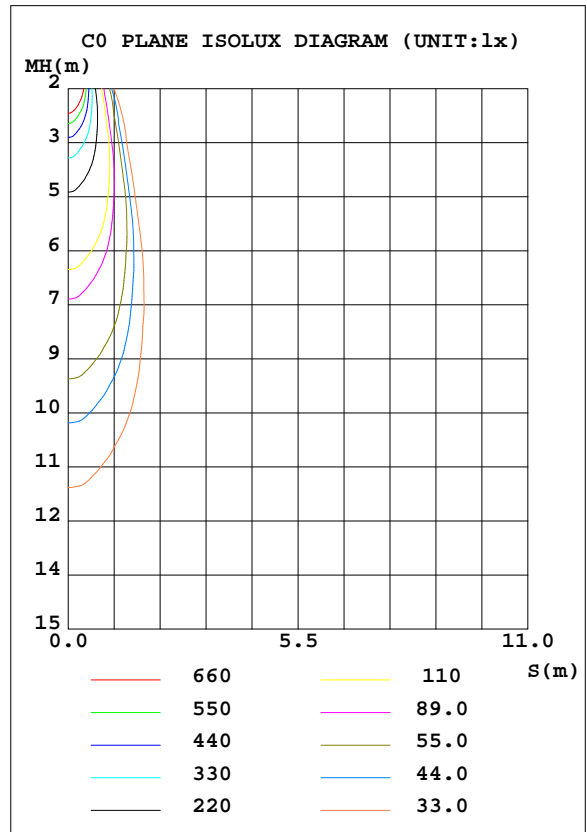
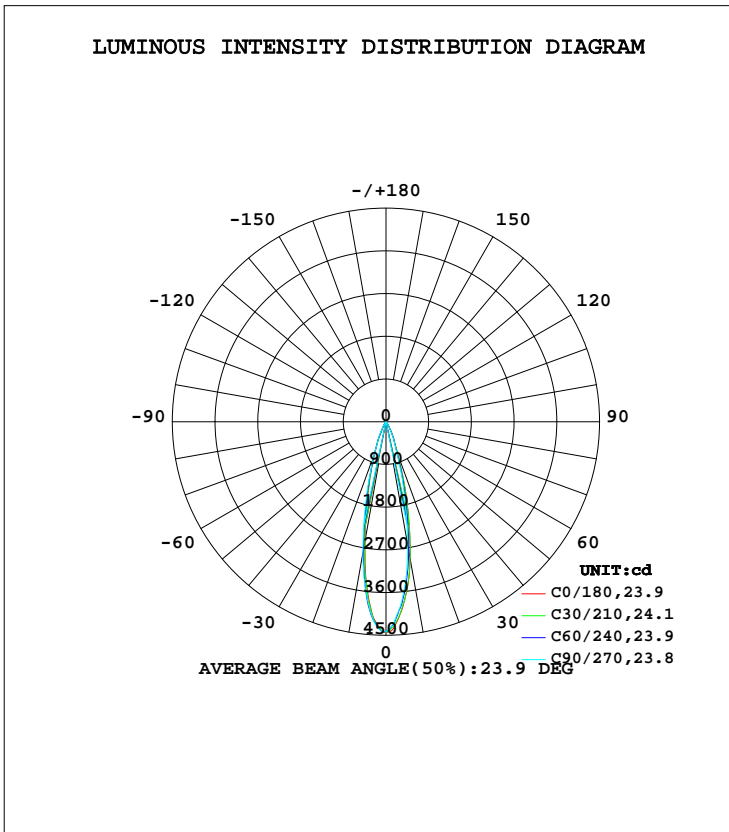


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.36lx1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	OSRAM-3000K	Imax(cd)	4434	S/MH(C0/180)	0.39
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	0.41
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	945.36	η UP, DN(C0-180)	0.0,49.5
NOMINAL FLUX(lm)	945.361	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.5
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: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-02-15

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	2928	2839	2637	2516	2553	2664	2809	2948	0- 10	334.6	334.6	35.4,35.4
20	732.2	694.8	638.2	646.8	690.7	701.6	701.3	746.2	10- 20	416.5	751.1	79.4,79.4
30	154.7	145.4	134.1	121.7	117.1	126.8	138.1	150.4	20- 30	157.8	908.8	96.1,96.1
40	13.73	12.83	9.264	8.354	7.685	8.403	9.420	12.24	30- 40	33.74	942.6	99.7,99.7
50	0.1961	0.1635	0.1634	0.2198	0.1825	0.2039	0.1812	0.1384	40- 50	1.587	944.2	99.9,99.9
60	0.1145	0.1239	0.1634	0.1936	0.1490	0.1816	0.1837	0.1294	50- 60	0.1472	944.3	99.9,99.9
70	0.0817	0.1363	0.1634	0.2126	0.1568	0.2017	0.2505	0.1480	60- 70	0.1568	944.5	99.9,99.9
80	0.1555	0.2316	0.2017	0.3649	0.3487	0.3324	0.5547	0.3542	70- 80	0.2322	944.7	99.9,99.9
90	0.1688	0.5147	0.1688	0.3840	0.0381	0.7543	1.650	1.988	80- 90	0.6633	945.4	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): 944.05 lm

%lum = 99.9%
%lamp = 99.9%

Conical surface Flux(120deg): 944.31 lm

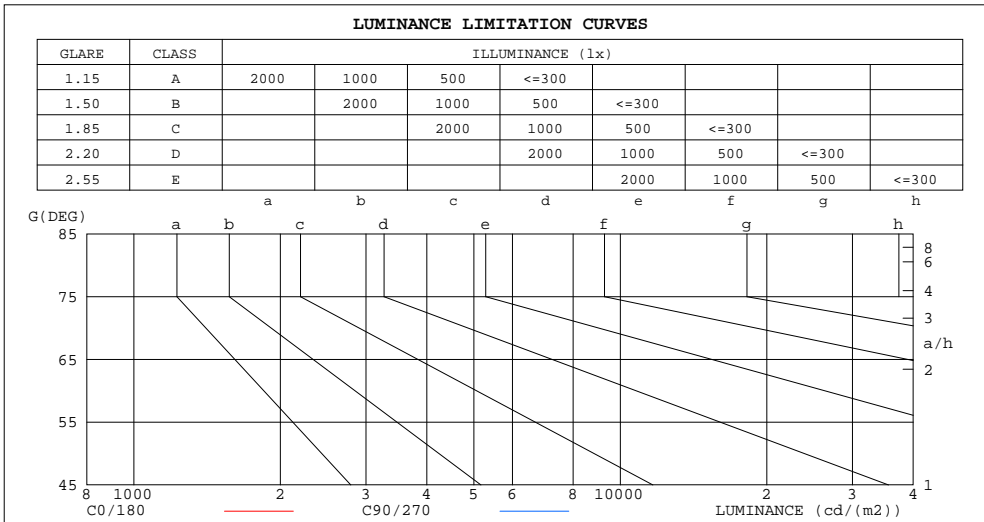
%lum = 99.9%
%lamp = 99.9%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-02-15

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:

LUMINANCE LIMITATION CURVES

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.361x1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	276	397
80	130	169
75	52	98
70	35	69
65	32	56
60	33	47
55	39	41
50	44	37
45	224	118

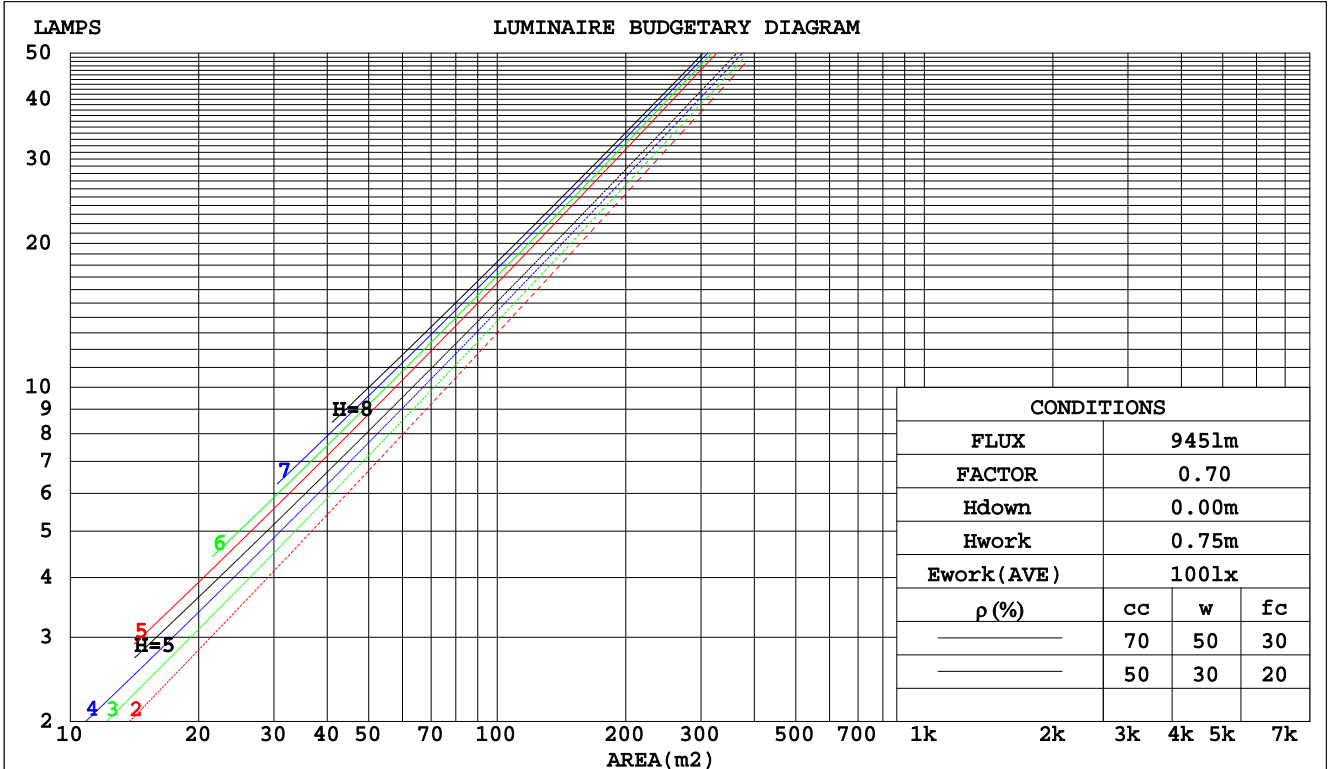
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-02-15

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.361x1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	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																
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	.97	.96	.95	.93
3.0	1.03	.00	.97	1.02	.99	.96	.99	.97	.95	.97	.95	.93	.95	.93	.92	.90
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	.87	.92	.89	.87	.90	.88	.86	.85
6.0	.92	.88	.85	.92	.88	.85	.90	.87	.85	.89	.86	.84	.88	.85	.83	.82
7.0	.89	.85	.82	.89	.85	.82	.88	.84	.82	.87	.84	.81	.86	.83	.81	.80
8.0	.87	.83	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.84	.81	.79	.78
9.0	.84	.80	.77	.84	.80	.77	.83	.80	.77	.82	.79	.77	.82	.79	.77	.76
10.0	.82	.78	.75	.81	.78	.75	.81	.77	.75	.80	.77	.75	.80	.77	.75	.74



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2023-02-15

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:

WEC AND CCEC

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.361x1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	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	.136	.077	.025	.130	.074	.023	.117	.067	.021	.106	.061	.020	.095	.055	.018	
2.0	.126	.069	.021	.120	.066	.020	.110	.061	.019	.101	.056	.018	.092	.052	.016	
3.0	.117	.062	.019	.113	.060	.018	.104	.056	.017	.096	.053	.016	.089	.049	.015	
4.0	.110	.057	.017	.106	.055	.016	.099	.052	.016	.092	.049	.015	.086	.047	.014	
5.0	.103	.053	.015	.100	.051	.015	.094	.049	.014	.088	.047	.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	.091	.045	.013	.086	.044	.013	.082	.042	.012	.078	.040	.012	
8.0	.089	.043	.012	.087	.043	.012	.083	.041	.012	.079	.040	.012	.075	.039	.011	
9.0	.085	.041	.011	.083	.040	.011	.080	.039	.011	.076	.038	.011	.073	.037	.011	
10.0	.081	.039	.011	.080	.039	.011	.077	.038	.011	.074	.037	.010	.071	.036	.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	.127	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.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	.057	.066	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.103	.076	.056	.089	.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	.077	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.083	.055	.036	.072	.048	.031	.050	.034	.022	.029	.020	.013	.009	.006	.004	
10.0	.078	.050	.031	.068	.044	.027	.047	.031	.019	.027	.018	.012	.009	.006	.004	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-02-15

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:

UGR(Unified Glare Rating) Table

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.36lx1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	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	6.1	6.7	6.3	6.9	7.0	6.1	6.7	6.3	6.9	7.0
3H	5.9	6.5	6.2	6.7	6.9	5.9	6.5	6.2	6.7	6.9
4H	5.9	6.4	6.1	6.6	6.8	5.8	6.4	6.1	6.6	6.8
6H	5.8	6.3	6.1	6.5	6.8	5.8	6.3	6.0	6.5	6.8
8H	5.7	6.3	6.0	6.5	6.8	5.7	6.3	6.0	6.5	6.7
12H	5.7	6.2	6.0	6.5	6.7	5.7	6.2	6.0	6.5	6.7
4H 2H	5.9	6.4	6.1	6.6	6.8	5.8	6.4	6.1	6.6	6.8
3H	5.7	6.2	6.0	6.4	6.7	5.7	6.2	6.0	6.4	6.7
4H	5.6	6.0	5.9	6.3	6.6	5.6	6.0	5.9	6.3	6.6
6H	5.5	5.9	5.9	6.2	6.6	5.5	5.9	5.9	6.2	6.6
8H	5.5	5.8	5.8	6.2	6.5	5.5	5.8	5.8	6.2	6.5
12H	5.4	5.8	5.8	6.1	6.5	5.4	5.8	5.8	6.1	6.5
8H 4H	5.4	5.8	5.8	6.2	6.5	5.4	5.8	5.8	6.2	6.5
6H	5.3	5.7	5.8	6.1	6.5	5.3	5.6	5.8	6.0	6.4
8H	5.3	5.6	5.8	6.0	6.5	5.3	5.6	5.7	6.0	6.4
12H	5.3	5.6	5.8	6.0	6.5	5.3	5.5	5.8	6.0	6.4
12H 4H	5.4	5.7	5.8	6.1	6.5	5.4	5.7	5.8	6.1	6.5
6H	5.3	5.6	5.7	6.0	6.4	5.3	5.6	5.7	6.0	6.4
8H	5.3	5.5	5.7	6.0	6.4	5.2	5.5	5.7	5.9	6.4
Variations with the observer position at spacings:										
S = 1.0H	+ 3.5 / - 9.3					+ 3.9 / - 8.9				
1.5H	+ 6.3 / - 9.7					+ 6.7 / - 9.1				
2.0H	+ 0.6 / - 0.4					+ 0.2 / - 0.2				

CIE Pub.117, 945.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-02-15

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:

UTILIZATION FACTORS TABLE

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.361x1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

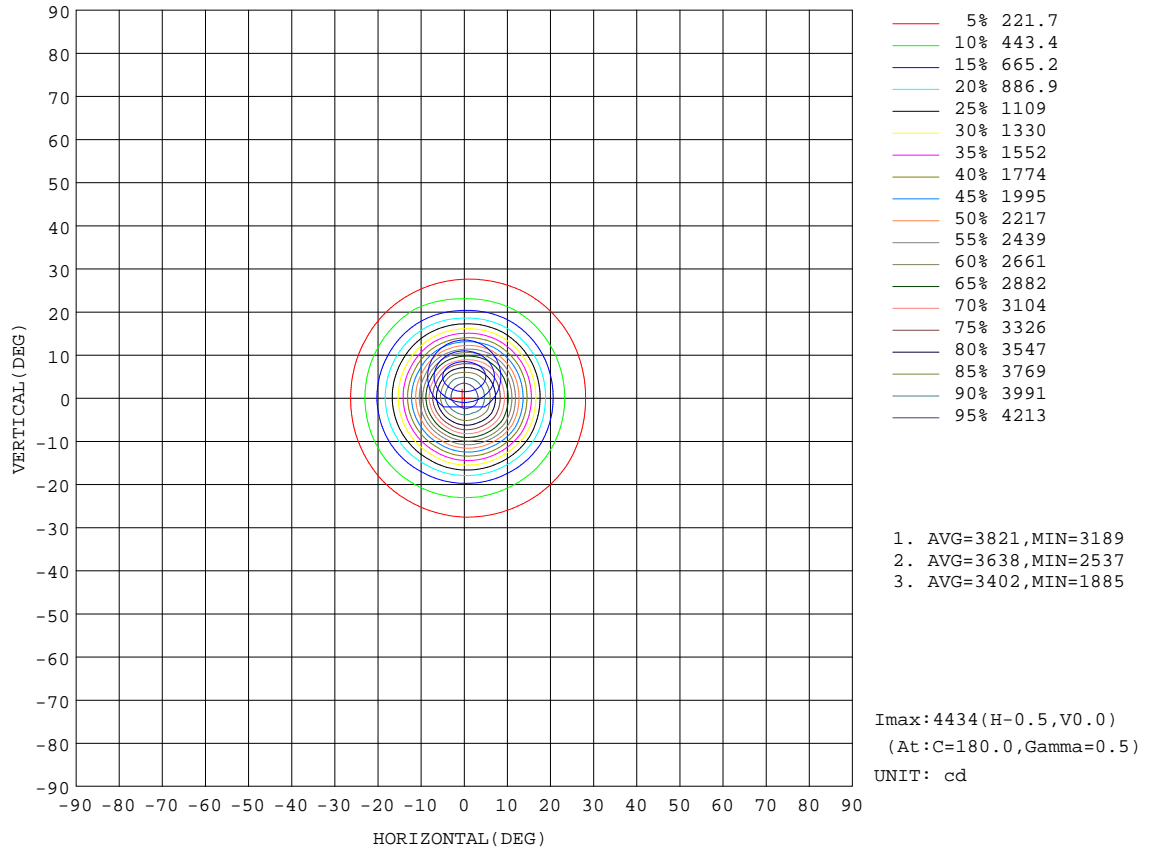
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	86	82	91	86	82	90	85	82	79
0.80	98	93	90	98	93	90	97	92	89	86
1.00	102	97	94	101	97	94	100	96	93	89
1.25	105	101	98	104	100	97	103	99	97	93
1.50	108	104	101	107	103	100	105	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: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-02-15

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:

ISOCANDELA DIAGRAM

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.361x1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



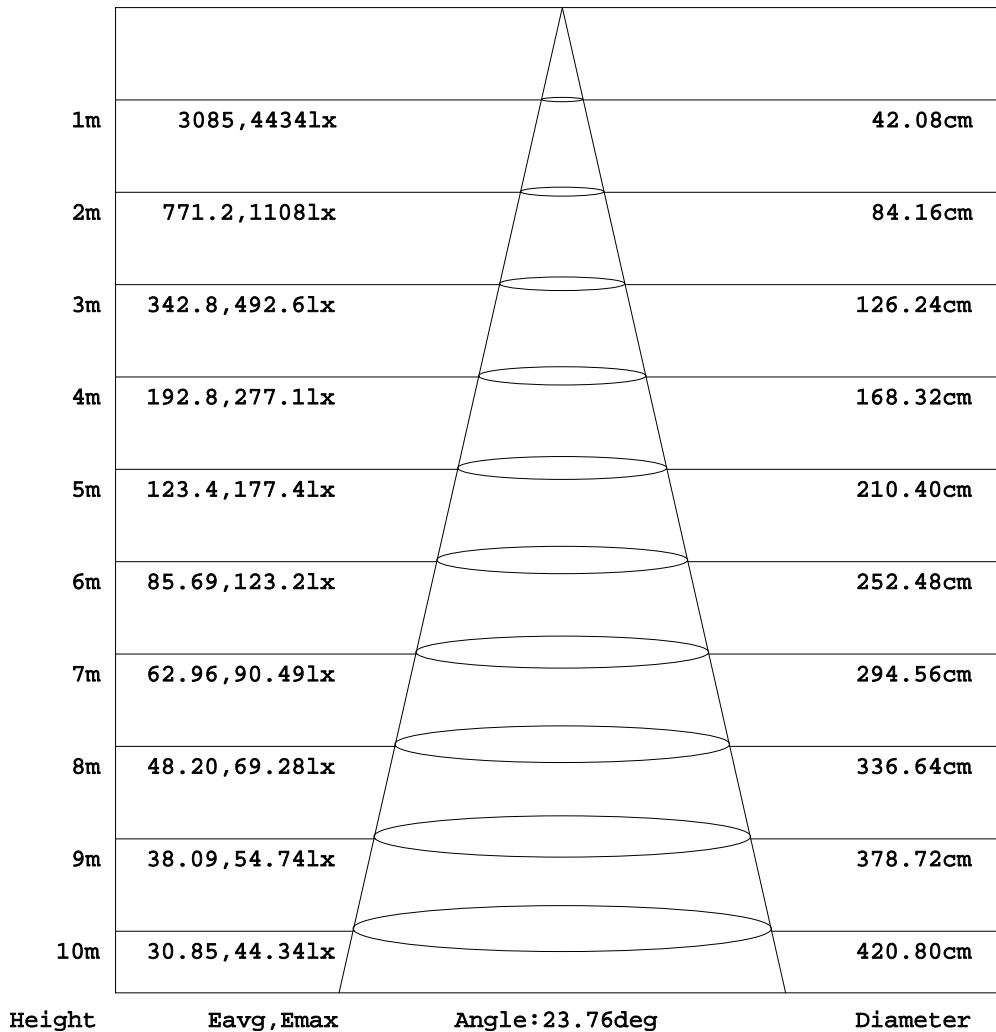
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-02-15

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:

AAI Figure

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.36lx1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

Flux out:437.9 lm



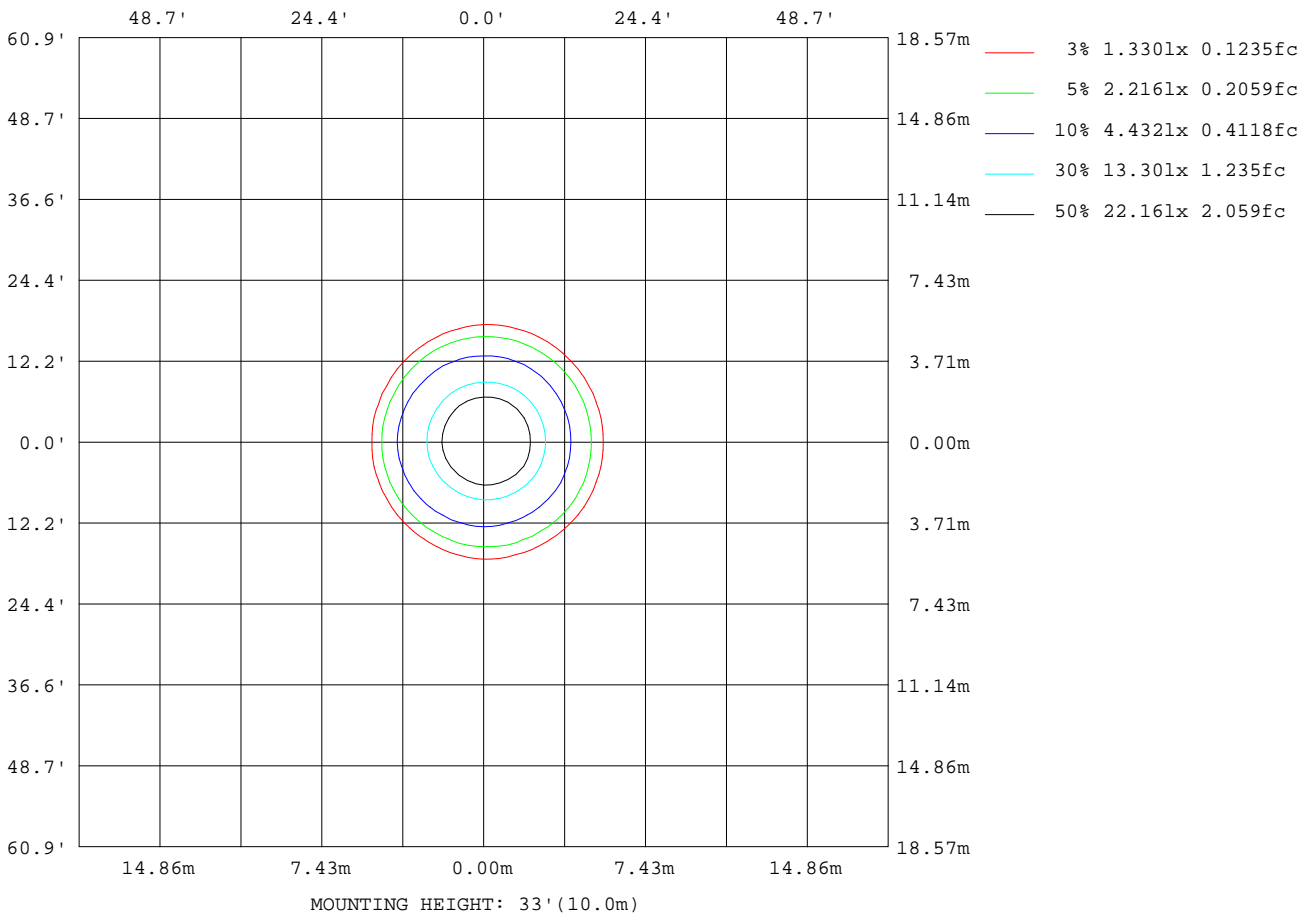
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-02-15

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:

ISOLUX DIAGRAM

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.36lx1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-02-15

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:

LED Avg.L Report

Test:U:220.7V I:0.0636A P:14.04W PF:0.9004 Freq:49.90Hz Lamp Flux:945.361x1 lm		
NAME: FF5-11W-930-24D	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: L153mm*W45mm*H60mm	
MFR.: NEKO LIGHTING AG		

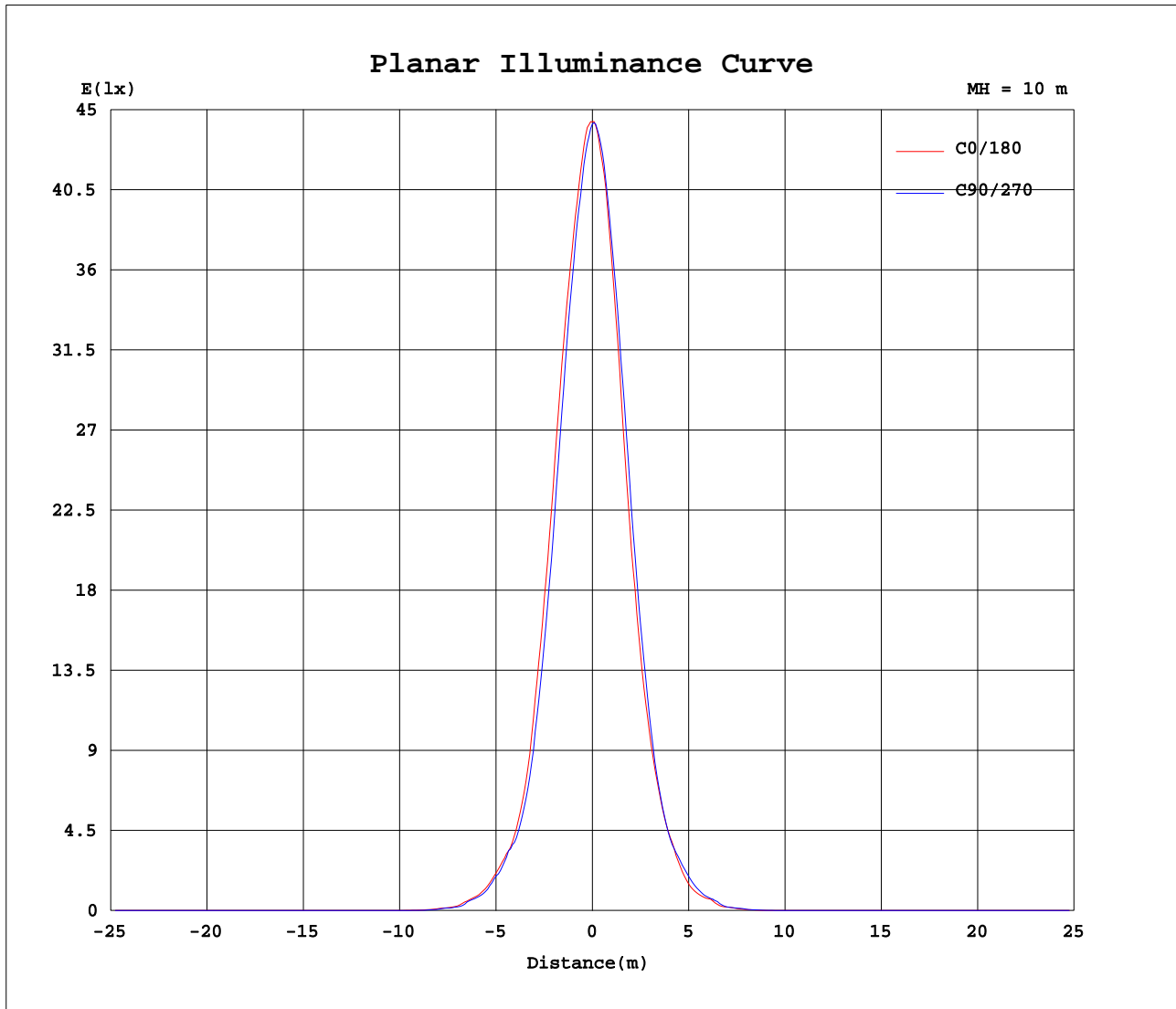
AvgL	cd/m2
L_0~180(65)av	42
L_0~180(75)av	79
L_0~180(85)av	703
L_90~270(65)av	60
L_90~270(75)av	133
L_90~270(85)av	1371
L_45(65)av	55
L_45(75)av	124
L_45(85)av	1100

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-02-15

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:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2023-02-15

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:

