

LED Downlight SENSE Series S100R2-13W-DW-918-W



Light Output Ratio:	100.0%	
Luminaire Power:	0.3598 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

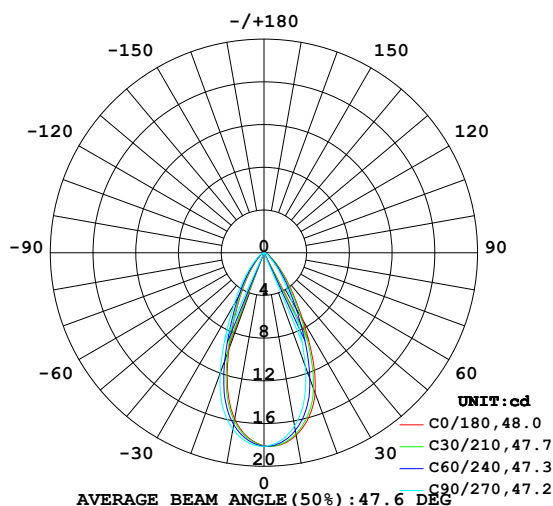
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

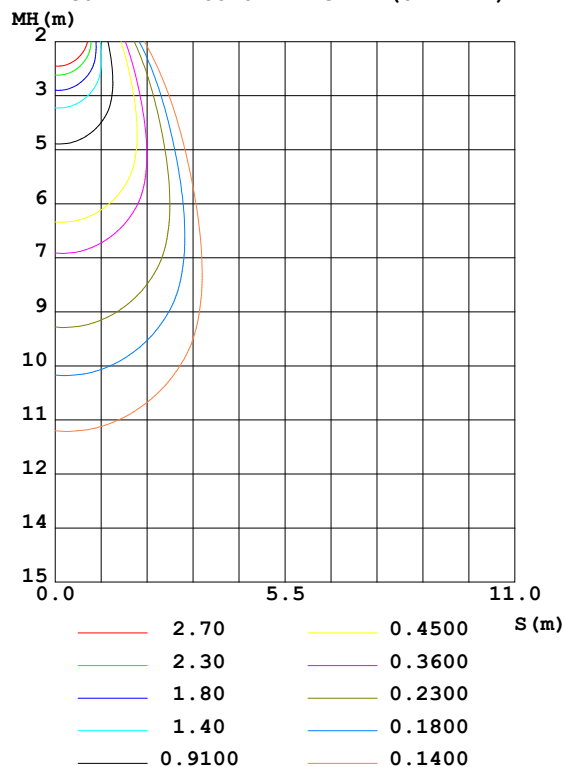
Test:U:25.70V I:0.0140A P:0.3598W PF:1.000 Freq:0Hz Lamp Flux:13.8786x1 lm		
NAME: S100R2-13W-DW-918-W	TYPE:Downlight	SERIAL No.:
SPEC.:1800K	DIM.: ϕ 108mm*H126mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 38.57 lm/W			
MODEL	BRIDGELUX-1800K	I _{max} (cd)	18.46	S/MH (C0/180)	0.67
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.76
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	13.879	η UP, DN (C0-180)	0.0, 50.0
NOMINAL FLUX (lm)	13.8786	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.0
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	17.35	17.10	16.47	16.06	15.82	16.12	16.77	17.30	0- 10	1.660	1.660	12,12
20	13.99	13.18	11.33	10.04	9.599	10.20	12.00	13.52	10- 20	4.037	5.697	41.1,41.1
30	7.266	6.526	5.117	4.359	4.137	4.493	5.667	6.879	20- 30	3.826	9.524	68.6,68.6
40	3.199	2.797	2.109	1.714	1.596	1.815	2.412	3.059	30- 40	2.313	11.84	85.3,85.3
50	1.307	1.073	0.8178	0.6417	0.5957	0.6992	0.8876	1.208	40- 50	1.156	12.99	93.6,93.6
60	0.5912	0.4826	0.4064	0.2873	0.2618	0.3496	0.4003	0.5500	50- 60	0.5529	13.55	97.6,97.6
70	0.2675	0.1746	0.1491	0.0409	0.0254	0.0979	0.1332	0.2418	60- 70	0.2686	13.81	99.5,99.5
80	0.0363	0.0101	0	0	0	0	0	0.0360	70- 80	0.0631	13.88	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.0011	13.88	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): 12.527 lm

%lum = 90.3%

%lamp = 90.3%

Conical surface Flux(120deg): 13.546 lm

%lum = 97.6%

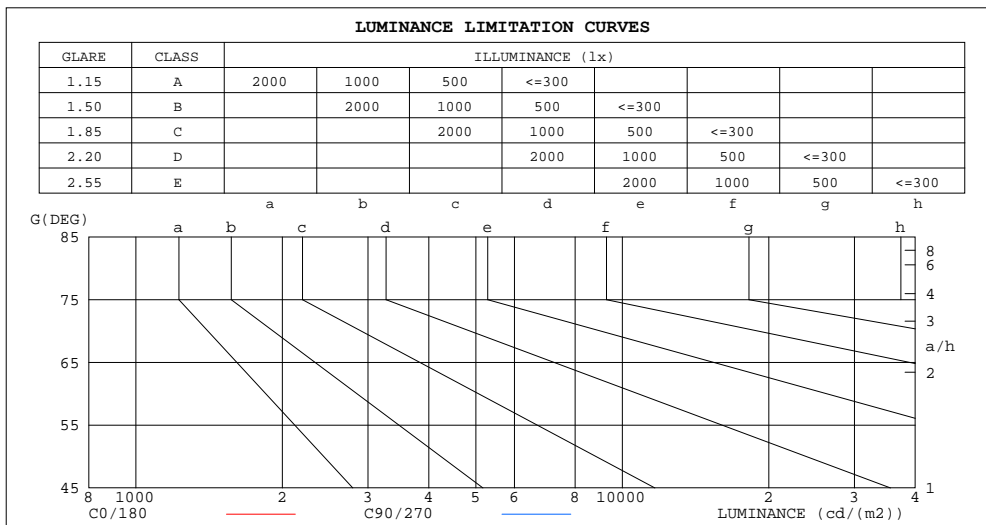
%lamp = 97.6%

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LUMINANCE LIMITATION CURVES

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LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	0	0
80	23	0
75	61	22
70	85	48
65	108	70
60	129	89
55	155	113
50	222	139
45	322	203

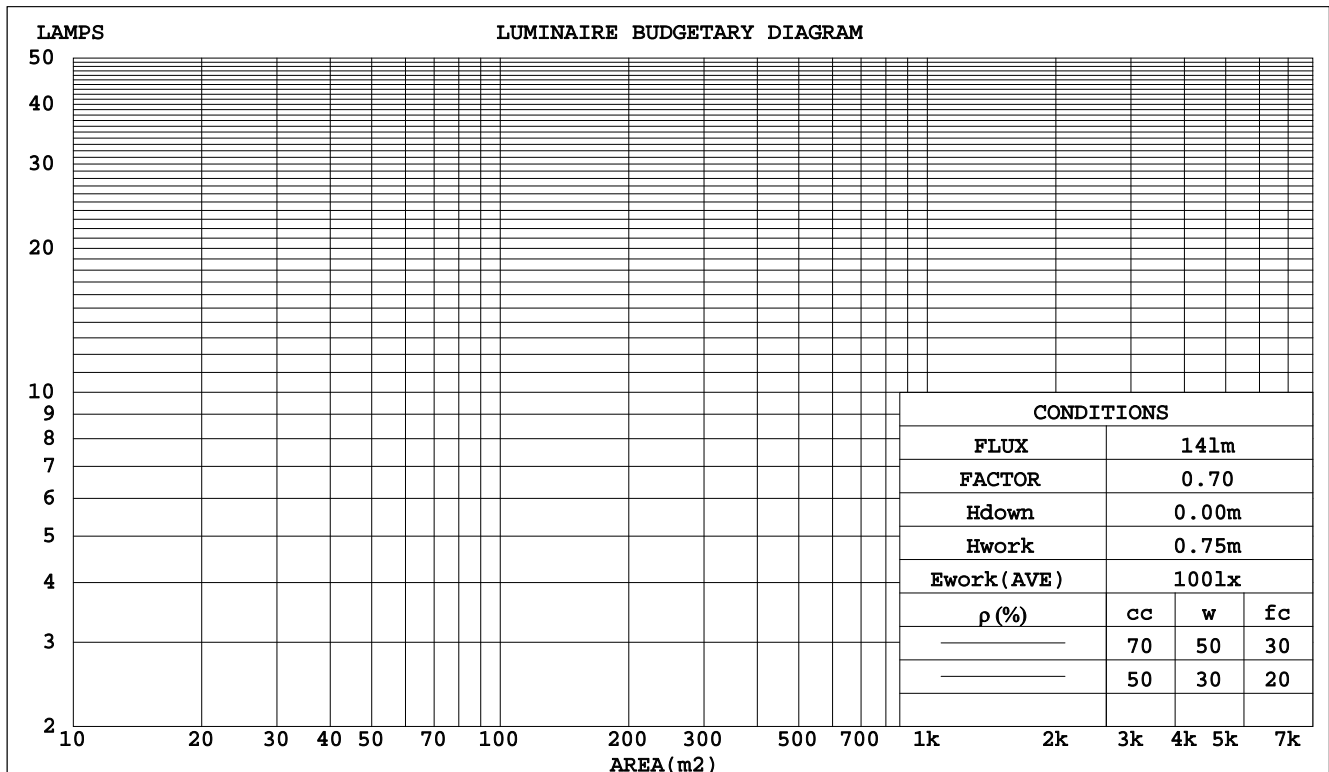
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	1.00
1.0	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.87	.86
3.0	.95	.90	.86	.93	.89	.85	.91	.87	.83	.88	.85	.82	.86	.83	.81	.79
4.0	.88	.83	.78	.87	.82	.78	.85	.80	.77	.83	.79	.76	.81	.78	.75	.73
5.0	.83	.77	.72	.82	.76	.72	.80	.75	.71	.78	.74	.71	.77	.73	.70	.68
6.0	.77	.71	.67	.77	.71	.67	.75	.70	.66	.74	.69	.66	.72	.68	.65	.64
7.0	.73	.67	.62	.72	.66	.62	.71	.66	.62	.70	.65	.62	.69	.64	.61	.60
8.0	.69	.63	.58	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.56
9.0	.65	.59	.55	.64	.59	.55	.64	.58	.55	.63	.58	.54	.62	.57	.54	.53
10.0	.62	.56	.52	.61	.56	.52	.60	.55	.52	.60	.55	.51	.59	.54	.51	.50



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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	.186	.106	.034	.180	.102	.033	.167	.096	.031	.155	.090	.029	.145	.084	.027		
2.0	.179	.098	.030	.174	.096	.029	.163	.091	.028	.153	.086	.027	.144	.081	.026		
3.0	.171	.091	.027	.166	.089	.027	.157	.085	.026	.148	.081	.025	.140	.078	.024		
4.0	.162	.084	.025	.158	.083	.024	.150	.079	.024	.142	.076	.023	.136	.074	.022		
5.0	.154	.078	.023	.150	.077	.022	.143	.075	.022	.137	.072	.021	.131	.070	.021		
6.0	.146	.073	.021	.143	.072	.021	.137	.070	.020	.131	.068	.020	.126	.066	.020		
7.0	.139	.069	.019	.136	.068	.019	.131	.066	.019	.126	.064	.019	.121	.063	.018		
8.0	.132	.065	.018	.130	.064	.018	.125	.062	.018	.121	.061	.018	.116	.060	.017		
9.0	.126	.061	.017	.124	.060	.017	.120	.059	.017	.116	.058	.017	.112	.057	.016		
10.0	.121	.058	.016	.119	.057	.016	.115	.056	.016	.111	.055	.016	.108	.054	.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	.157	.132	.112	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013		
3.0	.145	.114	.088	.125	.098	.077	.086	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.008		
5.0	.127	.088	.059	.109	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007		
6.0	.119	.078	.049	.103	.068	.043	.071	.047	.030	.041	.028	.018	.013	.009	.006		
7.0	.113	.071	.041	.097	.061	.036	.067	.043	.026	.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	.059	.031	.088	.052	.027	.061	.036	.019	.035	.021	.011	.011	.007	.004		
10.0	.097	.055	.027	.084	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003		

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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:

UGR(Unified Glare Rating) Table

Test:U:25.70V I:0.0140A P:0.3598W PF:1.000 Freq:0Hz Lamp Flux:13.8786x1 lm										
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SPEC.:1800K					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	19.7	20.6	19.9	20.8	21.0	18.1	19.1	18.3	19.2	19.4
3H	19.9	20.8	20.2	21.0	21.2	18.2	19.1	18.4	19.3	19.5
4H	19.9	20.8	20.2	21.0	21.2	18.1	19.0	18.4	19.2	19.4
6H	19.9	20.7	20.2	20.9	21.2	18.0	18.8	18.3	19.1	19.3
8H	19.8	20.6	20.1	20.9	21.1	18.0	18.8	18.3	19.0	19.3
12H	19.8	20.5	20.1	20.8	21.1	17.9	18.7	18.3	18.9	19.2
4H 2H	19.6	20.5	19.9	20.7	20.9	18.2	19.0	18.5	19.3	19.5
3H	20.0	20.7	20.3	21.0	21.3	18.4	19.1	18.7	19.4	19.7
4H	20.0	20.7	20.4	21.0	21.3	18.3	19.0	18.7	19.3	19.6
6H	20.0	20.6	20.4	20.9	21.3	18.2	18.8	18.6	19.2	19.5
8H	19.9	20.5	20.3	20.8	21.2	18.2	18.7	18.6	19.1	19.5
12H	19.9	20.4	20.3	20.8	21.1	18.1	18.6	18.6	19.0	19.4
8H 4H	19.9	20.5	20.3	20.8	21.2	18.3	18.8	18.7	19.2	19.5
6H	19.9	20.3	20.3	20.7	21.1	18.2	18.6	18.6	19.0	19.4
8H	19.8	20.2	20.3	20.6	21.1	18.1	18.5	18.6	18.9	19.4
12H	19.8	20.1	20.2	20.6	21.0	18.1	18.4	18.5	18.9	19.3
12H 4H	19.9	20.4	20.3	20.8	21.1	18.2	18.7	18.6	19.1	19.5
6H	19.8	20.2	20.3	20.6	21.1	18.1	18.5	18.6	18.9	19.4
8H	19.8	20.1	20.2	20.6	21.0	18.1	18.4	18.5	18.9	19.3
Variations with the observer position at spacings:										
S = 1.0H	+ 1.6 / - 2.2					+ 1.6 / - 2.4				
1.5H	+ 2.5 / - 2.2					+ 2.2 / - 2.0				
2.0H	+ 3.3 / - 2.0					+ 2.5 / - 1.8				

CIE Pub.117, 13.88 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -14.9$)

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UTILIZATION FACTORS TABLE

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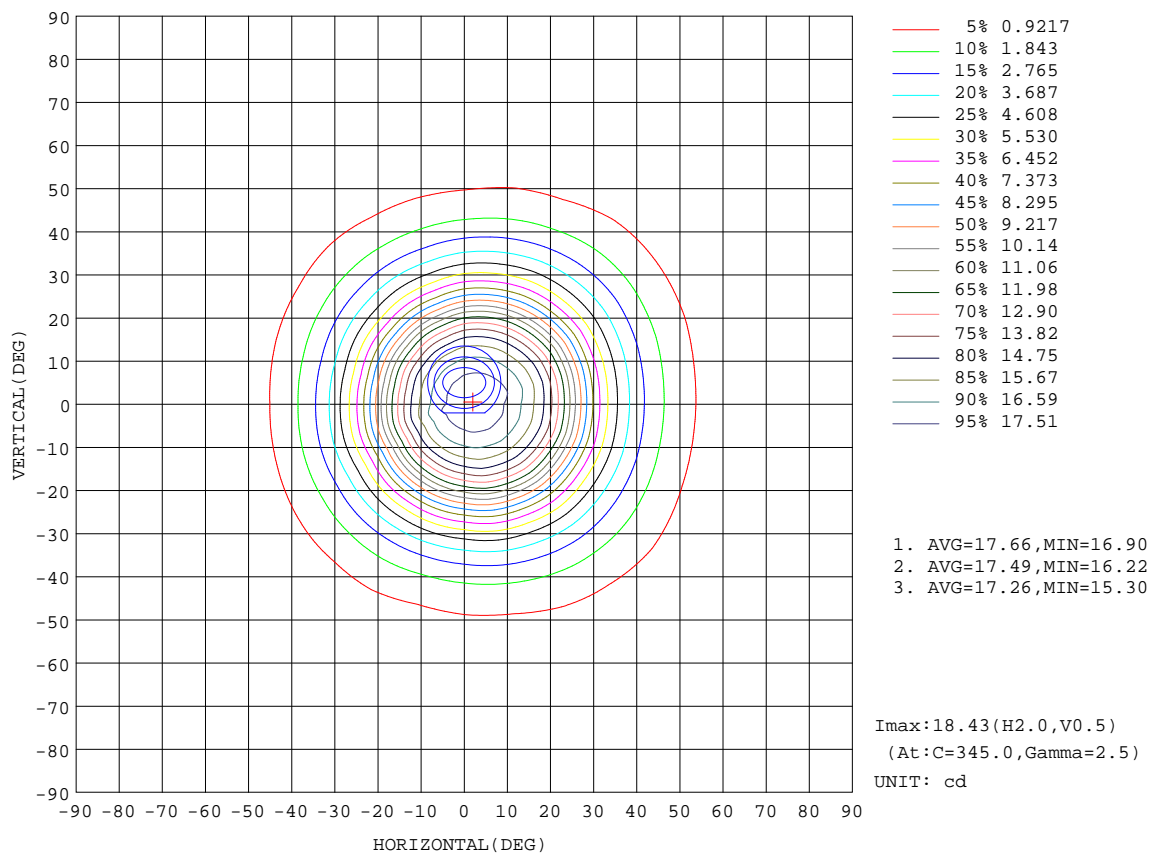
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	71	82	75	71	81	74	70	66
0.80	90	84	79	90	83	79	88	83	79	75
1.00	96	89	85	95	89	85	93	89	84	80
1.25	100	94	90	99	94	90	97	93	89	85
1.50	103	98	94	102	97	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	105	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	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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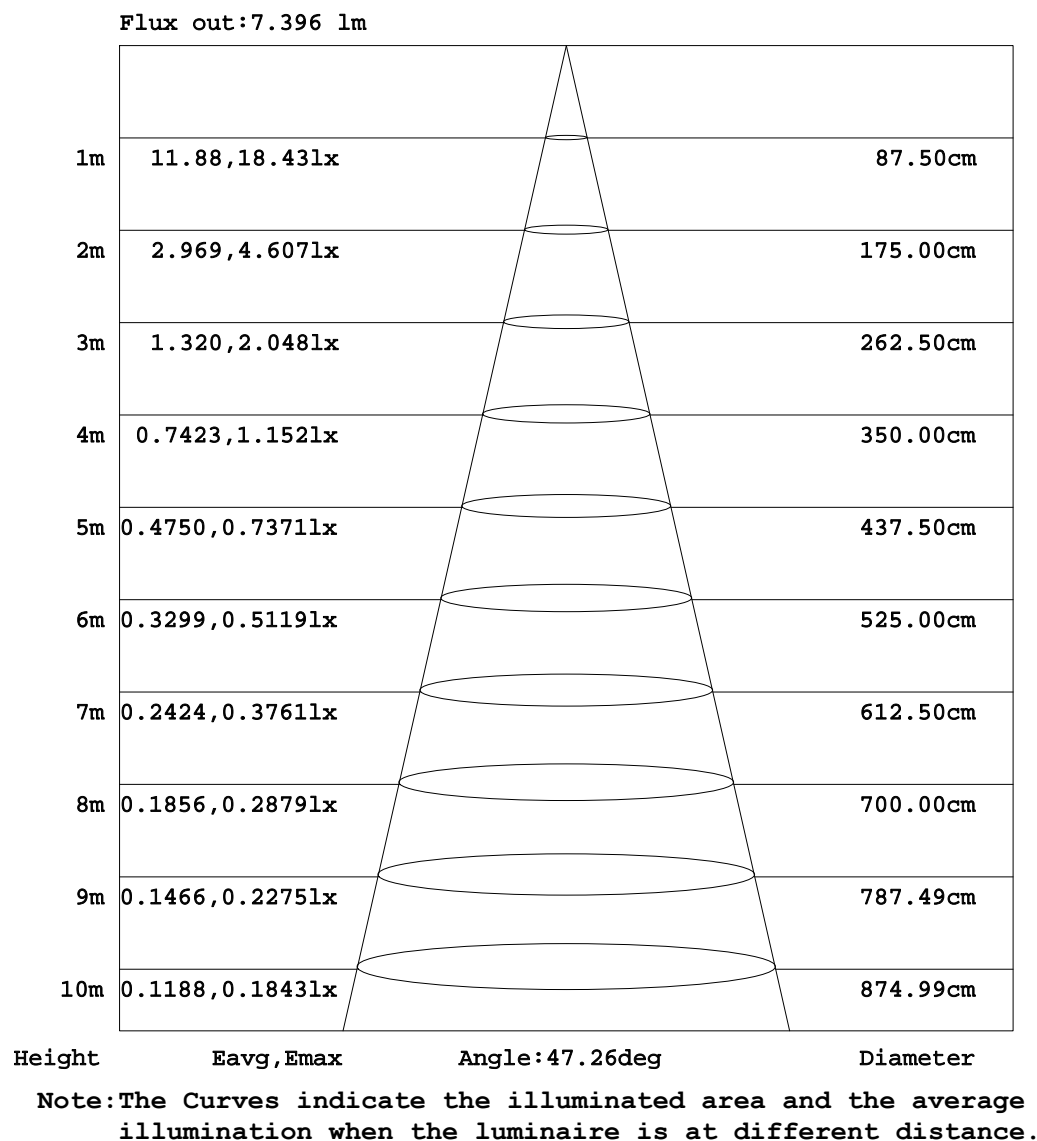


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AAI Figure

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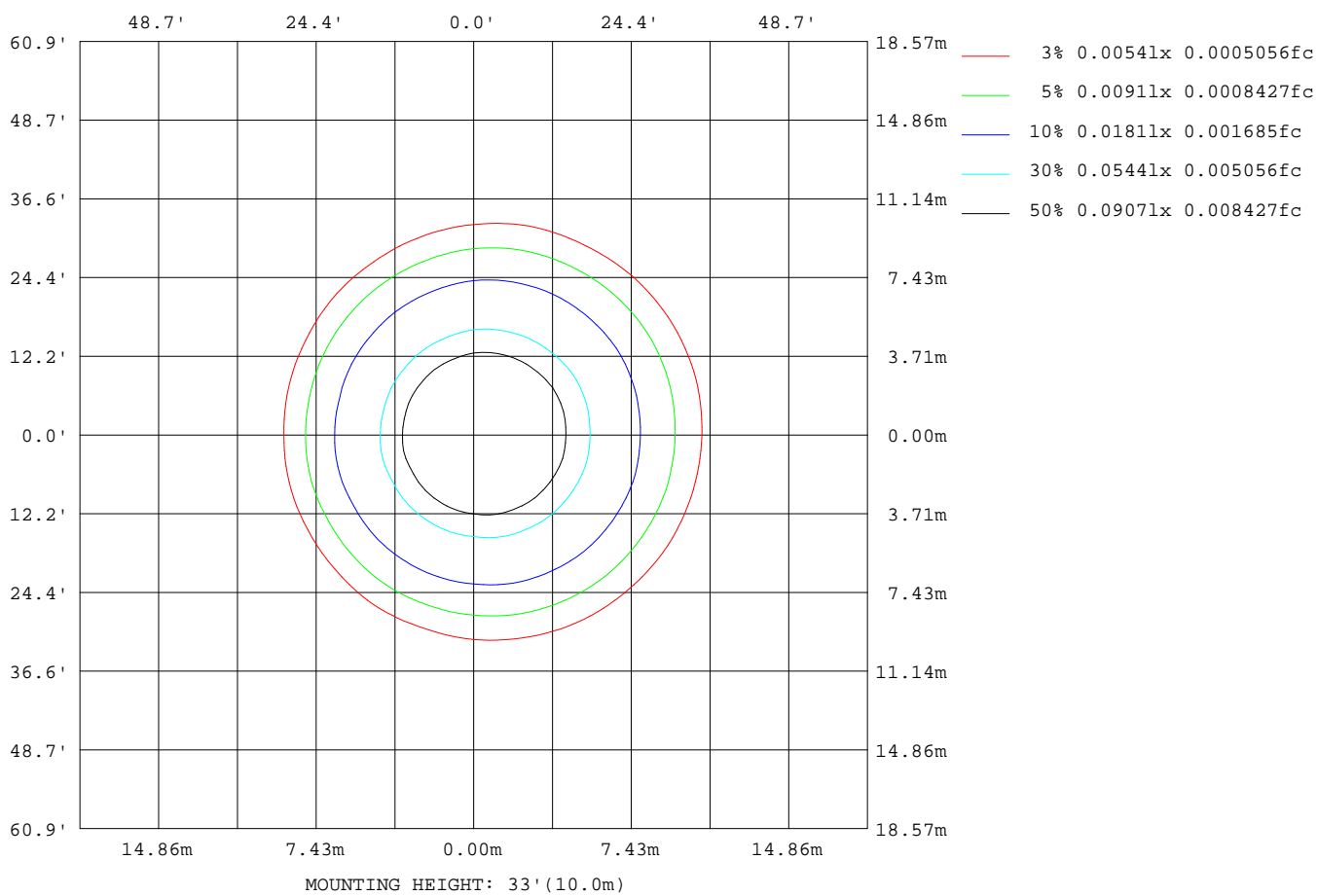


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ISOLUX DIAGRAM

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LED Avg.L Report

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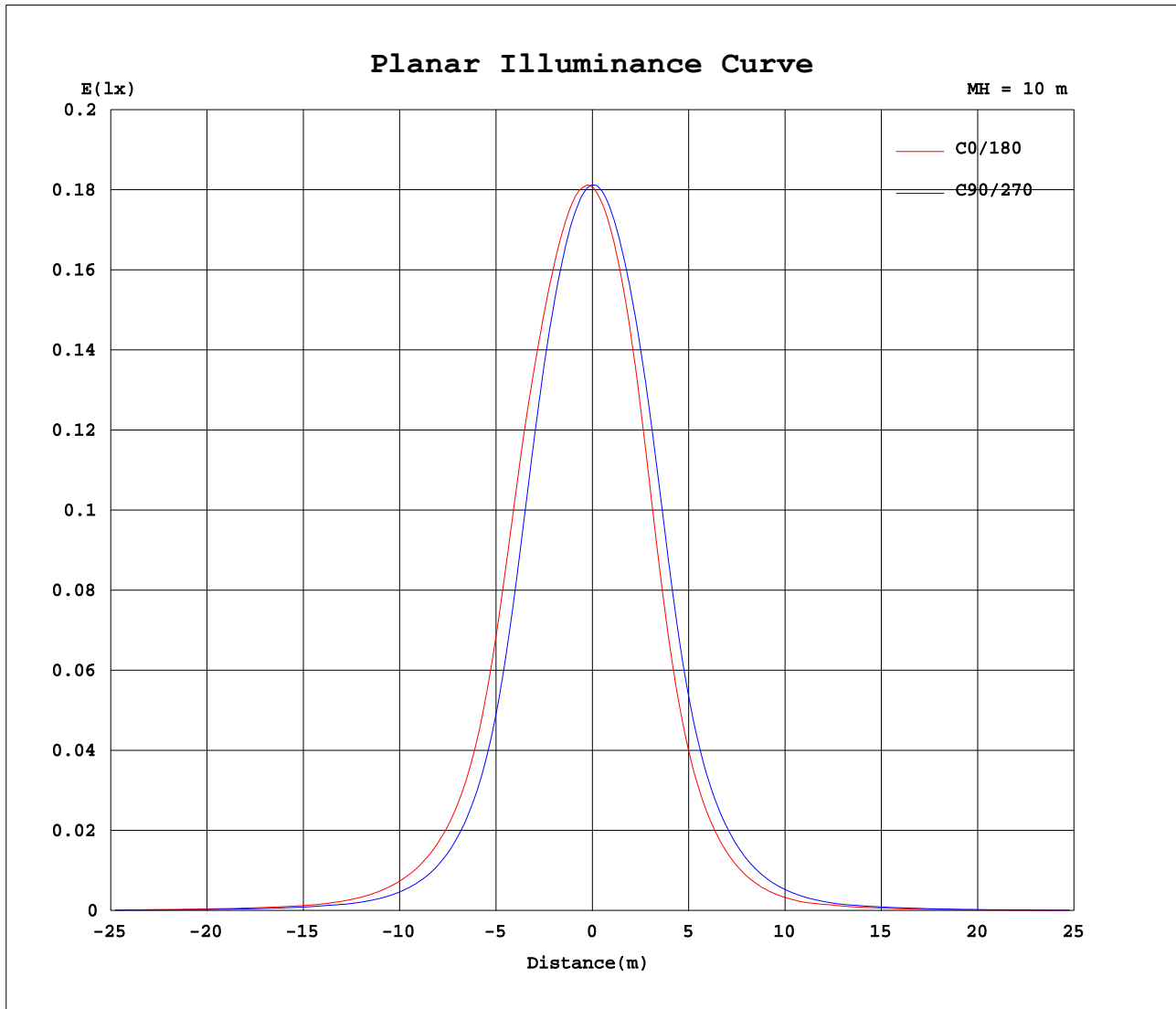
AvgL	cd/m2
L_0~180 (65) av	74
L_0~180 (75) av	30
L_0~180 (85) av	0
L_90~270 (65) av	68
L_90~270 (75) av	15
L_90~270 (85) av	0
L_45 (65) av	68
L_45 (75) av	22
L_45 (85) av	0

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:

```