

Installation :

Project number : P2152
Customer : Fusion - Terrace
Processed by : Matthew Morgan
Date : 03.12.2024

Project description:
Lighting _Emergency Lightng Calculation

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.

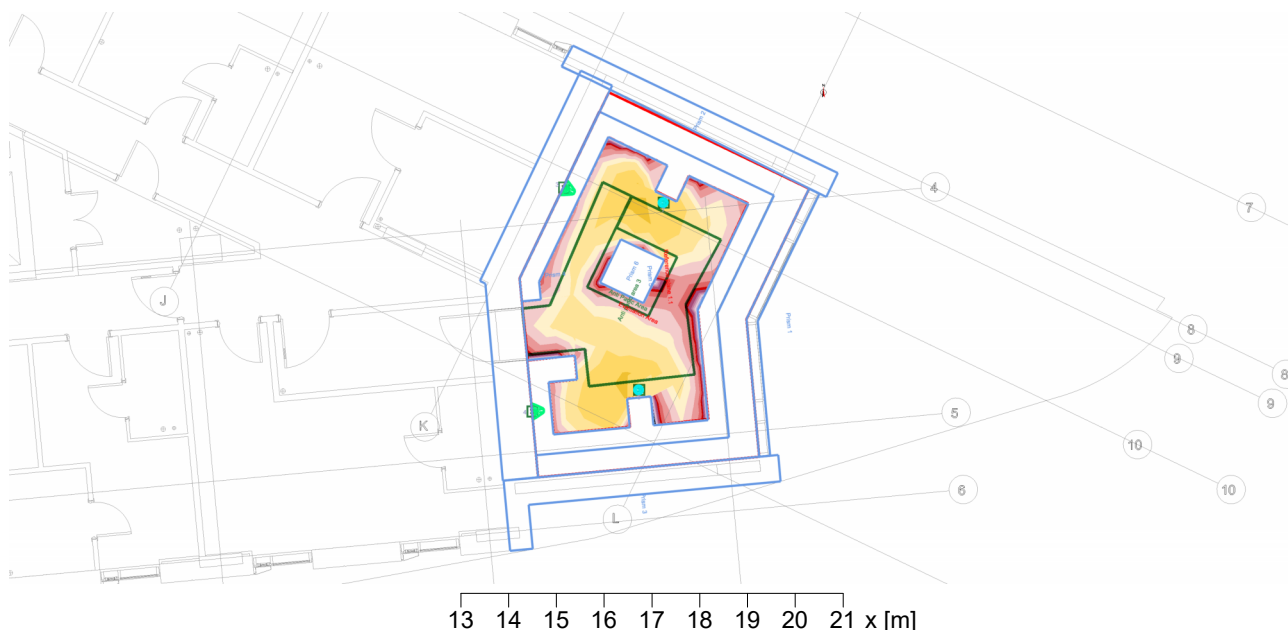
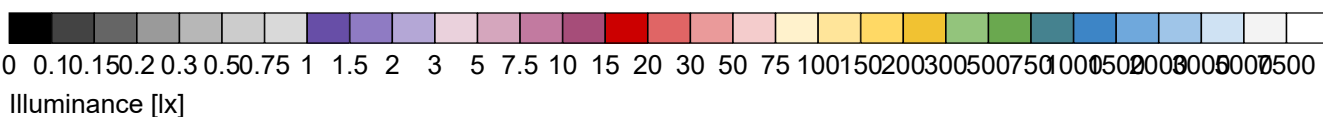
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1 Terrace 22nd Floor (With Central Planter)

1.1 Summary, Terrace 22nd Floor (With Central Planter)

1.1.1 Result overview, Evaluation Area



General

Calculation algorithm used
 Height of evaluation surface
 Maintenance factor

Average indirect fraction
 0.00 m
 0.80

Total luminous flux
 Total power
 Total power per area (33.45 m²)

7066.6001 lm
 58.2 W
 1.74 W/m²

Illuminance

Average illuminance $\bar{E}_m$ 94 lx
 Minimum illuminance E_{min} 28 lx
 Maximum illuminance E_{max} 205 lx
 Uniformity U_o $E_{min}/\bar{E}_m$ 1:3.31 (0.3)
 Diversity U_d E_{min}/E_{max} 1:7.22 (0.14)

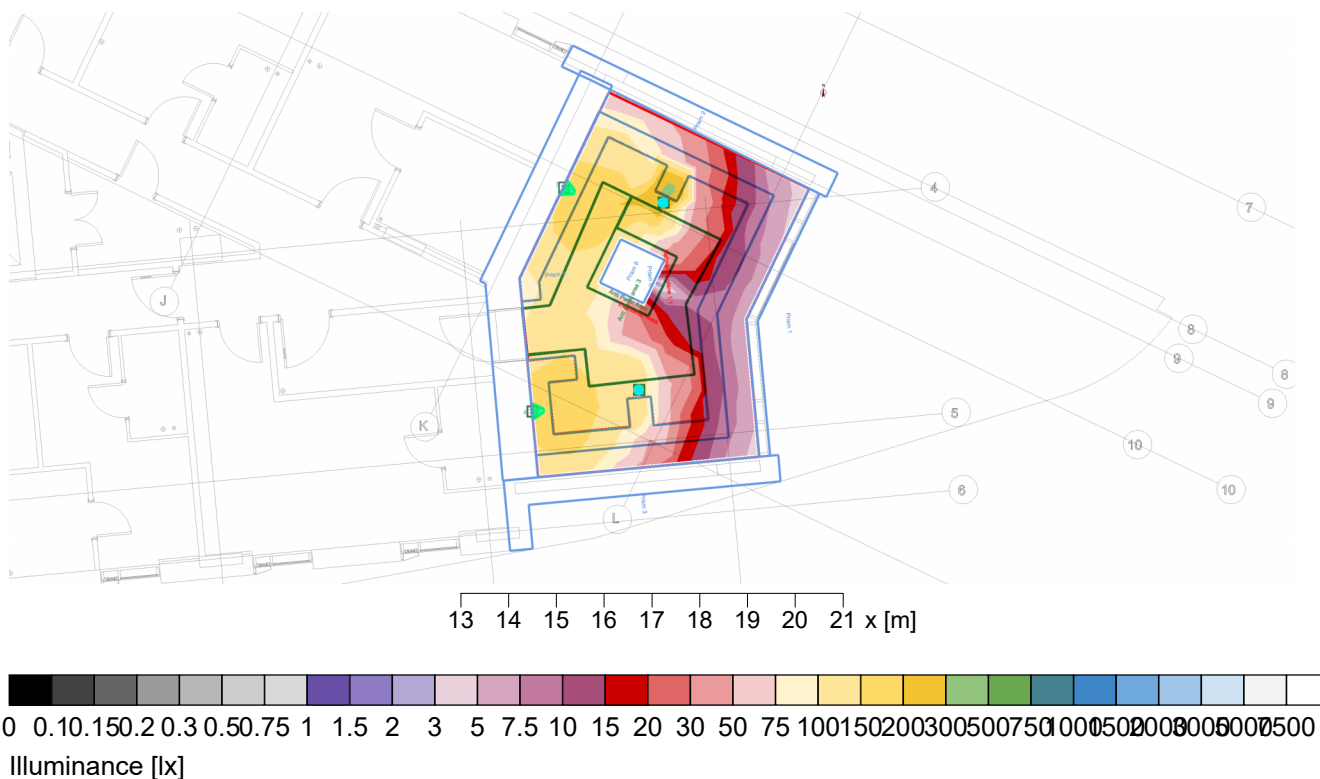
Type No. Make

6 2E x **Ansell**
 Order No. : ATAUB/1 (10W 4000K) -- Emergency Lighting --
 Luminaire name : BOLLARDS - Taurus
 Equipment : 1 x LED 9.7 W / 1141.3 lm
 Emergency : 114 lm (10.0 %)

7 2E x
 Order No. : AWOLF/BLK/M3 (CW 19W) -- Emergency Lighting --
 Luminaire name : BULKHEADS - Wolf Black 4000K
 Equipment : 1 x LED single 840 19.41 W / 2392 lm
 Emergency : 239 lm (10.0 %)

1.1 Summary, Terrace 22nd Floor (With Central Planter)

1.1.2 Result overview, Evaluation area 1



General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 0.80

Luminaire luminous flux
 Total power
 Total power per area (33.45 m²)

7066.60 lm
 58.2 W
 1.74 W/m² (2.12 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 $\bar{E}_m$ 82 lx
 E_{min} 5.3 lx
 $E_{min}/\bar{E}_m (U_o)$ 0.06
 $E_{min}/E_{max} (U_d)$ 0.02
 Position 0.75 m

Type No. Make

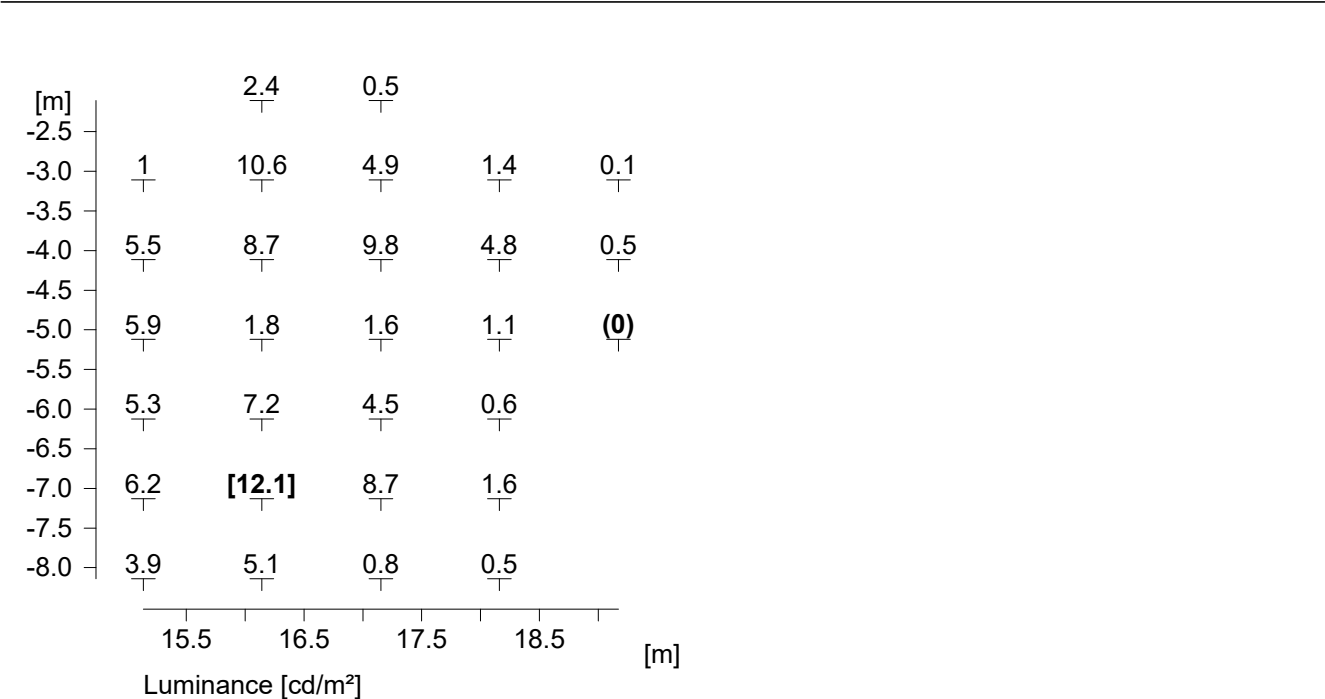
6 2E x **Ansell**
 Order No. : ATAUB/1 (10W 4000K) -- Emergency Lighting --
 Luminaire name : BOLLARDS - Taurus
 Equipment : 1 x LED 9.7 W / 1141.3 lm
 Emergency : 114 lm (10.0 %)

7 2E x
 Order No. : AWOLF/BLK/M3 (CW 19W) -- Emergency Lighting --
 Luminaire name : BULKHEADS - Wolf Black 4000K
 Equipment : 1 x LED single 840 19.41 W / 2392 lm
 Emergency : 239 lm (10.0 %)

1 Terrace 22nd Floor (With Central Planter)

1.2 Calculation results, Terrace 22nd Floor (With Central Planter)

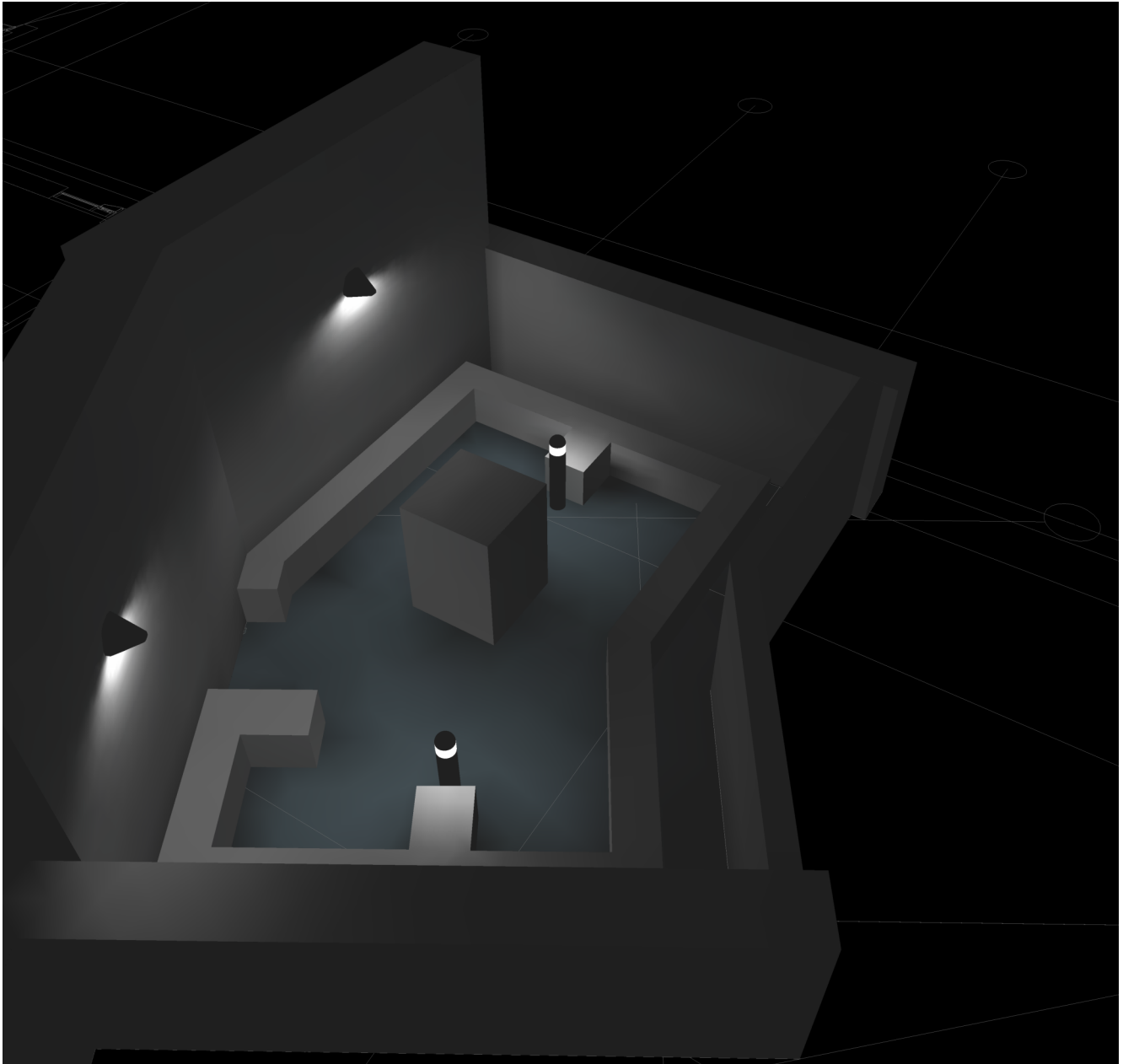
1.2.1 Table, Floor (L)



Average luminance	$\bar{L}_m$	: 4.04 cd/m²
Minimum luminance	L_{min}	: 0 cd/m²
Maximum luminance	L_{max}	: 12.1 cd/m²

1.2 Calculation results, Terrace 22nd Floor (With Central Planter)

1.2.2 3D luminance, View 1



Luminance in the scene

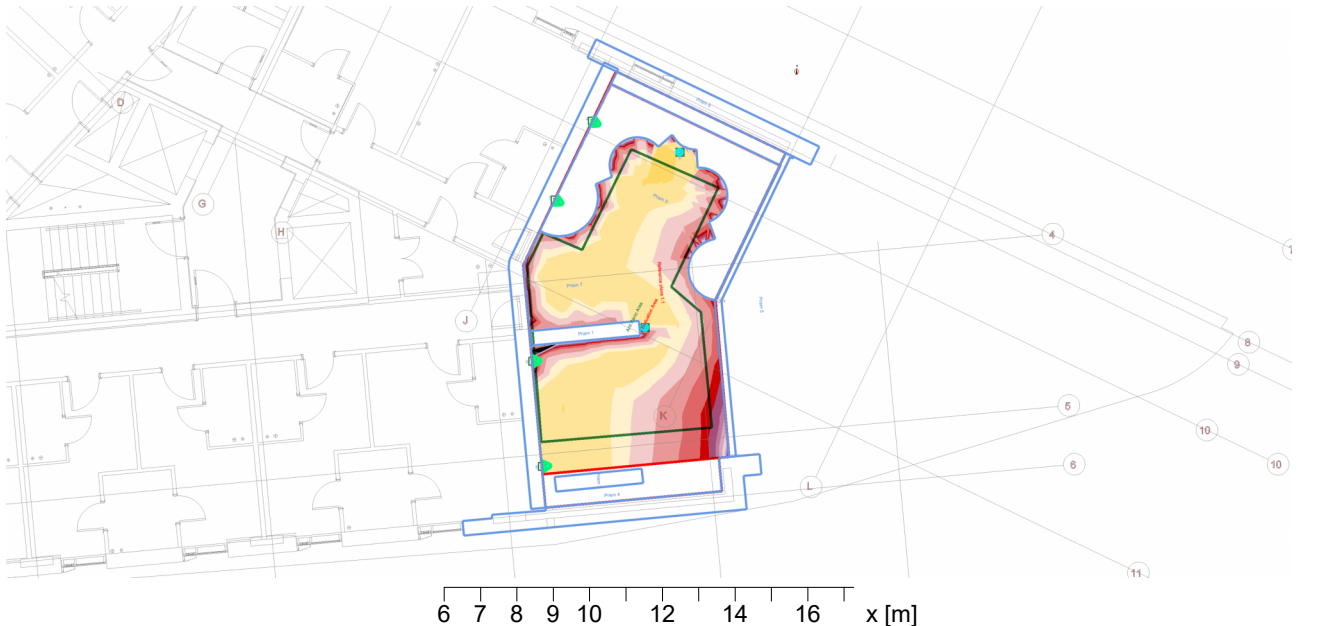
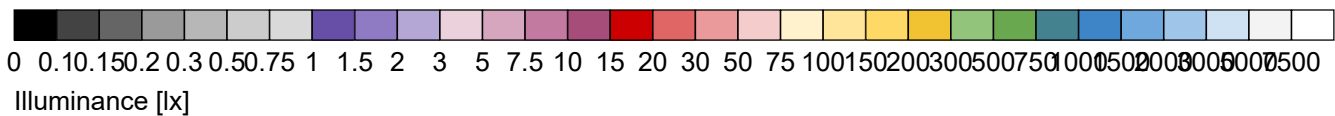
Minimum: : 0 cd/m²

Maximum: : 1010 cd/m²

2 Terrace 24th Floor

2.1 Summary, Terrace 24th Floor

2.1.1 Result overview, Evaluation Area



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux	11850.5996 lm
Total power	97 W
Total power per area (57.38 m²)	1.69 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	83 lx
Minimum illuminance	E_{min}	14 lx
Maximum illuminance	E_{max}	152 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:6.13 (0.16)
Diversity U_d	E_{min}/E_{max}	1:11.2 (0.09)

Type No. Make

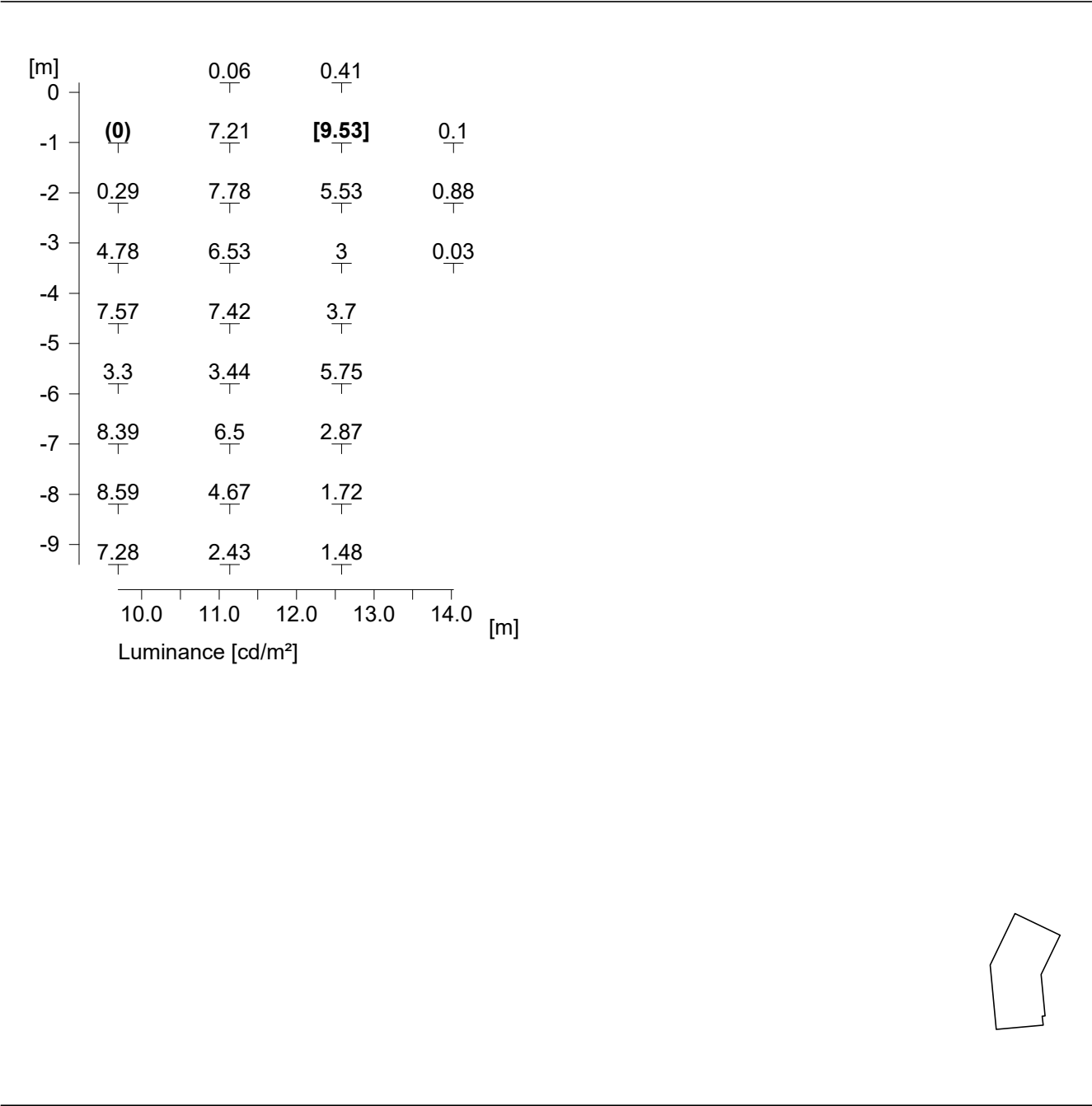
6	2E x	Ansell	
	Order No.	: ATAUB/1 (10W 4000K)	-- Emergency Lighting --
	Luminaire name	: BOLLARDS - Taurus	
	Equipment	: 1 x LED 9.7 W / 1141.3 lm	
	Emergency	: 114 lm (10.0 %)	

7	4E x	AWOLF/BLK/M3 (CW 19W)	-- Emergency Lighting --
	Luminaire name	: BULKHEADS - Wolf Black 4000K	
	Equipment	: 1 x LED single 840 19.41 W / 2392 lm	
	Emergency	: 239 lm (10.0 %)	

2 Terrace 24th Floor

2.2 Calculation results, Terrace 24th Floor

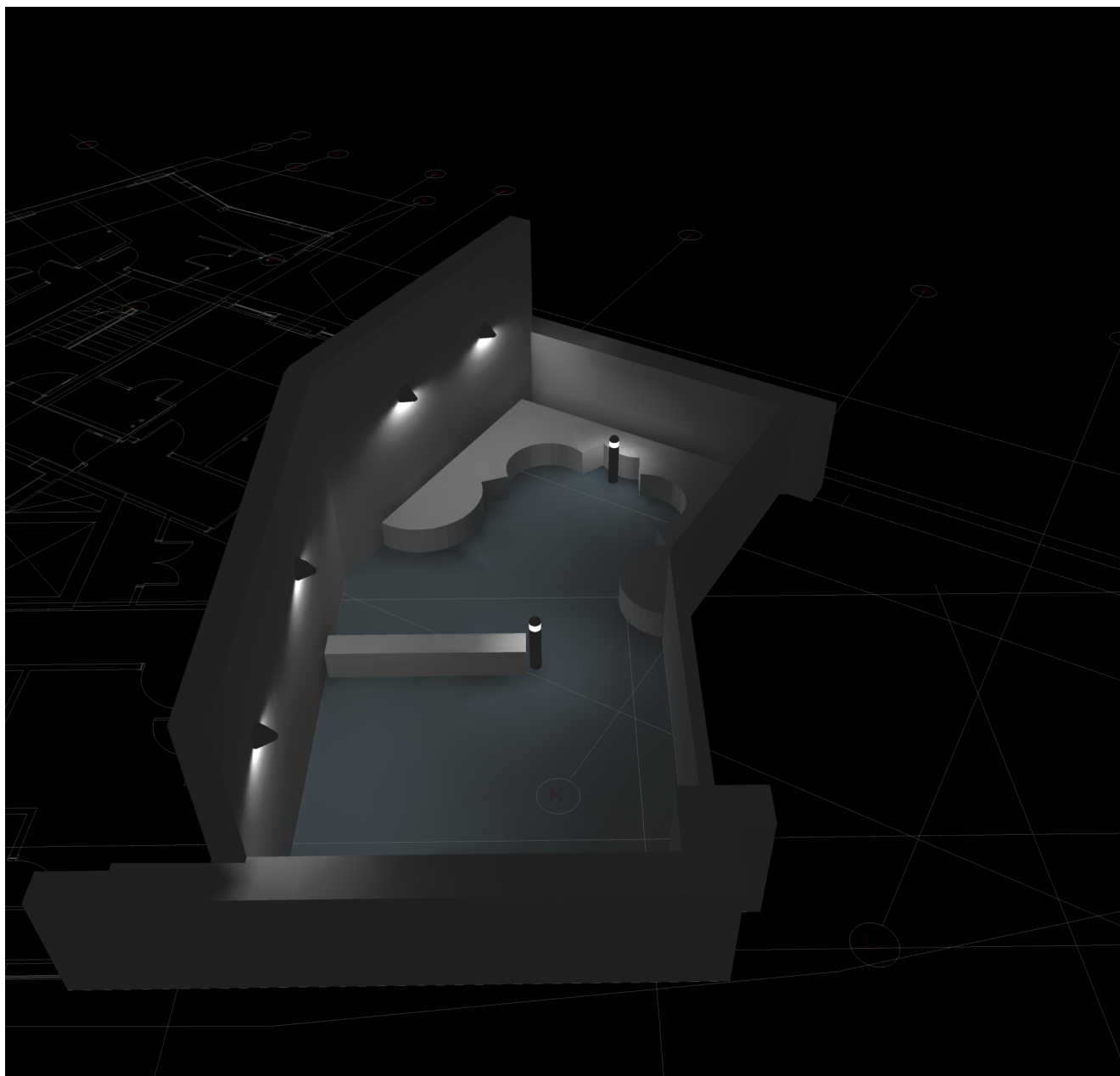
2.2.1 Table, Floor (L)



Average luminance	$\bar{L}_m$	: 4.18 cd/m²
Minimum luminance	L_{min}	: 0 cd/m²
Maximum luminance	L_{max}	: 9.53 cd/m²

2.2 Calculation results, Terrace 24th Floor

2.2.2 3D luminance, View 1



Luminance in the scene

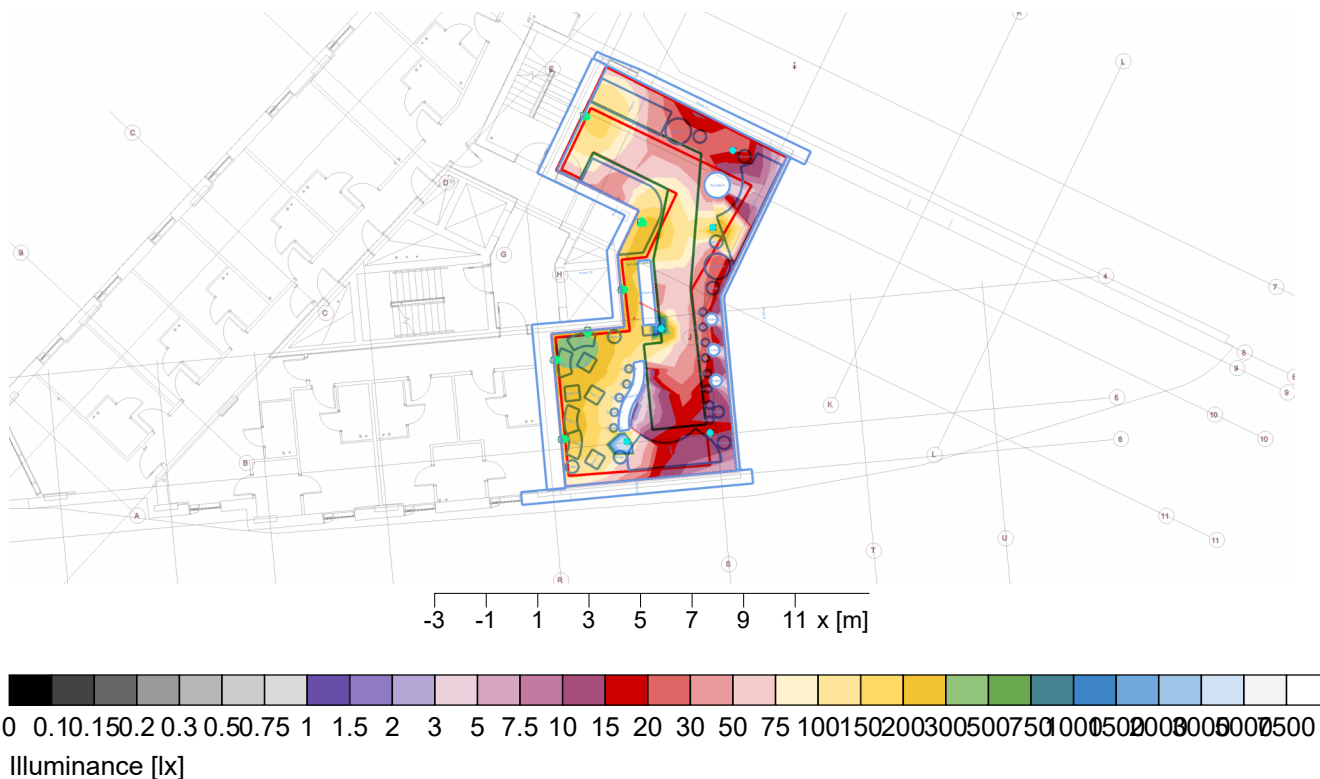
Minimum: : 0 cd/m²

Maximum: : 1450 cd/m²

4 Terrace 26th Floor (with furniture)(Copy of)

4.1 Summary, Terrace 26th Floor (with furniture)(Copy of)

4.1.1 Result overview, Evaluation area 1



General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 0.80

Luminaire luminous flux
 Total power
 Total power per area (88.82 m²)

20058.50 lm
 165.0 W
 1.86 W/m² (2.18 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 $\bar{E}_m$ 85.1 lx
 E_{min} 4.2 lx
 $E_{min}/\bar{E}_m (U_o)$ 0.05
 $E_{min}/E_{max} (U_d)$ 0.01
 Position 0.75 m

Type No. Make

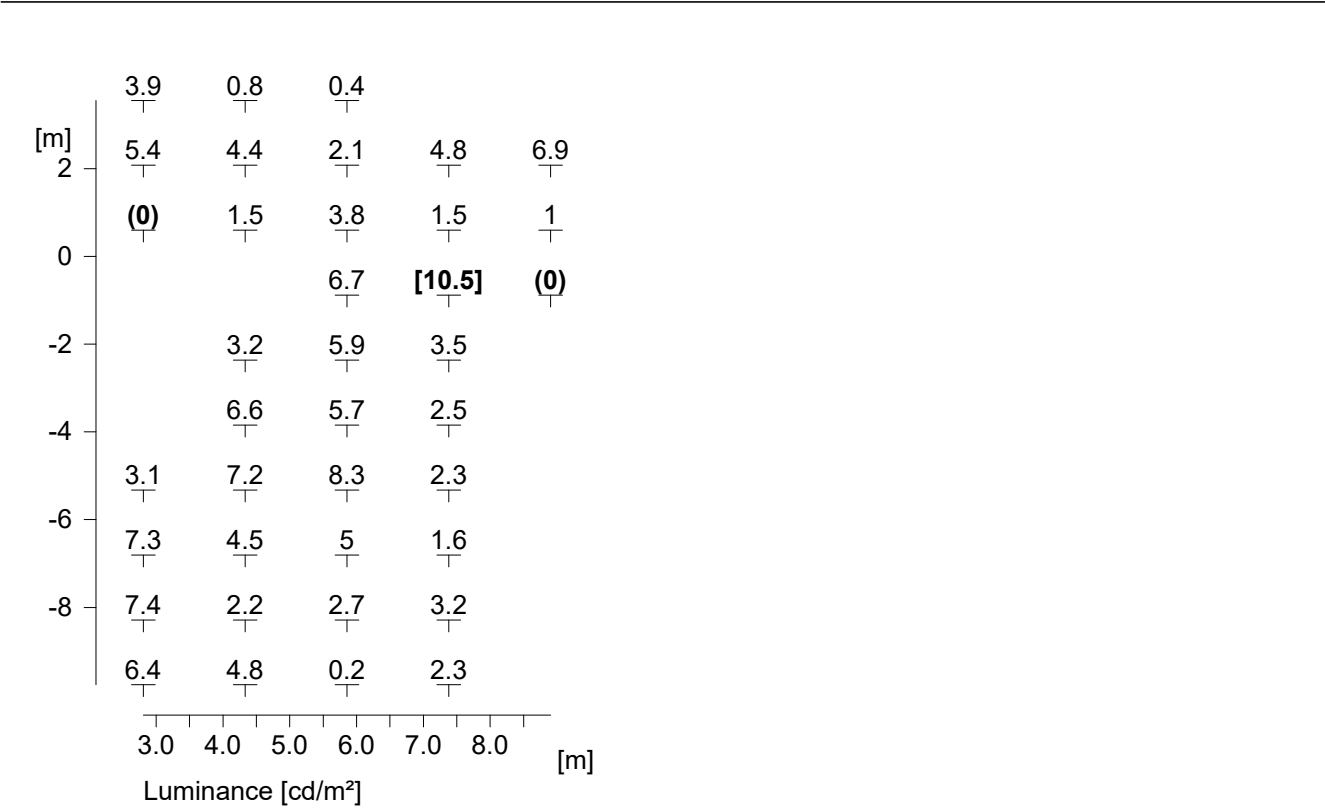
6 5E x **Ansell**
 Order No. : ATAUB/1 (10W 4000K) -- Emergency Lighting --
 Luminaire name : BOLLARDS - Taurus
 Equipment : 1 x LED 9.7 W / 1141.3 lm
 Emergency : 114 lm (10.0 %)

7 6E x
 Order No. : AWOLF/BLK/M3 (CW 19W) -- Emergency Lighting --
 Luminaire name : BULKHEADS - Wolf Black 4000K
 Equipment : 1 x LED single 840 19.41 W / 2392 lm
 Emergency : 239 lm (10.0 %)

4 Terrace 26th Floor (with furniture)(Copy of)

4.2 Calculation results, Terrace 26th Floor (with furniture)(Copy of)

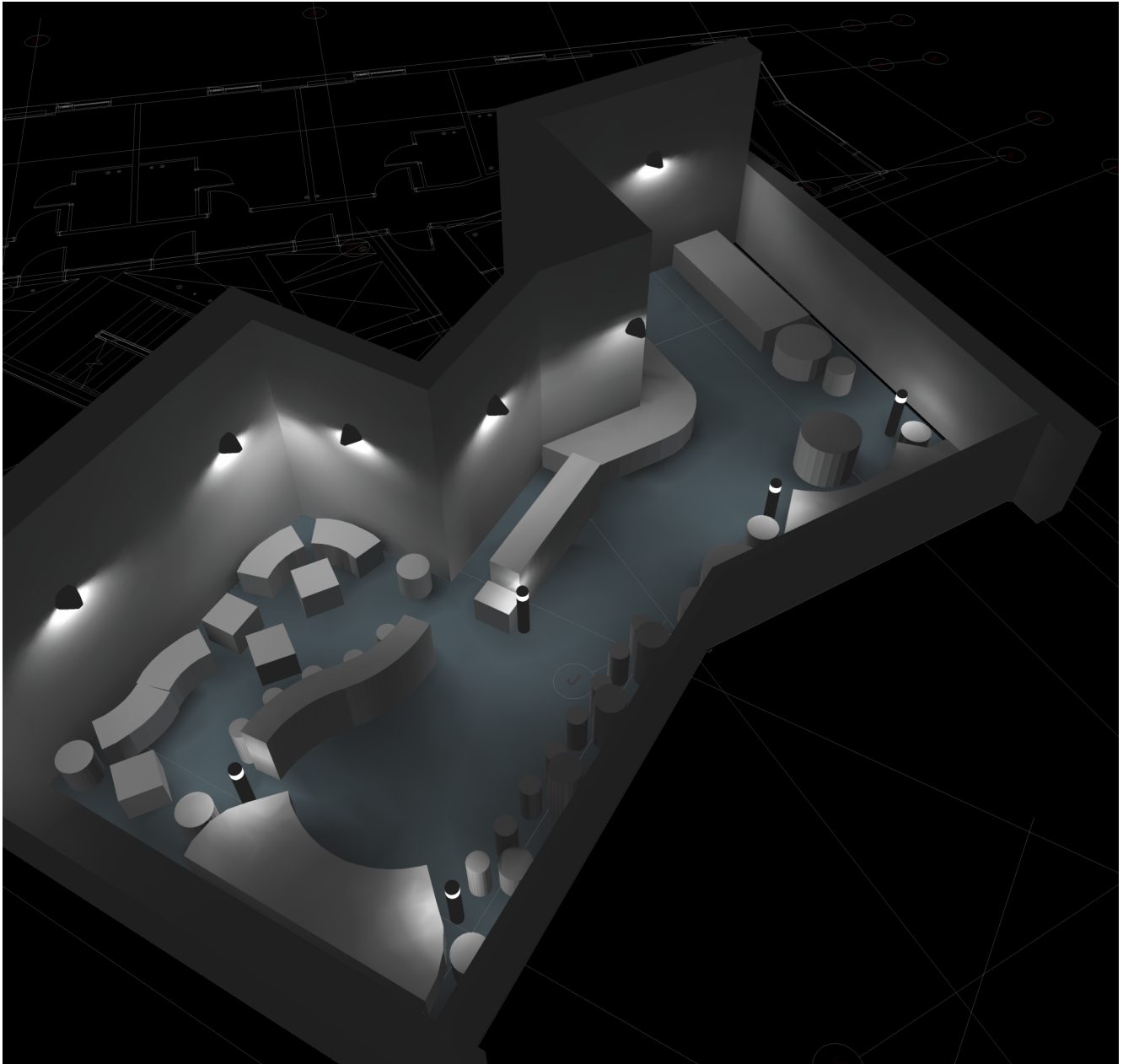
4.2.1 Table, Floor (L)



Average luminance $\bar{L}_m$: 3.94 cd/m²
Minimum luminance L_{min} : 0 cd/m²
Maximum luminance L_{max} : 10.5 cd/m²

4.2 Calculation results, Terrace 26th Floor (with furniture)(Copy of)

4.2.2 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m²

Maximum: : 1110 cd/m²

4.2 Calculation results, Terrace 26th Floor (with furniture)(Copy of)

4.2.3 3D pseudo colours, View 1 (L)

