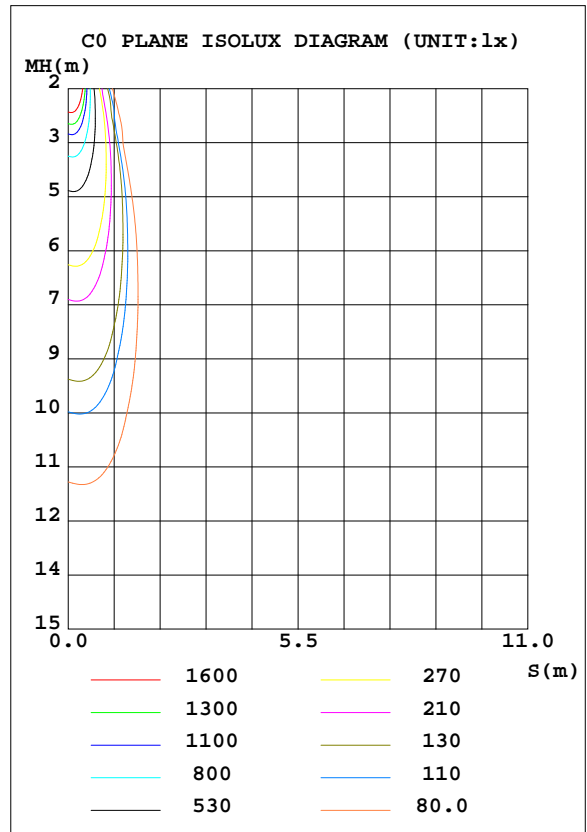
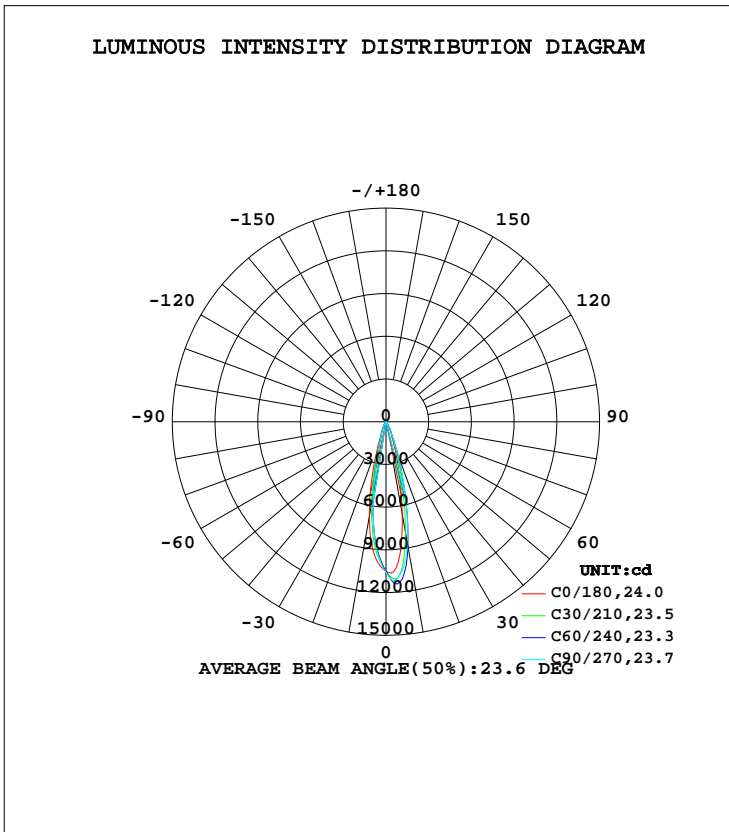


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 91.02 lm/W
MODEL	OSRAM-4000K	I _{max} (cd)	11431	S/MH(C0/180)	0.41	
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	0.33	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	2289.2	η UP, DN(C0-180)	0.0,60.4	
NOMINAL FLUX(lm)	2289.21	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,39.6	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.00	



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:Cao Chengpei
 Test Date:2019-06-23

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	659.9	857.9	871.6	798.2	677.6	533.0	505.6	542.7	0- 10	829.6	829.6	36.2,36.2
20	144.6	228.7	238.0	195.2	126.9	94.52	95.29	108.1	10- 20	997.2	1827	79.8,79.8
30	33.37	48.85	53.25	47.93	35.16	26.63	25.15	27.04	20- 30	361.3	2188	95.6,95.6
40	2.152	5.229	5.800	4.482	2.051	0.9290	0.8813	1.005	30- 40	91.08	2279	99.6,99.6
50	0.2981	0.3103	0.3179	0.2971	0.2906	0.2852	0.2951	0.2939	40- 50	6.216	2285	99.8,99.8
60	0.1891	0.2136	0.2032	0.1807	0.1681	0.1343	0.1221	0.1552	50- 60	2.109	2287	99.9,99.9
70	0.0827	0.0958	0.0789	0.0694	0.0672	0.0537	0.0477	0.0576	60- 70	1.117	2289	100,100
80	0.0307	0.0336	0.0339	0.0283	0.0262	0.0209	0.0177	0.0222	70- 80	0.4715	2289	100,100
90	0.0113	0.0115	0.0119	0.0102	0.0096	0.0085	0.0083	0.0075	80- 90	0.1734	2289	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 2283.9 lm

%lum = 99.8%
%lamp = 99.8%

Conical surface Flux(120deg): 2287.5 lm

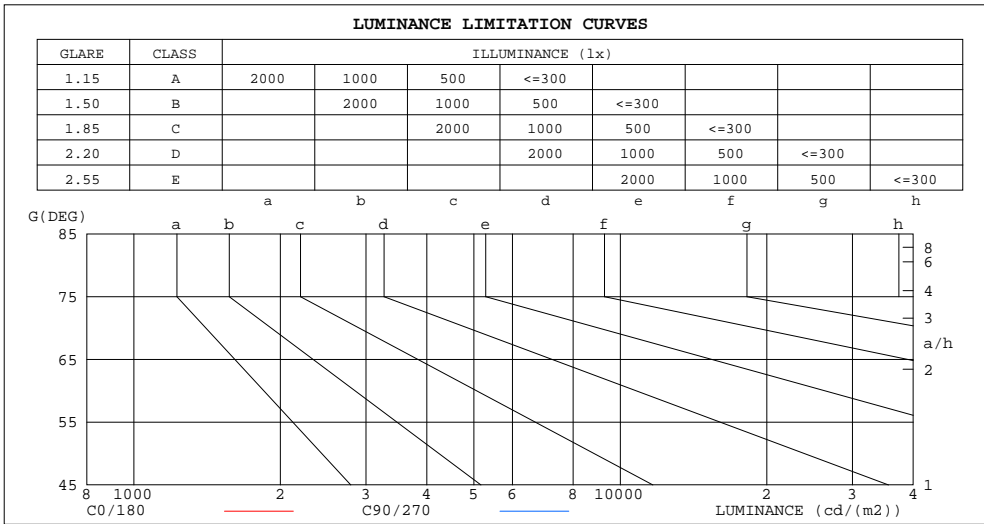
%lum = 99.9%
%lamp = 99.9%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:Cao Chengpei
Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	158	188
80	136	150
75	148	153
70	185	177
65	239	235
60	290	311
55	330	363
50	355	379
45	378	869

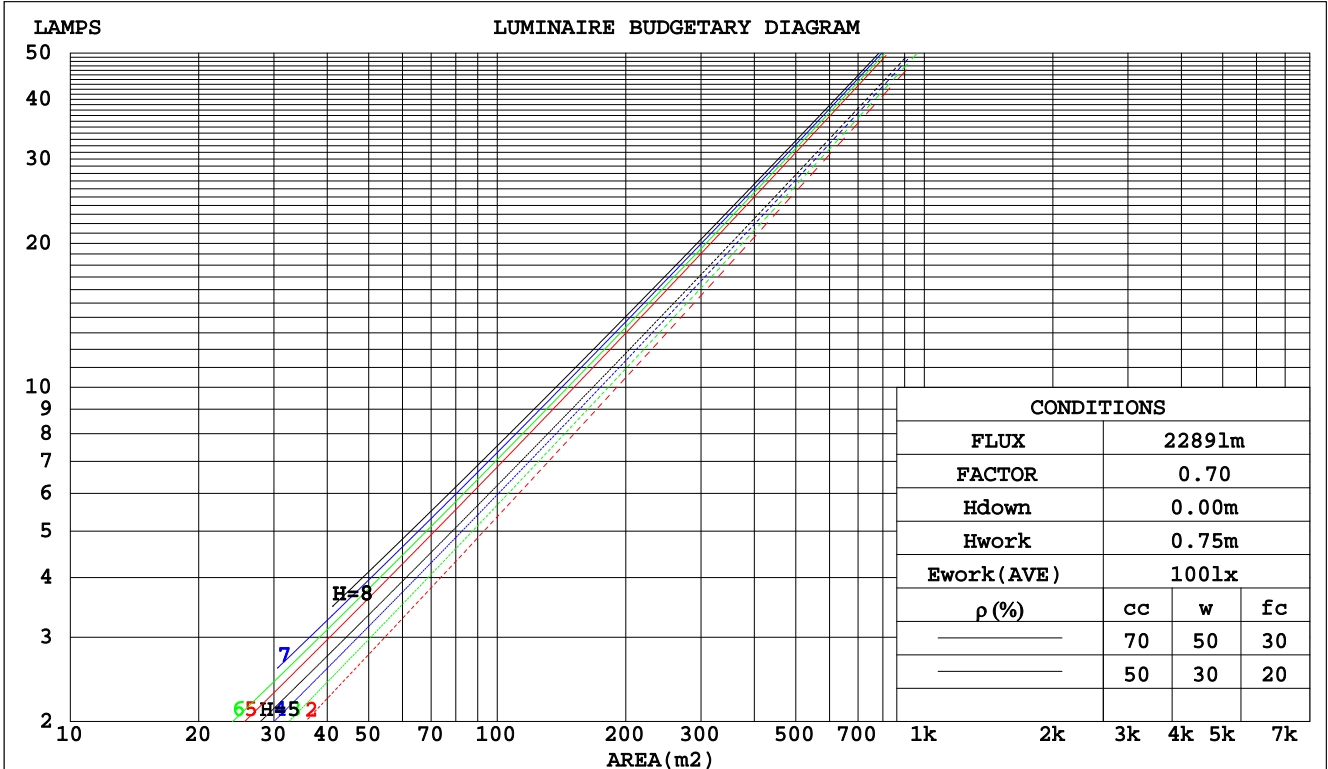
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:Cao Chengpei
 Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*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																
pfc																
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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.02	1.06	1.03	1.01	1.03	1.01	.99	1.00	.98	.97	.98	.96	.95	.94
3.0	1.03	.00	.97	1.02	.99	.96	.00	.97	.95	.97	.95	.93	.95	.93	.92	.91
4.0	.99	.95	.92	.98	.95	.92	.96	.93	.91	.94	.92	.90	.93	.91	.89	.88
5.0	.96	.92	.89	.95	.91	.88	.93	.90	.88	.92	.89	.87	.90	.88	.86	.85
6.0	.93	.88	.85	.92	.88	.85	.91	.87	.85	.89	.86	.84	.88	.86	.84	.83
7.0	.90	.85	.83	.89	.85	.82	.88	.84	.82	.87	.84	.82	.86	.83	.81	.80
8.0	.87	.83	.80	.86	.83	.80	.85	.82	.80	.85	.82	.79	.84	.81	.79	.78
9.0	.84	.80	.78	.84	.80	.78	.83	.80	.77	.82	.79	.77	.82	.79	.77	.76
10.0	.82	.78	.75	.82	.78	.75	.81	.78	.75	.80	.77	.75	.80	.77	.75	.74



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.2DEG
 Operators: Cao Chengpei
 Test Date: 2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*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	.135	.077	.024	.129	.073	.023	.116	.067	.021	.105	.061	.019	.094	.055	.018	
2.0	.125	.069	.021	.120	.066	.020	.110	.061	.019	.100	.056	.018	.092	.052	.016	
3.0	.117	.062	.019	.112	.060	.018	.104	.056	.017	.096	.053	.016	.089	.049	.015	
4.0	.109	.057	.017	.106	.055	.016	.098	.052	.016	.092	.049	.015	.086	.047	.014	
5.0	.103	.053	.015	.100	.051	.015	.094	.049	.014	.088	.046	.014	.083	.044	.013	
6.0	.098	.049	.014	.095	.048	.014	.090	.046	.013	.085	.044	.013	.080	.042	.013	
7.0	.093	.046	.013	.090	.045	.013	.086	.043	.012	.081	.042	.012	.077	.040	.012	
8.0	.088	.043	.012	.086	.042	.012	.082	.041	.012	.079	.040	.011	.075	.039	.011	
9.0	.085	.041	.011	.083	.040	.011	.079	.039	.011	.076	.038	.011	.073	.037	.011	
10.0	.081	.039	.011	.079	.038	.011	.076	.037	.011	.073	.036	.010	.070	.035	.010	

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	.168	.158	.148	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.128	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.116	.098	.083	.079	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.122	.098	.079	.105	.085	.069	.072	.059	.048	.042	.035	.029	.013	.011	.009	
5.0	.112	.086	.066	.096	.074	.058	.066	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.103	.076	.056	.088	.065	.049	.061	.046	.034	.035	.027	.020	.011	.009	.007	
7.0	.095	.067	.048	.082	.058	.042	.057	.041	.029	.033	.024	.018	.011	.008	.006	
8.0	.089	.061	.041	.076	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.083	.055	.036	.072	.048	.031	.050	.033	.022	.029	.020	.013	.009	.006	.004	
10.0	.078	.050	.031	.067	.044	.027	.047	.031	.019	.027	.018	.012	.009	.006	.004	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:Cao Chengpei
 Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*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	3.9	4.6	4.1	4.7	4.9	7.1	7.8	7.3	7.9	8.1
3H	3.8	4.4	4.0	4.6	4.8	7.0	7.6	7.2	7.8	8.0
4H	3.7	4.3	4.0	4.5	4.7	6.9	7.5	7.2	7.7	7.9
6H	3.7	4.2	3.9	4.4	4.7	6.8	7.4	7.1	7.6	7.8
8H	3.6	4.1	3.9	4.4	4.6	6.8	7.3	7.1	7.6	7.8
12H	3.6	4.1	3.9	4.3	4.6	6.7	7.2	7.0	7.5	7.8
4H 2H	3.7	4.3	4.0	4.5	4.7	6.9	7.5	7.2	7.7	7.9
3H	3.6	4.1	3.9	4.3	4.6	6.7	7.2	7.0	7.5	7.8
4H	3.5	3.9	3.8	4.2	4.5	6.7	7.1	7.0	7.4	7.7
6H	3.4	3.8	3.8	4.1	4.5	6.6	7.0	6.9	7.3	7.6
8H	3.3	3.7	3.7	4.1	4.4	6.5	6.9	6.9	7.2	7.6
12H	3.3	3.6	3.7	4.0	4.4	6.4	6.8	6.8	7.2	7.5
8H 4H	3.3	3.7	3.7	4.1	4.4	6.5	6.9	6.9	7.2	7.6
6H	3.2	3.5	3.7	3.9	4.3	6.4	6.7	6.8	7.1	7.5
8H	3.2	3.5	3.6	3.9	4.3	6.3	6.6	6.8	7.0	7.5
12H	3.1	3.4	3.6	3.8	4.3	6.3	6.5	6.7	6.9	7.4
12H 4H	3.3	3.6	3.7	4.0	4.4	6.4	6.8	6.8	7.2	7.5
6H	3.2	3.5	3.6	3.9	4.3	6.3	6.6	6.8	7.0	7.5
8H	3.1	3.4	3.6	3.8	4.3	6.3	6.5	6.7	6.9	7.4
Variations with the observer position at spacings:										
S = 1.0H	+ 3.0 / - 8.5					+ 4.3 / -11.4				
1.5H	+ 5.7 / - 8.1					+ 7.1 / -11.0				
2.0H	+ 0.4 / - 0.6					+ 3.2 / - 1.0				

CIE Pub.117, 2289 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.9)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:Cao Chengpei
 Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

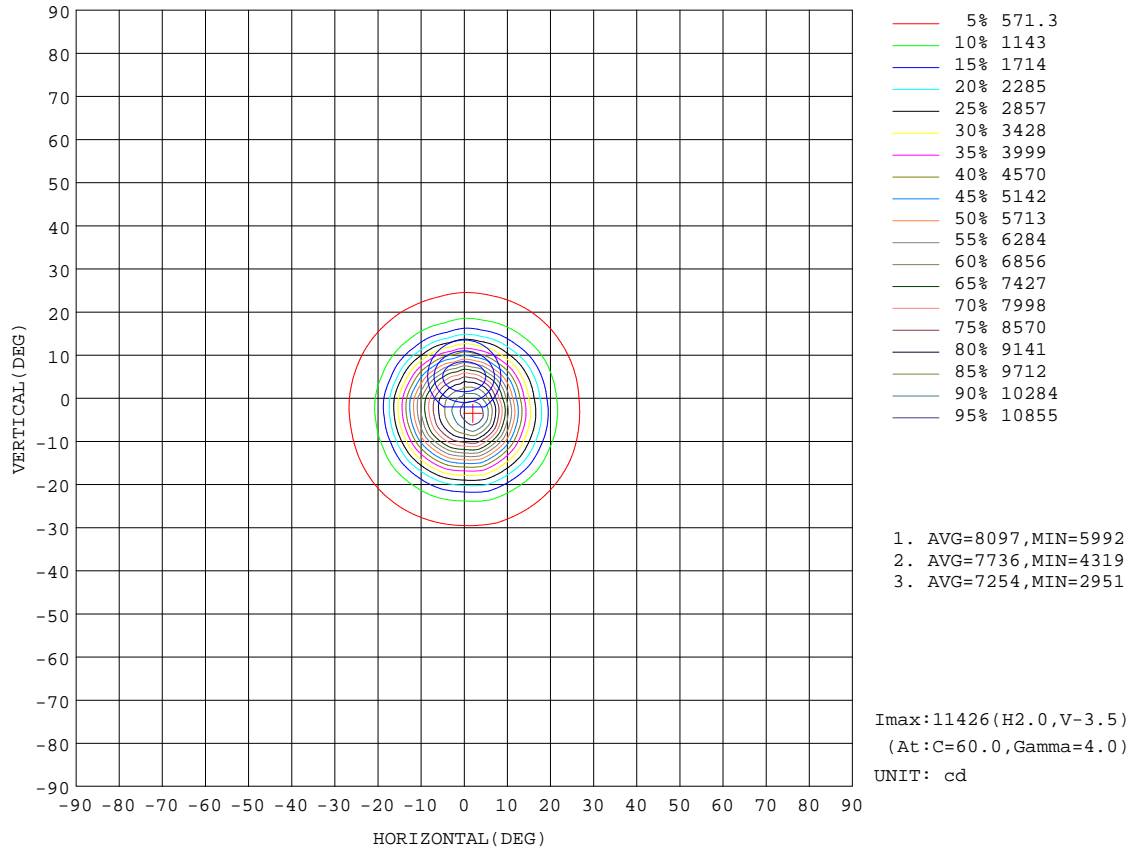
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	96	92	89	86
1.00	102	97	94	101	97	93	100	96	93	89
1.25	105	101	98	104	100	97	103	99	97	93
1.50	108	104	101	107	103	100	104	101	99	95
2.00	110	106	103	109	105	103	106	103	101	96
2.50	111	108	105	110	107	104	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	107	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:25.2DEG
 Operators:Cao Chengpei
 Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



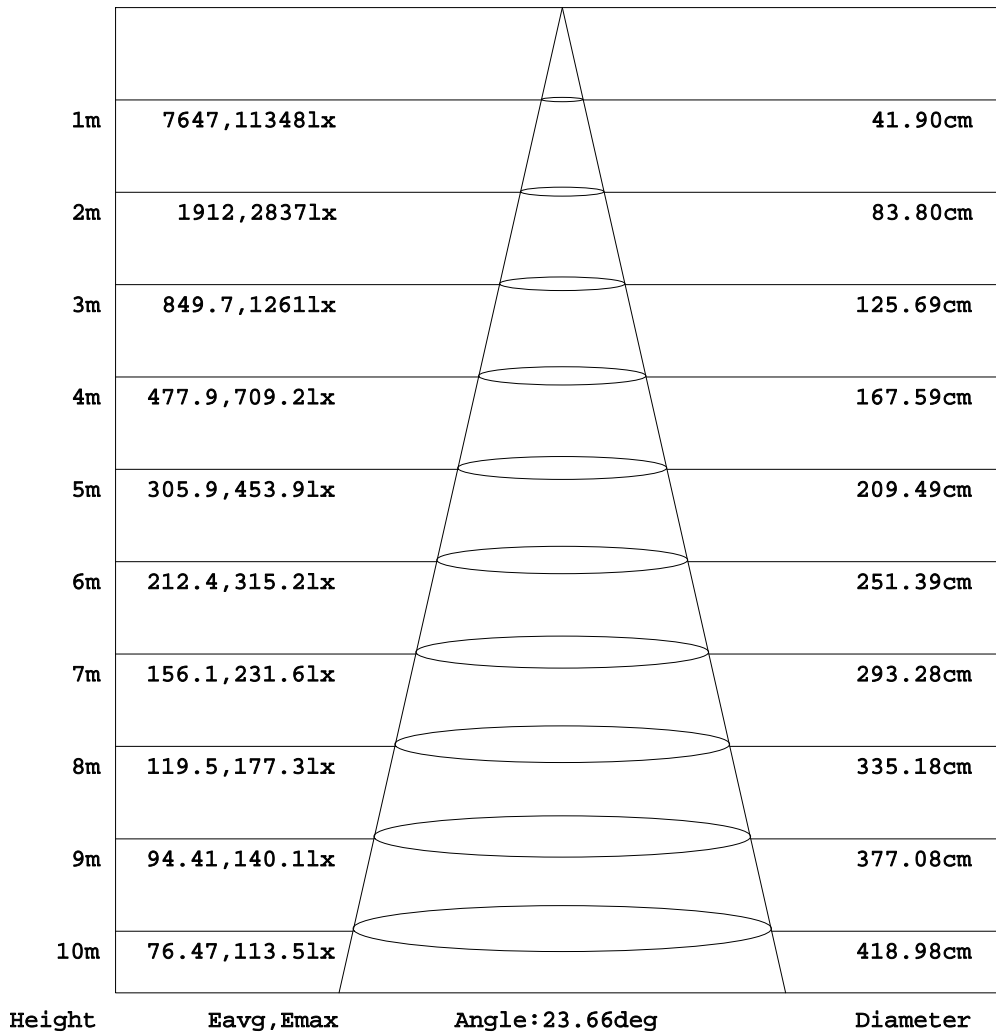
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:Cao Chengpei
 Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

Flux out:1085 lm



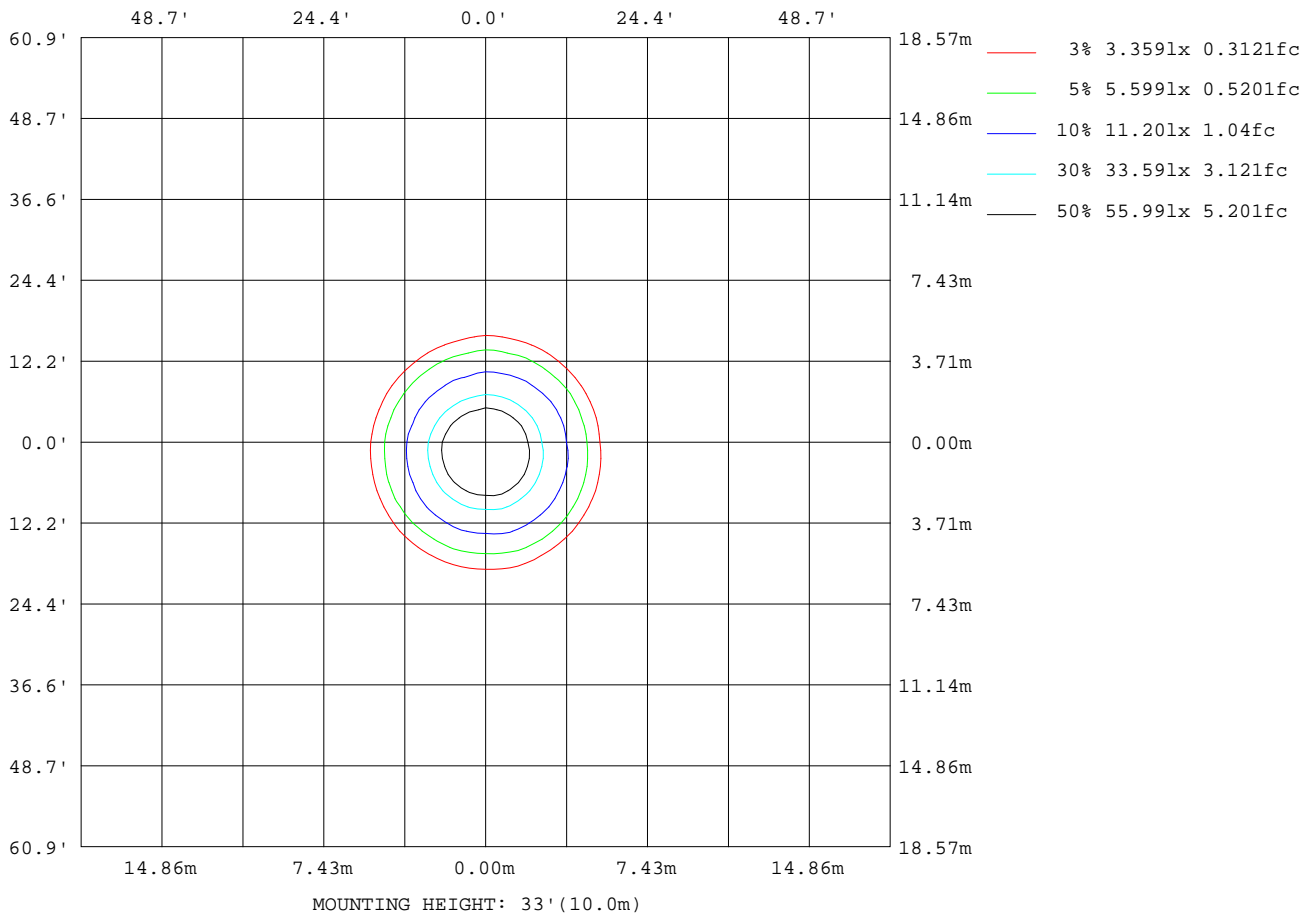
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:Cao Chengpei
Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:Cao Chengpei
Test Date:2019-06-23

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:220.0V I:0.1185A P:25.15W PF:0.9646 Freq:50.00Hz Lamp Flux:2289.21x1 lm		
NAME: FA10-840-24D Specular	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L290mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

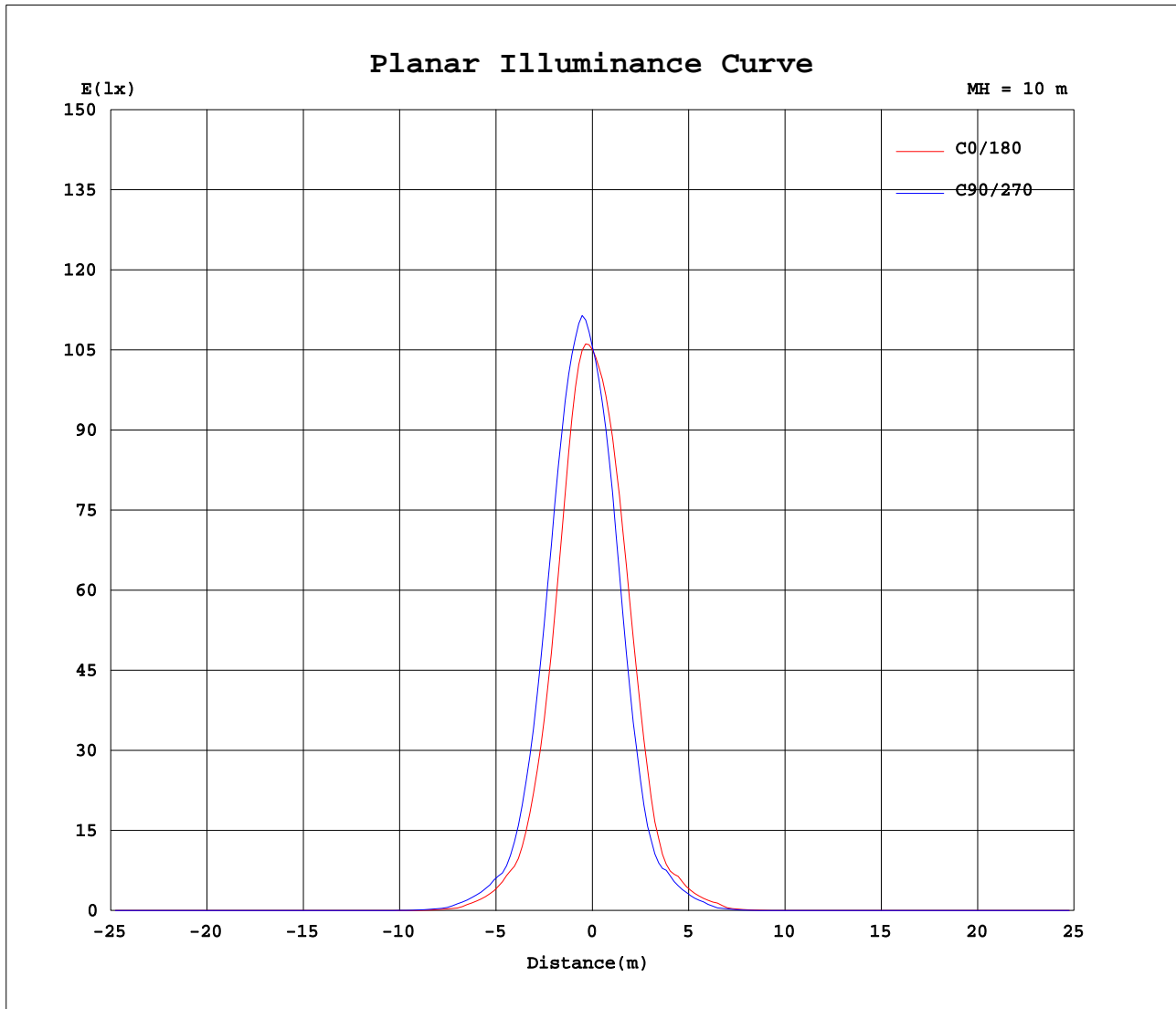
AvgL	cd/m2
L_0~180(65)av	216
L_0~180(75)av	136
L_0~180(85)av	141
L_90~270(65)av	183
L_90~270(75)av	121
L_90~270(85)av	131
L_45(65)av	200
L_45(75)av	128
L_45(85)av	130

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:Cao Chengpei
Test Date:2019-06-23

γ Range: 0 - 90DEG
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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: 25.2DEG
 Operators: Cao Chengpei
 Test Date: 2019-06-23

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:

