

FL450-SL450-3S-15W-830-30



Light Output Ratio:	100.0%	
Luminaire Power:	14.81 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.50	fine grid method.

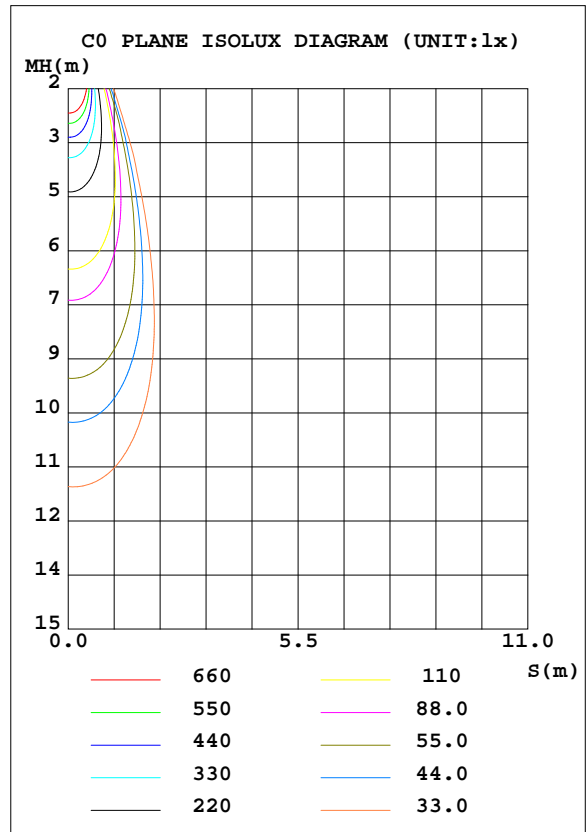
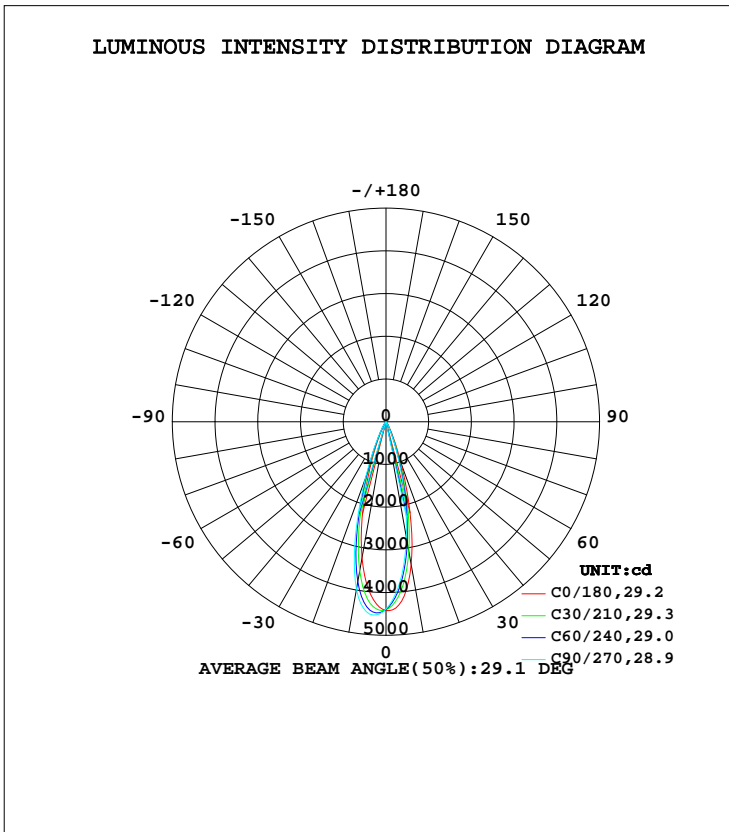
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Myles
Test Date: 2019-03-13

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:221.0V I:0.0691A P:14.81W PF:0.9682 Freq:49.90Hz Lamp Flux:1224.26x1 lm		
NAME: FL450-SL450-3S-15W-830-30	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	CREE-3000K	Imax(cd)	4553	S/MH(C0/180)	0.47
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.53
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1224.3	η UP, DN(C0-180)	0.0,43.5
NOMINAL FLUX(lm)	1224.26	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,56.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.50



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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	3398	3008	2760	3046	3236	3623	3984	3683	0- 10	371.0	371.0	30.3,30.3
20	1021	836.0	715.6	850.4	997.1	1215	1432	1193	10- 20	577.4	948.3	77.5,77.5
30	152.8	132.6	113.6	133.8	157.1	187.1	211.5	179.5	20- 30	204.1	1152	94.1,94.1
40	38.98	33.13	29.49	33.60	38.72	46.35	51.24	45.84	30- 40	51.42	1204	98.3,98.3
50	9.667	8.622	8.043	8.659	10.29	10.78	11.94	10.57	40- 50	15.62	1220	99.6,99.6
60	1.143	0.8462	0.7218	0.8243	1.203	1.458	1.796	1.447	50- 60	4.237	1224	100,100
70	0.1510	0.1223	0.1313	0.1049	0.1092	0.1445	0.1397	0.1554	60- 70	0.3785	1224	100,100
80	0.0591	0.0394	0.0547	0.0394	0.0328	0.0525	0.0349	0.0547	70- 80	0.0843	1224	100,100
90	0.0394	0.0394	0.0394	0.0415	0.0241	0.0262	0.0241	0.0262	80- 90	0.0404	1224	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): 1214 lm

%lum = 99.2%
%lamp = 99.2%

Conical surface Flux(120deg): 1223.8 lm

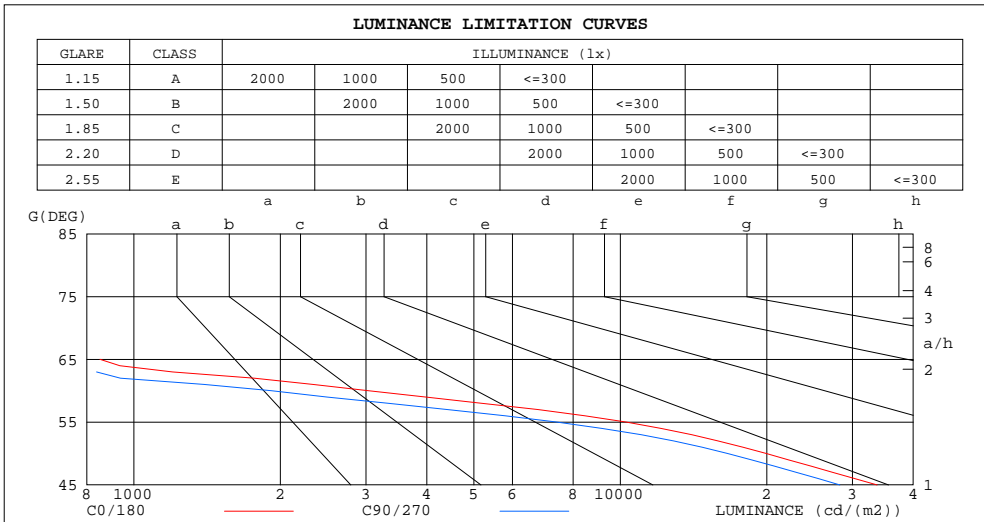
%lum = 100.0%
%lamp = 100.0%

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LUMINANCE LIMITATION CURVES

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SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	666	632
80	451	417
75	471	426
70	585	509
65	852	707
60	3031	1914
55	10277	7395
50	19936	16587
45	33716	28265

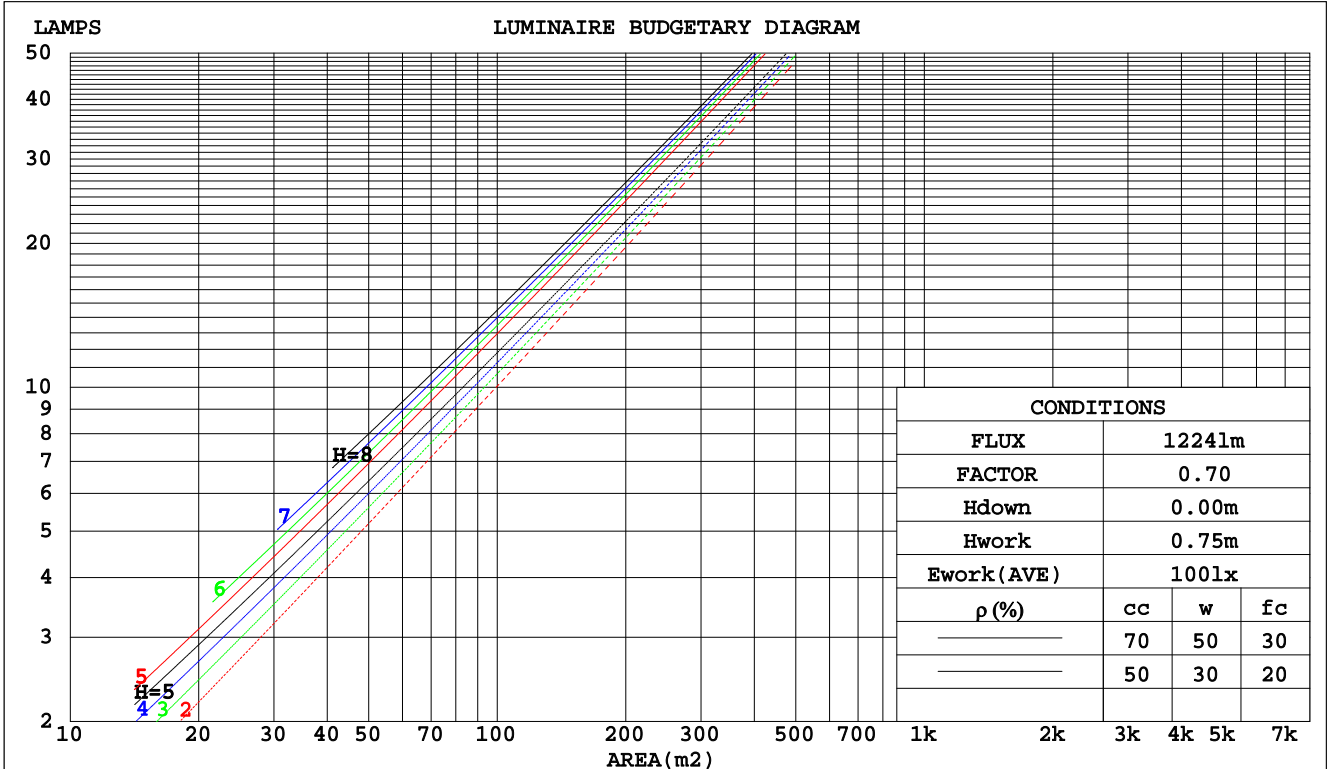
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																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	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96
2.0	1.07	1.04	1.02	1.06	1.03	1.00	1.02	1.00	.98	.00	.98	.96	.97	.96	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.94	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.91	.88	.92	.89	.87	.86
5.0	.94	.90	.87	.93	.90	.87	.92	.88	.86	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.87	.83	.90	.86	.83	.89	.85	.83	.88	.84	.82	.86	.84	.82	.81
7.0	.88	.83	.80	.87	.83	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.78
8.0	.85	.80	.78	.84	.80	.77	.83	.80	.77	.82	.79	.77	.82	.79	.77	.76
9.0	.82	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.79	.76	.74	.73
10.0	.80	.75	.73	.79	.75	.73	.79	.75	.72	.78	.75	.72	.77	.74	.72	.71



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WEC AND CCEC

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ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.140	.080	.025	.134	.076	.024	.121	.070	.022	.110	.063	.020	.099	.058	.019	
2.0	.131	.072	.022	.125	.069	.021	.115	.064	.020	.105	.059	.019	.097	.055	.017	
3.0	.122	.065	.019	.118	.063	.019	.109	.059	.018	.101	.055	.017	.094	.052	.016	
4.0	.115	.060	.018	.111	.058	.017	.104	.055	.016	.097	.052	.016	.091	.049	.015	
5.0	.108	.055	.016	.105	.054	.016	.099	.052	.015	.093	.049	.015	.088	.047	.014	
6.0	.103	.052	.015	.100	.051	.015	.095	.049	.014	.090	.047	.014	.085	.045	.013	
7.0	.098	.048	.014	.095	.048	.014	.091	.046	.013	.086	.044	.013	.082	.043	.013	
8.0	.093	.046	.013	.091	.045	.013	.087	.044	.012	.083	.042	.012	.080	.041	.012	
9.0	.089	.043	.012	.088	.043	.012	.084	.041	.012	.081	.040	.012	.077	.039	.011	
10.0	.086	.041	.011	.084	.041	.011	.081	.040	.011	.078	.039	.011	.075	.038	.011	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.105	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.097	.068	.047	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.040	.078	.053	.035	.054	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.085	.055	.035	.074	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.081	.051	.031	.069	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

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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:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.0691A P:14.81W PF:0.9682 Freq:49.90Hz Lamp Flux:1224.26x1 lm		
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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	14.0	14.6	14.2	14.8	15.0	12.8	13.5	13.0	13.6	13.8
3H	13.8	14.5	14.1	14.6	14.8	12.6	13.3	12.9	13.5	13.7
4H	13.7	14.3	14.0	14.5	14.8	12.6	13.2	12.8	13.4	13.6
6H	13.7	14.2	13.9	14.5	14.7	12.5	13.0	12.8	13.3	13.5
8H	13.6	14.2	13.9	14.4	14.7	12.4	13.0	12.7	13.2	13.5
12H	13.6	14.1	13.9	14.4	14.6	12.4	12.9	12.7	13.2	13.4
4H 2H	13.8	14.4	14.0	14.6	14.8	12.6	13.2	12.8	13.4	13.6
3H	13.6	14.1	13.9	14.4	14.6	12.4	12.9	12.7	13.2	13.5
4H	13.5	14.0	13.8	14.3	14.6	12.3	12.8	12.7	13.1	13.4
6H	13.4	13.8	13.8	14.1	14.5	12.2	12.6	12.6	13.0	13.3
8H	13.3	13.7	13.7	14.1	14.4	12.2	12.6	12.5	12.9	13.3
12H	13.3	13.6	13.7	14.0	14.4	12.1	12.5	12.5	12.8	13.2
8H 4H	13.3	13.7	13.7	14.1	14.4	12.2	12.6	12.5	12.9	13.3
6H	13.2	13.5	13.6	13.9	14.3	12.0	12.4	12.5	12.8	13.2
8H	13.2	13.4	13.6	13.9	14.3	12.0	12.3	12.4	12.7	13.1
12H	13.1	13.3	13.6	13.8	14.3	11.9	12.2	12.4	12.6	13.1
12H 4H	13.3	13.6	13.7	14.0	14.4	12.1	12.5	12.5	12.8	13.2
6H	13.2	13.4	13.6	13.9	14.3	12.0	12.3	12.4	12.7	13.1
8H	13.1	13.3	13.6	13.8	14.3	11.9	12.2	12.4	12.6	13.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.6 / -11.5					+ 3.1 / -12.1				
1.5H	+ 5.4 / - 8.1					+ 4.6 / - 7.6				
2.0H	+ 5.9 / -15.6					+ 5.5 / -15.1				

CIE Pub.117, 1224 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.7)

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 Remarks:

UTILIZATION FACTORS TABLE

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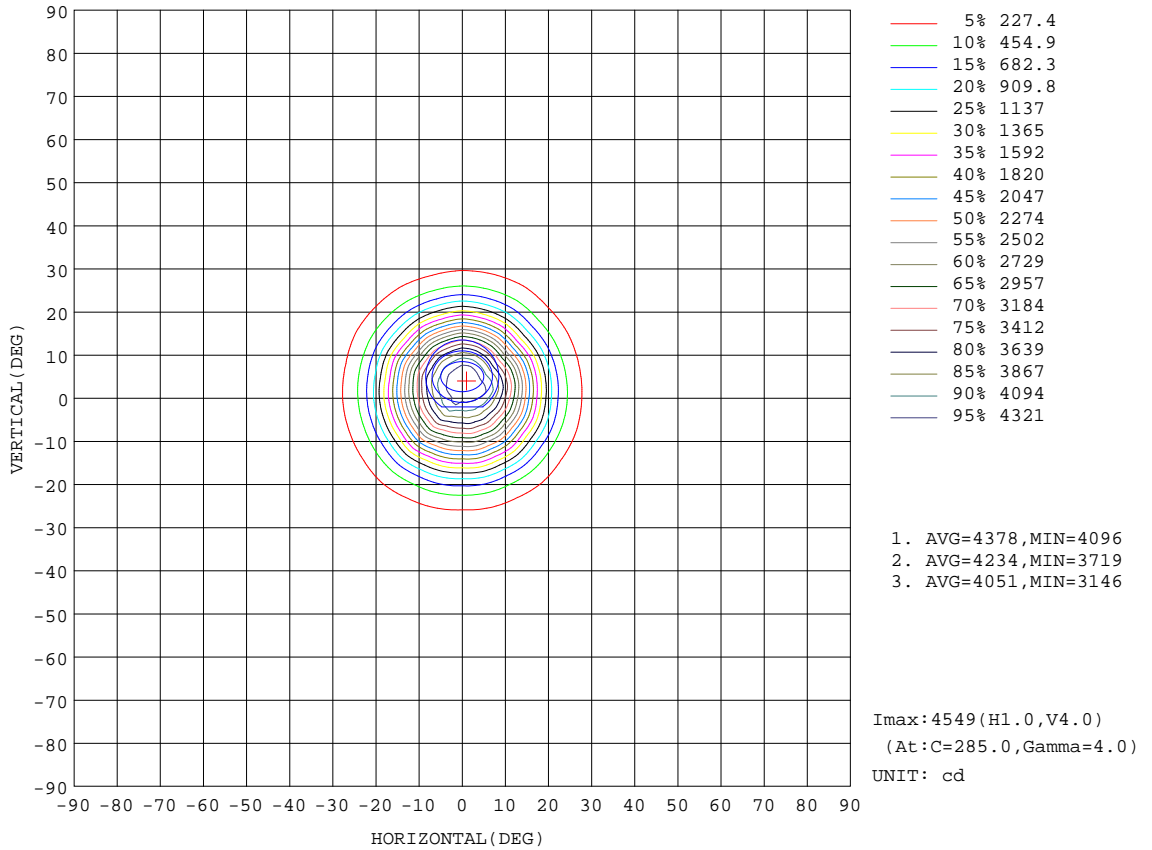
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	81	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	91	88	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	102	100	104	101	99	94
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	109	107	111	108	106	108	105	104	97
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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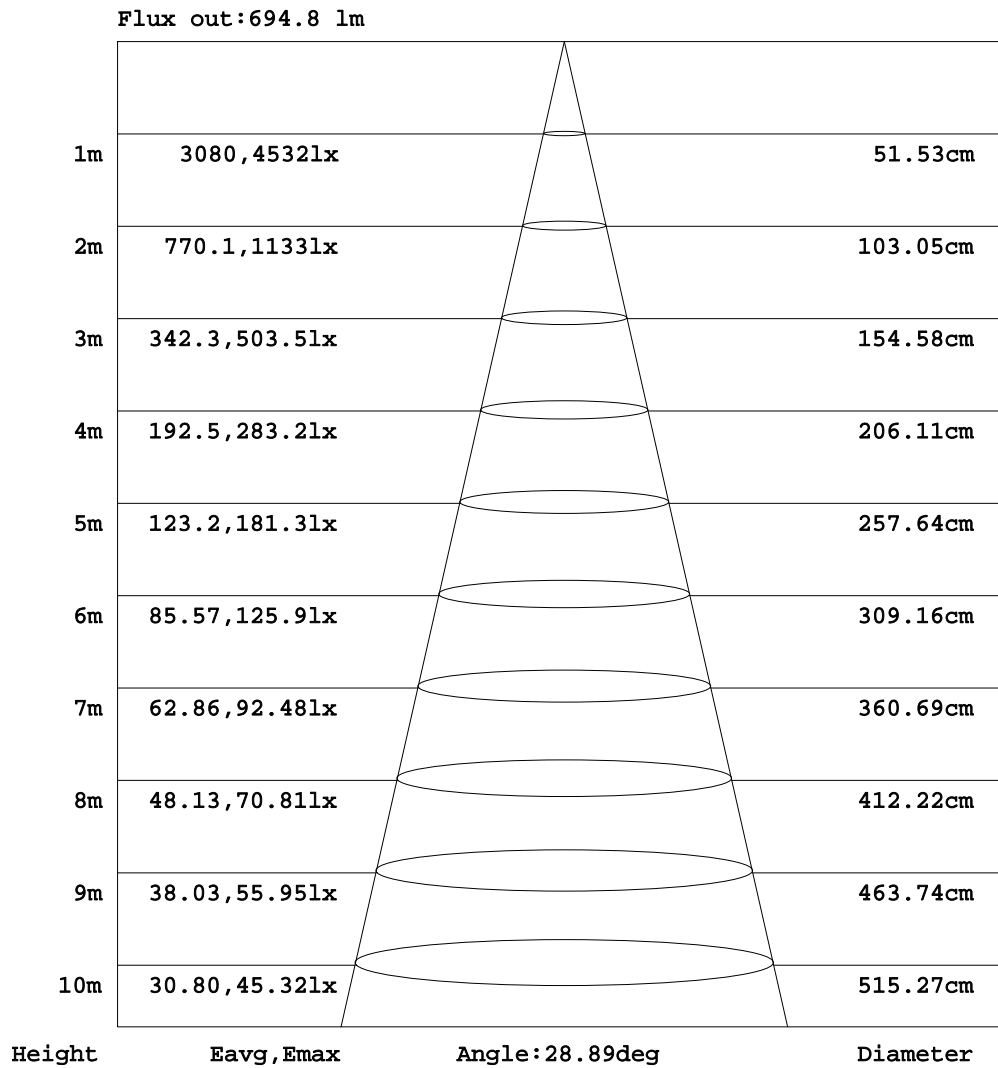


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AAI Figure

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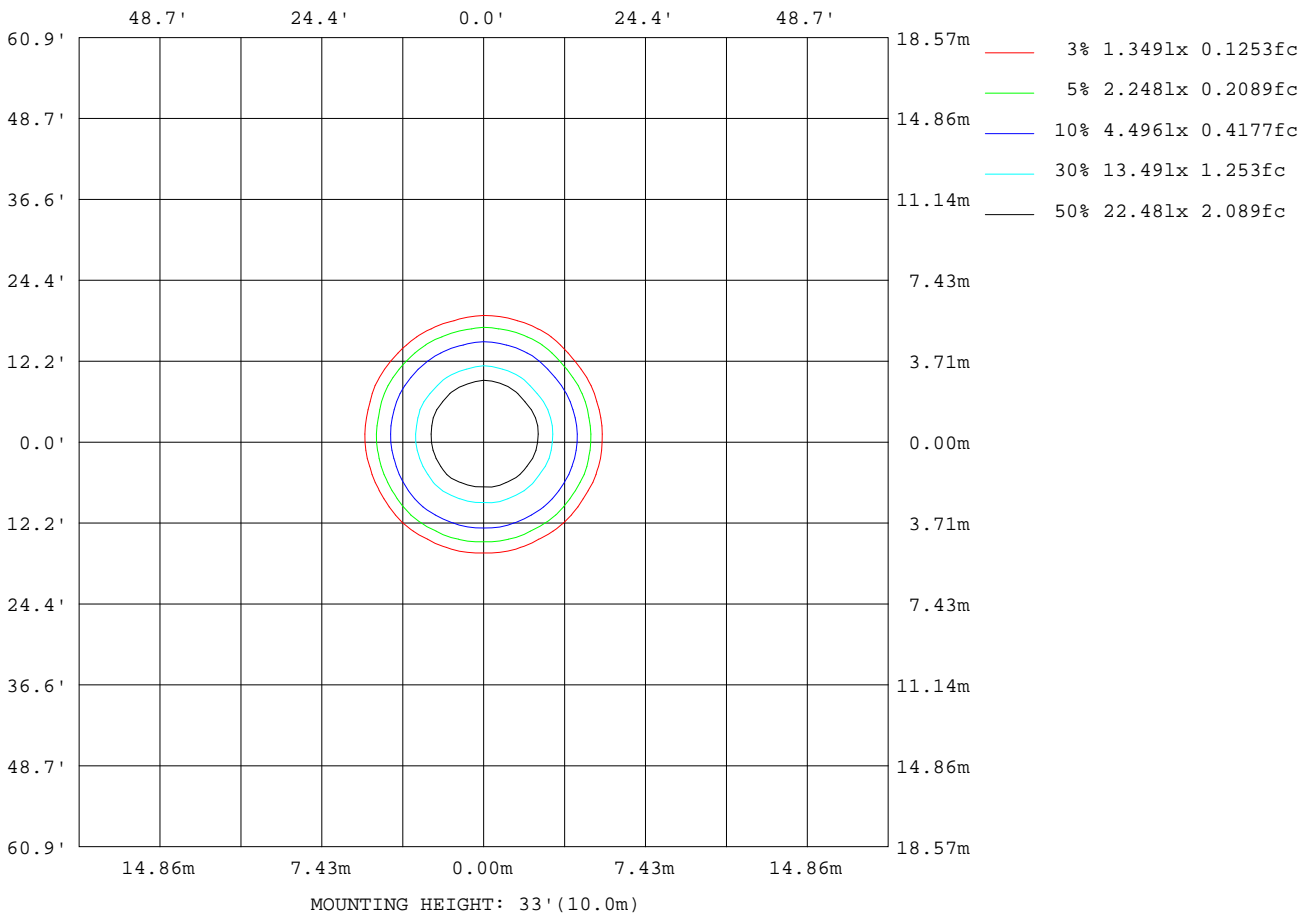
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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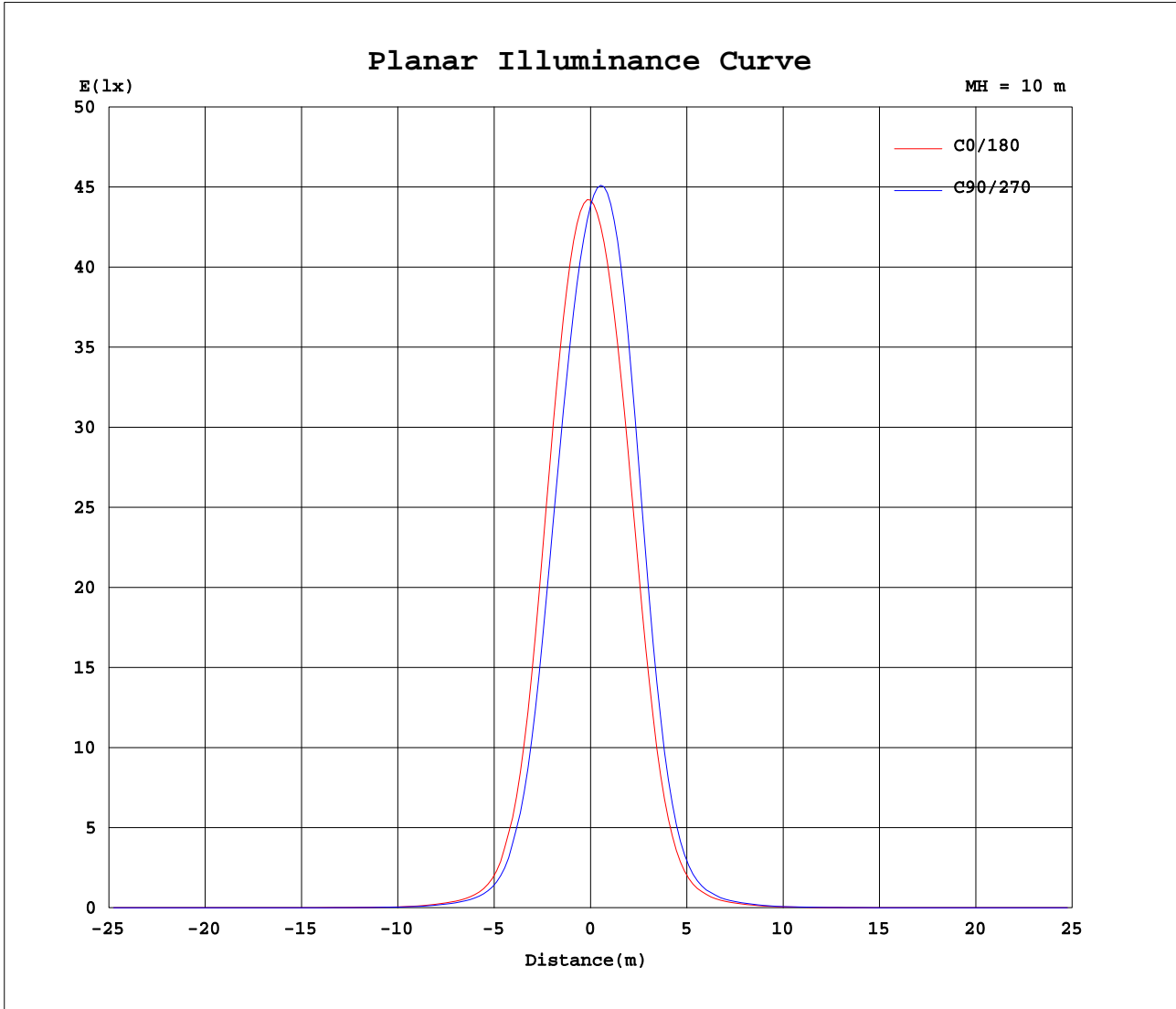
AvgL	cd/m2
L_0~180(65)av	782
L_0~180(75)av	403
L_0~180(85)av	516
L_90~270(65)av	812
L_90~270(75)av	392
L_90~270(85)av	515
L_45(65)av	789
L_45(75)av	381
L_45(85)av	574

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Myles
Test Date:2019-03-13

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: 2019-03-13

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:

