

Low Voltage Track System Module ML26-AL280-9W-930-20



Light Output Ratio:	100.0%	
Luminaire Power:	9.072 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: 2020-05-04

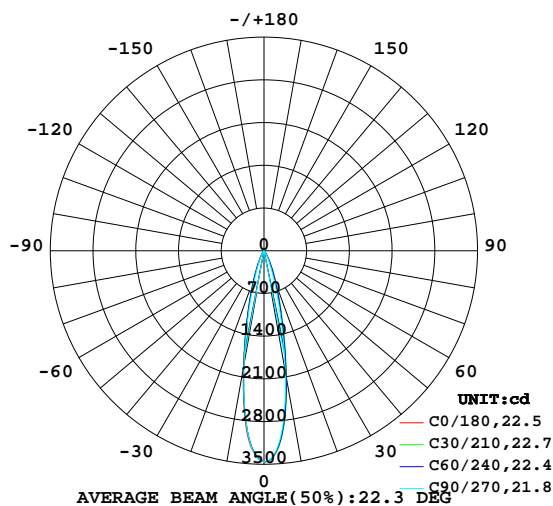
γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

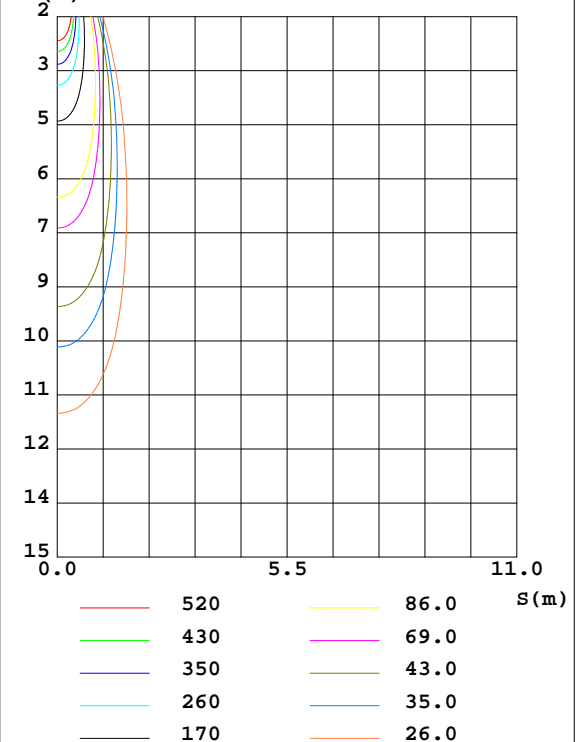
Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.13 lm/W			
MODEL	OSRAM-3000K	I <sub>max</sub> (cd)	3462	S/MH(C0/180)	0.37
NOMINAL POWER(W)	9	LOR(%)	100.0	S/MH(C90/270)	0.36
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	726.98	η UP,DN(C0-180)	0.0,51.6
NOMINAL FLUX(lm)	726.977	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.4
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  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

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:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2082	2166	2011	1982	1942	1883	1886	2005	0- 10	257.3	257.3	35.4, 35.4
20	560.2	640.0	434.5	546.8	447.9	500.8	378.8	569.5	10- 20	291.1	548.4	75.4, 75.4
30	126.3	173.4	94.09	142.2	99.05	113.9	82.34	148.6	20- 30	119.5	667.9	91.9, 91.9
40	34.13	40.46	20.53	35.20	31.09	30.00	19.04	35.07	30- 40	38.37	706.2	97.1, 97.1
50	13.01	15.64	8.320	13.59	12.96	13.15	7.440	14.42	40- 50	14.39	720.6	99.1, 99.1
60	0.1571	1.478	0.1465	0.6457	0.1282	0.5573	0.1136	1.189	50- 60	6.150	726.8	100, 100
70	0.0590	0.0437	0.0766	0.0459	0.0416	0.0634	0.0480	0.0590	60- 70	0.1136	726.9	100, 100
80	0.0393	0.0328	0.0502	0.0372	0.0350	0.0481	0.0283	0.0372	70- 80	0.0475	726.9	100, 100
90	0.0306	0.0328	0.0328	0.0372	0.0350	0.0328	0.0197	0.0262	80- 90	0.0376	727.0	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): 714.78 lm

%lum = 98.3%

%lamp = 98.3%

Conical surface Flux(120deg): 726.78 lm

%lum = 100.0%

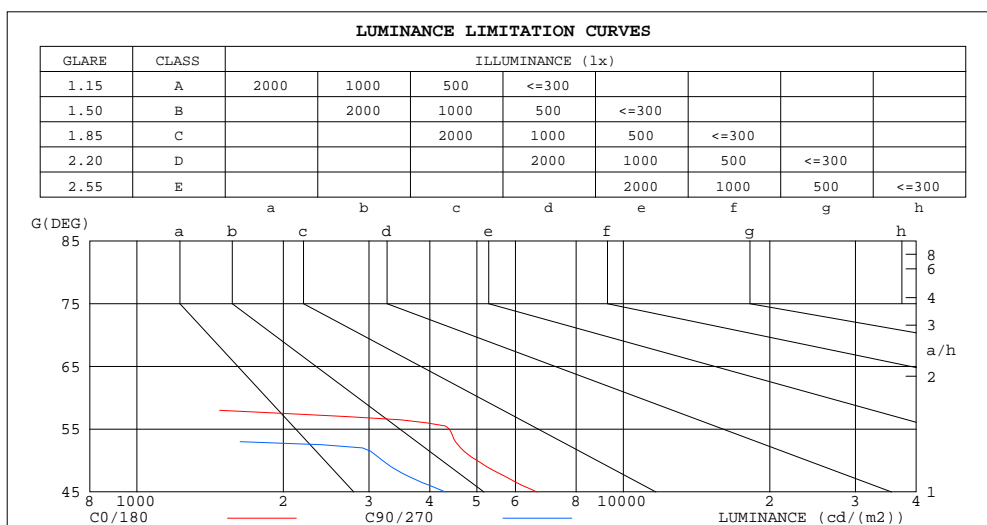
%lamp = 100.0%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2020-05-04

$\gamma$  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:

**LUMINANCE LIMITATION CURVES**

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	99	112
80	56	71
75	46	58
70	43	55
65	42	63
60	78	72
55	4389	145
50	5002	3197
45	6642	4306

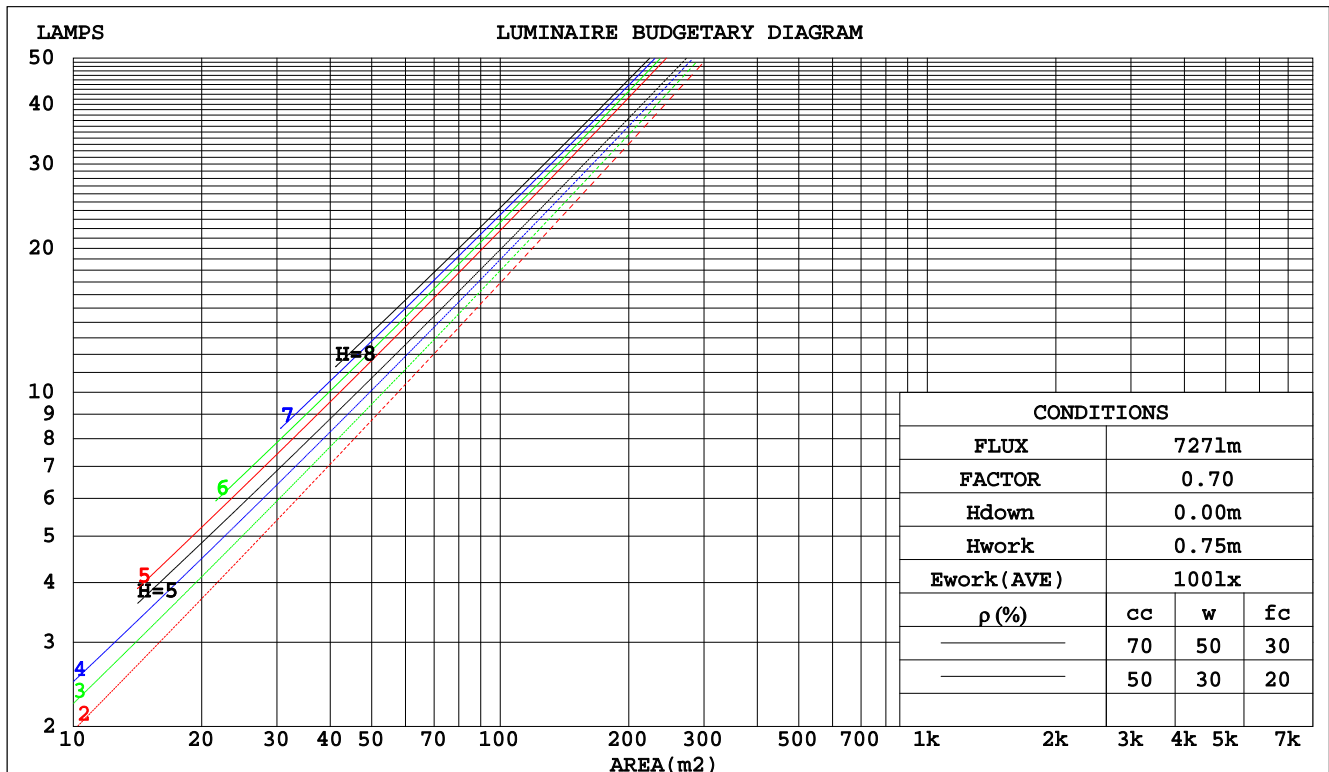
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

$\gamma$  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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
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	1.00
1.0	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96
2.0	1.07	1.04	1.02	1.06	1.03	1.00	1.02	1.00	.98	.00	.98	.96	.97	.96	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.94	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.91	.88	.92	.89	.88	.86
5.0	.94	.90	.87	.94	.90	.87	.92	.89	.86	.90	.88	.85	.89	.87	.85	.83
6.0	.91	.87	.84	.90	.86	.83	.89	.85	.83	.88	.85	.82	.87	.84	.82	.81
7.0	.88	.84	.81	.87	.83	.80	.86	.83	.80	.85	.82	.80	.84	.81	.79	.78
8.0	.85	.81	.78	.85	.81	.78	.84	.80	.77	.83	.80	.77	.82	.79	.77	.76
9.0	.82	.78	.75	.82	.78	.75	.81	.78	.75	.80	.77	.75	.80	.77	.75	.74
10.0	.80	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.73	.78	.75	.73	.72



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

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:

## WEC AND CCEC

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
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	.140	.080	.025	.133	.076	.024	.121	.069	.022	.110	.063	.020	.099	.057	.019		
2.0	.130	.072	.022	.125	.069	.021	.115	.064	.020	.105	.059	.018	.097	.055	.017		
3.0	.122	.065	.019	.118	.063	.019	.109	.059	.018	.101	.055	.017	.094	.052	.016		
4.0	.115	.060	.018	.111	.058	.017	.104	.055	.016	.097	.052	.016	.091	.049	.015		
5.0	.108	.055	.016	.105	.054	.016	.099	.051	.015	.093	.049	.015	.088	.047	.014		
6.0	.102	.051	.015	.100	.050	.014	.094	.048	.014	.089	.046	.014	.085	.045	.013		
7.0	.097	.048	.014	.095	.047	.013	.090	.046	.013	.086	.044	.013	.082	.043	.012		
8.0	.093	.045	.013	.091	.045	.013	.087	.043	.012	.083	.042	.012	.079	.041	.012		
9.0	.089	.043	.012	.087	.042	.012	.083	.041	.012	.080	.040	.011	.077	.039	.011		
10.0	.085	.041	.011	.083	.040	.011	.080	.039	.011	.077	.038	.011	.074	.037	.011		

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	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.105	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.097	.068	.047	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.041	.078	.053	.035	.054	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.085	.055	.035	.073	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.080	.051	.031	.069	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

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:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm										
NAME: ML26-AL280-9W-930-20					TYPE:Low Voltage Track System Module					
SPEC.:3000K					DIM.: L284mm*W22mm*H43mm					
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	13.6	13.2	13.8	13.9	10.4	11.1	10.6	11.2	11.4
3H	12.8	13.4	13.0	13.6	13.8	10.2	10.9	10.5	11.0	11.2
4H	12.7	13.3	13.0	13.5	13.7	10.1	10.7	10.4	11.0	11.2
6H	12.6	13.2	12.9	13.4	13.7	10.1	10.6	10.3	10.9	11.1
8H	12.6	13.1	12.9	13.4	13.6	10.0	10.6	10.3	10.8	11.1
12H	12.5	13.1	12.9	13.3	13.6	10.0	10.5	10.3	10.8	11.0
4H 2H	12.8	13.4	13.0	13.6	13.8	10.4	11.0	10.6	11.2	11.4
3H	12.6	13.1	12.9	13.4	13.7	10.2	10.7	10.5	11.0	11.3
4H	12.5	13.0	12.9	13.3	13.6	10.1	10.6	10.5	10.9	11.2
6H	12.4	12.8	12.8	13.2	13.5	10.0	10.4	10.4	10.8	11.1
8H	12.4	12.8	12.7	13.1	13.5	10.0	10.4	10.3	10.7	11.1
12H	12.3	12.7	12.7	13.0	13.4	9.9	10.3	10.3	10.6	11.0
8H 4H	12.4	12.8	12.7	13.1	13.5	10.0	10.4	10.3	10.7	11.1
6H	12.2	12.6	12.7	13.0	13.4	9.9	10.2	10.3	10.6	11.0
8H	12.2	12.5	12.6	12.9	13.3	9.8	10.1	10.2	10.5	10.9
12H	12.1	12.4	12.6	12.8	13.3	9.7	10.0	10.2	10.4	10.9
12H 4H	12.3	12.7	12.7	13.0	13.4	9.9	10.3	10.3	10.6	11.0
6H	12.2	12.5	12.6	12.9	13.3	9.8	10.1	10.2	10.5	10.9
8H	12.1	12.4	12.6	12.8	13.3	9.7	10.0	10.2	10.4	10.9
Variations with the observer position at spacings:										
S = 1.0H	+ 2.1 / - 5.3					+ 2.6 / -21.6				
1.5H	+ 2.8 / - 3.1					+ 2.4 / - 3.6				
2.0H	+ 2.9 / -25.8					+ 4.5 / -21.0				

CIE Pub.117, 727.0 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -1.1$ )

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

$\gamma$  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:

### UTILIZATION FACTORS TABLE

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		

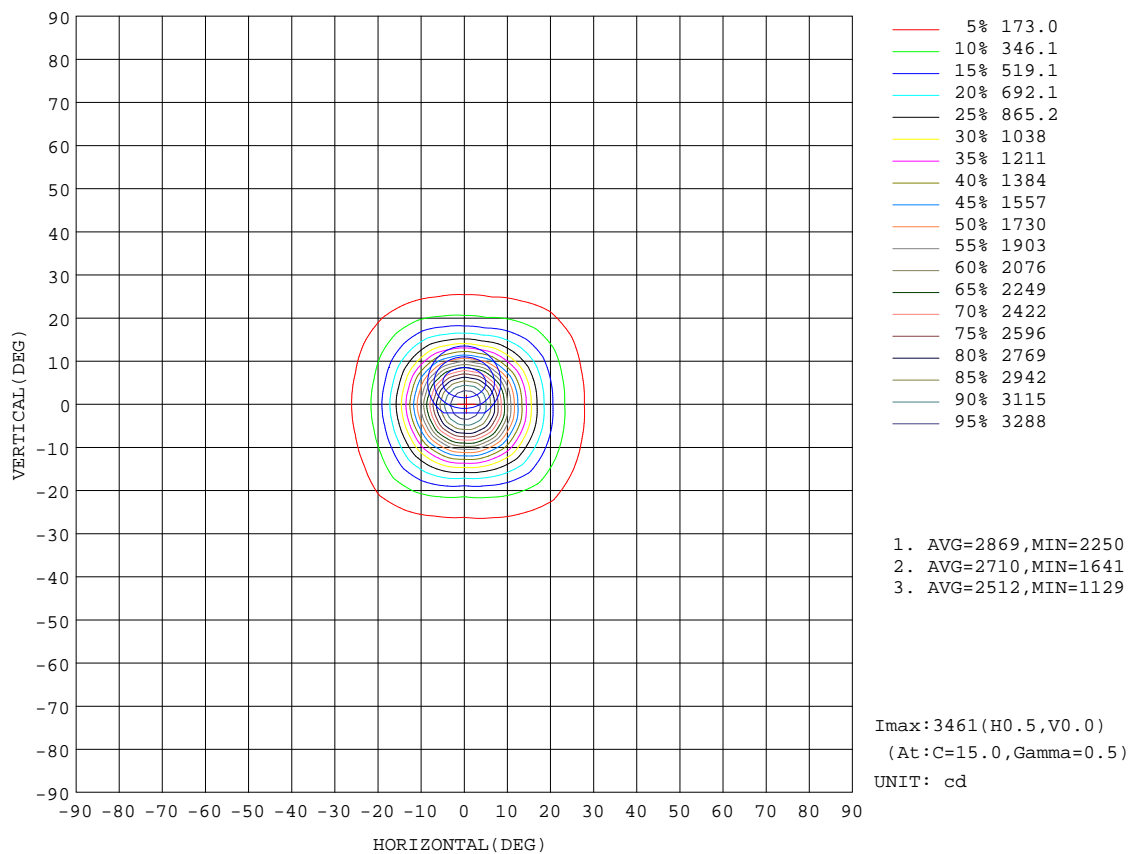
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	80	89	84	80	88	83	80	77
0.80	97	91	88	96	91	88	95	91	88	84
1.00	101	96	92	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	95	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jason  
 Test Date:2020-05-04

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:

ISOCANDELA DIAGRAM

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		



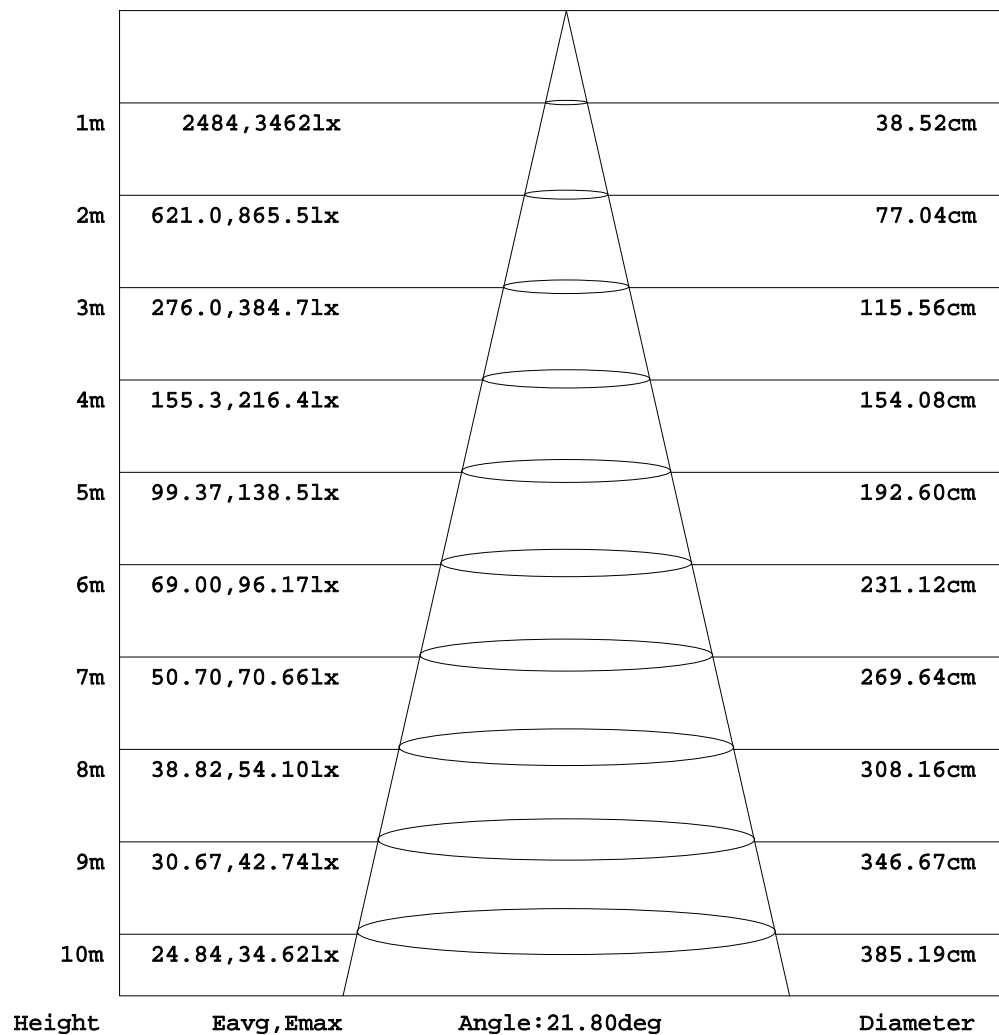
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jason  
 Test Date:2020-05-04

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:

AAI Figure

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		

Flux out:294.9 lm



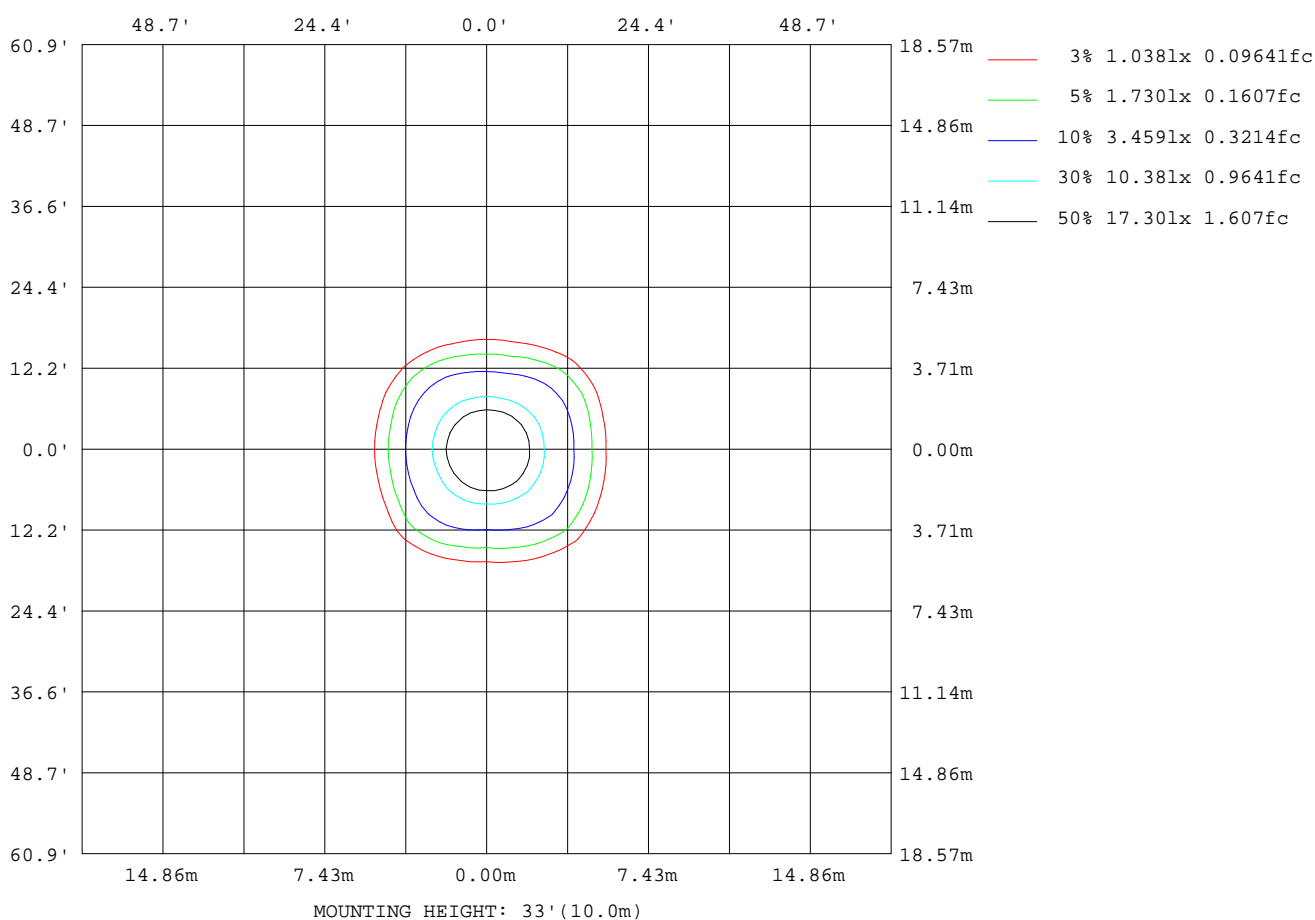
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

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:

ISOLUX DIAGRAM

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

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:

### LED Avg.L Report

Test:U:48.00V I:0.1890A P:9.072W PF:1.000 Freq:0Hz Lamp Flux:726.977x1 lm		
NAME: ML26-AL280-9W-930-20	TYPE:Low Voltage Track System Module	
SPEC.:3000K	DIM.: L284mm*W22mm*H43mm	
MFR.: NEKO LIGHTING AG		

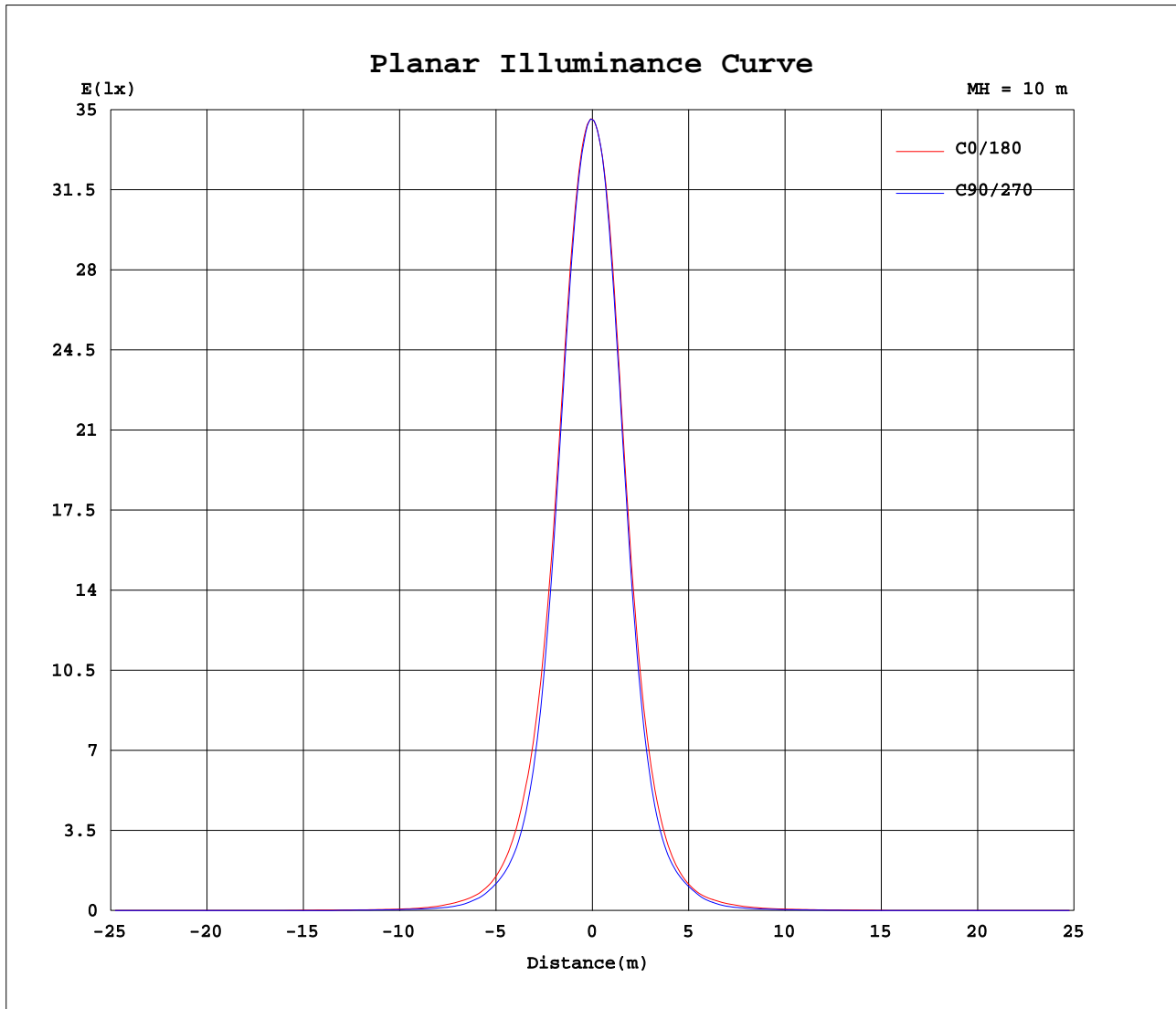
AvgL	cd/m2
L_0~180(65)av	38
L_0~180(75)av	40
L_0~180(85)av	99
L_90~270(65)av	53
L_90~270(75)av	44
L_90~270(85)av	84
L_45(65)av	42
L_45(75)av	41
L_45(85)av	102

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-05-04

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: 2020-05-04

$\gamma$  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:

```