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

Nata

LumCAT: 1496-S
Luminaire:
Report No: 220324-B010
Test No: 220324-C010
LampCAT: CITIZEN CLU028
Lamp flux(lm): 1035.7
Number of Lamps: 1
Length(mm): 111
Phm Type: C

Voltage(V): 34.8400
Current(A): 0.2320
Power (W): 8.0820
PF: 0.0000
Ballast type: DC
Width(mm): 111
Height(mm): 0

Photometric Results

Lumens(lm): 870.62
Efficiency(%): 84.06%
Lumens(lm)/Power(W): 107.72
Central intensity(cd): 3891.108
Maximum intensity(cd): 3891.108
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=21.3
[C90/270]Total=21.3
Field angle(10%Imax): [C0/180]Total=52.1
[C90/270]Total=52.1
Maximum s/h(1/2): C0_180=0.36 C90_270=0.36
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(%): 84.06%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.441%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3891.109	0.000	0	.000%	.000%
1.0	3863.697	3.711	3.711	.358%	.426%
2.0	3769.213	10.955	14.666	1.058%	1.685%
3.0	3627.972	17.692	32.358	1.708%	3.717%
4.0	3453.718	23.705	56.062	2.289%	6.439%
5.0	3242.043	28.805	84.867	2.781%	9.748%
6.0	3011.696	32.865	117.732	3.173%	13.523%
7.0	2777.165	35.931	153.664	3.469%	17.650%
8.0	2549.582	38.123	191.786	3.681%	22.029%
9.0	2309.001	39.376	231.162	3.802%	26.551%
10.0	2078.803	39.708	270.87	3.834%	31.112%
11.0	1874.897	39.506	310.376	3.814%	35.650%
12.0	1685.181	38.917	349.293	3.757%	40.120%
13.0	1503.010	37.836	387.128	3.653%	44.466%
14.0	1327.941	36.236	423.364	3.499%	48.628%
15.0	1207.068	34.802	458.166	3.360%	52.625%
16.0	1094.987	33.732	491.898	3.257%	56.499%
17.0	981.516	32.337	524.234	3.122%	60.214%
18.0	889.743	30.853	555.087	2.979%	63.757%
19.0	806.052	29.503	584.591	2.849%	67.146%
20.0	726.648	28.053	612.643	2.708%	70.368%
21.0	657.364	26.576	639.219	2.566%	73.421%
22.0	594.788	25.163	664.382	2.429%	76.311%
23.0	538.067	23.770	688.152	2.295%	79.041%
24.0	486.725	22.406	710.558	2.163%	81.615%
25.0	439.042	21.050	731.608	2.032%	84.033%
26.0	392.584	19.631	751.238	1.895%	86.287%
27.0	343.467	18.008	769.246	1.739%	88.356%
28.0	294.305	16.147	785.393	1.559%	90.210%
29.0	252.493	14.306	799.699	1.381%	91.854%
30.0	198.649	12.181	811.879	1.176%	93.253%
31.0	155.761	9.863	821.742	.952%	94.385%
32.0	116.309	7.794	829.537	.753%	95.281%
33.0	83.826	5.896	835.433	.569%	95.958%
34.0	56.780	4.255	839.688	.411%	96.447%
35.0	34.522	2.836	842.523	.274%	96.772%
36.0	20.555	1.754	844.277	.169%	96.974%
37.0	14.259	1.135	845.412	.110%	97.104%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	11.204	0.850	846.262	.082%	97.202%
39.0	9.531	0.708	846.97	.068%	97.283%
40.0	8.440	0.627	847.597	.061%	97.355%
41.0	7.850	0.580	848.177	.056%	97.422%
42.0	7.320	0.551	848.728	.053%	97.485%
43.0	6.894	0.527	849.255	.051%	97.546%
44.0	6.550	0.507	849.762	.049%	97.604%
45.0	6.259	0.492	850.254	.048%	97.660%
46.0	6.013	0.480	850.734	.046%	97.716%
47.0	5.796	0.470	851.204	.045%	97.769%
48.0	5.639	0.462	851.666	.045%	97.823%
49.0	5.505	0.458	852.124	.044%	97.875%
50.0	5.355	0.453	852.577	.044%	97.927%
51.0	5.236	0.448	853.025	.043%	97.979%
52.0	5.161	0.446	853.471	.043%	98.030%
53.0	5.072	0.445	853.916	.043%	98.081%
54.0	5.019	0.445	854.361	.043%	98.132%
55.0	4.959	0.445	854.806	.043%	98.183%
56.0	4.915	0.446	855.252	.043%	98.234%
57.0	4.877	0.448	855.7	.043%	98.286%
58.0	4.833	0.449	856.149	.043%	98.337%
59.0	4.818	0.451	856.6	.044%	98.389%
60.0	4.788	0.454	857.054	.044%	98.441%
61.0	4.765	0.456	857.51	.044%	98.494%
62.0	4.780	0.460	857.97	.044%	98.547%
63.0	4.765	0.464	858.434	.045%	98.600%
64.0	4.728	0.466	858.9	.045%	98.653%
65.0	4.720	0.468	859.367	.045%	98.707%
66.0	4.691	0.470	859.837	.045%	98.761%
67.0	4.683	0.471	860.308	.046%	98.815%
68.0	4.646	0.473	860.781	.046%	98.869%
69.0	4.601	0.472	861.253	.046%	98.924%
70.0	4.586	0.472	861.725	.046%	98.978%
71.0	4.541	0.472	862.196	.046%	99.032%
72.0	4.511	0.471	862.667	.045%	99.086%
73.0	4.481	0.470	863.137	.045%	99.140%
74.0	4.444	0.469	863.606	.045%	99.194%
75.0	4.399	0.467	864.074	.045%	99.248%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.354	0.465	864.538	.045%	99.301%
77.0	4.325	0.463	865.001	.045%	99.354%
78.0	4.295	0.461	865.463	.045%	99.407%
79.0	4.235	0.458	865.921	.044%	99.460%
80.0	4.213	0.455	866.376	.044%	99.512%
81.0	4.160	0.453	866.829	.044%	99.564%
82.0	4.101	0.448	867.277	.043%	99.616%
83.0	4.048	0.443	867.72	.043%	99.666%
84.0	3.996	0.438	868.158	.042%	99.717%
85.0	3.899	0.431	868.589	.042%	99.766%
86.0	3.764	0.419	869.008	.040%	99.814%
87.0	3.727	0.410	869.418	.040%	99.862%
88.0	3.697	0.407	869.825	.039%	99.908%
89.0	3.637	0.402	870.227	.039%	99.954%
90.0	3.600	0.397	870.624	.038%	100.000%

Zonal flux distribution table

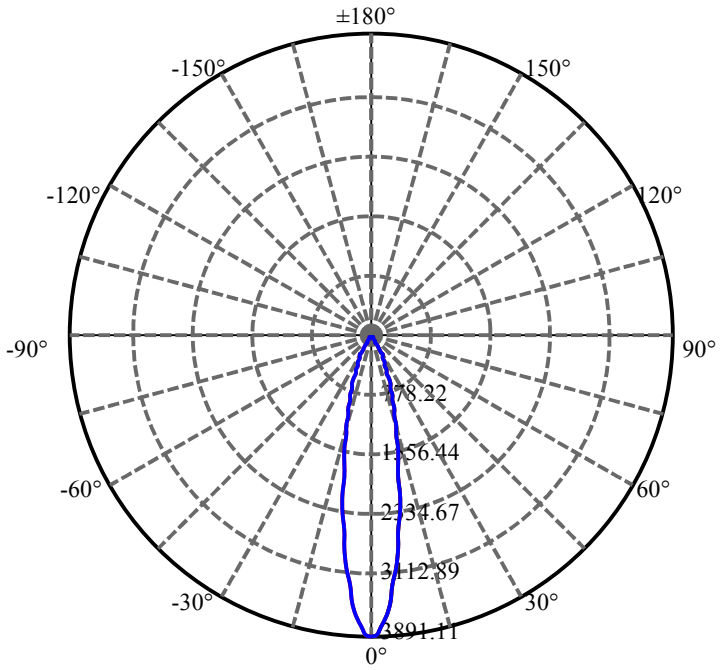
ZONAL LUMEN SUMMARY

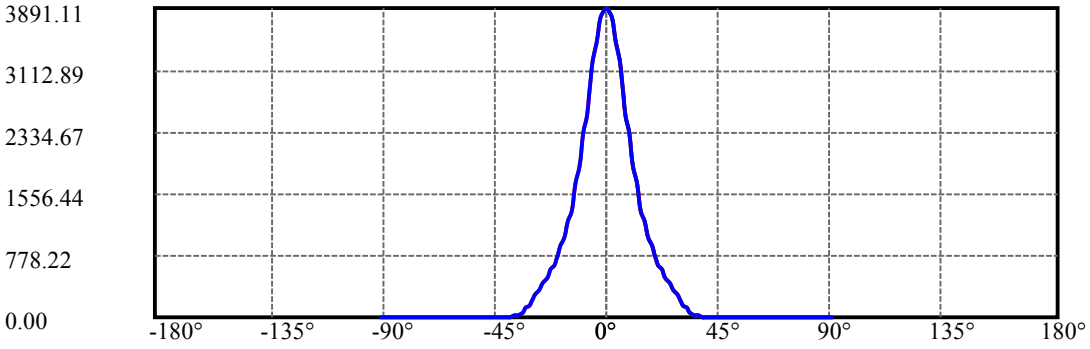
Zone	Lumens	%Lamp	%Fixt
0-30	811.88	78.39%	93.25%
0-40	847.60	81.84%	97.36%
0-60	857.05	82.75%	98.44%
0-90	870.23	84.02%	99.95%
0-120	870.23	84.02%	99.95%
0-180	870.62	84.06%	100.00%
60-90	13.63	1.32%	1.57%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-23.37	696.50	67.25%	80.00%

ZONAL LUMEN SUMMARY

0-10	270.87
10-20	341.77
20-30	199.24
30-40	35.72
40-50	4.98
50-60	4.48
60-70	4.67
70-80	4.65
80-90	3.85
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:26.1 Right:26.1
:C90/270Left:26.1 Right:26.1

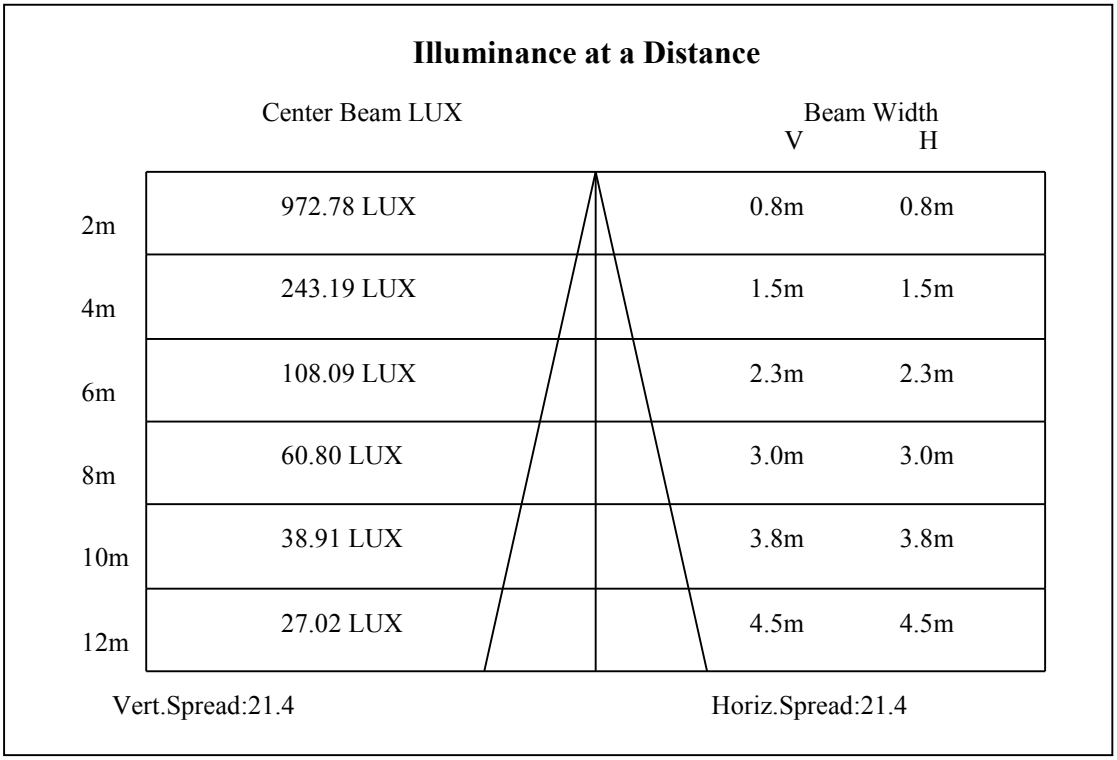
Beam Angle(50%Imax):C0/180Left:10.7 Right:10.7
:C90/270Left:10.7 Right:10.7

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/3/24
Humidity(%): 65.0%

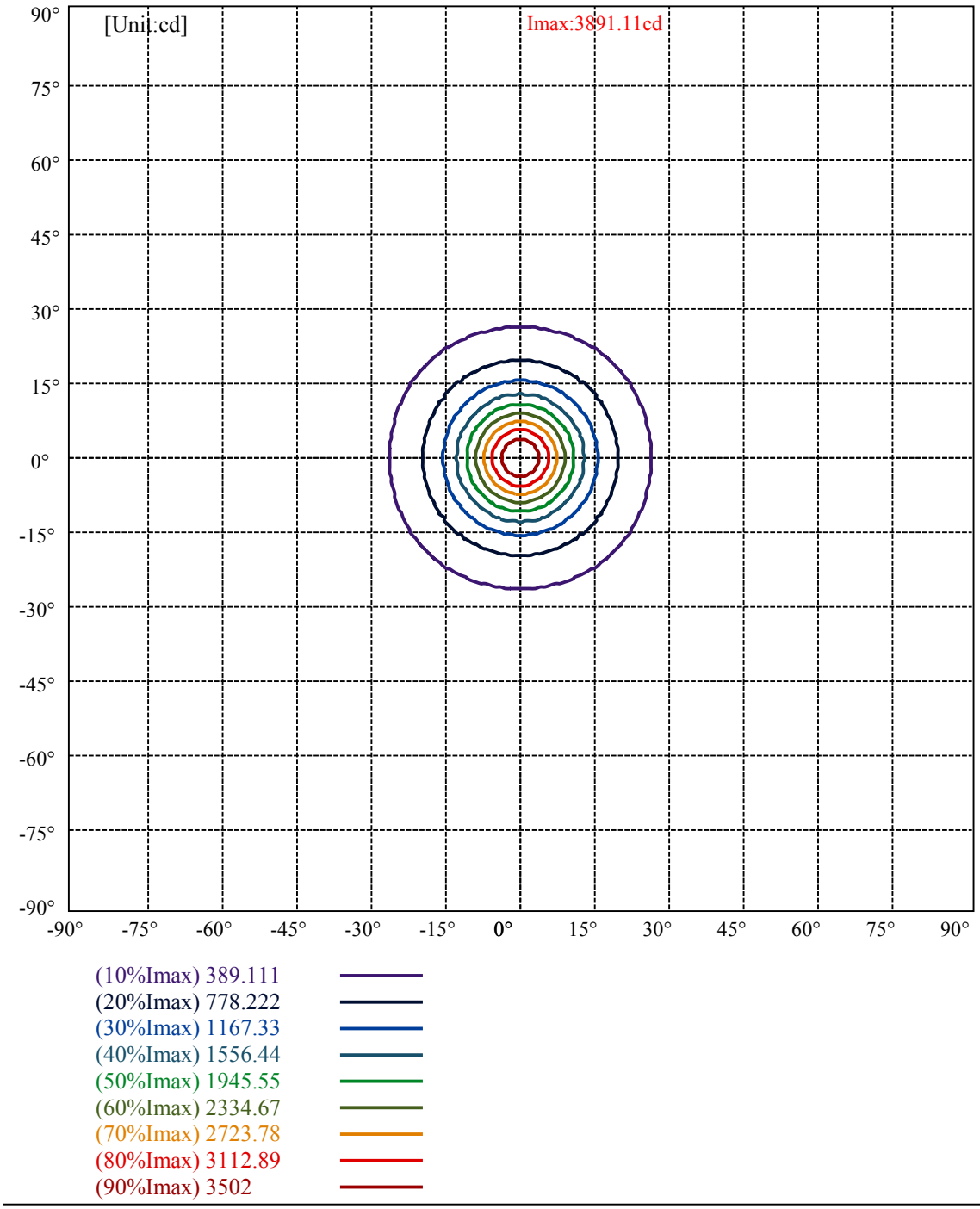
Operator: NT07
Distance(m): 7.73

Lux distance Curve



Equipment: GMS1980 Date: 2022/3/24 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

ISO-Intensity(V-H)

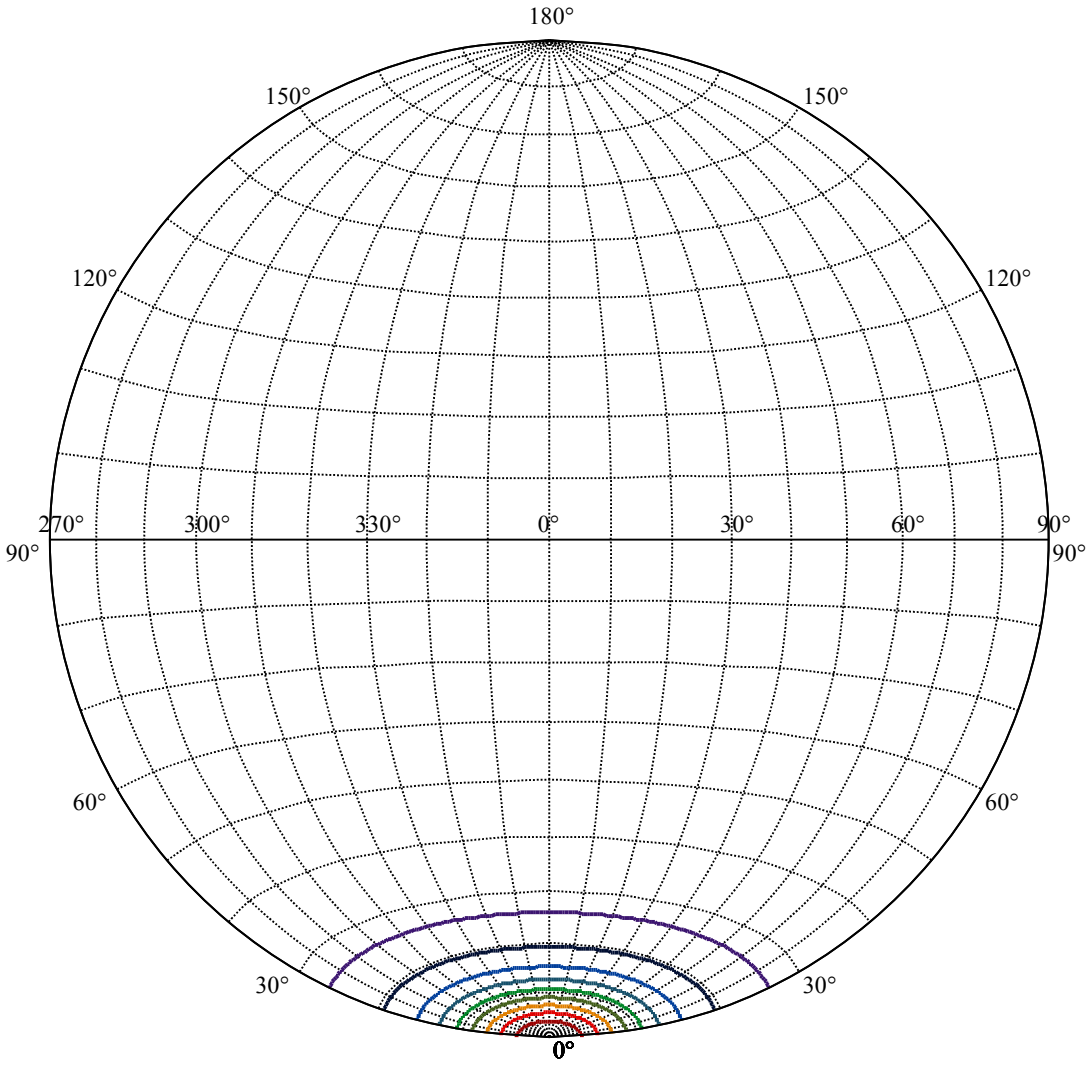


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/3/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:3891.11

(10%Imax) 389.111
(20%Imax) 778.222
(30%Imax) 1167.33
(40%Imax) 1556.44
(50%Imax) 1945.55
(60%Imax) 2334.67
(70%Imax) 2723.78
(80%Imax) 3112.89
(90%Imax) 3502

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/3/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

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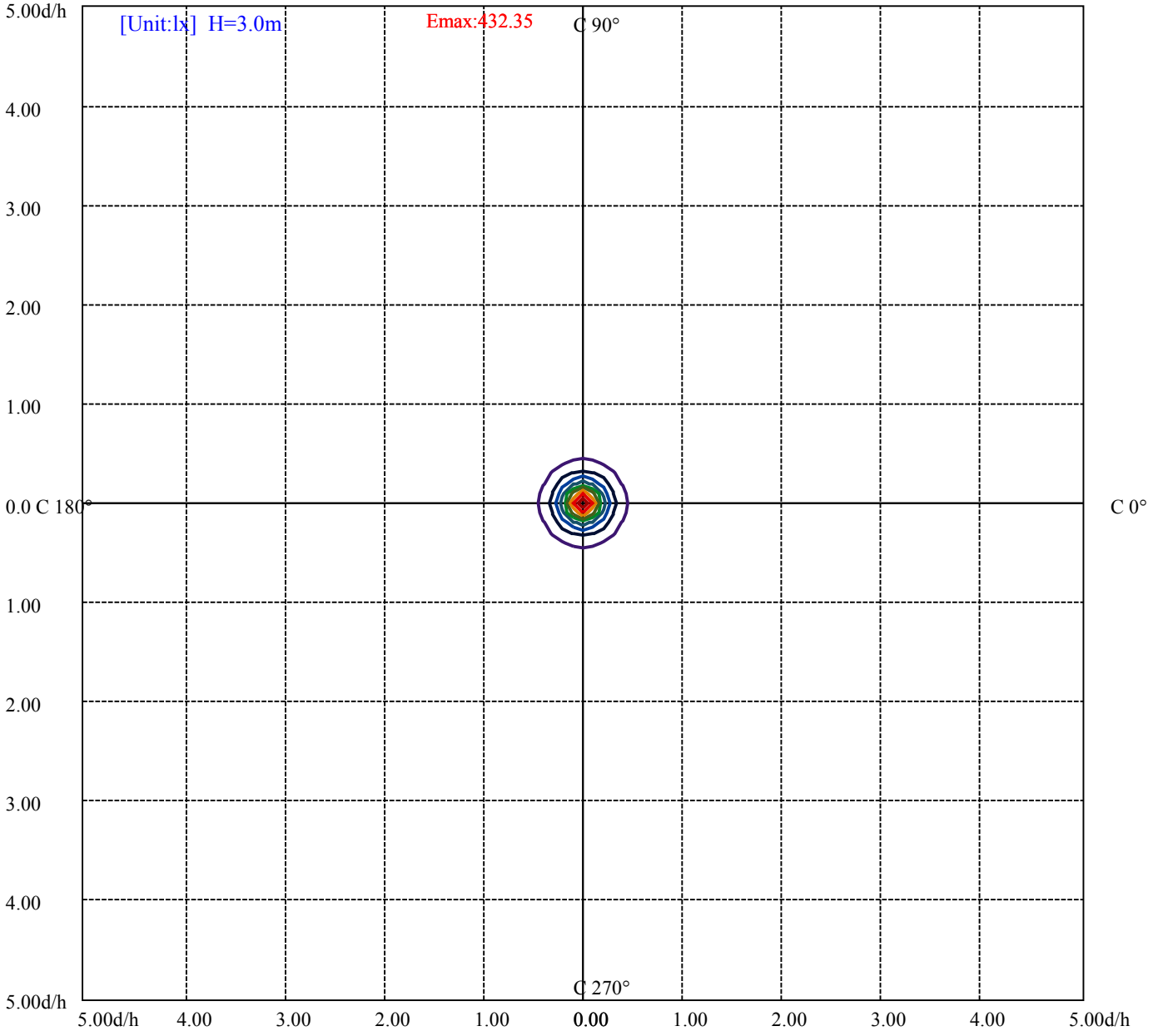
ISO illuminance diagram

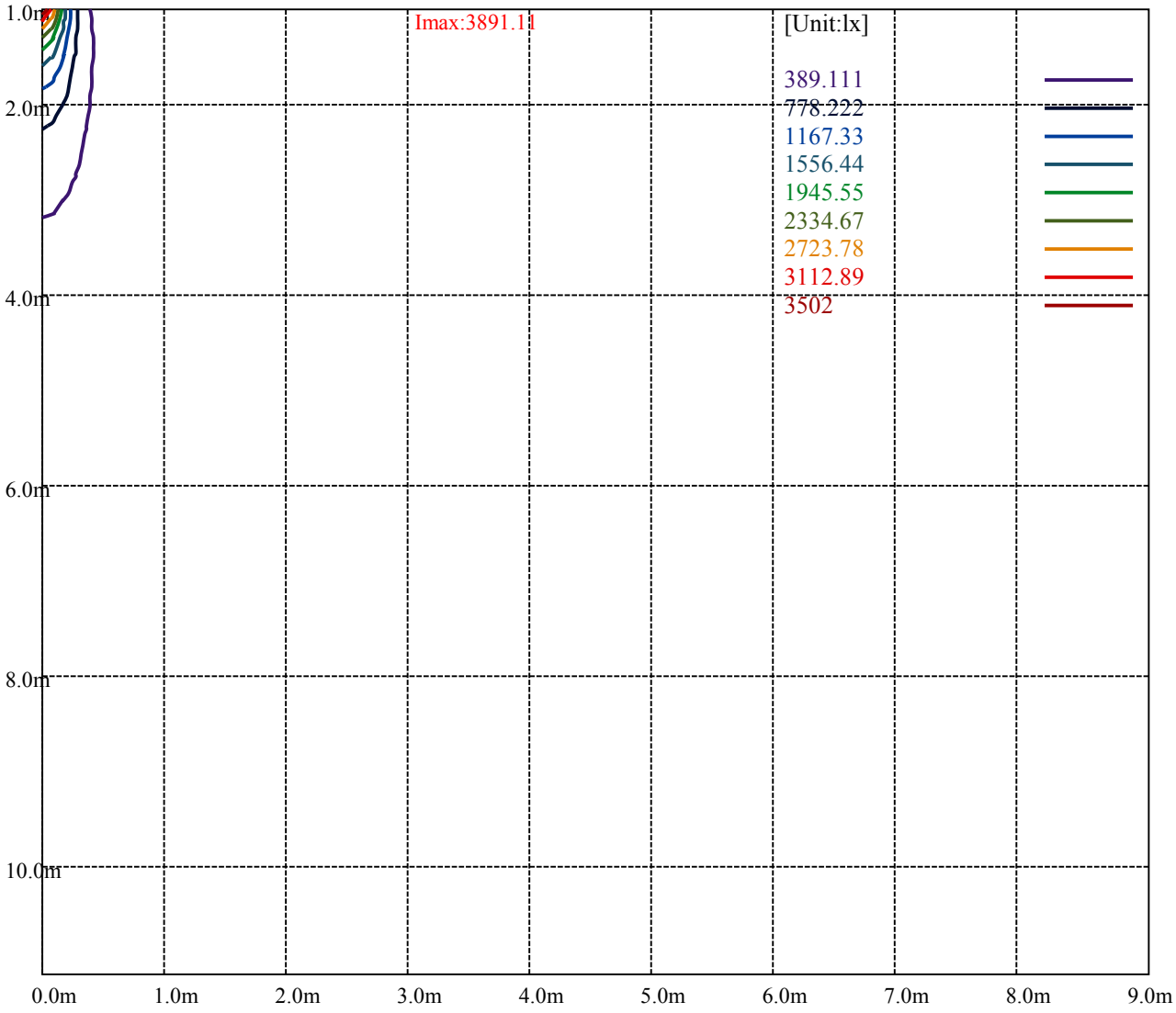


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/3/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/3/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

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Luminance Limitting Curve(no luminous side)

Luminance Table

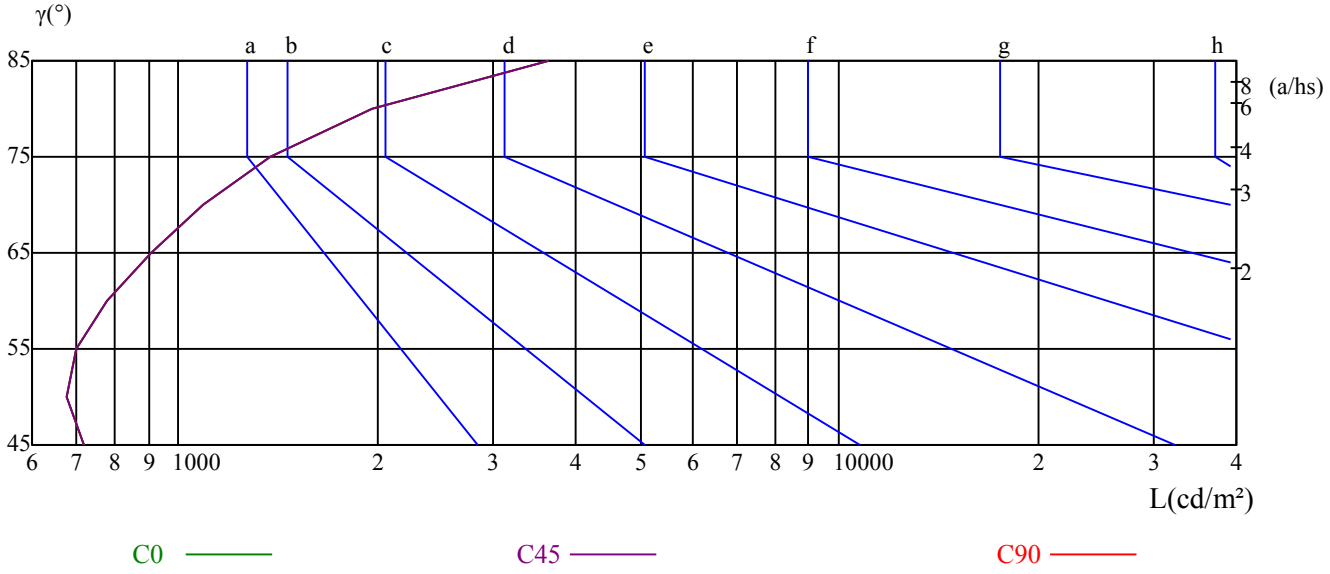
γ	45	50	55	60	65	70	75	80	85
C0	718	676	702	777	907	1088	1380	1969	3631
C45	718	676	702	777	907	1088	1380	1969	3631
C90	718	676	702	777	907	1088	1380	1969	3631

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
907	907	907	1380	1380	1380	3631	3631	3631

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

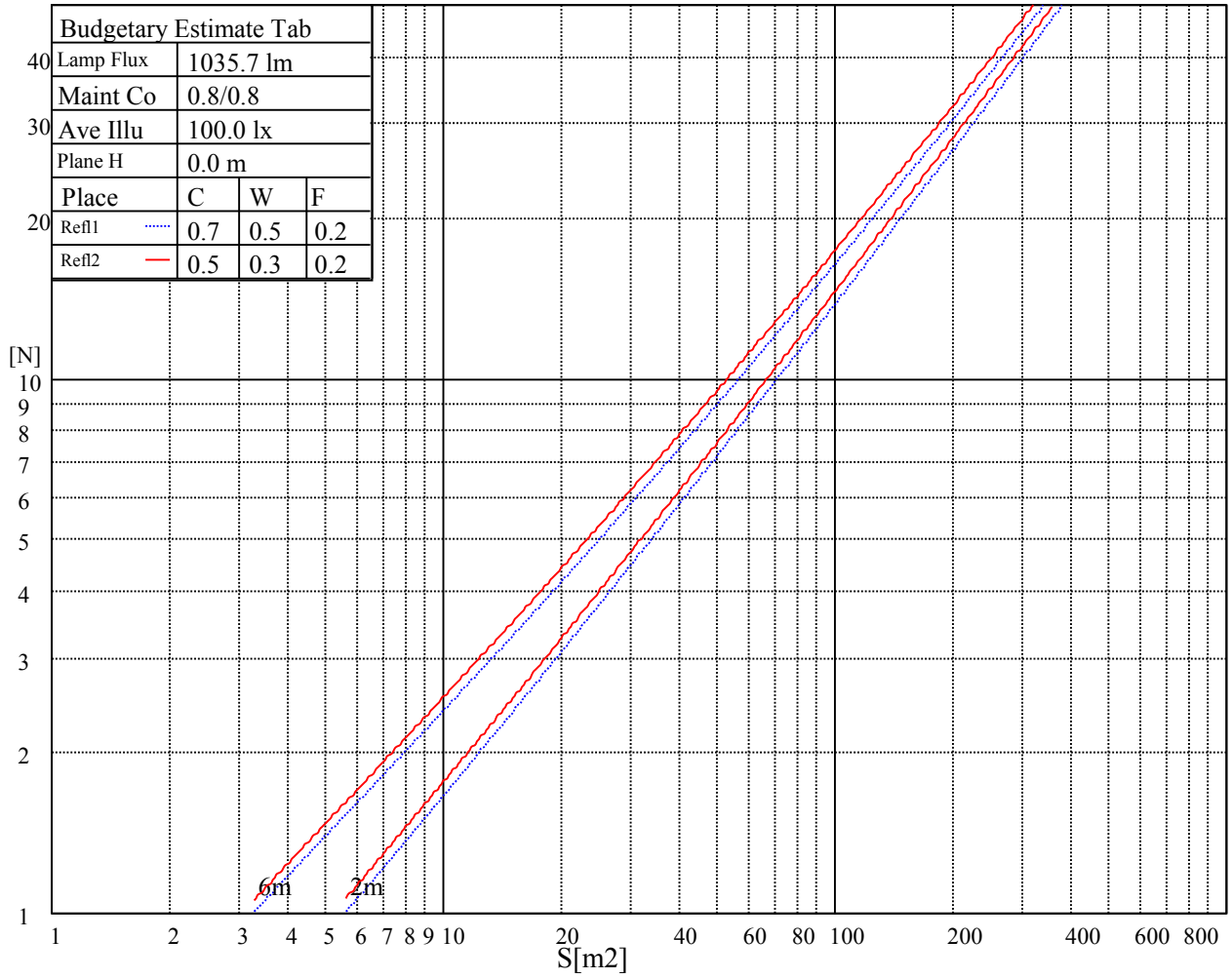


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/3/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Budgetary Estimate Table

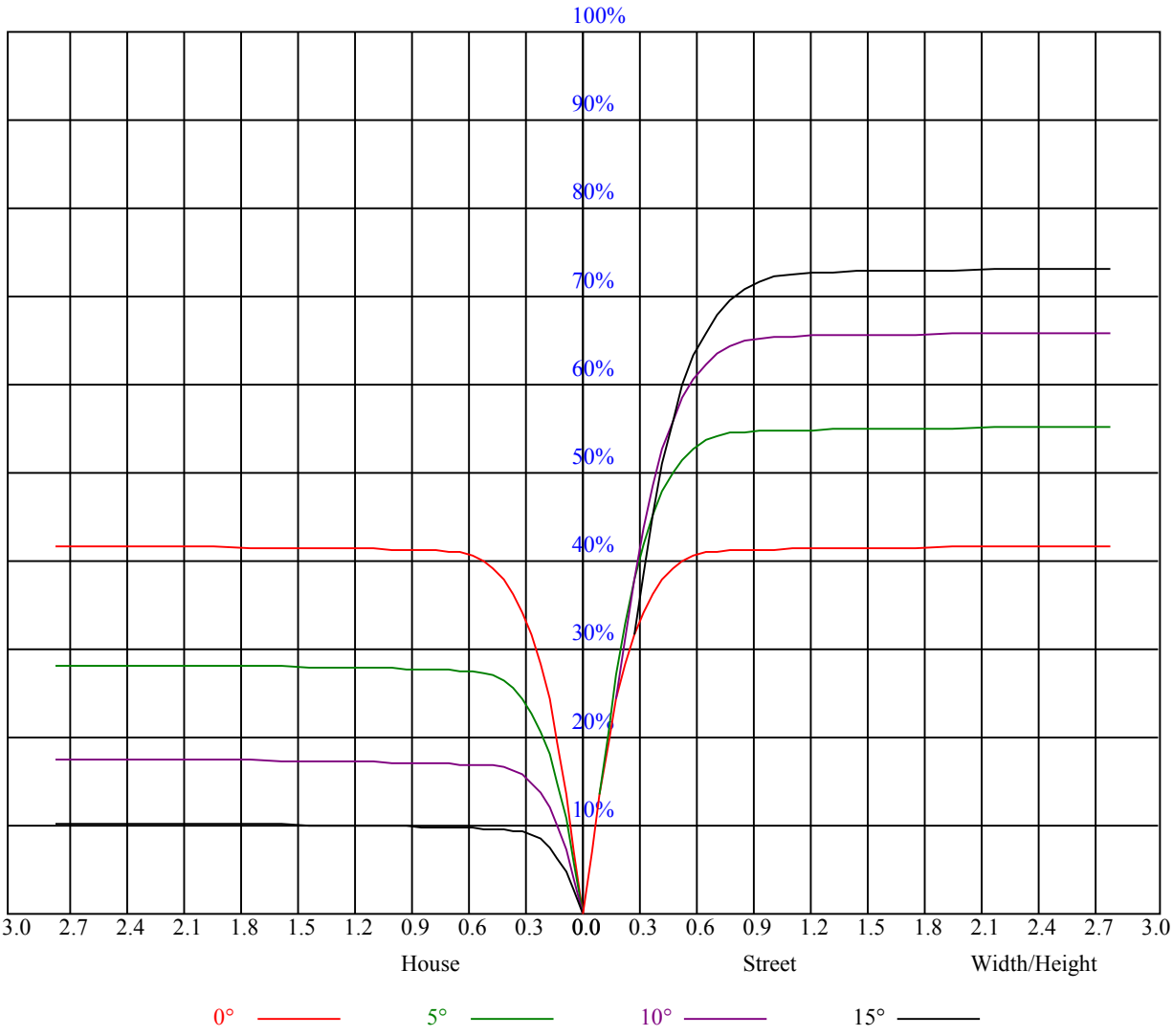


Equipment: GMS1980 Date: 2022/3/24 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

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	0.93	0.93	0.93	0.89	0.89	0.89	0.86	0.86	0.86	0.84
1	0.94	0.92	0.91	0.92	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.82	0.80
2	0.89	0.87	0.84	0.88	0.85	0.83	0.85	0.83	0.82	0.83	0.81	0.80	0.81	0.79	0.78	0.77
3	0.85	0.82	0.79	0.84	0.81	0.79	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.77	0.75	0.74
4	0.81	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
5	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.70	0.69
6	0.75	0.71	0.69	0.75	0.71	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.64
8	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
9	0.68	0.64	0.62	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.60
10	0.66	0.62	0.60	0.65	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.58

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2022/3/24	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.73

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	3866.61	3885.73	3842.11	3744.71	3589.36	3386.79	3184.83	2956.57	2740.87
45.0	3893.50	3923.97	3884.54	3776.98	3625.81	3472.84	3201.56	2987.65	2795.24
90.0	3920.99	3932.34	3873.78	3748.90	3588.76	3376.04	3165.71	2914.75	2663.78
135.0	3883.34	3900.67	3833.15	3725.00	3572.03	3362.30	3128.06	2912.36	2660.20
180.0	3866.61	3793.11	3671.82	3472.24	3272.07	3061.14	2846.03	2556.83	2330.96
225.0	3893.50	3800.28	3651.50	3483.59	3270.87	3056.96	2806.59	2560.41	2337.53
270.0	3920.99	3853.46	3705.87	3552.31	3365.28	3105.36	2886.07	2663.78	2442.70
315.0	3883.34	3820.00	3690.94	3520.04	3345.56	3114.92	2874.71	2664.98	2425.37
360.0	3866.61	3885.73	3842.11	3744.71	3589.36	3386.79	3184.83	2956.57	2740.87

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2506.63	2274.20	2072.83	1863.10	1671.89	1513.54	1390.45	1217.76	1107.22
45.0	2500.66	2288.54	2077.61	1854.13	1652.17	1491.43	1333.09	1204.62	1080.33
90.0	2443.30	2195.92	1964.08	1775.26	1598.99	1401.80	1178.81	1135.19	1012.15
135.0	2414.61	2195.32	1959.30	1763.31	1572.10	1400.01	1262.58	1142.48	1017.59
180.0	2110.47	1860.71	1682.64	1523.70	1361.17	1184.36	1106.32	996.92	911.17
225.0	2116.45	1865.49	1684.43	1512.35	1324.12	1180.06	1080.81	980.78	865.82
270.0	2169.63	1964.68	1777.65	1579.87	1404.79	1267.36	1133.51	1015.20	919.60
315.0	2210.26	1985.59	1780.64	1609.74	1438.85	1184.96	1170.98	1066.95	938.24
360.0	2506.63	2274.20	2072.83	1863.10	1671.89	1513.54	1390.45	1217.76	1107.22

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1018.19	907.05	817.42	754.68	672.22	610.67	555.10	495.95	449.94
45.0	969.79	878.97	795.31	710.46	644.73	586.77	521.05	476.83	436.20
90.0	900.42	813.71	727.31	650.95	589.52	527.44	480.35	433.21	386.48
135.0	927.37	842.52	752.89	692.54	629.80	568.25	515.07	474.44	428.43
180.0	823.10	744.70	682.20	617.73	560.12	514.23	470.67	410.74	361.74
225.0	787.54	718.71	647.54	582.05	526.78	475.51	428.07	385.59	336.77
270.0	826.38	752.89	677.00	607.69	552.12	497.74	449.94	407.51	365.69
315.0	865.16	789.87	713.51	642.82	583.01	523.91	473.54	428.07	375.43
360.0	1018.19	907.05	817.42	754.68	672.22	610.67	555.10	495.95	449.94

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	400.94	339.40	304.14	244.27	189.18	148.84	112.69	75.71	49.59
45.0	384.21	331.63	307.13	229.63	185.53	150.70	106.42	76.72	47.26
90.0	341.67	299.48	244.87	203.76	164.50	121.18	90.70	66.09	42.13
135.0	381.82	329.84	313.11	231.36	180.27	136.77	99.73	71.46	43.74
180.0	314.54	263.03	212.06	168.62	124.23	88.73	62.68	38.24	22.83
225.0	292.43	241.22	198.68	159.36	127.51	86.94	60.35	39.02	21.45
270.0	304.14	276.00	216.07	170.12	130.02	98.11	68.48	43.08	26.05
315.0	327.98	273.85	223.89	182.07	144.84	99.19	69.55	43.92	23.12
360.0	400.94	339.40	304.14	244.27	189.18	148.84	112.69	75.71	49.59

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	28.50	15.77	10.76	9.14	7.59	7.11	6.63	6.27	5.92
45.0	26.41	16.43	11.71	9.62	8.01	7.47	6.93	6.51	6.21
90.0	25.04	17.51	13.86	12.07	10.28	9.50	8.78	8.19	7.77
135.0	24.80	16.43	13.15	10.82	9.56	8.78	8.01	7.53	7.11
180.0	14.70	12.13	10.16	8.90	8.25	7.65	7.17	6.69	6.33
225.0	15.12	12.73	10.52	9.26	8.54	7.89	7.47	7.05	6.69
270.0	16.55	12.73	10.70	9.08	8.43	7.95	7.47	7.17	6.87
315.0	13.32	10.34	8.78	7.35	6.87	6.45	6.09	5.74	5.50
360.0	28.50	15.77	10.76	9.14	7.59	7.11	6.63	6.27	5.92

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	5.68	5.50	5.32	5.20	5.14	5.02	4.96	4.90	4.78
45.0	5.92	5.68	5.50	5.32	5.20	5.08	4.96	4.90	4.84
90.0	7.41	7.05	6.69	6.45	6.21	5.92	5.74	5.50	5.32
135.0	6.69	6.39	6.09	5.86	5.68	5.50	5.38	5.32	5.20
180.0	6.09	5.86	5.68	5.56	5.50	5.38	5.32	5.32	5.26
225.0	6.45	6.21	5.98	5.86	5.74	5.56	5.44	5.32	5.32
270.0	6.57	6.33	6.09	5.92	5.74	5.56	5.38	5.32	5.20
315.0	5.26	5.08	5.02	4.96	4.84	4.84	4.72	4.72	4.66
360.0	5.68	5.50	5.32	5.20	5.14	5.02	4.96	4.90	4.78

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.78	4.72	4.72	4.66	4.66	4.66	4.66	4.66	4.66
45.0	4.84	4.78	4.78	4.66	4.66	4.66	4.66	4.60	4.60
90.0	5.20	5.02	4.90	4.84	4.72	4.66	4.60	4.60	4.60
135.0	5.20	5.14	5.08	5.08	5.02	4.96	4.90	4.84	4.90
180.0	5.14	5.14	5.14	5.14	5.14	5.14	5.08	5.02	5.02
225.0	5.20	5.14	5.08	5.02	4.96	4.96	4.90	4.90	4.90
270.0	5.14	5.08	4.96	4.96	4.90	4.90	4.84	4.84	4.84
315.0	4.66	4.66	4.66	4.66	4.60	4.60	4.66	4.66	4.72
360.0	4.78	4.72	4.72	4.66	4.66	4.66	4.66	4.66	4.66

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.72	4.72	4.72	4.72	4.72	4.72	4.66	4.72	4.66
45.0	4.60	4.54	4.54	4.60	4.54	4.54	4.54	4.48	4.48
90.0	4.54	4.54	4.48	4.42	4.42	4.42	4.42	4.36	4.36
135.0	4.84	4.78	4.78	4.72	4.66	4.66	4.54	4.54	4.42
180.0	5.02	4.90	4.90	4.84	4.84	4.72	4.66	4.54	4.54
225.0	4.90	4.84	4.84	4.84	4.84	4.78	4.72	4.72	4.66
270.0	4.84	4.78	4.78	4.72	4.72	4.66	4.66	4.72	4.66
315.0	4.66	4.72	4.72	4.66	4.72	4.66	4.60	4.60	4.54
360.0	4.72	4.72	4.72	4.72	4.72	4.72	4.66	4.72	4.66

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.60	4.54	4.54	4.48	4.42	4.36	4.36	4.24	4.24
45.0	4.48	4.48	4.48	4.42	4.42	4.36	4.36	4.30	4.30
90.0	4.36	4.36	4.30	4.30	4.24	4.24	4.24	4.18	4.12
135.0	4.42	4.36	4.30	4.24	4.18	4.12	4.12	4.06	4.06
180.0	4.42	4.36	4.30	4.24	4.18	4.18	4.12	4.12	4.06
225.0	4.60	4.60	4.54	4.48	4.42	4.42	4.30	4.30	4.24
270.0	4.66	4.66	4.66	4.60	4.60	4.54	4.54	4.42	4.42
315.0	4.54	4.48	4.42	4.42	4.36	4.36	4.30	4.24	4.24
360.0	4.60	4.54	4.54	4.48	4.42	4.36	4.36	4.24	4.24

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.18	4.12	4.00	4.00	4.00	3.88	3.76	3.76	3.70
45.0	4.24	4.18	4.12	4.06	3.94	3.82	3.76	3.70	3.64
90.0	4.12	4.00	4.00	3.94	3.82	3.76	3.70	3.64	3.64
135.0	4.00	4.00	3.94	3.88	3.76	3.70	3.70	3.70	3.64
180.0	4.00	3.94	3.94	3.88	3.76	3.76	3.76	3.76	3.59
225.0	4.18	4.18	4.12	4.06	3.88	3.76	3.76	3.70	3.70
270.0	4.36	4.24	4.18	4.12	4.06	3.70	3.64	3.64	3.59
315.0	4.18	4.12	4.06	4.00	3.94	3.70	3.70	3.64	3.59
360.0	4.18	4.12	4.00	4.00	4.00	3.88	3.76	3.76	3.70

Intensity data(cd)

C/γ(°)	90.0
0.0	3.64
45.0	3.64
90.0	3.59
135.0	3.59
180.0	3.59
225.0	3.64
270.0	3.59
315.0	3.53
360.0	3.64