

**CARMEL S-830-55°**



Light Output Ratio:	100.0%	
Luminaire Power:	5.605 W	
SHR Nominal:	0.75	Calculated using the TM5
SHR Maximum:	0.85	fine grid method.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2020-09-18

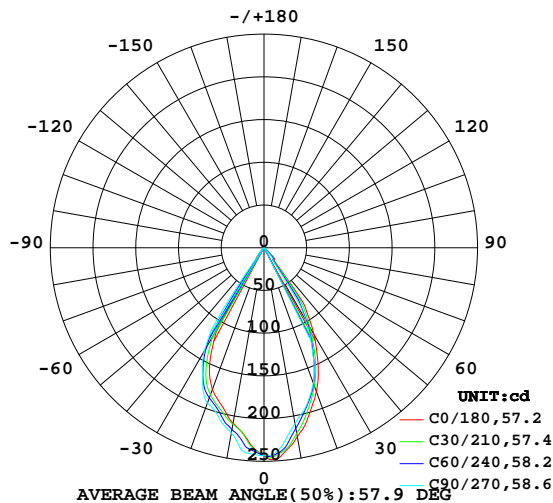
γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

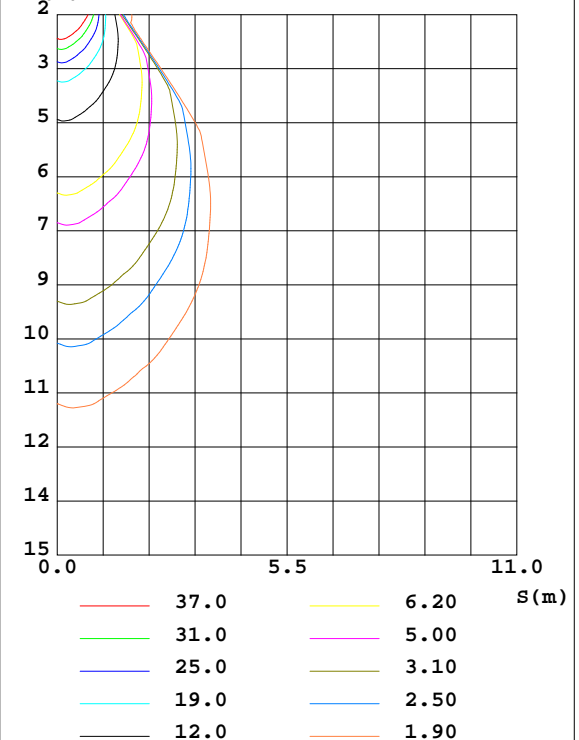
Test:U:220.9V I:0.0483A P:5.605W PF:0.5253 Freq:49.99Hz Lamp Flux:182.05lx1 lm		
NAME: CARMEL S-830-55°	TYPE:Outdoor Light	SERIAL No.:
SPEC.:3000K	DIM.: L80mm*W80mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 32.48 lm/W			
MODEL	3000K	I <sub>max</sub> (cd)	250.1	S/MH(C0/180)	0.83
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	0.93
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	182.05	η UP,DN(C0-180)	0.0,47.4
NOMINAL FLUX(lm)	182.051	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.85

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-09-18

γ Range: 0 - 90DEG  
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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
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	224.9	218.5	209.3	205.7	208.6	212.3	220.1	225.4	0- 10	21.83	21.83	12,12
20	179.2	171.3	168.7	167.8	176.4	185.4	193.3	189.7	10- 20	55.38	77.22	42.4,42.4
30	117.2	103.7	98.11	99.19	102.5	129.4	139.9	135.0	20- 30	68.74	146.0	80.2,80.2
40	18.92	16.90	15.02	8.559	6.240	6.987	9.928	17.51	30- 40	29.45	175.4	96.4,96.4
50	2.408	2.189	1.871	1.634	1.548	1.692	2.053	2.438	40- 50	4.528	179.9	98.8,98.8
60	1.069	0.9329	0.8148	0.6687	0.6180	0.6898	0.8810	1.054	50- 60	1.193	181.1	99.5,99.5
70	0.4801	0.4251	0.3680	0.2785	0.2385	0.2838	0.3454	0.4457	60- 70	0.5551	181.7	99.8,99.8
80	0.2347	0.1984	0.1644	0.1009	0.0824	0.1179	0.1356	0.2130	70- 80	0.2612	181.9	99.9,99.9
90	0.0955	0.0676	0.0197	0.0176	0.0130	0.0131	0.0088	0.0724	80- 90	0.1009	182.1	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): 178.76 lm

%lum = 98.2%

%lamp = 98.2%

Conical surface Flux(120deg): 181.13 lm

%lum = 99.5%

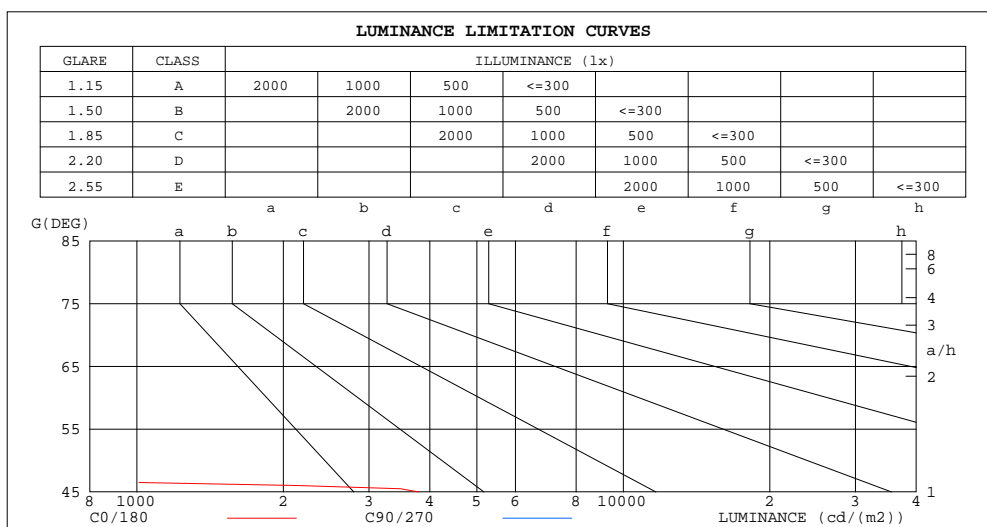
%lamp = 99.5%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-09-18

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:220.9V I:0.0483A P:5.605W PF:0.5253 Freq:49.99Hz Lamp Flux:182.05lx1 lm		
NAME: CARMEL S-830-55°	TYPE:Outdoor Light	SERIAL No.:
SPEC.:3000K	DIM.: L80mm*W80mm*H105mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	294	184
80	213	148
75	207	153
70	221	168
65	264	199
60	336	254
55	441	336
50	589	454
45	3792	616

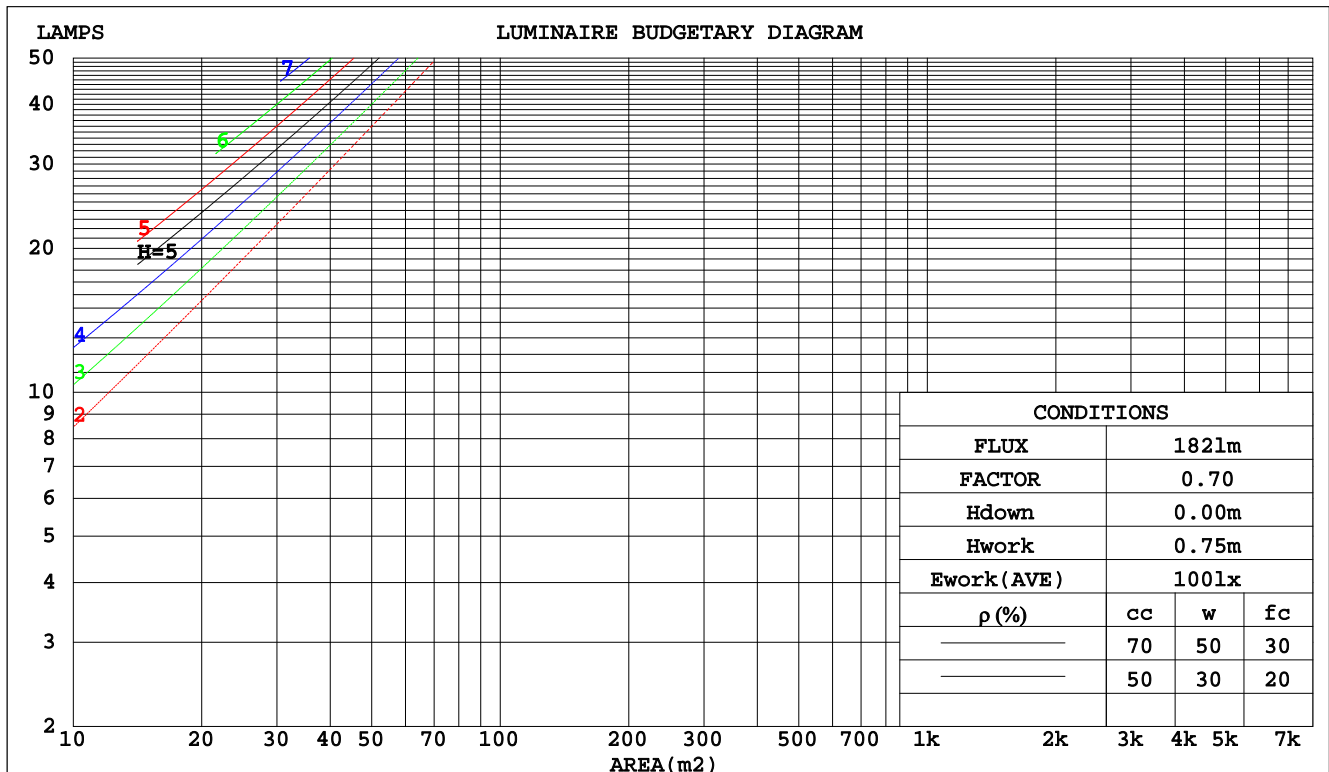
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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NAME: CARMEL S-830-55°	TYPE:Outdoor Light	SERIAL No.:
SPEC.:3000K	DIM.: L80mm*W80mm*H105mm	
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	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.83
4.0	.91	.86	.82	.90	.86	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.78
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.81	.76	.72	.80	.75	.71	.79	.74	.71	.78	.73	.70	.76	.73	.70	.68
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.65
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.61
9.0	.69	.63	.60	.68	.63	.59	.67	.63	.59	.67	.62	.59	.66	.62	.59	.58
10.0	.65	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.63	.59	.56	.54



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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

## WEC AND CCEC

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SPEC.:3000K	DIM.: L80mm*W80mm*H105mm	
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	.171	.097	.031	.164	.094	.030	.152	.087	.028	.140	.081	.026	.129	.075	.024		
2.0	.163	.089	.027	.157	.086	.027	.146	.081	.025	.137	.077	.024	.128	.072	.023		
3.0	.154	.082	.025	.150	.080	.024	.141	.076	.023	.133	.073	.022	.125	.069	.021		
4.0	.147	.076	.022	.143	.075	.022	.135	.072	.021	.128	.069	.021	.121	.066	.020		
5.0	.140	.071	.021	.137	.070	.020	.130	.068	.020	.124	.065	.019	.118	.063	.019		
6.0	.134	.067	.019	.131	.066	.019	.125	.064	.019	.119	.062	.018	.114	.060	.018		
7.0	.128	.063	.018	.125	.062	.018	.120	.061	.018	.115	.059	.017	.111	.058	.017		
8.0	.123	.060	.017	.120	.059	.017	.116	.058	.017	.111	.056	.016	.107	.055	.016		
9.0	.118	.057	.016	.116	.056	.016	.112	.055	.016	.108	.054	.015	.104	.053	.015		
10.0	.113	.054	.015	.111	.054	.015	.108	.053	.015	.104	.052	.015	.101	.051	.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	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.074	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.061	.105	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.019	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.061	.039	.023	.036	.023	.014	.012	.008	.004	
9.0	.098	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.094	.054	.028	.081	.047	.024	.056	.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:2020-09-18

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.0483A P:5.605W PF:0.5253 Freq:49.99Hz Lamp Flux:182.05lx1 lm										
NAME: CARMEL S-830-55°					TYPE:Outdoor Light			SERIAL No.:		
SPEC.:3000K					DIM.: L80mm*W80mm*H105mm					
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	18.1	19.0	18.4	19.2	19.4	16.5	17.4	16.7	17.6	17.7
3H	18.0	18.8	18.2	19.0	19.2	16.3	17.2	16.6	17.4	17.6
4H	17.9	18.7	18.2	18.9	19.1	16.3	17.1	16.5	17.3	17.5
6H	17.8	18.6	18.1	18.8	19.1	16.2	16.9	16.5	17.2	17.4
8H	17.8	18.5	18.1	18.8	19.0	16.2	16.9	16.5	17.1	17.4
12H	17.8	18.4	18.1	18.7	19.0	16.1	16.8	16.4	17.1	17.3
4H 2H	17.9	18.7	18.2	18.9	19.1	16.3	17.0	16.5	17.3	17.5
3H	17.7	18.4	18.1	18.7	19.0	16.1	16.8	16.4	17.1	17.3
4H	17.7	18.3	18.0	18.6	18.9	16.0	16.6	16.4	16.9	17.3
6H	17.6	18.1	18.0	18.5	18.8	16.0	16.5	16.3	16.8	17.2
8H	17.6	18.0	17.9	18.4	18.8	15.9	16.4	16.3	16.8	17.1
12H	17.5	18.0	17.9	18.3	18.7	15.9	16.3	16.3	16.7	17.1
8H 4H	17.5	18.0	17.9	18.4	18.7	15.9	16.4	16.3	16.8	17.1
6H	17.5	17.9	17.9	18.3	18.7	15.8	16.2	16.3	16.6	17.0
8H	17.4	17.8	17.9	18.2	18.6	15.8	16.1	16.2	16.6	17.0
12H	17.4	17.7	17.8	18.1	18.6	15.7	16.1	16.2	16.5	17.0
12H 4H	17.5	17.9	17.9	18.3	18.7	15.9	16.3	16.3	16.7	17.1
6H	17.4	17.8	17.8	18.2	18.6	15.8	16.1	16.2	16.6	17.0
8H	17.4	17.7	17.8	18.1	18.6	15.7	16.1	16.2	16.5	17.0
Variations with the observer position at spacings:										
S = 1.0H	+ 4.8 / - 7.7					+ 3.2 / - 6.6				
1.5H	+ 6.7 / - 7.7					+ 4.1 / - 5.6				
2.0H	+ 8.8 / - 4.7					+ 2.0 / - 1.4				

CIE Pub.117, 182.1 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -5.9$ )

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.0483A P:5.605W PF:0.5253 Freq:49.99Hz Lamp Flux:182.05lx1 lm		
NAME: CARMEL S-830-55°	TYPE:Outdoor Light	SERIAL No.:
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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) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	79	76
0.80	96	91	87	96	91	87	95	90	87	83
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	103	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	105	98
5.00	115	113	112	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

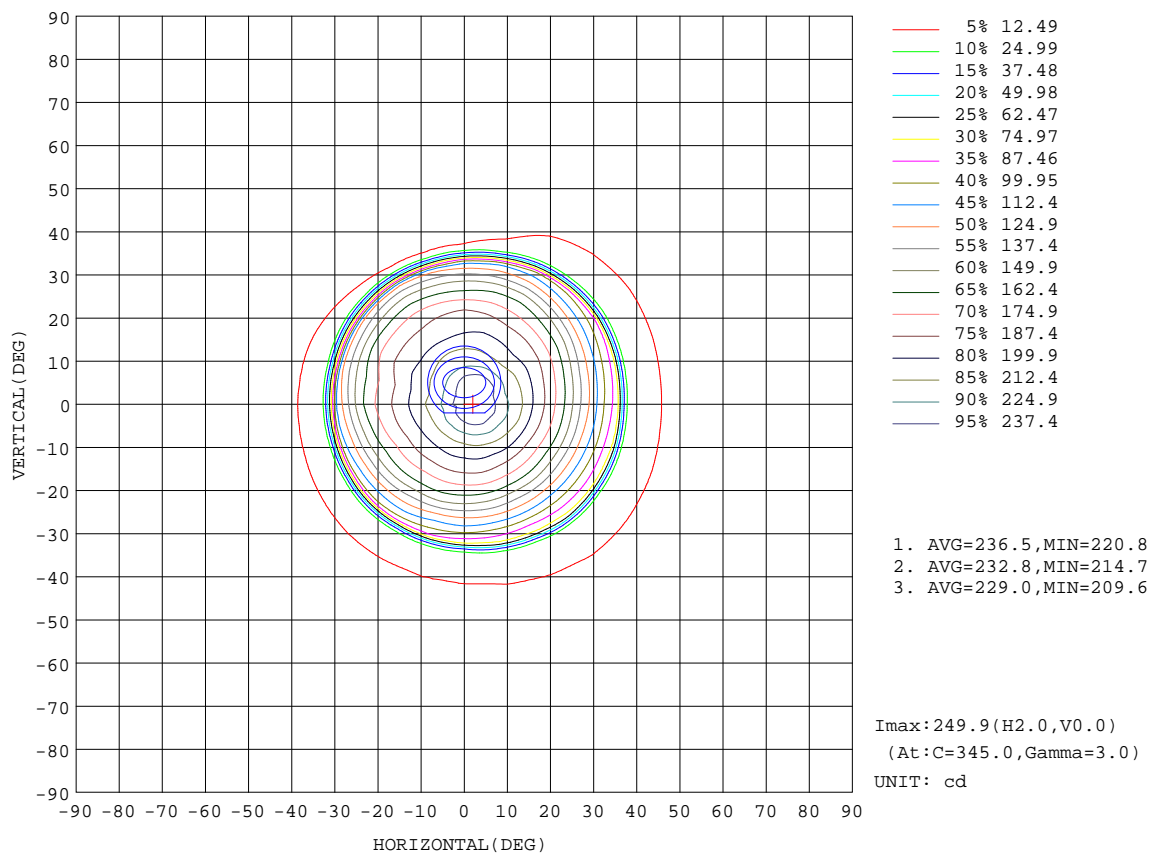
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ISOCANDELA DIAGRAM

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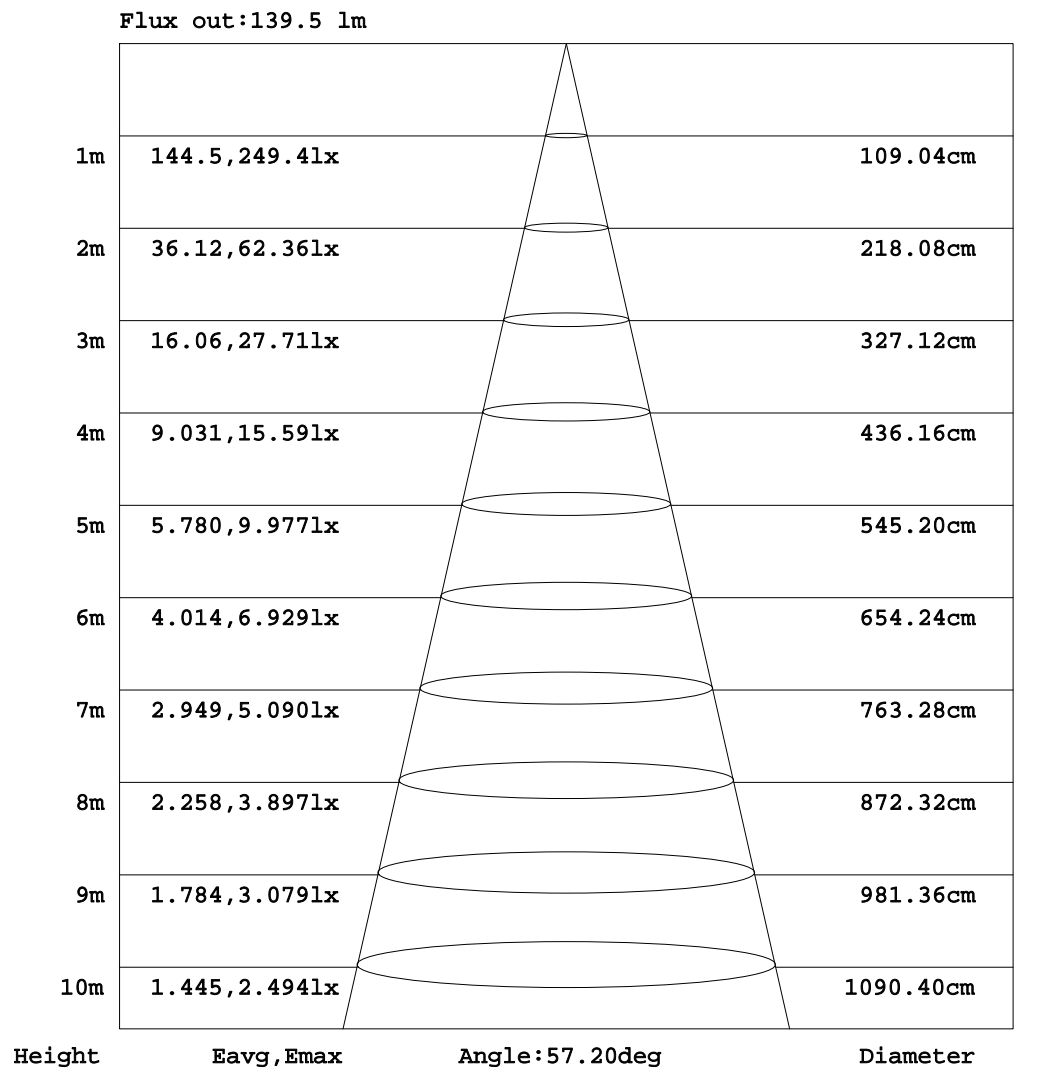


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AAI Figure

Test:U:220.9V I:0.0483A P:5.605W PF:0.5253 Freq:49.99Hz Lamp Flux:182.05lx 1m		
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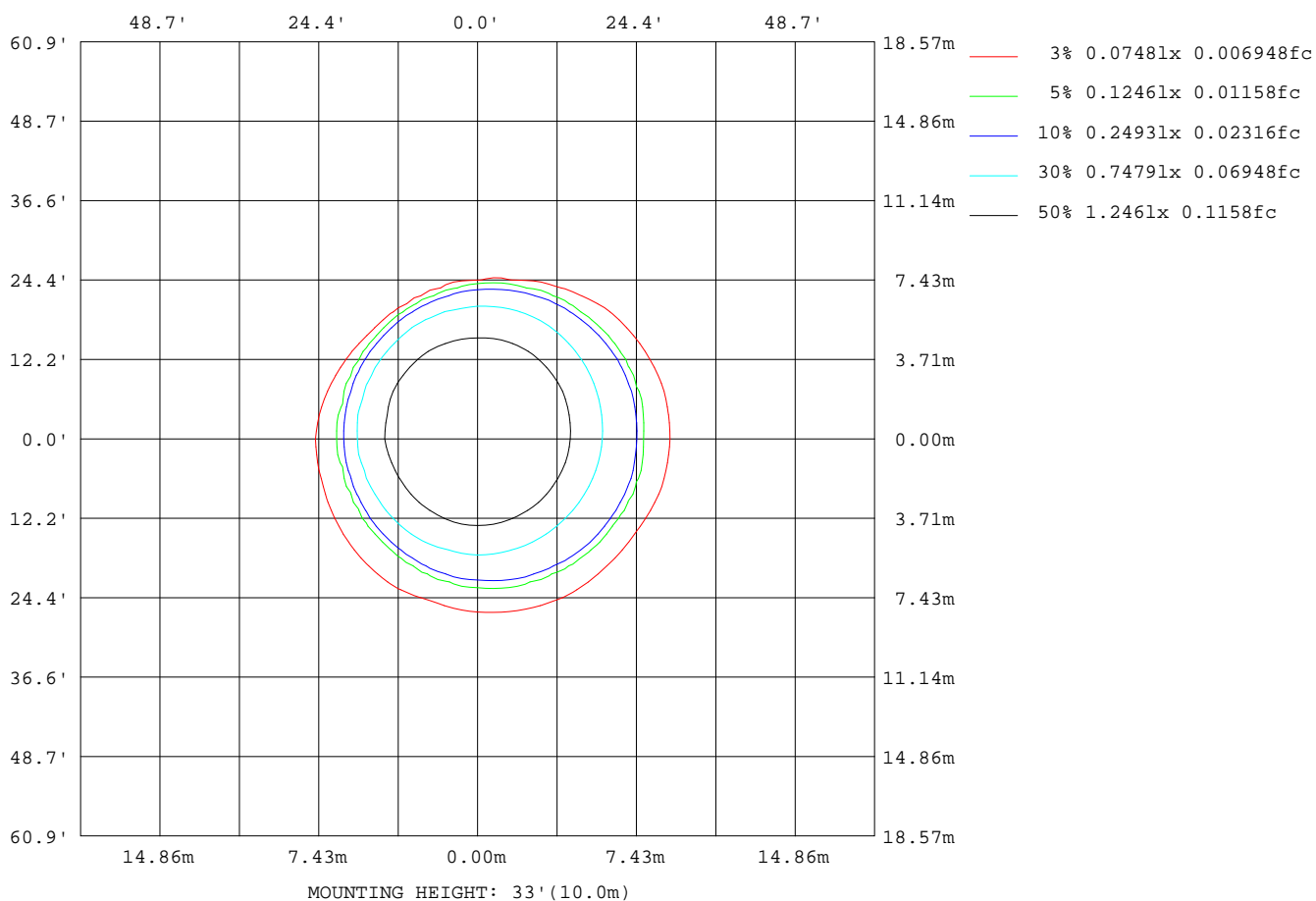
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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### LED Avg.L Report

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SPEC.:3000K	DIM.: L80mm*W80mm*H105mm	
MFR.: NEKO LIGHTING AG		

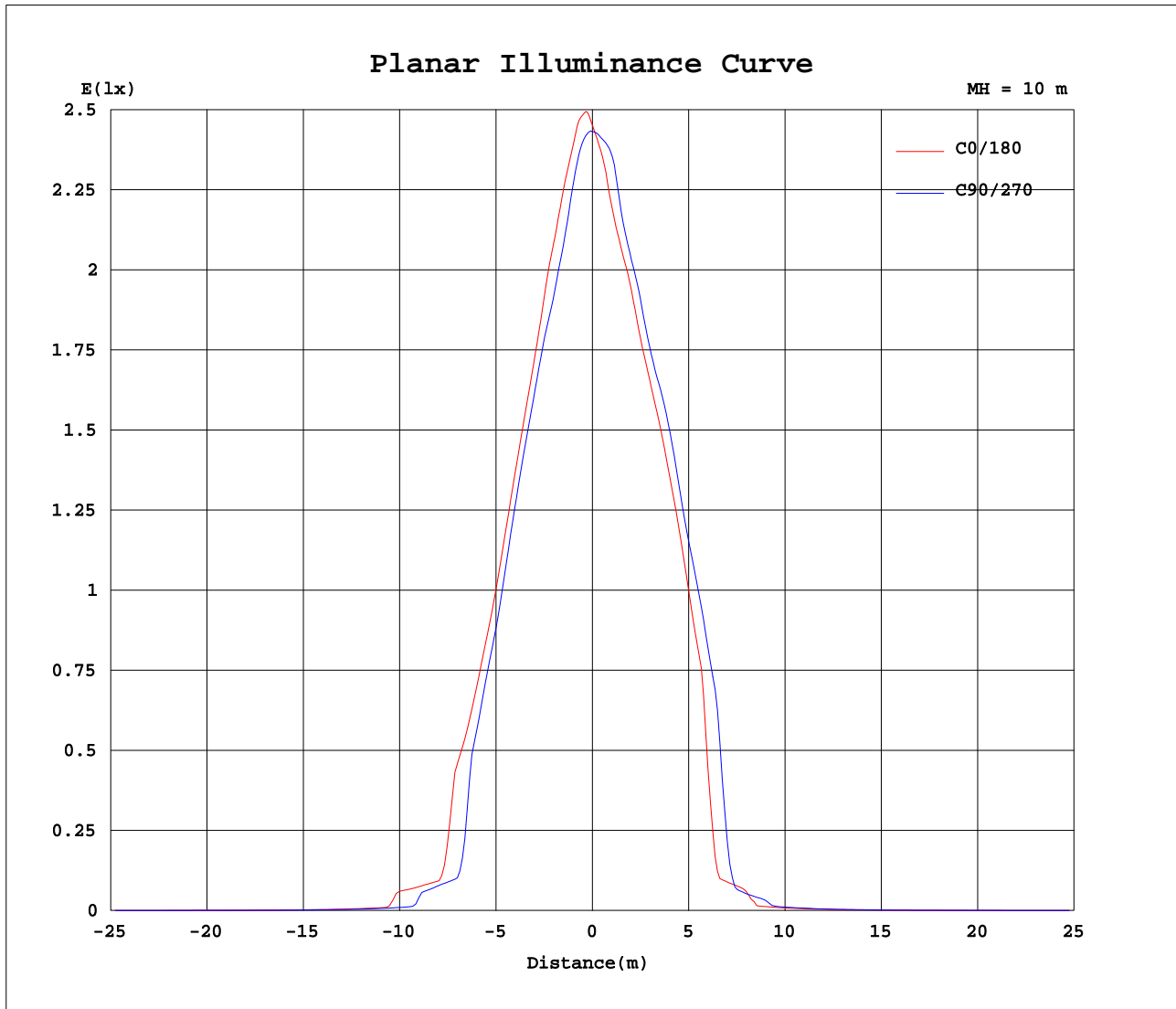
AvgL	cd/m2
L_0~180(65)av	200
L_0~180(75)av	147
L_0~180(85)av	169
L_90~270(65)av	201
L_90~270(75)av	144
L_90~270(85)av	161
L_45(65)av	198
L_45(75)av	147
L_45(85)av	166

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-09-18

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
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: Jason  
Test Date: 2020-09-18

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [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:5.850m [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:5.850m [K=1.0000]
Remarks:

```