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: 1-0919-M
Luminaire: 92.70.124.00

Report No: NATA0100	Voltage(V): 34.3300
Test No: GC2019092109	Current(A): 0.2970
LampCAT: BRIDGELUX V10B LES10	Power (W): 10.2000
Lamp flux(lm): 1244.0	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): 948.45
Efficiency(%): 76.24%
Lumens(lm)/Power(W): 92.99
Central intensity(cd): 4908.938
Maximum intensity(cd): 4908.938
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=24.6
[C90/270]Total=24.6
Field angle(10%Imax): [C0/180]Total=42.4
[C90/270]Total=42.4
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.24%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.535%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4908.938	0.000	0	.000%	.000%
1.0	4891.078	4.689	4.689	.377%	.494%
2.0	4828.922	13.951	18.64	1.121%	1.965%
3.0	4729.781	22.861	41.501	1.838%	4.376%
4.0	4605.820	31.249	72.751	2.512%	7.670%
5.0	4431.094	38.876	111.627	3.125%	11.769%
6.0	4245.258	45.597	157.224	3.665%	16.577%
7.0	4019.766	51.301	208.524	4.124%	21.986%
8.0	3754.477	55.639	264.163	4.473%	27.852%
9.0	3471.117	58.560	322.723	4.707%	34.026%
10.0	3172.641	60.124	382.846	4.833%	40.365%
11.0	2852.156	60.200	443.046	4.839%	46.713%
12.0	2547.914	59.031	502.077	4.745%	52.937%
13.0	2239.734	56.817	558.894	4.567%	58.927%
14.0	1917.914	53.218	612.112	4.278%	64.538%
15.0	1660.359	49.124	661.236	3.949%	69.717%
16.0	1408.289	44.964	706.2	3.614%	74.458%
17.0	1171.568	40.175	746.375	3.230%	78.694%
18.0	989.747	35.635	782.011	2.865%	82.451%
19.0	826.404	31.597	813.608	2.540%	85.783%
20.0	656.557	27.142	840.75	2.182%	88.645%
21.0	513.710	22.471	863.222	1.806%	91.014%
22.0	396.127	18.284	881.506	1.470%	92.942%
23.0	276.996	14.124	895.629	1.135%	94.431%
24.0	204.912	10.536	906.166	.847%	95.542%
25.0	109.062	7.139	913.305	.574%	96.294%
26.0	57.016	3.920	917.225	.315%	96.708%
27.0	26.529	2.044	919.269	.164%	96.923%
28.0	16.291	1.084	920.353	.087%	97.038%
29.0	11.897	0.737	921.091	.059%	97.115%
30.0	10.252	0.598	921.689	.048%	97.178%
31.0	9.338	0.545	922.234	.044%	97.236%
32.0	8.578	0.513	922.747	.041%	97.290%
33.0	8.002	0.488	923.235	.039%	97.341%
34.0	7.538	0.470	923.706	.038%	97.391%
35.0	7.130	0.456	924.161	.037%	97.439%
36.0	6.750	0.442	924.603	.036%	97.486%
37.0	6.462	0.431	925.034	.035%	97.531%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.195	0.422	925.457	.034%	97.576%
39.0	5.963	0.415	925.871	.033%	97.619%
40.0	5.801	0.410	926.282	.033%	97.663%
41.0	5.646	0.408	926.689	.033%	97.706%
42.0	5.491	0.405	927.094	.033%	97.748%
43.0	5.372	0.402	927.496	.032%	97.791%
44.0	5.280	0.402	927.898	.032%	97.833%
45.0	5.182	0.402	928.301	.032%	97.875%
46.0	5.119	0.403	928.703	.032%	97.918%
47.0	5.048	0.404	929.108	.033%	97.961%
48.0	4.992	0.406	929.514	.033%	98.003%
49.0	4.929	0.407	929.921	.033%	98.046%
50.0	4.887	0.409	930.33	.033%	98.089%
51.0	4.852	0.412	930.742	.033%	98.133%
52.0	4.809	0.415	931.157	.033%	98.177%
53.0	4.767	0.417	931.573	.033%	98.221%
54.0	4.725	0.418	931.992	.034%	98.265%
55.0	4.711	0.421	932.413	.034%	98.309%
56.0	4.669	0.424	932.837	.034%	98.354%
57.0	4.662	0.427	933.263	.034%	98.399%
58.0	4.627	0.430	933.693	.035%	98.444%
59.0	4.620	0.432	934.125	.035%	98.490%
60.0	4.584	0.435	934.56	.035%	98.535%
61.0	4.563	0.437	934.997	.035%	98.581%
62.0	4.542	0.439	935.435	.035%	98.628%
63.0	4.514	0.440	935.876	.035%	98.674%
64.0	4.521	0.443	936.319	.036%	98.721%
65.0	4.507	0.447	936.766	.036%	98.768%
66.0	4.472	0.448	937.214	.036%	98.815%
67.0	4.465	0.449	937.663	.036%	98.863%
68.0	4.451	0.452	938.115	.036%	98.910%
69.0	4.444	0.454	938.569	.036%	98.958%
70.0	4.444	0.456	939.025	.037%	99.006%
71.0	4.444	0.459	939.485	.037%	99.055%
72.0	4.423	0.461	939.946	.037%	99.103%
73.0	4.416	0.462	940.408	.037%	99.152%
74.0	4.416	0.464	940.872	.037%	99.201%
75.0	4.395	0.465	941.338	.037%	99.250%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.402	0.467	941.804	.038%	99.299%
77.0	4.388	0.469	942.273	.038%	99.349%
78.0	4.380	0.469	942.742	.038%	99.398%
79.0	4.395	0.471	943.214	.038%	99.448%
80.0	4.395	0.474	943.688	.038%	99.498%
81.0	4.380	0.475	944.162	.038%	99.548%
82.0	4.388	0.475	944.638	.038%	99.598%
83.0	4.395	0.477	945.115	.038%	99.648%
84.0	4.409	0.480	945.595	.039%	99.699%
85.0	4.395	0.480	946.075	.039%	99.750%
86.0	4.373	0.479	946.554	.039%	99.800%
87.0	4.317	0.476	947.03	.038%	99.850%
88.0	4.317	0.473	947.503	.038%	99.900%
89.0	4.331	0.474	947.977	.038%	99.950%
90.0	4.303	0.473	948.45	.038%	100.000%

Zonal flux distribution table

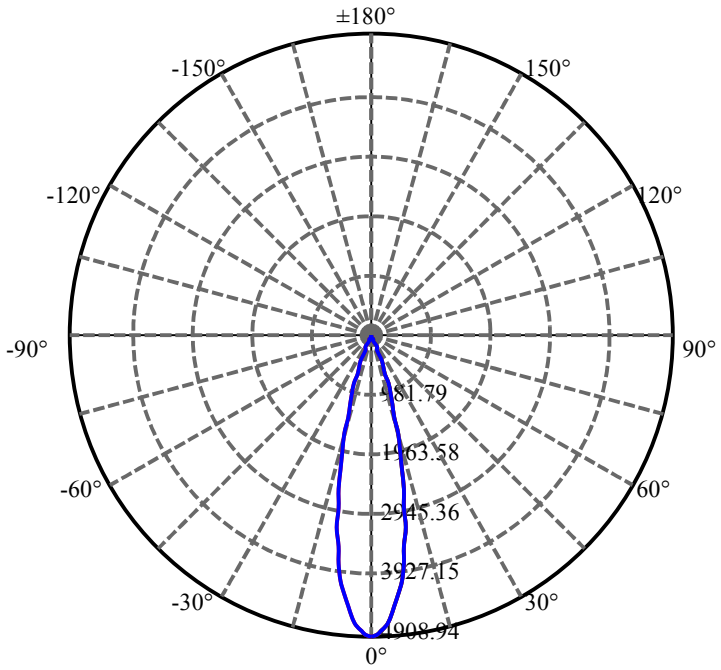
ZONAL LUMEN SUMMARY

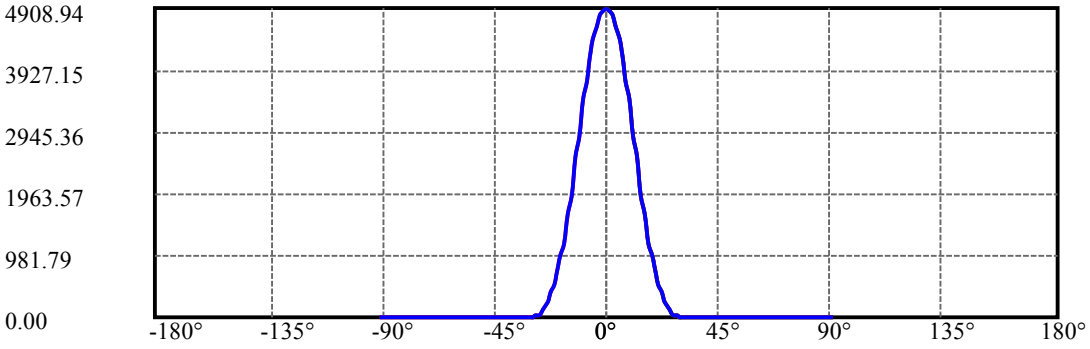
Zone	Lumens	%Lamp	%Fixt
0-30	921.69	74.09%	97.18%
0-40	926.28	74.46%	97.66%
0-60	934.56	75.13%	98.54%
0-90	947.98	76.20%	99.95%
0-120	947.98	76.20%	99.95%
0-180	948.45	76.24%	100.00%
60-90	13.85	1.11%	1.46%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.35	758.76	60.99%	80.00%

ZONAL LUMEN SUMMARY

0-10	382.85
10-20	457.90
20-30	80.94
30-40	4.59
40-50	4.05
50-60	4.23
60-70	4.47
70-80	4.66
80-90	4.29
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):

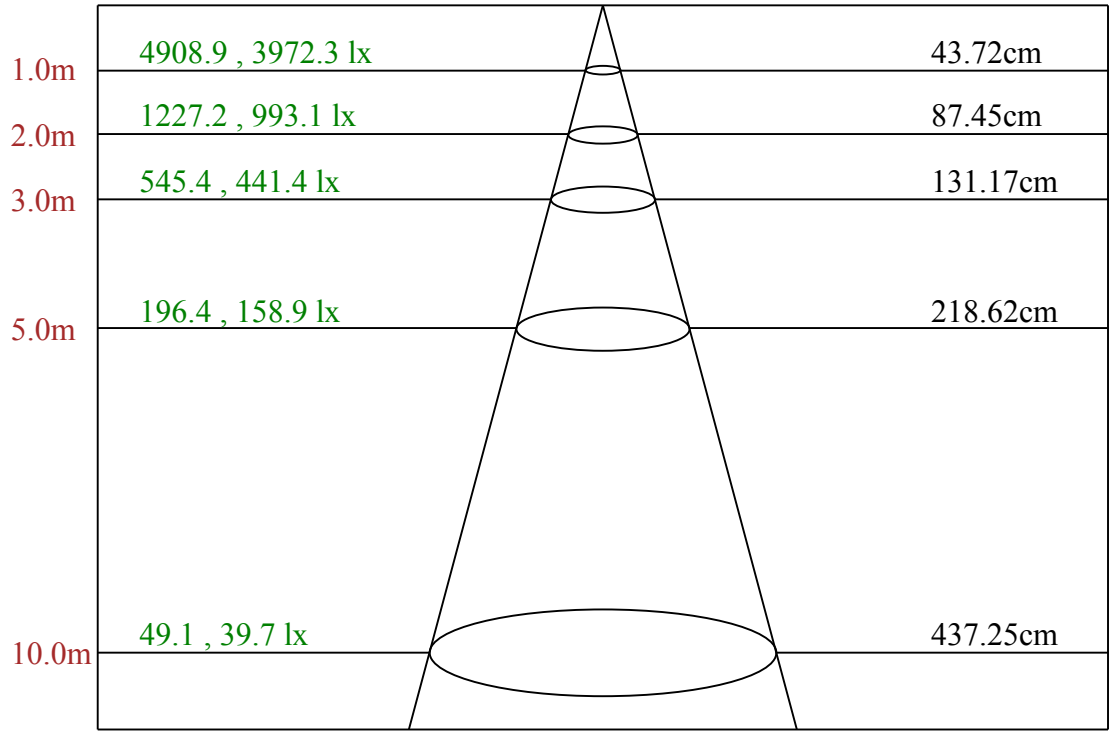
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:21.2 Right:21.2
:C90/270Left:21.2 Right:21.2

Beam Angle(50%Imax):C0/180Left:12.3 Right:12.3
:C90/270Left:12.3 Right:12.3

Lux distance Curve

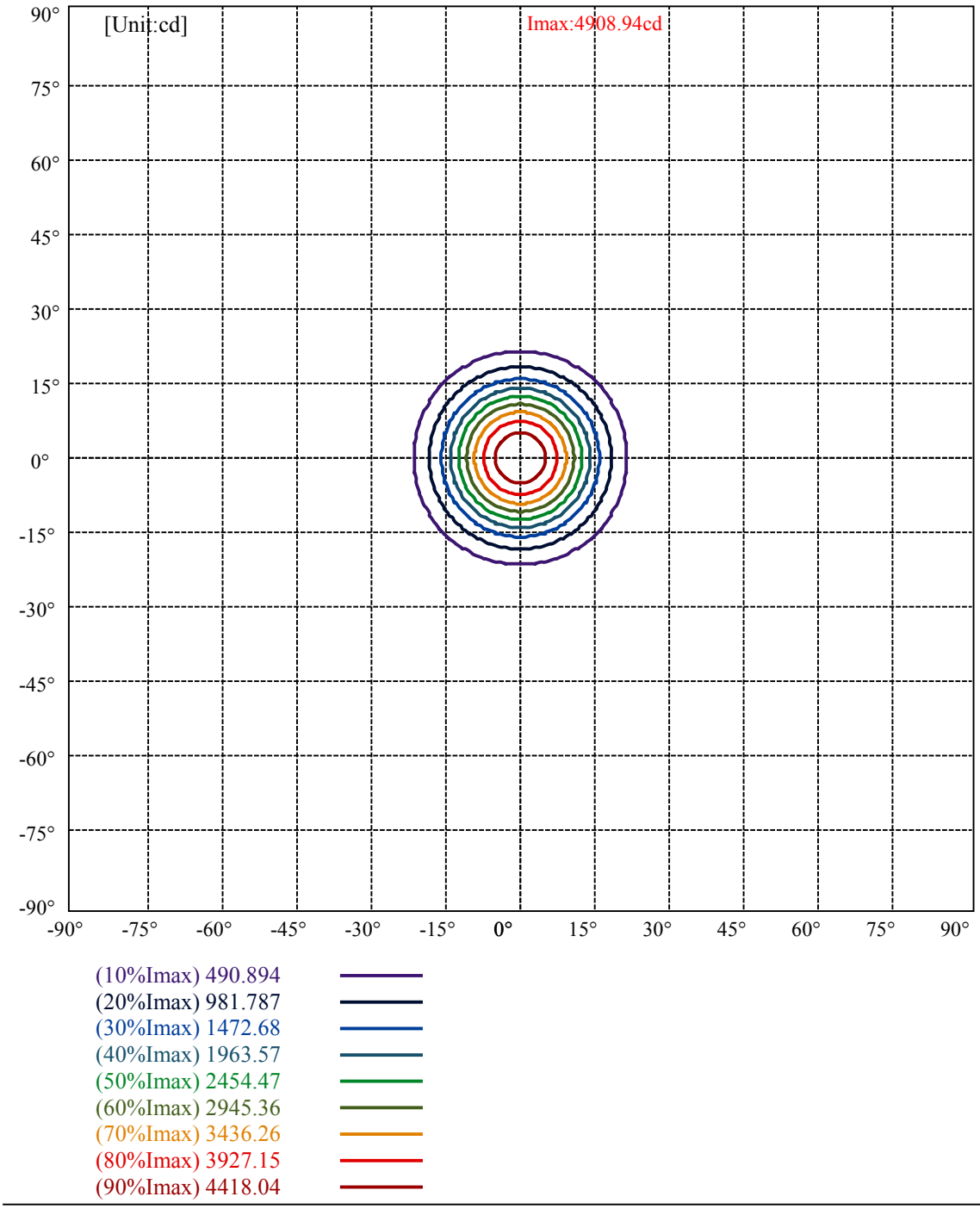


Max , Ave

Beam angle of C0 plane 24.66

Equipment: GMS1980	Date: 2019/9/21	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

ISO-Intensity(V-H)

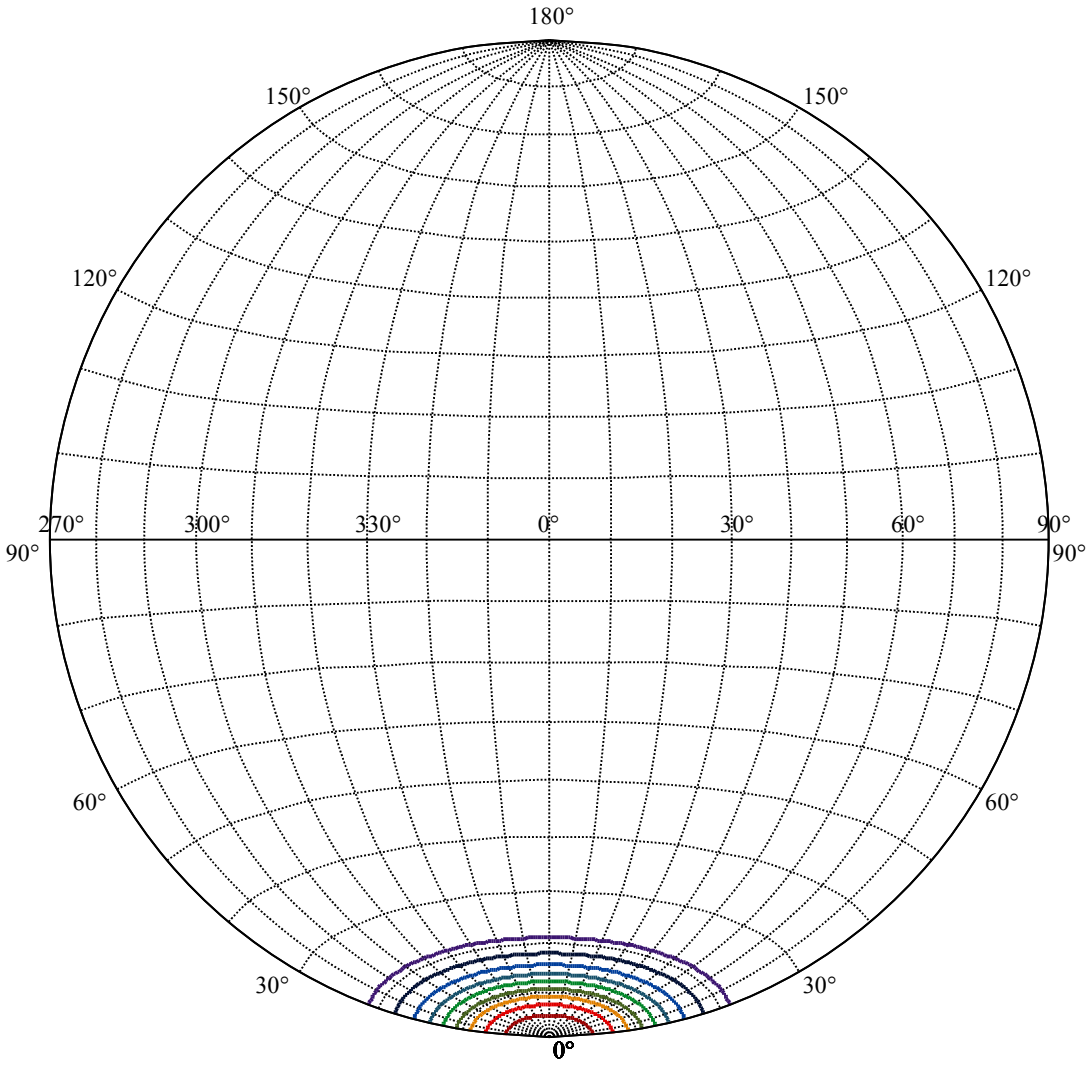


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/21
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:4908.94

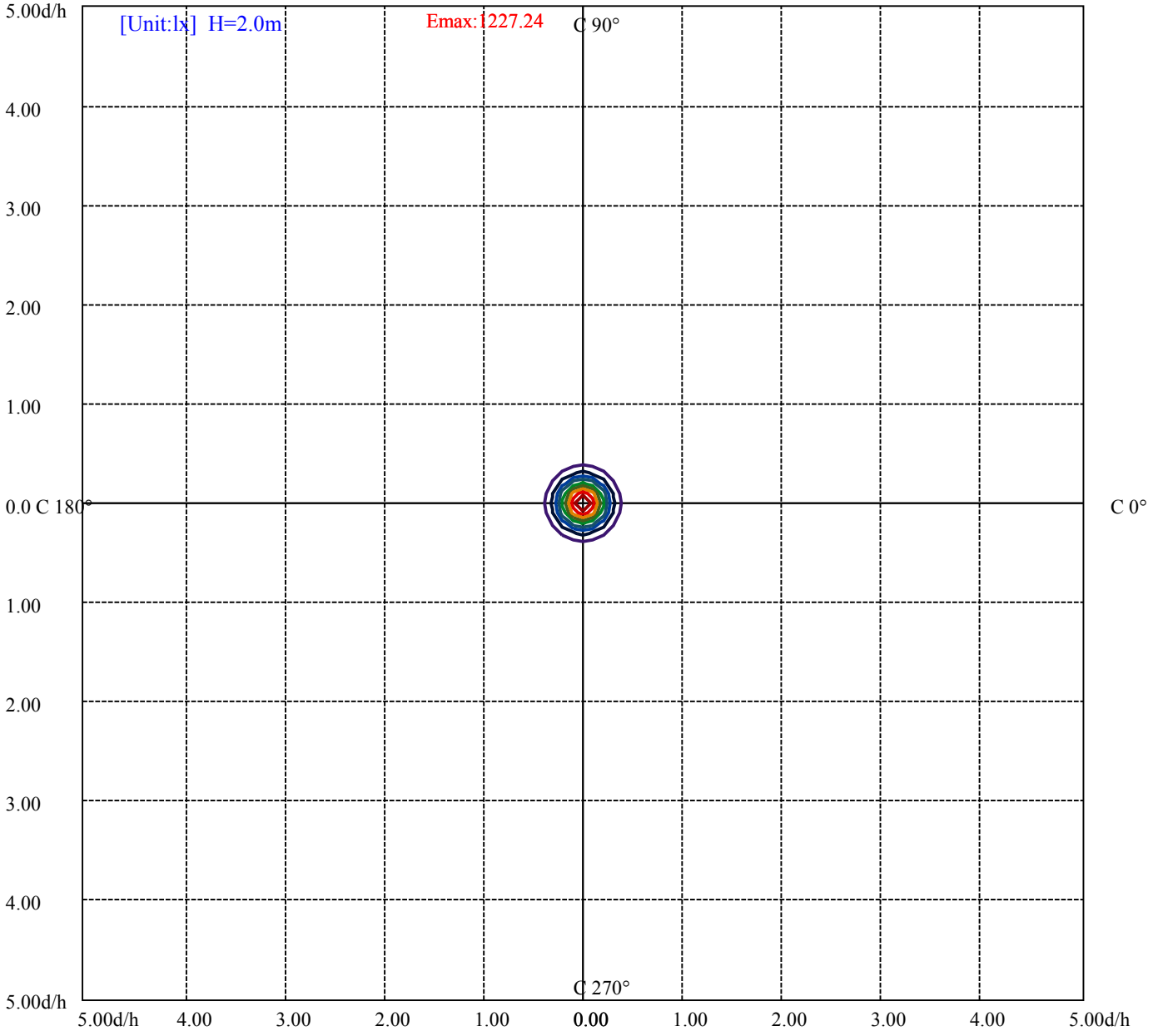
(10%Imax) 490.894
(20%Imax) 981.787
(30%Imax) 1472.68
(40%Imax) 1963.57
(50%Imax) 2454.47
(60%Imax) 2945.36
(70%Imax) 3436.26
(80%Imax) 3927.15
(90%Imax) 4418.04

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/21
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO illuminance diagram

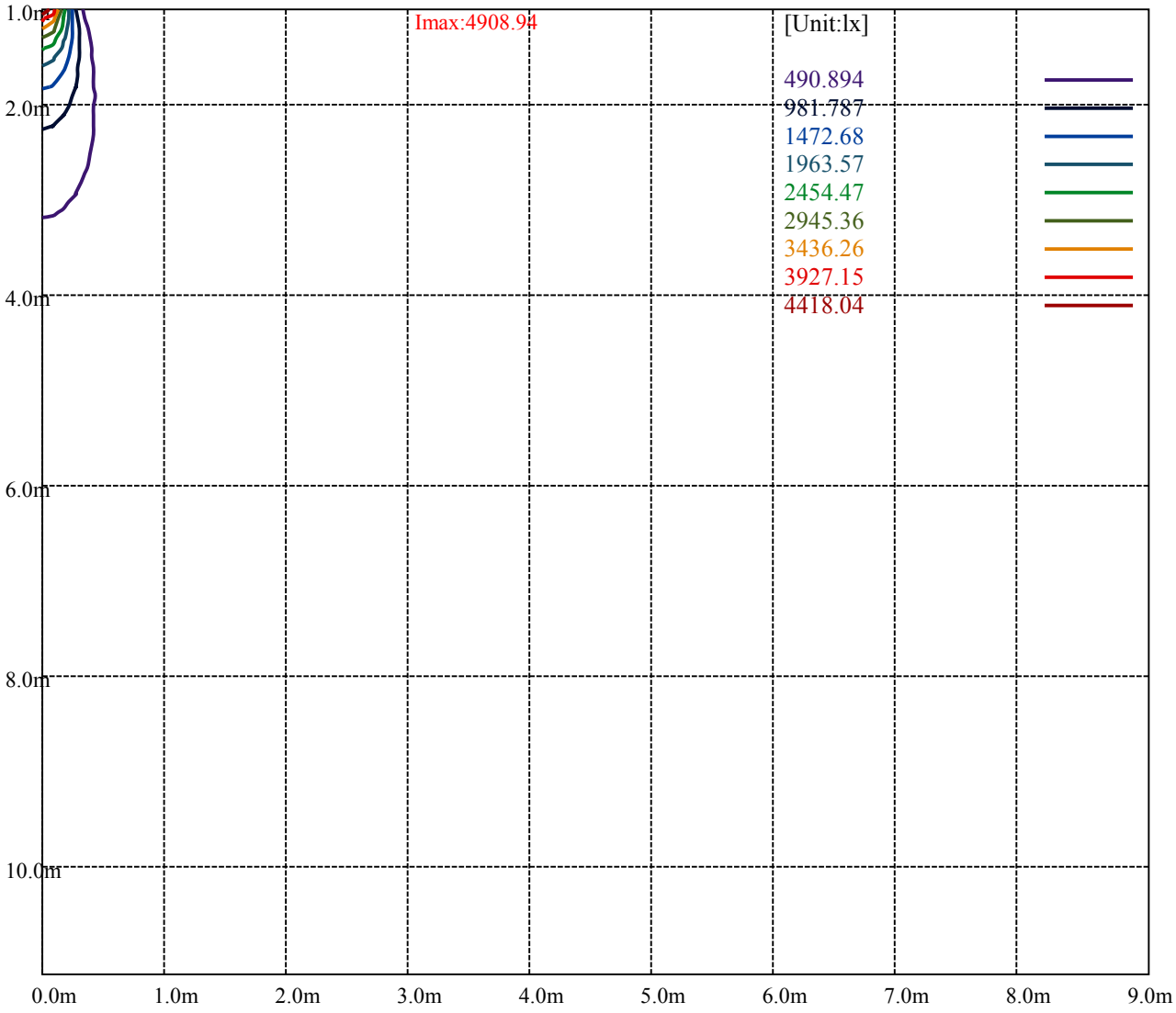


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/21
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/21
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

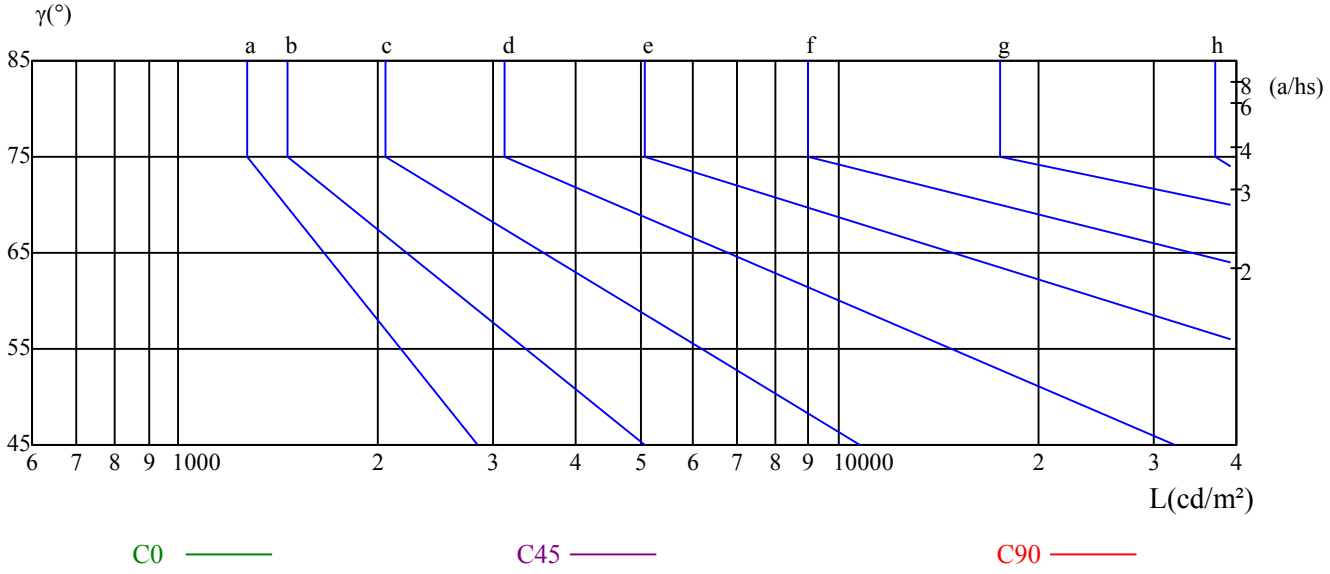
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

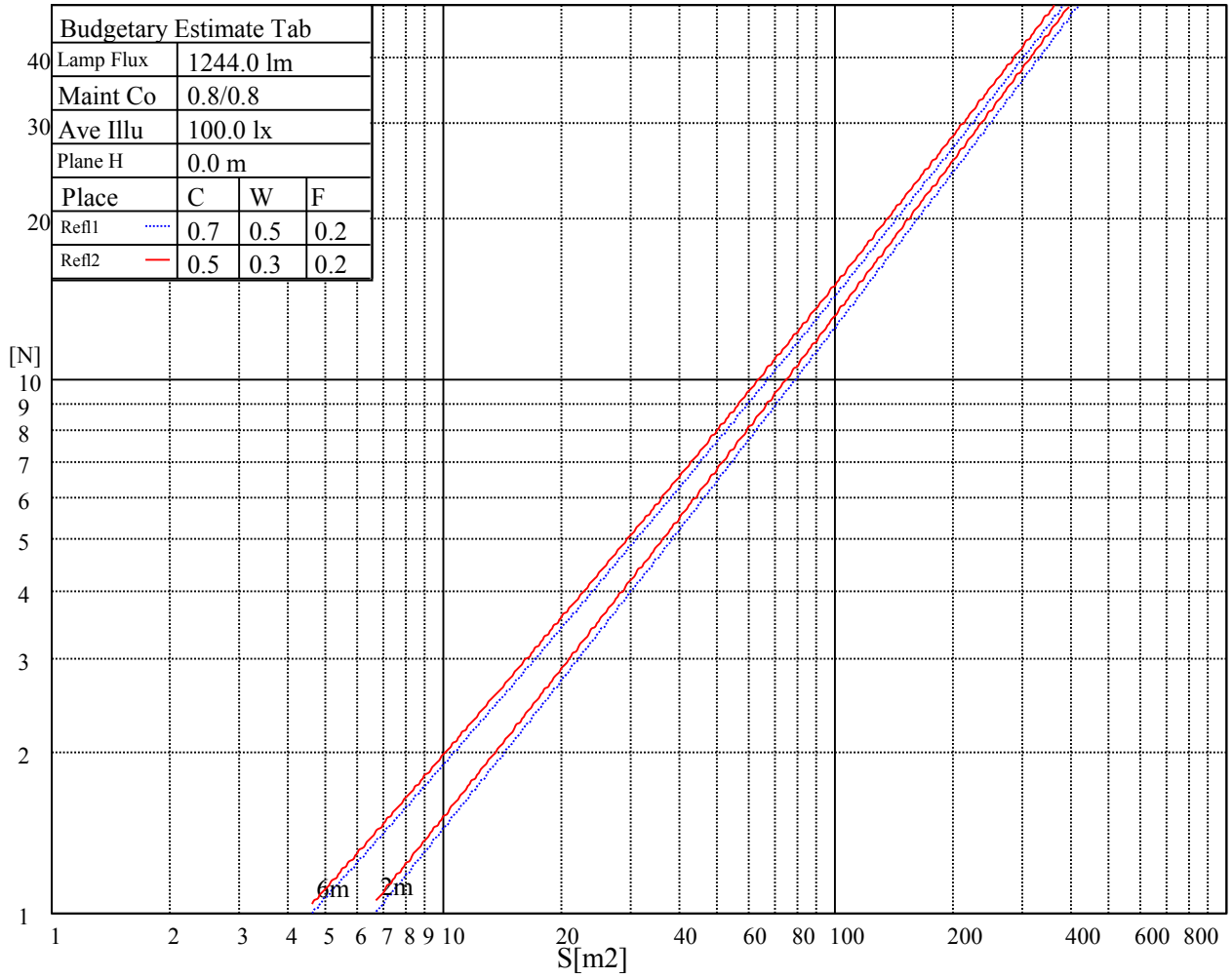
Glare Table

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

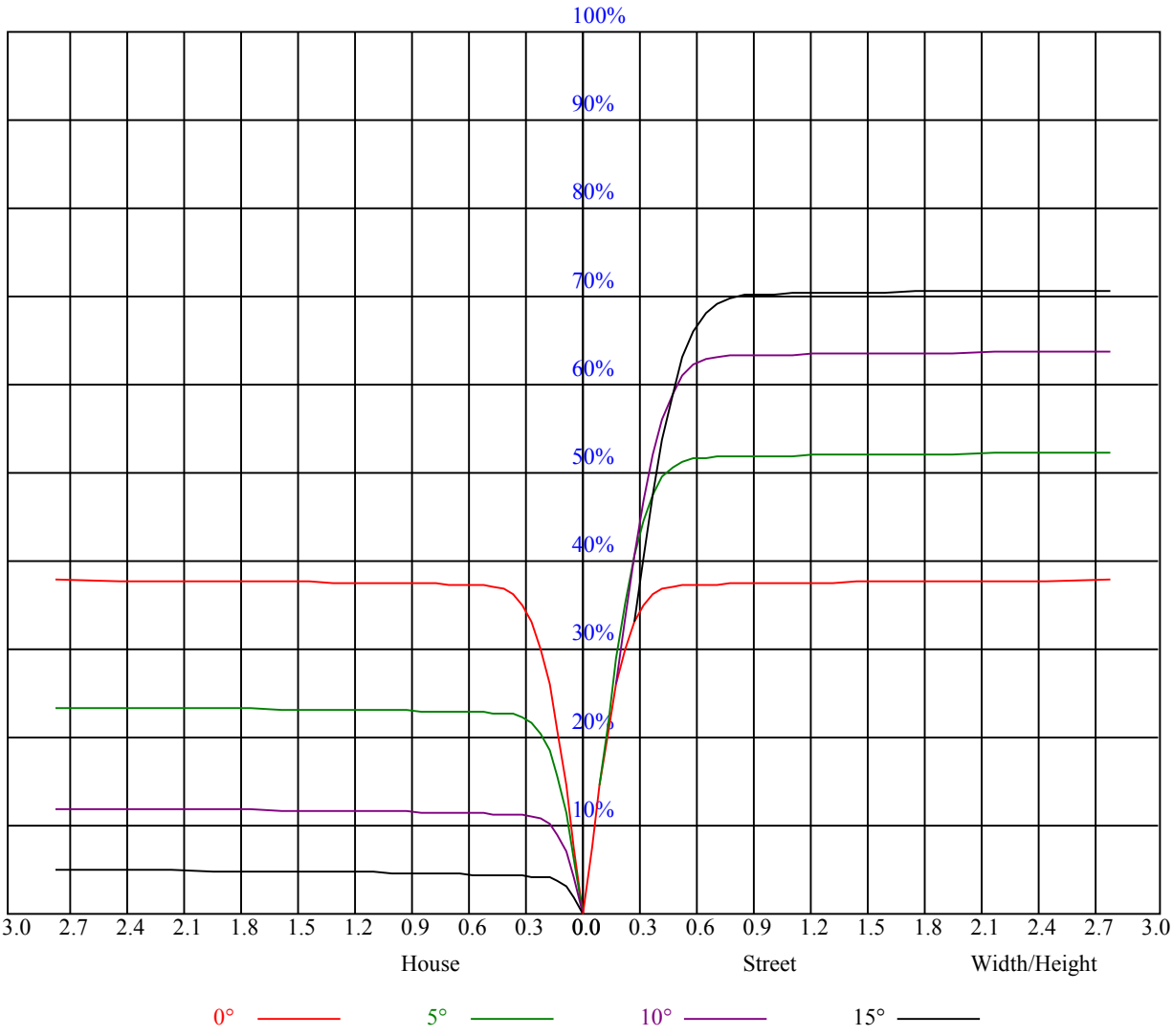


Equipment: GMS1980 Date: 2019/9/21 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.86	0.85	0.83	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.74
2	0.82	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.76	0.75	0.74	0.74	0.73	0.72	0.71
3	0.79	0.76	0.74	0.78	0.76	0.74	0.76	0.74	0.73	0.74	0.73	0.71	0.73	0.71	0.70	0.69
4	0.76	0.73	0.71	0.75	0.73	0.71	0.74	0.72	0.70	0.73	0.71	0.69	0.71	0.70	0.68	0.68
5	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.67	0.66
6	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.69	0.67	0.65	0.68	0.66	0.65	0.64
7	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.68	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	0.66	0.64	0.62	0.61
9	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.60
10	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.61	0.60	0.63	0.61	0.60	0.63	0.61	0.59	0.59

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/9/21	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	4906.13	4902.19	4859.44	4784.63	4647.94	4488.19	4320.56	4098.38	3876.19
45.0	4907.81	4906.13	4852.13	4769.44	4652.44	4469.63	4293.56	4086.00	3822.75
90.0	4910.06	4883.63	4807.13	4686.19	4548.38	4359.94	4161.94	3904.31	3615.19
135.0	4911.75	4902.19	4834.13	4740.19	4637.81	4430.25	4243.50	4055.63	3754.69
180.0	4906.13	4871.25	4808.81	4674.94	4536.00	4373.44	4154.63	3899.25	3645.56
225.0	4907.81	4874.63	4800.94	4689.56	4567.50	4388.06	4203.56	3957.19	3681.56
270.0	4910.06	4902.19	4847.06	4772.81	4658.63	4487.06	4324.50	4132.13	3880.69
315.0	4911.75	4886.44	4821.75	4720.50	4597.88	4452.19	4259.81	4025.25	3759.19
360.0	4906.13	4902.19	4859.44	4784.63	4647.94	4488.19	4320.56	4098.38	3876.19

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3597.75	3297.94	3015.56	2723.06	2354.63	2068.31	1799.44	1517.63	1266.19
45.0	3533.63	3258.56	2931.75	2631.94	2300.06	1983.38	1719.00	1459.13	1220.63
90.0	3340.13	3008.25	2673.00	2380.50	2099.25	1769.63	1534.50	1319.63	1102.05
135.0	3454.88	3206.81	2832.19	2531.81	2238.19	1896.75	1644.75	1420.31	1173.38
180.0	3331.69	3004.31	2705.63	2378.25	2097.00	1801.13	1533.94	1246.50	1121.40
225.0	3409.88	3089.81	2755.69	2460.94	2174.63	1841.63	1595.25	1364.63	1115.33
270.0	3600.56	3325.50	3006.00	2711.81	2383.31	2059.88	1790.44	1513.13	1263.94
315.0	3500.44	3189.94	2897.44	2565.00	2270.81	1922.63	1665.56	1425.38	1109.64
360.0	3597.75	3297.94	3015.56	2723.06	2354.63	2068.31	1799.44	1517.63	1266.19

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1073.25	898.88	705.94	569.25	444.94	306.56	294.19	134.04	72.17
45.0	1037.25	864.56	677.25	548.44	425.25	298.13	231.24	122.74	68.85
90.0	911.59	761.34	605.42	462.66	350.04	239.79	157.33	88.26	45.73
135.0	998.44	835.88	653.63	523.69	410.63	287.44	181.63	111.04	56.19
180.0	907.93	756.79	618.19	459.06	345.26	246.04	145.35	84.66	44.21
225.0	943.03	785.87	625.56	481.73	367.20	240.69	167.18	94.05	41.29
270.0	1071.00	898.31	707.06	570.38	447.19	322.31	284.63	135.68	72.00
315.0	975.49	809.61	659.42	494.49	378.51	275.01	177.75	102.04	55.69
360.0	1073.25	898.88	705.94	569.25	444.94	306.56	294.19	134.04	72.17

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	34.48	19.86	13.56	11.36	10.13	9.34	8.66	8.04	7.54
45.0	29.59	17.16	12.49	10.46	9.45	8.72	8.10	7.59	7.26
90.0	20.36	13.44	10.63	9.45	8.78	8.04	7.59	7.20	6.86
135.0	25.99	14.85	11.08	9.79	8.89	8.21	7.71	7.26	6.92
180.0	19.41	12.99	10.58	9.34	8.72	8.10	7.48	7.20	6.86
225.0	23.01	15.19	11.08	10.01	9.23	8.38	7.88	7.43	6.98
270.0	32.85	19.41	13.16	10.97	9.79	8.94	8.38	7.88	7.31
315.0	26.55	17.44	12.60	10.63	9.73	8.89	8.21	7.71	7.31
360.0	34.48	19.86	13.56	11.36	10.13	9.34	8.66	8.04	7.54

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	7.14	6.81	6.47	6.24	6.02	5.85	5.68	5.51	5.40
45.0	6.86	6.53	6.30	6.02	5.85	5.68	5.51	5.40	5.34
90.0	6.53	6.24	6.02	5.79	5.68	5.51	5.40	5.29	5.18
135.0	6.58	6.36	6.08	5.91	5.68	5.57	5.46	5.34	5.23
180.0	6.47	6.24	6.02	5.79	5.68	5.57	5.40	5.29	5.18
225.0	6.64	6.36	6.08	5.85	5.74	5.57	5.40	5.29	5.23
270.0	6.92	6.64	6.30	6.08	5.91	5.74	5.57	5.46	5.34
315.0	6.86	6.53	6.30	6.02	5.85	5.68	5.51	5.40	5.34
360.0	7.14	6.81	6.47	6.24	6.02	5.85	5.68	5.51	5.40

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	5.29	5.23	5.18	5.12	5.01	4.95	4.95	4.89	4.84
45.0	5.23	5.12	5.06	5.01	4.95	4.89	4.89	4.84	4.78
90.0	5.12	5.06	4.95	4.89	4.89	4.84	4.84	4.78	4.73
135.0	5.12	5.06	5.01	4.95	4.89	4.89	4.84	4.78	4.73
180.0	5.12	5.06	5.01	4.95	4.89	4.84	4.78	4.78	4.73
225.0	5.12	5.06	5.01	4.95	4.89	4.84	4.78	4.78	4.73
270.0	5.23	5.18	5.12	5.06	4.95	4.95	4.89	4.84	4.84
315.0	5.23	5.18	5.06	5.01	4.95	4.89	4.84	4.78	4.78
360.0	5.29	5.23	5.18	5.12	5.01	4.95	4.95	4.89	4.84

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.78	4.78	4.73	4.73	4.67	4.67	4.61	4.61	4.56
45.0	4.73	4.73	4.67	4.67	4.61	4.61	4.61	4.56	4.56
90.0	4.67	4.67	4.61	4.61	4.61	4.61	4.56	4.56	4.50
135.0	4.73	4.67	4.67	4.67	4.61	4.61	4.56	4.56	4.56
180.0	4.73	4.73	4.67	4.67	4.61	4.61	4.56	4.56	4.56
225.0	4.67	4.67	4.61	4.61	4.61	4.56	4.56	4.50	4.50
270.0	4.78	4.73	4.73	4.73	4.67	4.67	4.61	4.61	4.56
315.0	4.73	4.73	4.67	4.61	4.61	4.61	4.61	4.56	4.56
360.0	4.78	4.78	4.73	4.73	4.67	4.67	4.61	4.61	4.56

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.56	4.56	4.56	4.50	4.50	4.50	4.44	4.44	4.44
45.0	4.50	4.50	4.50	4.44	4.50	4.44	4.44	4.44	4.44
90.0	4.50	4.50	4.50	4.50	4.44	4.44	4.44	4.44	4.44
135.0	4.56	4.50	4.50	4.50	4.44	4.44	4.44	4.44	4.44
180.0	4.50	4.56	4.50	4.44	4.44	4.44	4.44	4.44	4.44
225.0	4.44	4.50	4.44	4.44	4.44	4.39	4.39	4.39	4.39
270.0	4.56	4.56	4.56	4.50	4.50	4.50	4.50	4.50	4.50
315.0	4.50	4.50	4.50	4.44	4.44	4.44	4.44	4.44	4.44
360.0	4.56	4.56	4.56	4.50	4.50	4.50	4.44	4.44	4.44

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.44	4.44	4.39	4.39	4.39	4.39	4.39	4.39	4.39
45.0	4.39	4.39	4.39	4.39	4.39	4.39	4.33	4.39	4.33
90.0	4.44	4.44	4.44	4.39	4.39	4.39	4.39	4.44	4.39
135.0	4.44	4.44	4.44	4.39	4.39	4.39	4.39	4.39	4.44
180.0	4.39	4.39	4.44	4.39	4.39	4.39	4.39	4.39	4.39
225.0	4.39	4.39	4.33	4.39	4.39	4.33	4.33	4.33	4.33
270.0	4.50	4.44	4.50	4.44	4.50	4.44	4.50	4.50	4.50
315.0	4.39	4.39	4.39	4.39	4.39	4.39	4.33	4.33	4.39
360.0	4.44	4.44	4.39	4.39	4.39	4.39	4.39	4.39	4.39

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.39	4.39	4.39	4.39	4.33	4.33	4.33	4.33	4.33
45.0	4.39	4.33	4.33	4.33	4.33	4.33	4.33	4.28	4.33
90.0	4.39	4.39	4.39	4.39	4.39	4.33	4.28	4.33	4.33
135.0	4.39	4.39	4.39	4.44	4.44	4.44	4.33	4.33	4.33
180.0	4.39	4.39	4.39	4.39	4.39	4.39	4.33	4.33	4.33
225.0	4.33	4.39	4.33	4.33	4.33	4.33	4.28	4.28	4.33
270.0	4.44	4.50	4.56	4.67	4.61	4.50	4.33	4.33	4.33
315.0	4.33	4.33	4.39	4.33	4.33	4.33	4.33	4.33	4.33
360.0	4.39	4.39	4.39	4.39	4.33	4.33	4.33	4.33	4.33

Intensity data(cd)

C/γ(°)	90.0
0.0	4.33
45.0	4.28
90.0	4.28
135.0	4.33
180.0	4.33
225.0	4.28
270.0	4.28
315.0	4.33
360.0	4.33