EVE-L

- **Zone 1, 2, 21, 22**
- **LED Remote Phosphor Technology**
- **Saving in energy, maintenance and installation costs**
- **Instant illumination**
- **Bright comfort**

4 Joule shock resistant borosilicate glass globe

LED Remote Phosphor Technology

Stainless Steel Protective guard

EVE...L series Lighting Fixture with LED Remote Phosphor Technology

EVE-5050L, EVE-5060L and EVE-5060L1 series Cortem lighting fixtures are designed to provide an optimal replacement to the conventional incandescent lamps and to provide a valid alternative for the energy-saving lamps in hazardous areas where it's necessary to light up using light sources close to the operator and to the equipment. The peculiarity of these new lighting fixtures consists in the use of the LED Remote Phosphor Technology on explosion-proof lighting fixtures. This represent an absolute evolution in the world of LEDs and an important step forward in terms of energy efficiency, lighting efficiency and chromatic yield quality. The LED Remote Phosphor Technology is based on a yellow semi-spherical light diffuser that, when the lighting fixture is on, absorbs the light produced by the internal LEDs and releases white light. The EVE series allows to replace the lighting fixtures which use incandescent and energy-saving lamps with a long lasting light source that ensures a better efficiency and an equal brightness comfort.

Application sectors:

| Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Oil loading/ unloading jetties | Fuel depots | Fuel tanker loading/ unloading areas | 100% Cortem product |

CERTIFICATION DATA

Classification: 94/9/EC

Group II	Category 2GD		

Installation: EN 60079.14

Zone 1 - Zone 2 (Gas)	Zone 21 - Zone 22 (Dust)		

Marking:

C€ 0722 ⟨Ex⟩ II 2GD Ex de IIC T6 Gb - Ex tb IIIC T85°C Db IP66

Certification:

ATEX CESI 12 ATEX 006			
IEC Ex IECEx CES 07.0004	All IEC Ex certification data can be downloaded at www.cortemgroup.com		

Standards:

CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and DIRETTIVA EUROPEA 94/9/EC: 1994 IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-7: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS

Class temperature:

85°C (T6)			

Ambient temperature:

Standard -20°C +50°C	Standard for EV..5060L1 -20°C +40°C	

Degree of protection:

IP66

CORTEM GROUP®

EVE...L series Lighting Fixture with LED Remote Phosphor Technology

ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass with aluminium shade ring
Gaskets:	Acid/hydrocarbon resistant NBR.
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EV series dimensional drawings"
Bolts and screws:	Stainless steel
Coating:	Epoxy coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

Diffuser: the Remote Phosphor Technology provides new levels of efficiency and optical performance for high power LEDs. This special yellow phosphors membrane filters and corrects blue LEDs light in quality white light, thus obtaining three advantages:
- higher efficiency compared with a normal LED lamp
- anti-glare effect
- greater comfort bright.

Thanks to the Remote Phosphor Technology, the light emission is perfectly uniform, does not present shadow effects and maintains very stable its color from device to device and during time. Phosphorus properties ensure a quality of light perfectly natural and comparable to the light of the day thanks to its ability to bring colors faithfully.

Section view EVE-5050L

ELECTRICAL FEATURES

LED:	n. 3 LEDs for EVE-5050L, n. 7 LEDs for EVE-5060L and EVE-5060L1
Rated voltage:	230 Vac/dc, 110/230 Vac/dc only for EVE-5050L
Rated frequency:	50/60 Hz
Connection:	Direct connection to terminal board L, N, Pe. Section 4mm^2

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Cable gland: REVD2IB for armoured cable or REV2IB for non-armoured cable.
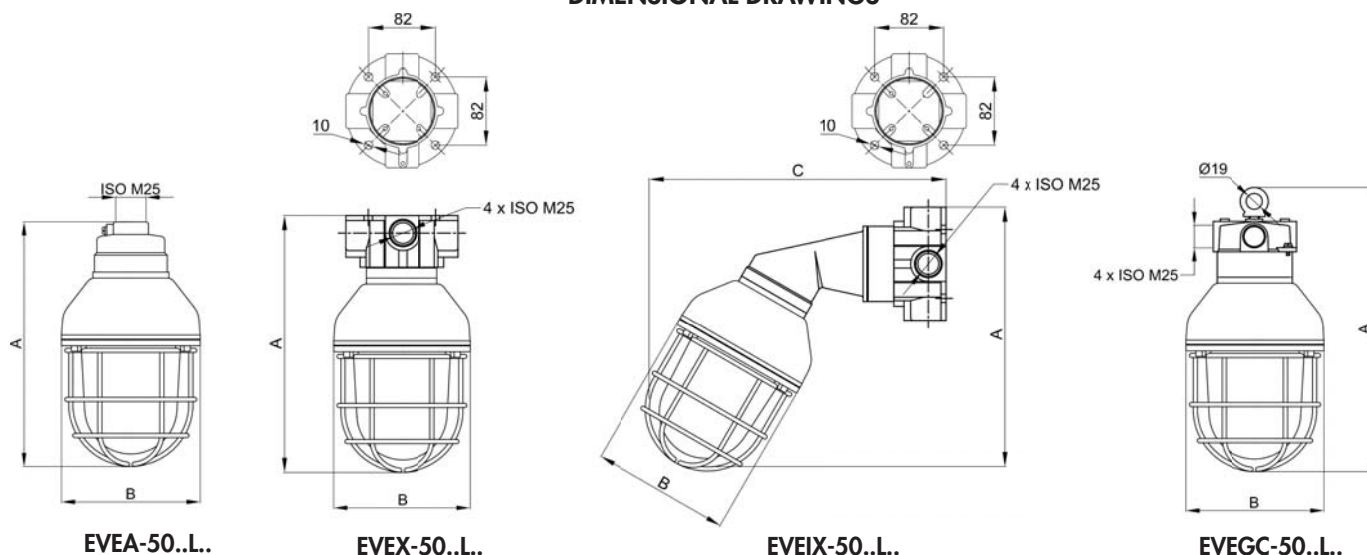Special request ⟨Ex⟩ II 2GD Ex d IIC T6 Gb Ex tb IIIC T85°C IP66. Code example: EV-5050L
Rated voltage: 24 Vac/dc (code EV-5050L**/24**)

CORTEM GROUP®

EVE...L series Lighting Fixture with LED selection chart

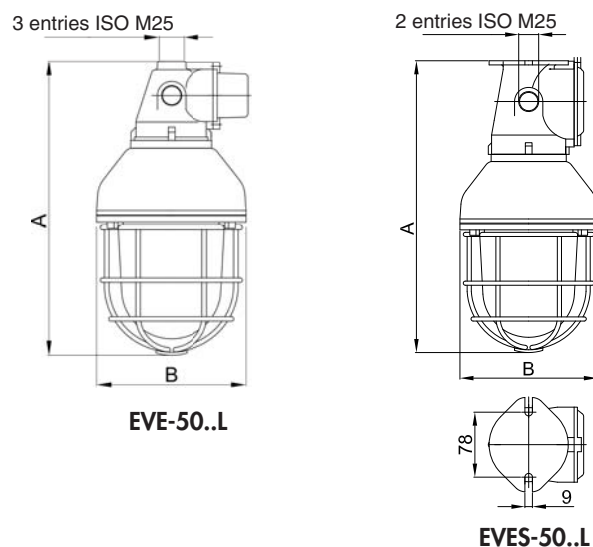| Code	Dimension mm			Lamp type	Watt	Class Ta =+40°C	Max surface temperature °C	Weight Kg	mm
	A	B	C						
EVEA-5050L	261	150	-	LED	8	T6	51	2,6	160x150x330
EVEA-5060L	323	170	-	LED	13	T6	54	3,2	190x170x390
EVEA-5060L1	323	170	-	LED	19	T6	57	3,2	190x170x390
EVEX-5050L	260	150	-	LED	8	T6	51	3,0	160x150x330
EVEX-5060L	322	170	-	LED	13	T6	54	3,9	190x170x390
EVEX-5060L1	322	170	-	LED	19	T6	57	3,9	190x170x390
EVEIX-5050L	285	150	310	LED	8	T6	51	3,5	190x170x390
EVEIX-5060L	339	170	344	LED	13	T6	54	4,1	260x210x490
EVEIX-5060L1	339	170	344	LED	19	T6	57	4,1	260x210x490
EVEGC-5050L	296	150	-	LED	8	T6	51	2,8	160x150x330
EVEGC-5060L	358	170	-	LED	13	T6	54	3,6	190x170x390
EVEGC-5060L1	358	170	-	LED	19	T6	57	3,3	190x170x390

DIMENSIONAL DRAWINGS

EVEA-50..L..

EVEX-50..L..

EVEIX-50..L..

EVEGC-50..L..

Lighting fixtures for loop-in/loop-out execution

DIMENSIONAL DRAWINGS

Code	Dimension mm		Watt	Weight Kg	mm
	A	B			
EVE-5050L	300	150	8	2,7	160x150x330
EVE-5060L	358	170	13	4,0	190x170x390
EVE-5060L1	358	170	19	4,1	190x170x390
EVES-5050L	325	150	8	2,7	160x150x330
EVES-5060L	384	170	13	4,0	190x170x390
EVES-5060L1	358	170	19	4,1	190x170x390

EVE-50..L

EVES-50..L

CORTEM GROUP®
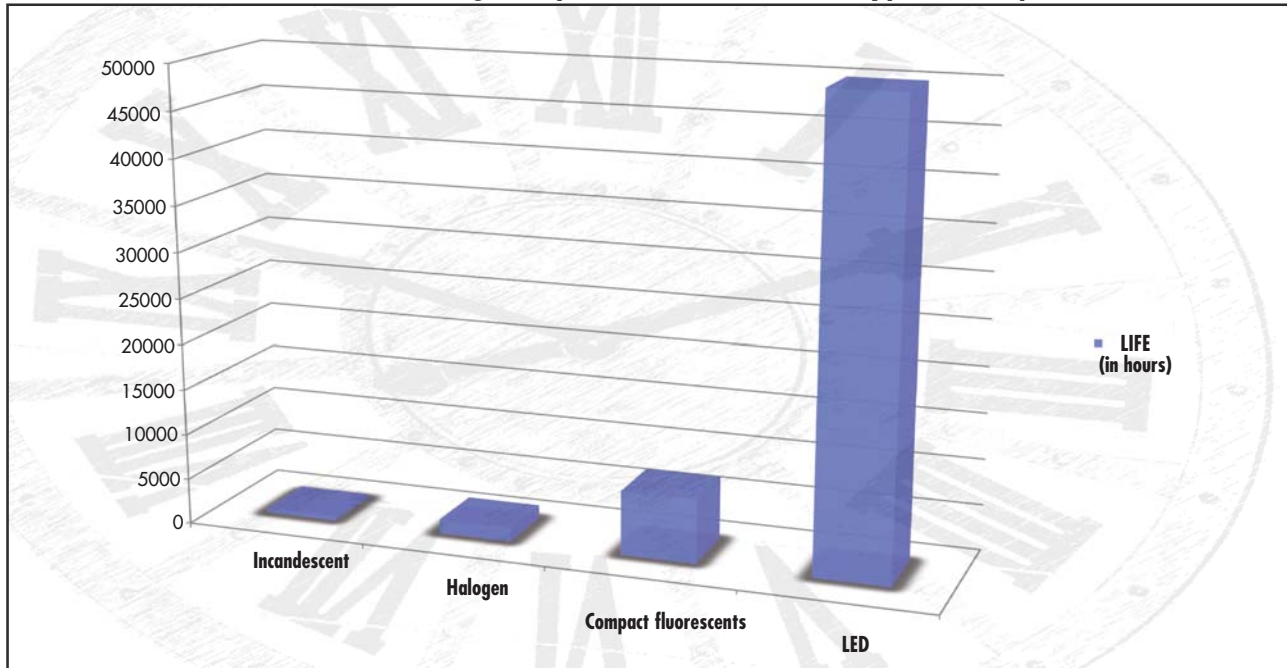
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	LED plate with electronic circuit complete with Remote Phosphores, heat dissipator and frame.	EVE-5050L	n. 3 power LEDs. Dome for Remote Phosphor Technology. Aluminium dissipator and frame	G-0571	
		EVE-5060L EVE-5060L1	n. 7 power LEDs. Dome for Remote Phosphor Technology. Aluminium dissipator and frame	G-0572	
	Power supply electronic	EVE-5050L	90 - 264 Vac 50/60 Hz	RT-6LED	
		EVE-5060L	220 - 240 Vac 50/60 Hz	RV-16LED	
		EVE-5060L1	220 - 240 Vac 50/60 Hz	RV-17LED	
	Protective guard	EVE-5050L	Material: electro-polished stainless steel	G50-0417	
		EVE-5060L		G60-0417	
	OR gasket	Globo 50	Material: NBR	OR-4512SH70	
		Globo 60		K15-131	
	Ex e pendant mounting EVE		n. 3 ISO M25 entries	G-0444	
	Ex e ceiling mounting EVES		n. 2 ISO M25 entries	G-0439	
	Globe with shade ring	EVE-5050L	Borosilicate glass globe Threaded aluminium shade ring	G50-0440CM	
		EVE-5060L		G60-0440CM	
	Pendant eyebolt		Material: galvanised steel	GOF-8	

CORTEM GROUP®

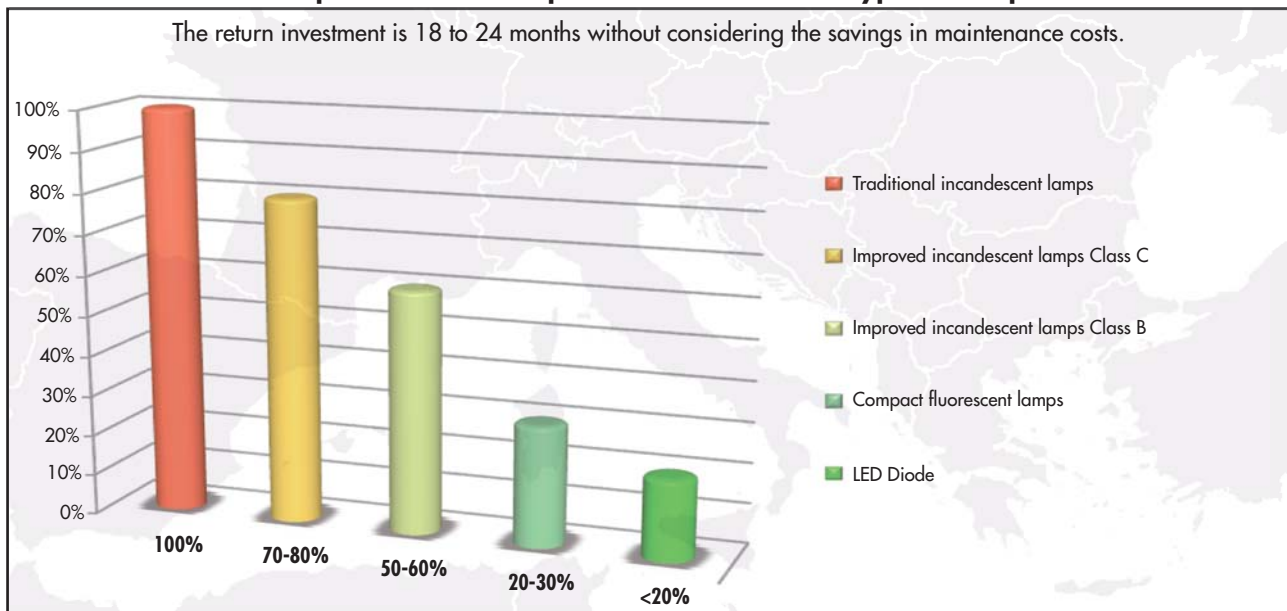| ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Pendant mounting EVEA		n. 1 ISO M25 entry	G-0213I	
	Pendant mounting with eyebolt EVEGC		n. 4 ISO M25 entries	G-0216I	
	Ceiling mounting EVEX		n. 4 ISO M25 entries	G-0214I	
	Wall mounting with bracket EVEIX		n. 4 ISO M25 entries	G-0215I	
	Reflector	EVE-5050L	White painted aluminium Stainless steel	G50-427 G50-427IN	
		EVE-5060L	White painted aluminium Stainless steel	G60-427 G60-427IN	
	Dome reflector	EVE-5050L	Contact our Sales Office for availability		
		EVE-5060L	White painted aluminium	G60-427D	
	30° inclined dome reflector	EVE-5050L	Contact our Sales Office for availability		
		EVE-5060L			
	Cable gland		For models and codes, visit www.cortemgroup.com	REVD2IB REV2IB	
	Articulated bracket for sloping mounting (have a look at installation and mounting methods)		Material: galvanised steel	G-0543	
	Warning signs		Materials: translucent film on plexiglass and aluminium frame	G-0513	

CORTEM GROUP®

Estimate of average life period between several types of lamps

The respect of two basic conditions, the internal temperature and the intensity of current, guarantees a life of LEDs equal to 100,000 hours.

Comparison of consumption between different types of lamps

The return investment is 18 to 24 months without considering the savings in maintenance costs.

- Traditional incandescent lamps
- Improved incandescent lamps Class C
- Improved incandescent lamps Class B
- Compact fluorescent lamps
- LED Diode

The industry association OIDA (Optoelectronics Industry Development Association) has predicted that LED lighting will replace in almost all incandescent lighting by 2012.

The main determinants of this choice were, further the durability and the operating economy represented in the graphs, the re-liability, quality and efficiency of the LED light and the environmental performance of these products.

CORTEM GROUP®

Reliability

LED modules light up instantly and provide a constant light output even at low temperatures allowing wide range of applications. They have a high mechanical resistance even in rooms with high humidity. Another peculiarity is the LEDs resistance to shock and vibration.

Quality and efficiency of LED light

LEDs emit cold white light, which allows to achieve safe lighting for users (reduce the reaction times for the unexpected), with less energy consumption. The white light goes through the fog much better, making vehicles more visible. Furthermore, LEDs also increase the quality of the images captured by security cameras.

LED efficiency has been greatly improved in recent years and has reached a level even higher than 130lm / W depending on the color.
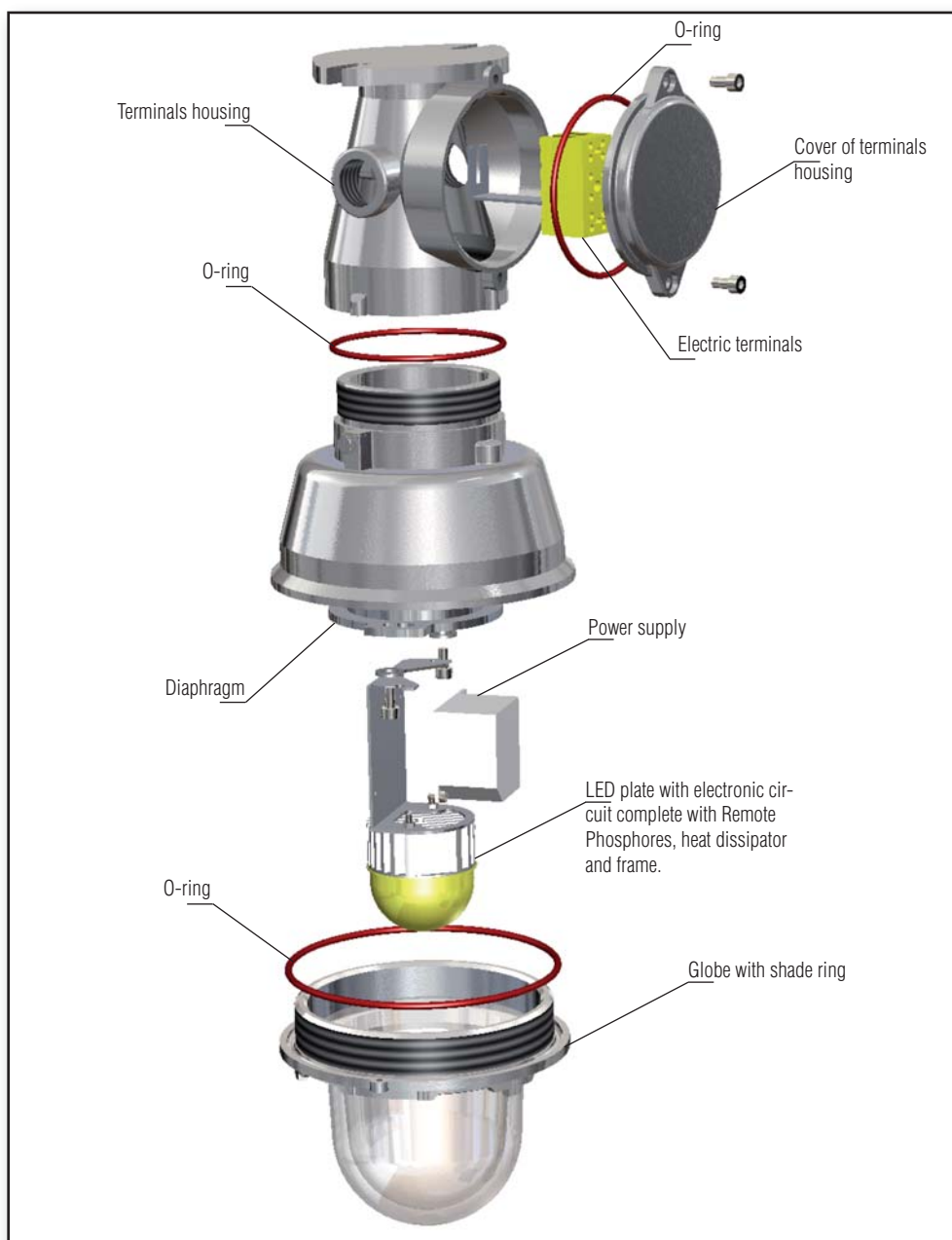
Maintenance

The maintenance costs of LED lighting equipment are one-tenth respect to sodium facilities currently in use.

Respect for the environment

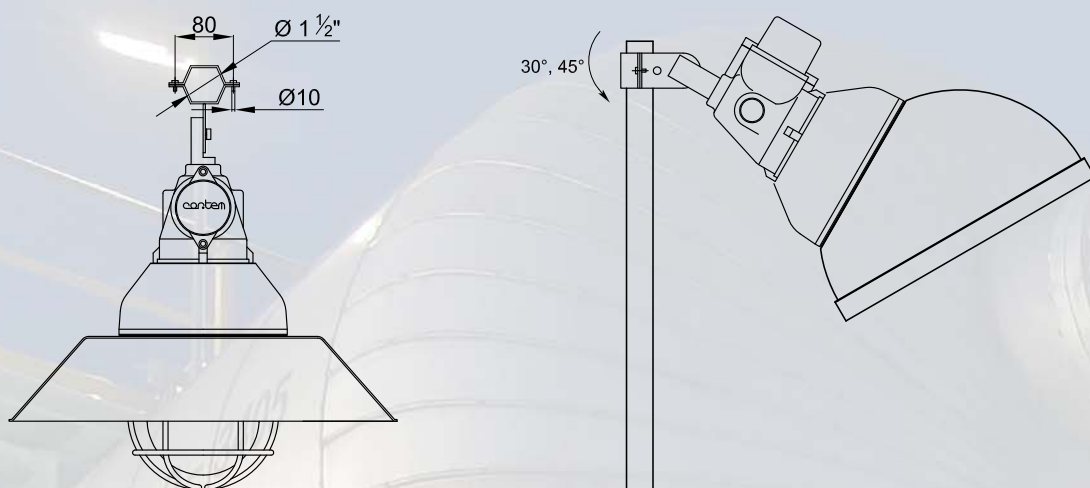The LED light is also an ecological light because high energy saving and pollutant-free (for example, mercury).
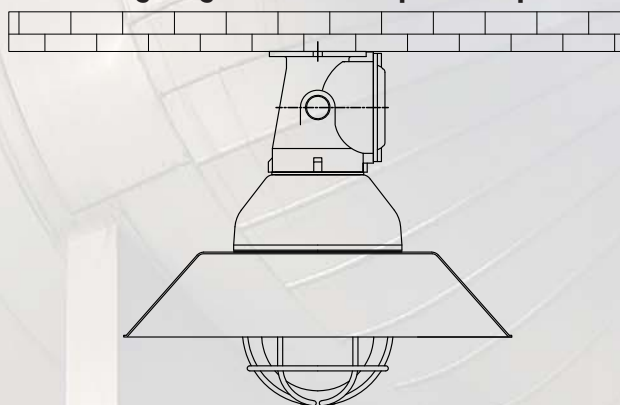
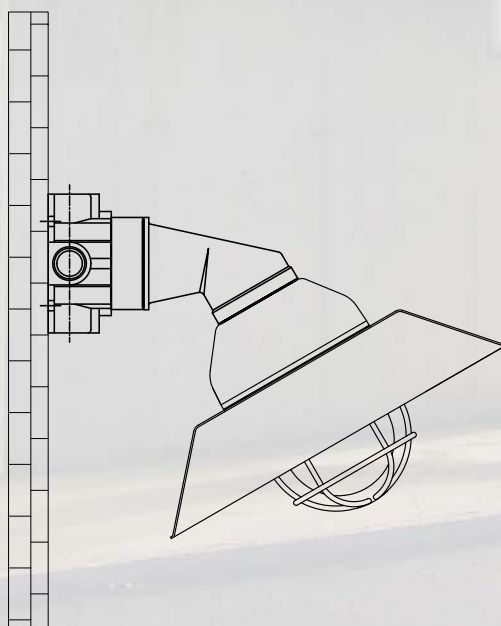### EXPLODED DIAGRAM OF EVE-5050L LIGHTING FIXTURES

Example of mounting with articulated bracket

80   Ø 1 ½"

Ø10

30°, 45°

**Example of ceiling mounting
with lighting fixture for loop-in / loop-out**

Example of wall mounting

Dimension in mm

CORTEM GROUP®

EVE-5050L, PEACK CD EQUIVALENTS
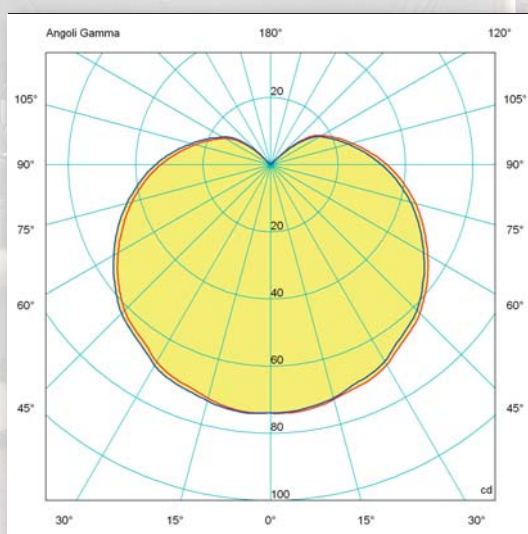
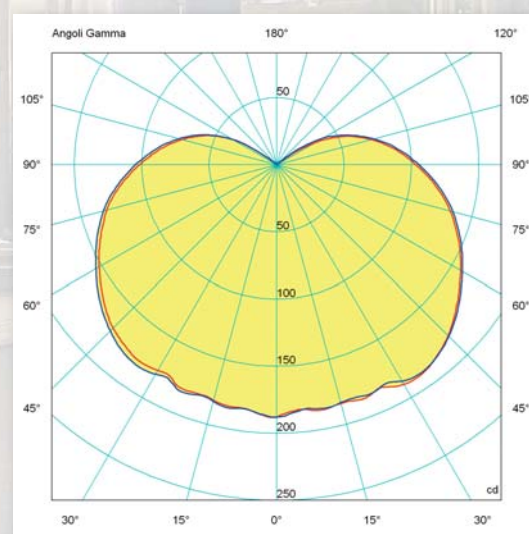|			
EVE-5050L (8W) LED + remote phosphor	EVA (15W) Fluorescent	EVA (50W) Halogen	EVA (75W) Incandescent

EVE-5060L, PEACK CD EQUIVALENTS

EVE-5060L (13W) LED + remote phosphor	EVA (30W) Fluorescent	EVA (110W) Halogen	EVA (150W) Incandescent

EVE-5060L1, PEACK CD EQUIVALENTS

EVE-5060L1 (17W) LED + remote phosphor	EVA (40W) Fluorescent	EVA (150W) Halogen	EVA (200W) Incandescent

EVE-5050L Luminous flux: 430 lm

EVE-5060L1 Luminous flux: 1200 lm

Cortem Group can supply photometric diagram files on request for use in special lighting design projects.

Contact the Sales Office for further information

—— = plane 90270

—— = plane C 0180

CORTEM GROUP®