

Low Voltage Track System Module ML26-RS40-12W-927-30



Light Output Ratio:	100.0%	
Luminaire Power:	12.48 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
Test Date: 2020-05-07

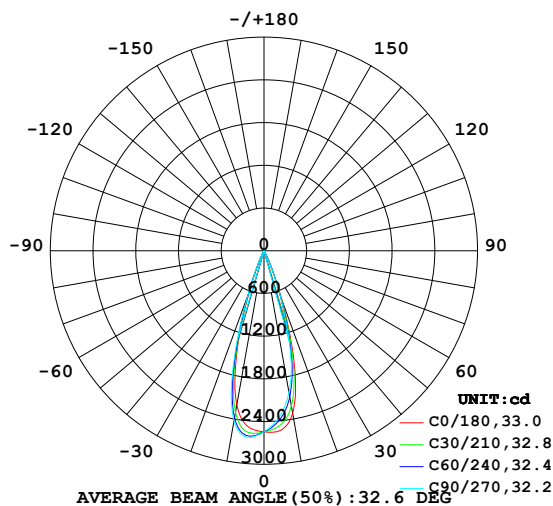
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

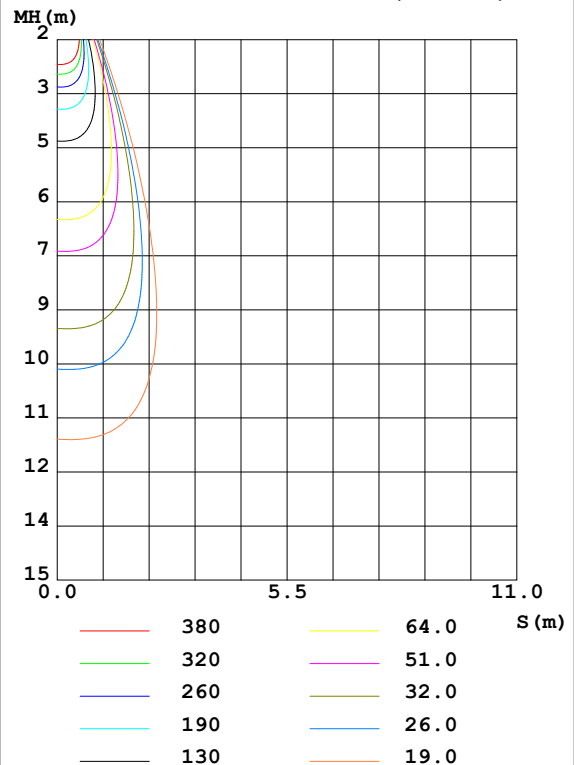
Test:U:48.00V I:0.2601A P:12.48W PF:1.000 Freq:0Hz Lamp Flux:746.216x1 lm		
NAME: ML26-RS40-12W-927-30	TYPE:Low Voltage Track System Module	
SPEC.:2700K	DIM.: ϕ 40mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 59.77 lm/W			
MODEL	CITIZEN-2700K	I _{max} (cd)	2630	S/MH (C0/180)	0.49
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	0.50
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	746.22	η UP, DN (C0-180)	0.0, 49.4
NOMINAL FLUX (lm)	746.216	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.6
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	2318	2156	2022	2116	2200	2331	2423	2321	0- 10	230.9	230.9	30.9,30.9
20	719.8	701.0	654.1	695.6	597.5	606.4	661.5	640.5	10- 20	402.5	633.4	84.9,84.9
30	48.62	46.76	38.42	41.64	37.48	36.90	39.70	39.68	20- 30	98.52	731.9	98.1,98.1
40	9.217	9.103	8.130	8.148	6.000	4.715	5.039	6.160	30- 40	12.11	744.1	99.7,99.7
50	0.7936	0.8121	0.8825	0.7449	0.6548	0.6742	0.6030	0.6495	40- 50	1.626	745.7	99.9,99.9
60	0.2217	0.2133	0.2891	0.2263	0.1343	0.1374	0.1113	0.1189	50- 60	0.3611	746.0	100,100
70	0.0826	0.0674	0.0964	0.0637	0.0304	0.0523	0.0371	0.0463	60- 70	0.1040	746.1	100,100
80	0.0434	0.0305	0.0460	0.0330	0.0261	0.0284	0.0219	0.0308	70- 80	0.0442	746.2	100,100
90	0.0282	0.0283	0.0284	0.0286	0.0261	0.0218	0.0219	0.0220	80- 90	0.0308	746.2	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): 745.27 lm

%lum = 99.9%

%lamp = 99.9%

Conical surface Flux(120deg): 746.04 lm

%lum = 100.0%

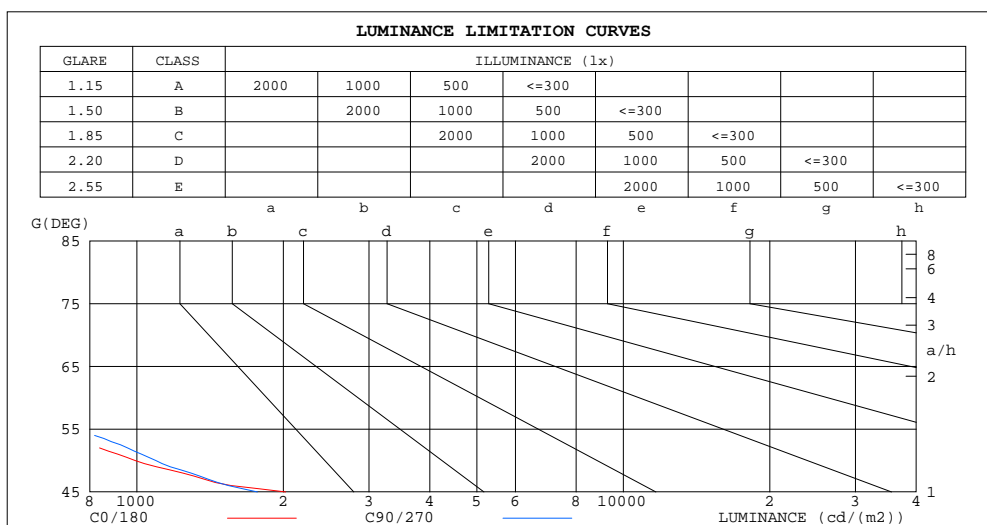
%lamp = 100.0%

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Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-07

γ Range: 0 - 90DEG
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Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:2700K	DIM.: ϕ 40mm*H105mm	
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LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	359	320
80	200	211
75	182	209
70	194	224
65	256	313
60	355	460
55	614	751
50	990	1093
45	2022	1769

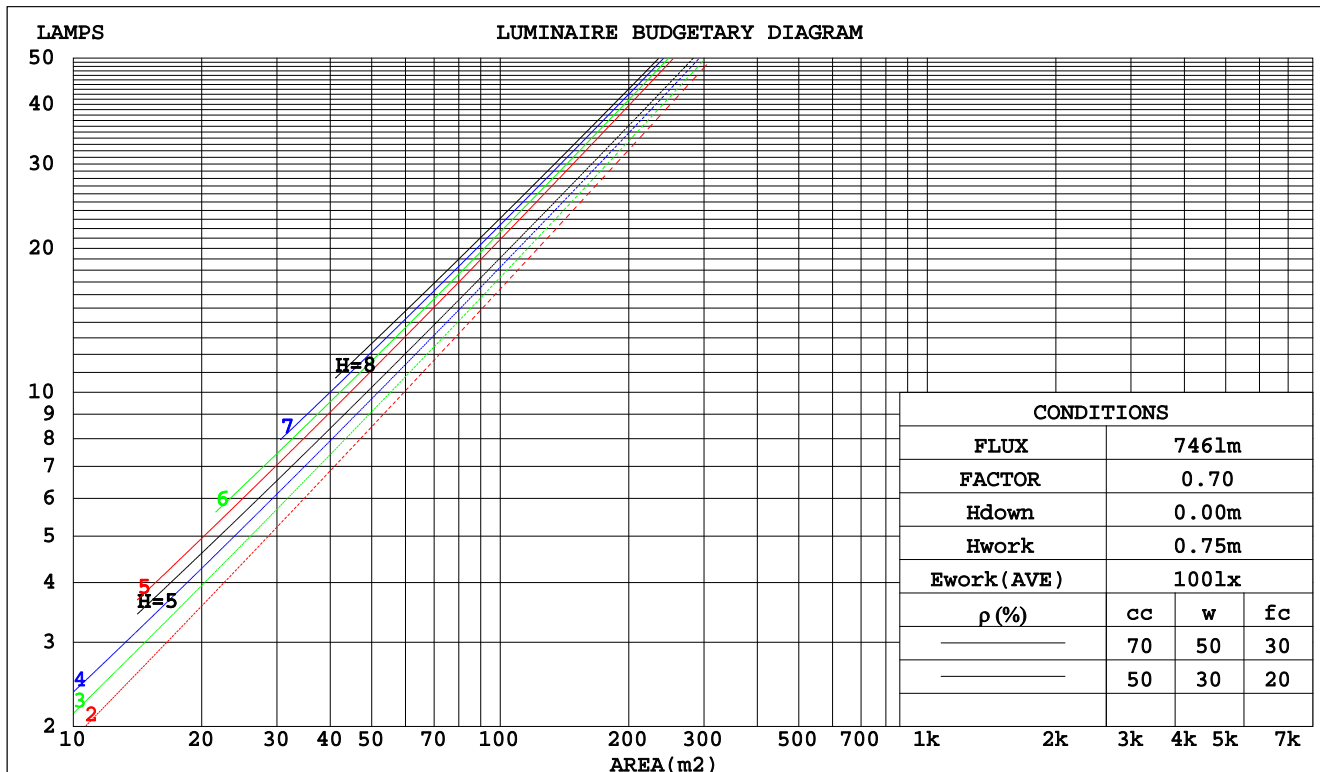
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:2700K	DIM.: $\phi 40\text{mm} \times \text{H}105\text{mm}$	
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	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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.02	1.06	1.04	1.01	1.03	1.01	.99	1.00	.99	.97	.98	.96	.95	.94
3.0	1.03	.00	.97	1.02	.99	.96	.00	.97	.95	.97	.95	.93	.95	.93	.92	.91
4.0	.99	.96	.93	.98	.95	.92	.96	.93	.91	.95	.92	.90	.93	.91	.89	.88
5.0	.96	.92	.89	.95	.91	.88	.93	.90	.88	.92	.89	.87	.91	.88	.86	.85
6.0	.93	.89	.86	.92	.88	.85	.91	.87	.85	.89	.86	.84	.88	.86	.84	.83
7.0	.90	.86	.83	.89	.85	.82	.88	.85	.82	.87	.84	.82	.86	.83	.81	.80
8.0	.87	.83	.80	.86	.83	.80	.85	.82	.80	.85	.82	.79	.84	.81	.79	.78
9.0	.84	.80	.78	.84	.80	.78	.83	.80	.77	.82	.79	.77	.82	.79	.77	.76
10.0	.82	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.75	.80	.77	.75	.74



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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	.135	.077	.024	.128	.073	.023	.116	.067	.021	.105	.060	.019	.094	.055	.018		
2.0	.125	.068	.021	.119	.066	.020	.109	.061	.019	.100	.056	.018	.091	.052	.016		
3.0	.116	.062	.019	.112	.060	.018	.103	.056	.017	.095	.052	.016	.088	.049	.015		
4.0	.109	.057	.017	.105	.055	.016	.098	.052	.016	.091	.049	.015	.085	.046	.014		
5.0	.103	.052	.015	.099	.051	.015	.093	.049	.014	.088	.046	.014	.082	.044	.013		
6.0	.097	.049	.014	.095	.048	.014	.089	.046	.013	.084	.044	.013	.080	.042	.012		
7.0	.093	.046	.013	.090	.045	.013	.086	.043	.012	.081	.042	.012	.077	.040	.012		
8.0	.088	.043	.012	.086	.042	.012	.082	.041	.012	.078	.040	.011	.075	.038	.011		
9.0	.085	.041	.011	.083	.040	.011	.079	.039	.011	.076	.038	.011	.073	.037	.011		
10.0	.081	.039	.011	.080	.038	.011	.076	.037	.011	.073	.036	.010	.071	.036	.010		

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	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.128	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.116	.098	.083	.079	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.122	.098	.079	.105	.085	.069	.072	.059	.048	.042	.035	.029	.013	.011	.009	
5.0	.112	.086	.066	.096	.074	.058	.066	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.103	.076	.056	.088	.065	.049	.061	.046	.034	.035	.027	.020	.011	.009	.007	
7.0	.095	.067	.048	.082	.058	.042	.057	.041	.029	.033	.024	.018	.011	.008	.006	
8.0	.089	.061	.041	.076	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.083	.055	.036	.072	.048	.031	.050	.033	.022	.029	.020	.013	.009	.006	.004	
10.0	.078	.050	.031	.068	.044	.027	.047	.031	.019	.027	.018	.012	.009	.006	.004	

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:48.00V I:0.2601A P:12.48W PF:1.000 Freq:0Hz Lamp Flux:746.216x1 lm										
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SPEC.:2700K					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	6.6	7.3	6.8	7.4	7.6	5.8	6.4	6.0	6.5	6.7
3H	6.5	7.1	6.7	7.3	7.5	5.6	6.2	5.9	6.4	6.6
4H	6.4	7.0	6.7	7.2	7.4	5.5	6.1	5.8	6.3	6.5
6H	6.3	6.9	6.6	7.1	7.3	5.5	6.0	5.7	6.2	6.5
8H	6.3	6.8	6.6	7.1	7.3	5.4	5.9	5.7	6.2	6.4
12H	6.3	6.8	6.6	7.0	7.3	5.4	5.9	5.7	6.1	6.4
4H 2H	6.4	7.0	6.7	7.2	7.4	5.5	6.1	5.8	6.3	6.5
3H	6.3	6.8	6.6	7.0	7.3	5.4	5.9	5.7	6.1	6.4
4H	6.2	6.6	6.5	6.9	7.2	5.3	5.7	5.6	6.0	6.3
6H	6.1	6.5	6.4	6.8	7.1	5.2	5.6	5.6	5.9	6.3
8H	6.0	6.4	6.4	6.7	7.1	5.1	5.5	5.5	5.9	6.2
12H	6.0	6.3	6.4	6.7	7.1	5.1	5.4	5.5	5.8	6.2
8H 4H	6.0	6.4	6.4	6.7	7.1	5.1	5.5	5.5	5.9	6.2
6H	5.9	6.2	6.3	6.6	7.0	5.0	5.3	5.4	5.7	6.1
8H	5.8	6.1	6.3	6.5	7.0	5.0	5.2	5.4	5.7	6.1
12H	5.8	6.0	6.2	6.5	6.9	4.9	5.2	5.4	5.6	6.1
12H 4H	5.9	6.3	6.4	6.7	7.0	5.1	5.4	5.5	5.8	6.2
6H	5.8	6.1	6.3	6.5	7.0	5.0	5.2	5.4	5.7	6.1
8H	5.8	6.0	6.2	6.5	6.9	4.9	5.1	5.4	5.6	6.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.7 / -13.8					+ 3.4 / -12.2				
1.5H	+ 6.4 / -11.6					+ 6.1 / -10.4				
2.0H	+ 5.4 / - 4.4					+ 4.3 / - 4.2				

CIE Pub.117, 746.2 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -1.0$)

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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity:58%
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Remarks:

UTILIZATION FACTORS TABLE

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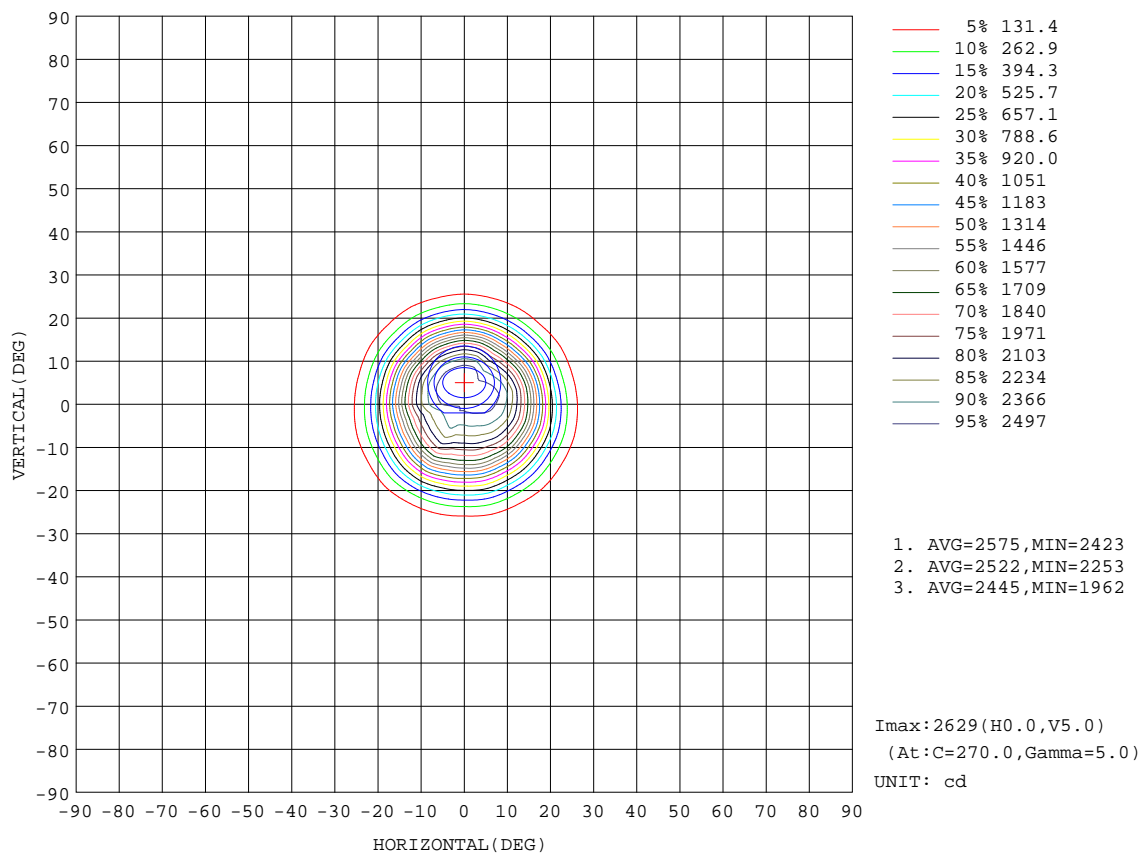
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	97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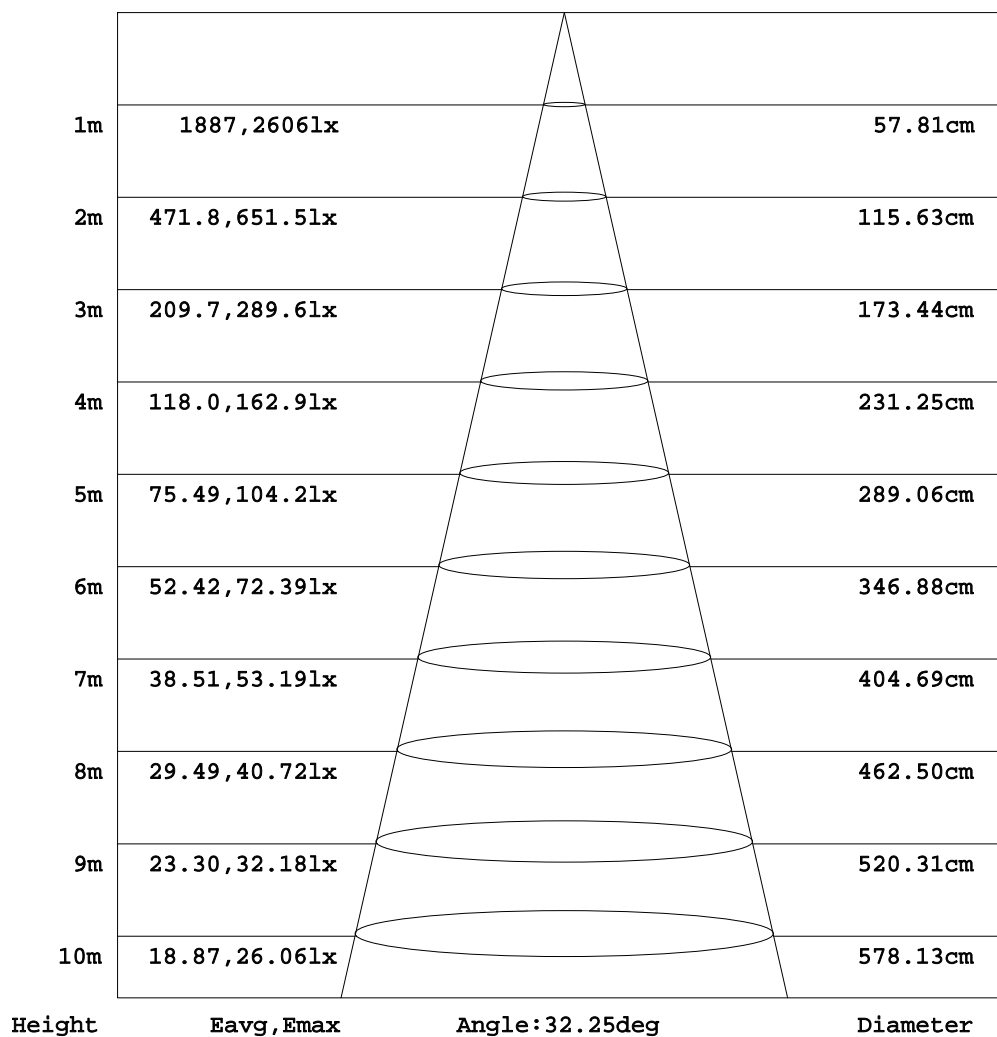
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AAI Figure

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Flux out:520.2 lm



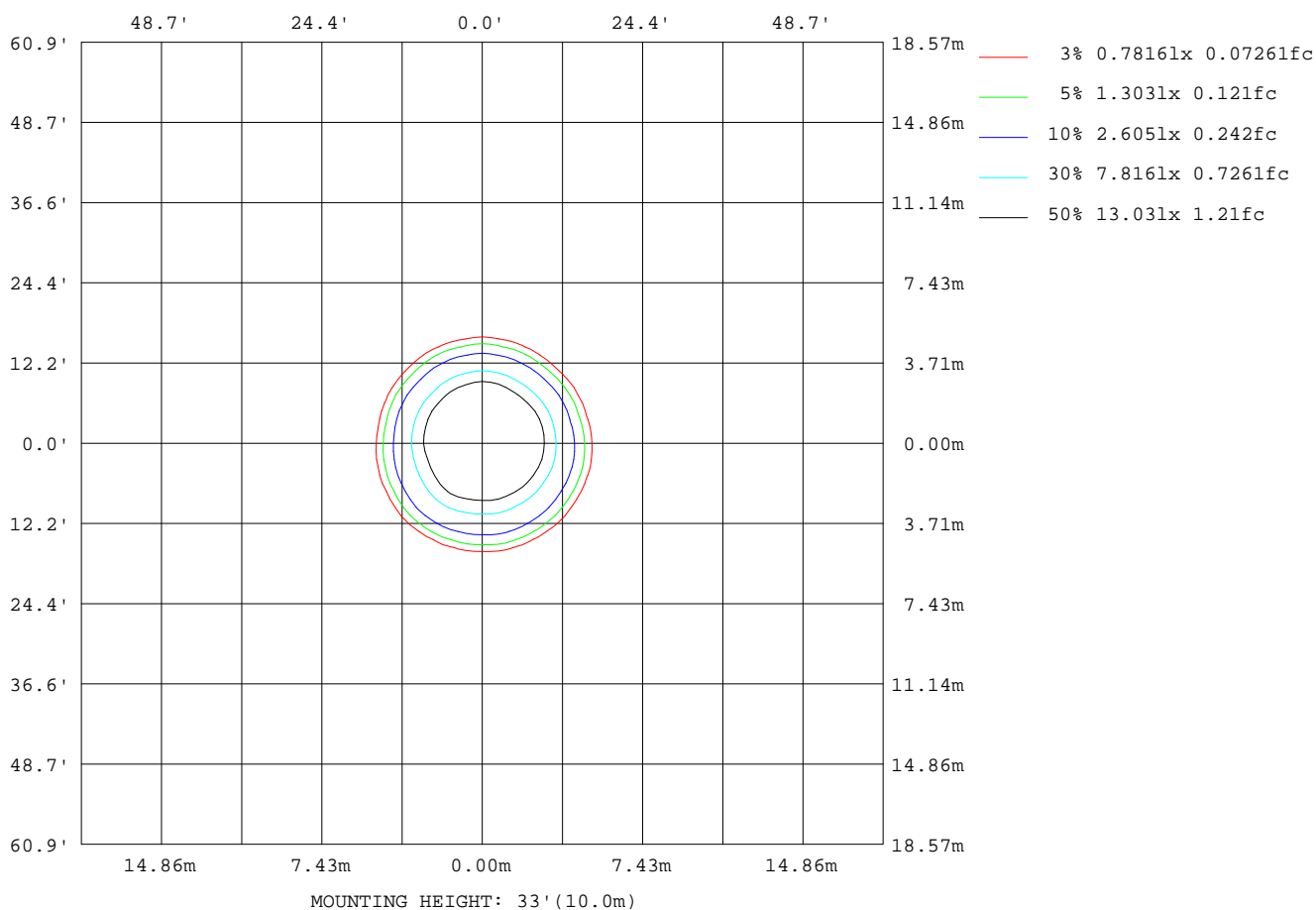
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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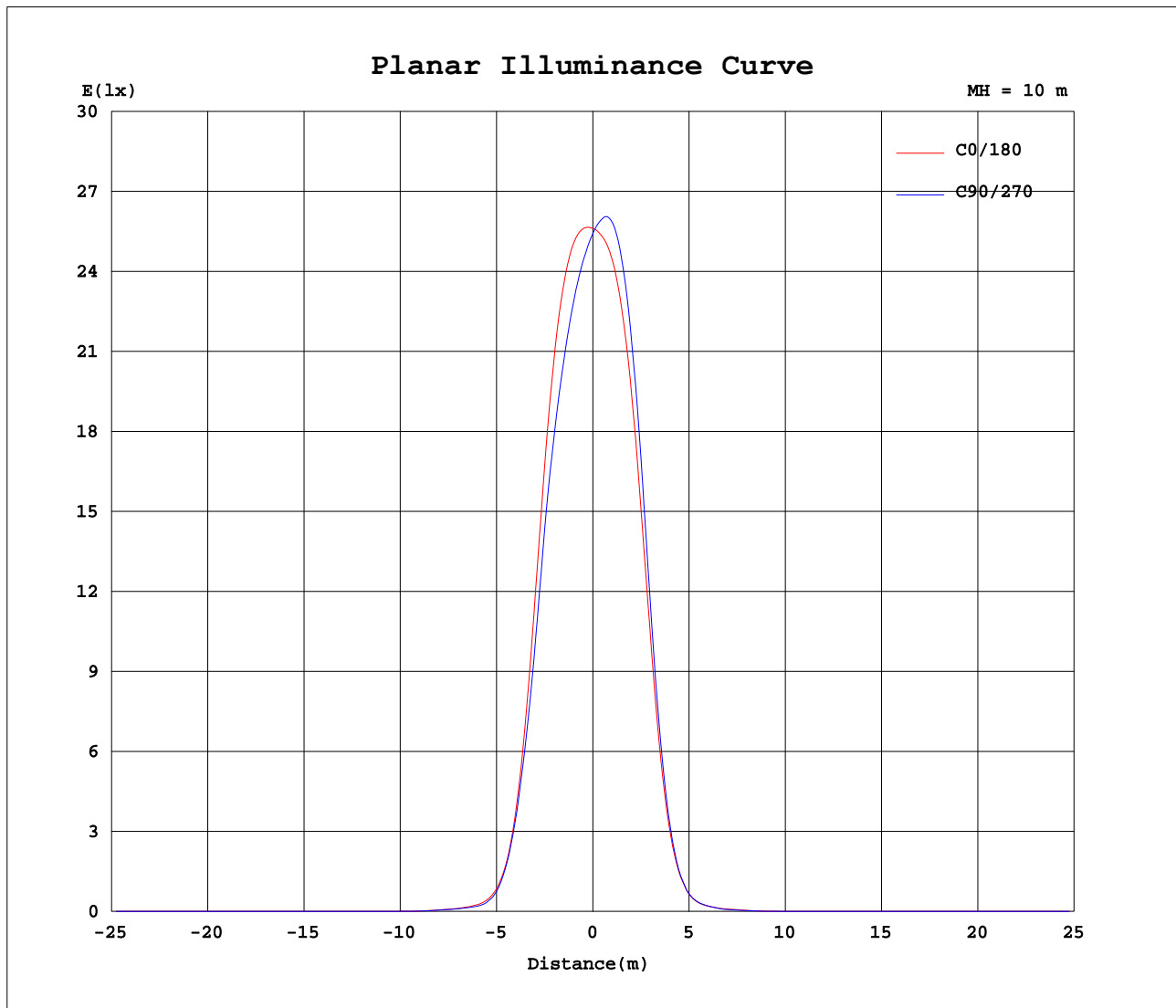
AvgL	cd/m2
L_0~180 (65) av	180
L_0~180 (75) av	130
L_0~180 (85) av	297
L_90~270 (65) av	212
L_90~270 (75) av	155
L_90~270 (85) av	260
L_45 (65) av	180
L_45 (75) av	116
L_45 (85) av	250

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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: 2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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: 0.5DEG
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: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

```