

PORTOFINO M-830-20°



Light Output Ratio:	100.0%	
Luminaire Power:	10.93 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: Jason
Test Date: 2020-06-28

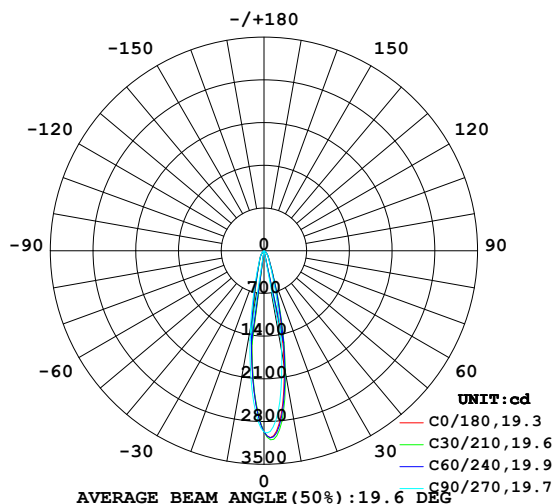
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

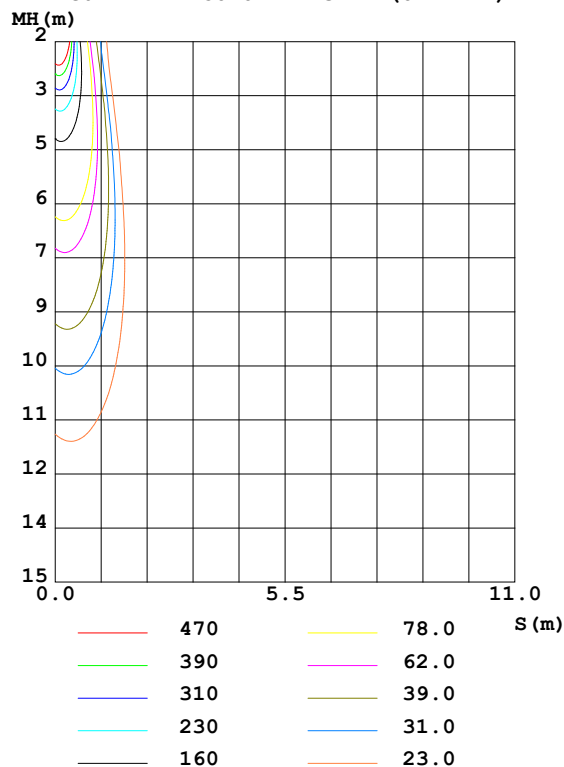
Test:U:221.0V I:0.0979A P:10.93W PF:0.5051 Freq:60.07Hz Lamp Flux:632.337x1 lm		
NAME: PORTOFINO M-830-20°	TYPE: Recessed Ground Light	SERIAL No.:
SPEC.: 3000K	DIM.: ϕ 105mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 57.86 lm/W			
MODEL	3000K	I _{max} (cd)	3105	S/MH (C0/180)	0.27
NOMINAL POWER (W)	11	LOR (%)	100.0	S/MH (C90/270)	0.31
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	632.34	η UP, DN (C0-180)	0.0, 55.6
NOMINAL FLUX (lm)	632.337	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 44.4
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	1900	2072	1661	1323	1040	1059	1279	1525	0- 10	203.2	203.2	32.1,32.1
20	438.8	474.9	381.9	318.2	258.8	253.0	290.8	358.9	10- 20	204.2	407.4	64.4,64.4
30	162.6	174.9	157.2	148.8	128.5	124.2	130.5	145.2	20- 30	100.00	507.4	80.2,80.2
40	87.15	93.47	83.76	73.06	36.25	54.91	69.21	77.39	30- 40	66.94	574.3	90.8,90.8
50	42.37	46.72	39.33	10.49	5.667	6.790	21.60	37.94	40- 50	35.22	609.6	96.4,96.4
60	20.05	21.90	6.832	2.547	1.541	2.003	4.828	17.00	50- 60	14.84	624.4	98.7,98.7
70	8.701	6.289	2.029	0.5317	0.0601	0.1905	1.430	4.751	60- 70	5.859	630.3	99.7,99.7
80	2.005	1.406	0.3916	0.0569	0.0345	0.0350	0.2320	0.9823	70- 80	1.710	632.0	99.9,99.9
90	0.4807	0.4043	0.1389	0.0417	0.0345	0.0350	0.0347	0.2589	80- 90	0.3596	632.3	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): 595.59 lm

%lum = 94.2%

%lamp = 94.2%

Conical surface Flux(120deg): 624.41 lm

%lum = 98.7%

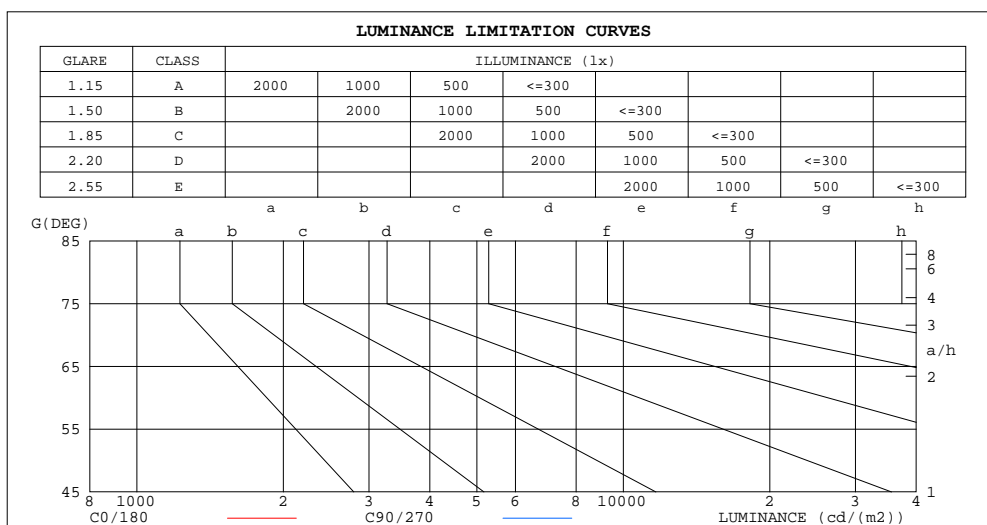
%lamp = 98.7%

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Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.: 3000K	DIM.: $\phi 105\text{mm} \times H105\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	58	18
80	71	14
75	109	26
70	157	36
65	201	56
60	247	84
55	303	183
50	406	374
45	535	508

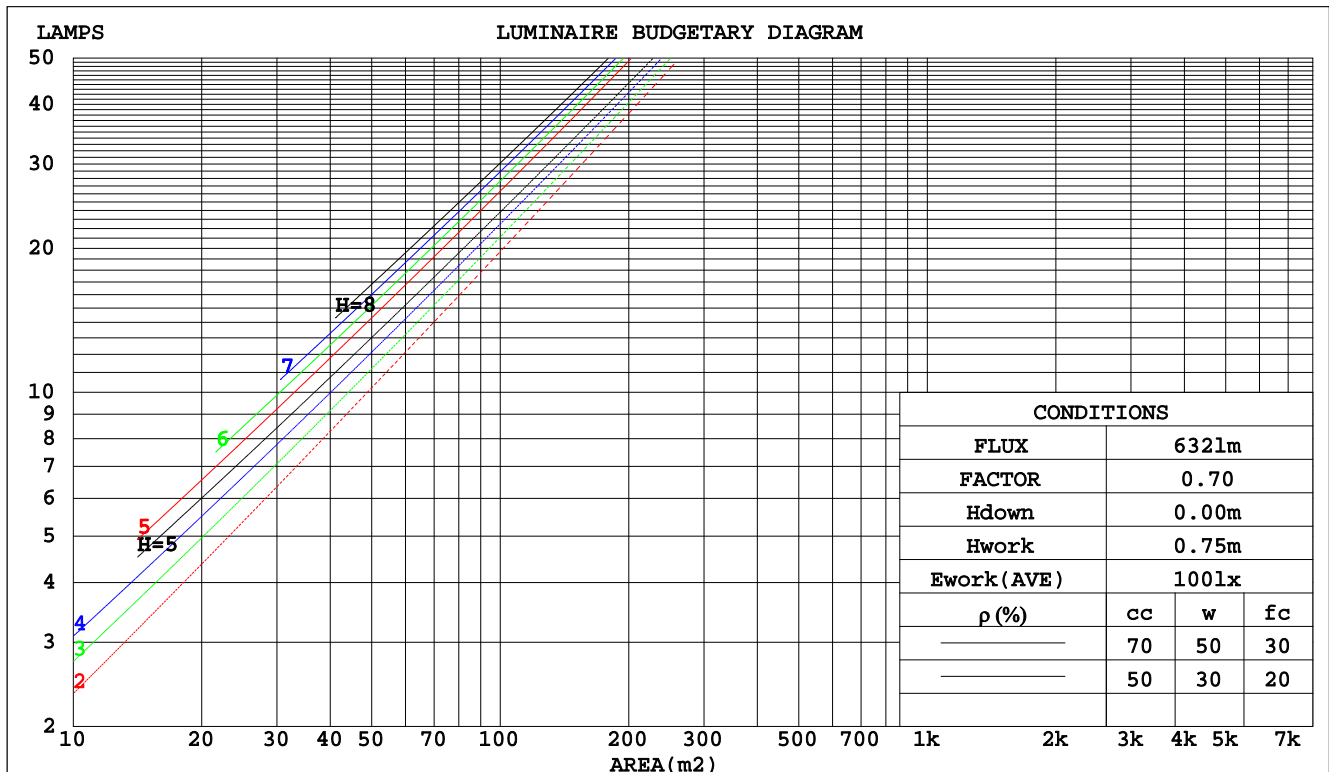
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	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	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.93	.92	.90
3.0	.00	.95	.92	.98	.94	.91	.96	.93	.90	.93	.91	.89	.91	.89	.87	.86
4.0	.95	.90	.87	.94	.89	.86	.92	.88	.85	.90	.87	.84	.88	.85	.83	.82
5.0	.90	.85	.82	.89	.85	.82	.88	.84	.81	.86	.83	.80	.85	.82	.79	.78
6.0	.86	.81	.78	.86	.81	.78	.84	.80	.77	.83	.79	.77	.82	.79	.76	.75
7.0	.83	.78	.75	.82	.78	.74	.81	.77	.74	.80	.76	.74	.79	.76	.73	.72
8.0	.80	.75	.72	.79	.75	.71	.78	.74	.71	.77	.74	.71	.76	.73	.71	.69
9.0	.77	.72	.69	.76	.72	.69	.76	.71	.69	.75	.71	.68	.74	.71	.68	.67
10.0	.74	.70	.66	.74	.69	.66	.73	.69	.66	.72	.69	.66	.72	.68	.66	.65



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WEC AND CCEC

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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	.157	.089	.028	.150	.086	.027	.138	.079	.025	.126	.073	.023	.116	.067	.022		
2.0	.148	.081	.025	.143	.079	.024	.132	.074	.023	.123	.069	.022	.114	.064	.020		
3.0	.140	.074	.022	.135	.072	.022	.126	.068	.021	.118	.065	.020	.110	.061	.019		
4.0	.131	.068	.020	.127	.067	.020	.120	.064	.019	.113	.061	.018	.107	.058	.018		
5.0	.124	.063	.018	.121	.062	.018	.114	.059	.017	.108	.057	.017	.103	.055	.016		
6.0	.117	.059	.017	.114	.058	.017	.109	.056	.016	.103	.054	.016	.099	.052	.015		
7.0	.111	.055	.016	.109	.054	.015	.104	.052	.015	.099	.051	.015	.095	.049	.014		
8.0	.106	.052	.015	.103	.051	.014	.099	.050	.014	.095	.048	.014	.091	.047	.014		
9.0	.101	.049	.014	.099	.048	.013	.095	.047	.013	.091	.046	.013	.088	.045	.013		
10.0	.096	.046	.013	.094	.046	.013	.091	.045	.013	.088	.044	.012	.085	.043	.012		

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.075	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.101	.075	.055	.070	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006	
7.0	.102	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005	
8.0	.096	.062	.039	.083	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.090	.057	.034	.078	.049	.030	.054	.035	.021	.031	.020	.013	.010	.007	.004	
10.0	.085	.052	.030	.074	.045	.026	.051	.032	.018	.030	.019	.011	.010	.006	.004	

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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: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.0979A P:10.93W PF:0.5051 Freq:60.07Hz Lamp Flux:632.337x1 lm											
NAME: PORTOFINO M-830-20°					TYPE:Recessed Ground Light			SERIAL No.:			
SPEC.:3000K					DIM.: φ105mm*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	2H	7.4	8.2	7.6	8.4	8.5	6.7	7.5	7.0	7.7	7.8
	3H	7.8	8.5	8.0	8.7	8.9	6.7	7.4	6.9	7.6	7.8
	4H	7.8	8.5	8.1	8.7	9.0	6.6	7.3	6.9	7.5	7.7
	6H	7.8	8.5	8.1	8.7	9.0	6.5	7.2	6.8	7.4	7.6
	8H	7.8	8.4	8.1	8.7	8.9	6.5	7.1	6.8	7.3	7.6
	12H	7.8	8.4	8.1	8.6	8.9	6.4	7.0	6.7	7.3	7.6
4H	2H	7.5	8.2	7.8	8.4	8.6	6.9	7.6	7.2	7.8	8.0
	3H	8.0	8.6	8.3	8.8	9.1	6.8	7.5	7.2	7.7	8.0
	4H	8.1	8.6	8.4	8.9	9.2	6.8	7.3	7.1	7.6	7.9
	6H	8.1	8.6	8.4	8.9	9.2	6.7	7.2	7.1	7.5	7.9
	8H	8.0	8.5	8.4	8.8	9.2	6.6	7.1	7.0	7.4	7.8
	12H	8.0	8.4	8.4	8.8	9.2	6.6	7.0	7.0	7.4	7.8
8H	4H	7.9	8.4	8.3	8.7	9.1	6.7	7.2	7.1	7.5	7.9
	6H	8.0	8.3	8.4	8.7	9.2	6.6	7.0	7.1	7.4	7.8
	8H	8.0	8.3	8.4	8.7	9.1	6.6	6.9	7.0	7.3	7.8
	12H	7.9	8.2	8.4	8.7	9.1	6.5	6.8	7.0	7.3	7.7
12H	4H	7.9	8.3	8.3	8.7	9.1	6.7	7.1	7.1	7.5	7.8
	6H	7.9	8.3	8.4	8.7	9.1	6.6	6.9	7.0	7.3	7.8
	8H	7.9	8.2	8.4	8.6	9.1	6.5	6.8	7.0	7.3	7.7
Variations with the observer position at spacings:											
S = 1.0H		+ 1.1 / - 1.7				+ 1.5 / - 3.0					
1.5H		+ 1.2 / - 1.2				+ 1.3 / - 1.5					
2.0H		+ 2.2 / - 1.7				+ 2.9 / - 6.2					

CIE Pub.117, 632.3 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -1.6$)

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γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
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Humidity: 58%
Test Distance: 5.850m [K=1.0000]
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UTILIZATION FACTORS TABLE

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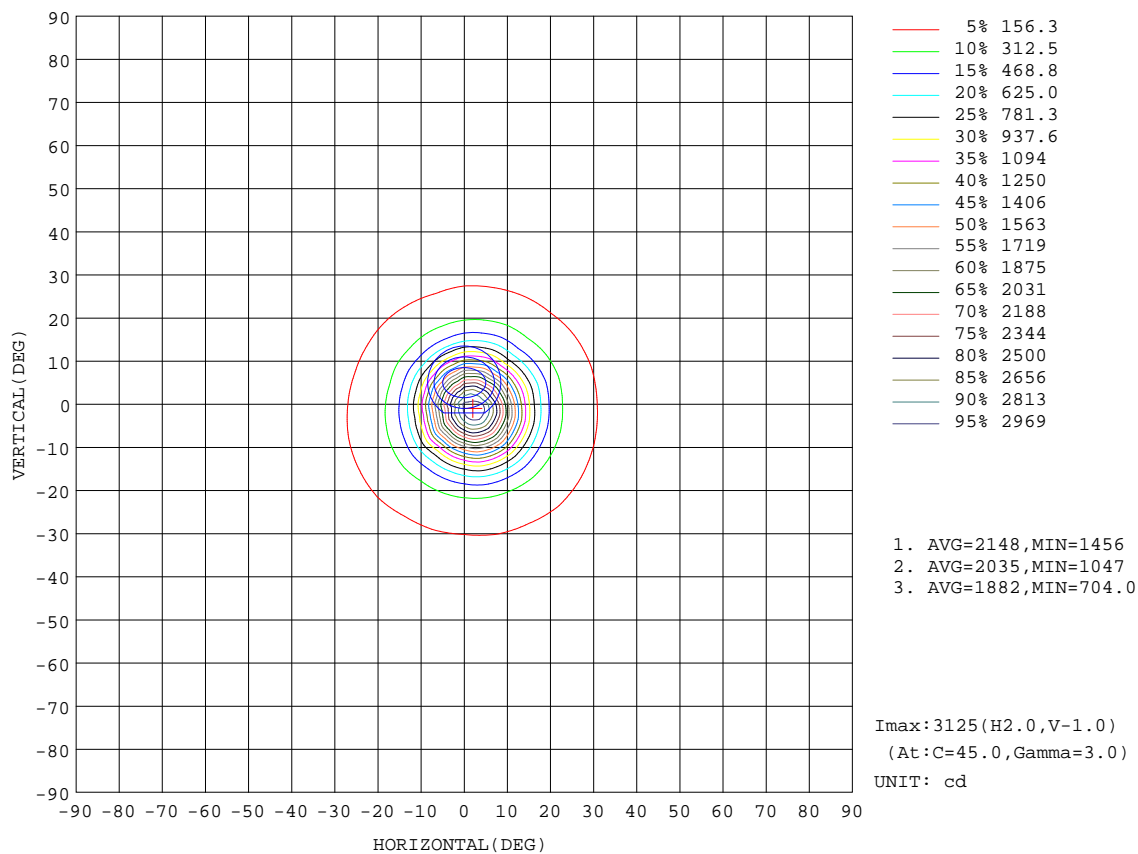
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	84	79	75	71
0.80	93	87	83	93	87	83	92	86	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	100	96	102	98	95	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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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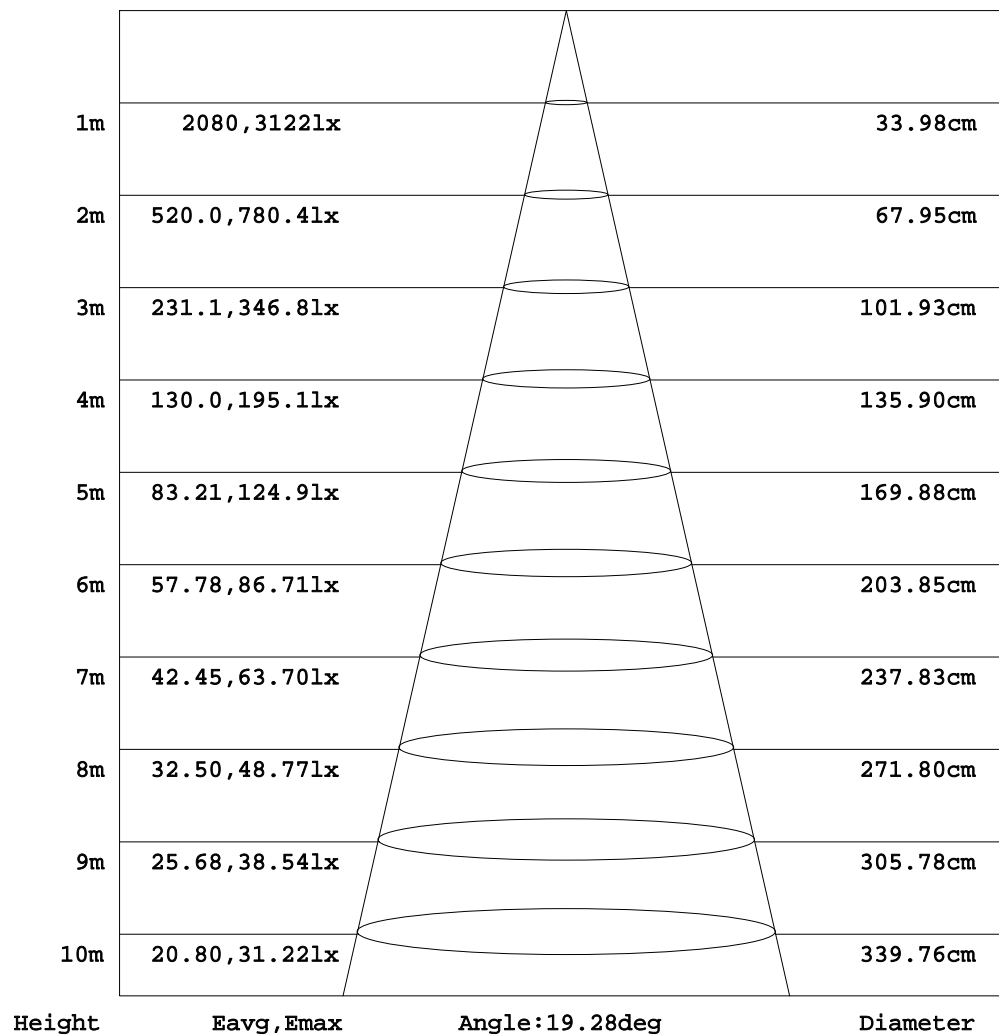
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AAI Figure

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Flux out: 203.2 lm



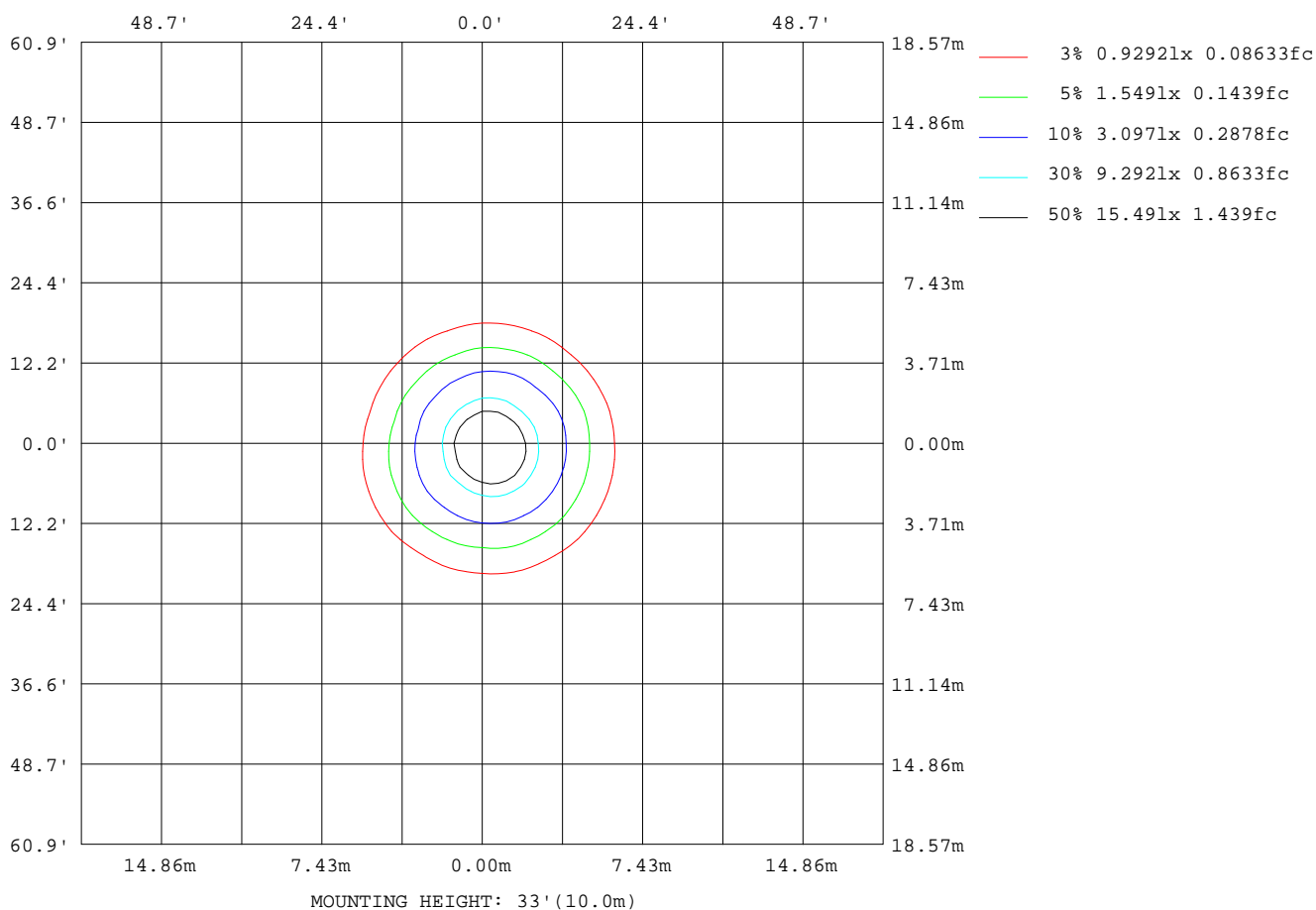
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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SPEC.: 3000K	DIM.: ϕ 105mm*H105mm	
MFR.: NEKO LIGHTING AG		

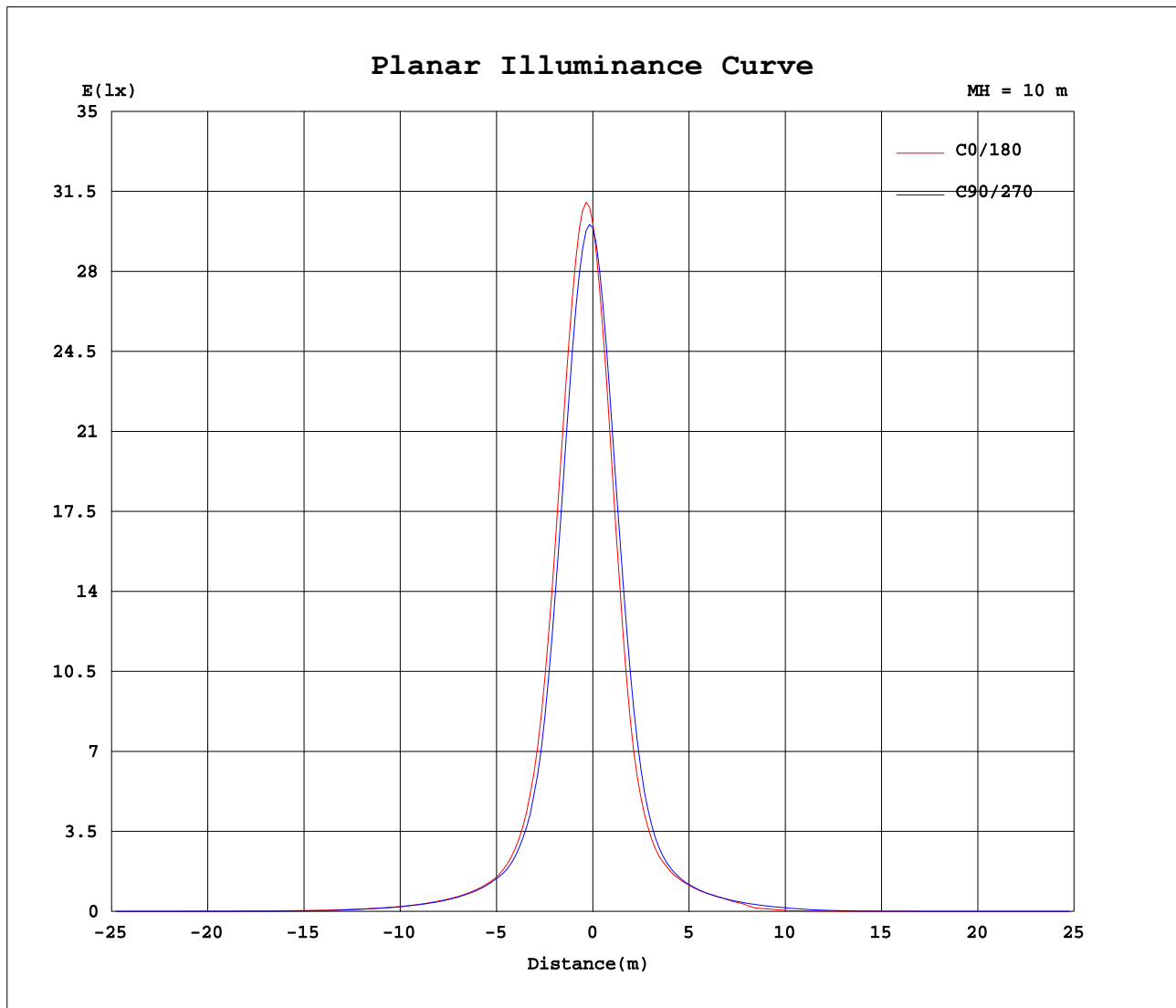
AvgL	cd/m2
L_0~180 (65) av	104
L_0~180 (75) av	54
L_0~180 (85) av	30
L_90~270 (65) av	46
L_90~270 (75) av	18
L_90~270 (85) av	13
L_45 (65) av	89
L_45 (75) av	33
L_45 (85) av	19

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

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:

Planar Illuminance Curve



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

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:

```

```

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:

```