

EVL 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+H₂

'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:



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	For all IEC Ex and TR CU certification data, download the certificate from www.cortemgroup.com	
	TR CU	AVAILABLE		
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 European Directive 2004/108 Electromagnetic compatibility European Directive 2012/19/UE, 2002/96/CE, 2003/108/CE WEEE European Directive 2011/65/UE RoHS			
Ambient temperature:	-40°C(-60°C)* +60°C**			
Degree of protection:	IP66			

* For temperatures to -60°C contact our Sales Office.

** For maximum surface temperature see "EVL series selection chart" a pagina A.34.

EVL series High bay LED lighting fixture



EXEMPT FROM
PHOTOBIOLOGICAL RISK
(STANDARD IEC / EN 62471)

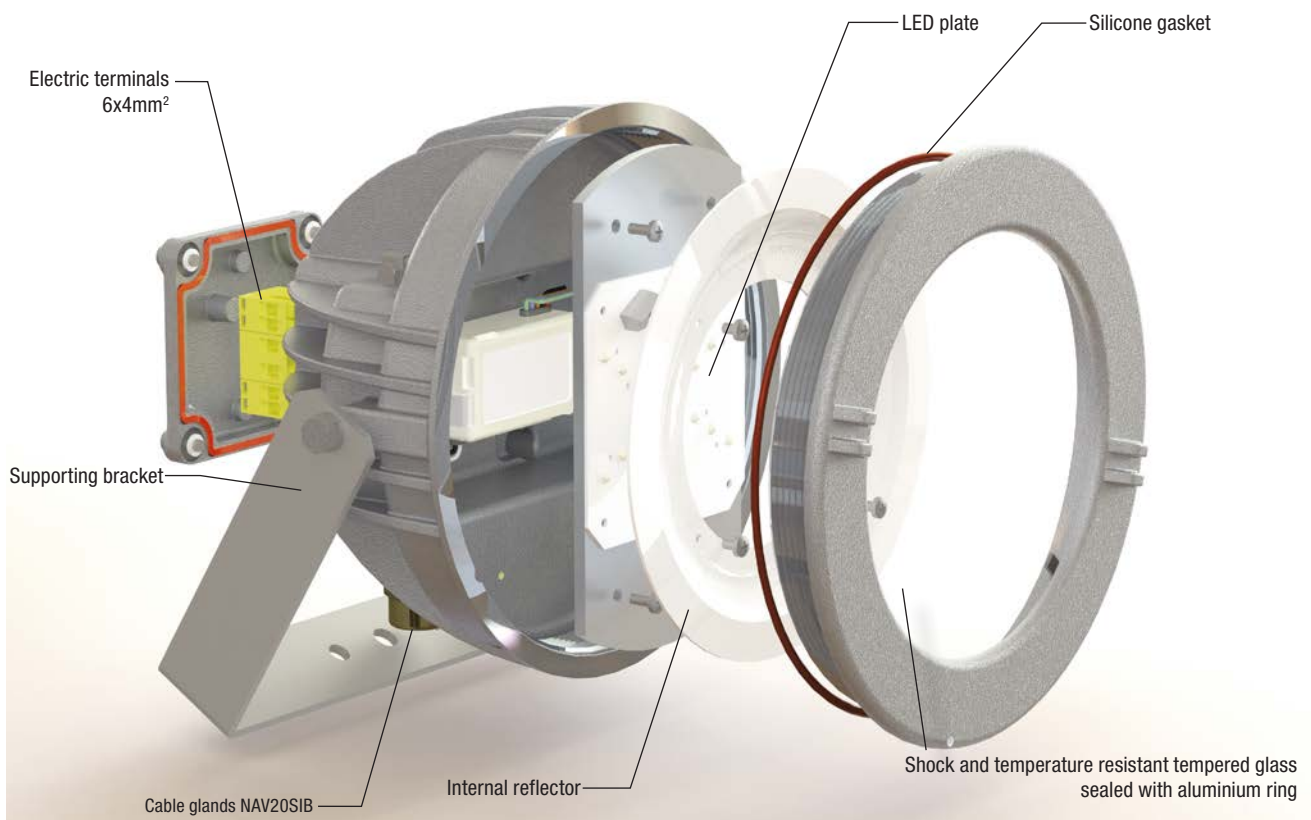


ORIGINAL PRODUCT

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 AISI 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

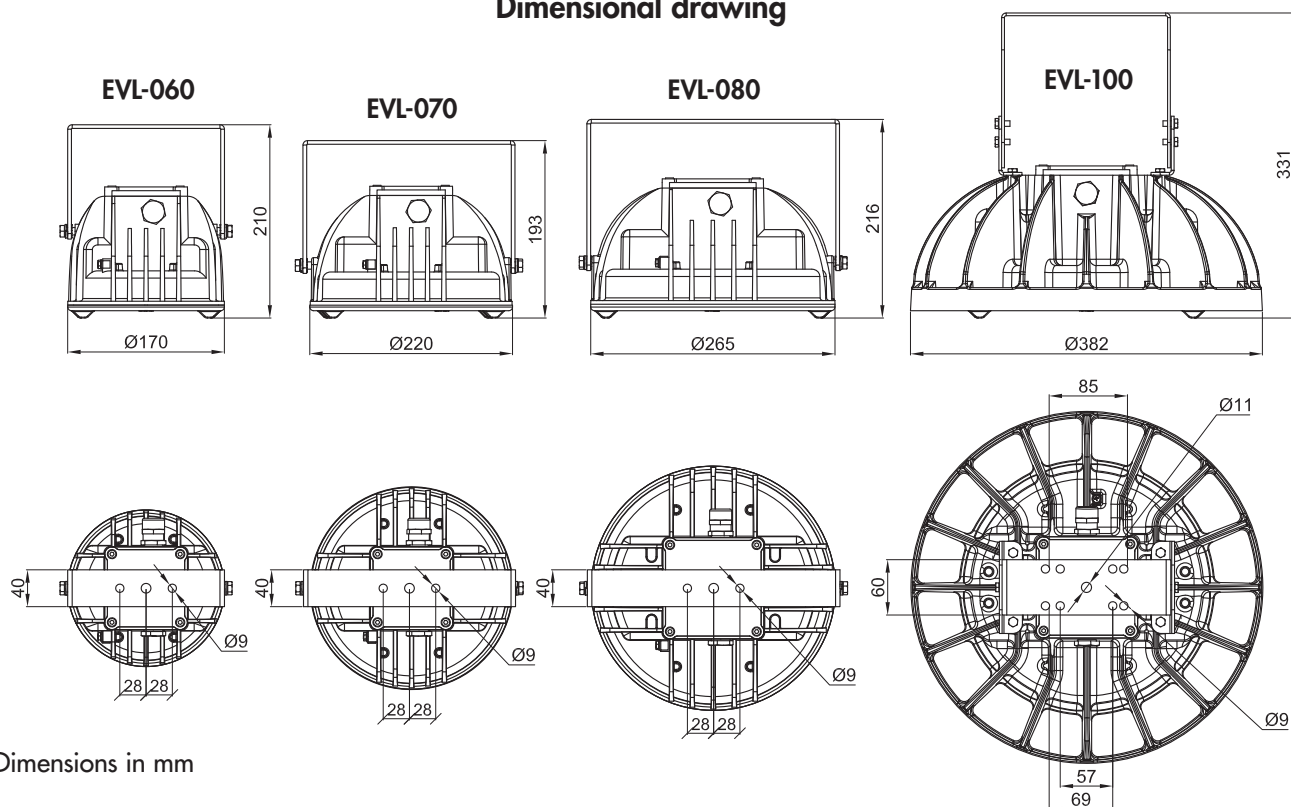


EVL series High bay LED lighting fixture

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	N/A	N/A	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	N/A	N/A	7852 lm	2659 cd	110,3 lm/W	5,2	250x235x165
EVL-070080	80 W	T5 / 100°C	N/A	N/A	8237 lm	2801 cd	103,5 lm/W	5,2	250x235x165
EVL-080080	80 W	T5 / 100°C	T5 / 100°C	T4 / 135°C	10630 lm	3455 cd	130,2 lm/W	7,2	290x290x170
EVL-080090	90 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	11768 lm	3823 cd	127,6 lm/W	7,2	290x290x170
EVL-080100	100 W	T4 / 135°C	N/A	N/A	12653 lm	4139 cd	122,1 lm/W	7,2	290x290x170
EVL-080120	120 W	T4 / 135°C	N/A	N/A	13924 lm	4555 cd	112,2 lm/W	7,2	290x290x170
EVL-100140	140 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	15872 lm	5162 cd	111,4 lm/W	11,2	385x385x250
EVL-100160	160 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	20363 lm	6824 cd	123,2 lm/W	11,2	385x385x250
EVL-100180	180 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	21467 lm	7249 cd	117,8 lm/W	11,2	385x385x250
EVL-100200	200 W	T4 / 135°C	N/A	N/A	23502 lm	7909 cd	115,5 lm/W	11,2	385x385x250
EVL-100220	220 W	T4 / 135°C	N/A	N/A	24533 lm	8332 cd	111,4 lm/W	11,2	385x385x250

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	..120 120 W	..200 200 W
	-	-	-	..220 220 W
Connection:	Direct connection to terminal board L, N, Pe. Section 4mm ² , 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	..120 530 mA	..200 890 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):	<10%			
Over-voltage protection:	4 kV	4 kV	4 kV	4 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:	YES	YES	YES	YES
L90:	> 72600 h	> 72600 h	> 72600 h	> 72600 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
 Stanchion mounting with fixed orientation at 25°
 Additional NAV20SIB cable gland for unarmoured cable

EVL series High bay LED lighting fixture

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Pendant eyebolt	Ø interno 20	Material: galvanised steel	GOF-8	 
	U bolt for pole mounting	Poste Ø1 1/2"	Material: stainless steel AISI 316L	UBD5S	 
	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	
		EVL-080... EVL-100...		B-499	
	Supporting bracket	EVL-060...	Material: stainless steel AISI 316L	G-764	
		EVL-070...		G-765	
		EVL-080...		G-766	
		EVL-100...		G-827	
	Power supply	EVL-060030	120-277 Vac	LEDDEVL060/2	
		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	LEDDEVL080/4/2	
		EVL-080090		LEDDEVL080/4/3	
		EVL-080100		LEDDEVL080/4/4	
		EVL-080120		LEDDEVL080/5/2	
		EVL-100140	120-277 Vac	LEDDEVL100/1/1	
		EVL-100160		LEDDEVL100/1/5	
		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	
	Front ring with glass	EVL-060...	Aluminium ring Borosilicate glass face	G60-0623	
		EVL-070...		G70-0623	
		EVL-080...		G80-0623	
		EVL-100...		G80-0623	

EVL series High bay LED lighting fixture

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.

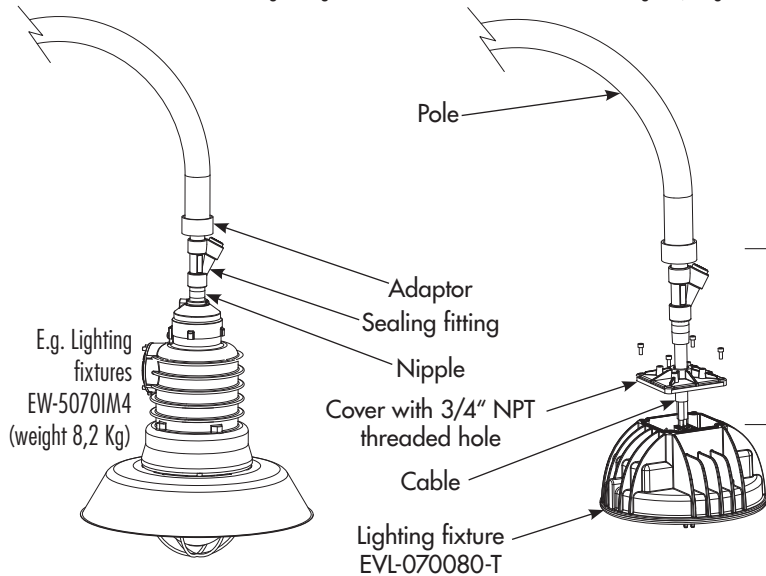


Code	Colour
EVL-060030-GG	Amber
EVL-060030-GR	Red
EVL-060030-GV	Green
EVL-060030-GB	Blue

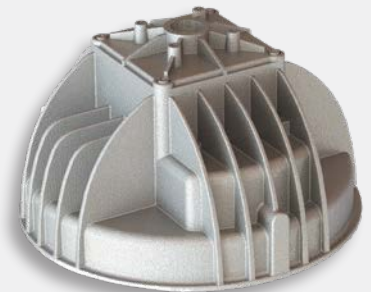
REPLACEMENT OF OLD LIGHTING FIXTURES POLE-MOUNTED

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.



3/4" NPT threaded entry



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

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



Transportable version EVL-...-PS complete with cable 8 meters long, sockets model PY216B (200-250Vac) and plug model SPY216B .

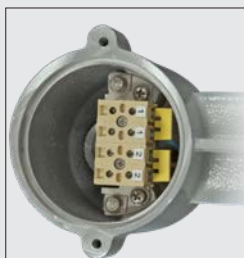
To order the transportable lighting fixture without socket and plug, omit the S in the code: **EVL-...-P**.

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

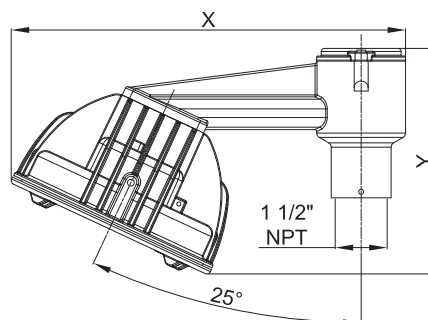
EVL series High bay LED lighting fixture

Stanchion mounting with fixed orientation at 25°



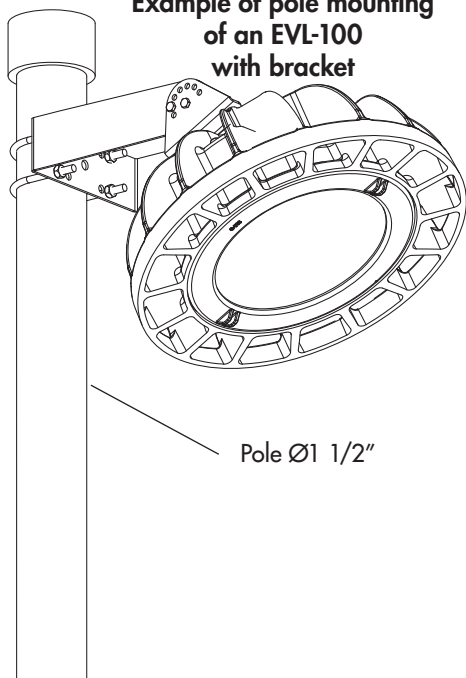
Direct connection to terminal board L, N, Pe.
Possible section 1.5mm² for loop-in/loop-out.
Input of 3 single cables up to 4mm², input-output
with 6 single cables up to 1.5mm²

Code	X	Y	Peso kg	 mm
EVL-060...-IX	372	215	4,5	372x170x215
EVL-070...-IX	395	226	6,0	372x327x226
EVL-080...-IX	419	242	8,2	351x351x242
EVL-100...-IX	478	280	12,0	412x412x280

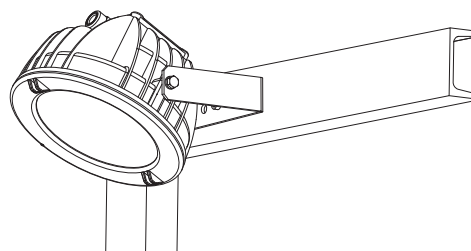


Installation and mounting methods

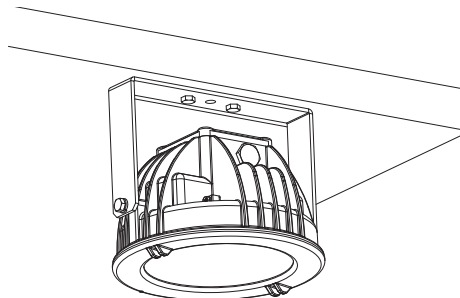
Example of pole mounting
of an EVL-100
with bracket



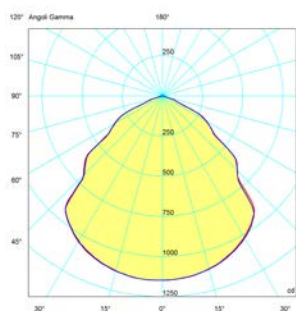
Example of wall or structure mounting
of an EVL-070



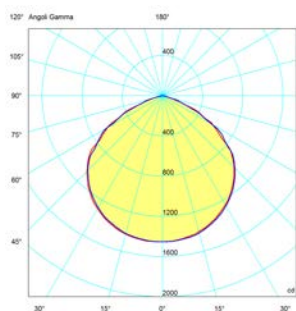
Example of ceiling mounting of an EVL-070



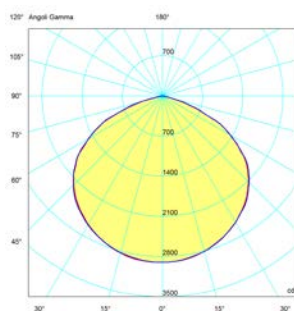
Photometric diagrams



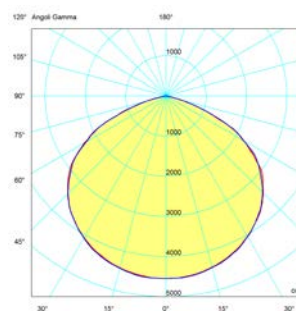
EVL-060030 Luminous flux:
2778 lm



EVL-070050 Luminous flux:
6332 lm



EVL-080080 Luminous flux:
10630 lm



EVL-100140 Luminous flux:
15872 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