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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: CT01D04508CH
Luminaire: 92.70.183.00
Report No: NATA0100 Voltage(V): 9.4600
Test No: GC2019082933 Current(A): 0.3570
LampCAT: EDSION 2PHM10WW38P55020 LES 3MM Power (W): 3.3700
Lamp flux(lm): 381.0 PF: 0.0000
Number of Lamps: 1 Ballast type: DC
Length(mm): 35 Width(mm): 35
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 320.88
Efficiency(%): 84.22%
Lumens(lm)/Power(W): 95.22
Central intensity(cd): 8623.547
Maximum intensity(cd): 8623.547
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=7.3
[C90/270]Total=7.3
Field angle(10%Imax): [C0/180]Total=13.9
[C90/270]Total=13.9
Maximum s/h(1/2): C0_180=0.13 C90_270=0.13
Maximum s/h(1/4): C0_180=0.13 C90_270=0.13
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.22%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 93.591%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8623.547	0.000	0	.000%	.000%
1.0	8246.109	8.072	8.072	2.119%	2.516%
2.0	7100.508	22.027	30.099	5.781%	9.380%
3.0	5457.234	30.034	60.133	7.883%	18.740%
4.0	3723.117	30.730	90.862	8.066%	28.316%
5.0	2364.413	26.188	117.051	6.874%	36.478%
6.0	1299.122	19.253	136.303	5.053%	42.478%
7.0	840.255	13.279	149.582	3.485%	46.616%
8.0	600.553	10.312	159.894	2.706%	49.829%
9.0	459.661	8.592	168.487	2.255%	52.507%
10.0	378.780	7.588	176.074	1.991%	54.872%
11.0	328.591	7.068	183.142	1.855%	57.075%
12.0	286.242	6.721	189.863	1.764%	59.169%
13.0	241.186	6.259	196.122	1.643%	61.120%
14.0	213.082	5.815	201.937	1.526%	62.932%
15.0	184.120	5.453	207.39	1.431%	64.631%
16.0	160.003	5.042	212.432	1.323%	66.203%
17.0	140.245	4.676	217.108	1.227%	67.660%
18.0	124.636	4.367	221.475	1.146%	69.021%
19.0	110.074	4.083	225.559	1.072%	70.293%
20.0	97.770	3.804	229.363	.998%	71.479%
21.0	86.681	3.542	232.905	.930%	72.583%
22.0	76.725	3.284	236.189	.862%	73.606%
23.0	69.230	3.063	239.251	.804%	74.560%
24.0	61.798	2.865	242.116	.752%	75.453%
25.0	55.779	2.673	244.789	.702%	76.286%
26.0	51.124	2.523	247.313	.662%	77.073%
27.0	46.905	2.398	249.711	.629%	77.820%
28.0	43.088	2.278	251.989	.598%	78.530%
29.0	40.254	2.180	254.17	.572%	79.210%
30.0	37.969	2.112	256.282	.554%	79.868%
31.0	35.803	2.053	258.335	.539%	80.508%
32.0	34.193	2.005	260.34	.526%	81.133%
33.0	32.885	1.976	262.316	.519%	81.748%
34.0	31.620	1.952	264.268	.512%	82.357%
35.0	30.459	1.928	266.196	.506%	82.958%
36.0	29.461	1.908	268.104	.501%	83.552%
37.0	28.371	1.886	269.99	.495%	84.140%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	27.190	1.855	271.845	.487%	84.718%
39.0	25.910	1.812	273.657	.476%	85.283%
40.0	24.567	1.760	275.418	.462%	85.831%
41.0	23.351	1.706	277.124	.448%	86.363%
42.0	22.022	1.648	278.773	.433%	86.877%
43.0	20.707	1.583	280.355	.415%	87.370%
44.0	19.659	1.524	281.879	.400%	87.845%
45.0	18.731	1.475	283.354	.387%	88.305%
46.0	17.634	1.422	284.777	.373%	88.748%
47.0	16.805	1.370	286.146	.360%	89.175%
48.0	16.038	1.328	287.474	.348%	89.589%
49.0	15.180	1.282	288.756	.336%	89.988%
50.0	14.351	1.231	289.987	.323%	90.372%
51.0	13.676	1.186	291.173	.311%	90.741%
52.0	13.008	1.145	292.318	.301%	91.098%
53.0	12.389	1.105	293.423	.290%	91.442%
54.0	11.855	1.069	294.491	.280%	91.775%
55.0	11.348	1.036	295.527	.272%	92.098%
56.0	10.920	1.006	296.533	.264%	92.412%
57.0	10.519	0.980	297.514	.257%	92.717%
58.0	10.146	0.956	298.469	.251%	93.015%
59.0	9.837	0.934	299.403	.245%	93.306%
60.0	9.534	0.915	300.318	.240%	93.591%
61.0	9.218	0.895	301.213	.235%	93.870%
62.0	8.972	0.876	302.09	.230%	94.143%
63.0	8.747	0.862	302.952	.226%	94.412%
64.0	8.501	0.846	303.798	.222%	94.676%
65.0	8.304	0.832	304.63	.218%	94.935%
66.0	8.079	0.817	305.447	.215%	95.190%
67.0	7.840	0.800	306.247	.210%	95.439%
68.0	7.566	0.780	307.028	.205%	95.682%
69.0	7.284	0.758	307.785	.199%	95.918%
70.0	7.003	0.734	308.519	.193%	96.147%
71.0	6.743	0.710	309.23	.186%	96.368%
72.0	6.462	0.687	309.916	.180%	96.582%
73.0	6.244	0.664	310.581	.174%	96.790%
74.0	6.124	0.650	311.231	.171%	96.992%
75.0	6.054	0.643	311.874	.169%	97.193%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.026	0.641	312.516	.168%	97.393%
77.0	6.019	0.642	313.158	.169%	97.593%
78.0	5.984	0.642	313.8	.169%	97.793%
79.0	5.822	0.634	314.435	.166%	97.991%
80.0	5.625	0.617	315.052	.162%	98.183%
81.0	5.498	0.602	315.653	.158%	98.370%
82.0	5.484	0.596	316.249	.156%	98.556%
83.0	5.541	0.599	316.848	.157%	98.743%
84.0	5.583	0.606	317.454	.159%	98.932%
85.0	5.562	0.608	318.062	.160%	99.121%
86.0	5.527	0.606	318.668	.159%	99.310%
87.0	5.379	0.597	319.265	.157%	99.496%
88.0	5.133	0.576	319.841	.151%	99.675%
89.0	4.732	0.541	320.382	.142%	99.844%
90.0	4.402	0.501	320.883	.131%	100.000%

Zonal flux distribution table

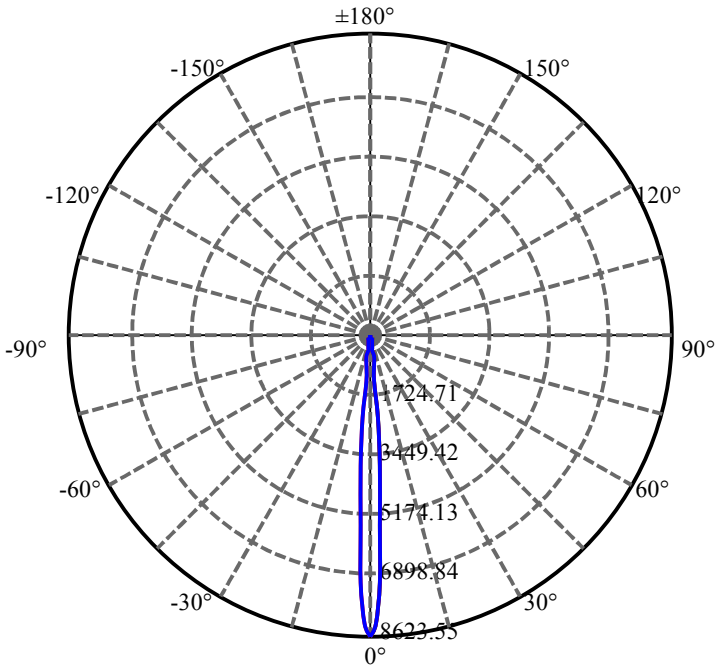
ZONAL LUMEN SUMMARY

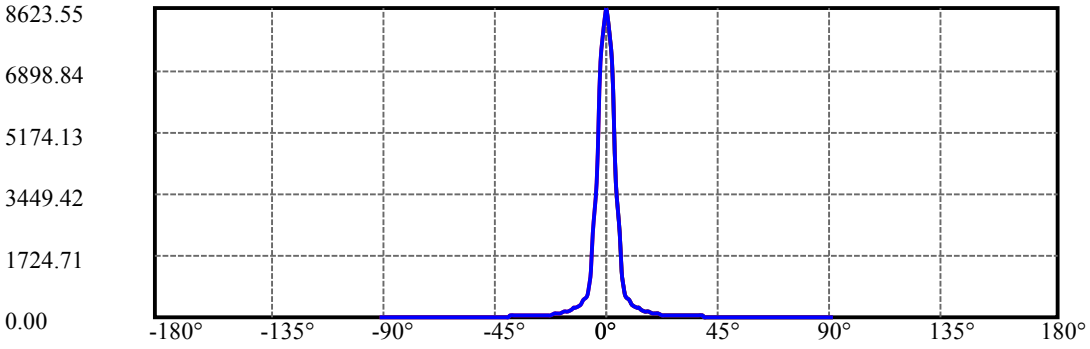
Zone	Lumens	%Lamp	%Fixt
0-30	256.28	67.27%	79.87%
0-40	275.42	72.29%	85.83%
0-60	300.32	78.82%	93.59%
0-90	320.38	84.09%	99.84%
0-120	320.38	84.09%	99.84%
0-180	320.88	84.22%	100.00%
60-90	20.98	5.51%	6.54%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-30.21	256.71	67.38%	80.00%

ZONAL LUMEN SUMMARY

0-10	176.07
10-20	53.29
20-30	26.92
30-40	19.14
40-50	14.57
50-60	10.33
60-70	8.20
70-80	6.53
80-90	5.33
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):

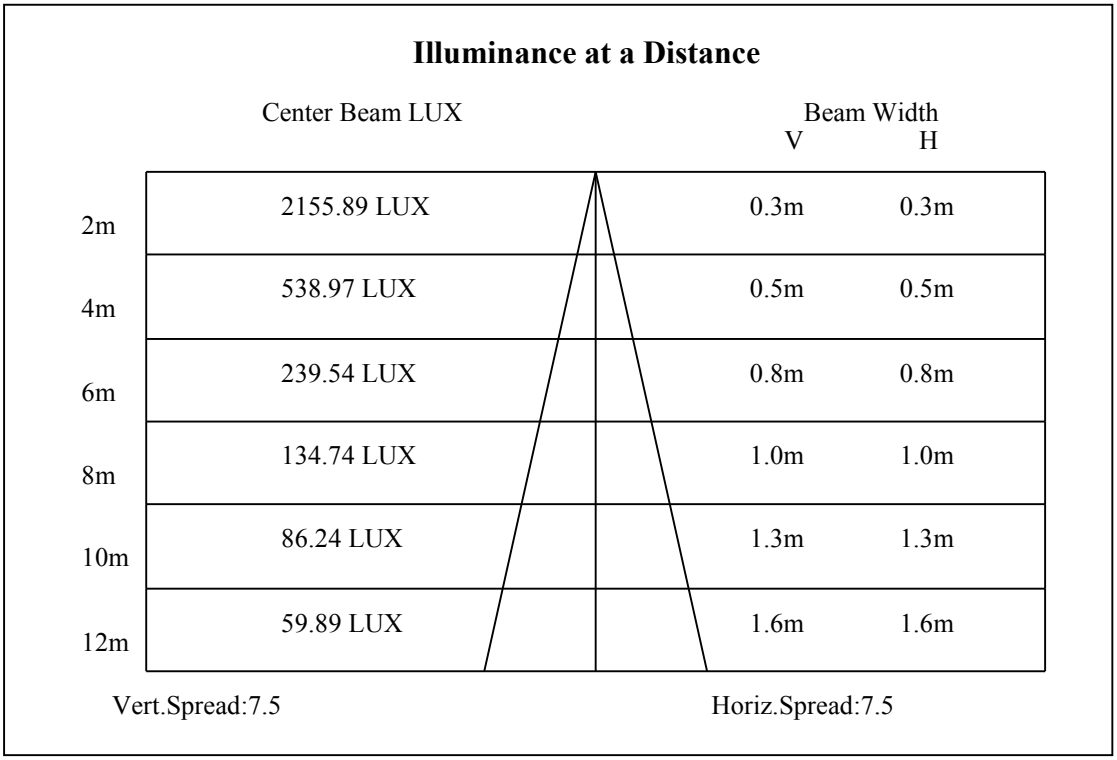
C0/C180:

C90/C270:

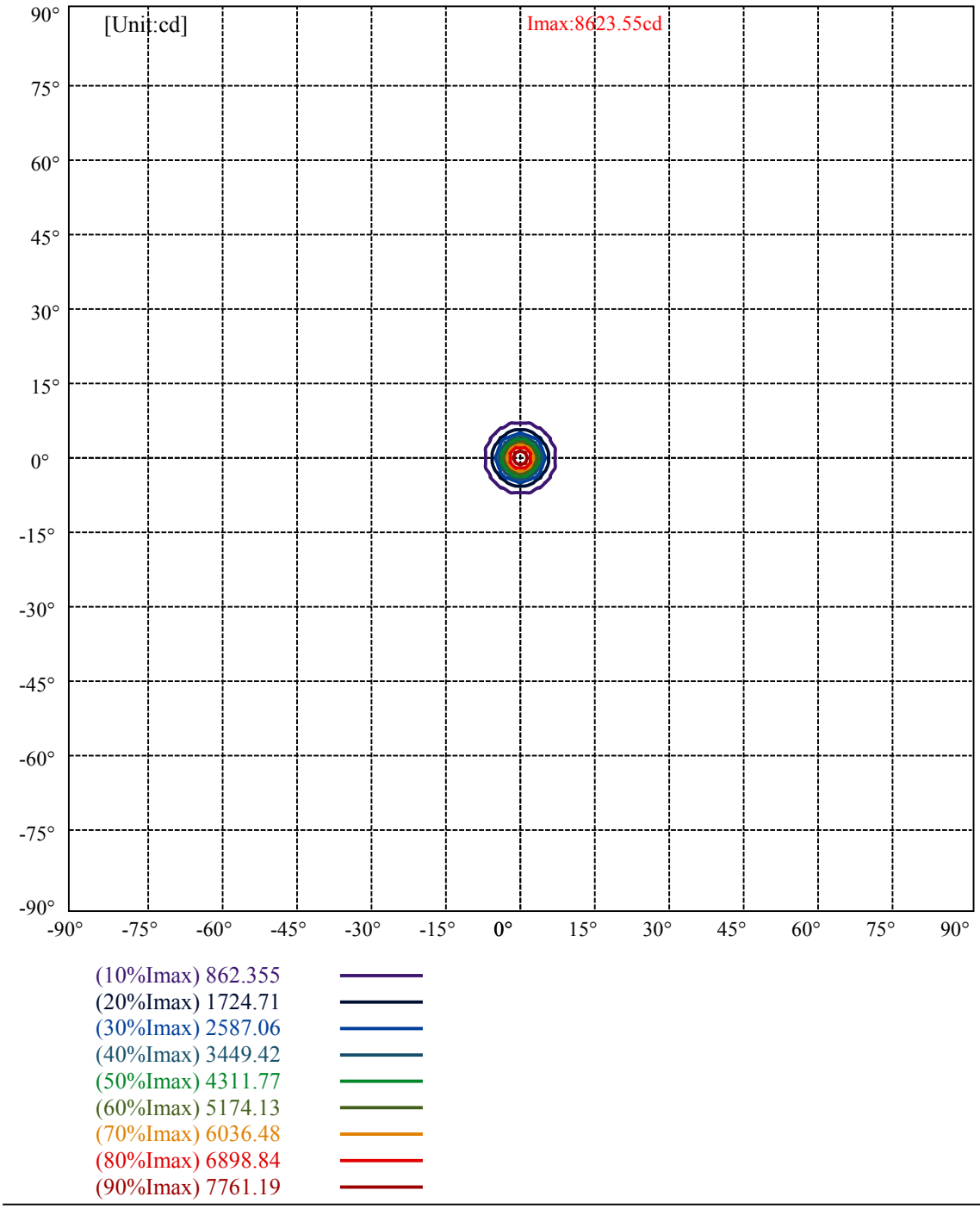
Field angle(10%Imax):C0/180Left:7.0 Right:7.0
:C90/270Left:7.0 Right:7.0

Beam Angle(50%Imax):C0/180Left:3.7 Right:3.7
:C90/270Left:3.7 Right:3.7

Lux distance Curve



ISO-Intensity(V-H)

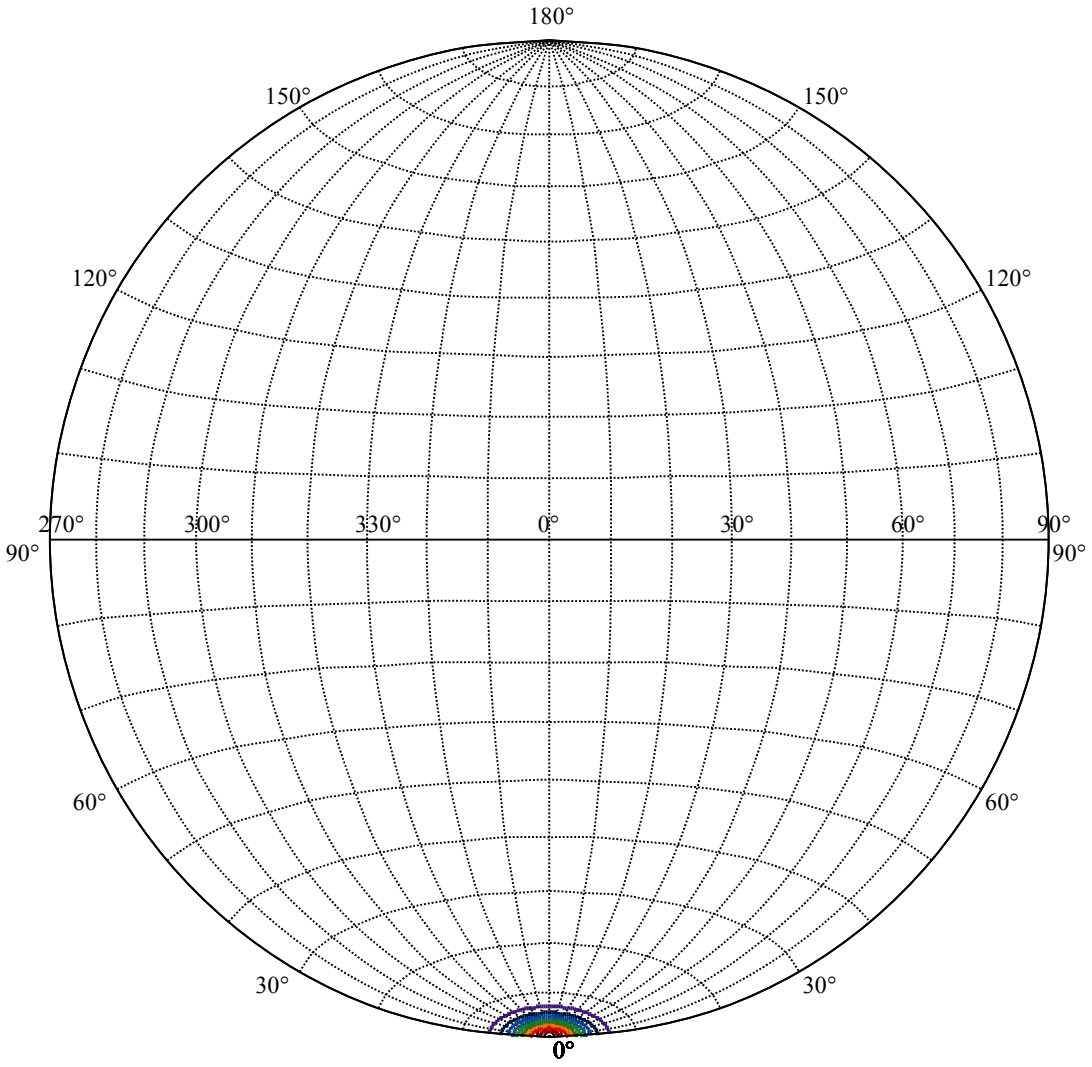


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/29
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8623.55

(10%Imax) 862.355
(20%Imax) 1724.71
(30%Imax) 2587.06
(40%Imax) 3449.42
(50%Imax) 4311.77
(60%Imax) 5174.13
(70%Imax) 6036.48
(80%Imax) 6898.84
(90%Imax) 7761.19

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/29
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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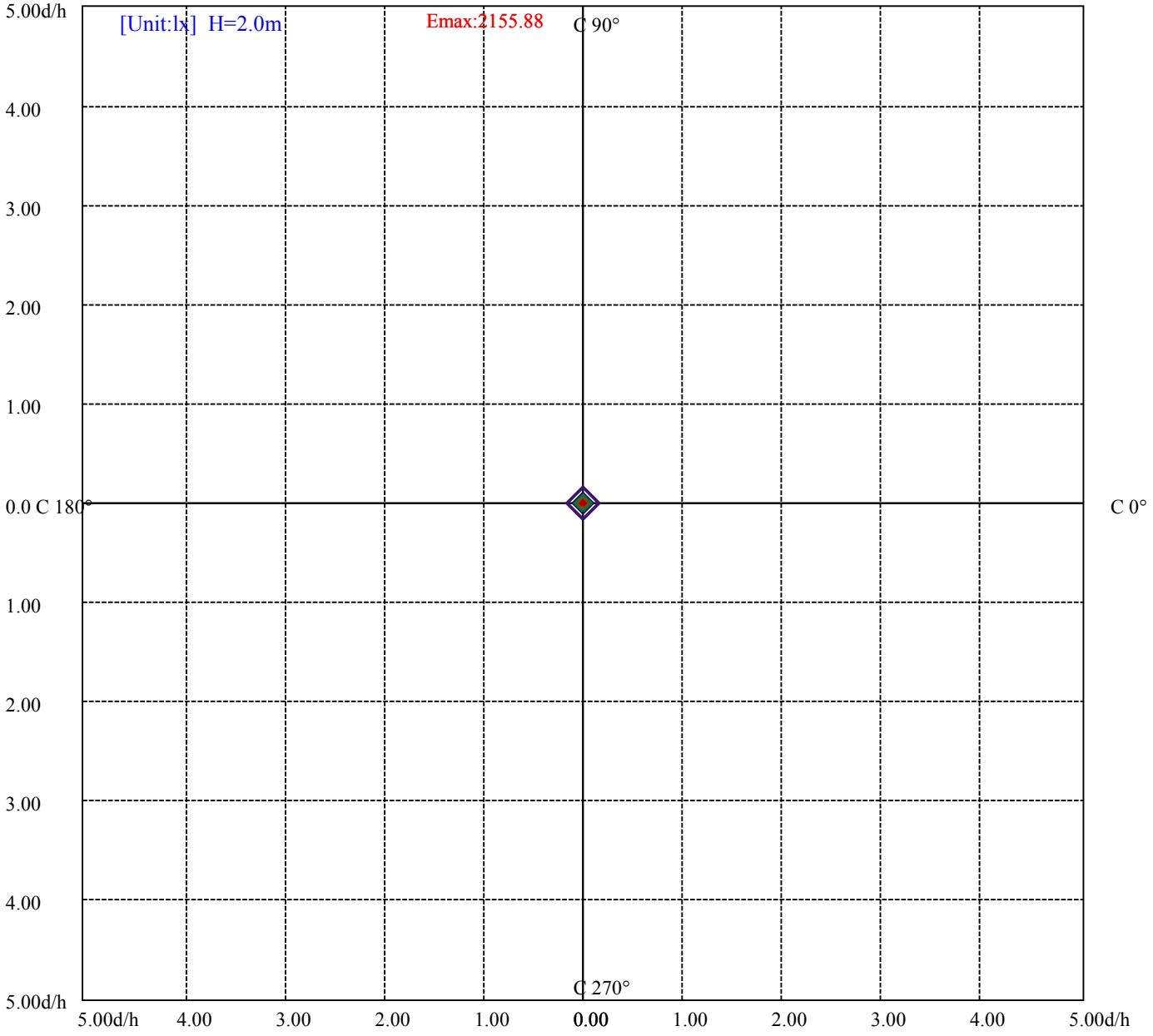
ISO illuminance diagram

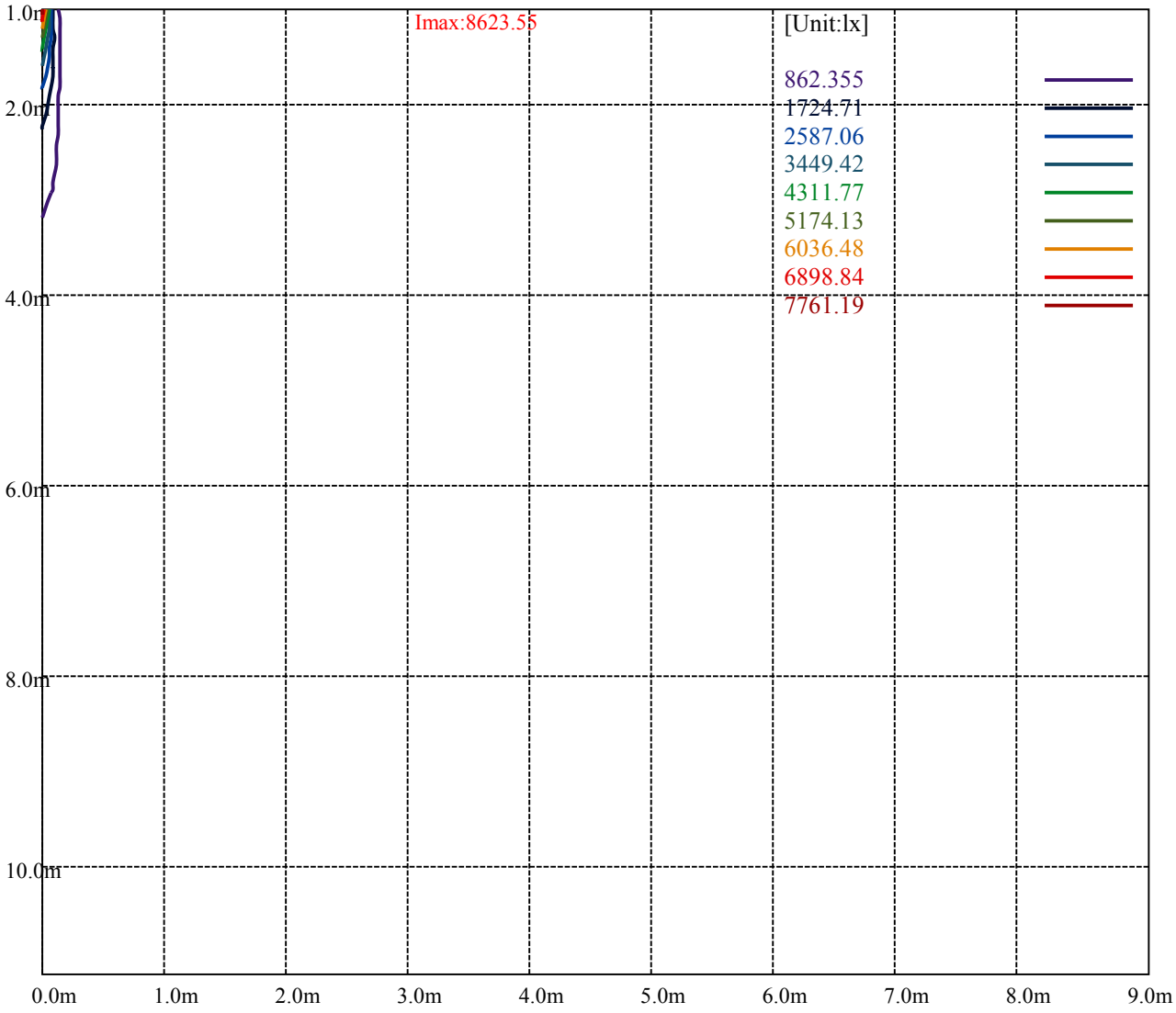


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/29
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/29
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

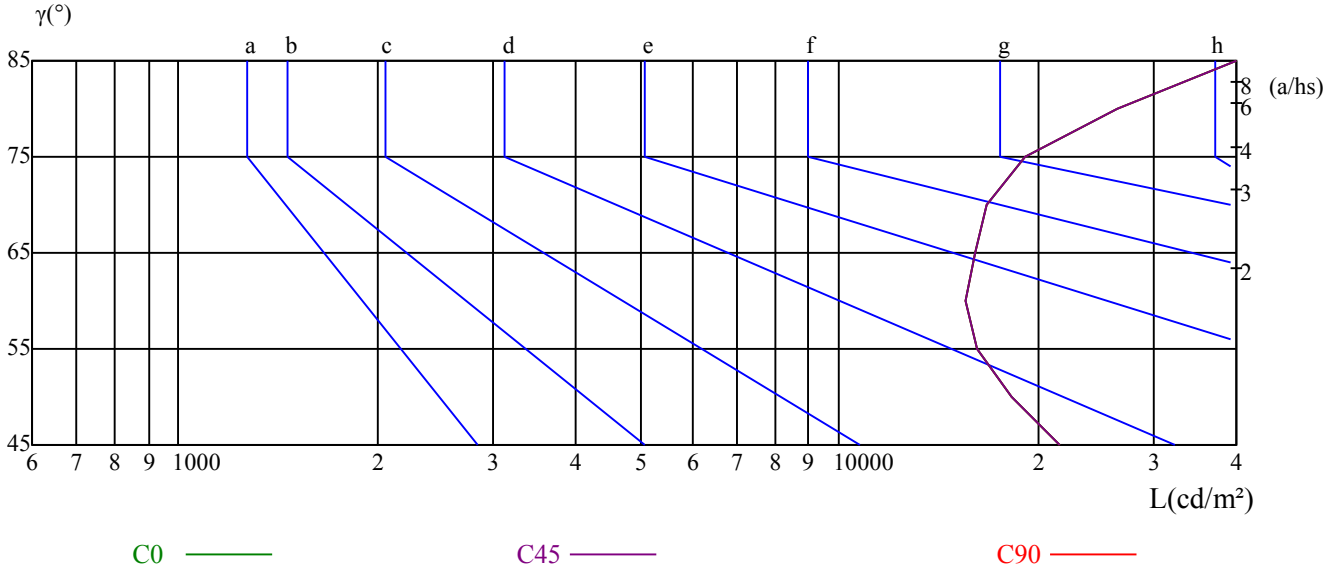
γ	45	50	55	60	65	70	75	80	85
C0	21624	18225	16151	15566	16040	16715	19094	26443	52093
C45	21624	18225	16151	15566	16040	16715	19094	26443	52093
C90	21624	18225	16151	15566	16040	16715	19094	26443	52093

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
16040	16040	16040	19094	19094	19094	52093	52093	52093

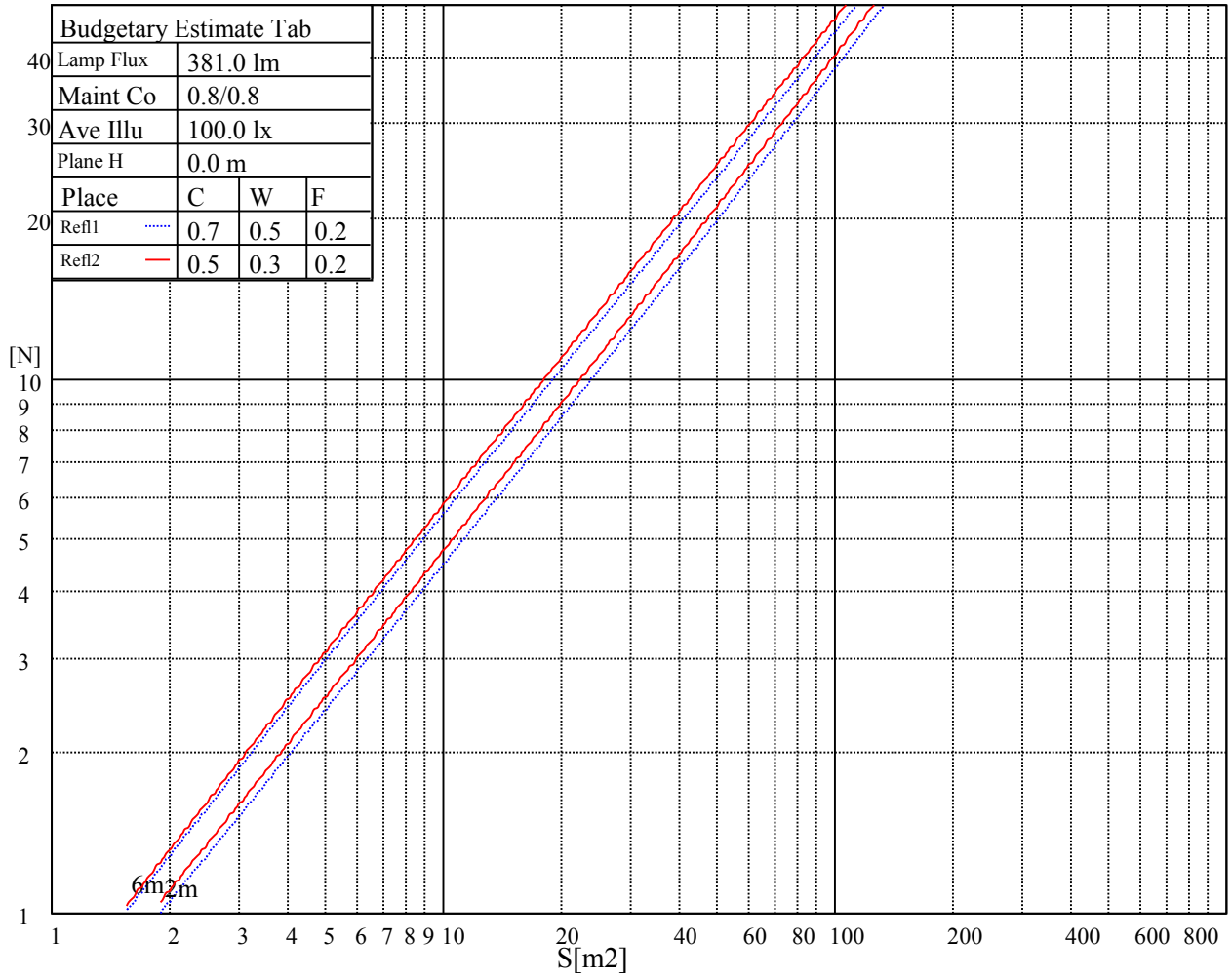
Glare Table

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

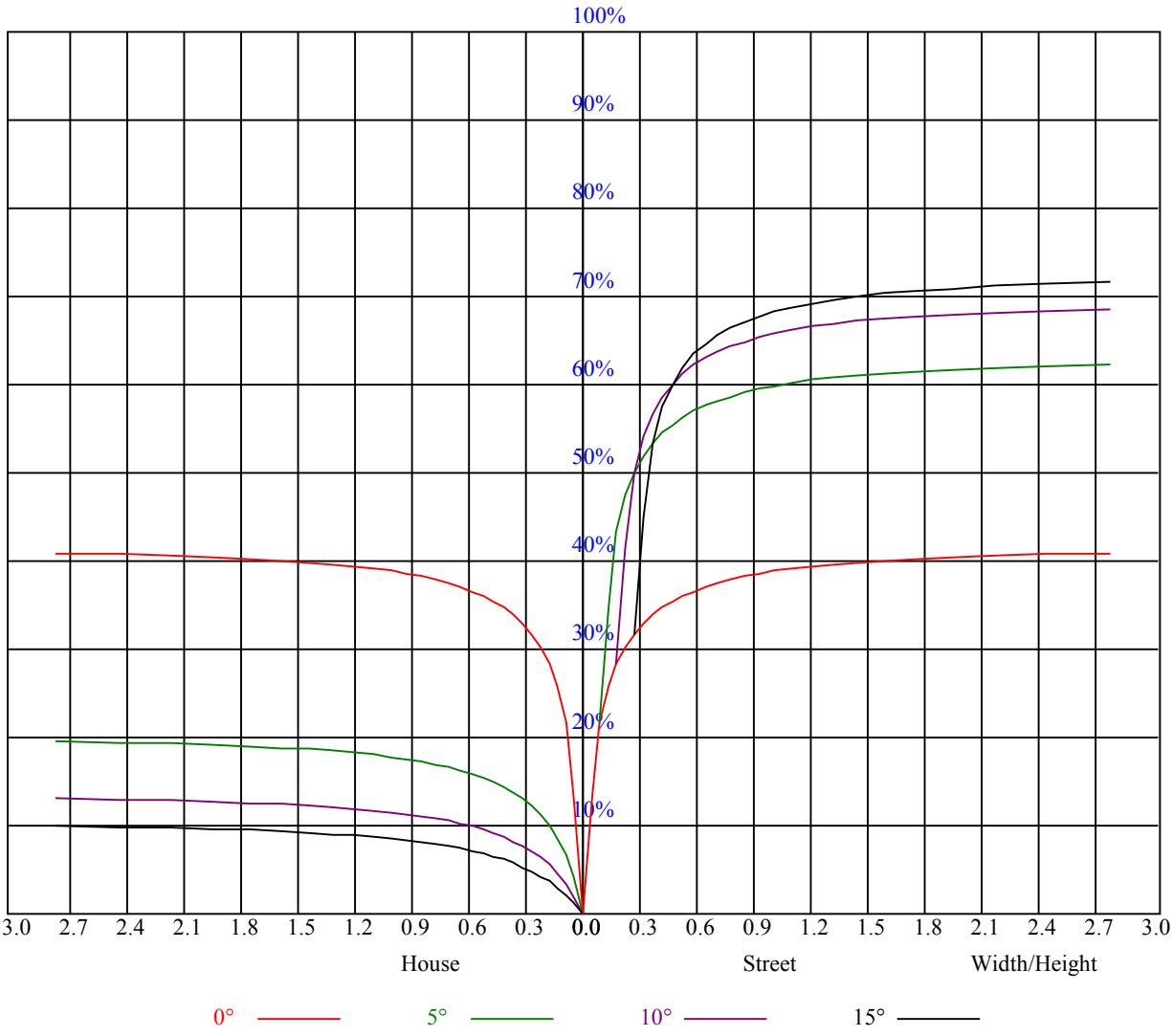


Equipment: GMS1980
Temperature(°C): 25.0
Date: 2019/8/29
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.93	0.91	0.90	0.92	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.81	0.79
2	0.88	0.85	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.79	0.78	0.77	0.75
3	0.84	0.80	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.76	0.75	0.77	0.75	0.73	0.72
4	0.80	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
8	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.63
9	0.69	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
10	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.61

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/8/29	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	8699.06	7644.94	5486.06	3678.75	2224.69	1217.81	755.44	557.44	435.94
45.0	8818.88	8317.13	6890.63	4885.31	3187.69	1922.06	1105.31	711.00	538.88
90.0	8661.94	8370.56	7410.38	5612.06	3756.38	2409.19	1086.92	888.47	633.38
135.0	8314.31	8858.81	8710.88	7827.75	6247.13	4496.63	2588.06	1561.50	982.69
180.0	8699.06	9080.44	8599.50	7457.63	5699.25	3640.50	2012.63	1104.81	736.99
225.0	8818.88	8564.06	7599.94	5791.50	3766.50	2242.69	1116.06	737.61	555.81
270.0	8661.94	8290.13	6973.88	5097.38	3404.81	1883.25	1010.81	667.13	511.31
315.0	8314.31	6842.81	5132.81	3307.50	1498.50	1103.18	717.75	494.10	409.44
360.0	8699.06	7644.94	5486.06	3678.75	2224.69	1217.81	755.44	557.44	435.94

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	363.38	315.56	288.56	231.02	198.68	174.71	152.27	135.68	121.33
45.0	422.44	362.81	315.56	289.69	230.96	202.05	180.90	155.03	136.24
90.0	487.13	383.74	331.82	290.25	247.39	217.46	191.53	164.42	146.31
135.0	628.88	490.50	407.25	346.50	299.25	285.19	223.93	196.48	170.38
180.0	552.60	441.28	372.77	327.09	281.64	241.31	211.39	185.57	158.46
225.0	456.53	380.19	332.38	289.29	243.28	212.51	186.98	162.39	142.43
270.0	412.88	362.81	319.50	289.13	234.00	204.08	178.20	151.59	133.82
315.0	353.48	293.34	260.89	226.97	194.29	167.34	147.77	128.87	113.01
360.0	363.38	315.56	288.56	231.02	198.68	174.71	152.27	135.68	121.33

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	106.14	95.01	83.64	74.25	66.77	60.30	53.66	49.16	45.23
45.0	123.69	107.83	95.06	86.06	75.09	68.18	61.59	55.35	50.85
90.0	129.99	112.95	102.15	89.94	78.47	71.72	64.01	57.09	53.04
135.0	147.94	130.89	114.86	100.86	89.38	80.78	70.76	63.96	58.11
180.0	140.12	124.43	109.69	96.75	87.08	77.18	68.57	62.10	56.03
225.0	127.35	113.51	102.49	90.51	79.59	71.55	63.90	57.54	52.88
270.0	120.88	106.65	94.33	84.26	74.64	67.33	60.19	54.45	50.01
315.0	100.97	89.33	79.93	70.82	62.78	56.81	51.69	46.58	42.86
360.0	106.14	95.01	83.64	74.25	66.77	60.30	53.66	49.16	45.23

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	41.46	38.36	36.11	33.92	32.29	31.16	29.98	29.08	28.18
45.0	47.08	43.20	40.67	38.64	36.34	35.10	33.92	32.96	31.89
90.0	48.94	44.72	41.91	39.77	37.46	36.00	34.82	33.58	32.63
135.0	52.20	48.21	44.61	41.74	38.64	36.79	35.10	33.36	32.06
180.0	51.47	47.03	43.26	40.44	38.03	35.49	34.09	32.63	31.05
225.0	48.71	44.49	41.63	39.21	37.07	35.33	33.75	32.23	30.99
270.0	45.68	42.19	39.43	37.35	35.44	34.09	33.08	31.73	30.54
315.0	39.71	36.51	34.43	32.68	31.16	29.59	28.35	27.39	26.33
360.0	41.46	38.36	36.11	33.92	32.29	31.16	29.98	29.08	28.18

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	27.34	26.55	25.54	24.24	23.23	22.22	20.81	19.91	18.96
45.0	31.05	29.93	28.97	27.62	25.93	24.36	22.61	20.93	19.69
90.0	31.56	30.38	29.14	27.56	25.93	24.41	22.84	21.21	19.97
135.0	30.99	29.64	28.24	27.00	25.65	24.53	23.12	21.83	20.76
180.0	29.87	28.69	27.17	25.99	24.75	23.51	22.56	21.26	20.08
225.0	29.87	28.63	27.45	26.04	24.53	23.63	22.28	20.70	19.80
270.0	29.59	28.58	27.28	26.16	24.69	23.29	21.99	20.81	19.74
315.0	25.43	24.58	23.74	22.67	21.83	20.87	19.97	19.01	18.28
360.0	27.34	26.55	25.54	24.24	23.23	22.22	20.81	19.91	18.96

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	18.06	17.16	16.37	15.47	14.68	13.89	13.16	12.54	11.93
45.0	18.51	17.04	16.14	15.30	14.34	13.39	12.71	12.09	11.53
90.0	18.90	17.66	16.82	16.03	15.24	14.34	13.61	12.99	12.38
135.0	19.86	18.56	17.83	17.21	16.26	15.58	14.96	14.06	13.33
180.0	19.29	18.39	17.49	16.76	16.09	15.24	14.63	14.01	13.39
225.0	18.84	17.78	16.93	16.26	15.41	14.74	14.12	13.44	12.94
270.0	18.84	17.72	16.88	16.09	15.02	14.18	13.50	12.83	12.15
315.0	17.55	16.76	15.98	15.19	14.40	13.44	12.71	12.09	11.48
360.0	18.06	17.16	16.37	15.47	14.68	13.89	13.16	12.54	11.93

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.42	10.97	10.58	10.18	9.84	9.56	9.34	9.17	9.06
45.0	11.08	10.58	10.18	9.79	9.45	9.17	8.83	8.49	8.33
90.0	11.76	11.31	10.86	10.46	10.13	9.79	9.45	9.11	8.78
135.0	12.77	12.09	11.64	11.19	10.74	10.41	10.01	9.62	9.28
180.0	12.83	12.38	11.87	11.48	11.14	10.74	10.52	10.24	10.01
225.0	12.38	11.81	11.42	11.03	10.58	10.35	10.07	9.73	9.51
270.0	11.70	11.19	10.80	10.41	10.01	9.73	9.45	9.11	8.83
315.0	10.91	10.46	10.01	9.62	9.28	8.94	8.61	8.27	7.99
360.0	11.42	10.97	10.58	10.18	9.84	9.56	9.34	9.17	9.06

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.94	8.89	8.78	8.66	8.38	8.04	7.59	7.14	6.92
45.0	8.33	8.27	8.27	8.10	7.93	7.59	7.20	6.81	6.41
90.0	8.49	8.16	7.88	7.59	7.31	6.98	6.81	6.58	6.41
135.0	8.94	8.55	8.27	7.93	7.65	7.37	7.09	6.86	6.64
180.0	9.79	9.62	9.51	9.28	9.06	8.78	8.44	8.16	7.82
225.0	9.28	9.00	8.78	8.55	8.33	8.10	7.93	7.65	7.31
270.0	8.55	8.10	7.88	7.59	7.37	7.20	6.98	6.75	6.53
315.0	7.65	7.43	7.09	6.92	6.69	6.47	6.24	6.08	5.91
360.0	8.94	8.89	8.78	8.66	8.38	8.04	7.59	7.14	6.92

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.64	6.47	6.47	6.69	6.86	6.75	6.36	6.02	5.74
45.0	5.91	5.57	5.46	5.40	5.34	5.34	5.18	4.89	4.73
90.0	6.19	5.96	5.85	5.74	5.74	5.79	5.79	5.57	5.34
135.0	6.47	6.30	6.19	6.02	6.02	6.08	6.30	6.41	6.30
180.0	7.43	7.09	6.81	6.64	6.53	6.53	6.69	6.64	6.24
225.0	6.92	6.64	6.41	6.24	6.19	6.30	6.36	6.08	5.79
270.0	6.36	6.19	6.08	6.02	6.02	6.08	5.96	5.79	5.63
315.0	5.79	5.74	5.74	5.68	5.51	5.29	5.23	5.18	5.23
360.0	6.64	6.47	6.47	6.69	6.86	6.75	6.36	6.02	5.74

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.57	5.46	5.40	5.29	5.29	5.40	5.18	4.89	4.44
45.0	4.67	4.67	4.78	4.84	4.84	4.89	4.67	4.16	3.60
90.0	5.29	5.46	5.63	5.85	5.79	5.68	5.46	5.18	4.73
135.0	5.96	5.68	5.79	5.79	5.85	5.85	5.85	5.85	5.40
180.0	5.91	5.74	5.68	5.63	5.63	5.57	5.46	5.51	5.23
225.0	5.63	5.63	5.57	5.68	5.63	5.57	5.63	5.51	5.12
270.0	5.68	5.85	5.96	6.13	6.08	5.85	5.79	5.29	4.95
315.0	5.29	5.40	5.51	5.46	5.40	5.40	5.01	4.67	4.39
360.0	5.57	5.46	5.40	5.29	5.29	5.40	5.18	4.89	4.44

Intensity data(cd)

C/γ(°)	90.0
0.0	4.16
45.0	3.26
90.0	4.39
135.0	5.01
180.0	5.01
225.0	4.84
270.0	4.50
315.0	4.05
360.0	4.16