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Nata

LumCAT: 1-0808-S	
Luminaire: 92.70.208.00	
Report No: NATA0100	Voltage(V): 34.0000
Test No: GC2019103004	Current(A): 0.2970
LampCAT: OSRAM 5050	Power (W): 10.1000
Lamp flux(lm): 878.0	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): 815.21
Efficiency(%): 92.85%
Lumens(lm)/Power(W): 80.71
Central intensity(cd): 5533.805
Maximum intensity(cd): 5533.805
Angle of maximum intensity: $C=0.0$ $\gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=15.8
[C90/270]Total=15.8
Field angle(10%Imax): [C0/180]Total=29.6
[C90/270]Total=29.6
Maximum s/h(1/2): C0_180=0.27 C90_270=0.27
Maximum s/h(1/4): C0_180=0.26 C90_270=0.26
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.691%

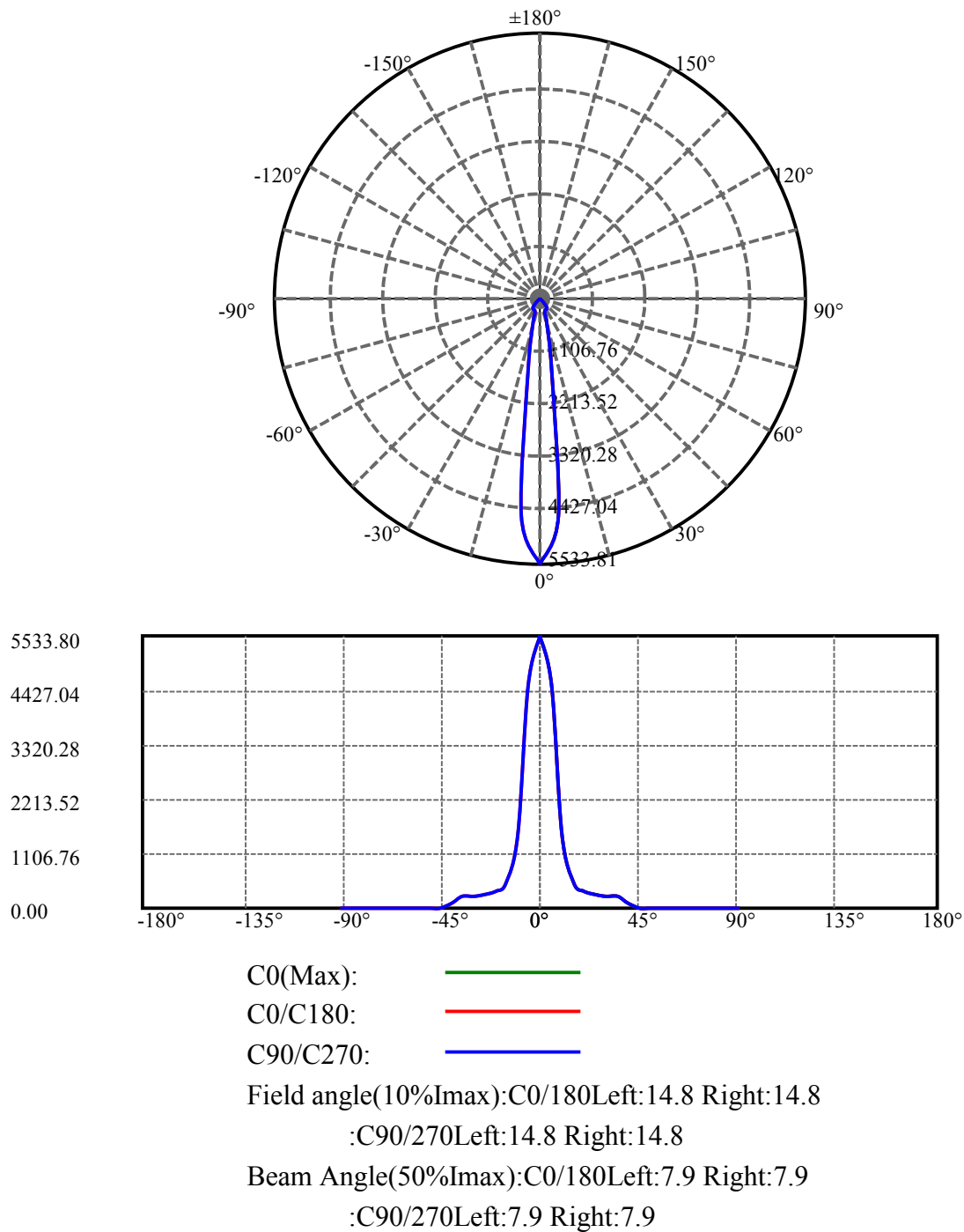
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5533.805	0.000	0	.000%	.000%
5.0	4514.344	120.123	120.123	13.681%	14.735%
10.0	1521.682	215.928	336.05	24.593%	41.223%
15.0	517.964	120.990	457.041	13.780%	56.064%
20.0	331.682	70.023	527.064	7.975%	64.654%
25.0	279.091	64.059	591.122	7.296%	72.512%
30.0	254.559	67.534	658.656	7.692%	80.796%
35.0	223.516	70.400	729.056	8.018%	89.432%
40.0	91.192	52.507	781.563	5.980%	95.873%
45.0	5.291	17.865	799.428	2.035%	98.064%
50.0	3.864	1.850	801.277	.211%	98.291%
55.0	3.596	1.622	802.9	.185%	98.490%
60.0	3.480	1.636	804.535	.186%	98.691%
65.0	3.431	1.680	806.216	.191%	98.897%
70.0	3.414	1.733	807.949	.197%	99.109%
75.0	3.396	1.780	809.729	.203%	99.328%
80.0	3.371	1.811	811.54	.206%	99.550%
85.0	3.368	1.831	813.371	.209%	99.775%
90.0	3.343	1.838	815.208	.209%	100.000%

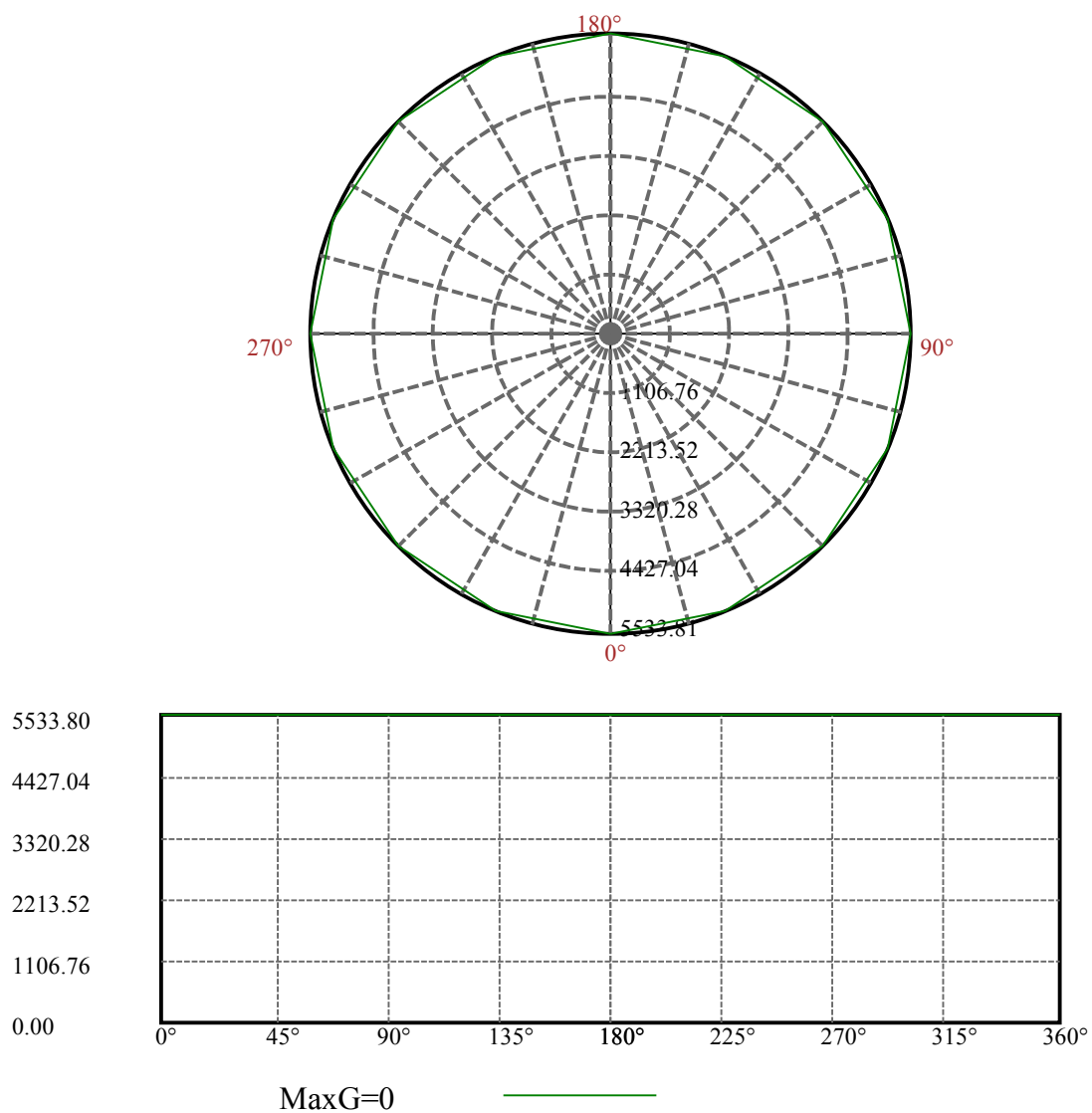
ZONAL LUMEN SUMMARY

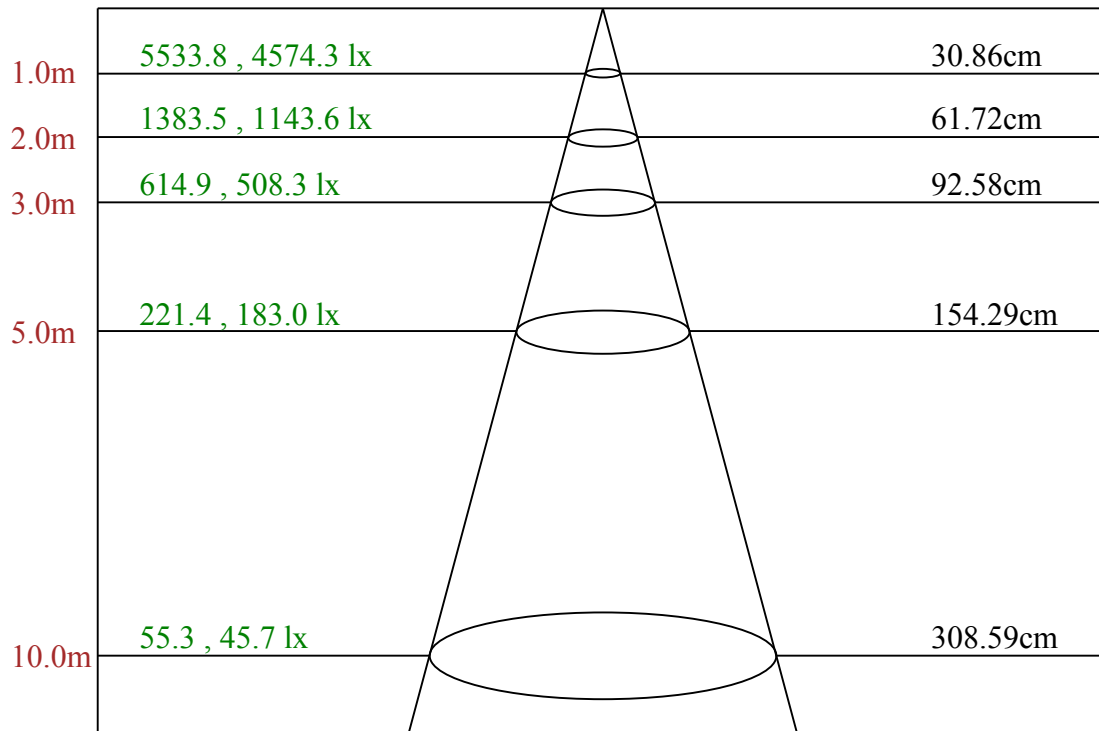
Zone	Lumens	%Lamp	%Fixt
0-30	658.66	75.02%	80.80%
0-40	781.56	89.02%	95.87%
0-60	804.54	91.63%	98.69%
0-90	813.37	92.64%	99.77%
0-120	813.37	92.64%	99.77%
0-180	815.21	92.85%	100.00%
60-90	10.47	1.19%	1.28%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.52	652.17	74.28%	80.00%

ZONAL LUMEN SUMMARY

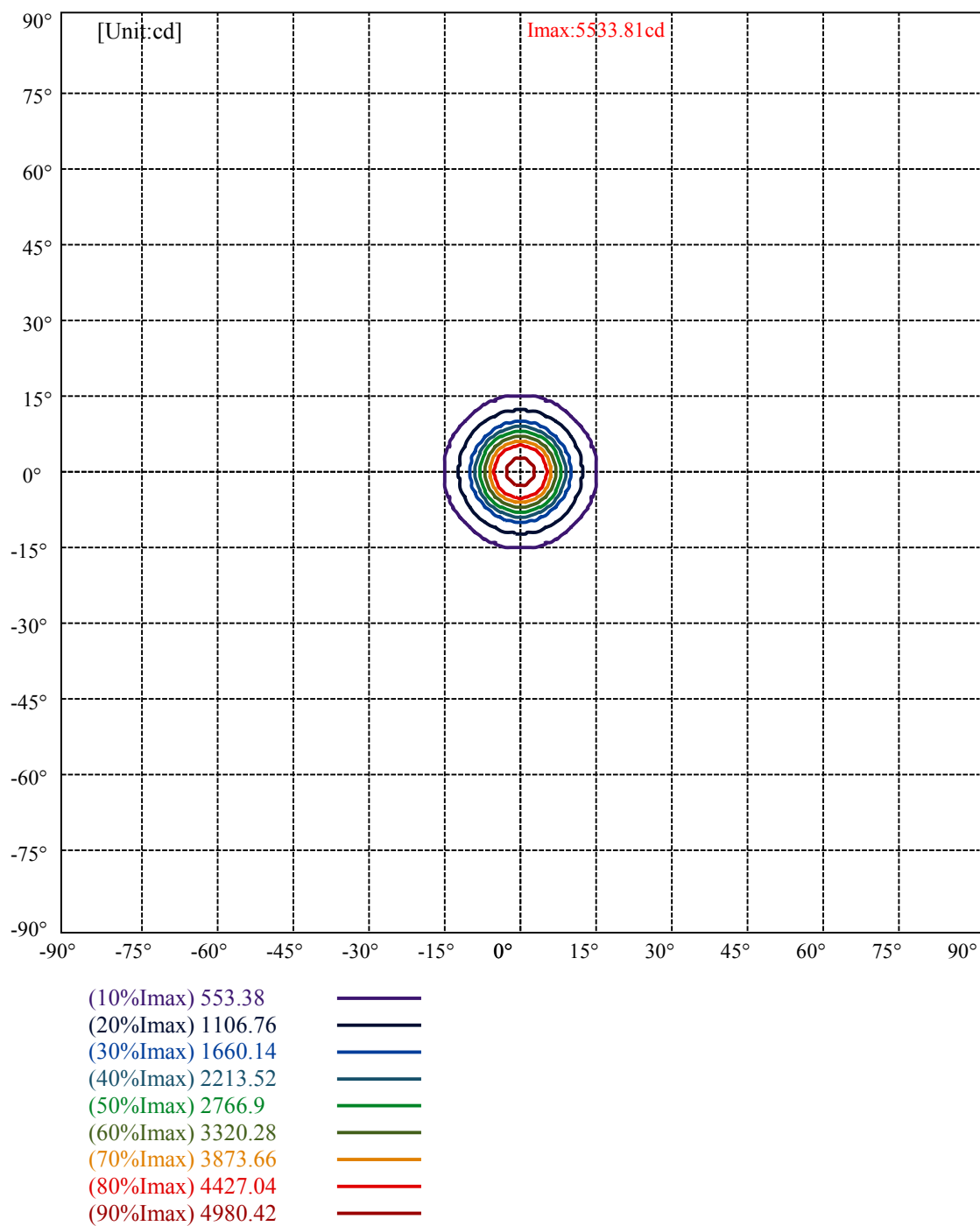
0-10	336.05
10-20	191.01
20-30	131.59
30-40	122.91
40-50	19.71
50-60	3.26
60-70	3.41
70-80	3.59
80-90	1.83
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

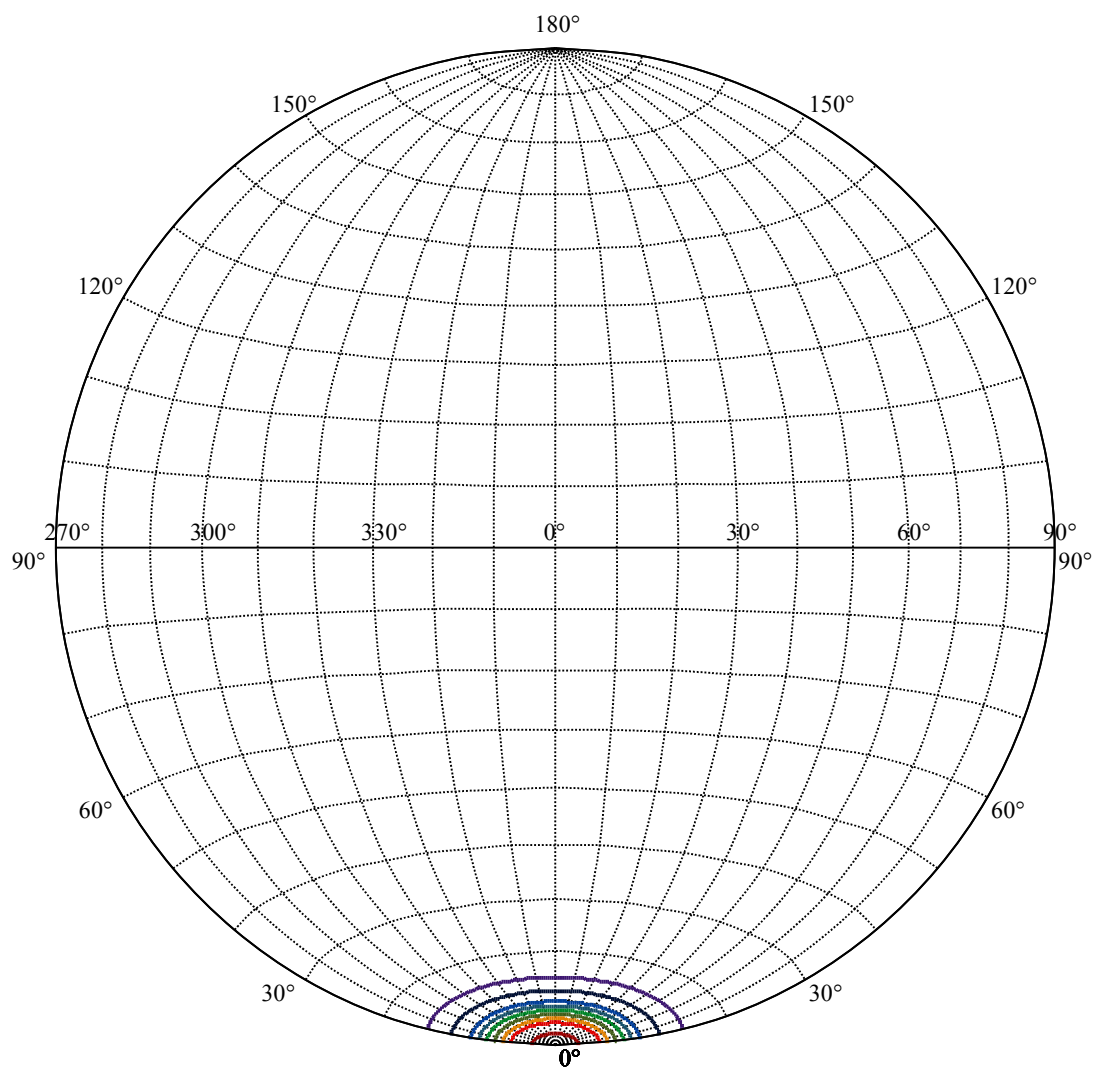






Max , Ave Beam angle of C0 plane 17.54





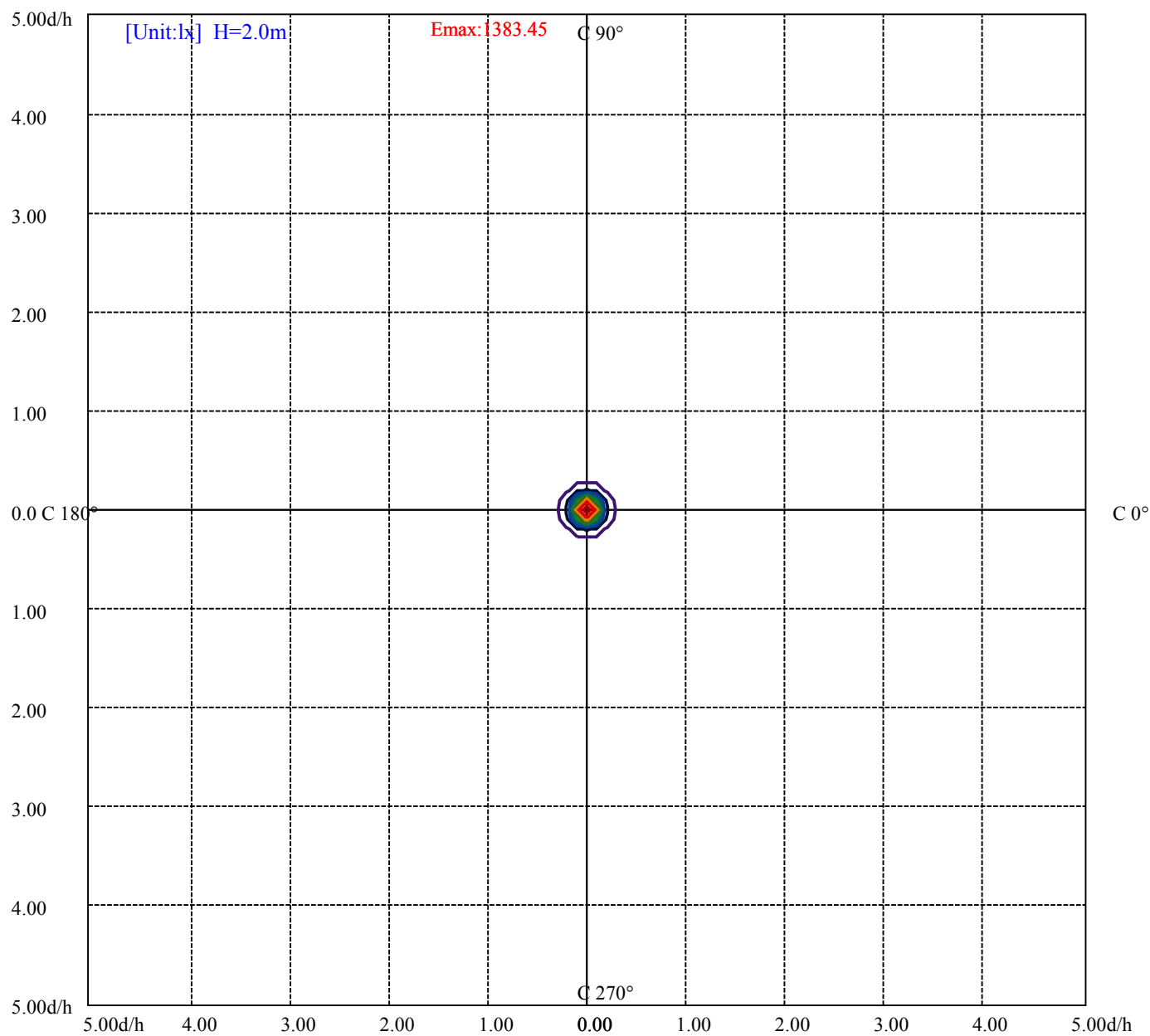
House

[Unit:cd]

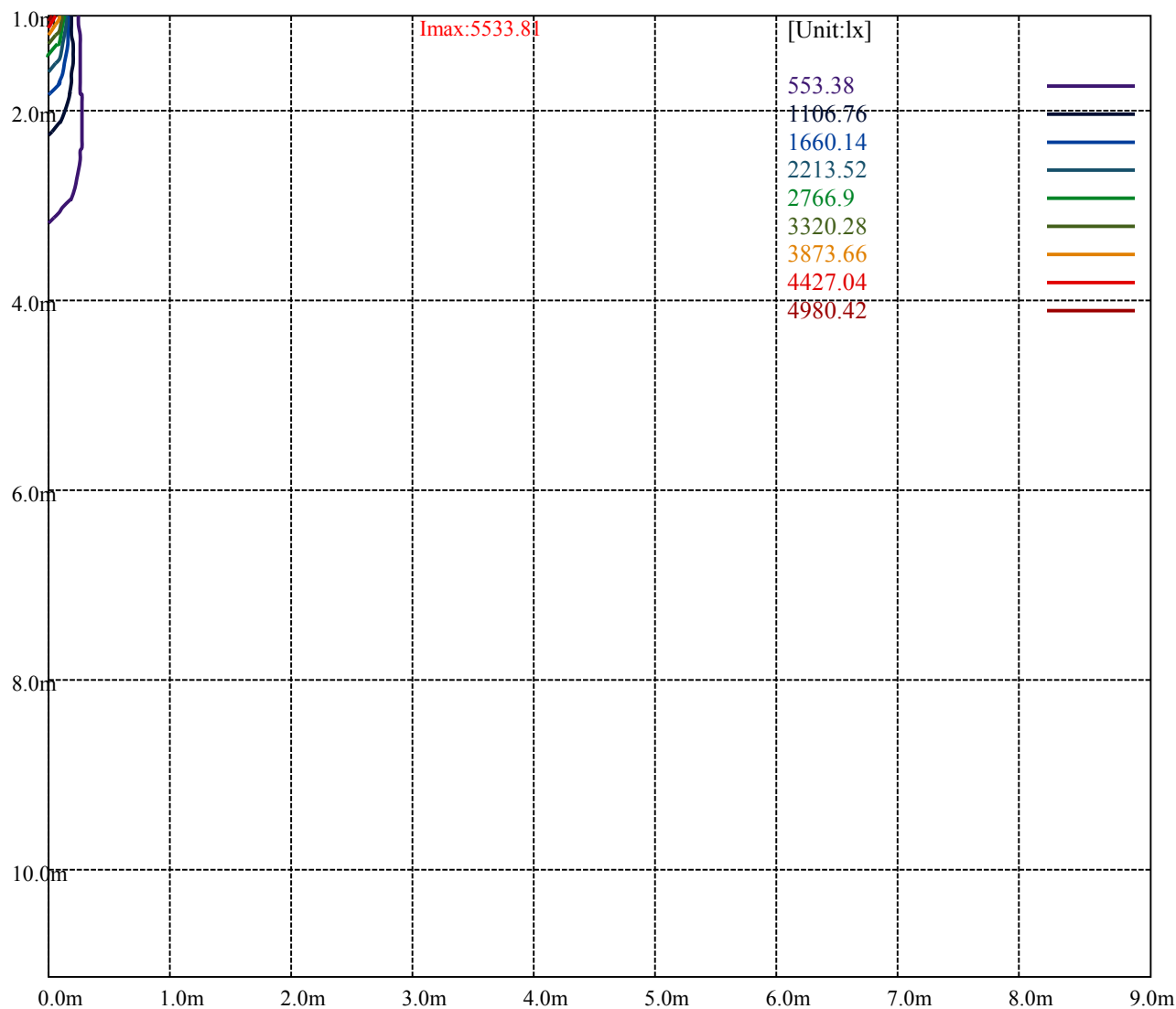
Road

Imax:5533.81

(10%Imax)	553.38	—
(20%Imax)	1106.76	—
(30%Imax)	1660.14	—
(40%Imax)	2213.52	—
(50%Imax)	2766.9	—
(60%Imax)	3320.28	—
(70%Imax)	3873.66	—
(80%Imax)	4427.04	—
(90%Imax)	4980.42	—



(10%E _{max}) 138.3443	—
(20%E _{max}) 276.6875	—
(30%E _{max}) 415.0325	—
(40%E _{max}) 553.3775	—
(50%E _{max}) 691.7225	—
(60%E _{max}) 830.065	—
(70%E _{max}) 968.41	—
(80%E _{max}) 1106.755	—
(90%E _{max}) 1245.1	—



Luminance Table

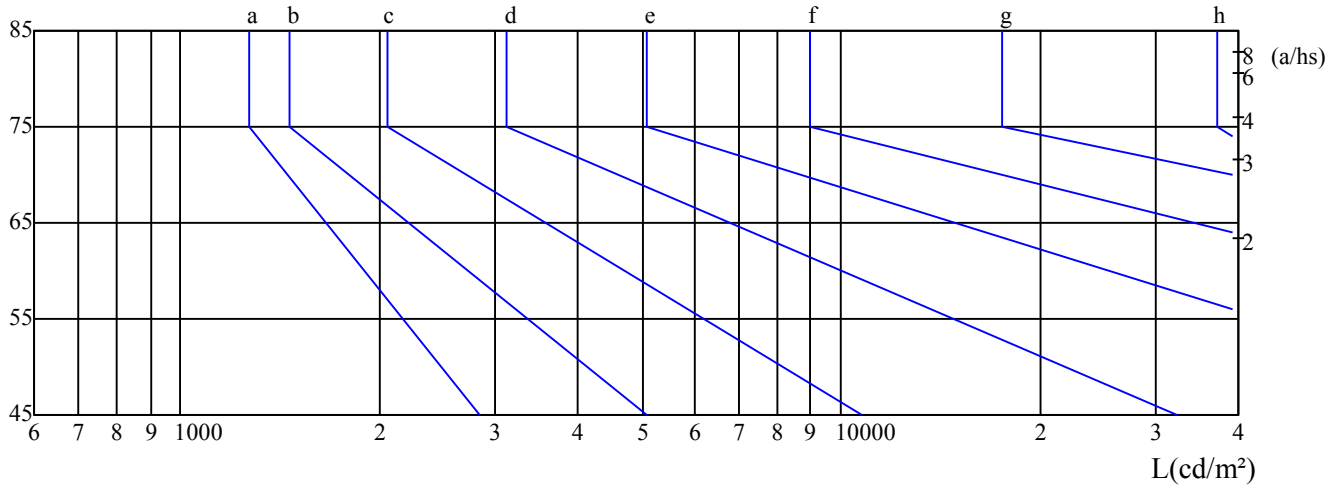
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

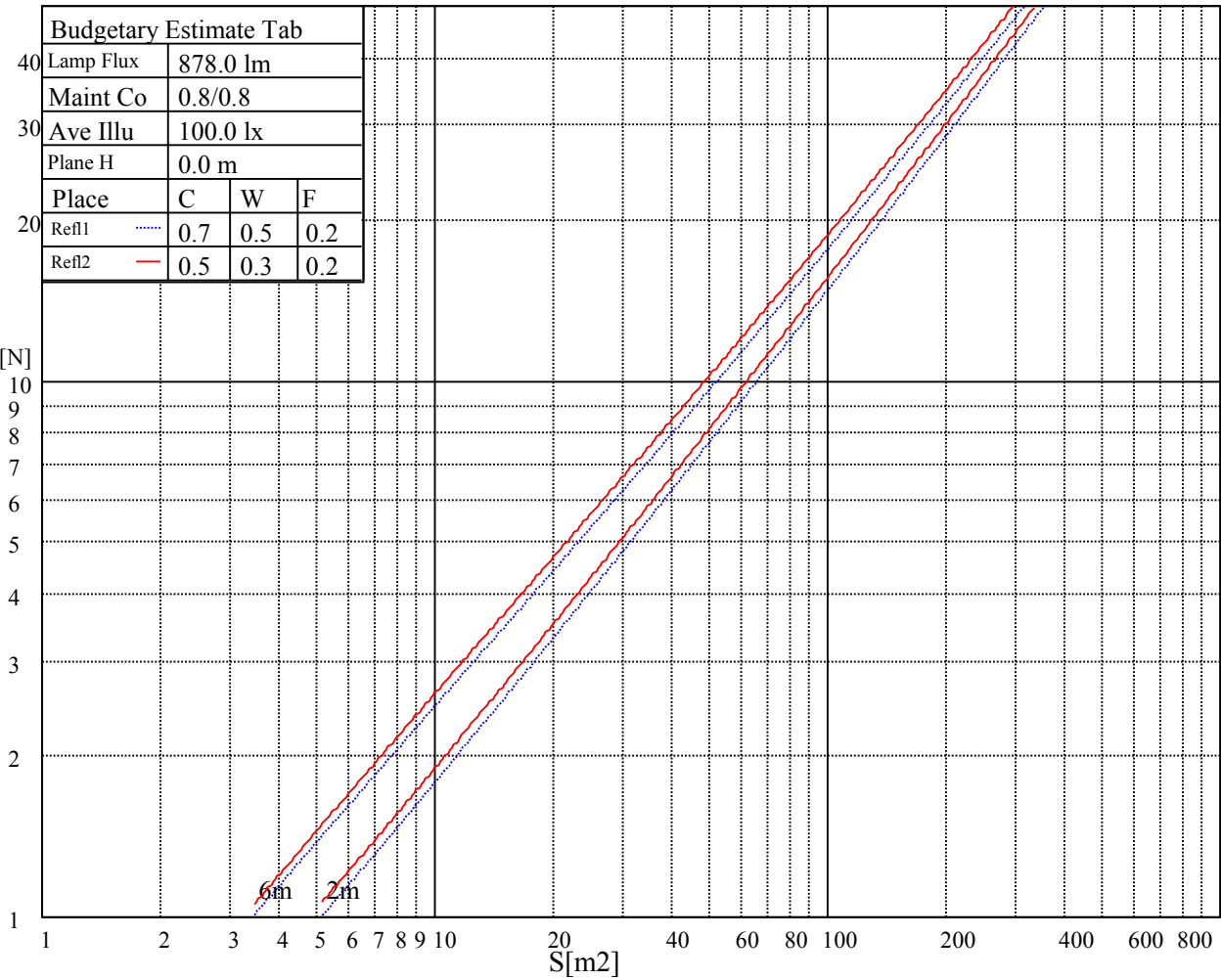
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

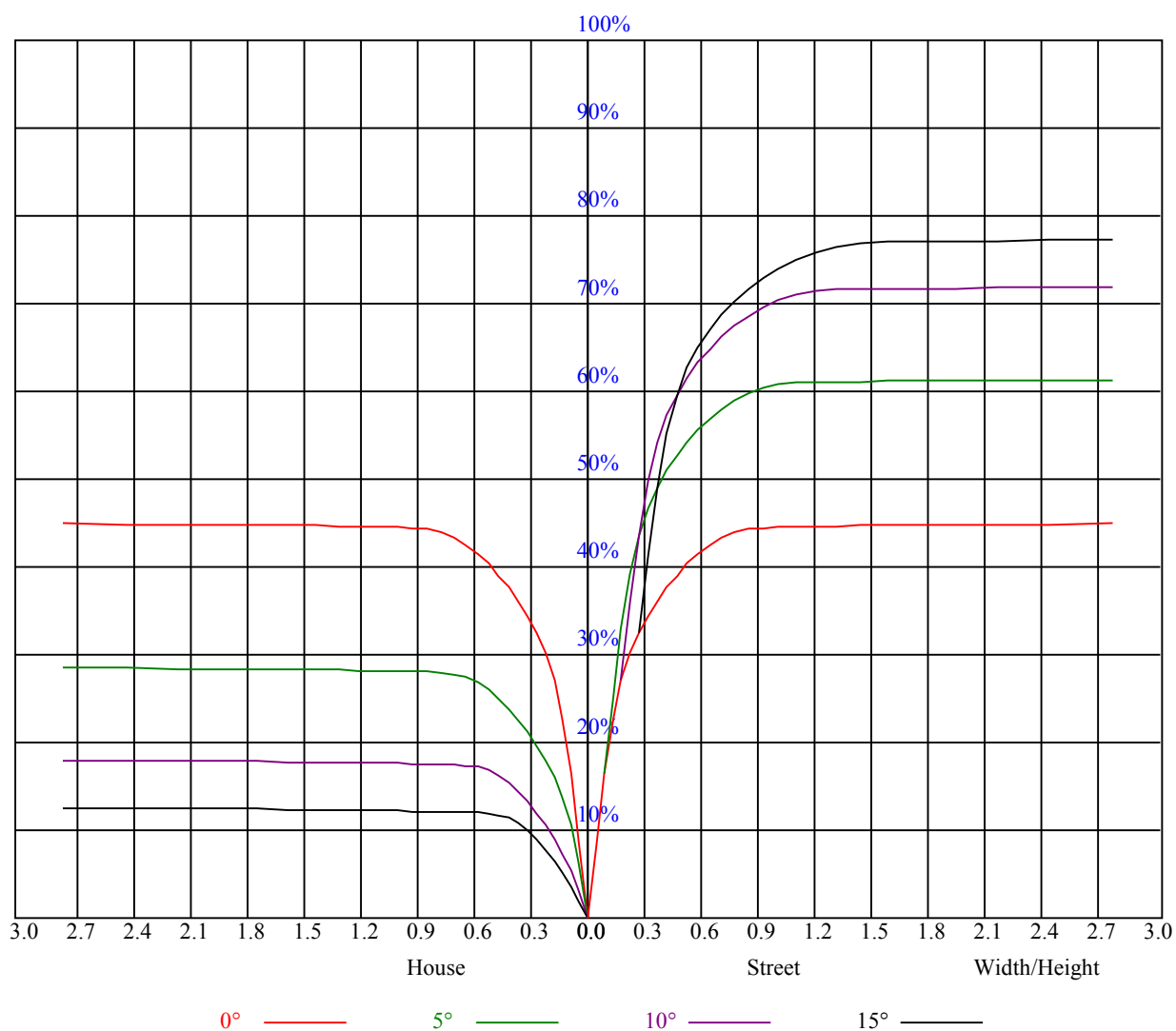
C0 ———

C45 ———

C90 ———



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	1.11	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	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.99	0.95	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.91	0.90	0.88	0.89	0.87	0.86	0.85
3	0.94	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.85	0.88	0.86	0.84	0.86	0.84	0.82	0.81
4	0.90	0.85	0.82	0.89	0.85	0.82	0.87	0.83	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.78
5	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.75
6	0.82	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	0.73	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	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.75	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	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.64



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	5550.75	4703.06	1911.38	529.31	341.44	285.19	255.15	229.28	103.89
22.5	5535.56	4599.56	1688.06	509.63	335.81	284.63	257.06	227.14	87.86
45.0	5499.56	3853.69	1102.78	450.06	311.74	269.21	252.23	200.31	52.48
67.5	5556.94	4279.50	1458.00	480.38	326.81	284.63	253.80	225.45	79.88
90.0	5505.75	3699.00	1060.31	434.31	307.74	266.63	249.86	193.78	56.36
112.5	5554.69	4443.19	1510.31	506.25	332.44	285.19	250.48	221.23	86.91
135.0	5522.63	3949.31	1111.84	463.16	313.14	264.99	248.12	208.29	60.08
157.5	5544.56	4712.63	1888.31	558.56	336.94	285.75	252.11	228.71	98.55
180.0	5550.75	4364.44	1038.38	497.19	321.02	274.44	252.34	220.50	90.06
202.5	5535.56	4498.31	1037.31	491.74	329.57	277.14	255.04	224.16	92.64
225.0	5499.56	5059.69	2472.19	604.13	355.50	285.19	259.65	241.03	124.71
247.5	5556.94	4819.50	1041.53	536.34	332.33	278.27	258.13	230.40	103.22
270.0	5505.75	5190.19	2536.88	641.25	360.00	288.00	260.49	242.38	128.48
292.5	5554.69	4677.75	1077.02	518.96	329.85	277.03	257.29	228.99	100.58
315.0	5522.63	4999.50	2327.63	574.31	349.31	284.06	258.36	235.63	114.86
337.5	5544.56	4380.19	1085.01	491.85	323.27	275.12	252.84	218.98	78.53
360.0	5550.75	4703.06	1911.38	529.31	341.44	285.19	255.15	229.28	103.89

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	4.95	4.11	3.77	3.60	3.49	3.43	3.43	3.43	3.38
22.5	4.67	4.05	3.71	3.54	3.49	3.43	3.43	3.38	3.32
45.0	4.44	3.88	3.66	3.49	3.49	3.43	3.38	3.38	3.32
67.5	4.50	3.83	3.60	3.54	3.43	3.43	3.43	3.32	3.32
90.0	4.28	3.77	3.54	3.49	3.43	3.38	3.38	3.38	3.32
112.5	8.61	3.71	3.54	3.49	3.43	3.60	3.43	3.43	3.66
135.0	4.16	3.66	3.49	3.38	3.43	3.38	3.38	3.32	3.38
157.5	4.39	3.66	3.49	3.43	3.38	3.38	3.38	3.38	3.38
180.0	4.16	3.66	3.49	3.43	3.38	3.38	3.38	3.38	3.43
202.5	4.33	3.71	3.49	3.38	3.38	3.38	3.38	3.38	3.38
225.0	8.10	3.94	3.54	3.43	3.38	3.38	3.38	3.38	3.38
247.5	4.61	3.83	3.54	3.43	3.38	3.38	3.38	3.32	3.32
270.0	5.68	3.99	3.66	3.49	3.43	3.43	3.38	3.38	3.32
292.5	5.91	3.94	3.60	3.49	3.43	3.38	3.38	3.38	3.32
315.0	7.14	4.05	3.71	3.54	3.49	3.43	3.43	3.38	3.38
337.5	4.73	4.05	3.71	3.54	3.49	3.43	3.43	3.38	3.32
360.0	4.95	4.11	3.77	3.60	3.49	3.43	3.43	3.43	3.38

C/γ(°)	90.0
0.0	3.38
22.5	3.32
45.0	3.32
67.5	3.32
90.0	3.32
112.5	3.43
135.0	3.38
157.5	3.32
180.0	3.38
202.5	3.38
225.0	3.32
247.5	3.32
270.0	3.32
292.5	3.32
315.0	3.38
337.5	3.32
360.0	3.38