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Nata

LumCAT: 1-1008-M
Luminaire: BJB 47.360.1020

Report No: NATA0100	Voltage(V): 35.2700
Test No: GC2019101914	Current(A): 0.2970
LampCAT: TRIDONIC SLE G7 9MM	Power (W): 10.4700
Lamp flux(lm): 1539.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1123.51
Efficiency(%): 73.00%
Lumens(lm)/Power(W): 107.31
Central intensity(cd): 9870.469
Maximum intensity(cd): 9870.469
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=15.5
[C90/270]Total=15.5
Field angle(10%Imax): [C0/180]Total=36.1
[C90/270]Total=36.1
Maximum s/h(1/2): C0_180=0.27 C90_270=0.27
Maximum s/h(1/4): C0_180=0.30 C90_270=0.30
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 73.00%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.568%

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	9870.469	0.000	0	.000%	.000%
1.0	9711.141	9.369	9.369	.609%	.834%
2.0	9217.828	27.169	36.538	1.765%	3.252%
3.0	8562.094	42.524	79.062	2.763%	7.037%
4.0	7851.938	54.943	134.005	3.570%	11.927%
5.0	7069.570	64.192	198.196	4.171%	17.641%
6.0	6250.008	69.998	268.194	4.548%	23.871%
7.0	5469.961	72.746	340.94	4.727%	30.346%
8.0	4754.250	73.173	414.113	4.755%	36.859%
9.0	4086.000	71.645	485.758	4.655%	43.236%
10.0	3541.359	69.025	554.783	4.485%	49.379%
11.0	3079.406	66.155	620.938	4.299%	55.268%
12.0	2672.297	62.874	683.812	4.085%	60.864%
13.0	2280.586	58.778	742.591	3.819%	66.096%
14.0	1962.984	54.317	796.908	3.529%	70.930%
15.0	1688.977	50.136	847.044	3.258%	75.393%
16.0	1417.402	45.517	892.561	2.958%	79.444%
17.0	1202.667	40.802	933.362	2.651%	83.075%
18.0	996.834	36.265	969.627	2.356%	86.303%
19.0	823.261	31.666	1001.293	2.058%	89.122%
20.0	638.030	26.746	1028.039	1.738%	91.502%
21.0	466.917	21.217	1049.256	1.379%	93.391%
22.0	337.845	16.172	1065.428	1.051%	94.830%
23.0	217.526	11.653	1077.081	.757%	95.867%
24.0	124.840	7.485	1084.567	.486%	96.534%
25.0	54.893	4.087	1088.653	.266%	96.897%
26.0	25.010	1.886	1090.54	.123%	97.065%
27.0	14.815	0.974	1091.514	.063%	97.152%
28.0	12.248	0.685	1092.199	.045%	97.213%
29.0	10.927	0.606	1092.805	.039%	97.267%
30.0	9.928	0.563	1093.368	.037%	97.317%
31.0	9.155	0.531	1093.899	.035%	97.364%
32.0	8.529	0.507	1094.406	.033%	97.409%
33.0	8.009	0.487	1094.893	.032%	97.453%
34.0	7.629	0.473	1095.367	.031%	97.495%
35.0	7.270	0.463	1095.829	.030%	97.536%
36.0	6.975	0.454	1096.283	.029%	97.577%
37.0	6.757	0.448	1096.731	.029%	97.616%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.567	0.445	1097.175	.029%	97.656%
39.0	6.377	0.442	1097.617	.029%	97.695%
40.0	6.251	0.440	1098.058	.029%	97.734%
41.0	6.145	0.441	1098.499	.029%	97.774%
42.0	6.033	0.442	1098.942	.029%	97.813%
43.0	5.934	0.443	1099.385	.029%	97.853%
44.0	5.871	0.446	1099.83	.029%	97.892%
45.0	5.815	0.449	1100.28	.029%	97.932%
46.0	5.738	0.452	1100.731	.029%	97.972%
47.0	5.688	0.454	1101.186	.030%	98.013%
48.0	5.646	0.458	1101.644	.030%	98.054%
49.0	5.604	0.462	1102.106	.030%	98.095%
50.0	5.548	0.465	1102.571	.030%	98.136%
51.0	5.527	0.469	1103.039	.030%	98.178%
52.0	5.498	0.473	1103.512	.031%	98.220%
53.0	5.470	0.477	1103.99	.031%	98.262%
54.0	5.442	0.481	1104.471	.031%	98.305%
55.0	5.407	0.484	1104.955	.031%	98.348%
56.0	5.372	0.487	1105.442	.032%	98.392%
57.0	5.358	0.491	1105.933	.032%	98.435%
58.0	5.337	0.495	1106.427	.032%	98.479%
59.0	5.323	0.498	1106.925	.032%	98.524%
60.0	5.309	0.502	1107.428	.033%	98.568%
61.0	5.273	0.505	1107.933	.033%	98.613%
62.0	5.273	0.508	1108.441	.033%	98.659%
63.0	5.245	0.512	1108.952	.033%	98.704%
64.0	5.238	0.514	1109.467	.033%	98.750%
65.0	5.224	0.518	1109.985	.034%	98.796%
66.0	5.224	0.521	1110.506	.034%	98.842%
67.0	5.203	0.524	1111.03	.034%	98.889%
68.0	5.196	0.527	1111.557	.034%	98.936%
69.0	5.182	0.529	1112.087	.034%	98.983%
70.0	5.168	0.532	1112.618	.035%	99.030%
71.0	5.161	0.534	1113.152	.035%	99.078%
72.0	5.168	0.537	1113.689	.035%	99.126%
73.0	5.161	0.540	1114.229	.035%	99.174%
74.0	5.147	0.542	1114.771	.035%	99.222%
75.0	5.140	0.544	1115.315	.035%	99.270%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.126	0.545	1115.86	.035%	99.319%
77.0	5.119	0.546	1116.406	.035%	99.368%
78.0	5.098	0.547	1116.953	.036%	99.416%
79.0	5.084	0.547	1117.5	.036%	99.465%
80.0	5.063	0.547	1118.047	.036%	99.514%
81.0	5.041	0.546	1118.593	.036%	99.562%
82.0	5.034	0.546	1119.139	.036%	99.611%
83.0	5.006	0.546	1119.685	.035%	99.659%
84.0	5.013	0.546	1120.231	.035%	99.708%
85.0	4.992	0.546	1120.777	.035%	99.757%
86.0	5.006	0.547	1121.324	.036%	99.805%
87.0	4.992	0.547	1121.871	.036%	99.854%
88.0	4.985	0.547	1122.417	.036%	99.903%
89.0	4.985	0.546	1122.964	.036%	99.951%
90.0	4.992	0.547	1123.511	.036%	100.000%

Zonal flux distribution table

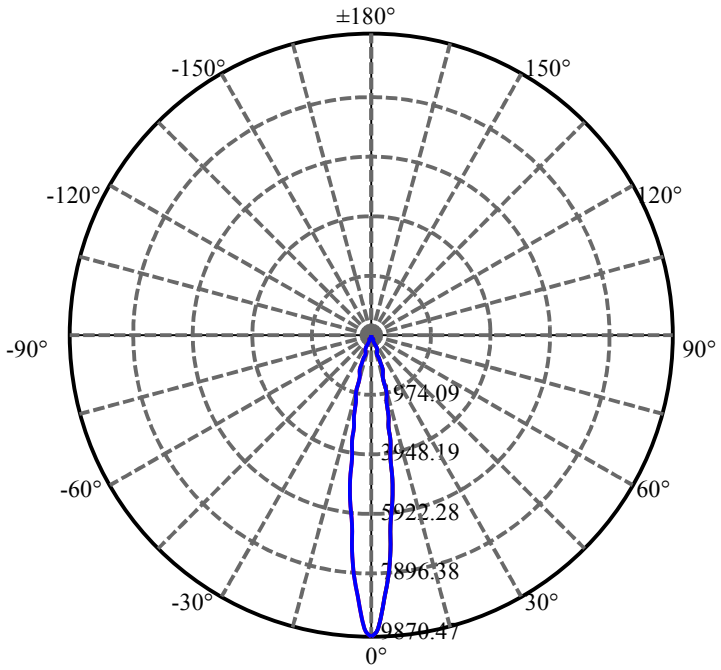
ZONAL LUMEN SUMMARY

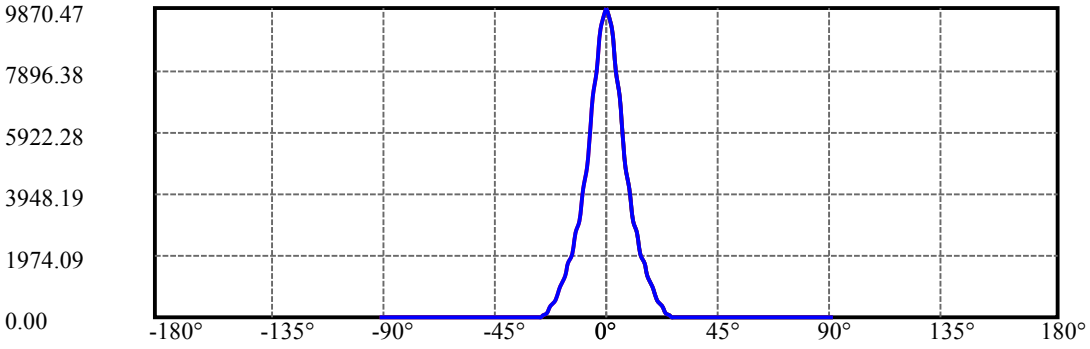
Zone	Lumens	%Lamp	%Fixt
0-30	1093.37	71.04%	97.32%
0-40	1098.06	71.35%	97.73%
0-60	1107.43	71.96%	98.57%
0-90	1122.96	72.97%	99.95%
0-120	1122.96	72.97%	99.95%
0-180	1123.51	73.00%	100.00%
60-90	16.04	1.04%	1.43%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-16.15	898.81	58.40%	80.00%

ZONAL LUMEN SUMMARY

0-10	554.78
10-20	473.26
20-30	65.33
30-40	4.69
40-50	4.51
50-60	4.86
60-70	5.19
70-80	5.43
80-90	4.92
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):

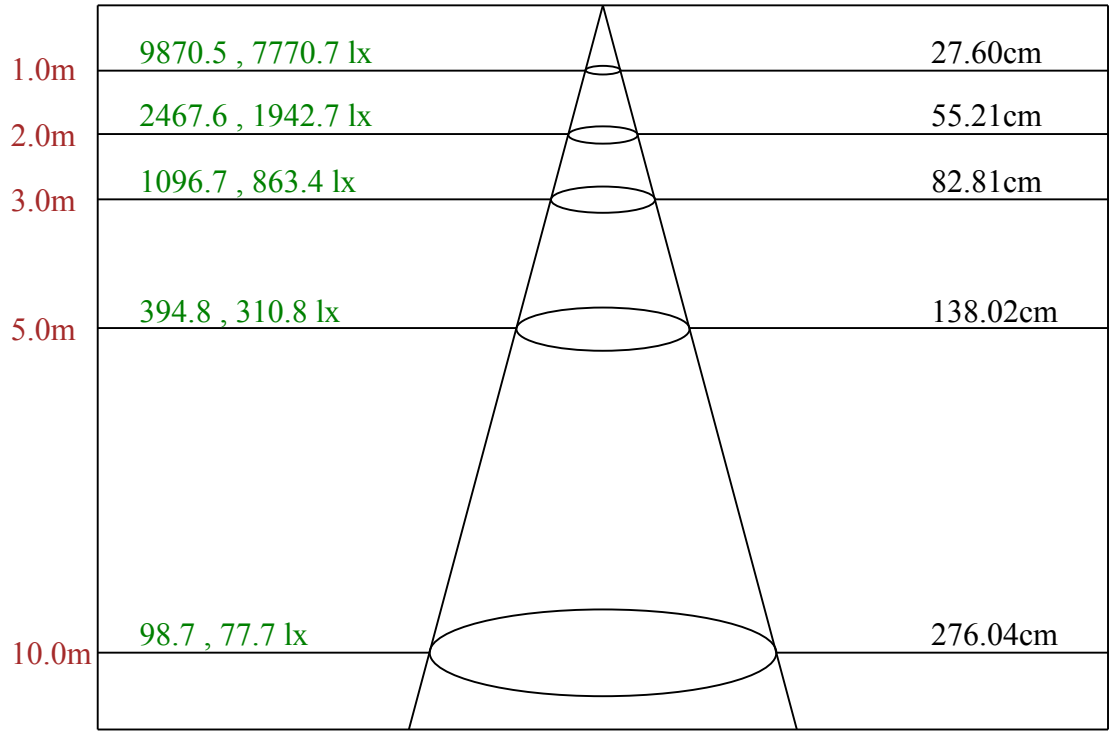
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:18.1 Right:18.1
:C90/270Left:18.1 Right:18.1

Beam Angle(50%Imax):C0/180Left:7.7 Right:7.7
:C90/270Left:7.7 Right:7.7

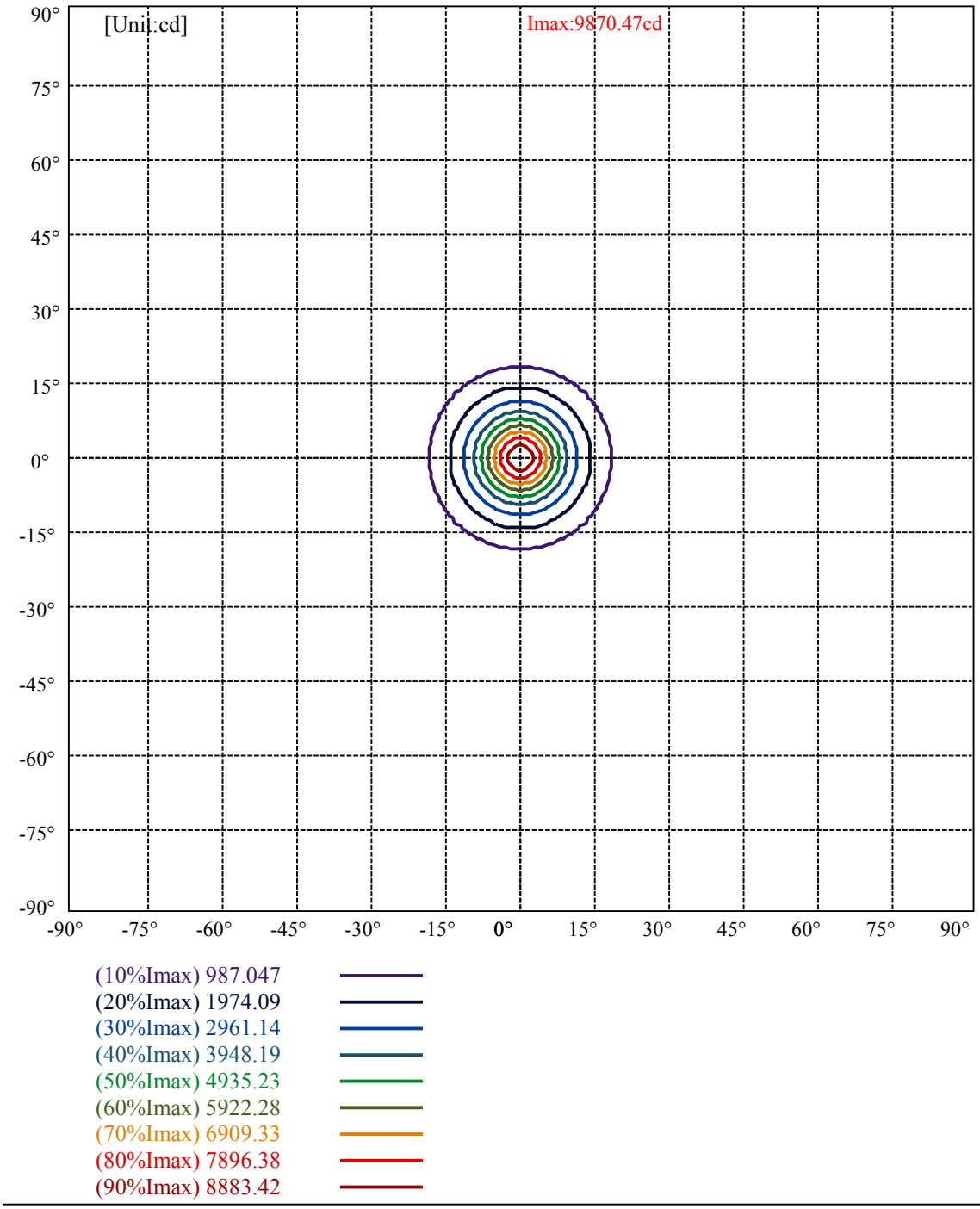
Lux distance Curve



Max , Ave

Beam angle of C0 plane 15.72

ISO-Intensity(V-H)

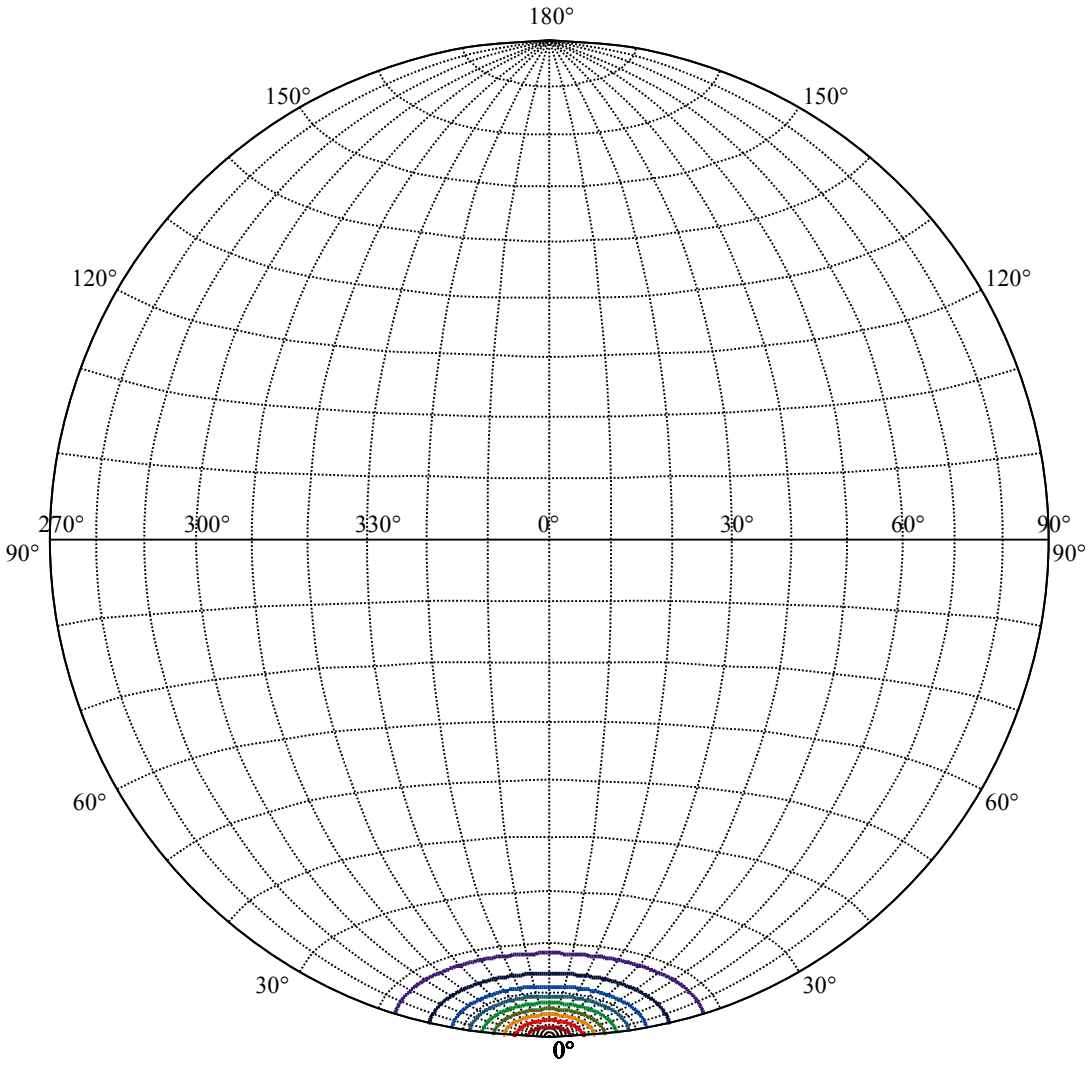


Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



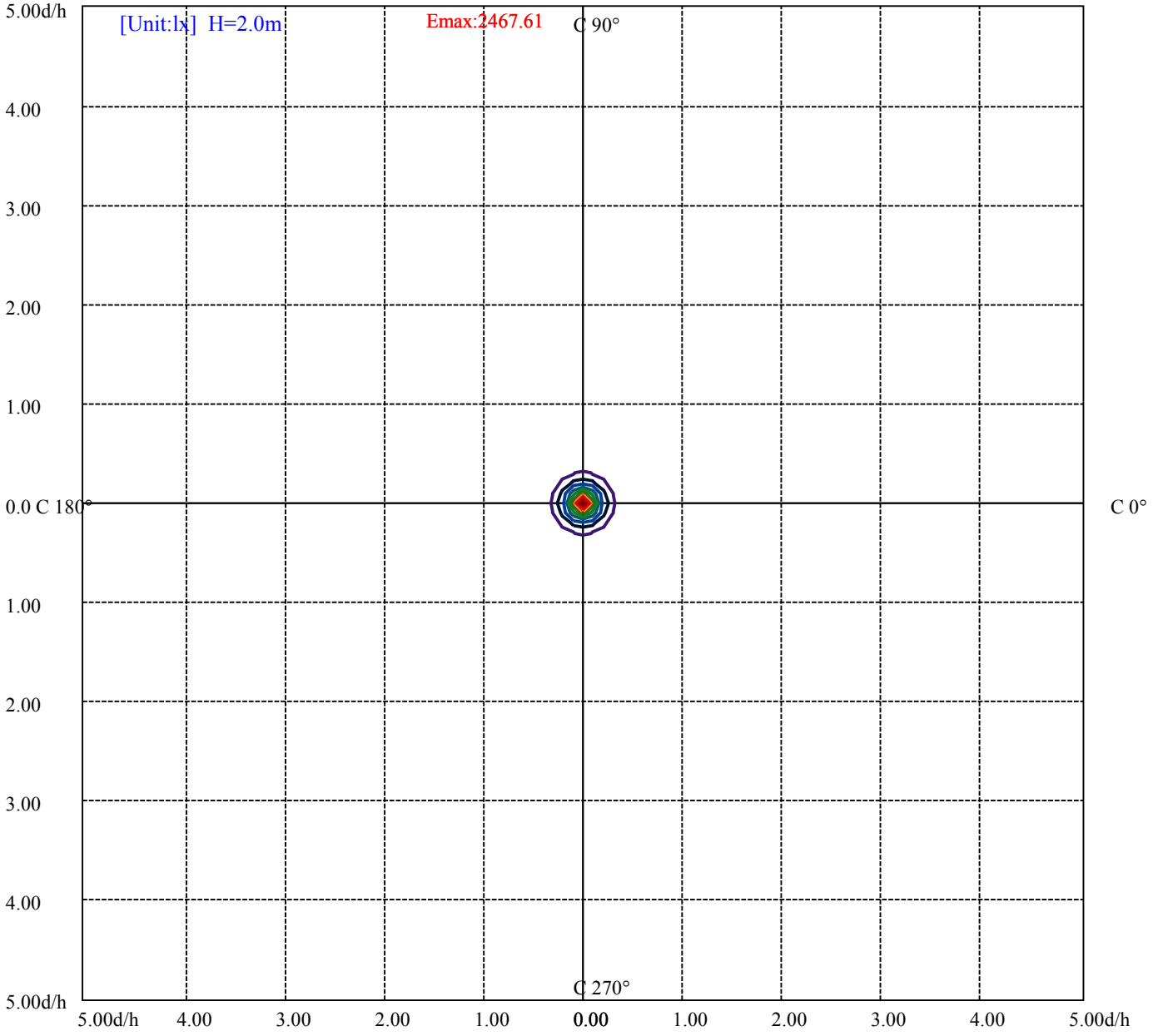
House [Unit:cd] Road

Imax:9870.47

(10%Imax) 987.047
(20%Imax) 1974.09
(30%Imax) 2961.14
(40%Imax) 3948.19
(50%Imax) 4935.23
(60%Imax) 5922.28
(70%Imax) 6909.33
(80%Imax) 7896.38
(90%Imax) 8883.42

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

ISO illuminance diagram

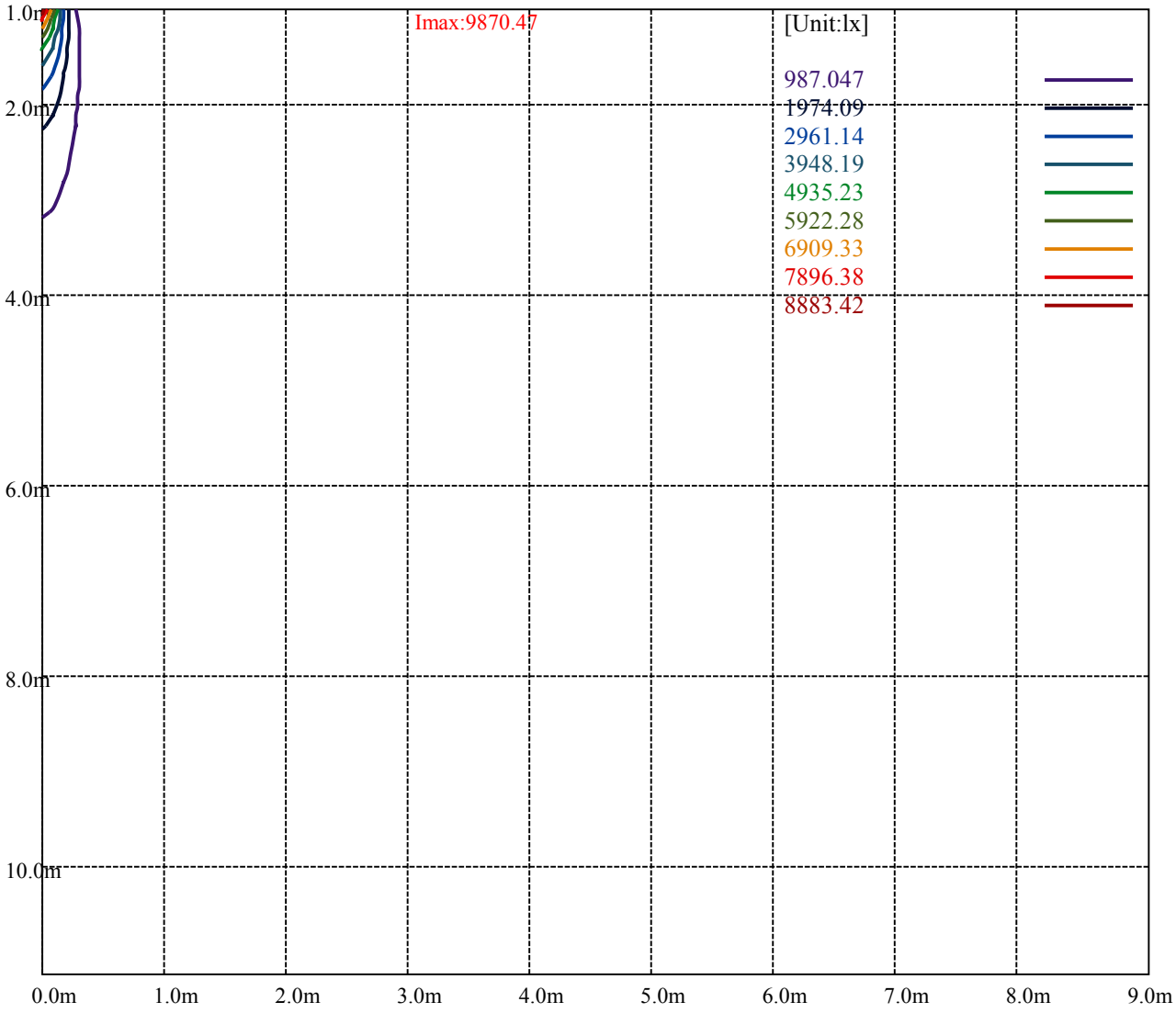


Equipment: GMS1980
Temperature(°C): 25.0

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

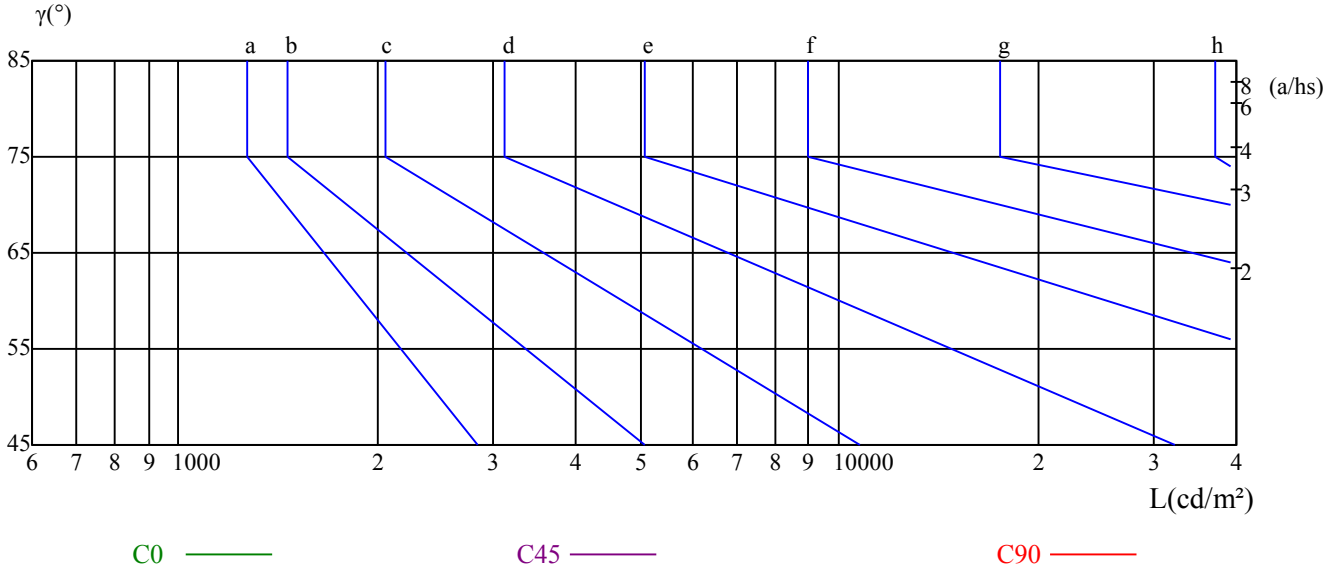
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

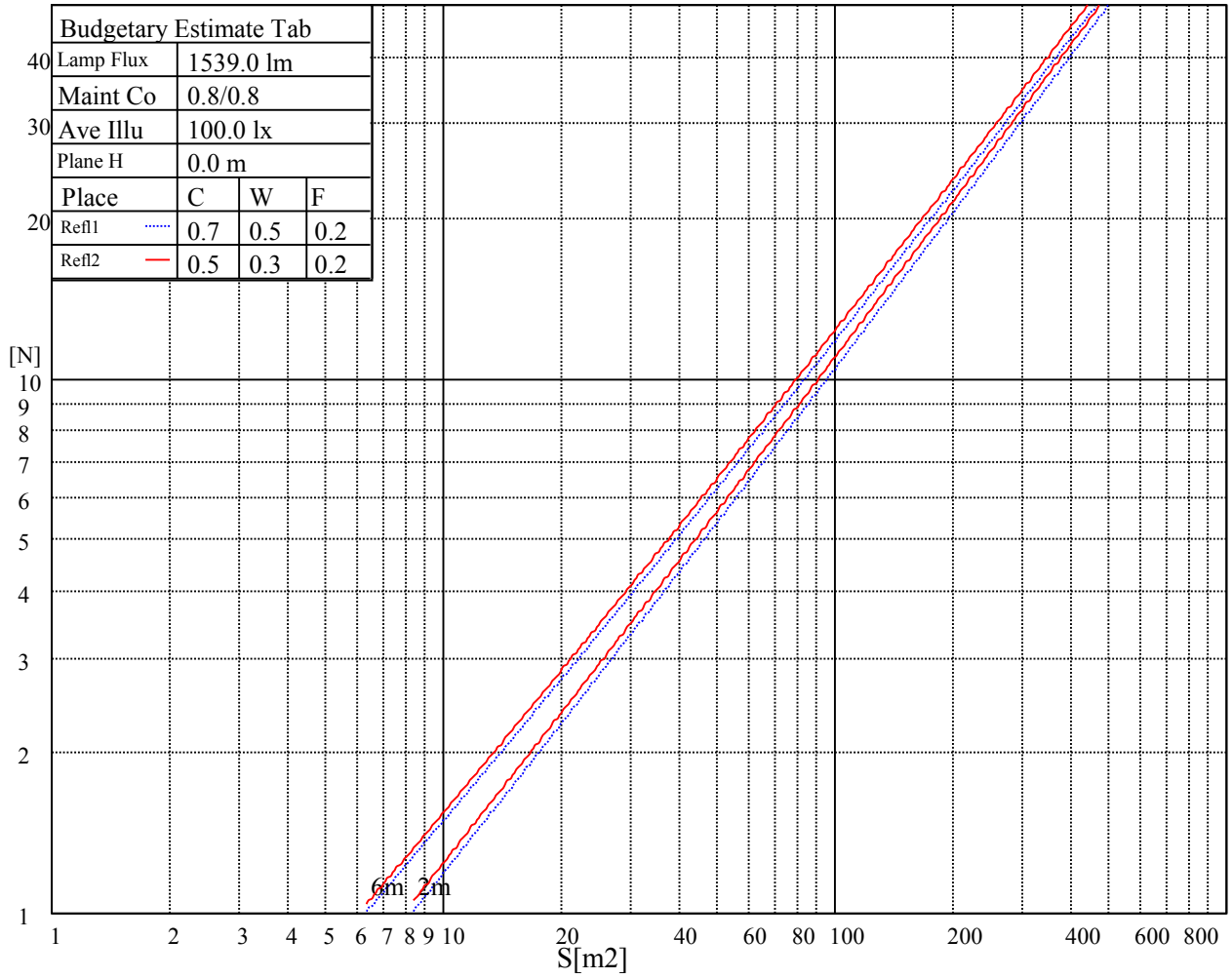
Glare Table

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

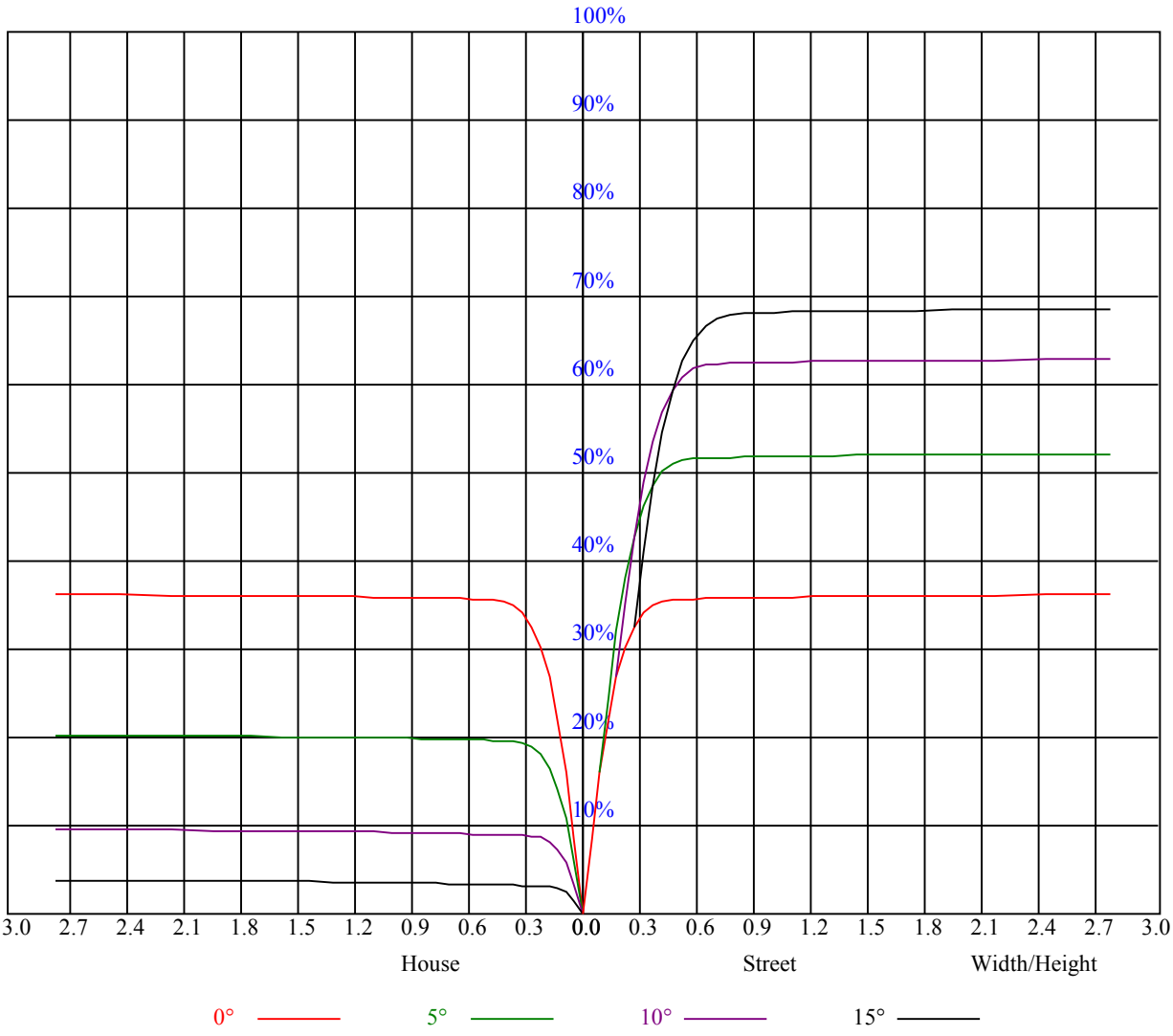


Equipment: GMS1980 Date: 2019/10/19 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.87	0.87	0.87	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.74	0.74	0.74	0.73
1	0.83	0.81	0.80	0.81	0.80	0.79	0.78	0.77	0.76	0.75	0.75	0.74	0.73	0.73	0.72	0.71
2	0.79	0.77	0.75	0.78	0.76	0.75	0.76	0.74	0.73	0.74	0.72	0.71	0.72	0.71	0.70	0.69
3	0.76	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.70	0.72	0.71	0.69	0.70	0.69	0.68	0.67
4	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.70	0.69	0.67	0.69	0.68	0.67	0.66
5	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.68	0.67	0.65	0.65
6	0.70	0.67	0.65	0.69	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
7	0.68	0.66	0.64	0.68	0.65	0.64	0.67	0.65	0.63	0.66	0.64	0.63	0.66	0.64	0.63	0.62
8	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.62	0.65	0.63	0.62	0.61
9	0.65	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.64	0.62	0.61	0.60
10	0.64	0.62	0.60	0.64	0.61	0.60	0.63	0.61	0.60	0.63	0.61	0.60	0.63	0.61	0.59	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	9775.13	10062.56	9955.69	9524.81	8760.38	8061.75	7251.75	6388.88	5627.81
45.0	9914.63	9933.19	9531.00	8948.25	8280.00	7382.25	6641.44	5865.75	5029.31
90.0	9783.00	9402.19	8710.88	7959.38	7239.38	6508.69	5573.25	4850.44	4206.94
135.0	10009.13	9560.25	8827.31	8133.19	7335.00	6505.31	5738.63	4924.69	4286.81
180.0	9775.13	9205.31	8530.31	7638.19	6936.19	6192.56	5267.25	4591.13	4011.19
225.0	9914.63	9567.00	8814.38	8148.38	7463.25	6631.31	5890.50	5089.50	4383.00
270.0	9783.00	9901.13	9568.69	9026.44	8370.56	7566.19	6747.19	6009.75	5195.25
315.0	10009.13	10057.50	9804.38	9118.13	8430.75	7708.50	6890.06	6039.56	5293.69
360.0	9775.13	10062.56	9955.69	9524.81	8760.38	8061.75	7251.75	6388.88	5627.81

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4834.13	4135.50	3621.94	3169.69	2671.88	2319.19	2009.81	1702.13	1440.56
45.0	4304.25	3765.38	3235.50	2811.38	2393.44	2041.31	1764.56	1490.06	1254.94
90.0	3620.25	3106.69	2703.94	2314.69	1978.88	1716.19	1456.31	1116.79	1022.18
135.0	3702.94	3187.69	2782.13	2424.38	2035.69	1763.44	1527.19	1253.81	1059.19
180.0	3406.50	2980.13	2605.50	2233.13	1902.38	1647.00	1392.75	1107.11	969.86
225.0	3795.75	3334.50	2867.63	2500.88	2145.94	1836.00	1593.00	1370.25	1110.49
270.0	4491.56	3929.06	3407.63	2992.50	2558.25	2190.94	1902.38	1686.38	1378.69
315.0	4532.63	3891.94	3411.00	2931.75	2558.25	2189.81	1865.81	1612.69	1385.44
360.0	4834.13	4135.50	3621.94	3169.69	2671.88	2319.19	2009.81	1702.13	1440.56

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1232.44	1015.88	822.38	658.13	485.44	342.00	295.88	118.63	49.50
45.0	1051.31	873.00	670.50	510.75	357.19	290.25	122.01	57.15	21.94
90.0	828.51	660.09	503.38	325.46	209.36	120.94	45.00	19.63	14.18
135.0	883.69	709.88	511.31	367.31	297.00	126.11	48.66	20.36	13.84
180.0	771.41	609.53	456.92	285.86	179.61	99.68	33.36	16.65	13.05
225.0	936.56	765.00	597.88	409.44	278.55	170.78	79.93	30.60	16.31
270.0	1166.06	1004.63	771.19	607.50	474.19	299.81	214.09	92.19	35.61
315.0	1104.69	948.09	770.68	570.88	421.43	290.64	159.81	83.93	35.66
360.0	1232.44	1015.88	822.38	658.13	485.44	342.00	295.88	118.63	49.50

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	21.60	15.08	12.88	11.64	10.41	9.62	9.00	8.49	7.93
45.0	14.85	12.66	11.42	10.29	9.51	8.89	8.27	7.88	7.54
90.0	12.04	10.74	9.90	9.06	8.49	7.99	7.59	7.31	7.03
135.0	11.81	10.69	9.73	9.06	8.44	7.93	7.54	7.20	6.92
180.0	11.53	10.24	9.45	8.78	8.21	7.76	7.43	7.09	6.86
225.0	13.28	11.64	10.58	9.62	8.94	8.33	7.82	7.43	7.09
270.0	17.16	13.39	11.64	10.58	9.62	8.83	8.27	7.82	7.37
315.0	16.26	13.56	11.81	10.41	9.62	8.89	8.16	7.82	7.43
360.0	21.60	15.08	12.88	11.64	10.41	9.62	9.00	8.49	7.93

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	7.54	7.26	6.98	6.75	6.58	6.41	6.24	6.13	6.08
45.0	7.26	7.03	6.81	6.64	6.47	6.41	6.24	6.19	6.13
90.0	6.75	6.58	6.47	6.30	6.19	6.13	6.02	5.91	5.85
135.0	6.75	6.58	6.41	6.24	6.13	6.08	6.02	5.91	5.79
180.0	6.64	6.47	6.36	6.19	6.08	5.96	5.91	5.85	5.79
225.0	6.81	6.58	6.41	6.24	6.13	6.02	5.91	5.79	5.74
270.0	7.09	6.81	6.53	6.36	6.24	6.08	5.96	5.85	5.79
315.0	6.98	6.75	6.58	6.30	6.19	6.08	5.96	5.85	5.79
360.0	7.54	7.26	6.98	6.75	6.58	6.41	6.24	6.13	6.08

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	6.02	5.91	5.85	5.79	5.74	5.68	5.63	5.63	5.57
45.0	6.02	5.91	5.91	5.85	5.79	5.74	5.68	5.68	5.63
90.0	5.79	5.74	5.68	5.68	5.63	5.57	5.57	5.51	5.51
135.0	5.79	5.74	5.68	5.68	5.63	5.57	5.51	5.51	5.51
180.0	5.74	5.68	5.63	5.57	5.51	5.51	5.51	5.46	5.46
225.0	5.68	5.63	5.57	5.51	5.51	5.40	5.40	5.40	5.34
270.0	5.74	5.63	5.57	5.51	5.51	5.46	5.46	5.40	5.34
315.0	5.74	5.68	5.63	5.57	5.51	5.46	5.46	5.40	5.40
360.0	6.02	5.91	5.85	5.79	5.74	5.68	5.63	5.63	5.57

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.57	5.51	5.46	5.46	5.40	5.40	5.40	5.34	5.34
45.0	5.63	5.57	5.51	5.46	5.51	5.46	5.46	5.40	5.40
90.0	5.51	5.51	5.46	5.46	5.40	5.40	5.40	5.40	5.40
135.0	5.46	5.46	5.40	5.40	5.40	5.40	5.34	5.29	5.29
180.0	5.40	5.34	5.34	5.34	5.29	5.29	5.29	5.23	5.23
225.0	5.29	5.23	5.23	5.23	5.18	5.18	5.12	5.12	5.12
270.0	5.34	5.34	5.29	5.23	5.29	5.23	5.23	5.23	5.23
315.0	5.34	5.29	5.29	5.29	5.23	5.23	5.23	5.18	5.18
360.0	5.57	5.51	5.46	5.46	5.40	5.40	5.40	5.34	5.34

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.29	5.29	5.29	5.29	5.29	5.23	5.23	5.18	5.23
45.0	5.40	5.34	5.34	5.34	5.34	5.29	5.29	5.29	5.29
90.0	5.34	5.34	5.34	5.34	5.34	5.34	5.34	5.34	5.29
135.0	5.29	5.29	5.29	5.29	5.23	5.23	5.23	5.18	5.18
180.0	5.23	5.23	5.18	5.18	5.18	5.18	5.18	5.12	5.12
225.0	5.12	5.12	5.06	5.06	5.06	5.06	5.01	5.06	5.01
270.0	5.18	5.18	5.18	5.18	5.12	5.12	5.12	5.12	5.12
315.0	5.12	5.12	5.12	5.12	5.06	5.12	5.06	5.06	5.06
360.0	5.29	5.29	5.29	5.29	5.29	5.23	5.23	5.18	5.23

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	5.18	5.12	5.12	5.12
45.0	5.29	5.29	5.29	5.29	5.23	5.23	5.18	5.23	5.18
90.0	5.34	5.34	5.34	5.29	5.29	5.29	5.23	5.12	5.01
135.0	5.18	5.18	5.12	5.12	5.12	5.12	5.12	5.12	5.12
180.0	5.12	5.12	5.12	5.12	5.12	5.06	5.06	5.06	5.06
225.0	5.06	5.01	5.01	5.01	5.01	5.01	5.01	4.95	4.95
270.0	5.12	5.12	5.06	5.06	5.06	5.06	5.06	5.06	5.06
315.0	5.06	5.06	5.06	5.06	5.01	5.01	5.01	5.01	5.01
360.0	5.18	5.18	5.18	5.18	5.18	5.18	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	5.06	5.06	5.12	5.06	5.06	5.06
45.0	5.12	5.12	5.01	5.06	5.01	5.06	5.06	4.95	5.01
90.0	4.95	4.95	4.95	4.95	4.95	5.01	4.95	4.89	4.89
135.0	5.12	5.06	5.06	5.01	5.01	5.01	5.01	5.01	5.01
180.0	5.06	5.06	5.06	5.01	5.01	5.01	5.01	5.06	5.01
225.0	4.95	4.89	4.89	4.95	4.89	4.89	4.89	4.95	4.95
270.0	4.95	5.01	4.95	5.01	5.01	5.01	4.95	5.01	5.01
315.0	5.06	5.06	5.01	5.06	5.01	4.95	5.01	4.95	4.95
360.0	5.12	5.12	5.12	5.06	5.06	5.12	5.06	5.06	5.06

Intensity data(cd)

C/γ(°)	90.0
0.0	5.01
45.0	4.95
90.0	4.95
135.0	5.01
180.0	5.06
225.0	5.01
270.0	4.95
315.0	5.01
360.0	5.01