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Nata

Client:

LumCAT: CR01W03060DN

Luminaire: 91.69.0010.00

Report No: GC20200311B007

Test No: GC20200311C007

LampCAT: CREE 3030

Lamp flux(lm): 1644.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 24.3900

Current(A): 0.5020

Power (W): 12.2400

PF: 0.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 1358.56, Efficiency(%): 82.64% , Luminous Efficacy(lm/W): 110.99

Central intensity(cd): 761.798, Maximum intensity(cd): 772.995

Angle of maximum intensity: C=15.0 $\gamma=0.0$

Beam Angle(50%Imax): [C0/180]Total=59.0

[C90/270]Total=104.0

Field angle(10%Imax): [C0/180]Total=145.4

[C90/270]Total=152.4

Maximum s/h(1/2): C0_180=0.86 C90_270=1.24

Maximum s/h(1/4): C0_180=0.92 C90_270=1.34

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.64%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 84.103%

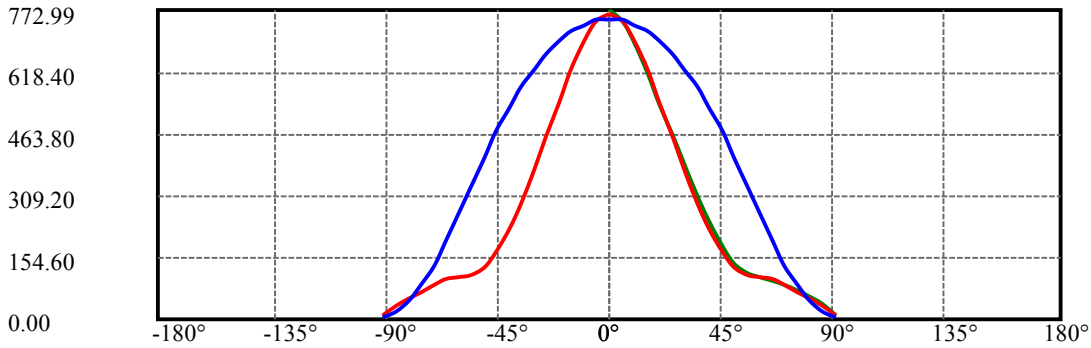
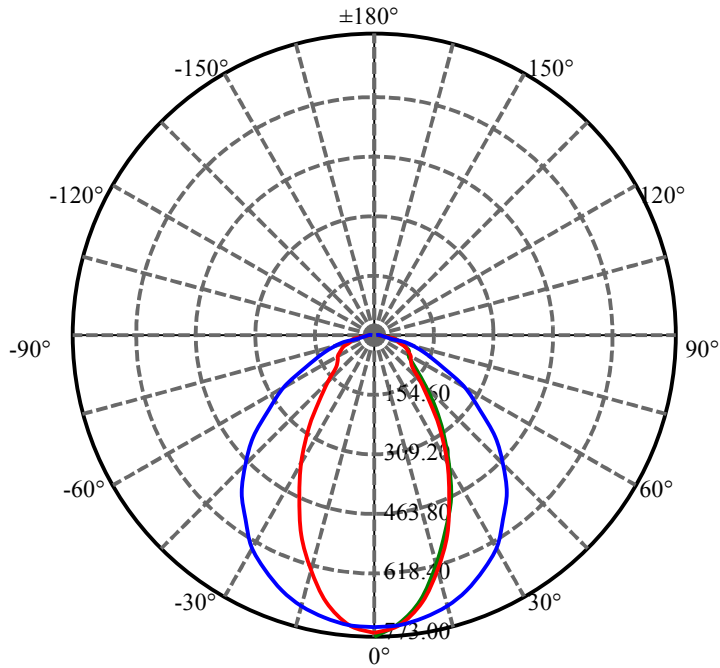
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	758.792	0.000	0	.000%	.000%
5.0	746.868	18.000	18	1.095%	1.325%
10.0	713.169	52.230	70.23	3.177%	5.169%
15.0	661.596	81.550	151.78	4.960%	11.172%
20.0	604.504	104.344	256.124	6.347%	18.853%
25.0	541.480	120.193	376.317	7.311%	27.700%
30.0	479.155	129.162	505.479	7.857%	37.207%
35.0	410.280	130.975	636.455	7.967%	46.848%
40.0	346.628	126.284	762.739	7.682%	56.143%
45.0	282.113	116.416	879.155	7.081%	64.712%
50.0	225.602	102.591	981.747	6.240%	72.264%
55.0	176.598	87.452	1069.198	5.319%	78.701%
60.0	140.911	73.391	1142.59	4.464%	84.103%
65.0	111.390	61.335	1203.925	3.731%	88.618%
70.0	87.692	50.409	1254.334	3.066%	92.328%
75.0	67.028	40.441	1294.775	2.460%	95.305%
80.0	49.721	31.239	1326.014	1.900%	97.605%
85.0	31.120	21.967	1347.98	1.336%	99.221%
90.0	7.507	10.576	1358.557	.643%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	505.48	30.75%	37.21%
0-40	762.74	46.40%	56.14%
0-60	1142.59	69.50%	84.10%
0-90	1347.98	81.99%	99.22%
0-120	1347.98	81.99%	99.22%
0-180	1358.56	82.64%	100.00%
60-90	278.78	16.96%	20.52%
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%
0-56.20	1086.85	66.11%	80.00%

ZONAL LUMEN SUMMARY

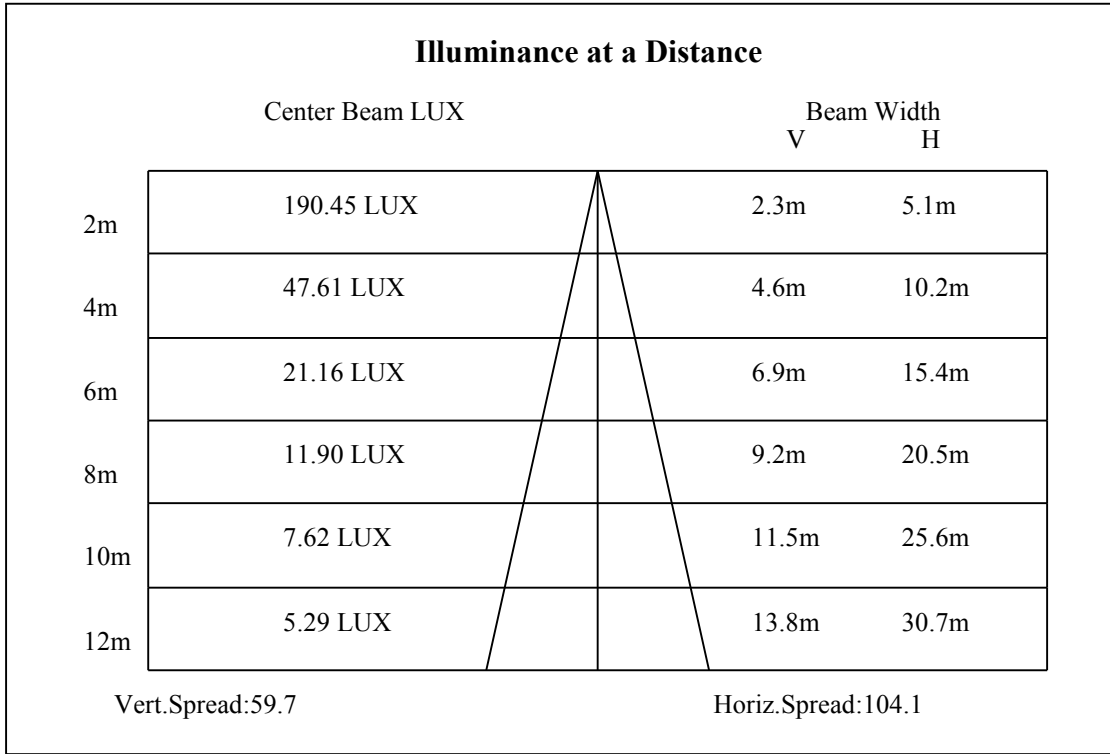
0-10	70.23
10-20	185.89
20-30	249.35
30-40	257.26
40-50	219.01
50-60	160.84
60-70	111.74
70-80	71.68
80-90	21.97
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

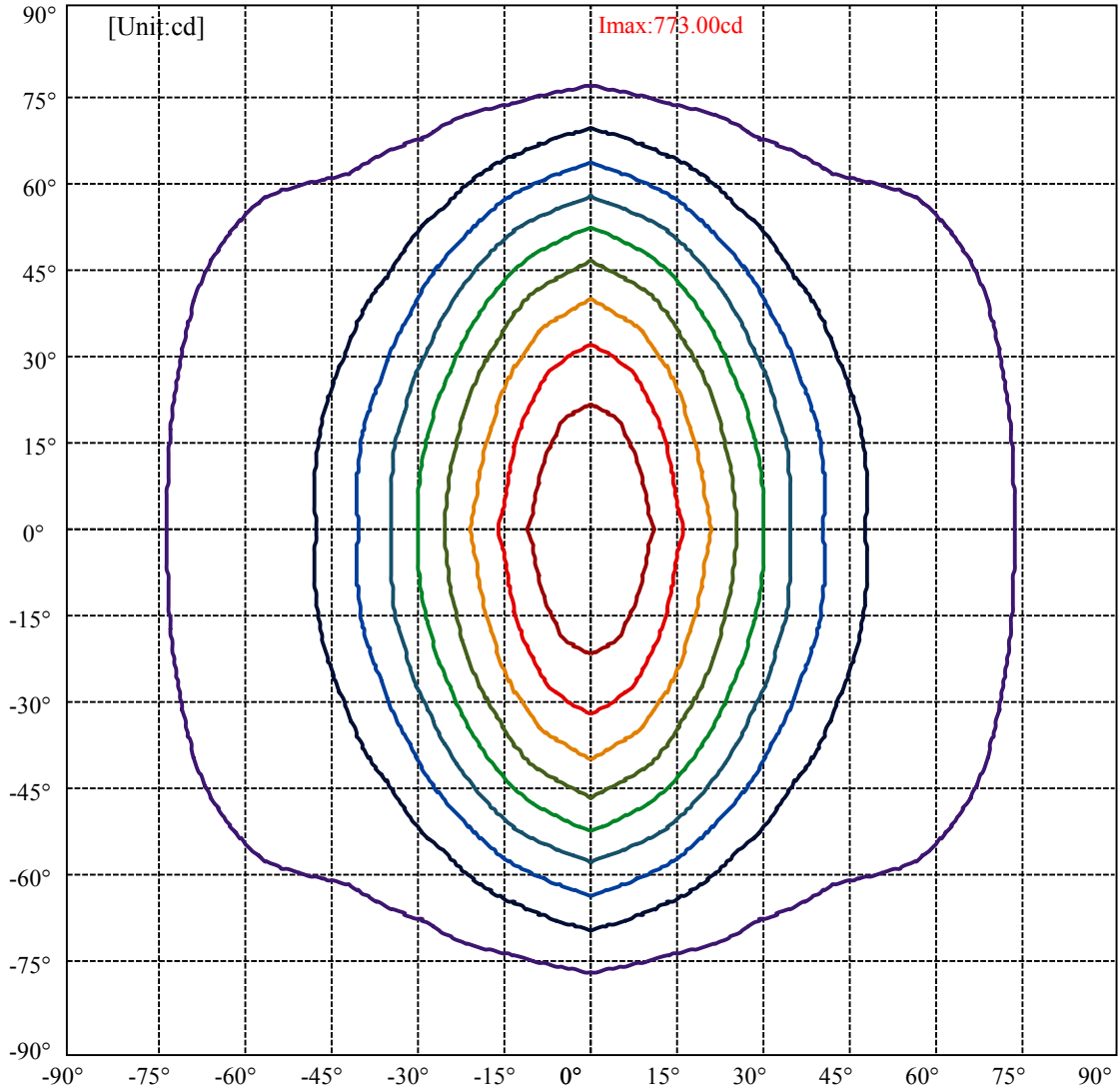


C15(Max): ———
 C0/C180: ———
 C90/C270: ———

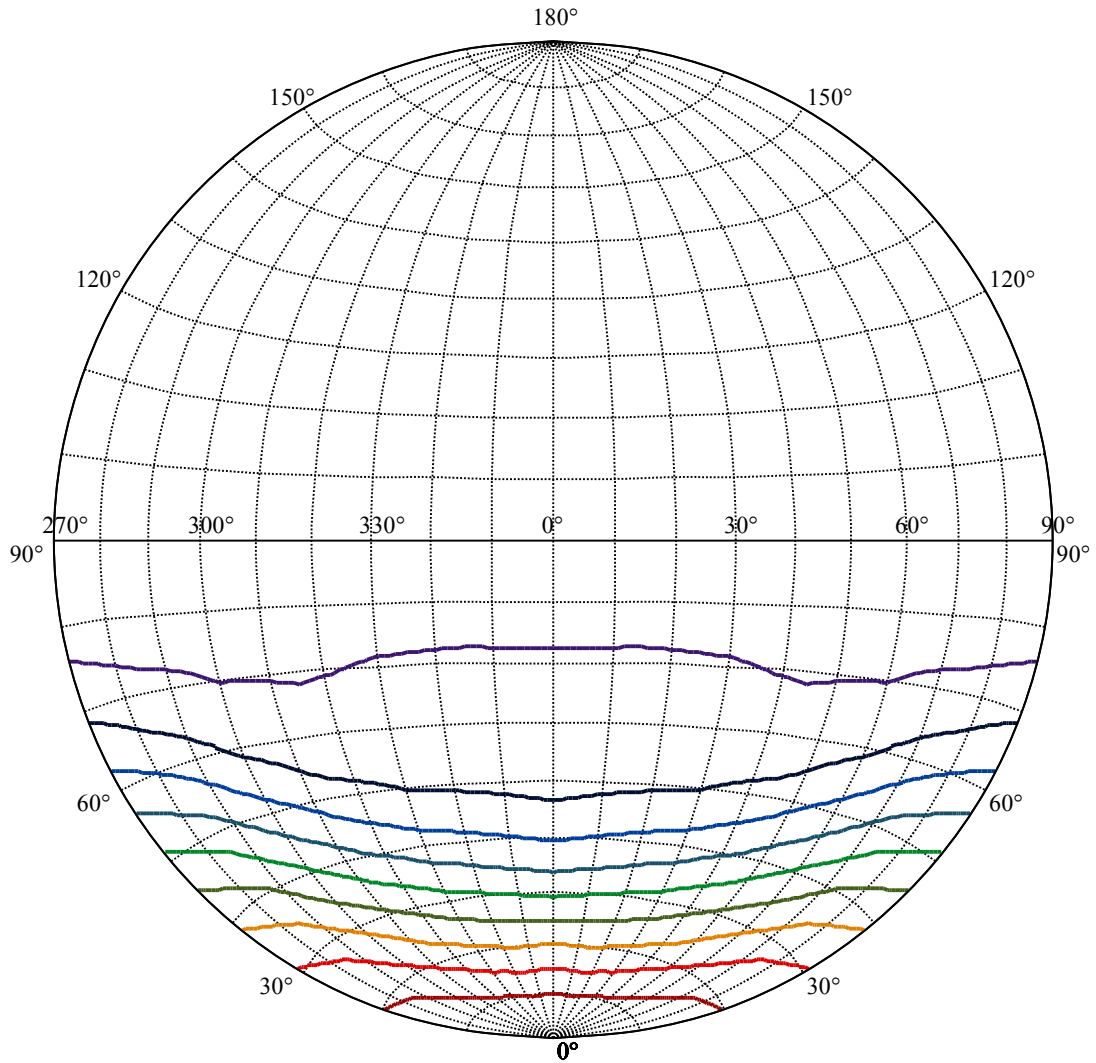
Field angle(10%Imax):C0/180Left:72.7 Right:72.7
 :C90/270Left:76.2 Right:76.2

Beam Angle(50%Imax):C0/180Left:29.5 Right:29.5
 :C90/270Left:52.0 Right:52.0





(10%Imax) 76.1988	—
(20%Imax) 152.398	—
(30%Imax) 228.596	—
(40%Imax) 304.795	—
(50%Imax) 380.994	—
(60%Imax) 457.193	—
(70%Imax) 533.391	—
(80%Imax) 609.59	—
(90%Imax) 685.789	—



House

[Unit:cd]

Road

Imax:773.00

(10%Imax) 77.2995

(20%Imax) 154.599

(30%Imax) 231.898

(40%Imax) 309.198

(50%Imax) 386.497

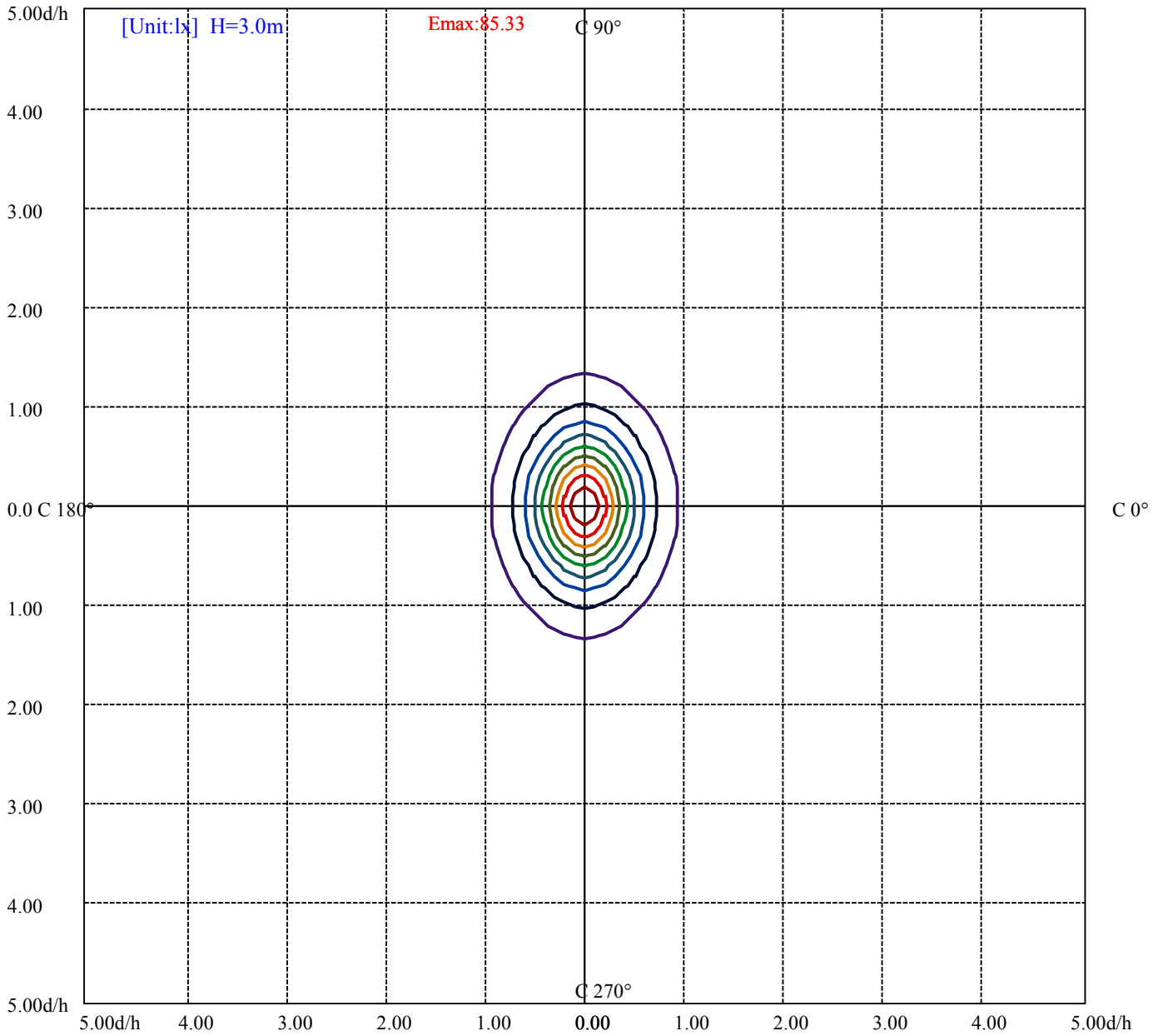
(60%Imax) 463.797

(70%Imax) 541.096

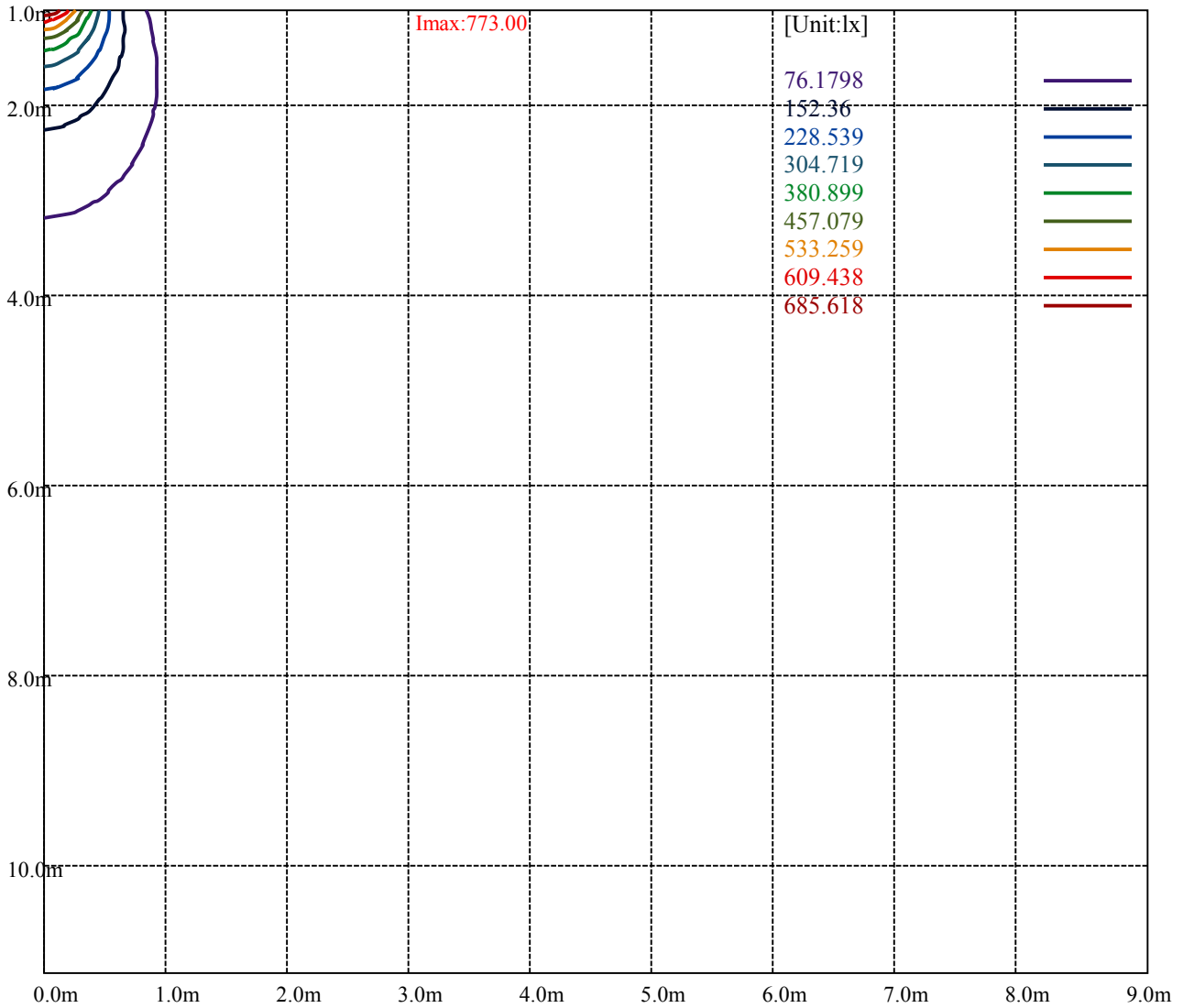
(80%Imax) 618.396

(90%Imax) 695.695





- (10%Emax) 8.533155
- (20%Emax) 17.06633
- (30%Emax) 25.59945
- (40%Emax) 34.13267
- (50%Emax) 42.66578
- (60%Emax) 51.19889
- (70%Emax) 59.73211
- (80%Emax) 68.26523
- (90%Emax) 76.79844



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

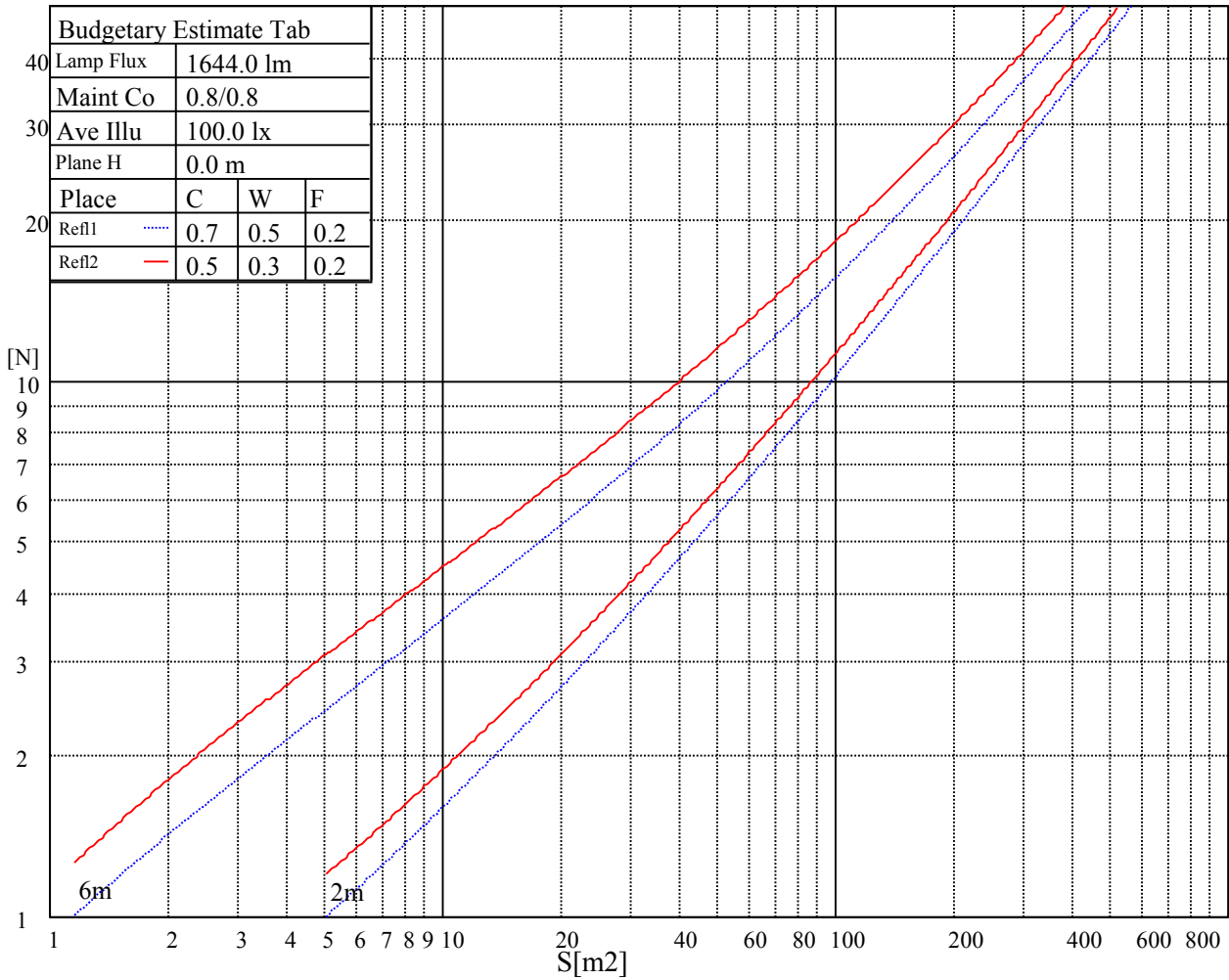
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

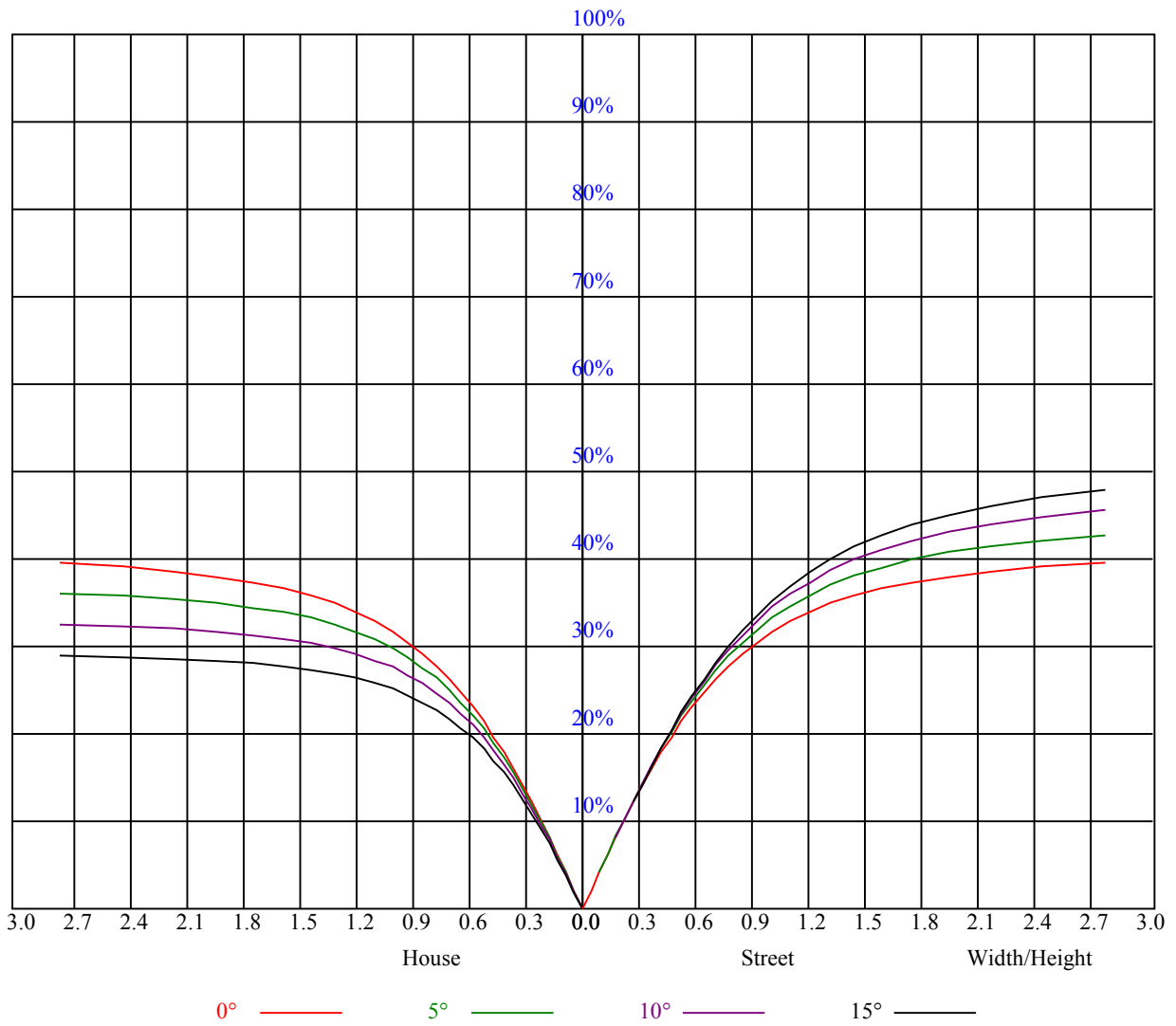
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

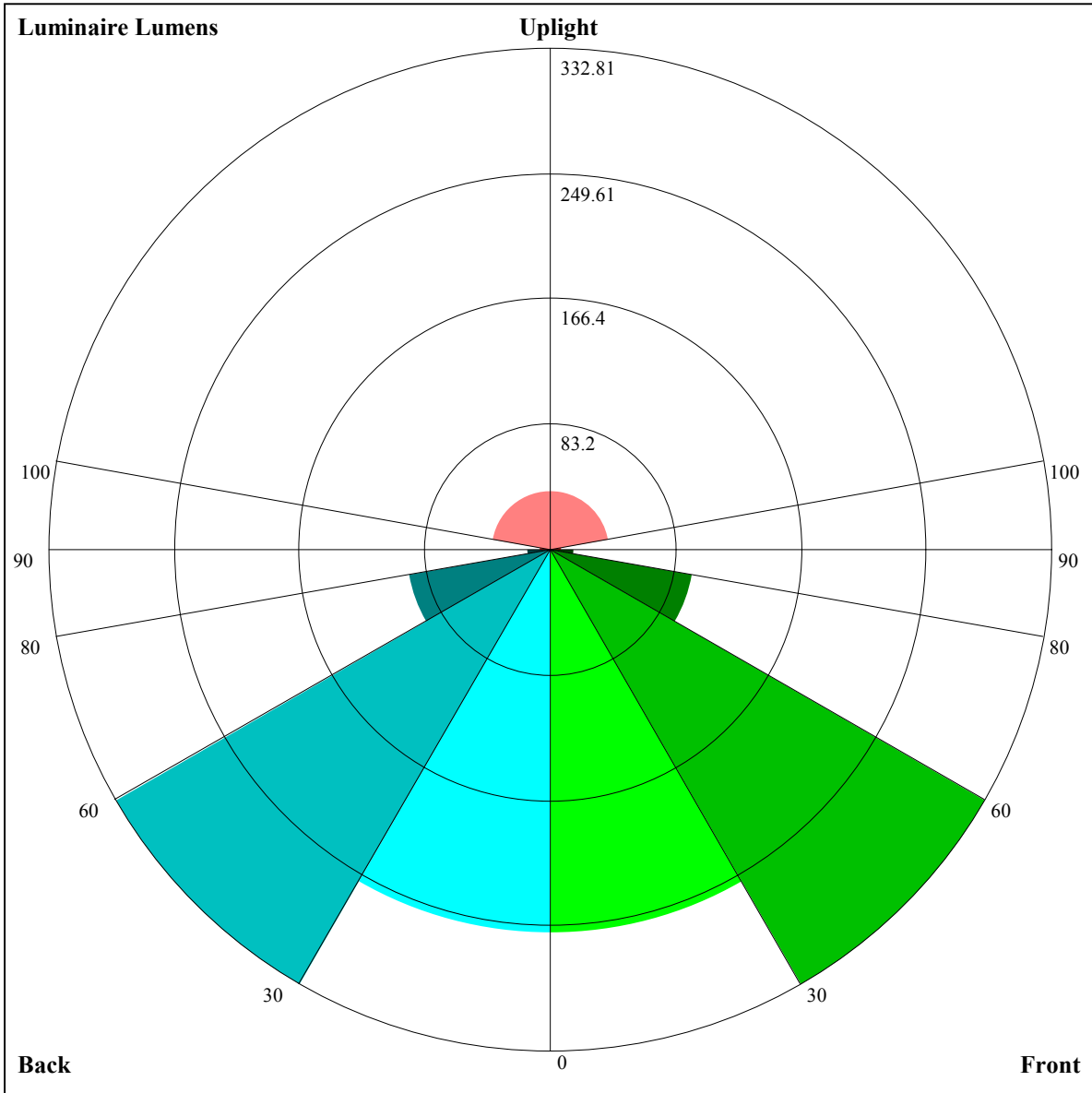
Luminance Limiting Curve





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	0.98	0.98	0.98	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.83
1	0.87	0.84	0.81	0.85	0.82	0.79	0.82	0.79	0.77	0.78	0.76	0.75	0.75	0.74	0.72	0.71
2	0.77	0.72	0.68	0.76	0.71	0.67	0.73	0.69	0.65	0.70	0.67	0.64	0.68	0.65	0.62	0.61
3	0.69	0.63	0.58	0.68	0.62	0.57	0.65	0.60	0.56	0.63	0.59	0.55	0.61	0.57	0.54	0.53
4	0.62	0.55	0.50	0.61	0.55	0.50	0.59	0.53	0.49	0.57	0.52	0.49	0.55	0.51	0.48	0.46
5	0.56	0.49	0.44	0.55	0.49	0.44	0.54	0.48	0.44	0.52	0.47	0.43	0.50	0.46	0.43	0.41
6	0.51	0.44	0.39	0.50	0.44	0.39	0.49	0.43	0.39	0.48	0.43	0.39	0.46	0.42	0.38	0.37
7	0.47	0.40	0.35	0.46	0.40	0.35	0.45	0.39	0.35	0.44	0.39	0.35	0.43	0.38	0.35	0.33
8	0.43	0.37	0.32	0.43	0.36	0.32	0.42	0.36	0.32	0.41	0.35	0.32	0.40	0.35	0.32	0.30
9	0.40	0.34	0.29	0.40	0.33	0.29	0.39	0.33	0.29	0.38	0.33	0.29	0.37	0.32	0.29	0.27
10	0.37	0.31	0.27	0.37	0.31	0.27	0.36	0.31	0.27	0.35	0.30	0.27	0.35	0.30	0.27	0.25





Luminaire Lumens:

FL=255.02,FM=332.81,FH=95.72,FVH=15.9

BL=255.02,BM=332.81,BH=95.72,BVH=15.9

UL=8.19,UH=38.98

BUG Rating:B1-U2-G1

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	761.80	743.96	696.25	622.31	543.31	456.66	372.66	290.00	225.24
15.0	772.99	743.06	690.51	613.93	536.39	461.11	387.79	309.52	244.99
30.0	767.87	747.45	700.41	629.06	557.77	484.18	413.34	337.88	268.51
45.0	767.99	746.77	712.11	658.72	593.95	522.27	460.15	388.13	317.68
60.0	755.95	748.86	724.21	686.01	638.63	581.91	523.28	455.59	394.37
75.0	755.21	749.59	735.24	711.10	681.39	639.36	590.97	536.11	478.21
90.0	750.60	747.00	736.82	719.20	694.45	663.44	626.14	578.87	526.77
105.0	752.40	749.59	735.24	711.10	681.39	639.36	590.97	536.11	478.21
120.0	753.58	748.86	724.21	686.01	638.63	581.91	523.28	455.59	394.37
135.0	752.85	746.77	712.11	658.72	593.95	522.27	460.15	388.13	317.68
150.0	758.65	747.45	700.41	629.06	557.77	484.18	413.34	337.88	268.51
165.0	755.61	743.06	690.51	613.93	536.39	461.11	387.79	309.52	244.99
180.0	761.80	743.96	696.25	622.31	543.31	456.66	372.66	290.00	225.24
195.0	772.99	743.06	690.51	613.93	536.39	461.11	387.79	309.52	244.99
210.0	767.87	747.45	700.41	629.06	557.77	484.18	413.34	337.88	268.51
225.0	767.99	746.77	712.11	658.72	593.95	522.27	460.15	388.13	317.68
240.0	755.95	748.86	724.21	686.01	638.63	581.91	523.28	455.59	394.37
255.0	755.21	749.59	735.24	711.10	681.39	639.36	590.97	536.11	478.21
270.0	750.60	747.00	736.82	719.20	694.45	663.44	626.14	578.87	526.77
285.0	752.40	749.59	735.24	711.10	681.39	639.36	590.97	536.11	478.21
300.0	753.58	748.86	724.21	686.01	638.63	581.91	523.28	455.59	394.37
315.0	752.85	746.77	712.11	658.72	593.95	522.27	460.15	388.13	317.68
330.0	758.65	747.45	700.41	629.06	557.77	484.18	413.34	337.88	268.51
345.0	755.61	743.06	690.51	613.93	536.39	461.11	387.79	309.52	244.99
360.0	761.80	743.96	696.25	622.31	543.31	456.66	372.66	290.00	225.24
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	167.11	129.13	111.80	106.29	100.32	84.74	68.70	54.75	35.67
15.0	184.61	140.50	114.28	105.11	97.45	85.41	70.56	55.48	37.02
30.0	203.86	153.05	117.20	98.80	88.28	80.80	70.00	57.22	38.94
45.0	249.94	187.65	136.00	104.38	85.92	72.47	61.39	50.70	35.84
60.0	325.11	258.83	193.45	139.60	99.76	76.35	60.09	45.18	27.96
75.0	410.86	346.60	276.61	210.94	148.26	100.49	63.64	39.44	20.59
90.0	469.49	404.84	332.31	266.99	196.99	136.50	84.29	45.86	17.05
105.0	410.86	346.60	276.61	210.94	148.26	100.49	63.64	39.44	20.59
120.0	325.11	258.83	193.45	139.60	99.76	76.35	60.09	45.18	27.96
135.0	249.94	187.65	136.00	104.38	85.92	72.47	61.39	50.70	35.84
150.0	203.86	153.05	117.20	98.80	88.28	80.80	70.00	57.22	38.94
165.0	184.61	140.50	114.28	105.11	97.45	85.41	70.56	55.48	37.02
180.0	167.11	129.13	111.80	106.29	100.32	84.74	68.70	54.75	35.67
195.0	184.61	140.50	114.28	105.11	97.45	85.41	70.56	55.48	37.02
210.0	203.86	153.05	117.20	98.80	88.28	80.80	70.00	57.22	38.94
225.0	249.94	187.65	136.00	104.38	85.92	72.47	61.39	50.70	35.84
240.0	325.11	258.83	193.45	139.60	99.76	76.35	60.09	45.18	27.96
255.0	410.86	346.60	276.61	210.94	148.26	100.49	63.64	39.44	20.59
270.0	469.49	404.84	332.31	266.99	196.99	136.50	84.29	45.86	17.05
285.0	410.86	346.60	276.61	210.94	148.26	100.49	63.64	39.44	20.59
300.0	325.11	258.83	193.45	139.60	99.76	76.35	60.09	45.18	27.96
315.0	249.94	187.65	136.00	104.38	85.92	72.47	61.39	50.70	35.84
330.0	203.86	153.05	117.20	98.80	88.28	80.80	70.00	57.22	38.94
345.0	184.61	140.50	114.28	105.11	97.45	85.41	70.56	55.48	37.02
360.0	167.11	129.13	111.80	106.29	100.32	84.74	68.70	54.75	35.67

Intensity data(cd)

C/γ(°)	90.0
0.0	11.31
15.0	9.00
30.0	8.38
45.0	7.99
60.0	5.85
75.0	5.63
90.0	5.06
105.0	5.63
120.0	5.85
135.0	7.99
150.0	8.38
165.0	9.00
180.0	11.31
195.0	9.00
210.0	8.38
225.0	7.99
240.0	5.85
255.0	5.63
270.0	5.06
285.0	5.63
300.0	5.85
315.0	7.99
330.0	8.38
345.0	9.00
360.0	11.31