

Low Voltage Track System Module ML26-RS40-16W-930-30



Light Output Ratio:	100.0%	
Luminaire Power:	16.67 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.50	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

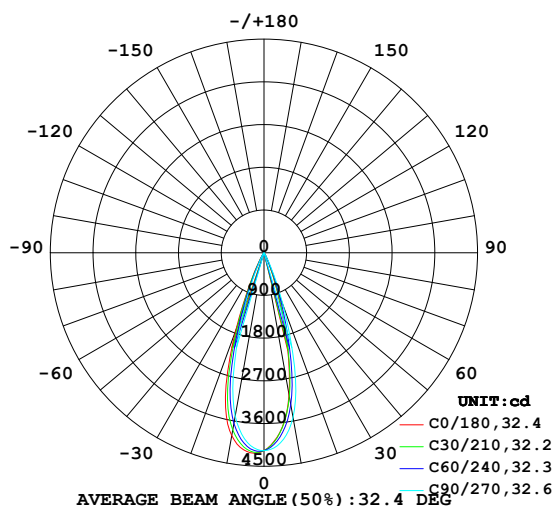
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 56%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

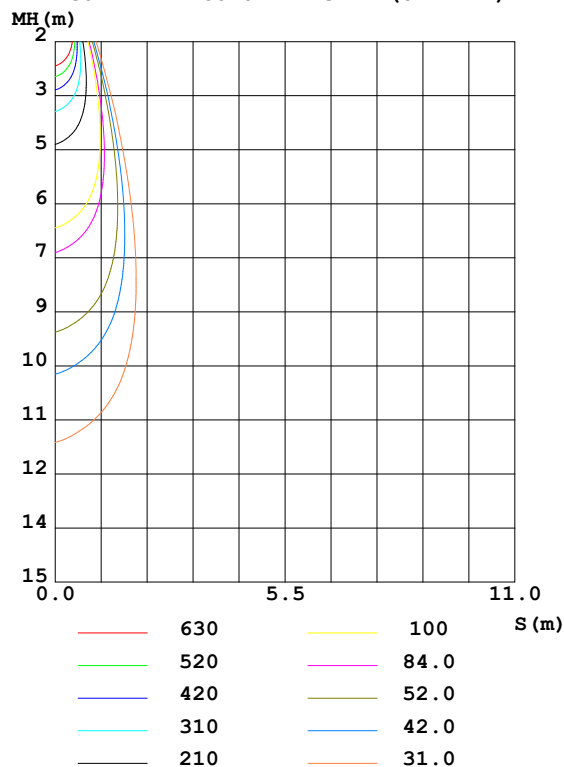
Test:U:48.00V I:0.3472A P:16.67W PF:1.000 Freq:0Hz Lamp Flux:1260.47x1 lm		
NAME: ML26-RS40-16W-930-30	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: ϕ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.63 lm/W			
MODEL	CITIZEN-3000K	I _{max} (cd)	4227	S/MH (C0/180)	0.56
NOMINAL POWER (W)	16	LOR (%)	100.0	S/MH (C90/270)	0.50
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1260.5	η UP,DN (C0-180)	0.0,49.9
NOMINAL FLUX (lm)	1260.47	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	48	η down (%)	100.0	CIBSE SHR MAX	0.50

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	3044	3182	3526	3915	3913	3690	3494	3195	0- 10	366.7	366.7	29.1,29.1
20	670.1	846.3	1185	1708	1737	1449	1135	793.0	10- 20	647.7	1014	80.5,80.5
30	86.09	83.15	109.6	172.0	181.2	128.4	97.87	82.20	20- 30	210.1	1224	97.1,97.1
40	11.14	11.41	16.18	22.15	23.83	19.13	16.28	11.59	30- 40	30.50	1255	99.6,99.6
50	1.419	1.484	1.622	1.851	2.003	1.771	1.589	1.415	40- 50	4.212	1259	99.9,99.9
60	0.4282	0.4401	0.5086	0.5897	0.6544	0.5766	0.4654	0.4176	50- 60	0.8942	1260	100,100
70	0.1368	0.1155	0.1402	0.1337	0.1539	0.1572	0.1050	0.1186	60- 70	0.2668	1260	100,100
80	0.0630	0.0436	0.0614	0.0461	0.0455	0.0590	0.0328	0.0483	70- 80	0.0871	1260	100,100
90	0.0477	0.0458	0.0416	0.0417	0.0326	0.0305	0.0241	0.0307	80- 90	0.0445	1260	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): 1258.2 lm

%lum = 99.8%

%lamp = 99.8%

Conical surface Flux(120deg): 1260.1 lm

%lum = 100.0%

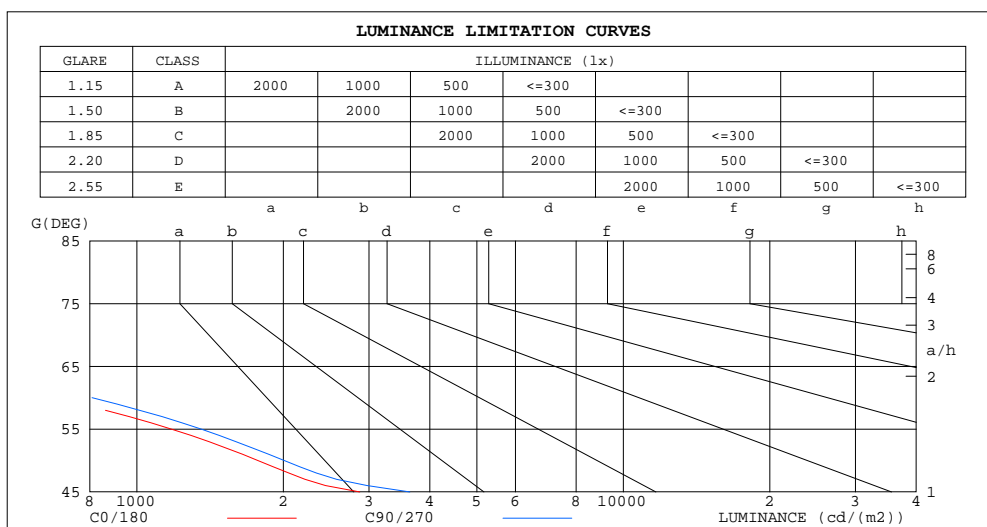
%lamp = 100.0%

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Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason Long
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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:

LUMINANCE LIMITATION CURVES

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SPEC.:3000K	DIM.: ϕ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	460	440
80	291	281
75	276	283
70	321	326
65	429	466
60	687	809
55	1176	1355
50	1771	2007
45	2872	3640

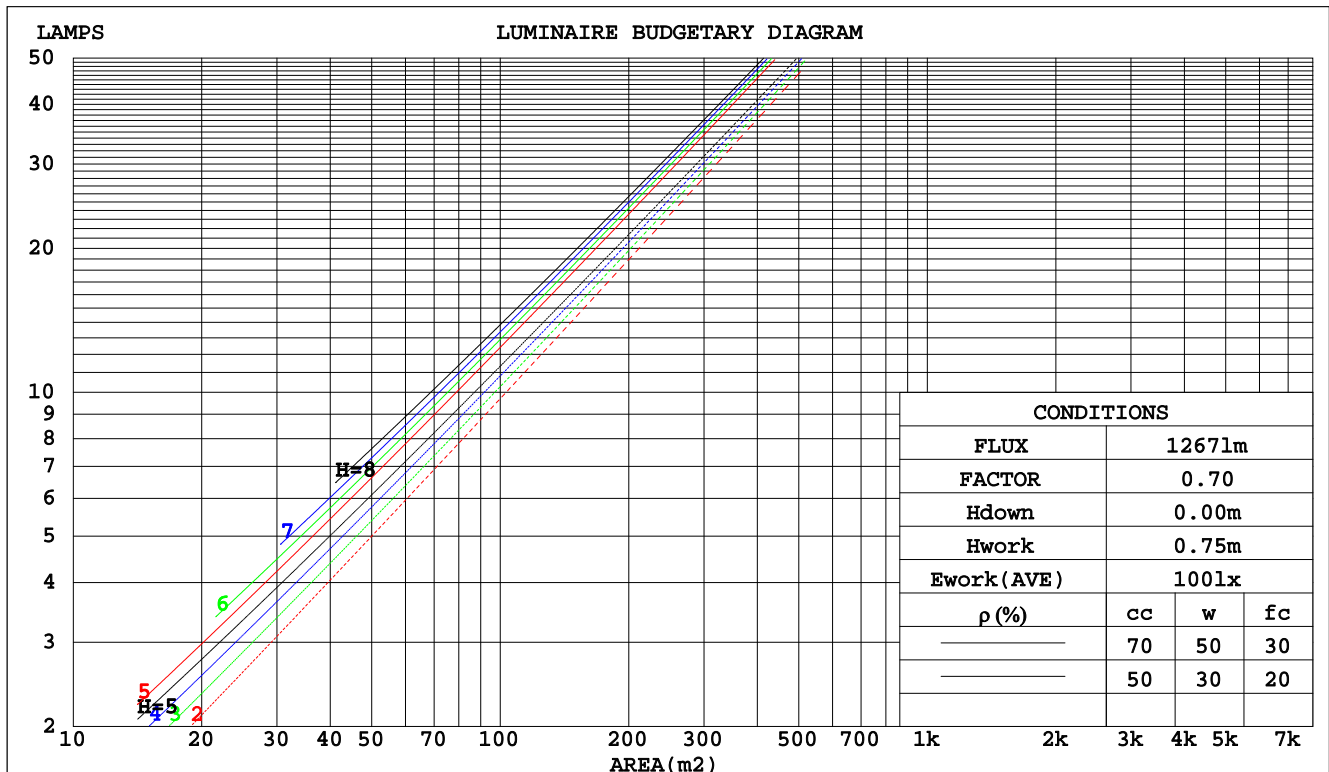
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:3000K	DIM.: $\phi 40\text{mm} \times H70\text{mm}$	
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						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	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.07	1.04	1.02	1.06	1.03	1.01	1.03	1.01	.99	.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.99	.96	1.02	.98	.96	.99	.96	.94	.97	.95	.93	.95	.93	.91	.90
4.0	.99	.95	.92	.98	.94	.91	.96	.93	.90	.94	.91	.89	.92	.90	.88	.87
5.0	.95	.91	.88	.94	.90	.87	.93	.89	.87	.91	.88	.86	.90	.87	.85	.84
6.0	.92	.87	.84	.91	.87	.84	.90	.86	.84	.88	.85	.83	.87	.85	.82	.81
7.0	.88	.84	.81	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.79
8.0	.86	.81	.79	.85	.81	.78	.84	.81	.78	.83	.80	.78	.82	.80	.77	.77
9.0	.83	.79	.76	.83	.79	.76	.82	.78	.76	.81	.78	.75	.80	.77	.75	.74
10.0	.80	.76	.74	.80	.76	.74	.79	.76	.73	.79	.76	.73	.78	.75	.73	.72



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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	.138	.079	.025	.131	.075	.024	.119	.068	.022	.108	.062	.020	.097	.056	.018		
2.0	.128	.070	.022	.123	.068	.021	.112	.062	.019	.103	.058	.018	.094	.053	.017		
3.0	.119	.064	.019	.115	.062	.019	.106	.058	.018	.099	.054	.017	.091	.051	.016		
4.0	.112	.058	.017	.108	.057	.017	.101	.054	.016	.095	.051	.015	.088	.048	.015		
5.0	.106	.054	.016	.103	.053	.015	.097	.050	.015	.091	.048	.014	.086	.046	.014		
6.0	.101	.050	.014	.098	.049	.014	.092	.047	.014	.087	.045	.013	.083	.044	.013		
7.0	.096	.047	.013	.093	.046	.013	.089	.045	.013	.084	.043	.013	.080	.042	.012		
8.0	.091	.045	.013	.089	.044	.012	.085	.043	.012	.081	.041	.012	.078	.040	.012		
9.0	.088	.042	.012	.086	.042	.012	.082	.041	.012	.079	.039	.011	.076	.038	.011		
10.0	.084	.040	.011	.082	.040	.011	.079	.039	.011	.076	.038	.011	.073	.037	.011		

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	.168	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.123	.098	.079	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.066	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008	
6.0	.104	.076	.055	.089	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.096	.068	.047	.083	.059	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006	
8.0	.090	.061	.041	.078	.053	.036	.054	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.085	.055	.035	.073	.048	.031	.050	.034	.022	.029	.020	.013	.010	.007	.004	
10.0	.080	.051	.031	.069	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

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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:

UGR(Unified Glare Rating) Table

Test:U:48.00V I:0.3472A P:16.67W PF:1.000 Freq:0Hz Lamp Flux:1260.47x1 lm										
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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	6.4	7.1	6.6	7.2	7.4	7.0	7.7	7.2	7.8	8.0
3H	6.3	6.9	6.5	7.1	7.2	6.9	7.5	7.1	7.7	7.9
4H	6.2	6.8	6.4	7.0	7.2	6.8	7.4	7.1	7.6	7.8
6H	6.1	6.6	6.4	6.9	7.1	6.7	7.3	7.0	7.5	7.7
8H	6.1	6.6	6.3	6.8	7.1	6.7	7.2	7.0	7.4	7.7
12H	6.0	6.5	6.3	6.8	7.0	6.6	7.1	6.9	7.4	7.7
4H 2H	6.2	6.8	6.4	7.0	7.2	6.8	7.4	7.0	7.6	7.8
3H	6.0	6.5	6.3	6.8	7.0	6.6	7.1	6.9	7.4	7.7
4H	5.9	6.4	6.3	6.7	7.0	6.5	7.0	6.9	7.3	7.6
6H	5.8	6.2	6.2	6.6	6.9	6.4	6.8	6.8	7.2	7.5
8H	5.8	6.2	6.2	6.5	6.9	6.4	6.8	6.8	7.1	7.5
12H	5.7	6.1	6.1	6.4	6.8	6.3	6.7	6.7	7.1	7.4
8H 4H	5.8	6.2	6.1	6.5	6.9	6.4	6.8	6.8	7.1	7.5
6H	5.7	6.0	6.1	6.4	6.8	6.3	6.6	6.7	7.0	7.4
8H	5.6	5.9	6.0	6.3	6.7	6.2	6.5	6.7	6.9	7.3
12H	5.5	5.8	6.0	6.2	6.7	6.2	6.4	6.6	6.8	7.3
12H 4H	5.7	6.1	6.1	6.4	6.8	6.3	6.7	6.7	7.0	7.4
6H	5.6	5.9	6.0	6.3	6.7	6.2	6.5	6.6	6.9	7.3
8H	5.5	5.8	6.0	6.2	6.7	6.1	6.4	6.6	6.8	7.3
Variations with the observer position at spacings:										
S = 1.0H	+ 4.3 / -11.8					+ 4.2 / -12.1				
1.5H	+ 6.9 / - 9.4					+ 6.9 / -10.1				
2.0H	+ 4.2 / - 4.2					+ 5.1 / - 5.0				

CIE Pub.117, 1260 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.8$)

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UTILIZATION FACTORS TABLE

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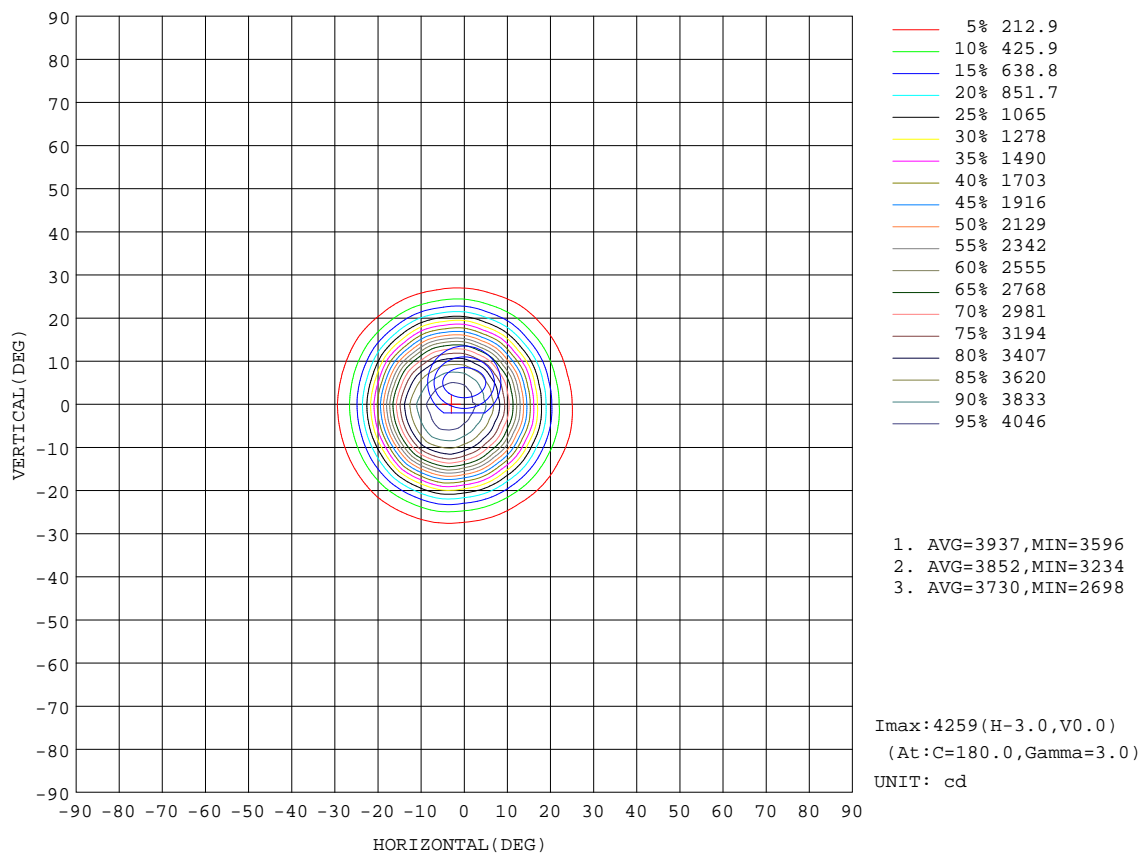
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	96	92	89	86
1.00	102	97	94	101	97	93	100	96	93	89
1.25	105	101	98	104	100	97	103	99	97	93
1.50	108	104	101	107	103	100	104	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	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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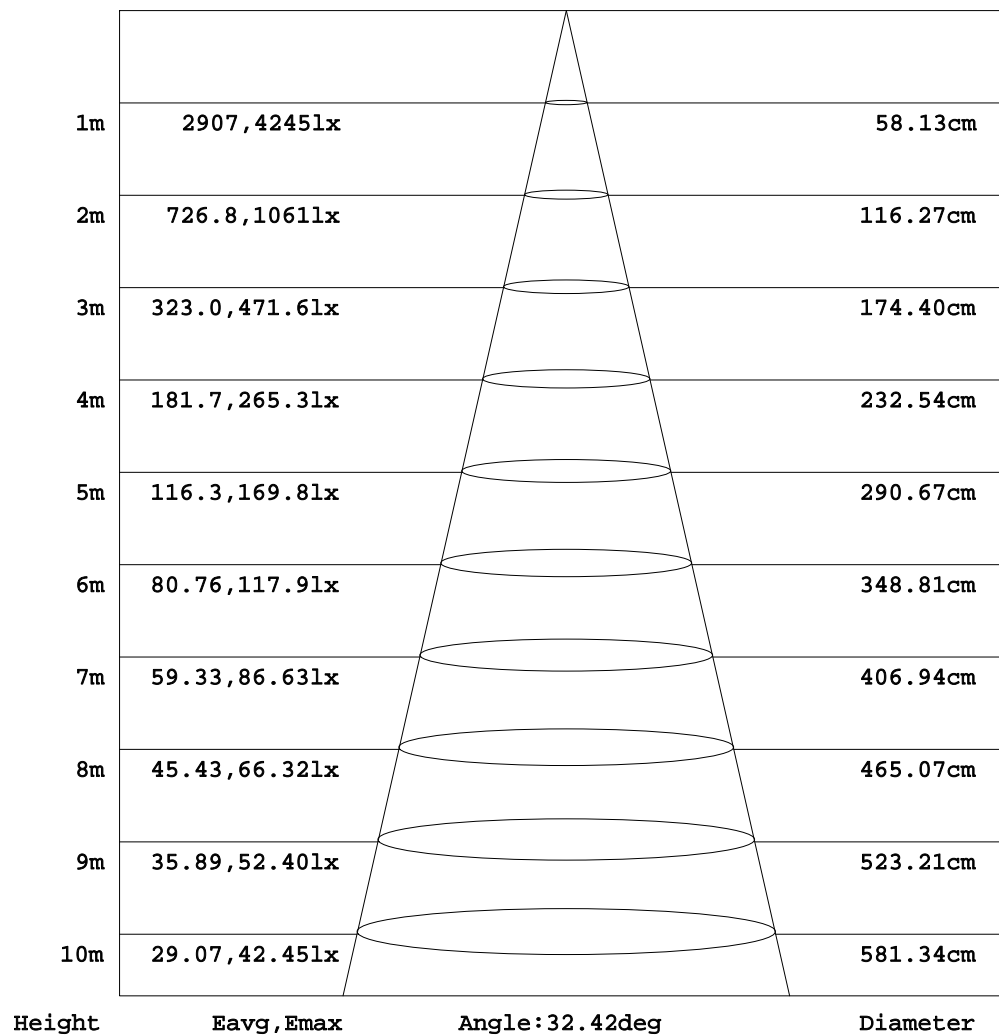
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AAI Figure

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Flux out:853.8 lm



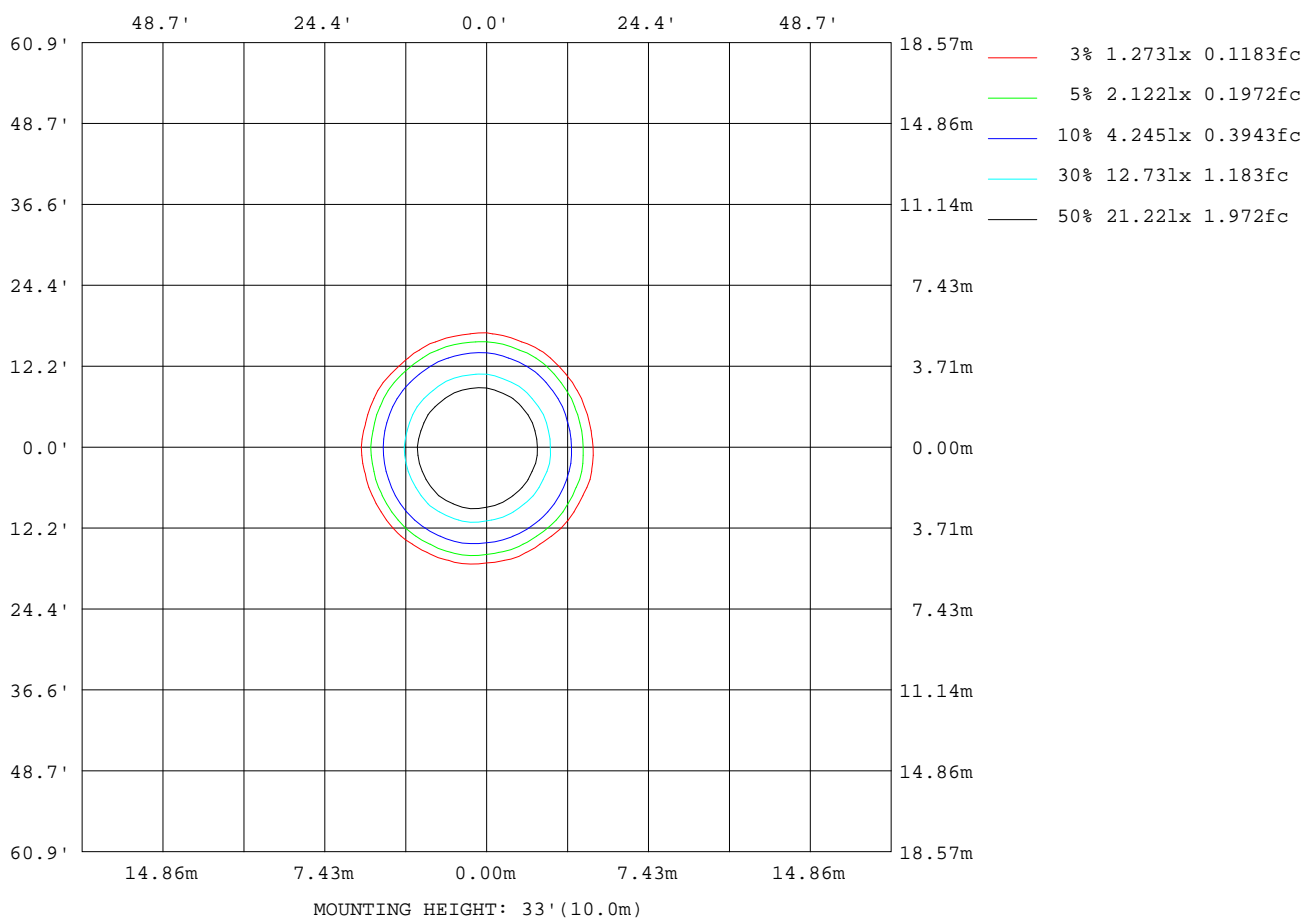
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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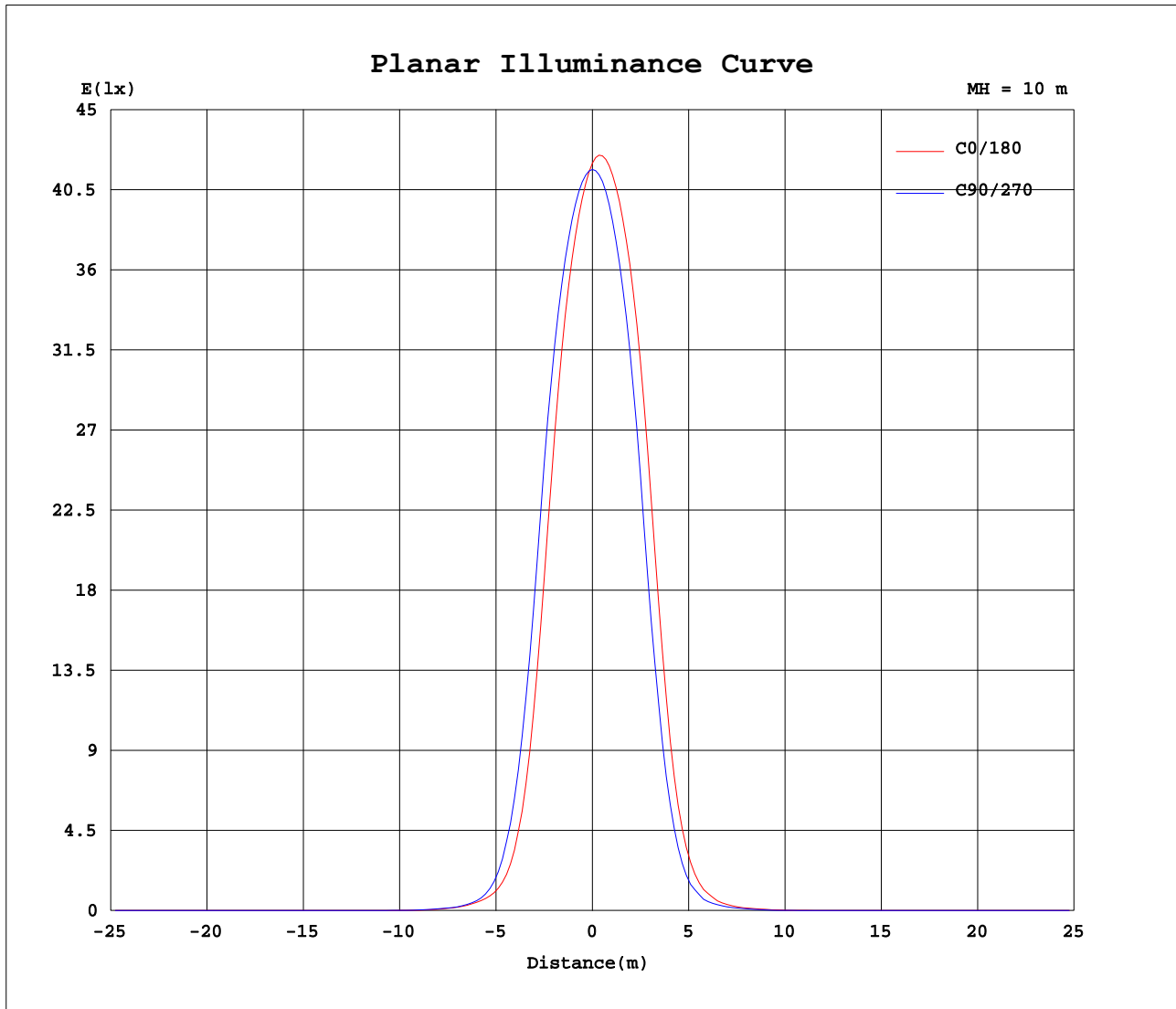
AvgL	cd/m2
L_0~180 (65) av	505
L_0~180 (75) av	267
L_0~180 (85) av	377
L_90~270 (65) av	431
L_90~270 (75) av	236
L_90~270 (85) av	340
L_45 (65) av	460
L_45 (75) av	231
L_45 (85) av	365

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:

```