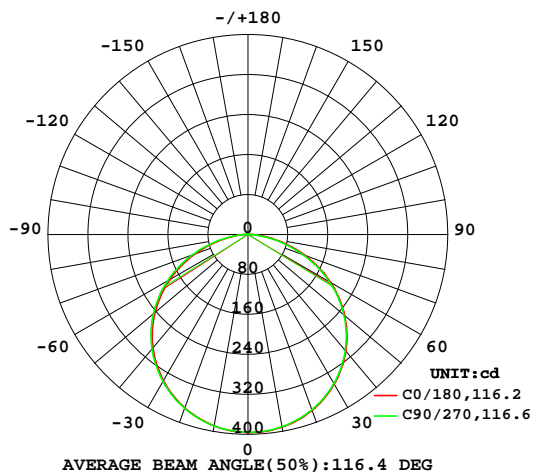


## LUMINAIRE PHOTOMETRIC TEST REPORT

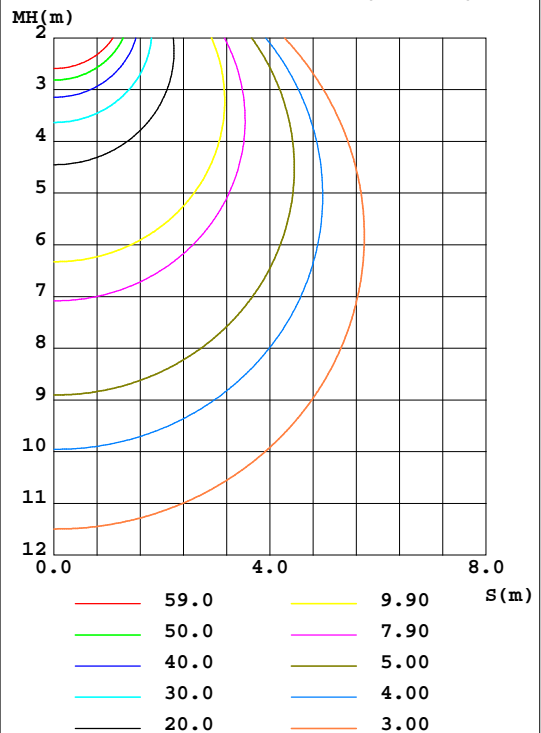
Test:U:24.00V I:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 91.63 lm/W			
MODEL	D8120M2408NO	I <sub>max</sub> (cd)	396.5	S/MH(C0/180)	1.27
NOMINAL POWER(W)	13.5	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1200.3	h UP,DN(C0-180)	0.9,49.6
NOMINAL FLUX(lm)	1200.3	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.7,48.9
LAMPS INSIDE	1	h up(%)	1.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	98.4	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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:

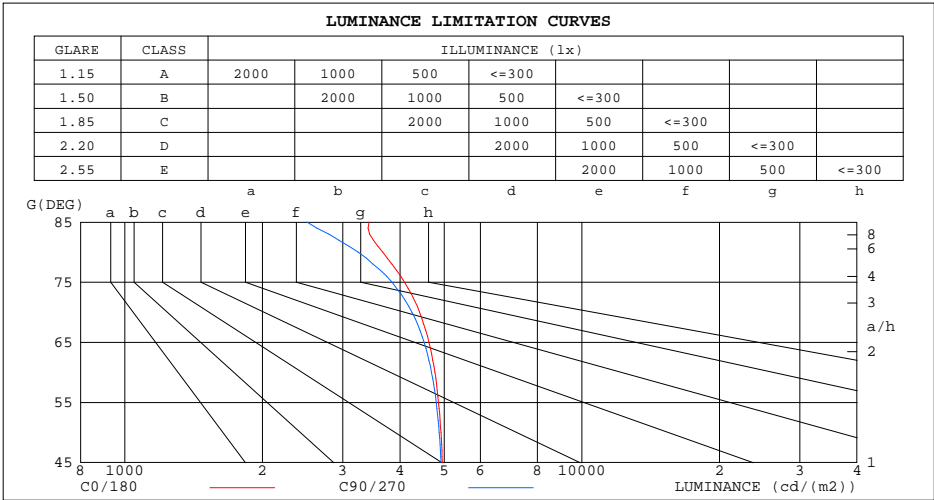
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	391.5	392.2	390.5	389.3	388.8	388.4	388.9	390.4	0~ 10	37.52	37.52	3.13,3.13
20	374.6	375.9	373.4	370.6	369.3	368.5	370.2	372.9	10~ 20	108.0	145.5	12.1,12.1
30	345.6	347.4	344.1	340.2	338.1	337.2	340.1	343.7	20~ 30	165.3	310.8	25.9,25.9
40	304.8	306.9	303.1	298.3	295.7	295.0	298.9	303.1	30~ 40	201.9	512.7	42.7,42.7
50	252.9	254.9	250.6	245.2	242.9	242.5	247.2	251.6	40~ 50	212.8	725.5	60.4,60.4
60	190.8	192.4	187.7	182.2	180.6	180.6	186.0	190.3	50~ 60	195.2	920.7	76.7,76.7
70	120.9	121.7	116.3	111.6	111.5	112.0	117.2	121.5	60~ 70	150.3	1071	89.2,89.2
80	50.94	50.85	44.99	42.72	44.73	45.29	48.32	52.38	70~ 80	85.69	1157	96.4,96.4
90	7.926	6.413	1.808	4.702	5.322	5.966	0.9872	7.347	80~ 90	24.67	1181	98.4,98.4
100	1.378	1.343	1.209	1.403	1.037	0.8737	0.8233	0.8079	90~100	2.120	1183	98.6,98.6
110	2.089	2.094	1.989	2.053	1.845	1.675	1.744	1.683	100~110	1.547	1185	98.7,98.7
120	3.083	3.101	2.997	2.834	2.661	2.502	2.512	2.485	110~120	2.318	1187	98.9,98.9
130	3.994	3.896	3.805	3.547	3.428	3.266	3.126	3.085	120~130	2.822	1190	99.2,99.2
140	4.702	4.430	4.334	4.216	4.082	4.034	3.580	3.500	130~140	2.956	1193	99.4,99.4
150	5.290	4.823	4.689	4.870	4.502	4.774	4.237	3.874	140~150	2.740	1196	99.6,99.6
160	5.865	5.184	5.350	5.464	5.050	5.357	5.205	4.548	150~160	2.279	1198	99.8,99.8
170	6.012	5.905	6.105	5.945	5.537	5.963	6.073	5.737	160~170	1.573	1200	100,100
180	5.885	6.726	6.726	6.780	5.911	6.700	6.760	6.753	170~180	0.5826	1200	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:2020-04-01

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:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3423	2503
80	3667	3239
75	4096	3842
70	4417	4249
65	4632	4518
60	4770	4691
55	4861	4803
50	4917	4874
45	4951	4918

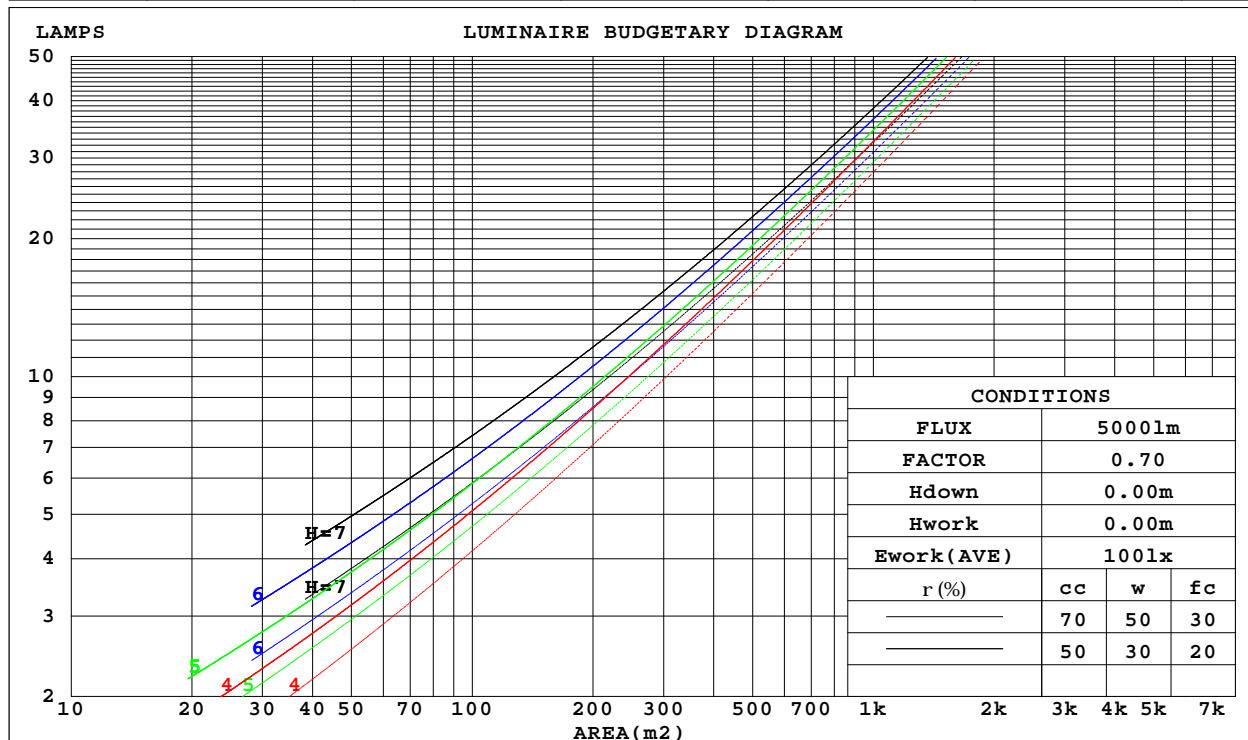
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
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:2020-04-01

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:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
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	.314	.179	.057	.307	.175	.056	.292	.168	.054	.279	.161	.052	.267	.155	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.153	.048	.264	.148	.046	.253	.143	.045	
3.0	.272	.145	.043	.267	.143	.043	.255	.138	.042	.245	.134	.041	.236	.130	.040	
4.0	.251	.131	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.218	.119	.036	
5.0	.232	.118	.034	.227	.117	.034	.218	.114	.033	.210	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.106	.031	.203	.104	.030	.196	.102	.030	.189	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.182	.094	.027	.176	.092	.027	
8.0	.187	.091	.026	.183	.090	.026	.177	.088	.025	.171	.087	.025	.165	.085	.025	
9.0	.175	.085	.024	.172	.084	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.162	.078	.022	.156	.077	.022	.151	.075	.021	.147	.074	.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	.202	.202	.202	.173	.173	.173	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.193	.168	.146	.165	.144	.126	.113	.099	.087	.065	.057	.051	.021	.019	.016	
2.0	.185	.144	.110	.158	.124	.095	.109	.086	.066	.063	.050	.039	.020	.016	.013	
3.0	.177	.127	.086	.152	.109	.075	.104	.076	.052	.060	.044	.031	.019	.014	.010	
4.0	.170	.113	.070	.146	.098	.061	.100	.068	.043	.058	.040	.025	.019	.013	.008	
5.0	.162	.103	.059	.139	.089	.052	.096	.062	.036	.056	.037	.022	.018	.012	.007	
6.0	.155	.095	.051	.133	.082	.045	.092	.057	.032	.053	.034	.019	.017	.011	.006	
7.0	.148	.088	.045	.128	.076	.040	.088	.053	.028	.051	.031	.017	.017	.010	.006	
8.0	.142	.082	.041	.122	.071	.036	.084	.050	.025	.049	.029	.015	.016	.010	.005	
9.0	.136	.077	.038	.117	.067	.033	.081	.047	.023	.047	.028	.014	.015	.009	.005	
10.0	.130	.073	.035	.112	.063	.030	.078	.045	.022	.045	.026	.013	.015	.009	.004	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm											
NAME: D8120M2408NO					TYPE:			WEIGHT:			
SPEC.:D8120M2408NO-9NWNDA012WC0100					DIM.: 1000*8*1.5			SERIAL No.:01			
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	17.8	19.3	18.1	19.6	19.8	17.8	19.3	18.0	19.5	19.7	
	3H	19.4	20.8	19.7	21.0	21.3	19.3	20.7	19.6	20.9	21.2
	4H	20.0	21.3	20.3	21.6	21.9	19.9	21.2	20.2	21.5	21.8
	6H	20.4	21.7	20.8	22.0	22.3	20.2	21.5	20.6	21.8	22.1
	8H	20.6	21.8	20.9	22.1	22.4	20.3	21.5	20.7	21.9	22.2
	12H	20.7	21.8	21.0	22.2	22.5	20.4	21.5	20.8	21.9	22.2
4H	2H	18.4	19.8	18.8	20.1	20.3	18.4	19.7	18.7	20.0	20.3
	3H	20.2	21.4	20.6	21.7	22.0	20.1	21.3	20.5	21.6	21.9
	4H	20.9	22.0	21.3	22.4	22.7	20.8	21.9	21.2	22.2	22.6
	6H	21.5	22.4	21.9	22.8	23.2	21.3	22.2	21.7	22.6	23.0
	8H	21.7	22.6	22.1	23.0	23.4	21.4	22.3	21.9	22.7	23.1
	12H	21.8	22.6	22.3	23.1	23.5	21.5	22.3	22.0	22.8	23.2
8H	4H	21.2	22.1	21.6	22.5	22.9	21.1	22.0	21.5	22.4	22.8
	6H	21.9	22.6	22.4	23.1	23.5	21.7	22.5	22.2	22.9	23.4
	8H	22.2	22.8	22.7	23.3	23.8	22.0	22.6	22.4	23.1	23.5
	12H	22.4	23.0	22.9	23.4	24.0	22.1	22.7	22.6	23.1	23.7
12H	4H	21.2	22.0	21.7	22.4	22.9	21.1	21.9	21.6	22.3	22.8
	6H	22.0	22.6	22.4	23.1	23.6	21.8	22.4	22.3	22.9	23.4
	8H	22.3	22.8	22.8	23.3	23.8	22.1	22.6	22.6	23.1	23.6
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117, 1200 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.6$ )

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

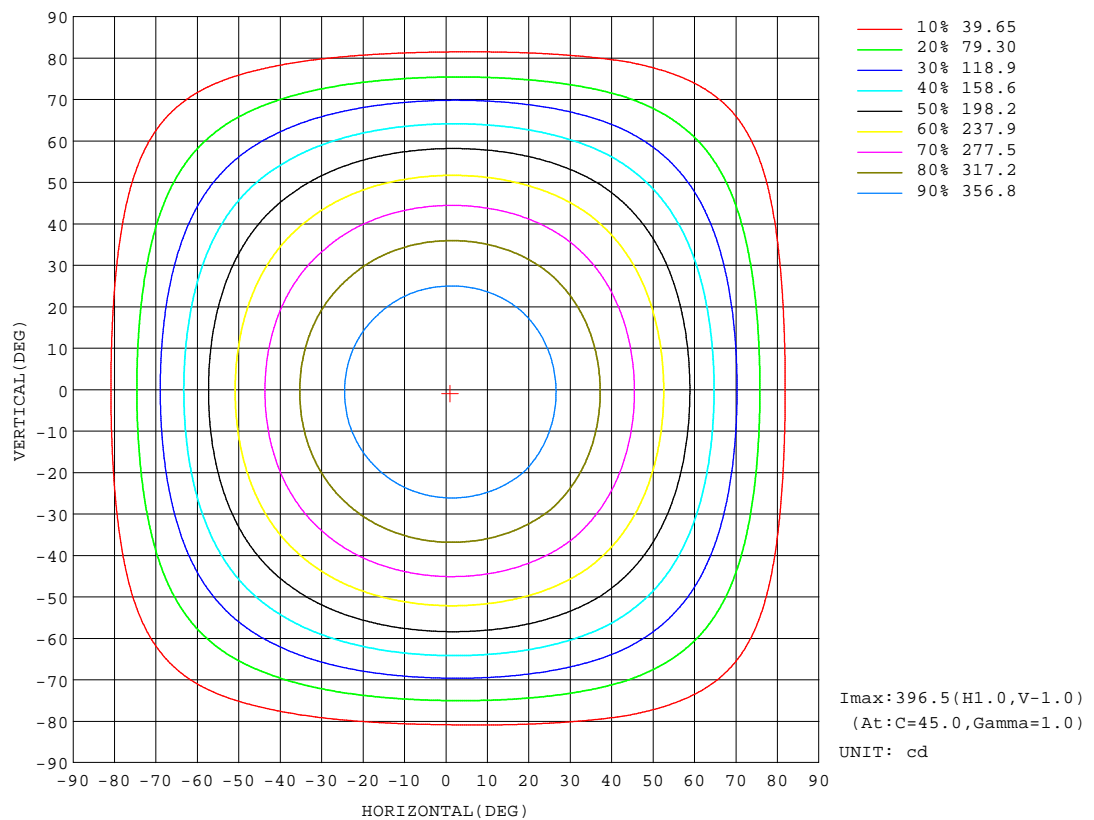
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	45	38	56	44	37	54	44	37	31
0.80	66	55	47	65	54	47	63	53	46	39
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	71	64	80	71	64	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	88	82	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	101	94	89	99	93	88	95	90	85	76
4.00	106	100	95	103	98	93	98	94	91	81
5.00	108	103	99	105	101	97	101	97	94	84
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:2020-04-01

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:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
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:2020-04-01

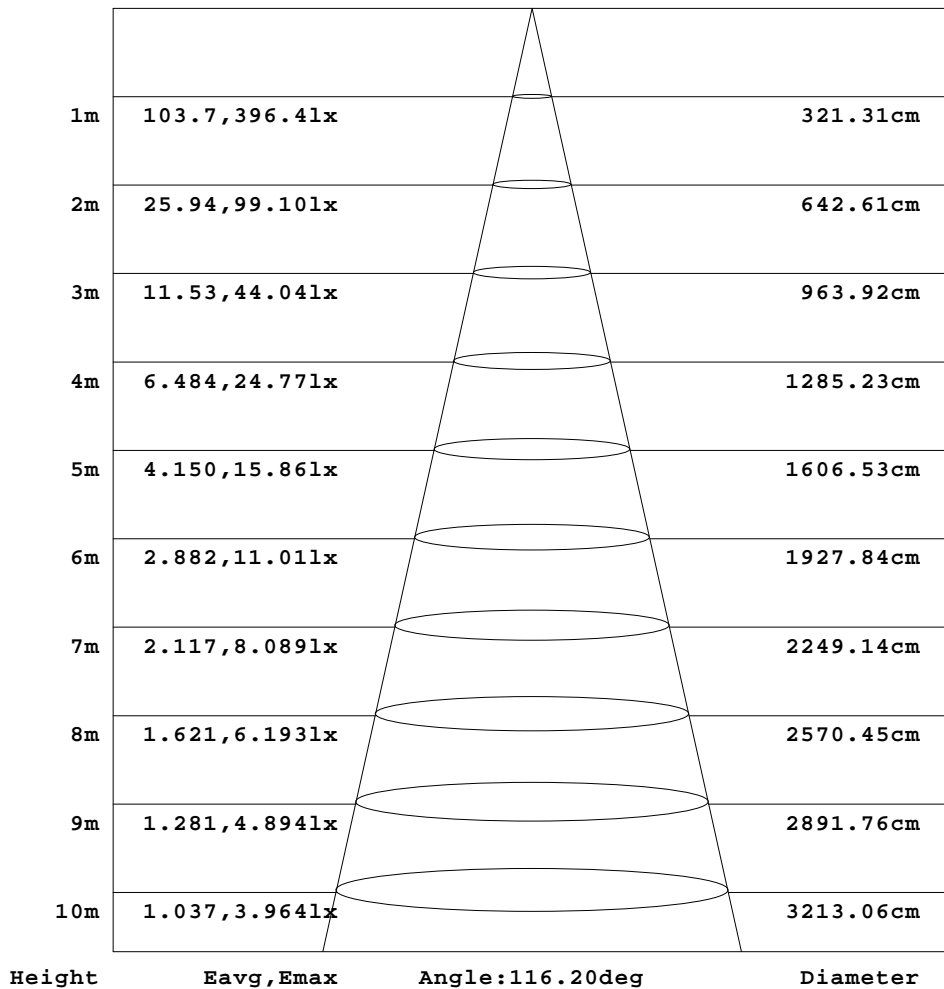
Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:24.00V I:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Flux out:902.7 lm



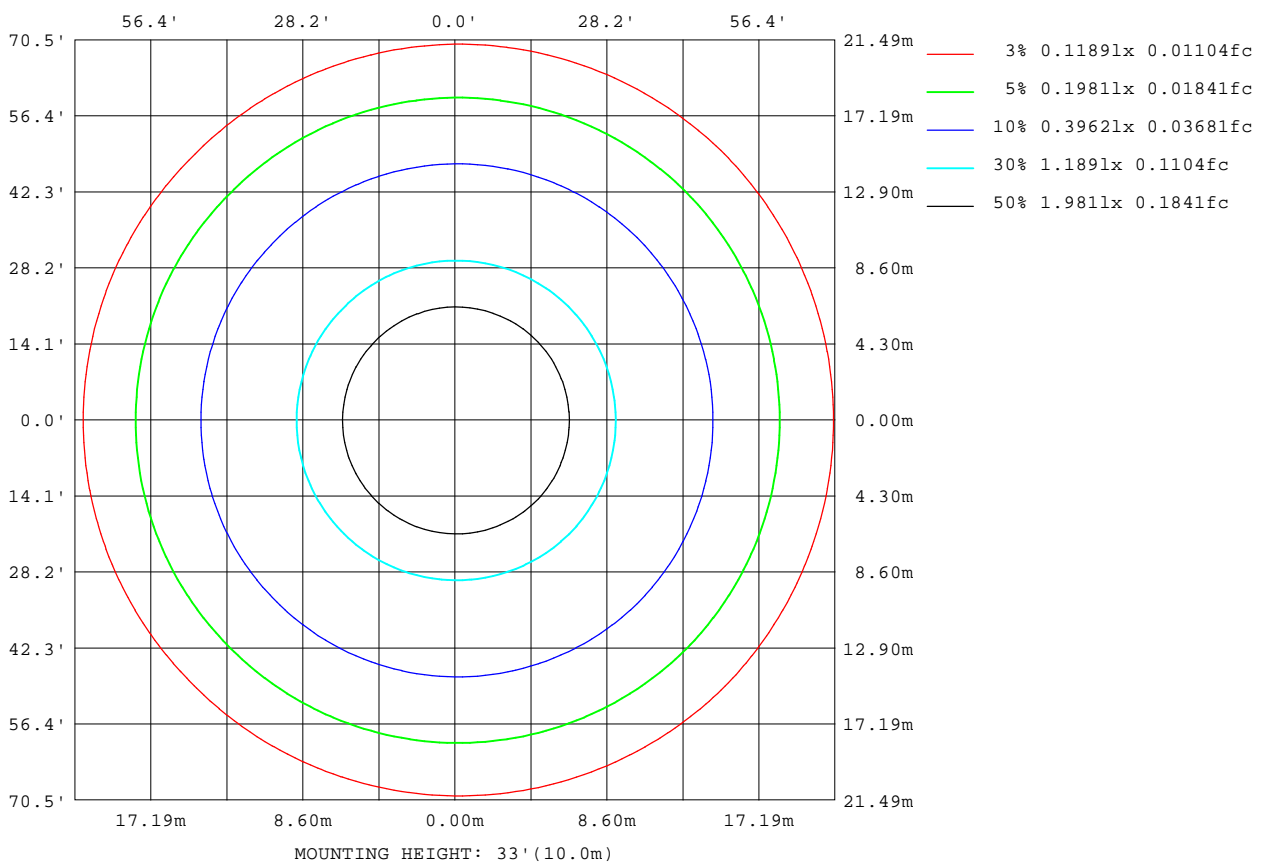
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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

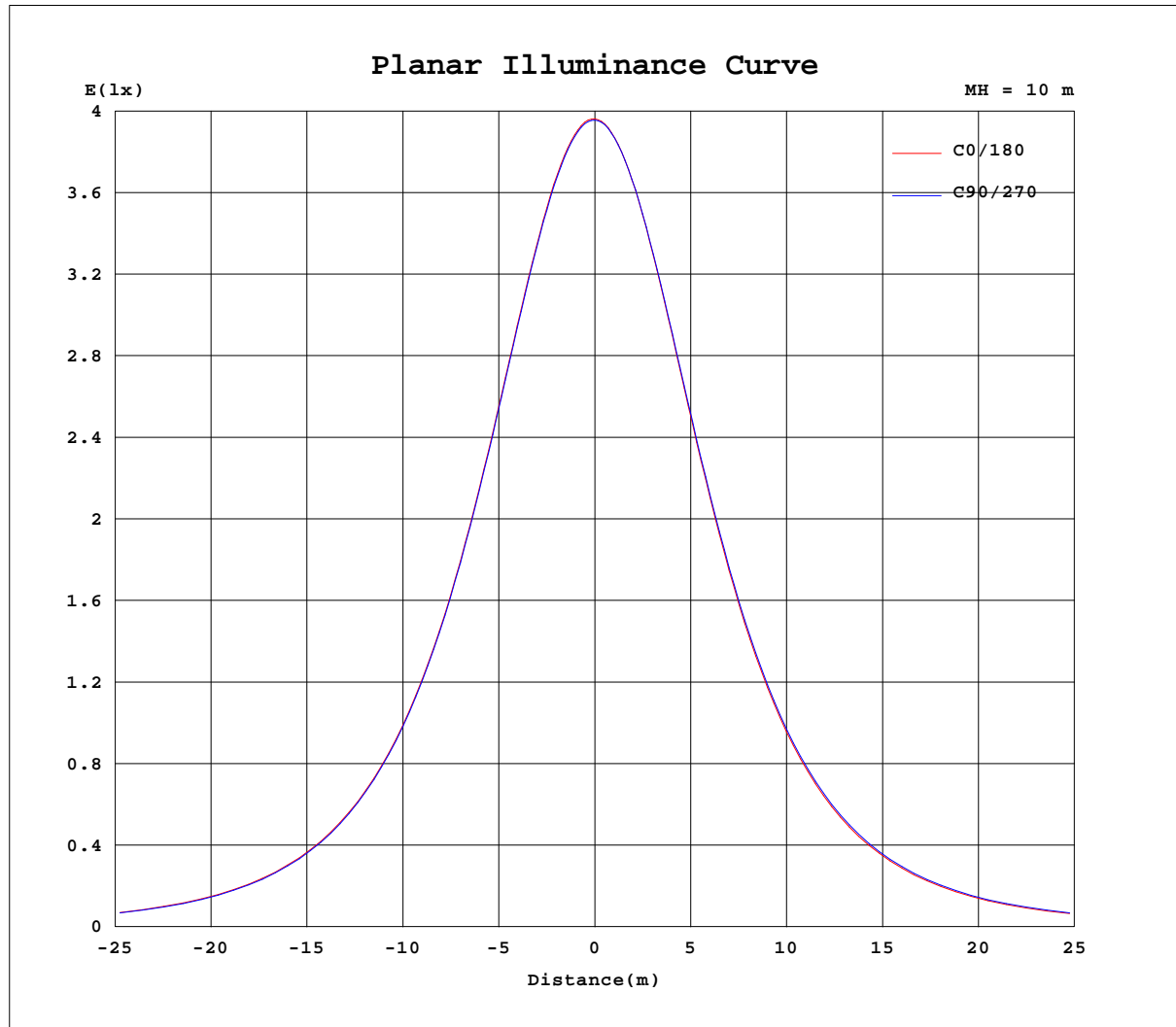
Test:U:24.00V I:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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: 2020-04-01

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:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.5450A P:13.10W PF:1.000 Freq:0Hz Lamp Flux:1200.3x1 lm		
NAME: D8120M2408NO	TYPE:	WEIGHT:
SPEC.:D8120M2408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	396	396	396	396	396	396	396	396										
5	395	396	395	394	394	394	394	395										
10	392	392	391	389	389	388	389	390										
15	385	386	383	381	381	380	381	383										
20	375	376	373	371	369	369	370	373										
25	362	363	360	357	355	354	357	360										
30	346	347	344	340	338	337	340	344										
35	327	329	325	321	318	317	321	325										
40	305	307	303	298	296	295	299	303										
45	280	282	278	273	271	270	274	279										
50	253	255	251	245	243	242	247	252										
55	223	225	220	215	213	213	218	222										
60	191	192	188	182	181	181	186	190										
65	157	158	153	148	147	147	152	157										
70	121	122	116	112	112	112	117	122										
75	84.8	85.0	79.6	75.7	76.7	77.4	81.9	86.0										
80	50.9	50.8	45.0	42.7	44.7	45.3	48.3	52.4										
85	23.9	23.5	17.5	17.6	19.6	20.1	20.4	24.1										
90	7.93	6.41	1.81	4.70	5.32	5.97	0.99	7.35										
95	2.55	1.91	1.23	1.54	1.14	1.22	0.46	0.96										
100	1.38	1.34	1.21	1.40	1.04	0.87	0.82	0.81										
105	1.58	1.65	1.48	1.69	1.40	1.26	1.30	1.23										
110	2.09	2.09	1.99	2.05	1.85	1.67	1.74	1.68										
115	2.58	2.61	2.52	2.46	2.25	2.06	2.14	2.10										
120	3.08	3.10	3.00	2.83	2.66	2.50	2.51	2.48										
125	3.60	3.55	3.39	3.19	3.07	2.86	2.83	2.76										
130	3.99	3.90	3.81	3.55	3.43	3.27	3.13	3.09										
135	4.35	4.20	4.10	3.88	3.77	3.65	3.39	3.30										
140	4.70	4.43	4.33	4.22	4.08	4.03	3.58	3.50										
145	5.00	4.63	4.50	4.54	4.32	4.44	3.84	3.70										
150	5.29	4.82	4.69	4.87	4.50	4.77	4.24	3.87										
155	5.58	5.00	4.99	5.18	4.77	5.13	4.72	4.17										
160	5.86	5.18	5.35	5.46	5.05	5.36	5.20	4.55										
165	6.09	5.46	5.74	5.70	5.33	5.63	5.66	5.09										
170	6.01	5.90	6.10	5.95	5.54	5.96	6.07	5.74										
175	5.80	6.37	6.52	6.32	5.53	6.26	6.46	6.35										
180	5.88	6.73	6.73	6.78	5.91	6.70	6.76	6.75										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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: