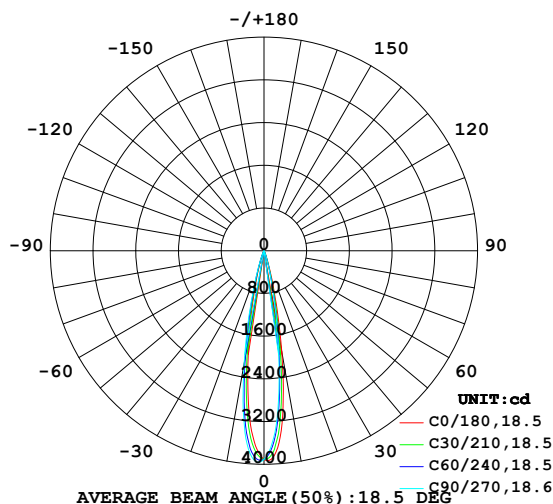


**LUMINAIRE PHOTOMETRIC TEST REPORT**

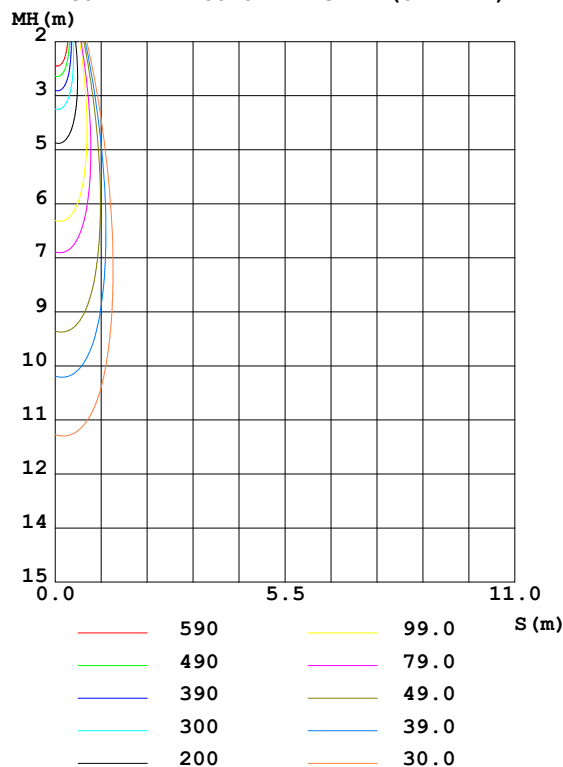
Test:U:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing$ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 63.07 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	3990	S/MH (C0/180)	0.30
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.35
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	484.31	$\eta$ UP, DN (C0-180)	0.0, 44.3
NOMINAL FLUX (lm)	484.308	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 55.7
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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

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

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1917	1555	1390	1375	1578	1881	2151	2170	0- 10	263.0	263.0	54.3, 54.3
20	172.8	136.0	122.8	127.1	162.5	198.5	225.0	208.3	10- 20	181.2	444.2	91.7, 91.7
30	24.14	19.20	18.40	19.74	23.28	25.02	27.42	28.14	20- 30	29.15	473.3	97.7, 97.7
40	6.199	5.324	4.774	4.744	5.777	7.080	7.034	6.771	30- 40	7.570	480.9	99.3, 99.3
50	1.889	1.484	1.407	1.404	1.566	1.848	1.983	1.859	40- 50	2.415	483.3	99.8, 99.8
60	0.4021	0.2396	0.1631	0.1938	0.2048	0.4102	0.6343	0.5649	50- 60	0.8860	484.2	100, 100
70	0.0324	0.0218	0.0109	0.0218	0.0162	0.0191	0.0273	0.0191	60- 70	0.0806	484.3	100, 100
80	0.0217	0.0191	0.0109	0.0191	0.0162	0.0136	0.0164	0.0137	70- 80	0.0193	484.3	100, 100
90	0.0216	0.0163	0.0109	0.0164	0.0162	0.0163	0.0164	0.0137	80- 90	0.0182	484.3	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): 482.42 lm

%lum = 99.6%

%lamp = 99.6%

Conical surface Flux(120deg): 484.19 lm

%lum = 100.0%

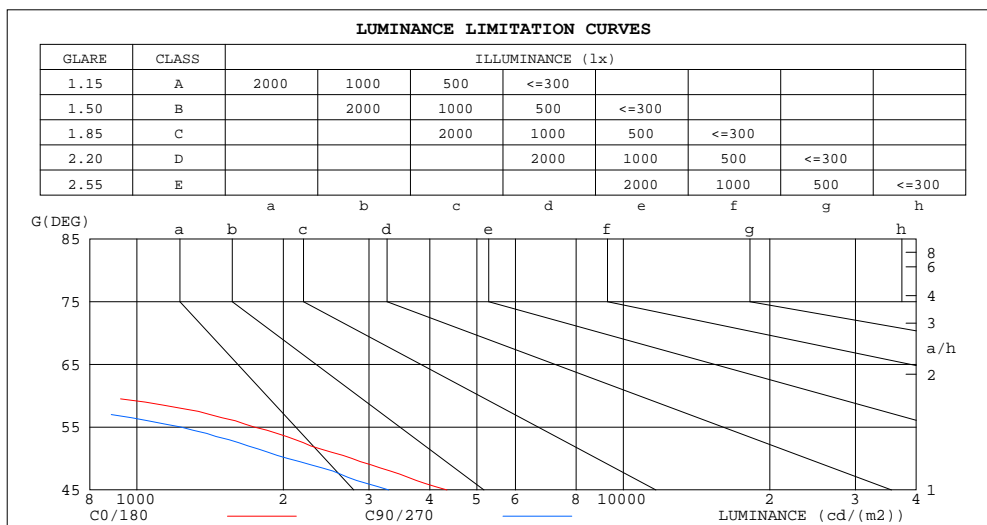
%lamp = 100.0%

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	234	117
80	118	59
75	98	39
70	89	30
65	133	24
60	757	304
55	1742	1232
50	2767	2041
45	4339	3294

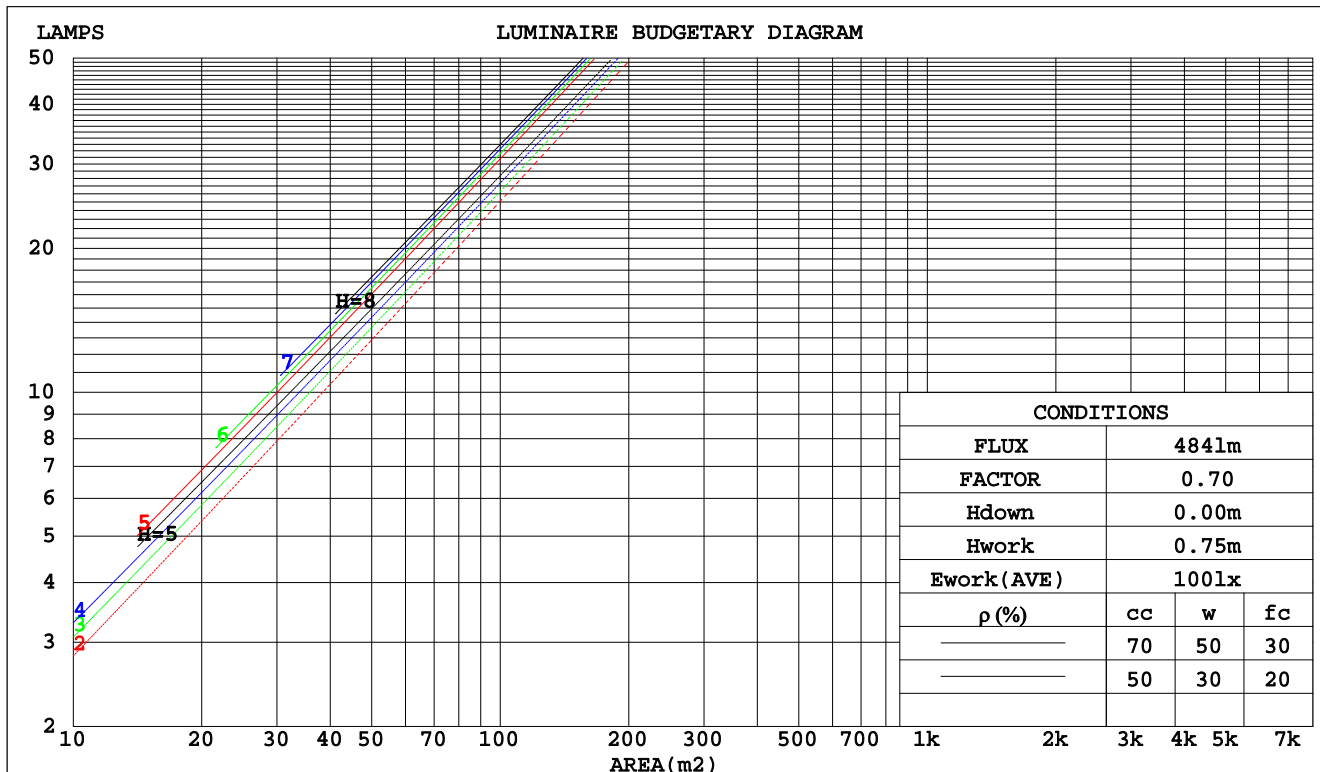
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2023-06-15

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 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			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	1.02	1.01	1.00	.99	.98
2.0	1.09	1.07	1.05	1.08	1.05	1.03	1.05	1.03	1.01	1.02	1.00	.99	.99	.98	.97	.96
3.0	1.06	1.03	1.00	1.04	1.02	.99	1.02	.00	.98	.00	.98	.96	.98	.96	.95	.94
4.0	1.03	.99	.97	1.02	.98	.96	.00	.97	.95	.98	.96	.94	.96	.94	.93	.92
5.0	.00	.96	.94	.99	.96	.93	.97	.95	.93	.96	.94	.92	.95	.93	.91	.90
6.0	.97	.94	.91	.97	.93	.91	.95	.93	.91	.94	.92	.90	.93	.91	.89	.89
7.0	.95	.92	.89	.95	.91	.89	.94	.91	.89	.93	.90	.88	.92	.90	.88	.87
8.0	.93	.90	.87	.93	.89	.87	.92	.89	.87	.91	.88	.87	.90	.88	.86	.86
9.0	.91	.88	.86	.91	.88	.86	.90	.87	.85	.89	.87	.85	.89	.87	.85	.84
10.0	.90	.86	.84	.89	.86	.84	.89	.86	.84	.88	.86	.84	.88	.85	.84	.83



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing$ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.120	.069	.022	.114	.065	.021	.102	.058	.019	.090	.052	.017	.080	.046	.015	
2.0	.110	.060	.018	.105	.058	.018	.095	.053	.016	.085	.048	.015	.077	.043	.014	
3.0	.101	.054	.016	.097	.052	.016	.088	.048	.015	.081	.044	.014	.074	.041	.013	
4.0	.094	.049	.014	.090	.047	.014	.083	.044	.013	.077	.041	.012	.071	.038	.012	
5.0	.088	.045	.013	.084	.043	.013	.079	.041	.012	.073	.039	.011	.068	.036	.011	
6.0	.082	.041	.012	.079	.040	.012	.074	.038	.011	.070	.036	.011	.065	.034	.010	
7.0	.077	.038	.011	.075	.037	.011	.071	.036	.010	.067	.034	.010	.063	.033	.010	
8.0	.073	.036	.010	.071	.035	.010	.068	.034	.010	.064	.032	.009	.061	.031	.009	
9.0	.070	.034	.009	.068	.033	.009	.065	.032	.009	.062	.031	.009	.059	.030	.009	
10.0	.066	.032	.009	.065	.031	.009	.062	.030	.009	.059	.029	.008	.057	.029	.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	.149	.143	.135	.129	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.148	.133	.120	.127	.114	.104	.087	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.132	.113	.098	.113	.098	.085	.078	.068	.060	.045	.040	.035	.014	.013	.012	
4.0	.119	.098	.081	.102	.084	.071	.070	.059	.050	.040	.034	.029	.013	.011	.010	
5.0	.107	.085	.068	.092	.073	.060	.063	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.098	.075	.058	.084	.065	.051	.058	.045	.036	.034	.027	.021	.011	.009	.007	
7.0	.090	.066	.050	.077	.057	.043	.053	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.083	.059	.043	.071	.051	.038	.049	.036	.027	.029	.021	.016	.009	.007	.005	
9.0	.077	.053	.038	.066	.046	.033	.046	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.071	.048	.033	.062	.042	.029	.043	.030	.020	.025	.017	.012	.008	.006	.004	

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm										
NAME: MINUX 38-6W-930-18D					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: $\phi$ 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	6.7	7.2	6.8	7.3	7.5	5.4	5.9	5.6	6.0	6.2
3H	6.5	7.0	6.7	7.2	7.4	5.2	5.7	5.5	5.9	6.1
4H	6.4	6.9	6.7	7.1	7.3	5.2	5.6	5.4	5.8	6.0
6H	6.4	6.8	6.6	7.0	7.3	5.1	5.5	5.4	5.8	6.0
8H	6.3	6.8	6.6	7.0	7.2	5.0	5.5	5.3	5.7	6.0
12H	6.3	6.7	6.6	7.0	7.2	5.0	5.4	5.3	5.7	5.9
4H 2H	6.5	6.9	6.7	7.1	7.3	5.2	5.7	5.4	5.9	6.1
3H	6.3	6.7	6.6	7.0	7.2	5.0	5.5	5.3	5.7	6.0
4H	6.2	6.6	6.5	6.9	7.2	4.9	5.3	5.3	5.6	5.9
6H	6.1	6.4	6.5	6.8	7.1	4.8	5.2	5.2	5.5	5.8
8H	6.0	6.4	6.4	6.7	7.1	4.8	5.1	5.2	5.4	5.8
12H	6.0	6.3	6.4	6.7	7.0	4.7	5.0	5.1	5.4	5.8
8H 4H	6.0	6.4	6.4	6.7	7.1	4.8	5.1	5.2	5.4	5.8
6H	5.9	6.2	6.3	6.6	7.0	4.7	4.9	5.1	5.3	5.7
8H	5.9	6.1	6.3	6.5	7.0	4.6	4.8	5.0	5.3	5.7
12H	5.8	6.0	6.3	6.5	6.9	4.5	4.8	5.0	5.2	5.7
12H 4H	6.0	6.3	6.4	6.6	7.0	4.7	5.0	5.1	5.4	5.8
6H	5.9	6.1	6.3	6.5	7.0	4.6	4.8	5.0	5.3	5.7
8H	5.8	6.0	6.3	6.4	6.9	4.5	4.7	5.0	5.2	5.7
Variations with the observer position at spacings:										
S = 1.0H	+ 3.2 / - 7.1					+ 2.8 / - 8.5				
1.5H	+ 4.7 / - 5.1					+ 4.3 / - 5.1				
2.0H	+ 5.4 / -15.4					+ 4.9 / -14.1				

CIE Pub.117, 484.3 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -2.5$ )

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 38\text{mm} \times H92\text{mm}$	
MFR.: NEKO LIGHTING AG		

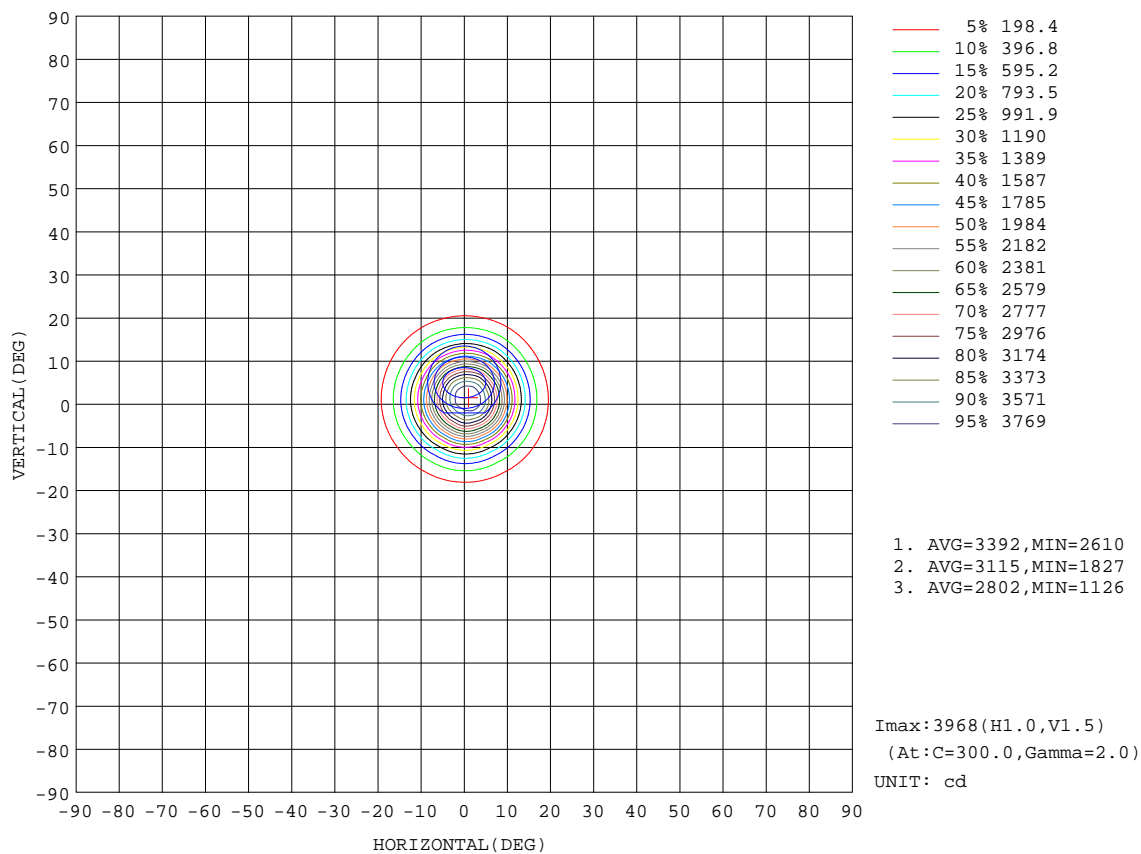
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	91	85	82	90	85	82	79
0.80	98	93	90	97	93	89	96	92	89	86
1.00	102	97	94	101	96	93	99	96	93	89
1.25	105	101	98	104	100	97	102	99	96	93
1.50	108	104	101	107	103	100	104	101	99	95
2.00	110	106	103	108	105	103	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	106	104	98
4.00	115	112	110	113	110	109	109	107	106	99
5.00	116	114	112	114	112	111	110	109	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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 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

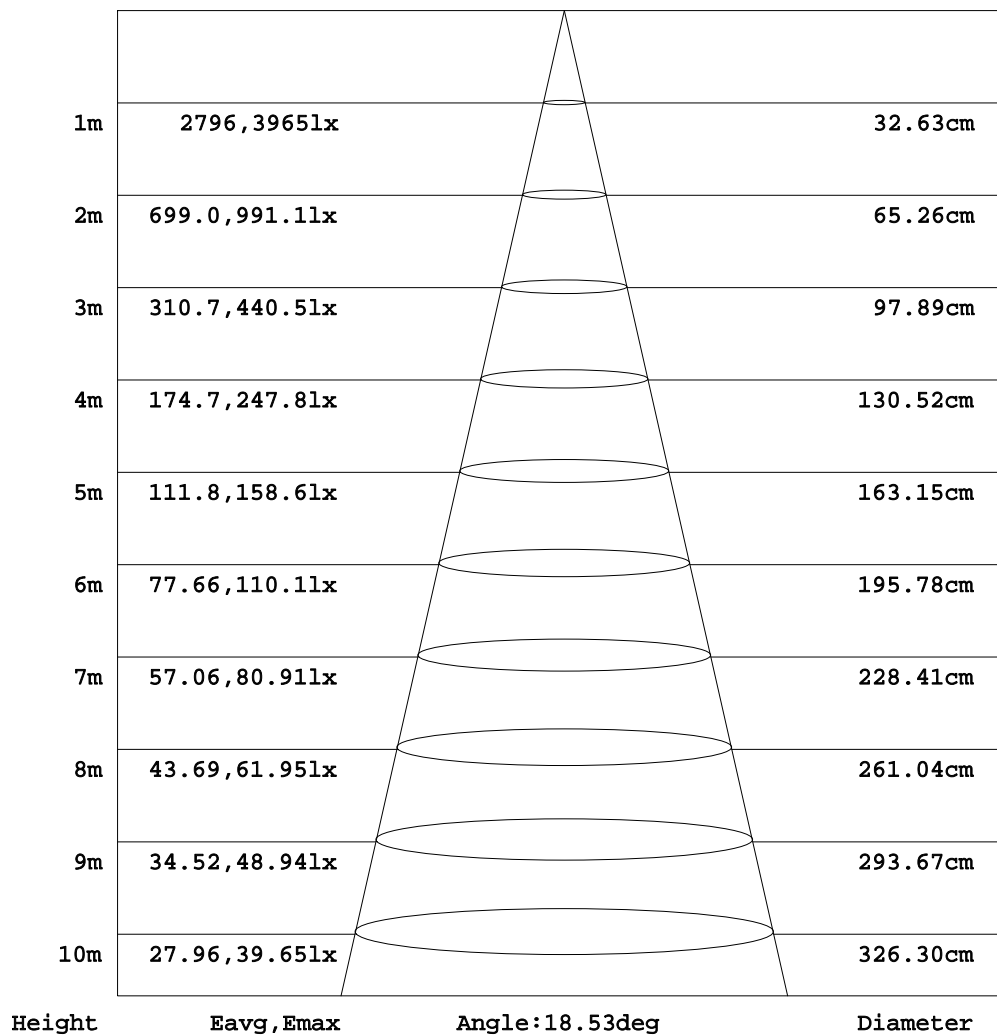
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 38\text{mm} \times H92\text{mm}$	
MFR.: NEKO LIGHTING AG		

Flux out:246.0 lm



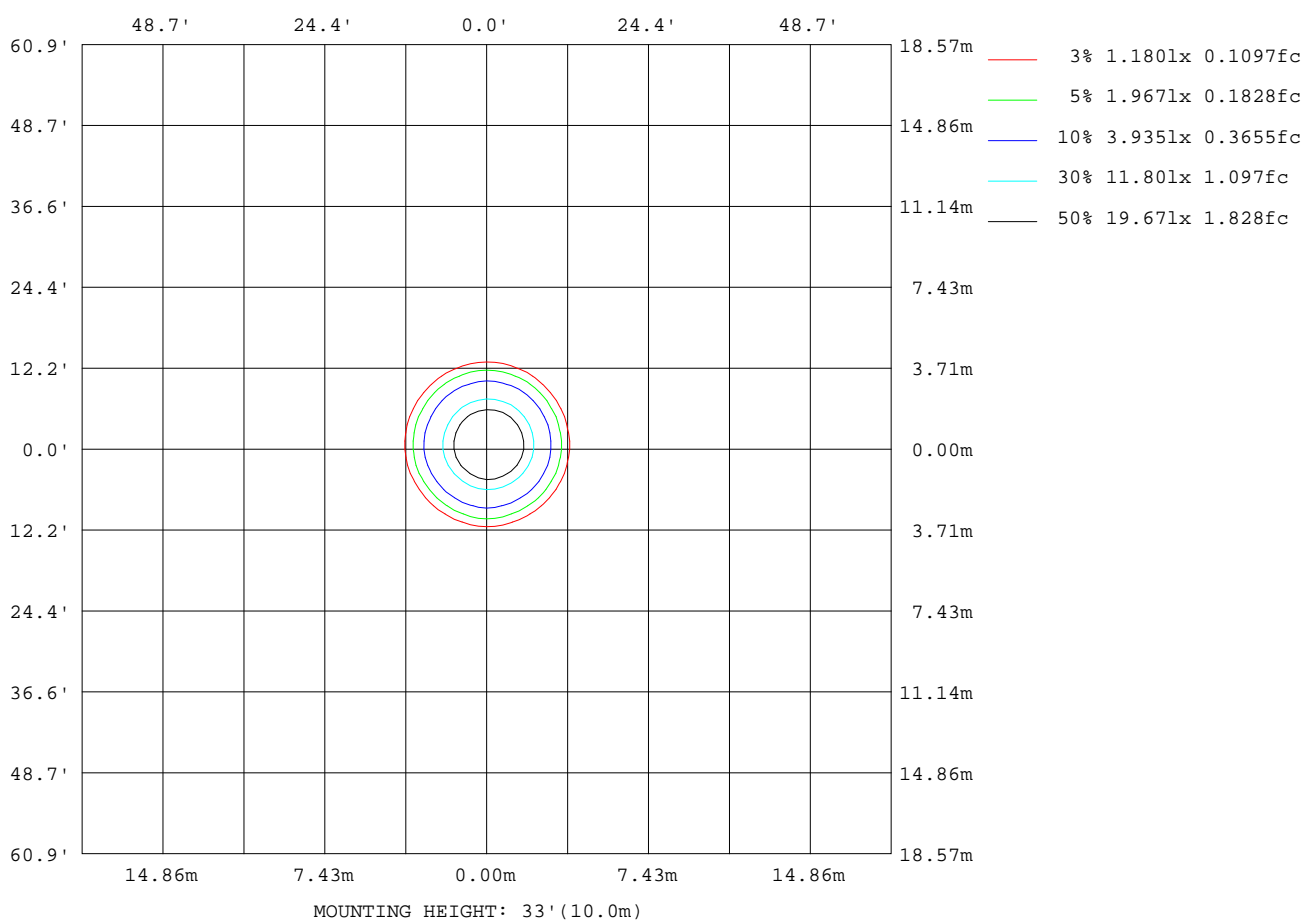
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing$ 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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:221.1V I:0.0386A P:7.678W PF:0.9008 Freq:49.99Hz Lamp Flux:484.308x1 lm		
NAME: MINUX 38-6W-930-18D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 38mm*H92mm	
MFR.: NEKO LIGHTING AG		

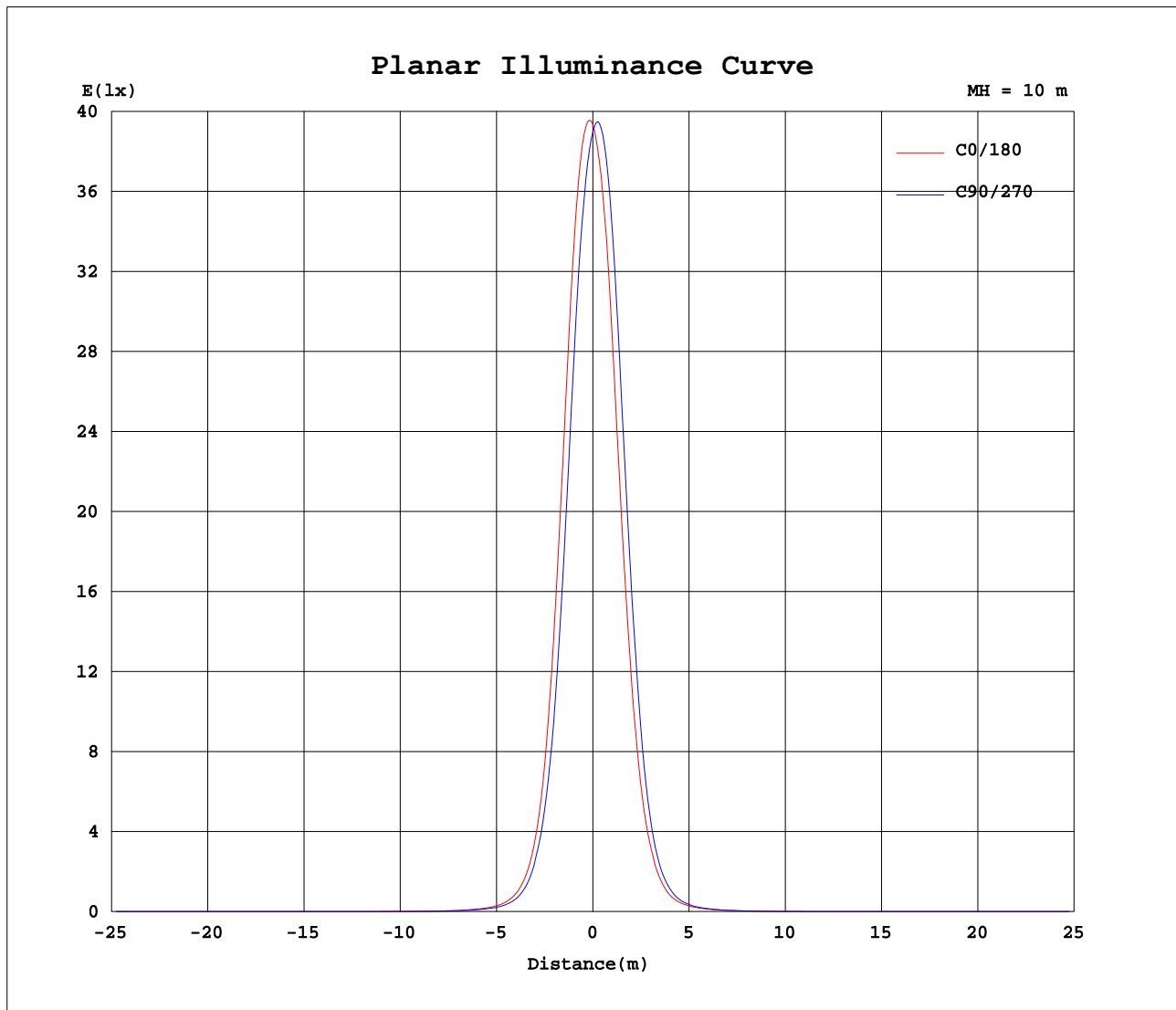
AvgL	cd/m2
L_0~180 (65) av	84
L_0~180 (75) av	78
L_0~180 (85) av	203
L_90~270 (65) av	103
L_90~270 (75) av	59
L_90~270 (85) av	146
L_45 (65) av	75
L_45 (75) av	63
L_45 (85) av	184

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

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

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

```