
Nata

LumCAT: 2-1672-M
Luminaire: 92.70.131.00
Report No: NT2017061702
Test No: GC2017061702
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2479.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 34.7000
Current(A): 0.5000
Power (W): 17.3500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 2241.92
Efficiency(%): 90.44%
Lumens(lm)/Power(W): 129.22
Central intensity(cd): 8034.518
Maximum intensity(cd): 8034.518
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.6
 [C90/270]Total=25.6
Field angle(10%Imax): [C0/180]Total=59.4
 [C90/270]Total=59.4
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.44%
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	8034.518	0.000	0	.000%	.000%
1.0	8008.160	7.676	7.676	.310%	.342%
2.0	7937.688	22.887	30.563	.923%	1.363%
3.0	7817.458	37.681	68.244	1.520%	3.044%
4.0	7672.729	51.851	120.095	2.092%	5.357%
5.0	7504.669	65.292	185.387	2.634%	8.269%
6.0	7263.316	77.610	262.997	3.131%	11.731%
7.0	6978.261	88.397	351.394	3.566%	15.674%
8.0	6647.372	97.516	448.91	3.934%	20.023%
9.0	6224.677	104.321	553.231	4.208%	24.677%
10.0	5669.433	107.637	660.868	4.342%	29.478%
11.0	5142.612	108.035	768.903	4.358%	34.297%
12.0	4576.219	106.241	875.144	4.286%	39.036%
13.0	3856.907	100.080	975.224	4.037%	43.500%
14.0	3284.252	91.406	1066.63	3.687%	47.577%
15.0	2765.001	83.047	1149.677	3.350%	51.281%
16.0	2246.026	73.426	1223.102	2.962%	54.556%
17.0	1846.660	63.734	1286.836	2.571%	57.399%
18.0	1551.338	56.026	1342.862	2.260%	59.898%
19.0	1330.493	50.138	1393	2.023%	62.134%
20.0	1166.652	45.705	1438.705	1.844%	64.173%
21.0	1076.174	43.067	1481.772	1.737%	66.094%
22.0	1005.653	41.835	1523.607	1.688%	67.960%
23.0	963.115	41.310	1564.917	1.666%	69.803%
24.0	931.148	41.415	1606.332	1.671%	71.650%
25.0	901.927	41.680	1648.012	1.681%	73.509%
26.0	880.132	42.066	1690.078	1.697%	75.385%
27.0	859.926	42.571	1732.649	1.717%	77.284%
28.0	834.263	42.893	1775.542	1.730%	79.197%
29.0	815.702	43.168	1818.71	1.741%	81.123%
30.0	798.166	43.574	1862.284	1.758%	83.067%
31.0	769.475	43.625	1905.909	1.760%	85.012%
32.0	731.018	42.987	1948.897	1.734%	86.930%
33.0	686.257	41.753	1990.65	1.684%	88.792%
34.0	622.068	39.594	2030.244	1.597%	90.558%
35.0	544.838	36.240	2066.484	1.462%	92.175%
36.0	464.965	32.152	2098.636	1.297%	93.609%
37.0	379.786	27.551	2126.187	1.111%	94.838%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	300.381	22.703	2148.89	.916%	95.851%
39.0	212.311	17.500	2166.39	.706%	96.631%
40.0	147.001	12.532	2178.921	.506%	97.190%
41.0	96.610	8.675	2187.596	.350%	97.577%
42.0	54.877	5.504	2193.1	.222%	97.823%
43.0	30.081	3.147	2196.247	.127%	97.963%
44.0	20.839	1.922	2198.169	.078%	98.049%
45.0	17.914	1.489	2199.658	.060%	98.115%
46.0	14.913	1.284	2200.942	.052%	98.172%
47.0	13.097	1.114	2202.056	.045%	98.222%
48.0	11.968	1.013	2203.069	.041%	98.267%
49.0	10.970	0.942	2204.011	.038%	98.309%
50.0	10.571	0.898	2204.909	.036%	98.349%
51.0	10.316	0.884	2205.793	.036%	98.389%
52.0	10.020	0.873	2206.666	.035%	98.428%
53.0	9.876	0.865	2207.531	.035%	98.466%
54.0	9.773	0.866	2208.397	.035%	98.505%
55.0	9.635	0.866	2209.264	.035%	98.543%
56.0	9.552	0.867	2210.131	.035%	98.582%
57.0	9.456	0.869	2211	.035%	98.621%
58.0	9.387	0.871	2211.871	.035%	98.660%
59.0	9.311	0.874	2212.745	.035%	98.699%
60.0	9.249	0.877	2213.622	.035%	98.738%
61.0	9.181	0.880	2214.502	.035%	98.777%
62.0	9.160	0.884	2215.385	.036%	98.817%
63.0	9.119	0.889	2216.274	.036%	98.856%
64.0	9.064	0.892	2217.167	.036%	98.896%
65.0	9.029	0.895	2218.062	.036%	98.936%
66.0	8.981	0.899	2218.961	.036%	98.976%
67.0	8.954	0.902	2219.862	.036%	99.016%
68.0	8.905	0.905	2220.767	.036%	99.057%
69.0	8.905	0.909	2221.676	.037%	99.097%
70.0	8.857	0.912	2222.588	.037%	99.138%
71.0	8.857	0.916	2223.503	.037%	99.179%
72.0	8.837	0.920	2224.423	.037%	99.220%
73.0	8.837	0.924	2225.348	.037%	99.261%
74.0	8.823	0.928	2226.276	.037%	99.302%
75.0	8.816	0.932	2227.208	.038%	99.344%

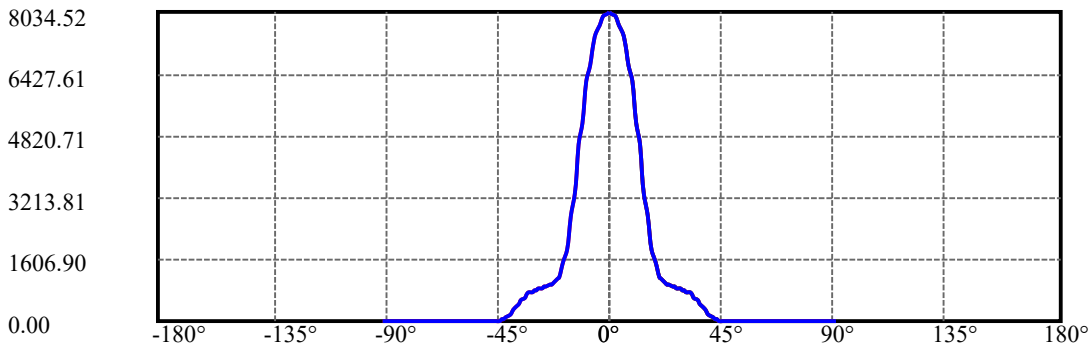
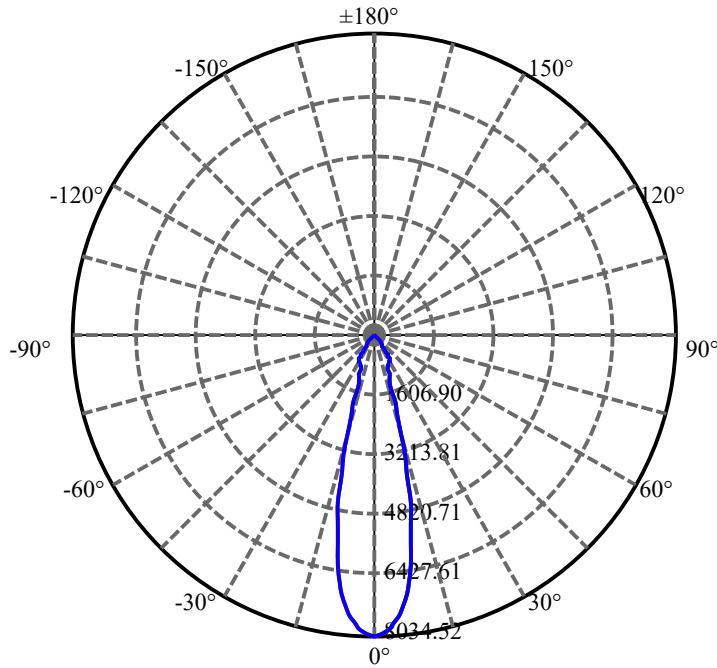
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.974	0.944	2228.152	.038%	99.386%
77.0	8.981	0.957	2229.11	.039%	99.429%
78.0	9.277	0.977	2230.087	.039%	99.472%
79.0	9.745	1.022	2231.109	.041%	99.518%
80.0	9.766	1.052	2232.161	.042%	99.565%
81.0	9.607	1.048	2233.209	.042%	99.612%
82.0	9.332	1.027	2234.236	.041%	99.657%
83.0	8.988	0.996	2235.232	.040%	99.702%
84.0	8.864	0.973	2236.204	.039%	99.745%
85.0	8.837	0.966	2237.17	.039%	99.788%
86.0	8.740	0.961	2238.131	.039%	99.831%
87.0	8.658	0.952	2239.083	.038%	99.874%
88.0	8.616	0.946	2240.029	.038%	99.916%
89.0	8.616	0.945	2240.974	.038%	99.958%
90.0	8.596	0.944	2241.918	.038%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1862.28	75.12%	83.07%
0-40	2178.92	87.90%	97.19%
0-60	2213.62	89.29%	98.74%
0-90	2240.97	90.40%	99.96%
0-120	2240.97	90.40%	99.96%
0-180	2241.92	90.44%	100.00%
60-90	28.23	1.14%	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%
0-28.42	1793.53	72.35%	80.00%

ZONAL LUMEN SUMMARY

0-10	660.87
10-20	777.84
20-30	423.58
30-40	316.64
40-50	25.99
50-60	8.71
60-70	8.97
70-80	9.57
80-90	8.81
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: —————

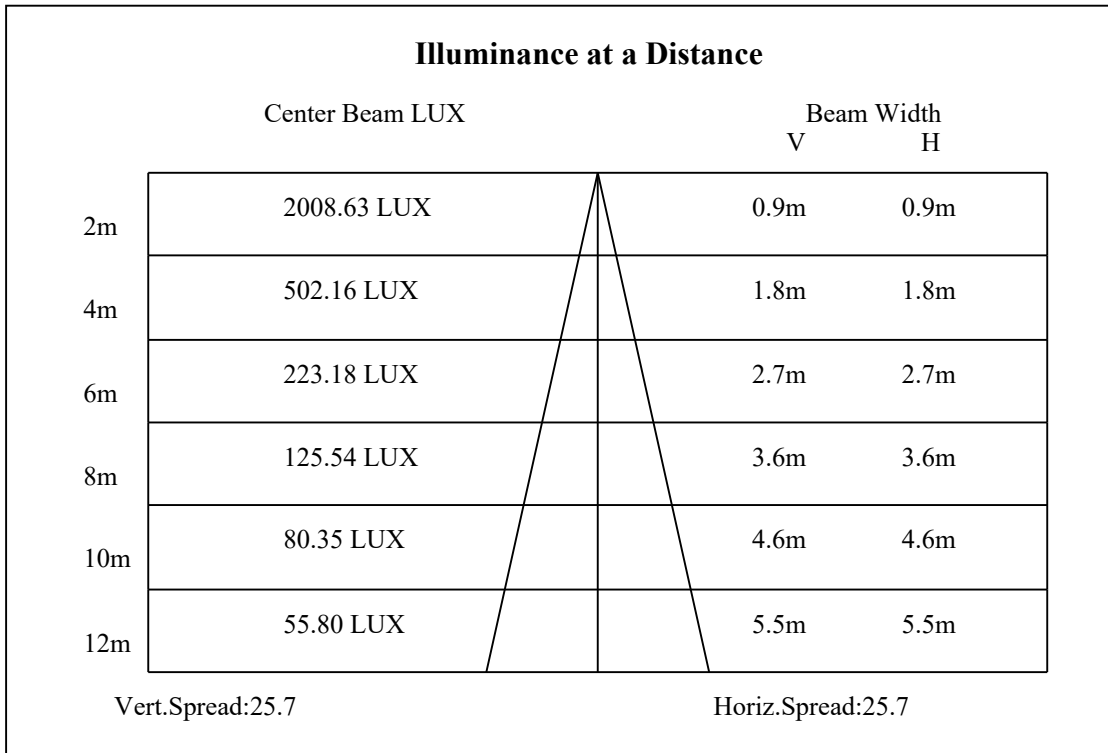
C90/C270: —————

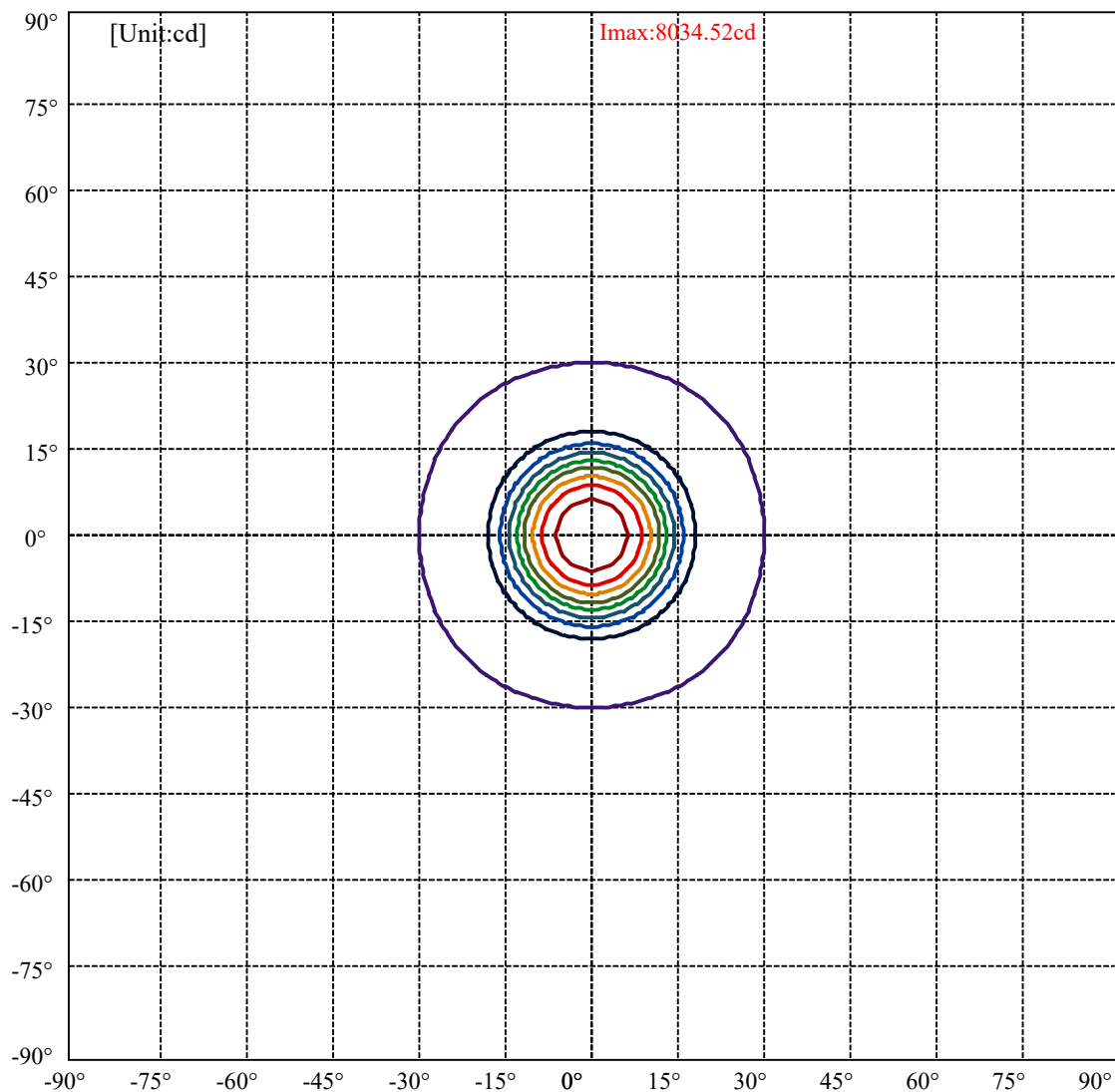
Field angle(10%Imax):C0/180Left:29.7 Right:29.7

:C90/270Left:29.7 Right:29.7

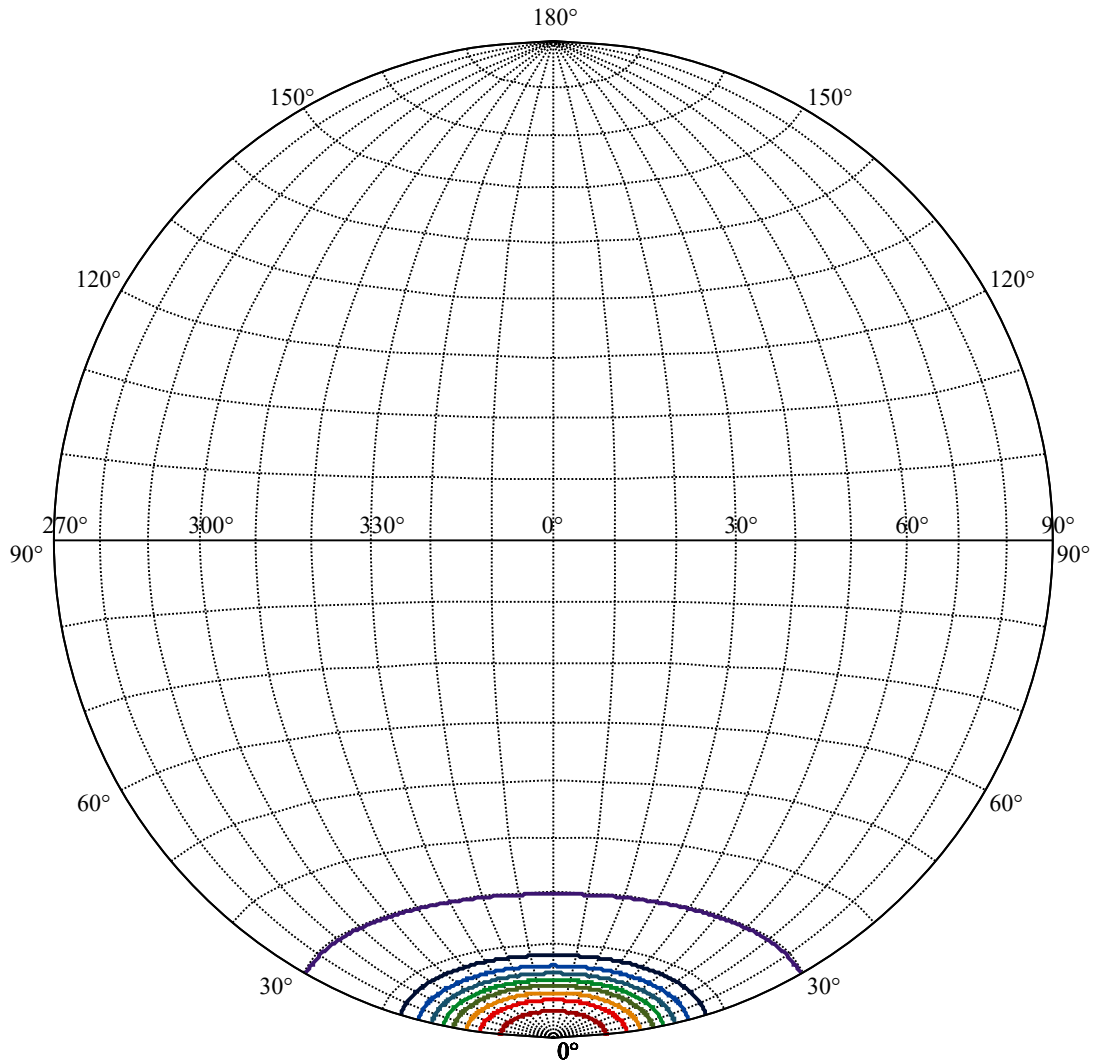
Beam Angle(50%Imax):C0/180Left:12.8 Right:12.8

:C90/270Left:12.8 Right:12.8





(10%Imax) 803.452	—
(20%Imax) 1606.9	—
(30%Imax) 2410.36	—
(40%Imax) 3213.81	—
(50%Imax) 4017.26	—
(60%Imax) 4820.71	—
(70%Imax) 5624.16	—
(80%Imax) 6427.61	—
(90%Imax) 7231.07	—



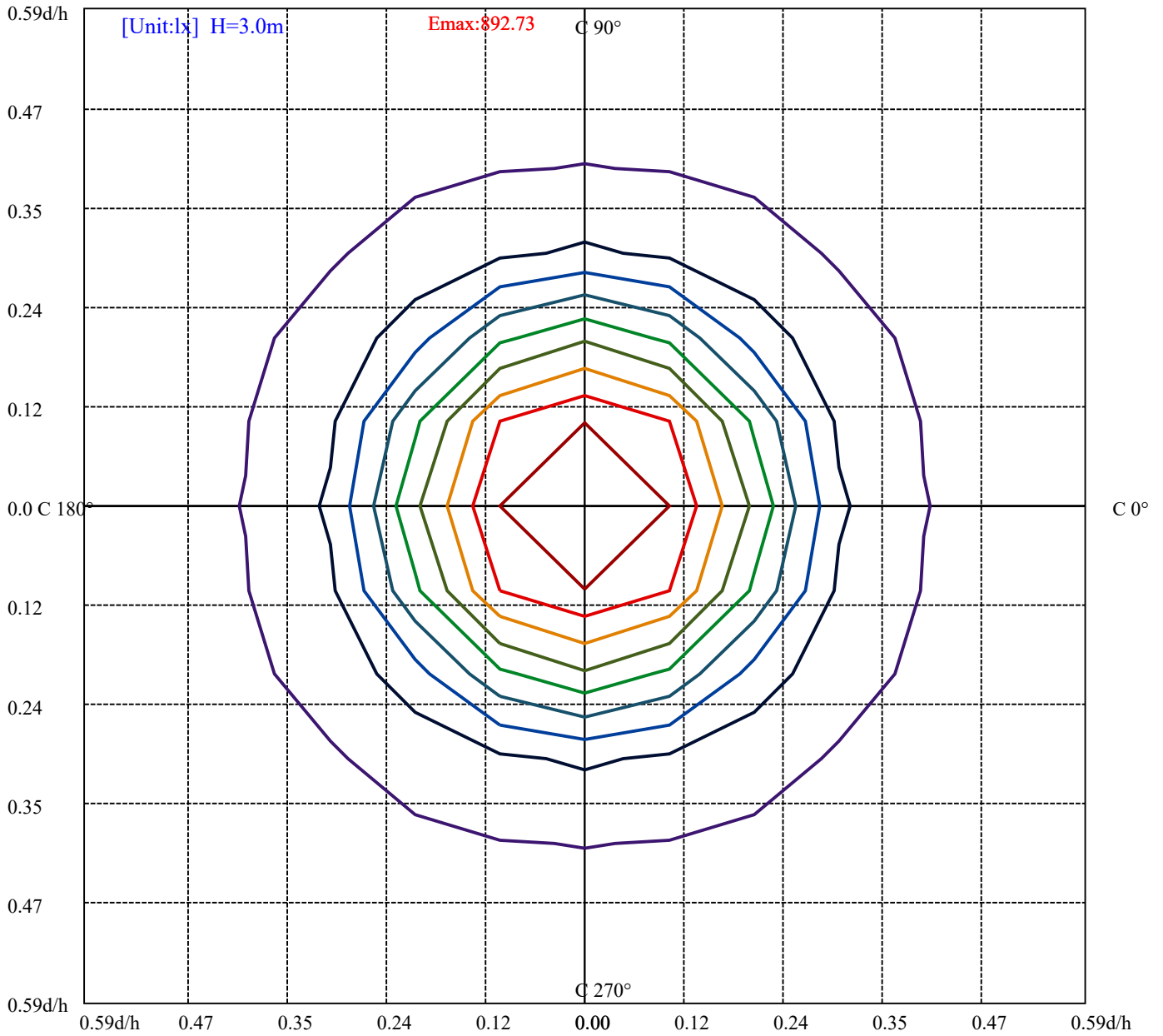
House

[Unit:cd]

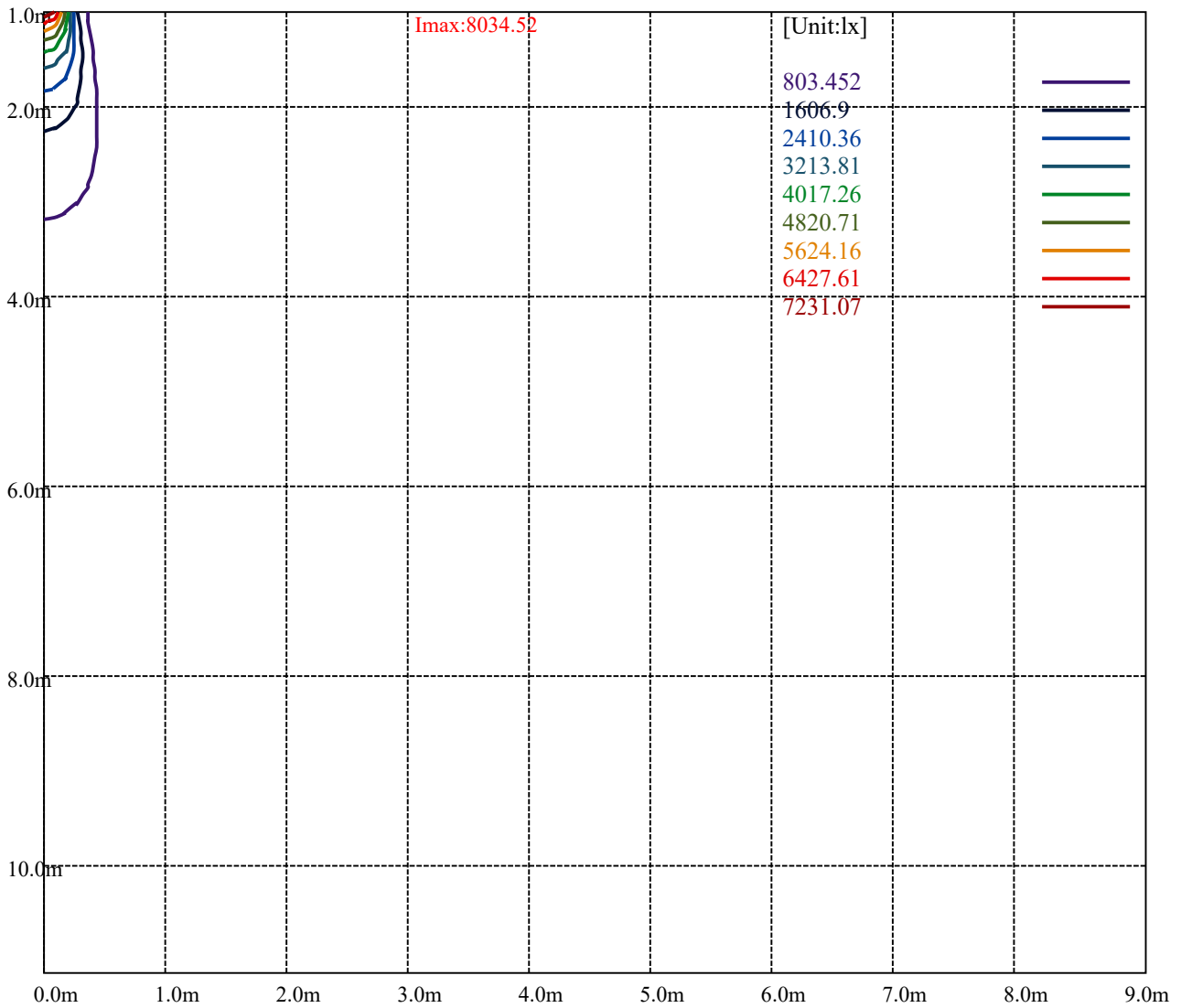
Road

Imax:8034.52

(10%Imax)	803.452	—
(20%Imax)	1606.9	—
(30%Imax)	2410.36	—
(40%Imax)	3213.81	—
(50%Imax)	4017.26	—
(60%Imax)	4820.71	—
(70%Imax)	5624.16	—
(80%Imax)	6427.61	—
(90%Imax)	7231.07	—



- (10%Emax) 89.27233
- (20%Emax) 178.5444
- (30%Emax) 267.8167
- (40%Emax) 357.09
- (50%Emax) 446.3622
- (60%Emax) 535.6345
- (70%Emax) 624.9067
- (80%Emax) 714.1789
- (90%Emax) 803.4511



Luminance Table

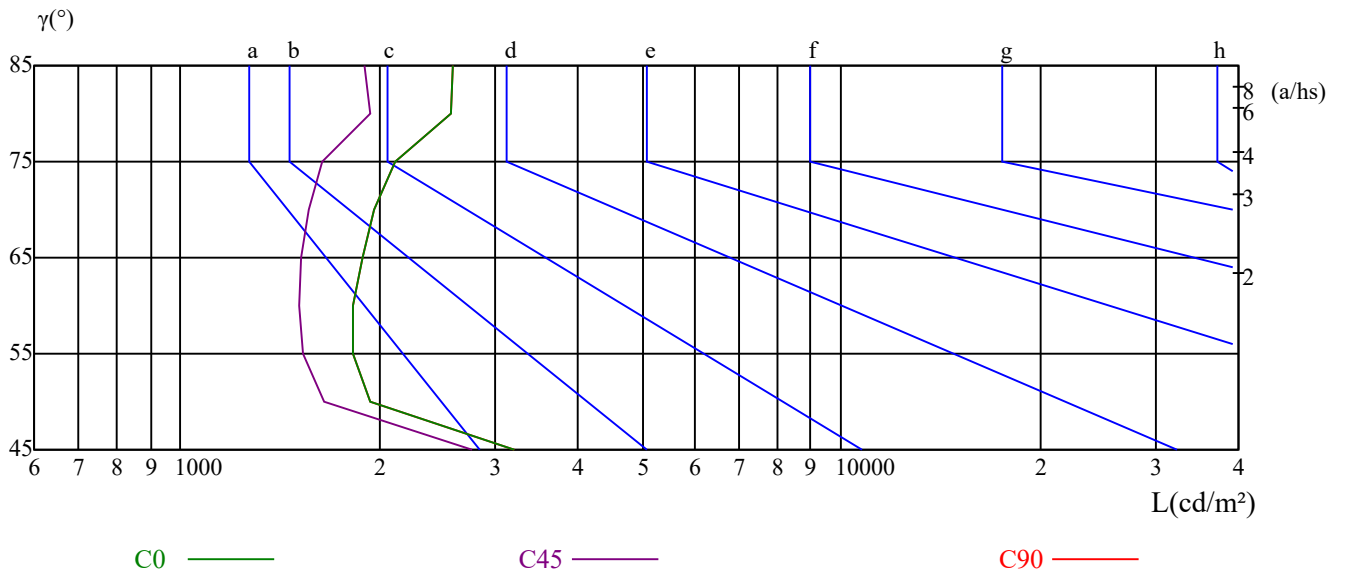
γ	45	50	55	60	65	70	75	80	85
C0	3203	1938	1826	1829	1882	1966	2111	2560	2580
C45	2767	1649	1530	1507	1523	1560	1639	1936	1893
C90	3203	1938	1826	1829	1882	1966	2111	2560	2580

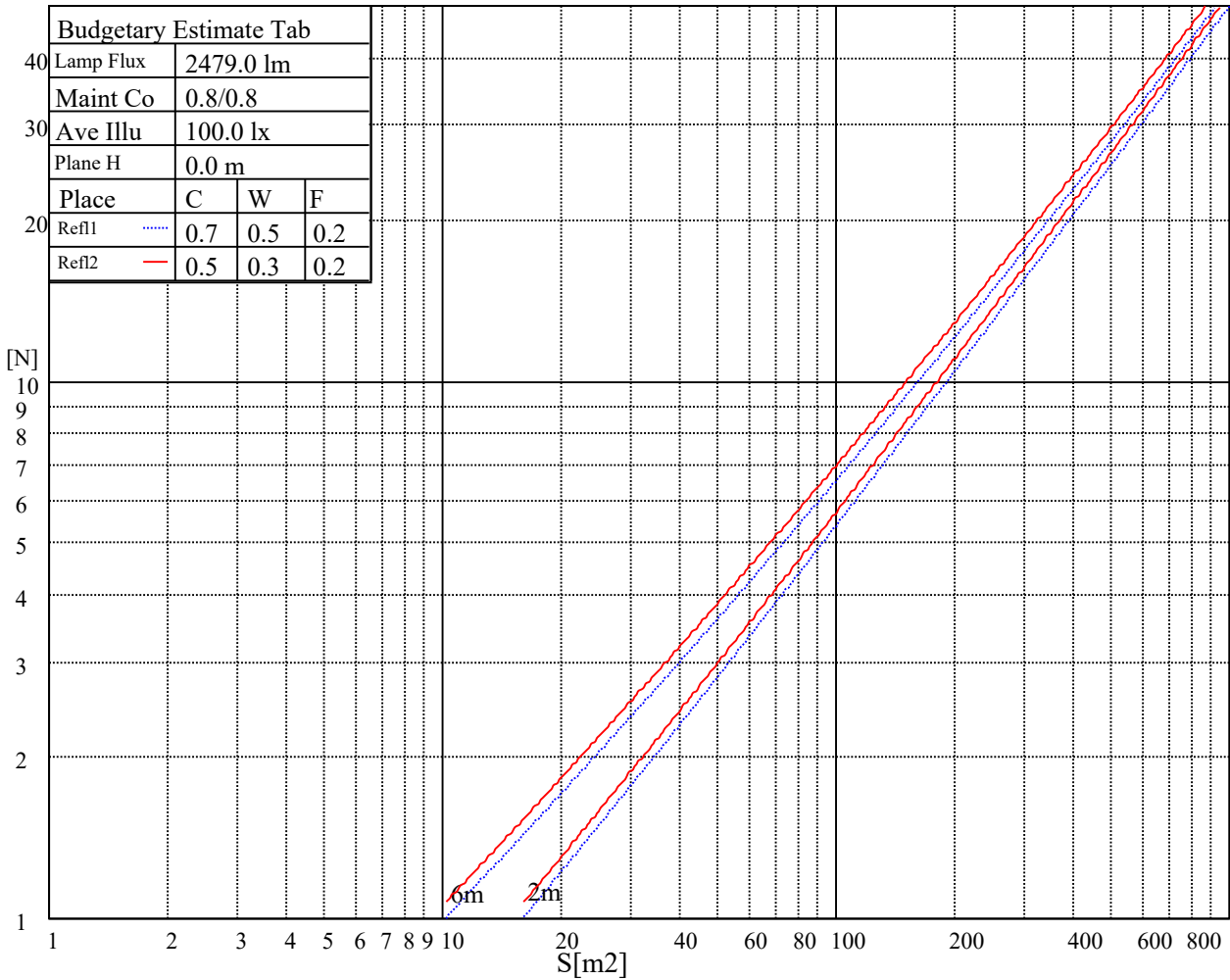
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4360	4360	4360	6951	6951	6951	20691	20691	20691

Glare Table

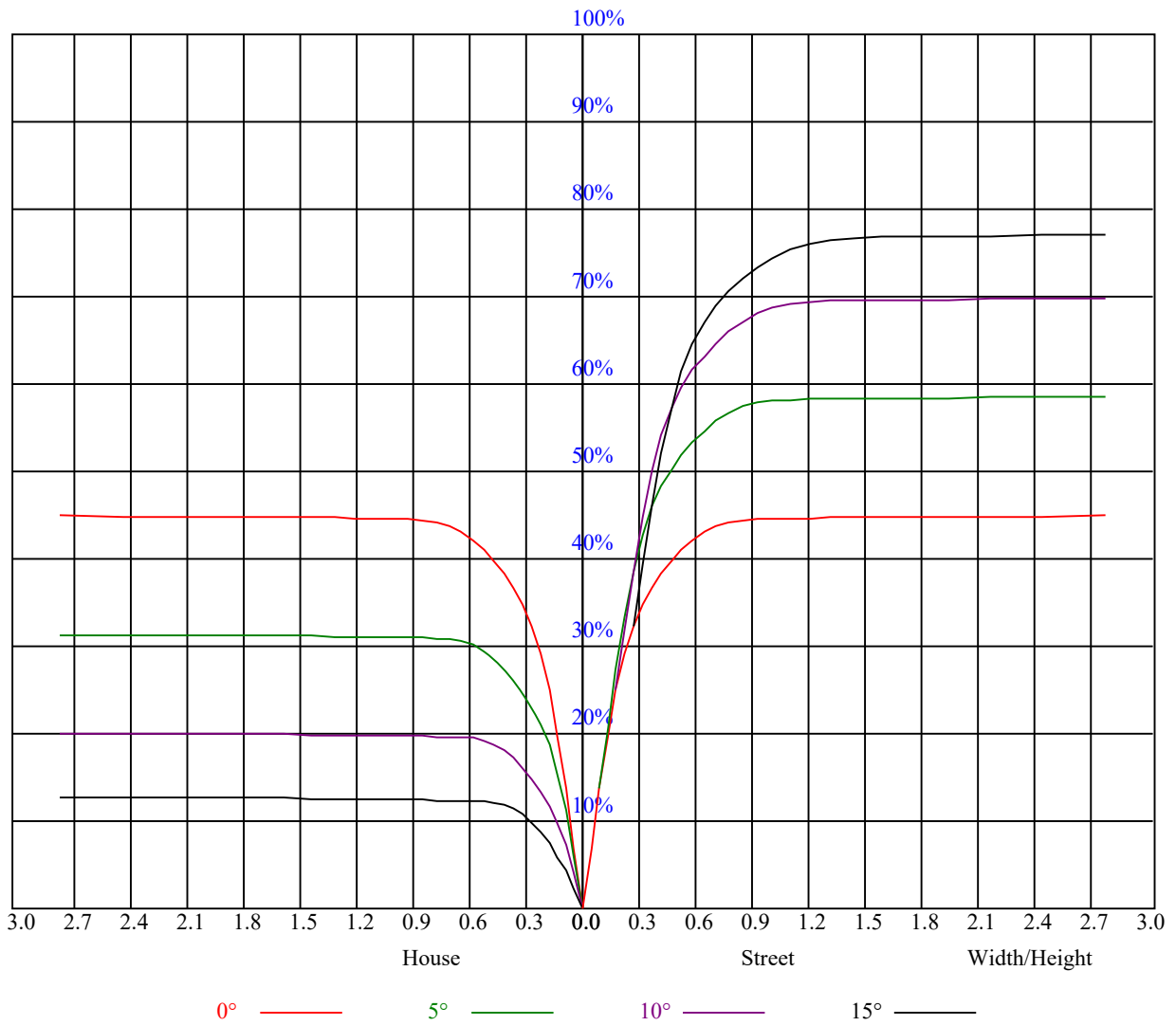
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	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	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.88	0.86
2	0.96	0.92	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.91	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	0.83	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
5	0.82	0.78	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.72
6	0.79	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.69
7	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
8	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64
9	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.68	0.65	0.62	0.61
10	0.68	0.63	0.61	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59



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	8072.37	7985.93	7861.50	7729.92	7554.84	7357.19	7075.85	6735.05	6363.42
45.0	8018.41	8099.35	8101.00	8028.87	7923.72	7795.44	7658.35	7462.90	7211.84
90.0	8056.95	8132.93	8136.23	8069.62	7974.92	7879.67	7722.76	7550.43	7314.79
135.0	7990.34	8101.00	8135.13	8102.10	8014.01	7927.02	7808.10	7645.68	7440.87
180.0	8072.37	8074.57	8026.12	7911.05	7810.85	7689.18	7496.48	7279.01	6995.47
225.0	8018.41	7900.04	7771.21	7574.11	7423.25	7203.58	6889.21	6495.00	6074.92
270.0	8056.95	7914.36	7747.54	7593.38	7383.06	7148.52	6822.04	6415.72	6002.80
315.0	7990.34	7857.10	7722.76	7530.61	7297.18	7036.76	6633.75	6242.29	5774.87
360.0	8072.37	7985.93	7861.50	7729.92	7554.84	7357.19	7075.85	6735.05	6363.42
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5867.91	5285.41	4715.03	4193.65	3384.32	2825.49	2394.95	1893.39	1567.46
45.0	6860.03	6445.45	5991.79	5462.15	4719.99	4108.86	3503.24	2799.62	2318.43
90.0	7024.65	6562.72	6106.31	5508.94	4838.91	4215.67	3518.10	2930.65	2349.81
135.0	7132.56	6763.13	6345.80	5917.46	5124.65	4490.40	3924.97	3159.14	2539.20
180.0	6649.71	6114.56	5591.53	4994.17	4233.29	3619.96	3026.45	2427.44	1944.04
225.0	5515.00	4871.39	4266.87	3584.17	3000.57	2422.48	1947.90	1624.16	1390.17
270.0	5506.74	4805.87	4214.02	3624.91	2906.43	2398.26	1980.38	1621.96	1368.70
315.0	5240.82	4506.92	3909.55	3324.31	2647.11	2192.90	1824.02	1511.85	1295.48
360.0	5867.91	5285.41	4715.03	4193.65	3384.32	2825.49	2394.95	1893.39	1567.46
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1385.77	1200.23	1091.77	1032.31	978.35	949.72	927.70	902.92	877.05
45.0	1927.52	1586.17	1351.08	1209.04	1097.82	1031.76	984.41	950.82	927.15
90.0	1933.03	1584.52	1364.85	1159.49	1080.81	1016.62	972.02	942.24	920.05
135.0	2134.54	1674.82	1401.19	1250.33	1105.53	1033.96	987.71	948.62	926.05
180.0	1622.51	1358.24	1093.64	1071.67	996.03	951.87	917.68	892.24	873.69
225.0	1096.94	1086.26	1014.80	961.78	927.37	905.13	886.19	857.78	837.68
270.0	1212.34	1096.17	1019.09	972.30	936.51	913.39	890.26	864.39	841.26
315.0	1098.04	1057.52	996.80	952.48	922.80	902.48	883.21	856.40	838.12
360.0	1385.77	1200.23	1091.77	1032.31	978.35	949.72	927.70	902.92	877.05
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	855.58	830.25	810.43	792.26	771.89	733.35	671.14	589.65	500.46
45.0	904.58	873.19	851.17	831.35	807.68	789.51	771.89	722.34	664.53
90.0	899.90	868.57	848.14	828.93	808.28	786.65	769.91	735.06	666.84
135.0	906.23	879.25	858.33	836.31	808.78	787.86	770.24	746.01	692.61
180.0	852.44	827.17	810.27	794.08	776.24	759.34	734.23	673.39	596.59
225.0	819.29	800.30	783.18	770.29	742.66	681.43	611.90	523.31	439.18
270.0	821.44	797.77	781.80	768.04	728.40	667.28	596.81	510.37	418.43
315.0	819.95	797.60	782.30	764.07	711.88	642.73	563.94	476.40	380.05
360.0	855.58	830.25	810.43	792.26	771.89	733.35	671.14	589.65	500.46
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	415.13	318.78	286.29	150.08	79.45	39.81	24.94	21.75	18.28
45.0	589.10	499.36	407.97	319.88	280.24	152.56	81.15	40.36	25.11
90.0	596.59	510.10	428.72	335.46	246.05	168.97	101.30	43.16	26.10
135.0	625.99	540.10	465.78	368.33	280.79	234.21	115.56	56.21	29.90
180.0	521.00	432.69	349.11	256.84	171.28	103.07	51.09	26.37	23.29
225.0	344.05	249.74	171.83	98.22	44.93	25.88	22.68	18.50	15.42
270.0	333.64	281.34	159.66	95.25	39.15	23.84	20.70	17.12	14.15
315.0	294.22	206.19	133.68	74.44	34.13	24.56	21.58	17.18	14.48
360.0	415.13	318.78	286.29	150.08	79.45	39.81	24.94	21.75	18.28

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	14.98	12.77	11.84	11.34	10.74	10.24	10.08	9.97	9.80
45.0	22.24	18.61	15.69	13.87	12.06	11.45	10.90	10.41	10.24
90.0	23.12	18.61	15.31	13.38	11.84	11.18	10.85	10.13	10.02
135.0	24.33	19.32	15.36	12.99	11.56	11.07	10.63	10.24	10.02
180.0	19.66	15.14	13.54	12.39	10.68	10.41	10.19	9.97	9.86
225.0	13.21	11.73	11.23	10.85	10.52	10.24	10.13	9.97	9.86
270.0	12.50	11.40	11.07	10.63	10.30	10.08	9.97	9.80	9.69
315.0	13.27	11.73	10.74	10.30	10.08	9.91	9.80	9.69	9.52
360.0	14.98	12.77	11.84	11.34	10.74	10.24	10.08	9.97	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	9.52	9.47	9.36	9.30	9.36	9.14	9.14	9.08
45.0	10.08	9.97	9.86	9.80	9.69	9.58	9.47	9.41	9.36
90.0	9.91	9.74	9.69	9.52	9.47	9.36	9.30	9.25	9.19
135.0	9.91	9.74	9.63	9.52	9.47	9.36	9.30	9.19	9.19
180.0	9.69	9.58	9.47	9.41	9.25	9.25	9.19	9.08	9.08
225.0	9.74	9.63	9.52	9.47	9.41	9.30	9.25	9.19	9.19
270.0	9.63	9.52	9.47	9.36	9.30	9.19	9.25	9.14	9.14
315.0	9.52	9.36	9.30	9.19	9.19	9.08	9.08	9.03	9.03
360.0	9.69	9.52	9.47	9.36	9.30	9.36	9.14	9.14	9.08
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.03	9.03	8.97	8.92	8.86	8.86	8.92	8.81	8.81
45.0	9.30	9.30	9.25	9.19	9.19	8.86	9.03	9.03	9.03
90.0	9.19	9.08	9.08	9.03	9.03	8.97	8.97	8.86	8.92
135.0	9.14	9.08	9.08	9.03	9.03	8.97	8.92	8.86	8.86
180.0	9.08	9.03	8.92	8.86	8.86	8.86	8.75	8.81	8.75
225.0	9.14	9.08	9.08	9.03	8.97	8.97	8.97	8.92	8.92
270.0	9.08	8.97	8.97	8.92	8.86	8.92	8.86	8.81	8.86
315.0	8.97	8.92	8.86	8.86	8.81	8.81	8.81	8.75	8.70
360.0	9.03	9.03	8.97	8.92	8.86	8.86	8.92	8.81	8.81
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.75	8.75	8.75	8.75	8.70	8.81	9.08	8.86	8.75
45.0	9.03	9.03	9.03	8.92	8.92	8.97	10.30	11.40	11.23
90.0	8.86	8.86	8.81	8.81	8.86	8.92	9.91	12.28	12.50
135.0	8.86	8.86	8.86	8.86	9.03	8.86	9.03	9.91	10.41
180.0	8.75	8.75	8.75	8.75	8.70	8.70	8.75	8.97	8.92
225.0	8.92	8.86	8.86	8.92	10.13	10.08	9.69	9.08	8.86
270.0	8.81	8.81	8.75	8.75	8.75	8.81	8.75	8.75	8.75
315.0	8.70	8.75	8.75	8.75	8.70	8.70	8.70	8.70	8.70
360.0	8.75	8.75	8.75	8.75	8.70	8.81	9.08	8.86	8.75
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.81	8.75	8.70	8.64	8.64	8.64	8.59	8.53	8.59
45.0	10.79	10.02	9.36	9.03	8.86	8.81	8.75	8.75	8.70
90.0	12.00	11.23	9.86	9.41	9.36	8.97	8.75	8.64	8.64
135.0	10.30	9.86	9.14	9.03	9.03	8.92	8.70	8.59	8.59
180.0	8.81	8.64	8.64	8.64	8.64	8.64	8.59	8.53	8.53
225.0	8.75	8.81	8.81	8.75	8.75	8.70	8.70	8.70	8.64
270.0	8.70	8.70	8.70	8.70	8.75	8.64	8.64	8.64	8.64
315.0	8.70	8.64	8.70	8.70	8.64	8.59	8.53	8.53	8.59
360.0	8.81	8.75	8.70	8.64	8.64	8.64	8.59	8.53	8.59

Intensity data(cd)

C/ γ (°)	90.0
0.0	8.53
45.0	8.70
90.0	8.59
135.0	8.59
180.0	8.53
225.0	8.64
270.0	8.59
315.0	8.59
360.0	8.53