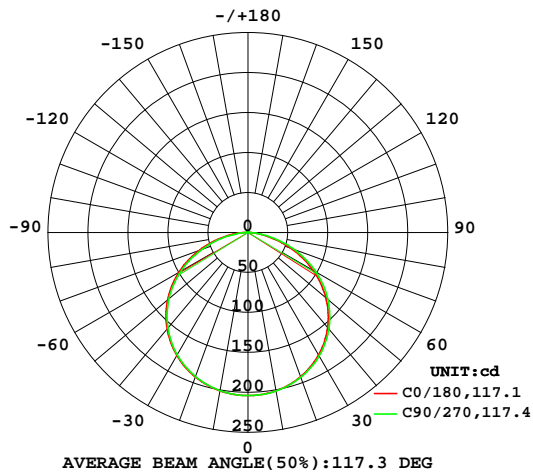


## LUMINAIRE PHOTOMETRIC TEST REPORT

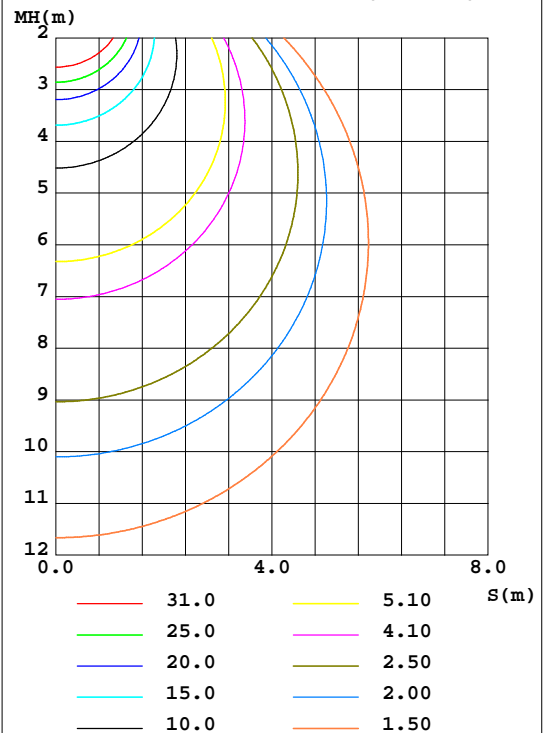
Test:U:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWNDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.72 lm/W			
MODEL	DS81444812NO	I <sub>max</sub> (cd)	204.1	S/MH(C0/180)	1.30
NOMINAL POWER(W)	5.4	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	622.30	h UP,DN(C0-180)	0.8,49.1
NOMINAL FLUX(lm)	622.298	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.7,49.3
LAMPS INSIDE	1	h up(%)	1.5	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	48	h down(%)	98.5	CIBSE SHR MAX	1.50

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:

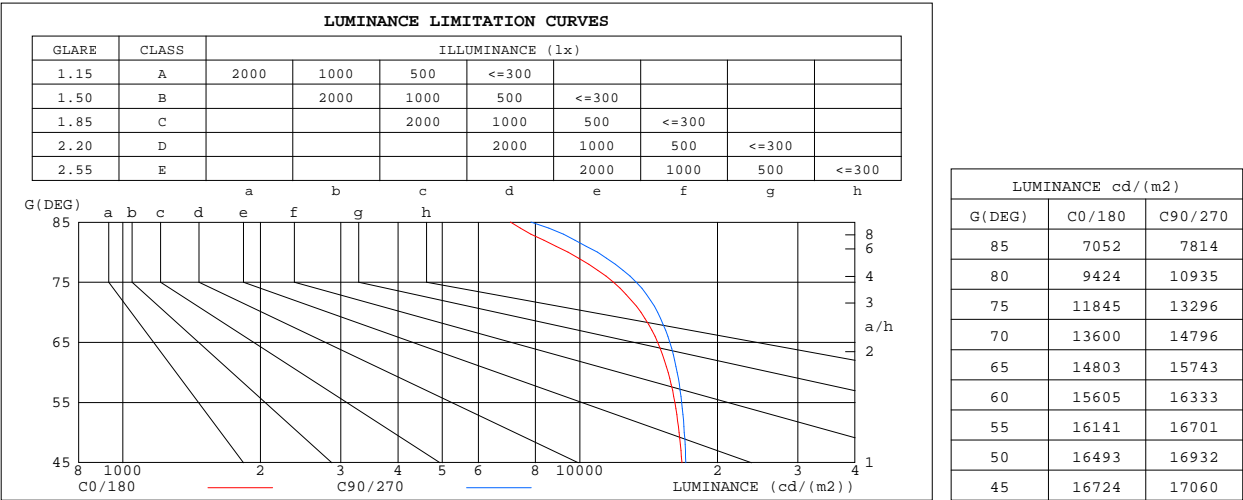
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	201.1	201.6	201.4	201.7	201.2	201.0	200.9	200.9	0- 10	19.34	19.34	3.11,3.11
20	192.1	192.9	192.8	193.3	192.5	192.1	191.9	191.6	10- 20	55.80	75.14	12.1,12.1
30	176.8	178.1	178.2	179.0	177.8	177.3	176.9	176.1	20- 30	85.63	160.8	25.8,25.8
40	155.1	156.9	157.5	158.7	157.4	156.8	155.9	154.6	30- 40	105.0	265.8	42.7,42.7
50	127.2	129.4	130.6	132.5	131.4	130.6	129.1	126.8	40- 50	110.9	376.7	60.5,60.5
60	93.63	96.07	98.00	100.9	100.1	99.11	96.85	93.47	50- 60	101.9	478.6	76.9,76.9
70	55.82	58.22	60.73	64.71	64.63	63.48	60.40	56.07	60- 70	78.32	556.9	89.5,89.5
80	19.64	20.81	22.79	27.91	28.61	27.33	23.79	20.01	70- 80	44.04	600.9	96.6,96.6
90	1.535	1.707	0.7106	3.539	4.252	3.232	0.1204	1.512	80- 90	11.81	612.8	98.5,98.5
100	0.6340	0.7418	0.6012	0.6480	0.4083	0.3338	0.4146	0.4468	90-100	0.8804	613.6	98.6,98.6
110	1.162	1.163	1.040	0.9819	0.8830	0.7548	0.9095	0.9617	100-110	0.7814	614.4	98.7,98.7
120	1.662	1.671	1.563	1.390	1.317	1.182	1.303	1.302	110-120	1.191	615.6	98.9,98.9
130	2.122	2.084	2.009	1.772	1.737	1.603	1.617	1.583	120-130	1.450	617.1	99.2,99.2
140	2.438	2.378	2.267	2.151	2.071	2.003	1.850	1.817	130-140	1.527	618.6	99.4,99.4
150	2.758	2.545	2.465	2.505	2.299	2.424	2.165	1.997	140-150	1.416	620.0	99.6,99.6
160	3.037	2.712	2.758	2.819	2.619	2.752	2.706	2.344	150-160	1.179	621.2	99.8,99.8
170	3.093	3.066	3.166	3.079	2.799	3.039	3.167	2.965	160-170	0.8134	622.0	100,100
180	3.019	3.473	3.513	3.520	3.026	3.527	3.520	3.527	170-180	0.3008	622.3	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:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:



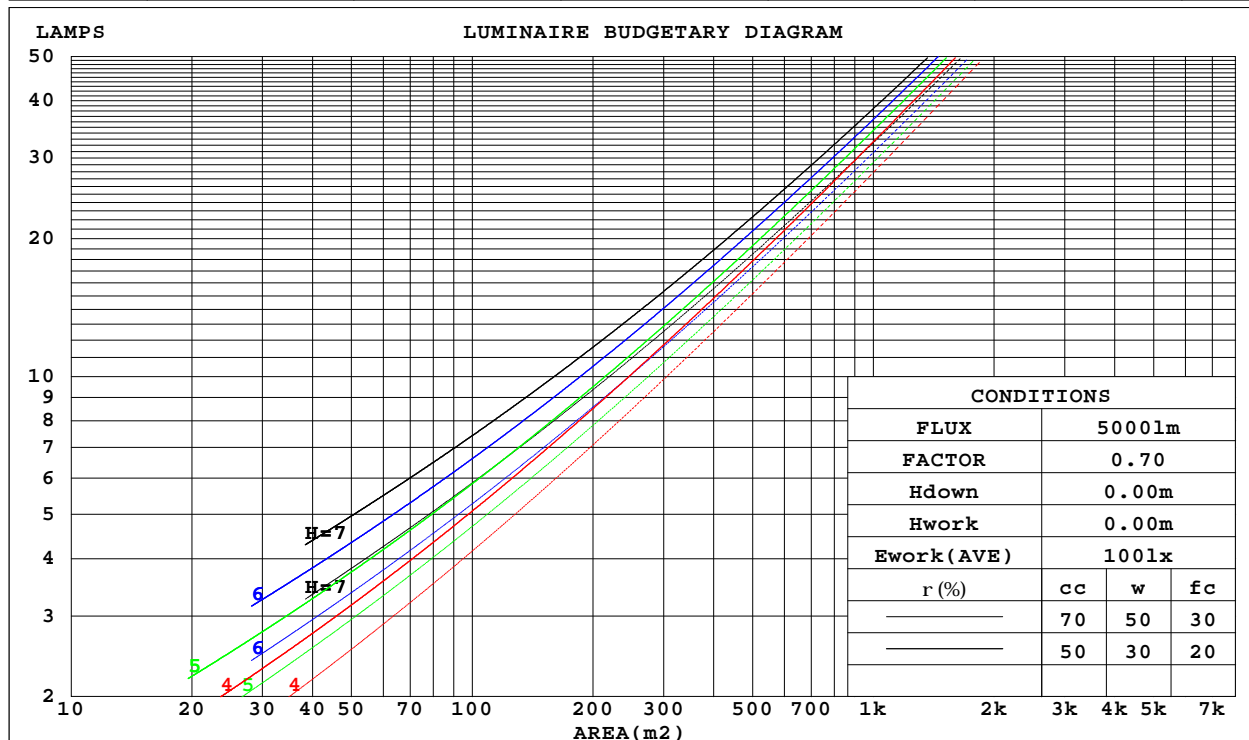
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-04-01

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:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	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                      Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.98
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.90	.87	.88	.86	.84	.82
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.80	.76	.72	.77	.74	.70	.68
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.65	.60	.68	.63	.59	.57
4.0	.70	.61	.54	.68	.60	.53	.65	.58	.52	.63	.57	.52	.60	.55	.51	.48
5.0	.62	.53	.46	.61	.52	.46	.58	.51	.45	.56	.50	.45	.54	.48	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.50	.42	.35	.50	.41	.35	.48	.40	.35	.46	.39	.34	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.36	.31	.41	.35	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.26
10.0	.39	.31	.26	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



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:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	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															

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	.165	.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	.074	.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	.034	.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:2020-04-01

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:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm											
NAME: DS81444812NO						TYPE:		WEIGHT:			
SPEC.:DS81444812NO-9NWDA012WC0100						DIM.: 1000*12*1.5		SERIAL No.:01			
MFR.: COLORS						SUR.:1000*12		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	24.1	25.6	24.4	25.9	26.1	24.3	25.8	24.6	26.0	26.3	
	3H	25.6	27.0	25.9	27.2	27.5	25.8	27.2	26.1	27.5	27.7
	4H	26.1	27.4	26.4	27.7	28.0	26.4	27.7	26.7	28.0	28.3
	6H	26.4	27.6	26.7	27.9	28.2	26.7	28.0	27.1	28.3	28.6
	8H	26.4	27.6	26.8	27.9	28.3	26.8	28.0	27.2	28.3	28.7
	12H	26.4	27.6	26.8	27.9	28.3	26.8	28.0	27.2	28.3	28.7
4H	2H	24.7	26.1	25.1	26.4	26.6	24.9	26.2	25.2	26.5	26.8
	3H	26.3	27.5	26.7	27.8	28.2	26.6	27.7	26.9	28.0	28.4
	4H	27.0	28.0	27.4	28.4	28.7	27.2	28.3	27.6	28.6	29.0
	6H	27.3	28.3	27.8	28.7	29.1	27.7	28.6	28.1	29.0	29.4
	8H	27.4	28.3	27.9	28.7	29.1	27.8	28.7	28.2	29.1	29.5
	12H	27.5	28.3	27.9	28.7	29.2	27.9	28.7	28.3	29.1	29.5
8H	4H	27.2	28.1	27.6	28.5	28.9	27.4	28.3	27.9	28.7	29.1
	6H	27.7	28.4	28.2	28.9	29.3	28.0	28.7	28.5	29.2	29.6
	8H	27.9	28.5	28.3	28.9	29.4	28.2	28.8	28.7	29.3	29.8
	12H	28.0	28.5	28.5	29.0	29.5	28.3	28.9	28.8	29.3	29.8
12H	4H	27.2	28.0	27.6	28.4	28.8	27.4	28.2	27.9	28.6	29.1
	6H	27.7	28.4	28.2	28.8	29.3	28.0	28.7	28.5	29.1	29.6
	8H	27.9	28.5	28.4	28.9	29.5	28.2	28.8	28.7	29.3	29.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 622.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)

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:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWNDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:

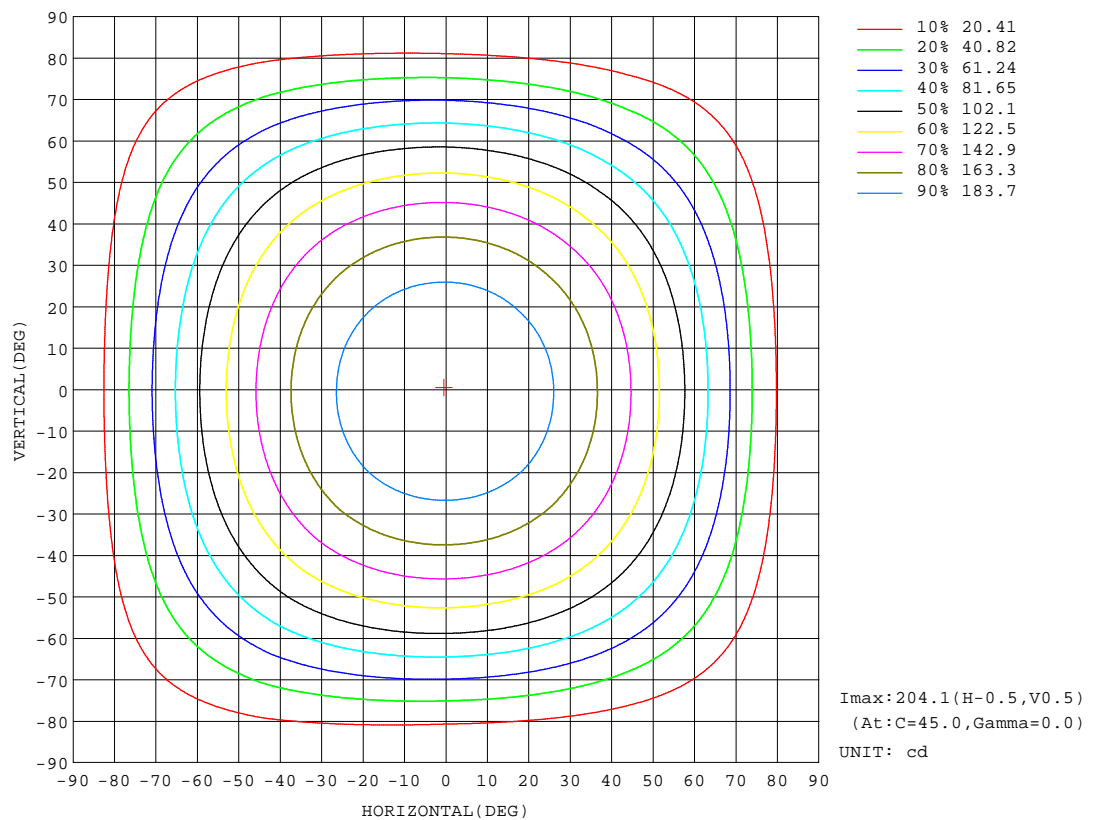
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	45	38	56	44	37	54	44	37	31
0.80	66	55	47	65	54	47	63	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	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:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:



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

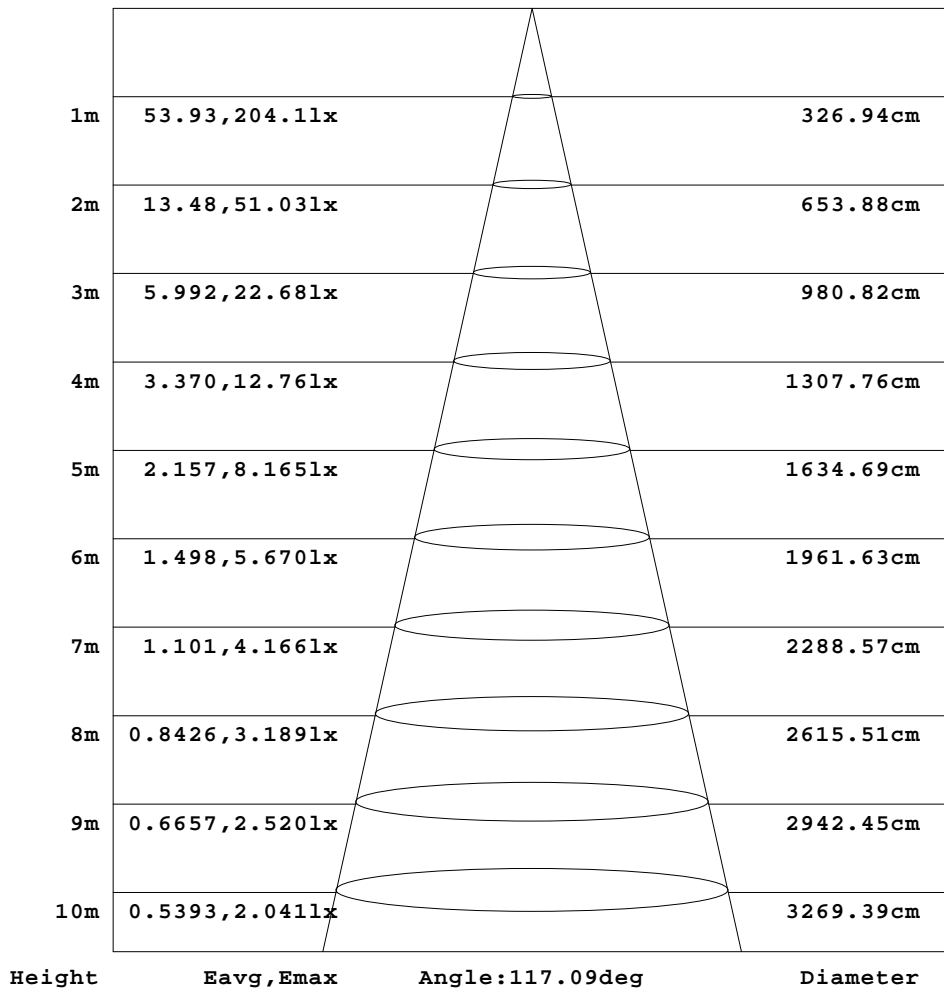
Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:

Flux out:469.2 lm



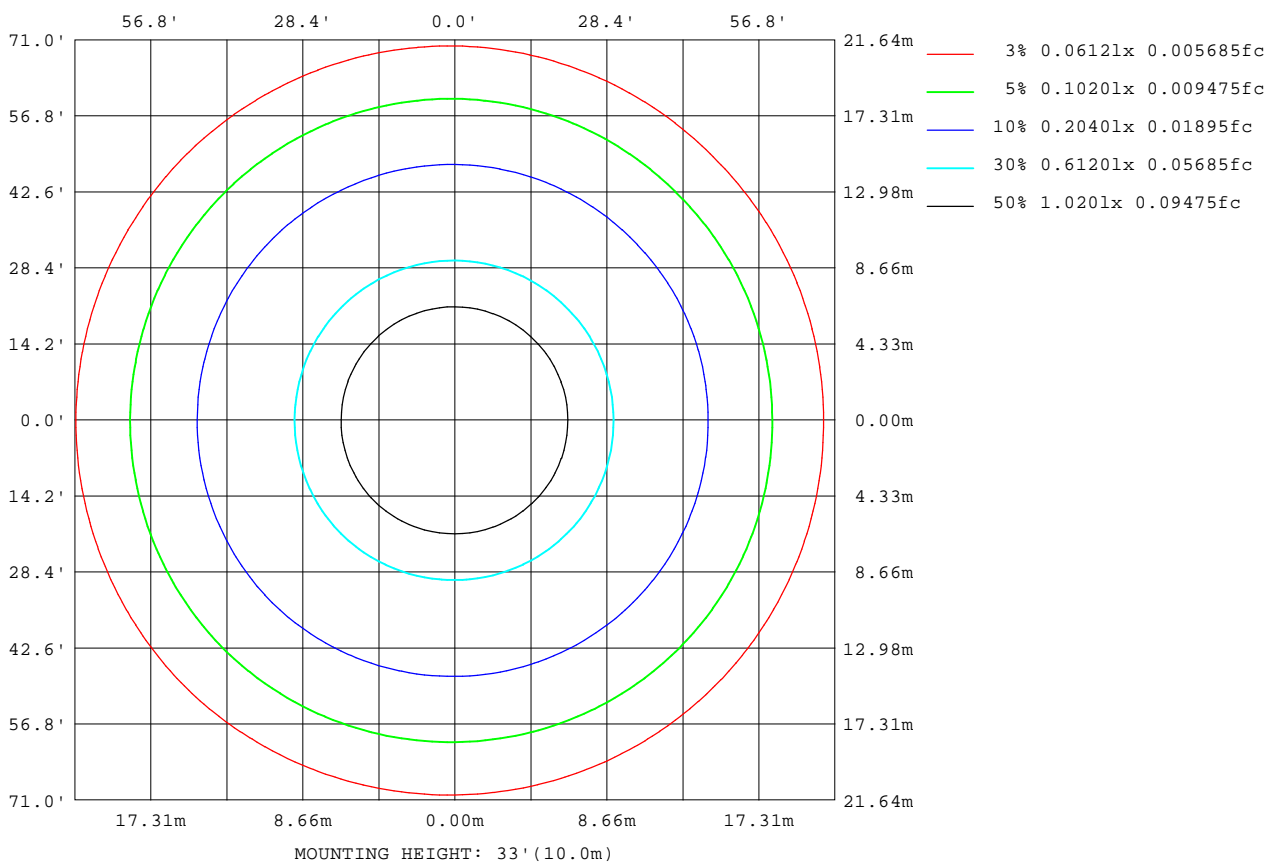
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

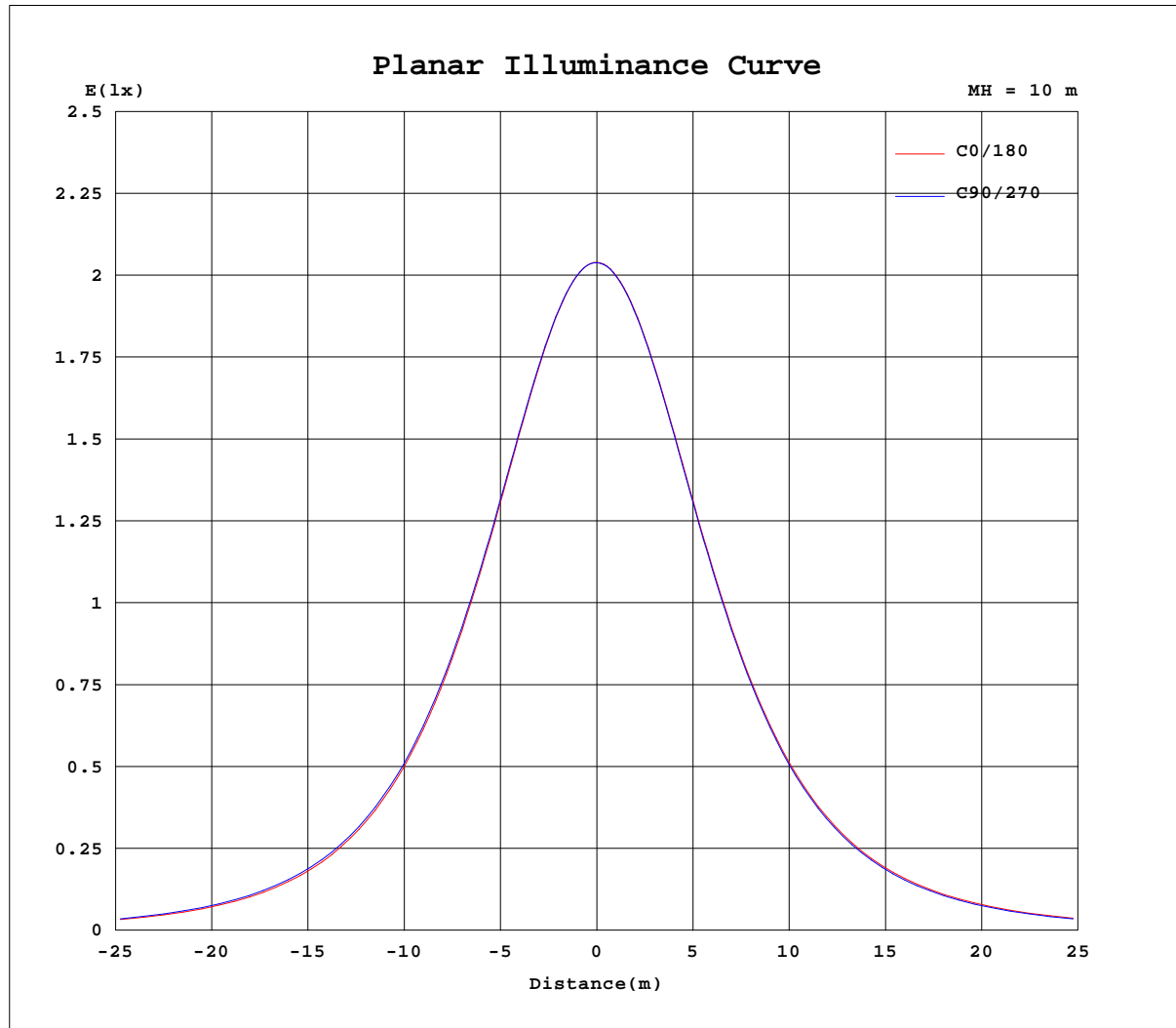
Test:U:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:



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

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:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:48.00V I:0.1250A P:6.000W PF:1.000 Freq:0Hz Lamp Flux:622.298x1 lm		
NAME: DS81444812NO	TYPE:	WEIGHT:
SPEC.:DS81444812NO-9NWDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:01
MFR.: COLORS	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	204	204	204	204	204	204	204	204										
5	203	204	203	204	203	203	203	203										
10	201	202	201	202	201	201	201	201										
15	197	198	198	198	198	197	197	197										
20	192	193	193	193	192	192	192	192										
25	185	186	186	187	186	185	185	185										
30	177	178	178	179	178	177	177	176										
35	167	168	169	169	168	168	167	166										
40	155	157	157	159	157	157	156	155										
45	142	144	145	146	145	144	143	141										
50	127	129	131	133	131	131	129	127										
55	111	113	115	117	116	115	114	111										
60	93.6	96.1	98.0	101	100	99.1	96.9	93.5										
65	75.1	77.6	79.8	83.2	82.7	81.7	79.0	75.1										
70	55.8	58.2	60.7	64.7	64.6	63.5	60.4	56.1										
75	36.8	38.4	41.3	46.0	46.2	45.0	41.6	37.2										
80	19.6	20.8	22.8	27.9	28.6	27.3	23.8	20.0										
85	7.38	7.69	8.17	12.7	13.6	12.4	8.88	7.13										
90	1.54	1.71	0.71	3.54	4.25	3.23	0.12	1.51										
95	0.59	0.67	0.61	0.80	0.71	0.43	0.23	0.38										
100	0.63	0.74	0.60	0.65	0.41	0.33	0.41	0.45										
105	0.87	0.91	0.75	0.77	0.64	0.55	0.67	0.69										
110	1.16	1.16	1.04	0.98	0.88	0.75	0.91	0.96										
115	1.40	1.42	1.31	1.18	1.10	0.97	1.11	1.13										
120	1.66	1.67	1.56	1.39	1.32	1.18	1.30	1.30										
125	1.89	1.88	1.79	1.58	1.53	1.39	1.46	1.46										
130	2.12	2.08	2.01	1.77	1.74	1.60	1.62	1.58										
135	2.32	2.23	2.15	1.96	1.90	1.81	1.74	1.73										
140	2.44	2.38	2.27	2.15	2.07	2.00	1.85	1.82										
145	2.58	2.46	2.35	2.34	2.20	2.20	1.97	1.92										
150	2.76	2.55	2.46	2.50	2.30	2.42	2.17	2.00										
155	2.87	2.63	2.57	2.67	2.48	2.65	2.46	2.11										
160	3.04	2.71	2.76	2.82	2.62	2.75	2.71	2.34										
165	3.17	2.83	2.96	2.94	2.77	2.87	2.95	2.66										
170	3.09	3.07	3.17	3.08	2.80	3.04	3.17	2.96										
175	3.01	3.33	3.33	3.28	2.85	3.21	3.36	3.27										
180	3.02	3.47	3.51	3.52	3.03	3.53	3.52	3.53										

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: