NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 1-1061-N
Luminaire: 92.70.246.00

Report No: 210706-B010	Voltage(V): 36.5700
Test No: 210706-C010	Current(A): 0.4510
LampCAT: Fortimo LED SLM 1203 G7N	Power (W): 16.4930
Lamp flux(lm): 2143.4	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 570	Width(mm): 45
Phm Type: C	Height(mm): 20

Photometric Results

Lumens(lm): 1717.06
Efficiency(%): 80.11%
Lumens(lm)/Power(W): 104.11
Central intensity(cd): 7047.563
Maximum intensity(cd): 7047.563
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=24.0
[C90/270]Total=24.0
Field angle(10%Imax): [C0/180]Total=51.1
[C90/270]Total=51.1
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
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(%): 80.11%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.112%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7047.563	0.000	0	.000%	.000%
1.0	7023.797	6.733	6.733	.314%	.392%
2.0	6932.039	20.031	26.764	.935%	1.559%
3.0	6769.898	32.771	59.534	1.529%	3.467%
4.0	6555.164	44.603	104.137	2.081%	6.065%
5.0	6295.430	55.283	159.42	2.579%	9.284%
6.0	5930.508	64.251	223.671	2.998%	13.026%
7.0	5555.320	71.292	294.963	3.326%	17.178%
8.0	5180.414	76.834	371.796	3.585%	21.653%
9.0	4752.703	80.503	452.299	3.756%	26.342%
10.0	4308.750	82.003	534.302	3.826%	31.117%
11.0	3918.305	82.205	616.507	3.835%	35.905%
12.0	3516.891	81.277	697.784	3.792%	40.638%
13.0	3105.563	78.592	776.376	3.667%	45.216%
14.0	2767.430	75.174	851.55	3.507%	49.594%
15.0	2454.328	71.687	923.237	3.344%	53.769%
16.0	2176.734	67.858	991.095	3.166%	57.721%
17.0	1928.180	63.925	1055.019	2.982%	61.443%
18.0	1720.547	60.160	1115.179	2.807%	64.947%
19.0	1546.664	56.843	1172.022	2.652%	68.258%
20.0	1388.039	53.713	1225.735	2.506%	71.386%
21.0	1209.045	49.869	1275.604	2.327%	74.290%
22.0	1103.688	46.475	1322.079	2.168%	76.997%
23.0	993.916	44.013	1366.093	2.053%	79.560%
24.0	871.952	40.795	1406.887	1.903%	81.936%
25.0	761.013	37.130	1444.017	1.732%	84.098%
26.0	660.150	33.547	1477.564	1.565%	86.052%
27.0	564.195	29.954	1507.518	1.397%	87.797%
28.0	468.696	26.151	1533.669	1.220%	89.320%
29.0	387.626	22.404	1556.072	1.045%	90.624%
30.0	313.488	18.930	1575.002	.883%	91.727%
31.0	251.466	15.722	1590.724	.733%	92.643%
32.0	177.370	12.286	1603.01	.573%	93.358%
33.0	126.591	8.955	1611.965	.418%	93.880%
34.0	99.056	6.829	1618.793	.319%	94.277%
35.0	83.278	5.663	1624.456	.264%	94.607%
36.0	74.039	5.009	1629.465	.234%	94.899%
37.0	66.635	4.588	1634.053	.214%	95.166%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	59.780	4.220	1638.273	.197%	95.412%
39.0	53.290	3.859	1642.132	.180%	95.636%
40.0	48.495	3.550	1645.682	.166%	95.843%
41.0	43.875	3.289	1648.971	.153%	96.035%
42.0	39.783	3.039	1652.011	.142%	96.212%
43.0	36.183	2.814	1654.824	.131%	96.376%
44.0	33.188	2.618	1657.443	.122%	96.528%
45.0	30.382	2.443	1659.886	.114%	96.670%
46.0	27.795	2.275	1662.161	.106%	96.803%
47.0	25.650	2.126	1664.287	.099%	96.927%
48.0	23.822	2.000	1666.286	.093%	97.043%
49.0	22.134	1.887	1668.174	.088%	97.153%
50.0	20.573	1.781	1669.954	.083%	97.257%
51.0	19.385	1.691	1671.645	.079%	97.355%
52.0	18.352	1.619	1673.264	.076%	97.450%
53.0	17.374	1.554	1674.818	.073%	97.540%
54.0	16.573	1.496	1676.315	.070%	97.627%
55.0	15.982	1.453	1677.768	.068%	97.712%
56.0	15.427	1.419	1679.187	.066%	97.795%
57.0	14.963	1.389	1680.576	.065%	97.875%
58.0	14.625	1.368	1681.945	.064%	97.955%
59.0	14.309	1.353	1683.297	.063%	98.034%
60.0	14.063	1.340	1684.638	.063%	98.112%
61.0	13.809	1.330	1685.968	.062%	98.189%
62.0	13.507	1.316	1687.284	.061%	98.266%
63.0	13.254	1.302	1688.586	.061%	98.342%
64.0	12.980	1.287	1689.873	.060%	98.417%
65.0	12.614	1.267	1691.139	.059%	98.491%
66.0	12.340	1.245	1692.384	.058%	98.563%
67.0	12.016	1.225	1693.609	.057%	98.634%
68.0	11.693	1.201	1694.81	.056%	98.704%
69.0	11.433	1.180	1695.99	.055%	98.773%
70.0	11.166	1.161	1697.151	.054%	98.841%
71.0	10.898	1.140	1698.291	.053%	98.907%
72.0	10.680	1.122	1699.413	.052%	98.972%
73.0	10.441	1.105	1700.518	.052%	99.037%
74.0	10.223	1.086	1701.604	.051%	99.100%
75.0	10.041	1.071	1702.675	.050%	99.162%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.865	1.057	1703.731	.049%	99.224%
77.0	9.675	1.042	1704.773	.049%	99.285%
78.0	9.513	1.027	1705.8	.048%	99.344%
79.0	9.352	1.014	1706.814	.047%	99.404%
80.0	9.218	1.001	1707.815	.047%	99.462%
81.0	9.098	0.991	1708.805	.046%	99.519%
82.0	9.000	0.981	1709.787	.046%	99.577%
83.0	8.909	0.974	1710.76	.045%	99.633%
84.0	8.754	0.962	1711.723	.045%	99.689%
85.0	8.557	0.945	1712.667	.044%	99.744%
86.0	8.318	0.922	1713.59	.043%	99.798%
87.0	8.079	0.897	1714.487	.042%	99.850%
88.0	7.889	0.875	1715.362	.041%	99.901%
89.0	7.706	0.855	1716.217	.040%	99.951%
90.0	7.601	0.839	1717.056	.039%	100.000%

Zonal flux distribution table

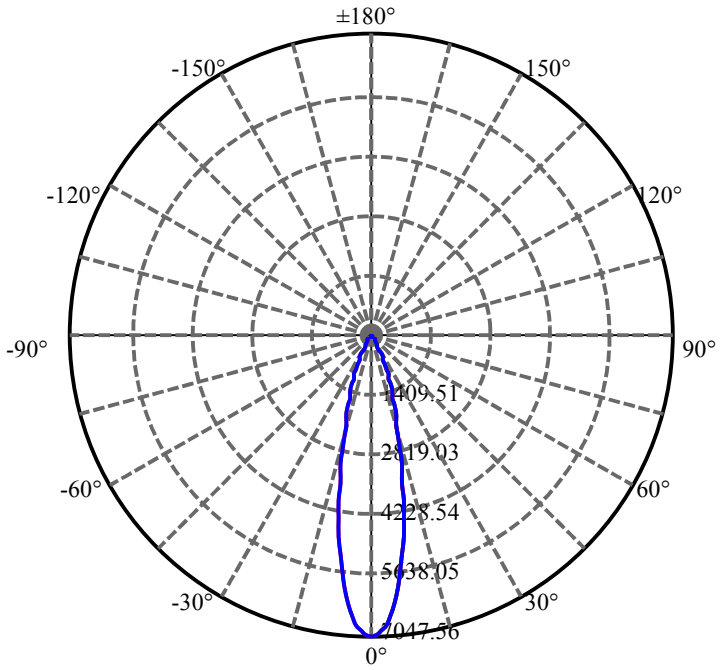
ZONAL LUMEN SUMMARY

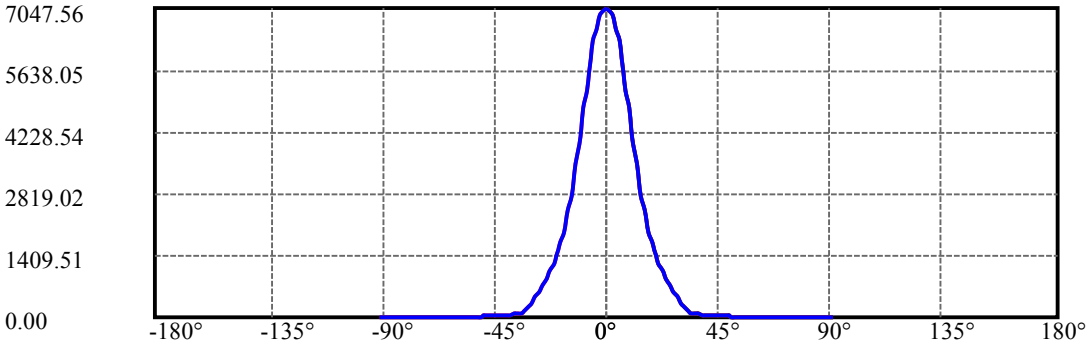
Zone	Lumens	%Lamp	%Fixt
0-30	1575.00	73.48%	91.73%
0-40	1645.68	76.78%	95.84%
0-60	1684.64	78.60%	98.11%
0-90	1716.22	80.07%	99.95%
0-120	1716.22	80.07%	99.95%
0-180	1717.06	80.11%	100.00%
60-90	32.92	1.54%	1.92%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-23.19	1373.65	64.09%	80.00%

ZONAL LUMEN SUMMARY

0-10	534.30
10-20	691.43
20-30	349.27
30-40	70.68
40-50	24.27
50-60	14.68
60-70	12.51
70-80	10.66
80-90	8.40
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):

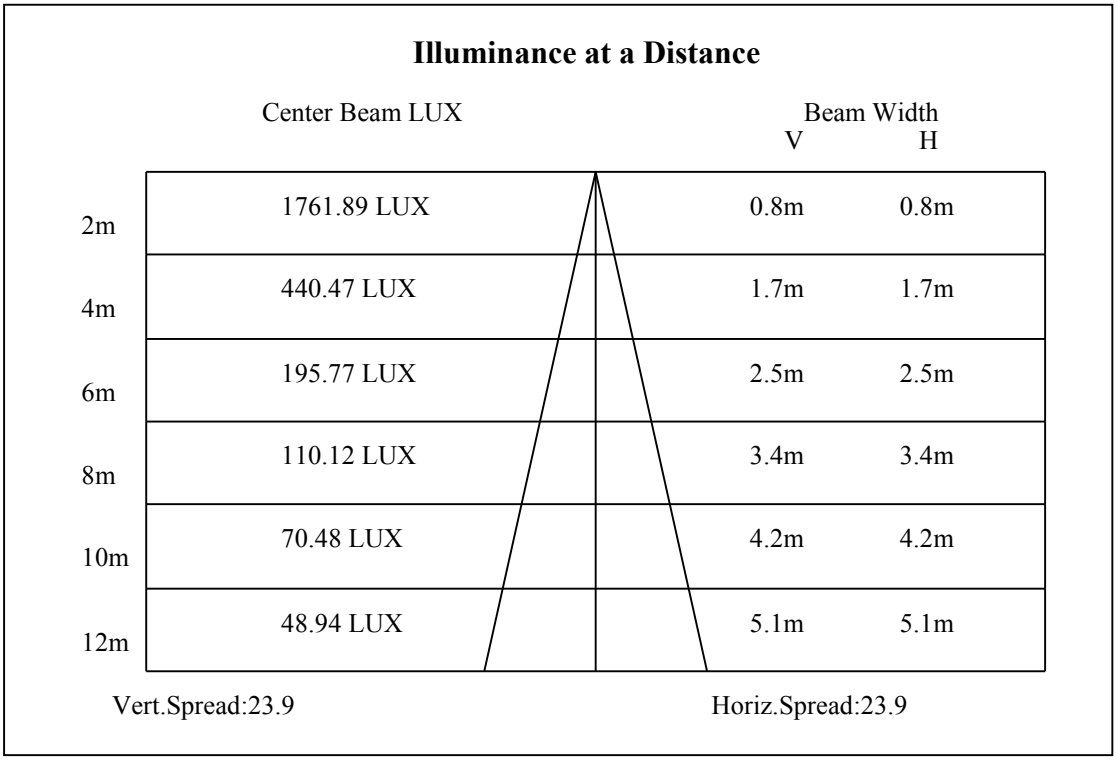
C0/C180:

C90/C270:

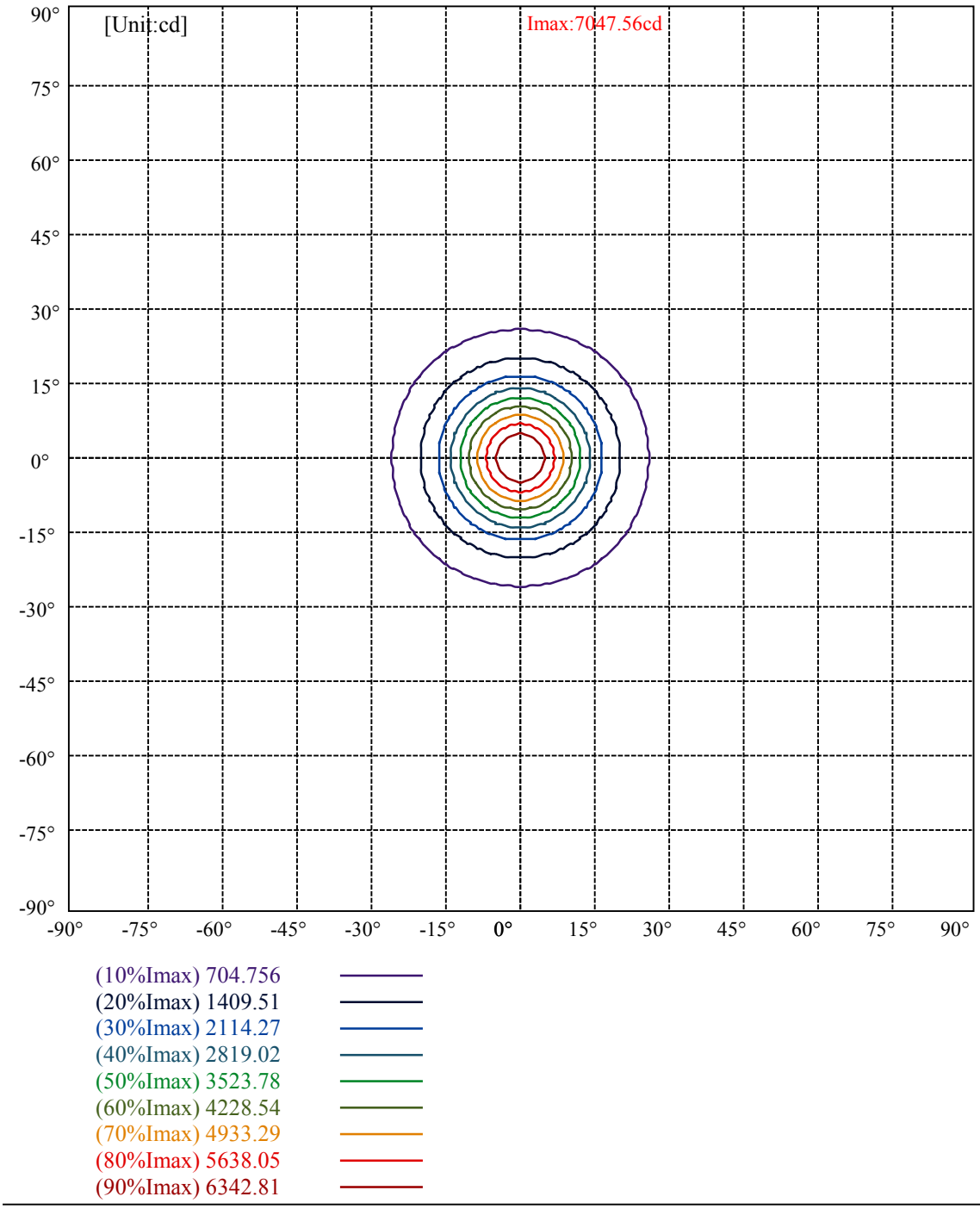
Field angle(10%Imax):C0/180Left:25.6 Right:25.6
:C90/270Left:25.6 Right:25.6

Beam Angle(50%Imax):C0/180Left:12.0 Right:12.0
:C90/270Left:12.0 Right:12.0

Lux distance Curve



ISO-Intensity(V-H)



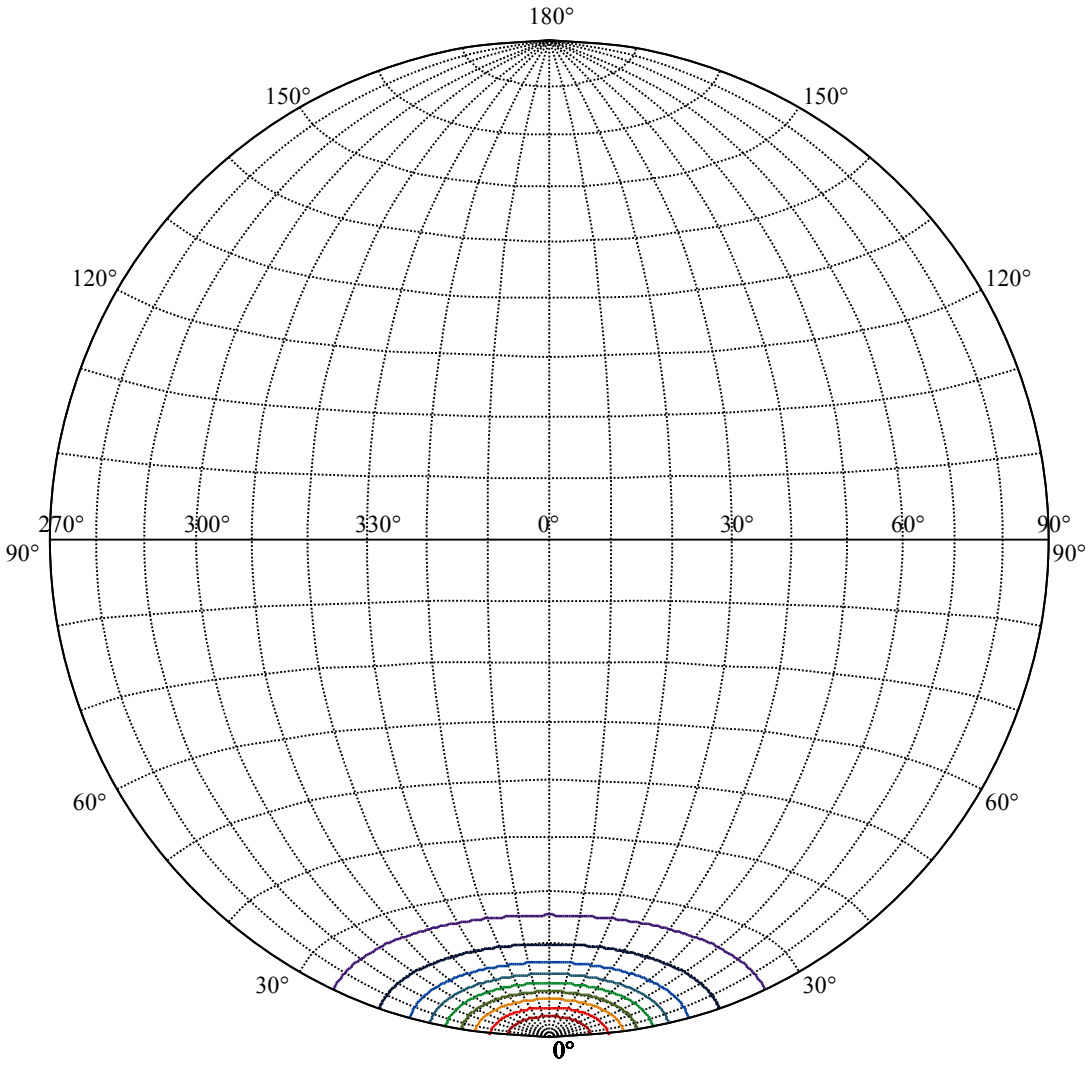
(10%Imax) 704.756
(20%Imax) 1409.51
(30%Imax) 2114.27
(40%Imax) 2819.02
(50%Imax) 3523.78
(60%Imax) 4228.54
(70%Imax) 4933.29
(80%Imax) 5638.05
(90%Imax) 6342.81

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/06
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



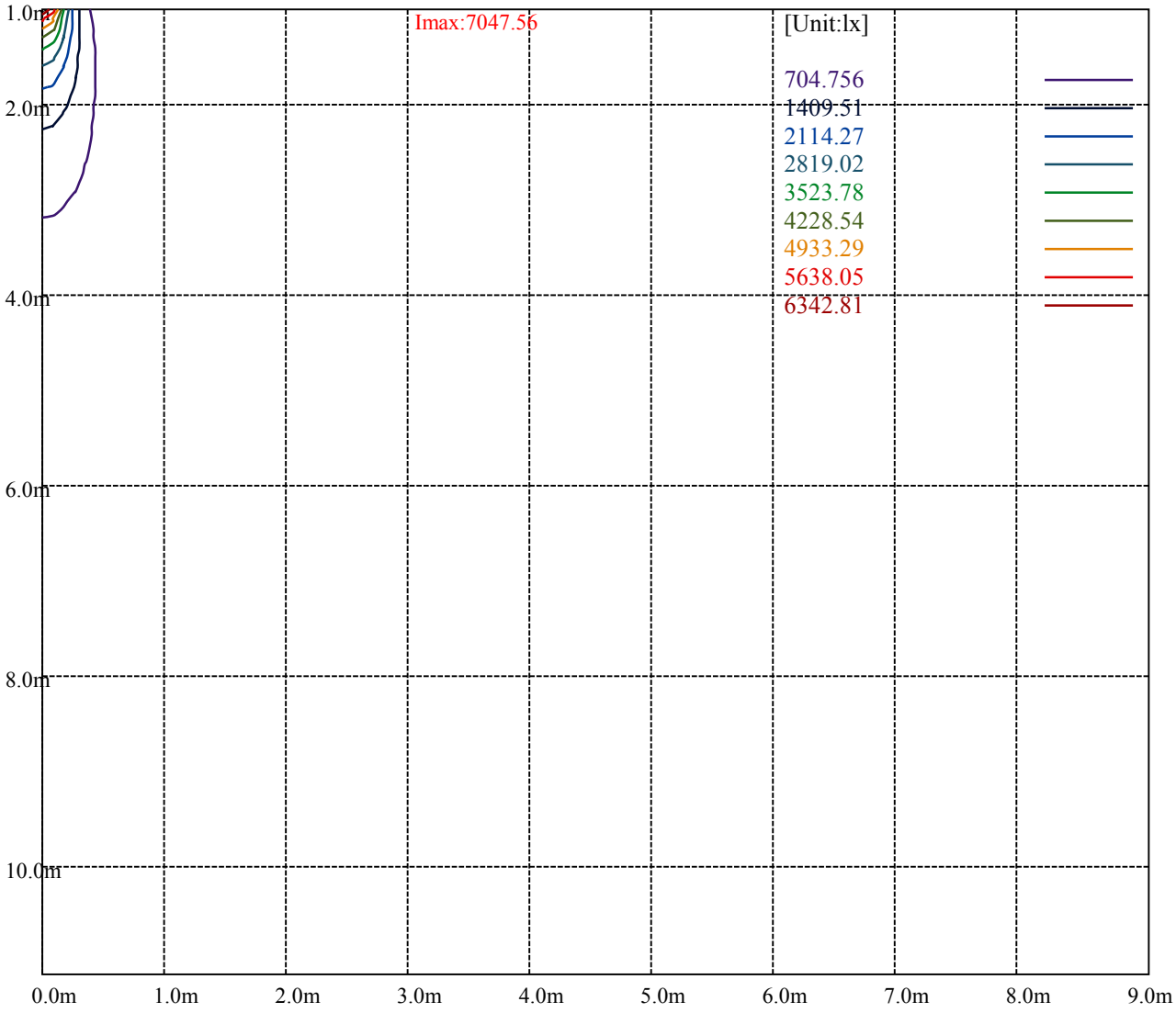
House [Unit:cd] Road

Imax:7047.56

(10%Imax) 704.756
(20%Imax) 1409.51
(30%Imax) 2114.27
(40%Imax) 2819.02
(50%Imax) 3523.78
(60%Imax) 4228.54
(70%Imax) 4933.29
(80%Imax) 5638.05
(90%Imax) 6342.81

Equipment: GMS1980 Date: 2021/7/06 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/06
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

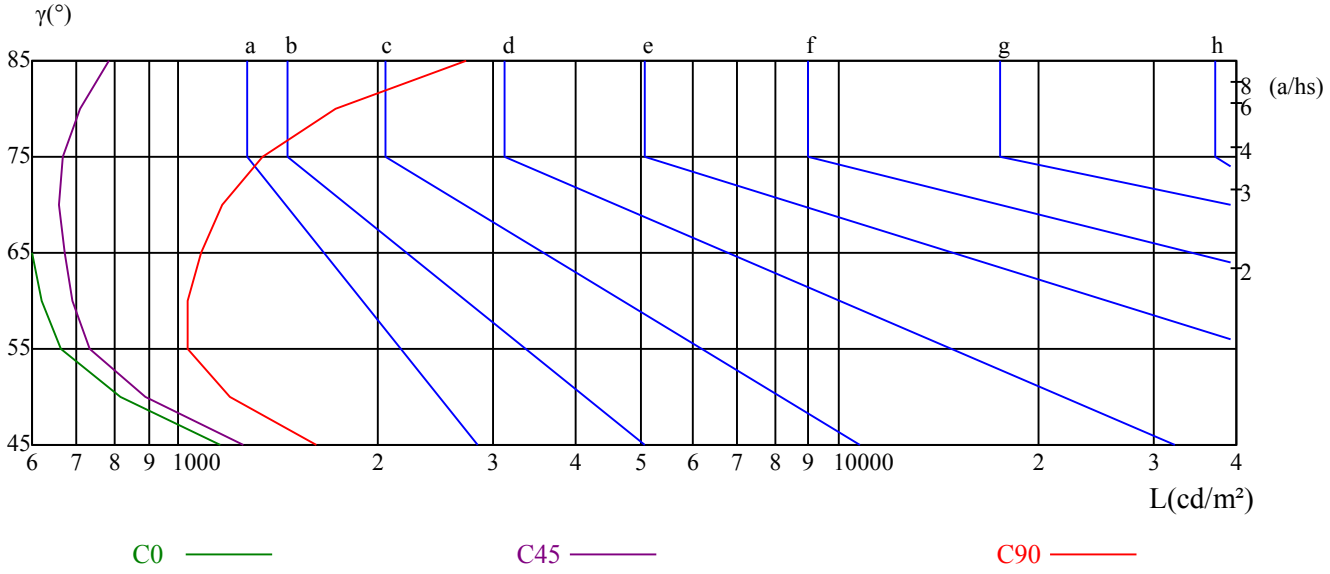
γ	45	50	55	60	65	70	75	80	85
C0	1160	816	665	620	596	573	569	588	630
C45	1251	889	732	691	674	659	668	708	785
C90	1618	1198	1034	1034	1082	1161	1337	1726	2732

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1164	1164	1164	1512	1512	1512	3828	3828	3828

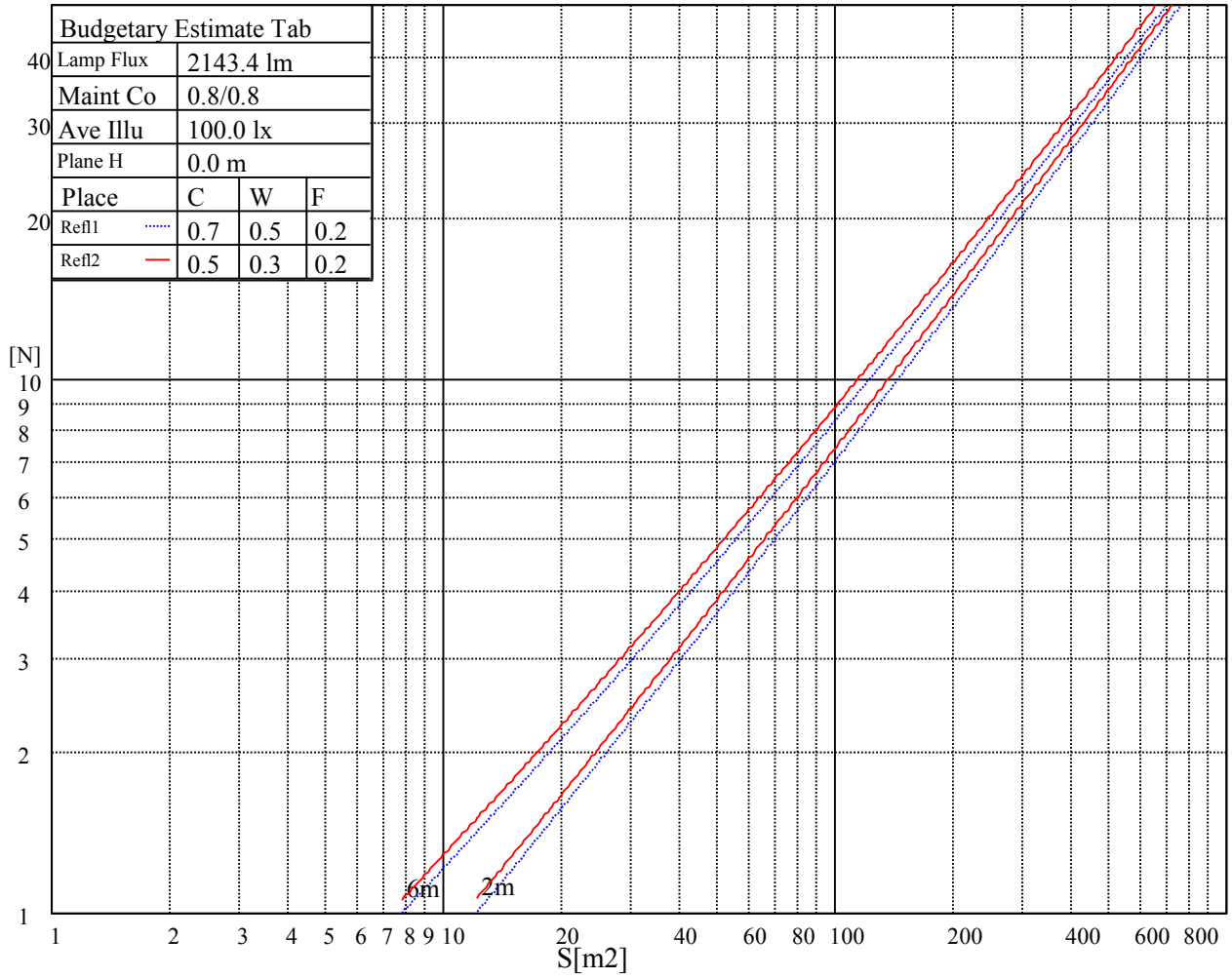
Glare Table

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

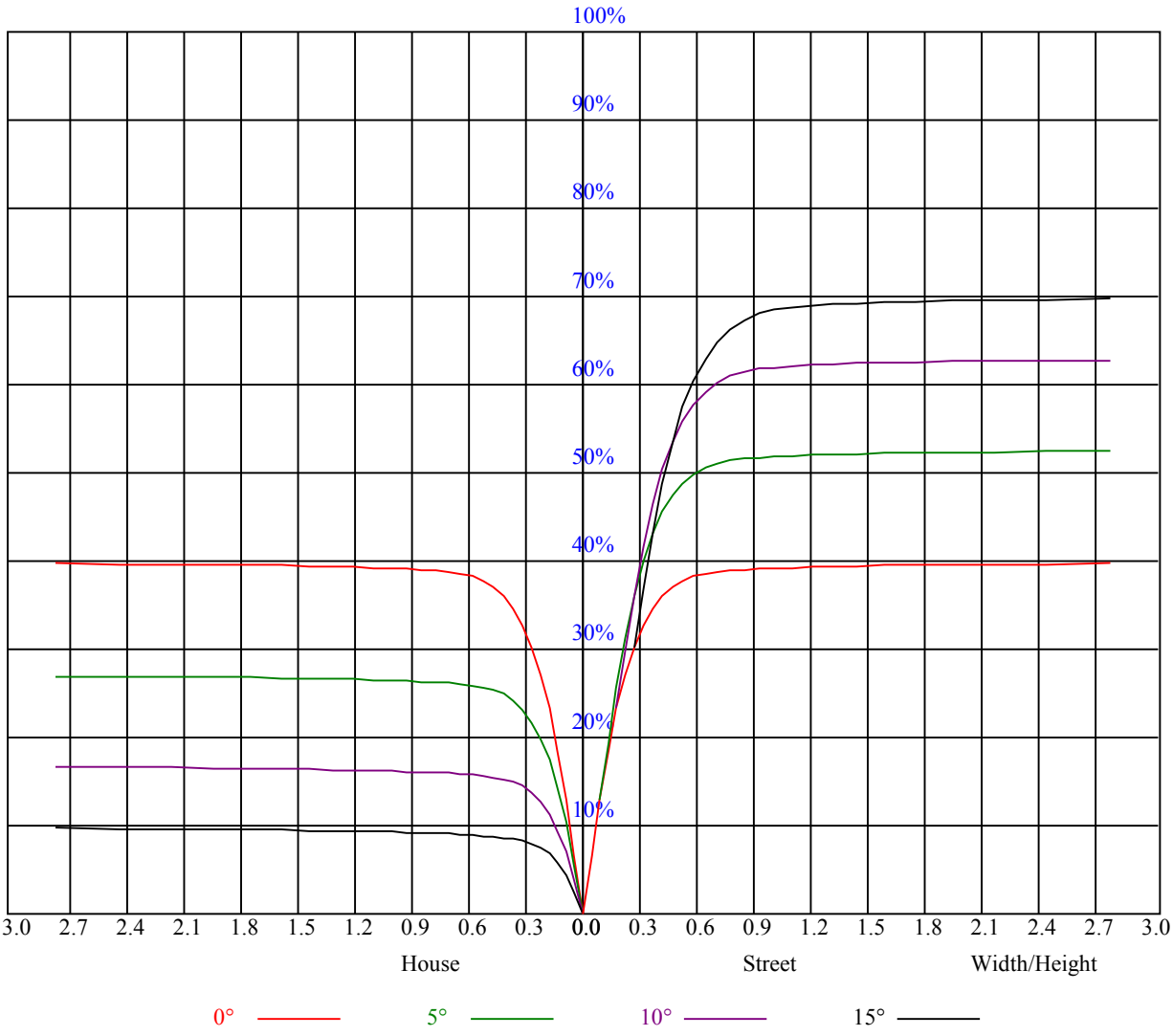


Equipment: GMS1980 Date: 2021/7/06 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.95	0.95	0.95	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.80
1	0.90	0.88	0.86	0.88	0.86	0.85	0.85	0.84	0.82	0.82	0.81	0.80	0.79	0.78	0.78	0.76
2	0.85	0.82	0.80	0.84	0.81	0.79	0.81	0.79	0.78	0.79	0.77	0.76	0.77	0.75	0.74	0.73
3	0.81	0.78	0.75	0.80	0.77	0.75	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.73	0.71	0.70
4	0.77	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.68	0.67	0.70	0.68	0.66	0.65
6	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.63
7	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.62	0.61
8	0.66	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.60	0.59
9	0.64	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
10	0.62	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.55

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/7/06	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	7043.63	7026.19	6934.50	6778.69	6546.38	6279.75	5922.56	5513.63	5137.31
45.0	7042.50	6995.25	6866.44	6701.06	6452.44	6175.69	5811.19	5391.00	5016.94
90.0	7055.44	7016.63	6922.69	6730.31	6523.88	6271.31	5909.63	5508.00	5130.00
135.0	7048.69	7070.06	7016.63	6918.19	6744.38	6527.81	6229.13	5870.25	5523.19
180.0	7043.63	7030.69	6955.31	6783.75	6584.06	6333.75	5922.00	5617.13	5234.06
225.0	7042.50	7034.63	6977.25	6828.75	6642.00	6409.69	6043.50	5708.25	5339.25
270.0	7055.44	7032.94	6949.69	6810.75	6581.81	6295.50	5985.00	5583.38	5203.13
315.0	7048.69	6984.00	6833.81	6607.69	6366.38	6069.94	5621.06	5250.94	4859.44
360.0	7043.63	7026.19	6934.50	6778.69	6546.38	6279.75	5922.56	5513.63	5137.31

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4713.19	4282.31	3893.63	3519.00	3075.75	2748.38	2449.69	2158.31	1911.94
45.0	4583.81	4140.56	3750.75	3376.69	2987.44	2631.38	2351.25	2103.19	1838.81
90.0	4689.00	4248.00	3857.06	3444.75	3094.31	2731.50	2406.94	2151.00	1929.94
135.0	5144.63	4655.81	4256.44	3857.06	3394.13	3045.38	2725.31	2401.31	2120.06
180.0	4790.25	4350.38	3959.44	3536.44	3134.25	2805.75	2469.94	2203.88	1945.13
225.0	4908.94	4474.69	4078.69	3638.81	3225.94	2882.81	2536.88	2263.50	1994.63
270.0	4773.94	4334.63	3950.44	3572.44	3123.00	2788.88	2484.56	2153.25	1926.00
315.0	4417.88	3983.63	3600.00	3189.94	2809.69	2505.38	2210.06	1979.44	1758.94
360.0	4713.19	4282.31	3893.63	3519.00	3075.75	2748.38	2449.69	2158.31	1911.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1723.50	1540.69	1377.56	1246.50	1107.00	998.44	877.50	758.25	653.06
45.0	1655.44	1484.44	1314.56	1172.81	1054.13	943.88	816.19	715.50	605.81
90.0	1687.50	1519.31	1370.25	1118.31	1072.52	966.54	850.39	736.37	641.19
135.0	1899.56	1680.75	1509.19	1356.19	1210.50	1086.75	964.13	843.75	745.31
180.0	1720.13	1551.94	1400.63	1122.24	1107.23	995.34	883.29	764.49	668.59
225.0	1769.06	1598.63	1445.06	1276.31	1120.11	1033.54	903.38	796.33	700.37
270.0	1737.00	1570.50	1391.06	1257.75	1136.25	1008.56	894.38	789.75	677.25
315.0	1572.19	1427.06	1296.00	1122.24	1021.78	918.28	786.38	683.66	589.61
360.0	1723.50	1540.69	1377.56	1246.50	1107.00	998.44	877.50	758.25	653.06

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	564.75	455.06	382.50	311.06	294.75	170.04	120.38	95.57	81.56
45.0	527.63	431.44	350.44	289.13	201.54	141.53	106.99	90.68	79.09
90.0	540.90	459.84	371.98	289.97	224.49	163.18	116.78	95.74	84.83
135.0	649.69	536.63	454.50	378.00	288.00	246.43	165.94	123.02	95.63
180.0	573.41	474.75	395.61	323.94	250.37	183.09	134.21	99.23	82.24
225.0	580.11	500.79	418.67	328.67	271.69	200.03	136.58	105.24	86.12
270.0	570.94	484.31	394.31	322.88	287.44	176.91	129.32	97.88	81.51
315.0	506.14	406.74	333.00	264.26	193.44	137.76	102.54	85.11	75.26
360.0	564.75	455.06	382.50	311.06	294.75	170.04	120.38	95.57	81.56

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	73.29	66.04	58.95	52.76	48.09	43.31	39.15	35.61	32.74
45.0	71.72	64.80	58.05	52.37	48.09	43.26	39.21	36.11	33.13
90.0	74.87	67.73	61.31	54.34	49.50	45.17	40.89	37.13	34.14
135.0	83.64	74.76	66.66	58.84	53.72	47.76	42.92	39.32	35.89
180.0	73.01	64.69	58.33	52.14	46.86	42.75	39.21	35.33	32.51
225.0	74.76	68.40	61.76	53.83	49.44	45.06	40.67	36.84	33.86
270.0	73.18	66.04	58.28	52.76	47.87	43.20	39.15	35.89	32.63
315.0	67.84	60.64	54.90	49.28	44.38	40.50	37.07	33.24	30.60
360.0	73.29	66.04	58.95	52.76	48.09	43.31	39.15	35.61	32.74

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	30.15	27.62	25.31	23.57	21.83	20.25	19.13	18.11	17.10
45.0	30.32	27.79	25.71	23.96	22.39	20.70	19.52	18.56	17.55
90.0	31.11	28.74	26.49	24.47	22.84	21.32	20.14	18.90	18.00
135.0	32.68	29.87	27.45	25.43	23.51	21.83	20.48	19.46	18.11
180.0	29.98	27.23	25.31	23.63	21.94	20.36	19.24	18.11	17.27
225.0	30.83	28.01	25.93	23.85	22.28	20.70	19.35	18.34	17.44
270.0	29.87	27.51	25.31	23.57	21.77	20.25	19.13	18.11	17.10
315.0	28.13	25.59	23.68	22.11	20.53	19.18	18.11	17.21	16.43
360.0	30.15	27.62	25.31	23.57	21.83	20.25	19.13	18.11	17.10

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	16.37	15.81	15.30	14.85	14.57	14.18	13.95	13.78	13.33
45.0	16.82	16.26	15.69	15.30	14.91	14.63	14.34	14.01	13.73
90.0	17.04	16.48	15.92	15.41	15.08	14.68	14.46	14.06	13.73
135.0	17.27	16.59	15.86	15.30	14.96	14.57	14.23	14.06	13.67
180.0	16.43	15.75	15.24	14.74	14.34	14.06	13.84	13.50	13.28
225.0	16.54	15.92	15.36	14.85	14.51	14.29	13.95	13.73	13.56
270.0	16.37	15.86	15.24	14.79	14.51	14.23	13.95	13.89	13.56
315.0	15.75	15.19	14.79	14.46	14.12	13.84	13.78	13.44	13.22
360.0	16.37	15.81	15.30	14.85	14.57	14.18	13.95	13.78	13.33

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.22	12.94	12.49	12.26	11.98	11.59	11.36	11.08	10.86
45.0	13.50	13.11	12.71	12.43	12.04	11.76	11.48	11.19	10.97
90.0	13.50	13.11	12.71	12.43	12.04	11.76	11.48	11.14	10.91
135.0	13.39	13.11	12.77	12.38	12.15	11.76	11.48	11.25	10.91
180.0	12.94	12.71	12.38	12.09	11.81	11.48	11.25	10.97	10.74
225.0	13.16	13.05	12.71	12.43	12.15	11.81	11.59	11.36	11.03
270.0	13.28	13.16	12.71	12.54	12.21	11.87	11.59	11.36	11.03
315.0	13.05	12.66	12.43	12.15	11.76	11.53	11.25	10.97	10.74
360.0	13.22	12.94	12.49	12.26	11.98	11.59	11.36	11.08	10.86

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.63	10.35	10.13	9.96	9.79	9.62	9.45	9.28	9.11
45.0	10.74	10.52	10.35	10.13	9.96	9.73	9.62	9.51	9.34
90.0	10.69	10.46	10.24	10.07	9.84	9.68	9.51	9.39	9.17
135.0	10.69	10.52	10.24	10.01	9.90	9.68	9.51	9.34	9.23
180.0	10.52	10.29	10.07	9.90	9.68	9.51	9.34	9.11	9.00
225.0	10.80	10.58	10.35	10.18	10.01	9.84	9.68	9.56	9.51
270.0	10.86	10.58	10.35	10.18	10.01	9.79	9.62	9.45	9.34
315.0	10.52	10.24	10.07	9.90	9.73	9.56	9.39	9.17	9.06
360.0	10.63	10.35	10.13	9.96	9.79	9.62	9.45	9.28	9.11

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	9.00	8.94	8.78	8.72	8.55	8.38	8.16	7.88	7.65
45.0	9.17	9.00	8.89	8.78	8.61	8.33	8.04	7.88	7.76
90.0	9.06	8.94	8.78	8.61	8.44	8.21	7.99	7.82	7.65
135.0	9.06	8.89	8.78	8.61	8.44	8.27	8.04	7.93	7.71
180.0	8.89	8.72	8.55	8.44	8.27	8.10	7.93	7.76	7.59
225.0	9.39	9.39	9.51	9.34	8.83	8.38	8.21	8.04	7.88
270.0	9.23	9.23	9.17	8.89	8.78	8.49	8.21	7.99	7.82
315.0	9.00	8.89	8.83	8.66	8.55	8.38	8.04	7.82	7.59
360.0	9.00	8.94	8.78	8.72	8.55	8.38	8.16	7.88	7.65

Intensity data(cd)

C/γ(°)	90.0
0.0	7.54
45.0	7.65
90.0	7.65
135.0	7.59
180.0	7.48
225.0	7.76
270.0	7.59
315.0	7.54
360.0	7.54