

EVNL

NEW TECHNOLOGY

- Zone 2, 21, 22
- Replaces traditional discharge lamps exceeding 400W
- Savings on energy costs, maintenance and installation
- Immediate high-intensity activation
- 5 years warranty



Ex casing and terminal holder for quick connection



LED multi plate



Cooling fins for high levels of heat dissipation



EVNL series, High Bay LED lighting fixtures for zone 2, 21, 22

EVNL series LED lighting fixtures are suitable for plants in zone 2 and zone 21,22. The advantage of the EVNL lighting fixtures is the implementation of the "Ex nR" method of protection which classifies the equipment as a restricted breathing device. The careful design together with the meticulous choice of materials to seal the lighting fixture limits the entry of flammable gases, vapours or mists during normal operation of the lighting fixture.

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 plate. Furthermore, the geometric structure of the cooling fins has been designed to minimise the deposits of combustible dust and allow air or water present in the surrounding area to exert a cleaning action on the fixture, an entry point with an opposing plug allows the in/out connection for connecting multiple lighting bodies onto one single power line.

Sectors for use:



Petroleum refineries



Chemical and petrochemical plants



Anti-light pollution



Offshore plants



Onshore plants



Lighting of perimeter zones



Petroleum loading/unloading pontoons



100% produced by Cortem

CERTIFICATION DATA

Classification:

Group II

Group 2D/3G

Installation: EN 60079.14

zone 2 (Gas)

zone 21, 22 (Dust)

Execution:

CE 0722 Ex II 2D Ex tb IIIC T... °C Db IP 66

zone 21,22

Certificate:

CE Ex II 3G Ex nR IIC T... °C Gc

zone 2

ATEX EPTI 20 ATEX 0389X

zone 21,22

ATEX EPT 20 ATEX 4087X

zone 2

IEC Ex IECEx EUT 20.0025X

For all IEC Ex certification data, download the certificate from www.cortemgroup.com

Standard:

CENELEC EN 60079-0: 2018, EN 60079-15: 2010, EN 60079-31: 2014 nd EUROPEAN DIRECTIVE 2014/34/UE
IEC 60079-0: 2017, IEC 60079-15: 2010, IEC 60079-31: 2013

Temperature class:



-60°C* +60°C



*-40°C for lighting fixtures with transparent cover in polycarbonate
For details regarding the temperatures, see "Selection table"

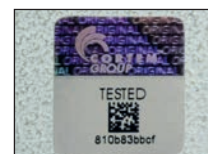
Protection rating:

IP66

EVNL series, High Bay LED lighting fixtures for zone 2, 21, 22



EXEMPT FROM
PHOTOBIOLOGICAL RISK
(STANDARD IEC / EN 62471)

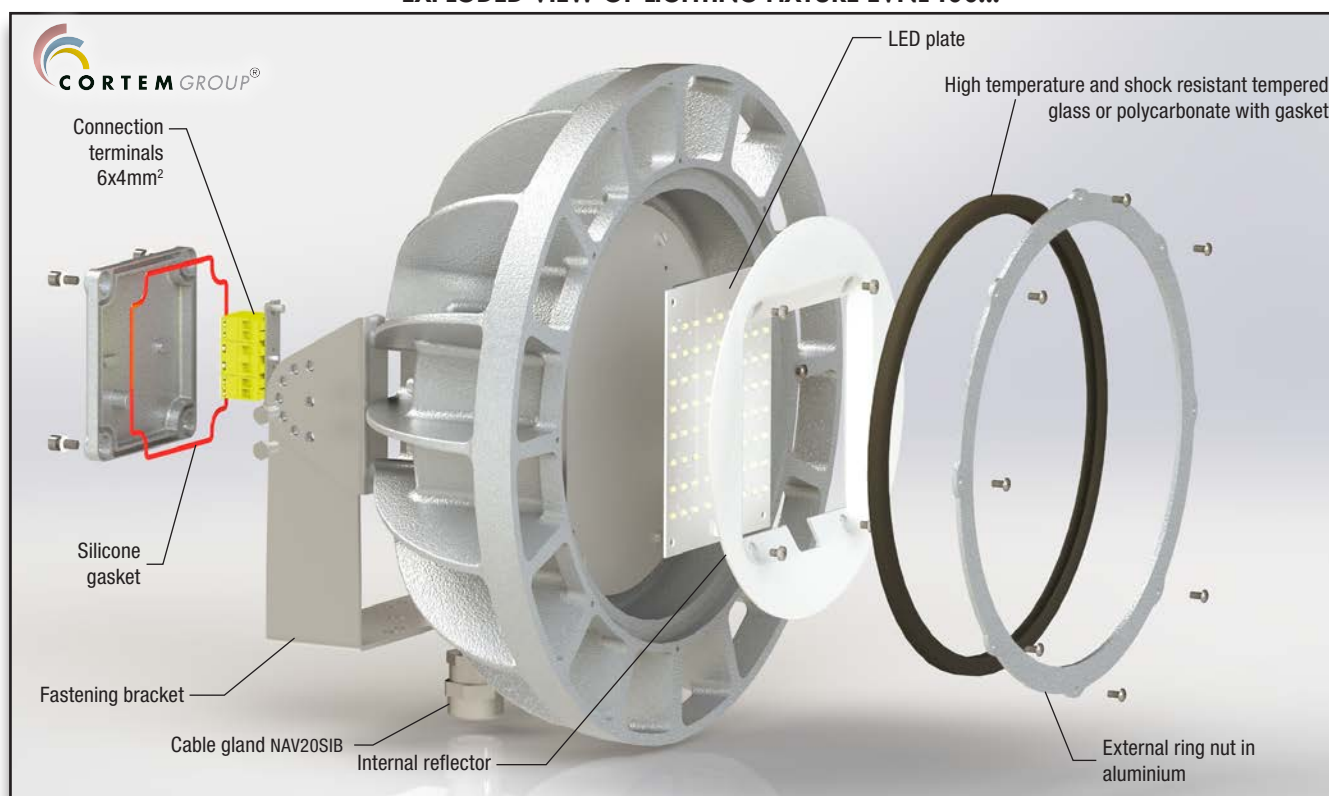


ORIGINAL PRODUCT

MECHANICAL CHARACTERISTICS

Body:	Aluminium alloy with low copper content. With cooling fins for high levels of heat dissipation.
Transparent front cover:	High temperature and shock resistant tempered glass or polycarbonate
Gasket:	Acid, hydrocarbon and high temperature resistant
Fastening bracket:	Stainless steel
Screws:	Stainless steel
Entry points:	2 ISO M20 entry points fixture complete with a PLG11LXE7 plug and NAV20SIB cable gland
Coating:	Polyester RAL 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by the Standard EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

EXPLODED VIEW OF LIGHTING FIXTURE EVNL-100...



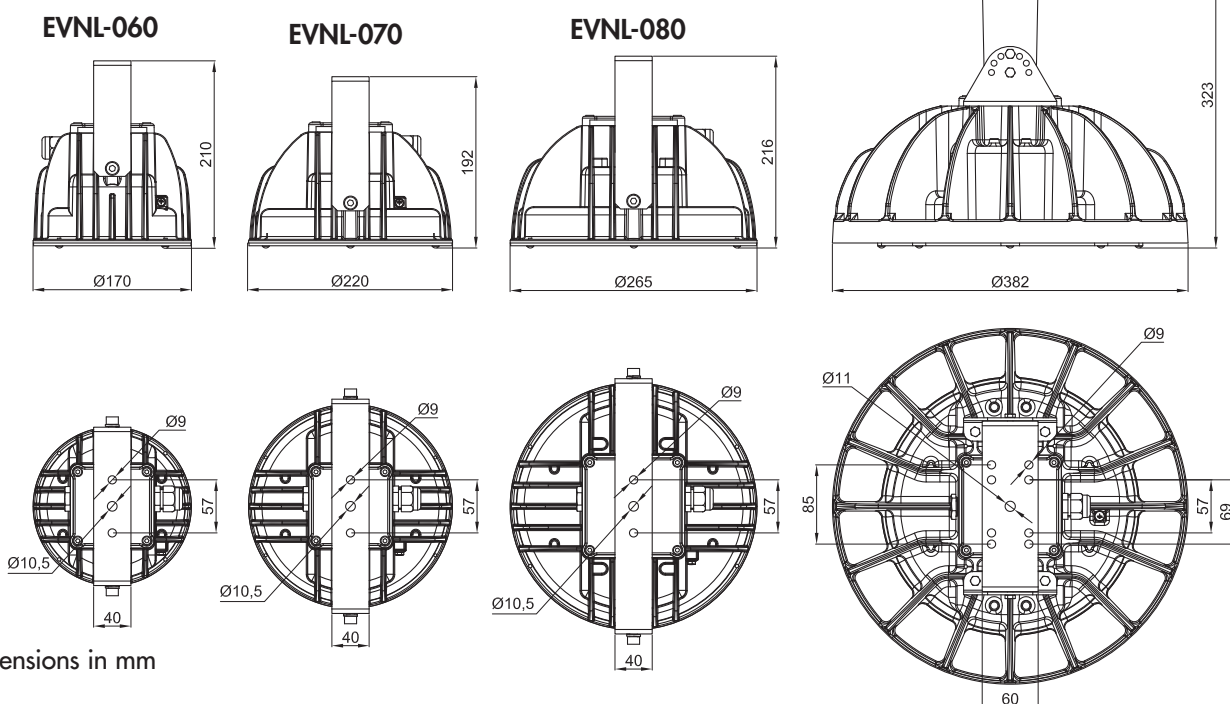
EVNL series, High Bay LED lighting fixtures for zone 2, 21, 22

EVNL series selection chart

Code	Rated 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					
EVNL-060030	30 W	T6 / 85°C	T6 / 85°C	T5 / 100°C	3179 lm	1138 cd	106 lm/W	2,5	215x205x170
EVNL-060040	40 W	T6 / 85°C	T5 / 100°C	T4 / 135°C	4778 lm	1668 cd	116 lm/W	2,5	215x205x170
EVNL-060050	50 W	T5 / 100°C	N/A	N/A	5170 lm	1825 cd	110 lm/W	2,5	215x205x170
EVNL-070050	50 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	6730 lm	2201 cd	126 lm/W	3,3	250x235x165
EVNL-070060	60 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	7863 lm	2575 cd	124 lm/W	3,3	250x235x165
EVNL-070070	70 W	T4 / 135°C	N/A	N/A	8443 lm	2775 cd	117 lm/W	3,3	250x235x165
EVNL-070080	80 W	T4 / 135°C	N/A	N/A	9468 lm	3104 cd	118 lm/W	3,3	250x235x165
EVNL-080080	80 W	T5 / 100°C	T4 / 135°C	T4 / 135°C	11330 lm	3598 cd	135 lm/W	4,3	290x290x170
EVNL-080090	90 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	12196 lm	3895 cd	131 lm/W	4,3	290x290x170
EVNL-080100	100 W	T4 / 135°C	N/A	N/A	13004 lm	4145 cd	121 lm/W	4,3	290x290x170
EVNL-080120	120 W	T4 / 135°C	N/A	N/A	14233 lm	4557 cd	115 lm/W	4,3	290x290x170
EVNL-100140	140 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	16161 lm	5194 cd	112 lm/W	9,2	385x385x250
EVNL-100160	160 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	21189 lm	6862 cd	127 lm/W	9,2	385x385x250
EVNL-100180	180 W	T4 / 135°C	T4 / 135°C	T4 / 135°C	22163 lm	7182 cd	122 lm/W	9,2	385x385x250
EVNL-100200	200 W	T4 / 135°C	N/A	N/A	24494 lm	7971 cd	120 lm/W	9,2	385x385x250
EVNL-100220	220 W	T4 / 135°C	N/A	N/A	25498 lm	8323 cd	117 lm/W	9,2	385x385x250
EVNL-060030-PC	30 W	T6 / 85°C	T6 / 85°C	T5 / 100°C	3179 lm	1138 cd	106 lm/W	2,2	215x205x170
EVNL-070060-PC	60 W	T4 / 135°C	T4 / 135°C	N/A	7863 lm	2575 cd	124 lm/W	3,0	250x235x165
EVNL-080090-PC	90 W	T4 / 135°C	T4 / 135°C	N/A	12196 lm	3895 cd	131 lm/W	3,9	290x290x170
EVNL-100160-PC	160 W	T4 / 135°C	T4 / 135°C	N/A	21189 lm	6862 cd	127 lm/W	8,7	385x385x250

Dimensional drawing

EVNL-100



Dimensions in mm

EVNL Series Selection table

Electrical features	EVNL-060..	EVNL-070..	EVNL-080..	EVNL-100..
Power supply:	120-277 Vac	120-277 Vac	120-277 Vac	120-277 Vac
Rated frequency:	50-60 Hz $\pm 5\%$	50-60 Hz $\pm 5\%$	50-60 Hz $\pm 5\%$	50-60 Hz $\pm 5\%$
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	..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%			
Protección de sobretensiones:	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
 Additional NAV20SIB cable gland for unarmoured cable

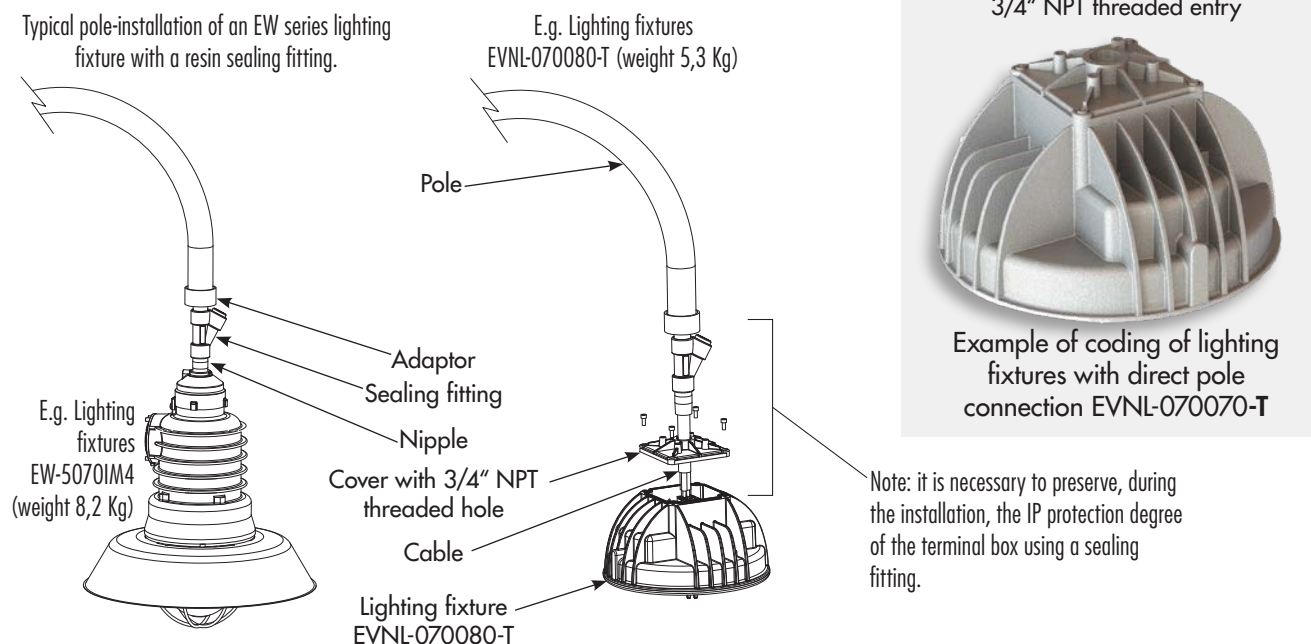
Accessories upon request and spare parts for lighting fixtures of the EVNL Series

ILLUSTRATION	DESCRIPTION	MODEL	CHARACTERISTICS	CODE	KEY
	Suspended eye bolt	Ø interno 20	Material: galvanized steel	G0F-8	 
	U-bolt for pole assembly	per pali Ø1 1/2"	Material: stainless steel AISI 316L	UBD5S	 
	Fastening bracket	EVNL-060...	Material: stainless steel AISI 316L	G-764IN	
		EVNL-070...		G-765IN	
		EVNL-080...		G-766IN	
		EVNL-100...		G-827	
	Cable gland	ISO M20	std. range cable 6,3÷11,6	NAV20SIB	
	Electronic power unit	EVNL-060030	120-277 Vac	LEDDEVL060/2	
		EVNL-060040		LEDDEVL060/2/1	
		EVNL-060050		LEDDEVL060/2	
		EVNL-070050	120-277 Vac	LEDDEVL070/1	
		EVNL-070060		LEDDEVL070/1/2	
		EVNL-070070		LEDDEVL070/1/3	
		EVNL-070080		LEDDEVL080/4/1	
		EVNL-080080	120-277 Vac	LEDDEVL080/4/2	
		EVNL-080090		LEDDEVL080/4/3	
		EVNL-080100		LEDDEVL080/4/4	
		EVNL-080120		LEDDEVL080/5/2	
		EVNL-100140	120-277 Vac	LEDDEVL100/1/1	
		EVNL-100160		LEDDEVL100/1/5	
		EVNL-100180		LEDDEVL100/1/2	
		EVNL-100200		LEDDEVL100/1/3	
		EVNL-100220		LEDDEVL100/1/4	
	Glass + gasket	EVNL-060...	Tempered front glass and black gasket	G-831 + G-944	
		EVNL-070...		G-830 + G70-955	
		EVNL-080...		G-829 + G80-955	
		EVNL-100...		G-852 + G100-955	
	Polycarbonate + gasket	EVNL-060...P	Transparent polycarbonate and black gasket	G-831P + G-944	
		EVNL-070...P		G-830P+ G70-955	
		EVNL-080...P		G-829P + G80-955	
		EVNL-100...P		G-852P + G100-955	

Installation and assembly methods

REPLACEMENT OF OLD LIGHTING FIXTURES POLE-MOUNTED

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

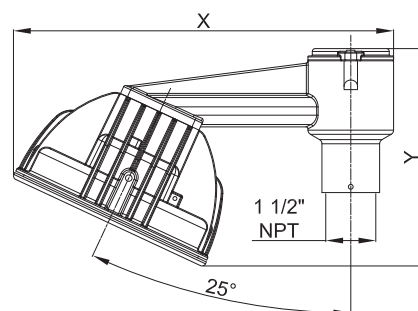


Stanchion mounting with fixed orientation at 25°



Direct connection to terminal board L, N, Pe. Section 4mm², suitable for loop-in/loop-out

Code	X	Y	Peso kg	mm
EVNL-060...-IX	372	215	3,5	372x170x215
EVNL-070...-IX	395	226	4,1	372x327x226
EVNL-080...-IX	419	242	5,2	351x351x242
EVNL-100...-IX	478	280	9,9	412x412x280



Transportable version EVNL-...-PS complete with cable 8 meters long, sockets model PY216B and plug model SPY216B.

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

Weight (without socket):

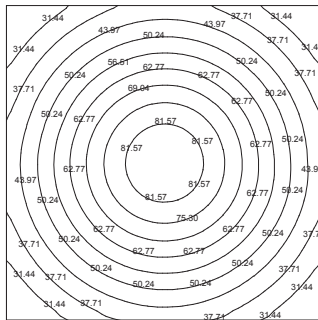
EVNL-060...-P	6,5 Kg
EVNL-070...-P	7,3 Kg
EVNL-080...-P	8,3 Kg
EVNL-100...-P	13,2 Kg

Photometric curves and specifications

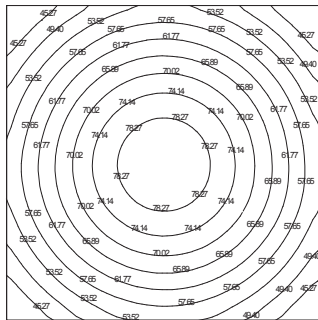
EVNL - Equivalence -

			
EVNL-060030 (30 W)	-	(70 W)	(70 W)
EVNL-060040 (40 W)	(125 W)	-	-
EVNL-070060 (70 W)	-	-	(150 W)
EVNL-070070 (70 W)	-	(150 W)	-
EVNL-070080 (80 W)	(250 W)	-	-
EVNL-080100 (100 W)	-	-	(250 W)
EVNL-080090 (90 W)	(400 W)	-	-
EVNL-100140 (140 W)	-	(250 W)	-
EVNL-100160 (160 W)	-	-	(400 W)
EVNL-100220 (400 W)	-	(400 W)	-
LED	Mercury	Sodium	Metal halide
Typical energy savings			

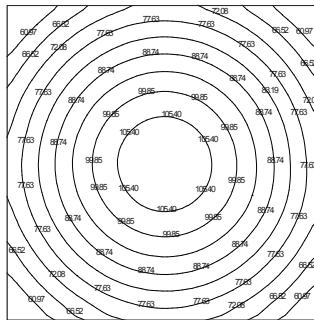
Floor lighting relating to **EVNL-060** expressed in lux in a room 5 m x 5 m with fixture at the centre at **3.5m** height.



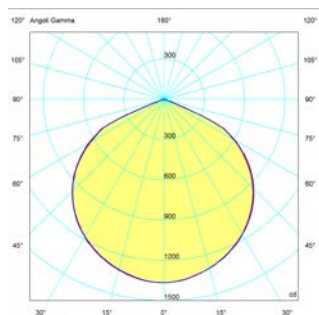
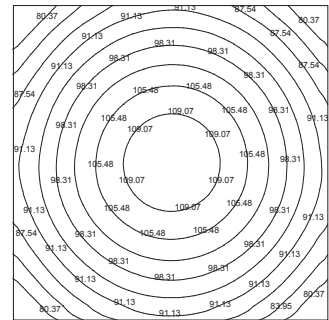
Floor lighting relating to **EVNL-070** expressed in lux in a room 5 m x 5 m with fixture at the centre at **5m** height.



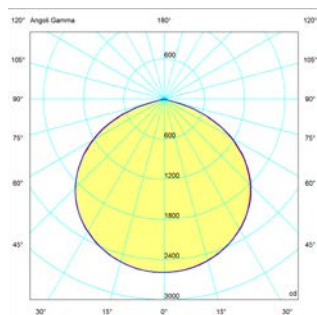
Floor lighting relating to **EVNL-080** expressed in lux in a room 5 m x 5 m with fixture at the centre at **5m** height.



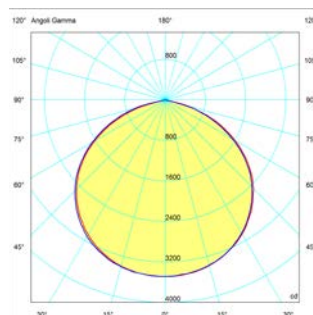
Floor lighting relating to **EVNL-100** expressed in lux in a room 5 m x 5 m with fixture at the centre at **7m** height.



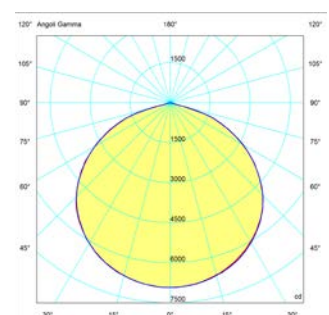
EVNL-060050
Luminous flux: 5170 lm



EVNL-070080
Luminous flux: 9468 lm



EVNL-080120
Luminous flux: 14233 lm



EVNL-100160
Luminous flux: 21189 lm

The lighting solution files for the design, planning and simulation of lighting levels in 2D-3D, rendering and ray-tracing are available from www.cortemgroup.com.

— = plane 90270
— = plane 0180