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Nata

LumCAT: 1-0809-S	
Luminaire: 92.70.208.00	
Report No: NATA0100	Voltage(V): 34.0000
Test No: GC2019103002	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): 829.07
Efficiency(%): 94.43%
Lumens(lm)/Power(W): 82.09
Central intensity(cd): 2834.086
Maximum intensity(cd): 2834.086
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.4
[C90/270]Total=23.4
Field angle(10%Imax): [C0/180]Total=59.1
[C90/270]Total=59.1
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 94.43%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.676%

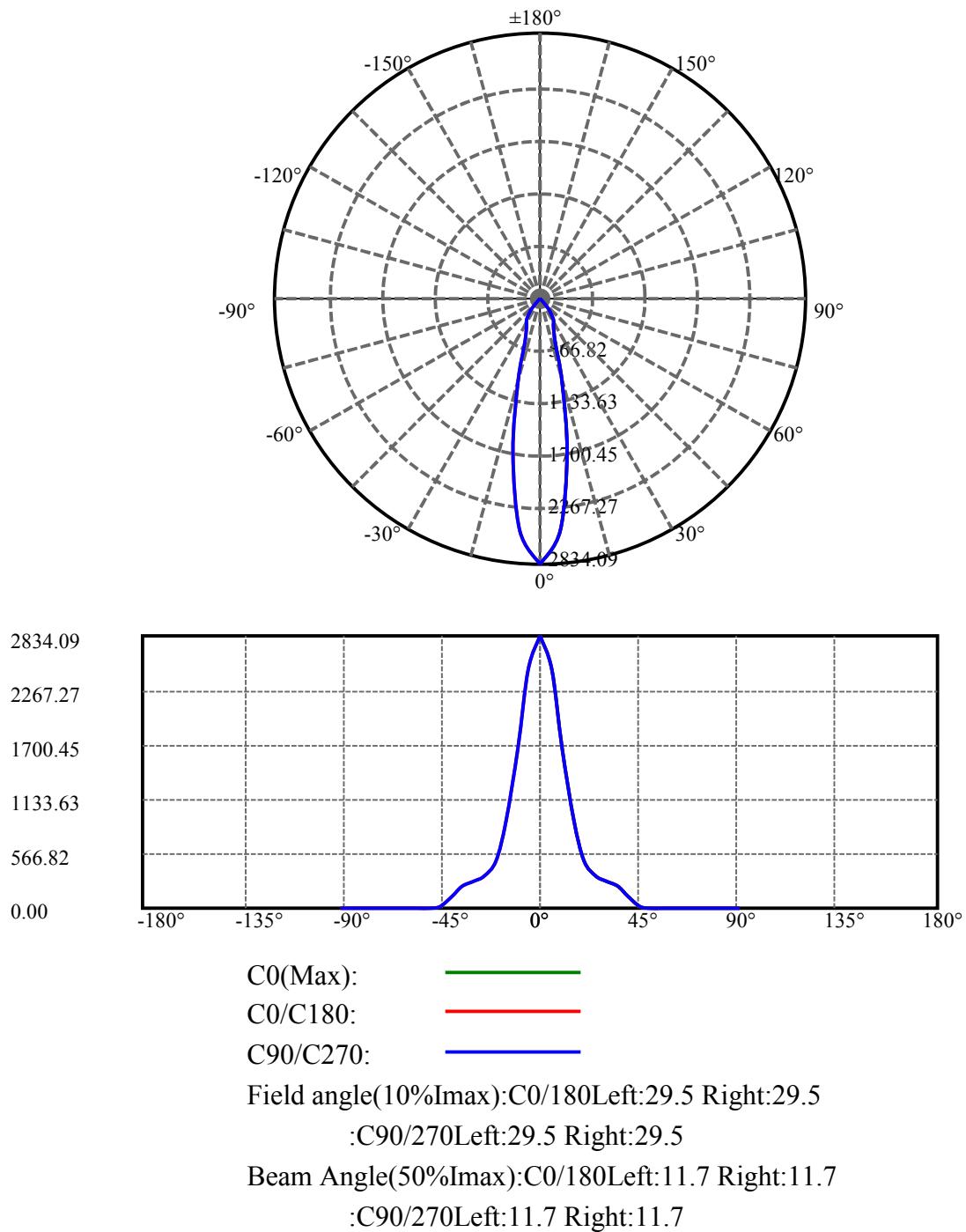
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2834.086	0.000	0	.000%	.000%
5.0	2474.684	63.465	63.465	7.228%	7.655%
10.0	1675.828	148.477	211.942	16.911%	25.564%
15.0	917.532	153.836	365.778	17.521%	44.119%
20.0	495.506	116.454	482.232	13.264%	58.165%
25.0	336.308	87.242	569.474	9.936%	68.688%
30.0	277.973	77.738	647.212	8.854%	78.064%
35.0	231.374	75.005	722.217	8.543%	87.111%
40.0	131.481	60.540	782.757	6.895%	94.413%
45.0	17.923	27.663	810.42	3.151%	97.750%
50.0	3.923	4.414	814.834	.503%	98.282%
55.0	3.579	1.631	816.466	.186%	98.479%
60.0	3.488	1.633	818.099	.186%	98.676%
65.0	3.452	1.687	819.786	.192%	98.880%
70.0	3.466	1.752	821.538	.200%	99.091%
75.0	3.459	1.810	823.348	.206%	99.309%
80.0	3.456	1.850	825.199	.211%	99.532%
85.0	3.565	1.908	827.106	.217%	99.763%
90.0	3.625	1.969	829.075	.224%	100.000%

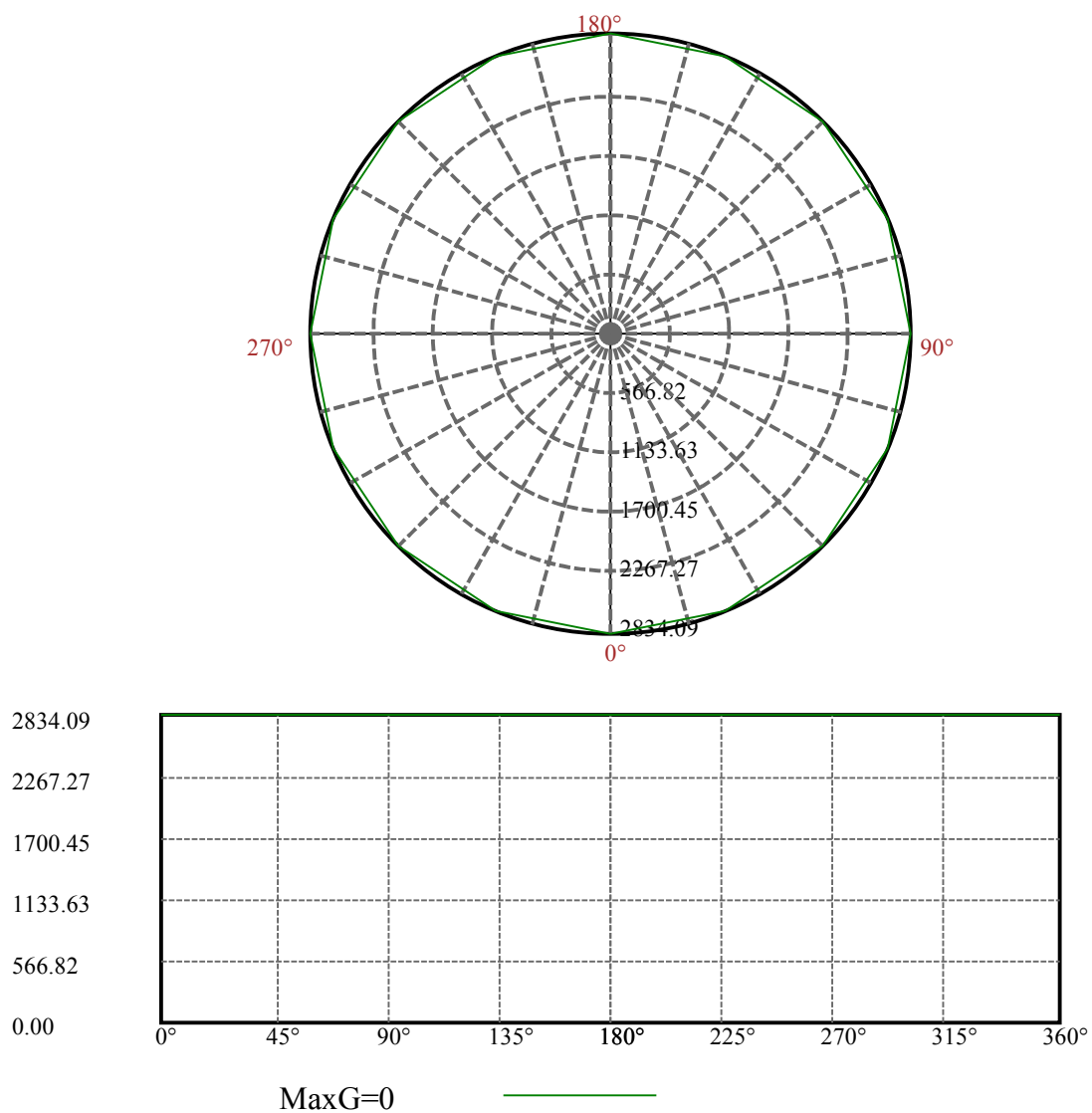
ZONAL LUMEN SUMMARY

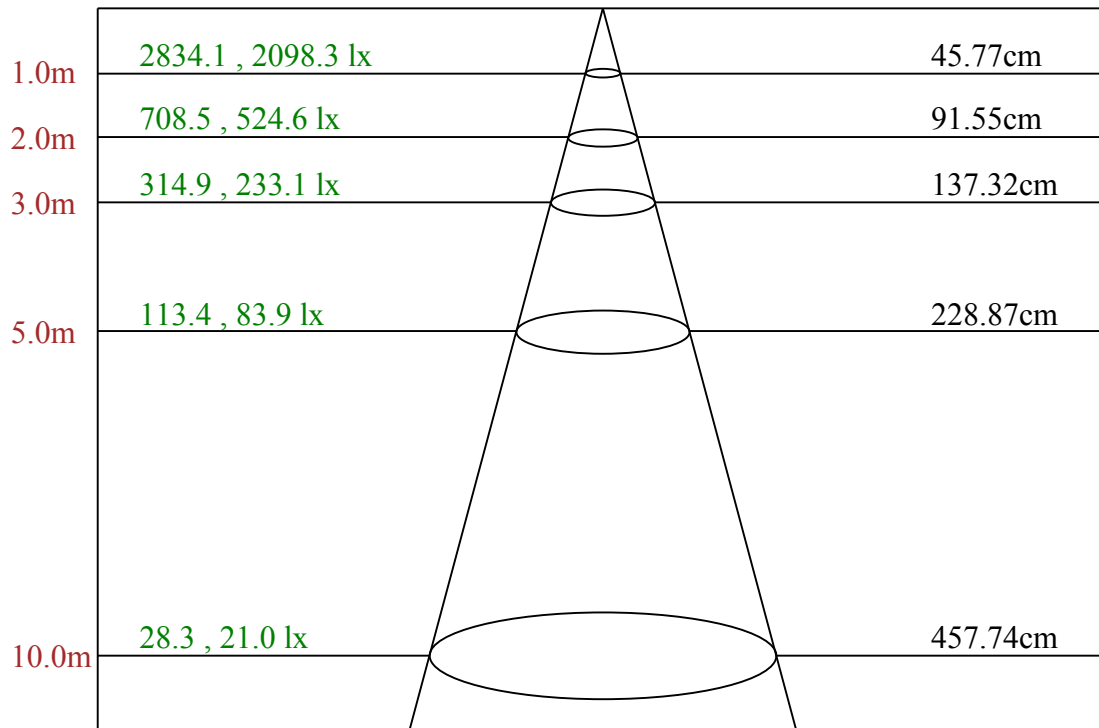
Zone	Lumens	%Lamp	%Fixt
0-30	647.21	73.71%	78.06%
0-40	782.76	89.15%	94.41%
0-60	818.10	93.18%	98.68%
0-90	827.11	94.20%	99.76%
0-120	827.11	94.20%	99.76%
0-180	829.07	94.43%	100.00%
60-90	10.64	1.21%	1.28%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.07	663.26	75.54%	80.00%

ZONAL LUMEN SUMMARY

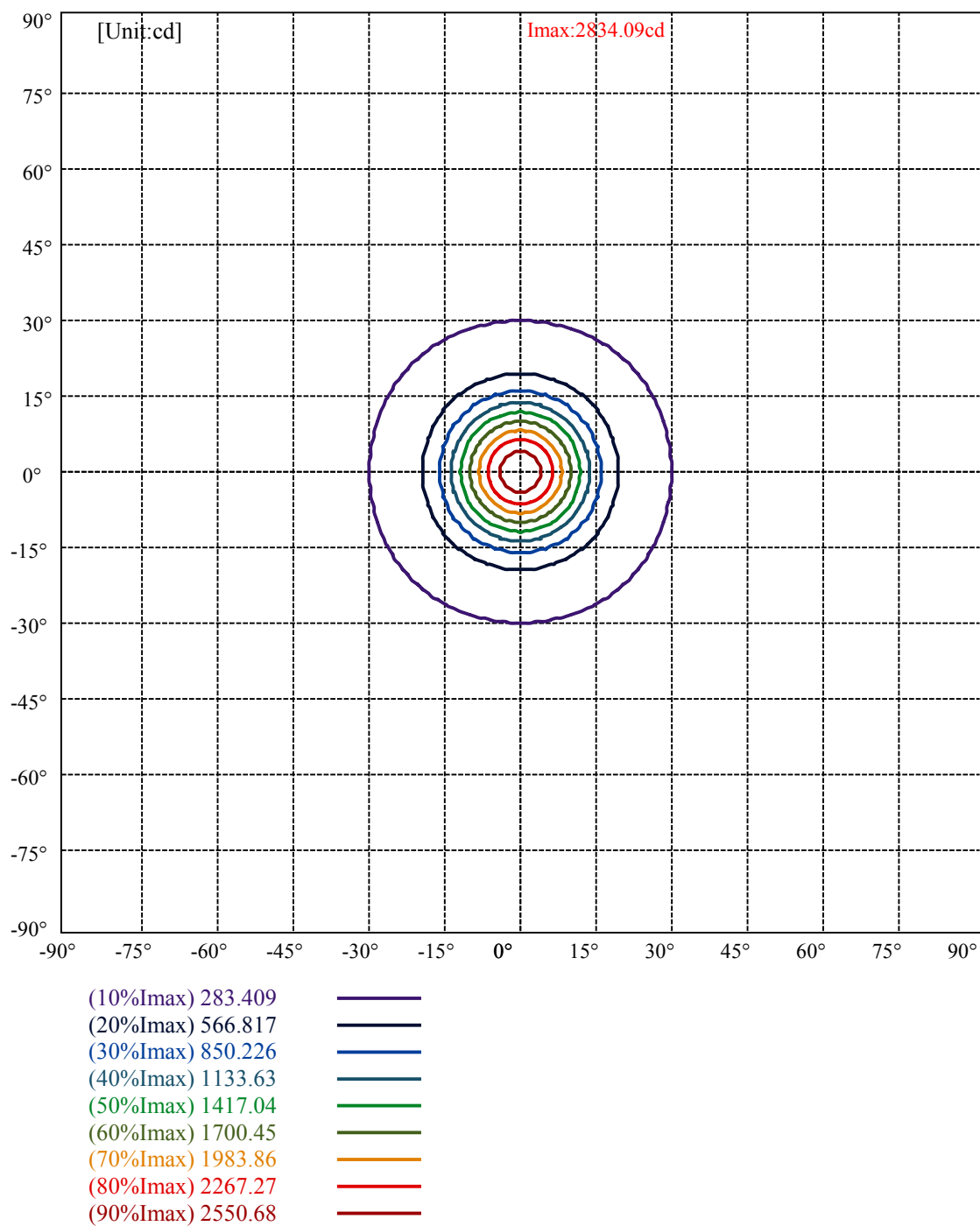
0-10	211.94
10-20	270.29
20-30	164.98
30-40	135.54
40-50	32.08
50-60	3.26
60-70	3.44
70-80	3.66
80-90	1.91
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

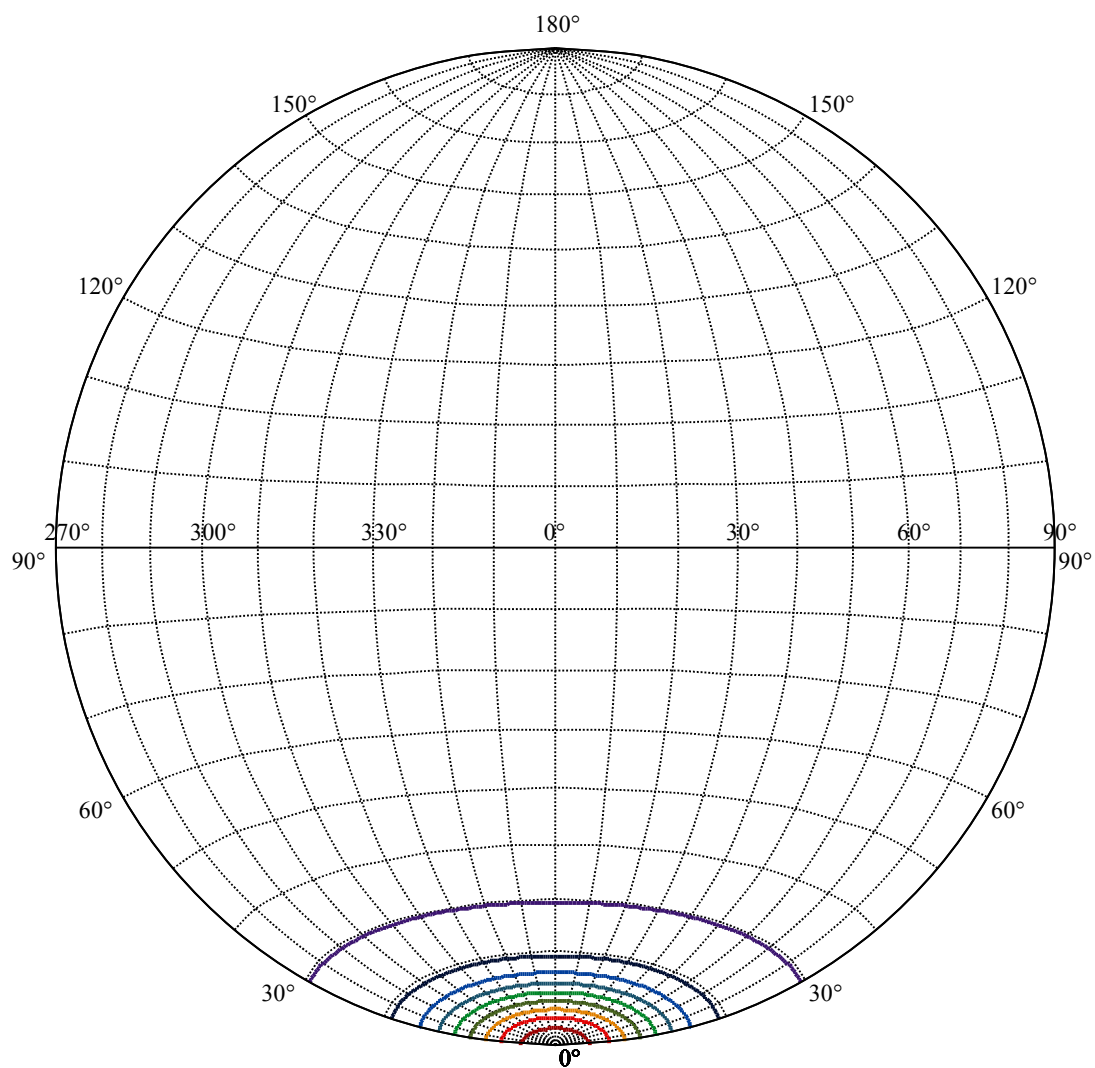






Max , Ave Beam angle of C0 plane 25.78





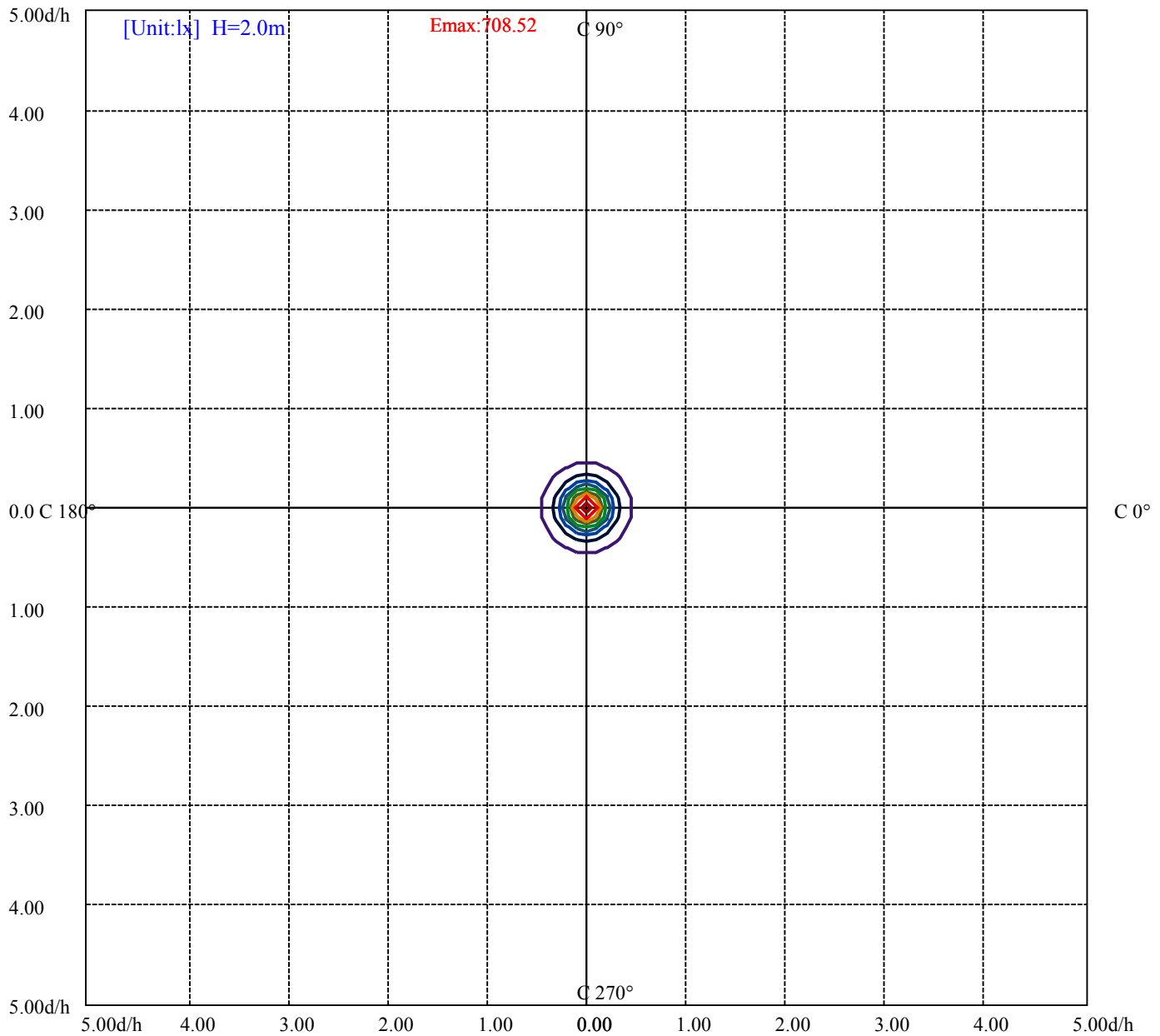
House

[Unit:cd]

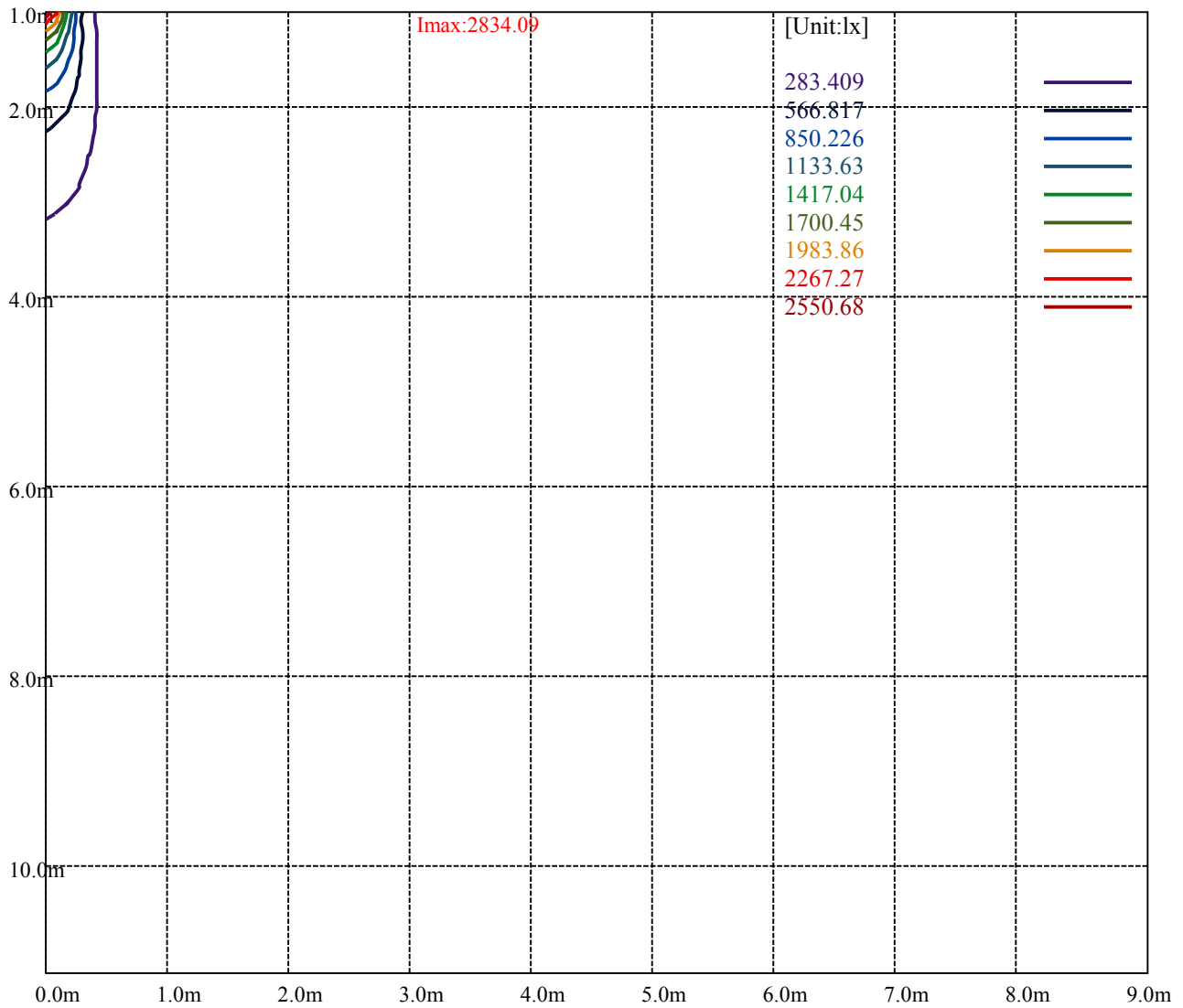
Road

Imax:2834.09

(10%Imax)	283.409	—
(20%Imax)	566.817	—
(30%Imax)	850.226	—
(40%Imax)	1133.63	—
(50%Imax)	1417.04	—
(60%Imax)	1700.45	—
(70%Imax)	1983.86	—
(80%Imax)	2267.27	—
(90%Imax)	2550.68	—



(10%Emax)	70.852	
(20%Emax)	141.7038	
(30%Emax)	212.5558	
(40%Emax)	283.4075	
(50%Emax)	354.26	
(60%Emax)	425.1125	
(70%Emax)	495.9625	
(80%Emax)	566.815	
(90%Emax)	637.6675	



Luminance Table

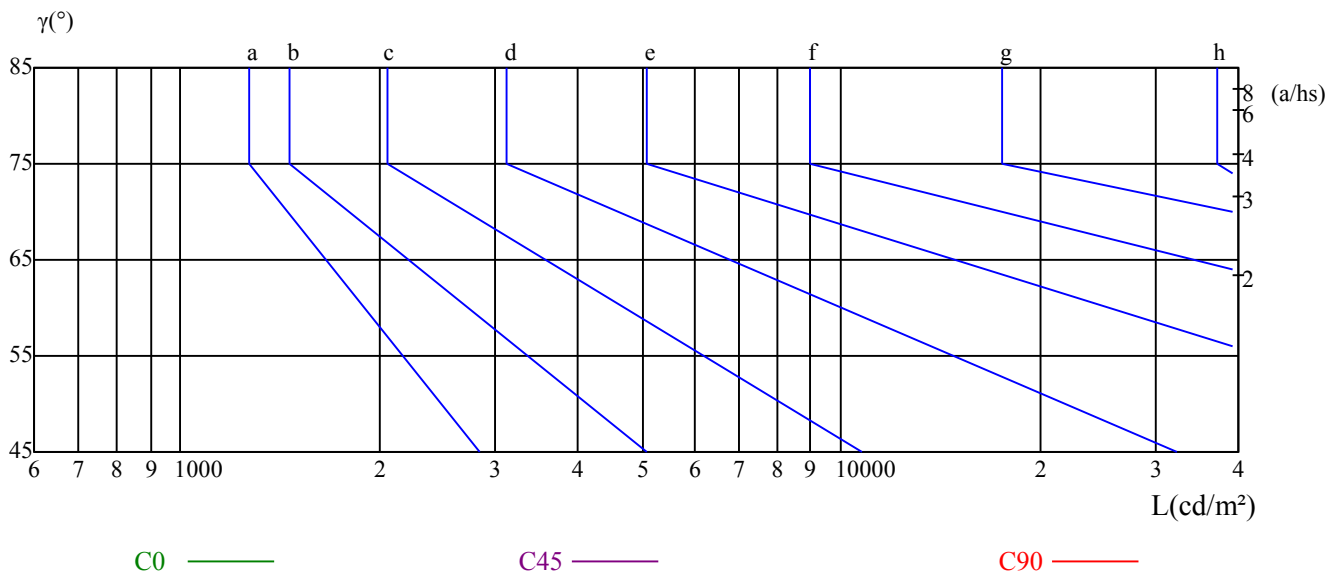
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

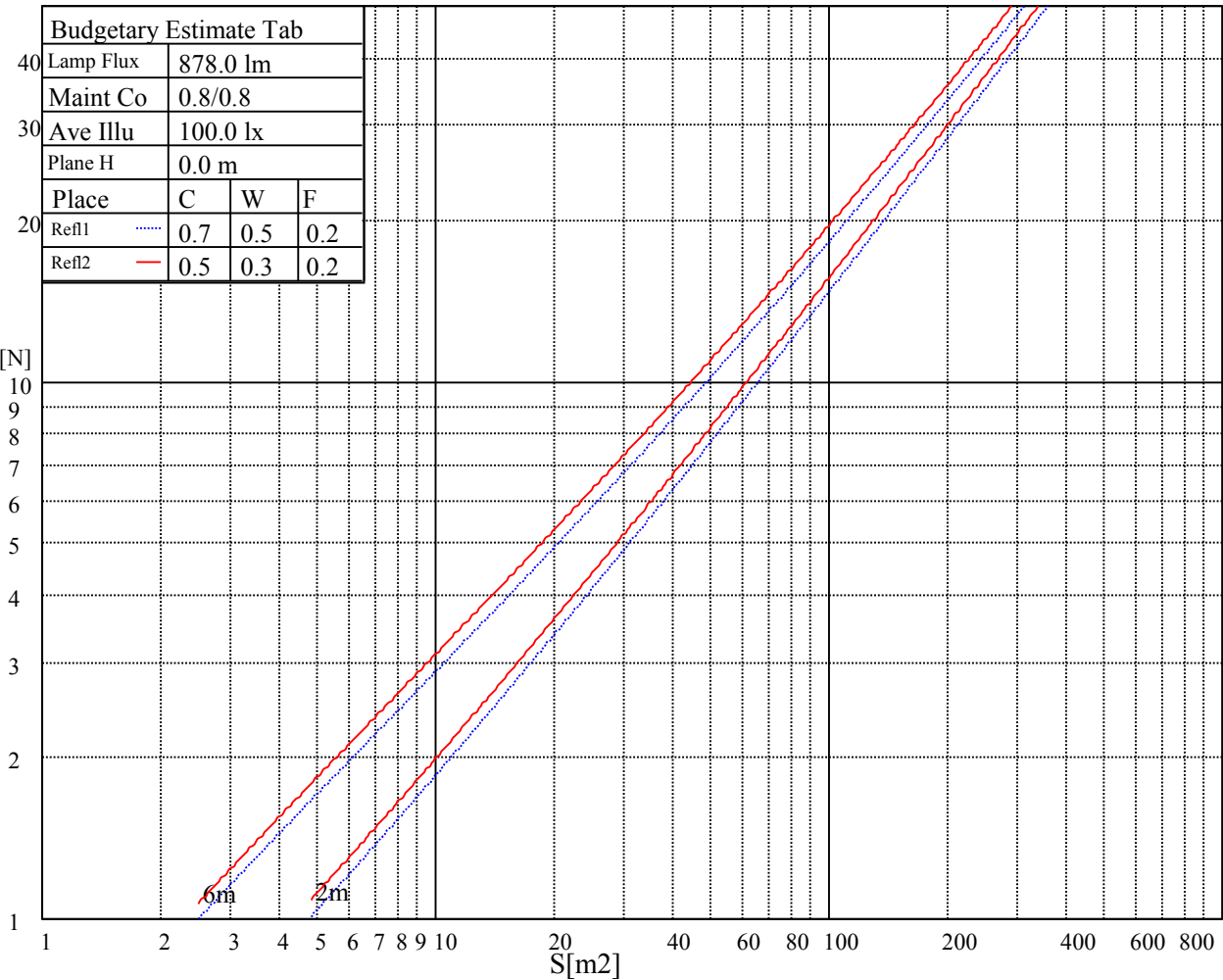
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

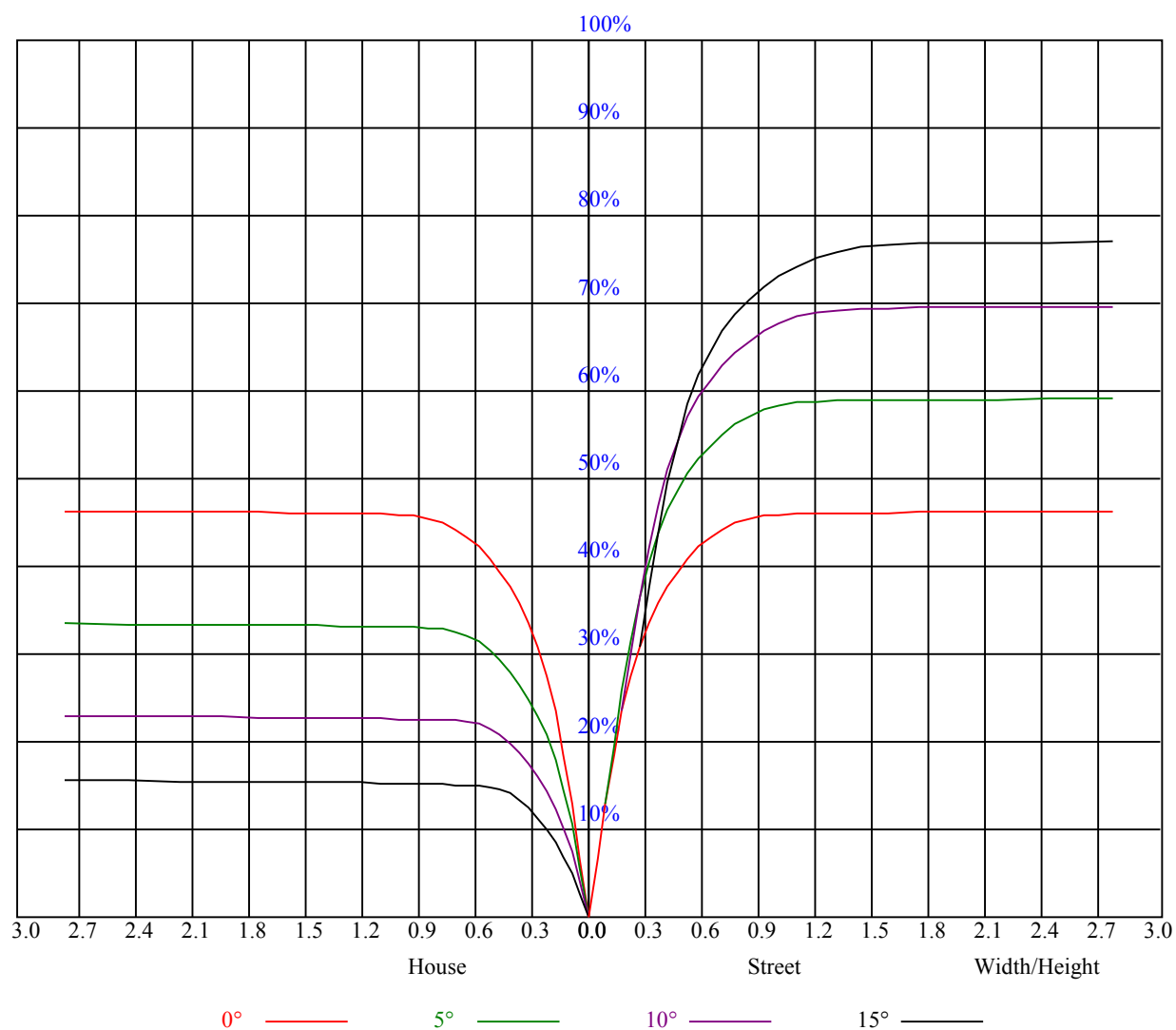
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.12	1.12	1.12	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.05	1.03	1.01	1.03	1.01	1.00	0.99	0.98	0.96	0.96	0.95	0.94	0.93	0.92	0.91	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	0.87	0.86	0.84
3	0.93	0.89	0.86	0.92	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.80
4	0.89	0.84	0.80	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.76
5	0.84	0.79	0.76	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	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	0.68	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.66
8	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.63
9	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
10	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58



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	2808.56	2599.31	1815.19	1042.88	565.31	370.69	290.81	246.43	174.54
22.5	2829.94	2622.38	1821.38	1045.69	552.38	354.38	285.75	243.96	150.92
45.0	2842.31	2418.19	1627.31	910.24	483.24	321.92	271.35	223.93	101.36
67.5	2848.50	2553.19	1817.44	984.38	516.38	334.13	285.75	225.79	112.11
90.0	2824.31	2402.44	1528.88	846.51	452.03	304.37	262.97	195.24	73.41
112.5	2858.06	2489.63	1762.31	938.81	487.13	321.75	264.32	211.44	90.96
135.0	2809.13	2299.50	1532.81	813.66	437.01	302.40	259.03	199.63	64.01
157.5	2851.88	2419.88	1716.75	909.00	483.75	333.00	272.81	224.72	113.01
180.0	2808.56	2271.94	1559.25	796.05	447.24	317.31	267.75	224.78	103.28
202.5	2829.94	2287.69	1519.88	807.86	458.10	325.97	273.21	235.46	112.22
225.0	2842.31	2529.56	1725.19	923.06	505.69	353.81	288.00	245.14	158.74
247.5	2848.50	2399.06	1522.13	843.36	471.54	336.71	281.42	241.48	145.35
270.0	2824.31	2655.56	1797.75	979.31	523.69	362.25	292.50	248.01	186.81
292.5	2858.06	2521.13	1615.50	890.49	488.98	333.73	282.15	243.56	167.23
315.0	2809.13	2680.31	1824.75	1025.44	548.44	365.63	290.25	249.53	195.98
337.5	2851.88	2445.19	1626.75	923.79	507.21	342.90	279.51	242.89	153.79
360.0	2808.56	2599.31	1815.19	1042.88	565.31	370.69	290.81	246.43	174.54
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	30.21	4.11	3.60	3.49	3.38	3.43	3.43	3.43	3.49
22.5	19.63	3.99	3.60	3.54	3.49	3.49	3.49	3.49	5.29
45.0	7.76	3.88	3.66	3.49	3.49	3.49	3.49	3.49	3.43
67.5	6.58	3.83	3.60	3.49	3.49	3.49	3.49	3.49	3.49
90.0	4.11	3.71	3.54	3.49	3.49	3.49	3.43	3.49	3.43
112.5	4.33	3.77	3.54	3.49	3.49	3.49	3.43	3.49	3.43
135.0	4.11	3.71	3.49	3.49	3.43	3.49	3.49	3.43	3.43
157.5	5.91	3.77	3.54	3.49	3.43	3.43	3.43	3.43	3.43
180.0	4.28	3.66	3.49	3.43	3.43	3.43	3.43	3.43	3.38
202.5	6.13	3.83	3.54	3.49	3.49	3.49	3.49	3.49	3.49
225.0	24.13	4.16	3.66	3.54	3.43	3.49	3.49	3.49	3.49
247.5	21.15	3.94	3.60	3.49	3.43	3.49	3.49	3.43	3.43
270.0	43.76	4.05	3.66	3.49	3.43	3.43	3.49	3.49	3.49
292.5	30.04	3.94	3.60	3.49	3.43	3.49	3.43	3.43	3.49
315.0	50.06	4.44	3.60	3.49	3.49	3.43	3.43	3.43	3.43
337.5	24.58	3.99	3.54	3.43	3.43	3.43	3.43	3.38	3.43
360.0	30.21	4.11	3.60	3.49	3.38	3.43	3.43	3.43	3.49
C/ γ (°)	90.0								
0.0	3.38								
22.5	6.53								
45.0	3.43								
67.5	3.49								
90.0	3.43								
112.5	3.49								
135.0	3.43								
157.5	3.38								
180.0	3.43								
202.5	3.43								
225.0	3.43								
247.5	3.43								
270.0	3.43								
292.5	3.43								
315.0	3.43								
337.5	3.43								
360.0	3.38								