NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: LN01D03524DA-N
Luminaire: 97.70.272.00
Report No: 200623-B019
Test No: 200623-C019
LampCAT: BRIDGELUX V4HD LES5.2
Lamp flux(lm): 365.8
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 34.5800
Current(A): 0.1000
Power (W): 3.4580
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 318.02
Efficiency(%): 86.94%
Lumens(lm)/Power(W): 91.97
Central intensity(cd): 1303.734
Maximum intensity(cd): 1303.734
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=27.0
[C90/270]Total=27.0
Field angle(10%Imax): [C0/180]Total=42.4
[C90/270]Total=42.4
Maximum s/h(1/2): C0_180=0.46 C90_270=0.46
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.94%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.258%

Nata LM01D03524DA

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1303.734	0.000	0	.000%	.000%
1.0	1300.641	1.246	1.246	.341%	.392%
2.0	1294.242	3.724	4.971	1.018%	1.563%
3.0	1282.148	6.162	11.132	1.685%	3.501%
4.0	1262.813	8.519	19.651	2.329%	6.179%
5.0	1239.188	10.763	30.415	2.943%	9.564%
6.0	1204.172	12.841	43.255	3.510%	13.601%
7.0	1149.757	14.611	57.866	3.994%	18.196%
8.0	1109.243	16.167	74.033	4.420%	23.280%
9.0	1044.253	17.453	91.486	4.771%	28.768%
10.0	970.474	18.233	109.719	4.985%	34.501%
11.0	889.826	18.588	128.307	5.082%	40.346%
12.0	797.597	18.446	146.753	5.043%	46.146%
13.0	696.586	17.732	164.485	4.848%	51.722%
14.0	607.472	16.692	181.177	4.563%	56.971%
15.0	515.988	15.423	196.6	4.217%	61.820%
16.0	430.952	13.875	210.476	3.793%	66.183%
17.0	354.614	12.233	222.709	3.344%	70.030%
18.0	289.765	10.624	233.333	2.905%	73.371%
19.0	236.299	9.152	242.486	2.502%	76.249%
20.0	176.850	7.562	250.048	2.067%	78.627%
21.0	136.877	6.024	256.072	1.647%	80.521%
22.0	105.377	4.868	260.94	1.331%	82.052%
23.0	84.480	3.984	264.924	1.089%	83.305%
24.0	68.006	3.334	268.258	.911%	84.353%
25.0	56.475	2.830	271.088	.774%	85.243%
26.0	48.776	2.484	273.573	.679%	86.024%
27.0	42.855	2.242	275.814	.613%	86.729%
28.0	37.786	2.042	277.856	.558%	87.371%
29.0	34.010	1.878	279.734	.514%	87.962%
30.0	30.762	1.749	281.483	.478%	88.512%
31.0	27.858	1.631	283.114	.446%	89.025%
32.0	25.509	1.529	284.643	.418%	89.505%
33.0	23.505	1.444	286.087	.395%	89.959%
34.0	21.565	1.364	287.451	.373%	90.388%
35.0	19.955	1.289	288.741	.353%	90.794%
36.0	18.492	1.224	289.965	.335%	91.179%
37.0	17.044	1.159	291.124	.317%	91.543%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	15.778	1.096	292.219	.300%	91.888%
39.0	14.548	1.035	293.255	.283%	92.213%
40.0	13.409	0.975	294.23	.267%	92.520%
41.0	12.438	0.920	295.15	.252%	92.809%
42.0	11.531	0.871	296.021	.238%	93.083%
43.0	10.652	0.822	296.843	.225%	93.341%
44.0	9.865	0.774	297.617	.212%	93.585%
45.0	9.169	0.731	298.348	.200%	93.815%
46.0	8.473	0.690	299.038	.189%	94.032%
47.0	7.889	0.651	299.689	.178%	94.236%
48.0	7.355	0.616	300.305	.168%	94.430%
49.0	6.884	0.585	300.89	.160%	94.614%
50.0	6.490	0.558	301.448	.152%	94.789%
51.0	6.173	0.536	301.983	.146%	94.958%
52.0	5.878	0.517	302.501	.141%	95.121%
53.0	5.618	0.500	303.001	.137%	95.278%
54.0	5.393	0.485	303.486	.133%	95.430%
55.0	5.154	0.471	303.957	.129%	95.578%
56.0	4.943	0.456	304.413	.125%	95.722%
57.0	4.760	0.444	304.857	.121%	95.861%
58.0	4.577	0.432	305.288	.118%	95.997%
59.0	4.416	0.420	305.709	.115%	96.129%
60.0	4.261	0.410	306.119	.112%	96.258%
61.0	4.099	0.399	306.518	.109%	96.384%
62.0	3.966	0.389	306.906	.106%	96.506%
63.0	3.839	0.380	307.286	.104%	96.625%
64.0	3.713	0.371	307.656	.101%	96.742%
65.0	3.607	0.362	308.019	.099%	96.856%
66.0	3.523	0.356	308.374	.097%	96.968%
67.0	3.445	0.350	308.725	.096%	97.078%
68.0	3.502	0.352	309.077	.096%	97.188%
69.0	3.748	0.370	309.447	.101%	97.305%
70.0	4.148	0.406	309.852	.111%	97.432%
71.0	4.570	0.451	310.303	.123%	97.574%
72.0	5.013	0.498	310.801	.136%	97.731%
73.0	5.400	0.545	311.346	.149%	97.902%
74.0	5.780	0.588	311.933	.161%	98.087%
75.0	6.075	0.626	312.56	.171%	98.284%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.026	0.642	313.202	.176%	98.486%
77.0	5.702	0.625	313.827	.171%	98.682%
78.0	5.337	0.591	314.418	.162%	98.868%
79.0	4.845	0.547	314.965	.150%	99.040%
80.0	4.430	0.500	315.465	.137%	99.197%
81.0	4.015	0.457	315.922	.125%	99.341%
82.0	3.516	0.408	316.33	.112%	99.469%
83.0	2.742	0.340	316.67	.093%	99.576%
84.0	2.081	0.263	316.933	.072%	99.659%
85.0	1.905	0.218	317.151	.059%	99.727%
86.0	1.779	0.201	317.352	.055%	99.791%
87.0	1.596	0.185	317.537	.050%	99.849%
88.0	1.491	0.169	317.706	.046%	99.902%
89.0	1.420	0.160	317.866	.044%	99.952%
90.0	1.364	0.153	318.018	.042%	100.000%

Zonal flux distribution table

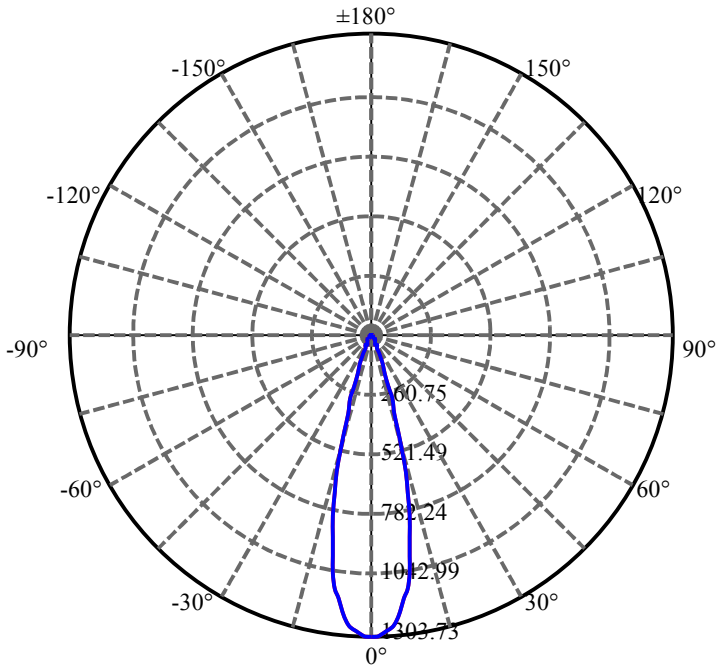
ZONAL LUMEN SUMMARY

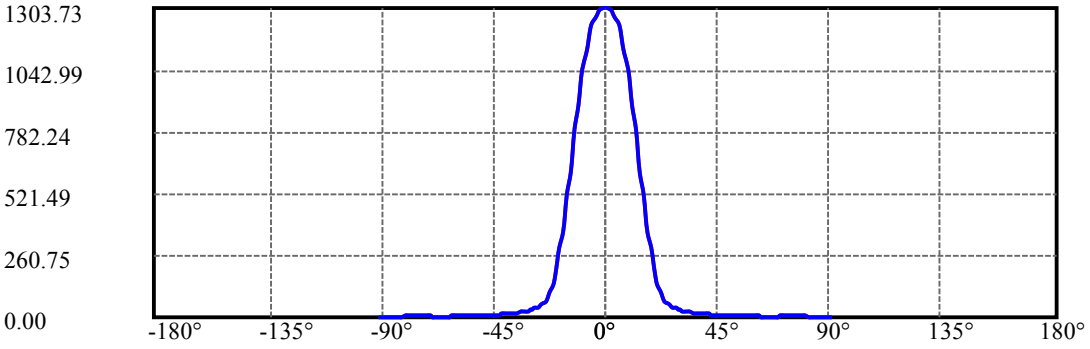
Zone	Lumens	%Lamp	%Fixt
0-30	281.48	76.95%	88.51%
0-40	294.23	80.44%	92.52%
0-60	306.12	83.69%	96.26%
0-90	317.87	86.90%	99.95%
0-120	317.87	86.90%	99.95%
0-180	318.02	86.94%	100.00%
60-90	12.16	3.32%	3.82%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-20.72	254.41	69.55%	80.00%

ZONAL LUMEN SUMMARY

0-10	109.72
10-20	140.33
20-30	31.44
30-40	12.75
40-50	7.22
50-60	4.67
60-70	3.73
70-80	5.61
80-90	2.40
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/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:21.2 Right:21.2
:C90/270Left:21.2 Right:21.2

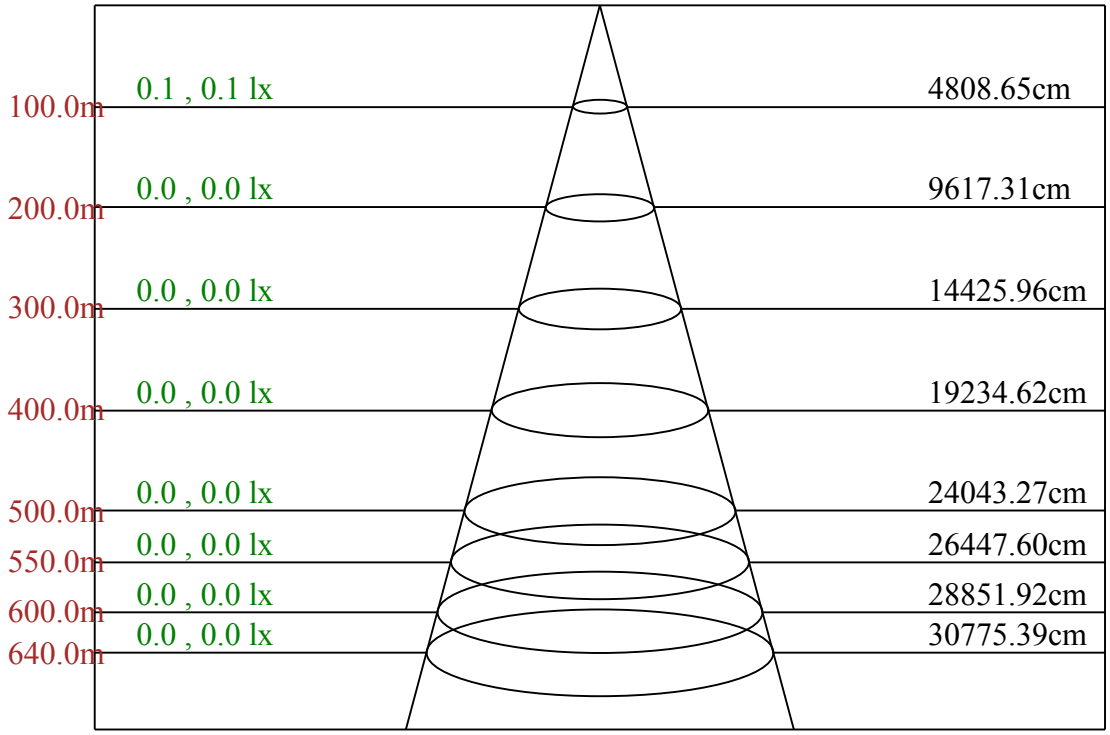
Beam Angle(50%Imax):C0/180Left:13.5 Right:13.5
:C90/270Left:13.5 Right:13.5

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/6/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

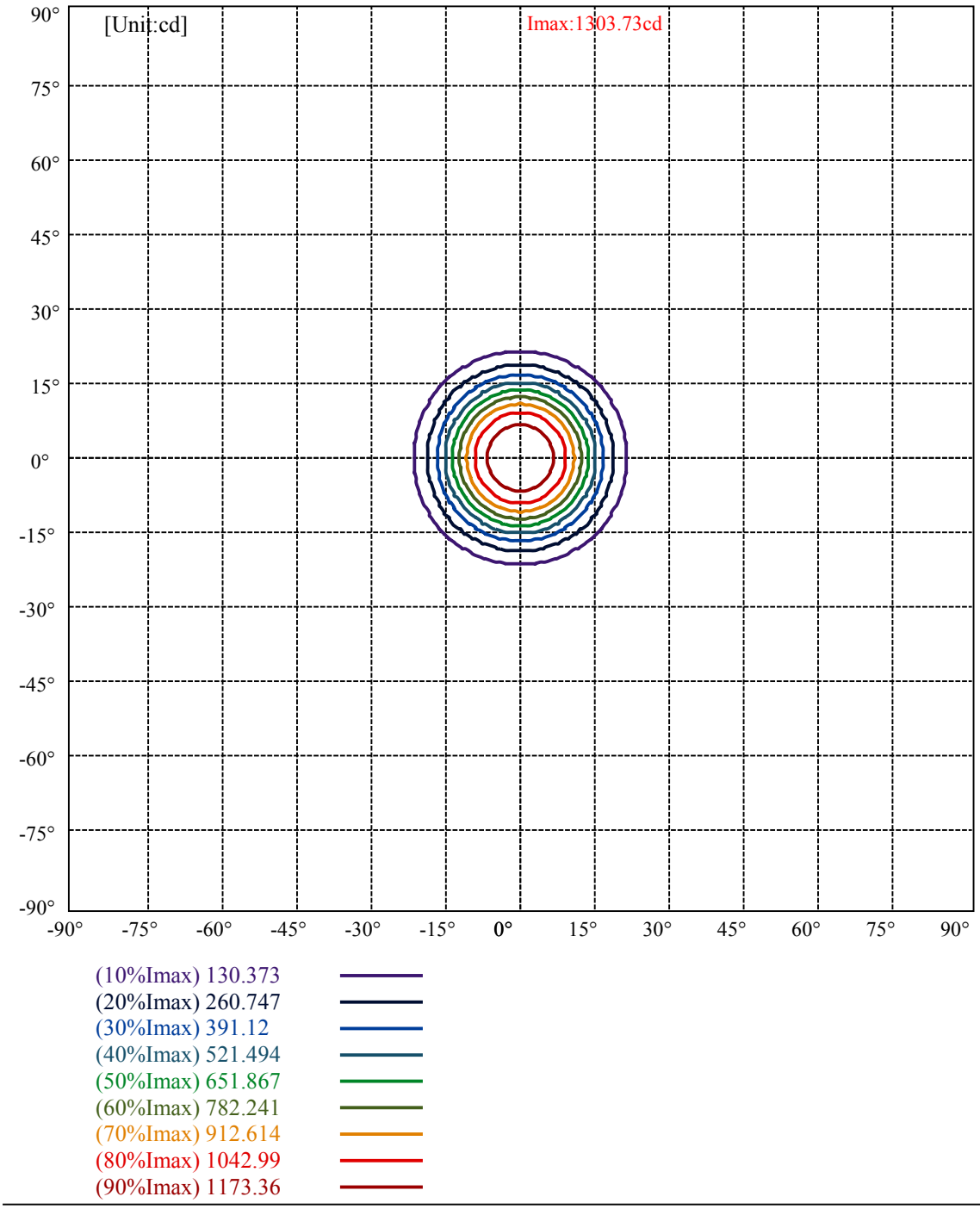
Lux distance Curve



Max , Ave

Beam angle of C0 plane 27.04

ISO-Intensity(V-H)

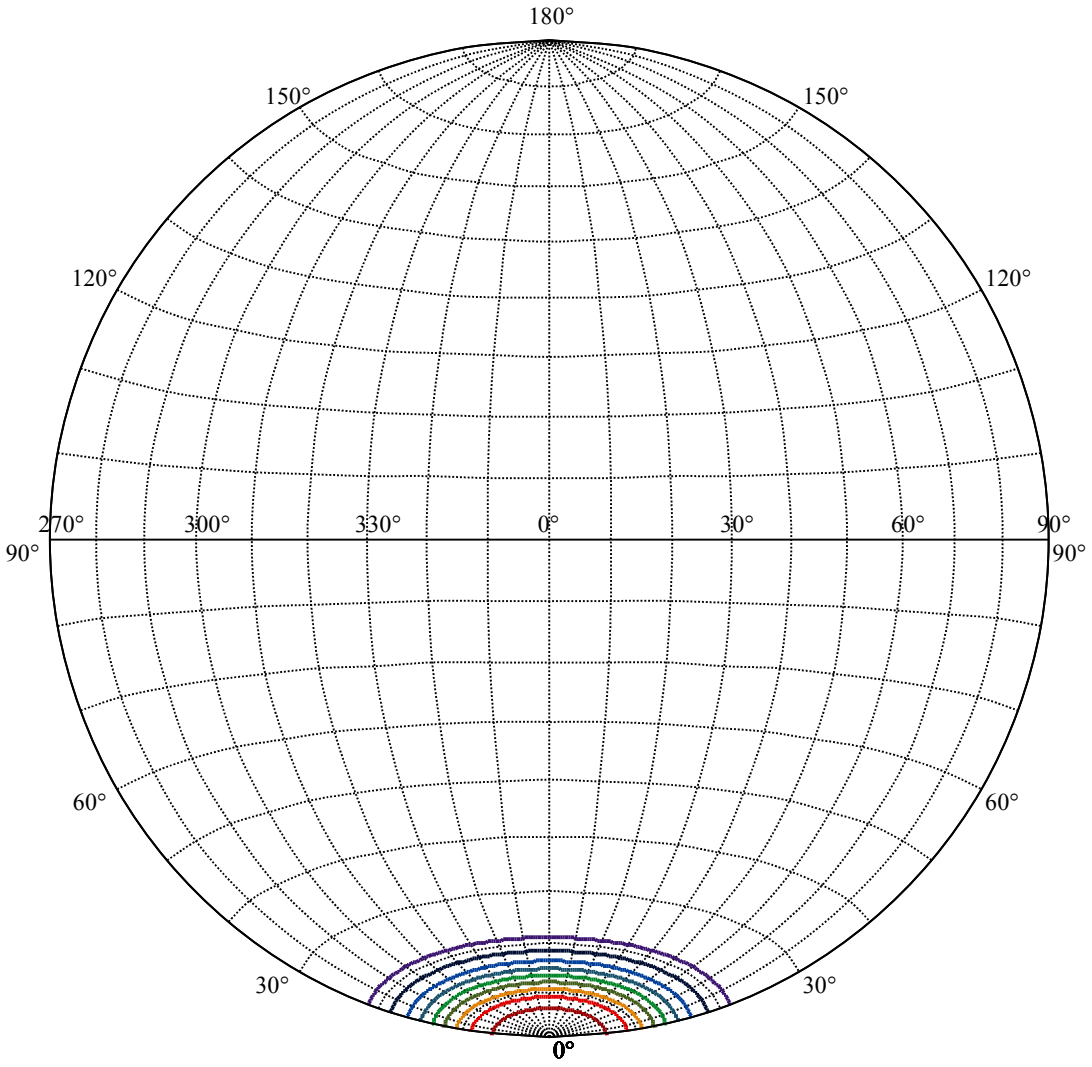


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/6/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



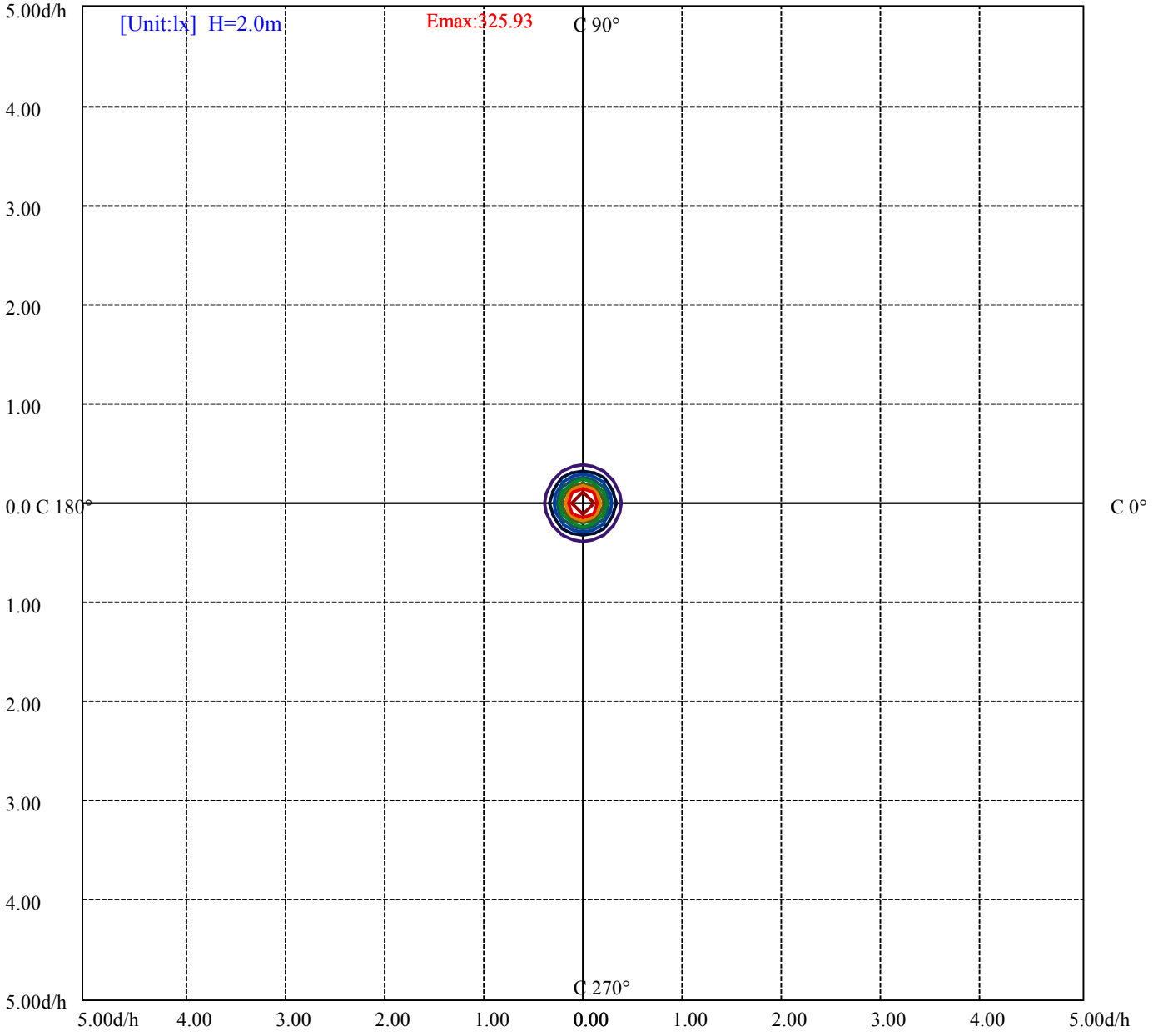
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/6/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Nata LM01D03524DA

ISO illuminance diagram



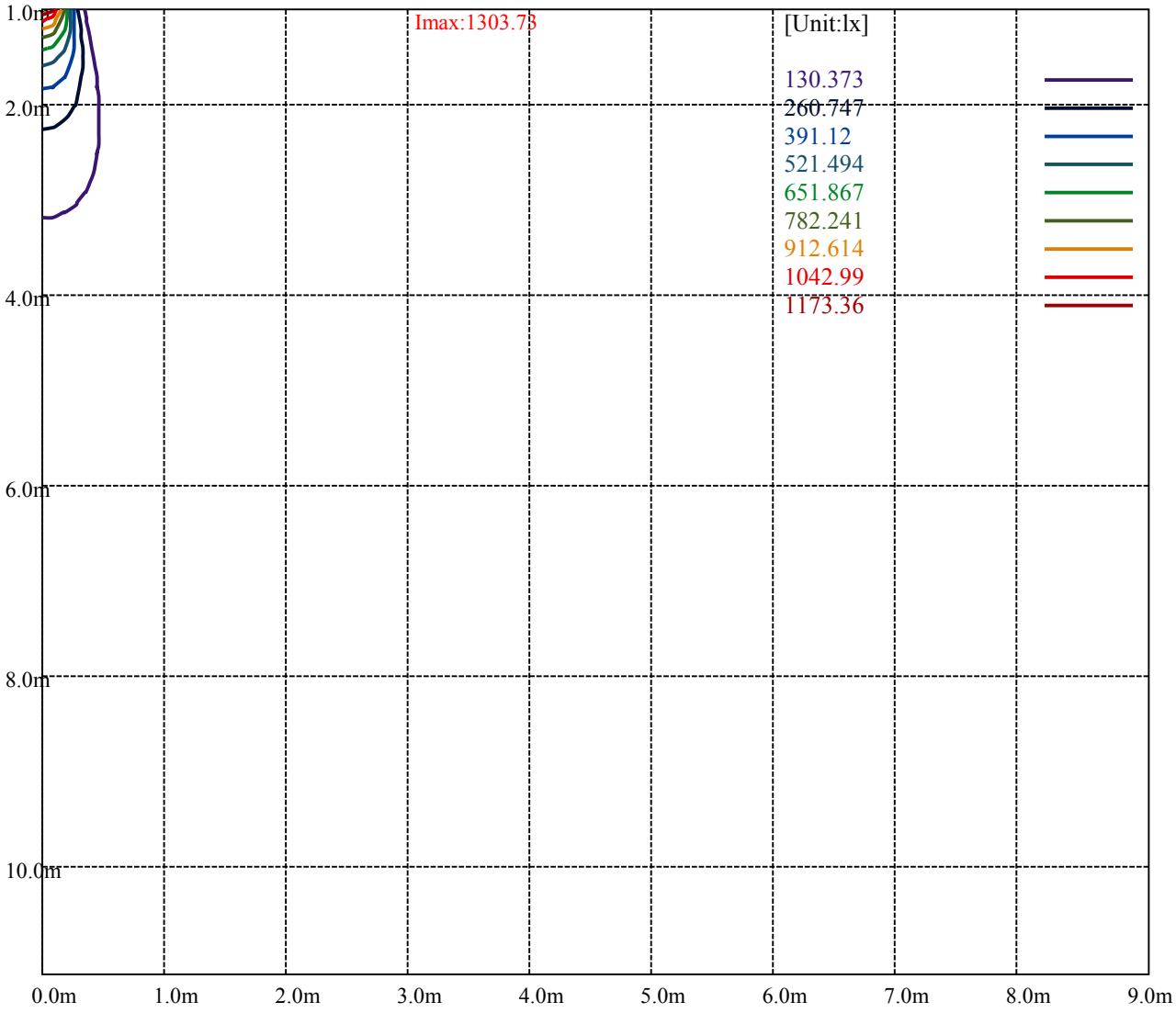
(10%Emax) 32.59325
(20%Emax) 65.18675
(30%Emax) 97.78
(40%Emax) 130.3735
(50%Emax) 162.9668
(60%Emax) 195.56
(70%Emax) 228.1535
(80%Emax) 260.7475
(90%Emax) 293.34

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/6/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/6/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Nata LM01D03524DA

Luminance Limitting Curve(no luminous side)

Luminance Table

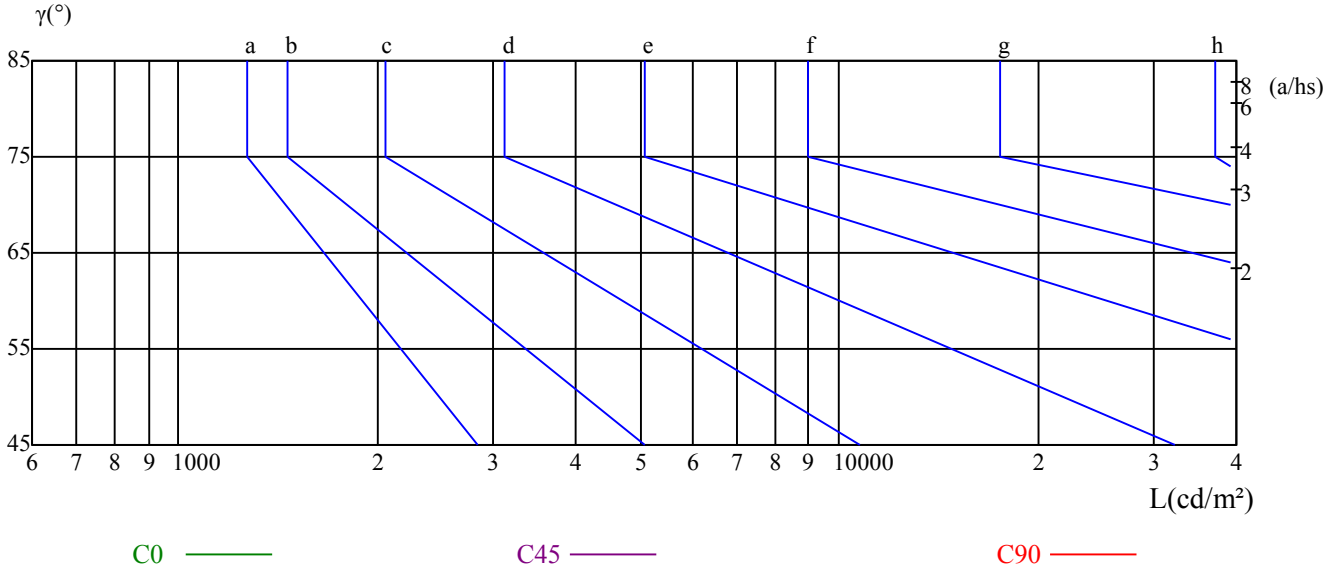
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

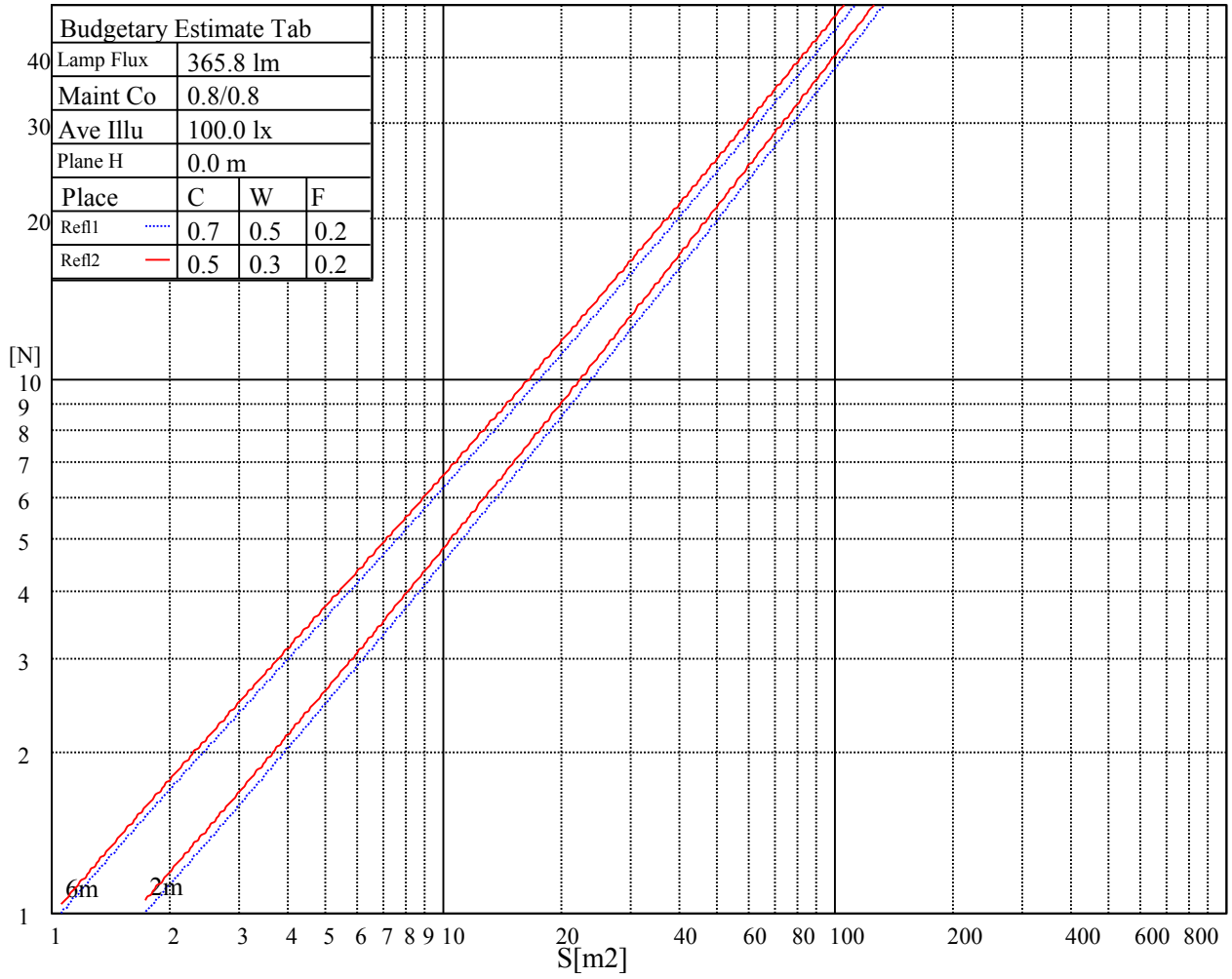
Glare Table

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

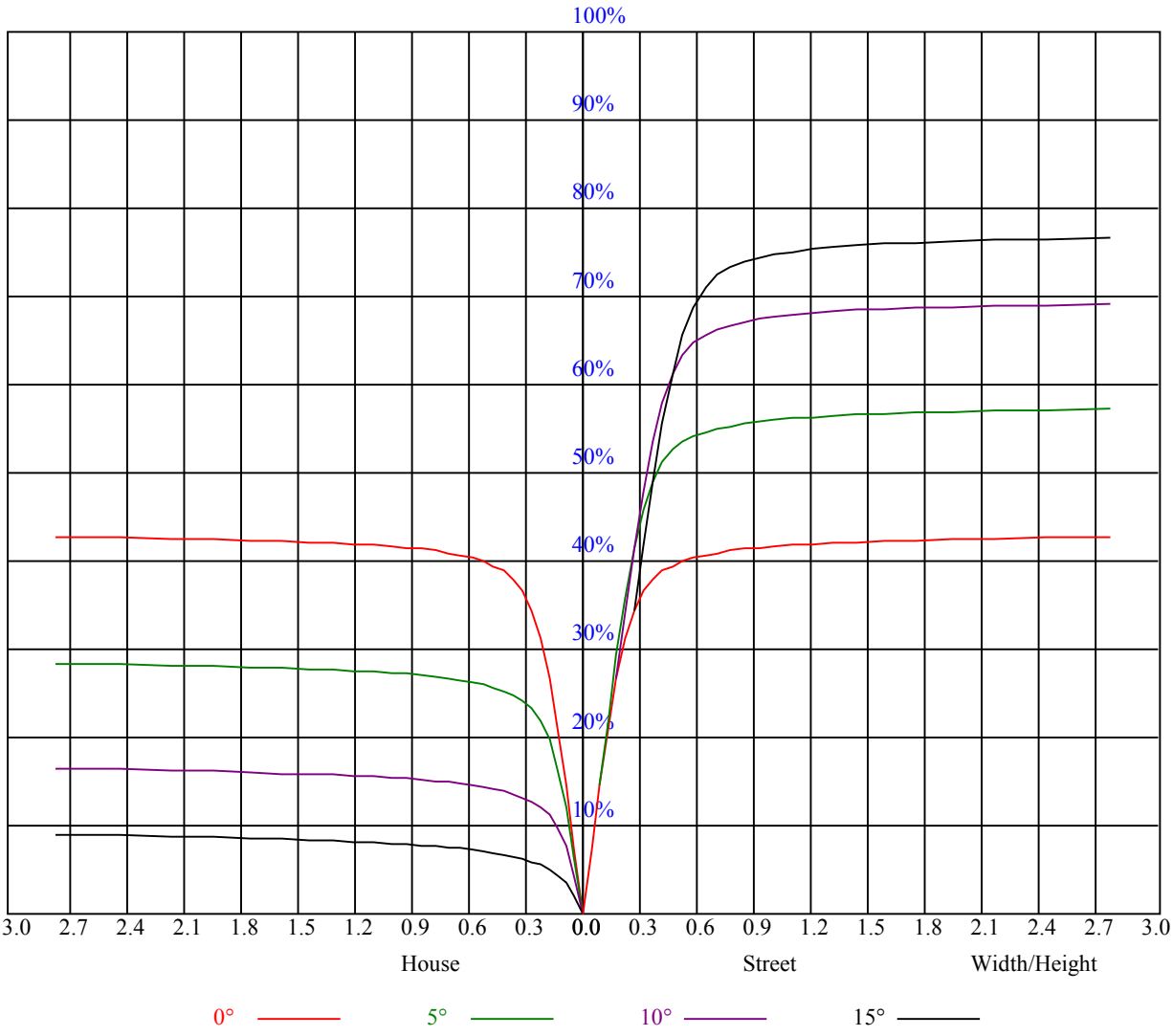


Equipment: GMS1980	Date: 2020/6/23	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	1.04	1.04	1.04	1.01	1.01	1.01	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	0.93	0.92	0.92	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.82
2	0.92	0.89	0.86	0.90	0.88	0.85	0.88	0.85	0.84	0.85	0.83	0.82	0.83	0.81	0.80	0.79
3	0.87	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.77	0.76
4	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.78	0.76	0.74	0.73
5	0.80	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.72	0.70
6	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
8	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
9	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.63
10	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2020/6/23	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	1312.31	1298.25	1280.25	1257.75	1233.56	1211.06	1173.94	1140.19	1099.13
45.0	1299.38	1284.19	1267.31	1247.06	1216.13	1188.56	1158.19	1118.81	1072.69
90.0	1299.94	1288.13	1275.19	1260.00	1237.50	1211.06	1175.63	1118.31	1074.88
135.0	1303.31	1302.75	1299.38	1289.25	1276.31	1249.31	1217.25	1177.88	1130.63
180.0	1312.31	1316.81	1314.56	1306.13	1283.63	1258.31	1215.00	1113.69	1088.61
225.0	1299.38	1310.63	1312.88	1305.56	1288.13	1266.75	1231.31	1187.44	1121.01
270.0	1299.94	1308.38	1314.56	1314.56	1306.13	1291.50	1257.75	1222.88	1175.63
315.0	1303.31	1296.00	1289.81	1276.88	1261.13	1236.94	1204.31	1118.87	1111.39
360.0	1312.31	1298.25	1280.25	1257.75	1233.56	1211.06	1173.94	1140.19	1099.13

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1044.56	990.56	927.00	845.44	756.56	673.31	578.25	499.50	416.81
45.0	1027.69	967.50	896.06	819.56	729.56	646.31	557.44	472.50	399.94
90.0	1018.97	935.49	860.01	780.30	675.51	591.41	510.58	425.48	347.34
135.0	1055.25	982.69	900.00	797.06	689.63	599.06	502.88	413.44	340.31
180.0	1011.43	914.46	809.66	715.33	610.88	512.04	430.88	355.22	272.98
225.0	1033.09	962.21	873.68	745.20	664.93	575.10	460.63	391.78	319.67
270.0	1104.75	1034.44	952.31	862.31	744.19	649.13	558.00	460.13	372.94
315.0	1058.29	976.44	899.89	815.57	701.44	613.41	529.26	429.58	366.92
360.0	1044.56	990.56	927.00	845.44	756.56	673.31	578.25	499.50	416.81

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	341.44	288.56	218.70	167.79	131.79	103.67	78.30	64.46	55.07
45.0	335.81	289.69	208.35	162.90	119.87	94.33	74.59	61.20	50.23
90.0	284.85	223.37	177.41	135.96	104.51	83.81	66.88	55.46	48.21
135.0	285.75	215.72	166.50	125.94	99.73	80.33	64.86	54.06	47.59
180.0	216.23	169.37	129.32	99.79	81.06	66.66	56.64	49.84	43.71
225.0	256.78	191.19	151.20	116.49	93.94	75.71	62.61	53.94	46.58
270.0	303.75	288.00	179.78	145.41	107.89	86.34	70.65	57.21	49.61
315.0	293.51	224.49	183.54	140.74	104.23	84.99	69.53	55.63	49.22
360.0	341.44	288.56	218.70	167.79	131.79	103.67	78.30	64.46	55.07

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	47.31	41.68	37.63	33.92	30.77	28.41	25.99	24.19	22.28
45.0	44.10	38.93	34.88	31.33	28.29	25.99	23.79	21.71	20.25
90.0	42.75	37.07	33.36	30.21	27.28	24.69	22.73	20.76	19.13
135.0	41.51	36.96	33.41	30.38	27.17	24.98	23.06	20.98	19.52
180.0	39.38	35.16	31.61	28.97	26.66	24.19	22.50	20.98	19.24
225.0	40.67	36.56	33.19	29.42	27.11	24.98	23.12	21.04	19.58
270.0	43.59	37.69	33.92	30.88	27.56	25.31	23.29	21.32	19.63
315.0	43.54	38.25	34.09	30.99	28.01	25.54	23.57	21.54	20.03
360.0	47.31	41.68	37.63	33.92	30.77	28.41	25.99	24.19	22.28

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	20.53	19.01	17.61	15.92	14.74	13.73	12.49	11.59	10.80
45.0	18.79	17.21	15.75	14.63	13.28	12.32	11.48	10.69	9.73
90.0	17.72	16.31	15.13	13.95	12.77	11.87	11.03	10.07	9.34
135.0	18.23	16.88	15.64	14.57	13.44	12.54	11.64	10.86	10.18
180.0	17.83	16.59	15.30	14.06	13.16	12.09	11.25	10.41	9.62
225.0	18.23	16.65	15.41	14.34	13.22	12.09	11.25	10.29	9.45
270.0	18.23	16.76	15.64	14.40	13.22	12.32	11.36	10.41	9.68
315.0	18.39	16.93	15.75	14.51	13.44	12.54	11.76	10.91	10.13
360.0	20.53	19.01	17.61	15.92	14.74	13.73	12.49	11.59	10.80

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	10.01	9.28	8.66	7.99	7.48	6.98	6.58	6.24	5.91
45.0	9.06	8.38	7.82	7.26	6.81	6.36	5.96	5.68	5.46
90.0	8.72	7.93	7.43	6.92	6.41	6.08	5.79	5.46	5.23
135.0	9.45	8.83	8.33	7.88	7.31	6.98	6.69	6.30	6.02
180.0	9.00	8.33	7.71	7.26	6.86	6.47	6.19	5.96	5.68
225.0	8.72	7.99	7.43	6.86	6.47	6.13	5.85	5.57	5.34
270.0	8.94	8.16	7.54	6.98	6.47	6.08	5.79	5.57	5.34
315.0	9.45	8.89	8.21	7.71	7.26	6.86	6.53	6.24	5.96
360.0	10.01	9.28	8.66	7.99	7.48	6.98	6.58	6.24	5.91

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.68	5.40	5.23	5.01	4.84	4.67	4.44	4.33	4.16
45.0	5.23	5.01	4.78	4.67	4.50	4.28	4.16	4.05	3.88
90.0	5.01	4.84	4.67	4.50	4.28	4.16	4.05	3.88	3.83
135.0	5.79	5.51	5.23	5.01	4.78	4.61	4.44	4.22	4.05
180.0	5.46	5.29	5.01	4.84	4.67	4.56	4.39	4.22	4.11
225.0	5.12	4.89	4.73	4.50	4.39	4.22	4.11	3.94	3.83
270.0	5.18	4.89	4.73	4.56	4.39	4.28	4.11	3.99	3.88
315.0	5.68	5.40	5.18	5.01	4.78	4.56	4.39	4.16	3.99
360.0	5.68	5.40	5.23	5.01	4.84	4.67	4.44	4.33	4.16

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.05	3.88	3.77	3.66	3.54	3.43	3.38	3.26	3.21
45.0	3.77	3.66	3.54	3.43	3.32	3.26	3.15	3.09	3.04
90.0	3.71	3.60	3.54	3.54	3.54	4.16	5.63	7.48	9.34
135.0	3.88	3.77	3.60	3.49	3.38	3.26	3.15	3.09	2.98
180.0	3.99	3.83	3.71	3.66	3.54	3.43	3.32	3.26	3.21
225.0	3.71	3.60	3.49	3.38	3.32	3.21	3.15	3.09	2.98
270.0	3.77	3.66	3.60	3.54	3.54	3.99	5.06	6.81	8.83
315.0	3.83	3.71	3.60	3.49	3.38	3.26	3.15	3.09	2.98
360.0	4.05	3.88	3.77	3.66	3.54	3.43	3.38	3.26	3.21

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.15	3.09	2.98	2.93	2.81	2.70	2.64	2.53	2.48
45.0	2.98	2.93	2.87	2.76	2.70	2.59	2.53	2.48	2.42
90.0	11.36	13.16	14.96	16.43	16.48	15.36	14.01	12.15	10.58
135.0	2.93	2.81	2.76	2.70	2.53	2.48	2.42	2.31	2.25
180.0	3.15	3.09	3.04	2.93	2.81	2.70	2.59	2.42	2.31
225.0	2.93	2.87	2.81	2.76	2.70	2.59	2.53	2.42	2.31
270.0	10.69	12.43	14.06	15.41	15.58	14.68	13.56	12.09	10.86
315.0	2.93	2.81	2.76	2.70	2.59	2.53	2.42	2.36	2.25
360.0	3.15	3.09	2.98	2.93	2.81	2.70	2.64	2.53	2.48

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.36	2.19	2.14	2.08	1.97	1.86	1.80	1.69	1.58
45.0	2.25	2.14	2.08	1.97	1.86	1.80	1.69	1.52	1.46
90.0	9.11	7.48	4.84	2.42	2.03	1.86	1.52	1.46	1.35
135.0	2.14	2.03	1.91	1.86	1.74	1.63	1.52	1.46	1.41
180.0	2.25	2.14	2.03	1.91	1.80	1.69	1.58	1.46	1.46
225.0	2.19	2.14	2.03	1.91	1.80	1.63	1.46	1.41	1.35
270.0	9.62	7.93	4.95	2.59	2.25	2.08	1.63	1.46	1.35
315.0	2.19	2.08	1.97	1.91	1.80	1.69	1.58	1.46	1.41
360.0	2.36	2.19	2.14	2.08	1.97	1.86	1.80	1.69	1.58

Intensity data(cd)

C/γ(°)	90.0
0.0	1.52
45.0	1.35
90.0	1.35
135.0	1.35
180.0	1.46
225.0	1.29
270.0	1.29
315.0	1.29
360.0	1.52