

46 Canal Street

Installation : Proposed Lighting

Project number : SHD341-1

Customer :

Processed by : SHD Lighting Consultancy Ltd

Date : 09.11.2021

Project description:

All luminaire styles are indicative only and may be subject to change during construction.

All luminaire positions have been taken from information provided on design drawing '46 Canal St. Manchester M1 3WD - LIGHTING SCHEME' and may be subject to change during construction.

Vertical calc added to offices adjacent to the building

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 Generic, 4W (!4W Globe)

1.1.1 Data sheet

Manufacturer: Generic

!4W Globe 4W

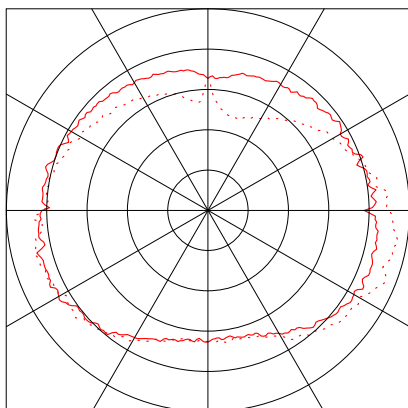
Luminaire data

Luminaire efficiency : 100%
Luminaire efficacy : 106.25 lm/W
Classification : C22 ↓51.4% ↑48.6%
CIE Flux Codes : 22 47 74 51 100
UGR 4H 8H : 23.9 / 23.9
Power : 4 W
Luminous flux : 425 lm

Equipped with

Quantity : 1
Designation : LED
Colour : 2700
Luminous flux : 425 lm
Colour reproduction : 80

Dimensions : 50 mm x 50 mm x 50 mm



1 Luminaire data

1.2 Synergy Lighting, Axiome (!AXM/F/0850/4K8)

1.2.1 Data sheet

Manufacturer: Synergy Lighting

!AXM/F/0850/4K8

Axiome

Luminaire data

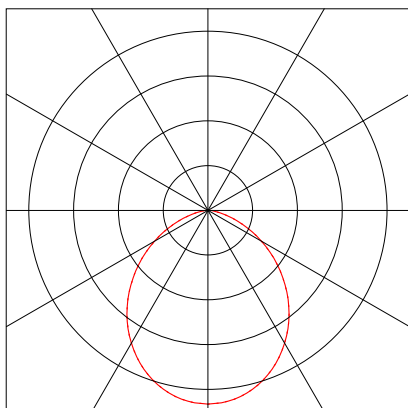
Absolute Photometry

Luminaire efficacy : 95.18 lm/W
Classification : A40 ↓99.9% ↑0.1%
CIE Flux Codes : 54 85 98 100 103
UGR 4H 8H : 29.1 / 29.1
Power : 9 W
Luminous flux : 856.6 lm

Dimensions : Ø110 mm x 2 mm

Equipped with

Quantity : 1
Designation : LED
Colour : 4000
Colour reproduction : 80



1 Luminaire data

1.3 Generic, Wall Light - Down Only (!Wall Light)

1.3.1 Data sheet

Manufacturer: Generic

!Wall Light Wall Light - Down Only

Luminaire data

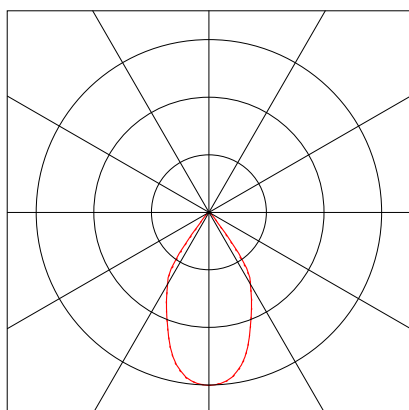
Absolute Photometry

Luminaire efficacy : 49.9 lm/W
Classification : A70 ↓100.0% ↑0.0%
CIE Flux Codes : 94 99 100 100 100
UGR 4H 8H : <10.0 / <10.0
Power : 9 W
Luminous flux : 449.1 lm

Dimensions : 120 mm x 120 mm x 5 mm

Equipped with

Quantity : 1
Designation : LED
Colour : 4000 K
Colour reproduction : 82



1 Luminaire data

1.4 Generic, Uplighter (!Uplighter)

1.4.1 Data sheet

Manufacturer: Generic

!Uplighter Uplighter

Luminaire data

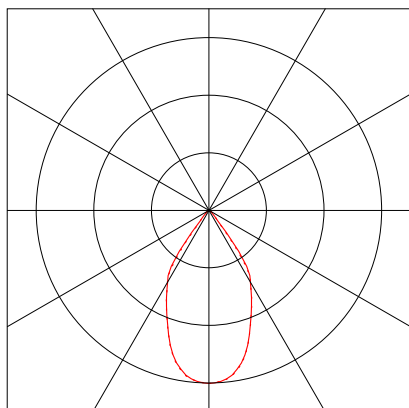
Absolute Photometry

Luminaire efficacy : 49.9 lm/W
Classification : A70 ↓100.0% ↑0.0%
CIE Flux Codes : 94 99 100 100 100
UGR 4H 8H : 10.7 / 11.5
Power : 9 W
Luminous flux : 449.1 lm

Dimensions : 60 mm x 60 mm x 5 mm

Equipped with

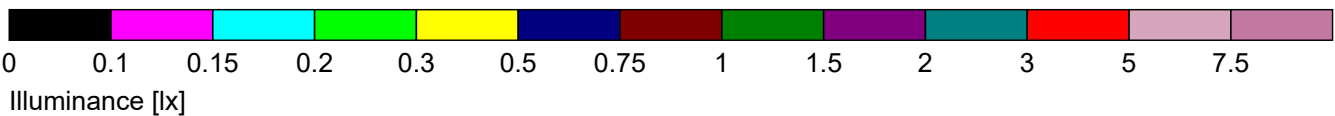
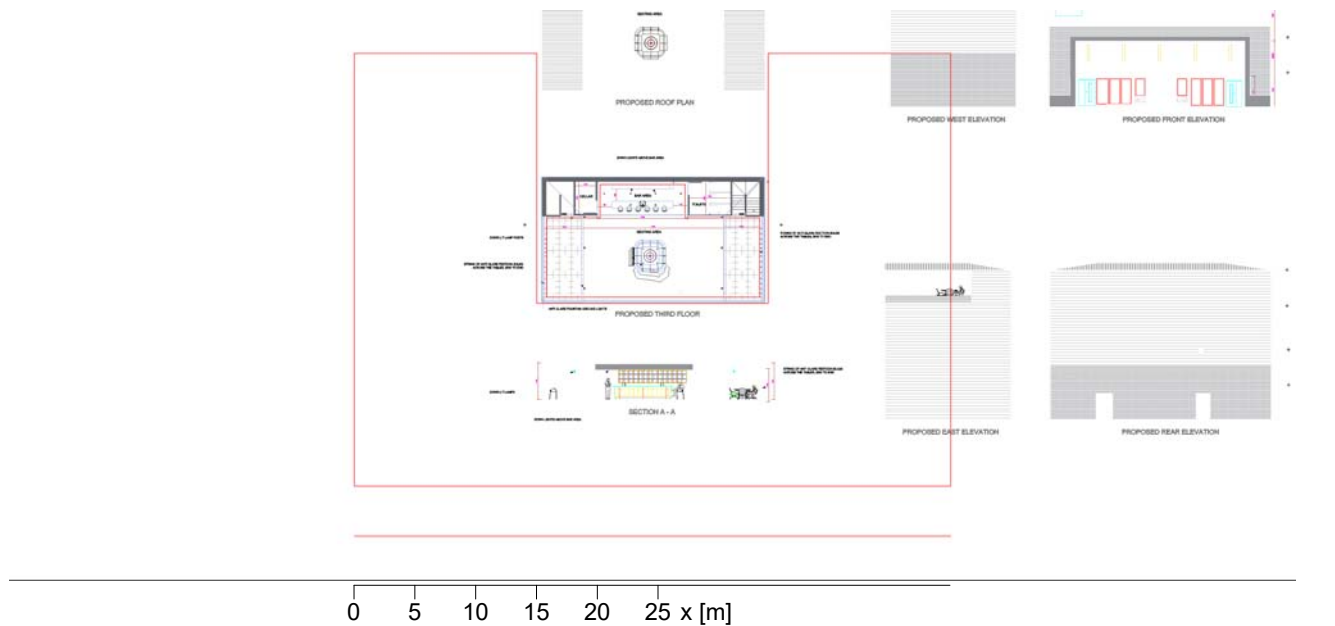
Quantity : 1
Designation : LED
Colour : 4000 K
Colour reproduction : 82



2 Exterior 1

2.1 Summary, Exterior 1

2.1.1 Result overview, Measuring area 5.1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	9.42 m
Maintenance factor	1.00
Total luminous flux of all lamps	23930 lm
Total power	282 W
Total power per area (151.08 m²)	1.87 W/m²

Illuminance

Average illuminance	Em	75 lx
Minimum illuminance	Emin	9 lx
Maximum illuminance	Emax	180 lx
Uniformity Uo	Emin/Em	1:8.44 (0.12)
Diversity Ud	Emin/Emax	1:20.3 (0.05)

Type No.\Make

Generic		
1	30	Order No. : !4W Globe
		Luminaire name : 4W
		Equipment : 1 x LED 4 W / 425 lm
3	6	Order No. : !Wall Light
		Luminaire name : Wall Light - Down Only
		Equipment : 1 x LED 9 W / 450 lm
4	4	Order No. : !Uplighter
		Luminaire name : Uplighter
		Equipment : 1 x LED 9 W / 450 lm

Object : 46 Canal Street
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2 Exterior 1

2.1 Summary, Exterior 1

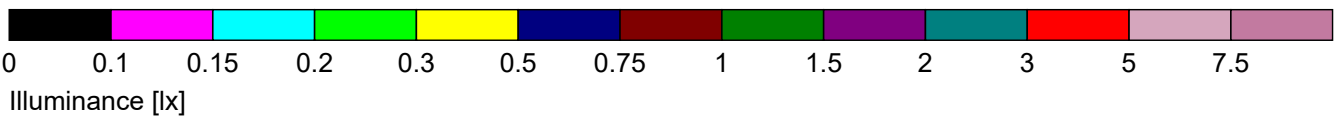
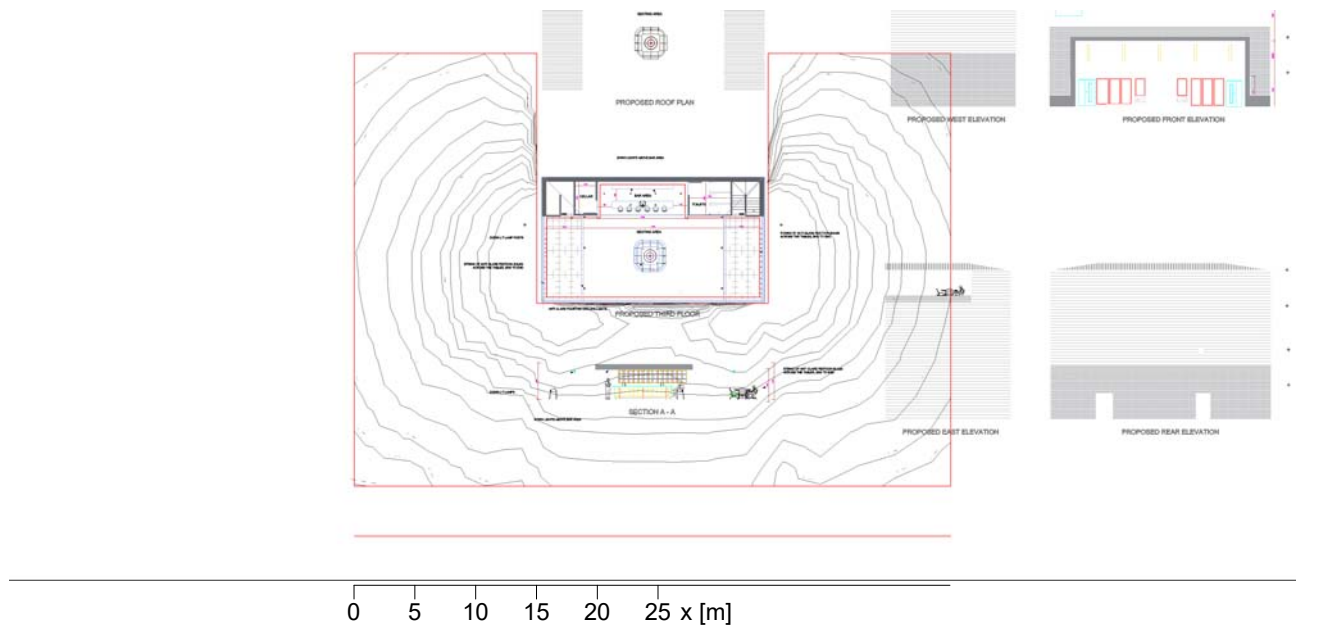
2.1.1 Result overview, Measuring area 5.1

2	8	Synergy Lighting	
		Order No.	: !AXM/F/0850/4K8
		Luminaire name	: Axiome
		Equipment	: 1 x LED 9 W / 835 lm



2.1 Summary, Exterior 1

2.1.2 Result overview, Spill Light



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	9.50 m
Maintenance factor	1.00
Total luminous flux of all lamps	23930 lm
Total power	282 W
Total power per area (151.08 m ²)	1.87 W/m ²

Illuminance

Average illuminance	Em	2.5 lx
Minimum illuminance	Emin	0.1 lx
Maximum illuminance	Emax	44.7 lx
Uniformity Uo	Emin/Em	1:34.6 (0.03)
Diversity Ud	Emin/Emax	1:610 (0)

Type No.\Make

Generic		
1	30	Order No. : !4W Globe
		Luminaire name : 4W
		Equipment : 1 x LED 4 W / 425 lm
3	6	Order No. : !Wall Light
		Luminaire name : Wall Light - Down Only
		Equipment : 1 x LED 9 W / 450 lm
4	4	Order No. : !Uplighter
		Luminaire name : Uplighter
		Equipment : 1 x LED 9 W / 450 lm

Object : 46 Canal Street
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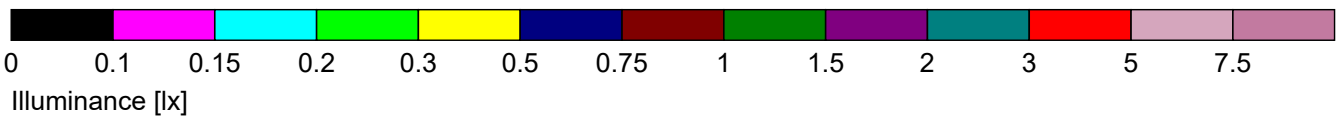
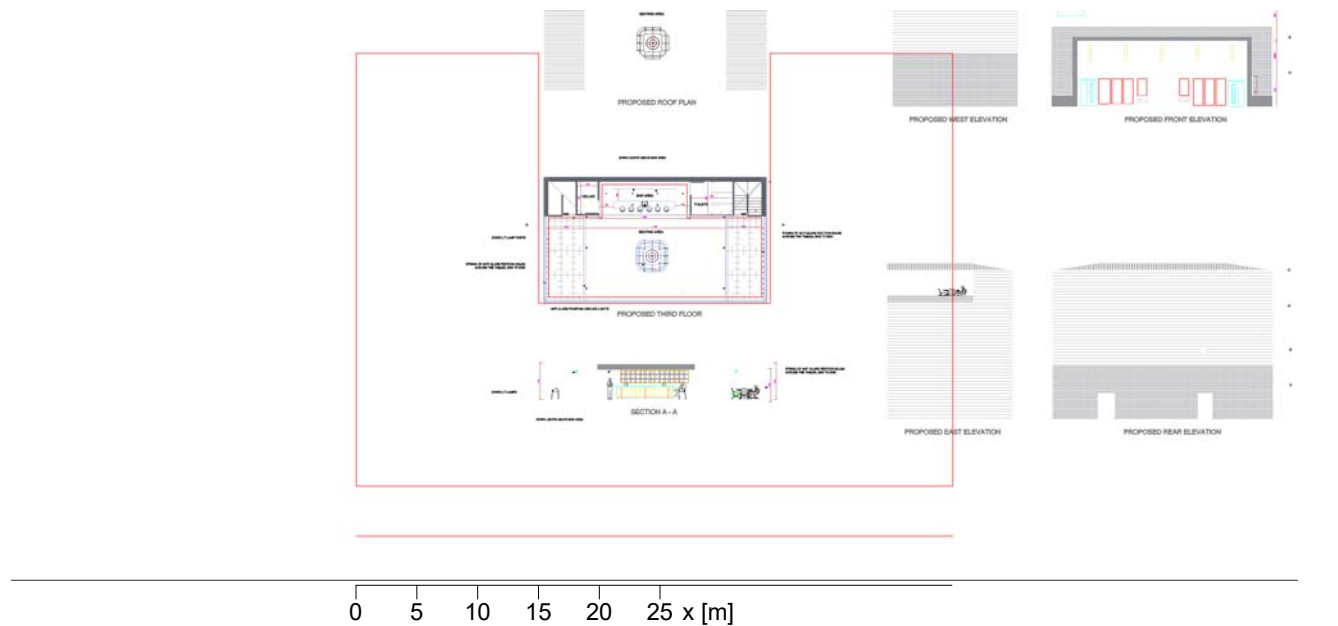
2.1 Summary, Exterior 1

2.1.2 Result overview, Spill Light

2 8 **Synergy Lighting**
 Order No. : !AXM/F/0850/4K8
Luminaire name : Axiome
Equipment : 1 x LED 9 W / 835 lm

2.1 Summary, Exterior 1

2.1.3 Result overview, Opposite Buildings - 19m away.



General

Calculation algorithm used
Maintenance factor

Average indirect fraction
1.00

Total luminous flux of all lamps
Total power
Total power per area (151.08 m²)

23930 lm
282 W
1.87 W/m²

Illuminance

Average illuminance	Em	1.01 lx
Minimum illuminance	Emin	0.19 lx
Maximum illuminance	E _{max}	2.93 lx
Uniformity U _o	Emin/Em	1:5.27 (0.19)
Diversity U _d	Emin/E _{max}	1:15.4 (0.07)

Type No.\Make

Generic

1	30		Order No.	: !4W Globe
			Luminaire name	: 4W
			Equipment	: 1 x LED 4 W / 425 lm
3	6		Order No.	: !Wall Light
			Luminaire name	: Wall Light - Down Only
			Equipment	: 1 x LED 9 W / 450 lm
4	4		Order No.	: !Uplighter
			Luminaire name	: Uplighter
			Equipment	: 1 x LED 9 W / 450 lm

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2.1 Summary, Exterior 1

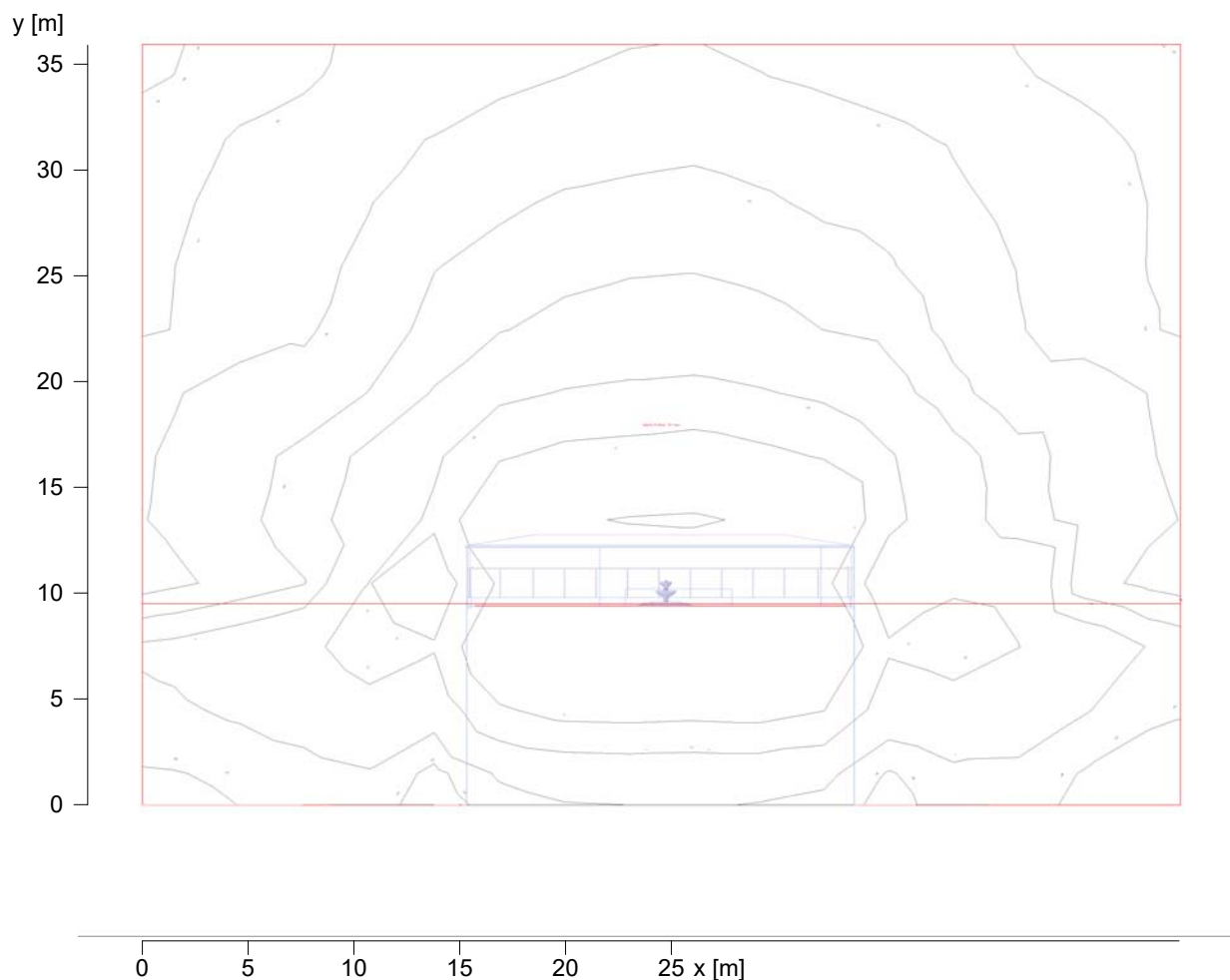
2.1.3 Result overview, Opposite Buildings - 19m away.

2 8 **Synergy Lighting**
 Order No. : !AXM/F/0850/4K8
Luminaire name : Axiome
Equipment : 1 x LED 9 W / 835 lm

2 Exterior 1

2.2 Calculation results, Exterior 1

2.2.1 Pseudo colours, Opposite Buildings - 19m away. (E)

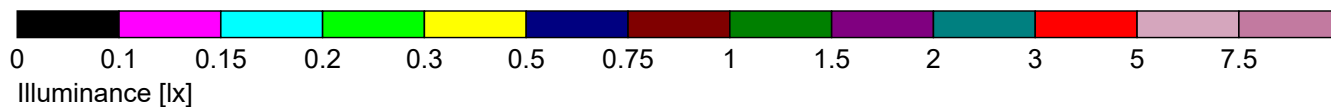
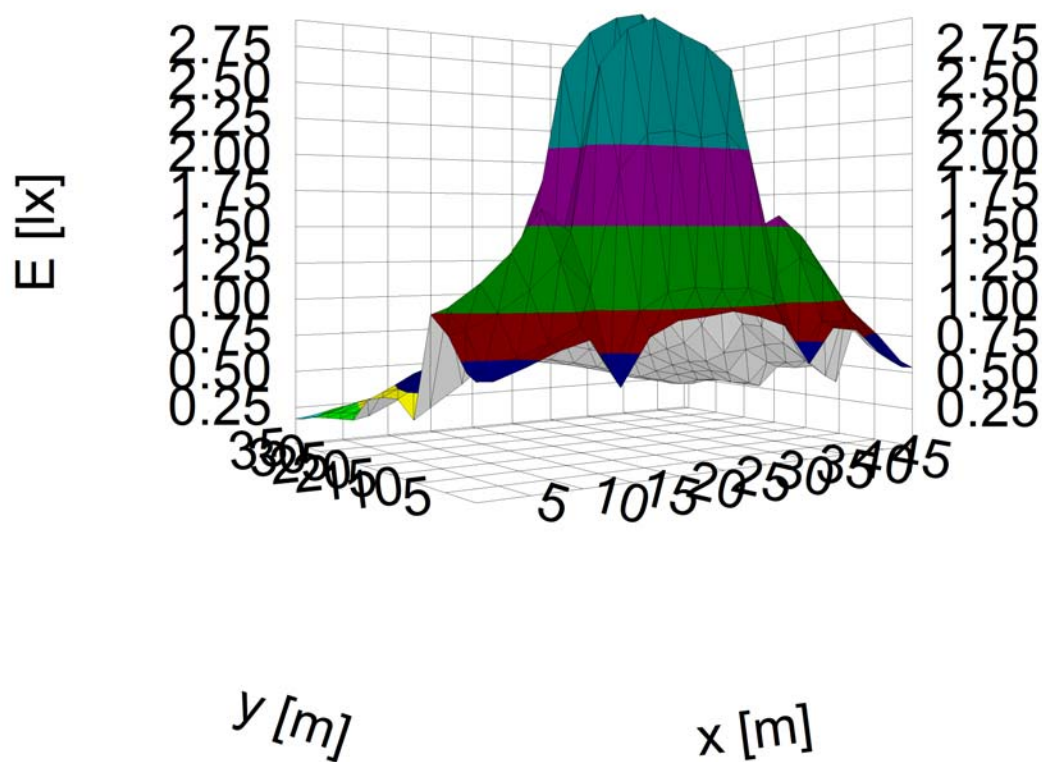


Average illuminance
Minimum illuminance
Maximum illuminance
Uniformity U_0
Diversity U_d

E_m	: 1.01 lx
E_{min}	: 0.19 lx
E_{max}	: 2.93 lx
E_{min}/E_m	: 1 : 5.27 (0.19)
E_{min}/E_{max}	: 1 : 15.36 (0.07)

2.2 Calculation results, Exterior 1

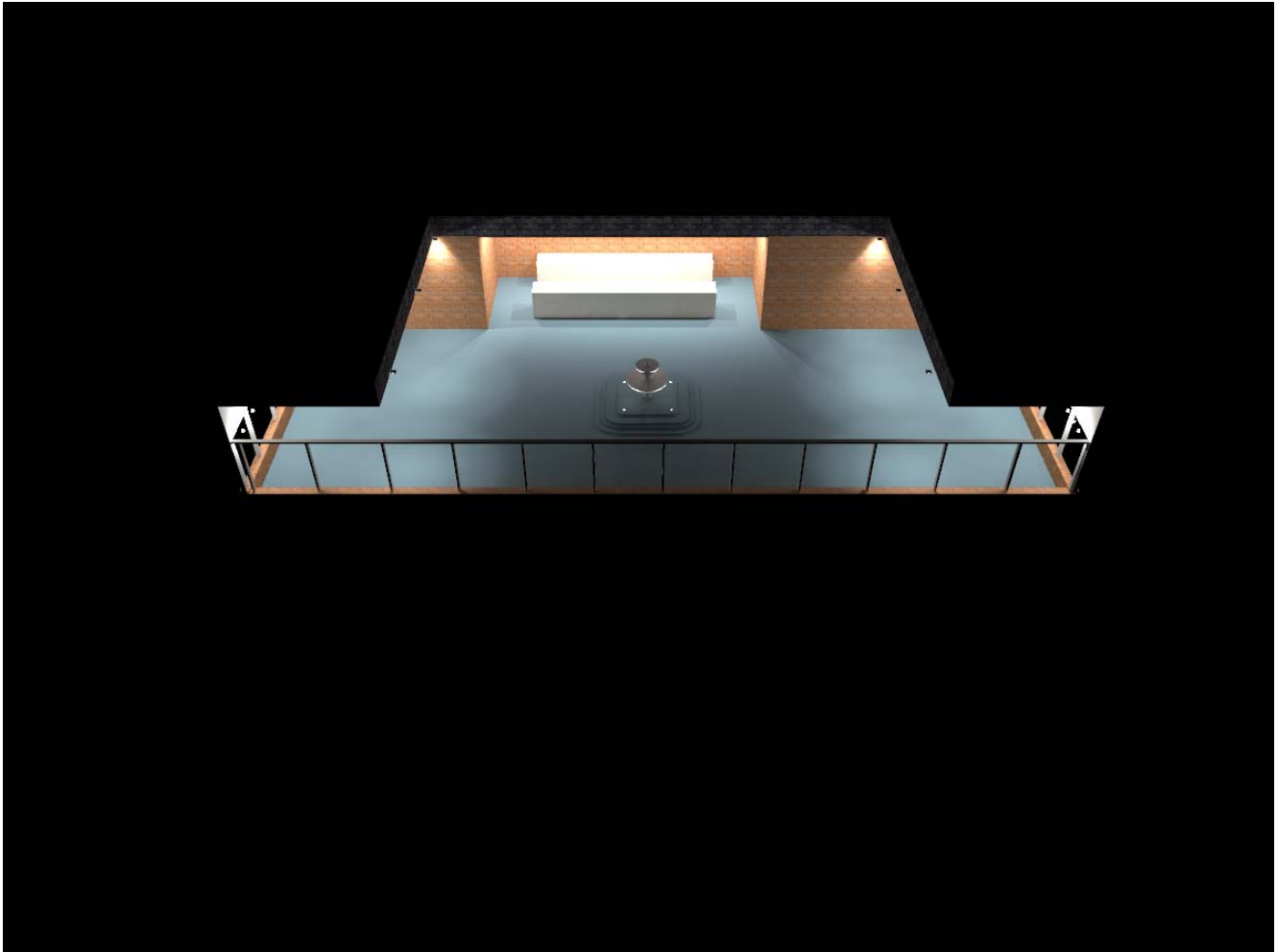
2.2.2 3D mountain plot, Opposite Buildings - 19m away. (E)



2 Exterior 1

2.3 Calculation results, Exterior 1

2.3.1 3D luminance (raytracing), Variable view



Luminance in the illustration:

Minimum: : 0 cd/m²
Maximum: : 29400 cd/m²

Artificial light calculation : Direct part, with 5 inter-reflections