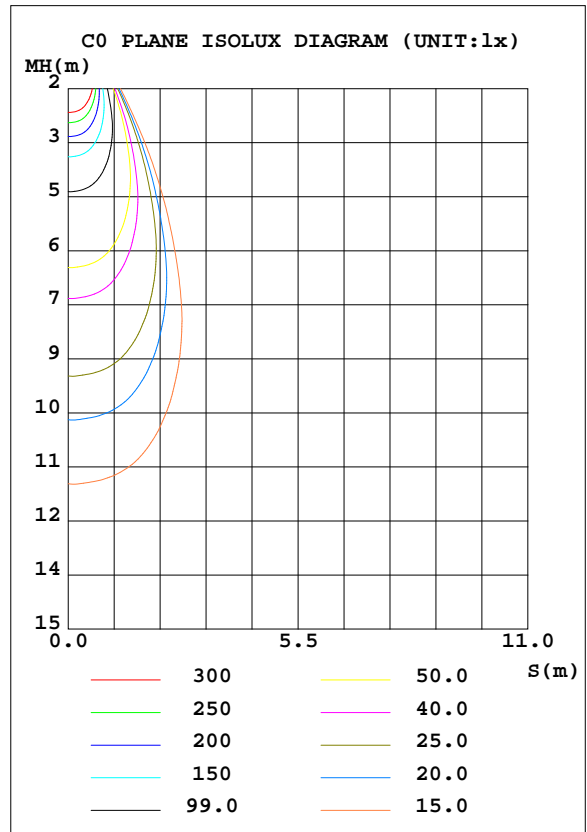
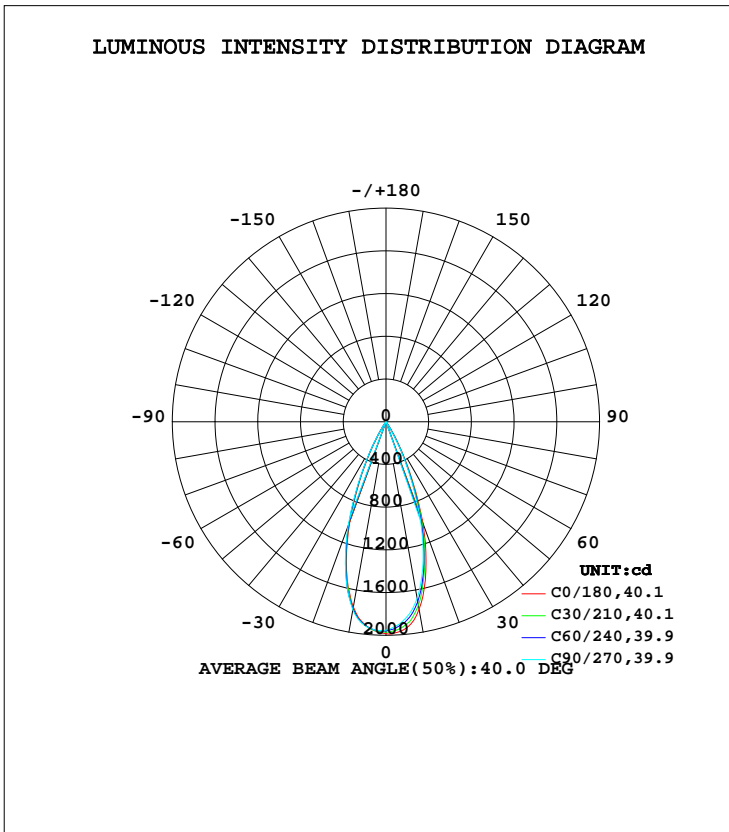


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 64.39 lm/W
MODEL	OSRAM-4000K	I _{max} (cd)	1988	S/MH(C0/180)	0.62	
NOMINAL POWER(W)	13.0	LOR(%)	100.0	S/MH(C90/270)	0.63	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	830.04	η UP, DN(C0-180)	0.0,48.2	
NOMINAL FLUX(lm)	830.036	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,51.8	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.65	



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 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	1786	1728	1681	1680	1761	1776	1790	1784	0- 10	177.4	177.4	21.4,21.4
20	1012	959.8	911.9	905.3	989.8	1007	1035	1027	10- 20	383.3	560.7	67.6,67.6
30	190.2	170.6	148.7	149.7	178.3	188.3	205.5	211.1	20- 30	239.4	800.1	96.4,96.4
40	3.238	3.182	2.700	2.779	3.326	3.397	3.588	3.844	30- 40	28.87	829.0	99.9,99.9
50	0.3284	0.3015	0.3064	0.3059	0.2993	0.2823	0.3255	0.3764	40- 50	0.6310	829.6	99.9,99.9
60	0.1619	0.1464	0.1728	0.1573	0.1486	0.1575	0.1573	0.1881	50- 60	0.2035	829.8	100,100
70	0.0919	0.0765	0.1072	0.0852	0.0699	0.0919	0.0852	0.1093	60- 70	0.1206	829.9	100,100
80	0.0525	0.0350	0.0635	0.0437	0.0262	0.0547	0.0371	0.0569	70- 80	0.0714	830.0	100,100
90	0.0350	0.0350	0.0372	0.0372	0.0219	0.0241	0.0219	0.0241	80- 90	0.0401	830.0	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): 829.44 lm

%lum = 99.9%
%lamp = 99.9%

Conical surface Flux(120deg): 829.8 lm

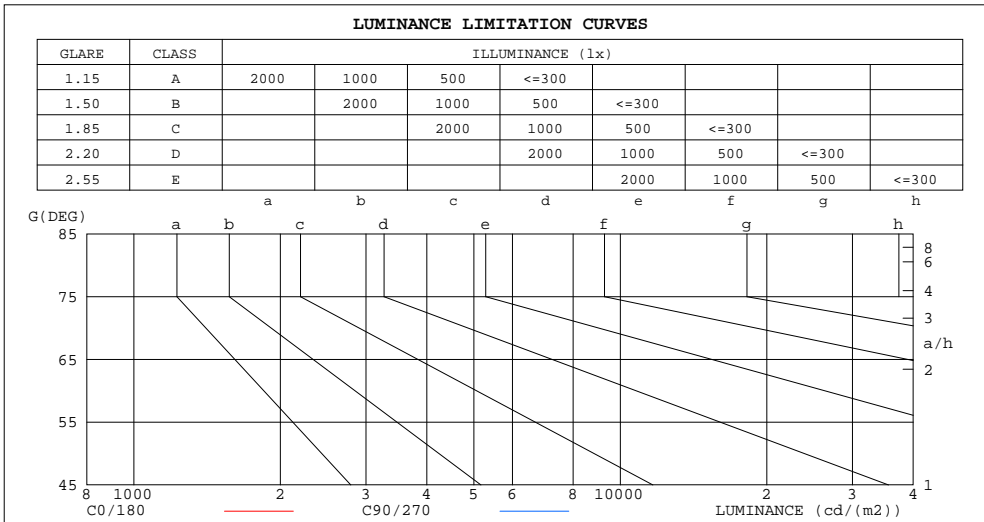
%lum = 100.0%
%lamp = 100.0%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Meng Yongjian
Test Date:2017-06-13

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
Humidity:52%
Test Distance:5.850m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	66	80
80	44	53
75	41	47
70	39	46
65	41	46
60	47	50
55	57	57
50	74	69
45	113	98

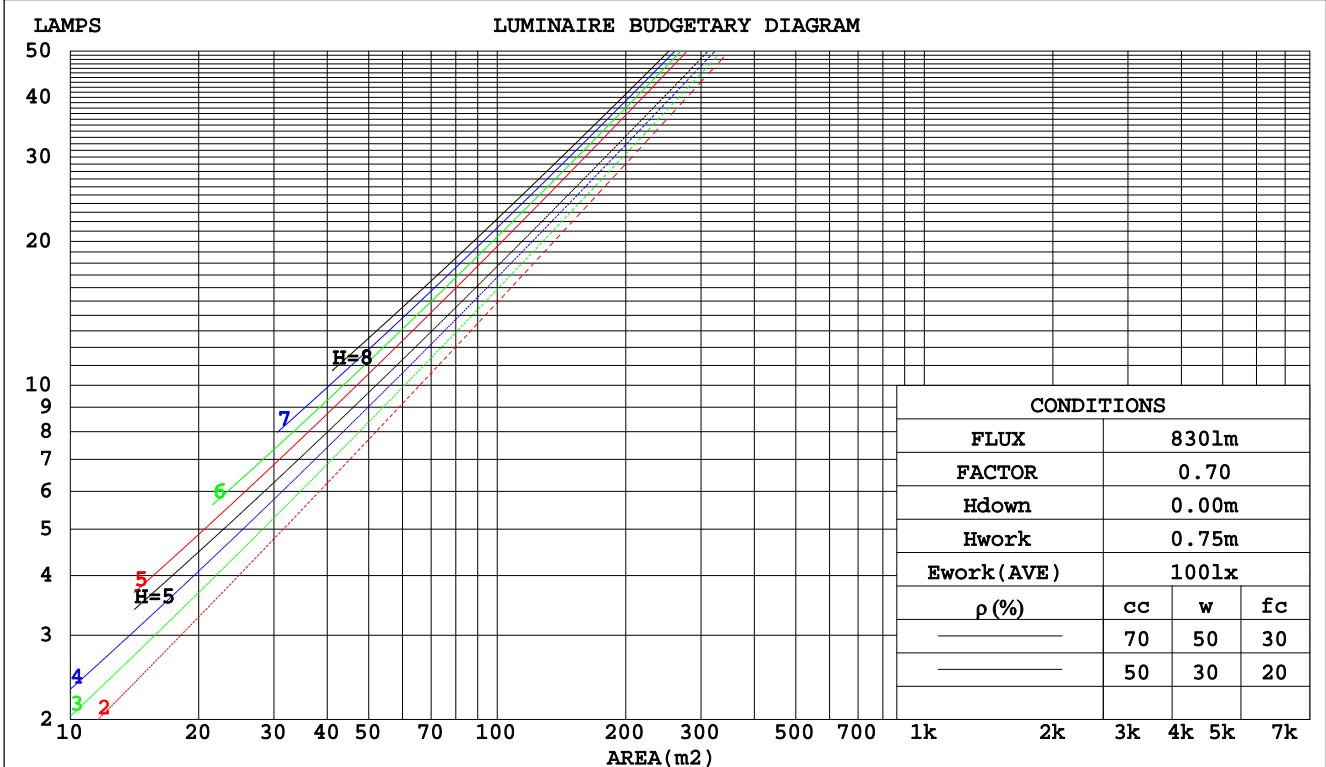
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 Test Distance:5.850m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																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	1.07	1.06	1.05	1.03	1.03	1.01	1.00	.99	.98	.98	.96
2.0	1.07	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	.92	.88	.85	.92	.87	.84	.90	.86	.83	.88	.85	.83	.87	.84	.82	.81
6.0	.89	.84	.81	.88	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.79	.78
7.0	.85	.80	.77	.84	.80	.77	.83	.79	.77	.82	.79	.76	.81	.78	.76	.75
8.0	.82	.77	.74	.81	.77	.74	.80	.76	.73	.79	.76	.73	.78	.75	.73	.72
9.0	.79	.74	.71	.78	.74	.71	.77	.73	.71	.77	.73	.70	.76	.73	.70	.69
10.0	.76	.71	.68	.75	.71	.68	.75	.71	.68	.74	.70	.68	.73	.70	.68	.67



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Meng Yongjian
 Test Date: 2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity: 52%
 Test Distance: 5.850m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

ρcc	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	.147	.084	.026	.140	.080	.025	.128	.073	.023	.117	.067	.022	.106	.061	.020	
2.0	.137	.075	.023	.132	.073	.022	.122	.068	.021	.112	.063	.020	.103	.058	.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	.111	.059	.018	.104	.056	.017	.098	.053	.016	
5.0	.116	.059	.017	.112	.058	.017	.106	.055	.016	.100	.053	.016	.095	.051	.015	
6.0	.110	.055	.016	.107	.054	.016	.102	.052	.015	.097	.050	.015	.092	.048	.014	
7.0	.105	.052	.015	.103	.051	.015	.098	.050	.014	.093	.048	.014	.089	.046	.014	
8.0	.101	.049	.014	.099	.049	.014	.094	.047	.013	.090	.046	.013	.087	.044	.013	
9.0	.097	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013	.084	.043	.012	
10.0	.093	.045	.012	.091	.044	.012	.088	.043	.012	.085	.042	.012	.082	.041	.012	

ρcc	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						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	.116	.086	.064	.099	.074	.056	.068	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.107	.076	.054	.092	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.007	
7.0	.100	.068	.046	.086	.059	.040	.059	.041	.028	.035	.024	.017	.011	.008	.006	
8.0	.094	.062	.040	.081	.054	.034	.056	.038	.024	.033	.022	.015	.011	.007	.005	
9.0	.089	.056	.034	.076	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.084	.052	.030	.072	.045	.026	.050	.032	.019	.029	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 Test Distance:5.850m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
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	4.8	5.5	5.0	5.7	5.8	3.6	4.4	3.8	4.5	4.7
3H	4.6	5.3	4.9	5.5	5.7	3.5	4.2	3.7	4.4	4.5
4H	4.6	5.2	4.8	5.4	5.6	3.4	4.0	3.7	4.3	4.5
6H	4.5	5.1	4.8	5.3	5.5	3.3	3.9	3.6	4.2	4.4
8H	4.4	5.0	4.7	5.3	5.5	3.3	3.9	3.6	4.1	4.4
12H	4.4	4.9	4.7	5.2	5.5	3.2	3.8	3.5	4.1	4.3
4H 2H	4.6	5.2	4.8	5.4	5.6	3.4	4.0	3.7	4.3	4.5
3H	4.4	4.9	4.7	5.2	5.5	3.2	3.8	3.5	4.1	4.3
4H	4.3	4.8	4.6	5.1	5.4	3.1	3.6	3.5	3.9	4.2
6H	4.2	4.6	4.6	5.0	5.3	3.0	3.5	3.4	3.8	4.2
8H	4.1	4.6	4.5	4.9	5.3	3.0	3.4	3.4	3.8	4.1
12H	4.1	4.5	4.5	4.8	5.2	2.9	3.3	3.3	3.7	4.1
8H 4H	4.1	4.6	4.5	4.9	5.3	3.0	3.4	3.4	3.8	4.1
6H	4.0	4.4	4.5	4.8	5.2	2.9	3.2	3.3	3.6	4.0
8H	4.0	4.3	4.4	4.7	5.1	2.8	3.1	3.3	3.5	4.0
12H	3.9	4.2	4.4	4.6	5.1	2.8	3.0	3.2	3.5	3.9
12H 4H	4.1	4.5	4.5	4.8	5.2	2.9	3.3	3.3	3.7	4.1
6H	4.0	4.3	4.4	4.7	5.1	2.8	3.1	3.3	3.5	4.0
8H	3.9	4.2	4.4	4.6	5.1	2.8	3.0	3.2	3.5	3.9
Variations with the observer position at spacings:										
S = 1.0H	+ 5.6 / -10.1					+ 4.7 / - 7.8				
1.5H	+ 8.4 / - 9.6					+ 7.4 / - 7.4				
2.0H	+ 2.0 / - 0.8					+ 1.2 / - 0.7				

CIE Pub.117, 830.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.6)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 Test Distance:5.850m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

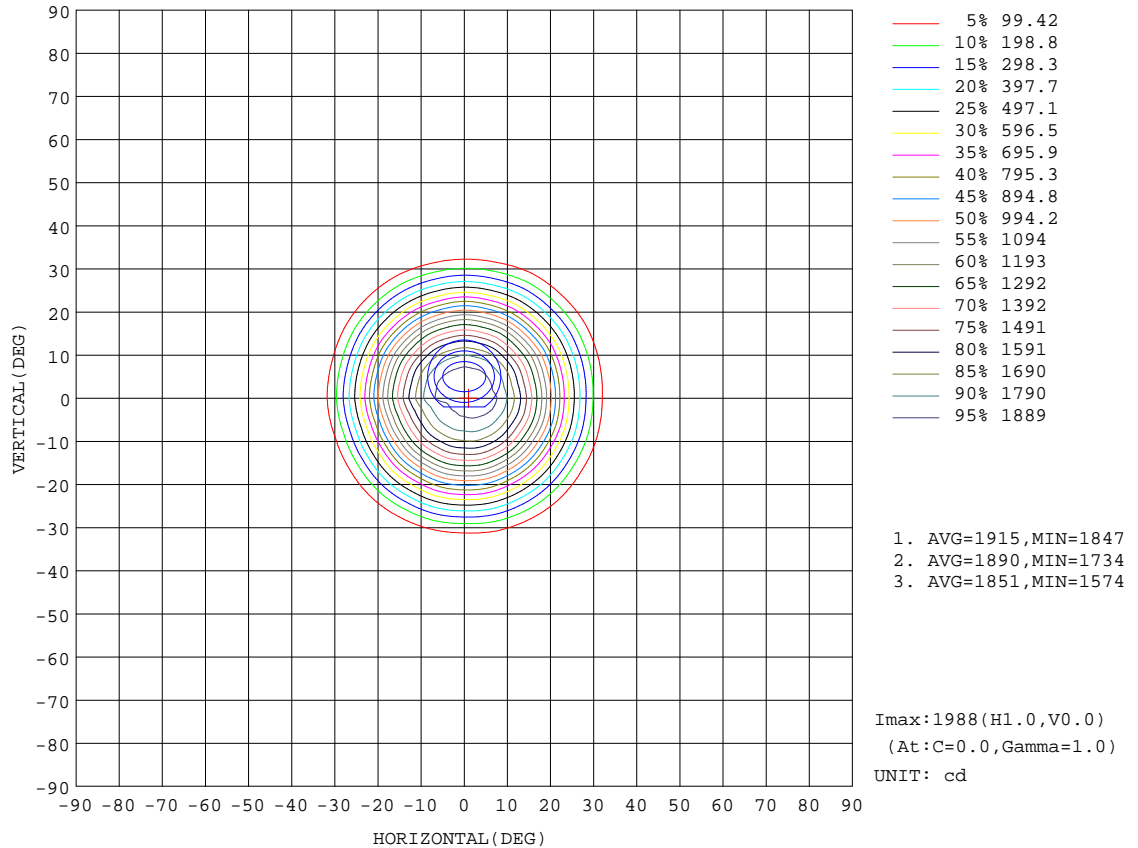
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	92	86	83	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	97	92	90	86
1.00	102	97	94	101	97	94	100	96	93	90
1.25	105	101	98	105	100	98	103	99	97	93
1.50	108	104	101	107	103	100	105	102	99	95
2.00	110	106	103	109	105	103	106	103	101	96
2.50	111	108	105	110	107	105	107	104	103	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	113	111	109	109	107	106	99
5.00	116	114	112	114	112	111	110	109	108	100
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:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 Test Distance:5.850m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

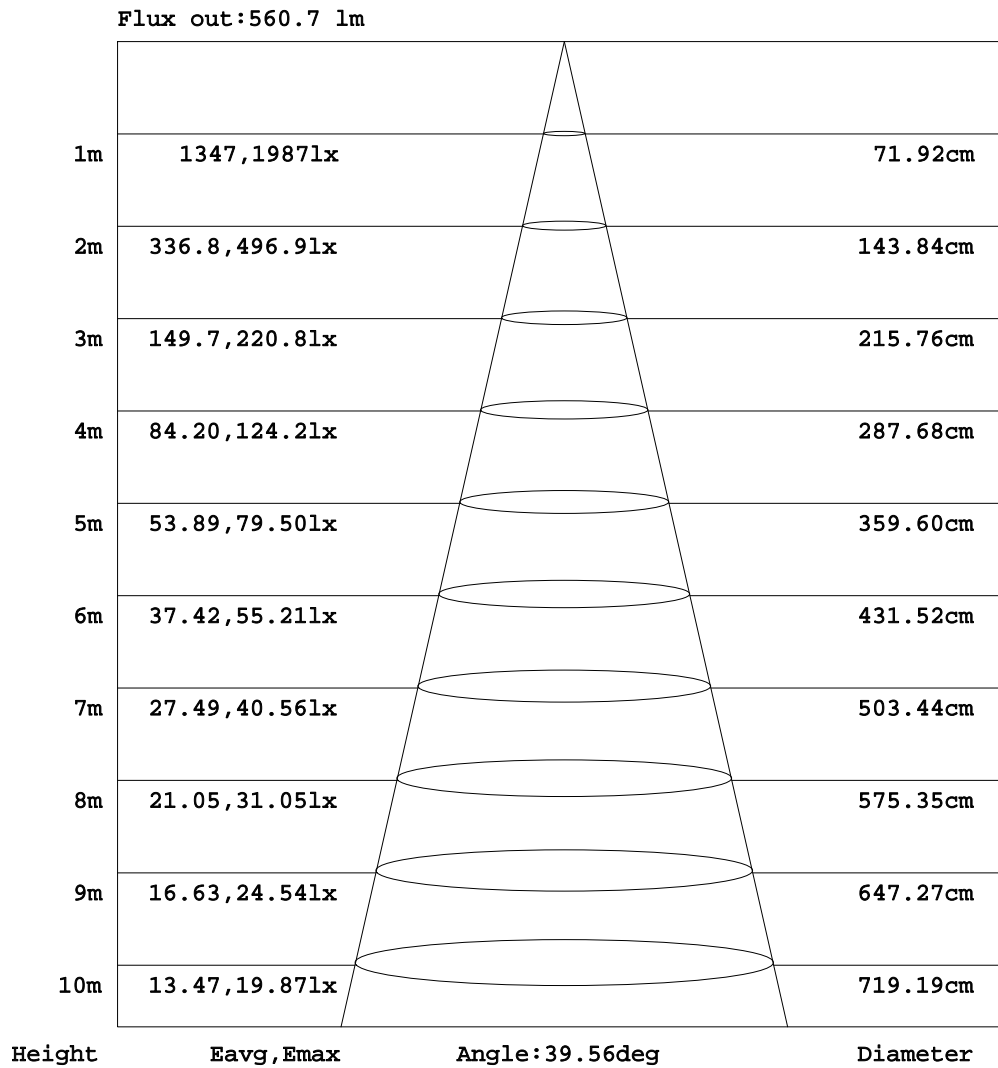


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 Test Distance:5.850m [K=1.0000]
 Remarks:

AAI Figure

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



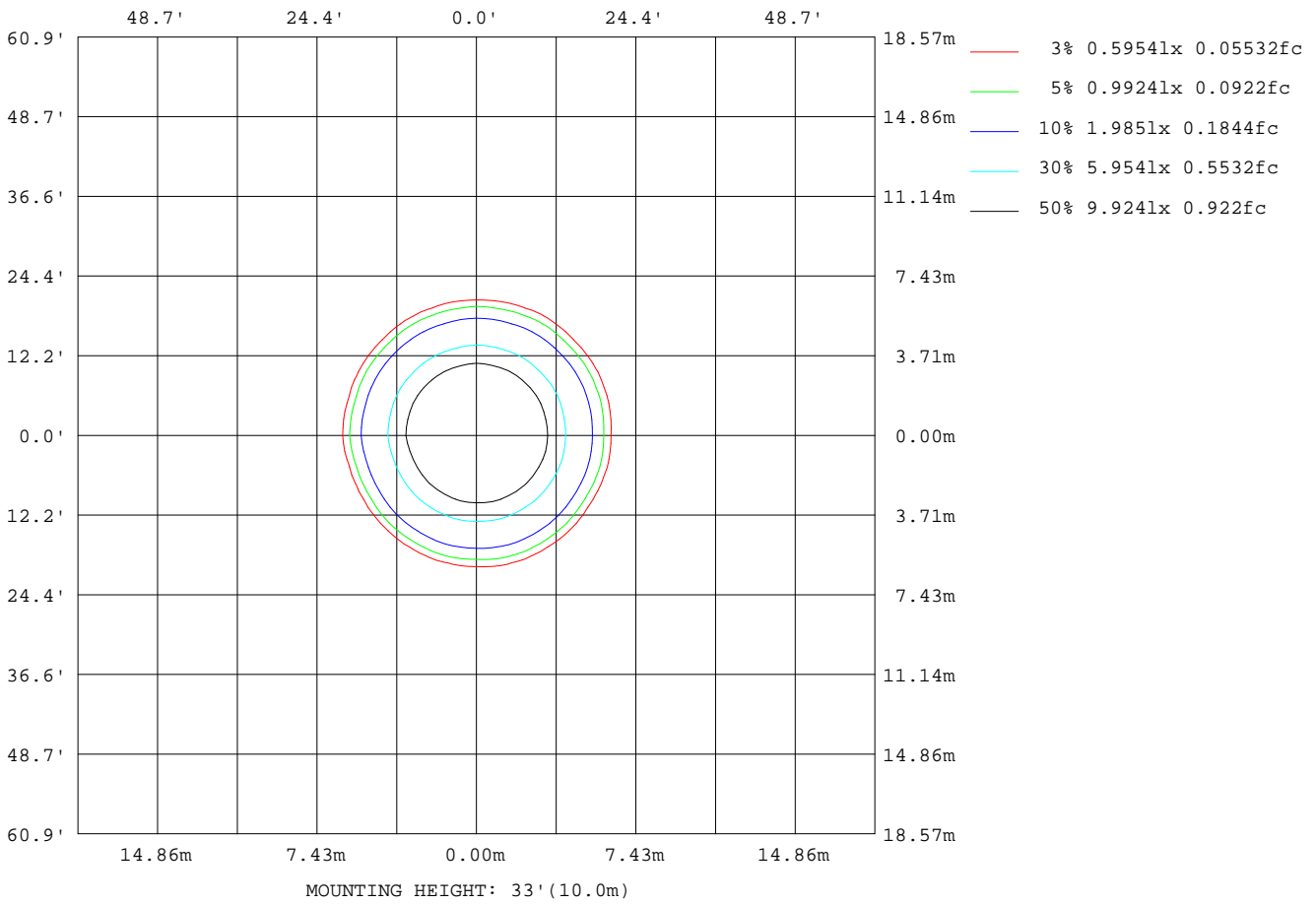
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Meng Yongjian
Test Date:2017-06-13

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
Humidity:52%
Test Distance:5.850m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Meng Yongjian
 Test Date:2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity:52%
 Test Distance:5.850m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:220.8V I:0.0648A P:12.89W PF:0.9014 Freq:50.00Hz Lamp Flux:830.036x1 lm		
NAME: FA5-11W-840-40D Black	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

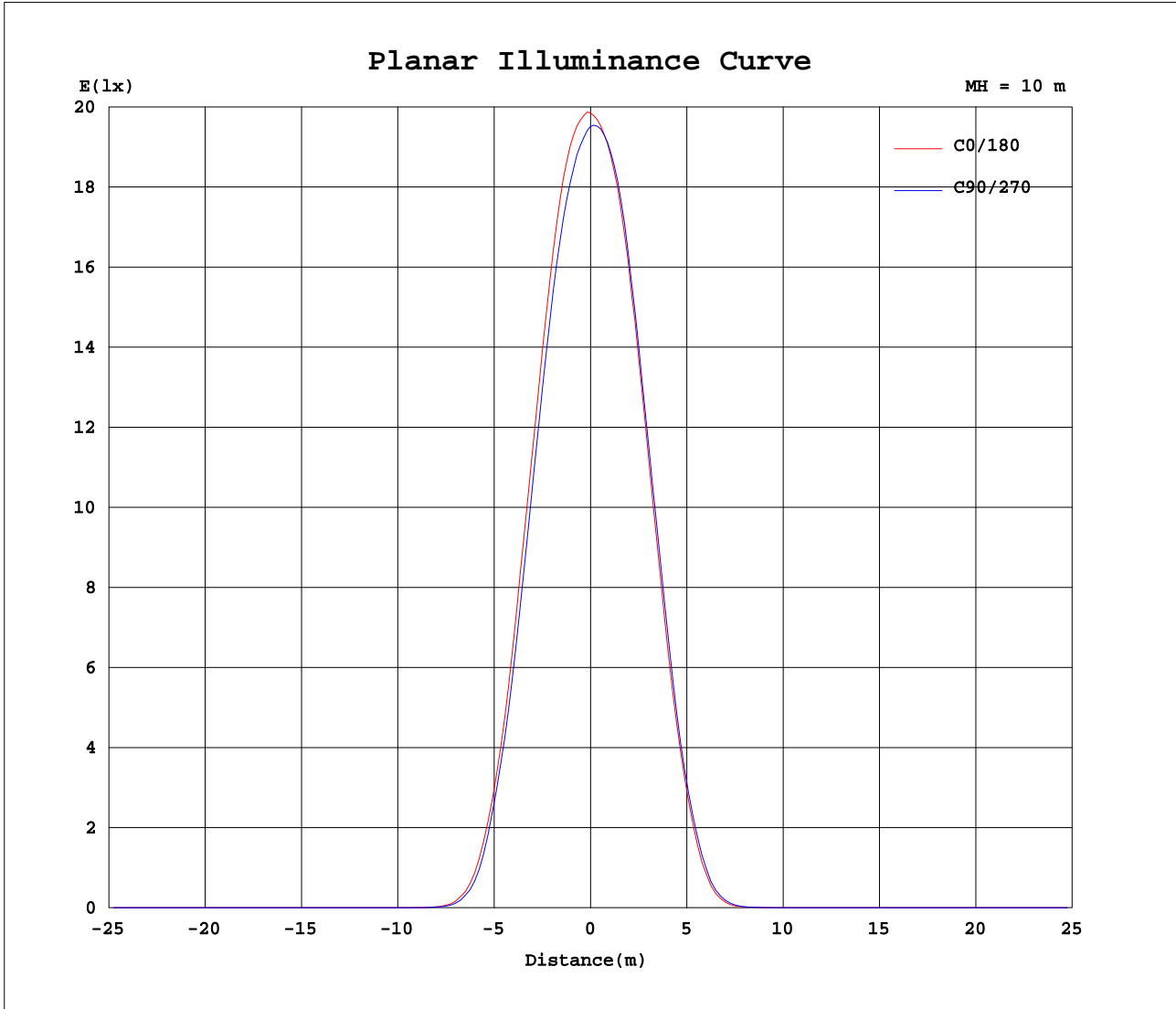
AvgL	cd/m2
L_0~180(65)av	39
L_0~180(75)av	34
L_0~180(85)av	51
L_90~270(65)av	42
L_90~270(75)av	41
L_90~270(85)av	62
L_45(65)av	42
L_45(75)av	39
L_45(85)av	63

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Meng Yongjian
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Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288
Humidity:52%
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: Meng Yongjian
 Test Date: 2017-06-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.288
 Humidity: 52%
 Test Distance: 5.850m [K=1.0000]
 Remarks:

