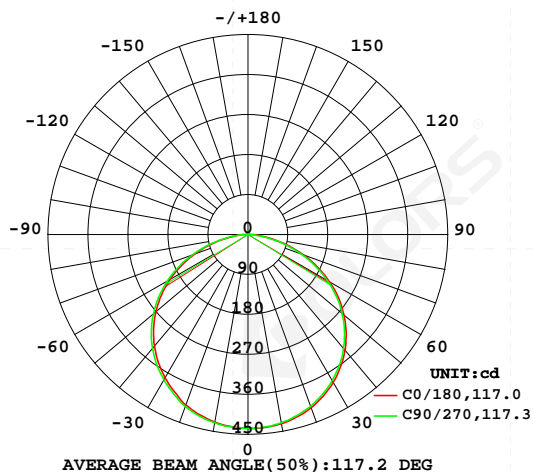


## LUMINAIRE PHOTOMETRIC TEST REPORT

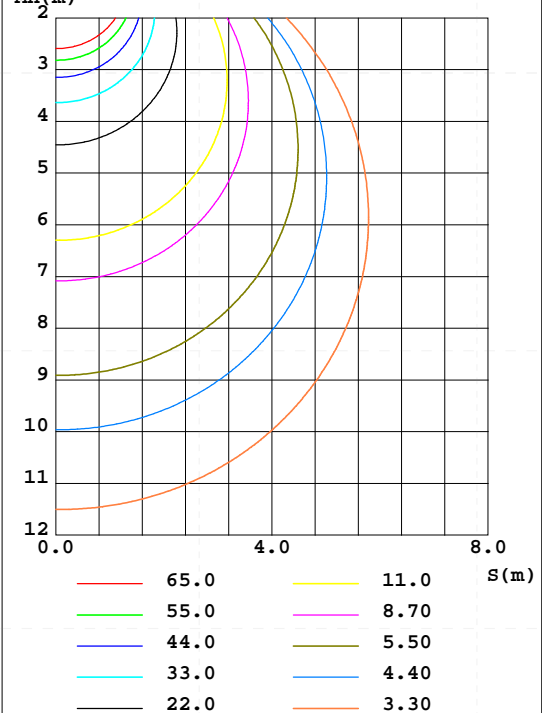
Test:U:24.00V I:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.29 lm/W			
MODEL	D81202408NO	I <sub>max</sub> (cd)	437.1	S/MH(C0/180)	1.27
NOMINAL POWER(W)	13.5	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1329.5	h UP,DN(C0-180)	0.8,49.2
NOMINAL FLUX(lm)	1329.46	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.7,49.2
LAMPS INSIDE	1	h up(%)	1.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	98.5	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:2020-03-31

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:

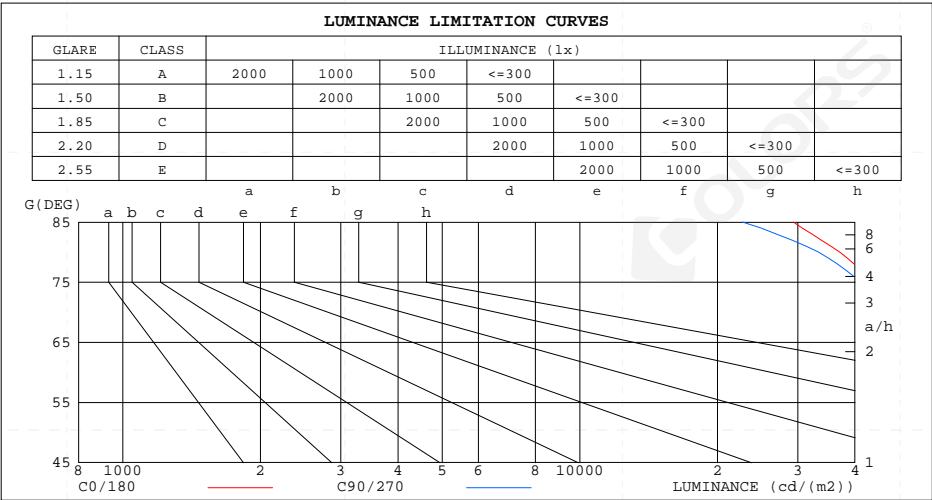
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	432.4	432.6	430.4	429.9	428.8	429.2	430.5	432.2	0- 10	41.41	41.41	3.11,3.11
20	415.1	415.4	411.6	410.2	408.4	409.2	412.1	414.5	10- 20	119.5	160.9	12.1,12.1
30	384.2	382.3	379.5	375.1	373.0	376.2	378.5	383.5	20- 30	183.0	343.9	25.9,25.9
40	340.0	338.4	334.8	330.1	327.8	331.1	334.6	339.6	30- 40	224.2	568.1	42.7,42.7
50	282.4	280.6	276.9	272.7	270.7	274.3	278.2	282.5	40- 50	237.0	805.1	60.6,60.6
60	211.9	210.6	206.0	203.8	202.6	204.9	210.2	212.6	50- 60	217.9	1023	77,77
70	131.5	130.8	125.8	125.8	126.2	127.9	132.8	133.2	60- 70	167.2	1190	89.5,89.5
80	51.44	50.72	46.24	48.68	50.11	51.32	54.42	54.07	70- 80	94.20	1284	96.6,96.6
90	4.984	4.343	1.493	4.162	4.227	4.810	0.6304	5.481	80- 90	24.67	1309	98.5,98.5
100	1.348	1.497	1.322	1.484	1.042	1.362	0.8377	0.9285	90-100	1.774	1311	98.6,98.6
110	2.343	2.392	2.303	2.247	2.006	1.768	1.917	1.882	100-110	1.723	1313	98.7,98.7
120	3.467	3.503	3.405	3.121	2.939	2.690	2.774	2.757	110-120	2.585	1315	98.9,98.9
130	4.428	4.384	4.307	3.903	3.788	3.598	3.448	3.392	120-130	3.136	1318	99.2,99.2
140	5.201	4.963	4.881	4.657	4.495	4.426	3.942	3.867	130-140	3.279	1322	99.4,99.4
150	5.836	5.364	5.230	5.359	4.944	5.215	4.623	4.268	140-150	3.027	1325	99.6,99.6
160	6.445	5.724	5.943	5.999	5.531	5.878	5.705	4.981	150-160	2.506	1327	99.8,99.8
170	6.559	6.500	6.753	6.520	6.038	6.491	6.660	6.297	160-170	1.729	1329	100,100
180	6.499	7.374	7.434	7.461	6.499	7.367	7.428	7.468	170-180	0.6392	1329	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:2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-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	29323	22688
80	37027	33284
75	43603	40980
70	48064	45972
65	50896	49198
60	52981	51494
55	54216	52990
50	54924	53854
45	55275	54357

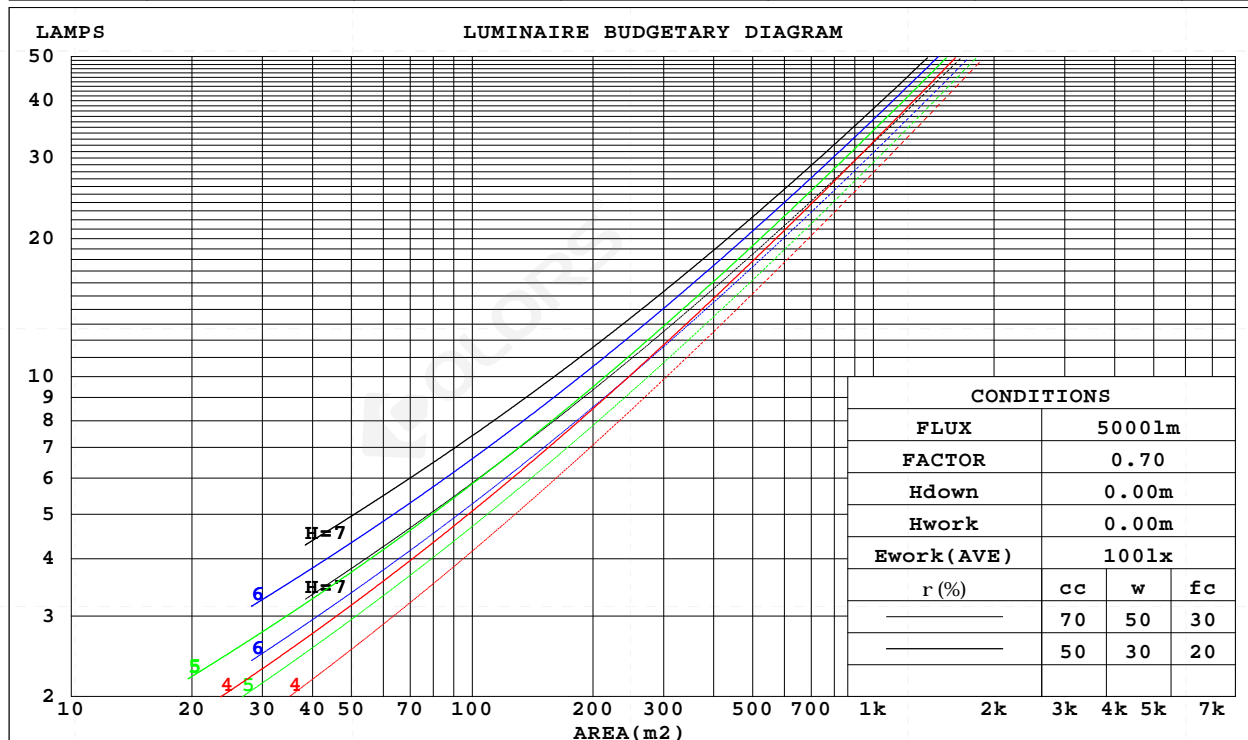
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-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:2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm					
NAME: D81202408NO			TYPE:		WEIGHT:
SPEC.:D81202408NO-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	.312	.177	.056	.305	.174	.055	.290	.167	.053	.277	.160	.051	.265	.154	.050	
2.0	.294	.161	.049	.287	.158	.049	.275	.153	.047	.263	.148	.046	.252	.143	.045	
3.0	.272	.145	.043	.266	.142	.043	.255	.138	.042	.245	.134	.041	.235	.130	.040	
4.0	.251	.130	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.218	.118	.036	
5.0	.232	.118	.034	.227	.117	.034	.218	.114	.033	.210	.111	.033	.202	.108	.033	
6.0	.215	.108	.031	.211	.106	.031	.203	.104	.030	.195	.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	.192	.168	.146	.164	.144	.126	.113	.099	.087	.065	.057	.051	.021	.018	.016	
2.0	.184	.144	.110	.158	.124	.095	.108	.086	.066	.062	.050	.039	.020	.016	.013	
3.0	.177	.126	.086	.152	.109	.075	.104	.076	.052	.060	.044	.031	.019	.014	.010	
4.0	.169	.113	.070	.145	.098	.061	.100	.068	.043	.058	.040	.025	.019	.013	.008	
5.0	.162	.103	.059	.139	.089	.051	.096	.062	.036	.055	.036	.021	.018	.012	.007	
6.0	.155	.094	.051	.133	.082	.044	.092	.057	.031	.053	.034	.019	.017	.011	.006	
7.0	.148	.087	.045	.127	.076	.039	.088	.053	.028	.051	.031	.017	.017	.010	.005	
8.0	.141	.082	.041	.122	.071	.035	.084	.050	.025	.049	.029	.015	.016	.010	.005	
9.0	.135	.077	.037	.117	.067	.032	.081	.047	.023	.047	.028	.014	.015	.009	.005	
10.0	.130	.073	.035	.112	.063	.030	.078	.044	.021	.045	.026	.013	.015	.009	.004	

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm												
NAME: D81202408NO						TYPE:			WEIGHT:			
SPEC.:D81202408NO-9NWDA012WC0100						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	25.8	27.3	26.1	27.5	27.8	25.7	27.2	26.0	27.4	27.7		
	27.3	28.7	27.7	29.0	29.3	27.2	28.6	27.5	28.8	29.1		
	27.9	29.2	28.3	29.5	29.8	27.7	29.1	28.1	29.4	29.6		
	28.3	29.5	28.7	29.8	30.2	28.1	29.3	28.4	29.6	29.9		
	28.4	29.6	28.8	29.9	30.2	28.2	29.4	28.5	29.7	30.0		
	28.4	29.6	28.8	29.9	30.3	28.2	29.3	28.5	29.7	30.0		
4H	2H	26.4	27.7	26.7	28.0	28.3	26.3	27.7	26.7	27.9	28.2	
	3H	28.1	29.3	28.5	29.6	29.9	28.0	29.2	28.4	29.5	29.8	
	4H	28.8	29.9	29.2	30.2	30.6	28.7	29.7	29.1	30.1	30.4	
	6H	29.3	30.3	29.7	30.6	31.0	29.1	30.1	29.5	30.4	30.8	
	8H	29.5	30.3	29.9	30.7	31.2	29.2	30.1	29.7	30.5	30.9	
	12H	29.5	30.4	30.0	30.8	31.2	29.3	30.1	29.7	30.5	30.9	
8H	4H	29.1	29.9	29.5	30.3	30.8	28.9	29.8	29.4	30.2	30.6	
	6H	29.7	30.4	30.2	30.8	31.3	29.5	30.2	30.0	30.7	31.1	
	8H	29.9	30.5	30.4	31.0	31.5	29.7	30.3	30.2	30.8	31.3	
	12H	30.1	30.6	30.6	31.1	31.6	29.8	30.3	30.3	30.8	31.3	
	12H	4H	29.1	29.9	29.5	30.3	30.7	28.9	29.7	29.4	30.1	30.6
		6H	29.7	30.4	30.2	30.8	31.3	29.5	30.2	30.0	30.6	31.1
8H		30.0	30.5	30.5	31.0	31.5	29.8	30.3	30.3	30.8	31.3	
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 / - 0.3					

CIE Pub.117, 1329 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 1.0$ )

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

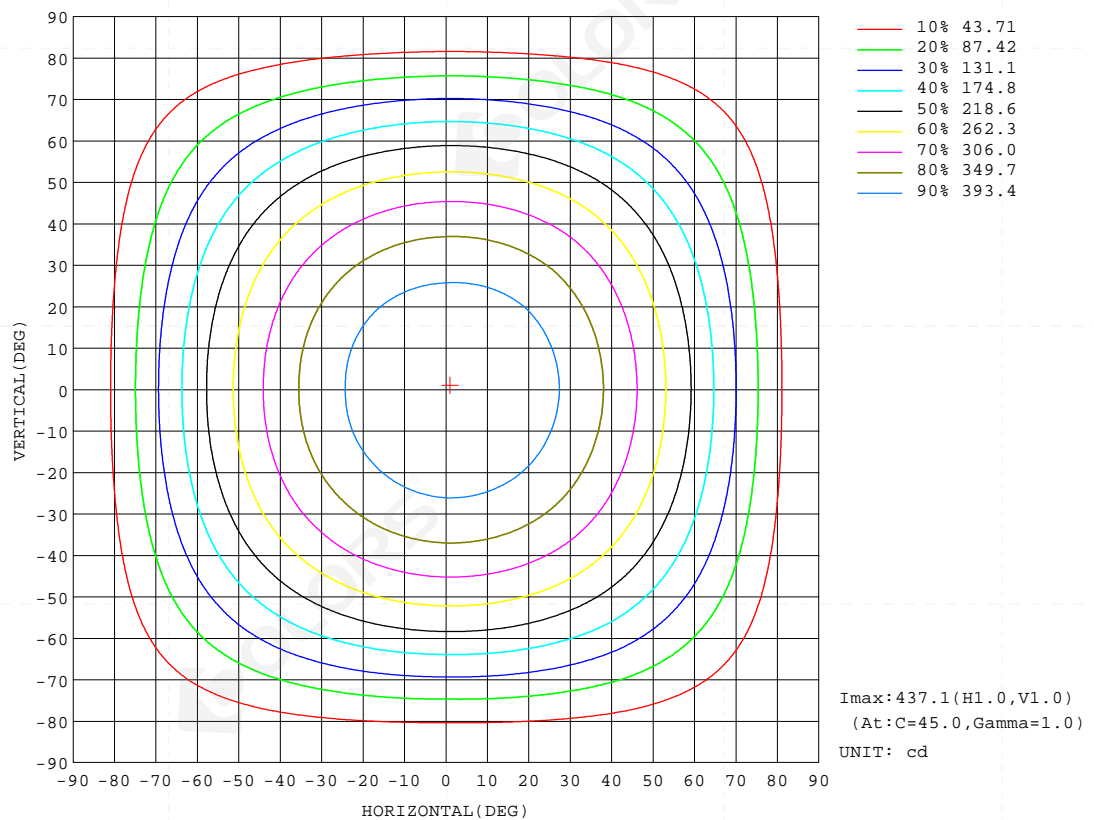
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	45	38	56	44	37	54	44	37	31
0.80	66	55	47	65	54	47	63	53	47	39
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	71	64	81	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	102	95	89	99	93	88	95	90	85	76
4.00	106	100	95	103	98	94	99	94	91	81
5.00	108	103	99	106	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:2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-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:2020-03-31

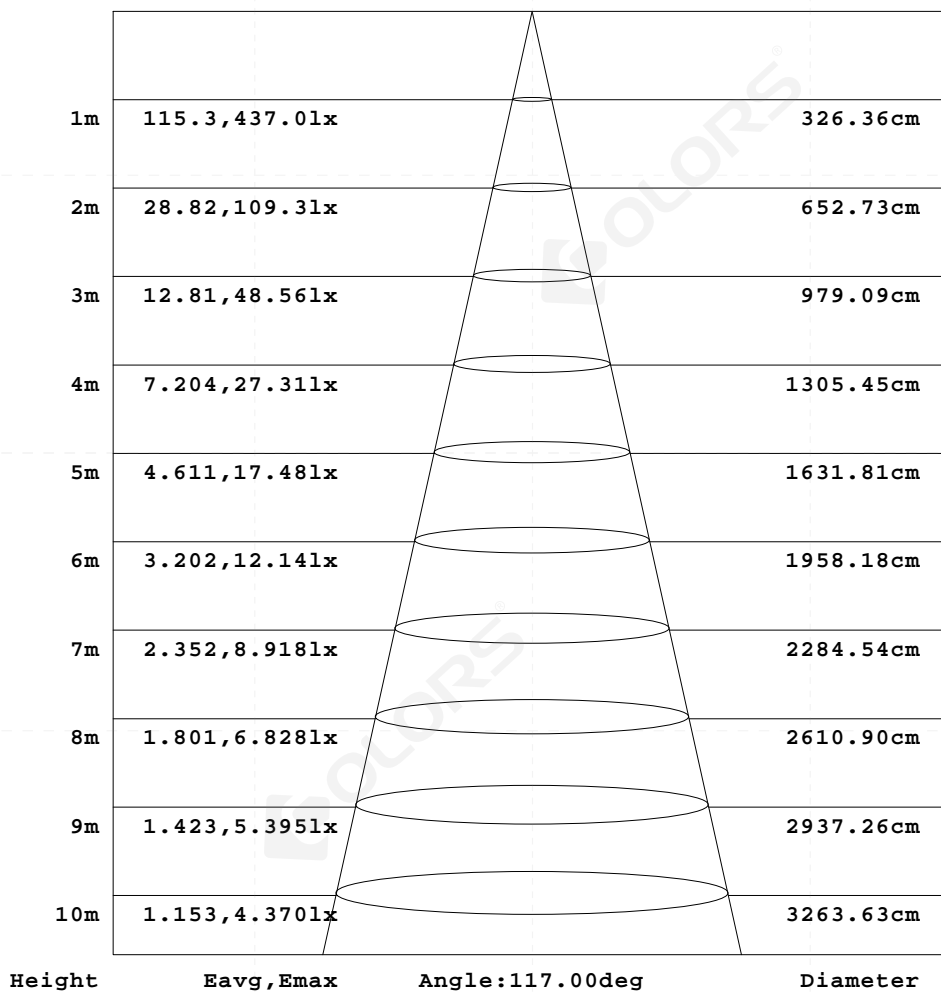
Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



## AAI Figure

Test:U:24.00V I:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:

Flux out:1003 lm



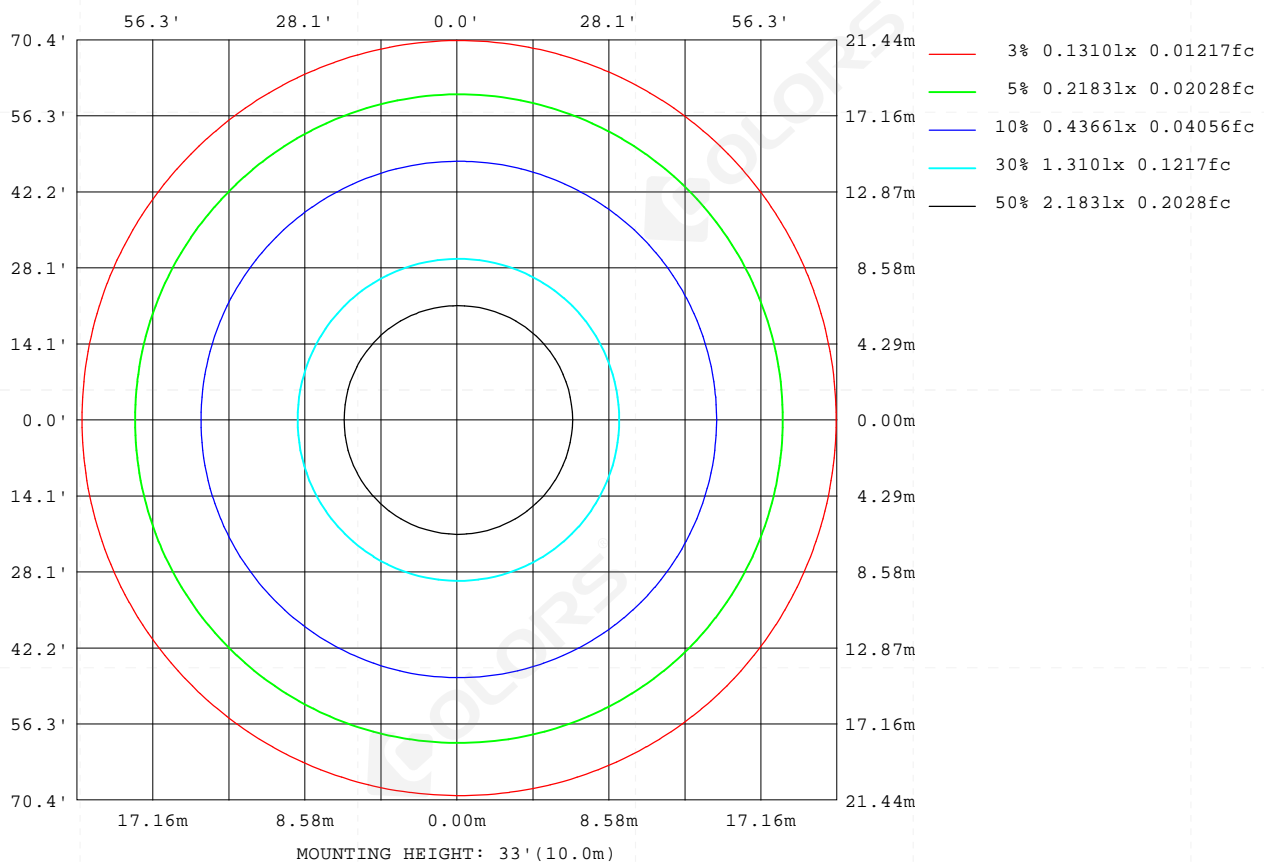
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-03-31

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:

## ISOLUX DIAGRAM

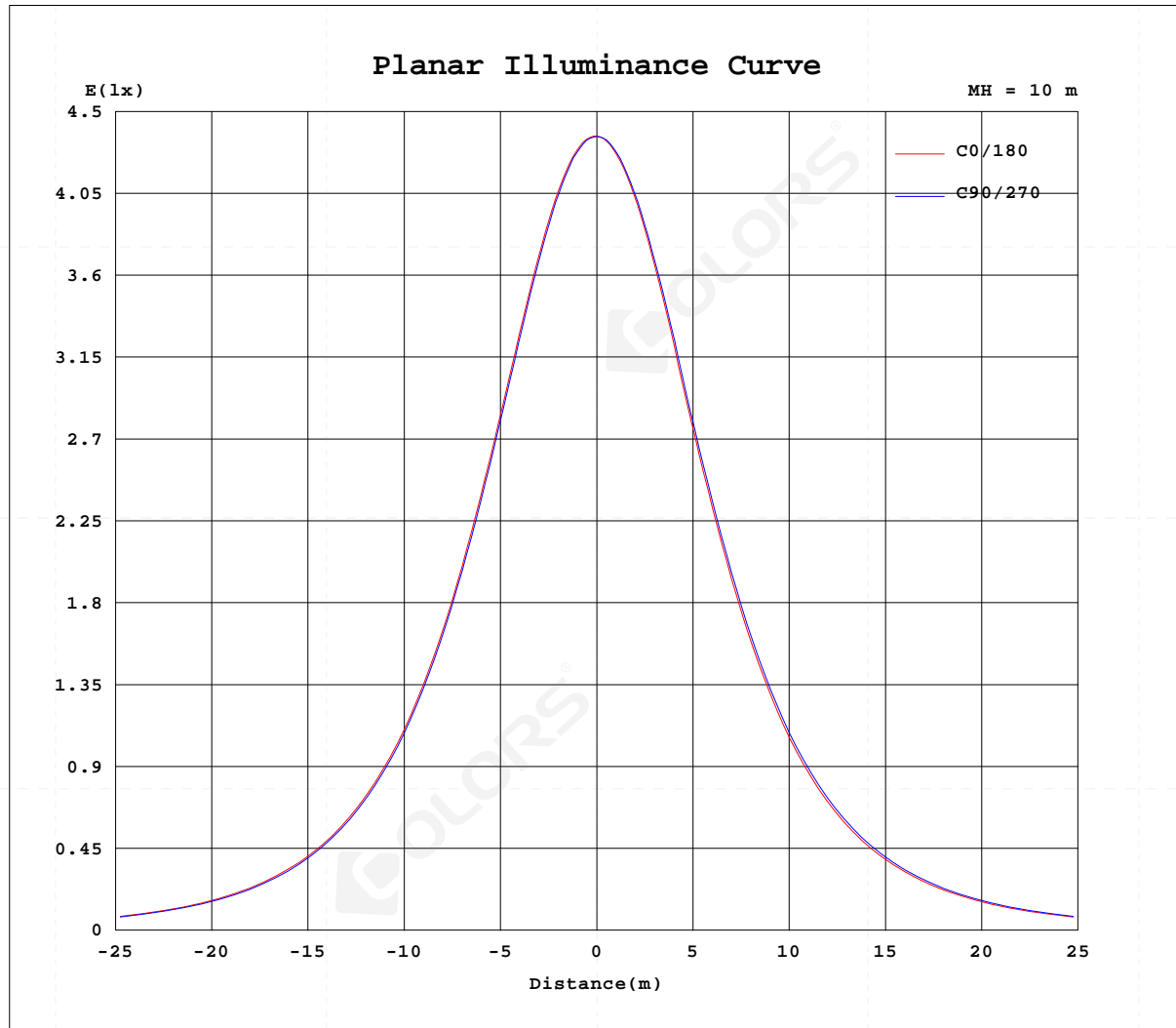
Test:U:24.00V I:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-9NWDA012WC0100	DIM.: 1000*8*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*8	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2020-03-31

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: 2020-03-31

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:0.5900A P:14.10W PF:1.000 Freq:0Hz Lamp Flux:1329.46x1 lm		
NAME: D81202408NO	TYPE:	WEIGHT:
SPEC.:D81202408NO-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	437	437	436	437	437	437	436	437										
5	436	436	435	435	434	435	435	436										
10	432	433	430	430	429	429	430	432										
15	425	426	423	422	420	421	423	425										
20	415	415	412	410	408	409	412	414										
25	401	400	397	393	391	394	396	401										
30	384	382	379	375	373	376	378	384										
35	364	362	359	354	352	355	358	363										
40	340	338	335	330	328	331	335	340										
45	313	311	307	303	301	304	308	312										
50	282	281	277	273	271	274	278	282										
55	249	247	243	240	238	241	246	249										
60	212	211	206	204	203	205	210	213										
65	172	172	166	166	165	167	172	173										
70	132	131	126	126	126	128	133	133										
75	90.3	90.0	84.9	86.0	87.0	88.5	92.8	92.6										
80	51.4	50.7	46.2	48.7	50.1	51.3	54.4	54.1										
85	20.4	19.9	15.8	19.2	20.5	21.1	22.7	22.4										
90	4.98	4.34	1.49	4.16	4.23	4.81	0.63	5.48										
95	1.41	1.38	1.34	1.58	1.02	1.62	0.46	1.02										
100	1.35	1.50	1.32	1.48	1.04	1.36	0.84	0.93										
105	1.78	1.85	1.67	1.83	1.51	1.55	1.40	1.37										
110	2.34	2.39	2.30	2.25	2.01	1.77	1.92	1.88										
115	2.90	2.95	2.89	2.71	2.49	2.24	2.38	2.43										
120	3.47	3.50	3.40	3.12	2.94	2.69	2.77	2.76										
125	3.94	3.98	3.89	3.51	3.38	3.15	3.13	3.07										
130	4.43	4.38	4.31	3.90	3.79	3.60	3.45	3.39										
135	4.83	4.72	4.61	4.28	4.16	4.01	3.72	3.71										
140	5.20	4.96	4.88	4.66	4.50	4.43	3.94	3.87										
145	5.54	5.16	5.04	5.02	4.76	4.85	4.20	4.05										
150	5.84	5.36	5.23	5.36	4.94	5.22	4.62	4.27										
155	6.14	5.54	5.56	5.69	5.26	5.57	5.16	4.56										
160	6.45	5.72	5.94	6.00	5.53	5.88	5.70	4.98										
165	6.73	6.01	6.38	6.25	5.85	6.16	6.21	5.57										
170	6.56	6.50	6.75	6.52	6.04	6.49	6.66	6.30										
175	6.36	7.00	7.15	6.93	6.05	6.89	7.10	6.95										
180	6.50	7.37	7.43	7.46	6.50	7.37	7.43	7.47										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-03-31

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: