

# EWL

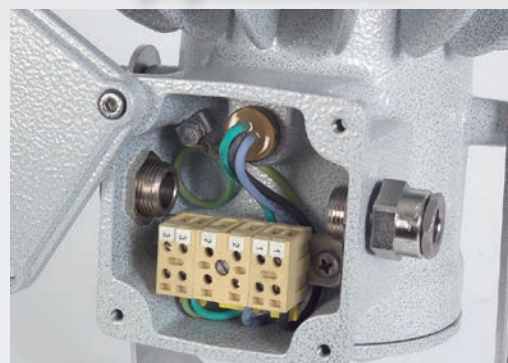
- Zone 1, 2, 21, 22
- Saves in energy, maintenance and installation costs
- Instant, bright illumination
- Suitable for GAS category IIC
- 5 years warranty

**'Ex op is'**  
safe optical radiation

*Painted aluminium  
body*



*Ex e terminal board housing  
for fast connection*











## EWL-.../.. series LED floodlights

EWL series LED floodlight 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 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 and base comply 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 (RLEE 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:



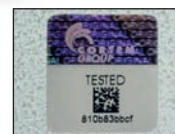
### CERTIFICATION DATA

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 IIIC T..°C Db IP66			
Certification:	ATEX CML 16 ATEX 1348			
	IEC Ex CML 16.0118	All IEC Ex, TR CU and INMETRO certification data can be downloaded at <a href="http://www.cortemgroup.com">www.cortemgroup.com</a>		
	TR CU AVAILABLE			
	INMETRO DNV 14.0153			
Standards:	CENELEC EN 60079-0: 2012 A11 COR1: 2013, EN 60079-1: 2014, EN 60079-7: 2015, EN 60079-31: 2014, EN 60079-28: 2015 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2014-06, IEC 60079-28: 2015, IEC 60079-31: 2013, IEC 60079-7: 2015 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)	 100°C (T5)		
Ambient temperature	 -40°C +60°C Standard 	 -20°C +60°C (EWL-80/EWL-801) 	 -40°C +60°C (EWL-80C/EWL-801C) 	
Degree of protection:	IP66			

## EWL-.../.. series LED floodlights



EXEMPT FROM  
PHOTOBIOLOGICAL RISK  
(STANDARD IEC / EN 62471)



ORIGINAL PRODUCT

### MECHANICAL FEATURES

<b>Body:</b>	Low copper content aluminium alloy fitted with cooling fins for better heat dissipation
<b>Glass face:</b>	Shock and temperature resistant tempered glass sealed with aluminium ring
<b>Gaskets:</b>	Acid, hydrocarbon and high temperature resistant silicone
<b>Supporting bracket:</b>	Stainless steel 316L
<b>Bolts and screws:</b>	Stainless steel
<b>Entries:</b>	2 x ISO M20 entries. Floodlight kit with PLG11B plug and NAV20SIB cable gland
<b>Coating:</b>	Polyester coating Ral 7035 (Light grey)
<b>Corrosion Resistance:</b>	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)

### Optical systems:



- Model: Strip Lenses
- High efficiency
- Vibration resistant
- Material: Optical PC, polycarbonate for optoelectronic components
- Manufactured with NJCTM (No Joint Construction) technology, i.e. the elimination of the collimator applied to the lens thus ensuring perfect mating of the LED and the lens. Perfect collimation is guaranteed by the positioning and hot riveting of the lugs to provide direct fixing to the LED
- Three different light emission angles

### ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Rated voltage: 12 Vdc, 24 Vdc, 48 Vdc (example code EWL-100/40/24)

Dimmer: (code EWL-80/10/D)

Base for horizontal adjustment on request

Different colour temperature



## EWL-../.. series LED floodlights

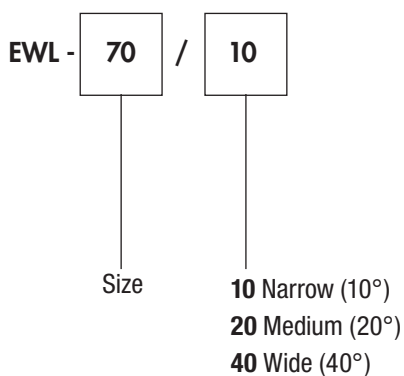
Electrical features	EWL-70	EWL-80 EWL-80C	EWL-801 EWL-801C	EWL-100/...
Power supply:	220-240 Vac $\pm 10\%$	100-277 Vac $\pm 10\%$ (12 Vdc <b>EWL-80/12</b> ) (24 Vdc <b>EWL-80/24</b> ) (48 Vdc <b>EWL-80/48</b> )	220-240 Vac $\pm 10\%$	100-277 Vac $\pm 10\%$ (12 Vdc <b>EWL-100/12</b> ) (24 Vdc <b>EWL-100/24</b> ) (48 Vdc <b>EWL-100/48</b> )
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	55W (65 W a 24 Vdc)	110W	188 W
Connection:	Direct connection to terminal board L, N, Pe. Section 4mm <sup>2</sup> , 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 (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			
Over-voltage protection:	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)	(0-10 V)	(0-10 V)	(0-10 V) or PWM or resistor
Photometric features				
LED:	Cree XTE	Cree XTE	Cree XTE	Cree XTE
Viewing angle:	10°, 20° o 40° depending on the lenses			
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
Instant Restrike:	SI	SI	SI	SI
L80:	> 60500	> 60500	> 60500	> 60500
Lumen:	<b>3700 lm</b>	<b>6050 lm</b>	<b>10100 lm</b>	<b>17000 lm</b>
Maximum light intensity:	33180 cd (EWL-70/10) 14450 cd (EWL-70/20) 5850 cd (EWL-70/40)	71000 cd (EWL-80/10) 30900 cd (EWL-80/20) 12500 cd (EWL-80/40)	118670 cd (EWL-801/10) 51680 cd (EWL-801/20) 20900 cd (EWL-801/40)	199740 cd (EWL-100/10) 86980 cd (EWL-100/20) 35180 cd (EWL-100/40)
Overall efficiency:	<b>85 lm/W</b>	<b>110 lm/W</b>	<b>91 lm/W</b>	<b>91 lm/W</b>

\* Test at 230Vac

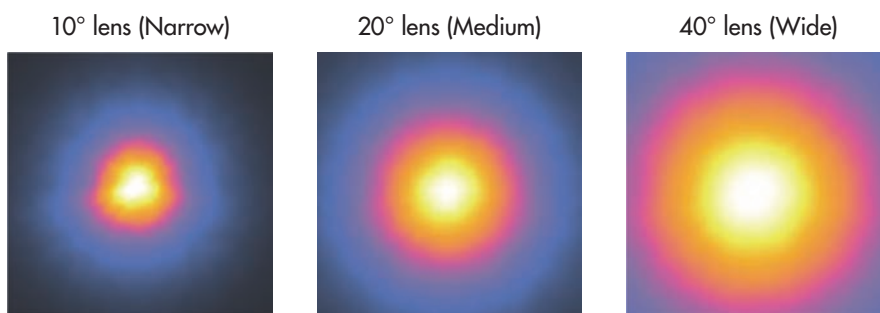
## EWL-../.. series selection chart

Code	Lamp type	Dimensions mm		Class (+40°C)	Max surface temperature °C (+40°C)	Class (+60°C)	Max surface temperature °C (+60°C)	Weight kg	mm
		A	B						
EWL-70/..	LED	340	215	T6	65	T6	85	6,4	290x270x330
EWL-80/..	LED	343	260	T6	65	T6	85	8,6	290x270x330
EWL-801/..	LED	343	260	T6	80	T5	100	8,6	290x270x330
EWL-80C/..	LED	373	260	T6	65	T6	85	9,5	290x270x330
EWL-801C/..	LED	373	260	T6	80	T5	100	9,5	290x270x330
EWL-100/..	LED	484	385	T6	80	T5	100	19,4	420x410x560

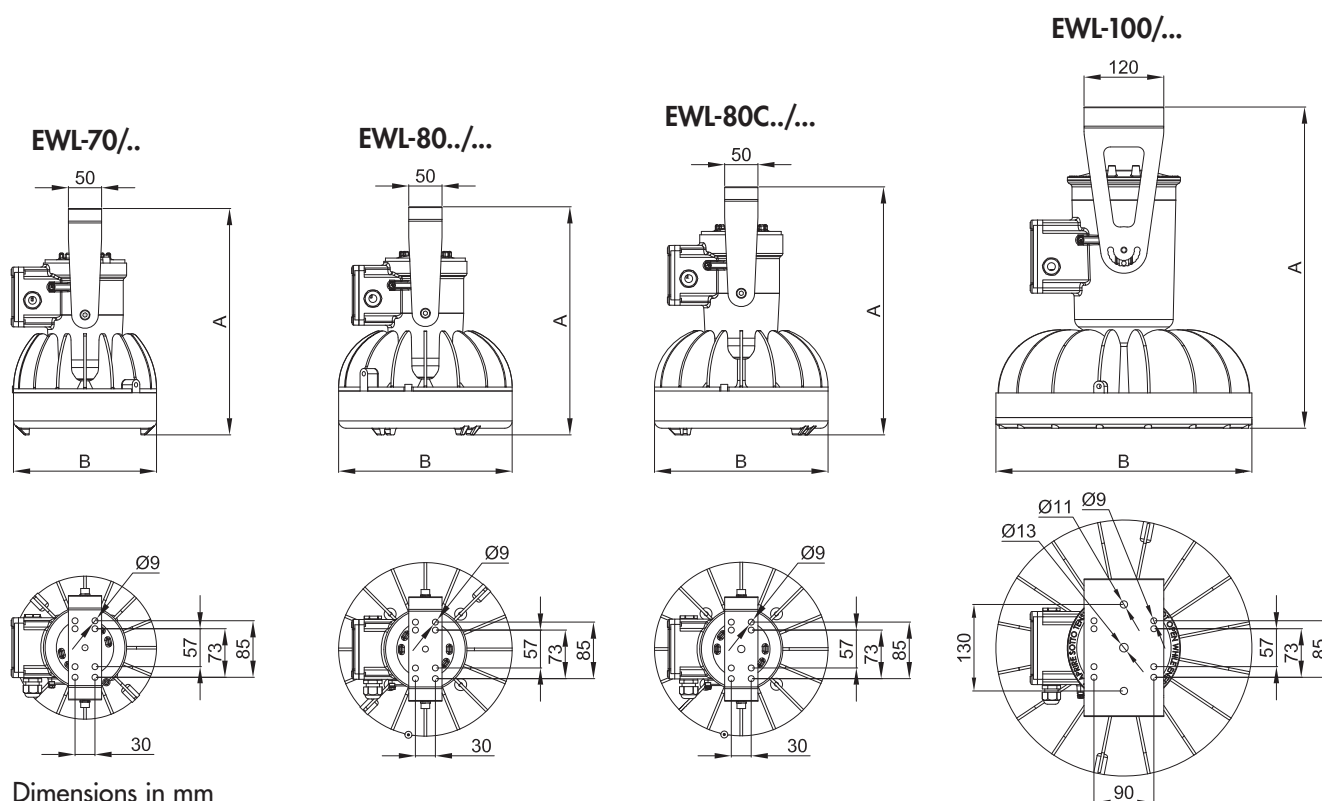
### Order code example



### Examples of illumination diagrams on the horizontal plane







## DIMENSIONAL DRAWING



## EWL-../.. Accessories and spare parts available on request

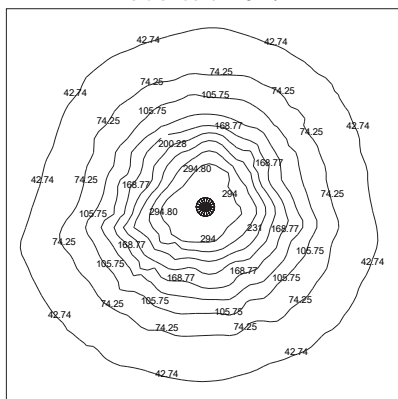
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Base for horizontal adjustment	EWL-70 EWL-80	Material: aluminium RAL 7035	G-161	 
	Swivel base for horizontal adjustment	EWL-100		G-326 G-327	
	Supporting bracket	EWL-70 EWL-80...	Material: stainless steel AISI316L	G-750	
	Supporting bracket	EWL-100...	Material: stainless steel AISI316L	G-753	
	Cable gland	ISO M20	std. range cable 6,3÷11,6	NAV20SIB	
	Power supply circuit	EWL-70	220 - 240 Vac	RV-40LED	
		EWL-80	120 - 240 Vac 120 - 370 Vdc 50-60 Hz	RSLD070-45	
		EWL-80/24	24 Vdc	RT-70LED	
		EWL-801	220 - 240 Vac	LEDDEV180/2	
		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	

### Example Peak Cd equivalents

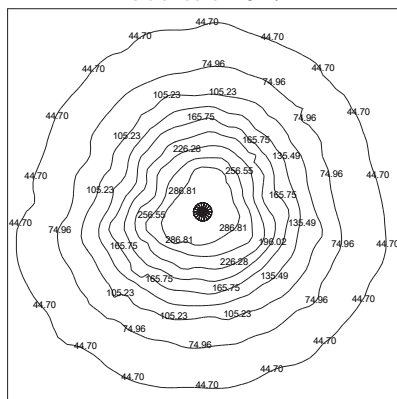
EWL-70/40 (40W)	EWL-80/40 (55W)	EWL-801/40 (110W)	EWL-100/40 (188W)
			
250W HIM/(HPSV)	400W HIM/(HPSV)	>600W HIM/(HPSV)	1000W HIM/(HPSV)
400W Hg	1.5x400W Hg	1000W Hg	>1000W Hg
500W INC	1.5x500W INC	>1000W INC	2x1000W INC

# Isolux diagrams

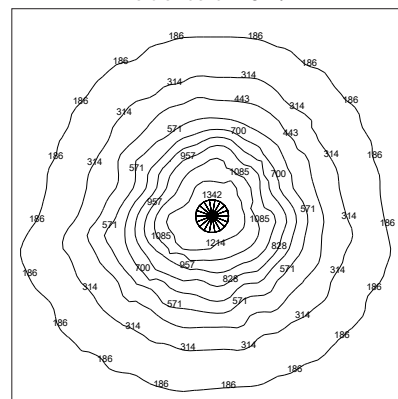
**EWL-70/10** illumination on the floor expressed in lux in a room 5m x 5m with the floodlight perpendicular placed at a distance of **10m**.



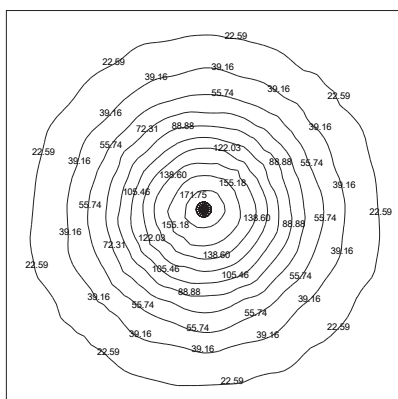
**EWL-80/10** illumination on the floor expressed in lux in a room 5m x 5m with the floodlight perpendicular placed at a distance of **13m**.



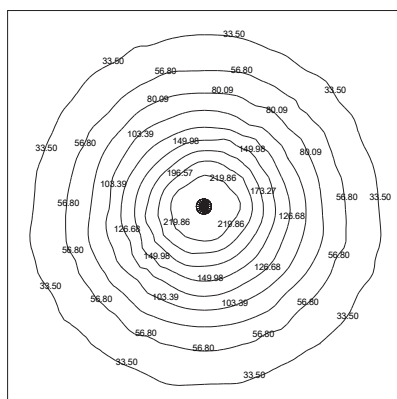
**EWL-100/10** illumination on the floor expressed in lux in a room 5m x 5m with the floodlight perpendicular placed at a distance of **20m**.



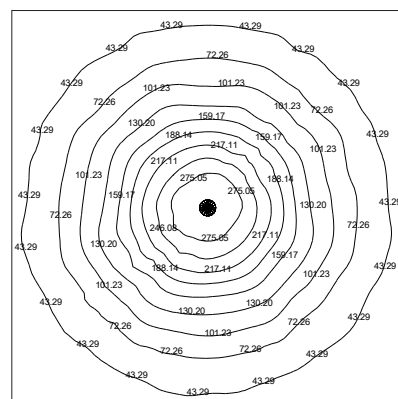
**EWL-70/20** illumination on the floor expressed in lux in a room 6m x 6m with the floodlight perpendicular placed at a distance of **8m**.



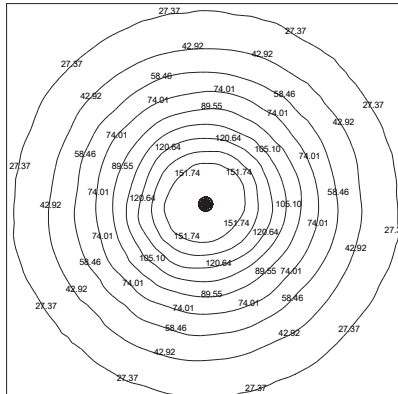
**EWL-80/20** illumination on the floor expressed in lux in a room 7m x 7m with the floodlight perpendicular placed at a distance of **10m**.



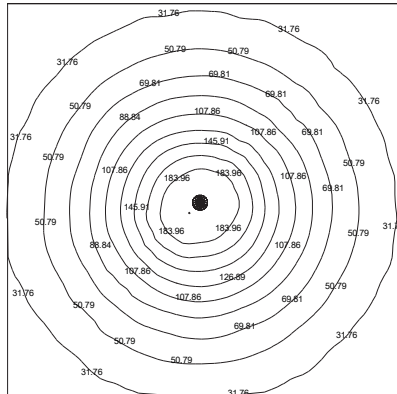
**EWL-100/20** illumination on the floor expressed in lux in a room 10m x 10m with the floodlight perpendicular placed at a distance of **15m**.



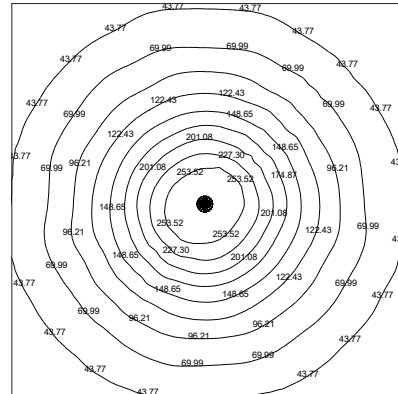
**EWL-70/40** illumination on the floor expressed in lux in a room 6m x 6m with the floodlight perpendicular placed at a distance of **6m**.



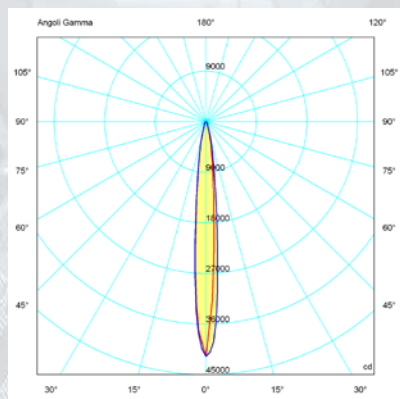
**EWL-80/40** illumination on the floor expressed in lux in a room 8m x 8m with the floodlight perpendicular placed at a distance of **7m**.



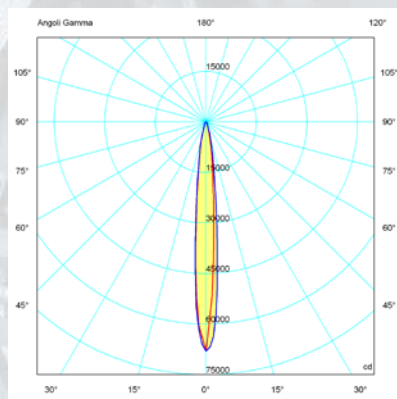
**EWL-100/40** illumination on the floor expressed in lux in a room 10m x 10m with the floodlight perpendicular placed at a distance of **10m**.



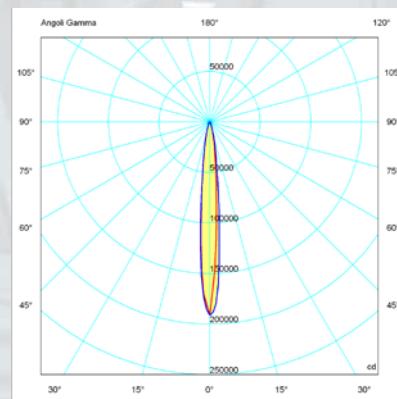
# Photometric diagrams



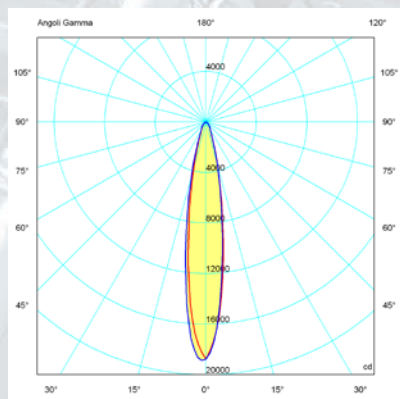
**EWL-70/10 Luminous flux: 3700 lm**



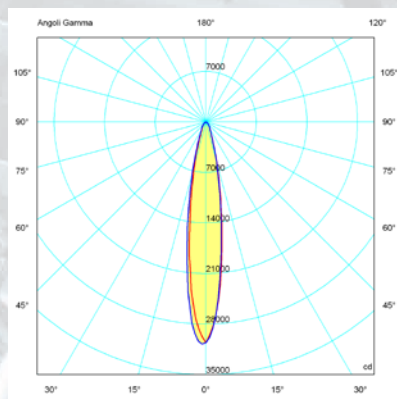
**EWL-80/10 Luminous flux: 6050 lm**



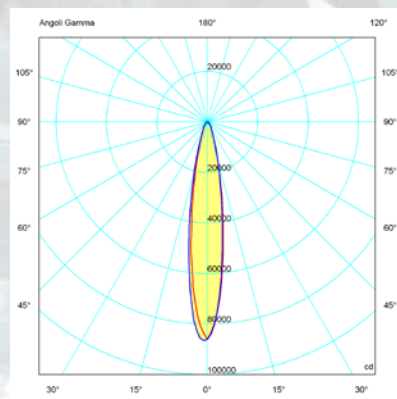
**EWL-100/10 Luminous flux: 17000 lm**



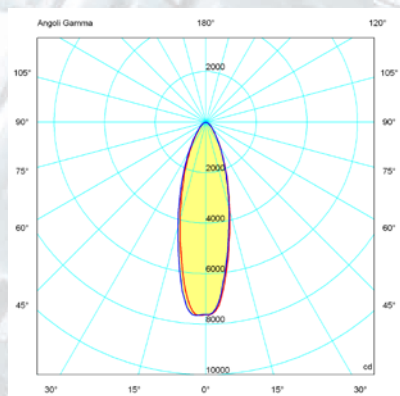
**EWL-70/20 Luminous flux: 3700 lm**



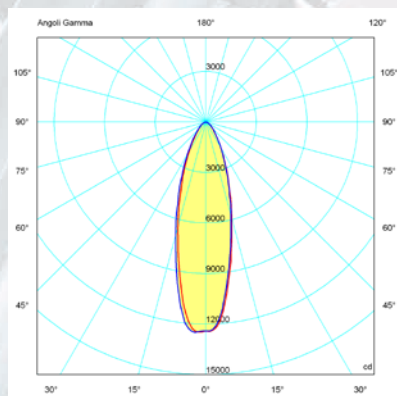
**EWL-80/20 Luminous flux: 6050 lm**



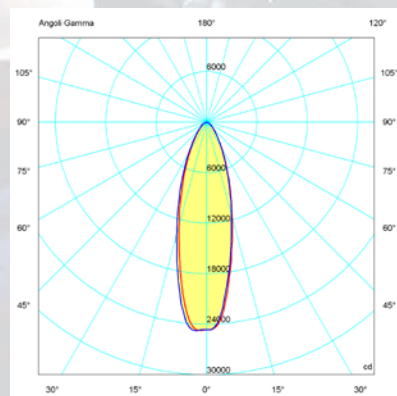
**EWL-100/20 Luminous flux: 17000 lm**



**EWL-70/40 Luminous flux: 3700 lm**



**EWL-80/40 Luminous flux: 6050 lm**



**EWL-100/40 Luminous flux: 17000 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