
Nata

LumCAT: 3-1939-M	
Luminaire: BJB 47.319.2021	
Report No: GC2017062003	Voltage(V): 218.3000
Test No: NT-0010	Current(A): 0.1030
LampCAT: CITIZEN CLU036	Power (W): 20.4000
Lamp flux(lm): 2279.0	PF: 0.9070
Number of Lamps: 1	Ballast type: DC
Length(mm): 78	Width(mm): 78
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2120.62
Efficiency(%): 93.05%
Lumens(lm)/Power(W): 103.95
Central intensity(cd): 7708.722
Maximum intensity(cd): 7708.722
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.5
[C90/270]Total=26.5
Field angle(10%Imax): [C0/180]Total=52.9
[C90/270]Total=52.9
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
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(%): 93.05%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.766%

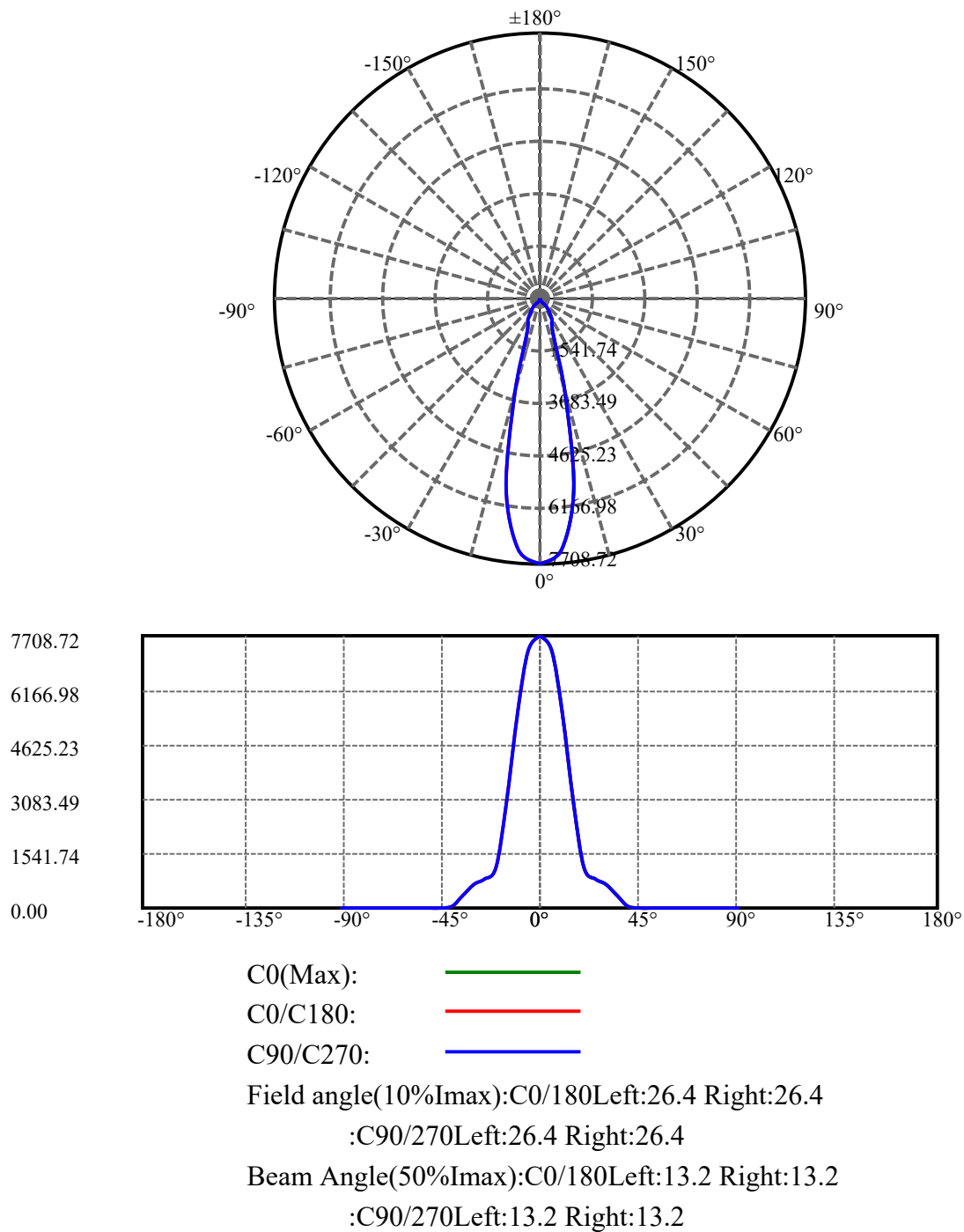
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7708.722	0.000	0	.000%	.000%
5.0	7298.483	179.407	179.407	7.872%	8.460%
10.0	5606.737	461.660	641.067	20.257%	30.230%
15.0	2903.055	504.795	1145.862	22.150%	54.034%
20.0	1131.898	332.537	1478.399	14.591%	69.715%
25.0	809.845	203.653	1682.052	8.936%	79.319%
30.0	673.883	187.767	1869.819	8.239%	88.173%
35.0	313.856	145.452	2015.271	6.382%	95.032%
40.0	32.669	57.815	2073.086	2.537%	97.758%
45.0	12.353	8.336	2081.422	.366%	98.152%
50.0	10.117	4.540	2085.963	.199%	98.366%
55.0	9.401	4.244	2090.206	.186%	98.566%
60.0	8.926	4.236	2094.442	.186%	98.766%
65.0	8.603	4.261	2098.704	.187%	98.967%
70.0	8.431	4.313	2103.017	.189%	99.170%
75.0	8.258	4.362	2107.379	.191%	99.376%
80.0	8.141	4.388	2111.767	.193%	99.583%
85.0	8.114	4.417	2116.184	.194%	99.791%
90.0	8.086	4.436	2120.62	.195%	100.000%

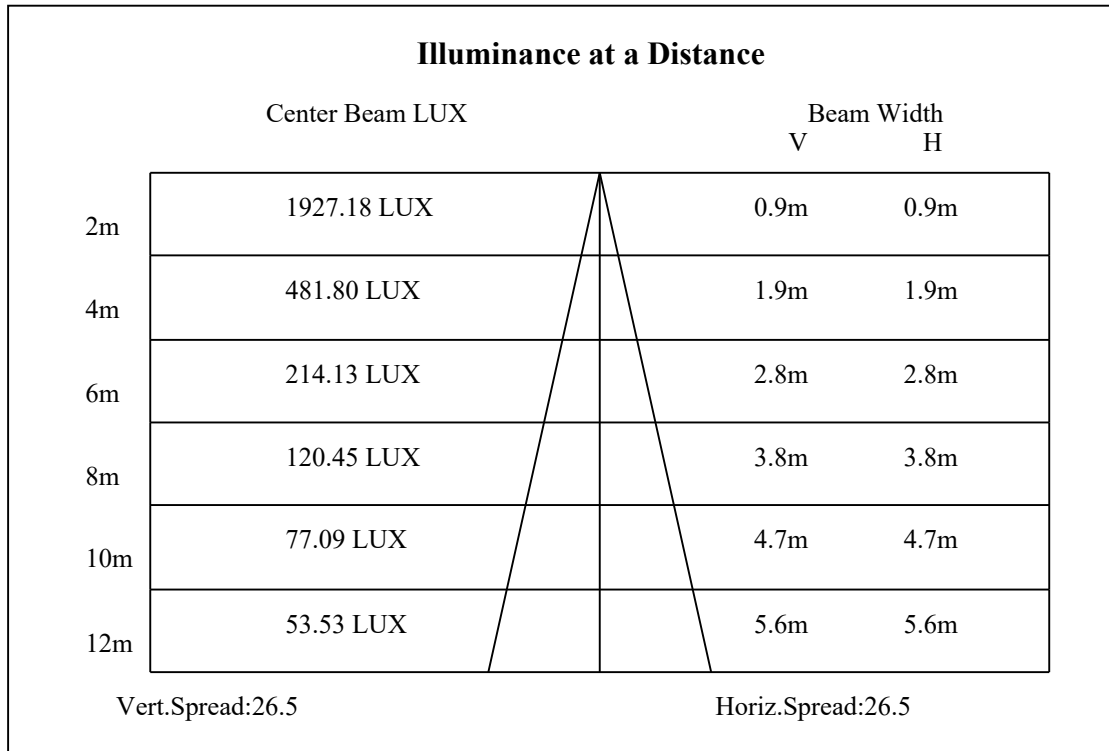
ZONAL LUMEN SUMMARY

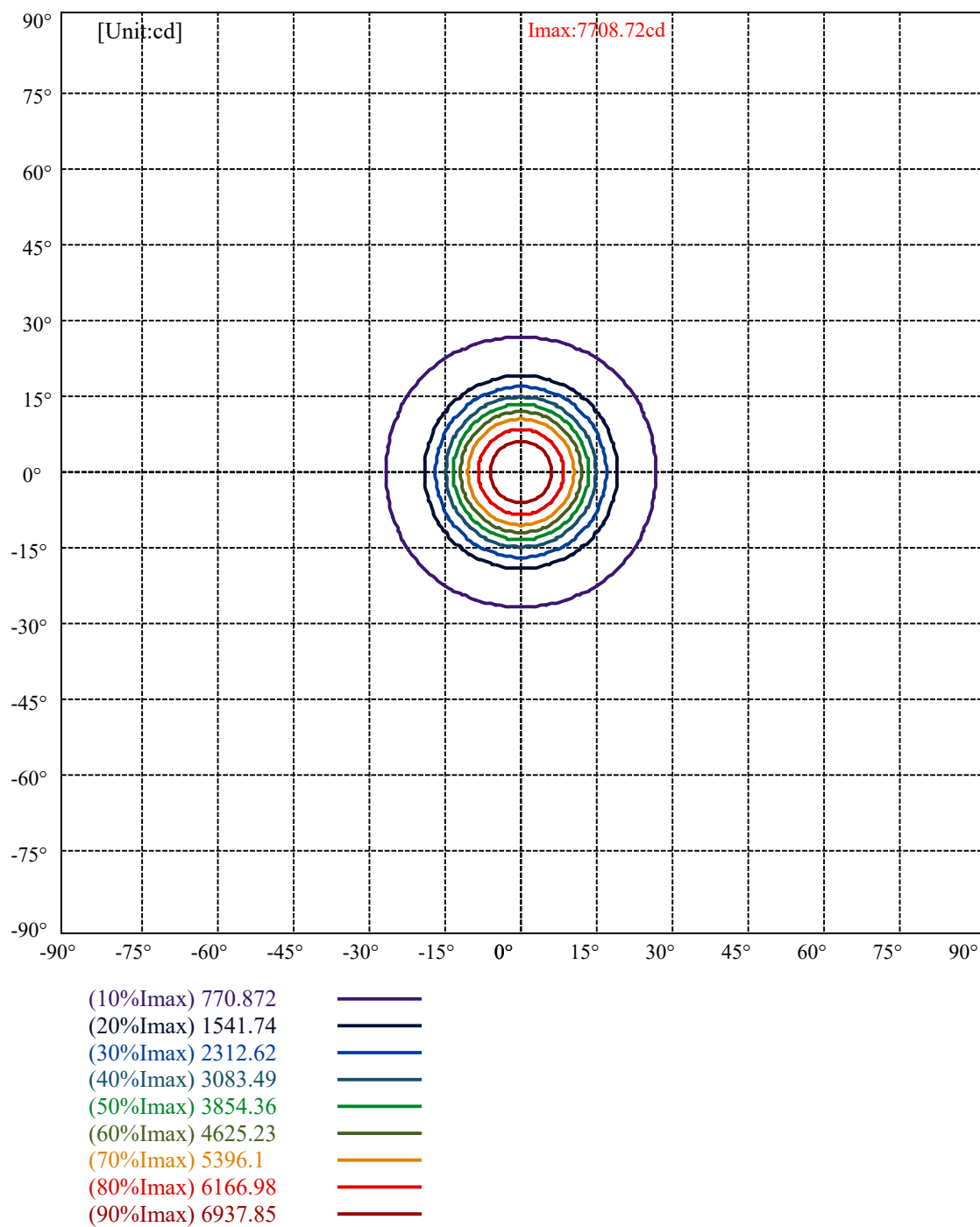
Zone	Lumens	%Lamp	%Fixt
0-30	1869.82	82.05%	88.17%
0-40	2073.09	90.96%	97.76%
0-60	2094.44	91.90%	98.77%
0-90	2116.18	92.86%	99.79%
0-120	2116.18	92.86%	99.79%
0-180	2120.62	93.05%	100.00%
60-90	25.98	1.14%	1.23%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-25.38	1696.50	74.44%	80.00%

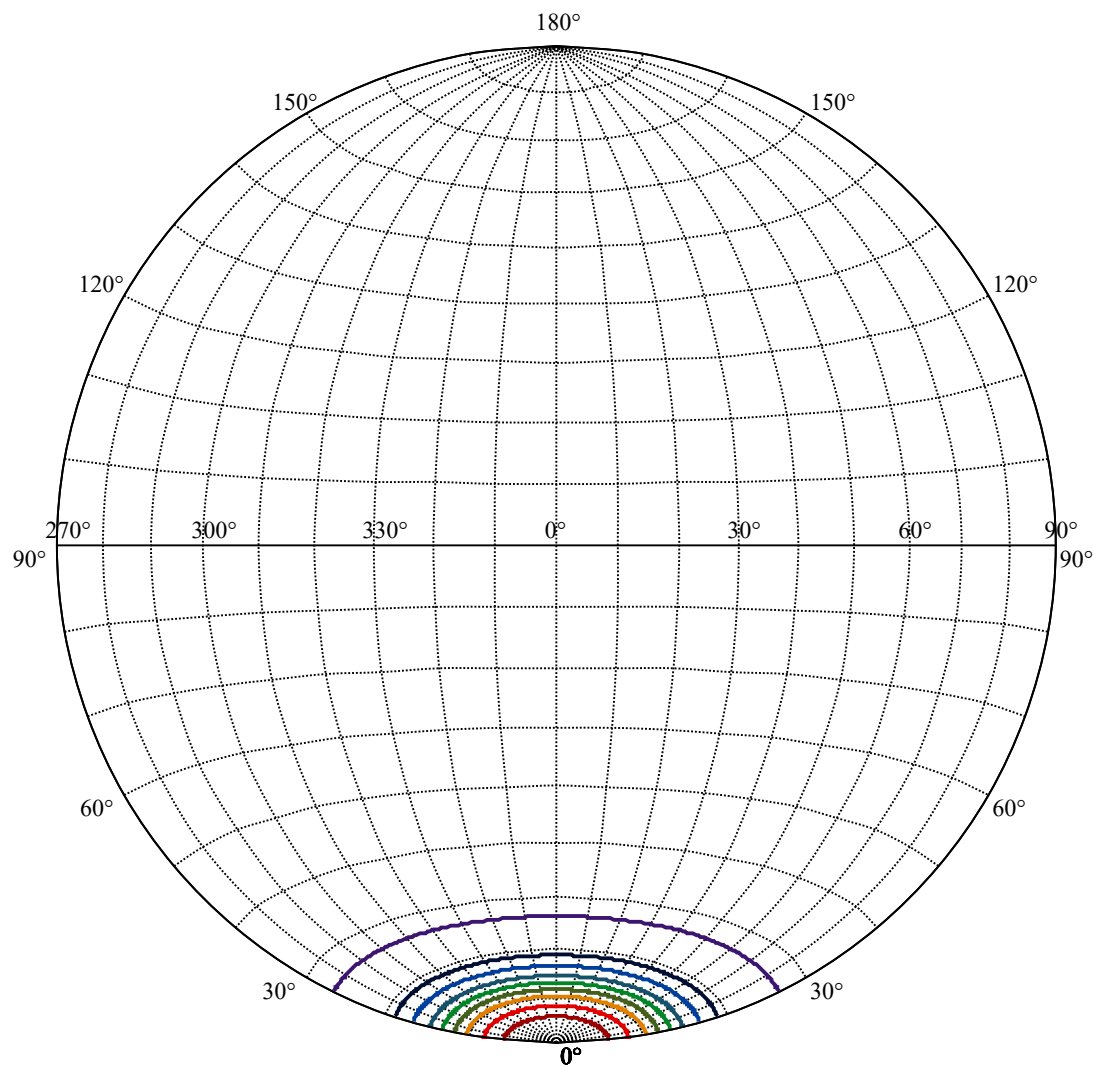
ZONAL LUMEN SUMMARY

0-10	641.07
10-20	837.33
20-30	391.42
30-40	203.27
40-50	12.88
50-60	8.48
60-70	8.57
70-80	8.75
80-90	4.42
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







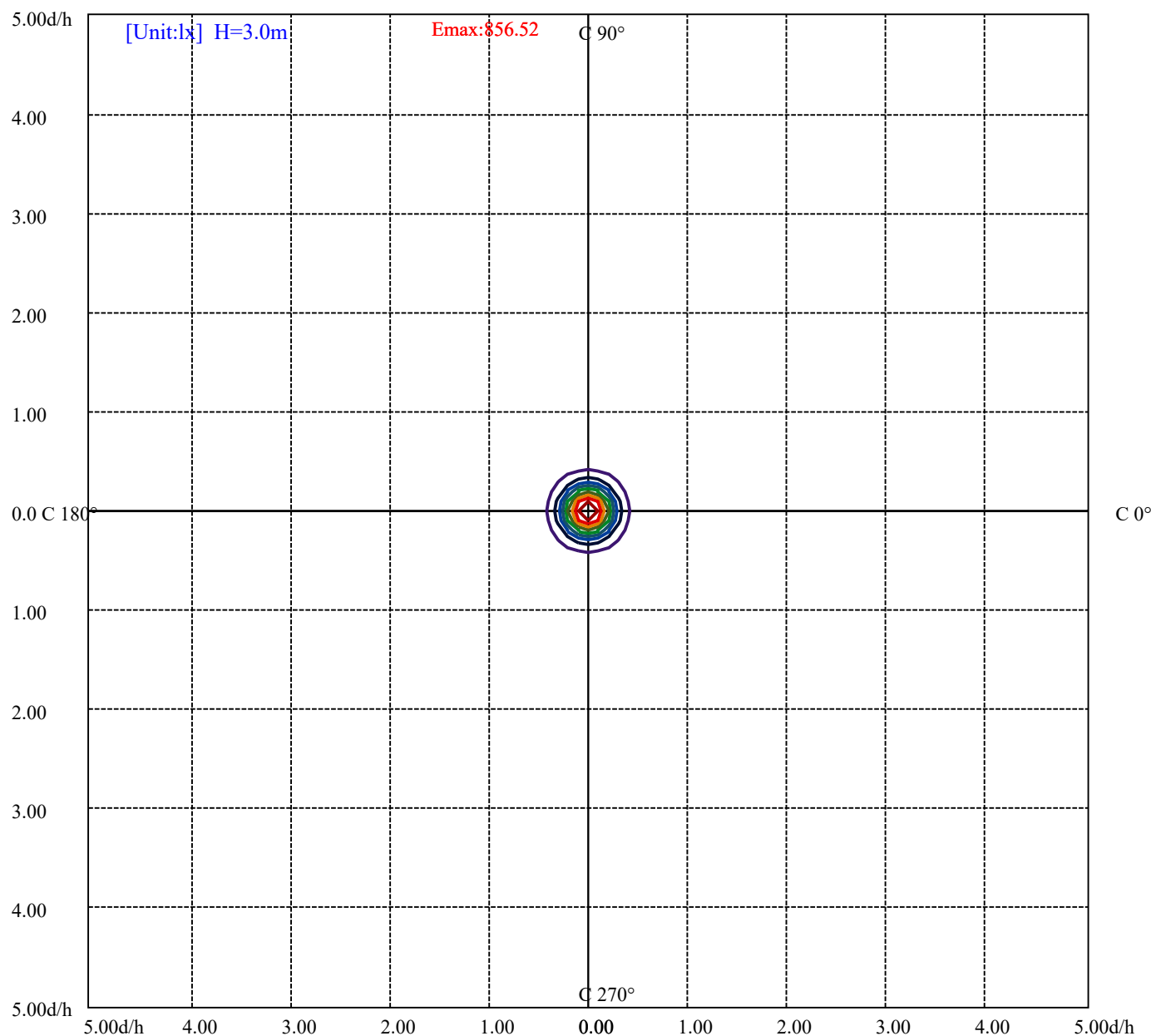


House

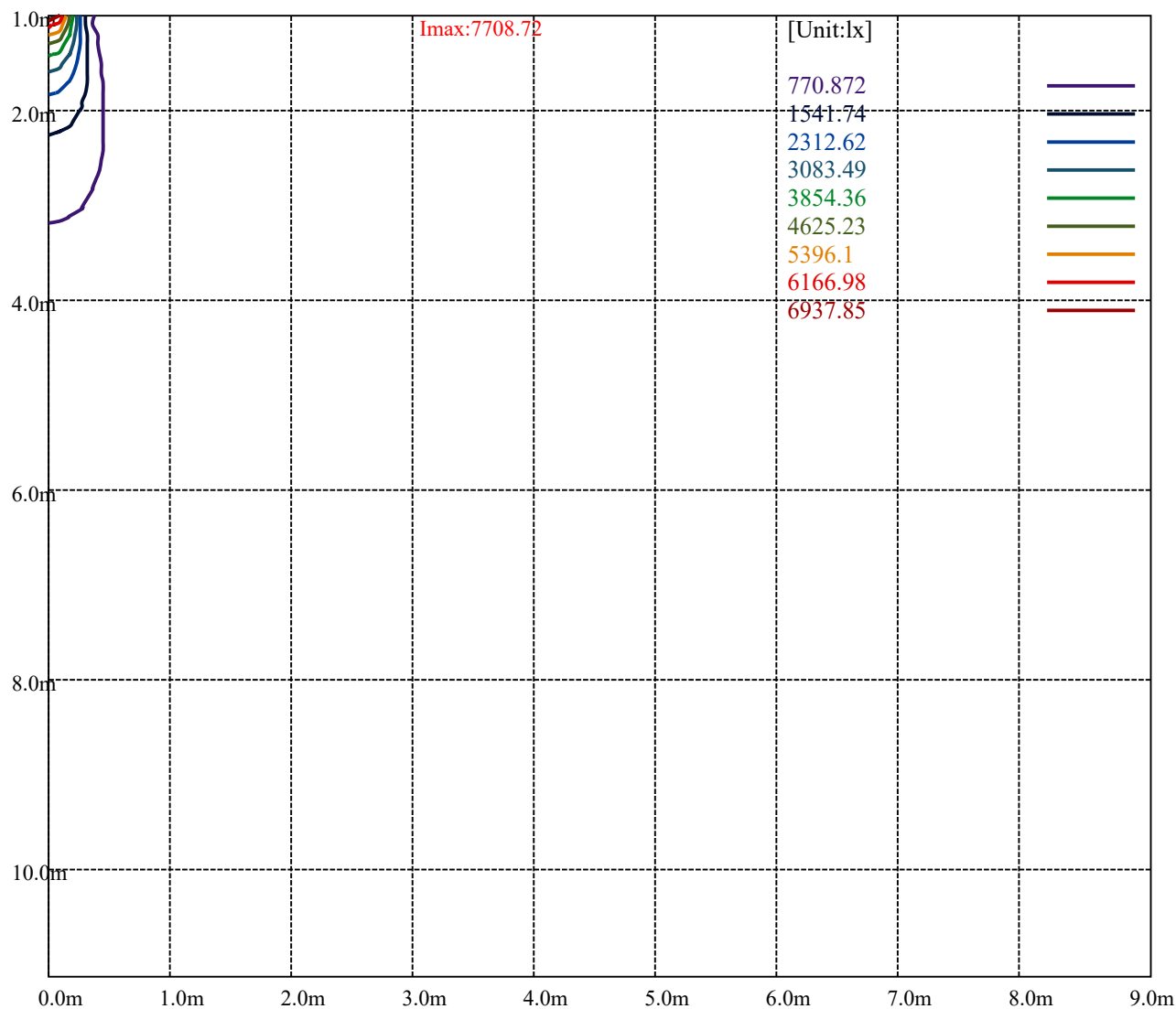
[Unit:cd]

Road

Imax:7708.72	
(10%Imax)	770.872
(20%Imax)	1541.74
(30%Imax)	2312.62
(40%Imax)	3083.49
(50%Imax)	3854.36
(60%Imax)	4625.23
(70%Imax)	5396.1
(80%Imax)	6166.98
(90%Imax)	6937.85



(10%E _{max})	85.65233	—
(20%E _{max})	171.3044	—
(30%E _{max})	256.9567	—
(40%E _{max})	342.6089	—
(50%E _{max})	428.2611	—
(60%E _{max})	513.9144	—
(70%E _{max})	599.5667	—
(80%E _{max})	685.2189	—
(90%E _{max})	770.8711	—



Luminance Table

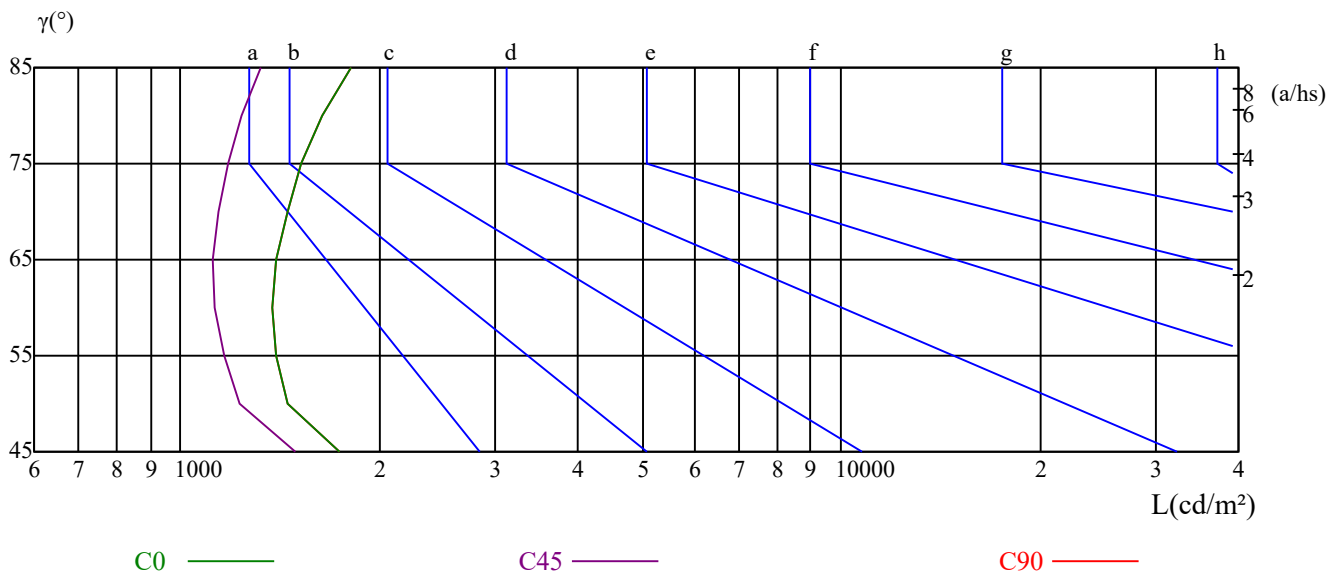
γ	45	50	55	60	65	70	75	80	85
C0	1736	1454	1393	1376	1393	1449	1525	1637	1806
C45	1492	1231	1161	1128	1122	1144	1178	1234	1323
C90	1736	1454	1393	1376	1393	1449	1525	1637	1806

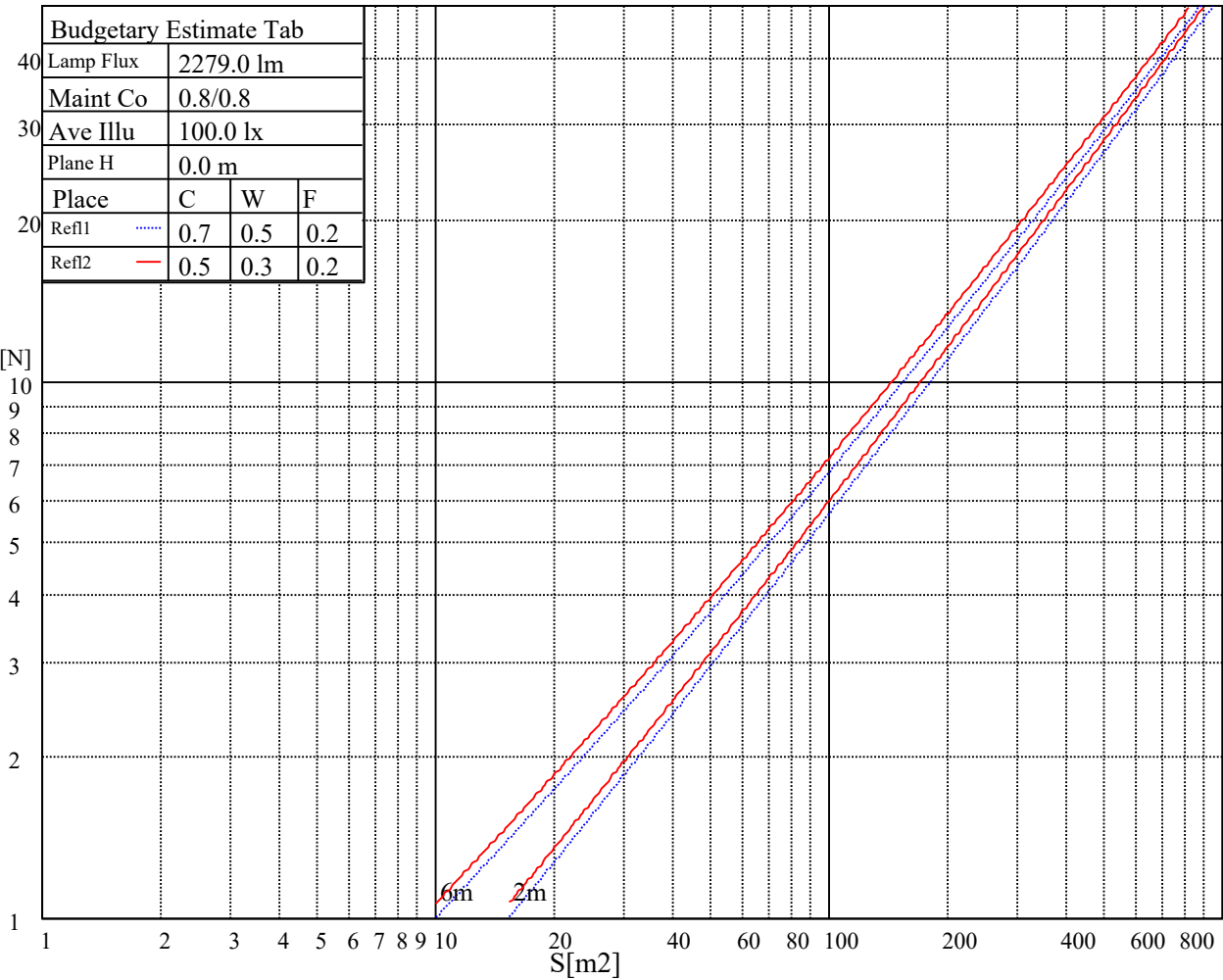
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3346	3346	3346	5245	5245	5245	15302	15302	15302

Glare Table

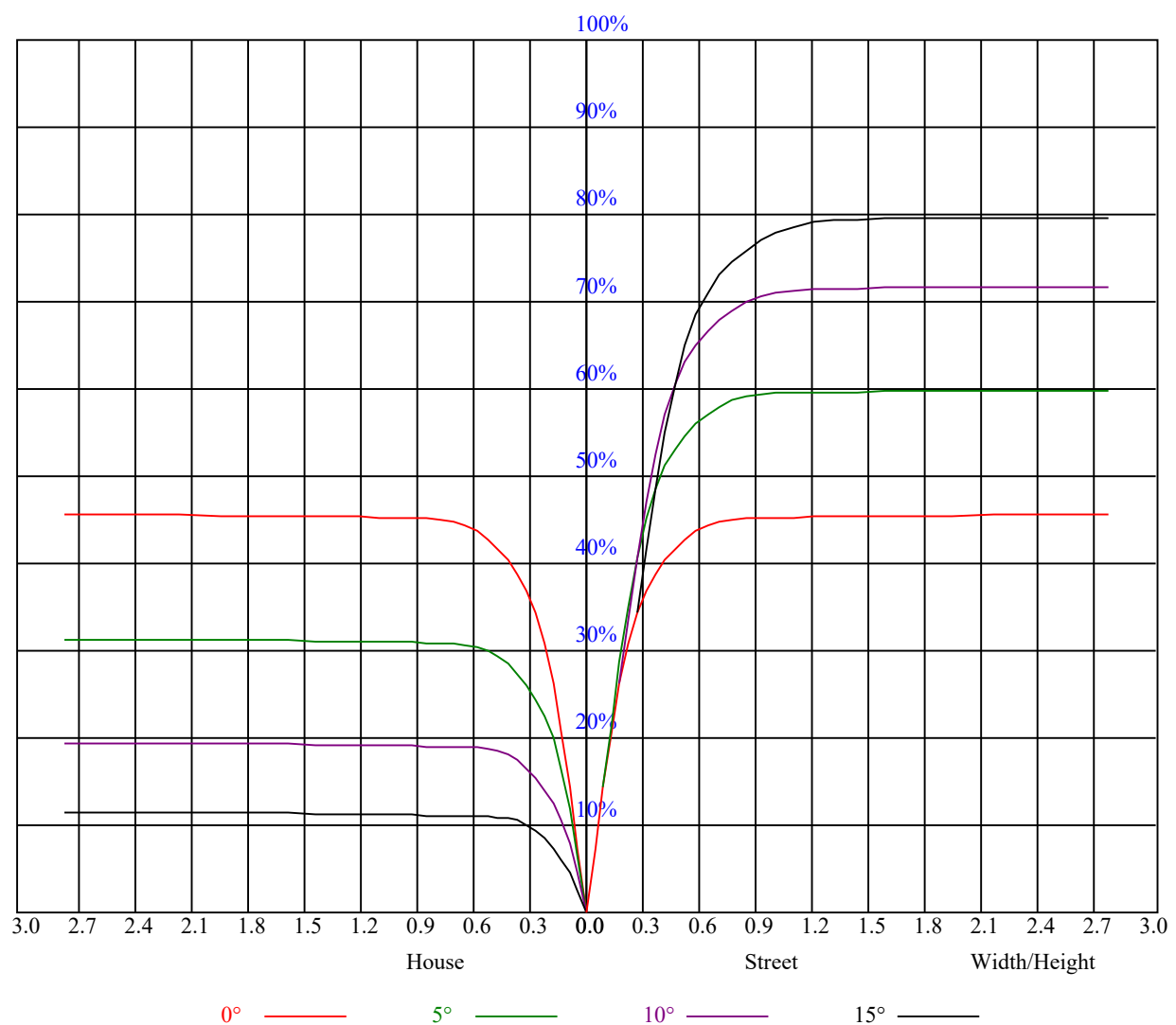
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.04	1.02	1.01	1.02	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.99	0.96	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.85
3	0.94	0.90	0.87	0.93	0.89	0.87	0.90	0.88	0.85	0.88	0.86	0.84	0.86	0.84	0.83	0.81
4	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.78
5	0.86	0.82	0.79	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.81	0.78	0.76	0.75
6	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.78	0.76	0.74	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.69	0.68
9	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
10	0.72	0.67	0.65	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63



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Intensity data(cd)									
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	7694.13	6938.76	4623.09	2102.05	941.46	758.68	571.49	288.50	16.68
45.0	7744.23	7201.93	5513.35	2619.58	1065.34	795.01	684.90	294.55	20.32
90.0	7732.67	7233.86	5410.94	2690.61	1061.43	796.72	699.22	267.35	19.88
135.0	7663.85	7618.15	6599.06	4018.57	1608.75	882.55	751.52	493.31	74.93
180.0	7694.13	7684.22	6580.89	3924.42	1292.17	862.24	739.35	441.72	67.50
225.0	7744.23	7504.74	5924.62	3031.96	1069.36	822.71	712.65	307.88	23.67
270.0	7732.67	7357.74	5750.64	2893.76	1120.40	811.53	704.17	288.50	22.08
315.0	7663.85	6848.47	4451.31	1943.49	896.26	749.32	527.77	129.05	16.30
360.0	7694.13	6938.76	4623.09	2102.05	941.46	758.68	571.49	288.50	16.68
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.96	9.74	9.14	8.70	8.42	8.31	8.09	8.04	8.04
45.0	12.06	10.24	9.52	9.03	8.70	8.53	8.31	8.26	8.20
90.0	11.84	10.08	9.36	8.92	8.64	8.48	8.31	8.20	8.15
135.0	14.70	10.30	9.58	9.08	8.70	8.53	8.31	8.15	8.15
180.0	13.54	10.24	9.36	8.86	8.48	8.31	8.15	7.98	7.93
225.0	12.28	10.30	9.47	8.97	8.70	8.42	8.31	8.15	8.15
270.0	12.72	10.24	9.58	9.03	8.70	8.53	8.37	8.26	8.20
315.0	10.74	9.80	9.19	8.81	8.48	8.31	8.20	8.09	8.09
360.0	10.96	9.74	9.14	8.70	8.42	8.31	8.09	8.04	8.04
C/γ(°)	90.0								
0.0	7.98								
45.0	8.15								
90.0	8.15								
135.0	8.09								
180.0	7.93								
225.0	8.09								
270.0	8.20								
315.0	8.09								
360.0	7.98								