



LCC Ardagh

Installation : External Lighting

Project number : 21.2147

Customer : LCC

Processed by : John Moloney

Date : 06.06.2022

Project description:
6 lux requirement

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.



Table of contents

First Page	1
Table of contents	2
1 Luminaire data	
1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies)	
1.1.1 Data sheet	3
1.1.2 LDC	4
1.1.3 Soellner diagram	5
1.1.4 Luminance chart	6
1.1.5 Glare Rating (UGR)	7
1.1.6 Cone diagram	8
1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies)	
1.2.1 Data sheet	9
1.2.2 LDC	10
1.2.3 Soellner diagram	11
1.2.4 Luminance chart	12
1.2.5 Glare Rating (UGR)	13
1.2.6 Cone diagram	14
2 Exterior 1	
2.1 Description, Exterior 1	
2.1.1 Luminaire data/Room elements	15
2.1.2 Floor plan	17
2.1.3 3D view, View 1	18
2.1.4 3D view, View from the front	19
2.1.5 3D view, View from the back	20
2.1.6 3D view, View from the left	21
2.1.7 3D view, View from the right	22
2.2 Summary, Exterior 1	
2.2.1 Result overview, Evaluation area 1	23
2.3 Calculation results, Exterior 1	
2.3.1 Table, Floor (E)	24
2.3.2 Table, Reference plane 1.1 (E)	26
2.3.3 Table, Floor (L)	38
2.3.4 Pseudo colours, Floor (E)	40
2.3.5 Pseudo colours, Reference plane 1.1 (E)	41
2.3.6 Boundary line, Reference plane 1.1 (E)	42
2.3.7 3D mountain plot, Reference plane 1.1 (E)	43
2.3.8 Longitudinal section, Reference plane 1.1 (E)	44
2.3.9 Cross section, Reference plane 1.1 (E)	45
2.3.10 3D luminance, View 1	46
2.3.11 3D luminance, View from the front	47
2.3.12 3D luminance, View from the back	48
2.3.13 3D luminance, View from the left	49
2.3.14 3D luminance, View from the right	50
2.3.15 3D pseudo colours, View 1 (L)	51
2.3.16 3D pseudo colours, View from the front (L)	52
2.3.17 3D pseudo colours, View from the back (L)	53
2.3.18 3D pseudo colours, View from the left (L)	54
2.3.19 3D pseudo colours, View from the right (L)	55
2.3.20 3D pseudo colours, View 1 (E)	56
2.3.21 3D pseudo colours, View from the front (E)	57
2.3.22 3D pseudo colours, View from the back (E)	58
2.3.23 3D pseudo colours, View from the left (E)	59
2.3.24 3D pseudo colours, View from the right (E)	60

Object :
Installation :
Project number :
Date :



1 Luminaire data

1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies)

1.1.1 Data sheet

Manufacturer: MICROPLUS GERMANY

MPG-1N-30W - 150lm-W.ies

MPG-1N-30W

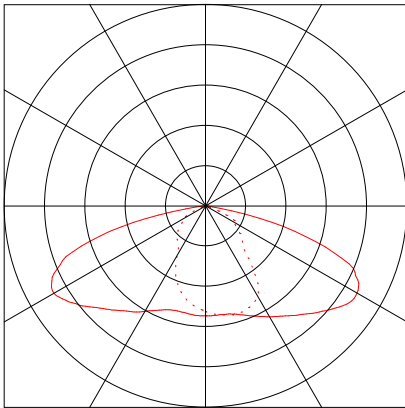
Luminaire data

Luminaire efficiency : 95%
Luminaire efficacy : 133.59 lm/W
Classification : A30 ↓99.7% ↑0.3%
CIE Flux Codes : 41 76 98 100 95
UGR 4H 8H : 27.8 / 15.5
Power : 32 W
Luminous flux : 4275 lm

Equipped with

Quantity : 1
Designation : MICROLED
DE 150lm/W
Colour :
Luminous flux : 4500 lm

Dimensions : 540 mm x 250 mm x 100 mm



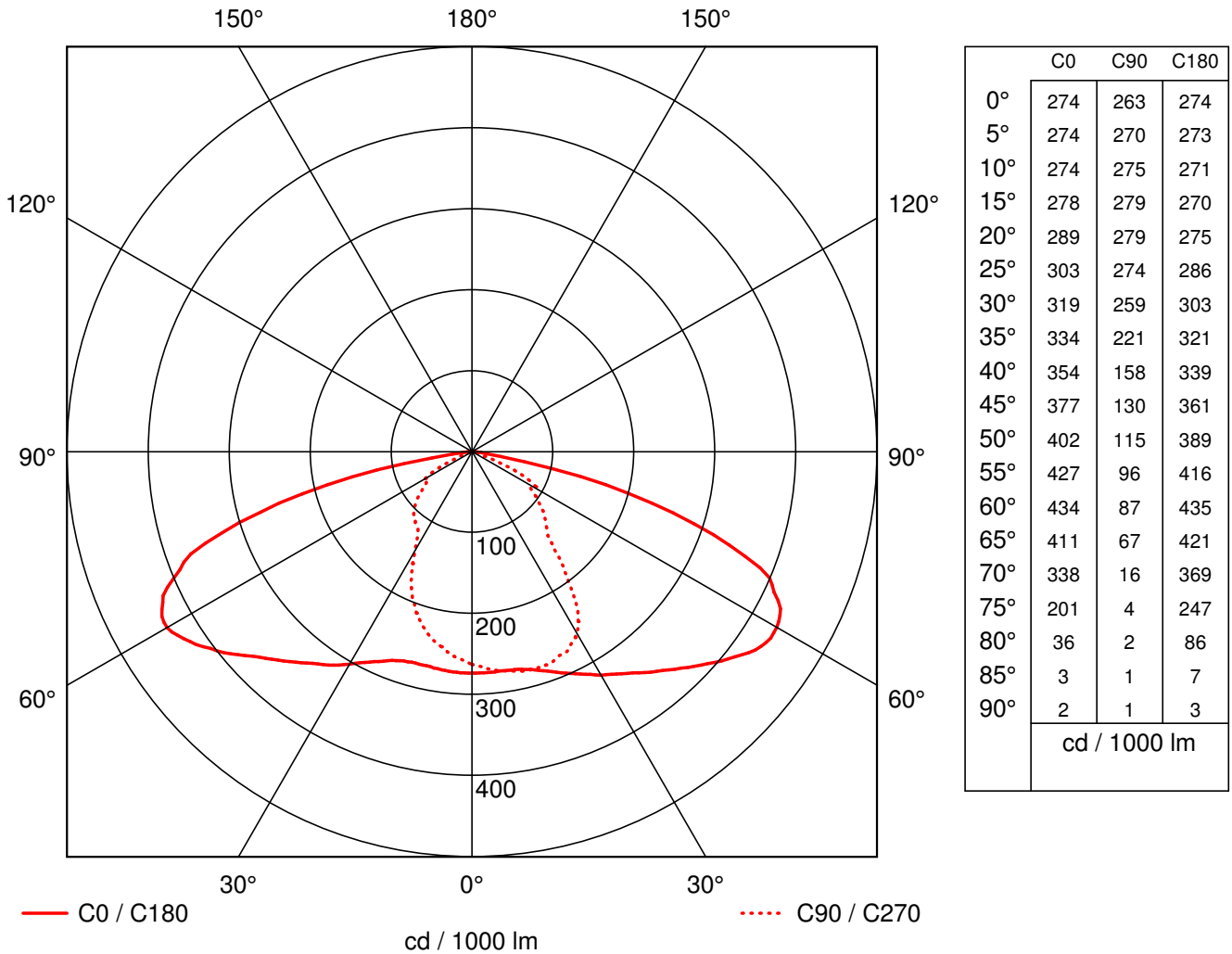
Object :
 Installation :
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 Date :



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1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.1.2 LDC

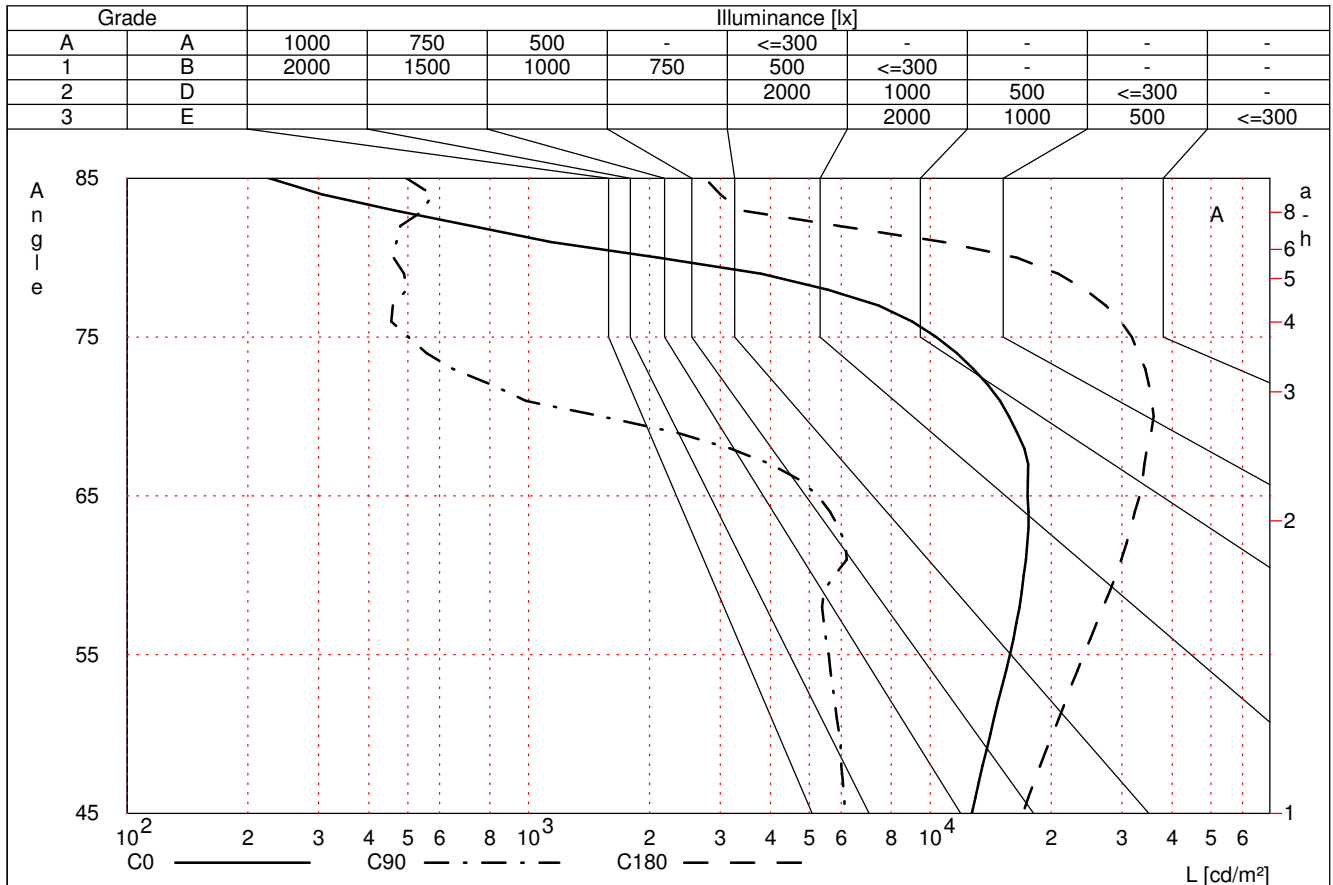


Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135047.ltd		: 75.3° C180
			: 11.3° C270



1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.1.3 Soellner diagram



Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135047.ltd		: 75.3° C180
			: 11.3° C270

Object :
 Installation :
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 Date :



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1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.1.4 Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	17453	19984	13499	5208	4813	4638	5253	5797	7067	8806	22298	36021
70°	15699	18388	9552	2388	2139	1442	1520	2493	4444	6644	19628	[40548]
75°	10359	11637	2449	321	1032	740	502	1038	1661	1893	11398	38067
80°	2108	2304	414	463	845	561	461	907	1267	1037	1440	19961
85°	227	402	324	474	745	490	497	1014	2104	2304	1339	3361

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	33190	18783	7256	4917	4598	3675	3076	2508	2478	2994	4743	9405
70°	35992	18464	6754	4642	2475	951	429	433	811	1557	3096	7161
75°	31785	13138	5499	2500	399	196	116	178	206	246	1045	3172
80°	16451	4753	2995	389	461	266	134	130	180	181	285	386
85°	2754	2381	1683	794	688	273	76	147	128	157	270	170

Luminance [cd/m²]

Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135047.ldt		: 75.3° C180
			: 11.3° C270

Object :
 Installation :
 Project number :
 Date :



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1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.1.5 Glare Rating (UGR)

Reflectance of Ceiling	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
Floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Room dimension		Viewed crosswise					Viewed endwise				
x	y										
2H	2H	24.2	25.9	24.6	26.2	26.5	14.3	16.0	14.7	16.4	16.7
	3H	26.8	28.3	27.2	28.7	29.0	14.7	16.2	15.1	16.6	16.9
	4H	27.4	28.9	27.8	29.2	29.6	14.6	16.1	15.0	16.4	16.8
	6H	27.6	28.9	28.0	29.3	29.7	14.6	15.9	15.0	16.3	16.7
	8H	27.5	28.8	27.9	29.2	29.6	14.5	15.8	14.9	16.2	16.6
	12H	27.5	28.7	27.9	29.1	29.5	14.5	15.7	14.9	16.1	16.5
4H	2H	24.2	25.7	24.6	26.0	26.4	15.3	16.7	15.7	17.1	17.5
	3H	26.9	28.2	27.3	28.6	29.0	15.6	16.9	16.0	17.3	17.7
	4H	27.7	28.8	28.1	29.2	29.6	15.6	16.7	16.1	17.1	17.6
	6H	27.8	28.8	28.3	29.2	29.7	15.5	16.5	16.0	17.0	17.4
	8H	27.8	28.7	28.2	29.1	29.6	15.5	16.4	16.0	16.9	17.3
	12H	27.8	28.6	28.3	29.0	29.6	15.5	16.3	16.0	16.8	17.3
8H	4H	27.6	28.5	28.1	28.9	29.4	15.8	16.7	16.3	17.2	17.7
	6H	27.7	28.4	28.2	28.9	29.4	15.8	16.5	16.2	17.0	17.5
	8H	27.7	28.4	28.2	28.9	29.4	15.8	16.4	16.3	17.0	17.4
	12H	27.7	28.2	28.2	28.8	29.3	15.8	16.3	16.3	16.8	17.3
12H	4H	27.6	28.4	28.1	28.8	29.4	15.9	16.7	16.3	17.1	17.6
	6H	27.7	28.4	28.2	28.9	29.4	15.8	16.5	16.3	17.0	17.5
	8H	27.7	28.2	28.2	28.8	29.3	15.8	16.3	16.3	16.8	17.4

Distance between luminaires: 0.25

Due to missing symmetry characteristics the values apply only to the indicated line of sight.

Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135047.ldt		: 75.3° C180
			: 11.3° C270

Object :
Installation :
Project number :
Date :



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1.1 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.1.6 Cone diagram

LDC unsuitable for cone representation

Object :
Installation :
Project number :
Date :



1 Luminaire data

1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.2.1 Data sheet

Manufacturer: MICROPLUS GERMANY

MPG-1N-30W - 150lm-W.ies

MPG-1N-30W

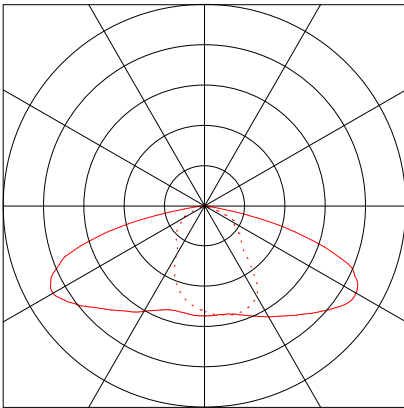
Luminaire data

Luminaire efficiency : 95%
Luminaire efficacy : 133.59 lm/W
Classification : A30 ↓99.7% ↑0.3%
CIE Flux Codes : 41 76 98 100 95
UGR 4H 8H : 27.8 / 15.5
Power : 32 W
Luminous flux : 4275 lm

Equipped with

Quantity : 1
Designation : MICROLED
DE 150lm/W
Colour :
Luminous flux : 4500 lm

Dimensions : 540 mm x 250 mm x 100 mm



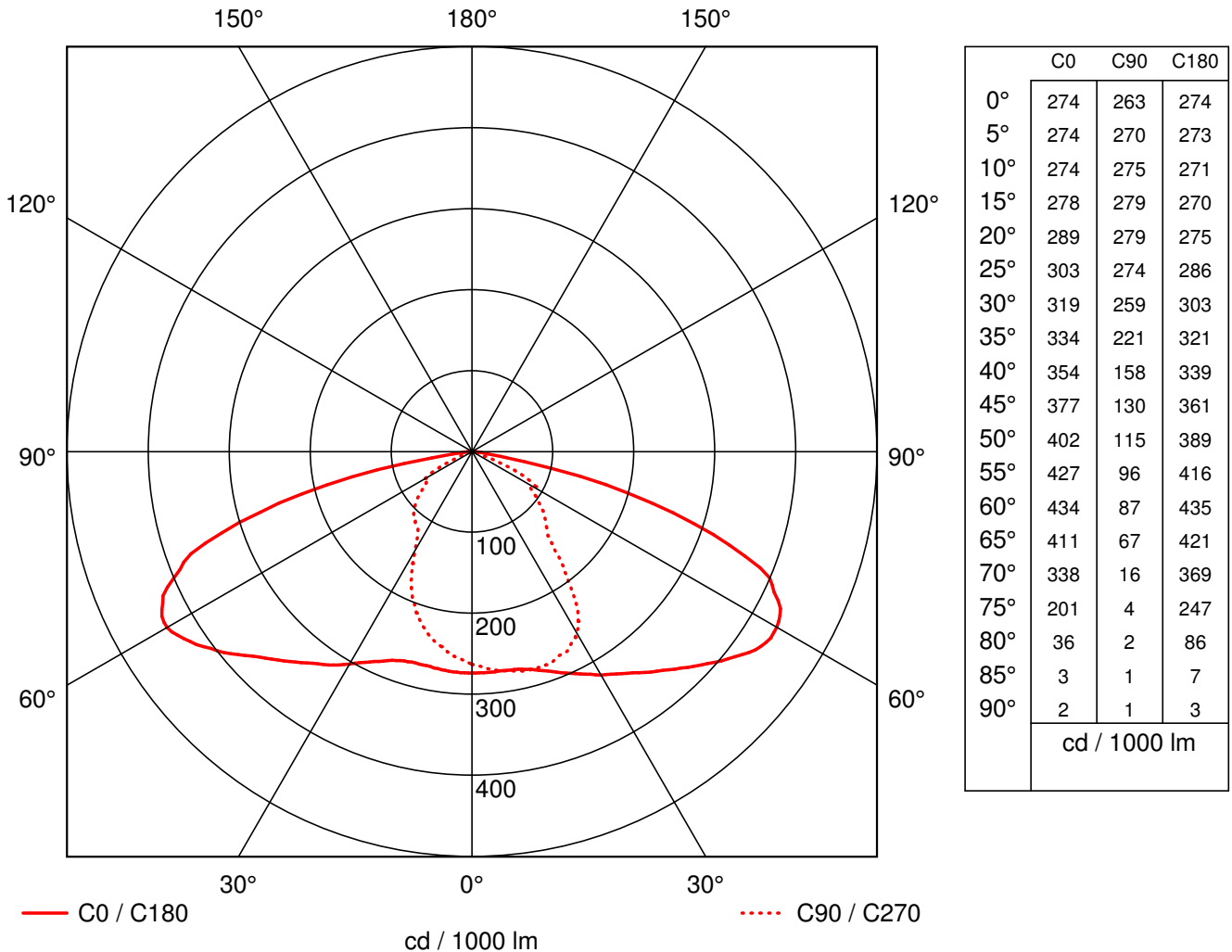
Object :
 Installation :
 Project number :
 Date :



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1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.2.2 LDC

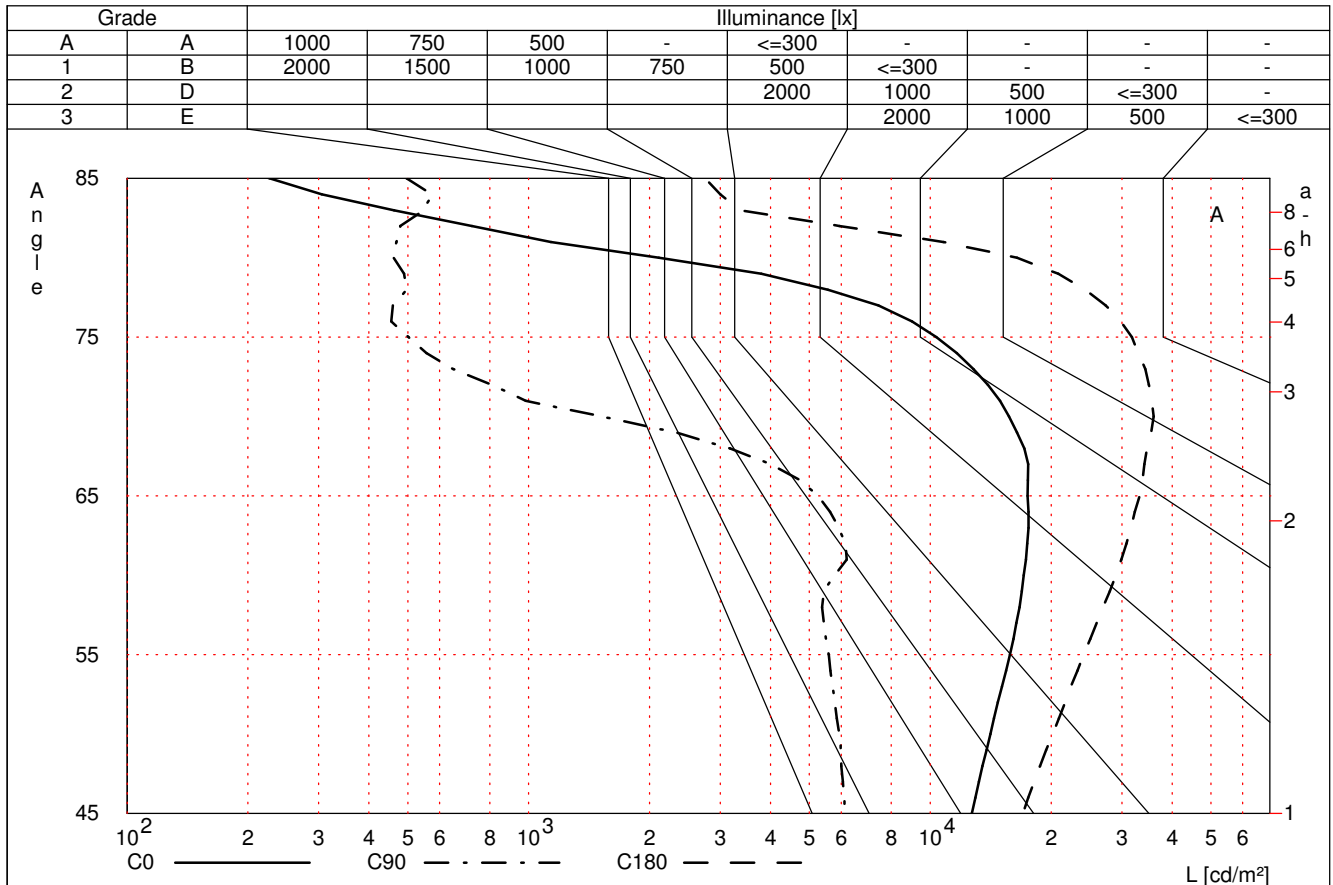


Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135054.ltd		: 75.3° C180
			: 11.3° C270



1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.2.3 Soellner diagram



Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135054.ltd		: 75.3° C180
			: 11.3° C270

Object :
 Installation :
 Project number :
 Date :



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1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.2.4 Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	17453	19984	13499	5208	4813	4638	5253	5797	7067	8806	22298	36021
70°	15699	18388	9552	2388	2139	1442	1520	2493	4444	6644	19628	[40548]
75°	10359	11637	2449	321	1032	740	502	1038	1661	1893	11398	38067
80°	2108	2304	414	463	845	561	461	907	1267	1037	1440	19961
85°	227	402	324	474	745	490	497	1014	2104	2304	1339	3361

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	33190	18783	7256	4917	4598	3675	3076	2508	2478	2994	4743	9405
70°	35992	18464	6754	4642	2475	951	429	433	811	1557	3096	7161
75°	31785	13138	5499	2500	399	196	116	178	206	246	1045	3172
80°	16451	4753	2995	389	461	266	134	130	180	181	285	386
85°	2754	2381	1683	794	688	273	76	147	128	157	270	170

Luminance [cd/m²]

Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135054.ltd		: 75.3° C180
			: 11.3° C270

Object :
 Installation :
 Project number :
 Date :



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1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.2.5 Glare Rating (UGR)

Reflectance of Ceiling	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
Floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Room dimension		Viewed crosswise					Viewed endwise				
x	y										
2H	2H	24.2	25.9	24.6	26.2	26.5	14.3	16.0	14.7	16.4	16.7
	3H	26.8	28.3	27.2	28.7	29.0	14.7	16.2	15.1	16.6	16.9
	4H	27.4	28.9	27.8	29.2	29.6	14.6	16.1	15.0	16.4	16.8
	6H	27.6	28.9	28.0	29.3	29.7	14.6	15.9	15.0	16.3	16.7
	8H	27.5	28.8	27.9	29.2	29.6	14.5	15.8	14.9	16.2	16.6
	12H	27.5	28.7	27.9	29.1	29.5	14.5	15.7	14.9	16.1	16.5
4H	2H	24.2	25.7	24.6	26.0	26.4	15.3	16.7	15.7	17.1	17.5
	3H	26.9	28.2	27.3	28.6	29.0	15.6	16.9	16.0	17.3	17.7
	4H	27.7	28.8	28.1	29.2	29.6	15.6	16.7	16.1	17.1	17.6
	6H	27.8	28.8	28.3	29.2	29.7	15.5	16.5	16.0	17.0	17.4
	8H	27.8	28.7	28.2	29.1	29.6	15.5	16.4	16.0	16.9	17.3
	12H	27.8	28.6	28.3	29.0	29.6	15.5	16.3	16.0	16.8	17.3
8H	4H	27.6	28.5	28.1	28.9	29.4	15.8	16.7	16.3	17.2	17.7
	6H	27.7	28.4	28.2	28.9	29.4	15.8	16.5	16.2	17.0	17.5
	8H	27.7	28.4	28.2	28.9	29.4	15.8	16.4	16.3	17.0	17.4
	12H	27.7	28.2	28.2	28.8	29.3	15.8	16.3	16.3	16.8	17.3
12H	4H	27.6	28.4	28.1	28.8	29.4	15.9	16.7	16.3	17.1	17.6
	6H	27.7	28.4	28.2	28.9	29.4	15.8	16.5	16.3	17.0	17.5
	8H	27.7	28.2	28.2	28.8	29.3	15.8	16.3	16.3	16.8	17.4

Distance between luminaires: 0.25

Due to missing symmetry characteristics the values apply only to the indicated line of sight.

Manufacturer	: MICROPLUS GERMANY	Efficiency factor	: 95%
Order number	: MPG-1N-30W - 150lm-W.ies	Luminaire efficacy	: 133.59 lm/W (A30)
Luminaire name	: MPG-1N-30W	Light distribution	: asymmetric
Equipment	: 1 x MICROLED DE 150lm/W 32 W / .	Beam Angle	: 73.7° C0
Dimensions	: L 540 mm x W 250 mm x H 100 mm		: 33.1° C90
File name	: rlx_20220609135054.ldt		: 75.3° C180
			: 11.3° C270

Object :
Installation :
Project number :
Date :



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1.2 MICROPLUS GERMANY, MPG-1N-30W (MPG-1N-30W - 150lm-W.ies) JEERS

1.2.6 Cone diagram

LDC unsuitable for cone representation

Object :
Installation :
Project number :
Date :



MOLONEYFOX

CONSULTING ENGINEERS

2 Exterior 1


2.1 Description, Exterior 1


2.1.1 Luminaire data/Room elements

Product data:

Type No.\Make

MICROPLUS GERMANY

1	9	Order No.	: MPG-1N-30W - 150lm-W.ies
		Luminaire name	: MPG-1N-30W
		Equipment	: 1 x MICROLED DE 150lm/W 32 W / 4500 lm

2	2	Order No.	: MPG-1N-30W - 150lm-W.ies
		Luminaire name	: MPG-1N-30W
		Equipment	: 1 x MICROLED DE 150lm/W 32 W / 4500 lm

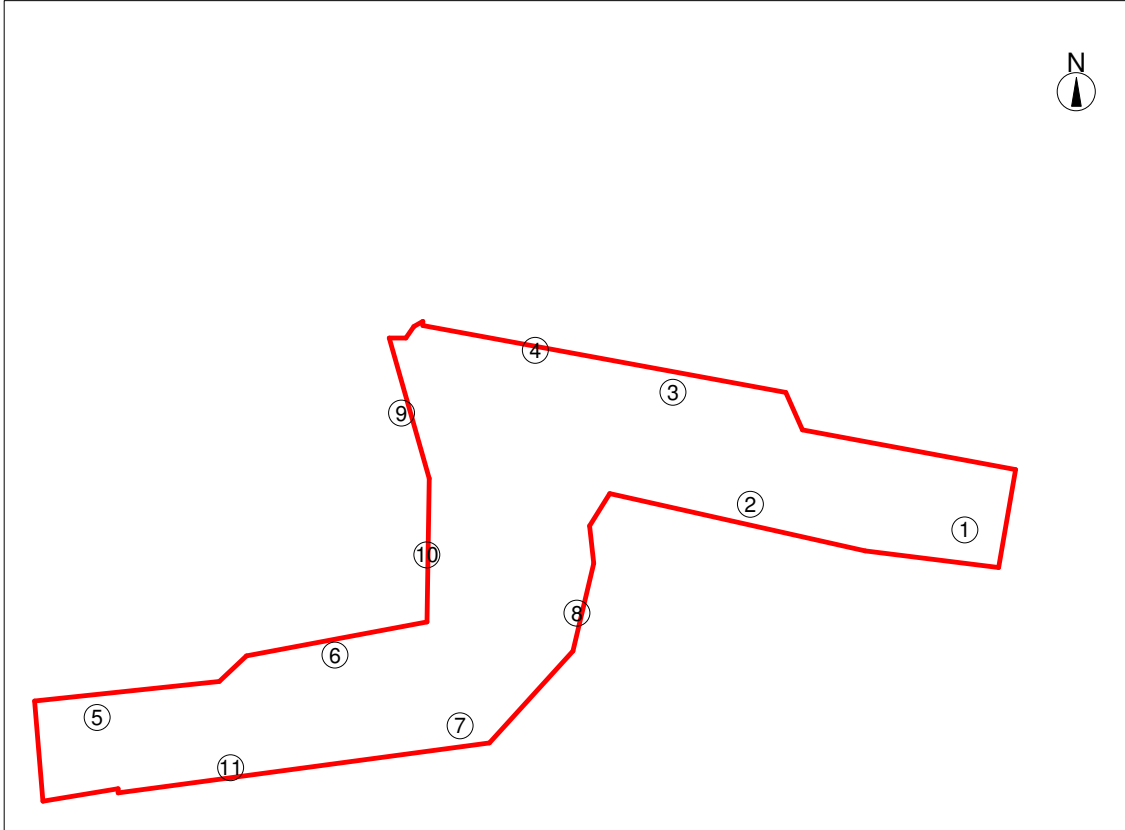


2 Exterior 1

2.1 Description, Exterior 1

2.1.1 Luminaire data/Room elements

Floor with luminaire and sensor positions:



No.	Centre point			Rotation angle			Target coordinates		
	X [m]	Y [m]	Z [m]	Z [°]	C0 [°]	C90 [°]	Xa [m]	Ya [m]	Za [m]
MICROPLUS GERMANY MPG-1N-30W MPG-1N-30W - 150lm-W.ies									
2	131.30	498.06	5.95	345.00	10.00	0.00	131.30	499.11	0.00
3	122.00	511.49	5.95	180.00	10.00	0.00	122.00	510.44	0.00
4	105.50	516.49	5.95	180.00	10.00	0.00	105.50	515.44	0.00
5	53.00	472.49	5.95	180.00	10.00	0.00	53.00	473.56	0.00
6	81.50	479.99	5.95	180.00	10.00	0.00	81.50	478.94	0.00
7	96.50	471.51	5.95	0.00	10.00	0.00	96.50	471.50	0.00
8	110.49	485.00	5.95	90.00	10.00	0.00	109.44	485.00	0.00
9	89.51	509.00	5.95	270.00	10.00	0.00	90.60	509.00	0.00
11	69.00	466.51	5.95	0.00	10.00	0.00	69.00	467.56	0.00
MICROPLUS GERMANY MPG-1N-30W MPG-1N-30W - 150lm-W.ies									
1	157.00	495.01	5.95	0.00	10.00	0.00	157.00	496.06	0.00
10	92.51	492.00	5.95	270.00	10.00	0.00	93.56	492.00	0.00

Structural elements

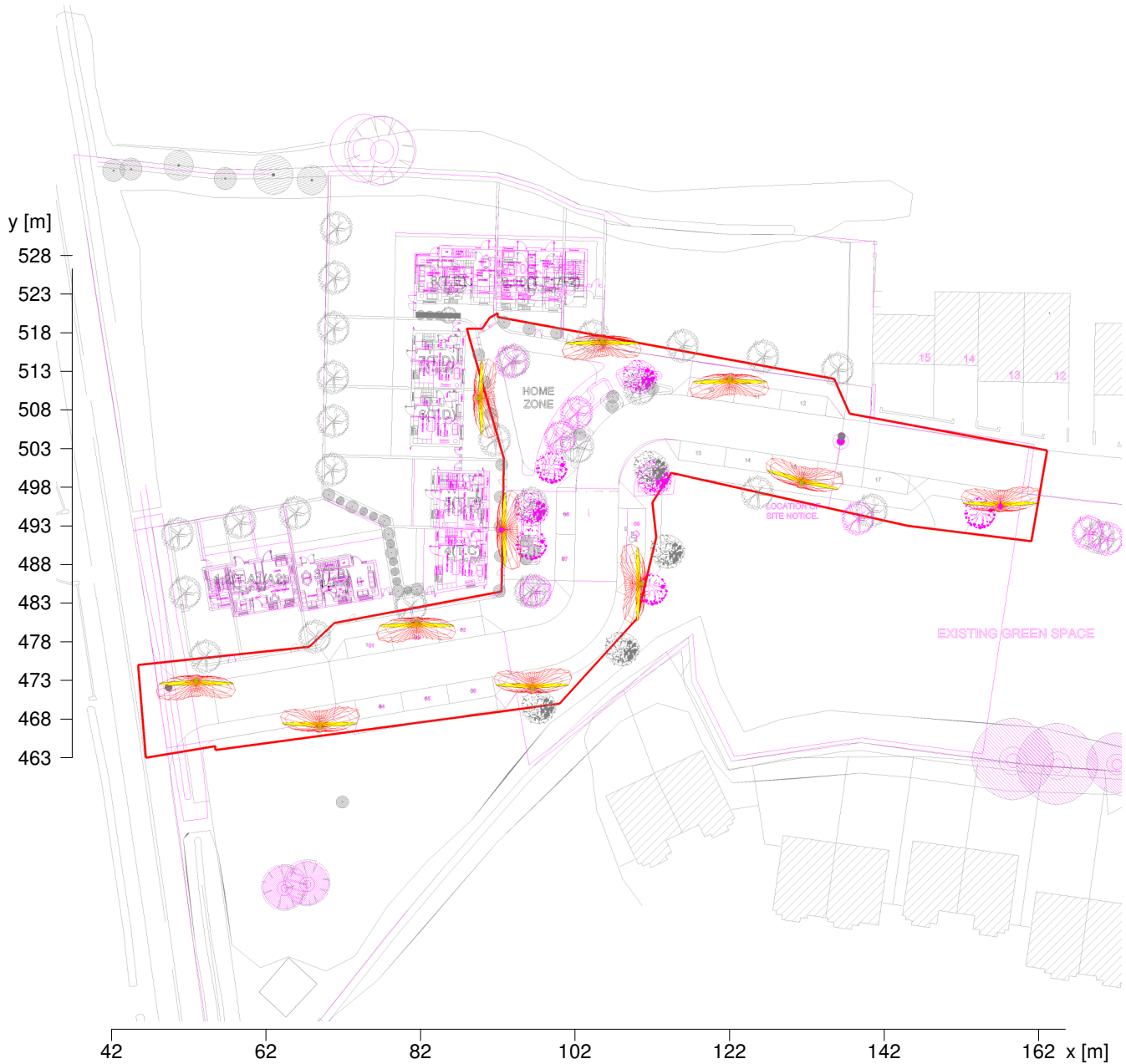
Measuring surface

No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle	
							L axis	Q axis
Ref. plane 1.1	45.50	474.50	0.00	123.47	63.26	274.76	0.00	0.00



2.1 Description, Exterior 1

2.1.2 Floor plan



Object :
Installation :
Project number :
Date :

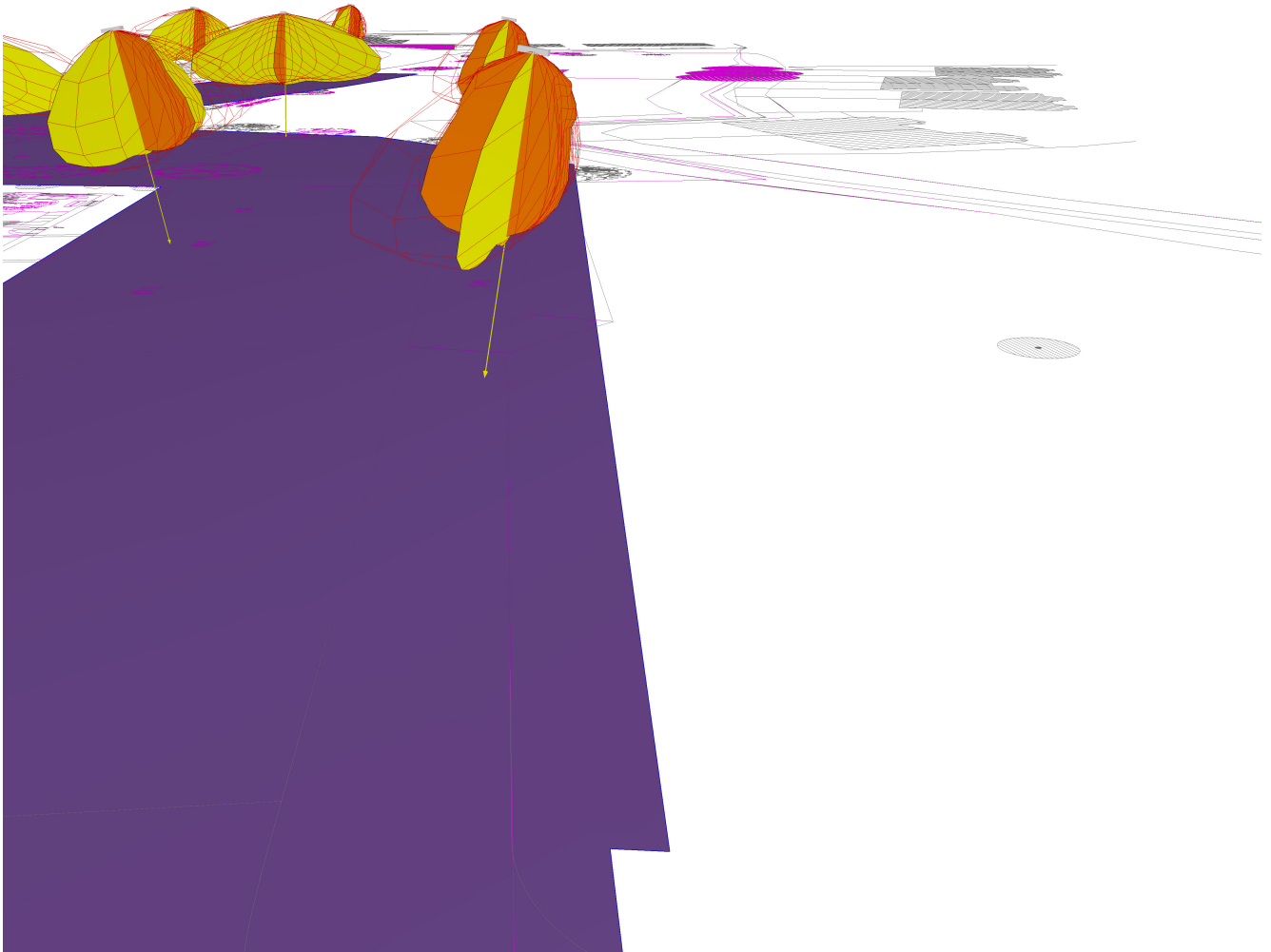


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2.1 Description, Exterior 1

2.1.3 3D view, View 1



Object :
Installation :
Project number :
Date :

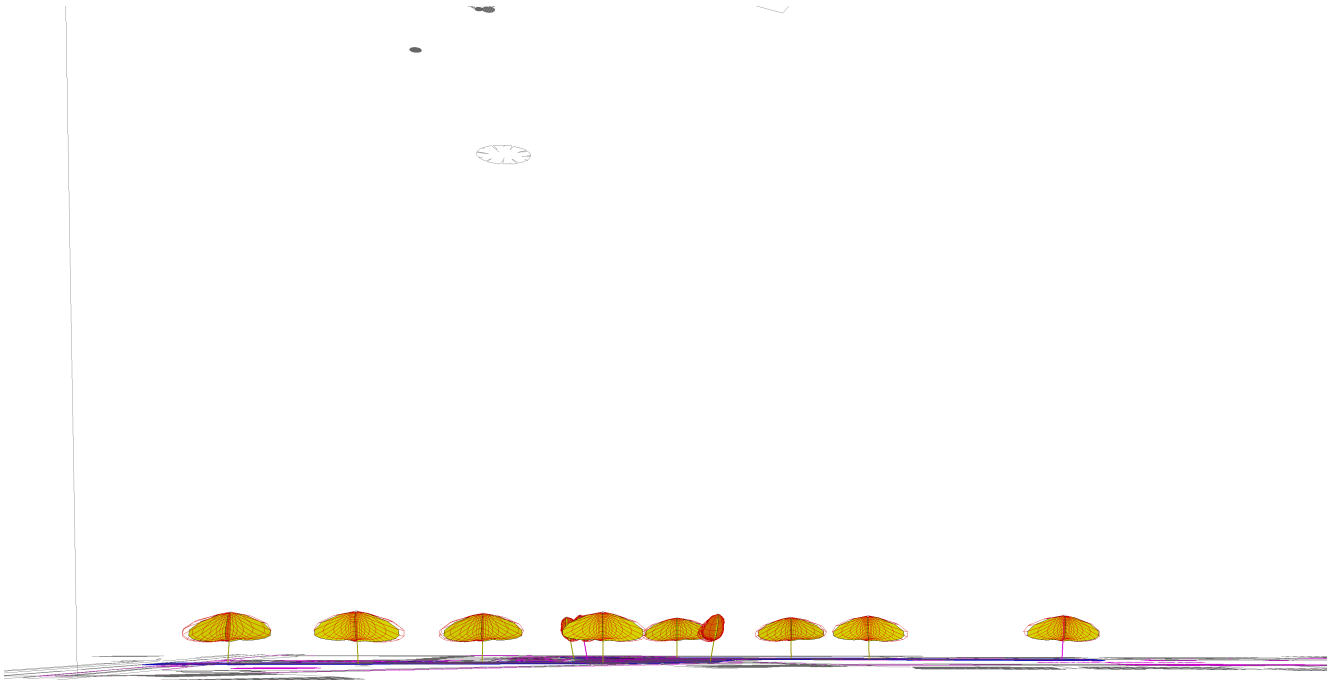


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2.1 Description, Exterior 1

2.1.4 3D view, View from the front



Object :
Installation :
Project number :
Date :



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2.1 Description, Exterior 1

2.1.5 3D view, View from the back



Object :
Installation :
Project number :
Date :



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2.1 Description, Exterior 1

2.1.6 3D view, View from the left



Object :
Installation :
Project number :
Date :

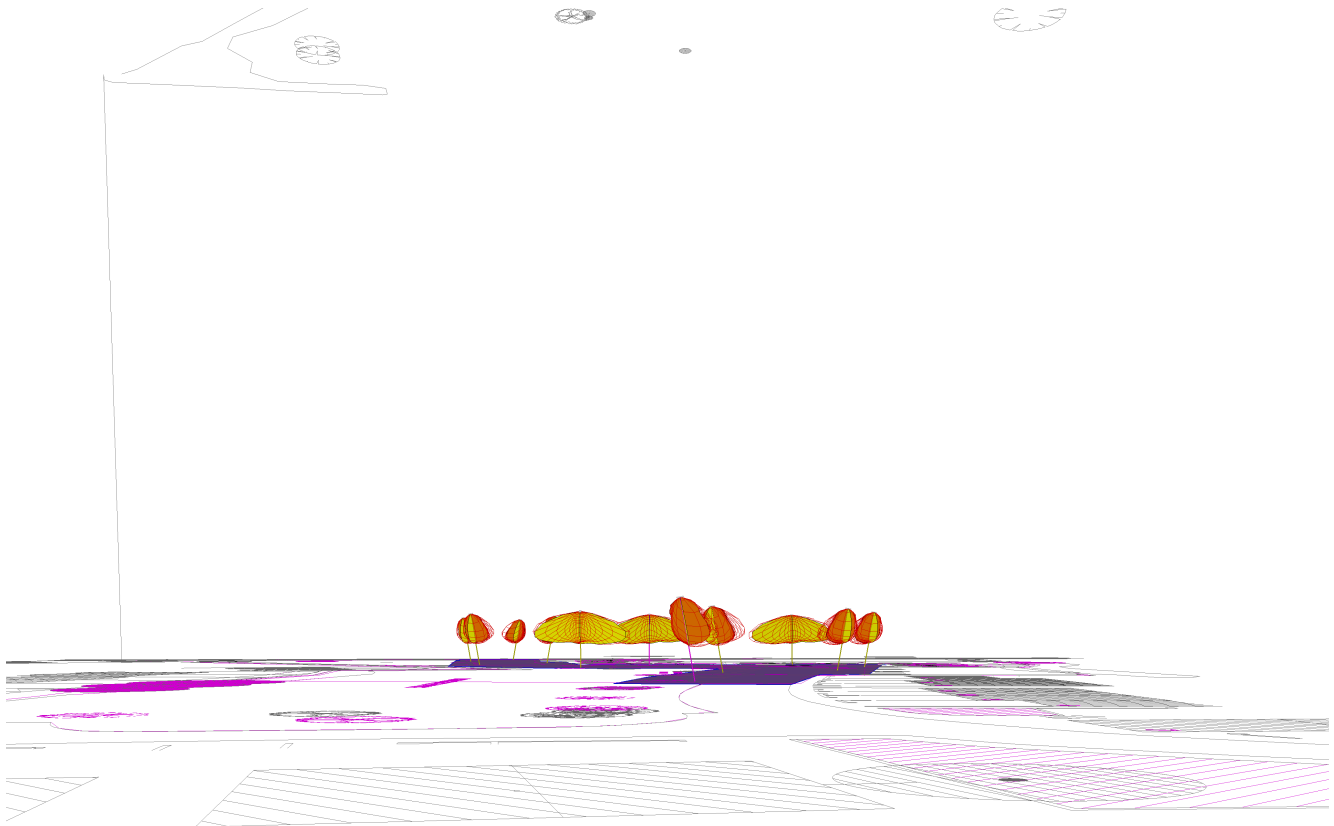


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CONSULTING ENGINEERS

2.1 Description, Exterior 1

2.1.7 3D view, View from the right



Object :
 Installation :
 Project number :
 Date :



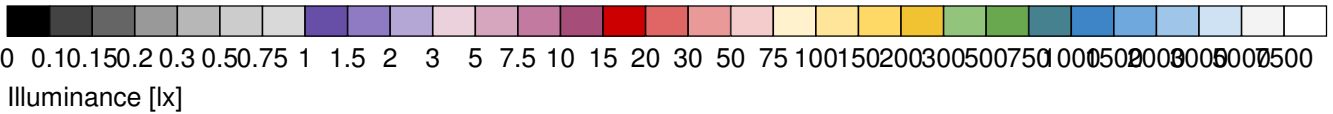
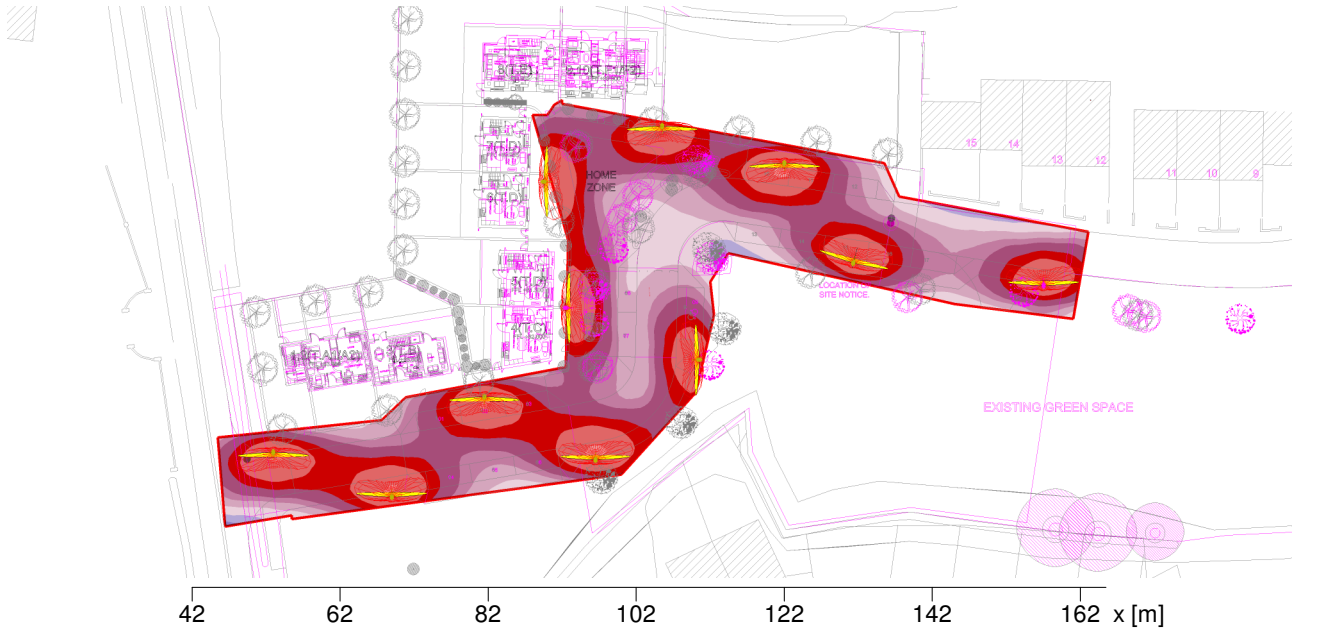
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2 Exterior 1

2.2 Summary, Exterior 1

2.2.1 Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height (phot. centre)	5.95 m
Maintenance factor	0.85
Total luminous flux of all lamps	45000.00 lm
Total power	320.0 W
Total power per area (2248.02 m ²)	0.14 W/m ² (1.13 W/m ² /100lx)

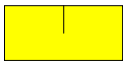

Evaluation area 1

Reference plane 1.1

	Horizontal
Em	12.6 lx
Emin	1.7 lx
Emin/Em (Uo)	0.14
Emin/Emax (Ud)	0.06
Position	0.00 m

Type No. Make

MICROPLUS GERMANY

1	8	Order No.	: MPG-1N-30W - 150lm-W.ies
		Luminaire name	: MPG-1N-30W
		Equipment	: 1 x MICROLED DE 150lm/W 32 W / 4500 lm
2	2	Order No.	: MPG-1N-30W - 150lm-W.ies
		Luminaire name	: MPG-1N-30W
		Equipment	: 1 x MICROLED DE 150lm/W 32 W / 4500 lm

Object :
 Installation :
 Project number :
 Date :



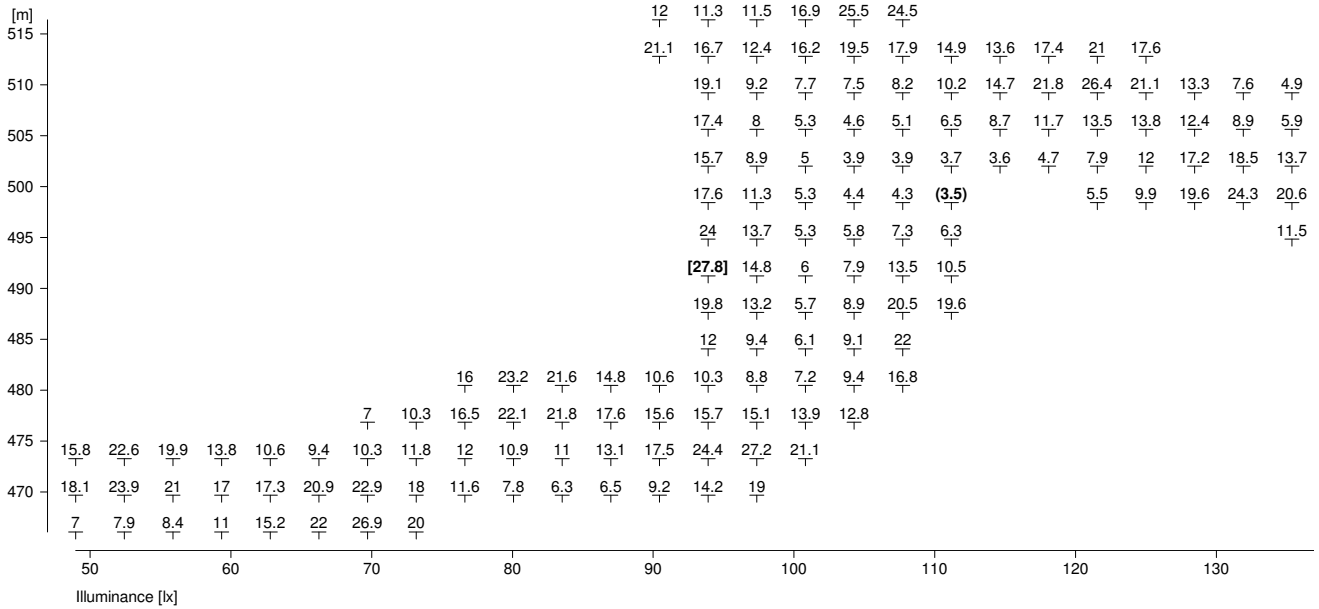
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2 Exterior 1

2.3 Calculation results, Exterior 1

2.3.1 Table, Floor (E)



Part1

Average illuminance	Em	: 13 lx
Minimum illuminance	Emin	: 3.5 lx
Maximum illuminance	Emax	: 27.8 lx
Uniformity Uo	Emin/Em	: 1 : 3.70 (0.27)
Diversity Ud	Emin/Emax	: 1 : 7.93 (0.13)

Object :
Installation :
Project number :
Date :

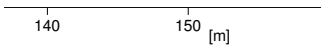


2 Exterior 1

2.3 Calculation results, Exterior 1

2.3.1 Table, Floor (E)

4.4	3.6						
9.1	6.4	5.1	5.3	5.4	5.9	6.1	
12.7	8.2	7	9.5	14.5	19	17.7	
8.1	5.8	6.4	8.7	16.5	23.7	20.7	
					8.2	6.3	



Part2

Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)



Height reference plane	:	0.00 m
Average illuminance	Em	: 12.6 lx
Minimum illuminance	Emin	: 1.7 lx
Maximum illuminance	Emax	: 30.3 lx
Uniformity Uo	Emin/Em	: 1 : 7.34 (0.14)
Diversity Ud	Emin/Emax	: 1 : 17.62 (0.06)

Object :
Installation :
Project number :
Date :



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2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)

			7.7
			7.7
7	8.1	8.9	9.1
7.4	9.6	10.5	10.7
10	11.4	12.4	12.5
11.8	13.4	14.4	14.3
	15.6	16.6	16.1
	17.9	18.9	18
	20.4	21.3	20
	22.7	23.3	21.8
	24.8	24.9	23.4
		26.6	25
		28.1	
		29.1	
		29	
		27.7	



Part2

Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)

4.6
6.6



Part6

Object :
 Installation :
 Project number :
 Date :



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2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)



Part7



Object :
Installation :
Project number :
Date :

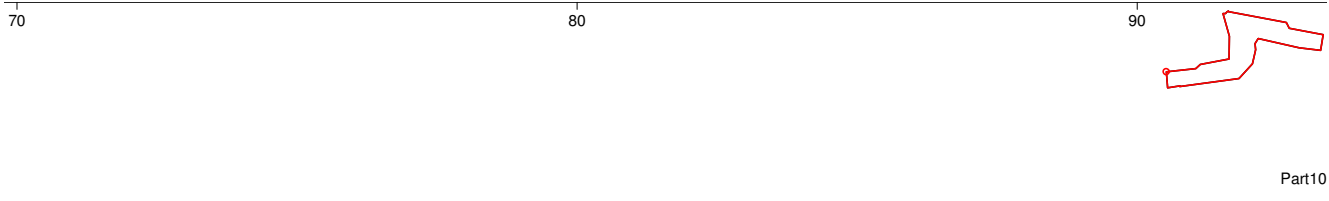


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CONSULTING ENGINEERS

2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)



Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)

100

110 [m]



Part11

Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.2 Table, Reference plane 1.1 (E)

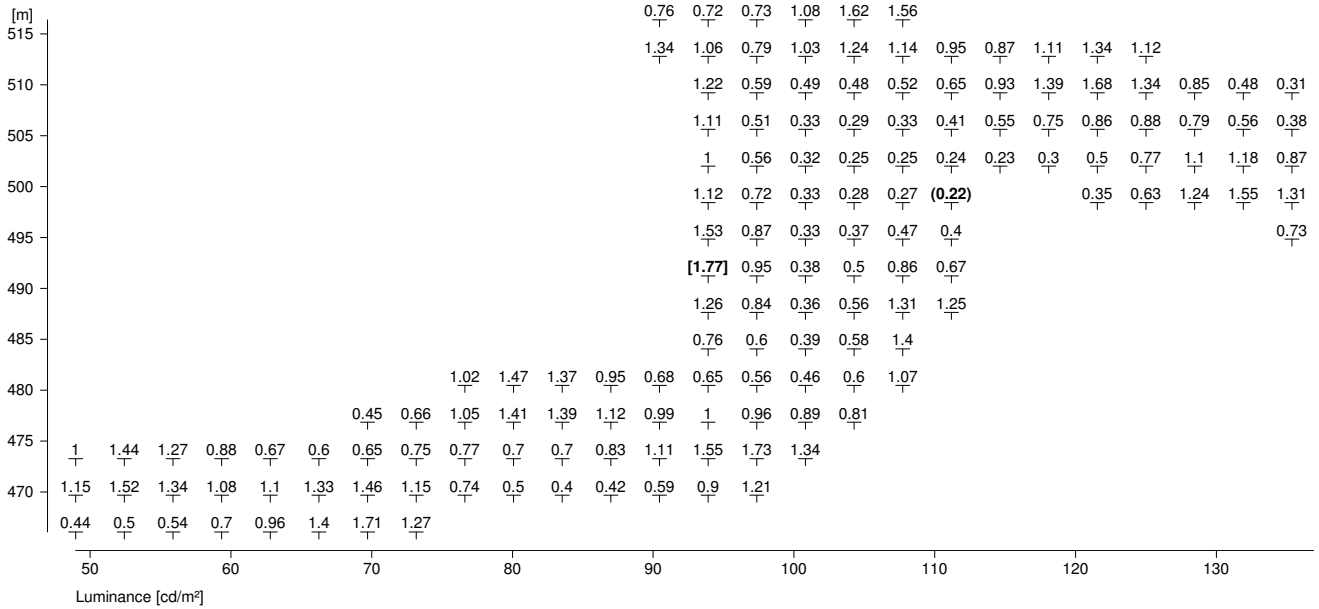


Part12



2.3 Calculation results, Exterior 1

2.3.3 Table, Floor (L)



Part1

Average luminance	Lav	: 0.83 cd/m ²
Minimum luminance	Lmin	: 0.22 cd/m ²
Maximum luminance	Lmax	: 1.77 cd/m ²

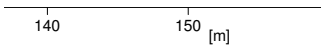
Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.3 Table, Floor (L)

0.28	0.23						
0.58	0.41	0.32	0.33	0.34	0.37	0.39	
0.81	0.52	0.45	0.6	0.92	1.21	1.13	
0.52	0.37	0.41	0.55	1.05	1.51	1.32	
				0.52	0.4		



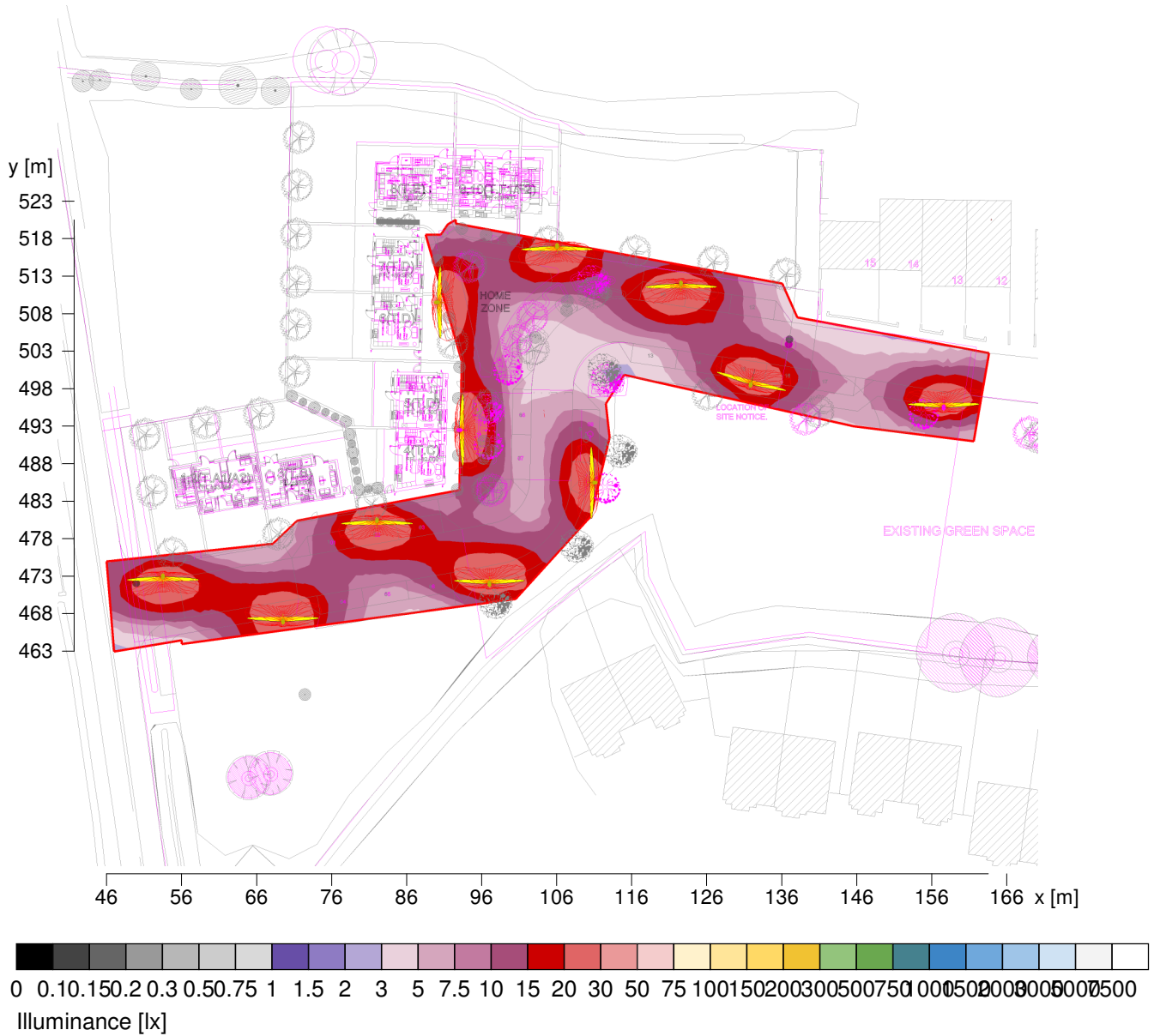
Part2

Object :
 Installation :
 Project number :
 Date :



2.3 Calculation results, Exterior 1

2.3.4 Pseudo colours, Floor (E)

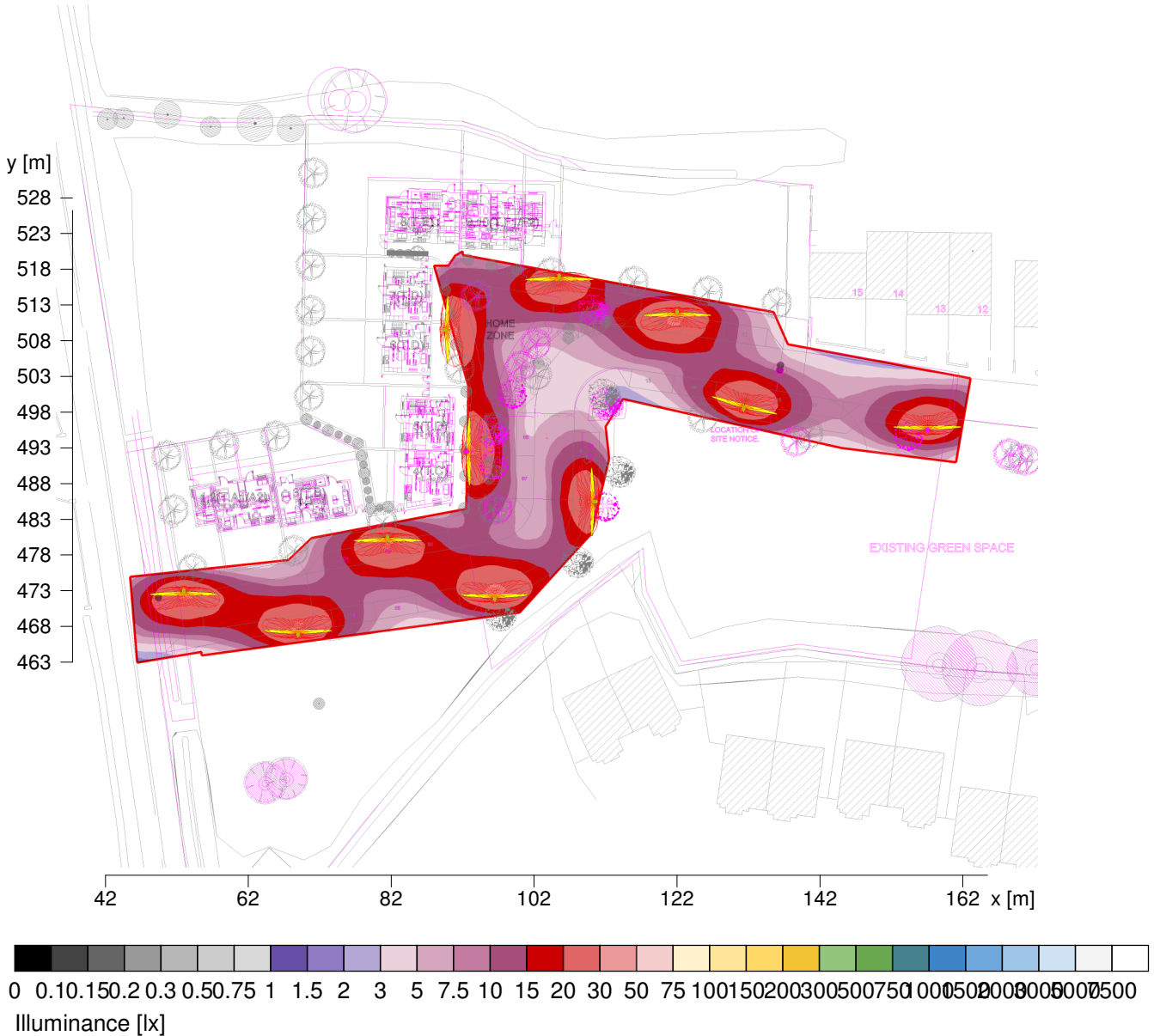


Average illuminance	Em	: 13 lx
Minimum illuminance	Emin	: 3.5 lx
Maximum illuminance	Emax	: 27.8 lx
Uniformity Uo	Emin/Em	: 1 : 3.70 (0.27)
Diversity Ud	Emin/Emax	: 1 : 7.93 (0.13)



2.3 Calculation results, Exterior 1

2.3.5 Pseudo colours, Reference plane 1.1 (E)

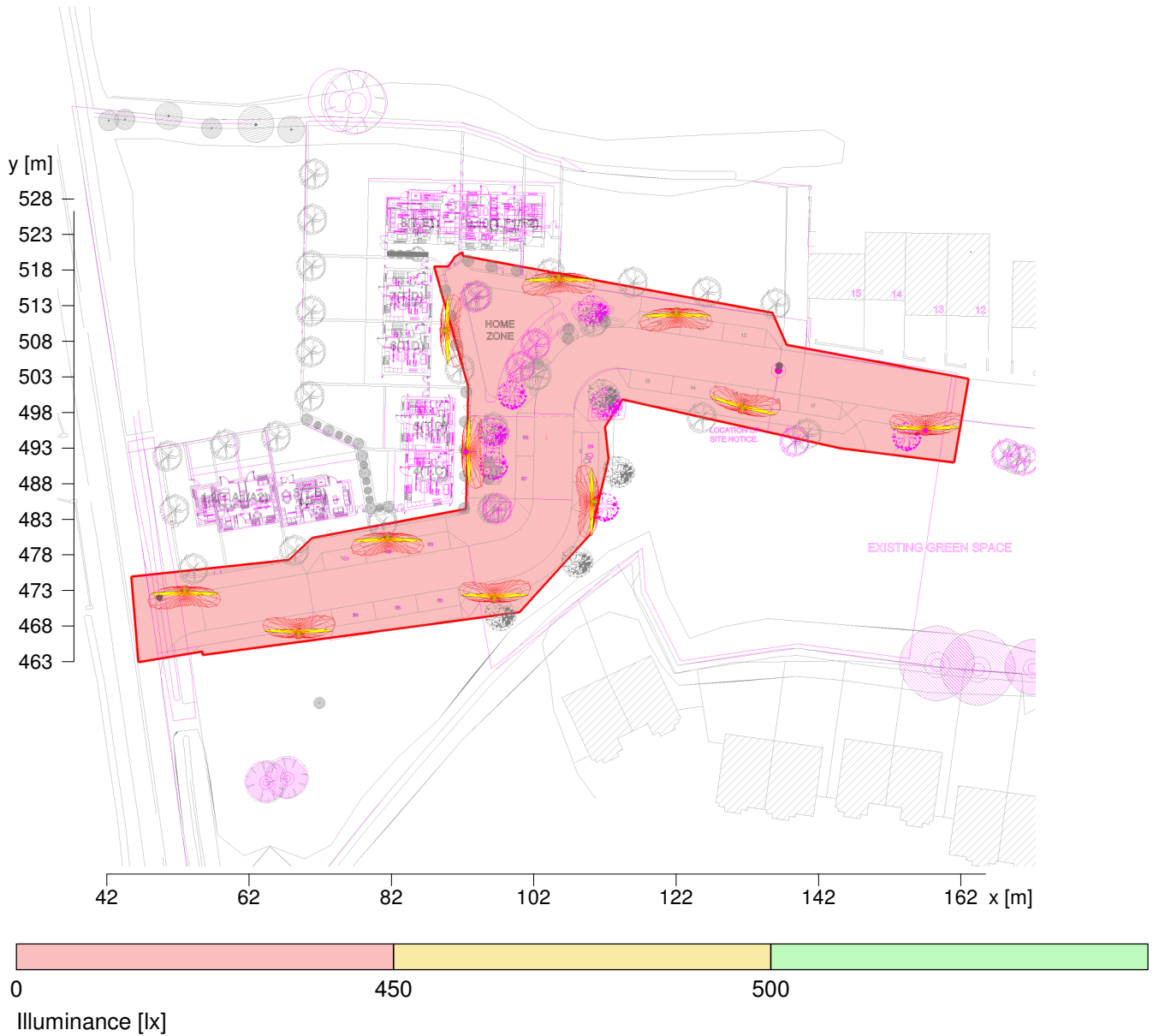


Height reference plane		: 0.00 m
Average illuminance	Em	: 12.6 lx
Minimum illuminance	Emin	: 1.7 lx
Maximum illuminance	Emax	: 30.3 lx
Uniformity Uo	Emin/Em	: 1 : 7.34 (0.14)
Diversity Ud	Emin/Emax	: 1 : 17.62 (0.06)



2.3 Calculation results, Exterior 1

2.3.6 Boundary line, Reference plane 1.1 (E)

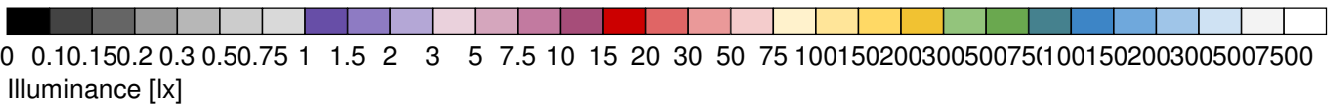
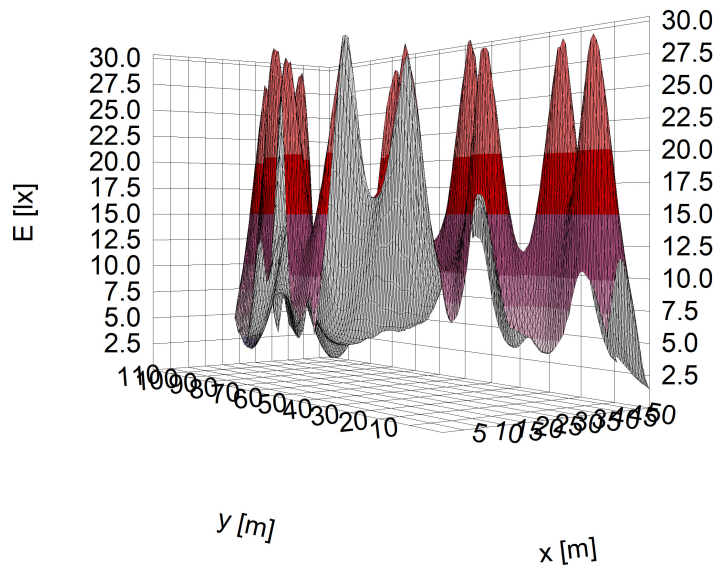


Height reference plane		: 0.00 m
Average illuminance	Em	: 12.6 lx
Minimum illuminance	Emin	: 1.7 lx
Maximum illuminance	Emax	: 30.3 lx
Uniformity Uo	Emin/Em	: 1 : 7.34 (0.14)
Diversity Ud	Emin/Emax	: 1 : 17.62 (0.06)



2.3 Calculation results, Exterior 1

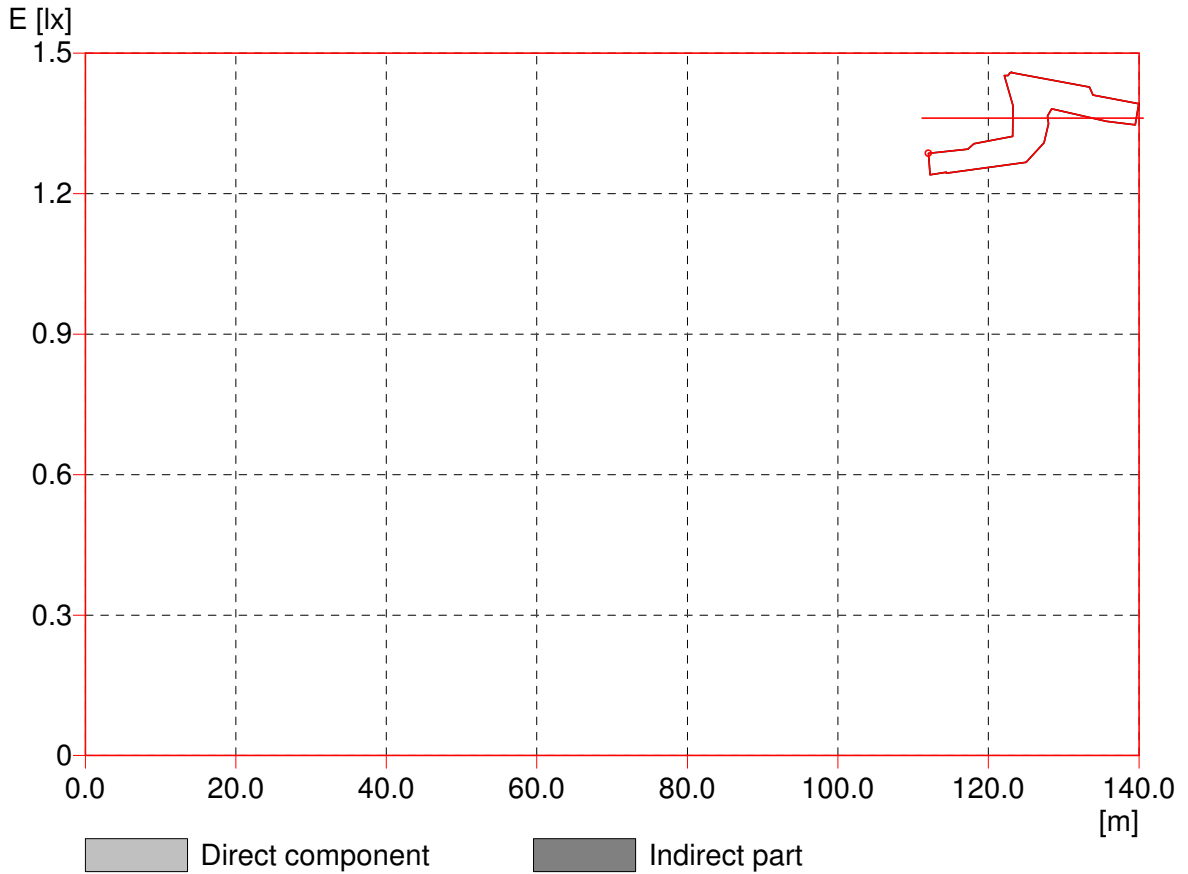
2.3.7 3D mountain plot, Reference plane 1.1 (E)





2.3 Calculation results, Exterior 1

2.3.8 Longitudinal section, Reference plane 1.1 (E)

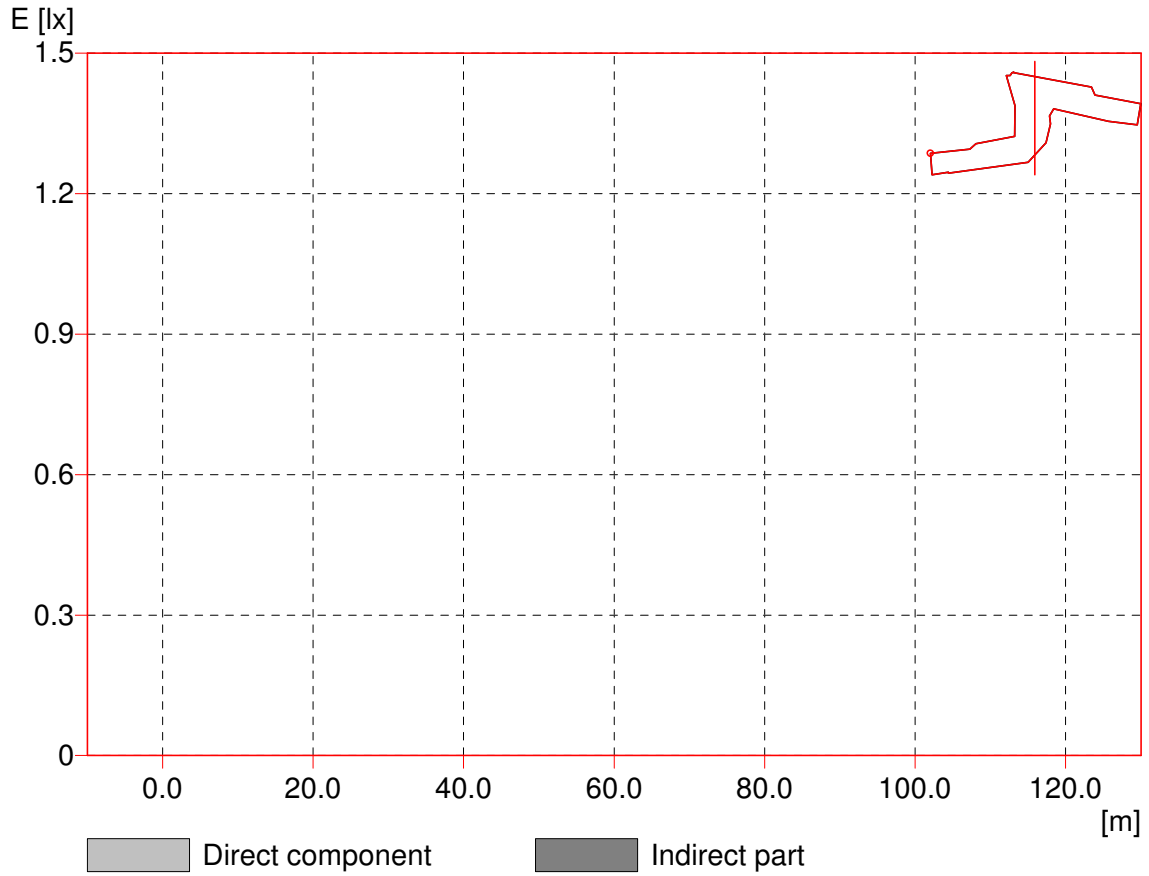


Longitudinal section at y = 448.71 m



2.3 Calculation results, Exterior 1

2.3.9 Cross section, Reference plane 1.1 (E)



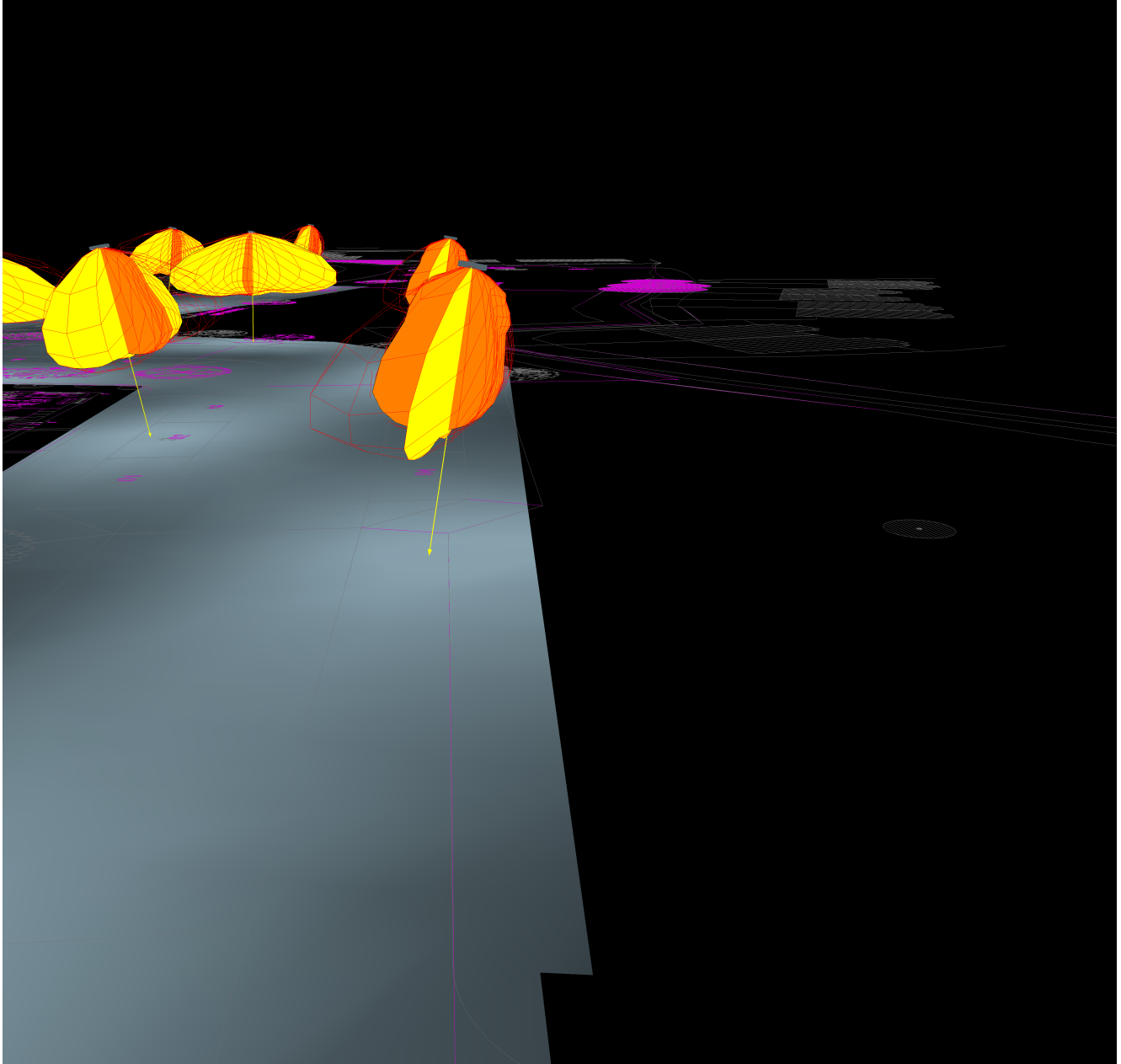
Cross section at x = 415.75 m

Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.10 3D luminance, View 1





2.3 Calculation results, Exterior 1

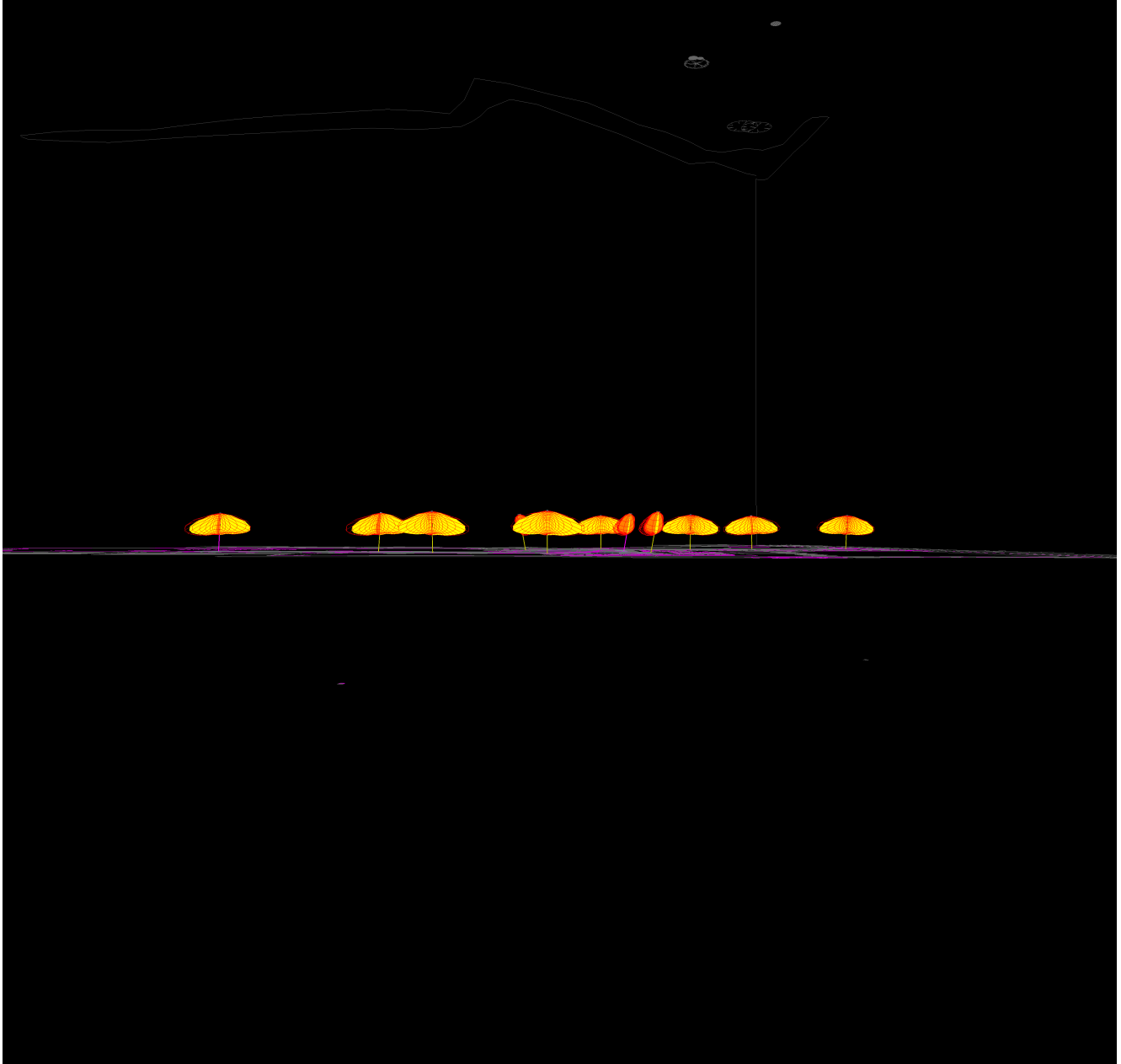
2.3.11 3D luminance, View from the front





2.3 Calculation results, Exterior 1

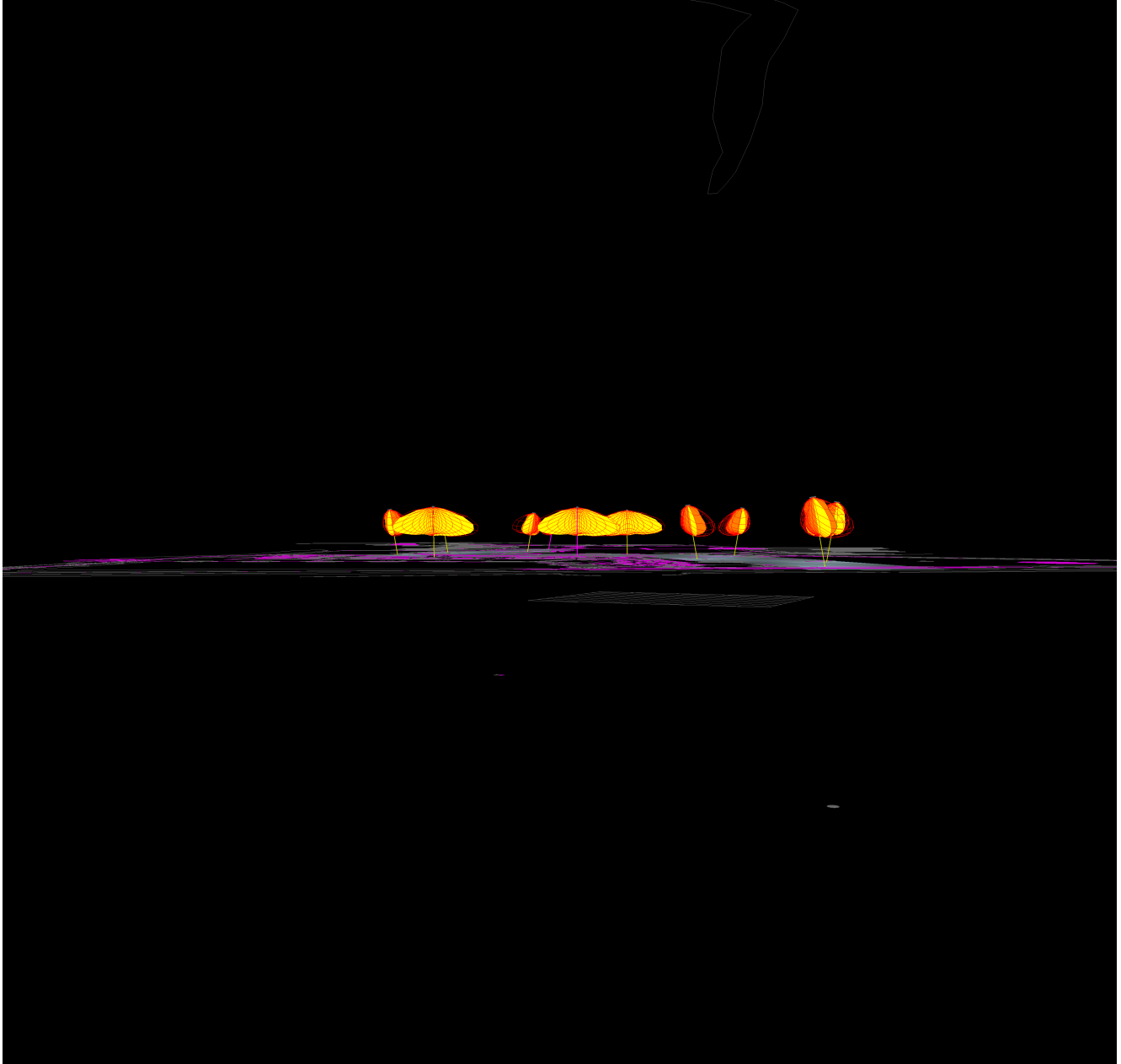
2.3.12 3D luminance, View from the back





2.3 Calculation results, Exterior 1

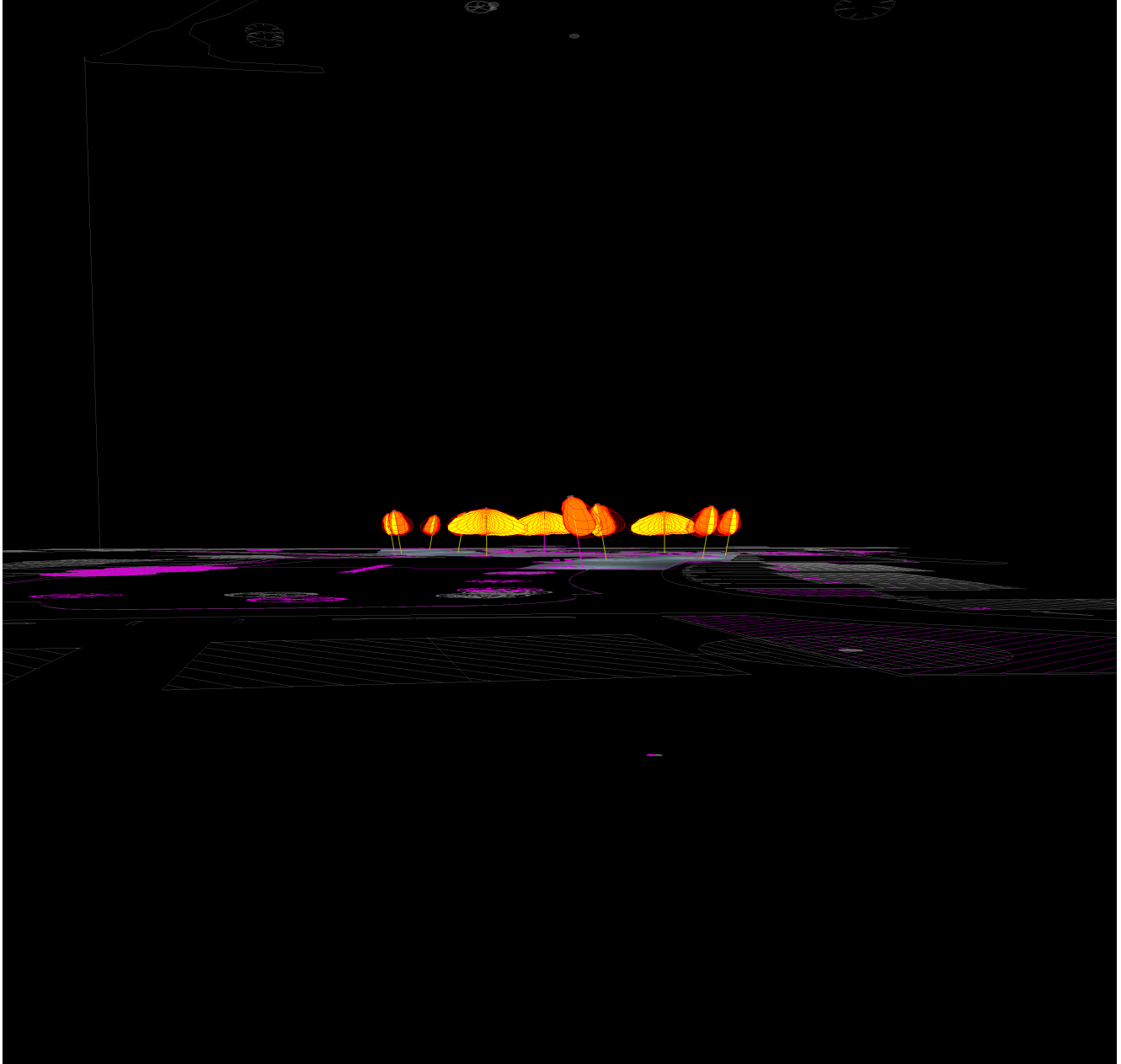
2.3.13 3D luminance, View from the left





2.3 Calculation results, Exterior 1

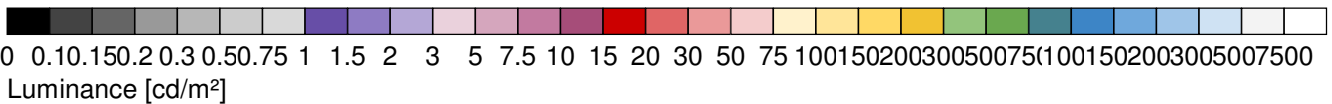
2.3.14 3D luminance, View from the right





2.3 Calculation results, Exterior 1

2.3.15 3D pseudo colours, View 1 (L)



Object :
Installation :
Project number :
Date :

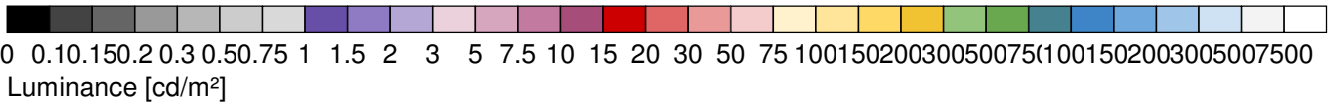


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2.3 Calculation results, Exterior 1

2.3.16 3D pseudo colours, View from the front (L)



Object :
Installation :
Project number :
Date :

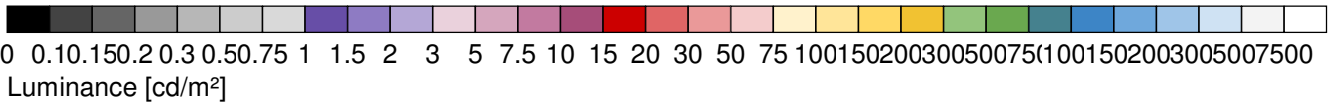


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2.3 Calculation results, Exterior 1

2.3.17 3D pseudo colours, View from the back (L)



Object :
Installation :
Project number :
Date :

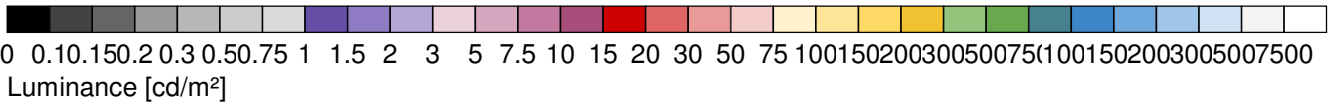
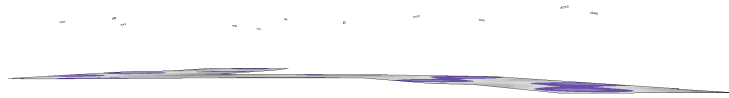


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2.3 Calculation results, Exterior 1

2.3.18 3D pseudo colours, View from the left (L)



Object :
Installation :
Project number :
Date :

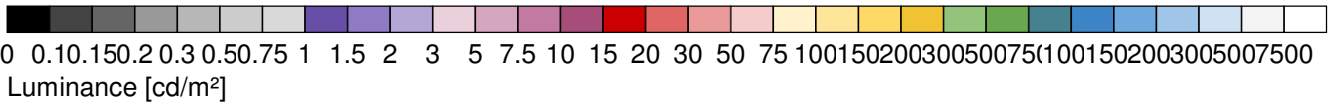
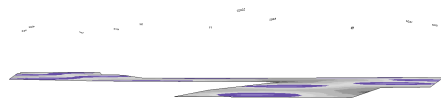


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2.3 Calculation results, Exterior 1

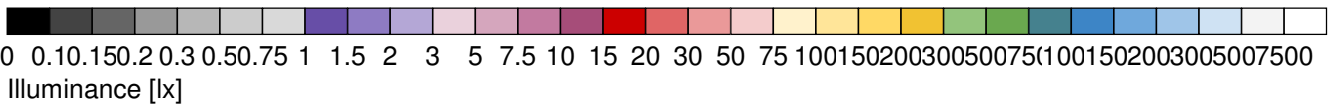
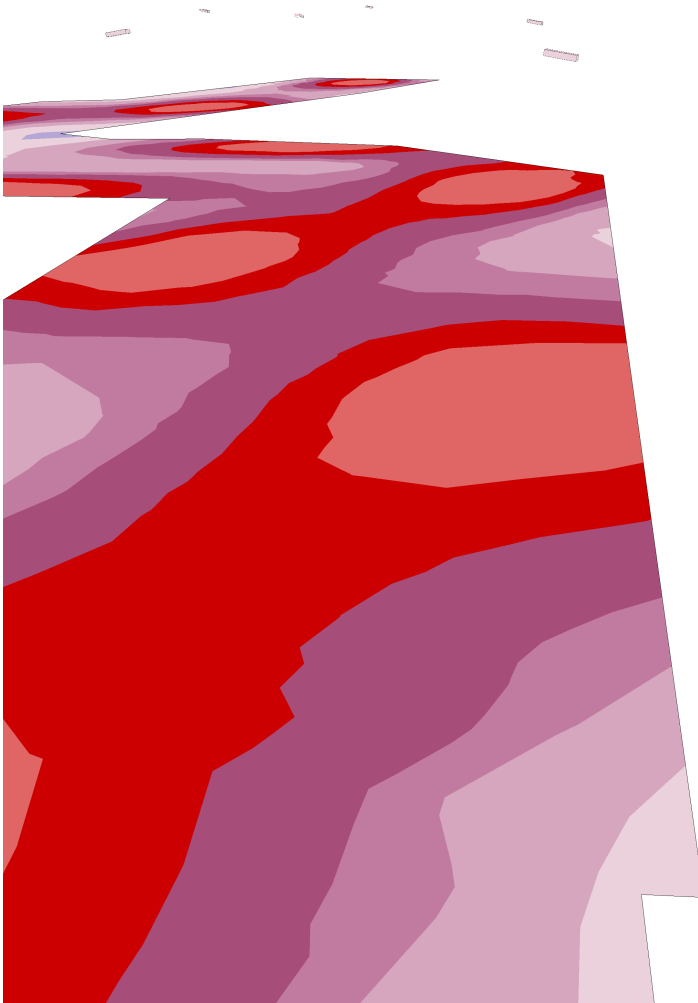
2.3.19 3D pseudo colours, View from the right (L)





2.3 Calculation results, Exterior 1

2.3.20 3D pseudo colours, View 1 (E)

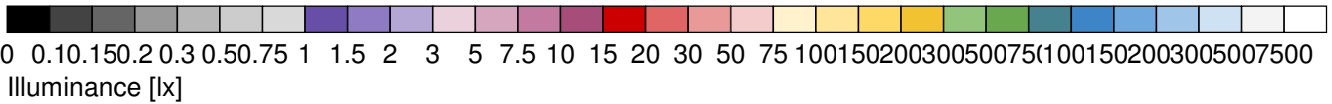


Object :
Installation :
Project number :
Date :



2.3 Calculation results, Exterior 1

2.3.21 3D pseudo colours, View from the front (E)



Object :
Installation :
Project number :
Date :

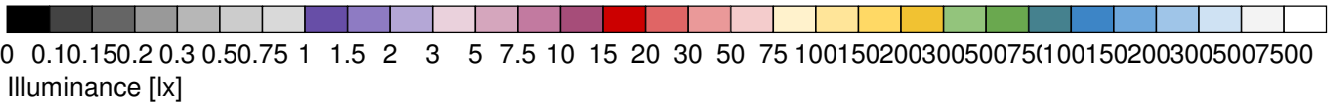


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2.3 Calculation results, Exterior 1

2.3.22 3D pseudo colours, View from the back (E)



Object :
Installation :
Project number :
Date :

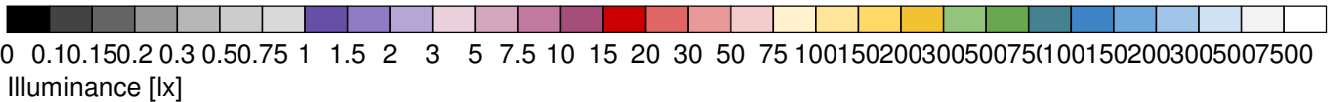


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2.3 Calculation results, Exterior 1

2.3.23 3D pseudo colours, View from the left (E)



Object :
Installation :
Project number :
Date :



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2.3 Calculation results, Exterior 1

2.3.24 3D pseudo colours, View from the right (E)

