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

Nata

LumCAT: 1-0927-M
Luminaire: 92.70.127.00

Report No: NATA0100	Voltage(V): 35.3500
Test No: GC2019092008	Current(A): 0.2470
LampCAT: CREE CXA1507	Power (W): 8.7000
Lamp flux(lm): 718.0	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 563.02
Efficiency(%): 78.42%
Lumens(lm)/Power(W): 64.72
Central intensity(cd): 3041.578
Maximum intensity(cd): 3041.578
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=24.5
[C90/270]Total=24.5
Field angle(10%Imax): [C0/180]Total=41.1
[C90/270]Total=41.1
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(%): 78.42%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.542%

Equipment: GMS1980	Date: 2019/9/20	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	3041.578	0.000	0	.000%	.000%
1.0	3032.086	2.906	2.906	.405%	.516%
2.0	2999.813	8.658	11.564	1.206%	2.054%
3.0	2943.914	14.215	25.779	1.980%	4.579%
4.0	2867.906	19.454	45.233	2.709%	8.034%
5.0	2762.508	24.222	69.455	3.374%	12.336%
6.0	2632.219	28.351	97.806	3.949%	17.371%
7.0	2487.727	31.779	129.585	4.426%	23.016%
8.0	2320.734	34.413	163.998	4.793%	29.128%
9.0	2141.156	36.161	200.159	5.036%	35.551%
10.0	1956.164	37.079	237.239	5.164%	42.136%
11.0	1757.883	37.111	274.35	5.169%	48.728%
12.0	1570.641	36.386	310.735	5.068%	55.190%
13.0	1349.712	34.657	345.392	4.827%	61.346%
14.0	1155.045	32.061	377.453	4.465%	67.040%
15.0	1009.329	29.713	407.167	4.138%	72.318%
16.0	856.976	27.347	434.513	3.809%	77.175%
17.0	708.919	24.385	458.898	3.396%	81.506%
18.0	576.633	21.196	480.094	2.952%	85.271%
19.0	470.454	18.217	498.311	2.537%	88.506%
20.0	356.653	15.138	513.45	2.108%	91.195%
21.0	264.635	11.930	525.38	1.662%	93.314%
22.0	180.281	8.941	534.321	1.245%	94.902%
23.0	101.967	5.922	540.243	.825%	95.954%
24.0	49.282	3.307	543.55	.461%	96.541%
25.0	20.588	1.589	545.138	.221%	96.823%
26.0	10.322	0.730	545.868	.102%	96.953%
27.0	7.748	0.442	546.31	.062%	97.031%
28.0	6.806	0.368	546.679	.051%	97.097%
29.0	6.117	0.338	547.017	.047%	97.157%
30.0	5.576	0.316	547.332	.044%	97.213%
31.0	5.168	0.299	547.631	.042%	97.266%
32.0	4.774	0.285	547.916	.040%	97.317%
33.0	4.493	0.273	548.189	.038%	97.365%
34.0	4.247	0.264	548.454	.037%	97.412%
35.0	4.022	0.257	548.711	.036%	97.458%
36.0	3.853	0.251	548.961	.035%	97.502%
37.0	3.720	0.247	549.208	.034%	97.546%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	3.579	0.244	549.452	.034%	97.589%
39.0	3.459	0.240	549.692	.033%	97.632%
40.0	3.375	0.238	549.931	.033%	97.674%
41.0	3.298	0.238	550.168	.033%	97.717%
42.0	3.220	0.237	550.405	.033%	97.759%
43.0	3.157	0.236	550.641	.033%	97.801%
44.0	3.115	0.237	550.878	.033%	97.843%
45.0	3.066	0.238	551.115	.033%	97.885%
46.0	3.009	0.238	551.353	.033%	97.927%
47.0	2.981	0.238	551.591	.033%	97.969%
48.0	2.960	0.240	551.831	.033%	98.012%
49.0	2.925	0.242	552.073	.034%	98.055%
50.0	2.883	0.242	552.315	.034%	98.098%
51.0	2.862	0.243	552.558	.034%	98.141%
52.0	2.841	0.245	552.803	.034%	98.185%
53.0	2.820	0.246	553.049	.034%	98.228%
54.0	2.784	0.247	553.296	.034%	98.272%
55.0	2.777	0.248	553.545	.035%	98.316%
56.0	2.763	0.250	553.795	.035%	98.361%
57.0	2.763	0.253	554.048	.035%	98.406%
58.0	2.742	0.255	554.302	.035%	98.451%
59.0	2.728	0.256	554.558	.036%	98.496%
60.0	2.714	0.257	554.815	.036%	98.542%
61.0	2.707	0.259	555.074	.036%	98.588%
62.0	2.693	0.260	555.334	.036%	98.634%
63.0	2.672	0.261	555.595	.036%	98.680%
64.0	2.672	0.262	555.857	.037%	98.727%
65.0	2.651	0.263	556.12	.037%	98.774%
66.0	2.644	0.264	556.385	.037%	98.821%
67.0	2.651	0.266	556.651	.037%	98.868%
68.0	2.630	0.267	556.918	.037%	98.915%
69.0	2.644	0.269	557.187	.037%	98.963%
70.0	2.630	0.271	557.458	.038%	99.011%
71.0	2.609	0.271	557.729	.038%	99.059%
72.0	2.616	0.272	558.001	.038%	99.108%
73.0	2.609	0.273	558.274	.038%	99.156%
74.0	2.595	0.274	558.547	.038%	99.205%
75.0	2.595	0.274	558.821	.038%	99.253%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.595	0.275	559.097	.038%	99.302%
77.0	2.588	0.276	559.373	.038%	99.351%
78.0	2.595	0.277	559.651	.039%	99.401%
79.0	2.588	0.278	559.929	.039%	99.450%
80.0	2.588	0.279	560.208	.039%	99.500%
81.0	2.588	0.280	560.488	.039%	99.549%
82.0	2.588	0.281	560.769	.039%	99.599%
83.0	2.588	0.281	561.05	.039%	99.649%
84.0	2.588	0.282	561.332	.039%	99.699%
85.0	2.580	0.282	561.614	.039%	99.749%
86.0	2.580	0.282	561.896	.039%	99.800%
87.0	2.588	0.283	562.179	.039%	99.850%
88.0	2.559	0.282	562.461	.039%	99.900%
89.0	2.573	0.281	562.742	.039%	99.950%
90.0	2.580	0.283	563.025	.039%	100.000%

Zonal flux distribution table

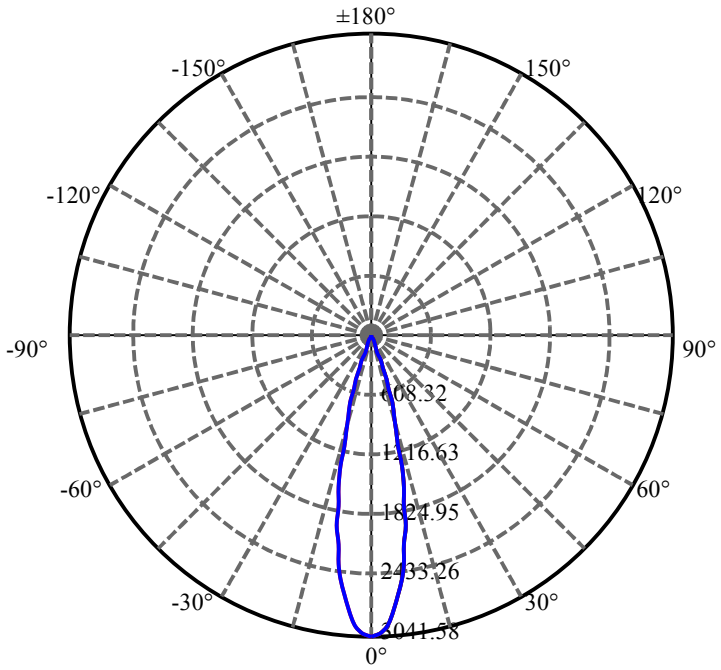
ZONAL LUMEN SUMMARY

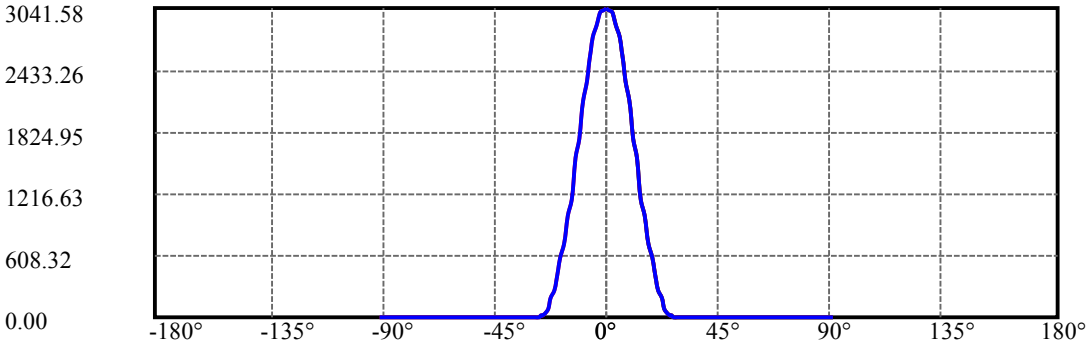
Zone	Lumens	%Lamp	%Fixt
0-30	547.33	76.23%	97.21%
0-40	549.93	76.59%	97.67%
0-60	554.81	77.27%	98.54%
0-90	562.74	78.38%	99.95%
0-120	562.74	78.38%	99.95%
0-180	563.02	78.42%	100.00%
60-90	8.18	1.14%	1.45%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-16.65	450.42	62.73%	80.00%

ZONAL LUMEN SUMMARY

0-10	237.24
10-20	276.21
20-30	33.88
30-40	2.60
40-50	2.38
50-60	2.50
60-70	2.64
70-80	2.75
80-90	2.53
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:20.6 Right:20.6
:C90/270Left:20.6 Right:20.6

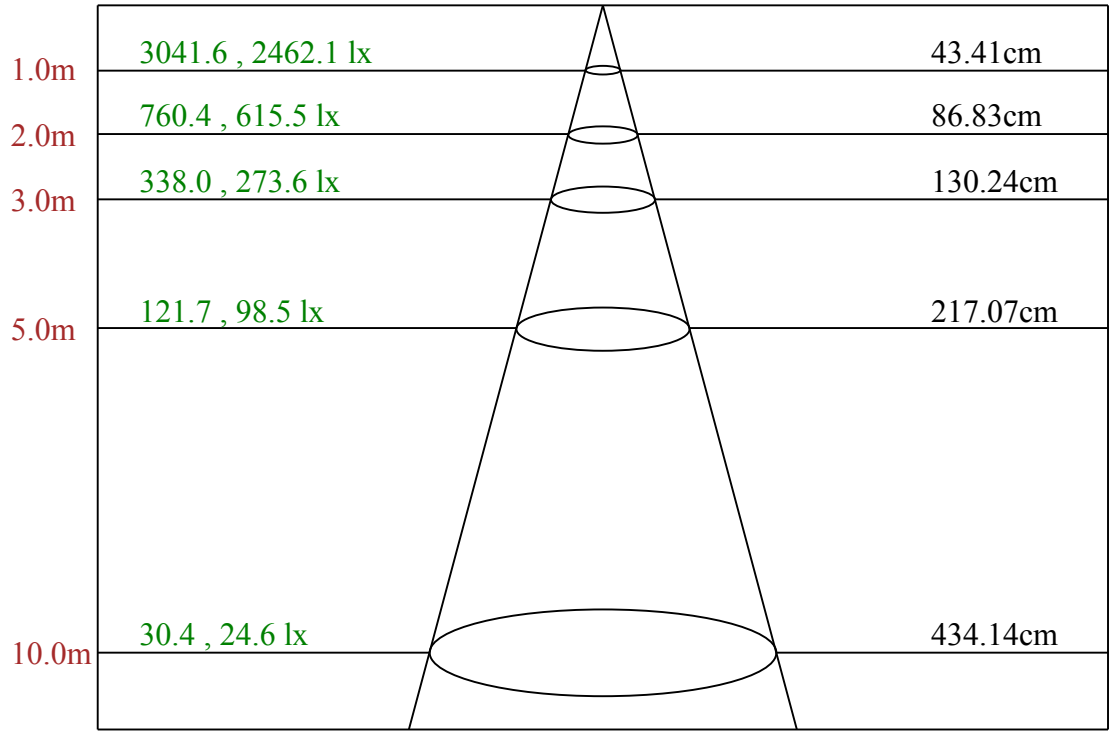
Beam Angle(50%Imax):C0/180Left:12.2 Right:12.2
:C90/270Left:12.2 Right:12.2

Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

Lux distance Curve



Max , Ave

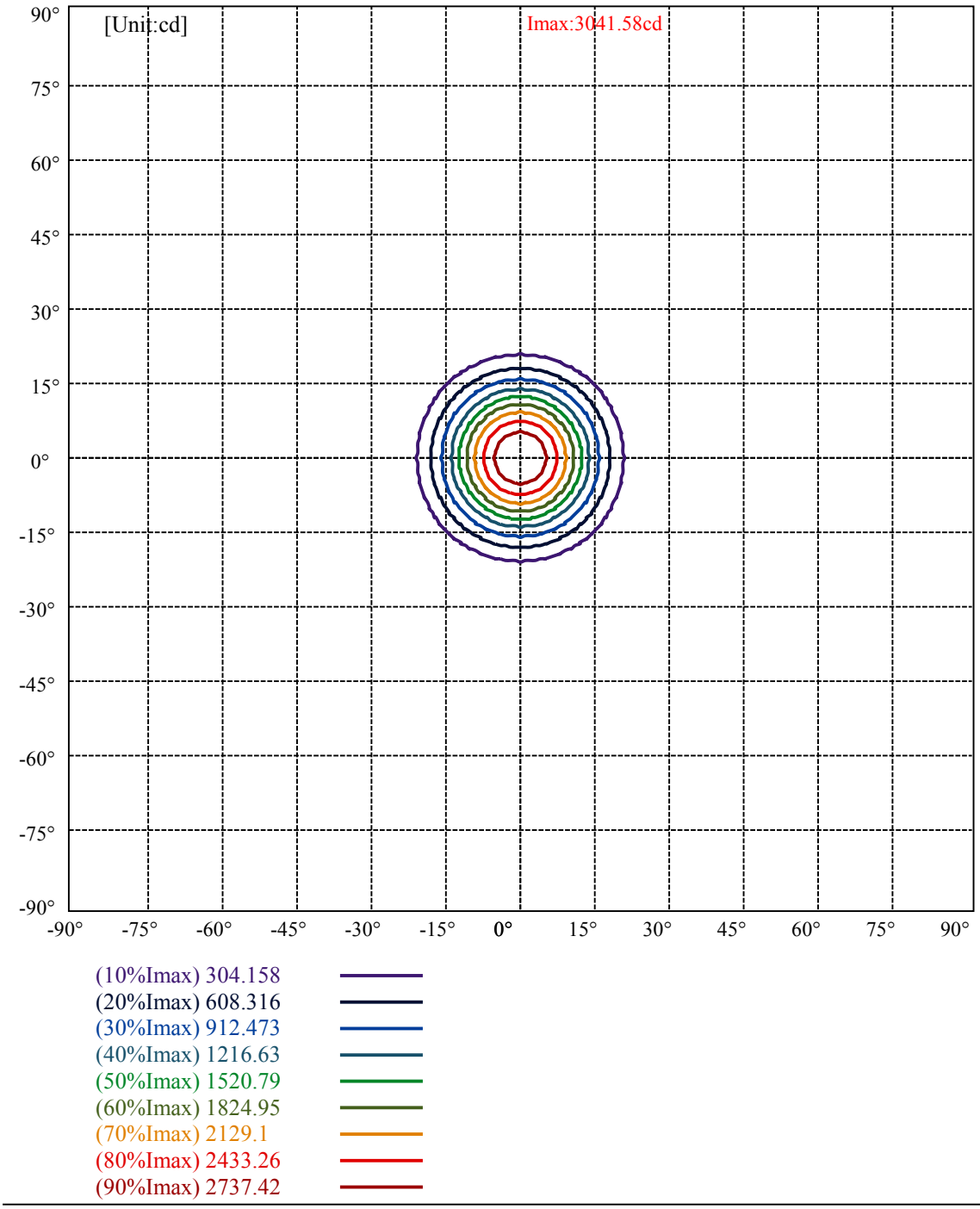
Beam angle of C0 plane 24.49

Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

ISO-Intensity(V-H)

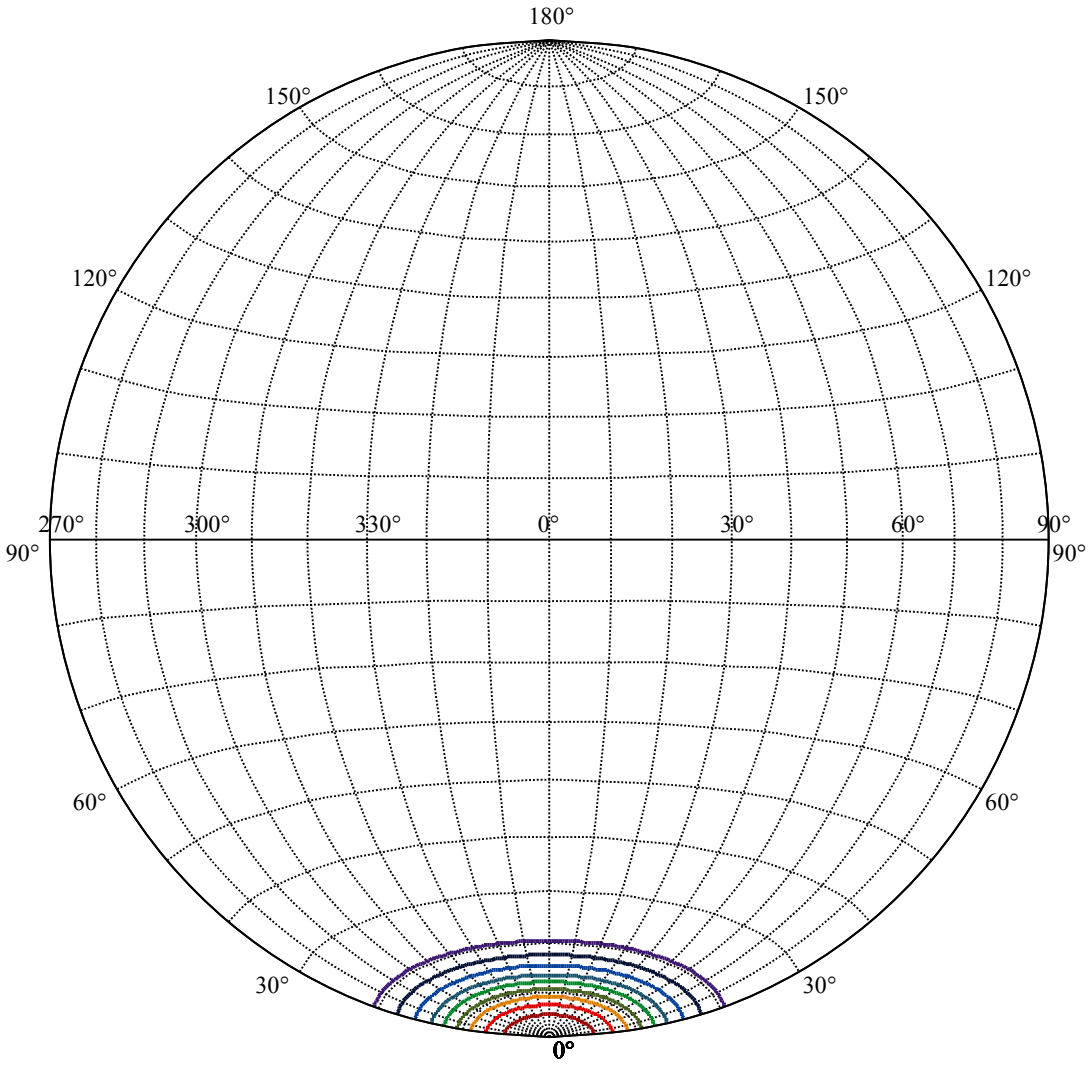


Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:3041.58

(10%Imax) 304.158
(20%Imax) 608.316
(30%Imax) 912.473
(40%Imax) 1216.63
(50%Imax) 1520.79
(60%Imax) 1824.95
(70%Imax) 2129.1
(80%Imax) 2433.26
(90%Imax) 2737.42

Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

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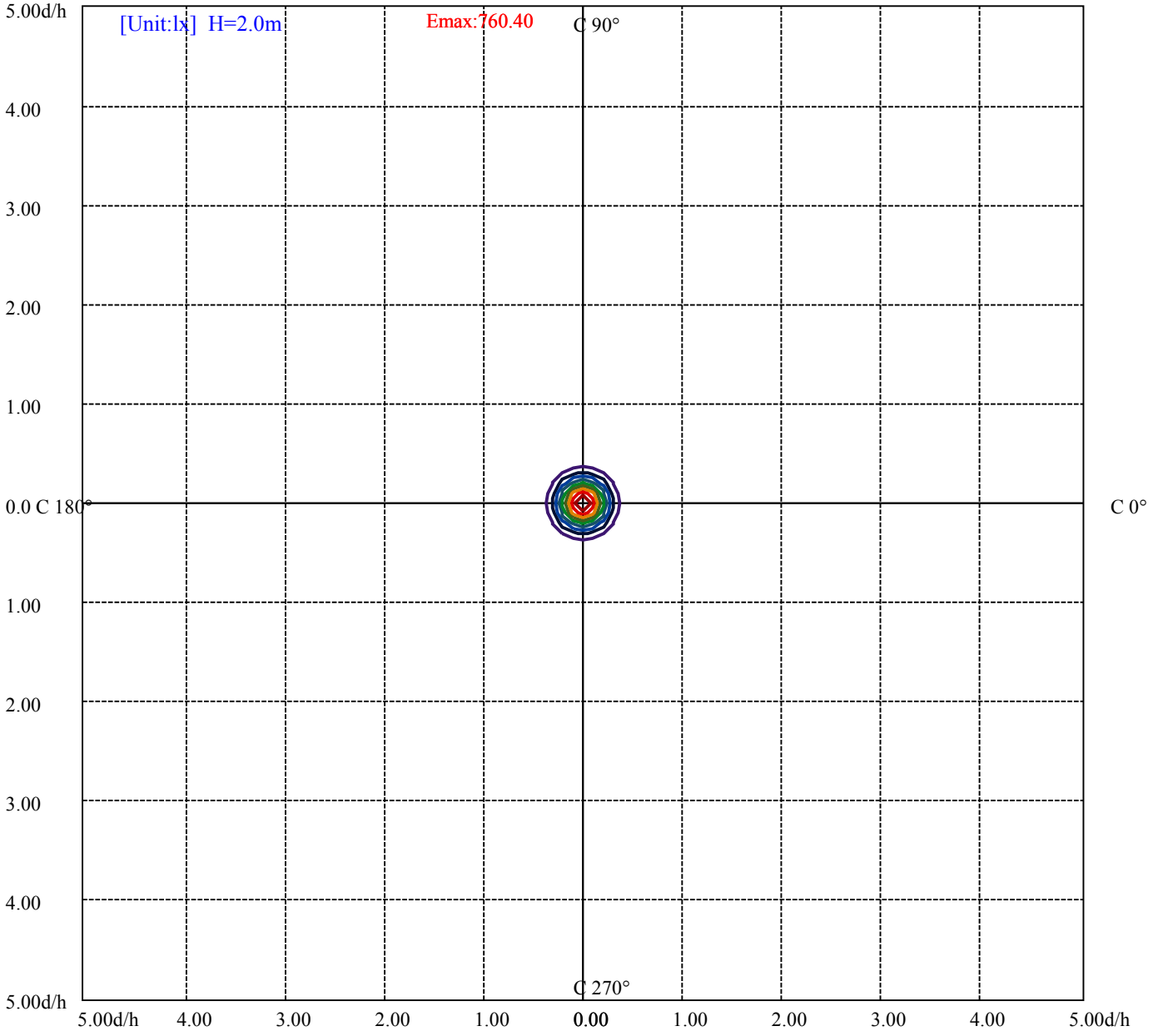
ISO illuminance diagram

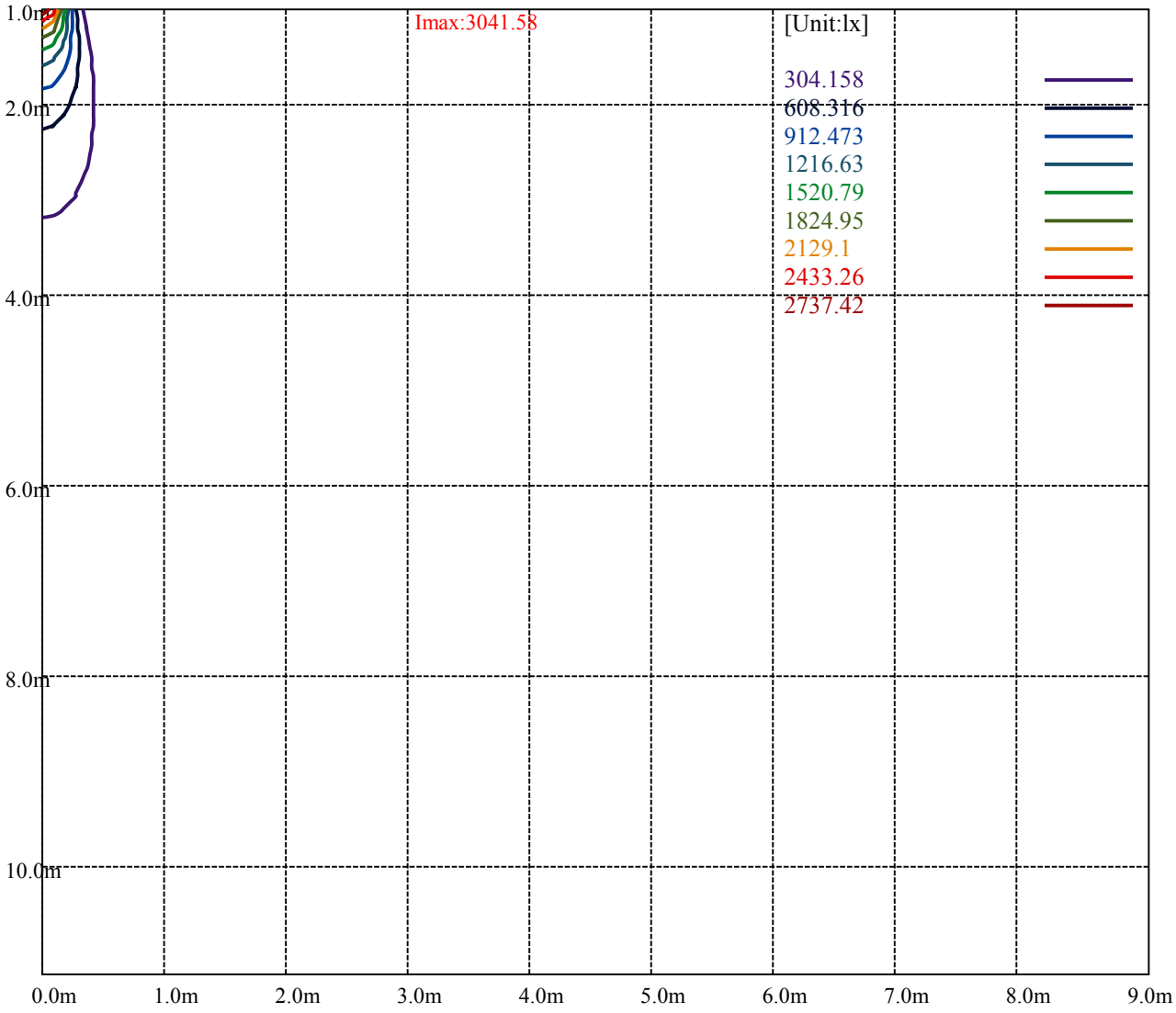


Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
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

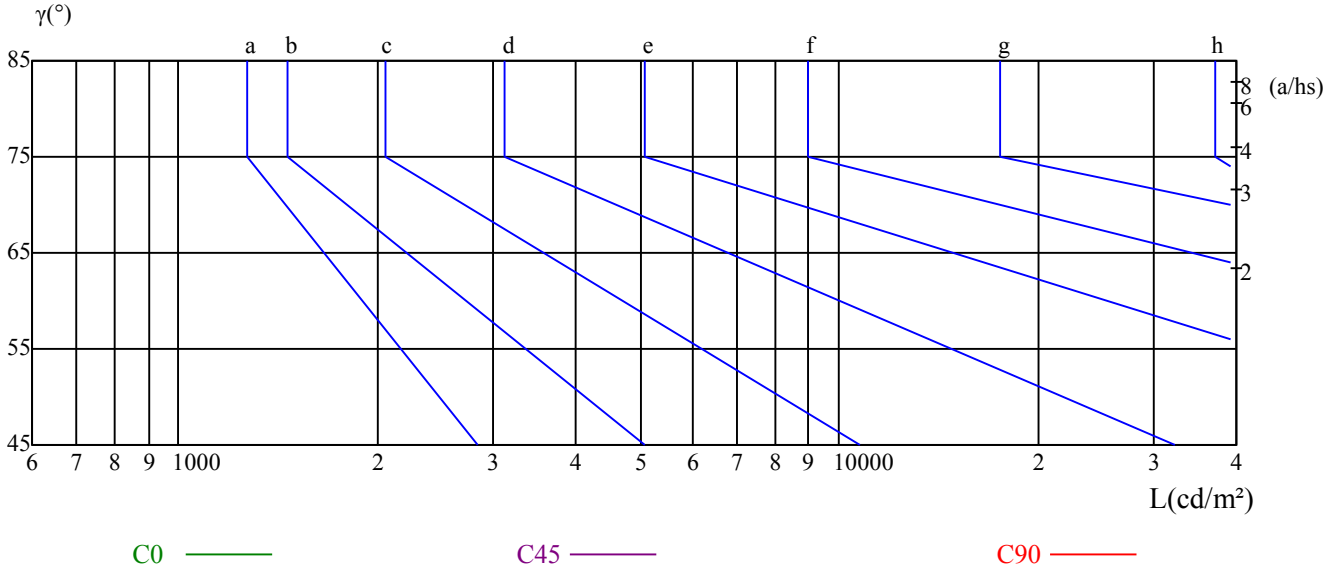
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

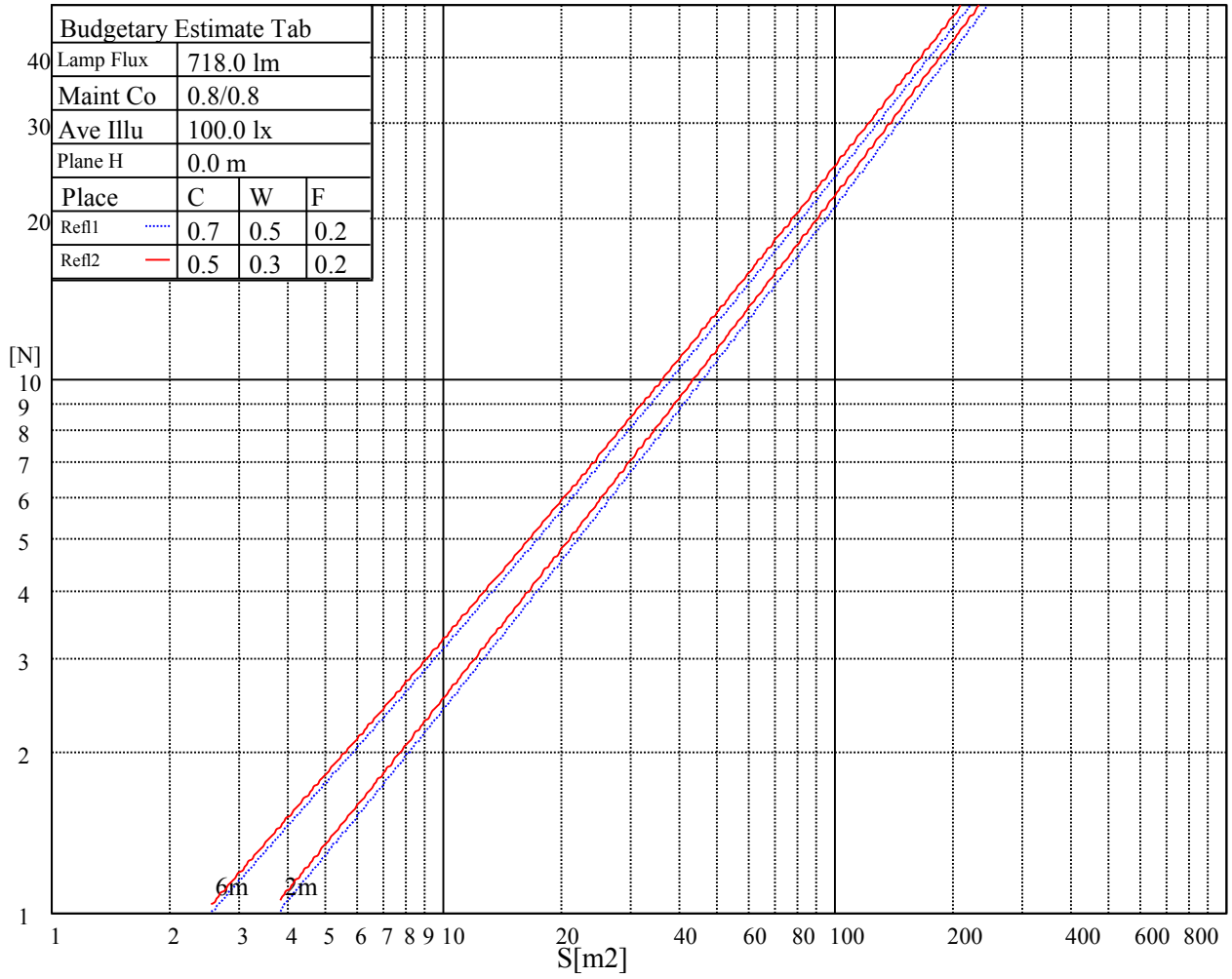
Glare Table

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

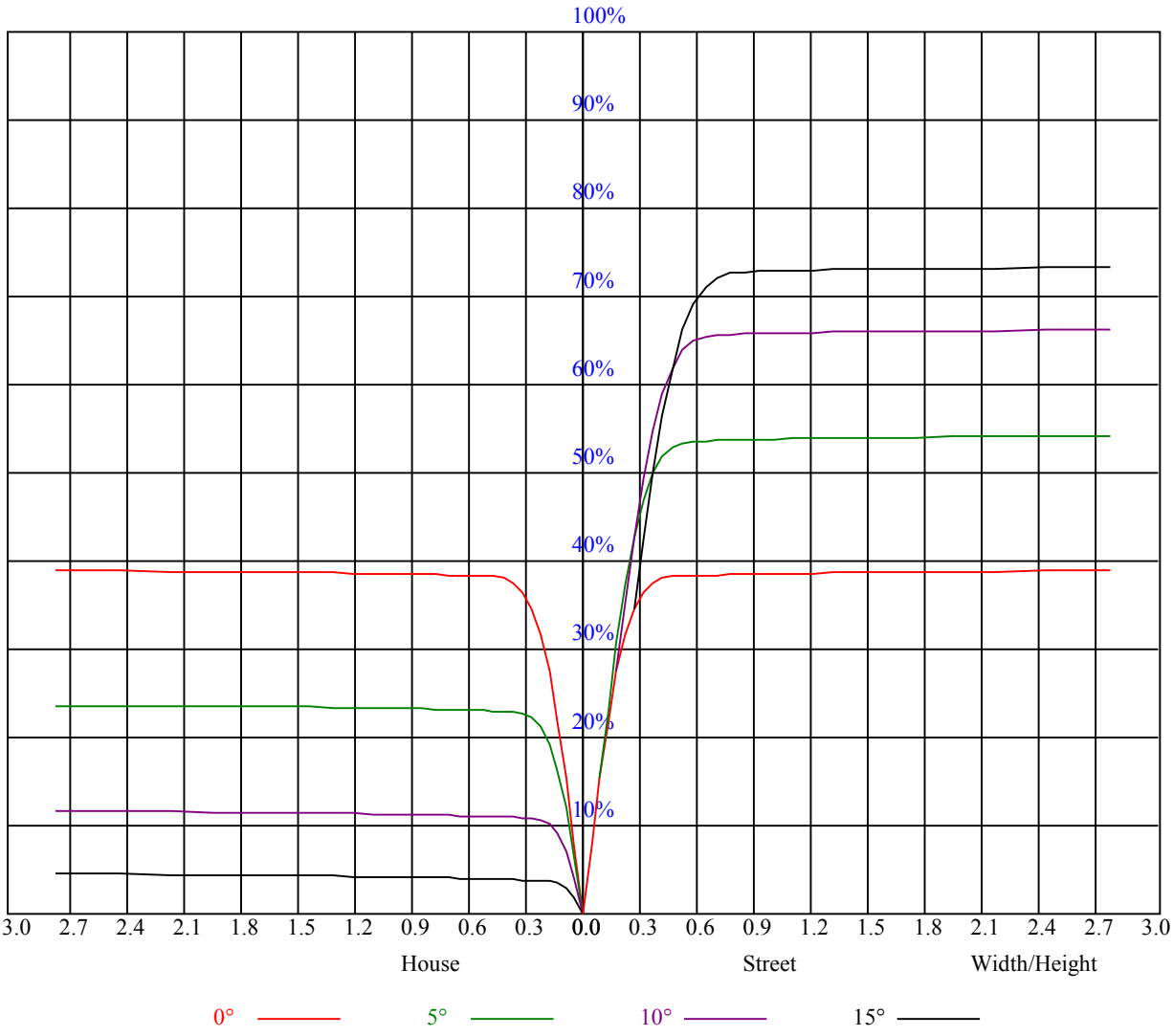


Equipment: GMS1980 Date: 2019/9/20 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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

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	3037.50	3039.75	3005.44	2955.94	2883.38	2764.69	2638.69	2522.25	2333.81
45.0	3046.50	3038.63	3011.06	2947.50	2876.63	2795.63	2631.94	2488.50	2351.81
90.0	3037.50	3019.50	2979.00	2905.31	2816.44	2694.94	2560.50	2391.75	2210.06
135.0	3044.81	3041.44	3004.88	2957.06	2884.50	2768.06	2651.63	2515.50	2342.81
180.0	3037.50	3026.81	2988.56	2926.69	2851.88	2757.38	2621.81	2463.75	2290.50
225.0	3046.50	3030.75	3000.38	2948.63	2860.88	2768.63	2637.56	2487.94	2337.75
270.0	3037.50	3034.69	3014.44	2978.44	2914.88	2807.44	2696.63	2570.63	2407.50
315.0	3044.81	3025.13	2994.75	2931.75	2854.69	2743.31	2619.00	2461.50	2291.63
360.0	3037.50	3039.75	3005.44	2955.94	2883.38	2764.69	2638.69	2522.25	2333.81

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2151.56	2001.94	1779.75	1596.38	1390.50	1188.56	1029.38	880.31	712.69
45.0	2122.88	1947.94	1785.94	1554.75	1350.00	1193.06	999.00	850.50	725.63
90.0	2035.69	1833.75	1629.56	1448.44	1099.63	1061.72	913.05	775.52	631.01
135.0	2159.44	1987.88	1781.44	1602.00	1396.13	1195.31	1034.44	862.31	713.81
180.0	2123.44	1926.56	1725.75	1546.88	1367.44	1105.26	989.78	844.31	706.33
225.0	2174.63	1954.69	1770.75	1589.06	1360.69	1102.28	1022.34	874.69	701.38
270.0	2234.81	2067.75	1869.19	1689.75	1481.63	1276.88	1103.06	928.13	787.50
315.0	2126.81	1928.81	1720.69	1537.88	1351.69	1117.29	983.59	840.04	693.00
360.0	2151.56	2001.94	1779.75	1596.38	1390.50	1188.56	1029.38	880.31	712.69

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	596.81	495.56	371.81	290.81	191.25	105.24	55.97	24.53	10.24
45.0	579.38	473.06	368.44	286.31	168.13	104.34	45.79	18.39	9.51
90.0	507.43	404.89	297.79	199.97	127.18	67.84	31.73	12.09	8.04
135.0	591.19	479.81	347.63	291.94	174.88	100.69	47.19	19.58	9.73
180.0	554.18	447.08	347.29	235.35	157.89	95.46	45.90	18.00	9.96
225.0	580.28	473.18	358.54	257.85	168.24	103.39	49.16	20.93	10.97
270.0	639.00	528.19	412.31	306.00	285.19	141.81	70.48	33.81	14.85
315.0	564.81	461.87	349.43	248.85	169.48	96.98	48.04	17.38	9.28
360.0	596.81	495.56	371.81	290.81	191.25	105.24	55.97	24.53	10.24

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	7.76	6.86	6.19	5.68	5.23	4.84	4.56	4.28	4.05
45.0	7.31	6.47	5.91	5.40	5.01	4.73	4.39	4.16	3.99
90.0	6.86	6.24	5.63	5.18	4.84	4.50	4.28	4.11	3.88
135.0	7.54	6.69	6.02	5.51	5.12	4.73	4.50	4.22	3.99
180.0	7.82	6.92	6.19	5.63	5.23	4.84	4.50	4.28	4.05
225.0	8.55	7.31	6.47	5.85	5.46	4.95	4.67	4.39	4.11
270.0	8.66	7.31	6.64	5.96	5.46	5.01	4.67	4.39	4.16
315.0	7.48	6.64	5.91	5.40	5.01	4.61	4.39	4.16	3.94
360.0	7.76	6.86	6.19	5.68	5.23	4.84	4.56	4.28	4.05

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	3.88	3.71	3.54	3.49	3.38	3.32	3.15	3.15	3.09
45.0	3.83	3.71	3.60	3.49	3.38	3.32	3.21	3.15	3.15
90.0	3.77	3.66	3.54	3.43	3.32	3.26	3.21	3.09	3.09
135.0	3.88	3.77	3.60	3.49	3.43	3.32	3.26	3.21	3.15
180.0	3.83	3.71	3.60	3.43	3.43	3.32	3.26	3.15	3.09
225.0	3.94	3.77	3.60	3.49	3.43	3.26	3.21	3.21	3.09
270.0	3.94	3.77	3.66	3.49	3.38	3.32	3.26	3.21	3.15
315.0	3.77	3.66	3.49	3.38	3.26	3.26	3.21	3.09	3.09
360.0	3.88	3.71	3.54	3.49	3.38	3.32	3.15	3.15	3.09

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	3.04	3.04	2.98	2.98	2.93	2.87	2.81	2.81	2.81
45.0	3.04	2.98	2.98	2.98	2.93	2.87	2.87	2.81	2.81
90.0	3.04	2.98	2.98	2.93	2.93	2.87	2.87	2.81	2.81
135.0	3.09	3.04	2.98	2.98	2.93	2.93	2.87	2.87	2.81
180.0	3.09	3.04	2.98	2.98	2.93	2.87	2.87	2.87	2.81
225.0	3.09	2.98	2.98	2.93	2.93	2.87	2.87	2.87	2.81
270.0	3.09	3.04	2.98	2.98	2.98	2.93	2.87	2.87	2.87
315.0	3.04	2.98	2.98	2.93	2.87	2.87	2.87	2.81	2.81
360.0	3.04	3.04	2.98	2.98	2.93	2.87	2.81	2.81	2.81

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

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	2.64	2.64	2.64	2.59	2.64	2.64	2.64
45.0	2.70	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.59
90.0	2.70	2.64	2.64	2.64	2.64	2.64	2.64	2.59	2.64
135.0	2.64	2.70	2.64	2.64	2.70	2.64	2.64	2.64	2.59
180.0	2.64	2.70	2.64	2.64	2.64	2.64	2.64	2.64	2.59
225.0	2.70	2.64	2.64	2.64	2.64	2.59	2.59	2.59	2.59
270.0	2.70	2.70	2.70	2.64	2.64	2.64	2.70	2.64	2.64
315.0	2.64	2.70	2.64	2.64	2.64	2.64	2.64	2.64	2.59
360.0	2.64	2.64	2.64	2.64	2.64	2.59	2.64	2.64	2.64

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

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
45.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.53	2.59
90.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
135.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
180.0	2.53	2.59	2.59	2.59	2.59	2.53	2.59	2.53	2.53
225.0	2.59	2.53	2.59	2.53	2.53	2.59	2.59	2.53	2.59
270.0	2.64	2.64	2.59	2.64	2.59	2.59	2.59	2.59	2.59
315.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.53	2.53
360.0	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59

Intensity data(cd)

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