

LED Track Light Series PORTOFINO S-830-35°



Light Output Ratio:	100.0%	
Luminaire Power:	4.247 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: 2020-06-29

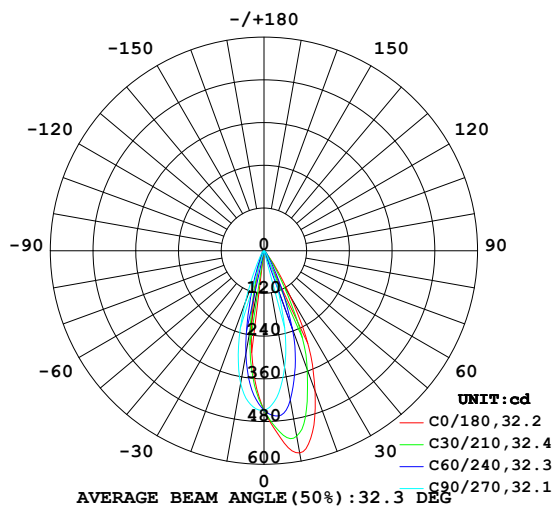
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

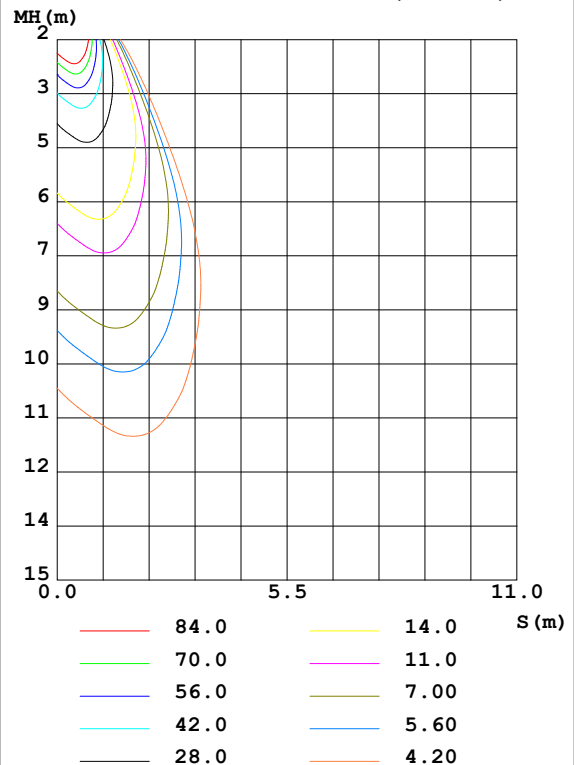
Test:U:221.0V I:0.0423A P:4.247W PF:0.4546 Freq:49.99Hz Lamp Flux:189.449x1 lm		
NAME: PORTOFINO S-830-35°	TYPE:Track Light Series	
SPEC.:3000K	DIM.: $\phi$ 66mm*H103mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 44.60 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	576.6	S/MH (C0/180)	0.31
NOMINAL POWER (W)	4	LOR (%)	100.0	S/MH (C90/270)	0.54
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	189.45	$\eta$ UP, DN (C0-180)	0.0, 51.1
NOMINAL FLUX (lm)	189.449	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 48.9
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  
Test Date: 2020-06-29

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	576.6	485.0	333.7	231.1	195.0	250.9	378.2	502.5	0- 10	39.06	39.06	20.6,20.6
20	419.3	305.4	112.7	42.36	31.85	47.54	153.5	344.8	10- 20	74.79	113.8	60.1,60.1
30	146.0	74.64	23.74	14.78	12.80	15.19	30.12	93.41	20- 30	49.63	163.5	86.3,86.3
40	16.49	15.22	10.04	7.506	6.856	8.073	11.86	14.74	30- 40	15.88	179.4	94.7,94.7
50	4.014	4.251	4.976	4.368	3.934	4.315	4.638	3.906	40- 50	5.639	185.0	97.7,97.7
60	1.435	1.610	2.232	2.504	2.322	2.330	1.846	1.549	50- 60	2.627	187.6	99,99
70	0.0238	0.4655	1.065	1.187	1.133	1.046	0.9029	0.1745	60- 70	1.353	189.0	99.8,99.8
80	0.0195	0.0196	0.1625	0.2214	0.1988	0.2208	0.0502	0.0176	70- 80	0.3849	189.4	100,100
90	0.0195	0.0196	0.0416	0.1383	0.1578	0.0982	0.0197	0.0176	80- 90	0.0866	189.4	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): 182.7 lm

%lum = 96.4%

%lamp = 96.4%

Conical surface Flux(120deg): 187.62 lm

%lum = 99.0%

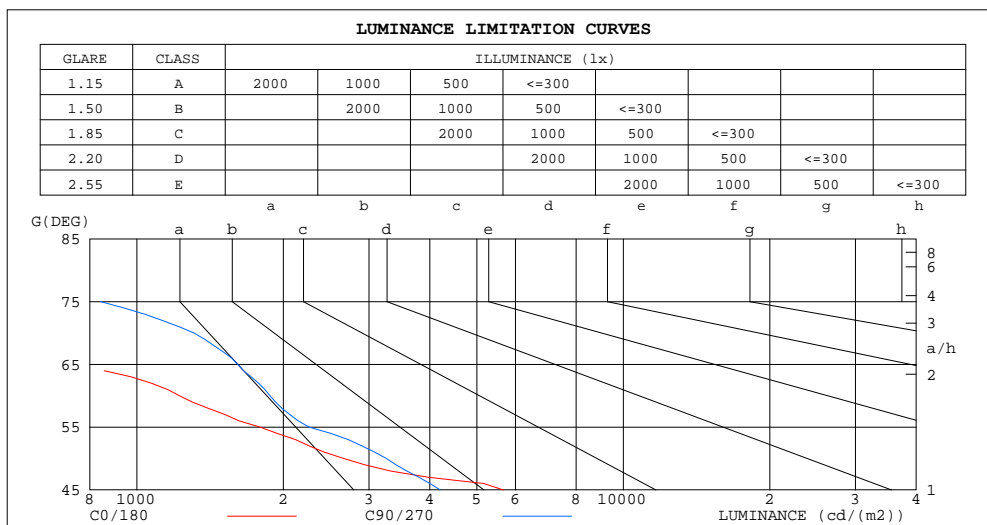
%lamp = 99.0%

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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:

### LUMINANCE LIMITATION CURVES

Test:U:221.0V I:0.0423A P:4.247W PF:0.4546 Freq:49.99Hz Lamp Flux:189.449x1 lm		
NAME: PORTOFINO S-830-35°	TYPE:Track Light Series	
SPEC.:3000K	DIM.: ø66mm*H103mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	95	370
80	48	394
75	32	841
70	30	1310
65	686	1611
60	1222	1878
55	1789	2259
50	2660	3256
45	5665	4203

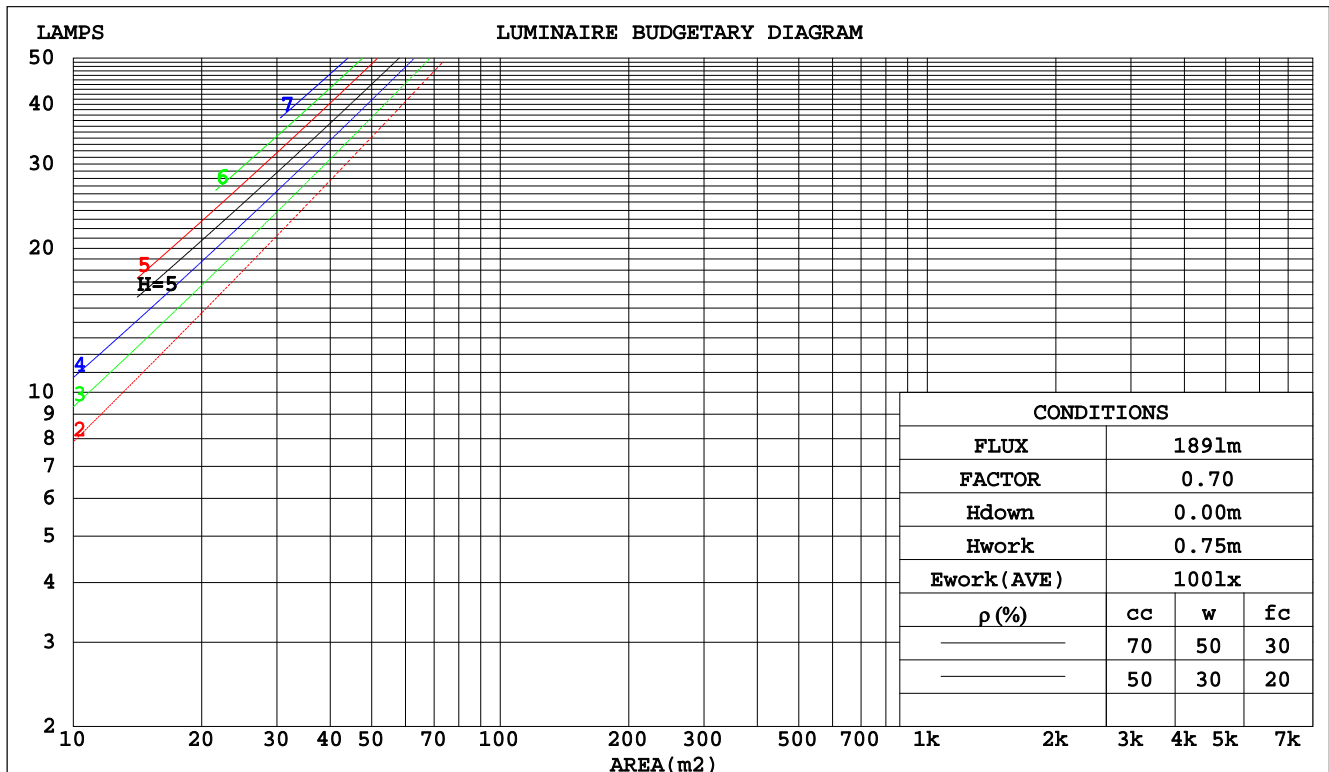
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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NAME: PORTOFINO S-830-35°	TYPE:Track Light Series	
SPEC.:3000K	DIM.: φ66mm*H103mm	
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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	1.09	1.07	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.99	.98	.98	.97	.95
2.0	1.05	1.02	.99	1.03	1.00	.98	1.00	.98	.95	.97	.95	.93	.95	.93	.91	.90
3.0	.99	.95	.92	.98	.94	.91	.95	.92	.89	.93	.90	.88	.91	.89	.87	.85
4.0	.94	.89	.86	.93	.89	.85	.91	.87	.84	.89	.86	.83	.87	.85	.82	.81
5.0	.89	.85	.81	.89	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.74
7.0	.81	.76	.73	.81	.76	.73	.80	.75	.72	.79	.75	.72	.77	.74	.72	.70
8.0	.78	.73	.69	.77	.73	.69	.76	.72	.69	.75	.72	.69	.75	.71	.68	.67
9.0	.75	.70	.66	.74	.70	.66	.73	.69	.66	.73	.69	.66	.72	.68	.66	.65
10.0	.72	.67	.64	.71	.67	.64	.71	.66	.63	.70	.66	.63	.69	.66	.63	.62



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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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## WEC AND CCEC

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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	.160	.091	.029	.153	.087	.028	.140	.081	.026	.129	.074	.024	.118	.069	.022		
2.0	.151	.083	.025	.145	.080	.025	.135	.075	.023	.125	.070	.022	.116	.066	.021		
3.0	.142	.076	.023	.137	.074	.022	.128	.070	.021	.120	.066	.020	.113	.062	.019		
4.0	.134	.070	.020	.130	.068	.020	.123	.065	.019	.116	.062	.019	.109	.059	.018		
5.0	.127	.065	.019	.124	.064	.018	.117	.061	.018	.111	.059	.017	.106	.056	.017		
6.0	.121	.061	.017	.118	.060	.017	.112	.058	.017	.107	.056	.016	.102	.054	.016		
7.0	.115	.057	.016	.113	.056	.016	.108	.054	.016	.103	.053	.015	.099	.051	.015		
8.0	.110	.054	.015	.108	.053	.015	.103	.052	.015	.099	.050	.014	.095	.049	.014		
9.0	.105	.051	.014	.103	.050	.014	.099	.049	.014	.096	.048	.014	.092	.047	.014		
10.0	.101	.048	.013	.099	.048	.013	.096	.047	.013	.092	.046	.013	.089	.045	.013		

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016		
2.0	.153	.133	.115	.131	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013		
3.0	.140	.113	.092	.120	.098	.080	.082	.068	.056	.048	.040	.033	.015	.013	.011		
4.0	.128	.098	.075	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009		
5.0	.119	.086	.063	.102	.075	.054	.070	.052	.038	.041	.031	.023	.013	.010	.008		
6.0	.111	.077	.052	.095	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006		
7.0	.104	.069	.045	.089	.060	.039	.062	.042	.028	.036	.025	.016	.012	.008	.005		
8.0	.098	.063	.038	.084	.054	.033	.058	.038	.024	.034	.022	.014	.011	.007	.005		
9.0	.092	.057	.033	.080	.050	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004		
10.0	.088	.053	.029	.076	.046	.025	.052	.032	.018	.031	.019	.011	.010	.006	.004		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
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Temperature:25.3DEG  
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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:0.0423A P:4.247W PF:0.4546 Freq:49.99Hz Lamp Flux:189.449x1 lm										
NAME: PORTOFINO S-830-35°					TYPE:Track Light Series					
SPEC.:3000K					DIM.: ø66mm*H103mm					
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	20.5	21.3	20.7	21.4	21.6	15.8	16.6	16.0	16.7	16.9
3H	20.3	21.0	20.6	21.2	21.4	16.0	16.8	16.3	17.0	17.2
4H	20.2	20.9	20.5	21.1	21.4	16.1	16.8	16.3	17.0	17.2
6H	20.1	20.8	20.4	21.0	21.3	16.0	16.7	16.3	16.9	17.2
8H	20.1	20.7	20.4	21.0	21.2	16.0	16.6	16.3	16.9	17.1
12H	20.0	20.7	20.4	20.9	21.2	15.9	16.5	16.2	16.8	17.1
4H 2H	20.3	21.0	20.5	21.2	21.4	15.7	16.4	16.0	16.6	16.9
3H	20.1	20.7	20.4	21.0	21.2	16.0	16.6	16.3	16.9	17.2
4H	20.0	20.6	20.3	20.9	21.2	16.0	16.6	16.4	16.9	17.2
6H	19.9	20.4	20.3	20.7	21.1	16.0	16.5	16.3	16.8	17.1
8H	19.8	20.3	20.2	20.7	21.0	15.9	16.4	16.3	16.7	17.1
12H	19.8	20.2	20.2	20.6	21.0	15.9	16.3	16.3	16.7	17.1
8H 4H	19.8	20.3	20.2	20.7	21.0	15.9	16.4	16.3	16.7	17.1
6H	19.7	20.1	20.2	20.5	20.9	15.8	16.2	16.2	16.6	17.0
8H	19.7	20.0	20.1	20.4	20.9	15.8	16.1	16.2	16.5	17.0
12H	19.6	19.9	20.1	20.4	20.8	15.7	16.0	16.2	16.4	16.9
12H 4H	19.8	20.2	20.2	20.6	21.0	15.8	16.3	16.3	16.6	17.0
6H	19.7	20.0	20.1	20.4	20.9	15.8	16.1	16.2	16.5	17.0
8H	19.6	19.9	20.1	20.4	20.8	15.7	16.0	16.2	16.4	16.9
Variations with the observer position at spacings:										
S = 1.0H	+ 4.3 / - 7.5					+ 1.8 / - 2.6				
1.5H	+ 6.2 / - 5.8					+ 2.4 / - 2.8				
2.0H	+ 5.2 / - 3.7					+ 3.2 / - 2.3				

CIE Pub.117, 189.4 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -5.8$ )

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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) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	88	82	78	87	81	78	75
0.80	96	90	86	95	89	86	94	89	86	82
1.00	100	94	91	99	94	91	97	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	98	105	101	98	103	99	97	92
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

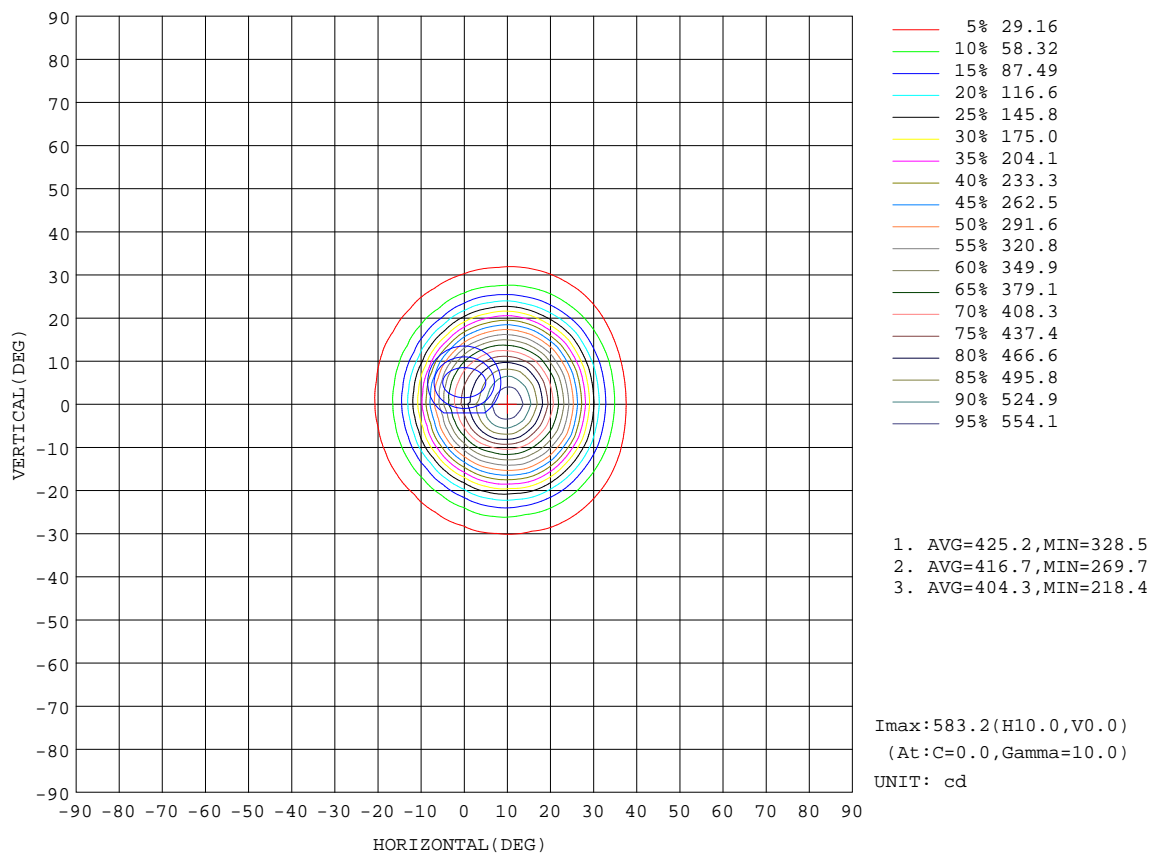
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ISOCANDELA DIAGRAM

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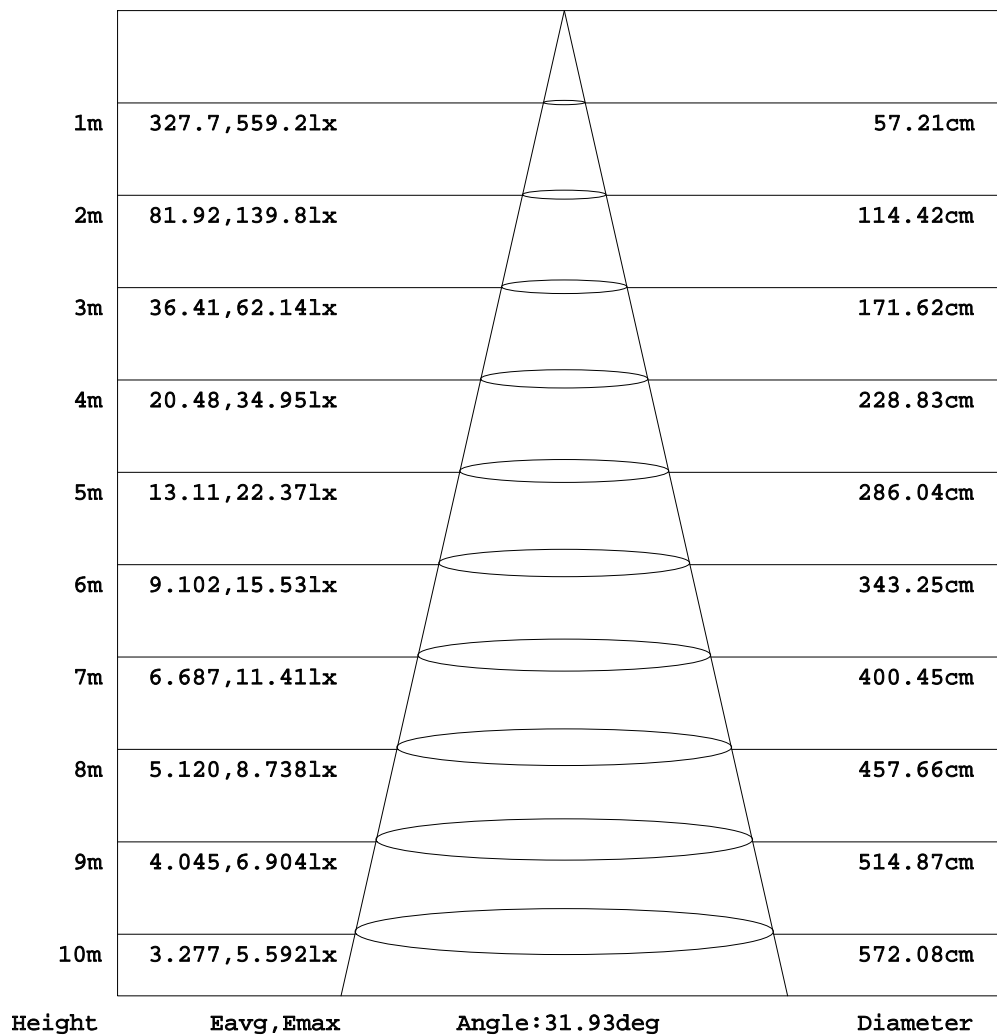
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**AAI Figure**

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Flux out:84.64 lm



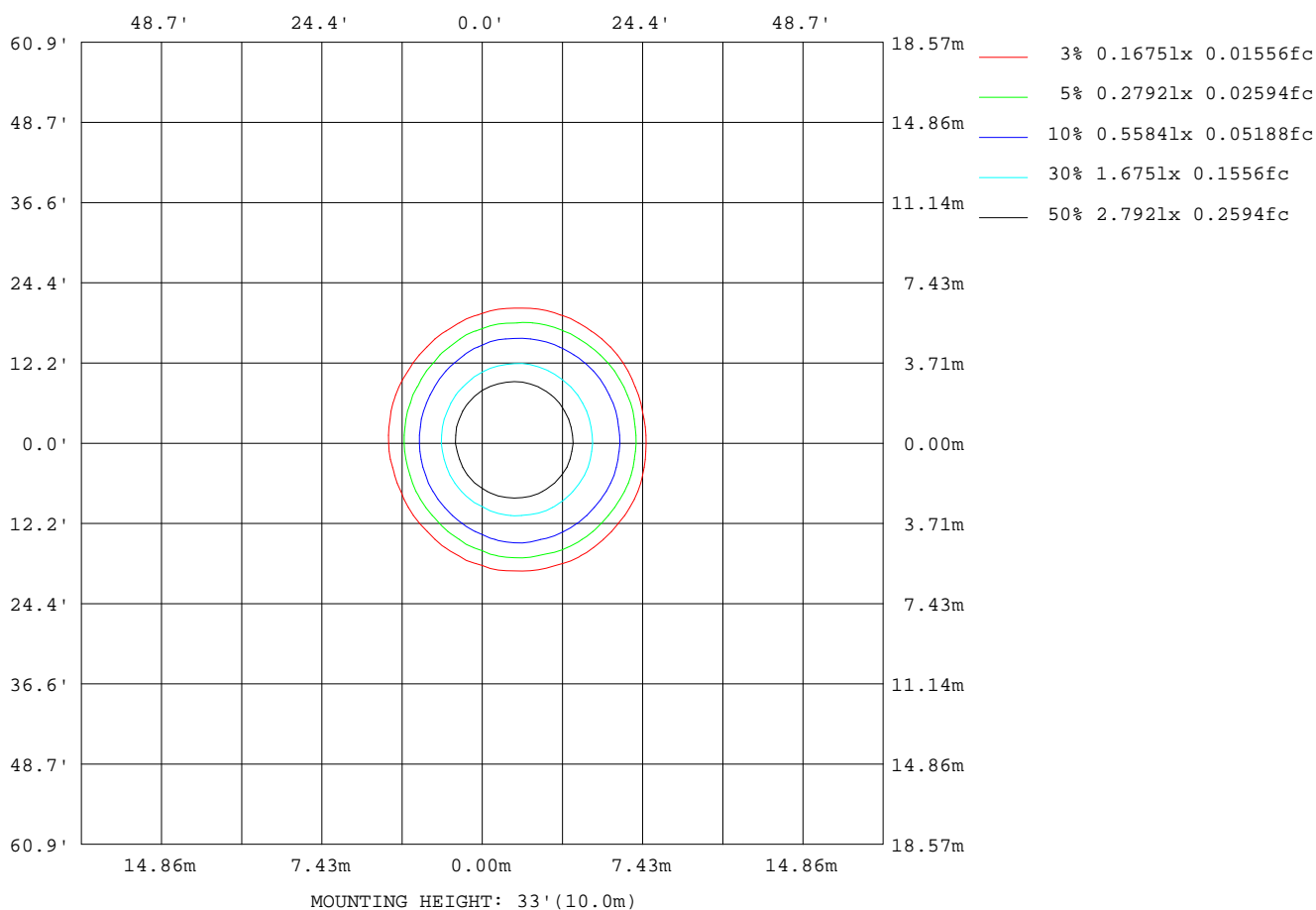
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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### LED Avg.L Report

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SPEC.:3000K	DIM.: φ66mm*H103mm	
MFR.: NEKO LIGHTING AG		

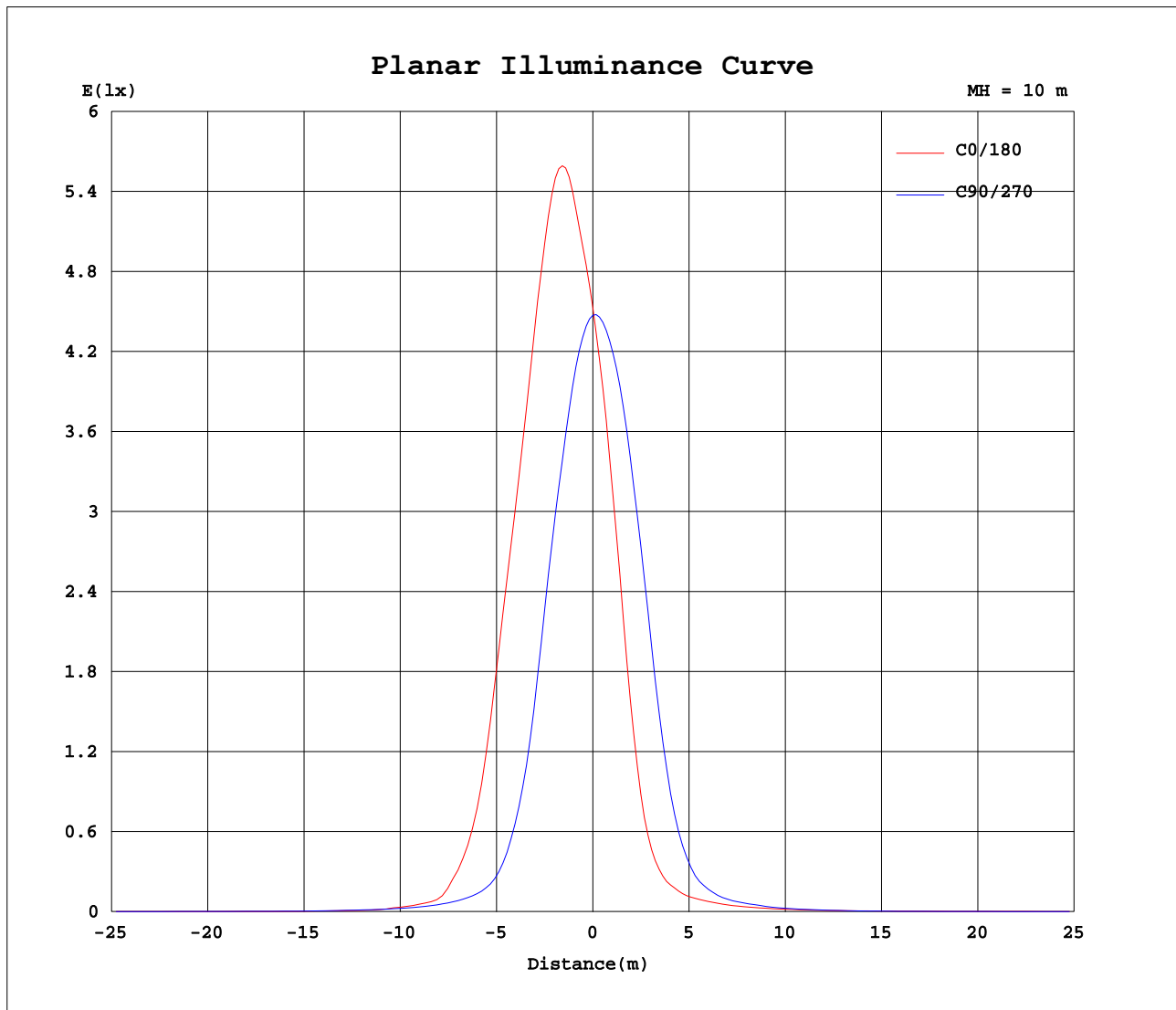
AvgL	cd/m2
L_0~180 (65) av	1202
L_0~180 (75) av	474
L_0~180 (85) av	459
L_90~270 (65) av	1479
L_90~270 (75) av	729
L_90~270 (85) av	233
L_45 (65) av	1403
L_45 (75) av	498
L_45 (85) av	378

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-06-29

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: 2020-06-29

$\gamma$  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:

```