

Low Voltage Track System Module ML26-RS40-24W-927-45



Light Output Ratio:	100.0%	
Luminaire Power:	23.63 W	
SHR Nominal:	0.50	Calculated using the TM5
SHR Maximum:	0.65	fine grid method.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jason
Test Date: 2020-05-12

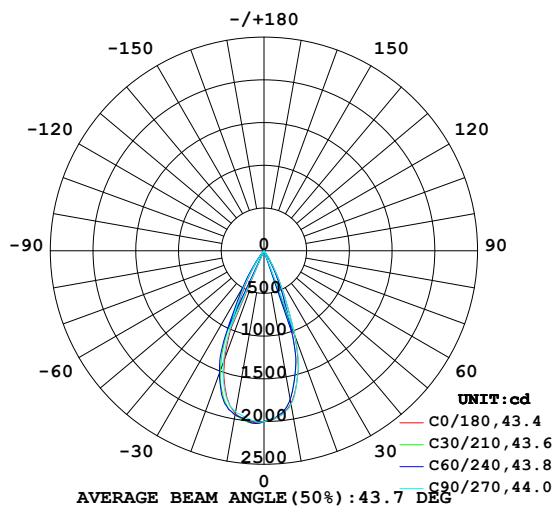
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

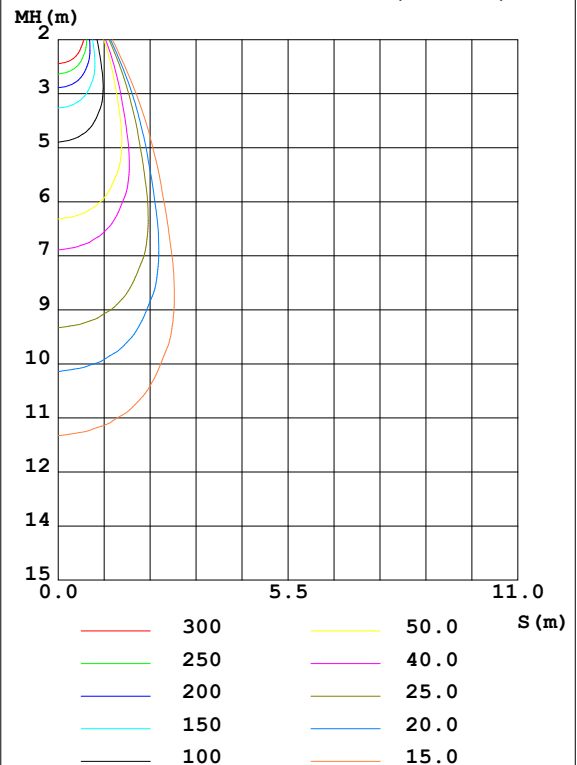
Test:U:48.00V I:0.4923A P:23.63W PF:1.000 Freq:0Hz Lamp Flux:1028.93x1 lm		
NAME: ML26-RS40-24W-927-45	TYPE:Low Voltage Track System Module	
SPEC.:2700K	DIM.: ϕ 40mm*H105mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 43.54 lm/W			
MODEL	CITIZEN-2700K	I _{max} (cd)	2024	S/MH (C0/180)	0.69
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	0.70
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1028.9	η UP, DN (C0-180)	0.0, 48.4
NOMINAL FLUX (lm)	1028.93	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	48	η down (%)	100.0	CIBSE SHR MAX	0.65

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	1813	1768	1826	1966	1933	1948	1917	1784	0- 10	185.1	185.1	18,18
20	1044	858.0	1059	1491	1343	1516	1389	921.6	10- 20	442.4	627.5	61,61
30	219.9	140.4	214.9	476.5	373.7	485.1	410.9	171.6	20- 30	317.3	944.7	91.8,91.8
40	14.23	9.324	12.81	42.10	27.75	39.30	29.95	11.10	30- 40	74.83	1020	99.1,99.1
50	3.027	2.194	2.613	4.991	4.056	5.144	4.598	2.498	40- 50	7.199	1027	99.8,99.8
60	0.6043	0.4082	0.4707	0.9546	0.7819	1.077	0.9510	0.5181	50- 60	1.626	1028	99.9,99.9
70	0.1603	0.0983	0.1258	0.2015	0.1775	0.2560	0.2119	0.1427	60- 70	0.3684	1029	100,100
80	0.0615	0.0459	0.0585	0.0636	0.0483	0.0831	0.0604	0.0527	70- 80	0.1066	1029	100,100
90	0.0505	0.0481	0.0498	0.0504	0.0329	0.0350	0.0346	0.0351	80- 90	0.0510	1029	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): 1024.6 lm

%lum = 99.6%

%lamp = 99.6%

Conical surface Flux(120deg): 1028.4 lm

%lum = 99.9%

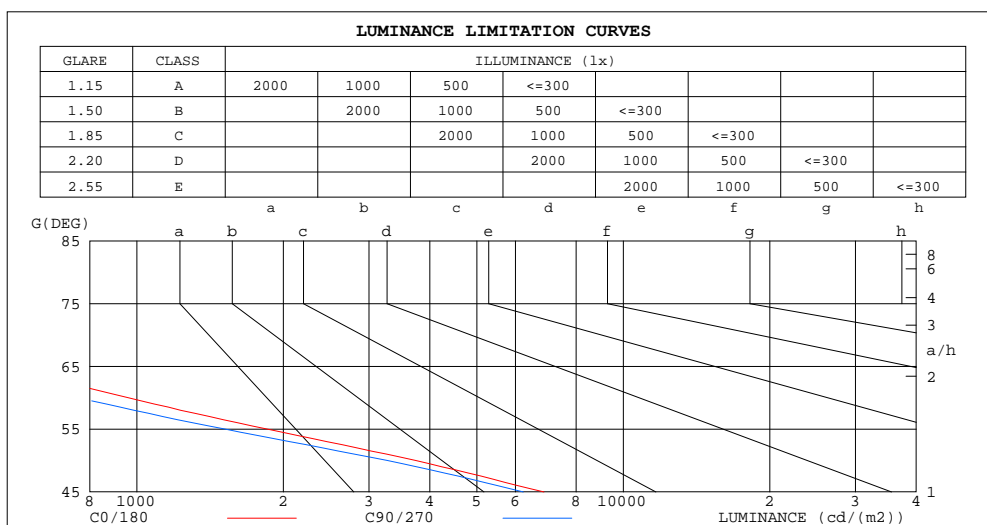
%lamp = 99.9%

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Humidity:58%
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Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:2700K	DIM.: $\phi 40\text{mm} \times \text{H}105\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	459	459
80	281	271
75	276	242
70	372	296
65	557	441
60	959	757
55	1852	1518
50	3736	3268
45	6867	6227

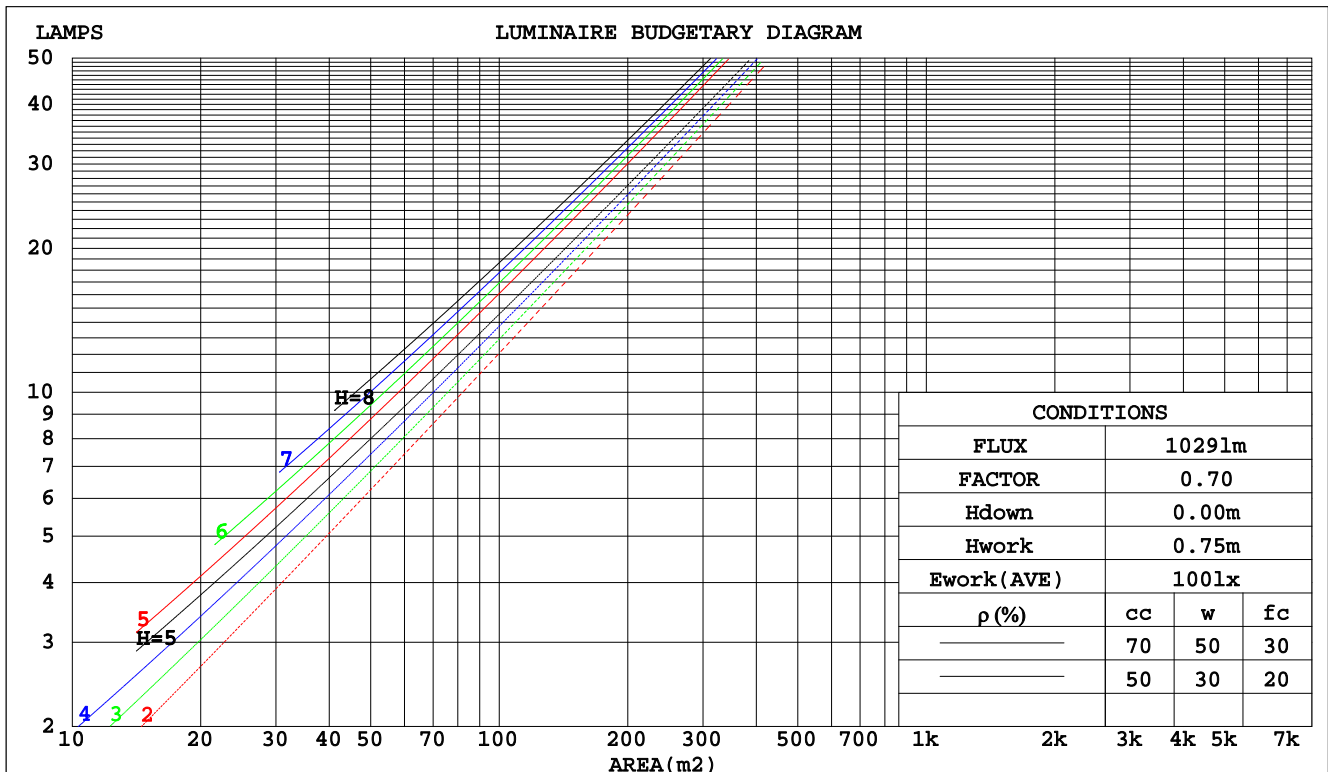
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	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	1.00
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	.89	.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	.80	.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	.67	.65	.71	.67	.64	.70	.67	.64	.63



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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	.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	.072	.022	.131	.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	.015	.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		

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	.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:0.4923A P:23.63W PF:1.000 Freq:0Hz Lamp Flux:1028.93x1 lm										
NAME: ML26-RS40-24W-927-45					TYPE:Low Voltage Track System Module					
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	10.9	11.7	11.2	11.9	12.0	10.4	11.2	10.6	11.3	11.5
3H	10.8	11.5	11.0	11.7	11.9	10.2	11.0	10.5	11.2	11.4
4H	10.7	11.4	11.0	11.6	11.8	10.2	10.8	10.4	11.1	11.3
6H	10.6	11.3	10.9	11.5	11.7	10.1	10.7	10.4	11.0	11.2
8H	10.6	11.2	10.9	11.4	11.7	10.0	10.7	10.3	10.9	11.2
12H	10.5	11.1	10.8	11.4	11.7	10.0	10.6	10.3	10.8	11.1
4H 2H	10.7	11.4	11.0	11.6	11.8	10.2	10.8	10.4	11.1	11.3
3H	10.5	11.1	10.8	11.4	11.7	10.0	10.6	10.3	10.8	11.1
4H	10.4	11.0	10.8	11.3	11.6	9.9	10.4	10.2	10.7	11.0
6H	10.3	10.8	10.7	11.1	11.5	9.8	10.3	10.2	10.6	10.9
8H	10.3	10.7	10.7	11.1	11.4	9.8	10.2	10.1	10.5	10.9
12H	10.2	10.6	10.6	11.0	11.4	9.7	10.1	10.1	10.5	10.9
8H 4H	10.3	10.7	10.7	11.1	11.4	9.7	10.2	10.1	10.5	10.9
6H	10.2	10.5	10.6	10.9	11.3	9.6	10.0	10.1	10.4	10.8
8H	10.1	10.4	10.6	10.9	11.3	9.6	9.9	10.0	10.3	10.8
12H	10.1	10.3	10.5	10.8	11.2	9.5	9.8	10.0	10.2	10.7
12H 4H	10.2	10.6	10.6	11.0	11.4	9.7	10.1	10.1	10.5	10.9
6H	10.1	10.4	10.6	10.9	11.3	9.6	9.9	10.0	10.3	10.8
8H	10.1	10.3	10.5	10.8	11.2	9.5	9.8	10.0	10.2	10.7
Variations with the observer position at spacings:										
S = 1.0H	+ 5.2 / -11.5					+ 5.2 / -12.0				
1.5H	+ 7.5 / -10.0					+ 7.5 / -10.1				
2.0H	+ 6.5 / - 7.9					+ 6.6 / - 8.0				

CIE Pub.117, 1029 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.1$)

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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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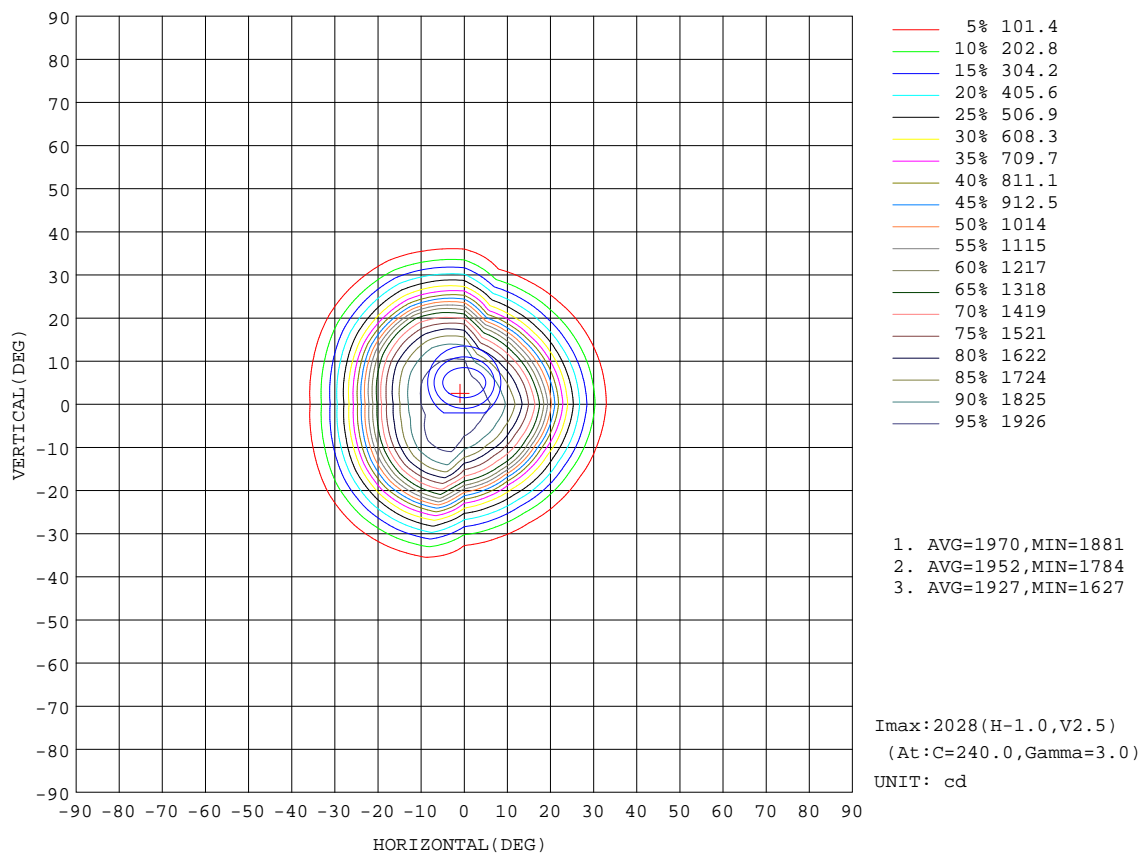
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	91	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	94	101	96	93	99	96	93	89
1.25	105	101	98	104	100	97	102	99	96	93
1.50	108	103	101	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	113	110	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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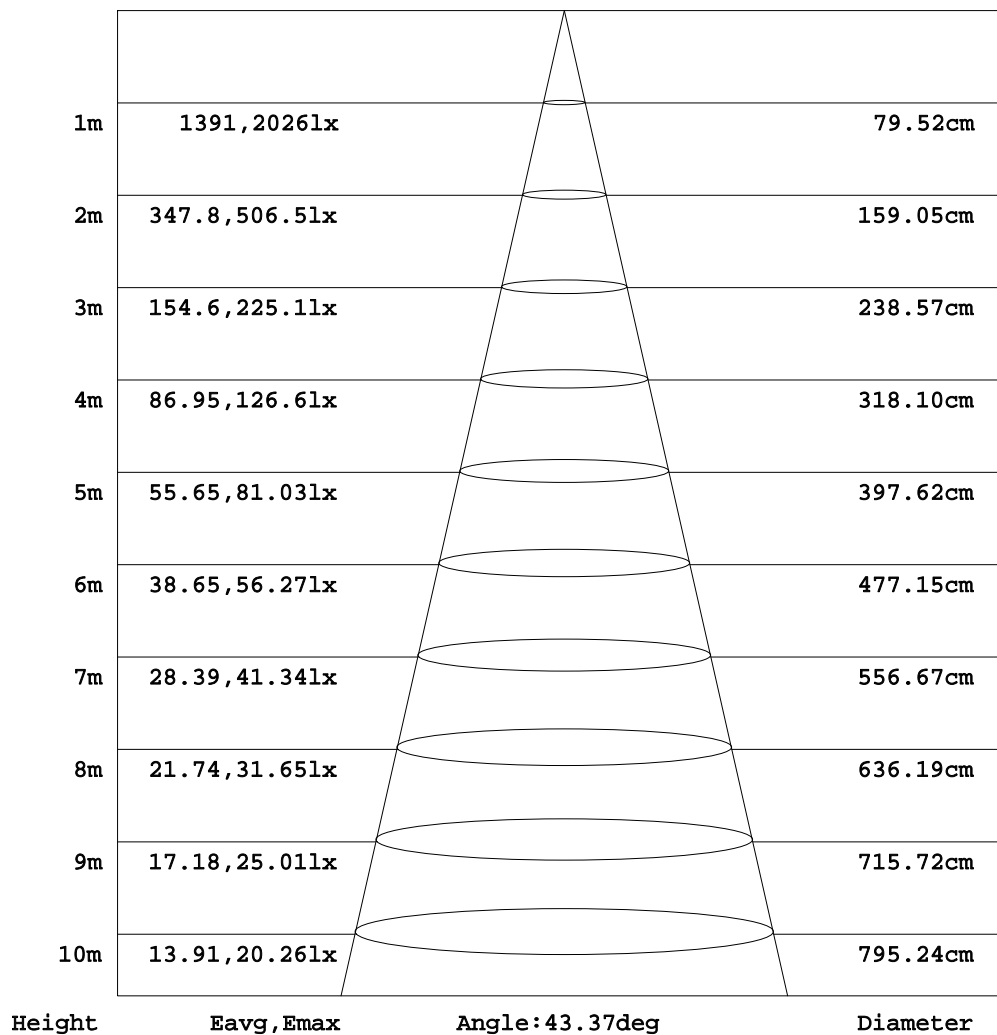
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AAI Figure

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Flux out:713.5 lm



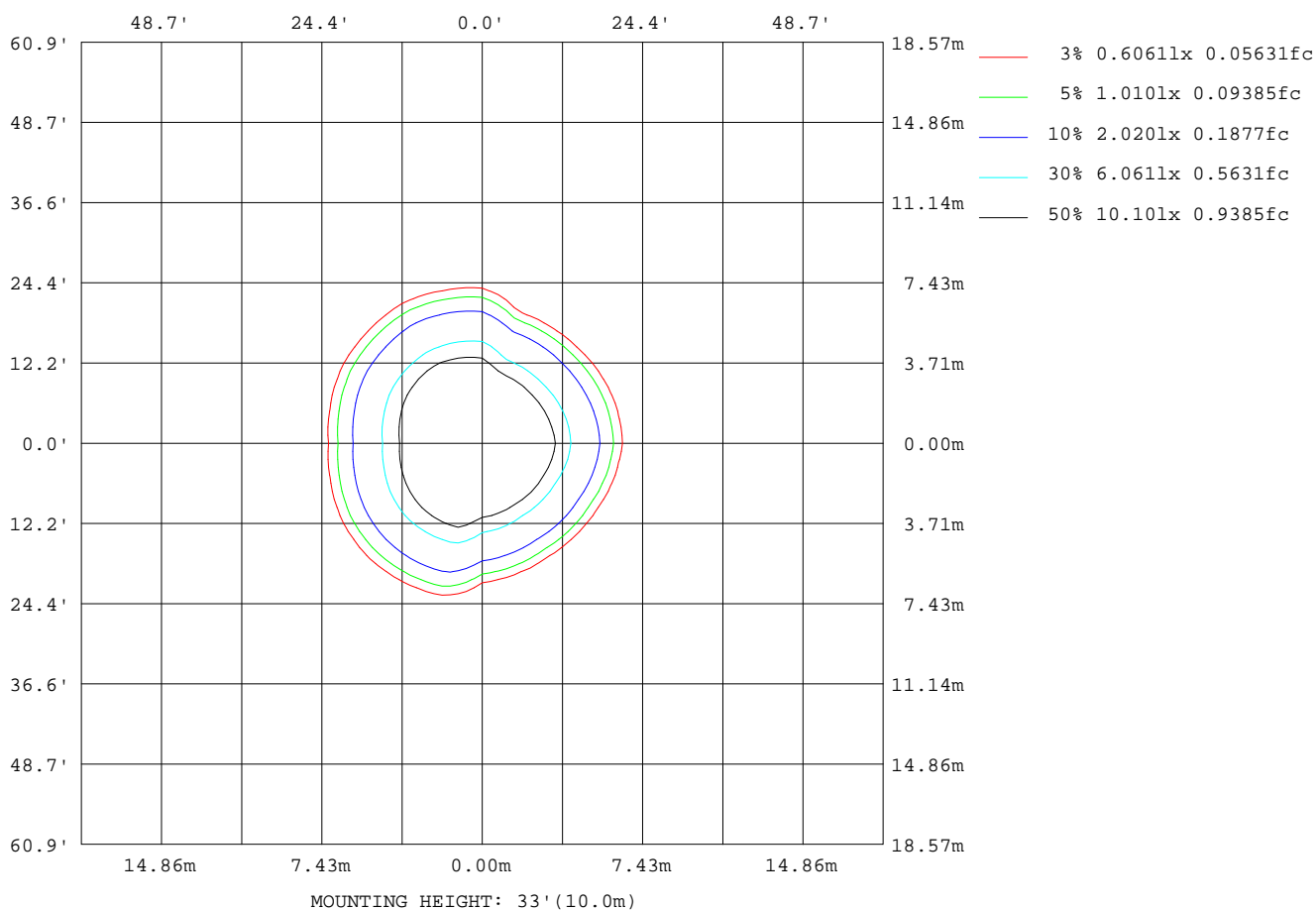
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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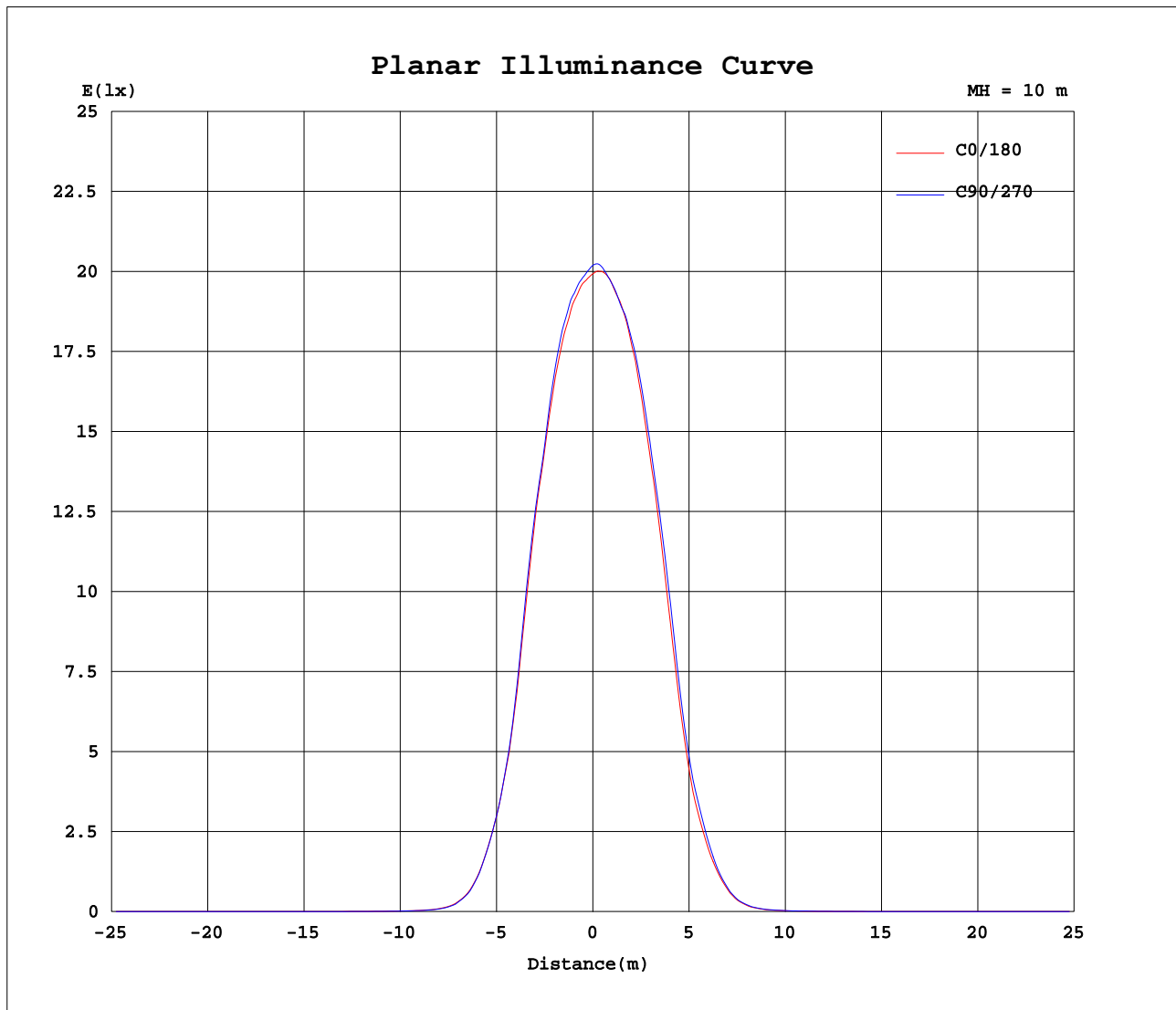
AvgL	cd/m2
L_0~180 (65) av	622
L_0~180 (75) av	283
L_0~180 (85) av	391
L_90~270 (65) av	638
L_90~270 (75) av	283
L_90~270 (85) av	386
L_45 (65) av	651
L_45 (75) av	291
L_45 (85) av	430

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-12

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: 2020-05-12

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:

```