

Low Voltage Track System Module ML26-RS40-16W-927-45



Light Output Ratio:	100.0%	
Luminaire Power:	15.94 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: 2020-05-11

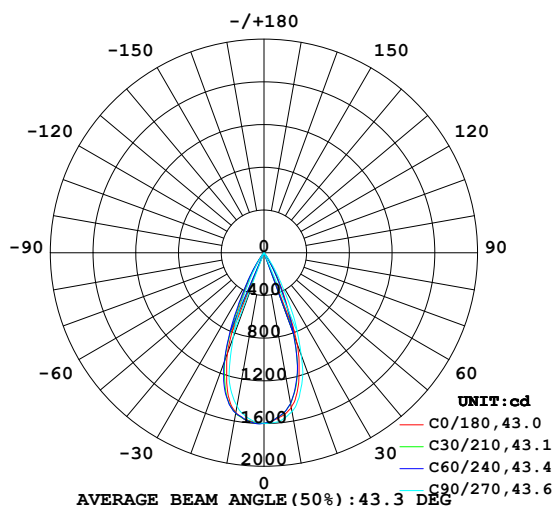
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

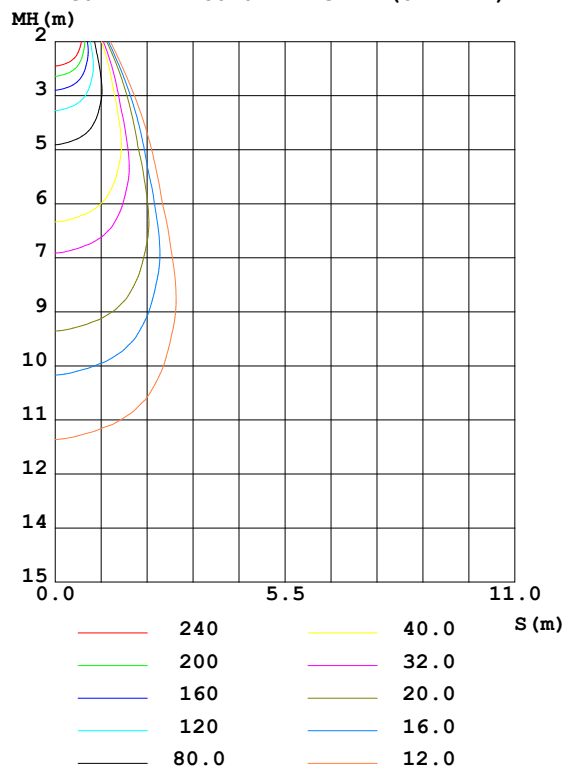
Test:U:48.00V I:0.3322A P:15.94W PF:1.000 Freq:0Hz Lamp Flux:799.204x1 lm		
NAME: ML26-RS40-16W-927-45	TYPE:Low Voltage Track System Module	
SPEC.:2700K	DIM.: ϕ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 50.13 lm/W			
MODEL	CITIZEN-2700K	I _{max} (cd)	1603	S/MH (C0/180)	0.65
NOMINAL POWER (W)	16	LOR (%)	100.0	S/MH (C90/270)	0.64
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	799.20	η UP, DN (C0-180)	0.0, 50.8
NOMINAL FLUX (lm)	799.204	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	48	η down (%)	100.0	CIBSE SHR MAX	0.65

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	1472	1429	1510	1545	1520	1524	1457	1424	0- 10	147.2	147.2	18.4,18.4
20	904.0	810.0	1025	1098	1002	1085	846.4	772.1	10- 20	349.0	496.1	62.1,62.1
30	194.4	167.1	296.1	328.8	243.8	288.6	194.5	147.6	20- 30	240.3	736.4	92.1,92.1
40	13.35	12.09	28.93	29.93	16.49	23.26	14.76	10.57	30- 40	54.86	791.3	99,99
50	2.922	2.706	3.969	4.290	3.163	3.571	2.711	2.283	40- 50	5.870	797.2	99.7,99.7
60	0.7050	0.6201	0.9221	0.9198	0.6443	0.8178	0.6288	0.5633	50- 60	1.476	798.6	99.9,99.9
70	0.2175	0.1632	0.2409	0.2196	0.1650	0.2398	0.1747	0.1760	60- 70	0.3916	799.0	100,100
80	0.0762	0.0478	0.0876	0.0638	0.0456	0.0850	0.0480	0.0638	70- 80	0.1240	799.2	100,100
90	0.0413	0.0436	0.0459	0.0440	0.0261	0.0283	0.0262	0.0264	80- 90	0.0488	799.2	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): 795.31 lm

%lum = 99.5%

%lamp = 99.5%

Conical surface Flux(120deg): 798.64 lm

%lum = 99.9%

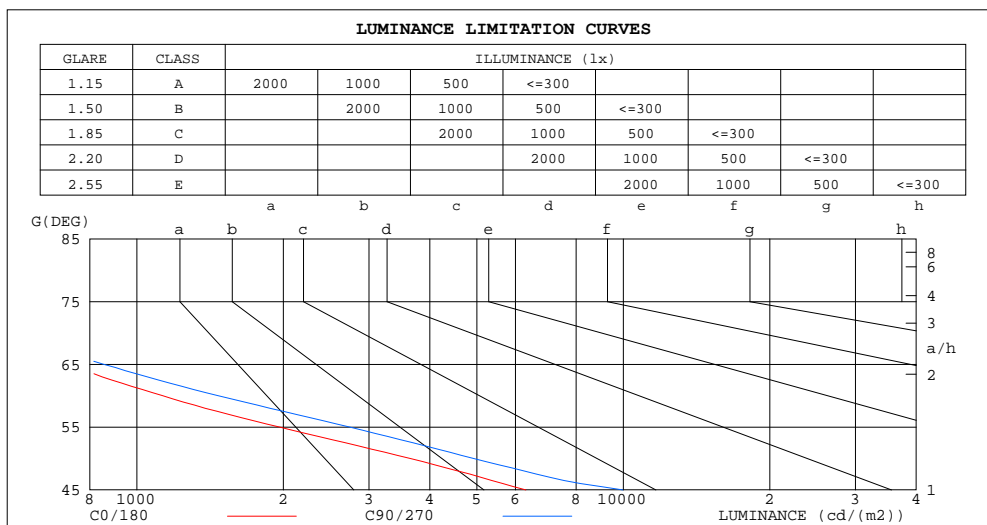
%lamp = 99.9%

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LUMINANCE LIMITATION CURVES

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LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	460	540
80	352	401
75	397	424
70	510	561
65	718	854
60	1130	1468
55	1964	2736
50	3641	4916
45	6303	9981

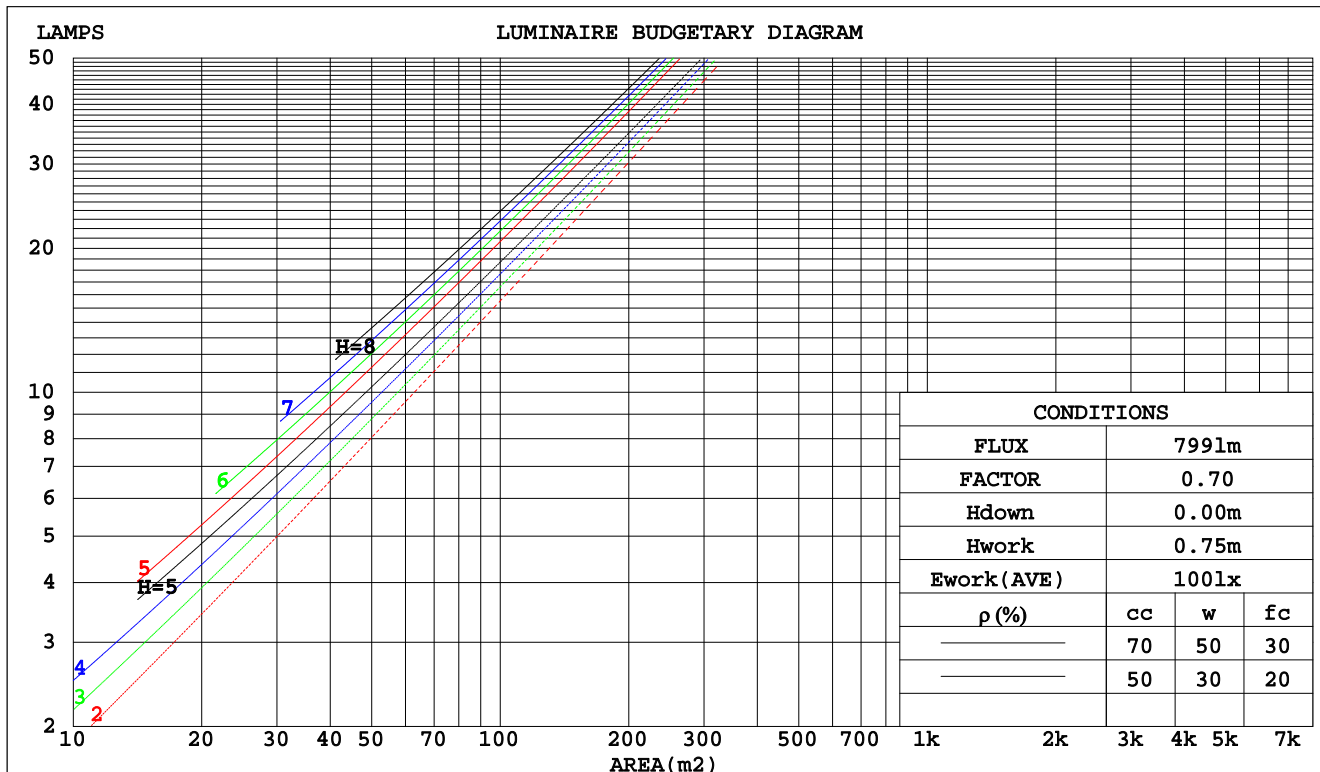
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	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	1.00	.99	.98	.97	.95
2.0	1.06	1.02	.90	1.04	1.01	.99	1.01	.99	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.97	.93	.91	.94	.92	.89	.92	.90	.88	.87
4.0	.95	.91	.87	.94	.90	.87	.92	.89	.86	.90	.87	.85	.89	.86	.84	.83
5.0	.91	.86	.83	.90	.86	.82	.88	.84	.82	.87	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.78	.86	.81	.78	.85	.81	.78	.83	.80	.77	.82	.79	.77	.75
7.0	.83	.78	.75	.82	.78	.74	.81	.77	.74	.80	.76	.74	.79	.76	.73	.72
8.0	.79	.75	.71	.79	.74	.71	.78	.74	.71	.77	.73	.70	.76	.73	.70	.69
9.0	.76	.71	.68	.76	.71	.68	.75	.71	.68	.74	.70	.68	.73	.70	.67	.66
10.0	.73	.68	.65	.73	.68	.65	.72	.68	.65	.71	.68	.65	.71	.67	.65	.64



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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	.146	.083	.026	.134	.077	.024	.122	.070	.023	.112	.065	.021	
2.0	.144	.079	.024	.138	.076	.023	.128	.071	.022	.118	.066	.021	.109	.062	.019	
3.0	.135	.072	.022	.131	.070	.021	.122	.066	.020	.114	.062	.019	.106	.059	.018	
4.0	.128	.067	.020	.124	.065	.019	.117	.062	.018	.110	.059	.018	.103	.056	.017	
5.0	.122	.062	.018	.118	.061	.018	.112	.058	.017	.106	.056	.017	.100	.054	.016	
6.0	.116	.058	.017	.113	.057	.016	.108	.055	.016	.102	.053	.016	.098	.051	.015	
7.0	.111	.055	.016	.108	.054	.015	.104	.052	.015	.099	.051	.015	.095	.049	.014	
8.0	.106	.052	.015	.104	.051	.014	.100	.050	.014	.096	.048	.014	.092	.047	.014	
9.0	.102	.049	.014	.100	.049	.014	.096	.048	.013	.093	.046	.013	.089	.045	.013	
10.0	.098	.047	.013	.096	.047	.013	.093	.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	.152	.133	.116	.131	.114	.100	.089	.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	.117	.086	.063	.101	.075	.055	.069	.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	.102	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005	
8.0	.096	.062	.039	.083	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.091	.057	.034	.078	.049	.029	.054	.035	.021	.032	.020	.012	.010	.007	.004	
10.0	.086	.052	.030	.074	.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:0.3322A P:15.94W PF:1.000 Freq:0Hz Lamp Flux:799.204x1 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	13.0	13.7	13.2	13.9	14.0	15.6	16.3	15.8	16.5	16.7
3H	12.8	13.5	13.1	13.7	13.9	15.4	16.1	15.7	16.3	16.5
4H	12.7	13.4	13.0	13.6	13.8	15.3	16.0	15.6	16.2	16.4
6H	12.6	13.3	12.9	13.5	13.8	15.3	15.9	15.5	16.1	16.4
8H	12.6	13.2	12.9	13.5	13.7	15.2	15.8	15.5	16.1	16.3
12H	12.6	13.1	12.9	13.4	13.7	15.2	15.8	15.5	16.0	16.3
4H 2H	12.7	13.4	13.0	13.6	13.8	15.3	16.0	15.6	16.2	16.4
3H	12.6	13.1	12.9	13.4	13.7	15.2	15.8	15.5	16.0	16.3
4H	12.5	13.0	12.8	13.3	13.6	15.1	15.6	15.4	15.9	16.2
6H	12.4	12.8	12.7	13.2	13.5	15.0	15.4	15.3	15.8	16.1
8H	12.3	12.8	12.7	13.1	13.5	14.9	15.4	15.3	15.7	16.1
12H	12.3	12.7	12.7	13.0	13.4	14.9	15.3	15.3	15.6	16.0
8H 4H	12.3	12.8	12.7	13.1	13.5	14.9	15.4	15.3	15.7	16.1
6H	12.2	12.6	12.6	13.0	13.4	14.8	15.2	15.2	15.6	16.0
8H	12.1	12.5	12.6	12.9	13.3	14.8	15.1	15.2	15.5	15.9
12H	12.1	12.4	12.6	12.8	13.3	14.7	15.0	15.2	15.4	15.9
12H 4H	12.3	12.7	12.7	13.0	13.4	14.9	15.3	15.3	15.6	16.0
6H	12.1	12.5	12.6	12.9	13.3	14.8	15.1	15.2	15.5	15.9
8H	12.1	12.4	12.6	12.8	13.3	14.7	15.0	15.2	15.4	15.9
Variations with the observer position at spacings:										
S = 1.0H	+ 4.7 / -10.1					+ 6.1 / -13.8				
1.5H	+ 7.0 / - 8.3					+ 8.6 / -12.2				
2.0H	+ 5.4 / - 6.2					+ 7.3 / - 7.6				

CIE Pub.117, 799.2 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.8$)

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 γ Interval: 0.5DEG
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Remarks:

UTILIZATION FACTORS TABLE

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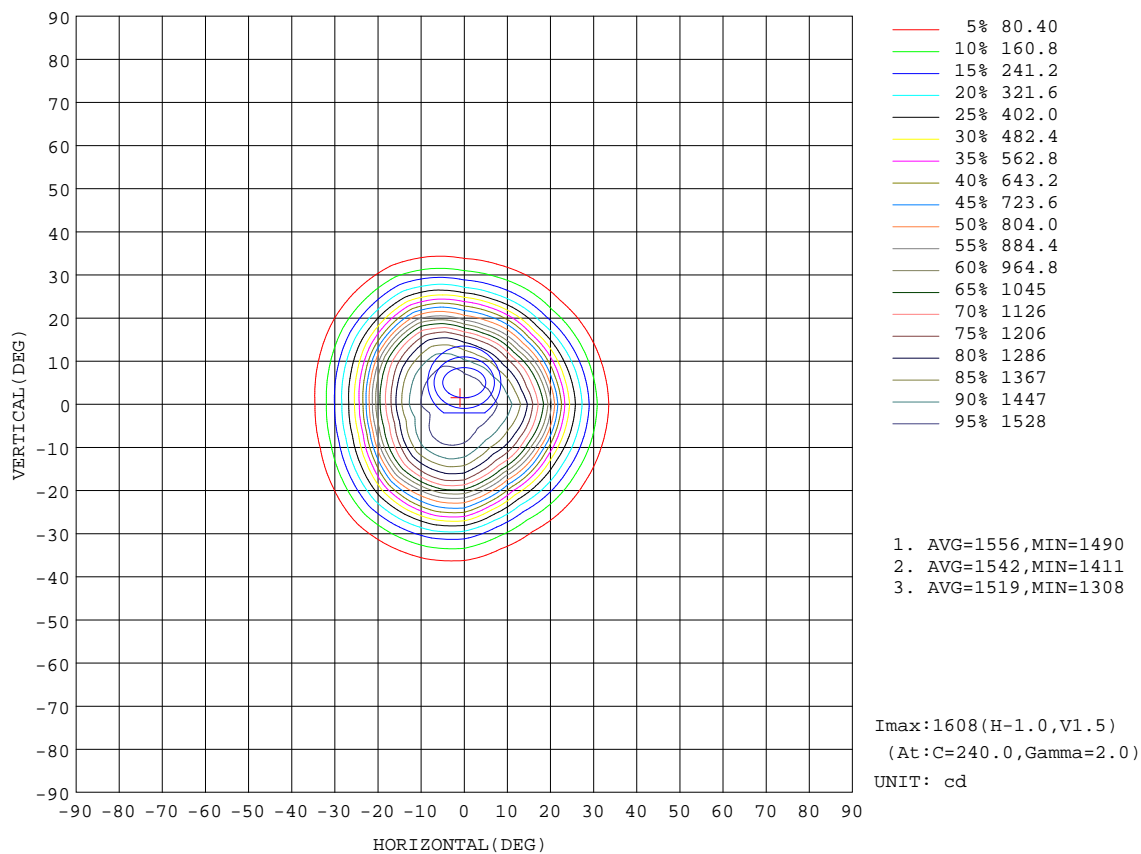
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96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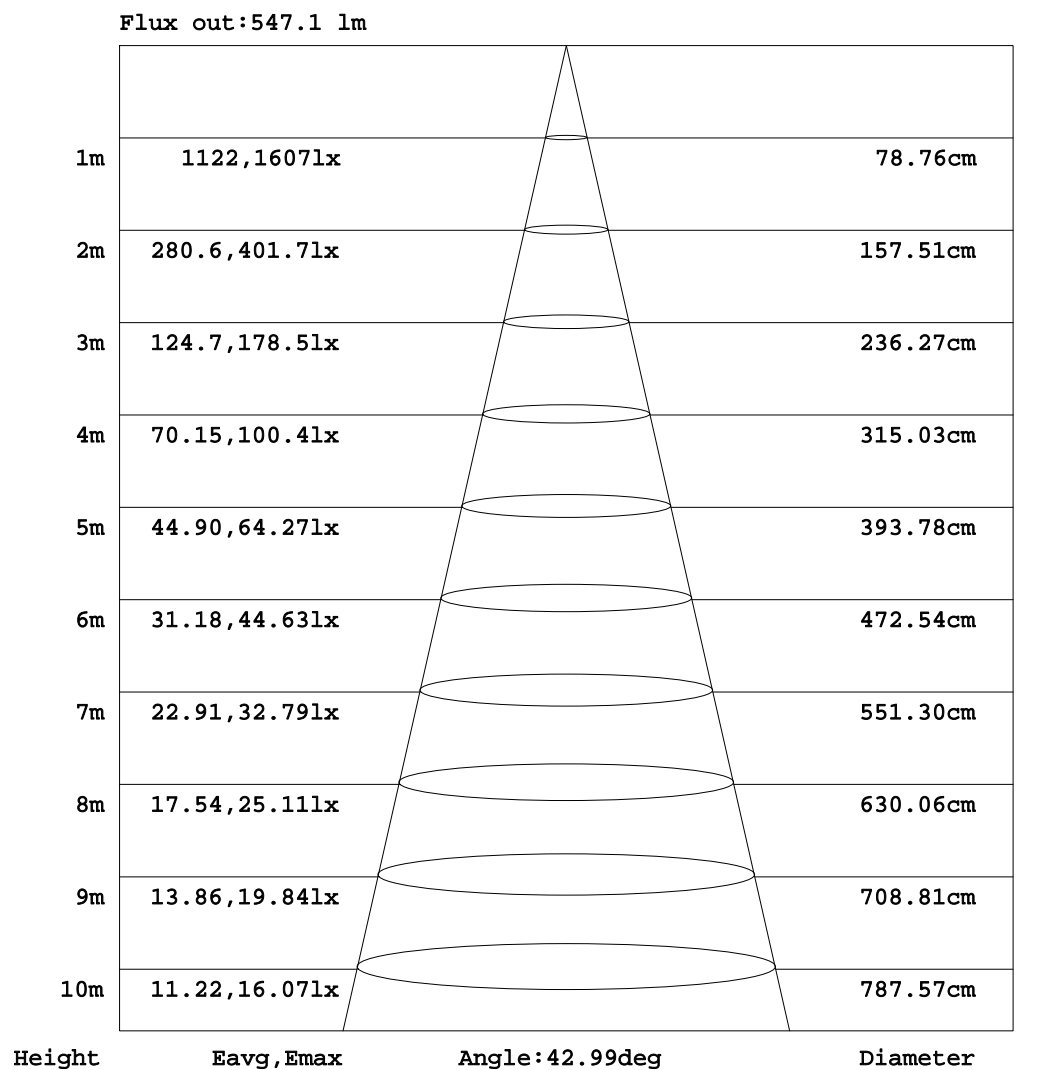


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AAI Figure

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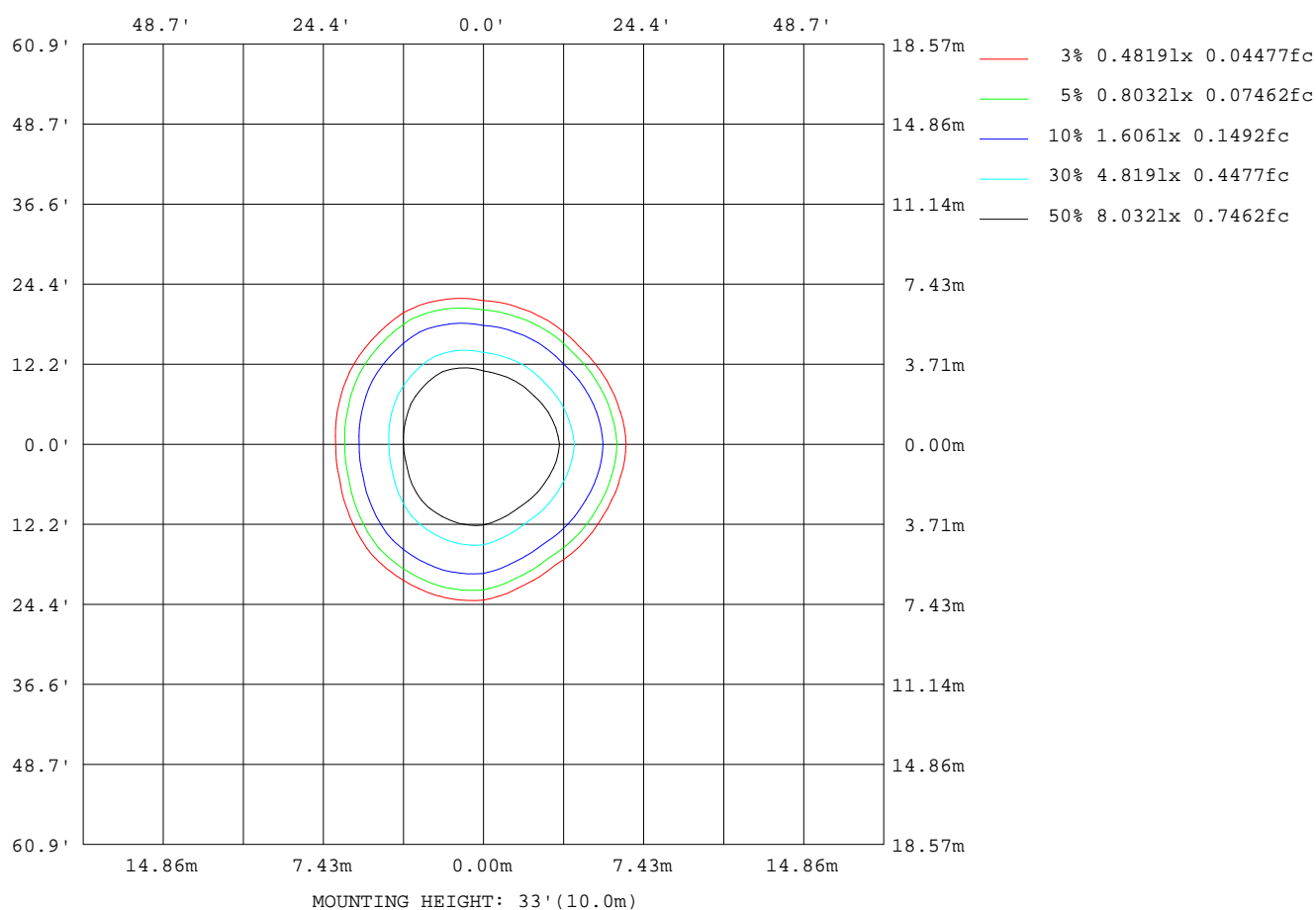
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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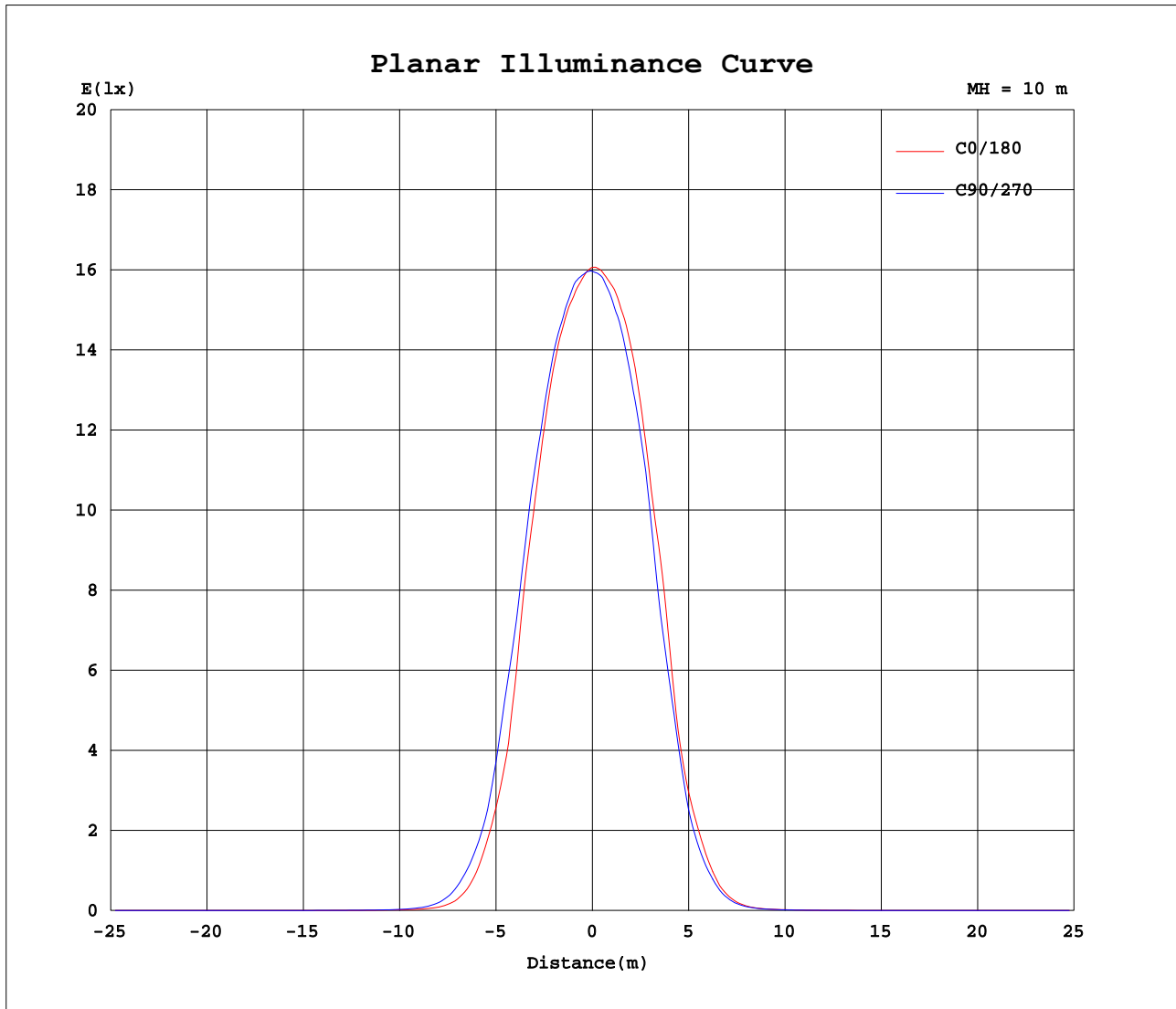
AvgL	cd/m2
L_0~180 (65) av	655
L_0~180 (75) av	331
L_0~180 (85) av	358
L_90~270 (65) av	736
L_90~270 (75) av	350
L_90~270 (85) av	400
L_45 (65) av	698
L_45 (75) av	342
L_45 (85) av	405

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-11

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: 2020-05-11

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:

```