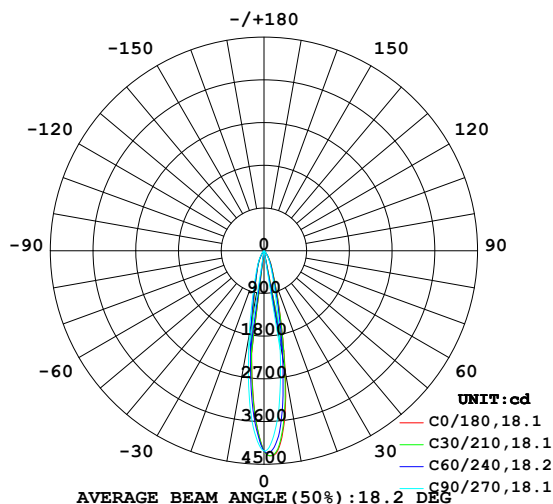


**LUMINAIRE PHOTOMETRIC TEST REPORT**

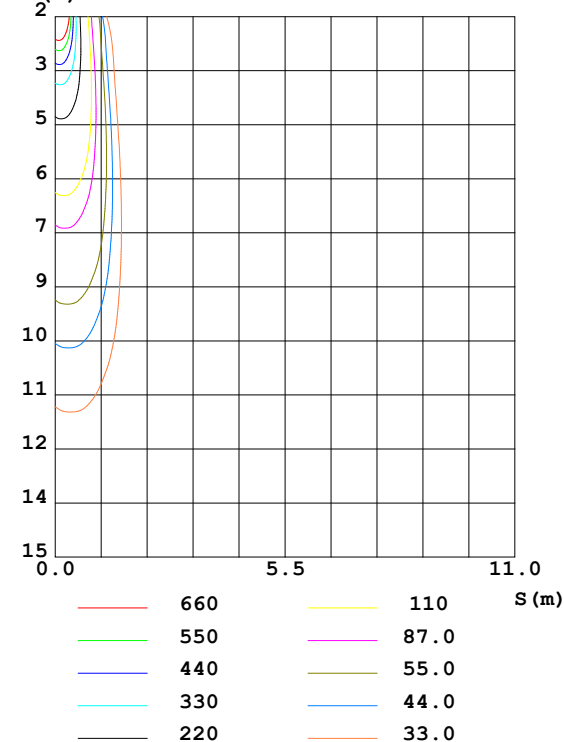
Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 76.66 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	4348	S/MH (C0/180)	0.25
NOMINAL POWER (W)	10	LOR (%)	100.0	S/MH (C90/270)	0.30
RATED VOLTAGE (V)	24	TOTAL FLUX (lm)	794.81	$\eta$ UP, DN (C0-180)	0.0, 51.9
NOMINAL FLUX (lm)	794.807	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 48.1
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	24	$\eta$ 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  
Test Date: 2020-10-28

$\gamma$  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:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2567	2463	1916	1537	1382	1418	1781	2295	0- 10	275.6	275.6	34.7, 34.7
20	631.1	593.2	500.2	433.9	418.3	408.4	476.0	572.2	10- 20	269.6	545.2	68.6, 68.6
30	251.6	227.2	189.2	156.2	152.3	148.5	185.5	221.7	20- 30	146.3	691.6	87, 87
40	69.98	65.39	60.70	39.16	34.05	32.83	51.28	60.07	30- 40	68.13	759.7	95.6, 95.6
50	17.49	17.38	19.29	13.44	12.03	11.72	17.50	17.15	40- 50	21.79	781.5	98.3, 98.3
60	7.311	7.130	6.170	4.937	4.551	4.461	6.091	6.772	50- 60	9.103	790.6	99.5, 99.5
70	2.172	2.063	1.547	1.182	1.159	1.104	1.749	1.857	60- 70	3.401	794.0	99.9, 99.9
80	0.2949	0.2165	0.1055	0.0418	0.0302	0.0460	0.0612	0.1464	70- 80	0.7707	794.8	100, 100
90	0.0367	0.0370	0.0394	0.0396	0.0259	0.0261	0.0263	0.0264	80- 90	0.0507	794.8	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): 773.29 lm

%lum = 97.3%

%lamp = 97.3%

Conical surface Flux(120deg): 790.58 lm

%lum = 99.5%

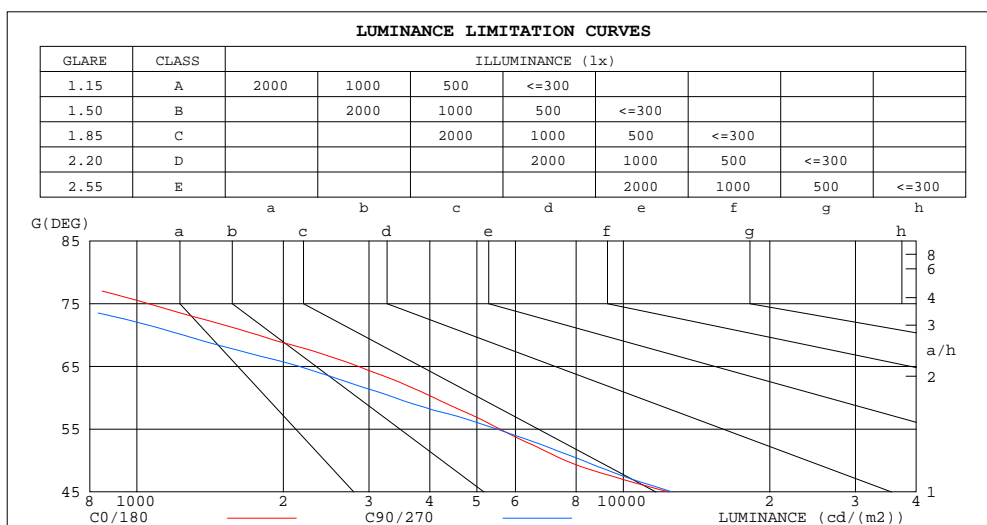
%lamp = 99.5%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jason  
Test Date: 2020-10-28

$\gamma$  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:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	152	152
80	474	167
75	1054	686
70	1773	1244
65	2852	2154
60	4082	3392
55	5577	5495
50	7595	8247
45	12425	12613

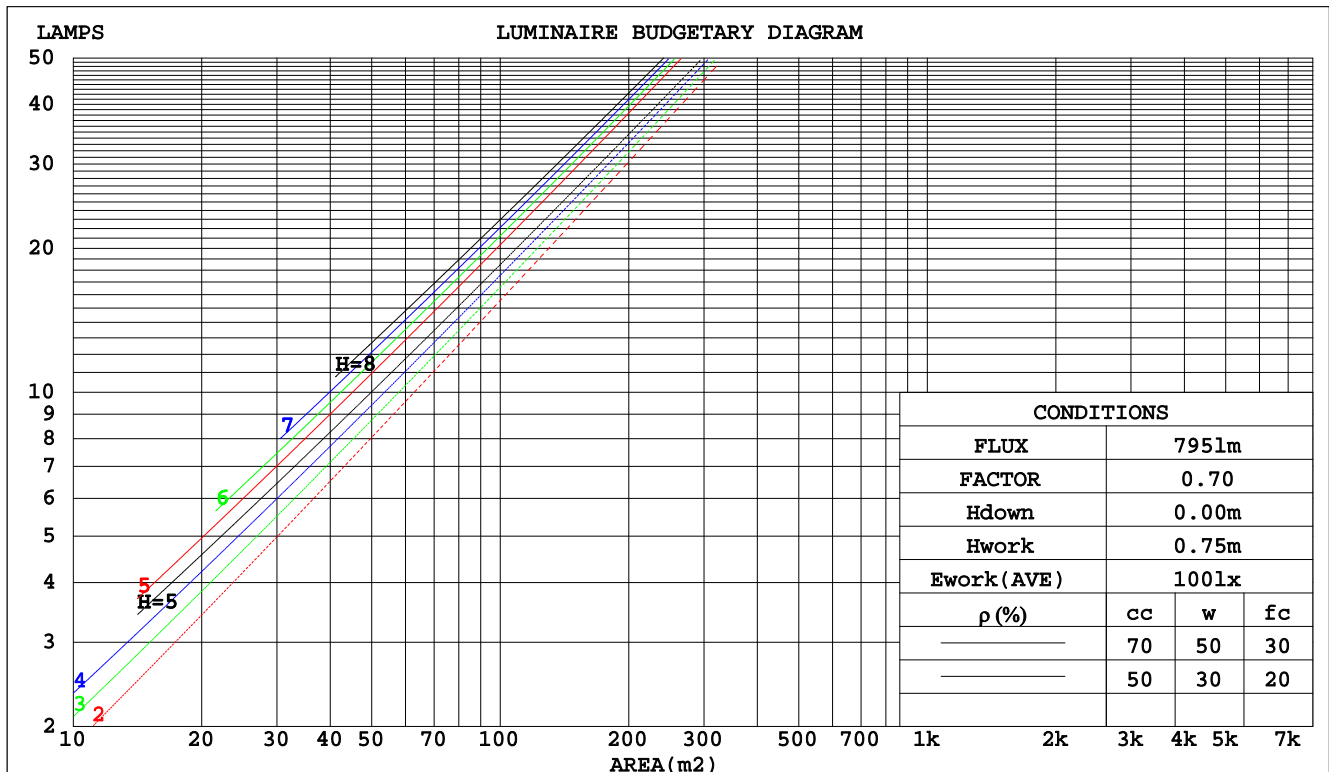
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
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	1.10	1.09	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.01	1.00	.99	.98	.98	.96
2.0	1.06	1.03	1.01	1.05	1.02	.99	1.02	.99	.97	.99	.97	.95	.96	.95	.93	.92
3.0	1.01	.97	.94	1.00	.96	.94	.98	.95	.92	.95	.93	.91	.93	.91	.89	.88
4.0	.97	.92	.89	.96	.92	.89	.94	.90	.88	.92	.89	.87	.90	.88	.86	.84
5.0	.93	.88	.85	.92	.88	.85	.90	.87	.84	.89	.86	.83	.87	.85	.82	.81
6.0	.89	.84	.81	.88	.84	.81	.87	.83	.80	.86	.82	.80	.85	.82	.79	.78
7.0	.86	.81	.78	.85	.81	.78	.84	.80	.77	.83	.80	.77	.82	.79	.77	.76
8.0	.83	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.80	.76	.74	.73
9.0	.80	.76	.73	.80	.75	.72	.79	.75	.72	.78	.75	.72	.77	.74	.72	.71
10.0	.78	.73	.70	.77	.73	.70	.76	.73	.70	.76	.72	.70	.75	.72	.70	.69



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:

## WEC AND CCEC

Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
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	.147	.083	.026	.140	.080	.025	.128	.073	.023	.116	.067	.022	.106	.061	.020		
2.0	.138	.075	.023	.132	.073	.022	.122	.068	.021	.112	.063	.020	.104	.059	.018		
3.0	.129	.069	.021	.125	.067	.020	.116	.063	.019	.108	.059	.018	.100	.056	.017		
4.0	.122	.063	.019	.118	.062	.018	.110	.058	.017	.103	.056	.017	.097	.053	.016		
5.0	.115	.058	.017	.111	.057	.017	.105	.055	.016	.099	.052	.016	.094	.050	.015		
6.0	.109	.054	.016	.106	.053	.015	.100	.051	.015	.095	.049	.015	.090	.048	.014		
7.0	.103	.051	.014	.101	.050	.014	.096	.049	.014	.091	.047	.014	.087	.045	.013		
8.0	.098	.048	.014	.096	.047	.013	.092	.046	.013	.088	.045	.013	.084	.043	.013		
9.0	.094	.045	.013	.092	.045	.013	.088	.044	.012	.085	.042	.012	.081	.041	.012		
10.0	.090	.043	.012	.088	.043	.012	.085	.042	.012	.082	.041	.012	.079	.040	.011		

$\rho_{cc}$	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	.169	.158	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.117	.130	.114	.101	.089	.079	.070	.051	.046	.041	.016	.015	.013	
3.0	.137	.113	.094	.118	.098	.082	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.125	.098	.077	.108	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.115	.086	.064	.099	.074	.056	.068	.052	.040	.040	.031	.023	.013	.010	.008	
6.0	.107	.076	.054	.092	.066	.047	.063	.046	.033	.037	.027	.020	.012	.009	.007	
7.0	.099	.068	.046	.085	.059	.040	.059	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.093	.061	.040	.080	.053	.035	.055	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.087	.056	.035	.075	.049	.030	.052	.034	.021	.030	.020	.013	.010	.007	.004	
10.0	.082	.051	.030	.071	.044	.027	.049	.031	.019	.029	.018	.011	.009	.006	.004	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:

## UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm										
NAME: AFTER7 Maxi CV-3020					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: $\phi$ 68mm*H124mm					
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	16.4	17.1	16.6	17.3	17.4	15.5	16.2	15.7	16.4	16.6
3H	16.3	17.0	16.6	17.2	17.4	15.4	16.1	15.7	16.3	16.5
4H	16.3	16.9	16.5	17.1	17.3	15.4	16.0	15.6	16.2	16.4
6H	16.2	16.8	16.5	17.0	17.3	15.3	15.9	15.6	16.1	16.4
8H	16.2	16.7	16.5	17.0	17.2	15.2	15.8	15.5	16.1	16.3
12H	16.1	16.7	16.4	16.9	17.2	15.2	15.8	15.5	16.0	16.3
4H 2H	16.3	16.9	16.5	17.1	17.3	15.4	16.0	15.7	16.2	16.5
3H	16.2	16.7	16.5	17.0	17.3	15.3	15.9	15.6	16.1	16.4
4H	16.1	16.6	16.5	16.9	17.2	15.2	15.8	15.6	16.0	16.3
6H	16.0	16.5	16.4	16.8	17.2	15.1	15.6	15.5	15.9	16.3
8H	16.0	16.4	16.4	16.7	17.1	15.1	15.5	15.5	15.9	16.2
12H	15.9	16.3	16.3	16.7	17.1	15.0	15.4	15.4	15.8	16.2
8H 4H	16.0	16.4	16.4	16.7	17.1	15.1	15.5	15.5	15.9	16.2
6H	15.9	16.2	16.3	16.6	17.0	15.0	15.3	15.4	15.7	16.2
8H	15.8	16.1	16.3	16.5	17.0	14.9	15.3	15.4	15.7	16.1
12H	15.8	16.0	16.2	16.5	16.9	14.9	15.1	15.3	15.6	16.1
12H 4H	15.9	16.3	16.3	16.7	17.1	15.1	15.4	15.5	15.8	16.2
6H	15.8	16.1	16.3	16.5	17.0	14.9	15.3	15.4	15.7	16.1
8H	15.8	16.0	16.2	16.5	16.9	14.9	15.1	15.3	15.6	16.1
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / - 5.6					+ 2.3 / - 5.2				
1.5H	+ 4.8 / - 4.4					+ 3.9 / - 4.0				
2.0H	+ 3.8 / - 3.4					+ 3.9 / - 3.7				

CIE Pub.117, 794.8 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -0.8$ )

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		

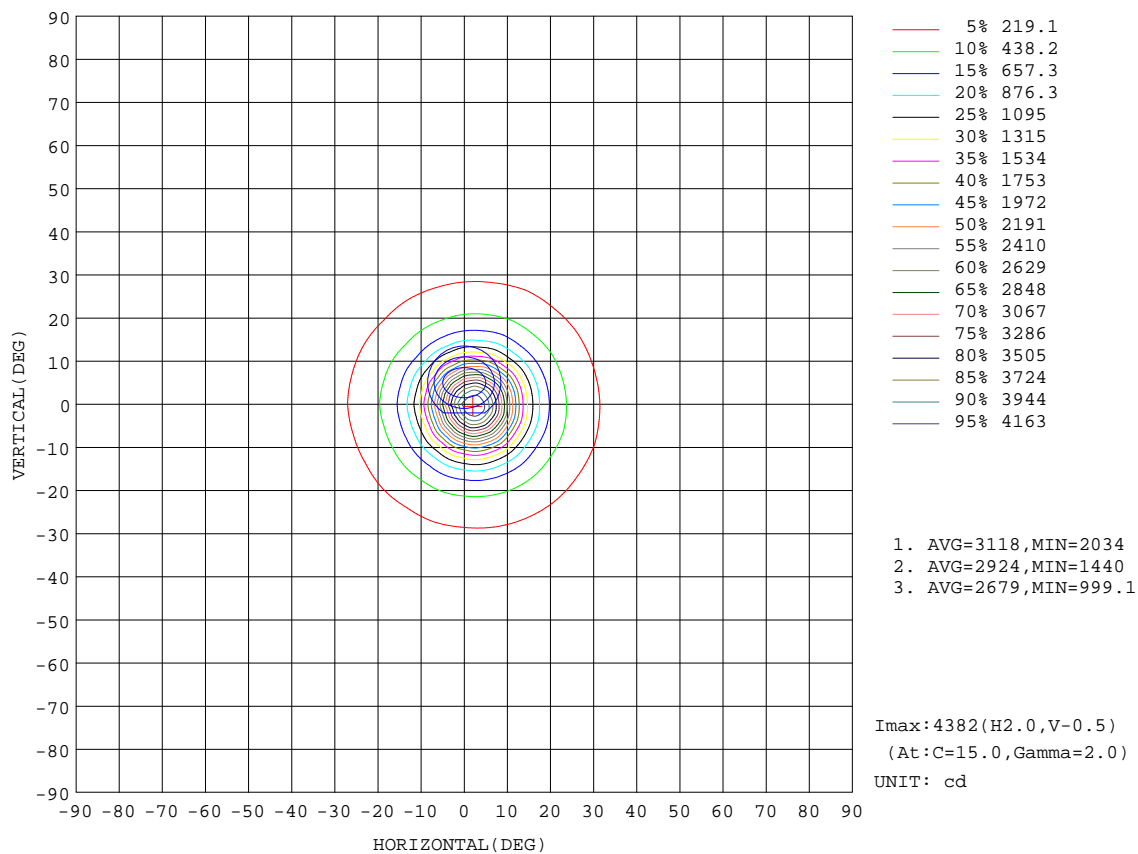
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	83	79	88	82	79	75
0.80	96	90	87	95	90	87	94	90	86	83
1.00	100	95	91	99	94	91	98	94	91	87
1.25	104	99	96	103	99	95	101	97	95	91
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	96
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	109	107	105	98
5.00	115	113	111	113	111	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: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

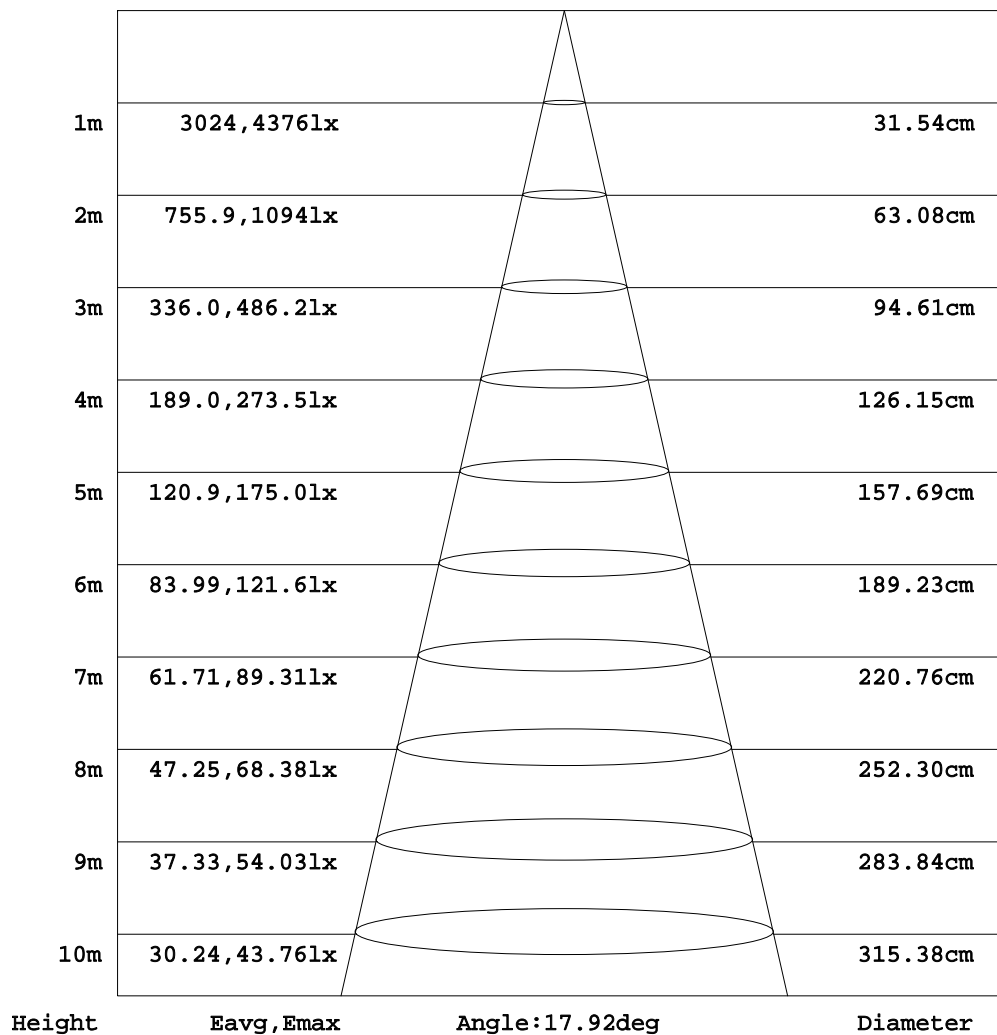
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		

Flux out:238.3 lm



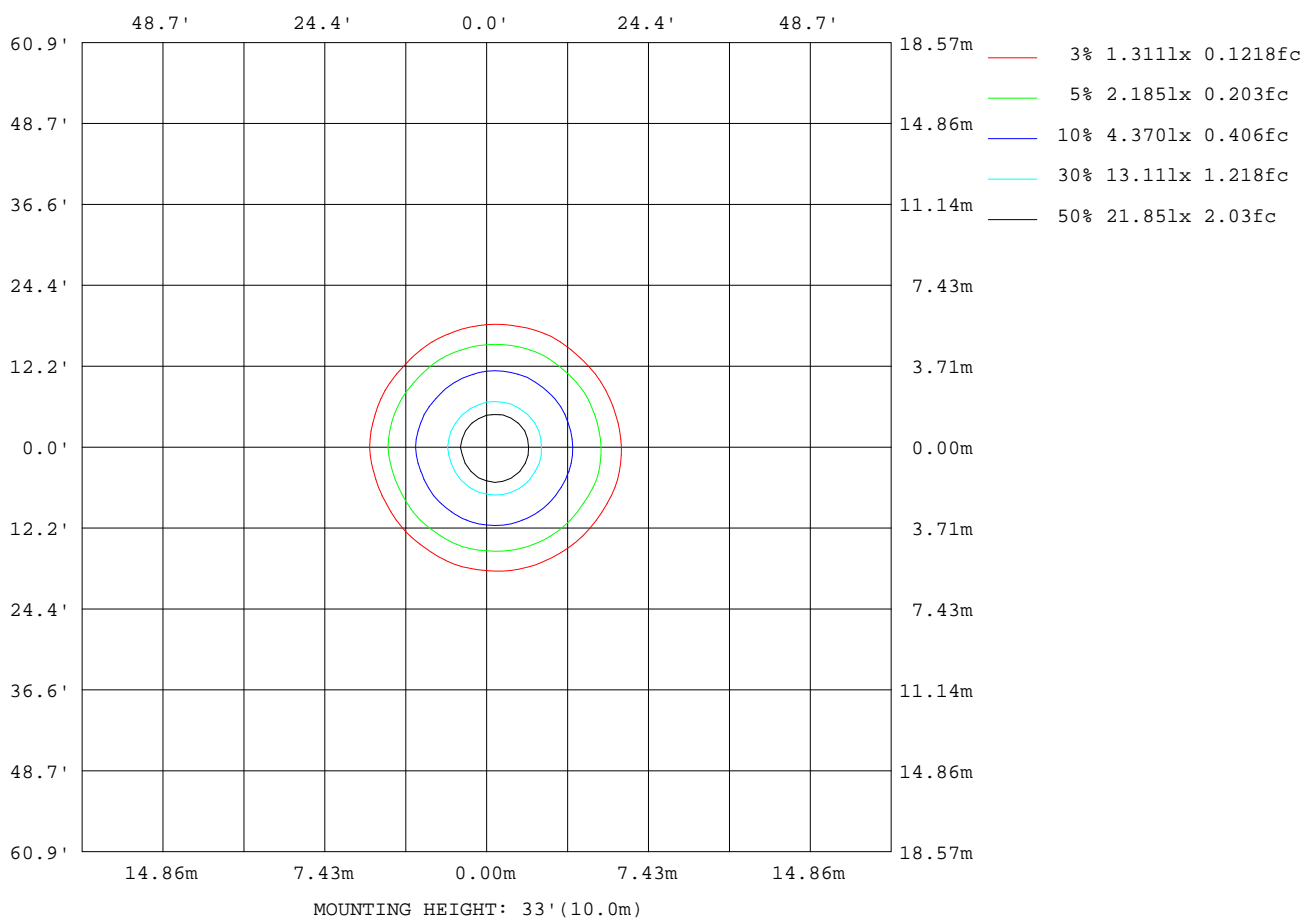
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:

ISOLUX DIAGRAM

Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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:

### LED Avg.L Report

Test:U:24.00V I:0.4320A P:10.37W PF:1.000 Freq:0Hz Lamp Flux:794.807x1 lm		
NAME: AFTER7 Maxi CV-3020	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 68mm*H124mm	
MFR.: NEKO LIGHTING AG		

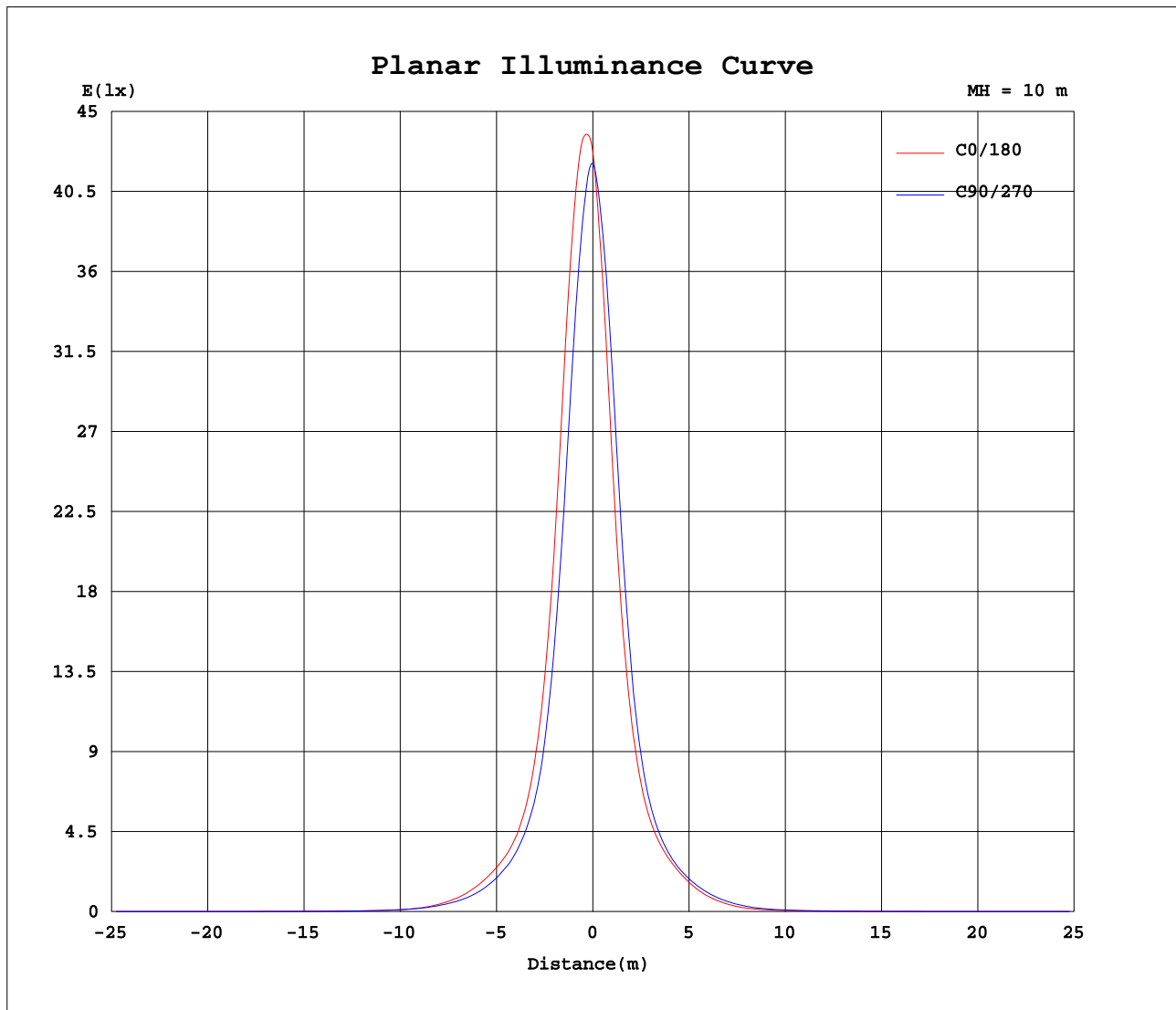
AvgL	cd/m2
L_0~180 (65) av	2204
L_0~180 (75) av	758
L_0~180 (85) av	116
L_90~270 (65) av	2205
L_90~270 (75) av	748
L_90~270 (85) av	121
L_45 (65) av	2098
L_45 (75) av	681
L_45 (85) av	119

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-10-28

$\gamma$  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: 2020-10-28

$\gamma$  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:

```