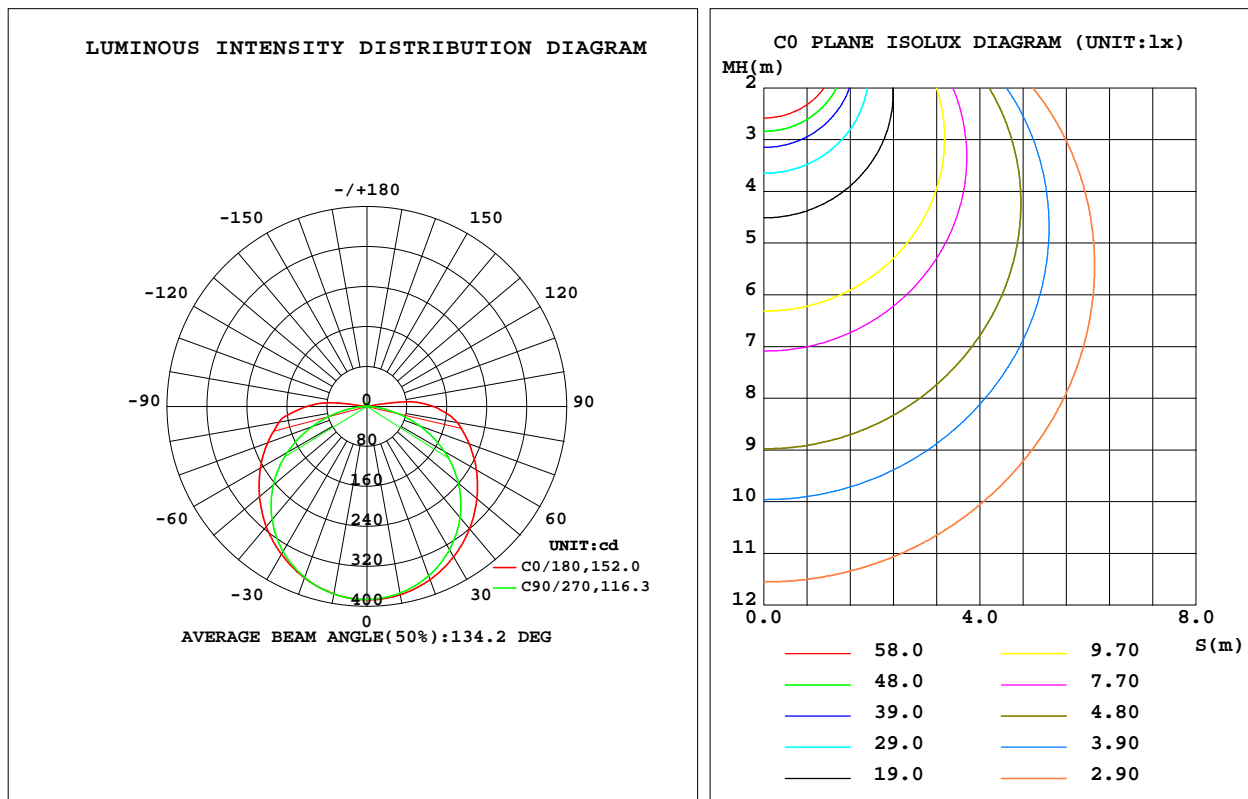


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 96.52 lm/W			
MODEL	DF152408NO	I <sub>max</sub> (cd)	386.8	S/MH(C0/180)	1.34
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1461.6	h UP,DN(C0-180)	2.5,47.6
NOMINAL FLUX(lm)	1461.59	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.2,47.7
LAMPS INSIDE	1	h up(%)	4.7	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	95.3	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

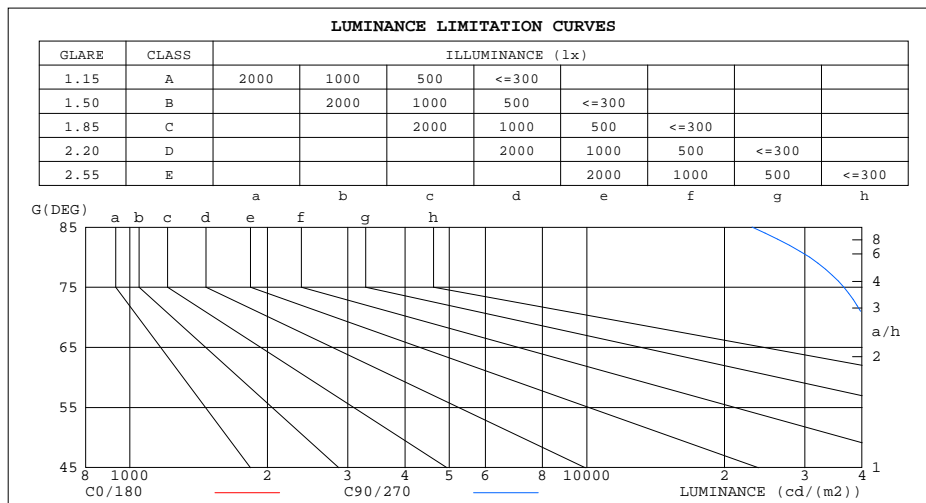
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	382.6	381.2	379.1	379.2	380.6	380.8	381.1	381.5	0- 10	36.61	36.61	2.5,2.5
20	368.8	365.1	360.7	361.9	365.1	364.2	364.1	366.2	10- 20	105.6	142.2	9.73,9.73
30	347.0	339.0	330.8	335.0	341.9	337.7	335.5	340.9	20- 30	162.7	304.9	20.9,20.9
40	319.5	304.4	289.9	300.2	313.6	302.6	295.5	306.9	30- 40	201.8	506.7	34.7,34.7
50	287.4	263.6	238.8	259.6	280.8	261.4	244.7	266.4	40- 50	219.5	726.1	49.7,49.7
60	252.7	218.7	178.1	215.6	246.2	216.3	184.1	221.9	50- 60	215.0	941.1	64.4,64.4
70	217.5	174.1	110.4	172.2	211.5	171.7	115.6	177.5	60- 70	191.0	1132	77.5,77.5
80	183.1	133.2	42.72	131.2	178.2	129.8	46.62	135.5	70- 80	153.5	1286	88,88
90	133.2	85.36	2.538	80.62	121.1	76.93	2.669	86.54	80- 90	107.4	1393	95.3,95.3
100	36.30	5.326	1.450	4.355	7.208	2.485	1.017	4.133	90-100	46.52	1440	98.5,98.5
110	5.197	4.061	2.003	4.041	3.841	2.744	2.091	2.862	100-110	4.214	1444	98.8,98.8
120	4.576	3.694	2.925	3.828	4.208	3.172	3.000	3.546	110-120	3.452	1447	99,99
130	4.769	4.082	3.579	4.316	4.622	3.733	3.709	4.140	120-130	3.466	1451	99.3,99.3
140	5.103	4.362	4.034	4.750	4.970	4.388	4.242	4.455	130-140	3.358	1454	99.5,99.5
150	5.337	4.522	4.594	5.230	5.090	5.055	4.616	4.662	140-150	2.956	1457	99.7,99.7
160	5.729	4.836	5.523	5.758	5.357	5.637	5.445	4.923	150-160	2.366	1459	99.9,99.9
170	5.786	5.792	6.351	6.266	5.330	6.092	6.305	5.763	160-170	1.604	1461	100,100
180	5.557	6.760	6.960	7.027	5.557	6.726	7.020	7.013	170-180	0.5862	1462	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-12-10

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	228786	22972
80	131775	30753
75	96615	36515
70	79478	40343
65	69552	42870
60	63179	44520
55	58889	45681
50	55884	46443
45	53720	46957

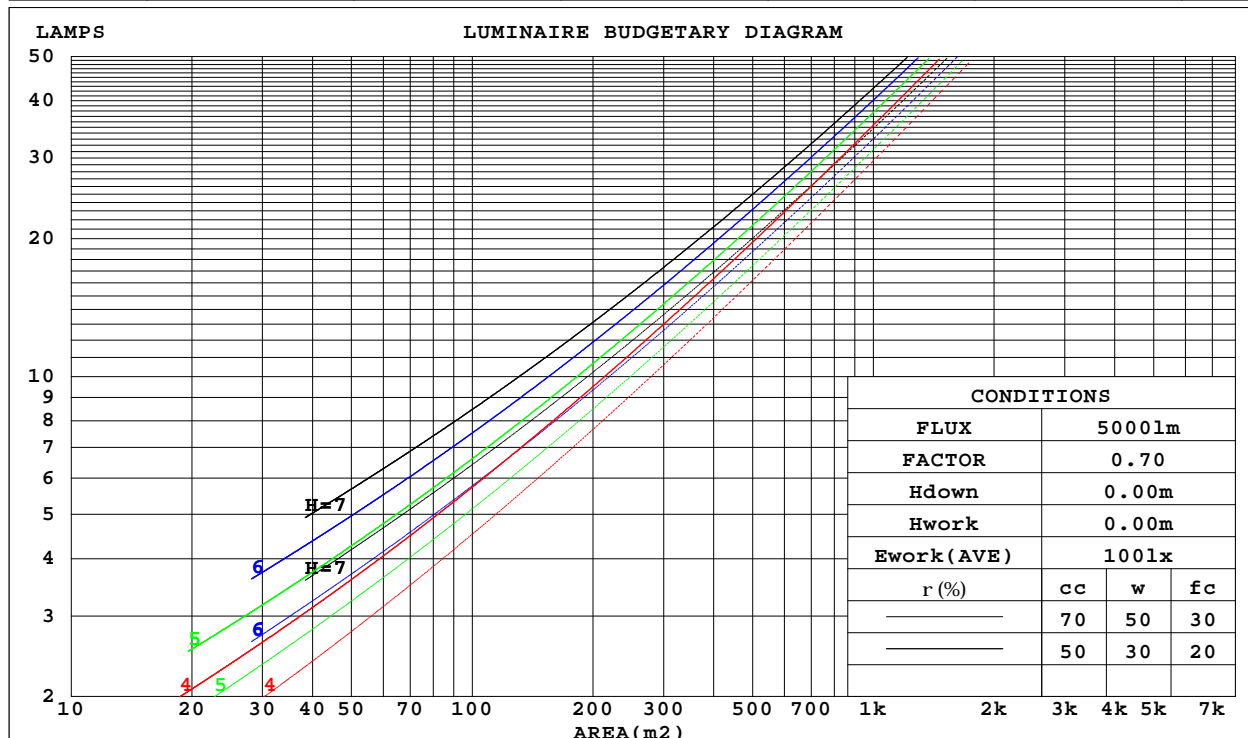
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

WEC AND CCEC

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWN5A012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Wall Exitance Coefficients(WEC)												
0.0																
1.0	.389	.221	.070	.380	.217	.069	.364	.209	.067	.349	.201	.065	.335	.194	.063	
2.0	.339	.186	.057	.332	.183	.056	.317	.176	.055	.303	.170	.053	.291	.165	.052	
3.0	.302	.161	.048	.295	.158	.048	.282	.153	.046	.270	.148	.045	.259	.143	.044	
4.0	.272	.142	.042	.266	.139	.041	.255	.135	.040	.244	.131	.039	.234	.127	.039	
5.0	.248	.126	.037	.242	.124	.036	.232	.121	.036	.222	.117	.035	.213	.114	.034	
6.0	.227	.114	.033	.222	.112	.032	.213	.109	.032	.204	.106	.031	.196	.103	.031	
7.0	.209	.103	.029	.205	.102	.029	.196	.099	.029	.188	.097	.028	.181	.094	.028	
8.0	.194	.095	.027	.190	.094	.026	.182	.091	.026	.175	.089	.026	.169	.087	.025	
9.0	.181	.087	.024	.177	.086	.024	.170	.084	.024	.164	.082	.024	.158	.080	.023	
10.0	.169	.081	.023	.166	.080	.022	.160	.078	.022	.154	.076	.022	.148	.075	.021	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.226	.226	.226	.193	.193	.193	.132	.132	.132	.076	.076	.076	.024	.024	.024	
1.0	.222	.191	.164	.190	.164	.141	.130	.113	.098	.075	.065	.057	.024	.021	.018	
2.0	.215	.168	.129	.184	.145	.111	.126	.100	.077	.073	.058	.045	.023	.019	.015	
3.0	.207	.151	.106	.178	.130	.092	.122	.090	.065	.070	.053	.038	.023	.017	.012	
4.0	.199	.138	.091	.171	.119	.079	.118	.083	.056	.068	.049	.033	.022	.016	.011	
5.0	.191	.128	.081	.164	.111	.071	.113	.077	.050	.066	.045	.030	.021	.015	.010	
6.0	.184	.120	.074	.158	.104	.065	.109	.073	.046	.063	.043	.027	.020	.014	.009	
7.0	.176	.113	.069	.152	.098	.060	.105	.069	.042	.061	.040	.025	.020	.013	.008	
8.0	.169	.107	.065	.146	.093	.056	.101	.065	.040	.059	.039	.024	.019	.013	.008	
9.0	.163	.102	.061	.140	.089	.054	.097	.062	.038	.057	.037	.023	.018	.012	.008	
10.0	.157	.098	.059	.135	.085	.051	.094	.060	.037	.055	.035	.022	.018	.012	.007	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm											
NAME: DF152408NO					TYPE:			WEIGHT:			
SPEC.:DF152408NO-9NWNSA012WC0100					DIM.: 1000*8*1.5mm			SERIAL No.:			
MFR.: COLORS					SUR.:1000*8			Shielding Angle:			
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	25.6	27.2	25.9	27.4	27.8	24.4	25.9	24.7	26.2	26.6	
	3H	28.1	29.6	28.5	29.9	30.3	26.0	27.5	26.4	27.8	28.1
	4H	29.6	31.0	30.0	31.3	31.7	26.7	28.1	27.1	28.4	28.8
	6H	31.2	32.5	31.6	32.9	33.2	27.1	28.4	27.5	28.8	29.2
	8H	32.1	33.3	32.5	33.7	34.1	27.2	28.5	27.7	28.9	29.3
	12H	33.0	34.3	33.5	34.7	35.1	27.3	28.6	27.7	28.9	29.4
4H	2H	26.2	27.6	26.6	28.0	28.3	25.3	26.7	25.7	27.1	27.5
	3H	29.0	30.2	29.4	30.6	31.0	27.3	28.5	27.7	28.9	29.3
	4H	30.6	31.7	31.1	32.2	32.6	28.1	29.3	28.6	29.7	30.1
	6H	32.4	33.4	32.9	33.9	34.4	28.8	29.8	29.3	30.3	30.7
	8H	33.4	34.4	33.9	34.8	35.3	29.0	30.0	29.5	30.4	30.9
	12H	34.5	35.4	35.0	35.9	36.4	29.2	30.1	29.7	30.5	31.1
8H	4H	31.0	32.0	31.5	32.4	32.9	29.0	30.0	29.5	30.4	30.9
	6H	33.1	33.9	33.6	34.4	34.9	30.0	30.9	30.6	31.4	31.9
	8H	34.3	35.0	34.8	35.5	36.1	30.5	31.2	31.0	31.7	32.3
	12H	35.6	36.3	36.2	36.8	37.4	30.9	31.5	31.4	32.0	32.6
12H	4H	31.0	31.9	31.5	32.4	32.9	29.3	30.1	29.8	30.6	31.1
	6H	33.2	34.0	33.8	34.5	35.0	30.5	31.2	31.0	31.8	32.3
	8H	34.5	35.2	35.1	35.7	36.3	31.1	31.8	31.7	32.3	32.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117, 1462 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.3)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

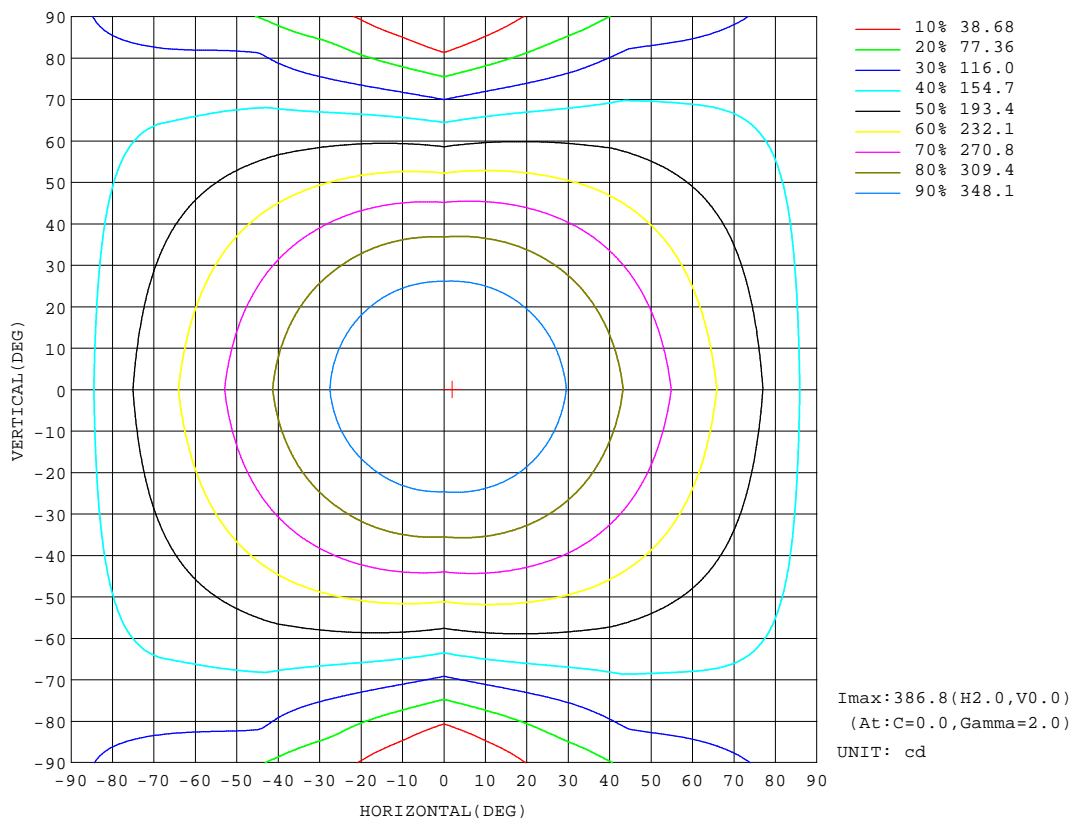
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	52	40	32	51	39	32	50	39	32	25
0.80	61	49	41	60	48	40	58	47	40	32
1.00	69	57	48	68	56	48	65	57	48	40
1.25	76	64	56	74	63	55	71	61	54	46
1.50	81	70	61	79	69	61	76	66	60	51
2.00	88	78	70	86	77	69	82	74	67	58
2.50	93	83	76	90	81	75	86	78	72	63
3.00	96	88	81	94	86	79	89	82	77	67
4.00	101	94	87	98	91	86	93	88	83	72
5.00	104	97	92	101	95	90	96	91	87	76
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

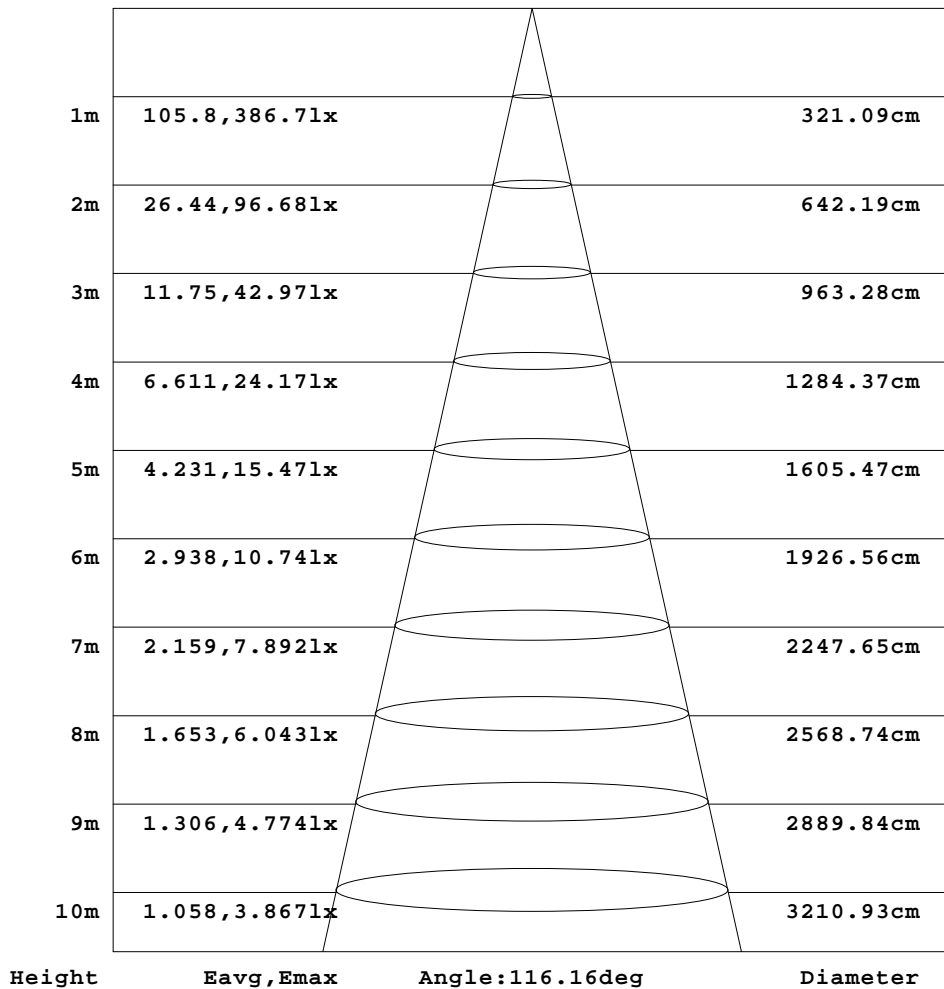
Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Flux out:920.4 lm



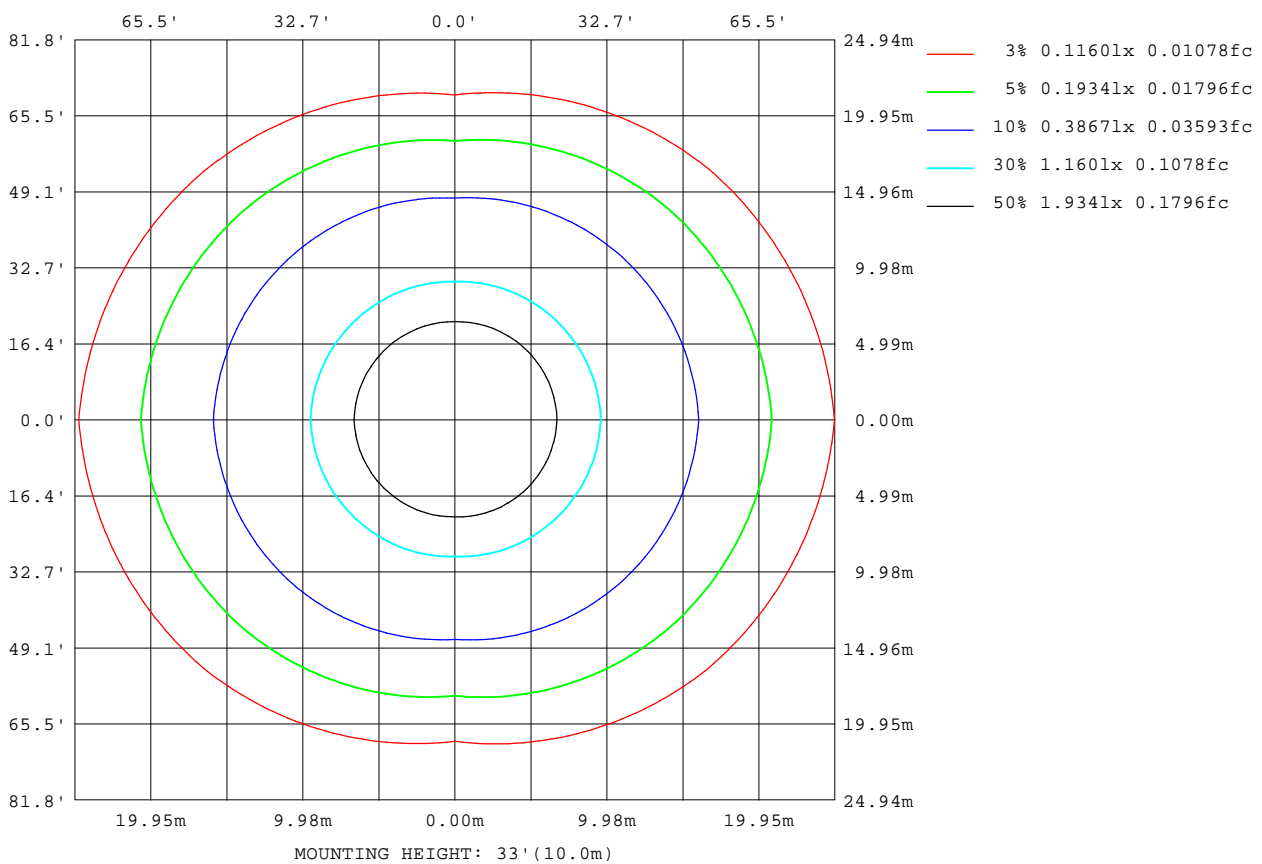
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

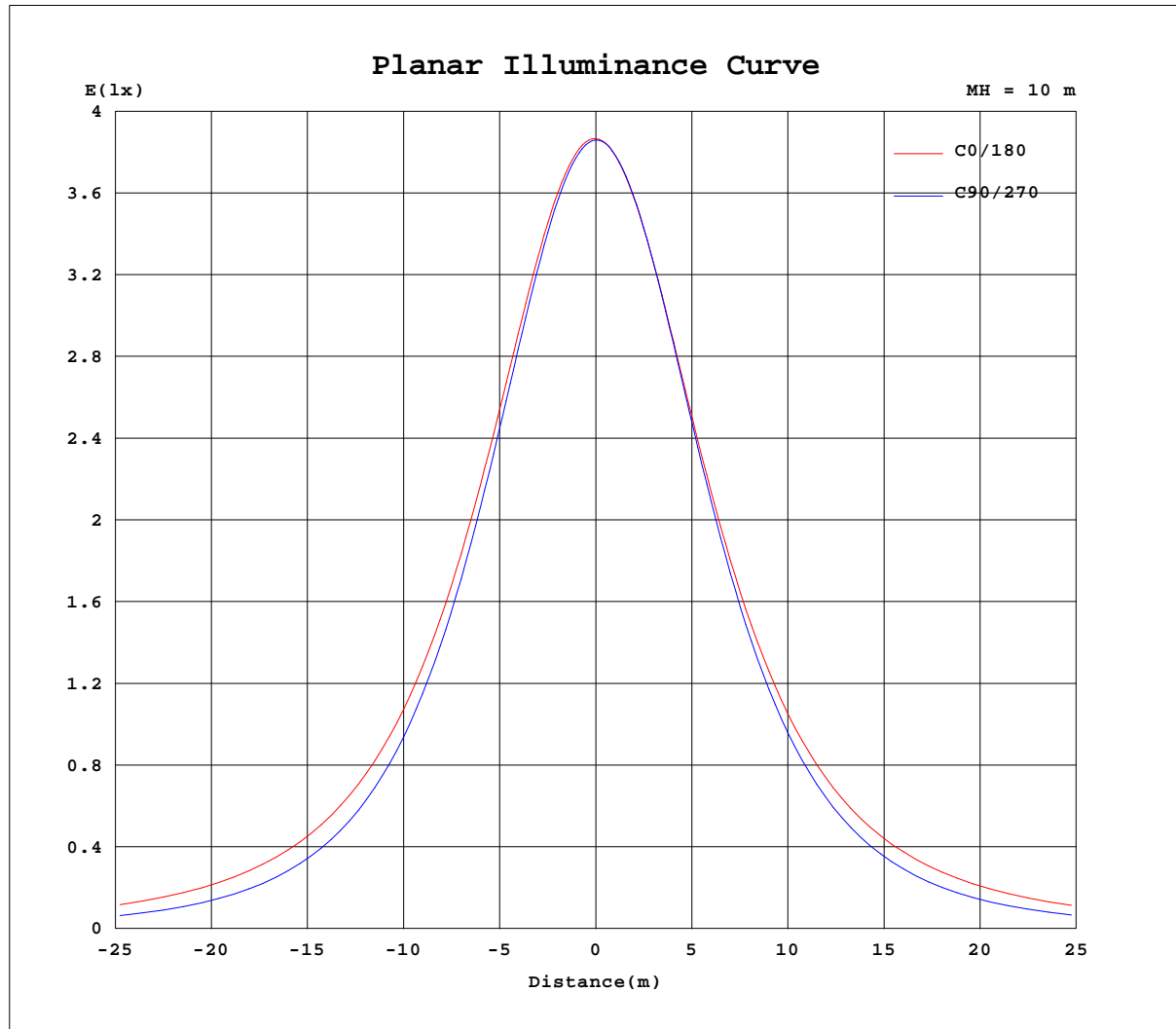
Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWNSA012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-12-10

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2020-12-10

deg Range: 0 - 180DEG  
deg Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.6300A P:15.14W PF:1.000 Freq:0Hz Lamp Flux:1461.59x1 lm		
NAME: DF152408NO	TYPE:	WEIGHT:
SPEC.:DF152408NO-9NWN5A012WC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Table--1

UNIT: cd

C(DEC) g (DEC)	0	45	90	135	180	225	270	315										
0	387	387	386	386	387	387	386	386										
5	386	385	384	384	385	385	385	385										
10	383	381	379	379	381	381	381	381										
15	377	374	371	372	374	374	374	375										
20	369	365	361	362	365	364	364	366										
25	359	353	347	350	354	352	351	355										
30	347	339	331	335	342	338	335	341										
35	334	323	312	318	328	321	317	325										
40	320	304	290	300	314	303	295	307										
45	304	285	266	280	298	283	271	287										
50	287	264	239	260	281	261	245	266										
55	270	241	210	238	264	239	215	244										
60	253	219	178	216	246	216	184	222										
65	235	196	145	194	229	194	151	199										
70	217	174	110	172	211	172	116	178										
75	200	153	75.6	152	194	151	80.3	156										
80	183	133	42.7	131	178	130	46.6	135										
85	160	113	16.0	112	151	109	18.9	113										
90	133	85.4	2.54	80.6	121	76.9	2.67	86.5										
95	101	51.6	1.51	41.7	85.9	36.9	0.59	48.0										
100	36.3	5.33	1.45	4.35	7.21	2.48	1.02	4.13										
105	6.03	4.12	1.57	4.22	3.69	2.56	1.59	2.54										
110	5.20	4.06	2.00	4.04	3.84	2.74	2.09	2.86										
115	5.00	3.80	2.50	3.78	4.00	2.97	2.60	3.20										
120	4.58	3.69	2.93	3.83	4.21	3.17	3.00	3.55										
125	4.58	3.89	3.28	4.09	4.42	3.44	3.37	3.92										
130	4.77	4.08	3.58	4.32	4.62	3.73	3.71	4.14										
135	5.01	4.23	3.81	4.53	4.81	4.05	4.00	4.35										
140	5.10	4.36	4.03	4.75	4.97	4.39	4.24	4.46										
145	5.21	4.46	4.26	4.97	5.07	4.72	4.42	4.60										
150	5.34	4.52	4.59	5.23	5.09	5.05	4.62	4.66										
155	5.52	4.62	5.03	5.50	5.22	5.36	4.93	4.79										
160	5.73	4.84	5.52	5.76	5.36	5.64	5.45	4.92										
165	5.90	5.24	5.94	6.01	5.43	5.88	5.89	5.22										
170	5.79	5.79	6.35	6.27	5.33	6.09	6.31	5.76										
175	5.48	6.32	6.70	6.63	5.12	6.39	6.71	6.42										
180	5.56	6.76	6.96	7.03	5.56	6.73	7.02	7.01										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-10

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks: