

## Installation :

Project number : DGU55-40\_IESNA2002

Customer :

Processed by : Marius Smith

Date : 11.03.2025

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 ()

#### 1.1.1 Data sheet

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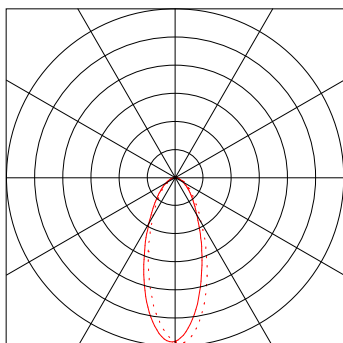
##### Luminaire data

Luminaire efficiency : 100%  
Luminaire efficacy : 107.92 lm/W  
Classification : A60 ↓98.5% ↑1.5%  
CIE Flux Codes : 73 92 99 98 100  
UGR 4H 8H : 48.7 / 48.7  
Power : 5.3 W  
Luminous flux : 572 lm

##### Equipped with

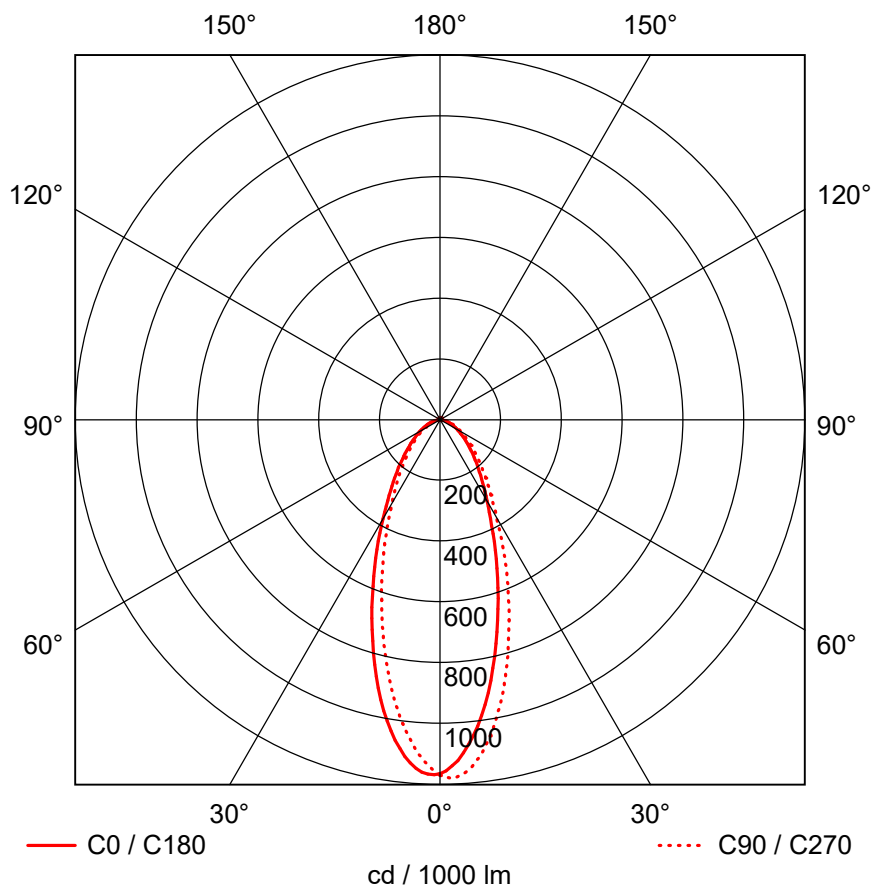
Quantity : 1  
Designation :  
Colour :  
Luminous flux : 572 lm

Dimensions : Ø1 mm x 1 mm



## 1.1 ()

### 1.1.2 LDC

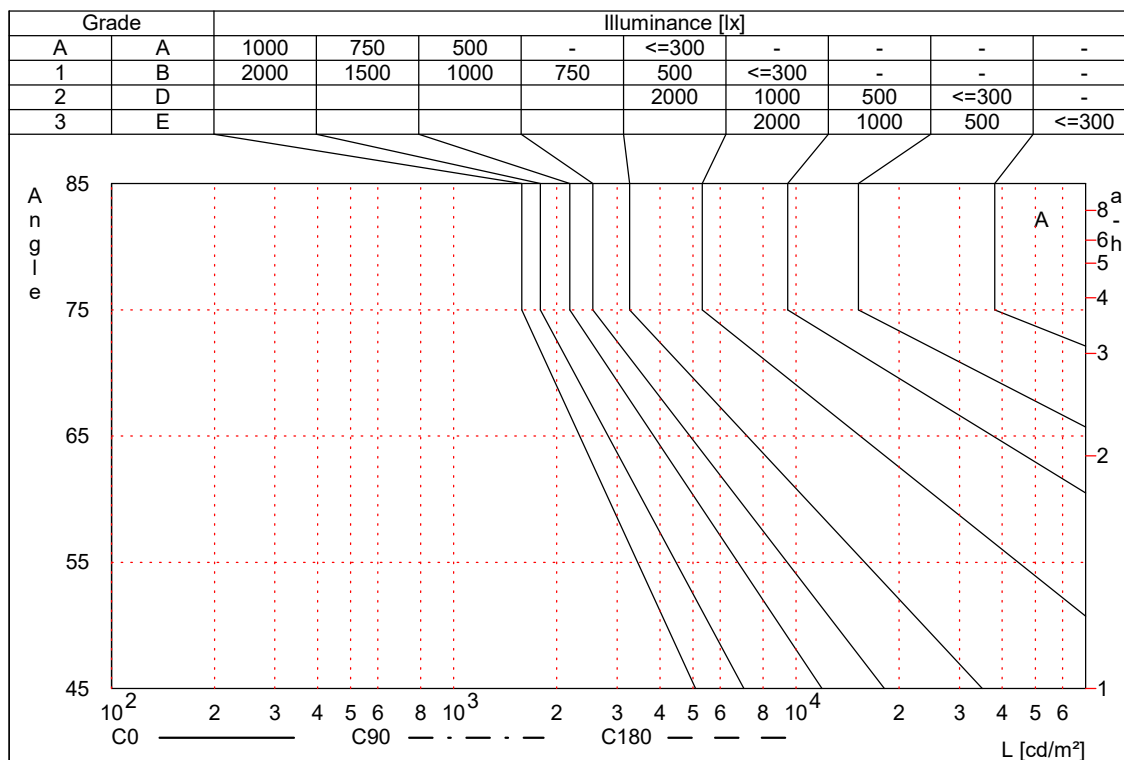


	C0	C90	C180
0°	1165	1171	1165
5°	1073	1153	1133
10°	913	1022	1007
15°	723	847	834
20°	554	663	657
25°	414	505	503
30°	309	373	376
35°	238	284	285
40°	186	221	220
45°	145	173	169
50°	112	133	130
55°	86	103	100
60°	65	78	76
65°	49	59	57
70°	35	44	42
75°	18	29	27
80°	7	13	11
85°	3	5	4
90°	0	2	1
cd / 1000 lm			

Manufacturer	:	Efficiency factor	: 100%
Order number	:	Luminaire efficacy	: 107.92 lm/W (A60)
Luminaire name	:	Light distribution	: asymmetric
Equipment	: 1 x 5.3 W / 572 lm	Beam Angle	: 18.8° C0
Dimensions	: D 1 mm x H 1 mm		22.2° C90
File name	:		22.0° C180
			19.1° C270

## 1.1 ()

### 1.1.3 Soellner diagram



Manufacturer	:	Efficiency factor	:	100%
Order number	:	Luminaire efficacy	:	107.92 lm/W (A60)
Luminaire name	:	Light distribution	:	asymmetric
Equipment	:	Beam Angle	:	18.8° C0
Dimensions	:		:	22.2° C90
File name	:		:	22.0° C180
			:	19.1° C270

## 1.1 ()

### 1.1.4 Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	224836	229800	236062	243623	264292	270023	274100	276524	277295	1276412	270735	26772386
70°	165519	169688	174982	181399	199092	203951	207396	209427	210044	209248	204187	20163184
75°	892061	94719	101664	110043	132749	139157	143773	146598	147631	146873	141349	13812485
80°	337141	370241	411863	462008	602633	639089	663580	676104	676661	665252	609272	5861576
85°	150284	161203	175018	191730	237950	250474	259240	264250	265502	262998	248491	2415642

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	263844	259096	253479	246995	231279	226195	222333	219693	218277	218083	218806	22117230
70°	198375	194417	189759	184399	171570	167346	164112	161870	160618	160357	160554	16247492
75°	133851	128531	122163	114747	964665	906363	862126	831954	815846	813803	824779	8512573
80°	559226	528480	493919	455542	369052	339656	317519	302642	295023	294664	296510	3125645
85°	232941	222622	210607	196896	164478	153754	145588	139978	136926	136430	137134	1422616

Luminance [cd/m²]

Manufacturer	:	Efficiency factor	:	100%
Order number	:	Luminaire efficacy	:	107.92 lm/W (A60)
Luminaire name	:	Light distribution	:	asymmetric
Equipment	:	Beam Angle	:	18.8° C0
Dimensions	:		:	22.2° C90
File name	:		:	22.0° C180
			:	19.1° C270

## 1.1 ()

### 1.1.5 Glare Rating (RUG)

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RUG tabular method not applicable.

## 1.1 ()

### 1.1.6 Cone diagram

---

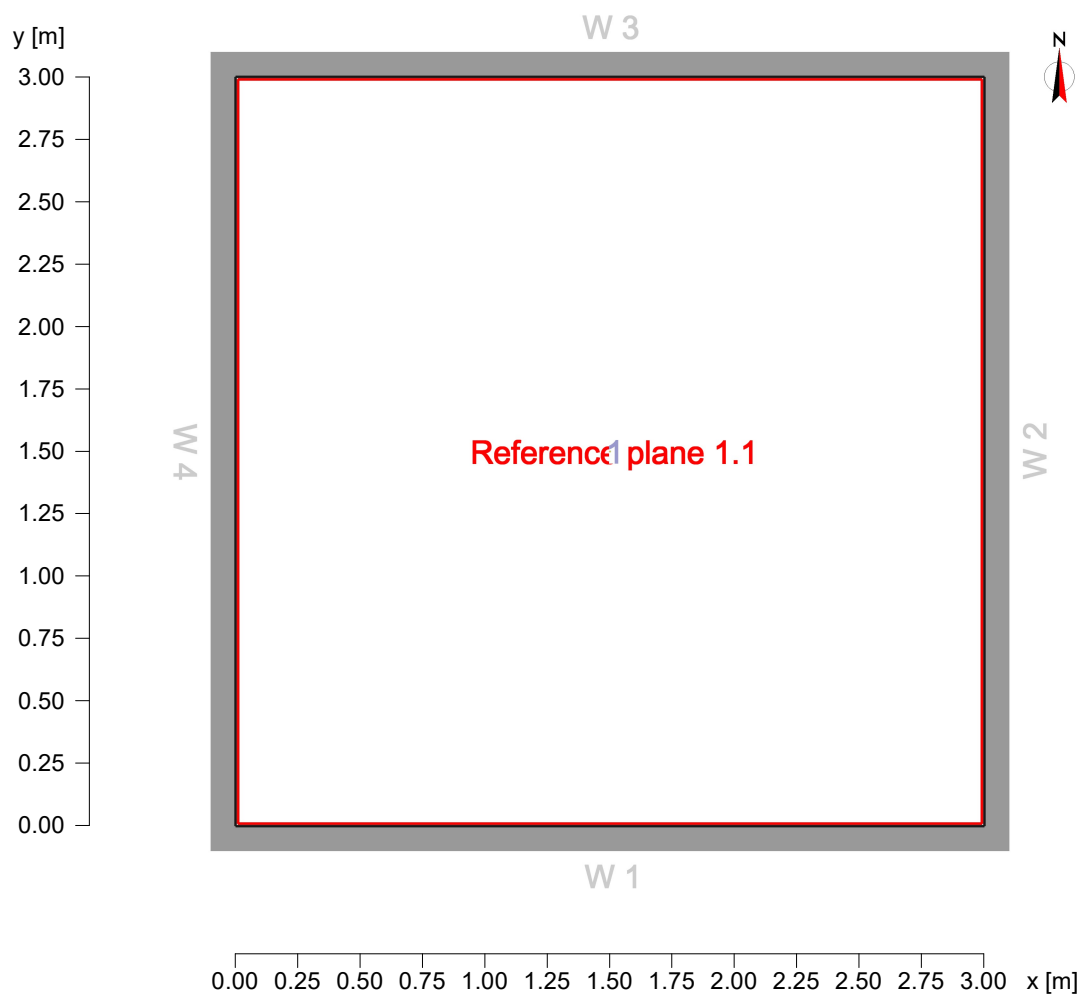
LDC unsuitable for cone representation



## 2 2.5

### 2.1 Description, 2.5

#### 2.1.1 Floor plan



#### Room data:

W1	:	3.00
W2	:	3.00
W3	:	3.00
W4	:	3.00
W5	:	----
W6	:	----
Floor:	----	20.0 %
Ceiling:	----	70.0 %
Room height [m]:		2.50
Height of ref. plane [m]:		1.00
Height of luminaire plane [m]:		2.50

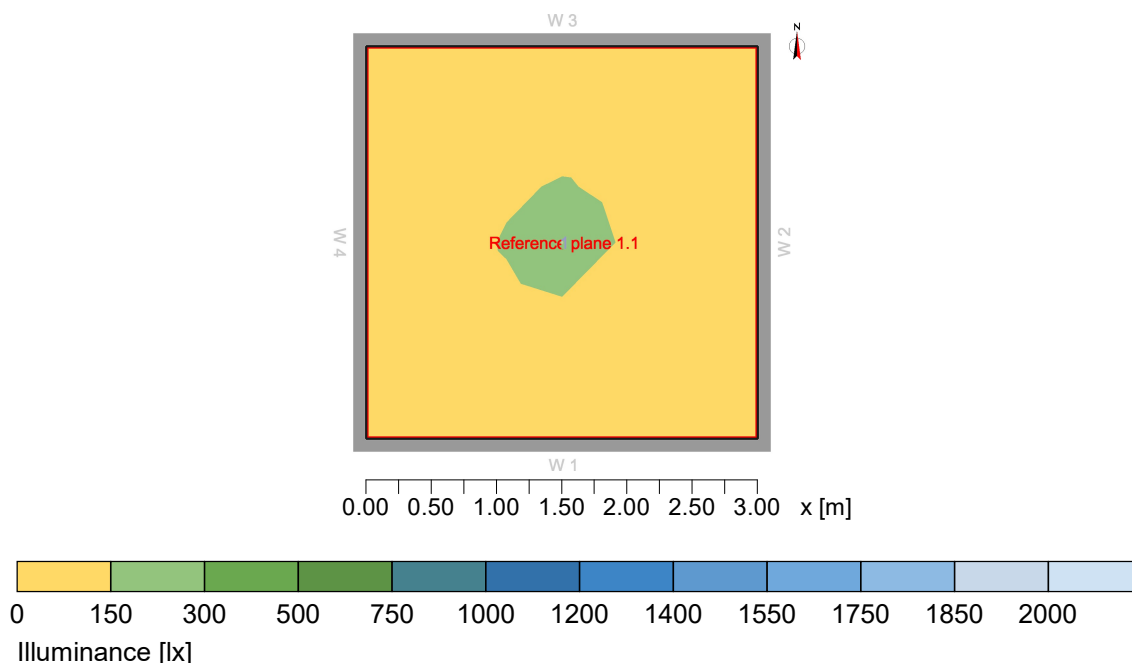
#### Reflectance:

50.0 %
50.0 %
50.0 %
50.0 %
----
----
20.0 %
70.0 %
2.50
1.00
2.50

## 2 2.5

### 2.2 Summary, 2.5

#### 2.2.1 Result overview, Evaluation area 1



#### General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.50 m
Maintenance factor	0.90
Luminaire luminous flux	572 lm
Total power	5.3 W
Total power per area (9.00 m <sup>2</sup> )	0.59 W/m <sup>2</sup> (1.16 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

$\bar{E}_m$	Horizontal	cylindrical
$E_{min}$	50.7 lx	14.1 lx
$E_{min}/\bar{E}_m (U_o)$	9.9 lx	6.6 lx
$E_{min}/E_{max} (U_d)$	0.19	0.47
$E_z/E_h$	0.04	0.26
Position	1.00 m	1.20 m
RUG (--- ---)	---	

Hints:

- The scene contains luminaires that are unsuitable for the RUG tabular method.

#### Type No. Make


Object :  
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## 2 2.5

### 2.2 Summary, 2.5

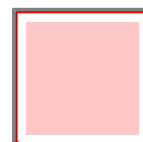
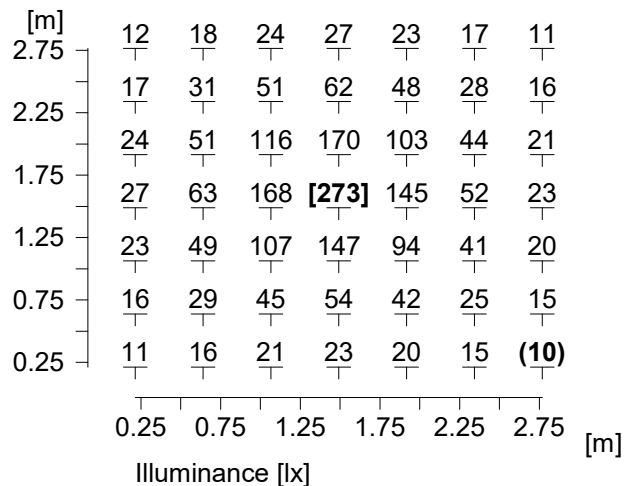
#### 2.2.1 Result overview, Evaluation area 1

1	1 x	Order No.	:
		Luminaire name	:
		Equipment	: 1 x 5.3 W / 572 lm

## 2 2.5

### 2.3 Calculation results, 2.5

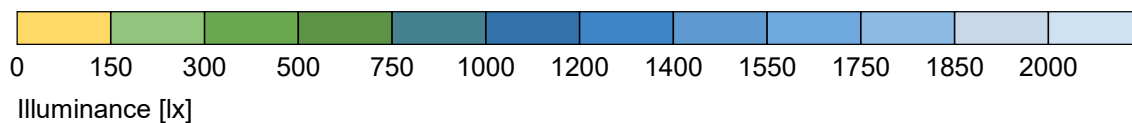
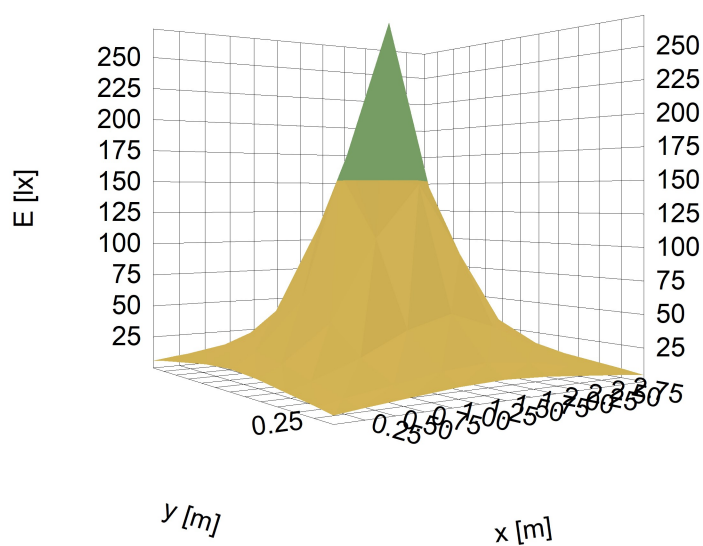
#### 2.3.1 Table, Reference plane 1.1 (E)



Height reference plane		: 1.00 m
Average illuminance	$\bar{E}_m$	: 51 lx
Minimum illuminance	$E_{min}$	: 10 lx
Maximum illuminance	$E_{max}$	: 273 lx
Uniformity $U_o$	$E_{min}/\bar{E}_m$	: 1 : 5.13 (0.19)
Diversity $U_d$	$E_{min}/E_{max}$	: 1 : 27.59 (0.04)

## 2.3 Calculation results, 2.5

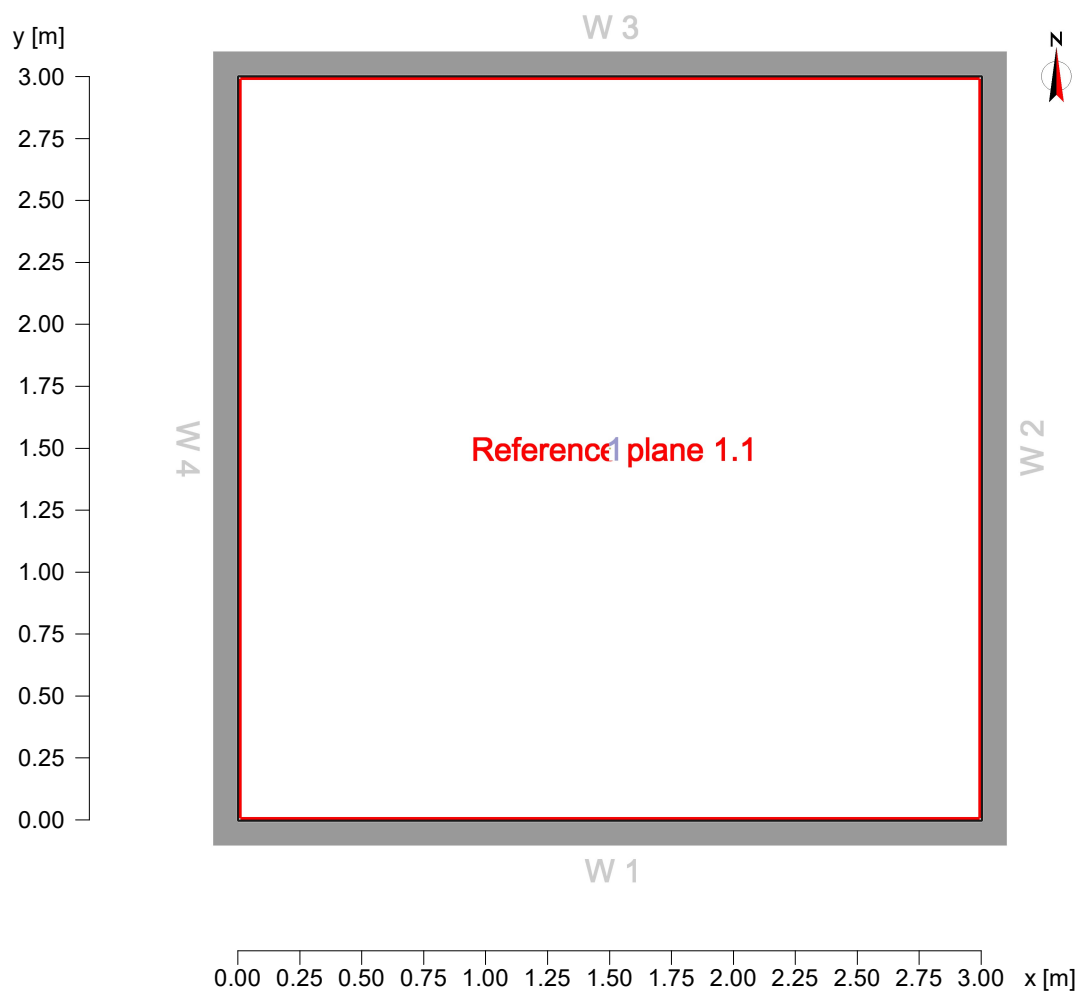
### 2.3.2 3D mountain plot, Reference plane 1.1 (E)



## 3 3

### 3.1 Description, 3

#### 3.1.1 Floor plan



#### Room data:

W1	:	3.00
W2	:	3.00
W3	:	3.00
W4	:	3.00
W5	:	----
W6	:	----
Floor:	----	20.0 %
Ceiling:	----	70.0 %
Room height [m]:		3.00
Height of ref. plane [m]:		1.00
Height of luminaire plane [m]:		3.00

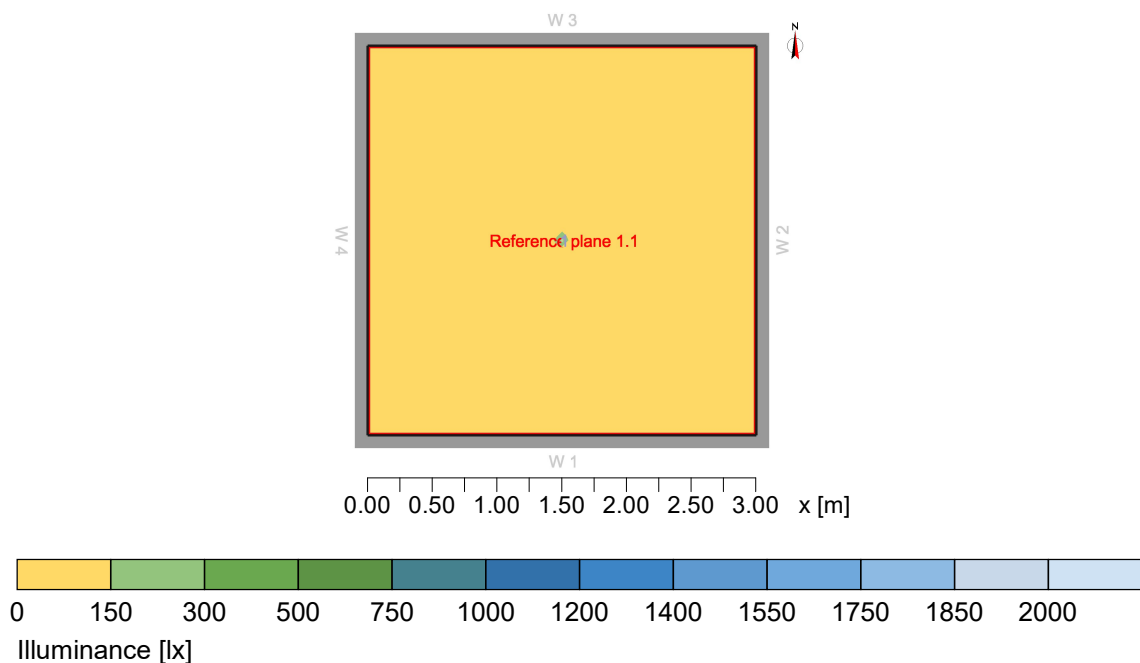
#### Reflectance:

50.0 %
50.0 %
50.0 %
50.0 %
----
----
20.0 %
70.0 %
3.00
1.00
3.00

## 3 3

### 3.2 Summary, 3

#### 3.2.1 Result overview, Evaluation area 1



#### General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.90
Luminaire luminous flux	572 lm
Total power	5.3 W
Total power per area (9.00 m <sup>2</sup> )	0.59 W/m <sup>2</sup> (1.30 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

	Horizontal	cylindrical
$\bar{E}_m$	45.2 lx	12.2 lx
$E_{min}$	12.5 lx	6.6 lx
$E_{min}/\bar{E}_m (U_o)$	0.28	0.54
$E_{min}/E_{max} (U_d)$	0.08	
$E_z/E_h$		0.26
Position	1.00 m	1.20 m
RUG (--- ---)	---	

Hints:

- The scene contains luminaires that are unsuitable for the RUG tabular method.

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### 3 3

## 3.2 Summary, 3

### 3.2.1 Result overview, Evaluation area 1

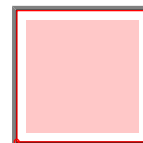
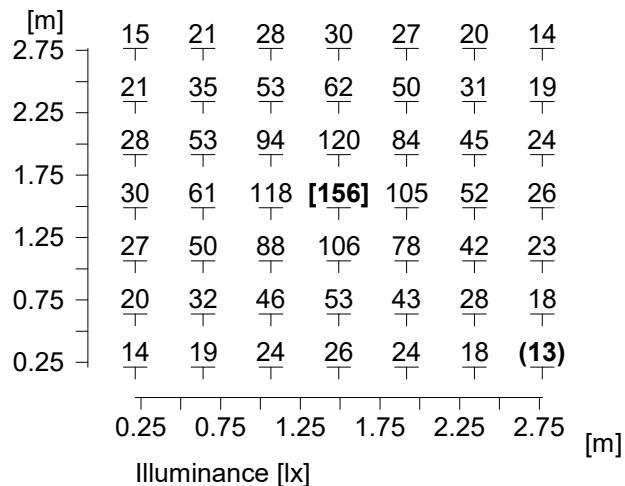
1	1 x	Order No.	:
		Luminaire name	:
		Equipment	: 1 x 5.3 W / 572 lm



## 3 3

### 3.3 Calculation results, 3

#### 3.3.1 Table, Reference plane 1.1 (E)



Height reference plane	: 1.00 m
Average illuminance	$\bar{E}_m$ : 45 lx
Minimum illuminance	$E_{min}$ : 13 lx
Maximum illuminance	$E_{max}$ : 156 lx
Uniformity $U_o$	$E_{min}/\bar{E}_m$ : 1 : 3.60 (0.28)
Diversity $U_d$	$E_{min}/E_{max}$ : 1 : 12.40 (0.08)

### 3.3 Calculation results, 3

#### 3.3.2 3D mountain plot, Reference plane 1.1 (E)

