

Low Voltage Track System Module ML26-RS40-24W-940-45



Light Output Ratio:	100.0%	
Luminaire Power:	23.4 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.60	fine grid method.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2020-05-19

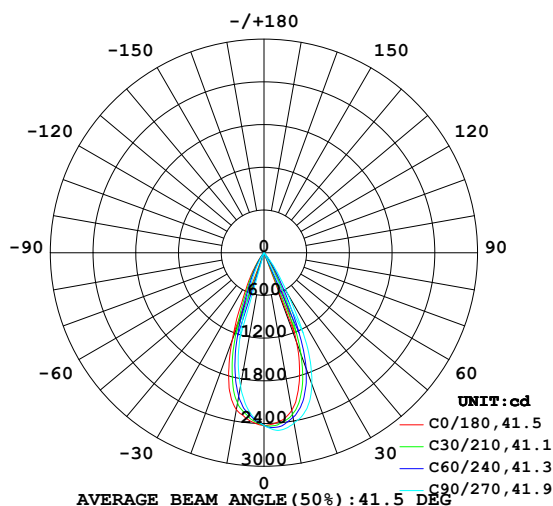
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

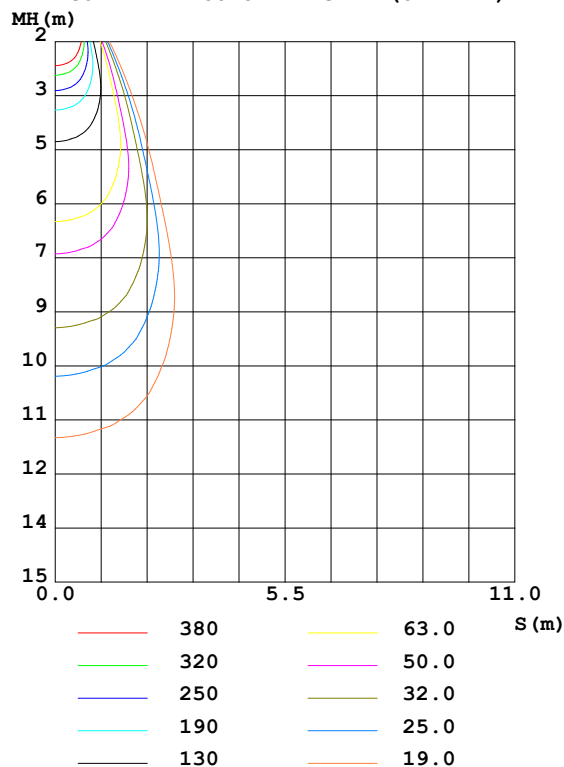
Test:U:48.00V I:0.4875A P:23.40W PF:1.000 Freq:0Hz Lamp Flux:1171.35x1 lm		
NAME: ML26-RS40-24W-940-45	TYPE:Low Voltage Track System Module	
SPEC.:4000K	DIM.: ϕ 40mm*H1054mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 50.05 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	2532	S/MH (C0/180)	0.63
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	0.51
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1171.4	η UP, DN (C0-180)	0.0, 62.8
NOMINAL FLUX (lm)	1171.35	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 37.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	48	η down (%)	100.0	CIBSE SHR MAX	0.60

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	2248	2337	2429	2488	2238	2087	1902	1786	0- 10	220.2	220.2	18.8,18.8
20	1346	1630	1964	1965	1307	982.8	700.6	581.5	10- 20	495.7	716.0	61.1,61.1
30	251.2	379.6	673.3	738.2	365.6	256.1	135.9	64.57	20- 30	345.5	1061	90.6,90.6
40	17.99	34.86	75.04	105.4	42.83	26.45	9.861	7.429	30- 40	96.60	1158	98.9,98.9
50	3.400	4.591	7.142	9.251	4.940	3.810	2.030	1.342	40- 50	10.81	1169	99.8,99.8
60	0.6041	0.9077	1.426	1.808	0.7571	0.5188	0.3048	0.2672	50- 60	1.966	1171	100,100
70	0.1473	0.1669	0.2820	0.3194	0.1469	0.1185	0.0714	0.0852	60- 70	0.3882	1171	100,100
80	0.0651	0.0507	0.0932	0.0850	0.0399	0.0487	0.0368	0.0460	70- 80	0.1032	1171	100,100
90	0.0525	0.0507	0.0542	0.0552	0.0357	0.0338	0.0368	0.0368	80- 90	0.0535	1171	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): 1166 lm

%lum = 99.5%

%lamp = 99.5%

Conical surface Flux(120deg): 1170.8 lm

%lum = 100.0%

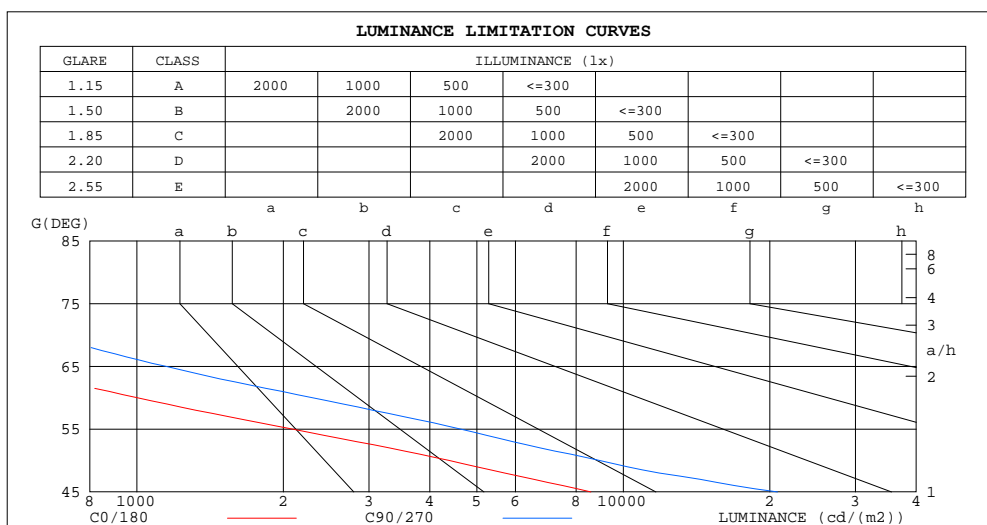
%lamp = 100.0%

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Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:4000K	DIM.: ϕ 40mm*H1054mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	519	600
80	311	431
75	276	465
70	357	663
65	545	1147
60	1001	2292
55	2086	4625
50	4382	8928
45	8574	20738

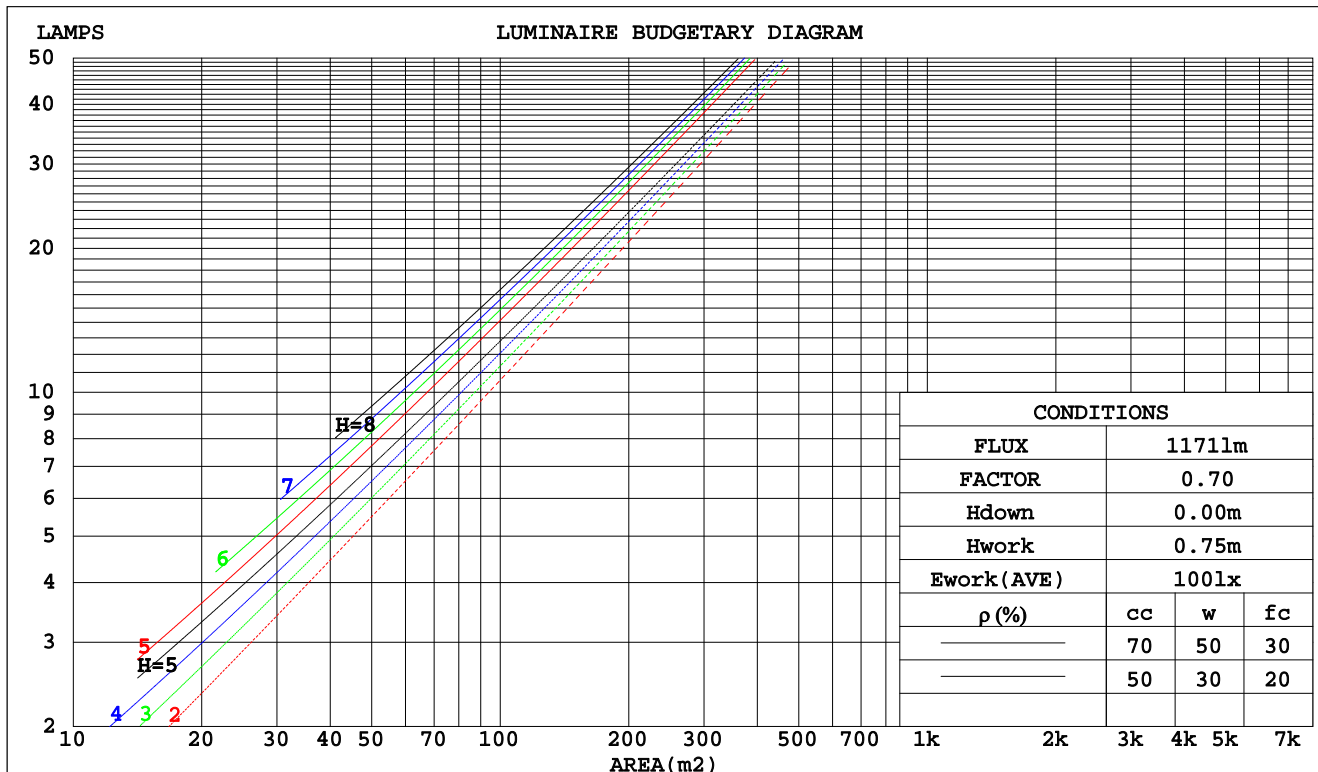
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:4000K	DIM.: $\phi 40\text{mm} \times \text{H}1054\text{mm}$	
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	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.02	.00	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.91	.94	.91	.89	.92	.90	.88	.86
4.0	.95	.91	.87	.94	.90	.87	.92	.88	.86	.90	.87	.85	.88	.86	.84	.82
5.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.87	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.78	.86	.81	.78	.84	.80	.77	.83	.79	.77	.82	.79	.76	.75
7.0	.83	.78	.74	.82	.77	.74	.81	.77	.74	.80	.76	.73	.79	.75	.73	.72
8.0	.79	.74	.71	.79	.74	.71	.78	.73	.70	.77	.73	.70	.76	.72	.70	.69
9.0	.76	.71	.68	.75	.71	.68	.75	.70	.67	.74	.70	.67	.73	.70	.67	.66
10.0	.73	.68	.65	.72	.68	.65	.72	.68	.65	.71	.67	.64	.70	.67	.64	.63



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WEC AND CCEC

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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	.153	.087	.028	.147	.084	.027	.134	.077	.025	.123	.071	.023	.112	.065	.021	
2.0	.144	.079	.024	.139	.076	.024	.128	.071	.022	.119	.067	.021	.110	.062	.020	
3.0	.136	.073	.022	.132	.070	.021	.123	.067	.020	.115	.063	.019	.107	.059	.018	
4.0	.129	.067	.020	.125	.065	.019	.118	.062	.019	.111	.059	.018	.104	.057	.017	
5.0	.123	.062	.018	.119	.061	.018	.113	.059	.017	.107	.056	.017	.101	.054	.016	
6.0	.117	.059	.017	.114	.058	.017	.108	.056	.016	.103	.054	.016	.098	.052	.015	
7.0	.112	.055	.016	.109	.054	.016	.104	.053	.015	.100	.051	.015	.095	.050	.015	
8.0	.107	.052	.015	.105	.052	.015	.100	.050	.014	.096	.049	.014	.093	.048	.014	
9.0	.103	.050	.014	.101	.049	.014	.097	.048	.014	.093	.047	.013	.090	.046	.013	
10.0	.099	.047	.013	.097	.047	.013	.094	.046	.013	.090	.045	.013	.087	.044	.013	

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	.169	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016		
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013		
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011		
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009		
5.0	.118	.086	.063	.101	.075	.055	.070	.052	.039	.040	.031	.023	.013	.010	.008		
6.0	.109	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006		
7.0	.103	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005		
8.0	.097	.062	.039	.083	.054	.034	.058	.038	.024	.033	.022	.014	.011	.007	.005		
9.0	.091	.057	.034	.079	.049	.029	.055	.035	.021	.032	.020	.012	.010	.007	.004		
10.0	.087	.052	.029	.075	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004		

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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:0.4875A P:23.40W PF:1.000 Freq:0Hz Lamp Flux:1171.35x1 lm										
NAME: ML26-RS40-24W-940-45					TYPE:Low Voltage Track System Module					
SPEC.:4000K					DIM.: \varnothing 40mm*H1054mm					
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	14.5	15.3	14.7	15.4	15.6	19.6	20.4	19.8	20.5	20.7
3H	14.3	15.0	14.6	15.2	15.4	19.4	20.2	19.7	20.4	20.5
4H	14.2	14.9	14.5	15.1	15.4	19.4	20.0	19.6	20.3	20.5
6H	14.2	14.8	14.4	15.0	15.3	19.3	19.9	19.6	20.1	20.4
8H	14.1	14.7	14.4	15.0	15.2	19.2	19.8	19.5	20.1	20.3
12H	14.1	14.7	14.4	14.9	15.2	19.2	19.8	19.5	20.0	20.3
4H 2H	14.2	14.9	14.5	15.1	15.4	19.4	20.0	19.6	20.3	20.5
3H	14.1	14.7	14.4	14.9	15.2	19.2	19.8	19.5	20.0	20.3
4H	14.0	14.5	14.3	14.8	15.1	19.1	19.6	19.4	19.9	20.2
6H	13.9	14.4	14.2	14.7	15.0	19.0	19.5	19.4	19.8	20.1
8H	13.8	14.3	14.2	14.6	15.0	18.9	19.4	19.3	19.7	20.1
12H	13.8	14.2	14.2	14.5	14.9	18.9	19.3	19.3	19.7	20.0
8H 4H	13.8	14.3	14.2	14.6	15.0	18.9	19.4	19.3	19.7	20.1
6H	13.7	14.1	14.1	14.5	14.9	18.8	19.2	19.3	19.6	20.0
8H	13.7	14.0	14.1	14.4	14.8	18.8	19.1	19.2	19.5	19.9
12H	13.6	13.9	14.1	14.3	14.8	18.7	19.0	19.2	19.4	19.9
12H 4H	13.8	14.2	14.2	14.5	14.9	18.9	19.3	19.3	19.7	20.0
6H	13.7	14.0	14.1	14.4	14.8	18.8	19.1	19.2	19.5	19.9
8H	13.6	13.9	14.1	14.3	14.8	18.7	19.0	19.2	19.4	19.9
Variations with the observer position at spacings:										
S = 1.0H	+ 3.1 / -13.8					+ 5.7 / -17.6				
1.5H	+ 5.5 / - 9.6					+ 8.4 / -15.3				
2.0H	+ 5.4 / - 8.1					+ 7.7 / -10.1				

CIE Pub.117, 1171 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.5$)

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Remarks:

UTILIZATION FACTORS TABLE

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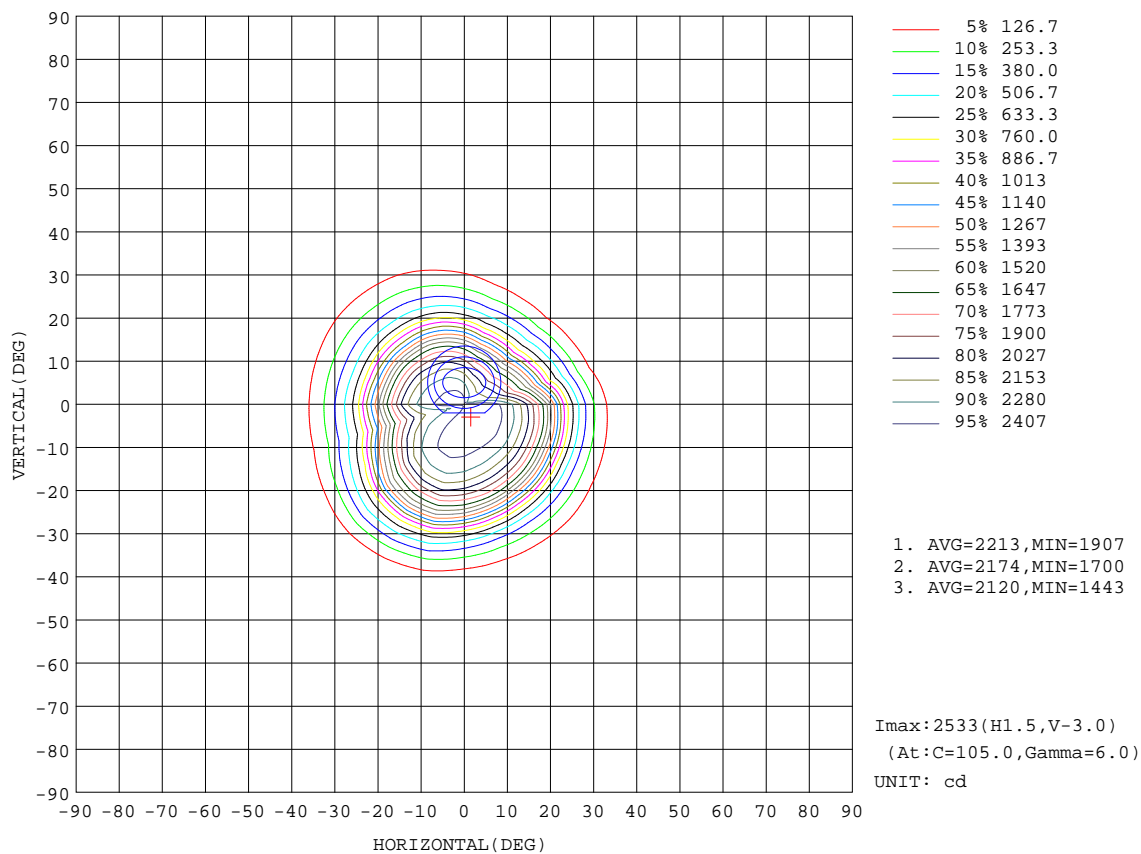
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(\text{RI}) \times \text{RCR} = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	101	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	112	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	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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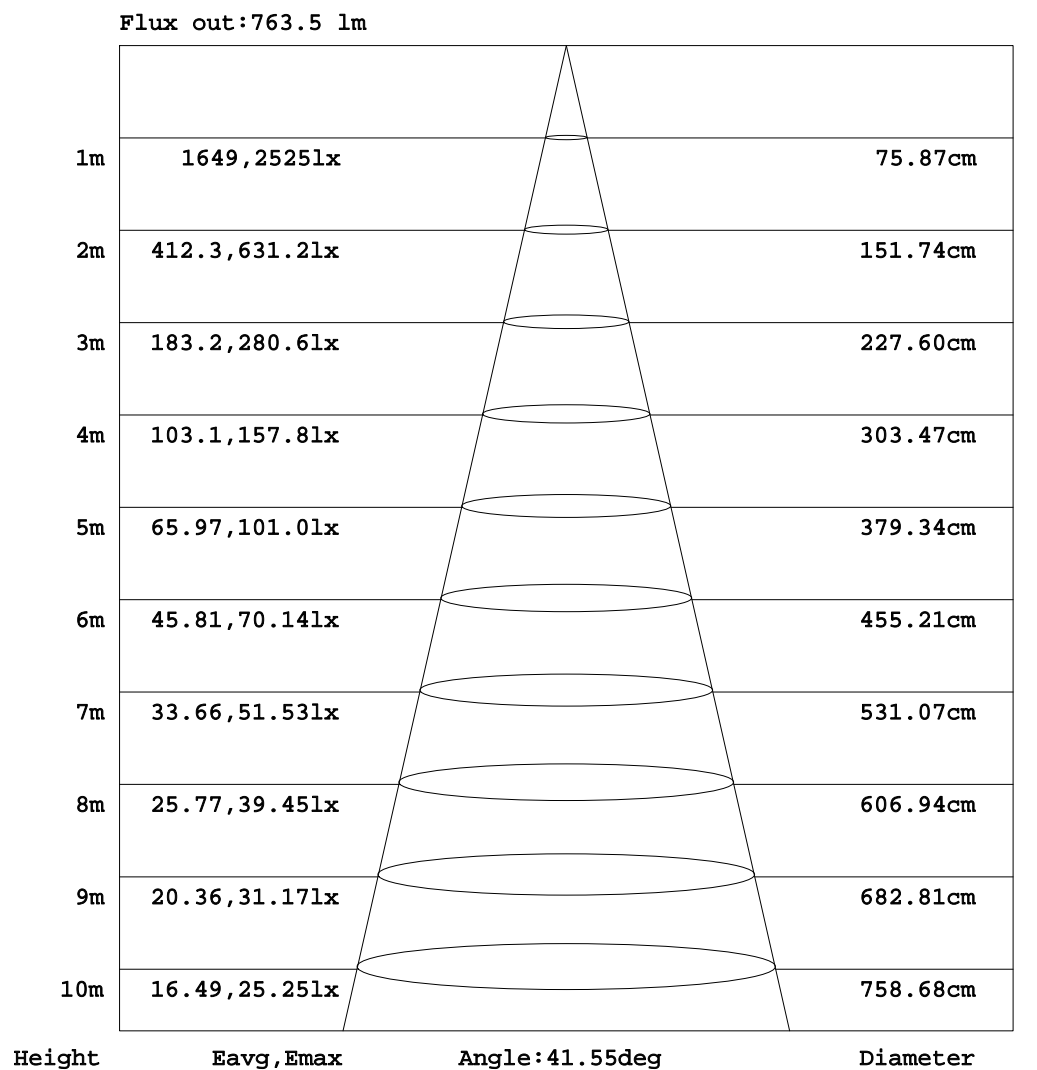


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AAI Figure

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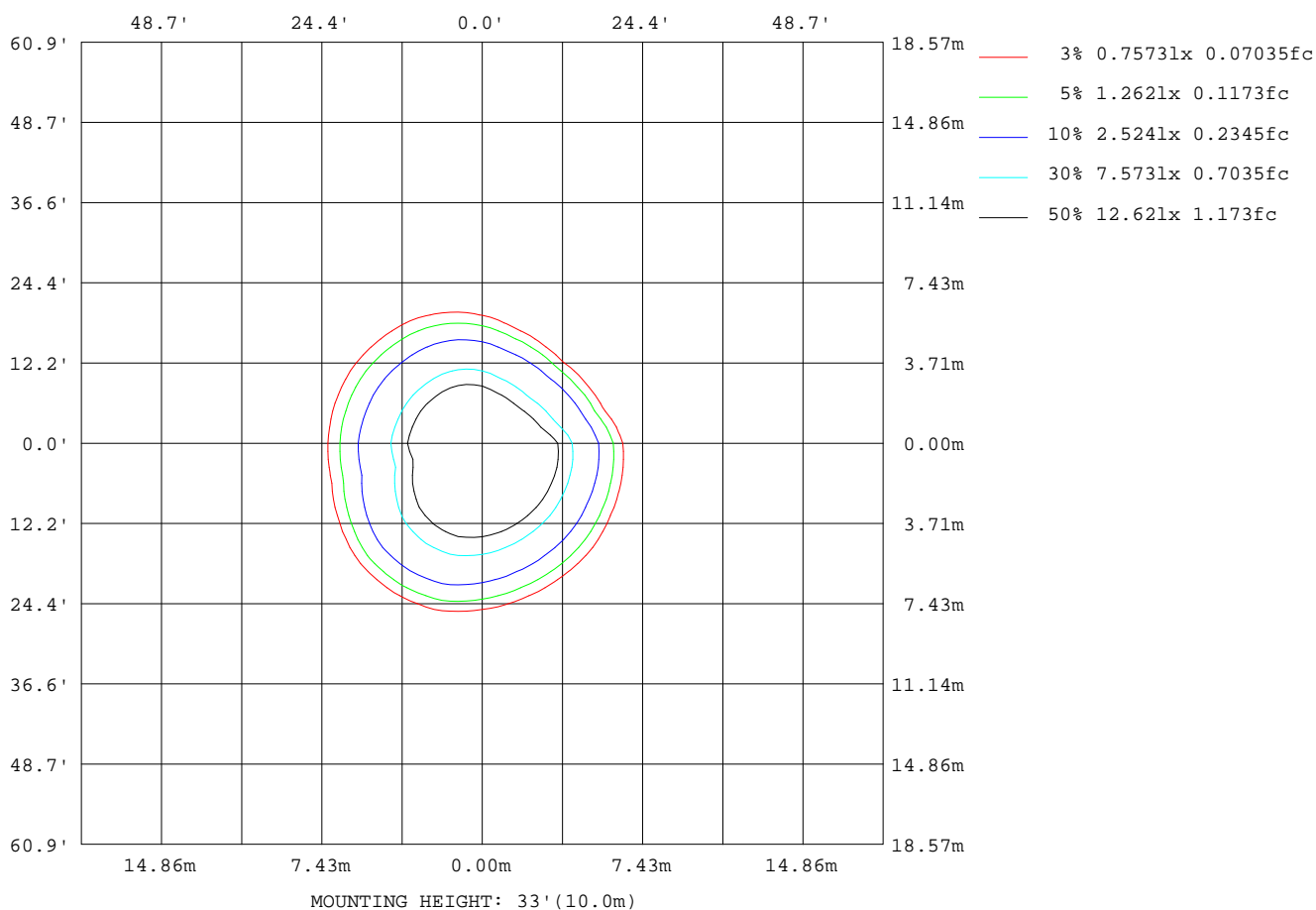
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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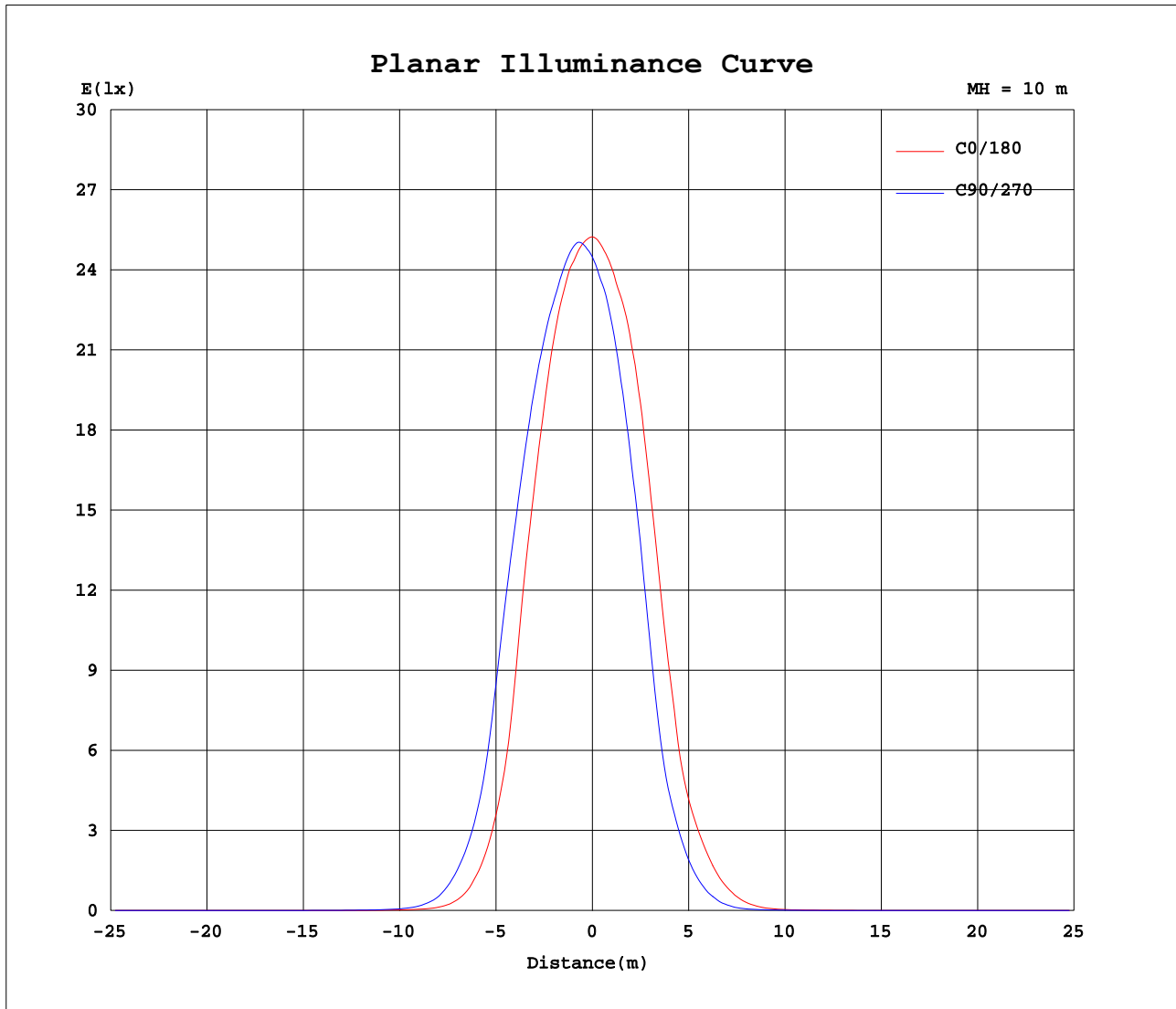
AvgL	cd/m2
L_0~180 (65) av	560
L_0~180 (75) av	249
L_0~180 (85) av	413
L_90~270 (65) av	701
L_90~270 (75) av	297
L_90~270 (85) av	465
L_45 (65) av	692
L_45 (75) av	285
L_45 (85) av	418

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-19

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: 2020-05-19

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:

```