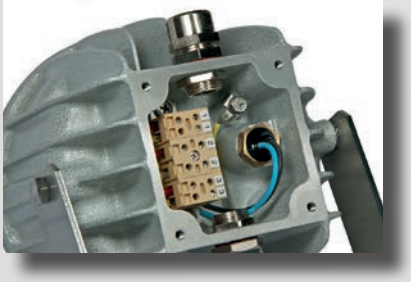
EVL

NEW TECHNOLOGY

- Zone 1, 2, 21, 22
- Replaces traditional discharge lamps more than 400W
- Saves in energy, maintenance and installation costs
- Instant, bright illumination
- Suitable for GAS category IIC and IIB+H_2

'Ex op is'
safe optical radiation

Ex e terminal housing for a quick connection



Entries

EVL series High bay LED lighting fixture

The new LED lighting fixtures EVL series has been developed with the aim of redefining the concepts of compactness, versatility and ease of installation thanks to high intensity and efficiency LED plates. The EVL series consists of four lighting fixtures sizes and represents the LED alternative for all those areas where it was normal to use lighting fixtures with discharge lamps of low and medium power greater than 400W. The body, made of aluminium alloy, is equipped with fins that act as a heat sink allowing a fast and effective dispersion of heat generated by the normal operation of the LED. The geometric conformation of the cooling fins was also designed with the objective of minimizing the deposit of combustible dust, allowing the self-cleaning of the lighting fixture by air or water present in the environment. Furthermore, thanks to the absence of UV emission, there is no ionization of the air particles around the lighting fixture, an intrinsic characteristic of LED technology which limits the attraction of dust and insects. The design of the lamp body, in addition to being functional to the duration of the system, gives the equipment very high light efficiency. The electrical connection is easier thanks to a 'Ex e' terminal housing which allows the entry with a 'Ex e' cable gland (no barrier). In addition, an opposed plugged hole permits the through wiring connection.

Application sectors:

Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Onshore plants | Perimeter lighting | Oil loading/ unloading jetties | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex db eb op is IIC T... Gb - Ex tb op is IIIC T...°C Db			
Certification:	ATEX EPT 19 ATEX 3323 X			
	IEC Ex IECEx SEV 19.0043X			
Standards:	CENELEC EN 60079-0: 2018, EN 60079-1: 2014, EN 60079-7: 2015, EN 60079-28: 2015, EN 60079-31: 2014 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2017, IEC 60079-1: 2014, IEC 60079-28: 2015, IEC 60079-31: 2013, IEC 60079-7: 2015			
Ambient temperature:	-40°C +60°C			
Degree of protection:	IP66			

* For ambient temperature +60°C see "EVL series selection chart" a pagina 26.

EVL series High bay LED lighting fixture

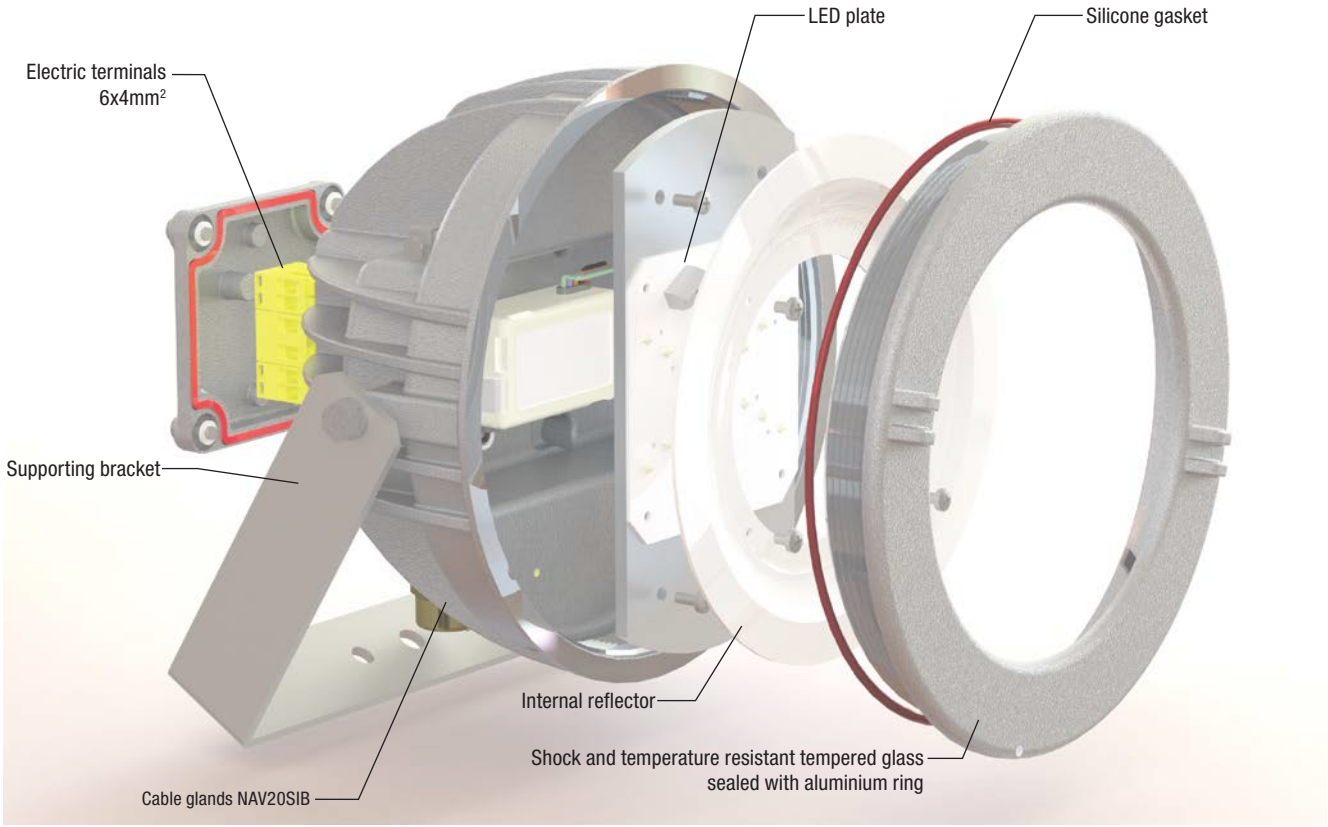
EXEMPT FROM PHOTOBIOLOGICAL RISK (STANDARD IEC / EN 62471)

ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy fitted with cooling fins for better heat dissipation
Glass face:	Shock and temperature resistant tempered glass sealed with aluminium ring
Gaskets:	Acid, hydrocarbon and high temperature resistant silicone
Supporting bracket:	Stainless steel 316L
Bolts and screws:	Stainless steel
Entries:	2 x ISO M20 entries. Fixture kit with PLG1IB plug and NAV20SIB cable gland
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

EXPLODED DIAGRAM OF EVL-070 LIGHTING FIXTURE



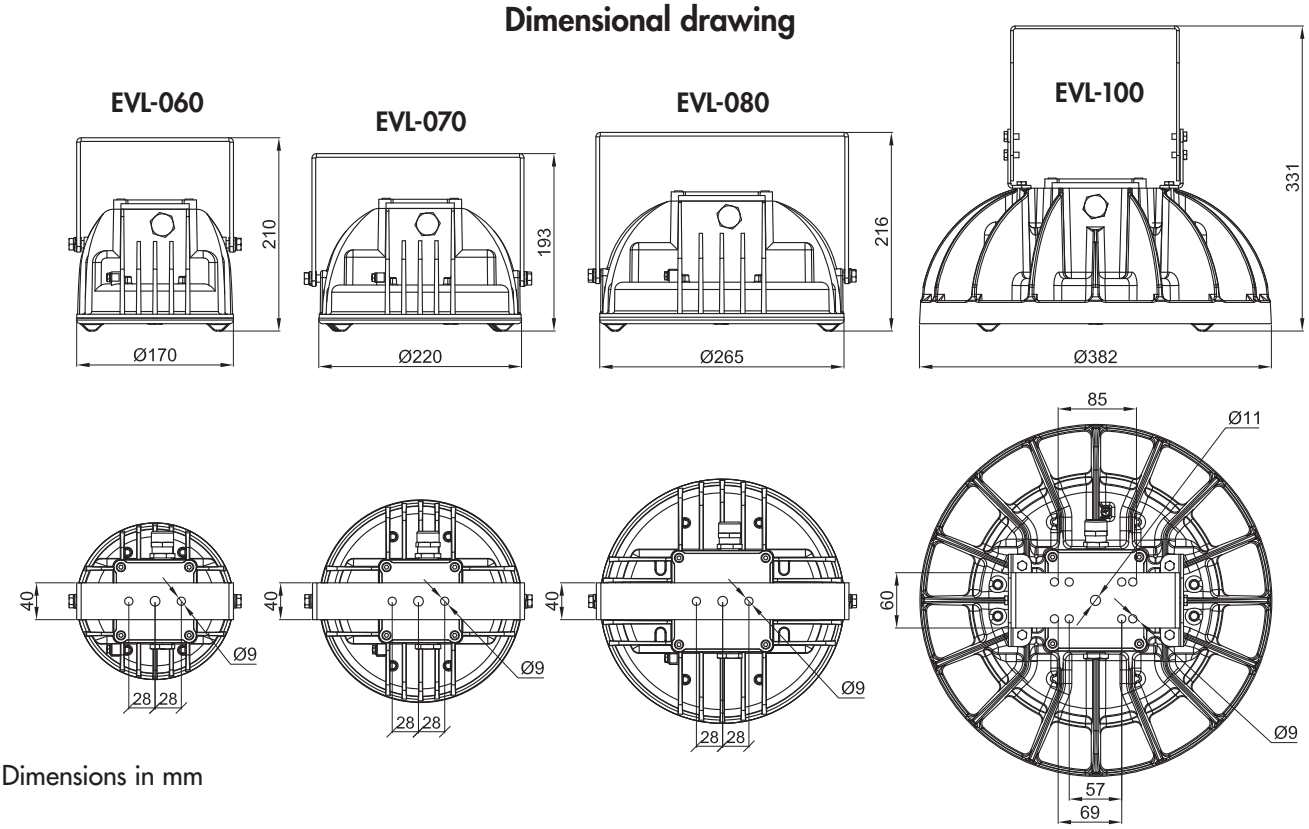
EVL series High bay LED lighting fixture

EVL series selection chart

Code	Maximum permitted power value	Class / Max surface temp. °C			Lumen	Maximum light intensity	Overall efficiency	Weight kg	mm
		TA=+40°C	TA=+50°C	TA=+60°C					
EVL-060030	30 W	T6 / 85°C	T5 / 100°C	T5 / 100°C	2778 lm	1179 cd	94,8 lm/W	3,5	215x205x170
EVL-060040	40 W	T6 / 85°C	T5 / 100°C	T5 / 100°C	3992 lm	1527 cd	97,9 lm/W	3,5	215x205x170
EVL-060050	50 W	T5 / 100°C	**	**	4643 lm	1765 cd	92,1 lm/W	3,5	215x205x170
EVL-070050	50 W	T5 / 100°C	T5 / 100°C	T4 / 135°C	6332 lm	2130 cd	120,1 lm/W	5,2	250x235x165
EVL-070060	60 W	T5 / 100°C	T5 / 100°C	T4 / 135°C	7259 lm	2458 cd	118,9 lm/W	5,2	250x235x165
EVL-070070	70 W	T5 / 100°C	**	**	7852 lm	2659 cd	110,3 lm/W	5,2	250x235x165
EVL-070080	80 W	T5 / 100°C	**	**	8237 lm	2801 cd	103,5 lm/W	5,2	250x235x165
EVL-080080	80 W	T5 / 100°C	T5 / 100°C	T4 / 135°C	8461 lm	2900 cd	105,8 lm/W	7,2	290x290x170
EVL-080090	90 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	9466 lm	3296 cd	105,2 lm/W	7,2	290x290x170
EVL-080100	100 W	T4 / 135°C	**	**	10315 lm	3586 cd	103,2 lm/W	7,2	290x290x170
EVL-080110	110 W	T4 / 135°C	**	**	11266 lm	3831 cd	102,4 lm/W	7,2	290x290x170
EVL-080120	120 W	T4 / 135°C	**	**	11603 lm	4019 cd	98,3 lm/W	7,2	290x290x170
EVL-100140	140 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	15260 lm	5213 cd	111,4 lm/W	11,2	385x385x250
EVL-100160	160 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	17535 lm	6032 cd	109,2 lm/W	11,2	385x385x250
EVL-100180	180 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	18535 lm	6635 cd	103,0 lm/W	11,2	385x385x250
EVL-100200	200 W	T4 / 135°C	**	**	20123 lm	7156 cd	101,4 lm/W	11,2	385x385x250
EVL-100220	220 W	T4 / 135°C	**	**	21818 lm	7595 cd	100,1 lm/W	11,2	385x385x250

** Item currently not available

Dimensional drawing



Dimensions in mm

EVL series High bay LED lighting fixture

Electrical features	EVL-060..	EVL-070..	EVL-080..	EVL-100..
Power supply:	120-277 Vac	120-277 Vac	120-277 Vac	120-277 Vac
Rated frequency:	50-60 Hz ±5%	50-60 Hz ±5%	50-60 Hz ±5%	50-60 Hz ±5%
Power consumption*:	..030 30 W	..050 50 W	..080 80 W	..140 140 W
	..040 40 W	..060 60 W	..090 90 W	..160 160 W
	..050 50 W	..070 70 W	..100 100 W	..180 180 W
	-	..080 80 W	..110 110 W	..200 200 W
	-		..120 120 W	..220 220 W
Connection:	Direct connection to terminal board L, N, Pe. Section 4mm², suitable for loop-in/loop-out			
Power factor:	>0,93	>0,95	>0,97	>0,96
Rated current:	..030 140 mA	..050 230 mA	..080 350 mA	..140 640 mA
	..040 180 mA	..060 270 mA	..090 400 mA	..160 710 mA
	..050 220 mA	..070 310 mA	..100 440 mA	..180 800 mA
	-	..080 360 mA	..110 490 mA	..200 890 mA
	-	-	..120 530 mA	..220 970 mA
EMC (electromagnetic compatibility):	EN 55015, EN 61547, IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-...			
THD (total harmonic distortion):	<15% 100-240 Vac			
Protección de sobretensiones:	2 kV	2 kV	6 kV	2 kV
Driver performances:	Over-Voltage protection, Over-Current protection, Short-Circuit protection			
Dimmer (on request):	(0-10 V) or PWM or resistor	(0-10 V) or PWM or resistor	(0-10 V) or PWM or resistor	(0-10 V) or PWM or resistor
Photometric features				
LED Multichip:	High power LED	High power LED	High power LED	High power LED
Viewing angle:	120°	120°	120°	120°
Colour temperature:	5700 K	5700 K	5700 K	5700 K
CRI:	>70	>70	>70	>70
Instant Restrike:	SI	SI	SI	SI
L80:	> 63500 h	> 60500 h	> 61000 h	> 60000 h

* *Test at 230Vac*

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

CRI values higher
Dimmer
Different colour temperature
U bolt for pole mounting
Eyebolt
Cover with direct connection for pole

EVL series High bay LED lighting fixture

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Pendant eyebolt	Ø interno 20	Material: galvanised steel	G0F-8	ACCESSORY SPARE PART
	U bolt for pole mounting	Poste Ø1 1/2"	Material: stainless steel 316L	UBD5S	ACCESSORY SPARE PART
	Cover with direct connection for pole	EVL-060 EVL-070	Material: aluminium alloy with threaded hole 3/4" NPT (Different threads on request)	B-498	SPARE PART
		EVL-080 EVL-100		B-499	
	Supporting bracket	EVL-060	Material: stainless steel 316L	G-764IN	SPARE PART
		EVL-070		G-765IN	
		EVL-080		G-766IN	
		EVL-100		G-827	
	Power supply	EVL-060030	120-277 Vac	LEDDEVL060/2	SPARE PART
		EVL-060040		LEDDEVL060/2/1	
		EVL-060050		LEDDEVL060/2	
		EVL-070050	120-277 Vac	LEDDEVL070/1	
		EVL-070060		LEDDEVL070/1/2	
		EVL-070070		LEDDEVL070/1/3	
		EVL-070080		LEDDEVL080/4/1	
		EVL-080080	120-277 Vac	LEDDEVL080/4	
		EVL-080090		LEDDEVL080/4/2	
		EVL-080100		LEDDEVL080/4/3	
		EVL-080110		LEDDEVL080/5/1	
		EVL-080120		LEDDEVL080/5/2	
		EVL-100140	120-277 Vac	LEDDEVL100/1/1	
		EVL-100160		LEDDEVL100/1	
		EVL-100180		LEDDEVL100/1/2	
		EVL-100200		LEDDEVL100/1/3	
		EVL-100220		LEDDEVL100/1/4	
	Cable gland	ISO M20	std. range cable 6,3÷11,6	NAV20SIB	SPARE PART
	Front ring with glass	EVL-060	Aluminium ring Borosilicate glass face	G60-0587	SPARE PART
		EVL-070		G70-0587	
		EVL-080		G80-0587	
		EVL-100		G100-0587	

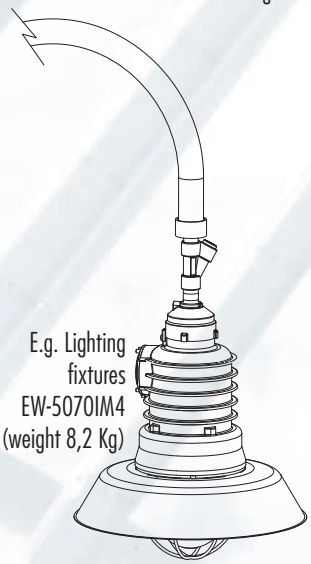
Obstruction lighting fixtures

The obstruction lighting fixtures are feature a LED plate and a globe of different colours: blue, red, green, amber. They can be installed in locations where obstacles, dangers are needed to be signalled and for any visual communication. They replace acoustic signals in places where they are not applicable.

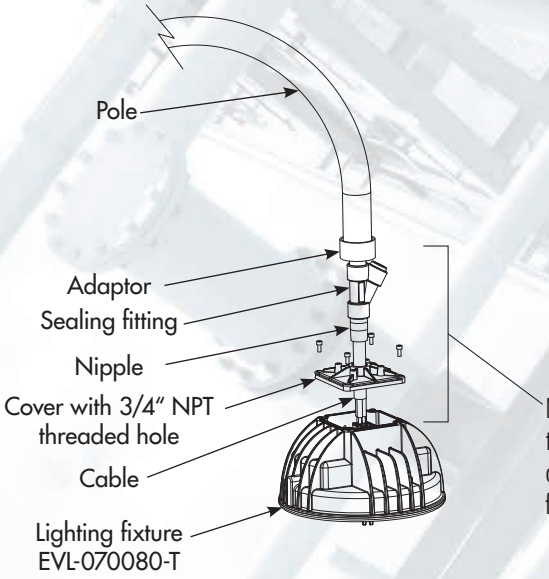
REPLACEMENT OF OLD LIGHTING FIXTURES POLE-MOUNTED

Using the lighting fixture with direct connection for pole mounting EVL-...-T series, it is possible to replace the old lighting fixtures with 3/4 "NPT or ISO 7/1 threaded entries.

Typical pole-installation of an EW series lighting fixture with a resin sealing fitting.

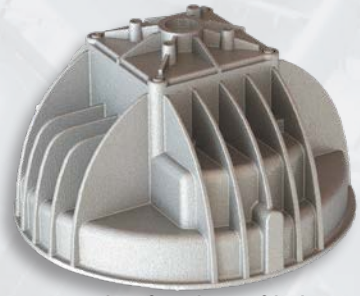


E.g. Lighting fixtures EVL-070080-T (weight 5,3 Kg)



Note: it is necessary to preserve, during the installation, the IP protection degree of the terminal box using a sealing fitting.

3/4" NPT threaded entry



Example of coding of lighting fixtures with direct pole connection EVL-070070-**T**

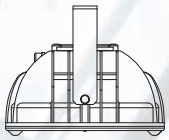
Transportable version **EVL-...-PS** complete with cable 8 meters long, sockets model PY216V and plug model SPY216V.
To order the transportable lighting fixture without socket and plug, omit the S in the code: **EVL-...-P**.

Weight (without socket):

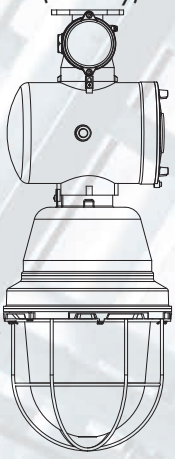
EVL-060...-P	7,5 Kg
EVL-070...-P	9,2 Kg
EVL-080...-P	11,2 Kg
EVL-100...-P	15,2 Kg

Compact size and lightweight
Cheaper support structures and most space available

EVL-080



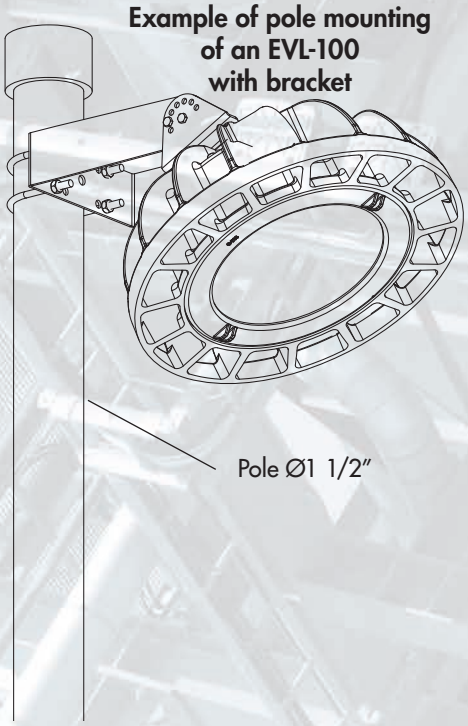
EWAES-50100F6 (Mercury)



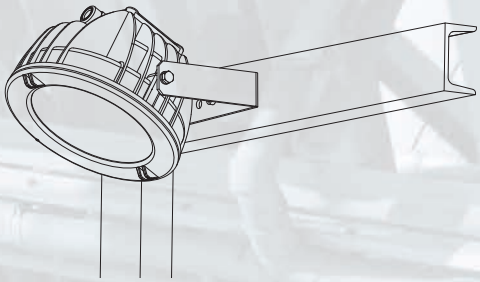
The comparison between the two lighting fixtures highlights the less space occupied by the EVL-080.. with the same lighting performance.

Installation and mounting methods

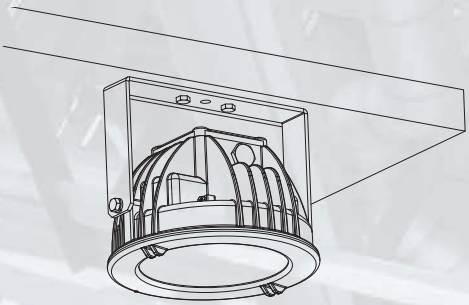
Example of pole mounting of an EVL-100 with bracket



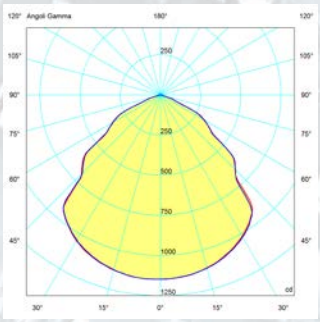
Example of wall or structure mounting of an EVL-70



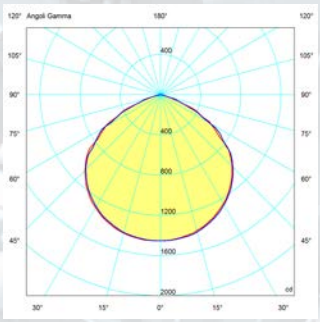
Example of ceiling mounting of an EVL-70



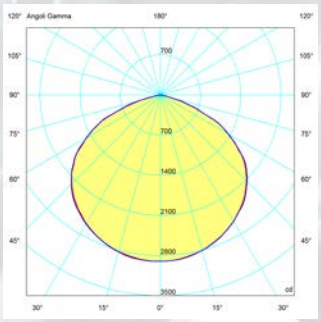
Photometric diagrams



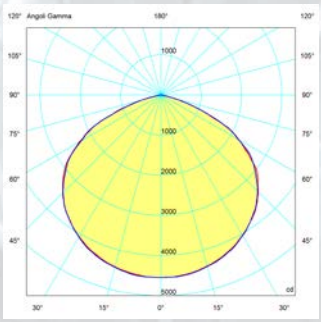
EVL-060030 Luminous flux: 2778 lm



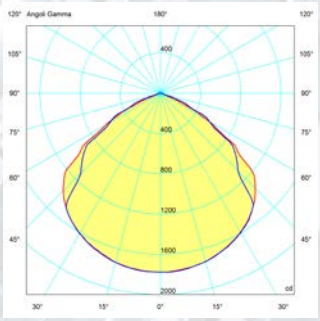
EVL-070050 Luminous flux: 6332 lm



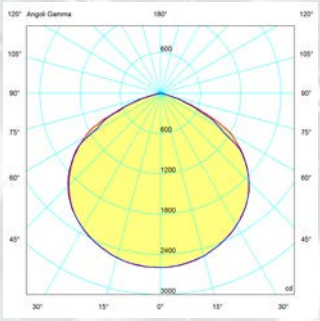
EVL-080080 Luminous flux: 8461 lm



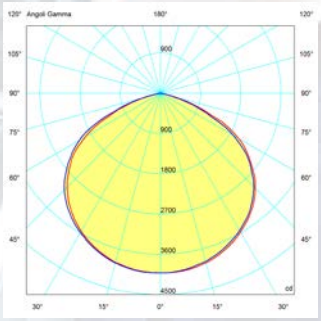
EVL-100140 Luminous flux: 15260 lm



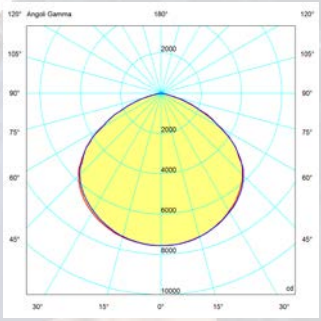
EVL-060050 Luminous flux: 4643 lm



EVL-070080 Luminous flux: 8237 lm



EVL-080120 Luminous flux: 11603 lm



EVL-100220 Luminous flux: 21818 lm

On Cortem Group web site you can download .LDT and .IES lighting data files for the design and simulation of lighting levels in 2D and 3D, rendering and ray tracing.

= plane 90270

= plane 0180