

EWL

- Zone 1, 2, 21, 22
- Savings in energy, maintenance and installation costs
- Instant, brilliant illumination
- Suitable for GAS category IIC



Ex e terminal board housing for fast connection



Mounting bracket

EWL-../.. LED floodlights

EWL series LED floodlight 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 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:



Oil refineries



Chemical and petrochemical plants



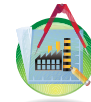
Anti light pollution



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: 2007, EN 60079-7: 2007, EN 60079-31: 2009, 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: 2011, IEC 60079-1: 2007, IEC 60079-7: 2006, IEC 60079-31: 2008

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



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
Bolts and screws:	Stainless steel
Entries:	2 x ISO M20 entries. Floodlight kit with PLG1IB plug and REV1IB 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)

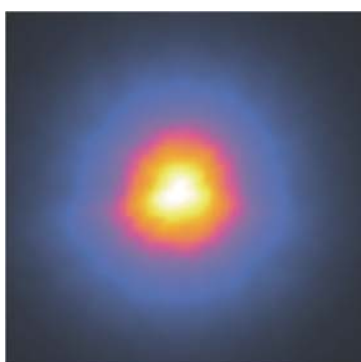
Optical systems:



- Model: Strip Lenses
- High efficiency
- Vibration resistant
- Material: Optical PC, polycarbonate for optoelectronic components
- Manufactured with NJC™ (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

Examples of illumination diagrams on the horizontal plane

10° lens (Narrow)



20° lens (Medium)



40° lens (Wide)



EWL-../.. LED floodlights

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)	DAI	SI (0-10 V) or PWM or resistance
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
Istant Restrike:	YES	YES	YES	YES
Lumen:	3700 lm	6050 lm	10100 lm	17000 lm
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:	85 lm/W	110 lm/W	91 lm/W	91 lm/W


* Test at 230Vac

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

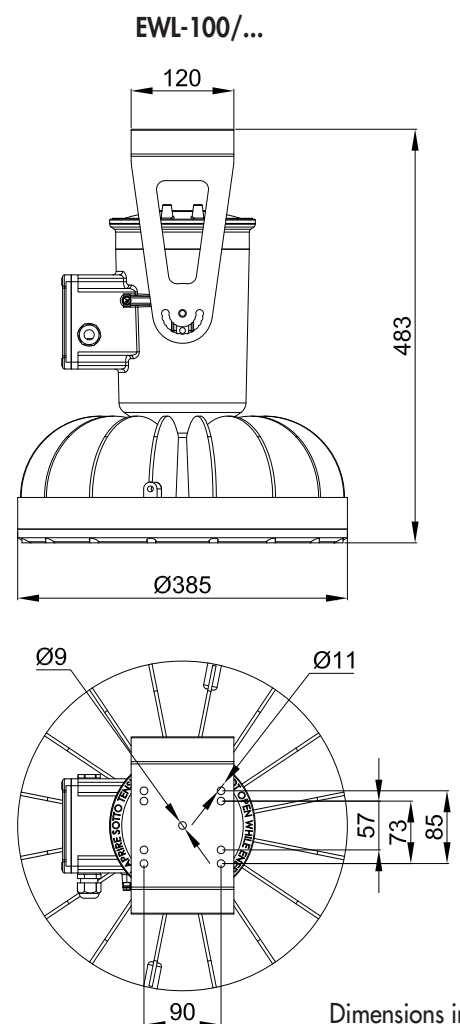
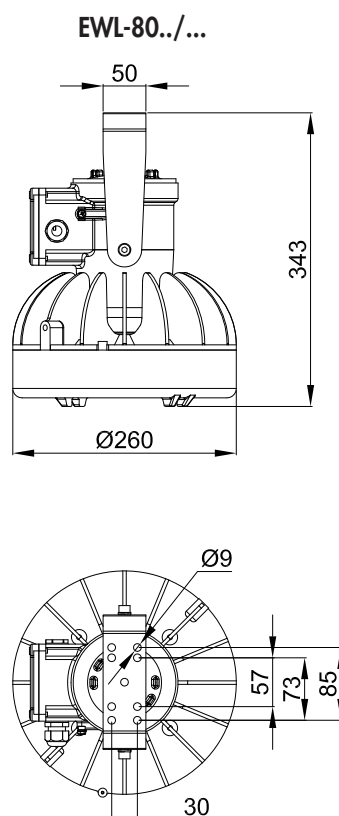
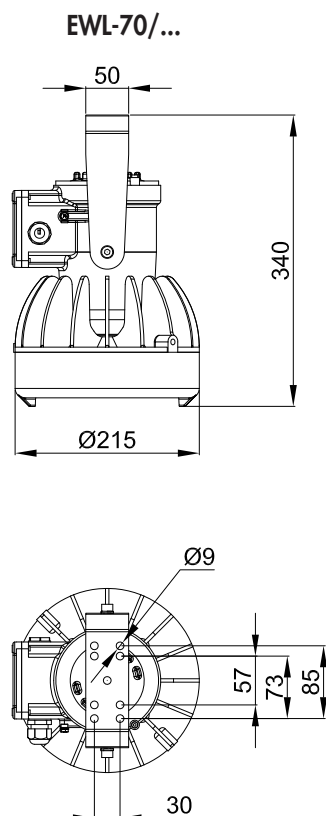
Rated voltage: 24 Vdc (code EWL-80/10/**24**) (code EWL-100/10/**24**)
 (code EWL-80/20/**24**) (code EWL-100/20/**24**)
 (code EWL-80/40/**24**) (code EWL-100/40/**24**)

Base for horizontal adjustment on request

EWL-../.. series selection chart

Code	Lens type	Watt	Class	Max surface temperature °C	Weight Kg	
EWL-70/10	Narrow (10°)	40W	T5	100	6,5	
EWL-70/20	Medium (20°)	40W	T5	100	6,5	
EWL-70/40	Wide (40°)	40W	T5	100	6,5	
EWL-80/10	Narrow (10°)	55W	T5	100	8,6	
EWL-80/20	Medium (20°)	55W	T5	100	8,6	
EWL-80/40	Wide (40°)	55W	T5	100	8,6	
EWL-801/10	Narrow (10°)	110W	T5	100	8,6	
EWL-801/20	Medium (20°)	110W	T5	100	8,6	
EWL-801/40	Wide (40°)	110W	T5	100	8,6	
EWL-100/10	Narrow (10°)	188W	T5	100	18,4	
EWL-100/20	Medium (20°)	188W	T5	100	18,4	
EWL-100/40	Wide (40°)	188W	T5	100	18,4	

DIMENSIONAL DRAWING



Dimensions in mm

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

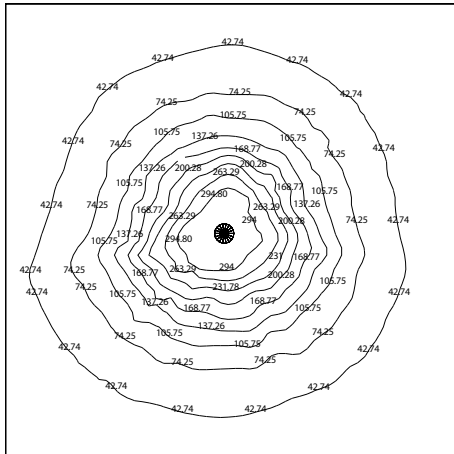
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Base for horizontal adjustment	EWL-70 EWL-80	Materiale: alluminio RAL 7035	G-161	
	Swivel base for horizontal adjustment (Combined with bracket G-714)	EWL-100		G-326 G-327	
	Supporting bracket	EWL-70 EWL-80	Material: stainless steel AISI316L	G-750	
	Supporting bracket	EWL-100	Material: stainless steel AISI316L	G-753	
	Power supply circuit	EWL-70	220 - 240 Vac	RV-40LED	
		EWL-80	100 - 240 Vac 120 - 370 Vdc 50-60 Hz	TXH120-124	
		EWL-80/24	24 Vdc	RT-70LED	
		EWL-100	100 - 240 Vac 120 - 370 Vdc 50-60 Hz	TXH240-124	
		EWL-100/24	24 Vdc	RT-240LED	
	Cable gland	ISO M20	std. range cable 7 ÷ 12	REV1IB	
	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

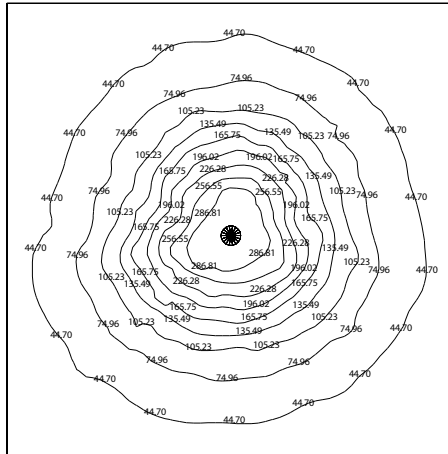
EWL-70/40 (40W)	EWL-80/40 (55W)	EWL-801/40 (110W)	EWL-100/40 (188W)
			
250W HIM	400W HIM	>600W HIM	1000W HIM
400W Hg	1.5x400W Hg	1000W Hg	>1000W Hg
500W INC	1.5x500W INC	>1000W INC	2x1000W INC

Isolux diagrams

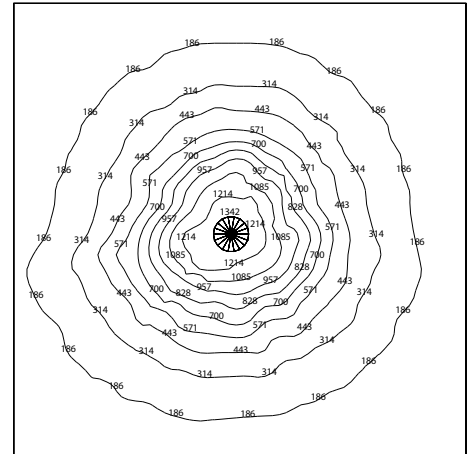
EWL-70/10 illumination on the floor expressed in lux in a room 5m x 5m with the floodlight perpendicular placed at a distance of **10m**.



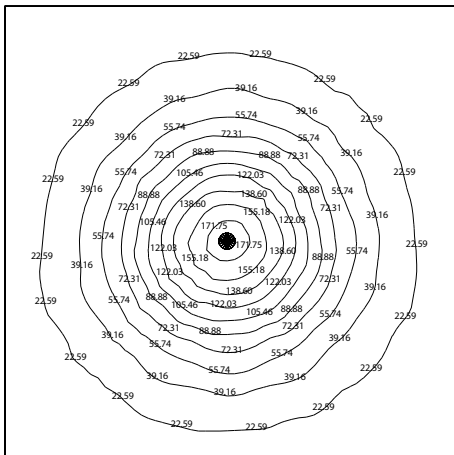
EWL-80/10 illumination on the floor expressed in lux in a room 5m x 5m with the floodlight perpendicular placed at a distance of **13m**.



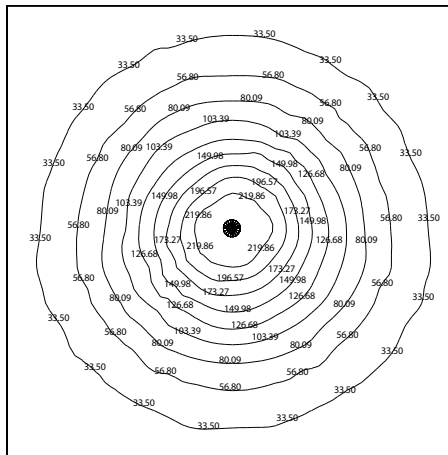
EWL-100/10 illumination on the floor expressed in lux in a room 5m x 5m with the floodlight perpendicular placed at a distance of **20m**.



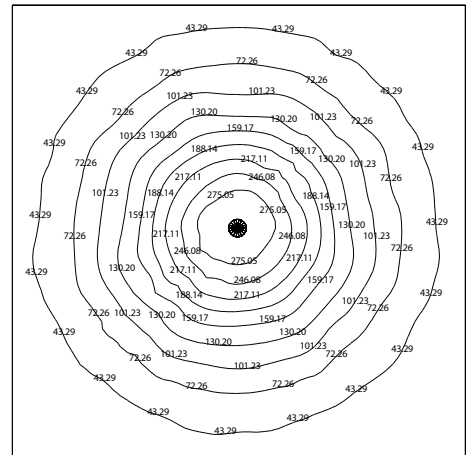
EWL-70/20 illumination on the floor expressed in lux in a room 6m x 6m with the floodlight perpendicular placed at a distance of **8m**.



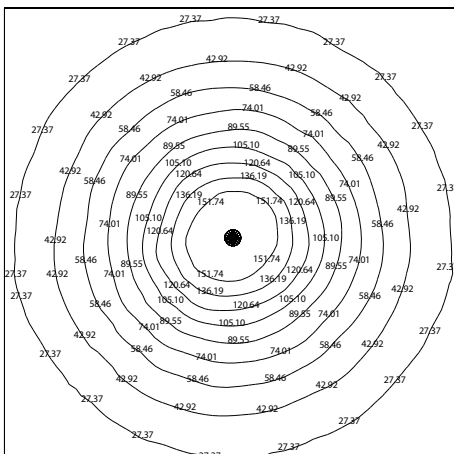
EWL-80/20 illumination on the floor expressed in lux in a room 7m x 7m with the floodlight perpendicular placed at a distance of **10m**.



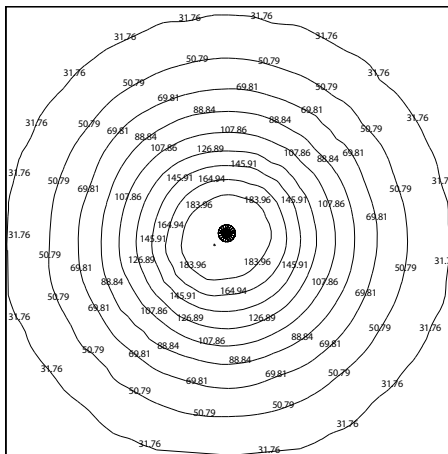
EWL-100/20 illumination on the floor expressed in lux in a room 10m x 10m with the floodlight perpendicular placed at a distance of **15m**.



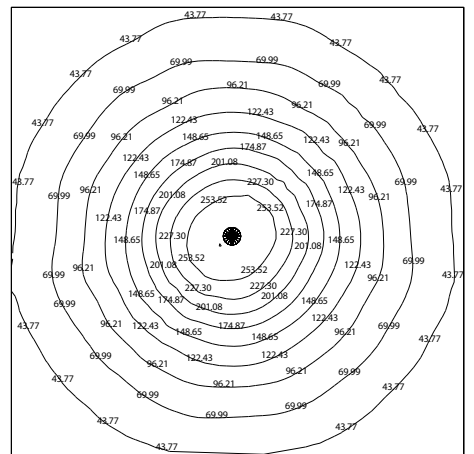
EWL-70/40 illumination on the floor expressed in lux in a room 6m x 6m with the floodlight perpendicular placed at a distance of **6m**.



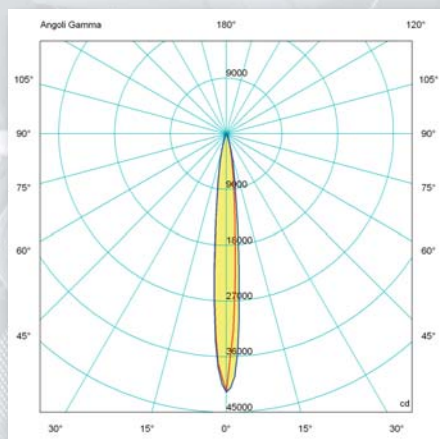
EWL-80/40 illumination on the floor expressed in lux in a room 8m x 8m with the floodlight perpendicular placed at a distance of **7m**.



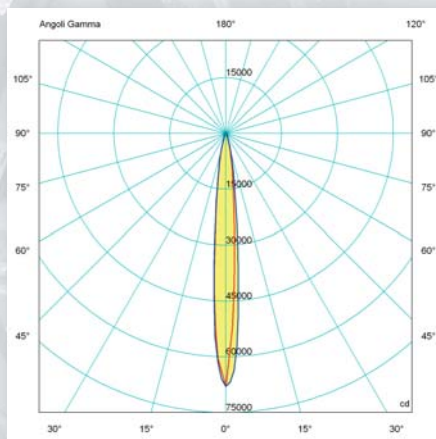
EWL-100/40 illumination on the floor expressed in lux in a room 10m x 10m with the floodlight perpendicular placed at a distance of **10m**.



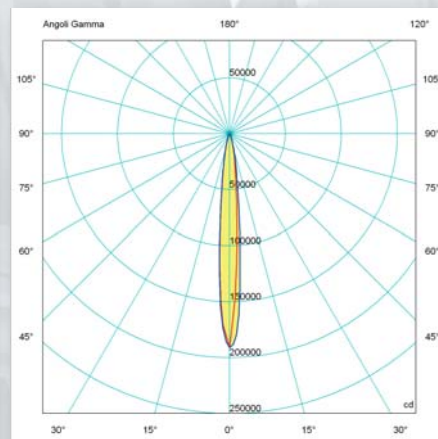
Photometric diagrams



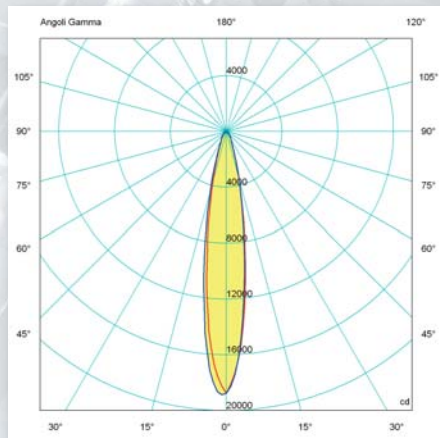
EWL-70/10 Luminous flux: 3700 lm



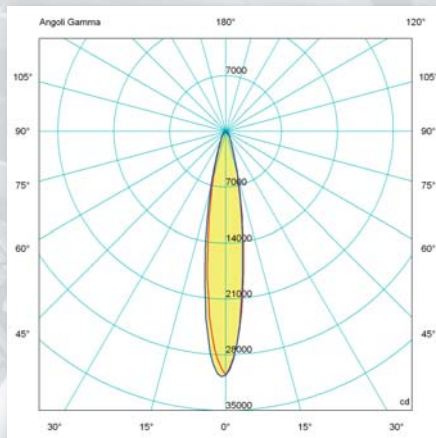
EWL-80/10 Luminous flux: 6050 lm



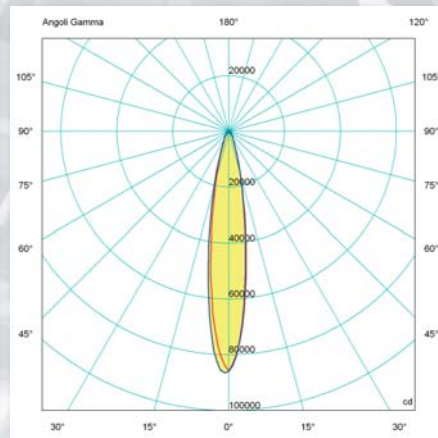
EWL-100/10 Luminous flux: 17000 lm



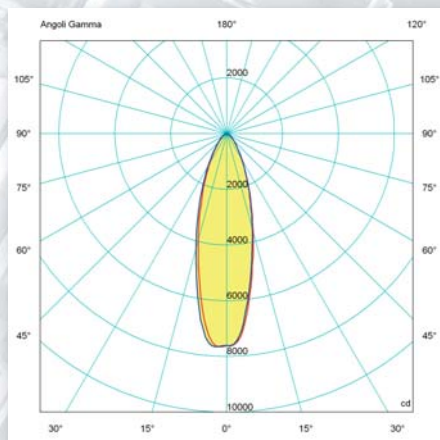
EWL-70/20 Luminous flux: 3700 lm



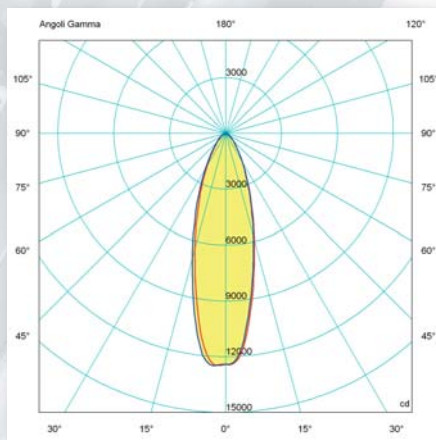
EWL-80/20 Luminous flux: 6050 lm



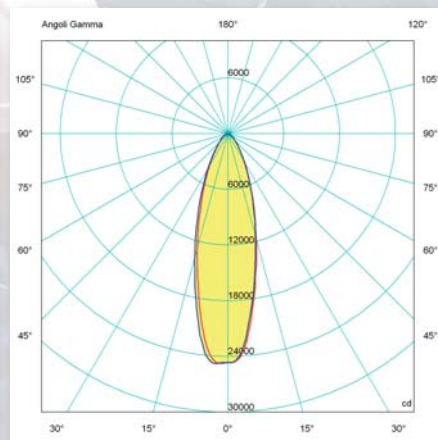
EWL-100/20 Luminous flux: 17000 lm



EWL-70/40 Luminous flux: 3700 lm



EWL-80/40 Luminous flux: 6050 lm



EWL-100/40 Luminous flux: 17000 lm

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

— = plane 90270
— = plane C 0180