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Nata

LumCAT: 3-1943-M
Luminaire: BJB 47.319.2021
Report No: GC2017050313
Test No: NT-0010
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2274.0
Number of Lamps: 1
Length(mm): 86
Phm Type: C

Voltage(V): 35.3000
Current(A): 0.5000
Power (W): 17.6500
PF: 0.0000
Ballast type: DC
Width(mm): 86
Height(mm): 0

Photometric Results

Lumens(lm): 2071.99
Efficiency(%): 91.12%
Lumens(lm)/Power(W): 117.39
Central intensity(cd): 8033.004
Maximum intensity(cd): 8033.004
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.4
[C90/270]Total=25.4
Field angle(10%Imax): [C0/180]Total=51.6
[C90/270]Total=51.6
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.748%

Equipment: gms1980
Temperature(°C): 25.0
Date: 2017/5/3
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8033.004	0.000	0	.000%	.000%
1.0	7987.583	7.666	7.666	.337%	.370%
2.0	7879.947	22.775	30.44	1.002%	1.469%
3.0	7721.247	37.313	67.753	1.641%	3.270%
4.0	7511.345	50.988	118.741	2.242%	5.731%
5.0	7281.484	63.638	182.379	2.799%	8.802%
6.0	6968.213	74.886	257.265	3.293%	12.416%
7.0	6613.650	84.302	341.568	3.707%	16.485%
8.0	6262.115	92.149	433.717	4.052%	20.932%
9.0	5858.414	98.230	531.947	4.320%	25.673%
10.0	5391.673	101.809	633.757	4.477%	30.587%
11.0	4946.680	103.301	737.058	4.543%	35.573%
12.0	4441.537	102.627	839.685	4.513%	40.526%
13.0	3854.223	98.450	938.134	4.329%	45.277%
14.0	3340.409	92.091	1030.225	4.050%	49.722%
15.0	2809.390	84.427	1114.652	3.713%	53.796%
16.0	2286.355	74.667	1189.319	3.284%	57.400%
17.0	1902.749	65.236	1254.555	2.869%	60.548%
18.0	1604.619	57.829	1312.384	2.543%	63.339%
19.0	1378.062	51.893	1364.276	2.282%	65.844%
20.0	1225.418	47.651	1411.927	2.095%	68.144%
21.0	1075.183	44.176	1456.103	1.943%	70.276%
22.0	1007.918	41.861	1497.964	1.841%	72.296%
23.0	932.848	40.723	1538.687	1.791%	74.261%
24.0	875.177	39.530	1578.217	1.738%	76.169%
25.0	828.874	38.746	1616.963	1.704%	78.039%
26.0	796.322	38.363	1655.326	1.687%	79.891%
27.0	771.602	38.360	1693.685	1.687%	81.742%
28.0	750.722	38.542	1732.227	1.695%	83.602%
29.0	733.599	38.834	1771.061	1.708%	85.477%
30.0	718.720	39.212	1810.274	1.724%	87.369%
31.0	690.793	39.225	1849.499	1.725%	89.262%
32.0	637.980	38.068	1887.566	1.674%	91.099%
33.0	558.919	35.261	1922.827	1.551%	92.801%
34.0	460.230	30.842	1953.67	1.356%	94.290%
35.0	357.151	25.385	1979.055	1.116%	95.515%
36.0	292.831	20.696	1999.75	.910%	96.514%
37.0	152.245	14.516	2014.266	.638%	97.214%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	78.331	7.696	2021.962	.338%	97.586%
39.0	35.635	3.890	2025.852	.171%	97.773%
40.0	21.238	1.984	2027.836	.087%	97.869%
41.0	18.430	1.413	2029.249	.062%	97.937%
42.0	16.090	1.254	2030.503	.055%	97.998%
43.0	14.026	1.116	2031.618	.049%	98.052%
44.0	12.649	1.007	2032.625	.044%	98.100%
45.0	11.603	0.932	2033.557	.041%	98.145%
46.0	10.846	0.878	2034.435	.039%	98.188%
47.0	10.364	0.844	2035.279	.037%	98.228%
48.0	10.158	0.830	2036.108	.036%	98.268%
49.0	9.951	0.826	2036.934	.036%	98.308%
50.0	9.814	0.824	2037.758	.036%	98.348%
51.0	9.676	0.825	2038.583	.036%	98.388%
52.0	9.539	0.825	2039.407	.036%	98.428%
53.0	9.401	0.824	2040.231	.036%	98.467%
54.0	9.291	0.824	2041.055	.036%	98.507%
55.0	9.194	0.825	2041.88	.036%	98.547%
56.0	9.112	0.827	2042.707	.036%	98.587%
57.0	9.043	0.830	2043.537	.037%	98.627%
58.0	8.947	0.832	2044.369	.037%	98.667%
59.0	8.892	0.834	2045.203	.037%	98.707%
60.0	8.768	0.834	2046.038	.037%	98.748%
61.0	8.781	0.837	2046.875	.037%	98.788%
62.0	8.713	0.843	2047.718	.037%	98.829%
63.0	8.658	0.845	2048.563	.037%	98.870%
64.0	8.603	0.847	2049.41	.037%	98.910%
65.0	8.548	0.849	2050.258	.037%	98.951%
66.0	8.506	0.851	2051.109	.037%	98.992%
67.0	8.492	0.855	2051.964	.038%	99.034%
68.0	8.465	0.859	2052.823	.038%	99.075%
69.0	8.410	0.861	2053.684	.038%	99.117%
70.0	8.369	0.862	2054.546	.038%	99.158%
71.0	8.327	0.863	2055.409	.038%	99.200%
72.0	8.300	0.865	2056.273	.038%	99.242%
73.0	8.258	0.866	2057.139	.038%	99.283%
74.0	8.231	0.867	2058.006	.038%	99.325%
75.0	8.203	0.868	2058.874	.038%	99.367%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.162	0.869	2059.743	.038%	99.409%
77.0	8.121	0.868	2060.611	.038%	99.451%
78.0	8.121	0.869	2061.481	.038%	99.493%
79.0	8.135	0.873	2062.354	.038%	99.535%
80.0	8.107	0.876	2063.23	.039%	99.577%
81.0	8.066	0.875	2064.104	.038%	99.620%
82.0	8.052	0.874	2064.978	.038%	99.662%
83.0	8.038	0.875	2065.853	.038%	99.704%
84.0	8.052	0.877	2066.729	.039%	99.746%
85.0	8.052	0.879	2067.608	.039%	99.789%
86.0	8.011	0.878	2068.486	.039%	99.831%
87.0	8.011	0.877	2069.363	.039%	99.873%
88.0	7.956	0.875	2070.238	.038%	99.916%
89.0	7.983	0.874	2071.111	.038%	99.958%
90.0	7.969	0.875	2071.986	.038%	100.000%

Zonal flux distribution table

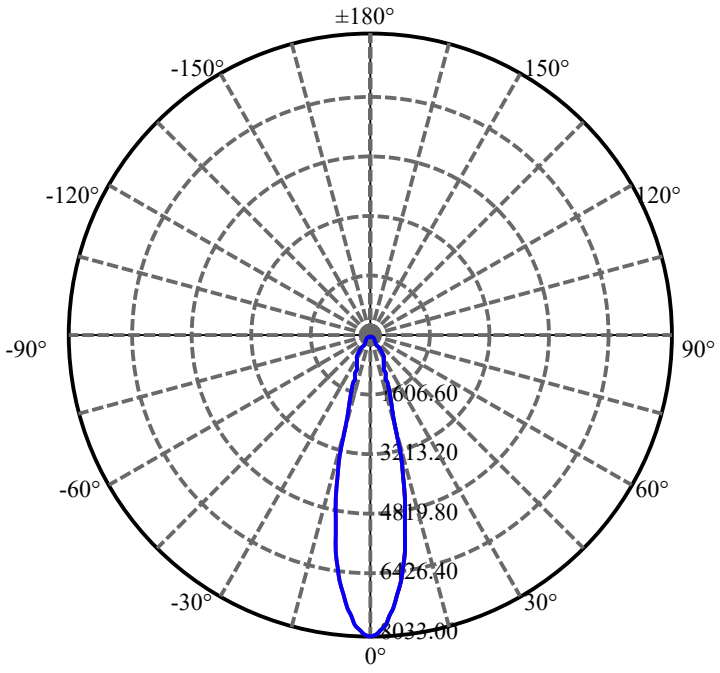
ZONAL LUMEN SUMMARY

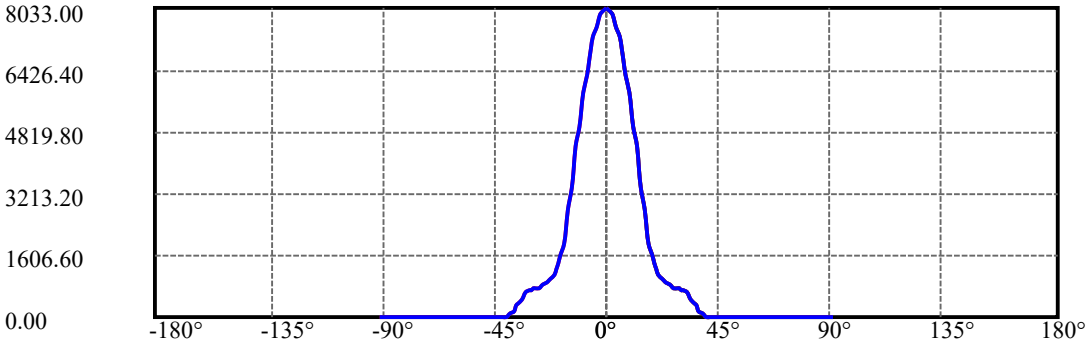
Zone	Lumens	%Lamp	%Fixt
0-30	1810.27	79.61%	87.37%
0-40	2027.84	89.17%	97.87%
0-60	2046.04	89.98%	98.75%
0-90	2071.11	91.08%	99.96%
0-120	2071.11	91.08%	99.96%
0-180	2071.99	91.12%	100.00%
60-90	25.91	1.14%	1.25%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.06	1657.59	72.89%	80.00%

ZONAL LUMEN SUMMARY

0-10	633.76
10-20	778.17
20-30	398.35
30-40	217.56
40-50	9.92
50-60	8.28
60-70	8.51
70-80	8.68
80-90	7.88
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

Light Distribution Curve [Unit:cd]





C0(Max):

C0/C180:

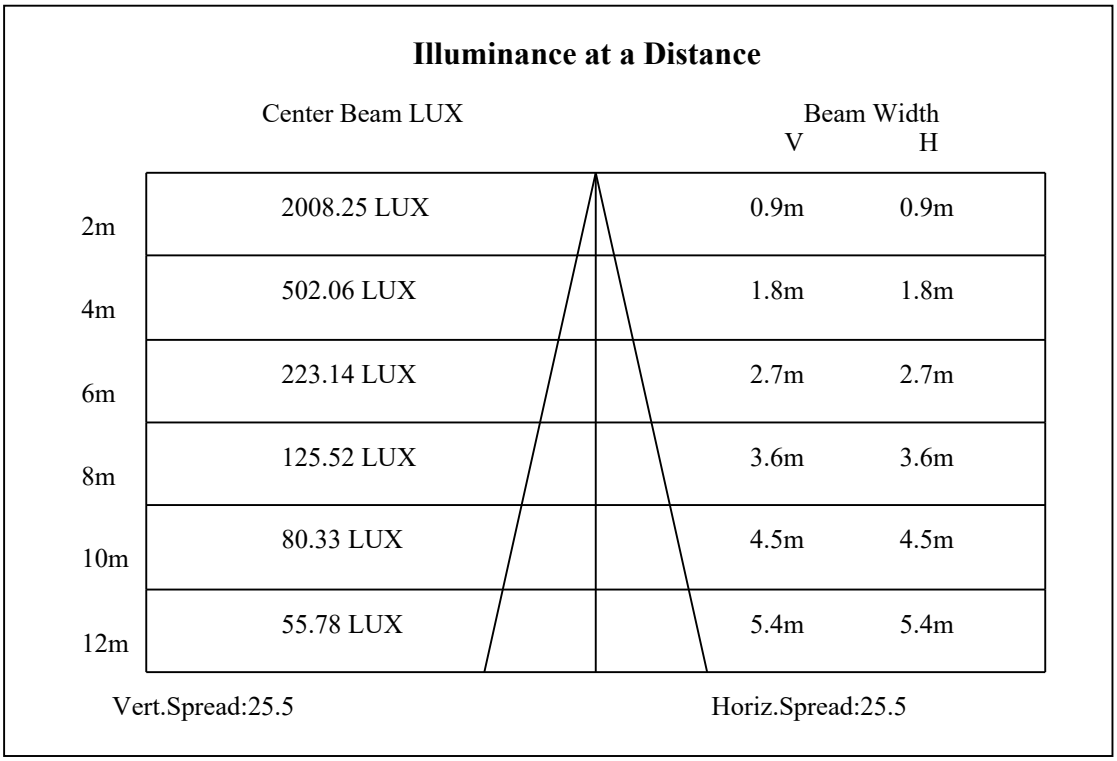
C90/C270:

Field angle(10%Imax):C0/180Left:25.8 Right:25.8
:C90/270Left:25.8 Right:25.8

Beam Angle(50%Imax):C0/180Left:12.7 Right:12.7
:C90/270Left:12.7 Right:12.7

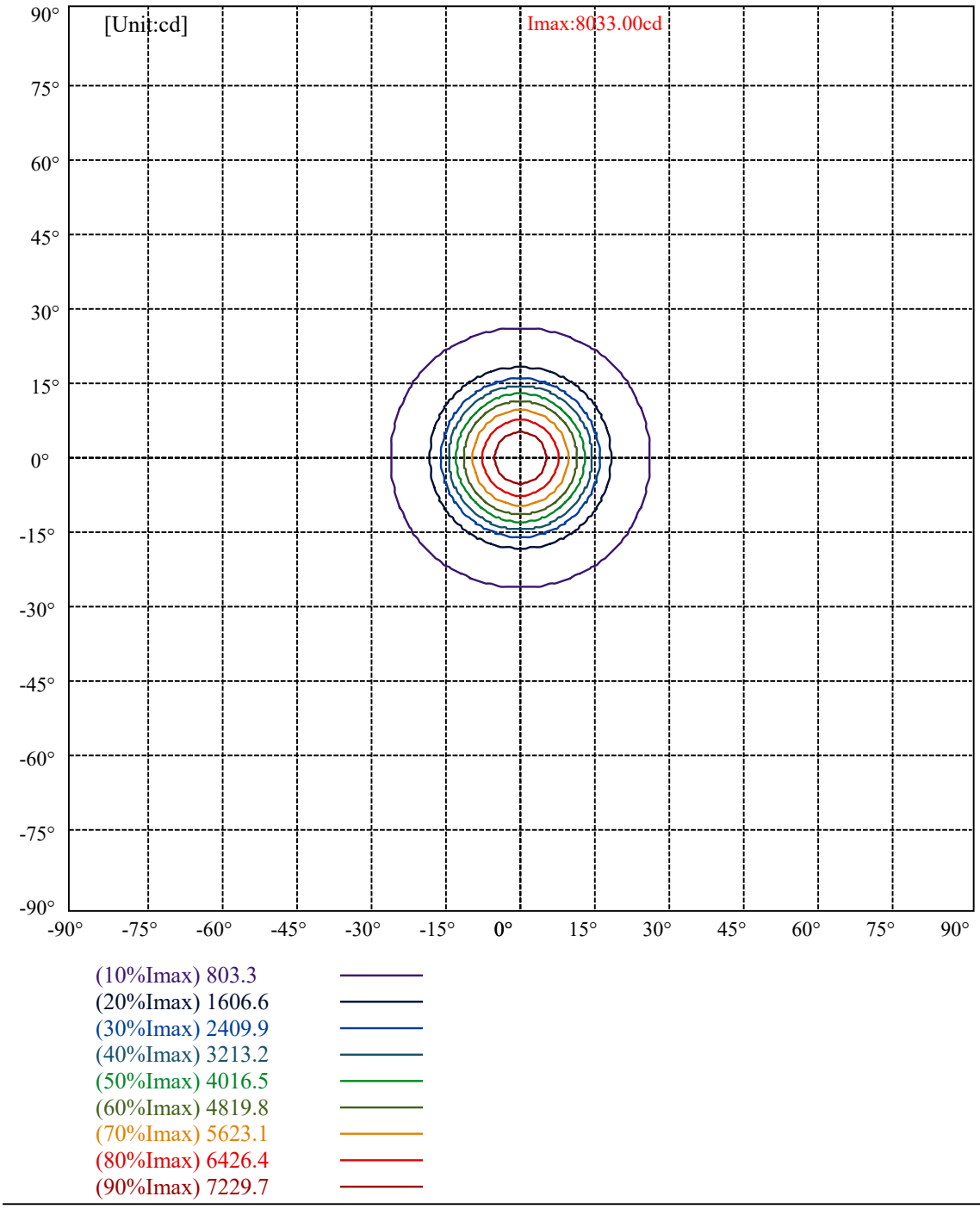
Equipment: gms1980 Date: 2017/5/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

Lux distance Curve



Equipment: gms1980 Date: 2017/5/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

ISO-Intensity(V-H)

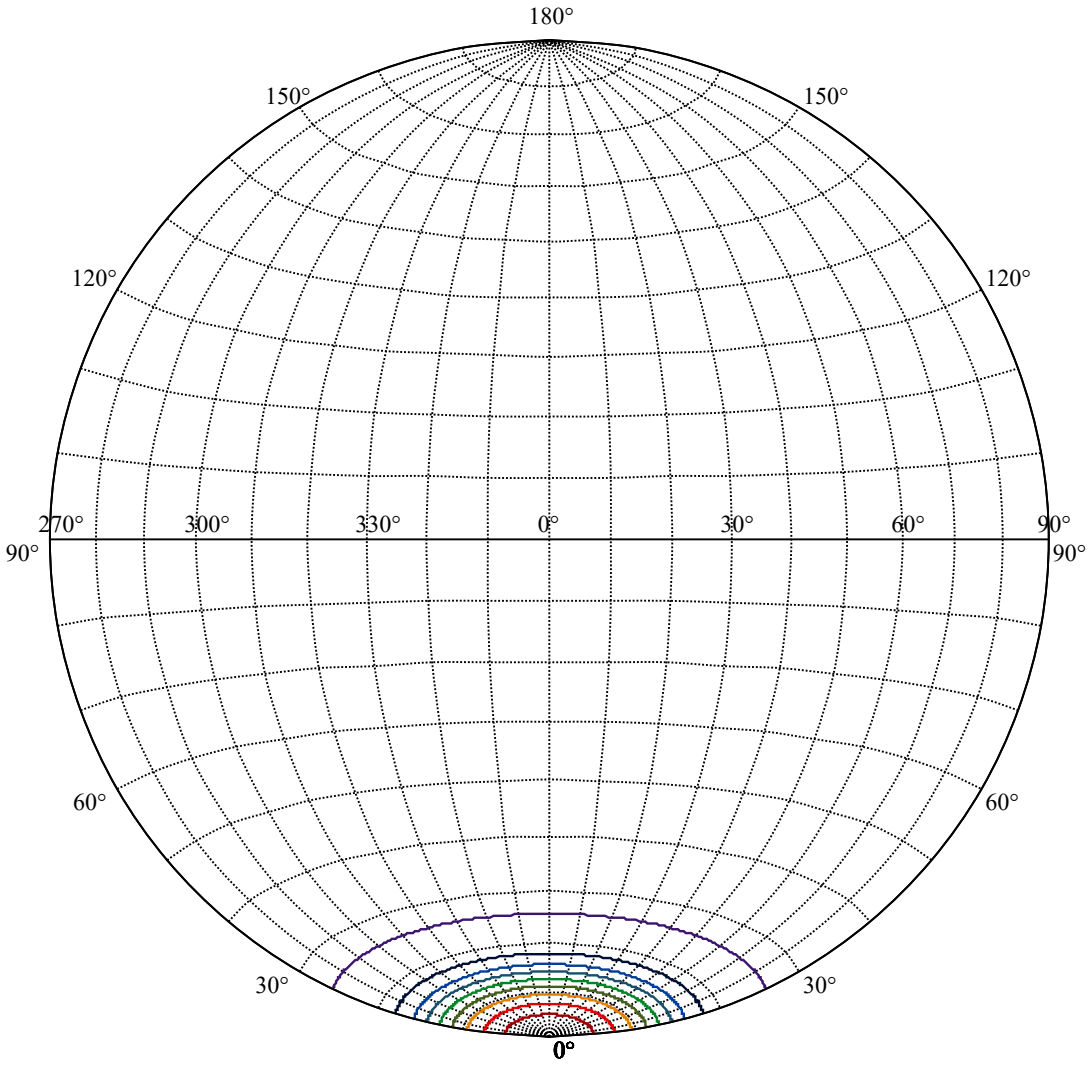


Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8033.00

(10%Imax) 803.3
(20%Imax) 1606.6
(30%Imax) 2409.9
(40%Imax) 3213.2
(50%Imax) 4016.5
(60%Imax) 4819.8
(70%Imax) 5623.1
(80%Imax) 6426.4
(90%Imax) 7229.7

Equipment: gms1980 Date: 2017/5/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

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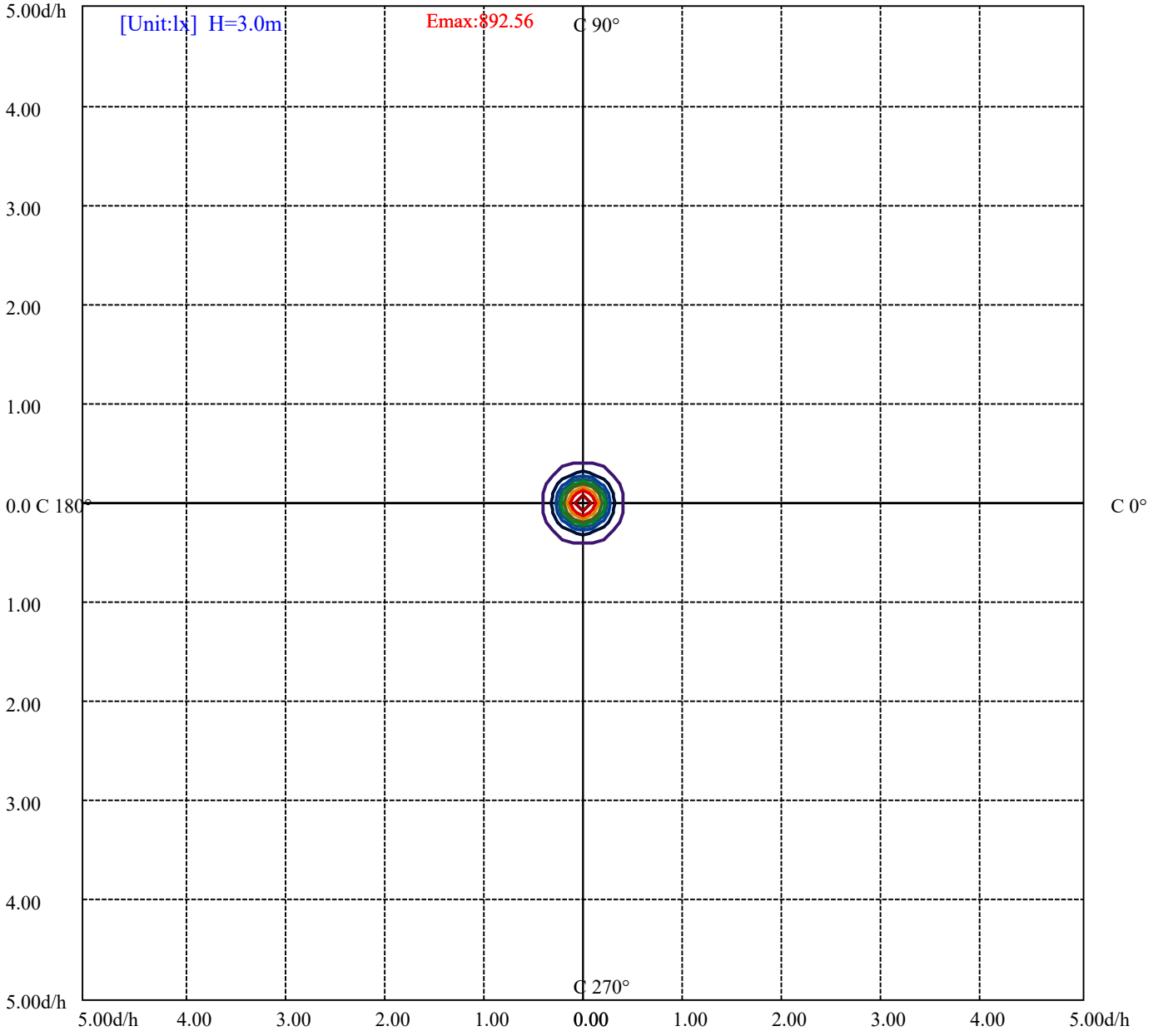
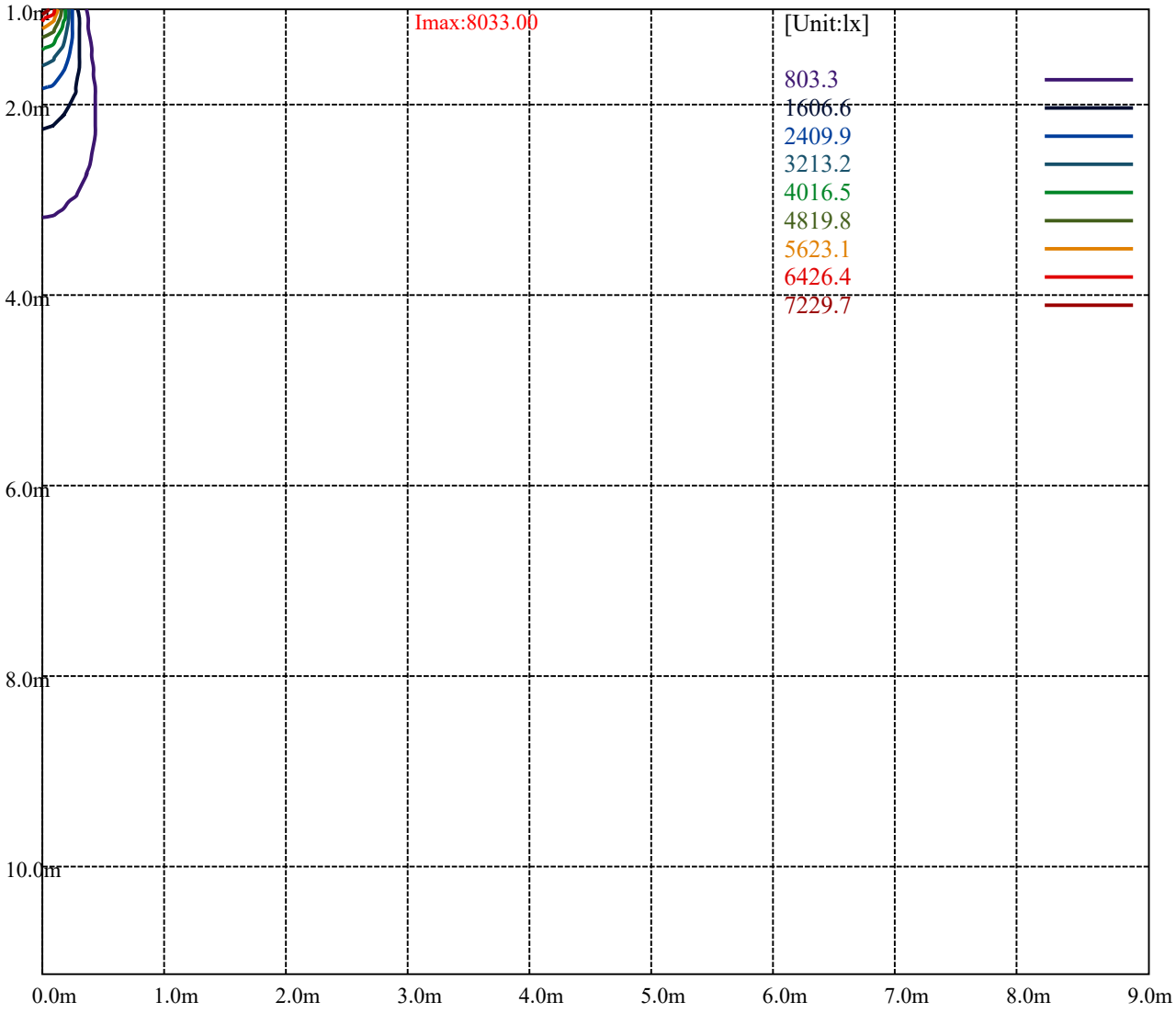
ISO illuminance diagram



Equipment: gms1980 Date: 2017/5/3 Operator: NT07

Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

Space ISO Lux diagram



Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Luminance Limitting Curve(no luminous side)

Luminance Table

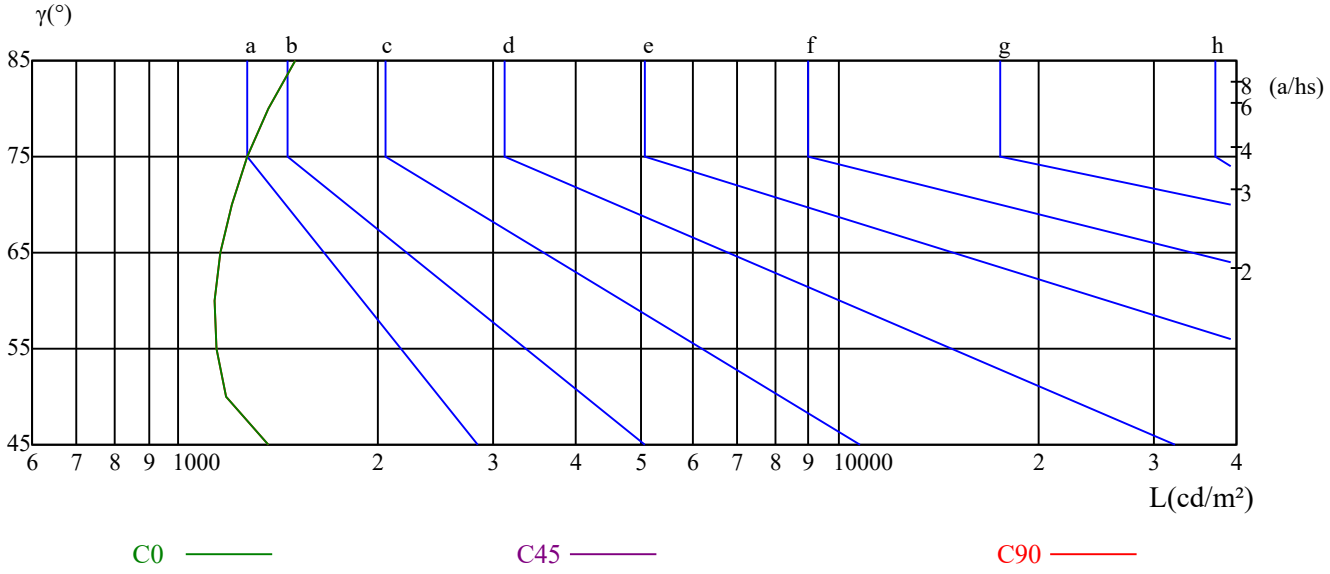
γ	45	50	55	60	65	70	75	80	85
C0	1369	1184	1143	1134	1160	1205	1268	1364	1499
C45	0	0	0	0	0	0	0	0	0
C90	1369	1184	1143	1134	1160	1205	1268	1364	1499

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2799	2799	0	4387	4387	0	12787	12787	0

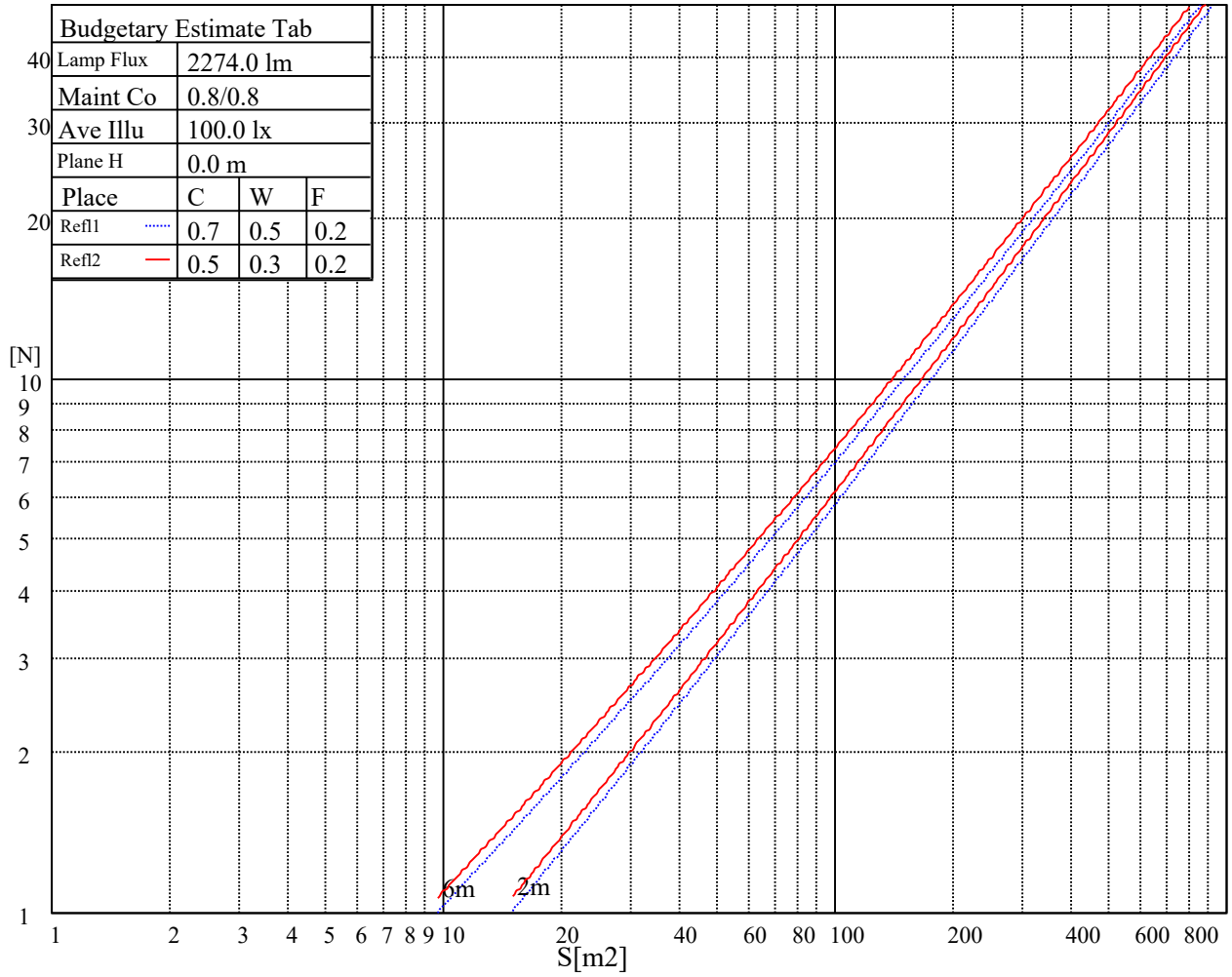
Glare Table

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 Limitting Curve



Budgetary Estimate Table

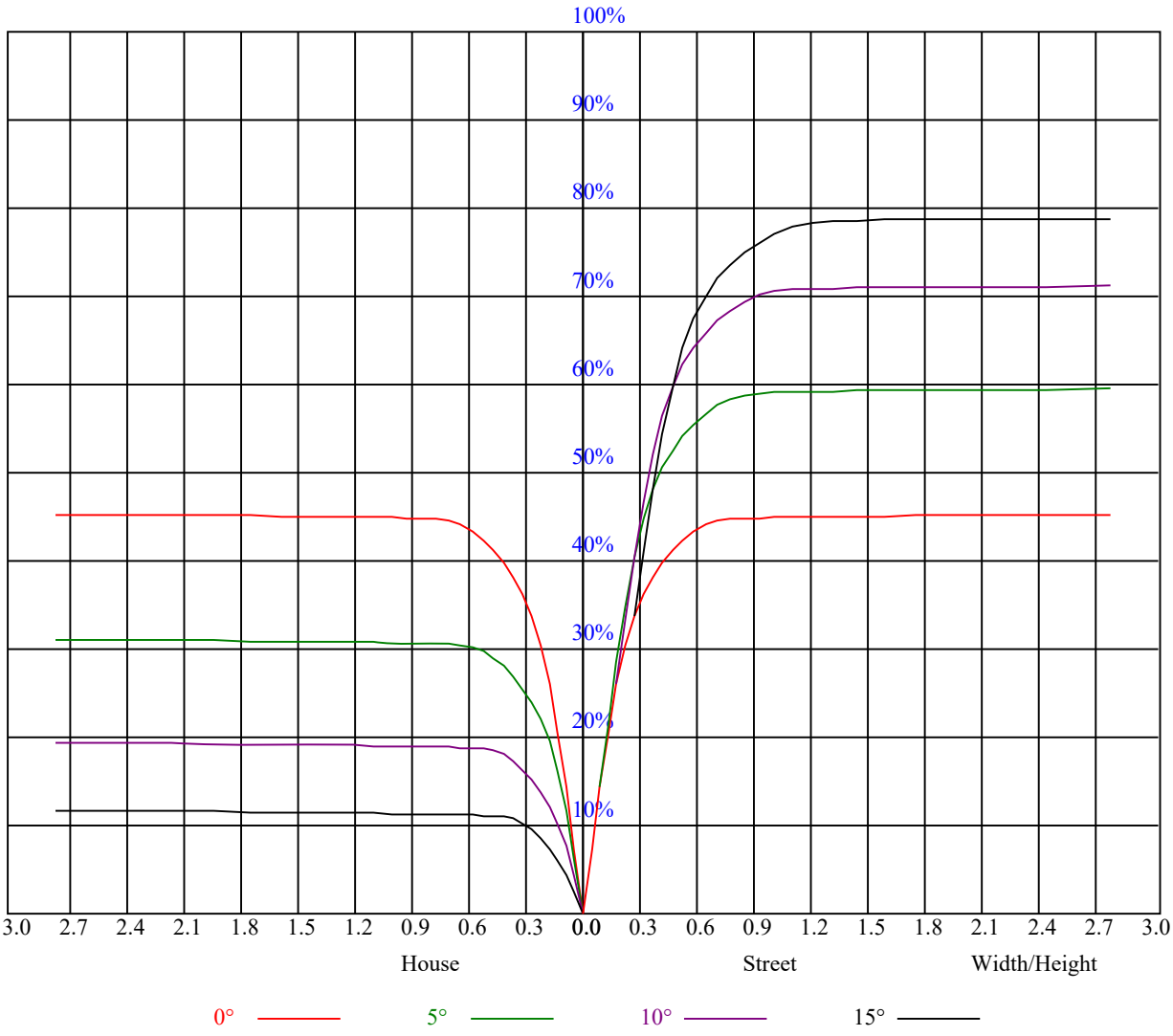


Equipment: gms1980 Date: 2017/5/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.08	1.08	1.08	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	1.02	1.00	0.98	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.85	0.91	0.87	0.85	0.88	0.86	0.83	0.86	0.84	0.82	0.84	0.82	0.81	0.80
4	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.81	0.78	0.82	0.79	0.78	0.76
5	0.84	0.80	0.77	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.77	0.75	0.73
6	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.71
7	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
8	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.66
9	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.64
10	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62

Coefficient Utilization Curve



Equipment: gms1980	Date: 2017/5/3	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.42

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	8020.07	7942.99	7810.85	7661.65	7454.09	7225.05	6903.52	6538.50	6175.13
90.0	8045.94	8009.61	7907.75	7746.44	7521.25	7271.30	6926.10	6525.84	6120.07
180.0	8020.07	8020.62	7945.74	7776.72	7598.33	7370.95	7036.21	6744.96	6428.39
270.0	8045.94	7977.12	7855.45	7700.19	7471.70	7258.64	7007.03	6645.31	6324.88
360.0	8020.07	7942.99	7810.85	7661.65	7454.09	7225.05	6903.52	6538.50	6175.13

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5727.52	5244.12	4776.69	4338.99	3600.14	3058.93	2608.02	2005.15	1684.18
90.0	5631.17	5171.45	4618.13	4032.33	3506.54	2991.21	2404.31	2013.41	1708.95
180.0	6095.84	5627.87	5216.59	4705.67	4221.72	3654.09	3073.80	2590.40	2107.56
270.0	5979.13	5523.26	5175.30	4689.15	4088.49	3657.40	3151.43	2536.45	2110.31
360.0	5727.52	5244.12	4776.69	4338.99	3600.14	3058.93	2608.02	2005.15	1684.18

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1478.81	1270.15	1134.71	1052.68	960.18	902.37	857.78	813.73	785.65
90.0	1432.57	1279.51	1160.59	1060.94	980.55	921.09	865.49	820.89	790.61
180.0	1727.67	1483.77	1305.39	1098.10	1039.57	960.18	889.77	838.78	805.14
270.0	1779.42	1478.81	1300.98	1089.02	1051.36	947.74	887.67	842.09	803.88
360.0	1478.81	1270.15	1134.71	1052.68	960.18	902.37	857.78	813.73	785.65

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	764.18	741.61	726.19	712.43	670.59	602.87	523.59	418.43	309.42
90.0	765.83	747.12	728.40	714.63	674.44	607.82	502.11	404.11	309.97
180.0	780.64	757.19	740.34	724.82	708.47	662.60	594.00	500.46	405.93
270.0	775.74	756.97	739.46	723.00	709.68	678.63	615.97	517.92	403.29
360.0	764.18	741.61	726.19	712.43	670.59	602.87	523.59	418.43	309.42

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	285.74	118.87	47.40	22.96	19.77	17.40	15.20	13.71	12.66
90.0	282.99	98.83	43.33	23.51	20.10	17.40	15.14	13.16	12.06
180.0	297.03	192.86	115.62	47.02	21.14	18.66	16.41	13.93	12.55
270.0	305.56	198.42	106.97	49.06	23.95	20.26	17.62	15.31	13.32
360.0	285.74	118.87	47.40	22.96	19.77	17.40	15.20	13.71	12.66

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	11.62	11.18	10.35	10.08	9.91	9.74	9.63	9.52	9.36
90.0	11.34	10.63	10.35	10.19	9.97	9.86	9.69	9.52	9.41
180.0	11.62	10.57	10.24	10.08	9.86	9.69	9.63	9.47	9.36
270.0	11.84	11.01	10.52	10.30	10.08	9.97	9.74	9.63	9.47
360.0	11.62	11.18	10.35	10.08	9.91	9.74	9.63	9.52	9.36

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.30	9.19	9.08	9.08	8.92	8.86	8.75	8.75	8.70
90.0	9.25	9.19	9.14	9.03	8.97	8.92	8.81	8.81	8.75
180.0	9.25	9.14	9.08	8.97	8.92	8.86	8.70	8.75	8.64
270.0	9.36	9.25	9.14	9.08	8.97	8.92	8.81	8.81	8.75
360.0	9.30	9.19	9.08	9.08	8.92	8.86	8.75	8.75	8.70

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.53	8.59	8.53	8.53	8.53	8.48	8.42	8.42	8.37
90.0	8.75	8.64	8.53	8.53	8.53	8.48	8.42	8.37	8.31
180.0	8.64	8.53	8.53	8.42	8.42	8.42	8.37	8.31	8.26
270.0	8.70	8.64	8.59	8.53	8.48	8.48	8.42	8.37	8.37
360.0	8.53	8.59	8.53	8.53	8.53	8.48	8.42	8.42	8.37

Intensity data(cd)

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.26	8.26	8.26	8.26	8.20	8.09	8.15	8.15	8.15
90.0	8.31	8.26	8.20	8.20	8.15	8.15	8.15	8.15	8.15
180.0	8.31	8.26	8.26	8.15	8.15	8.09	8.09	8.09	8.04
270.0	8.31	8.26	8.20	8.20	8.15	8.15	8.09	8.15	8.09
360.0	8.26	8.26	8.26	8.26	8.20	8.09	8.15	8.15	8.15

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

C/γ(°)	90.0
0.0	7.93
90.0	8.04
180.0	7.93
270.0	7.98
360.0	7.93