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Nata

LumCAT: LN01D05015DA-N

Luminaire: 97.70.234.00

Report No: 210104-B011

Test No: 210104-C011

LampCAT: BRIDGELUX V10 LES10.2

Lamp flux(lm): 1791.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 34.6300

Current(A): 0.3800

Power (W): 13.1590

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

Photometric Results

Lumens(lm): 1582.63

Efficiency(%): 88.37%

Lumens(lm)/Power(W): 120.27

Central intensity(cd): 9326.531

Maximum intensity(cd): 9326.531

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=38.9

[C90/270]Total=38.9

Maximum s/h(1/2): C0_180=0.34 C90_270=0.34

Maximum s/h(1/4): C0_180=0.35 C90_270=0.35

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.37%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.684%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9326.531	0.000	0	.000%	.000%
1.0	9266.836	8.897	8.897	.497%	.562%
2.0	9038.672	26.274	35.17	1.467%	2.222%
3.0	8709.398	42.448	77.618	2.370%	4.904%
4.0	8310.234	56.970	134.588	3.181%	8.504%
5.0	7732.125	69.013	203.601	3.853%	12.865%
6.0	7137.633	78.145	281.746	4.363%	17.802%
7.0	6538.711	84.889	366.635	4.740%	23.166%
8.0	5859.563	88.732	455.367	4.954%	28.773%
9.0	5211.352	89.724	545.091	5.010%	34.442%
10.0	4603.500	88.821	633.911	4.959%	40.054%
11.0	3982.430	85.791	719.703	4.790%	45.475%
12.0	3456.914	81.323	801.025	4.541%	50.613%
13.0	2946.375	75.991	877.016	4.243%	55.415%
14.0	2448.773	69.057	946.074	3.856%	59.778%
15.0	2089.266	62.300	1008.374	3.479%	63.715%
16.0	1760.977	56.417	1064.791	3.150%	67.280%
17.0	1427.407	49.652	1114.442	2.772%	70.417%
18.0	1149.750	42.492	1156.934	2.373%	73.102%
19.0	1017.000	37.697	1194.631	2.105%	75.484%
20.0	834.026	33.879	1228.51	1.892%	77.624%
21.0	691.643	29.296	1257.806	1.636%	79.475%
22.0	586.519	25.685	1283.491	1.434%	81.098%
23.0	490.816	22.605	1306.097	1.262%	82.527%
24.0	412.158	19.742	1325.839	1.102%	83.774%
25.0	351.239	17.358	1343.197	.969%	84.871%
26.0	305.951	15.513	1358.71	.866%	85.851%
27.0	258.898	13.819	1372.529	.772%	86.724%
28.0	223.193	12.206	1384.734	.681%	87.496%
29.0	193.542	10.903	1395.637	.609%	88.184%
30.0	169.861	9.812	1405.449	.548%	88.804%
31.0	150.813	8.924	1414.373	.498%	89.368%
32.0	134.297	8.168	1422.541	.456%	89.884%
33.0	121.085	7.524	1430.065	.420%	90.360%
34.0	110.334	7.003	1437.068	.391%	90.802%
35.0	100.561	6.550	1443.618	.366%	91.216%
36.0	91.645	6.120	1449.738	.342%	91.603%
37.0	84.741	5.753	1455.491	.321%	91.966%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	78.258	5.441	1460.931	.304%	92.310%
39.0	71.655	5.117	1466.048	.286%	92.633%
40.0	66.698	4.825	1470.873	.269%	92.938%
41.0	61.959	4.581	1475.455	.256%	93.228%
42.0	57.178	4.328	1479.783	.242%	93.501%
43.0	53.065	4.084	1483.867	.228%	93.759%
44.0	49.359	3.866	1487.733	.216%	94.004%
45.0	45.598	3.649	1491.382	.204%	94.234%
46.0	42.405	3.442	1494.824	.192%	94.452%
47.0	39.558	3.260	1498.084	.182%	94.658%
48.0	36.921	3.092	1501.175	.173%	94.853%
49.0	34.763	2.944	1504.119	.164%	95.039%
50.0	32.646	2.810	1506.93	.157%	95.217%
51.0	30.881	2.688	1509.617	.150%	95.386%
52.0	29.433	2.588	1512.205	.145%	95.550%
53.0	28.013	2.499	1514.704	.140%	95.708%
54.0	26.705	2.412	1517.116	.135%	95.860%
55.0	25.615	2.335	1519.451	.130%	96.008%
56.0	24.574	2.268	1521.719	.127%	96.151%
57.0	23.520	2.199	1523.918	.123%	96.290%
58.0	22.620	2.134	1526.052	.119%	96.425%
59.0	21.832	2.078	1528.13	.116%	96.556%
60.0	20.953	2.021	1530.151	.113%	96.684%
61.0	20.180	1.963	1532.114	.110%	96.808%
62.0	19.526	1.913	1534.028	.107%	96.929%
63.0	18.837	1.866	1535.893	.104%	97.047%
64.0	18.218	1.818	1537.712	.102%	97.162%
65.0	17.698	1.777	1539.489	.099%	97.274%
66.0	17.191	1.741	1541.23	.097%	97.384%
67.0	16.784	1.708	1542.938	.095%	97.492%
68.0	16.566	1.689	1544.628	.094%	97.599%
69.0	16.784	1.701	1546.329	.095%	97.706%
70.0	17.283	1.750	1548.078	.098%	97.817%
71.0	18.021	1.825	1549.903	.102%	97.932%
72.0	19.118	1.931	1551.834	.108%	98.054%
73.0	20.081	2.050	1553.884	.114%	98.183%
74.0	21.080	2.164	1556.048	.121%	98.320%
75.0	22.310	2.293	1558.341	.128%	98.465%

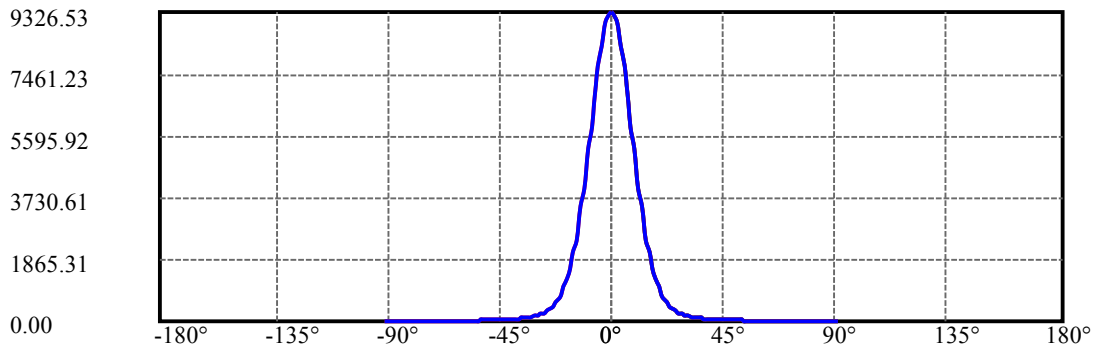
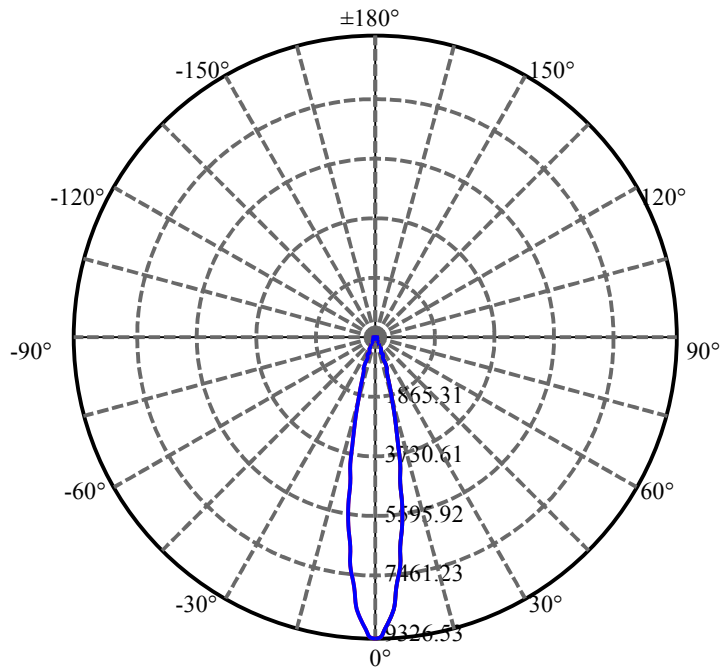
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	23.041	2.407	1560.748	.134%	98.617%
77.0	23.288	2.470	1563.218	.138%	98.773%
78.0	23.098	2.483	1565.701	.139%	98.930%
79.0	22.177	2.433	1568.134	.136%	99.084%
80.0	20.503	2.301	1570.435	.128%	99.229%
81.0	18.134	2.089	1572.524	.117%	99.361%
82.0	15.687	1.834	1574.358	.102%	99.477%
83.0	12.959	1.557	1575.915	.087%	99.575%
84.0	10.716	1.290	1577.205	.072%	99.657%
85.0	9.598	1.109	1578.314	.062%	99.727%
86.0	8.339	0.980	1579.294	.055%	99.789%
87.0	7.882	0.888	1580.182	.050%	99.845%
88.0	7.530	0.844	1581.026	.047%	99.898%
89.0	7.298	0.813	1581.839	.045%	99.950%
90.0	7.207	0.795	1582.634	.044%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1405.45	78.47%	88.80%
0-40	1470.87	82.13%	92.94%
0-60	1530.15	85.44%	96.68%
0-90	1581.84	88.32%	99.95%
0-120	1581.84	88.32%	99.95%
0-180	1582.63	88.37%	100.00%
60-90	53.71	3.00%	3.39%
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%
0-21.32	1266.11	70.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	633.91
10-20	594.60
20-30	176.94
30-40	65.42
40-50	36.06
50-60	23.22
60-70	17.93
70-80	22.36
80-90	11.40
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): —————

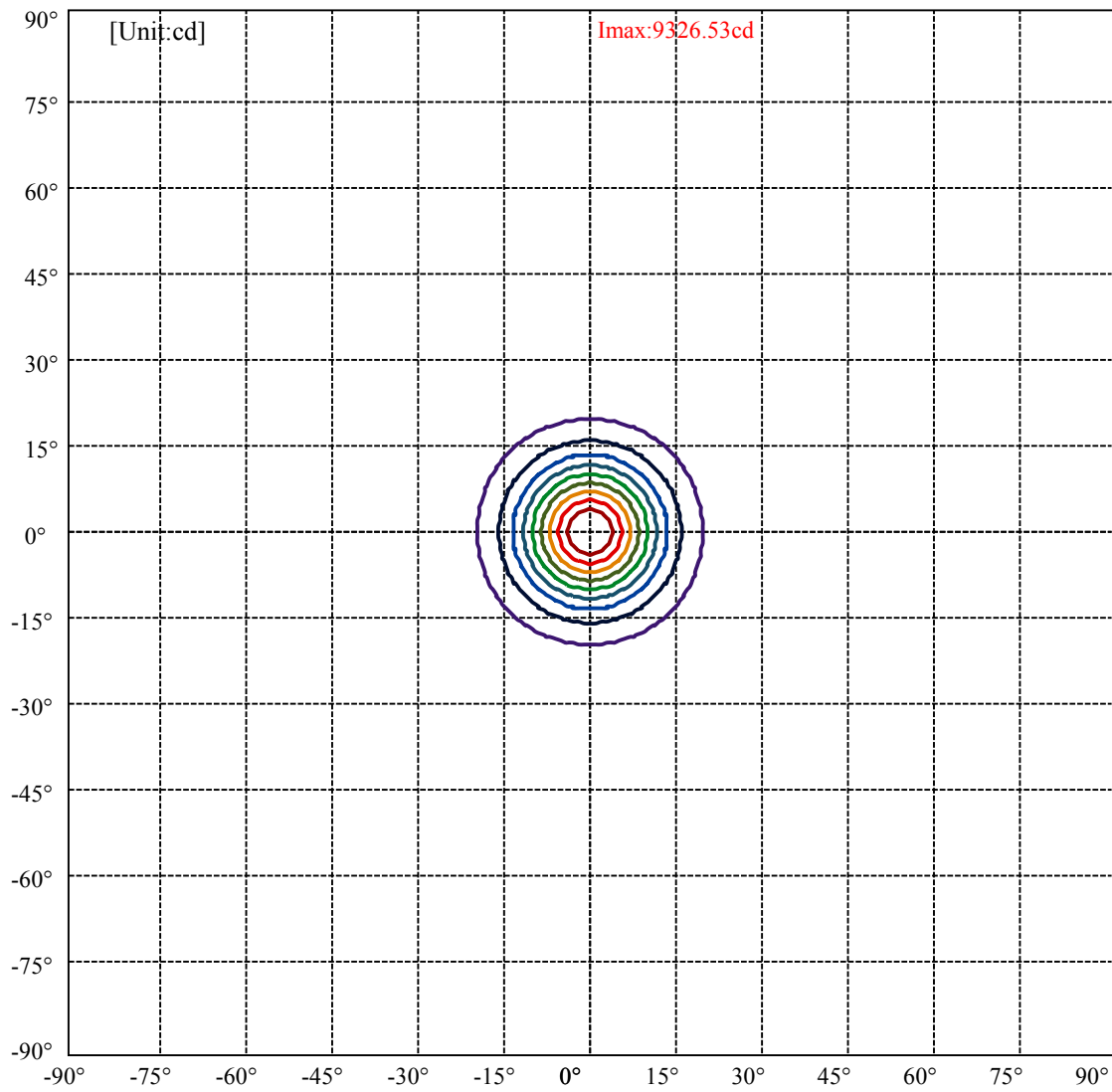
C0/C180: —————

C90/C270: —————

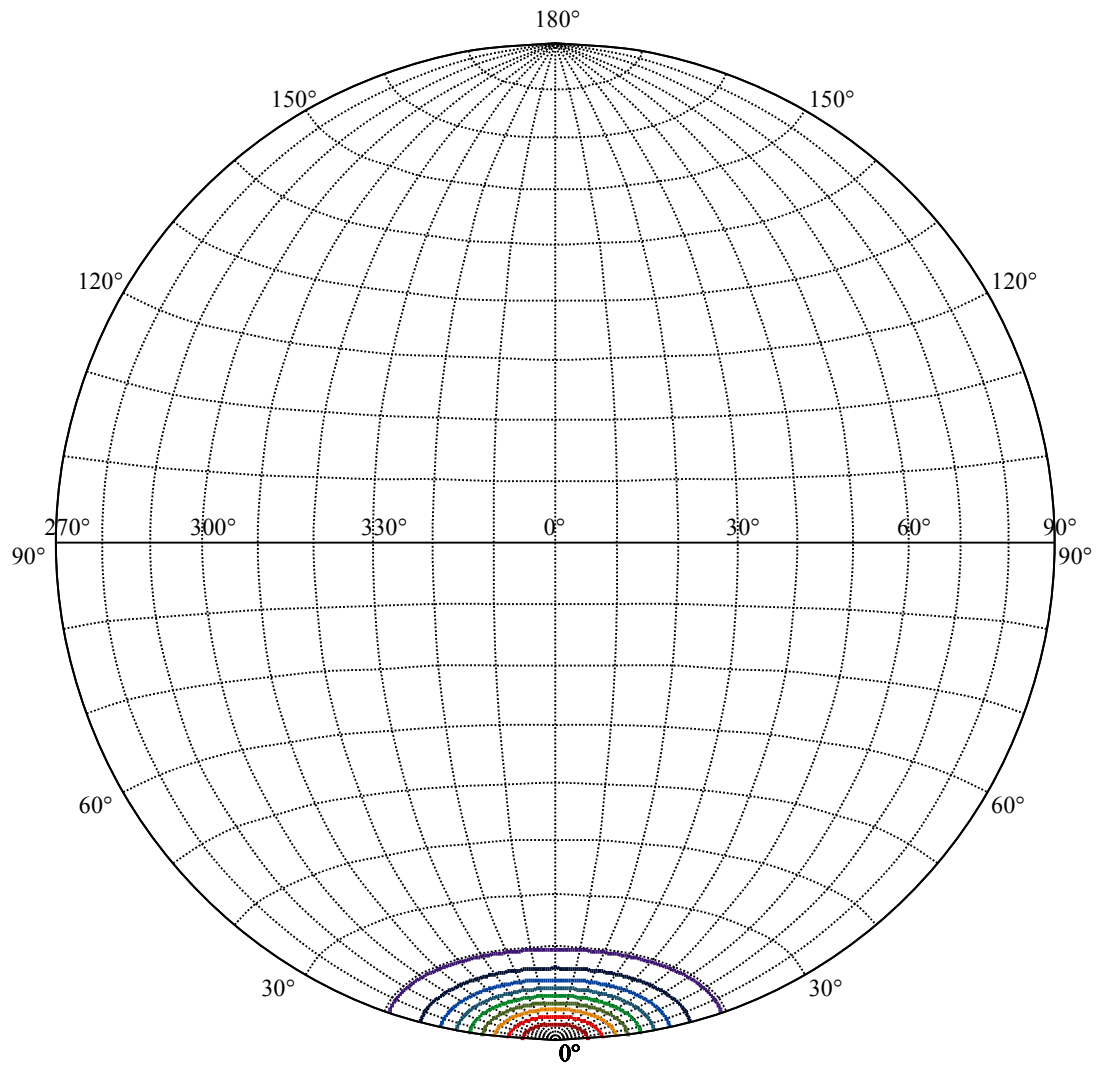
Field angle(10%Imax):C0/180Left:19.5 Right:19.5
:C90/270Left:19.5 Right:19.5

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

ISO-Intensity(V-H)



(10%Imax) 932.653	—
(20%Imax) 1865.31	—
(30%Imax) 2797.96	—
(40%Imax) 3730.61	—
(50%Imax) 4663.27	—
(60%Imax) 5595.92	—
(70%Imax) 6528.57	—
(80%Imax) 7461.23	—
(90%Imax) 8393.88	—



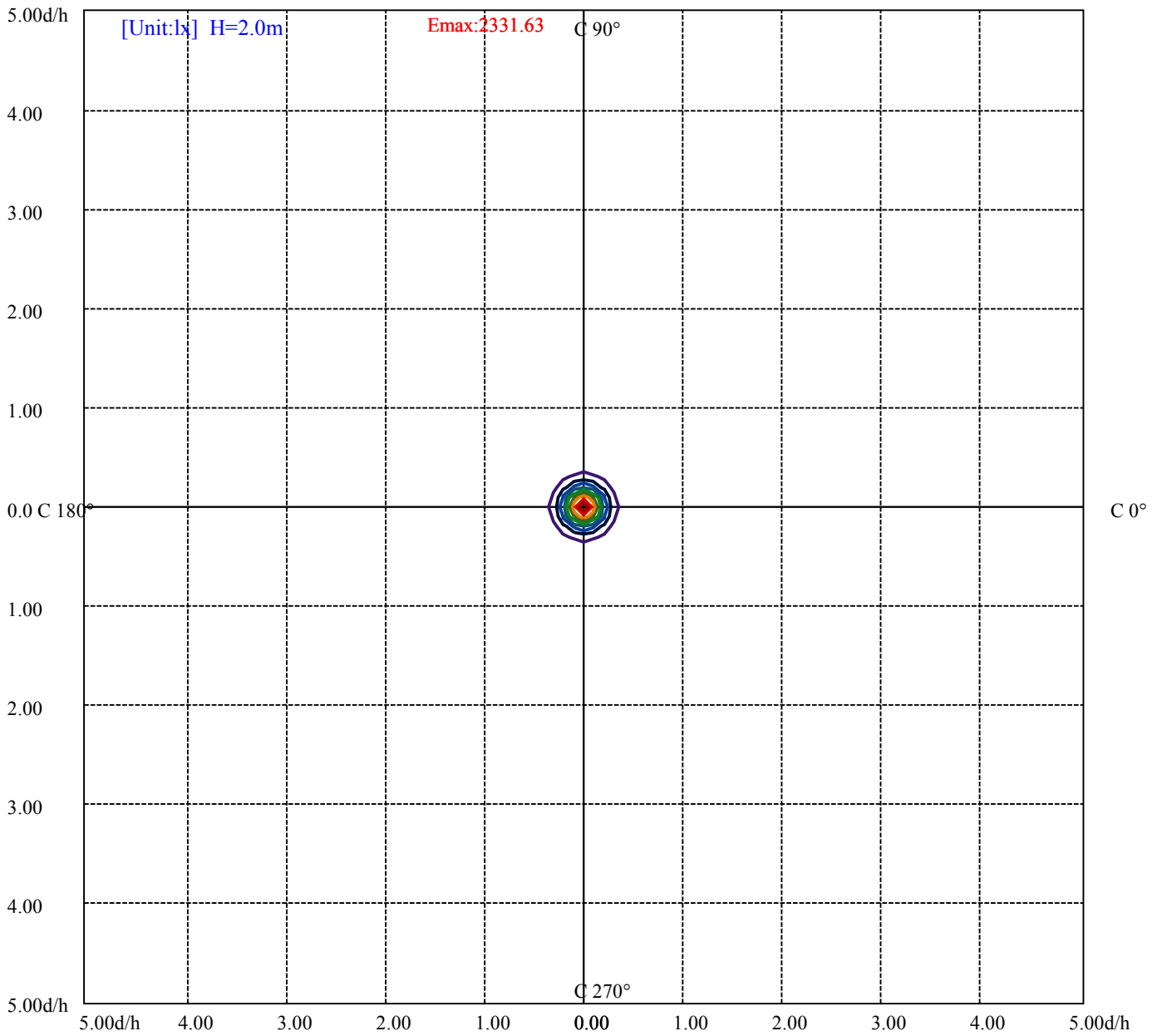
House

[Unit:cd]

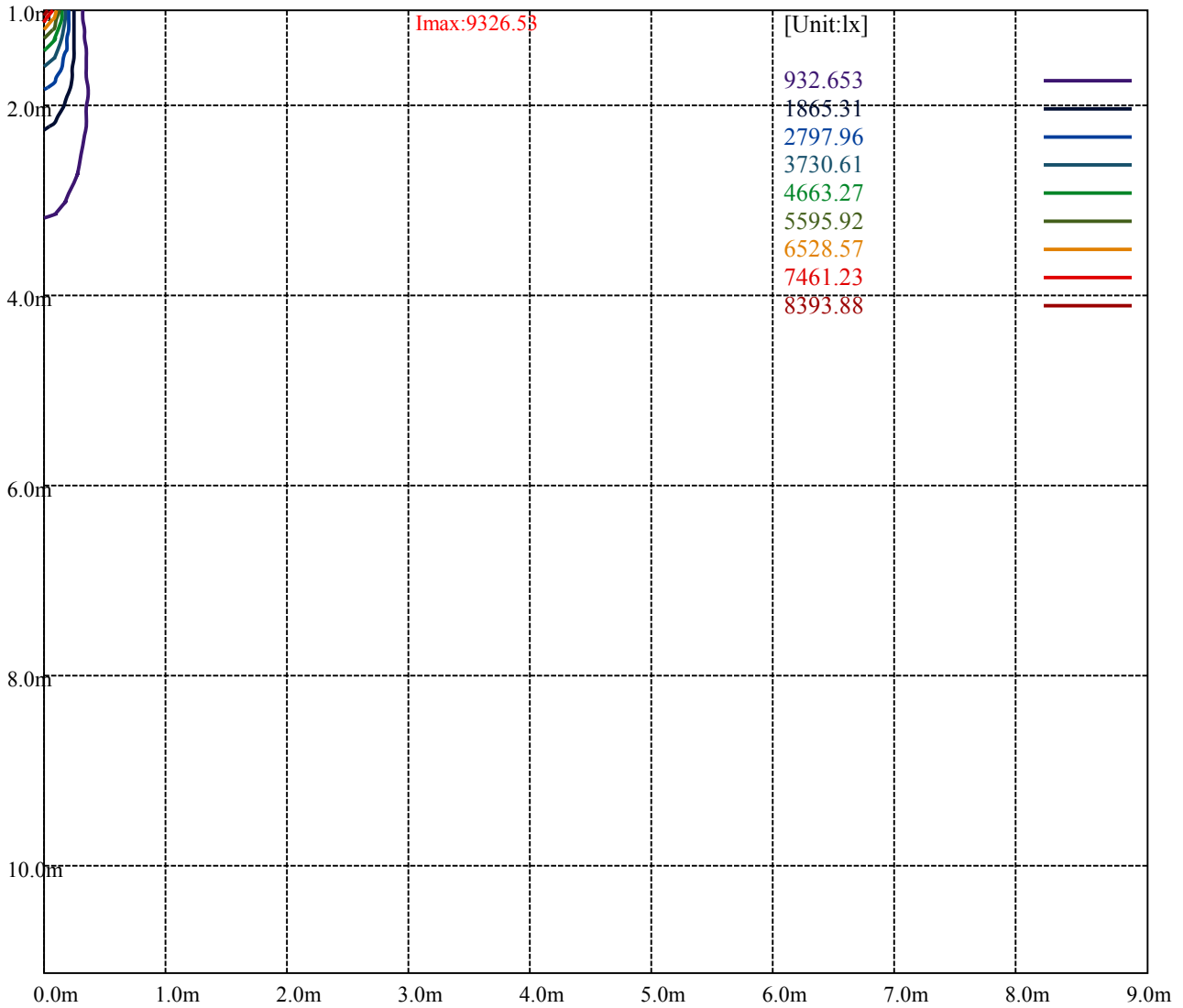
Road

Imax:9326.53

(10%Imax) 932.653	—
(20%Imax) 1865.31	—
(30%Imax) 2797.96	—
(40%Imax) 3730.61	—
(50%Imax) 4663.27	—
(60%Imax) 5595.92	—
(70%Imax) 6528.57	—
(80%Imax) 7461.23	—
(90%Imax) 8393.88	—



(10%Emax) 233.163	—
(20%Emax) 466.325	—
(30%Emax) 699.49	—
(40%Emax) 932.6525	—
(50%Emax) 1165.815	—
(60%Emax) 1398.978	—
(70%Emax) 1632.142	—
(80%Emax) 1865.305	—
(90%Emax) 2098.468	—



Luminance Table

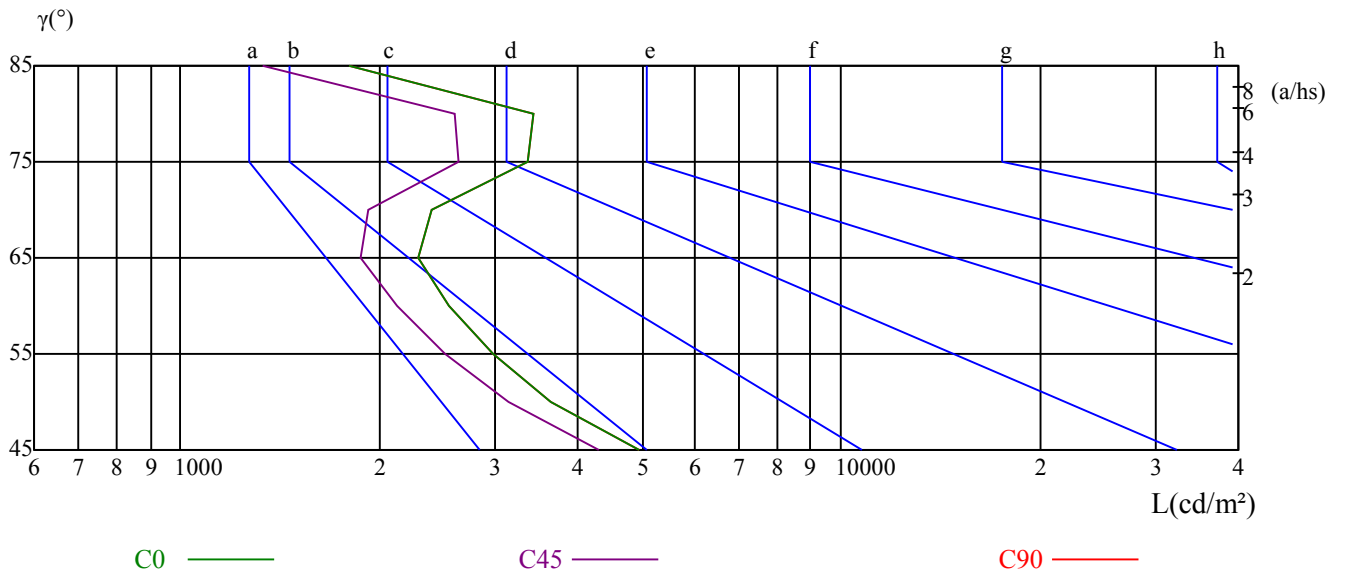
γ	45	50	55	60	65	70	75	80	85
C0	4936	3642	2971	2550	2285	2395	3363	3417	1804
C45	4308	3132	2515	2124	1868	1919	2633	2603	1330
C90	4936	3642	2971	2550	2285	2395	3363	3417	1804

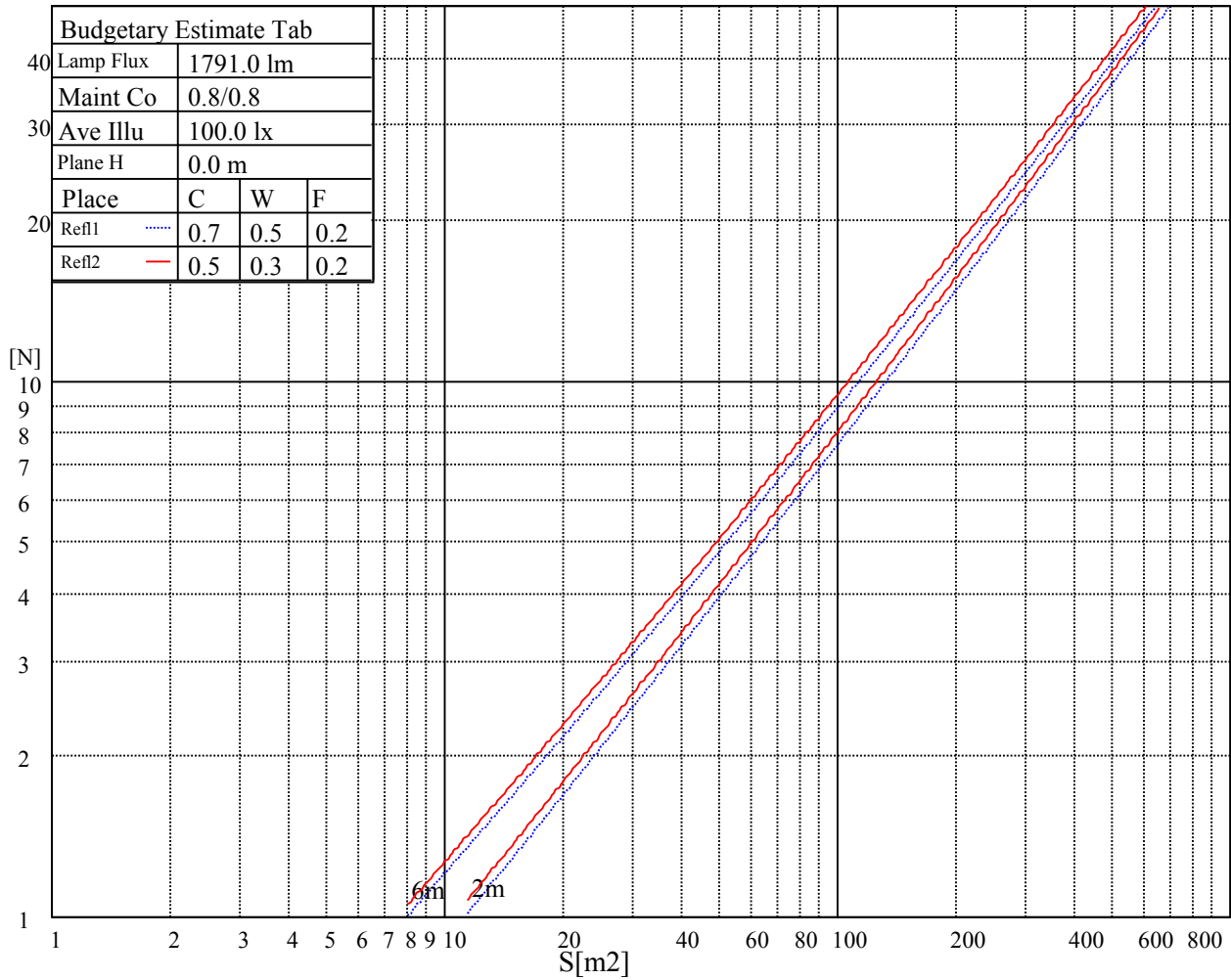
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4948	4948	4948	10184	10184	10184	13010	13010	13010

Glare Table

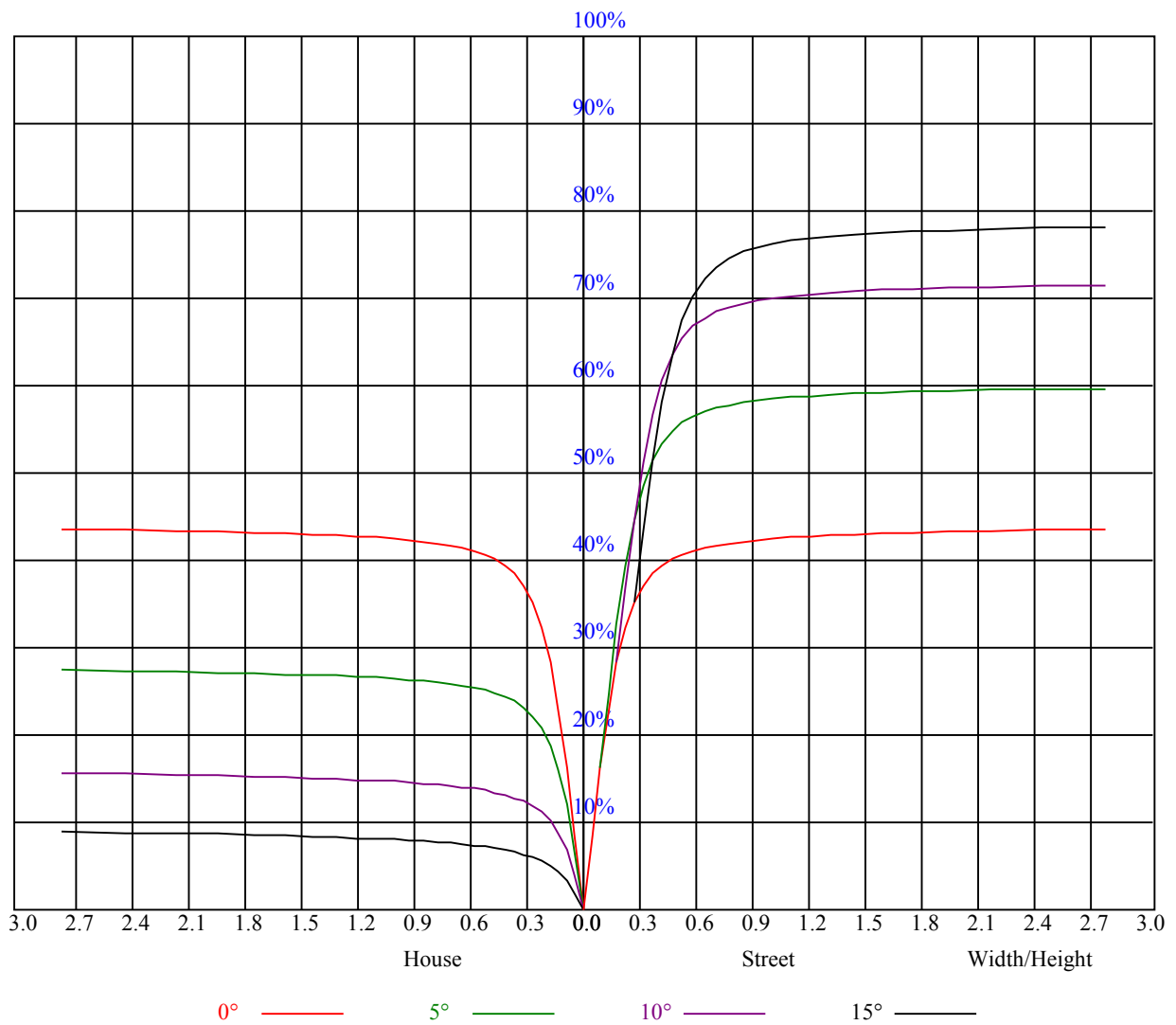
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.99	0.97	0.95	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.84
2	0.94	0.91	0.88	0.92	0.90	0.87	0.89	0.87	0.85	0.87	0.85	0.84	0.85	0.83	0.82	0.81
3	0.89	0.86	0.83	0.88	0.85	0.83	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.80	0.78	0.76	0.75
5	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.74	0.73
6	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.71
7	0.77	0.73	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.70	0.69
8	0.75	0.71	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67
9	0.73	0.69	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65
10	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.64



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	9358.88	9271.13	8949.38	8588.81	8196.75	7534.13	6879.94	6355.69	5603.63
45.0	9314.44	9194.63	8886.94	8533.13	8090.44	7439.06	6853.50	6251.63	5571.00
90.0	9323.44	9241.31	9014.63	8661.94	8245.13	7686.00	7122.38	6442.31	5744.25
135.0	9309.38	9374.06	9281.81	9082.69	8776.69	8316.00	7751.25	7188.75	6520.50
180.0	9358.88	9340.31	9179.44	8879.06	8502.19	7975.13	7357.50	6764.06	6150.38
225.0	9314.44	9308.81	9155.25	8859.38	8492.06	7976.25	7439.63	6800.06	6133.50
270.0	9323.44	9284.63	9066.38	8762.63	8362.69	7746.75	7191.00	6602.06	5928.75
315.0	9309.38	9119.81	8775.56	8307.56	7815.94	7183.69	6505.88	5905.13	5224.50
360.0	9358.88	9271.13	8949.38	8588.81	8196.75	7534.13	6879.94	6355.69	5603.63
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4933.13	4431.38	3744.56	3233.25	2764.69	2247.19	1891.13	1587.38	1271.25
45.0	4896.56	4315.50	3699.00	3189.94	2674.69	2225.81	1884.38	1560.94	1284.19
90.0	5136.75	4488.75	3886.31	3391.31	2935.13	2382.19	2079.00	1770.75	1477.13
135.0	5833.13	5225.06	4566.94	4011.19	3436.31	2917.69	2507.06	2142.56	1746.00
180.0	5459.63	4793.06	4230.56	3632.06	3080.81	2589.19	2203.31	1862.44	1497.38
225.0	5534.44	4873.50	4235.63	3695.06	3192.75	2634.75	2243.81	1897.31	1563.75
270.0	5258.81	4684.50	4064.06	3548.25	3012.19	2532.94	2156.06	1787.06	1478.81
315.0	4638.38	4016.25	3432.38	2954.25	2474.44	2060.44	1749.38	1479.38	1100.76
360.0	4933.13	4431.38	3744.56	3233.25	2764.69	2247.19	1891.13	1587.38	1271.25
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1064.25	891.00	713.81	600.19	506.81	421.31	351.00	300.38	284.06
45.0	1068.19	905.63	719.44	605.81	514.13	424.69	361.13	309.94	288.00
90.0	1108.18	1042.26	884.81	725.68	621.39	524.48	452.03	383.18	327.21
135.0	1472.06	1256.06	1011.94	856.69	727.88	616.50	514.13	439.31	374.06
180.0	1117.86	1044.73	870.92	695.93	584.94	493.43	399.88	339.47	289.86
225.0	1101.38	1077.36	881.55	722.36	606.21	497.81	418.84	347.01	290.36
270.0	1252.13	1060.88	861.75	730.13	620.44	510.75	437.06	375.75	318.38
315.0	1013.96	858.09	727.99	596.36	510.36	437.57	363.21	314.89	275.68
360.0	1064.25	891.00	713.81	600.19	506.81	421.31	351.00	300.38	284.06
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	218.76	188.94	165.38	148.28	132.02	118.69	108.84	100.13	90.96
45.0	225.68	197.78	177.75	153.96	136.86	125.66	112.22	102.32	95.57
90.0	285.75	249.86	216.11	188.04	167.40	146.03	131.91	120.04	109.41
135.0	322.31	284.63	234.62	206.16	179.49	157.67	141.47	128.08	113.91
180.0	244.97	208.35	182.25	158.91	141.64	126.17	113.63	104.34	95.40
225.0	249.30	215.04	182.08	161.10	144.00	126.68	115.37	105.47	96.98
270.0	286.31	234.39	206.72	180.62	159.36	143.21	128.14	115.43	105.47
315.0	238.11	206.55	183.43	161.83	145.74	130.28	117.11	106.88	96.81
360.0	218.76	188.94	165.38	148.28	132.02	118.69	108.84	100.13	90.96
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	84.49	78.58	72.51	66.99	62.66	58.16	54.11	50.68	46.91
45.0	87.24	81.23	75.94	69.81	65.19	60.86	56.03	52.37	48.94
90.0	97.88	89.78	82.74	74.76	69.02	63.84	58.50	53.72	49.56
135.0	104.12	95.46	86.79	79.09	73.13	66.88	61.37	56.93	52.82
180.0	87.75	81.96	76.67	70.54	66.09	61.99	57.77	53.72	50.34
225.0	88.09	81.90	75.83	70.14	65.64	61.48	57.09	53.04	49.73
270.0	95.74	88.14	80.61	73.97	68.79	63.90	58.56	54.62	50.74
315.0	87.86	80.89	74.98	67.95	63.06	58.56	54.00	49.44	45.84
360.0	84.49	78.58	72.51	66.99	62.66	58.16	54.11	50.68	46.91

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	43.93	40.89	38.14	35.94	34.03	31.78	30.26	28.91	27.39
45.0	45.17	42.53	39.99	37.58	35.44	33.64	31.95	30.43	29.03
90.0	45.51	42.24	39.09	36.11	33.86	31.78	29.87	28.46	27.23
135.0	48.32	44.38	41.34	38.19	35.61	33.02	31.22	29.53	27.84
180.0	46.86	43.59	40.95	38.25	36.17	33.98	32.01	30.54	29.08
225.0	46.24	43.31	39.99	37.69	35.72	33.69	31.89	30.49	29.08
270.0	46.52	43.37	40.73	37.74	35.27	33.24	31.33	29.87	28.35
315.0	42.24	38.93	36.23	33.86	32.01	30.04	28.52	27.23	26.10
360.0	43.93	40.89	38.14	35.94	34.03	31.78	30.26	28.91	27.39
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	26.27	25.26	24.19	23.12	22.22	21.38	20.59	19.74	18.96
45.0	27.73	26.61	25.48	24.41	23.51	22.67	21.66	20.93	20.19
90.0	25.88	24.86	23.91	23.01	22.05	21.32	20.53	19.80	19.18
135.0	26.66	25.54	24.53	23.40	22.56	21.71	20.81	20.14	19.52
180.0	27.56	26.38	25.31	24.13	23.18	22.39	21.49	20.64	19.91
225.0	27.62	26.49	25.43	24.36	23.34	22.50	21.66	20.76	20.14
270.0	27.17	26.04	24.92	23.91	23.06	22.39	21.32	20.53	20.03
315.0	24.75	23.74	22.84	21.83	21.04	20.31	19.58	18.90	18.28
360.0	26.27	25.26	24.19	23.12	22.22	21.38	20.59	19.74	18.96
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	18.39	17.72	17.27	16.76	16.31	15.86	15.41	14.91	14.23
45.0	19.41	18.68	18.06	17.44	16.88	16.37	15.86	15.36	14.79
90.0	18.56	18.00	17.44	17.04	16.65	16.43	17.27	19.07	21.49
135.0	18.90	18.17	17.61	17.16	16.76	16.26	15.92	15.69	16.43
180.0	19.18	18.45	17.89	17.33	16.82	16.31	15.81	15.30	14.85
225.0	19.35	18.79	18.11	17.44	16.99	16.54	15.98	15.53	15.02
270.0	19.18	18.62	18.23	17.72	17.44	17.72	19.41	21.66	24.24
315.0	17.72	17.33	16.99	16.65	16.43	17.04	18.62	20.76	23.12
360.0	18.39	17.72	17.27	16.76	16.31	15.86	15.41	14.91	14.23
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	13.78	13.39	12.99	12.54	12.26	11.98	11.59	11.19	10.80
45.0	14.23	13.73	13.33	12.88	12.54	12.15	11.81	11.48	11.08
90.0	24.69	27.39	30.15	33.36	36.06	37.35	37.97	36.96	33.47
135.0	18.00	19.97	21.88	25.26	27.68	29.25	30.54	30.09	28.74
180.0	14.29	13.78	13.33	12.88	12.54	12.21	11.76	11.48	11.14
225.0	14.34	13.89	13.44	12.99	12.60	12.26	11.93	11.64	11.25
270.0	27.68	30.38	33.36	36.56	38.42	39.43	39.66	38.08	34.59
315.0	25.93	28.13	30.15	32.01	32.23	31.67	29.53	26.49	22.95
360.0	13.78	13.39	12.99	12.54	12.26	11.98	11.59	11.19	10.80
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.41	10.01	9.62	9.11	8.83	7.93	7.54	7.26	7.09
45.0	10.63	10.24	9.90	9.45	8.94	8.33	7.93	7.71	7.48
90.0	29.31	24.30	18.00	12.54	9.73	8.44	7.88	7.54	7.31
135.0	25.82	22.22	17.83	13.28	11.03	8.66	8.16	7.65	7.31
180.0	10.74	10.35	10.01	9.56	9.17	8.27	7.88	7.48	7.26
225.0	10.86	10.52	10.13	9.73	9.39	8.83	8.33	7.93	7.71
270.0	29.42	23.68	17.27	12.04	10.58	8.55	7.99	7.54	7.26
315.0	17.89	14.18	10.91	10.01	9.11	7.71	7.37	7.14	6.98
360.0	10.41	10.01	9.62	9.11	8.83	7.93	7.54	7.26	7.09

Intensity data(cd)

C/γ(°)	90.0
0.0	7.03
45.0	7.48
90.0	7.26
135.0	7.14
180.0	7.09
225.0	7.54
270.0	7.14
315.0	6.98
360.0	7.03