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Nata

LumCAT: LN01D04524DA-N
Luminaire: 97.70.234.00
Report No: 210104-B007
Test No: 210104-C007
LampCAT: BRIDGELUX V10 LES10.2
Lamp flux(lm): 1790.7
Number of Lamps: 1
Length(mm): 92
Phm Type: C

Voltage(V): 34.6200
Current(A): 0.3800
Power (W): 13.1550
PF: 0.0000
Ballast type: DC
Width(mm): 92
Height(mm): 50

Photometric Results

Lumens(lm): 1564.22
Efficiency(%): 87.35%
Lumens(lm)/Power(W): 118.91
Central intensity(cd): 5341.500
Maximum intensity(cd): 5341.500
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=29.0
 [C90/270]Total=29.0
Field angle(10%Imax): [C0/180]Total=48.8
 [C90/270]Total=48.8
Maximum s/h(1/2): C0_180=0.49 C90_270=0.49
Maximum s/h(1/4): C0_180=0.47 C90_270=0.47
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.35%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.283%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5341.500	0.000	0	.000%	.000%
1.0	5328.070	5.105	5.105	.285%	.326%
2.0	5277.023	15.221	20.327	.850%	1.299%
3.0	5203.125	25.065	45.392	1.400%	2.902%
4.0	5106.094	34.508	79.9	1.927%	5.108%
5.0	4973.344	43.361	123.261	2.421%	7.880%
6.0	4804.664	51.386	174.647	2.870%	11.165%
7.0	4634.367	58.588	233.235	3.272%	14.911%
8.0	4430.883	64.878	298.113	3.623%	19.058%
9.0	4209.117	70.023	368.136	3.910%	23.535%
10.0	3969.703	74.015	442.151	4.133%	28.267%
11.0	3706.734	76.703	518.855	4.283%	33.170%
12.0	3443.203	78.159	597.014	4.365%	38.167%
13.0	3128.133	77.985	674.999	4.355%	43.152%
14.0	2810.250	76.011	751.01	4.245%	48.012%
15.0	2520.773	73.187	824.196	4.087%	52.691%
16.0	2231.508	69.634	893.831	3.889%	57.142%
17.0	1894.148	64.248	958.078	3.588%	61.250%
18.0	1641.867	58.301	1016.379	3.256%	64.977%
19.0	1404.731	53.005	1069.384	2.960%	68.365%
20.0	1125.197	46.305	1115.689	2.586%	71.326%
21.0	980.304	40.430	1156.118	2.258%	73.910%
22.0	829.737	36.374	1192.492	2.031%	76.236%
23.0	691.777	31.925	1224.417	1.783%	78.277%
24.0	569.067	27.567	1251.984	1.539%	80.039%
25.0	482.759	23.916	1275.9	1.336%	81.568%
26.0	408.565	21.040	1296.94	1.175%	82.913%
27.0	346.542	18.474	1315.414	1.032%	84.094%
28.0	297.267	16.300	1331.714	.910%	85.136%
29.0	251.698	14.362	1346.076	.802%	86.054%
30.0	220.409	12.747	1358.823	.712%	86.869%
31.0	192.424	11.489	1370.312	.642%	87.604%
32.0	169.692	10.374	1380.686	.579%	88.267%
33.0	151.263	9.455	1390.141	.528%	88.871%
34.0	136.779	8.717	1398.858	.487%	89.429%
35.0	122.344	8.047	1406.906	.449%	89.943%
36.0	110.883	7.426	1414.332	.415%	90.418%
37.0	101.623	6.931	1421.262	.387%	90.861%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	93.066	6.498	1427.761	.363%	91.276%
39.0	84.333	6.055	1433.816	.338%	91.663%
40.0	77.913	5.659	1439.474	.316%	92.025%
41.0	71.958	5.337	1444.811	.298%	92.366%
42.0	66.150	5.018	1449.829	.280%	92.687%
43.0	61.228	4.718	1454.547	.263%	92.989%
44.0	56.834	4.456	1459.003	.249%	93.274%
45.0	52.720	4.210	1463.214	.235%	93.543%
46.0	48.797	3.970	1467.184	.222%	93.797%
47.0	45.408	3.747	1470.931	.209%	94.036%
48.0	42.195	3.541	1474.472	.198%	94.263%
49.0	39.452	3.353	1477.825	.187%	94.477%
50.0	36.654	3.173	1480.998	.177%	94.680%
51.0	34.186	2.997	1483.995	.167%	94.871%
52.0	32.217	2.849	1486.844	.159%	95.053%
53.0	30.340	2.721	1489.566	.152%	95.227%
54.0	28.631	2.599	1492.165	.145%	95.394%
55.0	27.387	2.501	1494.665	.140%	95.553%
56.0	26.198	2.421	1497.087	.135%	95.708%
57.0	25.017	2.342	1499.429	.131%	95.858%
58.0	24.138	2.273	1501.702	.127%	96.003%
59.0	23.273	2.217	1503.918	.124%	96.145%
60.0	22.395	2.158	1506.076	.120%	96.283%
61.0	21.628	2.101	1508.177	.117%	96.417%
62.0	20.939	2.051	1510.228	.115%	96.548%
63.0	20.306	2.006	1512.234	.112%	96.677%
64.0	19.695	1.963	1514.196	.110%	96.802%
65.0	19.294	1.929	1516.126	.108%	96.925%
66.0	19.216	1.921	1518.047	.107%	97.048%
67.0	19.477	1.946	1519.993	.109%	97.173%
68.0	20.053	2.002	1521.995	.112%	97.301%
69.0	20.798	2.084	1524.079	.116%	97.434%
70.0	21.586	2.177	1526.256	.122%	97.573%
71.0	22.528	2.280	1528.536	.127%	97.719%
72.0	23.330	2.384	1530.921	.133%	97.871%
73.0	23.344	2.441	1533.361	.136%	98.027%
74.0	25.207	2.552	1535.914	.143%	98.190%
75.0	25.798	2.695	1538.609	.150%	98.363%

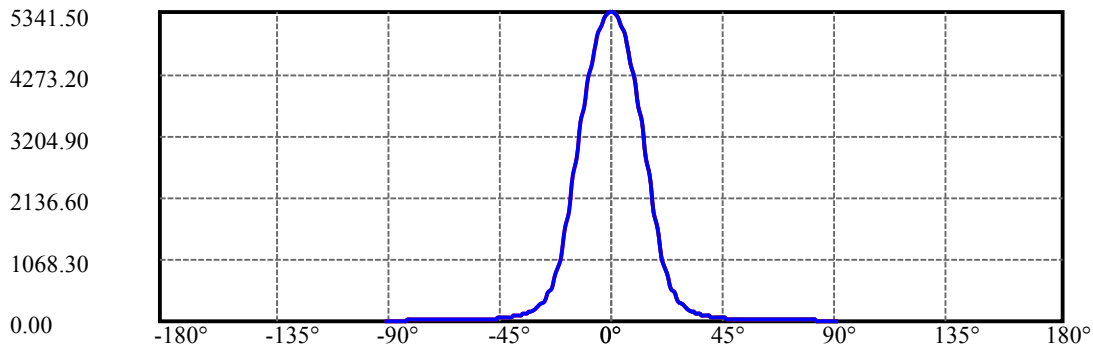
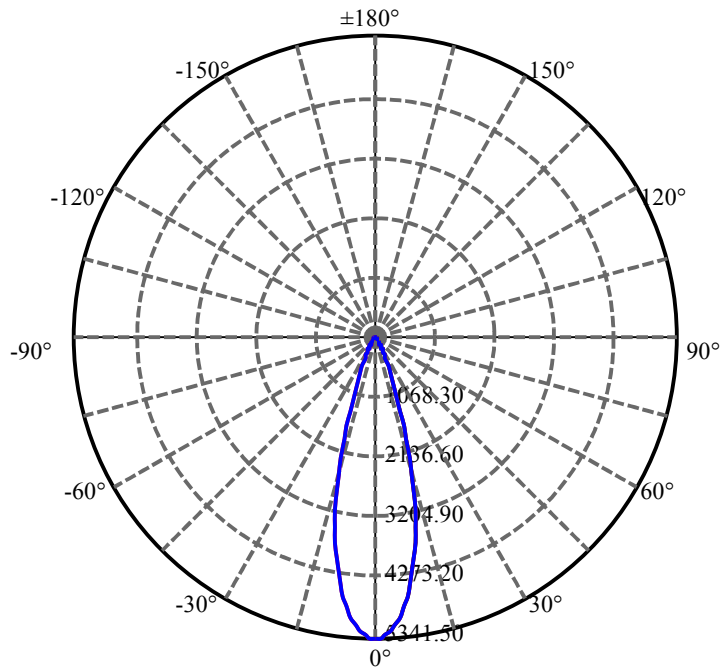
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	25.889	2.744	1541.353	.153%	98.538%
77.0	25.516	2.741	1544.093	.153%	98.713%
78.0	24.434	2.674	1546.767	.149%	98.884%
79.0	22.676	2.531	1549.298	.141%	99.046%
80.0	20.834	2.346	1551.644	.131%	99.196%
81.0	18.598	2.132	1553.776	.119%	99.332%
82.0	16.165	1.885	1555.661	.105%	99.453%
83.0	13.493	1.612	1557.274	.090%	99.556%
84.0	11.187	1.344	1558.618	.075%	99.642%
85.0	9.942	1.153	1559.771	.064%	99.716%
86.0	8.754	1.022	1560.793	.057%	99.781%
87.0	8.128	0.924	1561.717	.052%	99.840%
88.0	7.664	0.865	1562.582	.048%	99.895%
89.0	7.446	0.828	1563.41	.046%	99.948%
90.0	7.298	0.808	1564.219	.045%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1358.82	75.88%	86.87%
0-40	1439.47	80.38%	92.03%
0-60	1506.08	84.10%	96.28%
0-90	1563.41	87.31%	99.95%
0-120	1563.41	87.31%	99.95%
0-180	1564.22	87.35%	100.00%
60-90	59.49	3.32%	3.80%
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%
0-23.98	1251.38	69.88%	80.00%

ZONAL LUMEN SUMMARY

0-10	442.15
10-20	673.54
20-30	243.13
30-40	80.65
40-50	41.52
50-60	25.08
60-70	20.18
70-80	25.39
80-90	11.77
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: —————

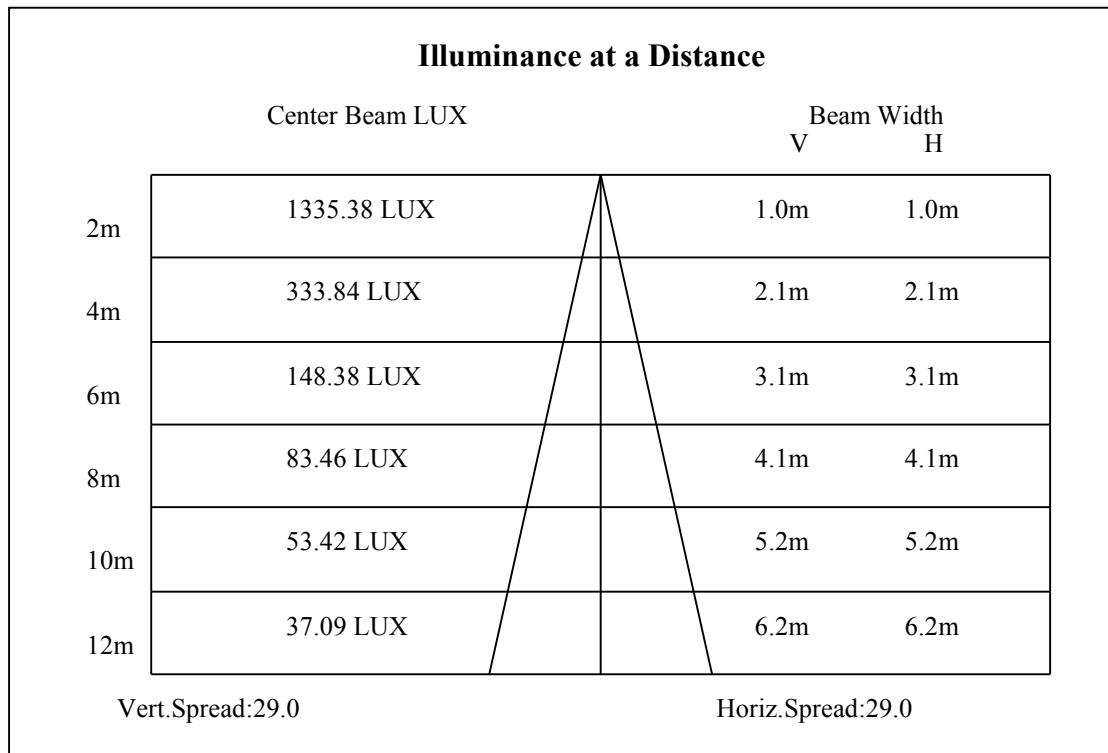
C90/C270: —————

Field angle(10%Imax):C0/180Left:24.4 Right:24.4

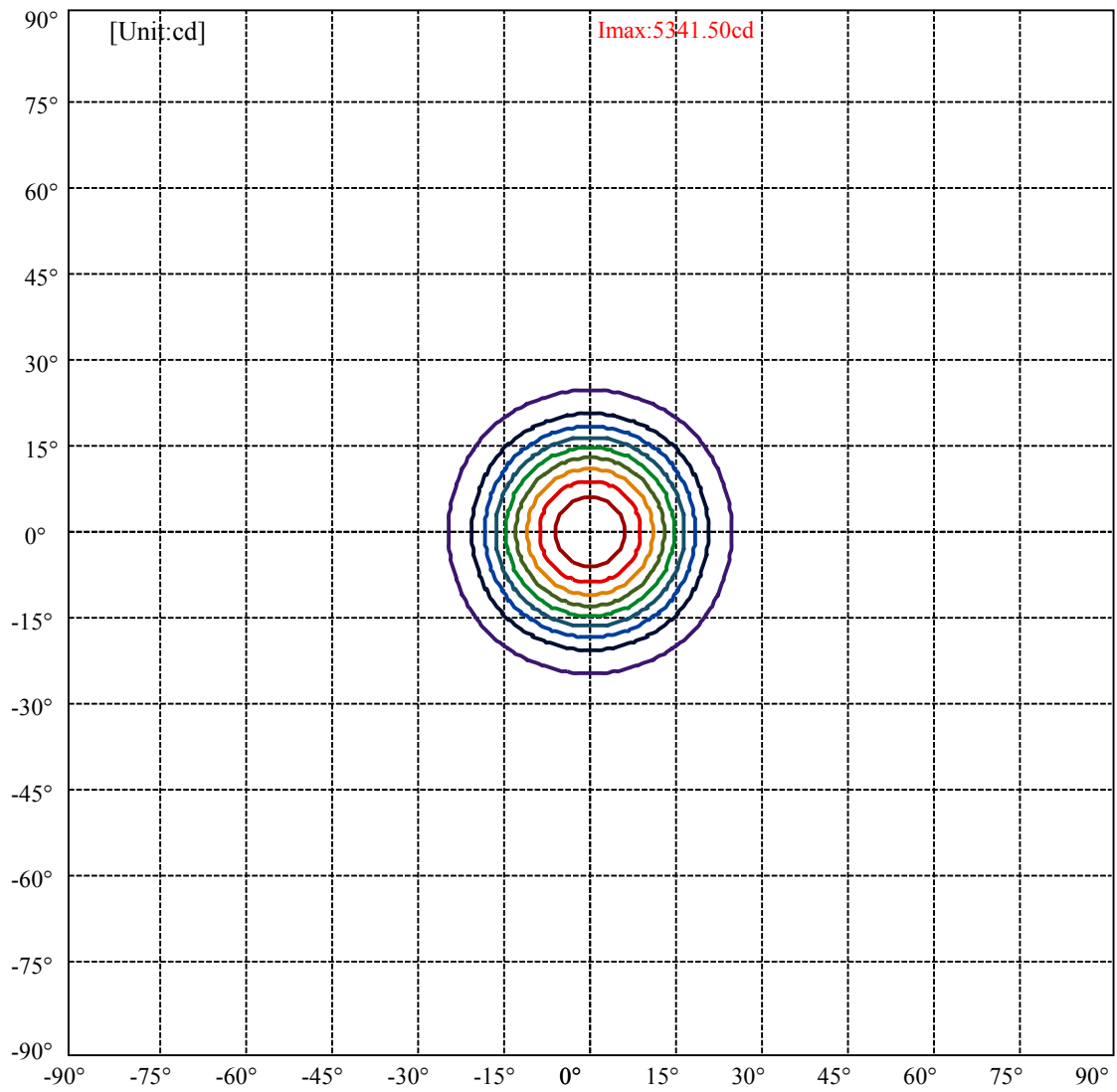
:C90/270Left:24.4 Right:24.4

Beam Angle(50%Imax):C0/180Left:14.5 Right:14.5

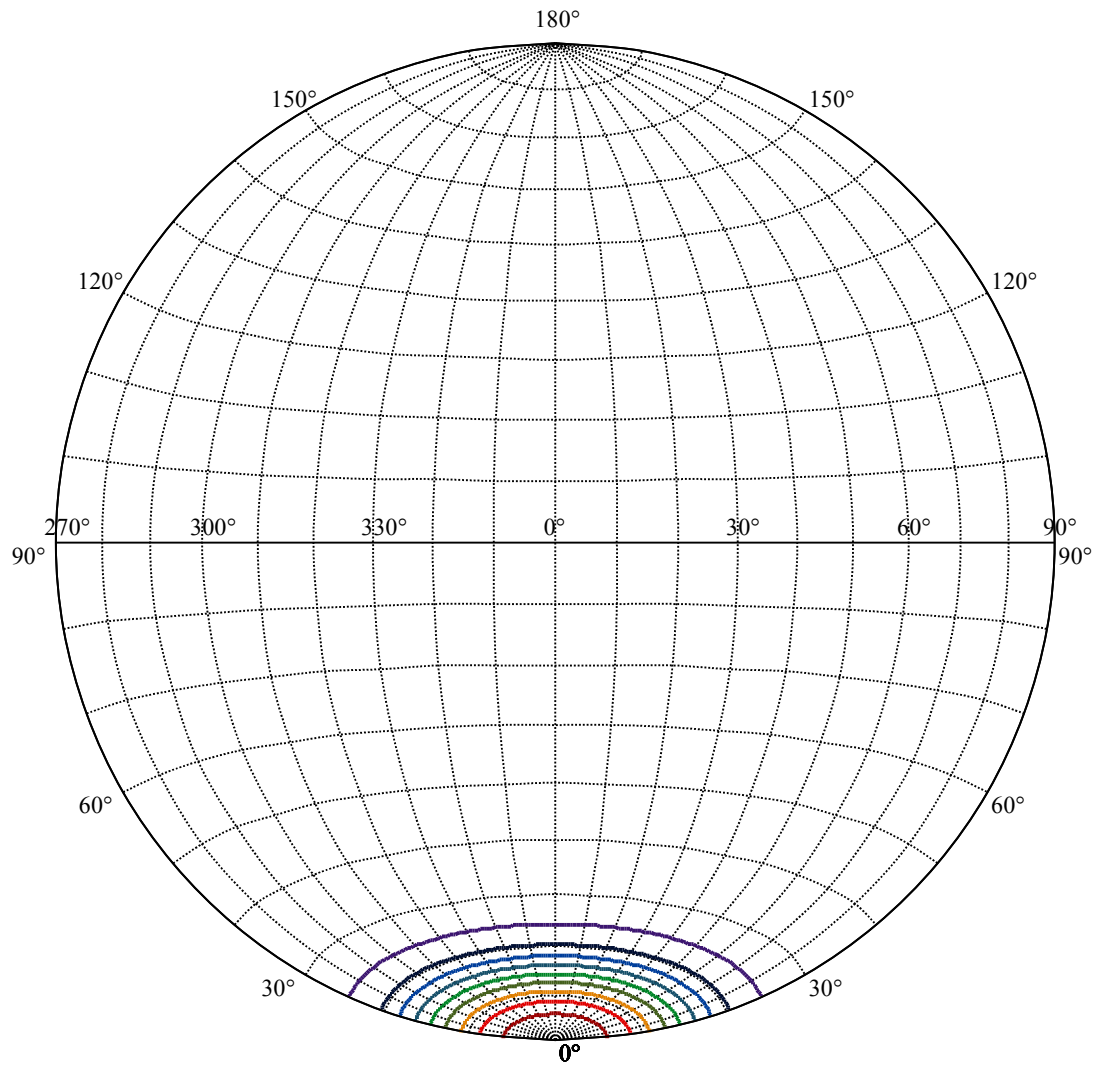
:C90/270Left:14.5 Right:14.5



ISO-Intensity(V-H)



(10%Imax) 534.15	—
(20%Imax) 1068.3	—
(30%Imax) 1602.45	—
(40%Imax) 2136.6	—
(50%Imax) 2670.75	—
(60%Imax) 3204.9	—
(70%Imax) 3739.05	—
(80%Imax) 4273.2	—
(90%Imax) 4807.35	—



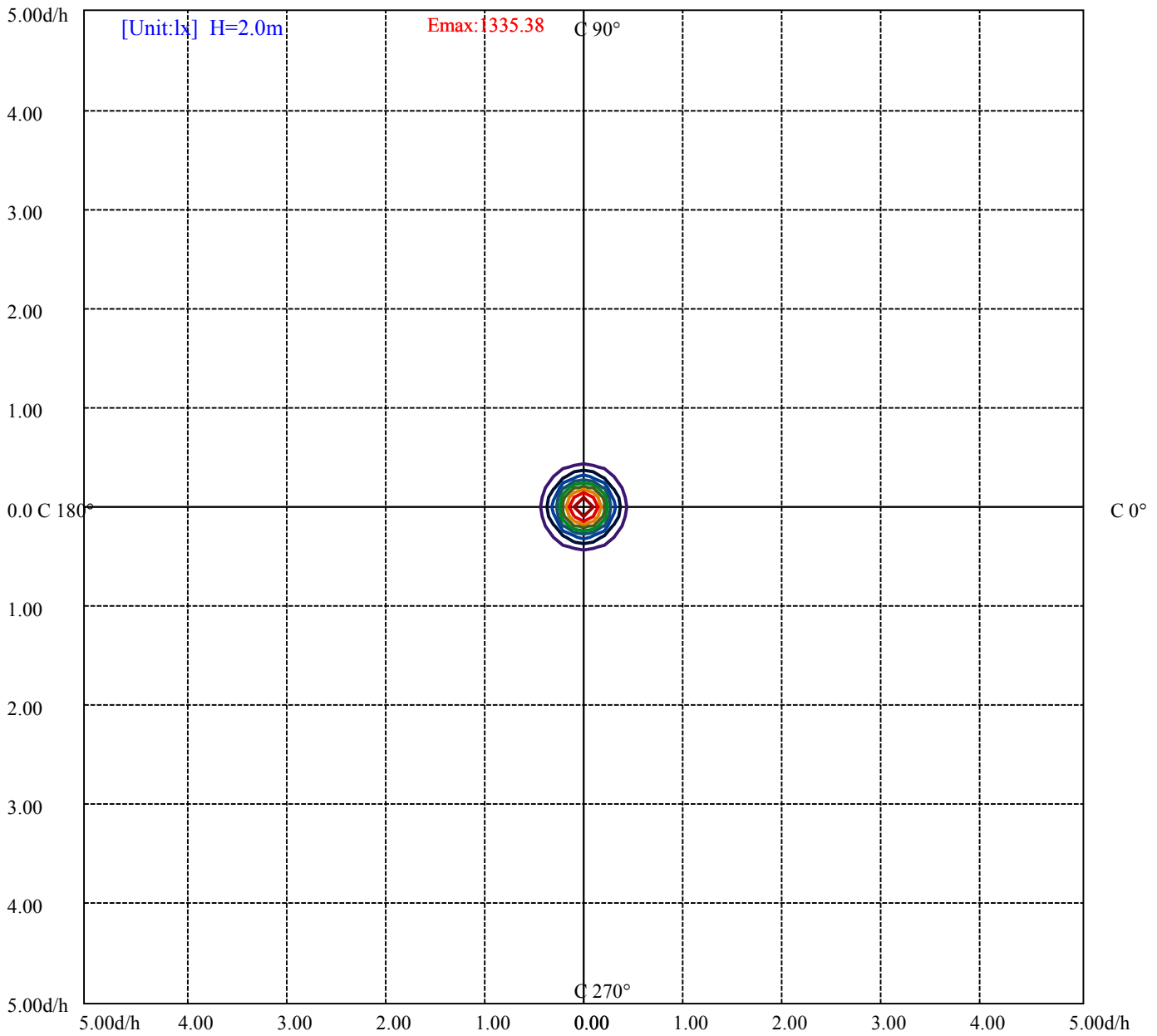
House

[Unit:cd]

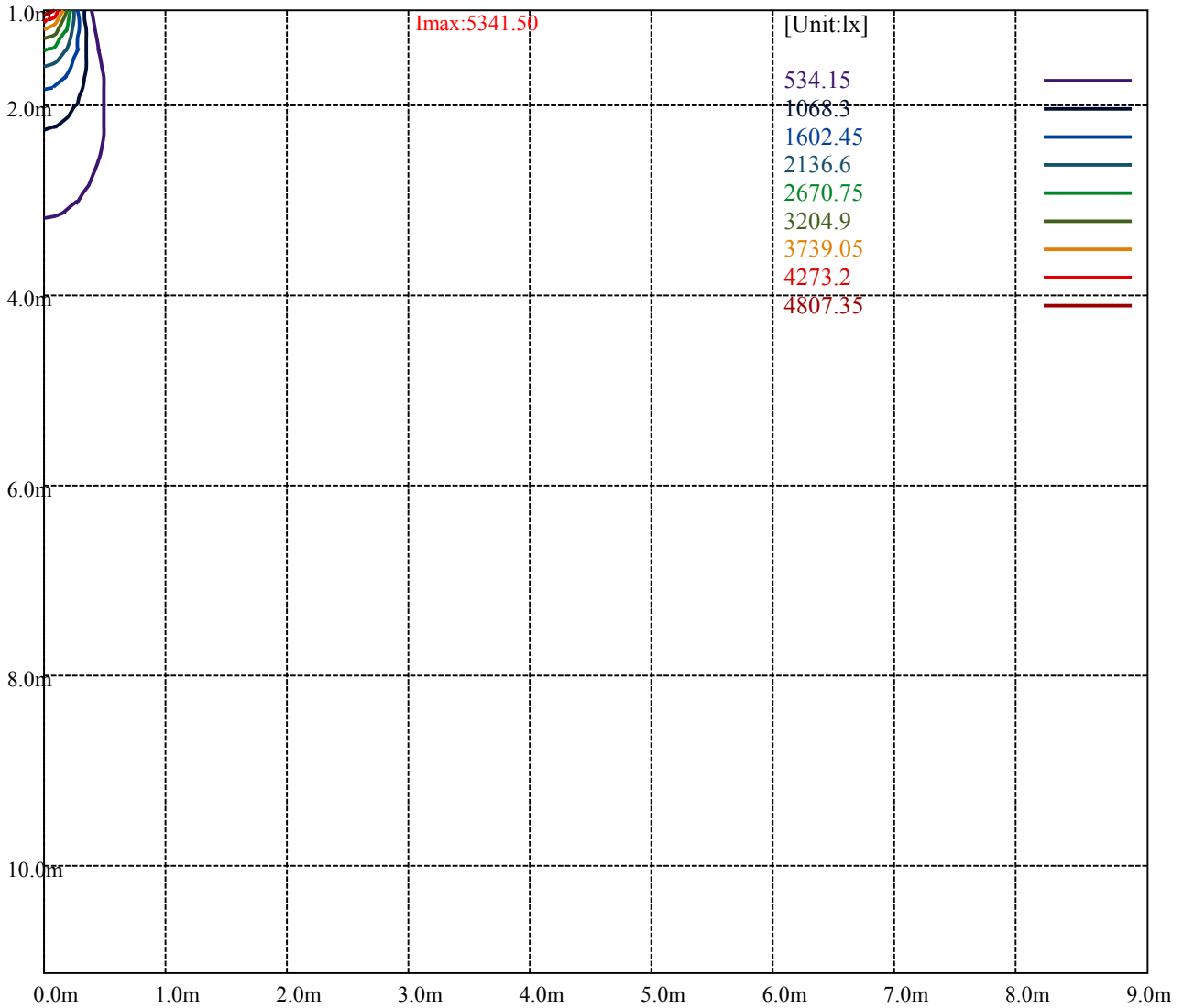
Road

Imax:5341.50

(10%Imax) 534.15	—
(20%Imax) 1068.3	—
(30%Imax) 1602.45	—
(40%Imax) 2136.6	—
(50%Imax) 2670.75	—
(60%Imax) 3204.9	—
(70%Imax) 3739.05	—
(80%Imax) 4273.2	—
(90%Imax) 4807.35	—



- (10%Emax) 133.5375
- (20%Emax) 267.075
- (30%Emax) 400.6125
- (40%Emax) 534.15
- (50%Emax) 667.6875
- (60%Emax) 801.225
- (70%Emax) 934.7625
- (80%Emax) 1068.3
- (90%Emax) 1201.838



Luminance Table

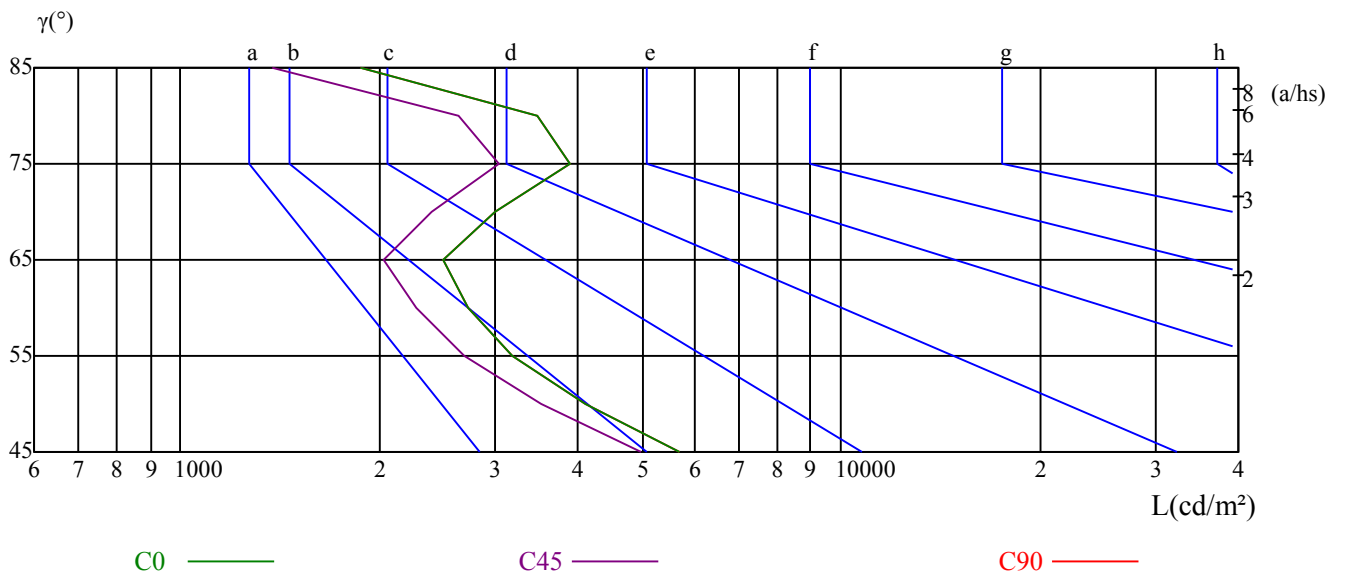
γ	45	50	55	60	65	70	75	80	85
C0	5707	4089	3176	2726	2491	2991	3889	3472	1869
C45	4981	3516	2689	2270	2037	2396	3044	2645	1377
C90	5707	4089	3176	2726	2491	2991	3889	3472	1869

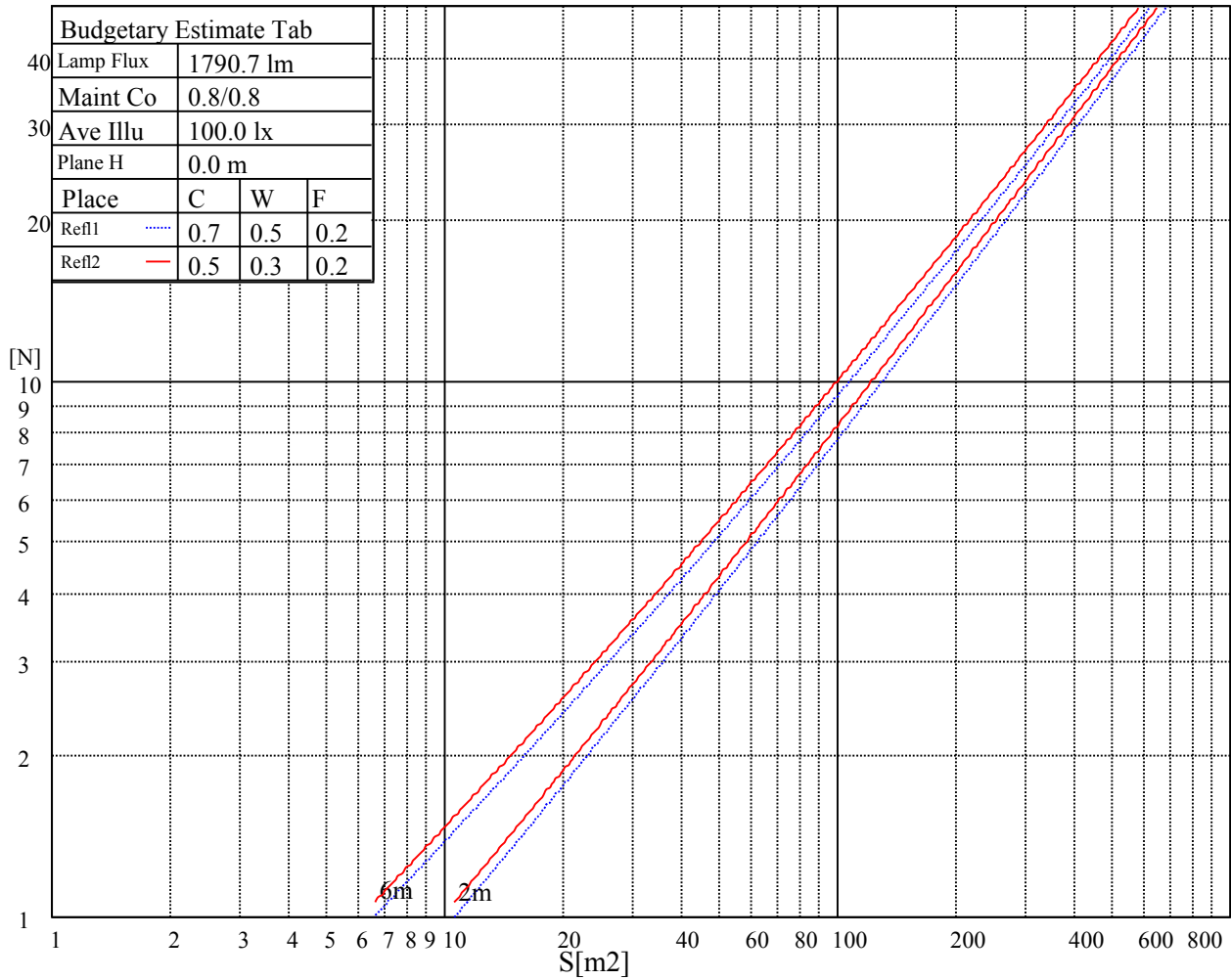
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5394	5394	5394	11776	11776	11776	13478	13478	13478

Glare Table

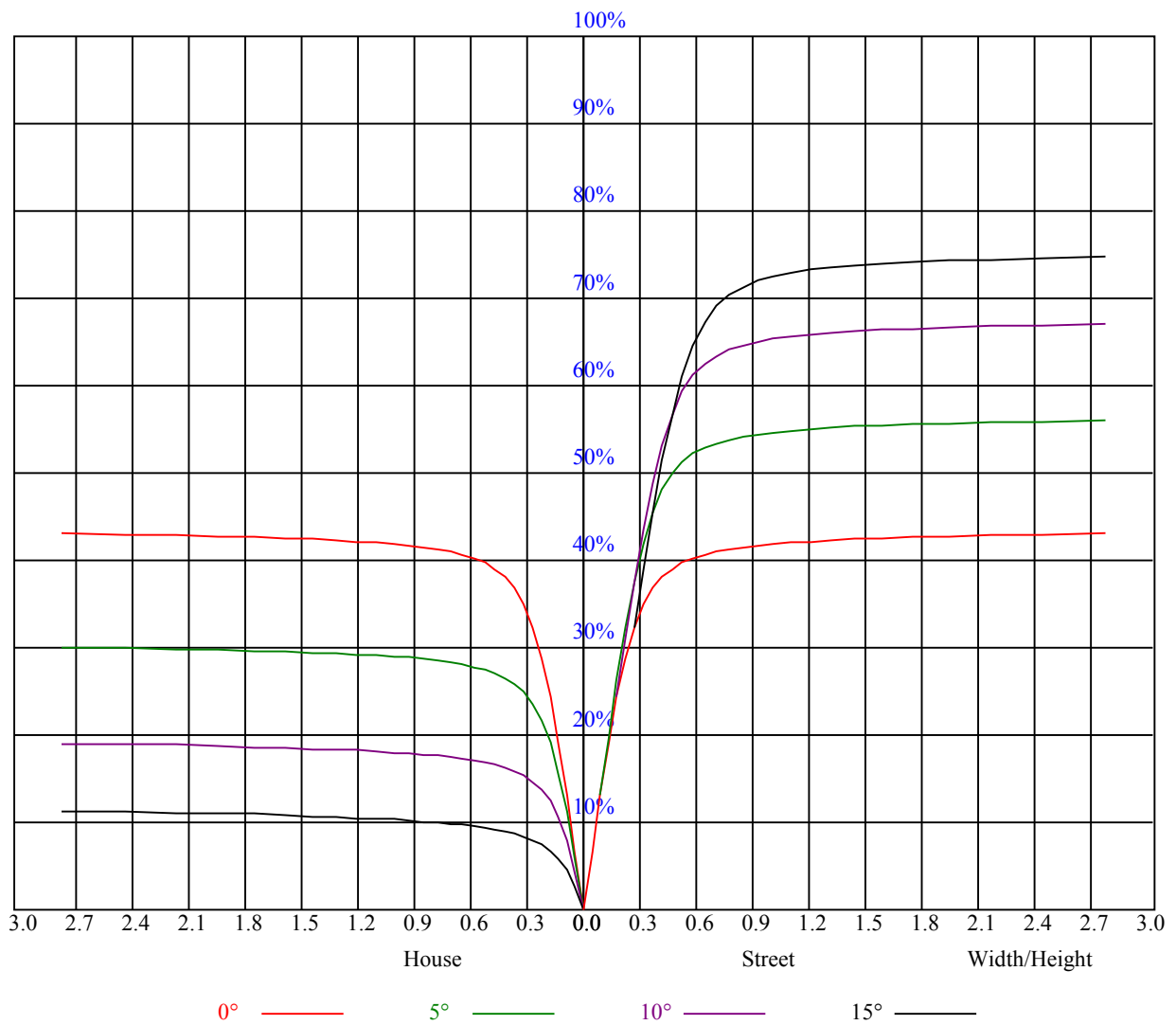
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	0.94	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.82
2	0.92	0.88	0.86	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.80	0.78
3	0.87	0.83	0.80	0.86	0.82	0.80	0.83	0.81	0.78	0.81	0.79	0.77	0.80	0.78	0.76	0.75
4	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.77	0.75	0.73	0.72
5	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.70	0.69
6	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
7	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64
8	0.71	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.58



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	5342.06	5312.25	5235.19	5142.38	5022.56	4859.44	4671.56	4487.63	4261.50
45.0	5342.06	5324.06	5261.06	5182.31	5079.38	4950.56	4754.25	4575.38	4376.81
90.0	5352.19	5352.19	5325.19	5263.31	5180.63	5058.56	4903.88	4744.13	4541.63
135.0	5329.69	5361.75	5364.00	5338.69	5288.06	5199.75	5074.31	4935.94	4759.31
180.0	5342.06	5345.44	5314.50	5261.63	5182.31	5060.81	4903.88	4737.38	4530.38
225.0	5342.06	5333.06	5291.44	5220.00	5119.31	5004.00	4848.19	4667.63	4485.94
270.0	5352.19	5325.19	5253.75	5172.75	5067.00	4918.50	4745.81	4577.63	4367.25
315.0	5329.69	5270.63	5171.06	5043.94	4909.50	4735.13	4535.44	4349.25	4124.25
360.0	5342.06	5312.25	5235.19	5142.38	5022.56	4859.44	4671.56	4487.63	4261.50
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4016.81	3785.63	3506.63	3241.13	2923.31	2595.38	2301.75	2019.94	1689.75
45.0	4103.44	3866.06	3611.81	3302.44	2977.31	2683.13	2355.75	2075.06	1770.19
90.0	4341.38	4097.25	3831.19	3571.88	3258.00	2930.63	2638.13	2347.88	1999.13
135.0	4555.69	4356.56	4111.31	3871.69	3578.06	3267.00	2976.19	2683.13	2314.69
180.0	4326.19	4075.88	3775.50	3550.50	3241.13	2883.38	2627.44	2334.38	1946.25
225.0	4284.56	4011.19	3771.56	3513.38	3171.94	2885.06	2594.81	2303.44	1954.13
270.0	4140.00	3924.56	3691.13	3411.00	3110.06	2793.94	2505.38	2187.00	1885.50
315.0	3904.88	3640.50	3354.75	3083.63	2765.25	2443.50	2166.75	1901.25	1593.56
360.0	4016.81	3785.63	3506.63	3241.13	2923.31	2595.38	2301.75	2019.94	1689.75
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1452.94	1241.44	1010.25	851.63	717.19	589.50	486.00	410.63	340.88
45.0	1487.81	1274.63	1053.56	874.69	743.63	651.94	519.75	444.38	389.25
90.0	1739.81	1501.88	1116.96	1052.16	896.74	734.34	626.57	537.30	453.88
135.0	2026.69	1767.94	1456.88	1243.13	1058.06	889.88	732.94	619.88	520.31
180.0	1715.06	1470.94	1099.24	1010.08	851.96	703.91	580.95	492.86	420.58
225.0	1697.06	1458.56	1121.29	1010.64	852.86	701.16	577.24	487.97	407.25
270.0	1640.25	1416.94	1166.63	992.81	838.69	706.50	569.81	479.81	403.88
315.0	1375.31	1105.54	976.78	807.30	678.77	556.99	459.28	389.25	332.49
360.0	1452.94	1241.44	1010.25	851.63	717.19	589.50	486.00	410.63	340.88
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	291.38	259.26	210.49	186.75	165.04	146.93	133.31	121.61	109.18
45.0	325.13	287.44	241.65	210.66	185.23	166.33	148.50	135.06	121.95
90.0	392.51	333.73	285.13	249.81	220.44	189.62	169.03	151.31	132.86
135.0	446.63	376.88	318.94	286.88	236.14	208.41	182.14	162.62	144.28
180.0	354.38	299.93	259.99	223.48	197.33	173.53	154.01	139.28	125.16
225.0	347.96	292.78	249.81	218.98	193.56	167.79	150.92	136.58	121.22
270.0	333.56	289.13	240.81	203.29	177.58	161.10	141.64	128.81	117.73
315.0	280.80	239.01	206.78	183.43	164.08	143.83	130.56	118.97	106.37
360.0	291.38	259.26	210.49	186.75	165.04	146.93	133.31	121.61	109.18
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	100.46	92.70	85.73	77.91	72.28	67.39	61.88	57.83	54.11
45.0	110.64	101.87	94.05	85.50	79.26	73.69	67.33	62.83	58.61
90.0	120.09	109.01	97.03	88.71	81.17	73.01	68.01	62.16	56.42
135.0	128.70	116.72	107.44	94.84	86.91	80.66	72.28	66.83	62.66
180.0	113.12	103.84	95.57	86.40	79.82	73.97	68.06	62.78	58.50
225.0	110.81	101.76	92.87	84.88	78.81	72.56	67.61	62.38	57.71
270.0	105.69	97.20	89.55	81.00	74.98	69.69	63.73	59.34	55.29
315.0	97.54	89.89	82.29	75.43	70.09	64.69	60.30	55.69	51.36
360.0	100.46	92.70	85.73	77.91	72.28	67.39	61.88	57.83	54.11

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	50.18	46.58	43.59	40.44	37.86	35.21	32.91	31.05	29.31
45.0	54.45	50.68	47.53	44.16	41.23	38.81	36.34	34.31	32.23
90.0	52.82	48.66	44.38	41.68	38.87	35.44	33.41	31.50	29.53
135.0	57.21	52.93	49.67	45.62	42.69	39.99	36.73	34.54	32.57
180.0	54.28	50.29	47.03	43.59	40.84	37.91	35.33	33.19	31.33
225.0	53.94	50.06	46.46	43.54	40.84	37.80	35.49	33.47	31.22
270.0	51.13	47.19	44.04	40.73	37.97	35.21	32.68	30.83	29.03
315.0	47.76	43.99	40.56	37.80	35.33	32.85	30.60	28.86	27.51
360.0	50.18	46.58	43.59	40.44	37.86	35.21	32.91	31.05	29.31
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	27.79	26.55	25.54	24.36	23.51	22.73	21.71	20.98	20.31
45.0	30.49	29.19	28.01	26.66	25.71	24.81	23.74	22.89	22.11
90.0	27.90	26.78	25.54	24.47	23.68	22.78	22.05	21.32	20.59
135.0	30.49	29.14	27.79	26.49	25.54	24.64	23.51	22.67	21.94
180.0	29.36	28.01	26.83	25.48	24.53	23.68	22.73	21.83	21.15
225.0	29.64	28.29	26.78	25.76	24.81	23.68	23.01	22.16	21.26
270.0	27.45	26.27	25.20	24.08	23.29	22.56	21.71	21.09	20.59
315.0	25.93	24.86	23.91	22.84	22.05	21.32	20.70	20.08	19.58
360.0	27.79	26.55	25.54	24.36	23.51	22.73	21.71	20.98	20.31
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	19.69	19.01	18.51	17.94	17.44	16.93	16.48	16.03	15.58
45.0	21.26	20.48	19.91	19.24	18.68	18.00	17.44	16.88	16.37
90.0	20.03	19.52	19.07	19.18	20.08	22.39	24.53	26.83	29.76
135.0	21.15	20.42	19.86	19.24	18.73	18.45	19.07	20.19	21.94
180.0	20.36	19.74	19.07	18.45	17.94	17.33	16.76	16.31	15.81
225.0	20.70	20.03	19.24	18.79	18.28	17.61	17.21	16.71	16.20
270.0	20.14	19.69	19.97	21.32	23.51	26.33	29.14	31.95	34.82
315.0	19.13	18.68	18.73	19.58	21.15	23.40	25.76	27.79	29.76
360.0	19.69	19.01	18.51	17.94	17.44	16.93	16.48	16.03	15.58
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.08	14.63	14.29	13.73	13.33	12.94	12.43	11.93	11.53
45.0	15.86	15.41	14.91	14.34	13.95	13.56	13.11	12.60	12.21
90.0	32.46	34.88	37.41	39.54	40.56	40.84	39.83	36.96	33.58
135.0	22.22	17.49	27.90	29.93	31.28	31.78	31.44	29.76	27.73
180.0	15.24	14.79	14.40	13.78	13.44	12.99	12.54	12.09	11.70
225.0	15.75	15.30	14.85	14.34	13.95	13.56	13.11	12.66	12.21
270.0	38.08	40.61	43.03	45.34	46.13	45.73	43.14	39.21	35.16
315.0	31.95	33.64	34.88	35.38	34.48	32.74	29.87	26.21	22.56
360.0	15.08	14.63	14.29	13.73	13.33	12.94	12.43	11.93	11.53
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	11.08	10.58	10.13	9.56	9.06	8.44	7.88	7.37	7.14
45.0	11.70	11.19	10.69	10.18	9.68	8.89	8.38	7.93	7.71
90.0	29.48	24.98	18.51	13.39	10.01	8.78	8.10	7.59	7.31
135.0	25.09	21.60	18.11	13.44	11.14	9.06	7.99	7.65	7.59
180.0	11.25	10.86	10.41	9.84	9.39	8.78	8.21	7.76	7.48
225.0	11.76	11.31	10.80	10.41	9.96	9.45	8.89	8.33	8.04
270.0	30.15	24.53	18.28	12.43	10.91	8.72	8.10	7.59	7.31
315.0	18.28	14.29	11.03	10.24	9.39	7.93	7.48	7.09	6.98
360.0	11.08	10.58	10.13	9.56	9.06	8.44	7.88	7.37	7.14

Intensity data(cd)

C/γ(°)	90.0
0.0	7.14
45.0	7.65
90.0	7.20
135.0	7.31
180.0	7.20
225.0	7.82
270.0	7.09
315.0	6.98
360.0	7.14