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

Nata

LumCAT: 1-0926-M
Luminaire: 92.70.127.00

Report No: NATA0100	Voltage(V): 35.3700
Test No: GC2019092008	Current(A): 0.2470
LampCAT: CREE CXA1507	Power (W): 8.7000
Lamp flux(lm): 718.0	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): 566.43
Efficiency(%): 78.89%
Lumens(lm)/Power(W): 65.11
Central intensity(cd): 5205.234
Maximum intensity(cd): 5205.234
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=14.9
[C90/270]Total=14.9
Field angle(10%Imax): [C0/180]Total=35.5
[C90/270]Total=35.5
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.29 C90_270=0.29
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.89%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.563%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5205.234	0.000	0	.000%	.000%
1.0	5115.305	4.938	4.938	.688%	.872%
2.0	4805.438	14.239	19.177	1.983%	3.386%
3.0	4440.023	22.112	41.289	3.080%	7.289%
4.0	4069.406	28.484	69.773	3.967%	12.318%
5.0	3619.828	33.079	102.852	4.607%	18.158%
6.0	3209.133	35.888	138.74	4.998%	24.494%
7.0	2787.680	37.222	175.962	5.184%	31.065%
8.0	2383.805	37.011	212.973	5.155%	37.599%
9.0	2047.289	35.912	248.885	5.002%	43.939%
10.0	1770.188	34.547	283.432	4.812%	50.038%
11.0	1516.289	32.839	316.27	4.574%	55.836%
12.0	1279.976	30.567	346.838	4.257%	61.232%
13.0	1128.129	28.578	375.416	3.980%	66.278%
14.0	965.208	26.795	402.21	3.732%	71.008%
15.0	831.895	24.671	426.882	3.436%	75.364%
16.0	710.655	22.603	449.484	3.148%	79.354%
17.0	596.419	20.355	469.839	2.835%	82.948%
18.0	498.445	18.052	487.891	2.514%	86.135%
19.0	418.662	15.956	503.847	2.222%	88.951%
20.0	327.452	13.656	517.503	1.902%	91.362%
21.0	257.386	11.230	528.733	1.564%	93.345%
22.0	172.807	8.645	537.378	1.204%	94.871%
23.0	106.172	5.854	543.231	.815%	95.905%
24.0	56.320	3.553	546.784	.495%	96.532%
25.0	24.659	1.841	548.625	.256%	96.857%
26.0	11.672	0.858	549.483	.119%	97.008%
27.0	8.072	0.483	549.966	.067%	97.094%
28.0	6.820	0.377	550.343	.053%	97.160%
29.0	6.040	0.336	550.68	.047%	97.220%
30.0	5.442	0.310	550.99	.043%	97.274%
31.0	4.992	0.290	551.28	.040%	97.326%
32.0	4.598	0.275	551.555	.038%	97.374%
33.0	4.324	0.263	551.818	.037%	97.420%
34.0	4.078	0.254	552.072	.035%	97.465%
35.0	3.867	0.247	552.319	.034%	97.509%
36.0	3.691	0.241	552.559	.034%	97.551%
37.0	3.565	0.237	552.796	.033%	97.593%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	3.438	0.234	553.03	.033%	97.634%
39.0	3.347	0.232	553.261	.032%	97.675%
40.0	3.277	0.231	553.492	.032%	97.716%
41.0	3.185	0.230	553.722	.032%	97.757%
42.0	3.129	0.229	553.952	.032%	97.797%
43.0	3.080	0.230	554.182	.032%	97.838%
44.0	3.030	0.231	554.412	.032%	97.879%
45.0	2.988	0.231	554.644	.032%	97.919%
46.0	2.953	0.232	554.876	.032%	97.960%
47.0	2.925	0.234	555.11	.033%	98.002%
48.0	2.890	0.235	555.345	.033%	98.043%
49.0	2.862	0.236	555.581	.033%	98.085%
50.0	2.841	0.238	555.819	.033%	98.127%
51.0	2.827	0.240	556.059	.033%	98.169%
52.0	2.798	0.241	556.3	.034%	98.212%
53.0	2.791	0.243	556.543	.034%	98.255%
54.0	2.756	0.245	556.788	.034%	98.298%
55.0	2.749	0.246	557.033	.034%	98.341%
56.0	2.735	0.248	557.281	.035%	98.385%
57.0	2.721	0.249	557.531	.035%	98.429%
58.0	2.707	0.251	557.782	.035%	98.473%
59.0	2.693	0.252	558.034	.035%	98.518%
60.0	2.700	0.255	558.289	.035%	98.563%
61.0	2.665	0.256	558.545	.036%	98.608%
62.0	2.658	0.256	558.801	.036%	98.653%
63.0	2.658	0.259	559.06	.036%	98.699%
64.0	2.644	0.260	559.32	.036%	98.745%
65.0	2.637	0.261	559.581	.036%	98.791%
66.0	2.630	0.263	559.844	.037%	98.837%
67.0	2.644	0.265	560.109	.037%	98.884%
68.0	2.630	0.267	560.376	.037%	98.931%
69.0	2.623	0.268	560.644	.037%	98.979%
70.0	2.609	0.269	560.913	.037%	99.026%
71.0	2.595	0.269	561.182	.037%	99.074%
72.0	2.588	0.269	561.451	.038%	99.121%
73.0	2.588	0.271	561.722	.038%	99.169%
74.0	2.595	0.272	561.994	.038%	99.217%
75.0	2.588	0.274	562.268	.038%	99.265%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.580	0.274	562.543	.038%	99.314%
77.0	2.580	0.275	562.818	.038%	99.362%
78.0	2.559	0.275	563.093	.038%	99.411%
79.0	2.573	0.276	563.369	.038%	99.460%
80.0	2.573	0.277	563.646	.039%	99.509%
81.0	2.566	0.278	563.924	.039%	99.558%
82.0	2.573	0.279	564.203	.039%	99.607%
83.0	2.552	0.279	564.482	.039%	99.656%
84.0	2.559	0.278	564.76	.039%	99.705%
85.0	2.552	0.279	565.039	.039%	99.755%
86.0	2.538	0.278	565.317	.039%	99.804%
87.0	2.531	0.277	565.595	.039%	99.853%
88.0	2.531	0.277	565.872	.039%	99.902%
89.0	2.545	0.278	566.15	.039%	99.951%
90.0	2.538	0.279	566.429	.039%	100.000%

Zonal flux distribution table

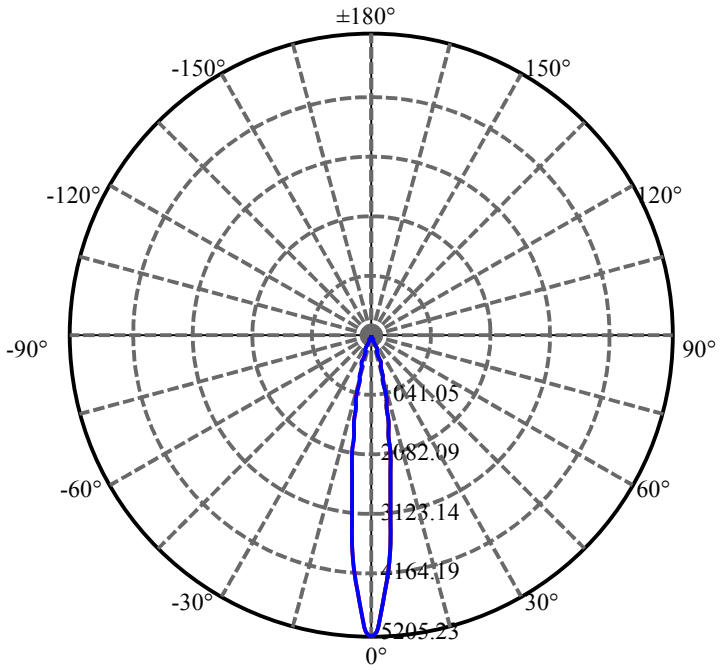
ZONAL LUMEN SUMMARY

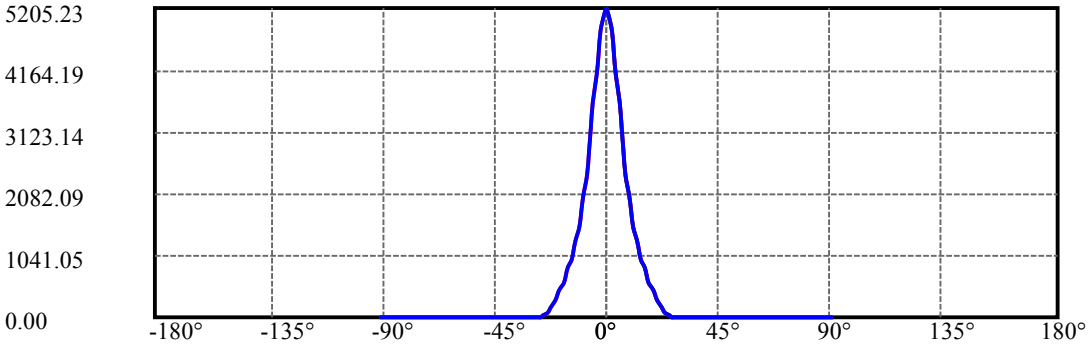
Zone	Lumens	%Lamp	%Fixt
0-30	550.99	76.74%	97.27%
0-40	553.49	77.09%	97.72%
0-60	558.29	77.76%	98.56%
0-90	566.15	78.85%	99.95%
0-120	566.15	78.85%	99.95%
0-180	566.43	78.89%	100.00%
60-90	8.12	1.13%	1.43%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-16.18	453.14	63.11%	80.00%

ZONAL LUMEN SUMMARY

0-10	283.43
10-20	234.07
20-30	33.49
30-40	2.50
40-50	2.33
50-60	2.47
60-70	2.62
70-80	2.73
80-90	2.50
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):

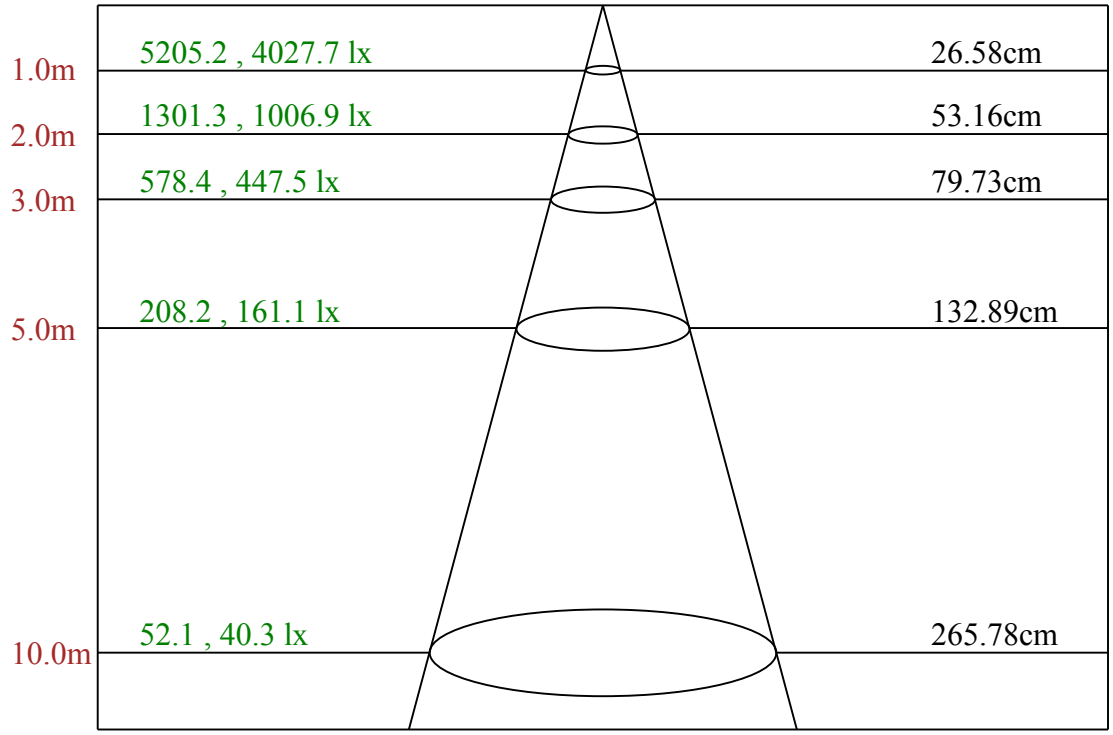
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:17.8 Right:17.8
:C90/270Left:17.8 Right:17.8

Beam Angle(50%Imax):C0/180Left:7.5 Right:7.5
:C90/270Left:7.5 Right:7.5

Lux distance Curve

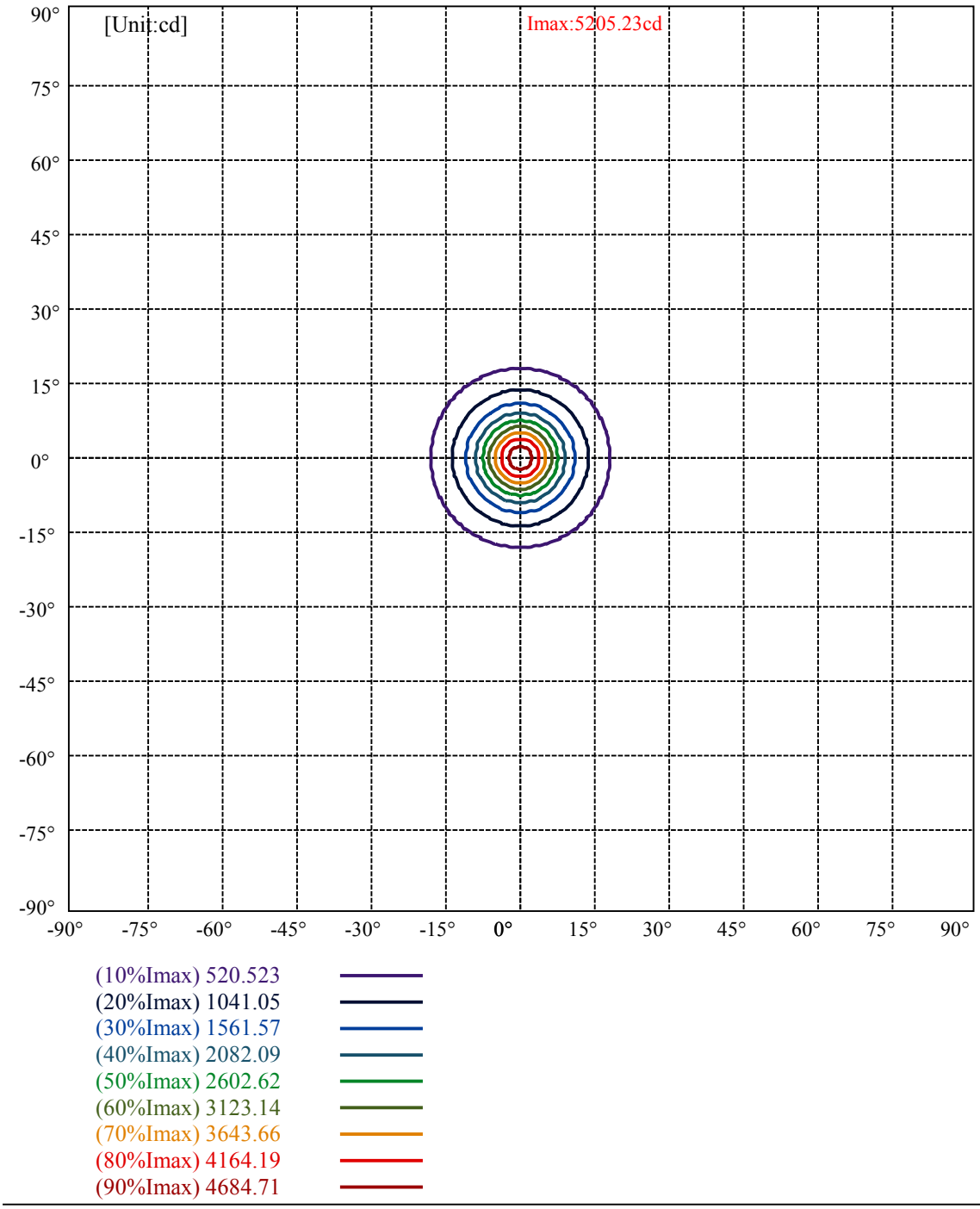


Max , Ave

Beam angle of C0 plane 15.14

Equipment: GMS1980	Date: 2019/9/20	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

ISO-Intensity(V-H)

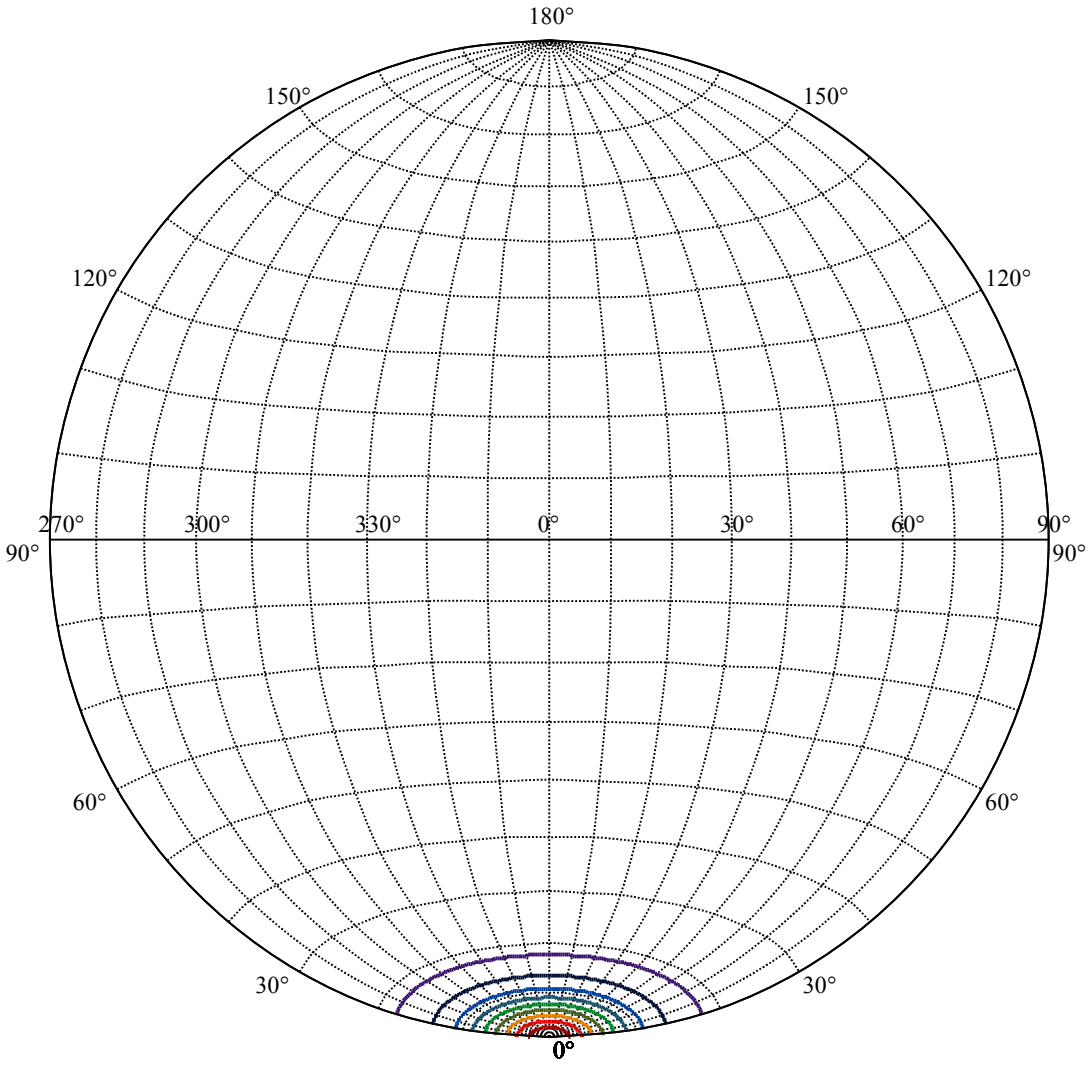


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/20
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5205.23

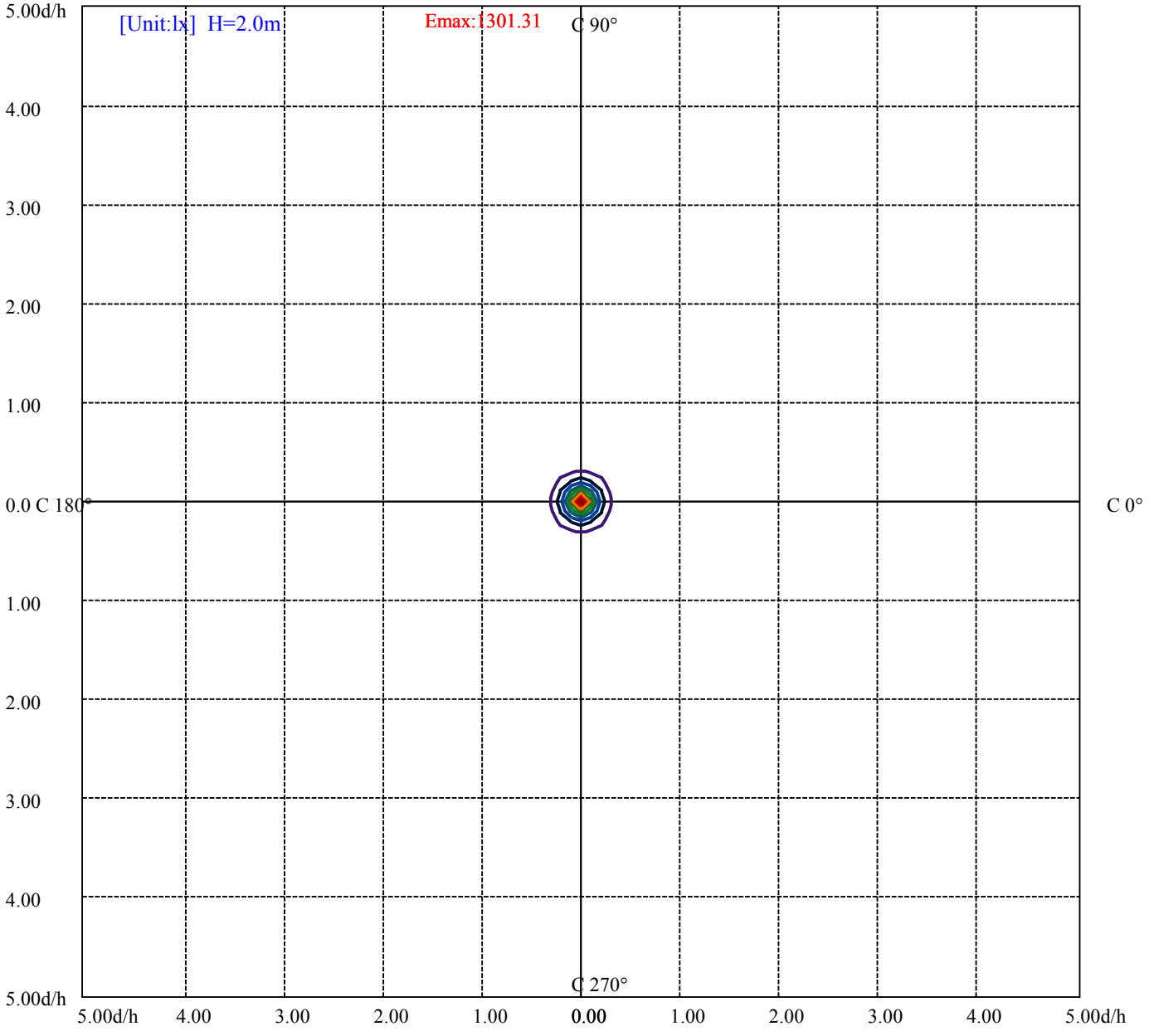
(10%Imax) 520.523
(20%Imax) 1041.05
(30%Imax) 1561.57
(40%Imax) 2082.09
(50%Imax) 2602.62
(60%Imax) 3123.14
(70%Imax) 3643.66
(80%Imax) 4164.19
(90%Imax) 4684.71

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/20
Humidity(%): 65.0%

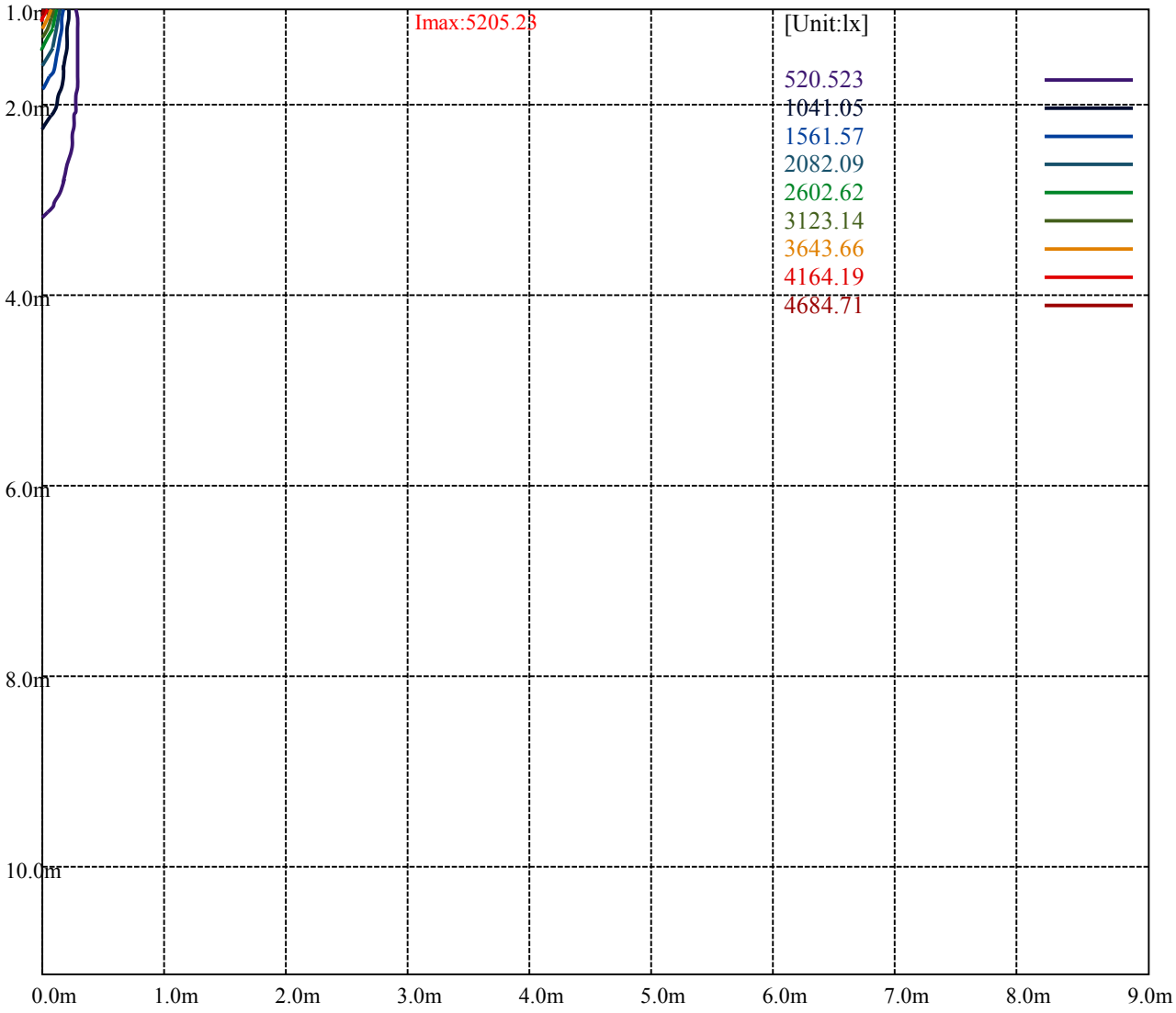
Operator: NT07
Distance(m): 7.50

ISO illuminance diagram



Equipment: GMS1980	Date: 2019/9/20	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/20
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

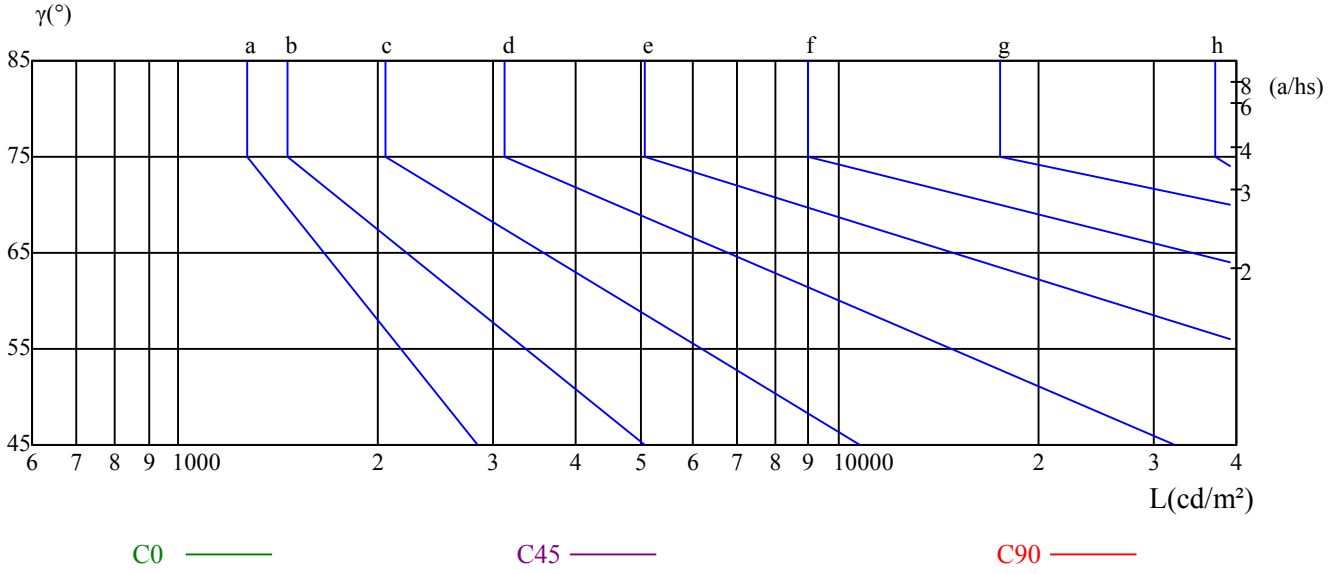
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

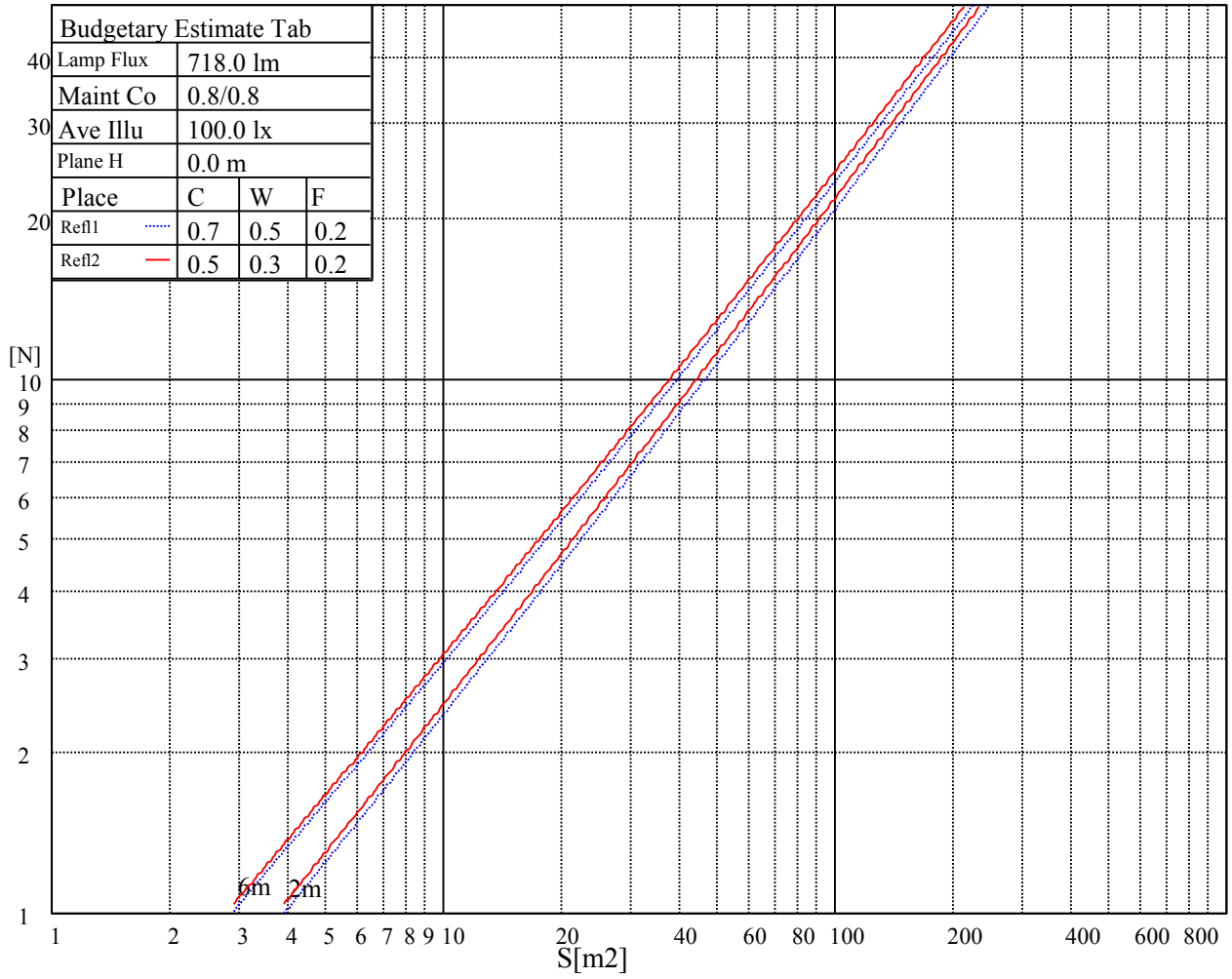
Glare Table

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

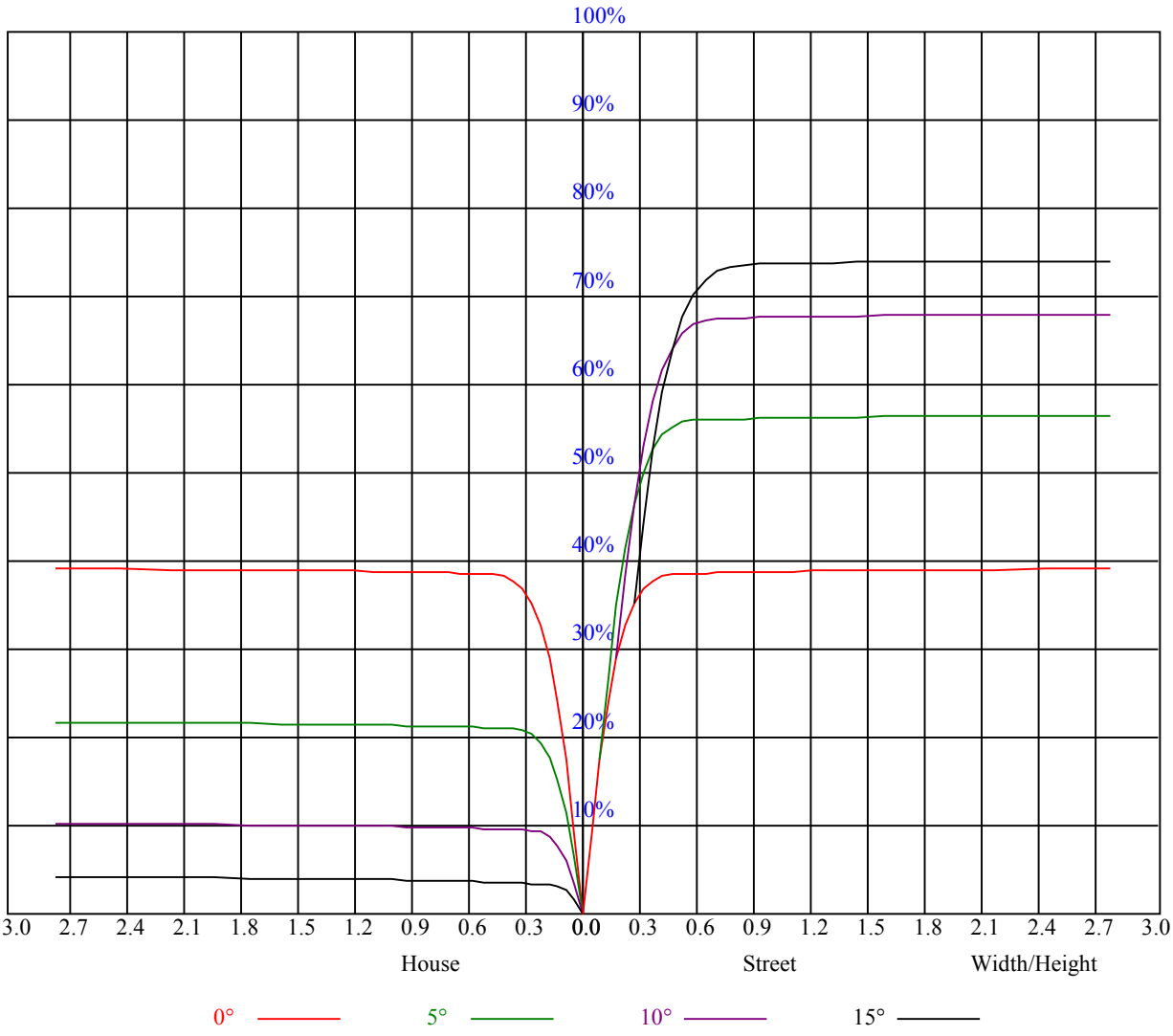


Equipment: GMS1980 Date: 2019/9/20 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/9/20	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	5204.81	5177.81	4904.44	4565.25	4182.75	3709.13	3298.50	2895.19	2473.88
45.0	5195.81	5207.63	4962.94	4651.88	4281.19	3861.00	3412.69	2985.75	2587.50
90.0	5225.06	5146.31	4859.44	4479.19	4110.75	3682.13	3275.44	2811.38	2383.88
135.0	5195.25	5198.06	4960.13	4632.19	4278.94	3821.06	3440.25	3025.69	2586.94
180.0	5204.81	5067.00	4777.88	4339.13	3978.00	3589.88	3143.81	2690.44	2332.13
225.0	5195.81	4992.19	4587.19	4213.69	3840.75	3409.31	2957.06	2576.25	2203.31
270.0	5225.06	5118.75	4765.50	4386.94	4007.81	3516.75	3120.19	2729.25	2332.69
315.0	5195.25	5014.69	4626.00	4251.94	3875.06	3369.38	3025.13	2587.50	2170.13
360.0	5204.81	5177.81	4904.44	4565.25	4182.75	3709.13	3298.50	2895.19	2473.88

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2107.69	1830.94	1573.88	1370.25	1164.94	993.38	860.63	729.00	613.13
45.0	2158.31	1874.81	1596.94	1381.50	1175.63	1015.88	864.00	738.56	624.94
90.0	2058.19	1758.38	1504.13	1305.00	1107.96	941.57	816.30	700.20	570.60
135.0	2205.56	1920.38	1640.81	1427.63	1212.75	1032.75	893.81	751.50	635.06
180.0	1991.81	1708.88	1492.31	1216.69	1109.76	946.63	807.86	697.33	595.97
225.0	1925.44	1656.56	1417.50	1111.39	1054.46	906.53	786.09	675.62	551.19
270.0	2003.63	1753.31	1510.31	1319.06	1129.50	968.63	842.06	716.06	601.31
315.0	1927.69	1658.25	1394.44	1108.29	1070.04	916.31	784.41	676.97	579.15
360.0	2107.69	1830.94	1573.88	1370.25	1164.94	993.38	860.63	729.00	613.13

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	518.63	450.56	343.69	286.88	194.57	116.10	67.05	31.73	12.54
45.0	514.13	430.88	340.88	291.94	182.87	122.57	62.04	28.63	12.88
90.0	479.08	397.29	310.22	225.68	160.37	91.58	53.38	21.54	10.01
135.0	536.06	448.88	348.75	290.81	196.71	119.53	70.14	33.69	13.95
180.0	483.36	404.33	326.08	231.36	163.91	105.64	53.27	20.76	10.52
225.0	468.73	389.08	300.21	215.89	148.05	85.44	39.09	16.82	9.68
270.0	513.56	433.13	333.00	293.63	180.62	111.09	57.32	25.48	13.28
315.0	474.02	395.16	316.80	222.92	155.36	97.43	48.26	18.62	10.52
360.0	518.63	450.56	343.69	286.88	194.57	116.10	67.05	31.73	12.54

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	8.27	6.75	5.96	5.40	4.89	4.56	4.28	3.99	3.77
45.0	7.99	6.41	5.79	5.23	4.84	4.50	4.28	4.05	3.83
90.0	7.82	6.58	5.74	5.29	4.89	4.50	4.28	4.11	3.88
135.0	8.55	7.09	6.30	5.68	5.18	4.78	4.50	4.22	3.94
180.0	7.71	6.75	5.96	5.40	5.01	4.56	4.28	4.05	3.88
225.0	7.88	6.86	6.08	5.51	5.12	4.67	4.39	4.11	3.88
270.0	8.55	7.31	6.58	5.74	5.18	4.78	4.44	4.16	3.99
315.0	7.82	6.81	5.91	5.29	4.84	4.44	4.16	3.94	3.77
360.0	8.27	6.75	5.96	5.40	4.89	4.56	4.28	3.99	3.77

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	3.66	3.54	3.38	3.32	3.26	3.15	3.09	3.04	2.98
45.0	3.66	3.54	3.49	3.38	3.32	3.21	3.15	3.09	3.04
90.0	3.71	3.60	3.49	3.38	3.32	3.21	3.15	3.09	3.04
135.0	3.77	3.66	3.49	3.43	3.38	3.26	3.21	3.15	3.09
180.0	3.66	3.54	3.43	3.32	3.26	3.21	3.15	3.09	3.04
225.0	3.71	3.54	3.43	3.32	3.26	3.15	3.09	3.09	3.04
270.0	3.77	3.60	3.43	3.38	3.26	3.21	3.15	3.09	3.04
315.0	3.60	3.49	3.38	3.26	3.15	3.09	3.04	2.98	2.98
360.0	3.66	3.54	3.38	3.32	3.26	3.15	3.09	3.04	2.98

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	2.98	2.93	2.93	2.87	2.81	2.81	2.81	2.76	2.76
45.0	2.98	2.98	2.98	2.93	2.87	2.87	2.81	2.81	2.81
90.0	2.98	2.98	2.93	2.93	2.87	2.87	2.87	2.81	2.81
135.0	3.04	2.98	2.98	2.93	2.93	2.87	2.87	2.81	2.81
180.0	2.98	2.98	2.87	2.87	2.87	2.87	2.81	2.81	2.76
225.0	2.98	2.93	2.93	2.87	2.87	2.81	2.87	2.81	2.81
270.0	3.04	2.98	2.93	2.87	2.87	2.81	2.81	2.81	2.81
315.0	2.93	2.87	2.87	2.87	2.81	2.81	2.76	2.76	2.76
360.0	2.98	2.93	2.93	2.87	2.81	2.81	2.81	2.76	2.76

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	2.76	2.70	2.76	2.70	2.70	2.70	2.70	2.64	2.64
45.0	2.76	2.76	2.76	2.76	2.70	2.70	2.70	2.70	2.70
90.0	2.76	2.76	2.76	2.76	2.70	2.70	2.70	2.64	2.64
135.0	2.81	2.76	2.76	2.76	2.76	2.70	2.70	2.70	2.70
180.0	2.76	2.76	2.70	2.70	2.70	2.70	2.70	2.64	2.64
225.0	2.76	2.76	2.76	2.70	2.70	2.70	2.70	2.64	2.64
270.0	2.76	2.76	2.70	2.70	2.70	2.70	2.70	2.70	2.64
315.0	2.70	2.76	2.70	2.70	2.70	2.64	2.70	2.64	2.64
360.0	2.76	2.70	2.76	2.70	2.70	2.70	2.70	2.64	2.64

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	2.64	2.64	2.59	2.64	2.64	2.59	2.64	2.59	2.59
45.0	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.59
90.0	2.64	2.64	2.64	2.64	2.64	2.64	2.59	2.59	2.59
135.0	2.70	2.64	2.70	2.64	2.64	2.64	2.64	2.64	2.64
180.0	2.64	2.64	2.64	2.64	2.64	2.64	2.59	2.59	2.59
225.0	2.70	2.64	2.59	2.59	2.64	2.64	2.64	2.64	2.59
270.0	2.64	2.64	2.64	2.64	2.64	2.64	2.59	2.59	2.59
315.0	2.64	2.64	2.64	2.59	2.64	2.59	2.64	2.59	2.59
360.0	2.64	2.64	2.59	2.64	2.64	2.59	2.64	2.59	2.59

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.53	2.59
45.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
90.0	2.59	2.59	2.59	2.59	2.59	2.59	2.53	2.53	2.53
135.0	2.64	2.59	2.64	2.59	2.59	2.59	2.59	2.59	2.53
180.0	2.59	2.59	2.59	2.59	2.53	2.53	2.53	2.59	2.59
225.0	2.59	2.59	2.59	2.59	2.59	2.59	2.53	2.59	2.59
270.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
315.0	2.53	2.59	2.59	2.59	2.59	2.59	2.53	2.59	2.59
360.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.53	2.59

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.53	2.59	2.53	2.59	2.53	2.53	2.53	2.53	2.53
45.0	2.59	2.59	2.53	2.59	2.53	2.53	2.53	2.53	2.59
90.0	2.59	2.59	2.59	2.53	2.59	2.53	2.53	2.53	2.53
135.0	2.59	2.59	2.59	2.59	2.59	2.53	2.53	2.53	2.53
180.0	2.59	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53
225.0	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53
270.0	2.53	2.59	2.59	2.53	2.53	2.53	2.53	2.53	2.59
315.0	2.59	2.59	2.53	2.59	2.59	2.59	2.53	2.53	2.53
360.0	2.53	2.59	2.53	2.59	2.53	2.53	2.53	2.53	2.53

Intensity data(cd)

C/γ(°)	90.0
0.0	2.59
45.0	2.53
90.0	2.53
135.0	2.53
180.0	2.53
225.0	2.53
270.0	2.53
315.0	2.53
360.0	2.59