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Nata

LumCAT: 4-2273-M	
Luminaire: 92.70.131.00	
Report No: GC2017061705	Voltage(V): 34.2000
Test No: NT-0010	Current(A): 0.5000
LampCAT: CITIZEN CLU038	Power (W): 17.1000
Lamp flux(lm): 2365.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2055.32
Efficiency(%): 86.91%
Lumens(lm)/Power(W): 120.19
Central intensity(cd): 24668.020
Maximum intensity(cd): 24668.020
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=11.0
 [C90/270]Total=11.0
Field angle(10%Imax): [C0/180]Total=23.1
 [C90/270]Total=23.1
Maximum s/h(1/2): C0_180=0.19 C90_270=0.19
Maximum s/h(1/4): C0_180=0.20 C90_270=0.20
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.91%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.776%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/6/4
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	24668.020	0.000	0	.000%	.000%
1.0	24155.996	23.361	23.361	.988%	1.137%
2.0	22555.230	67.044	90.406	2.835%	4.399%
3.0	20001.990	101.783	192.189	4.304%	9.351%
4.0	16807.344	123.213	315.401	5.210%	15.346%
5.0	13862.926	131.942	447.343	5.579%	21.765%
6.0	10835.375	129.796	577.139	5.488%	28.080%
7.0	7967.349	116.708	693.847	4.935%	33.759%
8.0	6387.231	102.733	796.58	4.344%	38.757%
9.0	4736.502	90.152	886.732	3.812%	43.143%
10.0	3720.987	76.537	963.269	3.236%	46.867%
11.0	2758.463	64.743	1028.012	2.738%	50.017%
12.0	2239.419	54.634	1082.646	2.310%	52.675%
13.0	1697.389	46.720	1129.366	1.975%	54.949%
14.0	1387.889	39.491	1168.858	1.670%	56.870%
15.0	1217.614	35.770	1204.627	1.512%	58.610%
16.0	1101.224	33.977	1238.605	1.437%	60.263%
17.0	1011.359	32.899	1271.503	1.391%	61.864%
18.0	967.547	32.628	1304.131	1.380%	63.452%
19.0	937.211	33.139	1337.27	1.401%	65.064%
20.0	911.032	33.828	1371.098	1.430%	66.710%
21.0	890.757	34.598	1405.696	1.463%	68.393%
22.0	874.943	35.482	1441.179	1.500%	70.120%
23.0	857.641	36.354	1477.533	1.537%	71.888%
24.0	841.372	37.147	1514.679	1.571%	73.696%
25.0	827.539	37.947	1552.627	1.605%	75.542%
26.0	813.431	38.735	1591.362	1.638%	77.427%
27.0	800.437	39.484	1630.846	1.669%	79.348%
28.0	784.994	40.140	1670.985	1.697%	81.301%
29.0	769.510	40.670	1711.656	1.720%	83.279%
30.0	754.947	41.160	1752.816	1.740%	85.282%
31.0	736.448	41.503	1794.319	1.755%	87.301%
32.0	692.252	40.931	1835.25	1.731%	89.293%
33.0	636.934	39.158	1874.408	1.656%	91.198%
34.0	561.314	36.263	1910.67	1.533%	92.962%
35.0	459.556	31.704	1942.375	1.341%	94.505%
36.0	340.070	25.460	1967.835	1.077%	95.744%
37.0	236.302	18.798	1986.633	.795%	96.658%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	162.994	13.328	1999.961	.564%	97.307%
39.0	79.364	8.272	2008.233	.350%	97.709%
40.0	39.186	4.135	2012.368	.175%	97.910%
41.0	21.830	2.173	2014.541	.092%	98.016%
42.0	16.366	1.388	2015.929	.059%	98.084%
43.0	13.076	1.091	2017.019	.046%	98.137%
44.0	11.452	0.926	2017.945	.039%	98.182%
45.0	10.020	0.825	2018.77	.035%	98.222%
46.0	9.470	0.762	2019.532	.032%	98.259%
47.0	9.277	0.746	2020.278	.032%	98.295%
48.0	9.153	0.745	2021.023	.032%	98.332%
49.0	9.002	0.746	2021.768	.032%	98.368%
50.0	8.905	0.747	2022.515	.032%	98.404%
51.0	8.781	0.748	2023.263	.032%	98.441%
52.0	8.713	0.751	2024.014	.032%	98.477%
53.0	8.644	0.755	2024.769	.032%	98.514%
54.0	8.548	0.758	2025.527	.032%	98.551%
55.0	8.492	0.761	2026.287	.032%	98.588%
56.0	8.437	0.765	2027.052	.032%	98.625%
57.0	8.410	0.770	2027.823	.033%	98.662%
58.0	8.355	0.775	2028.598	.033%	98.700%
59.0	8.327	0.780	2029.378	.033%	98.738%
60.0	8.258	0.784	2030.161	.033%	98.776%
61.0	8.245	0.788	2030.949	.033%	98.814%
62.0	8.217	0.793	2031.742	.034%	98.853%
63.0	8.190	0.798	2032.54	.034%	98.892%
64.0	8.148	0.802	2033.342	.034%	98.931%
65.0	8.121	0.805	2034.147	.034%	98.970%
66.0	8.093	0.809	2034.956	.034%	99.009%
67.0	8.093	0.814	2035.77	.034%	99.049%
68.0	8.093	0.820	2036.59	.035%	99.089%
69.0	8.066	0.824	2037.414	.035%	99.129%
70.0	8.066	0.828	2038.243	.035%	99.169%
71.0	8.011	0.831	2039.074	.035%	99.210%
72.0	7.983	0.832	2039.905	.035%	99.250%
73.0	7.997	0.836	2040.741	.035%	99.291%
74.0	7.997	0.841	2041.582	.036%	99.332%
75.0	7.997	0.845	2042.427	.036%	99.373%

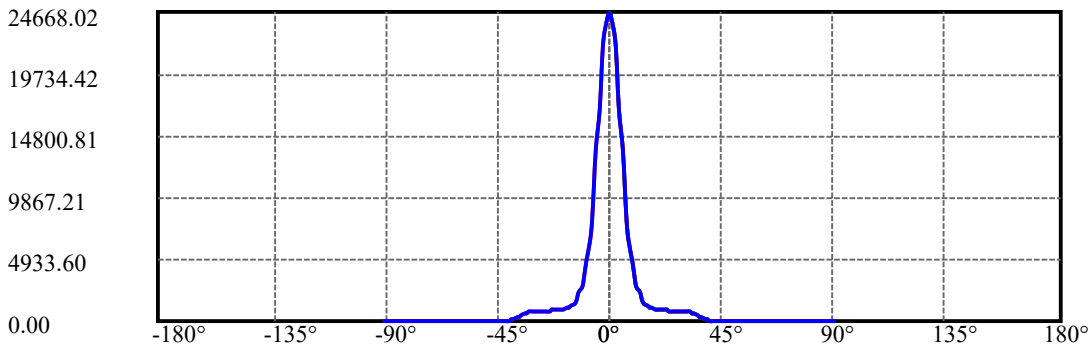
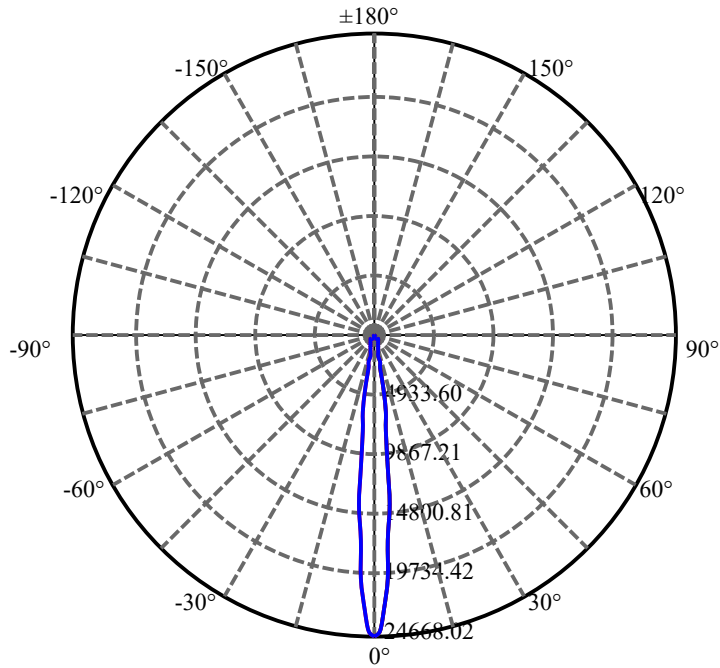
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.969	0.848	2043.274	.036%	99.414%
77.0	7.942	0.848	2044.123	.036%	99.455%
78.0	7.942	0.850	2044.973	.036%	99.497%
79.0	7.956	0.854	2045.827	.036%	99.538%
80.0	7.942	0.857	2046.684	.036%	99.580%
81.0	7.928	0.858	2047.542	.036%	99.622%
82.0	7.914	0.859	2048.402	.036%	99.664%
83.0	7.942	0.862	2049.264	.036%	99.706%
84.0	7.914	0.864	2050.127	.037%	99.748%
85.0	7.914	0.864	2050.991	.037%	99.790%
86.0	7.914	0.865	2051.856	.037%	99.832%
87.0	7.901	0.866	2052.722	.037%	99.874%
88.0	7.887	0.865	2053.587	.037%	99.916%
89.0	7.887	0.865	2054.451	.037%	99.958%
90.0	7.873	0.864	2055.315	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1752.82	74.11%	85.28%
0-40	2012.37	85.09%	97.91%
0-60	2030.16	85.84%	98.78%
0-90	2054.45	86.87%	99.96%
0-120	2054.45	86.87%	99.96%
0-180	2055.32	86.91%	100.00%
60-90	25.07	1.06%	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%
0-27.33	1644.25	69.52%	80.00%

ZONAL LUMEN SUMMARY

0-10	963.27
10-20	407.83
20-30	381.72
30-40	259.55
40-50	10.15
50-60	7.65
60-70	8.08
70-80	8.44
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: —————

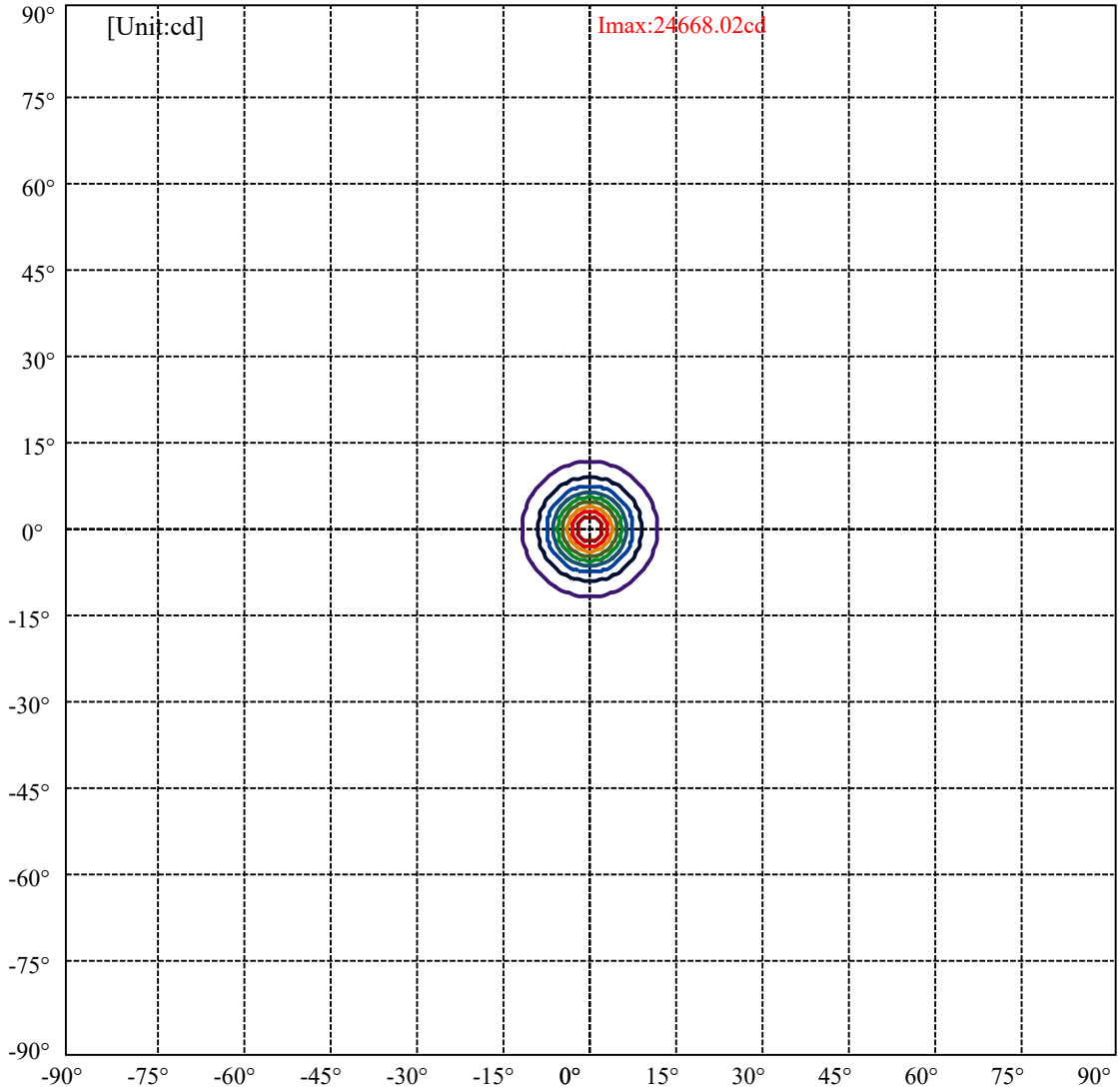
C90/C270: —————

Field angle(10%Imax):C0/180Left:11.6 Right:11.6

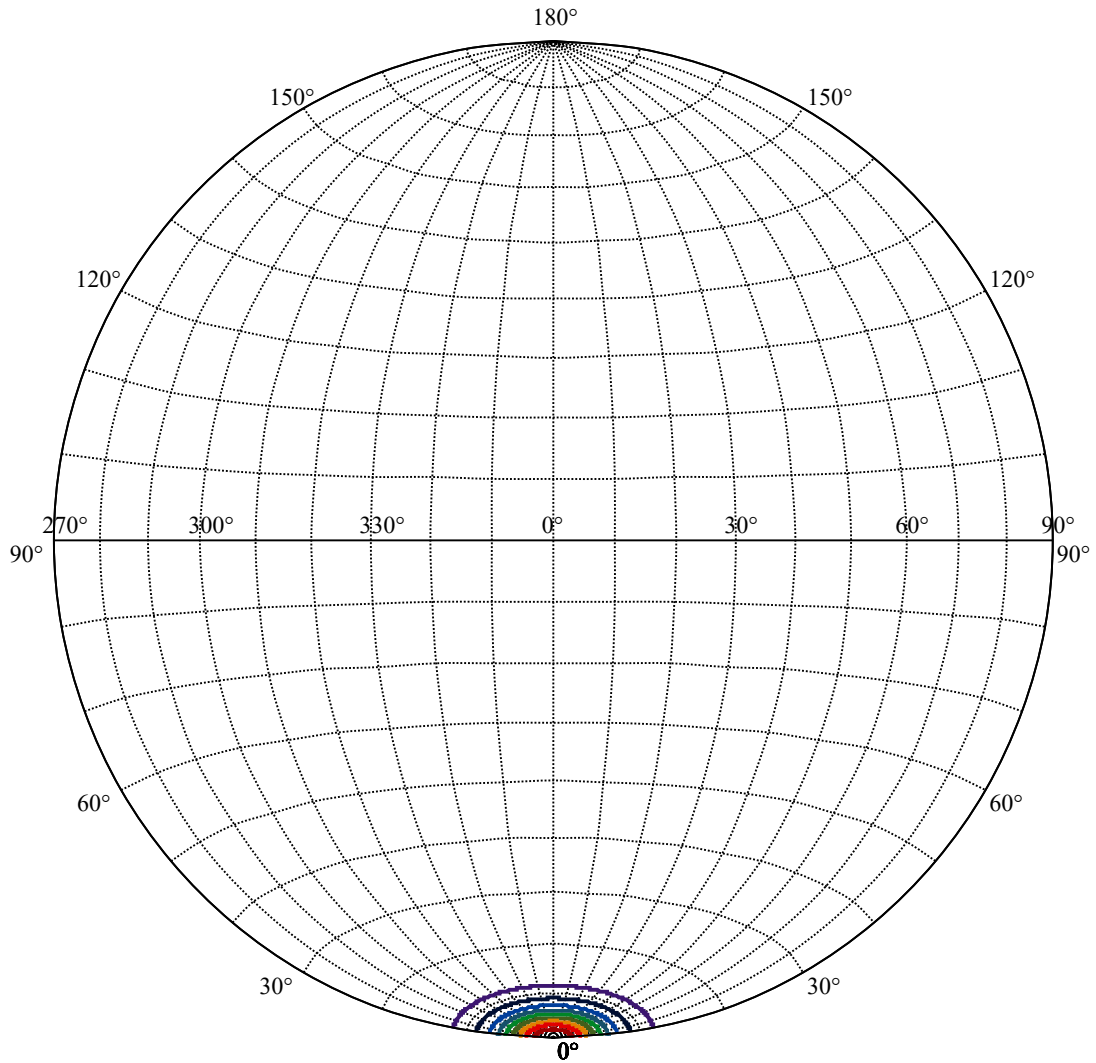
:C90/270Left:11.6 Right:11.6

Beam Angle(50%Imax):C0/180Left:5.5 Right:5.5

:C90/270Left:5.5 Right:5.5



(10%Imax) 2466.8	—
(20%Imax) 4933.6	—
(30%Imax) 7400.41	—
(40%Imax) 9867.21	—
(50%Imax) 12334	—
(60%Imax) 14800.8	—
(70%Imax) 17267.6	—
(80%Imax) 19734.4	—
(90%Imax) 22201.2	—



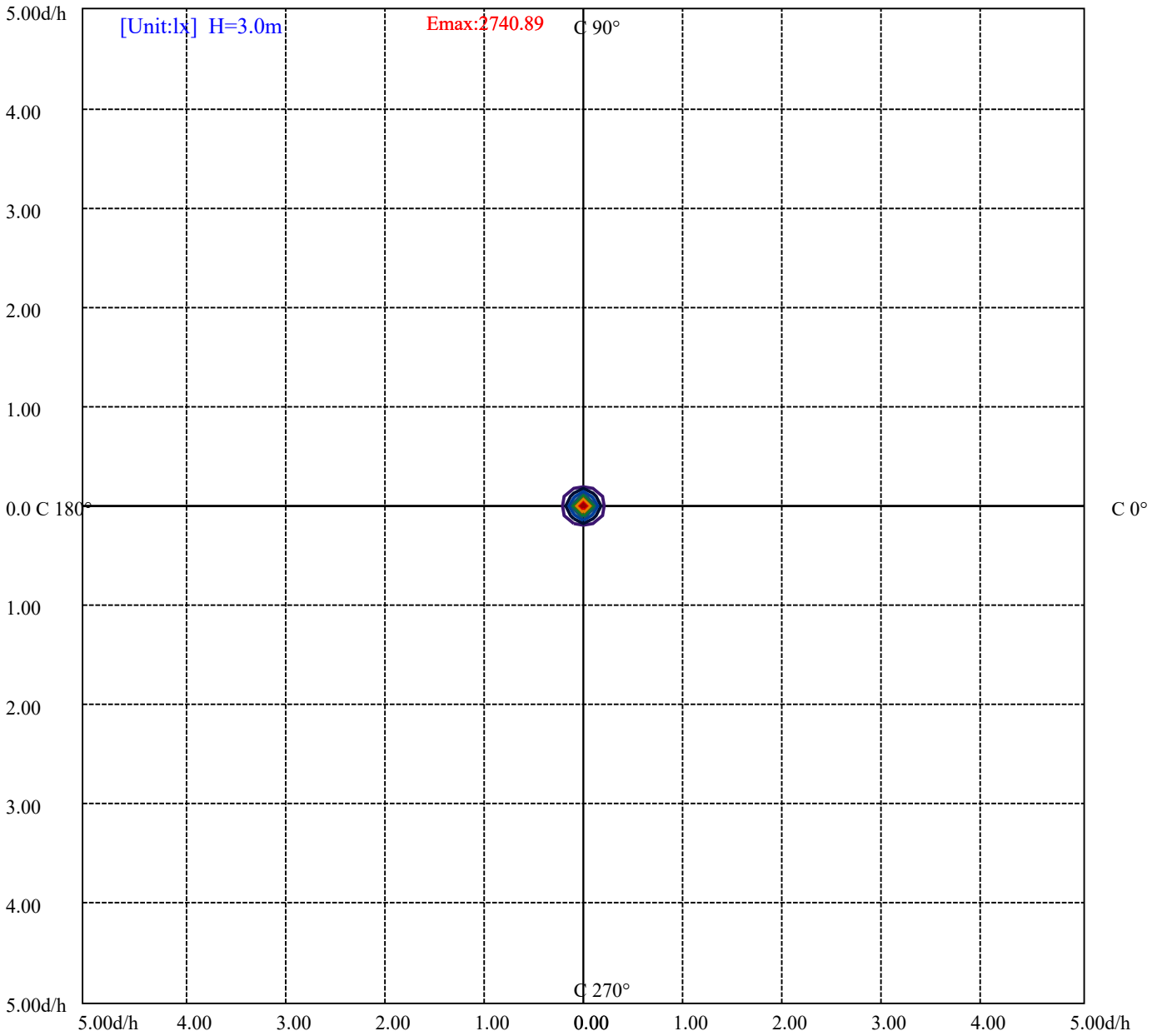
House

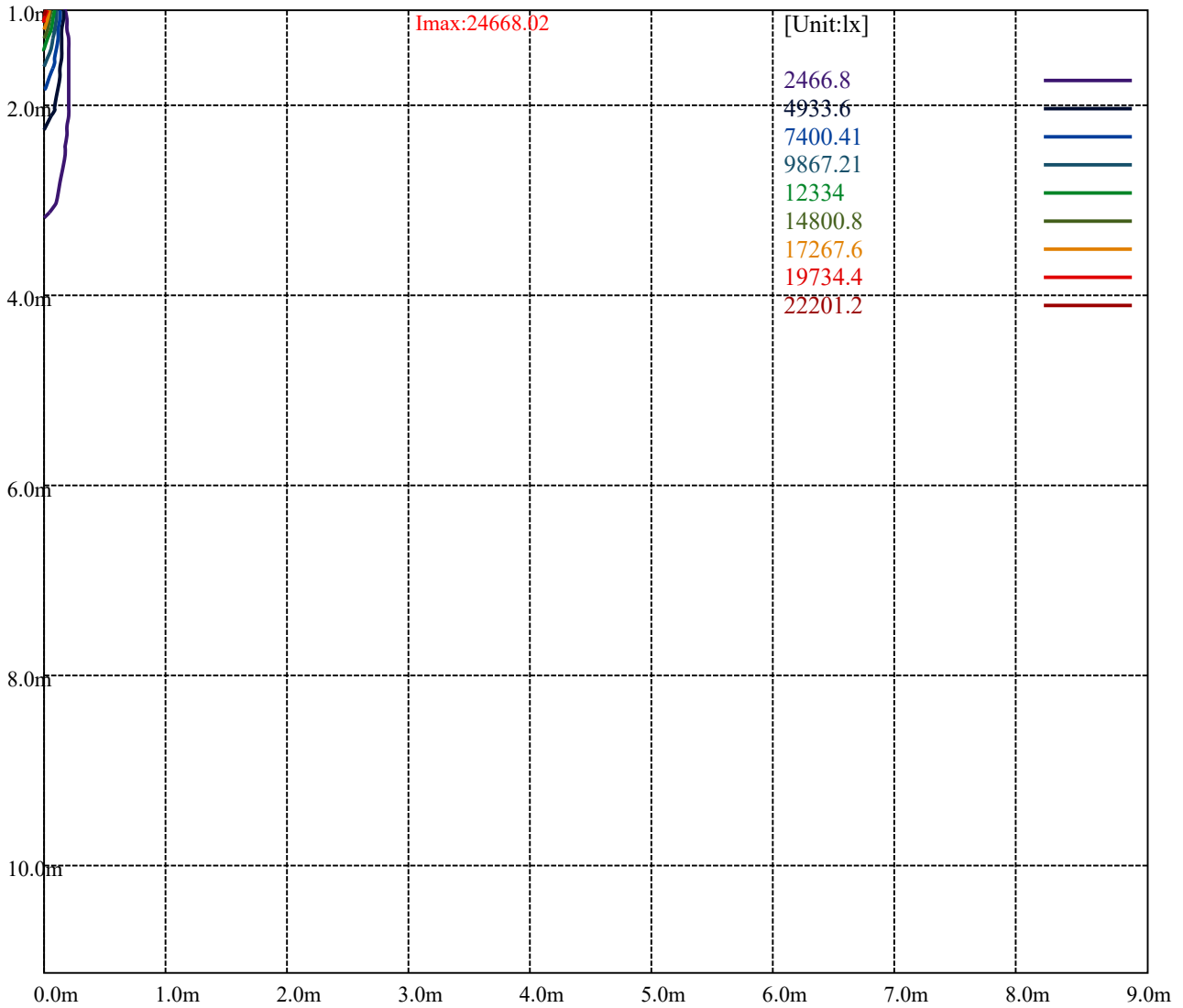
[Unit:cd]

Road

Imax:24668.02

(10%Imax) 2466.8	—
(20%Imax) 4933.6	—
(30%Imax) 7400.41	—
(40%Imax) 9867.21	—
(50%Imax) 12334	—
(60%Imax) 14800.8	—
(70%Imax) 17267.6	—
(80%Imax) 19734.4	—
(90%Imax) 22201.2	—





Luminance Table

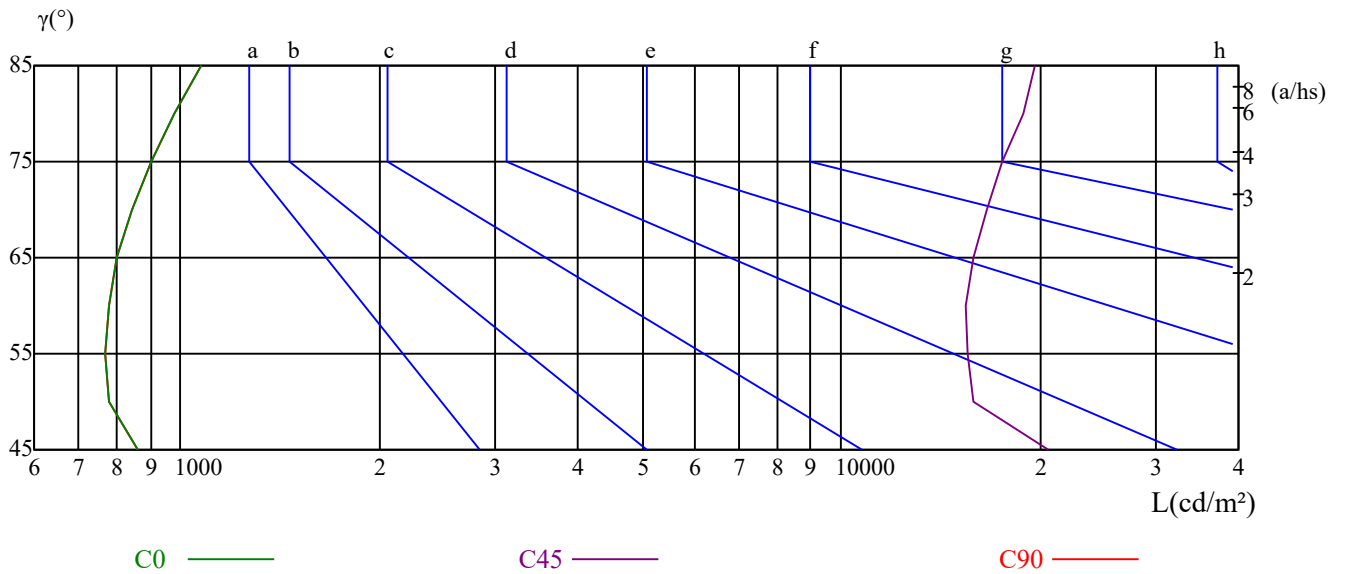
γ	45	50	55	60	65	70	75	80	85
C0	859	781	768	777	803	847	902	976	1077
C45	20604	15921	15524	15501	15836	16596	17589	18868	19656
C90	859	781	768	777	803	847	902	976	1077

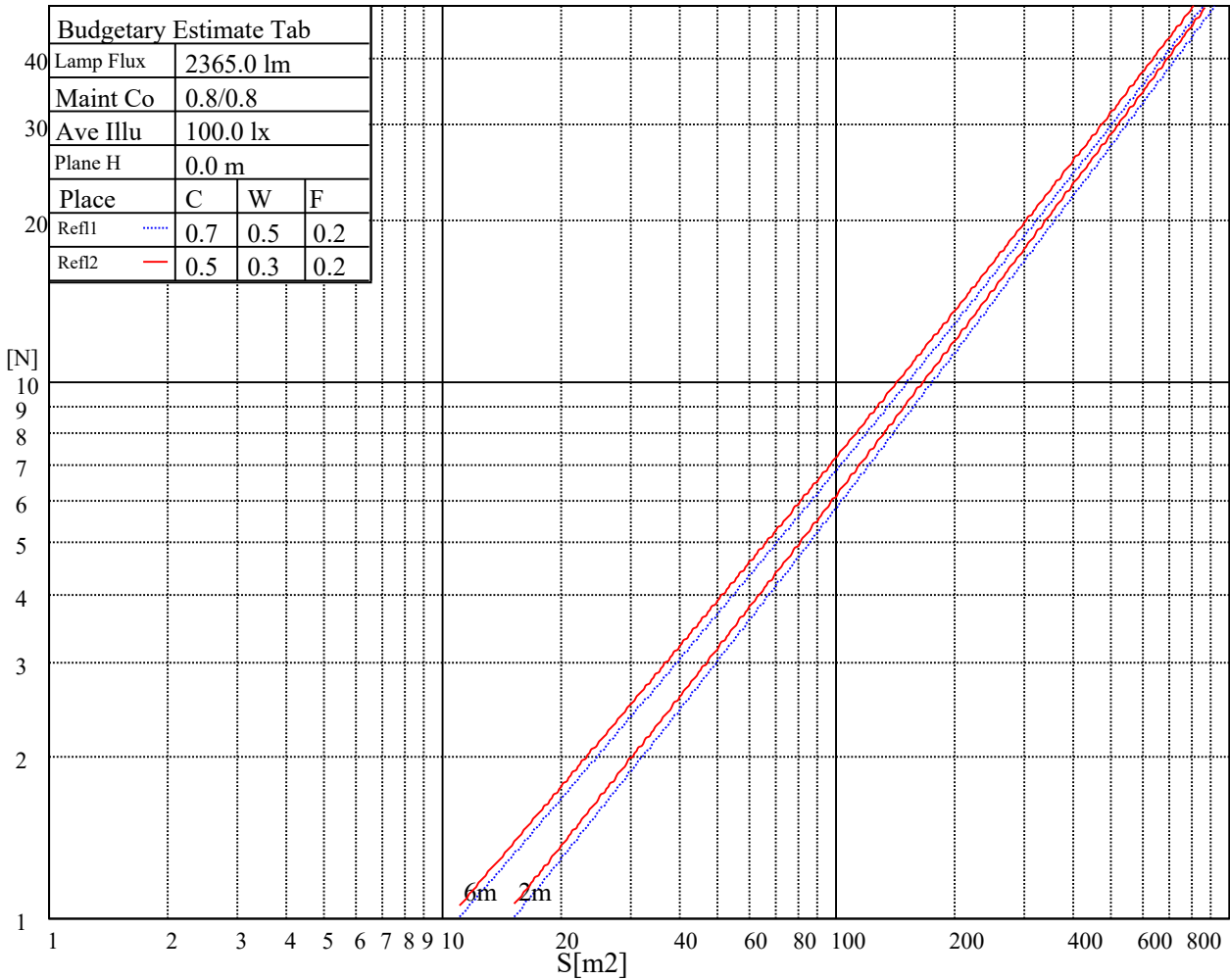
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1922	1922	47054	3090	3090	77931	9081	9081	226181

Glare Table

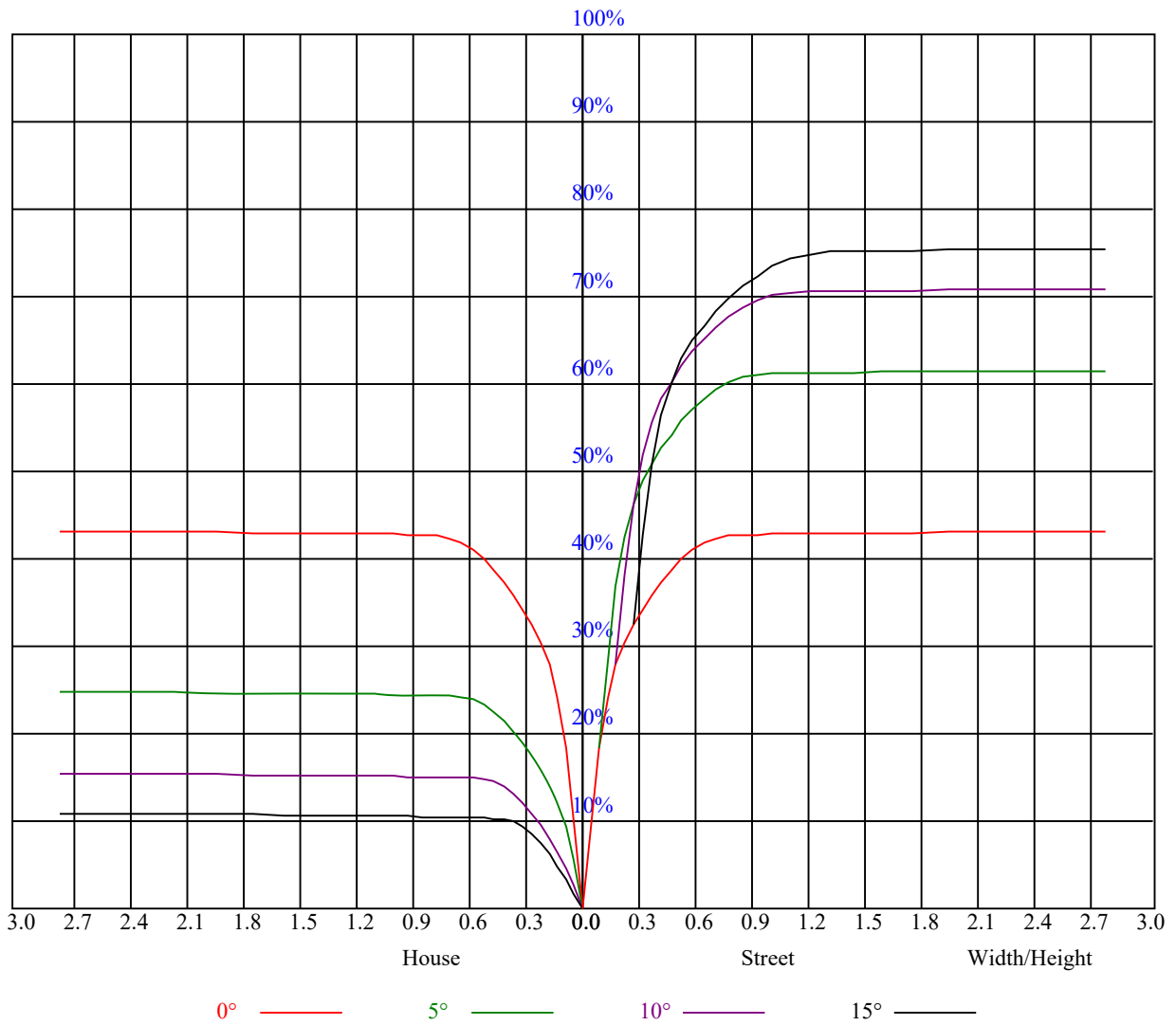
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.03	1.03	1.03	1.01	1.01	1.01	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89	0.87
1	0.98	0.96	0.94	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.83
2	0.93	0.90	0.88	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.84	0.83	0.81	0.80
3	0.89	0.85	0.83	0.88	0.85	0.82	0.85	0.83	0.81	0.83	0.81	0.80	0.82	0.80	0.78	0.77
4	0.85	0.81	0.79	0.84	0.81	0.78	0.82	0.80	0.77	0.81	0.78	0.77	0.79	0.77	0.76	0.75
5	0.82	0.78	0.75	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.77	0.75	0.73	0.72
6	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.73	0.71	0.70
7	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.71	0.69	0.68
8	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.66
9	0.72	0.68	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.70	0.67	0.65	0.64
10	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.63



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	24109.20	24709.31	24059.65	22105.14	19489.97	15542.42	12437.24	9767.01	7570.26
90.0	25226.84	22496.05	19033.00	15630.51	12002.30	9321.05	6937.11	5098.22	3897.99
180.0	24109.20	22573.12	19946.93	16643.55	12530.84	10470.63	8160.46	6058.96	4478.84
270.0	25226.84	26845.50	27181.34	25628.75	23206.27	20117.61	15806.69	10945.21	9601.84
360.0	24109.20	24709.31	24059.65	22105.14	19489.97	15542.42	12437.24	9767.01	7570.26
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5456.09	4184.29	3231.81	2846.42	1877.97	1539.38	1293.83	1138.57	1049.37
90.0	2923.49	2835.40	1778.87	1477.71	1260.79	1119.30	1036.71	989.91	942.02
180.0	3452.59	2608.02	2002.95	1638.48	1390.72	1092.54	1081.47	1014.52	961.89
270.0	7113.84	5256.23	4020.22	2995.07	2260.07	1800.34	1458.44	1261.89	1092.15
360.0	5456.09	4184.29	3231.81	2846.42	1877.97	1539.38	1293.83	1138.57	1049.37
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	989.36	954.13	926.05	904.58	887.51	869.34	851.17	836.31	823.09
90.0	918.34	901.82	880.35	866.04	853.37	837.41	823.09	812.08	797.77
180.0	933.59	912.39	890.92	875.29	860.81	843.24	831.74	817.86	803.11
270.0	1028.89	980.50	946.80	917.13	898.08	880.57	859.49	843.90	829.76
360.0	989.36	954.13	926.05	904.58	887.51	869.34	851.17	836.31	823.09
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	807.13	793.91	781.25	764.18	747.67	734.45	712.98	650.77	560.47
90.0	785.65	769.69	750.97	736.65	714.08	627.64	530.19	420.63	290.15
180.0	792.48	775.63	757.25	742.33	725.86	665.85	578.31	475.69	368.93
270.0	816.49	800.74	788.57	776.63	758.18	741.06	726.25	698.17	618.67
360.0	807.13	793.91	781.25	764.18	747.67	734.45	712.98	650.77	560.47
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	441.55	331.99	278.03	101.58	43.00	25.33	19.66	15.69	13.10
90.0	164.45	78.46	32.70	21.75	16.85	13.10	10.02	9.41	9.25
180.0	233.44	136.54	55.17	25.99	20.81	15.20	12.72	9.86	9.63
270.0	520.83	398.22	286.07	168.14	76.09	33.69	23.07	17.34	13.82
360.0	441.55	331.99	278.03	101.58	43.00	25.33	19.66	15.69	13.10
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	10.08	9.86	9.63	9.47	9.25	9.14	8.97	8.92	8.86
90.0	9.14	9.03	8.86	8.81	8.70	8.59	8.53	8.48	8.42
180.0	9.47	9.36	9.19	9.08	8.97	8.92	8.81	8.75	8.64
270.0	11.40	9.63	9.41	9.25	9.08	8.97	8.81	8.70	8.64
360.0	10.08	9.86	9.63	9.47	9.25	9.14	8.97	8.92	8.86
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.75	8.64	8.59	8.59	8.53	8.48	8.42	8.37	8.31
90.0	8.37	8.31	8.26	8.20	8.20	8.20	8.09	8.09	8.09
180.0	8.59	8.53	8.48	8.48	8.42	8.37	8.31	8.31	8.31
270.0	8.48	8.48	8.42	8.37	8.26	8.26	8.20	8.20	8.15
360.0	8.75	8.64	8.59	8.59	8.53	8.48	8.42	8.37	8.31
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.31	8.31	8.26	8.20	8.20	8.20	8.20	8.20	8.15
90.0	8.04	8.04	7.98	7.98	7.98	7.98	7.98	7.98	7.93
180.0	8.26	8.20	8.20	8.15	8.15	8.15	8.09	8.09	8.04
270.0	8.15	8.04	8.04	8.04	8.04	8.04	7.98	7.98	7.93
360.0	8.31	8.31	8.26	8.20	8.20	8.20	8.20	8.20	8.15

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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	8.09	8.09	8.09	8.04	8.04	8.04	8.04	8.04
90.0	7.87	7.87	7.87	7.93	7.93	7.87	7.82	7.87	7.87	7.87
180.0	8.09	8.09	8.09	8.04	7.98	7.98	8.04	8.04	8.04	7.98
270.0	7.87	7.93	7.93	7.93	7.87	7.87	7.87	7.87	7.87	7.87
360.0	8.09	8.09	8.09	8.09	8.09	8.04	8.04	8.04	8.04	8.04
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0	
0.0	7.98	7.98	8.04	8.04	8.04	8.04	7.98	7.98	7.98	7.98
90.0	7.87	7.87	7.87	7.82	7.82	7.82	7.82	7.82	7.82	7.76
180.0	7.98	7.98	7.98	7.98	7.93	7.98	7.98	7.98	7.93	7.98
270.0	7.87	7.82	7.87	7.82	7.87	7.82	7.82	7.82	7.82	7.82
360.0	7.98	7.98	8.04	8.04	8.04	8.04	7.98	7.98	7.98	7.98
C/γ(°)	90.0									
0.0	7.98									
90.0	7.76									
180.0	7.93									
270.0	7.82									
360.0	7.98									