

LED Downlight SENSE Series S68R1-11W-927-N



Light Output Ratio:	100.0%	
Luminaire Power:	13.36 W	
SHR Nominal:	0.00	Calculated using the TM5
SHR Maximum:	1.00	fine grid method.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2021-03-27

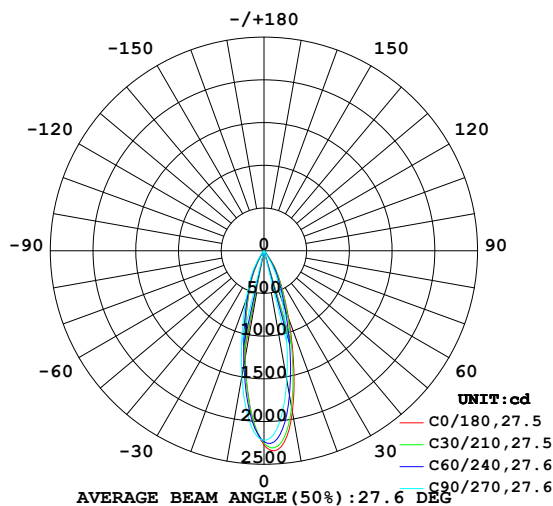
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

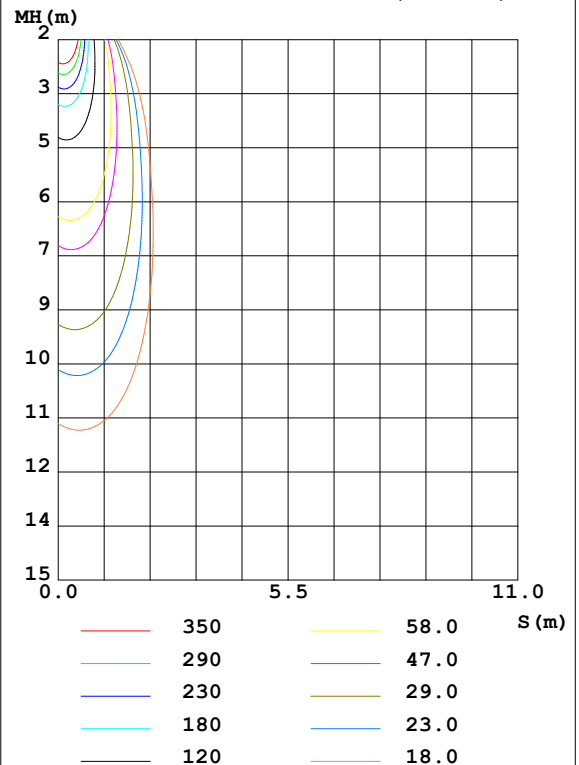
Test:U:221.0V I:0.0635A P:13.36W PF:0.9516 Freq:49.99Hz Lamp Flux:712.872x1 lm		
NAME: S68R1-11W-927-N	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: ϕ 78mm*H98mm	
MFR.: E-LITE LIGHTING Co.,Ltd.		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 53.36 lm/W			
MODEL	CITIZEN-2700K	I _{max} (cd)	2345	S/MH (C0/180)	0.38
NOMINAL POWER (W)	13.0	LOR (%)	100.0	S/MH (C90/270)	0.45
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	712.87	η UP, DN (C0-180)	0.0, 51.1
NOMINAL FLUX (lm)	712.872	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 48.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jason
 Test Date:2021-03-27

γ Range: 0 - 90DEG
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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	1917	1811	1539	1318	1276	1300	1492	1724	0- 10	177.5	177.5	24.9, 24.9
20	843.8	780.0	622.8	511.2	508.0	537.9	625.1	743.9	10- 20	284.2	461.8	64.8, 64.8
30	323.3	292.5	181.5	128.3	113.1	143.5	225.5	280.0	20- 30	181.5	643.3	90.2, 90.2
40	53.10	43.14	23.93	14.97	10.05	13.86	32.11	42.26	30- 40	59.72	703.0	98.6, 98.6
50	6.460	4.595	1.597	0.8867	0.7205	0.9842	2.590	3.816	40- 50	8.827	711.9	99.9, 99.9
60	0.5757	0.4798	0.1782	0.0731	0.0782	0.1307	0.1460	0.2621	50- 60	0.8505	712.7	100, 100
70	0.0837	0.0209	0.0366	0.0209	0.0261	0.0366	0.0261	0.0419	60- 70	0.0990	712.8	100, 100
80	0.0418	0.0209	0.0314	0.0209	0.0261	0.0314	0.0261	0.0314	70- 80	0.0326	712.8	100, 100
90	0.0314	0.0209	0.0261	0.0209	0.0261	0.0314	0.0261	0.0261	80- 90	0.0295	712.9	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): 709.67 lm

%lum = 99.6%

%lamp = 99.6%

Conical surface Flux(120deg): 712.71 lm

%lum = 100.0%

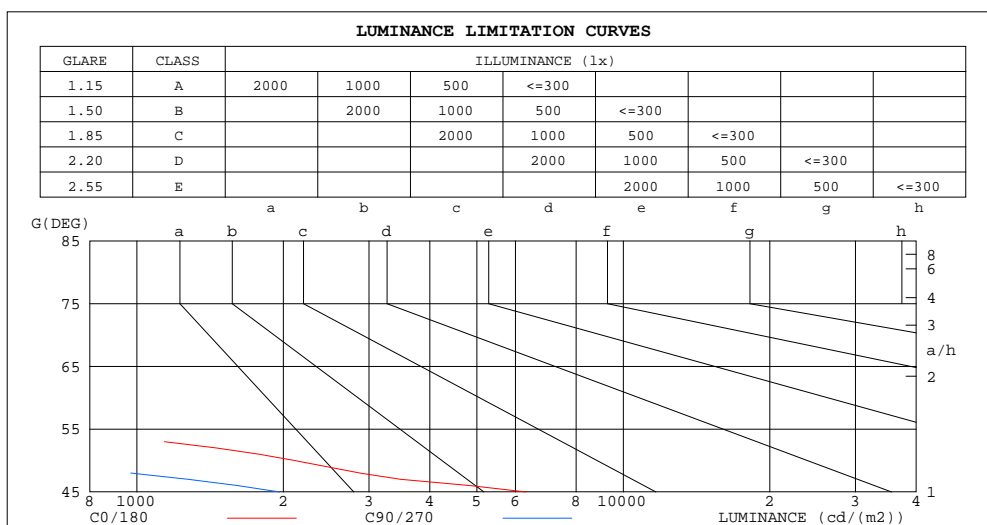
%lamp = 100.0%

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C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2021-03-27

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:

LUMINANCE LIMITATION CURVES

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SPEC.:2700K	DIM.: ϕ 78mm*H98mm	
MFR.: E-LITE LIGHTING Co.,Ltd.		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	100	63
80	50	38
75	38	25
70	51	22
65	88	39
60	241	75
55	488	231
50	2104	520
45	6305	1963

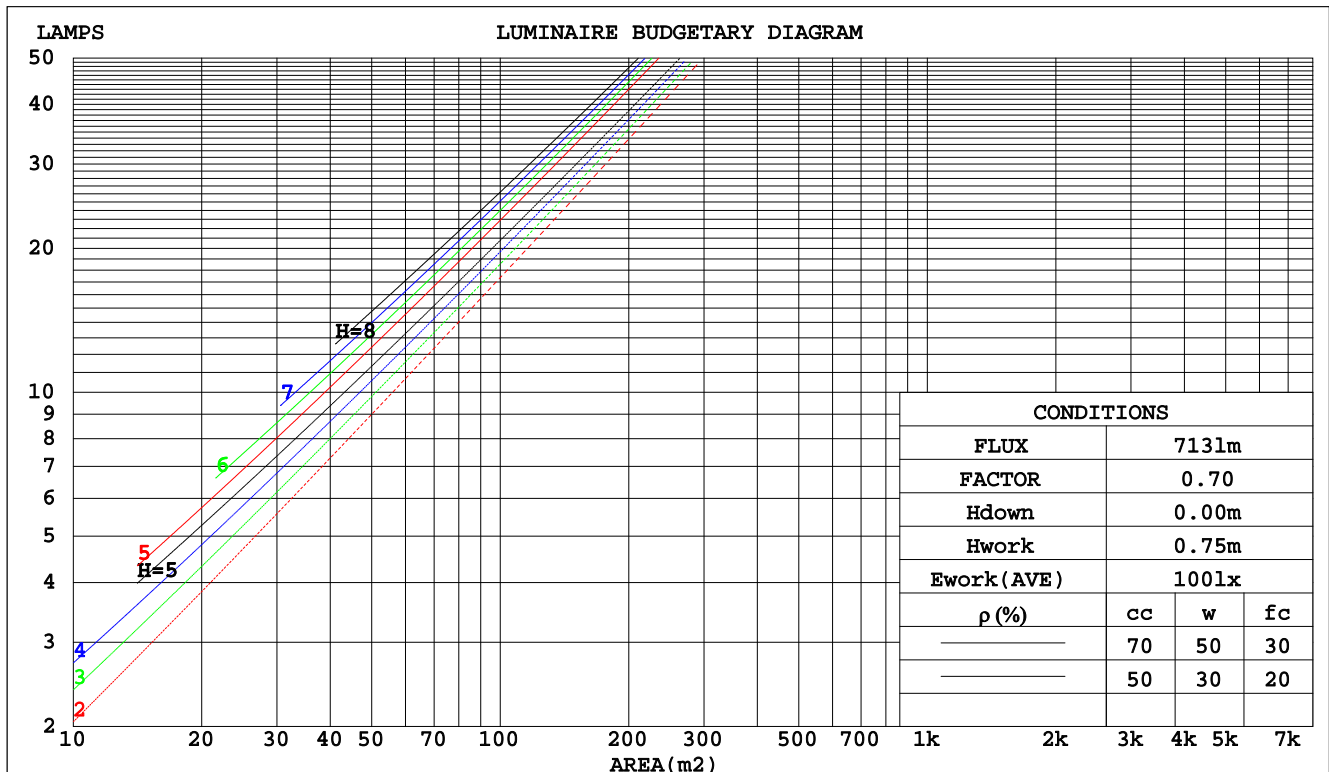
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	1.12	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	1.05	1.02	.99	1.01	.99	.97	.99	.97	.95	.96	.94	.93	.91
3.0	1.01	.97	.94	.90	.96	.93	.97	.94	.92	.95	.92	.90	.93	.91	.89	.87
4.0	.96	.92	.88	.95	.91	.88	.93	.90	.87	.91	.88	.86	.89	.87	.85	.84
5.0	.92	.87	.84	.91	.87	.83	.89	.86	.83	.88	.85	.82	.86	.84	.81	.80
6.0	.88	.83	.80	.87	.83	.80	.86	.82	.79	.85	.81	.79	.83	.80	.78	.77
7.0	.84	.80	.76	.84	.79	.76	.83	.79	.76	.81	.78	.75	.80	.77	.75	.74
8.0	.81	.76	.73	.81	.76	.73	.80	.76	.73	.79	.75	.72	.78	.74	.72	.71
9.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.70	.75	.72	.69	.68
10.0	.75	.71	.67	.75	.70	.67	.74	.70	.67	.73	.70	.67	.73	.69	.67	.66



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WEC AND CCEC

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SPEC.:2700K	DIM.: ϕ 78mm*H98mm	
MFR.: E-LITE LIGHTING Co.,Ltd.		

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	.149	.085	.027	.142	.081	.026	.130	.075	.024	.118	.068	.022	.108	.063	.020		
2.0	.140	.077	.024	.134	.074	.023	.124	.069	.021	.114	.064	.020	.106	.060	.019		
3.0	.132	.070	.021	.127	.068	.020	.118	.064	.019	.110	.060	.019	.103	.057	.018		
4.0	.124	.065	.019	.120	.063	.019	.113	.060	.018	.106	.057	.017	.100	.054	.017		
5.0	.118	.060	.017	.115	.059	.017	.108	.056	.017	.102	.054	.016	.097	.052	.016		
6.0	.112	.056	.016	.109	.055	.016	.104	.053	.015	.099	.051	.015	.094	.049	.015		
7.0	.107	.053	.015	.105	.052	.015	.100	.050	.015	.095	.049	.014	.091	.047	.014		
8.0	.103	.050	.014	.100	.049	.014	.096	.048	.014	.092	.047	.013	.088	.045	.013		
9.0	.098	.048	.013	.096	.047	.013	.093	.046	.013	.089	.045	.013	.086	.043	.013		
10.0	.094	.045	.013	.093	.045	.012	.089	.044	.012	.086	.043	.012	.083	.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	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.130	.114	.101	.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	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.116	.086	.064	.100	.075	.056	.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	.024	.017	.011	.008	.006	
8.0	.095	.062	.039	.081	.054	.034	.056	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.089	.056	.034	.077	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.085	.052	.030	.073	.045	.026	.051	.032	.019	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2021-03-27

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:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.0635A P:13.36W PF:0.9516 Freq:49.99Hz Lamp Flux:712.872x1 lm										
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SPEC.:2700K					DIM.: ϕ 78mm*H98mm					
MFR.: E-LITE LIGHTING Co.,Ltd.										
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	16.0	16.7	16.2	16.9	17.0	11.8	12.6	12.0	12.7	12.9
3H	15.8	16.5	16.1	16.7	16.9	11.7	12.4	11.9	12.6	12.8
4H	15.7	16.4	16.0	16.6	16.8	11.6	12.3	11.9	12.5	12.7
6H	15.7	16.3	15.9	16.5	16.7	11.5	12.1	11.8	12.4	12.6
8H	15.6	16.2	15.9	16.5	16.7	11.5	12.1	11.8	12.3	12.6
12H	15.6	16.1	15.9	16.4	16.7	11.4	12.0	11.7	12.3	12.5
4H 2H	15.7	16.4	16.0	16.6	16.8	11.6	12.3	11.9	12.5	12.7
3H	15.6	16.1	15.9	16.4	16.7	11.4	12.0	11.7	12.3	12.5
4H	15.5	16.0	15.8	16.3	16.6	11.3	11.9	11.7	12.1	12.4
6H	15.4	15.8	15.7	16.2	16.5	11.2	11.7	11.6	12.0	12.4
8H	15.3	15.7	15.7	16.1	16.5	11.2	11.6	11.6	12.0	12.3
12H	15.3	15.7	15.7	16.0	16.4	11.1	11.5	11.5	11.9	12.3
8H 4H	15.3	15.7	15.7	16.1	16.5	11.2	11.6	11.6	12.0	12.3
6H	15.2	15.6	15.6	16.0	16.4	11.1	11.4	11.5	11.8	12.2
8H	15.2	15.5	15.6	15.9	16.3	11.0	11.3	11.5	11.7	12.2
12H	15.1	15.4	15.6	15.8	16.3	11.0	11.2	11.4	11.7	12.1
12H 4H	15.3	15.7	15.7	16.0	16.4	11.1	11.5	11.5	11.9	12.3
6H	15.2	15.5	15.6	15.9	16.3	11.0	11.3	11.5	11.7	12.2
8H	15.1	15.4	15.6	15.8	16.3	11.0	11.2	11.4	11.7	12.1
Variations with the observer position at spacings:										
S = 1.0H	+ 4.2 / -21.9					+ 2.8 / -20.7				
1.5H	+ 6.6 / -19.0					+ 5.3 / -17.0				
2.0H	+ 7.9 / -16.4					+ 6.8 / -13.8				

CIE Pub.117, 712.9 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -1.2$)

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UTILIZATION FACTORS TABLE

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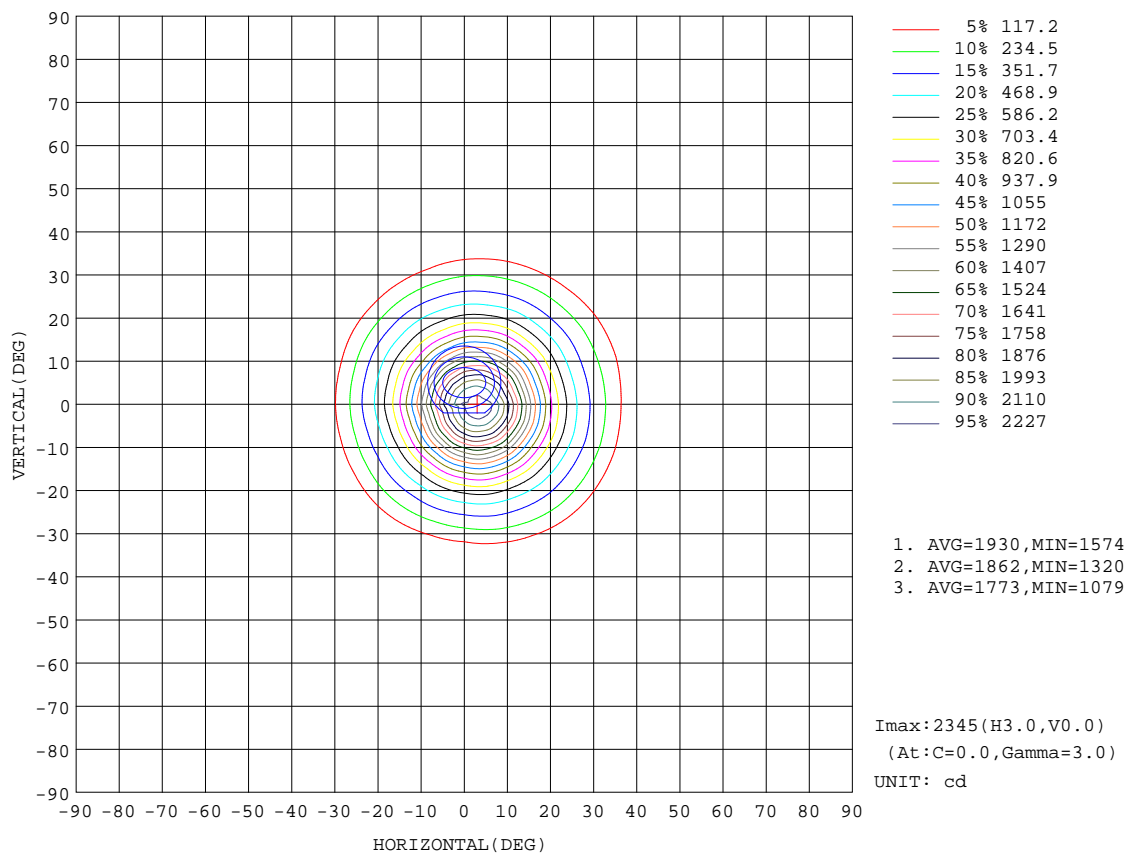
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	81	90	84	81	78
0.80	98	92	89	97	92	89	96	92	89	85
1.00	102	97	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	105	104	98
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	114	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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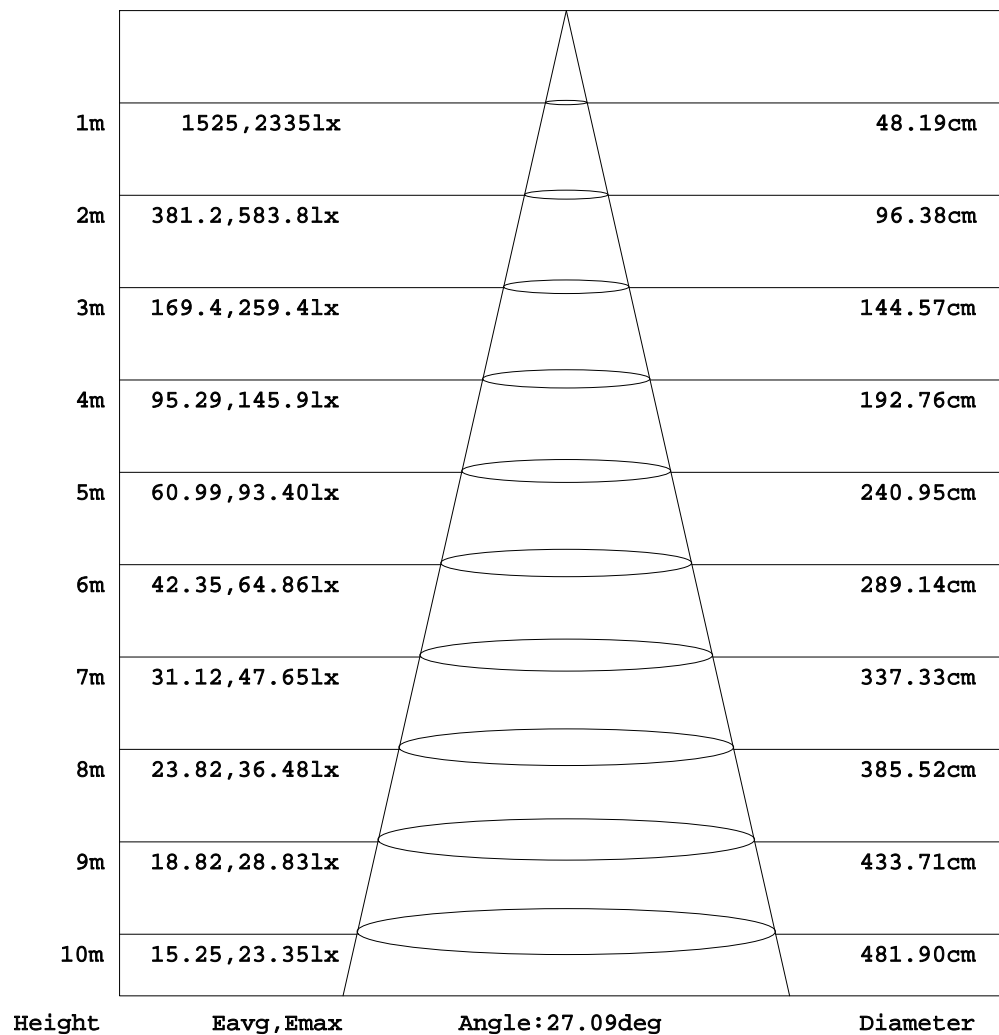
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AAI Figure

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Flux out:297.8 lm



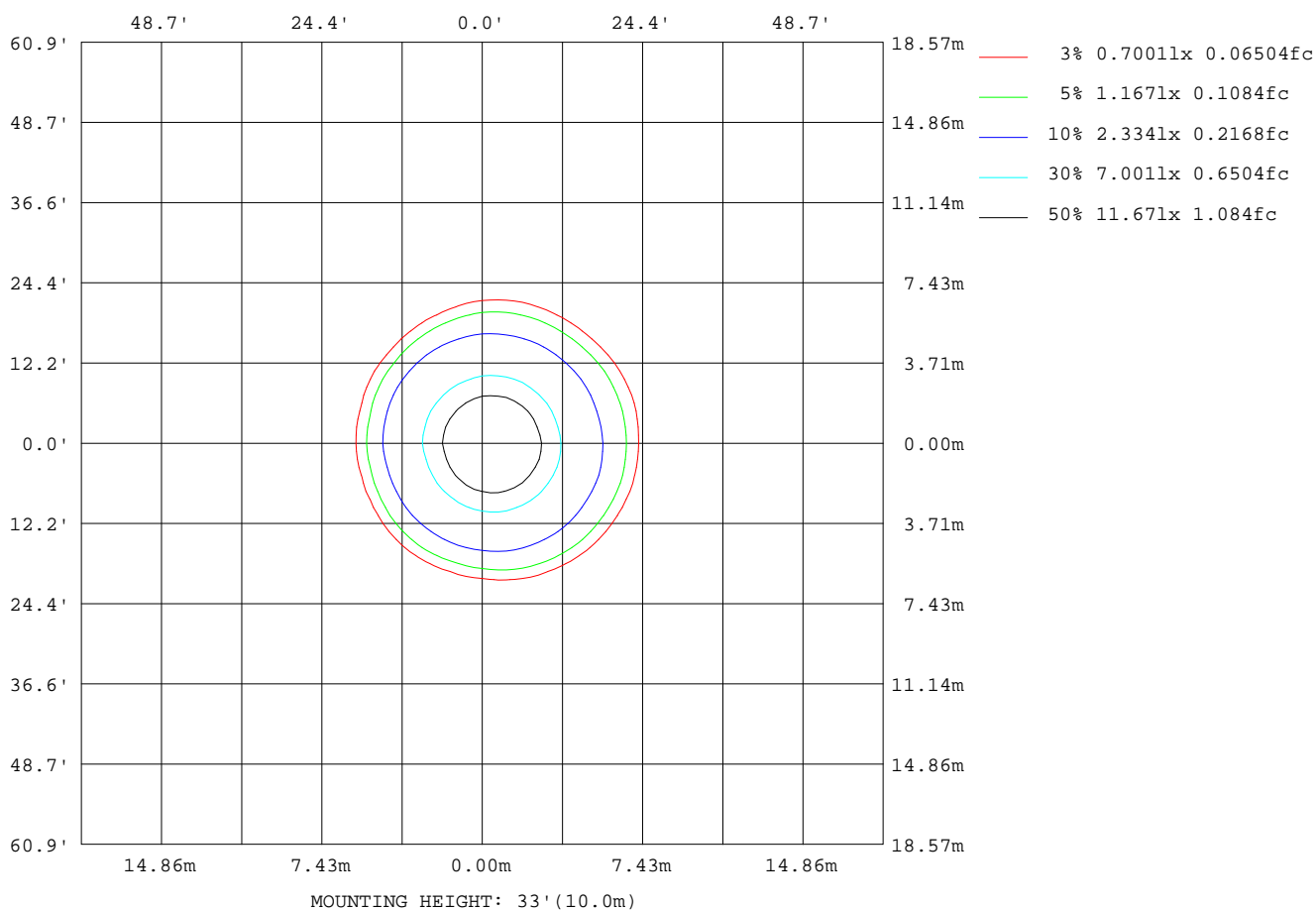
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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SPEC.:2700K	DIM.: ϕ 78mm*H98mm	
MFR.: E-LITE LIGHTING Co.,Ltd.		

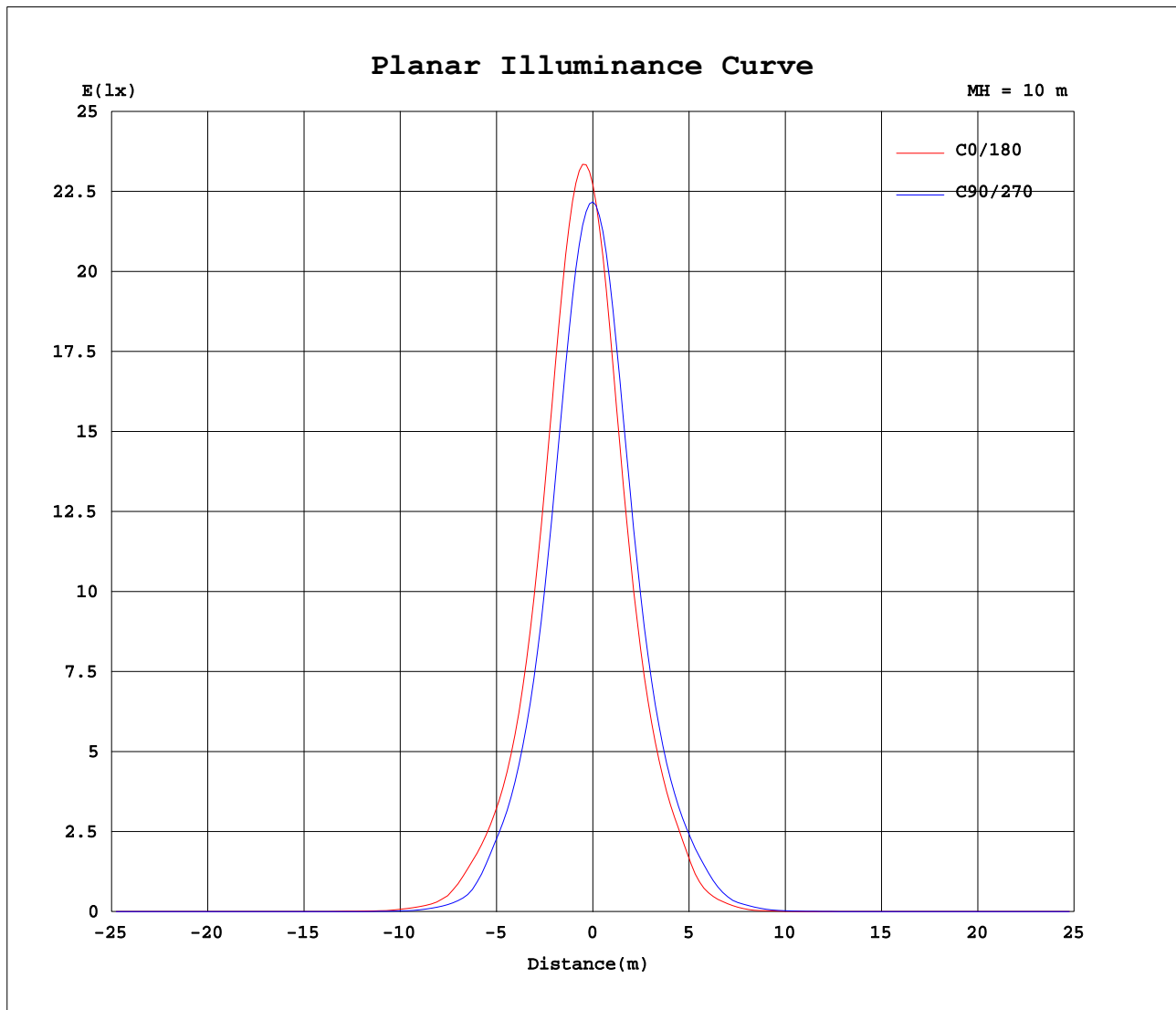
AvgL	cd/m2
L_0~180 (65) av	51
L_0~180 (75) av	30
L_0~180 (85) av	82
L_90~270 (65) av	39
L_90~270 (75) av	23
L_90~270 (85) av	63
L_45 (65) av	40
L_45 (75) av	22
L_45 (85) av	60

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2021-03-27

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: 2021-03-27

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:

```