
Nata

LumCAT: 3-2044-M
Luminaire: 92.70.131.00
Report No: GC2017042708
Test No: NT-0010
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2479.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 34.6000
Current(A): 0.5000
Power (W): 17.3000
PF: 0.0000
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 2228.35
Efficiency(%): 89.89%
Lumens(lm)/Power(W): 128.81
Central intensity(cd): 8383.163
Maximum intensity(cd): 8383.163
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.9
 [C90/270]Total=24.9
Field angle(10%Imax): [C0/180]Total=54.3
 [C90/270]Total=54.3
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.89%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.738%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8383.163	0.000	0	.000%	.000%
1.0	8370.637	8.016	8.016	.323%	.360%
2.0	8311.934	23.944	31.961	.966%	1.434%
3.0	8187.644	39.462	71.422	1.592%	3.205%
4.0	8015.042	54.236	125.658	2.188%	5.639%
5.0	7759.305	67.860	193.518	2.737%	8.684%
6.0	7416.579	79.753	273.272	3.217%	12.263%
7.0	7049.146	89.789	363.06	3.622%	16.293%
8.0	6607.525	97.738	460.798	3.943%	20.679%
9.0	6084.696	102.864	563.662	4.149%	25.295%
10.0	5559.595	105.377	669.038	4.251%	30.024%
11.0	4999.052	105.503	774.541	4.256%	34.759%
12.0	4438.028	103.161	877.702	4.161%	39.388%
13.0	3882.096	98.739	976.441	3.983%	43.819%
14.0	3349.356	92.562	1069.003	3.734%	47.973%
15.0	2880.276	85.523	1154.526	3.450%	51.811%
16.0	2498.528	78.815	1233.34	3.179%	55.348%
17.0	2105.081	71.691	1305.031	2.892%	58.565%
18.0	1817.687	64.678	1369.709	2.609%	61.467%
19.0	1580.738	59.126	1428.835	2.385%	64.121%
20.0	1369.246	53.993	1482.827	2.178%	66.544%
21.0	1211.826	49.562	1532.389	1.999%	68.768%
22.0	1097.536	46.408	1578.797	1.872%	70.851%
23.0	1003.465	44.085	1622.882	1.778%	72.829%
24.0	940.122	42.494	1665.375	1.714%	74.736%
25.0	899.222	41.823	1707.198	1.687%	76.613%
26.0	866.230	41.674	1748.872	1.681%	78.483%
27.0	840.904	41.765	1790.637	1.685%	80.357%
28.0	820.678	42.068	1832.705	1.697%	82.245%
29.0	800.919	42.426	1875.13	1.711%	84.149%
30.0	781.842	42.734	1917.865	1.724%	86.067%
31.0	750.900	42.654	1960.519	1.721%	87.981%
32.0	698.377	41.520	2002.039	1.675%	89.844%
33.0	630.761	39.157	2041.196	1.580%	91.601%
34.0	550.846	35.759	2076.954	1.442%	93.206%
35.0	440.279	30.781	2107.735	1.242%	94.587%
36.0	338.948	24.811	2132.546	1.001%	95.701%
37.0	247.451	19.125	2151.671	.771%	96.559%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	159.643	13.588	2165.259	.548%	97.169%
39.0	98.021	8.795	2174.054	.355%	97.563%
40.0	50.831	5.191	2179.245	.209%	97.796%
41.0	26.489	2.753	2181.999	.111%	97.920%
42.0	18.513	1.635	2183.634	.066%	97.993%
43.0	15.705	1.268	2184.901	.051%	98.050%
44.0	13.523	1.103	2186.004	.044%	98.100%
45.0	12.188	0.988	2186.993	.040%	98.144%
46.0	11.355	0.921	2187.913	.037%	98.185%
47.0	11.032	0.890	2188.804	.036%	98.225%
48.0	10.798	0.882	2189.686	.036%	98.265%
49.0	10.591	0.878	2190.564	.035%	98.304%
50.0	10.392	0.875	2191.439	.035%	98.344%
51.0	10.227	0.872	2192.312	.035%	98.383%
52.0	10.103	0.872	2193.184	.035%	98.422%
53.0	9.972	0.873	2194.057	.035%	98.461%
54.0	9.841	0.873	2194.931	.035%	98.500%
55.0	9.752	0.875	2195.805	.035%	98.540%
56.0	9.649	0.877	2196.682	.035%	98.579%
57.0	9.566	0.879	2197.56	.035%	98.618%
58.0	9.511	0.882	2198.443	.036%	98.658%
59.0	9.442	0.886	2199.329	.036%	98.698%
60.0	9.373	0.889	2200.218	.036%	98.738%
61.0	9.291	0.891	2201.108	.036%	98.778%
62.0	9.270	0.894	2202.003	.036%	98.818%
63.0	9.236	0.900	2202.903	.036%	98.858%
64.0	9.194	0.904	2203.807	.036%	98.899%
65.0	9.153	0.908	2204.715	.037%	98.939%
66.0	9.105	0.911	2205.626	.037%	98.980%
67.0	9.064	0.914	2206.54	.037%	99.021%
68.0	9.043	0.917	2207.457	.037%	99.062%
69.0	9.022	0.922	2208.378	.037%	99.104%
70.0	8.974	0.924	2209.303	.037%	99.145%
71.0	9.002	0.929	2210.232	.037%	99.187%
72.0	8.954	0.934	2211.165	.038%	99.229%
73.0	8.919	0.935	2212.1	.038%	99.271%
74.0	8.857	0.935	2213.035	.038%	99.313%
75.0	8.898	0.938	2213.973	.038%	99.355%

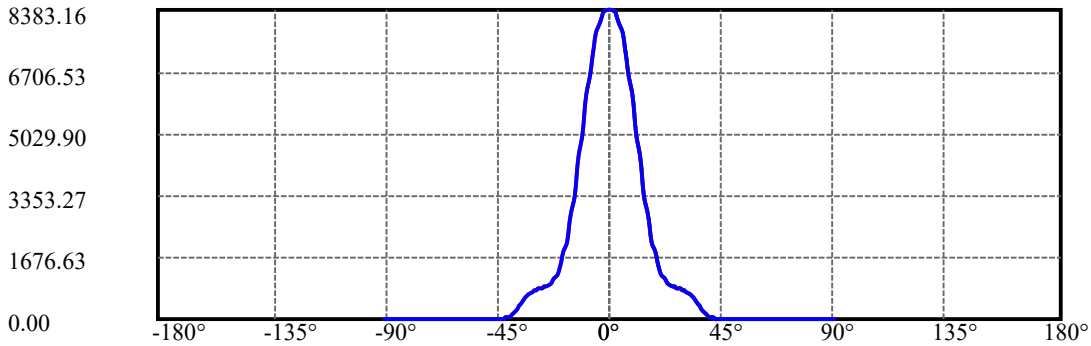
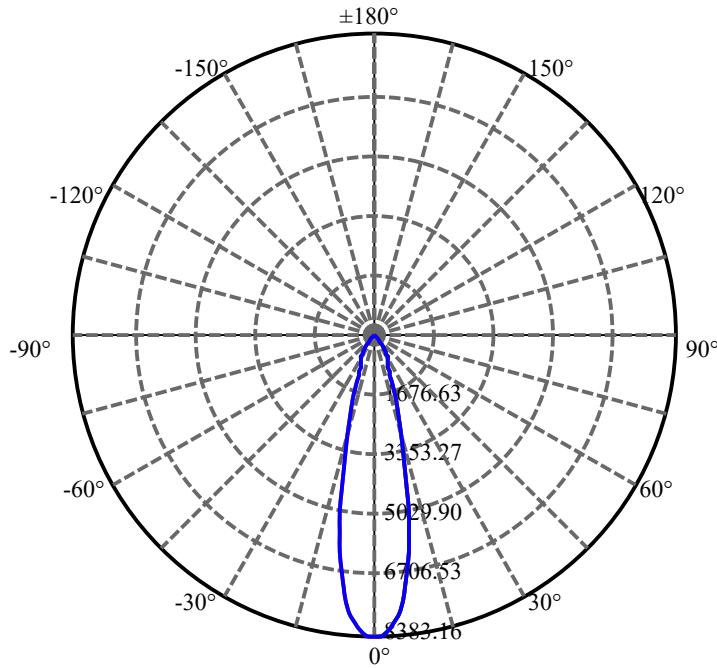
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.850	0.942	2214.915	.038%	99.397%
77.0	8.878	0.945	2215.86	.038%	99.440%
78.0	8.885	0.951	2216.811	.038%	99.482%
79.0	9.015	0.962	2217.773	.039%	99.525%
80.0	9.043	0.974	2218.746	.039%	99.569%
81.0	8.947	0.973	2219.719	.039%	99.613%
82.0	8.823	0.964	2220.683	.039%	99.656%
83.0	8.809	0.958	2221.641	.039%	99.699%
84.0	8.781	0.958	2222.599	.039%	99.742%
85.0	8.816	0.960	2223.56	.039%	99.785%
86.0	8.775	0.962	2224.521	.039%	99.828%
87.0	8.713	0.957	2225.478	.039%	99.871%
88.0	8.733	0.956	2226.434	.039%	99.914%
89.0	8.726	0.957	2227.391	.039%	99.957%
90.0	8.720	0.957	2228.348	.039%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1917.86	77.36%	86.07%
0-40	2179.25	87.91%	97.80%
0-60	2200.22	88.75%	98.74%
0-90	2227.39	89.85%	99.96%
0-120	2227.39	89.85%	99.96%
0-180	2228.35	89.89%	100.00%
60-90	28.06	1.13%	1.26%
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%
0-26.81	1782.68	71.91%	80.00%

ZONAL LUMEN SUMMARY

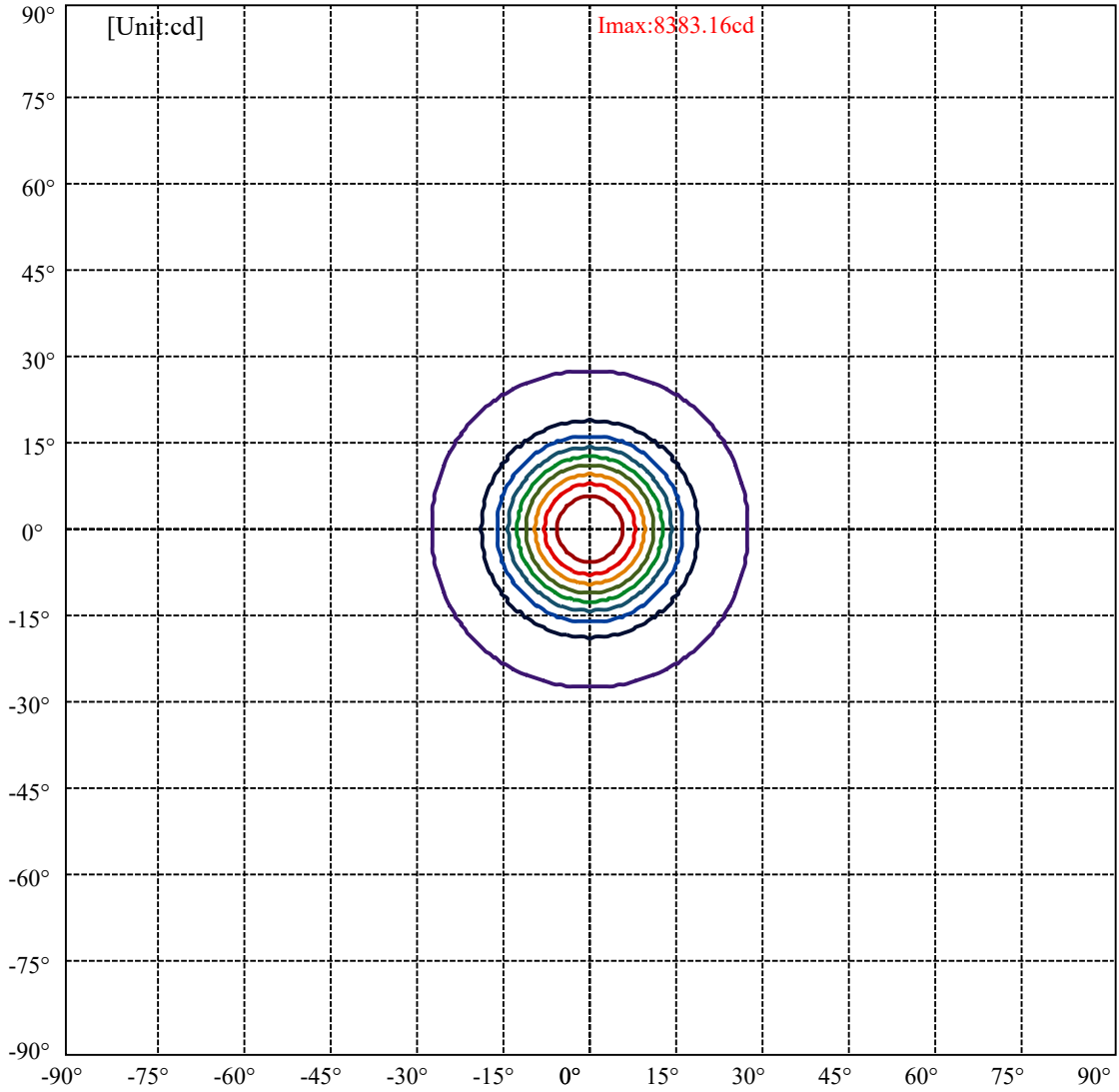
0-10	669.04
10-20	813.79
20-30	435.04
30-40	261.38
40-50	12.19
50-60	8.78
60-70	9.09
70-80	9.44
80-90	8.64
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



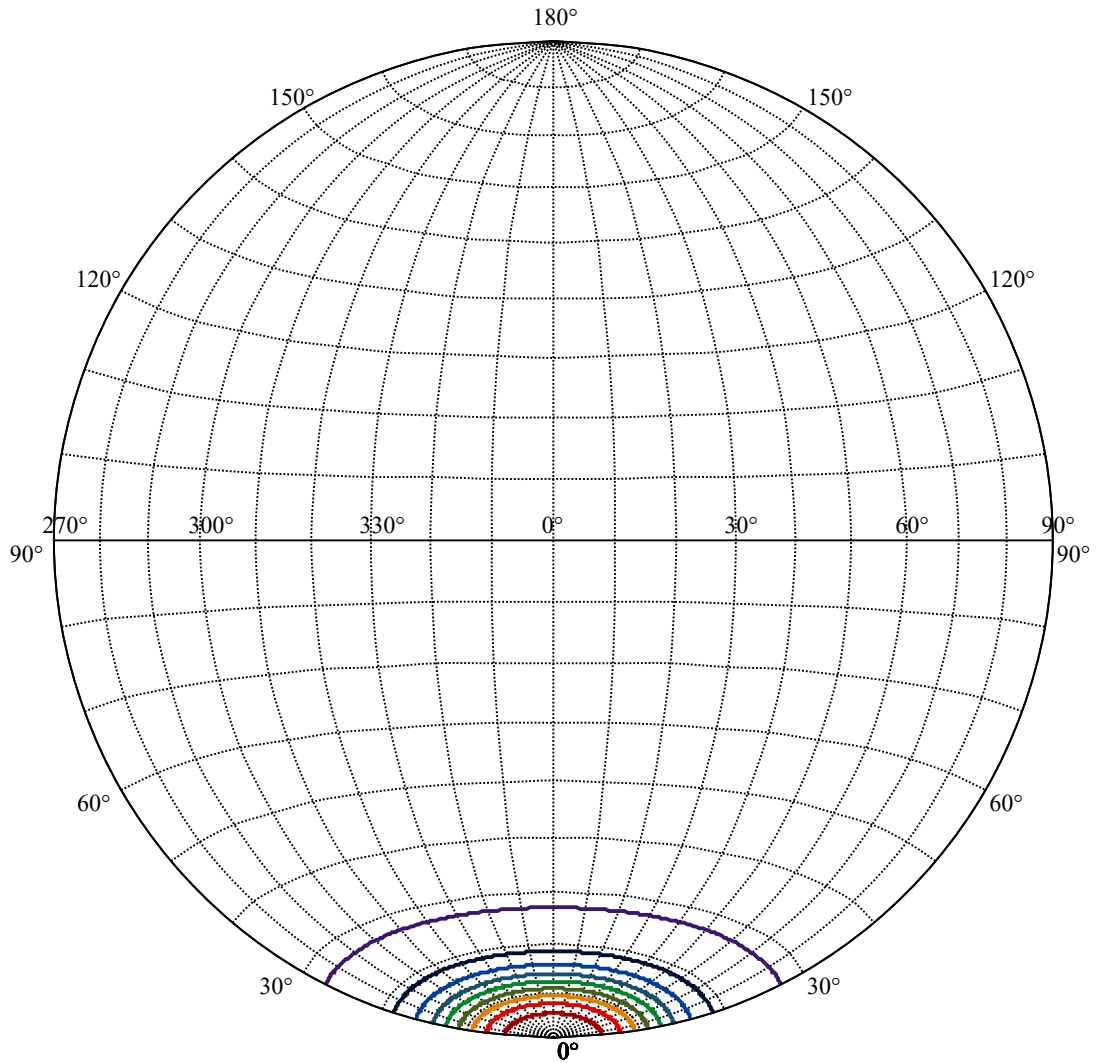
C0(Max): —————
 C0/C180: —————
 C90/C270: —————

Field angle(10%Imax):C0/180Left:27.1 Right:27.1
 :C90/270Left:27.1 Right:27.1

Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4
 :C90/270Left:12.4 Right:12.4



(10%Imax) 838.316	—
(20%Imax) 1676.63	—
(30%Imax) 2514.95	—
(40%Imax) 3353.27	—
(50%Imax) 4191.58	—
(60%Imax) 5029.9	—
(70%Imax) 5868.21	—
(80%Imax) 6706.53	—
(90%Imax) 7544.85	—



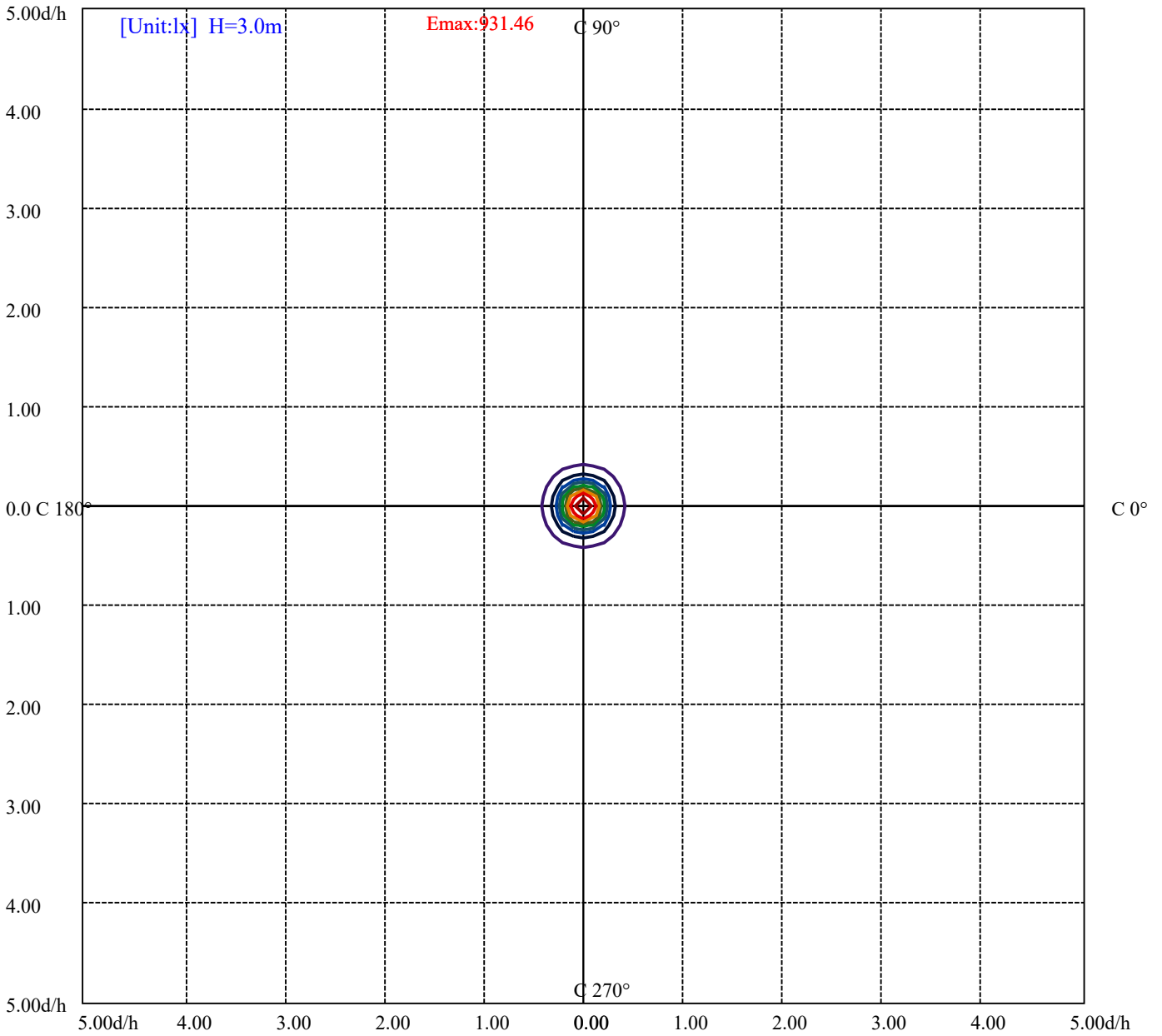
House

[Unit:cd]

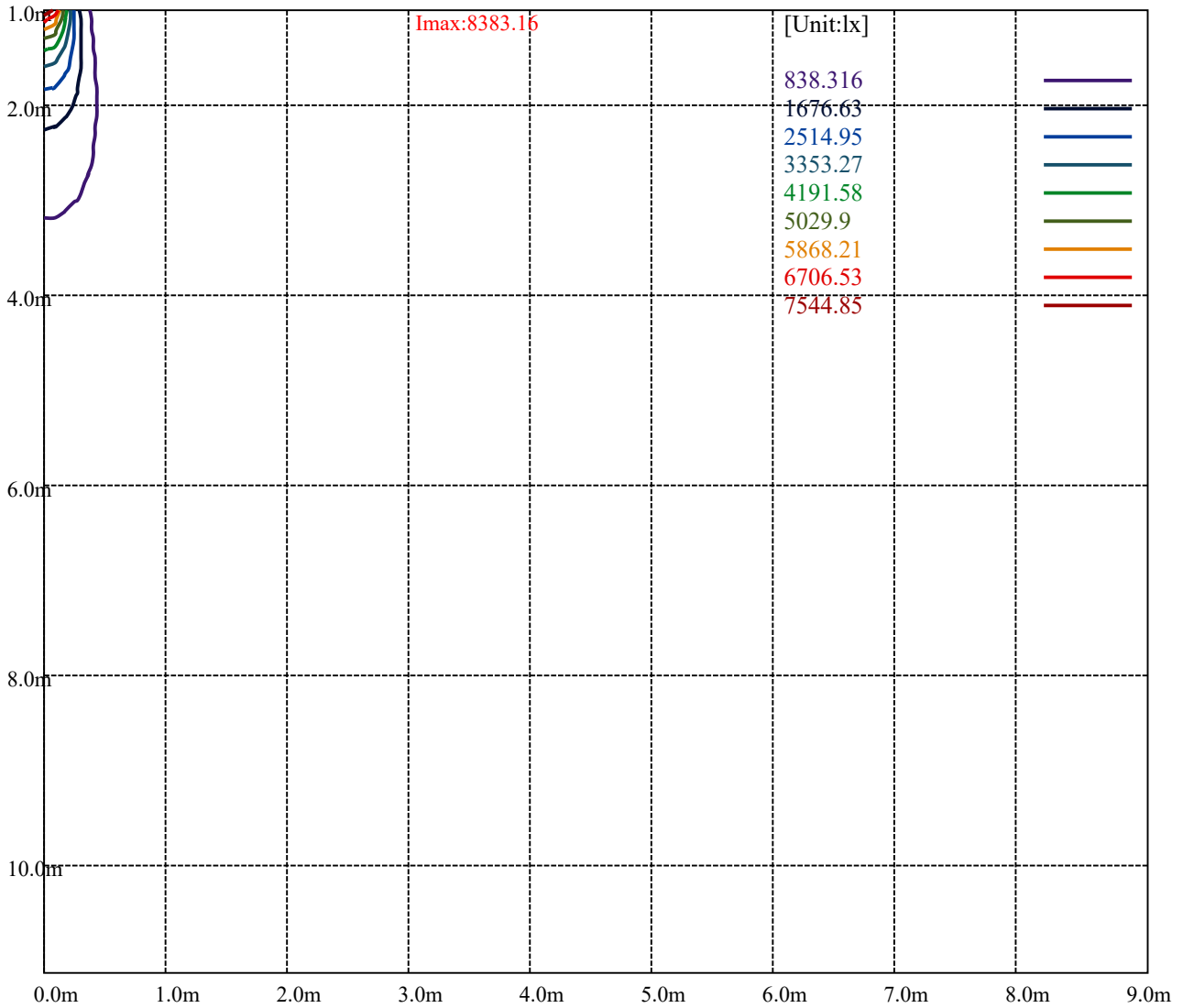
Road

Imax:8383.16

(10%Imax)	838.316	—
(20%Imax)	1676.63	—
(30%Imax)	2514.95	—
(40%Imax)	3353.27	—
(50%Imax)	4191.58	—
(60%Imax)	5029.9	—
(70%Imax)	5868.21	—
(80%Imax)	6706.53	—
(90%Imax)	7544.85	—



(10%Emax) 93.14622	—
(20%Emax) 186.2922	—
(30%Emax) 279.4389	—
(40%Emax) 372.5844	—
(50%Emax) 465.7311	—
(60%Emax) 558.8777	—
(70%Emax) 652.0233	—
(80%Emax) 745.17	—
(90%Emax) 838.3167	—



Luminance Table

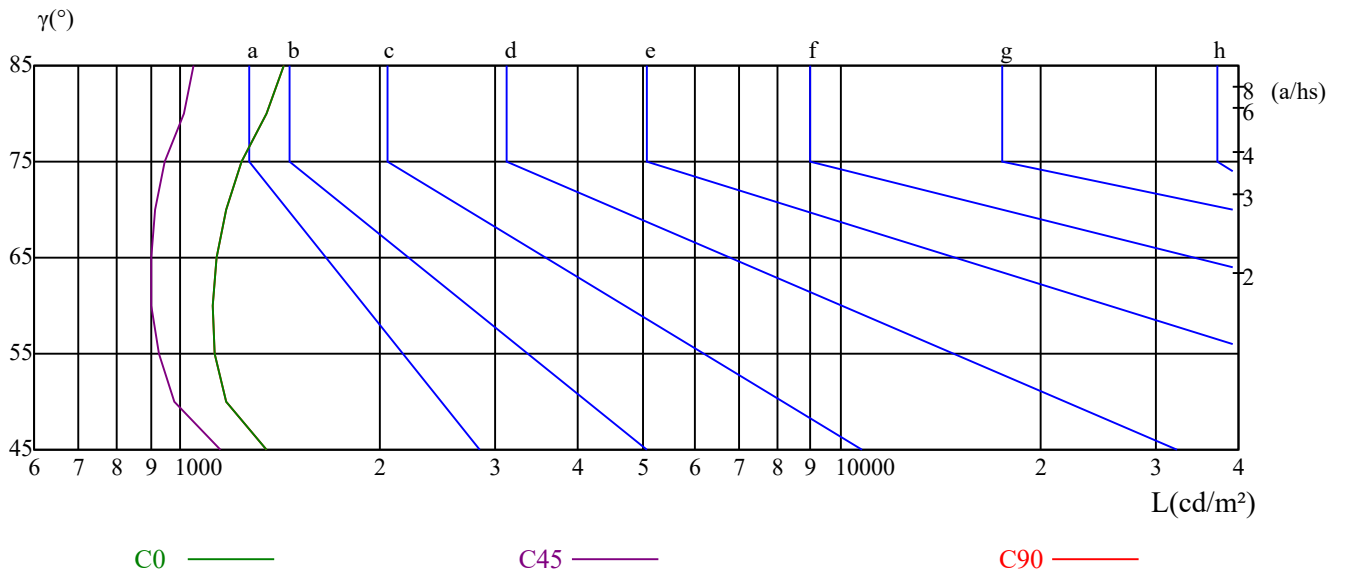
γ	45	50	55	60	65	70	75	80	85
C0	1352	1171	1125	1116	1136	1171	1235	1351	1437
C45	1146	978	925	903	903	914	945	1010	1048
C90	1352	1171	1125	1116	1136	1171	1235	1351	1437

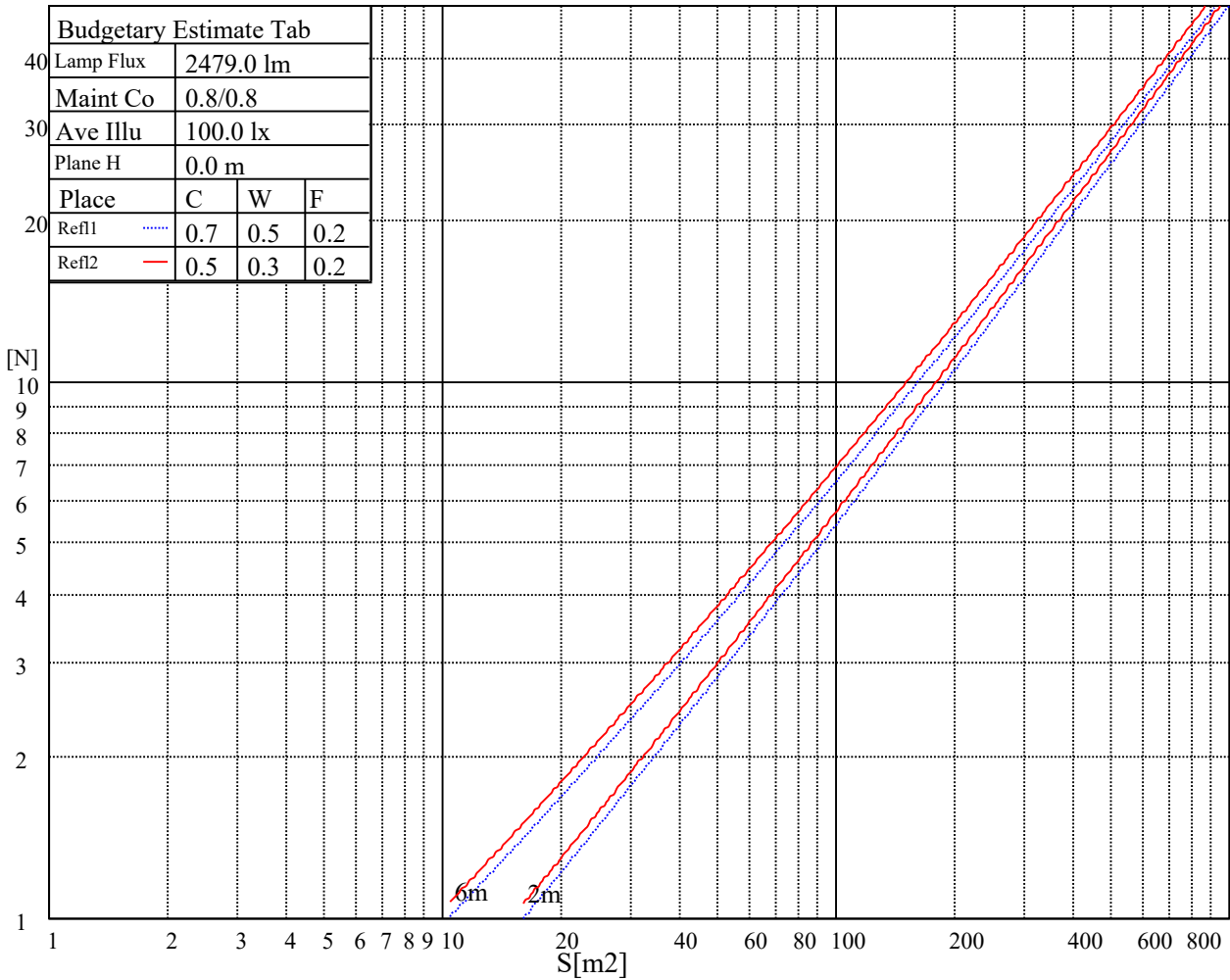
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2998	2998	2998	4759	4759	4759	14000	14000	14000

Glare Table

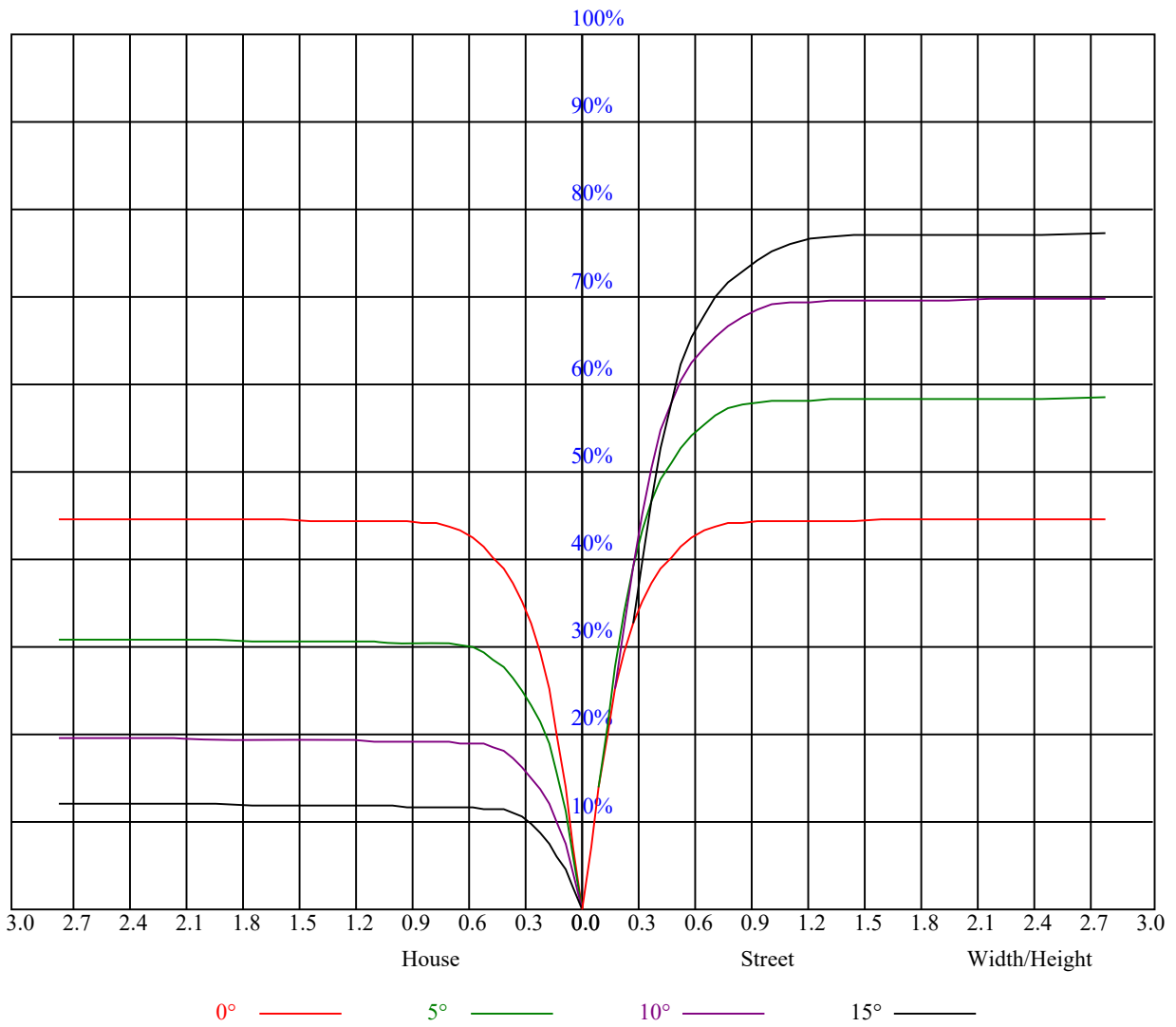
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.92	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.88	0.86	0.85	0.86	0.84	0.83	0.82
3	0.90	0.87	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.82	0.79	0.84	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
5	0.83	0.78	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
6	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.67
8	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
9	0.71	0.67	0.64	0.70	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62
10	0.68	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.60



Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	8403.81	8364.72	8262.31	8108.71	7884.08	7571.36	7187.61	6791.21	6287.44
45.0	8379.03	8400.51	8407.66	8379.03	8289.84	8124.12	7888.48	7611.55	7227.25
90.0	8396.10	8440.70	8466.57	8445.65	8376.28	8219.37	7985.38	7716.15	7377.01
135.0	8353.71	8417.57	8457.76	8456.66	8425.83	8302.51	8131.83	7892.89	7540.52
180.0	8403.81	8419.22	8410.42	8348.20	8218.82	8036.03	7709.00	7369.30	6962.43
225.0	8379.03	8327.83	8217.17	7984.83	7732.12	7397.38	6923.89	6486.75	6006.10
270.0	8396.10	8338.84	8178.08	7972.17	7694.68	7298.83	6846.26	6388.19	5835.98
315.0	8353.71	8255.71	8095.49	7805.90	7498.68	7124.85	6660.17	6137.14	5623.46
360.0	8403.81	8364.72	8262.31	8108.71	7884.08	7571.36	7187.61	6791.21	6287.44
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5734.12	5208.34	4602.72	4059.86	3475.71	2952.67	2543.61	2230.89	1835.03
45.0	6769.18	6368.92	5745.69	5209.44	4651.16	3969.57	3450.94	2985.71	2487.45
90.0	6913.98	6388.19	5889.38	5305.23	4699.61	4152.90	3553.34	3063.89	2599.76
135.0	7107.78	6671.73	6124.47	5597.58	4979.85	4357.16	3813.76	3303.93	2749.52
180.0	6451.51	5891.59	5361.94	4743.11	4125.93	3597.94	3063.34	2649.86	2247.40
225.0	5426.91	4818.54	4270.17	3672.81	3132.71	2719.24	2305.21	1988.09	1707.30
270.0	5249.63	4715.03	4116.57	3600.69	3123.90	2606.92	2246.85	1975.42	1641.78
315.0	5024.45	4414.42	3881.48	3315.50	2867.89	2438.45	2065.17	1790.43	1572.41
360.0	5734.12	5208.34	4602.72	4059.86	3475.71	2952.67	2543.61	2230.89	1835.03
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1607.65	1434.77	1215.65	1096.72	1017.99	939.81	897.42	873.75	848.97
45.0	2153.81	1871.92	1581.22	1385.22	1227.21	1093.42	996.52	938.16	896.32
90.0	2212.17	1923.12	1673.16	1411.10	1249.23	1095.51	1009.46	947.63	904.91
135.0	2376.78	2064.06	1738.68	1522.31	1339.52	1162.79	1059.29	982.21	923.85
180.0	1909.36	1659.40	1449.64	1240.42	1093.42	1012.05	932.27	892.96	865.82
225.0	1479.92	1309.79	1092.59	1033.19	962.77	916.41	878.53	856.51	833.99
270.0	1451.29	1287.77	1120.95	1025.70	960.73	913.39	880.90	858.88	832.45
315.0	1350.53	1095.07	1082.08	979.95	929.41	894.34	866.59	843.68	823.53
360.0	1607.65	1434.77	1215.65	1096.72	1017.99	939.81	897.42	873.75	848.97
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	828.05	811.53	795.56	781.25	765.83	696.46	611.13	514.78	383.74
45.0	870.44	848.42	823.64	807.13	789.51	773.54	747.67	687.65	570.38
90.0	872.31	848.42	823.04	803.05	788.57	771.29	749.81	688.59	593.73
135.0	883.10	858.33	831.35	810.43	791.16	774.64	761.43	714.08	625.44
180.0	839.94	814.50	795.45	777.51	765.67	748.44	679.29	607.82	503.49
225.0	813.90	796.17	781.53	765.83	721.90	636.12	514.89	422.72	304.57
270.0	814.28	796.67	780.15	763.63	704.72	610.58	515.88	413.47	284.64
315.0	805.20	791.38	776.63	745.90	679.84	575.95	466.00	357.65	256.23
360.0	828.05	811.53	795.56	781.25	765.83	696.46	611.13	514.78	383.74
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	279.69	218.24	86.60	33.25	22.96	19.05	14.92	12.77	11.78
45.0	470.73	365.57	288.50	146.89	73.28	29.90	22.79	18.88	14.92
90.0	486.75	385.06	285.36	170.12	89.63	39.64	24.28	20.43	16.35
135.0	539.00	437.15	305.01	280.24	120.96	50.32	25.38	21.53	16.52
180.0	377.85	290.37	195.12	83.30	40.30	25.33	20.76	15.97	13.76
225.0	192.64	108.74	47.18	24.50	20.98	16.85	13.49	12.06	11.62
270.0	224.35	100.59	38.37	23.62	20.10	15.75	13.21	12.17	11.84
315.0	140.56	73.89	31.00	22.24	18.44	15.09	13.27	11.84	11.40
360.0	279.69	218.24	86.60	33.25	22.96	19.05	14.92	12.77	11.78

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	11.45	11.12	10.85	10.63	10.46	10.24	10.08	9.91	9.80
45.0	12.94	11.67	11.34	11.07	10.90	10.63	10.46	10.30	10.19
90.0	13.76	12.00	11.62	11.23	11.01	10.74	10.57	10.41	10.24
135.0	13.27	11.89	11.45	11.23	10.85	10.68	10.52	10.35	10.19
180.0	12.28	11.12	10.85	10.63	10.41	10.24	10.08	9.97	9.86
225.0	11.23	10.96	10.74	10.57	10.41	10.24	10.02	9.97	9.86
270.0	11.51	11.23	10.85	10.74	10.52	10.35	10.19	10.13	9.91
315.0	11.07	10.85	10.57	10.30	10.19	10.02	9.91	9.80	9.74
360.0	11.45	11.12	10.85	10.63	10.46	10.24	10.08	9.91	9.80
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.69	9.58	9.52	9.41	9.36	9.30	9.30	9.19	9.19
45.0	10.08	10.08	9.91	9.74	9.69	9.58	9.47	9.47	9.41
90.0	10.02	9.97	9.86	9.74	9.69	9.58	9.52	9.41	9.41
135.0	10.02	9.86	9.74	9.69	9.63	9.52	9.47	9.36	9.30
180.0	9.74	9.63	9.30	9.41	9.36	9.41	9.25	9.14	9.14
225.0	9.74	9.63	9.69	9.52	9.47	9.41	9.36	9.30	9.25
270.0	9.86	9.74	9.69	9.63	9.52	9.36	9.41	9.30	9.30
315.0	9.58	9.52	9.47	9.36	9.36	9.36	9.19	9.14	9.14
360.0	9.69	9.58	9.52	9.41	9.36	9.30	9.30	9.19	9.19
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.14	9.08	9.03	8.97	8.92	8.97	8.92	8.86	8.92
45.0	9.41	9.36	9.30	9.25	9.25	9.19	9.14	9.14	9.19
90.0	9.36	9.30	9.25	9.19	9.19	9.14	9.14	9.03	9.08
135.0	9.25	9.25	9.19	9.14	9.08	9.08	9.03	9.03	8.97
180.0	9.08	9.03	9.03	8.97	8.92	8.92	8.86	8.86	8.86
225.0	9.25	9.25	9.19	9.14	9.08	9.08	9.14	9.03	9.03
270.0	9.25	9.19	9.19	9.19	9.14	9.03	9.03	8.92	9.03
315.0	9.14	9.08	9.03	8.97	8.92	8.92	8.92	8.92	8.92
360.0	9.14	9.08	9.03	8.97	8.92	8.97	8.92	8.86	8.92
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.81	8.81	8.81	8.81	8.75	8.75	8.75	8.70	8.70
45.0	9.08	9.08	8.97	9.08	8.97	9.08	8.97	8.97	8.97
90.0	8.97	8.92	8.81	8.92	8.92	8.97	9.08	10.13	10.13
135.0	8.97	8.97	8.86	8.86	8.86	8.92	8.92	9.08	9.30
180.0	8.86	8.81	8.75	8.86	8.70	8.70	8.70	8.70	8.70
225.0	8.97	8.92	8.92	8.92	8.92	8.92	8.92	8.86	8.86
270.0	9.08	9.03	8.92	8.86	8.86	8.86	8.92	8.86	8.92
315.0	8.86	8.81	8.81	8.86	8.81	8.81	8.81	8.81	8.75
360.0	8.81	8.81	8.81	8.81	8.75	8.75	8.75	8.70	8.70
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.70	8.70	8.70	8.64	8.75	8.70	8.64	8.64	8.70
45.0	8.92	8.97	8.92	8.92	8.92	8.86	8.86	8.81	8.86
90.0	9.58	8.97	8.86	8.75	8.81	8.92	8.70	8.75	8.75
135.0	9.19	8.97	8.86	8.86	8.86	8.81	8.70	8.70	8.70
180.0	8.70	8.59	8.64	8.64	8.70	8.70	8.64	8.59	8.59
225.0	8.81	8.81	8.86	8.86	8.81	8.75	8.75	8.92	8.81
270.0	8.92	8.81	8.86	8.86	8.92	8.75	8.75	8.75	8.75
315.0	8.75	8.75	8.75	8.70	8.75	8.70	8.64	8.70	8.64
360.0	8.70	8.70	8.70	8.64	8.75	8.70	8.64	8.64	8.70

Intensity data(cd)

C/γ(°)	90.0
0.0	8.64
45.0	8.81
90.0	8.86
135.0	8.70
180.0	8.53
225.0	8.81
270.0	8.75
315.0	8.64
360.0	8.64