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Nata

LumCAT: NA01D020045BW
Luminaire:

Report No: 200402-B001	Voltage(V): 6.6000
Test No: 200402-C001	Current(A): 0.1510
LampCAT: BRIDGELUX 3030	Power (W): 0.9970
Lamp flux(lm): 110.0	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): 102.81
Efficiency(%): 93.46%
Lumens(lm)/Power(W): 103.12
Central intensity(cd): 127.659
Maximum intensity(cd): 127.659
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=45.0
[C90/270]Total=45.0
Field angle(10%Imax): [C0/180]Total=91.3
[C90/270]Total=91.3
Maximum s/h(1/2): C0_180=0.70 C90_270=0.70
Maximum s/h(1/4): C0_180=0.75 C90_270=0.75
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.46%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 93.878%

Equipment: GMS1980	Date: 2020/4/2	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Nata NA01D020045BW

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	127.659	0.000	0	.000%	.000%
1.0	127.512	0.122	0.122	.111%	.119%
2.0	127.005	0.365	0.487	.332%	.474%
3.0	126.127	0.605	1.093	.550%	1.063%
4.0	124.770	0.840	1.933	.763%	1.880%
5.0	122.864	1.065	2.998	.968%	2.916%
6.0	120.670	1.280	4.278	1.163%	4.161%
7.0	118.343	1.484	5.761	1.349%	5.604%
8.0	115.966	1.677	7.438	1.524%	7.235%
9.0	113.210	1.857	9.296	1.689%	9.042%
10.0	110.004	2.020	11.316	1.836%	11.006%
11.0	106.755	2.166	13.481	1.969%	13.113%
12.0	103.380	2.297	15.779	2.088%	15.347%
13.0	99.612	2.409	18.188	2.190%	17.691%
14.0	95.948	2.503	20.691	2.276%	20.125%
15.0	92.412	2.586	23.277	2.351%	22.641%
16.0	88.545	2.652	25.928	2.410%	25.220%
17.0	84.600	2.696	28.624	2.451%	27.842%
18.0	80.684	2.725	31.35	2.477%	30.493%
19.0	76.929	2.742	34.092	2.493%	33.160%
20.0	73.118	2.746	36.838	2.497%	35.831%
21.0	69.300	2.735	39.573	2.486%	38.491%
22.0	65.679	2.712	42.285	2.466%	41.130%
23.0	62.121	2.682	44.967	2.438%	43.738%
24.0	58.584	2.639	47.606	2.399%	46.305%
25.0	55.371	2.591	50.197	2.356%	48.825%
26.0	52.235	2.540	52.737	2.309%	51.296%
27.0	49.078	2.479	55.216	2.253%	53.707%
28.0	45.984	2.407	57.622	2.188%	56.048%
29.0	43.193	2.333	59.956	2.121%	58.317%
30.0	40.598	2.262	62.218	2.057%	60.518%
31.0	37.934	2.185	64.403	1.987%	62.644%
32.0	35.494	2.104	66.507	1.912%	64.690%
33.0	33.321	2.027	68.534	1.843%	66.662%
34.0	31.071	1.949	70.483	1.772%	68.557%
35.0	28.941	1.864	72.347	1.694%	70.370%
36.0	27.021	1.782	74.129	1.620%	72.103%
37.0	25.235	1.704	75.833	1.549%	73.761%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	23.456	1.625	77.458	1.478%	75.342%
39.0	21.698	1.541	78.999	1.401%	76.841%
40.0	20.145	1.459	80.459	1.327%	78.260%
41.0	18.661	1.382	81.841	1.256%	79.604%
42.0	17.213	1.303	83.144	1.185%	80.872%
43.0	15.848	1.225	84.369	1.113%	82.063%
44.0	14.639	1.151	85.519	1.046%	83.183%
45.0	13.507	1.082	86.601	.983%	84.235%
46.0	12.403	1.013	87.614	.921%	85.220%
47.0	11.433	0.948	88.562	.862%	86.142%
48.0	10.554	0.889	89.451	.808%	87.007%
49.0	9.710	0.832	90.283	.757%	87.816%
50.0	8.916	0.777	91.06	.706%	88.572%
51.0	8.227	0.725	91.785	.659%	89.277%
52.0	7.566	0.678	92.463	.616%	89.936%
53.0	6.961	0.632	93.095	.574%	90.551%
54.0	6.420	0.590	93.684	.536%	91.125%
55.0	5.941	0.552	94.236	.502%	91.661%
56.0	5.527	0.518	94.754	.471%	92.165%
57.0	5.084	0.485	95.239	.441%	92.637%
58.0	4.697	0.452	95.692	.411%	93.077%
59.0	4.380	0.424	96.116	.386%	93.490%
60.0	4.057	0.399	96.515	.362%	93.878%
61.0	3.748	0.372	96.887	.339%	94.240%
62.0	3.509	0.350	97.237	.318%	94.580%
63.0	3.298	0.331	97.568	.301%	94.902%
64.0	3.066	0.312	97.88	.284%	95.206%
65.0	2.876	0.294	98.174	.267%	95.492%
66.0	2.721	0.279	98.453	.254%	95.763%
67.0	2.588	0.267	98.72	.243%	96.023%
68.0	2.447	0.255	98.975	.232%	96.271%
69.0	2.348	0.245	99.22	.222%	96.509%
70.0	2.250	0.236	99.456	.215%	96.739%
71.0	2.173	0.229	99.685	.208%	96.961%
72.0	2.123	0.223	99.908	.203%	97.178%
73.0	2.053	0.218	100.127	.199%	97.391%
74.0	2.011	0.214	100.34	.194%	97.599%
75.0	1.948	0.209	100.549	.190%	97.802%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.891	0.204	100.753	.185%	98.000%
77.0	1.856	0.200	100.953	.182%	98.195%
78.0	1.828	0.197	101.15	.179%	98.386%
79.0	1.779	0.194	101.344	.176%	98.575%
80.0	1.723	0.189	101.533	.172%	98.759%
81.0	1.688	0.184	101.717	.168%	98.938%
82.0	1.638	0.180	101.897	.164%	99.113%
83.0	1.575	0.175	102.072	.159%	99.283%
84.0	1.505	0.168	102.24	.153%	99.446%
85.0	1.406	0.159	102.399	.144%	99.601%
86.0	1.167	0.141	102.539	.128%	99.738%
87.0	0.738	0.104	102.644	.095%	99.839%
88.0	0.534	0.070	102.713	.063%	99.907%
89.0	0.429	0.053	102.766	.048%	99.958%
90.0	0.352	0.043	102.809	.039%	100.000%

Zonal flux distribution table

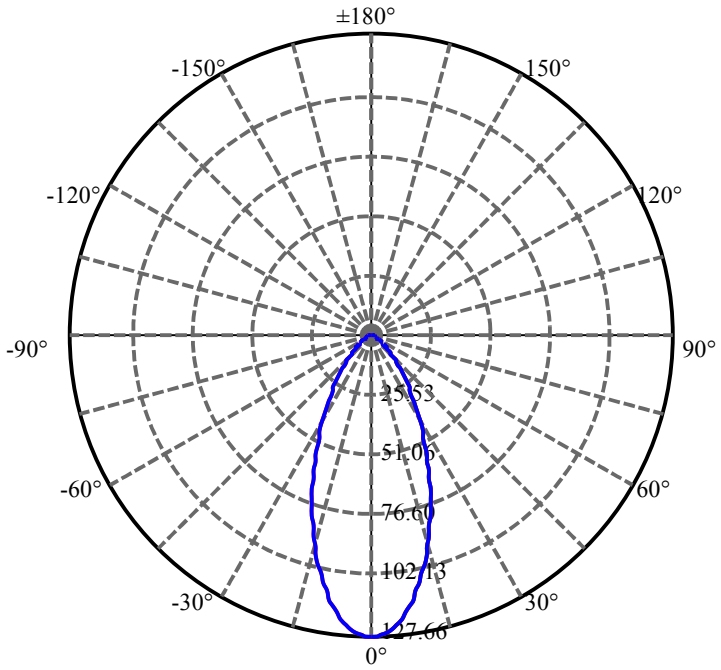
ZONAL LUMEN SUMMARY

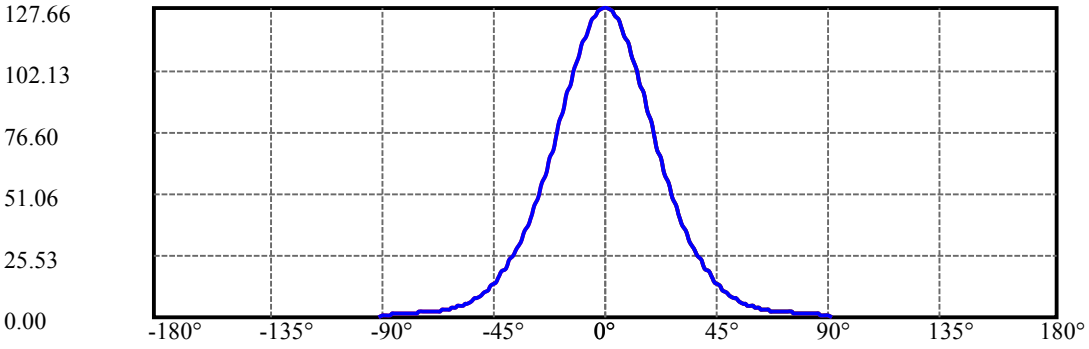
Zone	Lumens	%Lamp	%Fixt
0-30	62.22	56.56%	60.52%
0-40	80.46	73.14%	78.26%
0-60	96.51	87.74%	93.88%
0-90	102.77	93.42%	99.96%
0-120	102.77	93.42%	99.96%
0-180	102.81	93.46%	100.00%
60-90	6.65	6.05%	6.47%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-41.31	82.25	74.77%	80.00%

ZONAL LUMEN SUMMARY

0-10	11.32
10-20	25.52
20-30	25.38
30-40	18.24
40-50	10.60
50-60	5.45
60-70	2.94
70-80	2.08
80-90	1.23
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:

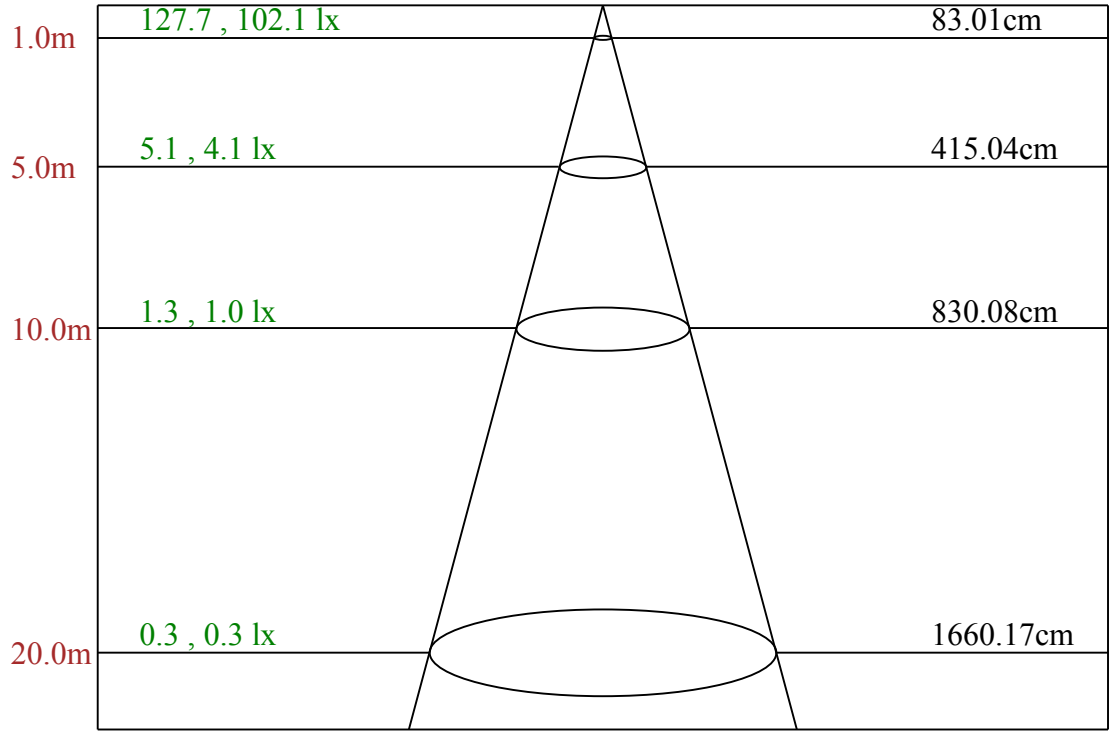
C90/C270:

Field angle(10%Imax):C0/180Left:45.7 Right:45.7
:C90/270Left:45.7 Right:45.7

Beam Angle(50%Imax):C0/180Left:22.5 Right:22.5
:C90/270Left:22.5 Right:22.5

Equipment: GMS1980	Date: 2020/4/2	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

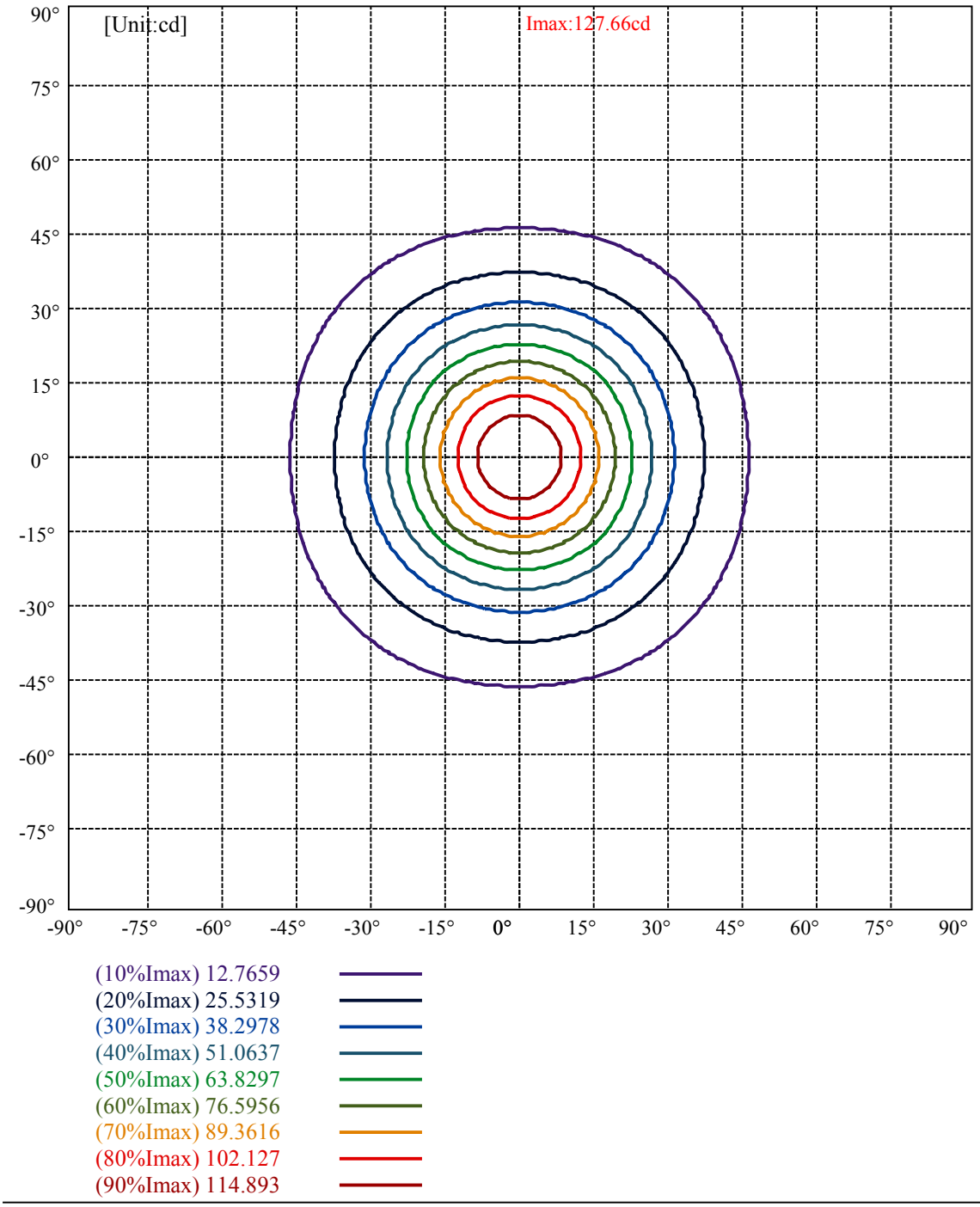
Lux distance Curve



Max , Ave

Beam angle of C0 plane 45.08

ISO-Intensity(V-H)

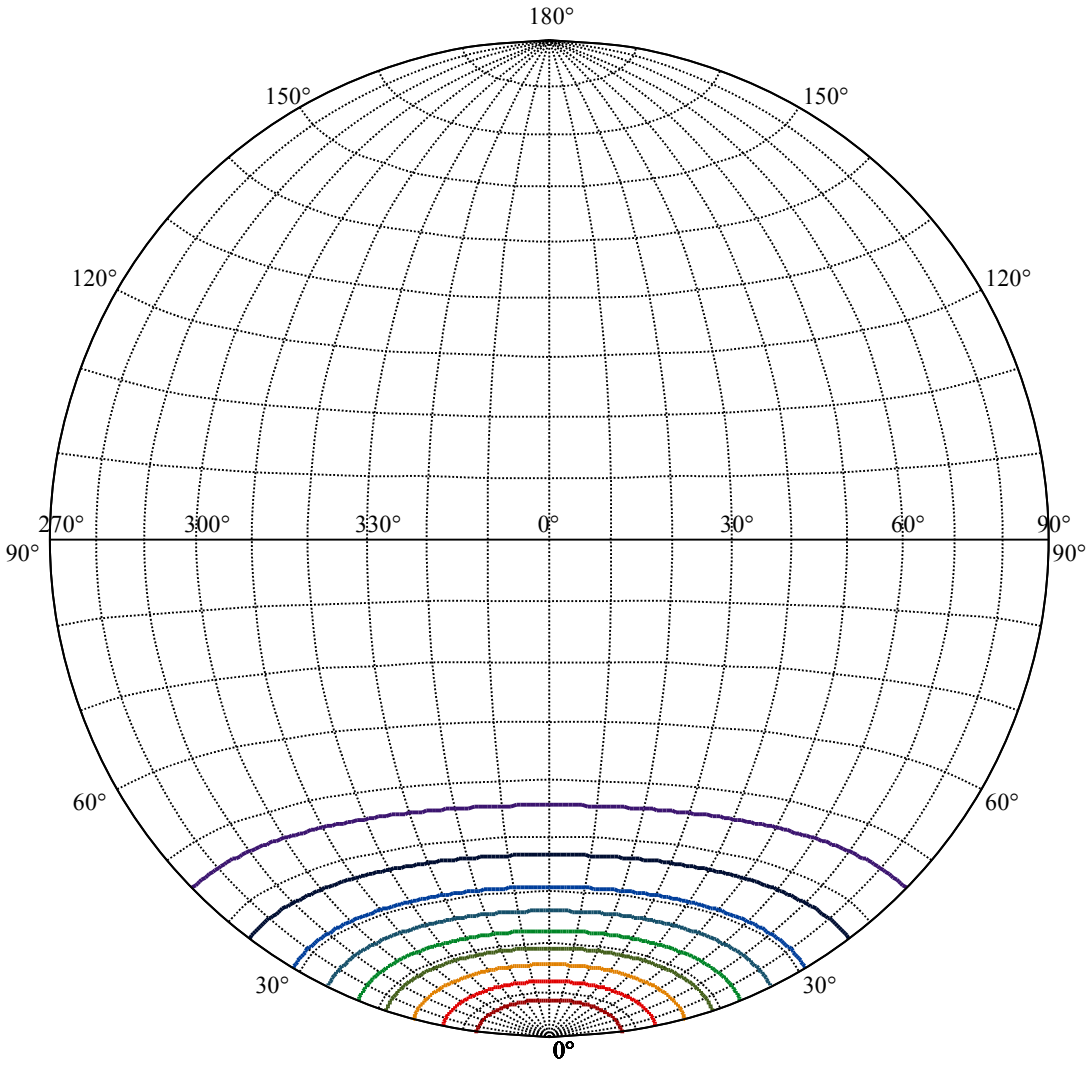


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/2
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:127.66

(10%Imax) 12.7659
(20%Imax) 25.5319
(30%Imax) 38.2978
(40%Imax) 51.0637
(50%Imax) 63.8297
(60%Imax) 76.5956
(70%Imax) 89.3616
(80%Imax) 102.127
(90%Imax) 114.893

Equipment: GMS1980 Date: 2020/4/2 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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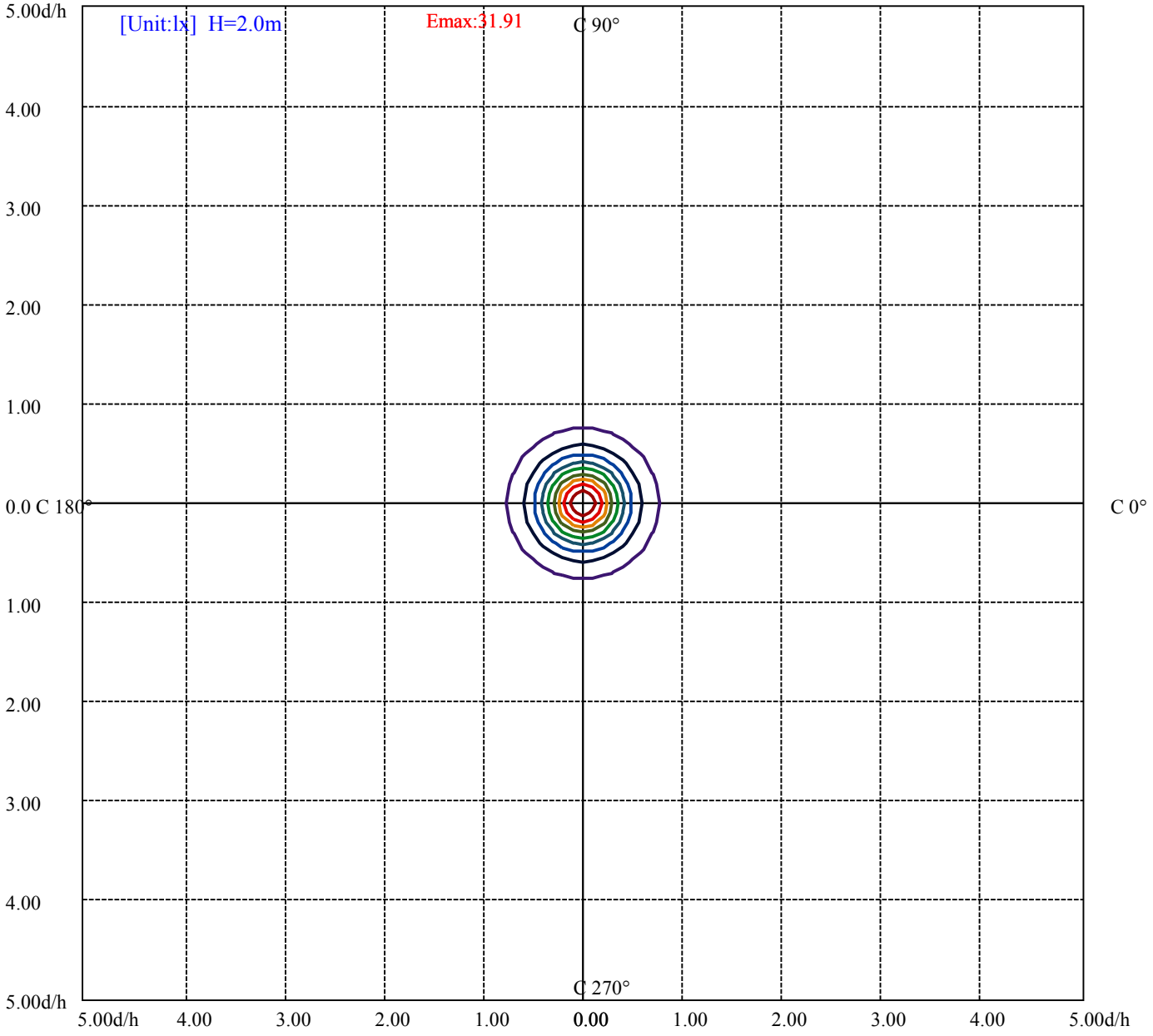
ISO illuminance diagram



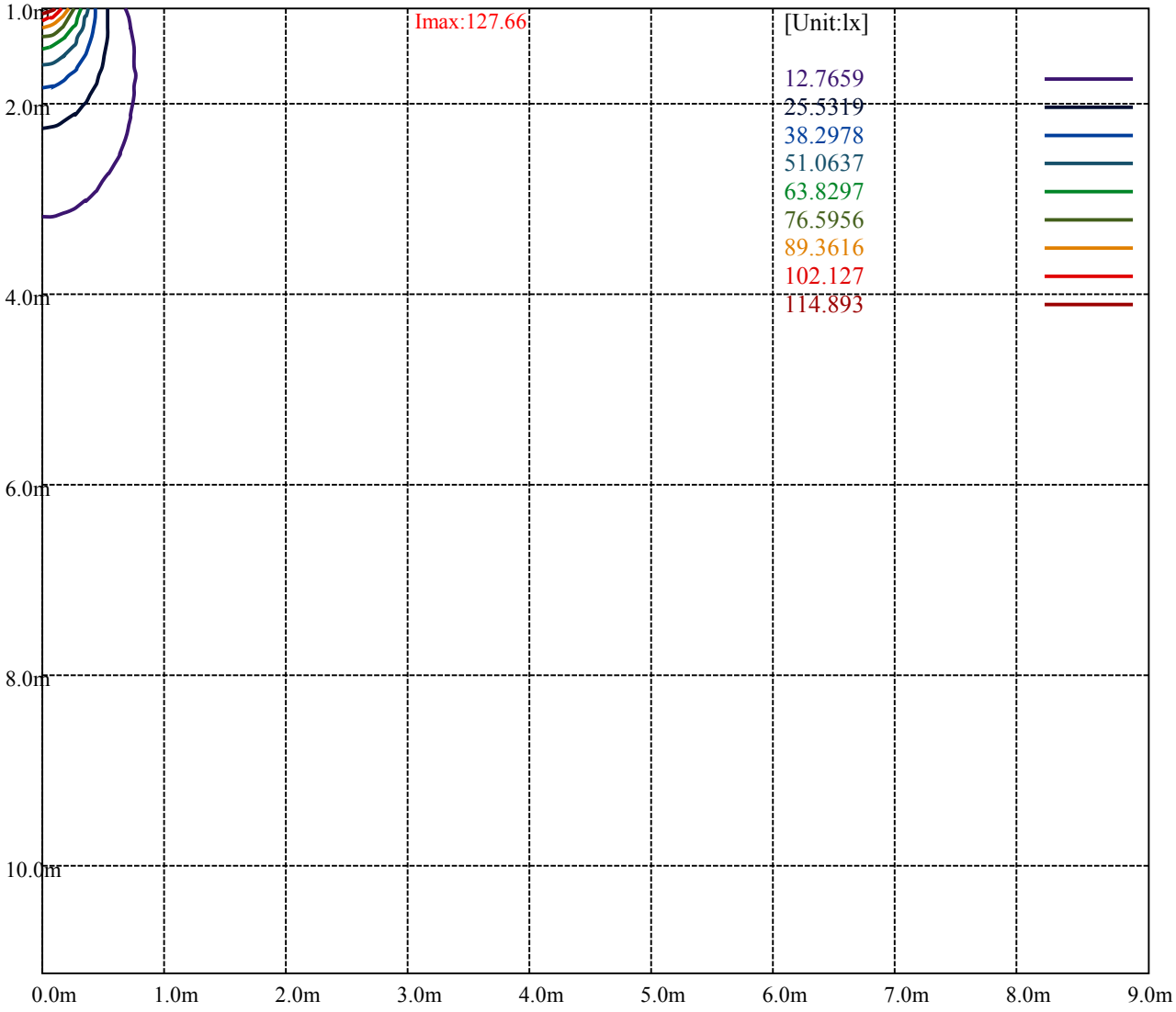
(10%Emax) 3.191475
(20%Emax) 6.382975
(30%Emax) 9.57445
(40%Emax) 12.76593
(50%Emax) 15.95743
(60%Emax) 19.1489
(70%Emax) 22.34038
(80%Emax) 25.53175
(90%Emax) 28.72325

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/2
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/2
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

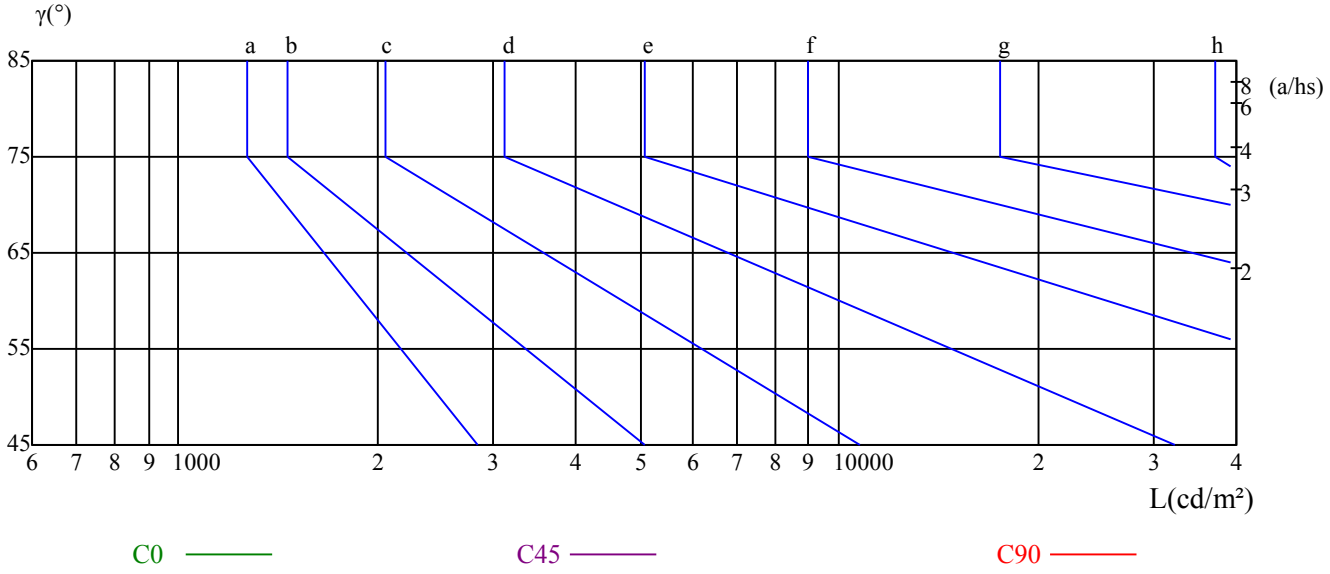
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

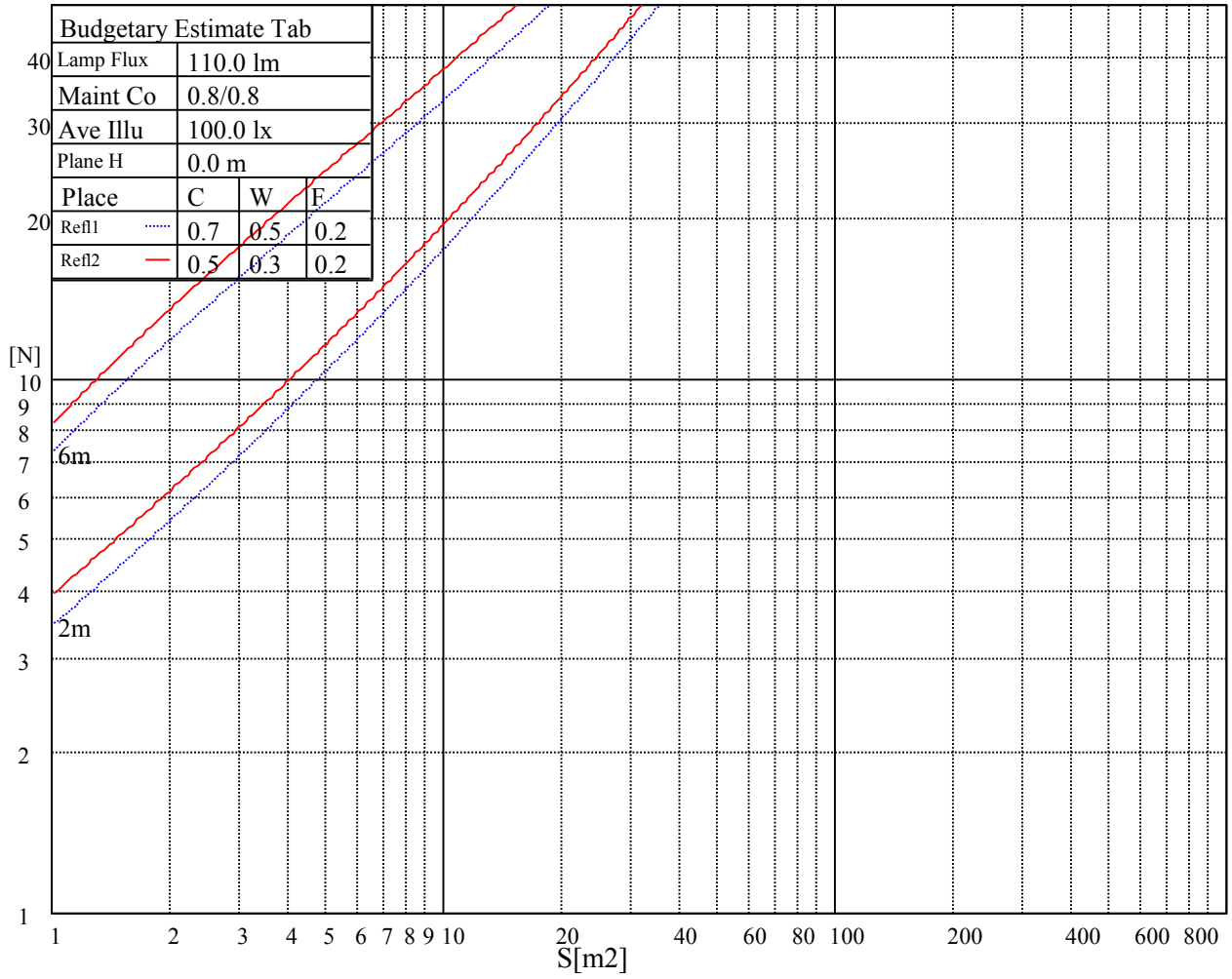


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/2
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

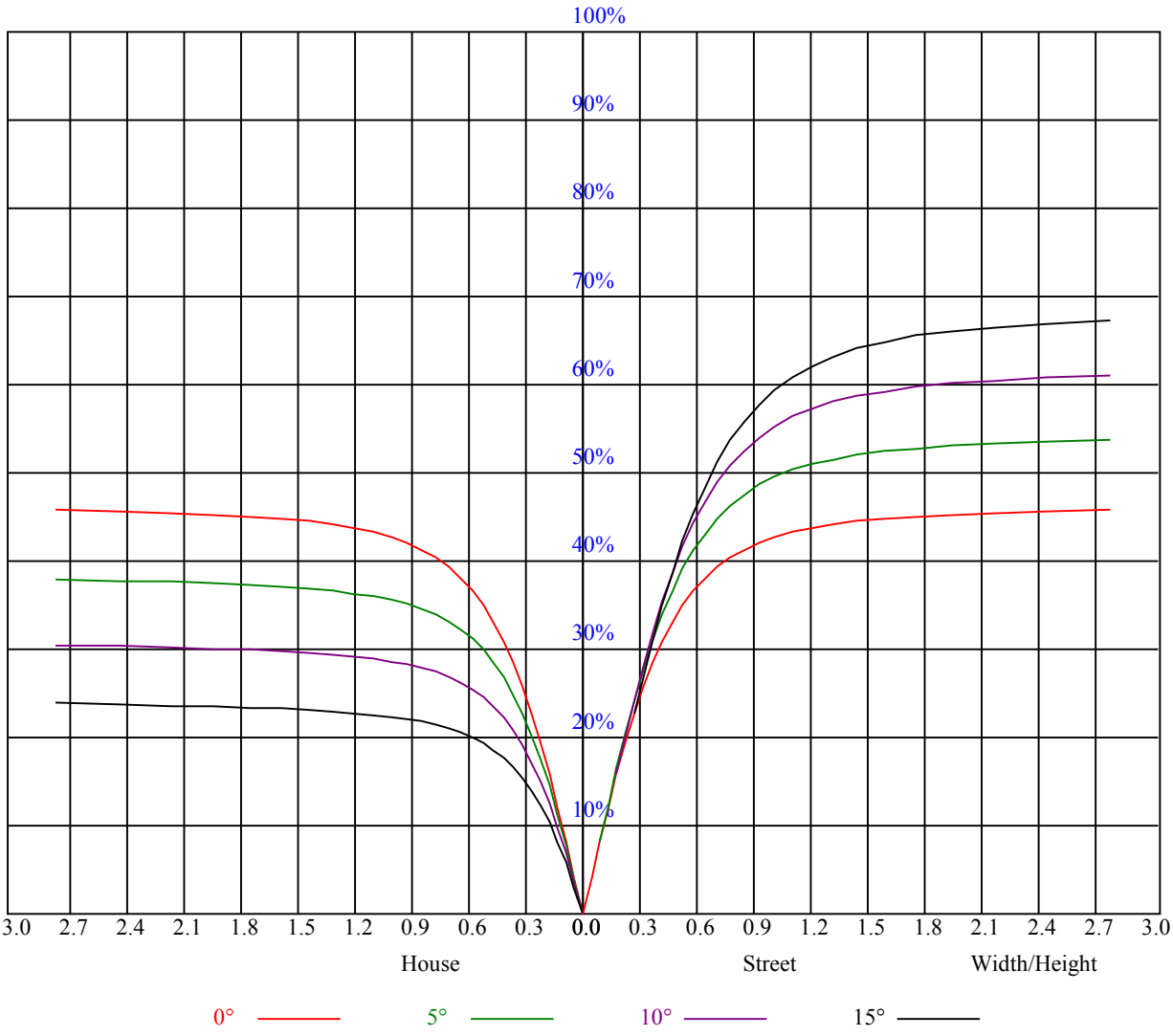


Equipment: GMS1980	Date: 2020/4/2	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	0.99	0.96	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.86	0.85
2	0.93	0.89	0.85	0.92	0.87	0.84	0.88	0.85	0.82	0.86	0.83	0.80	0.83	0.81	0.79	0.77
3	0.86	0.80	0.76	0.85	0.80	0.76	0.82	0.78	0.74	0.80	0.76	0.73	0.77	0.74	0.72	0.70
4	0.79	0.74	0.69	0.78	0.73	0.69	0.76	0.72	0.68	0.74	0.70	0.67	0.72	0.69	0.66	0.65
5	0.74	0.68	0.63	0.73	0.67	0.63	0.71	0.66	0.62	0.70	0.65	0.62	0.68	0.64	0.61	0.60
6	0.69	0.63	0.58	0.68	0.62	0.58	0.67	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.55
7	0.64	0.58	0.54	0.64	0.58	0.54	0.63	0.57	0.53	0.61	0.57	0.53	0.60	0.56	0.53	0.51
8	0.61	0.54	0.50	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.49	0.48
9	0.57	0.51	0.47	0.57	0.51	0.47	0.56	0.50	0.47	0.55	0.50	0.47	0.54	0.50	0.46	0.45
10	0.54	0.48	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.42

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2020/4/2	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	126.39	126.68	126.62	126.11	124.93	123.36	121.39	119.36	117.51
45.0	127.69	127.86	127.69	127.18	126.00	124.31	122.46	120.38	118.07
90.0	128.14	128.08	127.52	126.62	125.27	123.47	121.33	119.14	116.33
135.0	128.42	128.36	127.63	126.84	125.55	123.24	120.94	118.52	115.82
180.0	126.39	125.78	124.88	123.64	122.12	120.15	117.11	114.53	112.05
225.0	127.69	127.13	126.34	125.21	123.53	121.44	119.31	116.38	114.19
270.0	128.14	127.86	127.41	126.68	125.44	123.36	121.16	119.14	116.72
315.0	128.42	128.36	127.97	126.73	125.33	123.58	121.67	119.31	117.06
360.0	126.39	126.68	126.62	126.11	124.93	123.36	121.39	119.36	117.51

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	114.86	111.99	108.84	105.69	101.42	98.04	95.18	90.84	86.85
45.0	115.03	112.50	109.41	105.30	101.87	98.16	93.99	89.89	86.23
90.0	113.57	109.91	106.26	103.05	99.39	95.46	91.86	88.09	83.36
135.0	113.06	109.80	106.37	102.88	98.89	95.12	91.63	87.69	83.64
180.0	109.52	106.03	102.99	99.90	95.57	92.31	89.16	85.56	81.79
225.0	111.60	108.06	104.91	101.64	97.82	94.11	90.73	86.91	83.42
270.0	114.02	111.15	107.66	104.57	101.14	97.48	93.99	90.34	86.18
315.0	114.02	110.59	107.61	104.01	100.80	96.92	92.76	89.04	85.33
360.0	114.86	111.99	108.84	105.69	101.42	98.04	95.18	90.84	86.85

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	83.19	79.14	75.26	71.89	67.95	64.58	60.81	57.21	54.17
45.0	81.84	77.96	74.03	69.75	66.04	62.16	58.56	55.69	52.43
90.0	79.54	75.83	71.78	67.84	64.41	60.69	57.09	54.11	50.63
135.0	79.88	76.22	72.17	68.74	65.31	61.14	58.11	55.35	51.86
180.0	78.30	74.36	70.93	67.22	63.84	60.69	57.21	54.06	51.19
225.0	79.54	75.71	72.34	68.57	64.80	61.48	58.33	54.56	51.58
270.0	82.24	78.81	74.70	71.27	67.61	64.18	60.19	57.09	54.11
315.0	80.94	77.40	73.74	69.13	65.48	62.04	58.39	54.90	51.92
360.0	83.19	79.14	75.26	71.89	67.95	64.58	60.81	57.21	54.17

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	51.13	47.59	44.83	42.19	39.15	36.84	34.88	32.18	29.87
45.0	48.77	45.90	43.37	40.67	37.52	35.33	33.13	30.54	28.63
90.0	47.64	44.49	41.63	39.15	36.79	34.03	32.01	30.09	27.79
135.0	48.66	46.07	43.14	40.61	37.91	35.38	33.19	30.94	28.74
180.0	48.38	45.11	42.41	39.94	37.35	34.88	32.79	30.54	28.35
225.0	48.77	45.62	42.64	40.11	37.41	34.82	32.68	30.38	28.41
270.0	50.63	47.25	44.49	41.68	39.09	36.84	34.43	32.34	30.09
315.0	48.66	45.84	43.03	40.44	38.25	35.83	33.47	31.56	29.64
360.0	51.13	47.59	44.83	42.19	39.15	36.84	34.88	32.18	29.87

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	27.90	25.82	23.96	22.11	20.31	18.84	17.33	15.92	14.79
45.0	26.89	25.03	23.18	21.66	20.03	18.62	17.10	15.75	14.63
90.0	26.10	24.47	22.73	21.15	19.74	18.23	16.93	15.58	14.34
135.0	27.00	25.54	23.40	21.94	20.64	18.90	17.44	16.37	14.91
180.0	26.61	24.75	23.12	21.43	19.74	18.34	16.99	15.47	14.34
225.0	26.33	24.41	22.78	21.04	19.41	18.00	16.76	15.24	14.06
270.0	28.01	26.21	24.53	22.39	20.87	19.41	17.72	16.48	15.30
315.0	27.34	25.65	23.96	21.88	20.42	18.96	17.44	15.98	14.74
360.0	27.90	25.82	23.96	22.11	20.31	18.84	17.33	15.92	14.79

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	13.73	12.49	11.59	10.74	9.84	9.00	8.33	7.71	7.09
45.0	13.44	12.32	11.42	10.58	9.68	9.00	8.33	7.59	6.98
90.0	13.33	12.32	11.31	10.46	9.68	8.83	8.16	7.54	6.86
135.0	13.73	12.88	11.76	10.91	10.13	9.23	8.55	7.88	7.14
180.0	13.28	12.09	11.25	10.41	9.62	8.83	8.21	7.54	6.98
225.0	13.05	11.87	10.97	10.13	9.23	8.55	7.93	7.20	6.75
270.0	14.01	12.83	11.81	10.80	9.96	9.11	8.33	7.71	7.09
315.0	13.50	12.43	11.36	10.41	9.56	8.78	7.99	7.37	6.81
360.0	13.73	12.49	11.59	10.74	9.84	9.00	8.33	7.71	7.09

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.53	6.02	5.63	5.18	4.78	4.44	4.11	3.77	3.54
45.0	6.47	5.96	5.51	5.12	4.78	4.44	4.11	3.77	3.54
90.0	6.36	5.91	5.46	5.01	4.61	4.28	3.99	3.71	3.43
135.0	6.64	6.19	5.68	5.23	4.84	4.50	4.16	3.94	3.60
180.0	6.41	5.96	5.57	5.12	4.78	4.44	4.16	3.77	3.54
225.0	6.19	5.63	5.29	4.95	4.44	4.22	3.94	3.60	3.43
270.0	6.58	6.13	5.74	5.18	4.84	4.50	4.11	3.83	3.60
315.0	6.19	5.74	5.34	4.89	4.50	4.22	3.88	3.60	3.38
360.0	6.53	6.02	5.63	5.18	4.78	4.44	4.11	3.77	3.54

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.32	3.04	2.87	2.70	2.64	2.48	2.36	2.25	2.19
45.0	3.38	3.09	2.93	2.81	2.64	2.48	2.42	2.31	2.19
90.0	3.21	2.98	2.76	2.59	2.48	2.36	2.25	2.19	2.08
135.0	3.43	3.21	2.98	2.81	2.64	2.53	2.42	2.25	2.19
180.0	3.32	3.09	2.93	2.76	2.59	2.48	2.36	2.31	2.19
225.0	3.26	3.04	2.81	2.70	2.59	2.42	2.36	2.25	2.19
270.0	3.32	3.09	2.93	2.76	2.64	2.48	2.36	2.31	2.19
315.0	3.15	2.98	2.81	2.64	2.48	2.36	2.25	2.14	2.14
360.0	3.32	3.04	2.87	2.70	2.64	2.48	2.36	2.25	2.19

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	2.08	2.03	1.97	1.91	1.86	1.80	1.74	1.74	1.69
45.0	2.19	2.14	2.08	2.03	2.03	2.03	1.97	1.91	1.80
90.0	2.03	1.91	1.86	1.80	1.74	1.69	1.63	1.63	1.52
135.0	2.19	2.08	2.03	1.97	1.91	1.91	1.91	1.80	1.80
180.0	2.14	2.03	1.97	1.91	1.91	1.86	1.86	1.80	1.74
225.0	2.14	2.14	2.14	2.03	1.91	1.86	1.86	1.80	1.74
270.0	2.14	2.08	2.03	1.97	1.91	1.86	1.86	1.80	1.74
315.0	2.08	2.03	2.03	1.97	1.86	1.86	1.80	1.74	1.74
360.0	2.08	2.03	1.97	1.91	1.86	1.80	1.74	1.74	1.69

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.63	1.58	1.52	1.41	1.35	1.01	0.62	0.51	0.39
45.0	1.80	1.74	1.63	1.52	1.35	1.01	0.56	0.51	0.39
90.0	1.46	1.41	1.35	1.29	1.18	0.90	0.56	0.45	0.34
135.0	1.74	1.63	1.63	1.58	1.46	1.29	0.79	0.56	0.45
180.0	1.69	1.63	1.58	1.52	1.41	1.29	0.79	0.56	0.45
225.0	1.74	1.74	1.63	1.63	1.52	1.35	0.90	0.56	0.45
270.0	1.69	1.69	1.63	1.58	1.58	1.35	1.01	0.62	0.51
315.0	1.74	1.69	1.63	1.52	1.41	1.13	0.68	0.51	0.45
360.0	1.63	1.58	1.52	1.41	1.35	1.01	0.62	0.51	0.39

Intensity data(cd)

C/γ(°)	90.0
0.0	0.34
45.0	0.34
90.0	0.34
135.0	0.34
180.0	0.34
225.0	0.39
270.0	0.39
315.0	0.34
360.0	0.34