



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-1258-N
Luminaire: 92.70.045.00+92.70.059.00
Report No: NATA0100
Test No: GC20180962015
LampCAT: NICHIA NFCW108B-V3
Lamp flux(lm): 2265.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 33.9000
Current(A): 0.5000
Power (W): 16.9500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1720.98
Efficiency(%): 75.98%
Lumens(lm)/Power(W): 102.00
Central intensity(cd): 8633.394
Maximum intensity(cd): 8633.394
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=19.8
 [C90/270]Total=19.8
Field angle(10%Imax): [C0/180]Total=40.7
 [C90/270]Total=40.7
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.33 C90_270=0.33
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.33%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.307%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/6/20
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8633.394	8.262	8.262	.365%	.480%
2.0	8534.705	65.324	73.586	2.884%	4.276%
4.0	8161.492	124.859	198.445	5.513%	11.531%
6.0	7236.888	165.902	364.347	7.325%	21.171%
8.0	5854.147	178.683	543.03	7.889%	31.554%
10.0	4227.024	160.979	704.009	7.107%	40.907%
12.0	2821.847	128.670	832.679	5.681%	48.384%
14.0	1912.246	101.458	934.137	4.479%	54.279%
16.0	1433.669	86.667	1020.804	3.826%	59.315%
18.0	1098.251	74.430	1095.234	3.286%	63.640%
20.0	889.883	66.750	1161.984	2.947%	67.519%
22.0	736.662	60.521	1222.505	2.672%	71.035%
24.0	619.157	55.231	1277.736	2.438%	74.245%
26.0	530.255	50.979	1328.715	2.251%	77.207%
28.0	450.217	46.355	1375.07	2.047%	79.900%
30.0	381.486	41.832	1416.902	1.847%	82.331%
32.0	322.362	37.464	1454.366	1.654%	84.508%
34.0	277.126	33.986	1488.353	1.501%	86.483%
36.0	232.001	29.907	1518.26	1.320%	88.221%
38.0	198.809	26.844	1545.104	1.185%	89.780%
40.0	169.760	23.931	1569.035	1.057%	91.171%
42.0	140.924	20.680	1589.715	.913%	92.373%
44.0	118.853	18.107	1607.822	.799%	93.425%
46.0	98.778	15.583	1623.406	.688%	94.330%
48.0	81.305	13.251	1636.657	.585%	95.100%
50.0	66.618	11.192	1647.849	.494%	95.751%
52.0	55.146	9.530	1657.379	.421%	96.304%
54.0	45.084	7.999	1665.379	.353%	96.769%
56.0	37.115	6.748	1672.127	.298%	97.161%
58.0	30.081	5.595	1677.722	.247%	97.486%
60.0	24.693	4.690	1682.411	.207%	97.759%
62.0	20.674	4.003	1686.415	.177%	97.992%
64.0	17.804	3.509	1689.924	.155%	98.195%
66.0	16.283	3.262	1693.187	.144%	98.385%
68.0	15.202	3.091	1696.278	.136%	98.565%
70.0	14.356	2.959	1699.236	.131%	98.737%
72.0	13.606	2.838	1702.074	.125%	98.901%
74.0	13.076	2.757	1704.831	.122%	99.062%

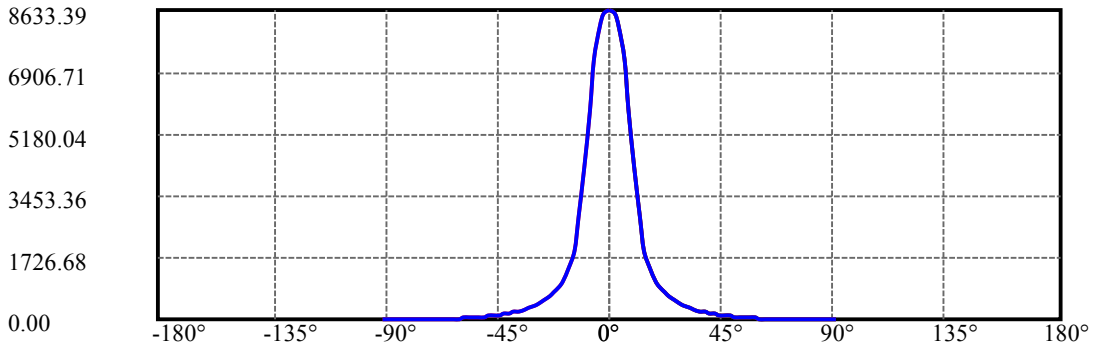
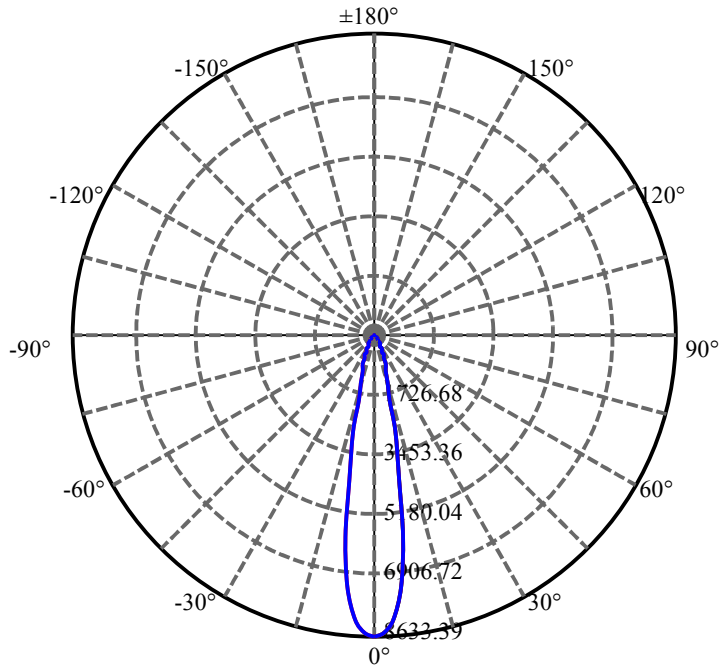
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	12.512	2.662	1707.493	.118%	99.216%
78.0	11.892	2.551	1710.045	.113%	99.365%
80.0	11.135	2.405	1712.45	.106%	99.504%
82.0	10.220	2.220	1714.669	.098%	99.633%
84.0	9.332	2.035	1716.704	.090%	99.752%
86.0	8.403	1.838	1718.543	.081%	99.858%
88.0	7.522	1.649	1720.192	.073%	99.954%
90.0	7.192	0.789	1720.98	.035%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1416.90	62.56%	82.33%
0-40	1569.03	69.27%	91.17%
0-60	1682.41	74.28%	97.76%
0-90	1720.19	75.95%	99.95%
0-120	1720.19	75.95%	99.95%
0-180	1720.98	75.98%	100.00%
60-90	42.47	1.88%	2.47%
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%
0-28.08	1376.78	60.79%	80.00%

ZONAL LUMEN SUMMARY

0-10	704.01
10-20	457.97
20-30	254.92
30-40	152.13
40-50	78.81
50-60	34.56
60-70	16.82
70-80	13.21
80-90	7.74
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



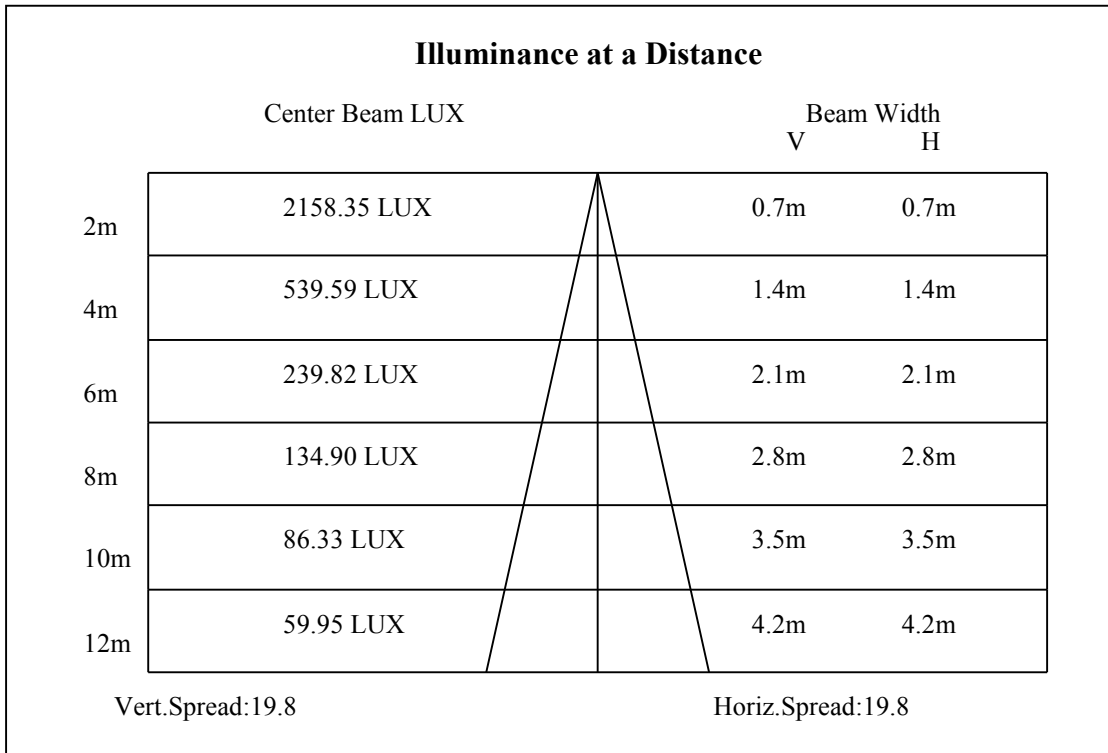
C0(Max): ———

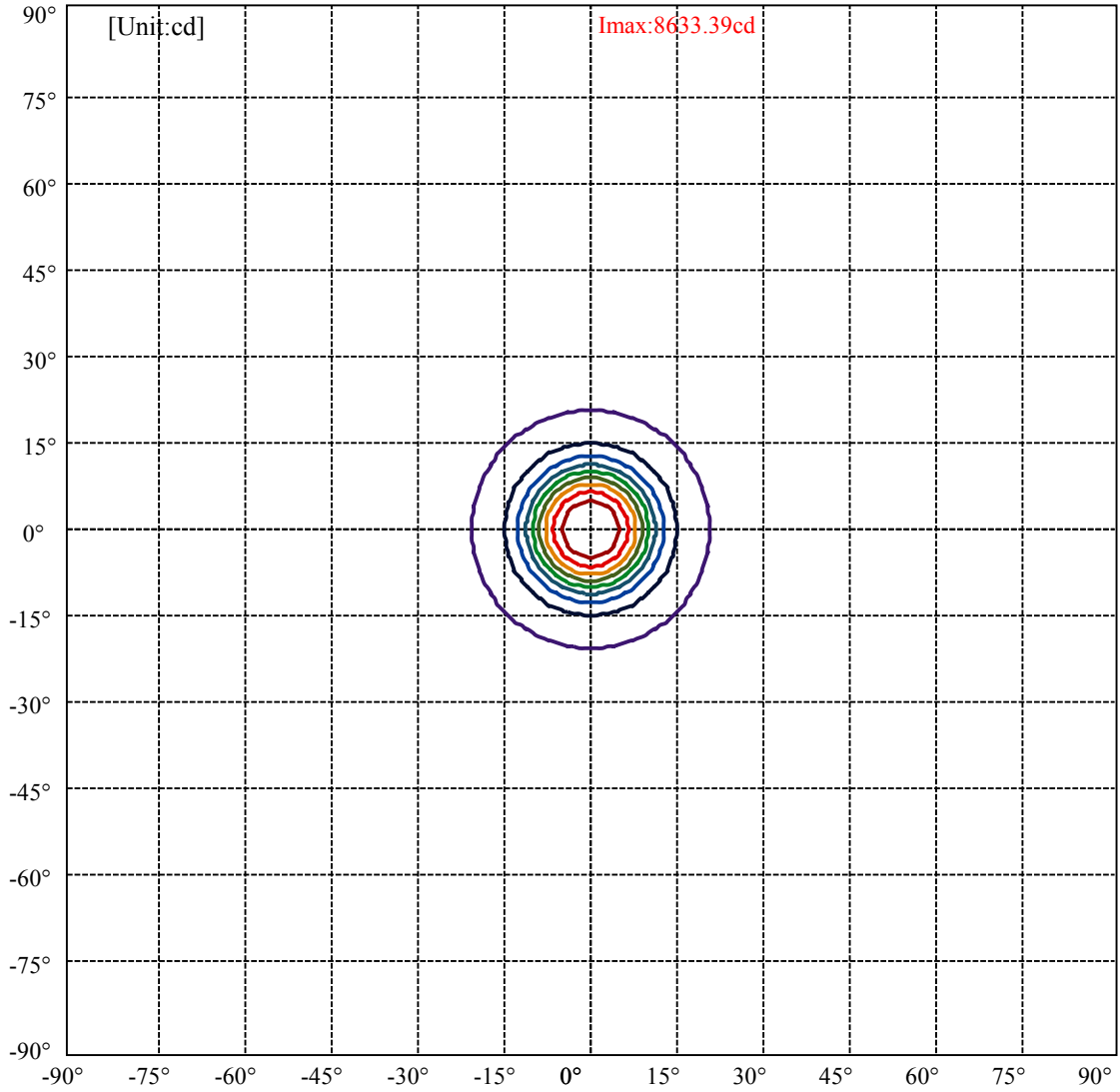
C0/C180: ———

C90/C270: ———

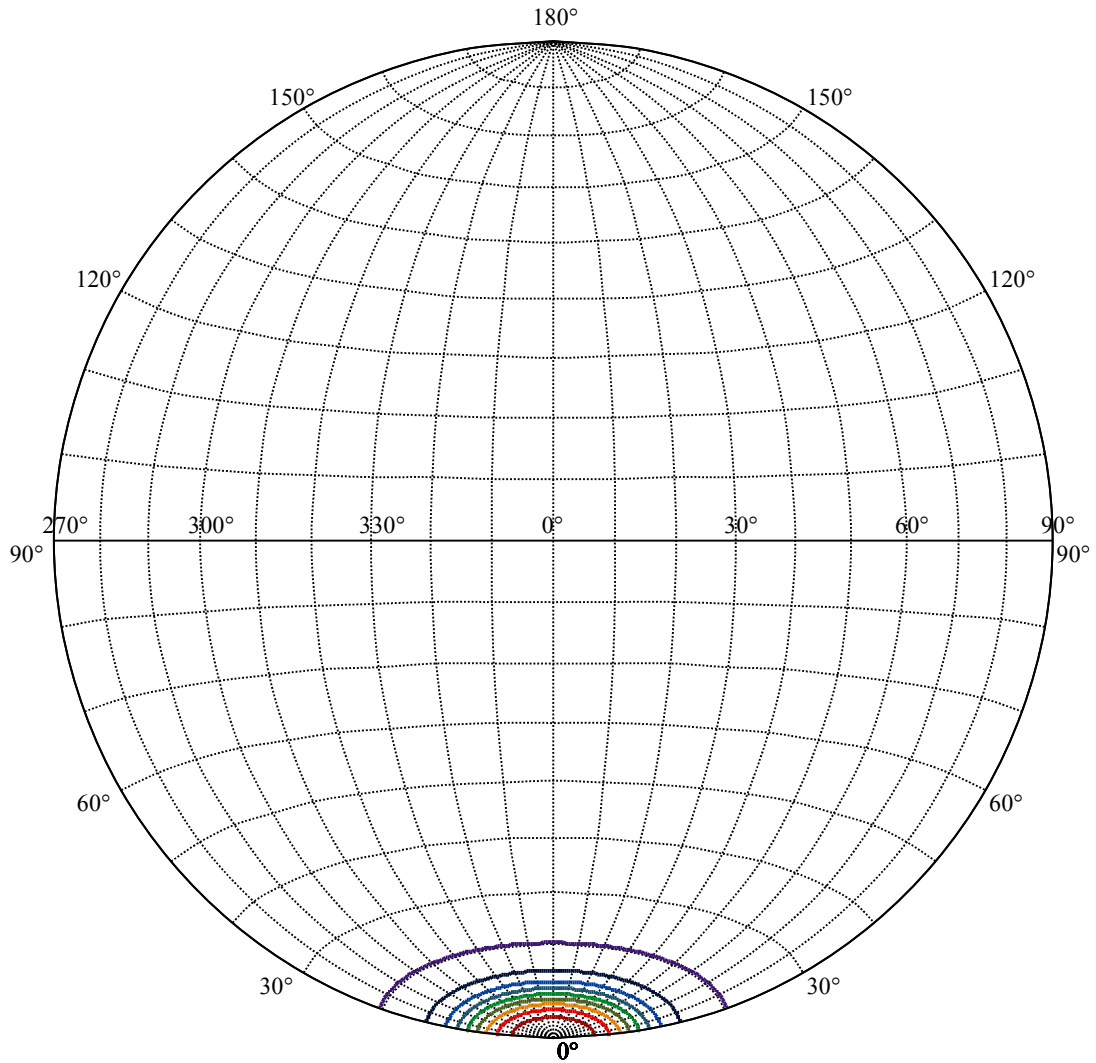
Field angle(10%Imax):C0/180Left:20.3 Right:20.3
:C90/270Left:20.3 Right:20.3

Beam Angle(50%Imax):C0/180Left:9.9 Right:9.9
:C90/270Left:9.9 Right:9.9





(10%Imax) 863.339	—
(20%Imax) 1726.68	—
(30%Imax) 2590.02	—
(40%Imax) 3453.36	—
(50%Imax) 4316.7	—
(60%Imax) 5180.04	—
(70%Imax) 6043.38	—
(80%Imax) 6906.71	—
(90%Imax) 7770.05	—



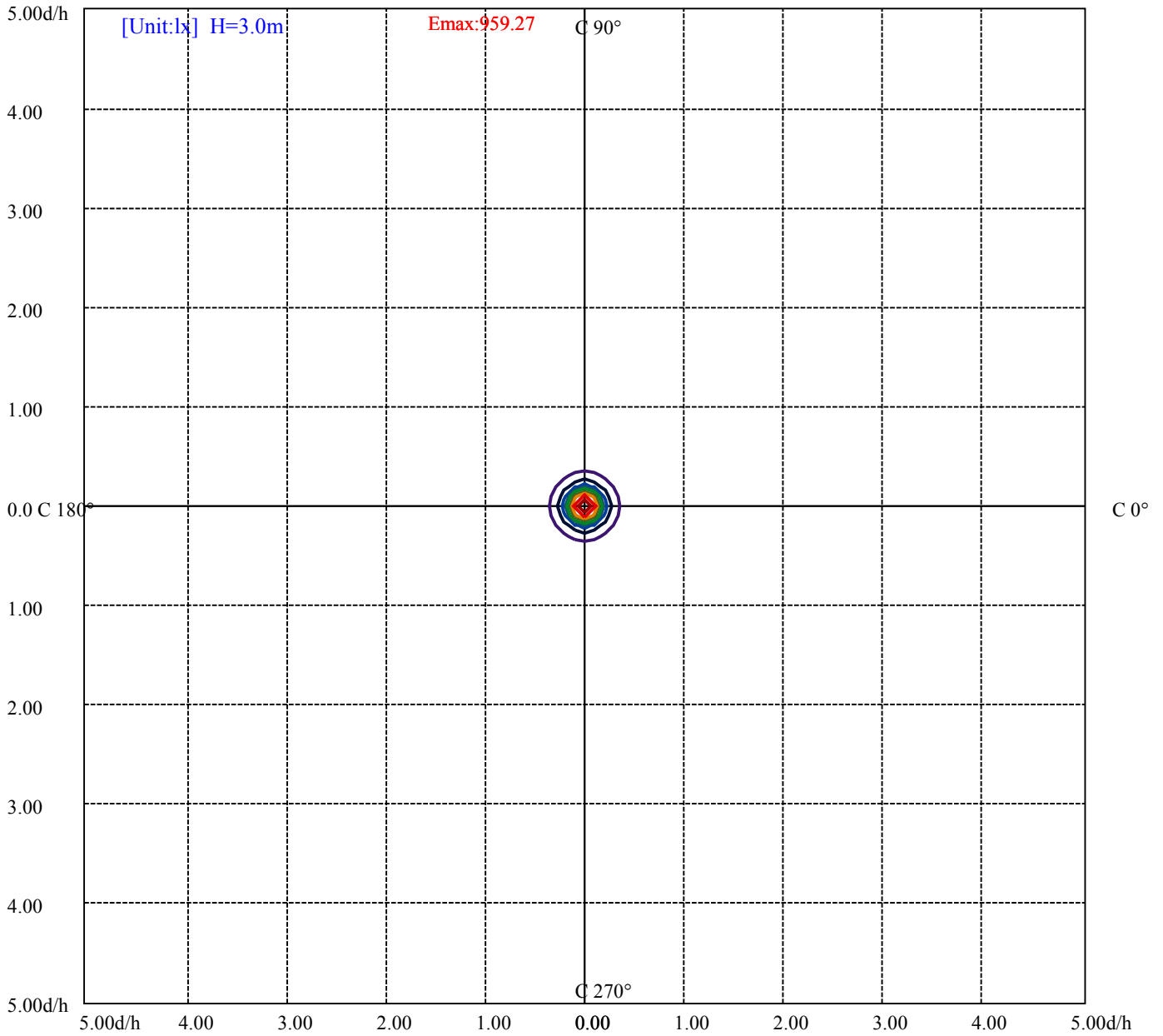
House

[Unit:cd]

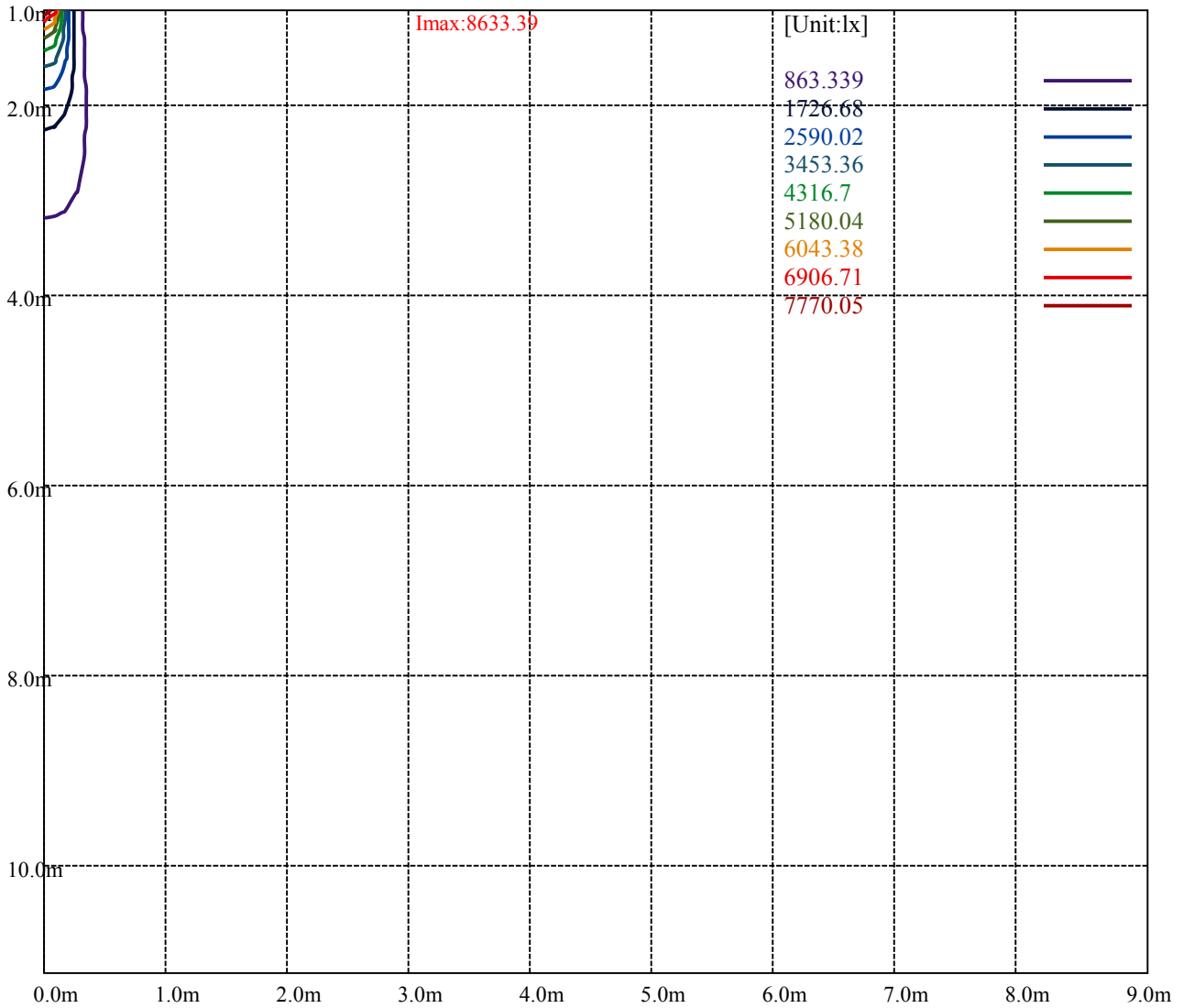
Road

Imax:8633.39

(10%Imax) 863.339	—
(20%Imax) 1726.68	—
(30%Imax) 2590.02	—
(40%Imax) 3453.36	—
(50%Imax) 4316.7	—
(60%Imax) 5180.04	—
(70%Imax) 6043.38	—
(80%Imax) 6906.71	—
(90%Imax) 7770.05	—



- (10%Emax) 95.92655
- (20%Emax) 191.8533
- (30%Emax) 287.78
- (40%Emax) 383.7056
- (50%Emax) 479.6322
- (60%Emax) 575.5588
- (70%Emax) 671.4856
- (80%Emax) 767.4122
- (90%Emax) 863.3389



Luminance Table

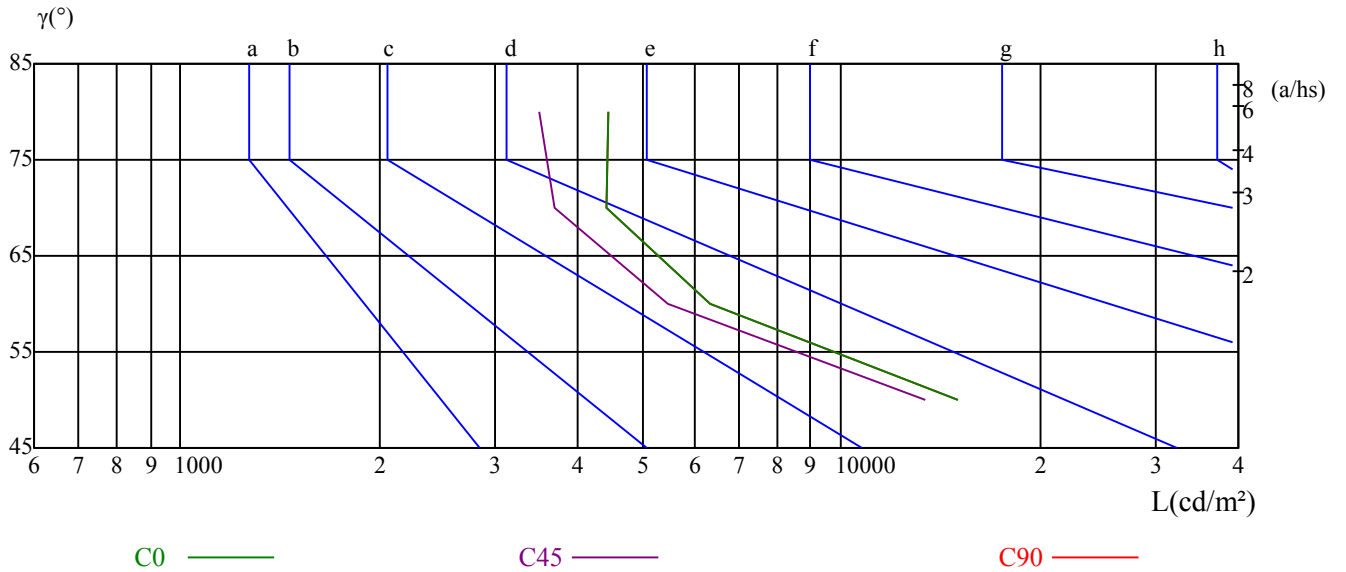
γ	45	50	55	60	65	70	75	80	85
C0	0	15016	0	6324	0	4411	0	4445	0
C45	0	13405	0	5478	0	3673	0	3490	0
C90	0	15016	0	6324	0	4411	0	4445	0

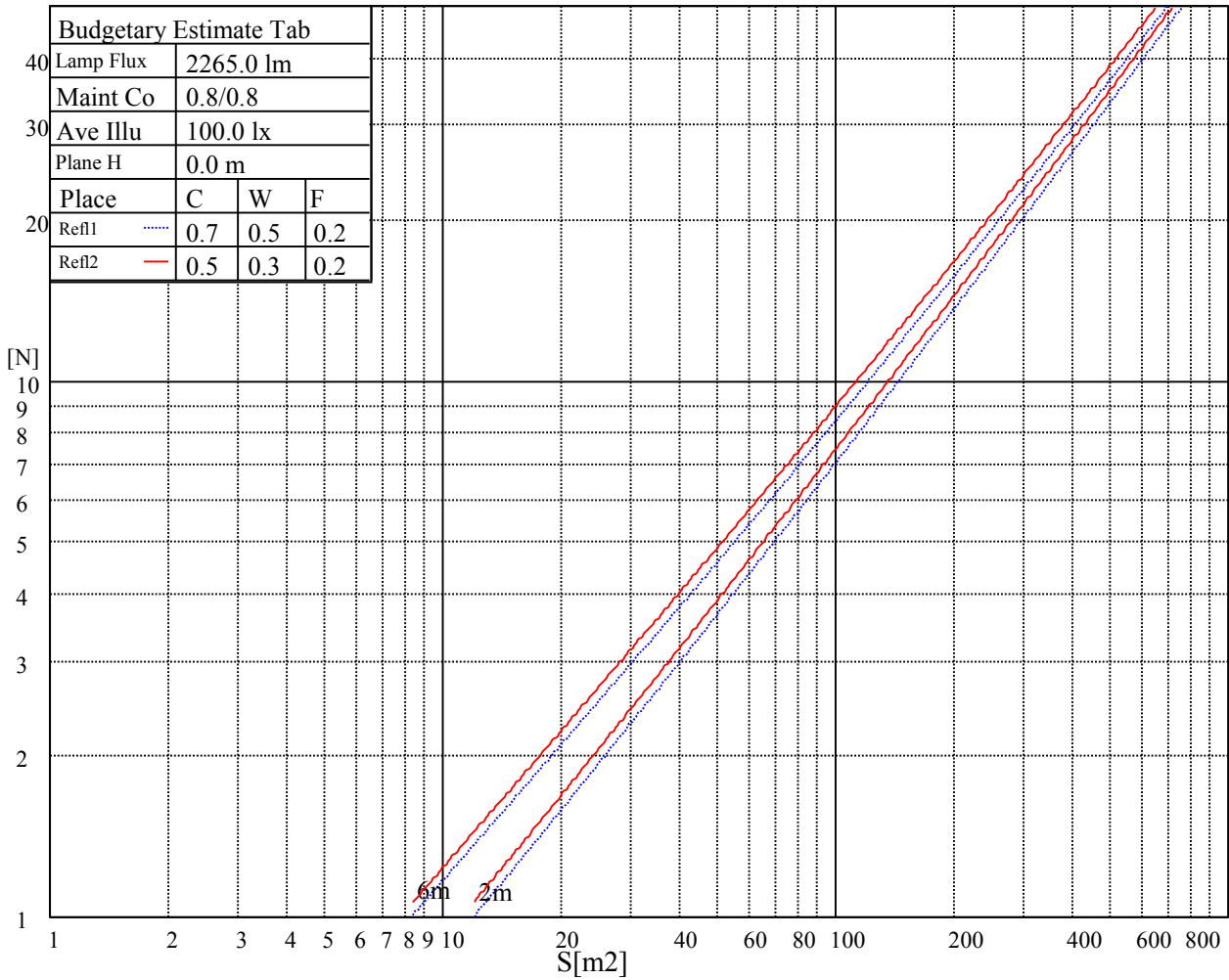
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
142704	141773	143495	110637	108249	110246	33841	38418	36838

Glare Table

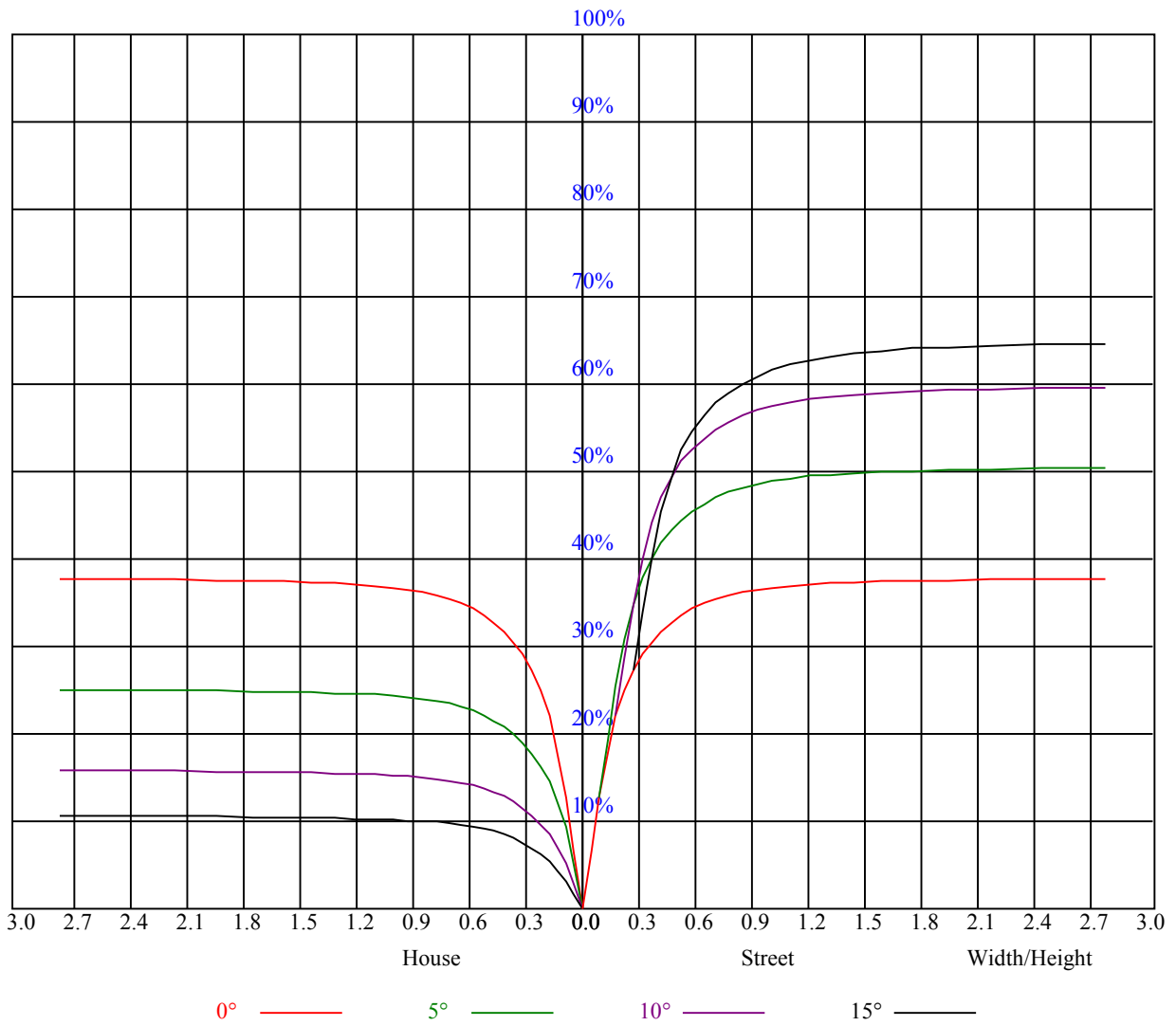
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.85	0.83	0.81	0.83	0.82	0.80	0.80	0.79	0.78	0.77	0.76	0.75	0.75	0.74	0.73	0.72
2	0.80	0.77	0.75	0.79	0.76	0.74	0.76	0.74	0.73	0.74	0.73	0.71	0.72	0.71	0.70	0.69
3	0.76	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.71	0.69	0.68	0.70	0.68	0.67	0.66
4	0.73	0.69	0.67	0.72	0.69	0.66	0.70	0.68	0.65	0.69	0.67	0.65	0.67	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.66	0.64	0.62	0.65	0.63	0.62	0.61
6	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.63	0.61	0.59	0.58
7	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.62	0.59	0.57	0.57
8	0.62	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.56	0.55
9	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.56	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.53
10	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.57	0.54	0.53	0.52



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	8600.91	8617.98	8461.62	7858.75	6697.61	5205.58	3517.00	2299.16	1656.10
45.0	8643.85	8581.64	8354.26	7528.96	6234.59	4418.83	2940.56	2003.50	1463.95
90.0	8651.56	8586.60	8235.89	7339.57	6009.96	4196.95	2794.66	1904.95	1405.04
135.0	8637.25	8551.36	8233.68	7332.41	6020.42	4515.18	3010.48	2007.91	1511.30
180.0	8600.91	8341.04	7695.78	6459.77	4878.55	3371.65	2311.82	1663.80	1319.70
225.0	8643.85	8504.56	7994.74	6979.50	5489.67	3798.89	2616.83	1809.70	1406.14
270.0	8651.56	8553.01	8163.76	7234.41	5790.83	4244.85	2707.12	1837.23	1375.86
315.0	8637.25	8541.45	8152.20	7161.74	5711.55	4064.26	2676.29	1771.71	1331.26
360.0	8600.91	8617.98	8461.62	7858.75	6697.61	5205.58	3517.00	2299.16	1656.10
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	1230.51	952.48	781.25	644.16	550.01	471.28	399.71	336.95	291.80
45.0	1097.82	874.85	715.18	600.11	521.93	443.20	378.24	321.53	279.69
90.0	1074.04	873.47	717.94	605.29	524.25	443.09	373.23	314.10	266.42
135.0	1164.44	935.41	779.05	646.91	547.26	466.33	392.55	329.24	280.79
180.0	1046.40	873.19	720.03	610.25	519.18	435.83	369.48	313.60	266.64
225.0	1088.02	911.51	761.49	648.23	551.33	472.00	403.84	337.99	291.08
270.0	1061.49	856.68	727.85	617.18	530.19	449.26	378.79	321.53	280.24
315.0	1023.28	841.48	690.52	581.12	497.88	420.74	356.05	303.97	260.36
360.0	1230.51	952.48	781.25	644.16	550.01	471.28	399.71	336.95	291.80
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	245.33	206.52	178.16	146.73	124.98	104.77	87.87	71.79	60.18
45.0	229.59	196.06	168.53	136.93	116.77	97.56	81.04	66.73	55.22
90.0	224.46	194.46	165.77	139.40	116.00	96.29	80.44	65.46	54.29
135.0	234.15	199.14	172.33	142.98	122.00	101.41	83.58	68.55	56.60
180.0	224.91	194.40	163.24	136.71	114.63	94.86	77.08	63.48	52.25
225.0	243.68	209.49	178.33	149.64	123.88	101.91	82.97	67.11	55.83
270.0	233.60	199.63	172.11	141.77	120.08	98.77	79.83	65.90	53.85
315.0	220.28	190.77	159.61	133.24	112.48	94.64	77.63	63.92	52.96
360.0	245.33	206.52	178.16	146.73	124.98	104.77	87.87	71.79	60.18
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	49.17	40.91	32.92	26.81	22.30	18.88	16.85	15.58	14.70
45.0	44.76	37.38	30.28	24.94	21.25	18.00	16.46	15.31	14.42
90.0	44.82	36.78	29.84	25.05	20.76	17.78	16.30	15.20	14.31
135.0	46.19	38.10	30.56	24.94	21.09	17.78	16.30	15.20	14.31
180.0	42.12	34.52	27.91	22.79	19.16	16.96	15.64	14.76	13.98
225.0	45.59	37.05	30.17	24.72	20.10	17.62	16.24	15.14	14.42
270.0	44.71	36.50	30.06	24.61	20.76	17.89	16.46	15.36	14.42
315.0	43.33	35.68	28.90	23.67	19.99	17.51	16.02	15.09	14.26
360.0	49.17	40.91	32.92	26.81	22.30	18.88	16.85	15.58	14.70
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	13.82	13.27	12.72	12.22	11.56	10.68	9.80	8.92	7.87
45.0	13.71	13.16	12.61	12.06	11.29	10.35	9.41	8.59	7.65
90.0	13.60	13.05	12.50	11.89	11.12	10.24	9.25	8.31	7.54
135.0	13.54	12.99	12.39	11.73	11.01	10.08	9.25	8.15	7.49
180.0	13.32	12.83	12.17	11.45	10.63	9.69	8.81	7.71	7.16
225.0	13.65	13.10	12.55	11.89	11.01	10.13	9.19	8.42	7.49
270.0	13.76	13.27	12.72	12.06	11.45	10.41	9.63	8.70	7.49
315.0	13.43	12.94	12.44	11.84	11.01	10.19	9.30	8.42	7.49
360.0	13.82	13.27	12.72	12.22	11.56	10.68	9.80	8.92	7.87

Intensity data(cd)

C/γ(°)	90.0
0.0	7.27
45.0	7.27
90.0	7.16
135.0	7.16
180.0	7.10
225.0	7.27
270.0	7.16
315.0	7.16
360.0	7.27