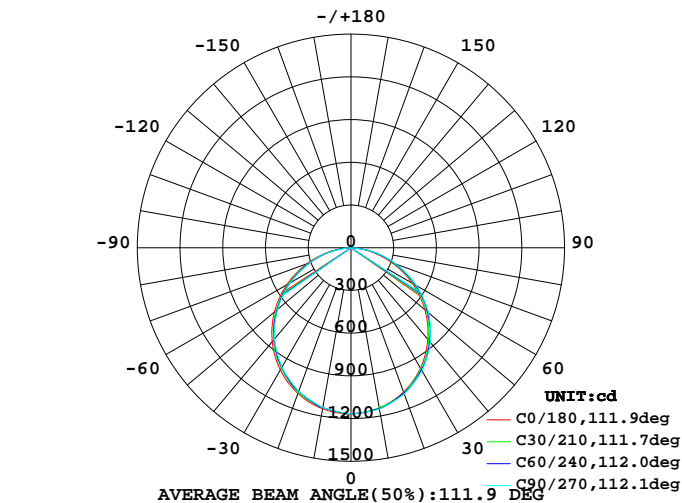


## LUMINAIRE PHOTOMETRIC TEST REPORT

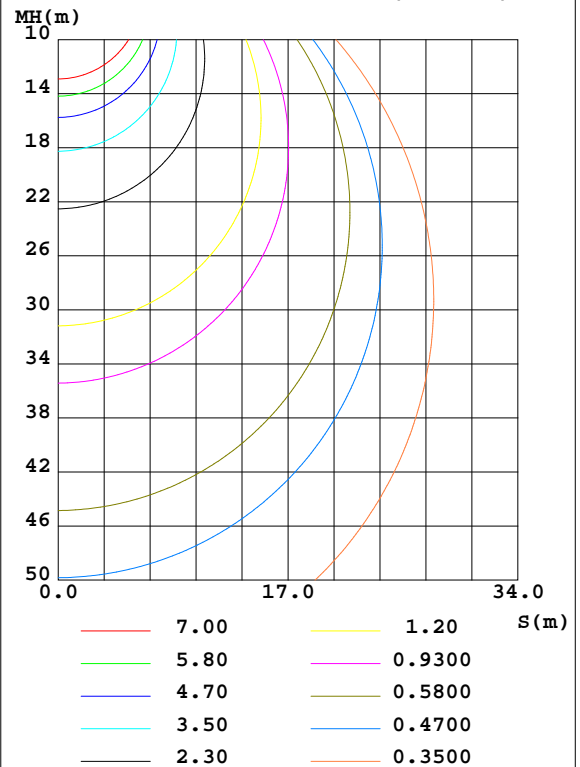
Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 92.72 lm/W			
MODEL		Imax(cd)	1167	S/MH(C0/180)	1.26
NOMINAL POWER(W)	36	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	100-240	TOTAL FLUX(lm)	3303.5	$\eta$ UP,DN(C0-180)	0.0,50.8
NOMINAL FLUX(lm)	3303.47	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.2
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



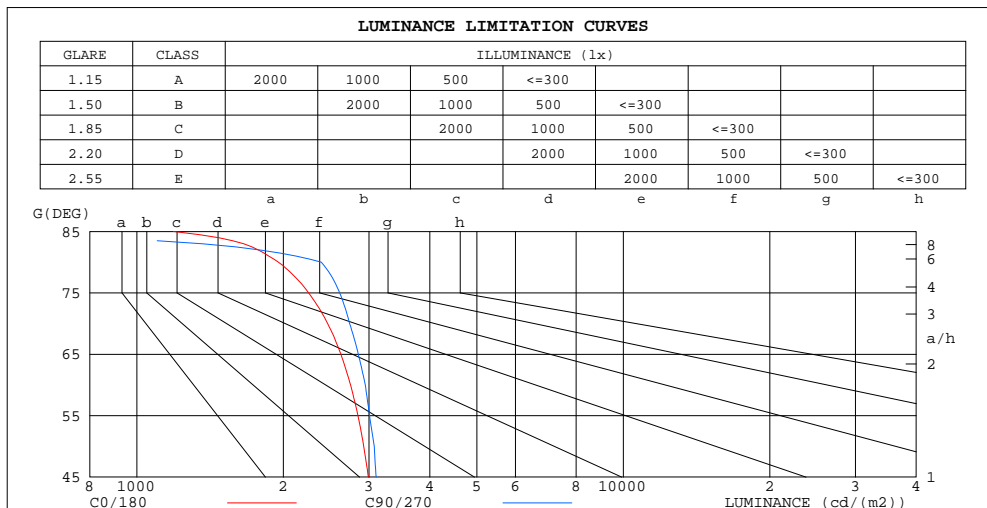
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.9DEG  
Operators:邹海南  
Test Date:2015-04-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:53%  
Test Distance:7.440m [K=1.0000]  
Remarks:

ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
5	1160	1157	1159	1159	1163	1156	1154	1154	0- 5	27.76	27.76	0.84,0.84
10	1143	1143	1151	1147	1149	1139	1140	1136	5- 10	82.26	110.0	3.33,3.33
15	1115	1121	1122	1126	1124	1116	1107	1110	10- 15	134.0	244.0	7.39,7.39
20	1078	1083	1094	1090	1089	1076	1074	1069	15- 20	181.0	425.0	12.9,12.9
25	1031	1040	1046	1048	1045	1032	1022	1023	20- 25	222.0	647.0	19.6,19.6
30	975.7	986.0	998.5	996.1	991.8	976.4	970.2	966.3	25- 30	255.2	902.2	27.3,27.3
35	911.5	923.6	933.6	934.0	930.3	912.1	903.2	901.4	30- 35	279.8	1182	35.8,35.8
40	839.9	856.8	868.8	867.8	860.9	843.8	836.2	832.5	35- 40	294.9	1477	44.7,44.7
45	761.5	777.3	790.2	789.5	784.4	764.6	755.1	752.0	40- 45	300.2	1777	53.8,53.8
50	677.2	696.9	711.7	710.5	701.7	684.6	674.0	670.9	45- 50	295.2	2072	62.7,62.7
55	587.8	606.8	621.2	619.7	613.8	592.6	583.0	579.9	50- 55	280.5	2353	71.2,71.2
60	494.8	516.7	530.8	528.7	521.6	500.7	492.0	489.5	55- 60	256.2	2609	79,79
65	399.6	419.9	434.0	432.1	425.7	404.3	395.3	394.0	60- 65	224.0	2833	85.8,85.8
70	303.8	324.4	337.1	335.8	328.7	308.3	298.7	299.6	65- 70	184.7	3018	91.3,91.3
75	210.2	230.0	243.4	239.6	233.2	212.1	212.4	206.0	70- 75	141.0	3159	95.6,95.6
80	122.2	141.4	149.6	148.6	142.1	127.1	126.1	122.7	75- 80	95.58	3254	98.5,98.5
85	37.30	37.29	0	39.64	58.91	32.41	0	31.03	80- 85	45.26	3299	99.9,99.9
90	1.095	0	0	0	1.144	0	0	0	85- 90	4.040	3303	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(°)	C0/180	C90/270
85	1189	0
80	1954	2393
75	2255	2612
70	2467	2738
65	2627	2852
60	2749	2949
55	2847	3009
50	2926	3075
45	2992	3104

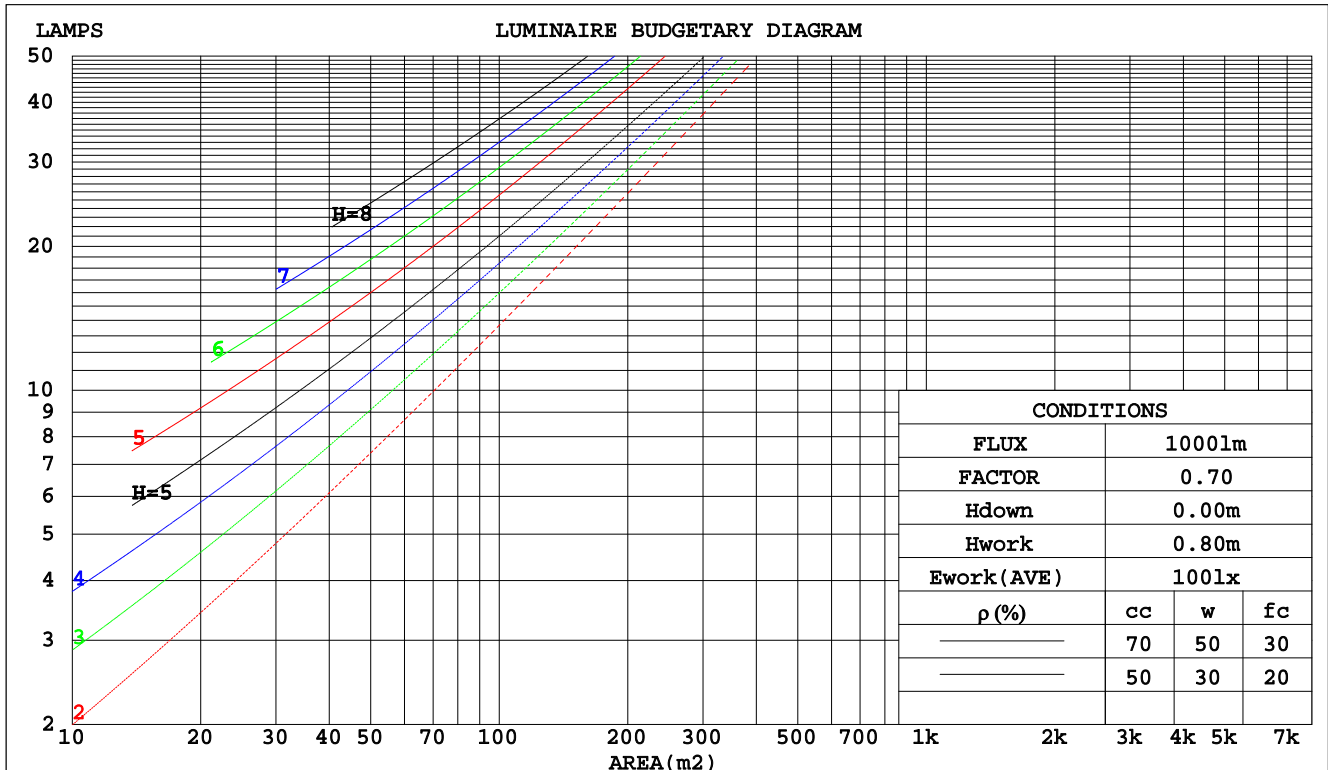
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.9DEG  
Operators: 邹海南  
Test Date: 2015-04-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 53%  
Test Distance: 7.440m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.04	.00	.96	1.02	.98	.94	.98	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.74	.79	.75	.72	.70
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.62	.55	.69	.61	.54	.66	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.29	.27
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.9DEG  
Operators: 邹海南  
Test Date: 2015-04-09

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 53%  
Test Distance: 7.440m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm								
NAME: 595x595 PANEL 8090				TYPE:LED			WEIGHT:	
SPEC.:				DIM.:			SERIAL No.:	
MFR.:				SUR.:0.6*0.6			Shielding Angle:	

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.307	.174	.055	.300	.171	.054	.286	.164	.052	.274	.158	.051	.263	.152	.049		
2.0	.290	.159	.049	.284	.157	.048	.272	.152	.047	.262	.147	.046	.252	.142	.045		
3.0	.269	.143	.043	.264	.141	.043	.253	.137	.042	.244	.134	.041	.235	.130	.040		
4.0	.249	.129	.038	.244	.128	.038	.235	.124	.037	.226	.121	.037	.218	.119	.036		
5.0	.230	.117	.034	.226	.116	.034	.218	.113	.033	.210	.111	.033	.203	.108	.033		
6.0	.213	.107	.031	.210	.106	.030	.202	.104	.030	.196	.102	.030	.189	.100	.030		
7.0	.199	.098	.028	.195	.097	.028	.189	.095	.027	.183	.094	.027	.177	.092	.027		
8.0	.186	.091	.025	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025		
9.0	.174	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023		
10.0	.164	.078	.022	.161	.078	.022	.156	.077	.022	.152	.075	.021	.148	.074	.021		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.074	.141	.099	.064	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.092	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.9DEG  
Operators:邹海南  
Test Date:2015-04-09

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:53%  
Test Distance:7.440m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm											
NAME: 595x595 PANEL 8090					TYPE:LED			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:0.6*0.6			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	16.5	18.0	16.8	18.3	18.5	16.8	18.3	17.1	18.5	18.7	
	3H	18.0	19.4	18.3	19.6	19.9	18.4	19.8	18.7	20.0	20.3
	4H	18.6	19.9	18.9	20.2	20.4	19.0	20.4	19.4	20.6	20.9
	6H	19.0	20.2	19.3	20.5	20.8	19.5	20.8	19.9	21.1	21.3
	8H	19.1	20.3	19.4	20.6	20.9	19.6	20.8	20.0	21.1	21.4
	12H	19.1	20.2	19.4	20.5	20.8	19.6	20.8	19.9	21.1	21.4
4H	2H	17.2	18.5	17.5	18.8	19.0	17.4	18.7	17.7	19.0	19.2
	3H	18.9	20.0	19.2	20.3	20.6	19.2	20.3	19.5	20.6	20.9
	4H	19.6	20.6	19.9	20.9	21.3	19.9	21.0	20.3	21.3	21.7
	6H	20.1	21.0	20.5	21.4	21.7	20.6	21.5	21.0	21.9	22.2
	8H	20.2	21.1	20.6	21.5	21.8	20.7	21.6	21.1	22.0	22.3
	12H	20.3	21.1	20.7	21.5	21.9	20.7	21.5	21.1	21.9	22.3
8H	4H	19.9	20.7	20.3	21.1	21.5	20.2	21.1	20.6	21.5	21.8
	6H	20.5	21.3	21.0	21.7	22.1	21.0	21.7	21.4	22.1	22.5
	8H	20.8	21.4	21.2	21.8	22.3	21.2	21.8	21.6	22.3	22.7
	12H	20.9	21.4	21.4	21.9	22.4	21.2	21.7	21.7	22.2	22.7
12H	4H	19.9	20.7	20.3	21.1	21.5	20.2	21.0	20.6	21.4	21.8
	6H	20.6	21.3	21.1	21.7	22.1	21.0	21.7	21.5	22.1	22.6
	8H	20.9	21.4	21.4	21.9	22.4	21.3	21.8	21.7	22.3	22.7
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 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 Corrected 3303 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.2)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.9DEG  
Operators:邹海南  
Test Date:2015-04-09

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:53%  
Test Distance:7.440m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	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) x RCR = 5									
k = 0.60	58	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	56	48	65	55	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	83	73	66	82	72	65	79	71	64	57
1.50	88	78	71	87	77	71	83	76	70	62
2.00	95	87	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	96	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	98	102	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.9DEG  
Operators:邹海南  
Test Date:2015-04-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:53%  
Test Distance:7.440m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	Shielding Angle:

Conical surface Flux(90deg):

1777 lm

%lum = 53.8%

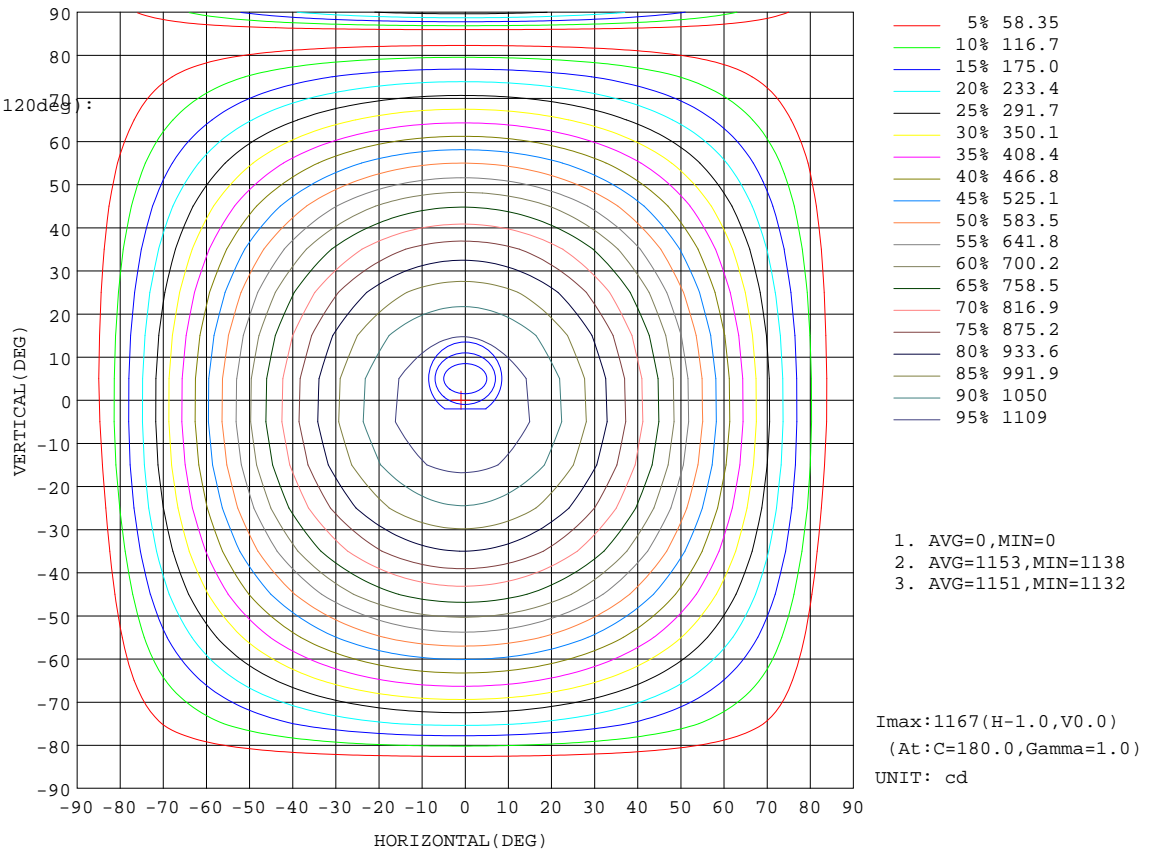
%lamp = 53.8%

Conical surface Flux(120deg):

2608.9 lm

%lum = 79.0%

%lamp = 79.0%

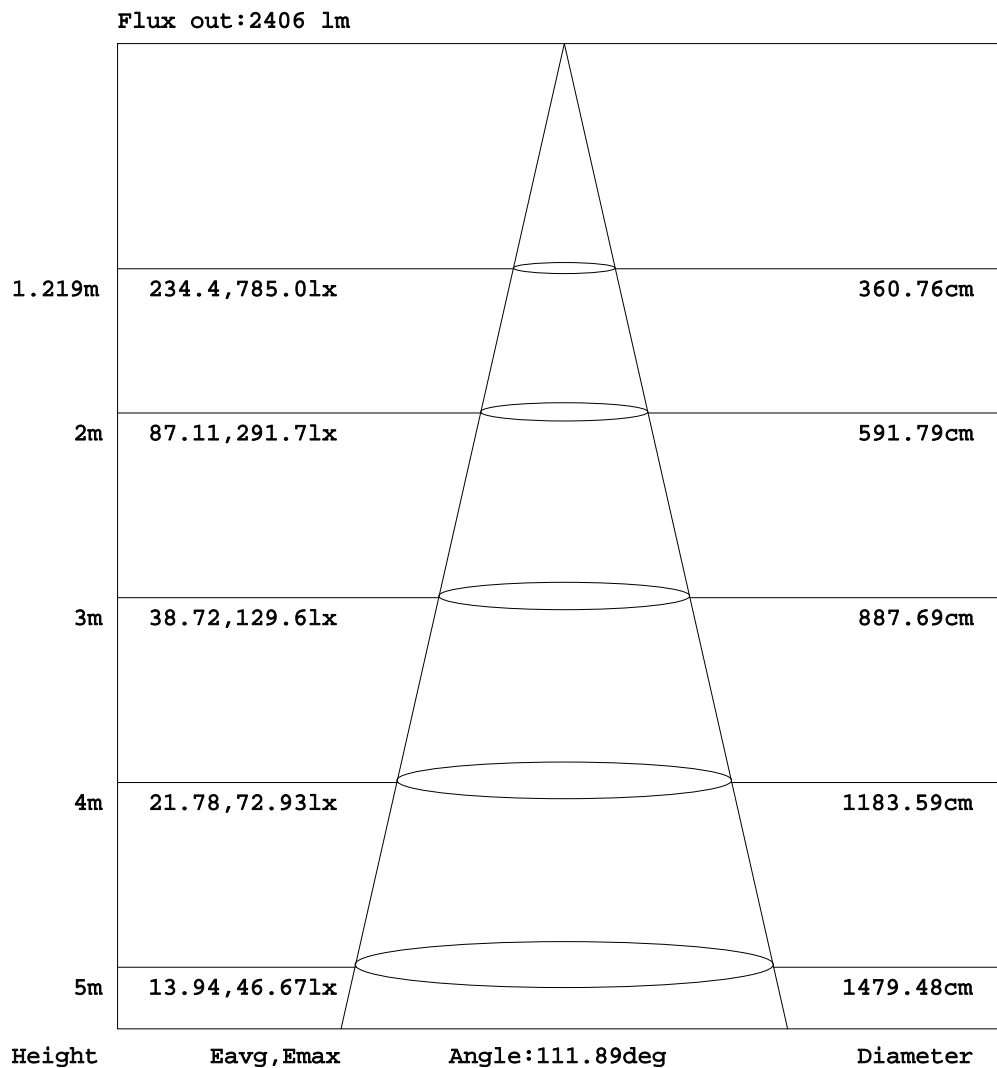


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.9DEG  
Operators:邹海南  
Test Date:2015-04-09

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:53%  
Test Distance:7.440m [K=1.0000]  
Remarks:

## AAI Figure

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	Shielding Angle:



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

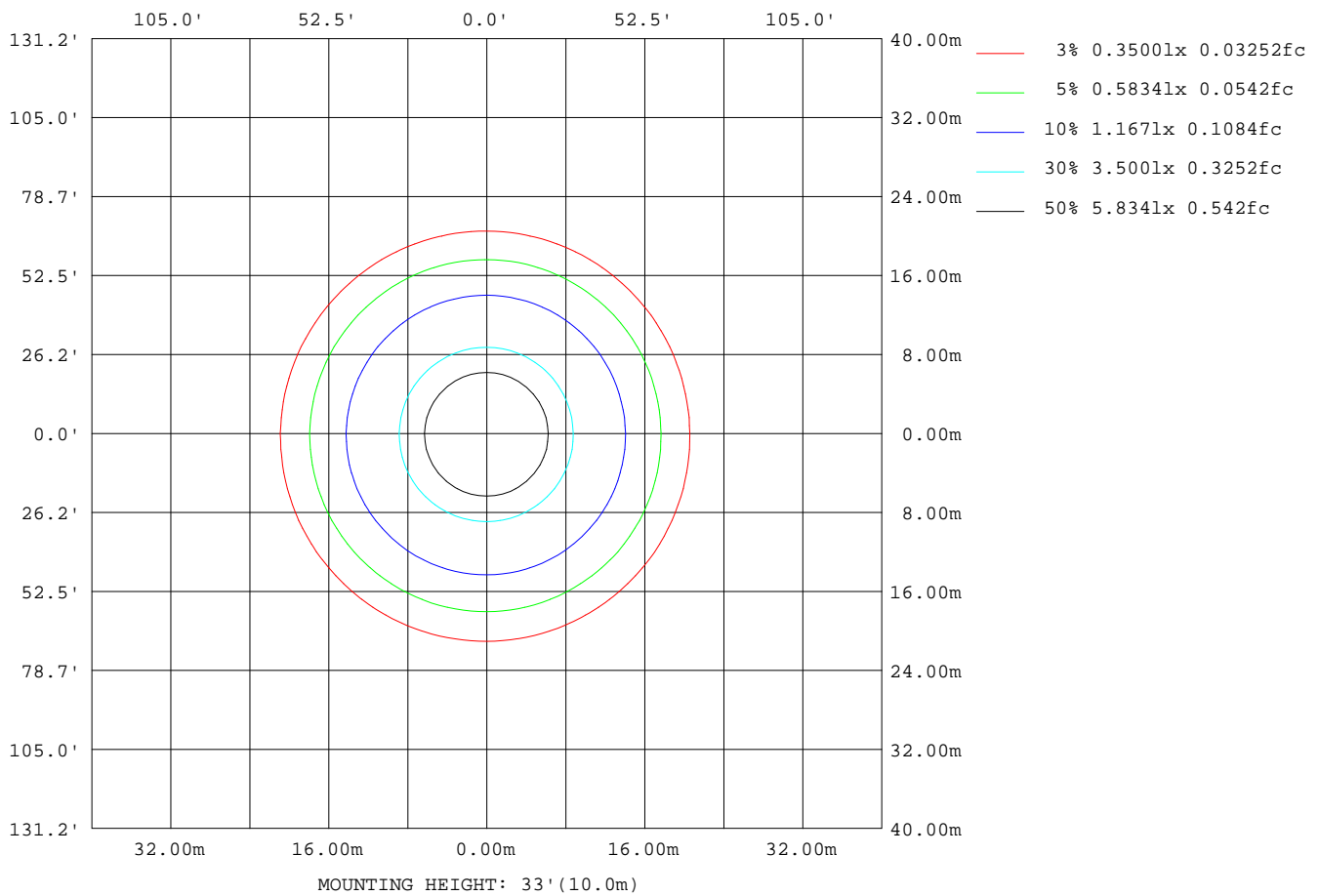
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.9DEG  
 Operators:邹海南  
 Test Date:2015-04-09

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:53%  
 Test Distance:7.440m [K=1.0000]  
 Remarks:



## ISOLUX DIAGRAM

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.9DEG  
Operators: 邹海南  
Test Date: 2015-04-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 53%  
Test Distance: 7.440m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:221.5V I:0.1668A P:35.63W PF:0.9641 Lamp Flux:3303.47x1 lm		
NAME: 595x595 PANEL 8090	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.6*0.6	Shielding Angle:

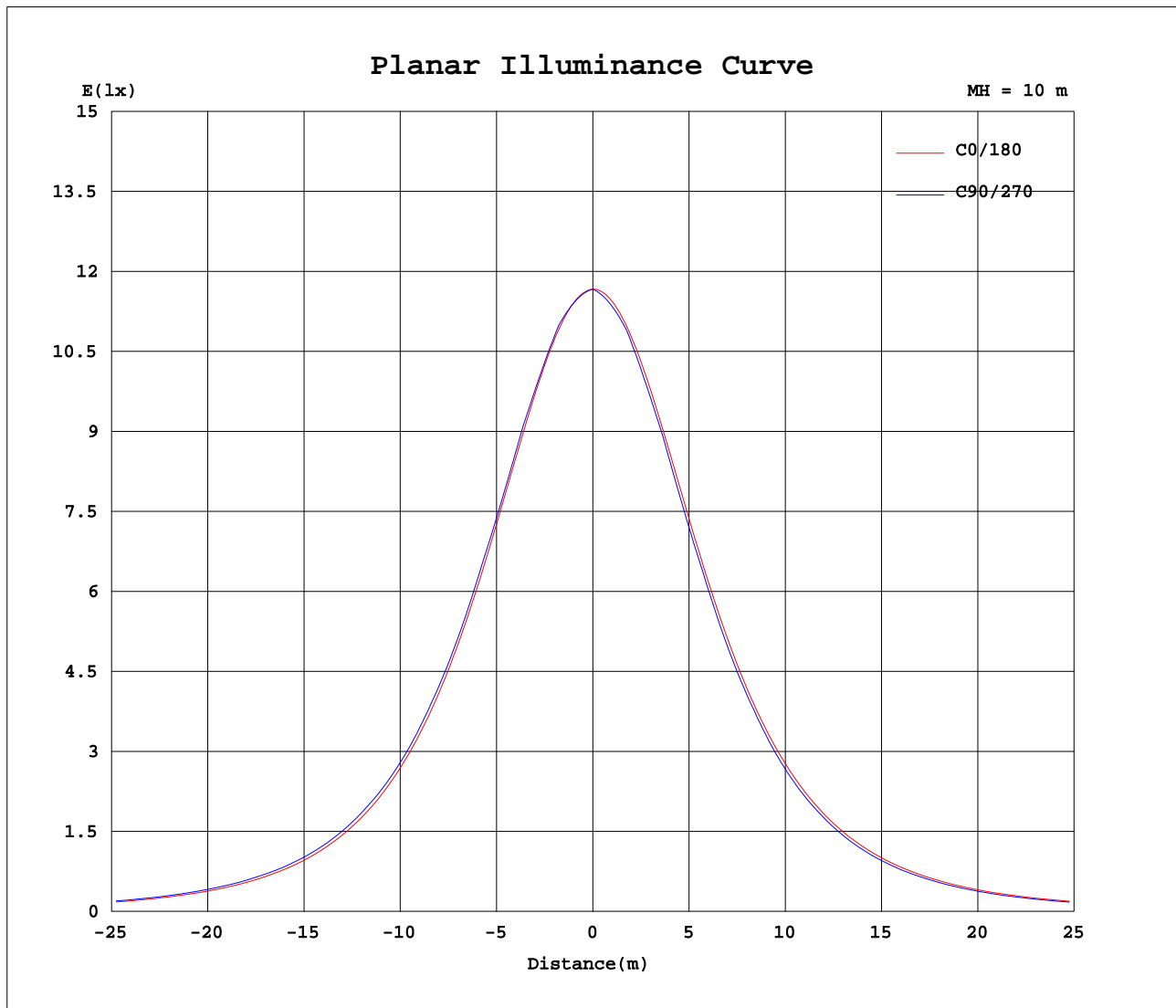
AvgL	cd/m2
L_0~180(65)av	2712
L_0~180(75)av	2379
L_0~180(85)av	1533
L_90~270(65)av	2725
L_90~270(75)av	2446
L_90~270(85)av	0
L_45(65)av	2712
L_45(75)av	2382
L_45(85)av	1118

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.9DEG  
Operators:邹海南  
Test Date:2015-04-09

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:53%  
Test Distance:7.440m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.9DEG  
Operators: 邹海南  
Test Date: 2015-04-09

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 53%  
Test Distance: 7.440m [K=1.0000]  
Remarks:

```

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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
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Test Distance:7.440m [K=1.0000]
Remarks:

```