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Address:380 JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-1566-M
Luminaire: BJB47.319.2011
Report No: NT2017060701
Test No: GC2017060701
LampCAT: LUMILEDS 1204
Lamp flux(lm): 2095.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 219.3000
Current(A): 0.1030
Power (W): 20.6000
PF: 0.9090
Ballast type: DC
Width(mm): 70
Height(mm): 45

Photometric Results

Lumens(lm): 1909.17
Efficiency(%): 91.13%
Lumens(lm)/Power(W): 92.68
Central intensity(cd): 6640.903
Maximum intensity(cd): 6640.903
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=16.7
[C90/270]Total=16.7
Field angle(10%Imax): [C0/180]Total=68.3
[C90/270]Total=68.3
Maximum s/h(1/2): C0_180=0.28 C90_270=0.28
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(%): 91.20%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.687%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6640.903	1.589	1.589	.076%	.083%
1.0	6592.591	12.617	14.206	.602%	.744%
2.0	6393.700	24.469	38.675	1.168%	2.026%
3.0	6073.409	34.857	73.532	1.664%	3.852%
4.0	5656.013	43.266	116.798	2.065%	6.118%
5.0	5108.546	48.825	165.623	2.331%	8.675%
6.0	4554.541	52.207	217.831	2.492%	11.410%
7.0	3980.784	53.200	271.031	2.539%	14.196%
8.0	3464.906	52.881	323.912	2.524%	16.966%
9.0	3035.259	52.069	375.981	2.485%	19.693%
10.0	2718.134	51.760	427.741	2.471%	22.405%
11.0	2489.926	52.100	479.841	2.487%	25.133%
12.0	2338.039	53.307	533.147	2.544%	27.926%
13.0	2221.388	54.798	587.945	2.616%	30.796%
14.0	2120.428	56.254	644.199	2.685%	33.742%
15.0	2035.229	57.765	701.963	2.757%	36.768%
16.0	1945.418	58.803	760.767	2.807%	39.848%
17.0	1849.069	59.284	820.051	2.830%	42.953%
18.0	1752.170	59.376	879.427	2.834%	46.063%
19.0	1657.955	59.192	938.62	2.825%	49.164%
20.0	1555.412	58.338	996.957	2.785%	52.219%
21.0	1457.136	57.264	1054.221	2.733%	55.219%
22.0	1373.107	56.407	1110.628	2.692%	58.173%
23.0	1287.611	55.171	1165.799	2.633%	61.063%
24.0	1206.416	53.810	1219.609	2.568%	63.882%
25.0	1134.547	52.580	1272.19	2.510%	66.636%
26.0	1072.175	51.542	1323.731	2.460%	69.336%
27.0	1017.312	50.647	1374.378	2.418%	71.988%
28.0	965.944	49.729	1424.108	2.374%	74.593%
29.0	919.697	48.895	1473.003	2.334%	77.154%
30.0	877.640	48.121	1521.124	2.297%	79.675%
31.0	834.793	47.149	1568.273	2.251%	82.144%
32.0	789.640	45.887	1614.16	2.190%	84.548%
33.0	739.125	44.145	1658.305	2.107%	86.860%
34.0	676.471	41.482	1699.787	1.980%	89.033%
35.0	603.336	37.949	1737.736	1.811%	91.021%
36.0	513.077	33.071	1770.808	1.579%	92.753%
37.0	424.086	27.988	1798.795	1.336%	94.219%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	344.116	23.233	1822.028	1.109%	95.436%
39.0	243.948	16.835	1838.863	.804%	96.318%
40.0	173.820	12.252	1851.116	.585%	96.959%
41.0	119.046	8.565	1859.68	.409%	97.408%
42.0	69.330	5.087	1864.768	.243%	97.674%
43.0	41.120	3.075	1867.843	.147%	97.835%
44.0	26.592	2.026	1869.869	.097%	97.942%
45.0	21.183	1.643	1871.511	.078%	98.028%
46.0	18.740	1.478	1872.989	.071%	98.105%
47.0	16.593	1.331	1874.32	.064%	98.175%
48.0	14.769	1.204	1875.524	.057%	98.238%
49.0	13.055	1.080	1876.604	.052%	98.294%
50.0	11.651	0.979	1877.583	.047%	98.346%
51.0	10.633	0.906	1878.489	.043%	98.393%
52.0	9.869	0.853	1879.342	.041%	98.438%
53.0	9.277	0.812	1880.154	.039%	98.480%
54.0	8.919	0.791	1880.946	.038%	98.522%
55.0	8.713	0.783	1881.728	.037%	98.563%
56.0	8.561	0.778	1882.507	.037%	98.604%
57.0	8.424	0.775	1883.281	.037%	98.644%
58.0	8.314	0.773	1884.055	.037%	98.685%
59.0	8.210	0.772	1884.826	.037%	98.725%
60.0	8.107	0.770	1885.596	.037%	98.765%
61.0	8.018	0.769	1886.365	.037%	98.806%
62.0	7.969	0.772	1887.137	.037%	98.846%
63.0	7.907	0.773	1887.909	.037%	98.887%
64.0	7.866	0.775	1888.685	.037%	98.927%
65.0	7.818	0.777	1889.462	.037%	98.968%
66.0	7.770	0.778	1890.24	.037%	99.009%
67.0	7.749	0.782	1891.022	.037%	99.050%
68.0	7.722	0.785	1891.808	.037%	99.091%
69.0	7.673	0.786	1892.593	.037%	99.132%
70.0	7.639	0.787	1893.38	.038%	99.173%
71.0	7.618	0.790	1894.17	.038%	99.214%
72.0	7.612	0.794	1894.964	.038%	99.256%
73.0	7.605	0.797	1895.762	.038%	99.298%
74.0	7.605	0.802	1896.563	.038%	99.340%
75.0	7.598	0.805	1897.368	.038%	99.382%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.584	0.807	1898.175	.039%	99.424%
77.0	7.556	0.807	1898.982	.039%	99.466%
78.0	7.536	0.808	1899.791	.039%	99.509%
79.0	7.543	0.812	1900.603	.039%	99.551%
80.0	7.570	0.818	1901.42	.039%	99.594%
81.0	7.515	0.814	1902.234	.039%	99.637%
82.0	7.501	0.815	1903.049	.039%	99.679%
83.0	7.501	0.816	1903.865	.039%	99.722%
84.0	7.481	0.816	1904.681	.039%	99.765%
85.0	7.474	0.816	1905.498	.039%	99.808%
86.0	7.460	0.816	1906.314	.039%	99.850%
87.0	7.467	0.818	1907.131	.039%	99.893%
88.0	7.426	0.814	1907.945	.039%	99.936%
89.0	7.433	0.815	1908.76	.039%	99.979%
90.0	7.439	0.408	1909.168	.019%	100.000%

Zonal flux distribution table

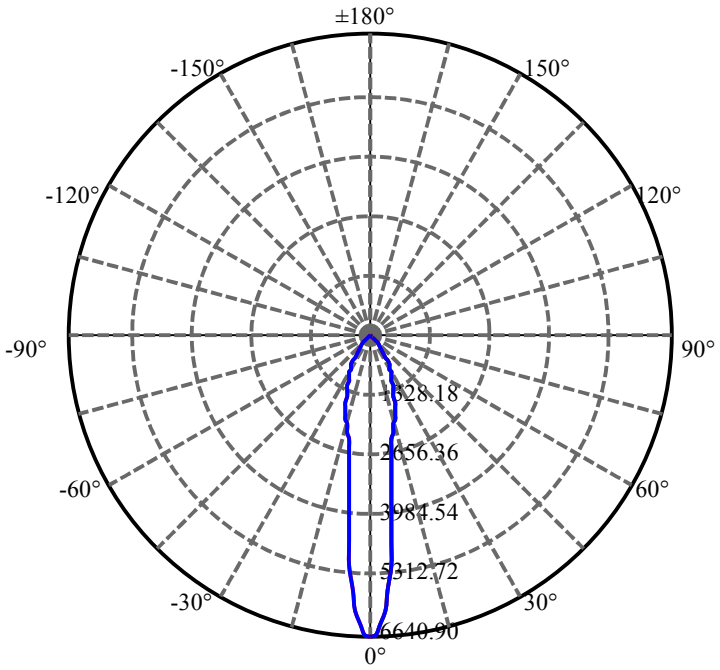
ZONAL LUMEN SUMMARY

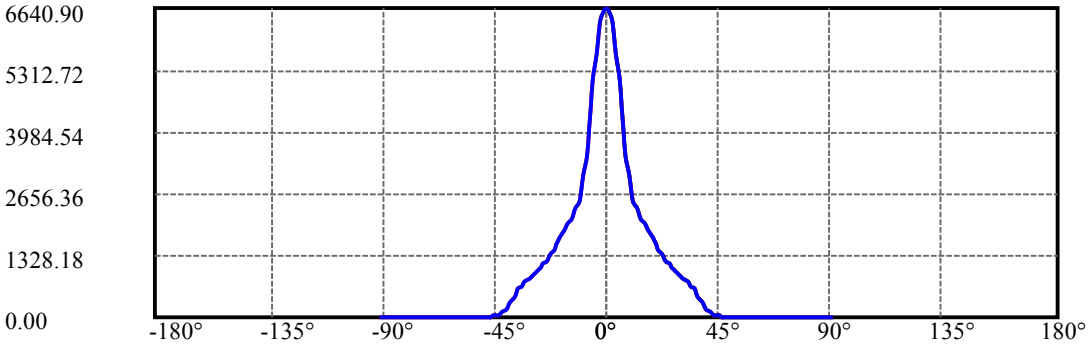
Zone	Lumens	%Lamp	%Fixt
0-30	1521.12	72.61%	79.67%
0-40	1851.12	88.36%	96.96%
0-60	1885.60	90.00%	98.77%
0-90	1908.76	91.11%	99.98%
0-120	1908.76	91.11%	99.98%
0-180	1909.17	91.13%	100.00%
60-90	23.93	1.14%	1.25%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-30.13	1527.33	72.90%	80.00%

ZONAL LUMEN SUMMARY

0-10	427.74
10-20	569.22
20-30	524.17
30-40	329.99
40-50	26.47
50-60	8.01
60-70	7.78
70-80	8.04
80-90	7.34
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):

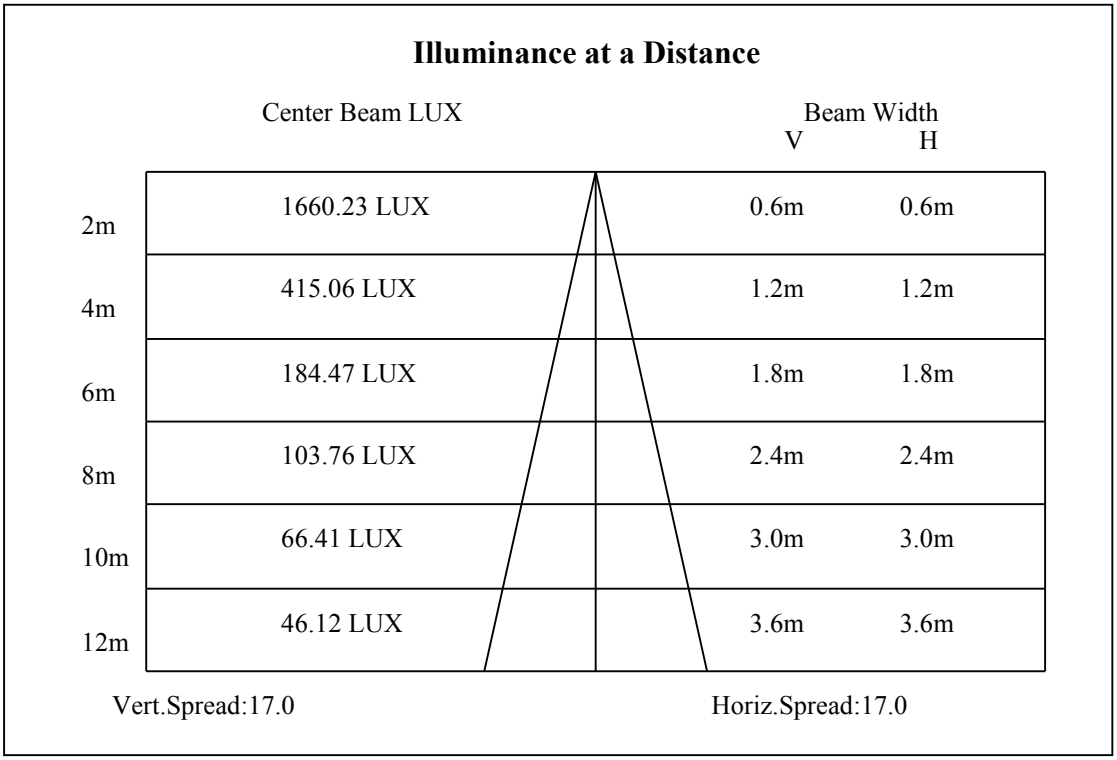
C0/C180:

C90/C270:

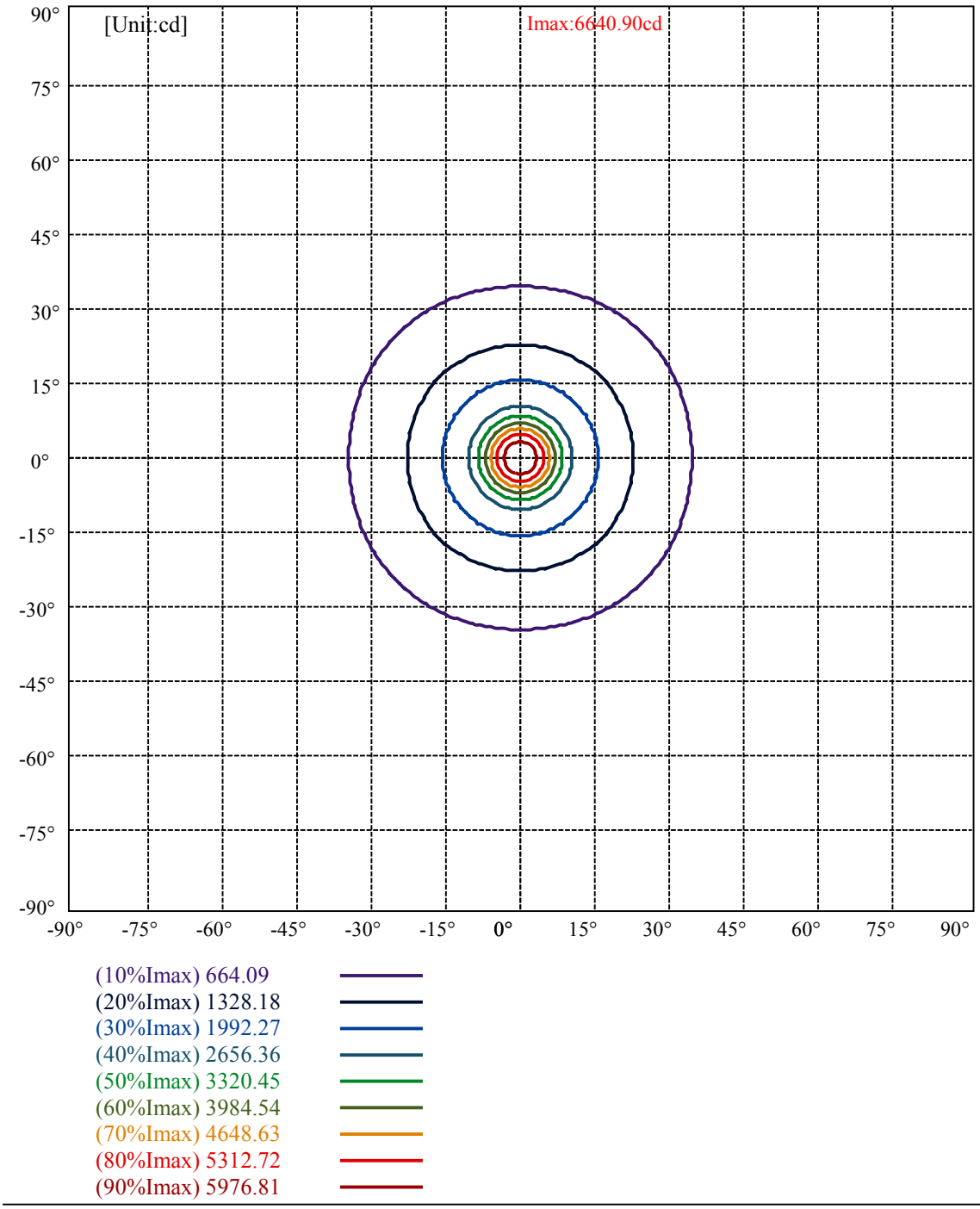
Field angle(10%Imax):C0/180Left:34.2 Right:34.2
:C90/270Left:34.2 Right:34.2

Beam Angle(50%Imax):C0/180Left:8.3 Right:8.3
:C90/270Left:8.3 Right:8.3

Lux distance Curve



ISO-Intensity(V-H)

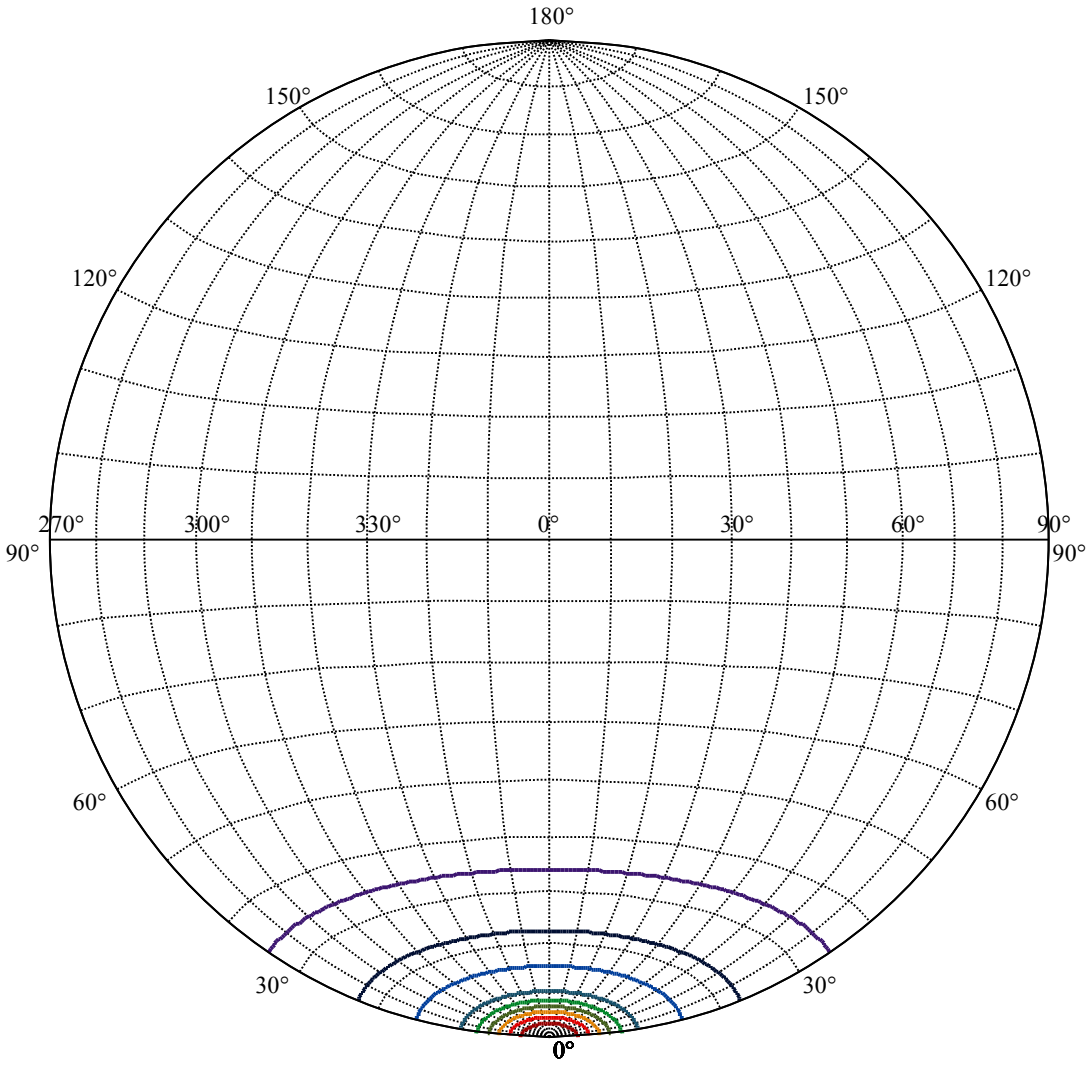


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/7
Humidity(%): 5.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:6640.90

(10%Imax) 664.09
(20%Imax) 1328.18
(30%Imax) 1992.27
(40%Imax) 2656.36
(50%Imax) 3320.45
(60%Imax) 3984.54
(70%Imax) 4648.63
(80%Imax) 5312.72
(90%Imax) 5976.81

Equipment: GMS1980 Date: 2017/6/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 5.0% Distance(m): 7.42

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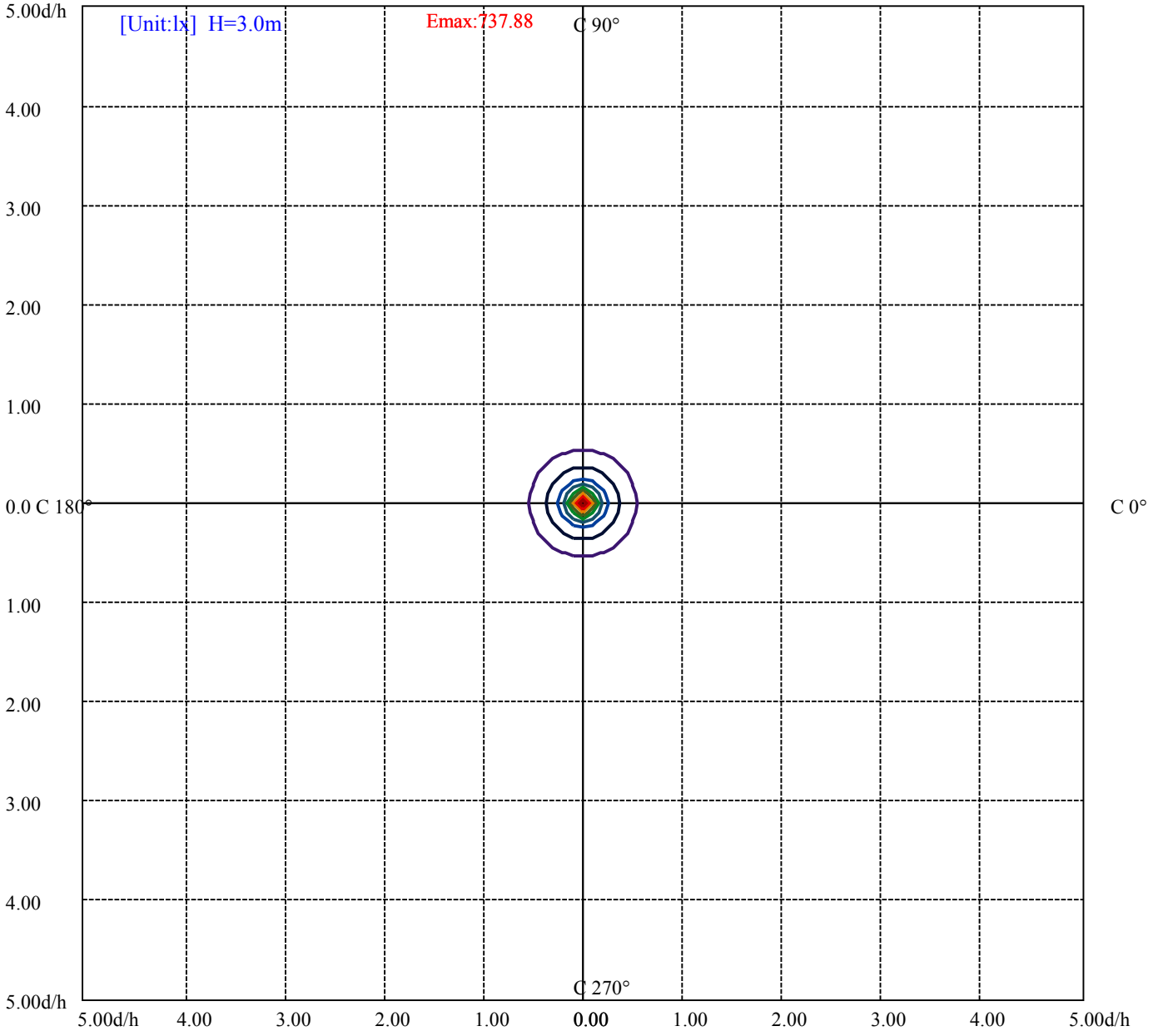
ISO illuminance diagram

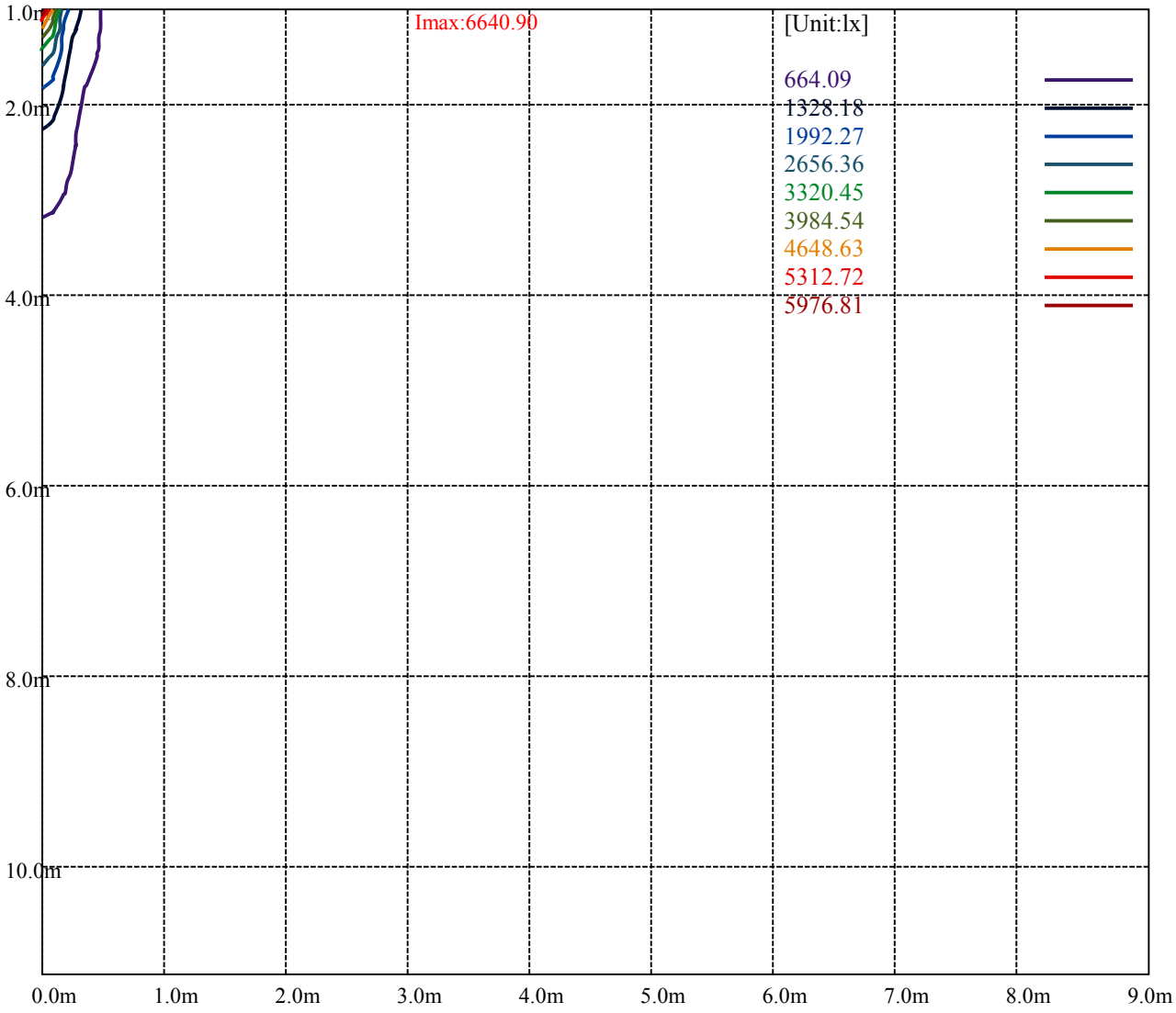


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/7
Humidity(%): 5.0%

Operator: NT07
Distance(m): 7.42

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/7
Humidity(%): 5.0%

Operator: NT07
Distance(m): 7.42

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Luminance Limitting Curve(no luminous side)

Luminance Table

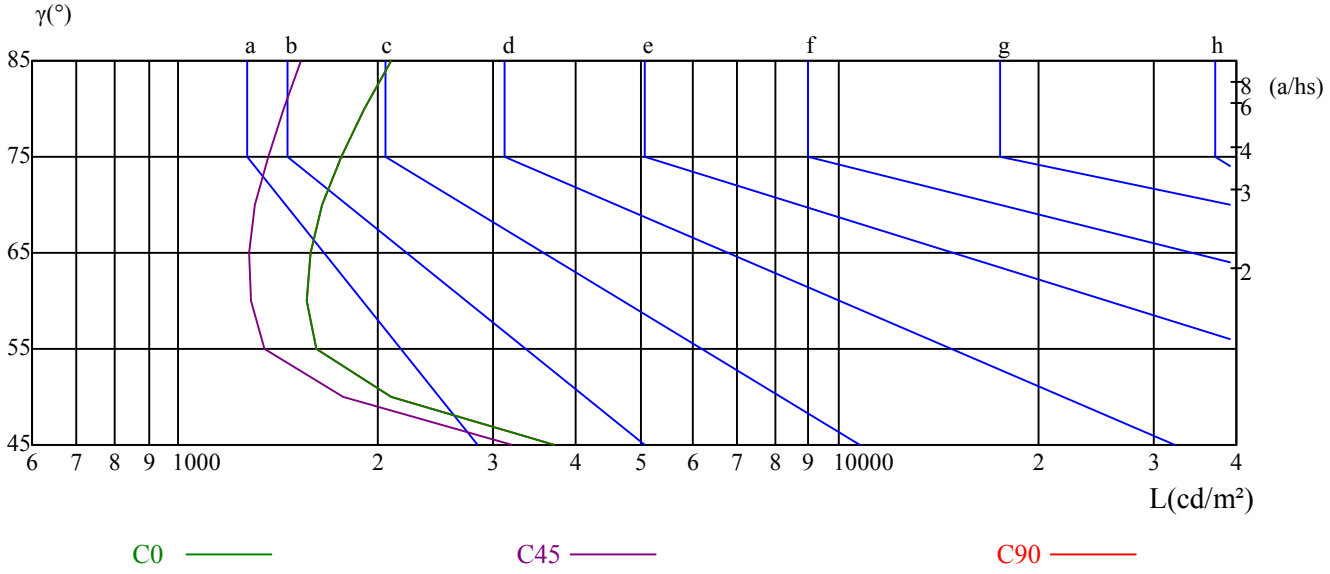
γ	45	50	55	60	65	70	75	80	85
C0	3721	2095	1616	1566	1587	1648	1762	1915	2096
C45	3202	1776	1349	1285	1280	1303	1364	1445	1536
C90	3721	2095	1616	1566	1587	1648	1762	1915	2096

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3775	3775	3775	5991	5991	5991	17501	17501	17501

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

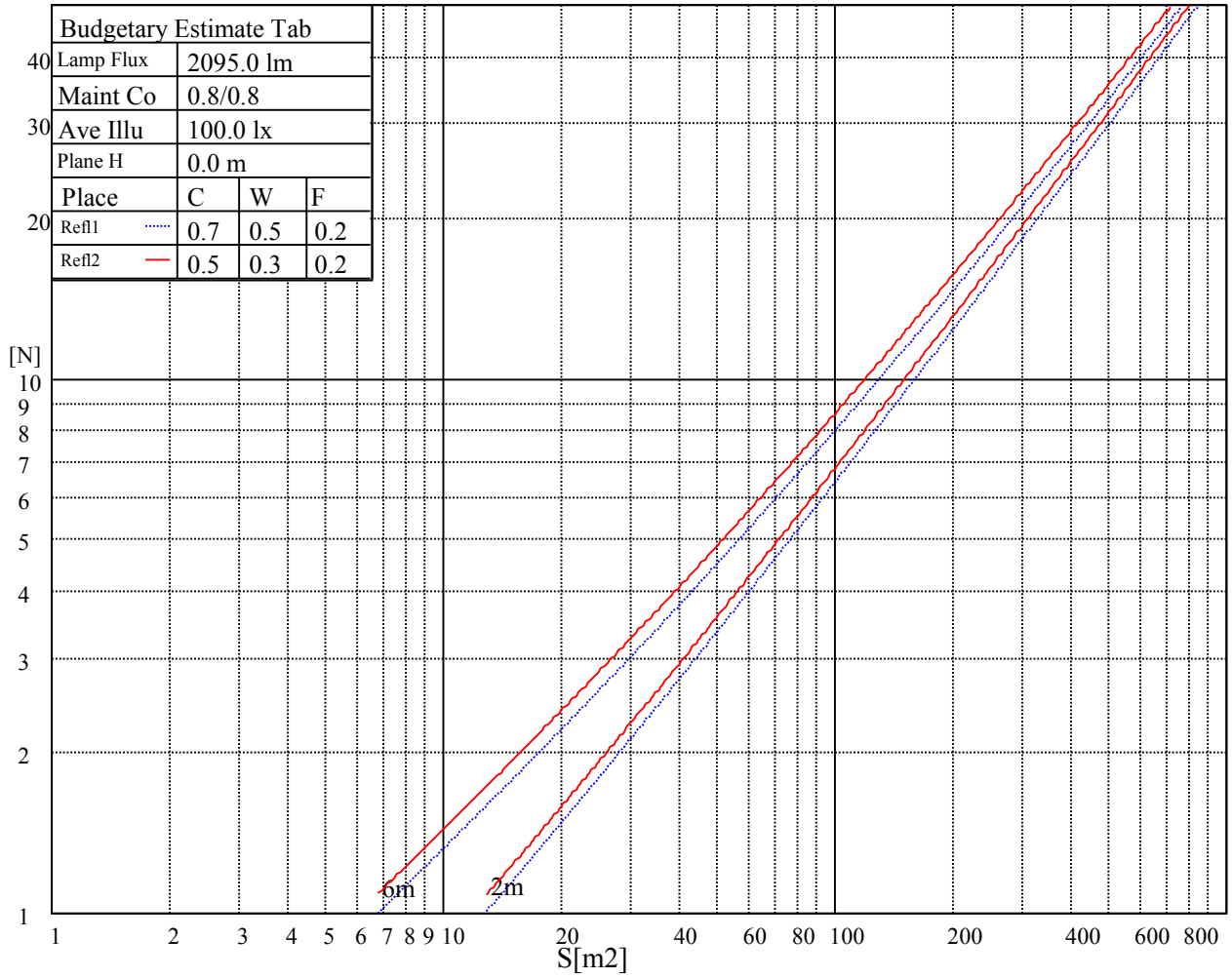


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/7
Humidity(%): 5.0%

Operator: NT07
Distance(m): 7.42

Budgetary Estimate Table

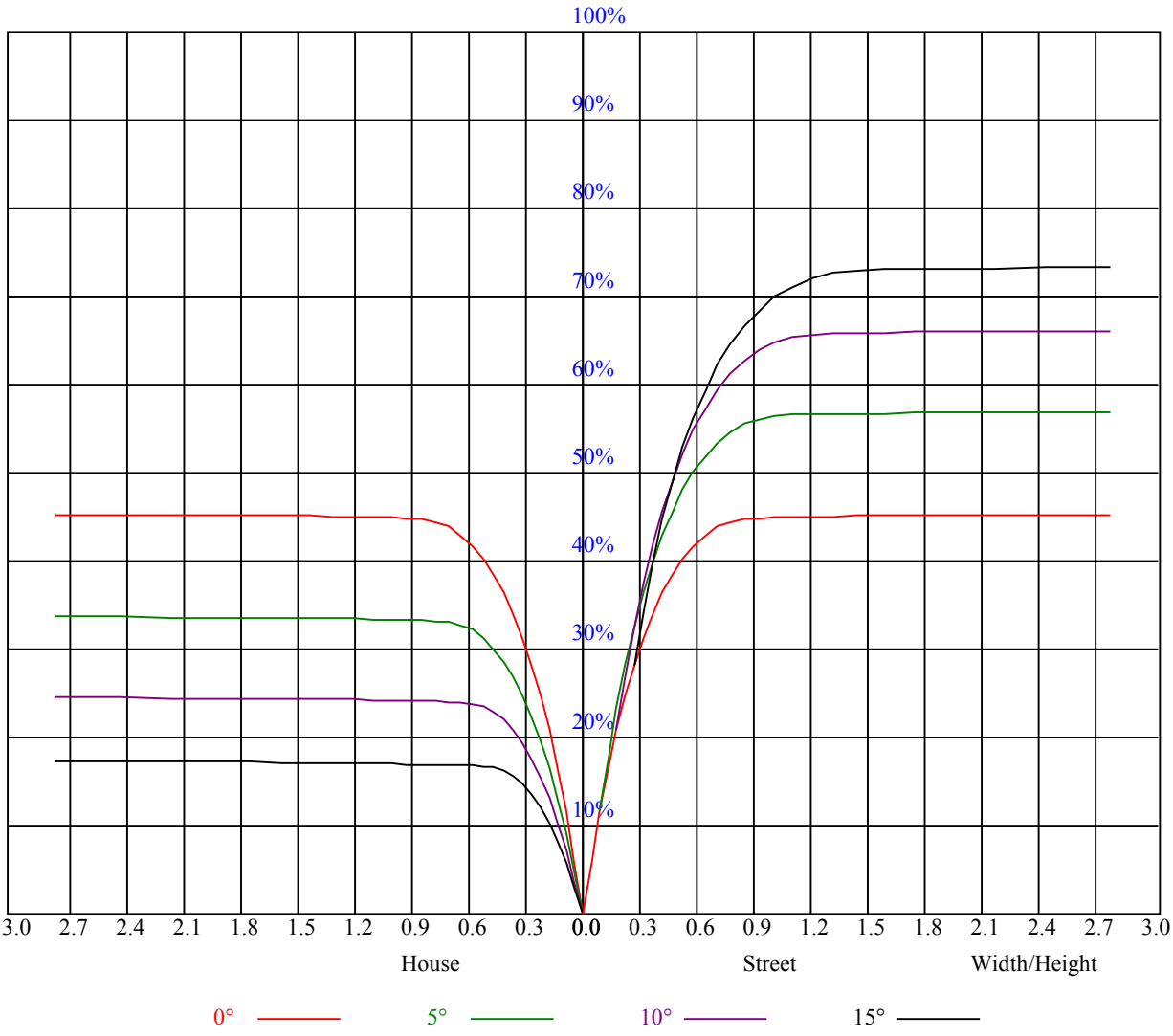


Equipment: GMS1980 Date: 2017/6/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 5.0% Distance(m): 7.42

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	1.09	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	1.01	0.99	0.97	0.99	0.98	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.88	0.86
2	0.95	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.83	0.81
3	0.90	0.86	0.82	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.70	0.69
6	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.62
8	0.70	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60
9	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/7
Humidity(%): 5.0%

Operator: NT07
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	6783.50	6706.97	6419.58	6049.60	5573.91	4822.39	4216.22	3658.50	3149.23
45.0	6406.36	6589.70	6722.94	6700.36	6595.21	6309.46	5965.36	5490.77	4836.70
90.0	6648.06	6731.20	6708.07	6546.76	6268.17	5894.89	5414.25	4678.69	4087.39
135.0	6725.69	6777.99	6726.79	6584.19	6336.44	5903.15	5321.75	4722.74	4034.53
180.0	6783.50	6778.54	6682.20	6434.44	6109.06	5647.13	4987.56	4266.87	3677.22
225.0	6406.36	6098.05	5497.38	4877.45	4239.89	3656.85	3097.47	2679.04	2436.80
270.0	6648.06	6487.85	6144.29	5676.87	4998.02	4288.89	3620.51	3112.34	2732.45
315.0	6725.69	6570.43	6248.35	5717.61	5127.40	4345.60	3813.21	3237.32	2764.93
360.0	6783.50	6706.97	6419.58	6049.60	5573.91	4822.39	4216.22	3658.50	3149.23

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2784.20	2561.22	2405.41	2305.21	2214.92	2118.57	2032.68	1933.03	1829.52
45.0	4163.92	3623.26	3121.70	2793.56	2541.40	2383.39	2287.59	2190.69	2090.49
90.0	3554.44	3028.10	2731.90	2533.70	2392.75	2284.84	2196.75	2096.00	1993.59
135.0	3423.41	3008.83	2665.28	2468.18	2326.13	2227.03	2147.75	2053.05	1956.15
180.0	3112.89	2696.11	2448.91	2289.80	2199.50	2118.57	2034.33	1964.41	1871.92
225.0	2271.08	2173.08	2099.30	2022.22	1952.30	1866.41	1777.22	1692.43	1593.33
270.0	2425.78	2282.64	2190.14	2111.41	2037.64	1964.96	1880.73	1793.74	1710.60
315.0	2546.36	2371.83	2256.76	2180.23	2106.46	1999.65	1924.77	1839.98	1746.94
360.0	2784.20	2561.22	2405.41	2305.21	2214.92	2118.57	2032.68	1933.03	1829.52

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1734.28	1639.58	1530.02	1440.83	1360.44	1272.35	1191.42	1125.35	1056.53
45.0	1997.45	1907.70	1779.97	1675.92	1582.32	1477.71	1384.12	1301.53	1221.15
90.0	1893.94	1777.77	1674.82	1563.60	1458.44	1372.56	1293.83	1206.84	1092.65
135.0	1867.51	1768.41	1646.74	1552.59	1462.85	1364.85	1274.01	1204.08	1128.11
180.0	1776.67	1678.67	1581.22	1471.66	1384.67	1305.94	1225.56	1098.60	1093.59
225.0	1498.08	1419.90	1338.97	1244.83	1180.96	1092.15	1054.44	995.03	945.21
270.0	1617.01	1527.26	1435.87	1350.53	1277.31	1207.39	1130.86	1076.90	1023.50
315.0	1632.42	1544.33	1455.69	1357.14	1277.86	1207.94	1097.11	1068.04	1016.67
360.0	1734.28	1639.58	1530.02	1440.83	1360.44	1272.35	1191.42	1125.35	1056.53

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	996.52	948.62	899.07	859.43	815.94	775.19	722.34	648.01	542.31
45.0	1150.13	1091.77	1031.21	981.11	932.10	889.16	850.62	819.24	776.85
90.0	1077.01	1010.28	963.65	917.90	869.07	833.55	802.78	762.64	713.75
135.0	1063.14	1010.28	956.88	912.28	870.99	830.80	802.17	769.69	707.47
180.0	1035.06	984.63	940.09	896.43	860.53	824.52	790.78	747.61	688.54
225.0	893.68	850.73	814.28	777.95	731.53	656.22	565.26	473.04	387.43
270.0	961.28	917.24	877.05	843.46	798.87	754.27	697.56	595.71	498.81
315.0	961.67	913.99	875.34	832.56	799.31	753.39	681.49	595.82	511.53
360.0	996.52	948.62	899.07	859.43	815.94	775.19	722.34	648.01	542.31

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	450.36	358.97	281.89	172.82	111.21	58.69	28.96	24.78	22.41
45.0	720.69	646.36	540.65	448.71	355.66	282.44	164.01	103.78	53.29
90.0	631.44	519.79	440.78	341.40	235.48	171.61	109.89	46.52	26.54
135.0	630.40	550.56	438.80	353.46	281.34	191.98	104.55	55.66	26.32
180.0	593.07	504.43	414.02	304.46	221.71	144.36	73.83	32.10	24.61
225.0	281.17	198.92	130.37	64.42	32.81	25.16	22.96	20.48	18.39
270.0	396.96	303.36	280.24	130.48	70.31	36.17	25.11	22.74	20.54
315.0	400.54	310.30	226.17	135.82	82.03	41.95	25.33	22.90	20.65
360.0	450.36	358.97	281.89	172.82	111.21	58.69	28.96	24.78	22.41

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	19.93	17.62	15.36	13.60	11.89	10.68	10.02	9.14	8.81
45.0	28.57	23.45	21.09	18.94	16.52	14.31	12.55	11.12	9.91
90.0	23.01	20.87	18.22	16.24	14.26	12.55	11.34	10.19	9.36
135.0	23.18	21.09	19.05	17.01	14.76	13.10	11.84	10.96	9.80
180.0	22.19	20.26	18.00	15.91	14.31	12.72	11.34	10.52	9.86
225.0	16.30	14.65	12.99	11.78	11.01	10.02	9.30	9.03	8.81
270.0	18.11	15.91	14.09	12.61	10.90	10.02	9.47	9.08	8.97
315.0	18.17	16.08	13.93	12.06	10.79	9.80	9.19	8.92	8.70
360.0	19.93	17.62	15.36	13.60	11.89	10.68	10.02	9.14	8.81

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.64	8.53	8.42	8.31	8.20	8.09	7.98	7.93	7.93
45.0	9.30	8.97	8.81	8.64	8.53	8.42	8.26	8.15	8.04
90.0	8.92	8.70	8.53	8.42	8.31	8.20	8.09	7.98	7.93
135.0	9.19	8.86	8.64	8.53	8.42	8.26	8.15	8.04	8.04
180.0	9.19	8.92	8.81	8.64	8.48	8.37	8.20	8.20	8.09
225.0	8.70	8.59	8.48	8.31	8.20	8.09	8.04	7.98	7.98
270.0	8.81	8.64	8.42	8.37	8.26	8.20	8.15	7.98	7.93
315.0	8.59	8.48	8.37	8.15	8.09	8.04	7.98	7.87	7.82
360.0	8.64	8.53	8.42	8.31	8.20	8.09	7.98	7.93	7.93

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.87	7.82	7.76	7.71	7.76	7.71	7.71	7.65	7.60
45.0	7.98	7.93	7.87	7.87	7.82	7.76	7.76	7.71	7.65
90.0	7.87	7.82	7.82	7.76	7.76	7.71	7.65	7.60	7.60
135.0	7.93	7.93	7.87	7.82	7.76	7.71	7.71	7.71	7.71
180.0	8.04	7.98	7.87	7.82	7.76	7.82	7.71	7.71	7.65
225.0	7.87	7.82	7.76	7.71	7.71	7.71	7.60	7.60	7.60
270.0	7.87	7.87	7.82	7.76	7.71	7.71	7.65	7.60	7.60
315.0	7.82	7.76	7.76	7.71	7.71	7.65	7.60	7.54	7.54
360.0	7.87	7.82	7.76	7.71	7.76	7.71	7.71	7.65	7.60

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.54
45.0	7.60	7.60	7.60	7.65	7.60	7.54	7.49	7.49	7.54
90.0	7.60	7.60	7.60	7.54	7.54	7.49	7.49	7.49	7.54
135.0	7.65	7.65	7.65	7.87	7.93	7.87	7.76	7.71	7.87
180.0	7.65	7.65	7.65	7.60	7.60	7.54	7.54	7.60	7.60
225.0	7.60	7.54	7.54	7.49	7.49	7.49	7.49	7.49	7.49
270.0	7.60	7.60	7.60	7.54	7.49	7.49	7.49	7.49	7.49
315.0	7.60	7.60	7.60	7.54	7.49	7.49	7.49	7.54	7.49
360.0	7.60	7.60	7.60	7.54	7.54	7.54	7.54	7.54	7.54

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.43	7.54	7.49	7.54	7.49	7.49	7.49	7.43	7.49
45.0	7.54	7.54	7.43	7.49	7.43	7.49	7.49	7.38	7.43
90.0	7.49	7.49	7.49	7.43	7.49	7.43	7.49	7.43	7.49
135.0	7.76	7.60	7.60	7.60	7.54	7.54	7.54	7.43	7.43
180.0	7.49	7.54	7.54	7.54	7.49	7.49	7.49	7.49	7.49
225.0	7.43	7.43	7.49	7.38	7.49	7.38	7.43	7.43	7.38
270.0	7.49	7.43	7.49	7.43	7.38	7.43	7.38	7.43	7.38
315.0	7.49	7.43	7.49	7.43	7.49	7.43	7.43	7.38	7.38
360.0	7.43	7.54	7.49	7.54	7.49	7.49	7.49	7.43	7.49

Intensity data(cd)

C/γ(°)	90.0
0.0	7.49
45.0	7.43
90.0	7.43
135.0	7.43
180.0	7.43
225.0	7.43
270.0	7.43
315.0	7.43
360.0	7.49