

Low Voltage Track System Module ML26-RS40-16W-930-18



Light Output Ratio:	100.0%	
Luminaire Power:	16.44 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 Long  
Test Date: 2019-12-03

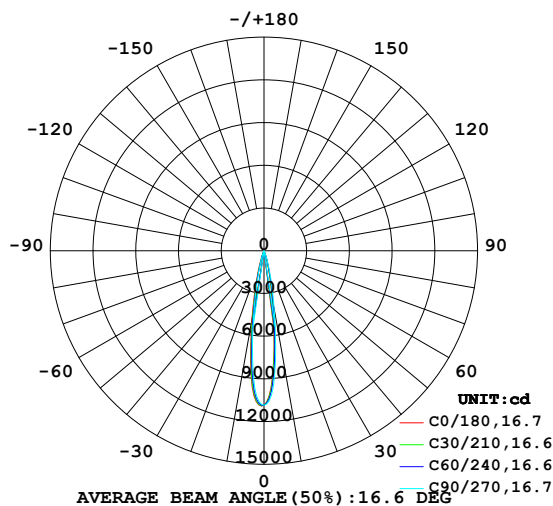
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 56%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

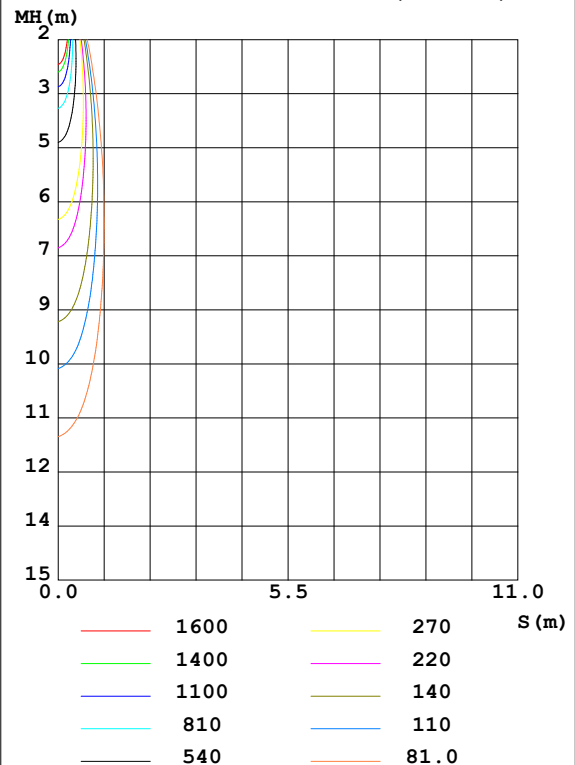
Test:U:48.00V I:0.3426A P:16.44W PF:1.000 Freq:0Hz Lamp Flux:1170.55x1 lm		
NAME: ML26-RS40-16W-930-18	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: $\phi$ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 71.18 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	10911	S/MH (C0/180)	0.32
NOMINAL POWER (W)	16	LOR (%)	100.0	S/MH (C90/270)	0.28
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	1170.6	$\eta$ UP,DN (C0-180)	0.0,51.4
NOMINAL FLUX (lm)	1170.55	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,48.6
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	48	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jason Long  
 Test Date:2019-12-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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 Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	330.7	366.4	412.4	480.3	487.1	426.4	388.3	338.9	0- 10	667.2	667.2	57,57
20	29.75	37.07	49.57	63.07	58.56	38.69	30.72	27.91	10- 20	425.5	1093	93.4,93.4
30	2.878	3.193	3.510	4.929	4.978	3.767	3.252	2.826	20- 30	63.58	1156	98.8,98.8
40	0.5366	0.6837	0.6403	0.9268	0.9064	0.7956	0.6180	0.5783	30- 40	10.48	1167	99.7,99.7
50	0.1351	0.1415	0.1531	0.1710	0.1795	0.1591	0.1454	0.1350	40- 50	2.689	1169	99.9,99.9
60	0.0363	0.0347	0.0405	0.0437	0.0464	0.0407	0.0323	0.0337	50- 60	0.7662	1170	100,100
70	0.0119	0.0098	0.0125	0.0107	0.0114	0.0112	0.0063	0.0096	60- 70	0.2045	1170	100,100
80	0.0055	0.0037	0.0055	0.0037	0.0035	0.0044	0.0024	0.0035	70- 80	0.0685	1171	100,100
90	0.0039	0.0037	0.0035	0.0035	0.0024	0.0026	0.0024	0.0022	80- 90	0.0360	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 1168.6 lm

%lum = 99.8%

%lamp = 99.8%

Conical surface Flux(120deg): 1170.2 lm

%lum = 100.0%

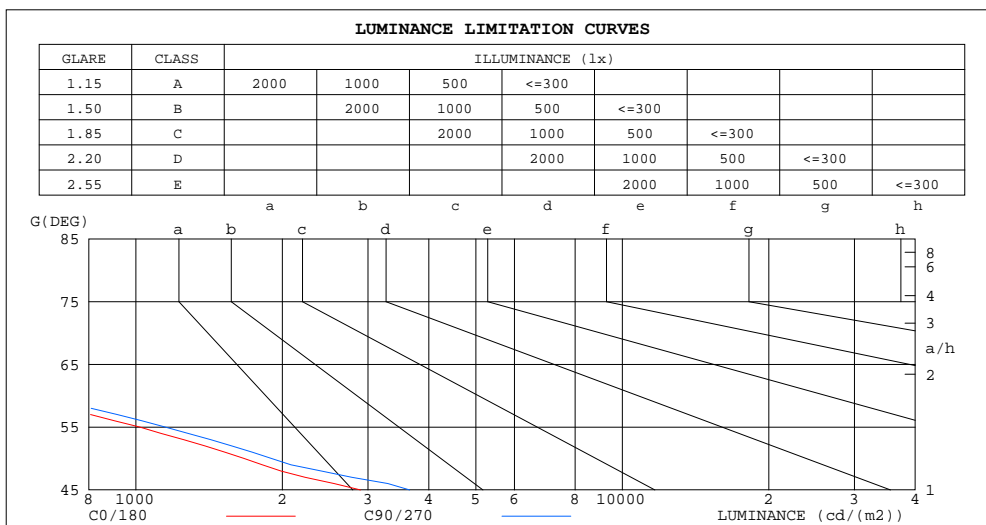
%lamp = 100.0%

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Temperature:25.3DEG  
Operators:Jason Long  
Test Date:2019-12-03

$\gamma$  Range: 0 - 90DEG  
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Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:48.00V I:0.3426A P:16.44W PF:1.000 Freq:0Hz Lamp Flux:1170.55x1 lm		
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SPEC.:3000K	DIM.: $\phi$ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	419	399
80	251	251
75	242	242
70	275	290
65	367	392
60	575	645
55	1018	1149
50	1668	1899
45	2895	3653

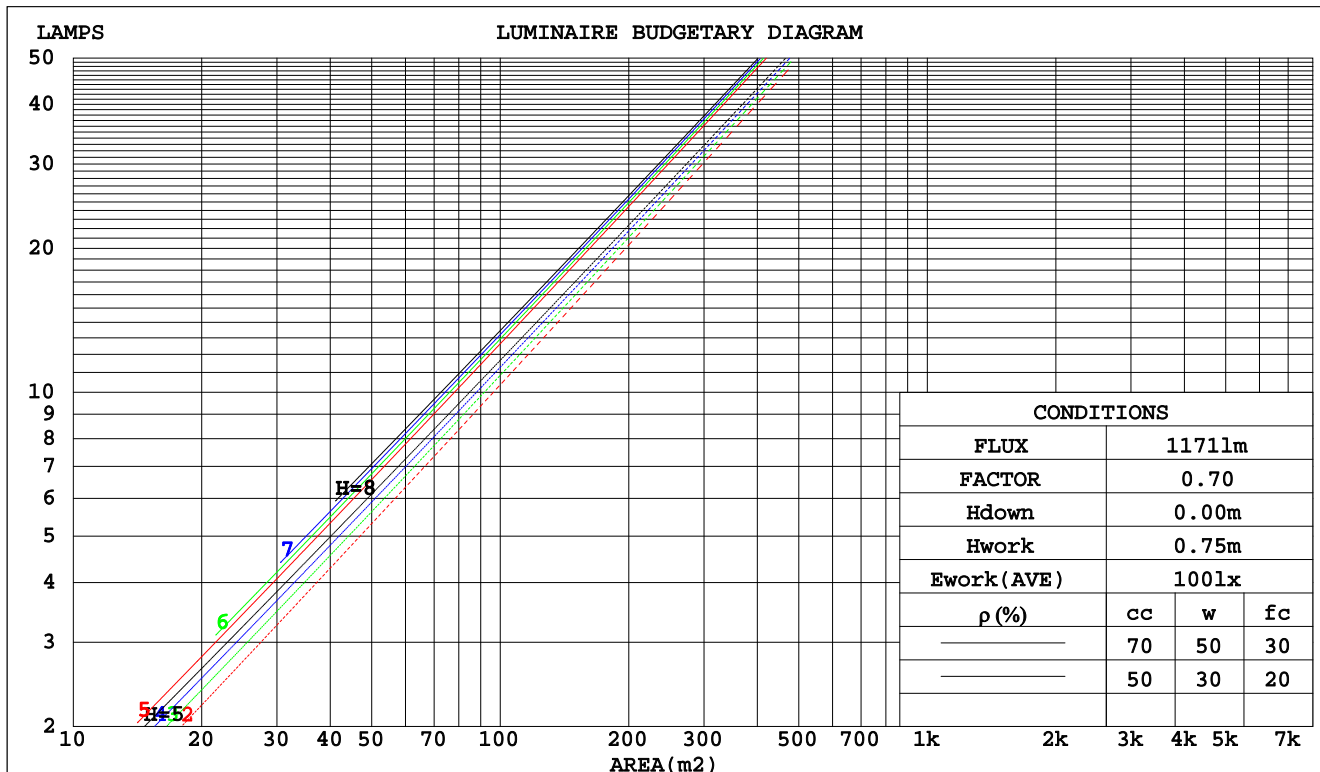
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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SPEC.:3000K	DIM.: $\phi 40\text{mm} \times \text{H}70\text{mm}$	
MFR.: NEKO LIGHTING AG		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.11	1.12	1.10	1.09	1.08	1.07	1.06	1.04	1.03	1.03	1.01	1.00	.00	.98
2.0	1.10	1.07	1.05	1.08	1.06	1.04	1.05	1.03	1.02	1.02	1.01	.00	.00	.98	.98	.96
3.0	1.06	1.03	1.01	1.05	1.02	.00	1.02	1.00	.98	1.00	.98	.97	.98	.97	.96	.94
4.0	1.03	.00	.97	1.02	.99	.97	1.00	.98	.96	.98	.96	.95	.97	.95	.94	.93
5.0	1.00	.97	.95	.00	.97	.94	.98	.96	.94	.97	.95	.93	.95	.94	.92	.91
6.0	.98	.95	.92	.98	.94	.92	.96	.94	.92	.95	.93	.91	.94	.92	.91	.90
7.0	.96	.93	.90	.96	.92	.90	.95	.92	.90	.94	.91	.89	.93	.91	.89	.88
8.0	.94	.91	.89	.94	.91	.89	.93	.90	.88	.92	.90	.88	.91	.89	.88	.87
9.0	.92	.89	.87	.92	.89	.87	.91	.89	.87	.91	.88	.87	.90	.88	.86	.86
10.0	.91	.88	.86	.91	.88	.86	.90	.87	.85	.89	.87	.85	.89	.87	.85	.84



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## WEC AND CCEC

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NAME: ML26-RS40-16W-930-18	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: $\phi$ 40mm*H70mm	
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	.118	.067	.021	.111	.063	.020	.099	.057	.018	.088	.051	.016	.077	.045	.014		
2.0	.107	.059	.018	.102	.056	.017	.092	.051	.016	.083	.046	.014	.074	.042	.013		
3.0	.098	.052	.016	.094	.050	.015	.086	.046	.014	.078	.043	.013	.071	.039	.012		
4.0	.091	.047	.014	.087	.046	.014	.080	.043	.013	.074	.040	.012	.068	.037	.011		
5.0	.085	.043	.013	.082	.042	.012	.076	.039	.012	.070	.037	.011	.065	.035	.010		
6.0	.079	.040	.011	.077	.039	.011	.072	.037	.011	.067	.035	.010	.063	.033	.010		
7.0	.075	.037	.010	.072	.036	.010	.068	.035	.010	.064	.033	.010	.061	.031	.009		
8.0	.071	.035	.010	.069	.034	.010	.065	.033	.009	.062	.031	.009	.058	.030	.009		
9.0	.067	.032	.009	.065	.032	.009	.062	.031	.009	.059	.030	.008	.056	.029	.008		
10.0	.064	.031	.009	.062	.030	.008	.060	.029	.008	.057	.028	.008	.054	.027	.008		

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	.167	.158	.150	.143	.135	.129	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.148	.133	.120	.126	.114	.104	.087	.079	.073	.050	.046	.043	.016	.015	.014	
3.0	.131	.113	.099	.113	.098	.085	.077	.068	.060	.045	.040	.035	.014	.013	.012	
4.0	.118	.097	.082	.101	.084	.071	.070	.059	.050	.040	.034	.030	.013	.011	.010	
5.0	.106	.085	.069	.091	.073	.060	.063	.051	.042	.036	.030	.025	.012	.010	.008	
6.0	.097	.074	.058	.083	.064	.051	.057	.045	.036	.033	.027	.021	.011	.009	.007	
7.0	.089	.066	.050	.076	.057	.044	.053	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.082	.059	.043	.070	.051	.038	.049	.036	.027	.028	.021	.016	.009	.007	.005	
9.0	.075	.053	.038	.065	.046	.033	.045	.032	.023	.026	.019	.014	.008	.006	.005	
10.0	.070	.048	.033	.061	.042	.029	.042	.029	.021	.025	.017	.012	.008	.006	.004	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
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 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:48.00V I:0.3426A P:16.44W PF:1.000 Freq:0Hz Lamp Flux:1170.55x1 lm										
NAME: ML26-RS40-16W-930-18					TYPE:Low Voltage Track System Module					
SPEC.:3000K					DIM.: $\phi$ 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	0.7	1.2	0.8	1.3	1.5	1.2	1.7	1.4	1.9	2.0
3H	0.5	1.0	0.8	1.2	1.4	1.1	1.6	1.3	1.8	1.9
4H	0.5	0.9	0.7	1.1	1.3	1.0	1.5	1.3	1.7	1.9
6H	0.4	0.8	0.7	1.1	1.3	0.9	1.4	1.2	1.6	1.8
8H	0.4	0.8	0.6	1.0	1.3	0.9	1.3	1.2	1.6	1.8
12H	0.3	0.7	0.6	1.0	1.3	0.9	1.3	1.2	1.5	1.8
4H 2H	0.5	0.9	0.7	1.1	1.3	1.0	1.5	1.3	1.7	1.9
3H	0.3	0.8	0.6	1.0	1.3	0.9	1.3	1.2	1.6	1.8
4H	0.3	0.6	0.6	0.9	1.2	0.8	1.2	1.1	1.5	1.8
6H	0.2	0.5	0.5	0.8	1.2	0.7	1.0	1.1	1.4	1.7
8H	0.1	0.4	0.5	0.8	1.1	0.7	1.0	1.0	1.3	1.7
12H	0.1	0.4	0.5	0.7	1.1	0.6	0.9	1.0	1.3	1.7
8H 4H	0.1	0.4	0.5	0.8	1.1	0.6	1.0	1.0	1.3	1.7
6H	0.0	0.3	0.4	0.7	1.1	0.5	0.8	1.0	1.2	1.6
8H	-0.0	0.2	0.4	0.6	1.0	0.5	0.7	0.9	1.1	1.6
12H	-0.1	0.1	0.4	0.6	1.0	0.4	0.6	0.9	1.1	1.6
12H 4H	0.0	0.3	0.4	0.7	1.1	0.6	0.9	1.0	1.2	1.6
6H	-0.1	0.2	0.4	0.6	1.0	0.5	0.7	0.9	1.1	1.6
8H	-0.1	0.1	0.4	0.5	1.0	0.4	0.6	0.9	1.1	1.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / - 7.5					+ 3.1 / - 7.8				
1.5H	+ 4.7 / - 5.7					+ 5.0 / - 6.2				
2.0H	+ 4.8 / - 5.1					+ 5.6 / - 5.6				

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

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### UTILIZATION FACTORS TABLE

Test:U:48.00V I:0.3426A P:16.44W PF:1.000 Freq:0Hz Lamp Flux:1170.55x1 lm		
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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		

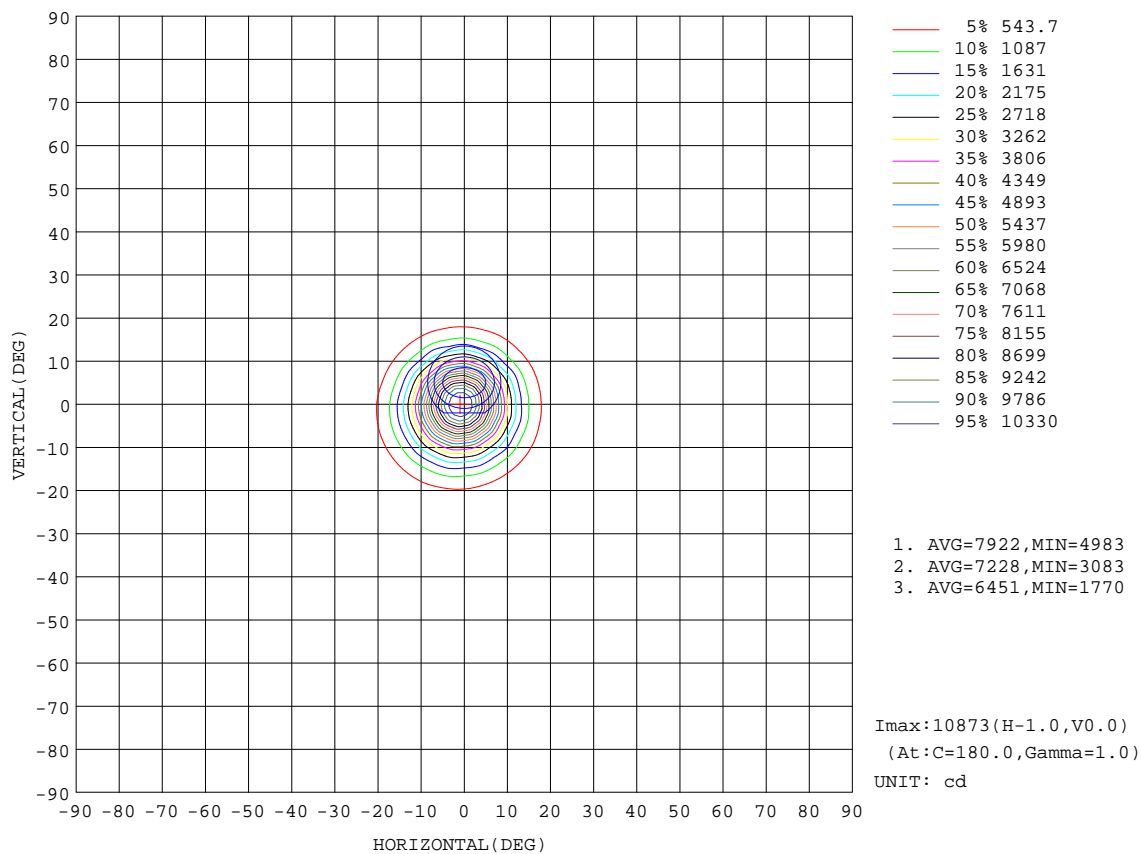
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ISOCANDELA DIAGRAM

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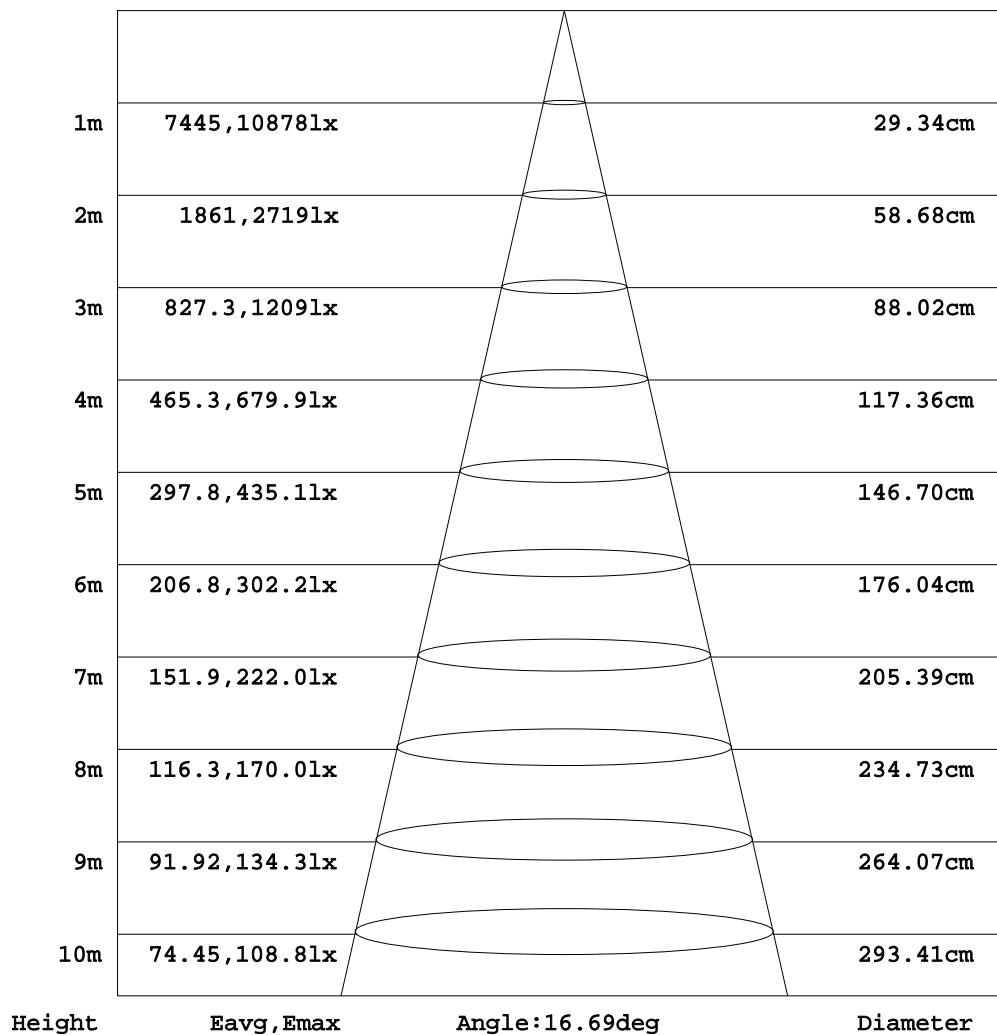
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**AAI Figure**

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Flux out:586.8 lm



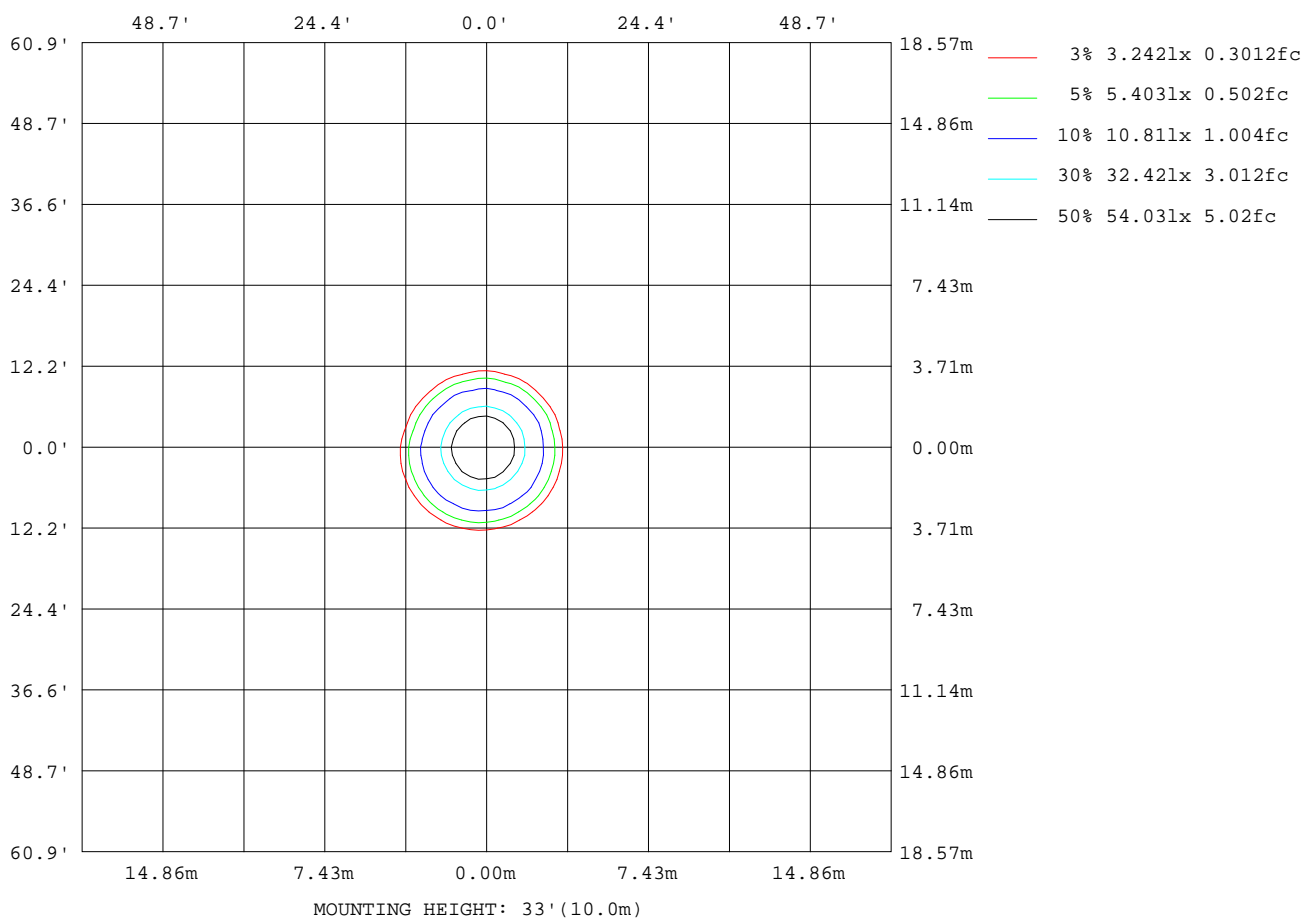
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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Remarks:

### LED Avg.L Report

Test:U:48.00V I:0.3426A P:16.44W PF:1.000 Freq:0Hz Lamp Flux:1170.55x1 lm		
NAME: ML26-RS40-16W-930-18	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: $\phi$ 40mm*H70mm	
MFR.: NEKO LIGHTING AG		

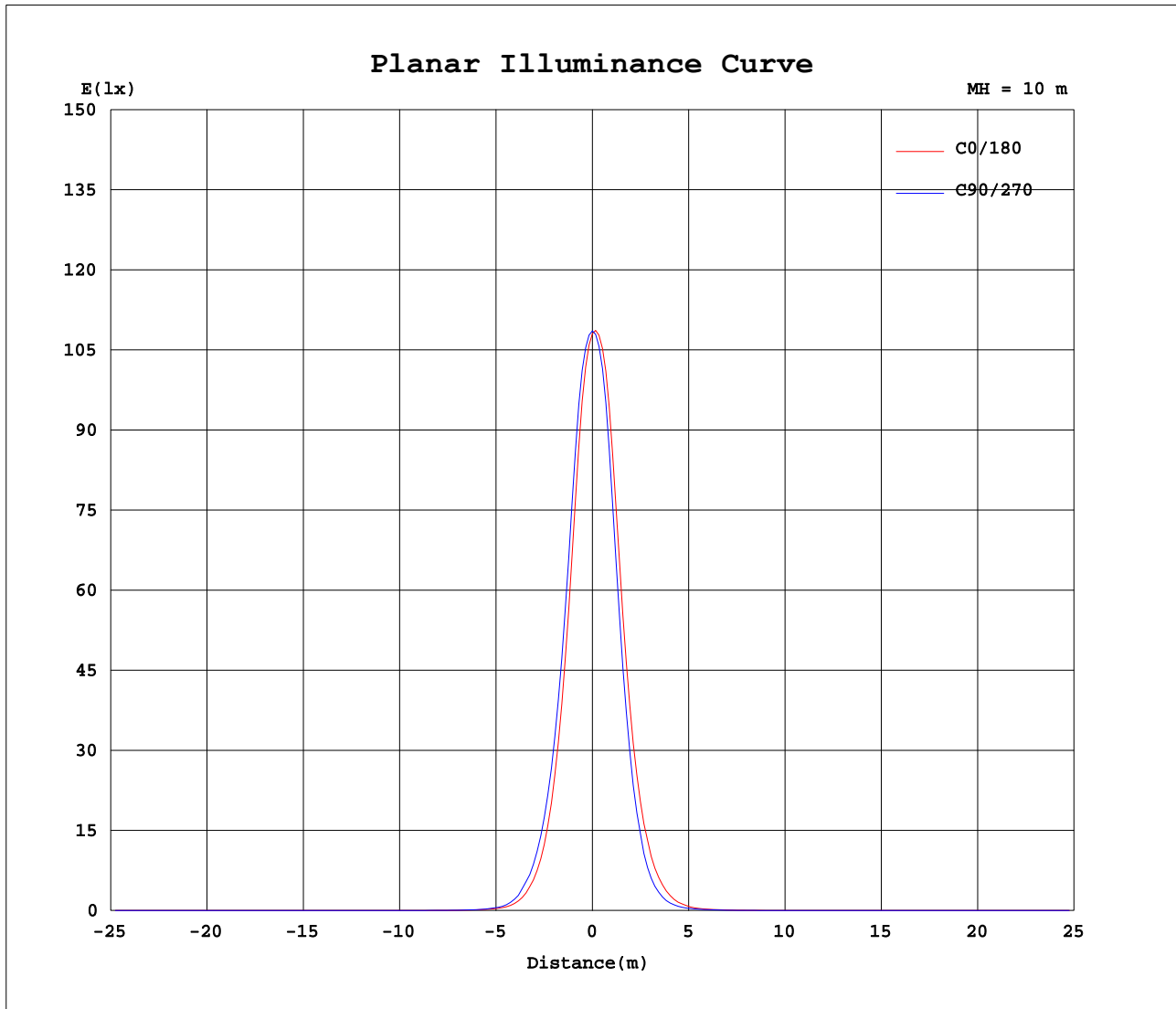
AvgL	cd/m2
L_0~180 (65) av	393
L_0~180 (75) av	213
L_0~180 (85) av	321
L_90~270 (65) av	323
L_90~270 (75) av	175
L_90~270 (85) av	309
L_45 (65) av	356
L_45 (75) av	188
L_45 (85) av	295

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason Long  
Test Date:2019-12-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
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 Long  
Test Date: 2019-12-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 56%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

```