

LED Downlight Sense Series S45S1-4W-927-50



Light Output Ratio:	100.0%	
Luminaire Power:	4.2 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.70	fine grid method.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2021-03-16

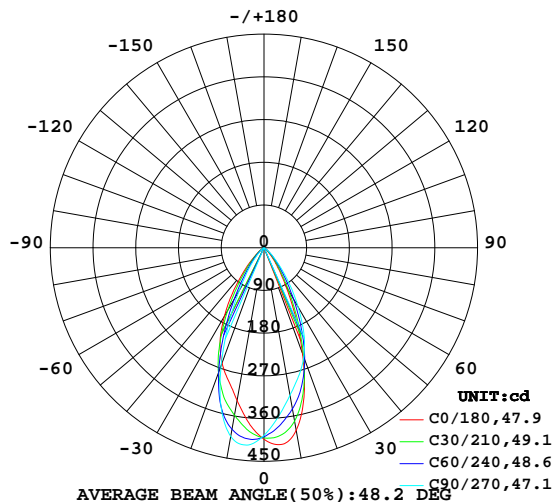
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

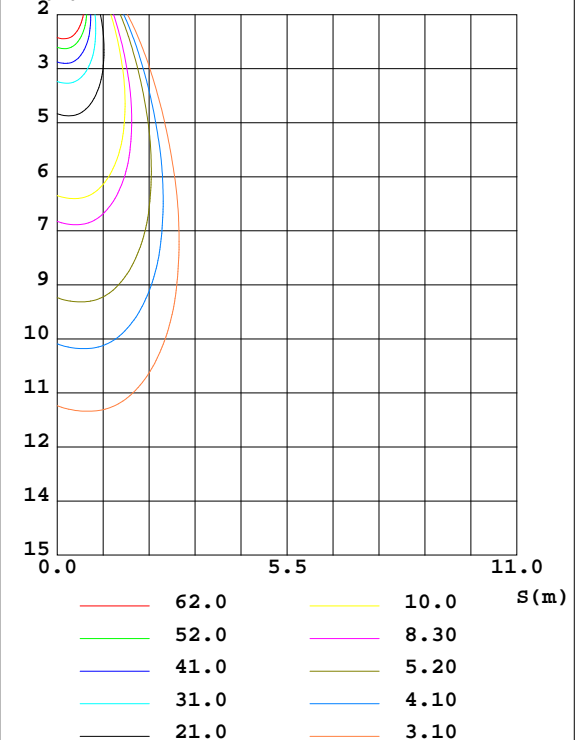
Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:283.215x1 lm		
NAME: S45S1-4W-927-50	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 67.43 lm/W			
MODEL	CREE-2700K	I _{max} (cd)	422.8	S/MH(C0/180)	0.78
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	0.73
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	283.21	η UP,DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	283.215	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.70

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
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Operators:Jason
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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	390.6	360.0	315.6	292.3	326.7	373.8	403.7	402.9	0- 10	36.05	36.05	12.7,12.7
20	237.6	249.9	245.1	228.4	258.5	282.7	264.1	237.8	10- 20	85.69	121.7	43,43
30	90.82	115.1	143.6	157.0	167.4	137.8	105.3	86.56	20- 30	84.26	206.0	72.7,72.7
40	28.01	41.02	55.32	71.30	68.08	48.03	33.48	28.41	30- 40	50.12	256.1	90.4,90.4
50	6.632	13.80	15.34	24.68	19.48	15.97	7.997	8.876	40- 50	20.83	276.9	97.8,97.8
60	0.3505	2.307	0.5572	5.788	1.056	3.387	0.3082	0.9335	50- 60	5.716	282.7	99.8,99.8
70	0.1517	0.1043	0.1516	0.1567	0.1201	0.1831	0.1043	0.1464	60- 70	0.4326	283.1	100,100
80	0.0626	0.0105	0.0682	0.0313	0.0312	0.0785	0.0156	0.0575	70- 80	0.0918	283.2	100,100
90	0.0105	0.0105	0.0157	0.0157	0.0209	0.0209	0.0157	0.0105	80- 90	0.0300	283.2	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): 269.24 lm

%lum = 95.1%

%lamp = 95.1%

Conical surface Flux(120deg): 282.66 lm

%lum = 99.8%

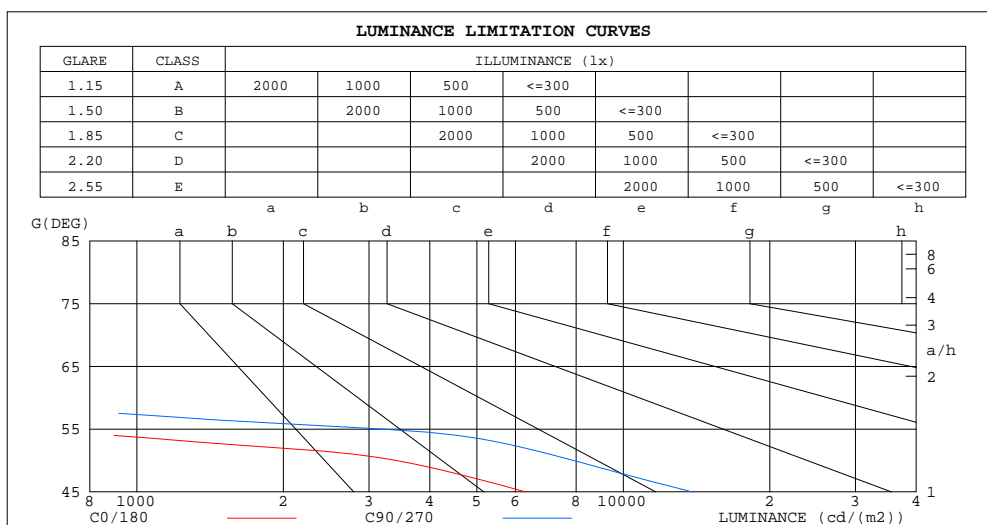
%lamp = 99.8%

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γ Range: 0 - 90DEG
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Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:283.215x1 lm		
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SPEC.:2700K	DIM.: L55mm*W55mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	119	159
80	119	130
75	114	134
70	147	146
65	172	209
60	232	368
55	656	3188
50	3411	7889
45	6301	13849

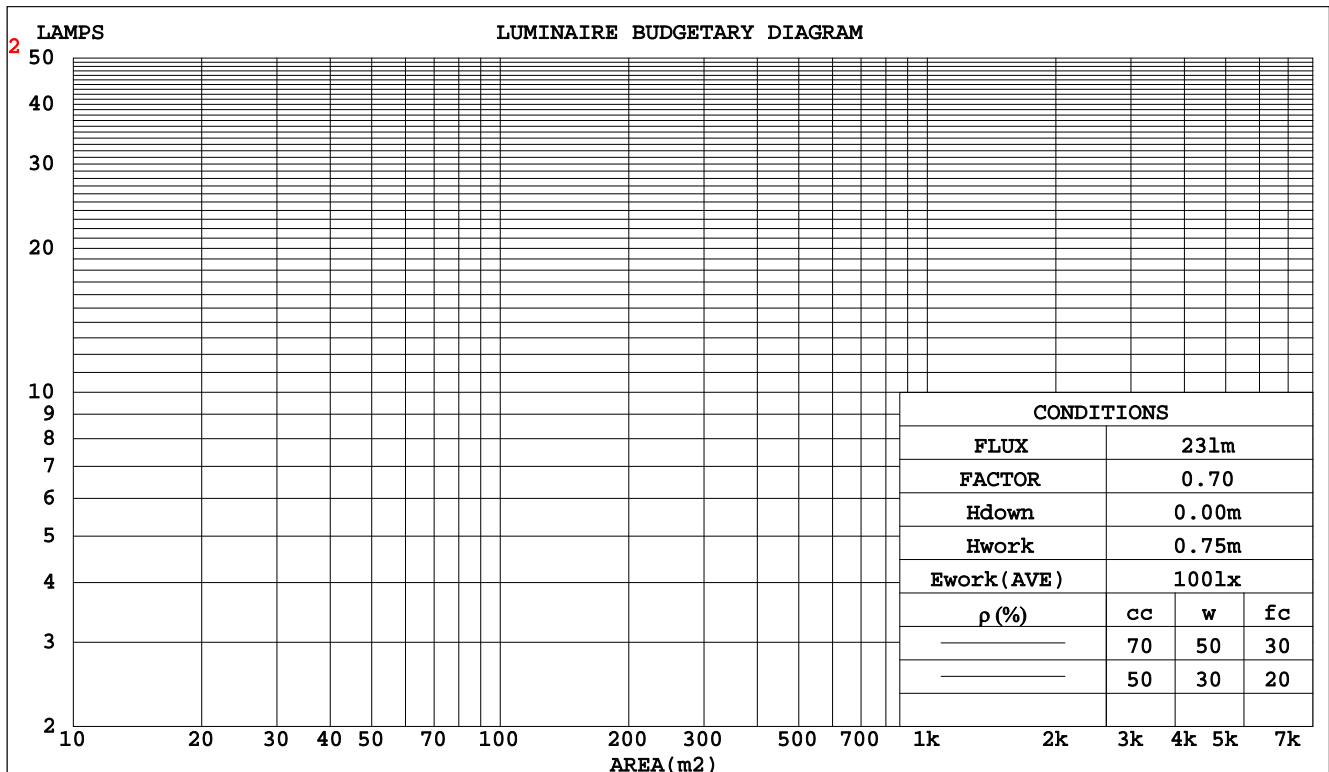
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	1.11	1.08	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.00	.98	.98	.97	.96	.94
2.0	1.03	.99	.96	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.81	.78	.83	.80	.78	.76
5.0	.85	.79	.75	.84	.78	.75	.82	.77	.74	.80	.76	.73	.79	.75	.73	.71
6.0	.80	.74	.70	.79	.73	.69	.77	.73	.69	.76	.72	.68	.75	.71	.68	.67
7.0	.75	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.63
8.0	.71	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.59
9.0	.67	.61	.58	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.57	.56
10.0	.64	.58	.54	.63	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.53



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WEC AND CCEC

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MFR.: NEKO LIGHTING AG		

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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.175	.100	.032	.168	.096	.030	.156	.089	.029	.144	.083	.027	.133	.077	.025		
2.0	.168	.092	.028	.162	.089	.028	.152	.084	.026	.142	.080	.025	.133	.075	.024		
3.0	.160	.085	.026	.155	.083	.025	.146	.079	.024	.138	.076	.023	.130	.072	.022		
4.0	.153	.079	.023	.148	.078	.023	.141	.075	.022	.133	.072	.022	.127	.069	.021		
5.0	.145	.074	.021	.142	.073	.021	.135	.070	.021	.129	.068	.020	.123	.066	.020		
6.0	.139	.070	.020	.136	.069	.020	.130	.066	.019	.124	.064	.019	.119	.063	.019		
7.0	.133	.066	.019	.130	.065	.018	.125	.063	.018	.120	.061	.018	.115	.060	.018		
8.0	.127	.062	.017	.124	.061	.017	.120	.060	.017	.115	.058	.017	.111	.057	.017		
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.056	.016	.107	.055	.016		
10.0	.116	.056	.016	.114	.055	.015	.111	.054	.015	.107	.053	.015	.104	.052	.015		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.060	.044	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.107	.075	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.100	.067	.043	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.105	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2021-03-16

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:12.00V I:0.3500A P:4.200W PF:1.000 Freq:0Hz Lamp Flux:283.215x1 lm										
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SPEC.:2700K					DIM.: L55mm*W55mm*H60mm					
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	18.3	19.2	18.5	19.4	19.6	20.9	21.9	21.2	22.0	22.2
3H	18.1	19.0	18.4	19.2	19.4	20.8	21.6	21.0	21.8	22.0
4H	18.0	18.8	18.3	19.1	19.3	20.7	21.5	20.9	21.7	21.9
6H	17.9	18.7	18.2	18.9	19.2	20.6	21.3	20.9	21.6	21.8
8H	17.9	18.6	18.2	18.9	19.1	20.5	21.3	20.8	21.5	21.8
12H	17.8	18.5	18.2	18.8	19.1	20.5	21.2	20.8	21.5	21.7
4H 2H	18.1	18.9	18.4	19.1	19.3	20.7	21.5	21.0	21.7	21.9
3H	17.9	18.6	18.2	18.9	19.1	20.5	21.2	20.8	21.5	21.8
4H	17.8	18.4	18.2	18.7	19.1	20.4	21.0	20.8	21.3	21.7
6H	17.7	18.3	18.1	18.6	19.0	20.3	20.9	20.7	21.2	21.6
8H	17.7	18.2	18.1	18.5	18.9	20.3	20.8	20.7	21.1	21.5
12H	17.6	18.1	18.0	18.5	18.8	20.2	20.7	20.6	21.1	21.4
8H 4H	17.7	18.2	18.1	18.5	18.9	20.3	20.8	20.7	21.1	21.5
6H	17.6	18.0	18.0	18.4	18.8	20.2	20.6	20.6	21.0	21.4
8H	17.5	17.9	18.0	18.3	18.7	20.1	20.5	20.6	20.9	21.3
12H	17.5	17.8	17.9	18.2	18.7	20.1	20.4	20.5	20.8	21.3
12H 4H	17.6	18.1	18.0	18.5	18.8	20.2	20.7	20.6	21.1	21.4
6H	17.5	17.9	18.0	18.3	18.7	20.1	20.5	20.6	20.9	21.3
8H	17.5	17.8	17.9	18.2	18.7	20.1	20.4	20.5	20.8	21.3
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / -17.4					+ 3.4 / -13.7				
1.5H	+ 3.7 / - 7.1					+ 4.7 / - 6.0				
2.0H	+ 5.2 / -16.0					+ 6.2 / -19.5				

CIE Pub.117, 283.2 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -4.4$)

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
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Remarks:

UTILIZATION FACTORS TABLE

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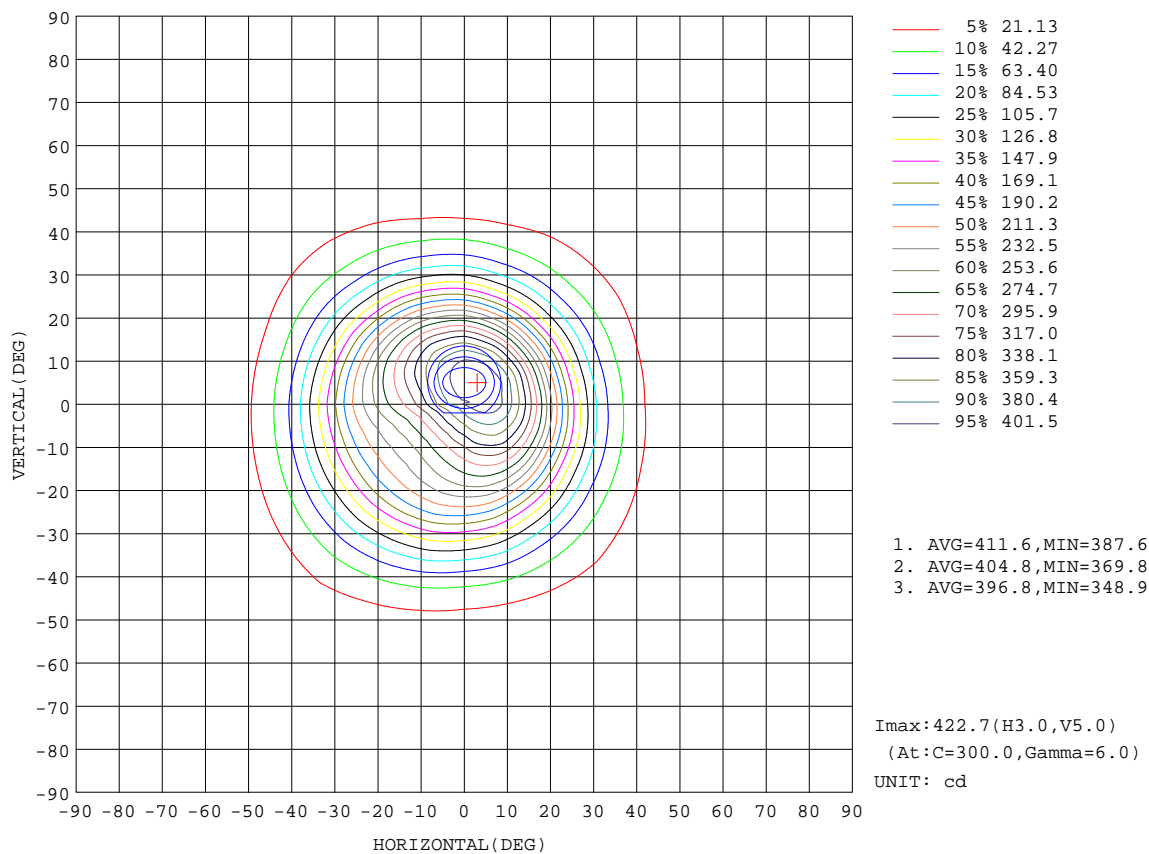
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	79	75	85	79	75	84	78	74	71
0.80	93	87	83	93	87	83	91	86	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	94	101	97	93	99	95	92	88
1.50	105	100	97	104	100	97	102	98	95	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	108	112	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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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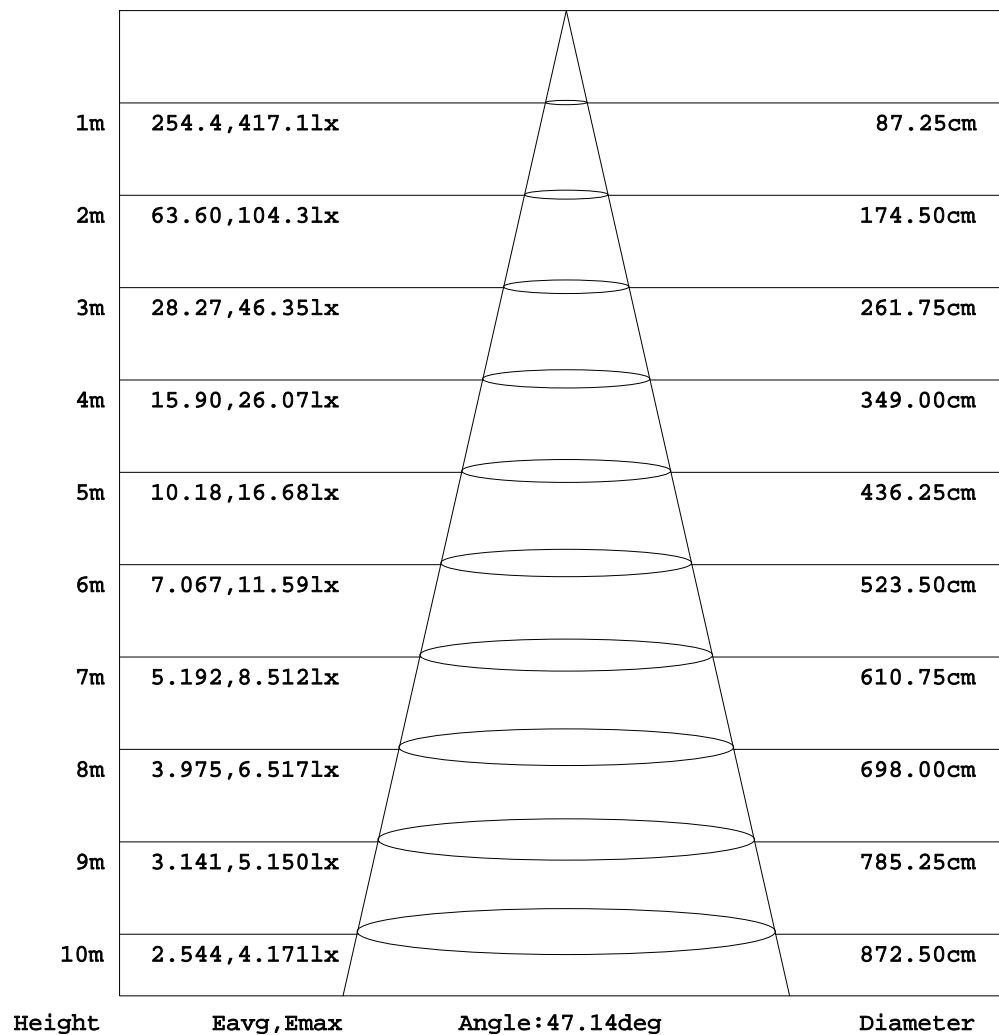
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AAI Figure

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Flux out:158.4 lm



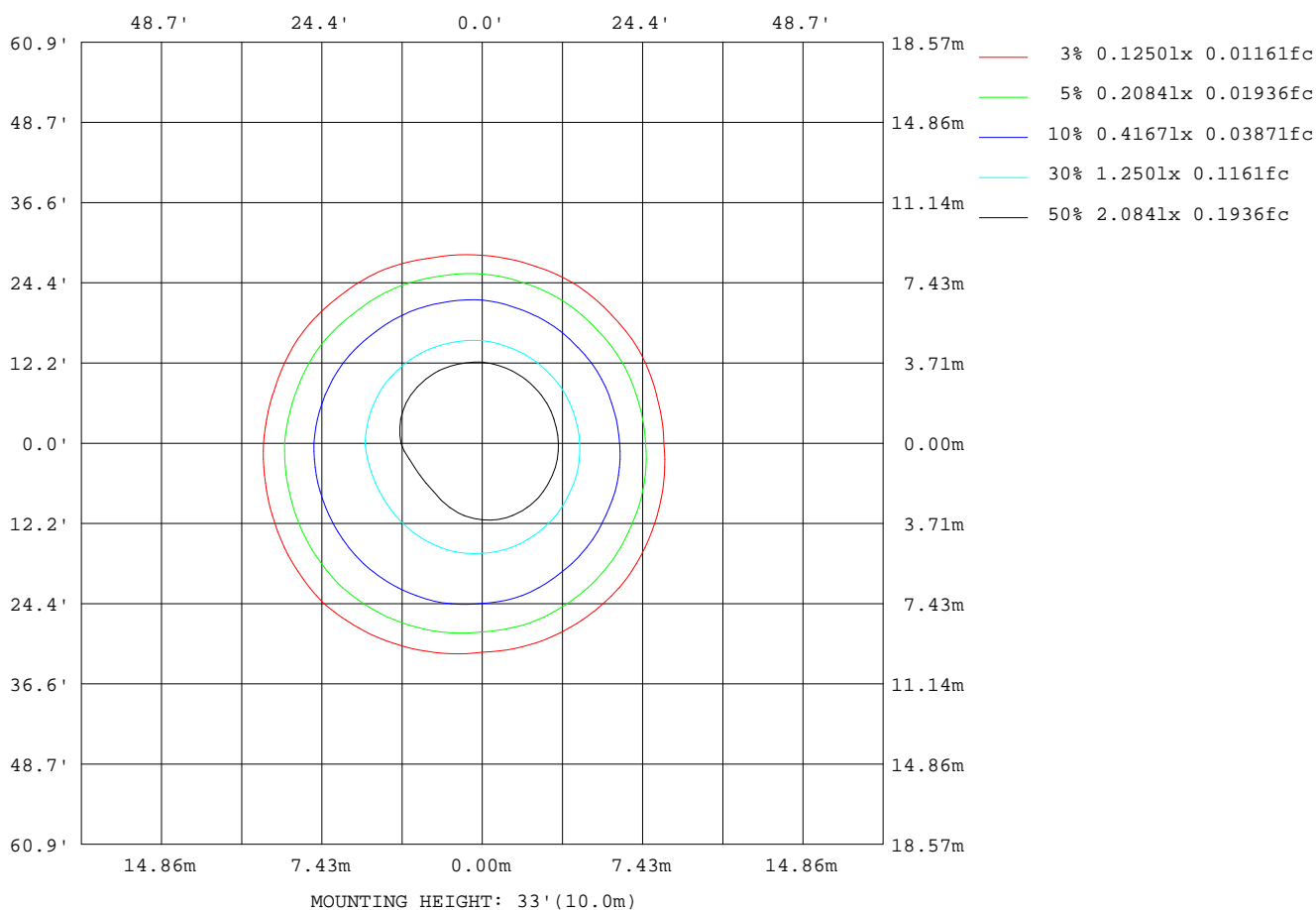
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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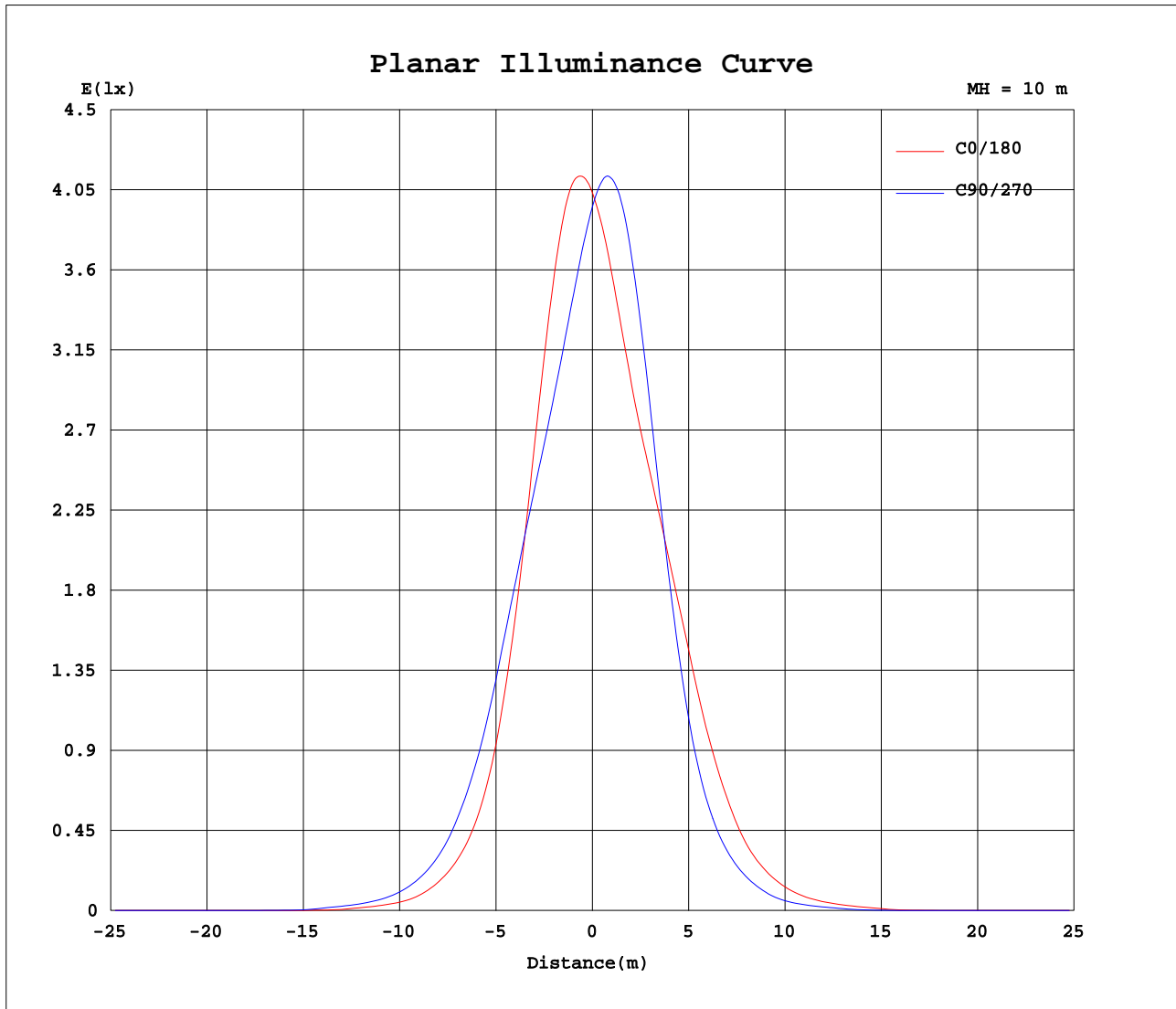
AvgL	cd/m2
L_0~180(65)av	180
L_0~180(75)av	104
L_0~180(85)av	99
L_90~270(65)av	176
L_90~270(75)av	110
L_90~270(85)av	99
L_45(65)av	364
L_45(75)av	110
L_45(85)av	94

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2021-03-16

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: 2021-03-16

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:

```