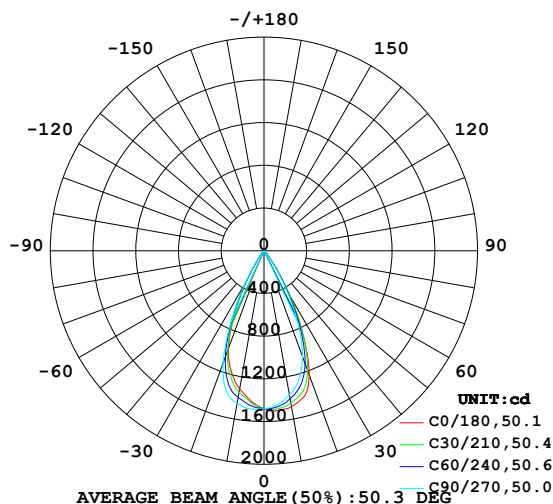


LUMINAIRE PHOTOMETRIC TEST REPORT

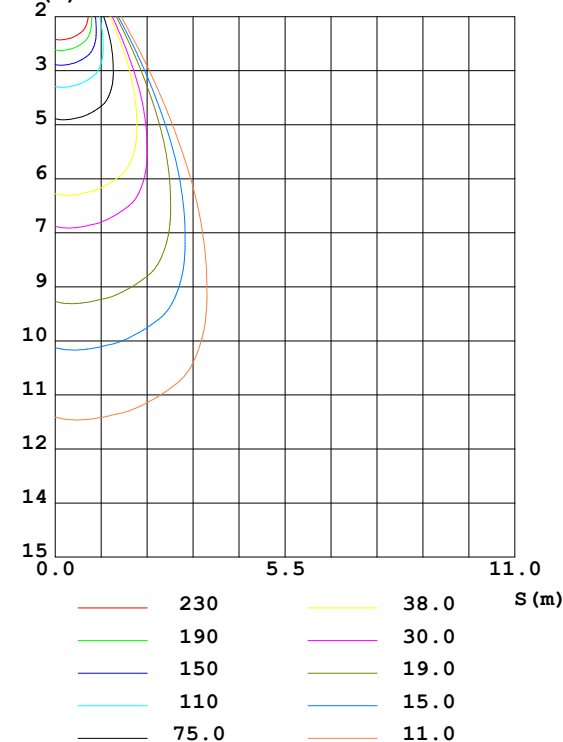
Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: \varnothing 57mm*H92mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 66.71 lm/W
MODEL	CITIZEN-3000K	I _{max} (cd)	1520	S/MH (C0/180)	0.72	
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.74	
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	974.15	η UP,DN (C0-180)	0.0,50.7	
NOMINAL FLUX (lm)	974.149	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.3	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	0.75	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1483	1428	1372	1315	1314	1371	1449	1508	0- 10	137.7	137.7	14.1,14.1
20	1236	1160	1053	965.1	973.7	1025	1119	1237	10- 20	359.8	497.5	51.1,51.1
30	469.6	468.9	421.2	342.8	326.0	323.7	351.0	438.7	20- 30	338.7	836.2	85.8,85.8
40	69.47	69.57	63.01	49.52	47.83	48.80	55.22	64.39	30- 40	104.9	941.0	96.6,96.6
50	19.91	18.97	16.49	13.11	12.99	13.16	14.61	18.18	40- 50	25.18	966.2	99.2,99.2
60	3.229	2.979	2.602	1.959	1.683	1.950	2.330	3.240	50- 60	7.052	973.3	99.9,99.9
70	0.0542	0.0408	0.0327	0.0465	0.0379	0.0435	0.0491	0.0438	60- 70	0.7909	974.1	100,100
80	0.0433	0.0326	0.0327	0.0384	0.0379	0.0380	0.0436	0.0383	70- 80	0.0429	974.1	100,100
90	0.0379	0.0299	0.0327	0.0383	0.0379	0.0380	0.0382	0.0383	80- 90	0.0404	974.1	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): 956.99 lm

%lum = 98.2%

%lamp = 98.2%

Conical surface Flux(120deg): 973.28 lm

%lum = 99.9%

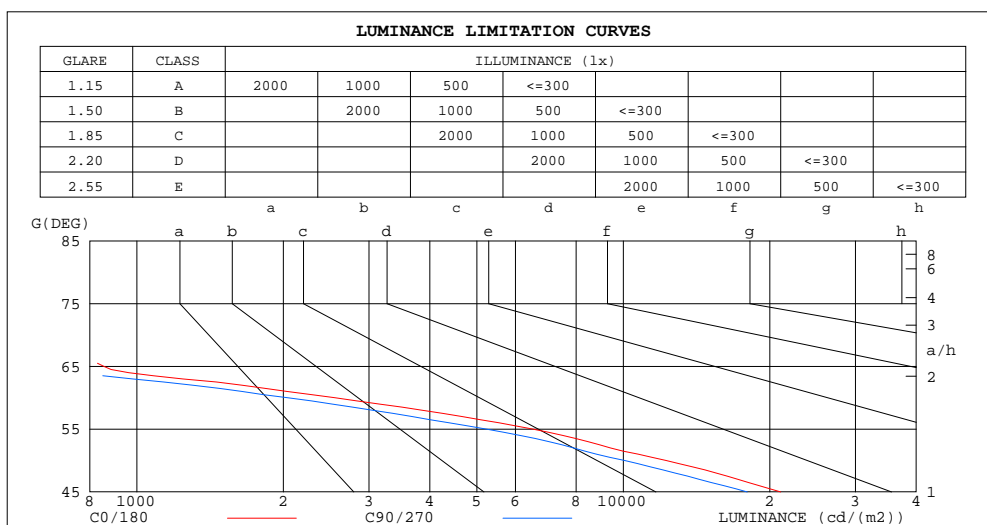
%lamp = 99.9%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 57\text{mm} \times H92\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	172	147
80	98	74
75	74	50
70	63	37
65	855	705
60	2548	2037
55	6508	5221
50	12221	10044
45	21062	17984

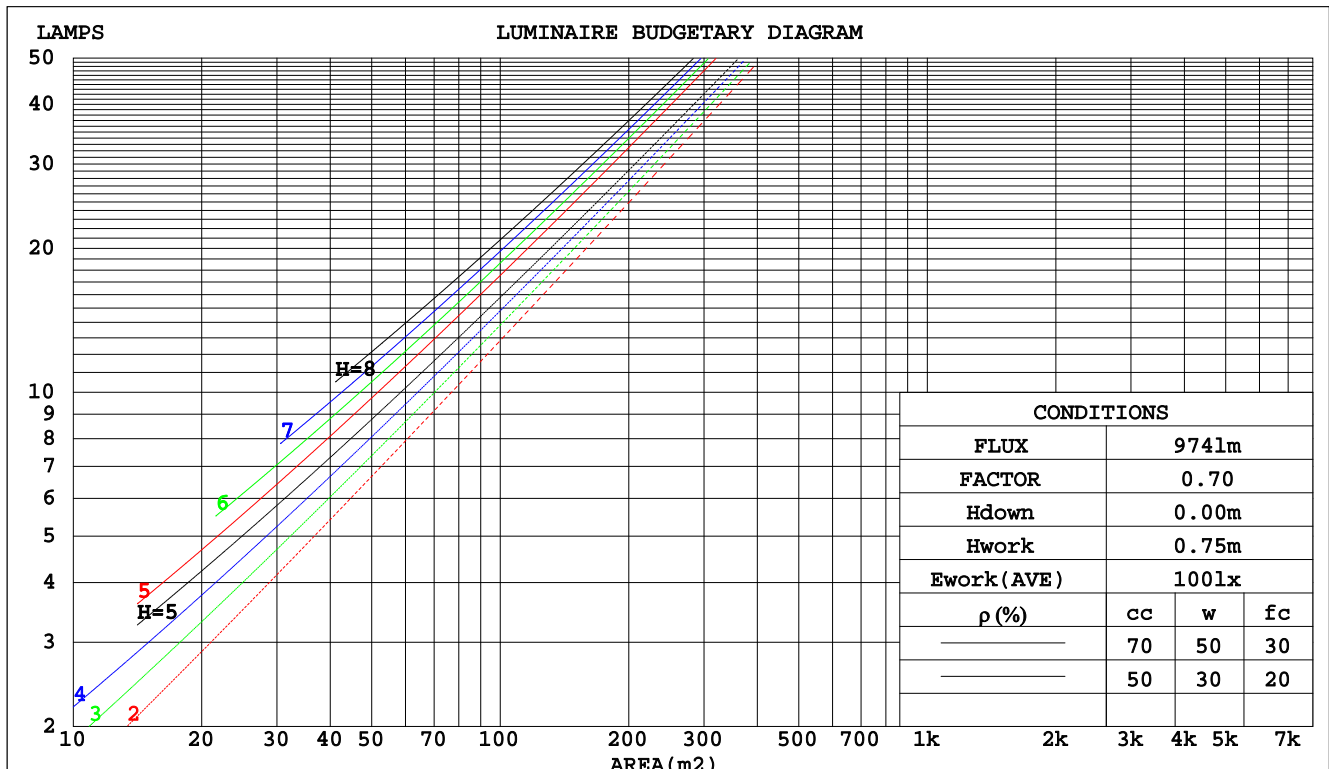
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 57mm*H92mm	
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	1.12	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.90	.97	.90	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.94	.91	.97	.93	.90	.95	.91	.88	.92	.90	.87	.90	.88	.86	.84
4.0	.93	.88	.84	.92	.87	.84	.90	.86	.83	.88	.85	.82	.86	.83	.81	.80
5.0	.88	.83	.79	.87	.82	.79	.85	.81	.78	.84	.80	.77	.82	.79	.77	.75
6.0	.84	.78	.74	.83	.78	.74	.81	.77	.74	.80	.76	.73	.79	.75	.73	.71
7.0	.79	.74	.70	.79	.74	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
8.0	.75	.70	.66	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.64
9.0	.72	.67	.63	.71	.66	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.61
10.0	.69	.63	.60	.68	.63	.60	.67	.63	.60	.67	.62	.60	.66	.62	.59	.58



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: \varnothing 57mm*H92mm	
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	.163	.093	.029	.156	.089	.028	.144	.082	.026	.132	.076	.024	.121	.070	.023		
2.0	.154	.085	.026	.149	.082	.025	.138	.077	.024	.129	.072	.023	.120	.068	.021		
3.0	.146	.078	.023	.142	.076	.023	.133	.072	.022	.125	.068	.021	.117	.065	.020		
4.0	.139	.072	.021	.135	.071	.021	.128	.068	.020	.120	.065	.020	.114	.062	.019		
5.0	.133	.068	.020	.129	.066	.019	.123	.064	.019	.116	.061	.018	.111	.059	.018		
6.0	.127	.063	.018	.124	.062	.018	.118	.060	.018	.112	.058	.017	.107	.057	.017		
7.0	.121	.060	.017	.118	.059	.017	.113	.057	.017	.109	.056	.016	.104	.054	.016		
8.0	.116	.057	.016	.114	.056	.016	.109	.055	.016	.105	.053	.015	.101	.052	.015		
9.0	.111	.054	.015	.109	.053	.015	.105	.052	.015	.101	.051	.015	.098	.050	.014		
10.0	.107	.051	.014	.105	.051	.014	.102	.050	.014	.098	.049	.014	.095	.048	.014		

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	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.121	.087	.062	.104	.075	.054	.071	.052	.038	.041	.031	.022	.013	.010	.007	
6.0	.113	.077	.052	.097	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.106	.069	.044	.091	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.100	.063	.038	.086	.055	.033	.060	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.033	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.053	.029	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm										
NAME: MINUX 57-13W-930-50D					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: \varnothing 57mm*H92mm					
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	18.2	19.1	18.4	19.2	19.4	17.7	18.6	17.9	18.7	18.9
3H	18.1	18.8	18.3	19.0	19.2	17.5	18.3	17.8	18.5	18.7
4H	18.0	18.7	18.2	18.9	19.1	17.5	18.2	17.7	18.4	18.6
6H	17.9	18.6	18.2	18.8	19.1	17.4	18.1	17.7	18.3	18.5
8H	17.8	18.5	18.1	18.8	19.0	17.3	18.0	17.6	18.2	18.5
12H	17.8	18.4	18.1	18.7	19.0	17.3	17.9	17.6	18.2	18.5
4H 2H	18.0	18.7	18.3	18.9	19.2	17.5	18.2	17.7	18.4	18.6
3H	17.8	18.4	18.1	18.7	19.0	17.3	17.9	17.6	18.2	18.5
4H	17.7	18.3	18.1	18.6	18.9	17.2	17.8	17.5	18.1	18.4
6H	17.6	18.1	18.0	18.5	18.8	17.1	17.6	17.5	17.9	18.3
8H	17.6	18.0	18.0	18.4	18.7	17.1	17.5	17.4	17.9	18.2
12H	17.5	17.9	17.9	18.3	18.7	17.0	17.4	17.4	17.8	18.2
8H 4H	17.6	18.0	18.0	18.4	18.7	17.1	17.5	17.4	17.9	18.2
6H	17.5	17.8	17.9	18.2	18.6	16.9	17.3	17.4	17.7	18.1
8H	17.4	17.7	17.8	18.2	18.6	16.9	17.2	17.3	17.7	18.1
12H	17.3	17.6	17.8	18.1	18.5	16.8	17.1	17.3	17.6	18.0
12H 4H	17.5	17.9	17.9	18.3	18.7	17.0	17.4	17.4	17.8	18.2
6H	17.4	17.7	17.8	18.2	18.6	16.9	17.2	17.3	17.7	18.1
8H	17.3	17.6	17.8	18.1	18.5	16.8	17.1	17.3	17.6	18.0
Variations with the observer position at spacings:										
S = 1.0H	+ 3.4 / - 9.9					+ 3.4 / -11.0				
1.5H	+ 5.0 / - 6.7					+ 5.1 / - 6.9				
2.0H	+ 5.5 / -13.2					+ 5.3 / -12.7				

CIE Pub.117, 974.1 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.1$)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 57\text{mm} \times H92\text{mm}$	
MFR.: NEKO LIGHTING AG		

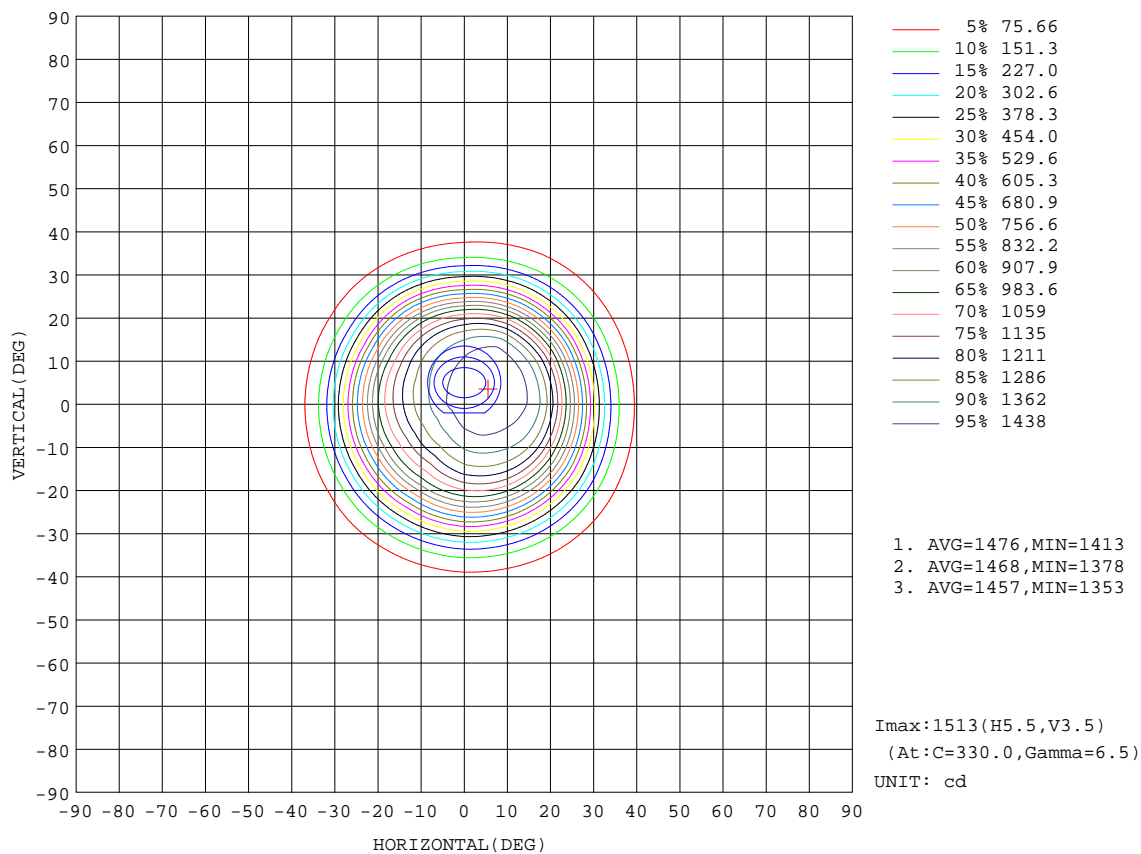
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	88
1.25	104	100	96	103	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	100	98	94
2.00	109	105	103	108	104	102	105	102	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	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:8.967m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 57mm*H92mm	
MFR.: NEKO LIGHTING AG		



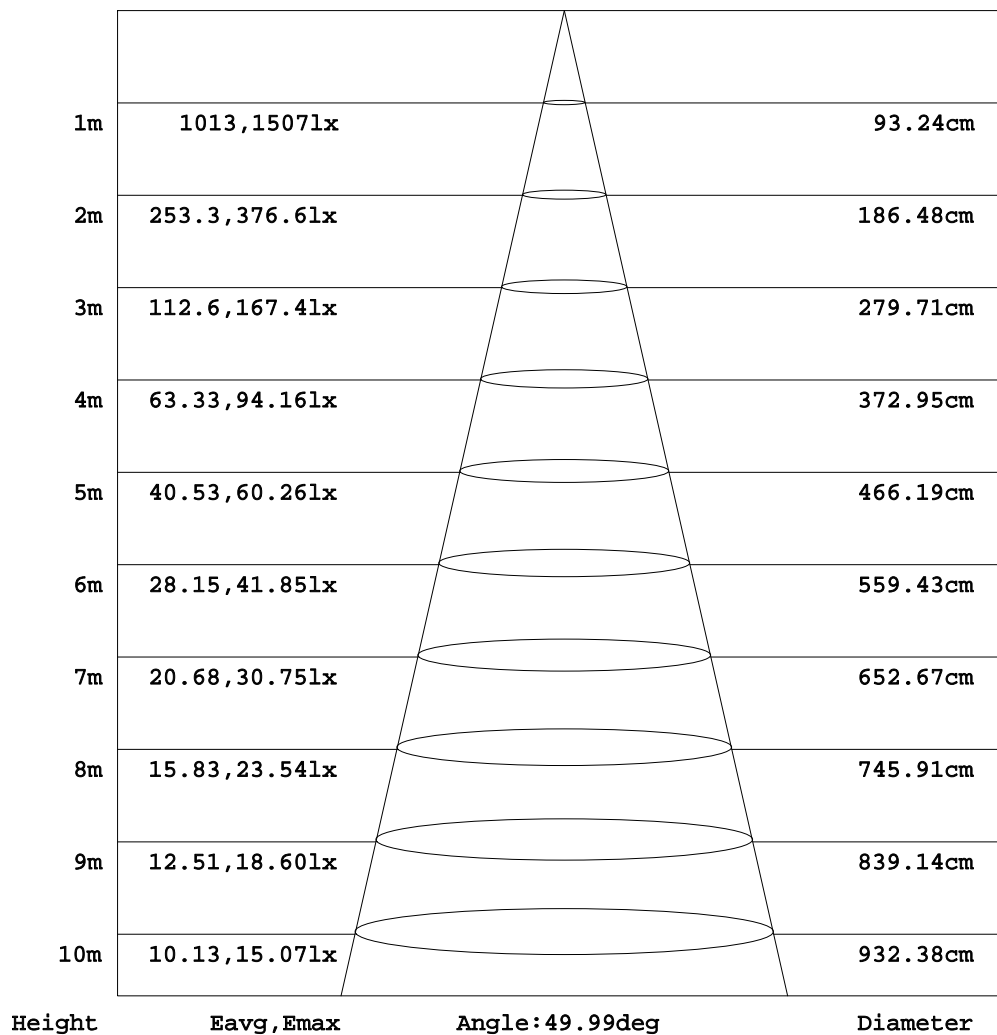
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

AAI Figure

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 57\text{mm} \times H92\text{mm}$	
MFR.: NEKO LIGHTING AG		

Flux out:692.2 lm



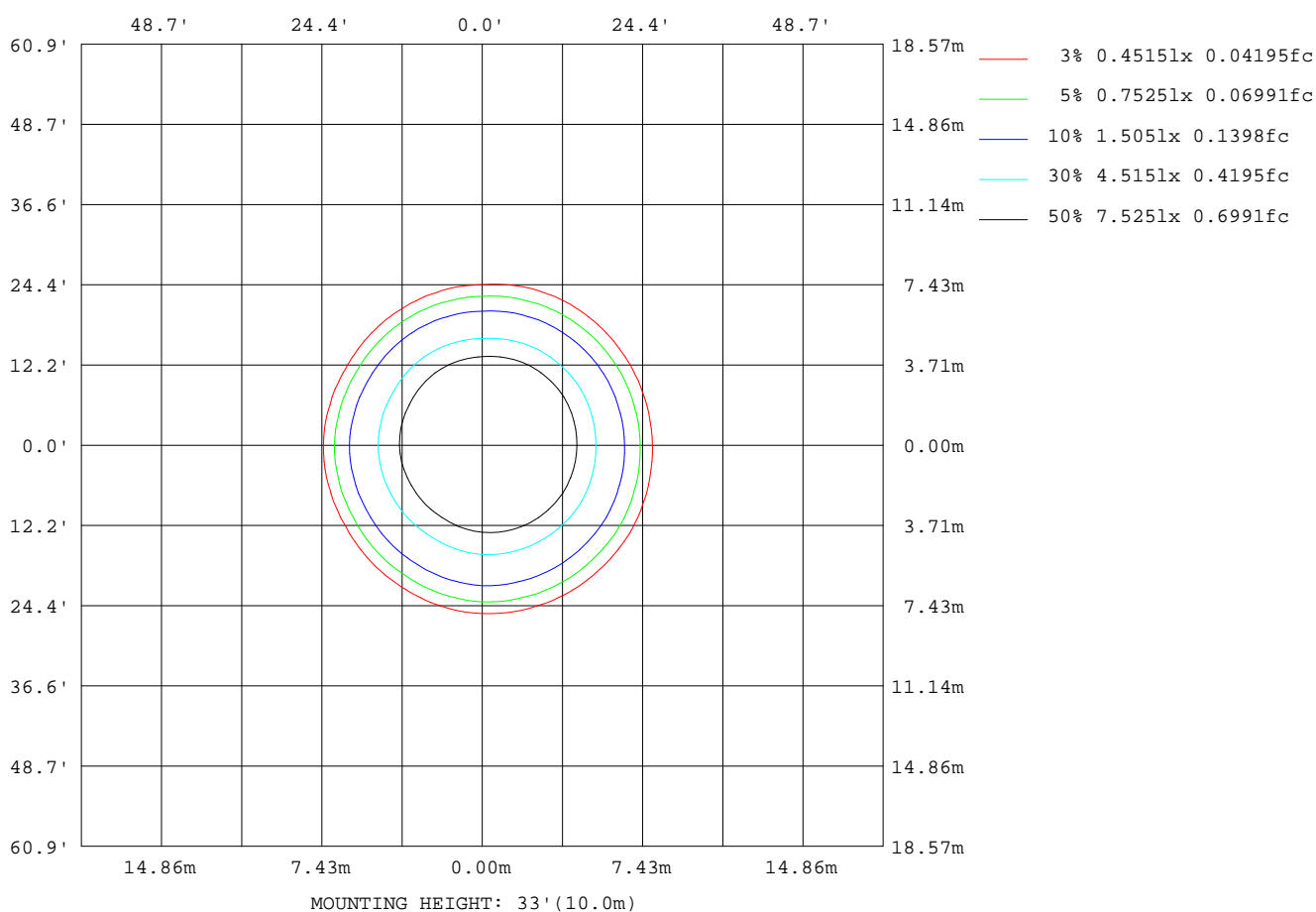
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 57\text{mm} \times H92\text{mm}$	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:222.1V I:0.0683A P:14.60W PF:0.9630 Freq:50.09Hz Lamp Flux:974.149x1 lm		
NAME: MINUX 57-13W-930-50D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 57mm*H92mm	
MFR.: NEKO LIGHTING AG		

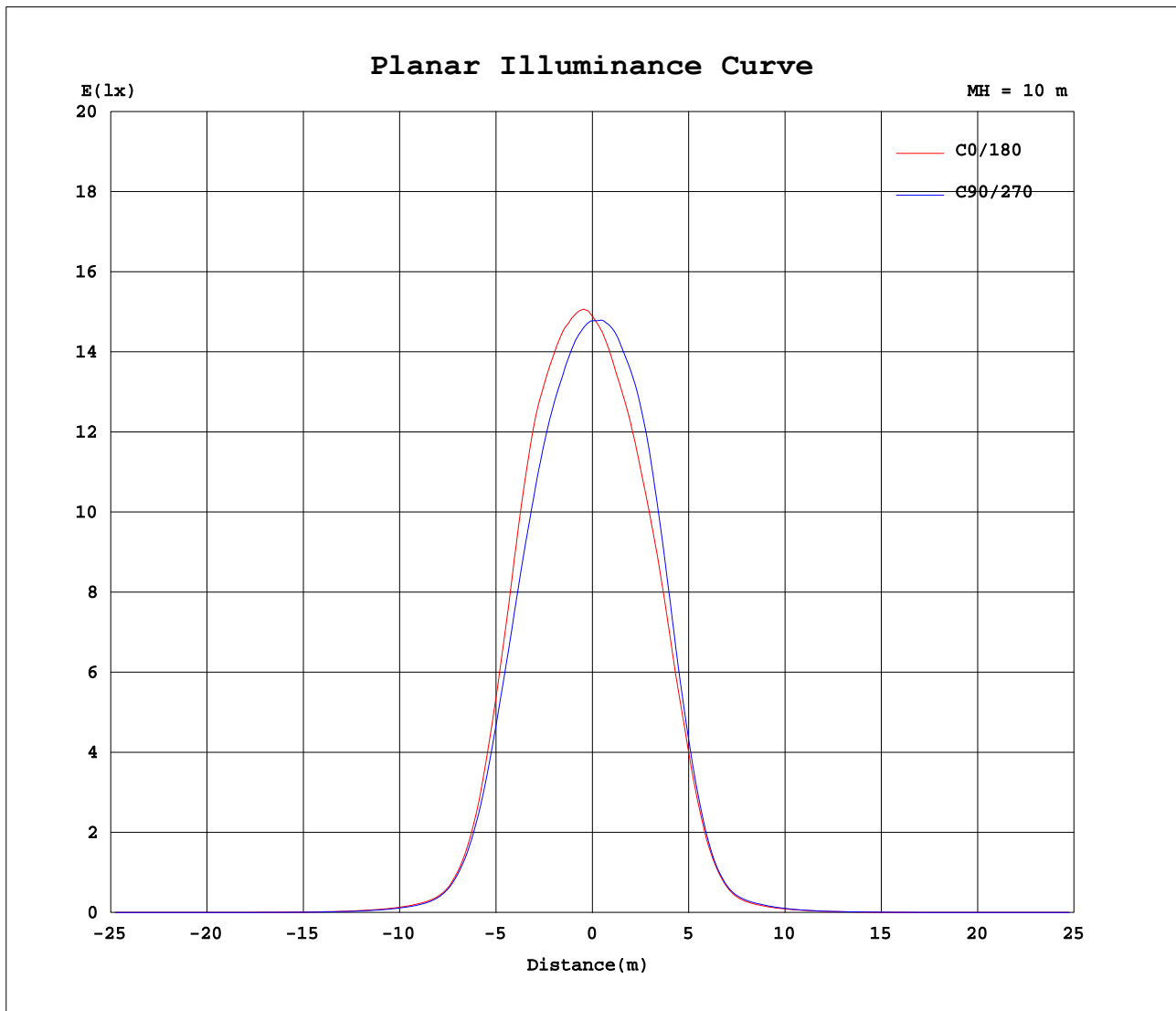
AvgL	cd/m2
L_0~180 (65) av	649
L_0~180 (75) av	66
L_0~180 (85) av	170
L_90~270 (65) av	695
L_90~270 (75) av	58
L_90~270 (85) av	160
L_45 (65) av	686
L_45 (75) av	61
L_45 (85) av	166

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 8.967m [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:8.967m [K=1.0000]
Remarks:

```