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Nata

Client:

LumCAT: 3-2042-M

Luminaire: 92.70.131.00

Report No:

Voltage(V): 35.0200

Test No: GC2019082206

Current(A): 0.3980

LampCAT: TRIDONIC SLE 13MM G7

Power (W): 13.9200

Lamp flux(lm): 1702.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 84

Width(mm): 84

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1553.10, Efficiency(%): 91.25% , Luminous Efficacy(lm/W): 111.57

Central intensity(cd): 15390.000, Maximum intensity(cd): 15390.000

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=13.0

[C90/270]Total=13.0

Field angle(10%Imax): [C0/180]Total=24.6

[C90/270]Total=24.6

Maximum s/h(1/2): C0_180=0.23 C90_270=0.23

Maximum s/h(1/4): C0_180=0.22 C90_270=0.22

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.25%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.582%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	15390.000	0.000	0	.000%	.000%
1.0	15241.641	14.657	14.657	.861%	.944%
2.0	14741.719	43.035	57.692	2.528%	3.715%
3.0	13424.414	67.364	125.056	3.958%	8.052%
4.0	12138.820	85.568	210.624	5.028%	13.562%
5.0	10608.047	97.856	308.48	5.749%	19.862%
6.0	8713.969	101.542	410.022	5.966%	26.400%
7.0	6708.234	95.725	505.748	5.624%	32.564%
8.0	5151.023	84.874	590.622	4.987%	38.029%
9.0	3771.844	72.315	662.937	4.249%	42.685%
10.0	2797.664	59.452	722.389	3.493%	46.513%
11.0	2157.469	49.512	771.901	2.909%	49.701%
12.0	1656.295	41.690	813.591	2.449%	52.385%
13.0	1314.942	35.261	848.852	2.072%	54.655%
14.0	1128.684	31.278	880.13	1.838%	56.669%
15.0	994.922	29.154	909.284	1.713%	58.546%
16.0	875.018	27.400	936.683	1.610%	60.311%
17.0	805.816	26.175	962.859	1.538%	61.996%
18.0	755.775	25.747	988.606	1.513%	63.654%
19.0	714.607	25.582	1014.187	1.503%	65.301%
20.0	684.893	25.615	1039.802	1.505%	66.950%
21.0	661.310	25.850	1065.652	1.519%	68.615%
22.0	638.459	26.119	1091.771	1.535%	70.296%
23.0	621.063	26.428	1118.2	1.553%	71.998%
24.0	605.447	26.816	1145.016	1.576%	73.725%
25.0	590.098	27.184	1172.2	1.597%	75.475%
26.0	578.081	27.575	1199.775	1.620%	77.250%
27.0	566.423	28.001	1227.775	1.645%	79.053%
28.0	555.110	28.395	1256.17	1.668%	80.882%
29.0	546.103	28.811	1284.981	1.693%	82.737%
30.0	537.623	29.260	1314.241	1.719%	84.621%
31.0	527.316	29.636	1343.877	1.741%	86.529%
32.0	511.509	29.761	1373.638	1.749%	88.445%
33.0	478.990	29.180	1402.819	1.714%	90.324%
34.0	417.930	27.143	1429.962	1.595%	92.072%
35.0	353.159	23.947	1453.909	1.407%	93.614%
36.0	285.567	20.337	1474.246	1.195%	94.923%
37.0	205.833	16.027	1490.273	.942%	95.955%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	138.516	11.494	1501.767	.675%	96.695%
39.0	78.504	7.407	1509.174	.435%	97.172%
40.0	37.688	4.052	1513.227	.238%	97.433%
41.0	21.009	2.090	1515.317	.123%	97.567%
42.0	16.868	1.376	1516.693	.081%	97.656%
43.0	14.365	1.157	1517.85	.068%	97.730%
44.0	12.291	1.006	1518.856	.059%	97.795%
45.0	10.779	0.887	1519.743	.052%	97.852%
46.0	10.153	0.819	1520.561	.048%	97.905%
47.0	9.788	0.793	1521.354	.047%	97.956%
48.0	9.534	0.781	1522.135	.046%	98.006%
49.0	9.302	0.774	1522.909	.045%	98.056%
50.0	9.070	0.766	1523.675	.045%	98.106%
51.0	8.902	0.760	1524.435	.045%	98.155%
52.0	8.705	0.755	1525.191	.044%	98.203%
53.0	8.508	0.749	1525.94	.044%	98.251%
54.0	8.346	0.743	1526.682	.044%	98.299%
55.0	8.198	0.739	1527.421	.043%	98.347%
56.0	8.072	0.735	1528.156	.043%	98.394%
57.0	7.959	0.733	1528.889	.043%	98.441%
58.0	7.854	0.731	1529.62	.043%	98.488%
59.0	7.748	0.729	1530.35	.043%	98.535%
60.0	7.664	0.728	1531.078	.043%	98.582%
61.0	7.573	0.727	1531.805	.043%	98.629%
62.0	7.488	0.726	1532.531	.043%	98.676%
63.0	7.425	0.725	1533.256	.043%	98.722%
64.0	7.376	0.726	1533.982	.043%	98.769%
65.0	7.298	0.726	1534.709	.043%	98.816%
66.0	7.249	0.726	1535.434	.043%	98.863%
67.0	7.200	0.727	1536.161	.043%	98.909%
68.0	7.137	0.726	1536.887	.043%	98.956%
69.0	7.102	0.726	1537.614	.043%	99.003%
70.0	7.052	0.727	1538.341	.043%	99.050%
71.0	7.052	0.729	1539.07	.043%	99.097%
72.0	7.010	0.731	1539.801	.043%	99.144%
73.0	6.975	0.731	1540.532	.043%	99.191%
74.0	6.947	0.732	1541.264	.043%	99.238%
75.0	6.933	0.733	1541.997	.043%	99.285%

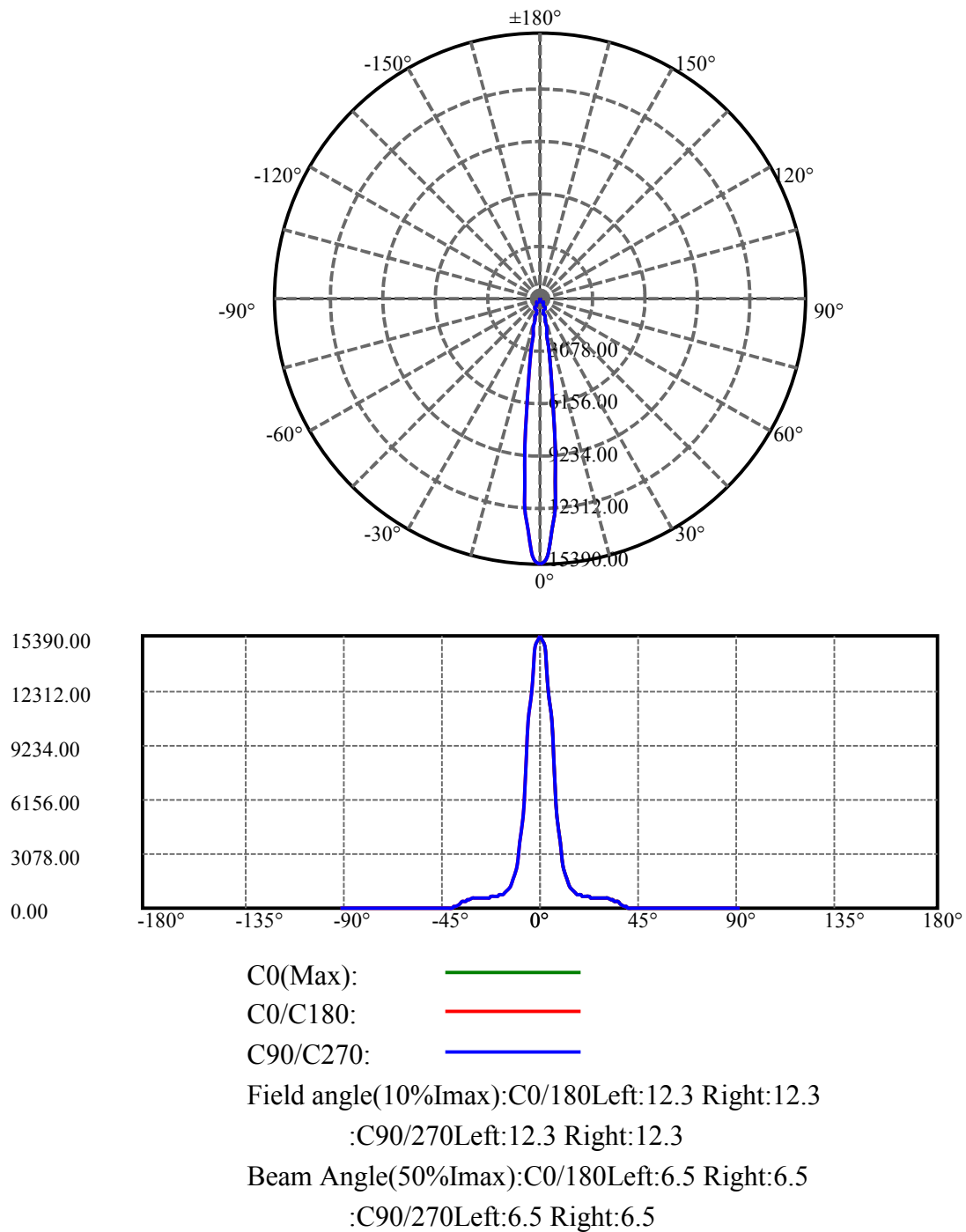
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.912	0.735	1542.732	.043%	99.333%
77.0	6.898	0.736	1543.469	.043%	99.380%
78.0	6.884	0.738	1544.206	.043%	99.428%
79.0	6.870	0.739	1544.945	.043%	99.475%
80.0	6.855	0.740	1545.685	.043%	99.523%
81.0	6.848	0.741	1546.426	.044%	99.570%
82.0	6.827	0.742	1547.168	.044%	99.618%
83.0	6.820	0.742	1547.91	.044%	99.666%
84.0	6.806	0.742	1548.652	.044%	99.714%
85.0	6.785	0.742	1549.394	.044%	99.762%
86.0	6.778	0.741	1550.135	.044%	99.809%
87.0	6.771	0.742	1550.877	.044%	99.857%
88.0	6.757	0.741	1551.618	.044%	99.905%
89.0	6.743	0.740	1552.358	.043%	99.952%
90.0	6.750	0.740	1553.098	.043%	100.000%

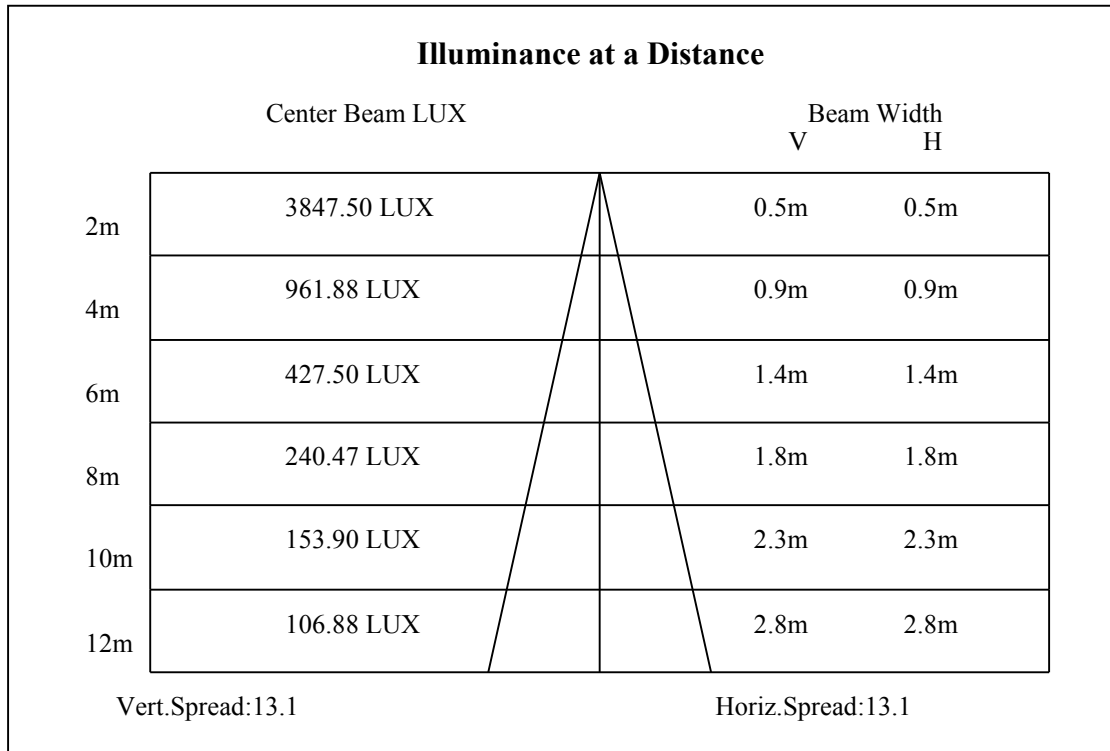
ZONAL LUMEN SUMMARY

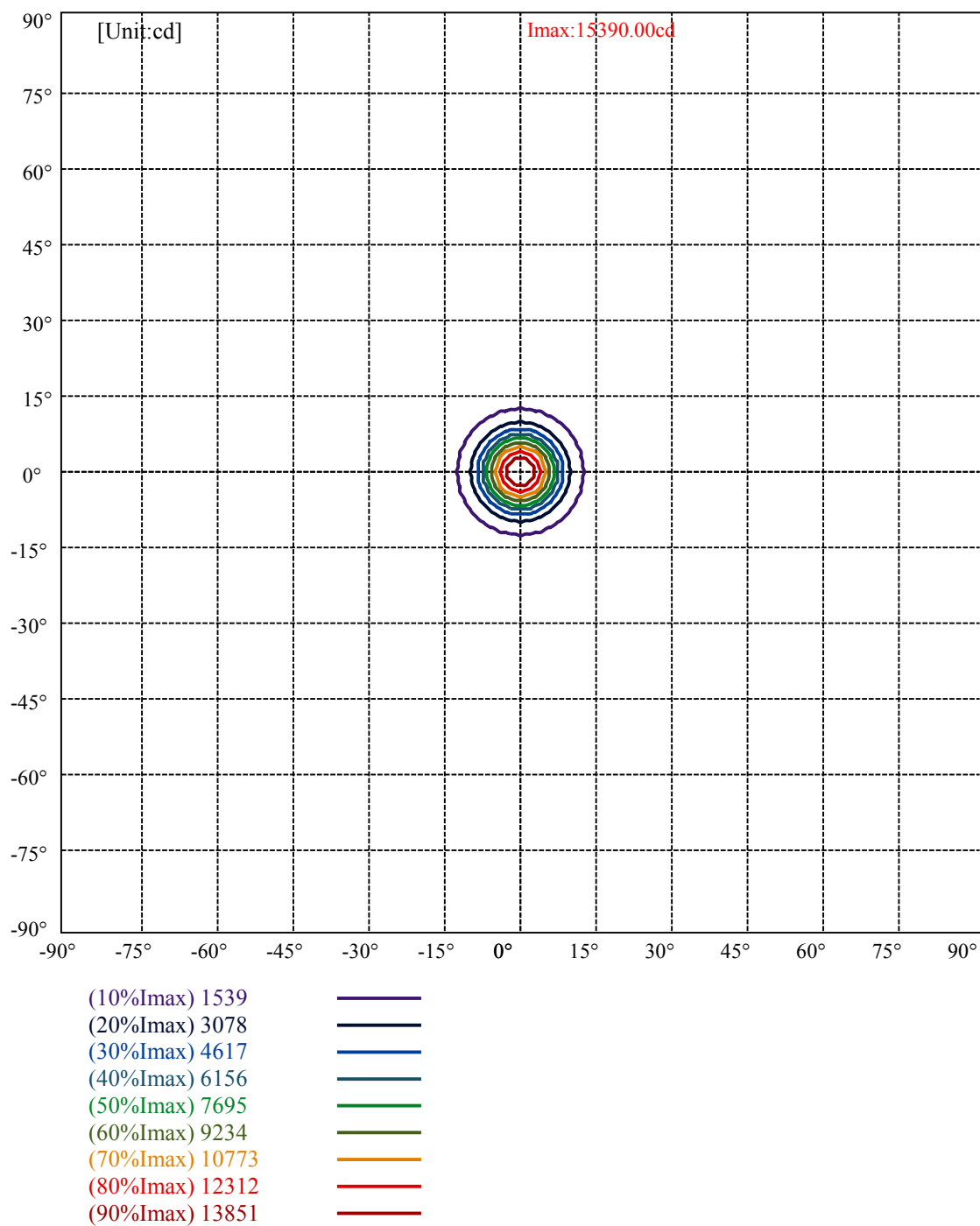
Zone	Lumens	%Lamp	%Fixt
0-30	1314.24	77.22%	84.62%
0-40	1513.23	88.91%	97.43%
0-60	1531.08	89.96%	98.58%
0-90	1552.36	91.21%	99.95%
0-120	1552.36	91.21%	99.95%
0-180	1553.10	91.25%	100.00%
60-90	22.01	1.29%	1.42%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.52	1242.48	73.00%	80.00%

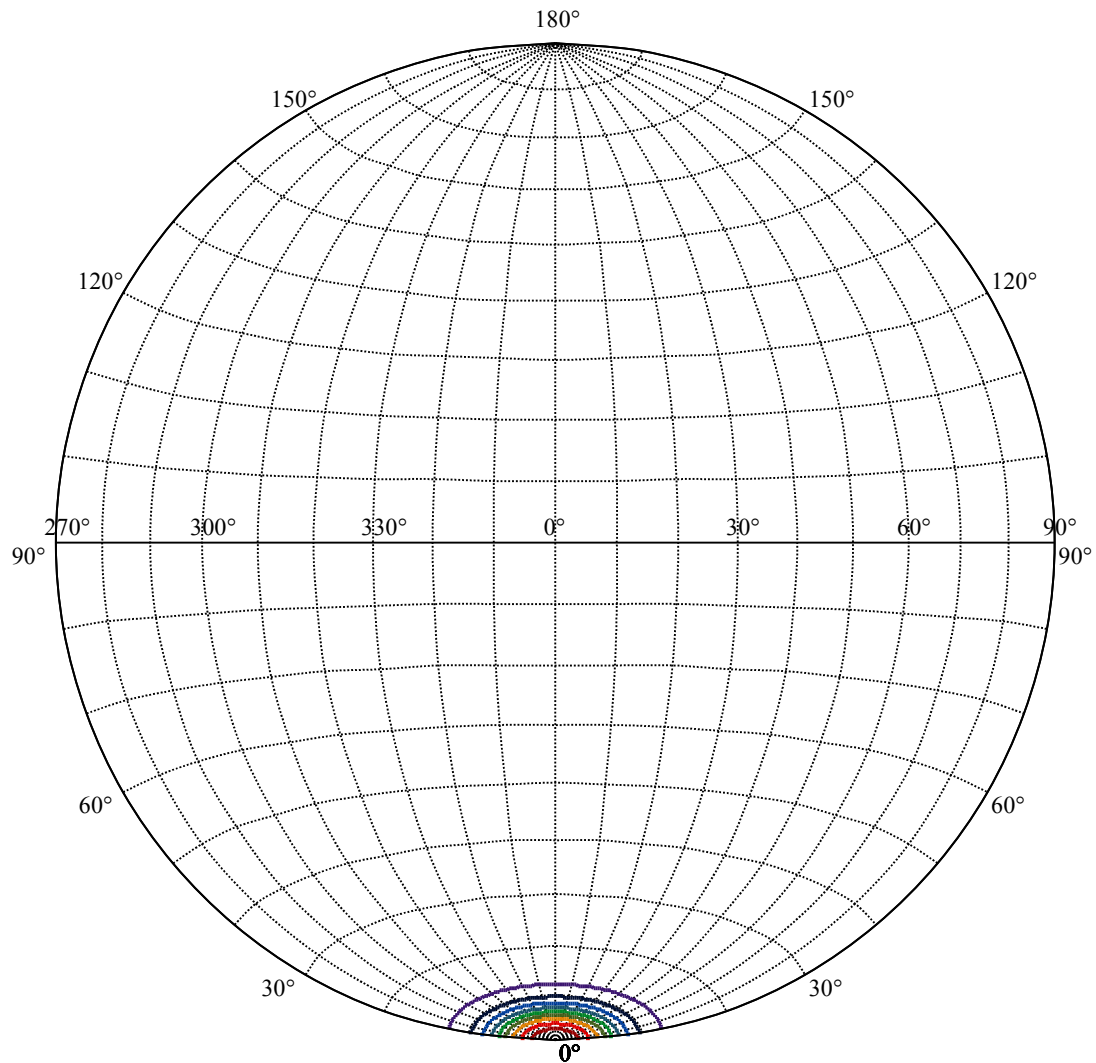
ZONAL LUMEN SUMMARY

0-10	722.39
10-20	317.41
20-30	274.44
30-40	198.99
40-50	10.45
50-60	7.40
60-70	7.26
70-80	7.34
80-90	6.67
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









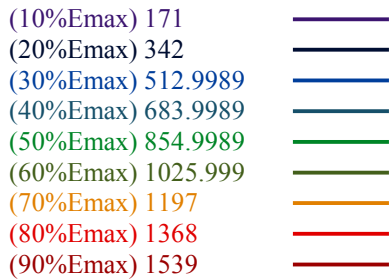
House

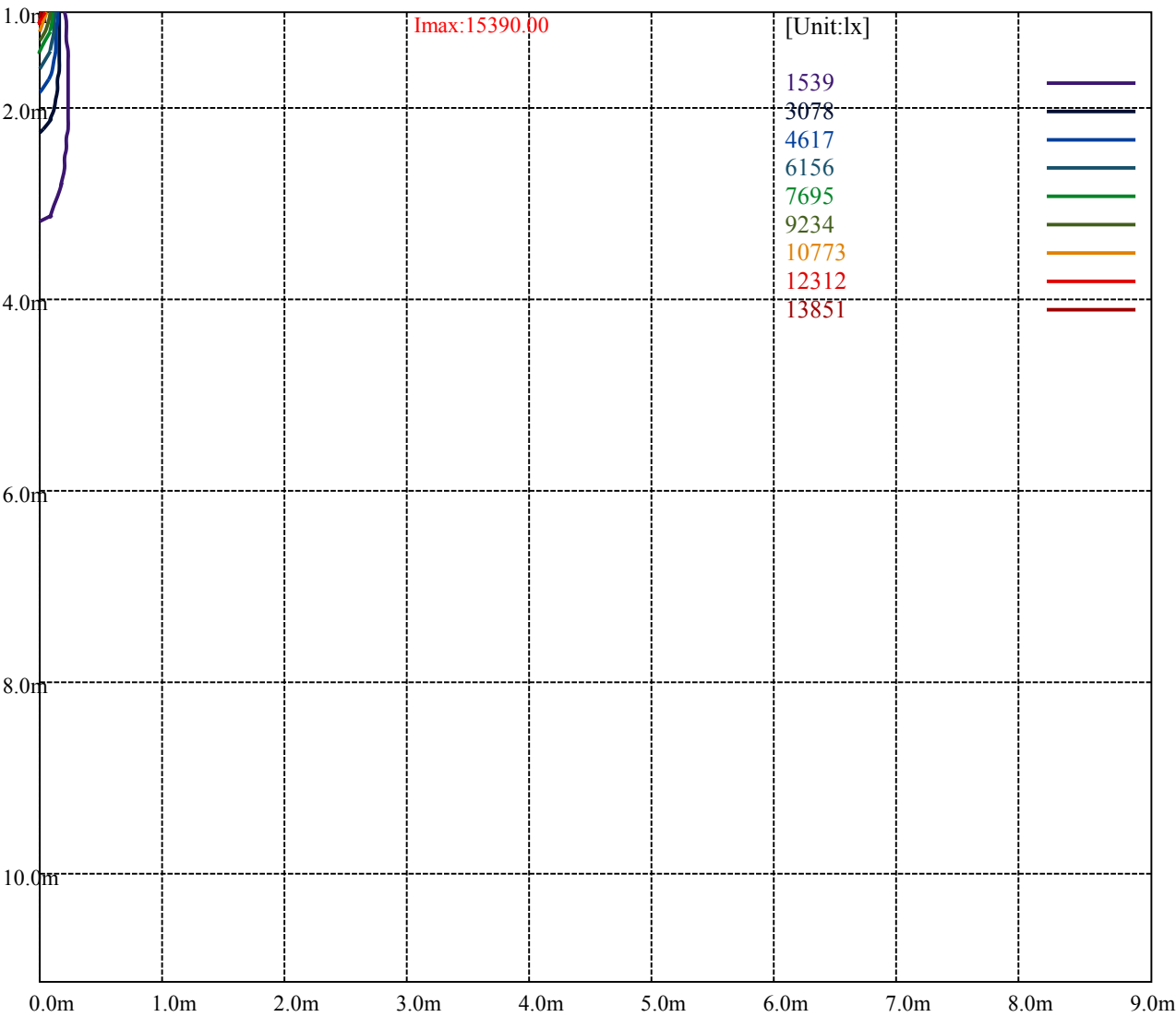
[Unit:cd]

Road

Imax:15390.00

(10%Imax)	1539	—
(20%Imax)	3078	—
(30%Imax)	4617	—
(40%Imax)	6156	—
(50%Imax)	7695	—
(60%Imax)	9234	—
(70%Imax)	10773	—
(80%Imax)	12312	—
(90%Imax)	13851	—





Luminance Table

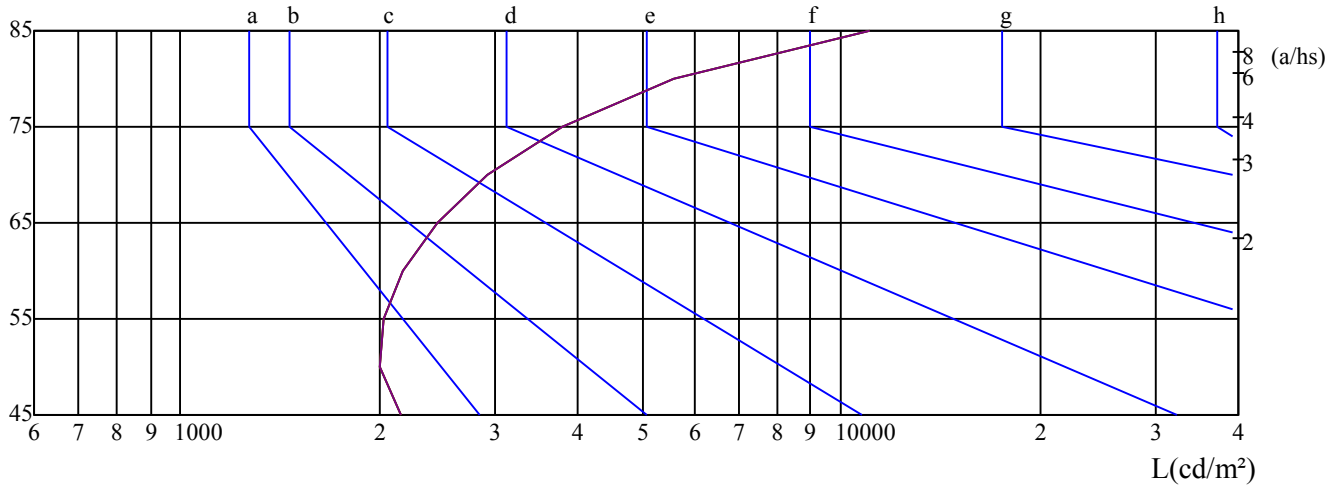
γ	45	50	55	60	65	70	75	80	85
C0	2160	2000	2026	2172	2448	2922	3796	5595	11033
C45	2160	2000	2026	2172	2448	2922	3796	5595	11033
C90	2160	2000	2026	2172	2448	2922	3796	5595	11033

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2448	2448	2448	3796	3796	3796	11033	11033	11033

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

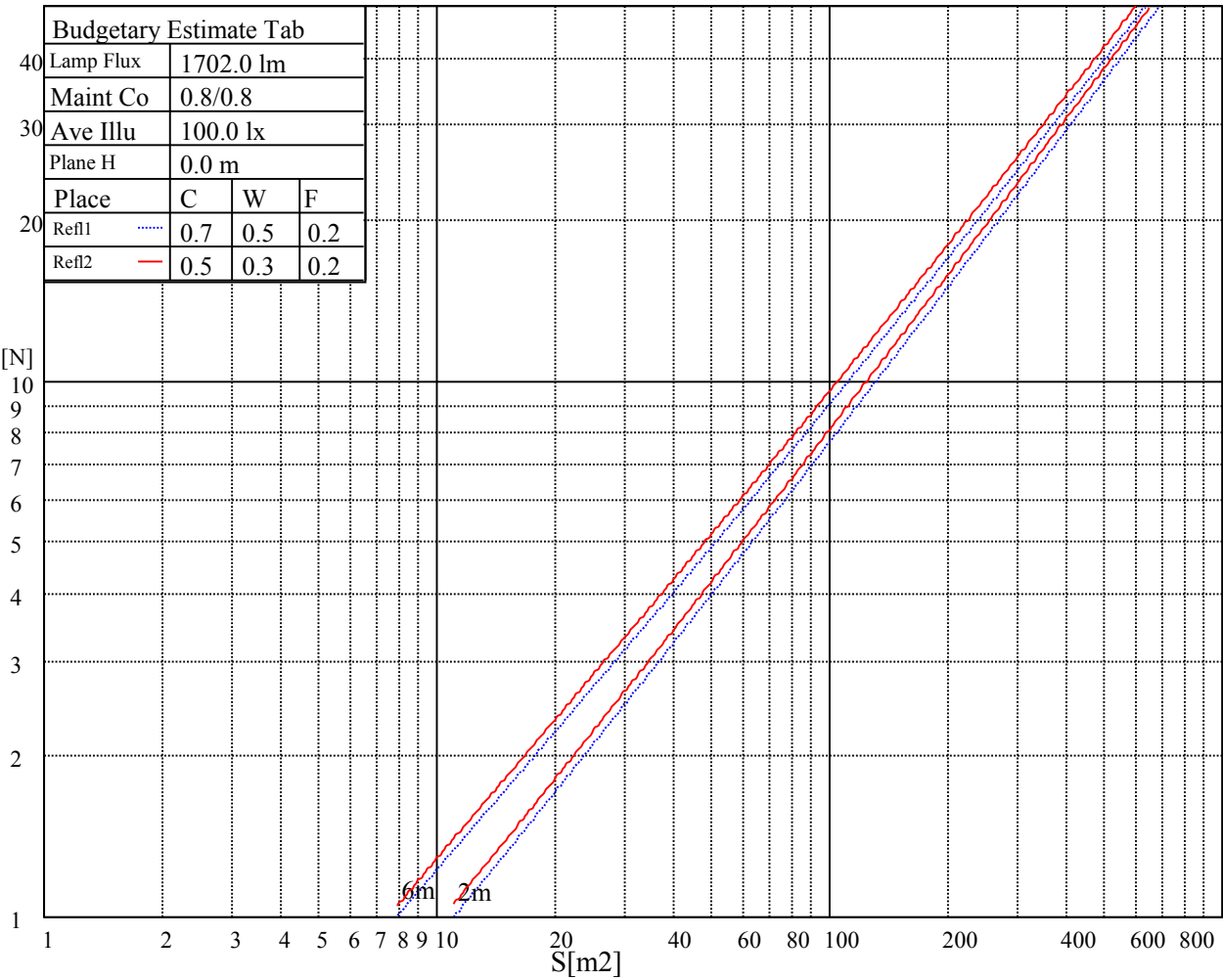
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

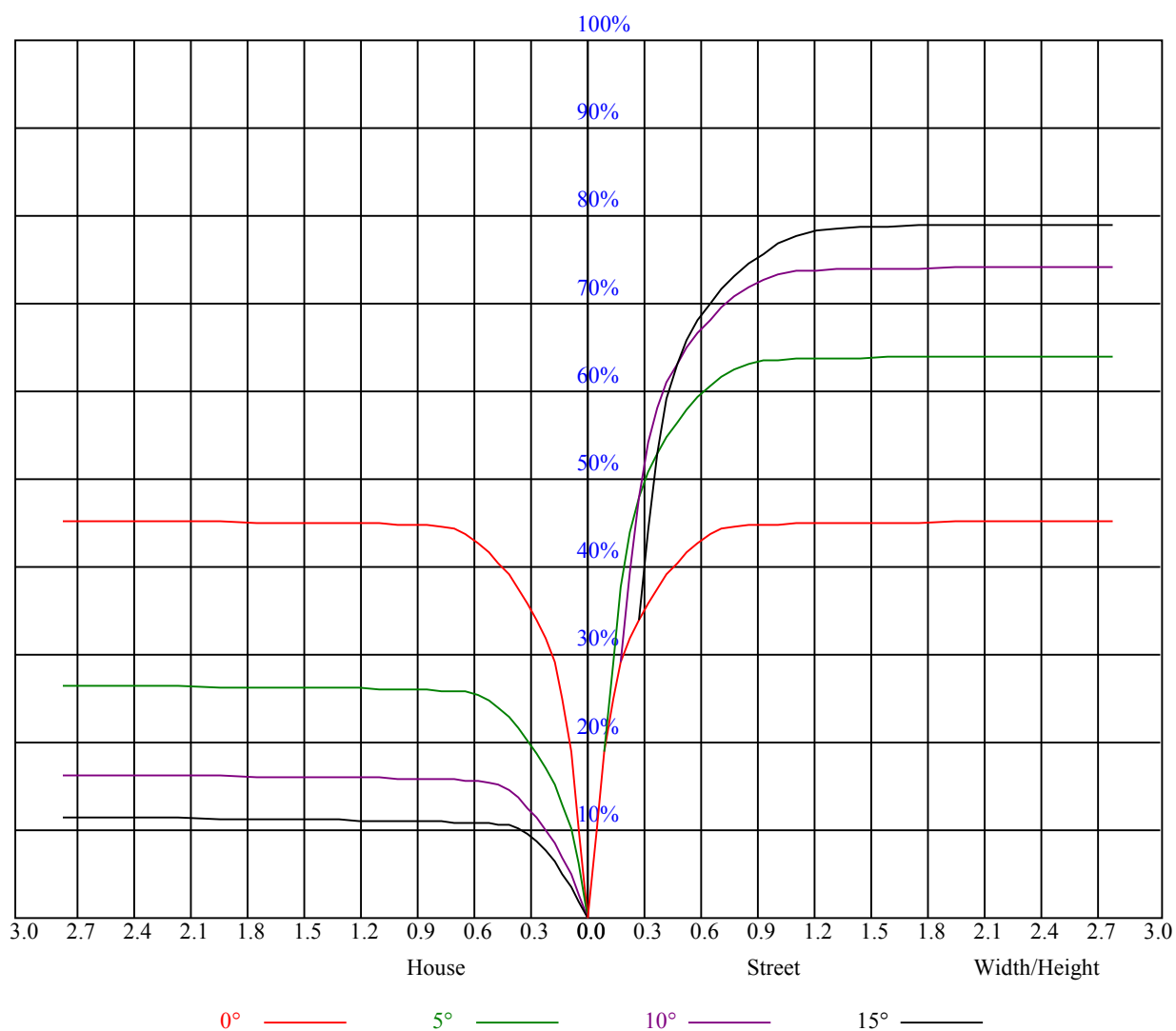
C0 ———

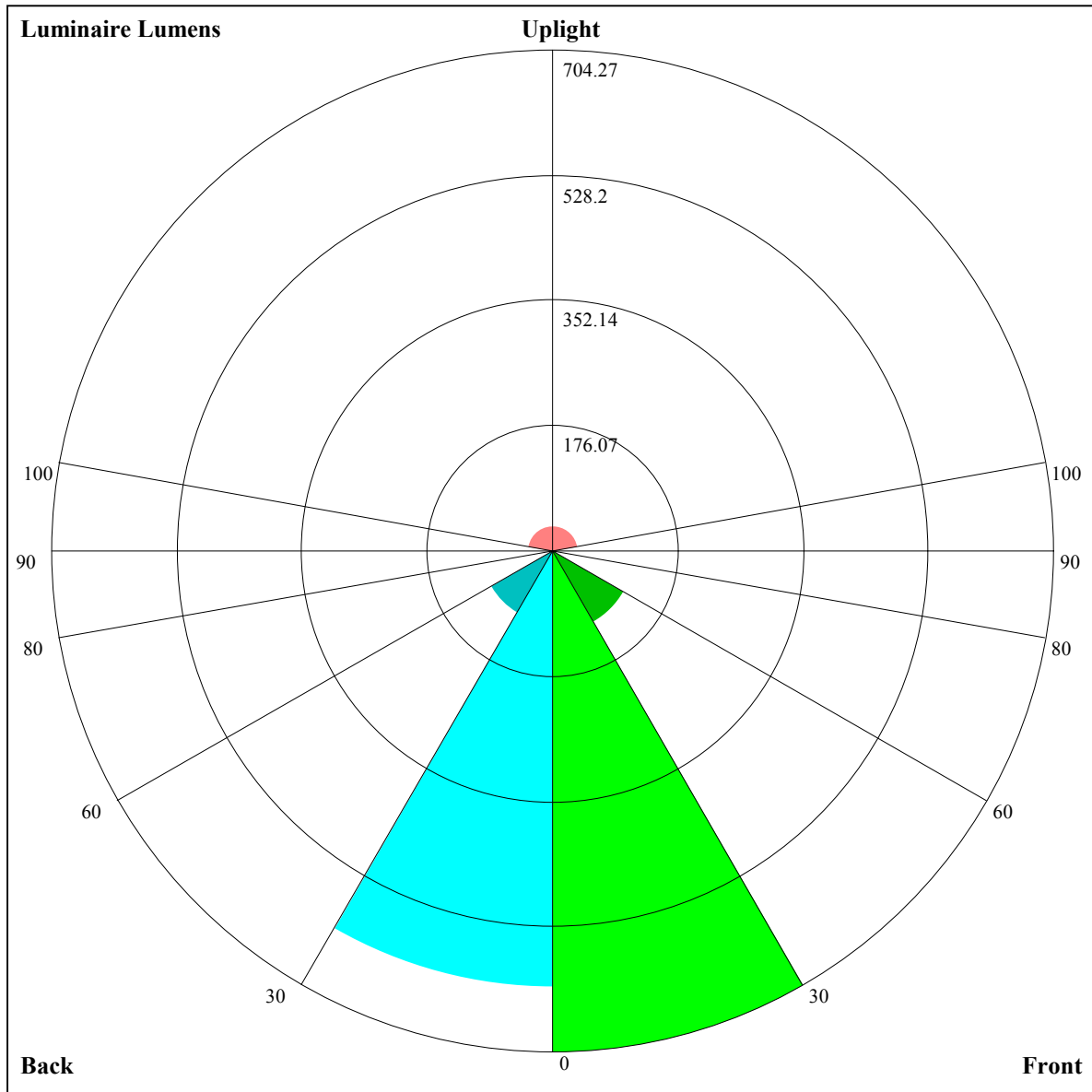
C45 ———

C90 ———



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	1.09	1.09	1.09	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.03	1.01	0.99	1.01	0.99	0.97	0.97	0.96	0.94	0.94	0.93	0.92	0.90	0.90	0.89	0.87
2	0.97	0.94	0.92	0.96	0.93	0.91	0.93	0.91	0.89	0.90	0.89	0.87	0.88	0.87	0.85	0.84
3	0.93	0.89	0.87	0.92	0.89	0.86	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.84	0.82	0.81
4	0.89	0.85	0.82	0.88	0.85	0.82	0.86	0.83	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.78
5	0.86	0.82	0.79	0.85	0.81	0.79	0.83	0.80	0.78	0.82	0.79	0.77	0.81	0.78	0.77	0.76
6	0.83	0.79	0.76	0.82	0.78	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
7	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.75	0.72	0.77	0.74	0.72	0.71
8	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.75	0.72	0.70	0.69
9	0.75	0.71	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.73	0.71	0.68	0.73	0.70	0.68	0.67
10	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.66





Luminaire Lumens:

FL=704.27,FM=116.21,FH=7.31,FVH=3.7

BL=612.57,BM=99.92,BH=7.29,BVH=3.7

UL=7.36,UH=35.05

BUG Rating:B2-U2-G0

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	15384.38	15541.88	15401.25	14928.75	13933.13	12296.25	10558.13	8505.00	6727.50
45.0	15271.88	15446.25	15300.00	14827.50	14006.25	12543.75	10670.63	8814.38	6991.88
90.0	15406.88	15232.50	14743.13	13629.38	11204.44	10549.13	8502.75	6474.94	4889.81
135.0	15496.88	15271.88	14636.25	13668.75	12060.00	10136.25	8341.88	6322.50	4792.50
180.0	15384.38	14945.63	14113.13	11014.88	10792.69	8975.25	6930.56	5082.19	3791.25
225.0	15271.88	14748.75	13798.13	11212.31	10313.44	8453.81	6670.69	4718.81	3528.56
270.0	15406.88	15294.38	14850.00	13966.88	12453.75	10755.00	8690.63	6676.88	5090.63
315.0	15496.88	15451.88	15091.88	14146.88	12346.88	11154.94	9346.50	7071.19	5396.06
360.0	15384.38	15541.88	15401.25	14928.75	13933.13	12296.25	10558.13	8505.00	6727.50
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4933.13	3555.00	2885.63	2118.94	1612.13	1335.38	1140.19	972.56	883.13
45.0	4978.13	3718.13	2891.25	2107.69	1653.19	1368.00	1182.94	984.38	886.50
90.0	3665.25	2595.94	2024.44	1622.81	1110.99	1090.74	955.07	848.64	776.98
135.0	3493.13	2851.88	2015.44	1612.69	1272.38	1083.38	947.81	833.63	771.19
180.0	2764.13	2066.06	1643.63	1321.31	1102.22	964.86	866.14	788.01	737.83
225.0	2656.69	1931.63	1556.44	1121.74	1063.58	942.58	857.81	782.10	742.95
270.0	3661.88	2851.88	2073.94	1661.63	1317.38	1130.06	997.31	889.88	815.63
315.0	4022.44	2810.81	2169.00	1683.56	1387.69	1114.48	1012.11	900.96	832.33
360.0	4933.13	3555.00	2885.63	2118.94	1612.13	1335.38	1140.19	972.56	883.13
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	819.00	768.94	730.13	701.44	676.13	654.19	635.06	617.06	599.63
45.0	822.94	761.06	719.44	695.25	663.19	640.13	622.69	602.44	587.25
90.0	730.46	692.16	667.24	645.13	625.50	609.13	592.54	578.31	567.51
135.0	722.81	686.25	657.56	637.88	617.63	603.00	590.06	578.81	569.81
180.0	695.59	664.43	641.70	621.00	604.24	591.30	580.22	568.63	558.84
225.0	706.73	676.18	657.68	636.19	615.83	603.90	591.86	577.97	568.07
270.0	769.50	728.44	695.81	672.19	649.13	630.56	612.56	597.94	586.69
315.0	779.18	739.41	709.59	681.41	656.04	636.30	618.58	599.63	586.86
360.0	819.00	768.94	730.13	701.44	676.13	654.19	635.06	617.06	599.63
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	584.44	569.81	560.25	551.81	541.69	533.81	524.81	483.75	426.94
45.0	576.00	561.38	551.81	543.94	533.25	525.38	518.06	479.81	428.63
90.0	556.43	545.34	537.58	529.59	519.36	510.13	477.84	411.64	349.20
135.0	557.44	548.44	540.56	532.13	521.44	511.31	471.38	402.75	334.13
180.0	550.24	541.18	531.73	522.68	513.28	482.34	427.78	354.77	287.72
225.0	558.84	549.73	540.06	530.83	520.31	477.73	419.34	339.98	267.75
270.0	574.31	563.06	554.63	545.63	534.38	525.38	492.75	429.19	353.81
315.0	573.69	561.94	552.21	544.39	534.83	525.99	499.95	441.56	377.10
360.0	584.44	569.81	560.25	551.81	541.69	533.81	524.81	483.75	426.94
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	361.69	291.94	199.18	131.79	78.36	27.51	18.84	16.99	13.89
45.0	362.81	293.06	235.29	140.23	69.75	28.86	18.56	16.26	13.67
90.0	280.86	194.79	135.06	70.82	25.71	18.96	16.59	13.28	11.98
135.0	291.38	198.51	116.21	63.84	26.66	19.52	16.99	14.34	12.43
180.0	212.06	139.22	80.83	34.14	20.19	18.11	15.58	12.88	10.52
225.0	187.26	113.40	62.44	29.19	19.24	16.99	14.46	12.26	10.86
270.0	290.81	197.16	129.77	68.68	28.29	18.79	16.43	14.18	12.26
315.0	297.68	218.59	149.34	89.33	33.30	19.35	17.49	14.74	12.71
360.0	361.69	291.94	199.18	131.79	78.36	27.51	18.84	16.99	13.89

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	12.04	11.08	10.13	9.84	9.56	9.28	9.11	8.89	8.66
45.0	11.64	10.29	10.01	9.73	9.45	9.28	9.11	8.89	8.72
90.0	10.52	9.96	9.73	9.45	9.28	9.06	8.89	8.66	8.49
135.0	10.18	9.90	9.62	9.39	9.23	9.00	8.78	8.66	8.38
180.0	10.07	9.73	9.45	9.28	9.00	8.83	8.66	8.49	8.33
225.0	10.13	9.84	9.51	9.28	9.06	8.83	8.66	8.49	8.27
270.0	10.69	10.13	9.84	9.56	9.34	9.06	8.89	8.72	8.49
315.0	10.97	10.29	10.01	9.73	9.51	9.23	9.11	8.83	8.72
360.0	12.04	11.08	10.13	9.84	9.56	9.28	9.11	8.89	8.66
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.49	8.33	8.16	8.04	7.93	7.82	7.71	7.59	7.54
45.0	8.55	8.33	8.16	8.10	7.99	7.88	7.76	7.71	7.59
90.0	8.33	8.16	8.04	7.93	7.82	7.76	7.65	7.54	7.48
135.0	8.27	8.16	8.04	7.93	7.82	7.71	7.65	7.59	7.48
180.0	8.16	8.04	7.93	7.88	7.76	7.65	7.59	7.48	7.43
225.0	8.16	8.04	7.93	7.82	7.71	7.59	7.54	7.48	7.37
270.0	8.33	8.21	8.10	7.93	7.88	7.76	7.65	7.54	7.48
315.0	8.49	8.33	8.21	8.04	7.93	7.82	7.76	7.65	7.54
360.0	8.49	8.33	8.16	8.04	7.93	7.82	7.71	7.59	7.54
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.43	7.43	7.31	7.31	7.26	7.20	7.14	7.09	7.09
45.0	7.54	7.48	7.43	7.37	7.26	7.20	7.14	7.09	7.09
90.0	7.43	7.37	7.31	7.26	7.20	7.09	7.09	7.03	7.03
135.0	7.43	7.37	7.31	7.26	7.26	7.14	7.09	7.09	7.09
180.0	7.37	7.31	7.26	7.20	7.14	7.14	7.09	7.03	7.03
225.0	7.31	7.31	7.20	7.14	7.14	7.09	7.09	7.03	7.03
270.0	7.43	7.37	7.31	7.26	7.20	7.14	7.09	7.03	7.03
315.0	7.48	7.37	7.26	7.20	7.14	7.09	7.09	7.03	7.03
360.0	7.43	7.43	7.31	7.31	7.26	7.20	7.14	7.09	7.09
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.03	7.03	6.98	6.92	6.92	6.92	6.92	6.92	6.86
45.0	7.09	7.03	7.03	6.98	6.98	6.98	6.92	6.92	6.92
90.0	7.03	6.92	6.92	6.92	6.86	6.86	6.86	6.86	6.81
135.0	7.03	6.98	6.92	6.92	6.92	6.86	6.86	6.86	6.86
180.0	6.98	6.98	6.92	6.92	6.92	6.86	6.86	6.86	6.86
225.0	6.98	6.98	6.98	6.98	6.92	6.92	6.92	6.92	6.92
270.0	6.98	6.98	6.92	6.92	6.92	6.92	6.86	6.81	6.81
315.0	6.98	6.92	6.92	6.92	6.86	6.86	6.86	6.81	6.81
360.0	7.03	7.03	6.98	6.92	6.92	6.92	6.92	6.92	6.86
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.86	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.75
45.0	6.92	6.86	6.86	6.86	6.86	6.86	6.81	6.75	6.75
90.0	6.81	6.81	6.81	6.75	6.75	6.75	6.75	6.75	6.69
135.0	6.86	6.86	6.81	6.81	6.75	6.75	6.75	6.75	6.75
180.0	6.86	6.81	6.81	6.81	6.81	6.81	6.81	6.75	6.81
225.0	6.86	6.86	6.86	6.86	6.81	6.75	6.75	6.75	6.75
270.0	6.81	6.81	6.81	6.81	6.75	6.75	6.75	6.75	6.69
315.0	6.81	6.81	6.81	6.75	6.75	6.75	6.75	6.75	6.75
360.0	6.86	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.75

Intensity data(cd)

Appendix Page: 19 Total:19

C/ γ (°)	90.0
0.0	6.75
45.0	6.75
90.0	6.75
135.0	6.75
180.0	6.75
225.0	6.81
270.0	6.69
315.0	6.75
360.0	6.75