

R4

Installation : Netly Police Lighting

Project number : AC04/7433

Customer : PSB

Processed by : Joe Ollington

Date : 25.03.2026

The diVa lighting design service is provided free of charge. Lighting designs are undertaken in accordance with any information supplied by the consulting engineer, electrical contractor or other parties associated with the project. diVa lighting will not be held responsible for inaccurate, incomplete or out of date information upon which the design is based.

Where an emergency design has been requested it will be designed in accordance with BS5266-1, 7 & 8. However this will be subject to a risk assessment by the relevant parties, in addition to coverage of related points such as fire fighting equipment and alarm call points.

It remains the ultimate responsibility of the client to check the design meets the requirements of the project and any applicable standards.

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

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1 Luminaire data

1.1 diVa lighting limited, MAN-S-700-830-180 (MAN-S-700-830-180) i G H T I N G

1.1.1 Data sheet

Manufacturer: diVa lighting limited

MAN-S-700-830-180

MAN-S-700-830-180

Luminaire data

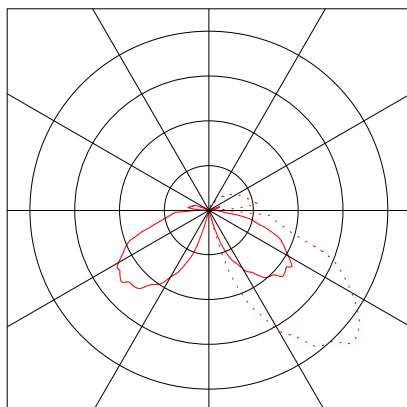
Absolute Photometry

Luminaire efficacy : 75.84 lm/W
Classification : B21 ↓ 86% ↑ 14%
CIE Flux Codes : 23 60 89 86 100
UGR 4H 8H : 62.2 / 46.0
Power : 8.9 W
Luminous flux : 675 lm

Equipped with

Quantity : 1
Designation : MAN-S-700-830-180
Colour : 0

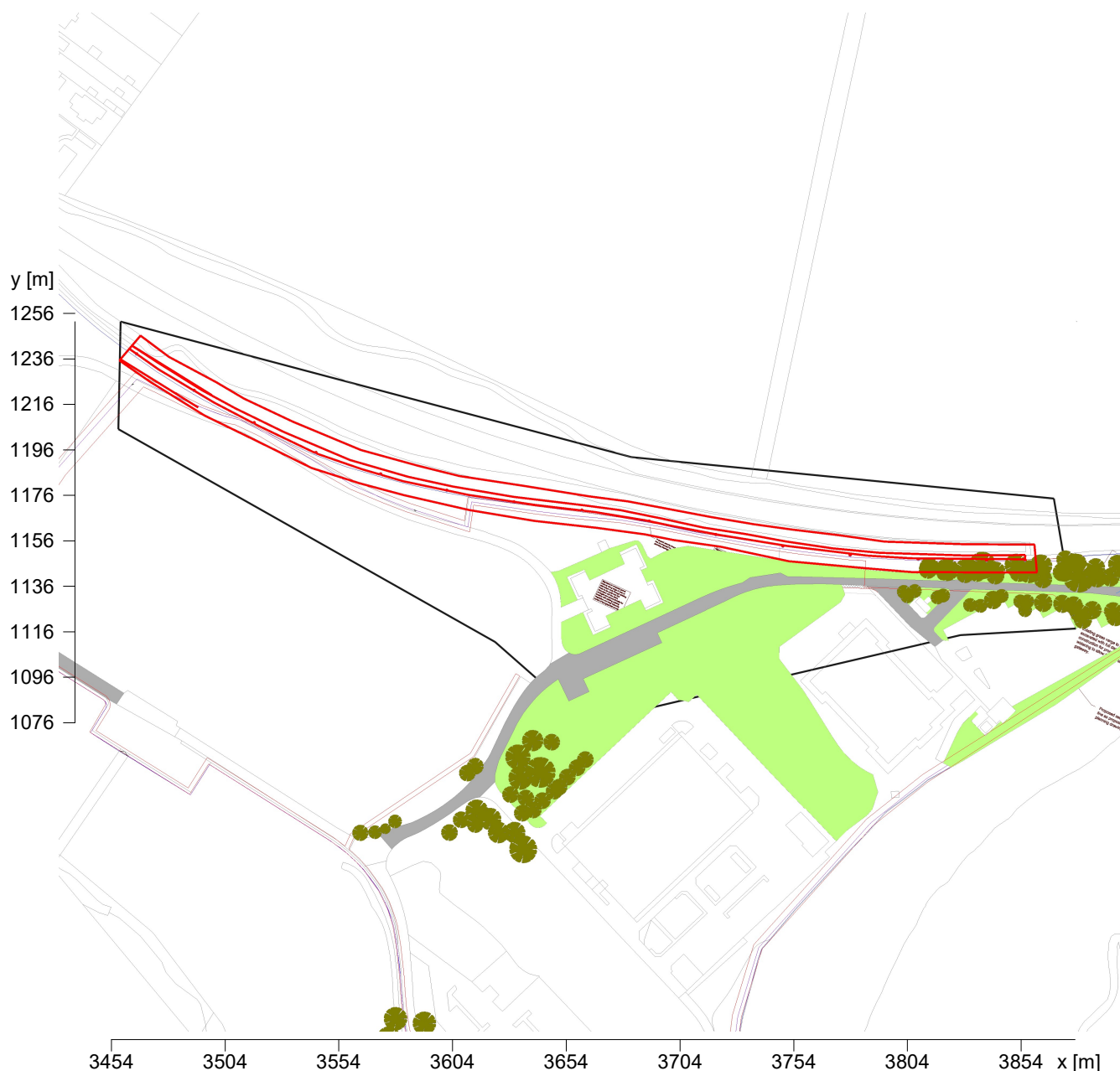
Dimensions : Ø1 mm x 1 mm



2 Exterior 1(15 Bollards)

2.1 Description, Exterior 1(15 Bollards) , Light scene 1(C)

2.1.1 Floor plan



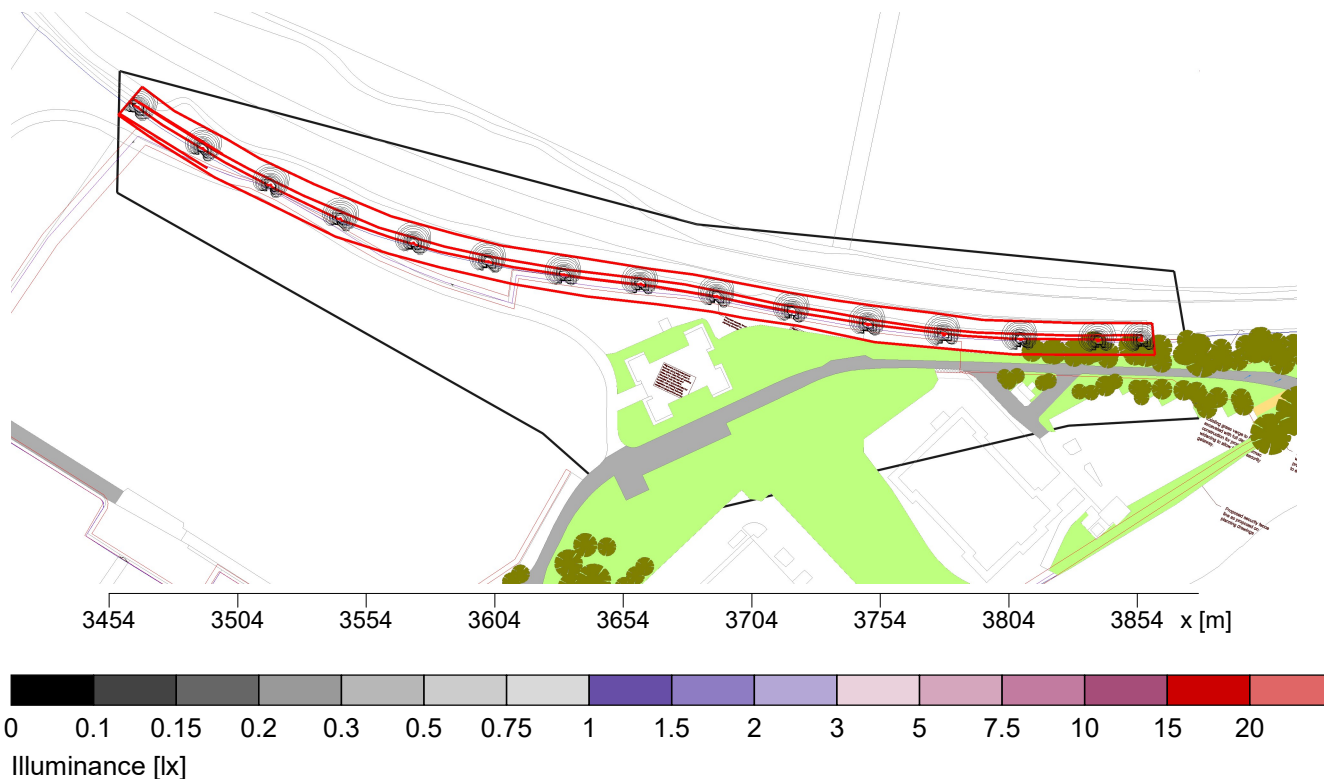
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2 Exterior 1(15 Bollards)

2.2 Summary, Exterior 1(15 Bollards) , Light scene 1(C)

2.2.1 Result overview, Overall



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Height (phot centre) [m]:	0.87 m
Maintenance factor	0.80

Total luminous flux	10125 lm
Total power	133.5 W
Total power per area (34156.40 m ²)	0.00 W/m ²

Illuminance

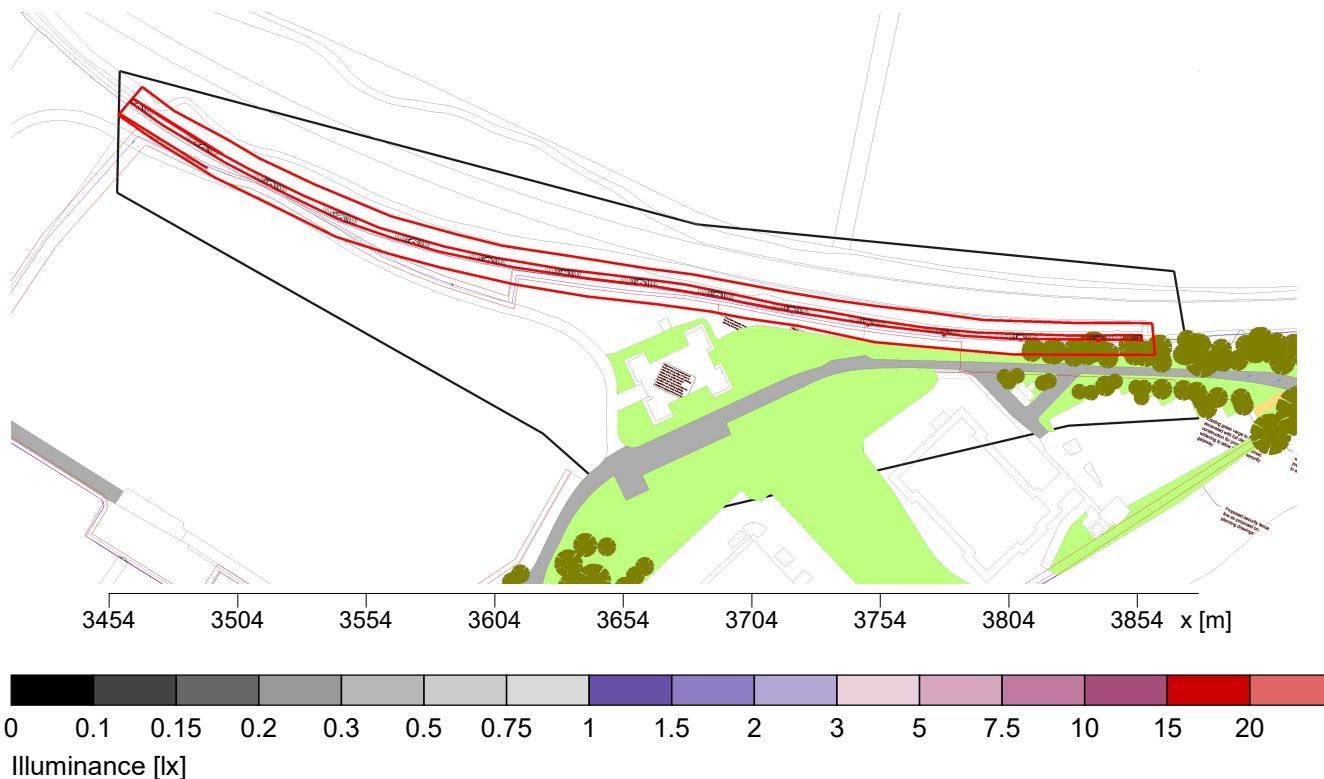
Average illuminance	$\bar{E}_m$	1 lx
Minimum illuminance	E_{min}	0 lx
Maximum illuminance	E_{max}	153 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:--- (---)
Diversity U_d	E_{min}/E_{max}	1:--- (---)

Type No.\Make

2	15 x	diVa lighting limited
		Order No. : MAN-S-700-830-180
		Luminaire name : MAN-S-700-830-180
		Equipment : 1 x MAN-S-700-830-180 8.9 W / 675 lm

2.2 Summary, Exterior 1(15 Bollards) , Light scene 1(C)

2.2.2 Result overview, Footpath



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.02 m
Height (phot centre) [m]:	0.87 m
Maintenance factor	0.80

Total luminous flux	10125 lm
Total power	133.5 W
Total power per area (34156.40 m ²)	0.00 W/m ²

Illuminance

Average illuminance	$\bar{E}_m$	3.4 lx
Minimum illuminance	E_{min}	0 lx
Maximum illuminance	E_{max}	95.9 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:387 (0)
Diversity U_d	E_{min}/E_{max}	1:10900 (0)

Type No. Make

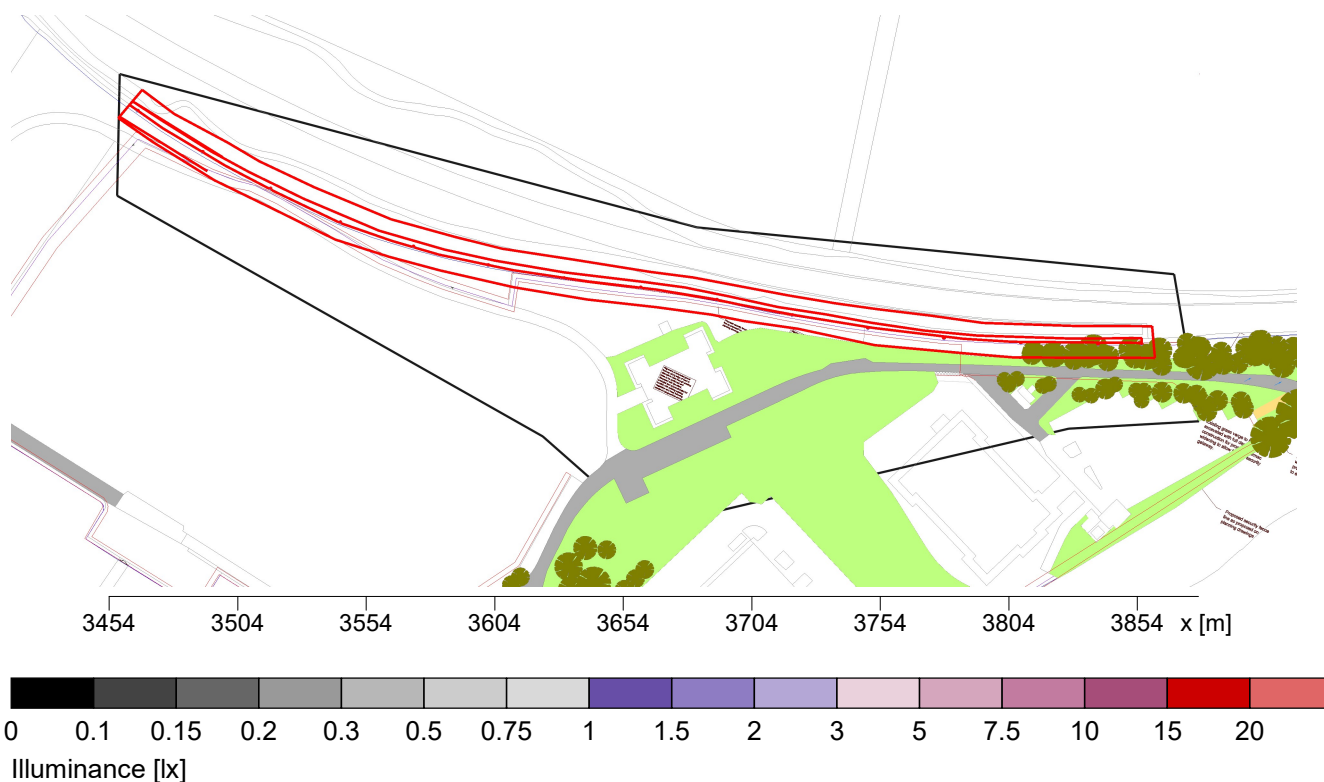
2	15 x	diVa lighting limited
		Order No. : MAN-S-700-830-180
		Luminaire name : MAN-S-700-830-180
		Equipment : 1 x MAN-S-700-830-180 8.9 W / 675 lm

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2.2 Summary, Exterior 1(15 Bollards) , Light scene 1(C)

2.2.3 Result overview, Vertical 5m Front



General

Calculation algorithm used	Average indirect fraction
Height (phot centre) [m]:	0.87 m
Maintenance factor	0.80
Total luminous flux	10125 lm
Total power	133.5 W
Total power per area (34156.40 m ²)	0.00 W/m ²

Illuminance

Average illuminance	$\bar{E}_m$	1.5 lx
Minimum illuminance	E_{min}	0 lx
Maximum illuminance	E_{max}	20.9 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:166 (0.01)
Diversity U_d	E_{min}/E_{max}	1:2290 (0)

Type No.\Make

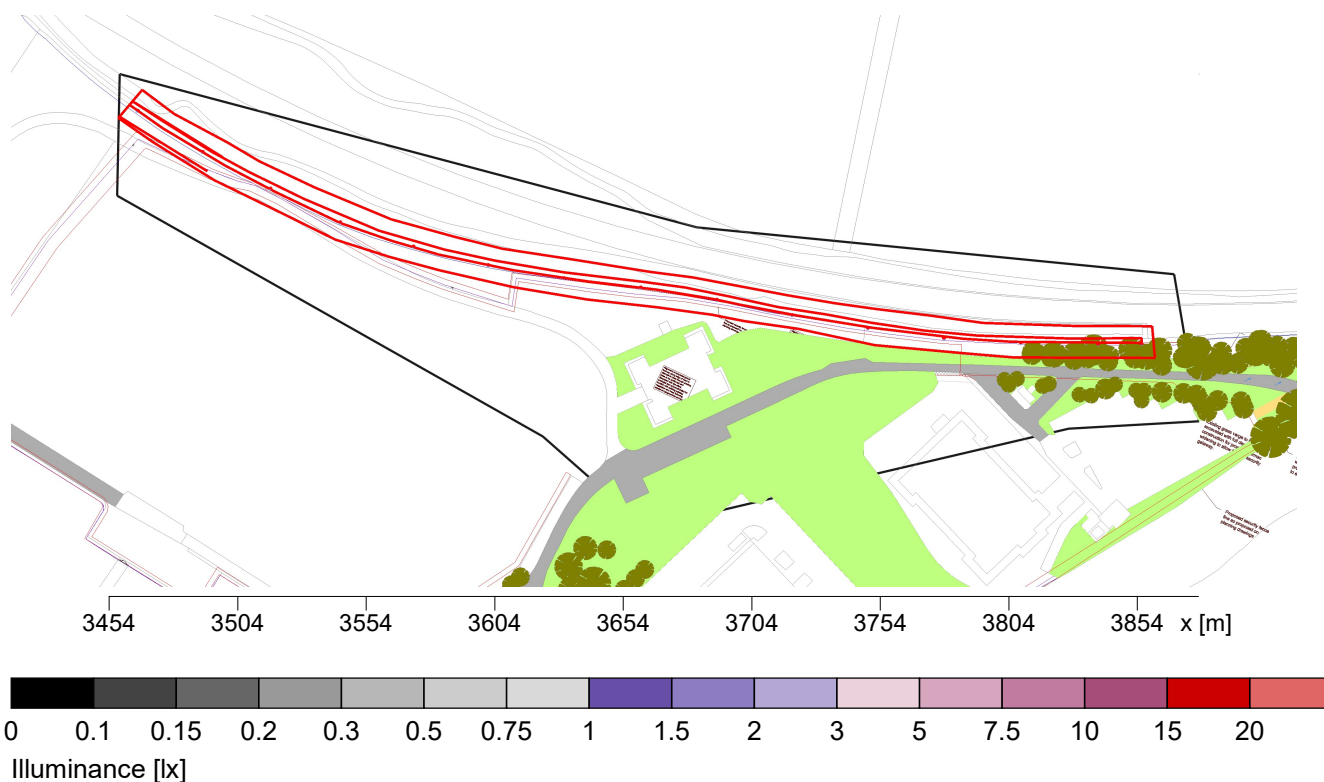
2 15 x		diVa lighting limited
	Order No.	: MAN-S-700-830-180
	Luminaire name	: MAN-S-700-830-180
	Equipment	: 1 x MAN-S-700-830-180 8.9 W / 675 lm

Object : R4
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2.2 Summary, Exterior 1(15 Bollards) , Light scene 1(C)

2.2.4 Result overview, Vertical 5m Back



General

Calculation algorithm used	Average indirect fraction
Height (phot centre) [m]:	0.87 m
Maintenance factor	0.80
Total luminous flux	10125 lm
Total power	133.5 W
Total power per area (34156.40 m ²)	0.00 W/m ²

Illuminance

Average illuminance	$\bar{E}_m$	0.22 lx
Minimum illuminance	E_{min}	0.02 lx
Maximum illuminance	E_{max}	0.61 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:13.1 (0.08)
Diversity U_d	E_{min}/E_{max}	1:36.1 (0.03)

Type No.\Make

2 15 x 	diVa lighting limited		
	Order No.	:	MAN-S-700-830-180
	Luminaire name	:	MAN-S-700-830-180
	Equipment	:	1 x MAN-S-700-830-180 8.9 W / 675 lm

2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C)

[illegible]

Average illuminance	$\bar{E}_m$	: 1.51 lx
Minimum illuminance	E_{min}	: 0.01 lx
Maximum illuminance	E_{max}	: 21 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 165.97 (0.01)



2 Exterior 1(15 Bollards)

2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C) L I G H T I N G

2.3.1 Table, Vertical 5m Front (E)

0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.10	0.10	0.12	0.15	0.22	0.28	0.34	0.41	0.46	0.49	0.60	0.75	0.83	0.94	1.06	1.12	1.14
0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.06	0.06	0.07	0.09	0.10	0.12	0.15	0.17	0.24	0.30	0.38	0.47	0.57	0.69	0.81	0.97	1.19	1.33	1.51	1.61	1.63
0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.16	0.20	0.27	0.34	0.42	0.54	0.69	0.85	1.04	1.27	1.56	1.83	2.10	2.31	2.41
0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.14	0.17	0.21	0.30	0.38	0.49	0.62	0.80	1.04	1.28	1.62	2.03	2.50	2.97	3.37	3.61
0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.14	0.18	0.23	0.33	0.42	0.54	0.70	0.93	1.22	1.55	2.03	2.65	3.39	4.19	4.92	5.47
(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.08	0.11	0.14	0.18	0.24	0.35	0.46	0.59	0.78	1.05	1.41	1.85	2.50	3.39	4.51	5.81	7.06	7.98
(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	0.02	0.02	0.02	0.03	0.04	0.05	0.07	0.09	0.15	0.24	0.35	0.50	0.74	1.11	1.57	2.11	2.95	4.14	5.75	7.71	9.69	11.2
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.08	0.11	0.14	0.18	0.23	0.29	0.37	0.52	0.75	1.13	1.69	2.39	3.37	4.47	5.17
0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.07	0.08	0.10	0.12	0.14	0.18	0.21	0.26	0.33	0.42	0.55	0.68	0.87	1.15	1.54	2.18	3.09	4.48	6.45	8.97	12.3	14.4
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Part2

Object : R4
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2 Exterior 1(15 Bollards)

2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C) L I G H T I N G

2.3.1 Table, Vertical 5m Front (E)

1.14	1.12	1.04	0.92	0.76	0.72	0.49	0.38	0.39	0.38	0.35	0.31	0.24	0.17
1.65	1.65	1.58	1.34	1.19	0.95	0.71	0.68	0.61	0.50	0.41	0.29	0.18	0.14
2.37	2.08	2.08	1.94	1.64	1.32	1.13	0.91	0.73	0.55	0.34	0.26	0.20	0.17
3.45	3.20	2.97	2.48	2.15	1.78	1.43	1.11	0.83	0.62	0.42	0.31	0.24	0.18
5.45	4.77	3.83	3.48	2.99	2.31	1.80	1.32	0.97	0.71	0.45	0.32	0.22	0.16
8.17	7.59	6.56	5.19	3.91	2.86	2.10	1.43	0.94	0.62	0.38	0.26	0.18	0.12
11.6	10.7	8.88	6.51	4.15	2.50	1.49	0.86	0.50	0.30	0.20	0.14	0.10	0.07
5.41	4.91	3.80	2.80	2.10	1.43	0.92	0.62	0.43	0.30	0.21	0.15	0.11	0.08
14.9	13.4	10.4	7.38	5.14	3.18	1.76	1.06	0.66	0.41	0.29	0.21	0.16	0.11

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[m]



Part3

2.3.2 Table, Vertical 5m Back (E)

Average illuminance	$\bar{E}_m$	: 0.22 lx
Minimum illuminance	E_{min}	: 0.02 lx
Maximum illuminance	E_{max}	: 0.61 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 13.08 (0.08)



2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C) L I G H T I N G

2.3.2 Table, Vertical 5m Back (E)

0.11	0.09	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.10	0.11	0.12	0.13	0.15	0.17	0.18	0.21	0.23	0.25	0.28	0.31	0.34	0.36					
0.11	0.09	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.10	0.11	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.26	0.28	0.32	0.35	0.37					
0.11	0.08	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.25	0.28	0.31	0.35	0.37					
0.10	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.07	0.08	0.09	0.10	0.12	0.13	0.16	0.18	0.21	0.24	0.24	0.27	0.30	0.33	0.36					
0.08	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.20	0.22	0.24	0.27	0.30	0.33					
0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.06	0.07	0.08	0.10	0.11	0.13	0.16	0.17	0.19	0.22	0.25	0.29					
0.04	0.03	0.03	0.03	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.17	0.20	0.22					
0.03	0.03	0.03	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15					
0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.08					
20															25										30									



Part2



2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C) L I G H T I N G

2.3.2 Table, Vertical 5m Back (E)

0.39	0.42	0.44	0.46	0.47	0.48	0.47	0.46	0.44	0.42	0.39	0.36	0.33	0.30
0.40	0.43	0.46	0.48	0.49	0.50	0.49	0.48	0.46	0.43	0.40	0.37	0.34	0.31
0.40	0.43	0.46	0.49	0.50	0.51	0.50	0.49	0.47	0.44	0.40	0.37	0.34	0.31
0.39	0.42	0.45	0.48	0.49	0.50	0.49	0.48	0.46	0.43	0.39	0.35	0.32	0.29
0.36	0.39	0.43	0.45	0.46	0.47	0.46	0.45	0.43	0.40	0.36	0.33	0.30	0.27
0.32	0.35	0.38	0.40	0.41	0.42	0.41	0.40	0.38	0.35	0.31	0.28	0.26	0.23
0.25	0.28	0.30	0.32	0.33	0.33	0.33	0.32	0.30	0.28	0.25	0.22	0.20	0.17
0.17	0.19	0.20	0.22	0.22	0.23	0.22	0.22	0.20	0.19	0.17	0.15	0.13	0.12
0.09	0.09	0.10	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.08	0.07	0.07	0.08

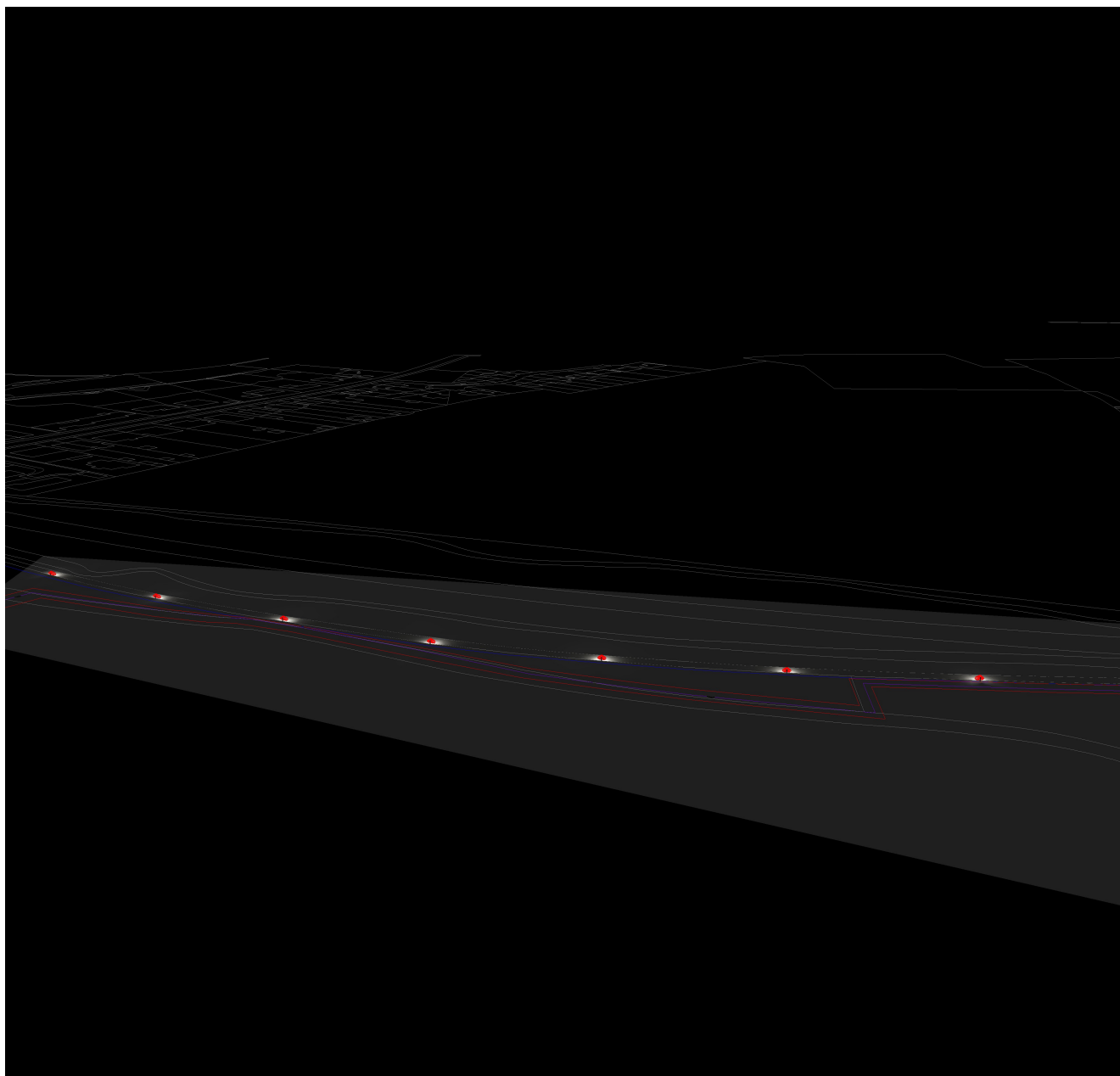
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[m]



Part3

2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C)

2.3.3 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m²

Maximum: : 1150 cd/m²

2.3 Calculation results, Exterior 1(15 Bollards) , Light scene 1(C)

2.3.4 3D pseudo colours, View 1 (E)

