

Installation :

Project number : DGU55-30_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.

Table of contents

First Page	1
Table of contents	2
1 Luminaire data	
1.1 ()	
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 (RUG)	7
1.1.6 Cone diagram	8
2 2.5	
2.1 Description, 2.5	
2.1.1 Floor plan	9
2.2 Summary, 2.5	
2.2.1 Result overview, Evaluation area 1	10
2.3 Calculation results, 2.5	
2.3.1 Table, Reference plane 1.1 (E)	12
2.3.2 3D mountain plot, Reference plane 1.1 (E)	13
3 3	
3.1 Description, 3	
3.1.1 Floor plan	14
3.2 Summary, 3	
3.2.1 Result overview, Evaluation area 1	15
3.3 Calculation results, 3	
3.3.1 Table, Reference plane 1.1 (E)	17
3.3.2 3D mountain plot, Reference plane 1.1 (E)	18

1 Luminaire data

1.1 ()

1.1.1 Data sheet

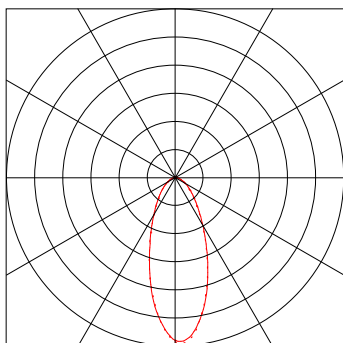
Luminaire data

Luminaire efficiency : 99.9269%
Luminaire efficacy : 102.28 lm/W
Classification : A60 ↓98.4% ↑1.6%
CIE Flux Codes : 73 92 99 98 100
UGR 4H 8H : 50.1 / 48.1
Power : 5.1 W
Luminous flux : 521.6 lm

Equipped with

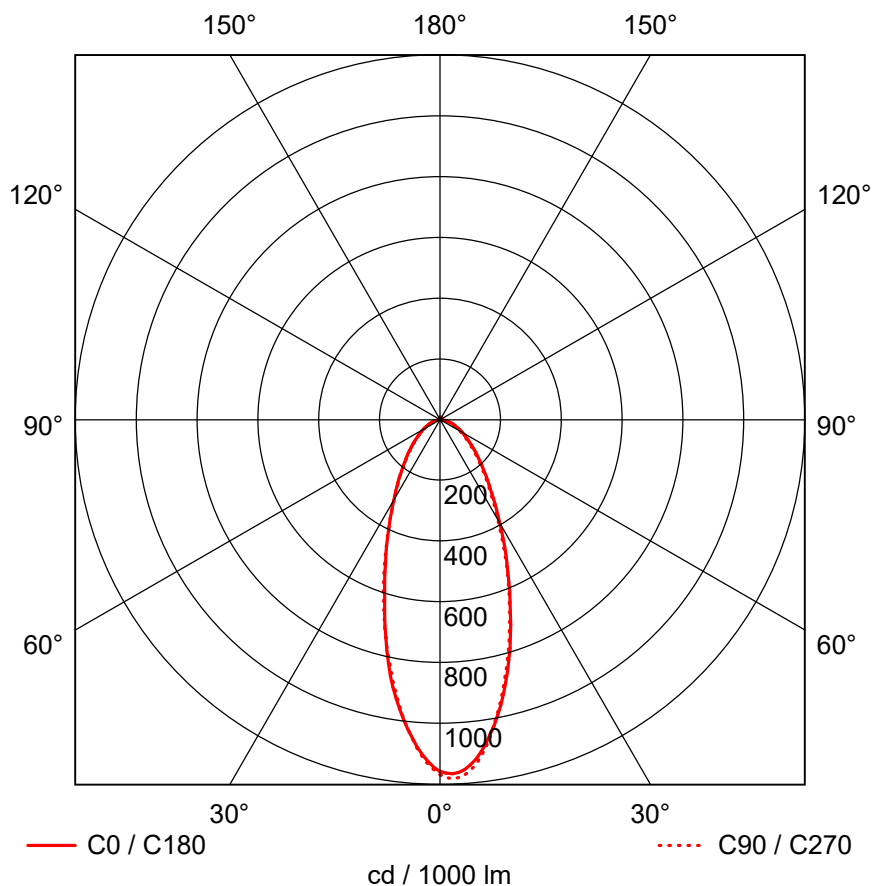
Quantity : 1
Designation :
Colour :
Luminous flux : 522 lm

Dimensions : Ø1 mm x 1 mm



1.1 ()

1.1.2 LDC

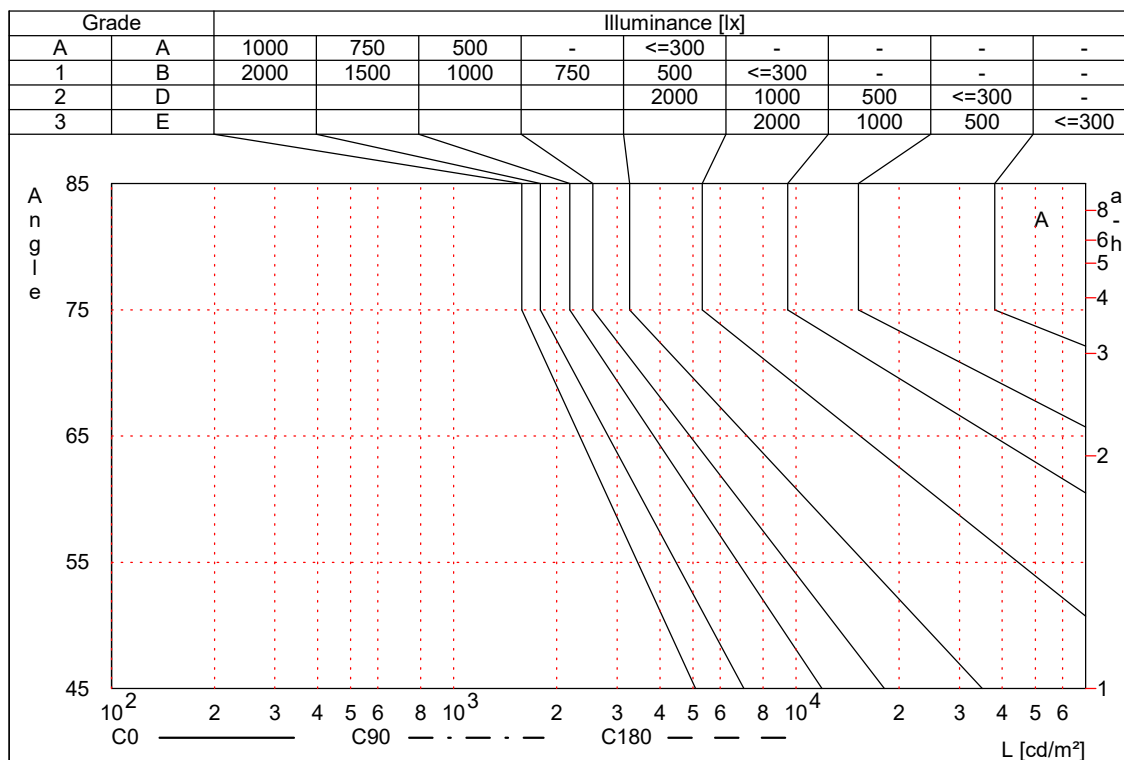


	C0	C90	C180
0°	1157	1168	1157
5°	1140	1158	1052
10°	1022	1021	895
15°	858	844	702
20°	678	672	532
25°	521	515	404
30°	394	381	306
35°	297	287	236
40°	230	221	182
45°	179	170	142
50°	139	131	110
55°	108	101	85
60°	83	77	64
65°	63	58	47
70°	46	43	33
75°	31	29	16
80°	13	13	6
85°	5	5	2
90°	2	2	0
cd / 1000 lm			

Manufacturer	:	Efficiency factor	: 99.93%
Order number	:	Luminaire efficacy	: 102.28 lm/W (A60)
Luminaire name	:	Light distribution	: asymmetric
Equipment	: 1 x 5.1 W / 522 lm	Beam Angle	: 22.7° C0
Dimensions	: D 1 mm x H 1 mm		22.5° C90
File name	:		18.1° C180
			18.5° C270

1.1 ()

1.1.3 Soellner diagram



Manufacturer	:	Efficiency factor	: 99.93%
Order number	:	Luminaire efficacy	: 102.28 lm/W (A60)
Luminaire name	:	Light distribution	: asymmetric
Equipment	: 1 x 5.1 W / 522 lm	Beam Angle	: 22.7° C0
Dimensions	: D 1 mm x H 1 mm		22.5° C90
File name	:		18.1° C180
			18.5° C270

1.1 ()

1.1.4 Luminance chart

	C0	C15	C30	C45	C60	C75	C90	C105	C120	C135	C150	C165
65°	263844	266579	266859	1264681	252977	248538	243411	237595	231091	223897	208496	20274546
70°	199782	202361	202954	201561	193483	189879	185464	180238	174200	167350	151533	14611948
75°	136845	140608	142347	142062	136969	133679	129062	123116	115843	1072419	860130	7899263
80°	622552	643128	652976	652096	628003	610350	585092	552227	511757	463681	342988	3040790
85°	245151	252496	256214	256305	250161	243977	234819	222687	207580	189499	142666	1283029

	C180	C195	C210	C225	C240	C255	C270	C285	C300	C315	C330	C345
65°	198185	194817	192640	191654	188808	191349	195843	202292	210694	221051	251003	25865182
70°	141933	138974	137243	136740	136094	138559	142595	148201	155377	164123	188664	19521680
75°	734689	694419	669117	658782	649065	674047	717583	779674	860320	95952	123246	13105805
80°	273816	252199	239229	234906	235067	249598	273816	307721	351313	404592	549217	5912489
85°	117409	109986	106034	105551	109895	115844	124924	137134	152476	170948	219582	2341805

Luminance [cd/m²]

Manufacturer	:	Efficiency factor	:	99.93%
Order number	:	Luminaire efficacy	:	102.28 lm/W (A60)
Luminaire name	:	Light distribution	:	asymmetric
Equipment	:	Beam Angle	:	22.7° C0
Dimensions	:		:	22.5° C90
File name	:		:	18.1° C180
			:	18.5° C270

1.1 ()

1.1.5 Glare Rating (RUG)

RUG tabular method not applicable.

1.1 ()

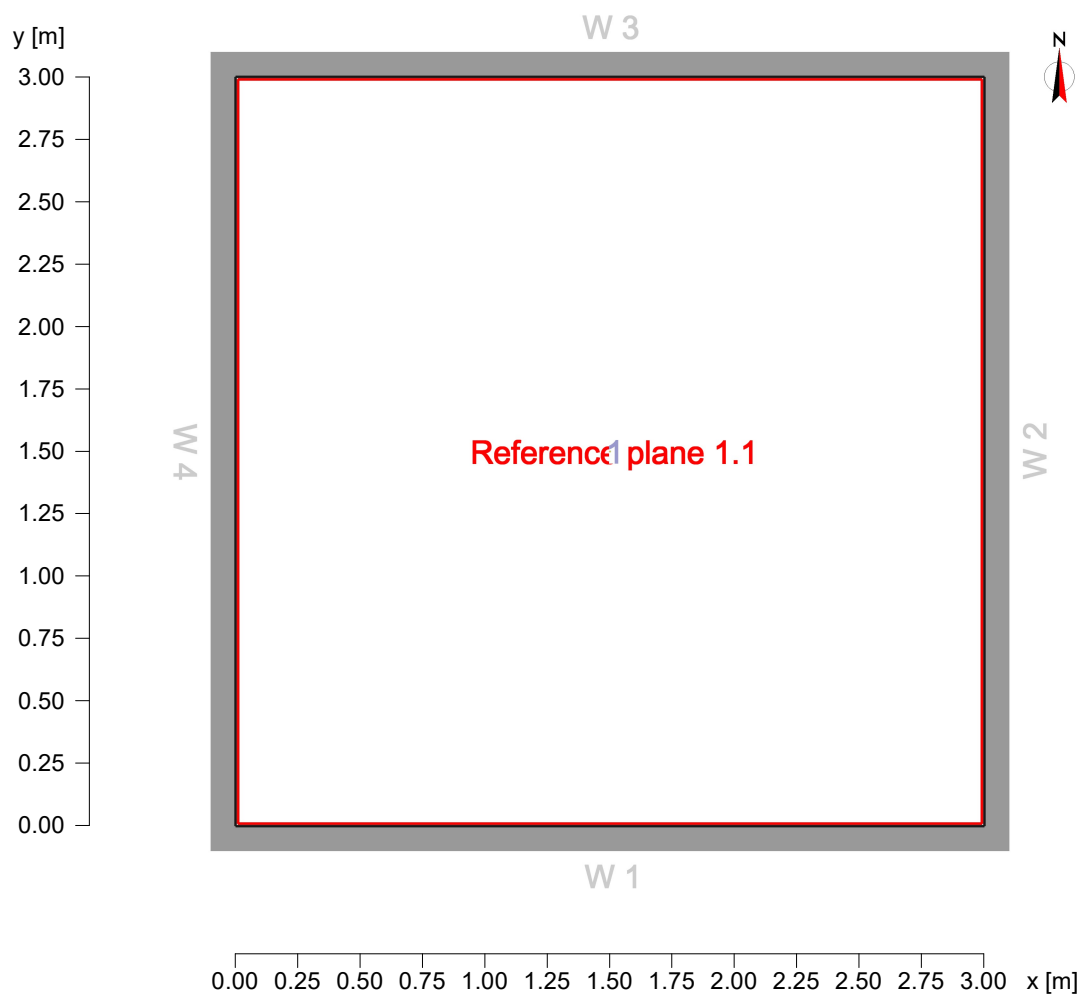
1.1.6 Cone diagram

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:

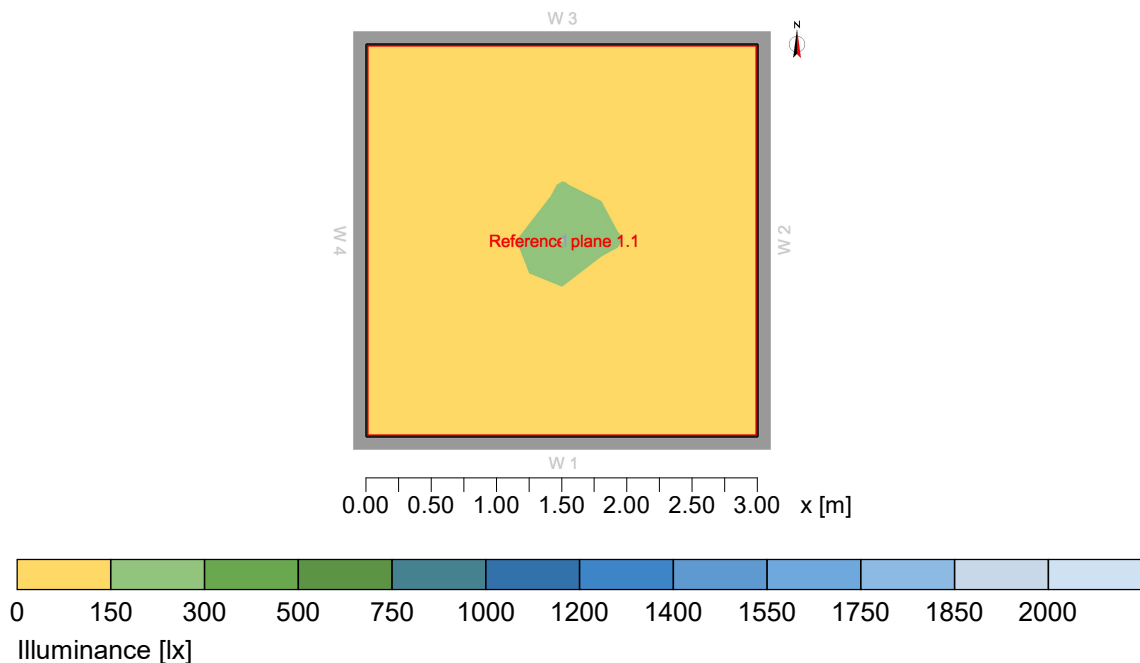
50.0 %
50.0 %
50.0 %
50.0 %

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
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.50 m
 0.90

Total lamp luminous flux
 Luminaire luminous flux
 Total power
 Total power per area (9.00 m²)

522 lm
 522 lm
 5.1 W
 0.57 W/m² (1.22 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal	cylindrical
\bar{E}_m	46.4 lx	12.9 lx
E_{min}	8.8 lx	6 lx
$E_{min}/\bar{E}_m (U_o)$	0.19	0.47
$E_{min}/E_{max} (U_d)$	0.04	
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.

Object :
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Project number : DGU55-30_IESNA2002
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2 2.5

2.2 Summary, 2.5

2.2.1 Result overview, Evaluation area 1

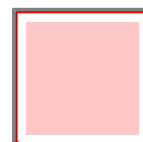
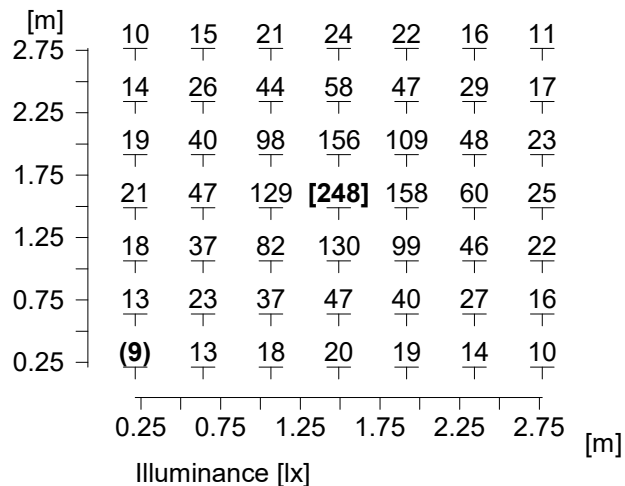
Type No.\Make

1	1 x	Order No.	:
		Luminaire name	:
		Equipment	: 1 x 5.1 W / 522 lm

2 2.5

2.3 Calculation results, 2.5

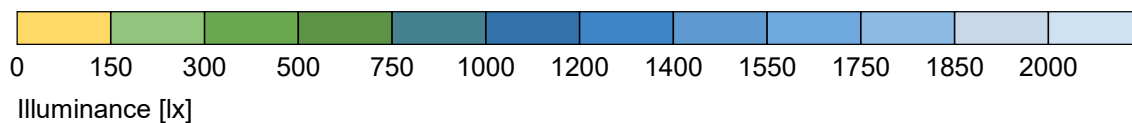
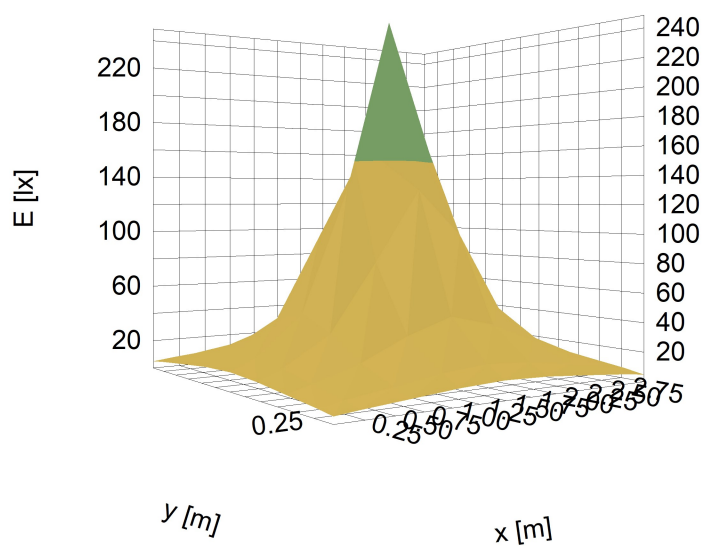
2.3.1 Table, Reference plane 1.1 (E)



Height reference plane	: 1.00 m
Average illuminance	\bar{E}_m : 46 lx
Minimum illuminance	E_{min} : 9 lx
Maximum illuminance	E_{max} : 248 lx
Uniformity U_o	E_{min}/\bar{E}_m : 1 : 5.27 (0.19)
Diversity U_d	E_{min}/E_{max} : 1 : 28.22 (0.04)

2.3 Calculation results, 2.5

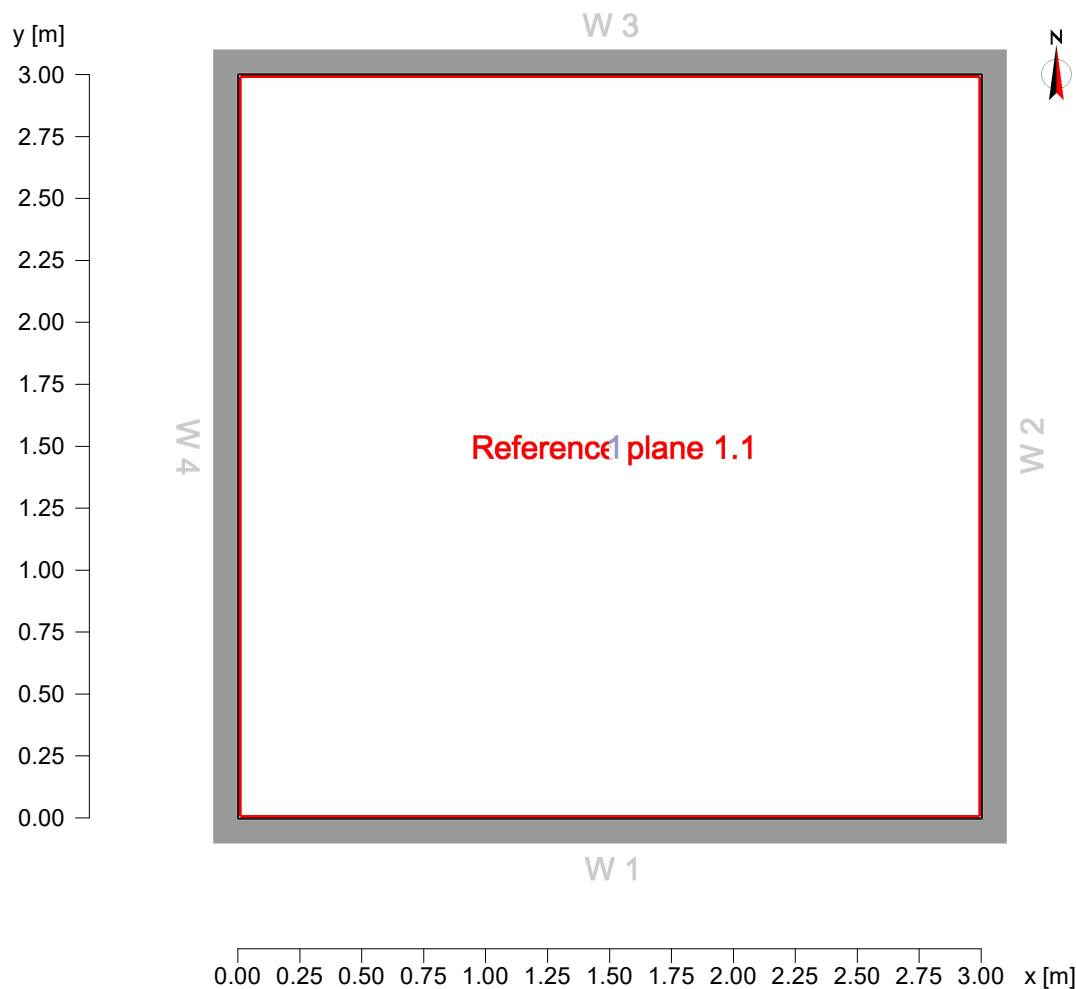
2.3.2 3D mountain plot, Reference plane 1.1 (E)



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:

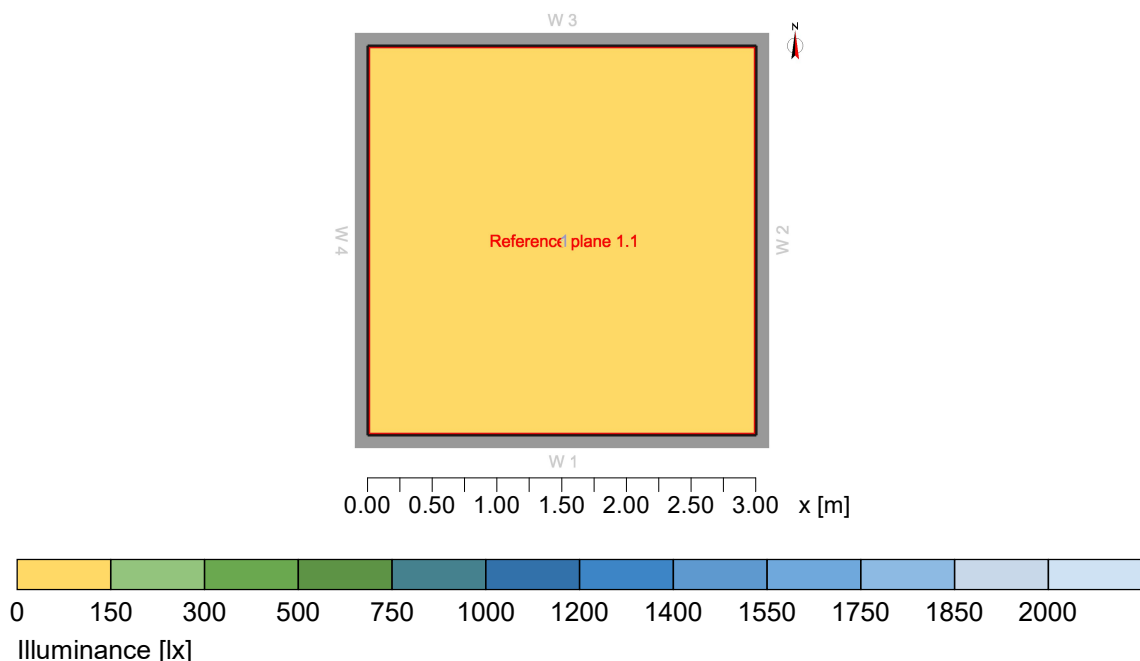
50.0 %
50.0 %
50.0 %
50.0 %

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
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.90

Total lamp luminous flux
 Luminaire luminous flux
 Total power
 Total power per area (9.00 m²)

522 lm
 522 lm
 5.1 W
 0.57 W/m² (1.37 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal	cylindrical
\bar{E}_m	41.3 lx	11.2 lx
E_{min}	11.2 lx	6 lx
$E_{min}/\bar{E}_m (U_o)$	0.27	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.

Object :
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3 3

3.2 Summary, 3

3.2.1 Result overview, Evaluation area 1

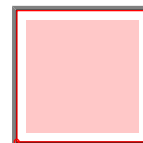
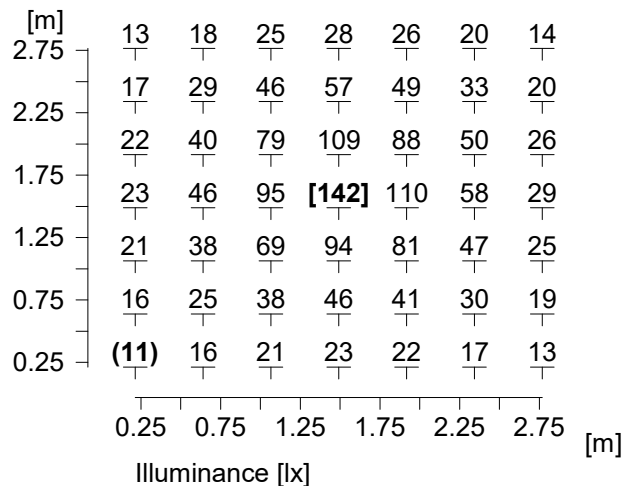
Type No.\Make

1	1 x	Order No.	:
		Luminaire name	:
		Equipment	: 1 x 5.1 W / 522 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	: 41 lx
Minimum illuminance	E_{min}	: 11 lx
Maximum illuminance	E_{max}	: 142 lx
Uniformity U_o	E_{min}/\bar{E}_m	: 1 : 3.69 (0.27)
Diversity U_d	E_{min}/E_{max}	: 1 : 12.67 (0.08)

3.3 Calculation results, 3

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

