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Nata

LumCAT: 2-1567-M
Luminaire: BJB47.319.2021
Report No: NT2017050302
Test No: GC2017050302
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2274.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 35.3000
Current(A): 0.5000
Power (W): 17.6500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 2078.92
Efficiency(%): 91.42%
Lumens(lm)/Power(W): 117.88
Central intensity(cd): 7057.680
Maximum intensity(cd): 7057.680
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.5
 [C90/270]Total=25.5
Field angle(10%Imax): [C0/180]Total=64.7
 [C90/270]Total=64.7
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.49%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.720%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7057.680	1.689	1.689	.074%	.081%
1.0	7043.778	13.481	15.169	.593%	.730%
2.0	6986.107	26.737	41.906	1.176%	2.016%
3.0	6885.904	39.520	81.425	1.738%	3.917%
4.0	6748.951	51.626	133.052	2.270%	6.400%
5.0	6547.858	62.582	195.634	2.752%	9.410%
6.0	6244.222	71.576	267.209	3.148%	12.853%
7.0	5911.130	78.998	346.207	3.474%	16.653%
8.0	5520.368	84.251	430.458	3.705%	20.706%
9.0	5104.004	87.558	518.016	3.850%	24.918%
10.0	4692.870	89.364	607.38	3.930%	29.216%
11.0	4279.809	89.552	696.932	3.938%	33.524%
12.0	3862.757	88.070	785.002	3.873%	37.760%
13.0	3418.590	84.331	869.332	3.708%	41.817%
14.0	2967.540	78.727	948.059	3.462%	45.603%
15.0	2566.729	72.850	1020.909	3.204%	49.108%
16.0	2191.382	66.238	1087.147	2.913%	52.294%
17.0	1830.488	58.689	1145.836	2.581%	55.117%
18.0	1593.057	53.984	1199.82	2.374%	57.714%
19.0	1412.610	50.433	1250.253	2.218%	60.140%
20.0	1270.702	47.659	1297.912	2.096%	62.432%
21.0	1156.377	45.444	1343.357	1.998%	64.618%
22.0	1083.882	44.526	1387.882	1.958%	66.760%
23.0	1033.381	44.278	1432.16	1.947%	68.890%
24.0	978.793	43.657	1475.818	1.920%	70.990%
25.0	939.152	43.525	1519.342	1.914%	73.083%
26.0	906.242	43.565	1562.907	1.916%	75.179%
27.0	877.668	43.695	1606.602	1.921%	77.281%
28.0	848.171	43.666	1650.268	1.920%	79.381%
29.0	821.180	43.658	1693.926	1.920%	81.481%
30.0	790.280	43.331	1737.257	1.906%	83.565%
31.0	760.535	42.955	1780.212	1.889%	85.632%
32.0	725.244	42.145	1822.357	1.853%	87.659%
33.0	672.252	40.151	1862.508	1.766%	89.590%
34.0	604.781	37.086	1899.594	1.631%	91.374%
35.0	519.856	32.698	1932.292	1.438%	92.947%
36.0	440.382	28.386	1960.678	1.248%	94.312%
37.0	363.785	24.008	1984.686	1.056%	95.467%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	289.679	19.557	2004.243	.860%	96.408%
39.0	205.760	14.200	2018.443	.624%	97.091%
40.0	130.497	9.199	2027.642	.405%	97.533%
41.0	75.400	5.425	2033.066	.239%	97.794%
42.0	36.915	2.709	2035.775	.119%	97.925%
43.0	24.005	1.795	2037.57	.079%	98.011%
44.0	20.564	1.566	2039.137	.069%	98.086%
45.0	18.017	1.397	2040.534	.061%	98.154%
46.0	15.677	1.237	2041.771	.054%	98.213%
47.0	13.957	1.119	2042.89	.049%	98.267%
48.0	12.401	1.011	2043.901	.044%	98.315%
49.0	11.163	0.924	2044.825	.041%	98.360%
50.0	10.392	0.873	2045.698	.038%	98.402%
51.0	9.924	0.846	2046.543	.037%	98.443%
52.0	9.552	0.825	2047.369	.036%	98.482%
53.0	9.387	0.822	2048.191	.036%	98.522%
54.0	9.222	0.818	2049.009	.036%	98.561%
55.0	9.098	0.817	2049.826	.036%	98.600%
56.0	8.974	0.816	2050.642	.036%	98.640%
57.0	8.850	0.814	2051.456	.036%	98.679%
58.0	8.754	0.814	2052.27	.036%	98.718%
59.0	8.713	0.819	2053.089	.036%	98.757%
60.0	8.630	0.820	2053.909	.036%	98.797%
61.0	8.561	0.821	2054.73	.036%	98.836%
62.0	8.492	0.822	2055.552	.036%	98.876%
63.0	8.437	0.824	2056.377	.036%	98.916%
64.0	8.396	0.828	2057.204	.036%	98.955%
65.0	8.341	0.829	2058.033	.036%	98.995%
66.0	8.300	0.831	2058.865	.037%	99.035%
67.0	8.258	0.834	2059.698	.037%	99.075%
68.0	8.217	0.835	2060.534	.037%	99.116%
69.0	8.190	0.838	2061.372	.037%	99.156%
70.0	8.135	0.838	2062.21	.037%	99.196%
71.0	8.135	0.843	2063.054	.037%	99.237%
72.0	8.093	0.844	2063.898	.037%	99.277%
73.0	8.080	0.847	2064.745	.037%	99.318%
74.0	8.052	0.849	2065.594	.037%	99.359%
75.0	8.011	0.849	2066.442	.037%	99.400%

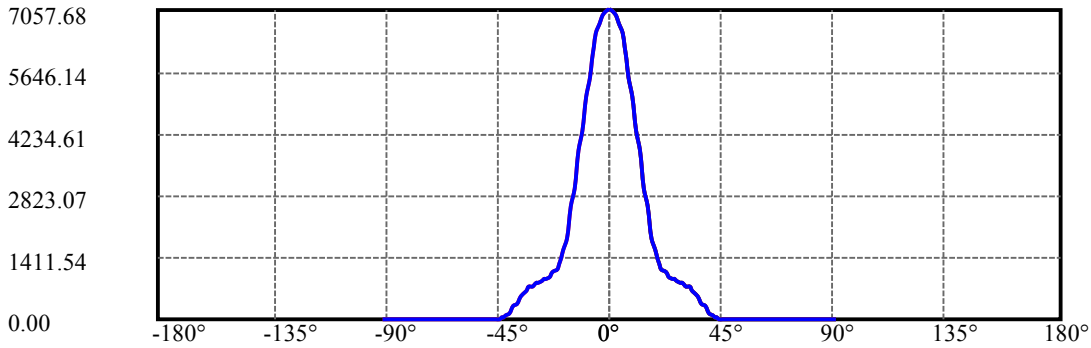
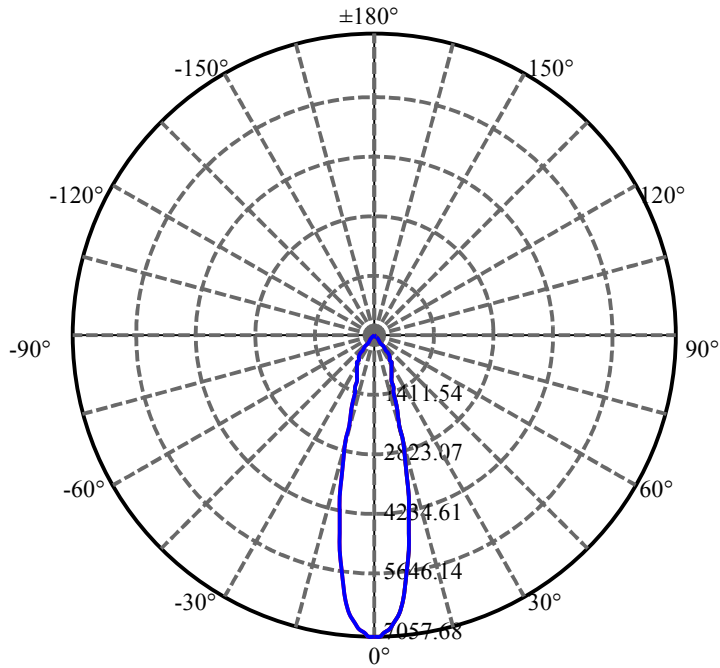
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.011	0.852	2067.295	.037%	99.441%
77.0	8.011	0.856	2068.151	.038%	99.482%
78.0	7.969	0.855	2069.006	.038%	99.523%
79.0	7.969	0.858	2069.864	.038%	99.564%
80.0	7.914	0.855	2070.718	.038%	99.605%
81.0	7.942	0.860	2071.578	.038%	99.647%
82.0	7.928	0.861	2072.439	.038%	99.688%
83.0	7.942	0.864	2073.304	.038%	99.730%
84.0	7.928	0.865	2074.168	.038%	99.771%
85.0	7.914	0.865	2075.033	.038%	99.813%
86.0	7.901	0.864	2075.897	.038%	99.855%
87.0	7.901	0.865	2076.762	.038%	99.896%
88.0	7.887	0.864	2077.627	.038%	99.938%
89.0	7.873	0.863	2078.49	.038%	99.979%
90.0	7.859	0.431	2078.921	.019%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1737.26	76.40%	83.57%
0-40	2027.64	89.17%	97.53%
0-60	2053.91	90.32%	98.80%
0-90	2078.49	91.40%	99.98%
0-120	2078.49	91.40%	99.98%
0-180	2078.92	91.42%	100.00%
60-90	25.40	1.12%	1.22%
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%
0-28.29	1663.14	73.14%	80.00%

ZONAL LUMEN SUMMARY

0-10	607.38
10-20	690.53
20-30	439.34
30-40	290.38
40-50	18.06
50-60	8.21
60-70	8.30
70-80	8.51
80-90	7.77
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: —————

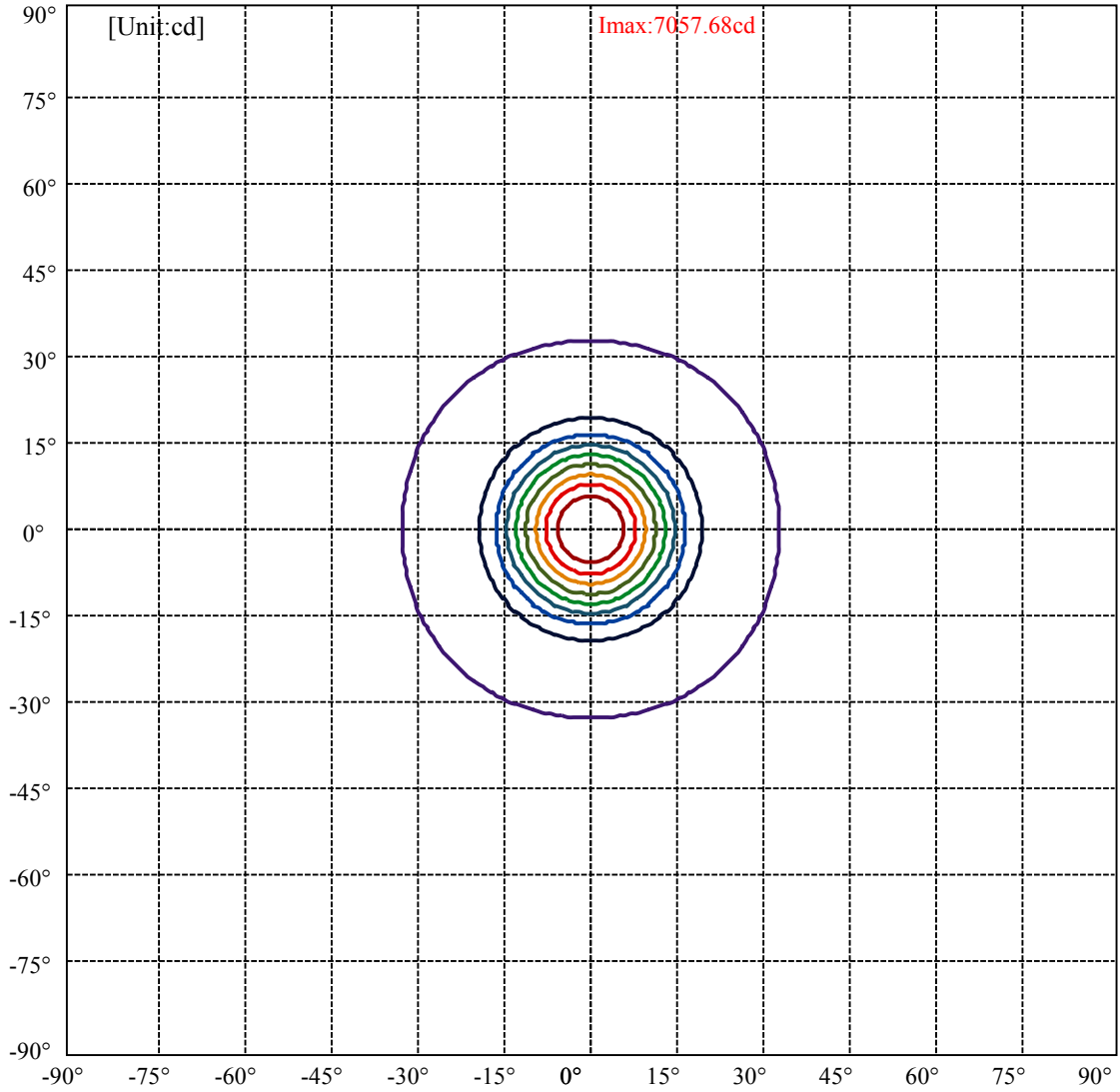
C90/C270: —————

Field angle(10%Imax):C0/180Left:32.4 Right:32.4

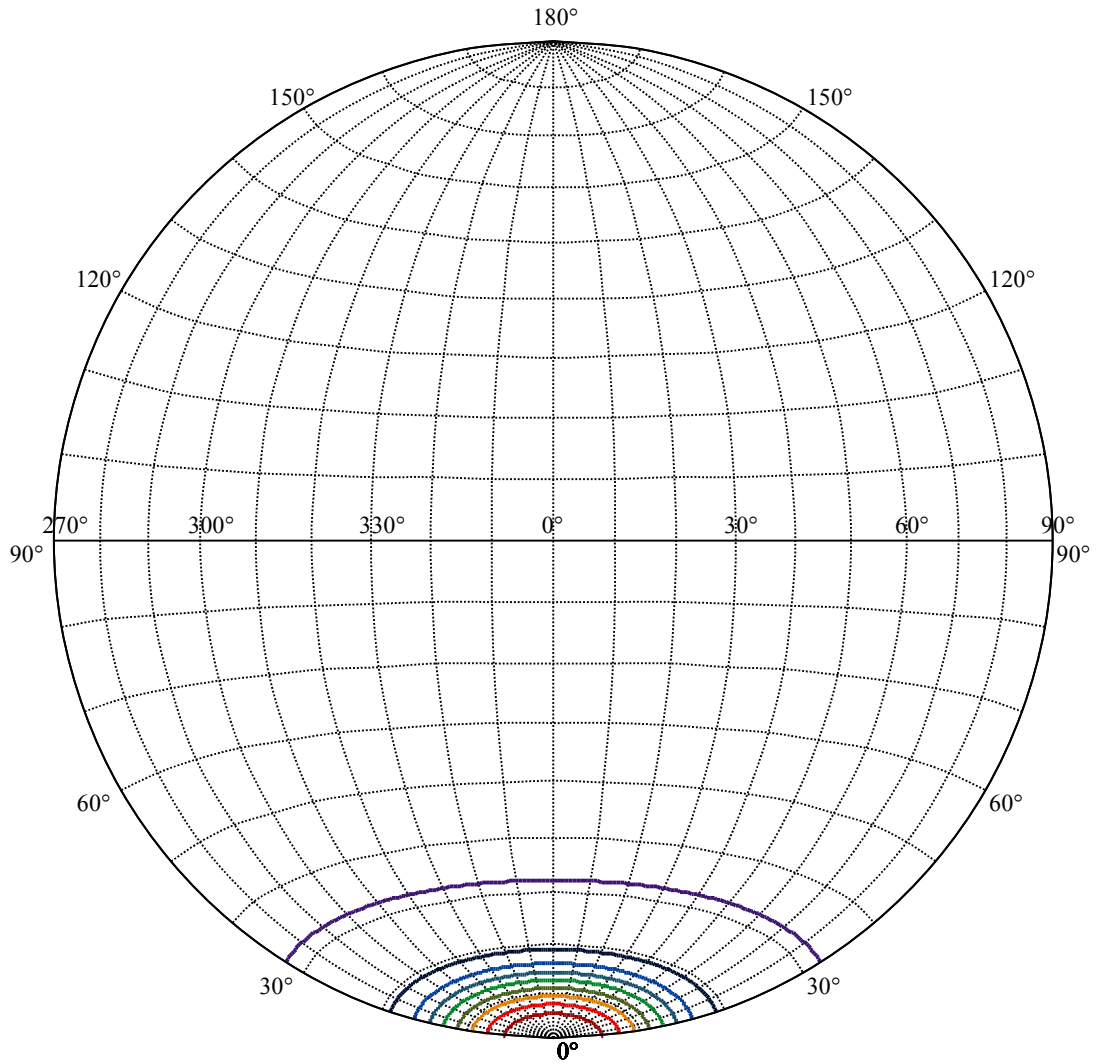
:C90/270Left:32.4 Right:32.4

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

:C90/270Left:12.8 Right:12.8



(10%Imax) 705.768	—
(20%Imax) 1411.54	—
(30%Imax) 2117.3	—
(40%Imax) 2823.07	—
(50%Imax) 3528.84	—
(60%Imax) 4234.61	—
(70%Imax) 4940.38	—
(80%Imax) 5646.14	—
(90%Imax) 6351.91	—



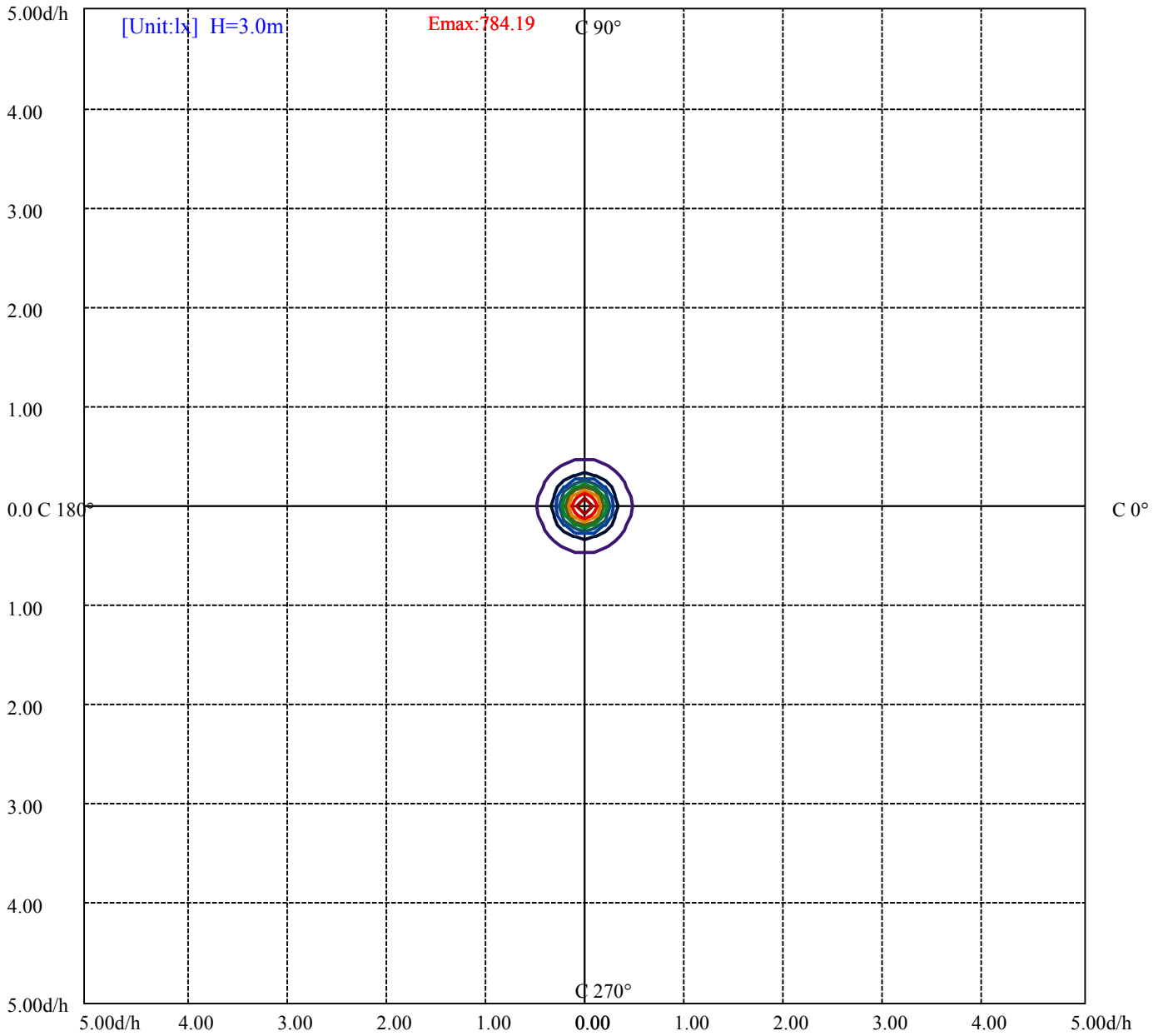
House

[Unit:cd]

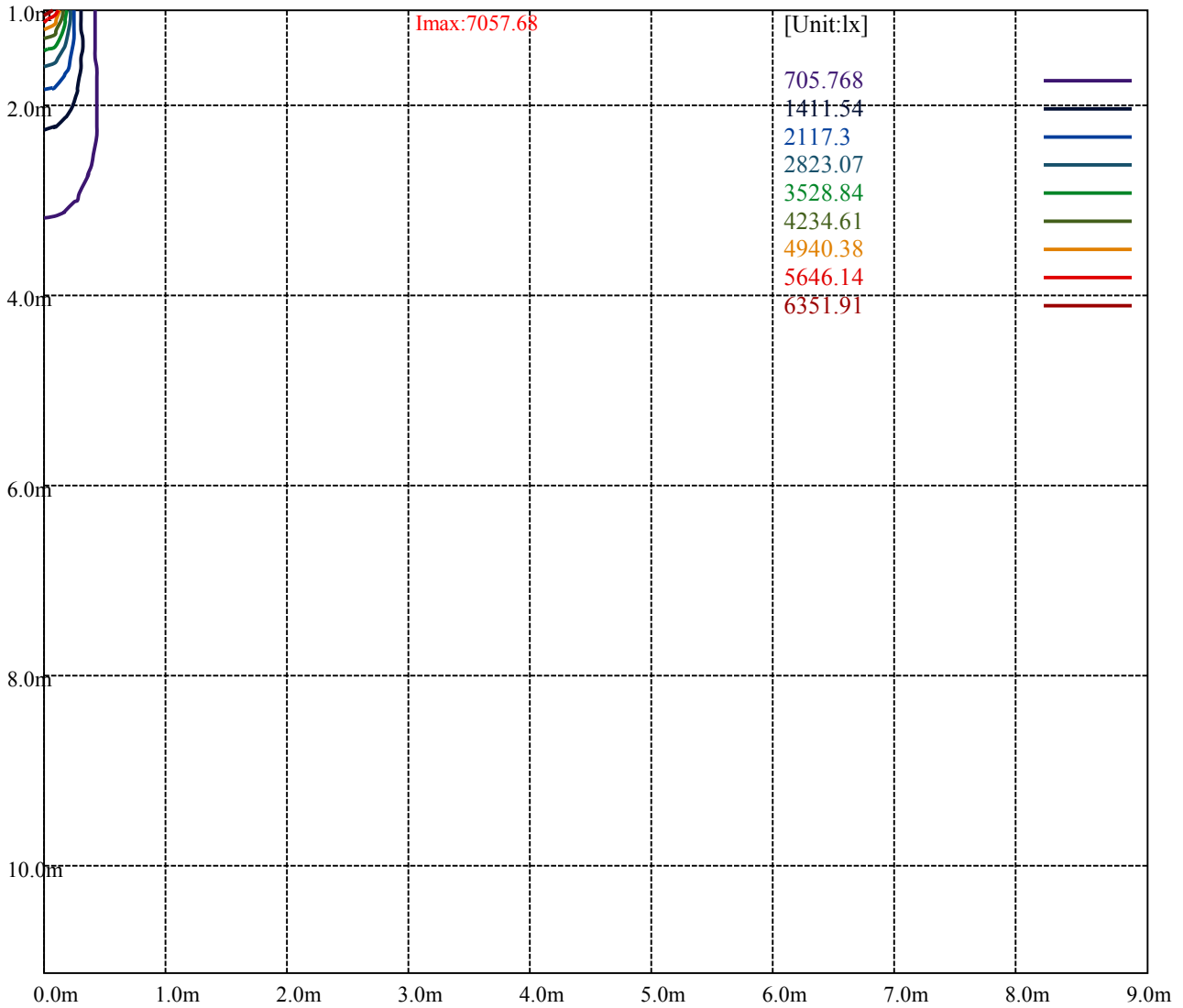
Road

Imax:7057.68

(10%Imax) 705.768	—
(20%Imax) 1411.54	—
(30%Imax) 2117.3	—
(40%Imax) 2823.07	—
(50%Imax) 3528.84	—
(60%Imax) 4234.61	—
(70%Imax) 4940.38	—
(80%Imax) 5646.14	—
(90%Imax) 6351.91	—



(10%Emax) 78.41867	—
(20%Emax) 156.8378	—
(30%Emax) 235.2556	—
(40%Emax) 313.6744	—
(50%Emax) 392.0934	—
(60%Emax) 470.5122	—
(70%Emax) 548.9311	—
(80%Emax) 627.3489	—
(90%Emax) 705.7678	—



Luminance Table

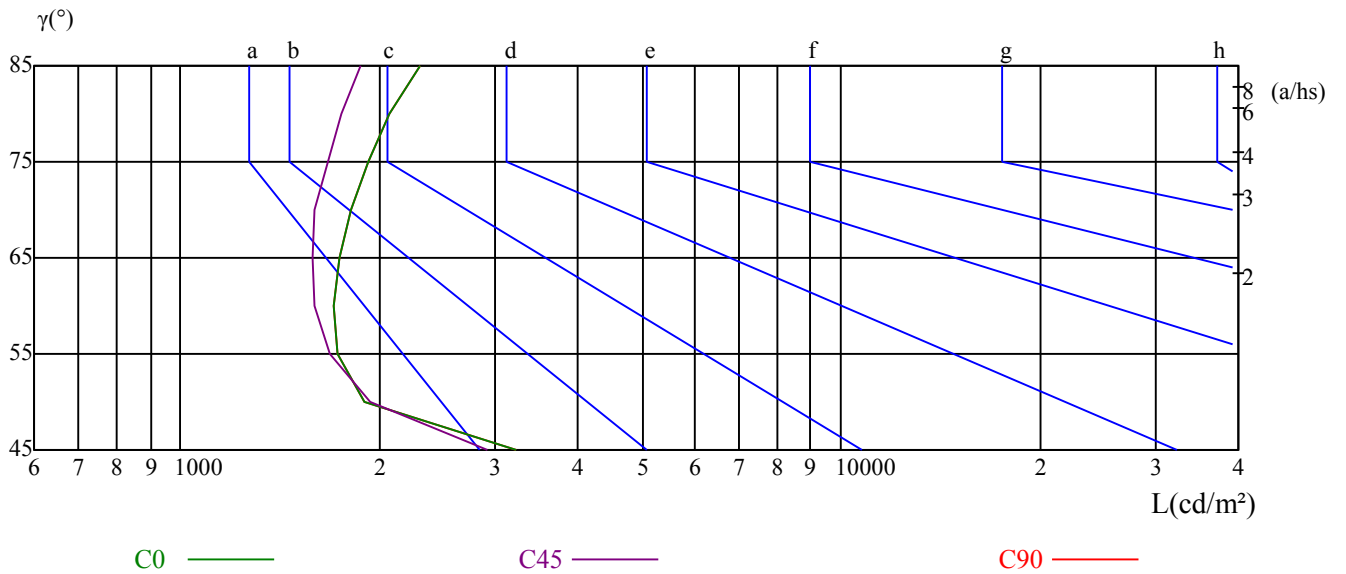
γ	45	50	55	60	65	70	75	80	85
C0	3221	1905	1724	1707	1738	1806	1918	2074	2310
C45	2908	1932	1679	1597	1588	1600	1668	1747	1875
C90	3221	1905	1724	1707	1738	1806	1918	2074	2310

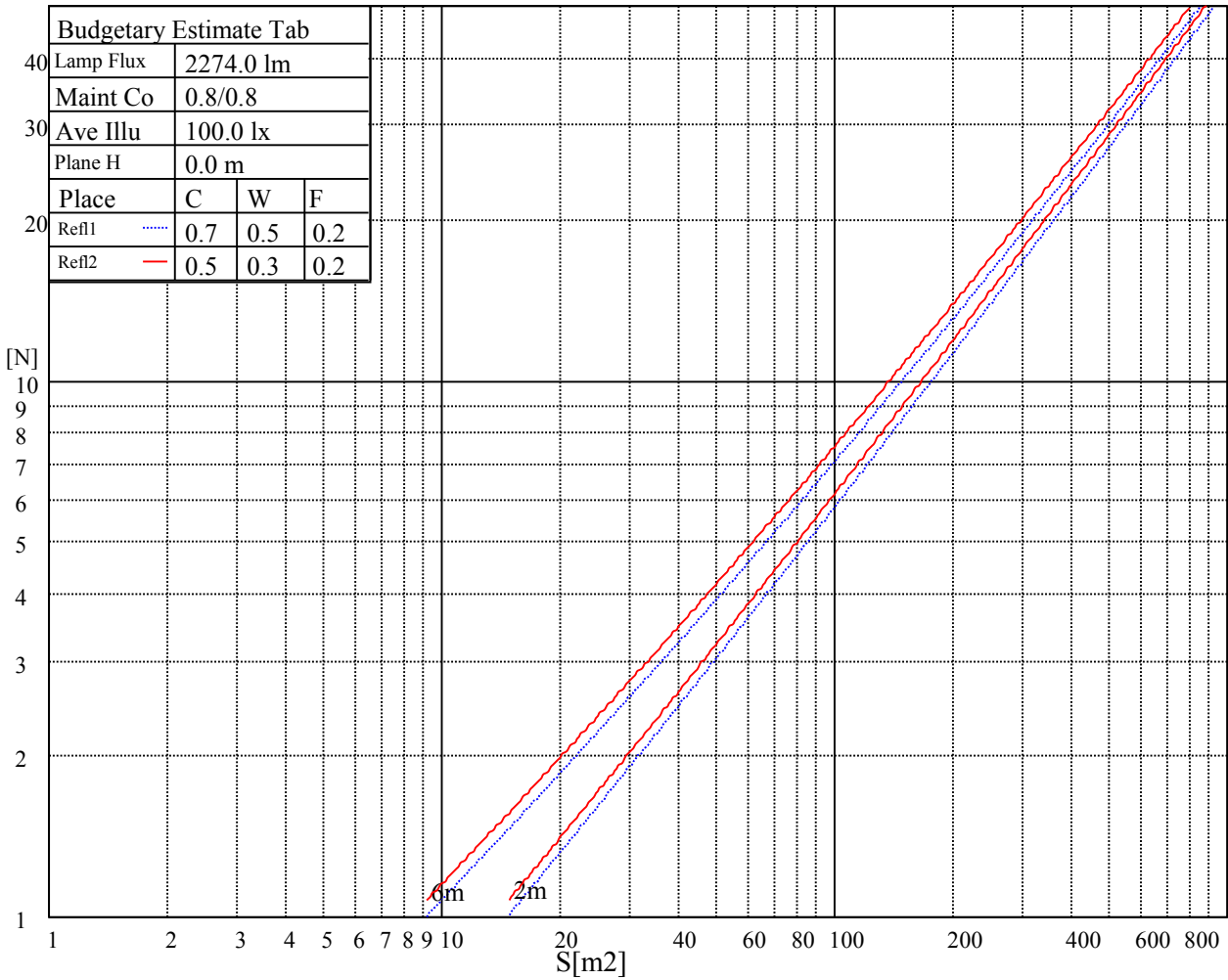
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4028	4028	4533	6317	6317	7022	18532	18532	20530

Glare Table

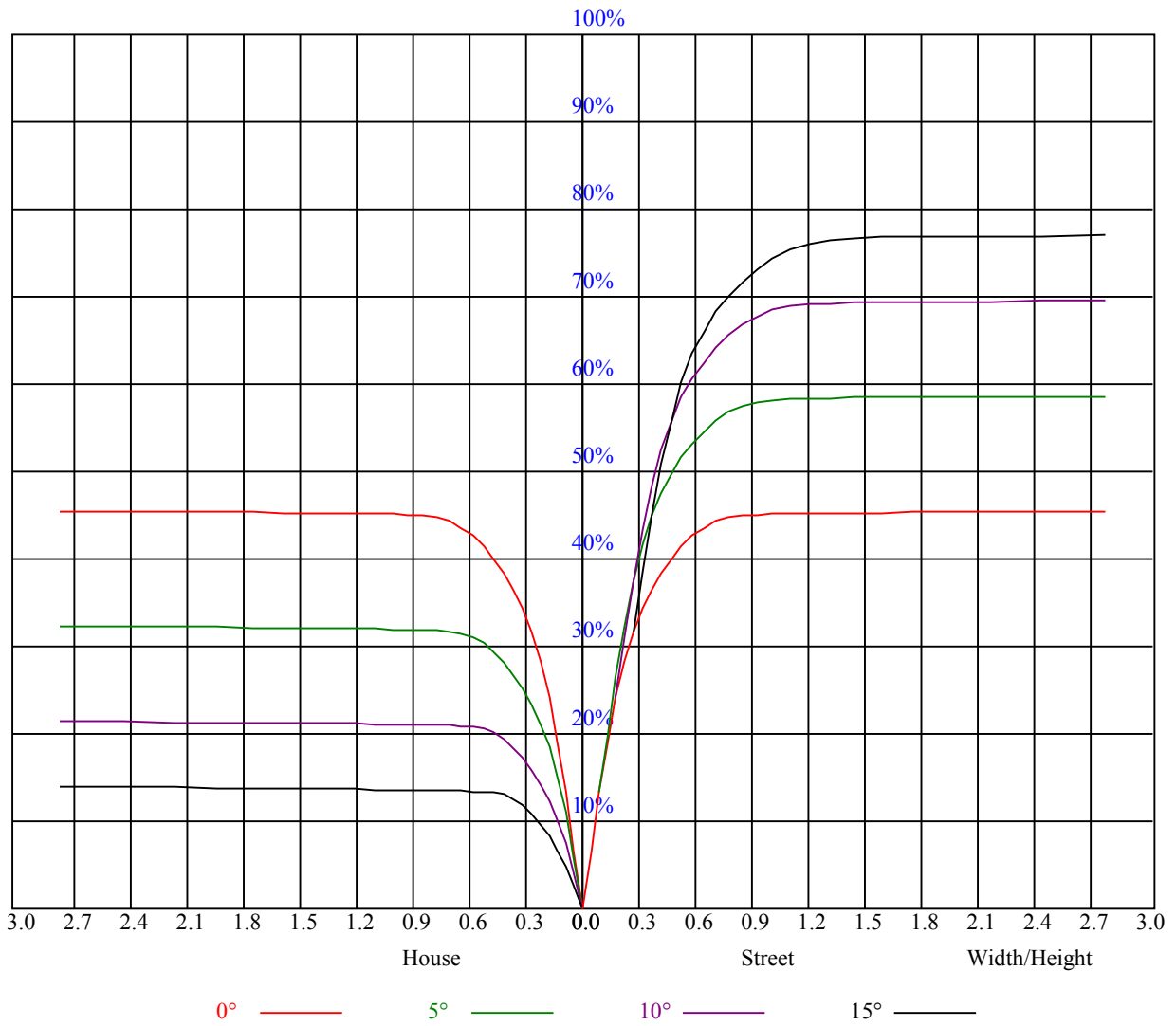
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.02	1.00	0.98	1.00	0.98	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.97	0.93	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.87	0.85	0.84	0.83
3	0.92	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.83	0.81	0.84	0.82	0.80	0.79
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.77	0.75
5	0.83	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
6	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.71	0.75	0.73	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.66
8	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.64
9	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
10	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	0.60	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	7044.47	7020.79	6951.42	6815.43	6654.12	6437.74	6057.31	5687.88	5305.79
90.0	7070.89	7060.43	7002.62	6926.65	6814.88	6626.59	6359.01	6064.46	5658.15
180.0	7044.47	7045.02	7011.43	6929.40	6800.02	6632.64	6379.94	6044.09	5690.63
270.0	7070.89	7048.87	6978.95	6872.14	6726.79	6494.45	6180.63	5848.09	5426.91
360.0	7044.47	7020.79	6951.42	6815.43	6654.12	6437.74	6057.31	5687.88	5305.79
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4821.84	4435.89	4025.72	3554.44	3078.75	2676.29	2247.95	1914.31	1629.12
90.0	5235.86	4859.28	4423.78	4020.77	3558.85	3106.28	2707.67	2326.13	1908.25
180.0	5320.65	4870.29	4508.02	4125.38	3687.68	3232.91	2845.31	2416.43	2032.13
270.0	5037.66	4606.02	4161.71	3750.44	3349.08	2854.67	2465.98	2108.66	1752.45
360.0	4821.84	4435.89	4025.72	3554.44	3078.75	2676.29	2247.95	1914.31	1629.12
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1433.12	1307.59	1201.88	1122.05	1064.24	1014.69	959.08	921.09	890.26
90.0	1648.94	1449.08	1277.86	1180.41	1105.53	1046.62	989.91	950.82	917.24
180.0	1748.04	1510.75	1356.59	1225.00	1092.21	1061.98	1003.79	957.21	922.91
270.0	1542.13	1383.02	1246.48	1098.04	1073.54	1010.23	962.39	927.48	894.56
360.0	1433.12	1307.59	1201.88	1122.05	1064.24	1014.69	959.08	921.09	890.26
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	861.63	833.00	805.48	773.54	743.26	705.27	635.90	564.88	483.40
90.0	885.31	856.13	832.45	799.42	768.04	741.06	692.61	624.34	543.96
180.0	894.83	861.80	834.38	804.54	775.14	740.78	704.01	644.99	560.42
270.0	868.90	841.76	812.41	783.62	755.70	713.86	656.49	584.92	491.65
360.0	861.63	833.00	805.48	773.54	743.26	705.27	635.90	564.88	483.40
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	396.41	323.18	280.79	161.81	92.27	47.18	24.39	21.53	19.16
90.0	458.07	379.89	292.90	236.41	137.31	89.08	34.25	24.06	21.80
180.0	491.98	416.45	335.46	253.59	182.68	109.84	59.08	27.09	21.09
270.0	415.07	335.62	249.57	171.23	109.73	55.50	29.95	23.34	20.21
360.0	396.41	323.18	280.79	161.81	92.27	47.18	24.39	21.53	19.16
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	17.01	14.76	13.16	11.67	10.30	9.80	9.52	9.36	9.19
90.0	18.44	15.86	14.31	12.33	11.12	10.52	9.91	9.63	9.47
180.0	18.99	16.85	14.98	13.49	12.11	10.63	9.91	9.52	9.41
270.0	17.62	15.25	13.38	12.11	11.12	10.63	10.35	9.69	9.47
360.0	17.01	14.76	13.16	11.67	10.30	9.80	9.52	9.36	9.19
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.03	8.92	8.81	8.75	8.64	8.59	8.53	8.48	8.42
90.0	9.30	9.19	9.03	8.92	8.81	8.75	8.70	8.64	8.53
180.0	9.30	9.19	9.08	8.86	8.81	8.81	8.64	8.59	8.53
270.0	9.25	9.08	8.97	8.86	8.75	8.70	8.64	8.53	8.48
360.0	9.03	8.92	8.81	8.75	8.64	8.59	8.53	8.48	8.42
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.37	8.31	8.26	8.26	8.20	8.20	8.15	8.09	8.09
90.0	8.48	8.42	8.37	8.31	8.26	8.26	8.20	8.20	8.15
180.0	8.48	8.42	8.37	8.31	8.26	8.20	8.20	8.15	8.15
270.0	8.42	8.42	8.37	8.31	8.31	8.20	8.20	8.09	8.15
360.0	8.37	8.31	8.26	8.26	8.20	8.20	8.15	8.09	8.09

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Intensity data(cd)										Appendix Page: 17 Total:17
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0	
0.0	8.09	8.09	8.04	8.04	7.98	7.98	7.98	7.93	7.93	
90.0	8.09	8.09	8.04	8.04	8.04	8.04	7.98	7.98	7.93	
180.0	8.09	8.04	8.04	7.98	8.04	8.04	7.98	7.93	7.87	
270.0	8.09	8.09	8.09	7.98	7.98	7.98	7.93	8.04	7.93	
360.0	8.09	8.09	8.04	8.04	7.98	7.98	7.98	7.93	7.93	
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	
0.0	7.98	7.93	7.93	7.93	7.87	7.87	7.87	7.93	7.87	
90.0	7.93	7.93	7.93	7.93	7.93	7.93	7.82	7.87	7.87	
180.0	7.93	7.93	7.93	7.93	7.93	7.87	7.93	7.87	7.87	
270.0	7.93	7.93	7.98	7.93	7.93	7.93	7.98	7.87	7.87	
360.0	7.98	7.93	7.93	7.93	7.87	7.87	7.87	7.93	7.87	
C/γ(°)	90.0									
0.0	7.87									
90.0	7.82									
180.0	7.87									
270.0	7.87									
360.0	7.87									