

S45R1-4W-927-50



Light Output Ratio:	100.0%	
Luminaire Power:	6.013 W	
SHR Nominal:	0.75	Calculated using the TM5
SHR Maximum:	0.80	fine grid method.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Myles  
Test Date: 2019-03-21

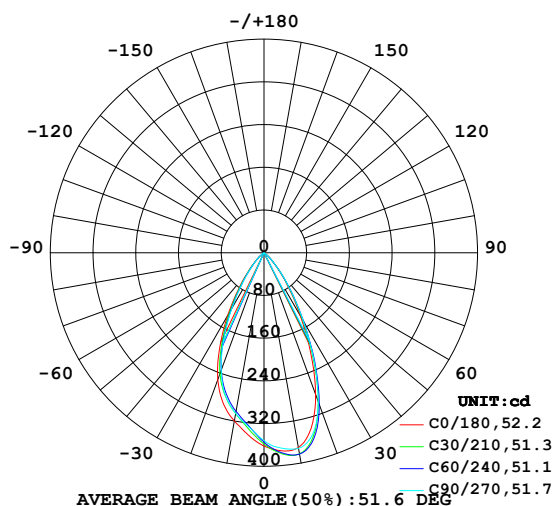
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 56%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

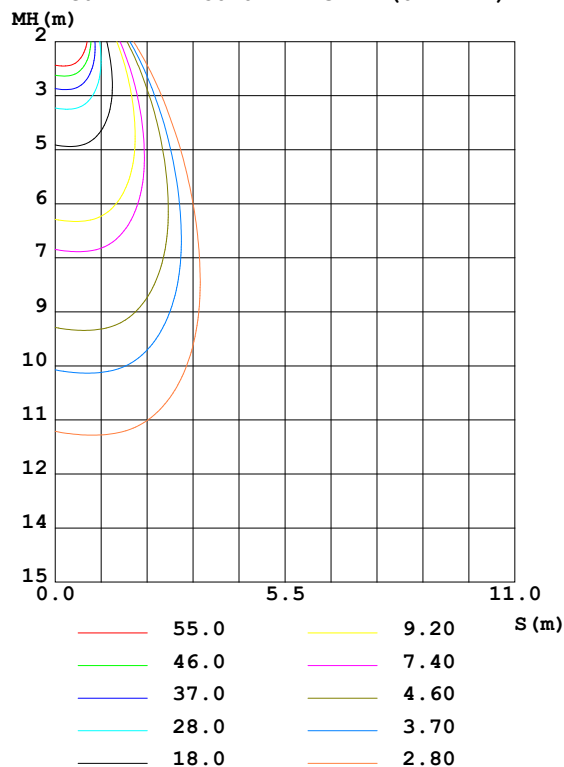
Test:U:220.9V I:0.0327A P:6.013W PF:0.8319 Freq:49.90Hz Lamp Flux:284.635x1 lm		
NAME: S45R1-4W-927-50	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\varnothing$ 55mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 47.34 lm/W			
MODEL	CREE-2700K	I <sub>max</sub> (cd)	384.6	S/MH (C0/180)	0.81
NOMINAL POWER (W)	6	LOR (%)	100.0	S/MH (C90/270)	0.79
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	284.64	$\eta$ UP,DN (C0-180)	0.0,53.4
NOMINAL FLUX (lm)	284.635	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,46.6
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.80

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
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Temperature:25.3DEG  
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Test Date:2019-03-21

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### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	370.5	384.4	371.8	338.5	320.0	301.6	305.5	327.5	0- 10	33.01	33.01	11.6,11.6
20	282.9	304.5	297.0	275.0	253.2	235.6	234.5	249.8	10- 20	86.71	119.7	42.1,42.1
30	136.5	149.3	147.3	145.2	137.0	124.7	120.7	123.6	20- 30	90.99	210.7	74,74
40	45.96	49.23	48.65	49.27	46.97	42.22	41.32	42.55	30- 40	52.28	263.0	92.4,92.4
50	11.19	11.35	11.21	11.58	11.10	10.16	10.48	10.81	40- 50	18.65	281.6	98.9,98.9
60	0.4748	0.4239	0.4048	0.3693	0.3823	0.4091	0.3976	0.4354	50- 60	2.604	284.2	99.9,99.9
70	0.1991	0.1660	0.1620	0.1354	0.1420	0.1663	0.1464	0.1838	60- 70	0.2597	284.5	100,100
80	0.0832	0.0568	0.0635	0.0393	0.0371	0.0635	0.0458	0.0744	70- 80	0.1102	284.6	100,100
90	0.0153	0.0109	0.0131	0.0109	0.0066	0.0066	0.0044	0.0066	80- 90	0.0310	284.6	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): 275.05 lm

%lum = 96.6%

%lamp = 96.6%

Conical surface Flux(120deg): 284.23 lm

%lum = 99.9%

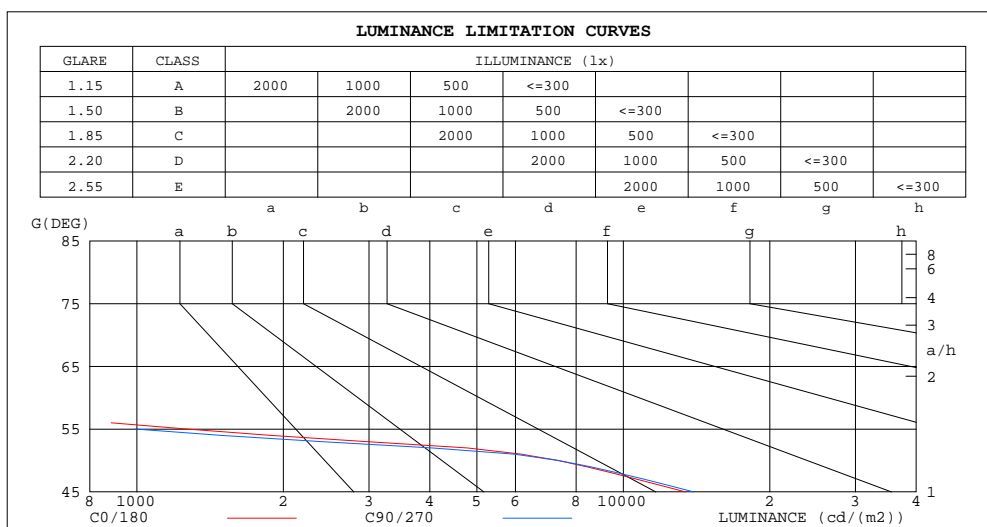
%lamp = 99.9%

C Range: 0 - 360DEG  
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Test Date:2019-03-21

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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:220.9V I:0.0327A P:6.013W PF:0.8319 Freq:49.90Hz Lamp Flux:284.635x1 lm		
NAME: S45R1-4W-927-50	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi$ 55mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	222	169
80	202	154
75	217	171
70	245	199
65	297	244
60	400	341
55	1268	993
50	7328	7343
45	13431	13959

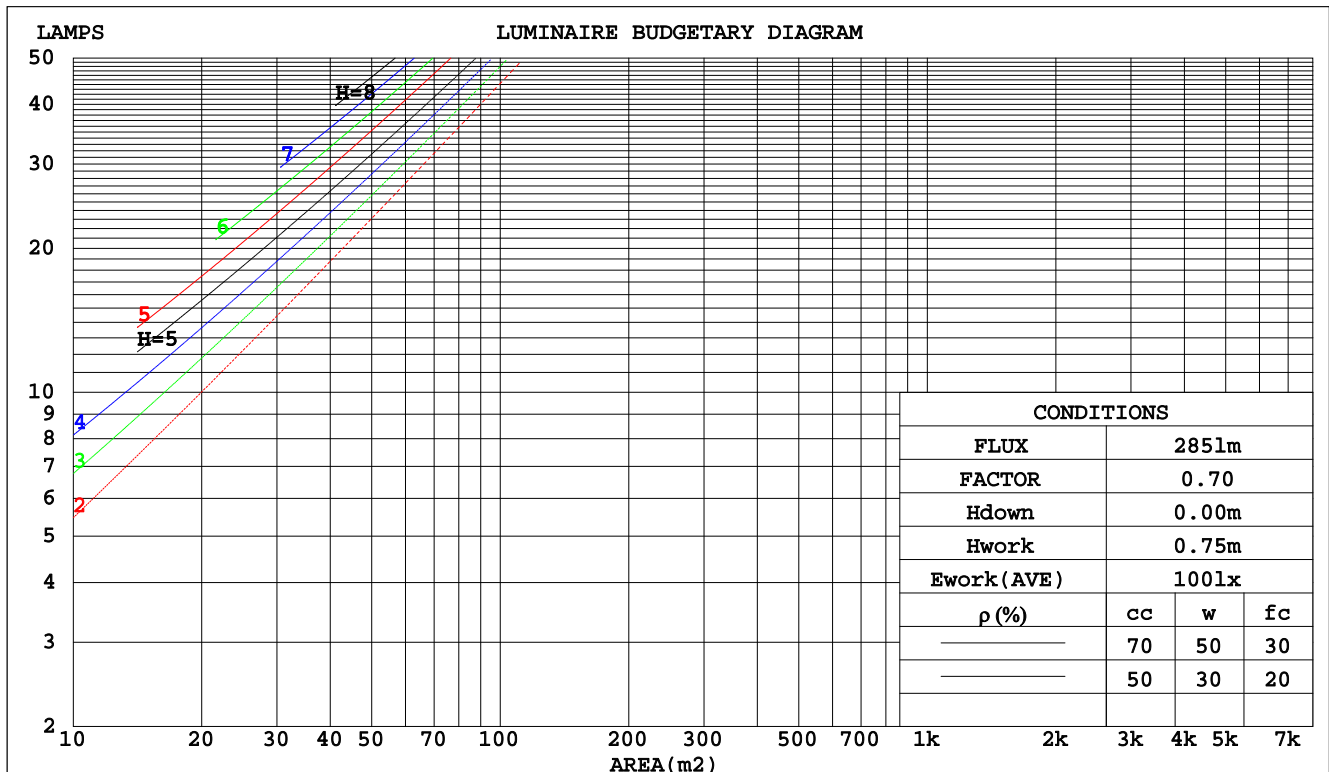
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:220.9V I:0.0327A P:6.013W PF:0.8319 Freq:49.90Hz Lamp Flux:284.635x1 lm		
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SPEC.:2700K	DIM.: $\phi$ 55mm*H60mm	
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															



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## WEC AND CCEC

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$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.174	.099	.031	.167	.095	.030	.155	.089	.028	.143	.082	.026	.132	.077	.025		
2.0	.167	.091	.028	.161	.089	.027	.150	.084	.026	.141	.079	.025	.132	.074	.023		
3.0	.159	.085	.025	.154	.082	.025	.145	.079	.024	.137	.075	.023	.129	.071	.022		
4.0	.151	.079	.023	.147	.077	.023	.139	.074	.022	.132	.071	.021	.126	.068	.021		
5.0	.144	.074	.021	.141	.072	.021	.134	.070	.021	.128	.067	.020	.122	.065	.020		
6.0	.138	.069	.020	.135	.068	.020	.129	.066	.019	.123	.064	.019	.118	.062	.018		
7.0	.132	.065	.019	.129	.064	.018	.124	.063	.018	.119	.061	.018	.114	.059	.017		
8.0	.126	.062	.017	.124	.061	.017	.119	.060	.017	.115	.058	.017	.111	.057	.017		
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.056	.016	.107	.054	.016		
10.0	.116	.056	.015	.114	.055	.015	.111	.054	.015	.107	.053	.015	.104	.052	.015		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	.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	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.107	.075	.052	.073	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.065	.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	.099	.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	

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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.0327A P:6.013W PF:0.8319 Freq:49.90Hz Lamp Flux:284.635x1 lm										
NAME: S45R1-4W-927-50					TYPE:Downlight			SERIAL No.:		
SPEC.:2700K					DIM.: $\phi$ 55mm*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	21.3	22.2	21.5	22.4	22.5	21.6	22.5	21.8	22.7	22.8
3H	21.1	22.0	21.4	22.2	22.4	21.4	22.3	21.7	22.5	22.7
4H	21.0	21.8	21.3	22.1	22.3	21.3	22.1	21.6	22.3	22.6
6H	20.9	21.7	21.2	21.9	22.2	21.2	22.0	21.5	22.2	22.5
8H	20.9	21.6	21.2	21.9	22.1	21.2	21.9	21.5	22.2	22.4
12H	20.8	21.5	21.2	21.8	22.1	21.1	21.8	21.5	22.1	22.4
4H 2H	21.0	21.8	21.3	22.1	22.3	21.3	22.1	21.6	22.3	22.6
3H	20.8	21.5	21.2	21.8	22.1	21.1	21.8	21.5	22.1	22.4
4H	20.8	21.4	21.1	21.7	22.0	21.0	21.7	21.4	22.0	22.3
6H	20.7	21.2	21.0	21.5	21.9	20.9	21.5	21.3	21.8	22.2
8H	20.6	21.1	21.0	21.5	21.8	20.9	21.4	21.3	21.8	22.1
12H	20.6	21.0	21.0	21.4	21.8	20.8	21.3	21.3	21.7	22.1
8H 4H	20.6	21.1	21.0	21.5	21.8	20.9	21.4	21.3	21.8	22.1
6H	20.5	20.9	20.9	21.3	21.7	20.8	21.2	21.2	21.6	22.0
8H	20.5	20.8	20.9	21.2	21.7	20.7	21.1	21.2	21.5	22.0
12H	20.4	20.7	20.9	21.2	21.6	20.7	21.0	21.2	21.4	21.9
12H 4H	20.6	21.0	21.0	21.4	21.8	20.8	21.3	21.3	21.7	22.1
6H	20.5	20.8	20.9	21.2	21.7	20.7	21.1	21.2	21.5	22.0
8H	20.4	20.7	20.9	21.2	21.6	20.7	21.0	21.2	21.4	21.9
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / -19.1					+ 3.1 / -20.4				
1.5H	+ 4.7 / -15.6					+ 4.9 / -16.7				
2.0H	+ 6.5 / -15.6					+ 6.7 / -16.4				

CIE Pub.117, 284.6 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -4.4$ )

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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.0327A P:6.013W PF:0.8319 Freq:49.90Hz Lamp Flux:284.635x1 lm		
NAME: S45R1-4W-927-50	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\varnothing 55\text{mm} \times H60\text{mm}$	
MFR.: NEKO LIGHTING AG		

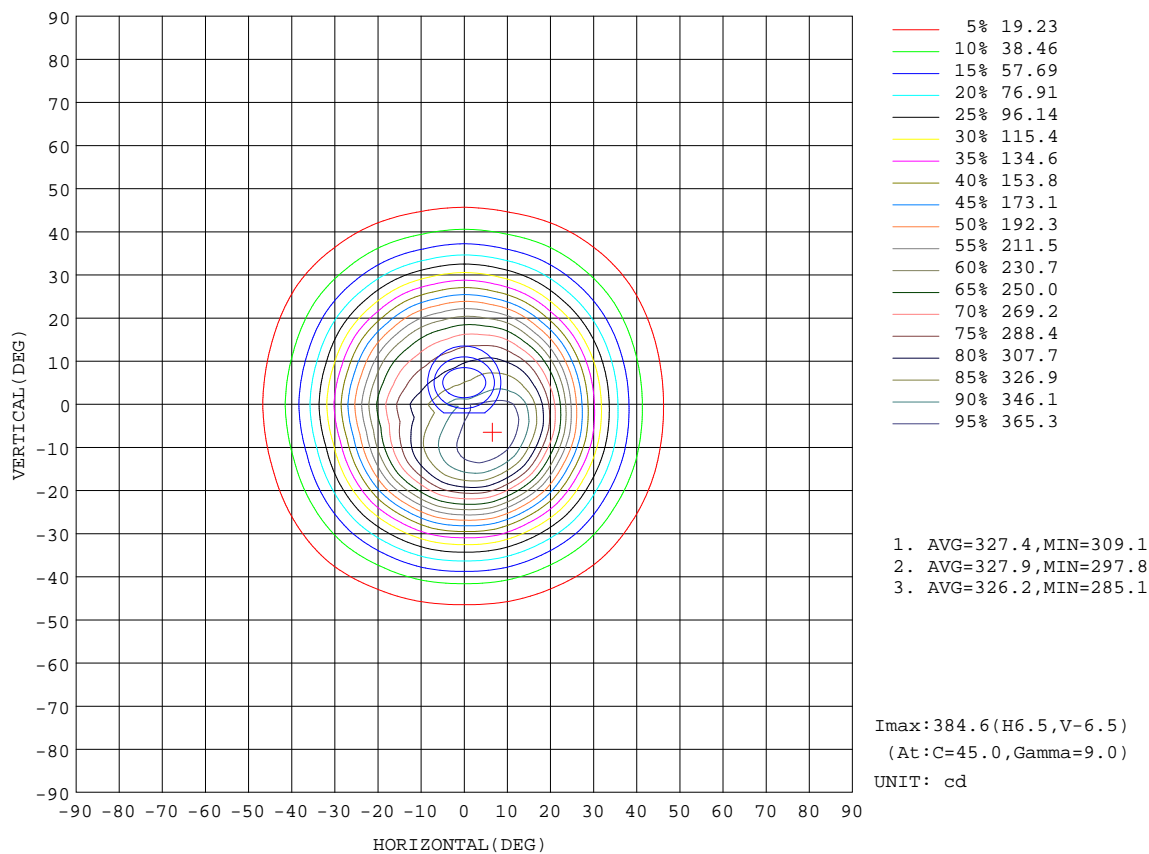
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	76	86	80	76	85	80	76	73
0.80	94	88	85	94	88	85	93	88	84	80
1.00	99	93	90	98	93	90	97	93	89	85
1.25	103	98	95	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	109	104	101	107	103	101	105	101	99	94
2.50	110	106	104	109	105	103	106	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	107	106	99
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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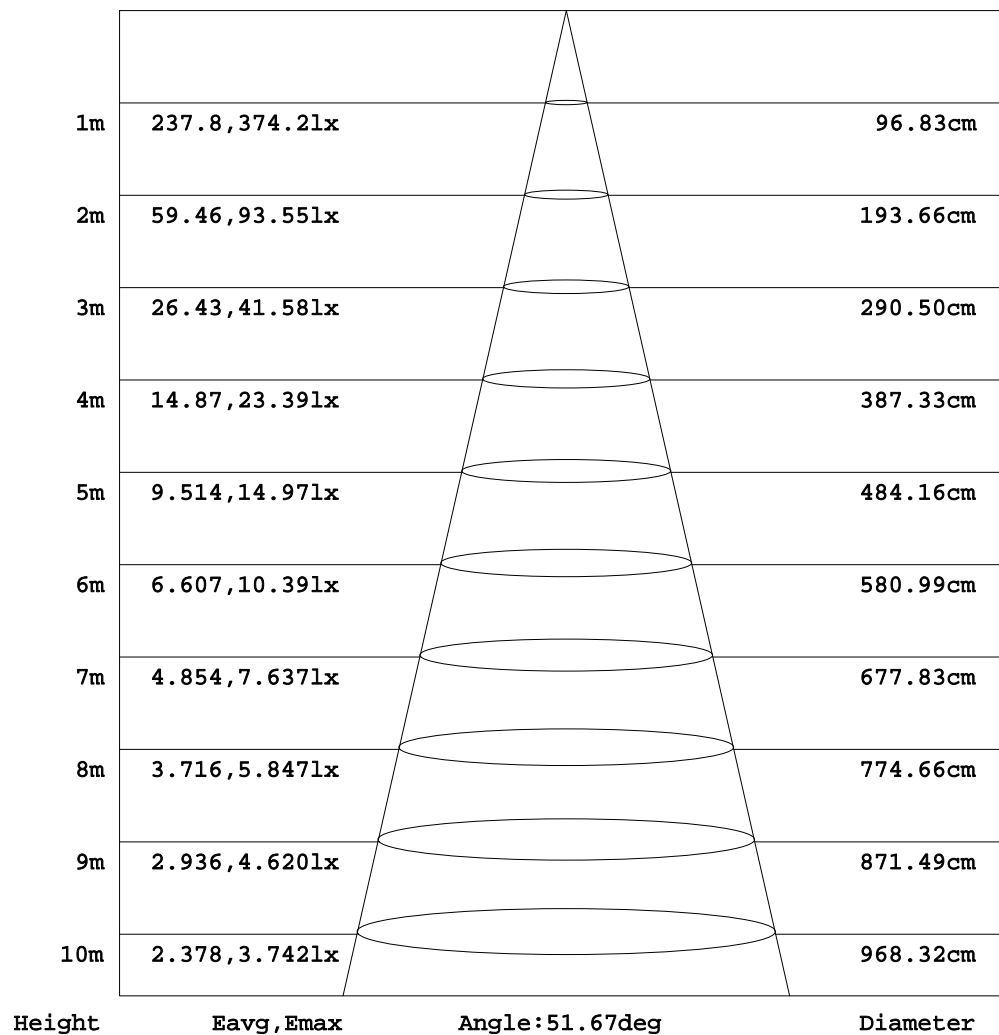
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**AAI Figure**

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Flux out:177.7 lm



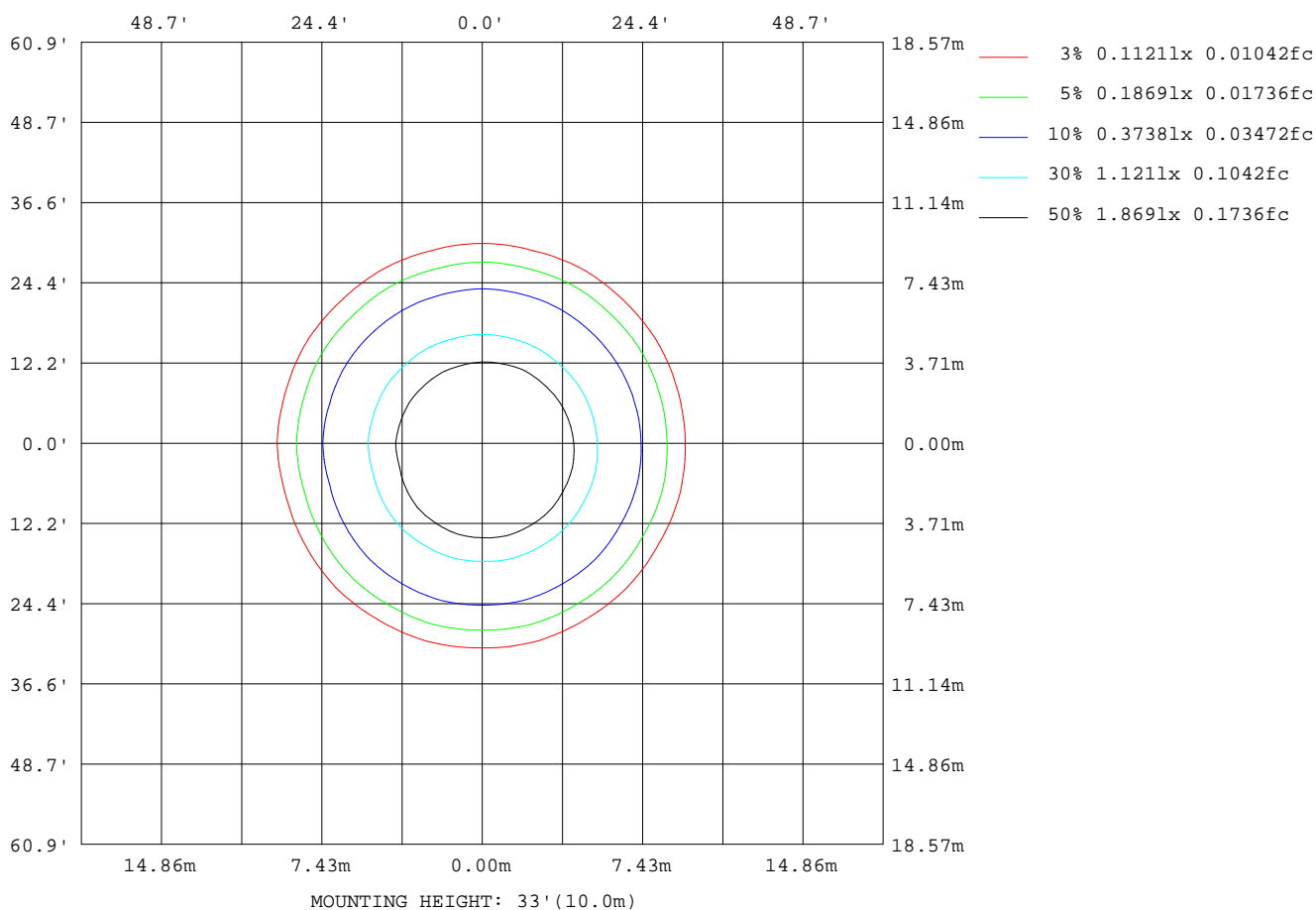
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

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SPEC.:2700K	DIM.: $\phi$ 55mm*H60mm	
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### LED Avg.L Report

Test:U:220.9V I:0.0327A P:6.013W PF:0.8319 Freq:49.90Hz Lamp Flux:284.635x1 lm		
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SPEC.:2700K	DIM.: $\phi$ 55mm*H60mm	
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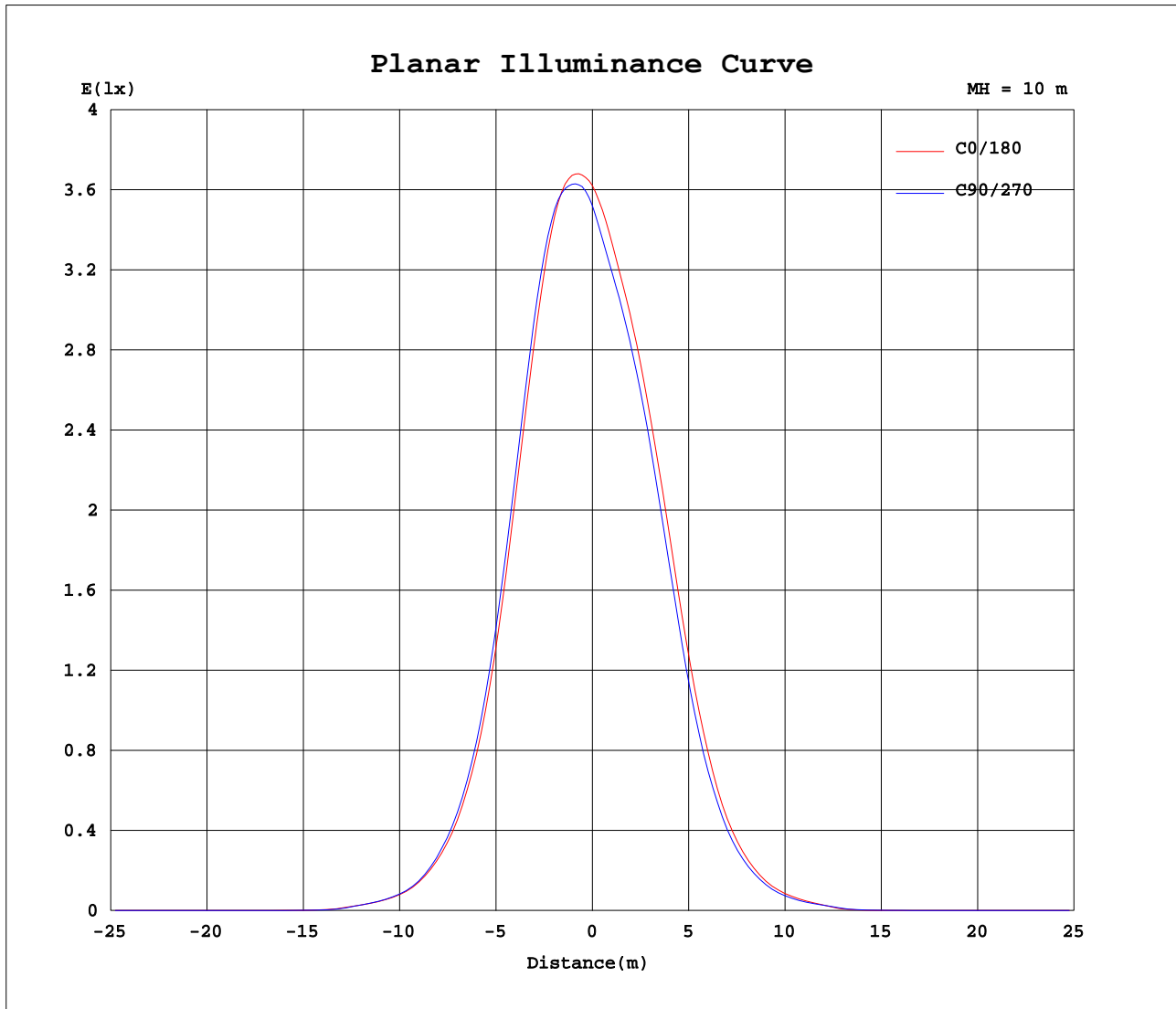
AvgL	cd/m2
L_0~180 (65) av	255
L_0~180 (75) av	174
L_0~180 (85) av	132
L_90~270 (65) av	240
L_90~270 (75) av	164
L_90~270 (85) av	111
L_45 (65) av	244
L_45 (75) av	163
L_45 (85) av	122

Standard: GB/T 29293-2012

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### Planar Illuminance Curve



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γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

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