

LED Downlight SENSE Series S100R2-13W-DW-930-W



Light Output Ratio:	100.0%	
Luminaire Power:	11.41 W	
SHR Nominal:	0.75	Calculated using the TM5
SHR Maximum:	0.75	fine grid method.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2021-01-19

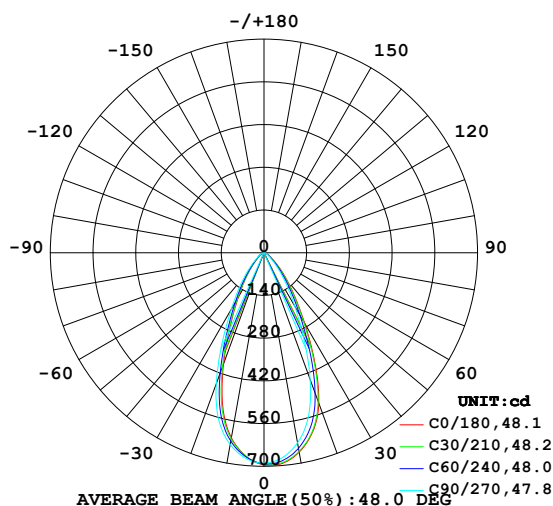
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

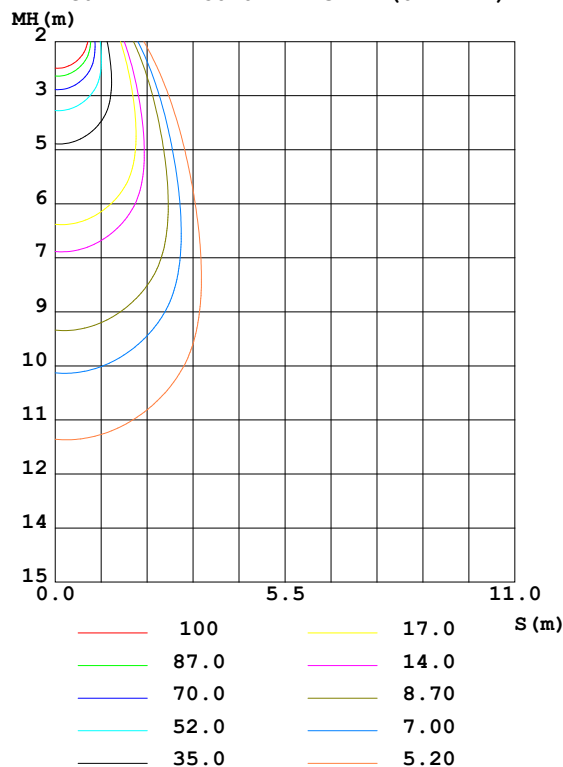
Test:U:32.60V I:0.3500A P:11.41W PF:1.000 Freq:0Hz Lamp Flux:538.248x1 lm		
NAME: S100R2-13W-DW-930-W	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 108mm*H126mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 47.17 lm/W			
MODEL	BRIDGELUX-3000K	I _{max} (cd)	697.7	S/MH (C0/180)	0.69
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.76
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	538.25	η UP, DN (C0-180)	0.0, 49.7
NOMINAL FLUX (lm)	538.248	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	32.56	η down (%)	100.0	CIBSE SHR MAX	0.75

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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ZONAL FLUX DIAGRAM

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γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	663.7	658.0	632.8	609.4	615.7	621.7	638.1	653.8	0- 10	63.34	63.34	11.8,11.8
20	524.8	508.4	442.8	383.4	388.9	405.8	457.6	509.3	10- 20	155.0	218.3	40.6,40.6
30	266.5	248.7	202.4	167.2	169.2	180.9	215.6	259.5	20- 30	147.2	365.5	67.9,67.9
40	117.7	106.4	83.45	67.70	69.30	74.85	93.42	116.5	30- 40	89.34	454.9	84.5,84.5
50	46.46	41.08	32.67	26.68	27.86	29.28	35.50	46.38	40- 50	45.29	500.2	92.9,92.9
60	21.04	19.51	16.62	13.29	14.21	15.30	17.52	21.34	50- 60	22.38	522.6	97.1,97.1
70	9.478	8.478	6.461	4.170	4.630	5.400	7.105	9.840	60- 70	11.72	534.3	99.3,99.3
80	1.619	1.111	0.6483	0.3386	0.3894	0.5246	0.6719	1.828	70- 80	3.593	537.9	99.9,99.9
90	0.1336	0.3391	0.1438	0.0154	0.0205	0.0257	0.0205	0.1387	80- 90	0.3841	538.2	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 481.83 lm

%lum = 89.5%

%lamp = 89.5%

Conical surface Flux(120deg): 522.55 lm

%lum = 97.1%

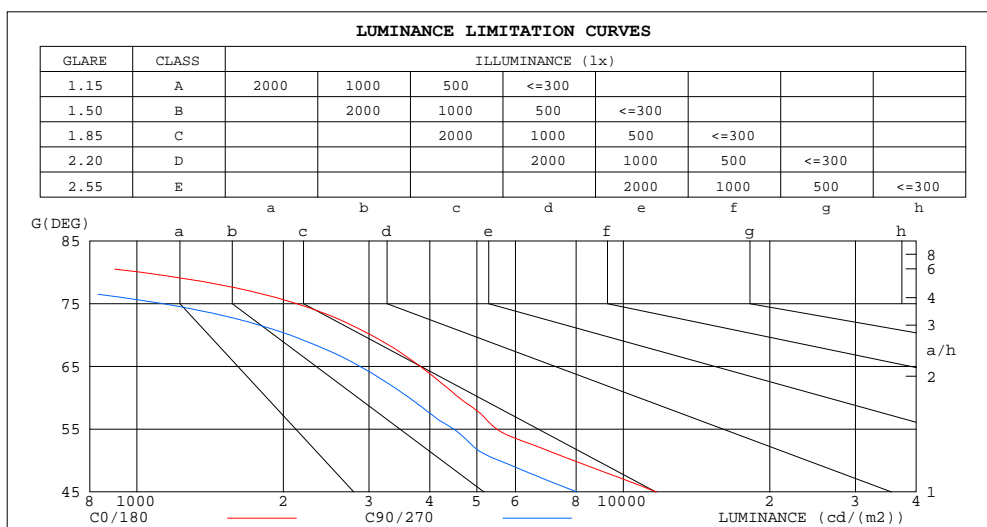
%lamp = 97.1%

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Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:3000K	DIM.: ϕ 108mm*H126mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	607	406
80	1018	408
75	2129	1128
70	3027	2063
65	3823	2872
60	4596	3629
55	5488	4478
50	7894	5550
45	11693	8031

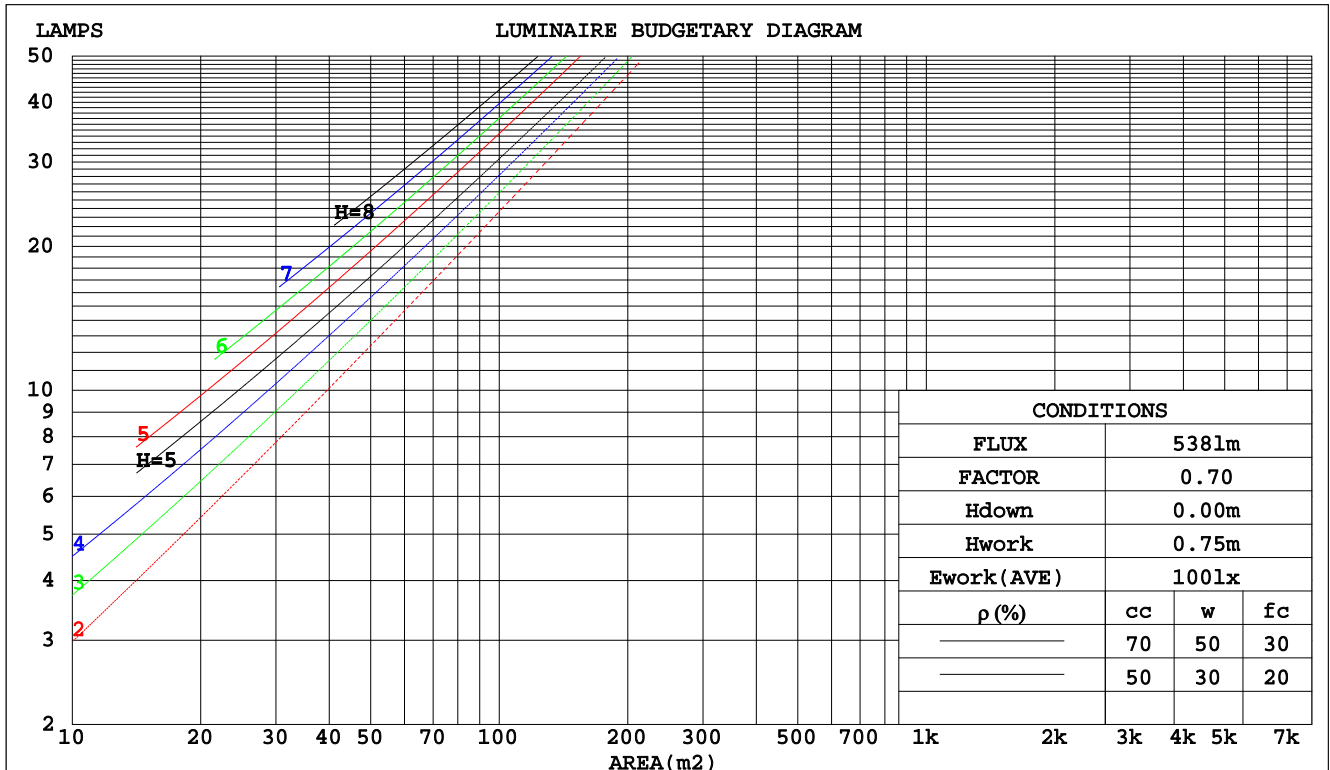
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.10	1.08	1.05	1.08	1.06	1.03	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.94	.93
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.95	.89	.85	.93	.88	.84	.90	.86	.83	.88	.85	.82	.86	.83	.80	.79
4.0	.88	.82	.78	.87	.81	.77	.85	.80	.76	.83	.79	.75	.81	.77	.75	.73
5.0	.82	.76	.72	.81	.76	.71	.79	.74	.71	.78	.73	.70	.76	.72	.69	.68
6.0	.77	.71	.66	.76	.70	.66	.75	.70	.66	.73	.69	.65	.72	.68	.65	.63
7.0	.72	.66	.62	.72	.66	.62	.70	.65	.61	.69	.65	.61	.68	.64	.61	.59
8.0	.68	.62	.58	.68	.62	.58	.67	.61	.58	.66	.61	.57	.65	.60	.57	.56
9.0	.65	.58	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.52
10.0	.61	.55	.51	.61	.55	.51	.60	.55	.51	.59	.54	.51	.58	.54	.51	.49



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WEC AND CCEC

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ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.189	.108	.034	.183	.104	.033	.170	.098	.031	.158	.091	.029	.148	.086	.028		
2.0	.182	.100	.031	.176	.097	.030	.165	.092	.029	.156	.087	.027	.146	.083	.026		
3.0	.173	.092	.028	.168	.090	.027	.159	.086	.026	.150	.082	.025	.142	.079	.024		
4.0	.164	.085	.025	.160	.083	.025	.152	.080	.024	.144	.077	.023	.137	.075	.023		
5.0	.155	.079	.023	.152	.078	.023	.145	.075	.022	.138	.073	.022	.132	.071	.021		
6.0	.147	.074	.021	.144	.073	.021	.138	.071	.021	.132	.069	.020	.127	.067	.020		
7.0	.140	.069	.020	.137	.068	.019	.132	.067	.019	.127	.065	.019	.122	.063	.019		
8.0	.133	.065	.018	.131	.064	.018	.126	.063	.018	.122	.062	.018	.117	.060	.018		
9.0	.127	.062	.017	.125	.061	.017	.121	.060	.017	.117	.058	.017	.113	.057	.017		
10.0	.122	.058	.016	.120	.058	.016	.116	.057	.016	.112	.056	.016	.109	.055	.016		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.054	.050	.040	.032	.016	.013	.010	
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008	
5.0	.127	.088	.058	.109	.076	.051	.075	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.120	.078	.049	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.113	.071	.041	.097	.061	.036	.067	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.107	.065	.035	.092	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.102	.060	.031	.088	.052	.027	.061	.036	.019	.036	.021	.011	.012	.007	.004	
10.0	.097	.055	.027	.084	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003	

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 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
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Remarks:

UGR(Unified Glare Rating) Table

Test:U:32.60V I:0.3500A P:11.41W PF:1.000 Freq:0Hz Lamp Flux:538.248x1 lm										
NAME: S100R2-13W-DW-930-W					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: ϕ 108mm*H126mm					
MFR.: NEKO LIGHTING AG										
ceiling/cavity	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
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	19.4	20.4	19.6	20.6	20.7	18.2	19.2	18.5	19.4	19.6
3H	19.7	20.6	19.9	20.8	21.0	18.5	19.4	18.7	19.6	19.8
4H	19.7	20.6	20.0	20.8	21.0	18.4	19.3	18.7	19.5	19.8
6H	19.7	20.5	20.0	20.7	21.0	18.4	19.2	18.7	19.4	19.7
8H	19.6	20.4	20.0	20.7	21.0	18.3	19.1	18.6	19.4	19.6
12H	19.6	20.4	19.9	20.6	20.9	18.3	19.0	18.6	19.3	19.6
4H 2H	19.4	20.3	19.7	20.5	20.7	18.3	19.2	18.6	19.4	19.7
3H	19.8	20.5	20.1	20.8	21.1	18.7	19.4	19.0	19.7	20.0
4H	19.9	20.5	20.2	20.8	21.2	18.7	19.4	19.0	19.7	20.0
6H	19.9	20.5	20.2	20.8	21.1	18.6	19.2	19.0	19.6	19.9
8H	19.8	20.4	20.2	20.7	21.1	18.6	19.1	19.0	19.5	19.9
12H	19.8	20.3	20.2	20.7	21.0	18.5	19.0	19.0	19.4	19.8
8H 4H	19.8	20.3	20.2	20.7	21.1	18.7	19.2	19.0	19.6	19.9
6H	19.8	20.2	20.2	20.6	21.1	18.6	19.1	19.0	19.4	19.9
8H	19.7	20.2	20.2	20.6	21.0	18.6	19.0	19.0	19.4	19.8
12H	19.7	20.1	20.2	20.5	21.0	18.5	18.9	19.0	19.3	19.8
12H 4H	19.7	20.3	20.2	20.6	21.0	18.6	19.1	19.0	19.5	19.9
6H	19.7	20.1	20.2	20.6	21.0	18.5	19.0	19.0	19.4	19.8
8H	19.7	20.0	20.2	20.5	21.0	18.5	18.9	19.0	19.3	19.8
Variations with the observer position at spacings:										
S = 1.0H	+ 1.4 / - 2.2					+ 1.4 / - 2.3				
1.5H	+ 2.3 / - 1.9					+ 2.0 / - 2.0				
2.0H	+ 2.9 / - 1.7					+ 2.3 / - 1.8				

CIE Pub.117, 538.2 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -2.2$)

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UTILIZATION FACTORS TABLE

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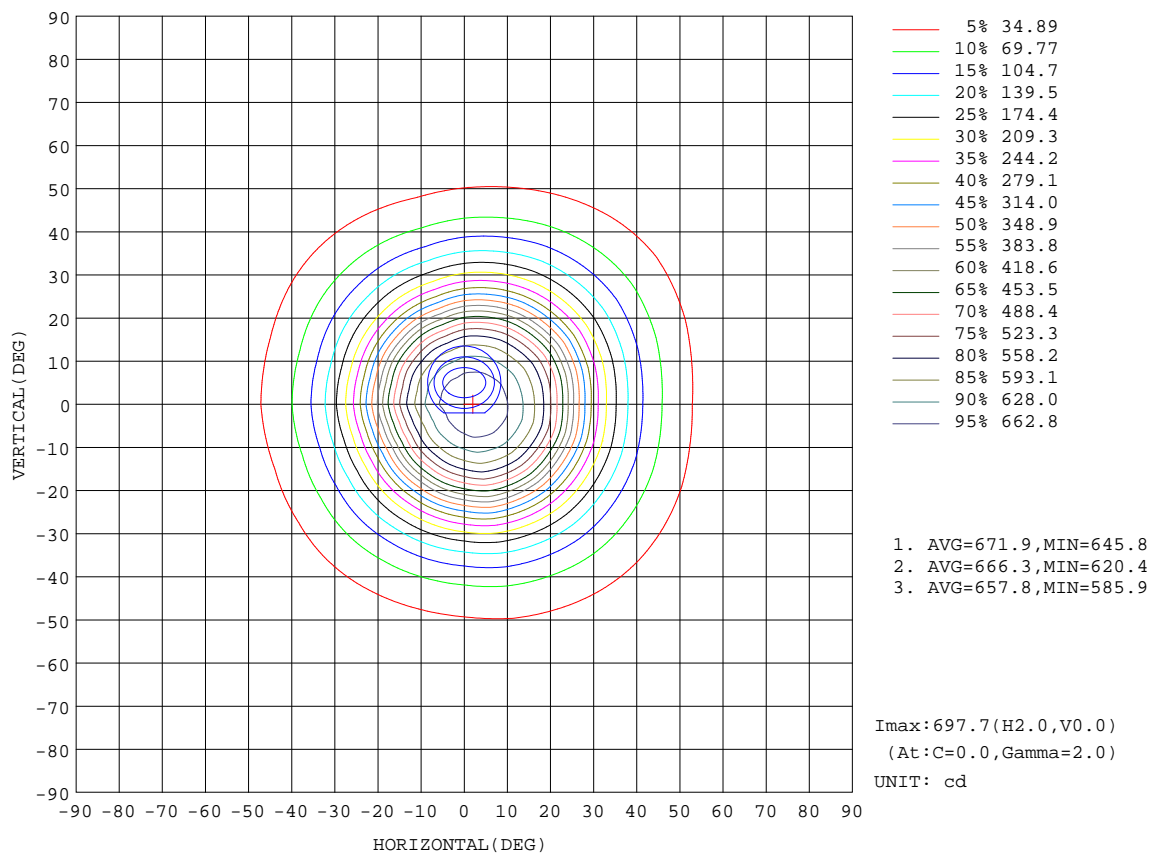
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	74	70	81	74	70	80	74	70	66
0.80	90	83	79	89	83	79	88	82	78	74
1.00	95	89	85	94	88	84	93	88	84	79
1.25	100	94	90	99	93	90	97	92	89	84
1.50	103	98	94	102	97	93	99	95	92	87
2.00	107	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	100	93
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	111	109	112	110	108	108	106	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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ISOCANDELA DIAGRAM

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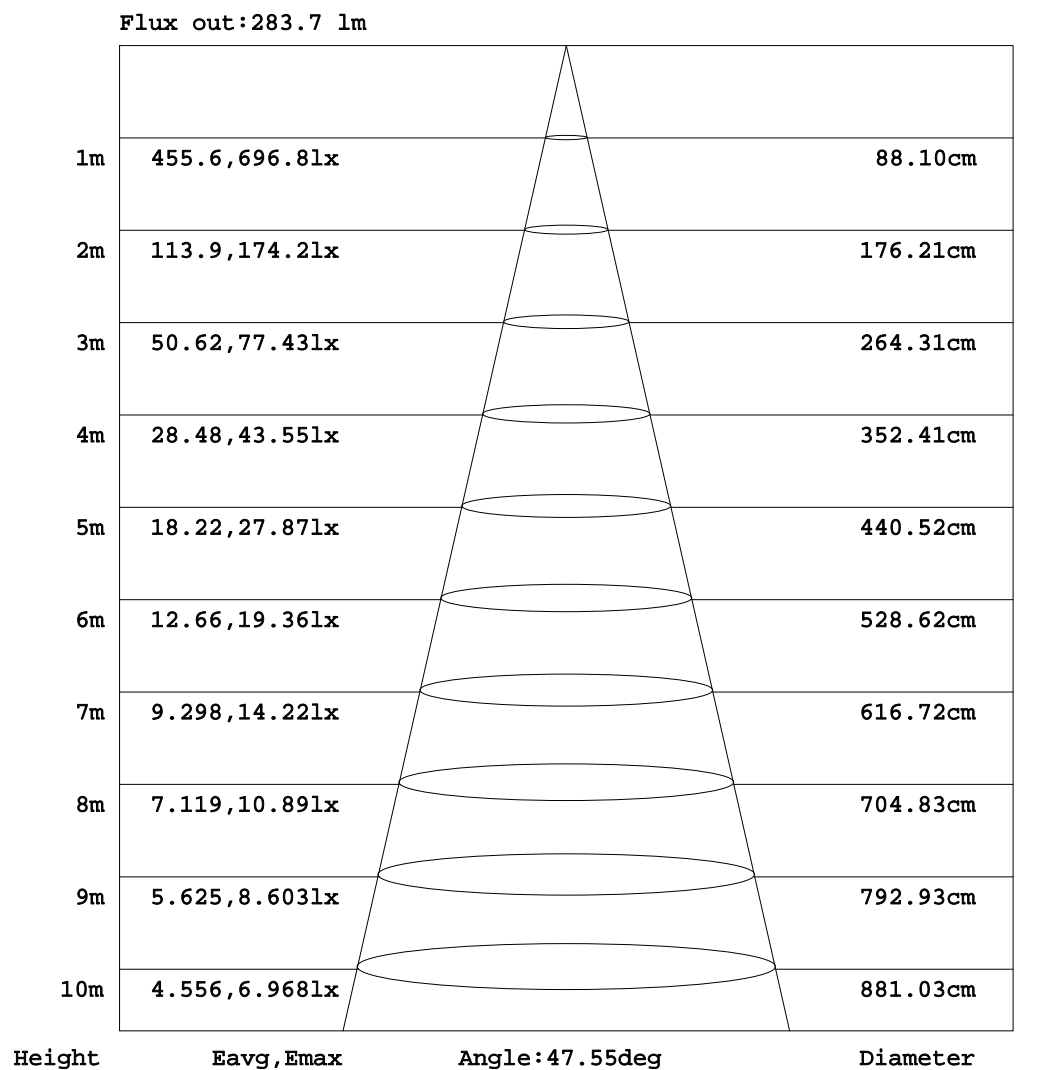


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AAI Figure

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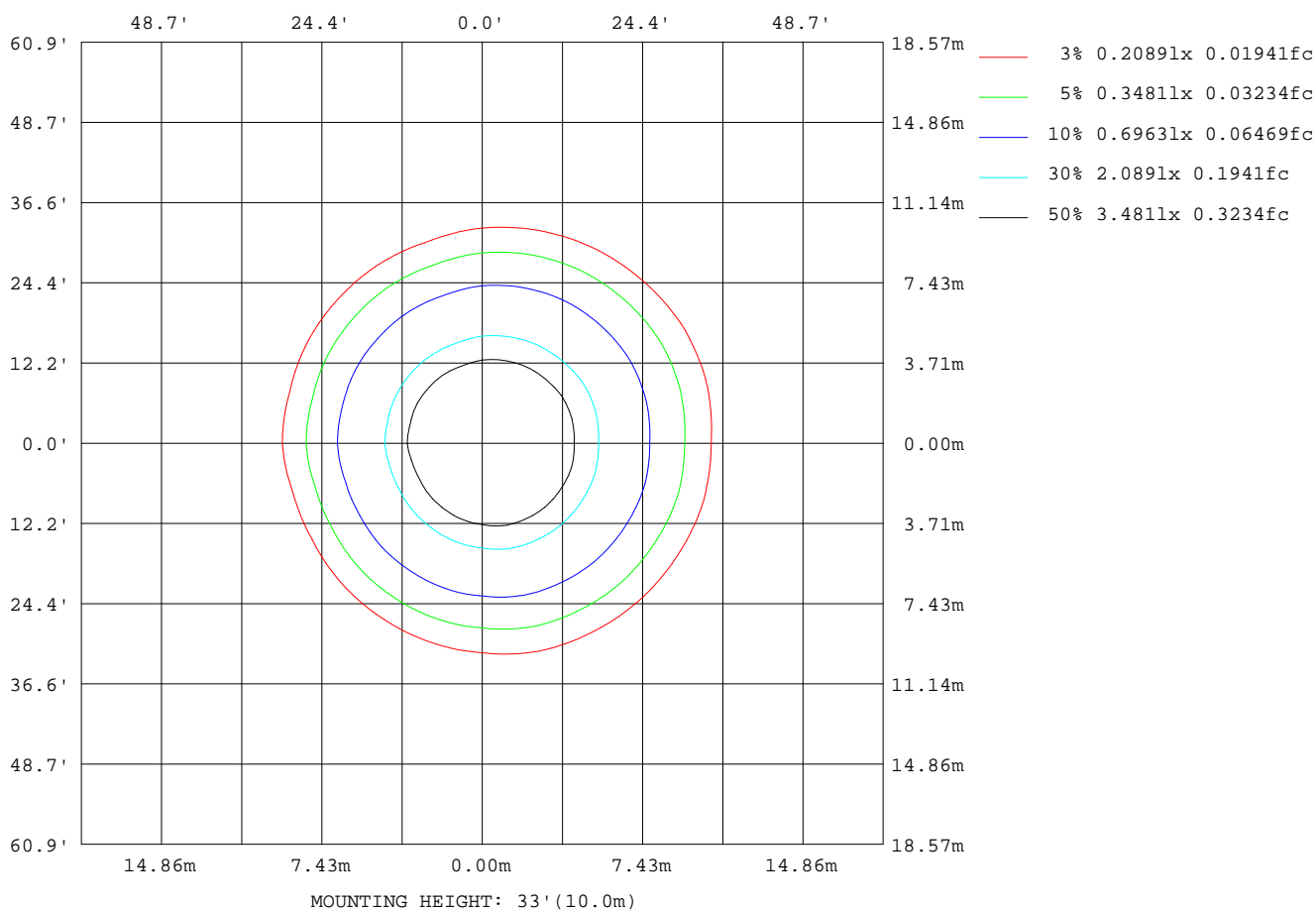
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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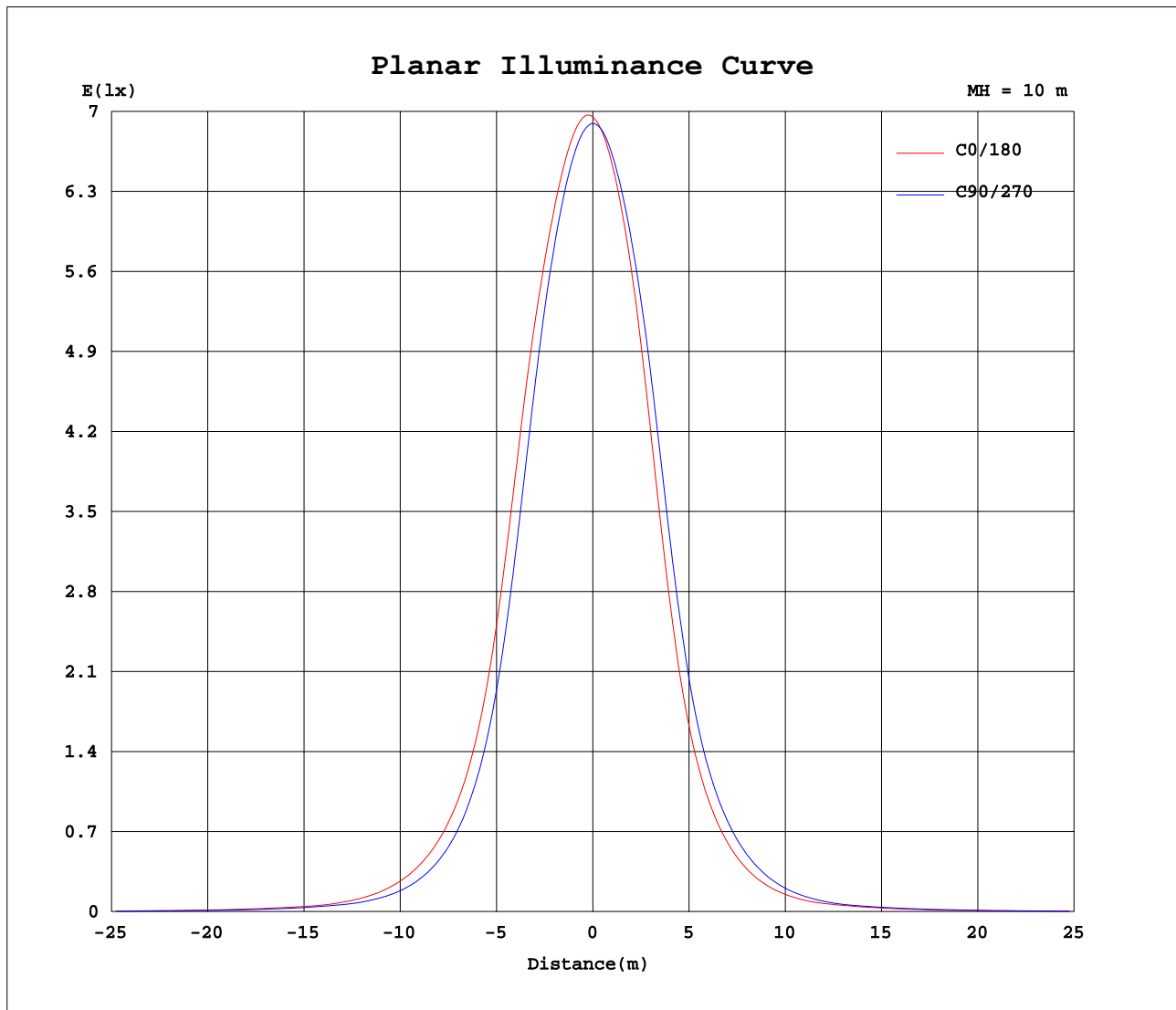
AvgL	cd/m2
L_0~180 (65) av	3073
L_0~180 (75) av	1341
L_0~180 (85) av	332
L_90~270 (65) av	2970
L_90~270 (75) av	1228
L_90~270 (85) av	351
L_45 (65) av	3033
L_45 (75) av	1322
L_45 (85) av	369

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2021-01-19

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2021-01-19

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```