LEDS C4

Installation Instructions
3D File
Photometry
Dialux | ULD
Revit

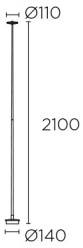
Invisible 2100mm

Francesc Vilaró

25-9733-05-M1

Bollard IP54 Invisible 2100mm LED 9W 3000K Black 469lm





TECHNICAL FEATURES

IP54 IK04 355º

Power (W) : 9W

Total power consumption of light (W) : 12.3W

Real lumens : 469

Real lm/W : 38

Correlated Colour Temperature (CCT) : LED warm-white 3000K

Lens / reflector angle : HORIZONTAL 111º

Structure material : Aluminium, Fibreglass

Structure finish : Black

Diffuser material : Polycarbonate

Diffuser finish : Opal

Useful life : 50.000h L80B20

Equipment included : Yes, electronic

Voltage / frequency : 100-240V/50-60Hz

Warranty : 5 Years

Max. temperature : 25ºC

Seaside : Yes

Energy efficiency : LED A++

LUMINOTECHNIC FEATURES

Light source: LED

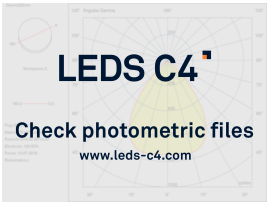
Luminance C0º65º: 12402.6

Luminance 90º65º: 12082.4

CRI: 80

MacAdam steps: 3

Photobiological risk: RG0





LOGISTICS

Net weight (kg): 0.64

Packaged weight (kg): 1.35

Packaging: 155mm x 110mm x 1110mm

2 Un

LIGHT APPLICATION



Luminaire		**Measurem.**		**Lamp**	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	

Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm
Maximum value	159.81 cd	Position	C=0.00 G=0.00	Double Symmetrical	

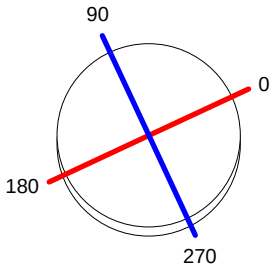
Round Luminaire	Diam. 110 mm	Height 20 mm			
Round Luminous Area	Diam. 105 mm	Height 10 mm			
Horizontal Luminous Area	0.008659 m2		Emitting area on Plane 180°	0.001050 m2	
Emitting area on Plane 0°	0.001050 m2		Emitting area on Plane 270°	0.001050 m2	
Emitting area on Plane 90°	0.001050 m2		Glare area at 76°	0.003114 m2	
Symmetry Type	Double Symmetrical		Maximum Gamma Angle	180	
Measurement Distance	0.00		Measurement Flux	469.49 lm	
Operator	Asselum T2		Source voltage		
Temperature	25.00 °C		Source current		
Humidity	60.00 %		Photocell		
Notes					

Luminaire Lamps

Line	Code	Name	Flux [lm]	Pow. [W]	Q.ty
Eulumdat	25-9733-05-M1	25-9733-05-M1 - 9.00 W	469.49	9.00	1

C.I.E.	46 78 94 98 100	D DIN 5040	A31
F UTE	0.98 E + 0.02 T	B NBN	BZ 5

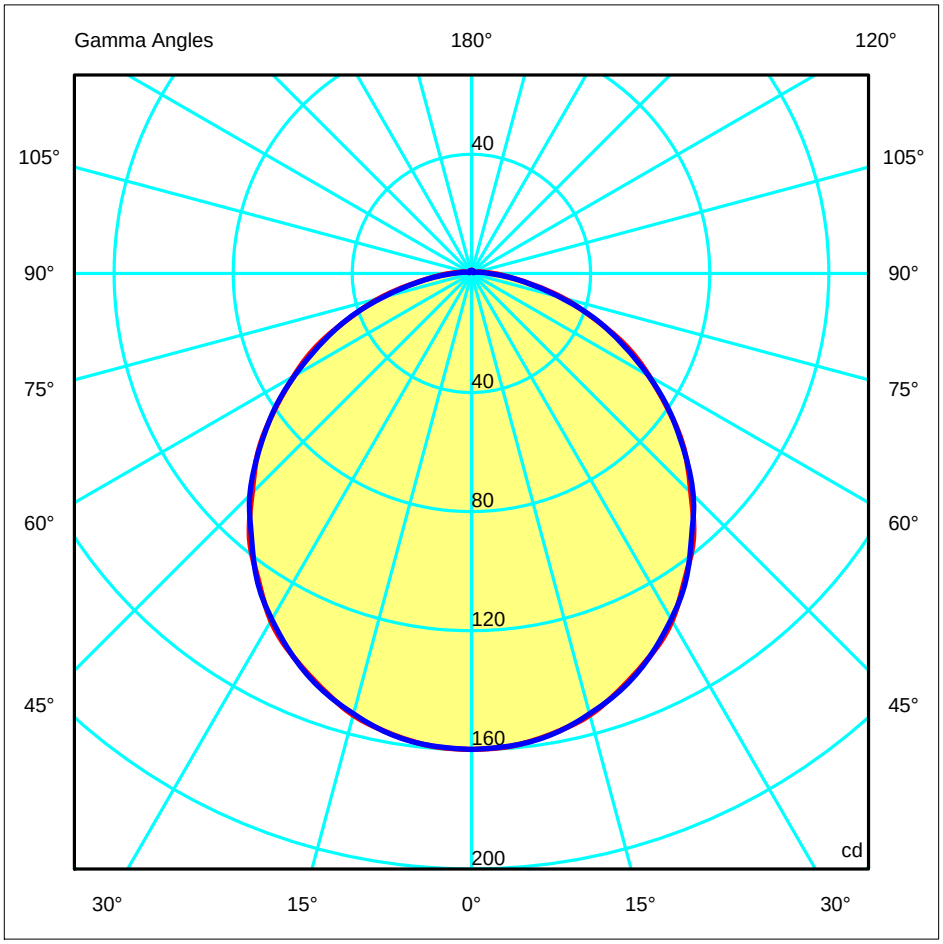
Diam=110mm



C Halfplanes

180.0 — 0.0

270.0 — 90.0

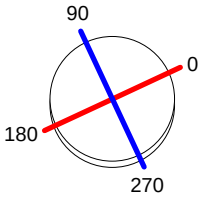


ULOR	2.18 %
DLOR	97.82 %
RN	2.18 %

Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	

Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

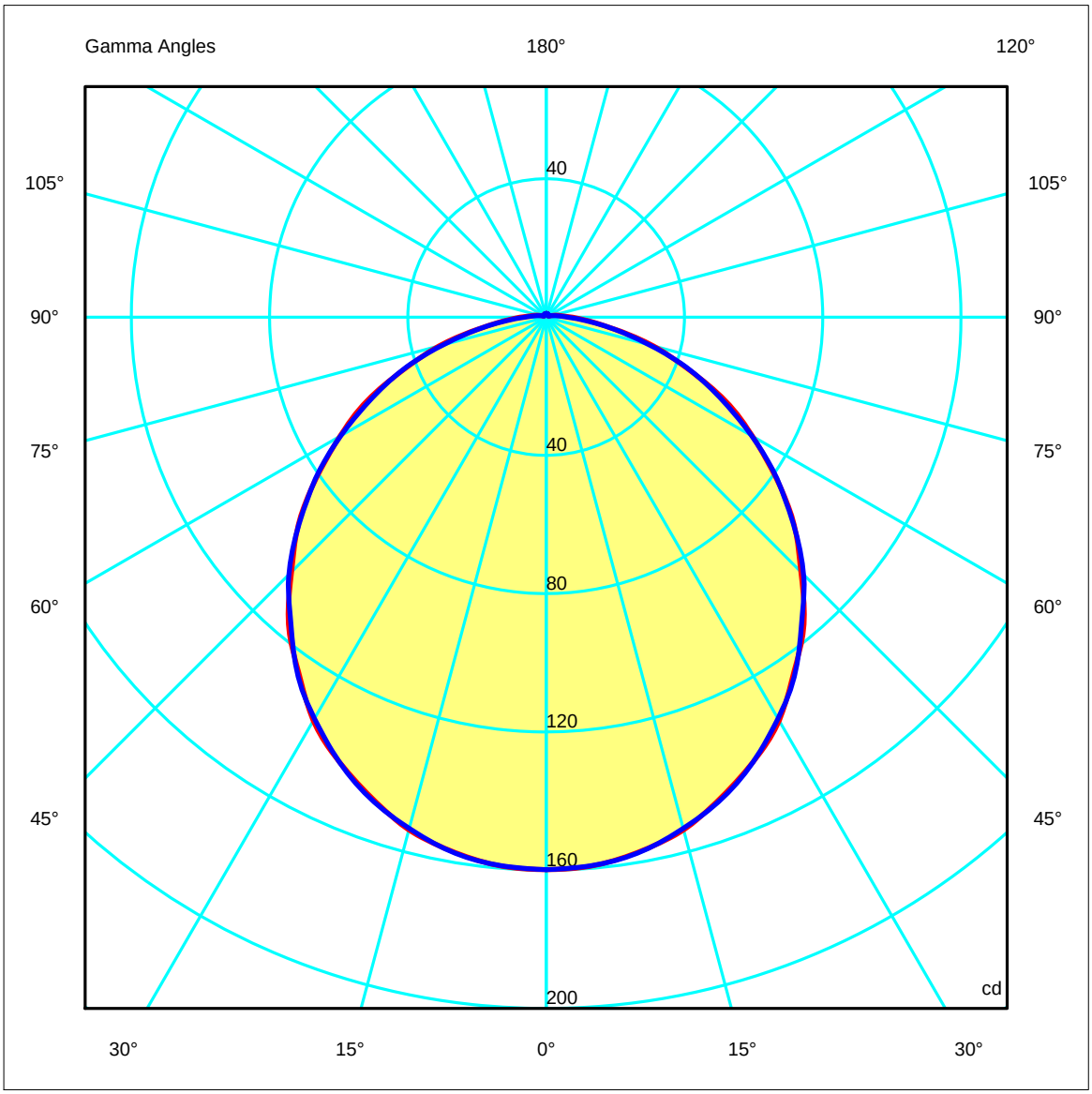
Diam=110mm



C Halfplanes

180.0 — 0.0

270.0 — 90.0



Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	

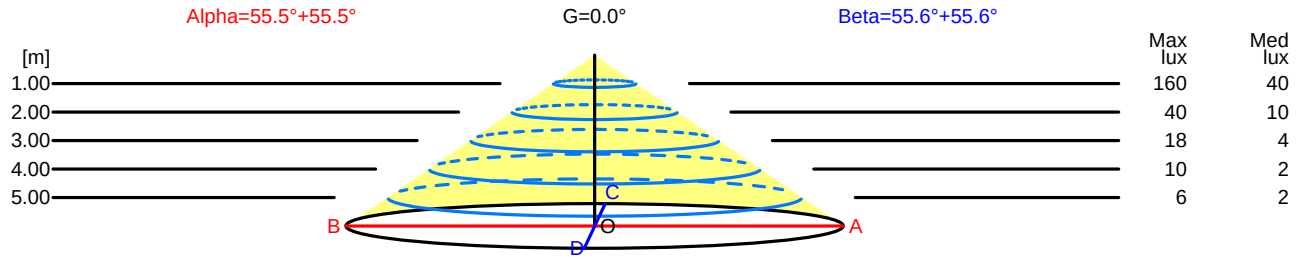
Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

Width at 50.00 % of Max Intensity

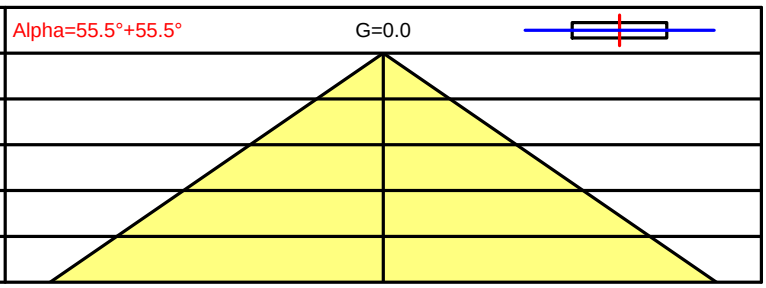
H[m]	1.00	2.00	3.00	4.00	5.00	H[m]	1.00	2.00	3.00	4.00	5.00
OA	1.45	2.91	4.36	5.82	7.27	OC	1.46	2.92	4.39	5.85	7.31
OB	1.45	2.91	4.36	5.82	7.27	OD	1.46	2.92	4.39	5.85	7.31

Luminous Intensities [cd]

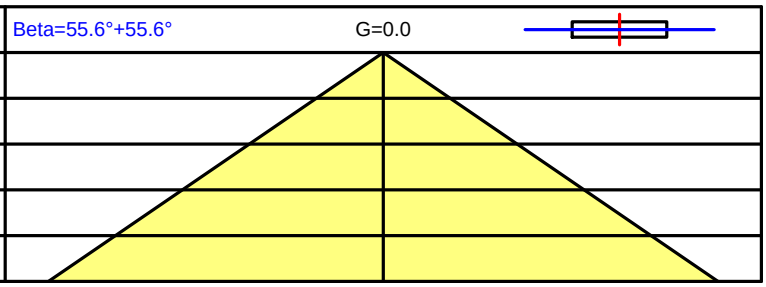
	0	5	15	25	35	45	55	65	75	85
OA	159.81	159.24	153.56	141.85	125.01	104.15	81.18	57.19	31.97	12.28
OB	159.81	159.24	153.56	141.85	125.01	104.15	81.18	57.19	31.97	12.28
OC	159.81	159.12	153.08	141.82	125.59	105.33	81.47	55.71	30.81	11.44
OD	159.81	159.12	153.08	141.82	125.59	105.33	81.47	55.71	30.81	11.44



H[m]	D[m]	Max lux	Med lux
1.00	2.91	160	40
2.00	5.82	40	10
3.00	8.73	18	4
4.00	11.64	10	2
5.00	14.55	6	2



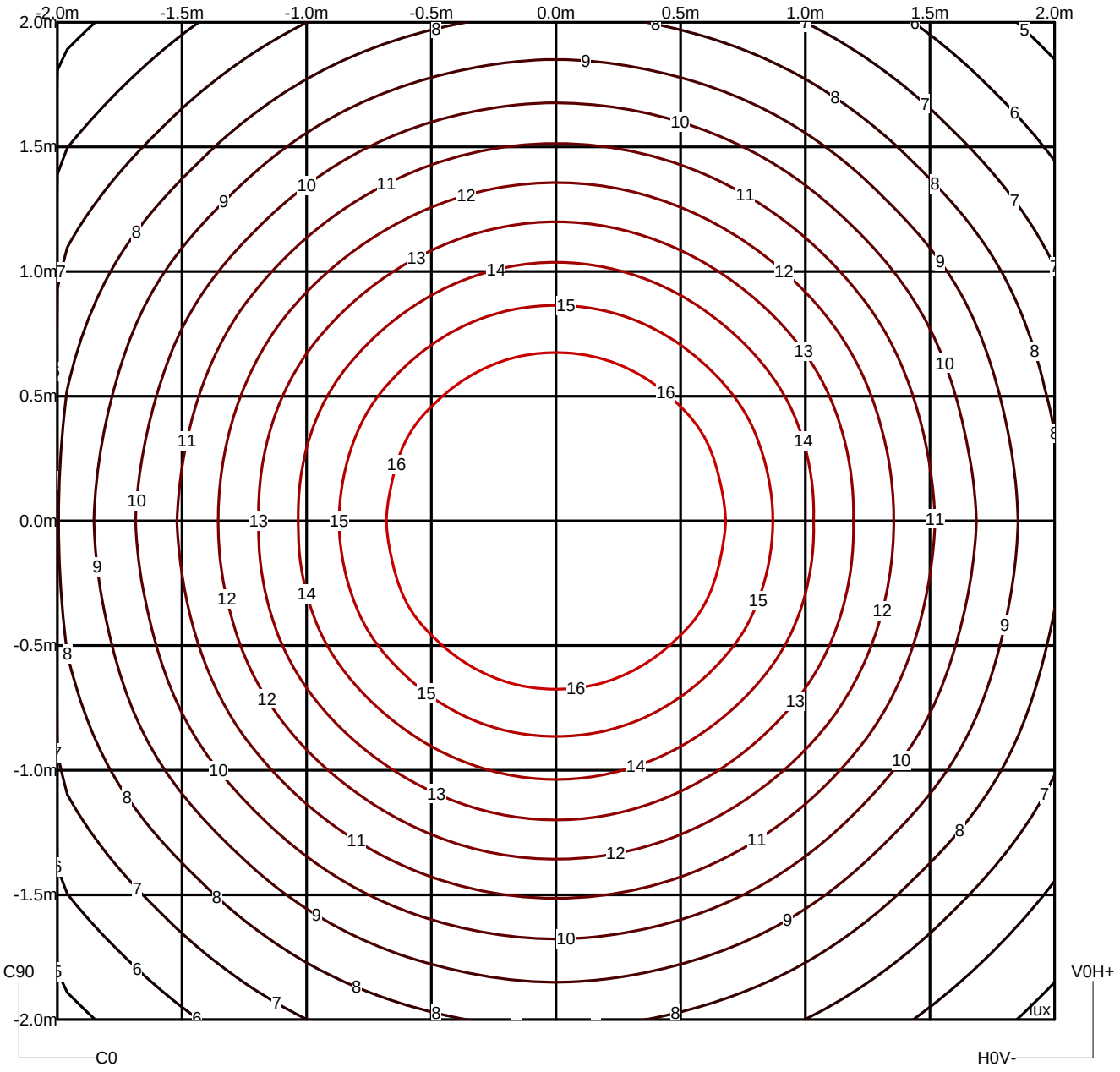
H[m]	D[m]	Max lux	Med lux
1.00	2.92	160	40
2.00	5.85	40	10
3.00	8.77	18	4
4.00	11.70	10	2
5.00	14.62	6	2



Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	
Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

Isolux (Floor)

Luminaire position X=0.00m Y=0.00m Z=3.00m



Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	

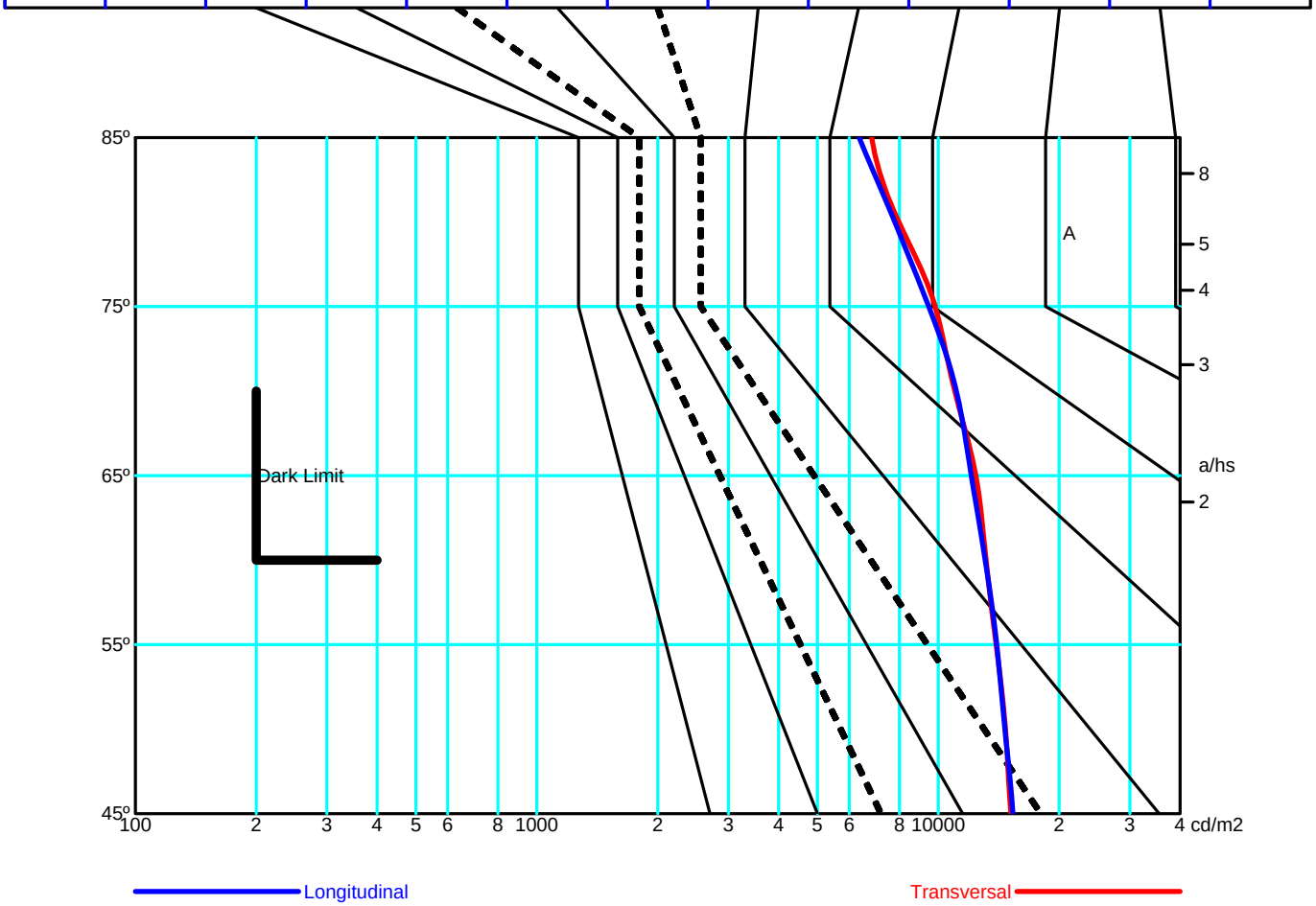
Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

Average Luminance [cd/m²]

	45°	50°	55°	60°	65°	70°	75°	80°	85°	
0.0°	15170	14702	13933	13149	12403	10985	9822	7975	6821	---
90.0°	15342	14648	13982	13092	12082	11095	9463	7794	6353	---

Flush mounted or longitudinal view

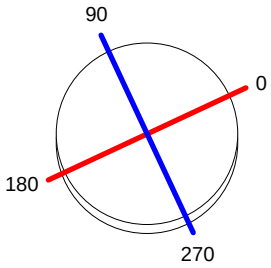
		Illumination(lx)										
A	A	2000	1000	750	500		<300					1.15
B	1		2000	1500	1000	750	500	<300				1.5
C					2000		1000	500	<300			1.85
D	2						2000	1000	500	<300		2.2
E	3							2000	1000	500	<300	2.55



Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	

Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

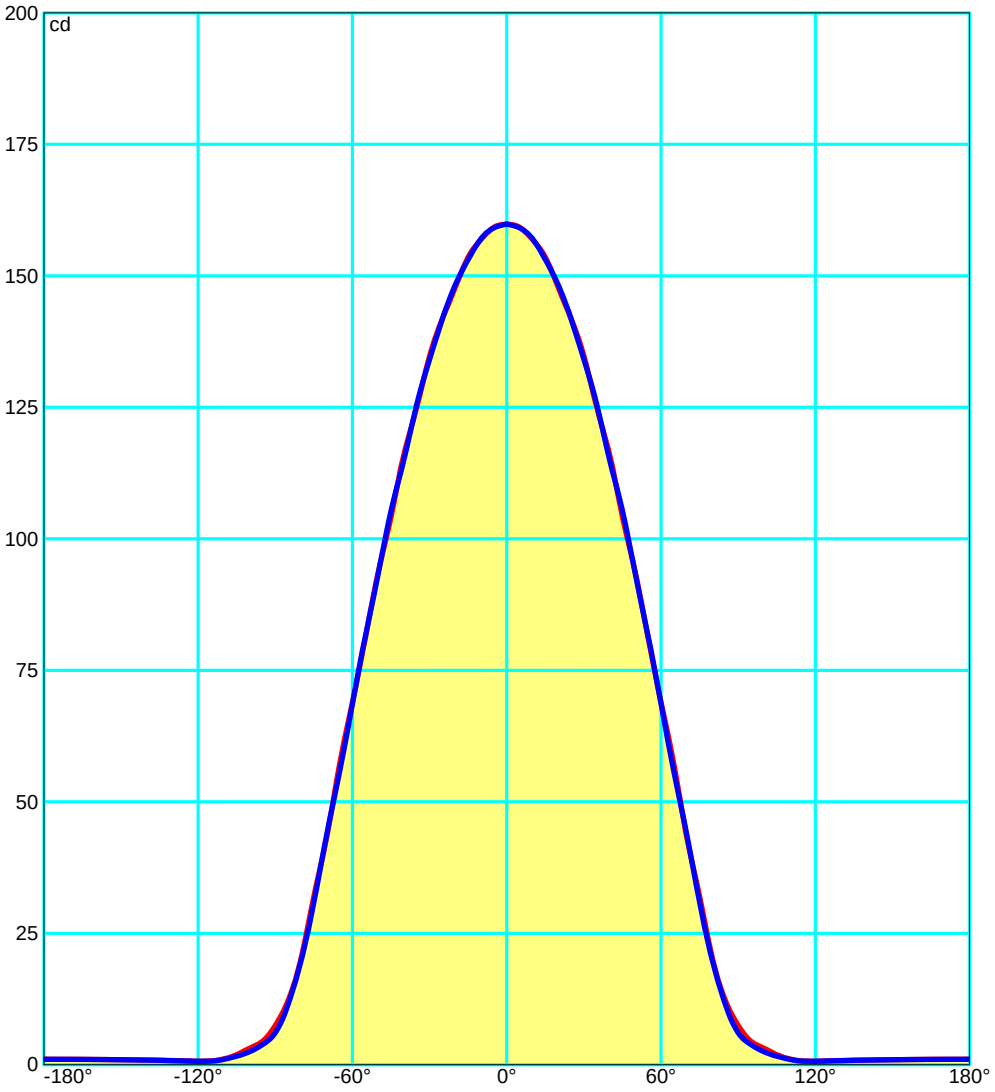
Diam=110mm



C Halfplanes

180.0 0.0

270.0 90.0



Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	
Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

UGR

S = 0.250

Reflectancies										
Ceiling/Cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
WorkingPlane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RoomDimensions	ViewedCrosswise					ViewedEndwise				
x=2H y=2H	21.5	22.8	21.8	23.0	23.3	21.4	22.7	21.7	23.0	23.3
x=2H y=3H	23.0	24.2	23.3	24.5	24.7	22.9	24.1	23.3	24.4	24.7
x=2H y=4H	23.6	24.7	24.0	25.0	25.3	23.5	24.6	23.9	24.9	25.3
x=2H y=6H	24.0	25.1	24.4	25.4	25.6	23.9	24.9	24.3	25.3	25.6
x=2H y=8H	24.2	25.2	24.6	25.5	25.8	24.0	25.0	24.4	25.4	25.8
x=2H y=12H	24.3	25.3	24.7	25.6	25.8	24.1	25.1	24.5	25.5	25.8
x=4H y=2H	22.2	23.3	22.6	23.6	23.9	22.2	23.3	22.5	23.6	23.9
x=4H y=3H	23.9	24.9	24.3	25.2	25.5	23.8	24.8	24.2	25.1	25.5
x=4H y=4H	24.6	25.5	25.1	25.9	26.2	24.5	25.3	24.9	25.7	26.2
x=4H y=6H	25.2	25.9	25.7	26.4	26.6	25.0	25.8	25.5	26.2	26.6
x=4H y=8H	25.4	26.1	25.9	26.5	26.8	25.2	25.9	25.7	26.3	26.8
x=4H y=12H	25.6	26.2	26.0	26.6	26.9	25.3	26.0	25.8	26.4	26.9
x=8H y=4H	24.9	25.6	25.4	26.1	26.4	24.8	25.5	25.3	25.9	26.4
x=8H y=6H	25.6	26.2	26.1	26.7	27.0	25.5	26.0	25.9	26.5	27.0
x=8H y=8H	25.9	26.4	26.4	26.9	27.2	25.7	26.2	26.2	26.7	27.2
x=8H y=12H	26.2	26.6	26.7	27.1	27.4	25.9	26.4	26.5	26.9	27.4
x=12H y=4H	24.9	25.6	25.4	26.0	26.4	24.8	25.5	25.3	25.9	26.4
x=12H y=6H	25.7	26.2	26.2	26.7	27.0	25.5	26.0	26.0	26.5	27.0
x=12H y=8H	26.0	26.5	26.6	27.0	27.3	25.8	26.3	26.4	26.8	27.3

Luminaire		Measurem.		Lamp	
Code	25-9733-05-M1	Code	25-9733-05-M1	Code	25-9733-05-M1
Name	Pie INVISIBLE 9W warm white	Name	Pie INVISIBLE 9W warm white	Number	1
Line	Eulumdat	Date	16-09-2014	Position	
Efficiency	100.00%	Coordinate system	CG	Total Flux	469.49 lm

Total Flux=469.49 Luminaire Flux=469.48

RI	0.60	0.80	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	10.00	20.00
DRR	0.30	0.39	0.46	0.53	0.58	0.67	0.73	0.77	0.82	0.85	0.92	0.96
RC	5	5	5	5	5	5	5	5	5	5	5	5

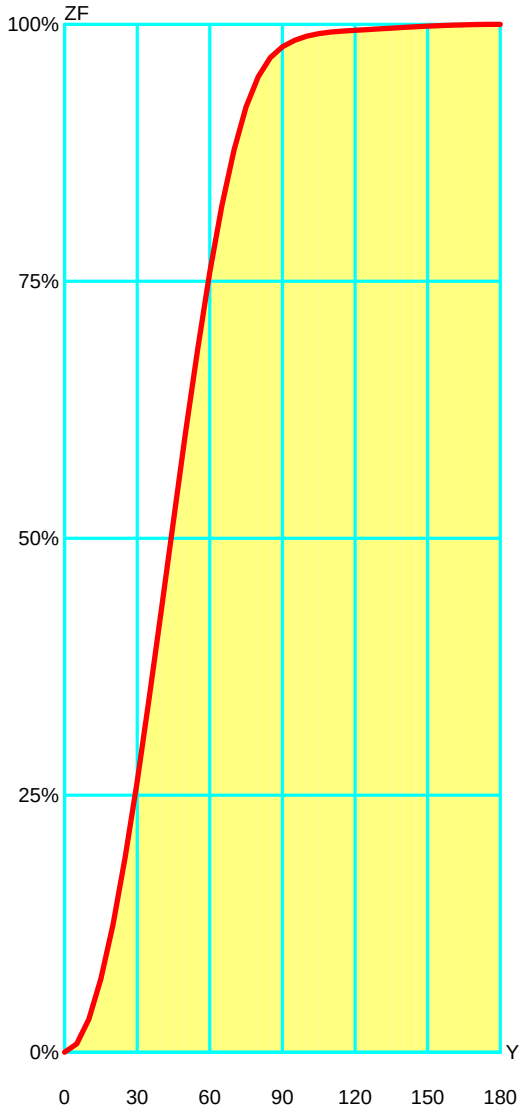
Zonal Flux per 1000 Lumen

Y°	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
ZF(Y)	32	124	264	431	603	759	878	949	978	988	993	994	996	997	998	999	1000	1000

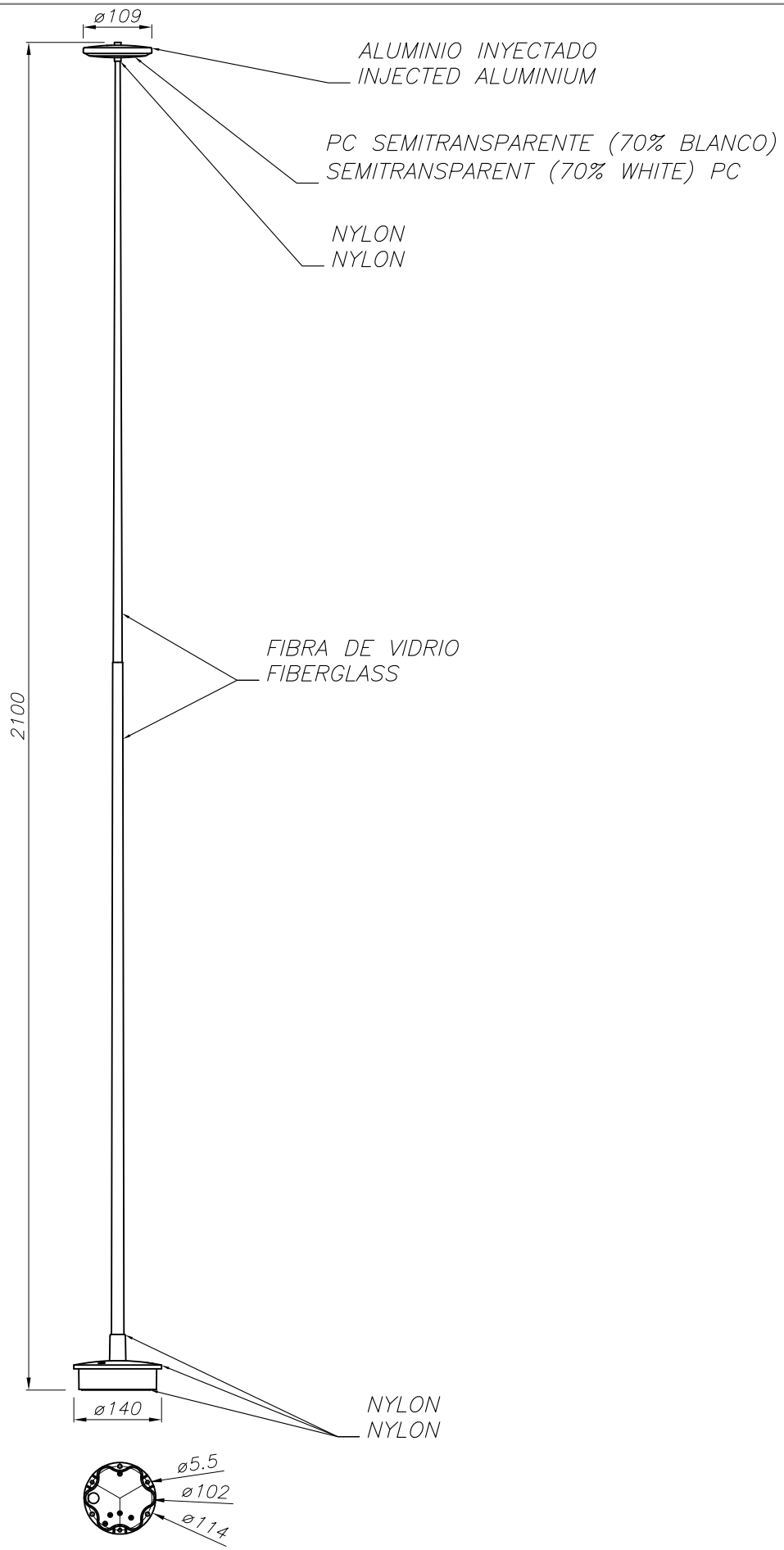
CIE Flux Codes

46 78 94 98 100

C.I.E.	5	LOR	99.99872 %
D DIN 5040	A31	ULOR	2.18335 %
F UTE	0.98 E + 0.02 T	DLOR	97.81537 %
B NBN	BZ 5	UFF	2.18338 %
RN	2.18338 %	DFF	97.81662 %
BLF	1.0	FFR	2.23212 %



Zonal Flux				
Gamma °	Flux	Sum lm	Flux [%]	Sum [%]
0°	0.00	0.00	0.00%	0.00 %
5°	8.12	8.12	0.81 %	0.81 %
10°	24.09	32.21	2.41 %	3.22 %
15°	39.21	71.42	3.92 %	7.14 %
20°	52.94	124.35	5.29 %	12.44 %
25°	64.80	189.15	6.48 %	18.92 %
30°	74.41	263.57	7.44 %	26.36 %
35°	81.45	345.01	8.14 %	34.50 %
40°	85.65	430.66	8.56 %	43.07 %
45°	87.03	517.69	8.70 %	51.77 %
50°	85.53	603.22	8.55 %	60.32 %
55°	81.18	684.40	8.12 %	68.44 %
60°	74.31	758.71	7.43 %	75.87 %
65°	65.14	823.84	6.51 %	82.39 %
70°	54.10	877.94	5.41 %	87.80 %
75°	41.81	919.75	4.18 %	91.98 %
80°	29.32	949.08	2.93 %	94.91 %
85°	18.43	967.51	1.84 %	96.75 %
90°	10.65	978.15	1.06 %	97.82 %
95°	6.22	984.37	0.62 %	98.44 %
100°	3.99	988.36	0.40 %	98.84 %
105°	2.60	990.96	0.26 %	99.10 %
110°	1.57	992.53	0.16 %	99.25 %
115°	0.93	993.46	0.09 %	99.35 %
120°	0.71	994.17	0.07 %	99.42 %
125°	0.69	994.87	0.07 %	99.49 %
130°	0.70	995.56	0.07 %	99.56 %
135°	0.70	996.26	0.07 %	99.63 %
140°	0.68	996.95	0.07 %	99.70 %
145°	0.65	997.60	0.06 %	99.76 %
150°	0.59	998.19	0.06 %	99.82 %
155°	0.52	998.72	0.05 %	99.87 %
160°	0.44	999.16	0.04 %	99.92 %
165°	0.36	999.52	0.04 %	99.95 %
170°	0.26	999.78	0.03 %	99.98 %
175°	0.16	999.93	0.02 %	99.99 %
180°	0.05	999.99	0.01 %	100.00 %

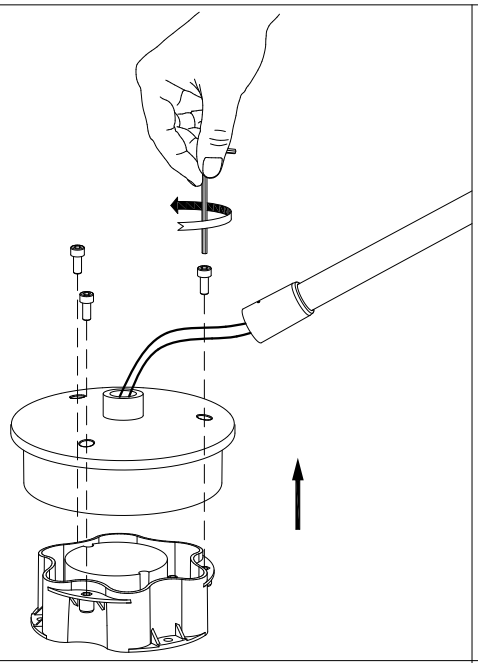


PLANTILLA DE INSTALACION
INSTALLATION TEMPLATE

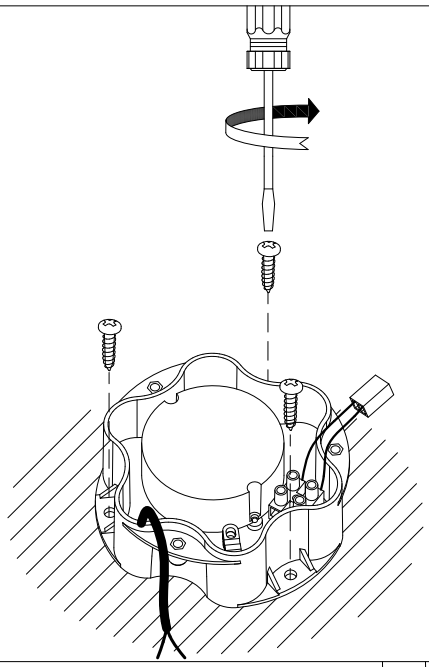
OUTDOOR

25-9733

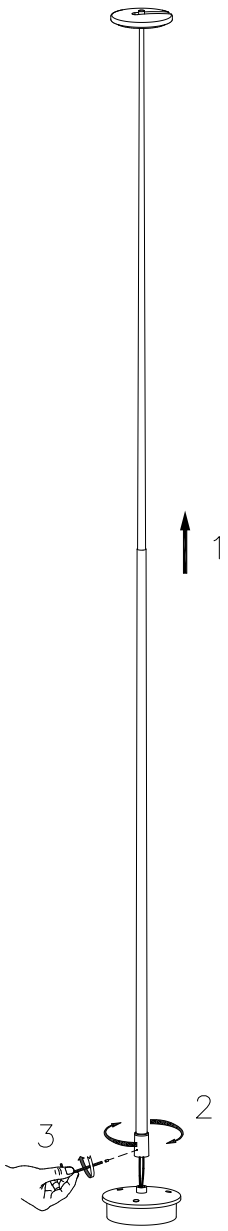
① OFF



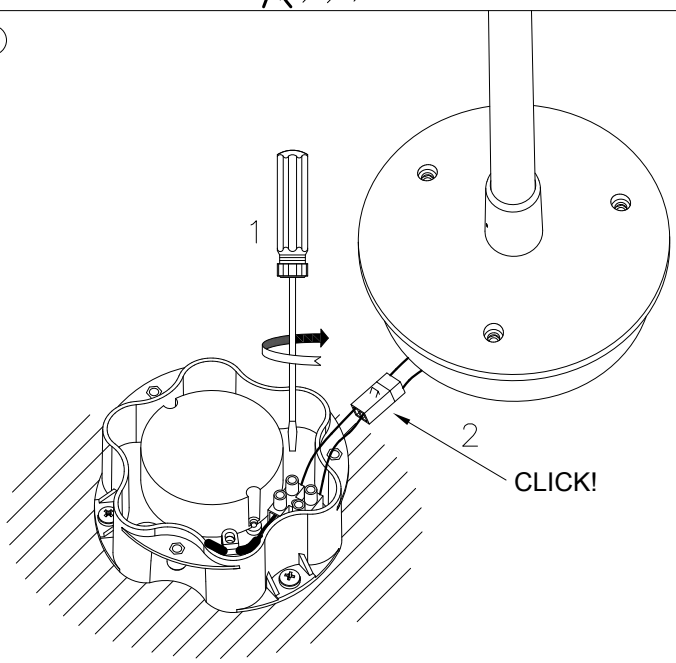
②



③



④



⑤

