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

LumCAT: 3-1882-L
Luminaire: 92.70.131.00

Report No: NATA0100	Voltage(V): 35.0100
Test No: GC2019120313	Current(A): 0.3970
LampCAT: TRIDONIC SLE G7 13MM	Power (W): 13.8900
Lamp flux(lm): 1765.0	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1682.28
Efficiency(%): 95.31%
Lumens(lm)/Power(W): 121.11
Central intensity(cd): 8132.484
Maximum intensity(cd): 8132.484
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=22.2
[C90/270]Total=22.2
Field angle(10%Imax): [C0/180]Total=38.6
[C90/270]Total=38.6
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.31%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.228%

Equipment: GMS1980	Date: 2019/12/3	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8132.484	0.000	0	.000%	.000%
1.0	8109.000	7.771	7.771	.440%	.462%
2.0	8049.867	23.193	30.964	1.314%	1.841%
3.0	7952.273	38.272	69.236	2.168%	4.116%
4.0	7829.719	52.827	122.063	2.993%	7.256%
5.0	7638.961	66.545	188.609	3.770%	11.212%
6.0	7355.531	78.800	267.409	4.465%	15.896%
7.0	6982.102	88.993	356.402	5.042%	21.186%
8.0	6385.781	95.671	452.074	5.420%	26.873%
9.0	5700.094	97.949	550.023	5.550%	32.695%
10.0	4956.188	96.435	646.458	5.464%	38.428%
11.0	4123.055	90.720	737.179	5.140%	43.820%
12.0	3432.938	82.598	819.777	4.680%	48.730%
13.0	2766.516	73.572	893.348	4.168%	53.104%
14.0	2155.078	62.996	956.344	3.569%	56.848%
15.0	1698.820	52.908	1009.252	2.998%	59.993%
16.0	1308.473	44.065	1053.318	2.497%	62.613%
17.0	1060.488	36.891	1090.209	2.090%	64.806%
18.0	927.218	32.773	1122.982	1.857%	66.754%
19.0	836.466	30.684	1153.666	1.738%	68.578%
20.0	762.476	29.265	1182.931	1.658%	70.317%
21.0	707.351	28.224	1211.155	1.599%	71.995%
22.0	670.289	27.684	1238.839	1.569%	73.641%
23.0	641.341	27.522	1266.361	1.559%	75.277%
24.0	616.957	27.511	1293.872	1.559%	76.912%
25.0	601.777	27.711	1321.583	1.570%	78.559%
26.0	590.147	28.135	1349.719	1.594%	80.232%
27.0	580.816	28.648	1378.366	1.623%	81.935%
28.0	570.980	29.161	1407.527	1.652%	83.668%
29.0	561.206	29.621	1437.149	1.678%	85.429%
30.0	546.089	29.897	1467.045	1.694%	87.206%
31.0	511.587	29.434	1496.479	1.668%	88.956%
32.0	453.804	27.657	1524.136	1.567%	90.600%
33.0	388.603	24.818	1548.954	1.406%	92.075%
34.0	324.577	21.583	1570.537	1.223%	93.358%
35.0	256.662	18.051	1588.588	1.023%	94.431%
36.0	180.942	13.933	1602.521	.789%	95.259%
37.0	120.734	9.839	1612.36	.557%	95.844%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	71.044	6.401	1618.762	.363%	96.225%
39.0	37.962	3.721	1622.482	.211%	96.446%
40.0	30.375	2.383	1624.866	.135%	96.587%
41.0	27.366	2.056	1626.922	.116%	96.710%
42.0	24.244	1.875	1628.797	.106%	96.821%
43.0	22.008	1.713	1630.51	.097%	96.923%
44.0	20.630	1.609	1632.119	.091%	97.019%
45.0	19.427	1.539	1633.659	.087%	97.110%
46.0	18.274	1.474	1635.133	.084%	97.198%
47.0	17.276	1.414	1636.547	.080%	97.282%
48.0	16.530	1.367	1637.914	.077%	97.363%
49.0	15.820	1.329	1639.242	.075%	97.442%
50.0	15.188	1.293	1640.535	.073%	97.519%
51.0	14.639	1.262	1641.797	.071%	97.594%
52.0	14.217	1.238	1643.035	.070%	97.667%
53.0	13.823	1.220	1644.255	.069%	97.740%
54.0	13.451	1.202	1645.457	.068%	97.811%
55.0	13.163	1.188	1646.645	.067%	97.882%
56.0	12.895	1.177	1647.823	.067%	97.952%
57.0	12.558	1.164	1648.986	.066%	98.021%
58.0	12.431	1.156	1650.142	.065%	98.090%
59.0	12.333	1.158	1651.3	.066%	98.159%
60.0	12.248	1.161	1652.461	.066%	98.228%
61.0	12.129	1.163	1653.624	.066%	98.297%
62.0	11.995	1.162	1654.787	.066%	98.366%
63.0	11.827	1.159	1655.945	.066%	98.435%
64.0	11.651	1.152	1657.097	.065%	98.503%
65.0	11.454	1.143	1658.241	.065%	98.571%
66.0	11.180	1.129	1659.37	.064%	98.638%
67.0	10.870	1.109	1660.479	.063%	98.704%
68.0	10.561	1.086	1661.564	.062%	98.769%
69.0	10.223	1.060	1662.625	.060%	98.832%
70.0	10.005	1.039	1663.664	.059%	98.894%
71.0	9.773	1.022	1664.686	.058%	98.954%
72.0	9.548	1.005	1665.691	.057%	99.014%
73.0	9.352	0.988	1666.679	.056%	99.073%
74.0	9.176	0.974	1667.653	.055%	99.131%
75.0	8.965	0.958	1668.611	.054%	99.188%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.845	0.945	1669.557	.054%	99.244%
77.0	8.761	0.939	1670.496	.053%	99.300%
78.0	8.670	0.933	1671.429	.053%	99.355%
79.0	8.592	0.927	1672.356	.053%	99.410%
80.0	8.522	0.923	1673.279	.052%	99.465%
81.0	8.480	0.919	1674.198	.052%	99.520%
82.0	8.430	0.917	1675.115	.052%	99.574%
83.0	8.374	0.914	1676.029	.052%	99.629%
84.0	8.297	0.908	1676.937	.051%	99.683%
85.0	8.234	0.902	1677.839	.051%	99.736%
86.0	8.156	0.896	1678.735	.051%	99.790%
87.0	8.100	0.890	1679.625	.050%	99.842%
88.0	8.058	0.885	1680.51	.050%	99.895%
89.0	7.980	0.879	1681.389	.050%	99.947%
90.0	8.191	0.887	1682.276	.050%	100.000%

Zonal flux distribution table

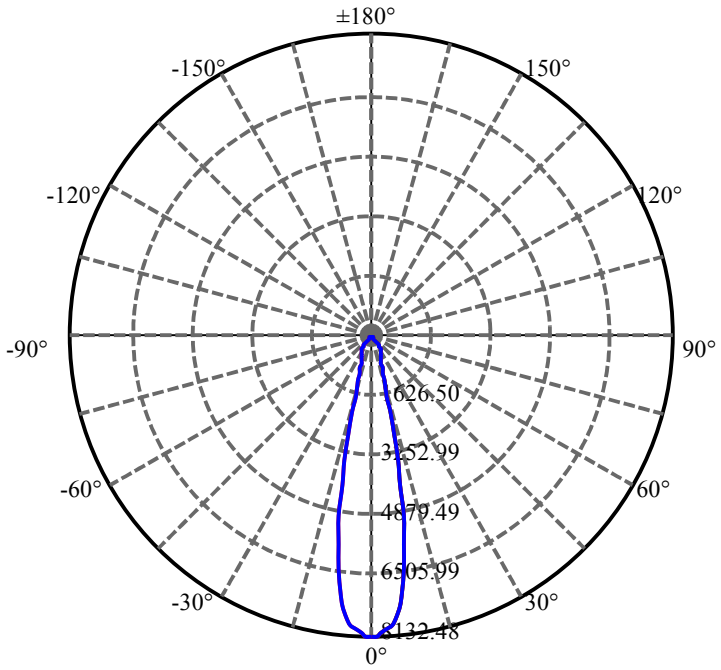
ZONAL LUMEN SUMMARY

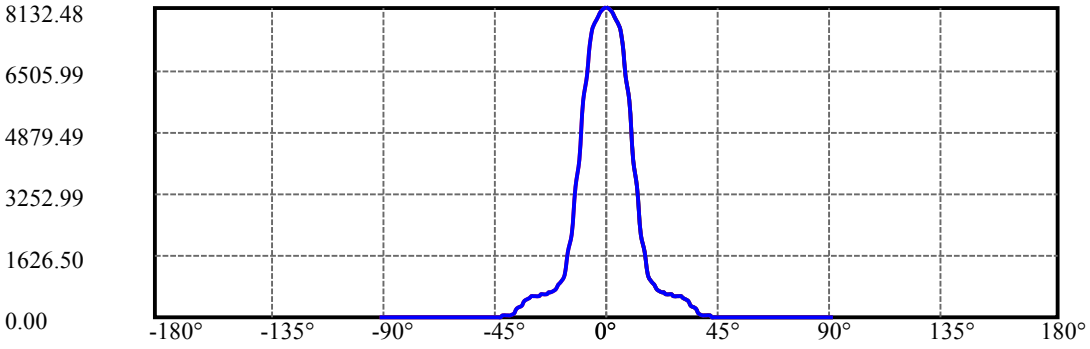
Zone	Lumens	%Lamp	%Fixt
0-30	1467.05	83.12%	87.21%
0-40	1624.87	92.06%	96.59%
0-60	1652.46	93.62%	98.23%
0-90	1681.39	95.26%	99.95%
0-120	1681.39	95.26%	99.95%
0-180	1682.28	95.31%	100.00%
60-90	30.09	1.70%	1.79%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-25.86	1345.82	76.25%	80.00%

ZONAL LUMEN SUMMARY

0-10	646.46
10-20	536.47
20-30	284.11
30-40	157.82
40-50	15.67
50-60	11.93
60-70	11.20
70-80	9.62
80-90	8.11
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:19.3 Right:19.3
:C90/270Left:19.3 Right:19.3

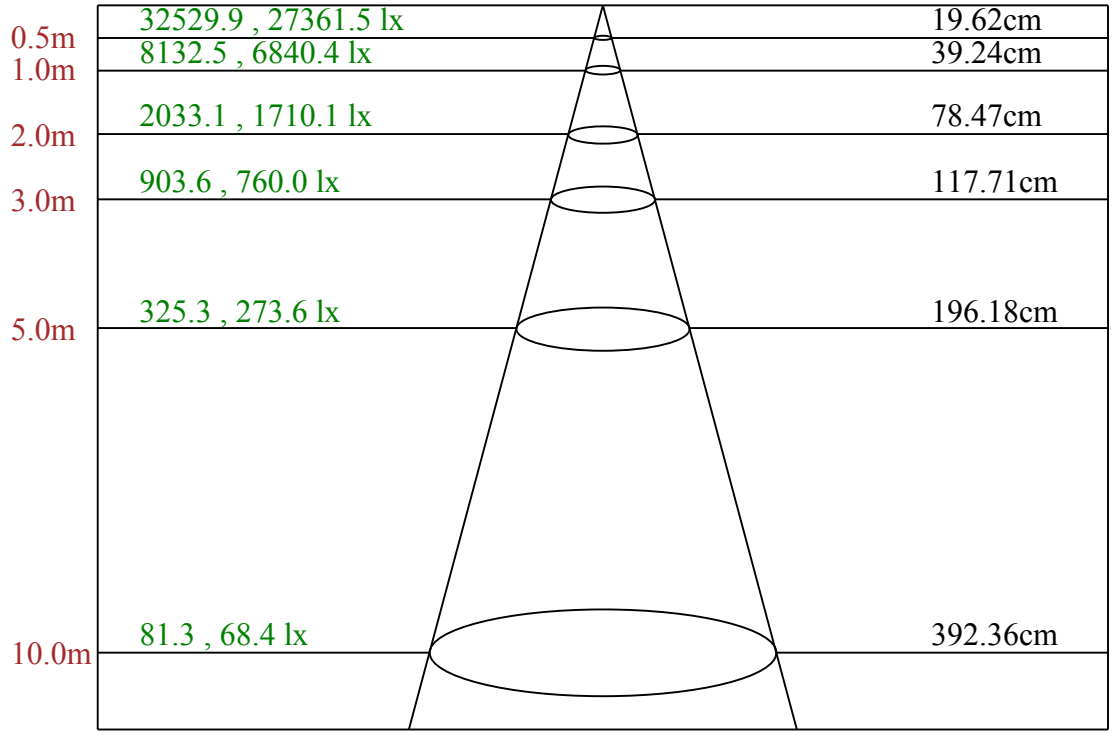
Beam Angle(50%Imax):C0/180Left:11.1 Right:11.1
:C90/270Left:11.1 Right:11.1

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/3
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

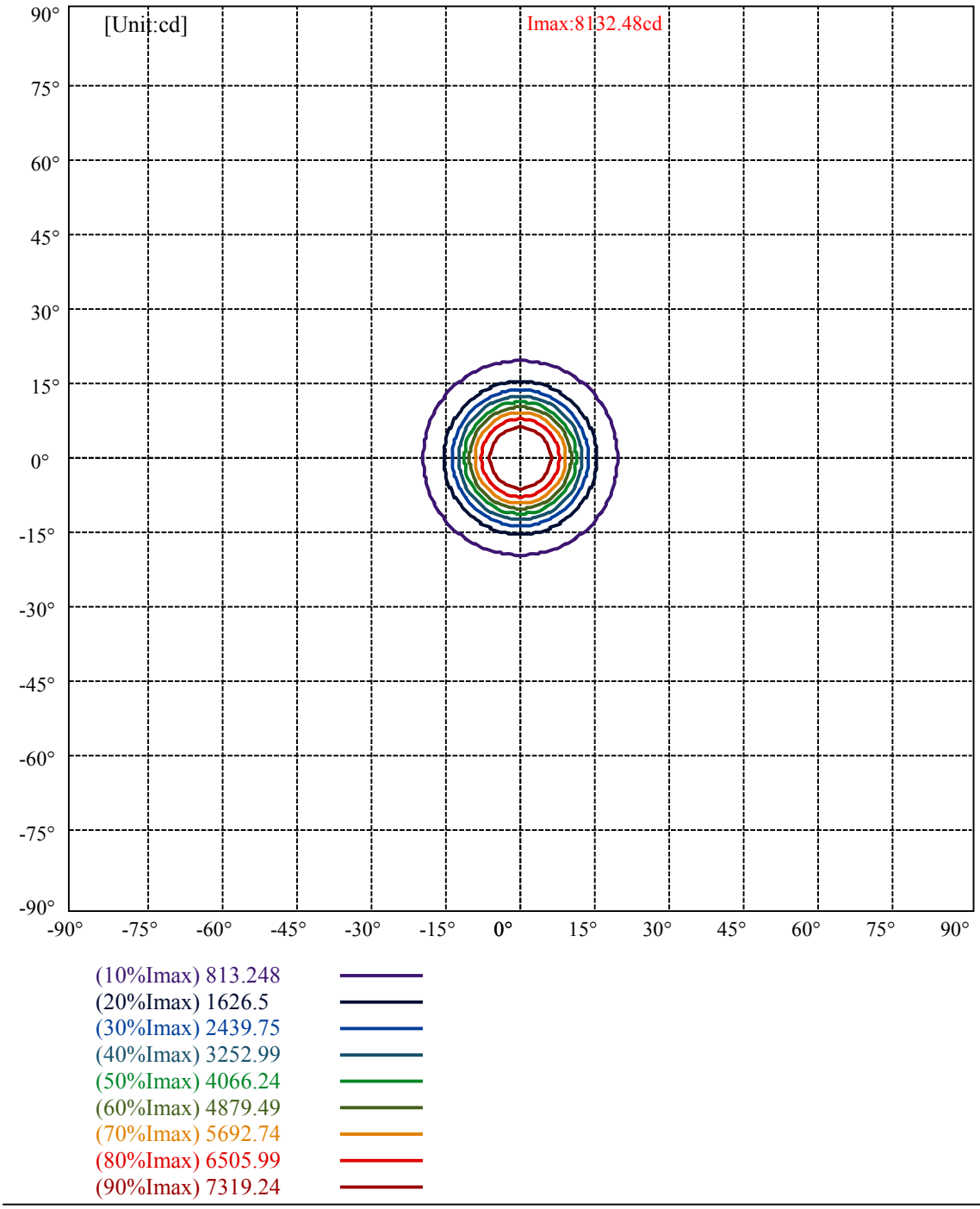
Lux distance Curve



Max , Ave

Beam angle of C0 plane 22.20

ISO-Intensity(V-H)

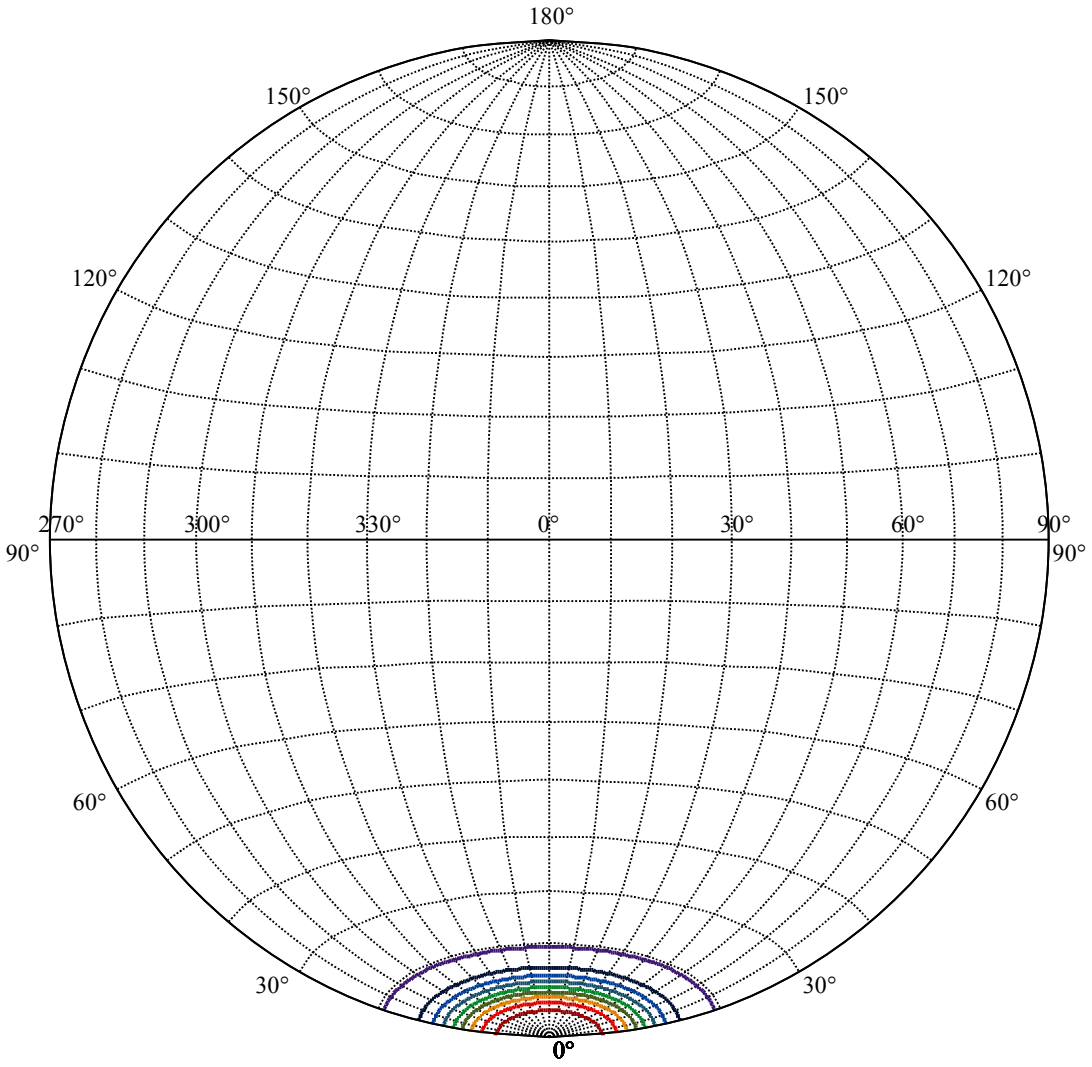


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/3
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



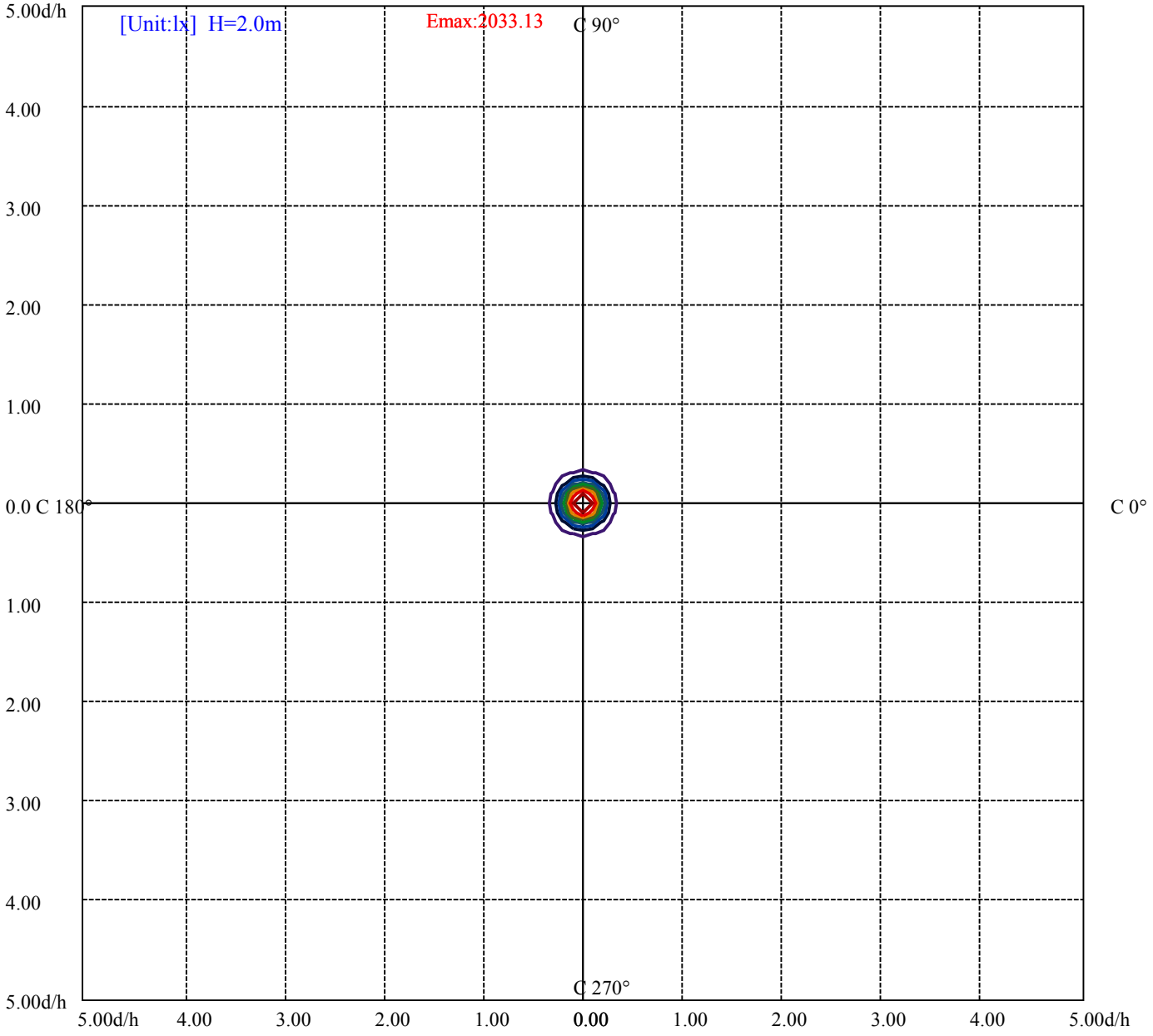
House [Unit:cd] Road

Imax:8132.48

(10%Imax) 813.248
(20%Imax) 1626.5
(30%Imax) 2439.75
(40%Imax) 3252.99
(50%Imax) 4066.24
(60%Imax) 4879.49
(70%Imax) 5692.74
(80%Imax) 6505.99
(90%Imax) 7319.24

Equipment: GMS1980 Date: 2019/12/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

ISO illuminance diagram

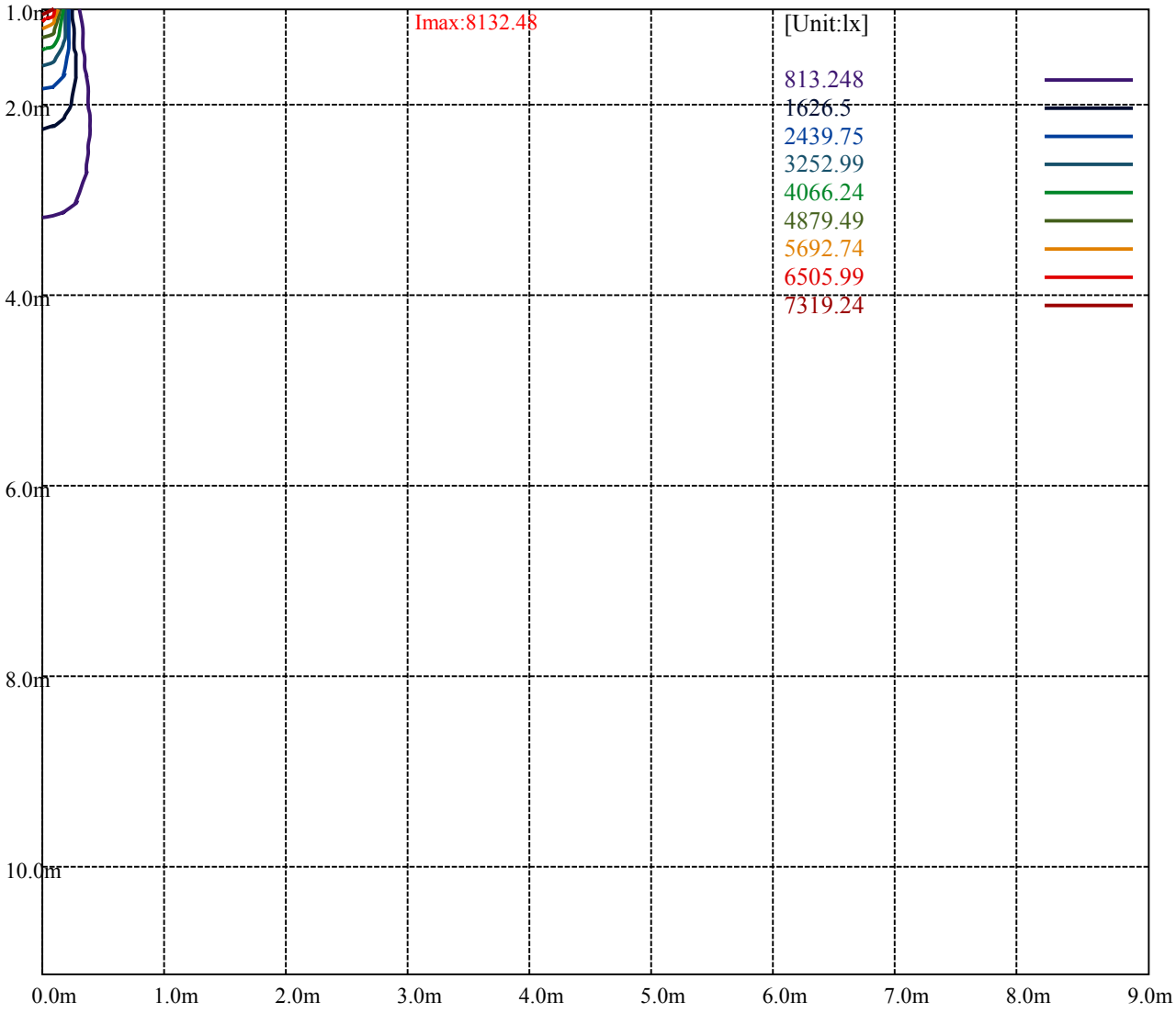


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/3
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/3
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

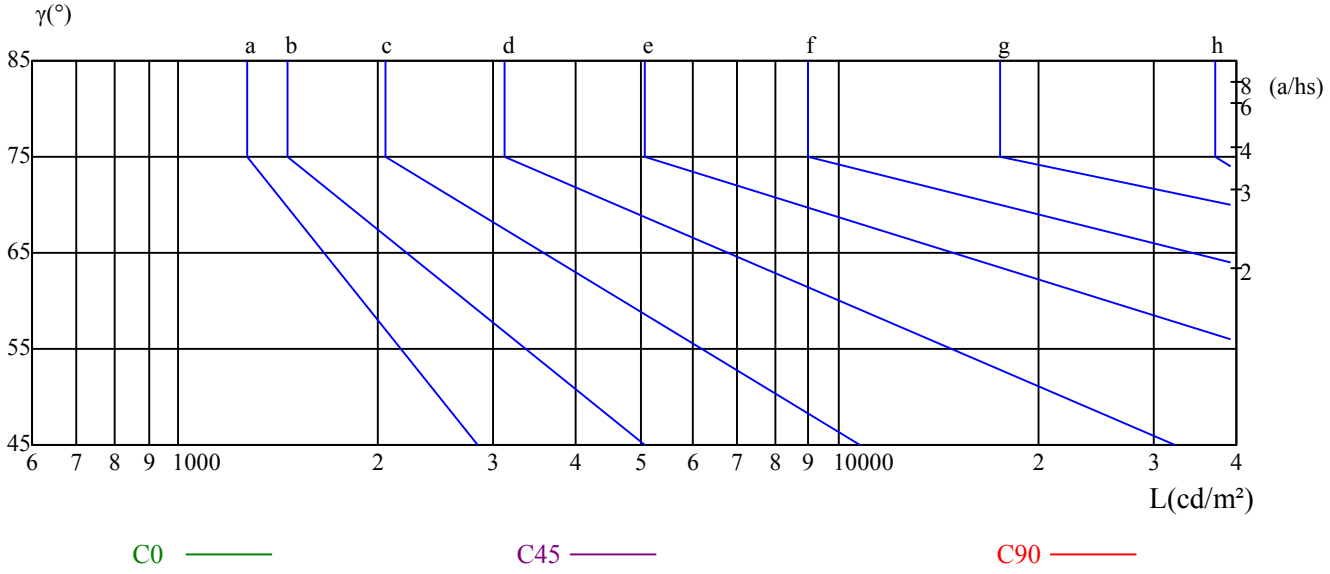
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

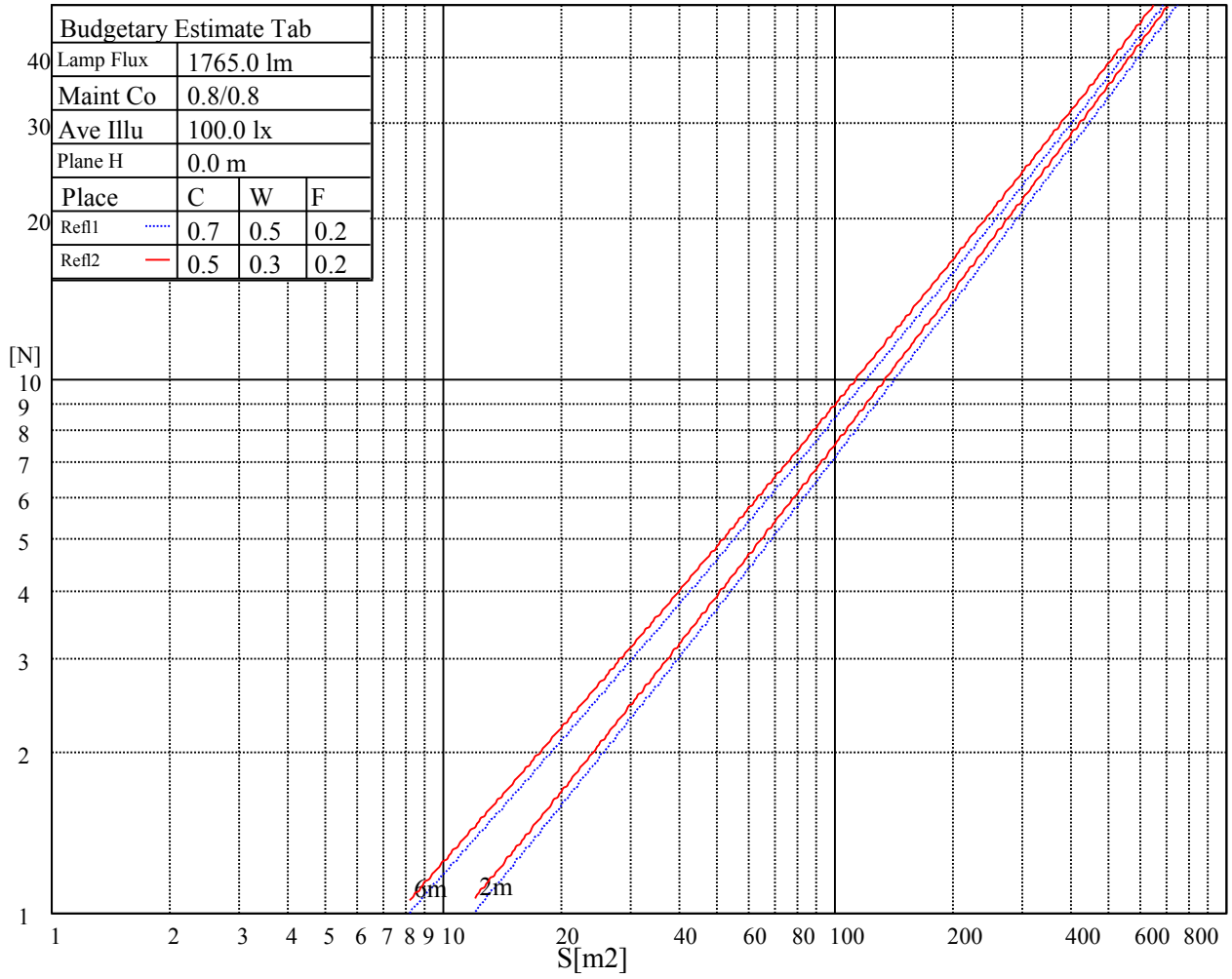
Glare Table

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

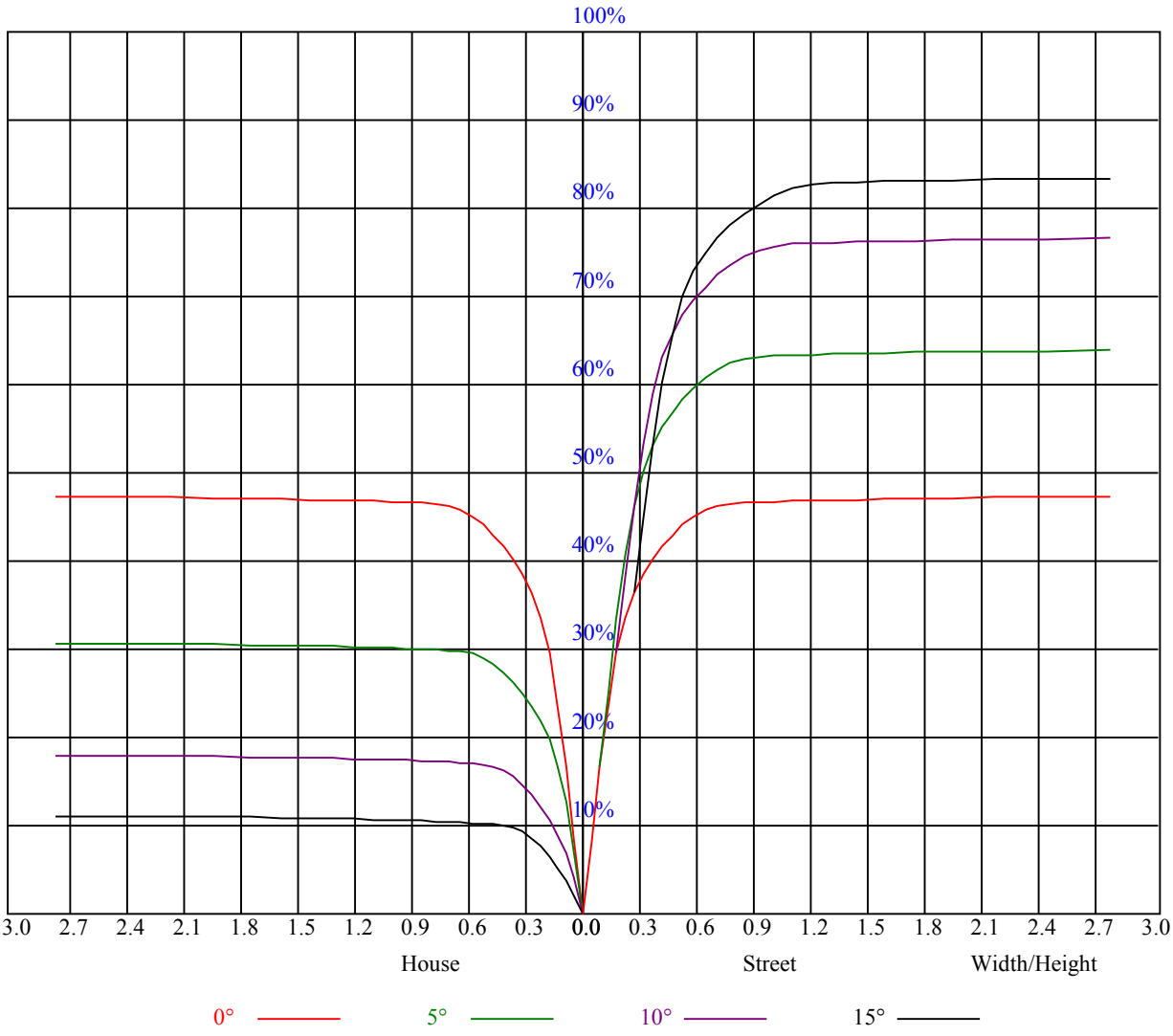


Equipment: GMS1980 Date: 2019/12/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.13	1.13	1.13	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	1.07	1.05	1.03	1.05	1.03	1.01	1.01	1.00	0.98	0.98	0.96	0.95	0.94	0.93	0.93	0.91
2	1.01	0.98	0.96	1.00	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.91	0.90	0.89	0.87
3	0.97	0.93	0.90	0.95	0.92	0.89	0.93	0.90	0.88	0.91	0.88	0.87	0.89	0.87	0.85	0.84
4	0.93	0.88	0.85	0.92	0.88	0.85	0.90	0.86	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.81
5	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.84	0.81	0.79	0.78
6	0.86	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.81	0.79	0.77	0.75
7	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.73
8	0.80	0.76	0.73	0.79	0.75	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.71
9	0.77	0.73	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
10	0.75	0.71	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.67

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/12/3	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	8106.75	8134.31	8093.25	8026.31	7915.50	7729.88	7425.56	6950.81	6306.19
45.0	8145.00	8142.19	8113.50	8022.94	7876.13	7680.94	7330.50	6872.06	6183.56
90.0	8124.19	8096.06	8025.75	7905.94	7754.63	7465.50	7169.63	6693.19	5936.06
135.0	8154.00	8102.25	8046.56	7947.00	7814.25	7625.81	7417.13	7153.88	6616.13
180.0	8106.75	8055.56	7977.38	7858.13	7689.94	7551.00	7294.50	6965.44	6514.31
225.0	8145.00	8088.75	8030.81	7906.50	7791.75	7637.06	7394.06	7130.25	6630.19
270.0	8124.19	8139.94	8065.69	7975.69	7894.69	7758.56	7529.63	7247.81	6757.88
315.0	8154.00	8112.94	8046.00	7975.69	7900.88	7662.94	7283.25	6843.38	6141.94
360.0	8106.75	8134.31	8093.25	8026.31	7915.50	7729.88	7425.56	6950.81	6306.19

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5542.31	4908.94	4017.94	3326.63	2694.38	1999.69	1566.00	1262.25	1042.88
45.0	5380.88	4677.19	3880.13	3165.75	2539.69	1960.31	1516.50	1230.19	1011.38
90.0	5307.19	4474.13	3703.50	3078.00	2464.31	1928.25	1517.06	1120.05	988.43
135.0	5986.69	5391.56	4499.44	3736.69	3048.19	2420.44	1916.44	1513.69	1127.81
180.0	5850.56	5026.50	4309.31	3541.50	2863.13	2329.88	1789.31	1265.63	1084.61
225.0	6050.81	5233.50	4327.88	3746.25	3047.63	2354.06	1918.13	1481.06	1091.31
270.0	6082.88	5373.00	4503.94	3798.00	3089.25	2416.50	1912.50	1473.19	1125.00
315.0	5399.44	4564.69	3742.31	3070.69	2385.56	1831.50	1454.63	1121.74	1012.50
360.0	5542.31	4908.94	4017.94	3326.63	2694.38	1999.69	1566.00	1262.25	1042.88

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	933.19	854.44	780.19	731.81	694.69	663.19	640.13	623.81	609.75
45.0	900.00	822.38	743.63	702.56	667.69	638.44	617.63	603.56	589.50
90.0	864.34	790.99	732.54	680.74	651.83	629.83	610.26	597.66	586.69
135.0	915.19	782.44	684.00	624.38	584.44	552.38	525.38	510.19	510.19
180.0	920.70	832.05	769.11	708.81	675.23	648.79	623.42	608.06	595.24
225.0	1005.41	902.59	826.03	752.74	710.49	678.38	647.33	628.65	613.18
270.0	974.25	877.50	794.81	743.63	700.88	669.94	645.19	630.56	616.50
315.0	904.67	829.35	769.50	714.15	677.08	649.80	626.34	611.72	600.13
360.0	933.19	854.44	780.19	731.81	694.69	663.19	640.13	623.81	609.75

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	597.38	583.31	570.38	556.31	515.25	453.94	393.19	330.75	286.88
45.0	578.81	567.56	555.75	536.06	492.75	430.88	366.75	302.06	213.75
90.0	574.93	562.84	553.11	530.21	485.55	423.62	354.26	289.18	218.76
135.0	517.50	527.63	534.94	525.38	488.81	433.13	374.63	314.44	284.06
180.0	583.54	571.95	561.32	549.62	521.66	462.83	392.57	329.51	255.71
225.0	598.44	584.16	572.12	559.46	539.89	489.54	420.13	353.70	275.23
270.0	608.06	596.81	582.19	570.38	550.13	497.25	438.19	373.50	289.13
315.0	587.87	573.58	559.86	541.29	498.66	439.26	369.11	303.47	229.78
360.0	597.38	583.31	570.38	556.31	515.25	453.94	393.19	330.75	286.88

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	178.48	118.29	61.03	29.70	26.21	23.68	20.87	19.13	17.83
45.0	150.47	95.06	51.53	26.55	24.47	22.05	19.01	17.61	16.59
90.0	147.66	93.26	49.28	28.63	26.16	23.79	21.32	19.80	18.62
135.0	180.11	128.36	81.06	52.71	42.41	36.62	31.73	28.69	26.66
180.0	184.78	127.86	79.71	39.71	30.66	27.96	24.69	21.94	20.76
225.0	199.24	138.77	87.92	42.24	28.86	26.61	23.68	20.98	19.52
270.0	248.06	158.01	95.57	49.05	31.56	28.58	26.10	23.51	22.05
315.0	158.74	106.26	62.27	35.10	32.68	29.64	26.55	24.41	23.01
360.0	178.48	118.29	61.03	29.70	26.21	23.68	20.87	19.13	17.83

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	17.33	16.14	15.24	14.46	13.61	13.16	12.60	12.32	11.98
45.0	15.69	14.79	14.23	13.67	13.28	12.94	12.66	12.43	12.26
90.0	17.10	16.03	15.24	14.57	14.01	13.50	13.11	12.77	12.49
135.0	25.09	23.96	22.39	21.43	20.76	19.63	18.79	18.28	17.66
180.0	19.52	18.00	17.10	16.20	15.41	14.85	14.34	13.84	13.56
225.0	18.28	17.16	16.20	15.47	14.79	14.18	13.78	13.44	13.22
270.0	20.70	19.58	18.28	17.38	16.54	15.64	14.85	14.63	13.78
315.0	21.71	20.53	19.52	19.07	18.17	17.61	16.99	16.03	15.64
360.0	17.33	16.14	15.24	14.46	13.61	13.16	12.60	12.32	11.98

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.81	11.59	11.36	11.08	10.97	10.91	10.80	10.74	10.74
45.0	12.04	11.98	11.81	11.59	11.59	11.64	11.64	11.70	11.64
90.0	12.15	11.87	11.64	11.53	11.59	11.64	11.76	11.76	11.76
135.0	17.04	16.65	16.20	15.81	15.47	15.19	14.74	14.34	13.89
180.0	13.16	13.05	12.83	12.54	12.54	12.54	12.54	12.43	12.21
225.0	12.99	12.77	12.49	12.15	11.93	11.76	11.64	11.59	11.53
270.0	13.44	12.99	12.60	12.21	11.93	11.76	11.64	11.48	11.25
315.0	14.96	14.40	14.23	13.56	13.44	13.22	13.22	12.99	12.94
360.0	11.81	11.59	11.36	11.08	10.97	10.91	10.80	10.74	10.74

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.74	10.69	10.63	10.41	10.18	9.96	9.73	9.56	9.34
45.0	11.59	11.53	11.42	11.25	11.03	10.80	10.46	10.24	9.90
90.0	11.59	11.36	11.08	10.74	10.46	10.18	9.84	9.62	9.45
135.0	13.44	12.99	12.66	12.26	11.81	11.36	10.97	10.69	10.41
180.0	11.87	11.64	11.36	10.97	10.63	10.29	9.96	9.73	9.56
225.0	11.48	11.42	11.31	11.14	10.91	10.52	10.18	9.96	9.73
270.0	11.19	11.08	10.86	10.69	10.29	10.13	9.84	9.73	9.56
315.0	12.71	12.49	12.32	11.98	11.64	11.25	10.80	10.52	10.24
360.0	10.74	10.69	10.63	10.41	10.18	9.96	9.73	9.56	9.34

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.23	9.06	8.94	8.83	8.72	8.66	8.61	8.55	8.49
45.0	9.62	9.39	9.17	8.89	8.78	8.66	8.61	8.55	8.49
90.0	9.23	9.06	8.94	8.78	8.66	8.61	8.55	8.49	8.44
135.0	10.13	9.90	9.62	9.34	9.11	9.00	8.89	8.78	8.66
180.0	9.28	9.11	8.94	8.72	8.61	8.55	8.44	8.38	8.33
225.0	9.51	9.23	9.06	8.83	8.72	8.61	8.55	8.44	8.38
270.0	9.39	9.23	9.06	8.89	8.78	8.72	8.55	8.49	8.38
315.0	10.01	9.84	9.68	9.45	9.39	9.28	9.17	9.06	9.00
360.0	9.23	9.06	8.94	8.83	8.72	8.66	8.61	8.55	8.49

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.38	8.38	8.27	8.21	8.21	8.16	8.10	8.04	7.99
45.0	8.44	8.38	8.38	8.27	8.16	8.10	8.10	8.04	7.88
90.0	8.38	8.33	8.33	8.27	8.16	8.10	8.04	7.99	7.88
135.0	8.61	8.55	8.44	8.38	8.33	8.21	8.16	8.10	7.99
180.0	8.33	8.27	8.27	8.21	8.16	8.16	8.10	8.04	8.04
225.0	8.38	8.38	8.38	8.38	8.38	8.21	8.04	8.04	8.04
270.0	8.38	8.33	8.27	8.21	8.21	8.16	8.16	8.10	8.10
315.0	8.94	8.83	8.66	8.44	8.27	8.16	8.10	8.10	7.93
360.0	8.38	8.38	8.27	8.21	8.21	8.16	8.10	8.04	7.99

Intensity data(cd)

C/γ(°)	90.0
0.0	7.88
45.0	7.88
90.0	7.93
135.0	7.93
180.0	7.93
225.0	10.13
270.0	7.93
315.0	7.93
360.0	7.88