NATA LIGHTING CO.,LTD.
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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

LumCAT: 1-0847-S
Luminaire:
Report No: NATA0100
Test No: GC2019053004
LampCAT: LUMILEDS LUXEON 3030
Lamp flux(lm): 327.5
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 29.1600
Current(A): 0.1000
Power (W): 2.9160
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 198.79
Efficiency(%): 60.69%
Lumens(lm)/Power(W): 68.17
Central intensity(cd): 4.444
Maximum intensity(cd): 533.925
Angle of maximum intensity: C=90.0 γ=20.0
Beam Angle(50%Imax): [C0/180]Total=25.9
[C90/270]Total=24.9
Field angle(10%Imax): [C0/180]Total=N.A.
[C90/270]Total=76.0
Maximum s/h(1/2): C0_180=0.41 C90_270=6.91
Maximum s/h(1/4): C0_180=0.87 C90_270=6.06
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 60.69%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 78.248%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3.356	0.000	0	.000%	.000%
1.0	3.209	0.003	0.003	.001%	.002%
2.0	3.136	0.009	0.012	.003%	.006%
3.0	3.584	0.016	0.028	.005%	.014%
4.0	5.189	0.029	0.058	.009%	.029%
5.0	8.194	0.058	0.115	.018%	.058%
6.0	12.141	0.107	0.222	.033%	.112%
7.0	18.073	0.188	0.41	.057%	.206%
8.0	25.097	0.309	0.719	.094%	.361%
9.0	33.129	0.472	1.19	.144%	.599%
10.0	42.347	0.683	1.874	.209%	.942%
11.0	51.680	0.940	2.813	.287%	1.415%
12.0	60.284	1.224	4.037	.374%	2.031%
13.0	69.209	1.537	5.574	.469%	2.804%
14.0	77.597	1.879	7.453	.574%	3.749%
15.0	84.131	2.220	9.673	.678%	4.866%
16.0	90.030	2.552	12.225	.779%	6.150%
17.0	94.373	2.872	15.097	.877%	7.594%
18.0	97.371	3.161	18.258	.965%	9.185%
19.0	99.061	3.418	21.676	1.043%	10.904%
20.0	99.595	3.636	25.312	1.110%	12.733%
21.0	99.028	3.814	29.126	1.164%	14.651%
22.0	97.683	3.953	33.079	1.207%	16.640%
23.0	95.435	4.052	37.131	1.237%	18.678%
24.0	93.059	4.121	41.252	1.258%	20.751%
25.0	90.068	4.164	45.416	1.271%	22.846%
26.0	86.773	4.174	49.59	1.274%	24.946%
27.0	83.508	4.166	53.756	1.272%	27.042%
28.0	80.161	4.144	57.9	1.265%	29.126%
29.0	76.582	4.101	62.001	1.252%	31.189%
30.0	73.397	4.049	66.05	1.236%	33.226%
31.0	69.839	3.986	70.036	1.217%	35.231%
32.0	66.570	3.908	73.944	1.193%	37.197%
33.0	63.673	3.837	77.781	1.171%	39.127%
34.0	60.551	3.759	81.54	1.148%	41.018%
35.0	57.811	3.676	85.216	1.122%	42.867%
36.0	55.198	3.598	88.814	1.099%	44.677%
37.0	52.784	3.522	92.336	1.075%	46.449%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	50.381	3.444	95.78	1.051%	48.181%
39.0	48.232	3.366	99.146	1.028%	49.874%
40.0	46.167	3.292	102.438	1.005%	51.531%
41.0	44.271	3.220	105.658	.983%	53.151%
42.0	42.377	3.148	108.807	.961%	54.734%
43.0	40.634	3.075	111.882	.939%	56.281%
44.0	39.094	3.009	114.891	.919%	57.795%
45.0	37.556	2.946	117.836	.899%	59.277%
46.0	36.136	2.882	120.718	.880%	60.726%
47.0	34.828	2.822	123.541	.862%	62.146%
48.0	33.605	2.766	126.307	.845%	63.538%
49.0	32.381	2.710	129.017	.827%	64.901%
50.0	31.287	2.655	131.671	.810%	66.236%
51.0	30.237	2.603	134.274	.795%	67.546%
52.0	29.276	2.554	136.828	.780%	68.830%
53.0	28.291	2.504	139.332	.765%	70.090%
54.0	27.338	2.452	141.784	.749%	71.323%
55.0	26.534	2.405	144.189	.734%	72.533%
56.0	25.713	2.361	146.55	.721%	73.721%
57.0	24.923	2.315	148.865	.707%	74.885%
58.0	24.176	2.271	151.136	.693%	76.027%
59.0	23.489	2.228	153.364	.680%	77.148%
60.0	22.786	2.186	155.55	.667%	78.248%
61.0	22.120	2.143	157.693	.654%	79.326%
62.0	21.490	2.101	159.795	.642%	80.383%
63.0	20.873	2.060	161.855	.629%	81.420%
64.0	20.262	2.018	163.873	.616%	82.435%
65.0	19.620	1.974	165.847	.603%	83.428%
66.0	19.088	1.931	167.778	.590%	84.399%
67.0	18.502	1.890	169.668	.577%	85.350%
68.0	17.970	1.848	171.516	.564%	86.280%
69.0	17.400	1.804	173.32	.551%	87.187%
70.0	16.889	1.761	175.081	.538%	88.073%
71.0	16.308	1.716	176.797	.524%	88.936%
72.0	15.743	1.667	178.464	.509%	89.775%
73.0	15.244	1.620	180.084	.495%	90.590%
74.0	14.695	1.574	181.658	.481%	91.381%
75.0	14.140	1.524	183.182	.465%	92.148%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	13.608	1.473	184.654	.450%	92.889%
77.0	13.071	1.422	186.077	.434%	93.604%
78.0	12.530	1.370	187.447	.418%	94.294%
79.0	11.974	1.317	188.764	.402%	94.956%
80.0	11.348	1.257	190.021	.384%	95.589%
81.0	10.748	1.195	191.216	.365%	96.190%
82.0	10.212	1.137	192.353	.347%	96.761%
83.0	9.630	1.079	193.431	.329%	97.304%
84.0	9.105	1.021	194.452	.312%	97.817%
85.0	8.562	0.964	195.416	.294%	98.303%
86.0	7.805	0.895	196.311	.273%	98.753%
87.0	6.853	0.802	197.113	.245%	99.156%
88.0	5.836	0.695	197.808	.212%	99.506%
89.0	4.530	0.568	198.377	.173%	99.792%
90.0	3.026	0.414	198.791	.126%	100.000%

Zonal flux distribution table

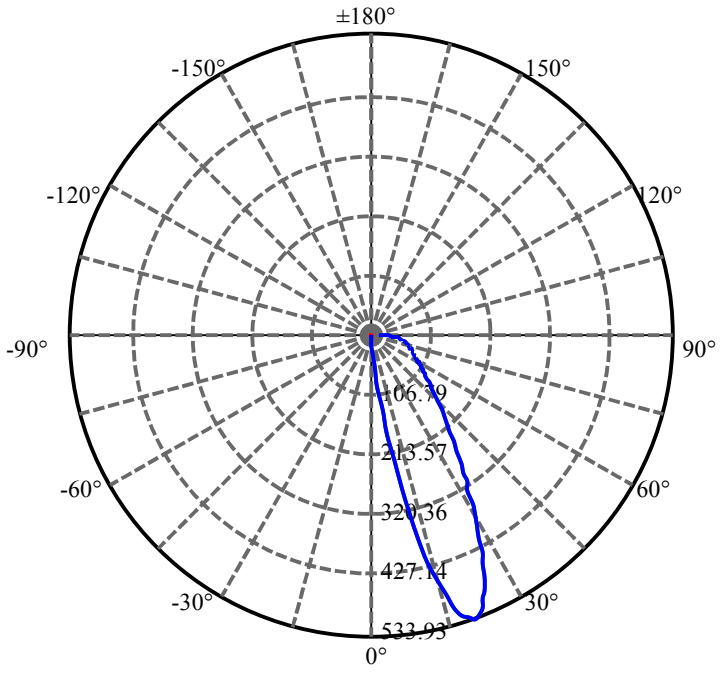
ZONAL LUMEN SUMMARY

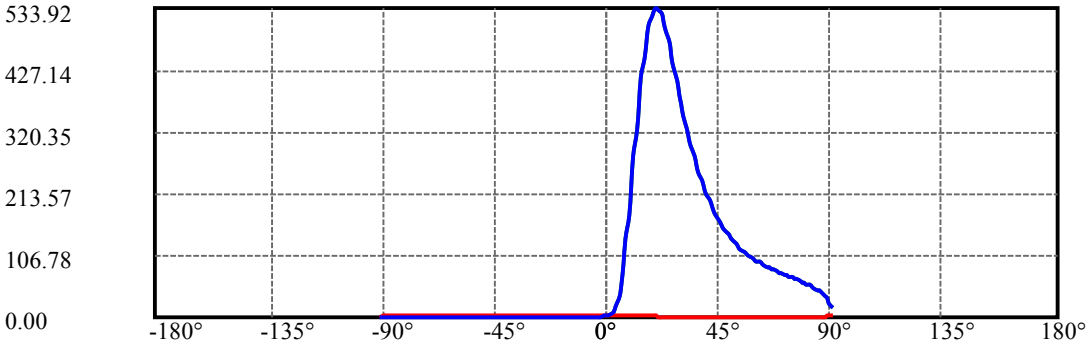
Zone	Lumens	%Lamp	%Fixt
0-30	66.05	20.17%	33.23%
0-40	102.44	31.28%	51.53%
0-60	155.55	47.49%	78.25%
0-90	198.38	60.57%	99.79%
0-120	198.38	60.57%	99.79%
0-180	198.79	60.69%	100.00%
60-90	45.01	13.74%	22.64%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-61.64	159.03	48.56%	80.00%

ZONAL LUMEN SUMMARY

0-10	1.87
10-20	23.44
20-30	40.74
30-40	36.39
40-50	29.23
50-60	23.88
60-70	19.53
70-80	14.94
80-90	8.36
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]





C90(Max):

C0/C180:

C90/C270:

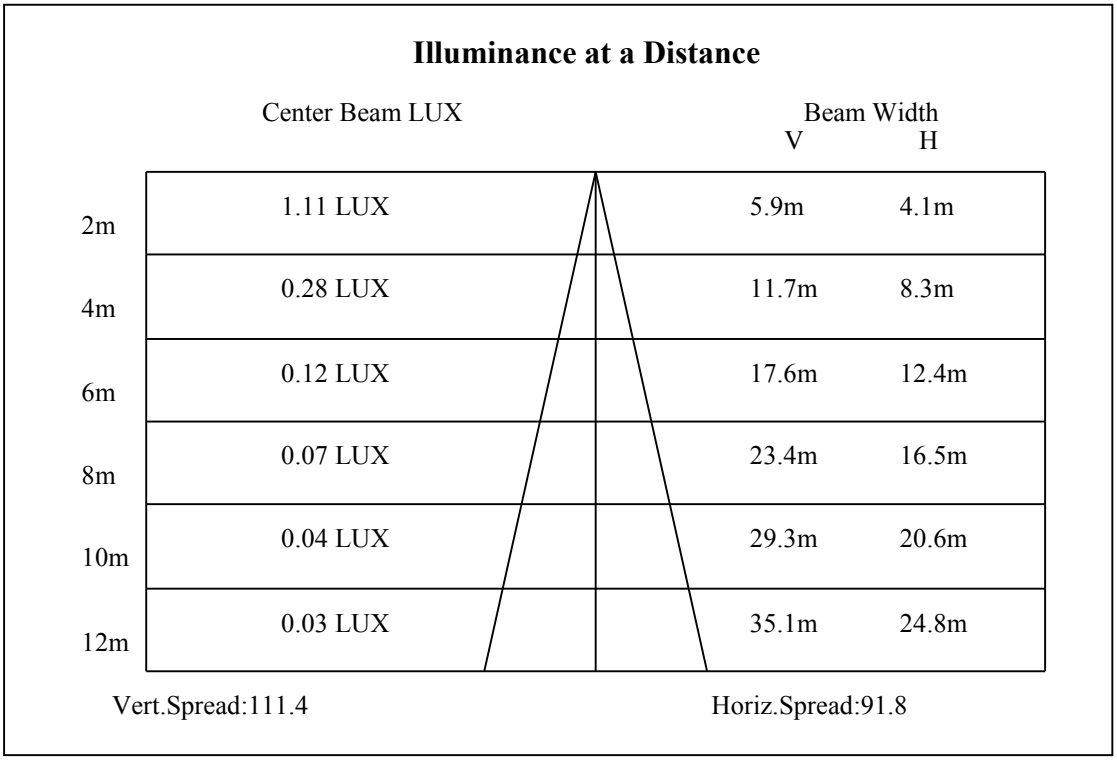
Field angle(10%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:14.3 Right:61.7

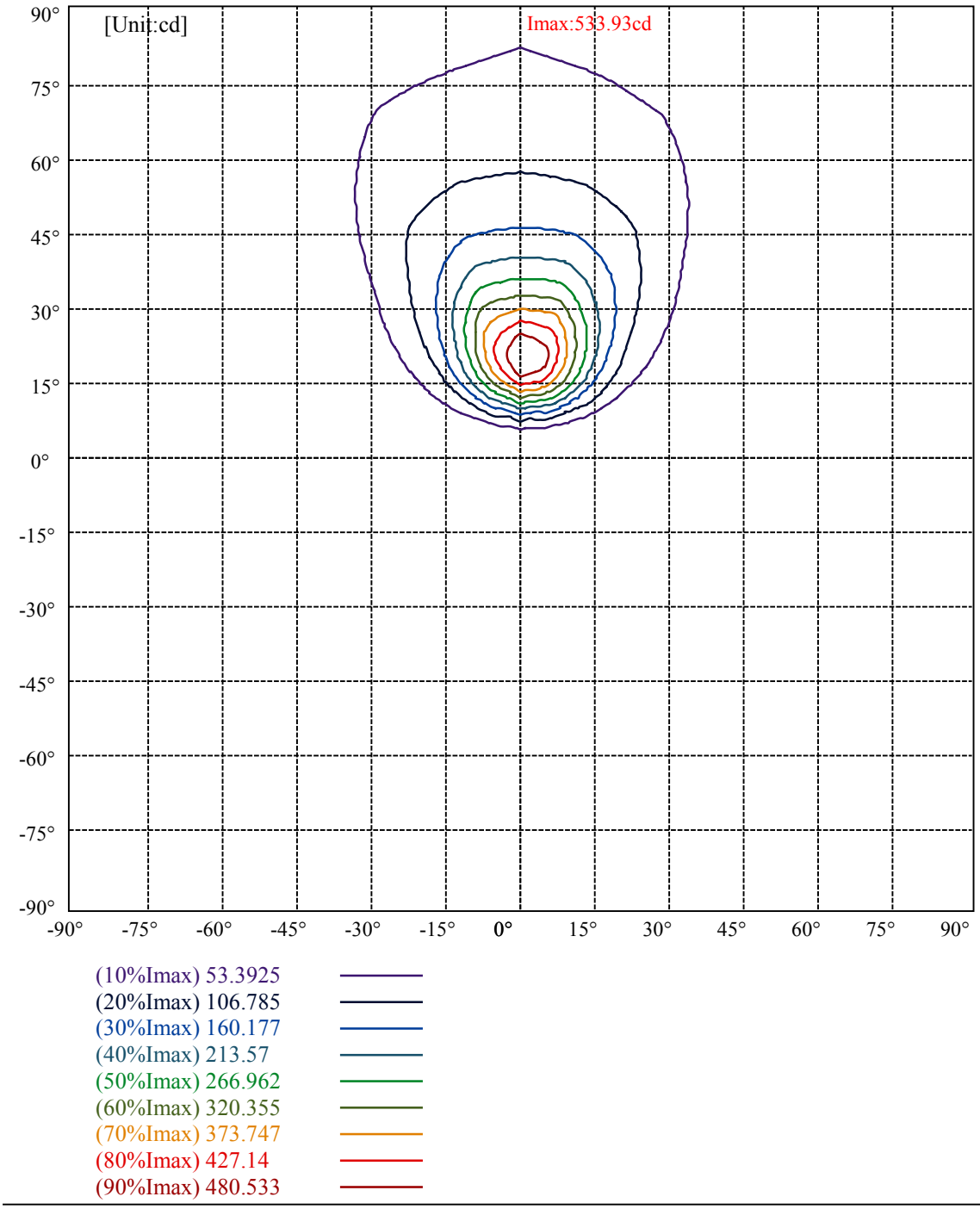
Beam Angle(50%Imax):C0/180Left:12.2 Right:13.8

:C90/270Left:9.2 Right:15.7

Lux distance Curve



ISO-Intensity(V-H)



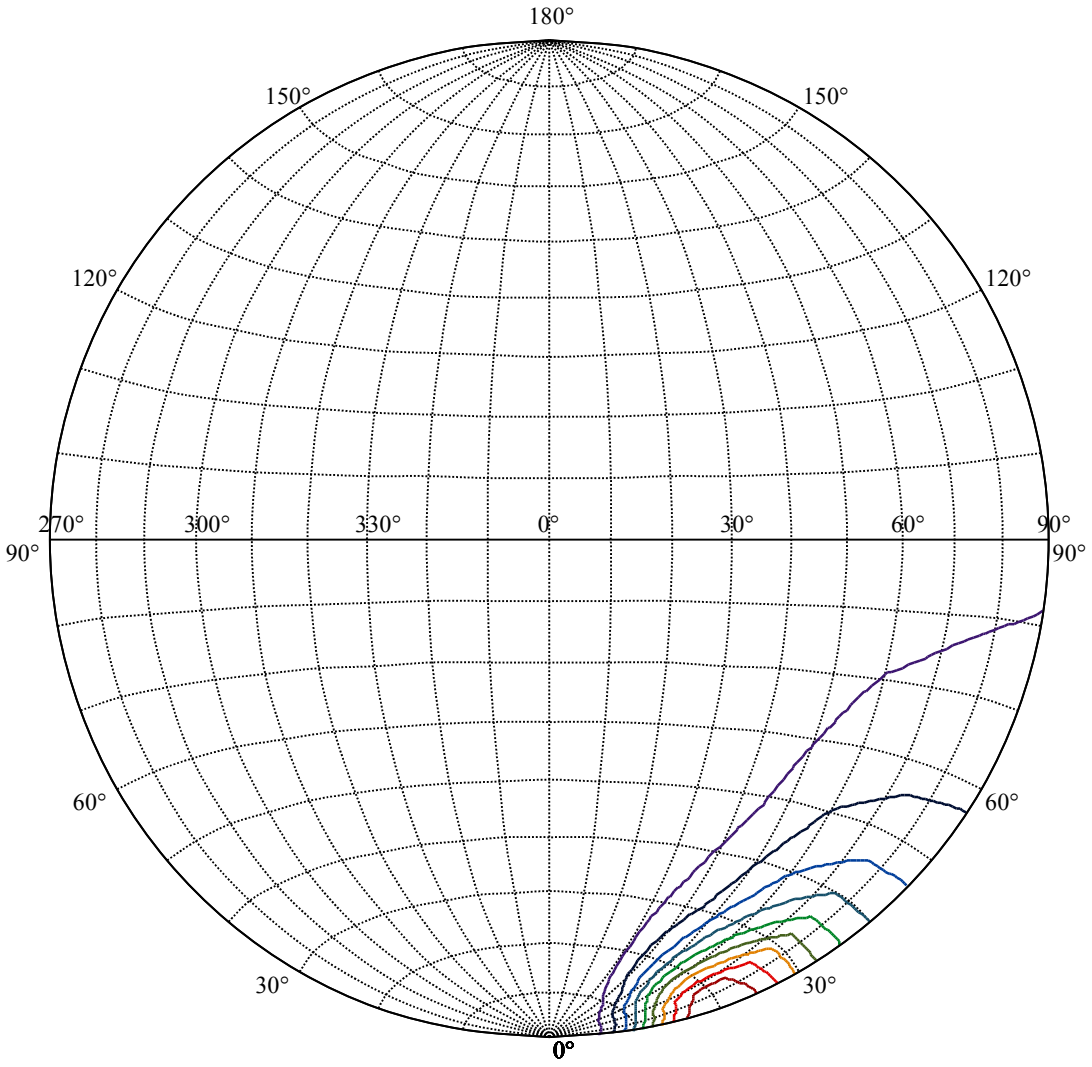
(10%Imax) 53.3925
(20%Imax) 106.785
(30%Imax) 160.177
(40%Imax) 213.57
(50%Imax) 266.962
(60%Imax) 320.355
(70%Imax) 373.747
(80%Imax) 427.14
(90%Imax) 480.533

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/5/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



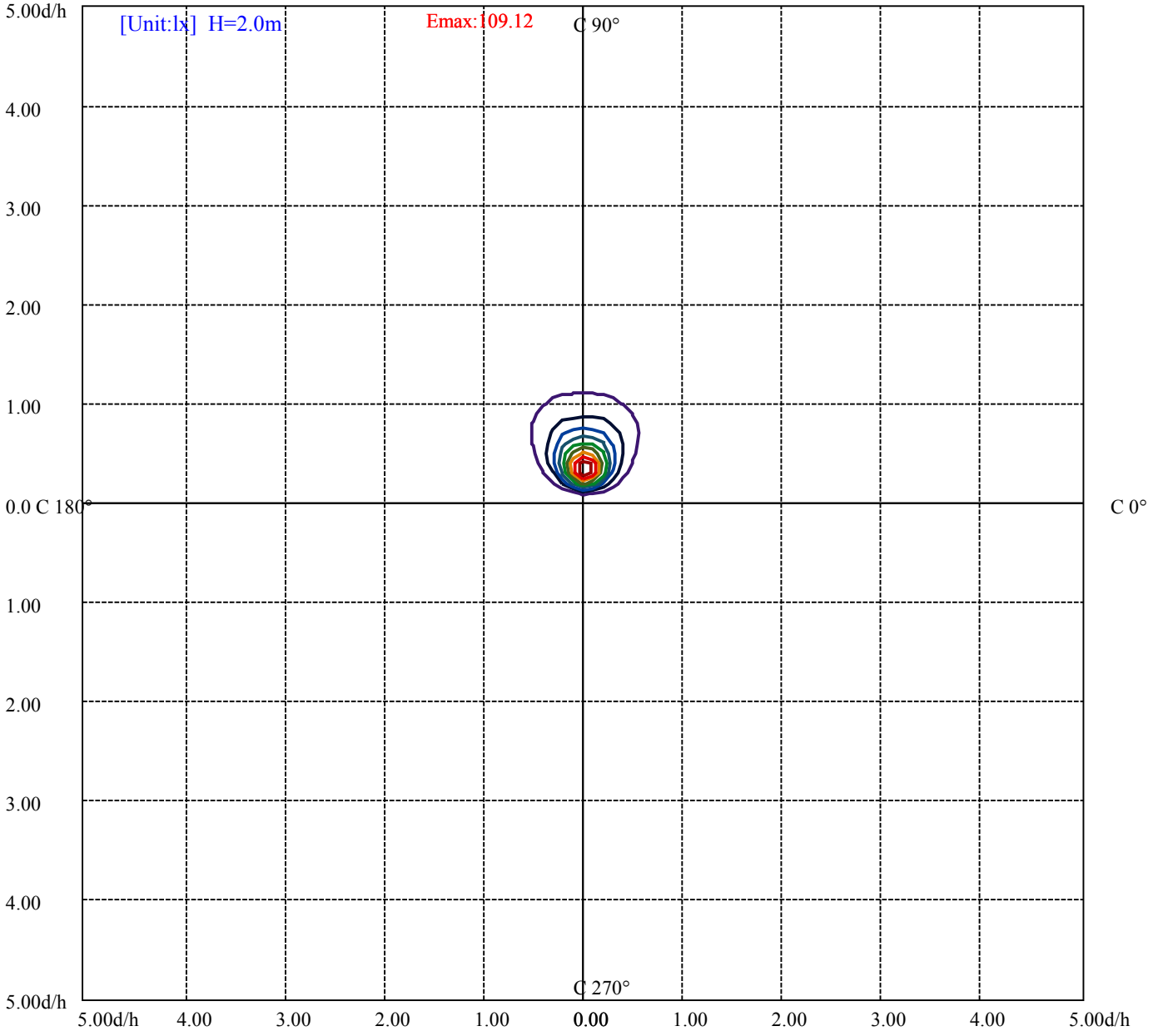
House [Unit:cd] Road

Imax:533.93

(10%Imax) 53.3925
(20%Imax) 106.785
(30%Imax) 160.177
(40%Imax) 213.57
(50%Imax) 266.962
(60%Imax) 320.355
(70%Imax) 373.747
(80%Imax) 427.14
(90%Imax) 480.533

Equipment: GMS1980 Date: 2019/5/30 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

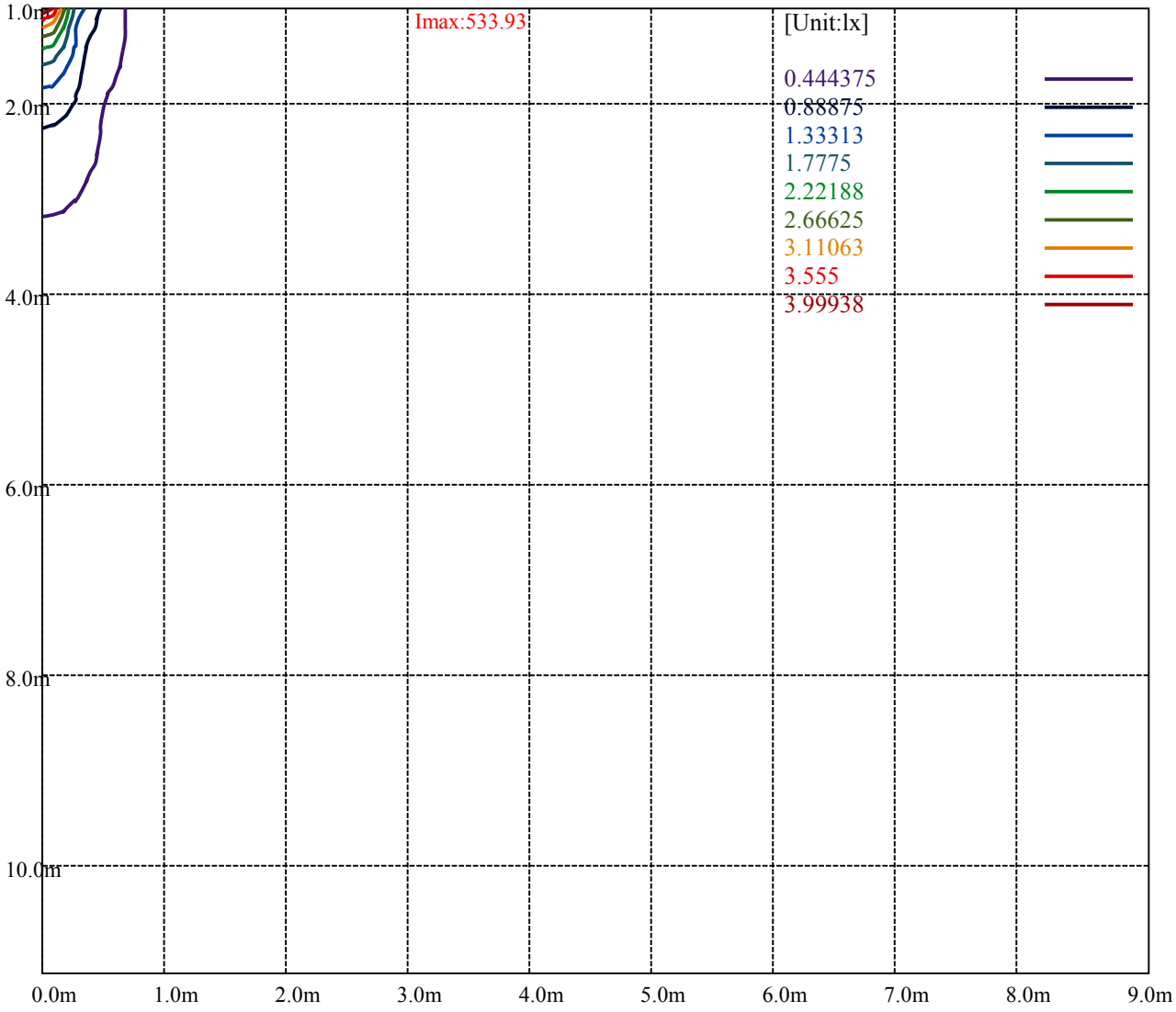
ISO illuminance diagram



(10%Emax) 10.91183
(20%Emax) 21.82368
(30%Emax) 32.7355
(40%Emax) 43.64725
(50%Emax) 54.55925
(60%Emax) 65.471
(70%Emax) 76.38275
(80%Emax) 87.29475
(90%Emax) 98.2065

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2019/5/30
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/5/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

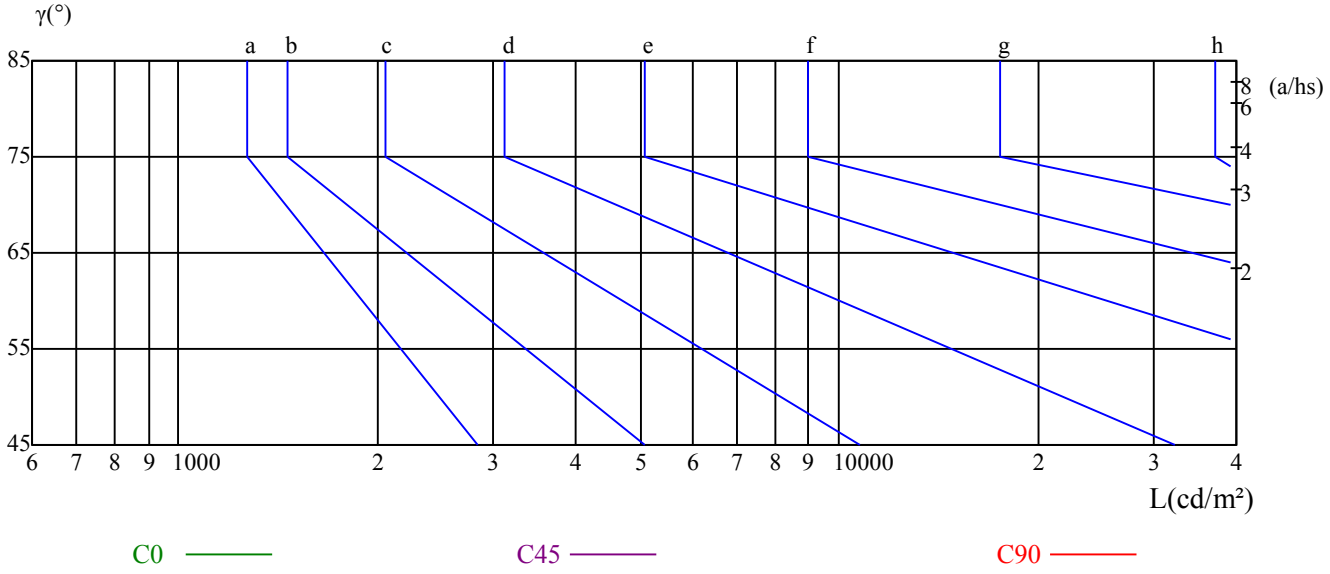
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

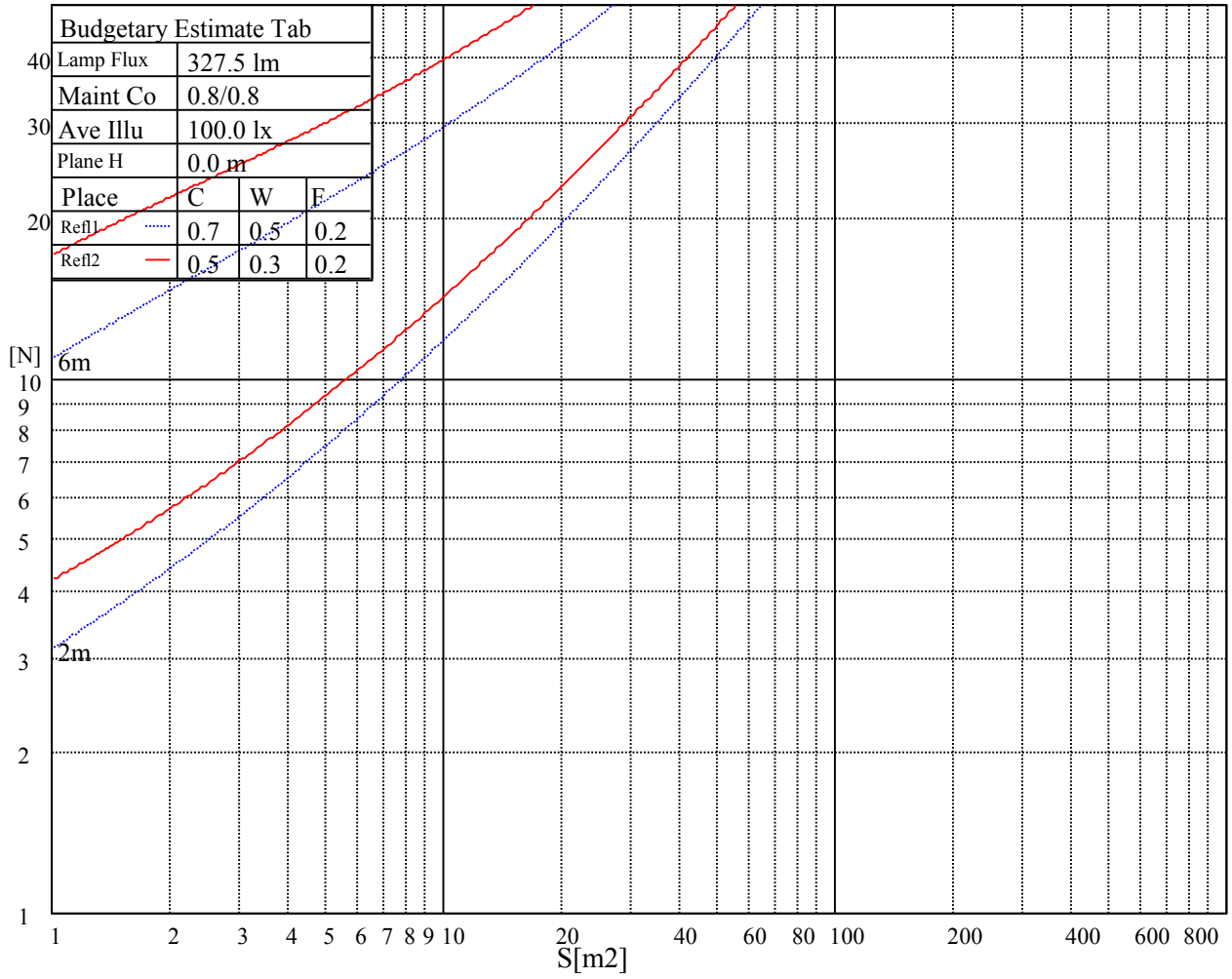
Glare Table

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

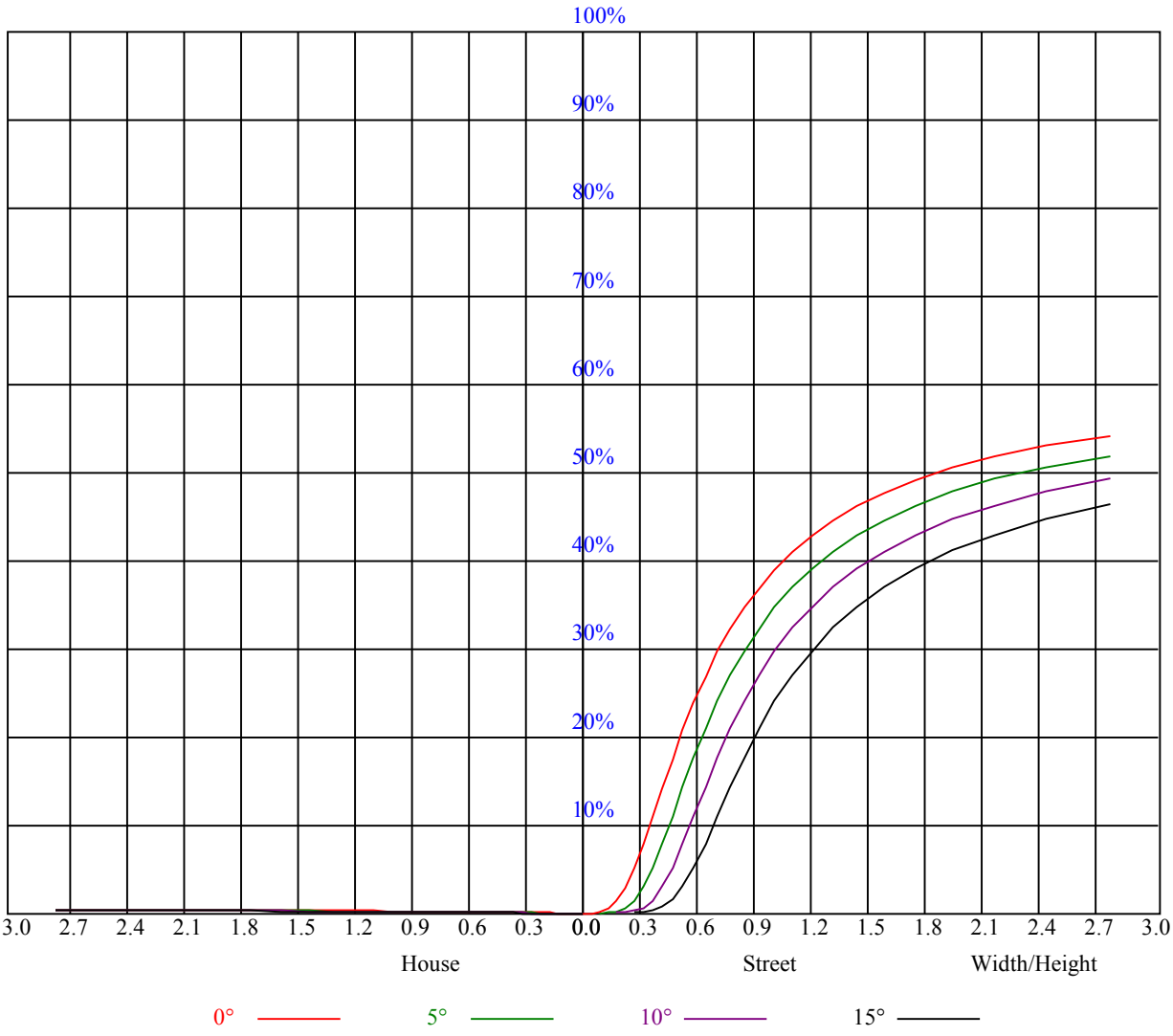


Equipment: GMS1980	Date: 2019/5/30	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	0.72	0.72	0.72	0.71	0.71	0.71	0.67	0.67	0.67	0.65	0.65	0.65	0.62	0.62	0.62	0.61
1	0.63	0.60	0.57	0.61	0.59	0.56	0.59	0.56	0.55	0.56	0.54	0.53	0.54	0.53	0.51	0.50
2	0.55	0.51	0.47	0.54	0.50	0.46	0.51	0.48	0.45	0.49	0.47	0.44	0.48	0.45	0.43	0.42
3	0.48	0.43	0.40	0.47	0.43	0.39	0.46	0.42	0.38	0.44	0.41	0.38	0.42	0.40	0.37	0.36
4	0.43	0.38	0.34	0.42	0.37	0.34	0.41	0.37	0.33	0.39	0.36	0.33	0.38	0.35	0.32	0.31
5	0.39	0.33	0.29	0.38	0.33	0.29	0.37	0.32	0.29	0.36	0.32	0.29	0.35	0.31	0.28	0.27
6	0.35	0.30	0.26	0.35	0.29	0.26	0.33	0.29	0.26	0.32	0.28	0.25	0.31	0.28	0.25	0.24
7	0.32	0.27	0.23	0.31	0.27	0.23	0.31	0.26	0.23	0.30	0.26	0.23	0.29	0.25	0.22	0.21
8	0.29	0.24	0.21	0.29	0.24	0.21	0.28	0.24	0.20	0.27	0.23	0.20	0.27	0.23	0.20	0.19
9	0.27	0.22	0.19	0.27	0.22	0.19	0.26	0.21	0.18	0.25	0.21	0.18	0.25	0.21	0.18	0.17
10	0.25	0.20	0.17	0.24	0.20	0.17	0.24	0.20	0.17	0.23	0.19	0.17	0.23	0.19	0.17	0.16

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/5/30	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	4.44	4.39	4.39	4.33	4.28	4.16	3.99	3.77	3.60
15.0	3.21	3.09	3.04	3.04	3.04	3.15	3.32	3.49	3.60
30.0	3.09	2.98	3.15	3.83	4.89	6.36	8.94	11.53	14.51
45.0	3.15	2.87	3.21	4.39	7.09	11.70	17.78	27.06	37.29
60.0	2.93	2.93	4.50	7.76	13.84	26.33	39.09	60.41	89.94
75.0	3.21	2.81	3.77	6.75	14.12	27.17	45.00	72.90	103.84
90.0	2.98	3.04	5.06	10.63	20.19	37.63	60.13	94.05	135.23
105.0	3.32	2.98	3.83	6.75	12.77	26.16	42.58	64.69	91.91
120.0	3.21	3.09	4.05	7.03	12.99	21.32	33.02	52.43	71.04
135.0	3.38	3.09	3.21	4.22	5.91	9.39	13.95	20.64	27.90
150.0	3.38	3.21	3.21	3.49	4.11	4.95	6.30	8.04	9.84
165.0	3.94	3.83	3.66	3.60	3.54	3.43	3.43	3.38	3.38
180.0	4.44	4.39	4.39	4.33	4.28	4.33	4.22	3.94	3.60
195.0	3.21	3.32	3.49	2.93	2.36	2.31	2.03	1.01	0.73
210.0	3.09	3.32	2.81	2.31	2.14	0.73	0.56	0.51	0.51
225.0	3.15	2.76	2.31	0.73	0.51	0.45	0.39	0.34	0.34
240.0	2.93	3.26	2.19	0.56	0.45	0.39	0.34	0.34	0.34
255.0	3.21	2.31	0.96	0.45	0.34	0.34	0.34	0.28	0.28
270.0	2.98	3.09	1.58	0.56	0.45	0.39	0.39	0.39	0.39
285.0	3.32	2.42	0.84	0.62	0.56	0.51	0.51	0.45	0.45
300.0	3.21	3.38	2.42	0.79	0.68	0.62	0.62	0.56	0.56
315.0	3.49	2.76	2.48	0.96	0.79	0.73	0.68	0.68	0.62
330.0	3.38	3.66	2.93	2.70	2.19	1.07	0.96	0.90	0.90
345.0	3.94	4.05	3.83	3.26	3.04	3.04	2.81	1.97	1.52
360.0	4.44	4.39	4.39	4.33	4.28	4.16	3.99	3.77	3.60

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3.43	3.21	3.04	2.81	2.48	2.14	2.03	1.91	1.86
15.0	3.77	3.88	3.99	4.05	3.99	3.99	3.99	3.94	3.94
30.0	18.23	22.16	25.65	29.59	33.36	36.51	39.71	42.13	44.33
45.0	50.63	65.76	80.10	94.44	111.71	124.48	135.56	146.59	152.94
60.0	113.68	146.31	183.60	209.25	237.32	271.29	289.29	305.83	319.22
75.0	144.00	189.23	232.59	281.70	329.34	368.83	403.88	439.65	461.53
90.0	176.12	225.90	277.20	321.92	365.06	414.62	448.65	477.06	505.18
105.0	131.01	165.77	206.72	243.23	282.99	315.96	348.30	374.68	393.13
120.0	92.25	120.15	142.48	163.74	185.85	205.48	220.16	233.21	241.65
135.0	37.07	47.31	56.87	66.26	77.57	85.78	92.87	99.90	104.12
150.0	11.98	14.29	16.26	18.45	20.31	22.28	24.02	25.43	26.66
165.0	3.38	3.38	3.38	3.38	3.26	3.26	3.21	3.15	3.15
180.0	3.32	2.98	2.59	2.25	2.08	1.97	1.97	1.91	1.91
195.0	0.62	0.56	0.51	0.51	0.51	0.51	0.45	0.45	0.45
210.0	0.45	0.39	0.39	0.39	0.39	0.39	0.39	0.34	0.34
225.0	0.34	0.34	0.34	0.28	0.34	0.34	0.28	0.28	0.28
240.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.23
255.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
270.0	0.39	0.39	0.34	0.34	0.34	0.34	0.34	0.34	0.34
285.0	0.45	0.45	0.45	0.45	0.39	0.39	0.39	0.39	0.45
300.0	0.56	0.56	0.51	0.51	0.51	0.51	0.51	0.51	0.51
315.0	0.62	0.62	0.62	0.62	0.56	0.62	0.56	0.56	0.56
330.0	0.84	0.79	0.79	0.79	0.79	0.79	0.79	0.73	0.73
345.0	1.41	1.35	1.35	1.29	1.29	1.29	1.24	1.18	1.18
360.0	3.43	3.21	3.04	2.81	2.48	2.14	2.03	1.91	1.86

Intensity data(cd)

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1.80	1.74	1.69	1.63	1.58	1.52	1.46	1.41	1.35
15.0	3.94	3.99	4.05	4.16	4.22	4.28	4.39	4.39	4.44
30.0	45.90	46.69	47.03	46.80	46.24	45.45	44.10	42.86	41.51
45.0	157.11	159.24	159.08	157.33	154.29	149.40	144.79	139.73	133.71
60.0	327.15	329.74	328.44	323.89	317.81	309.09	300.38	289.63	278.55
75.0	478.18	489.54	493.71	492.30	486.68	474.98	462.99	449.44	432.34
90.0	520.82	530.38	533.93	530.61	522.51	506.98	493.31	473.01	448.54
105.0	408.88	418.05	423.51	423.96	421.31	415.52	407.42	398.64	388.58
120.0	247.67	250.20	250.03	247.61	242.89	238.61	233.04	224.55	218.87
135.0	107.10	108.96	109.41	108.84	107.38	105.41	102.71	99.68	96.69
150.0	27.90	28.63	29.03	29.25	29.19	29.03	28.58	28.07	27.56
165.0	3.15	3.15	3.21	3.21	3.26	3.32	3.38	3.38	3.43
180.0	1.91	1.86	1.91	1.86	1.86	1.86	1.86	1.86	1.86
195.0	0.45	0.45	0.45	0.39	0.45	0.39	0.39	0.39	0.45
210.0	0.39	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.39
225.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
240.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
255.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
270.0	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
285.0	0.45	0.45	0.45	0.45	0.45	0.39	0.39	0.45	0.45
300.0	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
315.0	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
330.0	0.73	0.73	0.73	0.73	0.68	0.68	0.68	0.68	0.68
345.0	1.13	1.07	1.07	1.07	1.01	0.96	0.96	0.90	0.90
360.0	1.80	1.74	1.69	1.63	1.58	1.52	1.46	1.41	1.35

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1.29	1.24	1.24	1.18	1.13	1.07	1.01	0.96	0.96
15.0	4.44	4.44	4.44	4.39	4.33	4.28	4.28	4.16	4.16
30.0	40.11	38.36	36.90	35.44	33.92	32.40	31.16	29.87	28.58
45.0	127.63	122.29	116.55	111.71	105.53	101.14	97.26	92.31	88.20
60.0	268.54	258.53	245.93	236.03	226.69	215.49	207.00	198.96	190.41
75.0	414.00	396.23	379.24	361.86	339.86	325.35	309.26	289.97	275.96
90.0	430.93	408.38	383.51	366.53	348.02	324.06	309.71	294.13	277.71
105.0	374.63	363.15	350.49	334.97	318.94	306.23	289.74	274.28	261.17
120.0	212.23	204.75	197.16	190.52	183.43	176.57	170.94	164.81	159.75
135.0	93.32	90.00	86.96	84.21	80.16	77.68	75.26	71.83	69.30
150.0	26.78	26.21	25.43	24.53	23.96	23.18	22.39	21.83	21.21
165.0	3.49	3.49	3.54	3.54	3.54	3.54	3.54	3.54	3.54
180.0	1.86	1.86	1.80	1.80	1.80	1.80	1.80	1.80	1.80
195.0	0.45	0.39	0.39	0.39	0.39	0.45	0.39	0.39	0.39
210.0	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
225.0	0.28	0.28	0.28	0.34	0.28	0.34	0.28	0.28	0.28
240.0	0.23	0.28	0.23	0.23	0.28	0.28	0.28	0.28	0.28
255.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
270.0	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
285.0	0.45	0.45	0.39	0.39	0.45	0.45	0.45	0.45	0.45
300.0	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.56	0.51
315.0	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
330.0	0.68	0.68	0.62	0.68	0.62	0.62	0.62	0.62	0.62
345.0	0.84	0.84	0.84	0.79	0.79	0.73	0.73	0.68	0.68
360.0	1.29	1.24	1.24	1.18	1.13	1.07	1.01	0.96	0.96

Intensity data(cd)

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	0.90	0.90	0.79	0.79	0.79	0.73	0.73	0.73	0.68
15.0	4.05	3.99	3.88	3.77	3.77	3.66	3.60	3.60	3.49
30.0	27.56	26.44	25.48	24.36	23.51	22.73	21.88	20.98	20.31
45.0	84.71	81.45	77.68	74.93	72.28	69.47	66.83	64.74	62.38
60.0	182.42	175.73	168.58	162.56	156.04	149.74	144.39	138.71	133.31
75.0	262.58	248.40	235.24	224.16	211.73	200.93	190.86	181.35	173.03
90.0	262.35	249.47	235.86	223.37	212.79	201.66	192.49	182.93	174.15
105.0	247.67	235.97	224.21	212.63	202.95	194.96	182.93	175.11	168.64
120.0	154.41	149.46	145.35	141.08	137.08	133.65	130.44	126.51	123.53
135.0	67.50	64.86	62.55	60.98	58.73	57.09	55.69	53.78	52.31
150.0	20.48	20.03	19.46	18.90	18.34	17.89	17.38	16.93	16.48
165.0	3.49	3.54	3.49	3.49	3.43	3.43	3.43	3.38	3.38
180.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
195.0	0.39	0.39	0.39	0.39	0.45	0.39	0.39	0.39	0.45
210.0	0.39	0.34	0.34	0.34	0.34	0.39	0.34	0.34	0.34
225.0	0.34	0.34	0.34	0.28	0.28	0.28	0.28	0.28	0.28
240.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
255.0	0.28	0.28	0.28	0.34	0.28	0.28	0.28	0.28	0.28
270.0	0.34	0.34	0.34	0.39	0.39	0.39	0.34	0.34	0.34
285.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
300.0	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.56
315.0	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
330.0	0.62	0.62	0.62	0.62	0.62	0.62	0.56	0.62	0.62
345.0	0.68	0.68	0.68	0.62	0.62	0.62	0.62	0.62	0.62
360.0	0.90	0.90	0.79	0.79	0.79	0.73	0.73	0.73	0.68

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	0.68	0.68	0.68	0.62	0.62	0.62	0.62	0.62	0.68
15.0	3.43	3.32	3.26	3.15	3.09	3.04	2.98	2.93	2.81
30.0	19.58	18.84	18.23	17.66	16.99	16.43	15.86	15.30	14.79
45.0	60.41	58.56	56.64	55.01	53.27	51.58	50.18	48.94	47.08
60.0	128.76	124.43	119.25	115.37	111.71	107.33	103.95	100.69	97.59
75.0	164.93	156.60	150.13	144.06	137.08	131.85	127.01	122.40	117.00
90.0	166.95	159.36	152.38	146.59	141.19	135.45	130.11	125.66	120.99
105.0	159.24	153.23	147.77	141.08	135.00	130.84	125.21	120.99	116.94
120.0	120.54	117.28	114.13	111.38	108.28	105.24	102.66	99.73	97.14
135.0	51.02	49.44	48.32	47.14	45.73	44.66	43.65	42.47	41.34
150.0	16.09	15.69	15.30	14.79	14.46	14.06	13.67	13.28	12.88
165.0	3.32	3.32	3.26	3.26	3.21	3.15	3.09	3.09	3.04
180.0	1.80	1.80	1.80	1.80	1.80	1.86	1.80	1.80	1.80
195.0	0.39	0.39	0.39	0.39	0.39	0.45	0.39	0.39	0.39
210.0	0.34	0.34	0.34	0.34	0.34	0.34	0.39	0.34	0.34
225.0	0.28	0.34	0.28	0.28	0.28	0.28	0.28	0.28	0.28
240.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
255.0	0.28	0.34	0.28	0.28	0.28	0.34	0.34	0.34	0.34
270.0	0.34	0.34	0.39	0.39	0.39	0.39	0.39	0.39	0.39
285.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
300.0	0.51	0.51	0.56	0.51	0.56	0.51	0.56	0.51	0.56
315.0	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.62
330.0	0.56	0.56	0.56	0.56	0.62	0.62	0.62	0.56	0.62
345.0	0.62	0.62	0.62	0.56	0.56	0.56	0.62	0.62	0.62
360.0	0.68	0.68	0.68	0.62	0.62	0.62	0.62	0.62	0.68

Intensity data(cd)

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	0.62	0.68	0.68	0.73	0.73	0.79	0.84	0.84	0.90
15.0	2.76	2.64	2.59	2.48	2.36	2.31	2.25	2.14	2.08
30.0	14.23	13.67	13.22	12.71	12.21	11.81	11.36	10.91	10.46
45.0	45.79	44.66	42.98	41.79	40.84	39.38	38.19	37.24	35.94
60.0	93.88	91.13	88.43	85.50	82.74	80.33	77.68	75.09	72.84
75.0	113.01	109.24	104.91	101.64	98.55	95.29	92.19	89.55	86.79
90.0	116.66	113.18	109.80	106.26	102.94	100.18	97.20	94.78	92.19
105.0	112.39	108.96	105.75	101.93	99.06	96.36	93.15	90.62	88.14
120.0	94.33	91.58	89.21	86.91	84.09	81.84	79.71	76.95	74.76
135.0	40.33	39.26	38.19	37.29	36.23	35.38	34.37	33.36	32.51
150.0	12.49	12.15	11.76	11.36	10.97	10.63	10.24	9.84	9.51
165.0	2.98	2.93	2.87	2.81	2.76	2.70	2.64	2.64	2.59
180.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.86
195.0	0.39	0.45	0.39	0.39	0.39	0.45	0.45	0.39	0.39
210.0	0.34	0.34	0.34	0.34	0.34	0.34	0.39	0.34	0.34
225.0	0.28	0.34	0.34	0.28	0.28	0.28	0.28	0.34	0.34
240.0	0.28	0.28	0.34	0.28	0.28	0.28	0.28	0.28	0.28
255.0	0.28	0.28	0.34	0.34	0.34	0.34	0.34	0.34	0.34
270.0	0.39	0.39	0.39	0.39	0.39	0.34	0.39	0.39	0.39
285.0	0.45	0.45	0.45	0.45	0.45	0.45	0.51	0.45	0.51
300.0	0.56	0.56	0.51	0.56	0.56	0.56	0.56	0.56	0.56
315.0	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
330.0	0.62	0.62	0.62	0.62	0.62	0.62	0.68	0.68	0.62
345.0	0.62	0.62	0.62	0.68	0.68	0.68	0.73	0.73	0.79
360.0	0.62	0.68	0.68	0.73	0.73	0.79	0.84	0.84	0.90

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	0.96	0.96	1.01	1.07	1.07	1.13	1.18	1.18	1.24
15.0	2.03	1.91	1.80	1.74	1.69	1.63	1.58	1.52	1.46
30.0	10.07	9.56	9.23	8.89	8.49	8.16	7.82	7.48	7.14
45.0	34.88	33.86	32.40	31.44	30.26	28.97	27.84	26.72	25.31
60.0	70.37	68.23	65.87	63.56	61.59	59.63	57.15	55.18	53.21
75.0	84.43	81.84	79.14	77.23	74.59	72.51	70.43	68.79	66.04
90.0	89.66	87.58	85.39	83.31	81.56	79.82	77.74	76.11	74.53
105.0	85.50	82.86	80.44	78.30	75.54	73.74	71.38	69.30	66.99
120.0	72.68	70.59	68.06	66.15	64.29	62.10	59.85	57.88	55.63
135.0	31.67	30.54	29.59	28.69	27.45	26.61	25.71	24.64	23.57
150.0	9.17	8.83	8.49	8.16	7.88	7.54	7.20	6.92	6.69
165.0	2.53	2.42	2.36	2.36	2.25	2.19	2.19	2.14	2.03
180.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
195.0	0.39	0.39	0.39	0.39	0.45	0.45	0.45	0.39	0.45
210.0	0.34	0.34	0.34	0.34	0.39	0.34	0.39	0.39	0.34
225.0	0.34	0.34	0.34	0.28	0.34	0.34	0.34	0.34	0.34
240.0	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
255.0	0.34	0.34	0.34	0.34	0.39	0.34	0.34	0.34	0.34
270.0	0.39	0.39	0.39	0.45	0.45	0.39	0.45	0.45	0.45
285.0	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
300.0	0.56	0.56	0.56	0.56	0.56	0.62	0.62	0.62	0.62
315.0	0.62	0.62	0.62	0.62	0.62	0.62	0.68	0.68	0.68
330.0	0.68	0.68	0.68	0.73	0.68	0.68	0.73	0.73	0.79
345.0	0.79	0.84	0.84	0.90	0.90	0.90	0.96	0.96	0.96
360.0	0.96	0.96	1.01	1.07	1.07	1.13	1.18	1.18	1.24

Intensity data(cd)

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.29	1.29	1.29	1.35	1.35	1.41	1.46	1.46	1.46
15.0	1.41	1.29	1.29	1.24	1.18	1.18	1.18	1.13	1.07
30.0	6.86	6.53	6.24	5.91	5.63	5.40	5.18	4.95	4.73
45.0	24.24	23.23	21.99	20.70	19.58	18.39	17.33	16.31	15.24
60.0	50.74	48.71	46.80	44.66	42.53	40.61	38.53	36.45	33.92
75.0	64.18	62.49	60.02	57.77	56.03	53.38	51.36	49.50	46.97
90.0	72.45	70.82	69.08	67.11	65.08	63.23	61.09	59.12	56.93
105.0	64.58	62.55	60.53	57.94	55.86	53.66	51.13	49.16	47.14
120.0	53.38	51.47	49.44	47.76	45.84	43.93	42.08	39.26	35.94
135.0	22.61	21.60	20.53	19.58	18.51	17.55	16.59	15.58	14.74
150.0	6.41	6.13	5.91	5.68	5.40	5.18	5.01	4.78	4.56
165.0	2.03	1.97	1.91	1.91	1.86	1.86	1.80	1.80	1.74
180.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
195.0	0.45	0.39	0.39	0.39	0.39	0.45	0.45	0.45	0.45
210.0	0.39	0.39	0.39	0.34	0.39	0.39	0.39	0.39	0.39
225.0	0.28	0.34	0.34	0.34	0.34	0.28	0.34	0.34	0.34
240.0	0.34	0.34	0.28	0.34	0.28	0.34	0.34	0.34	0.34
255.0	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.34	0.39
270.0	0.45	0.45	0.45	0.45	0.45	0.45	0.51	0.45	0.45
285.0	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
300.0	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
315.0	0.68	0.68	0.68	0.68	0.68	0.73	0.68	0.68	0.68
330.0	0.73	0.79	0.73	0.79	0.79	0.79	0.79	0.79	0.79
345.0	0.96	1.01	1.01	1.07	1.07	1.13	1.13	1.13	1.13
360.0	1.29	1.29	1.29	1.35	1.35	1.41	1.46	1.46	1.46

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.52	1.58	1.58	1.58	1.63	1.63	1.63	1.69	1.69
15.0	1.07	1.01	1.01	0.96	0.90	0.90	0.79	0.68	0.62
30.0	4.50	4.22	3.99	3.71	3.49	3.04	2.42	1.86	1.24
45.0	14.23	13.44	12.38	11.53	10.46	9.28	7.65	5.96	3.94
60.0	31.50	29.36	26.94	24.92	22.89	19.97	16.71	12.99	8.44
75.0	44.66	42.75	40.67	38.59	36.23	33.08	29.08	24.86	19.41
90.0	54.79	52.65	50.12	47.93	45.73	41.85	37.24	31.73	24.41
105.0	44.72	42.75	40.78	38.76	36.73	33.64	29.98	25.65	20.98
120.0	33.13	30.60	28.07	25.99	23.79	21.49	17.94	15.30	10.86
135.0	13.84	12.94	12.15	11.36	10.52	9.68	8.44	7.14	5.40
150.0	4.39	4.22	3.99	3.83	3.60	3.32	2.93	2.53	1.97
165.0	1.74	1.69	1.69	1.63	1.63	1.58	1.52	1.46	1.46
180.0	1.80	1.80	1.74	1.74	1.74	1.74	1.74	1.74	1.69
195.0	0.39	0.45	0.39	0.45	0.45	0.45	0.45	0.39	0.39
210.0	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.34	0.39
225.0	0.34	0.34	0.34	0.34	0.34	0.28	0.34	0.34	0.34
240.0	0.34	0.28	0.34	0.34	0.34	0.34	0.28	0.28	0.28
255.0	0.39	0.34	0.34	0.34	0.39	0.34	0.34	0.39	0.34
270.0	0.45	0.45	0.39	0.39	0.39	0.39	0.45	0.45	0.45
285.0	0.56	0.56	0.56	0.51	0.56	0.56	0.62	0.62	0.68
300.0	0.62	0.62	0.62	0.62	0.62	0.68	0.73	0.73	0.79
315.0	0.68	0.68	0.68	0.68	0.68	0.73	0.73	0.79	0.84
330.0	0.79	0.79	0.79	0.79	0.79	0.79	0.84	0.90	0.90
345.0	1.13	1.18	1.18	1.18	1.18	1.18	1.24	1.24	1.24
360.0	1.52	1.58	1.58	1.58	1.63	1.63	1.63	1.69	1.69

Intensity data(cd)

C/γ(°)	90.0
0.0	1.74
15.0	0.51
30.0	0.68
45.0	2.08
60.0	3.15
75.0	11.98
90.0	14.96
105.0	13.50
120.0	8.89
135.0	3.43
150.0	2.03
165.0	1.35
180.0	1.58
195.0	0.39
210.0	0.34
225.0	0.34
240.0	0.34
255.0	0.39
270.0	0.51
285.0	0.68
300.0	0.84
315.0	0.90
330.0	0.90
345.0	1.13
360.0	1.74