

LED Downlight SENSE Series S68R1-11W-940-N



Light Output Ratio:	100.0%	
Luminaire Power:	10.15 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.50	fine grid method.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2021-04-14

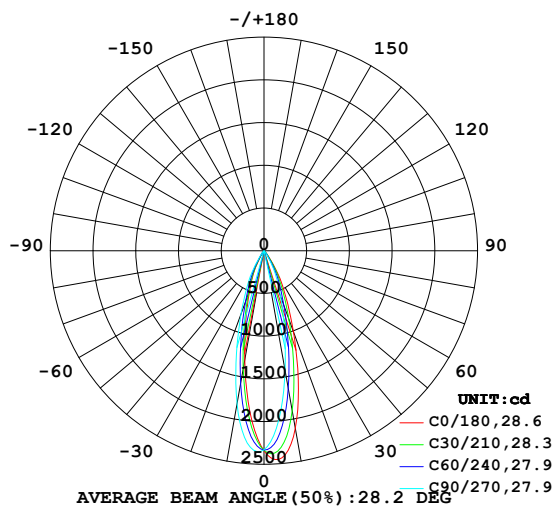
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

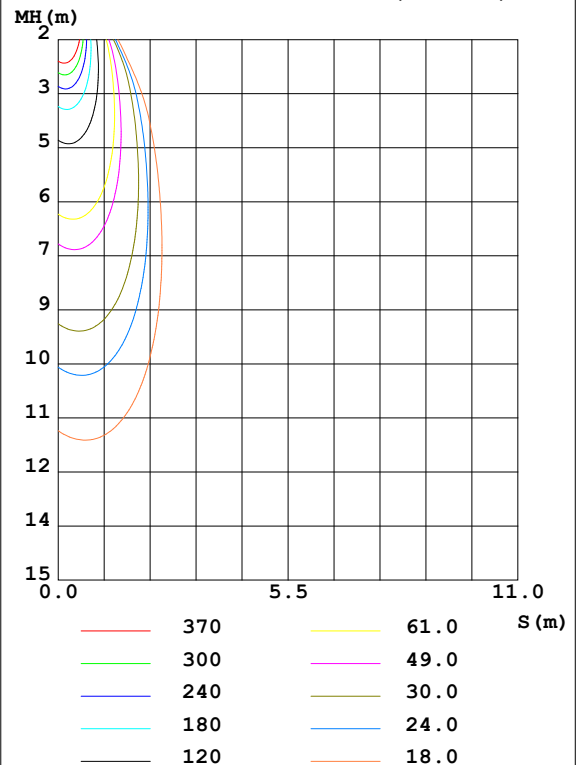
Test:U:29.00V I:0.3500A P:10.15W PF:1.000 Freq:0Hz Lamp Flux:780.344x1 lm		
NAME: S68R1-11W-940-N	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 78mm*H98mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 76.88 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	2473	S/MH (C0/180)	0.38
NOMINAL POWER (W)	11	LOR (%)	100.0	S/MH (C90/270)	0.52
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	780.34	η UP, DN (C0-180)	0.0, 47.0
NOMINAL FLUX (lm)	780.344	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 53.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	29.3	η down (%)	100.0	CIBSE SHR MAX	0.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2114	1783	1425	1283	1304	1464	1821	2132	0- 10	188.9	188.9	24.2, 24.2
20	1010	768.6	567.9	492.1	492.0	569.9	784.3	1013	10- 20	311.9	500.8	64.2, 64.2
30	371.2	278.1	165.2	118.6	112.0	152.2	250.6	369.9	20- 30	199.6	700.4	89.8, 89.8
40	64.08	51.79	28.56	28.71	14.29	32.52	33.66	63.95	30- 40	64.01	764.4	98, 98
50	6.712	7.548	2.986	3.192	1.724	3.923	3.231	11.28	40- 50	13.72	778.1	99.7, 99.7
60	0.8528	0.7464	0.3769	0.3810	0.3656	0.4346	0.4171	0.9906	50- 60	1.835	779.9	99.9, 99.9
70	0.2512	0.1671	0.0994	0.0417	0.0366	0.0996	0.0729	0.2667	60- 70	0.2999	780.2	100, 100
80	0.0629	0.0314	0.0523	0.0314	0.0366	0.0574	0.0261	0.0680	70- 80	0.0707	780.3	100, 100
90	0.0366	0.0314	0.0261	0.0314	0.0366	0.0314	0.0261	0.0314	80- 90	0.0403	780.3	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): 774.16 lm

%lum = 99.2%

%lamp = 99.2%

Conical surface Flux(120deg): 779.93 lm

%lum = 99.9%

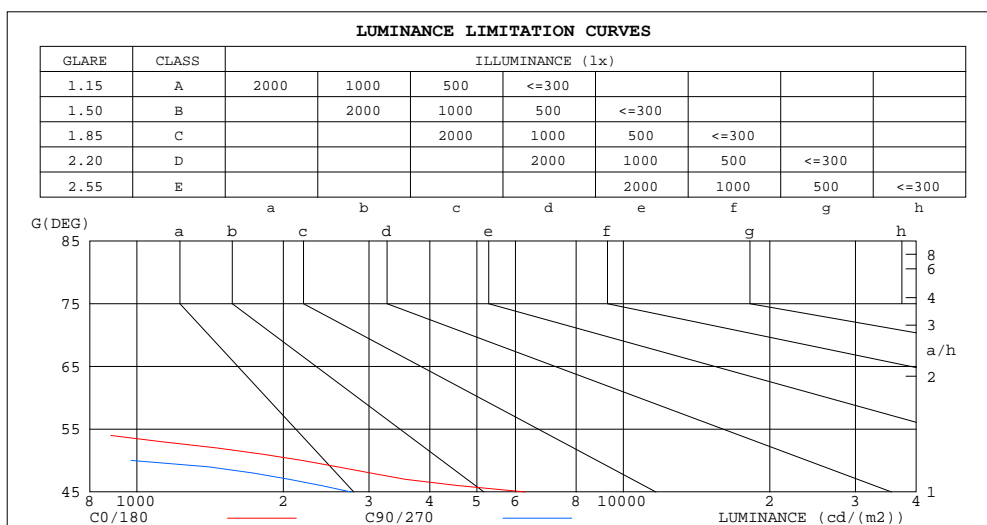
%lamp = 99.9%

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LUMINANCE LIMITATION CURVES

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SPEC.:4000K	DIM.: ϕ 78mm*H98mm	
MFR.: NEKO LIGHTING AG		



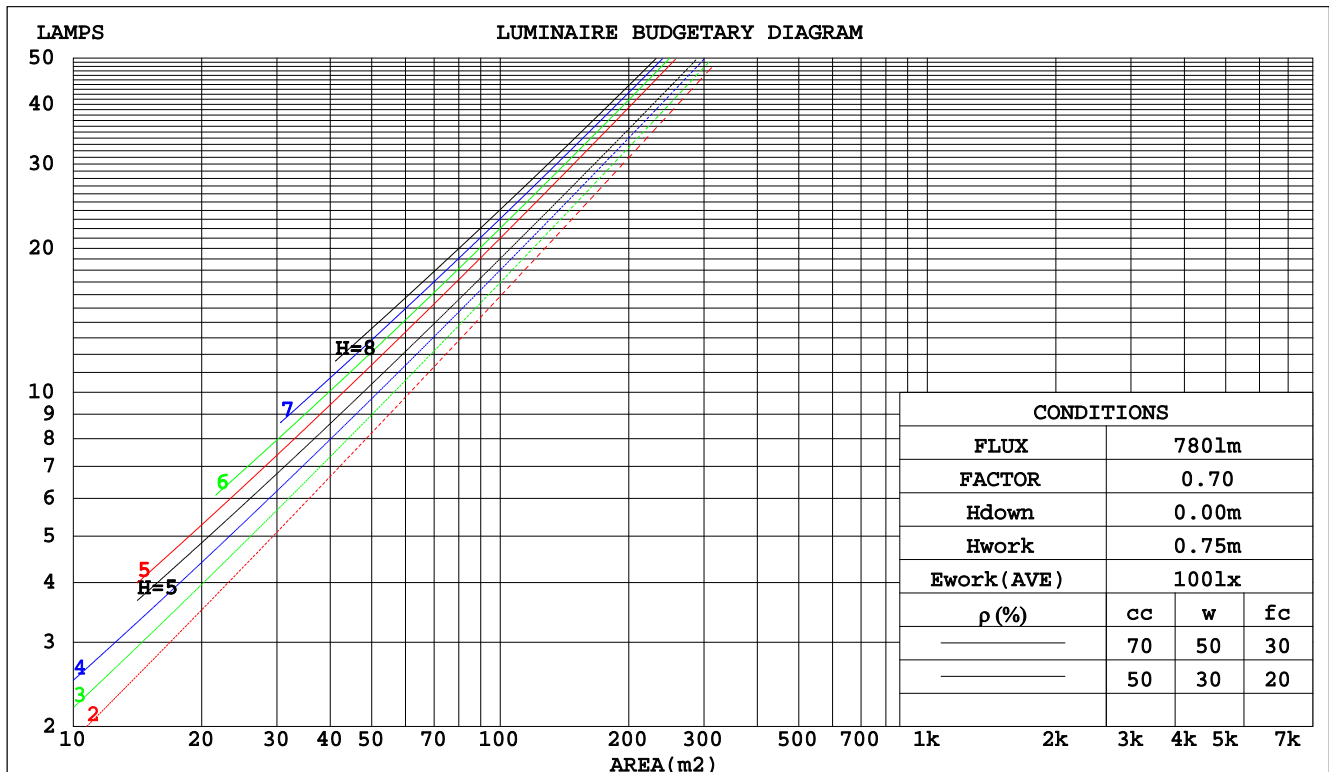
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	RCR:Room Cavity Ratio						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	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	1.00	1.04	1.01	.99	1.01	.99	.97	.98	.96	.95	.96	.94	.93	.91
3.0	1.01	.97	.93	.99	.96	.93	.97	.94	.91	.95	.92	.90	.92	.90	.89	.87
4.0	.96	.91	.88	.95	.91	.88	.93	.89	.87	.91	.88	.86	.89	.87	.85	.83
5.0	.92	.87	.83	.91	.86	.83	.89	.85	.82	.87	.84	.82	.86	.83	.81	.80
6.0	.88	.83	.79	.87	.82	.79	.85	.82	.79	.84	.81	.78	.83	.80	.78	.76
7.0	.84	.79	.76	.83	.79	.76	.82	.78	.75	.81	.78	.75	.80	.77	.74	.73
8.0	.81	.76	.73	.80	.76	.72	.79	.75	.72	.78	.75	.72	.77	.74	.72	.70
9.0	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.75	.71	.69	.68
10.0	.75	.70	.67	.74	.70	.67	.74	.69	.67	.73	.69	.67	.72	.69	.66	.65



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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	.150	.085	.027	.144	.082	.026	.131	.075	.024	.120	.069	.022	.109	.063	.020		
2.0	.141	.077	.024	.136	.075	.023	.125	.070	.022	.116	.065	.020	.107	.060	.019		
3.0	.133	.071	.021	.128	.069	.021	.120	.065	.020	.112	.061	.019	.104	.058	.018		
4.0	.126	.065	.019	.122	.064	.019	.114	.061	.018	.107	.058	.017	.101	.055	.017		
5.0	.119	.061	.018	.116	.059	.017	.109	.057	.017	.104	.055	.016	.098	.052	.016		
6.0	.113	.057	.016	.111	.056	.016	.105	.054	.016	.100	.052	.015	.095	.050	.015		
7.0	.108	.054	.015	.106	.053	.015	.101	.051	.015	.096	.049	.014	.092	.048	.014		
8.0	.104	.051	.014	.101	.050	.014	.097	.048	.014	.093	.047	.014	.089	.046	.013		
9.0	.099	.048	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013	.087	.044	.013		
10.0	.095	.046	.013	.094	.045	.013	.090	.044	.012	.087	.043	.012	.084	.042	.012		

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	.169	.158	.147	.145	.135	.127	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.130	.114	.100	.089	.079	.070	.051	.046	.041	.017	.015	.013	
3.0	.138	.113	.094	.118	.098	.081	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.126	.098	.077	.108	.085	.067	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.064	.100	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.068	.046	.087	.059	.040	.060	.042	.028	.035	.025	.017	.011	.008	.006	
8.0	.095	.062	.039	.082	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.090	.056	.034	.077	.049	.030	.054	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.085	.052	.030	.073	.045	.026	.051	.032	.018	.030	.019	.011	.010	.006	.004	

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 γ Interval: 1.0DEG
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Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:29.00V I:0.3500A P:10.15W PF:1.000 Freq:0Hz Lamp Flux:780.344x1 lm										
NAME: S68R1-11W-940-N					TYPE:Downlight			SERIAL No.:		
SPEC.:4000K					DIM.: ϕ 78mm*H98mm					
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	15.5	16.2	15.7	16.4	16.5	10.8	11.5	11.0	11.7	11.8
3H	15.3	16.0	15.6	16.2	16.4	10.6	11.3	10.9	11.5	11.7
4H	15.2	15.9	15.5	16.1	16.3	10.5	11.2	10.8	11.4	11.6
6H	15.2	15.8	15.4	16.0	16.2	10.4	11.1	10.7	11.3	11.5
8H	15.1	15.7	15.4	16.0	16.2	10.4	11.0	10.7	11.2	11.5
12H	15.1	15.6	15.4	15.9	16.2	10.4	10.9	10.7	11.2	11.5
4H 2H	15.2	15.9	15.5	16.1	16.3	10.5	11.2	10.8	11.4	11.6
3H	15.1	15.6	15.4	15.9	16.2	10.4	10.9	10.7	11.2	11.5
4H	15.0	15.5	15.3	15.8	16.1	10.3	10.8	10.6	11.1	11.4
6H	14.9	15.3	15.2	15.7	16.0	10.2	10.6	10.5	11.0	11.3
8H	14.8	15.2	15.2	15.6	16.0	10.1	10.6	10.5	10.9	11.3
12H	14.8	15.2	15.2	15.5	15.9	10.1	10.5	10.5	10.8	11.2
8H 4H	14.8	15.2	15.2	15.6	16.0	10.1	10.6	10.5	10.9	11.3
6H	14.7	15.1	15.1	15.5	15.9	10.0	10.4	10.4	10.8	11.2
8H	14.6	15.0	15.1	15.4	15.8	10.0	10.3	10.4	10.7	11.1
12H	14.6	14.9	15.1	15.3	15.8	9.9	10.2	10.4	10.6	11.1
12H 4H	14.8	15.2	15.2	15.5	15.9	10.1	10.5	10.5	10.8	11.2
6H	14.6	15.0	15.1	15.4	15.8	10.0	10.3	10.4	10.7	11.1
8H	14.6	14.9	15.1	15.3	15.8	9.9	10.2	10.4	10.6	11.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.7 / -18.9					+ 3.1 / -18.1				
1.5H	+ 5.8 / -10.7					+ 5.4 / -14.4				
2.0H	+ 7.1 / -14.1					+ 6.2 / -11.0				

CIE Pub.117, 780.3 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.9$)

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Remarks:

UTILIZATION FACTORS TABLE

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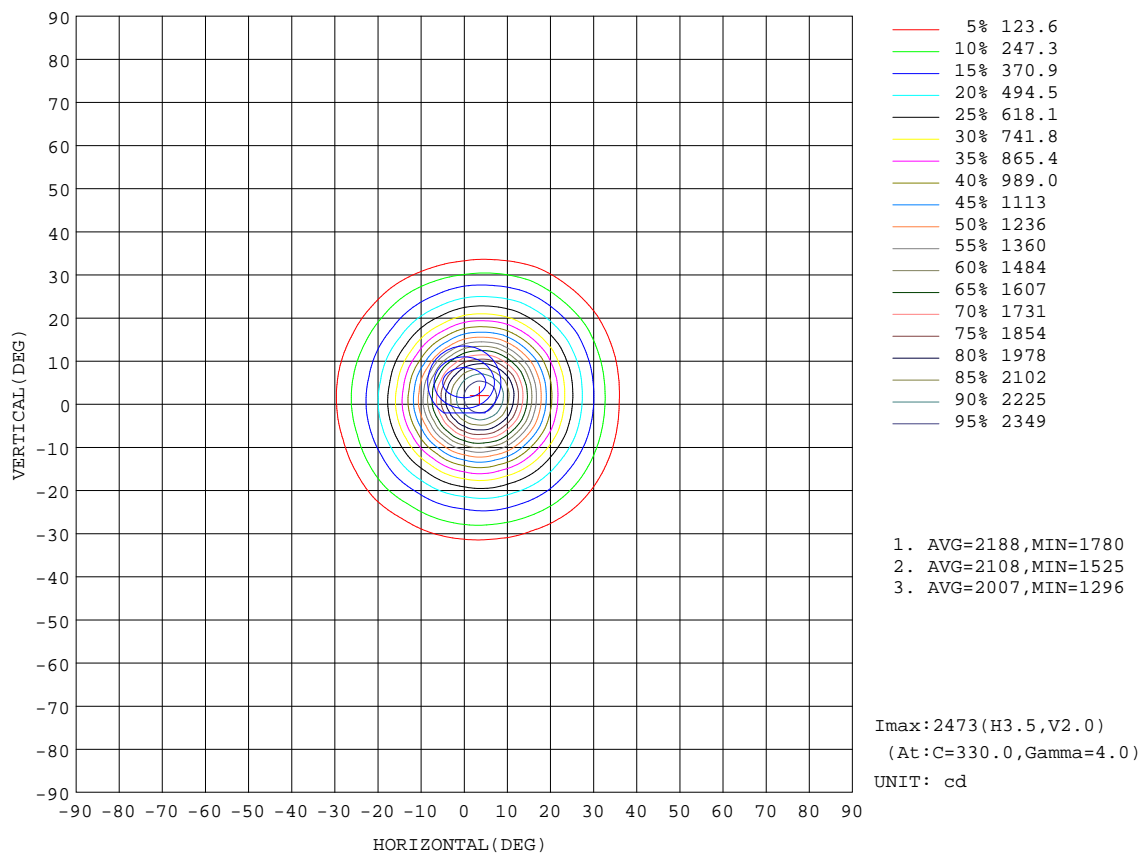
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	90	84	81	89	84	81	77
0.80	97	92	89	97	92	89	96	91	88	85
1.00	101	96	93	100	96	93	99	95	92	88
1.25	105	100	97	104	100	97	102	98	96	92
1.50	107	103	100	106	102	100	104	101	98	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	107	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	116	114	112	113	112	110	110	108	107	100
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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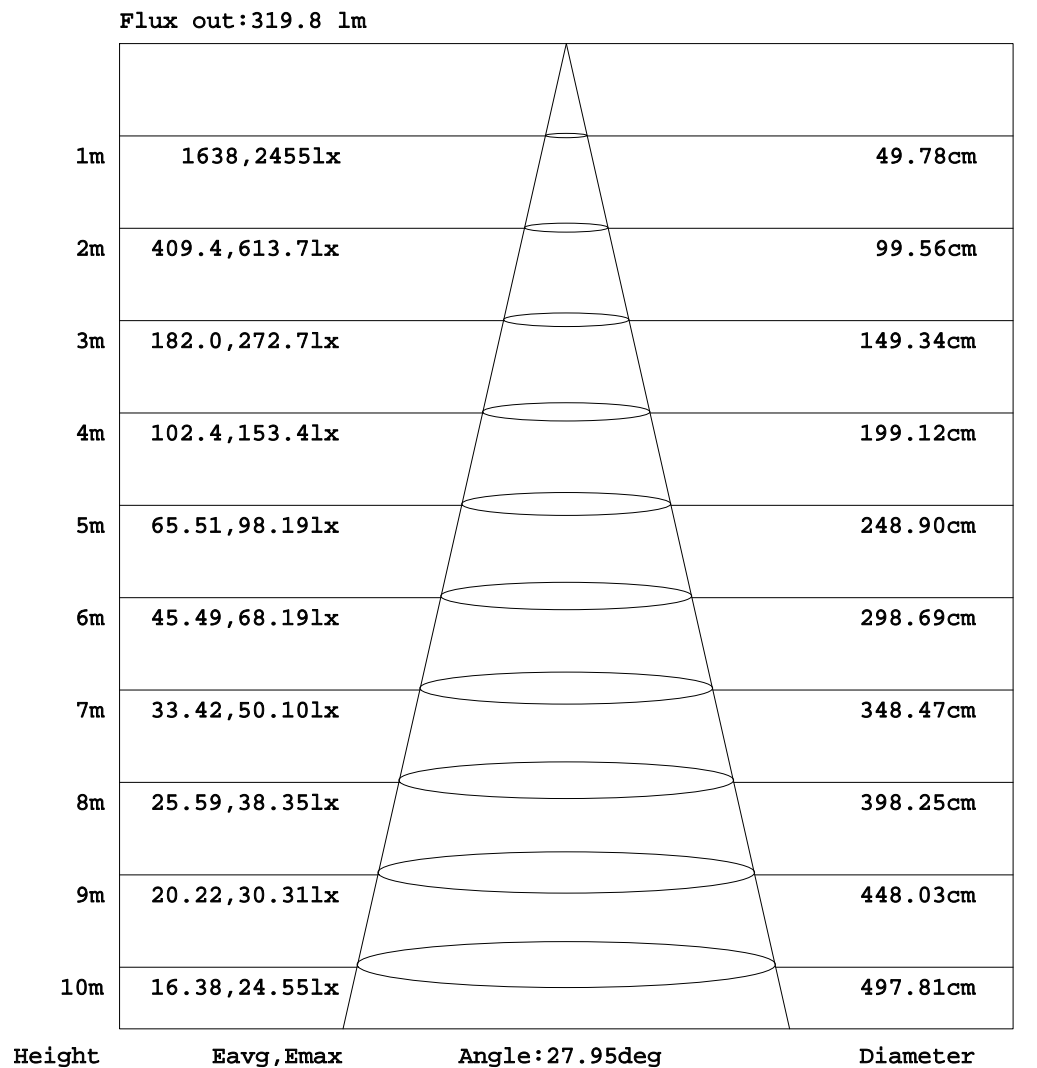


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AAI Figure

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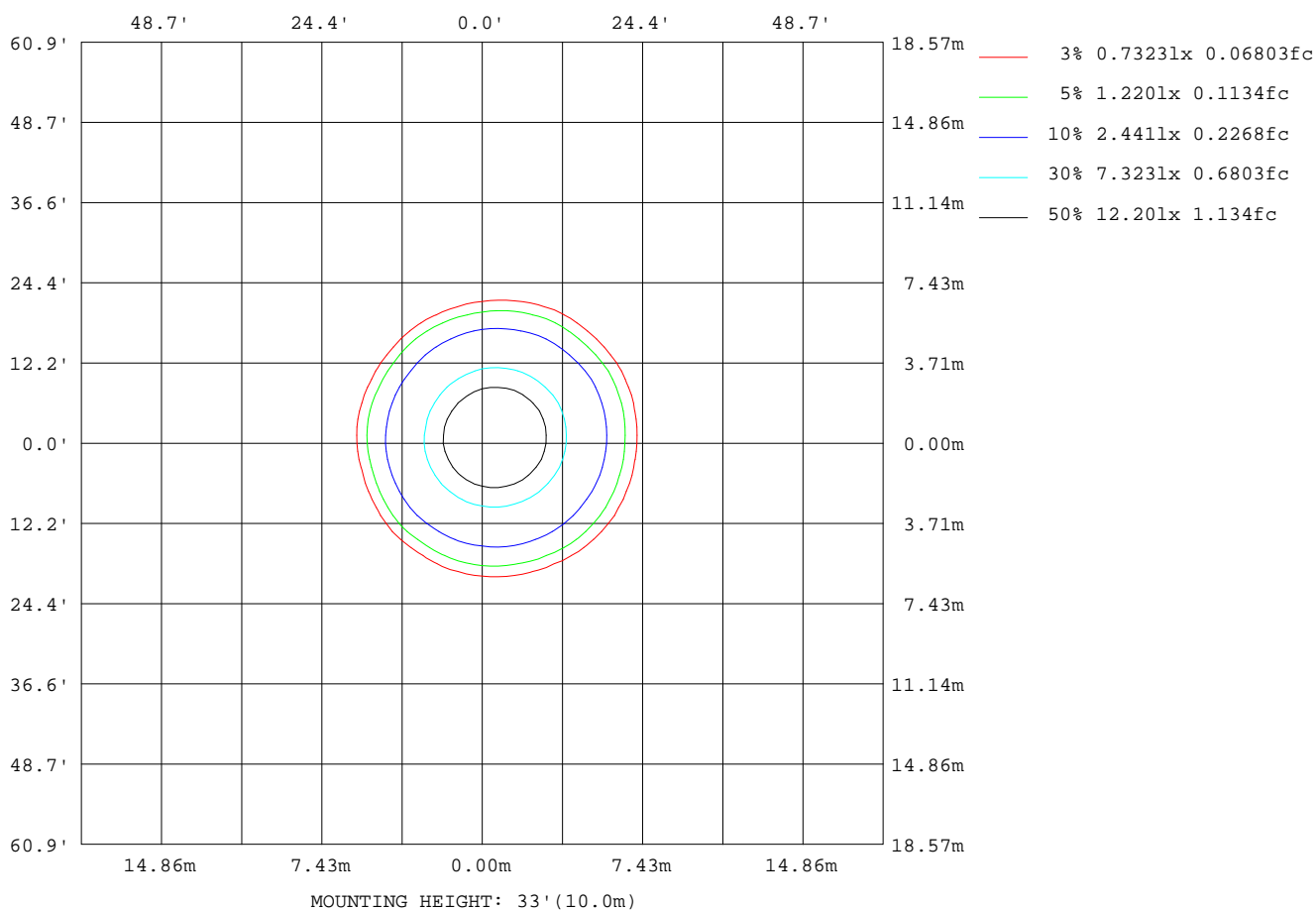
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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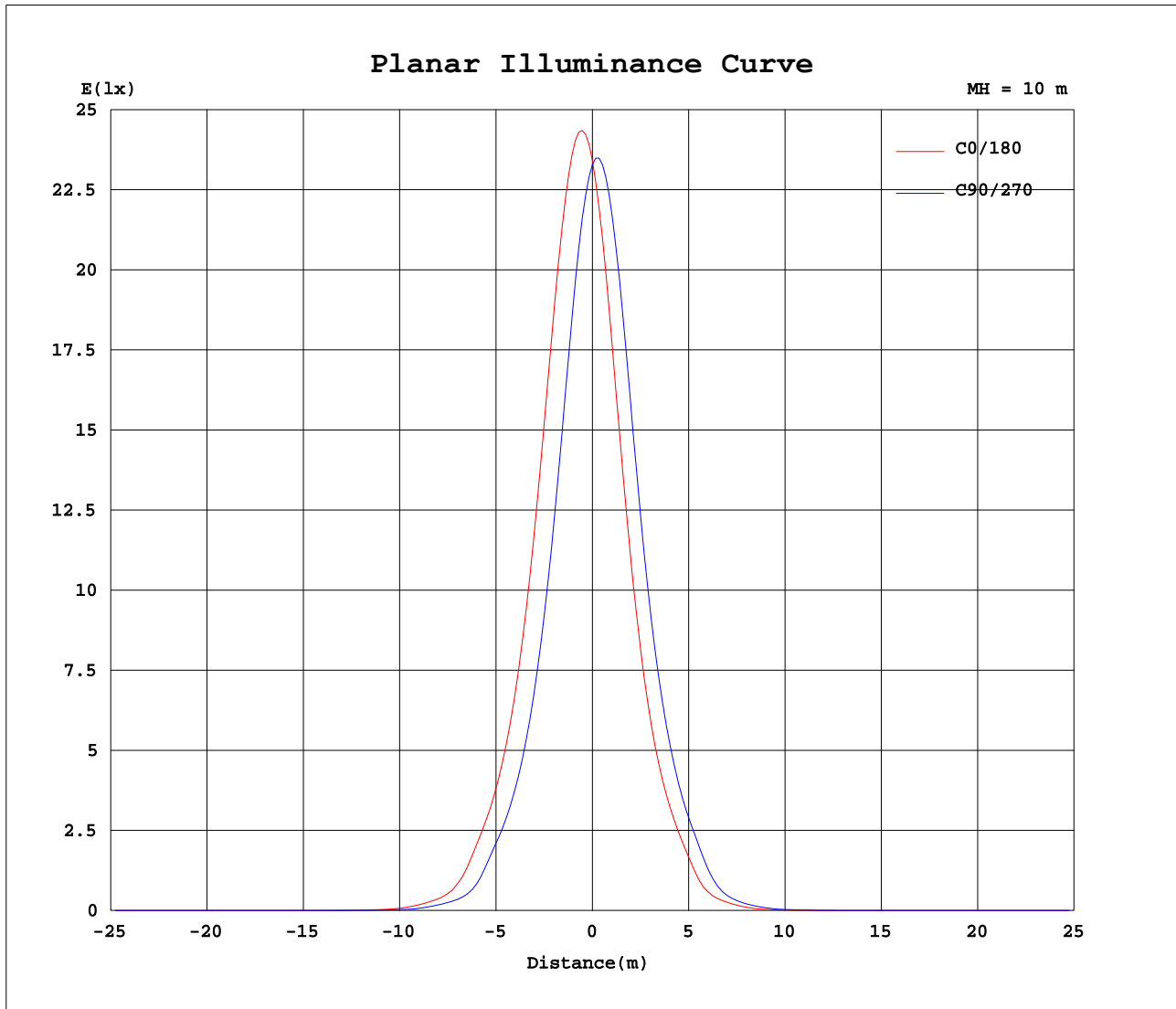
AvgL	cd/m2
L_0~180 (65) av	128
L_0~180 (75) av	53
L_0~180 (85) av	101
L_90~270 (65) av	131
L_90~270 (75) av	36
L_90~270 (85) av	82
L_45 (65) av	152
L_45 (75) av	44
L_45 (85) av	91

Standard: GB/T 29293-2012

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Temperature:25.3DEG
Operators:Jason
Test Date:2021-04-14

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
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: 2021-04-14

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
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: 1.0DEG
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: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```