



SOTEN LIGHTING LTD.
www.soten.hk
Email: info@soten.hk
Tel: +86 750 3778811 Fax: +86 750 3778800
Address: Jin OU Road, JiangMen Gity, GuangDong, China

SOTEN

LumCAT: D1037

Luminaire: 2-1421-EF 45°

Report No:

Voltage(V): 220.7000

Test No:

Current(A): 0.1080

LampCAT: LUMILEDS-1203-3090-F

Power (W): 13.2900

Lamp flux(lm): 1322.0

PF: 0.5530

Number of Lamps: 1

Ballast type: PHILIPS CertaDrive 15W 0.3A 40V LPF I 230V

Length(mm): -88

Width(mm): -88

Phm Type: C

Height(mm): 68

Photometric Results

Lumens(lm): 1031.53

Efficiency(%): 78.03%

Lumens(lm)/Power(W): 77.62

Central intensity(cd): 1718.130

Maximum intensity(cd): 1718.130

Angle of maximum intensity: C=0.0 γ=0.0

Beam Angle(50%Imax): [C0/180]Total=45.3

[C90/270]Total=45.3

Field angle(10%Imax): [C0/180]Total=70.9

[C90/270]Total=70.9

Maximum s/h(1/2): C0_180=0.72 C90_270=0.72

Maximum s/h(1/4): C0_180=1.03 C90_270=0.75

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 78.03%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.030%



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2022/1/22
Humidity(%): 60.0%

Operator: New
Distance(m): 6.81

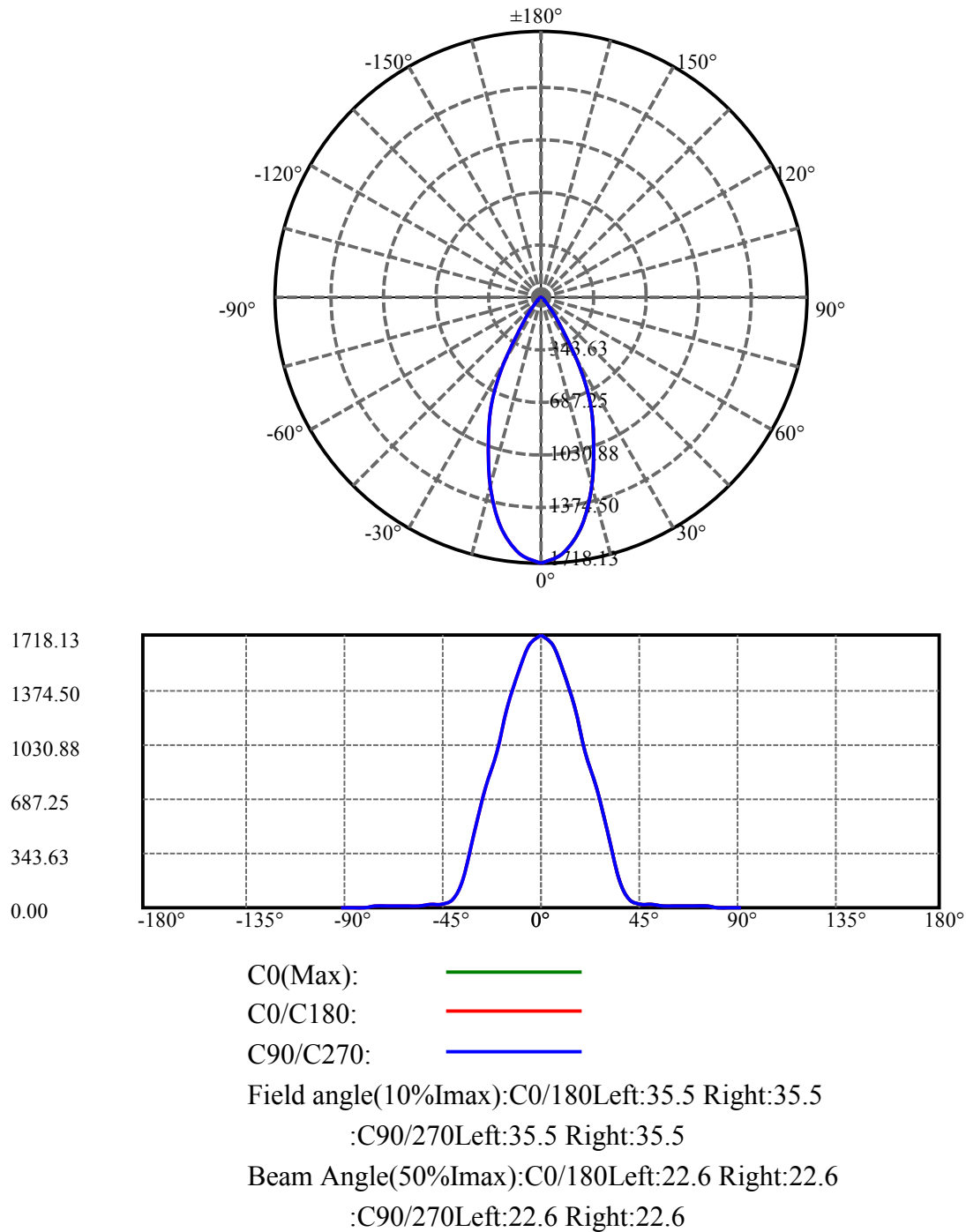
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1718.130	.000	.000	.000%	.000%
5.0	1656.413	40.342	40.342	3.052%	3.052%
10.0	1494.837	112.730	153.072	8.527%	11.579%
15.0	1257.855	163.288	316.360	12.352%	23.930%
20.0	981.895	184.587	500.947	13.963%	37.893%
25.0	749.739	181.616	682.563	13.738%	51.631%
30.0	490.715	156.981	839.544	11.874%	63.506%
35.0	184.268	99.396	938.939	7.519%	71.024%
40.0	48.770	38.881	977.820	2.941%	73.965%
45.0	25.661	13.782	991.601	1.042%	75.008%
50.0	16.288	8.476	1000.078	.641%	75.649%
55.0	11.508	6.044	1006.121	.457%	76.106%
60.0	10.487	5.084	1011.206	.385%	76.491%
65.0	9.652	4.896	1016.101	.370%	76.861%
70.0	8.492	4.594	1020.695	.348%	77.208%
75.0	7.053	4.063	1024.759	.307%	77.516%
80.0	5.197	3.278	1028.037	.248%	77.764%
85.0	3.155	2.270	1030.306	.172%	77.935%
90.0	1.299	1.220	1031.526	.092%	78.028%

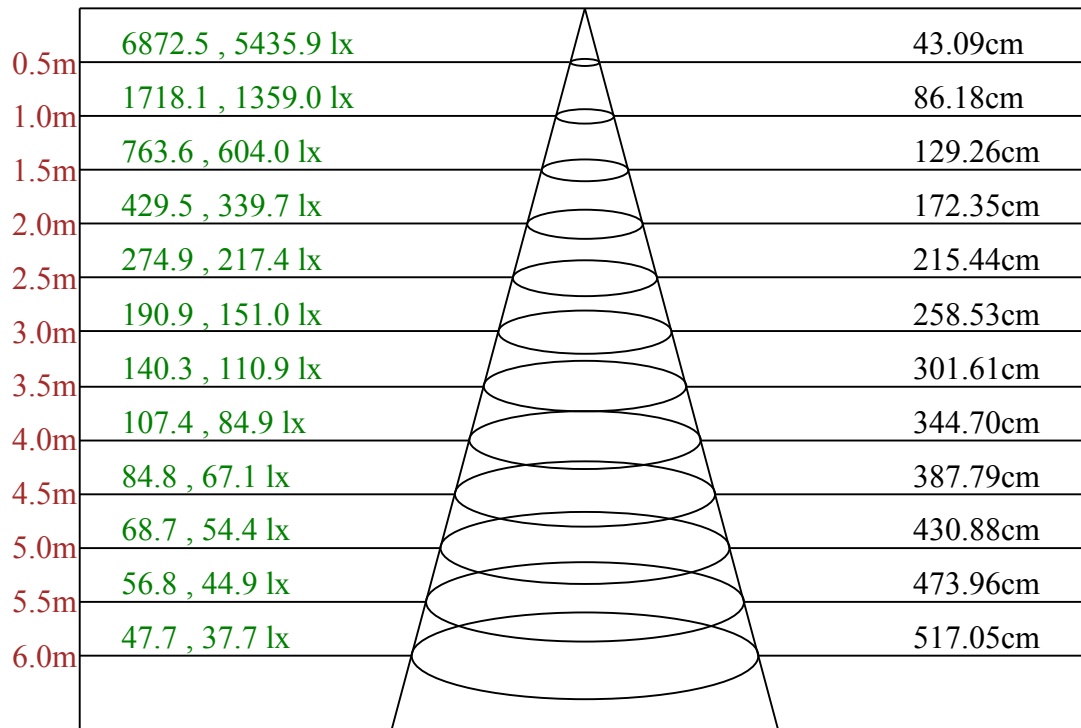
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	839.54	63.51%	81.39%
0-40	977.82	73.97%	94.79%
0-60	1011.21	76.49%	98.03%
0-90	1030.31	77.94%	99.88%
0-120	1030.31	77.94%	99.88%
0-180	1031.53	78.03%	100.00%
60-90	24.18	1.83%	2.34%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.54	825.22	62.42%	80.00%

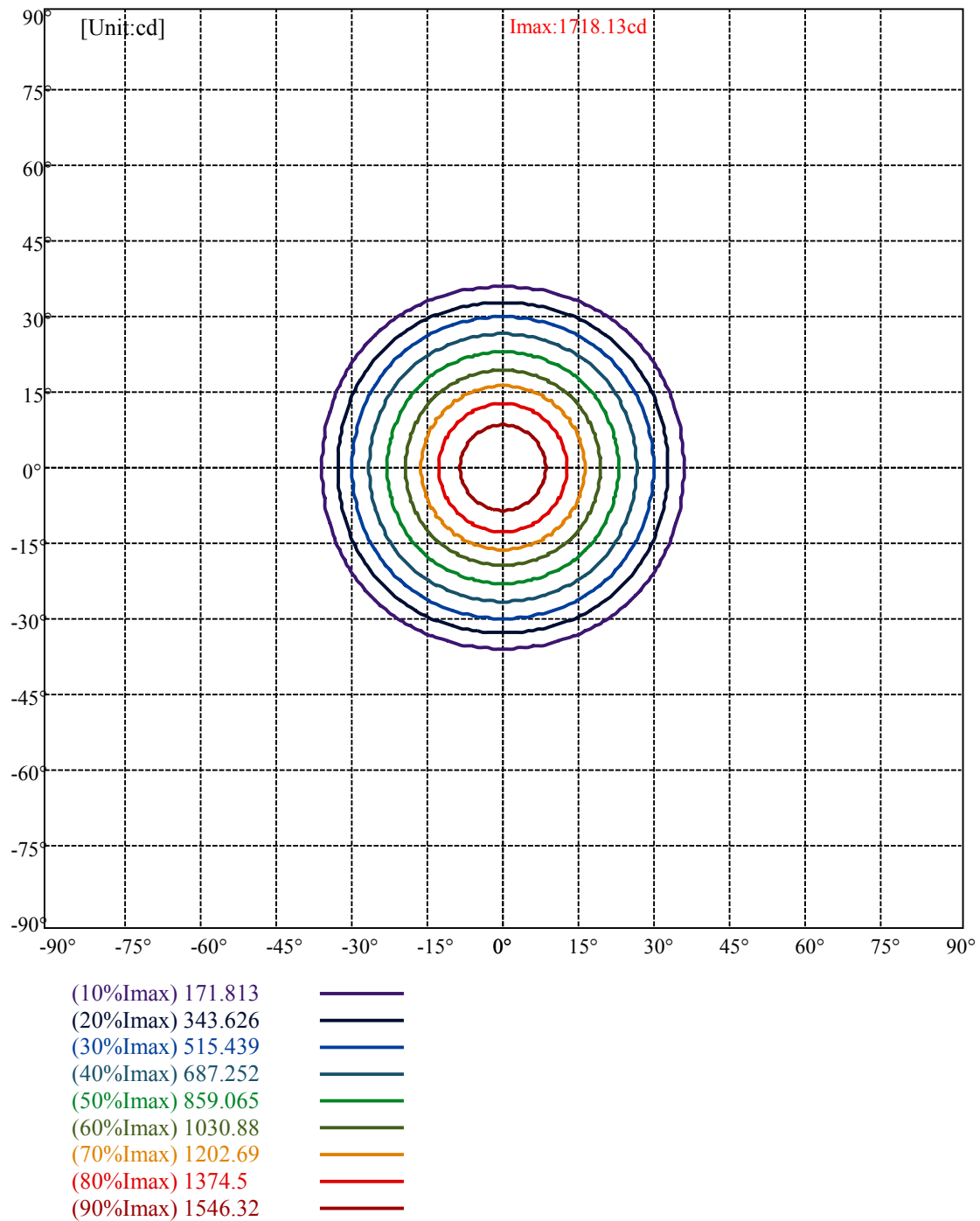
ZONAL LUMEN SUMMARY

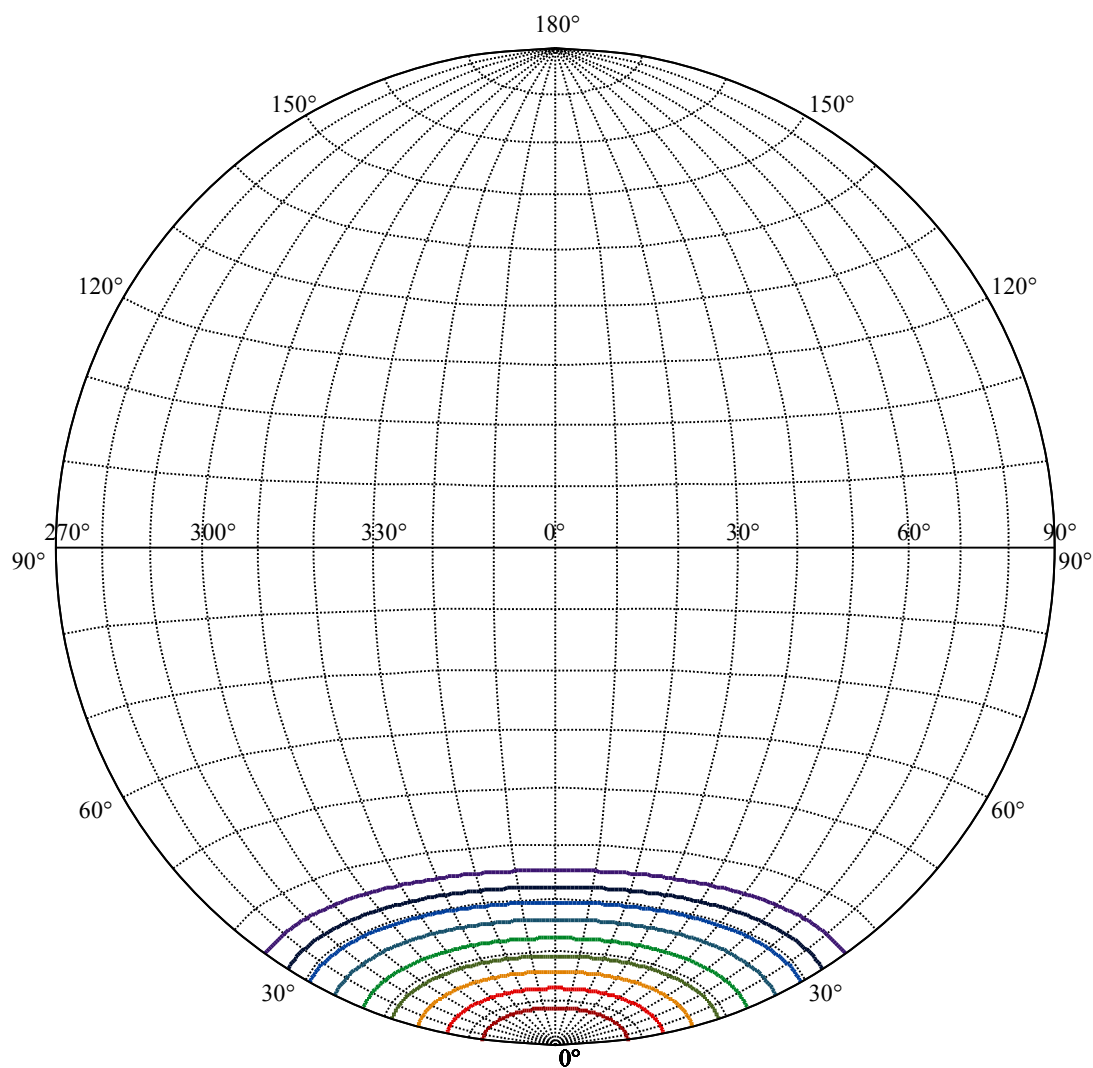
0-10	153.07
10-20	347.87
20-30	338.60
30-40	138.28
40-50	22.26
50-60	11.13
60-70	9.49
70-80	7.34
80-90	2.27
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0plane46.62














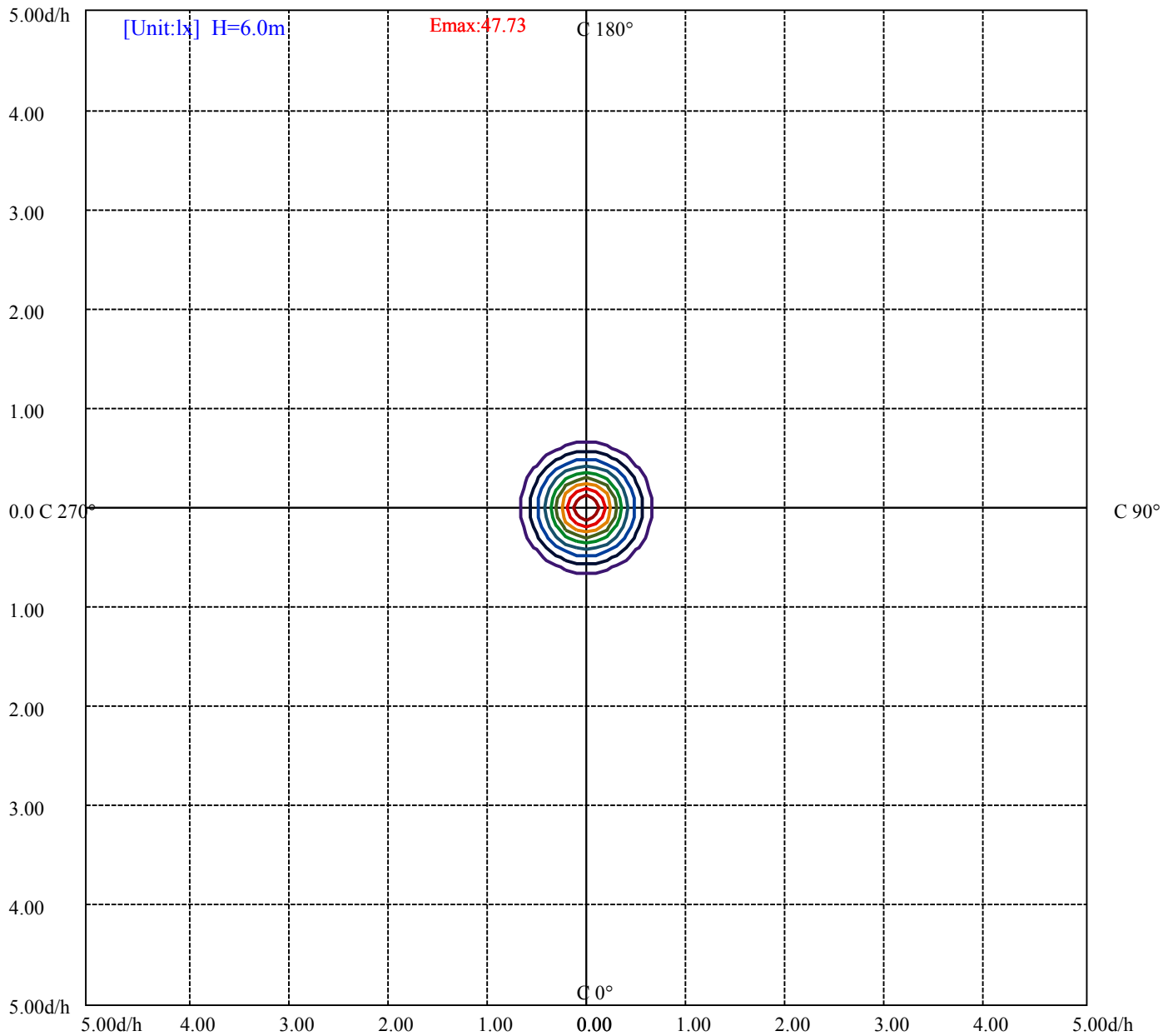
House

[Unit:cd]

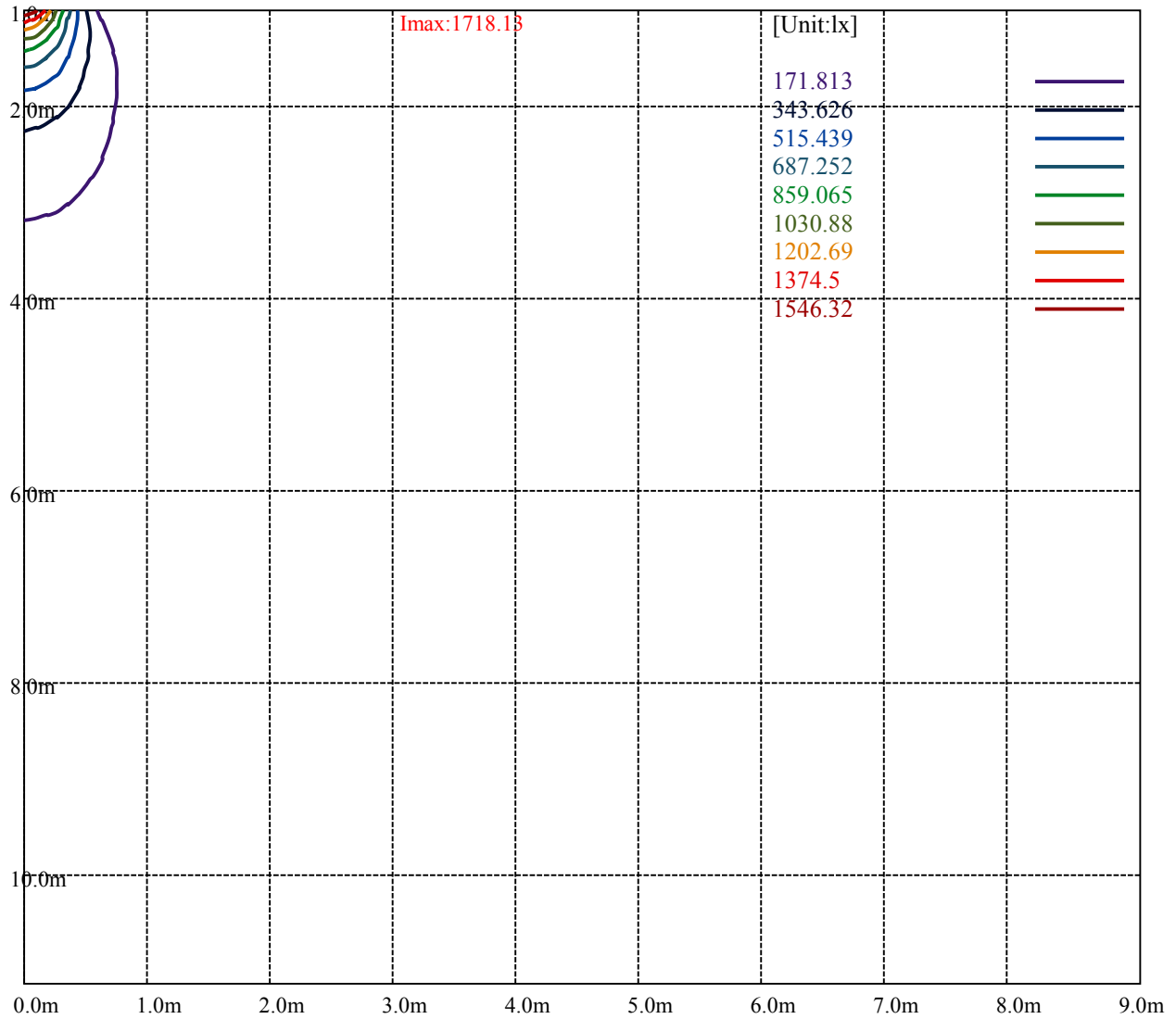
Road

Imax:1718.13

(10%Imax)	171.813	
(20%Imax)	343.626	
(30%Imax)	515.439	
(40%Imax)	687.252	
(50%Imax)	859.065	
(60%Imax)	1030.88	
(70%Imax)	1202.69	
(80%Imax)	1374.5	
(90%Imax)	1546.32	



(10%Emax)	4.772583	—
(20%Emax)	9.545167	—
(30%Emax)	14.31772	—
(40%Emax)	19.09031	—
(50%Emax)	23.86289	—
(60%Emax)	28.63556	—
(70%Emax)	33.40805	—
(80%Emax)	38.18056	—
(90%Emax)	42.95333	—



Luminance Table

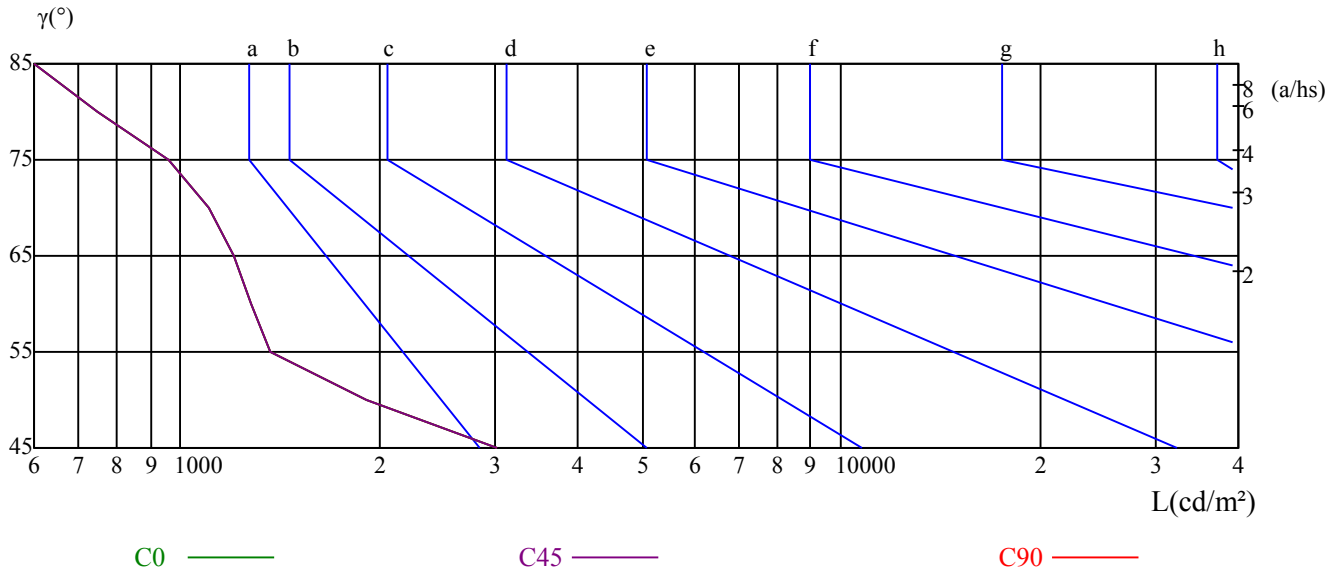
γ	45	50	55	60	65	70	75	80	85
C0	3008	1918	1372	1275	1207	1102	959	748	486
C45	3008	1918	1372	1275	1207	1102	959	748	486
C90	3008	1918	1372	1275	1207	1102	959	748	486

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
3755	3755	3755	4481	4481	4481	5953	5953	5953

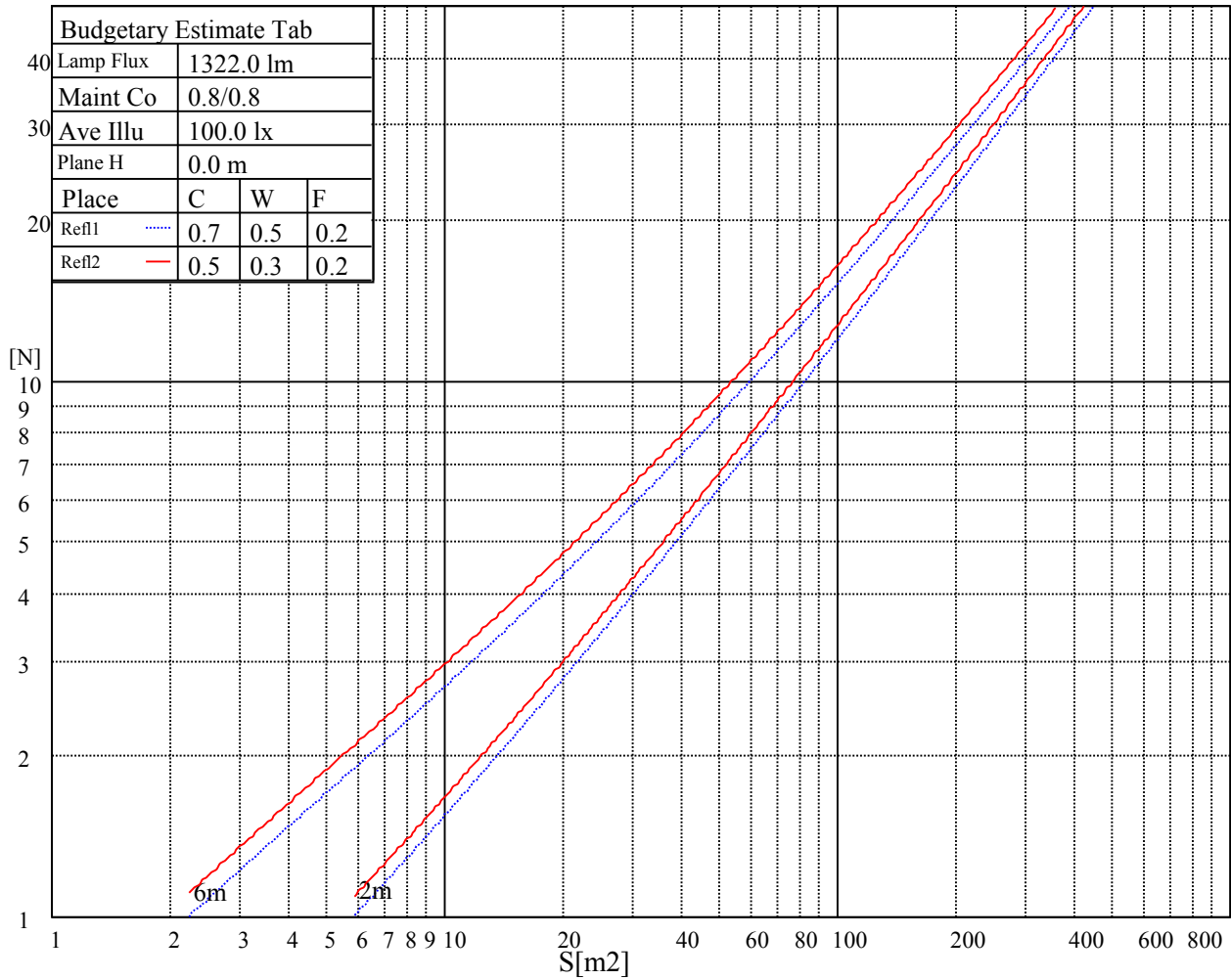
Glare Table

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

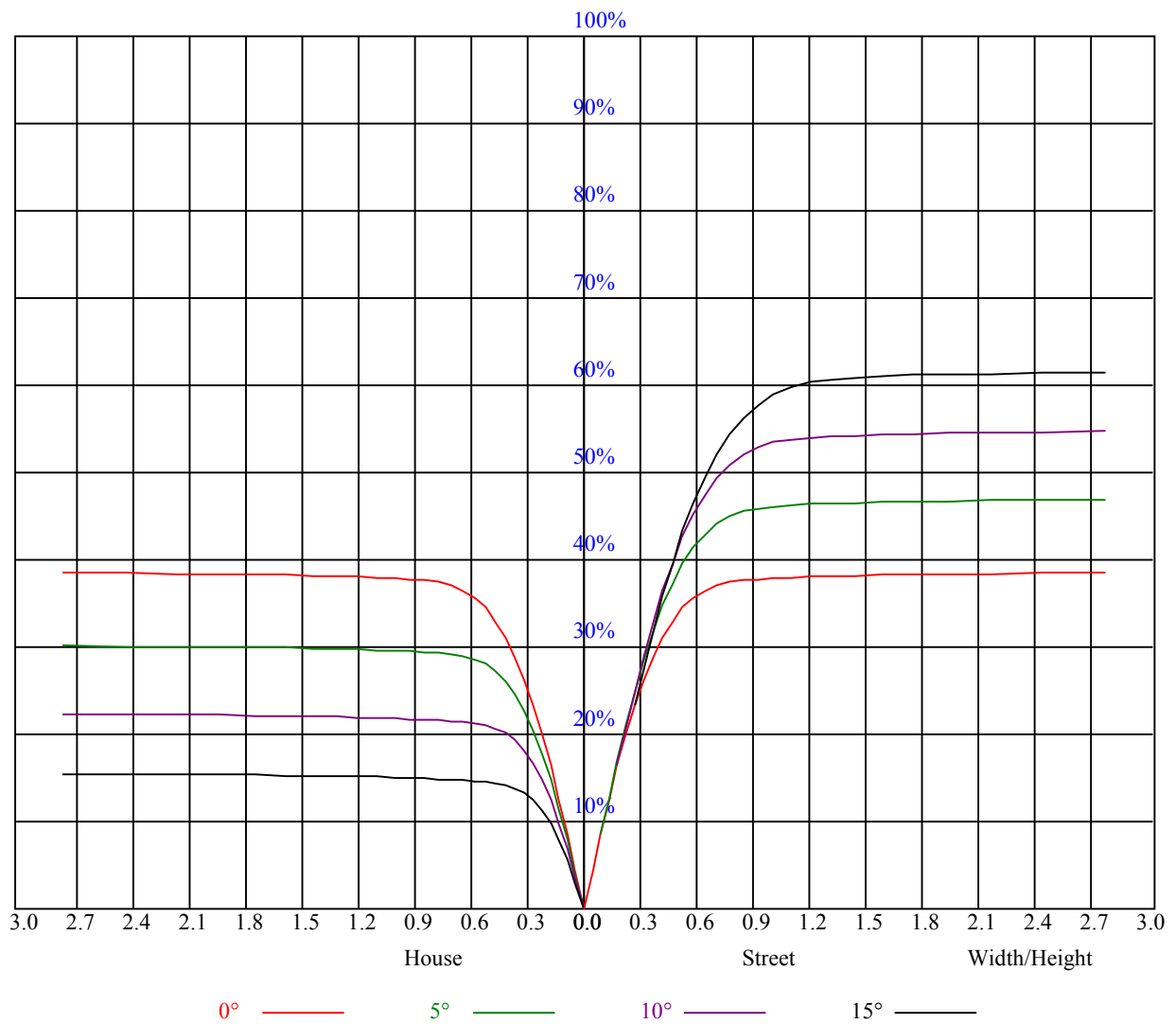
Luminance Limiting Curve



Illuminatin assessment acconding 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	8.5	9.3	8.8	9.5	9.7	8.5	9.3	8.8	9.5	9.7
	3H	8.5	9.3	8.8	9.5	9.8	8.5	9.3	8.8	9.5	9.8
	4H	8.5	9.1	8.8	9.4	9.7	8.5	9.1	8.8	9.4	9.7
	6H	8.6	9.2	9.0	9.5	9.8	8.6	9.2	9.0	9.5	9.8
	8H	8.7	9.3	9.0	9.6	9.9	8.7	9.3	9.0	9.6	9.9
	12H	8.5	8.9	8.9	9.3	9.7	8.5	8.9	8.9	9.3	9.7
4H	2H	8.2	8.8	8.6	9.1	9.5	8.2	8.8	8.6	9.1	9.5
	3H	8.3	8.8	8.8	9.2	9.6	8.3	8.8	8.8	9.2	9.6
	4H	8.5	9.0	8.9	9.4	9.8	8.5	9.0	8.9	9.4	9.8
	6H	8.7	9.2	9.1	9.6	9.9	8.7	9.2	9.1	9.6	9.9
	8H	8.6	8.8	9.1	9.3	9.8	8.6	8.8	9.1	9.3	9.8
	12H	8.6	8.9	9.1	9.4	9.9	8.6	8.9	9.1	9.4	9.9
8H	4H	8.4	8.7	8.9	9.2	9.7	8.4	8.7	8.9	9.2	9.7
	6H	8.7	8.9	9.2	9.4	9.9	8.7	8.9	9.2	9.4	9.9
	8H	8.8	9.1	9.3	9.5	10.0	8.8	9.1	9.3	9.5	10.0
	12H	8.9	9.1	9.4	9.6	10.1	8.9	9.1	9.4	9.6	10.1
12H	4H	8.4	8.7	8.9	9.2	9.7	8.4	8.7	8.9	9.2	9.7
	6H	8.7	9.0	9.2	9.4	9.9	8.7	9.0	9.2	9.4	9.9
	8H	8.8	9.1	9.3	9.6	10.1	8.8	9.1	9.3	9.6	10.1
Variation with the observer position at spacings:											
S = 1.0H		5.6/-5.5					5.6/-5.5				
S = 1.5H		8.0/-4.9					8.0/-4.9				
S = 2.0H		9.9/-4.6					9.9/-4.6				
Standard tables:		BK1					BK1				
Uncorrected UGR		-4.5					-4.5				



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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.87	0.85	0.83	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.73
2	0.81	0.78	0.75	0.80	0.77	0.75	0.77	0.75	0.73	0.75	0.73	0.71	0.73	0.71	0.70	0.69
3	0.76	0.72	0.69	0.75	0.72	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.69	0.67	0.66	0.65
4	0.72	0.68	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.66	0.64	0.62	0.61
5	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.58	0.57
6	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.54
7	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.58	0.55	0.53	0.57	0.55	0.52	0.51
8	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49
9	0.55	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.48	0.53	0.50	0.47	0.53	0.50	0.47	0.46
10	0.52	0.48	0.45	0.52	0.48	0.45	0.51	0.48	0.45	0.51	0.48	0.45	0.50	0.47	0.45	0.44



Intensity data(cd)									Page: 15 Total:15
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
45.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
90.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
135.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
180.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
225.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
270.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
315.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
360.0	1718.13	1656.41	1494.84	1257.86	981.89	749.74	490.72	184.27	48.77
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
45.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
90.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
135.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
180.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
225.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
270.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
315.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
360.0	25.66	16.29	11.51	10.49	9.65	8.49	7.05	5.20	3.16
C/γ(°)	90.0								
0.0	1.30								
45.0	1.30								
90.0	1.30								
135.0	1.30								
180.0	1.30								
225.0	1.30								
270.0	1.30								
315.0	1.30								
360.0	1.30								