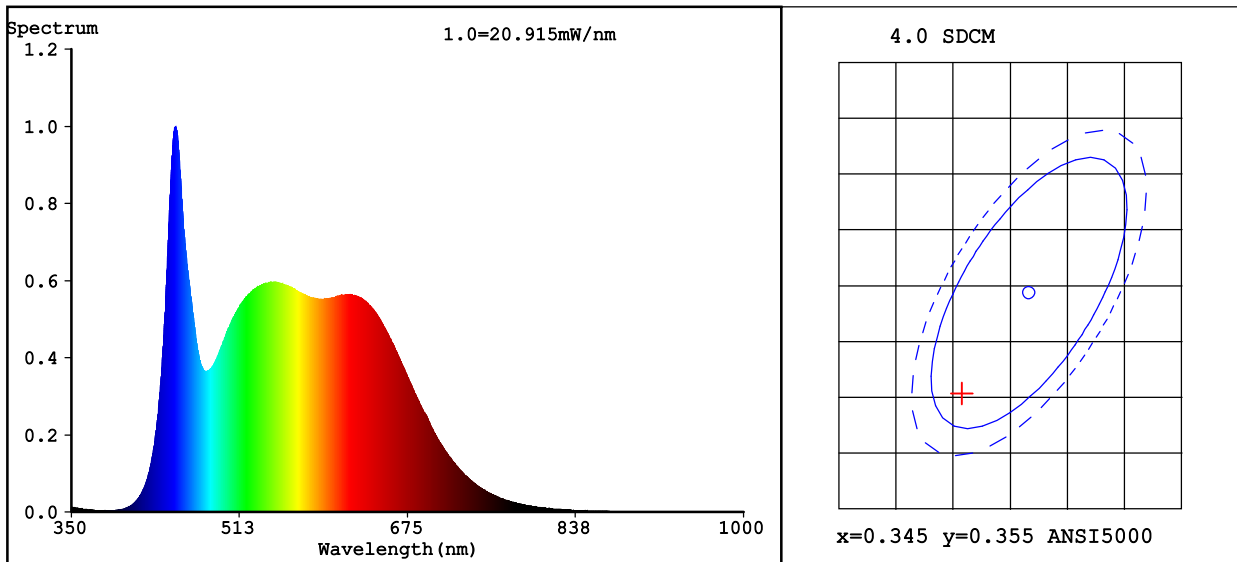


**Spectrum Test Report**



**Color Parameters:**

Chromaticity Coordinate:  $x=0.3388$   $y=0.3463$   $u'=0.2092$   $v'=0.4811$   
 CCT=5233K (Duv=-0.0001) Dominant WL:Ld =568.3nm Purity=5.6%  
 Ratio:R=17.2% G=77.3% B=5.5% Peak WL:Lp=450.7nm FWHM=28.0nm  
 Render Index:Ra=95.4  
 R1 =97 R2 =96 R3 =93 R4 =96 R5 =96 R6 =93 R7 =97  
 R8 =95 R9 =86 R10=90 R11=95 R12=76 R13=97 R14=96 R15=97

**Photo Parameters:**

Flux = 848.8 lm Eff. : 99.50 lm/W Fe = 3.089 W

**Electrical parameters:**

V = 119.99 V I = 0.09472 A P = 8.530 W PF = 0.7501

Status: Integral T = 987 ms Ip = 47600 (73%)

Model:A19-9-E26-950-F-F	Number:5
Tester:XCJ	Date:2018-09-29
Temperature:25.1Deg	Humidity:65.0%
Manufacturer:RAB Lighting Inc.	Remarks:

---

RAB Lighting Inc

---

Client:

LumCAT: A19-9-E26-950-F-F

Luminaire:

Report No:

Voltage(V): 120.1000

Test No: 258515-01-002

Current(A): 0.0870

LampCAT:

Power (W): 8.1150

Lamp flux(lm)

PF: 0.7804

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

---

Photometric Results

---

Lumens(lm): 883.65

Lumens(lm)/Power(W): 108.89

Central intensity(cd): 67.222

Maximum intensity(cd): 100.680

Angle of maximum intensity: C=22.5  $\gamma$ =90.0

Beam Angle(50%Imax): [C0/180]Total=272.1

[C90/270]Total=275.0

Field angle(10%Imax): [C0/180]Total=307.0

[C90/270]Total=308.3

Maximum s/h(1/2): C0\_180=1.87 C90\_270=2.02

Maximum s/h(1/4): C0\_180=2.06 C90\_270=2.14

Up flux rate of LUM(%): 38.77%

Down flux rate of LUM(%): 58.49%

CIE Type : General diffuse lighting

Output flux ratio in  $\pi$  solid angle : 29.219%

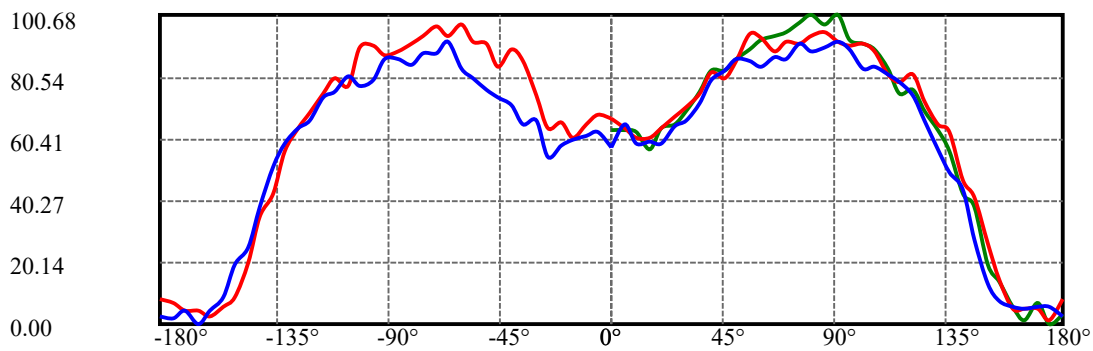
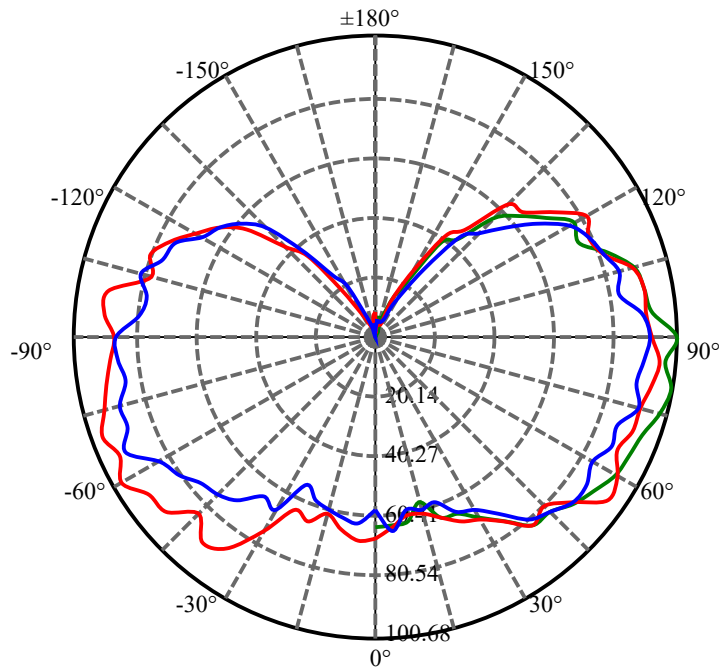
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	62.464	0.374	0.374	.042%	.042%
5.0	63.654	3.041	3.415	.344%	.386%
10.0	63.193	6.015	9.429	.681%	1.067%
15.0	60.738	8.617	18.046	.975%	2.042%
20.0	61.889	11.603	29.649	1.313%	3.355%
25.0	62.829	14.554	44.203	1.647%	5.002%
30.0	69.697	19.102	63.305	2.162%	7.164%
35.0	73.265	23.034	86.34	2.607%	9.771%
40.0	76.757	27.044	113.384	3.060%	12.831%
45.0	78.905	30.583	143.967	3.461%	16.292%
50.0	82.320	34.566	178.533	3.912%	20.204%
55.0	84.757	38.056	216.589	4.307%	24.511%
60.0	87.366	41.473	258.062	4.693%	29.204%
65.0	88.248	43.840	301.902	4.961%	34.165%
70.0	90.454	46.591	348.493	5.273%	39.438%
75.0	89.994	47.648	396.142	5.392%	44.830%
80.0	89.534	48.331	444.473	5.469%	50.299%
85.0	88.248	48.188	492.661	5.453%	55.753%
90.0	87.807	48.130	540.791	5.447%	61.199%
95.0	84.450	46.114	586.905	5.219%	66.418%
100.0	82.455	44.510	631.415	5.037%	71.455%
105.0	79.212	41.940	673.355	4.746%	76.201%
110.0	75.740	39.012	712.367	4.415%	80.616%
115.0	71.289	35.415	747.782	4.008%	84.624%
120.0	69.083	32.794	780.576	3.711%	88.335%
125.0	63.462	28.495	809.071	3.225%	91.560%
130.0	56.728	23.820	832.891	2.696%	94.255%
135.0	49.707	19.266	852.157	2.180%	96.436%
140.0	39.481	13.911	866.067	1.574%	98.010%
145.0	27.932	8.782	874.849	.994%	99.004%
150.0	15.616	4.280	879.129	.484%	99.488%
155.0	9.861	2.284	881.413	.259%	99.747%
160.0	5.506	1.032	882.446	.117%	99.863%
165.0	4.432	0.629	883.074	.071%	99.935%
170.0	4.355	0.415	883.489	.047%	99.981%
175.0	2.916	0.139	883.628	.016%	99.997%
180.0	4.105	0.025	883.653	.003%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	63.31	7.16%
0-40	113.38	12.83%
0-60	258.06	29.20%
0-90	540.79	61.20%
0-120	780.58	88.34%
0-180	883.65	100.00%
60-90	324.20	36.69%
90-120	287.91	32.58%
90-130	340.23	38.50%
90-150	386.47	43.74%
90-180	390.97	44.24%
0-109.30	706.92	80.00%

## ZONAL LUMEN SUMMARY

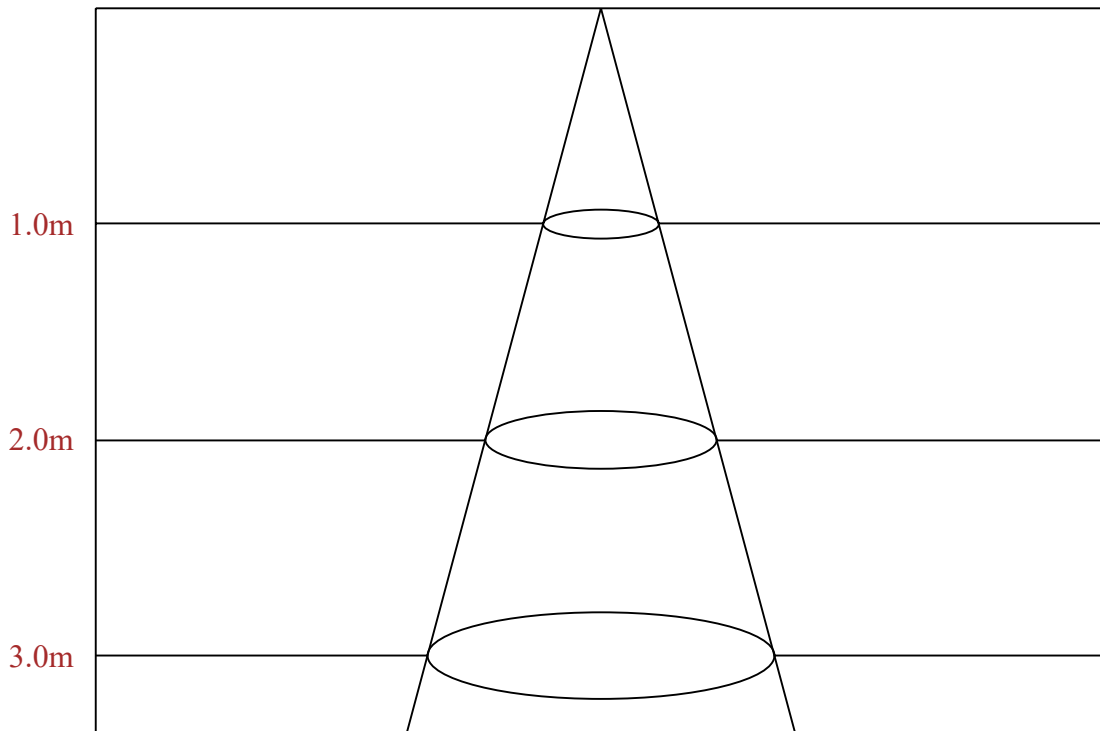
0-10	9.43
10-20	20.22
20-30	33.66
30-40	50.08
40-50	65.15
50-60	79.53
60-70	90.43
70-80	95.98
80-90	96.32
90-100	90.62
100-110	80.95
110-120	68.21
120-130	52.31
130-140	33.18
140-150	13.06
150-160	3.32
160-170	1.04
170-180	0.14



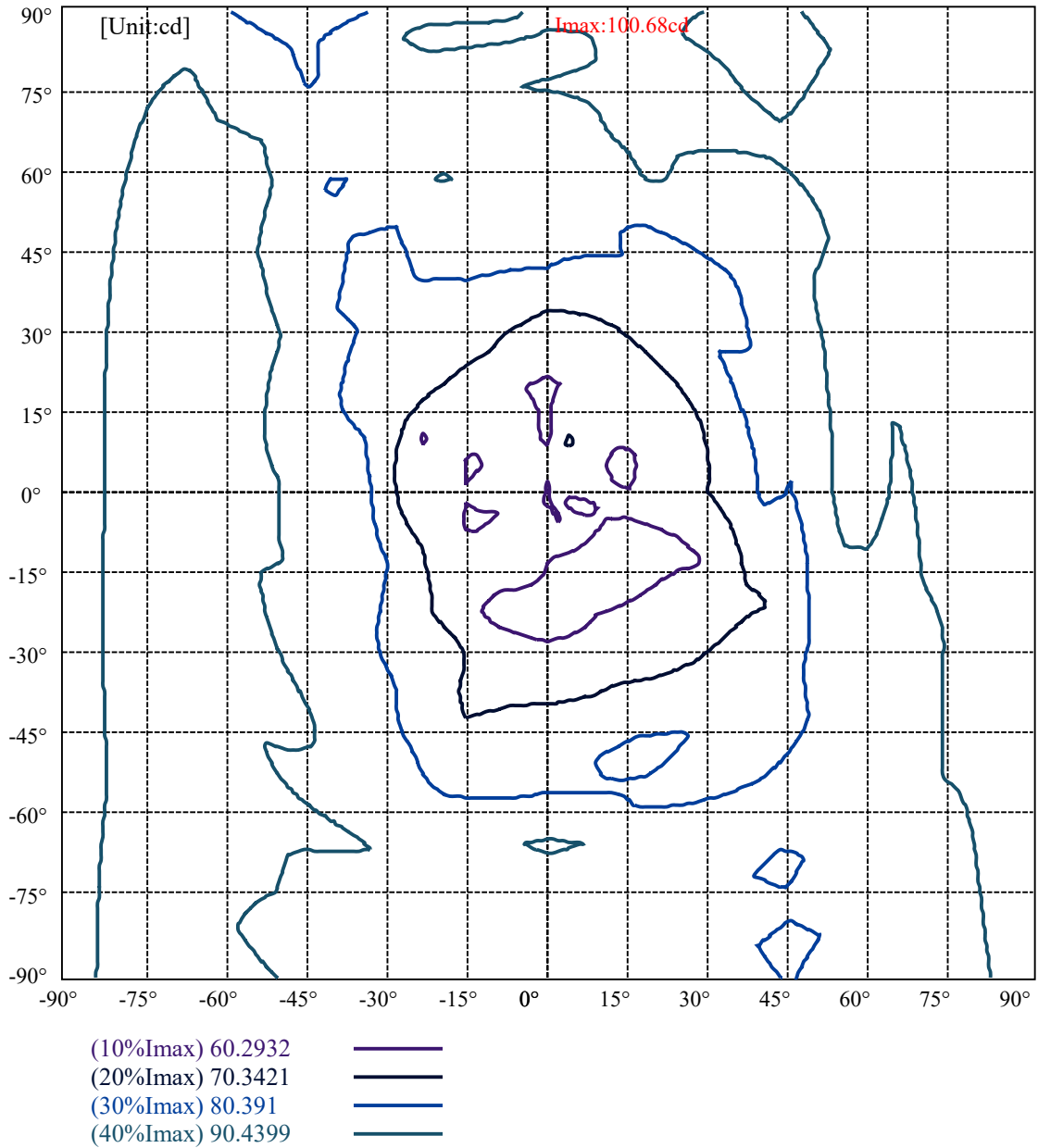
C22.5(Max): —  
 C0/C180: —  
 C90/C270: —

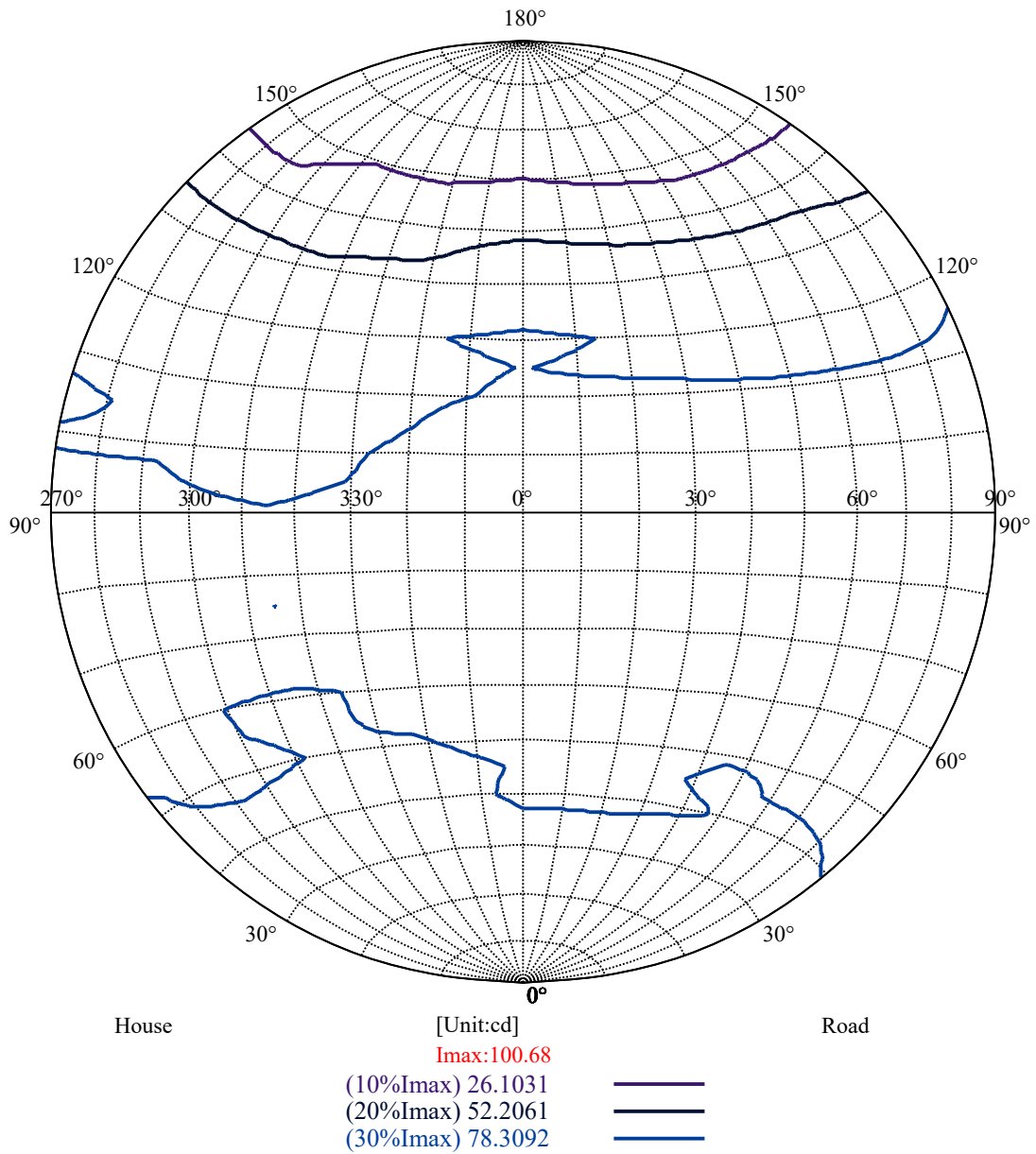
Field angle(10%Imax):C0/180Left:89.6 Right:217.4  
 :C90/270Left:244.9 Right:63.4

Beam Angle(50%Imax):C0/180Left:72.7 Right:199.4  
 :C90/270Left:227.1 Right:47.9

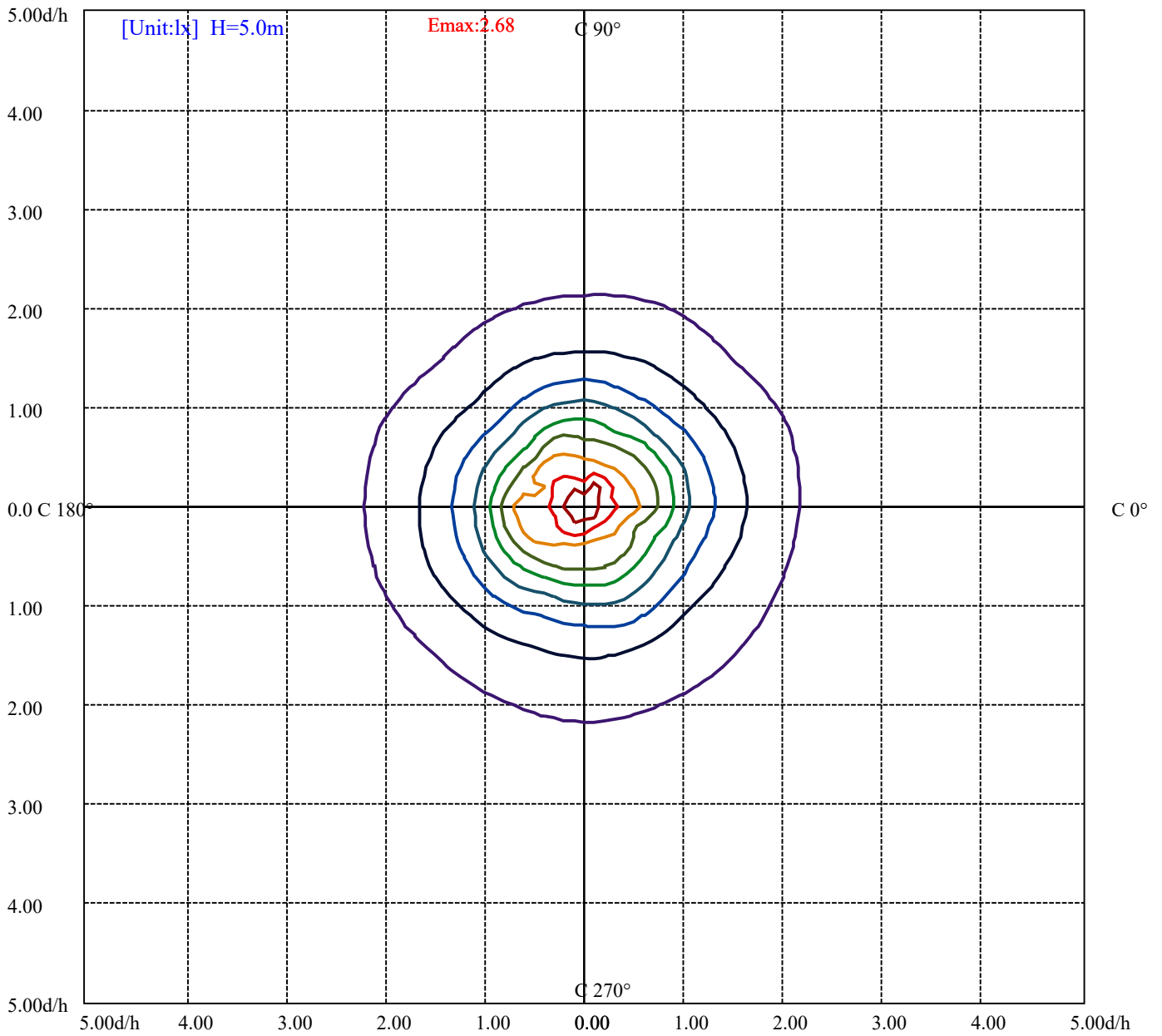


Max , Ave      Beam angle of C22.5 plane 284.98

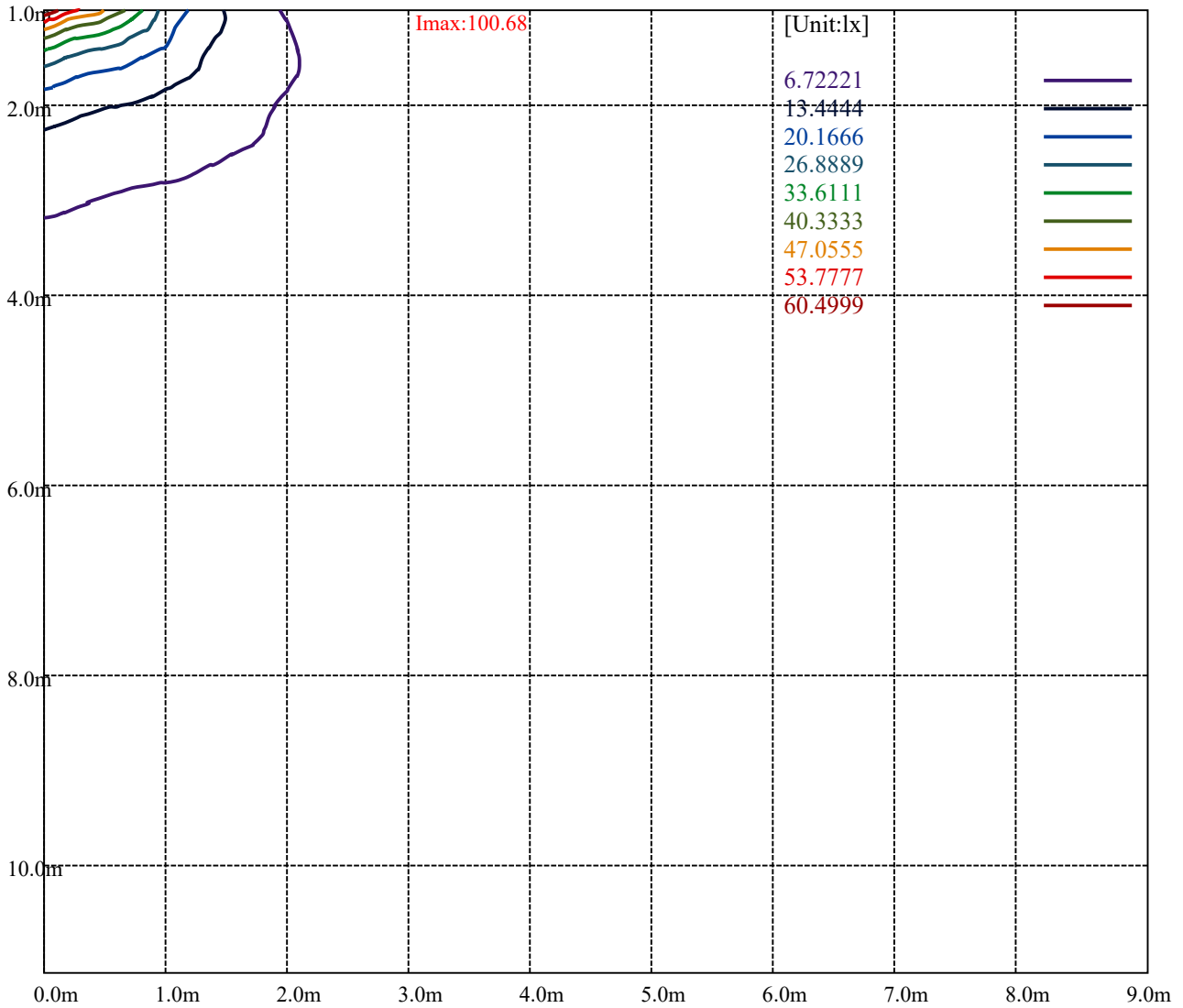








- (10%Emax) 0.2678504
- (20%Emax) 0.5357
- (30%Emax) 0.803552
- (40%Emax) 1.071404
- (50%Emax) 1.339252
- (60%Emax) 1.607104
- (70%Emax) 1.874952
- (80%Emax) 2.142804
- (90%Emax) 2.410656



Luminance Table

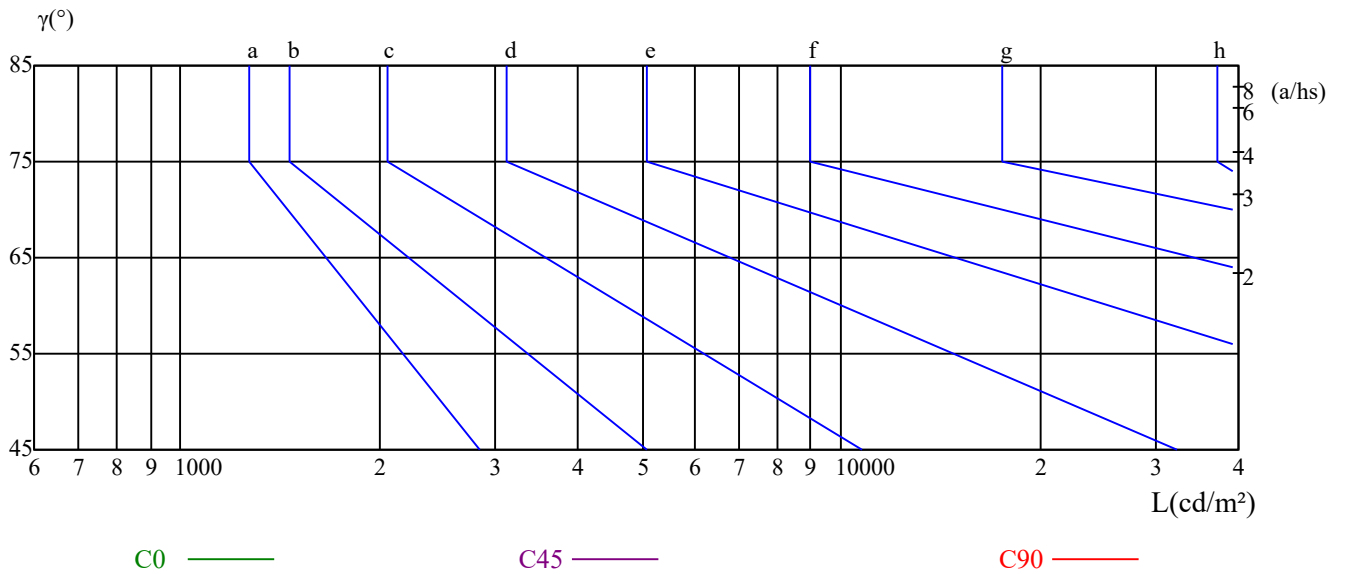
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

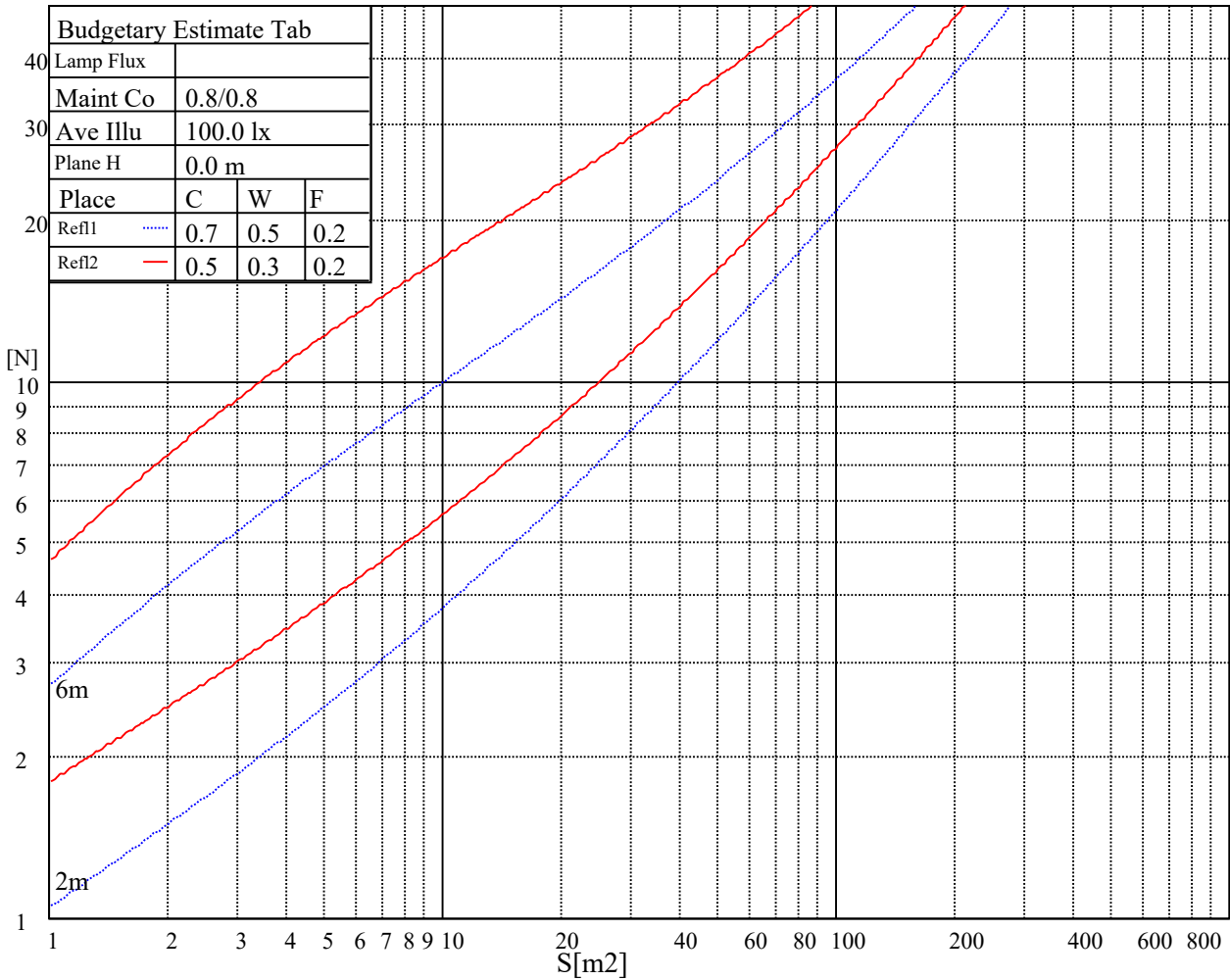
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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 RHOF=20 CU															
0	1.09	1.09	1.09	1.02	1.02	1.02	0.88	0.88	0.88	0.75	0.75	0.75	0.64	0.64	0.64	0.58
1	0.89	0.84	0.78	0.83	0.78	0.73	0.71	0.67	0.63	0.60	0.57	0.54	0.50	0.47	0.45	0.40
2	0.75	0.67	0.60	0.69	0.62	0.56	0.59	0.53	0.48	0.49	0.45	0.41	0.41	0.37	0.34	0.30
3	0.64	0.55	0.48	0.59	0.51	0.44	0.50	0.44	0.38	0.42	0.37	0.33	0.34	0.30	0.27	0.23
4	0.56	0.46	0.39	0.52	0.43	0.36	0.44	0.37	0.31	0.37	0.31	0.27	0.30	0.25	0.22	0.18
5	0.49	0.39	0.32	0.45	0.37	0.30	0.39	0.32	0.26	0.32	0.27	0.22	0.26	0.22	0.18	0.15
6	0.44	0.34	0.28	0.40	0.32	0.26	0.34	0.27	0.22	0.29	0.23	0.19	0.24	0.19	0.15	0.12
7	0.39	0.30	0.24	0.36	0.28	0.22	0.31	0.24	0.19	0.26	0.20	0.16	0.21	0.17	0.13	0.11
8	0.35	0.27	0.21	0.33	0.25	0.19	0.28	0.21	0.17	0.24	0.18	0.14	0.19	0.15	0.12	0.09
9	0.32	0.24	0.18	0.30	0.22	0.17	0.26	0.19	0.15	0.22	0.16	0.13	0.18	0.14	0.10	0.08
10	0.29	0.21	0.16	0.27	0.20	0.15	0.23	0.17	0.13	0.20	0.15	0.11	0.16	0.12	0.09	0.07

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	67.22	63.85	60.78	60.78	63.85	67.84	70.60	75.20	81.96
22.5	63.23	62.92	62.31	56.79	63.85	65.07	69.37	75.51	82.26
45.0	61.70	68.76	62.62	64.77	62.92	63.23	69.68	73.98	79.19
67.5	59.86	64.15	72.44	67.22	63.54	61.70	69.06	71.21	70.60
90.0	57.71	64.77	58.63	59.55	58.93	64.15	66.30	71.83	79.50
112.5	60.78	61.39	63.85	62.00	61.39	68.45	71.52	79.19	78.89
135.0	65.07	68.14	65.07	66.30	67.84	65.07	76.12	72.44	73.67
157.5	64.15	63.54	63.23	58.32	66.61	59.24	72.44	77.35	77.97
180.0	67.22	68.45	65.07	60.78	65.69	63.85	74.59	85.95	89.63
202.5	63.23	68.45	59.86	58.93	62.62	69.98	79.19	82.26	85.33
225.0	61.70	61.70	65.07	63.85	62.92	65.99	69.68	74.90	76.74
247.5	59.86	61.08	63.54	63.54	59.86	57.09	69.37	69.06	69.06
270.0	57.71	62.62	61.08	59.86	58.01	54.33	66.30	64.77	71.52
292.5	60.78	59.24	64.77	52.80	55.25	61.08	65.99	68.76	72.13
315.0	65.07	62.92	62.31	56.17	57.71	59.86	65.38	65.07	69.98
337.5	64.15	56.48	60.47	60.16	59.24	58.32	59.55	64.77	69.68
360.0	67.22	63.85	60.78	60.78	63.85	67.84	70.60	75.20	81.96
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	80.11	85.95	94.54	93.01	89.02	91.78	91.47	93.62	95.15
22.5	82.57	86.56	89.32	92.70	93.62	94.85	98.22	100.37	97.30
45.0	76.12	79.19	87.48	84.72	83.49	91.78	90.24	88.09	86.87
67.5	80.11	78.89	83.18	91.16	92.09	95.46	92.70	93.01	90.86
90.0	82.57	86.25	85.95	83.80	87.17	86.25	91.16	88.71	90.24
112.5	83.80	85.03	81.96	91.47	85.33	89.63	87.79	88.09	93.62
135.0	77.97	76.74	79.19	82.26	79.50	83.18	83.80	79.81	78.89
157.5	83.80	84.72	90.55	91.47	93.31	98.53	98.22	93.31	91.16
180.0	83.49	91.16	92.09	97.61	93.93	97.00	93.62	91.47	88.71
202.5	85.64	89.63	88.71	100.07	92.39	92.70	99.76	93.93	94.23
225.0	82.26	83.80	89.32	85.95	85.33	94.23	87.48	89.02	85.33
247.5	70.60	74.59	76.74	82.57	85.64	85.64	83.49	89.02	85.03
270.0	73.98	76.12	80.11	83.18	91.78	88.09	88.40	84.72	86.56
292.5	76.43	84.41	80.11	79.81	87.79	88.40	86.87	89.32	84.41
315.0	72.75	77.35	75.51	74.59	86.87	82.88	78.27	81.65	78.89
337.5	70.29	76.74	81.34	83.49	84.72	86.87	88.40	88.40	84.72
360.0	80.11	85.95	94.54	93.01	89.02	91.78	91.47	93.62	95.15
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	92.09	90.86	91.16	89.02	81.03	78.58	81.34	72.75	64.77
22.5	100.68	92.39	91.16	89.63	82.88	74.90	76.43	69.68	62.92
45.0	89.94	88.09	89.02	84.41	81.34	70.60	72.75	68.76	62.00
67.5	90.86	87.79	83.18	85.33	81.65	71.21	67.84	66.61	59.24
90.0	91.78	89.32	82.88	84.10	81.03	78.89	74.59	65.99	56.79
112.5	84.72	79.81	81.34	79.50	73.05	64.46	65.07	58.32	55.25
135.0	73.05	76.43	73.36	69.68	68.14	65.99	63.23	52.49	49.73
157.5	84.10	86.87	82.88	79.81	73.05	69.37	68.45	61.70	50.95
180.0	87.48	90.55	90.24	77.66	80.11	75.20	68.76	63.54	56.17
202.5	97.61	86.87	88.09	76.12	74.90	71.83	65.69	60.47	49.42
225.0	88.40	83.49	81.03	75.82	73.36	69.98	63.54	61.39	54.64
247.5	86.25	85.33	80.73	73.98	70.60	65.38	66.30	60.47	52.80
270.0	86.56	79.19	77.66	80.73	75.51	73.67	66.30	63.54	58.93
292.5	83.80	80.11	76.43	75.82	71.21	66.30	67.84	63.23	58.32
315.0	80.11	71.83	69.68	69.68	69.98	70.29	60.47	57.40	54.94
337.5	87.48	82.26	80.42	76.12	73.98	73.98	76.74	69.06	60.78
360.0	92.09	90.86	91.16	89.02	81.03	78.58	81.34	72.75	64.77

Intensity data(cd)

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	62.31	46.96	41.13	26.40	14.12	4.91	5.22	4.91	1.23
22.5	56.17	42.67	38.06	19.64	13.81	5.83	1.53	7.06	0.00
45.0	53.72	42.67	31.00	13.81	7.06	6.45	8.29	3.68	3.07
67.5	53.72	42.05	31.31	14.12	7.98	8.29	4.91	7.67	6.75
90.0	49.11	43.59	27.63	13.20	7.37	5.53	5.22	5.53	5.53
112.5	50.65	36.53	20.26	12.58	12.58	3.07	2.76	2.15	0.61
135.0	41.75	35.91	27.32	17.19	8.59	0.00	3.38	3.38	4.30
157.5	41.13	37.14	19.03	8.90	7.06	3.38	7.98	4.60	5.22
180.0	42.67	34.99	19.95	8.90	5.83	2.76	4.30	4.30	7.06
202.5	47.27	30.70	21.49	10.44	10.74	0.00	3.38	2.15	0.92
225.0	43.89	37.75	18.42	13.20	7.67	4.60	2.76	1.53	1.23
247.5	53.10	39.90	28.85	9.52	6.14	6.45	6.75	4.30	2.46
270.0	51.57	38.06	24.86	19.64	8.90	4.30	0.00	4.60	2.15
292.5	50.34	39.29	25.17	16.88	14.12	9.82	2.15	8.59	0.00
315.0	48.81	40.82	35.91	24.56	13.20	4.91	7.98	1.84	5.53
337.5	49.11	42.67	36.53	20.87	12.58	17.80	4.30	3.38	0.61
360.0	62.31	46.96	41.13	26.40	14.12	4.91	5.22	4.91	1.23
C/γ(°)	180.0								
0.0	8.29								
22.5	3.07								
45.0	4.30								
67.5	5.53								
90.0	2.76								
112.5	0.00								
135.0	5.53								
157.5	3.38								
180.0	8.29								
202.5	3.07								
225.0	4.30								
247.5	5.53								
270.0	2.76								
292.5	0.00								
315.0	5.53								
337.5	3.38								
360.0	8.29								