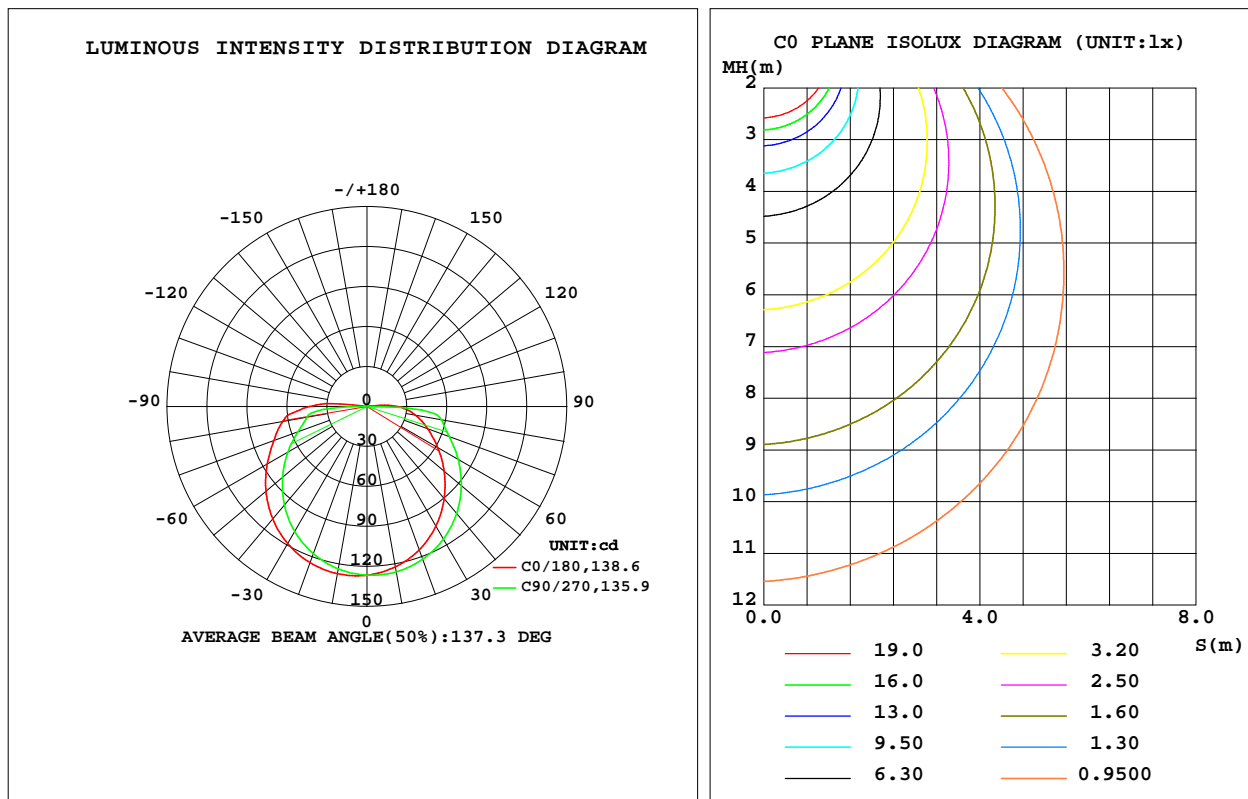


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 104.57 lm/W			
MODEL	FD642408NO	I <sub>max</sub> (cd)	127.5	S/MH(C0/180)	1.23
NOMINAL POWER(W)	4.8	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	501.95	h UP,DN(C0-180)	1.9,48.1
NOMINAL FLUX(lm)	501.949	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.9,48.1
LAMPS INSIDE	1	h up(%)	3.8	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	96.2	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

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:

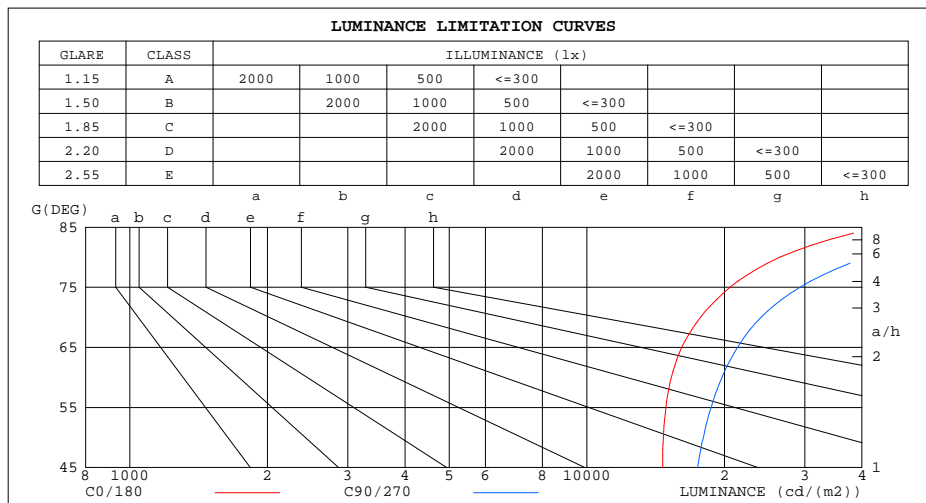
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	122.2	124.0	126.0	127.5	127.4	126.0	123.7	122.0	0- 10	12.00	12.00	2.39,2.39
20	114.6	118.0	122.0	125.1	124.8	121.9	117.6	114.2	10- 20	34.68	46.68	9.3,9.3
30	103.6	108.7	114.9	119.4	118.9	114.6	108.4	103.3	20- 30	53.53	100.2	20,20
40	90.17	96.61	104.7	110.7	110.1	104.6	96.43	89.77	30- 40	66.53	166.7	33.2,33.2
50	75.61	82.77	92.44	99.68	98.99	92.33	82.74	75.20	40- 50	72.67	239.4	47.7,47.7
60	61.22	68.48	79.03	87.00	86.48	79.13	68.62	60.82	50- 60	72.27	311.7	62.1,62.1
70	48.52	55.24	65.80	74.36	74.25	66.04	55.01	47.86	60- 70	66.64	378.3	75.4,75.4
80	36.75	44.85	56.73	66.37	64.14	57.30	45.73	37.74	70- 80	59.00	437.3	87.1,87.1
90	23.16	26.65	4.428	42.89	43.30	36.60	4.747	22.04	80- 90	45.58	482.9	96.2,96.2
100	2.462	1.483	1.396	1.356	0.6681	0.7531	0.9017	1.150	90-100	12.30	495.2	98.7,98.7
110	1.518	1.328	1.002	1.121	0.7950	0.7416	1.029	1.145	100-110	1.210	496.4	98.9,98.9
120	1.488	1.350	1.128	0.9824	0.9490	0.9007	1.129	1.155	110-120	1.087	497.5	99.1,99.1
130	1.588	1.476	1.249	1.149	1.149	1.075	1.236	1.242	120-130	1.073	498.6	99.3,99.3
140	1.710	1.597	1.376	1.323	1.336	1.282	1.309	1.287	130-140	1.039	499.6	99.5,99.5
150	1.777	1.623	1.476	1.537	1.477	1.503	1.450	1.382	140-150	0.9176	500.5	99.7,99.7
160	1.888	1.703	1.703	1.750	1.650	1.716	1.744	1.476	150-160	0.7440	501.3	99.9,99.9
170	1.984	1.924	1.957	1.957	1.708	1.917	1.991	1.797	160-170	0.5089	501.8	100,100
180	1.870	2.178	2.238	2.244	1.857	2.137	2.238	2.238	170-180	0.1882	501.9	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:2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	43945	67226
80	26457	40834
75	20580	29255
70	17733	24049
65	16134	21367
60	15306	19758
55	14890	18702
50	14703	17977
45	14651	17464

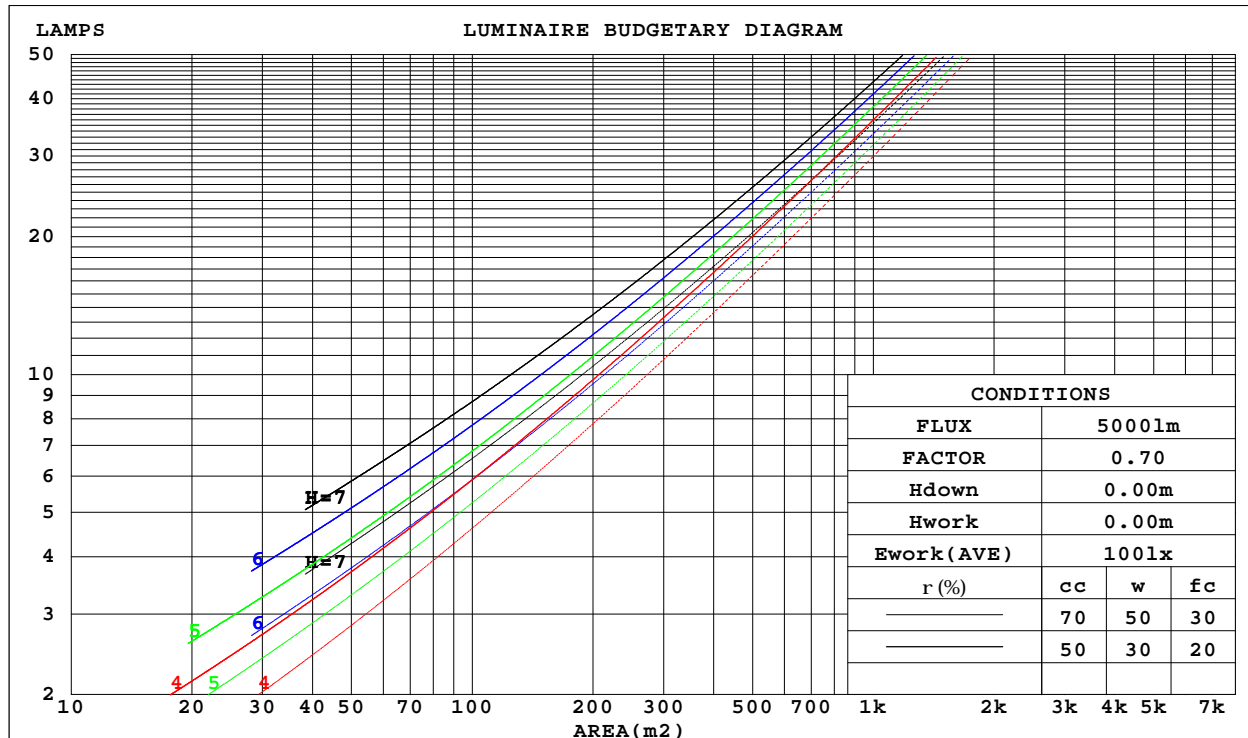
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	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:2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	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	.413	.235	.074	.405	.231	.073	.389	.223	.071	.374	.216	.069	.361	.209	.067	
2.0	.354	.194	.060	.346	.191	.059	.332	.185	.057	.319	.179	.056	.307	.174	.055	
3.0	.312	.166	.050	.305	.164	.049	.293	.159	.048	.281	.154	.047	.270	.150	.046	
4.0	.280	.145	.043	.273	.143	.042	.262	.139	.042	.252	.135	.041	.242	.131	.040	
5.0	.253	.129	.037	.248	.127	.037	.238	.124	.036	.228	.120	.036	.219	.117	.035	
6.0	.231	.116	.033	.226	.114	.033	.217	.111	.032	.209	.108	.032	.201	.106	.031	
7.0	.213	.105	.030	.208	.104	.030	.200	.101	.029	.192	.099	.029	.185	.096	.028	
8.0	.197	.096	.027	.193	.095	.027	.186	.093	.026	.179	.090	.026	.172	.088	.026	
9.0	.183	.089	.025	.180	.088	.025	.173	.085	.024	.167	.084	.024	.161	.082	.024	
10.0	.171	.082	.023	.168	.081	.023	.162	.079	.022	.156	.078	.022	.151	.076	.022	

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	.219	.219	.219	.188	.188	.188	.128	.128	.128	.074	.074	.074	.024	.024	.024	
1.0	.217	.184	.155	.185	.158	.134	.127	.109	.092	.073	.063	.054	.023	.020	.017	
2.0	.210	.161	.120	.180	.139	.104	.123	.096	.072	.071	.056	.042	.023	.018	.014	
3.0	.202	.144	.098	.173	.124	.085	.119	.086	.060	.069	.050	.035	.022	.016	.011	
4.0	.194	.131	.083	.166	.113	.072	.114	.079	.051	.066	.046	.030	.021	.015	.010	
5.0	.186	.121	.074	.160	.105	.064	.110	.073	.045	.064	.043	.027	.021	.014	.009	
6.0	.178	.113	.066	.153	.098	.058	.106	.069	.041	.061	.040	.024	.020	.013	.008	
7.0	.171	.106	.061	.147	.092	.053	.101	.065	.038	.059	.038	.023	.019	.012	.007	
8.0	.164	.101	.057	.141	.087	.050	.097	.061	.035	.057	.036	.021	.018	.012	.007	
9.0	.157	.096	.054	.135	.083	.047	.094	.058	.034	.055	.034	.020	.018	.011	.007	
10.0	.151	.091	.052	.130	.079	.045	.090	.056	.032	.053	.033	.019	.017	.011	.006	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm											
NAME: FD642408NO						TYPE:			WEIGHT:		
SPEC.:FD642408NO-8SWNSA012BC0100						DIM.: 1000*8*1.5mm			SERIAL No.:		
MFR.: COLORS						SUR.:1000*8mm			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	24.0	25.6	24.4	25.9	26.2	25.0	26.6	25.3	26.9	27.2	
	3H	26.2	27.7	26.5	28.0	28.3	27.5	29.0	27.8	29.3	
	4H	27.3	28.8	27.7	29.1	29.5	28.8	30.3	29.2	30.6	
	6H	28.6	30.0	29.0	30.3	30.7	30.5	31.8	30.9	32.2	
	8H	29.3	30.6	29.7	31.0	31.4	31.4	32.7	31.8	33.1	
	12H	30.0	31.3	30.5	31.7	32.1	32.3	33.6	32.7	34.0	
4H	2H	24.9	26.4	25.3	26.7	27.1	25.6	27.1	26.0	27.4	
	3H	27.3	28.6	27.7	29.0	29.4	28.3	29.6	28.7	30.0	
	4H	28.7	29.8	29.1	30.2	30.7	29.9	31.1	30.3	31.5	
	6H	30.1	31.2	30.6	31.6	32.1	31.7	32.8	32.2	33.2	
	8H	30.9	31.9	31.4	32.3	32.8	32.8	33.8	33.2	34.2	
	12H	31.8	32.7	32.3	33.2	33.7	33.9	34.8	34.4	35.3	
8H	4H	29.4	30.4	29.9	30.8	31.3	30.4	31.4	30.9	31.8	
	6H	31.1	32.0	31.6	32.5	33.0	32.5	33.4	33.0	33.8	
	8H	32.1	32.9	32.6	33.4	33.9	33.7	34.5	34.2	35.0	
	12H	33.2	33.9	33.7	34.4	34.9	35.0	35.7	35.6	36.2	
12H	4H	29.6	30.5	30.1	31.0	31.5	30.5	31.4	31.0	31.9	
	6H	31.5	32.2	32.0	32.7	33.3	32.7	33.5	33.2	34.0	
	8H	32.5	33.2	33.1	33.7	34.3	34.0	34.7	34.5	35.2	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2					
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					

CIE Pub.117, 501.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.4)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:

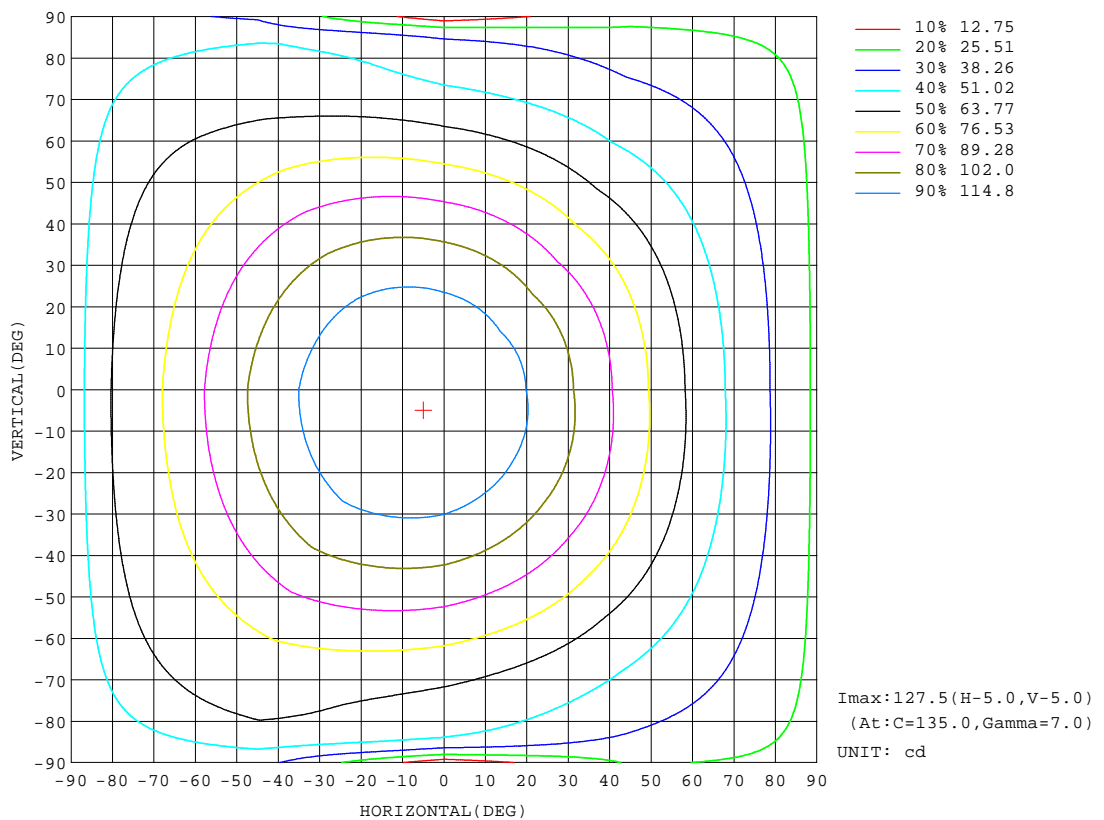
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	39	31	50	38	31	49	38	31	24
0.80	60	48	39	59	47	39	57	46	39	31
1.00	68	56	47	67	55	47	64	56	46	38
1.25	75	63	54	73	62	54	70	60	53	44
1.50	80	68	60	78	67	59	75	65	58	49
2.00	87	77	69	85	75	68	81	73	66	56
2.50	92	82	74	89	80	73	85	77	71	61
3.00	96	87	79	93	85	78	88	81	76	65
4.00	100	93	86	97	90	85	92	87	82	71
5.00	103	96	91	100	94	89	95	90	86	74
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:2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

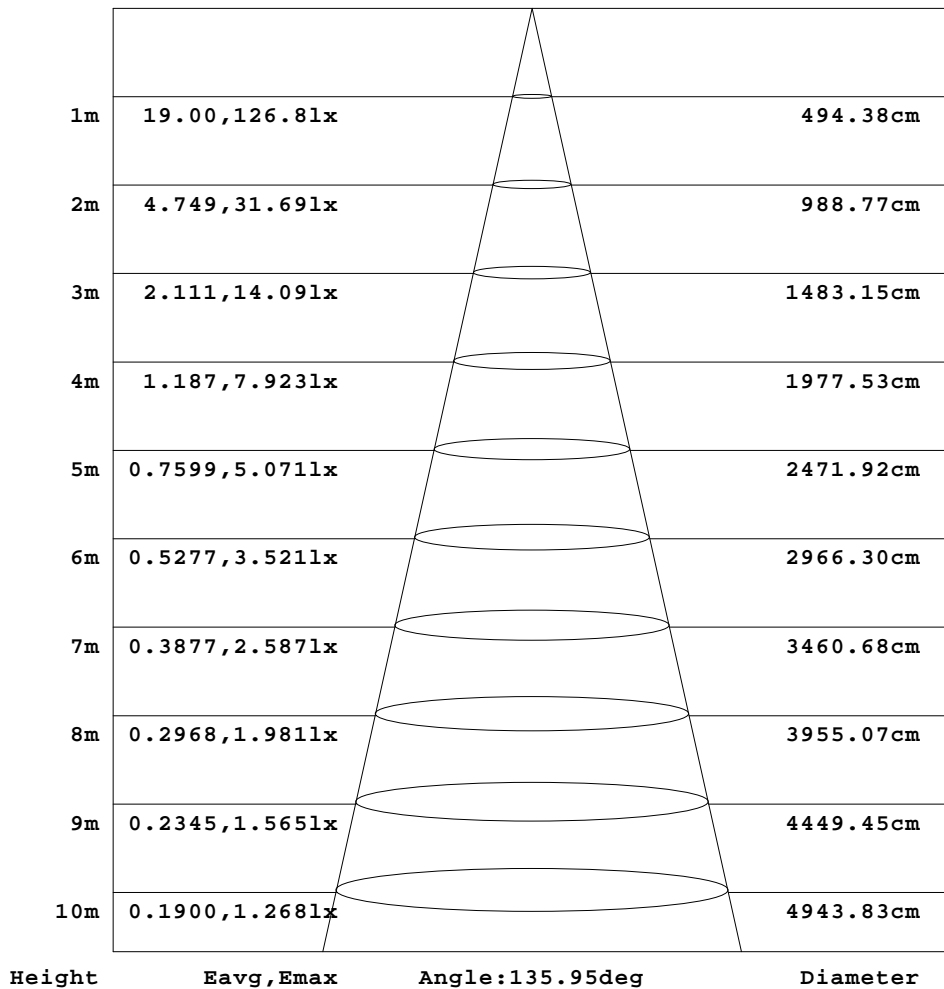
deg Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:

Flux out:365.6 lm



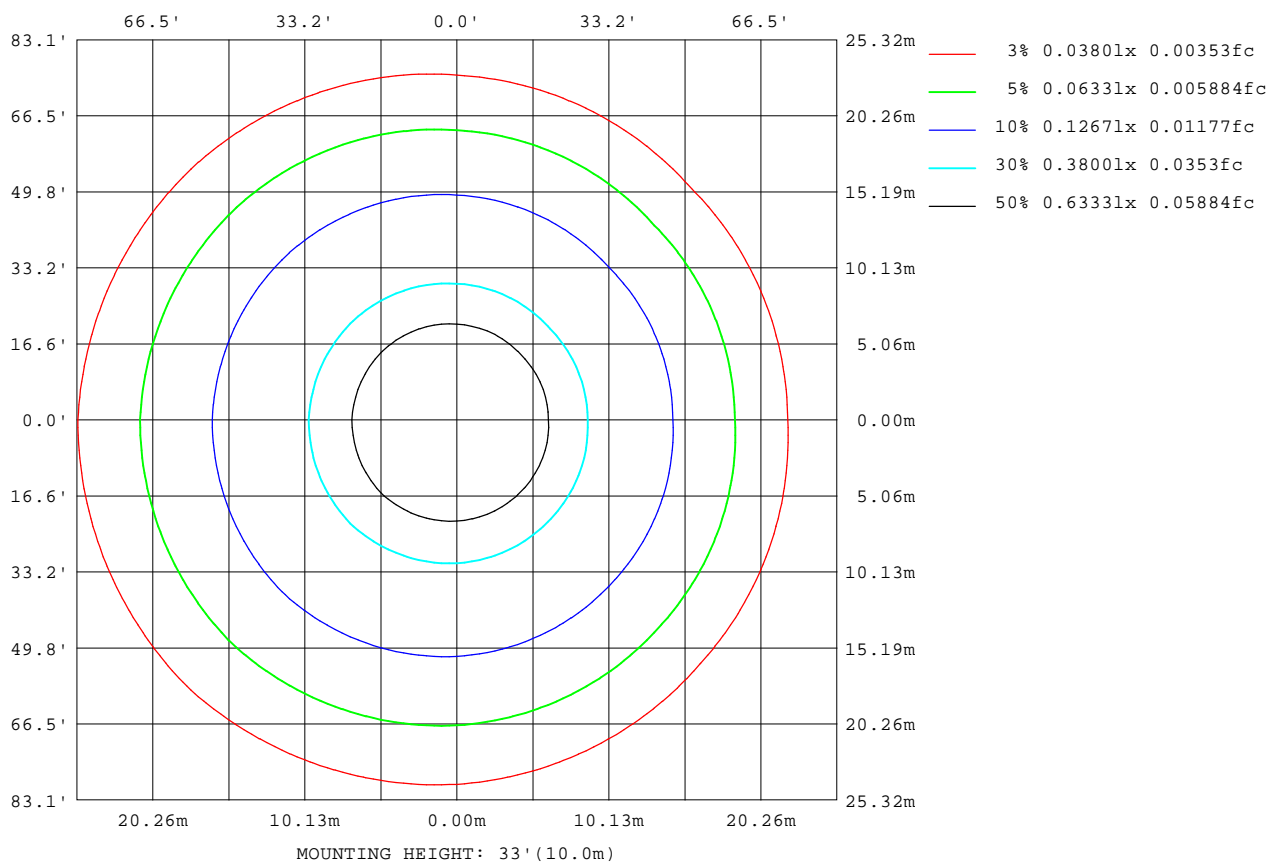
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

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

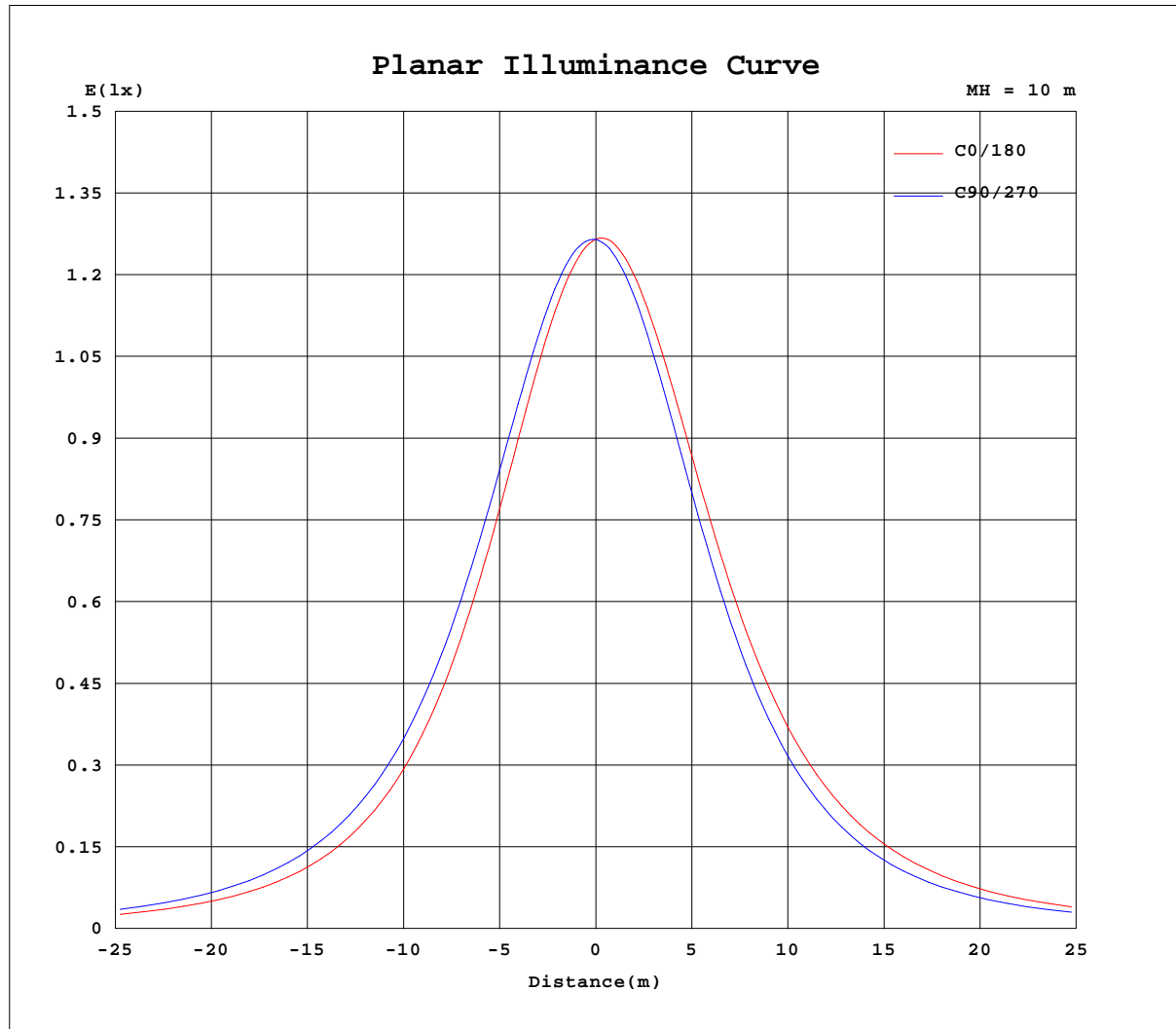
Test:U:24.00V I:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

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:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2021-01-14

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:0.2000A P:4.800W PF:1.000 Freq:0Hz Lamp Flux:501.949x1 lm		
NAME: FD642408NO	TYPE:	WEIGHT:
SPEC.:FD642408NO-8SWNSA012BC0100	DIM.: 1000*8*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*8mm	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	127	127	127	126	127	127	127	126										
5	125	126	127	127	127	127	126	125										
10	122	124	126	127	127	126	124	122										
15	119	121	124	127	127	124	121	119										
20	115	118	122	125	125	122	118	114										
25	109	114	119	123	122	119	113	109										
30	104	109	115	119	119	115	108	103										
35	97.2	103	110	115	115	110	103	96.8										
40	90.2	96.6	105	111	110	105	96.4	89.8										
45	82.9	89.8	98.8	105	105	98.6	89.7	82.5										
50	75.6	82.8	92.4	99.7	99.0	92.3	82.7	75.2										
55	68.3	75.6	85.8	93.4	92.8	85.8	75.7	67.9										
60	61.2	68.5	79.0	87.0	86.5	79.1	68.6	60.8										
65	54.5	61.5	72.2	80.5	80.2	72.4	61.7	54.0										
70	48.5	55.2	65.8	74.4	74.3	66.0	55.0	47.9										
75	42.6	50.1	60.6	69.3	69.4	61.0	49.5	42.9										
80	36.8	44.8	56.7	66.4	64.1	57.3	45.7	37.7										
85	30.6	38.1	46.9	60.1	56.0	52.7	36.8	31.4										
90	23.2	26.7	4.43	42.9	43.3	36.6	4.75	22.0										
95	13.5	9.56	1.36	13.7	27.4	7.41	0.77	6.73										
100	2.46	1.48	1.40	1.36	0.67	0.75	0.90	1.15										
105	1.54	1.44	1.32	1.26	0.73	0.74	0.98	1.13										
110	1.52	1.33	1.00	1.12	0.79	0.74	1.03	1.14										
115	1.50	1.30	1.03	0.92	0.87	0.84	1.10	1.16										
120	1.49	1.35	1.13	0.98	0.95	0.90	1.13	1.16										
125	1.50	1.41	1.19	1.06	1.04	0.97	1.19	1.16										
130	1.59	1.48	1.25	1.15	1.15	1.08	1.24	1.24										
135	1.70	1.54	1.35	1.24	1.24	1.16	1.29	1.28										
140	1.71	1.60	1.38	1.32	1.34	1.28	1.31	1.29										
145	1.72	1.61	1.46	1.43	1.41	1.40	1.38	1.29										
150	1.78	1.62	1.48	1.54	1.48	1.50	1.45	1.38										
155	1.81	1.65	1.57	1.65	1.56	1.62	1.60	1.38										
160	1.89	1.70	1.70	1.75	1.65	1.72	1.74	1.48										
165	1.91	1.79	1.83	1.86	1.69	1.80	1.87	1.62										
170	1.98	1.92	1.96	1.96	1.71	1.92	1.99	1.80										
175	1.88	2.06	2.08	2.10	1.72	2.02	2.12	2.02										
180	1.87	2.18	2.24	2.24	1.86	2.14	2.24	2.24										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-01-14

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: