



TEST REPORT

NAME OF SAMPLE	LED PANEL LIGHT
TRADE MARK	N/A
MODEL/TYPE	PL-36W-119WW, 3500K
CLIENT	
ADDRESS OF CLIENT	
INSPECTION CLASSIFICATION	Commission Test
TEST ITEM	IES Test

Test Report

Name or sample	LED PANEL LIGHT	Report No.	LCS1411261128S
Client		ADDRESS OF CLIENT	
Name of receipt	Delivering	Inspection Classification	Commission test
Test Model	PL-36W-119WW, 3500K	Test date	2014.11.24
Rating of sample	AC100-240V, 50/60Hz, 36W, 3500K, 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	

LumCAT: PL-36W-119WW, 3500K

Luminaire: LED PANEL LIGHT

Report No: LCS1411261128S

Test No: 1411240036

LampCAT: LED

Lamp flux(lm)

Number of Lamps: 1

Length(mm): 1190

Phm Type: C

Voltage(V): 230.400

Current(A): 0.169

Power (W): 37.100

PF: 0.954

Ballast type: -

Width(mm): 290

Height(mm): 12

Photometric Results

Lumens(lm): 1805.22

Lumens(lm)/Power(W): 48.66

Central intensity(cd): 629.343

Maximum intensity(cd): 633.164

Angle of maximum intensity: C=30.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Left=56.3 Right=55.6

[C90/270]Left=56.0 Right=55.0

Field angle(10%Imax): [C0/180]Left=81.9 Right=80.8

[C90/270]Left=81.7 Right=80.6

Beam angle of C30plane: 111.68

Maximum s/h: C0_180=1.26 C90_270=1.24

Up flux rate of LUM(%): 0.80%

Down flux rate of LUM(%): 99.20%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 77.794%

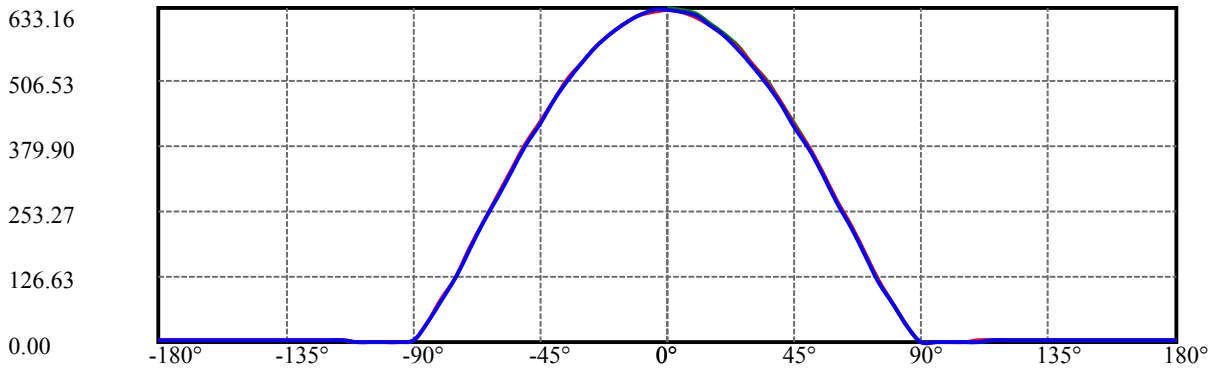
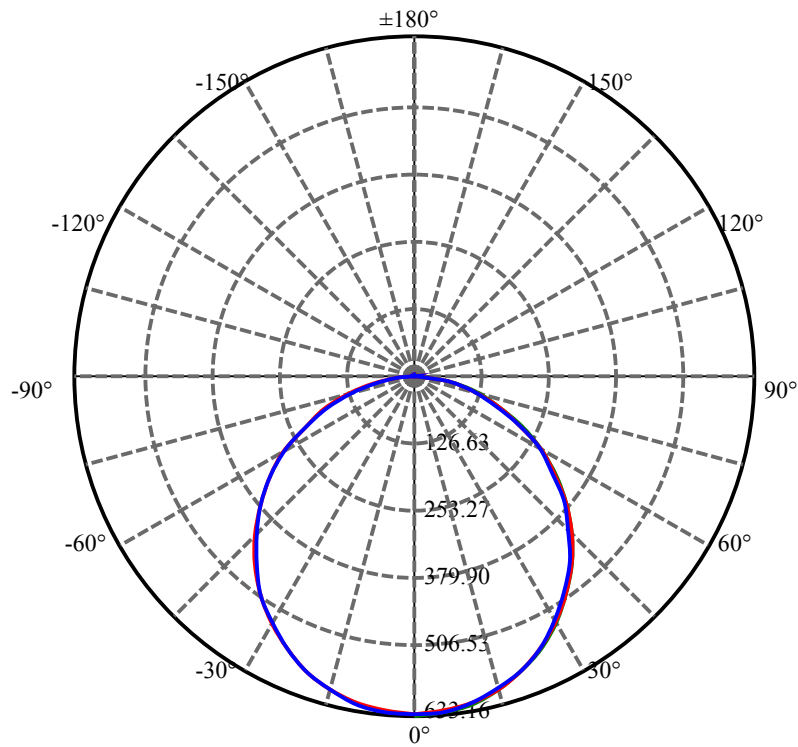
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	630.683	.000	.000	.000%	.000%
5.0	627.642	15.043	15.043	.833%	.833%
10.0	618.815	44.590	59.633	2.470%	3.303%
15.0	603.983	72.536	132.168	4.018%	7.321%
20.0	584.001	97.907	230.075	5.424%	12.745%
25.0	558.553	119.833	349.908	6.638%	19.383%
30.0	528.504	137.568	487.475	7.621%	27.004%
35.0	494.382	150.627	638.103	8.344%	35.348%
40.0	455.715	158.517	796.619	8.781%	44.129%
45.0	414.347	161.099	957.718	8.924%	53.053%
50.0	369.730	158.434	1116.152	8.776%	61.829%
55.0	322.456	150.504	1266.657	8.337%	70.167%
60.0	273.238	137.693	1404.349	7.628%	77.794%
65.0	221.913	120.372	1524.722	6.668%	84.462%
70.0	171.114	99.517	1624.238	5.513%	89.975%
75.0	120.425	76.204	1700.442	4.221%	94.196%
80.0	73.437	51.872	1752.314	2.873%	97.070%
85.0	32.629	28.820	1781.135	1.597%	98.666%
90.0	2.426	9.598	1790.733	.532%	99.198%
95.0	.944	.923	1791.656	.051%	99.249%
100.0	1.186	.579	1792.235	.032%	99.281%
105.0	1.438	.702	1792.937	.039%	99.320%
110.0	1.713	.824	1793.760	.046%	99.365%
115.0	1.965	.931	1794.692	.052%	99.417%
120.0	2.229	1.020	1795.711	.056%	99.474%
125.0	2.426	1.076	1796.787	.060%	99.533%
130.0	2.668	1.108	1797.895	.061%	99.595%
135.0	2.876	1.120	1799.015	.062%	99.657%
140.0	3.052	1.098	1800.113	.061%	99.717%
145.0	3.206	1.044	1801.157	.058%	99.775%
150.0	3.359	.967	1802.123	.054%	99.829%
155.0	3.535	.873	1802.996	.048%	99.877%
160.0	3.689	.758	1803.754	.042%	99.919%
165.0	3.832	.620	1804.373	.034%	99.953%
170.0	3.930	.460	1804.834	.026%	99.979%
175.0	4.007	.284	1805.118	.016%	99.995%
180.0	4.062	.096	1805.214	.005%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	487.48	27.00%
0-40	796.62	44.13%
0-60	1404.35	77.79%
0-90	1790.73	99.20%
0-120	1795.71	99.47%
0-180	1805.21	100.00%
60-90	524.08	29.03%
90-120	14.58	0.81%
90-130	16.76	0.93%
90-150	20.99	1.16%
90-180	23.98	1.33%
0-61.65	1444.17	80.00%

ZONAL LUMEN SUMMARY

0-10	59.63
10-20	170.44
20-30	257.40
30-40	309.14
40-50	319.53
50-60	288.20
60-70	219.89
70-80	128.08
80-90	38.42
90-100	1.50
100-110	1.53
110-120	1.95
120-130	2.18
130-140	2.22
140-150	2.01
150-160	1.63
160-170	1.08
170-180	0.28



C30(Max): ———

C0/C180: ———

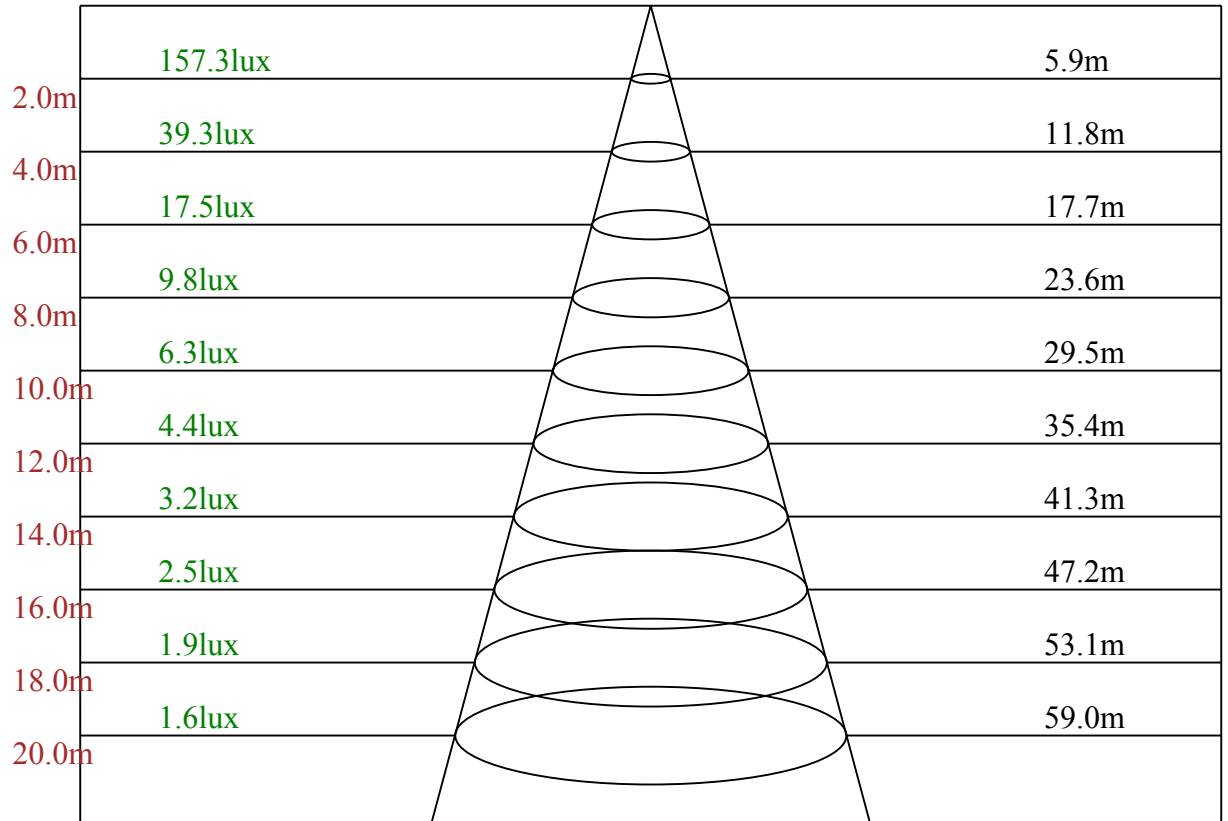
C90/C270: ———

Field angle(10%Imax):C0/180Left:81.9 Right:80.8

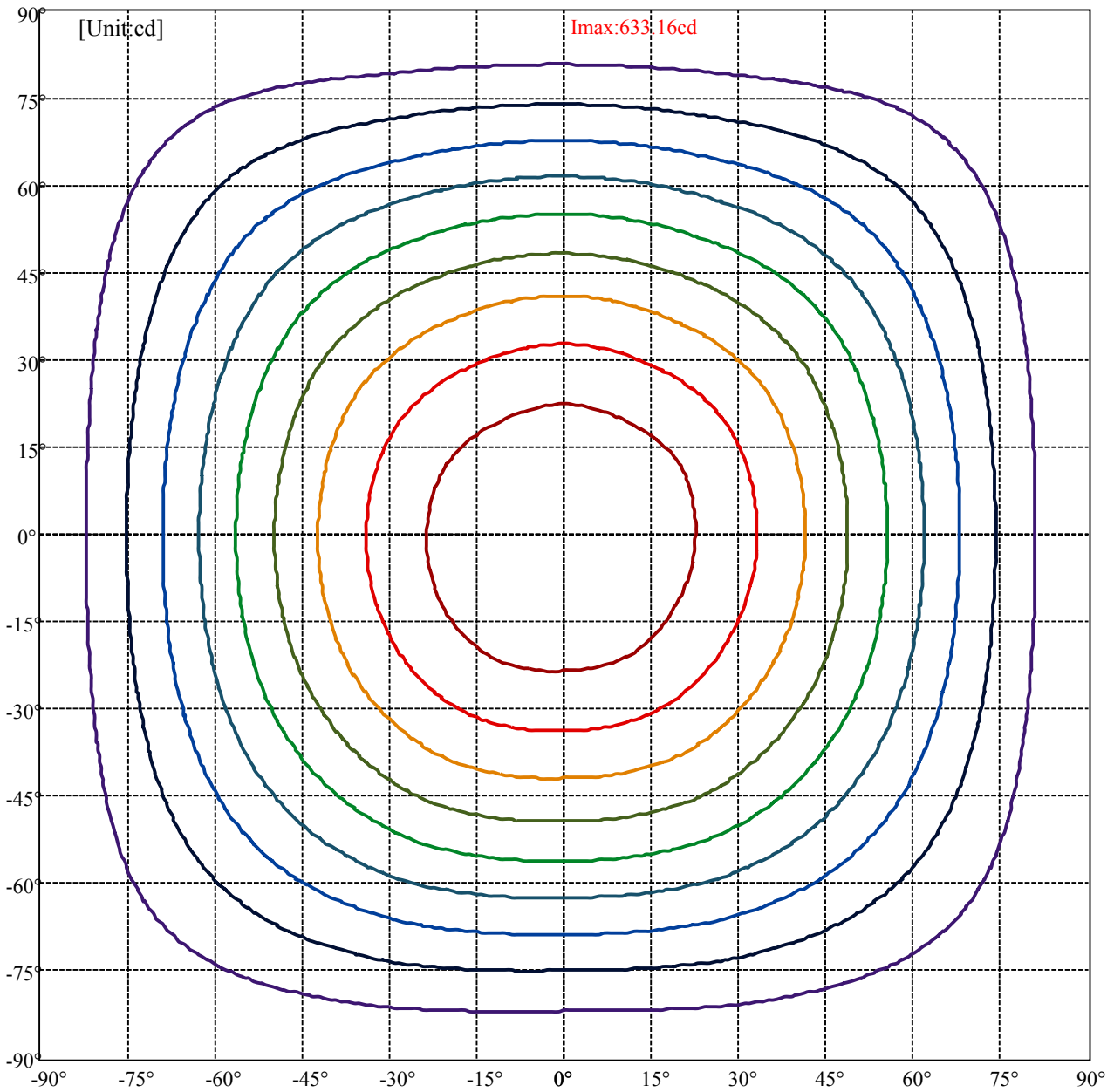
:C90/270Left:81.7 Right:80.6

Beam Angle(50%Imax):C0/180Left:56.3 Right:55.6

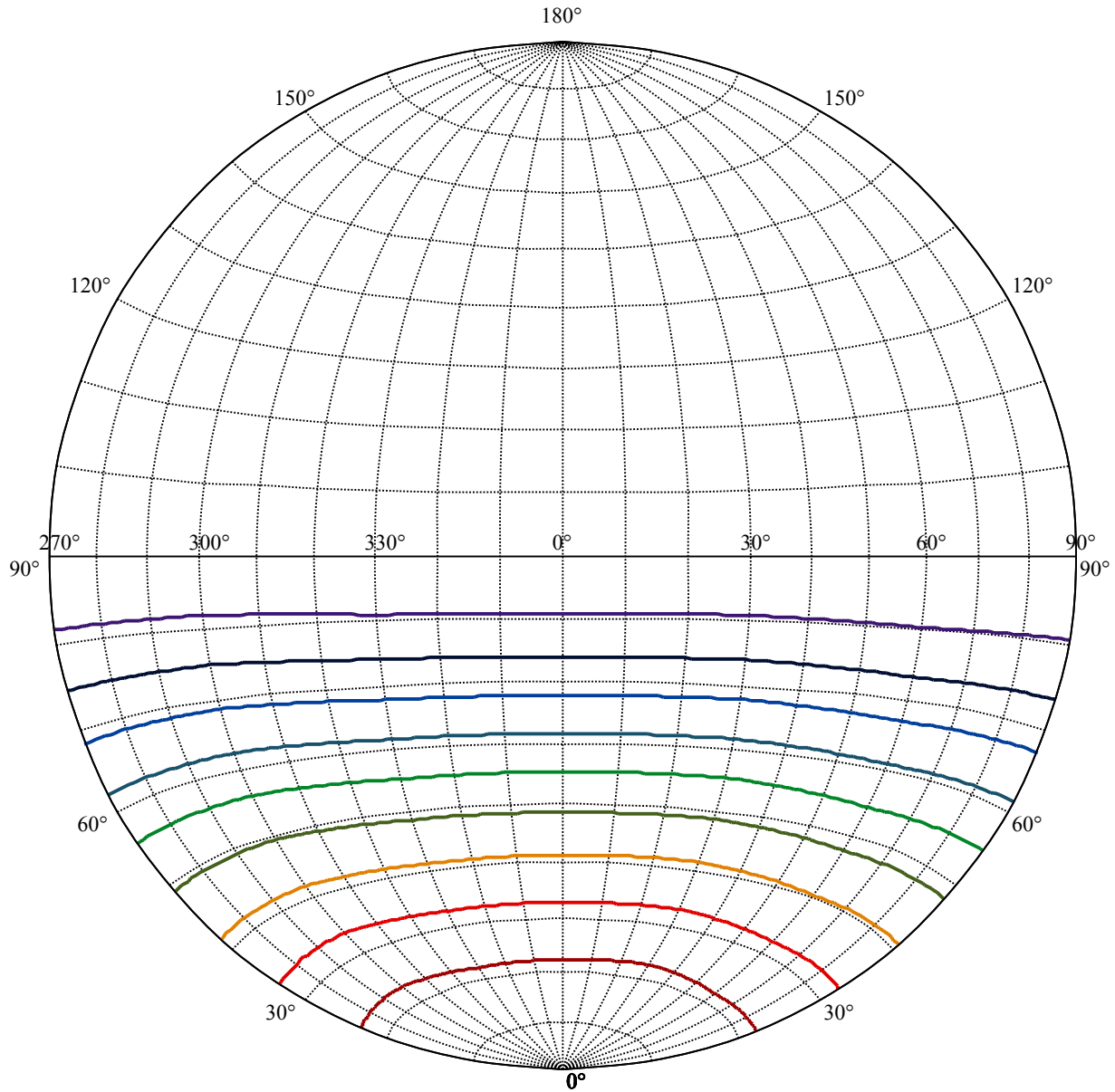
:C90/270Left:56.0 Right:55.0



Beam angle of C30plane111.68













(10%Imax) 63.1853	—
(20%Imax) 126.371	—
(30%Imax) 189.556	—
(40%Imax) 252.741	—
(50%Imax) 315.927	—
(60%Imax) 379.112	—
(70%Imax) 442.297	—
(80%Imax) 505.483	—
(90%Imax) 568.668	—

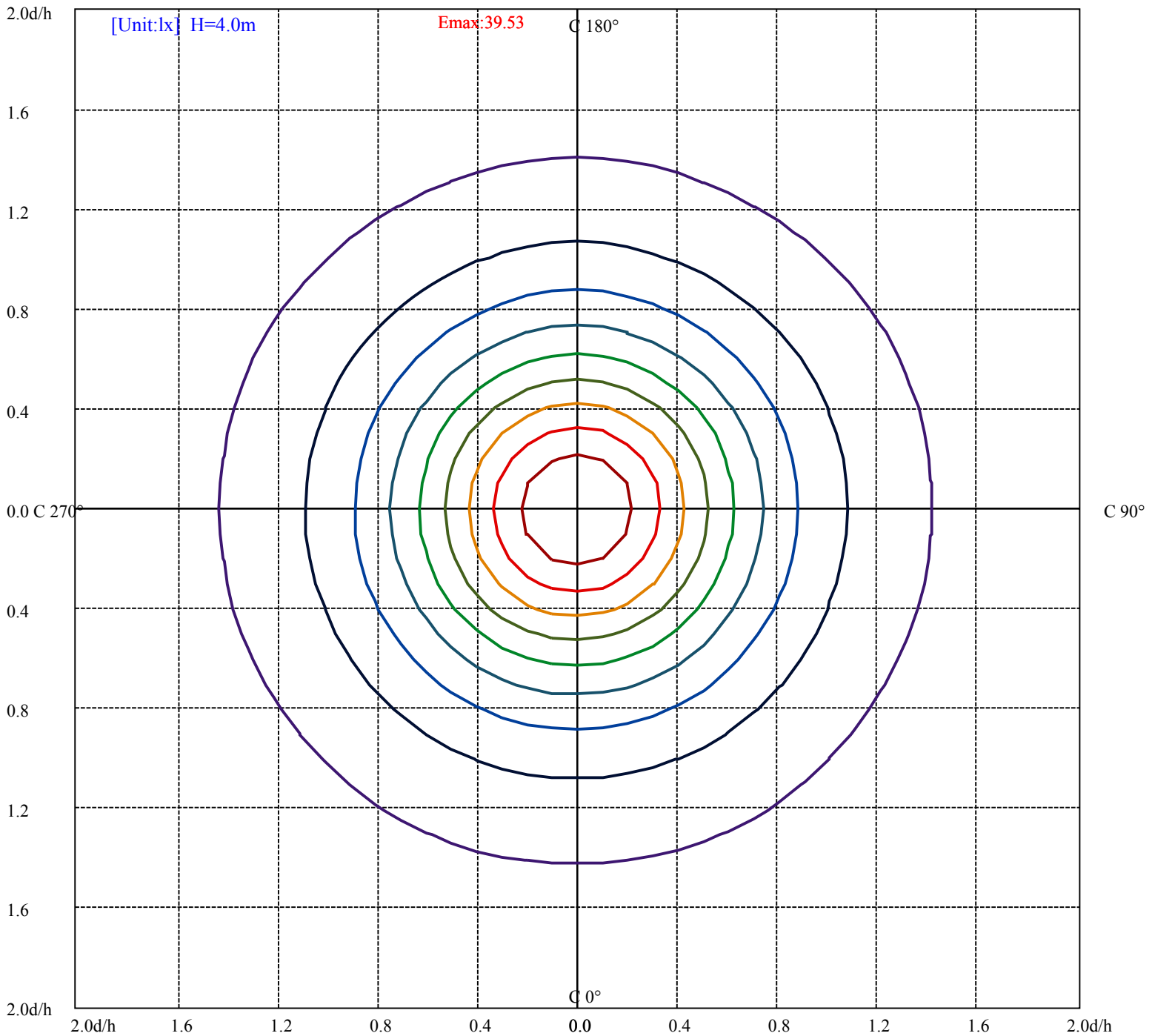


House

[Unit:cd]

Road

Imax:633.16	
(10%Imax) 63.3164	
(20%Imax) 126.633	
(30%Imax) 189.949	
(40%Imax) 253.266	
(50%Imax) 316.582	
(60%Imax) 379.898	
(70%Imax) 443.215	
(80%Imax) 506.531	
(90%Imax) 569.848	

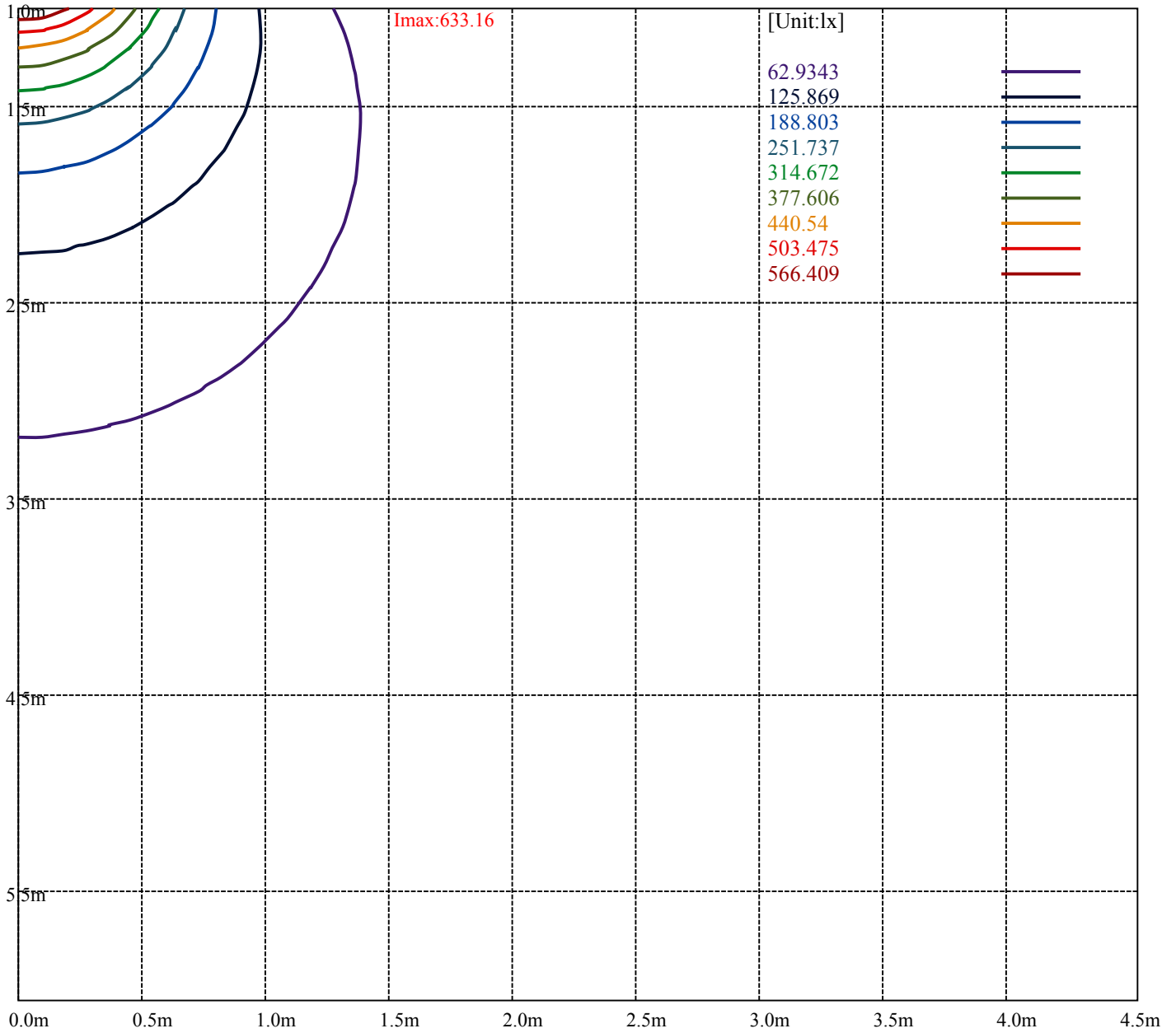


(10%Emax)	3.953156	—
(20%Emax)	7.906312	—
(30%Emax)	11.85944	—
(40%Emax)	15.81262	—
(50%Emax)	19.76581	—
(60%Emax)	23.71894	—
(70%Emax)	27.67212	—
(80%Emax)	31.62525	—
(90%Emax)	35.57844	—

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

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

Operator: Marine
Distance(m): 11.48



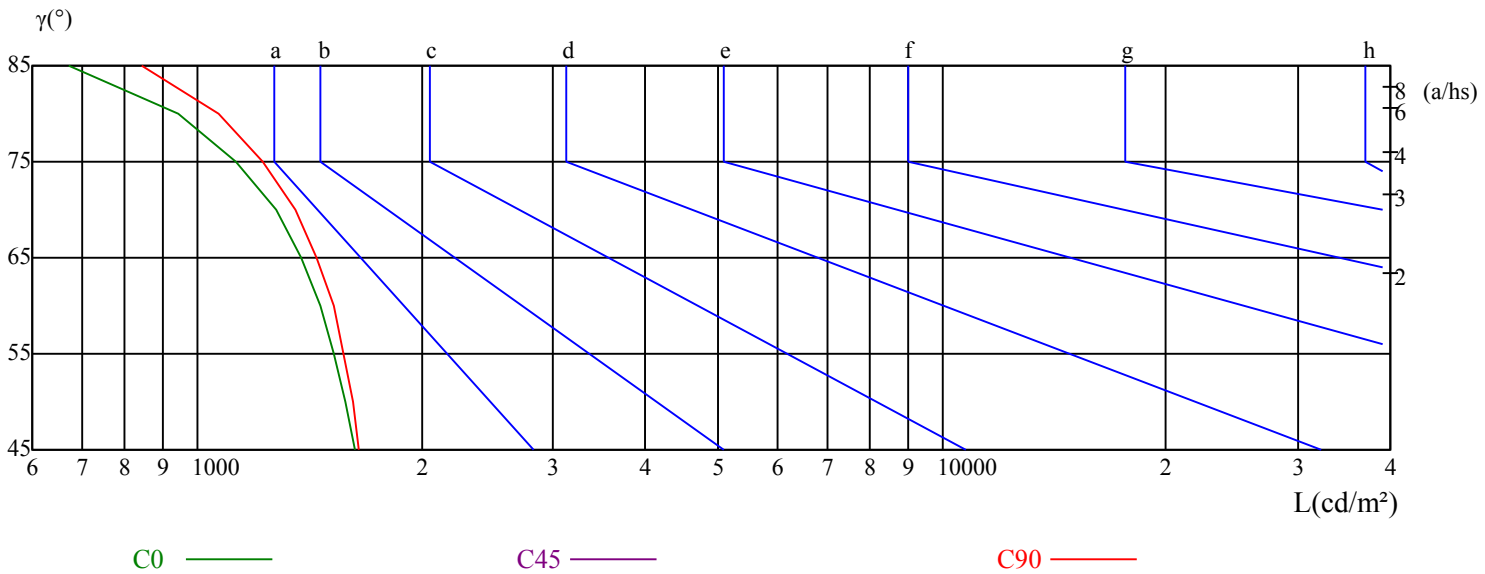
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	1623	1576	1528	1464	1375	1274	1124	940	672
C45	0	0	0	0	0	0	0	0	0
C90	1651	1616	1571	1520	1442	1353	1221	1067	840

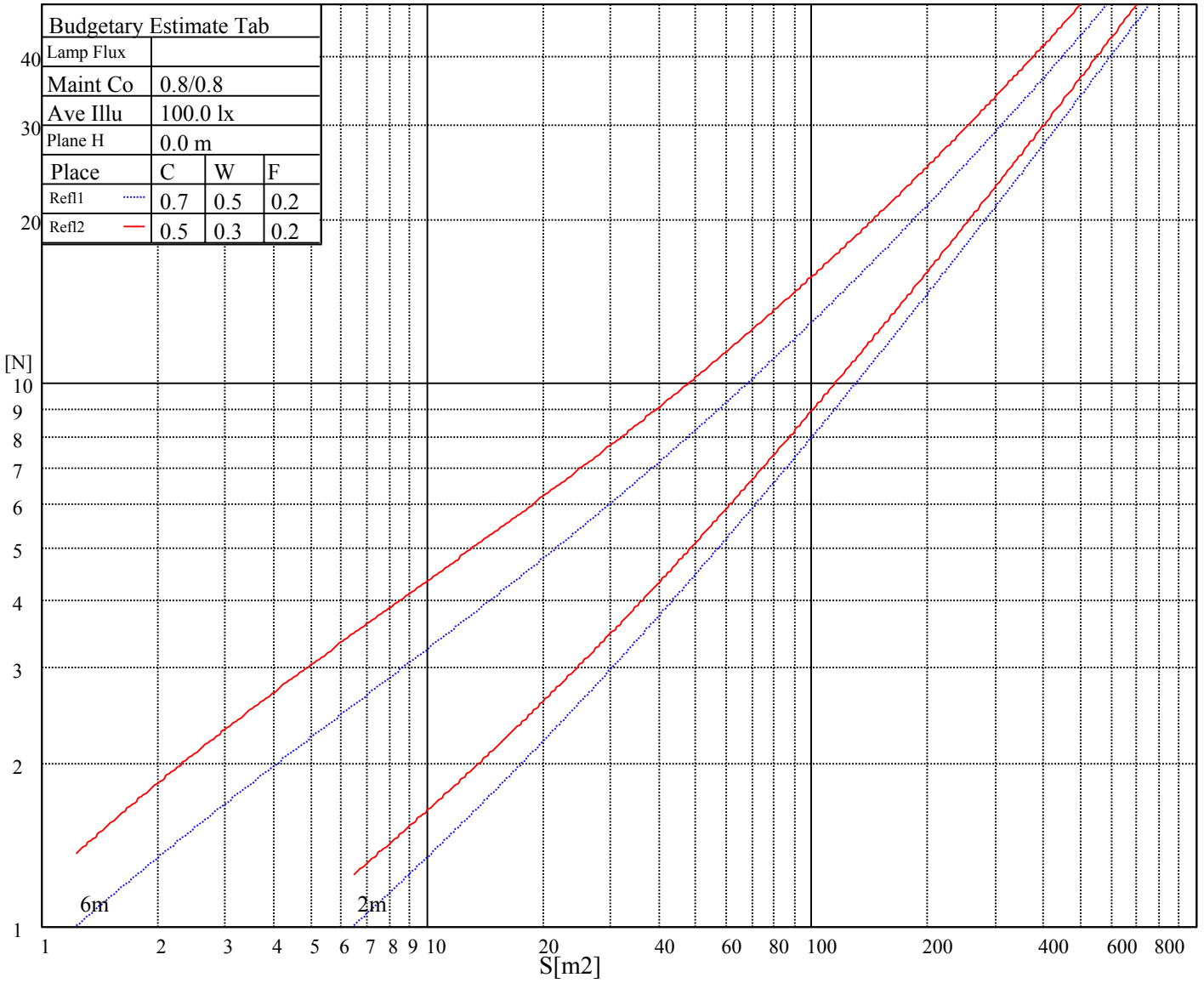
Glare Table

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	12.0	13.3	12.3	13.6	13.9	11.9	13.2	12.2	13.5	13.8
	3H	13.5	14.8	13.9	15.0	15.3	13.4	14.7	13.8	14.9	15.2
	4H	14.0	15.0	14.4	15.4	15.7	13.9	14.9	14.3	15.3	15.6
	6H	14.5	15.5	14.8	15.8	16.2	14.4	15.4	14.8	15.8	16.1
	8H	14.6	15.7	15.0	16.0	16.4	14.6	15.6	15.0	16.0	16.3
	12H	14.5	15.3	15.0	15.8	16.2	14.5	15.3	14.9	15.7	16.1
4H	2H	12.4	13.5	12.8	13.8	14.2	12.4	13.4	12.7	13.7	14.1
	3H	14.2	15.0	14.6	15.4	15.8	14.1	14.9	14.5	15.3	15.7
	4H	15.0	15.8	15.4	16.2	16.6	14.9	15.7	15.3	16.1	16.5
	6H	15.6	16.4	16.0	16.8	17.2	15.5	16.3	15.9	16.7	17.1
	8H	15.6	16.1	16.1	16.6	17.1	15.5	16.0	16.0	16.5	17.0
	12H	15.8	16.2	16.3	16.7	17.2	15.7	16.1	16.2	16.6	17.2
8H	4H	15.2	15.6	15.7	16.1	16.7	15.1	15.5	15.6	16.0	16.6
	6H	15.9	16.4	16.4	16.9	17.4	15.8	16.3	16.3	16.8	17.3
	8H	16.2	16.7	16.7	17.1	17.7	16.1	16.5	16.6	17.0	17.6
	12H	16.4	16.9	16.9	17.4	17.9	16.3	16.8	16.8	17.2	17.8
12H	4H	15.2	15.7	15.7	16.2	16.7	15.1	15.6	15.7	16.1	16.6
	6H	16.0	16.5	16.5	16.9	17.5	15.9	16.4	16.4	16.8	17.4
	8H	16.3	16.8	16.8	17.3	17.8	16.2	16.7	16.7	17.2	17.7
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.6					0.3/-0.6				
S = 1.5H		0.6/-0.6					0.6/-0.6				
S = 2.0H		0.8/-0.8					0.8/-0.8				
Standard tables:		BK3					BK3				
Uncorrected UGR		-2.5					-2.6				
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	0.94	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	0.75	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	0.63	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	0.49	0.41	0.36	0.47	0.40	0.35	0.46	0.39	0.35	0.33
8	0.47	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	0.15	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	0.26	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	0.23	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	629.34	625.79	616.17	601.94	581.78	556.09	526.45	492.86	453.73
30.0	633.16	629.08	620.52	605.23	584.16	559.26	529.09	493.65	455.97
60.0	631.85	627.63	616.96	601.02	579.68	552.14	521.97	485.48	446.35
90.0	630.66	626.97	617.62	601.68	580.73	554.64	524.34	488.38	449.91
120.0	629.74	625.79	616.43	600.75	579.28	553.33	522.63	488.11	448.59
150.0	629.34	626.45	618.41	604.18	585.21	559.91	530.27	497.47	459.00
180.0	629.34	626.31	618.67	604.58	584.95	561.36	531.33	497.73	459.39
210.0	633.16	630.79	621.97	607.47	588.63	563.87	533.57	500.10	462.69
240.0	631.85	629.61	622.49	608.40	589.95	565.32	535.41	502.74	464.14
270.0	630.66	628.82	619.59	605.10	585.74	560.18	529.48	496.02	456.89
300.0	629.74	628.29	619.59	605.23	586.26	560.84	531.19	498.13	459.13
330.0	629.34	626.18	617.35	602.20	581.65	555.70	526.32	491.93	452.81
360.0	629.34	625.79	616.17	601.94	581.78	556.09	526.45	492.86	453.73

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	412.49	366.78	320.27	270.73	218.30	167.45	115.94	69.56	29.77
30.0	414.60	368.75	321.59	270.60	219.88	168.63	116.86	70.75	30.30
60.0	404.85	358.48	310.92	261.91	211.19	158.62	109.74	64.29	23.71
90.0	406.83	362.69	315.40	266.91	214.88	164.15	113.17	67.58	28.19
120.0	407.22	361.38	314.21	265.47	213.16	162.31	113.56	66.14	26.88
150.0	417.76	372.57	326.46	277.72	225.55	174.56	124.89	76.41	35.57
180.0	419.34	375.47	327.39	278.90	226.34	177.33	125.42	78.65	37.42
210.0	420.26	376.26	328.04	279.17	228.58	177.59	127.27	78.52	37.15
240.0	423.16	380.21	332.26	283.91	233.85	181.41	131.48	82.34	40.45
270.0	415.52	371.91	325.54	275.21	225.28	174.82	123.44	76.68	36.10
300.0	418.16	374.81	328.44	278.11	228.18	177.59	126.08	79.05	36.36
330.0	411.97	367.44	318.95	270.21	217.77	168.90	117.25	71.27	29.64
360.0	412.49	366.78	320.27	270.73	218.30	167.45	115.94	69.56	29.77

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.05	1.05	1.32	1.58	1.84	2.24	2.37	2.77	3.16
30.0	1.58	0.92	1.19	1.45	1.71	1.98	2.37	2.50	2.77
60.0	0.79	0.92	1.19	1.45	1.71	1.98	2.24	2.37	2.50
90.0	1.05	0.92	1.19	1.32	1.58	1.84	2.11	2.24	2.50
120.0	0.79	0.92	1.05	1.45	1.71	1.98	2.11	2.50	2.50
150.0	2.11	0.92	1.19	1.45	1.71	1.84	2.24	2.37	2.63
180.0	3.03	0.92	1.19	1.45	1.71	1.98	2.24	2.50	2.77
210.0	3.69	0.92	1.19	1.58	1.84	1.98	2.37	2.50	2.63
240.0	6.98	0.92	1.19	1.45	1.58	1.98	2.24	2.24	2.63
270.0	3.43	0.92	1.05	1.32	1.58	1.98	2.11	2.24	2.63
300.0	3.69	0.92	1.19	1.32	1.71	1.84	2.11	2.37	2.50
330.0	0.92	1.05	1.32	1.45	1.84	1.98	2.24	2.50	2.77
360.0	1.05	1.05	1.32	1.58	1.84	2.24	2.37	2.77	3.16

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

Intensity data(cd)

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