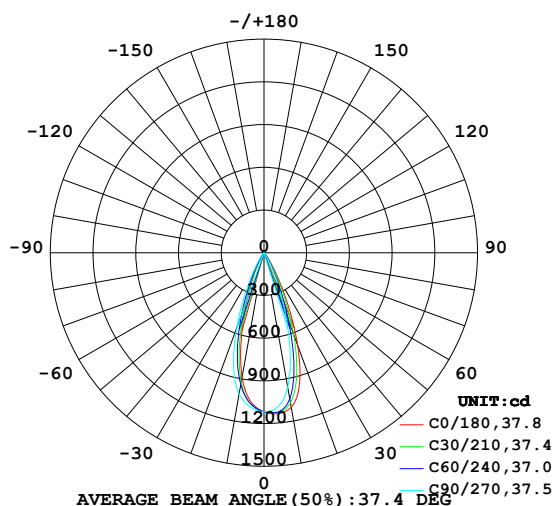


LUMINAIRE PHOTOMETRIC TEST REPORT

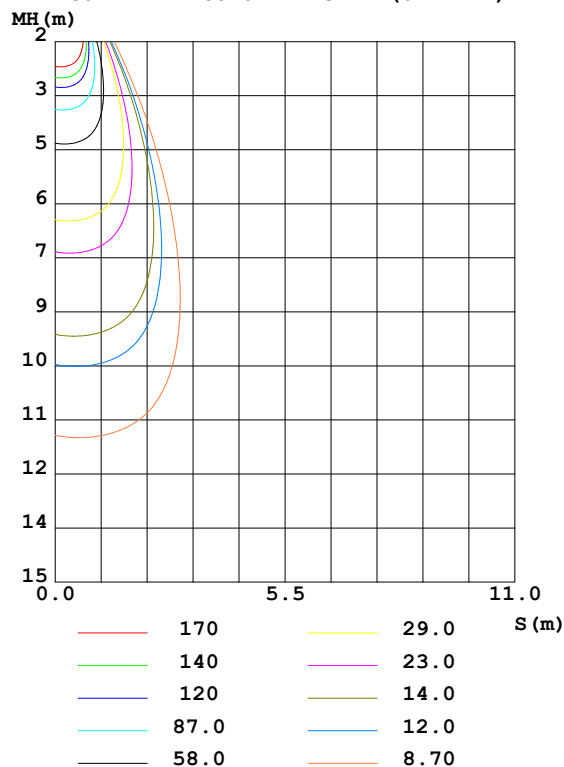
Test:U:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: \varnothing 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.98 lm/W			
MODEL	CITIZEN-3000K	I _{max} (cd)	1135	S/MH (C0/180)	0.52
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.62
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	470.02	η UP, DN (C0-180)	0.0, 48.9
NOMINAL FLUX (lm)	470.017	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	0.60

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: 2023-06-15

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	1101	1056	958.8	883.0	887.2	931.0	1006	1079	0- 10	101.0	101.0	21.5,21.5
20	691.9	553.0	417.3	342.0	345.5	422.3	560.5	678.1	10- 20	208.9	309.9	65.9,65.9
30	174.5	121.7	81.37	60.37	62.63	83.90	130.0	178.1	20- 30	122.4	432.4	92,92
40	25.84	19.74	13.57	9.386	9.947	14.18	19.80	26.21	30- 40	30.20	462.6	98.4,98.4
50	4.354	3.214	2.028	1.488	1.565	2.242	3.224	4.428	40- 50	6.094	468.6	99.7,99.7
60	0.7665	0.5206	0.3248	0.1831	0.2269	0.4420	0.6026	0.7734	50- 60	1.183	469.8	100,100
70	0.0372	0.0219	0.0166	0.0191	0.0160	0.0191	0.0386	0.0246	60- 70	0.1470	470.0	100,100
80	0.0213	0.0164	0.0166	0.0164	0.0160	0.0136	0.0166	0.0191	70- 80	0.0206	470.0	100,100
90	0.0160	0.0164	0.0166	0.0164	0.0160	0.0109	0.0166	0.0164	80- 90	0.0177	470.0	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): 466.79 lm

%lum = 99.3%

%lamp = 99.3%

Conical surface Flux(120deg): 469.83 lm

%lum = 100.0%

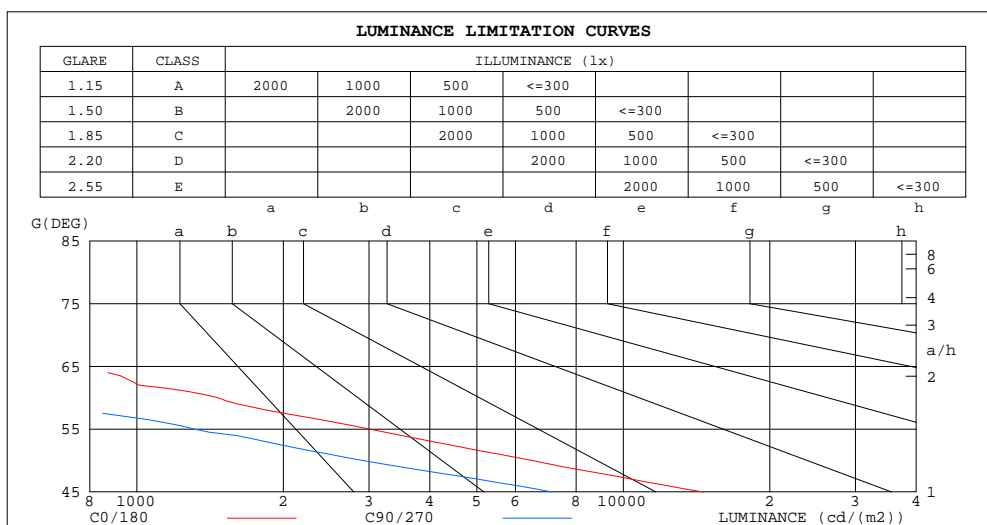
%lamp = 100.0%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	175	175
80	117	88
75	98	59
70	104	45
65	666	36
60	1468	599
55	3006	1312
50	6484	2909
45	14566	7131

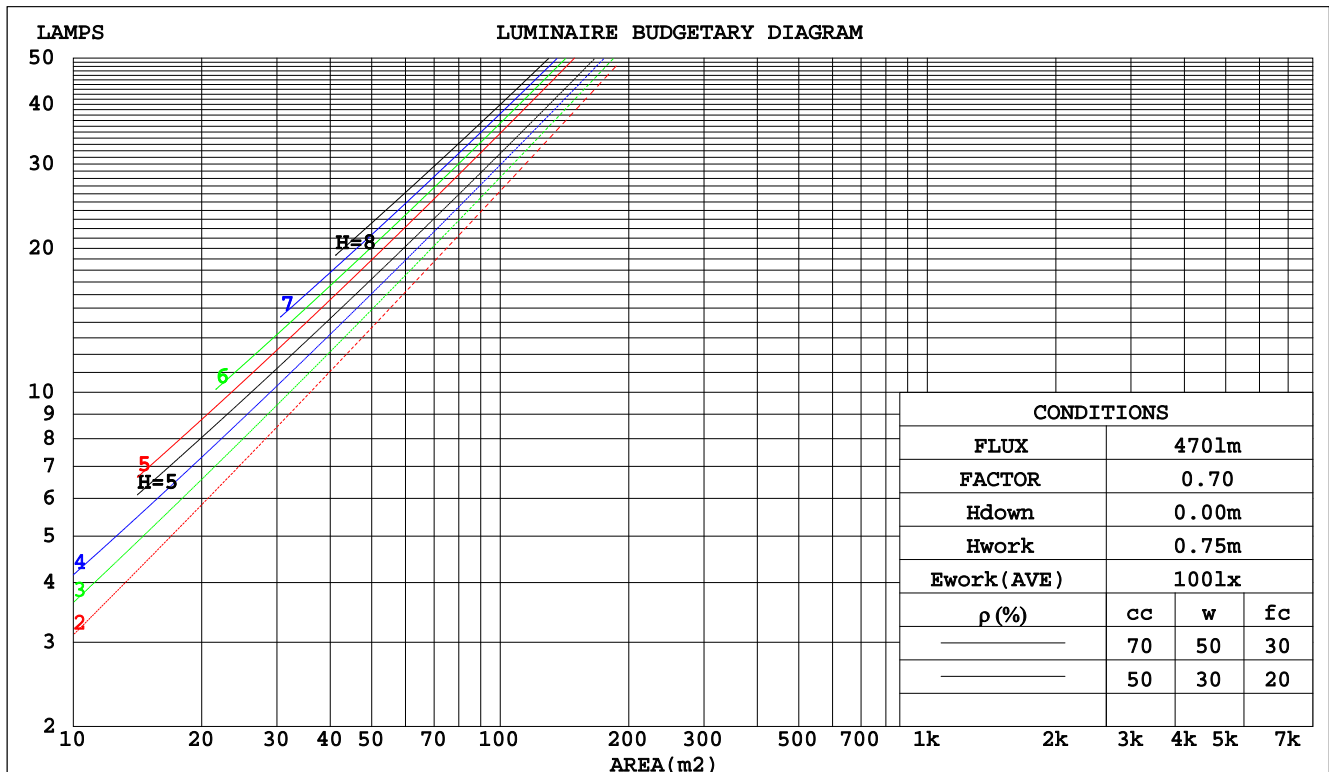
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 38\text{mm} \times \text{H}92\text{mm}$	
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						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	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	1.00	1.05	1.02	.99	1.01	.99	.97	.98	.96	.95	.96	.94	.93	.91
3.0	1.01	.97	.94	.99	.96	.93	.97	.94	.91	.95	.92	.90	.92	.90	.89	.87
4.0	.96	.92	.88	.95	.91	.88	.93	.89	.87	.91	.88	.86	.89	.87	.85	.83
5.0	.92	.87	.84	.91	.86	.83	.89	.85	.82	.88	.84	.82	.86	.83	.81	.80
6.0	.88	.83	.79	.87	.82	.79	.86	.82	.79	.84	.81	.78	.83	.80	.78	.77
7.0	.84	.79	.76	.83	.79	.76	.82	.78	.75	.81	.78	.75	.80	.77	.75	.73
8.0	.81	.76	.73	.80	.76	.72	.79	.75	.72	.78	.75	.72	.77	.74	.72	.71
9.0	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.75	.71	.69	.68
10.0	.75	.70	.67	.74	.70	.67	.74	.69	.67	.73	.69	.67	.72	.69	.66	.65



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: \varnothing 38mm*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	.150	.085	.027	.143	.082	.026	.131	.075	.024	.119	.069	.022	.109	.063	.020		
2.0	.141	.077	.024	.135	.074	.023	.125	.069	.022	.115	.065	.020	.107	.060	.019		
3.0	.132	.070	.021	.128	.068	.021	.119	.065	.020	.111	.061	.019	.104	.057	.018		
4.0	.125	.065	.019	.121	.063	.019	.114	.060	.018	.107	.057	.017	.101	.055	.017		
5.0	.119	.061	.018	.115	.059	.017	.109	.057	.017	.103	.054	.016	.098	.052	.016		
6.0	.113	.057	.016	.110	.056	.016	.105	.054	.016	.100	.052	.015	.095	.050	.015		
7.0	.108	.053	.015	.105	.053	.015	.101	.051	.015	.096	.049	.014	.092	.048	.014		
8.0	.103	.051	.014	.101	.050	.014	.097	.048	.014	.093	.047	.014	.089	.046	.013		
9.0	.099	.048	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013	.086	.044	.013		
10.0	.095	.046	.013	.094	.045	.013	.090	.044	.012	.087	.043	.012	.084	.042	.012		

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	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.130	.114	.101	.089	.079	.070	.051	.046	.041	.017	.015	.013	
3.0	.138	.113	.094	.118	.098	.081	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.126	.098	.077	.108	.085	.067	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.064	.100	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.068	.046	.087	.059	.040	.060	.042	.028	.035	.025	.017	.011	.008	.006	
8.0	.095	.062	.039	.082	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.090	.056	.034	.077	.049	.030	.054	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.085	.052	.030	.073	.045	.026	.051	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm										
NAME: MINUX 38-6W-930-38D					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: ϕ 38mm*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	18.9	18.4	19.1	19.2	14.5	15.3	14.8	15.5	15.6
3H	18.0	18.7	18.3	18.9	19.1	14.4	15.1	14.6	15.3	15.5
4H	17.9	18.6	18.2	18.8	19.0	14.3	15.0	14.6	15.2	15.4
6H	17.9	18.5	18.1	18.7	18.9	14.2	14.8	14.5	15.1	15.3
8H	17.8	18.4	18.1	18.7	18.9	14.2	14.8	14.5	15.0	15.3
12H	17.8	18.3	18.1	18.6	18.9	14.1	14.7	14.4	15.0	15.2
4H 2H	17.9	18.6	18.2	18.8	19.0	14.3	15.0	14.6	15.2	15.4
3H	17.8	18.3	18.1	18.6	18.9	14.1	14.7	14.5	15.0	15.2
4H	17.7	18.2	18.0	18.5	18.8	14.0	14.6	14.4	14.9	15.2
6H	17.6	18.0	17.9	18.4	18.7	13.9	14.4	14.3	14.7	15.1
8H	17.5	17.9	17.9	18.3	18.7	13.9	14.3	14.3	14.7	15.0
12H	17.5	17.9	17.9	18.2	18.6	13.8	14.2	14.2	14.6	15.0
8H 4H	17.5	17.9	17.9	18.3	18.7	13.9	14.3	14.3	14.7	15.0
6H	17.4	17.8	17.8	18.2	18.6	13.8	14.1	14.2	14.5	14.9
8H	17.3	17.7	17.8	18.1	18.5	13.7	14.0	14.2	14.5	14.9
12H	17.3	17.6	17.8	18.0	18.5	13.7	13.9	14.1	14.4	14.8
12H 4H	17.5	17.9	17.9	18.2	18.6	13.8	14.2	14.2	14.6	15.0
6H	17.3	17.7	17.8	18.1	18.5	13.7	14.0	14.2	14.5	14.9
8H	17.3	17.6	17.8	18.0	18.5	13.7	13.9	14.1	14.4	14.8
Variations with the observer position at spacings:										
S = 1.0H	+ 4.1 / -14.2					+ 2.8 / -14.5				
1.5H	+ 6.4 / -11.7					+ 5.0 / - 9.8				
2.0H	+ 7.2 / -12.2					+ 6.0 / -15.7				

CIE Pub.117, 470.0 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -2.6$)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: \varnothing 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

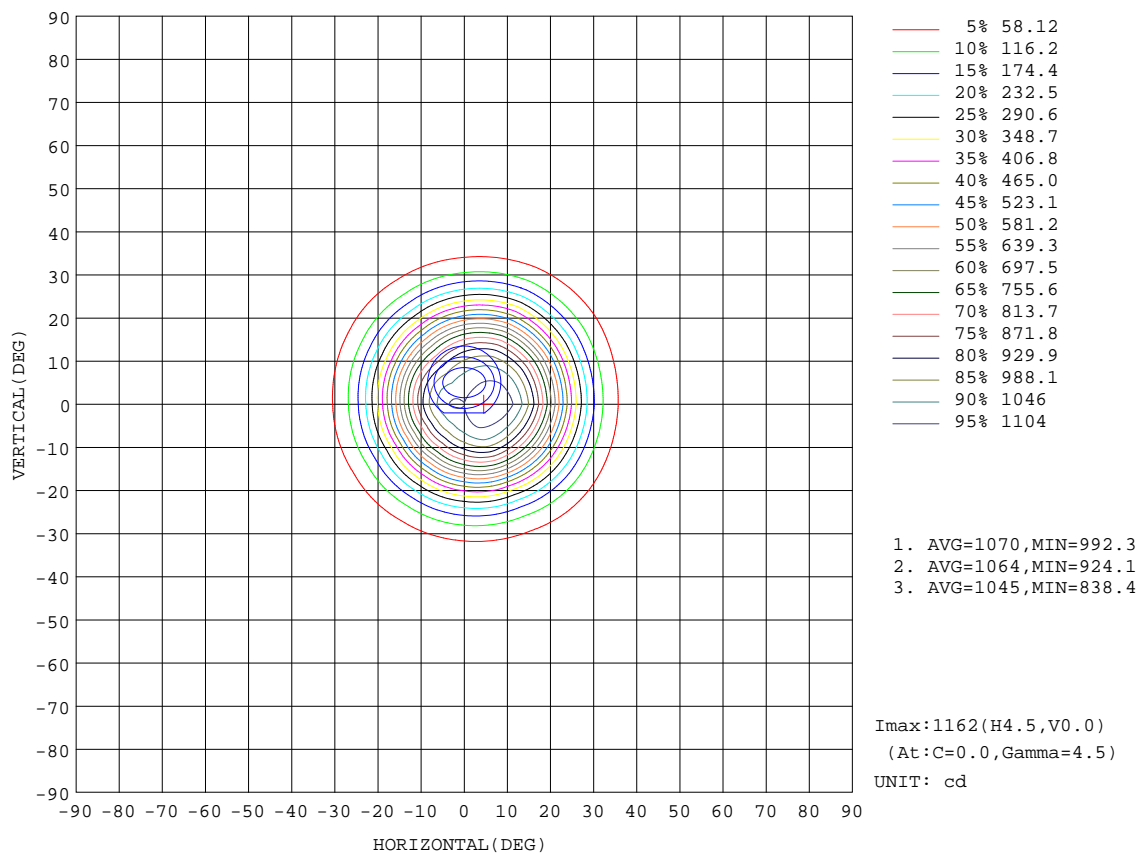
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	81	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	91	88	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	103	100	104	101	99	94
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	109	107	111	108	106	108	105	104	98
4.00	114	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		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

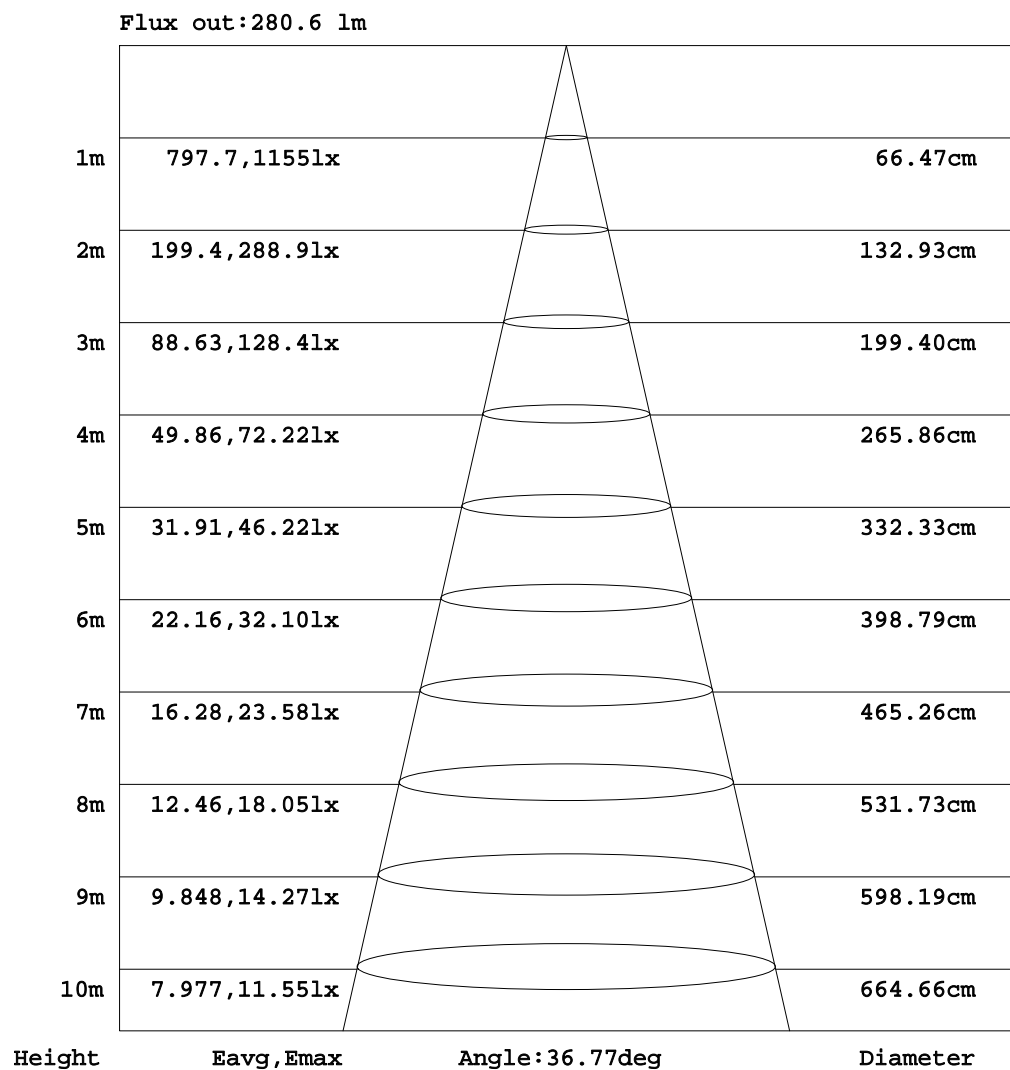


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		



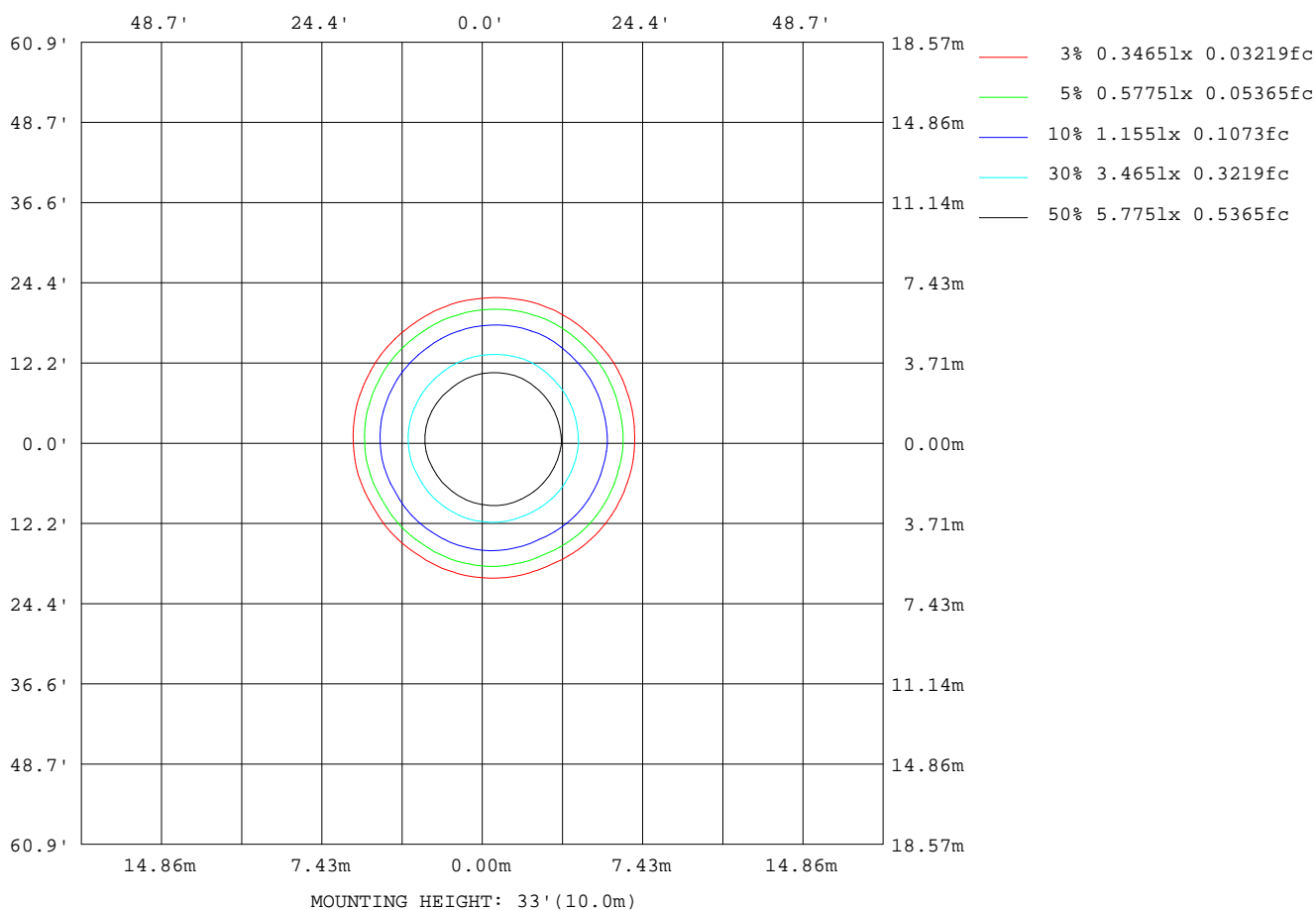
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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:221.0V I:0.0387A P:7.708W PF:0.9021 Freq:49.99Hz Lamp Flux:470.017x1 lm		
NAME: MINUX 38-6W-930-38D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

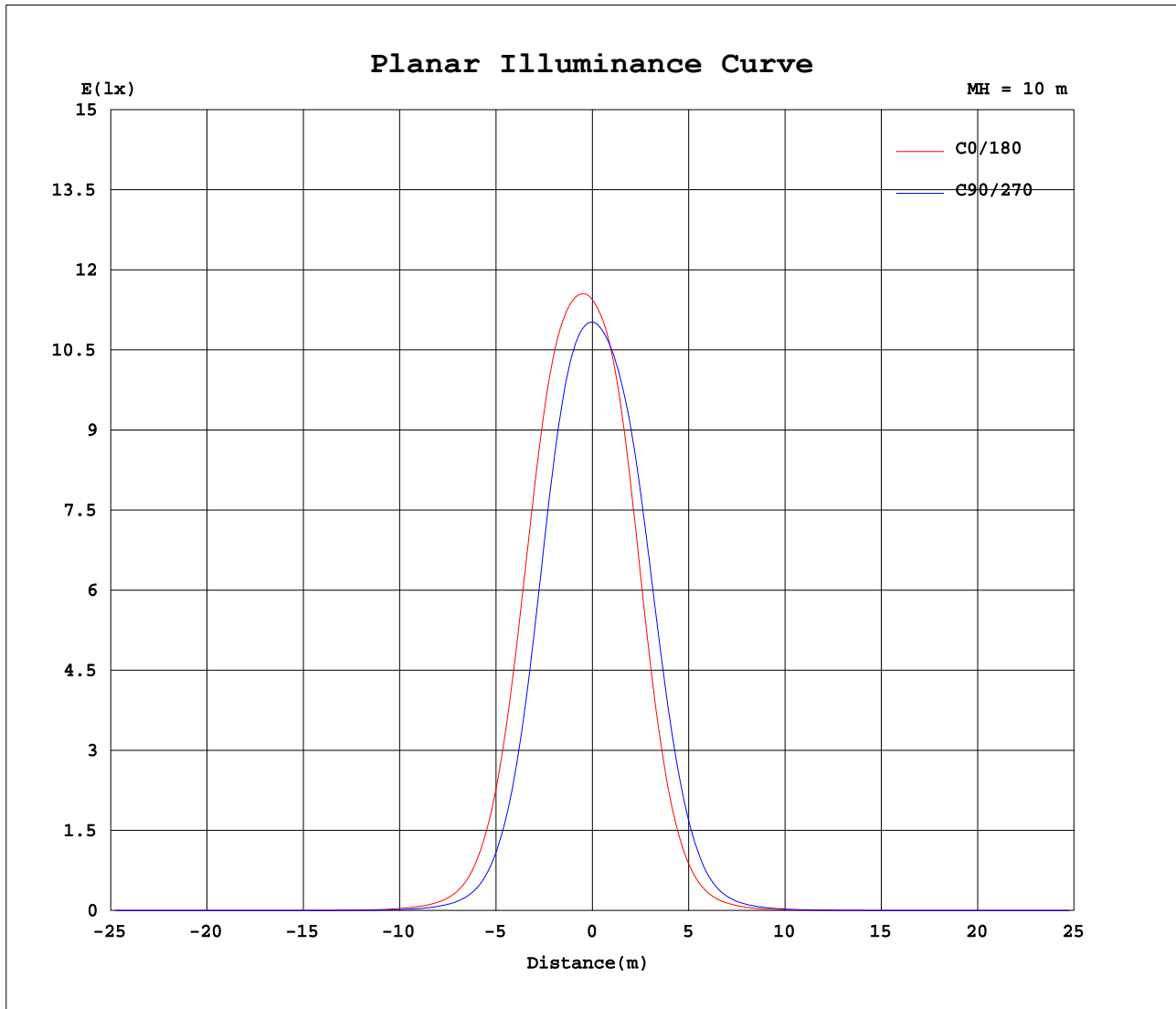
AvgL	cd/m2
L_0~180 (65) av	342
L_0~180 (75) av	77
L_0~180 (85) av	171
L_90~270 (65) av	154
L_90~270 (75) av	70
L_90~270 (85) av	178
L_45 (65) av	242
L_45 (75) av	63
L_45 (85) av	168

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-06-15

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: 2023-06-15

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:

```