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

Nata

LumCAT: NA01D020015BW
Luminaire:
Report No: 200402-B013
Test No: 200402-C013
LampCAT: OSRAM 3030 DURIS S5
Lamp flux(lm): 126.4
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 6.5600
Current(A): 0.1620
Power (W): 1.0630
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 118.24
Efficiency(%): 93.58%
Lumens(lm)/Power(W): 111.23
Central intensity(cd): 571.374
Maximum intensity(cd): 571.374
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=19.1
[C90/270]Total=19.1
Field angle(10%Imax): [C0/180]Total=43.1
[C90/270]Total=43.1
Maximum s/h(1/2): C0_180=0.33 C90_270=0.33
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.58%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.851%

Nata NA01D020015BW

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	571.373	0.000	0	.000%	.000%
1.0	566.381	0.544	0.544	.431%	.460%
2.0	552.066	1.605	2.15	1.270%	1.818%
3.0	528.968	2.585	4.735	2.046%	4.005%
4.0	499.598	3.443	8.178	2.725%	6.916%
5.0	465.124	4.150	12.328	3.284%	10.426%
6.0	423.155	4.668	16.996	3.694%	14.374%
7.0	382.894	5.003	22	3.959%	18.606%
8.0	344.588	5.206	27.206	4.120%	23.009%
9.0	305.817	5.271	32.477	4.172%	27.467%
10.0	267.933	5.192	37.669	4.109%	31.858%
11.0	236.813	5.043	42.713	3.991%	36.123%
12.0	208.329	4.866	47.579	3.851%	40.239%
13.0	179.402	4.601	52.18	3.641%	44.130%
14.0	157.064	4.307	56.487	3.408%	47.772%
15.0	137.363	4.042	60.529	3.199%	51.191%
16.0	119.735	3.767	64.296	2.981%	54.377%
17.0	103.317	3.474	67.77	2.749%	57.314%
18.0	90.394	3.194	70.964	2.528%	60.016%
19.0	79.073	2.948	73.912	2.333%	62.509%
20.0	68.991	2.710	76.622	2.145%	64.801%
21.0	60.863	2.493	79.115	1.973%	66.910%
22.0	53.986	2.308	81.423	1.826%	68.862%
23.0	48.164	2.143	83.567	1.696%	70.674%
24.0	43.066	1.995	85.561	1.579%	72.361%
25.0	38.897	1.864	87.425	1.475%	73.937%
26.0	35.395	1.754	89.179	1.388%	75.420%
27.0	32.393	1.658	90.837	1.312%	76.823%
28.0	29.475	1.566	92.404	1.240%	78.148%
29.0	26.930	1.476	93.879	1.168%	79.396%
30.0	24.701	1.394	95.273	1.103%	80.575%
31.0	22.556	1.315	96.588	1.041%	81.687%
32.0	20.552	1.235	97.823	.977%	82.731%
33.0	18.851	1.161	98.984	.919%	83.713%
34.0	17.213	1.091	100.076	.864%	84.636%
35.0	15.574	1.018	101.094	.806%	85.497%
36.0	14.217	0.949	102.042	.751%	86.299%
37.0	12.973	0.887	102.929	.702%	87.049%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	11.749	0.825	103.754	.653%	87.747%
39.0	10.596	0.763	104.517	.604%	88.392%
40.0	9.633	0.706	105.223	.558%	88.989%
41.0	8.782	0.656	105.878	.519%	89.544%
42.0	8.002	0.610	106.488	.483%	90.059%
43.0	7.320	0.568	107.056	.449%	90.539%
44.0	6.757	0.531	107.587	.420%	90.989%
45.0	6.279	0.501	108.088	.396%	91.412%
46.0	5.836	0.474	108.562	.375%	91.813%
47.0	5.498	0.451	109.012	.357%	92.194%
48.0	5.161	0.431	109.443	.341%	92.559%
49.0	4.830	0.410	109.854	.325%	92.906%
50.0	4.535	0.390	110.244	.309%	93.236%
51.0	4.275	0.373	110.617	.295%	93.551%
52.0	4.036	0.357	110.974	.282%	93.853%
53.0	3.804	0.341	111.315	.270%	94.141%
54.0	3.579	0.325	111.64	.258%	94.416%
55.0	3.417	0.312	111.952	.247%	94.680%
56.0	3.213	0.300	112.252	.237%	94.934%
57.0	3.059	0.287	112.539	.227%	95.176%
58.0	2.904	0.276	112.814	.218%	95.410%
59.0	2.784	0.266	113.08	.210%	95.634%
60.0	2.644	0.256	113.337	.203%	95.851%
61.0	2.510	0.246	113.583	.195%	96.059%
62.0	2.412	0.237	113.82	.188%	96.260%
63.0	2.306	0.229	114.049	.182%	96.454%
64.0	2.208	0.222	114.271	.175%	96.641%
65.0	2.102	0.213	114.484	.169%	96.822%
66.0	2.039	0.207	114.691	.164%	96.997%
67.0	1.969	0.202	114.892	.159%	97.167%
68.0	1.877	0.195	115.087	.154%	97.332%
69.0	1.800	0.188	115.275	.148%	97.490%
70.0	1.744	0.182	115.457	.144%	97.644%
71.0	1.695	0.178	115.634	.141%	97.795%
72.0	1.638	0.173	115.808	.137%	97.941%
73.0	1.603	0.170	115.977	.134%	98.084%
74.0	1.575	0.167	116.144	.132%	98.226%
75.0	1.526	0.164	116.308	.130%	98.364%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.512	0.161	116.469	.128%	98.501%
77.0	1.498	0.160	116.63	.127%	98.636%
78.0	1.484	0.160	116.789	.126%	98.771%
79.0	1.470	0.159	116.948	.126%	98.906%
80.0	1.448	0.157	117.105	.124%	99.039%
81.0	1.441	0.156	117.262	.124%	99.171%
82.0	1.420	0.155	117.417	.123%	99.302%
83.0	1.399	0.153	117.57	.121%	99.432%
84.0	1.336	0.149	117.719	.118%	99.558%
85.0	1.259	0.142	117.861	.112%	99.677%
86.0	1.013	0.124	117.985	.098%	99.782%
87.0	0.724	0.095	118.08	.075%	99.863%
88.0	0.492	0.067	118.147	.053%	99.919%
89.0	0.429	0.050	118.197	.040%	99.962%
90.0	0.394	0.045	118.242	.036%	100.000%

Zonal flux distribution table

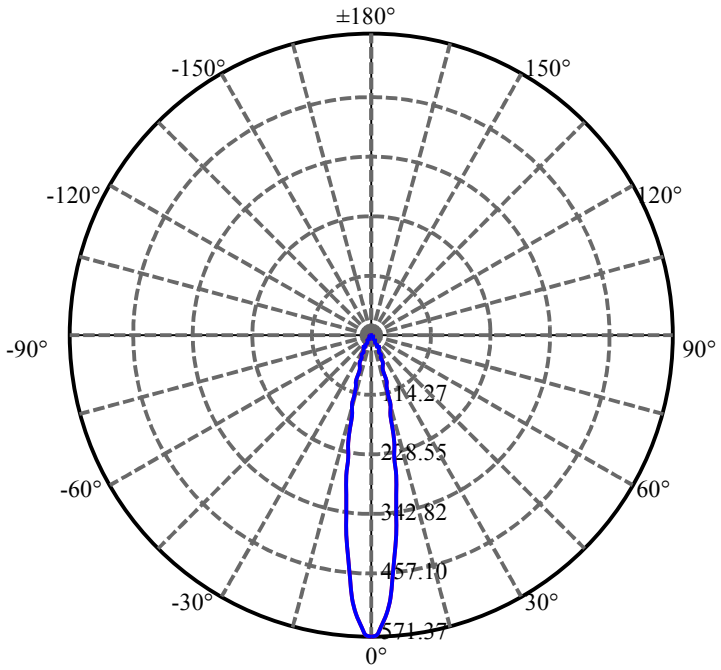
ZONAL LUMEN SUMMARY

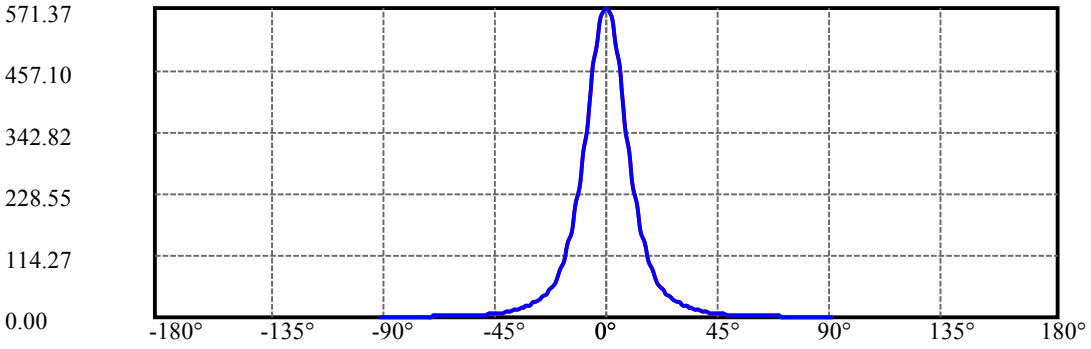
Zone	Lumens	%Lamp	%Fixt
0-30	95.27	75.40%	80.57%
0-40	105.22	83.27%	88.99%
0-60	113.34	89.69%	95.85%
0-90	118.20	93.54%	99.96%
0-120	118.20	93.54%	99.96%
0-180	118.24	93.58%	100.00%
60-90	5.12	4.05%	4.33%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.51	94.59	74.86%	80.00%

ZONAL LUMEN SUMMARY

0-10	37.67
10-20	38.95
20-30	18.65
30-40	9.95
40-50	5.02
50-60	3.09
60-70	2.12
70-80	1.65
80-90	1.09
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]





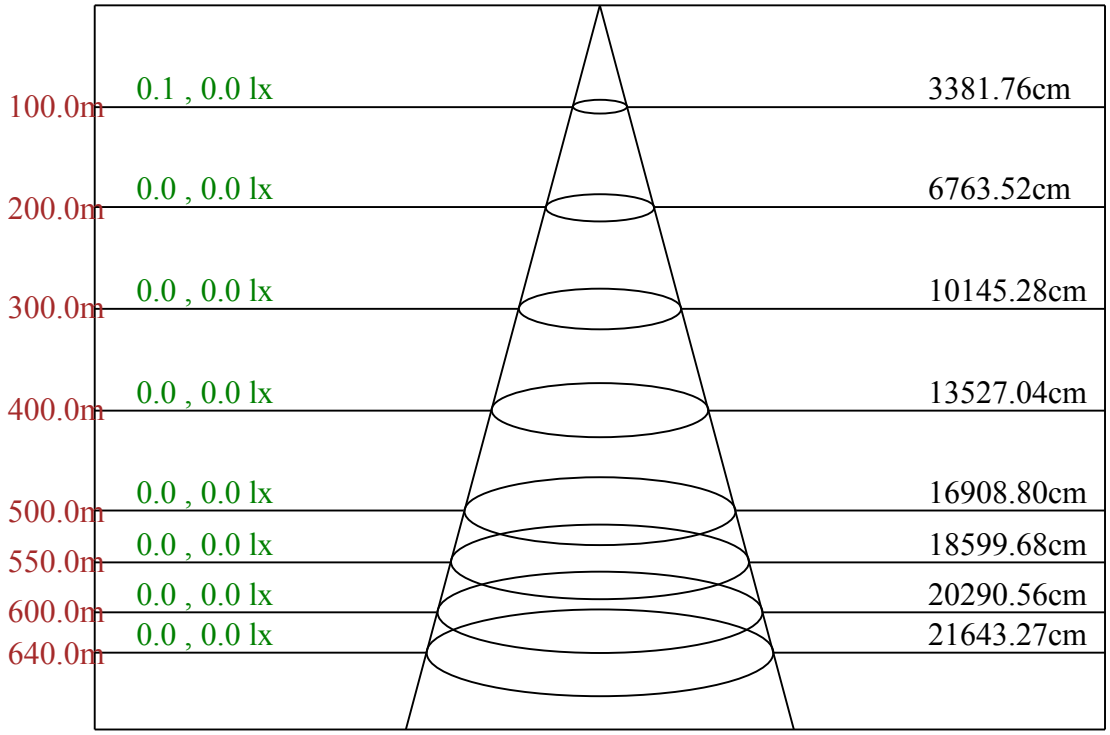
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:21.5 Right:21.5
:C90/270Left:21.5 Right:21.5

Beam Angle(50%Imax):C0/180Left:9.5 Right:9.5
:C90/270Left:9.5 Right:9.5

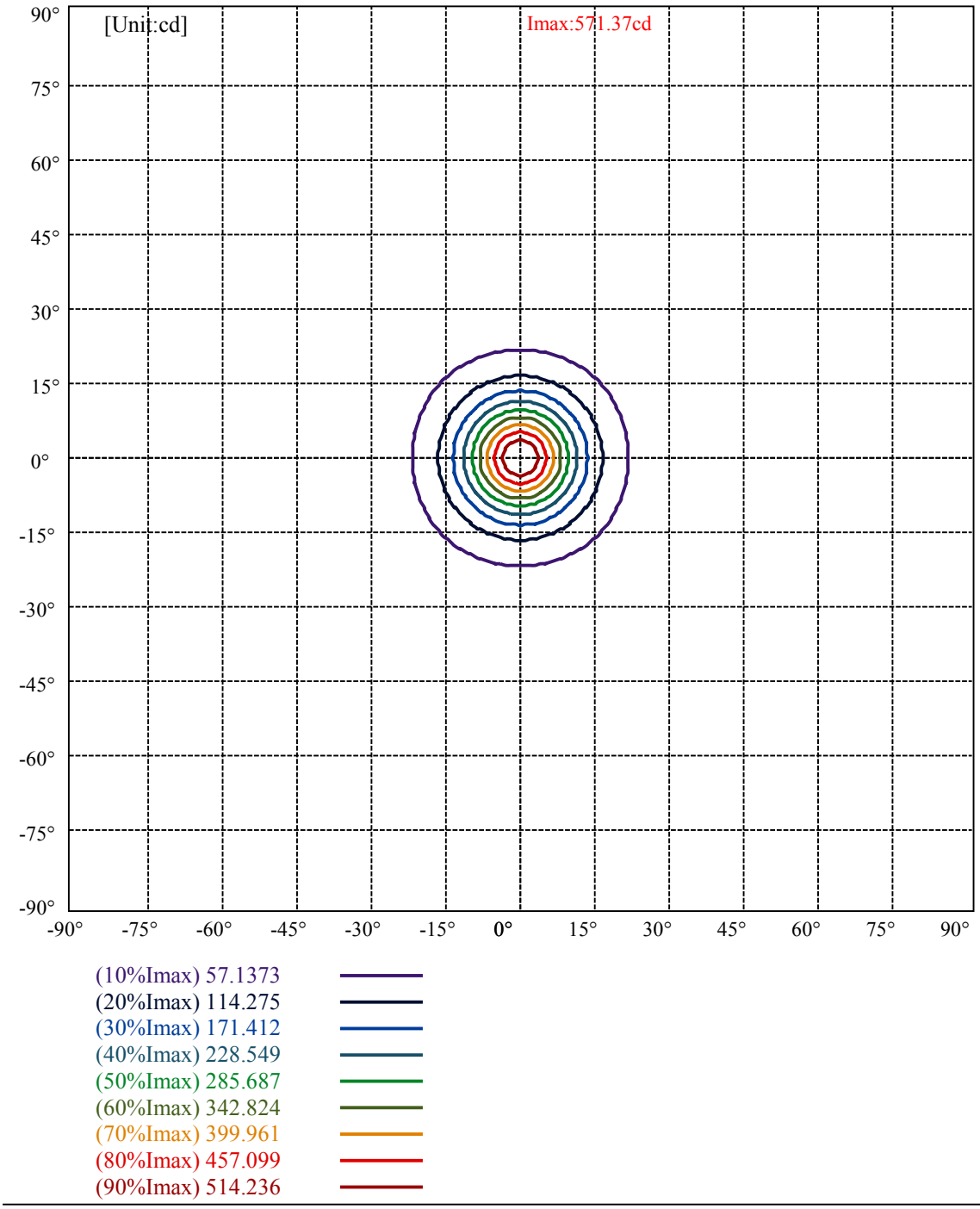
Lux distance Curve



Max , Ave

Beam angle of C0 plane 19.19

ISO-Intensity(V-H)

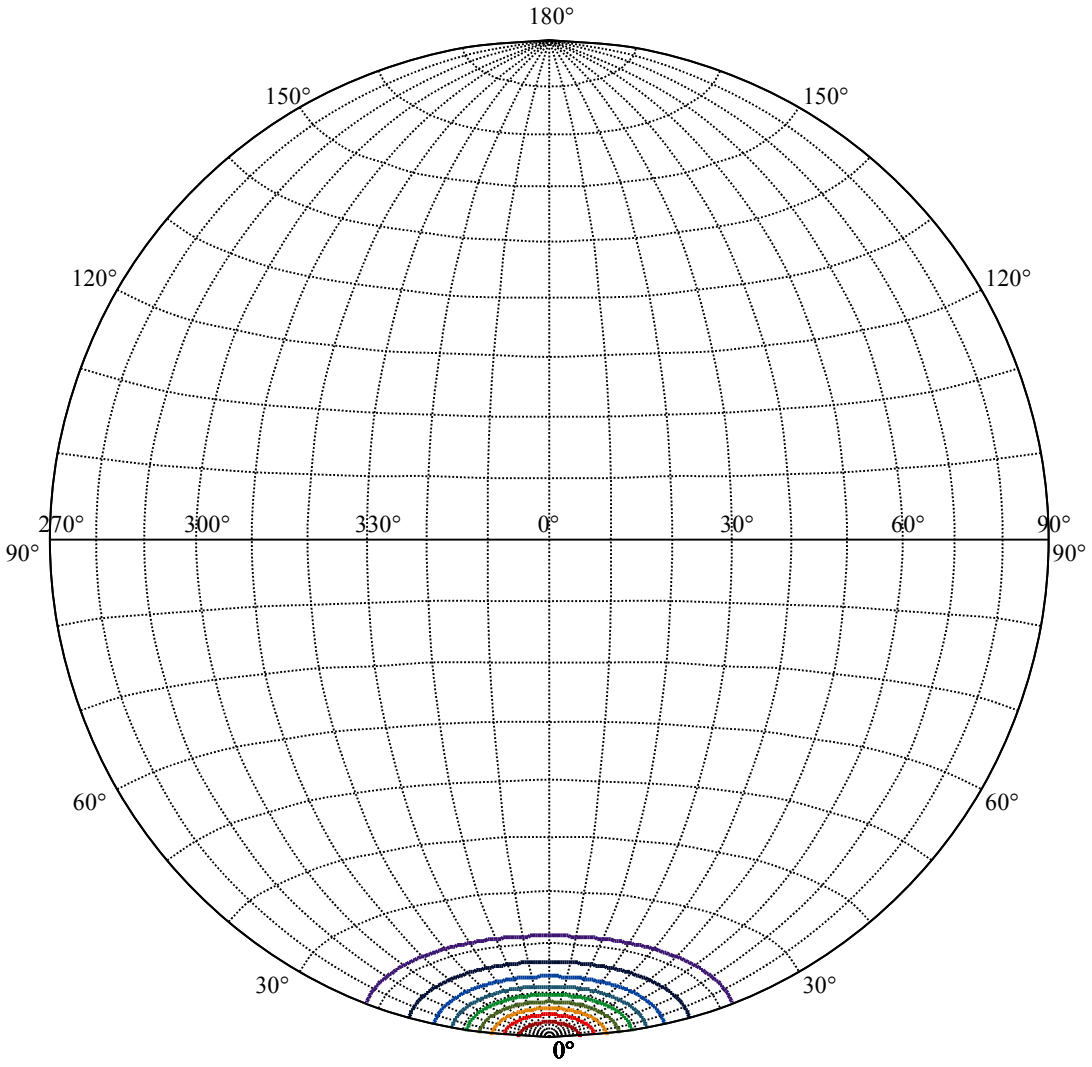


Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:571.37

(10%Imax) 57.1373
(20%Imax) 114.275
(30%Imax) 171.412
(40%Imax) 228.549
(50%Imax) 285.687
(60%Imax) 342.824
(70%Imax) 399.961
(80%Imax) 457.099
(90%Imax) 514.236

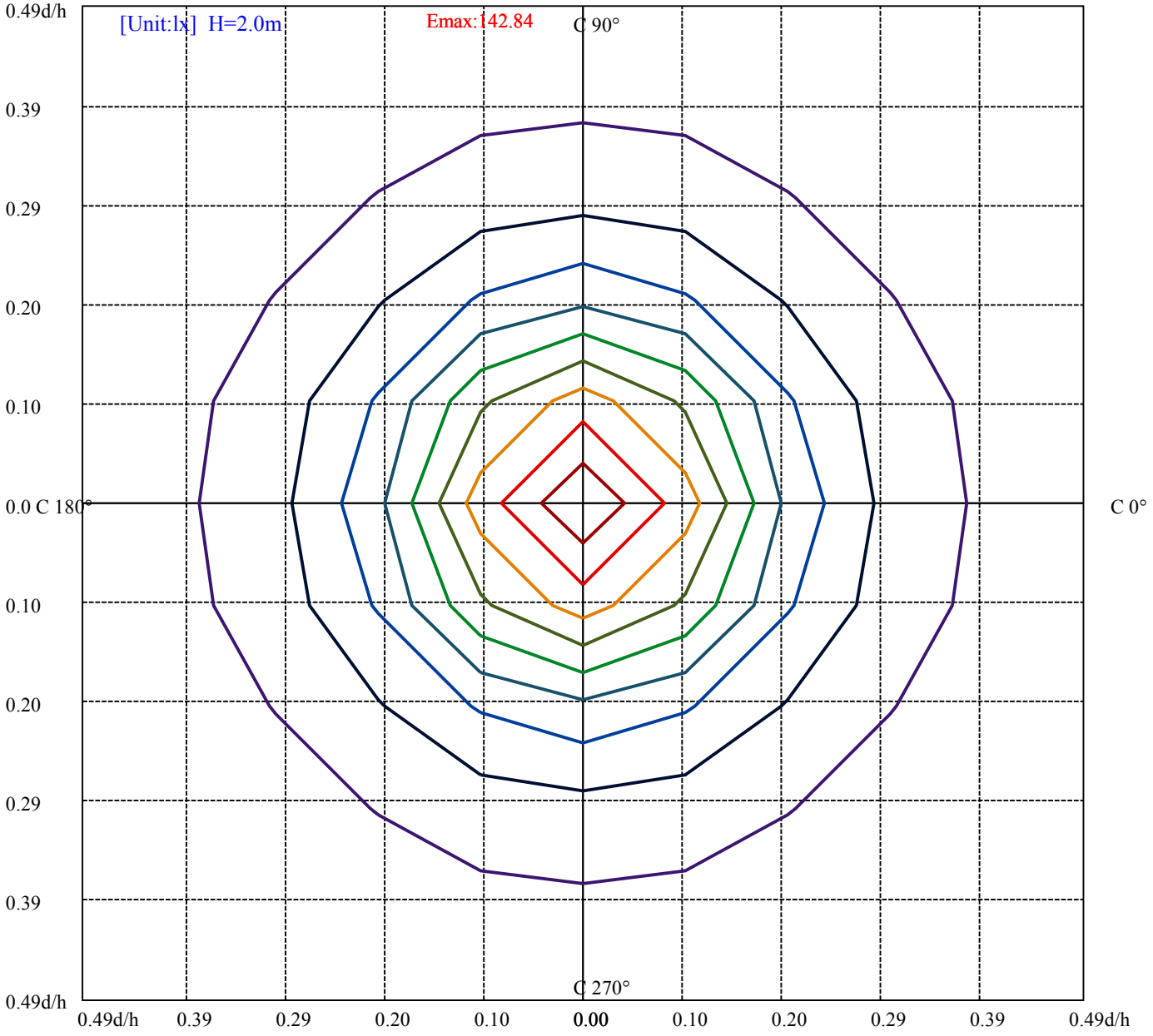
Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

Nata NA01D020015BW

ISO illuminance diagram

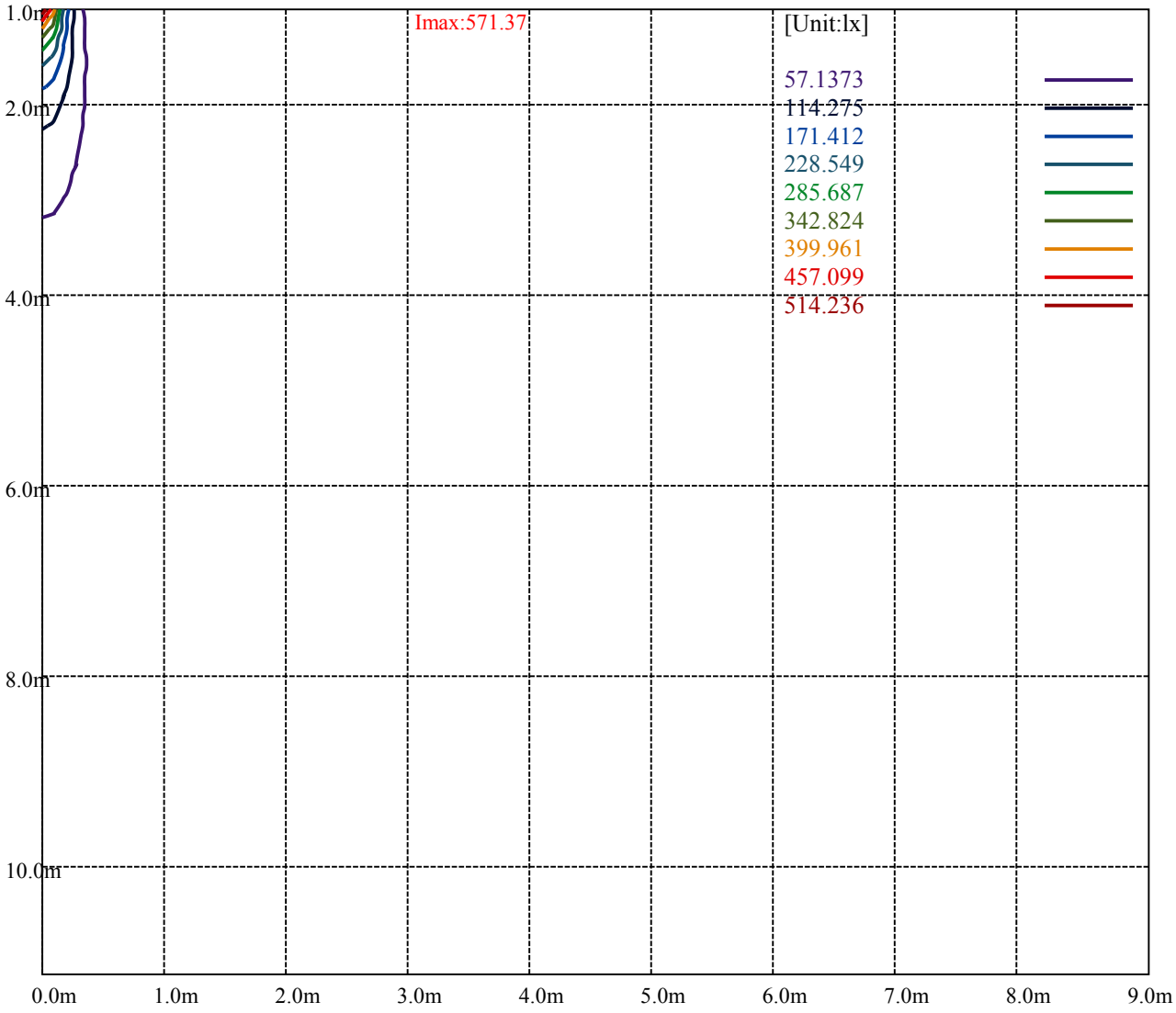


Equipment: GMS1980
Temperature(°C): 25.0

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

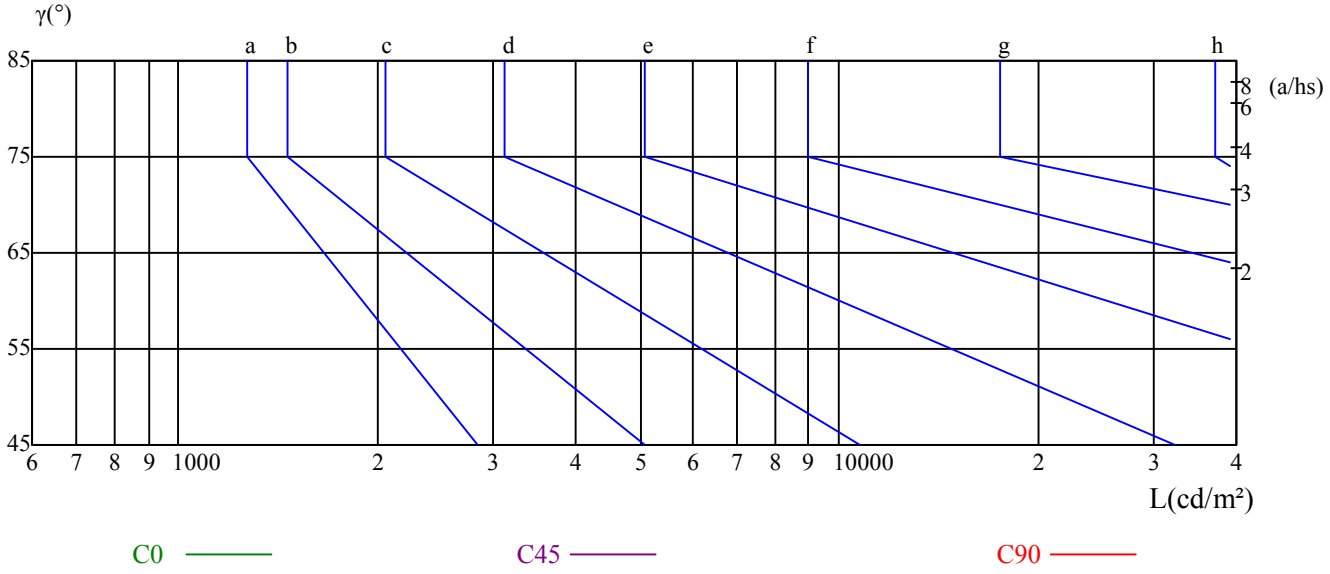
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

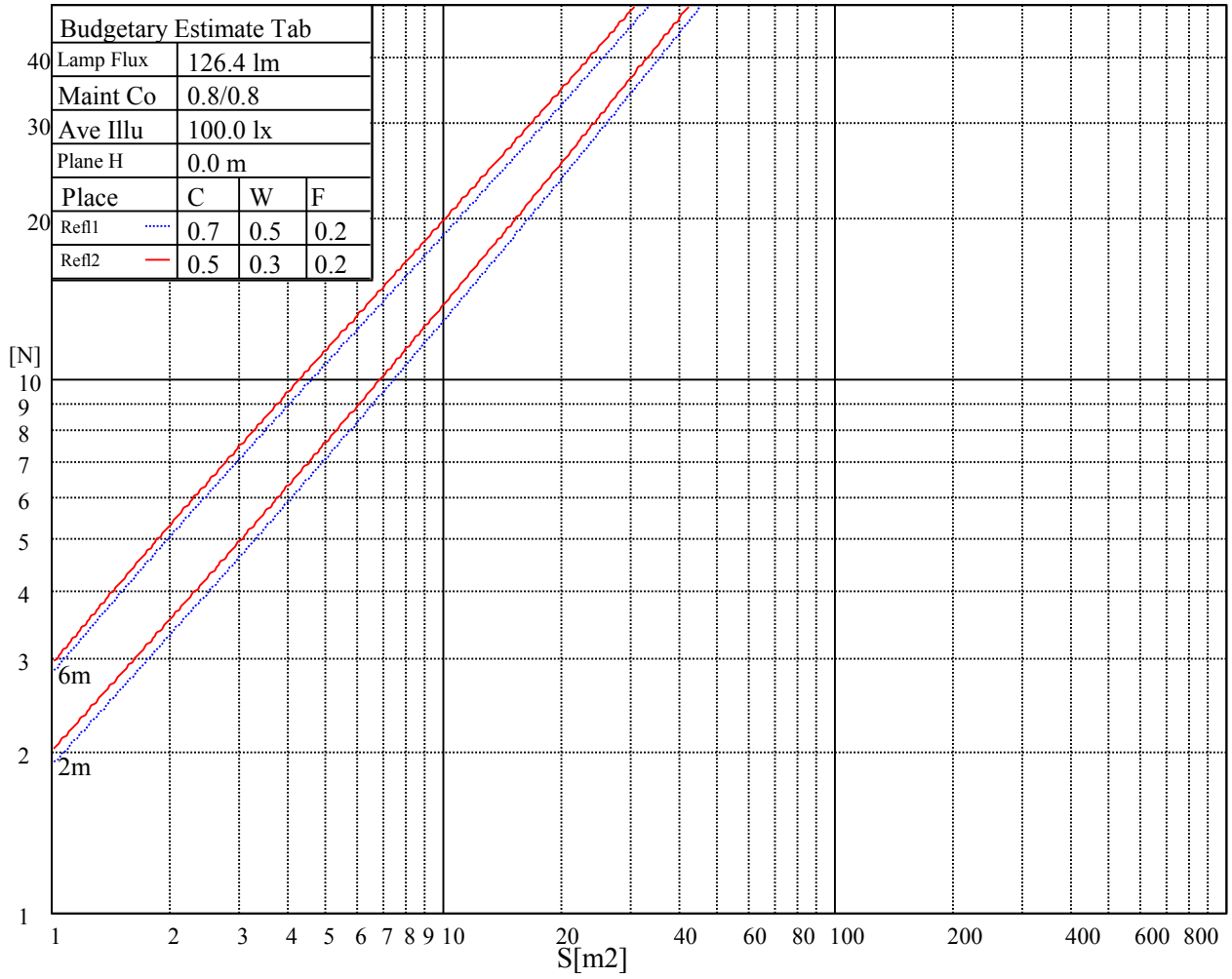
Glare Table

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



Budgetary Estimate Table

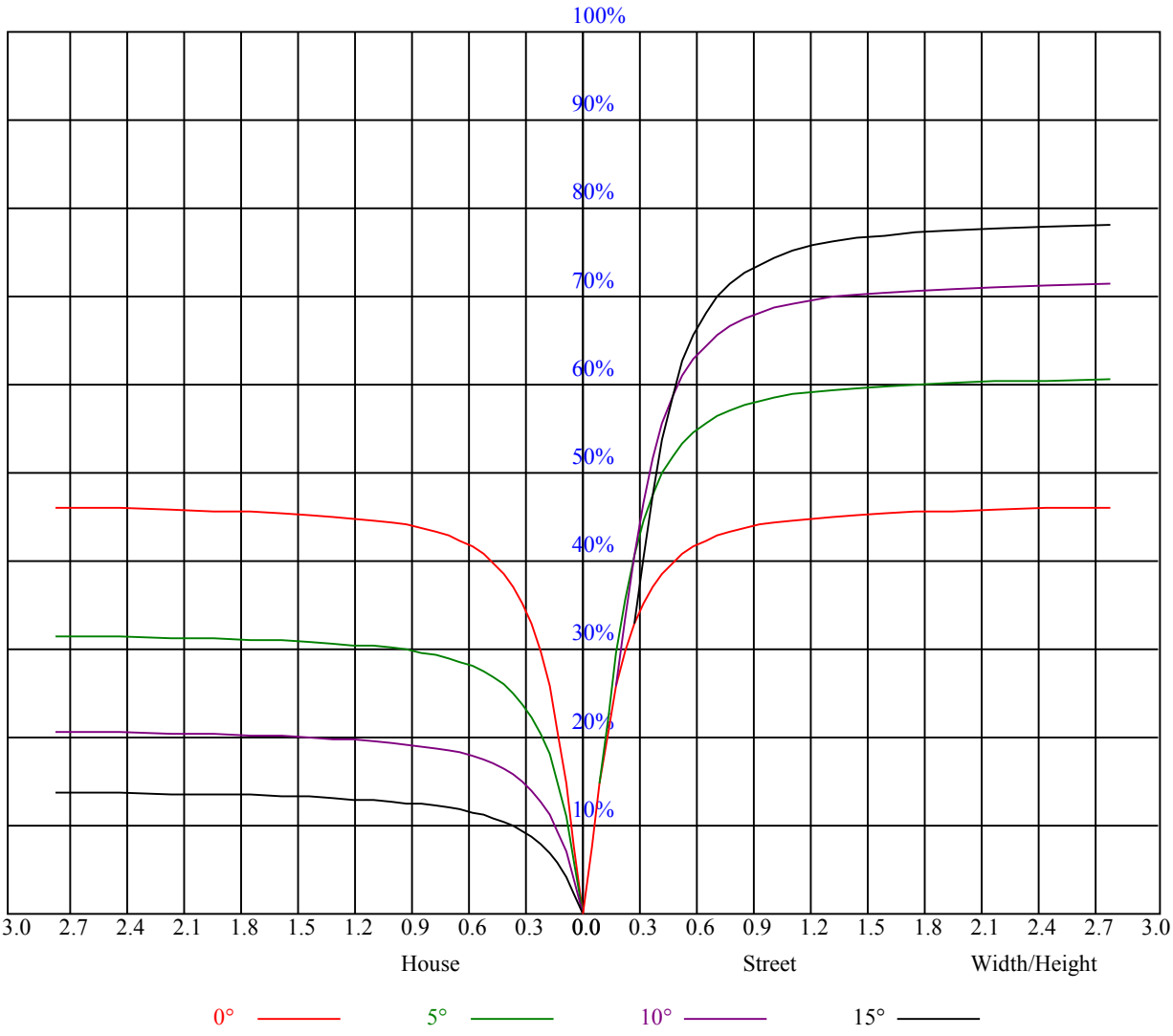


Equipment: GMS1980	Date: 2020/4/2	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	1.00	1.00	1.00	0.95	0.95	0.95	0.94
1	1.04	1.02	1.00	1.02	1.00	0.98	0.98	0.96	0.95	0.95	0.93	0.92	0.91	0.90	0.89	0.88
2	0.98	0.94	0.91	0.96	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.83
3	0.92	0.88	0.85	0.91	0.87	0.84	0.89	0.85	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.79
4	0.88	0.83	0.80	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.76	0.75
5	0.84	0.79	0.75	0.83	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.72
6	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.69
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.66
8	0.74	0.69	0.66	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.64
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.62
10	0.69	0.65	0.62	0.69	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60

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	590.23	577.29	550.13	521.61	488.25	446.63	403.20	365.63	324.90
45.0	565.43	559.07	543.15	521.55	490.61	459.00	419.06	376.76	340.20
90.0	568.80	567.11	557.55	535.61	509.85	478.69	433.01	393.64	354.54
135.0	561.04	569.98	569.48	558.62	539.94	510.53	473.01	434.81	395.66
180.0	590.23	594.17	588.15	570.88	546.53	510.81	468.17	427.50	382.39
225.0	565.43	561.77	549.73	523.74	495.51	461.70	415.24	377.61	340.99
270.0	568.80	560.19	541.35	516.38	480.99	445.39	402.24	360.23	324.62
315.0	561.04	541.46	516.99	483.36	445.11	408.26	371.31	326.98	293.40
360.0	590.23	577.29	550.13	521.61	488.25	446.63	403.20	365.63	324.90

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	286.59	254.14	221.46	195.19	168.47	144.79	126.34	110.42	93.43
45.0	301.11	263.93	232.88	205.03	174.77	153.17	134.38	118.35	101.25
90.0	316.97	273.26	241.43	209.87	181.86	159.86	138.04	121.56	105.64
135.0	347.68	310.39	275.51	239.96	208.58	183.60	159.13	138.21	122.23
180.0	343.69	302.51	264.99	235.01	205.03	178.65	157.84	139.39	118.97
225.0	301.73	265.44	235.86	205.71	178.76	157.78	136.86	120.09	103.56
270.0	287.10	252.34	224.04	201.49	169.71	149.23	133.09	112.73	96.75
315.0	261.68	221.46	198.34	174.38	148.05	129.43	113.23	97.14	84.71
360.0	286.59	254.14	221.46	195.19	168.47	144.79	126.34	110.42	93.43

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	81.90	72.28	61.99	55.01	49.05	43.43	38.64	34.88	31.33
45.0	88.88	78.53	68.18	60.98	54.73	48.49	43.37	39.43	35.72
90.0	93.32	81.56	72.90	64.69	57.83	52.65	47.70	43.54	40.28
135.0	105.92	93.49	82.29	72.56	65.08	58.73	52.20	47.53	43.71
180.0	104.74	92.31	79.14	70.26	62.61	54.79	49.44	44.94	40.11
225.0	89.61	78.92	69.58	59.57	52.88	47.08	41.18	37.29	34.03
270.0	85.89	72.51	62.27	55.46	47.42	42.36	38.14	33.64	30.77
315.0	72.90	63.00	55.58	48.38	42.30	37.80	33.86	29.93	27.23
360.0	81.90	72.28	61.99	55.01	49.05	43.43	38.64	34.88	31.33

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	28.52	25.82	23.34	21.38	19.46	17.66	16.26	14.85	13.39
45.0	32.74	29.64	26.89	24.69	22.50	20.53	18.84	17.49	15.64
90.0	37.29	33.98	31.50	29.19	26.72	24.58	22.67	20.64	18.84
135.0	39.60	36.68	33.86	30.99	28.58	26.49	24.13	22.05	20.31
180.0	37.18	33.86	30.49	28.18	25.82	22.95	21.38	19.52	17.27
225.0	30.71	27.84	25.65	23.23	21.32	19.41	17.61	16.09	14.51
270.0	28.29	25.59	23.46	21.49	19.24	17.66	16.14	14.57	13.16
315.0	24.81	22.39	20.25	18.45	16.82	15.13	13.78	12.49	11.48
360.0	28.52	25.82	23.34	21.38	19.46	17.66	16.26	14.85	13.39

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	12.26	11.19	10.13	9.17	8.38	7.65	6.98	6.47	6.02
45.0	14.34	13.16	11.93	10.86	9.90	9.00	8.10	7.54	6.86
90.0	17.44	15.81	14.40	13.05	11.87	10.80	9.96	9.00	8.38
135.0	18.39	16.88	15.36	13.84	12.66	11.59	10.35	9.51	8.78
180.0	15.92	14.51	12.99	11.70	10.63	9.51	8.66	7.71	6.98
225.0	13.11	11.93	10.80	9.51	8.55	7.82	7.09	6.41	5.96
270.0	11.93	10.80	9.79	8.83	7.93	7.26	6.69	6.13	5.74
315.0	10.35	9.51	8.61	7.82	7.14	6.64	6.19	5.79	5.34
360.0	12.26	11.19	10.13	9.17	8.38	7.65	6.98	6.47	6.02

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	5.63	5.29	5.01	4.73	4.44	4.16	3.94	3.83	3.54
45.0	6.47	6.02	5.68	5.29	5.01	4.67	4.39	4.11	3.88
90.0	7.76	7.09	6.75	6.30	5.74	5.29	4.89	4.56	4.22
135.0	7.93	7.37	6.86	6.36	5.85	5.51	5.12	4.84	4.56
180.0	6.41	5.91	5.46	5.12	4.78	4.44	4.22	3.99	3.77
225.0	5.46	5.12	4.78	4.50	4.28	4.11	3.88	3.66	3.43
270.0	5.46	5.06	4.84	4.61	4.39	4.16	3.99	3.71	3.54
315.0	5.12	4.84	4.61	4.39	4.16	3.94	3.77	3.60	3.49
360.0	5.63	5.29	5.01	4.73	4.44	4.16	3.94	3.83	3.54

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.43	3.32	3.15	2.98	2.81	2.76	2.59	2.48	2.36
45.0	3.66	3.54	3.26	3.09	2.93	2.76	2.64	2.53	2.36
90.0	3.99	3.71	3.49	3.26	3.15	2.93	2.76	2.59	2.48
135.0	4.11	3.88	3.60	3.38	3.15	2.98	2.81	2.70	2.59
180.0	3.49	3.32	3.09	2.93	2.81	2.76	2.64	2.53	2.48
225.0	3.26	3.15	3.04	2.93	2.76	2.70	2.59	2.42	2.36
270.0	3.43	3.26	3.09	3.04	2.87	2.76	2.59	2.48	2.36
315.0	3.26	3.15	2.98	2.87	2.76	2.64	2.53	2.36	2.31
360.0	3.43	3.32	3.15	2.98	2.81	2.76	2.59	2.48	2.36

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	2.25	2.14	2.08	1.97	1.91	1.80	1.74	1.69	1.63
45.0	2.25	2.14	2.03	1.97	1.86	1.80	1.69	1.63	1.58
90.0	2.36	2.25	2.08	2.03	1.97	1.86	1.80	1.69	1.63
135.0	2.48	2.36	2.25	2.19	2.14	2.03	1.91	1.86	1.80
180.0	2.36	2.31	2.19	2.14	2.08	2.03	1.91	1.91	1.86
225.0	2.25	2.19	2.08	2.03	1.97	1.86	1.80	1.74	1.74
270.0	2.31	2.19	2.08	2.03	1.97	1.86	1.80	1.74	1.69
315.0	2.19	2.08	2.03	1.97	1.86	1.80	1.74	1.69	1.63
360.0	2.25	2.14	2.08	1.97	1.91	1.80	1.74	1.69	1.63

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.58	1.52	1.52	1.52	1.52	1.52	1.52	1.46	1.46
45.0	1.52	1.52	1.52	1.46	1.46	1.46	1.41	1.46	1.41
90.0	1.58	1.52	1.52	1.46	1.46	1.41	1.41	1.41	1.35
135.0	1.74	1.69	1.63	1.58	1.52	1.52	1.52	1.46	1.46
180.0	1.80	1.74	1.69	1.63	1.63	1.58	1.58	1.52	1.52
225.0	1.69	1.63	1.58	1.58	1.52	1.52	1.46	1.52	1.46
270.0	1.63	1.63	1.58	1.46	1.46	1.46	1.46	1.41	1.41
315.0	1.58	1.58	1.58	1.52	1.52	1.52	1.52	1.52	1.52
360.0	1.58	1.52	1.52	1.52	1.52	1.52	1.52	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	1.46	1.41	1.41	1.29	1.24	0.73	0.51	0.45	0.45
45.0	1.41	1.41	1.35	1.29	1.13	0.73	0.51	0.45	0.39
90.0	1.35	1.29	1.29	1.24	1.18	0.79	0.51	0.45	0.39
135.0	1.46	1.46	1.46	1.41	1.35	1.24	0.84	0.51	0.45
180.0	1.52	1.52	1.46	1.41	1.35	1.29	1.01	0.56	0.45
225.0	1.46	1.41	1.41	1.35	1.29	1.18	0.96	0.56	0.45
270.0	1.41	1.35	1.35	1.35	1.29	1.24	0.96	0.51	0.45
315.0	1.46	1.52	1.46	1.35	1.24	0.90	0.51	0.45	0.39
360.0	1.46	1.41	1.41	1.29	1.24	0.73	0.51	0.45	0.45

Intensity data(cd)

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