

CALUMMA™ XL MC

Featuring an optical design using nineteen high efficacy multichip LEDs and available with optional LED colour variants and various beam angles, the extra large-sized Calumma XL MC luminaire creates powerful and beautiful light output for a spot, accent or flood lighting solution. Its durable housing is built to withstand any exterior conditions, and its special finish for harsh and marine environments provides an exceptional outdoor LED luminaire in an elegant design. Additionally, Calumma XL MC can be connected in long In/Out daisy-chains via an E-Box and hybrid Plug & Play connections for almost effortless installation. Complemented by wide range of accessories and control protocols, this luminaire is an effective and versatile unit to get the most out of architectural lighting applications.



KEY FEATURES

Lumen output & Light source

Luminaire with nineteen high-power, multi-chip LEDs provides up to 6318 lumen output. Multiple LED colour variants. No light spills. Perfectly homogenised light output with efficacy up to 36 lm/w.

Design & Durability

Compact, durable and stylish housing made of high-pressure die cast aluminium. IP67 and IK10 certification; suitable for marine applications (Harsh Environment Finish required) and traffic applications. Supported with a 5 year warranty.

Flexibility

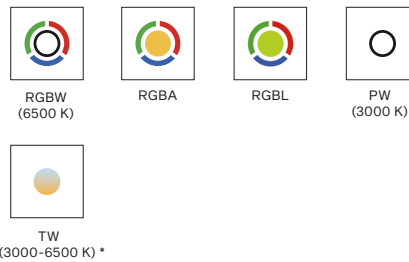
Exceptional outdoor or indoor LED luminaire with a wide range of accessories, custom colour finishes, multiple light output variants and beam angles.

Connectivity

Utilising the innovative E-Box series of power and data interfaces, Calumma XL MC can communicate via numerous wired, wireless, and Ethernet based control protocols. Various wiring topologies are supported using hybrid power / data cables with Plug & Play connectors or standard connection options.

COLOURS

* UPON REQUEST



CONTROL & PROTOCOLS



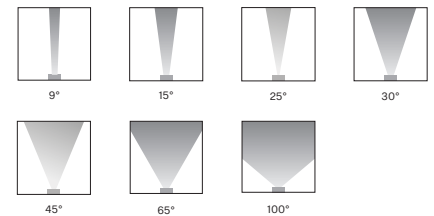
FINISH OPTIONS

* CLOSEST RAL TONE
* HE = Harsh Environment

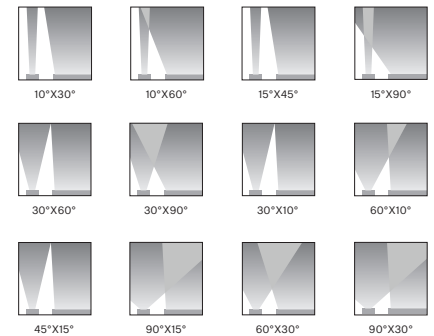


OPTIC OPTIONS

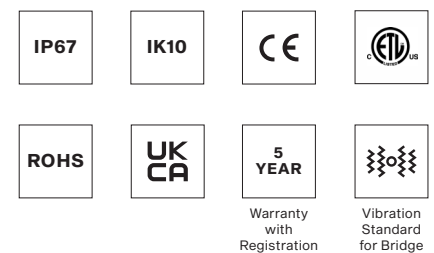
SYMMETRICAL



BI-SYMMETRICAL



STANDARD & SPECIFICATION



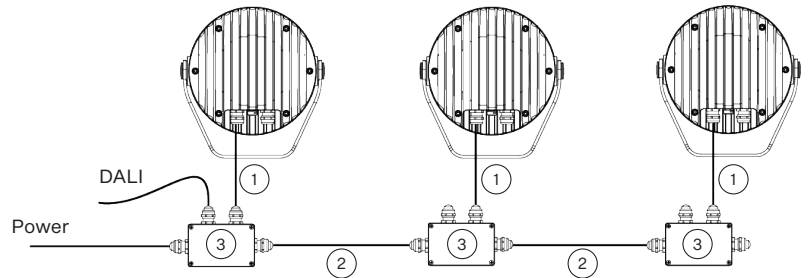
SPECIFICATION

ELECTRICAL	Input Voltage	120–277 V AC 50/60 Hz (US)		
	Typical Power Consumption	175 W +/-10 %		
OPTICAL	Light Source	High Power Multichip LEDs		
	Colour Variants	RGBW (W - 6500 K) RGBA RGLB Pure White (W - 3000 K) On Request: Tuneable White (3000–6500 K)		
	Beam Angle	9° 15° 25° 30° 45° 65° 100° 10°x30° 30°x10° 10°x60° 60°x10° 15°x45° 45°x15° 15°x90° 90°x15° 30°x60° 60°x30° 30°x90° 90°x30°		
	Lumen Output Delivered	6318 lm (@9° RGBW)		
	Projected Lumen Maintenance	L90B10 >90.000 hrs, Ta = 25°C / 77°F		
CONTROL	Interface Protocol	Via E-box range, DMX/RDM, wireless DMX, DALI 2		
	E-box control protocol	USITT DMX512+RDM, ArtNet, MA Net, MA Net2, sACN, Kling-Net		
	DALI 2 Device Type	DT 8		
	Wireless DMX (Option)	Lumen Radio CRMX Technology		
	Control System	Third Party DMX Controllers		
	Operating Modes	DMX, Stand-alone		
	Settings / Addressing	E-box, RDM communicator		
	Power Supply	Integrated		
PHYSICAL	Width x Height x Depth Weight	385 x 404 x 120 mm (15.16 x 15.91 x 4.72 in.) 12.3 kg (27.12 lbs)		
	Housing	High Pressure Die-Cast Aluminium Body Tempered Glass		
	Finish Options	Standard Colour	Graphite Black RAL 9011 Grey Aluminium RAL 9007 Pure White RAL 9010 Sandstone RAL 1014	
		Standard Colour Harsh Environment	Graphite Black RAL 9011 Grey Aluminium RAL 9007 Pure White RAL 9010 Sandstone RAL 1014	
		Cost Option	Custom RAL	
	Cables / Connections	IN/OUT (for E- Box version): - 0.5 m cables with hybrid connectors - Jumper cables	IN (for DMX, DALI): - 1 m cable with bare end - Other cable length - custom - Junction box - optional	
	Mounting Method	Yoke or Yoke for Pole Adaptor		
Adjustability	+180° / -180°			
Protection Factor	IP67 / Suitable For Wet Locations			
IK Rating	IK10			
Cooling System	Convection			
Operating Ambient Temperature	-20 °C / +50 °C (-4 °F / +122 °F)			
CERTIFICATION	Listings	ETL / cETL, CE, RoHS, UKCA		
ACCESSORIES	Not Included Items			
	Junction Box for Calumma S-XL / Eminere (CE or US)			
	Re-enterable Electrical Insulating Resin			
	Optical Demo Set for Calumma XL (for demo purposes)			
	Outdoor Foil Holder for Calumma XL „OFH“ version only (for permanent installation)			
	Optical Foil Set for Outdoor Foil Holder Calumma XL			
	Land Spike for Calumma XL			
	Top Hat Calumma XL			
	Half Top Hat Calumma XL			
	Floor stand for Calumma L, XL			
Pole Adaptor (ø 102 mm) (Yoke for Pole Adaptor Required)				

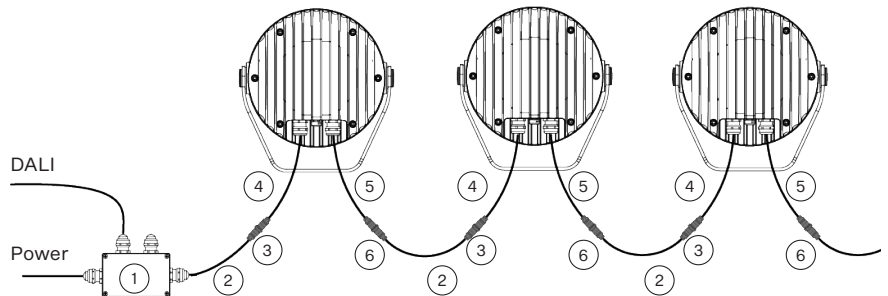
CONTROL AND CONNECTION OPTIONS - CE

DALI

- 1) Hybrid Cable (13053693) Standard 1 m with bare-end, black or on request Hybrid Cable (13053697), 1 m with bare-end, white
- 2) Hybrid Cable (13053693) Standard 1 m with bare-end, black or on request Hybrid Cable (13053697), 1 m with bare-end, white or Scope of Others
- 3) Junction Box



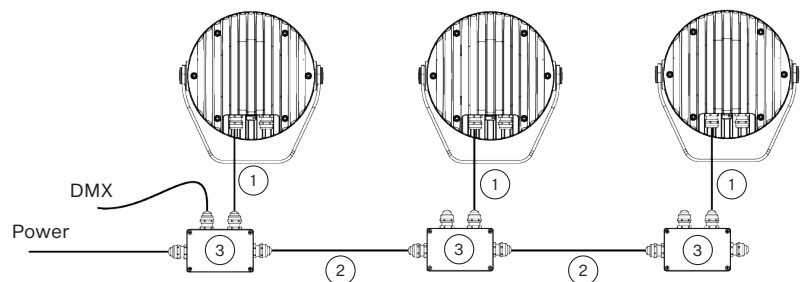
- 1) Junction Box
- 2) Hybrid Cable (13053693) Standard 1 m with bare-end, black or on request Hybrid Cable (13053697), 1 m with bare-end, white
- 3) Field Installable Connector FF DC-05 (13053971)
- 4) Hybrid Cable (13053693), black, Standard 0.5 m with Field Installable Connector MM DC-05 (13053972), black
or on request Hybrid Cable (13053697), white, 0.5 m with Field Installable Connector MM DC-05 (13053972), black
- 5) Hybrid Cable (13053693), black, Standard 0.5 m with Field Installable Connector FF DC-05 (13053971), black
or on request Hybrid Cable (13053697), white, 0.5 m with Field Installable Connector FF DC-05 (13053971), black
- 6) Field Installable Connector MM DC-05 (13053972)



Note: The last unplugged connector must be fitted with a Waterproof Cap to protect the IP rating.

DMX

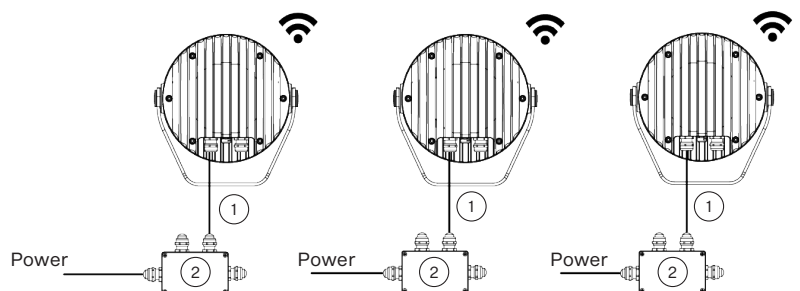
- 1) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508), Standard 1 m with bare-end, black or HYB-5731ZH LSZH (13053694), Hybrid Cable, white
- 2) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508), black or HYB-5731ZH LSZH (13053694), Hybrid Cable, white or Scope of Others
- 3) Junction Box



WIRELESS DMX

- 1) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508), Standard 1 m bare-end, black or Hybrid Cable HYB-5731ZH LSZH (13053694), white
- 2) Junction Box

Note: This type of connection is available for M, L, XL versions.

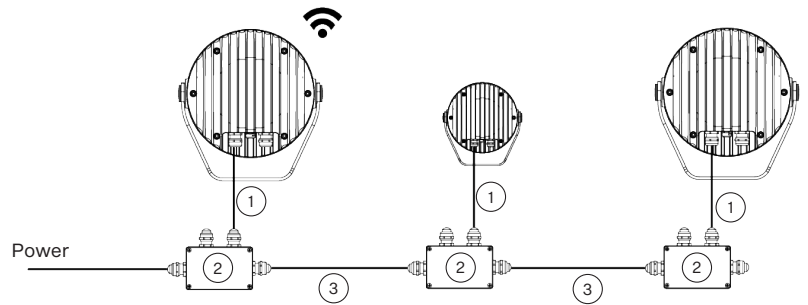


CONTROL AND CONNECTION OPTIONS - CE

WIRELESS DMX

- 1) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508), Standard 1 m bare-end, black or Hybrid Cable HYB-5731ZH LSZH (13053694), white
- 2) Junction Box
- 3) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508) or HYB-5731ZH LSZH (13053694), Hybrid Cable, white or Scope of Others

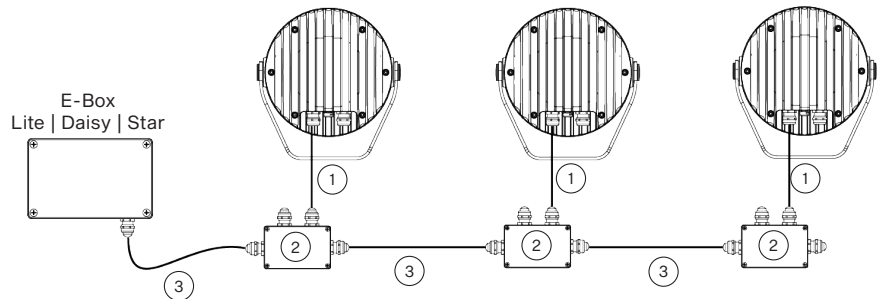
Note: This type of connection must have M, L or XL versions as the first luminaire. Next luminaires in a row could be chosen from S, M, L or XL versions.



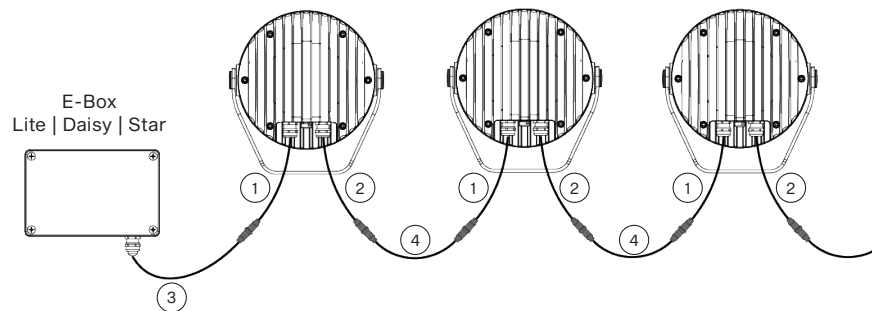
DMX or ETHERNET via E-BOX

- 1) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508), Standard 1 m with bare-end, black or HYB-5731ZH LSZH (13053694), Hybrid cable, white
- 2) Junction Box
- 3) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508), black or HYB-5731ZH LSZH (13053694), Hybrid cable, white or Scope of Others

Note: This type of connection is available for S, M, L, and XL versions. E-Box has to be in Pass Through mode only.

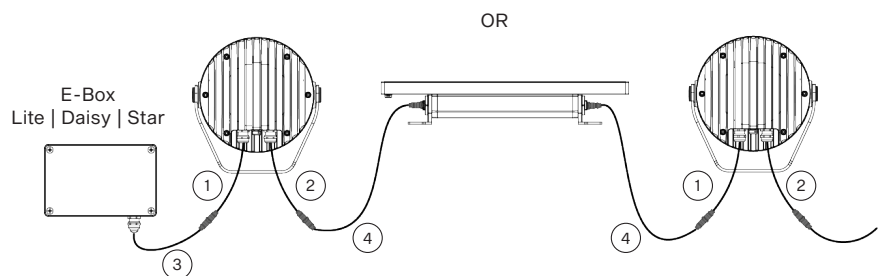


- 1) Leader Cable MM (13053493) Standard 0.5 m with hybrid connector
- 2) Leader Cable MF (13053494) Standard 0.5 m with hybrid connector
- 3) Leader Cable FF 2 m (13053438)
Leader Cable FF 5 m (13053440)
Leader Cable FF 10 m (13053436)
Leader Cable FF 25 m (13053437)
Leader Cable FF 50 m (13053439)



- 4) Jumper Cable FF/FM 0.25 m (13053422)
Jumper Cable FF/FM 0.5 m (13053423)
Jumper Cable FF/FM 1 m (13053425)
Jumper Cable FF/FM 2 m (13053427)
Jumper Cable FF/FM 3 m (13053428)
Jumper Cable FF/FM 5 m (13053430)
Jumper Cable FF/FM 10 m (13053424)

Note: With this type of connection is possible to connect Calumma (M, L, XL) and Eminere (Eminere, Eminere Side) luminaires in a row.

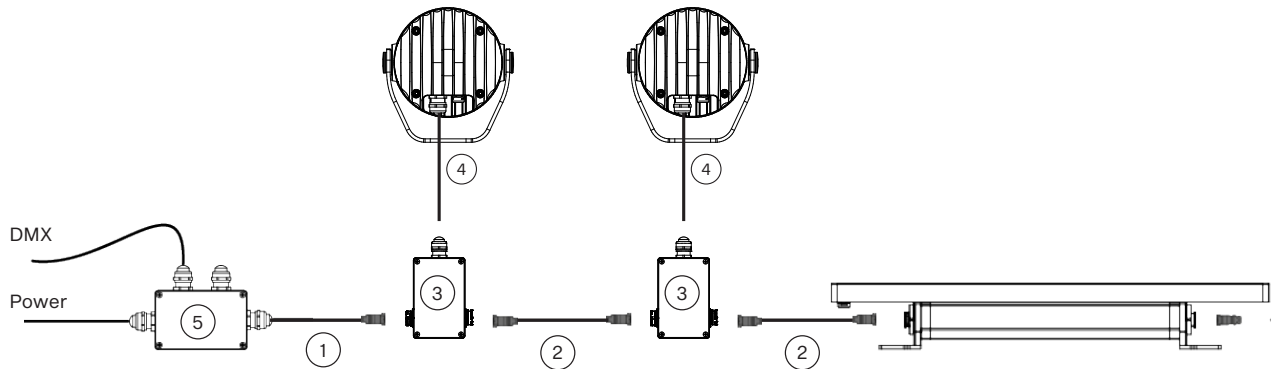


CONTROL AND CONNECTION OPTIONS - CE

DMX WITH JUNCTION BOX FOR CALUMMA XL / EMINERE (CE)

- 1) Leader Cables FF - 2 | 5 | 10 | 25 | 50 m
- 2) Jumper Cables FF/FM - 0.25 | 0.5 | 1 | 2 | 3 | 5 | 10 m
- 3) Junction Box for Calumma S-XL / Eminere CE (10981268 for RAL9011)
- 4) Flamar 3x16 AWG + 1x(2x24 AWG) - (13051508) Standard 1 m with bare-end, black or HYB-5731ZH LSZH (13053694), Hybrid Cable, white
- 5) Junction Box

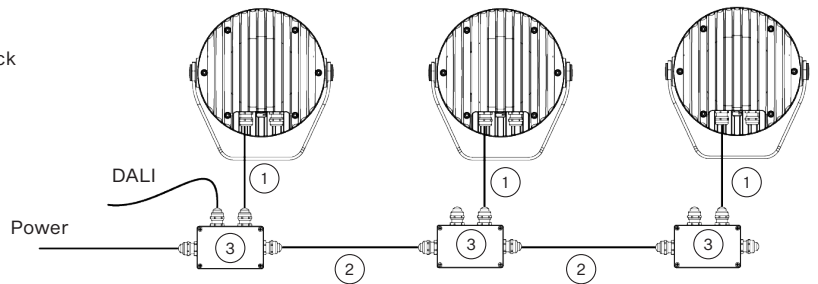
Note: The last unplugged connector must be fitted with a Waterproof Cap to protect the IP rating.



CONTROL AND CONNECTION OPTIONS - US

DALI

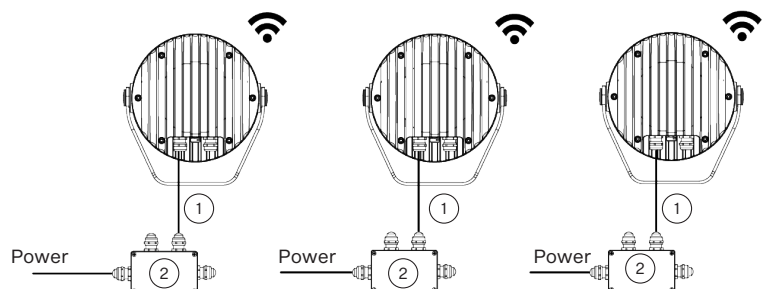
- 1) SJTW 5x14 AWG (13053693), Standard 1 m with bare-end, black or Cable SJTW 5x14 AWG (13053697), white
- 2) SJTW 5x14 AWG (13053693), black or Cable SJTW 5x14 AWG (13053697), white or Scope of Others
- 3) Junction Box



WIRELESS DMX

- 1) SJTW 6x14 AWG (13053480), Standard 1 m with bare-end, black or Cable SJTW 6x14 AWG (13053695), white
- 2) Junction Box

Note: This type of connection is available for M, L, XL versions

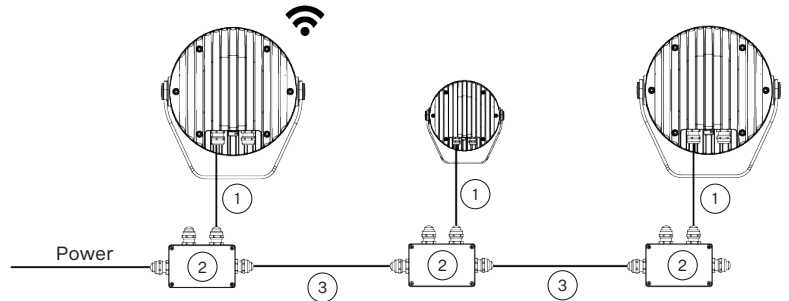


CONTROL AND CONNECTION OPTIONS - US

WIRELESS DMX

- 1) SJTW 6x14 AWG (13053480), Standard 1 m with bare-end, black or Cable SJTW 6x14 AWG (13053695), white
- 2) Junction Box
- 3) SJTW 6x14 AWG (13053480), black or Cable SJTW 6x14 AWG (13053695), white or Scope of Others

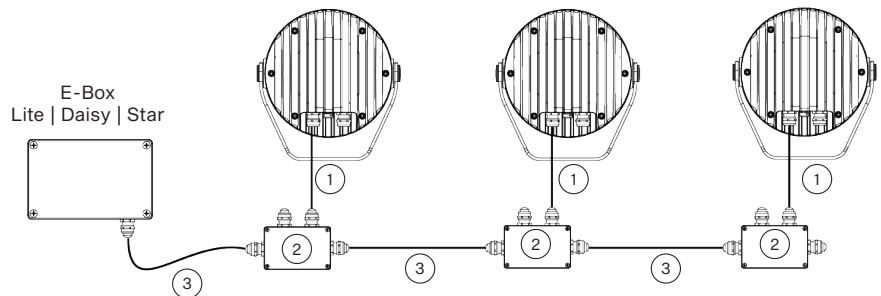
Note: This type of connection must have M, L or XL versions as the first luminaire. Next luminaires in a row could be chosen from S, M, L or XL versions.



DMX or ETHERNET via E-BOX

- 1) SJTW 6x14 AWG (13053480) Standard 1 m with bare-end, black or Cable SJTW 6x14 AWG (13053695), white
- 2) Junction Box
- 3) SJTW 6x14 AWG (13053480), black or Cable SJTW 6x14 AWG (13053695), white or Scope of Others

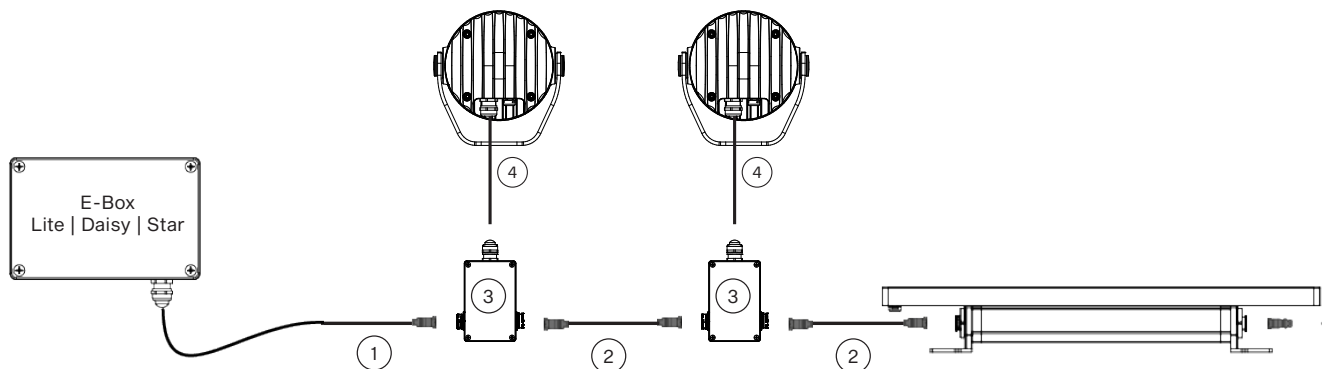
Note: This type of connection is available for S, M, L, and XL versions. E-Box has to be in Pass Through mode only.



DMX WITH JUNCTION BOX FOR CALUMMA XL / EMINERE (US)

- 1) Leader Cables FF - 2 | 5 | 10 | 25 | 50 m
- 2) Jumper Cables FF/FM - 0.25 | 0.5 | 1 | 2 | 3 | 5 | 10 m
- 3) Junction Box for Calumma S-XL / Eminere US (10981269 for RAL9011)
- 4) SJTW 6x 14AWG (13053480) Standard 1 m with bare-end, black or Cable SJTW 6x14 AWG (13053695), white

Note: The last unplugged connector must be fitted with a Waterproof Cap to protect the IP rating.



CONNECTIVITY

Following table shows maximum connected Calummas XL MC in a row with respect of cable length.

STANDARD MODE	Cable length (m)	Voltage (V)				PASS-THROUGH MODE	Cable length (m)	Voltage (V)				
		120	190	230	277			120	190	230	277	
CALUMMA XL MC	10	10	17	20	24	CALUMMA XL MC	10	10	17	20	24	
	20	10	17	20	24		20	10	17	20	24	
	30	7	17	20	24		30	7	17	20	24	
	50	4	11	16	23		50	4	11	16	23	
	70	3	8	12	17		70	3	8	12	17	
	100	2	6	8	12		100	2	6	8	12	
	200	1	3	4	6							
	500	0	1	2	2							

BOOSTER BOX POSITIONS

Cable length (m)	Max. number of Calummas XL MC= 191 (in Standard mode)			
	120 V	190 V	230 V	277 V
10 m	10, 20	17	20	24
20 m	10, 20, 30	17, 34	20, 40	24, 48
30 m	7, 14, 21, 28, 35, 42, 49, 56...	17, 34, 51, 68	20, 40, 60, 80	24, 48, 72
50 m	4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56....	11, 22, 33, 44, 55, 66, 77, 88, 99, 110...	16, 32, 48, 64, 80, 96, 112	23, 46, 69, 92, 115
70 m	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72...	8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88...	12, 24, 36, 48, 56, 68, 80, 92, 104...	17, 34, 51, 68, 85, 102, 119...
100 m	2, 4, 6, 8, 10, 12, 14, 16, 18, 20...	6, 12, 18, 24, 30, 36...	8, 16, 24, 32, 40, 48, 56...	12, 24, 36, 48, 56, 68, 80...
200 m	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11....	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72...	4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84...	6, 12, 18, 24, 30, 36, 42...
500 m	-	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11...	2, 4, 6, 8, 10, 12, 14, 16, 18, 20...	2, 4, 6, 8, 10, 12, 14, 16, 18, 20...

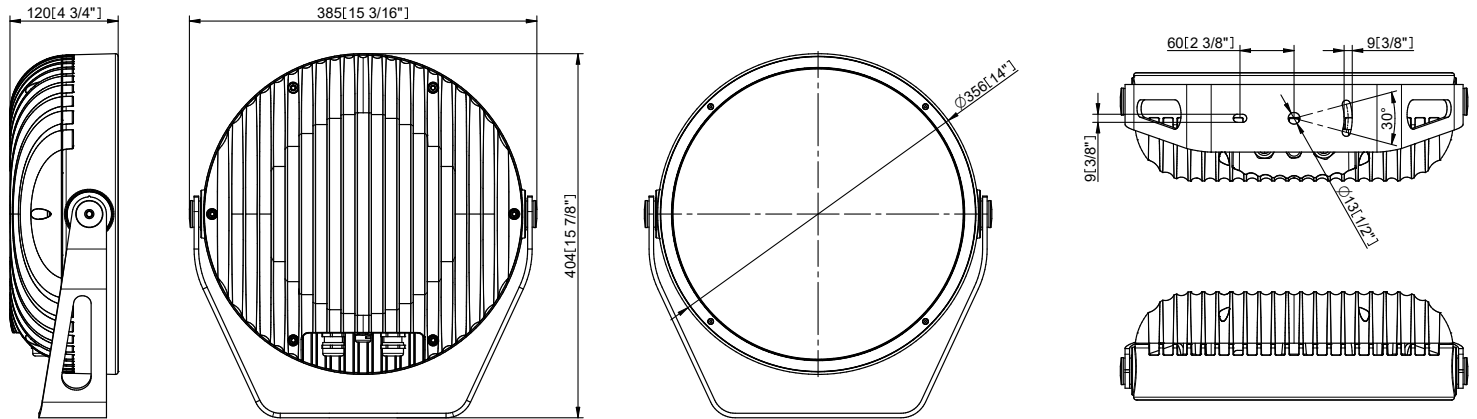
NOTE: For more detail see the User manual.

PROJECTED AREA

	Front (rear) - m ²	Front (rear) ft ²	Side - m ²	Side - ft ²	Top - m ²	Top - ft ²
Calumma XL	0.105	1.130	0.044	0.469	0.042	0.446
with Top Hat	0.105	1.130	0.107	1.151	0.105	1.130
with Half Top Hat	0.105	1.130	0.064	0.684	0.105	1.130

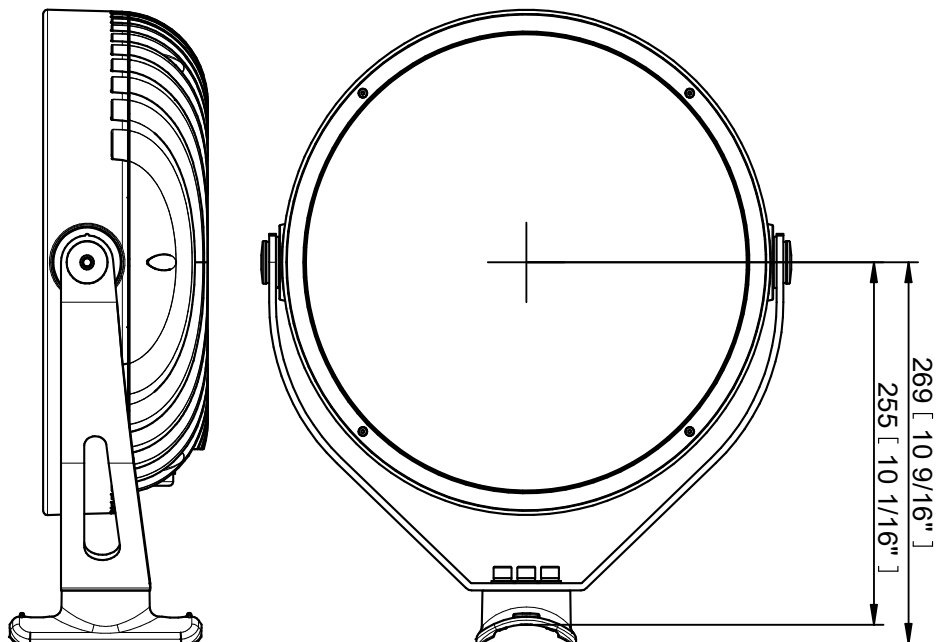
DIMENSIONS

Standard Yoke



Yoke for Pole Adaptor (with Pole Adaptor / PA)

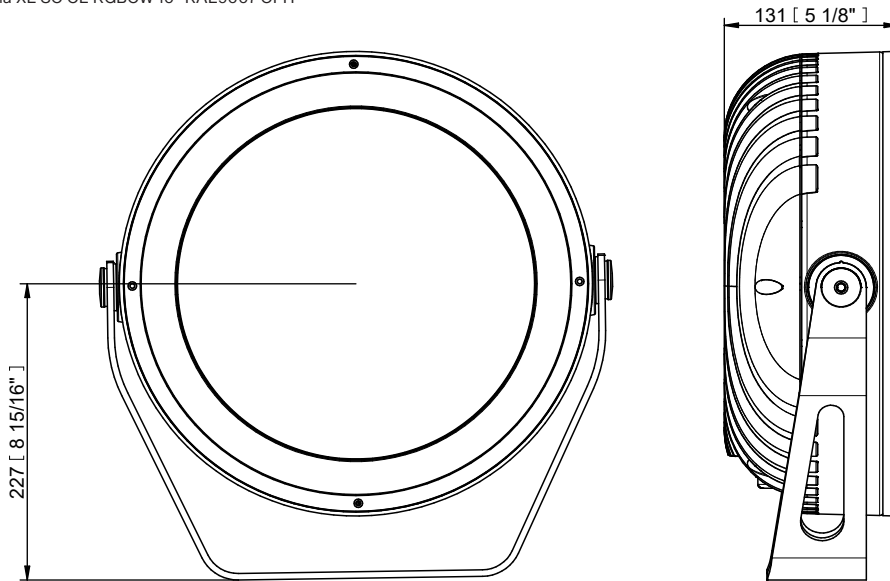
Example of ordering code: Calumma XL MC RGBCW 15° PA



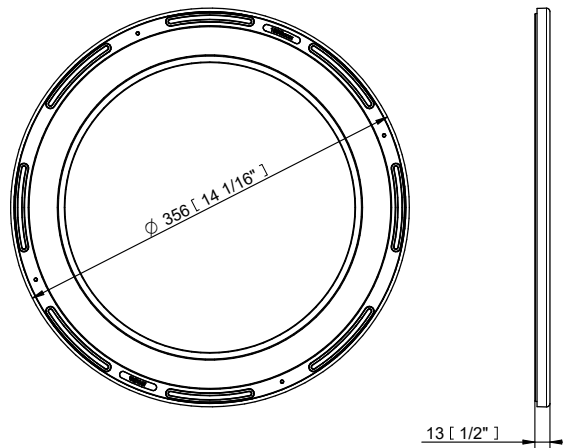
ACCESSORIES

Outdoor Foil Holder for Calumma XL „OFH“ version only (for permanent installation)

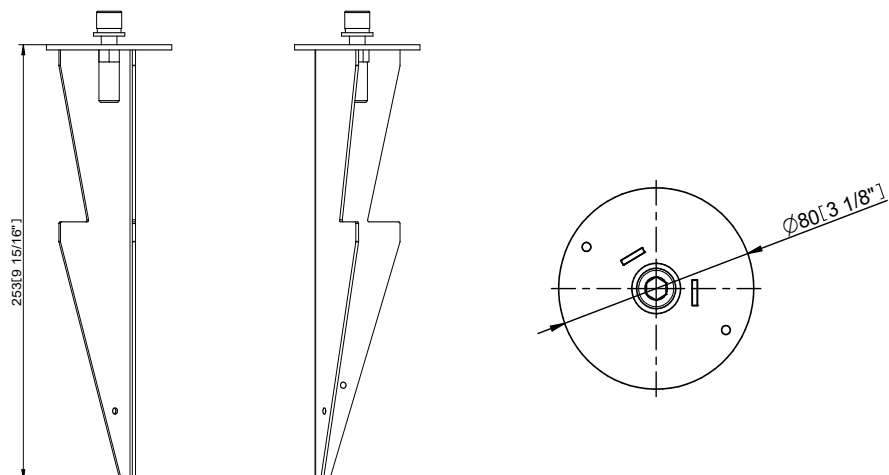
Example of ordering code: Calumma XL SC CE RGBCW 10° RAL9007 OFH



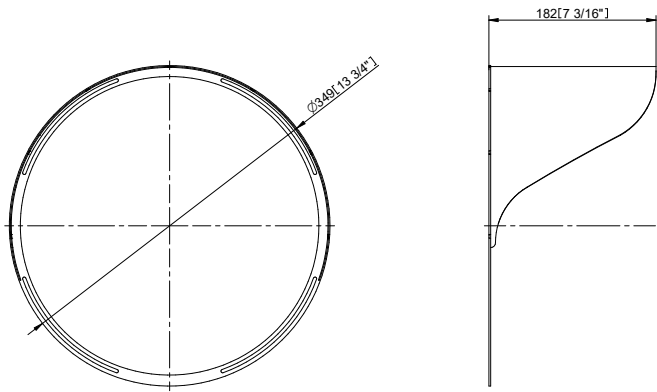
Outdoor Foil Holder for Calumma XL



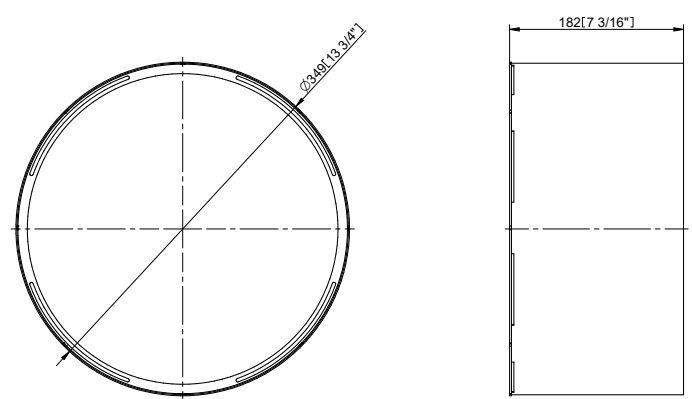
Land Spike for Calumma (S, M, L, XL)



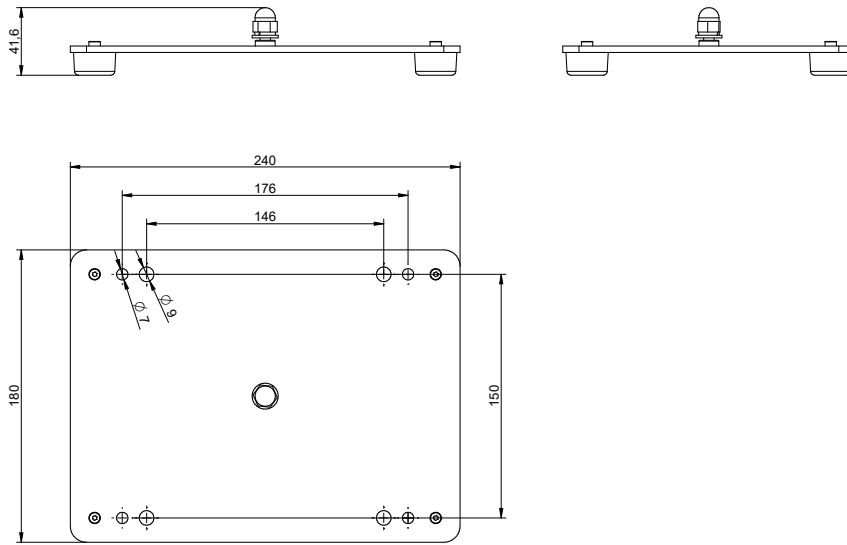
Half Top Hat



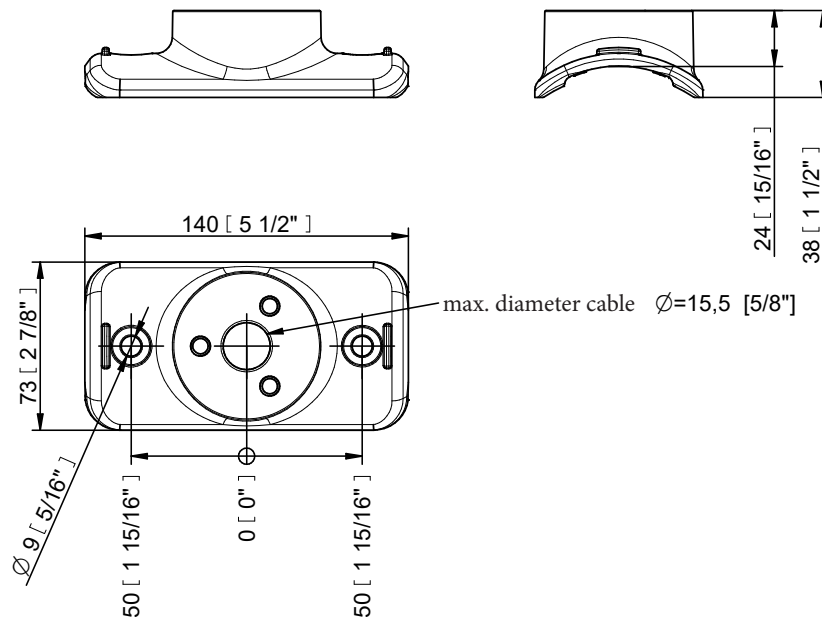
Top Hat



Floor Stand



Pole Adaptor

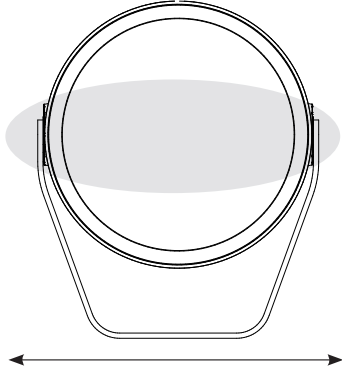


BI-SYMMETRICAL BEAM ANGLES

Bi-symmetrical:

10°x30°,
10°x60°,
15°x45°,
15°x90°,
30°x60°,
30°x90°

10°, 15°, 30°

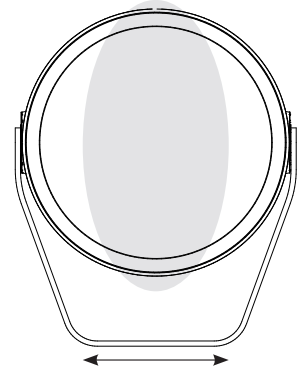


30°, 45°, 60°, 90°

Bi-symmetrical:

30°x10°,
60°x10°,
45°x15°,
90°x15°,
60°x30°,
90°x30°

30°, 45°, 60°, 90°



10°, 15°, 30°

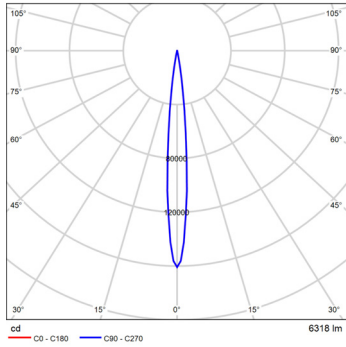
PHOTOMETRIC OVERVIEW

Lumen Output (lm)

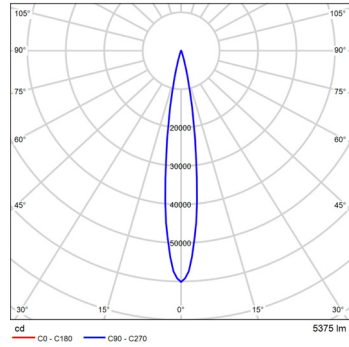
	RGBCW (W 6500 K)	RGBA	WW (W 3000 K)
9°	6318	5417	5386
15°	5375	4609	4582
25°	5376	4610	4583
30°	5288	4535	4509
45°	5361	4599	4572
65°	5367	4603	4576
100°	5305	4550	4523
10°x30°, 30°x10°	5073	4351	4325
10°x60°, 60°x10°	5641	4837	4809
15°x45°, 45°x15°	5744	4926	4898
30°x60°, 60°x30°	5339	4578	4551
30°x90°, 90°x30°	5738	4920	4893
15°x90°, 90°x15°	5714	4900	4872

PHOTOMETRIC DATA

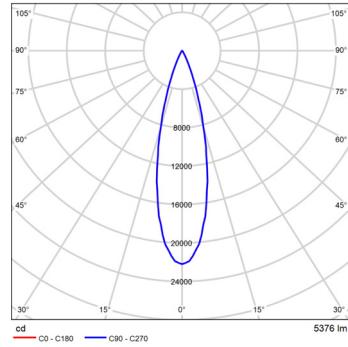
Calumma XL MC RGBW 6500K 9dg



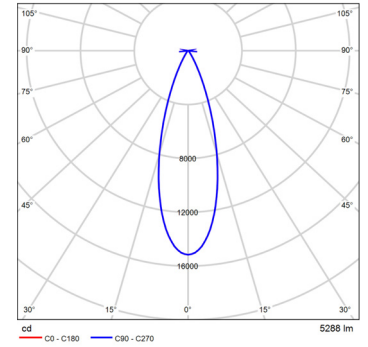
Calumma XL MC RGBW 6500K 15dg



Calumma XL MC RGBW 6500K 25dg



Calumma XL MC RGBW 6500K 30dg



Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	0.09	64337	31960	64337
1.0	0.17	16084	7996	16084
1.5	0.26	7142	3561	7142
2.0	0.35	4029	1996	4029
2.5	0.44	2573	1279	2573
3.0	0.52	1787	888	1787

Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 10.0°)

Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	0.13	24531	11710	24531
1.0	0.27	6033	2927	6033
1.5	0.40	2672	1307	2672
2.0	0.53	1503	732	1503
2.5	0.67	921	466	921
3.0	0.80	681	324	681

Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 15.2°)

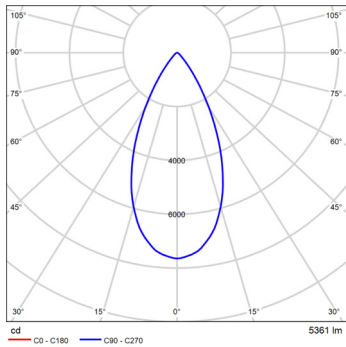
Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	0.23	8796	4129	8796
1.0	0.46	2216	1037	2216
1.5	0.69	986	485	986
2.0	0.92	550	279	550
2.5	1.2	352	161	352
3.0	1.4	266	116	266

Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 26.0°)

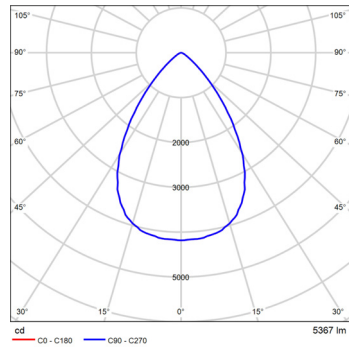
Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	0.29	6021	2743	6021
1.0	0.57	1515	676	1515
1.5	0.86	676	301	676
2.0	1.1	379	166	379
2.5	1.4	242	106	242
3.0	1.7	184	74	184

Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 32.0°)

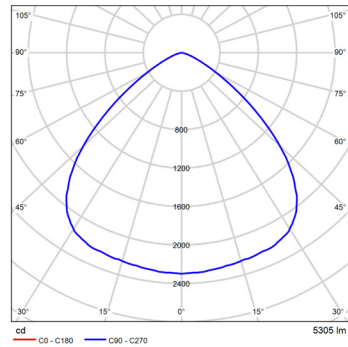
Calumma XL MC RGBW 6500K 45dg



Calumma XL MC RGBW 6500K 65dg



Calumma XL MC RGBW 6500K 100dg



Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	0.45	30581	11568	30581
1.0	0.91	7645	2892	7645
1.5	1.4	3398	1285	3398
2.0	1.8	1911	723	1911
2.5	2.3	1223	463	1223
3.0	2.7	849	321	849

Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 48.8°)

Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	0.70	16733	4643	16733
1.0	1.4	4183	1161	4183
1.5	2.1	1859	516	1859
2.0	2.8	1046	290	1046
2.5	3.5	689	186	689
3.0	4.2	485	129	485

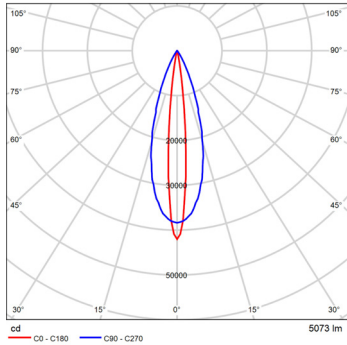
Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 69.8°)

Distance [m]	Cone diameter [m]	E(0°) E(C0)	E(0°) E(C270)	Illuminance [lx]
0.50	1.2	9199	1290	9199
1.0	2.4	2300	313	2300
1.5	3.5	1022	139	1022
2.0	4.7	575	78	575
2.5	5.9	366	50	366
3.0	7.1	256	36	256

Distance [m] Cone diameter [m] Illuminance [lx]
C0 - C180 (Beam angle: 99.4°)

PHOTOMETRIC DATA

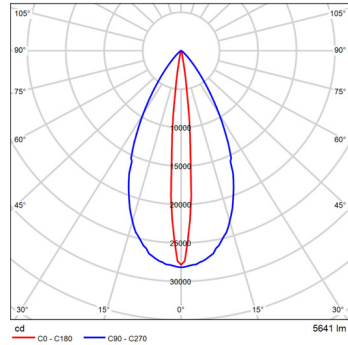
Calumma XL MC RGBW 6500K
10x30dg



Distance [m]	Cone diameter [m]	E(0°)	E(C90)	E(C0)	Illuminance [lx]
0.50	0.35 0.09	168014 E(C90) 16.7° E(C0) 5.2°	67742 16.7° 64366 5.2°	168014	
1.0	0.69 0.18	42003 E(C90) 16.7° E(C0) 5.2°	16936 16.7° 21991 5.2°	42003	
1.5	0.90 0.27	18668 E(C90) 16.7° E(C0) 5.2°	7527 16.7° 9374 5.2°	18668	
2.0	1.2 0.36	10901 E(C90) 16.7° E(C0) 5.2°	4234 16.7° 5273 5.2°	10901	
2.5	1.5 0.46	6721 E(C90) 16.7° E(C0) 5.2°	2710 16.7° 3375 5.2°	6721	
3.0	1.8 0.55	4867 E(C90) 16.7° E(C0) 5.2°	1882 16.7° 2343 5.2°	4867	

Distance [m] Cone diameter [m] Illuminance [lx]
 — C0 - C180 (Beam angle: 10.4°)
 — C90 - C270 (Beam angle: 33.4°)

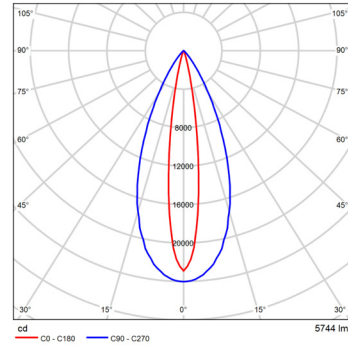
Calumma XL MC RGBW 6500K
10x60dg



Distance [m]	Cone diameter [m]	E(0°)	E(C90)	E(C0)	Illuminance [lx]
0.50	0.40 0.11	111382 E(C90) 26.3° E(C0) 5.0°	40746 26.3° 55563 5.0°	111382	
1.0	0.99 0.17	27845 E(C90) 26.3° E(C0) 5.0°	10187 26.3° 13916 5.0°	27845	
1.5	1.5 0.26	12376 E(C90) 26.3° E(C0) 5.0°	4528 26.3° 6185 5.0°	12376	
2.0	2.0 0.35	6961 E(C90) 26.3° E(C0) 5.0°	2547 26.3° 3479 5.0°	6961	
2.5	2.5 0.44	4485 E(C90) 26.3° E(C0) 5.0°	1630 26.3° 2227 5.0°	4485	
3.0	3.0 0.52	3094 E(C90) 26.3° E(C0) 5.0°	1132 26.3° 1546 5.0°	3094	

Distance [m] Cone diameter [m] Illuminance [lx]
 — C0 - C180 (Beam angle: 10.0°)
 — C90 - C270 (Beam angle: 52.6°)

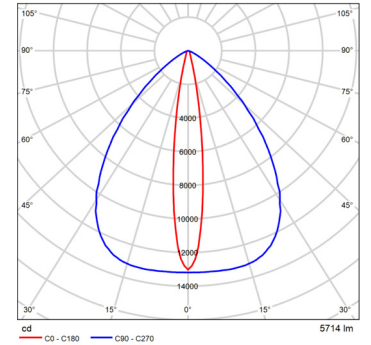
Calumma XL MC RGBW 6500K
15x45dg



Distance [m]	Cone diameter [m]	E(0°)	E(C90)	E(C0)	Illuminance [lx]
0.50	0.40 0.14	91602 E(C90) 22.0° E(C0) 7.7°	38029 22.0° 44664 7.7°	91602	
1.0	0.81 0.27	22901 E(C90) 22.0° E(C0) 7.7°	9632 22.0° 11166 7.7°	22901	
1.5	1.2 0.41	10170 E(C90) 22.0° E(C0) 7.7°	4281 22.0° 4963 7.7°	10170	
2.0	1.6 0.54	5733 E(C90) 22.0° E(C0) 7.7°	2408 22.0° 2792 7.7°	5733	
2.5	2.0 0.68	3664 E(C90) 22.0° E(C0) 7.7°	1541 22.0° 1787 7.7°	3664	
3.0	2.4 0.81	2545 E(C90) 22.0° E(C0) 7.7°	1070 22.0° 1241 7.7°	2545	

Distance [m] Cone diameter [m] Illuminance [lx]
 — C0 - C180 (Beam angle: 15.4°)
 — C90 - C270 (Beam angle: 44.0°)

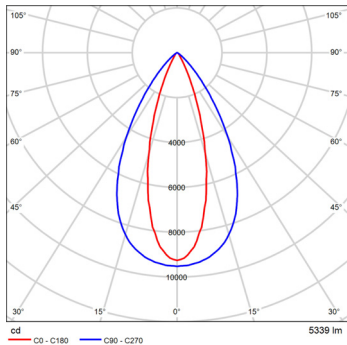
Calumma XL MC RGBW 6500K
15x90dg



Distance [m]	Cone diameter [m]	E(0°)	E(C90)	E(C0)	Illuminance [lx]
0.50	0.80 0.13	53055 E(C90) 41.3° E(C0) 7.6°	11282 41.3° 23662 7.6°	53055	
1.0	1.6 0.27	13014 E(C90) 41.3° E(C0) 7.6°	2818 41.3° 6413 7.6°	13014	
1.5	2.4 0.40	5784 E(C90) 41.3° E(C0) 7.6°	1281 41.3° 2950 7.6°	5784	
2.0	3.2 0.53	3353 E(C90) 41.3° E(C0) 7.6°	704 41.3° 1603 7.6°	3353	
2.5	4.0 0.67	2082 E(C90) 41.3° E(C0) 7.6°	450 41.3° 1028 7.6°	2082	
3.0	4.8 0.80	1446 E(C90) 41.3° E(C0) 7.6°	313 41.3° 713 7.6°	1446	

Distance [m] Cone diameter [m] Illuminance [lx]
 — C0 - C180 (Beam angle: 15.2°)
 — C90 - C270 (Beam angle: 82.6°)

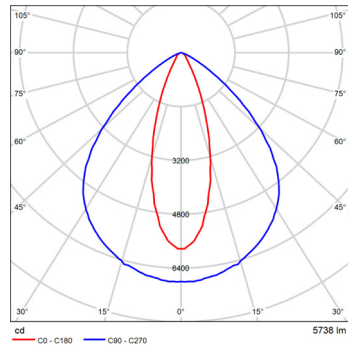
Calumma XL MC RGBW 6500K
30x60dg



Distance [m]	Cone diameter [m]	E(0°)	E(C90)	E(C0)	Illuminance [lx]
0.50	0.58 0.28	37039 E(C90) 29.9° E(C0) 15.7°	12445 29.9° 16036 15.7°	37039	
1.0	1.2 0.58	9260 E(C90) 29.9° E(C0) 15.7°	3111 29.9° 4134 15.7°	9260	
1.5	1.7 0.84	4115 E(C90) 29.9° E(C0) 15.7°	1383 29.9° 1837 15.7°	4115	
2.0	2.3 1.1	2315 E(C90) 29.9° E(C0) 15.7°	778 29.9° 1033 15.7°	2315	
2.5	2.9 1.4	1482 E(C90) 29.9° E(C0) 15.7°	498 29.9° 661 15.7°	1482	
3.0	3.5 1.7	1029 E(C90) 29.9° E(C0) 15.7°	348 29.9° 459 15.7°	1029	

Distance [m] Cone diameter [m] Illuminance [lx]
 — C0 - C180 (Beam angle: 31.4°)
 — C90 - C270 (Beam angle: 39.8°)

Calumma XL MC RGBW 6500K
30x90dg



Distance [m]	Cone diameter [m]	E(0°)	E(C90)	E(C0)	Illuminance [lx]
0.50	1.0 0.30	23314 E(C90) 45.3° E(C0) 16.8°	4750 45.3° 10242 16.8°	23314	
1.0	2.0 0.60	5828 E(C90) 45.3° E(C0) 16.8°	1188 45.3° 2560 16.8°	5828	
1.5	3.0 0.91	2990 E(C90) 45.3° E(C0) 16.8°	528 45.3° 1138 16.8°	2990	
2.0	4.0 1.2	1497 E(C90) 45.3° E(C0) 16.8°	297 45.3° 640 16.8°	1497	
2.5	5.1 1.5	933 E(C90) 45.3° E(C0) 16.8°	190 45.3° 410 16.8°	933	
3.0	6.1 1.8	648 E(C90) 45.3° E(C0) 16.8°	132 45.3° 284 16.8°	648	

Distance [m] Cone diameter [m] Illuminance [lx]
 — C0 - C180 (Beam angle: 15.4°)
 — C90 - C270 (Beam angle: 50.6°)