

S45R1-4W-927-24



Light Output Ratio:	100.0%	
Luminaire Power:	5.982 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: Myles
Test Date: 2019-03-21

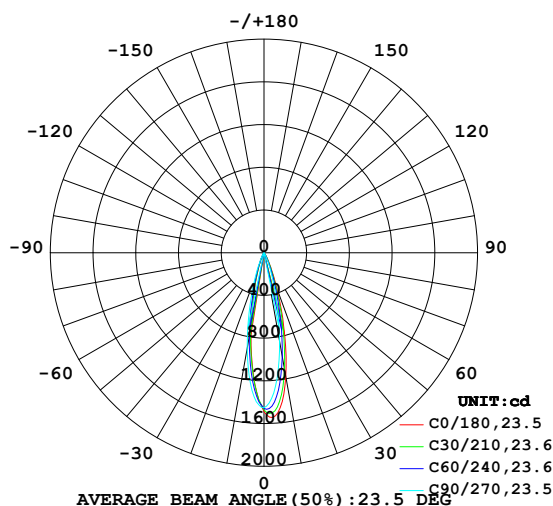
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 56%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

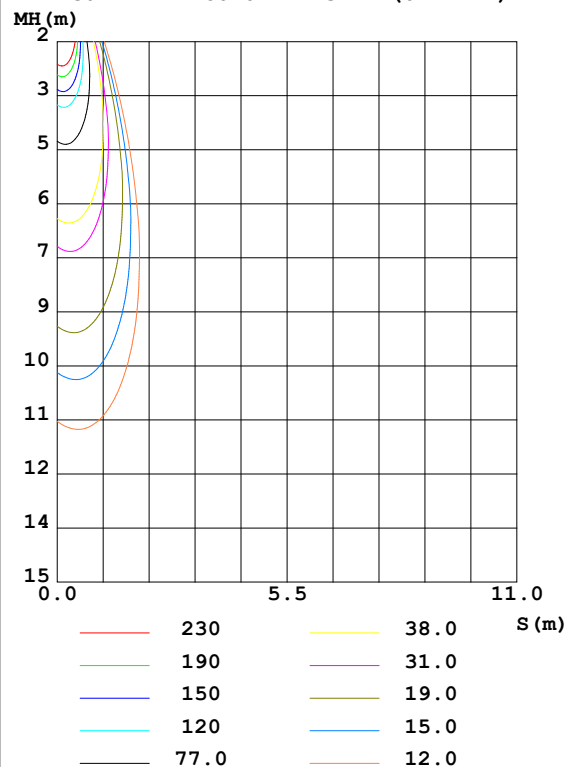
Test:U:220.9V I:0.0326A P:5.982W PF:0.8313 Freq:49.90Hz Lamp Flux:314.368x1 lm		
NAME: S45R1-4W-927-24	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: ϕ 55mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 52.55 lm/W			
MODEL	CREE-2700K	I _{max} (cd)	1544	S/MH (C0/180)	0.32
NOMINAL POWER (W)	6	LOR (%)	100.0	S/MH (C90/270)	0.41
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	314.37	η UP, DN (C0-180)	0.0, 50.3
NOMINAL FLUX (lm)	314.368	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.7
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)



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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	1176	1065	842.2	742.6	697.2	733.0	909.7	1042	0- 10	110.4	110.4	35.1,35.1
20	347.3	296.7	195.3	157.9	155.2	158.3	229.4	305.4	10- 20	137.6	248.0	78.9,78.9
30	66.34	45.49	31.07	26.59	31.02	28.68	39.10	68.78	20- 30	48.14	296.1	94.2,94.2
40	14.40	11.73	8.389	7.141	7.765	8.822	12.28	17.05	30- 40	13.95	310.1	98.6,98.6
50	2.024	1.928	1.483	1.251	1.281	1.441	1.851	1.999	40- 50	3.497	313.6	99.7,99.7
60	0.2214	0.1857	0.1904	0.1507	0.1659	0.1925	0.1879	0.2193	50- 60	0.6355	314.2	99.9,99.9
70	0.0875	0.0634	0.0809	0.0481	0.0633	0.0766	0.0634	0.0875	60- 70	0.1168	314.3	100,100
80	0.0416	0.0197	0.0328	0.0109	0.0087	0.0263	0.0131	0.0394	70- 80	0.0475	314.4	100,100
90	0.0131	0.0087	0.0109	0.0109	0.0066	0.0066	0.0044	0.0087	80- 90	0.0160	314.4	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): 312.58 lm

%lum = 99.4%

%lamp = 99.4%

Conical surface Flux(120deg): 314.19 lm

%lum = 99.9%

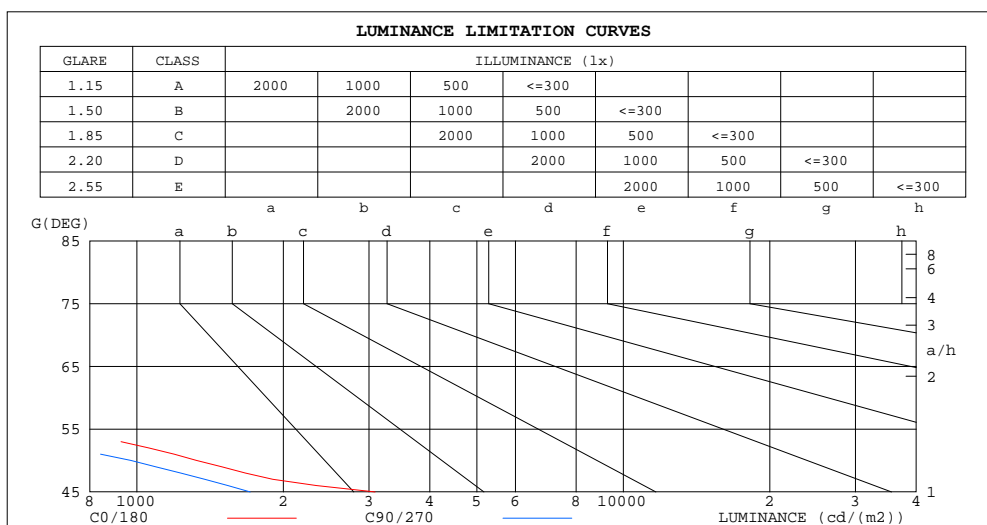
%lamp = 99.9%

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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:

LUMINANCE LIMITATION CURVES

Test:U:220.9V I:0.0326A P:5.982W PF:0.8313 Freq:49.90Hz Lamp Flux:314.368x1 lm		
NAME: S45R1-4W-927-24	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: ϕ 55mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	127	95
80	101	80
75	96	85
70	108	100
65	142	111
60	186	160
55	658	358
50	1326	972
45	3087	1710

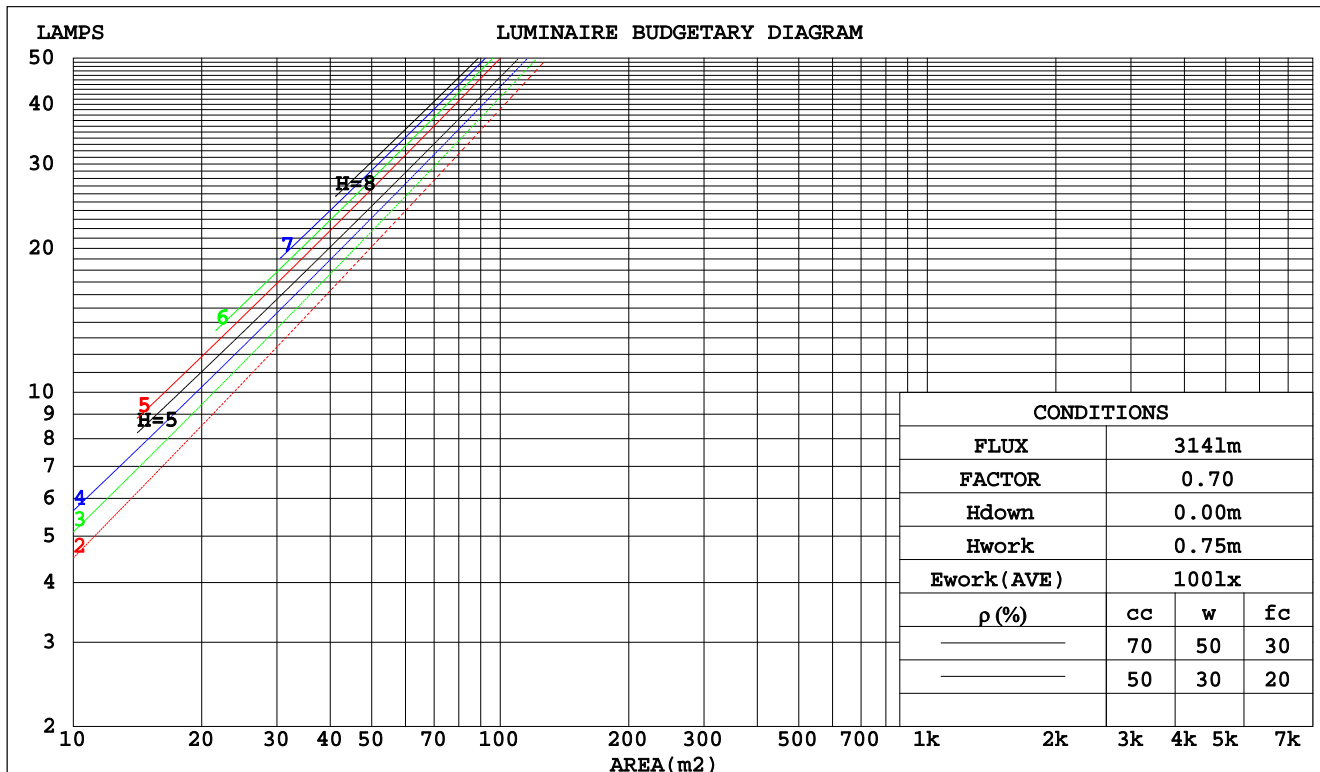
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.02	1.06	1.03	1.01	1.03	1.01	.99	.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.99	.96	1.02	.98	.96	.99	.96	.94	.97	.95	.93	.95	.93	.91	.90
4.0	.99	.95	.92	.98	.94	.91	.96	.93	.90	.94	.91	.89	.92	.90	.88	.87
5.0	.95	.91	.88	.94	.91	.88	.93	.89	.87	.91	.88	.86	.90	.87	.86	.84
6.0	.92	.88	.85	.91	.87	.84	.90	.86	.84	.89	.86	.83	.88	.85	.83	.82
7.0	.89	.85	.82	.88	.84	.82	.87	.84	.81	.86	.83	.81	.85	.82	.80	.79
8.0	.86	.82	.79	.86	.82	.79	.85	.81	.79	.84	.81	.78	.83	.80	.78	.77
9.0	.84	.79	.77	.83	.79	.77	.82	.79	.76	.82	.78	.76	.81	.78	.76	.75
10.0	.81	.77	.75	.81	.77	.74	.80	.77	.74	.80	.76	.74	.79	.76	.74	.73



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WEC AND CCEC

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SPEC.:2700K	DIM.: ϕ 55mm*H60mm	
MFR.: NEKO LIGHTING AG		

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	.137	.078	.025	.131	.074	.024	.118	.068	.022	.107	.062	.020	.096	.056	.018		
2.0	.127	.070	.021	.122	.067	.021	.112	.062	.019	.102	.057	.018	.093	.053	.017		
3.0	.119	.063	.019	.114	.061	.018	.106	.057	.017	.098	.054	.016	.091	.050	.016		
4.0	.111	.058	.017	.108	.056	.017	.100	.053	.016	.094	.050	.015	.088	.048	.014		
5.0	.105	.054	.016	.102	.052	.015	.096	.050	.015	.090	.047	.014	.085	.045	.014		
6.0	.099	.050	.014	.097	.049	.014	.091	.047	.014	.086	.045	.013	.082	.043	.013		
7.0	.095	.047	.013	.092	.046	.013	.088	.044	.013	.083	.043	.012	.079	.041	.012		
8.0	.090	.044	.012	.088	.043	.012	.084	.042	.012	.080	.041	.012	.077	.039	.011		
9.0	.086	.042	.012	.084	.041	.012	.081	.040	.011	.077	.039	.011	.074	.038	.011		
10.0	.083	.040	.011	.081	.039	.011	.078	.038	.011	.075	.037	.011	.072	.036	.010		

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	.168	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.123	.098	.079	.105	.085	.068	.073	.059	.048	.042	.035	.029	.013	.011	.009	
5.0	.112	.086	.066	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008	
6.0	.104	.076	.056	.089	.066	.048	.061	.046	.034	.036	.027	.020	.011	.009	.007	
7.0	.096	.067	.047	.083	.058	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006	
8.0	.090	.061	.041	.077	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.084	.055	.036	.072	.048	.031	.050	.034	.022	.029	.020	.013	.009	.007	.004	
10.0	.079	.050	.031	.068	.044	.027	.047	.031	.019	.028	.018	.012	.009	.006	.004	

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:

UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.0326A P:5.982W PF:0.8313 Freq:49.90Hz Lamp Flux:314.368x1 lm										
NAME: S45R1-4W-927-24					TYPE:Downlight			SERIAL No.:		
SPEC.:2700K					DIM.: ϕ 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	12.4	13.1	12.6	13.2	13.4	9.7	10.4	9.9	10.5	10.7
3H	12.3	12.9	12.5	13.1	13.3	9.6	10.2	9.8	10.4	10.6
4H	12.2	12.8	12.5	13.0	13.2	9.5	10.1	9.8	10.3	10.5
6H	12.1	12.7	12.4	12.9	13.1	9.4	10.0	9.7	10.2	10.4
8H	12.1	12.6	12.4	12.8	13.1	9.4	9.9	9.7	10.2	10.4
12H	12.0	12.5	12.3	12.8	13.1	9.3	9.8	9.6	10.1	10.4
4H 2H	12.2	12.8	12.5	13.0	13.2	9.5	10.1	9.8	10.3	10.5
3H	12.0	12.5	12.3	12.8	13.1	9.3	9.9	9.7	10.1	10.4
4H	11.9	12.4	12.3	12.7	13.0	9.3	9.7	9.6	10.0	10.3
6H	11.8	12.2	12.2	12.6	12.9	9.2	9.6	9.5	9.9	10.2
8H	11.8	12.2	12.2	12.5	12.9	9.1	9.5	9.5	9.8	10.2
12H	11.7	12.1	12.1	12.4	12.8	9.0	9.4	9.5	9.8	10.2
8H 4H	11.8	12.2	12.2	12.5	12.9	9.1	9.5	9.5	9.8	10.2
6H	11.7	12.0	12.1	12.4	12.8	9.0	9.3	9.4	9.7	10.1
8H	11.6	11.9	12.0	12.3	12.7	8.9	9.2	9.4	9.6	10.1
12H	11.5	11.8	12.0	12.2	12.7	8.9	9.1	9.3	9.6	10.0
12H 4H	11.7	12.1	12.1	12.4	12.8	9.0	9.4	9.4	9.8	10.2
6H	11.6	11.9	12.0	12.3	12.7	8.9	9.2	9.4	9.6	10.1
8H	11.5	11.8	12.0	12.2	12.7	8.9	9.1	9.3	9.6	10.0
Variations with the observer position at spacings:										
S = 1.0H	+ 3.9 / -14.0					+ 2.9 / -14.7				
1.5H	+ 6.2 / -10.6					+ 5.0 / -10.1				
2.0H	+ 7.2 / -10.1					+ 5.6 / - 8.7				

CIE Pub.117, 314.4 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -4.0$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
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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:

UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.0326A P:5.982W PF:0.8313 Freq:49.90Hz Lamp Flux:314.368x1 lm		
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SPEC.:2700K	DIM.: \varnothing 55mm*H60mm	
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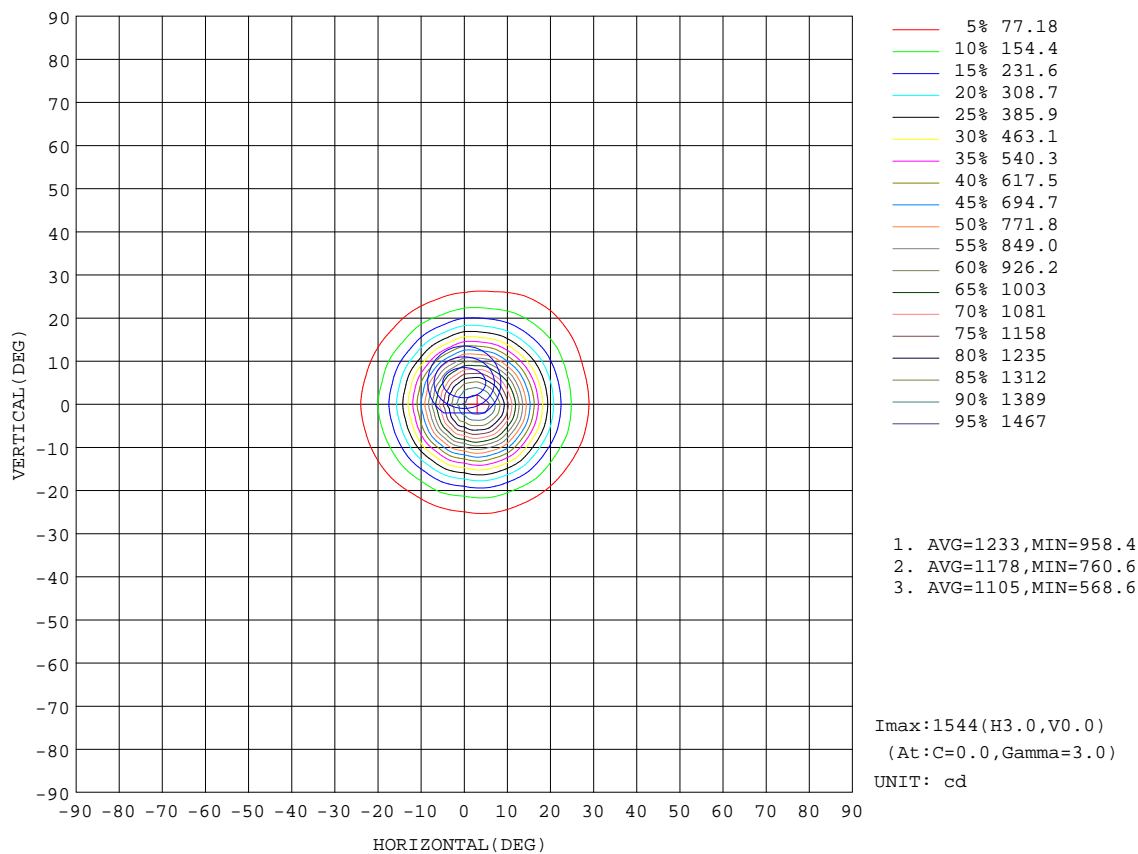
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	81	90	84	81	78
0.80	98	92	89	97	92	89	96	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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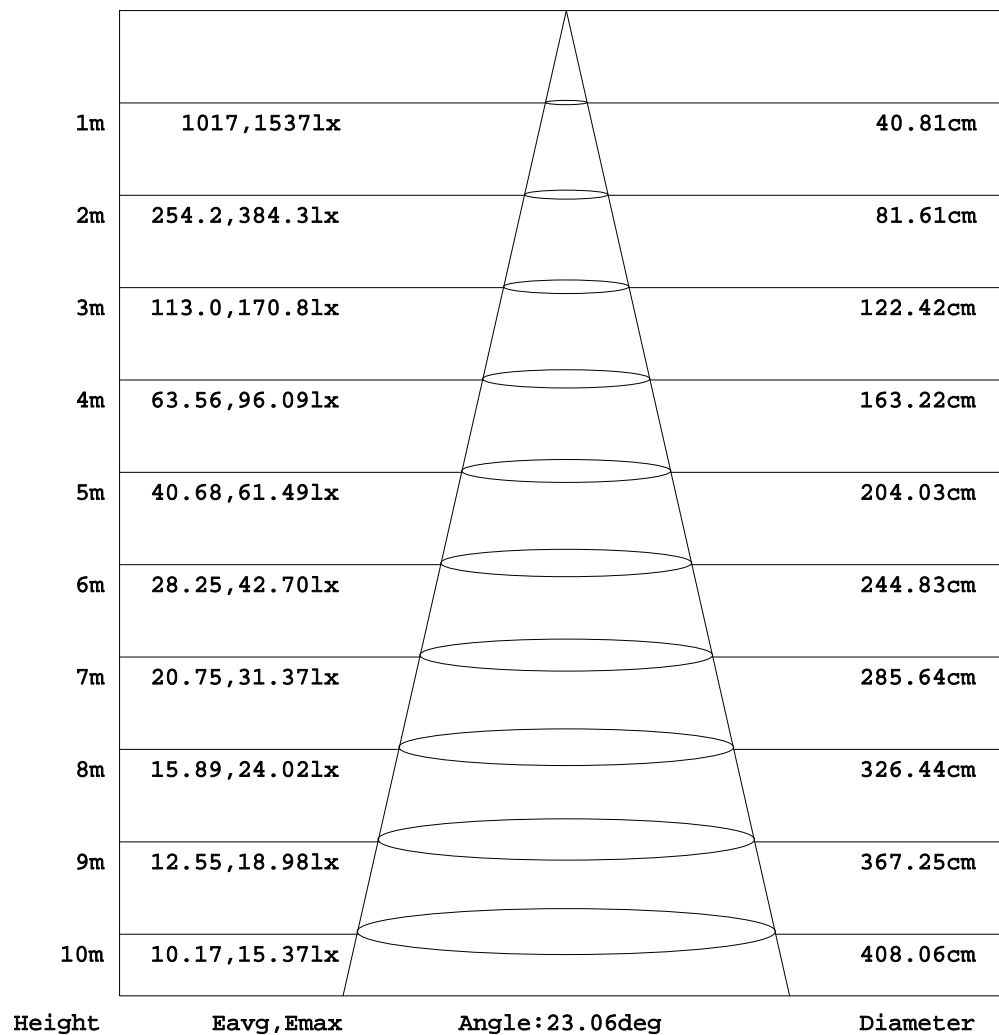
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AAI Figure

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Flux out:144.3 lm



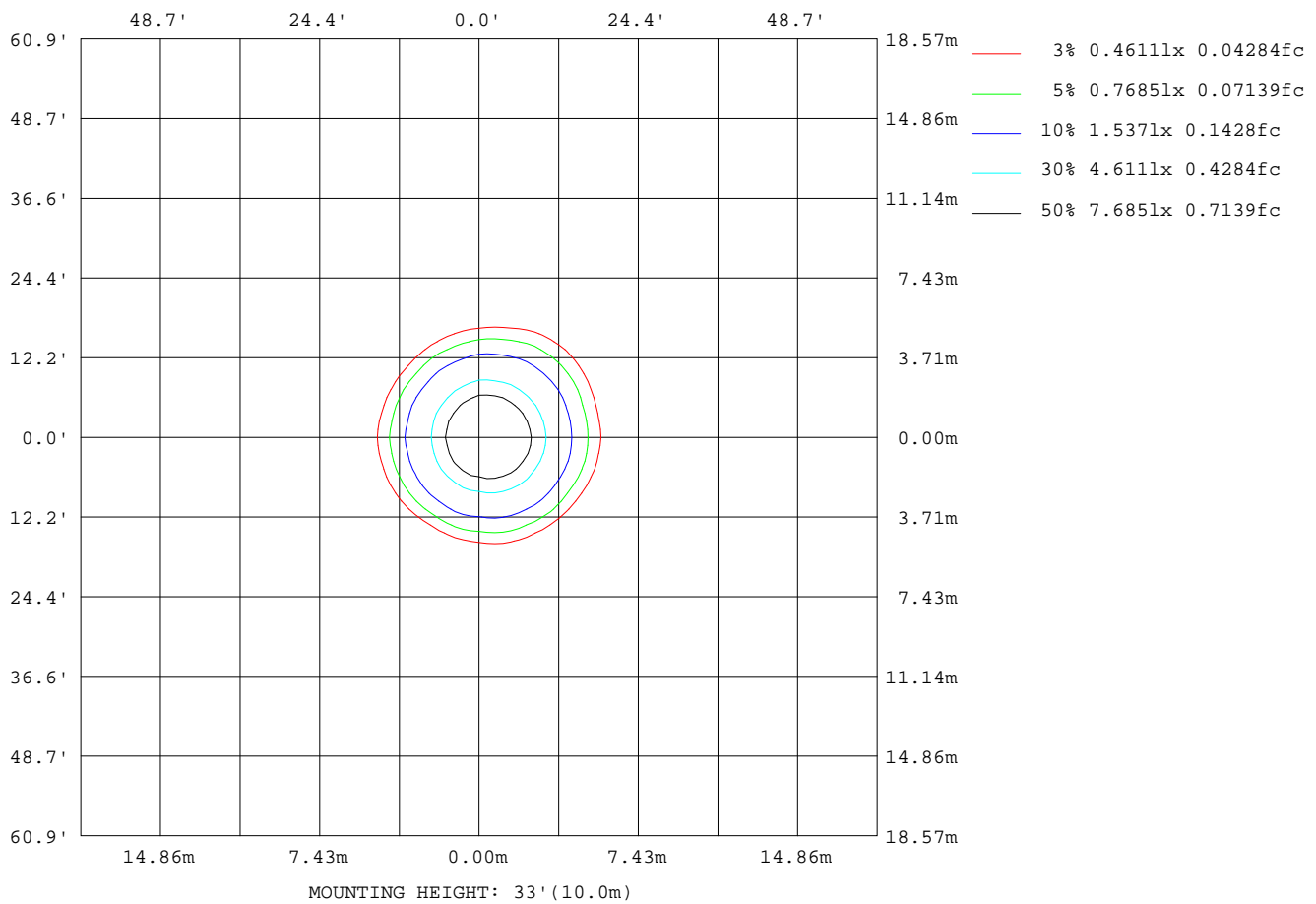
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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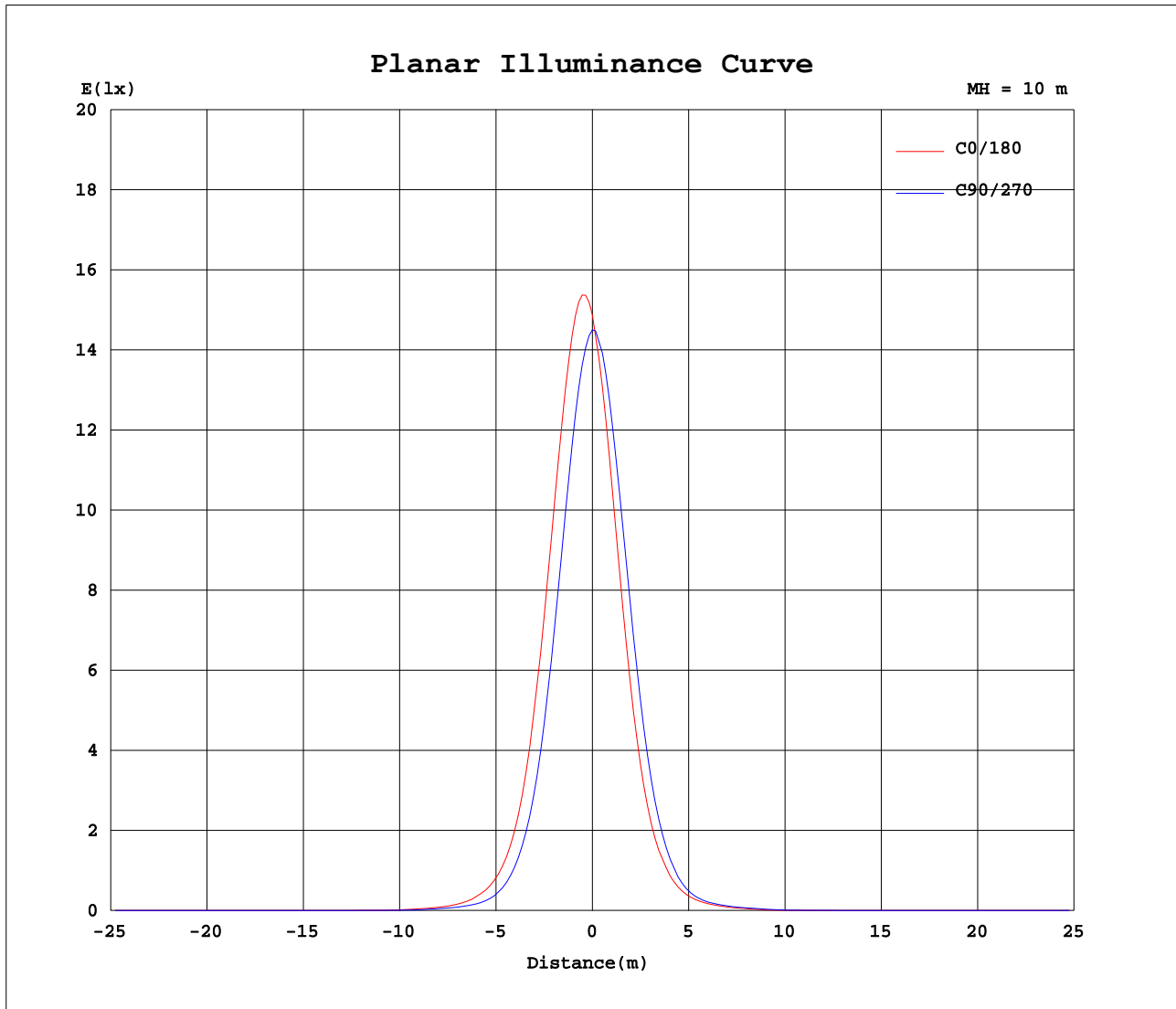
AvgL	cd/m2
L_0~180 (65) av	114
L_0~180 (75) av	73
L_0~180 (85) av	79
L_90~270 (65) av	107
L_90~270 (75) av	71
L_90~270 (85) av	58
L_45 (65) av	110
L_45 (75) av	72
L_45 (85) av	71

Standard: GB/T 29293-2012

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:

Planar Illuminance Curve



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:

```

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:

```

```

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:

```