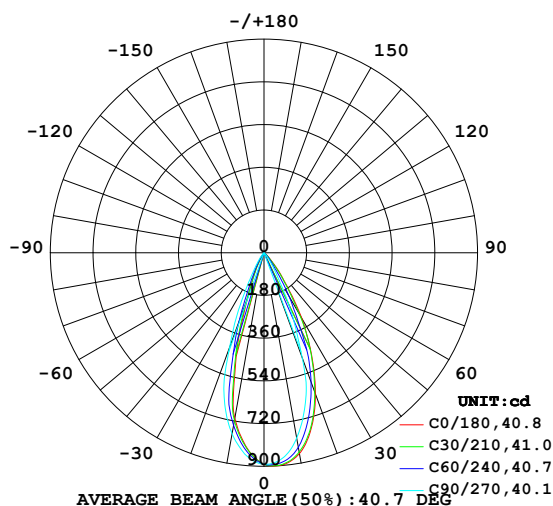


LUMINAIRE PHOTOMETRIC TEST REPORT

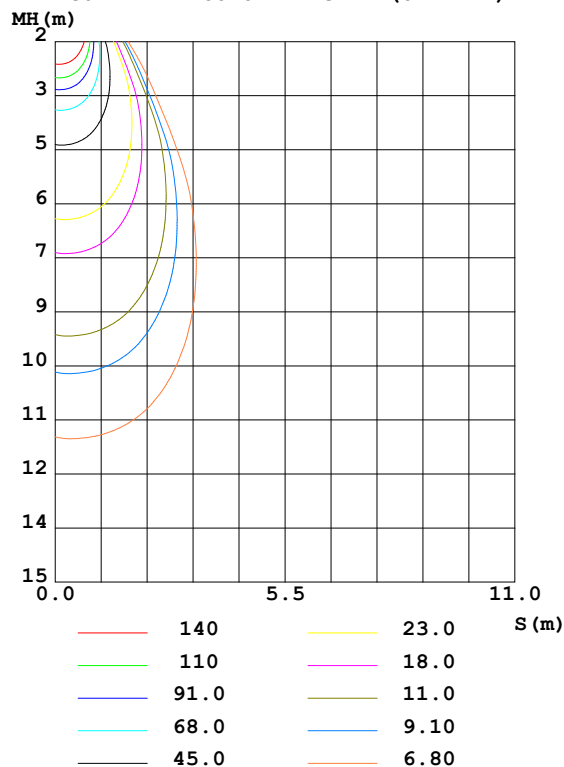
Test:U:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 40mm*H102mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.98 lm/W			
MODEL	CITIZEN-3000K	I _{max} (cd)	901.2	S/MH (C0/180)	0.48
NOMINAL POWER (W)	5.5	LOR (%)	100.0	S/MH (C90/270)	0.61
RATED VOLTAGE (V)	24	TOTAL FLUX (lm)	430.36	η UP, DN (C0-180)	0.0, 53.6
NOMINAL FLUX (lm)	430.359	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 46.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	24	η down (%)	100.0	CIBSE SHR MAX	0.65

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: 2020-10-27

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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	859.4	847.3	793.4	735.2	708.7	722.8	774.3	829.5	0- 10	79.83	79.83	18.5,18.5
20	633.7	611.4	472.2	287.7	200.8	248.3	425.6	582.6	10- 20	171.5	251.3	58.4,58.4
30	317.4	256.0	108.6	52.94	31.78	42.28	87.47	223.4	20- 30	122.0	373.3	86.7,86.7
40	77.93	50.34	19.66	2.974	1.853	2.558	13.98	39.89	30- 40	42.43	415.7	96.6,96.6
50	15.07	10.84	3.169	1.483	0.8213	1.200	2.604	8.447	40- 50	9.494	425.2	98.8,98.8
60	4.508	3.109	1.772	0.5067	0.0151	0.2884	1.341	2.678	50- 60	2.821	428.1	99.5,99.5
70	2.210	1.797	0.9314	0.0176	0.0173	0.0174	0.6343	1.528	60- 70	1.233	429.3	99.8,99.8
80	1.288	1.087	0.3157	0.0220	0.0173	0.0174	0.1486	0.9169	70- 80	0.6965	430.0	99.9,99.9
90	0.7400	0.5406	0.0350	0.0242	0.0173	0.0174	0.0175	0.4286	80- 90	0.3752	430.4	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): 422.08 lm

%lum = 98.1%

%lamp = 98.1%

Conical surface Flux(120deg): 428.05 lm

%lum = 99.5%

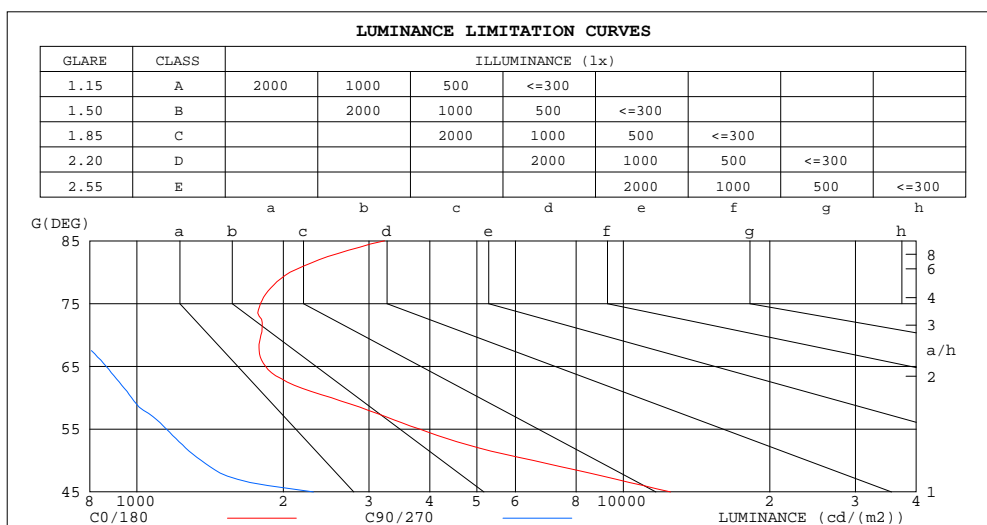
%lamp = 99.5%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 40\text{mm} \times H102\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3230	464
80	2065	500
75	1796	608
70	1799	749
65	1838	864
60	2510	975
55	3811	1150
50	6526	1356
45	12506	2307

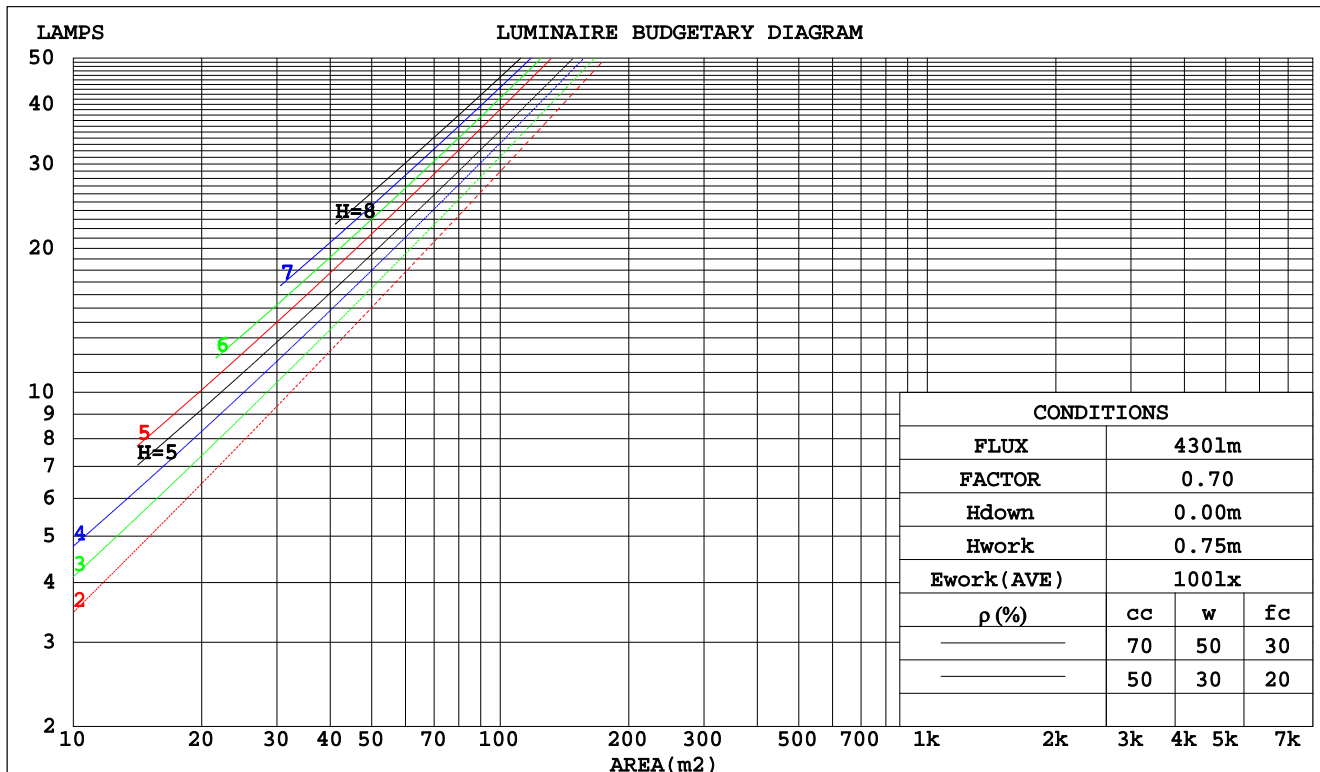
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 40\text{mm} \times H102\text{mm}$	
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	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.98	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.95	.97	.95	.93	.95	.93	.92	.90
3.0	.99	.95	.92	.98	.94	.91	.96	.92	.89	.93	.90	.88	.91	.89	.87	.85
4.0	.94	.89	.86	.93	.89	.85	.91	.87	.84	.89	.86	.83	.87	.85	.82	.81
5.0	.89	.84	.81	.89	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.76	.84	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.75	.73
7.0	.81	.76	.73	.81	.76	.72	.79	.75	.72	.78	.74	.72	.77	.74	.71	.70
8.0	.78	.73	.69	.77	.72	.69	.76	.72	.69	.75	.71	.68	.74	.71	.68	.67
9.0	.74	.69	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.71	.68	.65	.64
10.0	.71	.66	.63	.71	.66	.63	.70	.66	.63	.69	.65	.63	.69	.65	.62	.61



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 40mm*H102mm	
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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.159	.091	.029	.153	.087	.028	.140	.080	.026	.129	.074	.024	.118	.068	.022		
2.0	.150	.082	.025	.144	.080	.025	.134	.075	.023	.124	.070	.022	.116	.065	.021		
3.0	.142	.075	.023	.137	.073	.022	.128	.069	.021	.120	.066	.020	.112	.062	.019		
4.0	.134	.070	.020	.130	.068	.020	.122	.065	.019	.116	.062	.019	.109	.059	.018		
5.0	.127	.065	.019	.124	.064	.019	.117	.061	.018	.111	.059	.017	.106	.056	.017		
6.0	.121	.061	.017	.118	.060	.017	.112	.058	.017	.107	.056	.016	.102	.054	.016		
7.0	.116	.057	.016	.113	.056	.016	.108	.055	.016	.103	.053	.015	.099	.051	.015		
8.0	.111	.054	.015	.108	.053	.015	.104	.052	.015	.100	.051	.015	.096	.049	.014		
9.0	.106	.051	.014	.104	.051	.014	.100	.049	.014	.096	.048	.014	.093	.047	.014		
10.0	.102	.049	.014	.100	.048	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013		

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						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	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.082	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.128	.098	.075	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.119	.086	.063	.102	.075	.054	.070	.052	.038	.041	.031	.023	.013	.010	.008	
6.0	.111	.077	.052	.095	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.045	.089	.060	.039	.062	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.098	.063	.038	.084	.054	.033	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.093	.057	.033	.080	.050	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.088	.053	.029	.076	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm										
NAME: AFTER7 Mini-H-830-45					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: ϕ 40mm*H102mm					
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	21.1	21.9	21.3	22.1	22.3	15.5	16.3	15.7	16.5	16.6
3H	21.0	21.8	21.3	22.0	22.2	15.4	16.2	15.7	16.4	16.6
4H	21.0	21.7	21.2	21.9	22.1	15.4	16.1	15.7	16.3	16.5
6H	20.9	21.6	21.2	21.8	22.1	15.3	16.0	15.6	16.2	16.5
8H	20.9	21.6	21.2	21.8	22.1	15.3	15.9	15.6	16.2	16.4
12H	20.9	21.5	21.2	21.8	22.1	15.3	15.9	15.6	16.1	16.4
4H 2H	20.9	21.6	21.2	21.8	22.0	15.4	16.1	15.7	16.3	16.5
3H	20.8	21.4	21.1	21.7	22.0	15.4	16.0	15.7	16.2	16.5
4H	20.8	21.3	21.1	21.6	21.9	15.3	15.9	15.7	16.2	16.5
6H	20.7	21.2	21.1	21.6	21.9	15.3	15.8	15.7	16.1	16.5
8H	20.7	21.2	21.1	21.6	21.9	15.3	15.7	15.7	16.1	16.5
12H	20.8	21.2	21.2	21.6	21.9	15.2	15.7	15.7	16.0	16.4
8H 4H	20.6	21.1	21.0	21.4	21.8	15.3	15.8	15.7	16.1	16.5
6H	20.6	21.0	21.1	21.4	21.8	15.3	15.7	15.8	16.1	16.5
8H	20.7	21.0	21.1	21.4	21.9	15.3	15.7	15.8	16.1	16.5
12H	20.7	21.0	21.2	21.5	21.9	15.3	15.6	15.8	16.1	16.5
12H 4H	20.6	21.0	21.0	21.4	21.8	15.3	15.7	15.7	16.1	16.5
6H	20.6	20.9	21.0	21.3	21.8	15.4	15.7	15.8	16.1	16.5
8H	20.6	20.9	21.1	21.4	21.8	15.4	15.7	15.9	16.1	16.6
Variations with the observer position at spacings:										
S = 1.0H	+ 3.3 / - 6.0					+ 2.2 / - 4.1				
1.5H	+ 5.4 / - 5.6					+ 3.7 / - 4.3				
2.0H	+ 4.6 / - 2.7					+ 2.3 / - 1.6				

CIE Pub.117, 430.4 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -2.9$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 40mm*H102mm	
MFR.: NEKO LIGHTING AG		

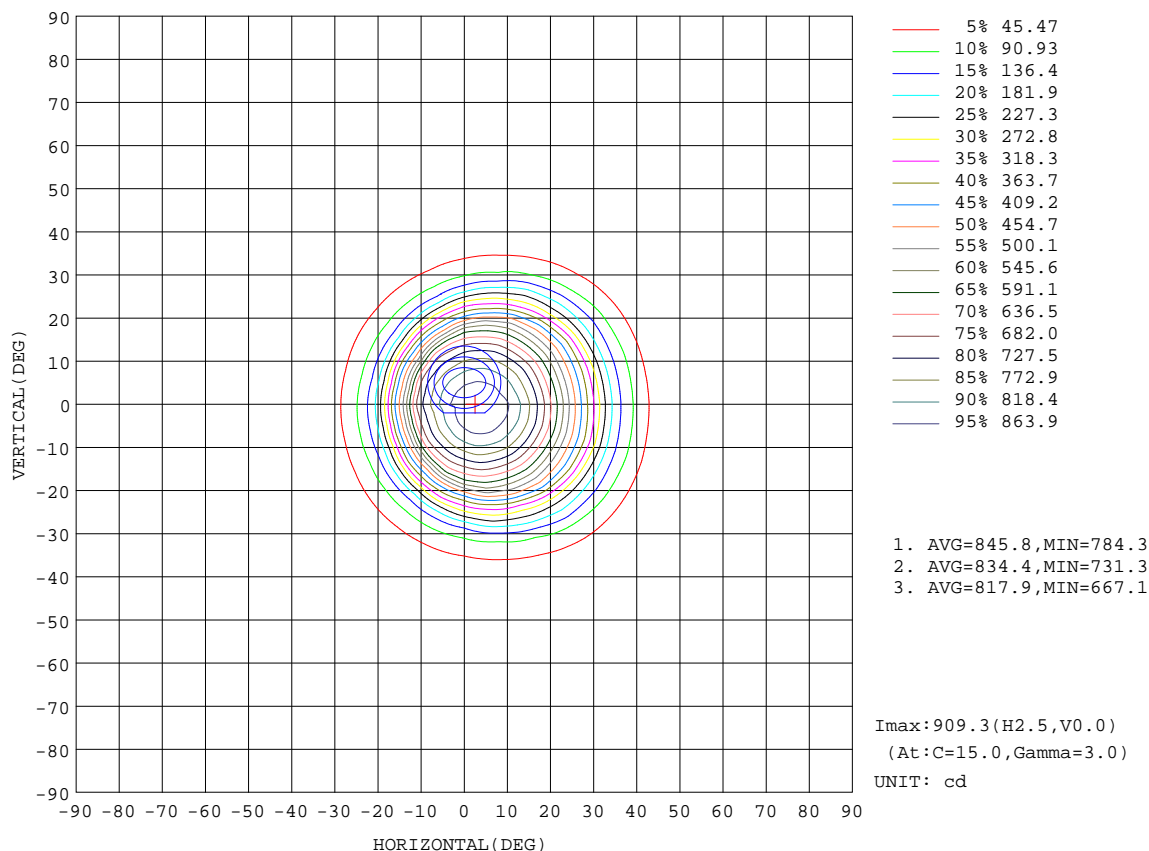
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	104	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	104	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	105	98
5.00	115	113	112	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:2020-10-27

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:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 40mm*H102mm	
MFR.: NEKO LIGHTING AG		

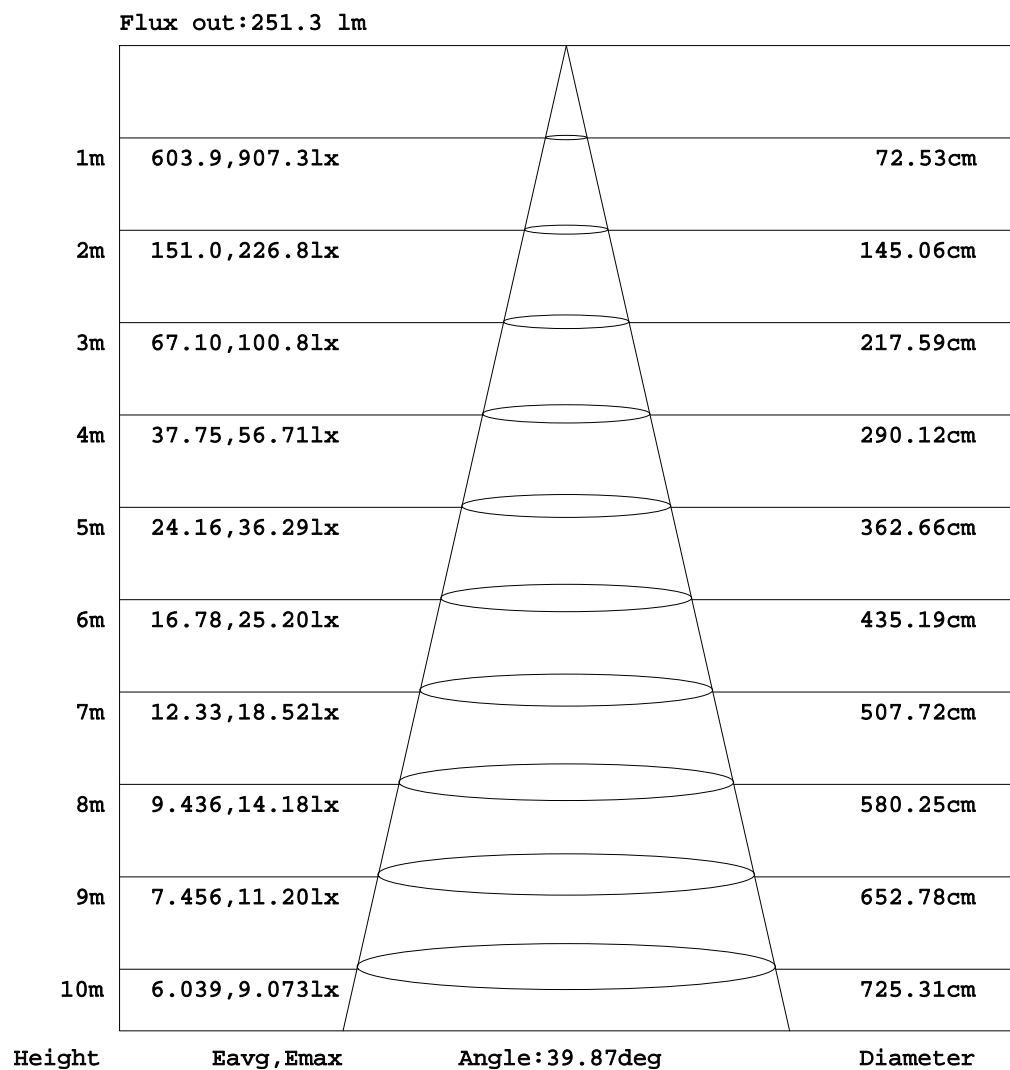


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 40\text{mm} \times H102\text{mm}$	
MFR.: NEKO LIGHTING AG		



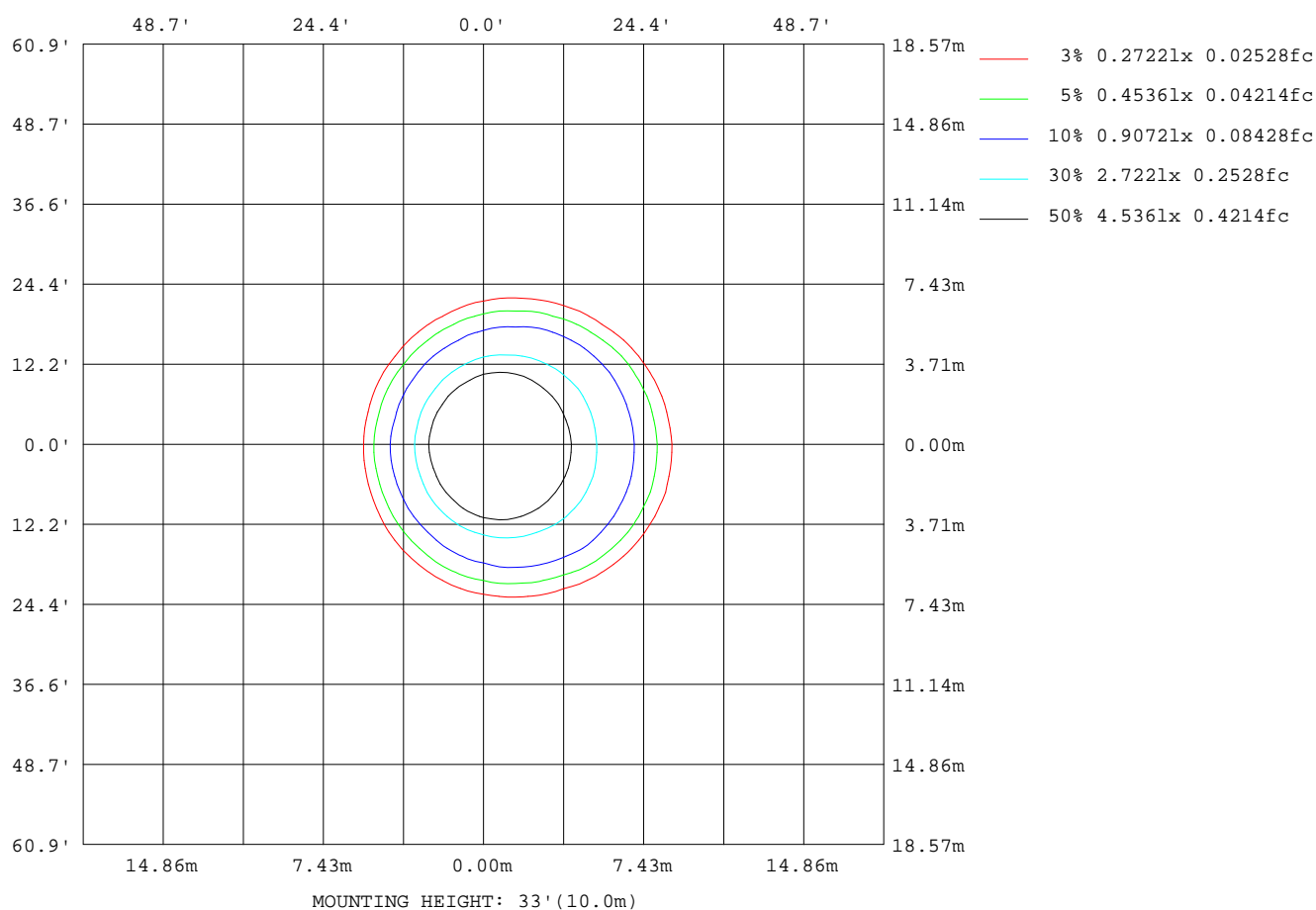
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi 40\text{mm} \times \text{H}102\text{mm}$	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jason
 Test Date: 2020-10-27

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:24.00V I:0.2360A P:5.664W PF:1.000 Freq:0Hz Lamp Flux:430.359x1 lm		
NAME: AFTER7 Mini-H-830-45	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 40mm*H102mm	
MFR.: NEKO LIGHTING AG		

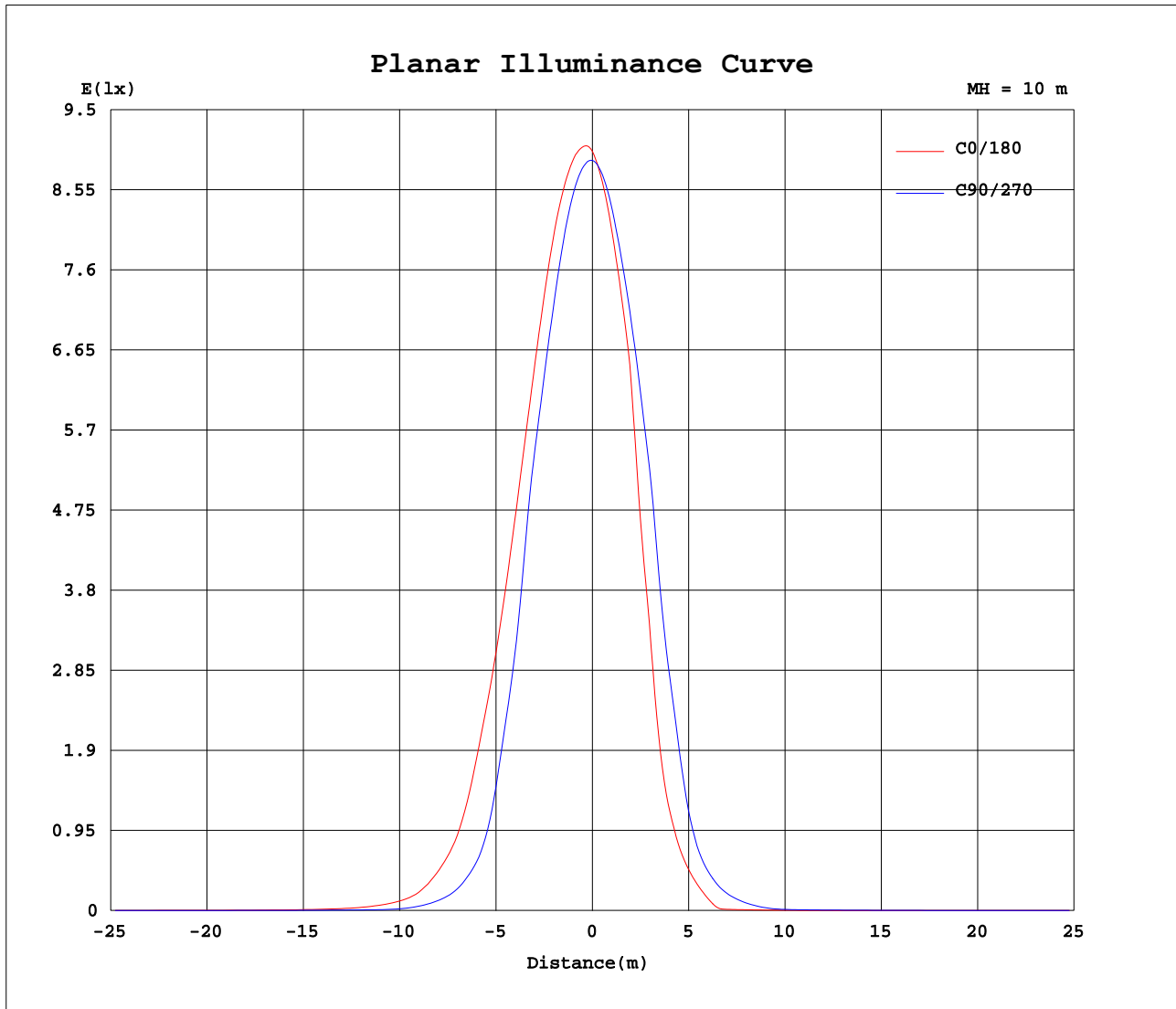
AvgL	cd/m2
L_0~180 (65) av	915
L_0~180 (75) av	898
L_0~180 (85) av	1625
L_90~270 (65) av	748
L_90~270 (75) av	486
L_90~270 (85) av	277
L_45 (65) av	736
L_45 (75) av	703
L_45 (85) av	1169

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-10-27

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: 2020-10-27

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:

```

```

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:

```