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

Nata

LumCAT: NA01D020024BW
Luminaire:
Report No: 200406-B001
Test No: 200406-C001
LampCAT: CREE 3030-HE
Lamp flux(lm): 134.6
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 3.3900
Current(A): 0.2990
Power (W): 1.0140
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 131.91
Efficiency(%): 97.99%
Lumens(lm)/Power(W): 130.09
Central intensity(cd): 357.089
Maximum intensity(cd): 357.089
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=27.1
[C90/270]Total=27.1
Field angle(10%Imax): [C0/180]Total=59.2
[C90/270]Total=59.2
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.48 C90_270=0.48
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 97.99%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 93.950%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	357.089	0.000	0	.000%	.000%
1.0	355.648	0.341	0.341	.253%	.259%
2.0	350.768	1.014	1.355	.753%	1.027%
3.0	343.828	1.661	3.016	1.234%	2.287%
4.0	334.849	2.272	5.288	1.688%	4.009%
5.0	322.699	2.829	8.117	2.101%	6.153%
6.0	308.721	3.318	11.435	2.465%	8.669%
7.0	292.915	3.734	15.169	2.774%	11.500%
8.0	276.420	4.075	19.244	3.027%	14.589%
9.0	258.729	4.337	23.581	3.222%	17.877%
10.0	240.673	4.519	28.1	3.357%	21.303%
11.0	222.616	4.629	32.73	3.439%	24.812%
12.0	205.256	4.677	37.407	3.474%	28.358%
13.0	187.509	4.661	42.068	3.462%	31.892%
14.0	170.719	4.585	46.653	3.406%	35.368%
15.0	155.588	4.480	51.133	3.328%	38.764%
16.0	141.595	4.355	55.488	3.235%	42.065%
17.0	127.709	4.194	59.681	3.115%	45.244%
18.0	114.813	3.999	63.68	2.970%	48.276%
19.0	103.950	3.806	67.486	2.827%	51.161%
20.0	93.691	3.617	71.103	2.687%	53.903%
21.0	84.094	3.414	74.517	2.536%	56.491%
22.0	76.184	3.221	77.738	2.393%	58.933%
23.0	68.899	3.044	80.782	2.261%	61.241%
24.0	61.889	2.860	83.642	2.124%	63.409%
25.0	56.095	2.683	86.325	1.993%	65.443%
26.0	50.977	2.527	88.852	1.877%	67.359%
27.0	46.188	2.377	91.229	1.766%	69.161%
28.0	41.730	2.226	93.455	1.653%	70.848%
29.0	37.863	2.082	95.537	1.547%	72.427%
30.0	34.390	1.951	97.488	1.449%	73.906%
31.0	31.184	1.825	99.313	1.356%	75.289%
32.0	28.266	1.703	101.016	1.265%	76.580%
33.0	25.713	1.590	102.606	1.181%	77.786%
34.0	23.520	1.490	104.096	1.107%	78.915%
35.0	21.502	1.398	105.495	1.039%	79.975%
36.0	19.554	1.307	106.802	.971%	80.966%
37.0	17.965	1.224	108.025	.909%	81.894%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	16.552	1.152	109.178	.856%	82.767%
39.0	15.173	1.083	110.26	.804%	83.588%
40.0	14.041	1.019	111.279	.757%	84.361%
41.0	13.078	0.966	112.245	.717%	85.093%
42.0	12.136	0.916	113.161	.680%	85.787%
43.0	11.278	0.867	114.028	.644%	86.445%
44.0	10.540	0.823	114.852	.612%	87.069%
45.0	9.858	0.784	115.636	.582%	87.663%
46.0	9.176	0.744	116.38	.553%	88.228%
47.0	8.606	0.707	117.087	.525%	88.764%
48.0	8.128	0.676	117.764	.503%	89.277%
49.0	7.650	0.648	118.412	.481%	89.768%
50.0	7.179	0.618	119.03	.459%	90.237%
51.0	6.764	0.590	119.62	.438%	90.684%
52.0	6.377	0.564	120.184	.419%	91.111%
53.0	6.019	0.539	120.723	.401%	91.520%
54.0	5.688	0.516	121.239	.383%	91.911%
55.0	5.386	0.494	121.733	.367%	92.286%
56.0	5.105	0.474	122.208	.352%	92.645%
57.0	4.852	0.455	122.663	.338%	92.990%
58.0	4.613	0.438	123.1	.325%	93.322%
59.0	4.395	0.421	123.521	.313%	93.641%
60.0	4.205	0.406	123.928	.302%	93.949%
61.0	4.008	0.392	124.32	.291%	94.247%
62.0	3.832	0.378	124.697	.281%	94.533%
63.0	3.684	0.366	125.063	.272%	94.810%
64.0	3.523	0.354	125.417	.263%	95.078%
65.0	3.382	0.342	125.758	.254%	95.337%
66.0	3.248	0.331	126.089	.246%	95.588%
67.0	3.143	0.321	126.411	.239%	95.832%
68.0	3.059	0.314	126.725	.233%	96.070%
69.0	2.946	0.306	127.031	.228%	96.302%
70.0	2.876	0.299	127.33	.222%	96.529%
71.0	2.791	0.293	127.623	.218%	96.751%
72.0	2.728	0.287	127.91	.213%	96.968%
73.0	2.672	0.282	128.192	.210%	97.182%
74.0	2.623	0.278	128.471	.207%	97.393%
75.0	2.588	0.275	128.746	.204%	97.602%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.538	0.272	129.018	.202%	97.808%
77.0	2.510	0.269	129.287	.200%	98.012%
78.0	2.468	0.266	129.554	.198%	98.214%
79.0	2.454	0.264	129.818	.196%	98.415%
80.0	2.433	0.263	130.082	.196%	98.615%
81.0	2.405	0.262	130.343	.194%	98.813%
82.0	2.370	0.259	130.602	.192%	99.009%
83.0	2.320	0.255	130.857	.189%	99.203%
84.0	2.194	0.246	131.103	.183%	99.389%
85.0	2.046	0.231	131.334	.172%	99.564%
86.0	1.652	0.202	131.537	.150%	99.718%
87.0	1.062	0.149	131.685	.110%	99.830%
88.0	0.703	0.097	131.782	.072%	99.904%
89.0	0.563	0.069	131.851	.052%	99.956%
90.0	0.492	0.058	131.909	.043%	100.000%

Zonal flux distribution table

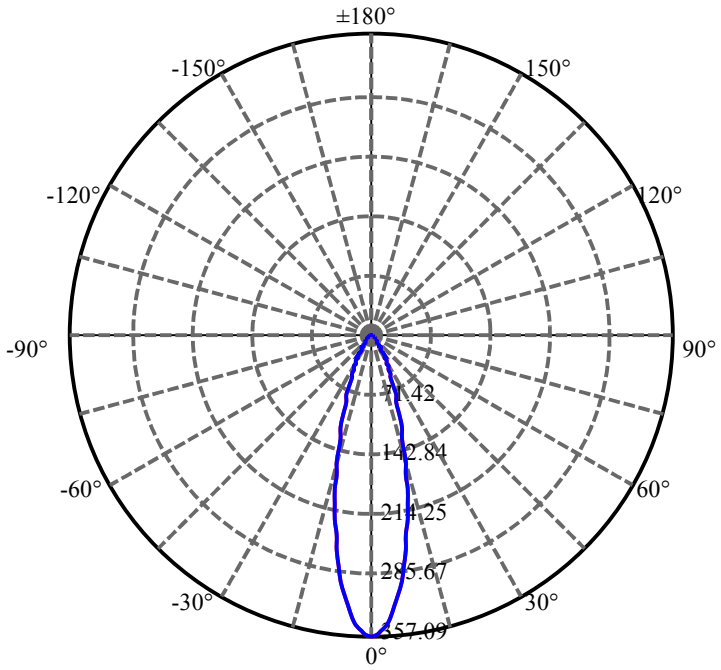
ZONAL LUMEN SUMMARY

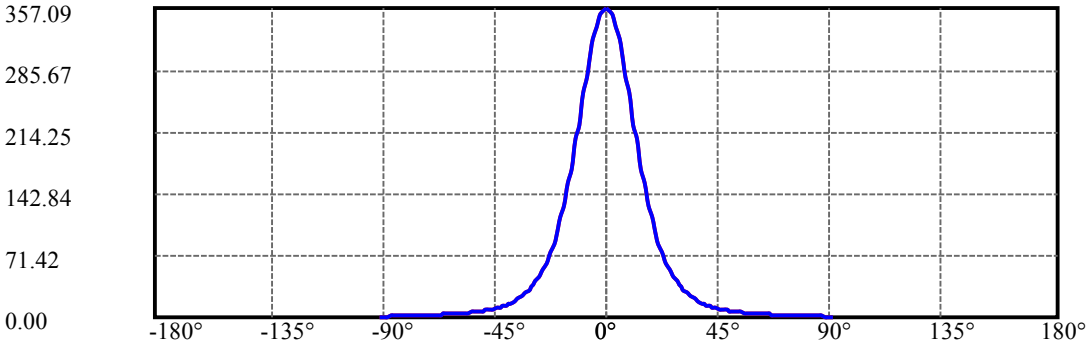
Zone	Lumens	%Lamp	%Fixt
0-30	97.49	72.42%	73.91%
0-40	111.28	82.66%	84.36%
0-60	123.93	92.06%	93.95%
0-90	131.85	97.94%	99.96%
0-120	131.85	97.94%	99.96%
0-180	131.91	97.99%	100.00%
60-90	8.33	6.19%	6.31%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-35.02	105.53	78.39%	80.00%

ZONAL LUMEN SUMMARY

0-10	28.10
10-20	43.00
20-30	26.38
30-40	13.79
40-50	7.75
50-60	4.90
60-70	3.40
70-80	2.75
80-90	1.77
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:

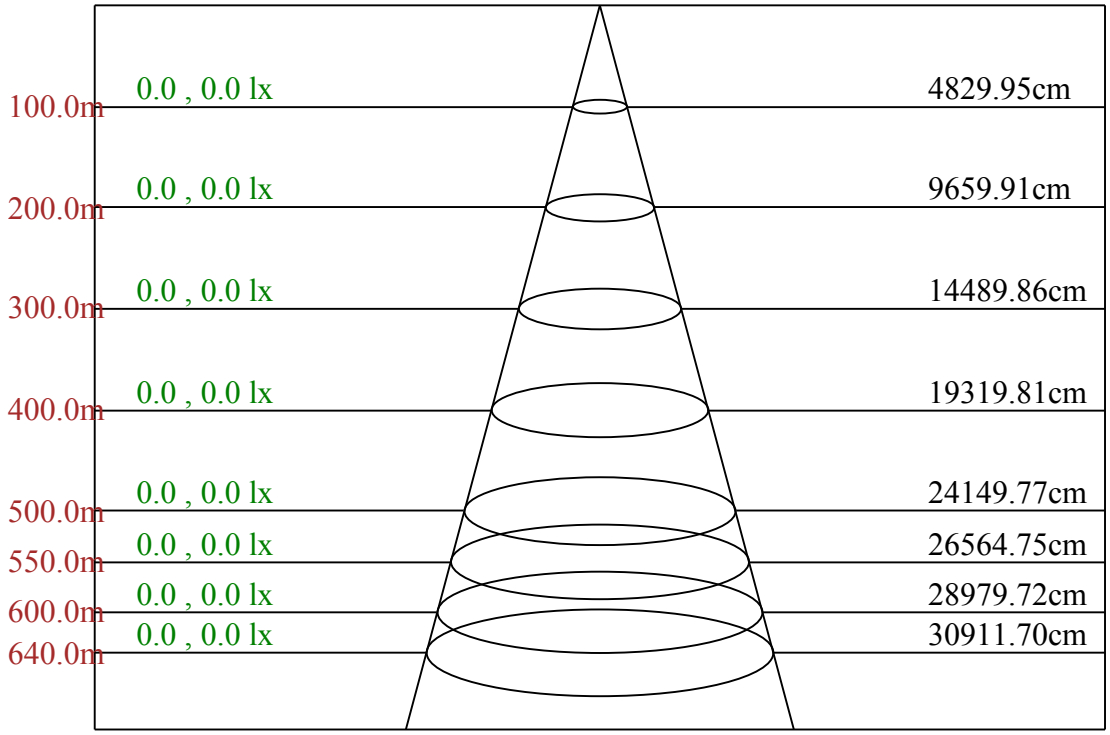
C90/C270:

Field angle(10%Imax):C0/180Left:29.6 Right:29.6
:C90/270Left:29.6 Right:29.6

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

Equipment: GMS1980	Date: 2020/4/6	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

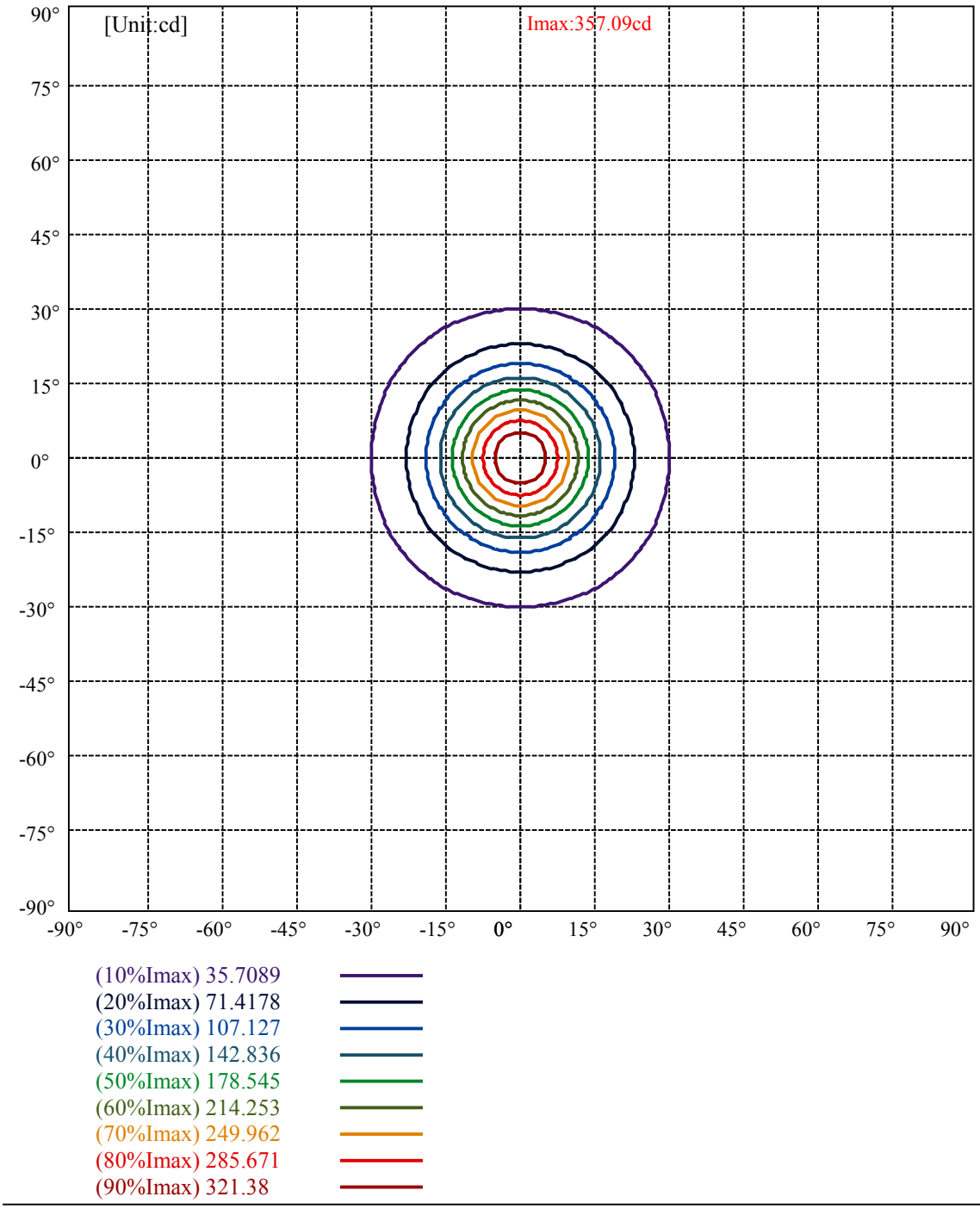
Lux distance Curve



Max , Ave

Beam angle of C0 plane 27.15

ISO-Intensity(V-H)

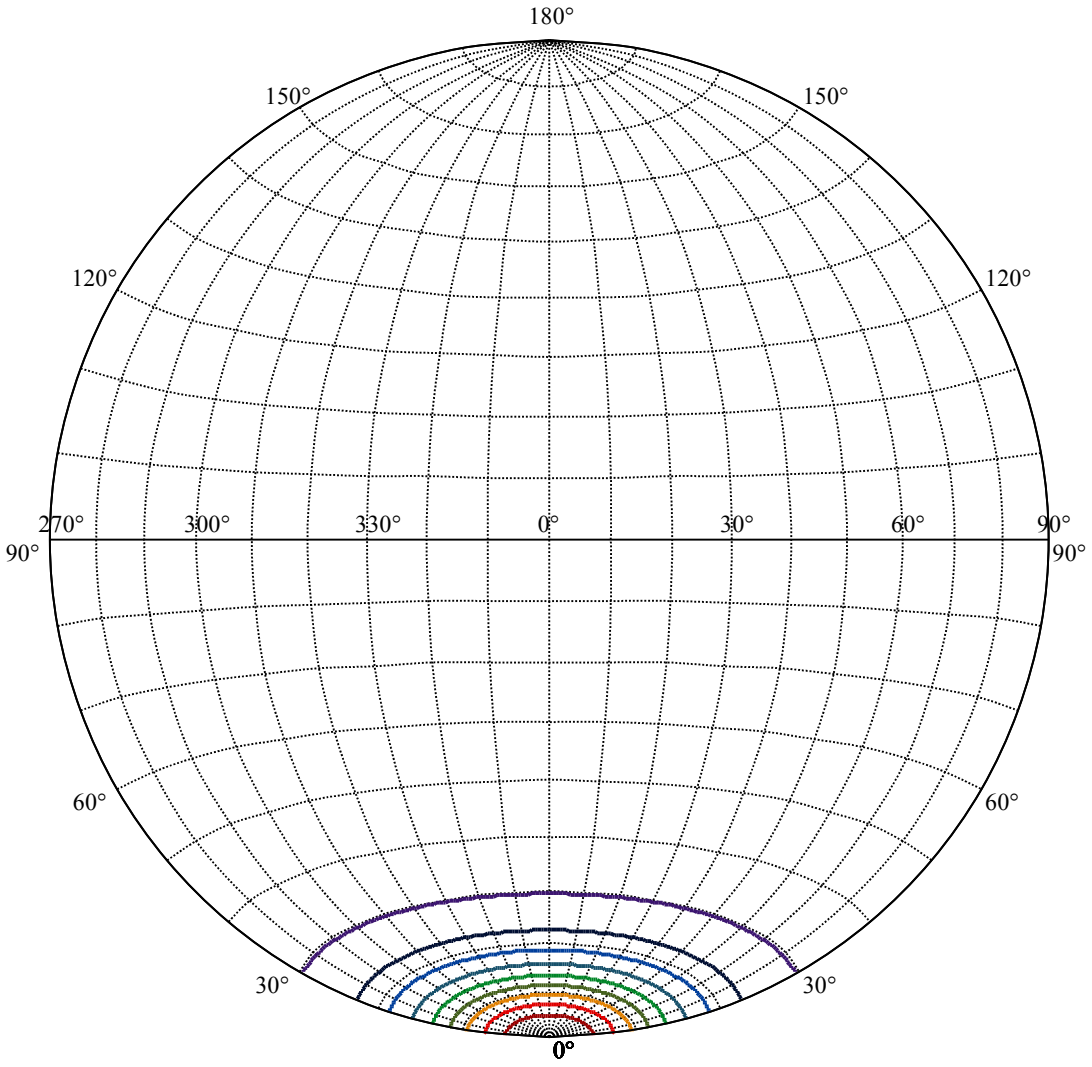


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:357.09

(10%Imax) 35.7089
(20%Imax) 71.4178
(30%Imax) 107.127
(40%Imax) 142.836
(50%Imax) 178.545
(60%Imax) 214.253
(70%Imax) 249.962
(80%Imax) 285.671
(90%Imax) 321.38

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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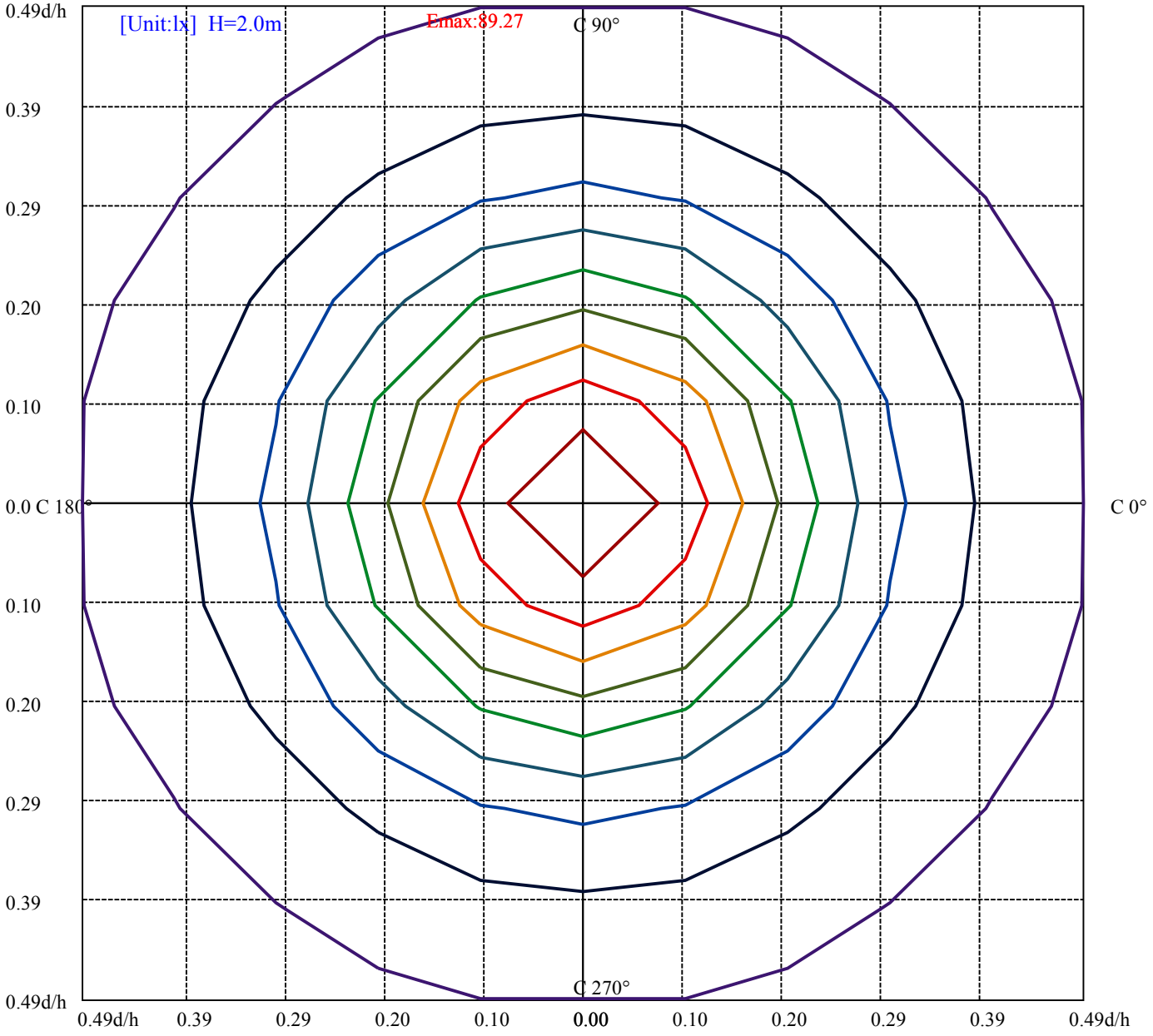
ISO illuminance diagram



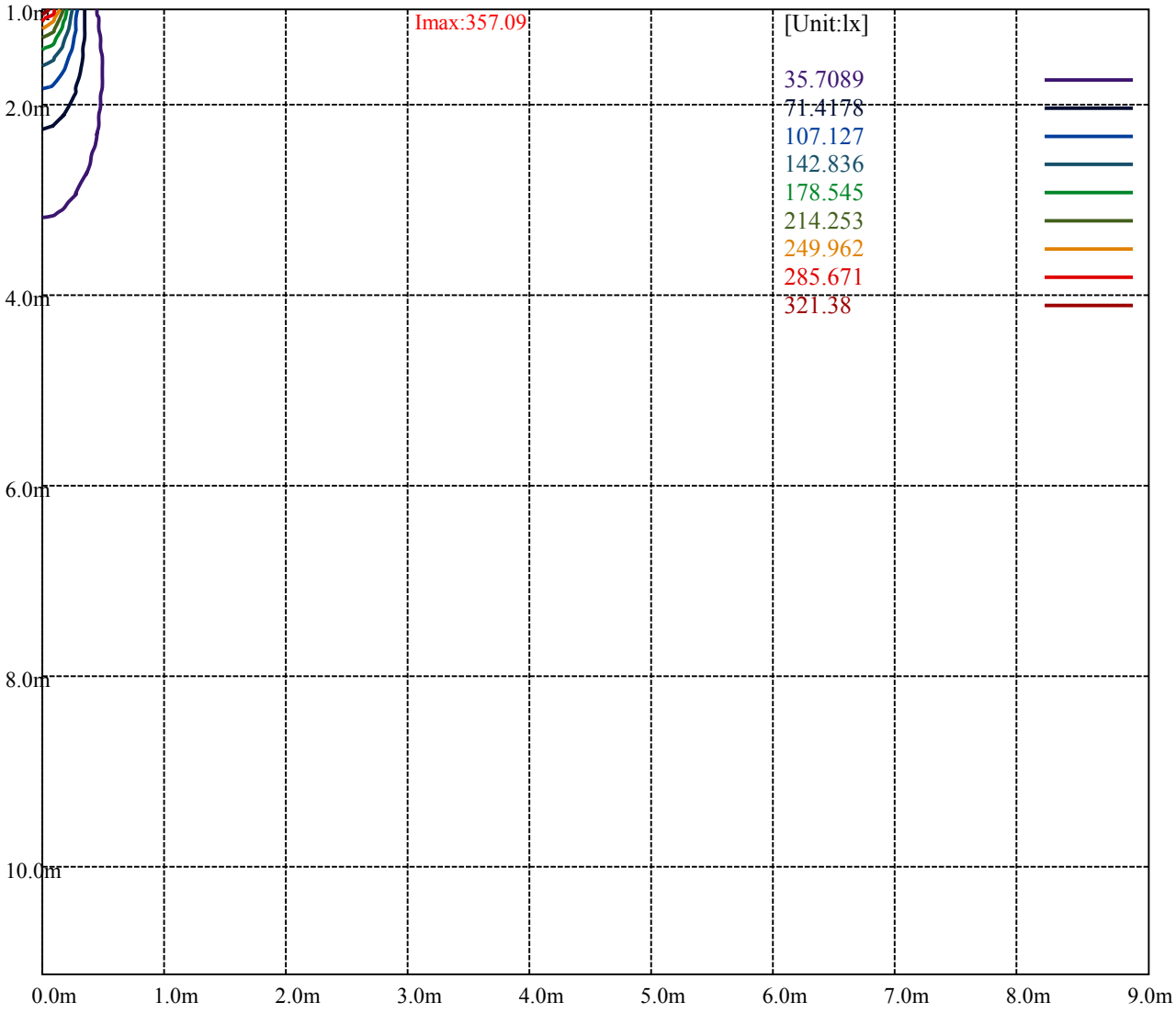
(10%Emax) 8.927225
(20%Emax) 17.85445
(30%Emax) 26.78175
(40%Emax) 35.709
(50%Emax) 44.636
(60%Emax) 53.56325
(70%Emax) 62.4905
(80%Emax) 71.41775
(90%Emax) 80.345

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

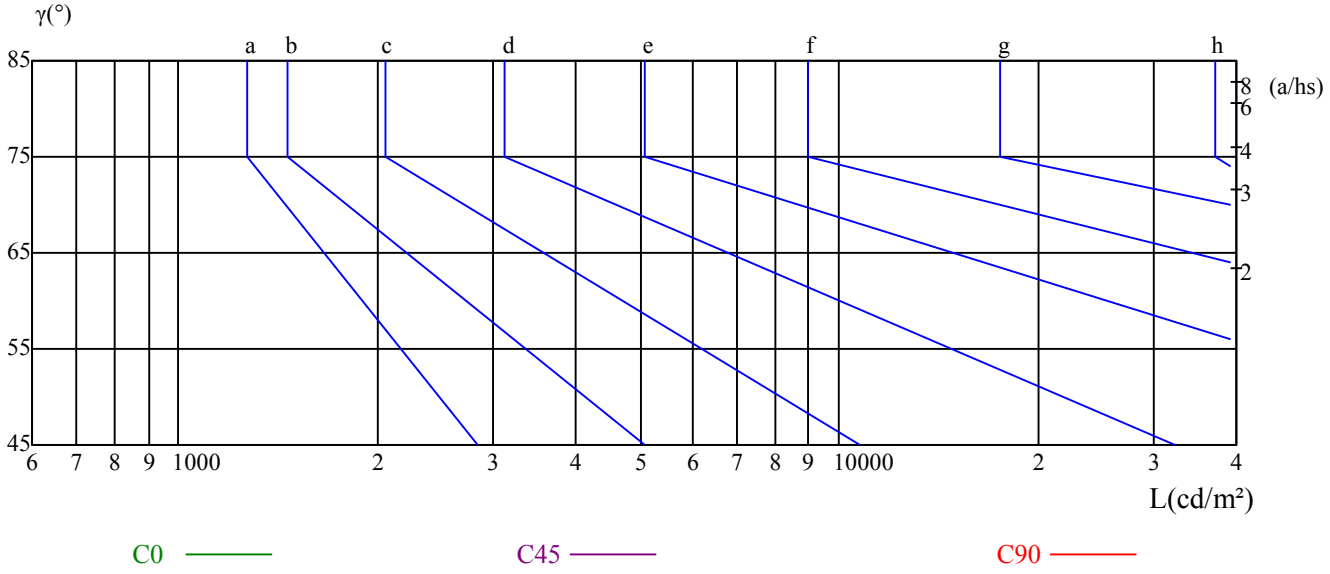
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

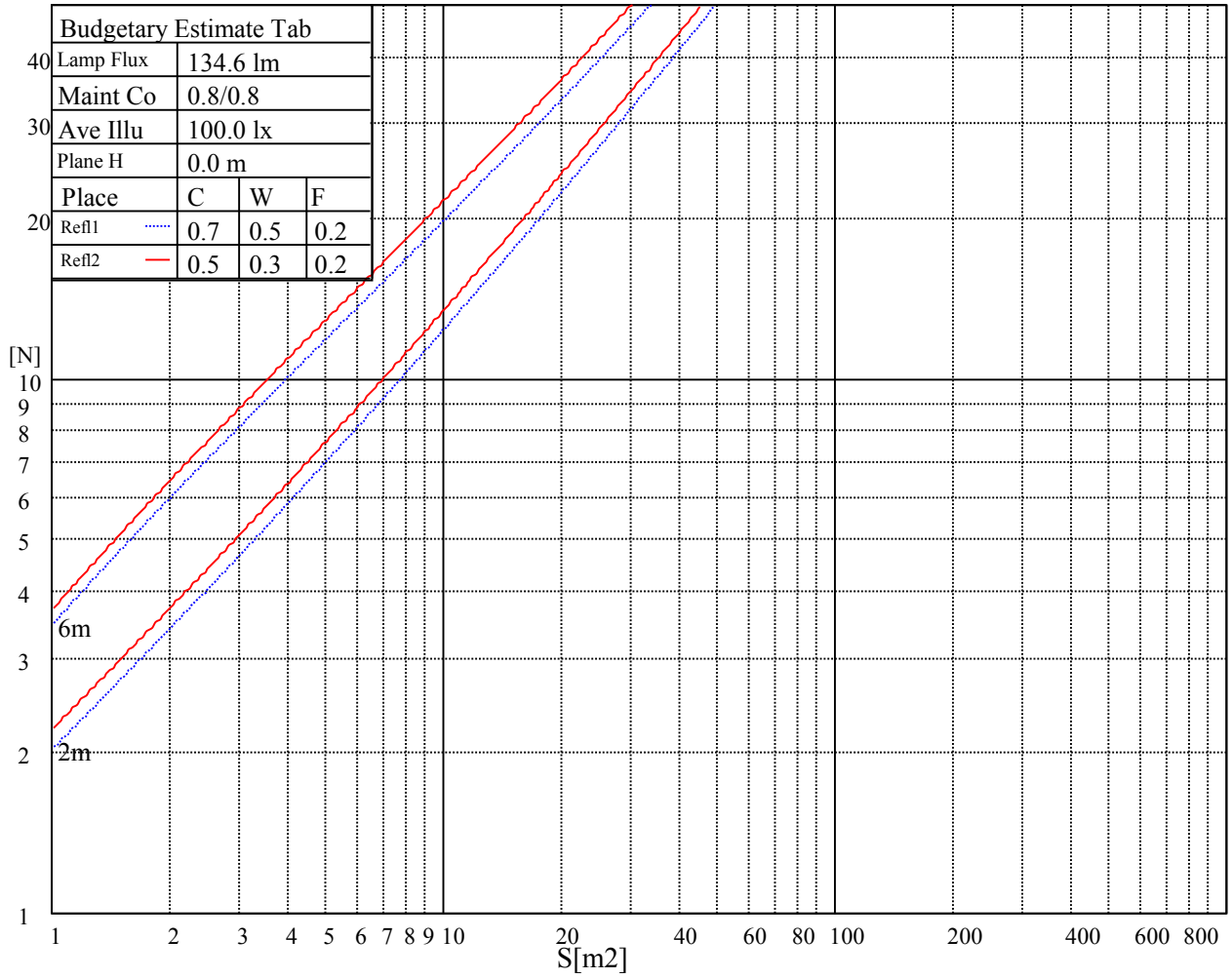
Glare Table

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

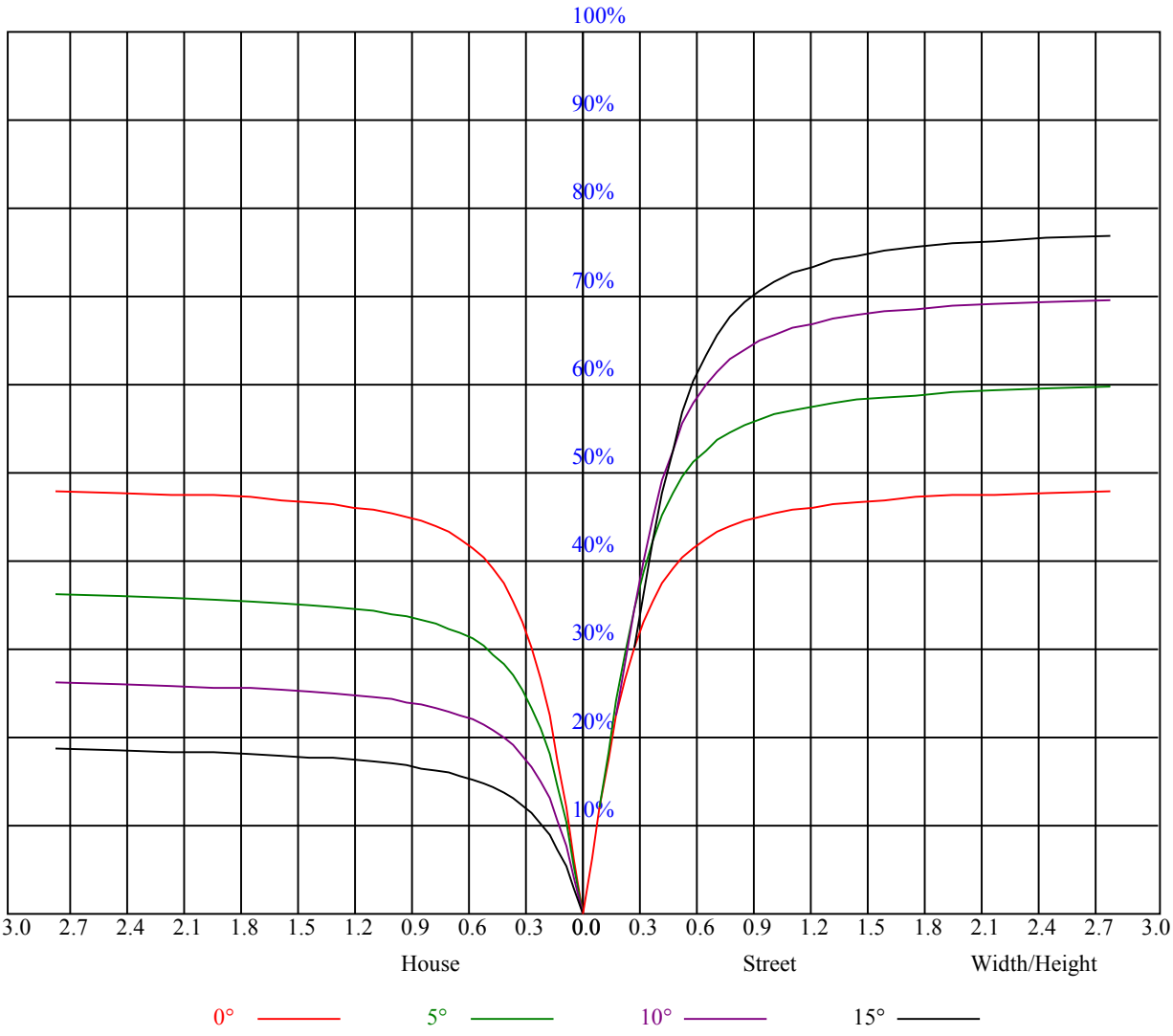


Equipment: GMS1980	Date: 2020/4/6	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

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	1.17	1.17	1.17	1.14	1.14	1.14	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.98
1	1.08	1.05	1.02	1.05	1.03	1.01	1.01	0.99	0.98	0.98	0.96	0.95	0.94	0.93	0.92	0.90
2	1.00	0.96	0.92	0.98	0.94	0.91	0.95	0.92	0.89	0.92	0.90	0.87	0.89	0.87	0.85	0.84
3	0.93	0.88	0.84	0.92	0.87	0.84	0.89	0.86	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.78
4	0.88	0.82	0.78	0.87	0.82	0.78	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.74
5	0.83	0.77	0.73	0.82	0.77	0.73	0.80	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.70
6	0.79	0.73	0.69	0.78	0.73	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.66
7	0.75	0.69	0.65	0.74	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.63
8	0.71	0.66	0.62	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.60
9	0.68	0.63	0.59	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.57
10	0.66	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.55

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2020/4/6	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	355.78	353.81	348.41	341.16	330.92	319.39	304.48	287.78	272.36
45.0	358.20	354.38	347.40	340.48	327.38	312.98	299.81	279.28	262.97
90.0	356.74	352.86	345.88	336.09	324.79	309.99	293.29	277.65	259.14
135.0	357.64	356.91	352.01	345.60	338.57	324.34	311.51	296.72	279.06
180.0	355.78	354.88	351.11	343.74	335.48	325.24	309.43	295.14	279.96
225.0	358.20	358.48	355.78	349.31	342.79	333.06	319.56	303.92	288.68
270.0	356.74	357.98	355.84	351.23	344.76	336.15	322.88	310.16	295.76
315.0	357.64	355.89	349.71	343.01	334.13	320.46	308.81	292.67	273.43
360.0	355.78	353.81	348.41	341.16	330.92	319.39	304.48	287.78	272.36

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	254.25	235.91	219.60	203.57	183.77	168.53	154.35	139.44	125.61
45.0	246.66	225.11	208.35	192.09	172.58	157.44	143.61	128.19	116.94
90.0	242.21	222.69	203.51	187.03	169.99	153.56	140.12	127.86	113.34
135.0	260.61	245.87	224.21	206.66	188.61	171.45	156.77	141.08	126.73
180.0	259.31	242.38	225.84	205.20	189.00	173.76	155.42	143.55	129.15
225.0	270.79	252.00	235.07	215.94	199.35	181.29	164.53	150.36	137.08
270.0	276.53	260.04	243.62	225.00	206.33	189.96	172.46	158.12	142.76
315.0	259.48	241.37	220.73	206.55	190.46	169.76	157.44	144.17	130.05
360.0	254.25	235.91	219.60	203.57	183.77	168.53	154.35	139.44	125.61

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	114.24	102.71	92.19	83.81	75.38	68.85	61.76	55.46	50.46
45.0	105.64	93.94	84.60	76.95	68.91	61.59	55.91	50.29	45.84
90.0	102.15	92.31	83.36	75.15	67.89	60.92	55.24	50.29	45.11
135.0	114.47	103.33	92.42	83.87	75.88	67.39	61.26	55.52	49.89
180.0	114.41	105.08	95.46	83.48	76.67	69.58	61.43	56.76	51.81
225.0	121.84	110.53	100.46	89.27	81.11	73.58	66.09	59.63	54.45
270.0	128.64	117.00	105.41	94.67	85.95	79.31	69.81	63.56	58.56
315.0	117.11	106.71	95.63	85.56	77.68	69.98	63.62	57.26	51.69
360.0	114.24	102.71	92.19	83.81	75.38	68.85	61.76	55.46	50.46

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	45.96	40.95	37.41	34.26	30.54	27.96	25.48	23.18	21.21
45.0	41.51	37.29	33.98	30.88	27.56	25.14	23.06	20.93	19.24
90.0	41.12	37.18	33.36	30.38	27.56	24.47	22.33	20.59	18.51
135.0	44.94	40.95	36.79	33.36	30.15	27.17	24.81	22.61	20.53
180.0	46.74	41.96	38.14	34.37	31.44	28.35	25.88	23.79	21.66
225.0	49.50	44.72	40.28	36.51	33.36	30.21	27.28	24.98	22.95
270.0	52.37	47.25	43.76	39.38	35.78	33.08	29.59	27.06	24.86
315.0	47.36	43.54	39.21	36.00	33.08	29.76	27.28	25.03	23.06
360.0	45.96	40.95	37.41	34.26	30.54	27.96	25.48	23.18	21.21

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	19.52	17.66	16.20	14.85	13.67	12.83	11.87	11.08	10.46
45.0	17.66	16.14	14.96	13.67	12.71	11.93	11.08	10.35	9.73
90.0	17.16	15.98	14.68	13.50	12.49	11.48	10.80	10.13	9.45
135.0	18.90	17.55	16.09	15.02	13.89	12.83	11.87	11.08	10.24
180.0	19.74	18.23	16.82	15.30	14.23	13.33	12.54	11.53	10.80
225.0	20.64	18.84	17.44	16.03	14.79	13.78	12.88	11.76	11.03
270.0	22.28	20.48	18.79	16.99	15.75	14.63	13.28	12.43	11.53
315.0	20.53	18.84	17.44	16.03	14.79	13.84	12.77	11.87	11.08
360.0	19.52	17.66	16.20	14.85	13.67	12.83	11.87	11.08	10.46

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	9.84	9.11	8.61	8.10	7.65	7.14	6.75	6.36	6.02
45.0	9.28	8.66	8.16	7.76	7.31	6.92	6.58	6.13	5.79
90.0	8.89	8.27	7.76	7.43	6.98	6.53	6.24	5.91	5.57
135.0	9.56	8.94	8.38	7.99	7.54	7.03	6.69	6.30	5.91
180.0	10.01	9.28	8.78	8.27	7.76	7.26	6.81	6.47	6.13
225.0	10.35	9.62	9.00	8.49	7.93	7.48	7.03	6.64	6.24
270.0	10.63	9.90	9.28	8.66	8.16	7.65	7.09	6.64	6.30
315.0	10.29	9.62	8.89	8.33	7.88	7.43	6.92	6.58	6.19
360.0	9.84	9.11	8.61	8.10	7.65	7.14	6.75	6.36	6.02

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.74	5.40	5.12	4.89	4.67	4.44	4.22	4.05	3.88
45.0	5.57	5.23	5.01	4.73	4.56	4.33	4.22	3.99	3.83
90.0	5.23	5.01	4.73	4.50	4.28	4.05	3.94	3.77	3.60
135.0	5.63	5.34	4.95	4.73	4.50	4.28	4.11	3.94	3.71
180.0	5.74	5.46	5.18	4.89	4.67	4.44	4.22	4.05	3.88
225.0	5.91	5.57	5.29	5.06	4.73	4.56	4.33	4.05	3.88
270.0	5.91	5.57	5.34	5.01	4.78	4.56	4.33	4.11	3.94
315.0	5.79	5.51	5.23	5.01	4.73	4.50	4.28	4.11	3.94
360.0	5.74	5.40	5.12	4.89	4.67	4.44	4.22	4.05	3.88

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.77	3.54	3.38	3.26	3.15	3.09	2.98	2.93	2.81
45.0	3.71	3.54	3.43	3.32	3.21	3.09	3.04	2.98	2.87
90.0	3.43	3.32	3.21	3.04	2.98	2.87	2.81	2.76	2.70
135.0	3.60	3.43	3.32	3.21	3.04	2.98	2.87	2.81	2.76
180.0	3.71	3.54	3.38	3.21	3.09	3.04	2.93	2.81	2.76
225.0	3.77	3.60	3.43	3.32	3.21	3.09	2.98	2.87	2.76
270.0	3.71	3.54	3.43	3.26	3.21	3.09	2.93	2.87	2.76
315.0	3.77	3.66	3.49	3.38	3.26	3.21	3.04	2.98	2.93
360.0	3.77	3.54	3.38	3.26	3.15	3.09	2.98	2.93	2.81

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	2.76	2.70	2.64	2.64	2.64	2.59	2.59	2.59	2.53
45.0	2.81	2.81	2.76	2.76	2.70	2.70	2.70	2.64	2.70
90.0	2.59	2.53	2.53	2.48	2.42	2.36	2.31	2.31	2.25
135.0	2.70	2.64	2.59	2.53	2.53	2.48	2.42	2.42	2.42
180.0	2.64	2.59	2.53	2.53	2.42	2.42	2.36	2.36	2.31
225.0	2.76	2.70	2.64	2.59	2.48	2.48	2.42	2.42	2.42
270.0	2.70	2.59	2.53	2.48	2.48	2.42	2.36	2.31	2.25
315.0	2.87	2.81	2.76	2.70	2.64	2.64	2.59	2.59	2.59
360.0	2.76	2.70	2.64	2.64	2.64	2.59	2.59	2.59	2.53

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.53	2.48	2.42	2.31	2.25	1.52	0.84	0.62	0.51
45.0	2.64	2.70	2.59	2.42	2.19	1.35	0.79	0.56	0.51
90.0	2.19	2.14	2.08	1.80	1.63	1.18	0.79	0.62	0.51
135.0	2.36	2.31	2.31	2.19	2.03	1.80	1.18	0.73	0.62
180.0	2.25	2.25	2.19	2.08	1.91	1.86	1.13	0.73	0.56
225.0	2.42	2.36	2.31	2.25	2.14	1.91	1.35	0.84	0.62
270.0	2.25	2.19	2.14	2.14	2.03	1.86	1.46	0.84	0.62
315.0	2.59	2.53	2.53	2.36	2.19	1.74	0.96	0.68	0.56
360.0	2.53	2.48	2.42	2.31	2.25	1.52	0.84	0.62	0.51

Intensity data(cd)

C/γ(°)	90.0
0.0	0.45
45.0	0.45
90.0	0.45
135.0	0.45
180.0	0.51
225.0	0.56
270.0	0.56
315.0	0.51
360.0	0.45