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Nata

LumCAT: 3-2033-M	
Luminaire: 92.70.135.00	
Report No: NATA0100	Voltage(V): 34.0000
Test No: GC2018070406	Current(A): 0.5000
LampCAT: NICHIA NFCWD096B-V3	Power (W): 17.0000
Lamp flux(lm): 2202.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1976.00
Efficiency(%): 89.74%
Lumens(lm)/Power(W): 116.24
Central intensity(cd): 17068.860
Maximum intensity(cd): 17068.860
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=14.0
 [C90/270]Total=14.0
Field angle(10%Imax): [C0/180]Total=27.6
 [C90/270]Total=27.6
Maximum s/h(1/2): C0_180=0.24 C90_270=0.24
Maximum s/h(1/4): C0_180=0.24 C90_270=0.24
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.46%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.907%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/7/4
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	17068.859	16.334	16.334	.742%	.827%
2.0	16099.868	123.227	139.561	5.596%	7.063%
4.0	13542.718	207.184	346.745	9.409%	17.548%
6.0	10191.545	233.636	580.381	10.610%	29.372%
8.0	6818.900	208.130	788.511	9.452%	39.904%
10.0	4110.841	156.555	945.066	7.110%	47.827%
12.0	2501.763	114.075	1059.141	5.181%	53.600%
14.0	1627.963	86.374	1145.515	3.923%	57.972%
16.0	1231.777	74.462	1219.977	3.382%	61.740%
18.0	1032.308	69.961	1289.938	3.177%	65.280%
20.0	907.770	68.091	1358.03	3.092%	68.726%
22.0	826.286	67.885	1425.914	3.083%	72.162%
24.0	769.688	68.658	1494.573	3.118%	75.636%
26.0	732.746	70.447	1565.019	3.199%	79.202%
28.0	701.308	72.208	1637.227	3.279%	82.856%
30.0	677.854	74.331	1711.558	3.376%	86.617%
32.0	641.462	74.550	1786.108	3.386%	90.390%
34.0	529.698	64.961	1851.069	2.950%	93.678%
36.0	353.132	45.522	1896.591	2.067%	95.982%
38.0	206.627	27.899	1924.491	1.267%	97.393%
40.0	54.781	7.723	1932.213	.351%	97.784%
42.0	18.389	2.699	1934.912	.123%	97.921%
44.0	13.379	2.038	1936.95	.093%	98.024%
46.0	10.791	1.702	1938.652	.077%	98.110%
48.0	10.240	1.669	1940.321	.076%	98.195%
50.0	9.910	1.665	1941.986	.076%	98.279%
52.0	9.635	1.665	1943.652	.076%	98.363%
54.0	9.360	1.661	1945.312	.075%	98.447%
56.0	9.194	1.672	1946.984	.076%	98.532%
58.0	8.974	1.669	1948.653	.076%	98.616%
60.0	8.864	1.684	1950.337	.076%	98.701%
62.0	8.754	1.695	1952.032	.077%	98.787%
64.0	8.644	1.704	1953.736	.077%	98.873%
66.0	8.589	1.721	1955.456	.078%	98.961%
68.0	8.534	1.735	1957.192	.079%	99.048%
70.0	8.479	1.747	1958.939	.079%	99.137%
72.0	8.424	1.757	1960.696	.080%	99.226%
74.0	8.424	1.776	1962.472	.081%	99.316%

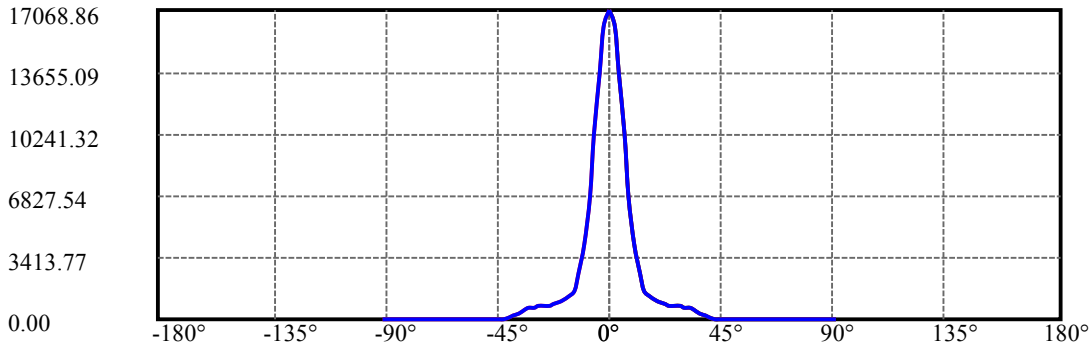
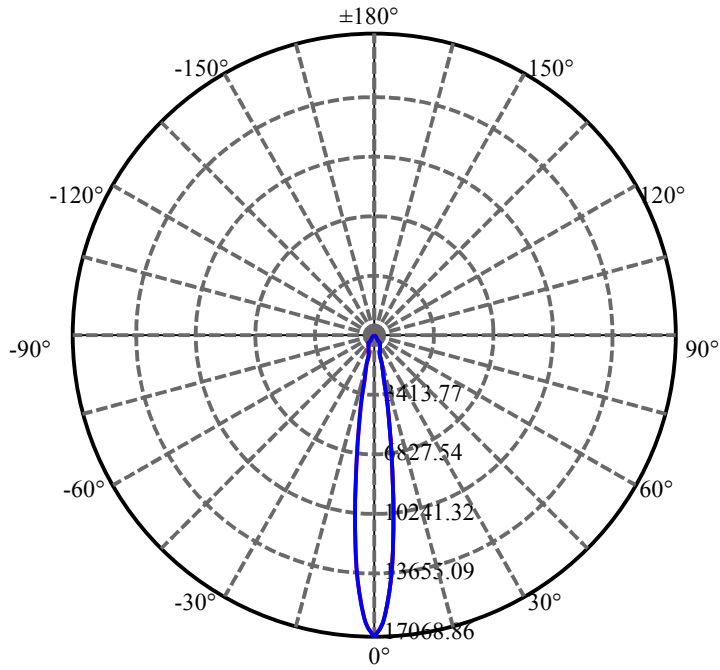
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.369	1.781	1964.253	.081%	99.406%
78.0	8.369	1.795	1966.048	.082%	99.497%
80.0	8.314	1.796	1967.843	.082%	99.587%
82.0	8.314	1.806	1969.649	.082%	99.679%
84.0	8.314	1.813	1971.462	.082%	99.771%
86.0	8.314	1.819	1973.281	.083%	99.863%
88.0	8.258	1.810	1975.091	.082%	99.954%
90.0	8.258	0.906	1975.997	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1711.56	77.73%	86.62%
0-40	1932.21	87.75%	97.78%
0-60	1950.34	88.57%	98.70%
0-90	1975.09	89.70%	99.95%
0-120	1975.09	89.70%	99.95%
0-180	1976.00	89.74%	100.00%
60-90	26.44	1.20%	1.34%
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%
0-26.44	1580.80	71.79%	80.00%

ZONAL LUMEN SUMMARY

0-10	945.07
10-20	412.96
20-30	353.53
30-40	220.65
40-50	9.77
50-60	8.35
60-70	8.60
70-80	8.90
80-90	7.25
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



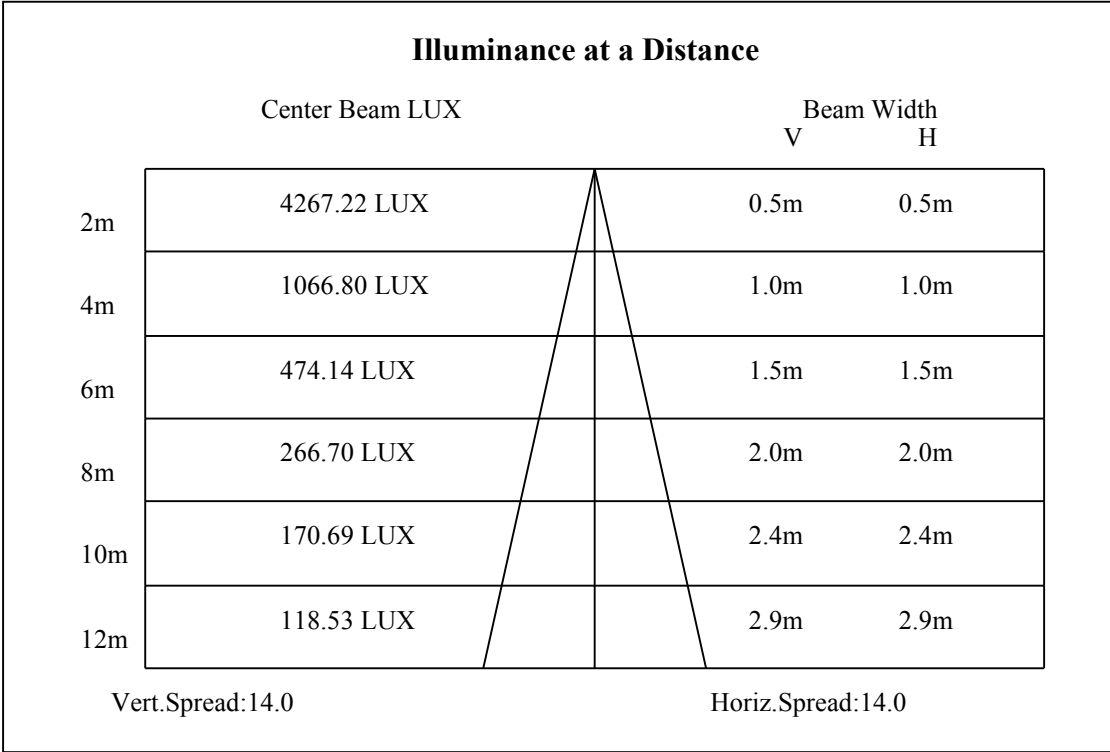
C0(Max): —————

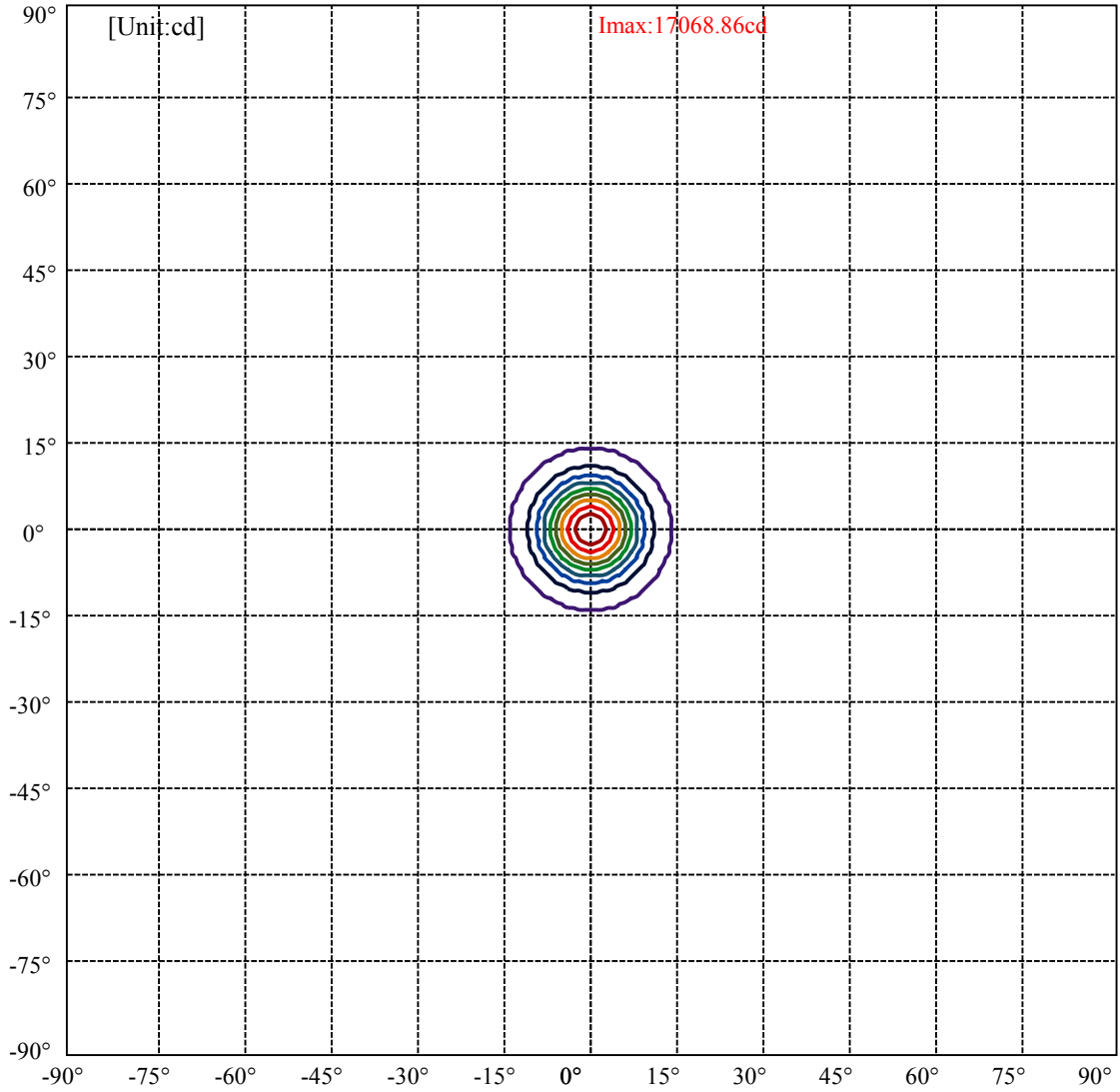
C0/C180: —————

C90/C270: —————

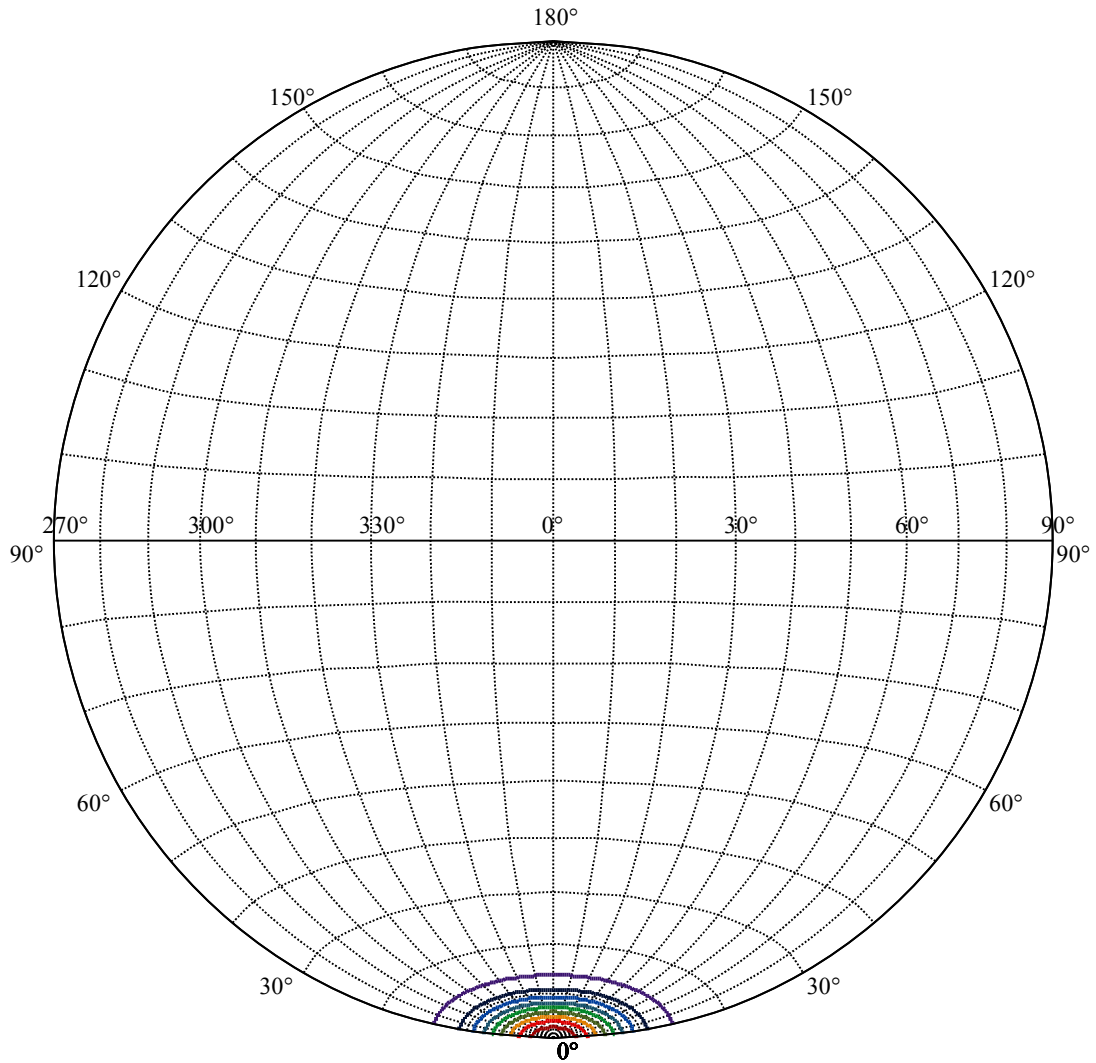
Field angle(10%Imax):C0/180Left:13.8 Right:13.8
:C90/270Left:13.8 Right:13.8

Beam Angle(50%Imax):C0/180Left:7.0 Right:7.0
:C90/270Left:7.0 Right:7.0





(10%I _{max}) 1706.89	—
(20%I _{max}) 3413.77	—
(30%I _{max}) 5120.66	—
(40%I _{max}) 6827.54	—
(50%I _{max}) 8534.43	—
(60%I _{max}) 10241.3	—
(70%I _{max}) 11948.2	—
(80%I _{max}) 13655.1	—
(90%I _{max}) 15362	—



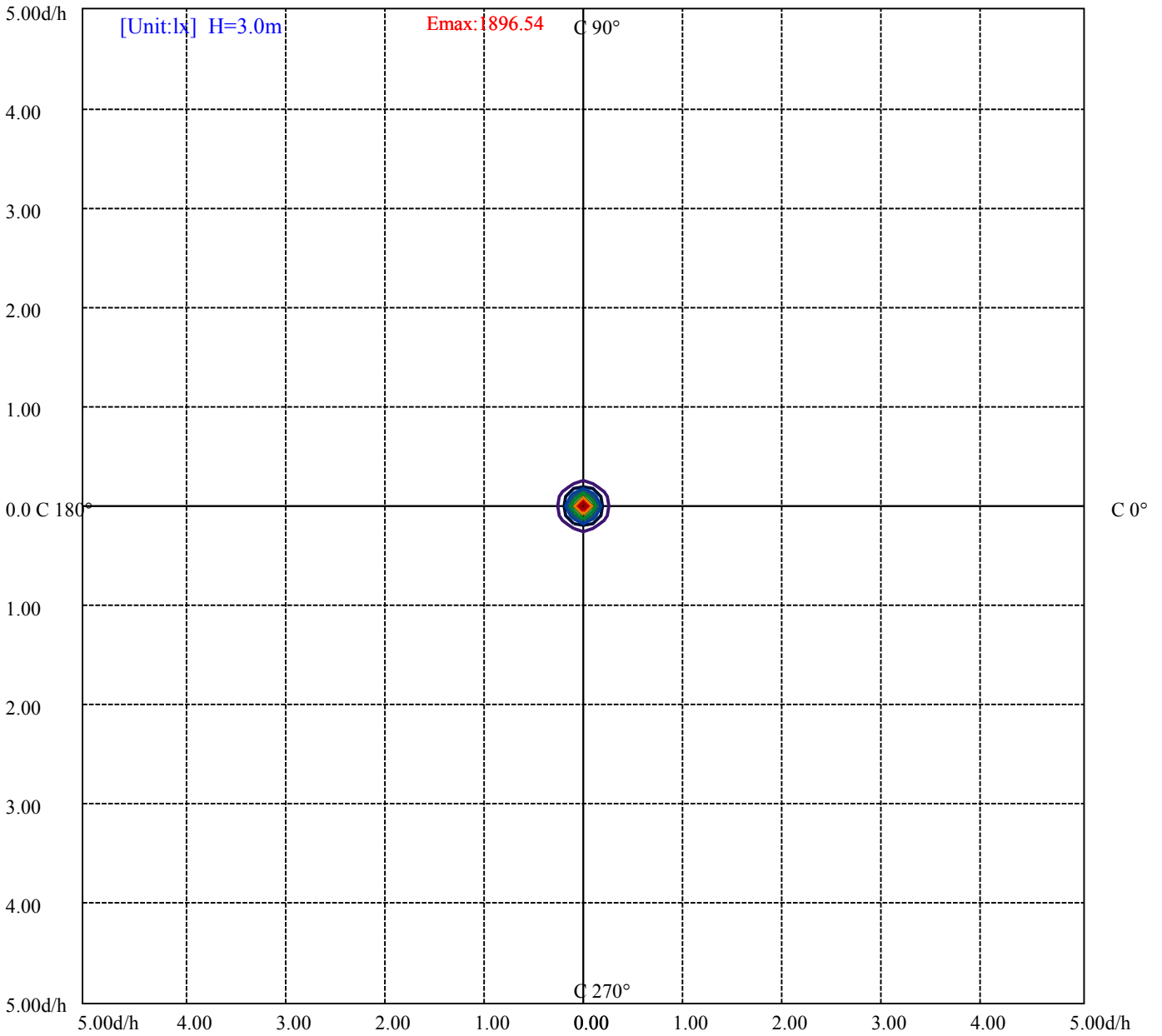
House

[Unit:cd]

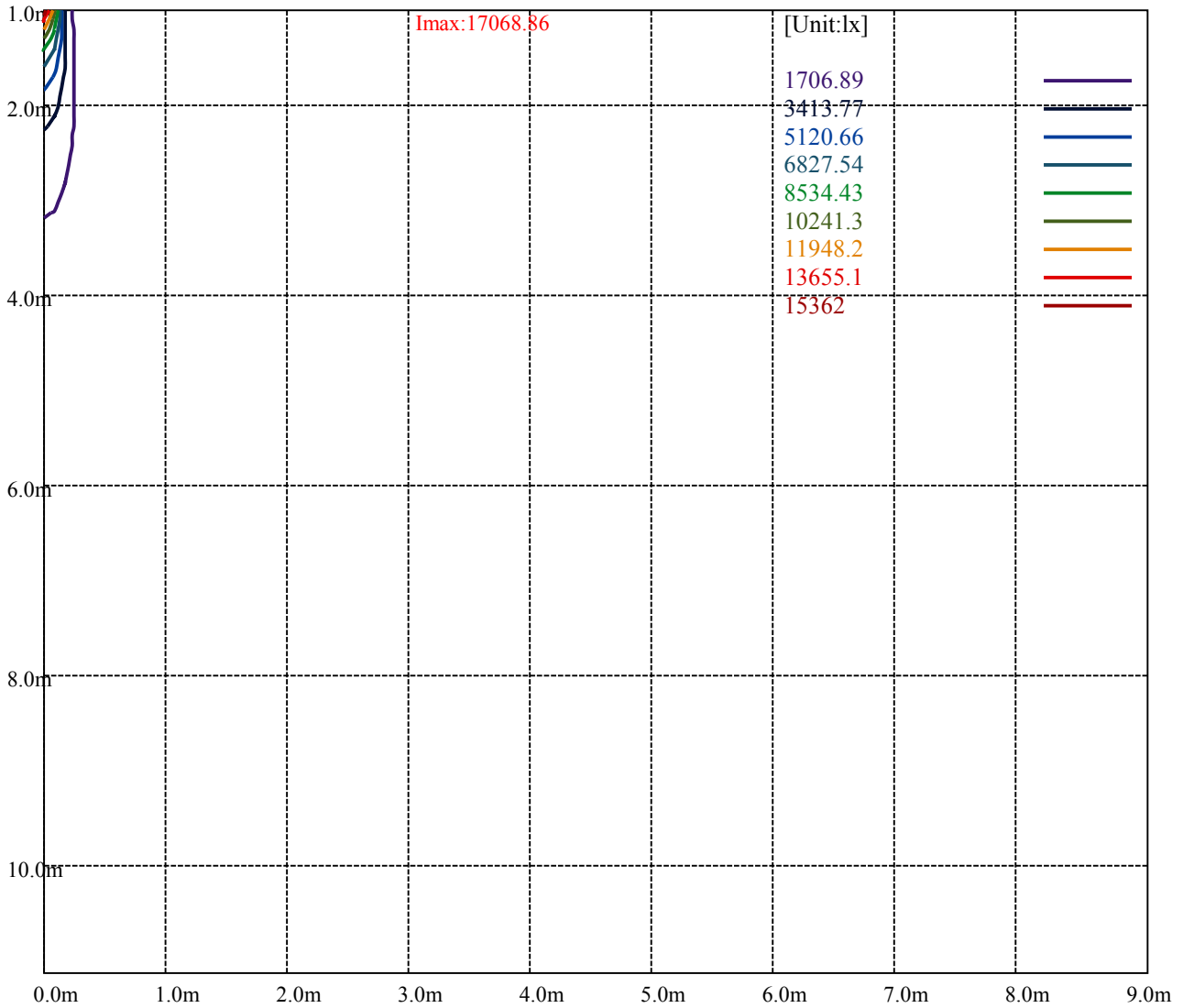
Road

Imax:17068.86

(10%Imax)	1706.89	—
(20%Imax)	3413.77	—
(30%Imax)	5120.66	—
(40%Imax)	6827.54	—
(50%Imax)	8534.43	—
(60%Imax)	10241.3	—
(70%Imax)	11948.2	—
(80%Imax)	13655.1	—
(90%Imax)	15362	—



- (10%Emax) 189.6533
- (20%Emax) 379.3067
- (30%Emax) 568.96
- (40%Emax) 758.6122
- (50%Emax) 948.2655
- (60%Emax) 1137.922
- (70%Emax) 1327.578
- (80%Emax) 1517.222
- (90%Emax) 1706.878



Luminance Table

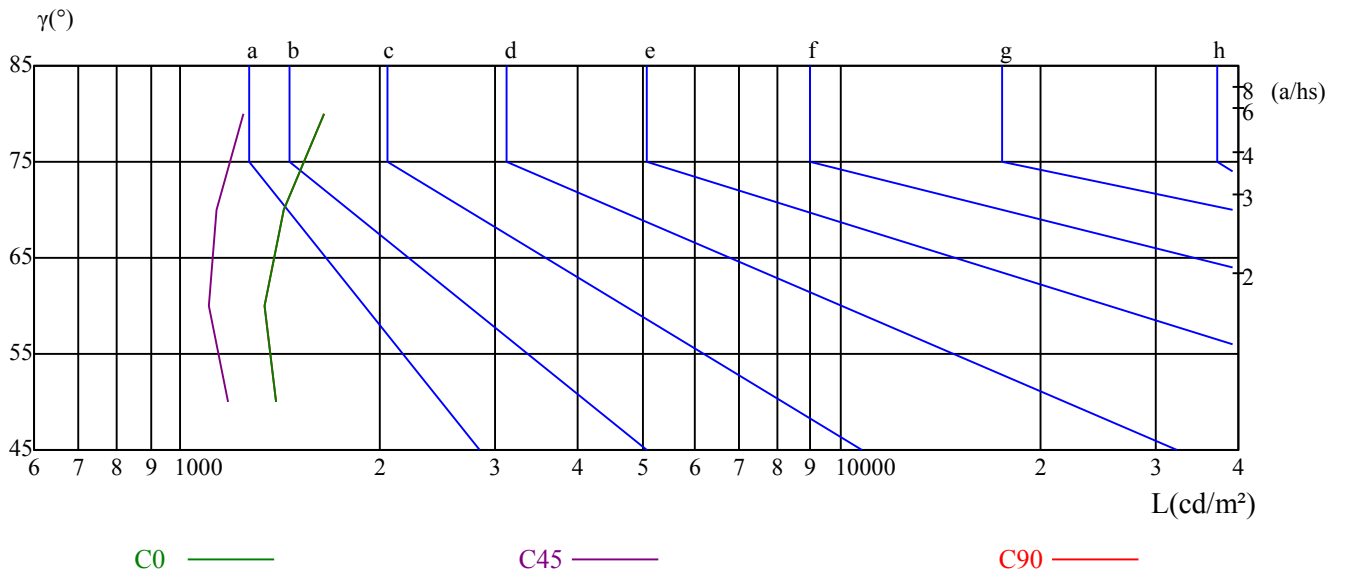
γ	45	50	55	60	65	70	75	80	85
C0	0	1396	0	1341	0	1432	0	1646	0
C45	0	1183	0	1100	0	1132	0	1242	0
C90	0	1396	0	1341	0	1432	0	1646	0

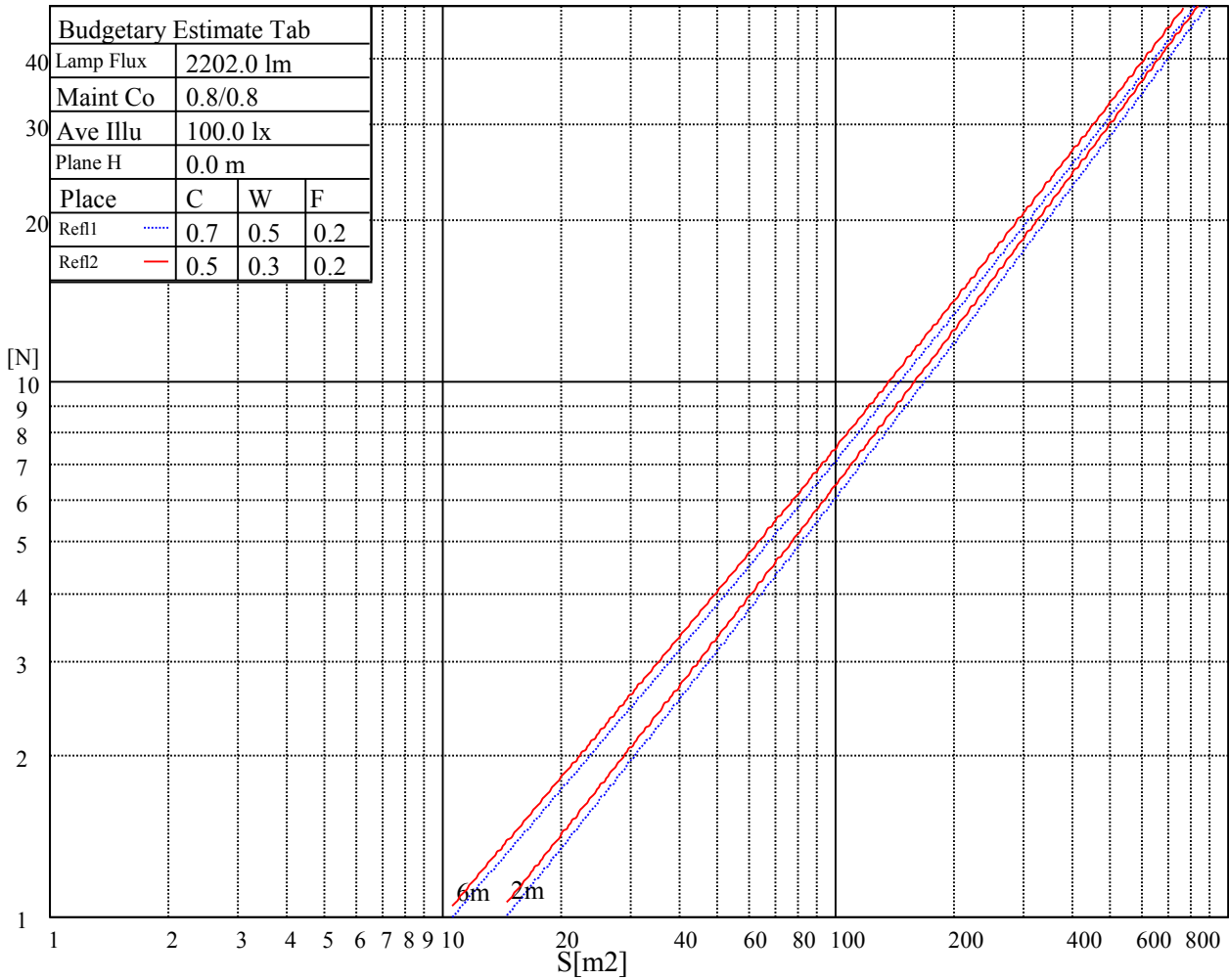
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3465	3465	3465	5419	5419	5419	15790	15790	15790

Glare Table

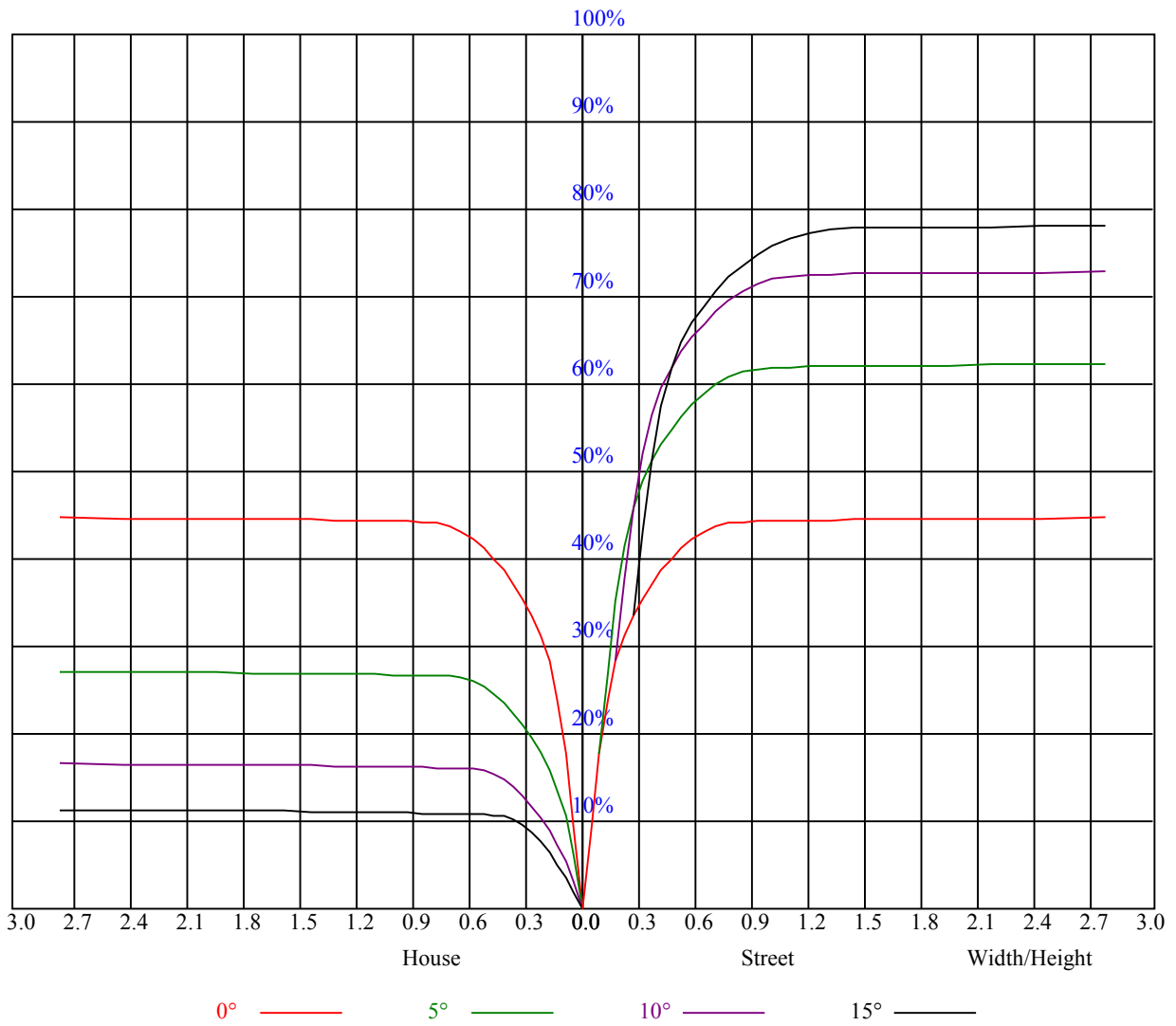
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.96	0.93	0.90	0.94	0.92	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.84	0.82
3	0.92	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.84	0.82	0.81	0.79
4	0.88	0.84	0.81	0.87	0.83	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.76	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
9	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.67
10	0.73	0.69	0.66	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.65



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
45.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
90.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
135.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
180.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
225.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
270.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
315.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
360.0	17068.86	16099.87	13542.72	10191.55	6818.90	4110.84	2501.76	1627.96	1231.78
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
45.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
90.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
135.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
180.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
225.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
270.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
315.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
360.0	1032.31	907.77	826.29	769.69	732.75	701.31	677.85	641.46	529.70
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
45.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
90.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
135.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
180.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
225.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
270.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
315.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
360.0	353.13	206.63	54.78	18.39	13.38	10.79	10.24	9.91	9.63
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
45.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
90.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
135.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
180.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
225.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
270.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
315.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
360.0	9.36	9.19	8.97	8.86	8.75	8.64	8.59	8.53	8.48
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
45.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
90.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
135.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
180.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
225.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
270.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
315.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26
360.0	8.42	8.42	8.37	8.37	8.31	8.31	8.31	8.31	8.26

Intensity data(cd)

C/γ(°)	90.0
0.0	8.26
45.0	8.26
90.0	8.26
135.0	8.26
180.0	8.26
225.0	8.26
270.0	8.26
315.0	8.26
360.0	8.26