

Low Voltage Track System Module ML26-RS40-12W-930-18



Light Output Ratio:	100.0%	
Luminaire Power:	12.3 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 Long
Test Date: 2019-12-03

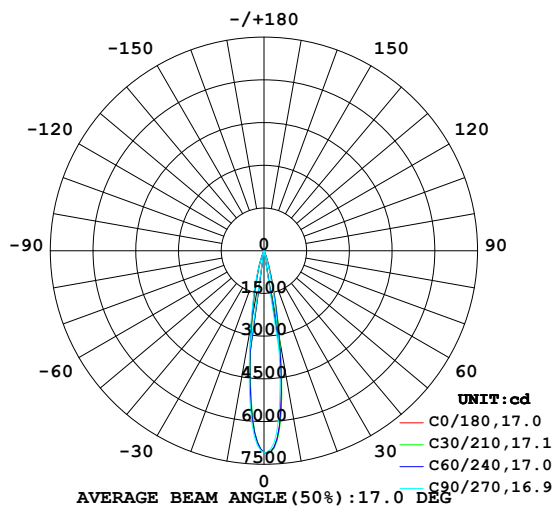
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 56%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

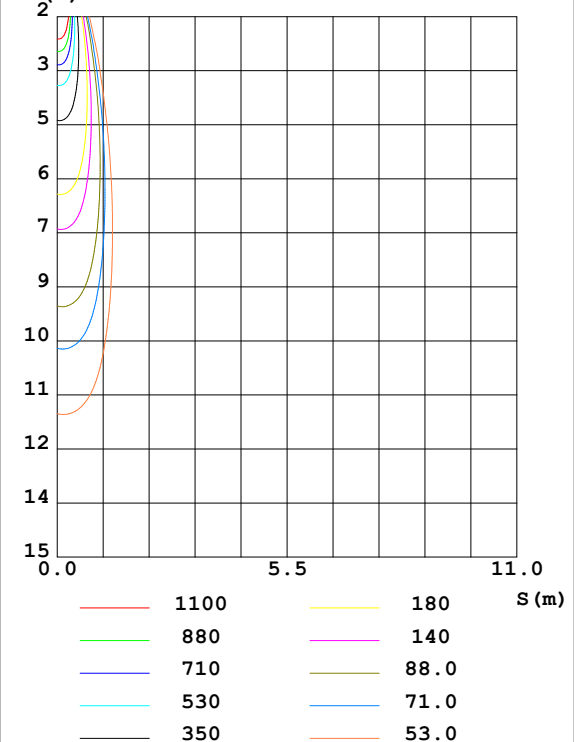
Test:U:48.00V I:0.2563A P:12.30W PF:1.000 Freq:0Hz Lamp Flux:795.098x1 lm		
NAME: ML26-RS40-12W-930-18	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: ϕ 40mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 64.63 lm/W			
MODEL	CITIZEN-3000K	I _{max} (cd)	7140	S/MH (C0/180)	0.27
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	0.28
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	795.10	η UP, DN (C0-180)	0.0, 49.9
NOMINAL FLUX (lm)	795.098	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	48	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	3128	3244	2737	2485	2422	2405	2694	2880	0- 10	443.3	443.3	55.8,55.8
20	337.5	277.0	200.6	212.9	279.4	327.9	357.8	343.9	10- 20	295.5	738.8	92.9,92.9
30	35.91	30.86	24.21	23.13	23.45	23.33	26.99	28.79	20- 30	45.85	784.7	98.7,98.7
40	8.626	6.145	4.437	4.034	4.909	3.992	4.303	5.247	30- 40	7.712	792.4	99.7,99.7
50	1.214	1.266	1.104	0.9736	0.9692	0.9817	1.064	1.160	40- 50	1.951	794.3	99.9,99.9
60	0.3226	0.3300	0.3236	0.2619	0.2340	0.2454	0.2485	0.3041	50- 60	0.5555	794.9	100,100
70	0.0921	0.0700	0.0852	0.0567	0.0459	0.0723	0.0588	0.0875	60- 70	0.1476	795.0	100,100
80	0.0373	0.0306	0.0372	0.0197	0.0175	0.0263	0.0131	0.0306	70- 80	0.0455	795.1	100,100
90	0.0263	0.0219	0.0218	0.0197	0.0175	0.0153	0.0131	0.0153	80- 90	0.0231	795.1	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): 793.68 lm

%lum = 99.8%

%lamp = 99.8%

Conical surface Flux(120deg): 794.88 lm

%lum = 100.0%

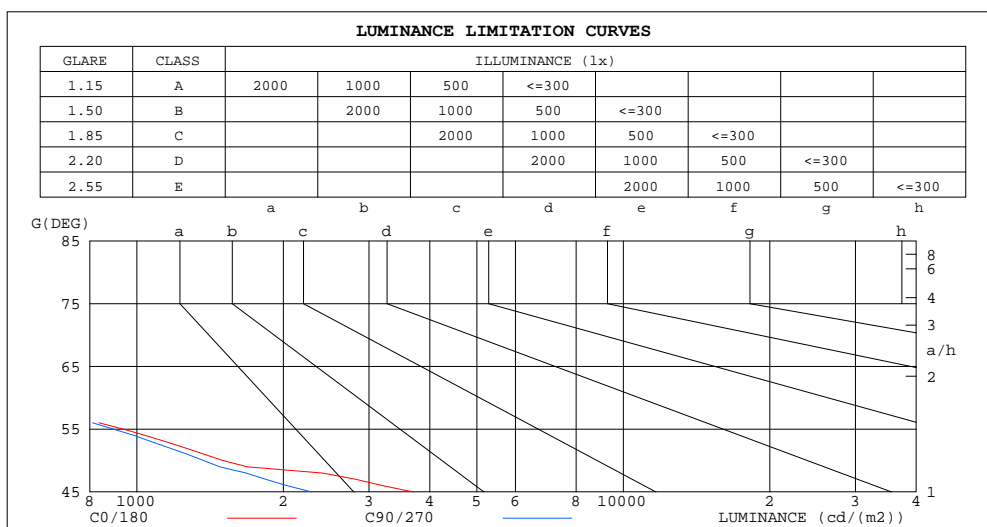
%lamp = 100.0%

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Temperature:25.3DEG
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γ Range: 0 - 90DEG
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Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:3000K	DIM.: $\phi 40\text{mm} \times \text{H}105\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m ²)		
G(DEG)	C0/180	C90/270
85	280	260
80	171	171
75	175	162
70	214	199
65	297	301
60	513	516
55	936	894
50	1500	1369
45	3696	2286

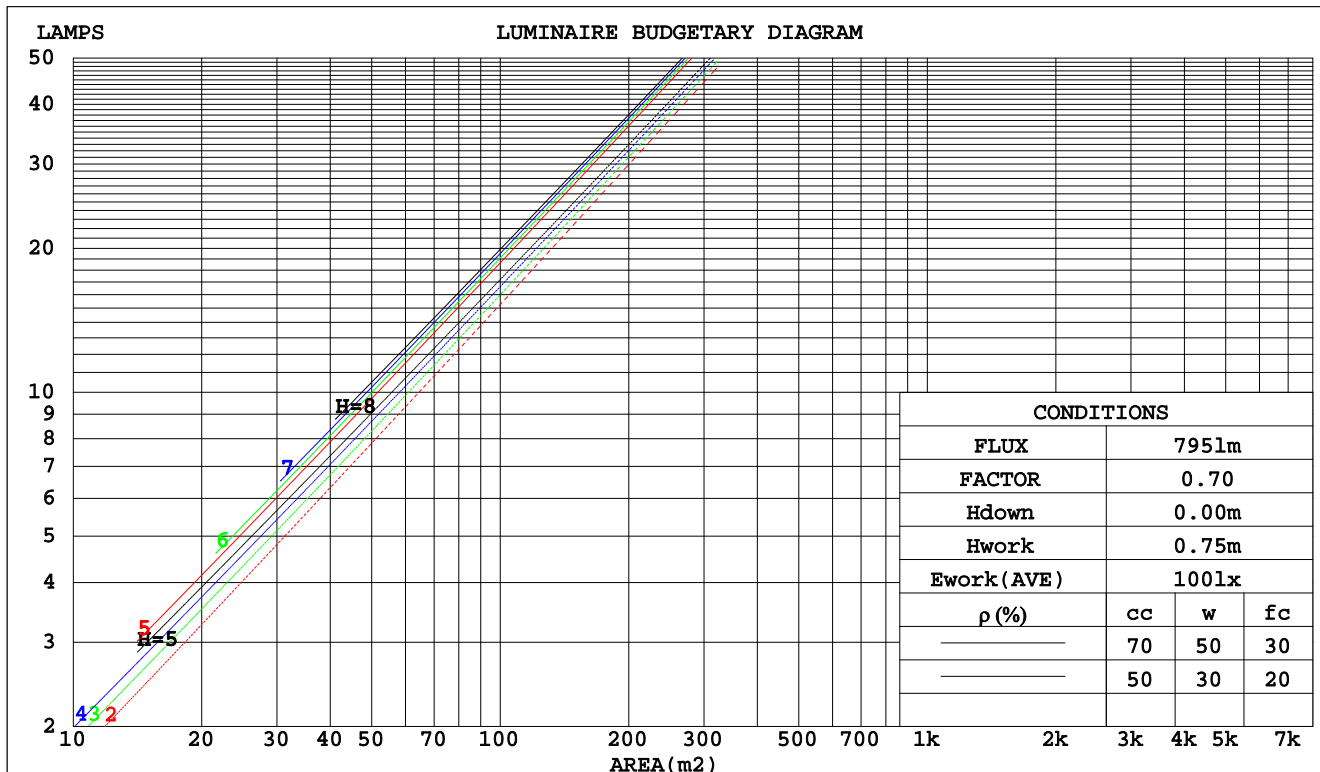
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	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	1.14	1.12	1.11	1.12	1.10	1.09	1.08	1.07	1.06	1.04	1.03	1.03	1.01	1.00	.00	.98
2.0	1.10	1.07	1.05	1.08	1.06	1.04	1.05	1.03	1.02	1.02	1.01	.99	.99	.98	.97	.96
3.0	1.06	1.03	1.01	1.05	1.02	.00	1.02	1.00	.98	1.00	.98	.97	.98	.97	.95	.94
4.0	1.03	.00	.97	1.02	.99	.97	1.00	.98	.96	.98	.96	.95	.97	.95	.94	.92
5.0	1.00	.97	.94	.99	.96	.94	.98	.95	.93	.97	.94	.93	.95	.93	.92	.91
6.0	.98	.95	.92	.97	.94	.92	.96	.93	.91	.95	.92	.91	.94	.92	.90	.89
7.0	.96	.92	.90	.95	.92	.90	.94	.91	.89	.93	.91	.89	.92	.90	.89	.88
8.0	.94	.91	.88	.93	.90	.88	.93	.90	.88	.92	.89	.87	.91	.89	.87	.86
9.0	.92	.89	.87	.92	.89	.87	.91	.88	.86	.90	.88	.86	.90	.87	.86	.85
10.0	.90	.87	.85	.90	.87	.85	.89	.87	.85	.89	.86	.85	.88	.86	.85	.84



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WEC AND CCEC

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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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.119	.067	.021	.112	.064	.020	.100	.057	.018	.089	.051	.016	.078	.045	.015		
2.0	.108	.059	.018	.103	.057	.017	.093	.052	.016	.083	.047	.015	.075	.042	.013		
3.0	.099	.053	.016	.095	.051	.015	.087	.047	.014	.079	.043	.013	.072	.040	.012		
4.0	.092	.048	.014	.088	.046	.014	.081	.043	.013	.075	.040	.012	.069	.037	.011		
5.0	.086	.044	.013	.083	.042	.012	.077	.040	.012	.071	.038	.011	.066	.035	.011		
6.0	.080	.040	.012	.078	.039	.011	.073	.037	.011	.068	.035	.010	.064	.034	.010		
7.0	.076	.037	.011	.073	.037	.010	.069	.035	.010	.065	.033	.010	.061	.032	.009		
8.0	.072	.035	.010	.070	.034	.010	.066	.033	.009	.062	.032	.009	.059	.030	.009		
9.0	.068	.033	.009	.066	.032	.009	.063	.031	.009	.060	.030	.009	.057	.029	.008		
10.0	.065	.031	.009	.063	.031	.009	.060	.030	.008	.058	.029	.008	.055	.028	.008		

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	.167	.158	.149	.143	.135	.129	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.148	.133	.120	.127	.114	.104	.087	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.132	.113	.098	.113	.098	.085	.077	.068	.060	.045	.040	.035	.014	.013	.012	
4.0	.118	.097	.082	.101	.084	.071	.070	.059	.050	.040	.034	.030	.013	.011	.010	
5.0	.107	.085	.069	.092	.073	.060	.063	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.097	.075	.058	.083	.065	.051	.058	.045	.036	.033	.027	.021	.011	.009	.007	
7.0	.089	.066	.050	.076	.057	.044	.053	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.082	.059	.043	.070	.051	.038	.049	.036	.027	.028	.021	.016	.009	.007	.005	
9.0	.076	.053	.038	.065	.046	.033	.045	.032	.023	.026	.019	.014	.009	.006	.005	
10.0	.071	.048	.033	.061	.042	.029	.042	.029	.021	.025	.017	.012	.008	.006	.004	

C Range: 0 - 360DEG
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 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:48.00V I:0.2563A P:12.30W PF:1.000 Freq:0Hz Lamp Flux:795.098x1 lm										
NAME: ML26-RS40-12W-930-18					TYPE:Low Voltage Track System Module					
SPEC.:3000K					DIM.: ϕ 40mm*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	4.5	5.0	4.7	5.2	5.3	2.3	2.9	2.5	3.0	3.2
3H	4.4	4.9	4.6	5.1	5.2	2.2	2.7	2.5	2.9	3.1
4H	4.3	4.8	4.6	5.0	5.2	2.2	2.6	2.4	2.8	3.0
6H	4.2	4.7	4.5	4.9	5.1	2.1	2.5	2.4	2.8	3.0
8H	4.2	4.6	4.5	4.9	5.1	2.0	2.5	2.3	2.7	3.0
12H	4.1	4.6	4.4	4.8	5.1	2.0	2.4	2.3	2.7	2.9
4H 2H	4.3	4.8	4.6	5.0	5.2	2.2	2.6	2.4	2.8	3.0
3H	4.2	4.6	4.5	4.8	5.1	2.0	2.4	2.3	2.7	3.0
4H	4.1	4.5	4.4	4.7	5.0	1.9	2.3	2.3	2.6	2.9
6H	4.0	4.3	4.3	4.6	5.0	1.8	2.2	2.2	2.5	2.8
8H	3.9	4.2	4.3	4.6	4.9	1.8	2.1	2.2	2.5	2.8
12H	3.9	4.2	4.3	4.5	4.9	1.7	2.0	2.1	2.4	2.8
8H 4H	3.9	4.2	4.3	4.6	4.9	1.8	2.1	2.2	2.4	2.8
6H	3.8	4.1	4.2	4.5	4.9	1.7	1.9	2.1	2.3	2.7
8H	3.7	4.0	4.2	4.4	4.8	1.6	1.9	2.1	2.3	2.7
12H	3.7	3.9	4.1	4.3	4.8	1.6	1.8	2.0	2.2	2.7
12H 4H	3.8	4.1	4.2	4.5	4.9	1.7	2.0	2.1	2.4	2.8
6H	3.7	4.0	4.2	4.4	4.8	1.6	1.9	2.1	2.3	2.7
8H	3.7	3.9	4.1	4.3	4.8	1.6	1.8	2.0	2.2	2.7
Variations with the observer position at spacings:										
S = 1.0H	+ 3.5 / -10.2					+ 2.5 / - 7.5				
1.5H	+ 5.7 / - 7.7					+ 4.3 / - 5.1				
2.0H	+ 6.2 / - 6.8					+ 4.7 / - 5.5				

CIE Pub.117, 795.1 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.8$)

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γ Range: 0 - 90DEG
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Remarks:

UTILIZATION FACTORS TABLE

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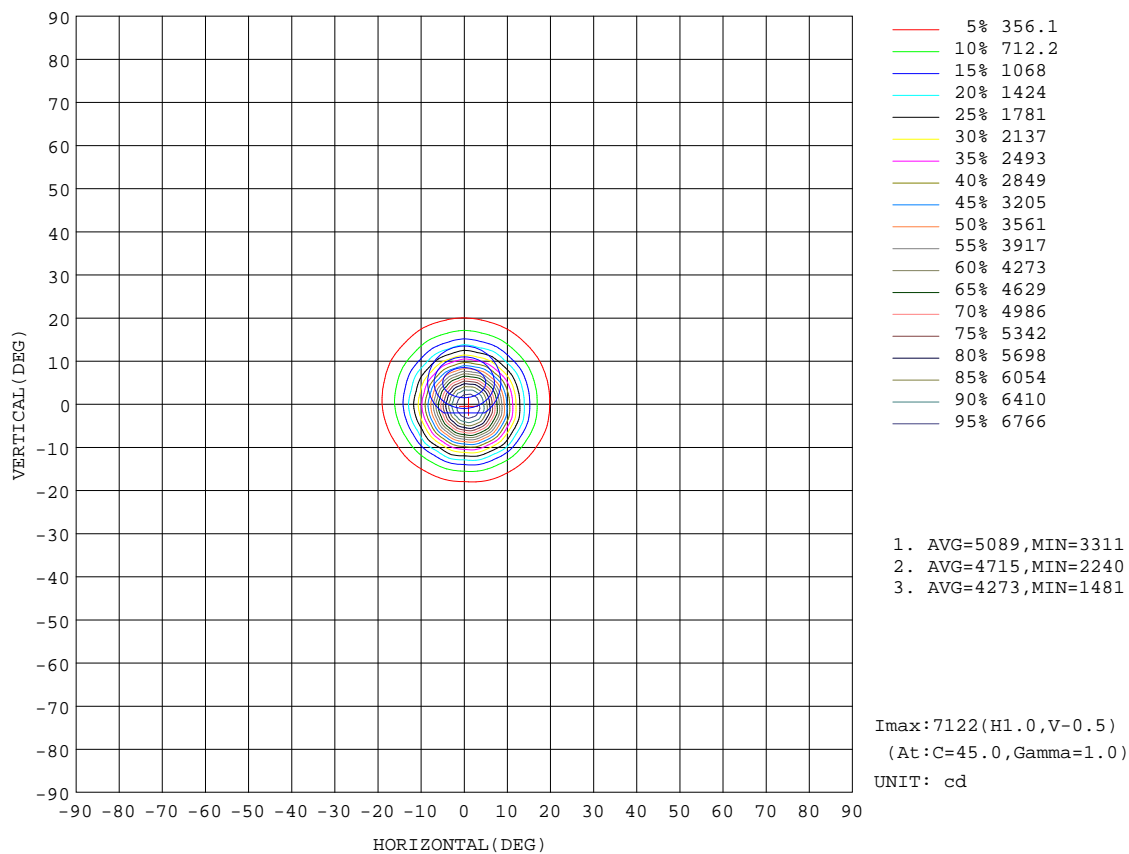
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	97	92	89	86
1.00	102	97	94	101	97	94	100	96	93	89
1.25	105	101	98	104	100	97	103	99	97	93
1.50	108	104	101	107	103	100	105	101	99	95
2.00	110	106	103	109	105	103	106	103	101	96
2.50	111	108	105	110	107	104	107	104	103	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	113	111	109	109	107	106	99
5.00	116	114	112	114	112	111	110	109	108	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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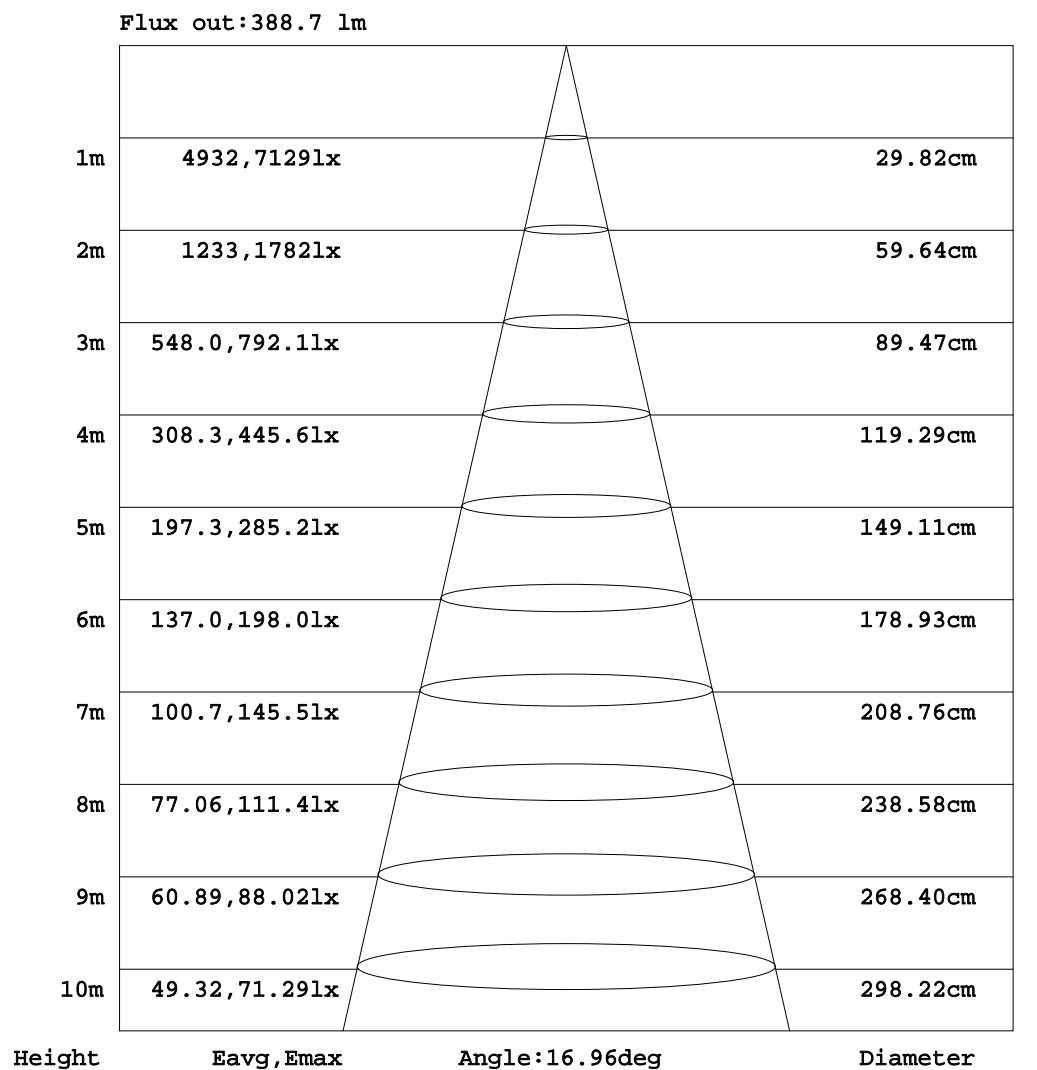


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AAI Figure

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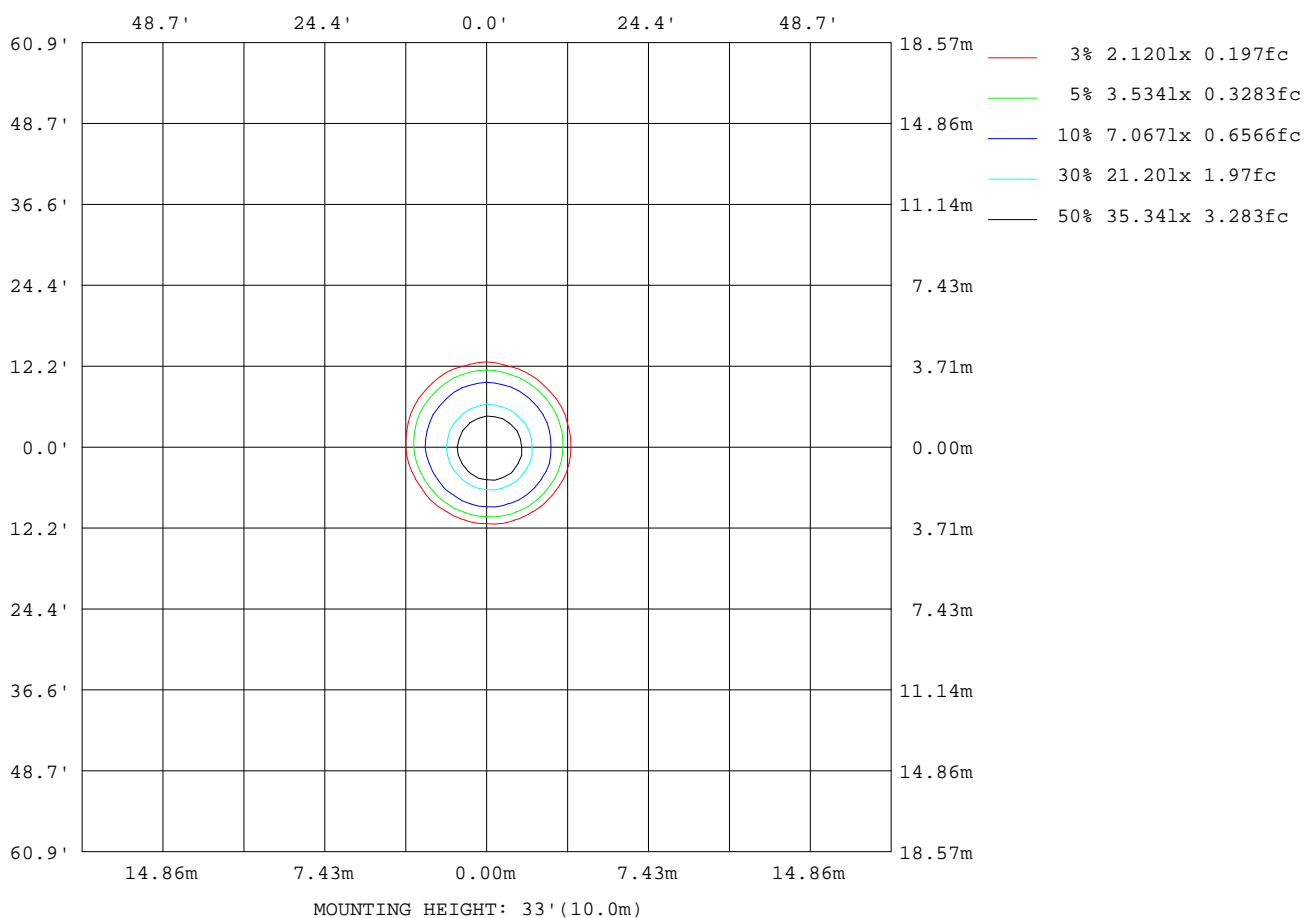
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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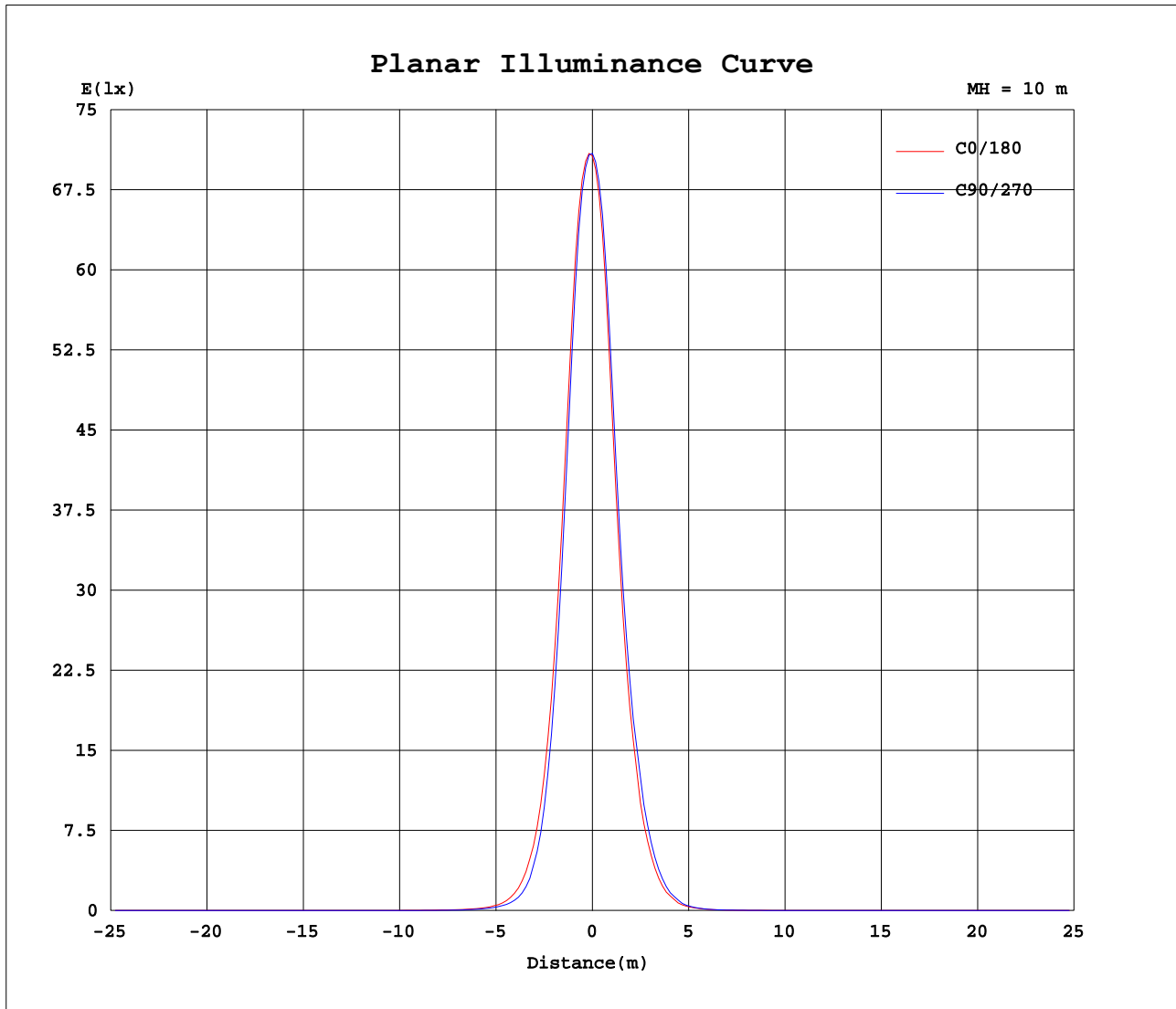
AvgL	cd/m2
L_0~180 (65) av	250
L_0~180 (75) av	125
L_0~180 (85) av	220
L_90~270 (65) av	261
L_90~270 (75) av	128
L_90~270 (85) av	190
L_45 (65) av	261
L_45 (75) av	125
L_45 (85) av	180

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Long
Test Date:2019-12-03

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
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 Long
Test Date: 2019-12-03

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 56%
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:56%
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:56%
Test Distance:5.850m [K=1.0000]
Remarks:

```