

Low Voltage Track System Module ML26-RS40-12W-940-18



Light Output Ratio:	100.0%	
Luminaire Power:	11.62 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
Test Date: 2020-05-15

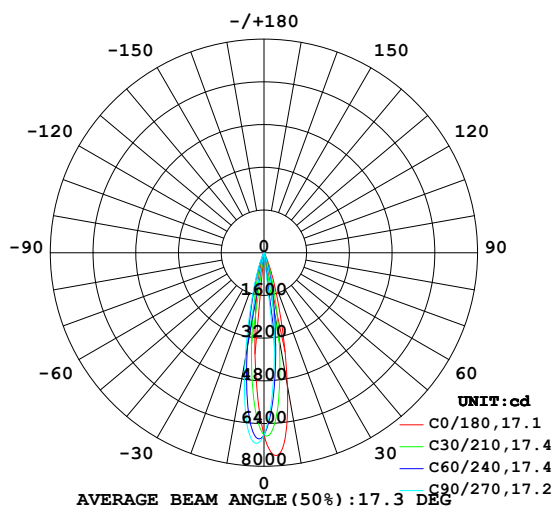
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

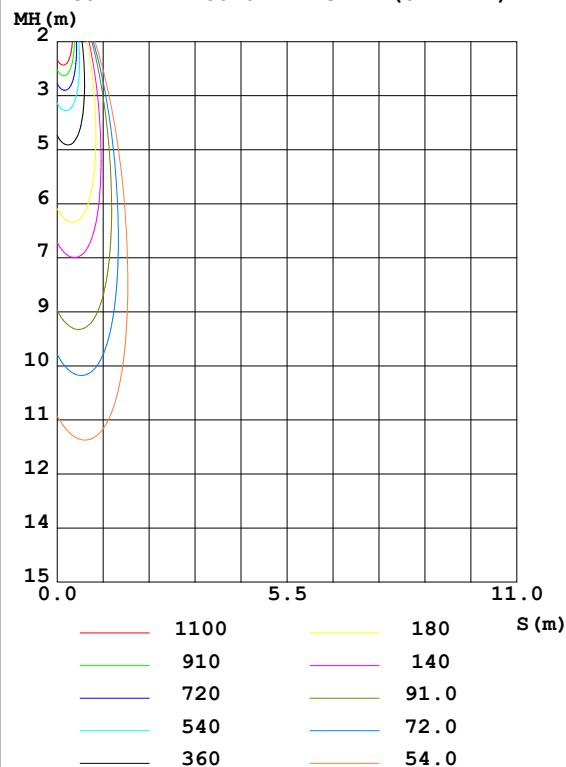
Test:U:48.00V I:0.2421A P:11.62W PF:1.000 Freq:0Hz Lamp Flux:839.375x1 lm		
NAME: ML26-RS40-12W-940-18	TYPE:Low Voltage Track System Module	
SPEC.:4000K	DIM.: ϕ 40mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 72.23 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	7609	S/MH (C0/180)	0.20
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	0.37
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	839.38	η UP,DN (C0-180)	0.0,47.3
NOMINAL FLUX (lm)	839.375	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,52.7
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

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γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	5053	2695	1899	2275	1567	2922	4063	2974	0- 10	433.0	433.0	51.6, 51.6
20	856.7	389.4	216.7	257.6	151.6	401.2	601.8	353.3	10- 20	332.7	765.6	91.2, 91.2
30	66.76	35.92	22.59	28.95	19.08	36.04	50.23	36.46	20- 30	61.27	826.9	98.5, 98.5
40	9.711	6.702	3.468	4.490	3.186	5.668	7.158	5.991	30- 40	9.697	836.6	99.7, 99.7
50	1.989	0.9803	0.6799	0.8036	0.6453	1.139	1.515	1.122	40- 50	2.102	838.7	99.9, 99.9
60	0.3913	0.1695	0.1255	0.1353	0.0981	0.2434	0.2937	0.2332	50- 60	0.4790	839.2	100, 100
70	0.0915	0.0367	0.0501	0.0360	0.0296	0.0619	0.0501	0.0636	60- 70	0.1032	839.3	100, 100
80	0.0434	0.0344	0.0334	0.0339	0.0274	0.0298	0.0230	0.0297	70- 80	0.0411	839.3	100, 100
90	0.0365	0.0367	0.0355	0.0360	0.0297	0.0252	0.0230	0.0212	80- 90	0.0328	839.4	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): 838.04 lm

%lum = 99.8%

%lamp = 99.8%

Conical surface Flux(120deg): 839.2 lm

%lum = 100.0%

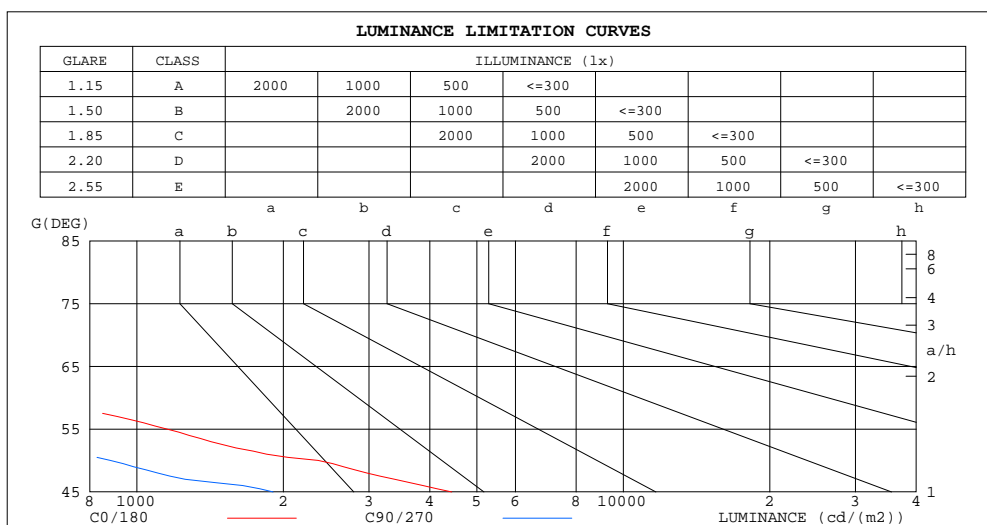
%lamp = 100.0%

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Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:4000K	DIM.: ϕ 40mm*H105mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	340	320
80	190	160
75	168	128
70	204	122
65	309	140
60	596	209
55	1152	417
50	2358	882
45	4440	1906

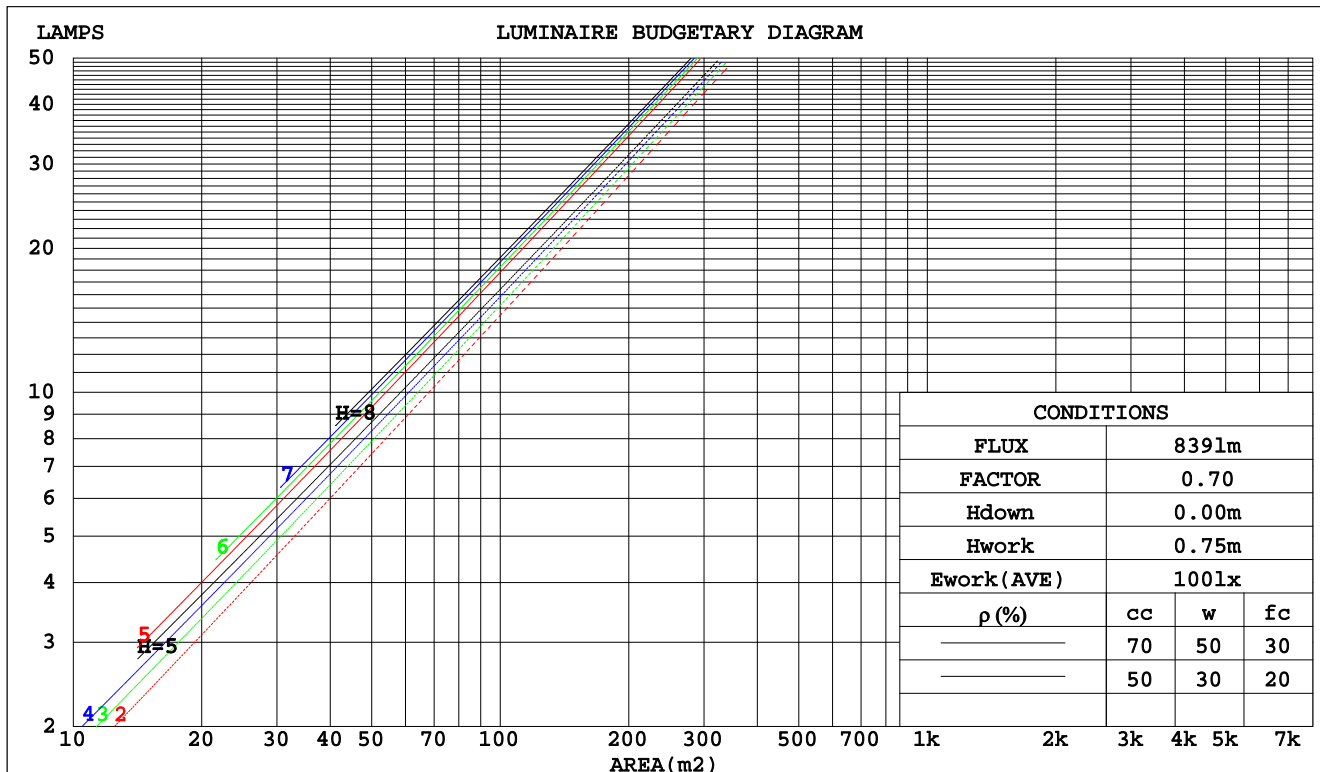
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:4000K	DIM.: $\phi 40\text{mm} \times H105\text{mm}$	
MFR.: NEKO LIGHTING AG		

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	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	1.10	1.12	1.10	1.09	1.08	1.06	1.05	1.04	1.03	1.02	1.01	1.00	.99	.98
2.0	1.09	1.07	1.04	1.08	1.05	1.03	1.05	1.03	1.01	1.02	1.00	.99	.99	.98	.97	.96
3.0	1.06	1.02	.00	1.04	1.01	.99	1.02	.00	.98	.00	.98	.96	.98	.96	.95	.94
4.0	1.02	.99	.96	1.01	.98	.96	.99	.97	.95	.98	.95	.94	.96	.94	.93	.92
5.0	.99	.96	.93	.99	.95	.93	.97	.94	.92	.96	.93	.92	.94	.92	.91	.90
6.0	.97	.93	.91	.96	.93	.91	.95	.92	.90	.94	.91	.90	.93	.91	.89	.88
7.0	.95	.91	.89	.94	.91	.89	.93	.90	.88	.92	.90	.88	.91	.89	.87	.86
8.0	.93	.89	.87	.92	.89	.87	.91	.88	.86	.90	.88	.86	.90	.87	.86	.85
9.0	.91	.87	.85	.90	.87	.85	.90	.87	.85	.89	.86	.84	.88	.86	.84	.83
10.0	.89	.86	.83	.89	.85	.83	.88	.85	.83	.87	.85	.83	.87	.84	.83	.82



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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	.122	.069	.022	.115	.066	.021	.103	.059	.019	.091	.053	.017	.081	.047	.015		
2.0	.111	.061	.019	.106	.058	.018	.096	.053	.017	.086	.048	.015	.078	.044	.014		
3.0	.102	.054	.016	.098	.052	.016	.090	.049	.015	.082	.045	.014	.075	.041	.013		
4.0	.095	.049	.014	.091	.048	.014	.084	.045	.013	.078	.042	.013	.072	.039	.012		
5.0	.089	.045	.013	.086	.044	.013	.080	.041	.012	.074	.039	.012	.069	.037	.011		
6.0	.083	.042	.012	.081	.041	.012	.076	.039	.011	.071	.037	.011	.067	.035	.010		
7.0	.079	.039	.011	.076	.038	.011	.072	.036	.010	.068	.035	.010	.064	.033	.010		
8.0	.075	.036	.010	.073	.036	.010	.069	.034	.010	.065	.033	.010	.062	.032	.009		
9.0	.071	.034	.010	.069	.034	.009	.066	.033	.009	.063	.032	.009	.060	.030	.009		
10.0	.068	.032	.009	.066	.032	.009	.063	.031	.009	.061	.030	.009	.058	.029	.008		

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	.167	.158	.149	.143	.135	.128	.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	.078	.068	.060	.045	.040	.035	.014	.013	.012	
4.0	.119	.098	.081	.102	.084	.071	.070	.059	.050	.041	.034	.029	.013	.011	.010	
5.0	.108	.085	.068	.092	.074	.059	.064	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.098	.075	.058	.084	.065	.050	.058	.045	.036	.034	.027	.021	.011	.009	.007	
7.0	.090	.066	.050	.077	.057	.043	.054	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.083	.059	.043	.072	.051	.037	.050	.036	.027	.029	.021	.016	.009	.007	.005	
9.0	.077	.053	.037	.066	.046	.033	.046	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.072	.048	.033	.062	.042	.029	.043	.030	.020	.025	.018	.012	.008	.006	.004	

C Range: 0 - 360DEG
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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:

UGR(Unified Glare Rating) Table

Test:U:48.00V I:0.2421A P:11.62W PF:1.000 Freq:0Hz Lamp Flux:839.375x1 lm										
NAME: ML26-RS40-12W-940-18					TYPE:Low Voltage Track System Module					
SPEC.:4000K					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	5.8	6.4	6.0	6.5	6.6	1.1	1.7	1.3	1.8	1.9
3H	5.7	6.2	5.9	6.4	6.5	1.0	1.5	1.2	1.7	1.9
4H	5.6	6.1	5.9	6.3	6.5	0.9	1.4	1.2	1.6	1.8
6H	5.5	6.0	5.8	6.2	6.4	0.8	1.3	1.1	1.5	1.8
8H	5.5	5.9	5.8	6.2	6.4	0.8	1.2	1.1	1.5	1.7
12H	5.4	5.9	5.7	6.1	6.4	0.8	1.2	1.1	1.5	1.7
4H 2H	5.6	6.1	5.9	6.3	6.5	0.9	1.4	1.2	1.6	1.8
3H	5.4	5.9	5.7	6.1	6.4	0.8	1.2	1.1	1.4	1.7
4H	5.3	5.7	5.7	6.0	6.3	0.7	1.1	1.0	1.4	1.7
6H	5.2	5.6	5.6	5.9	6.3	0.6	0.9	0.9	1.3	1.6
8H	5.2	5.5	5.6	5.9	6.2	0.5	0.9	0.9	1.2	1.6
12H	5.1	5.4	5.5	5.8	6.2	0.5	0.8	0.9	1.2	1.5
8H 4H	5.2	5.5	5.6	5.9	6.2	0.5	0.8	0.9	1.2	1.6
6H	5.1	5.3	5.5	5.7	6.1	0.4	0.7	0.8	1.1	1.5
8H	5.0	5.3	5.5	5.7	6.1	0.4	0.6	0.8	1.0	1.5
12H	5.0	5.2	5.4	5.6	6.1	0.3	0.6	0.8	1.0	1.5
12H 4H	5.1	5.4	5.5	5.8	6.2	0.5	0.8	0.9	1.1	1.5
6H	5.0	5.3	5.4	5.7	6.1	0.4	0.6	0.8	1.0	1.5
8H	4.9	5.2	5.4	5.6	6.1	0.3	0.5	0.8	1.0	1.4
Variations with the observer position at spacings:										
S = 1.0H	+ 4.7 / -11.6					+ 2.7 / -10.4				
1.5H	+ 7.0 / -10.4					+ 4.8 / - 8.3				
2.0H	+ 7.2 / - 8.4					+ 5.6 / - 5.8				

CIE Pub.117, 839.4 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.6$)

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UTILIZATION FACTORS TABLE

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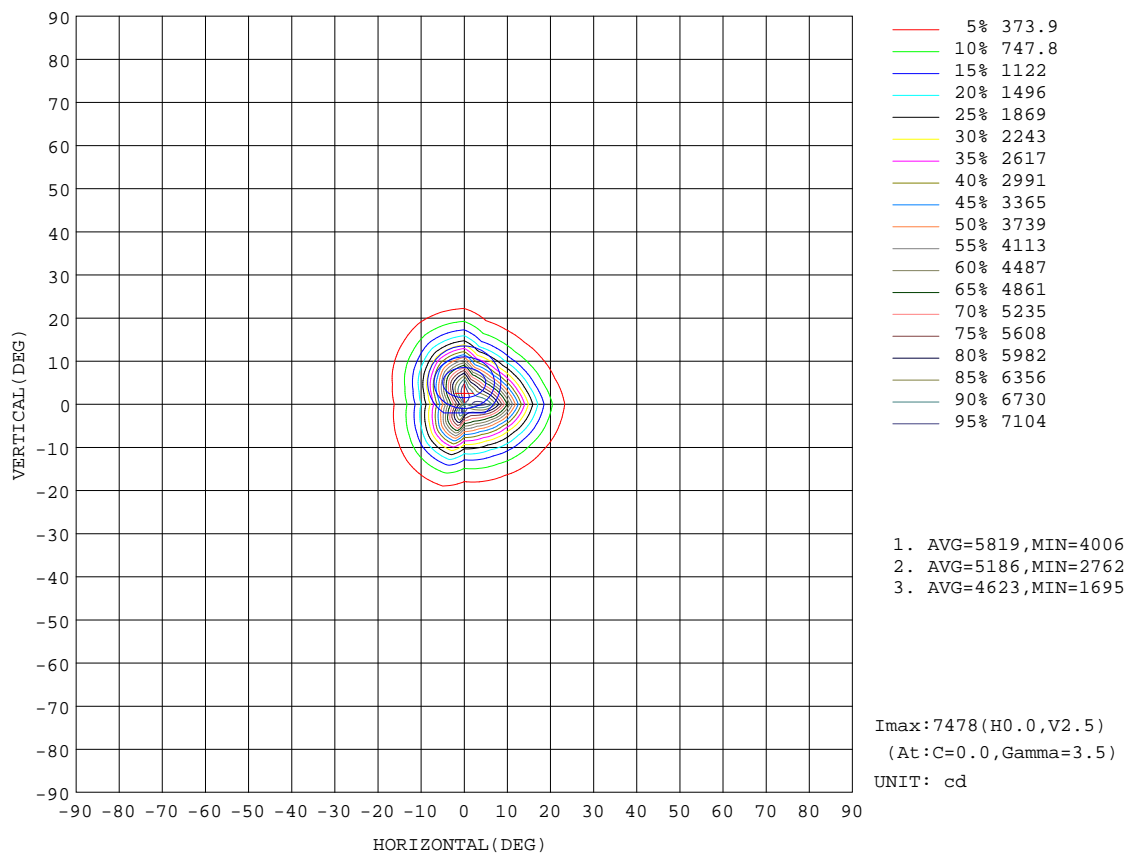
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	97	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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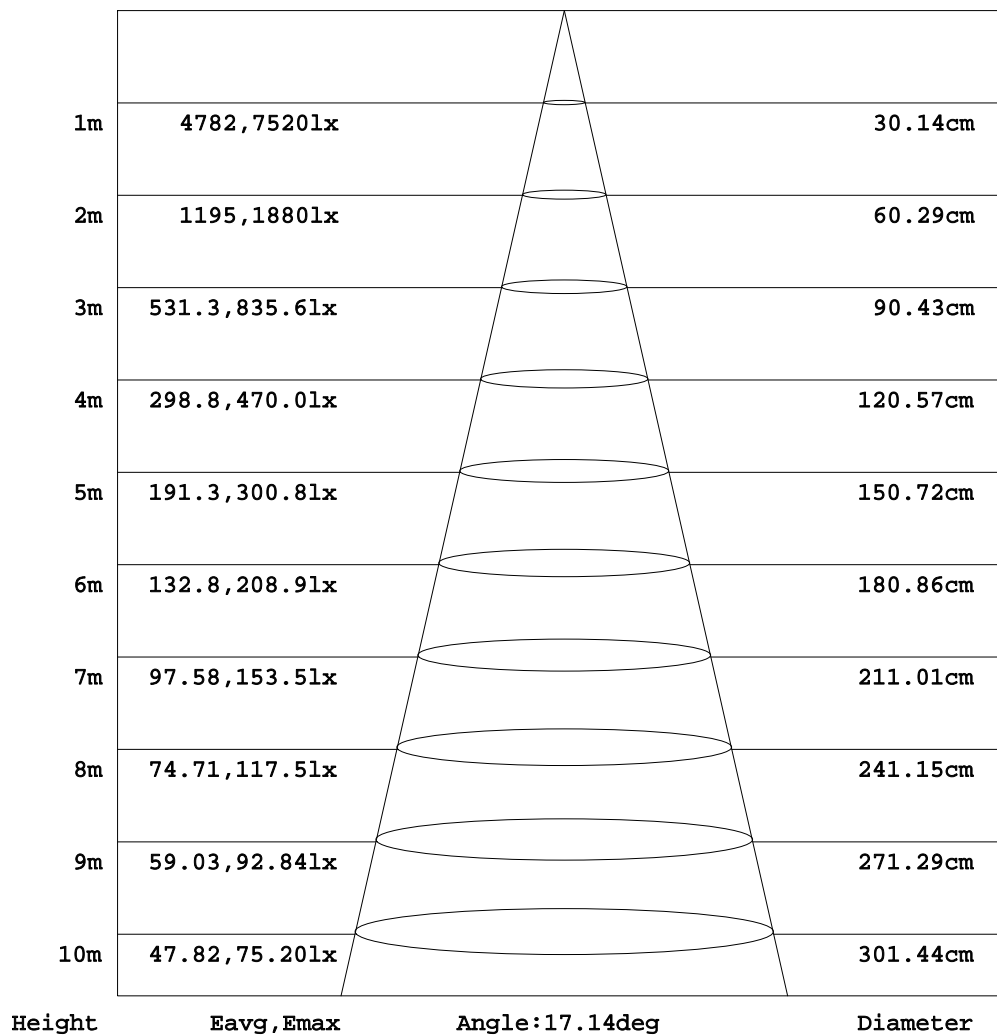
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AAI Figure

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Flux out:376.8 lm



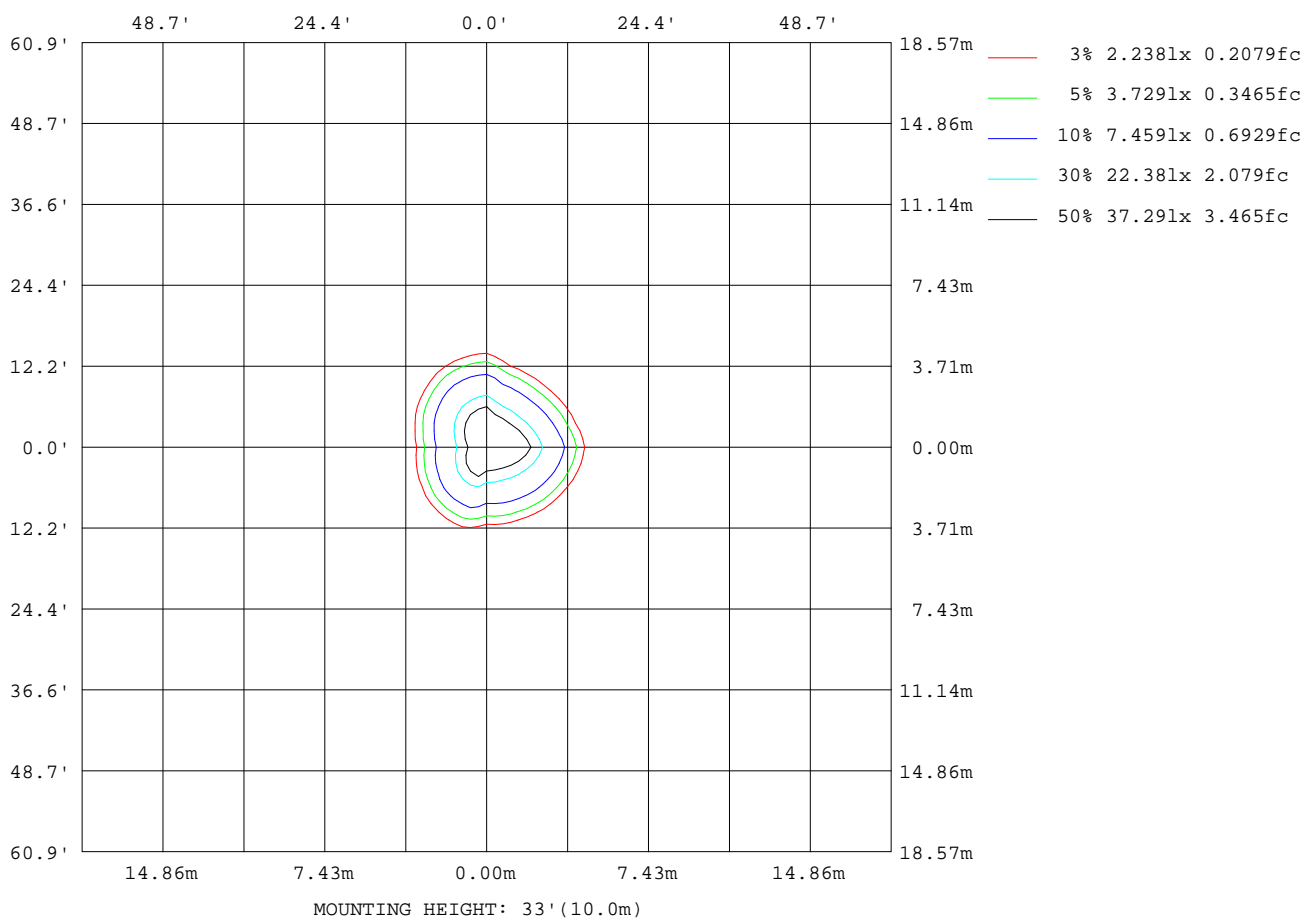
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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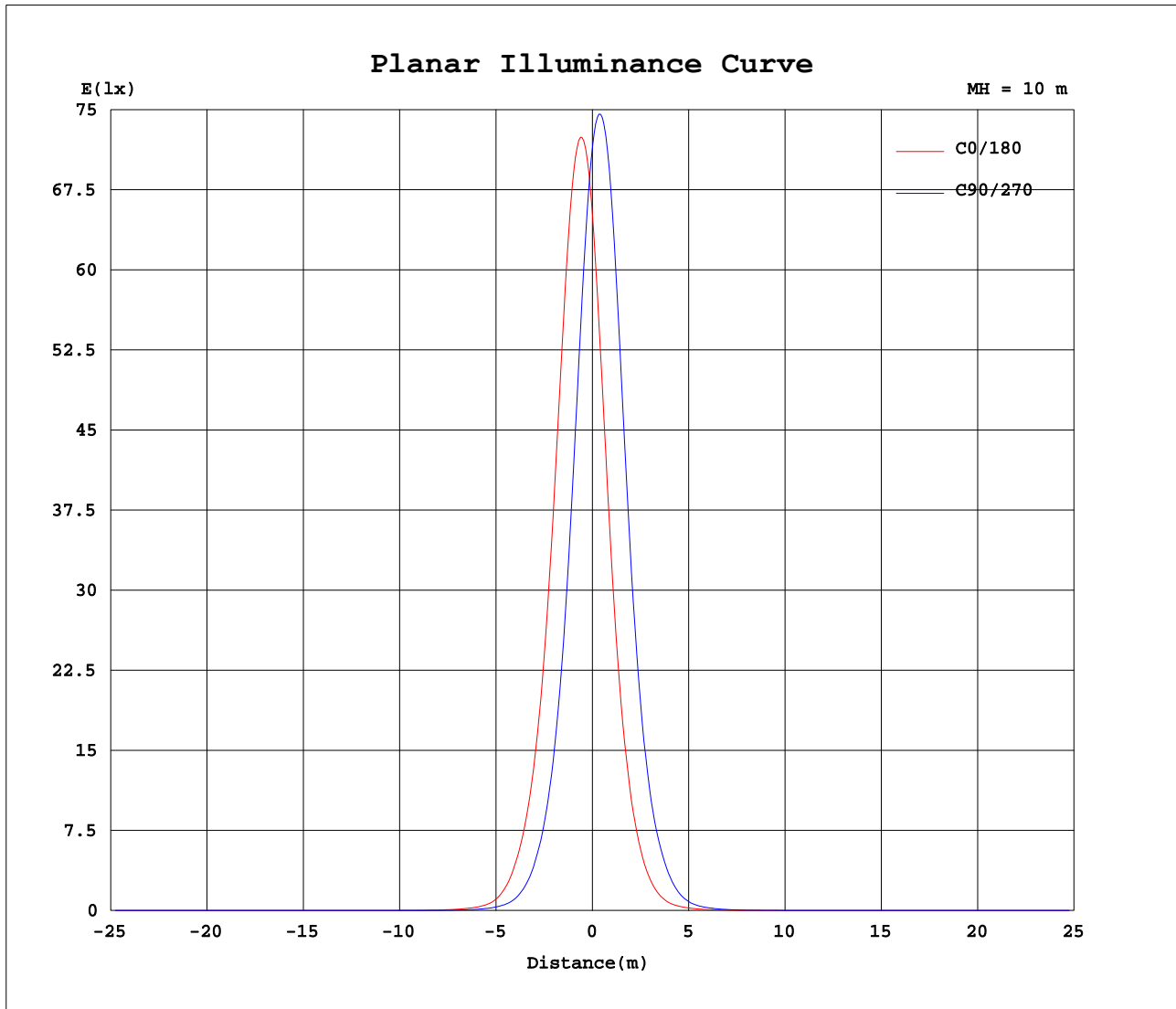
AvgL	cd/m2
L_0~180 (65) av	200
L_0~180 (75) av	127
L_0~180 (85) av	303
L_90~270 (65) av	179
L_90~270 (75) av	112
L_90~270 (85) av	258
L_45 (65) av	171
L_45 (75) av	119
L_45 (85) av	272

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-15

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: 2020-05-15

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:

```