

E50-SP3-280-15W-830-55



Light Output Ratio:	100.0%	
Luminaire Power:	14.81 W	
SHR Nominal:	0.75	Calculated using the TM5
SHR Maximum:	0.90	fine grid method.

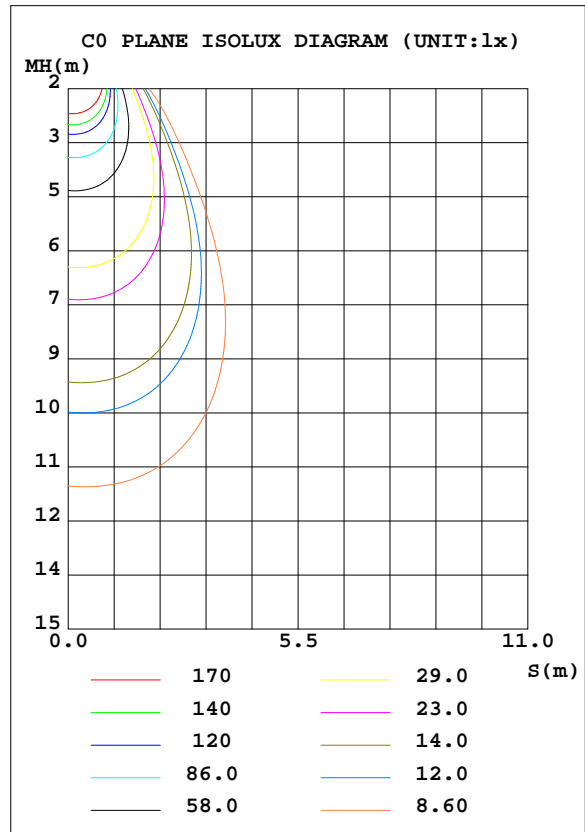
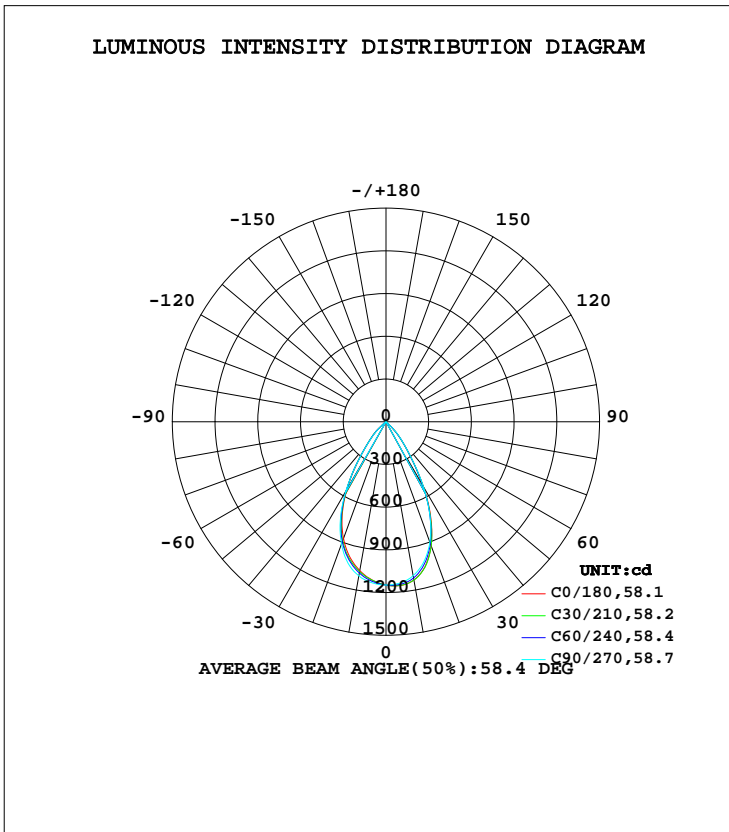
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Myles  
 Test Date: 2019-03-13

$\gamma$  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:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 68.64 lm/W			
MODEL	CREE-3000K	I <sub>max</sub> (cd)	1156	S/MH(C0/180)	0.89
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.89
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1016.5	η UP, DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	1016.51	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.90



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:

**ZONAL FLUX DIAGRAM**

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	1129	1125	1099	1076	1062	1072	1100	1122	0- 10	107.3	107.3	10.6,10.6
20	926.7	925.3	900.6	890.4	873.3	890.5	915.0	929.2	10- 20	285.3	392.6	38.6,38.6
30	524.5	525.0	524.5	543.6	550.3	553.6	564.5	538.1	20- 30	335.4	727.9	71.6,71.6
40	171.7	172.8	174.4	191.9	201.9	200.5	197.9	180.0	30- 40	211.3	939.2	92.4,92.4
50	12.42	12.19	13.37	18.27	24.25	22.83	19.59	14.01	40- 50	70.20	1009	99.3,99.3
60	1.488	1.448	1.714	2.278	2.714	2.557	2.355	1.743	50- 60	6.113	1016	99.9,99.9
70	0.2668	0.2424	0.2693	0.2993	0.3185	0.3479	0.3080	0.2933	60- 70	0.7027	1016	100,100
80	0.1006	0.0764	0.1029	0.0984	0.0982	0.1247	0.0939	0.1007	70- 80	0.1927	1016	100,100
90	0.0502	0.0437	0.0437	0.0503	0.0262	0.0262	0.0241	0.0241	80- 90	0.0640	1017	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): 990.24 lm

%lum = 97.4%

%lamp = 97.4%

Conical surface Flux(120deg): 1015.6 lm

%lum = 99.9%

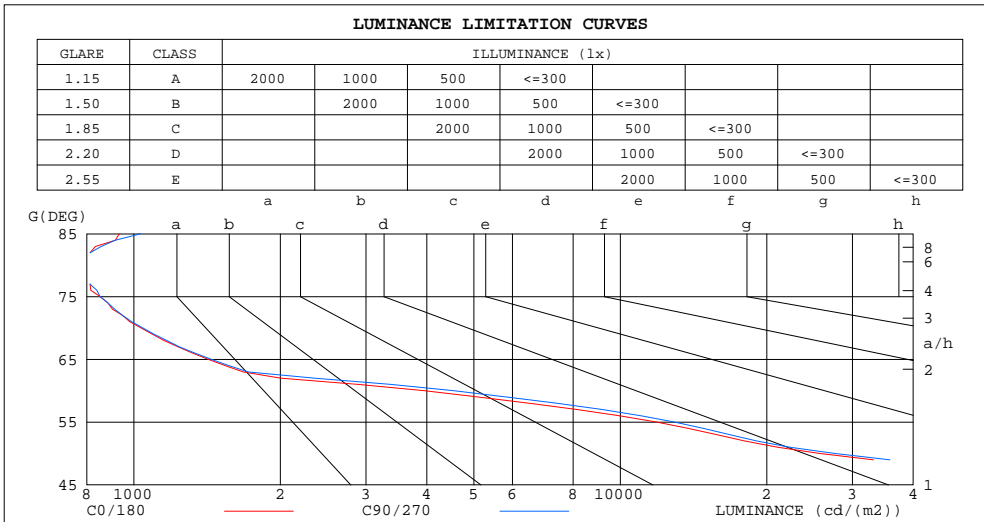
%lamp = 99.9%

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

$\gamma$  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:

**LUMINANCE LIMITATION CURVES**

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	933	1032
80	769	785
75	852	852
70	1035	1043
65	1422	1442
60	3949	4542
55	11865	12921
50	25640	27562
45	135204	151506

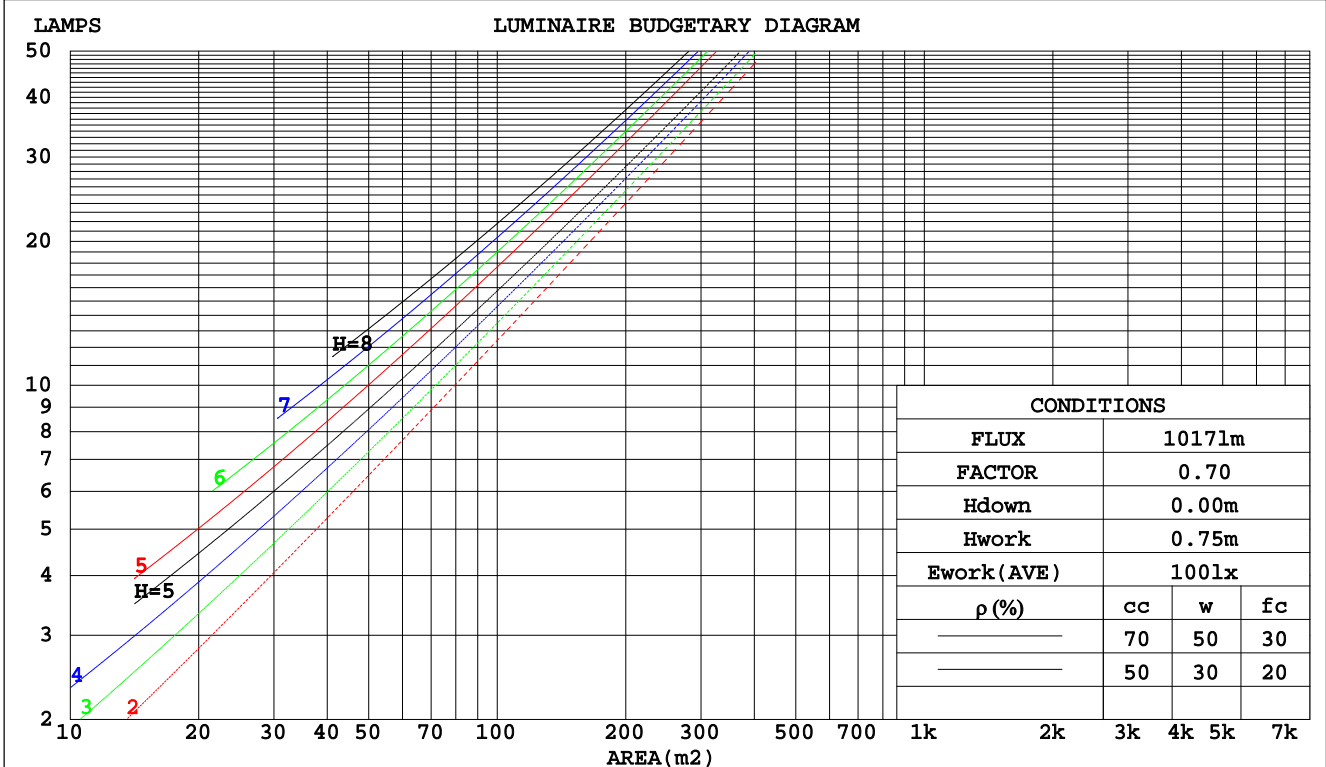
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Myles  
 Test Date:2019-03-13

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:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
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															
	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	1.06	1.04	1.05	1.03	1.01	1.01	.00	.98	.98	.96	.95	.94
2.0	1.03	.99	.96	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.96	.91	.87	.95	.90	.87	.92	.88	.85	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.85	.80	.89	.84	.80	.87	.82	.79	.85	.81	.78	.83	.80	.77	.76
5.0	.84	.79	.74	.83	.78	.74	.82	.77	.73	.80	.76	.73	.78	.75	.72	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66
7.0	.74	.68	.64	.74	.68	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.62
8.0	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.58
9.0	.66	.60	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
10.0	.63	.57	.53	.62	.57	.53	.61	.56	.53	.61	.56	.53	.60	.55	.52	.51



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:

WEC AND CCEC

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		

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	.176	.100	.032	.169	.097	.031	.157	.090	.029	.145	.084	.027	.135	.078	.025	
2.0	.169	.093	.028	.163	.090	.028	.153	.085	.026	.143	.080	.025	.134	.076	.024	
3.0	.161	.086	.026	.157	.084	.025	.148	.080	.024	.139	.076	.023	.132	.073	.023	
4.0	.154	.080	.024	.150	.079	.023	.142	.075	.023	.135	.072	.022	.128	.070	.021	
5.0	.147	.075	.022	.144	.074	.021	.137	.071	.021	.130	.069	.020	.125	.067	.020	
6.0	.141	.071	.020	.138	.070	.020	.132	.067	.020	.126	.065	.019	.121	.064	.019	
7.0	.135	.067	.019	.132	.066	.019	.127	.064	.018	.122	.062	.018	.117	.061	.018	
8.0	.129	.063	.018	.127	.062	.018	.122	.061	.017	.117	.059	.017	.113	.058	.017	
9.0	.124	.060	.017	.122	.059	.017	.117	.058	.016	.113	.057	.016	.110	.056	.016	
10.0	.119	.057	.016	.117	.056	.016	.113	.055	.016	.109	.054	.015	.106	.053	.015	

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.133	.113	.134	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.090	.123	.098	.078	.085	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.072	.114	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.060	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.096	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.106	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.101	.059	.031	.087	.051	.027	.060	.036	.019	.035	.021	.011	.011	.007	.004	
10.0	.096	.055	.027	.083	.048	.024	.057	.033	.017	.034	.020	.010	.011	.007	.003	

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:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
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	25.2	26.1	25.4	26.3	26.5	25.2	26.2	25.5	26.3	26.5
3H	25.0	25.9	25.3	26.1	26.3	25.1	25.9	25.3	26.1	26.3
4H	24.9	25.7	25.2	25.9	26.2	25.0	25.8	25.2	26.0	26.2
6H	24.8	25.6	25.1	25.8	26.1	24.9	25.6	25.2	25.9	26.1
8H	24.8	25.5	25.1	25.8	26.0	24.8	25.6	25.1	25.8	26.1
12H	24.7	25.4	25.0	25.7	26.0	24.8	25.5	25.1	25.8	26.0
4H 2H	24.9	25.7	25.2	26.0	26.2	25.0	25.8	25.2	26.0	26.2
3H	24.7	25.4	25.0	25.7	26.0	24.8	25.5	25.1	25.8	26.0
4H	24.6	25.3	25.0	25.6	25.9	24.7	25.3	25.0	25.6	25.9
6H	24.5	25.1	24.9	25.4	25.8	24.6	25.2	25.0	25.5	25.8
8H	24.5	25.0	24.9	25.4	25.7	24.5	25.1	24.9	25.4	25.8
12H	24.4	24.9	24.8	25.3	25.7	24.5	25.0	24.9	25.3	25.7
8H 4H	24.5	25.0	24.9	25.4	25.7	24.5	25.1	24.9	25.4	25.8
6H	24.4	24.8	24.8	25.2	25.6	24.4	24.9	24.9	25.3	25.7
8H	24.3	24.7	24.8	25.1	25.6	24.4	24.8	24.8	25.2	25.6
12H	24.3	24.6	24.7	25.0	25.5	24.3	24.7	24.8	25.1	25.6
12H 4H	24.4	24.9	24.8	25.3	25.7	24.5	25.0	24.9	25.3	25.7
6H	24.3	24.7	24.8	25.1	25.6	24.4	24.8	24.8	25.2	25.6
8H	24.3	24.6	24.7	25.0	25.5	24.3	24.7	24.8	25.1	25.6
Variations with the observer position at spacings:										
S = 1.0H	+ 3.0 / -19.6					+ 3.1 / -18.9				
1.5H	+ 5.4 / -15.7					+ 5.4 / -15.4				
2.0H	+ 8.7 / -18.6					+ 8.8 / -19.2				

CIE Pub.117, 1017 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.1)

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:

UTILIZATION FACTORS TABLE

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
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	105	101	107	103	101	105	102	99	94
2.50	110	107	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	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

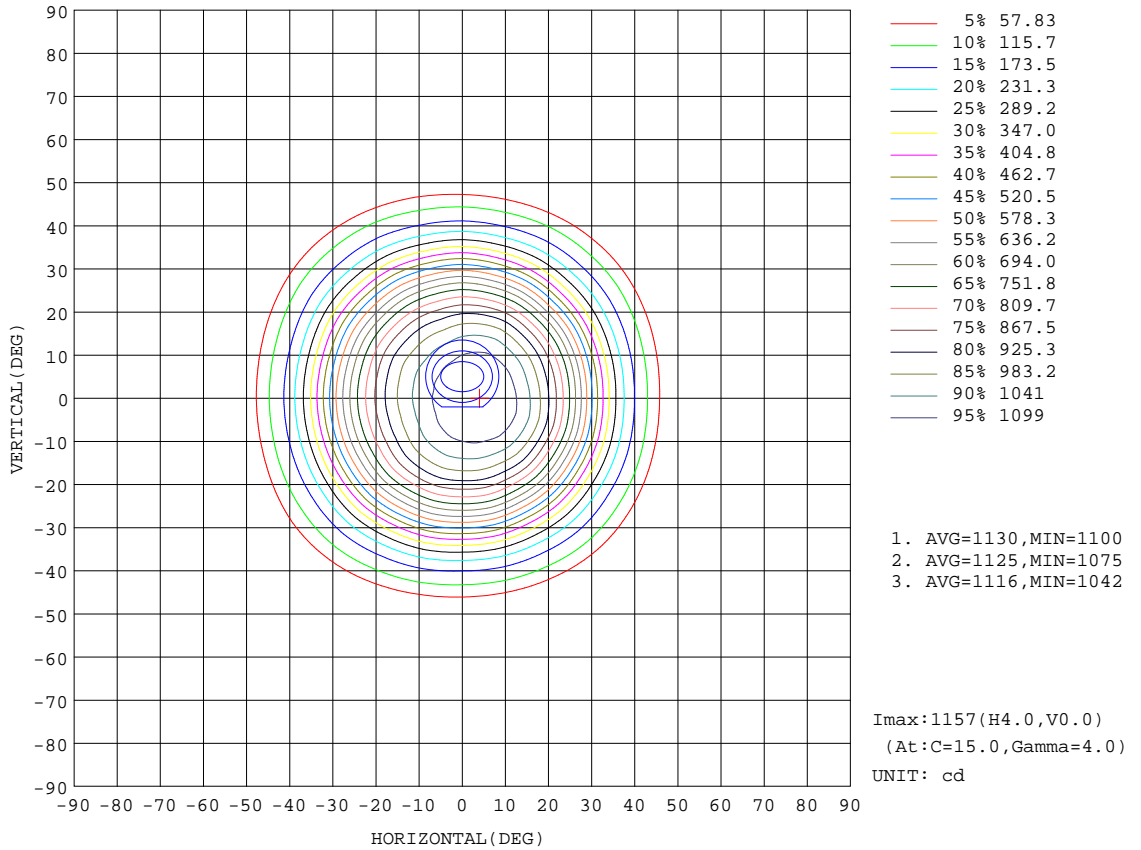
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Myles  
 Test Date:2019-03-13

$\gamma$  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:



**ISOCANDELA DIAGRAM**

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		



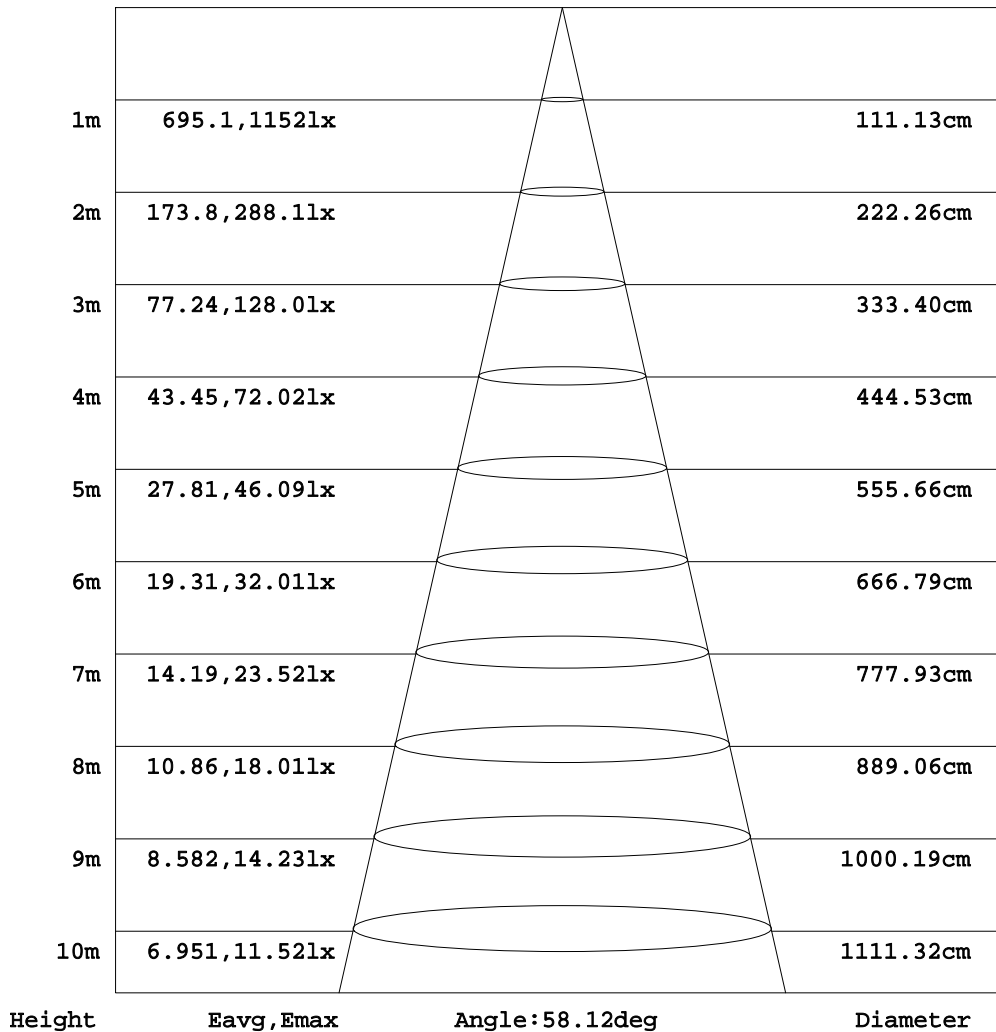
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-03-13

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:

**AAI Figure**

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		

Flux out:727.9 lm



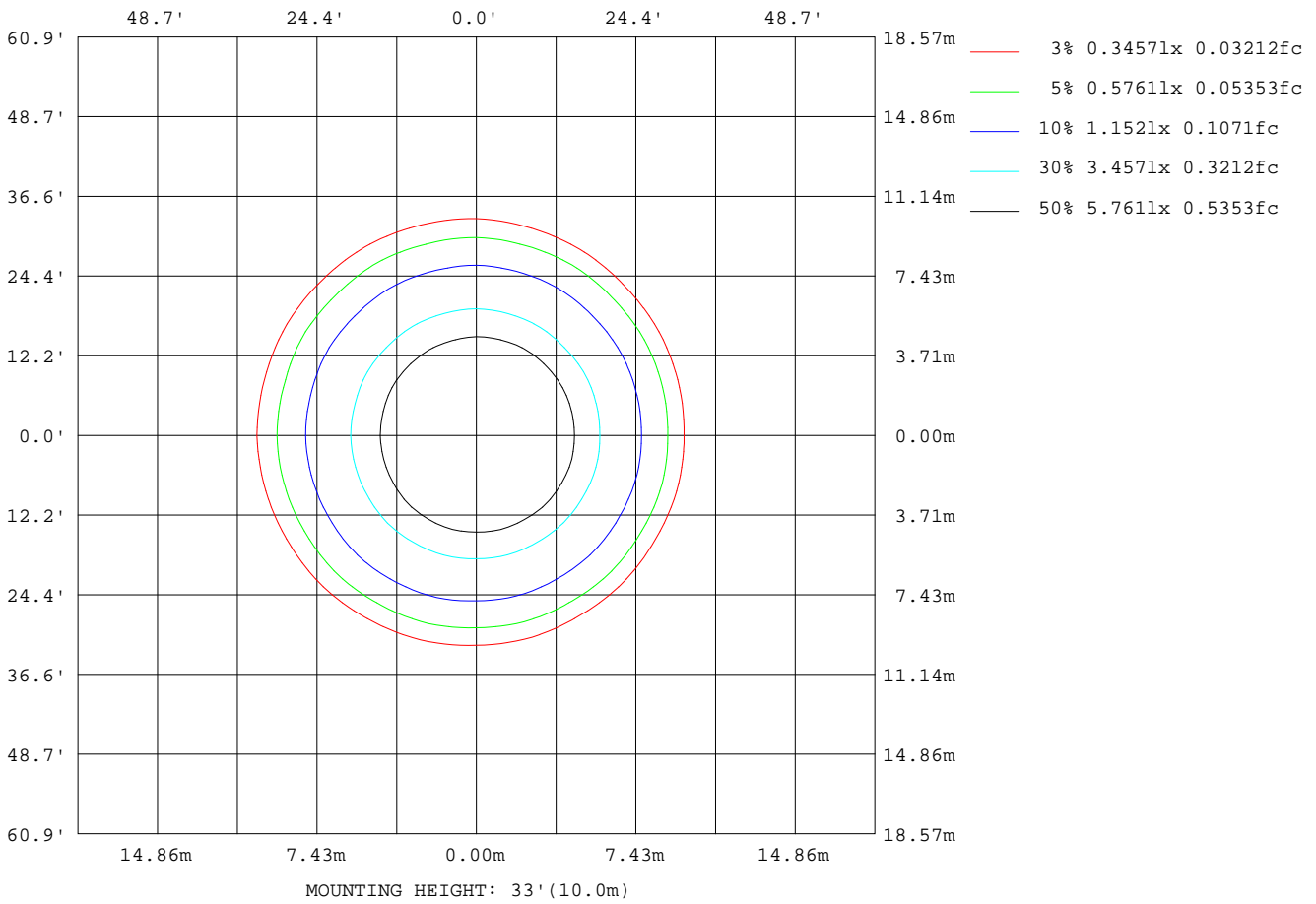
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

**ISOLUX DIAGRAM**

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		



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:

LED Avg.L Report

Test:U:221.0V I:0.0692A P:14.81W PF:0.9682 Freq:0Hz Lamp Flux:1016.51x1 lm		
NAME: FL450-SL450-3S-15W-830-55	TYPE:Spotlight	SERIAL No.:
SPEC.:3000K	DIM.: L450mm*W45mm*H73mm	
MFR.: NEKO LIGHTING AG		

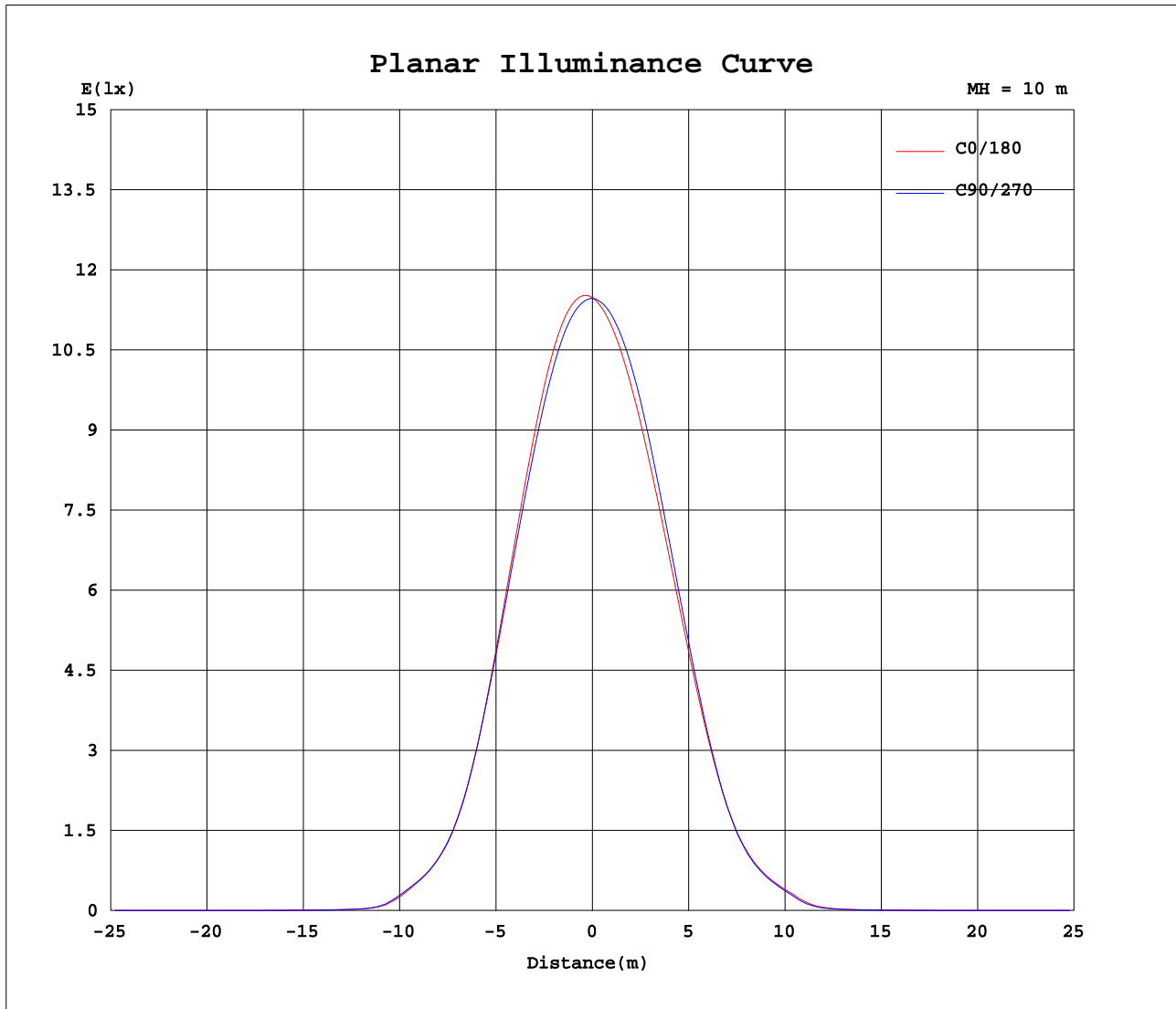
AvgL	cd/m2
L_0~180(65)av	1620
L_0~180(75)av	895
L_0~180(85)av	781
L_90~270(65)av	1585
L_90~270(75)av	879
L_90~270(85)av	798
L_45(65)av	1621
L_45(75)av	904
L_45(85)av	848

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

$\gamma$  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:



