

LED Track Light Series CLIFTON-830-110°



Light Output Ratio:	100.0%	
Luminaire Power:	24.72 W	
SHR Nominal:	1.25	Calculated using the TM5
SHR Maximum:	1.35	fine grid method.

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

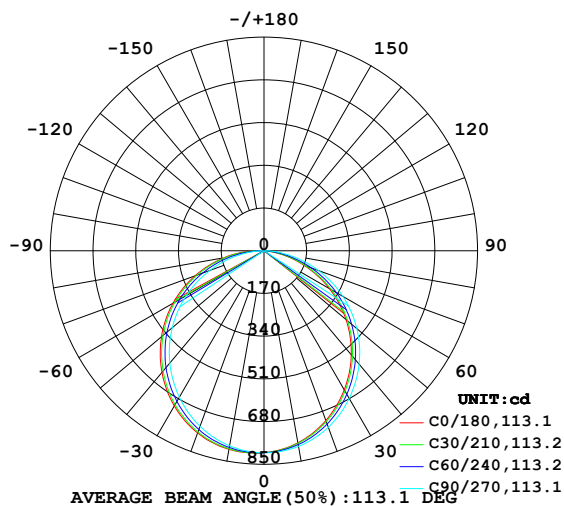
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

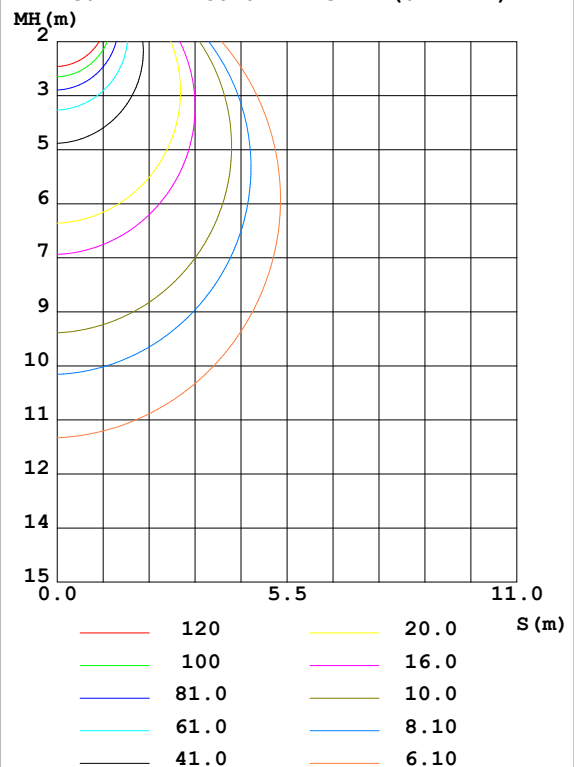
Test:U:221.1V I:0.1168A P:24.72W PF:0.9577 Freq:49.99Hz Lamp Flux:2329.43x1 lm		
NAME: CLIFTON-830-110°	TYPE:Track Light Series	
SPEC.:3000K	DIM.: φ270mm*H53mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.21 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	806.6	S/MH (C0/180)	1.32
NOMINAL POWER (W)	25	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2329.4	η UP,DN (C0-180)	0.0,49.6
NOMINAL FLUX (lm)	2329.43	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.35

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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γ Range: 0 - 90DEG  
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 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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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	776.0	780.8	790.5	799.7	802.8	797.7	788.6	779.1	0- 10	76.03	76.03	3.26,3.26
20	719.3	729.0	748.0	765.9	772.2	762.6	743.6	725.4	10- 20	217.6	293.6	12.6,12.6
30	639.0	652.7	678.5	704.8	713.3	700.2	673.4	647.5	20- 30	328.9	622.5	26.7,26.7
40	540.3	557.1	588.9	621.0	631.7	615.4	583.1	551.1	30- 40	396.2	1019	43.7,43.7
50	426.3	445.6	482.5	519.7	532.5	514.0	476.8	438.9	40- 50	412.4	1431	61.4,61.4
60	300.3	320.9	361.8	403.6	418.2	397.9	357.0	314.9	50- 60	376.1	1807	77.6,77.6
70	170.1	189.7	231.2	275.9	292.3	271.6	229.4	186.2	60- 70	292.4	2100	90.1,90.1
80	50.40	65.96	102.3	144.4	162.3	142.6	102.7	51.92	70- 80	175.7	2275	97.7,97.7
90	0.8500	0.7783	1.578	13.56	31.50	17.06	1.416	0.7338	80- 90	54.07	2329	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): 1226.2 lm

%lum = 52.6%

%lamp = 52.6%

Conical surface Flux(120deg): 1807.2 lm

%lum = 77.6%

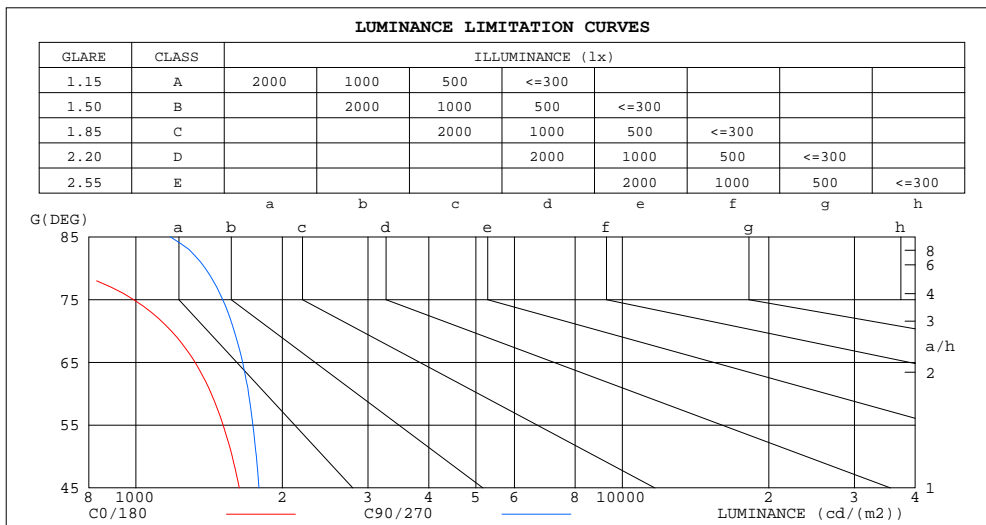
%lamp = 77.6%

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:

**LUMINANCE LIMITATION CURVES**

Test:U:221.1V I:0.1168A P:24.72W PF:0.9577 Freq:49.99Hz Lamp Flux:2329.43x1 lm		
NAME: CLIFTON-830-110°	TYPE:Track Light Series	
SPEC.:3000K	DIM.: φ270mm*H53mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	122	1177
80	690	1389
75	989	1508
70	1183	1593
65	1323	1657
60	1429	1705
55	1512	1740
50	1577	1769
45	1632	1791

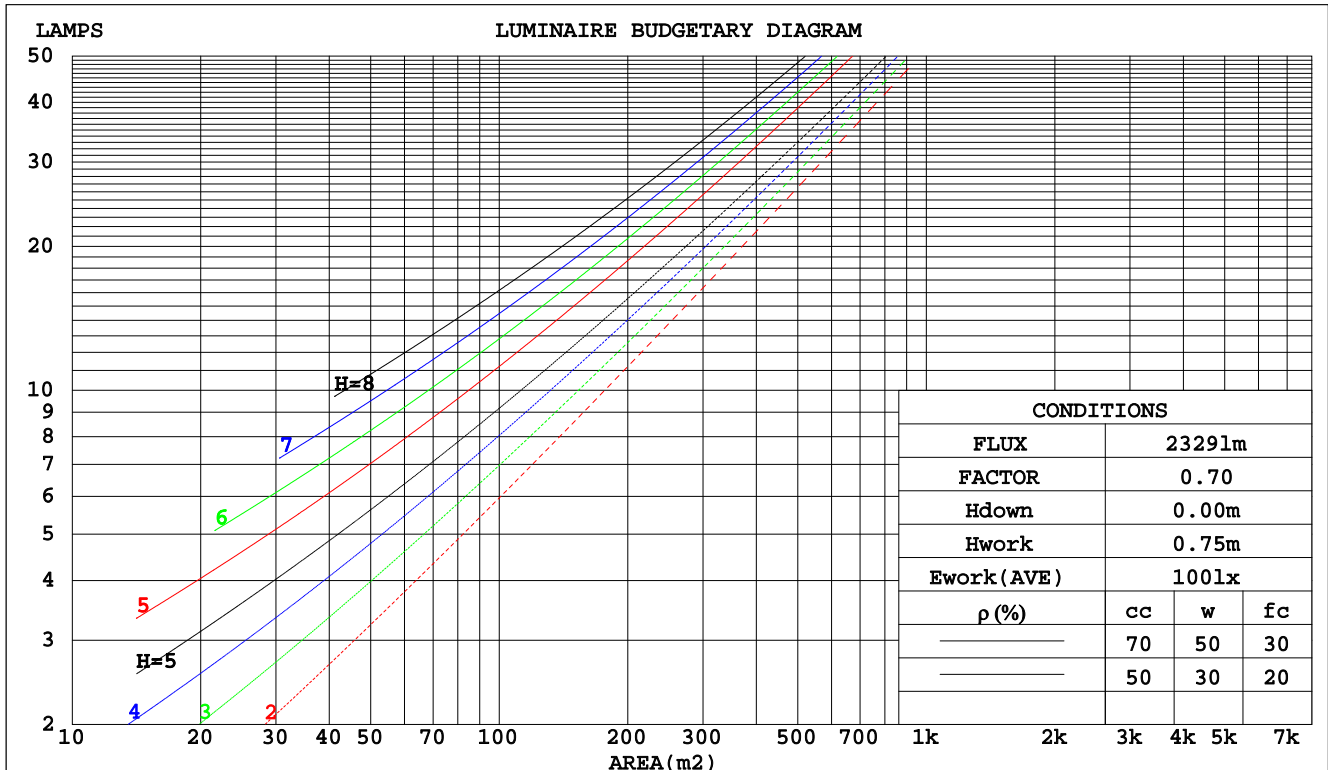
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:3000K	DIM.: φ270mm*H53mm	
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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	1.00
1.0	1.03	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.77	.73	.78	.74	.71	.69
3.0	.79	.70	.64	.77	.69	.63	.74	.68	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.46	.57	.50	.45	.55	.49	.45	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.46	.40	.51	.45	.39	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.29	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.24



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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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SPEC.:3000K	DIM.: φ270mm*H53mm	
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	.318	.181	.057	.311	.177	.056	.297	.171	.054	.285	.164	.053	.274	.159	.051		
2.0	.297	.163	.050	.291	.160	.049	.279	.155	.048	.268	.150	.047	.258	.146	.046		
3.0	.274	.146	.044	.268	.144	.043	.258	.140	.042	.248	.136	.042	.239	.132	.041		
4.0	.252	.131	.038	.247	.129	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037		
5.0	.233	.118	.034	.228	.117	.034	.220	.115	.034	.212	.112	.033	.205	.110	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.105	.030	.197	.103	.030	.191	.101	.030		
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023		
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.149	.075	.021		

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	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.020	.017	.015		
2.0	.173	.132	.097	.148	.114	.084	.102	.079	.059	.059	.046	.034	.019	.015	.011		
3.0	.165	.114	.074	.142	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009		
4.0	.158	.101	.058	.135	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007		
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.010	.006		
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005		
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004		
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003		
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003		
10.0	.118	.060	.022	.101	.052	.019	.070	.037	.014	.041	.022	.008	.013	.007	.003		

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:

## UGR(Unified Glare Rating) Table

Test:U:221.1V I:0.1168A P:24.72W PF:0.9577 Freq:49.99Hz Lamp Flux:2329.43x1 lm										
NAME: CLIFTON-830-110°					TYPE:Track Light Series					
SPEC.:3000K					DIM.: φ270mm*H53mm					
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	11.0	12.5	11.2	12.7	12.9	11.6	13.1	11.9	13.3	13.5
3H	12.2	13.6	12.5	13.9	14.1	13.2	14.6	13.5	14.8	15.1
4H	12.6	14.0	13.0	14.2	14.5	13.8	15.2	14.2	15.4	15.7
6H	12.8	14.1	13.2	14.4	14.7	14.3	15.6	14.7	15.9	16.2
8H	12.8	14.1	13.2	14.4	14.7	14.5	15.7	14.8	16.0	16.3
12H	12.8	14.0	13.2	14.3	14.6	14.6	15.8	14.9	16.1	16.4
4H 2H	11.6	12.9	11.9	13.2	13.4	12.1	13.4	12.4	13.7	13.9
3H	13.0	14.2	13.4	14.5	14.8	13.8	15.0	14.2	15.3	15.6
4H	13.5	14.6	13.9	14.9	15.3	14.6	15.7	15.0	16.0	16.3
6H	13.8	14.8	14.2	15.1	15.5	15.2	16.2	15.6	16.5	16.9
8H	13.8	14.7	14.3	15.1	15.5	15.4	16.3	15.8	16.7	17.1
12H	13.8	14.6	14.2	15.0	15.4	15.5	16.4	16.0	16.8	17.2
8H 4H	13.8	14.7	14.2	15.0	15.4	14.7	15.6	15.2	16.0	16.4
6H	14.2	14.9	14.6	15.3	15.7	15.5	16.2	15.9	16.6	17.0
8H	14.2	14.9	14.7	15.3	15.8	15.7	16.4	16.2	16.8	17.3
12H	14.2	14.8	14.7	15.2	15.7	15.9	16.5	16.4	16.9	17.4
12H 4H	13.8	14.6	14.2	15.0	15.4	14.7	15.6	15.2	15.9	16.3
6H	14.2	14.9	14.7	15.3	15.7	15.5	16.1	15.9	16.6	17.0
8H	14.3	14.9	14.8	15.3	15.8	15.8	16.3	16.2	16.8	17.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.1 / - 0.2				
2.0H	+ 0.3 / - 0.4					+ 0.2 / - 0.3				

CIE Pub.117, 2329 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.9$ )

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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:

### UTILIZATION FACTORS TABLE

Test:U:221.1V I:0.1168A P:24.72W PF:0.9577 Freq:49.99Hz Lamp Flux:2329.43x1 lm		
NAME: CLIFTON-830-110°	TYPE:Track Light Series	
SPEC.:3000K	DIM.: $\varnothing 270\text{mm} \times \text{H}53\text{mm}$	
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) $k(\text{RI}) \times \text{RCR} = 5$									
$k = 0.60$	57	45	38	56	45	38	55	45	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	64	56	72	65	56	49
1.25	83	72	65	81	71	64	78	70	63	56
1.50	88	77	70	86	77	70	83	75	69	61
2.00	94	86	79	93	85	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	82	73
3.00	102	95	89	100	93	88	96	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	95	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

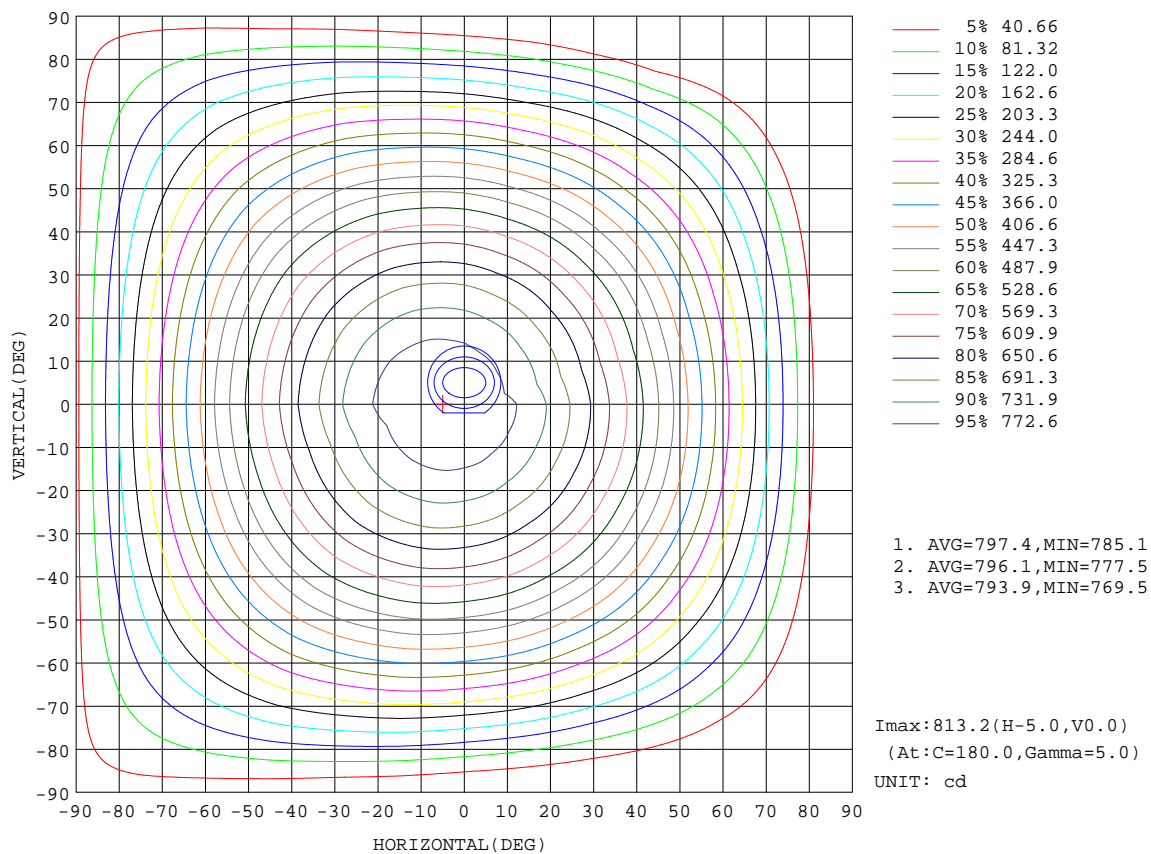
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ISOCANDELA DIAGRAM

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SPEC.:3000K	DIM.: $\phi$ 270mm*H53mm	
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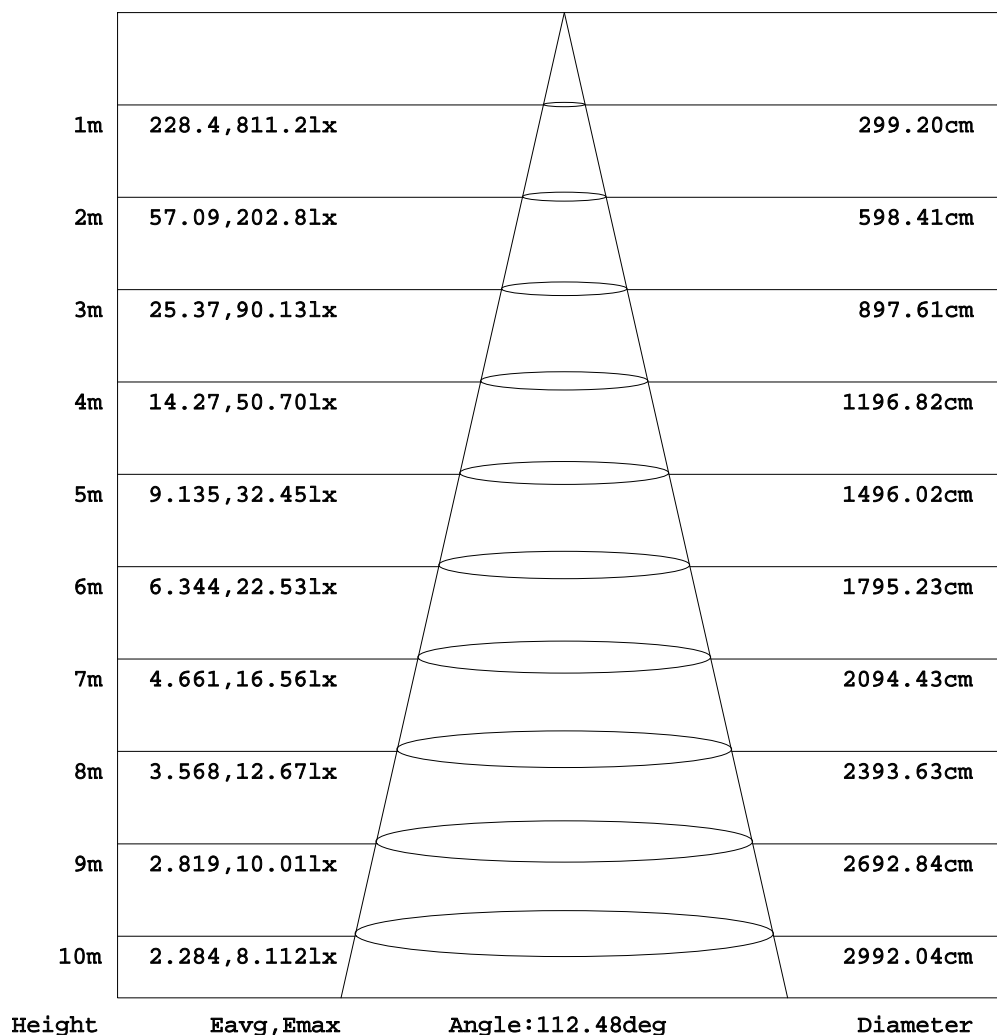
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**AAI Figure**

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SPEC.:3000K	DIM.: φ270mm*H53mm	
MFR.: NEKO LIGHTING AG		

Flux out:1701 lm



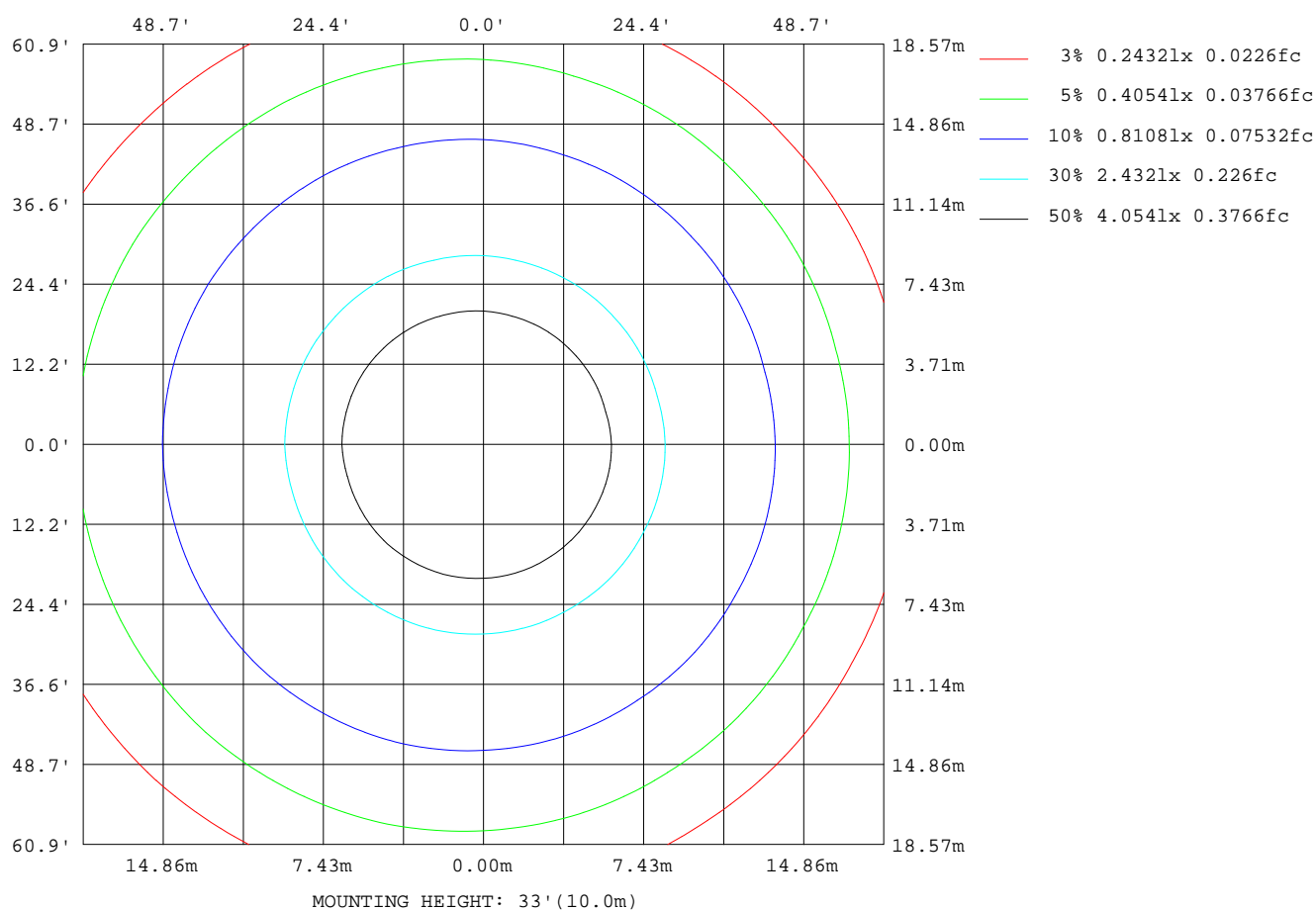
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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### LED Avg.L Report

Test:U:221.1V I:0.1168A P:24.72W PF:0.9577 Freq:49.99Hz Lamp Flux:2329.43x1 lm		
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MFR.: NEKO LIGHTING AG		

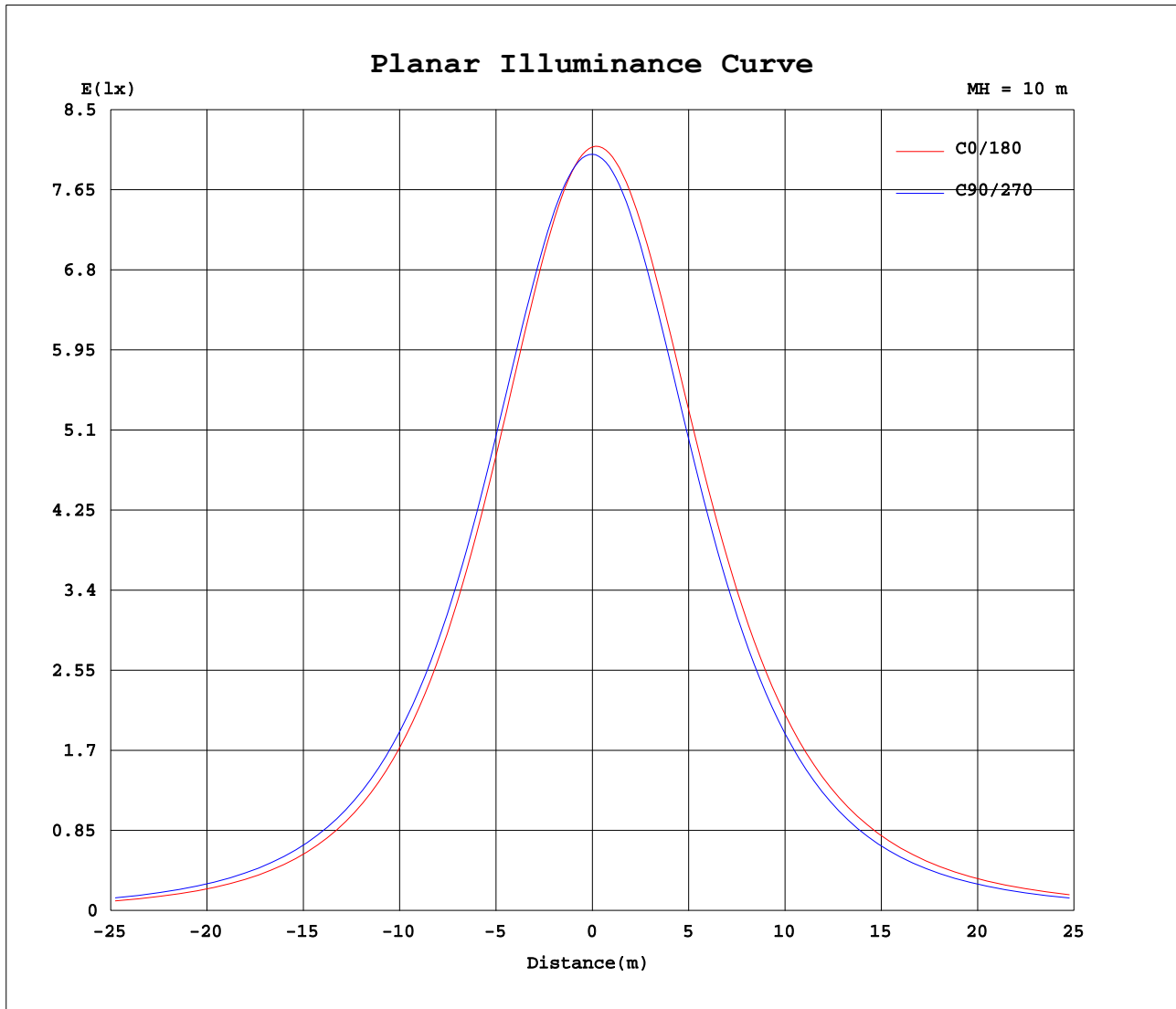
AvgL	cd/m2
L_0~180 (65) av	1651
L_0~180 (75) av	1525
L_0~180 (85) av	1382
L_90~270 (65) av	1650
L_90~270 (75) av	1508
L_90~270 (85) av	1206
L_45 (65) av	1651
L_45 (75) av	1512
L_45 (85) av	1216

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:

```