

EWL

- Zone 1, 2, 21, 22
- Replacing traditional discharge lamps of up to 750W
- Savings in energy, maintenance and installation costs
- Instant, brilliant illumination
- Suitable for GAS category IIC



EWL High bay LED lighting fixture

EWL series LED High Bay lighting fixture is the first of a new family of products specially designed to optimise LED technology. This unit combines a light and compact design with improved performance and reliability over time in terms of safety, efficiency and energy saving guaranteeing a lifespan of 20 years of constant high quality illumination. The EWL series is suitable for installation at low and medium heights in all those areas defined as hazardous due to the presence of gases and explosive dusts such as Zones 1, 2, 21 and 22. The universal steel mounting bracket complies with all application requirements. Unlike the rest of the market that offers a modification of LEDs inside old lighting fixtures, the EWL series has been specifically designed to meet the technical requirements of LEDs. In effect, the body of the lamp acts as a heat dissipater for the LED plate meaning that more powerful lighting can be installed without causing any deterioration of the actual LEDs. The protective shockproof glass plate is resistant to high temperatures and ensures that light emissions do not pollute the surrounding environment. The LED board is positioned in a separate "chamber" housing the electronic power supply system and this in turn is separated by an "Ex e" terminal box housing that is used to connect the lighting fixture to the electronic power supply system through a cable gland with an Ex (non barrier) O-ring as specified in EN/IEC 60079-14. The fact that discharge lamps containing mercury are not used in hazardous areas makes these light fixtures eco-compatible and they have a no cost environmental impact in the event of recycling. LED lights can be fitted with a lens that changes their photometric properties meaning that the same lamp body can replace a traditional discharge lamp lighting fixture (EV, EW, EWA series). A further advantage in using EWL series LED fixtures lies in the knowledge that the degree of illumination will never just fade. If one LED fails, the others keep on working and when the lamp is turned on, the light reaches its maximum level instantly.

Application sectors:



Oil refineries



Chemical and petrochemical plants



Anti light pollution



Offshore plants



Onshore plants



Perimeter lighting



Oil loading/unloading jetties



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:

CE 0722 Ex II 2GD Ex de IIC T5 Gb - Ex tb IIIC T100°C Db IP66

Certification:

ATEX ITS 11 ATEX 17267

IEC Ex ITS 11.0018

GOST R AVAILABLE

All IEC Ex and GOST R certification data can be downloaded at www.cortemgroup.com

Standards:

CENELEC EN 60079-0: 2012, EN 60079-1: 2008, EN 60079-7: 2008, EN 60079-31: 2010, EN 60598-1: 2008+A11: 2009, EN 60598-2-5: 1998, EN 62031:2008, EN 62471: 2008, EN 61547: 2009 and EUROPEAN DIRECTIVE 94/9/EC: 1994
IEC 60079-0: 2010, IEC 60079-1: 2008, IEC 60079-7: 2008, IEC 60079-31: 2010
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:



100°C (T5)

Ambient temperature:



-20°C +60°C

-20°C +50°C
(EWL-801)

-40°C +60°C
(EWL-100)



Degree of protection:

IP66

EWL High Bay Lighting fixture



EXEMPT FROM
PHOTOBIOLOGICAL RISK
(STANDARD IEC / EN 62471)

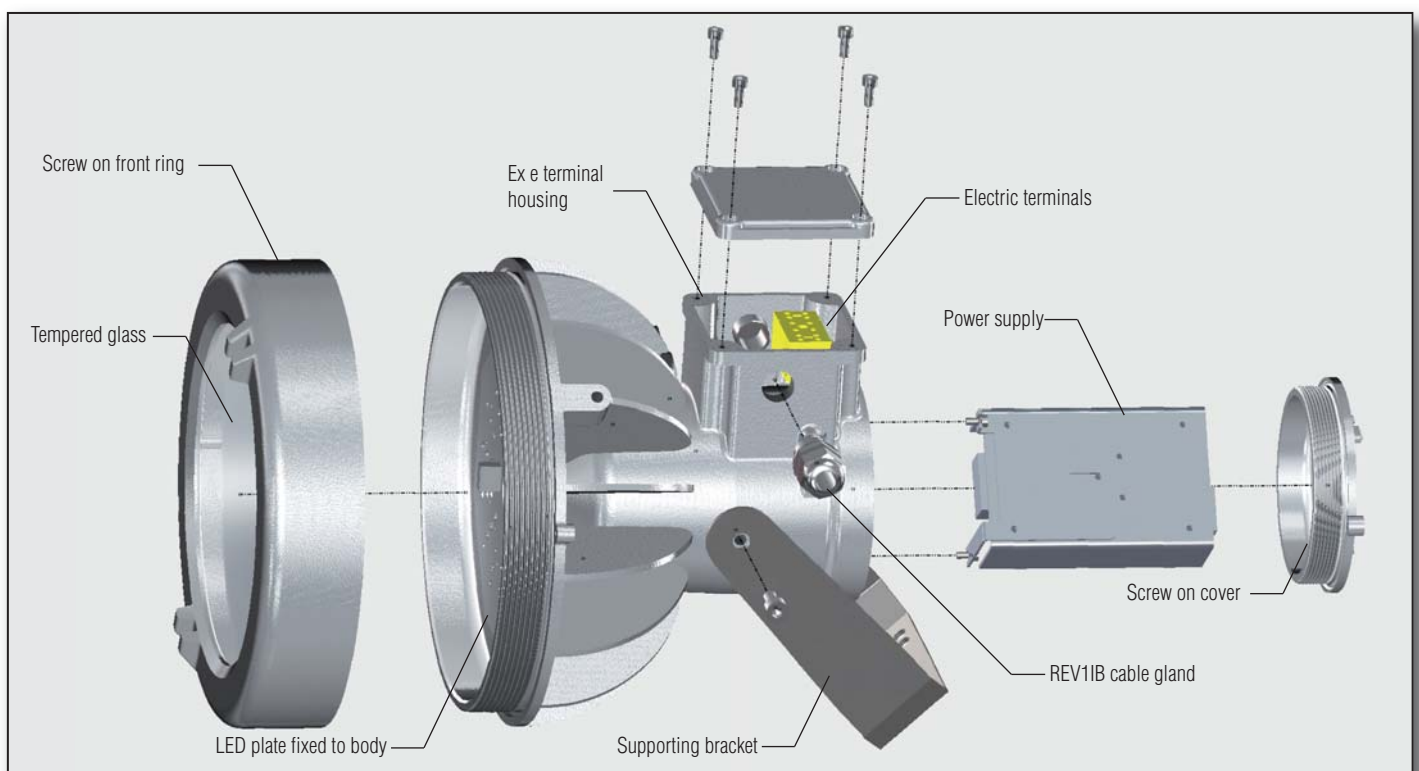


ORIGINAL PRODUCT

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 PLG11B plug and REV11B cable gland
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)

EXPLODED DIAGRAM OF EWL-80 LIGHTING FIXTURE



EWL High Bay Lighting fixtures

Electrical features	EWL-70	EWL-80	EWL-801	EWL-100
Power supply:	220-240 Vac $\pm 10\%$	100-240 Vac $\pm 10\%$ (24 Vdc EWL-80/24)	220-240 Vac $\pm 10\%$	100-240 Vac $\pm 10\%$ (24 Vdc EWL-100/24)
Rated frequency:	50-60 Hz $\pm 5\%$	50-60 Hz $\pm 5\%$	50-60 Hz $\pm 5\%$	50-60 Hz $\pm 5\%$
Power consumption:	40 W	55 W (65 W α 24 Vdc)	110 W	188 W
Connection:	Direct connection to terminal board L, N, Pe. Section 4mm ² , suitable for loop-in/loop-out			
Power factor:	>0,95 *	>0,95 *	>0,95 *	>0,95 *
Rated current:	185 mA *	260 mA *	508 mA *	800 mA *
Initial current:	1,55 A	2 A	-	2,70 A
Initial current/Rated current:	8	8	-	3
EMC:	EN 55015, EN 61547, IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-...			
THD:	<15% 100-240 Vac			
Over-voltage protection:	± 1 kV			
Driver performances:	Over-Voltage protection, Over-Current protection, Short-Circuit protection			
Dimmer:	SI (0-10 V) on request	SI (0-10 V)	DALI	SI (0-10 V) or PWM or resistance
Photometric features				
LED:	Cree XTE	Cree XTE	Cree XTE	Cree XTE
Viewing angle:	120°	120°	120°	120°
Type:	Cool White	Cool White	Cool White	Cool White
Group:	R4	R4	R4	R4
Colour temperature:	5700 K	5700 K	5700 K	5700 K
CRI:	>70	>70	>70	>70
Istant Restrike:	YES	YES	YES	YES
Lumen:	3700 lm	6050 lm	10100 lm	17000 lm
Maximum light intensity:	1560 cd	2840 cd	4330 cd	6100 cd
Overall efficiency:	85 lm/W	110 lm/W	91 lm/W	91 lm/W

* Test at 230Vac

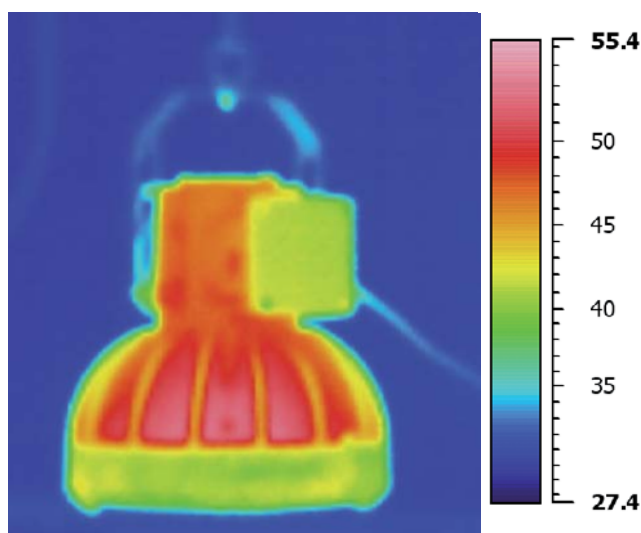
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Rated voltage: 24 Vdc (code EWL-80/**24**, EWL-100/**24**)

U bolt for pole mounting

Eyebolt

EWL series selection chart




THERMAL IMAGING

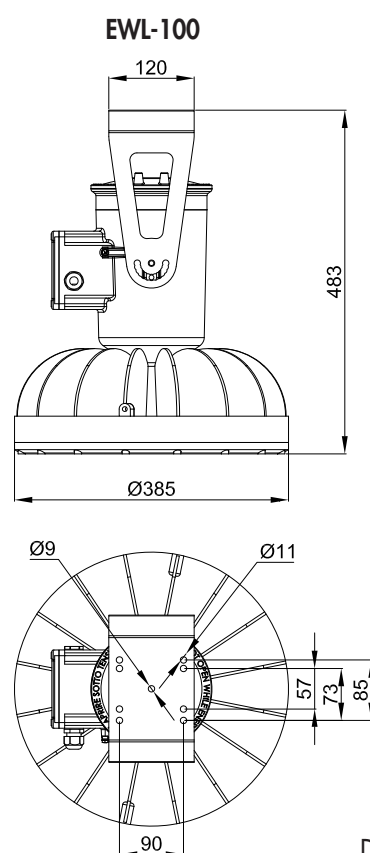
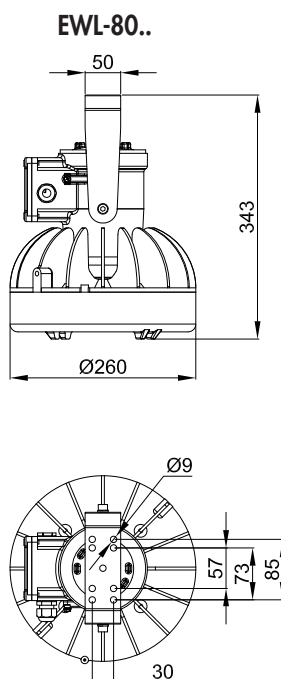
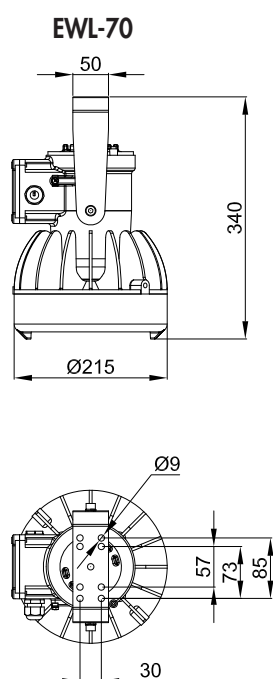
Following a very brief initial period, the lamp reaches thermal stability. This image shows the heat detected. With the ambient temperature at 28°C (as shown by the blue background) the LED lamp barely touches 56°C at the hottest point.

This thermal performance is tangible proof of the high efficiency of LED lamps as a source of light.

It is also worth noting the distribution of heat on the fins that are the result of sophisticated Thermal Management.

Code	Lamp type	Watt	Class	Max surface temperature °C	Weight Kg	
EWL-70	LED	40 W	T5	100	6,4	
EWL-80	LED	55 W	T5	100	8,6	
EWL-801	LED	110 W	T5	100	8,6	
EWL-100	LED	188 W	T5	100	19,6	

DIMENSIONAL DRAWING



Dimensions in mm

DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture
EWL-80

+

UBD5G
U bolt for pole mounting

+

other...see key

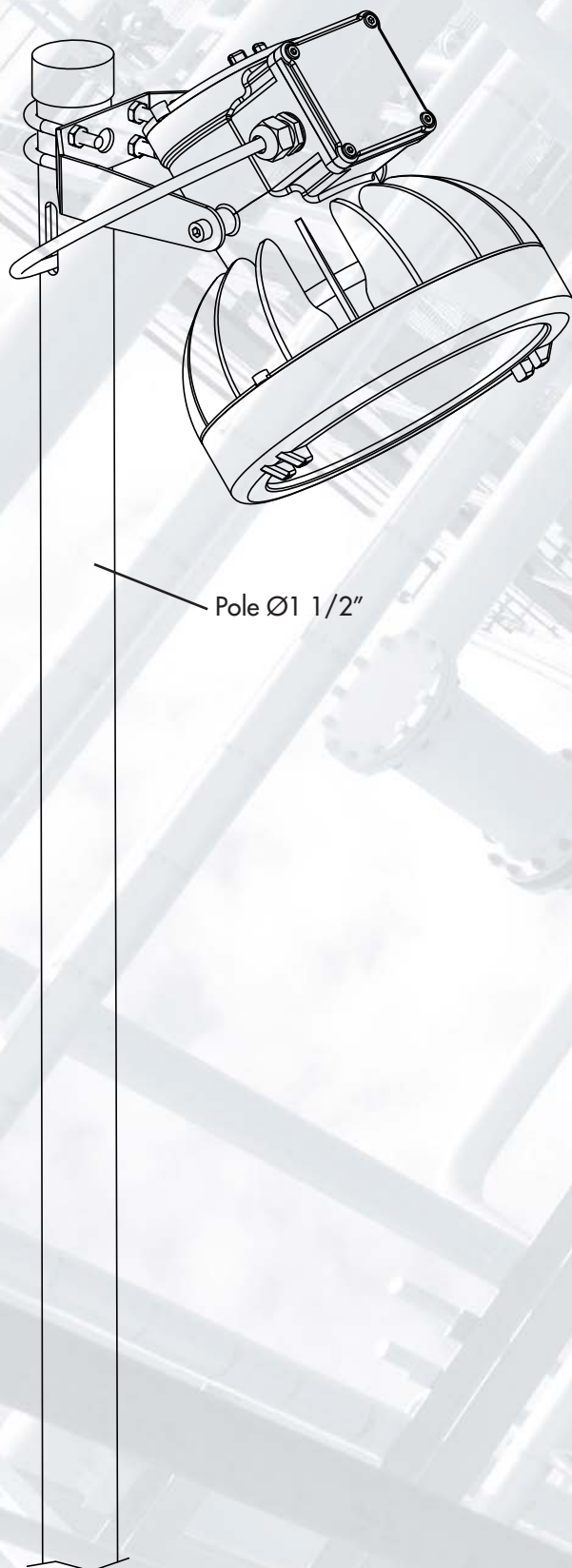


EWL Accessories and spare parts available on request

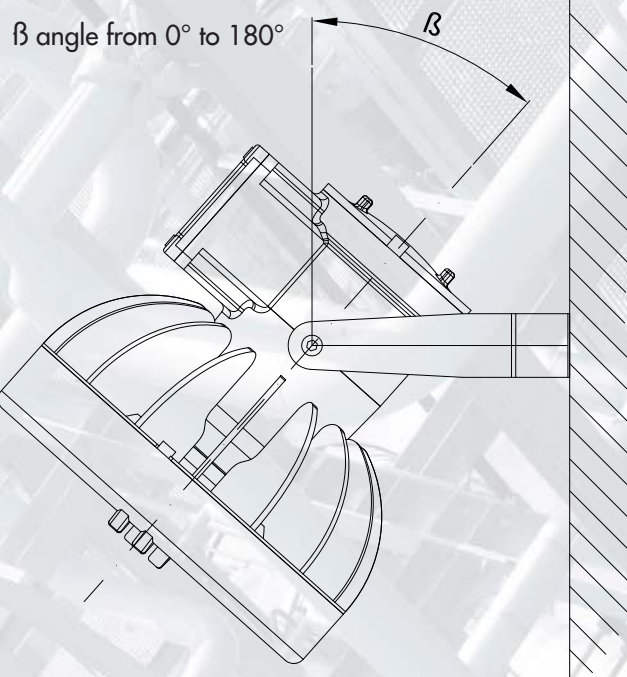
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Pendant eyebolt	Ø internal 20	Material: galvanised steel	G0F-8	 
	U bolt for pole mounting	for Ø1 1/2" holes	Material: tainless steel 316L	UBD5GS	 
	Supporting bracket	EWL-70 EWL-80	Material: stainless steel 316L	G-750	
	Supporting bracket	EWL-100	Material: stainless steel 316L	G-753	
	LED positioned on plate with electronic circuit	EWL-70	Plate material: IMS (insulated metal substrate)	G-659	
		EWL-80		G-747	
		EWL-80/24		G-667	
		EWL-100		G-748	
		EWL-100/24		G-688	
	Cable gland	ISO M20	std. cable range 7-12	REV11B	
	Power supply circuit	EWL-70	220 - 240 Vac	RV-40LED	
		EWL-80	100 - 240 Vac 120 - 370 Vdc 50-60 Hz	RSLD070-45	
		EWL-80/24	24 Vdc	RT-70LED	
		EWL-100	100 - 240 Vac 120 - 370 Vdc 50-60 Hz	HLG-185H-C700B	
		EWL-100/24	24 Vdc	RT-240LED	
	Front ring with glass	EWL-70	Aluminium ring Borosilicate glass face	G70-0556	
		EWL-80		G80-0556	
		EWL-100		G100-0556	

Installation and mounting methods

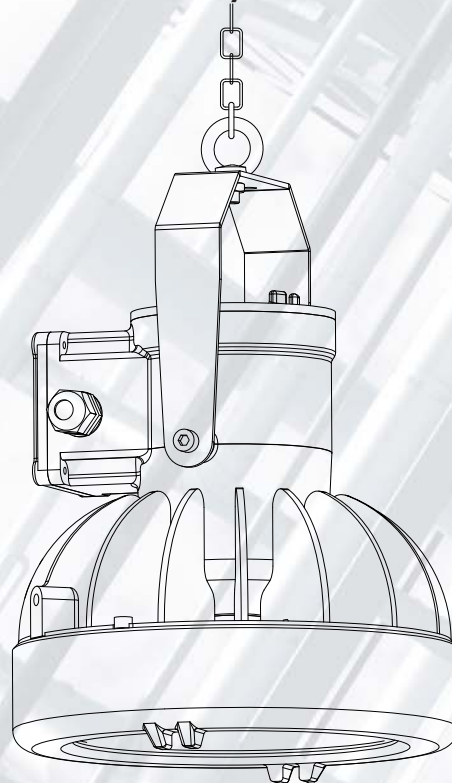
Example of pole mounting



Example of wall mounting



**Example of pendant mounting
with eyebolt**

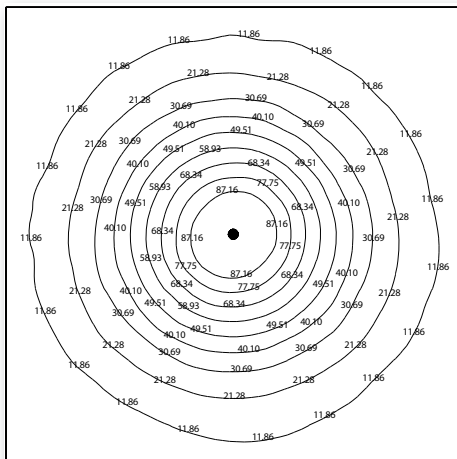


Features and photometric diagrams

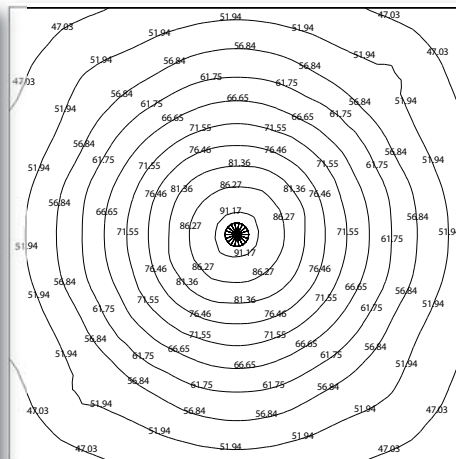
Example Peak Cd equivalents

			
EWL-70 (40W) EWL-80 (55W) EWL-801 (110W) EWL-100 (180W) LED	(150W) (250W) (400W) (750W) Mercury	(100W) (150W) (250W) (450W) Metal halide	(320W) (500W) (1000W) (1500W) Incandescent

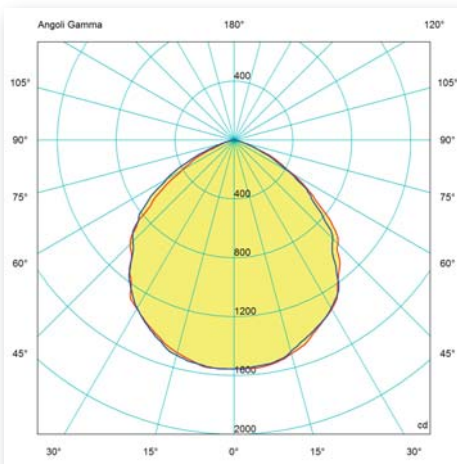
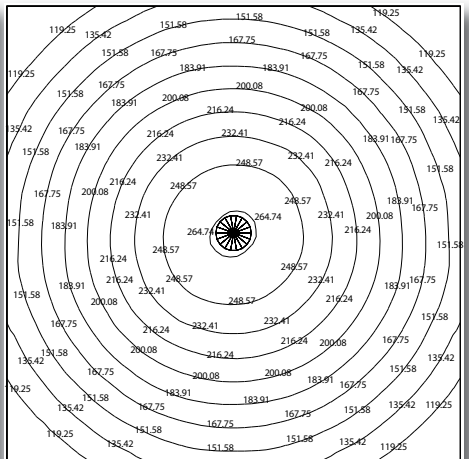
EWL-70 illumination on the floor expressed in lux in a room 5m x 5m with the lighting fixtures centrally placed at **3.5m** in height.



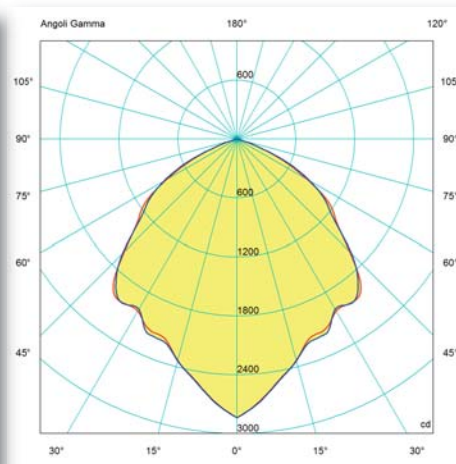
EWL-80 illumination on the floor expressed in lux in a room 5m x 5m with the lighting fixtures centrally placed at **5m** in height.



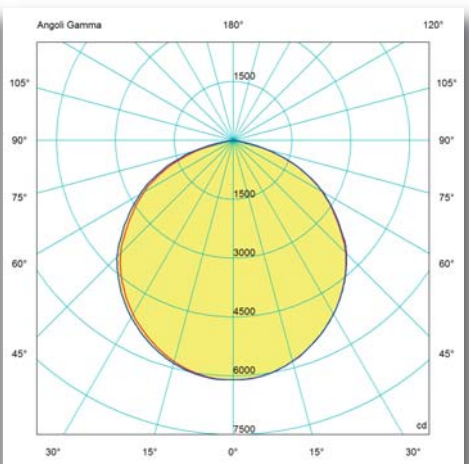
EWL-100 illumination on the floor expressed in lux in a room 5m x 5m with the lighting fixtures centrally placed at **9m** in height.



EWL-70 Luminous flux: 3700 lm



EWL-80 Luminous flux: 6050 lm



EWL-100 Luminous flux: 17000 lm

Cortem Group can supply photometric diagram files on request for use in special lighting design projects.
Contact the Sales Office for further information

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