


# TEST REPORT

<b>NAME OF SAMPLE</b>	<b>LED PANEL LIGHT</b>
<b>TRADE MARK</b>	<b>N/A</b>
<b>MODEL/TYPE</b>	<b>PL-36W-119DW, 6000K</b>
<b>CLIENT</b>	
<b>ADDRESS OF CLIENT</b>	
<b>INSPECTION CLASSIFICATION</b>	<b>Commission Test</b>
<b>TEST ITEM</b>	<b>IES Test</b>

## Test Report

Name or sample	LED PANEL LIGHT	Report No.	LCS1411261127S
Client		ADDRESS OF CLIENT	
Name of receipt	Delivering	Inspection Classification	Commission test
Test Model	PL-36W-119DW, 6000K	Test date	2014.11.24
Rating of sample	AC100-240V, 50/60Hz, 36W, 6000K, 1190*290*12		
Test standard	This test report presents the results of measurements performed on the solid lighting in accordance with LM-79-08 Electrical and Photometric Measurements of Solid-State Lighting Products.		
Test result	Measured data see report attached.		
Testing laboratory			
Ambient Temperature (°C)	25	Relative Humidity (%)	50
Test report Special-purpose seal	Test by:	Marine Wu	
	Approved by:	Hart Qiu	
	Date of issue	2014-11-27	

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LumCAT: PL-36W-119DW, 6000K

Luminaire: LED PANEL LIGHT

Report No: LCS1411261127S

Test No: 1411240035

LampCAT: LED

Lamp flux(lm)

Number of Lamps: 1

Length(mm): 1190

Phm Type: C

Voltage(V): 220.200

Current(A): 0.180

Power (W): 38.200

PF: 0.961

Ballast type: -

Width(mm): 290

Height(mm): 12

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### Photometric Results

Lumens(lm): 1819.61

Lumens(lm)/Power(W): 47.63

Central intensity(cd): 634.877

Maximum intensity(cd): 634.877

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Left=54.7 Right=57.4

[C90/270]Left=55.6 Right=55.4

Field angle(10%Imax): [C0/180]Left=80.1 Right=82.8

[C90/270]Left=81.3 Right=81.1

Beam angle of C0plane: 112.11

Maximum s/h: C0\_180=1.24 C90\_270=1.26

Up flux rate of LUM(%): 0.80%

Down flux rate of LUM(%): 99.20%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 77.753%

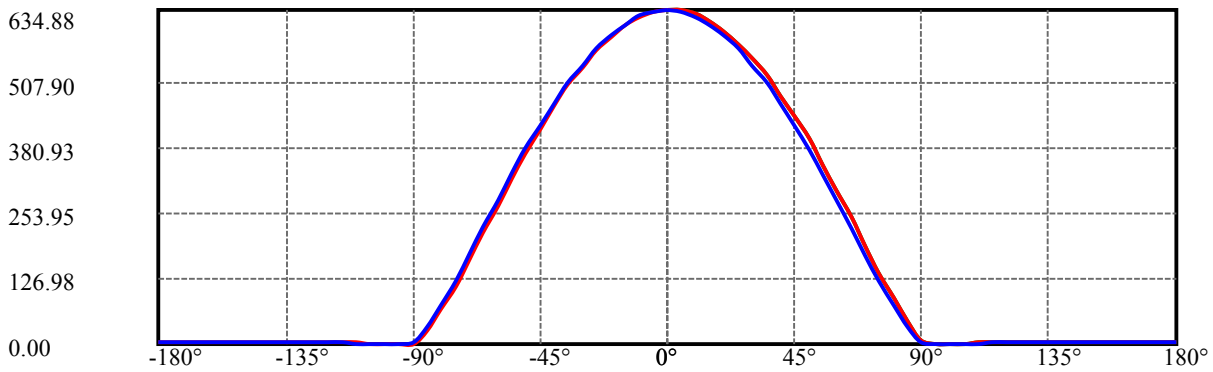
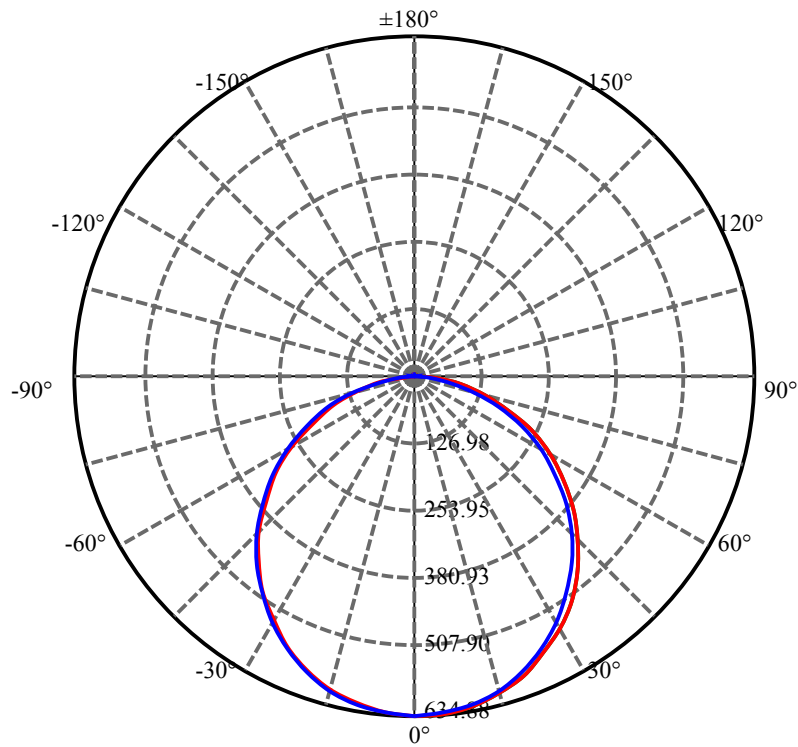
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	634.635	.000	.000	.000%	.000%
5.0	631.901	15.141	15.141	.832%	.832%
10.0	622.866	44.887	60.028	2.467%	3.299%
15.0	608.155	73.023	133.051	4.013%	7.312%
20.0	588.129	98.591	231.642	5.418%	12.730%
25.0	562.450	120.675	352.317	6.632%	19.362%
30.0	532.390	138.553	490.869	7.614%	26.977%
35.0	497.972	151.728	642.598	8.338%	35.315%
40.0	459.195	159.696	802.294	8.776%	44.091%
45.0	417.674	162.360	964.653	8.923%	53.014%
50.0	372.573	159.681	1124.334	8.776%	61.790%
55.0	325.025	151.681	1276.015	8.336%	70.126%
60.0	275.368	138.779	1414.794	7.627%	77.753%
65.0	223.702	121.325	1536.119	6.668%	84.420%
70.0	172.443	100.306	1636.426	5.513%	89.933%
75.0	121.710	76.887	1713.312	4.225%	94.158%
80.0	74.721	52.559	1765.872	2.889%	97.047%
85.0	33.200	29.325	1795.196	1.612%	98.658%
90.0	2.822	9.863	1805.059	.542%	99.200%
95.0	.966	1.037	1806.096	.057%	99.257%
100.0	1.186	.585	1806.681	.032%	99.289%
105.0	1.449	.705	1807.386	.039%	99.328%
110.0	1.735	.832	1808.218	.046%	99.374%
115.0	1.998	.945	1809.163	.052%	99.426%
120.0	2.218	1.025	1810.188	.056%	99.482%
125.0	2.426	1.073	1811.262	.059%	99.541%
130.0	2.646	1.103	1812.365	.061%	99.602%
135.0	2.843	1.109	1813.474	.061%	99.663%
140.0	2.997	1.081	1814.555	.059%	99.722%
145.0	3.151	1.026	1815.581	.056%	99.779%
150.0	3.338	.955	1816.537	.053%	99.831%
155.0	3.513	.867	1817.404	.048%	99.879%
160.0	3.656	.752	1818.156	.041%	99.920%
165.0	3.821	.616	1818.772	.034%	99.954%
170.0	3.919	.459	1819.231	.025%	99.979%
175.0	4.029	.284	1819.515	.016%	99.995%
180.0	4.062	.097	1819.612	.005%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	490.87	26.98%
0-40	802.29	44.09%
0-60	1414.79	77.75%
0-90	1805.06	99.20%
0-120	1810.19	99.48%
0-180	1819.61	100.00%
60-90	529.04	29.07%
90-120	14.99	0.82%
90-130	17.17	0.94%
90-150	21.34	1.17%
90-180	24.32	1.34%
0-61.69	1455.69	80.00%

## ZONAL LUMEN SUMMARY

0-10	60.03
10-20	171.61
20-30	259.23
30-40	311.42
40-50	322.04
50-60	290.46
60-70	221.63
70-80	129.45
80-90	39.19
90-100	1.62
100-110	1.54
110-120	1.97
120-130	2.18
130-140	2.19
140-150	1.98
150-160	1.62
160-170	1.08
170-180	0.28



C0(Max): —

C0/C180: —

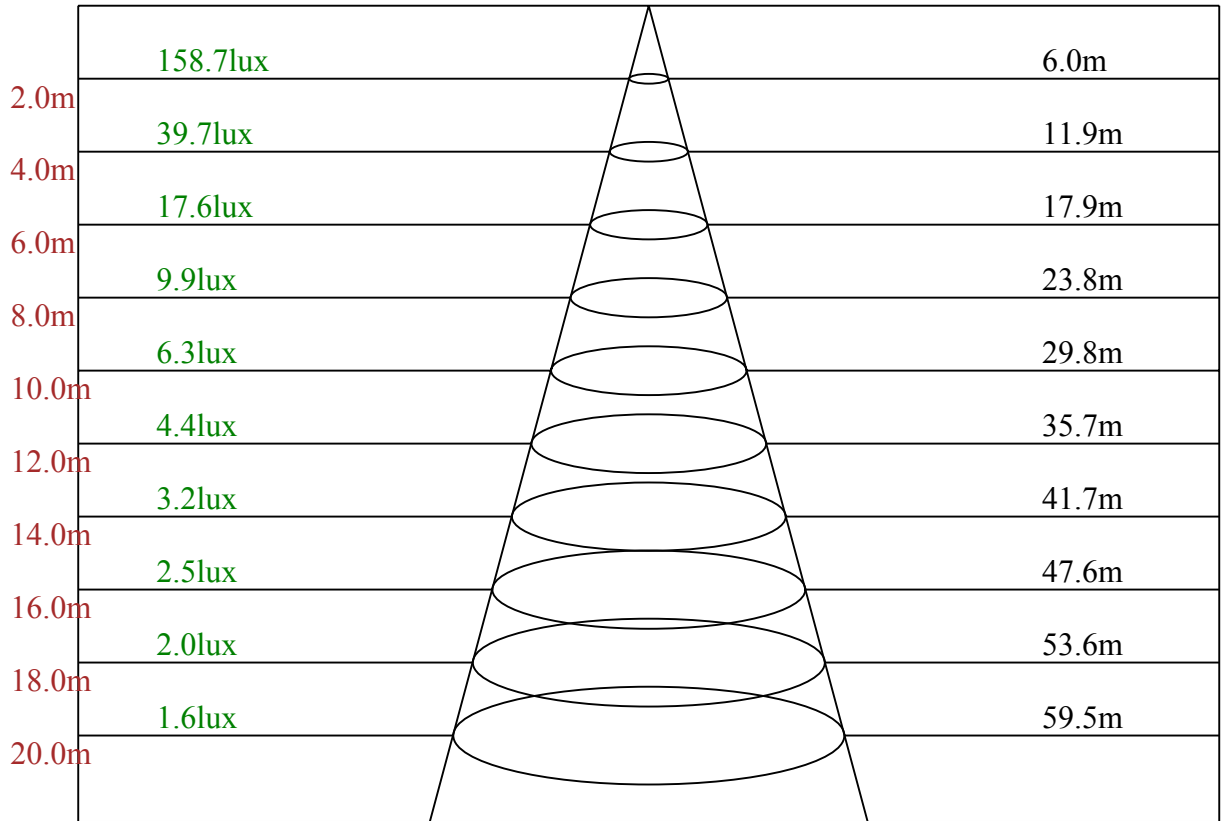
C90/C270: —

Field angle(10%Imax):C0/180Left:80.1 Right:82.8

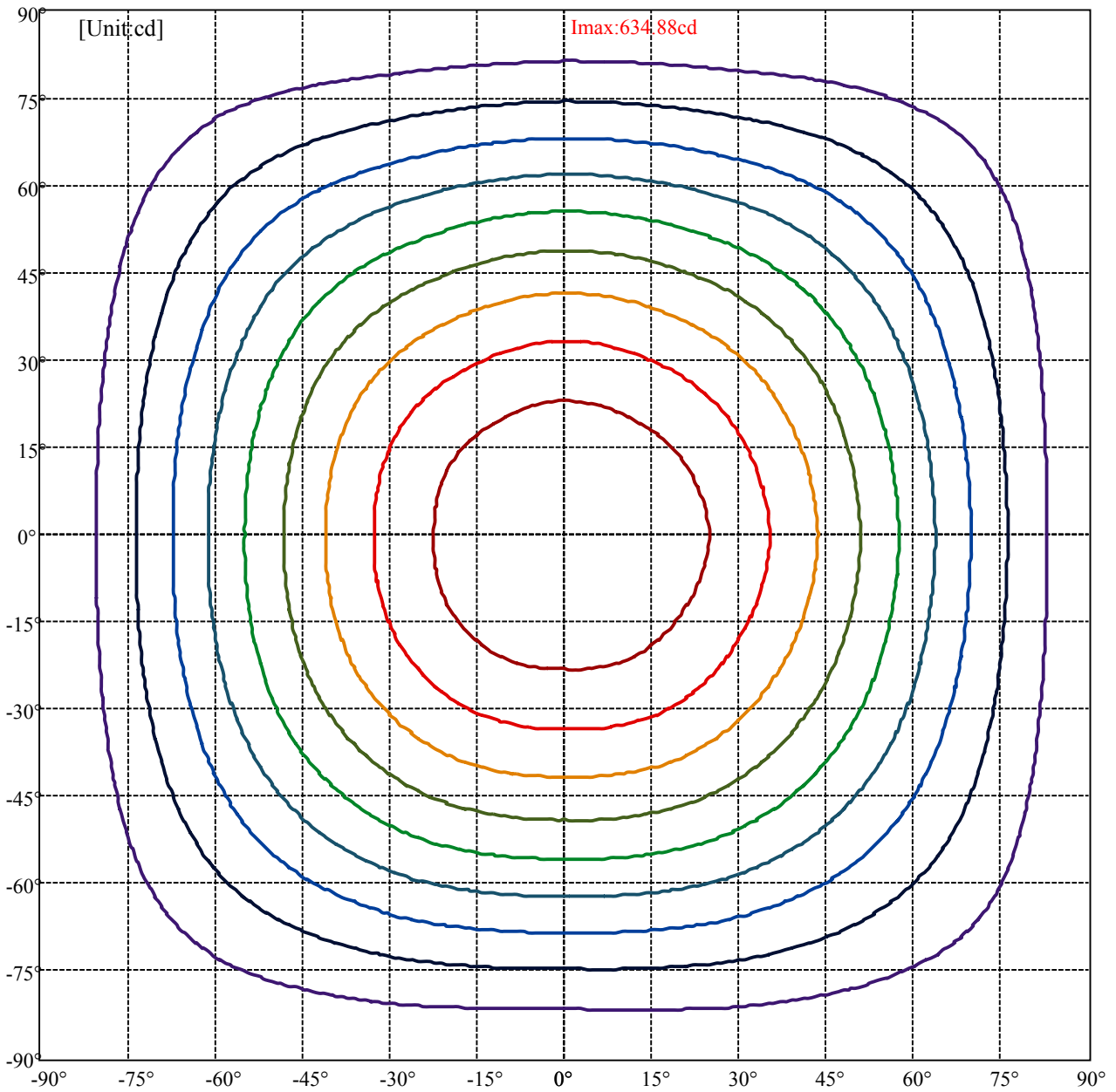
:C90/270Left:81.3 Right:81.1

Beam Angle(50%Imax):C0/180Left:54.7 Right:57.4

:C90/270Left:55.6 Right:55.4

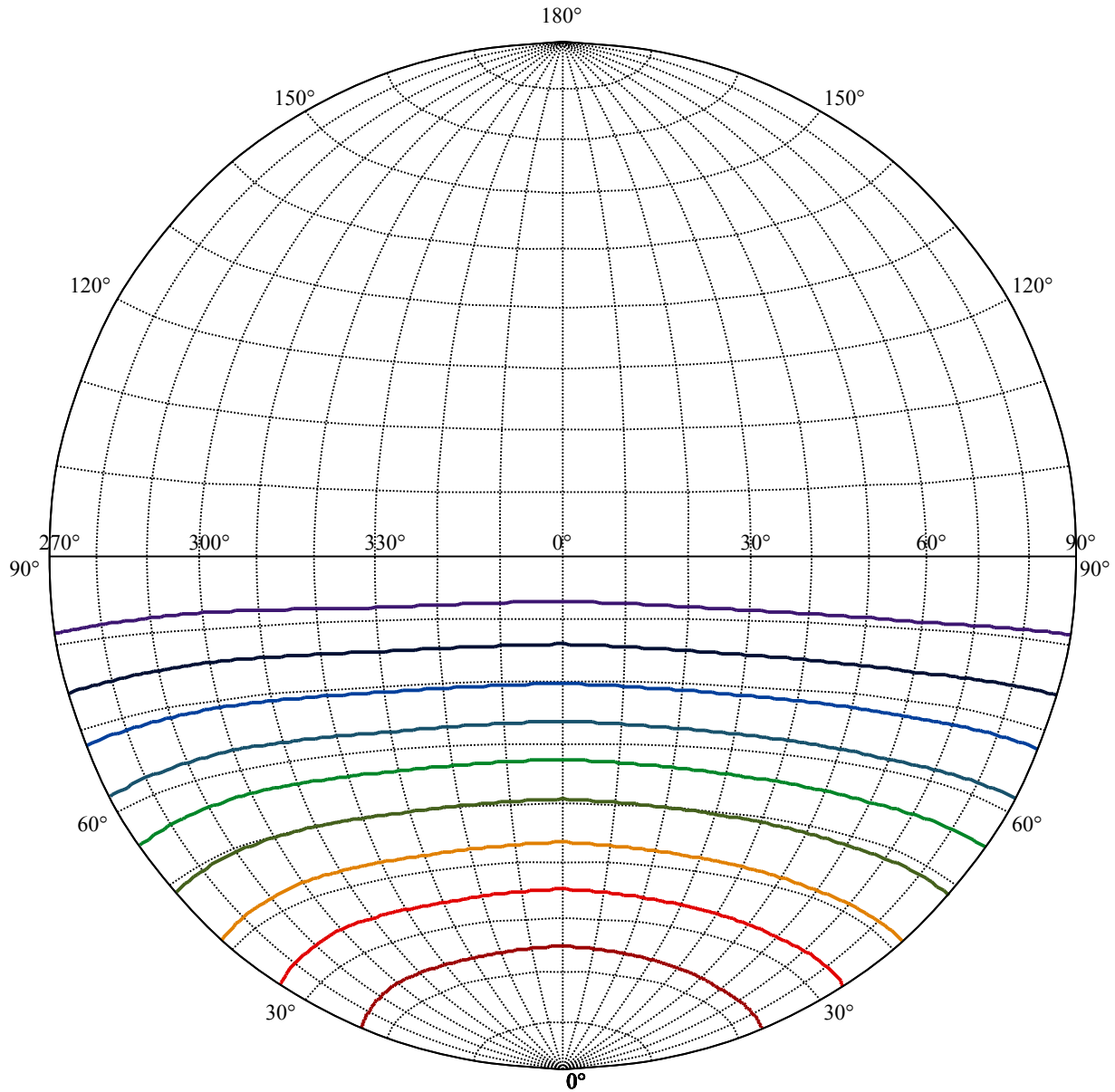


Beam angle of C0plane112.11



(10%Imax) 63.4745	—
(20%Imax) 126.949	—
(30%Imax) 190.423	—
(40%Imax) 253.898	—
(50%Imax) 317.372	—
(60%Imax) 380.847	—
(70%Imax) 444.321	—
(80%Imax) 507.796	—
(90%Imax) 571.27	—



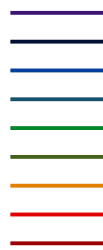


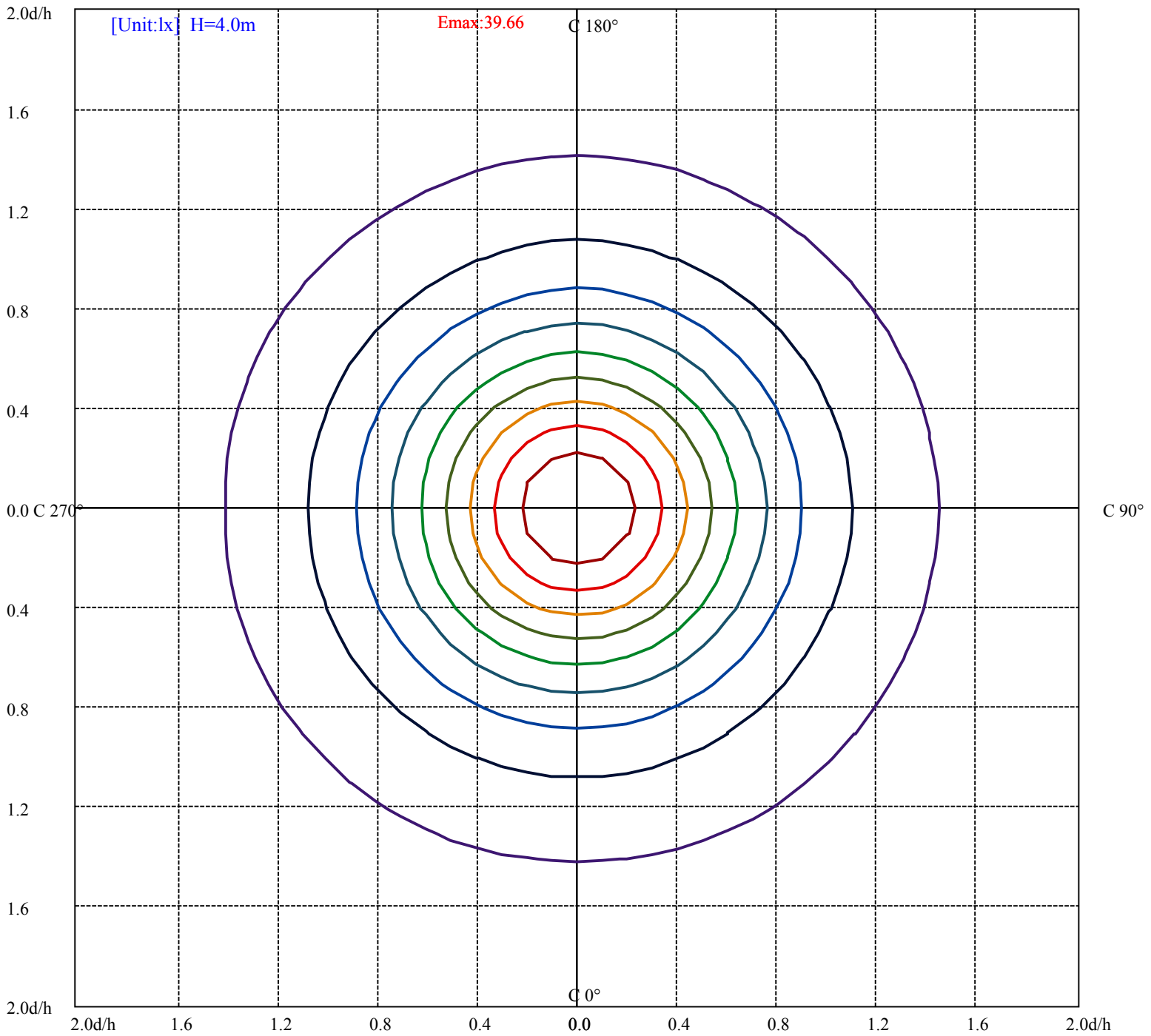
House

Road

[Unit:cd]

- Imax:634.88
- (10%Imax) 63.4877
- (20%Imax) 126.975
- (30%Imax) 190.463
- (40%Imax) 253.951
- (50%Imax) 317.438
- (60%Imax) 380.926
- (70%Imax) 444.414
- (80%Imax) 507.901
- (90%Imax) 571.389



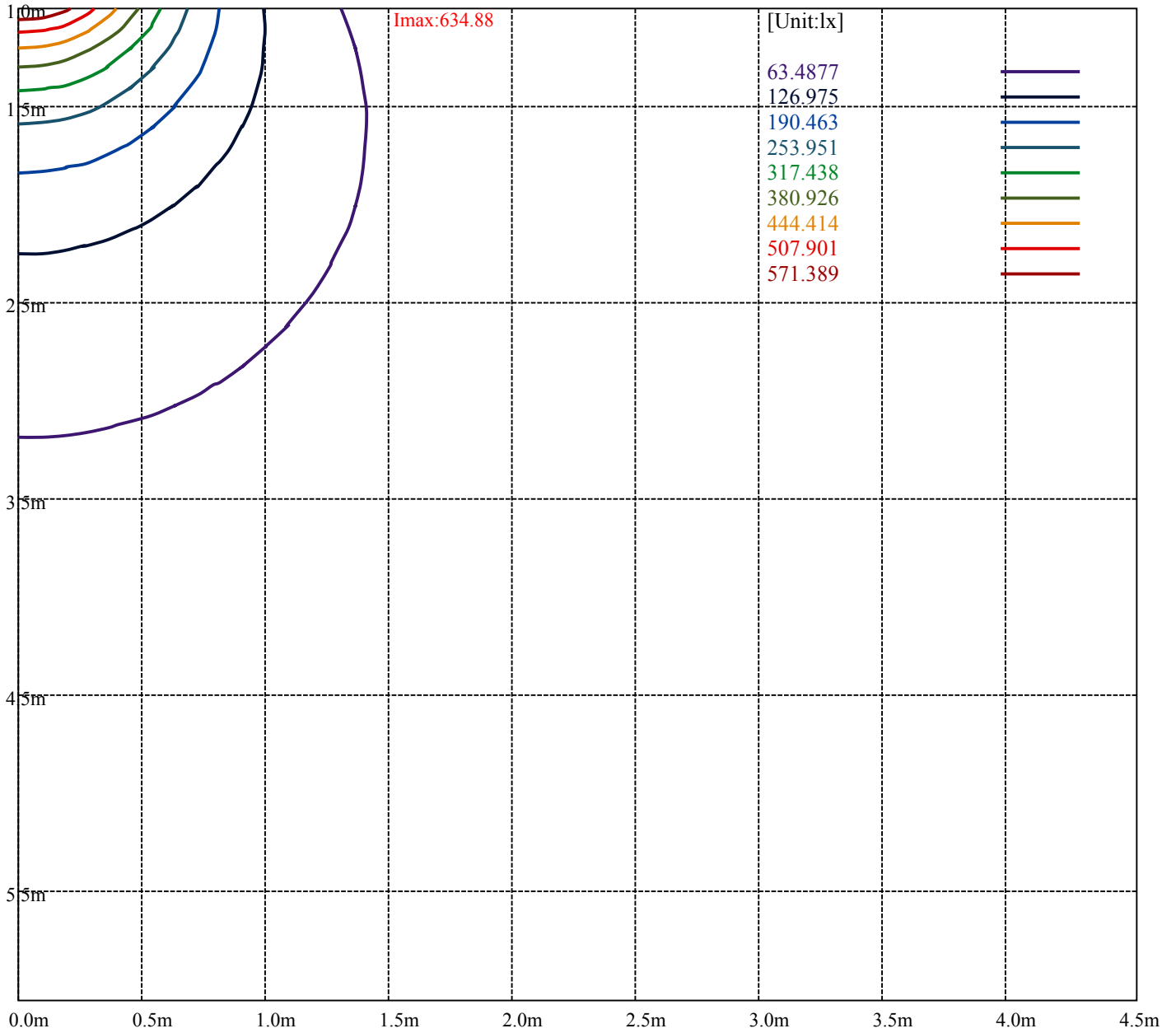


(10%Emax) 3.965506	—
(20%Emax) 7.931	—
(30%Emax) 11.8965	—
(40%Emax) 15.862	—
(50%Emax) 19.82756	—
(60%Emax) 23.79306	—
(70%Emax) 27.75856	—
(80%Emax) 31.72406	—
(90%Emax) 35.68956	—

Equipment: GMS-1800B  
 Temperature(°C): 25.0

Date: 2014-11-24  
 Humidity(%): 50.0%

Operator: Marine  
 Distance(m): 11.48



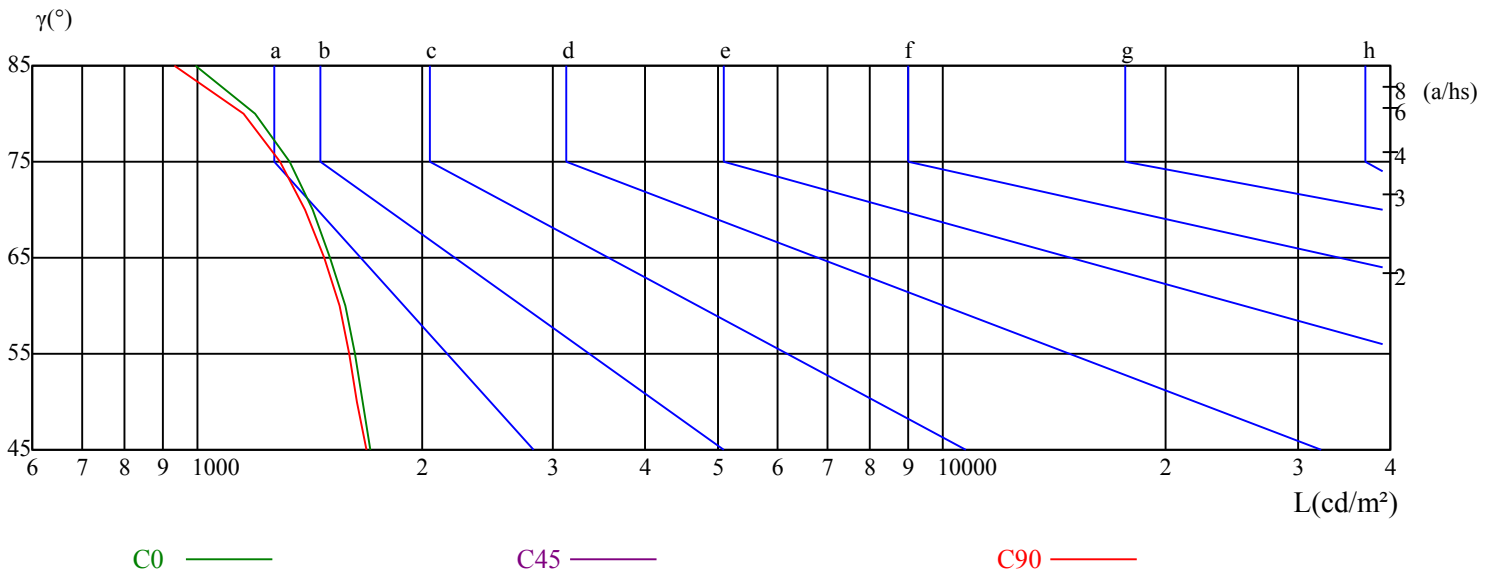
Luminance Table

$\gamma$	45	50	55	60	65	70	75	80	85
C0	1703	1670	1626	1580	1508	1428	1326	1197	993
C45	0	0	0	0	0	0	0	0	0
C90	1682	1641	1600	1550	1476	1392	1288	1150	931

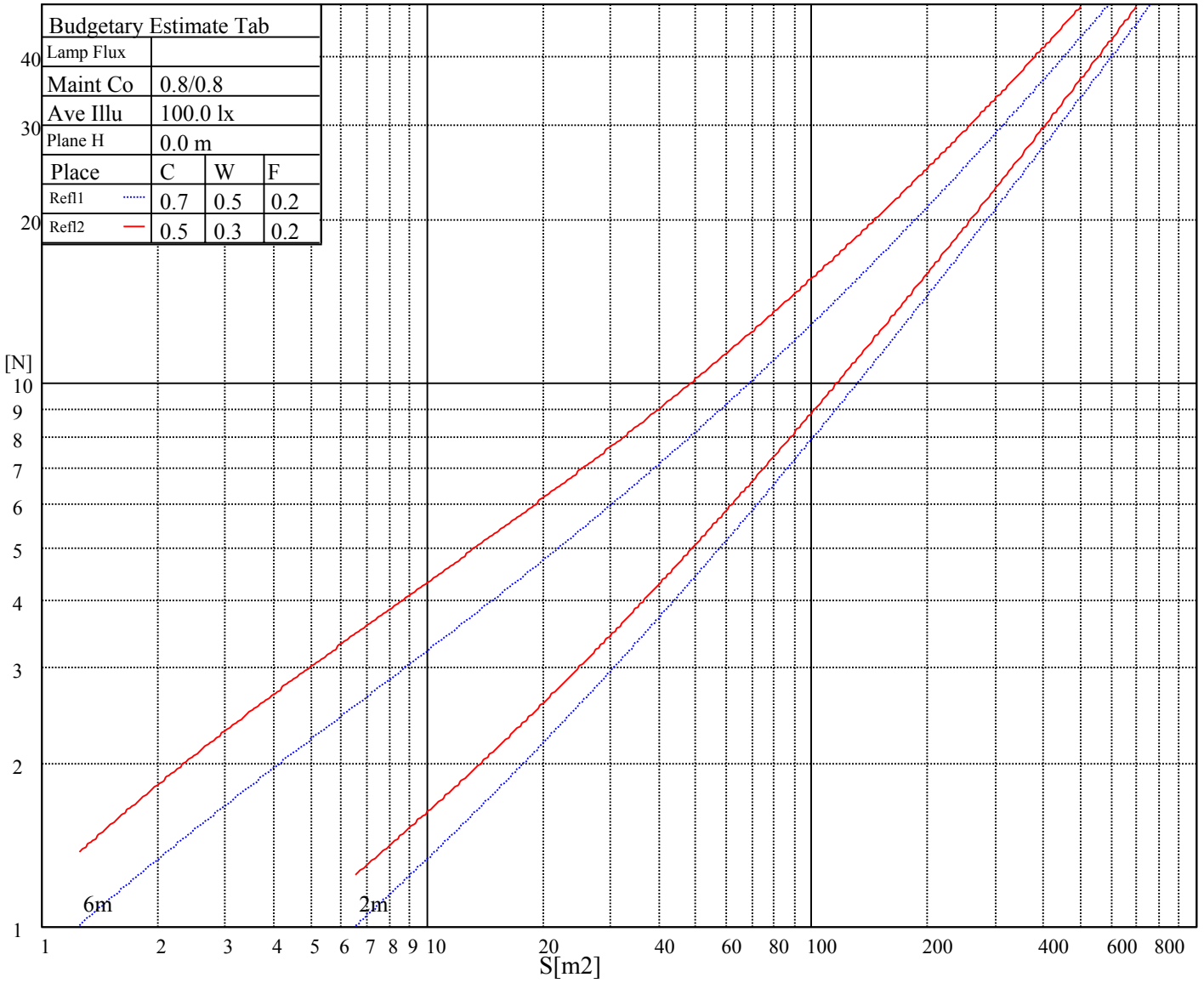
Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve



Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	12.2	13.6	12.5	13.8	14.1	12.0	13.3	12.3	13.6	13.9
	3H	13.9	15.1	14.2	15.4	15.7	13.6	14.8	13.9	15.1	15.4
	4H	14.4	15.5	14.8	15.8	16.2	14.0	15.1	14.4	15.4	15.8
	6H	15.0	16.1	15.4	16.4	16.8	14.6	15.6	15.0	16.0	16.3
	8H	15.2	16.3	15.6	16.6	17.0	14.8	15.8	15.2	16.2	16.5
	12H	15.2	16.0	15.7	16.4	16.9	14.7	15.5	15.2	15.9	16.4
4H	2H	12.7	13.7	13.1	14.1	14.4	12.5	13.5	12.9	13.9	14.2
	3H	14.5	15.3	15.0	15.7	16.1	14.2	15.0	14.7	15.4	15.9
	4H	15.4	16.2	15.8	16.6	17.0	15.0	15.8	15.5	16.3	16.7
	6H	16.1	16.9	16.5	17.3	17.7	15.7	16.5	16.1	16.9	17.3
	8H	16.2	16.7	16.7	17.2	17.7	15.8	16.2	16.3	16.7	17.3
	12H	16.4	16.9	17.0	17.4	17.9	16.0	16.4	16.5	16.9	17.4
8H	4H	15.6	16.0	16.1	16.5	17.1	15.3	15.8	15.8	16.2	16.8
	6H	16.4	16.9	16.9	17.4	17.9	16.1	16.5	16.6	17.0	17.5
	8H	16.8	17.3	17.3	17.7	18.3	16.4	16.8	16.9	17.3	17.9
	12H	17.1	17.5	17.6	18.0	18.6	16.6	17.1	17.1	17.6	18.1
12H	4H	15.6	16.1	16.2	16.6	17.1	15.4	15.8	15.9	16.3	16.8
	6H	16.5	17.0	17.0	17.5	18.0	16.2	16.6	16.7	17.1	17.6
	8H	16.9	17.4	17.4	17.9	18.4	16.5	17.0	17.0	17.5	18.0
Variation with the observer position at spacings:											
S = 1.0H		0.2/-0.6					0.3/-0.6				
S = 1.5H		0.6/-0.6					0.6/-0.6				
S = 2.0H		0.8/-0.7					0.7/-0.7				
Standard tables:		BK3					BK3				
Uncorrected UGR		-2.1					-2.4				
According 1000lm											



RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
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	1.01	1.01	1.01	0.99
1	1.04	0.99	0.95	1.01	0.97	0.94	0.97	0.93	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
2	0.90	0.83	0.77	0.88	0.82	0.76	0.84	0.79	0.74	0.81	0.77	0.73	0.78	0.74	0.71	0.69
3	0.79	0.71	0.64	0.77	0.70	0.64	0.74	0.68	0.62	0.71	0.66	0.61	0.69	0.64	0.60	0.58
4	0.70	0.61	0.54	0.69	0.60	0.54	0.66	0.59	0.53	0.64	0.57	0.52	0.61	0.56	0.51	0.49
5	0.62	0.53	0.47	0.61	0.53	0.46	0.59	0.52	0.46	0.57	0.50	0.45	0.55	0.49	0.45	0.43
6	0.56	0.47	0.41	0.55	0.47	0.41	0.53	0.46	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.37
7	0.51	0.42	0.36	0.50	0.42	0.36	0.48	0.41	0.35	0.47	0.40	0.35	0.46	0.39	0.35	0.33
8	0.46	0.38	0.32	0.46	0.38	0.32	0.44	0.37	0.32	0.43	0.36	0.31	0.42	0.36	0.31	0.29
9	0.43	0.34	0.29	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.28	0.39	0.33	0.28	0.26
10	0.39	0.31	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	0.24
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 WLC															
1	0.31	0.18	0.06	0.31	0.17	0.06	0.29	0.17	0.05	0.28	0.16	0.05	0.27	0.16	0.05	
2	0.29	0.16	0.05	0.29	0.16	0.05	0.27	0.15	0.05	0.26	0.15	0.05	0.25	0.14	0.05	
3	0.27	0.14	0.04	0.27	0.14	0.04	0.25	0.14	0.04	0.24	0.13	0.04	0.24	0.13	0.04	
4	0.25	0.13	0.04	0.24	0.13	0.04	0.24	0.12	0.04	0.23	0.12	0.04	0.22	0.12	0.04	
5	0.23	0.12	0.03	0.23	0.12	0.03	0.22	0.11	0.03	0.21	0.11	0.03	0.20	0.11	0.03	
6	0.21	0.11	0.03	0.21	0.11	0.03	0.20	0.10	0.03	0.20	0.10	0.03	0.19	0.10	0.03	
7	0.20	0.10	0.03	0.20	0.10	0.03	0.19	0.10	0.03	0.18	0.09	0.03	0.18	0.09	0.03	
8	0.19	0.09	0.03	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.02	0.17	0.08	0.02	
9	0.17	0.08	0.02	0.17	0.08	0.02	0.17	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	
10	0.16	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	0.02	
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CCLU															
0	0.20	0.20	0.20	0.17	0.17	0.17	0.11	0.11	0.11	0.07	0.07	0.07	0.02	0.02	0.02	
1	0.15	0.14	0.13	0.14	0.13	0.12	0.10	0.09	0.08	0.06	0.05	0.05	0.02	0.02	0.02	
2	0.12	0.11	0.09	0.11	0.10	0.08	0.09	0.07	0.06	0.06	0.05	0.04	0.02	0.02	0.01	
3	0.10	0.08	0.07	0.10	0.08	0.06	0.08	0.06	0.05	0.05	0.04	0.03	0.02	0.01	0.01	
4	0.09	0.07	0.05	0.09	0.06	0.05	0.07	0.05	0.04	0.05	0.04	0.02	0.02	0.01	0.01	
5	0.08	0.06	0.04	0.08	0.05	0.04	0.07	0.05	0.03	0.05	0.03	0.02	0.02	0.01	0.01	
6	0.07	0.05	0.03	0.07	0.05	0.03	0.06	0.04	0.02	0.05	0.03	0.02	0.02	0.01	0.01	
7	0.06	0.04	0.03	0.06	0.04	0.03	0.06	0.04	0.02	0.04	0.03	0.01	0.02	0.01	0.01	
8	0.05	0.04	0.02	0.06	0.04	0.02	0.06	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.00	
9	0.05	0.03	0.02	0.05	0.03	0.02	0.05	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.00	
10	0.05	0.03	0.02	0.05	0.03	0.02	0.05	0.03	0.01	0.04	0.02	0.01	0.02	0.01	0.00	

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	634.88	633.69	626.84	613.67	595.22	570.98	543.45	510.25	472.44
30.0	634.88	632.51	623.94	609.58	589.95	565.58	535.28	501.16	462.16
60.0	634.09	630.53	621.83	606.16	585.21	559.91	528.30	493.78	453.99
90.0	634.74	631.71	621.97	607.47	586.66	560.18	530.27	494.44	455.70
120.0	634.48	631.06	620.38	604.18	583.63	556.49	525.00	490.48	450.17
150.0	634.74	631.32	621.31	606.82	585.60	559.65	530.01	494.17	455.70
180.0	634.88	630.66	619.86	603.92	583.36	556.49	525.13	491.01	450.83
210.0	634.88	632.24	622.76	607.47	588.11	562.02	531.85	496.41	459.26
240.0	634.09	632.24	623.02	609.32	589.29	563.60	534.49	499.44	461.50
270.0	634.74	631.85	622.76	607.21	587.45	561.10	530.54	496.68	457.02
300.0	634.48	632.51	625.00	611.03	591.66	566.50	537.39	504.05	465.19
330.0	634.74	632.51	624.73	611.03	591.40	566.90	536.99	503.79	466.38
360.0	634.88	633.69	626.84	613.67	595.22	570.98	543.45	510.25	472.44

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	432.65	388.78	340.82	292.08	239.51	187.74	136.75	88.53	44.00
30.0	421.45	376.92	328.44	279.43	228.44	175.09	125.03	76.28	36.62
60.0	412.23	367.70	318.82	269.29	218.83	167.71	116.20	70.35	30.17
90.0	414.60	368.49	321.19	272.18	219.88	168.90	119.36	72.85	31.22
120.0	408.01	361.38	313.95	264.54	211.71	162.57	111.46	65.74	25.03
150.0	412.49	368.09	320.67	269.29	218.17	167.05	115.14	69.03	28.85
180.0	408.67	361.77	314.34	264.28	211.05	159.67	110.01	64.29	23.85
210.0	417.37	371.52	324.62	273.50	222.38	171.14	120.94	74.30	31.88
240.0	420.53	375.08	328.44	279.43	227.26	176.27	124.50	77.47	36.10
270.0	415.39	371.52	323.04	273.77	223.44	172.45	120.94	74.30	32.67
300.0	424.74	379.29	332.52	284.04	231.87	180.36	130.30	82.74	39.26
330.0	423.95	380.35	333.45	282.59	231.87	180.36	129.90	80.76	38.73
360.0	432.65	388.78	340.82	292.08	239.51	187.74	136.75	88.53	44.00

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	8.43	0.92	1.19	1.45	1.84	2.11	2.24	2.50	2.63
30.0	3.29	0.92	1.19	1.32	1.71	1.98	2.24	2.37	2.63
60.0	1.71	0.92	1.05	1.45	1.71	1.98	2.11	2.37	2.50
90.0	1.98	0.92	1.05	1.32	1.58	1.84	2.11	2.37	2.50
120.0	0.79	1.05	1.19	1.45	1.58	1.84	2.11	2.37	2.63
150.0	0.92	1.05	1.19	1.45	1.71	1.98	2.24	2.50	2.63
180.0	0.92	1.05	1.32	1.58	1.98	2.11	2.37	2.50	2.90
210.0	1.71	1.05	1.32	1.58	1.71	2.11	2.24	2.50	2.77
240.0	3.95	0.92	1.19	1.45	1.71	1.98	2.24	2.37	2.63
270.0	1.98	0.92	1.32	1.45	1.71	1.98	2.24	2.37	2.63
300.0	5.01	0.92	1.05	1.45	1.71	1.98	2.11	2.37	2.50
330.0	3.16	0.92	1.19	1.45	1.84	2.11	2.37	2.50	2.77
360.0	8.43	0.92	1.19	1.45	1.84	2.11	2.24	2.50	2.63

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	2.90	3.03	3.16	3.43	3.56	3.69	3.82	3.82	3.95
30.0	2.90	3.03	3.16	3.43	3.56	3.69	3.82	3.82	3.95
60.0	2.77	2.90	3.16	3.29	3.56	3.69	3.95	3.95	4.08
90.0	2.63	2.90	3.03	3.16	3.29	3.43	3.69	3.95	4.22
120.0	2.77	2.90	3.03	3.29	3.43	3.56	3.82	3.82	4.08
150.0	2.90	3.03	3.16	3.29	3.56	3.56	3.69	3.82	3.95
180.0	3.03	3.16	3.29	3.43	3.56	3.69	3.82	3.82	3.95
210.0	2.90	3.03	3.16	3.29	3.56	3.69	3.82	3.82	3.95
240.0	2.77	3.03	3.16	3.29	3.43	3.69	3.95	4.08	3.95
270.0	2.90	3.03	3.16	3.43	3.56	3.69	3.82	4.08	4.22
300.0	2.77	2.90	3.16	3.29	3.56	3.82	3.82	4.08	4.08
330.0	2.90	3.03	3.16	3.43	3.56	3.69	3.82	3.95	3.95
360.0	2.90	3.03	3.16	3.43	3.56	3.69	3.82	3.82	3.95



Intensity data(cd)

<b>C/γ(°)</b>	<b>180.0</b>
<b>0.0</b>	<b>4.08</b>
<b>30.0</b>	<b>3.95</b>
<b>60.0</b>	<b>4.08</b>
<b>90.0</b>	<b>4.22</b>
<b>120.0</b>	<b>4.08</b>
<b>150.0</b>	<b>3.95</b>
<b>180.0</b>	<b>4.08</b>
<b>210.0</b>	<b>3.95</b>
<b>240.0</b>	<b>4.08</b>
<b>270.0</b>	<b>4.22</b>
<b>300.0</b>	<b>4.08</b>
<b>330.0</b>	<b>3.95</b>
<b>360.0</b>	<b>4.08</b>