

NERI

Nebula Bollard

Fixing: on ground

Technical sheet

Rev. 03 - 2024/03/19

DESCRIPTION

Compliance



- ENEC safety mark.
- In compliance with EN 60598-1; EN 60598-2-3; EN 62031; EN 55015 EMC; EN 61547 EMC; EN 61000-3-2/3; IEC/TR 62778.

Dimensions

Height	Width	Length	Weight	IP	IK	Area (S)
1065 mm	100 mm	218 mm	8 Kg	66	08	0.15 m ²

Electrical characteristics

Voltage	Frequency	Cos φ	Insulation class	Operative Temp.
220-240V	50/60Hz	> 0.9	CL II	-35°C/+50°C

- Insulation Class I on demand.

Fixing

- Bracket with a tilting system (step 0° / ±30° / ±45°).
- Central frame with a tilting system of ± 45°.
- Fixing by two headless screws M6 stainless steel.

Materials

- Extruded aluminium.
- Galvanized steel.
- Extra clear transparent or prismatic tempered flat glass.
- Stainless or burnished steel fasteners.

Structure – Main components

- External frame and body in extruded aluminium.
- Shield in extra-clear transparent or prismatic tempered glass with impact resistance IK08 (EN 62262).
- Integrated heat sink in aluminium.

Electrical features

- Electronic power supply with protection against short circuits, overheating and power surges.
- Predisposition for two PG13.5 cable glands (Ø 6 - 12 mm).
- Standard surge protection for differential/common mode 10kV/10kV (CL I, CL II).

Operations and maintenance

- Please refer to the installation and maintenance manual of the product.
- It is responsibility of the installer the correct installation and electric connection in accordance with applicable regulations.

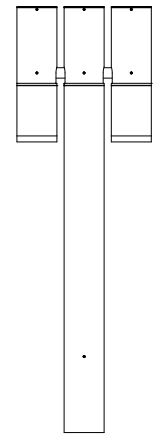
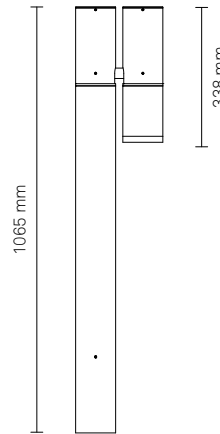
Finish

- Powder coating or anodising.
- Powder coating:
 - Neri grey
 - Pure white
 - White aluminum
 - Grey aluminum
 - Jet black
 - Moss green
- Information about paint steps used on this product in specific technical sheet.

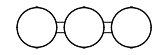
Accessories

- Glare shield available in 30° and 45° versions (Cod. 9515.145.017 - 30°, Cod. 9515.145.018 - 45°).
- Refractor screen (Linear diffusion).

DRAWINGS



Ø 100 mm



NERI

Nebula Bollard

Version: ST
Screen: Prismatic

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - ST

Transparent flat glass - High Power LED

Lighting distribution	Screen	LOR	ULOR
Type I	Prismatic	100%	0%
Type II	Prismatic	100%	0%
Type IV	Prismatic	100%	0%
Type V	Prismatic	100%	0%

- LOR: optical efficiency appliance due to the physical shielding.
- Refractive lens in PMMA.

LUMINOUS FLUX

Colour Temperature		2.700K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,000	12.5	80	8	467	10.5
1,500	18.7	80	8	700	15.7

Colour Temperature		3.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,000	11.6	86	8	420	9.3
1,500	17.4	86	8	630	14.0

Colour Temperature		4.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,000	10.3	97	8	393	8.7
1,500	15.5	97	8	590	13.0

- * The energy values in the table refer to LED module + driver.
- LED type: NVSLE21A Nichia.
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 60,000 h L80B10 (Tq=25°C).
- Colour Rendering Index: CRI > 80.
- Photobiological risk (IEC/TR 62778): class RG1 to class RG2 at 1.5m from source.
- Photobiological risk (EN62471): class RG0 at 2 m from source.

DRIVER FUNCTIONS

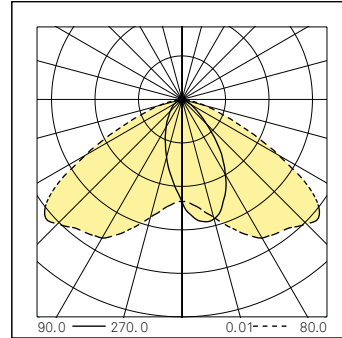
ON-OFF

NVL + PRIORITY DALI

POLAR DIAGRAMS

Type I

Luminous intensity class G*6

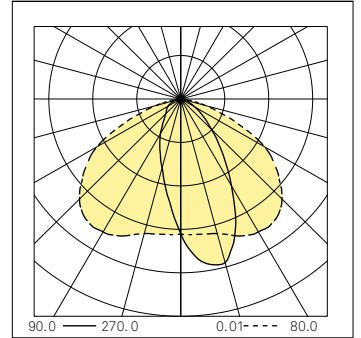


CIE flux code
N.1 N.2 N.3 N.4 N.5
55 88 99 100 100



Type II

Luminous intensity class G*6

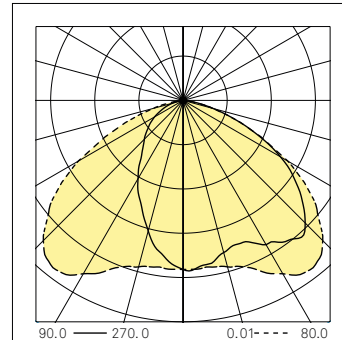


CIE flux code
N.1 N.2 N.3 N.4 N.5
58 87 98 100 100

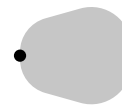


Type IV

Luminous intensity class G*6

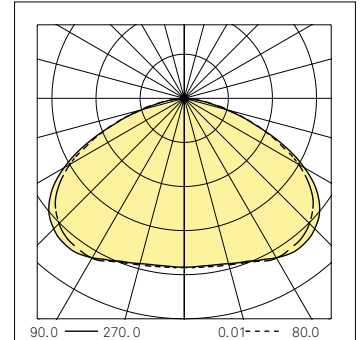


CIE flux code
N.1 N.2 N.3 N.4 N.5
45 82 97 100 100



Type V

Luminous intensity class G*6



CIE flux code
N.1 N.2 N.3 N.4 N.5
33 72 96 100 100



NEBULA BOLLARD - PR
Transparent flat glass - COB LED

Lighting distribution	Screen	LOR	ULOR
30° Medium narrow spot	Transparent	100%	0%
60° Medium flood	Transparent	100%	0%
70° Medium wide flood	Transparent	100%	0%
80° Medium wide flood	Transparent	100%	0%

- LOR: optical efficiency appliance due to the physical shielding.
- Single lens, silicone.

LUMINOUS FLUX

Colour Temperature		2.700K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,500	13.9	108	1	393	11.5
2,500	24.0	104	1	655	20.7

Colour Temperature		3.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,500	13.4	112	1	382	11.2
2,500	23.3	107	1	637	20.0

Colour Temperature		4.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,500	12.6	119	1	363	10.5
2,500	22.0	114	1	605	18.9

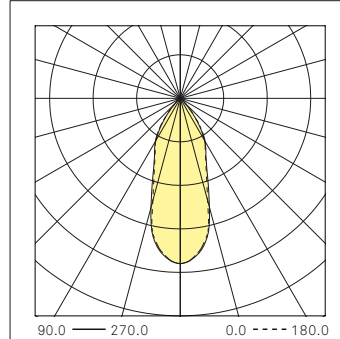
* The energy values in the table refer to LED module + driver.
- LED type: COB CREE CMU 2287.
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 75.000h L80B10 (Tq = 50°C).
- Colour Rendering Index: CRI > 80.
- Photobiological risk (IEC/TR 62778): class RG1 to class RG2 at 3m from source.
- Photobiological risk (EN62471): class RG0 at 4 m from source.

DRIVER FUNCTIONS

ON-OFF
NVL + PRIORITY DALI

POLAR DIAGRAMS

30° Medium narrow spot
Luminous intensity class G*6

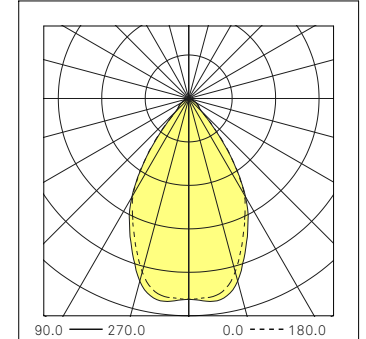


CIE flux code

N.1	N.2	N.3	N.4	N.5
89	97	99	100	100



60° Medium flood
Luminous intensity class G*6

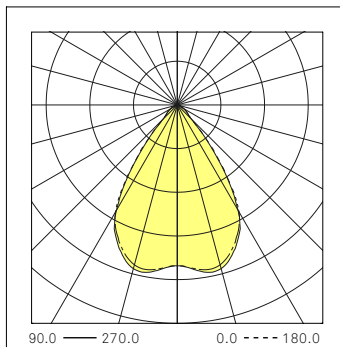


CIE flux code

N.1	N.2	N.3	N.4	N.5
85	96	99	100	100



70° Medium wide flood
Luminous intensity class G*6

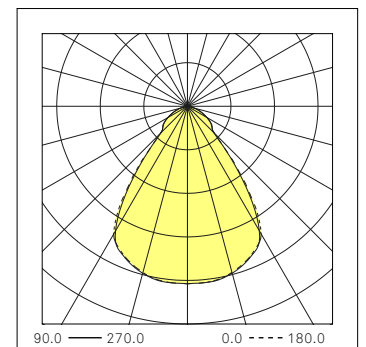


CIE flux code

N.1	N.2	N.3	N.4	N.5
85	96	99	100	100



80° Medium wide flood
Luminous intensity class G*6



CIE flux code

N.1	N.2	N.3	N.4	N.5
74	91	99	100	100



NERI

Nebula Bollard

Version: RGBW
Screen: Transparent

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - RGBW

Transparent flat glass - High Power LED

Lighting distribution	Screen	LOR	ULOR
15° Very narrow spot	Transparent	100%	0%
25° Narrow spot	Transparent	100%	0%
35° Medium narrow spot	Transparent	100%	0%

- LOR: optical efficiency appliance due to the physical shielding.
- Single lens, silicone.

LUMINOUS FLUX

System*	RGBW				
	LED module				
Colour	lm tot	λ (nm)	n LED	mA	W
Red	270 (R)	623	3	550	3.5
Green	210 (G)	517	3	550	4.5
Blu	75 (B)	455	3	550	4.5
White	390 (W)	warm	3	550	4.5

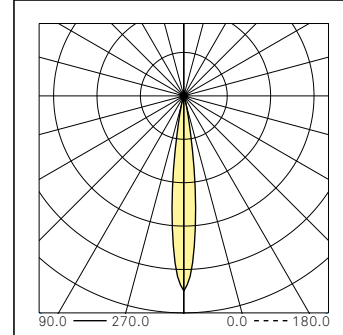
- * The energy values in the table refer to LED module.
- LED type: Cree XM-L Color.
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 91.000h L90B10 (Tq = 25°C).

DRIVER FUNCTIONS

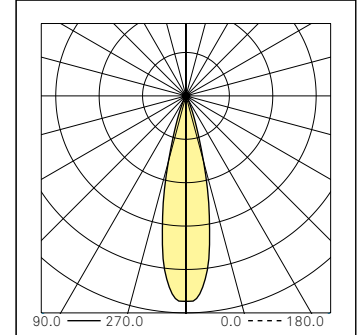
DMX

POLAR DIAGRAMS

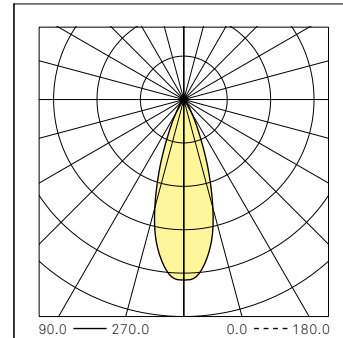
15° Very narrow spot



25° Narrow spot



35° Medium narrow spot



NERI

Nebula Bollard

Version: Amber
Screen: Prismatic

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - A

Prismatic flat glass - High Power LED

Lighting distribution	Screen	LOR	ULOR
Type II	Prismatic	100%	0%
Type V	Prismatic	100%	0%

- LOR: optical efficiency appliance due to the physical shielding.
- Refractive lenses in PMMA.

LUMINOUS FLUX

Colour Temperature			Amber		
System*			LED module		
Colour	lm tot	λ (nm)	n LED	mA	W
Amber	350	598	12	700	18.0

- * The energy values in the table refer to LED module + driver.
- LED type: Cree XB-D.
 - Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 60.000h L80B10 ($T_q = 25^\circ\text{C}$).

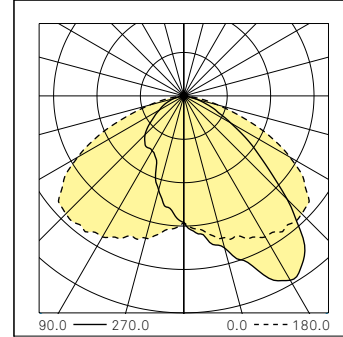
DRIVER FUNCTIONS

1-10V (Analogic control)

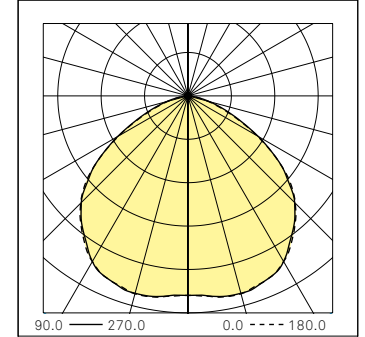
DALI (Digital control)

POLAR DIAGRAMS

Type II



Type V



DESCRIPTION

Compliance



- ENEC safety mark.
- In compliance with EN 60598-1; EN 60598-2-3; EN 62031; EN 55015 EMC; EN 61547 EMC; EN 61000-3-2/3; IEC/TR 62778.

Dimensions

Height	Width	Length	Weight	IP	IK	Area (S)
2740 mm	100 mm	218 mm	11 Kg	66	08	0.30 m ²

Electrical characteristics

Voltage	Frequency	Cos φ	Insulation class	Operative Temp.
220-240V	50/60Hz	> 0.9	CL II	-35°C/+50°C

- Insulation Class I on demand.

Fixing

- Flange Ø 230 mm (thickness 5 mm), for mounting with three anchors bolts to the foundation plinth.
- We recommend mounting with hidden flange, positioned 100 mm below the final pavement level.
- Joint with tilt adjustment (step 0° / ±30° / ±45°).
- Central frame with a tilting system of ± 45°.
- Fixing by two headless screws stainless steel.

Materials

- Extruded aluminium.
- Galvanized steel.
- Extra clear transparent or prismatic tempered flat glass.
- Stainless or burnished steel fasteners.

Structure – Main components

- External frame and body in extruded aluminium.
- Shield in extra-clear transparent or prismatic tempered glass with impact resistance IK08 (EN 62262).
- Integrated heat sink in aluminium.

Electrical features

- Electronic power supply with protection against short circuits, overheating and power surges.
- Predisposition for two PG13.5 cable glands (Ø 6 - 12 mm).
- Standard surge protection for differential/common mode 10kV/10kV (CL I, CL II).

Operations and maintenance

- Please refer to the installation and maintenance manual of the product.
- It is responsibility of the installer the correct installation and electric connection in accordance with applicable regulations.

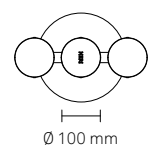
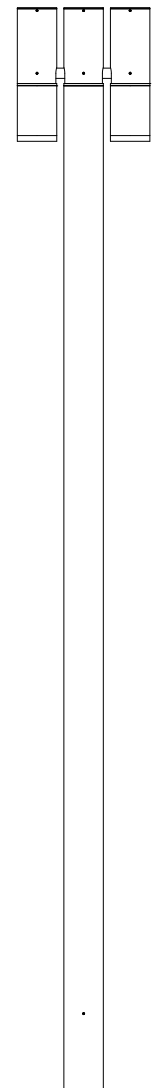
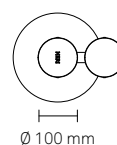
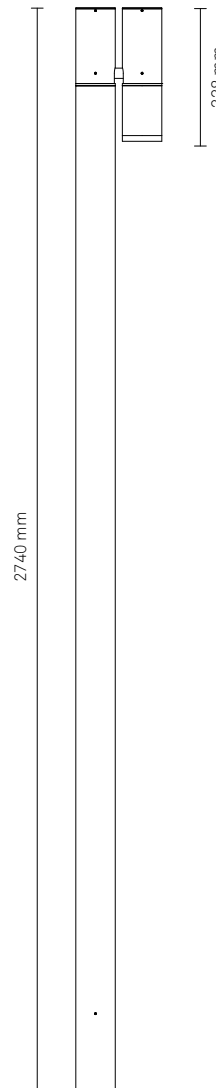
Finish

- Powder coating or anodising.
- Powder coating:
 - Neri grey
 - Pure white
 - White aluminum
 - Grey aluminum
 - Jet black
 - Moss green
- Information about paint steps used on this product in specific technical sheet.

Accessories

- Post base cover
- Glare shield available in 30° and 45° versions (Cod. 9515.145.017 - 30°, Cod. 9515.145.018 - 45°).
- Refractor screen (Linear diffusion).

DRAWINGS



NERI

Nebula Bollard

Version: ST
Screen: Transparent

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - ST

Transparent flat glass - High Power LED

Lighting distribution	Screen	LOR	ULOR
Type I	Prismatic	100%	0%
Type II	Prismatic	100%	0%
Type IV	Prismatic	100%	0%
Type V	Prismatic	100%	0%

- LOR: optical efficiency appliance due to the physical shielding.
- Refractive lens in PMMA.

LUMINOUS FLUX

Colour Temperature		2.700K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,000	12.5	80	8	467	10.5
1,500	18.7	80	8	700	15.7

Colour Temperature		3.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,000	11.6	86	8	420	9.3
1,500	17.4	86	8	630	14.0

Colour Temperature		4.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,000	10.3	97	8	393	8.7
1,500	15.5	97	8	590	13.0

- * The energy values in the table refer to LED module + driver.
- LED type: NVSLE21A Nichia.
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 100.000h L80B10 (Tq = 25°C).
- Colour Rendering Index: CRI > 80.
- Photobiological risk (IEC/TR 62778): class RG1 to class RG2 at 1.5m from source.
- Photobiological risk (EN62471): class RG0 at 2 m from source.

DRIVER FUNCTIONS

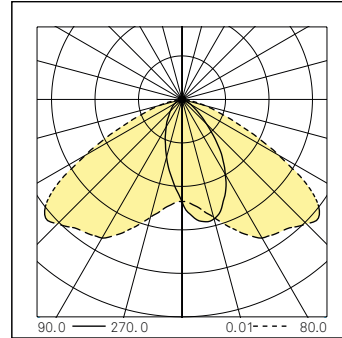
ON-OFF

NVL + PRIORITY DALI

POLAR DIAGRAMS

Type I

Luminous intensity class G*6



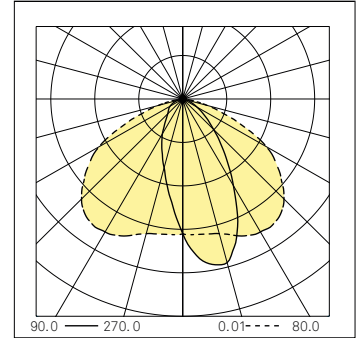
CIE flux code

N.1 N.2 N.3 N.4 N.5
55 88 99 100 100



Type II

Luminous intensity class G*6



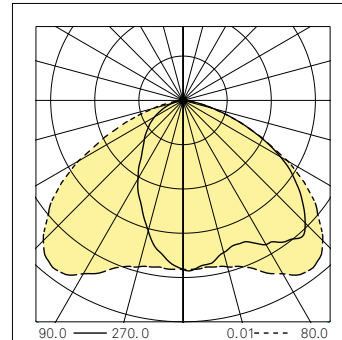
CIE flux code

N.1 N.2 N.3 N.4 N.5
58 87 98 100 100



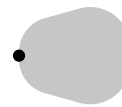
Type IV

Luminous intensity class G*6



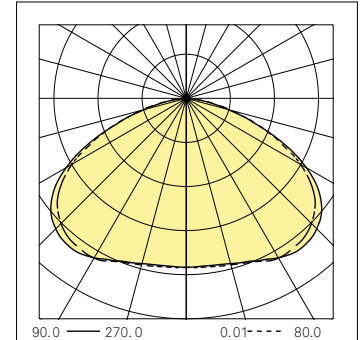
CIE flux code

N.1 N.2 N.3 N.4 N.5
45 82 97 100 100



Type V

Luminous intensity class G*6



CIE flux code

N.1 N.2 N.3 N.4 N.5
33 72 96 100 100



NERI

Nebula Bollard

Version: PR
Screen: Transparent

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - PR
Transparent flat glass - COB LED

Lighting distribution	Screen	LOR	ULOR
30° Medium narrow spot	Transparent	100%	Full Cutoff
60° Medium flood	Transparent	100%	Full Cutoff
70° Medium wide flood	Transparent	100%	Full Cutoff
80° Medium wide flood	Transparent	100%	Full Cutoff

- LOR: optical efficiency appliance due to the physical shielding.
- Single lens, silicone.

LUMINOUS FLUX

Colour Temperature		2.700K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,500	13.9	108	1	393	11.5
2,500	24.0	104	1	655	20.7

Colour Temperature		3.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,500	13.4	112	1	382	11.2
2,500	23.3	107	1	637	20.0

Colour Temperature		4.000K			
System*		LED module			
lm tot	W tot	lm/W	n LED	mA	W
1,500	12.6	119	1	363	10.5
2,500	22.0	114	1	605	18.9

* The energy values in the table refer to LED module + driver.
- LED type: COB CREE CMU 2287.
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 75.000h L80B10 (Tq = 50°C).
- Colour Rendering Index: CRI > 80.
- Photobiological risk (IEC/TR 62778): class RG1 to class RG2 at 3m from source.
- Photobiological risk (EN62471): class RG0 at 4 m from source.

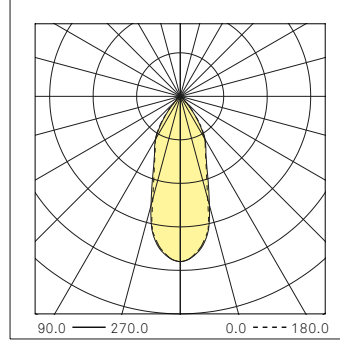
DRIVER FUNCTIONS

ON-OFF

NVL + PRIORITY DALI

POLAR DIAGRAMS

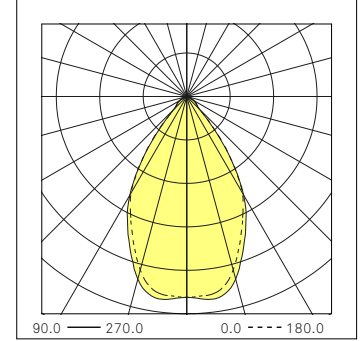
30° Medium narrow spot
Luminous intensity class G*6



CIE flux code
N.1 N.2 N.3 N.4 N.5
89 97 99 100 100



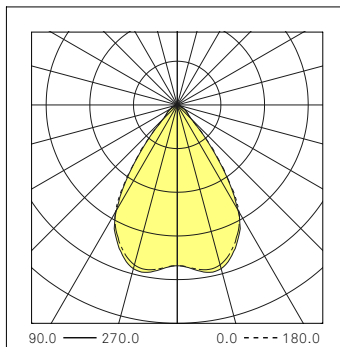
60° Medium flood
Luminous intensity class G*6



CIE flux code
N.1 N.2 N.3 N.4 N.5
85 96 99 100 100



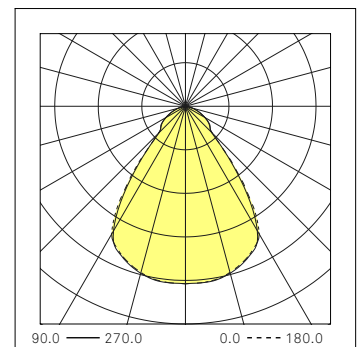
70° Medium wide flood
Luminous intensity class G*6



CIE flux code
N.1 N.2 N.3 N.4 N.5
85 96 99 100 100



80° Medium wide flood
Luminous intensity class G*6



CIE flux code
N.1 N.2 N.3 N.4 N.5
74 91 99 100 100



NERI

Nebula Bollard

Version: RGBW
Screen: Transparent

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - RGBW

Transparent flat glass - High Power LED

Lighting distribution	Screen	LOR	ULOR
15° Very narrow spot	Transparent	100%	Full Cutoff
25° Narrow spot	Transparent	100%	Full Cutoff
35° Medium narrow spot	Transparent	100%	Full Cutoff

- LOR: optical efficiency appliance due to the physical shielding.
- Single lens, silicone.

LUMINOUS FLUX

System*	RGBW				
	LED module				
Colour	lm tot	λ (nm)	n LED	mA	W
Red	333 (R)	623	3	700	4,5
Green	289 (G)	517	3	700	6,0
Blu	89 (B)	455	3	700	6,0
White	500 (W)	warm	3	700	6,0

* The energy values in the table refer to LED module.

- LED type: Cree XM-L Color.

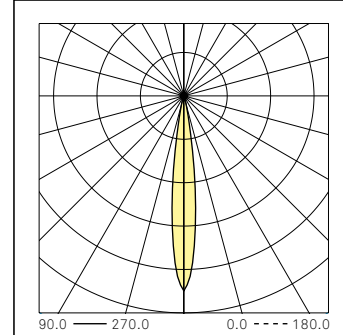
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 80.000h L80B10 (T_q = 25°C).

DRIVER FUNCTIONS

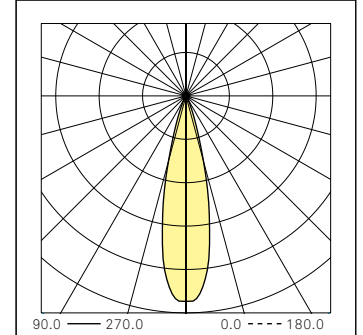
DMX

POLAR DIAGRAMS

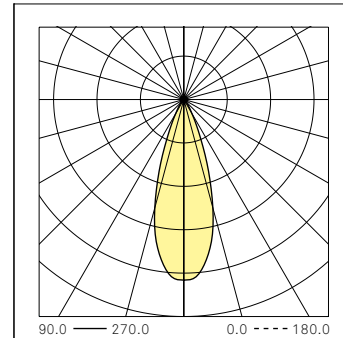
15° Very narrow spot



25° Narrow spot



35° Medium narrow spot



NERI

Nebula Bollard

Version: Amber
Screen: Prismatic

Technical sheet
Rev. 03 - 2024/03/19

NEBULA BOLLARD - A

Prismatic flat glass - High Power LED

Lighting distribution	Screen	LOR	ULOR
Type II	Prismatic	100%	Full Cutoff
Type V	Prismatic	100%	Full Cutoff

- LOR: optical efficiency appliance due to the physical shielding.
- Refractive lenses in PMMA.

LUMINOUS FLUX

Colour Temperature			Amber		
System*			LED module		
Colour	lm tot	λ (nm)	n LED	mA	W
Amber	350	598	12	700	18.0

* The energy values in the table refer to LED module + driver.
- LED type: Cree XB-D.
- Life time specification for gradual light output degradation (EN 62722-2-1, LM80 data) 60,000 h L80B10 (Tq=25°C).

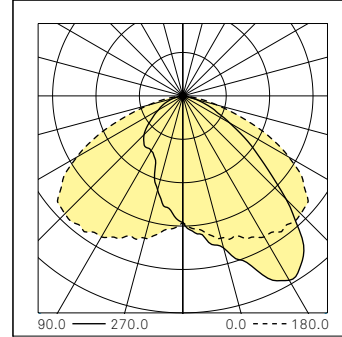
DRIVER FUNCTIONS

1-10V (Analogic control)

DALI (Digital control)

POLAR DIAGRAMS

Type II



Type V

