

Low Voltage Track System Module ML26-RS40-16W-940-18



Light Output Ratio:	100.0%	
Luminaire Power:	15.94 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: 2020-05-18

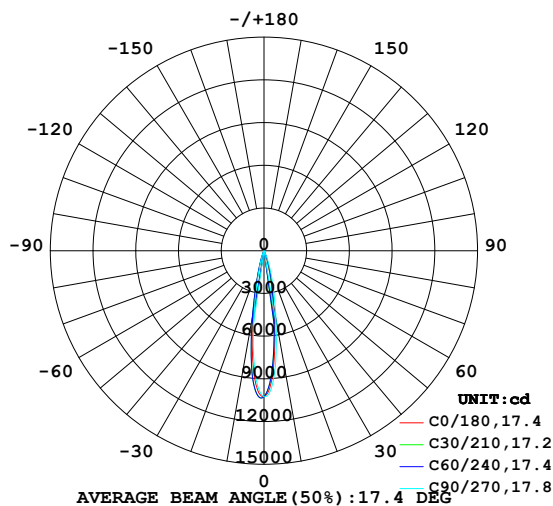
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

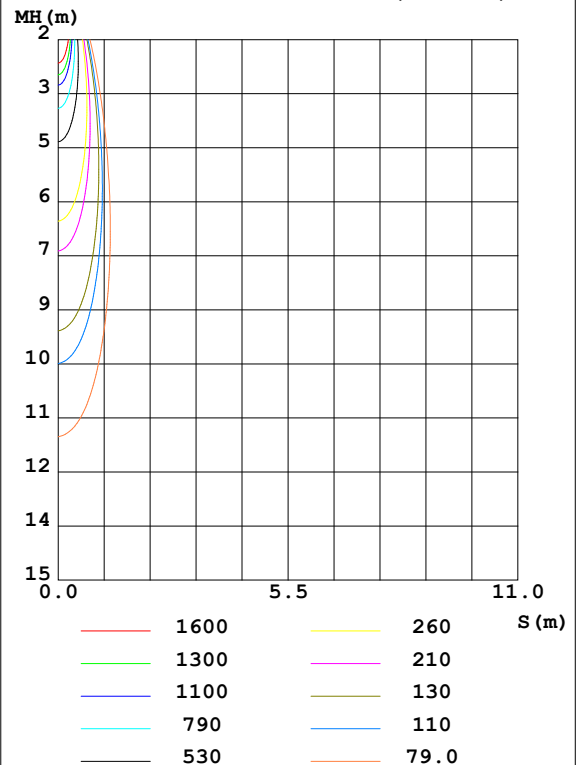
Test:U:48.00V I:0.3321A P:15.94W PF:1.000 Freq:0Hz Lamp Flux:1264.04x1 lm		
NAME: ML26-RS40-16W-940-18	TYPE:Low Voltage Track System Module	
SPEC.:4000K	DIM.: $\phi 40\text{mm} \times \text{H}70\text{mm}$	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 79.30 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	10922	S/MH (C0/180)	0.31
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	0.28
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1264.0	η UP, DN (C0-180)	0.0, 56.4
NOMINAL FLUX (lm)	1264.04	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 43.6
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)



C Range: 0 - 360DEG
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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	399.3	376.7	483.0	649.2	424.1	459.4	370.2	245.2	0- 10	649.7	649.7	51.4, 51.4
20	45.79	59.51	99.40	110.7	43.82	52.88	43.88	26.46	10- 20	494.6	1144	90.5, 90.5
30	4.558	4.730	7.342	9.866	4.896	6.395	4.689	3.551	20- 30	99.66	1244	98.4, 98.4
40	0.7928	0.7982	0.9284	1.493	0.9334	1.087	0.8082	0.7076	30- 40	15.50	1259	99.6, 99.6
50	0.1355	0.1203	0.1649	0.3474	0.1854	0.2251	0.1732	0.1208	40- 50	3.587	1263	99.9, 99.9
60	0.0251	0.0195	0.0294	0.0544	0.0344	0.0440	0.0282	0.0198	50- 60	0.7749	1264	100, 100
70	0.0077	0.0050	0.0089	0.0118	0.0072	0.0100	0.0056	0.0065	60- 70	0.1591	1264	100, 100
80	0.0051	0.0044	0.0051	0.0053	0.0038	0.0048	0.0034	0.0041	70- 80	0.0595	1264	100, 100
90	0.0047	0.0046	0.0046	0.0053	0.0038	0.0037	0.0036	0.0039	80- 90	0.0479	1264	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: $\times 10 \text{cd}$									UNIT: lm		

Conical surface Flux(90deg): 1261.8 lm

%lum = 99.8%

%lamp = 99.8%

Conical surface Flux(120deg): 1263.8 lm

%lum = 100.0%

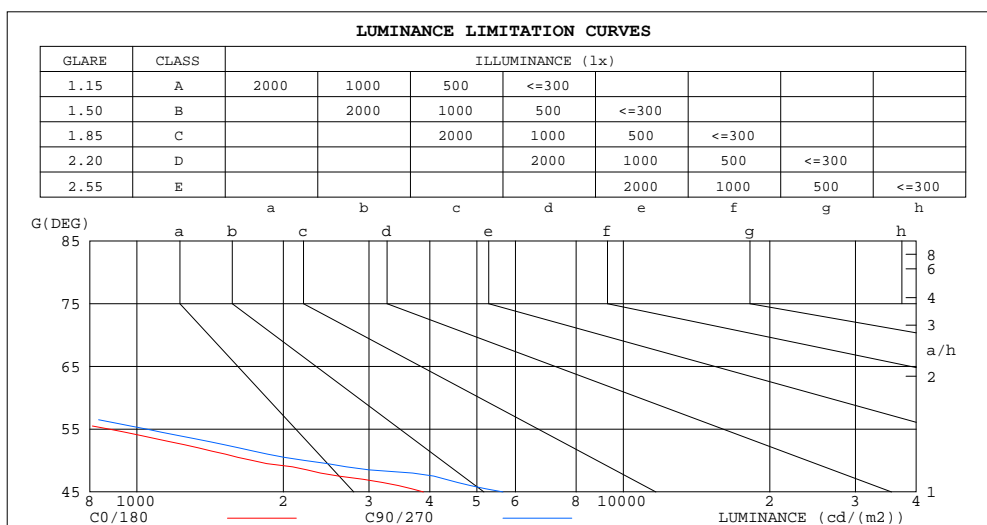
%lamp = 100.0%

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LUMINANCE LIMITATION CURVES

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MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	439	459
80	241	251
75	182	209
70	183	224
65	239	297
60	412	506
55	876	1046
50	1726	2209
45	3883	5656

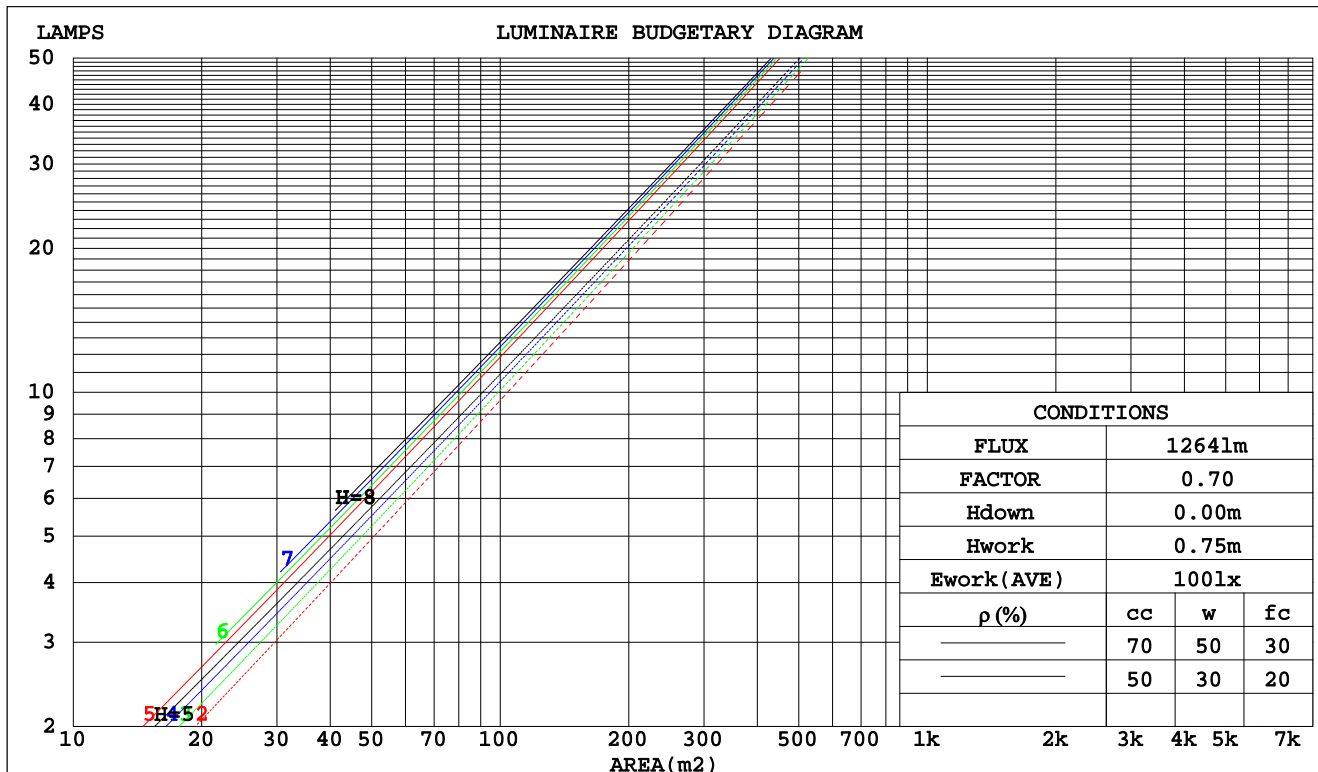
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	.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	.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	1.05	1.02	.00	1.04	1.01	.99	1.02	.99	.98	.00	.98	.96	.97	.96	.95	.93
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	.91	.94	.92	.91	.90
6.0	.97	.93	.91	.96	.93	.90	.95	.92	.90	.94	.91	.89	.93	.91	.89	.88
7.0	.95	.91	.89	.94	.91	.88	.93	.90	.88	.92	.89	.88	.91	.89	.87	.86
8.0	.92	.89	.87	.92	.89	.86	.91	.88	.86	.90	.88	.86	.90	.87	.86	.85
9.0	.90	.87	.85	.90	.87	.85	.89	.86	.84	.89	.86	.84	.88	.86	.84	.83
10.0	.89	.85	.83	.88	.85	.83	.88	.85	.83	.87	.85	.83	.87	.84	.83	.82



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WEC AND CCEC

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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	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.122	.069	.022	.115	.066	.021	.103	.059	.019	.092	.053	.017	.081	.047	.015		
2.0	.111	.061	.019	.106	.058	.018	.096	.053	.017	.087	.049	.015	.078	.044	.014		
3.0	.103	.055	.016	.098	.053	.016	.090	.049	.015	.082	.045	.014	.075	.042	.013		
4.0	.095	.050	.015	.092	.048	.014	.085	.045	.013	.078	.042	.013	.072	.039	.012		
5.0	.089	.045	.013	.086	.044	.013	.080	.042	.012	.075	.039	.012	.070	.037	.011		
6.0	.084	.042	.012	.081	.041	.012	.076	.039	.011	.071	.037	.011	.067	.035	.010		
7.0	.079	.039	.011	.077	.038	.011	.072	.037	.011	.068	.035	.010	.065	.034	.010		
8.0	.075	.037	.010	.073	.036	.010	.069	.035	.010	.066	.033	.010	.062	.032	.009		
9.0	.071	.034	.010	.070	.034	.010	.066	.033	.009	.063	.032	.009	.060	.031	.009		
10.0	.068	.033	.009	.067	.032	.009	.064	.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	.093	.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	.078	.057	.043	.054	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.083	.059	.043	.072	.051	.037	.050	.036	.026	.029	.021	.016	.009	.007	.005	
9.0	.077	.053	.037	.067	.046	.033	.046	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.072	.049	.033	.062	.042	.029	.043	.030	.020	.025	.018	.012	.008	.006	.004	

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 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:0.3321A P:15.94W PF:1.000 Freq:0Hz Lamp Flux:1264.04x1 lm										
NAME: ML26-RS40-16W-940-18					TYPE:Low Voltage Track System Module					
SPEC.:4000K					DIM.: ϕ 40mm*H70mm					
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	2.3	2.8	2.4	2.9	3.1	3.8	4.3	3.9	4.4	4.6
3H	2.1	2.6	2.3	2.8	3.0	3.6	4.1	3.8	4.3	4.5
4H	2.0	2.5	2.3	2.7	2.9	3.5	4.0	3.8	4.2	4.4
6H	2.0	2.4	2.2	2.7	2.9	3.5	3.9	3.7	4.2	4.4
8H	1.9	2.4	2.2	2.6	2.9	3.4	3.9	3.7	4.1	4.4
12H	1.9	2.3	2.2	2.6	2.8	3.4	3.8	3.7	4.1	4.3
4H 2H	2.0	2.5	2.3	2.7	2.9	3.5	4.0	3.8	4.2	4.4
3H	1.9	2.3	2.2	2.6	2.8	3.4	3.8	3.7	4.1	4.3
4H	1.8	2.2	2.1	2.5	2.8	3.3	3.7	3.6	4.0	4.3
6H	1.7	2.1	2.1	2.4	2.7	3.2	3.5	3.5	3.9	4.2
8H	1.6	2.0	2.0	2.3	2.7	3.1	3.5	3.5	3.8	4.2
12H	1.6	1.9	2.0	2.3	2.7	3.1	3.4	3.5	3.8	4.1
8H 4H	1.6	2.0	2.0	2.3	2.7	3.1	3.5	3.5	3.8	4.2
6H	1.5	1.8	1.9	2.2	2.6	3.0	3.3	3.4	3.7	4.1
8H	1.5	1.7	1.9	2.1	2.6	3.0	3.2	3.4	3.6	4.1
12H	1.4	1.6	1.9	2.1	2.5	2.9	3.1	3.4	3.6	4.0
12H 4H	1.6	1.9	2.0	2.2	2.6	3.1	3.4	3.5	3.7	4.1
6H	1.5	1.7	1.9	2.1	2.6	3.0	3.2	3.4	3.6	4.1
8H	1.4	1.6	1.9	2.1	2.5	2.9	3.1	3.4	3.6	4.0
Variations with the observer position at spacings:										
S = 1.0H	+ 3.4 / -11.4					+ 3.4 / -11.7				
1.5H	+ 5.6 / - 9.7					+ 5.5 / -10.4				
2.0H	+ 6.5 / - 7.0					+ 7.8 / - 8.1				

CIE Pub.117, 1264 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.8$)

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UTILIZATION FACTORS TABLE

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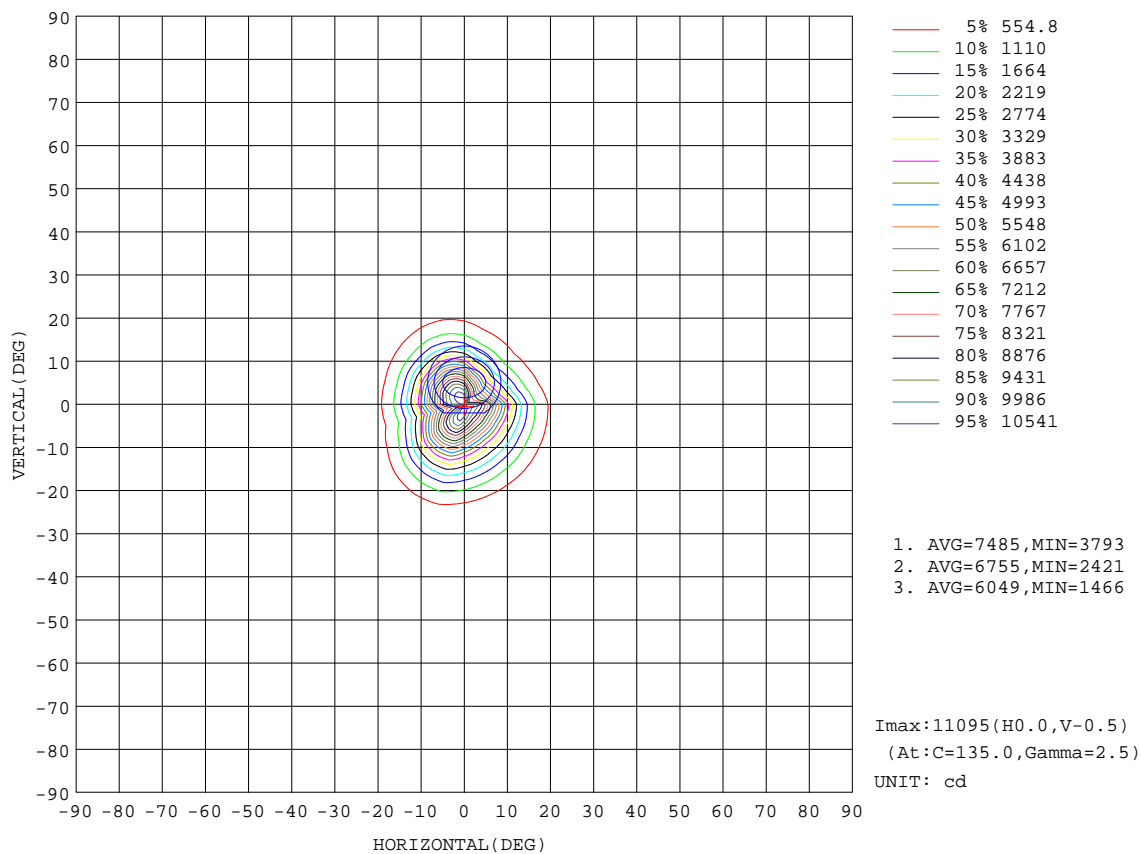
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	97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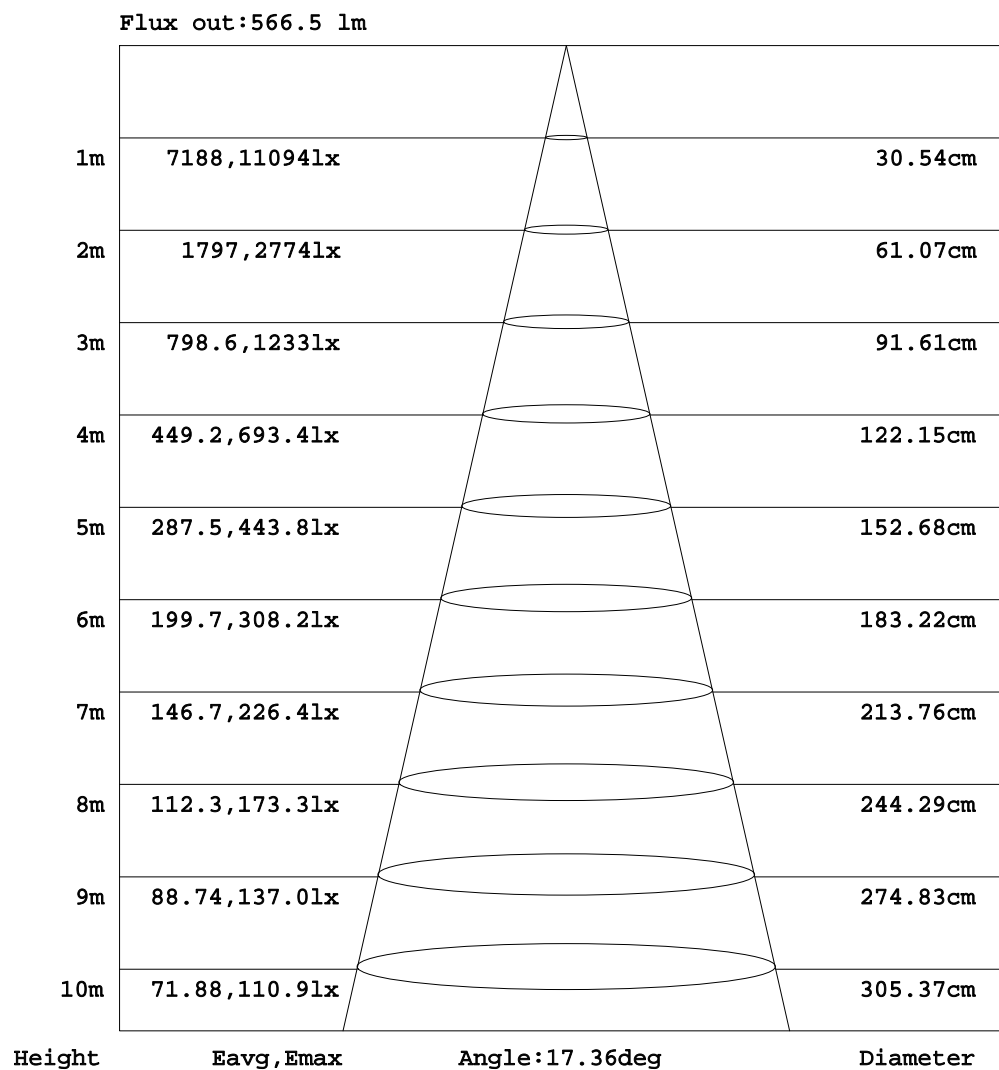


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AAI Figure

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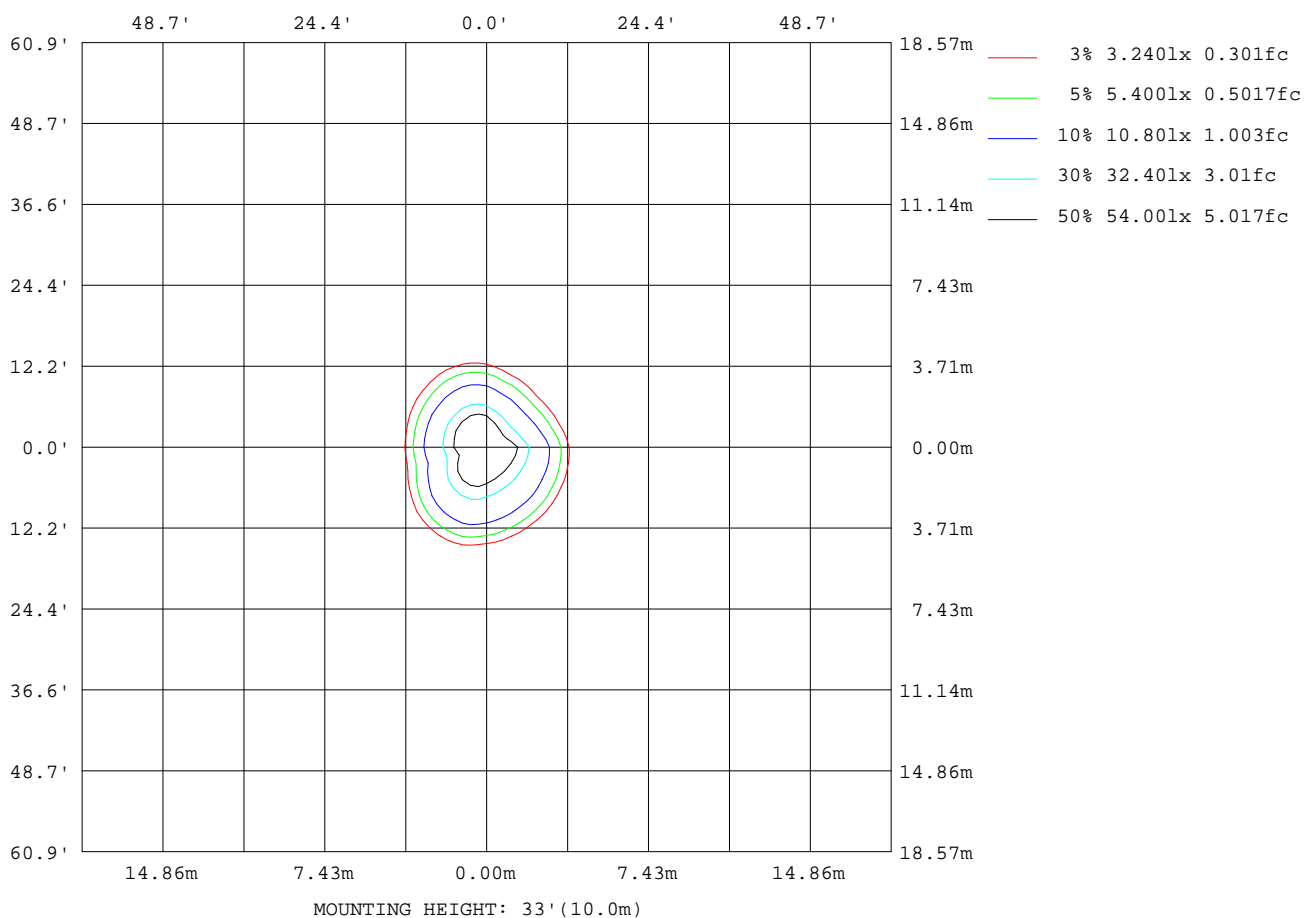
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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SPEC.:4000K	DIM.: ϕ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		

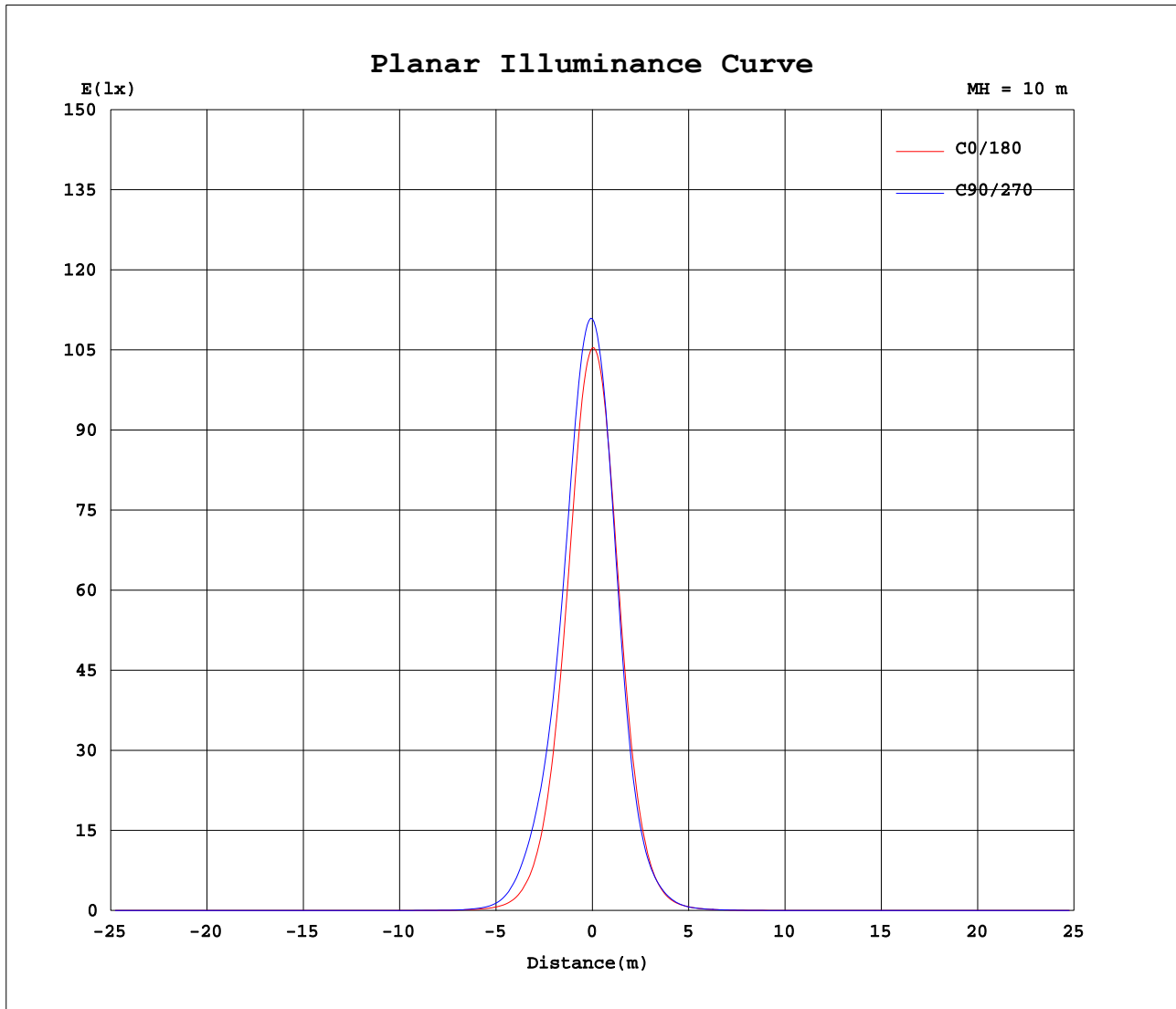
AvgL	cd/m2
L_0~180 (65) av	256
L_0~180 (75) av	150
L_0~180 (85) av	388
L_90~270 (65) av	244
L_90~270 (75) av	149
L_90~270 (85) av	370
L_45 (65) av	288
L_45 (75) av	172
L_45 (85) av	404

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-05-18

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: 2020-05-18

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:

```