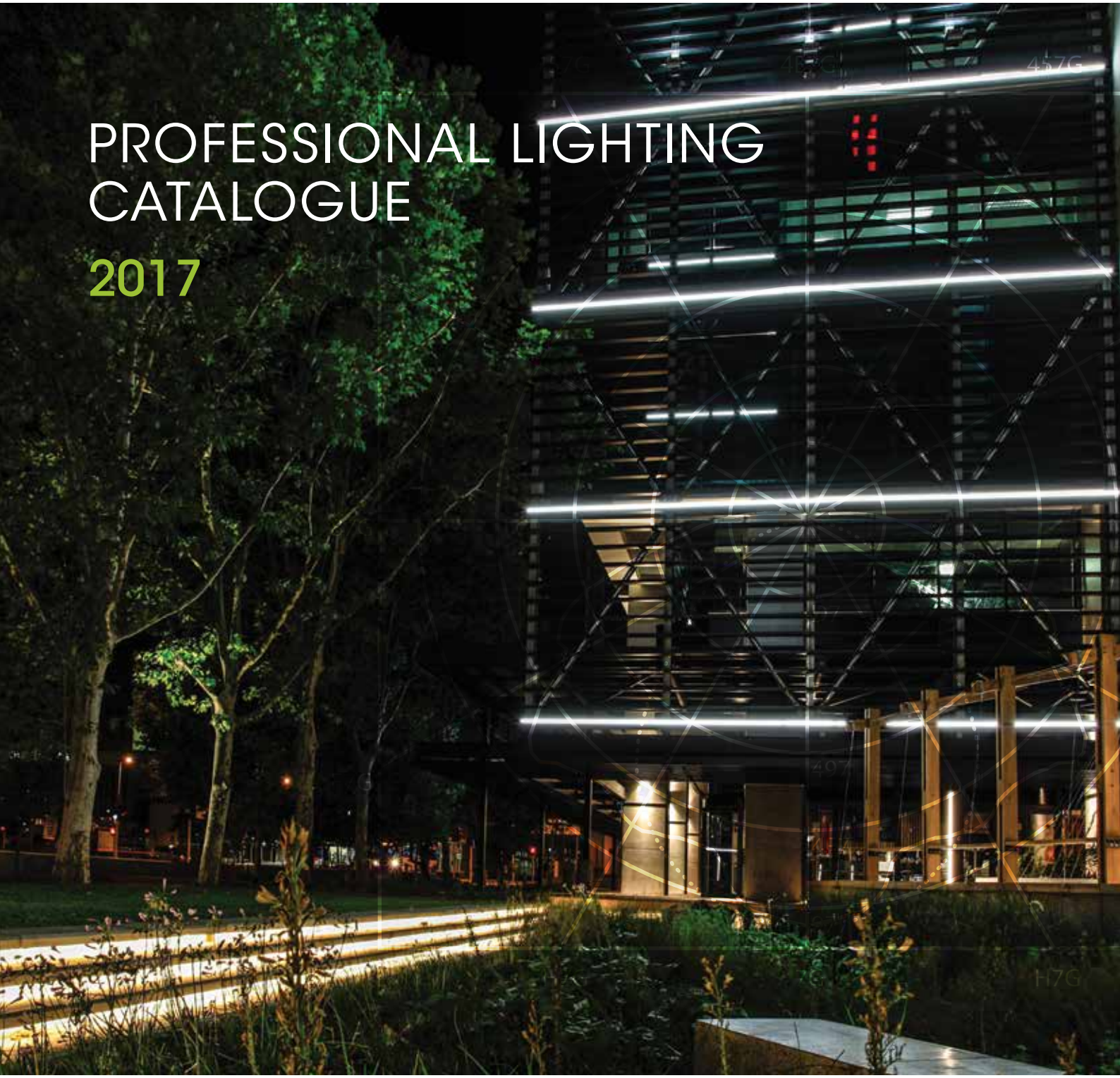
LASCON

PROFESSIONAL LIGHTING CATALOGUE

2017



Commercial Lighting • Industrial Lighting • Lighting Automation

INTRODUCTION

Dear Valued Customer

It gives us great pleasure to introduce our most innovative and technically advanced product range to date, where the emphasis is on "the quality of light" our fixtures produce.

Our products are more energy efficient and greener than ever, and are designed to add value to all your projects.

We are deeply indebted to our technology partners and chosen suppliers, without whom, we would not have been able to design light fixtures of the highest quality, in terms of appearance, performance and durability.

ISO/TS 16949:2009

Voltex Lighting,
adding value through innovation.

Proudly associated with:

Eskom

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SAPOA

eta awards
TURNING IDEAS INTO ENERGY
Sponsored by Eskom

GREEN BUILDING COUNCIL
OF SOUTH AFRICA

ENERGY EFFICIENCY
IT'S IN YOUR POWER!

www.voltexlighting.co.za

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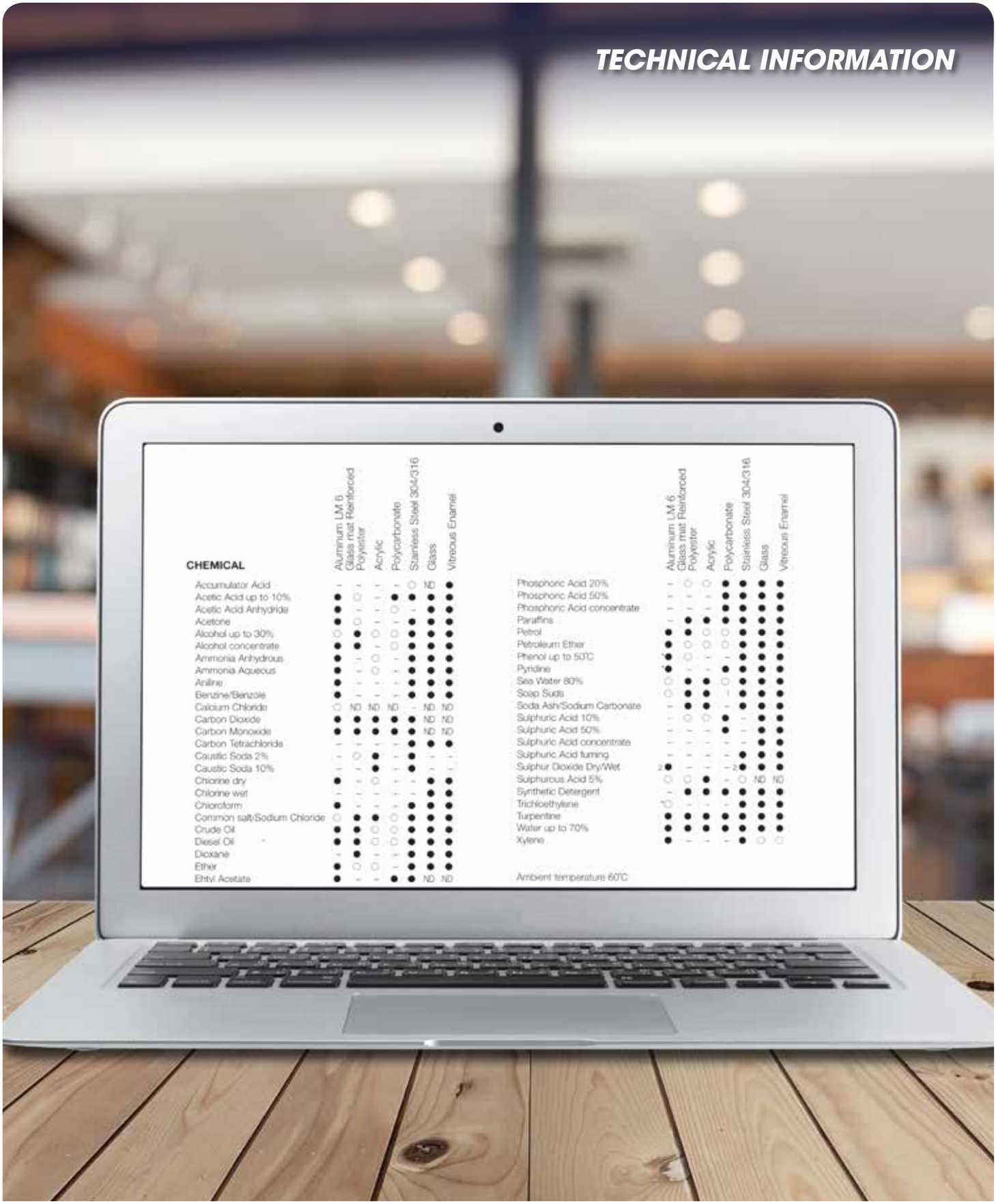
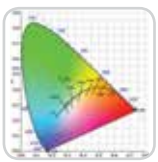
TECHNICAL INFORMATION



CHEMICAL	Aluminum LM 6	Glass mat Reinforced Polyester	Acrylic	Polycarbonate	Stainless Steel 304/316	Glass	Vitreous Enamel
Accumulator Acid	-	-	-	-	○	ND	●
Acetic Acid up to 10%	●	○	-	-	●	●	●
Acetic Acid Anhydride	●	-	-	-	○	-	●
Acetone	●	○	-	-	-	●	●
Alcohol up to 30%	○	●	○	○	●	●	●
Alcohol concentrate	●	●	-	○	●	●	●
Ammonia Anhydrous	●	-	○	-	●	●	●
Ammonia Aqueous	●	-	○	-	●	●	●
Aniline	●	-	-	-	●	●	●
Benzine/Benzole	●	-	-	-	●	●	●
Calcium Chloride	○	ND	ND	ND	-	ND	ND
Carbon Dioxide	●	●	●	●	●	ND	ND
Carbon Monoxide	●	●	●	●	●	ND	ND
Carbon Tetrachloride	-	-	-	-	●	●	●
Caustic Soda 2%	-	○	●	-	●	-	-
Caustic Soda 10%	-	-	●	-	●	-	-
Chlorine dry	●	-	○	-	-	●	●
Chlorine wet	-	-	-	-	-	●	●
Chloroform	●	-	-	-	●	●	●
Common salt/Sodium Chloride	○	●	●	○	●	●	●
Crude Oil	●	●	○	○	●	●	●
Diesel Oil	●	●	○	○	●	●	●
Dioxane	-	●	-	-	●	●	●
Ether	●	○	○	-	●	●	●
Ethyl Acetate	●	-	-	●	●	ND	ND

CHEMICAL	Aluminum LM 6	Glass mat Reinforced Polyester	Acrylic	Polycarbonate	Stainless Steel 304/316	Glass	Vitreous Enamel
Phosphoric Acid 20%	-	-	○	○	●	●	●
Phosphoric Acid 50%	-	-	-	-	●	●	●
Phosphoric Acid concentrate	-	-	-	-	●	●	●
Paraffins	-	-	●	●	●	●	●
Petrol	●	-	●	○	●	●	●
Petroleum Ether	●	-	○	○	●	●	●
Phenol up to 50°C	●	-	○	-	●	●	●
Pyridine	●	-	-	-	●	●	●
Sea Water 80%	○	●	●	○	●	●	●
Soap Suds	○	●	●	-	●	●	●
Soda Ash/Sodium Carbonate	-	●	●	-	●	●	●
Sulphuric Acid 10%	-	○	○	●	-	●	●
Sulphuric Acid 50%	-	-	-	●	-	●	●
Sulphuric Acid concentrate	-	-	-	-	-	●	●
Sulphuric Acid fuming	-	-	-	-	●	●	●
Sulphur Dioxide Dry/Wet	2 ●	-	-	-	2 ●	●	●
Sulphurous Acid 5%	○	○	●	-	○	ND	ND
Synthetic Detergent	-	●	●	●	●	●	●
Trichloethylene	°C	-	-	-	●	●	●
Turpentine	●	●	●	●	●	●	●
Water up to 70%	●	●	●	●	●	●	●
Xylene	●	-	-	-	●	○	○

Ambient temperature 60°C



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TERMINOLOGY

	**Safety Class I** Electrically insulated and earthed. In the event of a basic insulation failure, exposed metal parts that could become live are protected by the earth.
	**Suitable for mounting on normally flammable surfaces such as wood.** **Max surface temp <90°C**
	**Luminaire is fitted with Electronic control gear**
	**Luminaire can be fitted with an emergency module**
	**Luminaire can be fitted with a dimmable ballast**
	**Ingress Protection** Protection rating against dust and water (See page 14)
	**Lamp Not Included** Luminaire does not come complete with the lamps and has to be ordered as a separate item
	**Operating Voltage**

LIGHTING TERMS

Colour temperature

Unit of measurement: Kelvin [K]
The colour temperature of a light source is defined in comparison with a "black body radiator" and plotted on what is known as the "Planckian curve". The higher the temperature of this "black body radiator" the greater the blue component in the spectrum and the smaller the red component. An incandescent lamp with a warm white light, for example, has a colour temperature of 2700 K, whereas a daylight fluorescent lamp has a colour temperature of 6000 K.

Light colour

The light colour of a lamp can be neatly defined in terms of colour temperature. There are three main categories here:
Warm White < 3300 K
Cool White 3300 – 5300 K
Daylight > 5300 K
Despite having the same light colour, lamps may have very different colour rendering properties owing to the spectral composition of their light.

Colour rendering

As a rule, artificial light should enable the human eye to perceive colours correctly, as it would in natural daylight. Obviously, this depends to some extent on the location and purpose for which light is required.

The criterion here is the colour rendering property of a light source. This is expressed as a "general colour rendering index" (Ra).

The colour rendering index is a measure of the correspondence between the colour of an object (its "self-luminous colour") and its appearance under a reference light source. To determine the Ra values, eight test colours defined in accordance with DIN 6169 are illuminated with the reference light source and the light source under test. The smaller the discrepancy, the better the colour rendering property of the lamp being tested.

A light source with an Ra value of 100 displays all colours exactly as they appear under the reference light source. The lower the Ra value, the worse the colours are rendered.

Luminaire efficiency

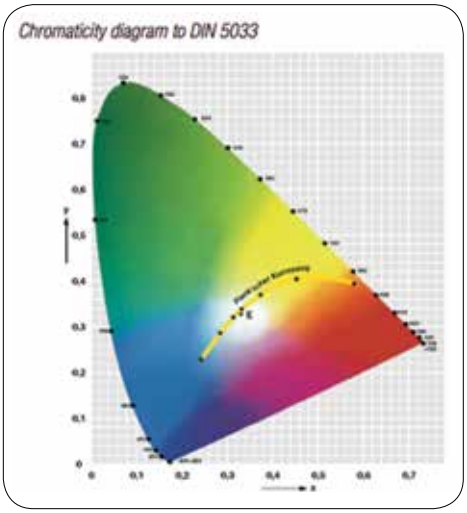
Luminaire efficiency (also known as light output ratio) is an important criterion in gauging the energy efficiency of a luminaire. This is the ratio between the luminous flux emitted by the luminaire and the luminous flux of the lamp (or lamps) installed in the luminaire.

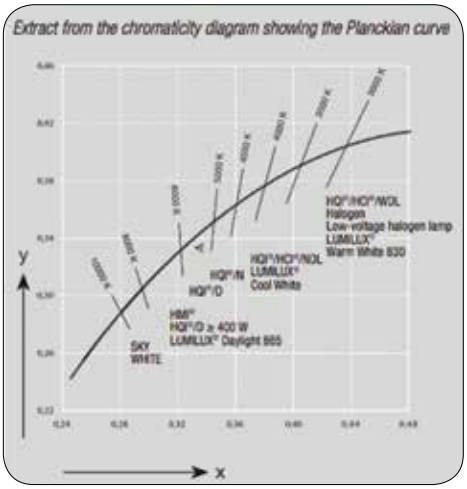
Average life

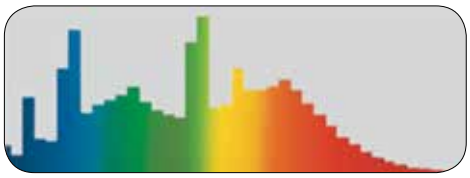
The average life of a lamp is an average of the lives of individual lamps operated under standard conditions (50 % failure = average rated life).

Service life

Service life is a simple practical measure of the economical life of a lamp. It is the number of hours of operation after which the system luminous flux (i.e. the product of the relative luminous flux and the relative proportion of lamps still in operation) is around 80% of the initial value.







Wavelength

Spectrum of a BIOLUX® fluorescent lamp.
The radiation is very evenly distributed over the entire visible range.

LIGHTING TERMS

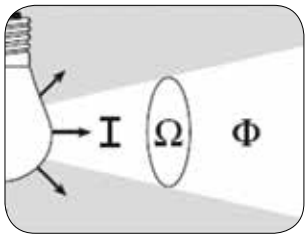
Glossary of the most important lighting terms

As with any technical or scientific discipline, lighting technology has its own special terms and concepts for defining the characteristics of lamps and fixtures and for standardizing the units of measurement.

The most important terms are described here.

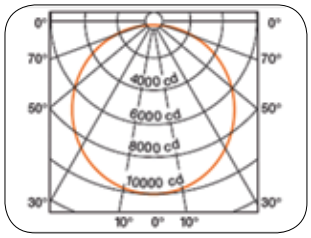
Light and radiation
Light is taken to mean the electromagnetic radiation that the human eye perceives as brightness, in other words that part of the spectrum that can be seen. This is the radiation between 380 and 780 nm, a tiny fraction of the known spectrum of electromagnetic radiation.

Luminous flux Ø
Unit of measurement: lumen [lm]
Luminous flux Ø is all the radiated power emitted by a light source evaluated with the spectral sensitivity of the eye and the photometric radiation equivalent k .



Luminous intensity I is a measure of the luminous flux Ø emitted in solid angle Ω.

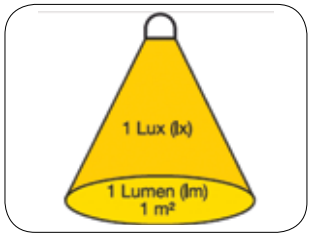
Luminous intensity I
Unit of measurement: candela [cd]
Generally speaking, a light source emits its luminous flux Ø in different directions and at different intensities.
Luminous intensity is the luminous flux radiated in a particular direction (solid angle Ω).



Polar diagram

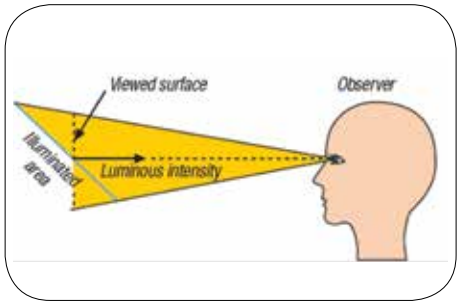
Illuminance E
Unit of measurement: lux [lx]
Illuminance E is the ratio between the luminous flux and the area being illuminated.

An illuminance of 1 lx occurs when a luminous flux of 1 lm is evenly distributed over an area of 1 m^2.



Illuminance E

Luminance L
Unit of measurement: candela per square meter [cd/m^2]
The luminance L of a light source or an illuminated area is a measure of the impression of brightness.



Luminance L

Luminous efficacy n
Unit of measurement: lumen per watt [lm/W]
Luminous efficacy n indicates the efficiency with which the electrical power consumed is converted into light.

The most important photometric formulae:

Luminous intensity [cd] I	Luminous flux [lm] / Solid angle Ω [sr]	Luminance [cd/m²] L	Luminous intensity [cd] / Viewed luminous area [m²]
Illuminance [lx] E	Luminous flux falling on area [lm] / Illuminated area [m²]	Luminous efficacy [lm/W] η	Generated luminous flux [lm] / Electrical power consumed [W]

LED TECHNOLOGY

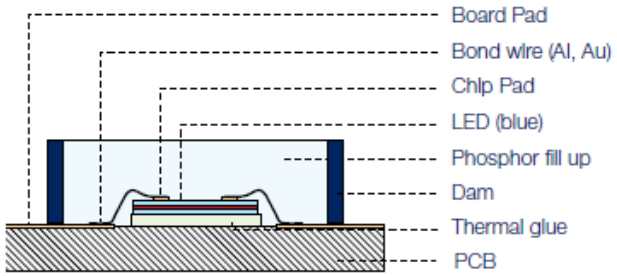
What is an LED

LEDs (Light Emitting Diode) are electronic components which emit light when an electrical current passes through them. This is possible thanks to the optical properties of some semiconductors which emit photons when current is passed through them.

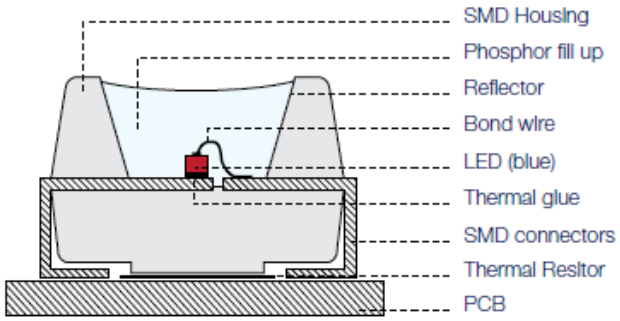
When a group of LEDs are installed on a printed circuit they are known as an LED module.

Chip on board (COB) and Surface mounted device (SMD)
Voltex Lighting use both COB and SMD LED technologies in our luminaire. Typically SMD is used in our linear luminaires whereas COB is used for LED downlights and floodlights

COB



SMD



Chip on board technology means the different components of the LED (chip, fluorescent converter, wire bond) are built together on the printed circuit board. SMD technology means the different components of the LED are pre-fabricated. The unit is soldered to the printed circuit board as a whole.

Advantages of LED

- Energy efficient technology
- Instant flicker-free light
- Very low direct thermal output
- No IR or UV radiation in the light
- Constant colour throughout the life of the LED
- Very high luminous efficacy
- Insensitive to vibrations
- Easy disposal at end of life

Lifetime

Lifetime (L value)
LED sources, unlike traditional lighting, do not tend to suddenly fail at the end of their lifetime; LEDs rather have a gradual reduction of their luminous flux overtime before completely running out. this is characterized with the L value

L70 means that the LED module will give 70 % of its initial luminous flux. This value is always related to the number of operation hours and therefore defines the lifetime of an LED module.

LED life expectancy (B value)
As the L value is a statistical value and the lumen maintenance may vary over the delivered LED modules, a B value defines the amount of modules which are below the specific L value.

L70 B10 means 10 % of the LED modules are below 70 % of the initial luminous flux, 90 % will be above 70 % of the initial value

LED failure rate (C value)
In addition a percentage of failed modules (fatal failure) is characterized by the C value. This value indicates the percentage of LEDs which are no longer operational at the end of their lifetime.

E.g. L70/B10/C0: 50,000 hours - indicates that after 50,000 hours, the percentage of LEDs no longer working is 0%.

Imperfection rate (F value)
The F value is the combination of the B and C value. The F value, followed by a value normally between 10 and 50, provides a more detailed indication of the percentage of components which do NOT maintain their declared luminous flux characteristics (B), also the failure percentage (C) of the LED module.

e.g. L70F10 means 10 % of the LED modules may fail or be below 70 % of the initial luminous flux

Lumen maintenance

Forward current	tp temperature	L90 / F10	L90 / F50	L80 / F10	L80 / F50	L70 / F10	L70 / F50
250 mA	65 °C	23,000 h	35,000 h	49,000 h	>60,000 h	>60,000 h	>60,000 h
300 mA	65 °C	20,000 h	30,000 h	43,000 h	>60,000 h	>60,000 h	>60,000 h
350 mA	65 °C	17,000 h	26,000 h	36,000 h	55,000 h	58,000 h	>60,000 h

LED TECHNOLOGY

Temperature

Ambient Temperature Ta

When any testing is performed on a product it is for a defined surrounding air temperature. This is the ambient temperature and is designated as Ta. The standard Ta defined for testing is 25°C although testing at any other value is permissible as long as the temperature is declared

Junction Temperature Tj

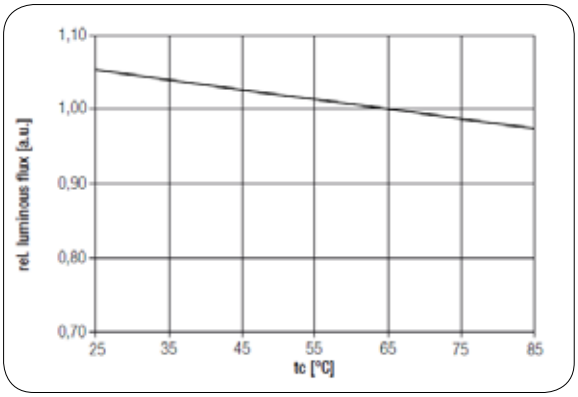
Inside an LED chip is a junction between two materials, one positively charged and one negatively charged. Light is emitted from this junction by the exchange of electrons between the two materials, and as a side-effect heat is also generated at the junction. The temperature of the junction needs to be controlled to ensure that the light output and LED lifetime fulfil the requirements for a given application

It will always be quoted by the luminous flux of our LED luminaires at a Tp temperature of 65 °C as a worst-case scenario. Careful attention has been paid to ensure our products do not exceed their maximum permissible reference temperatures

The Tc / Tp point is situated on the LED PCB and the temperature measured at this point corresponds to the Tj value and makes it possible to predict the behaviour of the LED. The Tc / Tp point is readily accessible with a temperature sensor, thus making readings easy to take.

The Tc and Tp temperature of LED modules from Tridonic are measured at the same reference point

The below graph shows the luminous flux at 100% at Tc 65°C as stated in our catalogue, however if Tc is below 65°C the luminous flux increases



Colour

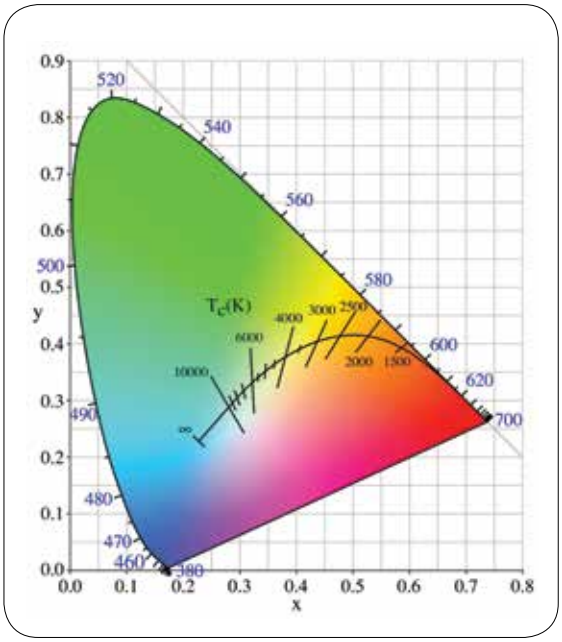
MacAdam Elipse / SDCM

SDCM is an acronym which stands for Standard Deviation Colour Matching. SDCM has the same meaning as a "MacAdam ellipse". A 1-step MacAdam ellipse defines a zone in the CIE 1931 2 deg (xy) colour space within which the human eye cannot discern colour difference. Due to the variable nature of the colour produced by white light LEDs, a convenient metric for expressing the extent of the colour difference within a batch (or bin) or LEDs is the number of SDCM (MacAdam) ellipses steps in the CIE colour space that the LEDs fall into. If the chromaticity coordinates of a set of LEDs all fall within 1 SDCM (or a "1-step MacAdam ellipse"), most people would fail to see any difference in colour. If the colour variation is such that the variation in chromaticity extends to a zone that is twice as big (2 SDCM or a 2-step MacAdam ellipse), you might start to see some colour difference. A 3-step MacAdam ellipse is better than a 4-step zone, and so on. All Voltex Lighting linear LED luminaires have a 3-step MacAdam

Colour Shift

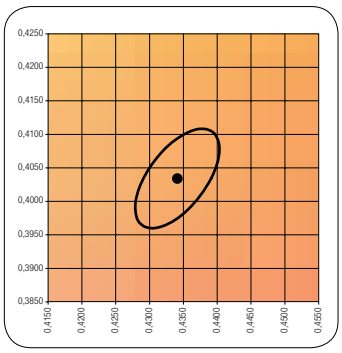
As white LEDs age, the colour temperature will slowly change. The colour shift is given as the maximum number of MacAdam elipse the colour will change by.

CIE1931 XY chromaticity diagram showing the black body locus (Planckian curve)

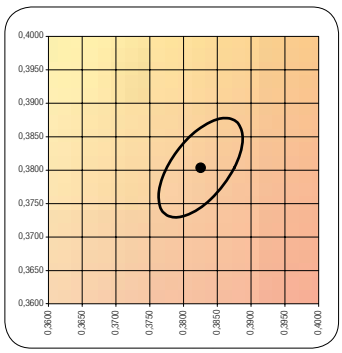


LED TECHNOLOGY

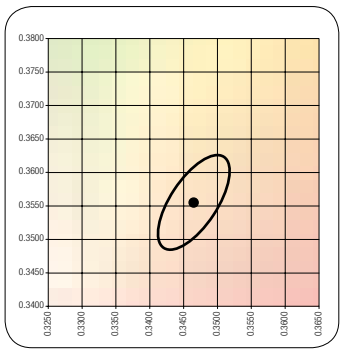
All Linear LED luminaires are available in 3000K, 4000K and 5000K



3000K
MacAdam Ellipse: 3SDCM



4000K
MacAdam Ellipse: 3SDCM



5000K
MacAdam Ellipse: 3SDCM

1st digit		2nd + 3rd digit	4th digit	5th digit	6th digit	
Code	CRI	Colour temperature in Kelvin x 100	McAdam initial	McAdam after 25% of the life-time (max.6000h)	Luminous flux after 25% of the life-time (max.6000h)	
					Code	Luminous flux
7	70 – 79				7	≥ 70 %
8	80 – 89				8	≥ 80 %
9	≥90				9	≥ 90 %

Photometric code for all Voltex Lightings linear LED luminaires

830/359 840/359 850/359

Standards

IEC EN 62471 - Photobiological Safety (also PD IEC TR 62778)
Light is a form of energy and is capable of causing physical harm. All light sources are classified by RISK GROUP (RG) which indicates how safe the source is. RG0 and RG1 are completely safe, RG2 is safe as long as nobody stares directly into the light source (glancing briefly at it is safe). No light source for general use should be RG3 (although technically the sun is RG3). The main hazard from LED is blue light which can cause damage to the retina.

LM79
A North American standard defining how LED luminaires should be measured for electrical and photometric characteristics.

LM80
A North American standard defining how LED should be measured for lumen maintenance characteristics

TM21
A North American technical memorandum on projecting long term lumen maintenance of LED light sources. It defines the number of units required for testing and how far the results may be safely extended to predict long term values. The maximum extension allowed is 6x the real test period, so for a 50,000 hour prediction the real test must have been for 8,333 hours. For a 100,000 hour prediction the real test must have been for 16,666 hours.

RoHS
This places restrictions on the use of certain hazardous substances in electrical and electronic equipment.

CE Mark
The CE mark shows that a product conforms to the required European directives for placing on the European market. It helps customs and market inspectors in facilitating the free trade and movement of product within Europe. Displaying the CE mark signifies compliance to four main European directives.

INGRESS PROTECTION

In addition to protection against the risk of explosion or ignition luminaires for use in hazardous areas will also need to provide adequate protection against the ingress of solids and liquids.

The degree of protection is denoted by the IP Classification system

A two digit number is used to identify the degree of protection afforded by the luminaire against the ingress of solids and liquids.

The first digit shows the resistance of the luminaire to the entry of solids and the second digit the resistance to entry of liquids.

NOTE : When a luminaire is rated IP66 (water-tight and dust-tight) this does not imply that it is automatically classified as being dust-ignition and hose-proof. The tests are quite different as those for ingress protection rating exclude any tests for surface temperatures.

First Digit Numeral	Degree of Protection (foreign bodies)	Second Digit Numeral	Degree of Protection (liquids)
0	No protection	0	No protection
1	Protected against the ingress of solid objects greater than 50mm in diameter	1	Protected against dripping water
2	Protected against the ingress of solid objects greater than 12mm in diameter	2	Protected against dripping water at an angle of 15˚ from the vertical
3	Protected against the ingress of dust in an amount sufficient to interfere with the satisfactory operation	3	Protected against spray falling at an angle 60˚ from the vertical
4	Protected against the ingress of solid objects greater than 1,0mm in diameter	4	Protected against water splashed from any direction
5	Protected against the ingress of dust in an amount sufficient to interfere with the satisfactory operation of the equipment enclosed	5	Protected against water projected by a nozzle against the enclosure from any direction
6	Dust-tight. Complete protection against the ingress of dust	6	Protected from heavy seas or water projected in powerful jets
-		7	Protected against immersion in water under defined conditions of time and pressure
-		8	Protected against continuous immersion in water

HAZARDOUS AREA LIGHTING

Classification of hazardous areas and locations

What is a hazardous area?

Areas are defined as hazardous where a danger of explosion exists owing to the presence, or possible presence, of a potentially explosive atmosphere or dust resulting from the processes or activity undertaken in the immediate or surrounding area.

Hazardous areas are "zoned" according to the level of risk.

Hazardous locations

Flammable Fibres	Flammable Dusts	Flammable Gases
ZONE 0 Continually explosive **ZONE 1** Likely to be explosive under normal operating conditions **ZONE 2** Explosive only under abnormal conditions	**ZONE 21** Likely to contain ignitable concentrations in suspension under normal operating conditions **ZONE 22** Not likely to contain dust in suspension but where ignitable deposits may create a hazard	**ZONE 21** Likely to be contaminated through handling, manufacture or usage **ZONE 22** Unlikely to be contaminated since area is used for storage

Classification of explosion protected luminaires

Materials

Luminaires used in hazardous areas will often be exposed to corrosive atmospheres or liquids. Care must be taken to ensure that the luminaire is made from materials which are able to resist the corrosive elements which may be present.

Equipment Protection Concepts

The design of electrical equipment for use in hazardous areas is based on a number of established engineering concepts which are intended to protect against the possibility of explosion.

These concepts are identified by 'protection symbols".

LUMINAIRE CHEMICAL RESISTANCE

Chemical resistance of luminaire materials

Our range of PRO TECTA luminaires are manufactured in a variety of materials each selected as being the best available to withstand attack from known corrosive elements.

The information set out below should be used as part of the final luminaire selection process.

CHEMICAL	Aluminum LM 6	Glass mat Reinforced Polyester	Acrylic	Polycarbonate	Stainless Steel 304/316	Glass	Vitreous Enamel
Accumulator Acid	–	–	–	–	○	ND	●
Acetic Acid up to 10%	●	○	–	●	●	●	●
Acetic Acid Anhydride	●	–	–	○	–	●	●
Acetone	●	○	–	–	●	●	●
Alcohol up to 30%	○	●	○	○	●	●	●
Alcohol concentrate	●	●	–	○	●	●	●
Ammonia Anhydrous	●	–	○	–	●	●	●
Ammonia Aqueous	●	–	○	–	●	●	●
Aniline	●	–	–	–	●	●	●
Benzine/Benzole	●	–	–	–	●	●	●
Calcium Chloride	○	ND	ND	ND	–	ND	ND
Carbon Dioxide	●	●	●	●	●	ND	ND
Carbon Monoxide	●	●	●	●	●	ND	ND
Carbon Tetrachloride	–	–	–	–	●	●	●
Caustic Soda 2%	–	○	●	–	●	–	–
Caustic Soda 10%	–	–	●	–	●	–	–
Chlorine dry	●	–	○	–	–	●	●
Chlorine wet	–	–	–	–	–	●	●
Chloroform	●	–	–	–	●	●	●
Common salt/Sodium Chloride	○	●	●	○	●	●	●
Crude Oil	●	●	○	○	●	●	●
Diesel Oil	●	●	○	○	●	●	●
Dioxane	–	●	–	–	●	●	●
Ether	●	○	○	–	●	●	●
Ehtyl Acetate	●	–	–	●	●	ND	ND
* Fluorine dry	●	–	–	–	–	–	–
* Fluorine wet	–	–	–	–	ND	–	–
* Glycerine	●	●	●	●	●	●	●
Glycol	●	●	●	●	●	●	●
Hydrobromic Acid	–	–	–	○	–	●	●
Hydrochloric Acid 10%	–	○	○	●	–	●	●
Hydrochloric Acid 30%	–	○	○	●	–	●	●
Hydrochloric Acid 96%	–	–	–	○	–	●	●
Hydrogen Peroxide 30%	●	–	●	●	●	●	●
Hydrogen Peroxide over 80%	●	○	○	–	●	●	●
* Hydrogen Sulphide	●	–	●	–	●	–	●
*§Hydrofluoric Acid 40%	–	–	–	–	–	–	–
*§Hydrofluoric Acid 70%	–	–	–	–	–	–	–
Lysol	●	–	–	–	●	●	●
Maleic Acid	●	–	–	–	●	●	●
Metal Salts (Iron Oxide, Zinc Oxide) and their aqueous solutions	–	●	●	●	○	●	●
Methanol	●	●	–	○	●	●	●
Methanol Aqueous	*	–	–	–	●	●	●
Methylene Chloride	○	–	–	–	–	●	●
Milk of Lime	–	●	●	○	●	ND	ND
Nitric Acid 10%	–	○	○	●	●	●	●
Nitric Acid 50%	1.●	–	–	–	●	●	●
Nitric Acid concentrate	1.●	–	–	–	–	●	●
Nitric Aid fuming	●	–	–	–	–	●	●
Ketones	●	–	–	○	●	●	●

CHEMICAL	Aluminum LM 6	Glass mat Reinforced Polyester	Acrylic	Polycarbonate	Stainless Steel 304/316	Glass	Vitreous Enamel
Phosphoric Acid 20%	–	○	○	●	●	●	●
Phosphoric Acid 50%	–	–	–	●	●	●	●
Phosphoric Acid concentrate	–	–	–	●	●	●	●
Paraffins	–	●	●	●	●	●	●
Petrol	●	●	○	○	●	●	●
Petroleum Ether	●	○	○	○	●	●	●
Phenol up to 50°C	*●	○	–	–	●	●	●
Pyridine	*●	–	–	●	●	●	●
Sea Water 80%	○	●	●	○	●	●	●
Soap Suds	○	●	●	!	●	●	●
Soda Ash/Sodium Carbonate	–	●	●	–	●	●	●
Sulphuric Acid 10%	–	○	○	●	–	●	●
Sulphuric Acid 50%	–	–	–	●	–	●	●
Sulphuric Acid concentrate	–	–	–	–	–	●	●
Sulphuric Acid fuming	–	–	–	–	●	●	●
Sulphur Dioxide Dry/Wet	2.●	–	–	–	2.●	●	●
Sulphurous Acid 5%	○	○	●	–	○	ND	ND
Synthetic Detergent	–	●	●	●	●	●	●
Trichloethylene	*○	–	–	–	●	●	●
Turpentine	●	●	●	●	●	●	●
Water up to 70%	●	●	●	●	●	●	●
Xylene	●	–	–	–	●	○	○

Ambient temperature 60°C

- ● Resistant
- ○ Resistant within limits
- – Not resistant
- ! Resistant when saturated, resistant within limits when unsaturated

§ Mild attack – aqueous 1% & 5% at ambient temperature
§ Water – accelerates corrosion
§ at 40°C – Butyl Rubber is resistant
§ at 70°C – Butyl Rubber is not resistant
* Coat glass with "Clear Shield"
ND No data
1. Varies with agitation and presence of Nitrogen Oxide
2. Alum/SS304: Not resistant when Sulphur Dioxide is wet

NOTES:
Aqueous – with water content in %
Anhydrous – free of water
Anhydride – crystallized

Hydrocarbons:
Paraffins
Ethyl Acetate
Pyridine

Chloride Hydrocarbons
Carbon Tetrachloride
Trichloethylene
Methylene Chloride

Aromatic Hydrocarbons
Aniline
Benzine
Benzine derivates (extractions)

NOTES

LASCON
MELLOW LIGHTING

RCB T5
page 18

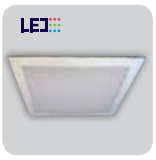
RCC
page 19

RCL T5
page 20

RCS
page 21

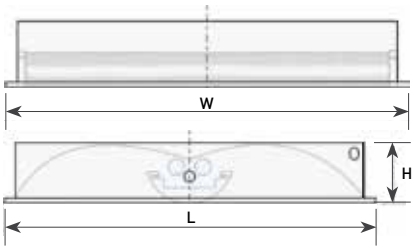
RCO T5
page 22

RCM
page 23

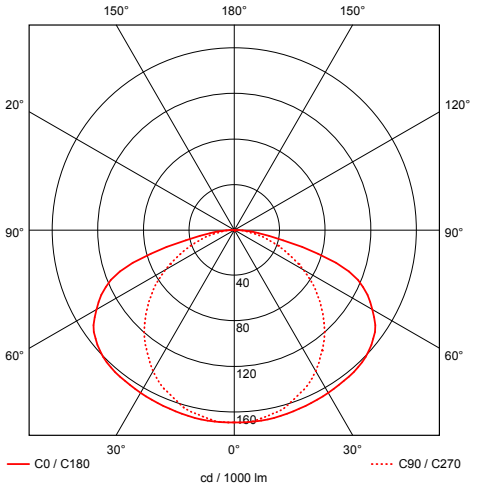


Lightfield
page 24

LASCON RCB T5



Photometric Diagram



	C0	C90	C180
0°	169	169	169
5°	169	169	169
10°	169	166	169
15°	168	163	168
20°	167	157	167
25°	166	151	166
30°	165	143	165
35°	164	133	164
40°	163	123	163
45°	161	111	161
50°	157	98	157
55°	151	85	151
60°	140	70	140
65°	127	55	127
70°	107	41	107
75°	69	28	69
80°	31	16	31
85°	13	7	13
90°	1	1	1
	cd / 1000 lm		

Luminaire efficiency: 59.2%

Life/Maintenance

ECG Average rated life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Hospitals
- Lecture halls
- Retail stores

Product Features and Accessories

- Easily removable basket to access the lamps for replacement
- UV resistant perforated basket
- Rolled mild steel body with a white epoxy powder coated finish
- UV resistant white polyester powder coated back reflectors
- Supplied with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Watts	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
RCB-224-ELB	2 x 24W	2 x 1750	52W	0.98	0.24A	598mm	598mm	94mm	6.0kg
RCB-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1195mm	598mm	94mm	10.0kg
RCB-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1195mm	598mm	94mm	10.0kg

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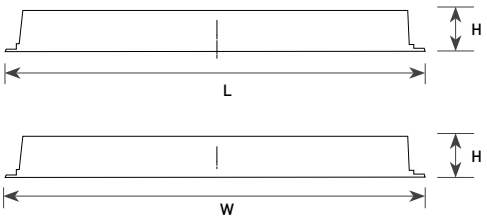
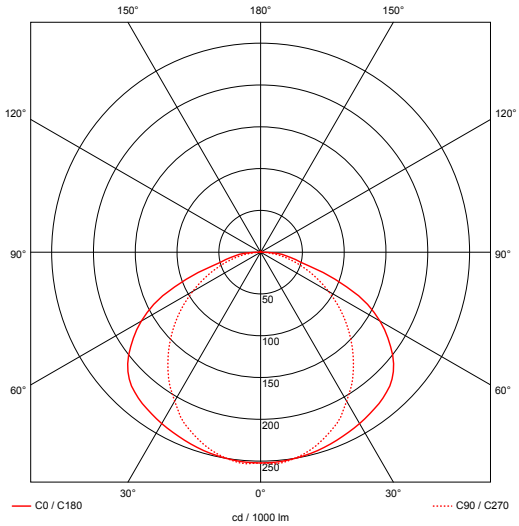
LASCON RCC LED



Photometric Diagram



Luminaire efficiency: 79.7%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Offices
- Hospitals
- Lecture halls
- Retail stores

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a matt white epoxy powder coated finish
- Rolled mild steel back reflectors with a matt white epoxy powder coated finish
- High transmission optic hides the LEDs
- DALI/DSI and dimmable options available
- Emergency options available
- Matt white infill panels for 1200 x 600 ceiling grid available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
RCC-25W-LED	4260	26.8W	0.98	275mA	597mm	597mm	61mm	5.6kg
RCC-37W-LED	5980	40.2W	0.98	400mA	597mm	597mm	61mm	5.6kg

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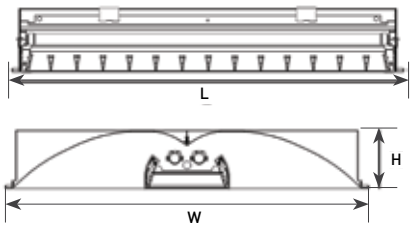
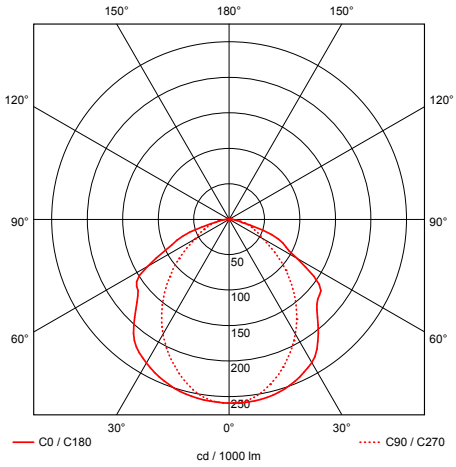
LASCON RCL T5



Photometric Diagram



	C0	C90	C180
0°	259	259	259
5°	259	257	258
10°	258	249	256
15°	254	237	253
20°	249	222	248
25°	242	205	242
30°	233	186	234
35°	217	166	225
40°	195	144	210
45°	175	121	188
50°	166	98	168
55°	151	75	160
60°	111	55	133
65°	86	44	93
70°	64	34	70
75°	24	25	33
80°	12	16	14
85°	4	7	6
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 64.95%

Life/Maintenance

ECG Average rated life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18,000hrs

Applications

- Offices
- Hospitals
- Lecture halls
- Retail stores

Product Features and Accessories

- Easily removable louvre to access the lamps for replacement
- Matt white louvre
- Rolled mild steel body with a white epoxy powder coated finish
- UV resistant white polyester powder coated back reflectors
- Supplied with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
RCL-224-ELB	2 x 24W	2 x 1750	52W	0.98	0.24A	598 mm	598mm	94mm	6.0kg
RCL-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1195mm	598mm	94mm	10.0kg
RCL-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1195mm	598mm	94mm	10.0kg

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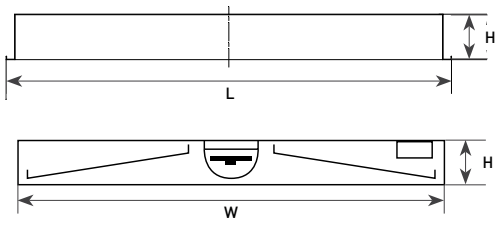
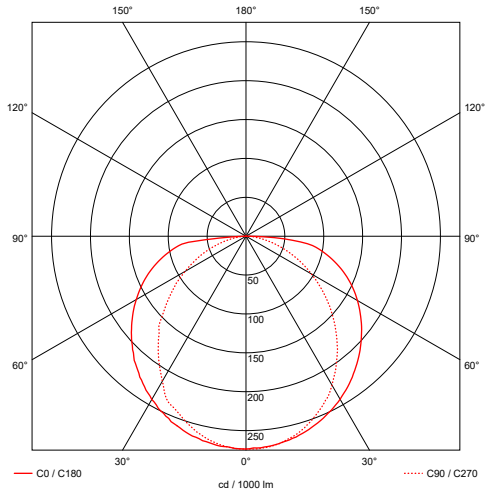
LASCON RCS LED



Photometric Diagram



Luminaire efficiency: 85.58%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Retail stores
- Lecture halls
- Laboratories
- Commerce

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a matt white epoxy powder coated finish
- Rolled mild steel back reflectors with a matt white epoxy powder coated finish
- High transmission optic hides the LEDs
- DALI/DSI and dimmable options available
- Emergency options available
- Direct replacement for 3 x 18W and 3 x 36W T8

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
RCS-19W-LED	2990	20.1W	0.98	400mA	597mm	597mm	60mm	5.6kg
RCS-27W-LED	4640	29.6W	0.98	300mA	1197mm	597mm	60mm	9.5kg
RCS-37W-LED	5980	40.2W	0.98	400mA	1197mm	597mm	60mm	9.5kg

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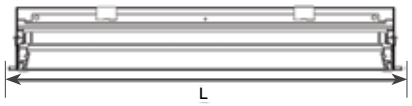
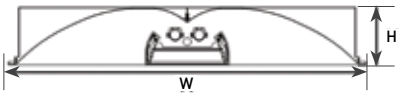
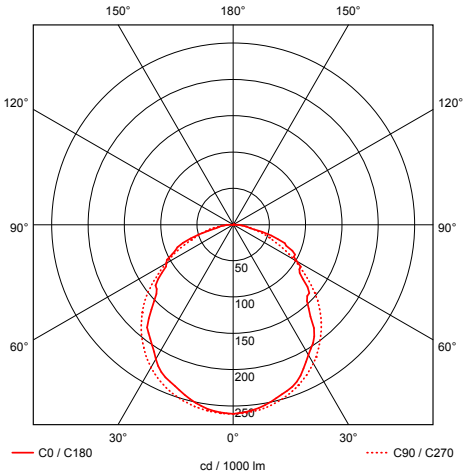
LASCON RCO T5





Photometric Diagram



	C0	C90	C180
0°	261	261	261
5°	258	259	259
10°	253	256	254
15°	245	250	246
20°	238	243	236
25°	224	233	228
30°	207	221	214
35°	194	206	197
40°	166	189	185
45°	143	170	157
50°	134	147	138
55°	111	122	123
60°	101	96	107
65°	93	74	91
70°	76	53	74
75°	48	36	43
80°	20	21	20
85°	9	10	12
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 71.72%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Hospitals
- Lecture halls
- Retail stores

Product Features and Accessories

- Easily removable optic to access the lamps for replacement
- Micro linear optic
- Rolled mild steel body with a white epoxy powder coated finish
- UV resistant white polyester powder coated removeable back reflectors
- Supplied with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Watts	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
RCO-224-ELB	2 x 24W	2 x 1750	52W	0.98	0.24A	598mm	598mm	94mm	6.0kg
RCO-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1195mm	598mm	94mm	10.0kg
RCO-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1195mm	598mm	94mm	10.0kg

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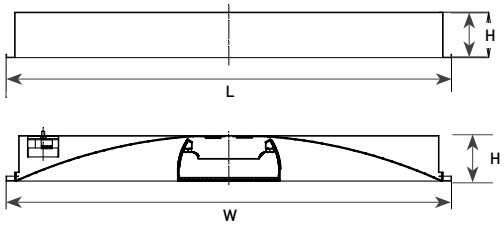
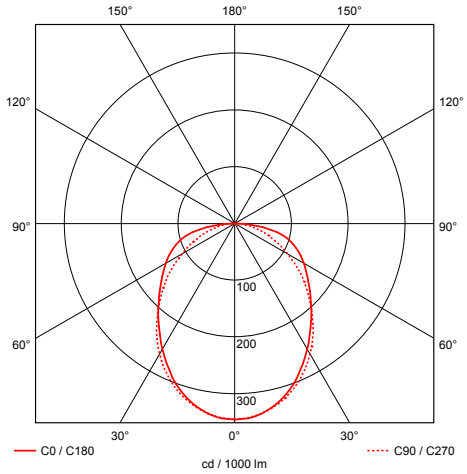
LASCON RCM® LED



Photometric Diagram



	C0	C90	C180
0°	345	345	345
5°	342	342	342
10°	334	334	334
15°	319	323	319
20°	301	307	301
25°	279	288	279
30°	255	265	255
35°	231	240	231
40°	210	213	210
45°	189	185	189
50°	171	159	171
55°	155	133	155
60°	140	107	140
65°	126	85	126
70°	110	63	110
75°	93	43	93
80°	64	26	64
85°	24	12	24
90°	0	1	0

cd / 1000 lm

Luminaire efficiency: 87.41%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Offices
- Hospitals
- Lecture halls
- Retail stores

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a matt white epoxy powder coated finish
- Rolled mild steel back reflectors with a matt white epoxy powder coated finish
- High transmission optic hides the LEDs
- DALI/DSI and dimmable options available
- Emergency options available
- Matt white infill panels for 1200 x 600 ceiling grid available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
RCM-25W-LED	4260	26.8W	0.98	275mA	597mm	597mm	61mm	5.6kg
RCM-37W-LED	5980	40.2W	0.98	400mA	597mm	597mm	61mm	5.6kg

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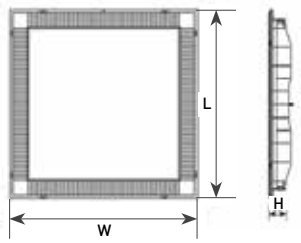
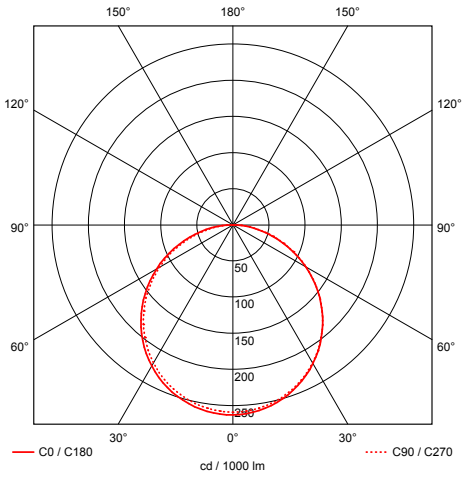
LASCON LIGHTFIELD LED



Photometric Diagram



	C0	C90	C180
0°	263	259	263
5°	261	258	262
10°	257	254	259
15°	251	249	253
20°	243	241	246
25°	233	232	236
30°	221	220	225
35°	208	207	212
40°	192	192	197
45°	175	175	180
50°	156	157	162
55°	137	138	142
60°	116	117	122
65°	95	96	101
70°	73	75	80
75°	52	54	59
80°	32	34	38
85°	13	16	19
90°	2	2	2
	cd / 1000 lm		

Luminaire efficiency: 75.9%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	30 000 hours @ 500mA (L70 F10, TP 65°C)

Applications

- Retail stores
- Public areas
- Offices
- Receptions

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K
- LG LED module and Tridonic driver
- Ambient temperature: -25…+45°C
- Quick wiring connection, no need to open the luminaire
- Edge type lighting ensures maximum visual comfort and even distribution of light
- Polycarbonate body and opal acrylic diffuser
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
LIGHTFIELD-35W-LED	3535	37.5W	0.98	500mA	595mm	595mm	69.5mm	3.1kg
LIGHTFIELD-70W-LED	7539	74W	0.98	500mA	1195mm	595mm	69.5mm	6.5kg

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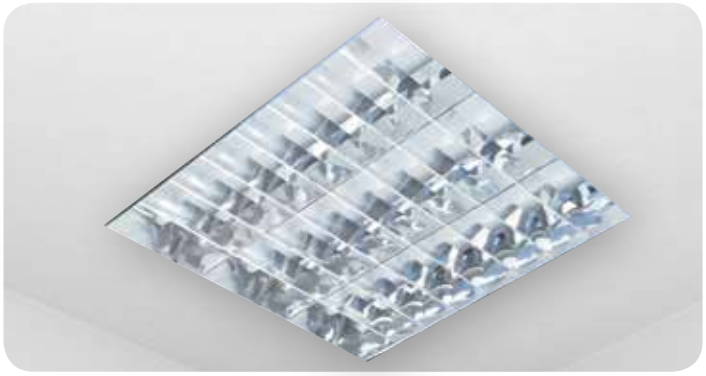
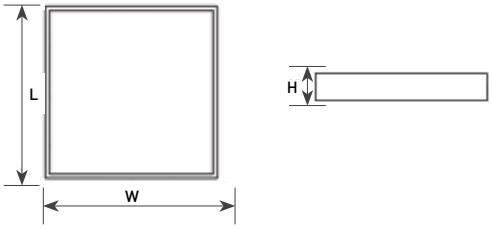
NOTES

NOTES

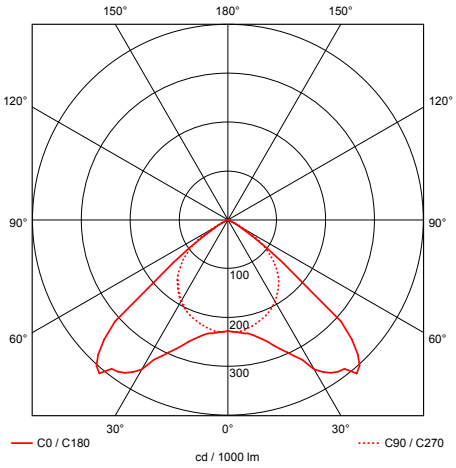
LASCON
RECESSED LUMINAIRES

LASCON FM90 T5 DLB





Photometric Diagram



	C0	C90	C180
0°	228	228	228
5°	231	230	231
10°	236	226	236
15°	250	220	250
20°	273	213	273
25°	303	204	303
30°	353	193	353
35°	381	178	381
40°	410	162	410
45°	369	140	369
50°	197	113	197
55°	78	82	78
60°	29	38	29
65°	0	9	0
70°	0	3	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 74%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Laboratories
- Control rooms
- Libraries

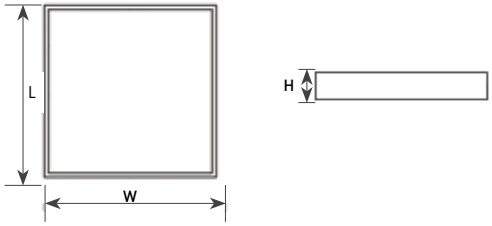
Product Features and Accessories

- High quality recessed luminaire
- Ideal for environments where greater visual comfort is required
- The louvre is fixed to the body by means of four wishbone springs
- 350G aluminium double parabolic louvre in an aluminium frame
- Rolled mild steel body with a white epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

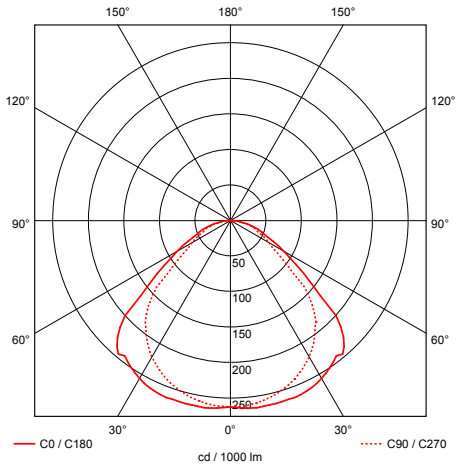
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
FM90-324-ELB/DLB	3 x 24W	3 x 1750	76W	0.98	0.35A	595mm	595mm	90mm	3.4kg
FM90-328-ELB/DLB	3 x 28W	3 x 2600	89.9W	0.98	0.40A	1195mm	595mm	90mm	6.2kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON FM90 T5 AR27



Photometric Diagram



	C0	C90	C180
0°	262	262	262
5°	265	261	265
10°	265	258	265
15°	265	252	265
20°	265	244	265
25°	262	234	262
30°	256	222	256
35°	248	205	248
40°	245	187	245
45°	223	160	223
50°	165	116	165
55°	119	82	119
60°	87	63	87
65°	62	48	62
70°	46	39	46
75°	32	29	32
80°	18	18	18
85°	7	8	7
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 69.5%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Reception areas
- Canteens
- Schools

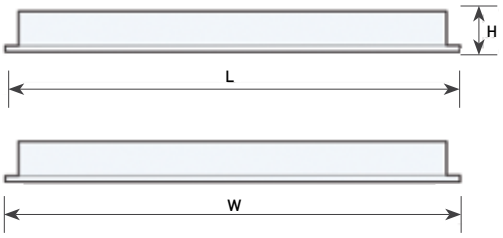
Product Features and Accessories

- High quality recessed luminaire
- Ideal for general lighting
- The diffuser is fixed to the body by means of four wishbone springs
- Prismatic acrylic diffuser in an aluminium frame
- Rolled mild steel body with a white epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

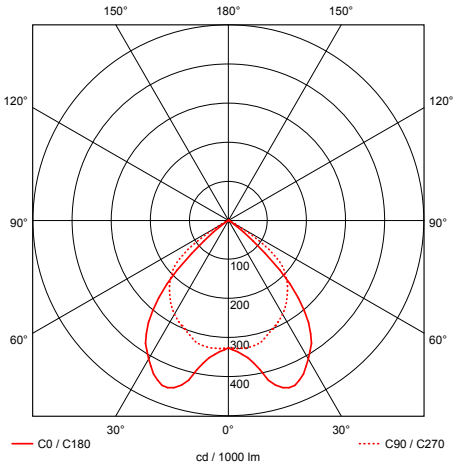
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
FM90-324-ELB/AR27	3 x 24W	3 x 1750	76W	0.98	0.35A	595mm	595mm	90mm	3.4kg
FM90-328-ELB/AR27	3 x 28W	3 x 2600	89.9W	0.98	0.40A	1195mm	595mm	90mm	6.2kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON FM95 T5



Photometric Diagram



	C0	C90	C180
0°	326	326	326
5°	340	329	340
10°	370	329	370
15°	430	322	430
20°	456	306	456
25°	442	292	442
30°	409	277	409
35°	369	258	369
40°	302	235	302
45°	205	210	205
50°	83	178	83
55°	9	119	9
60°	2	36	2
65°	1	1	1
70°	0	1	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 81.76%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Retail stores
- Healthcare
- Meeting rooms

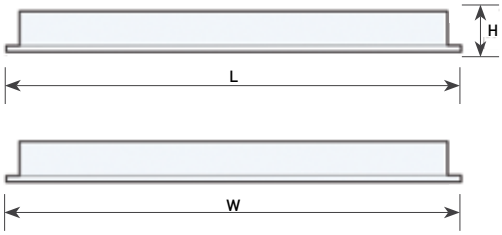
Product Features and Accessories

- Easily removable in-fill panels to access the ballast
- The louvre is fixed to the body by means of four spring clips
- MIRO4 silver louvre
- Rolled mild steel body with a white epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

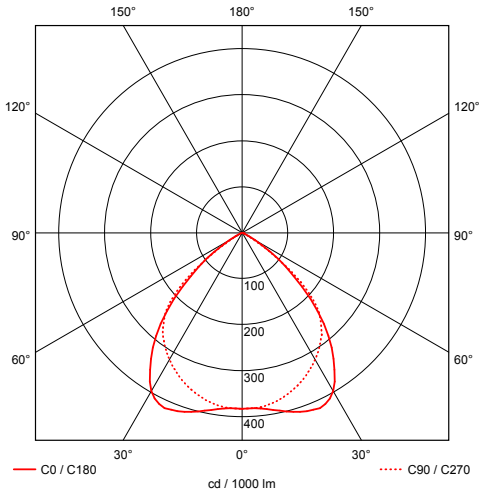
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
FM95-224-ELB	2 x 24W	2 x 1750	52W	0.98	0.24A	597mm	597mm	53mm	3.0kg
FM95-324-ELB	3 x 24W	3 x 1750	76W	0.98	0.35A	597mm	597mm	53mm	3.2kg
FM95-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1197mm	597mm	53mm	5.9kg
FM95-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1197mm	597mm	53mm	5.9kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON FM95 LED



Photometric Diagram



	C0	C90	C180
0°	382	382	382
5°	382	382	382
10°	391	376	391
15°	402	366	402
20°	412	353	412
25°	416	337	416
30°	396	318	396
35°	349	296	349
40°	292	269	292
45°	222	231	222
50°	147	167	147
55°	86	80	86
60°	32	19	32
65°	3	3	3
70°	1	2	1
75°	1	1	1
80°	0	1	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 82.05%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Offices
- Retail stores
- Healthcare
- Meeting rooms

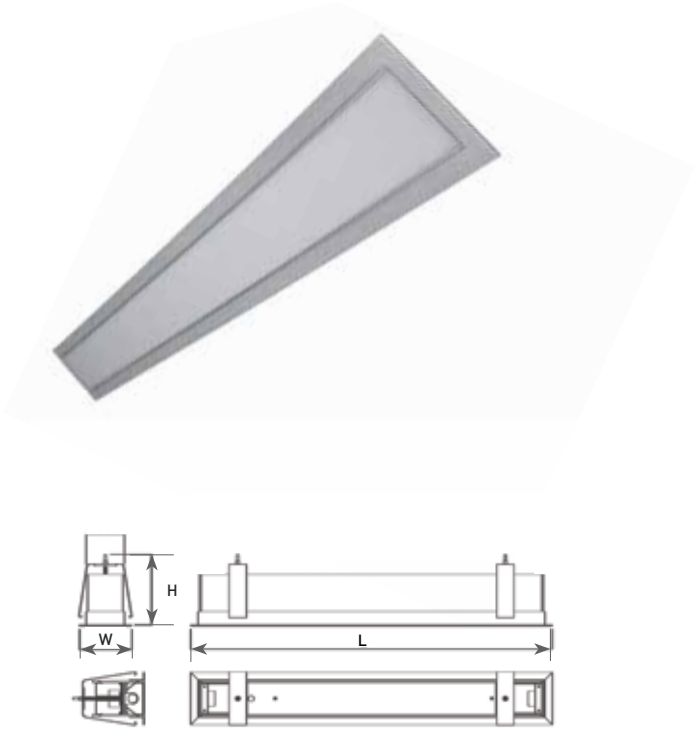
Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Easily removable in-fill panels to access the driver
- The louvre is fixed to the body by means of four spring clips
- 1520G3 anti-iridescent matt aluminium louvre
- Rolled mild steel body with a white epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

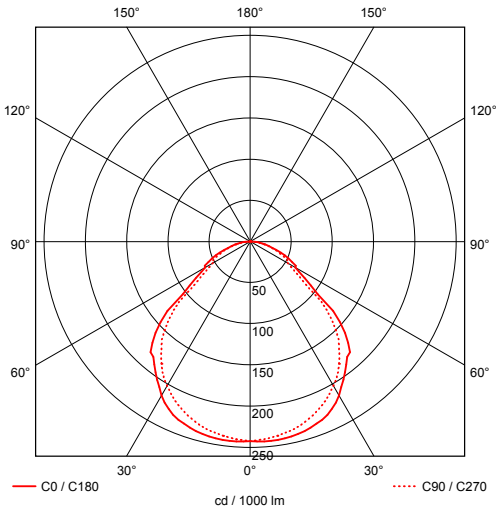
Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
FM95-27W-LED	4640	29.6W	0.98	300mA	597mm	597mm	53mm	3.0kg
FM95-37W-LED	5980	40.2W	0.98	400mA	597mm	597mm	53mm	3.0kg

SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON H-PRO-R T5



Photometric Diagram



	C0	C90	C180
0°	242	242	242
5°	243	240	243
10°	242	236	242
15°	240	231	240
20°	235	224	235
25°	228	214	228
30°	216	202	216
35°	199	187	199
40°	183	168	183
45°	166	144	166
50°	131	111	131
55°	85	71	85
60°	63	53	63
65°	54	46	54
70°	39	35	39
75°	26	24	26
80°	15	14	15
85°	6	5	6
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 56.8%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Retail stores
- Offices
- Passages
- Reception areas

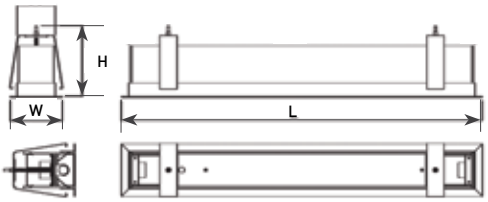
Product Features and Accessories

- Surface mounted luminaire, recessed and semi-recessed available on request
- Frosted acrylic diffuser
- Extruded aluminium body
- Various coloured bodies available
- DALI/DSI and dimmable options available
- Emergency options available

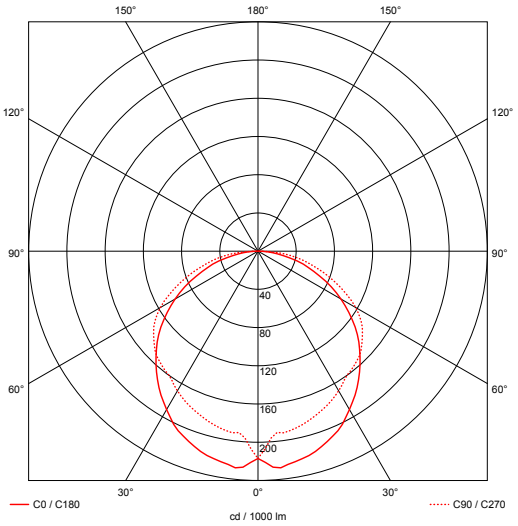
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Cut Out	Dimensions			Weight
							L	W	H	
H-PROFILE-R-124-ELB	1 x 24W	1 x 1750	28W	0.98	0.13A	685mm x 75mm	615mm	92mm	90mm	1.0kg
H-PROFILE-R-154-ELB	1 x 54W	1 x 4450	54W	0.98	0.26A	1185mm x 75mm	1215mm	92mm	90mm	1.3kg
H-PROFILE-R-180-ELB	1 x 80W	1 x 6150	86W	0.98	0.38A	1485mm x 75mm	1515mm	92mm	90mm	2.0kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON H-PRO-R LED



Photometric Diagram



Luminaire efficiency: 64.5%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Retail stores
- Offices
- Passages
- Reception areas

Product Features and Accessories

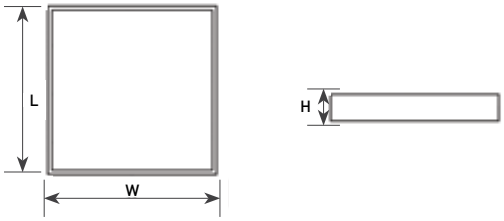
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Recessed luminaire
- Frosted acrylic diffuser
- Extruded aluminium body
- Various coloured bodies available
- DALI/DSI and dimmable options available
- Emergency options available
- Custom lengths to order
- Available in 300mm, 600mm, 900mm, 1200mm

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Cut Out	Dimensions			Weight
						L	W	H	
H-PROFILE-R-27W-LED	4640	29.6W	0.98	300mA	1140mm x 75mm	1156mm	92mm	90mm	1.3kg
H-PROFILE-R-37W-LED	5980	40.2W	0.98	400mA	1140mm x 75mm	1156mm	92mm	90mm	1.3kg

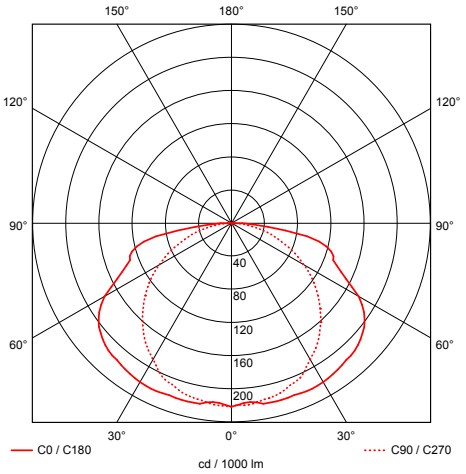
SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON TPR T5



Photometric Diagram



	C0	C90	C180
0°	221	221	221
5°	217	220	217
10°	221	217	221
15°	222	214	222
20°	221	208	221
25°	222	202	222
30°	221	190	221
35°	219	179	219
40°	216	166	216
45°	213	152	213
50°	206	136	206
55°	196	120	196
60°	177	101	177
65°	149	83	149
70°	131	63	131
75°	122	46	122
80°	93	28	93
85°	34	11	34
90°	5	2	5

cd / 1000 lm

Luminaire efficiency: 83.64%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Psychiatric hospitals
- Areas where a degree of protection is required
- High security areas

Product Features and Accessories

- The diffuser frame is fixed to the body by means of eight anti-tamper snake eye screws
- Foam gasket prevents insects getting into the luminaire
- Mirco linear frost diffuser frame
- Rolled mild steel body with a white epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- DALI/DSI and dimmable options available
- Emergency options available

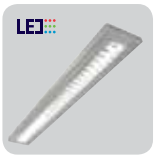
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
TPR-314-ELB	3 x 14W	3 x 1200	48W	0.98	0.22A	595mm	595mm	103mm	3.0kg
TPR-324-ELB	3 x 24W	3 x 1750	76W	0.98	0.35A	595mm	595mm	103mm	3.0kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON
SURFACE AND SUSPENDED LUMINAIRES

RCM-S
page 37

SL95 T5
page 38



SL95
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SL95-S T5
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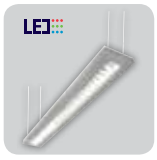
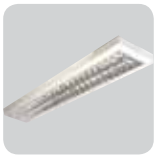


SL95-S
page 41



M95N T5
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ZD95-S T5
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H-PRO-S T5
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H-PRO-S
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M6V T5
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M6V
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RAW-N T5
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RAW
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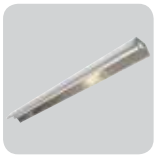

RAIL T5
page 50

RAIL
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R-BAY T5
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R-BAY
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TP T5
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TP
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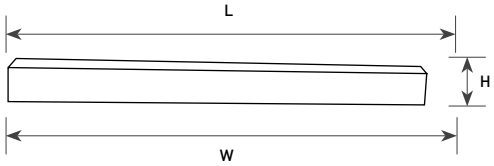
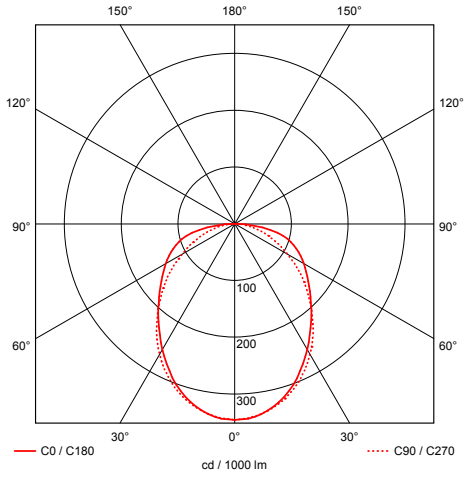
NOTES

LASCON RCM-S® LED



Photometric Diagram



	C0	C90	C180
0°	345	345	345
5°	342	342	342
10°	334	334	334
15°	319	323	319
20°	301	307	301
25°	279	288	279
30°	255	265	255
35°	231	240	231
40°	210	213	210
45°	189	185	189
50°	171	159	171
55°	155	133	155
60°	140	107	140
65°	126	85	126
70°	110	63	110
75°	93	43	93
80°	64	26	64
85°	24	12	24
90°	0	1	0

cd / 1000 lm

Luminaire efficiency: 87.41%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Offices
- Hospitals
- Lecture halls
- Retail stores

Product Features and Accessories

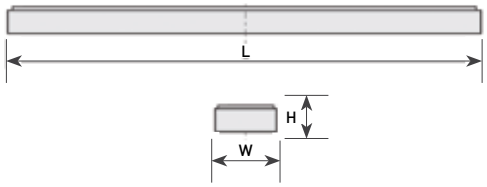
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Surface mount
- Rolled mild steel body with a matt white epoxy powder coated finish
- Rolled mild steel back reflectors with a matt white epoxy powder coated finish
- High transmission optic hides the LEDs
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
RCM-S-25W-LED	4260	26.8W	0.98	275mA	597mm	597mm	61mm	5.6kg
RCM-S-37W-LED	5980	40.2W	0.98	400mA	597mm	597mm	61mm	5.6kg

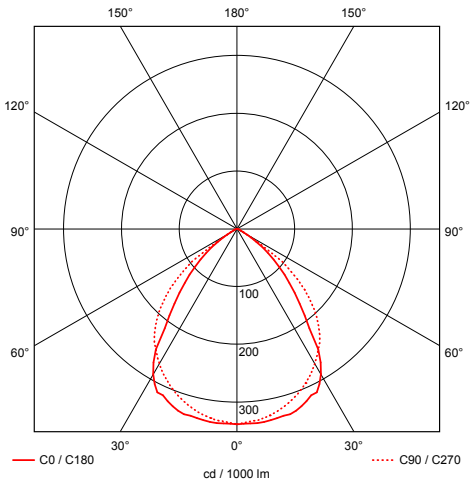
SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON SL95 T5



Photometric Diagram



	C0	C90	C180
0°	338	338	338
5°	337	332	337
10°	336	327	336
15°	332	317	332
20°	326	304	326
25°	311	288	311
30°	290	269	290
35°	240	246	240
40°	169	220	169
45°	121	183	121
50°	83	138	83
55°	48	84	48
60°	20	22	20
65°	5	0	5
70°	1	2	1
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 68.4%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Passages
- Reception areas
- Study halls

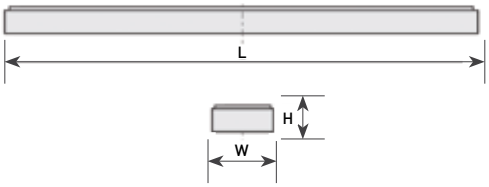
Product Features and Accessories

- One piece louvre system
- The louvre is fixed to the body by means of four spring clips
- 1520G3 anti-iridescent matt aluminium louvre
- Rolled mild steel body with a structured silver epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

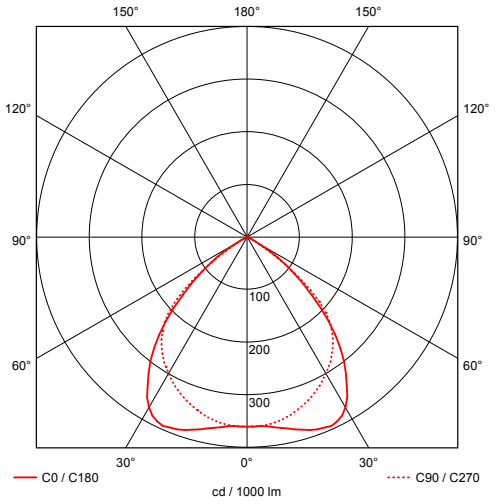
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
SL95-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1260mm	175mm	53mm	4.4kg
SL95-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1260mm	175mm	53mm	4.4kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON SL95 LED



Photometric Diagram



	C0	C90	C180
0°	360	360	360
5°	360	360	360
10°	368	355	368
15°	379	345	379
20°	389	333	389
25°	392	318	392
30°	374	299	374
35°	329	279	329
40°	275	254	275
45°	209	218	209
50°	138	158	138
55°	81	76	81
60°	30	18	30
65°	3	3	3
70°	1	2	1
75°	1	1	1
80°	0	1	0
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 77.34%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Offices
- Passages
- Reception areas
- Study halls

Product Features and Accessories

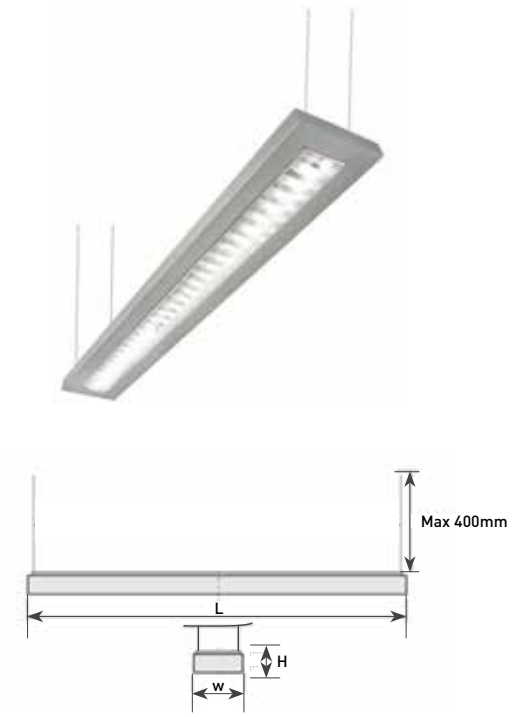
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a structured silver or matt white epoxy powder coated finish
- 1520G3 anti-iridescent matt aluminium louvre
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
SL95-27W-LED	4640	29.6W	0.98	300mA	1260mm	175mm	53mm	4.4kg
SL95-37W-LED	5980	40.2W	0.98	400mA	1260mm	175mm	53mm	4.4kg

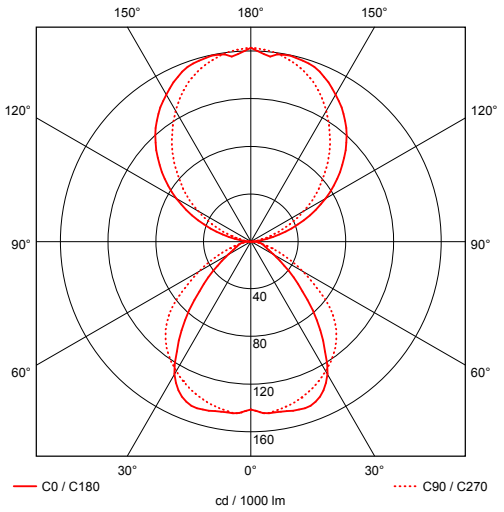
SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON SL95-S T5



Photometric Diagram



	C0	C90	C180
0°	141	141	141
10°	145	143	145
20°	147	136	147
30°	129	126	129
40°	86	111	86
50°	47	87	47
60°	22	50	22
70°	13	23	13
80°	8	6	8
90°	0	0	0
100°	14	7	14
110°	42	26	42
120°	72	51	72
130°	100	77	100
140°	125	103	125
150°	142	127	142
160°	156	146	156
170°	159	158	159
180°	163	163	163
	cd / 1000 lm		

Luminaire efficiency: 78.18%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Passages
- Reception areas
- Study halls

Product Features and Accessories

- One piece louvre system
- The louvre is fixed to the body by means of four spring clips
- Suspension cables supplied separately
- 1520G3 anti-iridescent matt aluminium louvre
- Rolled mild steel body with a structured silver epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

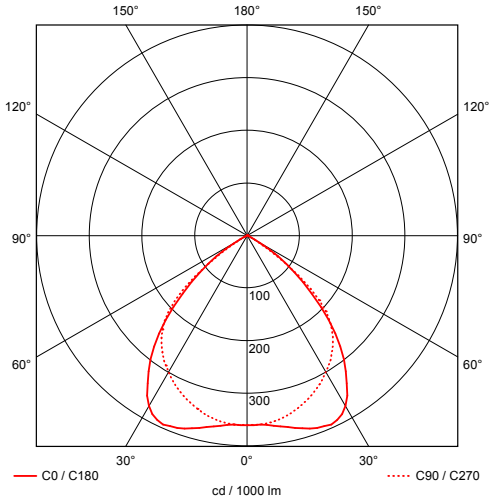
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
SL95-S-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1260mm	175mm	53mm	4.4kg
SL95-S-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1260mm	175mm	53mm	4.4kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED

PRODUCED IN RSA

LASCON SL95-S LED

Photometric Diagram



	C0	C90	C180
0°	360	360	360
5°	360	360	360
10°	368	355	368
15°	379	345	379
20°	389	333	389
25°	392	318	392
30°	374	299	374
35°	329	279	329
40°	275	254	275
45°	209	218	209
50°	138	158	138
55°	81	76	81
60°	30	18	30
65°	3	3	3
70°	1	2	1
75°	1	1	1
80°	0	1	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 77.34%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Offices
- Passages
- Reception areas
- Study halls

Product Features and Accessories

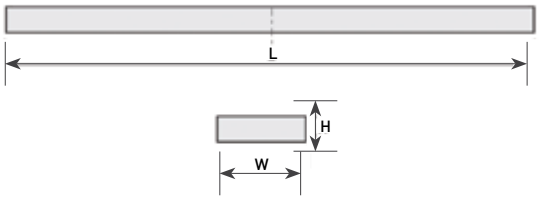
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a structured silver epoxy powder coated finish
- Suspension cables supplied separately
- 1520G3 anti-iridescent matt aluminium louvre
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
SL95-S-27W-LED	4640	29.6W	0.98	300mA	1260mm	175mm	53mm	4.4kg
SL95-S-37W-LED	5980	40.2W	0.98	400mA	1260mm	175mm	53mm	4.4kg

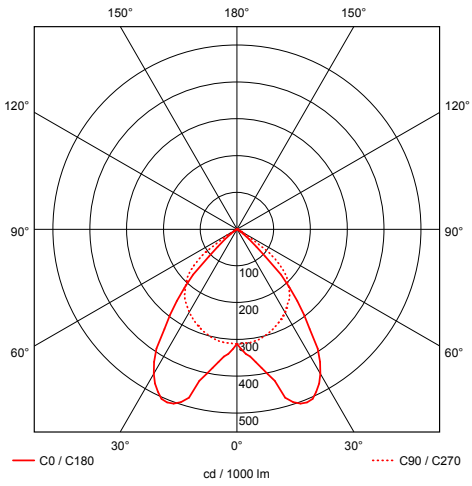
SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON M95N T5



Photometric Diagram



	C0	C90	C180
0°	312	312	312
5°	340	311	340
10°	382	307	382
15°	465	299	465
20°	504	288	504
25°	497	275	497
30°	453	260	453
35°	356	245	356
40°	255	222	255
45°	128	196	128
50°	43	153	43
55°	17	68	17
60°	2	14	2
65°	1	6	1
70°	0	1	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 80.1%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Passages
- Reception areas
- Schools

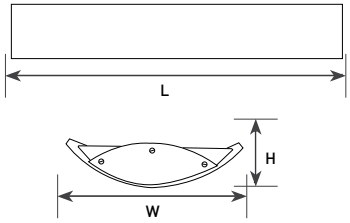
Product Features and Accessories

- One piece louvre system
- The louvre is fixed to the body by means of four spring clips
- 1520G3 anti-iridescent matt aluminium louvre
- Rolled mild steel body with a white epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

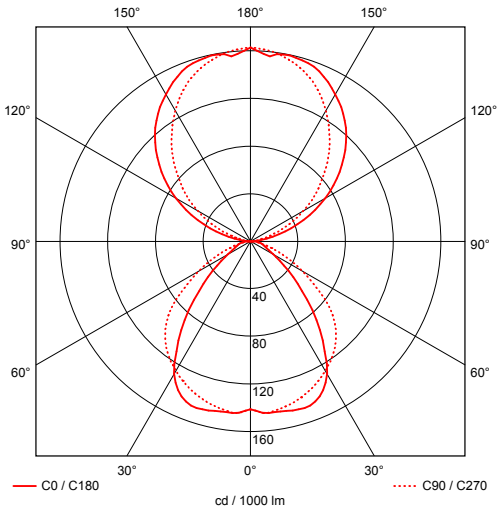
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
M95N-224-ELB	2 x 24W	2 x 1750	52W	0.98	0.24A	629mm	223mm	72mm	3.1kg
M95N-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1229mm	223mm	72mm	4.2kg
M95N-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1229mm	223mm	72mm	4.2kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON ZD95-S T5



Photometric Diagram



	C0	C90	C180
0°	141	141	141
10°	145	143	145
20°	147	136	147
30°	129	126	129
40°	86	111	86
50°	47	87	47
60°	22	50	22
70°	13	23	13
80°	8	6	8
90°	0	0	0
100°	14	7	14
110°	42	26	42
120°	72	51	72
130°	100	77	100
140°	125	103	125
150°	142	127	142
160°	156	146	156
170°	159	158	159
180°	163	163	163
	cd / 1000 lm		

Luminaire efficiency: 78.18%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Passages
- Reception areas
- Study halls

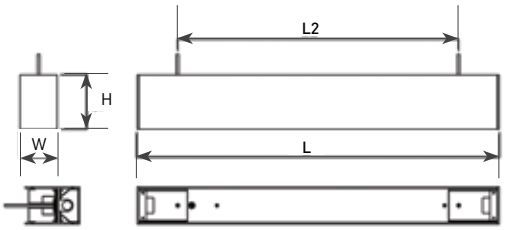
Product Features and Accessories

- One piece louvre system
- The louvre is fixed to the body by means of four spring clips
- Suspension cables supplied separately
- 1520G3 anti-iridescent matt aluminium louvre
- Rolled mild steel body with a structured silver epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

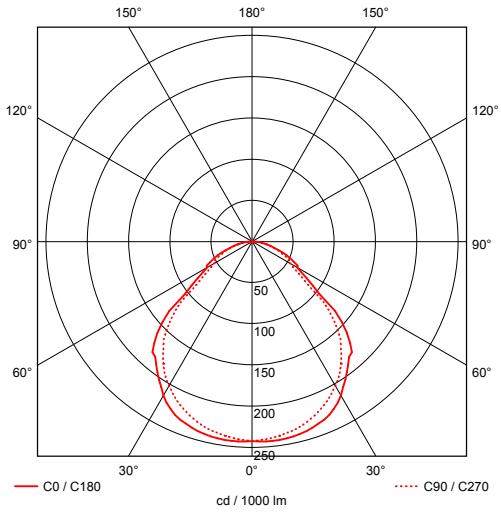
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
ZD95-S-154-ELB	1 x 54W	1 x 4450	54W	0.98	0.26A	1288mm	275mm	75mm	4.4kg
ZD95-S-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1288mm	275mm	75mm	4.4kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON H-PRO-S T5



Photometric Diagram



	C0	C90	C180
0°	242	242	242
5°	243	240	243
10°	242	236	242
15°	240	231	240
20°	235	224	235
25°	228	214	228
30°	216	202	216
35°	199	187	199
40°	183	168	183
45°	166	144	166
50°	131	111	131
55°	85	71	85
60°	63	53	63
65°	54	46	54
70°	39	35	39
75°	26	24	26
80°	15	14	15
85°	6	5	6
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 56.8%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Retail stores
- Offices
- Passages
- Reception areas

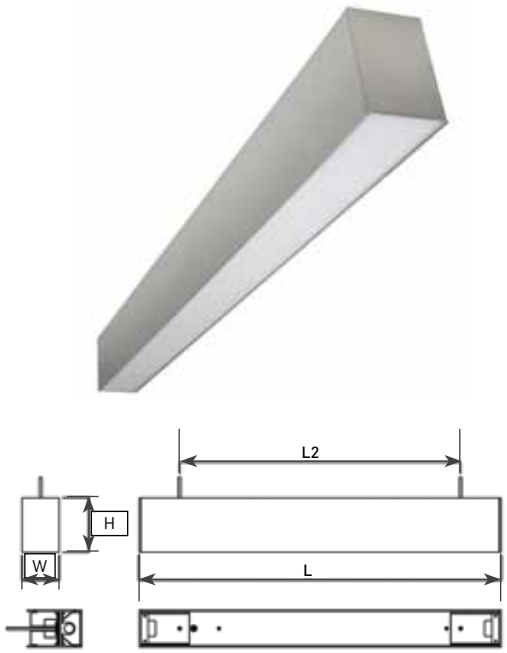
Product Features and Accessories

- Surface mounted luminaire, recessed and semi-recessed available on request
- Frosted acrylic diffuser
- Extruded aluminium body
- Various coloured bodies available
- DALI/DSI and dimmable options available
- Emergency options available

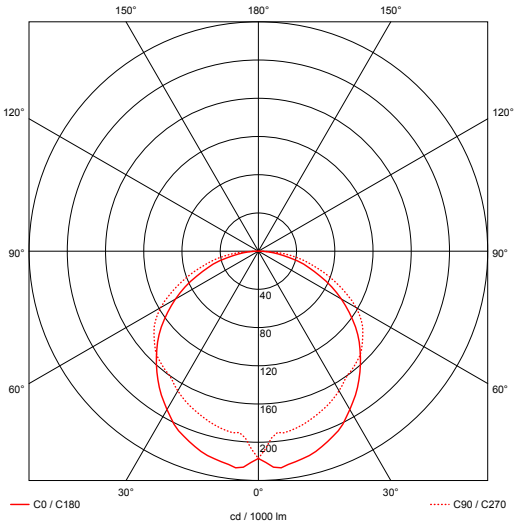
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions				Weight
						L	L2	W	H	
H-PROFILE-S-124-ELB	1 x 24W	1 x 1750	28W	0.98	0.13A	583mm	466mm	62mm	90mm	1.0kg
H-PROFILE-S-154-ELB	1 x 54W	1 x 4450	54W	0.98	0.26A	1183mm	1066mm	62mm	90mm	1.3kg
H-PROFILE-S-180-ELB	1 x 80W	1 x 6150	86W	0.98	0.38A	1483mm	1366mm	62mm	90mm	2.0kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON H-PRO-S LED



Photometric Diagram



Luminaire efficiency: 64.5%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Retail stores
- Offices
- Passages
- Reception areas

Product Features and Accessories

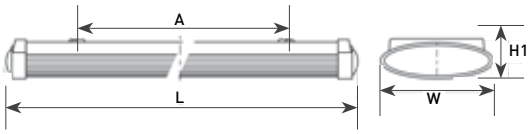
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Surface or suspended luminaire
- Frosted acrylic diffuser
- Extruded aluminium body
- Various coloured bodies available
- DALI/DSI and dimmable options available
- Emergency options available
- Custom lengths to order
- Available in 300mm, 600mm, 900mm, 1200mm

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions				Weight
					L	L2	W	H	
H-PROFILE-S-27W-LED	4640	29.6W	0.98	300mA	1126mm	790mm	62mm	90mm	1.3kg
H-PROFILE-S-37W-LED	5980	40.2W	0.98	400mA	1126mm	790mm	62mm	90mm	1.3kg

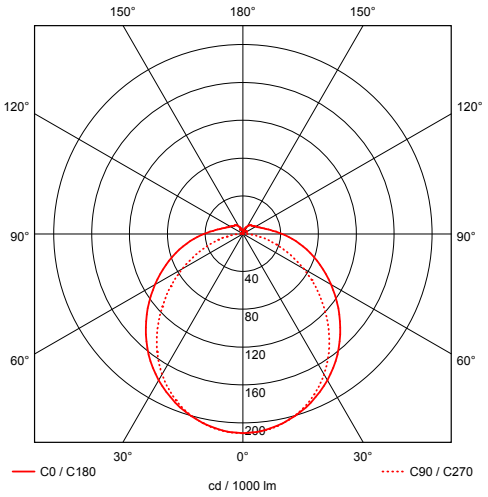
SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON M6V T5



Photometric Diagram



	C0	C90	C180
0°	211	211	211
10°	206	207	206
20°	195	193	195
30°	179	172	179
40°	158	142	158
50°	133	108	133
60°	108	74	108
70°	83	43	83
80°	61	18	61
90°	41	0	41
100°	27	2	27
110°	20	3	20
120°	16	4	16
130°	13	5	13
140°	12	6	12
150°	9	5	9
160°	6	3	6
170°	3	2	3
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 67%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Kitchens
- Passages
- Storage rooms
- Schools

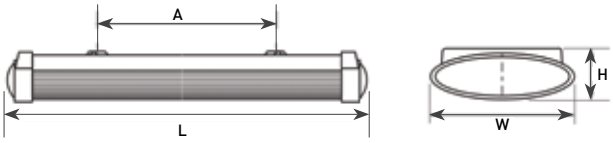
Product Features and Accessories

- Snap-on injection moulded plastic end-caps
- Frosted prismatic diffuser
- Rolled mild steel body with a white epoxy powder coated finish
- Suspension kit available (ordered separately)
- Individual mounting and continuous row mounting (mid cap assembly ordered separately)
- DALI/DSI and dimmable options available
- Emergency options available

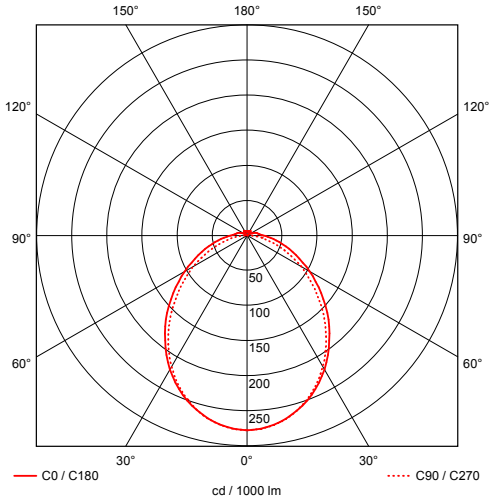
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions				Weight
						L	A	W	H1	
M6V-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1250mm	800mm	208mm	77mm	3.0kg
M6V-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1250mm	800mm	208mm	77mm	3.0kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON M6V LED



Photometric Diagram



	C0	C90	C180
0°	278	278	278
10°	270	270	270
20°	250	249	250
30°	220	216	220
40°	182	174	182
50°	142	130	142
60°	103	89	103
70°	69	51	69
80°	42	21	42
90°	23	1	23
100°	16	1	16
110°	11	2	11
120°	4	4	4
130°	3	4	3
140°	7	5	7
150°	8	5	8
160°	7	6	7
170°	6	6	6
180°	6	6	6
	cd / 1000 lm		

Luminaire efficiency: 84.67%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Kitchens
- Storage rooms
- Passages
- Schools

Product Features and Accessories

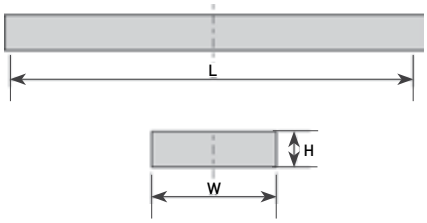
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a white epoxy powder coated finish
- Snap-on injection moulded plastic end-caps
- Frosted prismatic diffuser
- Individual mounting and continuous row mounting (mid cap assembly ordered separately)
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions				Weight
					L	A	W	H1	
M6V-27W-LED	4640	29.6W	0.98	300mA	683mm	460mm	208mm	77mm	2.0kg
M6V-37W-LED	5980	40.2W	0.98	400mA	683mm	460mm	208mm	77mm	2.0kg

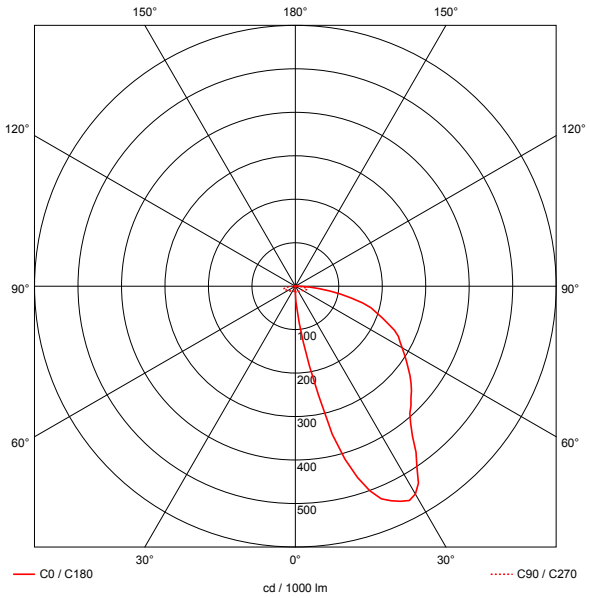
SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON RAW-N T5



Photometric Diagram



Luminaire efficiency: 70.62%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Retail stores
- Fashion stores
- Food stores
- Lecture rooms

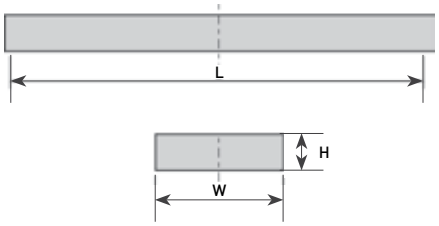
Product Features and Accessories

- Provides uniform illumination of the vertical surface from the ceiling
- Can be surface mounted or recessed
- Polished anodized aluminium high performance reflector
- Rolled mild steel body with a grey epoxy powder coated finish (white body available on request)
- DALI/DSI and dimmable options available
- Emergency options available

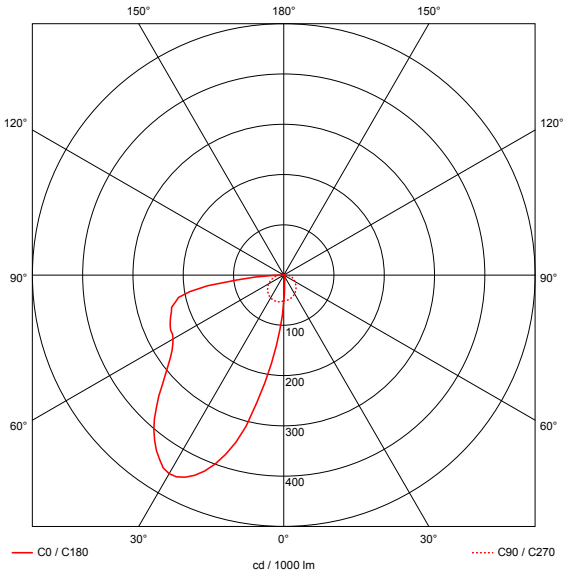
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
RAW-N-224-ELB	2 x 24W	2 x 1750	52W	0.98	0.24A	692mm	191mm	60mm	3.4kg
RAW-N-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1191mm	191mm	60mm	4.2kg

SABS APPROVED · IP65 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON RAW LED



Photometric Diagram



Luminaire efficiency: 66.4%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Retail stores
- Fashion stores
- Food stores
- Lecture rooms

Product Features and Accessories

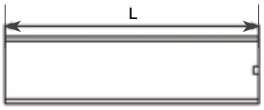
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Provides uniform illumination of the vertical surface from the ceiling
- Can be surface mounted or recessed
- Polished anodized aluminium high performance reflector
- Optic hides the LEDs
- Rolled mild steel body with a grey epoxy powder coated finish (white body available on request)
- DALI/DSI and dimmable options available

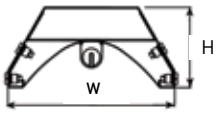
Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
RAW-18.5W-LED	2990	20.1W	0.98	400mA	692mm	191mm	60mm	3.2kg
RAW-37W-LED	5980	40.2W	0.98	400mA	1191mm	191mm	60mm	3.2kg

SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

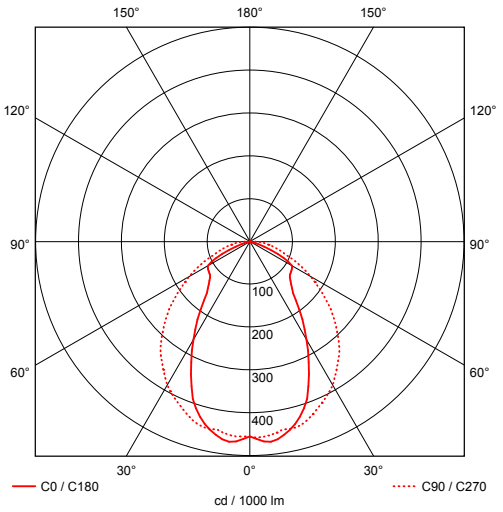
PRODUCED IN RSA

LASCON RAIL T5





Photometric Diagram



	C0	C90	C180
0°	455	455	455
5°	469	455	469
10°	458	445	458
15°	432	445	432
20°	391	429	391
25°	326	408	326
30°	265	386	265
35°	208	355	208
40°	157	325	157
45°	135	286	135
50°	122	246	122
55°	118	203	118
60°	114	164	114
65°	80	126	80
70°	36	89	36
75°	4	64	4
80°	1	44	1
85°	0	26	0
90°	0	9	0

cd / 1000 lm

Luminaire efficiency: 92.25%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Retail stores
- Factories
- Aisle lighting
- Warehouses

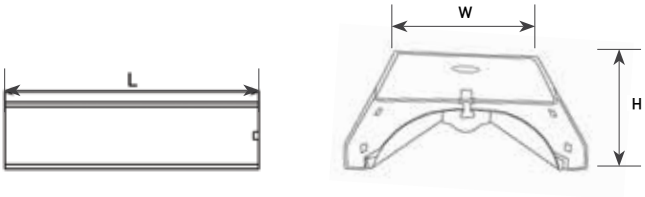
Product Features and Accessories

- Single mount or continuous row lighting
- Supplied with fish plates for continuous row lighting
- End-caps ordered separately
- Suitable for mounting on trunking
- 1500G2 anti-iridescent matt aluminium louvre
- Rolled mild steel body with a grey epoxy powder coated finish (white body available on request)
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
RAIL-154-ELB	1 x 54W	1 x 4450	54W	0.98	0.26A	1225mm	150mm	72mm	4.0kg
RAIL-180-ELB	1 x 80W	1 x 6150	86W	0.98	0.38A	1525mm	150mm	72mm	5.0kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON RAIL LED



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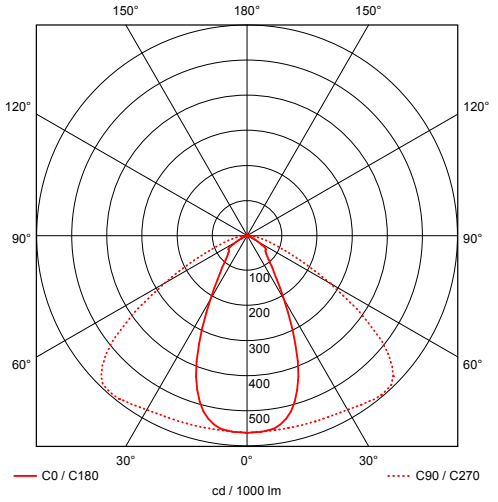

	C0	C90	C180
0°	562	562	562
5°	560	560	560
10°	547	561	547
15°	505	562	505
20°	427	564	427
25°	316	567	316
30°	210	574	210
35°	141	584	141
40°	103	594	103
45°	80	586	80
50°	69	525	69
55°	65	406	65
60°	37	273	37
65°	17	166	17
70°	10	96	10
75°	8	54	8
80°	5	27	5
85°	2	10	2
90°	0	1	0
	cd / 1000 lm		

Luminaire efficiency: 92.74%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Retail stores
- Factories
- Aisle lighting
- Warehouses

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Single mount or continuous row lighting
- Supplied with fish plates for continuous row lighting
- End-caps ordered separately
- Suitable for mounting on trunking
- Rolled mild steel body with a grey epoxy powder coated finish (white body available on request)
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
RAIL-27W-LED	4640	29.6W	0.98	300mA	1225mm	150mm	72mm	4.0kg
RAIL-37W-LED	5980	40.2W	0.98	400mA	1225mm	150mm	72mm	4.0kg

SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

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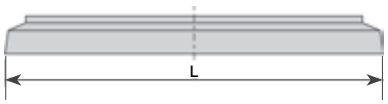
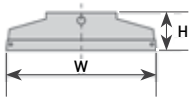
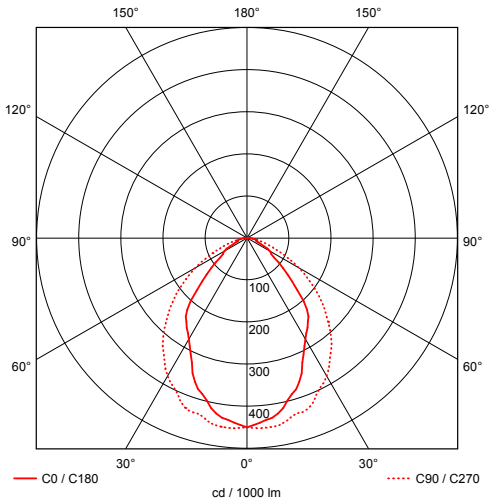
LASCON R-BAY T5





Photometric Diagram



	C0	C90	C180
0°	450	450	450
5°	437	453	437
10°	423	450	423
15°	392	435	392
20°	364	429	364
25°	315	401	315
30°	278	378	278
35°	251	345	251
40°	222	311	222
45°	160	269	160
50°	111	229	111
55°	74	184	74
60°	62	142	62
65°	41	98	41
70°	25	62	25
75°	24	38	24
80°	18	18	18
85°	7	4	7
90°	2	0	2

cd / 1000 lm

Luminaire efficiency: 87.05%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Retail stores
- Clothing stores
- Food stores
- Grocery stores

Product Features and Accessories

- Designed for retail environments with a semi-industrial look
- Anti-glare micro linear frost diffuser
- Miro 4 silver aluminium high performance reflector
- Complete with P2000 mounting brackets, 4 x rivnuts and M5 eyebolts
- Rolled mild steel body with a structured silver epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
R-BAY-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1195mm	240mm	80mm	4.0kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED

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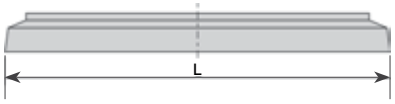
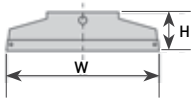
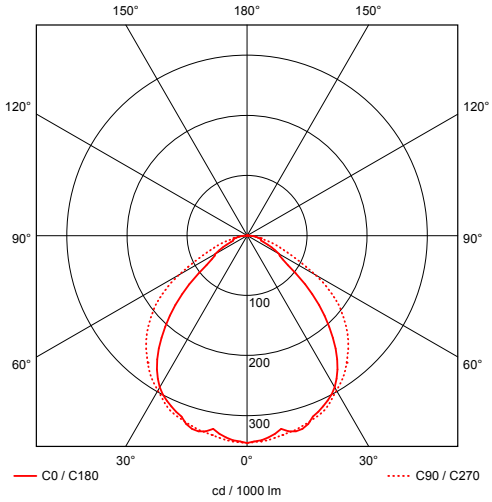
LASCON R-BAY LED





Photometric Diagram



	C0	C90	C180
0°	345	345	345
5°	340	342	340
10°	326	337	326
15°	336	331	336
20°	320	324	320
25°	308	315	308
30°	291	297	291
35°	262	281	262
40°	222	260	222
45°	176	237	176
50°	126	208	126
55°	77	175	77
60°	62	131	62
65°	42	87	42
70°	25	57	25
75°	23	35	23
80°	16	17	16
85°	7	4	7
90°	1	1	1

cd / 1000 lm

Luminaire efficiency: 80.37%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Retail stores
- Clothing stores
- Food stores
- Grocery stores

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Designed for quick and easy installations, it comes complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- Rolled mild steel body with a structured silver epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- Complete with Micro Linear frost diffuser
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
R-BAY-54W-LED	9280	59.2W	0.98	300mA	1195mm	240mm	105mm	4.0kg
R-BAY-74W-LED	11 960	80.4W	0.98	400mA	1195mm	240mm	105mm	4.0kg

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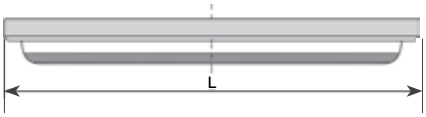
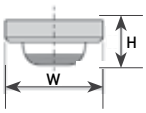
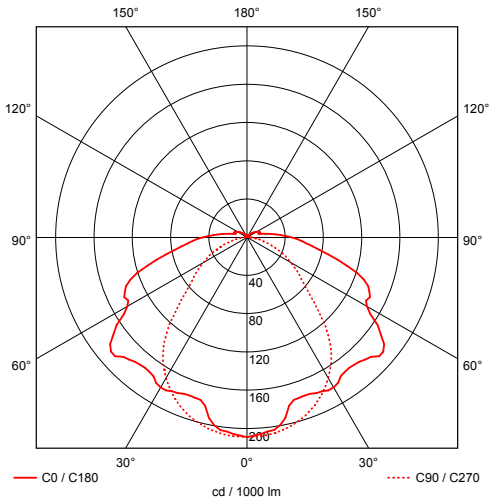
LASCON TP T5





Photometric Diagram



	C0	C90	C180
0°	209	209	209
10°	199	205	199
20°	176	193	176
30°	181	170	181
40°	174	132	174
50°	186	79	186
60°	145	53	145
70°	130	30	130
80°	77	12	77
90°	47	3	47
100°	23	3	23
110°	15	2	15
120°	12	1	12
130°	8	1	8
140°	4	1	4
150°	2	1	2
160°	2	1	2
170°	1	0	1
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 79%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Prison cells
- Psychiatric hospital
- High security areas
- Holding cells

Product Features and Accessories

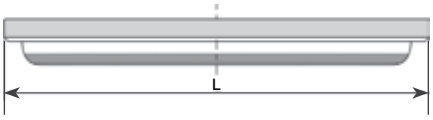
- "Snake eye" tamper proof screws hold the diffuser into place and are removable with a special tool
- Approved luminaire by the department of correctional services
- One-piece injection moulded self-extinguishing UV stabilised polycarbonate injection moulded diffuser
- Rolled mild steel body with a white epoxy powder coated finish
- Available with night light
- DALI/DSI and dimmable options available
- Emergency options available

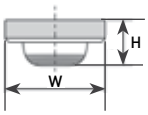
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
TP-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1299mm	210mm	120mm	8.0kg
TP-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1599mm	210mm	120mm	9.6kg

SABS APPROVED · IP65 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED

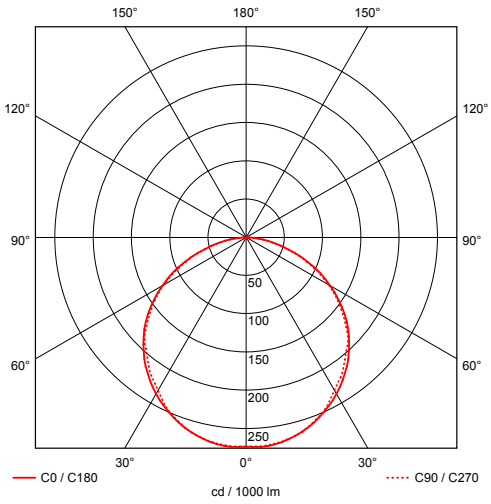
PRODUCED IN RSA

LASCON TP LED





Photometric Diagram



	C0	C90	C180
0°	273	273	273
5°	275	273	275
10°	271	271	271
15°	266	266	266
20°	258	257	258
25°	248	246	248
30°	236	231	236
35°	222	218	222
40°	207	202	207
45°	190	188	190
50°	171	168	171
55°	150	147	150
60°	127	125	127
65°	103	100	103
70°	77	76	77
75°	52	51	52
80°	29	28	29
85°	11	10	11
90°	1	1	1

cd / 1000 lm

Luminaire efficiency: 79.02%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs @ (L70 F10, TP 65°C)

Applications

- Prison cells
- Psychiatric hospital
- High security areas
- Holding cells

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- "Snake eye" tamper proof screws hold the diffuser into place and are removable with a special tool
- Optic hides the LEDs
- Approved luminaire by the department of correctional services
- One-piece injection moulded self-extinguishing UV stabilised polycarbonate injection moulded diffuser
- Rolled mild steel body with a white epoxy powder coated finish
- Available with night light
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
TP-27W-LED	4640	29.6W	0.98	300mA	1299mm	210mm	120mm	8.0kg
TP-37W-LED	5980	40.2W	0.98	400mA	1599mm	210mm	120mm	9.6kg

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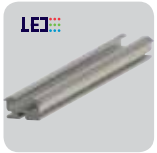
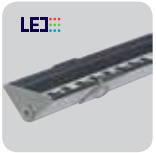
NOTES

LASCON
LED LIGHTING SYSTEMS

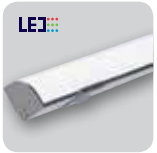
CLOSED CHANNEL
page 58



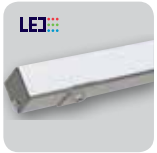
SLIMLINE
page 59



HAWK OPEN
page 60

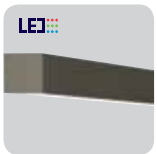


HAWK ROUND
page 61



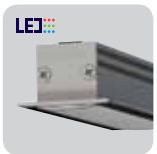
HAWK SQUARE
page 62

LYNX SURFACE
page 63



ORYX SURFACE
page 64

ORYX PENDANT
page 65



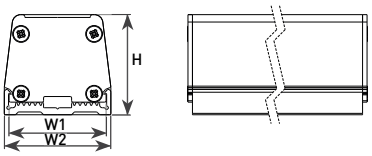
DAKOTA
page 66

LYNX RECESSED
page 67

ORYX RECESSED
page 68

ORYX SEMI-RECESSED
page 69

LASCON CLOSED CHANNEL LED



Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Retail stores
- Offices
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K & 5000K on request)
- Finish – natural and black anodise. White powder coating
- 5W, 10W and 15W versions available
- Custom cut length up to 5m
- DALI and dimmable options available

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				W1	W2	H	
CLOSED CHANNEL – 5W	400/m	6W	0.96	34.6mm	38mm	35.7mm	1.2kg
CLOSED CHANNEL – 10W	800/m	12W	0.96	34.6mm	38mm	35.7mm	1.2kg
CLOSED CHANNEL – 15W	1200/m	17W	0.96	34.6mm	38mm	35.7mm	1.2kg

Note:

- Photometrics available on request

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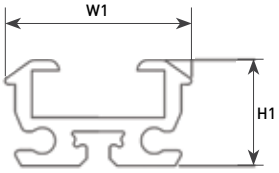
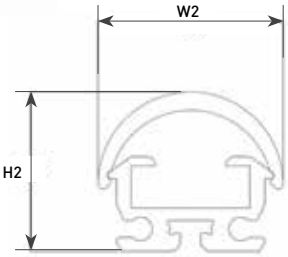
LASCON SLIMLINE LED

Without cover

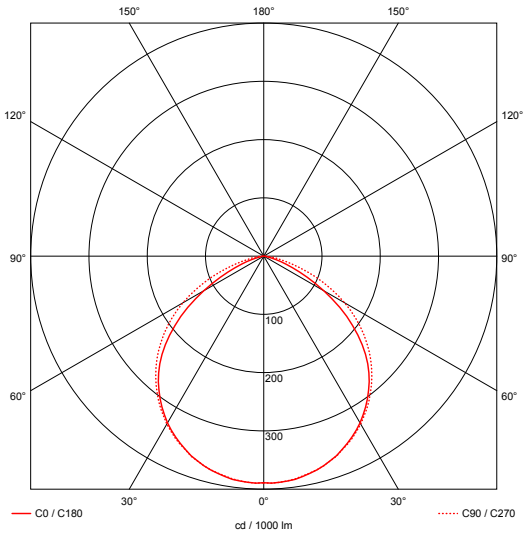
With cover

Clip accessory





Photometric Diagram



Luminaire efficiency: 92.3%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Retail stores
- Offices
- Hotels

Product Features and Accessories

- High colour rendering index CRI >80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodise
- 5W, 10W and 15W versions available
- Custom cut length up to 5m
- DALI and dimmable options available
- Fixing via clips
- Magnetic tape fixing available
- Mechanical clips available in 0, 15, 30, 45 and 60 degrees.

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions				Weight
				W1	W2	H1	H2	
SLIMLINE – 5W	400/m	6W	0.96	18mm	20mm	10mm	17mm	0.2kg
SLIMLINE –10W	800/m	12W	0.96	18mm	20mm	10mm	17mm	0.2kg
SLIMLINE –15W	1200/m	17W	0.96	18mm	20mm	10mm	17mm	0.2kg

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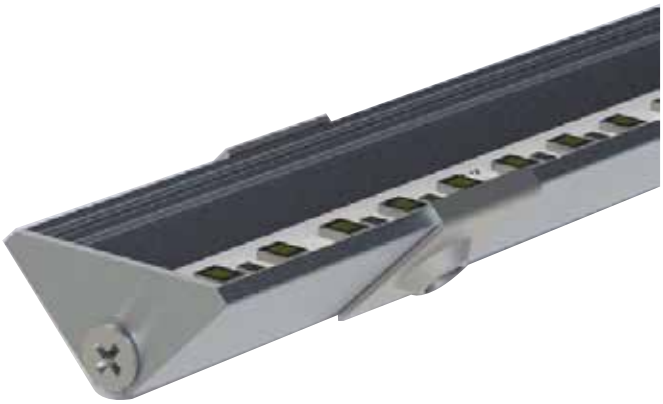
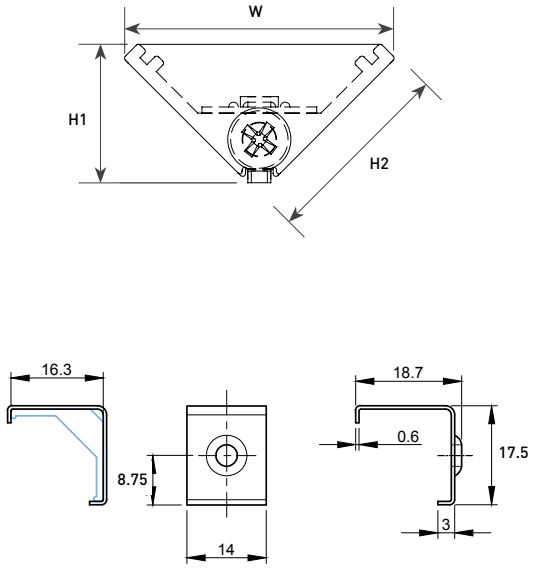
LASCON HAWK OPEN LED





Clip accessory

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Coves
- Display cabinets

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised
- 10W and 15W versions available
- Custom cut length up to 5m
- Fully dimmable
- Fixing via clips

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				W	H1	H2	
HAWK-OPEN-10W	800/m	12W	0.96	24mm	12mm	16mm	0.2kg P/M
HAWK-OPEN-15W	1200/m	17W	0.96	24mm	12mm	16mm	0.2kg P/M

Note:

- Photometrics available on request

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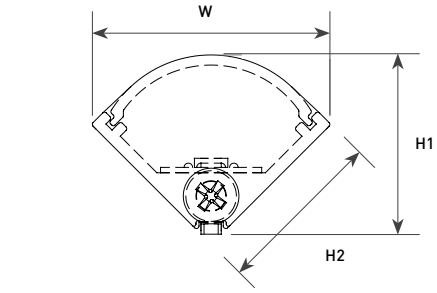
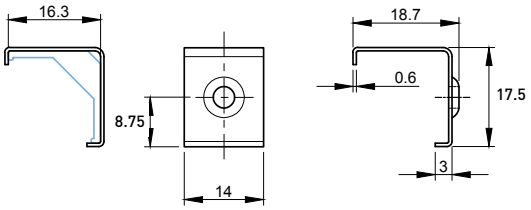
LASCON HAWK ROUND LED





Clip accessory

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Application

- Joinery

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised
- 10W and 15W versions available
- Custom cut length up to 5m
- Fully dimmable
- Fixing via clips

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				W	H1	H2	
HAWK-ROUND-10W	800/m	12W	0.96	24mm	18mm	16mm	0.3kg P/M
HAWK-ROUND-15W	1200/m	17W	0.96	24mm	18mm	16mm	0.3kg P/M

Note:

- Photometrics available on request

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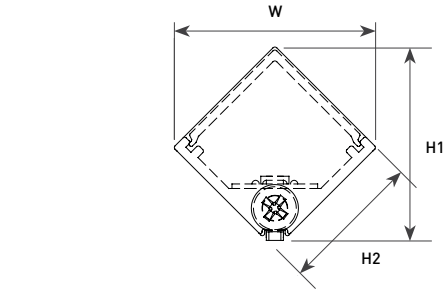
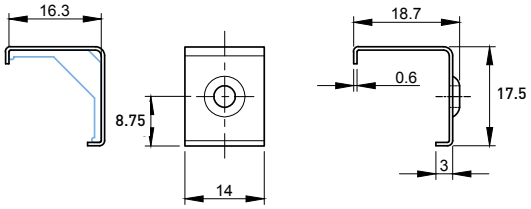
LASCON HAWK SQUARE LED





Clip accessory

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Application

- Joinery

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised
- 10W and 15W versions available
- Custom cut length up to 5m
- Fully dimmable
- Fixing via clips

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				W	H1	H2	
HAWK-SQUARE-10W	800/m	12W	0.96	23mm	23mm	16mm	0.3kg P/M
HAWK-SQUARE-15W	1200/m	17W	0.96	23mm	23mm	16mm	0.3kg P/M

Note:

- Photometrics available on request

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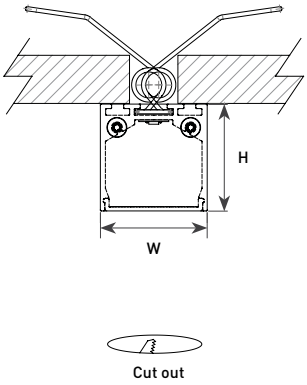
LASCON LYNX SURFACE LED



Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Offices / reception areas
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised. White powder coated
- 15W, 25W and 40W versions available
- Custom cut length up to 5m
- Fully dimmable

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				Cut out	W	H	
LYNX-SURFACE-15W	1200/m	17W	0.96	16mm	36mm	36mm	0.9kg P/M
LYNX-SURFACE-25W	2200/m	28W	0.96	16mm	36mm	36mm	0.9kg P/M
LYNX-SURFACE-40W	4000/m	44W	0.96	16mm	36mm	36mm	0.9kg P/M

Note:

- Photometrics available on request

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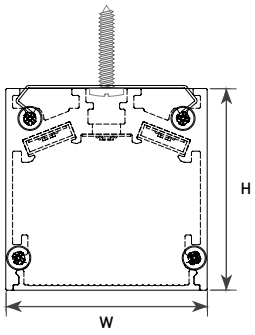
LASCON ORYX SURFACE LED



Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Offices / reception areas
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised. White powder coated
- 15W, 25W and 40W versions available
- Custom cut length up to 5m
- Fully dimmable

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions		Weight
				W	H	
ORYX-SURFACE-15W	1200/m	17W	0.96	50mm	50mm	1.5kg P/M
ORYX-SURFACE-25W	2200/m	28W	0.96	50mm	50mm	1.5kg P/M
ORYX-SURFACE-40W	4000/m	44W	0.96	50mm	50mm	1.5kg P/M

Note:

- Photometrics available on request

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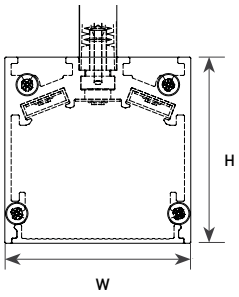
LASCON ORYX PENDANT LED



Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Offices / reception areas
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised. White powder coated
- 15W, 25W and 40W versions available
- Custom cut length up to 5m
- Fully dimmable
- Suspension kit supplied separately

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions		Weight
				W	H	
ORYX-PENDANT-15W	1200/m	17W	0.96	50mm	50mm	1.5kg P/M
ORYX-PENDANT-25W	2200/m	28W	0.96	50mm	50mm	1.5kg P/M
ORYX-PENDANT-40W	4000/m	44W	0.96	50mm	50mm	1.5kg P/M

Note:

- Photometrics available on request

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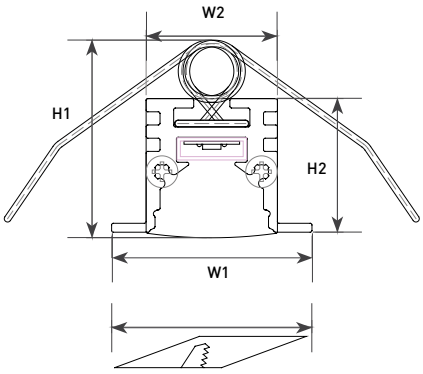
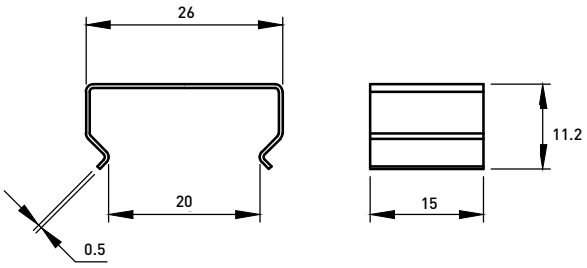
LASCON DAKOTA LED



Cut out



Clip accessory

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Retail stores
- Offices
- Residential
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K, 5000K and 6000K on request)
- Finish – natural and black anodised. White Powder Coated
- 10W and 15W versions available
- Custom cut length up to 5m
- Fully dimmable
- Fixing spring or clip

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions					Weight
				Cut Out	W1	W2	H1	H2	
DAKOTA -10W	800/m	12W	0.96	26mm	36mm	24mm	35mm	24mm	0.7kg P/M
DAKOTA -15W	1200/m	17W	0.96	26mm	36mm	24mm	35mm	24mm	0.7kg P/M

Note:

- Photometrics available on request

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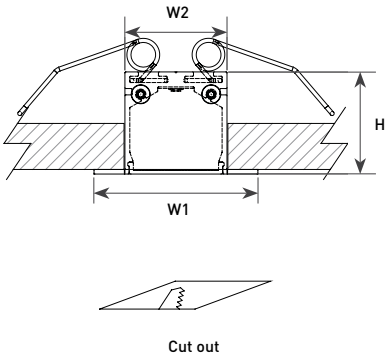
LASCON LYNX RECESSED LED



Cut out

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Offices / reception areas
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised. White powder coated
- 15W, 25W and 40W versions available
- Custom cut length up to 5m
- Fully dimmable

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions				Weight
				Cut out	W1	W2	H	
LYNX-RECESSED-15W	1200/m	17W	0.96	38mm	57mm	36mm	36mm	1.0kg P/M
LYNX-RECESSED-25W	2200/m	28W	0.96	38mm	57mm	36mm	36mm	1.0kg P/M
LYNX-RECESSED-40W	4000/m	44W	0.96	38mm	57mm	36mm	36mm	1.0kg P/M

Note:

- Photometrics available on request

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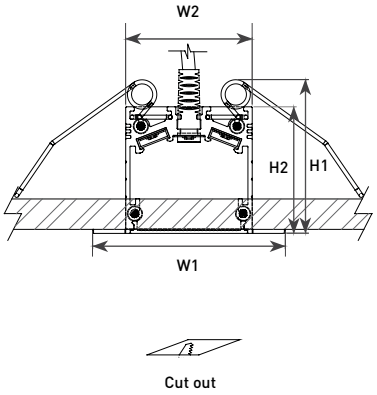
LASCON ORYX RECESSED LED



Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Offices / reception areas
- Conference Rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised. White powder coated
- 15W, 25W and 40W versions available
- Custom cut length up to 5m
- Fully dimmable

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions					Weight
				Cut out	W1	W2	H1	H2	
ORYX-RECESSED-15W	1200/m	17W	0.96	55mm	76mm	50mm	60mm	50mm	1.5kg P/M
ORYX-RECESSED-25W	2200/m	28W	0.96	55mm	76mm	50mm	60mm	50mm	1.5kg P/M
ORYX-RECESSED-40W	4000/m	44W	0.96	55mm	76mm	50mm	60mm	50mm	1.5kg P/M

Note:

- Photometrics available on request

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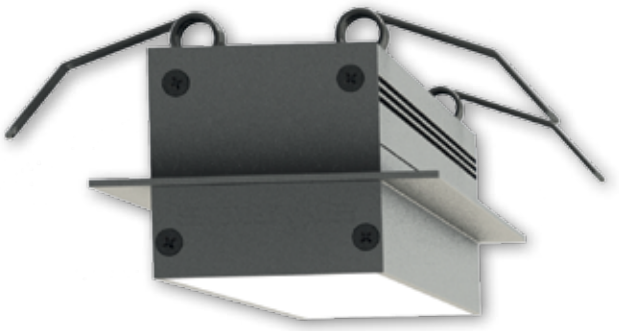
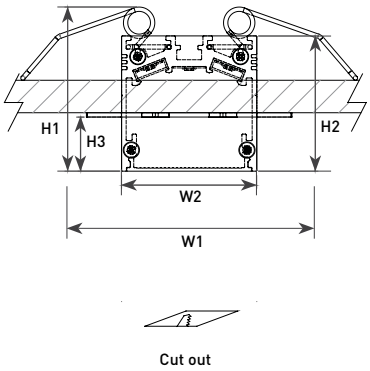
LASCON ORYX SEMI-RECESSED LED





Cut out

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10)

Applications

- Residential
- Offices / reception areas
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K and 5000K on request)
- Finish – natural and black anodised. White powder coated
- 15W, 25W and 40W versions available
- Custom cut length up to 5m
- Fully dimmable

Specification	Lumen @65°C	System Power	Power Factor	Dimensions						Weight
				Cut Out	W1	W2	H1	H2	H3	
ORYX-SEMI-RECESSED-15W	1200/m	17W	0.96	55mm	76mm	50mm	60mm	50mm	20mm	1.5kg P/M
ORYX-SEMI-RECESSED-25W	2200/m	28W	0.96	55mm	76mm	50mm	60mm	50mm	20mm	1.5kg P/M
ORYX-SEMI-RECESSED-40W	4000/m	44W	0.96	55mm	76mm	50mm	60mm	50mm	20mm	1.5kg P/M

Note:

- Photometrics available on request

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NOTES

LASCON
CHANNELS AND BATTENS

CHANNEL T5
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SEAMLESS BATTEN T5
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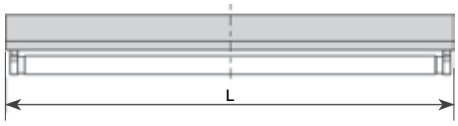
BATTEN T5
page 74

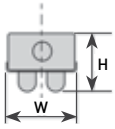
BATTEN
page 75

LASCON CHANNEL T5

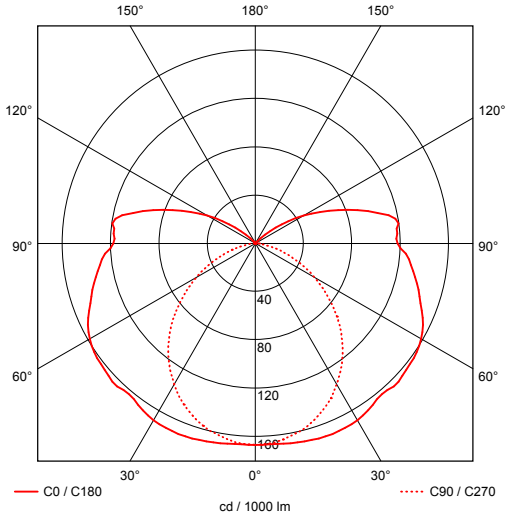
Wing accessory

Wire guard accessory





Photometric Diagram



	C0	C90	C180
0°	167	167	167
10°	168	163	168
20°	170	152	170
30°	169	135	169
40°	163	112	163
50°	163	85	163
60°	158	57	158
70°	146	30	146
80°	133	9	133
90°	118	0	118
100°	118	0	118
110°	81	0	81
120°	46	0	46
130°	16	0	16
140°	1	0	1
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 86.52%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Semi-industrial
- General lighting
- Storage rooms
- Parking garages

Product Features and Accessories

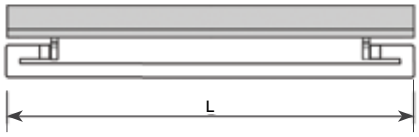
- Narrow T5 body channel
- Rolled mild steel body with a white epoxy powder coated finish
- WING attachment available
- B-FOCAL WING attachment available
- WIRE GUARD attachment available
- DALI/DSI and dimmable options available
- Emergency options available

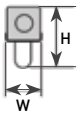
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
CHANNEL-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1180mm	72mm	64mm	2.2kg
CHANNEL-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1180mm	72mm	64mm	2.2kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED

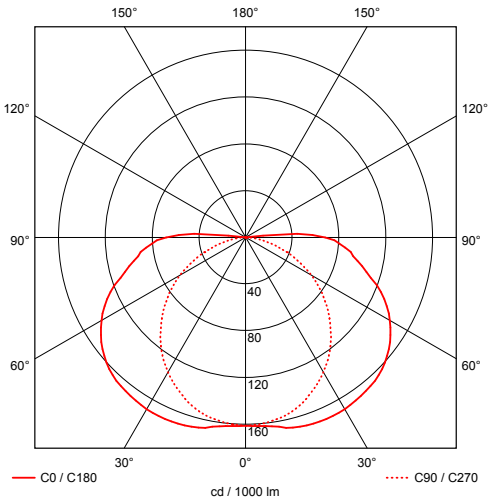
PRODUCED IN RSA

LASCON SEAMLESS BATTEN T5





Photometric Diagram



	C0	C90	C180
0°	161	161	161
5°	162	160	162
10°	164	158	164
15°	168	154	168
20°	170	148	170
25°	170	141	170
30°	170	133	170
35°	168	124	168
40°	166	114	166
45°	163	102	163
50°	158	90	158
55°	151	78	151
60°	142	65	142
65°	132	51	132
70°	120	38	120
75°	105	25	105
80°	93	14	93
85°	83	5	83
90°	68	0	68
	cd / 1000 lm		

Luminaire efficiency: 68.87%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Product Features and Accessories

- Narrow single lamp T5 body
- Continuous row lighting without shadows
- Rolled mild steel body with a white epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

Applications

- Cover lighting
- Food store lighting
- Continuous row lighting
- Retail lighting

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
SEAMLESS BATTEN-154-ELB	1 x 54W	1 x 4450	54W	0.98	0.26A	1180mm	44mm	81mm	1.3kg

SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED

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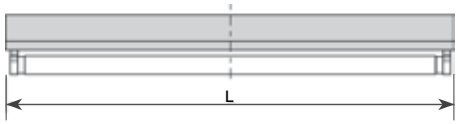
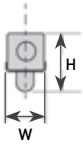
LASCON BATTEN T5

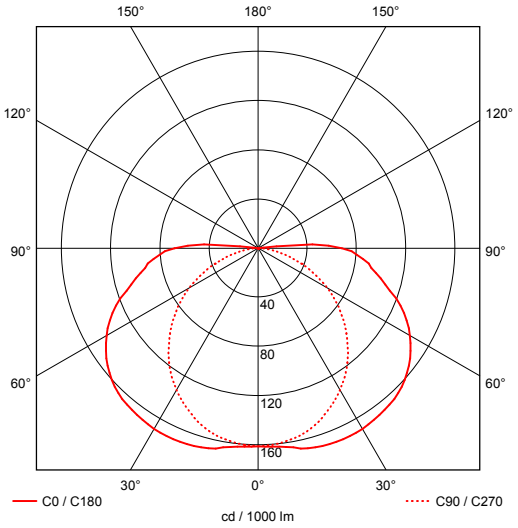
Batten T5

Batten Bi-Focal





Photometric Diagram



	C0	C90	C180
0°	161	161	161
5°	162	160	162
10°	164	158	164
15°	168	154	168
20°	170	148	170
25°	170	141	170
30°	170	133	170
35°	168	124	168
40°	166	114	166
45°	163	102	163
50°	158	90	158
55°	151	78	151
60°	142	65	142
65°	132	51	132
70°	120	38	120
75°	105	25	105
80°	93	14	93
85°	83	5	83
90°	68	0	68

cd / 1000 lm

Luminaire efficiency: 68.87%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Product Features and Accessories

- Narrow single lamp T5 body
- Rolled mild steel body with a white epoxy powder coated finish
- BI-FOCAL WING attachment available
- DALI/DSI and dimmable options available
- Emergency options available

Applications

- Cove lighting
- General lighting
- Storage rooms
- Parking garages

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
BATTEN-124-ELB	1 x 24W	1 x 1750	28W	0.98	0.13A	680mm	44mm	64mm	1.0kg
BATTEN-128-ELB	1 x 28W	1 x 2600	31W	0.96	0.14A	1180mm	44mm	64mm	1.3kg
BATTEN-154-ELB	1 x 54W	1 x 4450	54W	0.98	0.26A	1180mm	44mm	64mm	1.3kg
BATTEN-149-ELB	1 x 49W	1 x 4300	53W	0.95	0.24A	1480mm	44mm	64mm	1.8kg
BATTEN-180-ELB	1 x 80W	1 x 6150	86W	0.98	0.38A	1480mm	44mm	64mm	1.8kg

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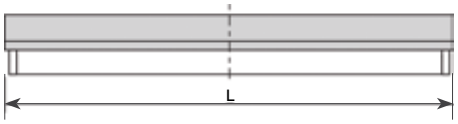
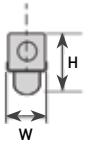
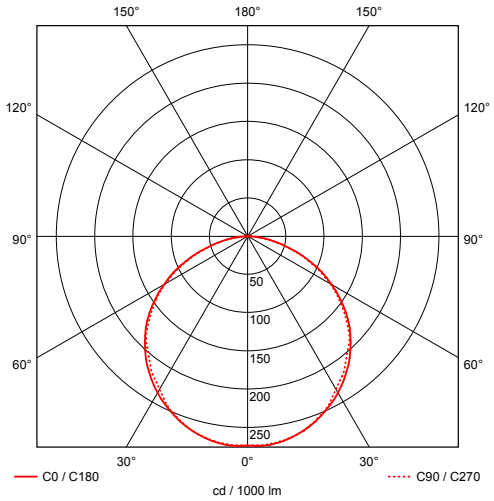
LASCON BATTEN LED





Photometric Diagram



	C0	C90	C180
0°	273	273	273
5°	275	273	275
10°	271	271	271
15°	266	266	266
20°	258	257	258
25°	248	246	248
30°	236	231	236
35°	222	218	222
40°	207	202	207
45°	190	188	190
50°	171	168	171
55°	150	147	150
60°	127	125	127
65°	103	100	103
70°	77	76	77
75°	52	51	52
80°	29	28	29
85°	11	10	11
90°	1	1	1

cd / 1000 lm

Luminaire efficiency: 80.22%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Cove lighting
- Retail lighting
- Storage rooms
- Passage lighting

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Rolled mild steel body with a white epoxy powder coated finish
- Semi-transparent PMMA diffuser
- Polycarbonate end-caps
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
BATTEN-20W-LED	3520	21.7W	0.98	225mA	1120mm	44mm	73mm	1.3kg
BATTEN-25W-LED	4260	26.8W	0.98	275mA	1120mm	44mm	73mm	1.3kg
BATTEN-27W-LED	4640	29.6W	0.98	300mA	1120mm	44mm	73mm	1.3kg
BATTEN-32W-LED	5340	34.7W	0.98	350mA	1120mm	44mm	73mm	1.3kg
BATTEN-37W-LED	5980	40.2W	0.98	400mA	1120mm	44mm	73mm	1.3kg

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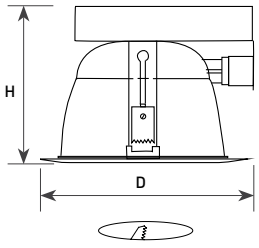
NOTES

LASCON
DOWNLIGHTS

LASCON FUTURA 1 CFL

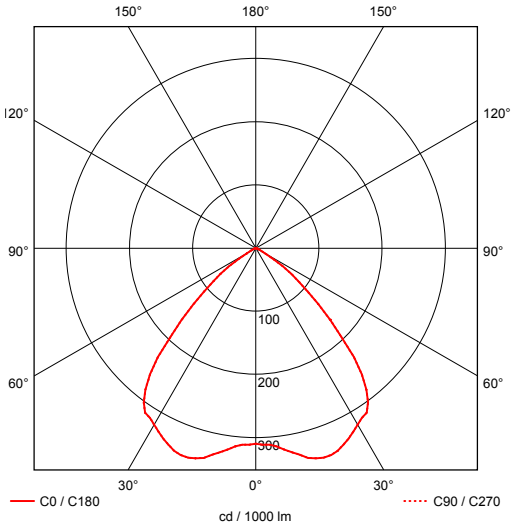
Dropped glass option

Flush glass option



Cut out

Photometric Diagram



	C0	C90	C180
0°	309	309	309
5°	313	313	313
10°	328	328	328
15°	344	344	344
20°	348	348	348
25°	338	338	338
30°	322	322	322
35°	308	308	308
40°	261	261	261
45°	179	179	179
50°	107	107	107
55°	60	60	60
60°	17	17	17
65°	3	3	3
70°	1	1	1
75°	1	1	1
80°	1	1	1
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 67.10%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- General lighting
- Offices
- Conference rooms
- Corridors

Product Features and Accessories

- Pure aluminium reflector
- Faceted reflector
- Horizontal lamp position
- Flush glass accessory available
- Decorative dropped glass accessory available
- Electronic control gear
- Dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		
						Cut Out	D	H
FUT1-113-ELB	1 x 13W	900	14W	0.60	0.10A	175mm	210mm	170mm
FUT1-118-ELB	1 x 18W	1200	18W	0.92	0.13A	175mm	210mm	170mm

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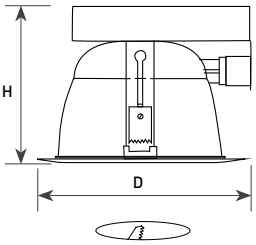
LASCON FUTURA 2 CFL

Dropped glass option

Flush glass option



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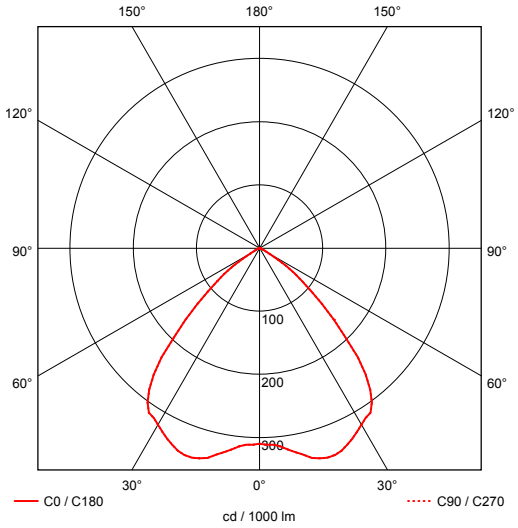
Photometric Diagram



	C0	C90	C180
0°	309	309	309
5°	313	313	313
10°	328	328	328
15°	344	344	344
20°	348	348	348
25°	338	338	338
30°	322	322	322
35°	308	308	308
40°	261	261	261
45°	179	179	179
50°	107	107	107
55°	60	60	60
60°	17	17	17
65°	3	3	3
70°	1	1	1
75°	1	1	1
80°	1	1	1
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 67.10%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- General lighting
- Offices
- Conference rooms
- Corridors

Product Features and Accessories

- Pure aluminium reflector
- Faceted reflector
- Horizontal lamp position
- Flush glass accessory available
- Decorative dropped glass accessory available
- Electronic control gear
- Dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		
						Cut Out	D	H
FUT2-218-ELB	2 x 18W	2 x 1200	36W	0.95	0.18A	210mm	240mm	170mm
FUT2-226-ELB	2 x 26W	2 x 1800	53W	0.95	0.25A	210mm	240mm	170mm

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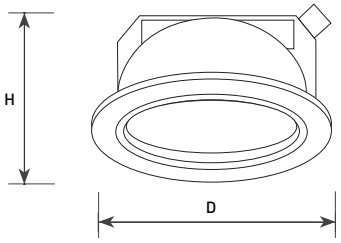
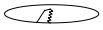
LASCON FUTURA 3 CFL





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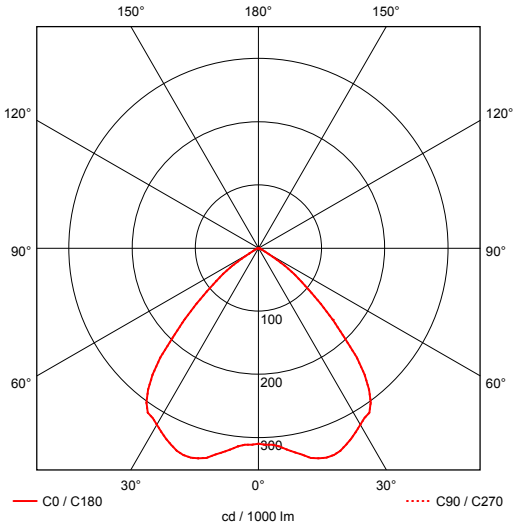
Photometric Diagram



	C0	C90	C180
0°	309	309	309
5°	313	313	313
10°	328	328	328
15°	344	344	344
20°	348	348	348
25°	338	338	338
30°	322	322	322
35°	308	308	308
40°	261	261	261
45°	179	179	179
50°	107	107	107
55°	60	60	60
60°	17	17	17
65°	3	3	3
70°	1	1	1
75°	1	1	1
80°	1	1	1
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 67.10%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- General lighting
- Offices
- Conference rooms
- Corridors

Product Features and Accessories

- Pure aluminium reflector
- Faceted reflector
- Horizontal lamp position
- Decorative flush glass
- Electronic control gear
- Dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		
						Cut Out	D	H
FUT3-213-ELB	2 x 13W	2 x 18W	2 x 1200	36W	0.95	210mm	240mm	170mm
FUT3-218-ELB	2 x 18W	2 x 26W	2 x 1800	53W	0.95	210mm	240mm	170mm

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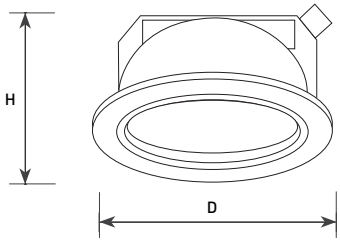
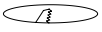
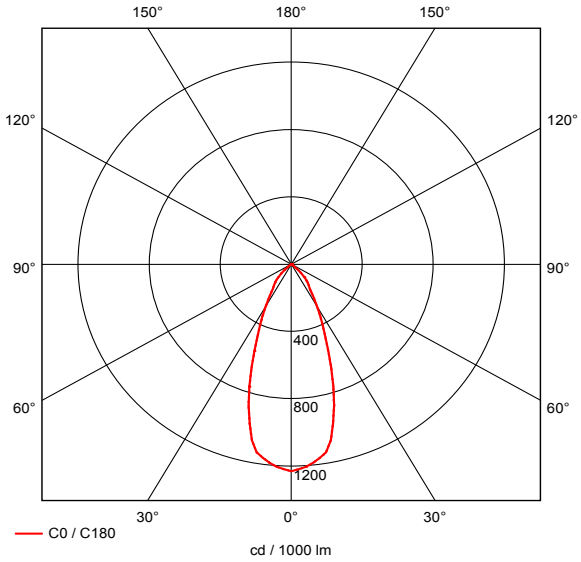
LASCON FUTURA 4 HID





Cut out

Photometric Diagram



Luminaire efficiency: 77.1%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	15 000hrs
Lumen Maintenance	80% luminous flux at 12 000hrs

Product Features and Accessories

- Pure aluminium reflector
- Faceted reflector
- Horizontal lamp position
- Decorative flush glass
- Metal halide electronic control gear

Applications

- General lighting
- Offices
- Conference rooms
- Corridors

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		
						Cut Out	D	H
FUT4-70W-ELB	1 x 70W	6800	73W	0.98	0.36A	210mm	240mm	170mm

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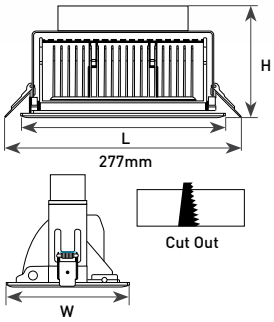
LASCON FUTURA 5 LED



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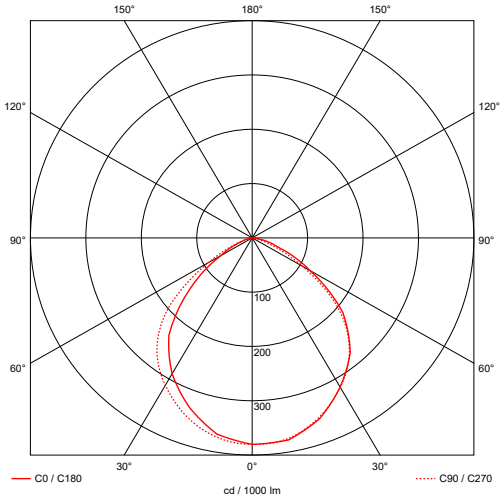

Luminaire efficiency: 84.9%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Shopping malls
- Retail lighting
- Conference rooms
- Foyers

Product Features and Accessories

- High colour rendering index CRI > 85
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- Samsung LED and VS Driver
- Ambient temperature: -25…+45°C
- Aluminium trim ring
- Aluminium reflector
- DALI/DSI and dimmable options available
- Emergency options available
- 120 degree beam angle

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions		
					Cut Out	L x W	H
FUT5-35W-LED	3800	38W	0.98	700mA	227 x 130mm	240 x 145mm	136mm

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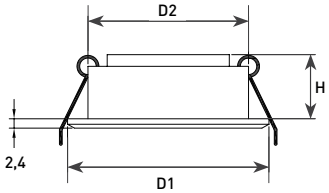
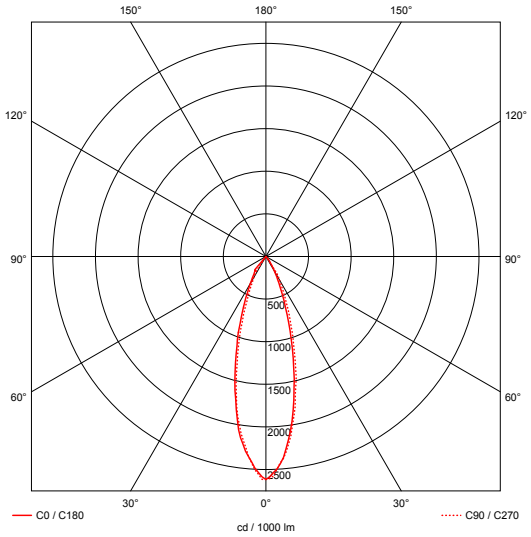
LASCON FUTURA 6 LED



Cut out

Photometric Diagram



Luminaire efficiency: 93.97%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs @ 350-700mA (L70 F10, TP 65°C)

Applications

- Residential
- Offices / reception areas
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 3000K (4000K on request)
- Philips LUXEON Rebel
- True replacement for 10W and 20W
- Finish: white or silver trim
- Clear lens
- Up to 10 fixtures per driver
- Excellent thermal management
- Fully dimmable

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions				Weight
				Cut Out	D1	D2	H	
FUT6-1W-LED	90	1.2W	0.6	46mm	51.8mm	41.3mm	16.5mm	0.1kg
FUT6-3W-LED	270	3.6W	0.6	46mm	51.8mm	41.3mm	16.5mm	0.1kg

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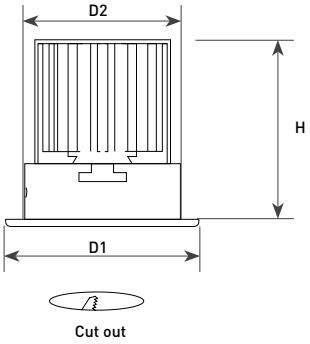
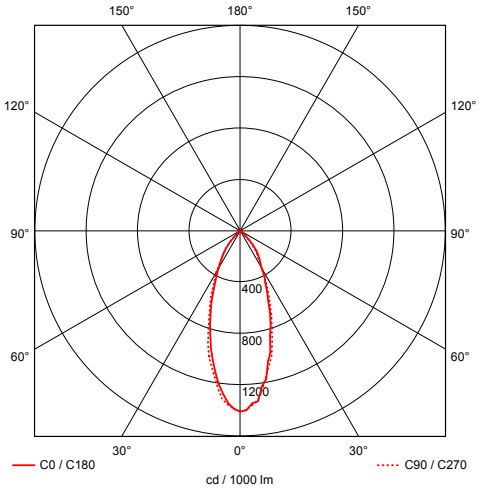
DIM OPTION

LASCON FUTURA 7 LED



Cut out

Photometric Diagram



	C0	C90	C180
0°	1409	1409	1409
5°	1355	1351	1315
10°	1176	1157	1122
15°	908	960	895
20°	680	720	676
25°	479	511	483
30°	337	340	339
35°	255	238	244
40°	186	154	152
45°	80	59	60
50°	29	19	23
55°	18	10	10
60°	10	4	4
65°	7	2	3
70°	4	0	0
75°	1	0	0
80°	1	0	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 83.05%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs @ 700mA (L70 F10, TP 65°C)

Applications

- Offices
- Reception areas
- Residential
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K and 3000K available
- Philips LUXEON M LED
- A true direct replacement for a 50W halogen downlight
- White or silver trim available
- Moulded plastic trim ring
- Clear lens (frosted lens on request)
- DALI, 1 to 10V and bell press dimming on request
- Excellent thermal management

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions				Weight
					Cut Out	D1	D2	H	
FUT7-10.5W-LED-830	805	10.5W	0.75	700mA	60mm	68mm	55mm	64mm	0.2kg
FUT7-10.5W-LED-840	905	10.5W	0.75	700mA	60mm	68mm	55mm	64mm	0.2kg

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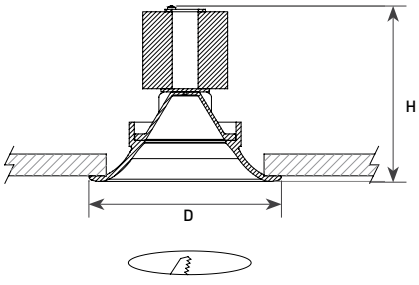
LASCON FUTURA 8 LED



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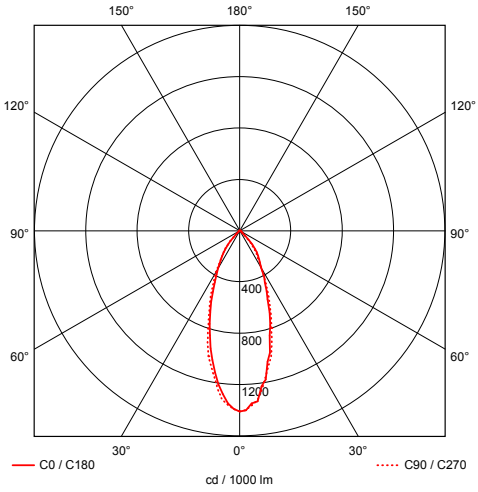
Photometric Diagram



	C0	C90	C180
0°	1409	1409	1409
5°	1355	1351	1315
10°	1176	1157	1122
15°	908	960	895
20°	680	720	676
25°	479	511	483
30°	337	340	339
35°	255	238	244
40°	186	154	152
45°	80	59	60
50°	29	19	23
55°	18	10	10
60°	10	4	4
65°	7	2	3
70°	4	0	0
75°	1	0	0
80°	1	0	0
85°	0	0	0
90°	0	0	0

cd / 1000 lm

Luminaire efficiency: 83.05%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs @ 700mA (F10,TP 65°C)

Applications

- Offices
- Reception areas
- Residential
- Conference rooms
- Hotels

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K and 3000K available
- Philips LUXEON M LED
- A true direct replacement for a 50W halogen downlight
- White or silver trim available
- Moulded plastic trim ring
- Clear lens (frosted lens on request)
- DALI, 1 to 10V and bell press dimming on request
- Excellent thermal management

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					Cut Out	D	H	
FUT8-10.5W-LED-830	805	10.5W	0.75	700mA	80mm	95mm	87mm	0.2kg
FUT8-10.5W-LED-840	905	10.5W	0.75	700mA	80mm	95mm	87mm	0.2kg

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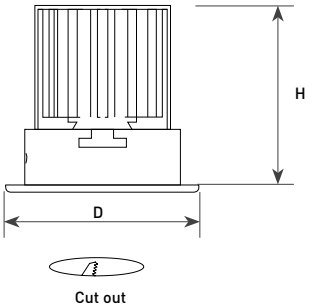
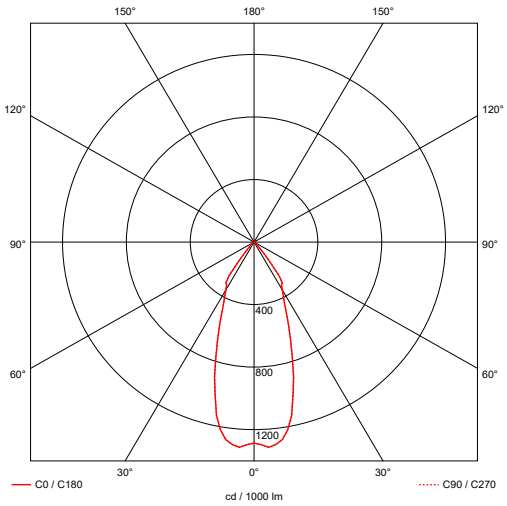
LASCON FUTURA 9 LED



Cut out

Photometric Diagram



Luminaire efficiency: 81.8%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Shopping malls
- Hotels
- Conference rooms
- Foyers

Product Features and Accessories

- High colour rendering index CRI > 85
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- VS LED module and driver
- Ambient temperature: -25…+45°C
- Aluminium trim ring
- Aluminium reflector
- DALI/DSI and dimmable options available
- Emergency options available
- Available in 30 and 45 degrees

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions		
					Cut Out	D	H
FUT9-16W-LED	2270	17.9W	0.98	420mA	125mm	140mm	120mm

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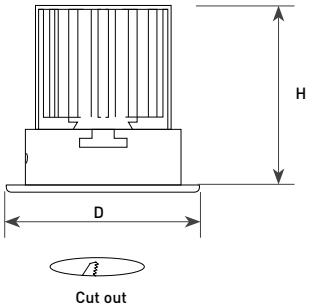
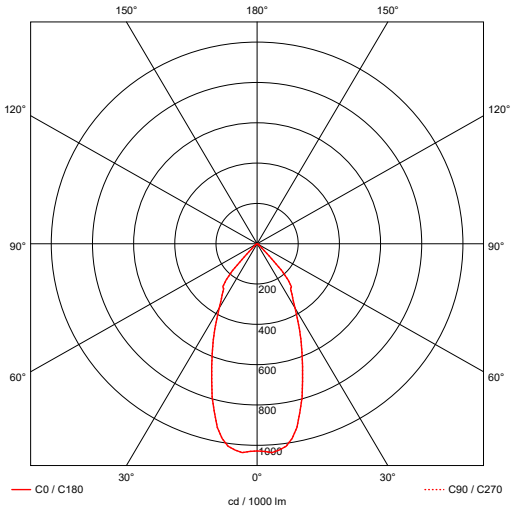
LASCON FUTURA 10 LED



Cut out

Photometric Diagram



Luminaire efficiency: 82.9%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Shopping malls
- Hotels
- Conference rooms
- Foyers

Product Features and Accessories

- High colour rendering index CRI > 85
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- VS LED module and driver
- Ambient temperature: -25…+45°C
- Aluminium trim ring
- Aluminium reflector
- DALI/DSI and dimmable options available
- Emergency options available
- Available in 30 and 45 degrees

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions		
					Cut Out	D	H
FUT10-24W-LED	3910	26.9W	0.98	700mA	165mm	180mm	135mm

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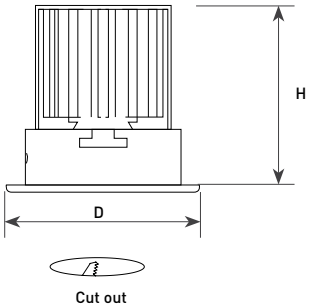
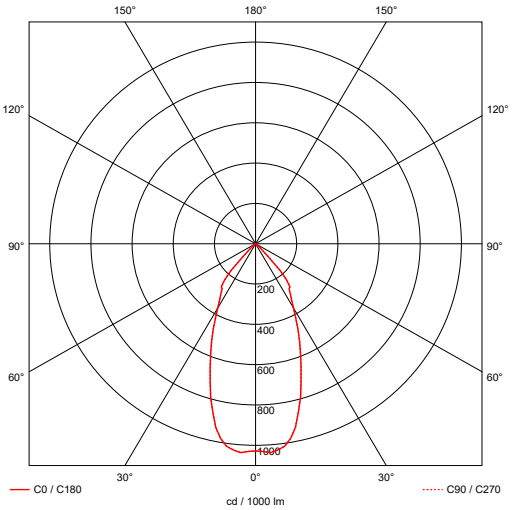
LASCON FUTURA 11 LED



Cut out

Photometric Diagram



Luminaire efficiency: 82.9%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Shopping malls
- Retail lighting
- Conference rooms
- Foyers

Product Features and Accessories

- High colour rendering index CRI > 85
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- VS LED module and driver
- Ambient temperature: -25…+45°C
- Aluminium trim ring
- Aluminium reflector
- DALI/DSI and dimmable options available
- Emergency options available
- Available in 30 and 45 degrees

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions		
					Cut Out	D	H
FUT11-36W-LED	5610	40.1W	0.98	1050mA	165mm	190mm	135mm

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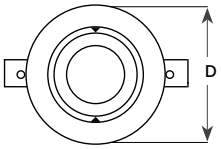
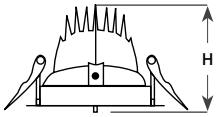
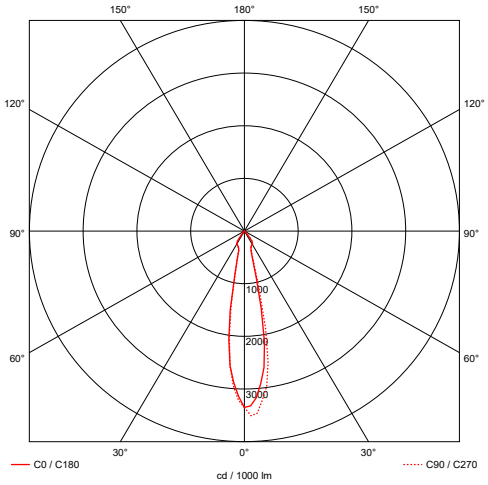
LASCON FUTURA 12 LED





Photometric Diagram



Luminaire efficiency: 74.5%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Shopping malls
- Retail lighting
- Conference rooms
- Foyers

Product Features and Accessories

- High colour rendering index CRI > 85
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- VS LED module and driver
- Ambient temperature: -25…+45°C
- Aluminium trim ring
- Aluminium reflector
- DALI/DSI and dimmable options available
- Emergency options available
- Available in 24 and 36 degree beam

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions		
					Cut Out	D	H
FUT12-32W-LED	4950	35.8W	0.98	925mA	175mm	195mm	155mm

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NOTES

LASCON
CEILING AND WALL LUMINAIRES

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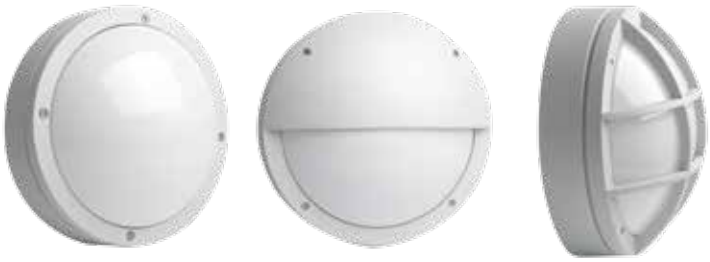
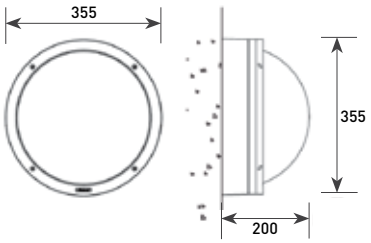
LASCON RIMINI CFL





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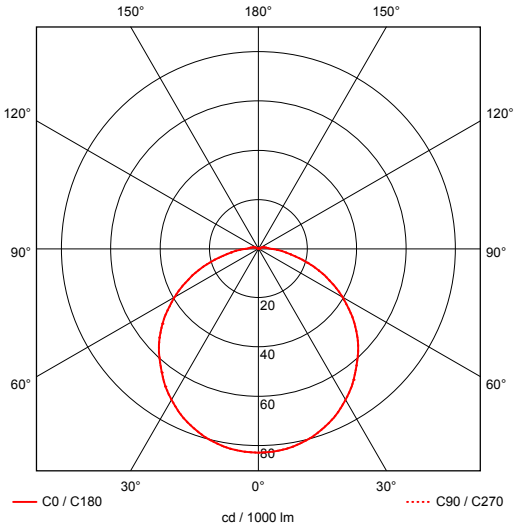

	C0	C90	C180
0°	83	83	83
10°	82	82	82
20°	77	77	77
30°	71	71	71
40°	62	62	62
50°	52	52	52
60°	40	40	40
70°	26	26	26
80°	13	13	13
90°	5	5	5
100°	3	3	3
110°	2	2	2
120°	0	0	0
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 26.3%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Product Features and Accessories

- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Shopping malls

Specification	Wattage	Lumen @ 25°C	System Power	Current	Power Factor	Weight
RIMINI-218-ELB/ DOME	2 x 18W	2 x 1200	36W	0.26A	0.95	2.17kg
RIMINI-218-ELB/ EYELID	2 x 18W	2 x 1200	36W	0.26A	0.95	2.17kg
RIMINI-218-ELB/GRID	2 x 18W	2 x 1200	36W	0.26A	0.95	2.17kg

SABS APPROVED IP65 230V ECG F

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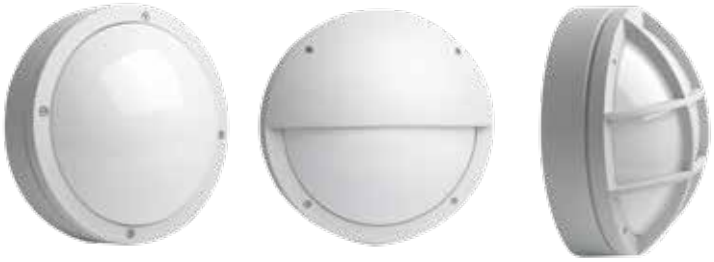
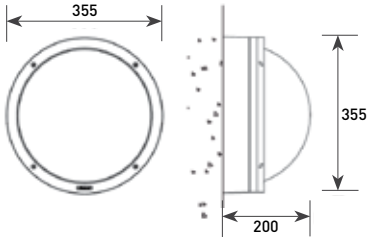
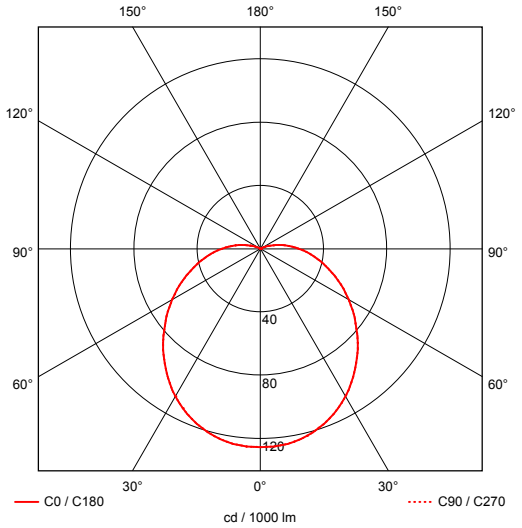
LASCON RIMINI LED





Photometric Diagram



	C0	C90	C180
0°	125	125	125
10°	124	124	124
20°	118	118	118
30°	108	108	108
40°	94	94	94
50°	79	79	79
60°	64	64	64
70°	50	50	50
80°	36	36	36
90°	24	24	24
100°	14	14	14
110°	6	6	6
120°	1	1	1
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 46.28%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Shopping malls

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe main voltage (220-240V) LED module
- Ambient temperature: -25…+80°C
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Specification	Lumen @ 65°C	System Power	Power Factor	Weight
RIMINI-17.5W-LED/DOME	1590	17.5W	0.97	2.0kg
RIMINI-17.5W-LED/EYELID	1590	17.5W	0.97	2.0kg
RIMINI-17.5W-LED/GRID	1590	17.5W	0.97	2.0kg

SABS APPROVED | IP65 | 230V | EMG OPTION | F

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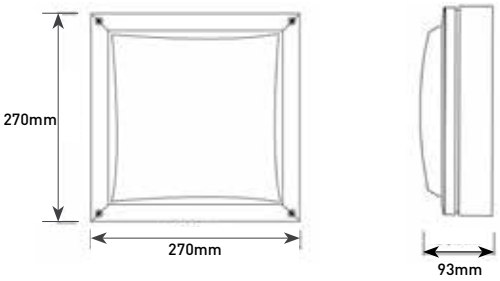
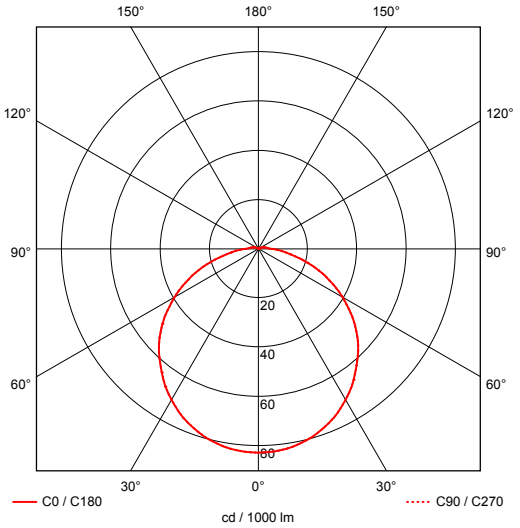
LASCON MILANO CFL



Photometric Diagram



	C0	C90	C180
0°	83	83	83
10°	82	82	82
20°	77	77	77
30°	71	71	71
40°	62	62	62
50°	52	52	52
60°	40	40	40
70°	26	26	26
80°	13	13	13
90°	5	5	5
100°	3	3	3
110°	2	2	2
120°	0	0	0
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 26.3%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Product Features and Accessories

- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Shopping malls

Specification	Wattage	Lumen @ 25°C	System Power	Current	Power Factor	Weight
MILANO-218-ELB	2 x 18	2 x 1200	36W	0.26A	0.95	2.17kg

SABS APPROVED | IP65 | 230V | ECG | F

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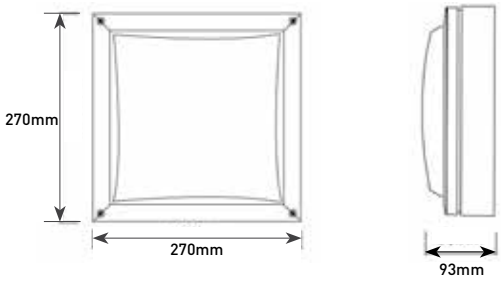
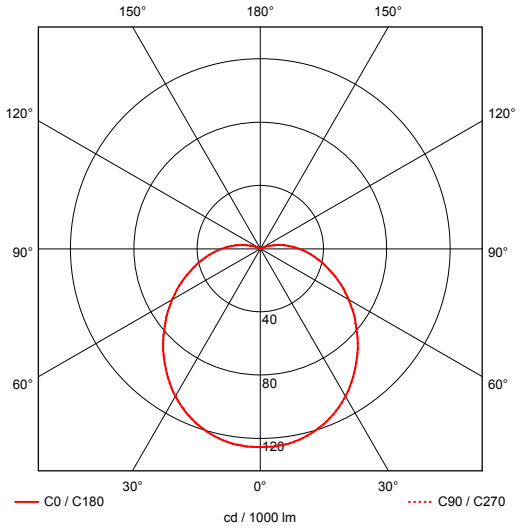
LASCON MILANO LED



Photometric Diagram



	C0	C90	C180
0°	125	125	125
10°	124	124	124
20°	118	118	118
30°	108	108	108
40°	94	94	94
50°	79	79	79
60°	64	64	64
70°	50	50	50
80°	36	36	36
90°	24	24	24
100°	14	14	14
110°	6	6	6
120°	1	1	1
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 46.28%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Shopping malls

Product Features and Accessories

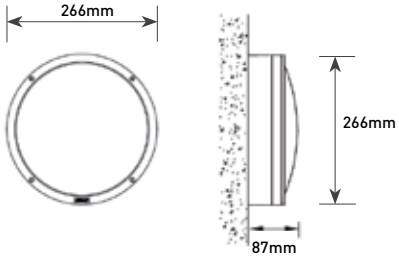
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe main voltage (220-240V) LED module
- Ambient temperature: -25…+80°C
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Specification	Lumen @ 65°C	System Power	Power Factor	Weight
MILANO-17.5-LED	1590	17.5W	0.97	2.0kg

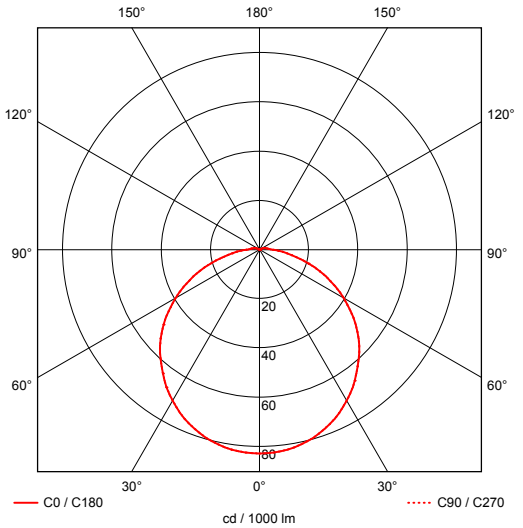
SABS APPROVED | IP65 | 230V | EMG OPTION | F

PRODUCED IN RSA

LASCON ROMA CFL



Photometric Diagram



	C0	C90	C180
0°	83	83	83
10°	82	82	82
20°	77	77	77
30°	71	71	71
40°	62	62	62
50°	52	52	52
60°	40	40	40
70°	26	26	26
80°	13	13	13
90°	5	5	5
100°	3	3	3
110°	2	2	2
120°	0	0	0
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 25.5%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Product Features and Accessories

- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Applications

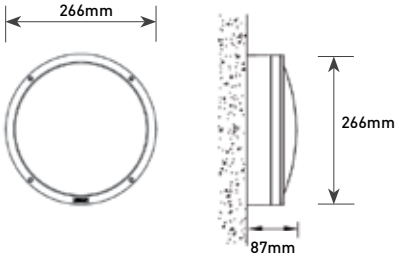
- Residential areas
- Perimeter lighting
- Architectural lighting
- Shopping malls

Specification	Wattage	Lumen @ 25°C	System Power	Current	Power Factor	Weight
ROMA-218-ELB	2 x 18	2 x 1200	36W	0.26A	0.95	2.17kg

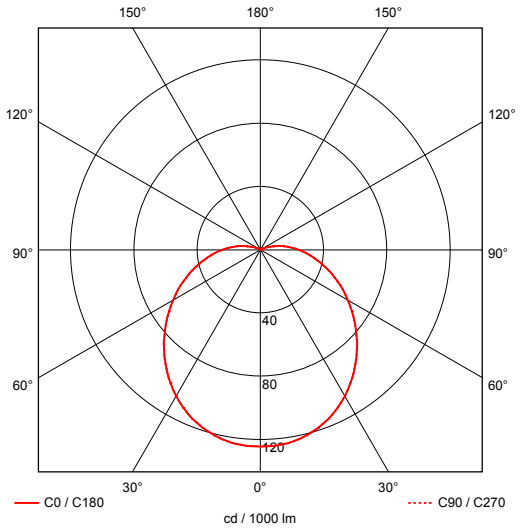
SABS APPROVED | IP65 | 230V | ECG | F

PRODUCED IN RSA

LASCON ROMA LED



Photometric Diagram



	C0	C90	C180
0°	124	124	124
10°	123	123	123
20°	117	117	117
30°	107	107	107
40°	93	93	93
50°	79	79	79
60°	64	64	64
70°	49	49	49
80°	36	36	36
90°	24	24	24
100°	14	14	14
110°	5	5	5
120°	1	1	1
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 45.9%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Shopping malls

Product Features and Accessories

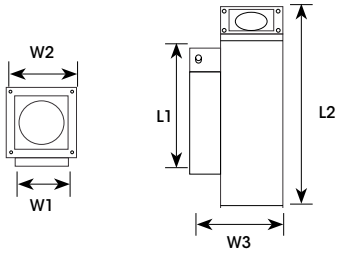
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe main voltage (220-240V) LED module
- Ambient temperature: -25…+80°C
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Specification	Lumen @ 65°C	System Power	Power Factor	Weight
ROMA-17.5-LED	1590	17.5W	0.97	2.0kg

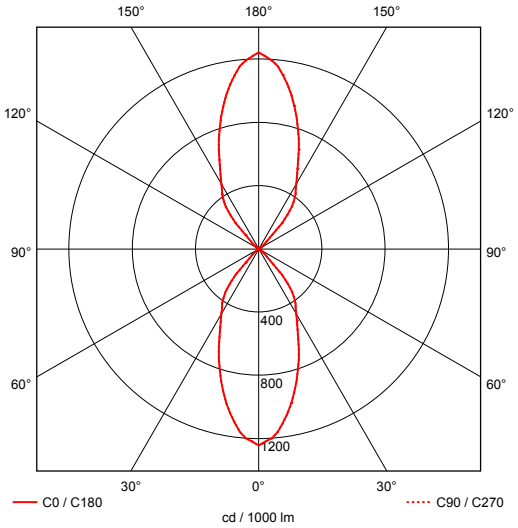
SABS APPROVED | IP65 | 230V | EMG OPTION | F

PRODUCED IN RSA

LASCON QUATRO LED



Photometric Diagram



	C0	C90	C180
0°	1241	1241	1241
10°	1053	1053	1053
20°	739	739	739
30°	473	473	473
40°	288	288	288
50°	33	33	33
60°	14	14	14
70°	6	6	6
80°	2	2	2
90°	1	1	1
100°	2	2	2
110°	6	6	6
120°	14	14	14
130°	33	33	33
140°	288	288	288
150°	473	473	473
160°	739	739	739
170°	1053	1053	1053
180°	1241	1241	1241
	cd / 1000 lm		

Luminaire efficiency: 82.5%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000 hours @ 200mA (L70 F10, TP 65°C)

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Indoor lighting

Product Features and Accessories

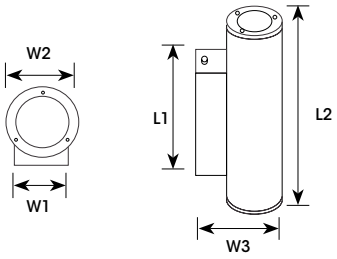
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- Philips LED module, Tridonic driver
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions					Weight
					L1	L2	W1	W2	W3	
QUATRO-2X5W-LED	775	5.8	0.98	200mA	150mm	255mm	40mm	80mm	120mm	1.8kg

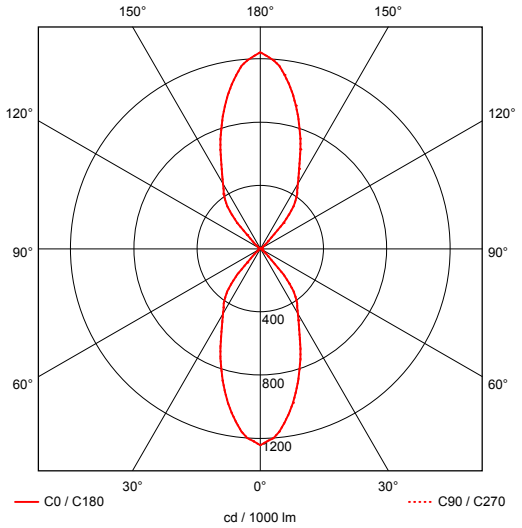
SABS APPROVED | IP65 | 230V | F

PRODUCED IN RSA

LASCON PALERMO LED



Photometric Diagram



	C0	C90	C180
0°	1241	1241	1241
10°	1053	1053	1053
20°	739	739	739
30°	473	473	473
40°	288	288	288
50°	33	33	33
60°	14	14	14
70°	6	6	6
80°	2	2	2
90°	1	1	1
100°	2	2	2
110°	6	6	6
120°	14	14	14
130°	33	33	33
140°	288	288	288
150°	473	473	473
160°	739	739	739
170°	1053	1053	1053
180°	1241	1241	1241
	cd / 1000 lm		

Luminaire efficiency: 82.5%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000 hours @ 200mA (L70 F10,TP 65°C)

Applications

- Residential areas
- Perimeter lighting
- Architectural lighting
- Indoor lighting

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- Philips LED module, Tridonic driver
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions					Weight
					L1	L2	W1	W2	W3	
PALERMO-2X5W-LED	775	5.8	0.98	200mA	121mm	262mm	70mm	81mm	121mm	1.8kg

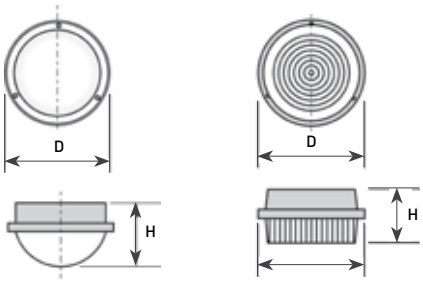
SABS APPROVED | IP65 | 230V | F

PRODUCED IN RSA

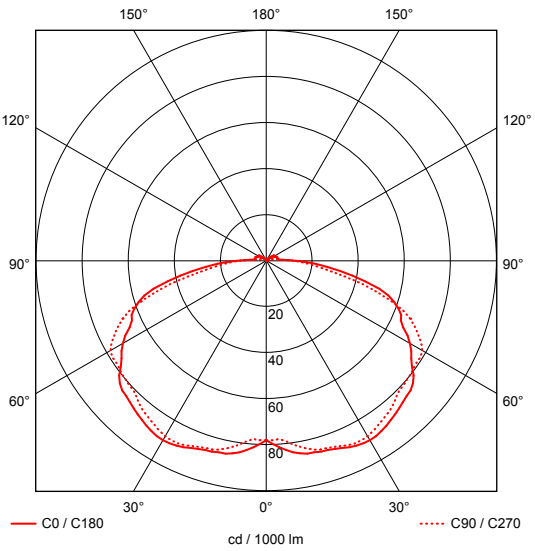
LASCON B10 CFL

B10 Dome

B10 Flat



Photometric Diagram



	C0	C90	C180
0°	78	78	78
10°	85	82	85
20°	87	86	87
30°	90	88	90
40°	87	84	87
50°	83	80	83
60°	72	78	72
70°	61	63	61
80°	38	30	38
90°	13	12	13
100°	5	3	5
110°	5	3	5
120°	4	3	4
130°	3	2	3
140°	1	1	1
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 40.84%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- Building perimeter
- Stairwells
- Industrial lighting
- Corridors

Product Features and Accessories

- Surface mounted on ceilings or walls or can even be or semi-recessed
- Decorative skirt ordered separately
- Front trim ring ordered separately
- A silicone gasket seals out moisture, dust and insects
- High pressure die cast aluminium body with black polyurethane powder paint
- High impact resistant polycarbonate diffuser
- Clear flat or opal dome diffusers available
- Vandal proof version available
- Electronic control gear
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		Weight
						D	H	
B10-118-ELB/FLAT	1 x 18W	1 x 1200	18W	0.92	0.13A	230mm	140mm	1.4kg
B10-118-ELB/DOME	1 x 18W	1 x 1200	18W	0.92	0.13A	230mm	140mm	1.4kg

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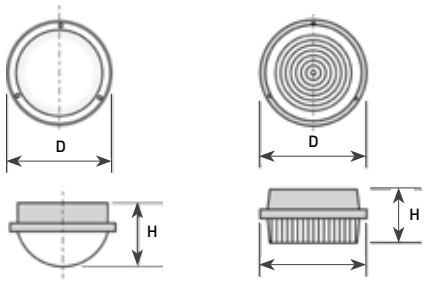
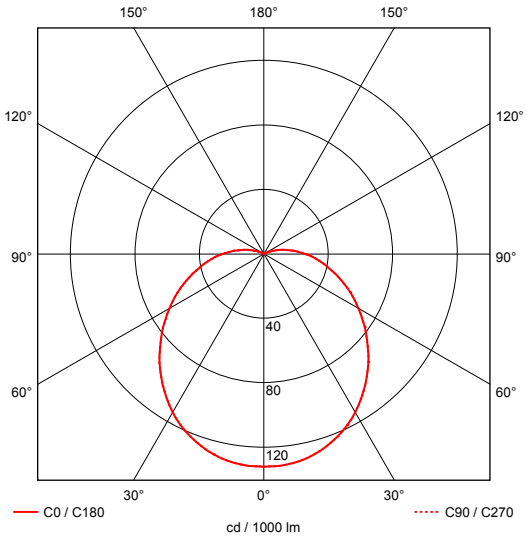
LASCON B10 LED

B10 Dome

B10 Flat



Photometric Diagram



	C0	C90	C180
0°	132	132	132
10°	130	130	130
20°	124	124	124
30°	113	113	113
40°	99	99	99
50°	83	83	83
60°	68	68	68
70°	52	52	52
80°	38	38	38
90°	26	26	26
100°	15	15	15
110°	6	6	6
120°	1	1	1
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 40.66%

Life/Maintenance

LED Life	50 000hrs (L70 F50, TP 65°C)

Applications

- Building perimeter
- Stairwells
- Industrial lighting
- Corridors

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe main voltage (220-240V) LED module
- Ambient temperature: -25…+80°C
- Surface mounted on ceilings or walls or can even be semi-recessed
- Decorative skirt ordered separately
- Front trim ring ordered separately
- A silicone gasket seals out moisture, dust and insects
- High pressure die cast aluminium body with black polyurethane powder paint
- High impact resistant polycarbonate diffuser
- Clear flat or opal dome diffusers available
- Vandal proof version available

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions		Weight
				D	H	
B10-10W-LED/FLAT	1250	10W	0.97	230mm	170mm	1.4kg
B10-10W-LED/DOME	1250	10W	0.97	230mm	170mm	1.4kg

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IP65 230V F

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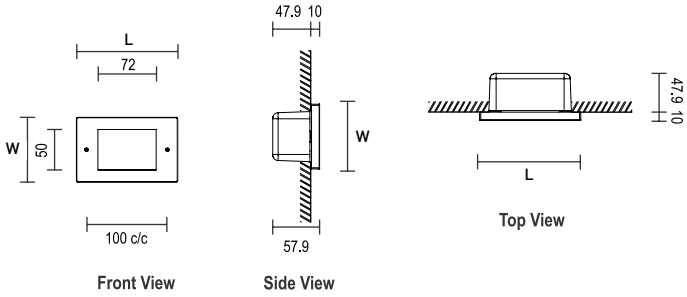
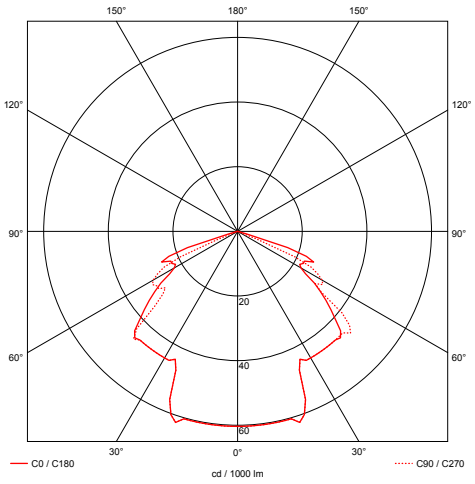
LASCON TORINO 1 LED



Photometric Diagram



Luminaire efficiency: 16.2%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Walkways
- Planters
- External steps

Product Features and Accessories

- LM 6 die cast aluminium housing
- High impact opal acrylic diffuser
- Osram LED, PC board and power potted sealed
- Powder coated finish
- Recessed wall mounted
- Fits into a standard 2 x 4 electrical connection box PVC or electro galvanised
- Face plate fixed with 2 counter sunk stainless steel screws
- Connection in the conduit feed
- Colour temperature 4000K (3000K on request)
- IP65

Specification	System Lumen	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
TORINO1-2W-LED	121	2.2W	0.95	350mA	125mm	80mm	10mm	0.2kg

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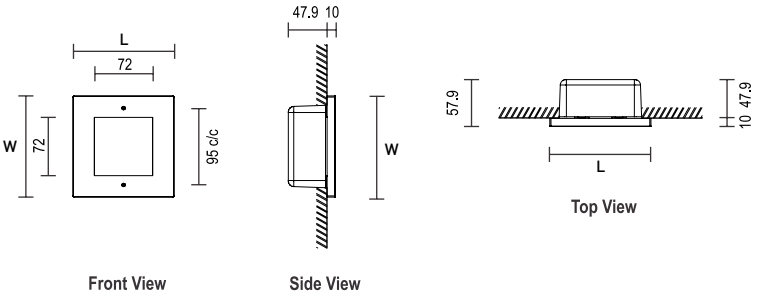
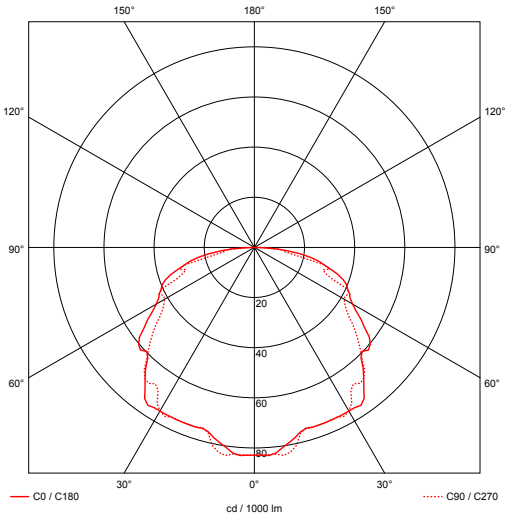
LASCON TORINO 2 LED



Photometric Diagram



Luminaire efficiency: 28.9%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Life	50 000hrs (L70 F10, TP 65°C)

Applications

- Walkways
- Planters
- External steps

Product Features and Accessories

- LM 6 die cast aluminium housing
- High impact opal acrylic diffuser
- Osram LED, PC board and power potted sealed
- Powder coated finish
- Recessed wall mounted
- Fits into a standard 4 x 4 electrical connection box PVC or electro galvanised
- Face plate fixed with 2 counter sunk stainless steel screws
- Connection in the conduit feed
- Colour temperature 4000K (3000K on request)
- IP65

Specification	System Lumen	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
TORINO2-4W-LED	242	4.4W	0.95	350mA	125mm	125mm	10mm	0.4kg

SABS APPROVED | IP65 | 230V | F | ENERGY EFFICIENT | PRODUCED IN RSA

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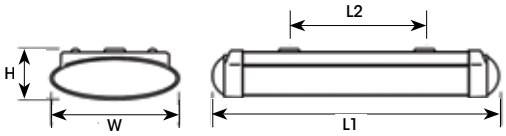
LASCON LILI T5 EMG

(Sold separately)



Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Offices
- Hospitals
- Lecture halls
- Retail

Product Features and Accessories

- Snap-on injection moulded plastic end-caps
- Frosted prismatic diffuser
- Rolled mild steel body with a white epoxy powder coated finish
- Maintained emergency luminaire
- 2.6 hours of emergency duration and 40% light output in emergency mode
- Pictogram packs sold separately (1 x running man left, 1 x running man right,1 x running down and 1 x EXIT pictogram per pack)

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions				Weight
						L1	L2	W	H	
LILI-1X8-ELB	1 x 8W	1 x 450	10W	0.6	0.07A	420mm	165mm	208mm	77mm	2.1kg

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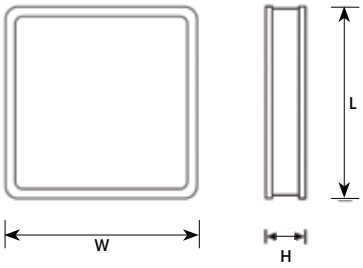
LASCON E10 CFL EMG



(Sold separately)

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- Offices
- Hospitals
- Lecture halls
- Retail

Product Features and Accessories

- Fibreglass frame
- Toughened glass lens
- Galvanised hanging bolts (ceiling mounted version)
- Choice of legends
- Electronic control gear
- Wall mounted (single sided) or ceiling mounted (single or double sided) versions available
- Maintained or non-maintained versions available
- Green on white or white on green available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
E10-2X9W-EMG	2 x 9W	2 x 600	20W	0.6	0.14A	310mm	310mm	65mm	3.5kg

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LASCON EMERGENCY LIGHTING GUIDE

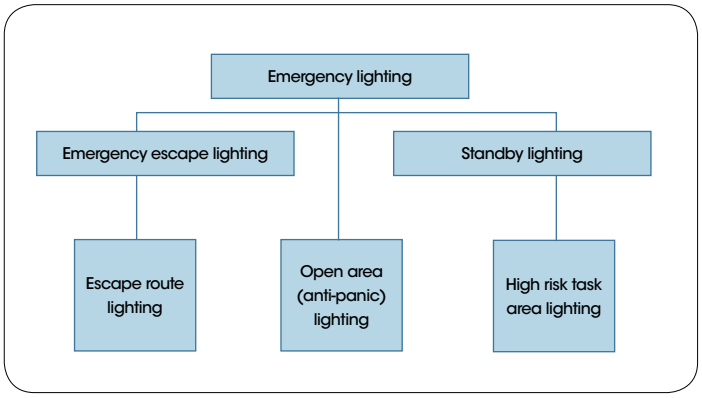
Introduction

Emergency lighting is intended to provide sufficient light to enable people to see their way out safely in case of an emergency. Emergency lighting installations must always comply with the appropriate standards. In terms of the Occupational Health and Safety Act (act 85 of 1993) as amended, it is now mandatory to provide emergency lighting. In addition, it is compulsory that the emergency lighting system installed satisfies strict performance and operational criteria with **SANS 1464-22 – Safety of Luminaires Part 22: Luminaires for Emergency Lighting**. Further details and explanations can be found in **SANS 10114-2 – Interior Lighting Part 2: Emergency Lighting**. The installation must also be regularly maintained, tested and full records kept.

The need for emergency lighting

Emergency lighting is provided for when the main lighting supply fails. This emergency light is required to help the occupants evacuate the premises quickly and safely. The emergency lighting is only required to be bright enough for the occupants to find exit doors and to avoid obstacles.

Specific forms of emergency lighting



Emergency escape lighting – that part of the emergency lighting provided to enable safe exit from a building in the event of mains failure.

Standby lighting – that part of the emergency lighting that enables normal activities to continue in the event of mains failure.

Escape route lighting – that part of the emergency lighting that enables the safe exit from a building by providing adequate light and direction findings on escape routes and ensures that the fire fighting and safety equipment can be easily identified and used.

Open area (anti-panic) lighting – that part of emergency lighting that is provided in an open area to avoid panic and to enable safe movement of occupants to reach an escape route.

High-risk task area lighting – that part of emergency lighting that provides light for the safety of the occupants involved in a potentially dangerous process or situation and enables proper shutdown procedures to ensure the safety of the operator and other occupants of the premises.

Under emergency conditions, emergency lighting is usually powered by internal batteries or a standby generator, which are automatically triggered as soon as the mains supply fails. The emergency light source will usually be a separate miniature compact fluorescent lamp if "stand alone" emergency luminaires are used. It could also be one of the normal linear fluorescent lamps in a standard luminaire operated at reduced power level when in emergency mode.

All emergency lighting requires a power source, which is independent of the main power supply. In general this will either be powered by batteries or a generator.

There are two main system types:

Battery system

Battery systems may be one of two distinct types: self-contained and central system.

Self-contained emergency system

Each luminaire is equipped with a battery charger/ballast, indicator and changeover devices (inverter). These components may be integral within the luminaire or adjacent to it. Self-contained systems are easy to install and require little or no maintenance other than routine testing to ensure correct operation. The luminaires should be connected to the local lighting circuit where there is a danger from circuit failure.

Central battery system

The central battery system is a battery room or cubicle in which the charger, batteries and changeover devices are located. In a central system it is also essential that the wiring be of a very high integrity. If it is not of a sufficiently high standard there is a considerable risk of loss of power due to fire damage. There may also be a poor overall performance because of excessive voltage drop in the cables.

Generator system

An emergency lighting system must reach its required illumination level within 5 seconds, although some authorities will extended this to 15 seconds if the building is occupied by staff who are familiar with the surroundings. It is essential that either the generator is run at all times. During its required time or the time that the generator automatically starts and runs up to, its required output is in 5 seconds or less. If neither of these conditions can be achieved, then the generator must be supplemented by a battery system capable of operating the emergency lighting for at least an hour. In this case, the generator need not start up automatically, but it should take over from the battery system as soon as possible.

LASCON EMERGENCY LIGHTING GUIDE

Modes of operation

There are two types of emergency luminaires: Non-maintained mode and maintained mode.

Non-maintained mode

In non-maintained mode the lamp is normally off, and only operates during supply power failure. When using a non-maintained luminaire, the lamp only provides emergency escape lighting in the event of a power supply interruption. It has only one main connection that must be left on permanently. This connection is normally used to charge the batteries and to detect a power failure.

Non-maintained emergency luminaires are usually used:

- in areas where it is not possible to merge the emergency lighting gear into the existing luminaires;
- for high risk task area lighting where bright, direct lighting is required during an emergency;
- for existing lighting installations where it is not feasible to change the building wiring and the lighting is on permanently;
- for area flood lighting where the existing lamp (HID) is not suitable for use in an emergency lighting application.

Maintained mode

A maintained luminaire provides light for both normal and emergency lighting. It has two main connections: permanent life and switched life. The permanent life connection is used to charge the batteries and detect the power failure. The switched life is used to switch the luminaire on and off to provide normal lighting. Maintained emergency luminaires are ideally suited for emergency lighting in:

- stair wells;
- general offices;
- escape route lighting;
- in areas where it is preferable to merge emergency lighting into existing luminaires;
- in new installations where the additional wiring requirements can be readily accommodated.

Batteries

There are two type of batteries used for emergency lighting luminaires:

Nickel cadmium batteries

The nickel cadmium (NiCad) batteries are the most commonly used for emergency lighting. These batteries are rechargeable and the batteries are normally connected in series into a battery pack – 4 batteries will give a 4.8V output for an hour duration and 5 batteries will give 6V output for a two to three hour duration.

Nickel cadmium batteries have a long life, up to 10 years. They can be kept on the shelf for one or two years before being used without any detrimental effect.

Lead-acid batteries

The sealed lead-acid battery is cheaper but requires more maintenance while its rated life is about 5 years. It is used for halogen lights and other 12V DC devices. When this battery is stored, it must be recharged every three months. It is seldom used in fluorescent emergency luminaires.

Servicing / Maintenance

To protect the integrity of an emergency lighting system, recommended maintenance and routine servicing is essential. This routine should be detailed and checks recorded in logbook which is available for examination by any duly authorized personnel. These personnel must have at their disposal a general building or floor plan and electrical system assembly diagram of the safety lighting system.

Monthly – test for a short period not exceeding one quarter of the rated duration of operation of the luminaire.

Annually – test each luminaire to its full rated duration of operation.

Note: these tests should be carried out more regularly if there are many power failures of short duration in a short space of time.

In terms of the Occupational Health and Safety Act 1993 (act 85 0f 1993) as amended, periodic inspection and test reports should be supplied to the person responsible for the premises.

Design considerations

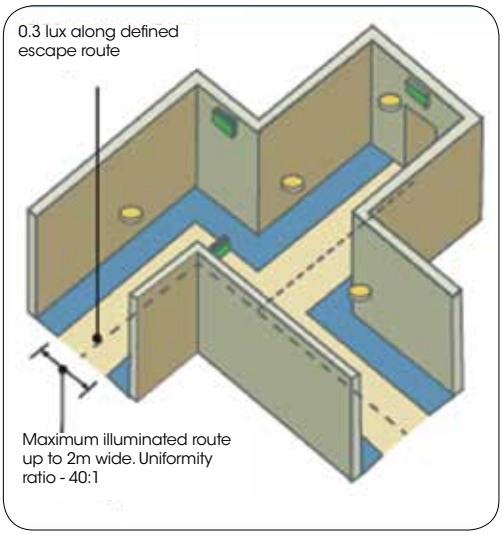
Design objective

It is an increasing requirement that commercial, industrial and public buildings are provided with some form of emergency lighting.

Requirements vary for different types of buildings. General guidance is given in **SANS 10114-2 – Interior Lighting Part 2: code of practices for emergency lighting,** fulfil the following requirements:

Clearly define the escape routes.

Provide illumination along the escape routes to allow safe movement towards and through the exits by luminaires spaced at appropriate intervals. Corridors and stairways or gangways in open areas are all classified as clearly defined escape routes.



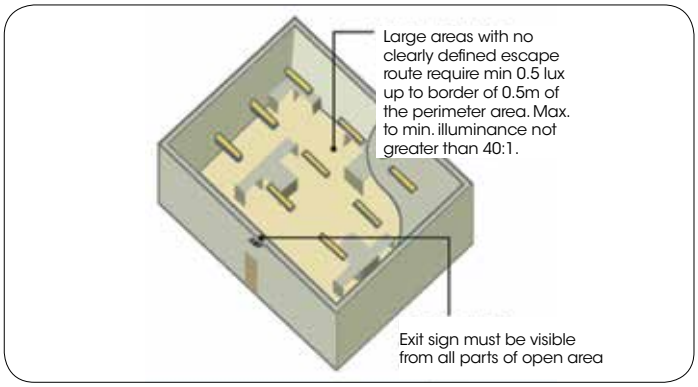
LASCON EMERGENCY LIGHTING GUIDE

The minimum lighting parameters are as follows:

- Horizontal illumination at the floor on the centreline of permanently unobstructed routes should not be less than 0,2 lux. For stairways, the illumination should be measured horizontally at the edge of each tread.
- Where escape routes are greater than 2 metres, the escape route is to be treated as multiples of 2 metre wide bands.
- In retirement centres, an illumination of 0,3 lux is recommended.

Open areas anti-panic lighting

For areas that are frequently reconfigured and therefore do not have within them clearly defined escape routes, for example open plan offices or conference facilities. The minimum lighting parameters are as follows:



- The horizontal illumination shall not be less than 0,5 lux at the floor level of the empty core area which excludes the border of 0,5 metre of the perimeter area.
- The ratio of the maximum to the minimum open area lighting illumination shall not be greater than 40:1.
- Exit signs should be visible from any part of the space.

High risk task lighting

High risk areas are those in which dangerous machines must be shut down prior to evacuation.

General requirements

- The task must be illuminate to 10% of the normal lighting for as long as the risk exists or 20 lux, whichever is greater.
- Maximum uniformity ratio of 10:1 within 5 metres of task.
- Duration of at least 30 minutes.
- Response time of at least 0.5 seconds.

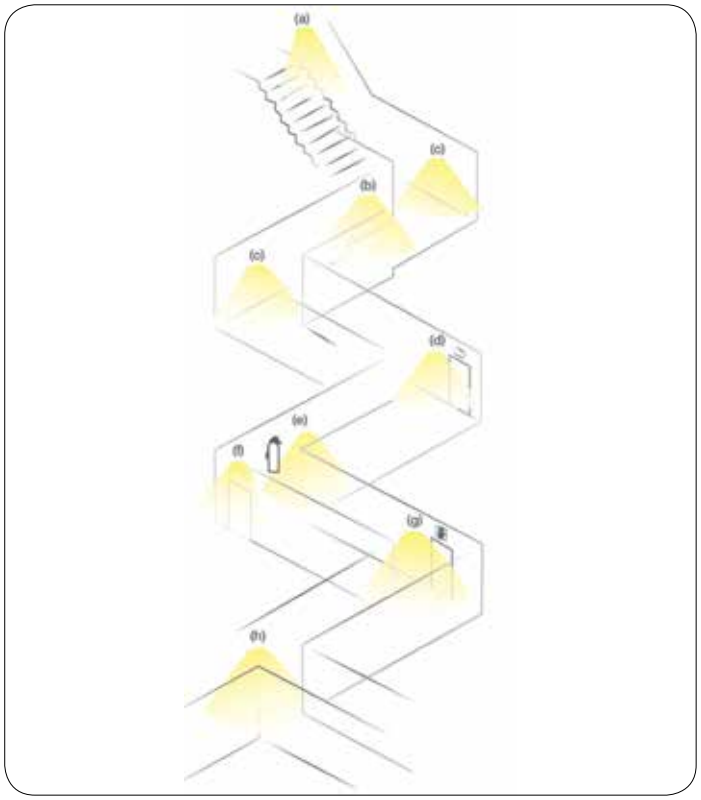
Position of emergency lighting luminaires

The most important part of the design procedure is to determine the location and position of luminaires to account for specific points of emphasis. This is to be performed regardless of whether the luminaires are placed on the emergency escape route or in an open anti-panic area.

These points of emphasis should be illuminated by a luminaire and a directional sign (exit sign).

Areas requiring special emphasis lighting:

(a) All staircases – long flights of stairs may need more than one luminaire.
(b) At or near changes in floor levels.
(c) At or near each change of direction.
(d) To illuminate exit doors and safety signs.
(e) Within 2 metres of each fire call point and each item of fire equipment such as extinguishers or hose reels.
(f) Outside and near to each final exit.
(g) Near any First Aid points.
(h) At each intersection of the escape route corridor.



"Near" is described as being within 2 metres measured in a horizontal direction. Exit signs are to be mounted at a height of 2 to 2.5 metres above floor level.

Additional emergency lighting

Although not part of the escape route, certain other additional areas require the use of emergency lighting.

- Lift cars – although they may be part of the escape route in exceptional circumstances, they may present a problem if the public are trapped in them in the event of a mains supply failure.
- Toilet facilities exceeding 8m² floor area and all toilets for the disabled.
- Motor generator, control or plant rooms.
- Covered car parks along the normal pedestrian routes.

Most of Voltex Lighting standard fluorescent luminaires can be supplied as self-contained emergency units. All luminaires can be maintained or non-maintained for an hour duration with 20% light output.

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N-BAY
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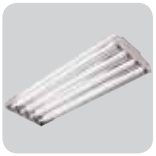
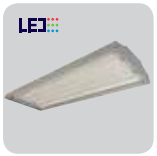


S-BAY T5
page 114



S-BAY
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C-BAY T5
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C-BAY-NB
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C-BAY-WB
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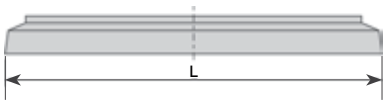
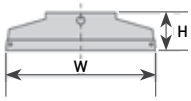
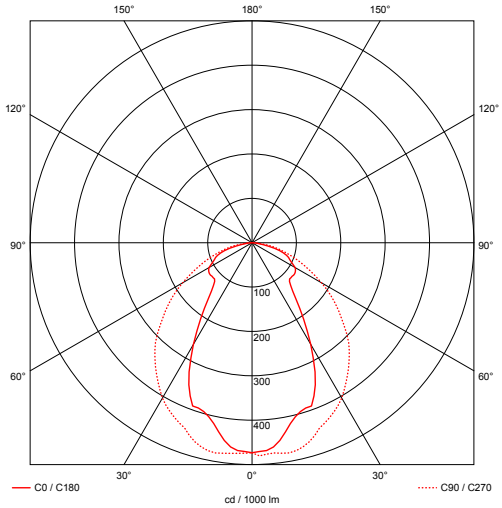
LASCON N-BAY T5





Photometric Diagram



Luminaire efficiency: 93.86%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Warehouses
- Aisles
- Industry
- Factories

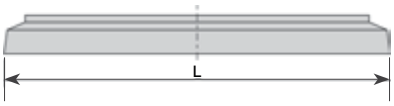
Product Features and Accessories

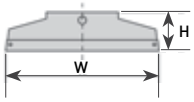
- Designed for retail environments with a semi-industrial look
- Complete with clear diffuser
- Miro 4 silver aluminium high performance reflector
- Complete with P2000 mounting brackets, 4 x rivnuts and M5 eyebolts
- Rolled mild steel body with a structured silver epoxy powder coated finish
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
N-BAY-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1195mm	240mm	80mm	4.0kg
N-BAY-280-ELB	2 x 80W	2 x 6150	175W	0.98	0.26A	1495mm	240mm	80mm	4.0kg

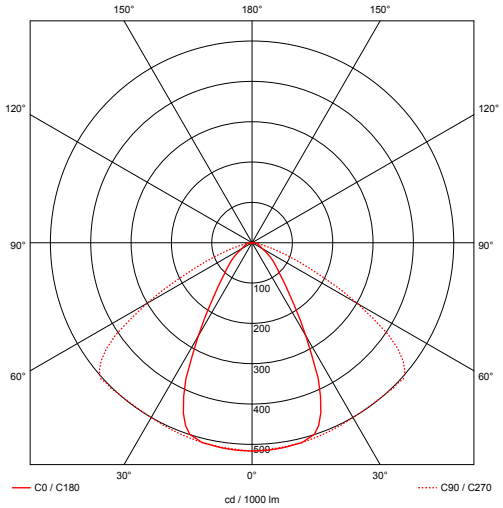
SABS APPROVED · IP20 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON N-BAY LED





Photometric Diagram



Luminaire efficiency: 92.3%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Warehouses
- Aisles
- Industry
- Factories

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Designed for quick and easy installations. Comes complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- Rolled mild steel body with a structured silver epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- Complete with clear diffuser
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
N-BAY-54W-LED	9280	59.2W	0.98	300mA	1195mm	240mm	80mm	4.0kg
N-BAY-74W-LED	11 960	80.4W	0.98	400mA	1195mm	240mm	80mm	4.0kg

SABS APPROVED · IP20 · 230V · EMG OPTION · DIM OPTION · F

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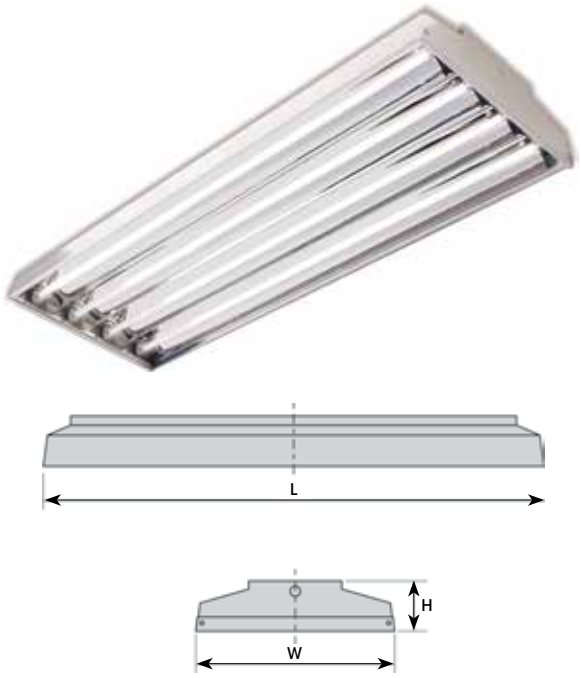
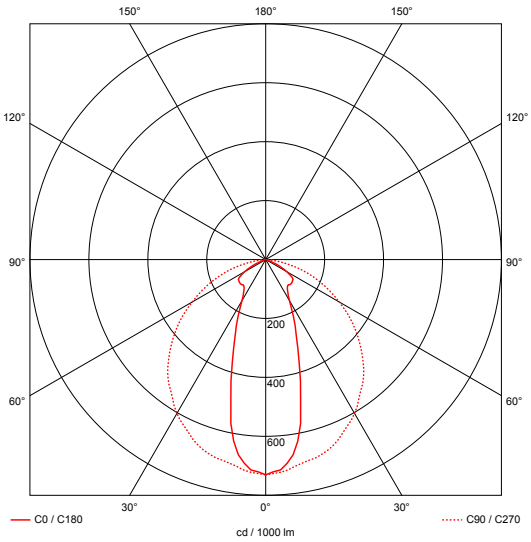
LASCON S-BAY T5



Photometric Diagram



Luminaire efficiency: 92.7%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Warehouses
- Sports halls
- Industrial lighting
- Factory lighting

Product Features and Accessories

- Designed for quick and easy installations, comes complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- Surface or recessed
- High performance MIRO4 silver louvre
- Narrow beam (wide beam available)
- Rolled mild steel body with a structured silver epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- HUBBELL end mount WASP sensor available
- Clear diffuser available
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
S-BAY-454-ELB	4 x 54W	4 x 4450	214W	0.98	0.52A	1195mm	418mm	105mm	4.6kg
S-BAY-480-ELB	4 x 80W	4 x 6150	350W	0.98	1.52A	1495mm	418mm	105mm	6.2kg

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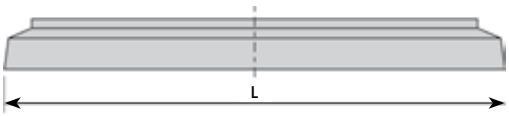
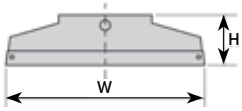
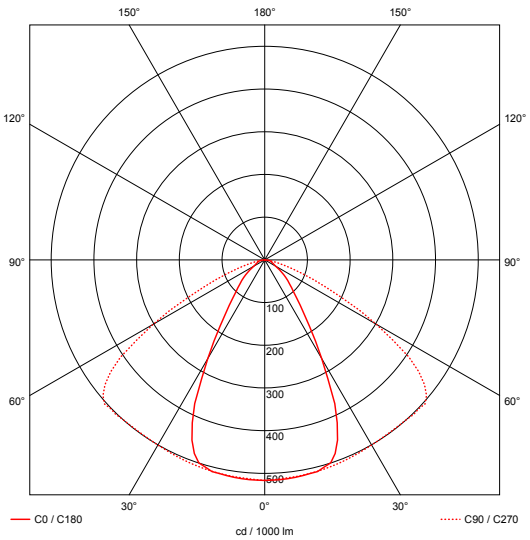
LASCON S-BAY LED





Photometric Diagram



Luminaire efficiency: 92.3%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Warehouses
- Aisle lighting
- Industrial lighting
- Factory lighting

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- Surface or recessed
- Rolled mild steel body with a structured silver epoxy powder coated finish
- Complete with 3m cabtyre and 5Amp plug
- Complete with clear diffuser
- HUBBELL end mount WASP sensor available
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
S-BAY-111W-LED	17 940	120.6W	0.98	400mA	1195mm	418mm	105mm	4.6kg
S-BAY-148W-LED	23 920	160.8W	0.98	400mA	1195mm	418mm	105mm	4.6kg

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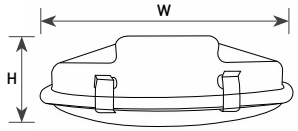
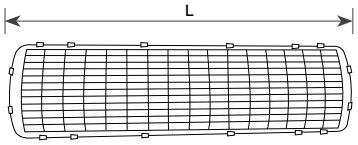
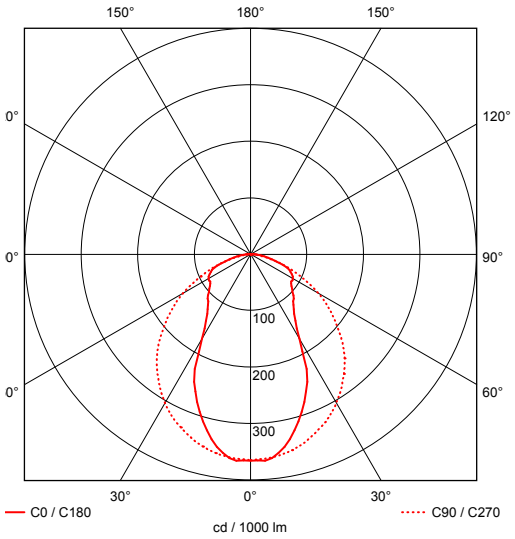
LASCON C-BAY T5





Photometric Diagram



	C0	C90	C180
0°	366	364	366
10°	346	358	346
20°	278	336	278
30°	173	304	173
40°	118	259	118
50°	96	201	96
60°	87	139	87
70°	68	72	68
80°	25	19	25
90°	8	1	8
100°	3	2	3
110°	2	1	2
120°	1	0	1
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	1	0	1
180°	1	0	1
	cd / 1000 lm		

Luminaire efficiency: 70.5%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Parking garages
- Cold rooms
- Industrial lighting
- Food processing

Product Features and Accessories

- Glass reinforced polyester (GRP) body
- UV stabilised, self-extinguishing polycarbonate diffuser
- MIRO 4 reflectors
- Hinge-able gear tray
- Stainless steel latches
- Complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
C-BAY-454-ELB	4 x 54W	4 x 4450	214W	0.98	0.52A	1330mm	350mm	130mm	8.0kg

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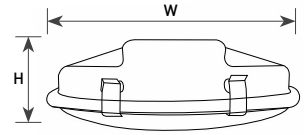
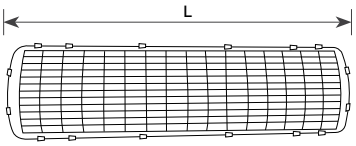
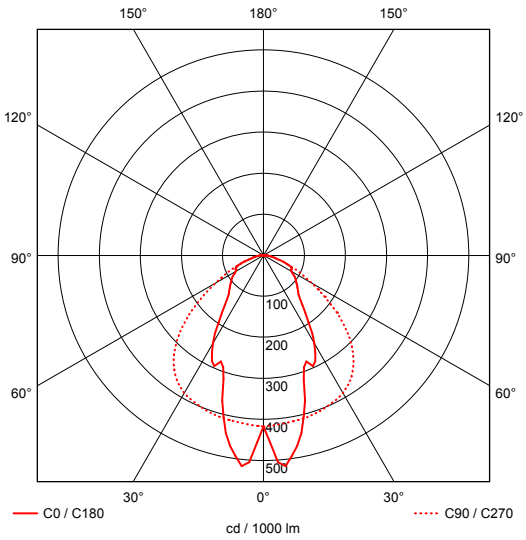
LASCON C-BAY-NB LED





Photometric Diagram



	C0	C90	C180
0°	417	417	417
10°	471	410	471
20°	290	403	290
30°	248	387	248
40°	139	341	139
50°	105	250	105
60°	78	136	78
70°	60	59	60
80°	21	18	21
90°	9	2	9
100°	4	2	4
110°	2	1	2
120°	1	1	1
130°	1	1	1
140°	1	1	1
150°	1	1	1
160°	1	1	1
170°	1	1	1
180°	1	1	1

cd / 1000 lm

Luminaire efficiency: 86.91%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Wet areas
- Cold rooms
- Industrial lighting
- Food processing

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -30…+45°C
- Glass reinforced polyester (GRP) body
- UV stabilised, self-extinguishing polycarbonate diffuser
- Hinge-able gear tray
- Stainless steel latches
- Complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- Complete with IP65 quick connector
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
C-BAY-74-LED	11 960	80.4W	0.98	400mA	1330mm	350mm	130mm	8.0kg
C-BAY-111-LED	17 940	120.6W	0.98	400mA	1330mm	350mm	130mm	8.2kg
C-BAY-148-LED	23 920	160.8W	0.98	400mA	1330mm	350mm	130mm	8.5kg

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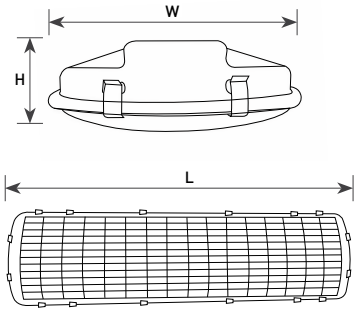
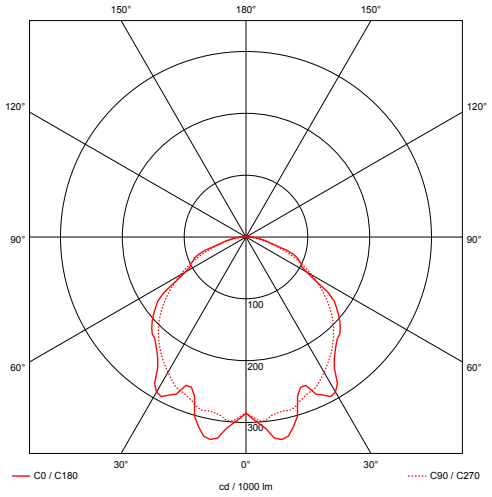
LASCON C-BAY-WB LED



Photometric Diagram



Luminaire efficiency: 89.2%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Wet areas
- Cold rooms
- Industrial lighting
- Food processing

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -30…+45°C
- Glass reinforced polyester (GRP) body
- UV stabilised, self-extinguishing polycarbonate diffuser
- Hinge-able gear tray
- Stainless steel latches
- Complete with 2 x P2000 mounting brackets and 4 x M5 eyebolts
- Complete with IP65 quick connector
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
C-BAY-74-LED	11 960	80.4W	0.98	400mA	1330mm	350mm	130mm	8.0kg
C-BAY-111-LED	17 940	120.6W	0.98	400mA	1330mm	350mm	130mm	8.2kg
C-BAY-148-LED	23 920	160.8W	0.98	400mA	1330mm	350mm	130mm	8.5kg

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LASCON
CORROSION PROOF LUMINAIRES

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VML C2
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VML ES
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VML NI
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VML
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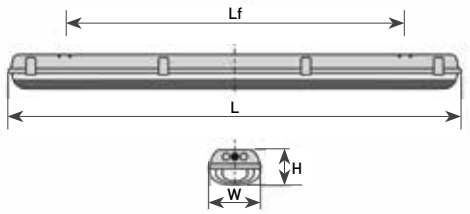
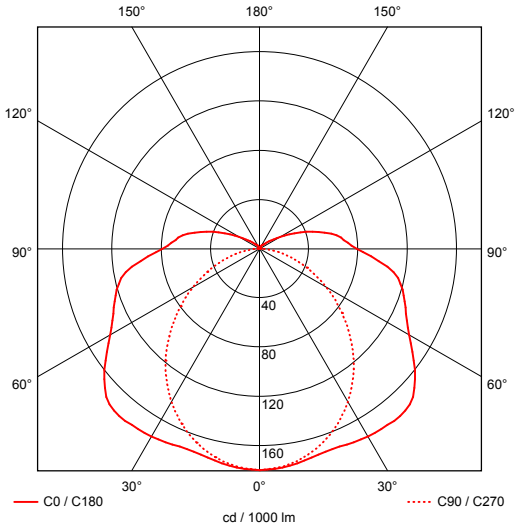
LASCON C10 T5



Photometric Diagram



	C0	C90	C180
0°	180	180	180
10°	177	175	177
20°	173	163	173
30°	176	143	176
40°	177	119	177
50°	165	91	165
60°	140	63	140
70°	125	37	125
80°	111	14	111
90°	79	2	79
100°	64	2	64
110°	41	1	41
120°	19	1	19
130°	9	1	9
140°	4	1	4
150°	3	1	3
160°	1	1	1
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 77.7%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Parking garages
- Cold rooms
- Industrial lighting
- Food processing

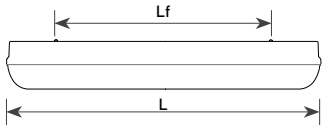
Product Features and Accessories

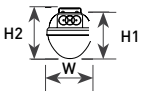
- Self-extinguishing polycarbonate body
- UV stabilised, self-extinguishing polycarbonate diffuser with photo-engraved interior and smooth outer surface
- Hinge-able gear tray
- Anti-tamper polycarbonate snap-lock latches (stainless steel on request)
- Complete with mounting accessories
- Aluminium back reflector option
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions				Weight
						L	Lf	W	H	
C10-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1270mm	920mm	160mm	100mm	3.0kg
C10-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1270mm	920mm	160mm	100mm	3.0kg

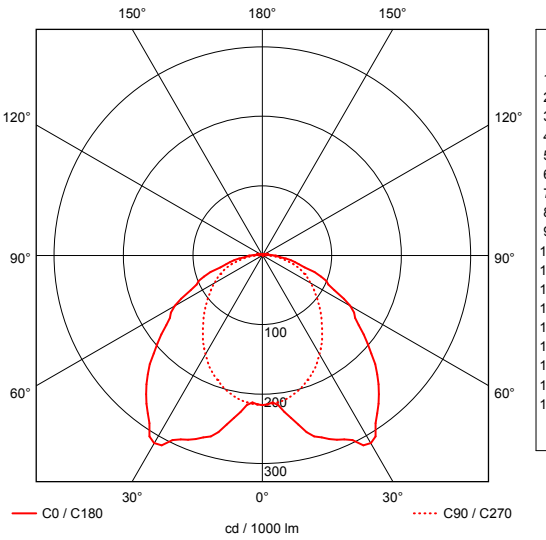
SABS APPROVED · IP65 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON C10 LED





Photometric Diagram



	C0	C90	C180
0°	216	216	216
10°	238	209	238
20°	281	191	281
30°	312	164	312
40°	260	134	260
50°	198	105	198
60°	146	80	146
70°	90	57	90
80°	41	28	41
90°	17	5	17
100°	8	3	8
110°	7	2	7
120°	3	1	3
130°	3	1	3
140°	2	1	2
150°	1	1	1
160°	1	1	1
170°	1	1	1
180°	1	1	1

cd / 1000 lm

Luminaire efficiency: 88.12%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Parking garages
- Cold storage facilities
- Industrial halls
- Power stations

Product Features and Accessories

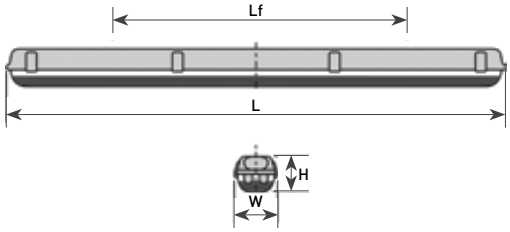
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 5000K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -25…+45°C
- Self-extinguishing polycarbonate body
- UV stabilised, self-extinguishing polycarbonate diffuser with photo-engraved interior and smooth outer surface
- Anti-tamper polycarbonate snap-lock latches (stainless steel on request)
- Hinge-able gear tray
- Complete with mounting accessories
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions					Weight
					L	Lf	W	H1	H2	
C10-27W-LED	4640	29.6W	0.98	300mA	1270mm	795mm	100mm	100mm	110mm	2.3kg
C10-37W-LED	5980	40.2W	0.98	400mA	1270mm	795mm	100mm	100mm	110mm	2.3kg

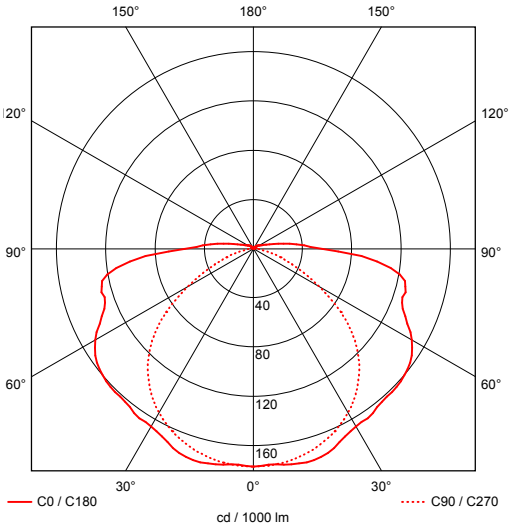
SABS APPROVED · IP65 · 230V · EMG OPTION · DIM OPTION · F

PRODUCED IN RSA

LASCON C2 T5



Photometric Diagram



	C0	C90	C180
0°	177	177	177
10°	178	174	178
20°	176	167	176
30°	167	154	167
40°	162	133	162
50°	160	104	160
60°	148	62	148
70°	128	28	128
80°	121	9	121
90°	56	3	56
100°	25	2	25
110°	10	1	10
120°	6	1	6
130°	4	1	4
140°	2	1	2
150°	1	1	1
160°	1	1	1
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 74%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	18 000hrs
Lumen Maintenance	90% luminous flux at 18 000hrs

Applications

- Parking garages
- Cold rooms
- Industrial lighting
- Food processing

Product Features and Accessories

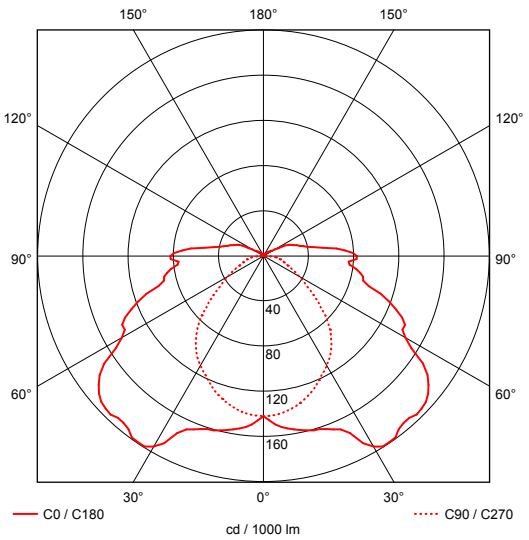
- One piece captive double action snap-lock polycarbonate clips securing the diffuser to the body
- A urethane gasket between body and diffuser
- Hinge-able gear tray
- Glass reinforced polyester (GRP) body with 20mm entry knockouts
- Injected polycarbonate diffuser with linear control prisms
- Aluminium back reflector and stainless steel clips available on request
- Complete with mounting accessories
- DALI/DSI and dimmable options available
- Emergency options available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions				Weight
						L	Lf	W	H	
C2-228-ELB	2 x 28W	2 x 2600	60W	0.98	0.26A	1275mm	800mm	134mm	98mm	2.7kg
C2-254-ELB	2 x 54W	2 x 4450	107W	0.98	0.26A	1275mm	800mm	134mm	98mm	2.7kg

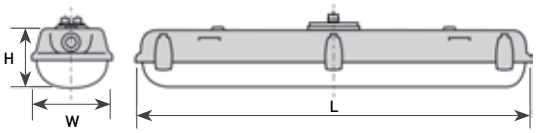
SABS APPROVED · IP65 · 230V · ECG · EMG OPTION · DIM OPTION · F · LAMP NOT INCLUDED · PRODUCED IN RSA

LASCON VML C2 CFL

Photometric Diagram



	C0	C90	C180
0°	142	142	142
10°	156	138	156
20°	163	127	163
30°	195	112	195
40°	193	93	193
50°	190	62	190
60°	145	37	145
70°	118	21	118
80°	87	13	87
90°	83	3	83
100°	46	1	46
110°	29	1	29
120°	12	1	12
130°	6	1	6
140°	2	2	2
150°	2	2	2
160°	2	2	2
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		



Luminaire efficiency: 77.3%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	36 000hrs
Lumen Maintenance	80% luminous flux at 36 000hrs

Applications

- Underground tunnels
- Parking garages
- Industrial lighting
- Mining workshops

Product Features and Accessories

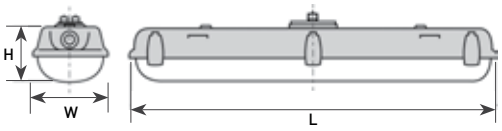
- Designed for "plug and play" into the VML lamp holder
- One piece captive double action snap-lock polycarbonate clips
- Urethane gasket between body and diffuser
- Hinge-able gear tray
- Glass reinforced polyester (GRP)
- Injected polycarbonate diffuser with linear control prisms
- Designed in conjunction with the VML NI lamp holder
- 230V and 110V versions available
- VML lamp holders ordered separately

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
VML/C2-155-ELB/230V	1 x 55W	1 x 4800	50W	0.98	0.24A	665mm	134mm	98mm	1.7kg
VML/C2-140-ELB/110V	1 x 40W	1 x 3500	44W	0.98	0.20A	665mm	134mm	98mm	1.7kg

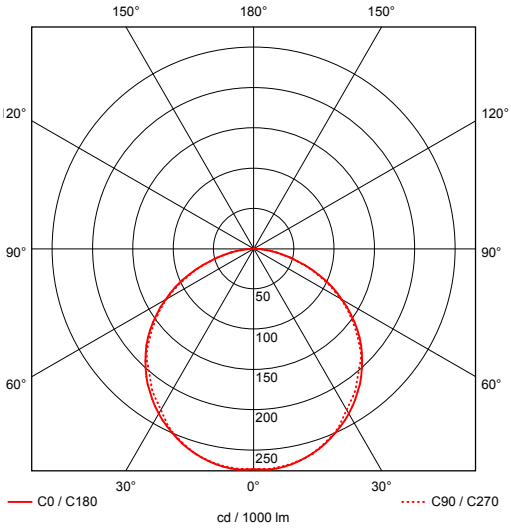
SABS APPROVED · IP65 · 230V · 110V · ECG · F · LAMP NOT INCLUDED

PRODUCED IN RSA

LASCON VML C2 LED



Photometric Diagram



	C0	C90	C180
0°	273	273	273
5°	275	273	275
10°	271	271	271
15°	266	266	266
20°	258	257	258
25°	248	246	248
30°	236	231	236
35°	222	218	222
40°	207	202	207
45°	190	188	190
50°	171	168	171
55°	150	147	150
60°	127	125	127
65°	103	100	103
70°	77	76	77
75°	52	51	52
80°	29	28	29
85°	11	10	11
90°	1	1	1

cd / 1000 lm

Luminaire efficiency: 80.22%

Life/Maintenance

LED Driver Average Rated Life	100 000hrs
LED Life	> 60 000hrs (L70 F10, TP 65°C)

Applications

- Underground tunnels
- Parking garages
- Industrial lighting
- Mining workshops

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K and 6500K on request)
- Small colour tolerance - MacAdam 3
- Tridonic LED module and driver
- Ambient temperature: -30…+45°C
- Designed for "plug and play" into the VML lamp holder
- One piece captive double action snap-lock polycarbonate clips
- Urethane gasket between body and diffuser
- Hinge-able gear tray
- Glass reinforced polyester (GRP)
- Injected polycarbonate diffuser with linear control prisms
- Semi-transparent diffuser over the LED module
- 230V and 110V versions available
- VML lamp holders ordered separately

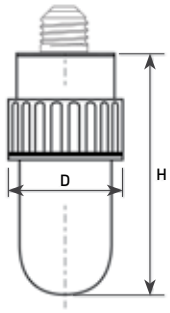
Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions			Weight
					L	W	H	
VML/C2-19W-LED/230V	2990	20.1W	0.98	400mA	665mm	134mm	98mm	1.7kg
VML/C2-19W-LED/110V	2990	20.1W	0.98	400mA	665mm	134mm	98mm	1.7kg

SABS APPROVED

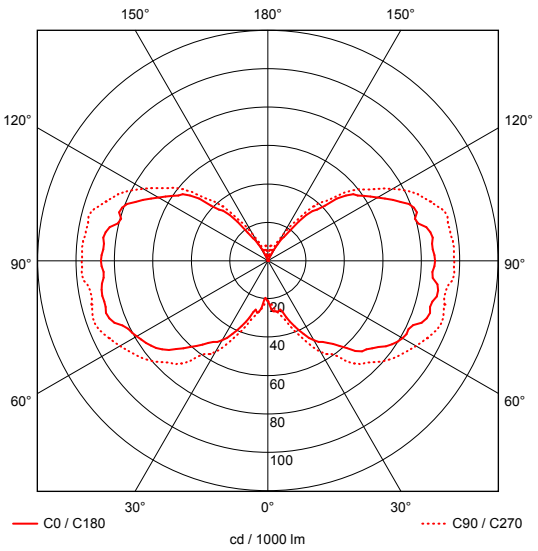
IP65 230V 110V F

PRODUCED IN RSA

LASCON VML ES



Photometric Diagram



	C0	C90	C180
0°	21	21	21
10°	27	27	27
20°	34	38	34
30°	48	55	48
40°	58	70	58
50°	71	81	72
60°	81	89	79
70°	88	96	88
80°	90	94	88
90°	87	97	87
100°	86	96	86
110°	81	90	81
120°	66	75	66
130°	53	57	53
140°	31	37	31
150°	10	16	10
160°	0	6	0
170°	0	8	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 90.7%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- Underground tunnels
- Mining workshops

Product Features and Accessories

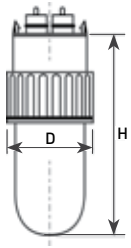
- Designed to be installed into existing EMES boxes
- A special key is needed to install and remove the luminaire making it theft proof
- Flame retardant non-toxic polycarbonate body which houses the electronic ballast
- Impact resistant prismatic polycarbonate diffuser
- Compliant according to both local and international standards
- Compact and lightweight
- High tolerance to voltage fluctuations
- 230V and 110V versions available

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		Weight
						H	D	
VML-ES-113-ELB/230V	1 x 13W	1 x 900	15W	0.98	0.07A	170mm	75mm	0.3kg
VML-ES-113-ELB/110V	1 x 13W	1 x 900	15W	0.98	0.07A	170mm	75mm	0.3kg

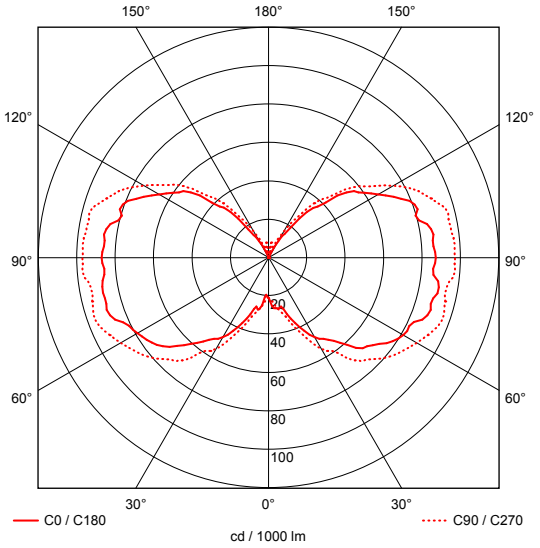
SABS APPROVED

PRODUCED IN RSA

LASCON VML NI



Photometric Diagram



	C0	C90	C180
0°	21	21	21
10°	27	27	27
20°	34	38	34
30°	48	55	48
40°	58	70	58
50°	71	81	72
60°	81	89	79
70°	88	96	88
80°	90	94	88
90°	87	97	87
100°	86	96	86
110°	81	90	81
120°	66	75	66
130°	53	57	53
140°	31	37	31
150°	10	16	10
160°	0	6	0
170°	0	8	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 90.7%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	13 000hrs
Lumen Maintenance	90% luminous flux at 10 000hrs

Applications

- Underground tunnels
- Mining workshops

Product Features and Accessories

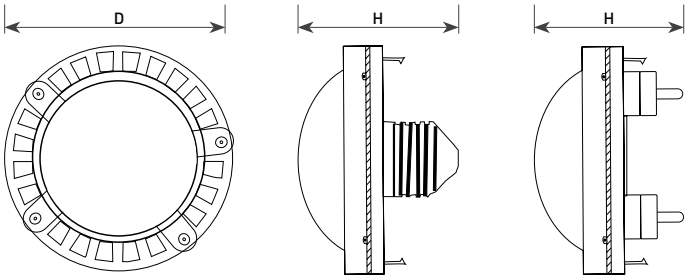
- Designed for "plug and play" into the VML lampholder
- Flame retardant non-toxic polycarbonate body which houses the electronic ballast
- Impact resistant prismatic polycarbonate diffuser
- Compliant according to both local and international standards
- Compact and lightweight
- High tolerance to voltage fluctuations
- 230V and 110V versions available
- VML lamp holders ordered separately

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions		Weight
						H	D	
VML-NI-113-ELB/230V	1 x 13W	1 x 900	15W	0.98	0.07A	170mm	75mm	0.3kg
VML-NI-113-ELB/110V	1 x 13W	1 x 900	15W	0.98	0.07A	170mm	75mm	0.3kg

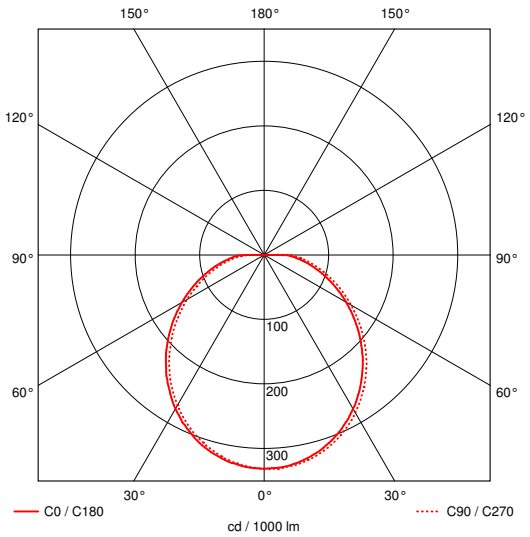
SABS APPROVED

PRODUCED IN RSA

LASCON VML LED



Photometric Diagram



	C0	C90	C180
0°	331	332	331
10°	325	327	325
20°	306	311	305
30°	275	282	275
40°	237	245	236
50°	193	201	193
60°	146	156	147
70°	103	112	104
80°	65	73	67
90°	19	38	26
100°	0	0	0
110°	0	0	0
120°	0	0	0
130°	0	0	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Life/Maintenance

LED Life	30 000hrs @ 48mA (L70 F10, TP 65°C) 30 000hrs @ 61mA (L70 F10, TP 65°C)

Applications

- Underground tunnels
- Mining workshops

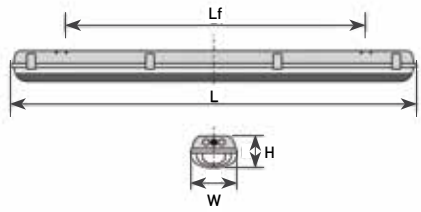
Product Features and Accessories

- Designed for "plug and play" into the VML lampholder
- New installation (NI) or existing installation (ES) lamp bases available
- Flame retardant non-toxic polycarbonate body
- Impact resistant polycarbonate diffuser
- Compliant according to both local and international standards
- Compact and lightweight
- VML lamp holders ordered separately
- 8.5W and 12.5W LED module options available
- Available as 110V configuration; enquire for specifications

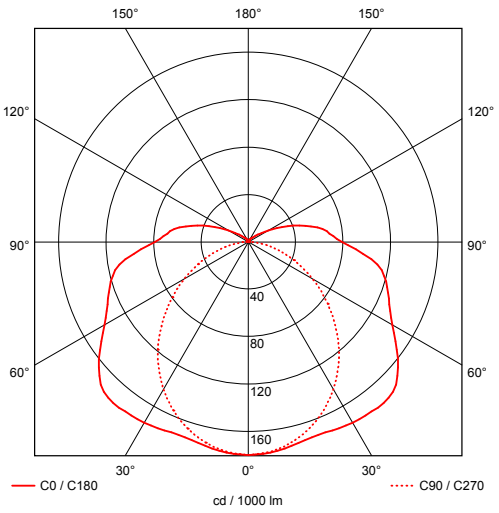
Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions		Weight
					H	D	
VML-8.5W-LED/ES	630	9.3W	0.85	48mA	68.10mm	124.09mm	0.3kg
VML-8.5W-LED/NI	630	9.3W	0.85	48mA	68.10mm	124.09mm	0.3kg
VML-12.5W-LED/ES	830	12.7W	0.91	61mA	68.10mm	124.09mm	0.3kg
VML-12.5W-LED/NI	830	12.7W	0.91	61mA	68.10mm	124.09mm	0.3kg

SABS APPROVED

LASCON P20 / P21 T8



Photometric Diagram



	C0	C90	C180
0°	180	180	180
10°	177	175	177
20°	173	163	173
30°	176	143	176
40°	177	119	177
50°	165	91	165
60°	140	63	140
70°	125	37	125
80°	111	14	111
90°	79	2	79
100°	64	2	64
110°	41	1	41
120°	19	1	19
130°	9	1	9
140°	4	1	4
150°	3	1	3
160°	1	1	1
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 77.7%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2 (BAT)
Lamp Service Life	12 000hrs
Lumen Maintenance	90% luminous flux at 12 000hrs

Applications

PROTECTA 20 – P20: Zone 2 non-sparking luminaire
PROTECTA 21 – P21: Zone 21 and 22 dust ignition and hose-proof luminaire

Product Features and Accessories

- Self-extinguishing polycarbonate body
- UV stabilised, self-extinguishing polycarbonate diffuser with photo-engraved interior and smooth outer surface
- Hinge-able gear tray
- Anti-tamper polycarbonate snap-lock latches (stainless steel on request)
- Complete with mounting accessories
- Approved No. 0s (4-9mm Ø) compression cable gland for un-armoured cable is fitted

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions				Weight
						L	Lf	W	H	
P20-236-ELB	2 x 36W	2 x 3200	72W	0.98	0.31A	1270mm	920mm	160mm	100mm	3.0kg
P21-236-ELB	2 x 36W	2 x 3200	72W	0.98	0.31A	1270mm	920mm	160mm	100mm	3.0kg

SABS APPROVED · IP65 · 230V · ECG · F · LAMP NOT INCLUDED

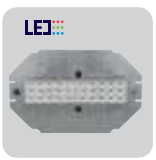
PRODUCED IN RSA

LASCON
INDUSTRIAL CEILING AND WALL LUMINAIRES

B40 CFL
page 130

B40 HID
page 131

B40
page 132



B40 RETROFIT
page 133

B41
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B41 RETROFIT
page 135

B60 HID
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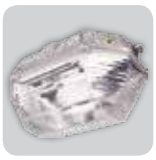
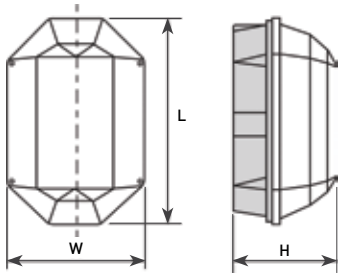
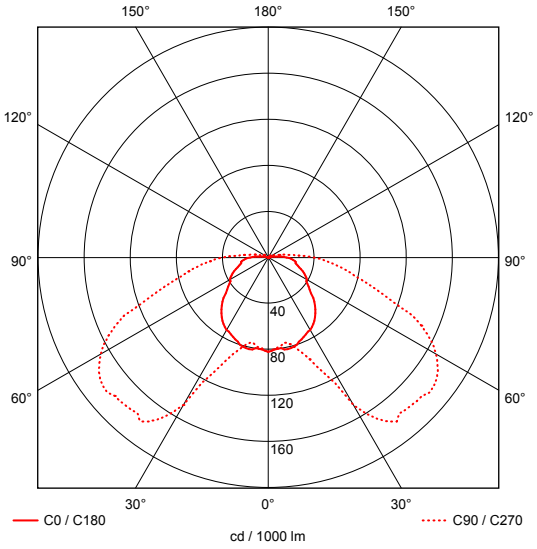


P40 / P41 HID
page 137

LASCON B40 CFL



Photometric Diagram



	C0	C90	C180
0°	82	82	82
10°	81	75	81
20°	78	89	78
30°	73	148	73
40°	63	177	63
50°	49	183	49
60°	39	168	39
70°	30	117	30
80°	24	71	24
90°	16	40	16
100°	5	15	5
110°	1	7	1
120°	0	5	0
130°	0	3	0
140°	0	2	0
150°	0	1	0
160°	0	1	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 62.4%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A2
Lamp Service Life	20 000hrs
Lumen Maintenance	80% luminous flux at 20 000hrs

Applications

- Tunnel lighting
- Conveyor lighting
- Power stations
- Security lighting

Product Features and Accessories

- LM6 high pressure die cast aluminium body
- High impact polycarbonate diffuser
- Anodised aluminium reflector
- Widespread distribution
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Mounting bracket available (ordered separately)
- Electronic control gear
- Emergency options available

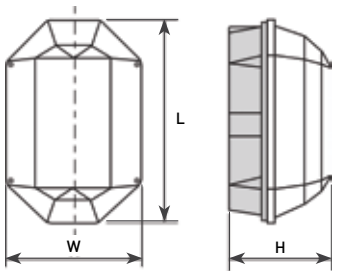
Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
B40-218-ELB	2 x 18W	2 x 1200	36W	0.98	0.16A	410mm	271mm	198mm	4.9kg
B40-224-ELB	2 x 24W	2 x 1800	49W	0.98	0.22A	410mm	271mm	198mm	4.9kg

IP20 230V ECG EMG OPTION DIM OPTION F LAMP NOT INCLUDED

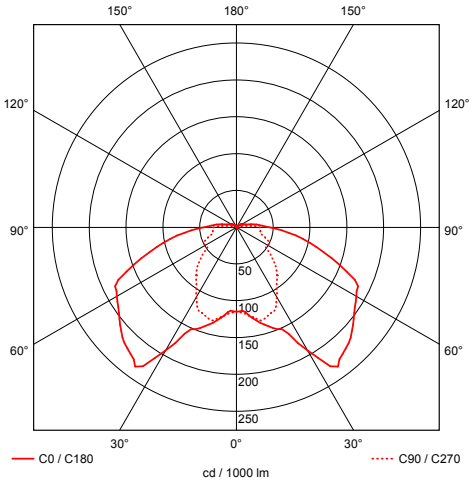
PRODUCED IN RSA

LASCON B40 HID

Mount on a vertical surface with lamp in the cap-up position



Photometric Diagram



	C0	C90	C180
0°	115	115	115
10°	125	124	125
20°	146	127	146
30°	193	110	193
40°	224	86	224
50°	206	62	206
60°	188	49	188
70°	149	41	149
80°	92	33	92
90°	46	32	46
100°	24	13	24
110°	12	0	12
120°	8	0	8
130°	6	0	6
140°	3	0	3
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 82.26%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	32 000hrs
Lumen Maintenance	80% luminous flux at 16 000hrs (HPS lamp)

Applications

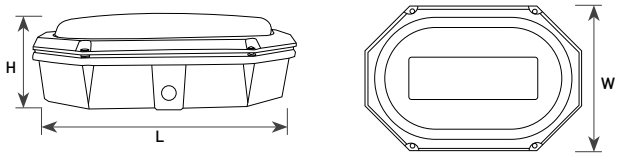
- Tunnel lighting
- Conveyor lighting
- Power stations
- Security lighting

Product Features and Accessories

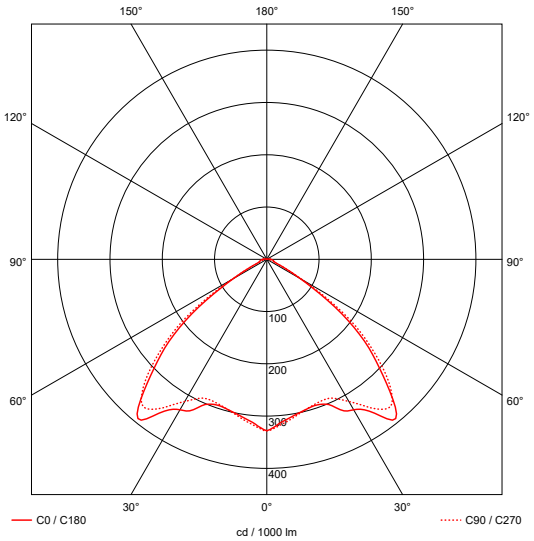
- LM6 high pressure die cast aluminium body
- High impact polycarbonate diffuser (high impact resistant acrylic used for mercury vapour lamps)
- Anodised aluminium reflector
- Widespread distribution
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Mounting bracket available (ordered separately)

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
B40-125W-MVE	1 x 125W	6800	138W	0.85	0.69A	410mm	271mm	198mm	5.1kg
B40-70W-MH	1 x 70W	5900	90W	0.85	0.42A	410mm	271mm	198mm	5.1kg
B40-70W-HPS	1 x 70W	6300	91W	0.85	0.42A	410mm	271mm	198mm	5.1kg
B40-100W-MH	1 x 100W	7950	129W	0.85	0.59A	410mm	271mm	198mm	5.1kg
B40-100W-HPS	1 x 100W	10 400	130W	0.85	0.59A	410mm	271mm	198mm	5.1kg
B40-150W-MH	1 x 150W	12 100	185W	0.85	0.84A	410mm	271mm	198mm	7.1kg
B40-150W-HPS	1 x 150W	17 000	190W	0.85	0.84A	410mm	271mm	198mm	7.1kg

LASCON B40 LED



Photometric Diagram



Luminaire efficiency: 94.9%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F50, TP 65°C)

Applications

- Tunnel lighting
- Conveyor lighting
- Industrial lighting
- Security lighting

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe LED modules and driver
- Ambient temperature: -25…+80°C
- LM6 high pressure die cast aluminium body
- Borosilicate clear tempered glass or polycarbonate
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Mounting bracket available (ordered separately)

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				L	W	H	
B40-17W-LED	2200	18.3W	0.95	410mm	271mm	120mm	4kg
B40-34W-LED	4400	36.5W	0.95	410mm	271mm	120mm	4kg

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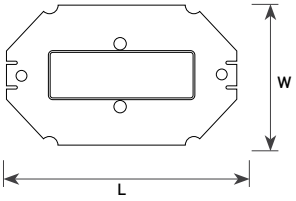
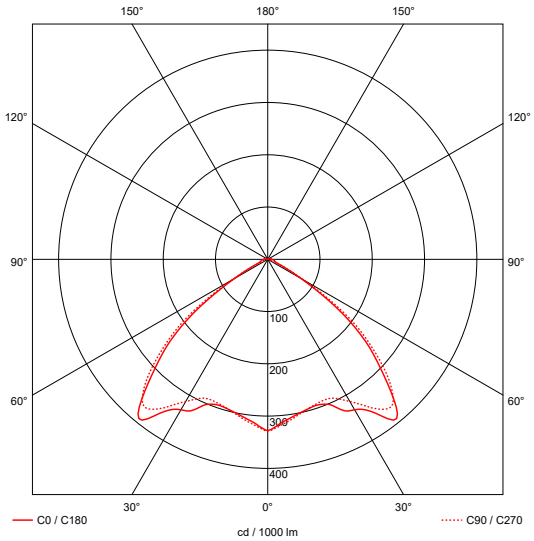
LASCON B40 RETROFIT LED



Photometric Diagram



Luminaire efficiency: 94.9%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F50, TP 65°C)

Applications

- Tunnel lighting
- Conveyor lighting
- Power stations
- Industrial lighting
- Security lighting

Product Features and Accessories

- Designed to be used in existing B40 luminaries
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe LED modules and driver
- Ambient temperature: -25…+80°C
- Borosilicate glass cover available separately

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				L	W	H	
B40-RETROFIT-17W-LED	2200	18.3W	0.95	384mm	245mm	50mm	0.3kg
B40-RETROFIT-34W-LED	4400	36.5W	0.95	384mm	245mm	50mm	0.3kg

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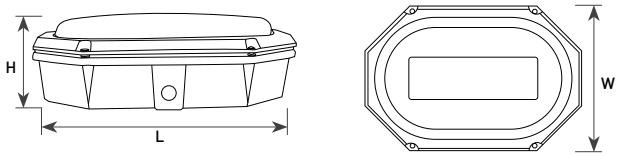
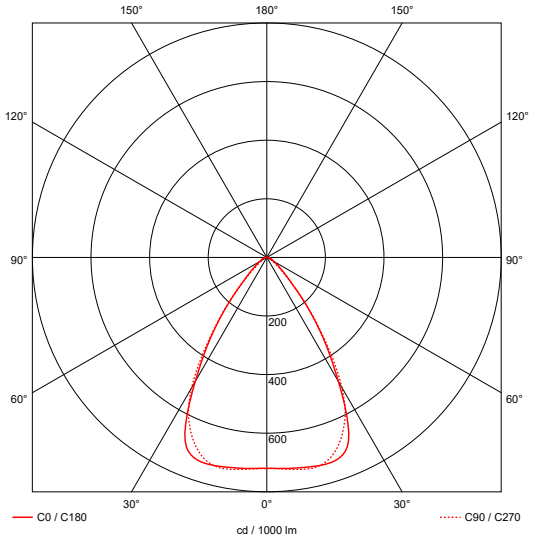
PRODUCED IN RSA

LASCON B41 LED



Photometric Diagram



Luminaire efficiency: 93.3%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F50, TP 65°C)

Applications

- Tunnel lighting
- Conveyor lighting
- Industrial lighting
- Security lighting

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe LED modules and driver
- Ambient temperature: -25…+80°C
- LM6 high pressure die cast aluminium body
- Borosilicate clear tempered glass or polycarbonate
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Mounting bracket available (ordered separately)

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				L	W	H	
B41-17W-LED	2200	18.3W	0.95	410mm	271mm	120mm	4kg
B41-34W-LED	4400	36.5W	0.95	410mm	271mm	120mm	4kg

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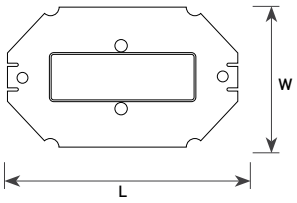
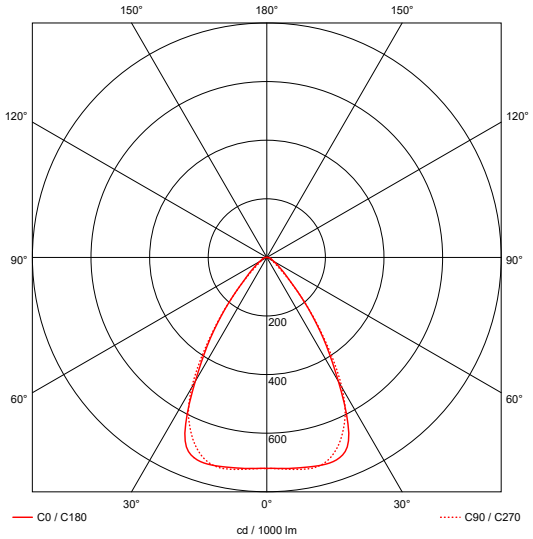
LASCON B41 RETROFIT LED



Photometric Diagram



Luminaire efficiency: 93.3%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs (L70 F50, TP 65°C)

Applications

- Tunnel lighting
- Conveyor lighting
- Power stations
- Industrial lighting
- Security lighting

Product Features and Accessories

- Designed to be used in existing B40 luminaries
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe LED modules and driver
- Ambient temperature: -25…+80°C
- Borosilicate glass cover available separately

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				L	W	H	
B41-RETROFIT-17W-LED	2200	18.3W	0.95	384mm	245mm	50mm	0.3kg
B41-RETROFIT-34W-LED	4400	36.5W	0.95	384mm	245mm	50mm	0.3kg

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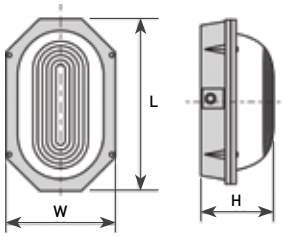
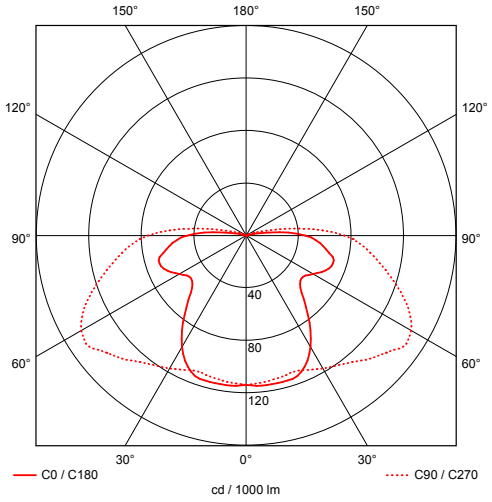
PRODUCED IN RSA

LASCON B60 HID



Photometric Diagram



	C0	C90	C180
0°	114	114	114
10°	115	112	115
20°	114	110	114
30°	98	117	98
40°	71	126	71
50°	54	139	54
60°	59	145	59
70°	69	125	69
80°	62	100	62
90°	45	75	45
100°	11	29	11
110°	0	6	0
120°	0	2	0
130°	0	1	0
140°	0	0	0
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 59.4%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	32 000hrs
Lumen Maintenance	80% luminous flux at 16 000hrs (HPS lamp)

Applications

- Tunnel lighting
- Conveyor lighting
- Power stations
- Security lighting

Product Features and Accessories

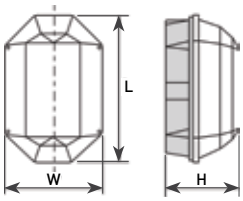
- LM6 High pressure die cast aluminium body with an epoxy powder coated finish
- Borosilicate glass diffuser with internal linear prisms and a smooth outer surface
- Anodised aluminium reflector
- Widespread distribution
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Mounting bracket available (ordered separately)

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
B60-125W-MVE	1 x 125W	6800	138W	0.85	0.69A	410mm	270mm	195mm	8.3kg
B60-70W-MH	1 x 70W	5900	90W	0.85	0.42A	410mm	270mm	195mm	8.1kg
B60-70W-HPS	1 x 70W	6300	91W	0.85	0.42A	410mm	270mm	195mm	8.1kg
B60-100W-MH	1 x 100W	7950	129W	0.85	0.59A	410mm	270mm	195mm	8.1kg
B60-100W-HPS	1 x 100W	10 400	130W	0.85	0.59A	410mm	270mm	195mm	8.1kg
B60-150W-MH	1 x 150W	12 100	185W	0.85	0.84A	410mm	270mm	195mm	10kg
B60-150W-HPS	1 x 150W	17 000	190W	0.85	0.84A	410mm	270mm	195mm	10kg

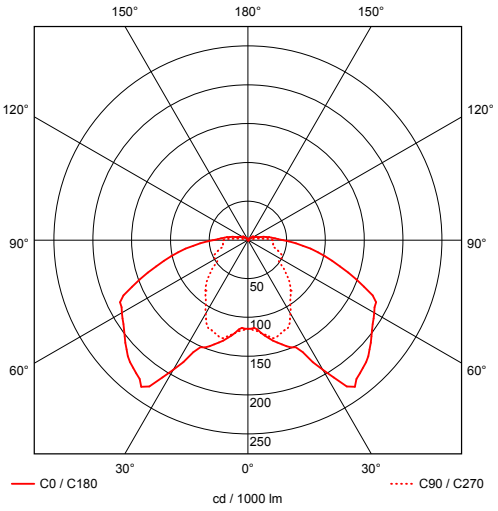
IP65 230V F LAMP NOT INCLUDED

PRODUCED IN RSA

LASCON P40 / P41 HID



Photometric Diagram



	C0	C90	C180
0°	115	115	115
10°	125	124	125
20°	146	127	146
30°	193	110	193
40°	224	86	224
50°	206	62	206
60°	188	49	188
70°	149	41	149
80°	92	33	92
90°	46	32	46
100°	24	13	24
110°	12	0	12
120°	8	0	8
130°	6	0	6
140°	3	0	3
150°	0	0	0
160°	0	0	0
170°	0	0	0
180°	0	0	0

cd / 1000 lm

Luminaire efficiency: 82.26%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	32 000hrs
Lumen Maintenance	80% luminous flux at 16 000hrs (HPS lamp)

Applications

PROTECTA 40 – P40: Zone 2 non-sparking luminaire

PROTECTA 41 – P41: Zone 21 and 22 dust ignition luminaire

Product Features and Accessories

- LM6 high pressure die cast aluminium body
- High impact polycarbonate diffuser (high impact resistant acrylic used for mercury vapour lamps)
- Anodised aluminium reflector
- Widespread distribution
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Mounting bracket available (ordered separately)

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
P40-125W-MVE	1 x 125W	6800	138W	0.85	0.69A	410mm	271mm	198mm	5.1kg
P40-70W-HPS	1 x 70W	6300	91W	0.85	0.42A	410mm	271mm	198mm	5.1kg
P40-242-CFL	2 x 42W	2 x 3200	92W	0.97	0.39A	410mm	271mm	198mm	5.1kg
P41-125W-MVE	1 x 125W	6800	138W	0.85	0.69A	410mm	271mm	198mm	5.1kg
P41-70W-HPS	1 x 70W	6300	91W	0.85	0.42A	410mm	271mm	198mm	5.1kg
P41-242-CFL	2 x 42W	2 x 3200	92W	0.97	0.39A	410mm	271mm	198mm	5.1kg

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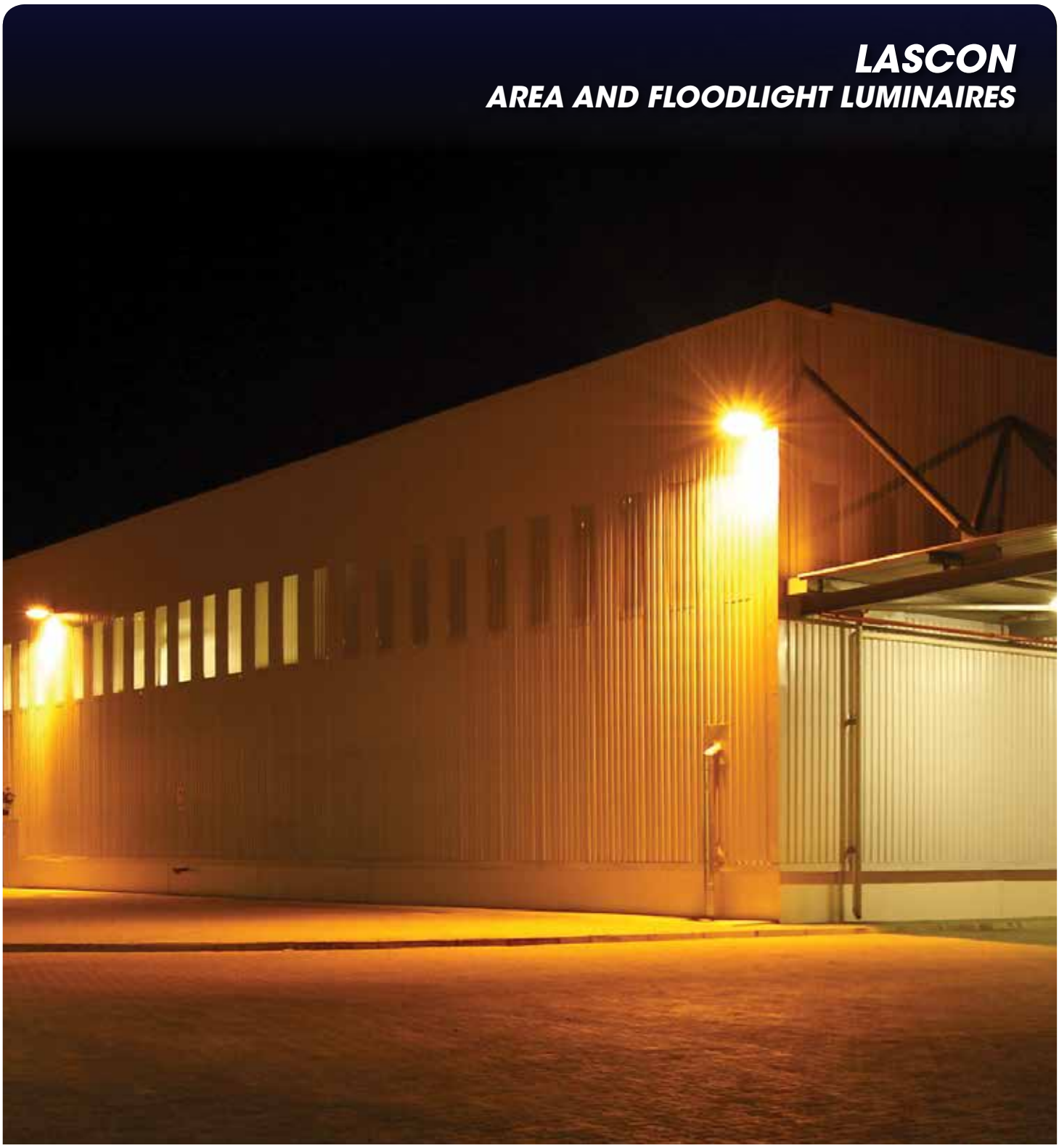
NOTES

LASCON
AREA AND FLOODLIGHT LUMINAIRES



L14D HID
page 140

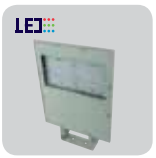
L14 DRAGLINE HID
page 141

L14ST HID
page 142

L16 FLOODLIGHT
page 143

L18 FLOODLIGHT
page 144

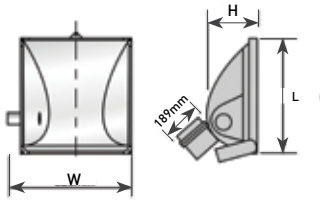
L10 FLOODLIGHT
page 145



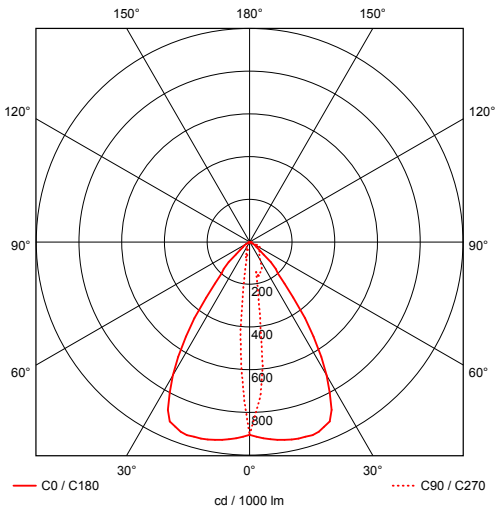
L12 FLOODLIGHT
page 146

SL10
page 147

LASCON L14D HID



Photometric Diagram



	C0	C90	C180
0°	904	904	904
5°	926	658	926
10°	942	215	942
15°	950	156	950
20°	946	151	946
25°	901	135	901
30°	722	100	722
35°	489	83	489
40°	255	66	255
45°	157	65	157
50°	59	64	59
55°	36	62	36
60°	14	60	14
65°	7	39	7
70°	0	18	0
75°	0	9	0
80°	0	0	0
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 72.2%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	32 000hrs
Lumen Maintenance	80% luminous flux at 16 000hrs (HPS lamp)

Applications

- Mast lighting
- Sport field lighting
- Power Stations
- Security lighting

Product Features and Accessories

- Separate lamp and control gear housing
- Nylon compression gland for cable entry
- Anodized, highly specular reflector includes a deflector blade for improved performance. Hammered reflector for wide distribution available
- High pressure cast aluminium body and control gear housing
- Tempered glass diffuser
- For use with Metal Halide and High Pressure Sodium tubular lamps only
- Lamp replacement is via side mounted cast aluminium lamp holder housing

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
L14D-1000W-MH	1 x 1000W	110 000	1080W	0.85	4.81A	485mm	525mm	185mm	35.2kg
L14D-1000W-HPS	1 x 1000W	130 000	1100W	0.85	4.81A	485mm	525mm	185mm	35.2kg

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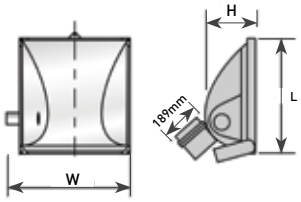
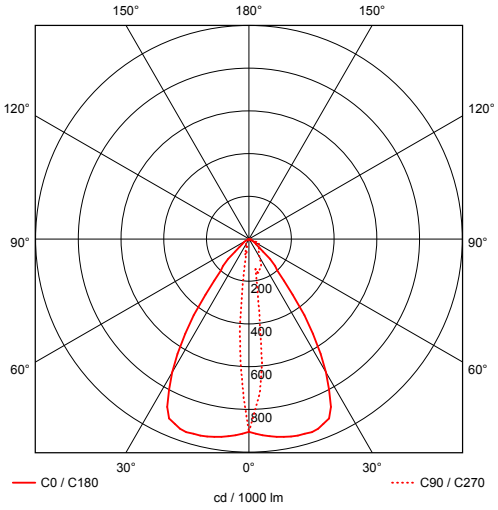
LASCON L14 DRAGLINE HID



Photometric Diagram



	C0	C90	C180
0°	904	904	904
5°	926	658	926
10°	942	215	942
15°	950	156	950
20°	946	151	946
25°	901	135	901
30°	722	100	722
35°	489	83	489
40°	255	66	255
45°	157	65	157
50°	59	64	59
55°	36	62	36
60°	14	60	14
65°	7	39	7
70°	0	18	0
75°	0	9	0
80°	0	0	0
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 72.2%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	32 000hrs
Lumen Maintenance	80% luminous flux at 16 000hrs (HPS lamp)

Applications

- Draglines

Product Features and Accessories

- Designed specifically for use on draglines and areas with extreme vibration
- Anti-vibration rubber mounts and stabilising devices ensure a steady beam
- Control gear housing ordered separately
- Nylon compression gland for cable entry
- Anodized, highly specular reflector includes a deflector blade for improved performance. Hammered reflector for wide distribution available
- High pressure cast aluminium body and control gear housing
- Tempered glass diffuser
- For use with Metal Halide and High Pressure Sodium tubular lamps only
- Lamp replacement is via side mounted cast aluminium lamp holder housing

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
L14D-1000W-MH	1 x 1000W	110 000	1080W	0.85	4.81A	485mm	525mm	185mm	35.2kg
L14D-1000W-HPS	1 x 1000W	130 000	1100W	0.85	4.81A	485mm	525mm	185mm	35.2kg

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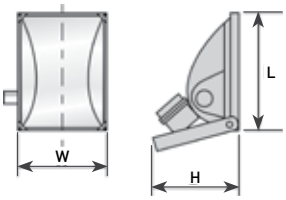
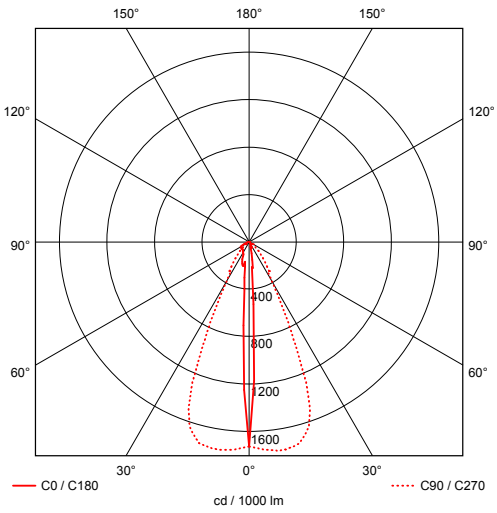
LASCON L14ST HID



Photometric Diagram



	C0	C90	C180
0°	1725	1725	1725
5°	347	1759	538
10°	155	1777	213
15°	42	1727	210
20°	53	1494	178
25°	53	860	122
30°	25	378	105
35°	22	280	96
40°	18	182	87
45°	9	122	86
50°	0	62	85
55°	0	42	85
60°	0	22	85
65°	0	11	58
70°	0	0	30
75°	0	0	15
80°	0	0	0
85°	0	0	0
90°	0	0	0
	cd / 1000 lm		

Luminaire efficiency: 81.8%

Life/Maintenance

ECG Average Rated Life	50 000hrs
Energy Efficient Index EEI	A3
Lamp Service Life	32 000hrs
Lumen Maintenance	80% luminous flux at 16 000hrs (HPS lamp)

Applications

- General floodlighting
- Sport field lighting
- Security lighting
- Area lighting

Product Features and Accessories

- Separate lamp and control gear housing
- Nylon compression gland for cable entry
- Anodized, highly specular reflector includes a deflector blade for improved performance. Hammered reflector for wide distribution available
- High pressure cast aluminium body and control gear housing
- Tempered glass diffuser
- For use with Metal Halide and High Pressure Sodium tubular lamps only
- Lamp replacement is via side mounted cast aluminium lamp holder housing

Specification	Wattage	Lumen @ 25°C	System Power	Power Factor	Current	Dimensions			Weight
						L	W	H	
L14ST-250W-MH	1 x 250W	19 000	295W	0.85	1.3A	470mm	420mm	280mm	17kg
L14ST-250W-HPS	1 x 250W	33 200	295W	0.85	1.3A	470mm	420mm	280mm	19kg
L14ST-400W-MH	1 x 400W	34 000	460W	0.85	2.4A	470mm	420mm	280mm	17kg
L14ST-400W-HPS	1 x 400W	56 500	465W	0.85	1.98A	470mm	420mm	280mm	19kg

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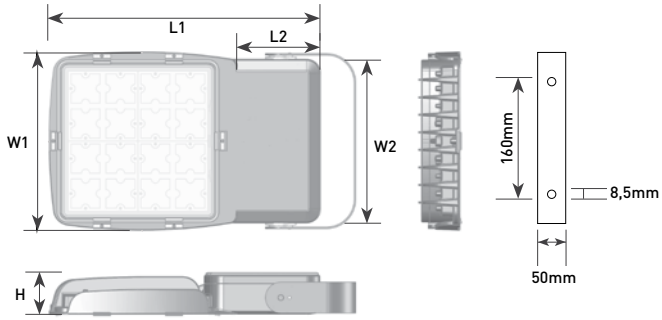
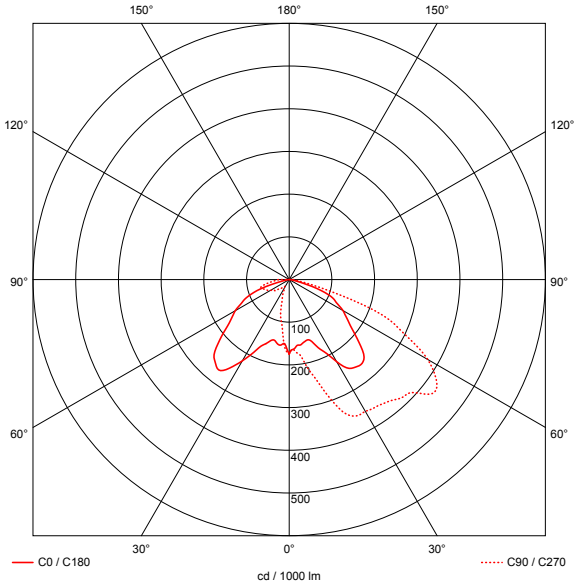
IP65 230V F LAMP NOT INCLUDED

PRODUCED IN RSA

LASCON L16 FLOODLIGHT LED



Photometric Diagram



Luminaire efficiency: 93.5%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs @ 850mA (L70 F10, TP 65°C)

Applications

- General floodlighting
- Security lighting
- Sport field lighting
- Area lighting

Product Features and Accessories

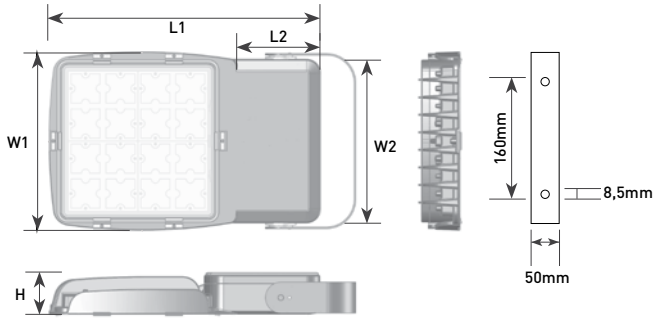
- Vossloh Schwabe LED modules and driver
- High colour rendering index CRI > 80
- Colour temperature 5000K available
- LM6 die cast aluminium body
- Hot dipped galvanised stirrup
- 316 stainless steel screws and heli-coils
- 316 stainless steel fasteners

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions					Weight
					L1	L2	W1	W2	H	
L16-165W-LED	22 180	178W	0.95	850mA	467mm	143mm	306mm	281mm	65mm	6.5kg

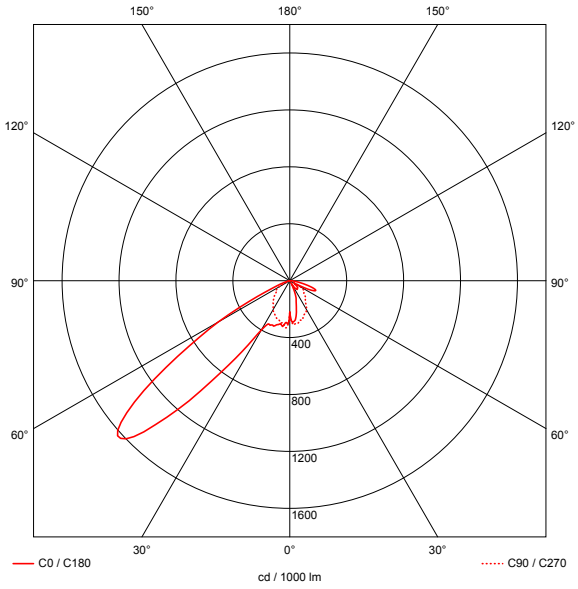
SABS APPROVED IP65 230V F

PRODUCED IN RSA

LASCON L18 FLOODLIGHT LED



Photometric Diagram



Luminaire efficiency: 96.4%

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000hrs @ 850mA (L70 F10, TP 65°C)

Applications

- General floodlighting
- Security lighting
- Sport field lighting
- Area lighting

Product Features and Accessories

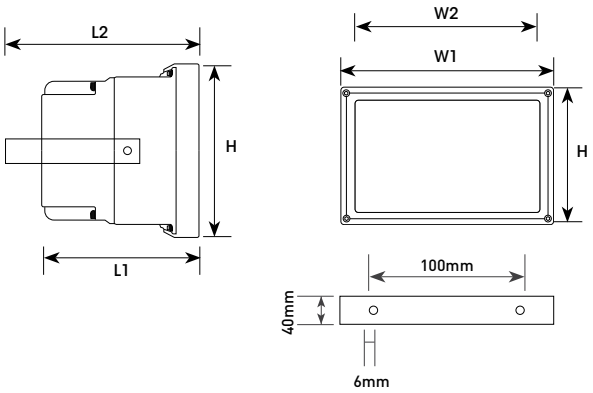
- Vossloh Schwabe LED modules and driver
- High colour rendering index CRI > 80
- Colour temperature 5000K available
- LM6 die cast aluminium body
- Hot dipped galvanised stirrup
- 316 stainless steel screws and heli-coils
- 316 stainless steel fasteners

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions					Weight
					L1	L2	W1	W2	H	
L18-165W-LED	21 180	178W	0.95	850mA	467mm	143mm	306mm	281mm	65mm	6.5kg

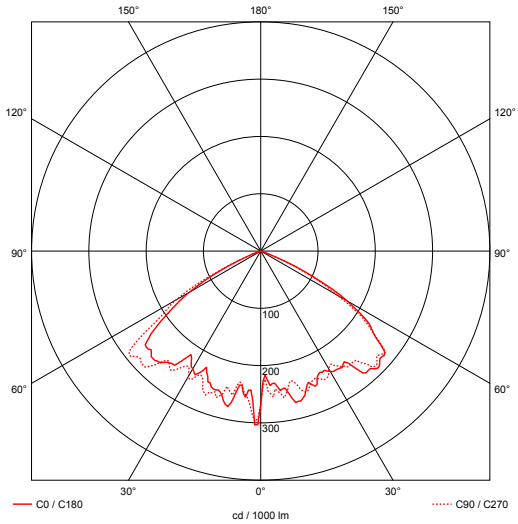
SABS APPROVED IP65 230V F

PRODUCED IN RSA

LASCON L10 FLOODLIGHT LED



Photometric Diagram



Luminaire efficiency: 92.5%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000 hours @ 700mA (L70 F10, TP 65°C)

Applications

- Signage lighting
- Perimeter lighting
- Architectural lighting
- Security lighting

Product Features and Accessories

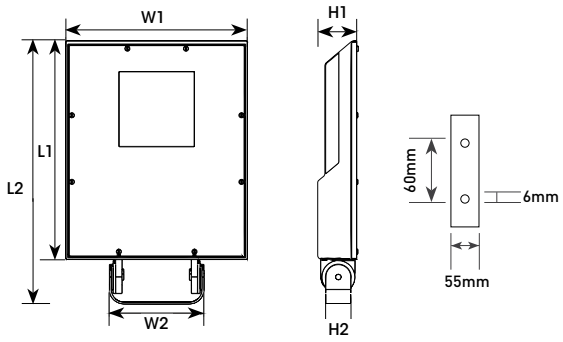
- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Small colour tolerance - MacAdam 3
- Vossloh Schwabe main LED module and driver
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions					Weight
					L1	L2	W1	W2	H	
L10-34W-LED	4640	36.5	0.95	700mA	158mm	215mm	280mm	265mm	180mm	3.9kg

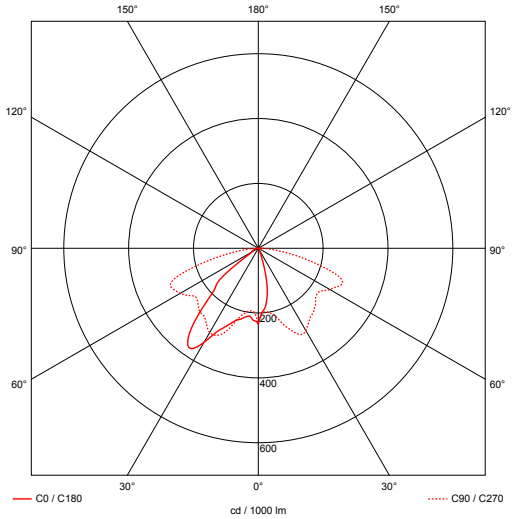
SABS APPROVED | IP65 | 230V | F

PRODUCED IN RSA

LASCON L12 FLOODLIGHT LED



Photometric Diagram



Luminaire efficiency: 95.6%

Colours available

Matt black | Matt white | Matt silver

Life/Maintenance

LED Driver Average Rated Life	50 000hrs
LED Life	50 000 hours @ 700mA (L70 F10, TP 65°C)

Applications

- Parking areas
- Perimeter lighting
- Architectural lighting
- Security lighting

Product Features and Accessories

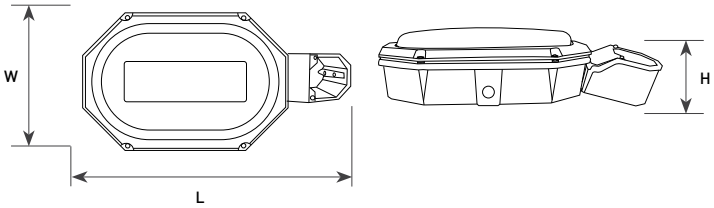
- High colour rendering index CRI > 80
- Colour temperature 3000K/4000K (5000K on request)
- Small colour tolerance - MacAdam 3
- LM6 marine grade aluminium
- Opal polycarbonate diffuser
- 316 stainless steel screws with heli-coils
- Chemically treated and epoxy powder coated
- 5 year anti-corrosion warranty
- IP65
- 1 Way/2 Way pole mount bracket available on request

Specification	Lumen @ 65°C	System Power	Power Factor	Current	Dimensions						Weight
					L1	L2	W1	W2	H1	H2	
L12-34W-LED	4640	36.5W	0.95	700mA	350mm	421mm	290mm	151mm	62mm	40mm	4.75kg
L12-68W-LED	9280	73W	0.95	700mA	350mm	421mm	290mm	151mm	62mm	40mm	4.75kg

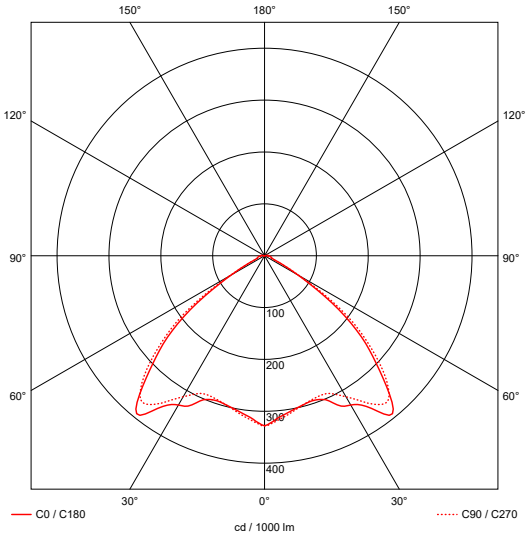
SABS APPROVED | IP65 | 230V | F

PRODUCED IN RSA

LASCON SL10 LED



Photometric Diagram



Luminaire efficiency: 94.9%

Life/Maintenance

LED Life	50 000hrs (L70 F50, TP 65°C)

Applications

- Area lighting
- Security lighting
- Industrial lighting
- Perimeter stations

Product Features and Accessories

- High colour rendering index CRI > 80
- Colour temperature 4000K (3000K on request)
- Vossloh Schwabe LED modules and driver
- Ambient temperature: -25…+80°C
- LM6 high pressure die cast aluminium body
- Borosilicate clear glass or polycarbonate
- 316 stainless steel screws and heli-coils
- 3 x 20mm Ø cable entry knockouts and 1 x M20 threaded gland entry
- Complete with 76mm spigot
- Emergency options available

Specification	Lumen @ 65°C	System Power	Power Factor	Dimensions			Weight
				L	W	H	
SL10-17W-LED	2200	18.3W	0.95	410mm	271mm	120mm	4.3kg
SL10-34W-LED	4400	36.5W	0.95	410mm	271mm	120mm	4.3kg

SABS APPROVED · IP65 · 230V · EMG OPTION · F

PRODUCED IN RSA

NOTES

DIGITAL CEILING AND WALL MOUNT SENSORS

GESM SENSOR
page 150

HUBBELL SENSOR RANGE
page 154

GESM - SURFACE MOUNTED PIR MOVEMENT SENSOR

Overview

The GESM movement sensor is designed to provide automatic control of lighting, heating or ventilation loads. It detects movement using a PIR sensor and turns the load on. When an area is no longer occupied the load will switch off after an adjustable time out period.

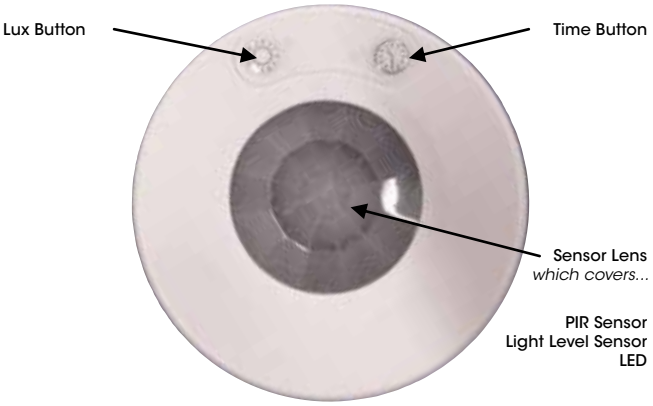
An adjustable internal light sensor provides additional energy saving in lighting applications. When an area is occupied, lighting is only switched on when the level of natural light falls below a preset level.

When the sensor is first powered up, the PIR sensor will always detect immediately regardless of whether the room is occupied.

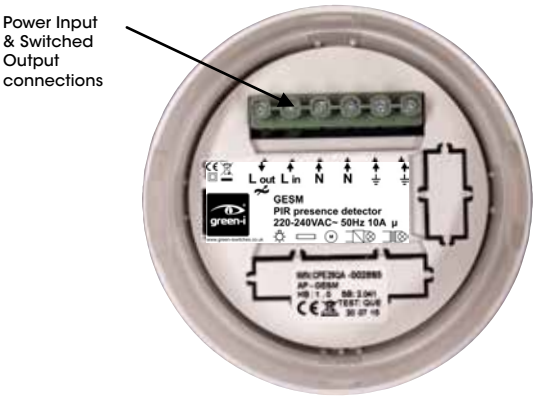
Features

- PIR Sensor
  Detects movement within the sensor's detection range, allowing load control in response to changes in occupancy.
- Light Level Sensor
  Measures the overall light level in the detection area
- LED
  The red LED is used for feedback information during **Set-up**. See **Set-up** section, on page 152.
- Power Input & Switched Output Connector
  Used to connect mains power to the sensor and to connect a switched load.
- Lux Button
  Use to set the Lux level for Lux switching. See **Set-up** section, on page 152.
- Time Button
  Use to set the time delay after which the load switches off when an area is vacated. See **Set-up** section, on page 152.

Front features



Back features



GESM - SURFACE MOUNTED PIR MOVEMENT SENSOR

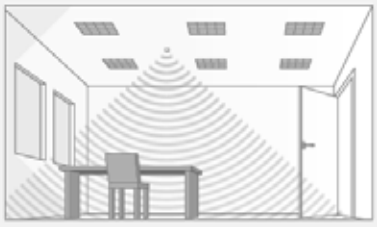
Sensor functionality

Movement detection

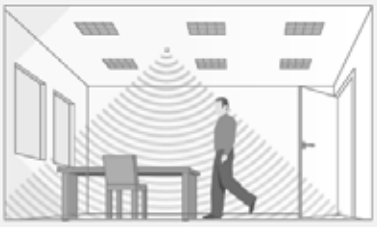
When movement is detected the load will automatically turn on. When the area is no longer occupied the load will automatically switch off after an adjustable time period.

Lux level switching

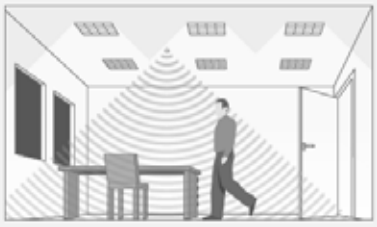
The GESM has a built-in adjustable lux sensor which will keep the lighting switched off if there is sufficient natural light. The Lux level is set using the Lux Button on the front of the sensor.



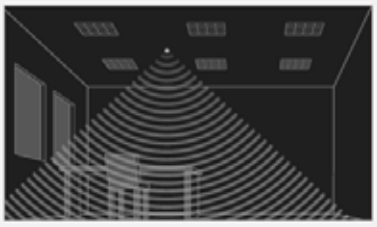
No presence detected, daylight, lights off



Presence detected, sufficient daylight, lights off



Presence detected, insufficient daylight, all lights on



No presence detected, lights off

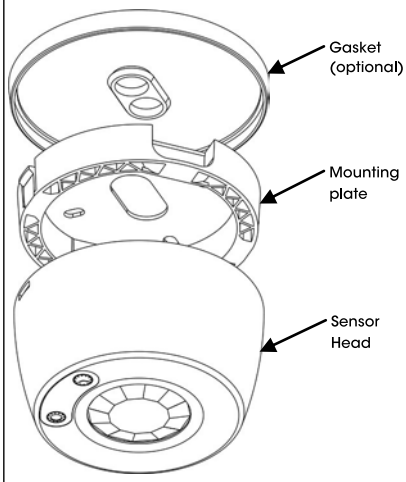
Installation

Choosing a suitable location

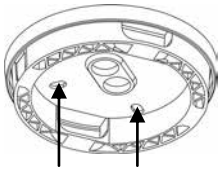
The GESM is designed to be ceiling mounted and must satisfy the following criteria:

- The sensor should be sited so that the occupants of the room fall inside the detection pattern (see page 153) at a recommended height of 2.8m on the ceiling. Note that the lower the sensor is installed, the smaller the detection range will be subject to the parameters shown on the diagram, on page 153.
- Avoid positioning the sensor where direct sunlight may enter the sensor element.
- Do not site the sensor within 1m of any lighting, forced air heating or ventilation.
- Do not fix the sensor to an unstable or vibrating surface.

Components

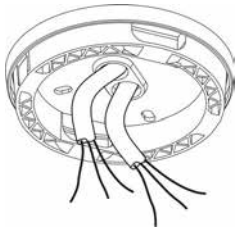


1



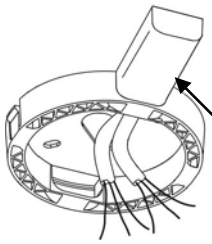
Screw the Mounting plate and optional Gasket to the ceiling via the 4 mounting holes.
Note: 2 holes are suitable for BESA boxes, 2 are suitable for UK or EU 60mm fixing backboxes.

2a Rear entry



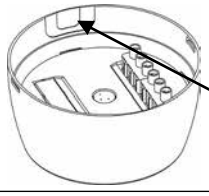
Pass cable through Gasket and Mounting plate

2b Side entry



Pass cable through either of the 2 side entry points in the Mounting plate

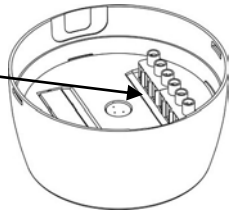
Conduit



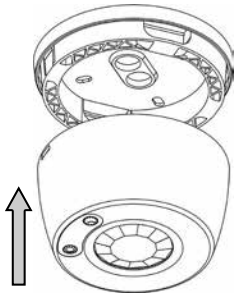
Knock-outs on Sensor Head for clearing side entry of conduit and / or cables

3

Wire cables into the terminals



4



Push the Sensor Head onto the Mounting plate and align clips with slots on Sensor Head

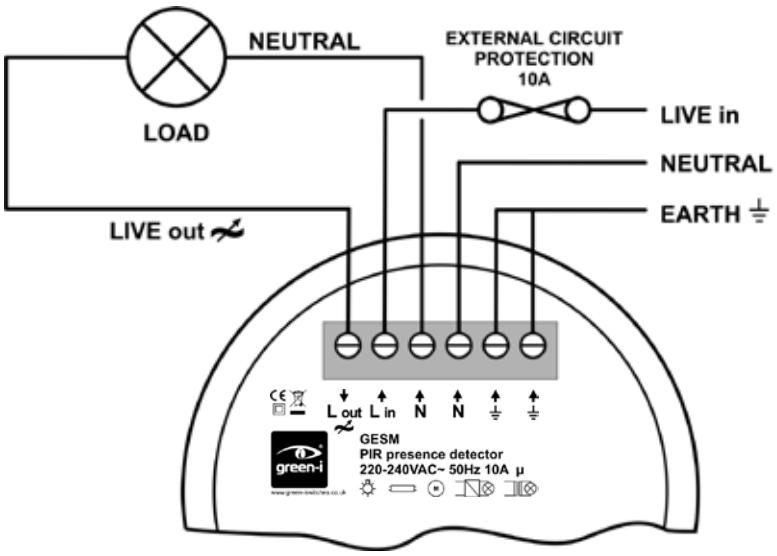
5

Use a flat bladed screwdriver to unclip the Mounting plate from the Sensor Head

GESM - SURFACE MOUNTED PIR MOVEMENT SENSOR

Wiring diagram

Note: To switch from more than one position simply wire two or more sensors in parallel.



Power-up test procedure

- Power the sensor up—the load should come on immediately.
- Set the Lux level to maximum and the time to minimum.
- Vacate the room or remain very still and wait for the load to switch off (should take no more than 2 minutes).
- Check that the load switches on when movement is detected.
- To set the final Lux level wait until the level of natural daylight is such that lighting is required. Starting with the Lux control at minimum, slowly increase the Lux until the lights come on. Note that when the Lux control is at maximum, the lights will always come on with occupancy.
- Set the time required.

Set-up

To program a Time or Lux setting

- Press and release either the Time or Lux Button quickly (presses within 1 second of each other) to access 1 of 5 settings. 1 second after the switch has been released, the LEDs will flash to signal which setting has been loaded.

To find out what the Lux or Time has been set to

- Press either switch for more than 3 seconds then release. The LED will flash to signify the setting.

To lock the programmed settings

- Use to stop accidental re-programming of the sensor.
- Press either switch for more than 10 seconds and do not release. It will toggle between lock and unlock. If the sensor was unlocked, whilst the button is pressed the LED will be lit, after 10 seconds it will extinguish. If the sensor is locked, the LED will flash once after 10 seconds.

Button presses	LED flashes	Time	Lux
1	R	10 seconds	1 (minimum)
2	R R	5 minutes	3
3	R R R	10minutes	5
4	R R R R	20 minutes (default)	7
5	R R R R R	30 minutes	9 (default) Always on / lux disabled

Fault finding

What if the load does not turn ON?

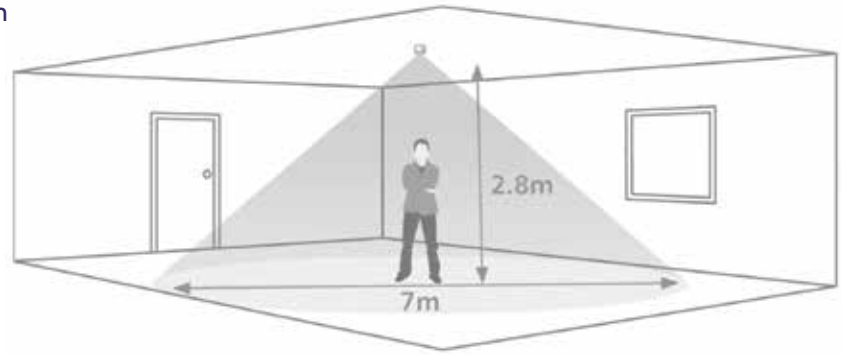
- Check to see if the live supply to the circuit is good. Strap across the L and LIVE OUT terminal to turn the load on.
- If the supply and wiring are good, check the Lux level setting. Increase the Lux level setting to allow the controller to turn on at higher ambient natural light level.
- If the detection range is smaller than expected, check the Detection Diagram on the opposite page. Rotating the sensor slightly may improve the range.

What if the load does not turn OFF?

- Ensure that the area is left unoccupied for longer than the Time Out Period.
- Ensure that the sensor is not adjacent to circulating air, heaters or lamps.

GESM - SURFACE MOUNTED PIR MOVEMENT SENSOR

Detection diagram

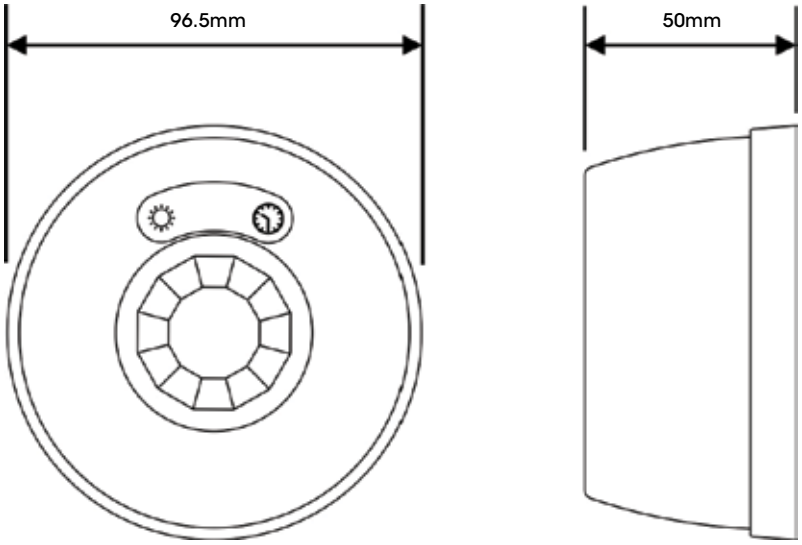


Area of high sensitivity Area of lower sensitivity

Technical data

Dimensions	See diagrams opposite
Weight	0.15kg
Supply voltage	230VAC +/- 10%
Frequency	50Hz
Circuit protection	10A
Maximum load	10 Amp resistive and incandescent lighting 6 Amp fluorescent lighting and resistive 3 Amp compact fluorescent lighting 3 Amp low energy lighting 3 Amp low voltage lighting (switch primary of transformer) Fluorescent lighting (max 6 fittings recommended) For fluorescent lighting, total power factor correction capacitance must not exceed 40µF. 3 Amp fans and ventilation equipment Switch SON lighting loads via a contactor minimum load 100mA
Power consumption	On 572mW, Off 670mW
Terminal capacity	2.5mm²
Temperature	-10°C to 35°C
Humidity	5 to 95% non-condensing
Material (casing)	Flame retardant ABS and PC/ABS
Type	Class 2
IP rating	40 without gasket. 54 with gasket
Compliance	EMC-2004/108/EC LVD-2006/95/EC

GESM (with gasket fitted)



IMPORTANT NOTICE!

This device should be installed by a qualified electrician in accordance with the latest edition of the IEE Wiring Regulations and any applicable Building Regulations.

TECHNICAL INFORMATION

A Name You Can Trust - Hubbell

Founded in 1888 by Harvey Hubbell II, Hubbell Inc. has been a long-time contributor to new product design and manufacturing innovation. In 1896, Hubbell invented the world's first lighting control device, the pull chain switch.

Over 100+ years later, Hubbell Building Automation, headquartered in Austin, Texas, continues this tradition of innovation with the development of a vast array of energy saving lighting controls.

Innovative Occupancy Sensors

Hubbell Building Automation sets the standard. Few people realise that traditional occupancy sensors need adjustment throughout the year when seasons change, airflow is modified and furniture layout or occupancy patterns change. If sensors are not constantly monitored and adjusted, your energy savings objectives will not be met. HBA realised this and was the first to introduce the industry's first self-adapting sensor. HBA's patented IntelliDAPT® technology is the key to maximising energy savings – from open offices to the manufacturing floor. Digital microprocessor technology makes all sensor adjustment decisions. Smart software monitors the controlled area, and makes sensitivity and timer adjustments automatically. Occupancy sensors with IntelliDAPT provide maintenance free "Install and Forget" operation.

Smart Technology for today's needs

IntelliDAPT Technology is an HBA patented innovation that delivers benefits to both building owners and occupants. The building owner achieves reduced energy costs, fewer adjustments and less maintenance while the building occupant experiences fewer false on and offs and disturbances. IntelliDAPT Technology occupancy sensors use microprocessors that make all the decisions for setting adjustments. Internal software constantly monitors the controlled area and automatically adjusts the sensitivity and timer based on environmental history. This means that instead of manually adjusting the sensor for seasonal changes, modified airflow, furniture layout or occupancy pattern changes, the sensor automatically adjusts itself. These automatic adjustments eliminate the need for multiple manual adjustments by maintenance personnel or outside contractors. HBA offers IntelliDAPT Technology throughout its product offering – wall switches, ceiling and wall mount sensors – in conjunction with dual technology, ultrasonic and passive infrared products.

TECHNICAL INFORMATION

How to Select the Right Technology for the Proper Application

Passive infrared (PIR) technology senses occupancy by detecting the movement of heat emitted from the human body against the background space. Unlike US technology, PIR sensors require an unobstructed line-of-sight for detection. These sensors use a segmented lens, which divides the coverage area into zones. Movement between zones is then interpreted as occupancy. PIR sensors are ideal for detecting major motion (e.g. walking), and they work best in small, enclosed spaces with high levels of occupant movement.

Passive Infrared (PIR)

Benefits:

- Long range detection
- Reliable triggering
- Cost efficient

Ultrasonic (US) technology senses occupancy by bouncing sound waves (32 kHz or 45 kHz) off of objects and detecting a frequency shift between the emitted and reflected sound waves. Movement by a person or object within a space causes a shift in frequency, which the sensor interprets as occupancy. While US occupancy sensors have a limited range, they are excellent at detecting even minor motion such as typing and filing, and they do not require an unobstructed line-of-sight. This makes US technology sensors ideal for an application like an office with cubicles or a restroom with stalls.

Ultrasonic (US)

Benefits:

- Detects small motion
- Sees around obstructions
- Cost efficient

Dual technology occupancy sensors combine both passive infrared (PIR) and ultrasonic (US) technologies for maximum reliability. Because US and PIR need to both detect occupancy to turn lighting on, dual technology sensors minimise the risk of lights coming on when the space is unoccupied - false triggering. Continued detection by only one technology then keeps lighting on as necessary. Dual technology sensors offer the best performance for most applications.

Dual Technology

Benefits:

- Track occupancy on with two sensing methods
- Minimises false triggering
- Consistent, reliable operation

Product Image

"Quick To Install" says it all. Capable of interconnecting a sensor and power pack in a fraction of the time. The QTI connector eliminates low-voltage wiring nuts to ensure error-free connections. The QTI system saves time and money, a 25% savings in labor costs alone, and the elimination of call backs and costly troubleshooting. The QTI system is available on most Hubbell Building Automation low-voltage sensors and power packs.

Key Features

- Dramatically reduces installation cost
- Easy to install; fast and efficient
- Completely removable and reusable if necessary
- Eliminates need for large spools of cable for installation of plenum cable runs
- Reduces possibility of transposing wires as in conventional splicing wire terminations
- Standard features on OMNIUS, OMNIR, LODT and UVPP.

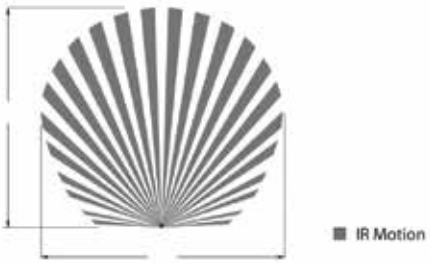
TECHNICAL INFORMATION

WALL SWITCH OCCUPANCY SENSORS
LIGHTHAWK™ PASSIVE INFRARED
WALL SWITCH SENSOR FEATURING IntelliDAPT®

Key features

- All-digital passive infrared (PIR) sensor
- IntelliDAPT self-adaptive technology – no manual adjustment required
- Auto-on and manual-on operating modes
- 92m², 180° coverage area
- Built-in photocell with SuperSaver™ mode
- RhinoTuff ™ lens
- Dual 120/277 VAC operation
- No minimum load requirement
- Zero Arc Point Switching

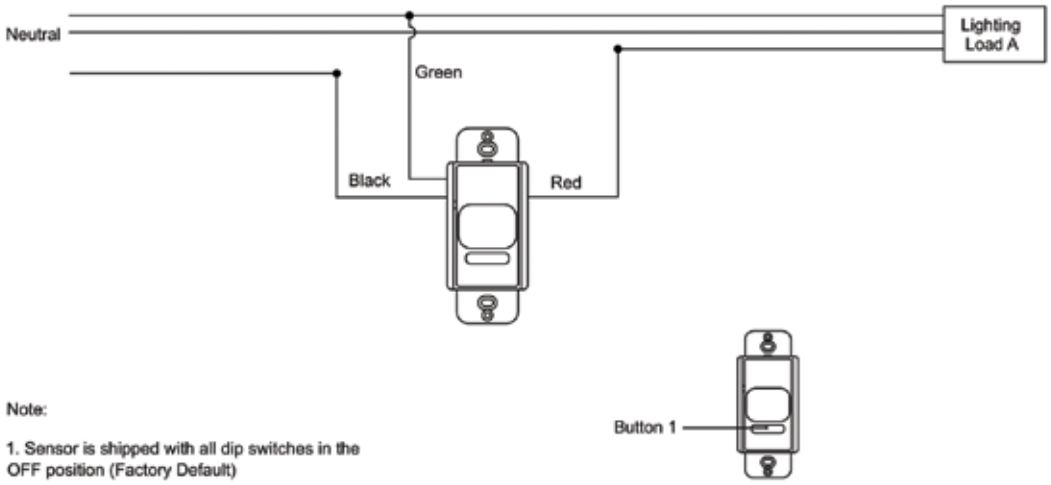
Range Diagram



Specifications	
IntelliDAPT technology	Self-adjusting timer Self-adjusting passive infrared (PIR) sensitivity Automatic false-on/false-off corrections No manual adjustments required
Timer timeout	Auto mode: 4 – 30 minutes; self-adjusts based on occupancy Fixed mode: 4, 8, 15, and 30 minutes Test mode: 5 seconds
Passive infrared (PIR)	Dual-element pyrometer and 12-element cylindrical RhinoTuff lens
Photocell	Natural light override range: 100-5000 LUX
Coverage	92m², 180°C
Power requirements	20/277 VAC; 50/60Hz
Electrical ratings	120 VAC: 800W Incandescent; 1,000W Fluorescent; 120W motor 277 VAC: 1,800W Fluorescent; 120W motor
Load requirements	No minimum load
Operating environment	Indoor use only Operating temperature: 0°–40°C Relative humidity (non-condensing): 0–95%
Construction	Casing – high-impact injection-molded plastic (UL-94-5V) Impact-resistant lens Colour-coded leads are 152.4mm long
Size and weight	**Size:** 106.68mm x 45.72mm x 53.34mm; 9.39mm extension **Weight:** 0.08kg
Colour	White
Mounting	Single-gang NEMA-style switch box (average switch box) • Decorator-style wall plate not included
Warranty	5 years

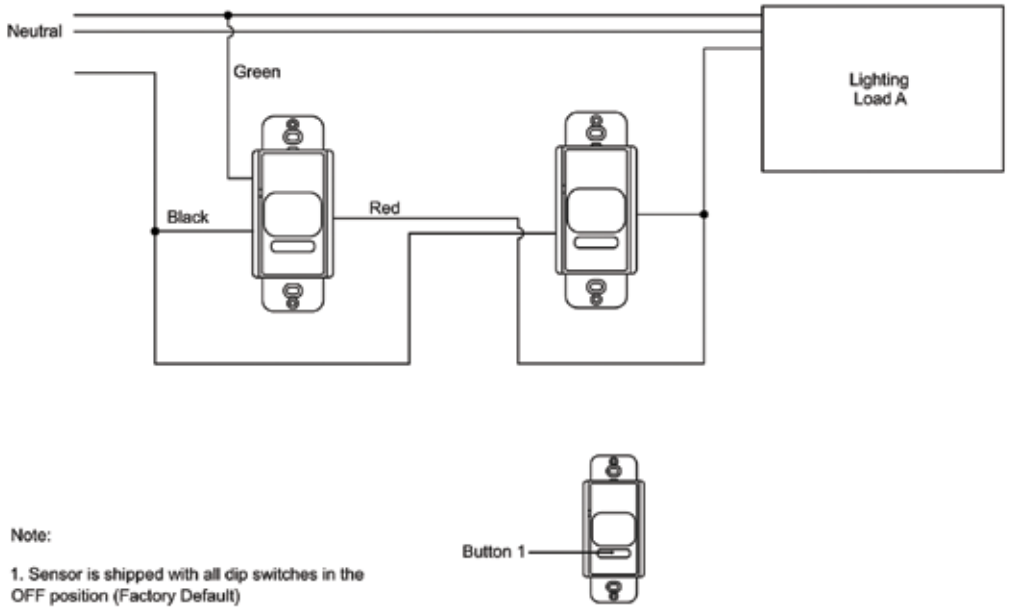
TECHNICAL INFORMATION

Wiring Diagram



Note:

1. Sensor is shipped with all dip switches in the OFF position (Factory Default)



Note:

1. Sensor is shipped with all dip switches in the OFF position (Factory Default)

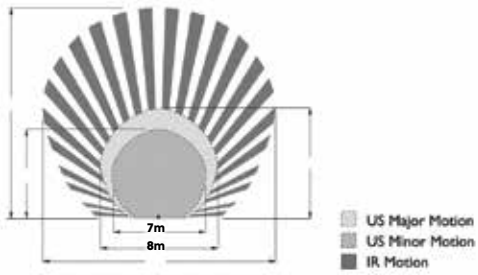
LHMTS

LIGHTHAWK™ MULTI-TECHNOLOGY WALL SWITCH SENSOR FEATURING IntelliDAPT®

Key features

- All-digital dual technology (ultrasonic [US] and passive infrared [PIR]) sensor
- IntelliDAPT self-adaptive technology - no manual adjustment required
- Auto-on and manual-on operating modes
- 92 square-metres, 180° coverage area
- Built-in photocell with SuperSaver™ mode
- RhinoTuff™ lens
- Dual 120/277 VAC operation
- No minimum load requirement
- Zero Arc Point Switching

Range Diagram

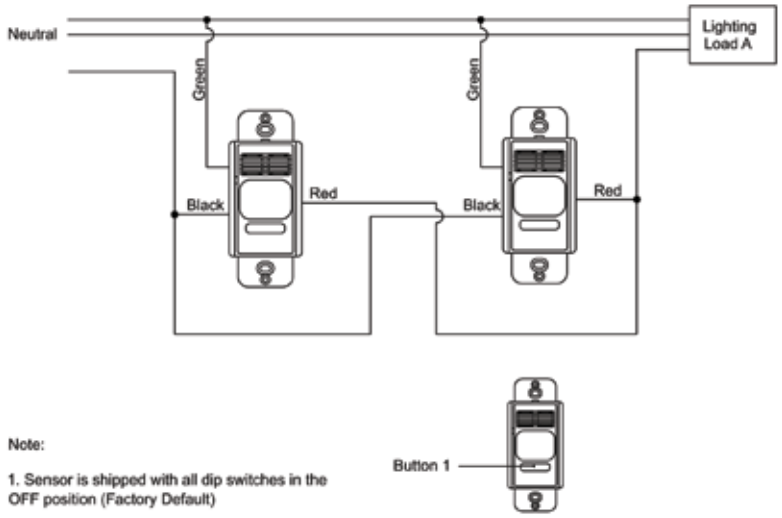


Specifications

IntelliDAPT technology	Self-adjusting timer Self-adjusting ultrasonic (US) and passive infrared (PIR) sensitivity Automatic false-on/false-off corrections No manual adjustments required
Timer timeout	Auto mode: 4–30 minutes; self-adjusts based on occupancy Fixed mode: 4, 8, 15, and 30 minutes Test mode: 5 seconds
Ultrasonic (US) output	40kHz output
Passive infrared (PIR)	Dual-element pyrometer and 12-element cylindrical RhinoTuff lens
Photocell	Natural light override range: 100-5000 LUX
Coverage	92m², 180°
Power requirements	120/277 VAC; 50/60Hz
Electrical ratings	120 VAC: 800W Incandescent; 1,000W Fluorescent; 120W motor 277 VAC: 1,800W Fluorescent; 120W motor
Load requirements	None
Operating environment	Indoor use only Operating temperature: 0°–40°C Relative humidity (non-condensing): 0–95%
Construction	Casing - high-impact injection-molded plastic (UL-94-5V) Impact-resistant lens Colour-coded leads are 152.4mm long
Size and weight	**Size:** 106.68mm x 45.72mm x 53.34mm; 9.39mm extension **Weight:** 0.08kg
Colour	White
Mounting	Single-gang NEMA-style switch box (average switch box) • Decorator-style wall plate not included
Warranty	5 years

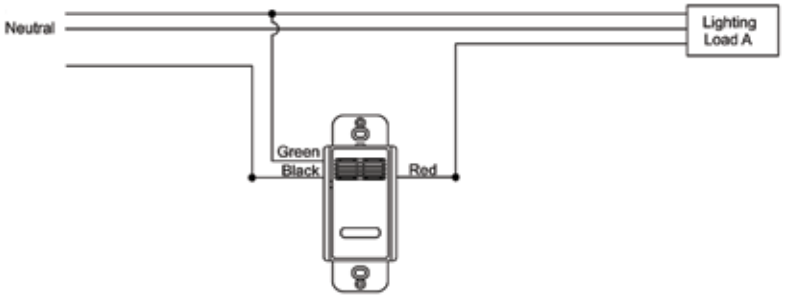
LHMTS

Wiring Diagram



Note:

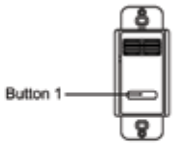
1. Sensor is shipped with all dip switches in the OFF position (Factory Default)



Notes:

1. Sensor is shipped with all dip switches in the OFF position (Factory Default)

2. Our product is powered by less than 500 microamps of leakage to ground current. The sensor must be grounded to function.



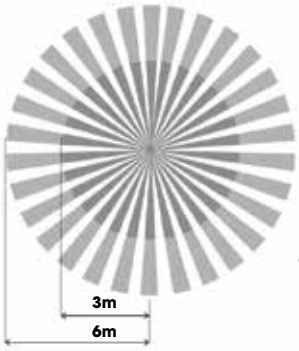
OMNIIRL | OMNIIRLRP

OMNI™ PASSIVE INFRARED CEILING SENSOR FEATURING IntelliDAPT®

Key features

- IntelliDAPT self-adaptive technology – no manual adjustment required
- All-digital passive infrared (PIR) sensor
- Non-volatile memory for sensor settings
- 139 square-metre coverage area (depending on model)
- Optional relay and photocell control
- Quick to Install (QTI) connector
- Uses UVPP Power Pack - not included

Range Diagram



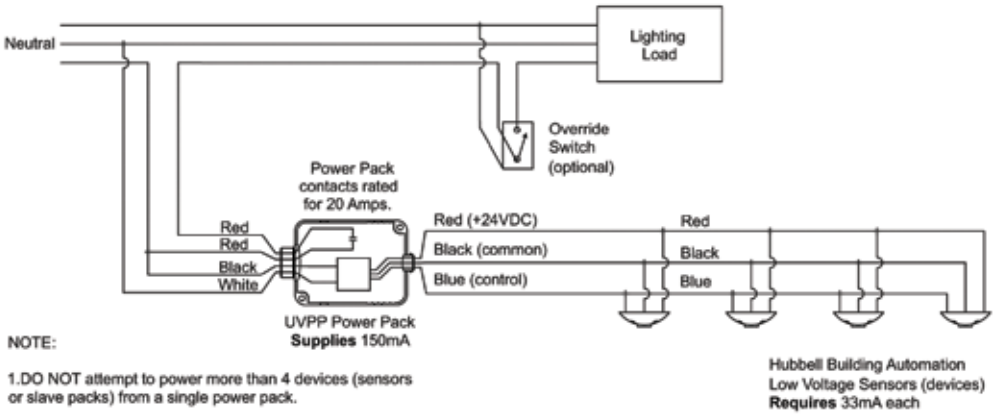
OMNIIRL

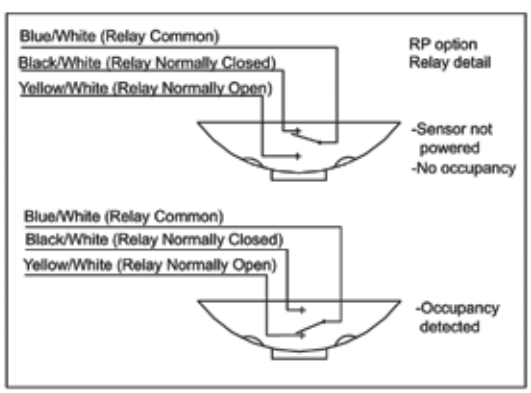
Specifications

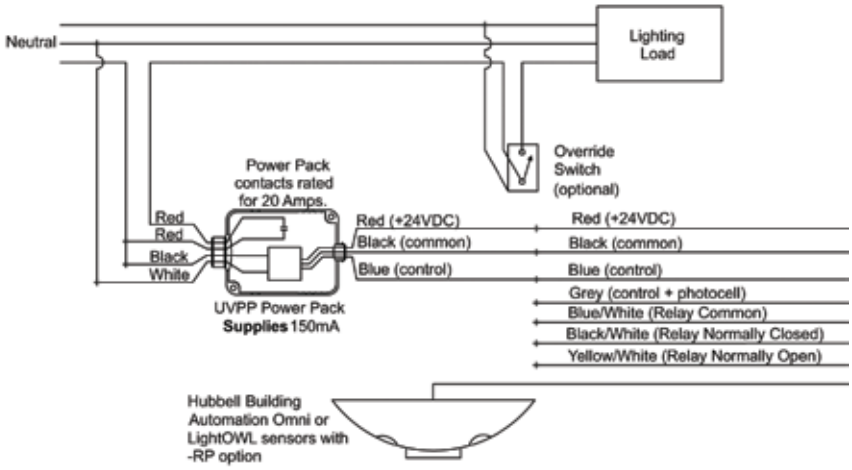
IntelliDAPT technology	Auto reset from test setting Self-adjusting timer Self-adjusting ultrasonic and passive infrared thresholds Automatic false-on/false-off corrections
LED lamp	Red – infrared motion Green - ultrasonic motion
Timer timeout	Automatic mode: 8–30 min. (self-adjusts based on occupancy) Test mode: 8 seconds (for an easy check at installation)
Passive infrared (PIR)	Dual-element pyrometer and 12-element cylindrical rugged lens
RP option	Relay and photocell included Relay: NO + NC contacts; SPDT; 500 mA rated @ 24VDC; three-wire isolated relay Photocell: adjustable natural-light override ranges from 0–1,000 lux
Coverage	139.35m^2 (depending on model)
Power requirements	24 VDC, 33mA (uses UVPP Power Pack – not included)
Output	24 VDC active high-logic control signal with short circuit protection and optional dry contact (see: RP option)
Operating environment	Indoor use only Operating temperature: 0° – 40°C 0% to 95% relative humidity, non-condensing
Construction	Casing – rugged, high-impact, injection-molded plastic KJB ABS Cycolac (UL-945VA) flame class rating, UV inhibitors Colour-coded leads are 152.4mm long
Size and weight	**Size:** 114mm diameter, 38mm height **Weight:** 142g
Colour	Off white
Mounting	Mounting base provided Recommended maximum mounting height: 3.65m
Warranty	5 years

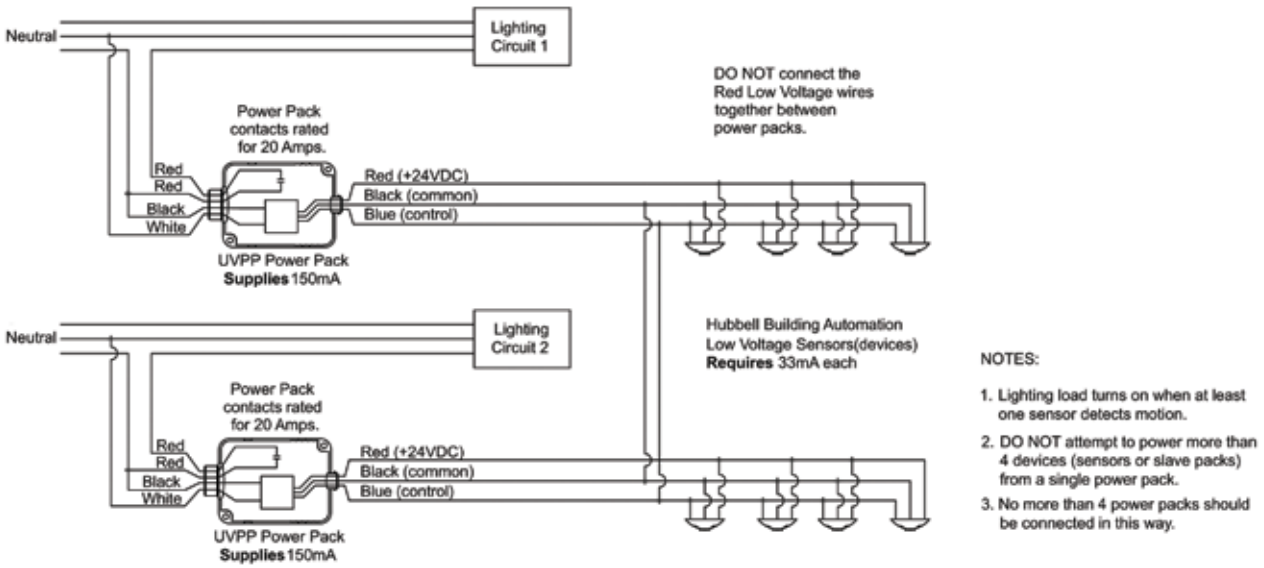
OMNIIRL | OMNIIRLRP

Wiring Diagram









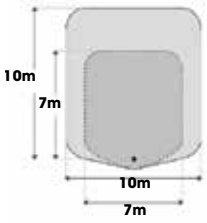
OMNIUS | OMNIUSRP

OMNI™ ULTRASONIC CEILING SENSOR FEATURING IntelliDAPT®

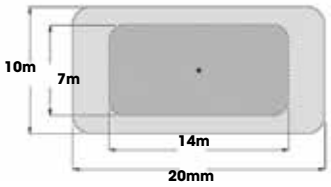
Key features

- IntelliDAPT self-adaptive technology – no manual adjustment required
- All-digital ultrasonic (US) technology
- Non-volatile memory for sensor settings
- 92 – 185 square-metre coverage area (depending on model)
- Optional relay and photocell control
- Quick to Install (QTI) connector
- Uses UVPP Power Pack - not included

Range Diagram



OMNIUS1000 Range Diagram



OMNIUS2000 Range Diagram

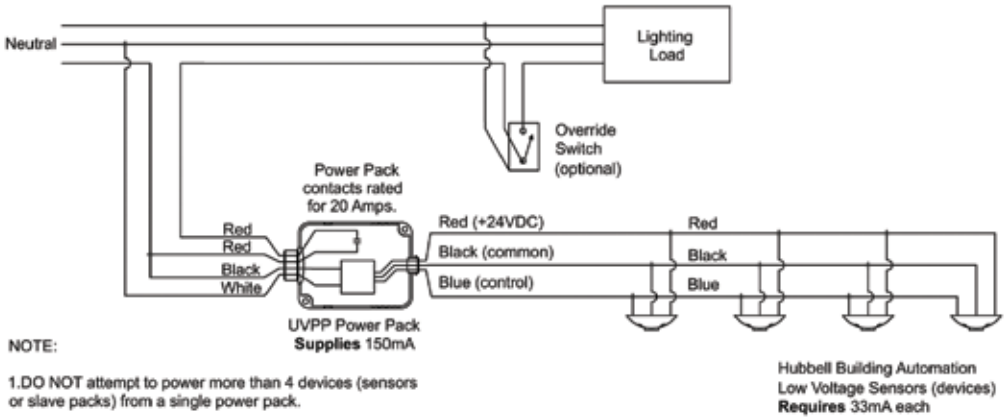
OMNIUS2000 Range Diagram - Hallway application

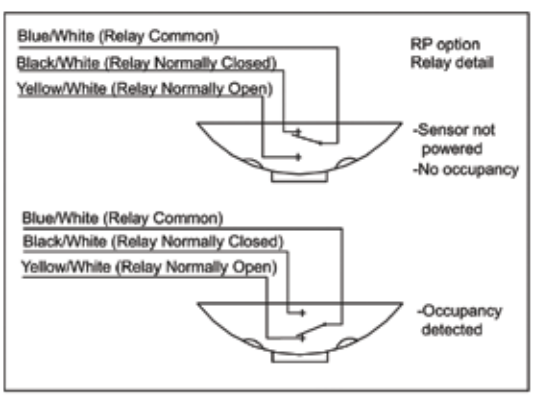
Specifications

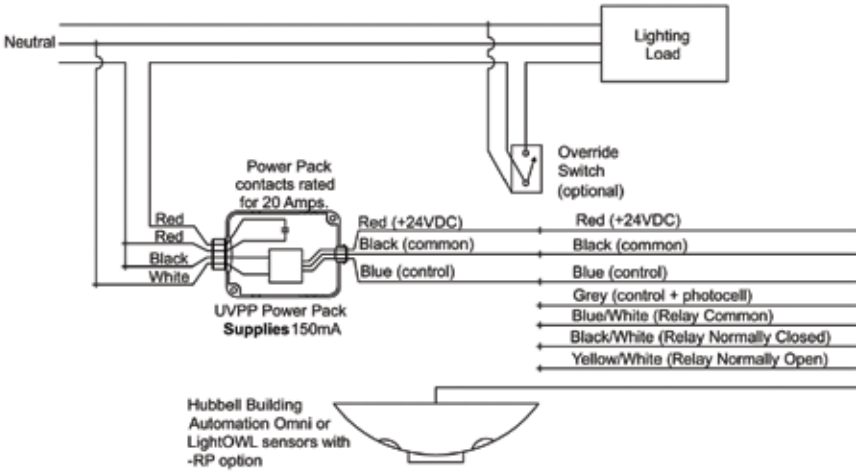
IntelliDAPT technology	Auto reset from test setting Self-adjusting timer Self-adjusting ultrasonic and passive infrared thresholds Automatic false-on/false-off corrections
Timer timeout	Automatic mode: 8–30 min. (self-adjusts based on occupancy) Test mode: 8 seconds (for an easy check at installation)
Ultrasonic (US) output	OMNIUS1000 and OMNIUS2000: 32kHz output
RP option	Relay and photocell included Relay: NO + NC contacts; SPDT; 500 mA rated @ 24VDC; three-wire isolated relay Photocell: adjustable natural-light override ranges from 0–1,000 lux
Coverage	92 – 185m^2 (depending on model)
Power requirements	24 VDC, 33mA (uses UVPP Power Pack – not included)
Output	24 VDC active high-logic control signal with short circuit protection and optional dry contact (see: RP option)
Operating environment	Indoor use only Operating temperature: 0° – 40°C 0% to 95% relative humidity, non-condensing
Construction	Casing – rugged, high-impact, injection-molded plastic KJB ABS Cycolac (UL-945VA) flame class rating, UV inhibitors Colour-coded leads are 152.4mm long
Size and weight	**Size:** 114mm diameter, 38mm height **Weight:** 142g
Colour	Off white
Mounting	Mounting base provided Recommended maximum mounting height: 3.65m
Warranty	5 years

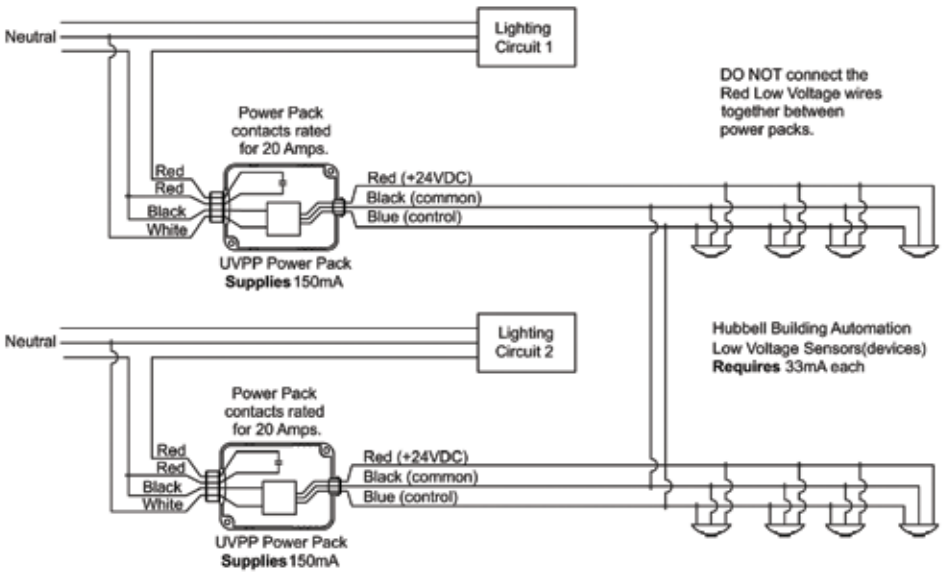
OMNIUS | OMNIUSRP

Wiring Diagram









NOTES:

1. Lighting load turns on when at least one sensor detects motion.
2. DO NOT attempt to power more than 4 devices (sensors or slave packs) from a single power pack.
3. No more than 4 power packs should be connected in this way.

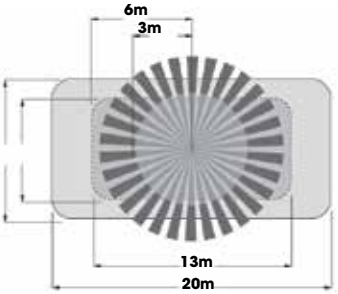
OMNIDT | OMNIDTRP

OMNI™ DUAL TECHNOLOGY ULTRASONIC AND PASSIVE INFRARED CEILING SENSOR FEATURING IntelliDAPT®

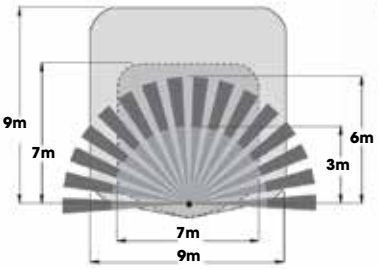
Key features

- IntelliDAPT self-adaptive technology – no manual adjustment required
- All-digital dual technology (ultrasonic [US] and passive infrared [PIR]) sensor
- Non-volatile memory for sensor settings
- 92-185 square-metre coverage area (depending on model)
- Optional relay and photocell control
- Quick to Install (QTI) connector
- Uses UVPP Power Pack - not included

Range Diagram



OMNIDT2000 Range Diagram



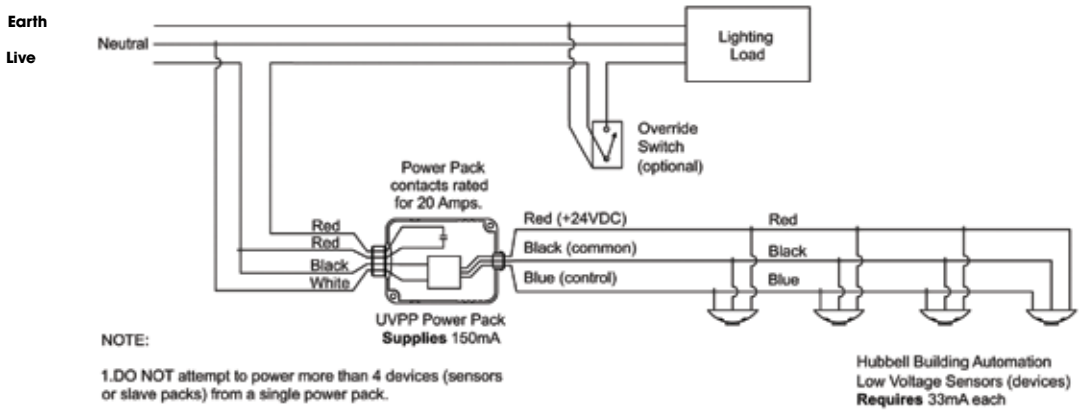
OMNIDT1000 Range Diagram

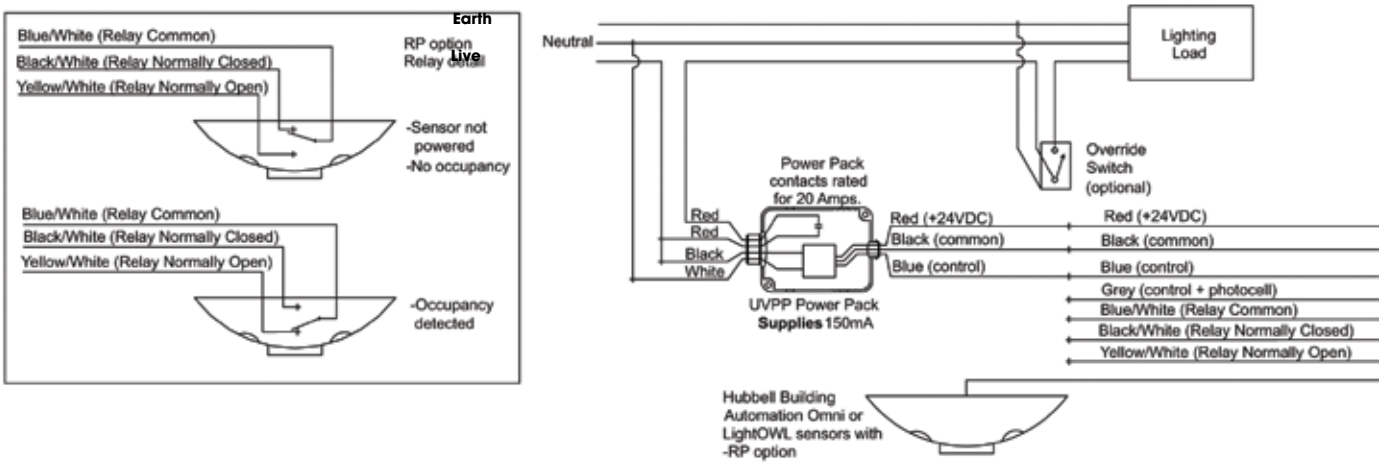
Specifications

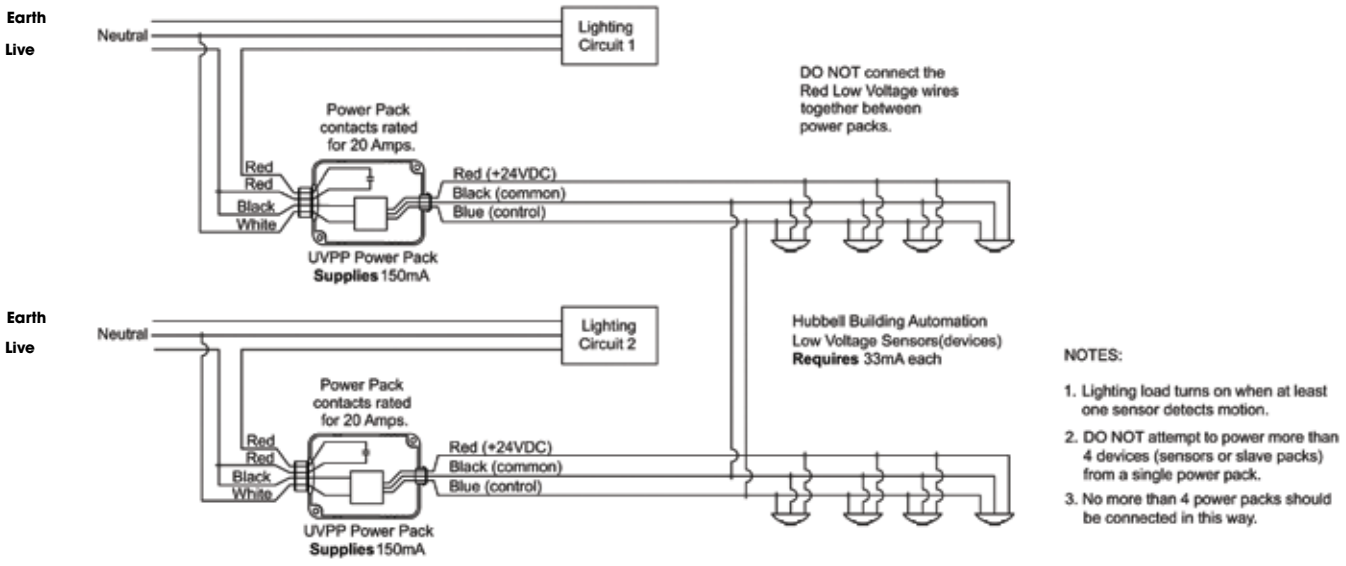
IntelliDAPT technology	Auto reset from test setting Self-adjusting timer Self-adjusting ultrasonic and passive infrared thresholds Automatic false-on/false-off corrections
Timer timeout	Automatic mode: 8–30 min. (self-adjusts based on occupancy) Test mode: 8 seconds (for an easy check at installation)
Ultrasonic (US) output	OMNIDT1000 and OMNIDT2000: 32kHz
Passive infrared (PIR)	Dual-element pyrometer and 12-element cylindrical rugged lens
RP option	Relay and photocell included Relay: NO + NC contacts; SPDT; 500 mA rated @ 24VDC; three-wire isolated relay Photocell: adjustable natural-light override ranges from 0–1,000 lux
Coverage	92 – 185m^2 (depending on model)
Power requirements	24 VDC, 33mA (uses UVPP Power Pack – not included)
Output	24 VDC active high-logic control signal with short circuit protection and optional dry contact (see: RP option)
Operating environment	Indoor use only Operating temperature: 0° – 40°C 0% to 95% relative humidity, non-condensing
Construction	Casing – rugged, high-impact, injection-molded plastic KJB ABS Cycolac (UL-945VA) flame class rating, UV inhibitors Colour-coded leads are 152.4mm long
Size and weight	**Size:** 114mm diameter, 38mm height **Weight:** 142g
Colour	Off white
Mounting	Mounting base provided Recommended maximum mounting height: 3.65m
Warranty	5 years

OMNIDT | OMNIDTRP

Wiring Diagram







UVPP

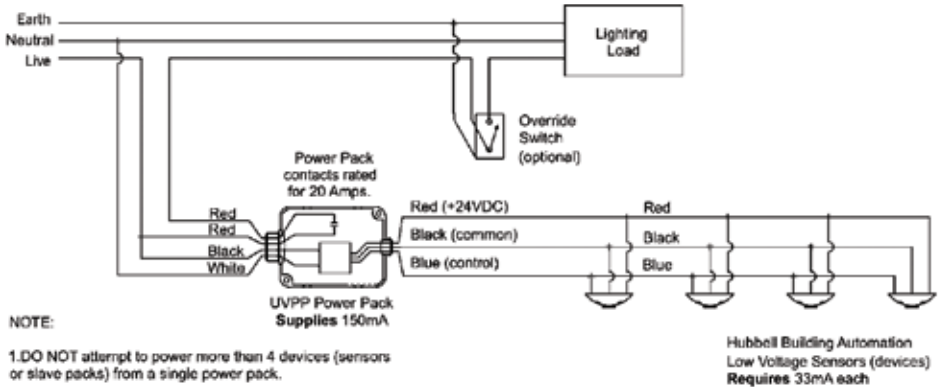
UNIVERSAL VOLTAGE POWER PACK

Key features

- Power pack can switch up to 4 ceiling sensors
- Universal voltage (100–277 VAC; 50/60Hz)
- Automatic voltage detection
- Electrical load switching capability: maximum of 20 Amps
- Regulated 24 VDC current; 150mA output; short circuit protected
- Zero Arc Point Switching
- Plenum rated
- Mounts: inside or outside a junction box; inside a fluorescent ballast cavity
- Complete with exclusive Quick to Install (QTI) connector

Specifications	
Power requirements	100–277 VAC; 50/60Hz Single phase only
Output	24 VDC; 150mA nominal, isolated, and regulated
Relay contact rating	20A: 120 VAC Incandescent 20A: 120 or 277 VAC Ballast 745W: 120 or 277 VAC Motor Load
Construction	High-impact UL 94-5V plastic
Plenum rated	Complies with requirements for use in a plenum area Plenum rated for external junction box mounting
Operating environment	Indoor use only Operating temperature: 0° – 40°C 0% to 95% relative humidity, non-condensing
Size and weight	**Size:** 93.92mm x 59.18mm x 34.54mm
Colour	Black
Warranty	5 years

Wiring Diagram



HBA WASP2™

FLUORESCENT HIGH BAY OCCUPANCY SENSOR

The HBA WASP2 Fluorescent High Bay Occupancy Sensor is specifically designed for ON/OFF control of high bay fluorescent fixtures in warehouses, distribution centers and even in offices. The sensor is available in end mount and surface mount versions with either single or dual outputs. All WASP2 sensors feature a daylight sensor which can be used to increase energy savings by turning off lights when there is sufficient natural light.

Surface mount

Key features

- IntelliDAPT self-adaptive technology – no manual adjustment required
- All-digital ultrasonic (US) technology
- Non-volatile memory for sensor settings
- 92 – 185 square-metre coverage area (depending on model)
- Optional relay and photocell control
- Quick to Install (QTI) connector
- Uses UVPP Power Pack - not included

Lens options (ordered seperatley)

Area Lens

Aisle Lens

Half Aisle Lens

1800 Lens

End mount

Specifications

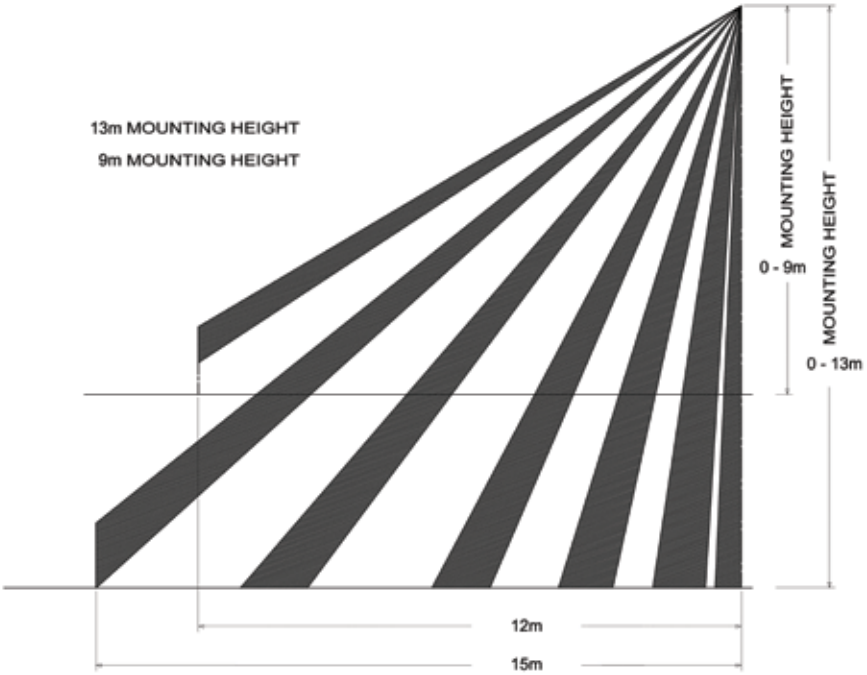
Load ratings (Line voltage sensors)	120VAC: 0-800W ballast or 0-600W tungsten, 60Hz 277VAC: 0-1200W ballast 347VAC: 0-1500W ballast 208/240VAC: 0-1200W ballast 480VAC: 0-2400W ballast QuarterHP motor load @ 120VAC, 1/6HP @ 347VAC
User interface	Twelve pin dip switch*
Timer timeout	Primary: 8-second test mode - 4, 8, 16 and 30 min timeouts Secondary: Can be disabled (switches off with primary timer) - 30, 60 and 90 min timeouts
Passive infrared	Dual element pyrometer and spherical Fresnel lens designed for robust detection of a walking person*
Daylight Sensor	Range 300 - 25 000 LUX End mount sensor: Downward and upward looking daylight sensors (Direction selectable via dip switch) Surface mount sensor: Downward looking daylight sensor only
Interchangeable lens options and coverage	Lens option: 360° area lens, aisle lens 180° area lens, half aisle lens (lenses sold seperatley - not included with sensor module) All lenses provide 1.4:1 coverage up to 9m, 1.1:1 coverage 9m-13m
Power requirements	Line Voltage sensors: 120/277/347 VAC Low voltage: 24 VDC, 33mA
Output	24 VDC active high-logic control signal with short circuit protection and optional dry contact
Operating environment	Standard version: Indoor use only Operating temperature: 0° – 65°C 0% to 95% relative humidity, non-condensing Low-temperature/Water tight version: Indoor use only
Construction	Sensor Module and Lens Assembly - high impact, injection-molded plastic
Size and weight	**Size:** 101.6mm diameter, 38.1mm height **Weight:** 198g
Colour	White
Mounting	Surface mount sensor: Mounts directly to fixture or j-box via (2) 31.75mm stainless steel screws and locking nuts End mount sensor: Mounts directly to end of fixture through extended chase nipple
Warranty	5 years

Note:

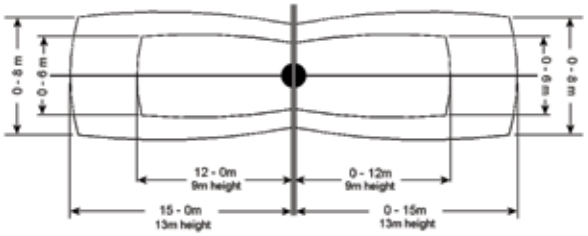
* When used with warm start ballast, a 1-2 second delay from occupancy detection to lamp turn-on may be experienced.

HBA WASP2™

Sensor Lens Coverage and Detection Patterns (when mounted at 9m and 13m)



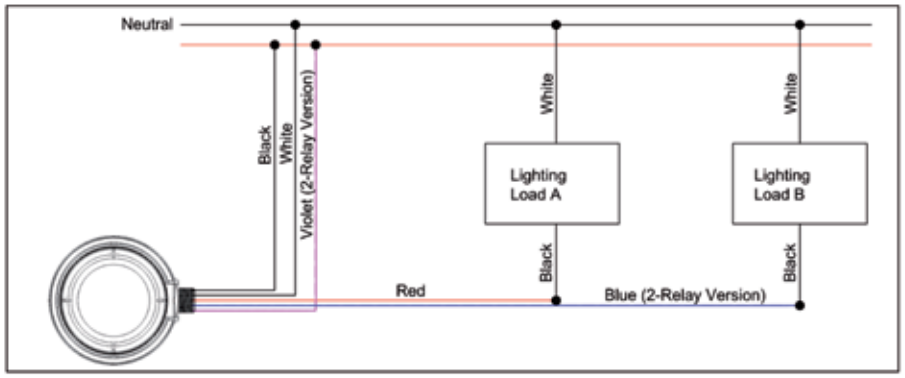
Side view of lens coverage pattern



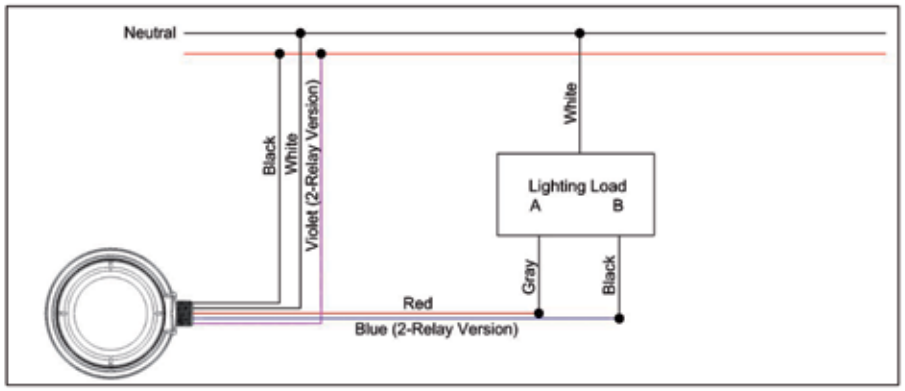
Top view of aisle lens coverage pattern

HBA WASP2™

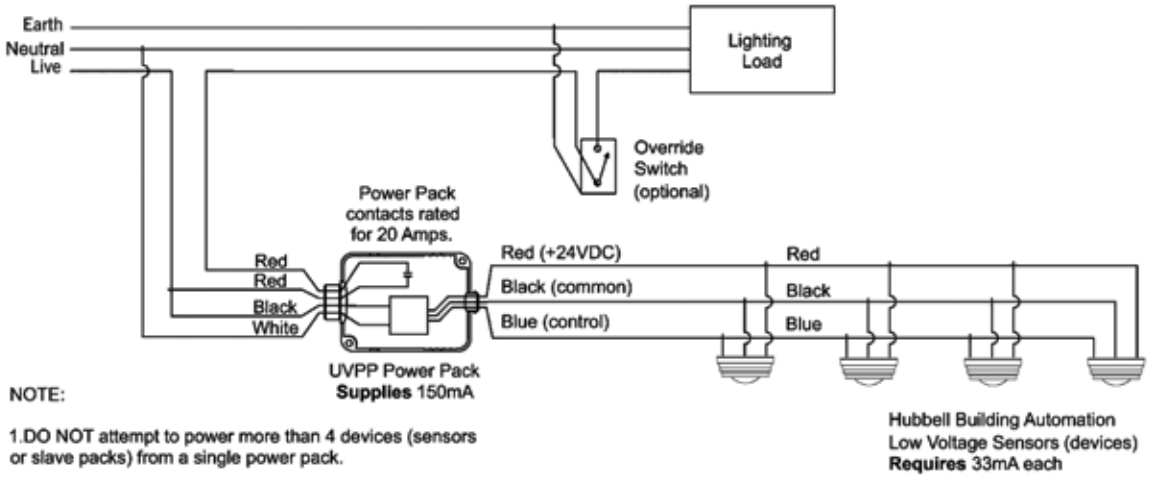
Wiring Diagram



Wiring Diagram A - 120/277/347VAC Line voltage wiring diagram for single and dual relay sensors (Single Phase Only)



Wiring Diagram A -B120/277/347VAC Line voltage wiring diagram for connecting a dual relay sensor to a switching ballast.
Note: Disable Smart Cyclingg for this configuration.



Wiring Diagram C - Low voltage sensor wiring diagram.

CEILING AND WALL MOUNT ACCESSORIES

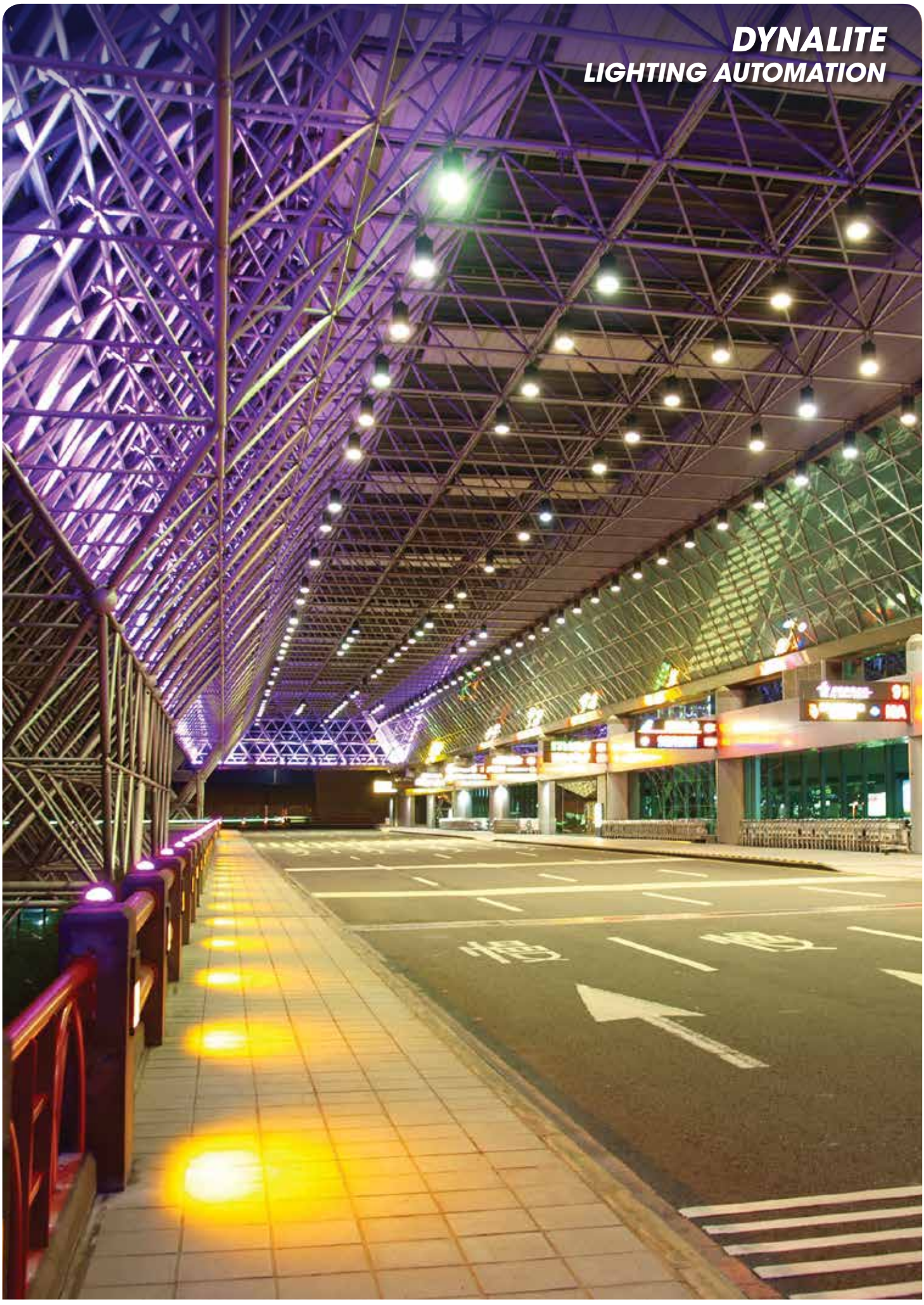
SIM2F

CAB IO/20

Specifications	
CAB10	3m Plenum rated, 3 Core 3 Conductor QTI cable
CAB20	6m Plenum rated, 3 Core 3 Conductor QTI cable
S1M2F	Splitter 1 male, 2 female, QTI system
OPE	OMNI protective enclosure
WGWS	Wire guard For Wall Switches
WGOMNI	Ceiling mount guard for OMNI sensors
TD200 Digital	Programmable timer
WGLO	Wire guard for LightOWL sensors

Note:

- Available on request


DYNALITE
LIGHTING AUTOMATION

dynalite LIGHTING CONTROLS

Philips Dynalite

Philips Dynalite is synonymous with the creation of sophisticated, simple, reliable and energy-efficient lighting control solutions for a wide range of industry sectors, including residential, custom installation, offices, retail, hospitality and public spaces. An industry leading innovator for over 20 years, Philips Dynalite is the solution of choice for a wide range of 'smart home', energy management and architectural lighting control applications. Philips Dynalite solutions blend high-level functionality with dramatic aesthetic sustainability to enable and enhance our lives.

End-to-End Lighting

Philips Dynalite specialises in the provision of end-to-end intelligent lighting control systems, rather than just products. We know that the critical link between products like lamps, luminaires and LEDs and a fully integrated solutions environment, is the control capability. Lighting control infrastructure underpins the fully integrated environment that is the future of building and energy management systems worldwide. When combined with broad selection of Philips Lighting's energy-efficient luminaires, Philips Dynalite lighting control systems allow users to create ambiances, luminaires, Philips Dynalite lighting control systems allow users to create ambiances, develop innovative and distinctive lighting scenes and transform environments.

Our Key

Office
Our lighting control systems allow building owners to create inviting and highly functional office environments - ones that stimulate productivity and optimise energy use, while permitting users to tailor work areas to specific tasks and accommodate future layout and occupancy changes.

Retail
Shop owners, store operators and retail centre management need to be able to tailor eye-catching lighting schemes to individual retail zones, products, store events and themed days, maximise customer engagement and enrich the overall shopping experience. This is made simple with our advanced lighting control solutions which have energy management functionality built-in, making the much sought-after 'green store' an achievable reality.

Hospitality
Lighting plays a key role in optimising guest comfort and stakeholder returns, creating workable and inviting ambiances in front-of-house, public and functional spaces and building brand differentiation in hotels all over the world.

Public Spaces
Environments such as public spaces, multipurpose event centres, stadiums and places of worship require specialised lighting control solutions. Our solutions allow designers to create and implement attractive and engaging environments with optimised levels of comfort and safety, enhancing the public's sense of wellbeing.

Smart Home
Clever lighting control solutions allow developers, designers and homeowners to express individual personality and style and create atmospheres tailored to function, mood or occasion – all in an easy-to-use and cost-effective sustainable way.

dynalite LIGHTING CONTROLS

Philips Dynalite

The contemporary Revolution series user control panels incorporate a clip-on cover fastening system which provides the ultimate in aesthetic design facility.

Incorporating a unique button depth adjustment facility, the panels can accommodate covers of practically any flat architectural surface medium, ranging in thicknes from 1.2mm to 6.5mm.

DR2P / DR2PE series panels are available in a range of configurations including single column, which provides arrangements of one to eight buttons and double or triple column designs for up to 24 buttons.

Smooth action buttons with LED indicators provide both tactile and visual feedback and are easily removed for engraving, further assisting the identification of button function. Button backlighting is also provided to illuminate engraved text, improving night time panel location and operation.

Infra-red (IR) receive capabilities have been integrated, eliminating the need for separate sensors where remote IR remote control operation is required.

DR2PA - 2"X4"
DR2PE - 3"X3"

Revolution Series

The Revolution DR2P Series of panels offers the ultimate in choice and flexibility. Each panel can be selected from a vast range of standard plate finishes or if required custom finishes of glass, stone, wood, metal and ceramic. The panels come in many different button layouts as well, allowing up to three columns of buttons, ensuring a maximum number of functions from a single panel.

Each button can be custom engraved with text or icons that help describe its functionality and the engraving is back-lit to allow ease-of-use in low light environments. An option of an integrated OLED display within the button column is available, allowing fully editable text and icons to indicate the current system status.

Glass, stone, wood, metal, ceramic... the options are endless.

- Available in the two standard international mounting formats, in single and multi-gang configurations
- From 1 to 24 buttons on single, double & triple gang plates
- Rear-lit engravable buttons for clear identification of function
- Button colour: charcoal grey, silver or white
- LED Status Indicators: blue as standard, other colours available
- Integrated IR receive capability
- Front cover finishes; stainless steel, white glass and black glass as standard, an infinite number of options are available
- Card triggered room actuator allows for full hotel room integration & consistent panel finishes throughout

DR2PA - 2"X4"
DR2PE - 3"X3"

The second generation DR2P Revolution series user control panels incorporate a clip-on cover fastening system which provides the ultimate in aesthetic design flexibility. DR2P series panels are available in a range of configurations including single column, which provides arrangements of one to eight buttons and double or triple column designs for up to 24 buttons. Smooth action buttons with LED indicators provide both tactile and visual feedback and are easily removed for engraving, further assisting the identification of button function. Button backlighting is also provided to illuminate engraved text, improving night time panel location and operation. Optional infra-red (IR) receive capabilities are available, eliminating the need for separate sensors where IR remote control operation is required.

dynalite LIGHTING CONTROLS

DPN-SF

Philips Dynalite DPN-SF and DPNE-SF series user control panels are a popular choice for commercial and residential applications, providing integrated automation solutions. These robust panels are supplied as standard in a brushed stainless steel finish with square button caps in silver, black bezel and black engraving. Smooth action buttons with LED indicators provide both tactile and visual feedback and are easily removed for engraving, further insisting the identification of button options further enhances the DPN series, offering superior choice and functionality.

The workhorse of the Philips Dynalite range is particularly well-suited to a commercial environment. These robust panels are available with or without concealed fixings. The Classic series is available in two standard international mounting formats in both single and multi-gang configurations.

The panels can be customised to provide a multitude of control options, including buttons, faders, keyswitches and custom engraving on either buttons or metalwork.

- Smooth action switches with LED indicator provide tactile and visual feedback
- Engravable buttons available in silver, charcoal, grey and ivory
- Face plate finished in 1.6mm stainless steel other finishes such as gold-plate and powder coat also are available
- Control options include buttons, faders, key switches and custom engraving

Classic Series

The Classic DPN Series is a truly timelessly styled panel that is well suited to any commercial environment. These classic panels are available in a wide range of standard options which include network sockets, key switches and fader sliders to meet the varying functional requirements of modern projects. Panels are available in different button configurations, allowing different levels of functionality. Each plate and switch cap has the opportunity to be custom engraved allowing intuitive control for the end-user. Standard options are available throughout the range.

iPad Apps

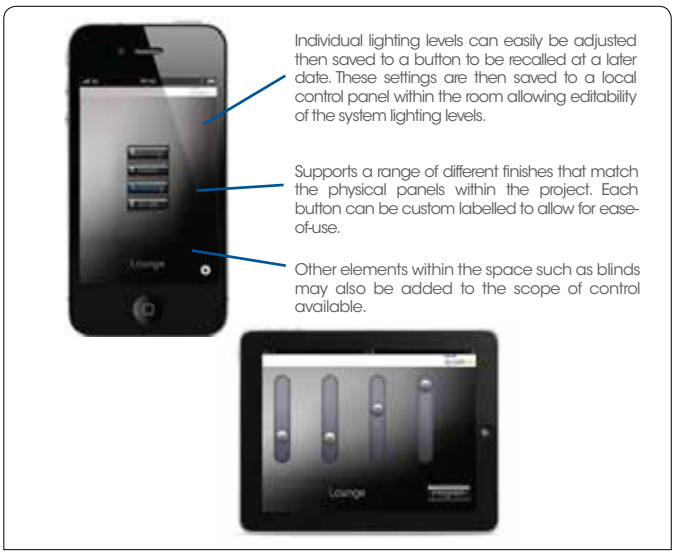
The DynamicTouch iPad/iPhone application complements traditional methods of managing sophisticated lighting automation and control technologies, bridging the gap between purpose-built control devices and consumer technology.

The intuitive, easy-to-use application will allow iPad and iPhone owners to configure lighting schemes, adjust present levels and run task-specific customised macros, both remotely and on-site, all from a multifunction device. Importantly, the application of DynamicTouch is not limited to the lighting control system. Third-party control systems, such as AV, blind and temperature control can also be accessed. Users will be able to ring changes to third-party systems that are interfaced with the lighting control system network.

DynamicTouch helps consolidate control system functionality – one application to manage all automated processes at the office, in the restaurant, at the conference centre or at home. In addition to providing streamlined remote access to control system elements, DynamicTouch will deliver added operational flexibility on-site. Once on-site, the iPhone can be used as a hand-held remote control while the iPad can be placed in wall-mounted cradle and used as a touchscreen operator interface. This multifunctionality has the potential to reduce the total cost of deploying automation and control systems, putting them within reach of a wider range of businesses and homeowners.

DynamicTouch features at a glance

- Permits home or office control via iPhone or iPad
- Single 'remote' point of control for lighting, climate control, security and more
- Use a hand-held remote in the home or office
- Reduces potential cost of smart home system development



DynamicTouch iPad Apps

The DynamicTouch app is ideal for "smart homes" and commercial control applications alike. DynamicTouch combines easy-to-use operability with advanced functions, permitting Philips Dynalite control system elements to be accessed and configured via an iPad or iPhone device.

Some steps are required to enable your Philips Dynalite DynamicTouch app that include:

- the lighting and other devices you wish to control must be under the management of a Philips Dynalite control system
- there must be a Philips Dynalite Ethernet gateway in the control system and the Ethernet gateway must be connected to a wireless router

dynalite LIGHTING CONTROLS

DUS804C-UP – Multifunction Sensor

The DUS804C-UP is a 360° ceiling mount sensor that combines ultrasonic and passive infra-red (PIR) motion detection and infra-red remote control reception (IR) in the one device.

In applications such as office buildings, lecture theatres and homes, the DUS804C-UP universal sensor can be utilised to detect motion and switch on the lights. When rooms are unoccupied, lights can be automatically dimmed or switched off to provide energy savings. The unit also incorporates a segmented click-up bezel surrounding the PIR motion sensor element, which enables a portion of the sensing field to be readily masked to prevent nuisance detection from adjacent doorways or corridors. The same sensor provides IR control reception to enable full remote control over lights, audio-visual equipment and blinds. A range of hand-held infra-red transmitters to complement the DUS804C-UP series universal sensors are available.

DDTC001 – Timer Clock

The DDTC001 is a tamper-resistant DIN rail mounted embedded timer clock. All functions are programmed via a PC and there are no external controls available, preventing disruption to device operation.

The DDTC001 features an astronomical 365 day timer clock with sunrise/sunset tracking, automatic daylight saving adjustment and powerful macro and conditional logic functions.

The timer clock interfaces with other devices over the DyNet RS485 network to automate tasks and events and may be used as an energy management controller or simply to select scenes at preset times of the day or week.

The DDTC001 is powerful enough to provide full automation of a large commercial project and can be programmed with events that automatically run at a specified time.

The timer clock forms part of a powerful energy management system when used in conjunction with other Philips Dynalite devices. For instance, when used to set the operating mode of the Philips Dynalite DUS704 universal sensors, the timer clock can give priority to infra-red, PIR or PE capability, depending on the time of day or day of week, ensuring that energy is not used unnecessarily. The DDTC001 is programmed remotely via a PC and will operate autonomously even if the PC is disconnected.

- Multifunction fully programmable sensor
- All functions remotely programmable

PE Cell for Light Measurement
- Dynamic range <5 lux to >5,000 lux
- Automatic "Daylight Harvesting" mode
- Standard functions for proportional and multifunction illumination control
- LED activation indicator
- Dimensions: 90mm diameter x Depth 26mm (exposed)
- Weight: Packed weight 0.25kg

Infra-red Remote Control Receiver
- Range >6m
- LED activation indicator
- Can be used with DTK500 series infra-red remotes or other learning IR remote controls

Motion Detection
PIR:
- Maximum detection range: 5.0m
- Detection area: 7.4m x 5.6m ellipse (at a height of 2.5m)
- Detection speed: 1.0m/s
- Detection object: 700mm x 500mm
- Detection zones: 64
- LED activation indicator
- Adjustable Pulse Count & Sensitivity
- Sensor: Quad element pyro-electric
- R.F.I. Immunity: >15V/m @ 10-1000MHz

Ultrasonic:
- Detection area: 8m x 16m (128m^2 coverage)
- Transducer pairs: 2
- Operating frequency: 32KHz

dynalite LIGHTING CONTROLS

DUS804C-UP – Multifunction Sensor

The DUS804C is a low profile recessed flush mount 360degree ceiling mount sensor that combines motion detection (PIR), infra-red remote control reception (IR) and ambient light level detection (PE) in the one device. In applications such as office buildings, lecture theatres and homes, the DUS804C universal sensor can be utilised to detect motion and switch on the lights.

When rooms are unoccupied, lights can be automatically dimmed or switched off to provide energy savings. The unit also incorporates a segmented click-up bezel surrounding the motion sensor element. This enables a portion of the sensing field to be readily masked to prevent nuisance detection from adjacent doorways or corridors. The same sensor provides IR control reception to enable full remote control over lights, audio-visual equipment and blinds. A range of hand-held infra-red transmitters to complement DUS804 series universal sensors is available. In situations where it is critical to maintain precise lighting control for individual workspaces, such as an office workstation or even air traffic control centres, the DUS804C facilitates light compensation.

The DUS804C can also be placed in an automatic "Daylight Harvesting" mode for energy savings. The DUS804C sensor has additional optional accessories that allow it to be surface mounted when required.

DynamicTouch iPad Apps

PE Cell for Light Measurement

- Dynamic range <5 lux to >5,000 lux
- Automatic "Daylight Harvesting" mode
- Standard functions for proportional and multifunction illumination control
- LED activation indicator
- Adjustable pulse count and sensitivity
- Sensor: Quad element pyro-electric
- R.F.I. Immunity: >15V/m @ 10-10,000MHz
- Dimensions: Diameter 72mm x D 26mm
- Packed weight: 0.116kg

Infra-red Remote Control Receiver

- Range >6m
- LED activation indicator
- Can be used with DTK500 series infra-red remotes or other learning IR remote controls
- Multifunction fully programmable sensor
- All functions remotely programmable

Motion Detection
Available in two sensitivity levels:

DUS804C – Standard

- Maximum detection range: 5.0m
- Detection area: 7.4 x 5.6m ellipse (at a height of 2.5m)
- Detection speed: 1.0m/s
- Detection object: 700mm x 500mm
- Detection zones: 64

DUS804C-SM – Slight Motion

- Maximum detection range: 2.0m
- Detection area: 5.0m circular (at height of 2.0m)
- Detection speed: 0.5m/s
- Detection object: 200mm x 200mm
- Detection zones: 104

dynalite LIGHTING CONTROLS

DUS704C – Multifunction Sensor

The DUS704C sensors combine motion detection (PIR), infra-red remote control reception (IR) and ambient light level detection (PE) in the one device.

In applications such as homes, lecture theatres, car parks and office towers, DUS704C universal sensors can be utilised to detect motion and switch on the lights. When rooms are unoccupied, lights can be automatically dimmed or switched off to provide energy savings. The same sensor provides IR control reception to enable full remote control over lights, audio-visual equipment and blinds. A range of hand-held infra-red transmitters to complement DUS704C universal sensors are available. In situations where it is critical to maintain precise lighting control for individual workplaces such as a flight control tower or office workstation, the DUS704C facilitates light compensation. The DUS704C can also be placed in an automatic "Daylight Harvesting" mode for energy savings.

DUS704C – Multifunction Sensor

Infra-red Remote Control Receiver
- Range >6m
- LED activation indicator
- Can be used with DTK500 series infra-red remote or other learning IR remote controls
- Multifunction fully programmable sensor
- All functions remotely programmable

Wide Angle 360° Ceiling Mount
- PIR motion detector
- Detection range 9m x 6m ellipse
- Mounting height: 2.1m to 5. 0m (2.4m optimum), on ceiling
- LED activation indicator
- Adjustable pulse count
- Adjustable sensitivity
- Detection zones: 34 dual element zones
- Sensor: Dual element pyro-electric
- R.F.I. Immunity: >15V/m @ 10-1,000MHz

PE Cell for Light Measurement
- Dynamic range <5 lux to >5,000 lux
- Automatic "Daylight Harvesting" mode
- Standard functions for proportional and multi-threshold illumination control
- Dimensions: Diameter 102mm x D 30mm
- Packed weight: 0.116kg

DUS704W – Universal Sensor

The DUS704W wall-mounted sensor is available with an adjustable bracket for mounting and aiming toward the desired detection zone.

Combining motion detection (PIR), infra-red remote control reception (IR) and ambient light level detection (PE) in the one device makes this sensor suitable for applications such as single office spaces, stair way landings, hall ways, meeting rooms, class rooms and data centres. DUS704W universal sensors can be utilised to detect motion and switch on the lights. When rooms are unoccupied, lights can be automatically dimmed or switched off to provide energy savings. The same sensor provides IR control reception to enable full remote control over lights, audio-visual equipment and blinds. A range of hand-held infra-red transmitters to complement DUS704W universal sensors are available. In situations where it is critical to maintain precise lighting control for individual workspaces, the DUS704W can also be placed in an automatic "Daylight Harvesting" mode for energy savings. Available with two lens options of wide angle with a motion detection range of 12m x 90° or long range 30m x 30°.

DUS704W – Universal Sensor

- Range >6m
- LED activation indicator
- Can be used with DTK500 series infra-red remotes or other learning IR remote controls
- Multifunction fully programmable sensor
- All functions remotely programmable

Wide Angle Wall Mount PIR Motion Detector
- Detection range 12m x 90°
- Mounting height: 1.1m to 3.1m on wall or corner
- LED activation indicator
- Adjustable pulse count
- Adjustable sensitivity
- Detection zones: 20 dual element zones
- Sensor: Dual element pyro-electric
- R.F.I. Immunity: >15V/m @ 10-1,000MHz
- Optional lens: 30m narrow long range and 15m curtain

PE Cell for Light Measurement
- Dynamic range <5 lux to >5,000 lux
- Automatic "Daylight Harvesting" mode
- Standard functions for proportional and multithreshold illumination control
- Dimensions: H 85mm x W 66mm x D 45mm
- Packed weight: 0.116kg

dynalite LIGHTING CONTROLS

Signal Dimmer Controllers

The Philips Dynalite range of Signal Dimmer Controllers have been engineered to meet the future demands of projects. They are capable of transmitting all industry standard ballast protocols (1-10V, DSI, DALI and Broadcast DALI) and support two ranges of install opprtunities of both DIN rail and wall box to allow for exible install opportunities. The Signal Dimmer Controller range also support a vast range of ballast controllers with a variety of circuit numbers and sizes to work individually or as part of a system, suiting any project requirement.

DDBC120-DALI Dimmer Controller

The DDBC120-DALI is designed for cost-effective control of DALI high frequency fluorescent ballasts providing a full universe of 64 DALI channels.

Direct DALI to DyNet mapping means that the DALI-imposed limits, such as the maximum of 16 groups, are seamlessly overcome. The device is DIN rail mountable, designed to be installed in a switchboard next to the circuit breaker that is supplying power to the controlled lighting circuit. The DDBC120-DALI contains an integral DALI bus power supply removing the need for the provision of a separate external supply.

DUS704C – Multifunction Sensor

- 230V ±14% 50/60Hz Single Phase at 0.1A
- 1 x DALI control output supporting a full DALI universe of 64 channels including diagnostic back channel

Diagnostics include:

- Lamp failure reporting
- Ballast failure reporting
- Ballast run tracking for each ballast
- Device Online/Offline status
- 1 x programmable dry contact AUX input
- Internal DALI bus power supply
- Dimensions: H 86mm x W 105mm x D 58mm
- Packed weight: 0.324kg

dynalite LIGHTING CONTROLS

DDBC320-DALI Dimmer Controller

The DDBC320-DALI is designed to provide cost effective control of DALI high frequency fluorescent ballasts. It has three DALI outputs allowing it to control up to 192 DALI devices.

The DALI control signals can be programmed to operate in tandem with the three internal switched outputs which will automatically isolate the power circuit when all associated DALI channels are at 0%. This feature is useful for energy saving applications, as DALI ballasts draw a significant amount of power when the lamps are turned off via a DALI command. Direct DALI to DyNet mapping means that the DALI imposed limits, such as the maximum of 16 groups, are seamlessly overcome.

The device is DIN rail mountable, designed to be installed in a switchboard next to the circuit breakers supplying power to the controlled lighting circuits. The DDBC320-DALI contains an integral DALI bus power supply, removing the need for an additional external device.

DDBC320-DALI Dimmer Controller

- 230V ±14% 50/60Hz Single Phase at 0.1A
- 3 x DALI control outputs, each supporting a full DALI universe of 64 channels (192 total), including diagnostic back channel

Diagnostics include:
- Lamp failure reporting
- Ballast failure reporting
- Ballast run tracking for each ballast switched output
- Device Online/Offline status
- 3 x 20A feed through switched circuits for DALI ballast mains supply
- 1 x programmable dry contact AUX input
- Internal DALI bus power supply
- Dimensions: H 86mm x W 210mm x D 58mm
- Packed weight: 0.8kg

LED PWM Controllers

Capable of directly driving LED fittings, the Philips Dynalite LED dimmers use Pulse Width Modulation (PWM) technology to great effect. Perfectly suited to Red, Green, Blue (RGB) colour changing applications, chase sequencing or provision of elegant scene settings. The Philips Dynalite LED drivers come in a range of configurations to meet the compatibility requirements of many of the available LED fittings.

Each device is ready to receive native DMX allowing them to be used in colour mixing or chase sequence applications.

DDLEDC605 – 6 x 5A PWM Controller

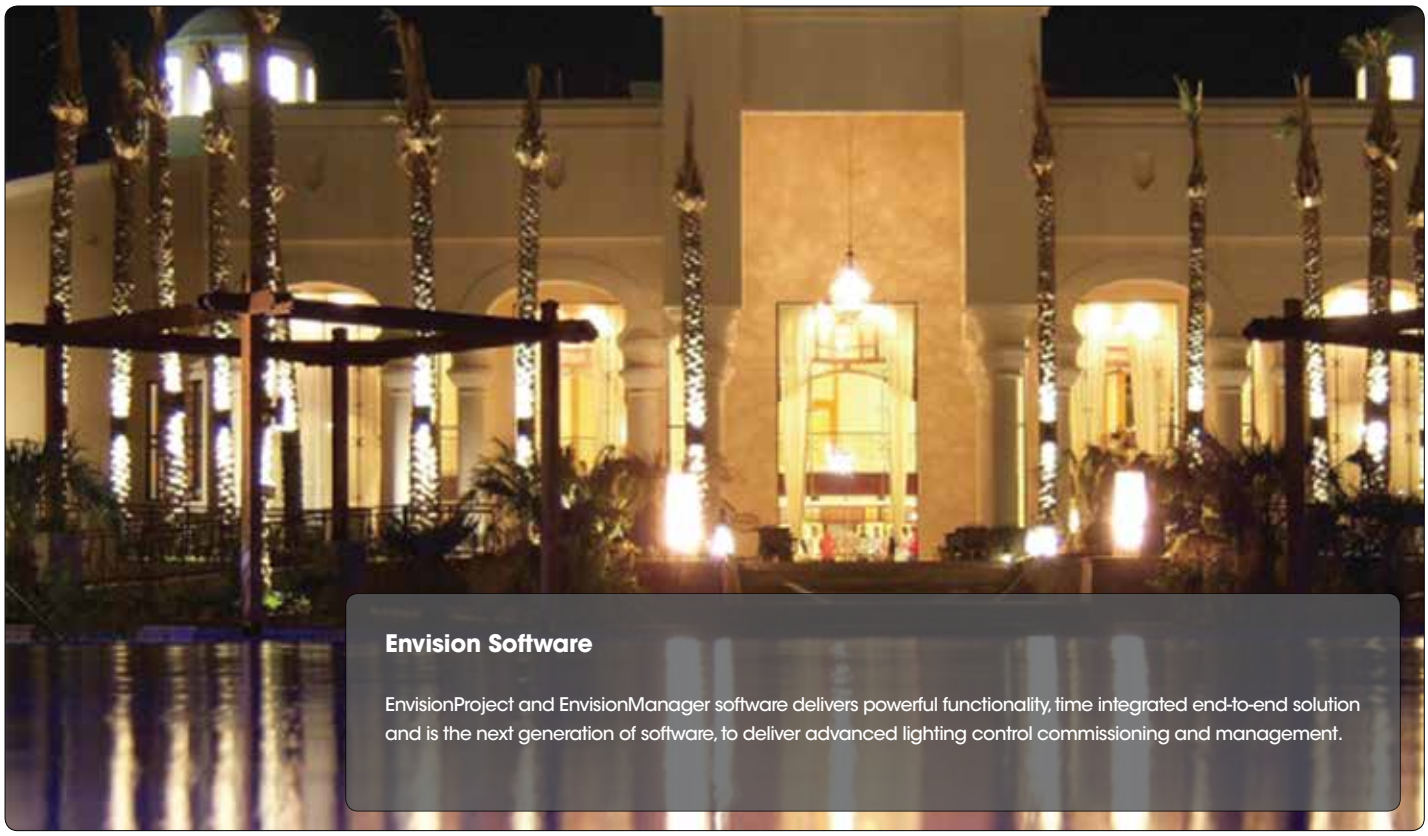
The DDLEDC605 is designed to control LED loads in decorative architectural lighting applications where creative colour mixing and sequencing is required.

The controller provides six pulse width modulated common anode voltage mode outputs suitable for directly driving high intensity LED sources. The controller is designed for connection to an external DC power supply enabling the unit to deliver a range of nominal output voltages. The device is supplied with a DIN rail mountable housing designed for installation within a switchboard or suitable electrical enclosure. The DDLEDC605 is DMX512 compatible and is suitable for the high chase speeds commonly found in display lighting.

DUS704C – Multifunction Sensor

- Requires external 20A regulated power supply, enabling a range of nominal output voltages
- Controller supply voltage range selectable with internal link to 18-32V DC (standard) or 12-15VDC
- 6 x 5A voltage mode common anode PWM outputs
- 1 x RS485 serial port – DyNet & DMX512
- Dimensions: H 86mm x W 209mm x D 66mm
- Packed weight: 1.0kg

dynalite LIGHTING CONTROLS



Envision Software

EnvisionProject and EnvisionManager software delivers powerful functionality, time integrated end-to-end solution and is the next generation of software, to deliver advanced lighting control commissioning and management.

EnvisionManager

EnvisionManager is a sophisticated software package that allows building owners and managers to manage, modify and expand their lighting control systems. This intuitive, easy-to-use and powerful computer-based interface allows access to all the control features within a lighting control system, in one software package.

With EnvisionManager, even the most advanced Philips Dynalite lighting control solutions can be easily accessed and managed giving building owners and facility managers the ability to control, modify and customise their building, whether this be for increased energy savings, greater facility productivity or for user comfort. With a complete overview of a building's lighting control system, it is possible to navigate to any location and make adjustments to network devices and functions including controlled areas or zones, re-channeling and presetting of loads, task editing and building automation maintenance programs.

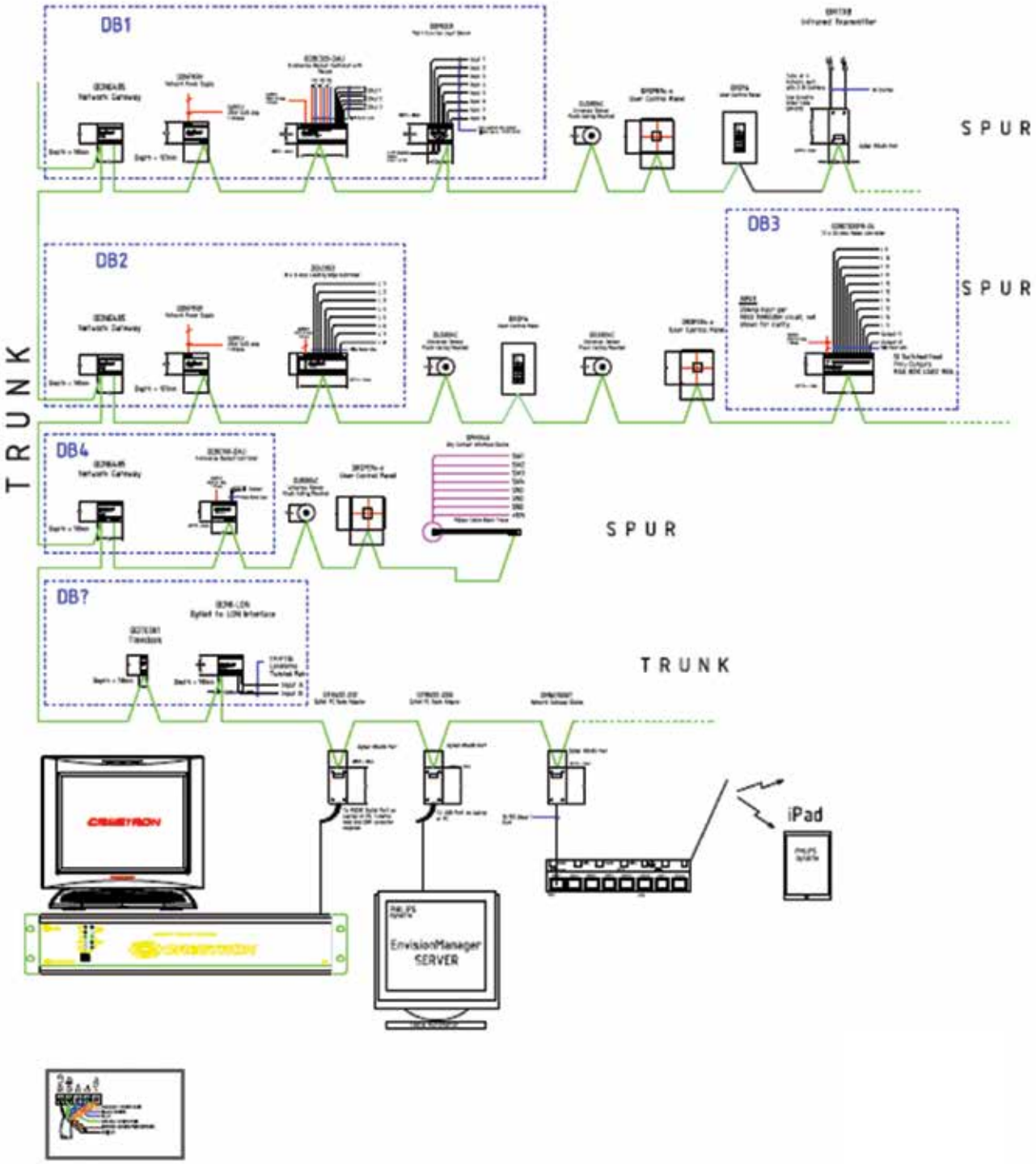
Multiple operators can access and view the lighting control events and edit system settings from different or remote locations. The software also has both notional and metered energy management reporting capability that accurately details lighting consumption, which assists operators to set and meet energy management targets and reduce operational costs.

DUS704C – Multifunction Sensor

EnvisionManager at a glance

- Global energy management, facility optimisation and user comfort with the click of a mouse
- Multiple operators can access the lighting control system to monitor the system or make adjustments
- Software can be accessed from different on-site or remote locations
- Multiple complex functions can be performed from pre-programmed icon buttons
- Real time status and energy management reporting capability
- Easy to navigate interface
- Helpful software button presets to shortcut complex network site functions and settings
- Powerful scheduling and time clock engine
- A virtual control panel (Tray Pan) allows individual users to control their local lighting system to override specific functions and adjust specific timer perform actions at a specified time or date

dynalite LIGHTING CONTROLS



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DIGITAL SIGNAL INTERFACE (DSI) / DALI SYSTEMS

TECHNICAL INFORMATION

Introduction

The Digital Signal Interface (DSI) enables DSI ECGs to be controlled. The luminaires are switched via the control line irrespective of the cabling for the power supply. Using a digital interface means that the light level is identical from the first to the last light source.

The DSI enables DSI ECGs from Tridonic to be controlled. The luminaires are switched via the control line irrespective of the cabling for the power supply. In contrast to DALI, however, it is not possible to address individual ECGs separately.

The low-voltage cable of the digital interface is polarity-free and can therefore be connected with either polarity to the DSI connection of the ECG. If the room layout is changed only the control line needs to be rerouted; the load line can be left unchanged. On/off switching is controlled via the digital interface.

Thanks to their built-in intelligence, the PCA ECO DSI ECGs are capable of specifying a minimum dimming value, maximum brightness and an emergency lighting value for all the ECGs in a control circuit.

luxCONTROL lighting control systems

corridorFUNCTION – huge benefits in terms of energy efficiency, safety and comfort. Within a user-definable time window (fade-off time), the lighting is dimmed to a low level (B) and switchedoff after a certain dwell time (C).

Intelligent lighting control
The right light in the right amount at the right place – this saves energy and creates an individual level of lighting comfort that promotes a feeling of well-being.

luxCONTROL components from Tridonic provide the basis for innovative and tailor-made lighting solutions in which maximum energy efficiency is combined with optimum functionality for the specific application. luxCONTROL represents the next generation of lighting management for modern lighting systems with daylight-dependent control, spectacular lighting moods and impressive colour chases.

Intelligent luxCONTROL systems are characterised by the optimum interplay of controller, sensors, controls, electronic ballasts and lamps. They are perfectly tailored to work with digital dimmable PCA EXCEL one4all lp, PCA EXCITE and PCA ECO ballasts, TE one4all electronic transformers, digital PCI FOX ballasts, TALEXX converters for LED modules and EM PRO emergency lighting units.

Task-specific lighting management

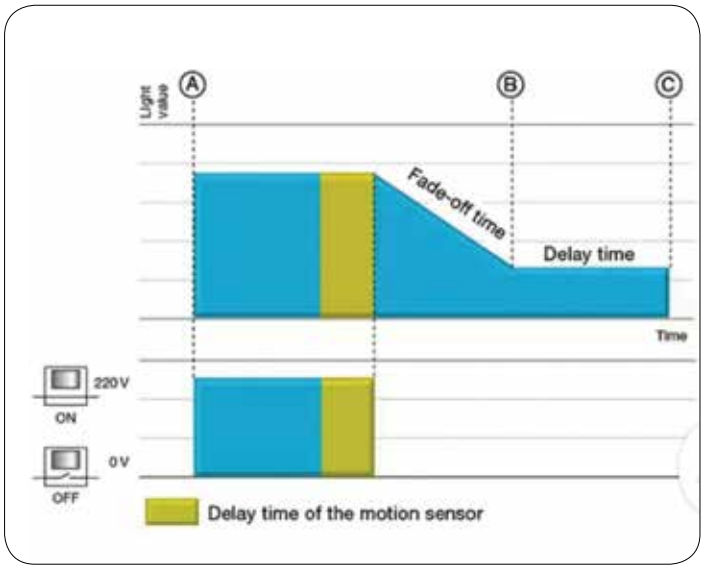
With luxCONTROL all the lighting tasks are performed with versions that are ecologically, economically and functionally the most attractive. Integrated solutions enable manufacturers to produce cost-effective energy-saving luminaires. Lighting planners and installers can use the right configuration based on an extensive range of equipment to suit the specific task and the required lighting design.

Tried and tested DSI technology and the DALI interface protocol (Digital Addressable Lighting Interface) offer impressive flexibility – from individual intelligent luminaires and large room installations to lighting concepts for buildings that can even be linked to emergency lighting systems to provide a total package.

Ballasts from Tridonic: the simplest form of lighting management

switchDIM applications use the mains voltage as the control signal for the digital dimmable ballasts from Tridonic. This is the simplest form of lighting management, which makes switchDIM uncomplicated, cost-effective and extremely user-friendly. Only simple conventional mains voltage switches are therefore needed to dim and switch the lighting system from several locations.

Safe passage with integrated corridorFUNCTION



In presence-controlled lighting systems, the corridorFUNCTION integrated in dimmable ballasts from Tridonic provides a new level of energy efficiency, safety and comfort. Instead of being switched off abruptly if no movement is detected in stairwells, corridors, underground car parks or entrance halls, the lighting is dimmed to a low level and then switched off after a delay of one minute. As soon as someone enters the room the light is switched back up to its full level.

TECHNICAL INFORMATION

SMART sensors – elements of a cost-effective constant lighting solution

Simple, cost-effective and energy-efficient constant lighting systems can be produced on the basis of digital dimmable PCA EXCEL one4all and PCA ECO ballasts. SMART sensors, which are connected to the ballasts via the Tridonic SMART Interface, register the available ambient light or the presence of a person in the room. The level of light can be regulated to a userdefined constant light value or the luminaire can be switched off if there is no-one in the room. The compact components are easy to integrate enabling luminaire manufacturers to offer products with added intelligence without having to compromise on the freedom of optimum design. Further control inputs on the ballast enable the luminaires to be integrated in a complete lighting system.

DSI – simply functional

To optimise the energy consumption of extensive groups of luminaires, for example in sports stadiums or factories, there are solutions based on the modularDIM system and the DSI digital interface. The attractive functions of a DSI lighting management system include simple programming of scenes and the option of common routing of the control line and mains power supply cabling in one duct. Digital transmission means no problems of interference and an identical dimming value for all the luminaires.

BasicDIM ILD
Provides the basis for an easy-to-use and cost-effective lighting system with motion detection. When the sensor detects movement it triggers a individual adjustable motion detection profile in the control unit. As the amount of natural ambient light changes, the illuminance from the artificial lighting system is adjusted. The connected luminaires can be switched on and off via momentary-action switch or remote control.

DALI – the established standard

DALI enables up to 64 digital dimmable ballasts with one4all interfaces to be individually addressed on a single line, 16 groups to be assigned and 16 lighting scenes to be programmed. Regrouping is possible at any time without the need for costly rewiring, for example after renovation or a change of function for a room.

With individual addressability and status feedback, the DALI-based comfortDIM lighting control systems not only offer top quality monitoring functions but also open up new opportunities for developing high-quality lighting solutions because the various parameters can be easily programmed. With comfortDIM it is also possible for external systems such as louvre blind controllers to be integrated in the overall concept.

Other functions that have been implemented by Tridonic in ballasts with one4all interfaces and that go beyond the DALI standard contribute to greater lighting comfort and even greater energy savings.

Maximum convenience
From office buildings to showrooms, simple and clear handling of the system modules is an impressive feature in a wide range of applications. With individual adjustable scenes and automatic execution of entire lighting sequences at the touch of a button, you can create lighting moods of the highest standard.

Very high energy efficiency
With comfortDIM and electronic control gear (ECG), transformers and operating devices from Tridonic you can produce highly energy-efficient lighting solutions with exceptional levels of comfort and convenience. Standby monitoring of the DALI line means that the ECGs are automatically disconnected from the power supply via a relay which avoids standby losses. Scenes that are controlled according to the time of day prevent luminaires being operated when artificial light is not needed.

Economical
Time is a major cost factor. With comfortDIM, planning and installation of a DALI control system can be completed quickly and easily. The module structure of the system means that you can tailor the system to suit the specific requirements of the customer and therefore always achieve the most cost-effective solution.

Networked solutions

The software-based lighting management solution winDIM@net from Tridonic combines standardised DALI technology with the tried and tested TCP/IP internet protocol. This means that the lighting control system can be fully integrated in a building management system so everything can be controlled centrally with just one system.

Intelligent emergency lighting system

Compact emergency lighting systems for up to 120 individually addressable DALI emergency lighting units is easily implemented with e-touch. The status report for the emergency lighting system can be retrieved locally via an infra-red interface or in a networked installation with EM LINK software (available free of charge) via a standard web browser (TCP/IP).

For more technical detail on the DSI product range available, please enquire in-store.

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