

Low Voltage Track System Module ML26-PS55-14W-927-24



Light Output Ratio:	100.0%	
Luminaire Power:	13.59 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: 2020-05-09

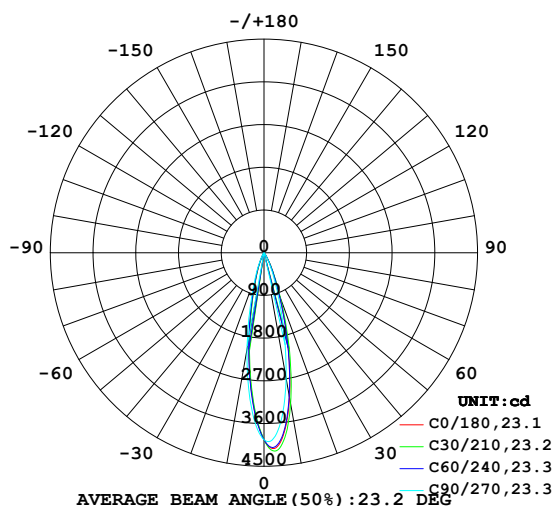
γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

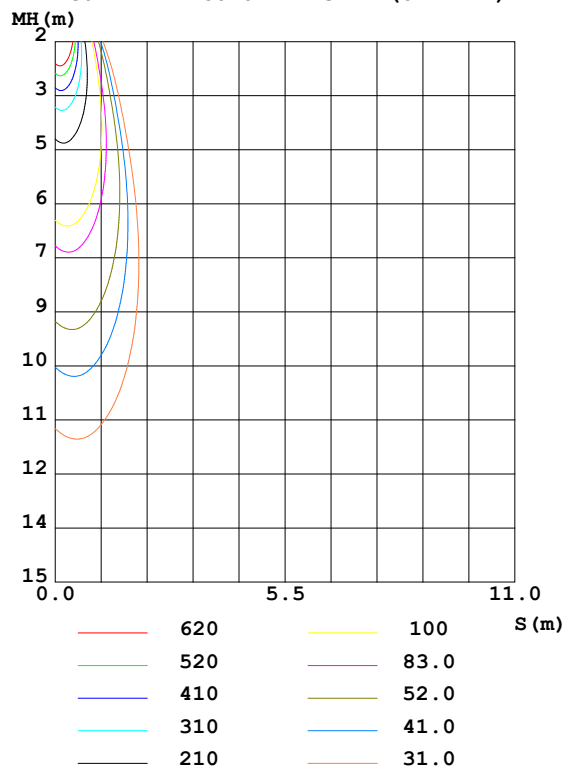
Test:U:48.00V I:0.2831A P:13.59W PF:1.000 Freq:0Hz Lamp Flux:859.768x1 lm		
NAME: ML26-PS55-14W-927-24	TYPE:Low Voltage Track System Module	
SPEC.:2700K	DIM.: $\varnothing$ 55mm*H180mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 63.27 lm/W			
MODEL	CITIZEN-2700K	I <sub>max</sub> (cd)	4193	S/MH (C0/180)	0.32
NOMINAL POWER (W)	14	LOR (%)	100.0	S/MH (C90/270)	0.35
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	859.77	$\eta$ UP, DN (C0-180)	0.0, 56.4
NOMINAL FLUX (lm)	859.768	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 43.6
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  
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## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	3100	3234	2686	2108	1796	1749	2061	2586	0- 10	296.5	296.5	34.5, 34.5
20	933.6	1024	736.7	498.1	402.4	404.0	500.7	684.8	10- 20	375.0	671.6	78.1, 78.1
30	179.6	189.7	142.0	92.92	65.60	65.53	86.38	139.0	20- 30	142.1	813.7	94.6, 94.6
40	33.99	36.86	29.59	21.50	14.86	14.23	20.42	27.32	30- 40	35.40	849.1	98.8, 98.8
50	5.738	5.362	4.412	3.106	2.090	2.142	3.208	4.642	40- 50	8.821	857.9	99.8, 99.8
60	0.7711	0.8420	0.5979	0.3546	0.2450	0.2692	0.3729	0.5711	50- 60	1.542	859.5	100, 100
70	0.1241	0.1114	0.0919	0.0525	0.0456	0.0722	0.0524	0.0856	60- 70	0.2176	859.7	100, 100
80	0.0609	0.0415	0.0503	0.0351	0.0261	0.0372	0.0284	0.0439	70- 80	0.0577	859.7	100, 100
90	0.0391	0.0328	0.0372	0.0351	0.0283	0.0284	0.0262	0.0263	80- 90	0.0384	859.8	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): 855.31 lm

%lum = 99.5%

%lamp = 99.5%

Conical surface Flux(120deg): 859.46 lm

%lum = 100.0%

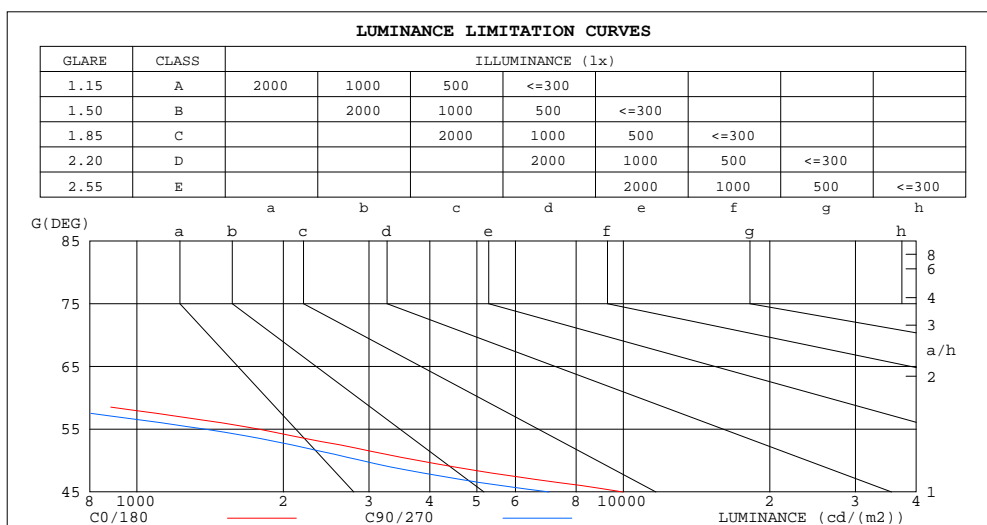
%lamp = 100.0%

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Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2020-05-09

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Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:48.00V I:0.2831A P:13.59W PF:1.000 Freq:0Hz Lamp Flux:859.768x1 lm		
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SPEC.:2700K	DIM.: $\phi$ 55mm*H180mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	232	201
80	149	122
75	132	107
70	154	113
65	303	247
60	653	504
55	1778	1376
50	3782	2892
45	9967	7036

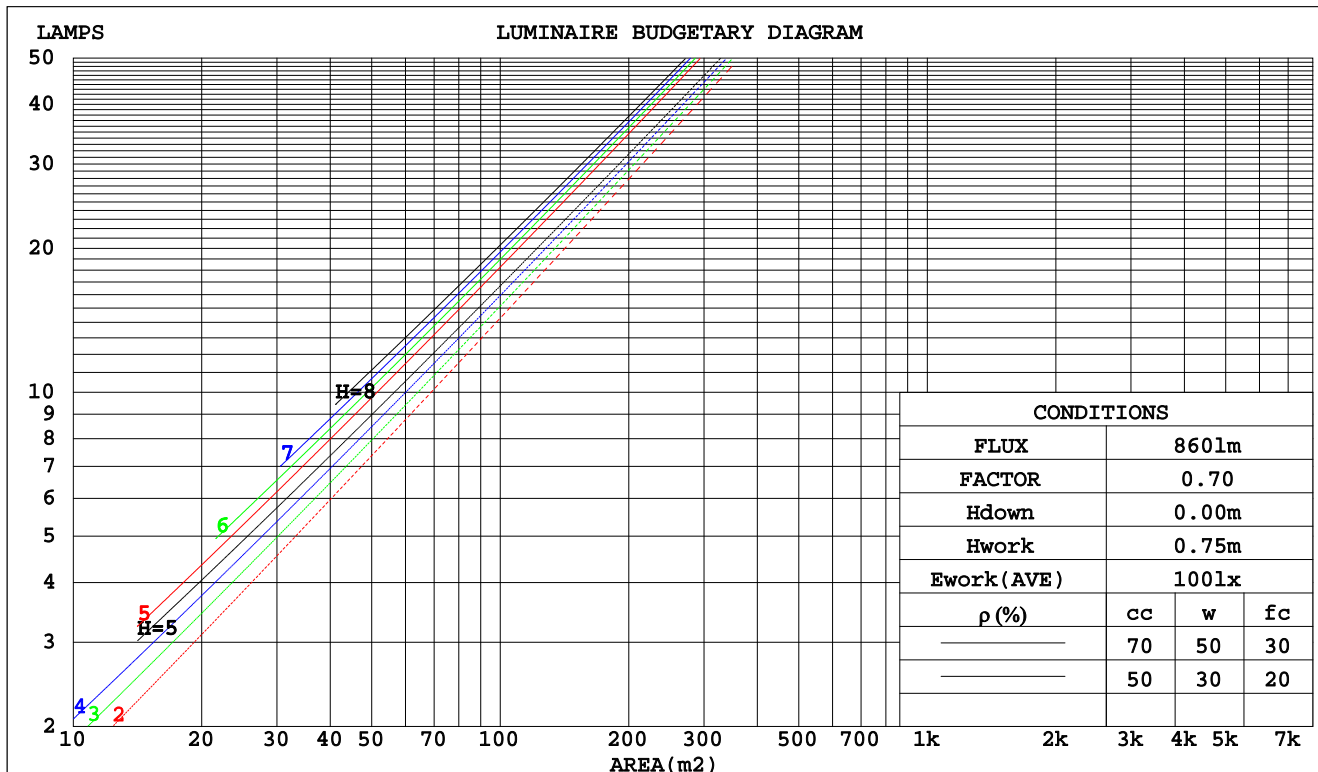
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:2700K	DIM.: $\phi 55\text{mm} \times \text{H}180\text{mm}$	
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						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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.02	1.06	1.03	1.01	1.03	1.01	.99	.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.99	.96	1.02	.98	.96	.99	.96	.94	.97	.95	.93	.95	.93	.91	.90
4.0	.99	.95	.92	.98	.94	.91	.96	.93	.90	.94	.91	.89	.92	.90	.88	.87
5.0	.95	.91	.88	.94	.90	.88	.93	.89	.87	.91	.88	.86	.90	.87	.85	.84
6.0	.92	.88	.85	.91	.87	.84	.90	.86	.84	.89	.86	.83	.87	.85	.83	.82
7.0	.89	.85	.82	.88	.84	.81	.87	.84	.81	.86	.83	.81	.85	.82	.80	.79
8.0	.86	.82	.79	.85	.82	.79	.85	.81	.78	.84	.81	.78	.83	.80	.78	.77
9.0	.83	.79	.77	.83	.79	.76	.82	.79	.76	.81	.78	.76	.81	.78	.76	.75
10.0	.81	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.74	.79	.76	.74	.73



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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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Remarks:

## WEC AND CCEC

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SPEC.:2700K	DIM.: $\phi$ 55mm*H180mm	
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	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.137	.078	.025	.131	.075	.024	.118	.068	.022	.107	.062	.020	.097	.056	.018		
2.0	.128	.070	.021	.122	.067	.021	.112	.062	.019	.102	.057	.018	.094	.053	.017		
3.0	.119	.063	.019	.115	.061	.018	.106	.057	.017	.098	.054	.016	.091	.050	.016		
4.0	.112	.058	.017	.108	.056	.017	.101	.053	.016	.094	.051	.015	.088	.048	.015		
5.0	.105	.054	.016	.102	.052	.015	.096	.050	.015	.090	.048	.014	.085	.045	.014		
6.0	.100	.050	.014	.097	.049	.014	.092	.047	.014	.087	.045	.013	.082	.043	.013		
7.0	.095	.047	.013	.093	.046	.013	.088	.044	.013	.084	.043	.012	.080	.041	.012		
8.0	.091	.044	.012	.088	.044	.012	.084	.042	.012	.081	.041	.012	.077	.040	.012		
9.0	.087	.042	.012	.085	.041	.012	.081	.040	.011	.078	.039	.011	.075	.038	.011		
10.0	.083	.040	.011	.081	.039	.011	.078	.038	.011	.075	.037	.011	.072	.036	.010		

$\rho_{cc}$	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	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	.168	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017		
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014		
3.0	.135	.113	.096	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011		
4.0	.123	.098	.079	.106	.085	.068	.073	.059	.048	.042	.035	.029	.014	.011	.009		
5.0	.113	.086	.066	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008		
6.0	.104	.076	.056	.089	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007		
7.0	.096	.067	.047	.083	.059	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006		
8.0	.090	.061	.041	.077	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005		
9.0	.084	.055	.036	.072	.048	.031	.050	.034	.022	.029	.020	.013	.009	.007	.004		
10.0	.079	.050	.031	.068	.044	.027	.047	.031	.019	.028	.018	.012	.009	.006	.004		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
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 $\gamma$  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:0.2831A P:13.59W PF:1.000 Freq:0Hz Lamp Flux:859.768x1 lm										
NAME: ML26-PS55-14W-927-24					TYPE:Low Voltage Track System Module					
SPEC.:2700K					DIM.: $\phi$ 55mm*H180mm					
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	12.9	13.5	13.1	13.7	13.8	12.2	12.9	12.4	13.1	13.2
3H	12.7	13.3	13.0	13.5	13.7	12.1	12.7	12.3	12.9	13.1
4H	12.7	13.2	12.9	13.4	13.7	12.0	12.6	12.3	12.8	13.0
6H	12.6	13.1	12.9	13.4	13.6	11.9	12.5	12.2	12.7	13.0
8H	12.5	13.1	12.8	13.3	13.6	11.9	12.4	12.2	12.7	12.9
12H	12.5	13.0	12.8	13.3	13.5	11.8	12.4	12.2	12.6	12.9
4H 2H	12.7	13.2	12.9	13.5	13.7	12.0	12.6	12.3	12.8	13.0
3H	12.5	13.0	12.8	13.3	13.5	11.9	12.4	12.2	12.6	12.9
4H	12.4	12.9	12.7	13.2	13.5	11.8	12.2	12.1	12.5	12.8
6H	12.3	12.7	12.7	13.0	13.4	11.7	12.1	12.0	12.4	12.7
8H	12.2	12.6	12.6	13.0	13.3	11.6	12.0	12.0	12.3	12.7
12H	12.2	12.5	12.6	12.9	13.3	11.5	11.9	11.9	12.3	12.7
8H 4H	12.2	12.6	12.6	13.0	13.3	11.6	12.0	12.0	12.3	12.7
6H	12.1	12.4	12.5	12.8	13.2	11.5	11.8	11.9	12.2	12.6
8H	12.1	12.3	12.5	12.8	13.2	11.4	11.7	11.9	12.1	12.6
12H	12.0	12.2	12.5	12.7	13.2	11.4	11.6	11.8	12.1	12.5
12H 4H	12.2	12.5	12.6	12.9	13.3	11.5	11.9	11.9	12.3	12.7
6H	12.1	12.3	12.5	12.8	13.2	11.4	11.7	11.9	12.1	12.6
8H	12.0	12.2	12.5	12.7	13.2	11.4	11.6	11.8	12.1	12.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / -13.7					+ 2.7 / -14.7				
1.5H	+ 4.9 / - 9.9					+ 4.8 / - 9.9				
2.0H	+ 6.9 / -12.4					+ 6.4 / -11.2				

CIE Pub.117, 859.8 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:0.2831A P:13.59W PF:1.000 Freq:0Hz Lamp Flux:859.768x1 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	85	82	90	85	82	90	85	81	78
0.80	98	93	89	97	92	89	96	92	89	85
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	100	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	105	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		

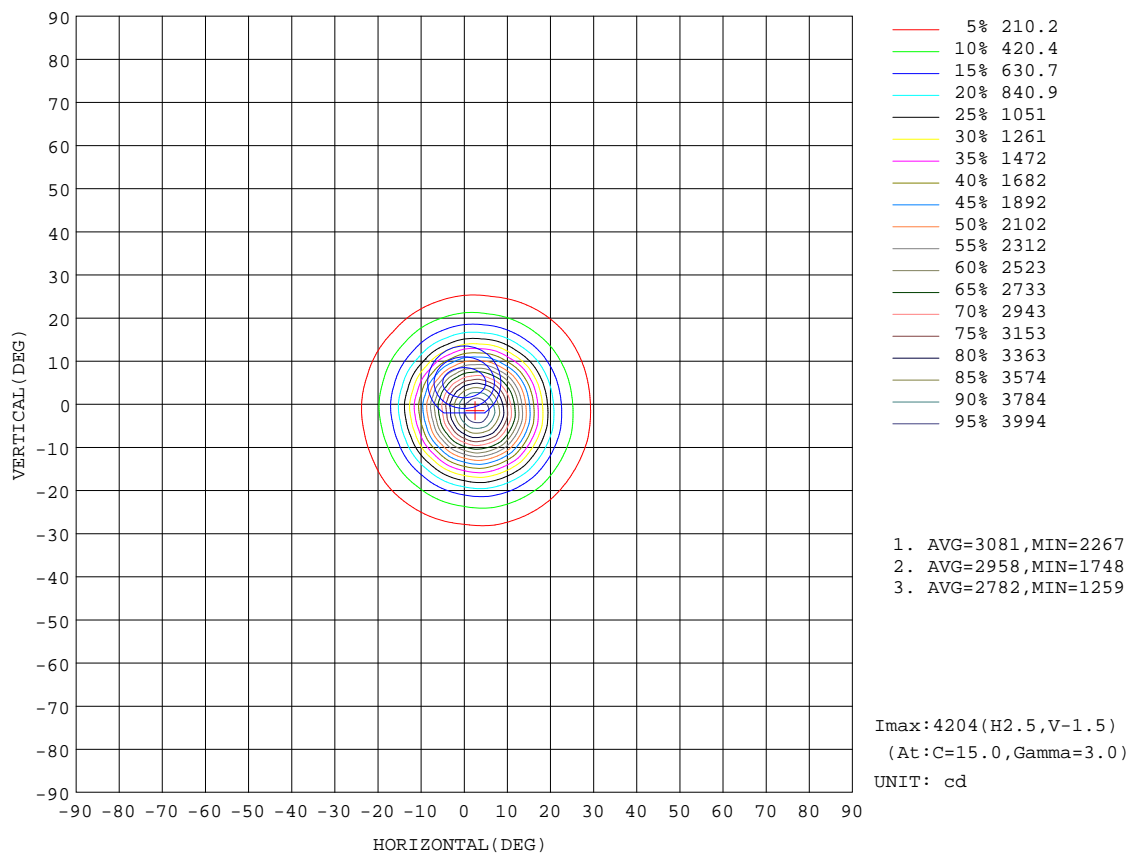
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ISOCANDELA DIAGRAM

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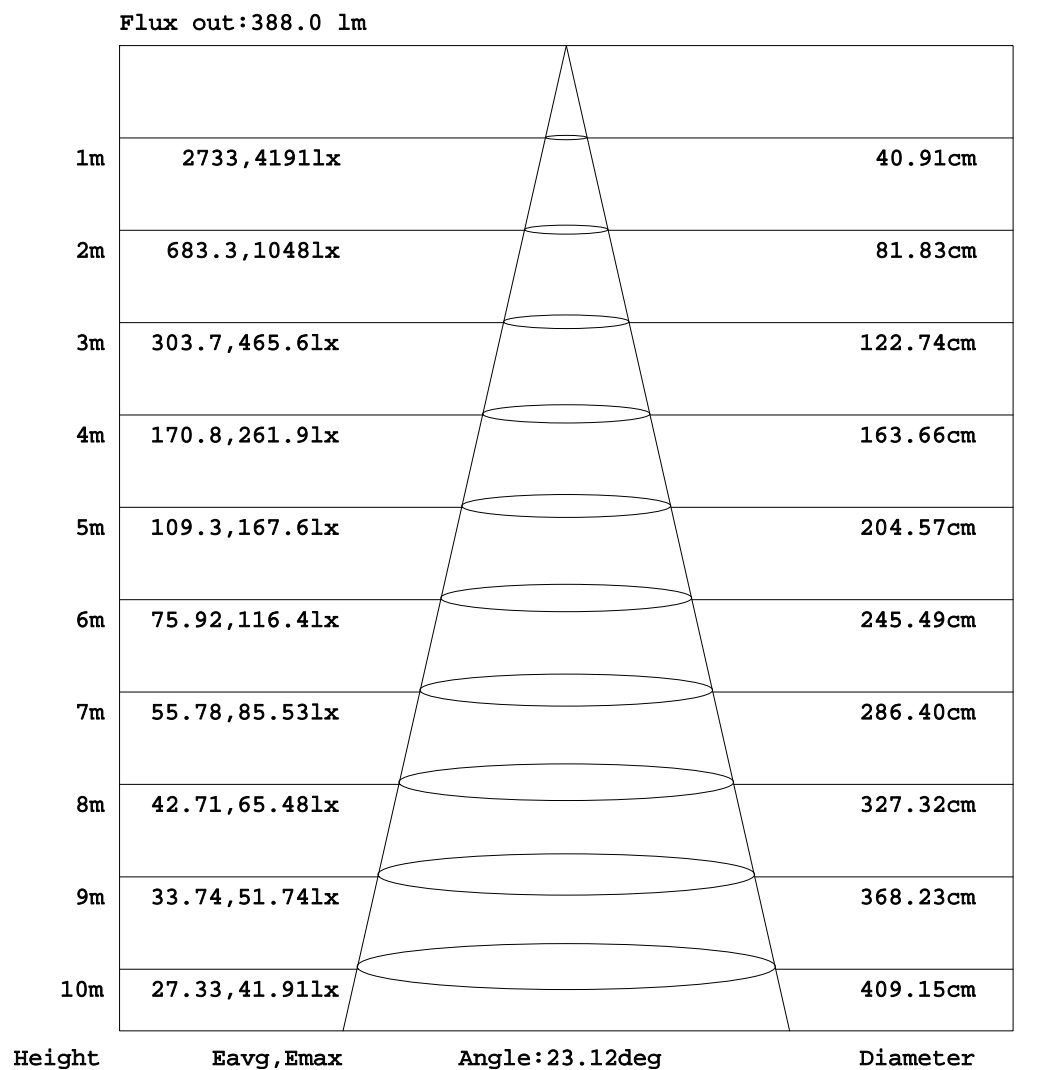


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**AAI Figure**

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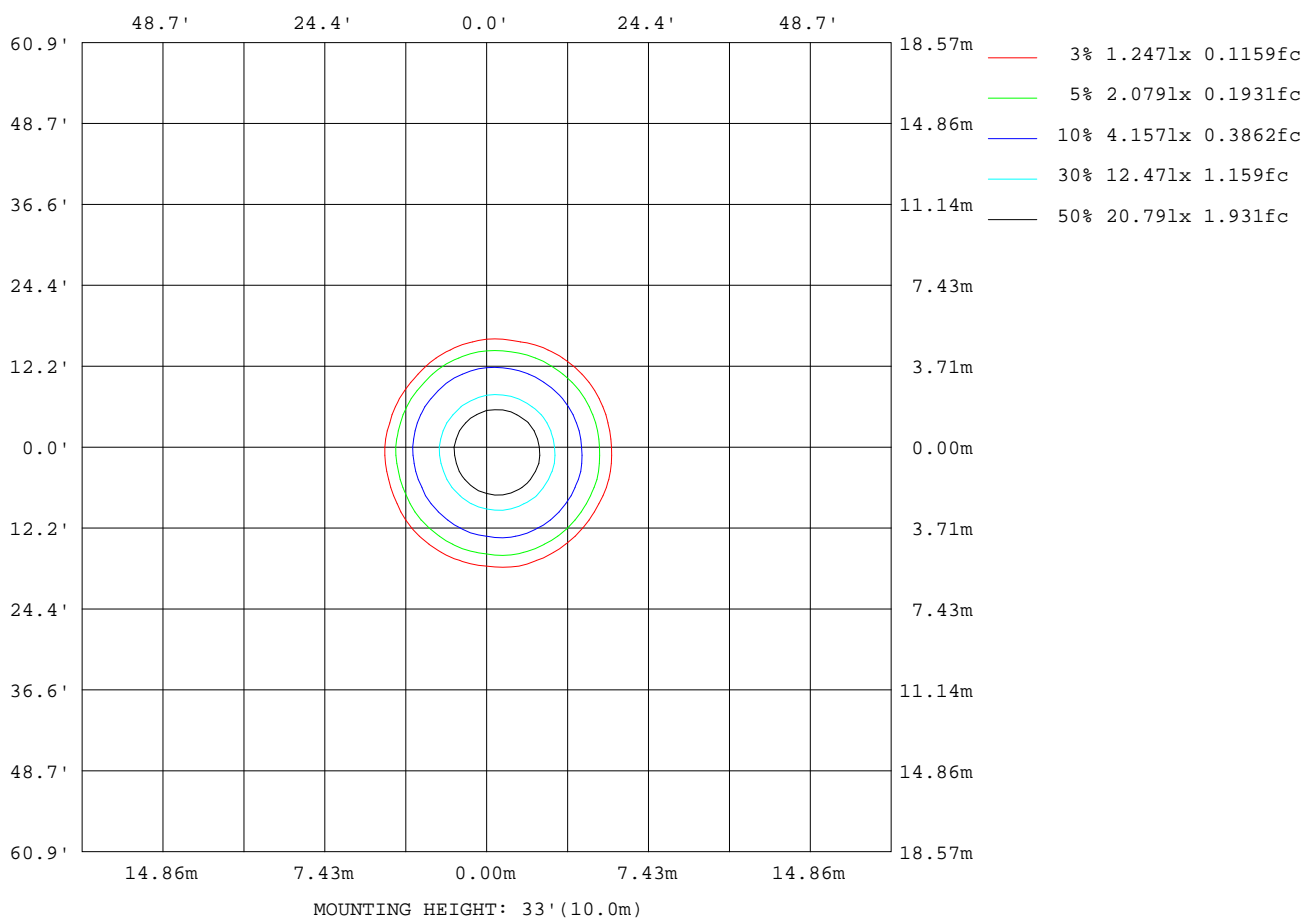
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

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Remarks:

### LED Avg.L Report

Test:U:48.00V I:0.2831A P:13.59W PF:1.000 Freq:0Hz Lamp Flux:859.768x1 lm		
NAME: ML26-PS55-14W-927-24	TYPE:Low Voltage Track System Module	
SPEC.:2700K	DIM.: $\phi$ 55mm*H180mm	
MFR.: NEKO LIGHTING AG		

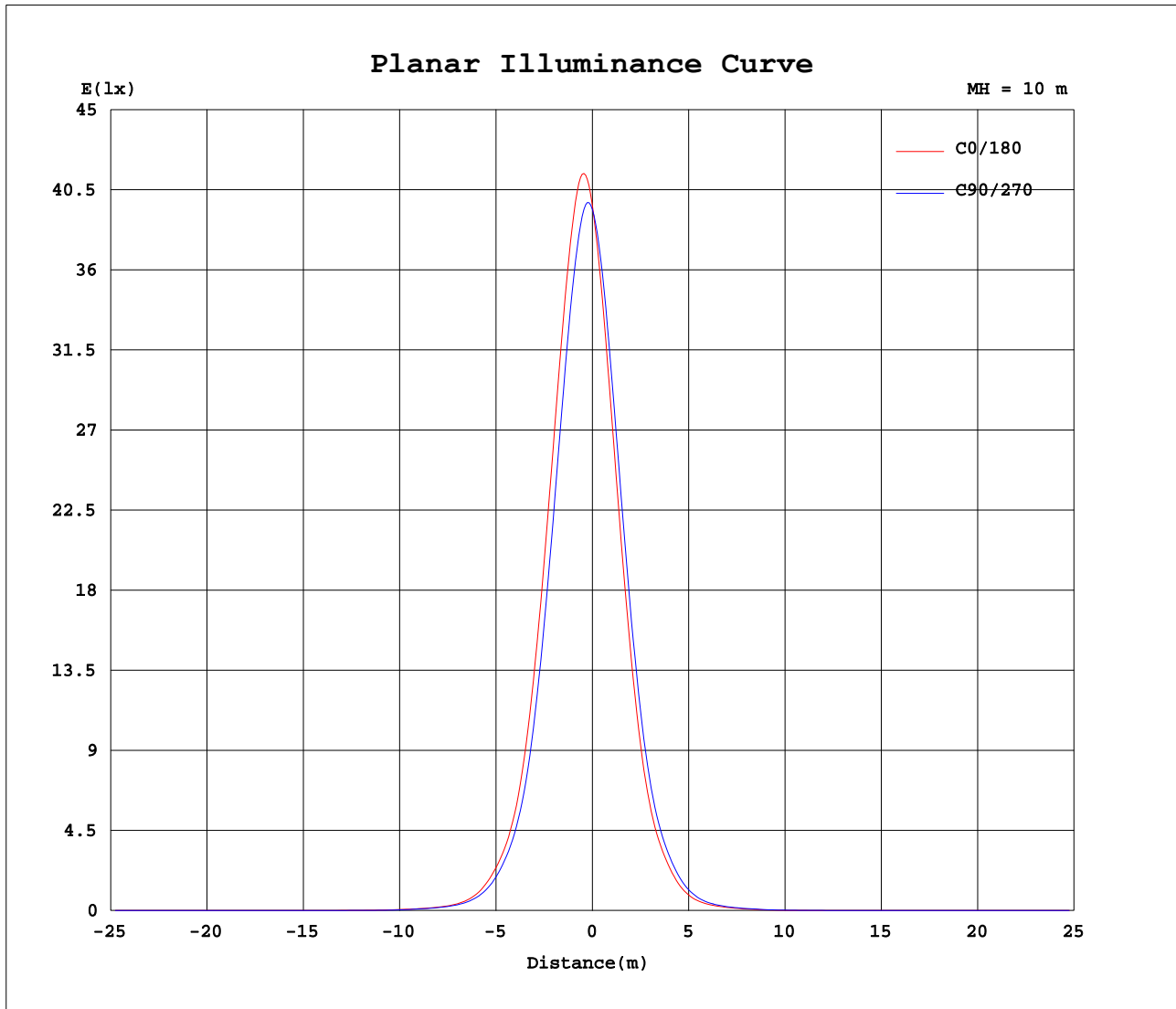
AvgL	cd/m2
L_0~180 (65) av	192
L_0~180 (75) av	90
L_0~180 (85) av	179
L_90~270 (65) av	181
L_90~270 (75) av	78
L_90~270 (85) av	164
L_45 (65) av	187
L_45 (75) av	86
L_45 (85) av	161

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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: 2020-05-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:

```