

**PORTOFINO A-830-Z-60**

Light Output Ratio:	100.0%	
Luminaire Power:	10.64 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.55	fine grid method.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2020-06-28

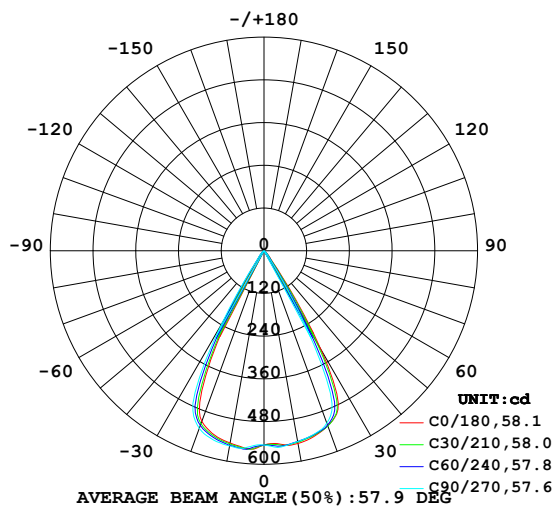
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

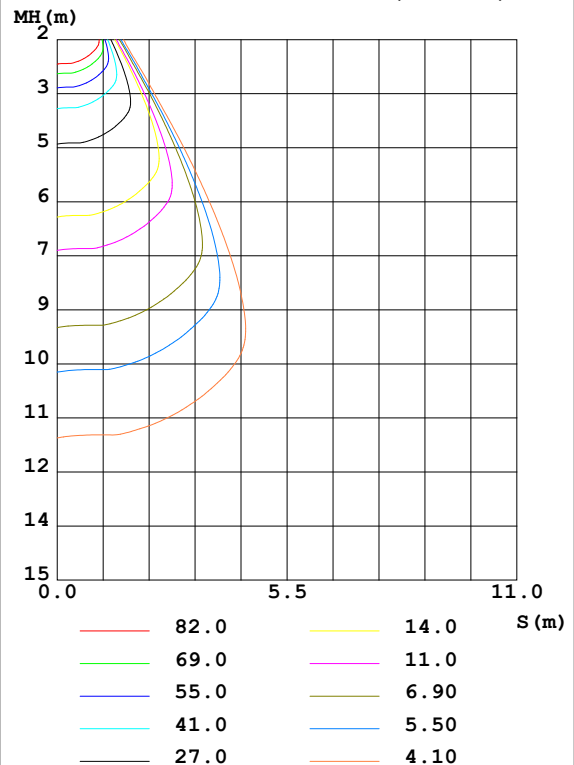
Test:U:221.0V I:0.0547A P:10.64W PF:0.8797 Freq:60.07Hz Lamp Flux:454.266x1 lm		
NAME: PORTOFINO A-830-Z-60	TYPE: Recessed Ground Light	SERIAL No.:
SPEC.: 3000K	DIM.: $\varnothing$ 70mm*H135mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 42.68 lm/W			
MODEL	3000K	I <sub>max</sub> (cd)	560.2	S/MH (C0/180)	0.78
NOMINAL POWER (W)	11	LOR (%)	100.0	S/MH (C90/270)	0.84
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	454.27	$\eta$ UP, DN (C0-180)	0.0, 49.6
NOMINAL FLUX (lm)	454.266	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 50.4
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.55

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  
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Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
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Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	549.5	544.6	544.2	548.5	548.2	552.4	556.7	555.7	0- 10	52.71	52.71	11.6,11.6
20	523.3	523.4	515.6	514.0	510.2	519.3	531.0	523.5	10- 20	152.3	205.0	45.1,45.1
30	319.9	274.1	187.9	160.2	147.4	183.9	243.6	275.2	20- 30	190.0	395.0	87,87
40	27.35	22.61	18.17	17.50	17.48	19.52	21.85	25.17	30- 40	45.65	440.6	97,97
50	8.049	6.689	5.273	4.800	4.898	5.756	7.009	7.347	40- 50	9.291	449.9	99,99
60	1.908	1.404	1.033	0.9808	1.080	1.281	1.814	1.751	50- 60	2.969	452.9	99.7,99.7
70	0.6715	0.5491	0.4710	0.4302	0.4838	0.5519	0.6495	0.6615	60- 70	0.8472	453.7	99.9,99.9
80	0.3044	0.2244	0.1973	0.1558	0.1648	0.2182	0.2470	0.2880	70- 80	0.3981	454.1	100,100
90	0.0847	0.0480	0.0372	0.0373	0.0304	0.0305	0.0416	0.0659	80- 90	0.1281	454.3	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): 446.52 lm

%lum = 98.3%

%lamp = 98.3%

Conical surface Flux(120deg): 452.89 lm

%lum = 99.7%

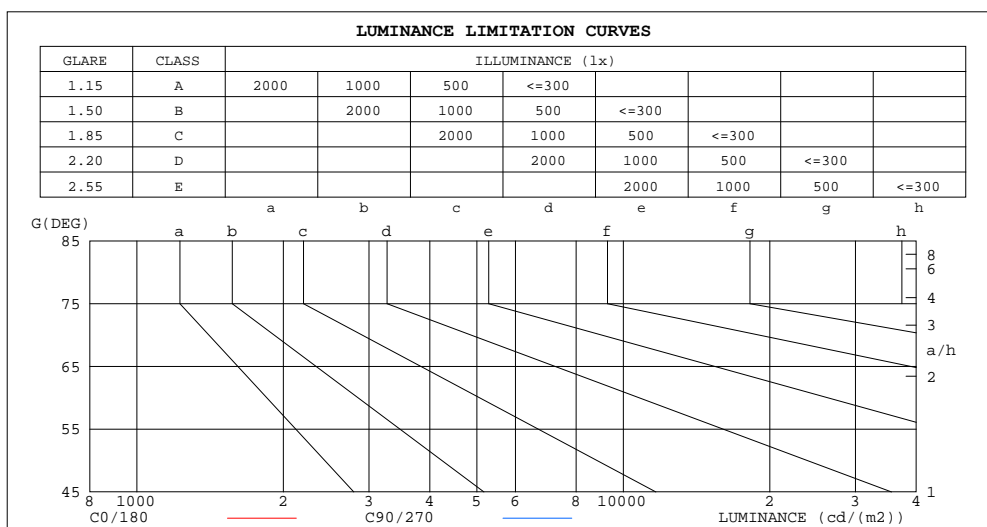
%lamp = 99.7%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-06-28

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
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:221.0V I:0.0547A P:10.64W PF:0.8797 Freq:60.07Hz Lamp Flux:454.266x1 lm		
NAME: PORTOFINO A-830-Z-60	TYPE: Recessed Ground Light	SERIAL No.:
SPEC.: 3000K	DIM.: $\phi 70\text{mm} \times H135\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	19	10
80	16	10
75	16	11
70	18	13
65	21	14
60	35	19
55	70	38
50	115	75
45	194	123

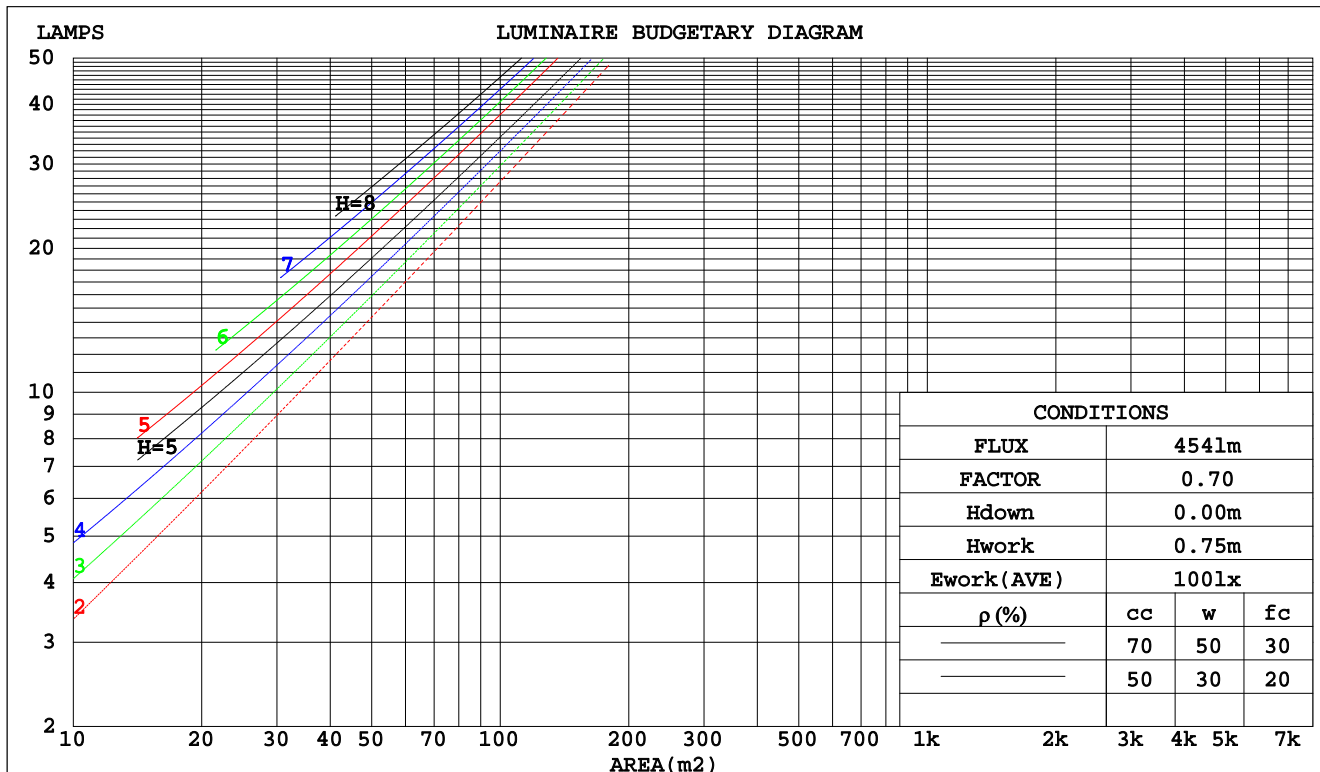
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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NAME: PORTOFINO A-830-Z-60	TYPE: Recessed Ground Light	SERIAL No.:
SPEC.: 3000K	DIM.: $\phi$ 70mm*H135mm	
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	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	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.04	1.01	.98	1.03	.99	.96	.99	.97	.94	.97	.94	.92	.94	.92	.90	.89
3.0	.98	.94	.90	.97	.93	.89	.94	.91	.88	.92	.89	.86	.90	.87	.85	.84
4.0	.92	.87	.83	.91	.87	.83	.89	.85	.82	.87	.84	.81	.85	.83	.80	.79
5.0	.87	.82	.78	.86	.81	.78	.85	.80	.77	.83	.79	.76	.81	.78	.76	.74
6.0	.82	.77	.73	.82	.77	.73	.80	.76	.72	.79	.75	.72	.78	.74	.71	.70
7.0	.78	.73	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.74	.70	.67	.66
8.0	.74	.69	.65	.74	.68	.65	.73	.68	.64	.72	.67	.64	.71	.67	.64	.63
9.0	.70	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.67	.63	.61	.59
10.0	.67	.62	.58	.67	.61	.58	.66	.61	.58	.65	.61	.58	.64	.60	.58	.56



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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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NAME: PORTOFINO A-830-Z-60	TYPE: Recessed Ground Light	SERIAL No.:
SPEC.: 3000K	DIM.: $\varnothing$ 70mm*H135mm	
MFR.: NEKO LIGHTING AG		

$\rho_{cc}$	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	.166	.095	.030	.160	.091	.029	.147	.084	.027	.136	.078	.025	.125	.073	.023		
2.0	.158	.087	.027	.152	.084	.026	.142	.079	.025	.132	.074	.023	.123	.070	.022		
3.0	.150	.080	.024	.145	.078	.023	.136	.074	.022	.128	.070	.022	.120	.067	.021		
4.0	.143	.074	.022	.139	.073	.021	.131	.069	.021	.124	.066	.020	.117	.064	.019		
5.0	.136	.069	.020	.132	.068	.020	.126	.066	.019	.120	.063	.019	.114	.061	.018		
6.0	.130	.065	.019	.127	.064	.018	.121	.062	.018	.116	.060	.018	.111	.058	.017		
7.0	.124	.061	.017	.122	.061	.017	.117	.059	.017	.112	.057	.017	.107	.056	.016		
8.0	.119	.058	.016	.117	.058	.016	.112	.056	.016	.108	.055	.016	.104	.053	.016		
9.0	.115	.055	.015	.112	.055	.015	.108	.054	.015	.105	.052	.015	.101	.051	.015		
10.0	.110	.053	.015	.108	.052	.015	.105	.051	.014	.101	.050	.014	.098	.049	.014		

$\rho_{cc}$	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	.170	.157	.146	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.091	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.131	.099	.074	.112	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.104	.075	.053	.072	.052	.038	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.045	.068	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.102	.063	.037	.087	.055	.032	.061	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.097	.058	.032	.083	.050	.028	.058	.035	.020	.034	.021	.012	.011	.007	.004	
10.0	.092	.054	.028	.079	.047	.025	.055	.033	.017	.032	.019	.010	.010	.006	.003	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
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:221.0V I:0.0547A P:10.64W PF:0.8797 Freq:60.07Hz Lamp Flux:454.266x1 lm										
NAME: PORTOFINO A-830-Z-60					TYPE: Recessed Ground Light			SERIAL No.:		
SPEC.: 3000K					DIM.: $\phi$ 70mm*H135mm					
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	5.9	6.7	6.1	6.9	7.1	1.6	2.5	1.9	2.7	2.8
3H	5.7	6.5	6.0	6.7	6.9	1.5	2.3	1.8	2.5	2.7
4H	5.6	6.4	5.9	6.6	6.8	1.4	2.2	1.7	2.4	2.6
6H	5.6	6.3	5.8	6.5	6.7	1.4	2.1	1.6	2.3	2.5
8H	5.5	6.2	5.8	6.4	6.7	1.3	2.0	1.6	2.2	2.5
12H	5.5	6.1	5.8	6.4	6.7	1.3	1.9	1.6	2.2	2.5
4H 2H	5.6	6.4	5.9	6.6	6.8	1.4	2.2	1.7	2.4	2.6
3H	5.5	6.1	5.8	6.4	6.7	1.3	1.9	1.6	2.2	2.5
4H	5.4	6.0	5.7	6.3	6.6	1.2	1.8	1.6	2.1	2.4
6H	5.3	5.8	5.7	6.1	6.5	1.1	1.7	1.5	2.0	2.3
8H	5.2	5.7	5.6	6.1	6.4	1.1	1.6	1.5	1.9	2.3
12H	5.2	5.6	5.6	6.0	6.4	1.0	1.5	1.4	1.9	2.2
8H 4H	5.2	5.7	5.6	6.1	6.4	1.1	1.6	1.5	1.9	2.3
6H	5.1	5.5	5.6	5.9	6.3	1.0	1.4	1.4	1.8	2.2
8H	5.1	5.4	5.5	5.9	6.3	1.0	1.3	1.4	1.7	2.2
12H	5.0	5.3	5.5	5.8	6.3	0.9	1.2	1.4	1.6	2.1
12H 4H	5.2	5.6	5.6	6.0	6.4	1.0	1.5	1.4	1.8	2.2
6H	5.1	5.4	5.5	5.9	6.3	0.9	1.3	1.4	1.7	2.2
8H	5.0	5.3	5.5	5.8	6.3	0.9	1.2	1.4	1.6	2.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.7 / - 6.4					+ 2.3 / - 6.6				
1.5H	+ 5.4 / - 5.5					+ 3.3 / - 4.7				
2.0H	+ 5.3 / - 5.9					+ 4.5 / - 5.2				

CIE Pub.117, 454.3 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -2.7$ )

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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:221.0V I:0.0547A P:10.64W PF:0.8797 Freq:60.07Hz Lamp Flux:454.266x1 lm		
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SPEC.: 3000K	DIM.: $\varnothing 70\text{mm} \times H135\text{mm}$	
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) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	80	89	84	80	88	83	80	77
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	96	92	100	95	92	98	95	91	88
1.25	105	100	97	104	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	100	98	94
2.00	109	106	103	108	104	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

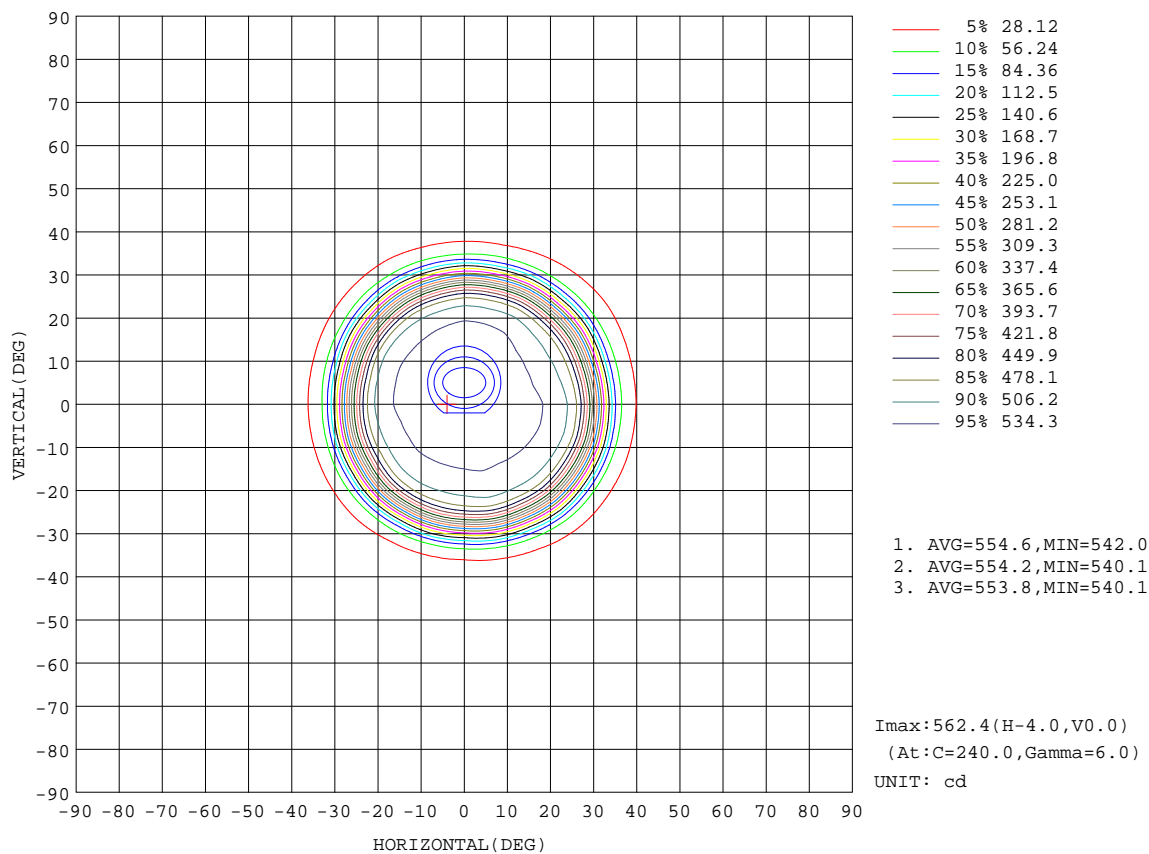
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ISOCANDELA DIAGRAM

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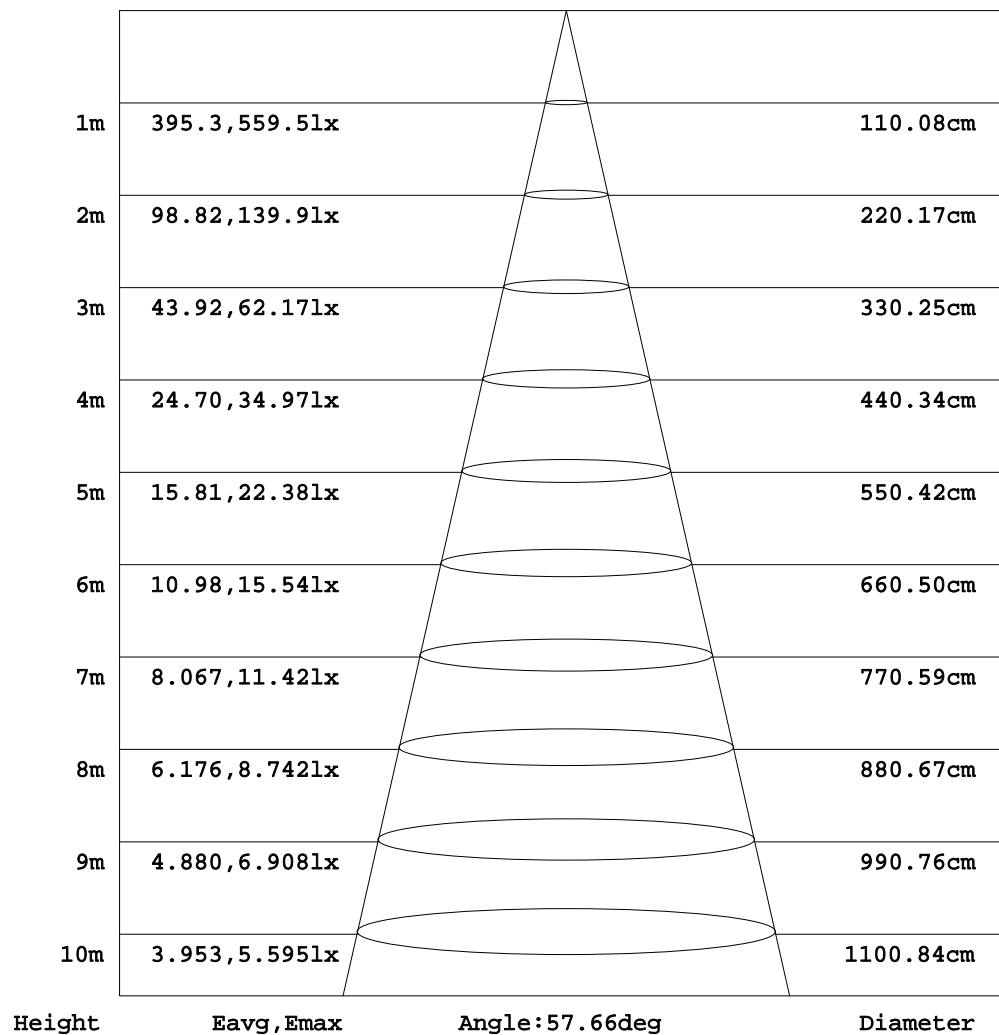
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**AAI Figure**

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Flux out: 381.5 lm



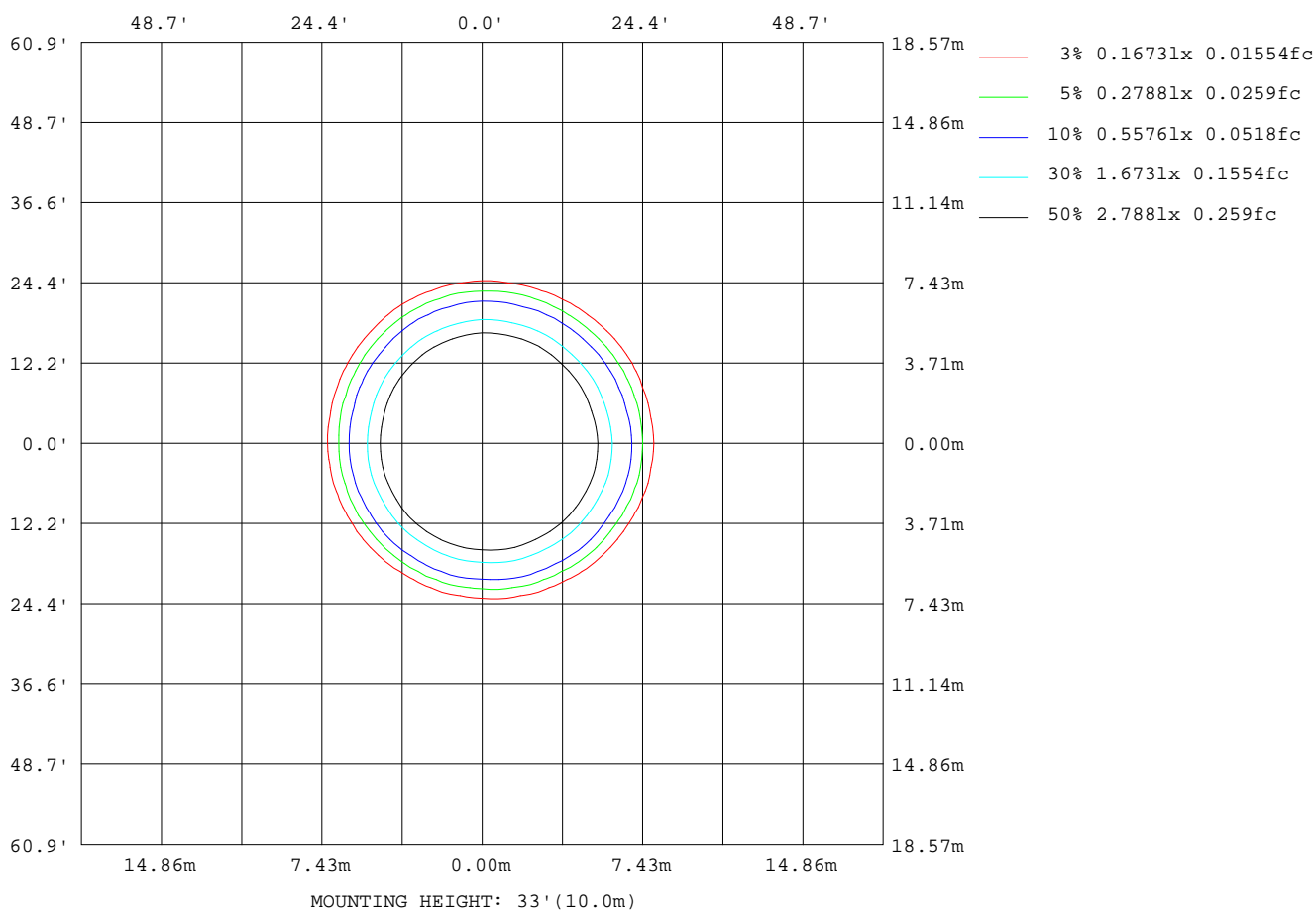
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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Test Distance: 5.850m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:221.0V I:0.0547A P:10.64W PF:0.8797 Freq:60.07Hz Lamp Flux:454.266x1 lm		
NAME: PORTOFINO A-830-Z-60	TYPE: Recessed Ground Light	SERIAL No.:
SPEC.: 3000K	DIM.: $\phi$ 70mm*H135mm	
MFR.: NEKO LIGHTING AG		

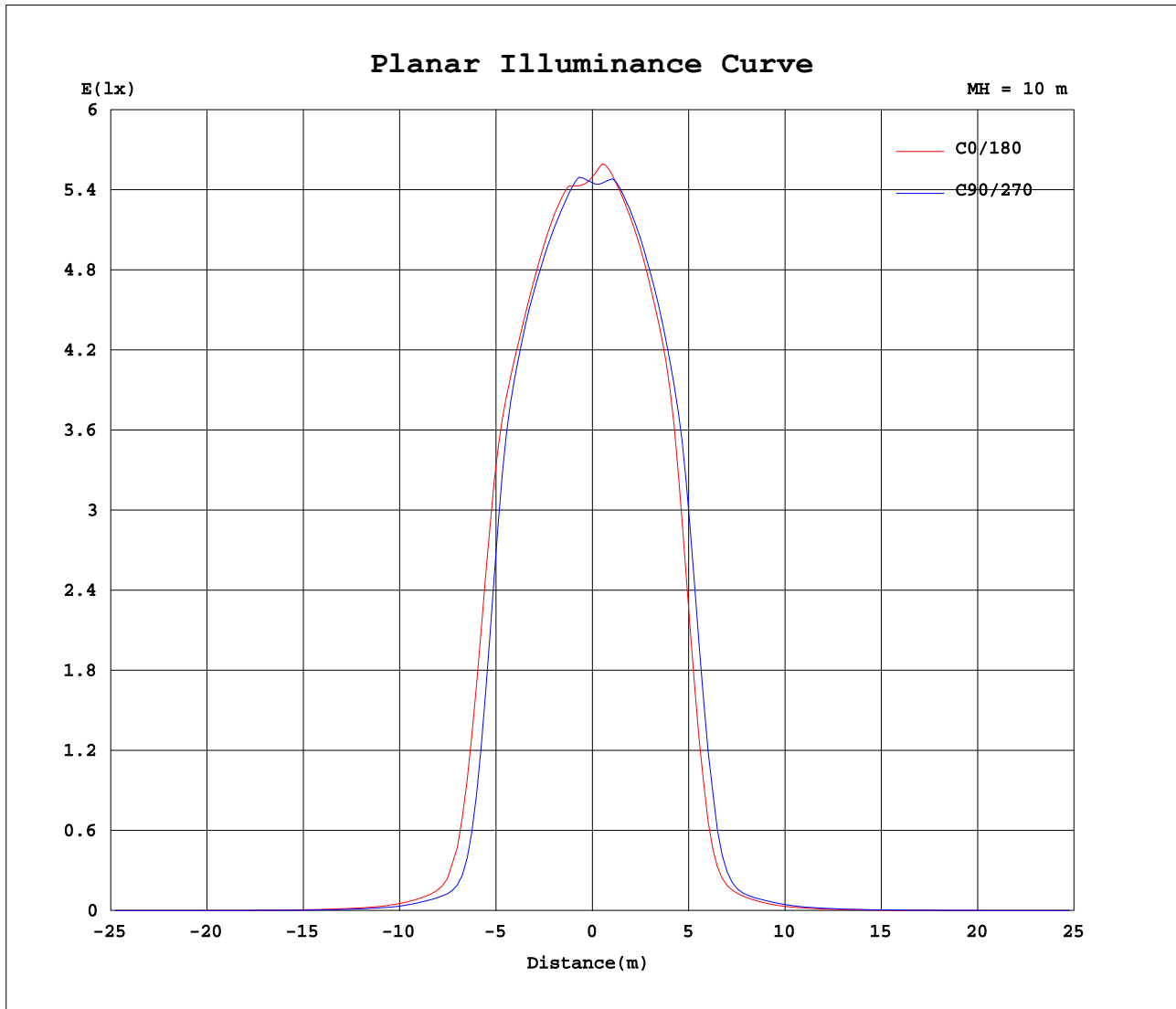
AvgL	cd/m2
L_0~180 (65) av	18
L_0~180 (75) av	13
L_0~180 (85) av	13
L_90~270 (65) av	18
L_90~270 (75) av	13
L_90~270 (85) av	12
L_45 (65) av	17
L_45 (75) av	13
L_45 (85) av	12

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2020-06-28

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
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: 2020-06-28

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
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: 1.0DEG
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: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

```