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: 1-1005-M
Luminaire: BJB 47.360.1020

Report No: NATA0100	Voltage(V): 34.9800
Test No: GC20191019011	Current(A): 0.2970
LampCAT: TRIDONIC SLE G7 9MM	Power (W): 10.3800
Lamp flux(lm): 1539.0	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): 1151.62
Efficiency(%): 74.83%
Lumens(lm)/Power(W): 110.95
Central intensity(cd): 8337.375
Maximum intensity(cd): 8337.375
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=18.2
[C90/270]Total=18.2
Field angle(10%Imax): [C0/180]Total=38.7
[C90/270]Total=38.7
Maximum s/h(1/2): C0_180=0.31 C90_270=0.31
Maximum s/h(1/4): C0_180=0.33 C90_270=0.33
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 74.83%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.546%

Equipment: GMS1980	Date: 2019/10/19	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	8337.375	0.000	0	.000%	.000%
1.0	8276.414	7.949	7.949	.517%	.690%
2.0	8061.820	23.450	31.4	1.524%	2.727%
3.0	7730.508	37.770	69.17	2.454%	6.006%
4.0	7303.922	50.325	119.495	3.270%	10.376%
5.0	6686.719	60.187	179.682	3.911%	15.603%
6.0	6099.820	67.197	246.878	4.366%	21.437%
7.0	5459.414	71.748	318.626	4.662%	27.668%
8.0	4806.773	73.473	392.099	4.774%	34.048%
9.0	4210.523	73.080	465.18	4.749%	40.393%
10.0	3670.805	71.323	536.503	4.634%	46.587%
11.0	3165.539	68.309	604.812	4.439%	52.518%
12.0	2751.328	64.680	669.492	4.203%	58.135%
13.0	2369.180	60.768	730.259	3.949%	63.411%
14.0	2001.938	55.950	786.209	3.635%	68.270%
15.0	1735.102	51.304	837.513	3.334%	72.725%
16.0	1480.437	47.117	884.63	3.062%	76.816%
17.0	1227.853	42.175	926.805	2.740%	80.478%
18.0	1046.932	37.506	964.311	2.437%	83.735%
19.0	896.688	33.815	998.126	2.197%	86.671%
20.0	721.772	29.622	1027.749	1.925%	89.244%
21.0	569.039	24.786	1052.535	1.611%	91.396%
22.0	439.095	20.259	1072.794	1.316%	93.155%
23.0	331.158	16.162	1088.956	1.050%	94.559%
24.0	209.426	11.819	1100.775	.768%	95.585%
25.0	133.242	7.792	1108.566	.506%	96.261%
26.0	75.016	4.916	1113.482	.319%	96.688%
27.0	41.175	2.843	1116.325	.185%	96.935%
28.0	24.996	1.675	1118	.109%	97.081%
29.0	16.263	1.079	1119.08	.070%	97.174%
30.0	12.333	0.772	1119.852	.050%	97.241%
31.0	10.512	0.636	1120.487	.041%	97.297%
32.0	9.570	0.575	1121.063	.037%	97.347%
33.0	8.923	0.545	1121.608	.035%	97.394%
34.0	8.402	0.524	1122.132	.034%	97.439%
35.0	7.980	0.509	1122.641	.033%	97.484%
36.0	7.608	0.496	1123.137	.032%	97.527%
37.0	7.327	0.487	1123.624	.032%	97.569%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	7.066	0.480	1124.104	.031%	97.611%
39.0	6.870	0.476	1124.58	.031%	97.652%
40.0	6.673	0.472	1125.052	.031%	97.693%
41.0	6.546	0.471	1125.523	.031%	97.734%
42.0	6.398	0.470	1125.993	.031%	97.775%
43.0	6.293	0.470	1126.464	.031%	97.815%
44.0	6.209	0.472	1126.935	.031%	97.856%
45.0	6.124	0.474	1127.409	.031%	97.898%
46.0	6.047	0.476	1127.885	.031%	97.939%
47.0	5.991	0.479	1128.364	.031%	97.981%
48.0	5.927	0.482	1128.846	.031%	98.022%
49.0	5.864	0.484	1129.33	.031%	98.064%
50.0	5.815	0.487	1129.817	.032%	98.107%
51.0	5.780	0.491	1130.308	.032%	98.149%
52.0	5.730	0.494	1130.802	.032%	98.192%
53.0	5.709	0.498	1131.299	.032%	98.235%
54.0	5.674	0.502	1131.801	.033%	98.279%
55.0	5.625	0.504	1132.305	.033%	98.323%
56.0	5.604	0.507	1132.813	.033%	98.367%
57.0	5.583	0.511	1133.324	.033%	98.411%
58.0	5.555	0.515	1133.839	.033%	98.456%
59.0	5.534	0.518	1134.358	.034%	98.501%
60.0	5.513	0.522	1134.879	.034%	98.546%
61.0	5.484	0.525	1135.404	.034%	98.592%
62.0	5.470	0.528	1135.932	.034%	98.638%
63.0	5.456	0.531	1136.464	.035%	98.684%
64.0	5.435	0.534	1136.998	.035%	98.730%
65.0	5.414	0.537	1137.535	.035%	98.777%
66.0	5.407	0.540	1138.075	.035%	98.824%
67.0	5.393	0.543	1138.618	.035%	98.871%
68.0	5.386	0.546	1139.164	.035%	98.918%
69.0	5.372	0.549	1139.713	.036%	98.966%
70.0	5.365	0.551	1140.264	.036%	99.014%
71.0	5.351	0.554	1140.818	.036%	99.062%
72.0	5.344	0.556	1141.374	.036%	99.110%
73.0	5.323	0.558	1141.932	.036%	99.159%
74.0	5.316	0.559	1142.491	.036%	99.207%
75.0	5.316	0.562	1143.053	.036%	99.256%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.323	0.565	1143.618	.037%	99.305%
77.0	5.309	0.567	1144.184	.037%	99.354%
78.0	5.309	0.568	1144.753	.037%	99.404%
79.0	5.295	0.570	1145.322	.037%	99.453%
80.0	5.288	0.571	1145.893	.037%	99.503%
81.0	5.280	0.571	1146.464	.037%	99.552%
82.0	5.266	0.572	1147.036	.037%	99.602%
83.0	5.252	0.572	1147.608	.037%	99.652%
84.0	5.245	0.572	1148.18	.037%	99.701%
85.0	5.252	0.573	1148.753	.037%	99.751%
86.0	5.238	0.573	1149.326	.037%	99.801%
87.0	5.238	0.573	1149.9	.037%	99.851%
88.0	5.231	0.574	1150.473	.037%	99.900%
89.0	5.238	0.574	1151.047	.037%	99.950%
90.0	5.224	0.574	1151.621	.037%	100.000%

Zonal flux distribution table

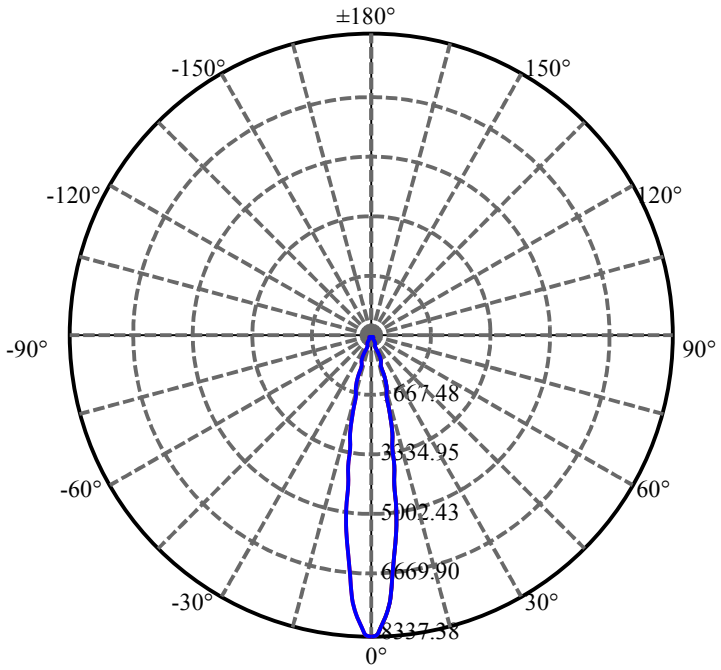
ZONAL LUMEN SUMMARY

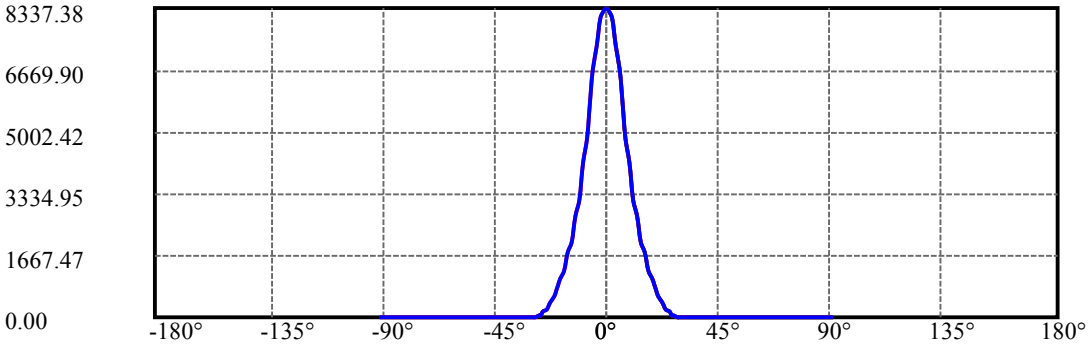
Zone	Lumens	%Lamp	%Fixt
0-30	1119.85	72.76%	97.24%
0-40	1125.05	73.10%	97.69%
0-60	1134.88	73.74%	98.55%
0-90	1151.05	74.79%	99.95%
0-120	1151.05	74.79%	99.95%
0-180	1151.62	74.83%	100.00%
60-90	16.69	1.08%	1.45%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-16.87	921.30	59.86%	80.00%

ZONAL LUMEN SUMMARY

0-10	536.50
10-20	491.25
20-30	92.10
30-40	5.20
40-50	4.76
50-60	5.06
60-70	5.38
70-80	5.63
80-90	5.15
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):

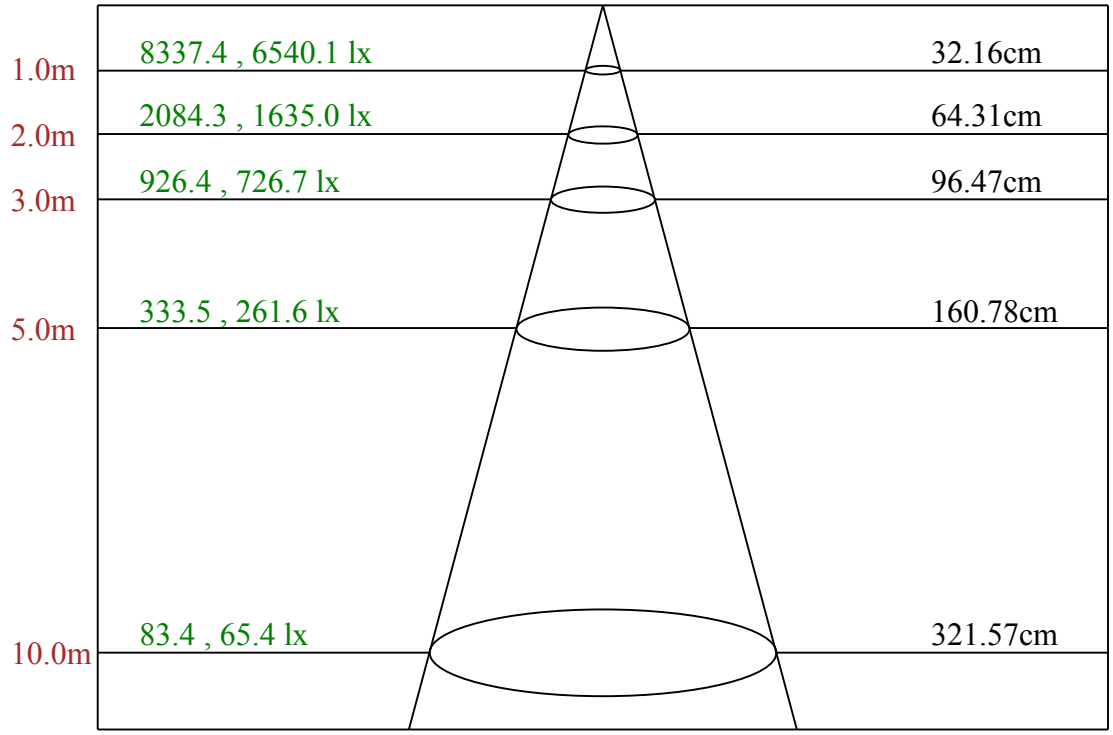
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:19.4 Right:19.4
:C90/270Left:19.4 Right:19.4

Beam Angle(50%Imax):C0/180Left:9.1 Right:9.1
:C90/270Left:9.1 Right:9.1

Lux distance Curve

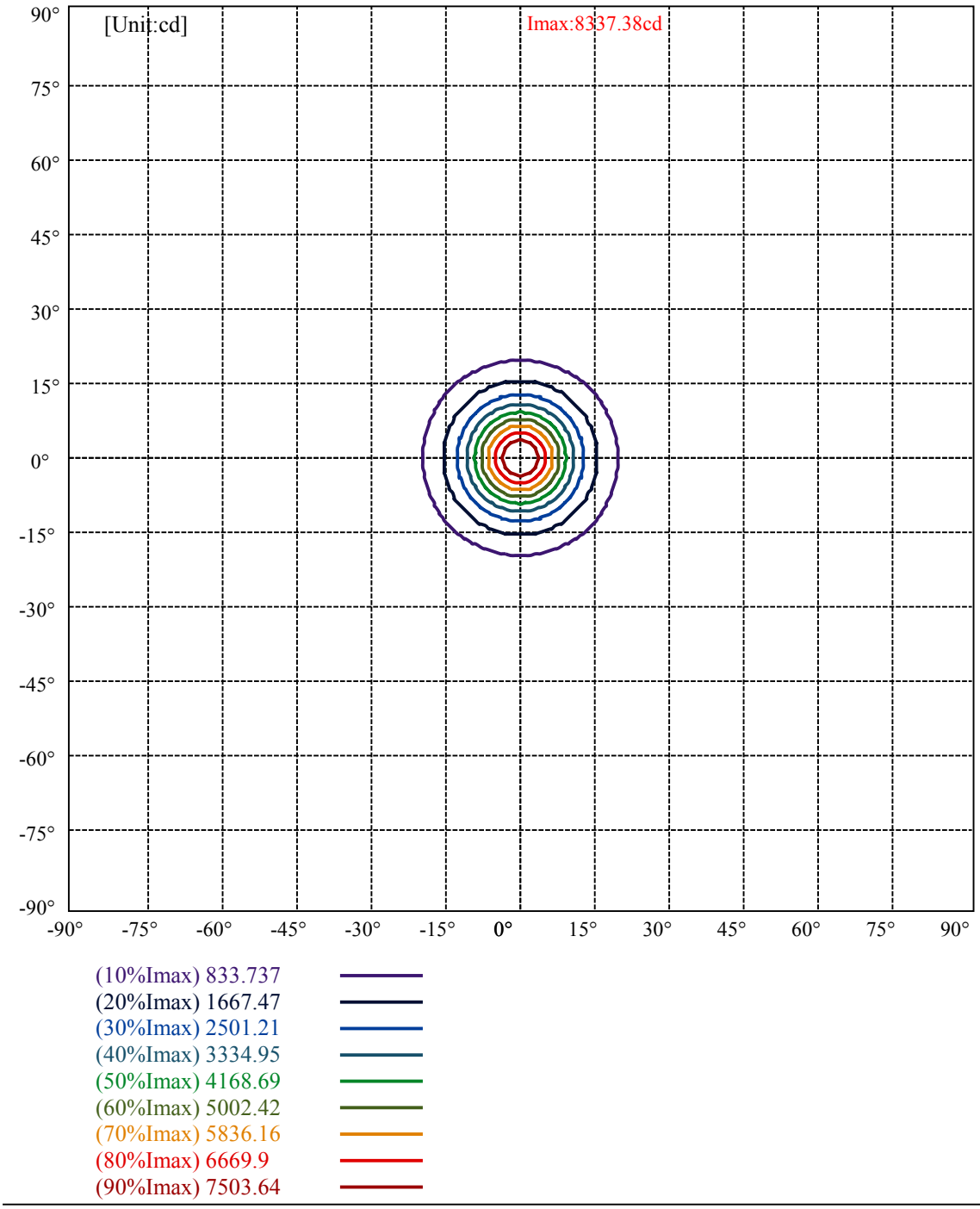


Max , Ave

Beam angle of C0 plane 18.27

Equipment: GMS1980	Date: 2019/10/19	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

ISO-Intensity(V-H)



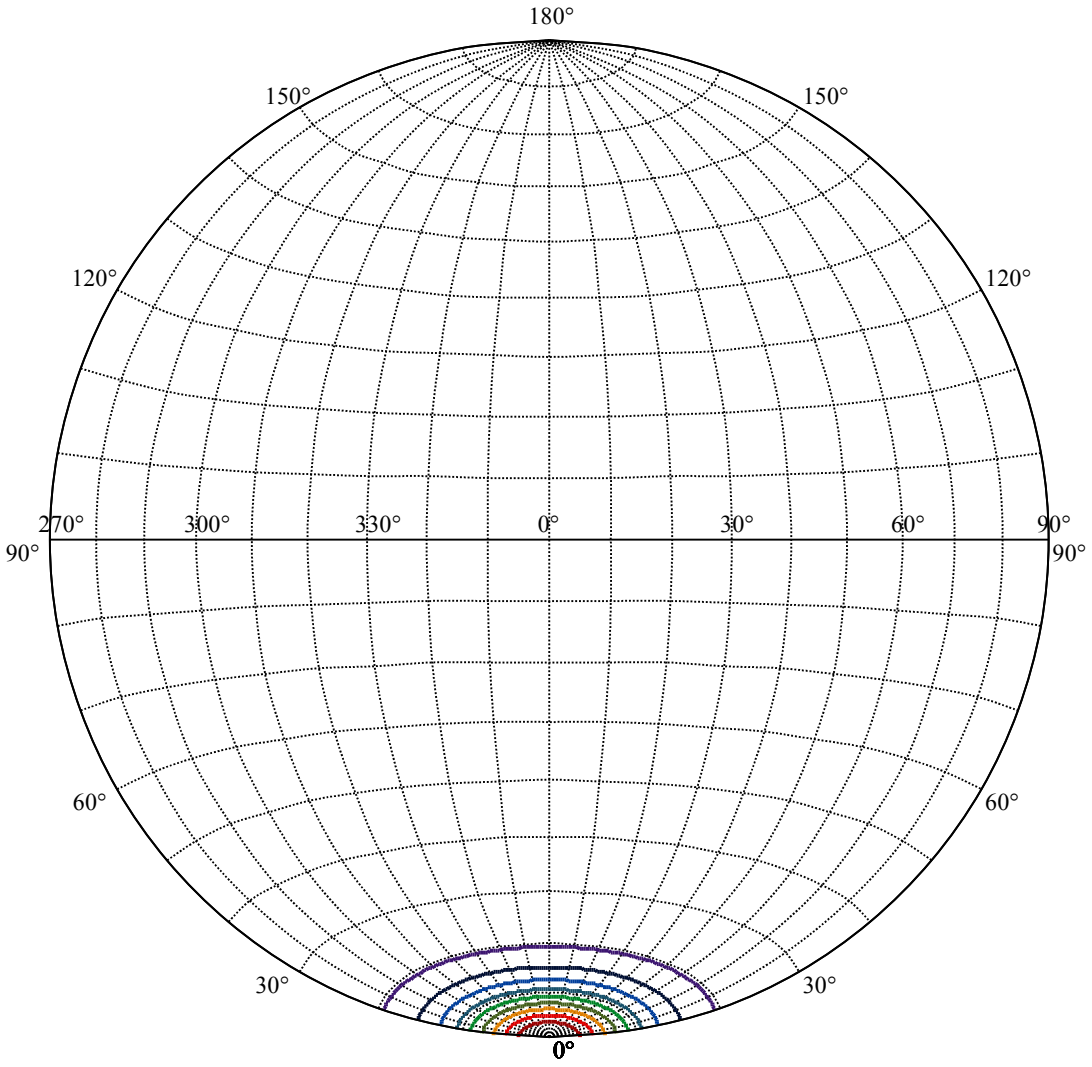
(10%Imax) 833.737
(20%Imax) 1667.47
(30%Imax) 2501.21
(40%Imax) 3334.95
(50%Imax) 4168.69
(60%Imax) 5002.42
(70%Imax) 5836.16
(80%Imax) 6669.9
(90%Imax) 7503.64

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/10/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8337.38

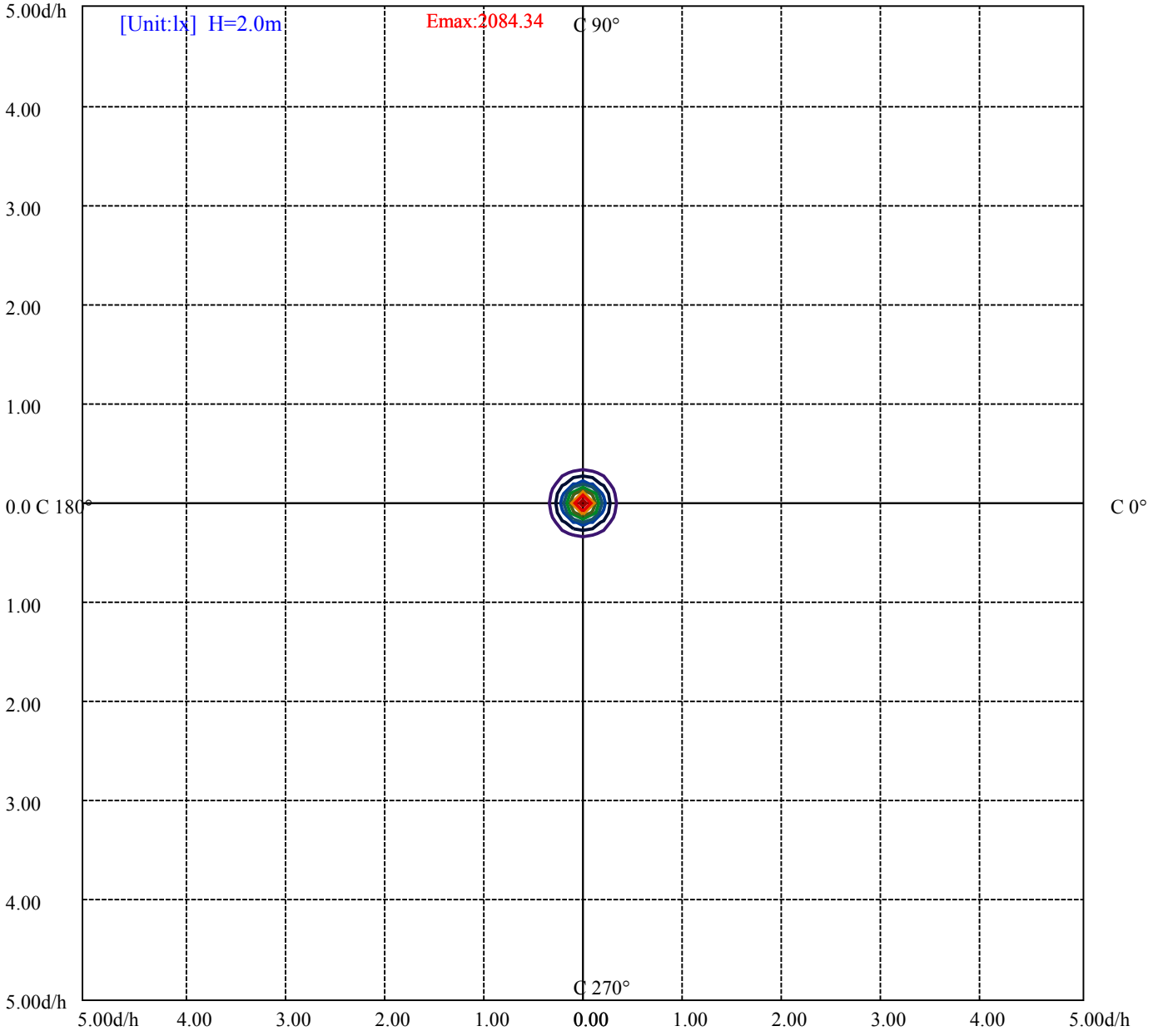
(10%Imax) 833.737
(20%Imax) 1667.47
(30%Imax) 2501.21
(40%Imax) 3334.95
(50%Imax) 4168.69
(60%Imax) 5002.42
(70%Imax) 5836.16
(80%Imax) 6669.9
(90%Imax) 7503.64

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/10/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO illuminance diagram

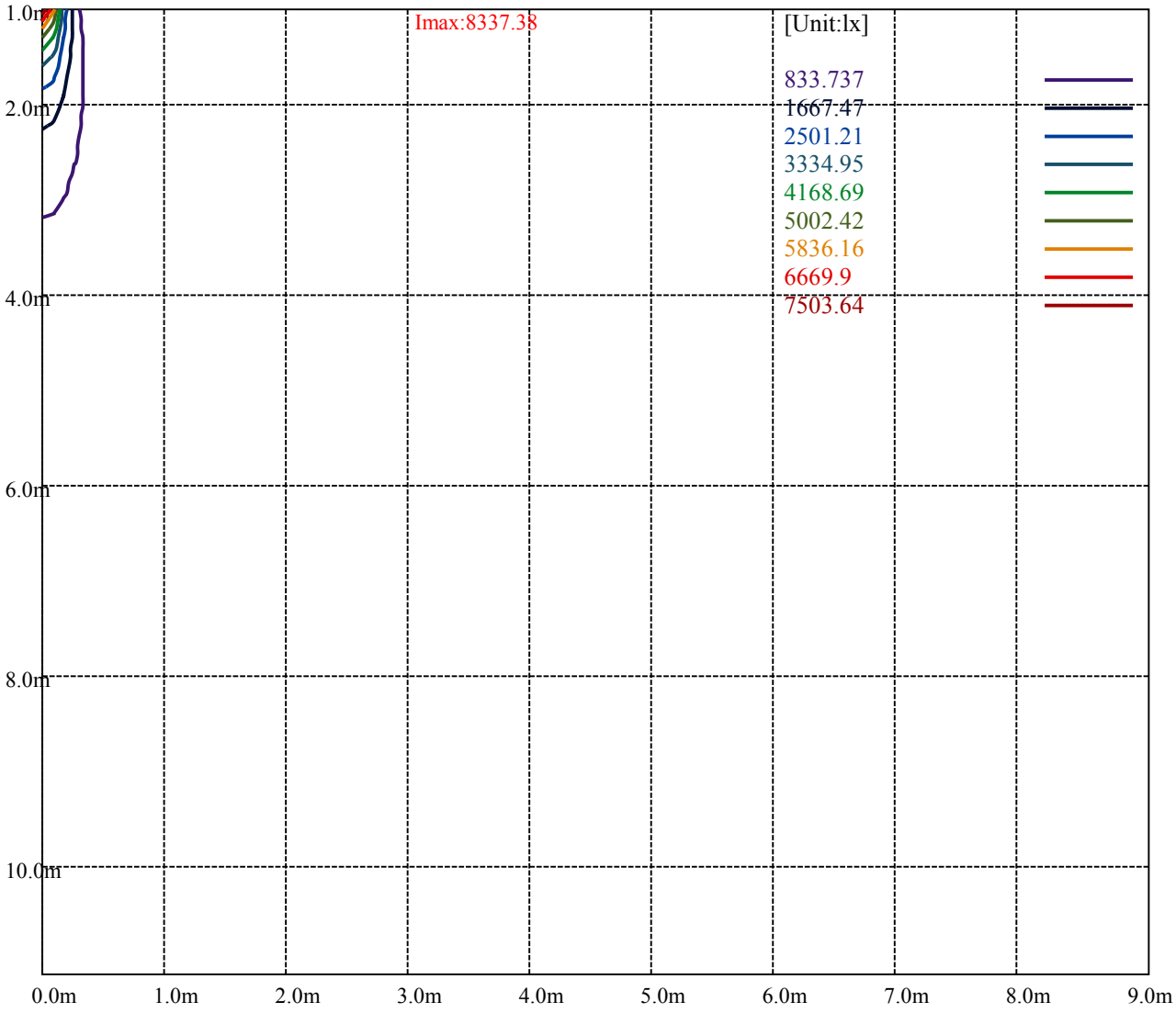


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/10/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/10/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

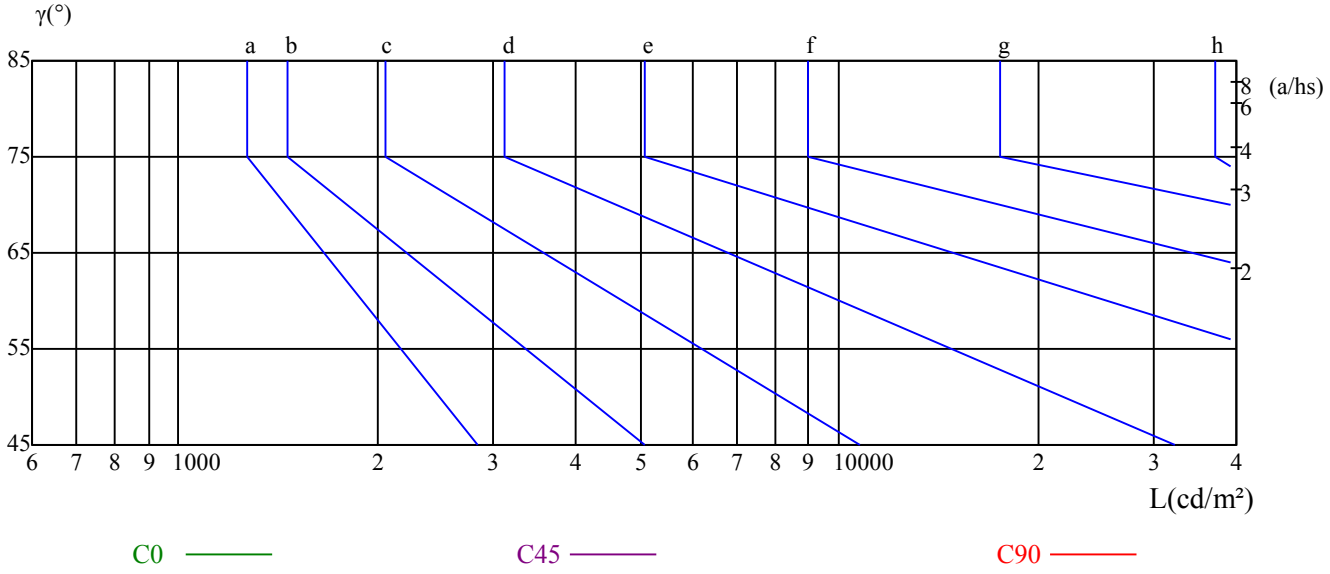
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

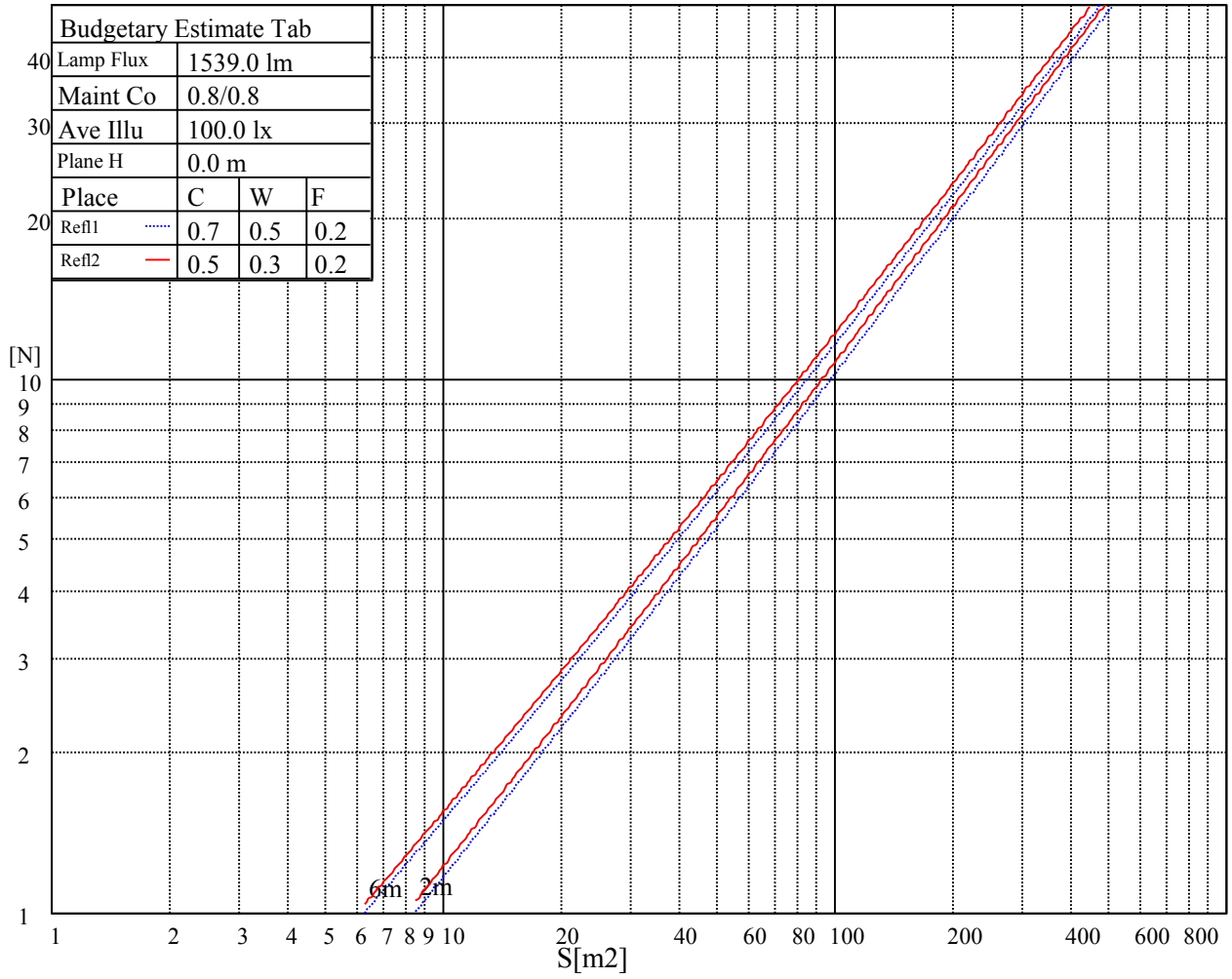
Glare Table

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

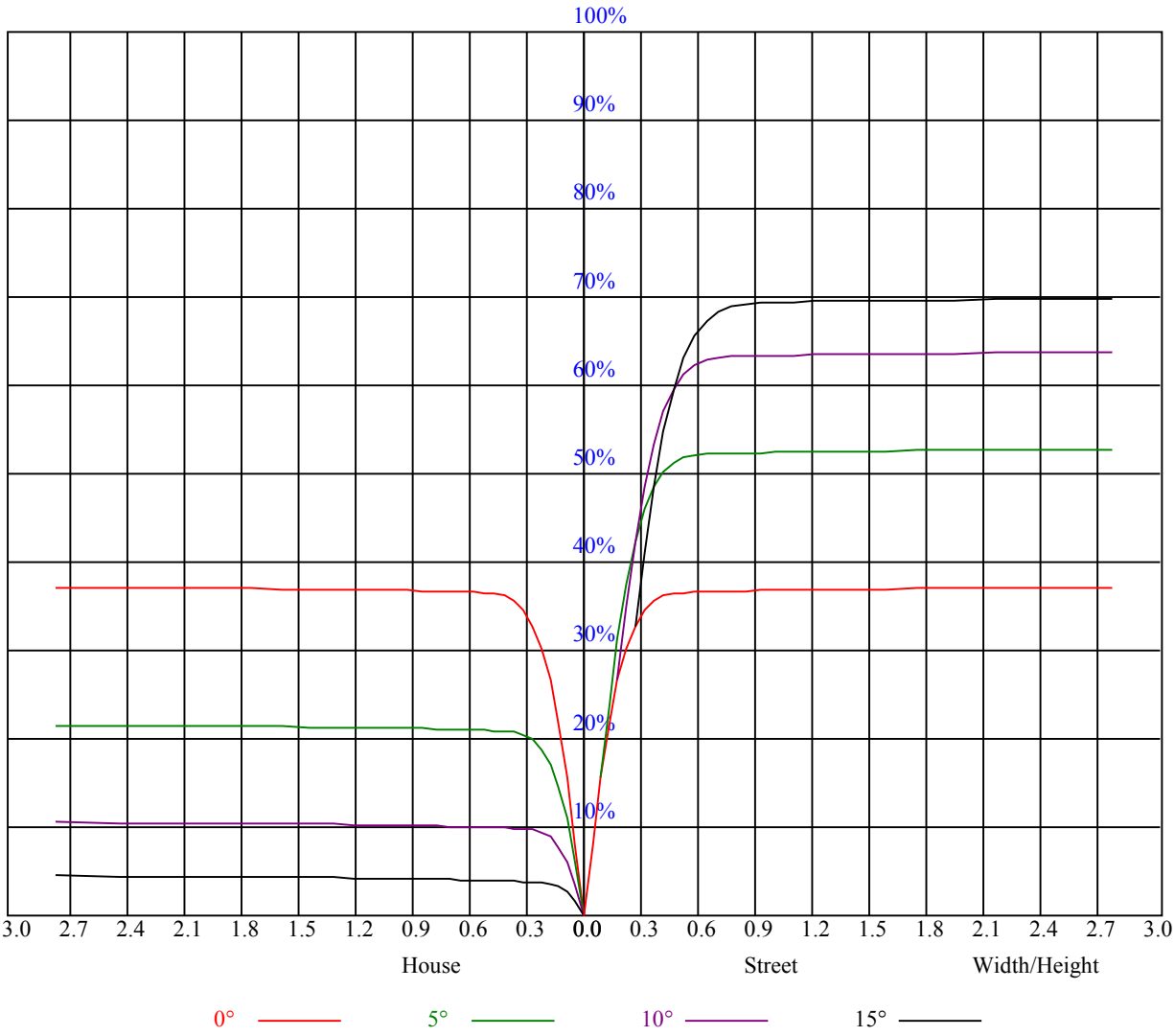


Equipment: GMS1980 Date: 2019/10/19 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.89	0.89	0.89	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.76	0.76	0.76	0.75
1	0.85	0.83	0.82	0.83	0.82	0.81	0.80	0.79	0.78	0.77	0.77	0.76	0.75	0.74	0.74	0.72
2	0.81	0.79	0.77	0.80	0.78	0.76	0.77	0.76	0.75	0.75	0.74	0.73	0.73	0.72	0.72	0.70
3	0.78	0.75	0.73	0.77	0.75	0.73	0.75	0.73	0.72	0.73	0.72	0.71	0.72	0.71	0.70	0.69
4	0.75	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.69	0.71	0.69	0.68	0.67
5	0.73	0.70	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.67	0.69	0.68	0.66	0.66
6	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.66	0.69	0.67	0.65	0.68	0.66	0.65	0.64
7	0.69	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.67	0.65	0.64	0.67	0.65	0.64	0.63
8	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.66	0.64	0.62	0.65	0.64	0.62	0.62
9	0.66	0.63	0.62	0.66	0.63	0.62	0.65	0.63	0.61	0.65	0.63	0.61	0.64	0.62	0.61	0.60
10	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.62	0.60	0.63	0.61	0.60	0.59

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/10/19	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	8353.13	8195.06	7789.50	7310.25	6747.75	5982.75	5350.50	4741.31	4127.63
45.0	8357.06	8281.69	8021.81	7668.56	7191.56	6508.69	5917.50	5290.88	4622.06
90.0	8358.75	8343.56	8217.00	7956.00	7566.75	6995.25	6431.63	5749.31	5042.25
135.0	8280.56	8386.88	8394.19	8328.38	8177.63	7734.94	7239.38	6671.81	5997.38
180.0	8353.13	8389.13	8359.88	8180.44	7910.44	7481.25	6884.44	6220.69	5584.50
225.0	8357.06	8326.69	8172.00	7860.94	7418.25	6813.56	6242.63	5549.63	4856.63
270.0	8358.75	8272.13	7989.75	7587.56	7065.56	6339.38	5726.25	5097.94	4442.63
315.0	8280.56	8016.19	7550.44	6951.94	6353.44	5637.94	5006.25	4353.75	3781.13
360.0	8353.13	8195.06	7789.50	7310.25	6747.75	5982.75	5350.50	4741.31	4127.63

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3589.31	3152.81	2705.63	2350.13	2010.38	1720.69	1491.19	1288.13	1071.00
45.0	4025.25	3539.25	3039.19	2643.75	2250.56	1919.25	1665.56	1404.56	1188.56
90.0	4452.19	3852.00	3317.63	2890.69	2507.63	2095.31	1815.75	1570.50	1226.81
135.0	5280.75	4654.13	4024.69	3521.25	3005.44	2556.00	2214.56	1872.56	1599.19
180.0	4851.00	4192.88	3680.44	3159.56	2745.00	2293.88	1988.44	1723.50	1487.25
225.0	4293.56	3718.13	3191.63	2774.25	2404.69	2015.44	1746.56	1507.50	1112.57
270.0	3866.06	3400.31	2925.00	2547.56	2178.56	1859.06	1611.56	1362.94	1147.50
315.0	3326.06	2856.94	2440.13	2123.44	1851.19	1555.88	1347.19	1113.81	989.94
360.0	3589.31	3152.81	2705.63	2350.13	2010.38	1720.69	1491.19	1288.13	1071.00

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	908.44	758.81	581.63	450.56	331.88	290.81	124.93	66.54	32.40
45.0	1024.88	861.19	678.94	540.00	410.06	298.69	178.03	107.66	58.84
90.0	1110.43	946.35	769.84	611.94	480.99	358.54	241.71	150.81	89.78
135.0	1372.50	1176.75	969.75	810.00	651.38	495.56	370.69	287.44	159.13
180.0	1111.44	1048.50	882.28	695.31	557.89	435.21	308.08	198.11	125.89
225.0	1071.11	908.49	737.49	577.74	450.56	318.88	216.39	127.24	66.21
270.0	981.56	826.88	642.38	509.06	381.94	295.88	153.79	88.03	42.98
315.0	795.09	646.54	511.88	357.69	248.06	155.70	81.79	40.11	24.92
360.0	908.44	758.81	581.63	450.56	331.88	290.81	124.93	66.54	32.40

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	19.80	13.39	11.14	10.24	9.39	8.72	8.21	7.76	7.37
45.0	30.54	20.08	13.05	11.08	10.13	9.45	8.83	8.33	7.99
90.0	48.38	29.08	16.48	12.15	10.80	9.90	9.17	8.66	8.27
135.0	87.58	48.99	28.97	18.34	12.38	10.69	9.84	9.11	8.55
180.0	66.15	35.66	22.73	14.06	11.36	10.13	9.34	8.78	8.27
225.0	36.45	24.19	14.79	12.15	11.03	10.01	9.34	8.78	8.27
270.0	25.09	16.65	12.43	10.97	10.01	9.28	8.72	8.21	7.88
315.0	15.41	11.93	10.52	9.68	9.00	8.38	7.93	7.59	7.26
360.0	19.80	13.39	11.14	10.24	9.39	8.72	8.21	7.76	7.37

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	7.14	6.86	6.64	6.47	6.30	6.19	6.08	6.02	5.96
45.0	7.65	7.37	7.14	6.98	6.75	6.69	6.53	6.41	6.30
90.0	7.82	7.54	7.31	7.09	6.86	6.75	6.58	6.47	6.36
135.0	8.10	7.76	7.43	7.20	6.98	6.75	6.64	6.53	6.41
180.0	7.82	7.48	7.20	6.98	6.75	6.58	6.41	6.24	6.19
225.0	7.88	7.59	7.26	7.03	6.81	6.69	6.53	6.41	6.30
270.0	7.48	7.26	6.98	6.75	6.64	6.53	6.36	6.24	6.19
315.0	6.98	6.75	6.58	6.47	6.30	6.19	6.08	6.02	5.96
360.0	7.14	6.86	6.64	6.47	6.30	6.19	6.08	6.02	5.96

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	5.85	5.79	5.74	5.68	5.63	5.57	5.57	5.51	5.51
45.0	6.24	6.19	6.08	6.02	5.96	5.96	5.91	5.85	5.79
90.0	6.30	6.24	6.13	6.08	6.02	5.96	5.91	5.91	5.85
135.0	6.30	6.19	6.13	6.08	5.96	5.91	5.85	5.79	5.79
180.0	6.08	6.02	5.96	5.85	5.85	5.74	5.74	5.63	5.63
225.0	6.24	6.13	6.08	6.02	5.96	5.91	5.85	5.85	5.79
270.0	6.13	6.02	6.02	5.96	5.85	5.85	5.79	5.74	5.74
315.0	5.85	5.79	5.79	5.74	5.68	5.63	5.63	5.57	5.57
360.0	5.85	5.79	5.74	5.68	5.63	5.57	5.57	5.51	5.51

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.46	5.46	5.40	5.40	5.34	5.34	5.34	5.29	5.29
45.0	5.79	5.74	5.68	5.68	5.68	5.63	5.63	5.57	5.57
90.0	5.79	5.74	5.74	5.68	5.68	5.68	5.63	5.63	5.57
135.0	5.74	5.68	5.68	5.63	5.63	5.57	5.57	5.51	5.51
180.0	5.57	5.51	5.51	5.51	5.46	5.46	5.40	5.34	5.34
225.0	5.74	5.68	5.68	5.68	5.63	5.63	5.57	5.57	5.57
270.0	5.74	5.68	5.68	5.63	5.57	5.57	5.57	5.57	5.57
315.0	5.57	5.51	5.46	5.46	5.46	5.40	5.40	5.40	5.34
360.0	5.46	5.46	5.40	5.40	5.34	5.34	5.34	5.29	5.29

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.29	5.23	5.23	5.23	5.23	5.23	5.23	5.18	5.18
45.0	5.57	5.51	5.51	5.51	5.51	5.46	5.46	5.46	5.46
90.0	5.57	5.57	5.51	5.51	5.51	5.51	5.46	5.46	5.46
135.0	5.46	5.46	5.46	5.46	5.40	5.40	5.40	5.40	5.34
180.0	5.34	5.34	5.29	5.29	5.29	5.29	5.23	5.23	5.23
225.0	5.51	5.51	5.46	5.51	5.46	5.46	5.46	5.46	5.40
270.0	5.51	5.51	5.51	5.46	5.46	5.46	5.46	5.46	5.46
315.0	5.40	5.34	5.34	5.29	5.29	5.29	5.29	5.29	5.29
360.0	5.29	5.23	5.23	5.23	5.23	5.23	5.23	5.18	5.18

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.18	5.18	5.18	5.18	5.18	5.12	5.12	5.12	5.12
45.0	5.46	5.40	5.40	5.46	5.40	5.40	5.40	5.40	5.40
90.0	5.46	5.46	5.46	5.40	5.40	5.40	5.40	5.34	5.34
135.0	5.34	5.34	5.29	5.29	5.34	5.29	5.29	5.29	5.29
180.0	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.12
225.0	5.46	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
270.0	5.40	5.40	5.40	5.40	5.46	5.46	5.46	5.40	5.40
315.0	5.29	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23
360.0	5.18	5.18	5.18	5.18	5.18	5.12	5.12	5.12	5.12

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
45.0	5.34	5.34	5.34	5.34	5.34	5.34	5.29	5.29	5.34
90.0	5.34	5.34	5.34	5.29	5.34	5.29	5.29	5.29	5.29
135.0	5.29	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23
180.0	5.18	5.18	5.12	5.12	5.12	5.12	5.12	5.12	5.12
225.0	5.40	5.34	5.34	5.34	5.29	5.29	5.34	5.34	5.29
270.0	5.34	5.34	5.29	5.29	5.34	5.29	5.29	5.29	5.29
315.0	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.18	5.23
360.0	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12

Intensity data(cd)

C/γ(°)	90.0
0.0	5.12
45.0	5.29
90.0	5.29
135.0	5.18
180.0	5.12
225.0	5.29
270.0	5.29
315.0	5.23
360.0	5.12