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Nata

LumCAT: 1-0805-S
Luminaire: 92.70.208.00
Report No: NATA0100
Test No: GC2019103004
LampCAT: OSRAM 5050
Lamp flux(lm): 878.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.2970
Power (W): 10.1000
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 714.54
Efficiency(%): 81.38%
Lumens(lm)/Power(W): 70.75
Central intensity(cd): 499.388
Maximum intensity(cd): 507.544
Angle of maximum intensity: $C=292.5$ $\gamma=5.0$
Beam Angle(50%Imax): [C0/180]Total=74.2
[C90/270]Total=73.5
Field angle(10%Imax): [C0/180]Total=94.2
[C90/270]Total=94.7
Maximum s/h(1/2): C0_180=1.15 C90_270=1.12
Maximum s/h(1/4): C0_180=1.07 C90_270=1.02
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.38%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.537%

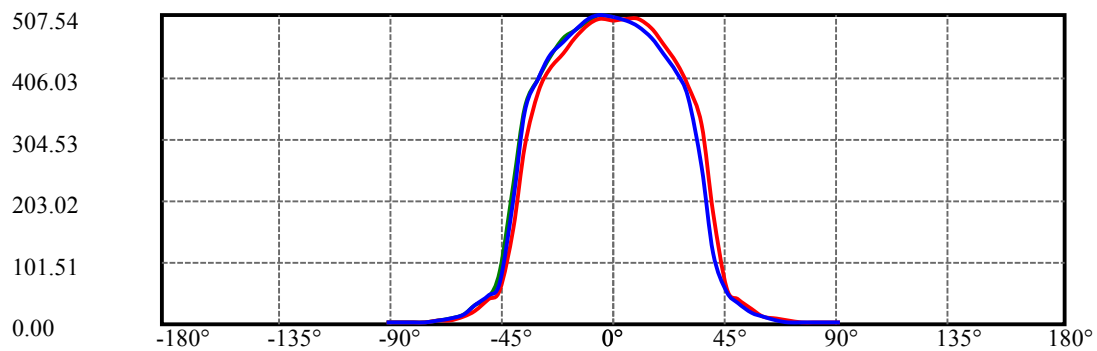
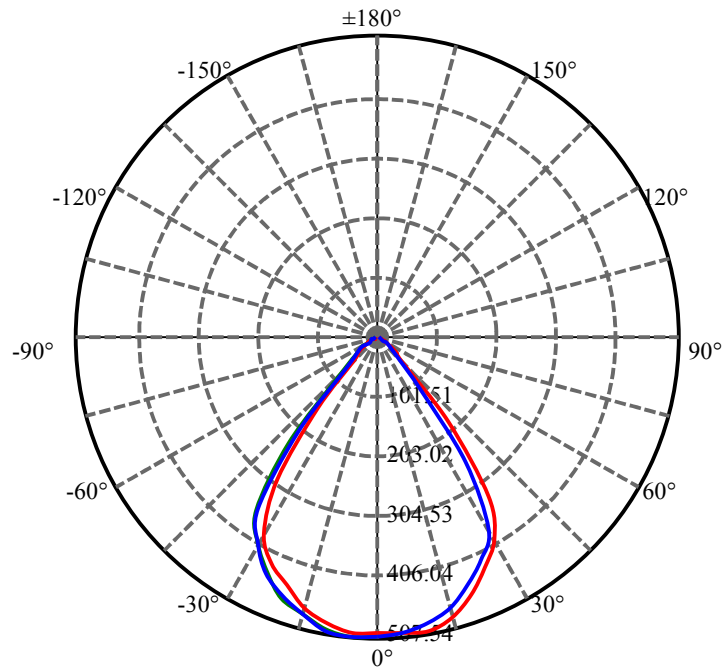
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	504.246	0.000	0	.000%	.000%
5.0	502.400	12.034	12.034	1.371%	1.684%
10.0	494.838	35.674	47.709	4.063%	6.677%
15.0	479.162	57.777	105.486	6.581%	14.763%
20.0	457.116	77.162	182.648	8.788%	25.562%
25.0	427.883	92.820	275.468	10.572%	38.552%
30.0	393.086	103.894	379.362	11.833%	53.092%
35.0	337.250	107.547	486.909	12.249%	68.143%
40.0	223.179	93.503	580.413	10.650%	81.229%
45.0	101.682	60.151	640.564	6.851%	89.647%
50.0	48.280	30.302	670.866	3.451%	93.888%
55.0	26.494	16.258	687.124	1.852%	96.164%
60.0	15.947	9.810	696.934	1.117%	97.537%
65.0	9.485	6.183	703.117	.704%	98.402%
70.0	5.973	3.914	707.031	.446%	98.950%
75.0	3.913	2.584	709.615	.294%	99.311%
80.0	2.981	1.845	711.459	.210%	99.569%
85.0	2.788	1.568	713.027	.179%	99.789%
90.0	2.725	1.509	714.536	.172%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	379.36	43.21%	53.09%
0-40	580.41	66.11%	81.23%
0-60	696.93	79.38%	97.54%
0-90	713.03	81.21%	99.79%
0-120	713.03	81.21%	99.79%
0-180	714.54	81.38%	100.00%
60-90	25.90	2.95%	3.63%
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%
0-39.53	571.63	65.11%	80.00%

ZONAL LUMEN SUMMARY

0-10	47.71
10-20	134.94
20-30	196.71
30-40	201.05
40-50	90.45
50-60	26.07
60-70	10.10
70-80	4.43
80-90	1.57
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



C292.5(Max): —————

C0/C180: —————

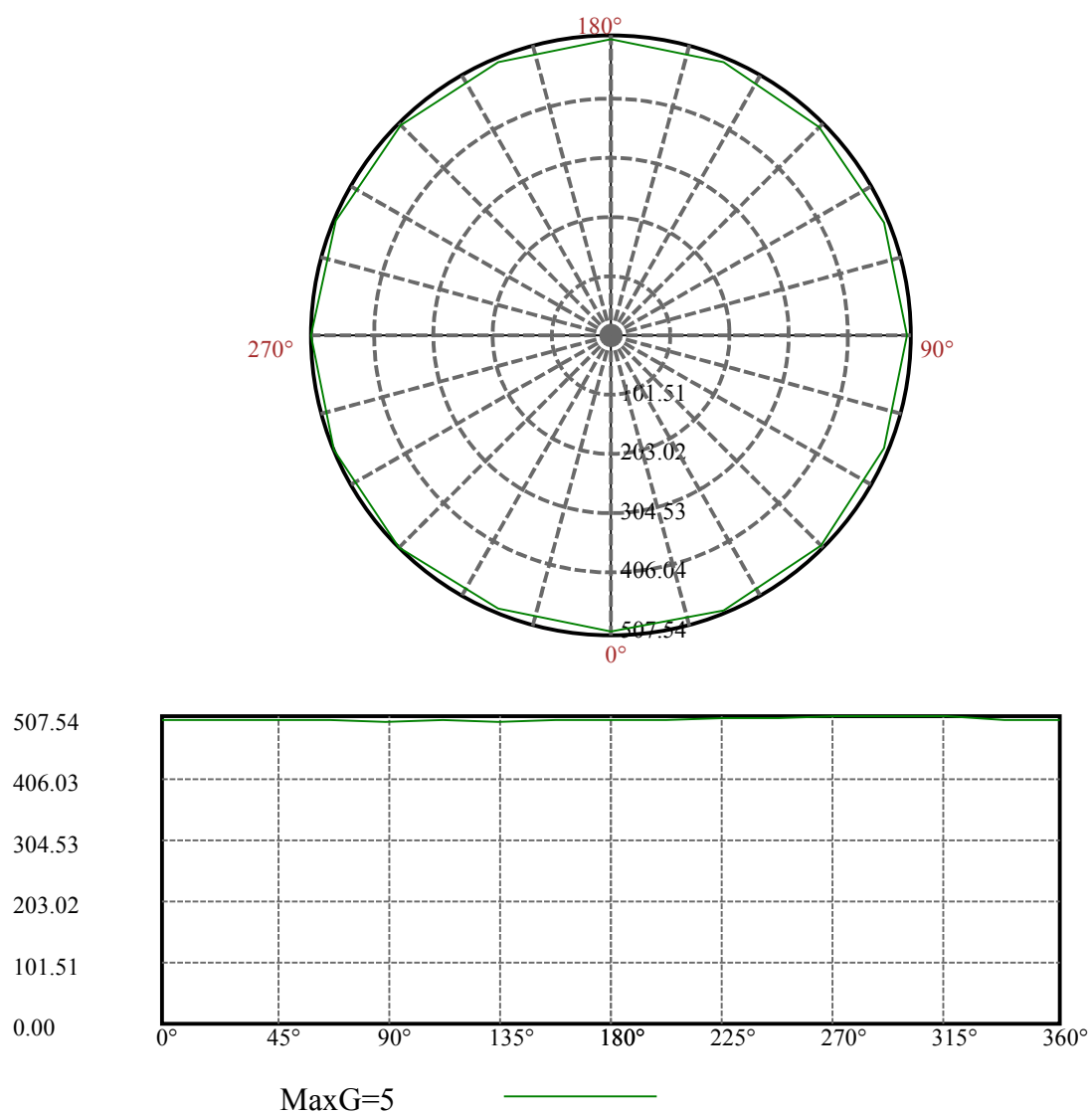
C90/C270: —————

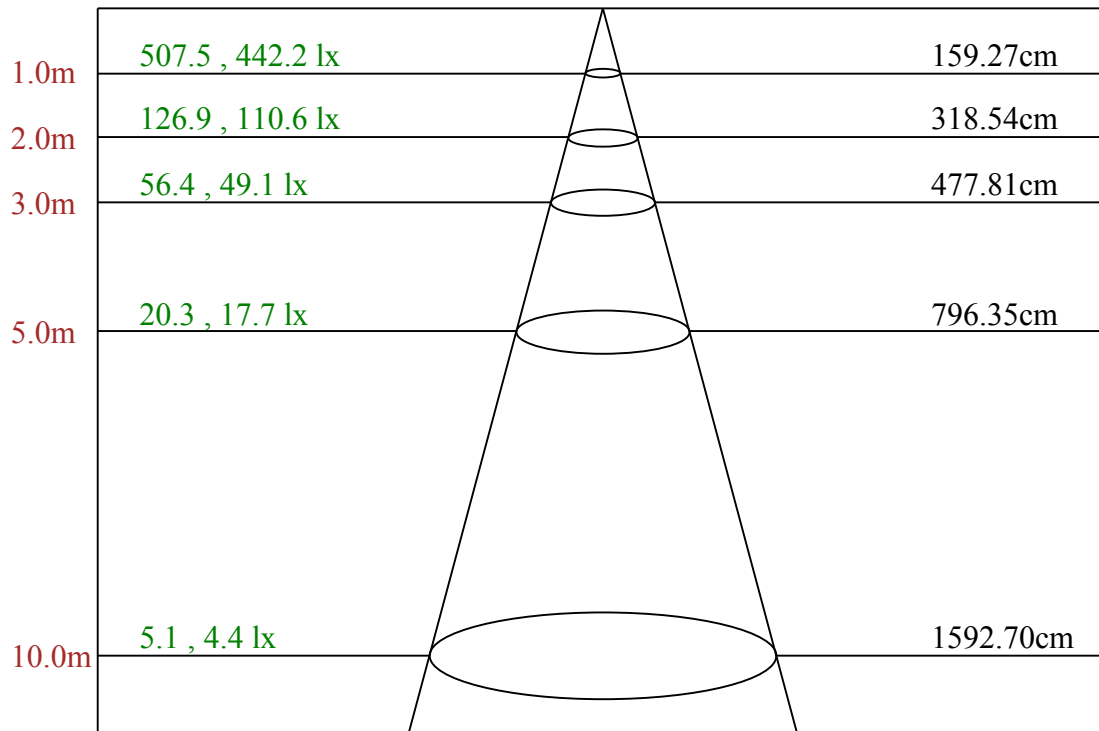
Field angle(10%Imax):C0/180Left:56.8 Right:37.4

:C90/270Left:44.4 Right:50.4

Beam Angle(50%Imax):C0/180Left:46.5 Right:27.6

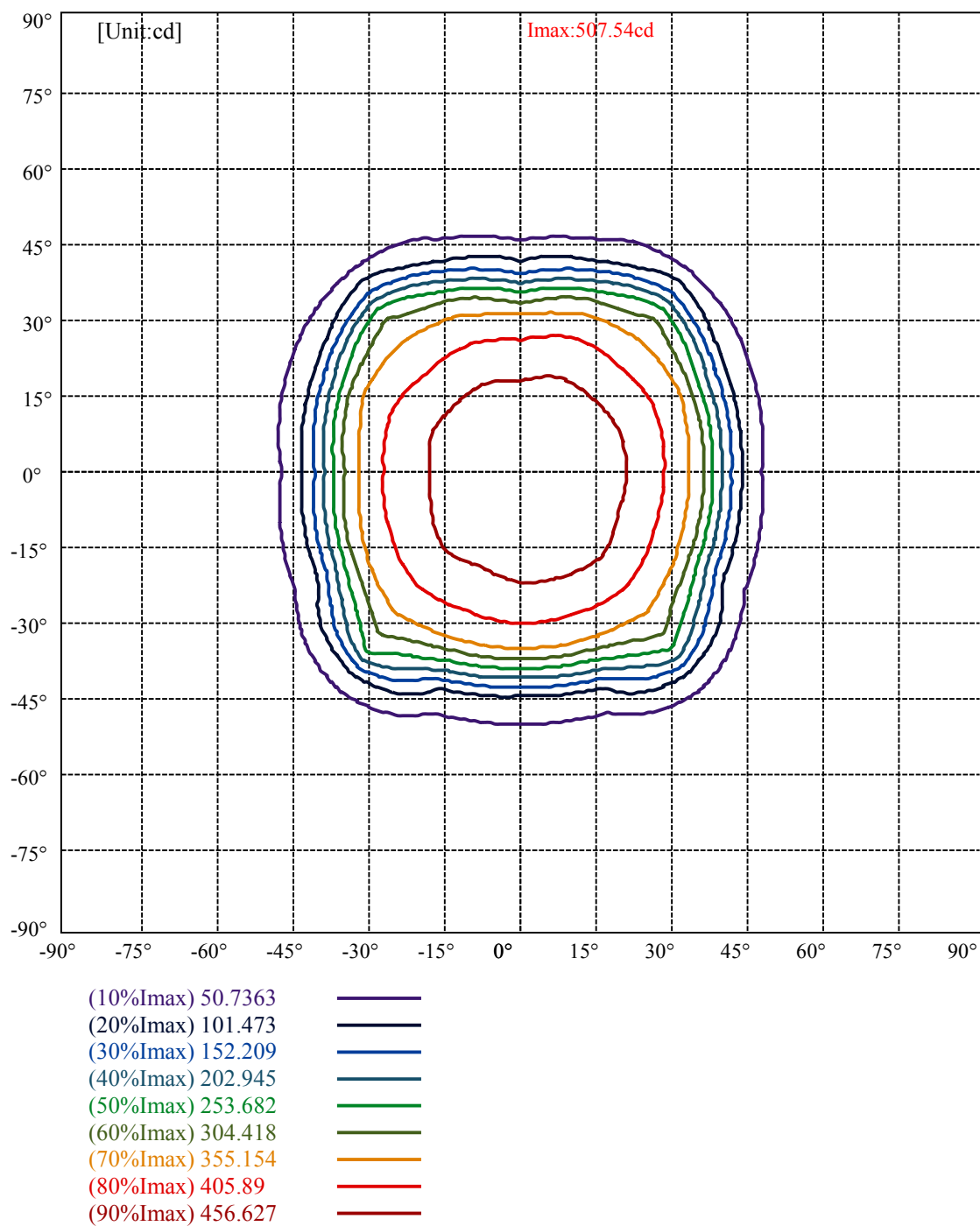
:C90/270Left:33.4 Right:40.2

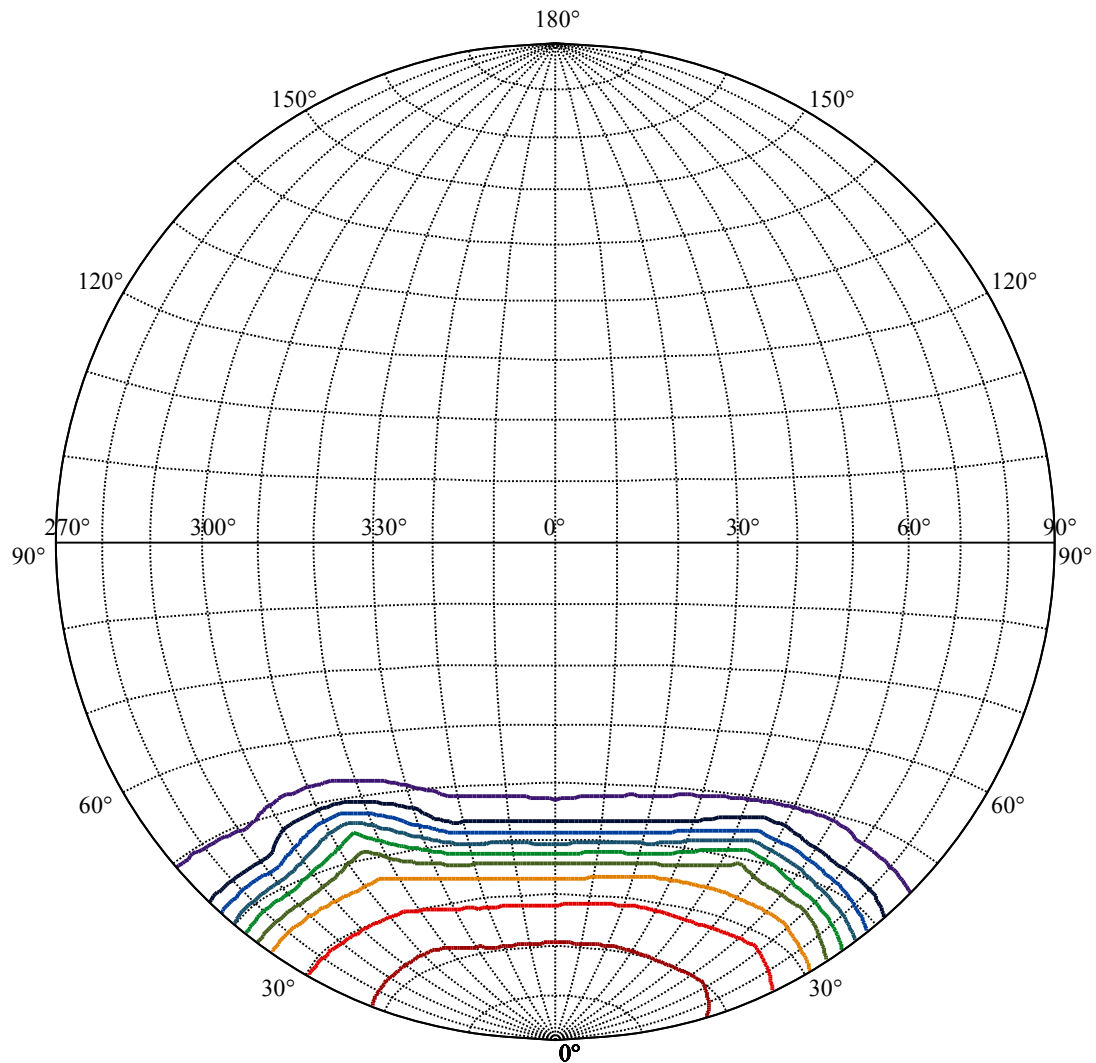




Max , Ave

Beam angle of C292.5 plane 77.05





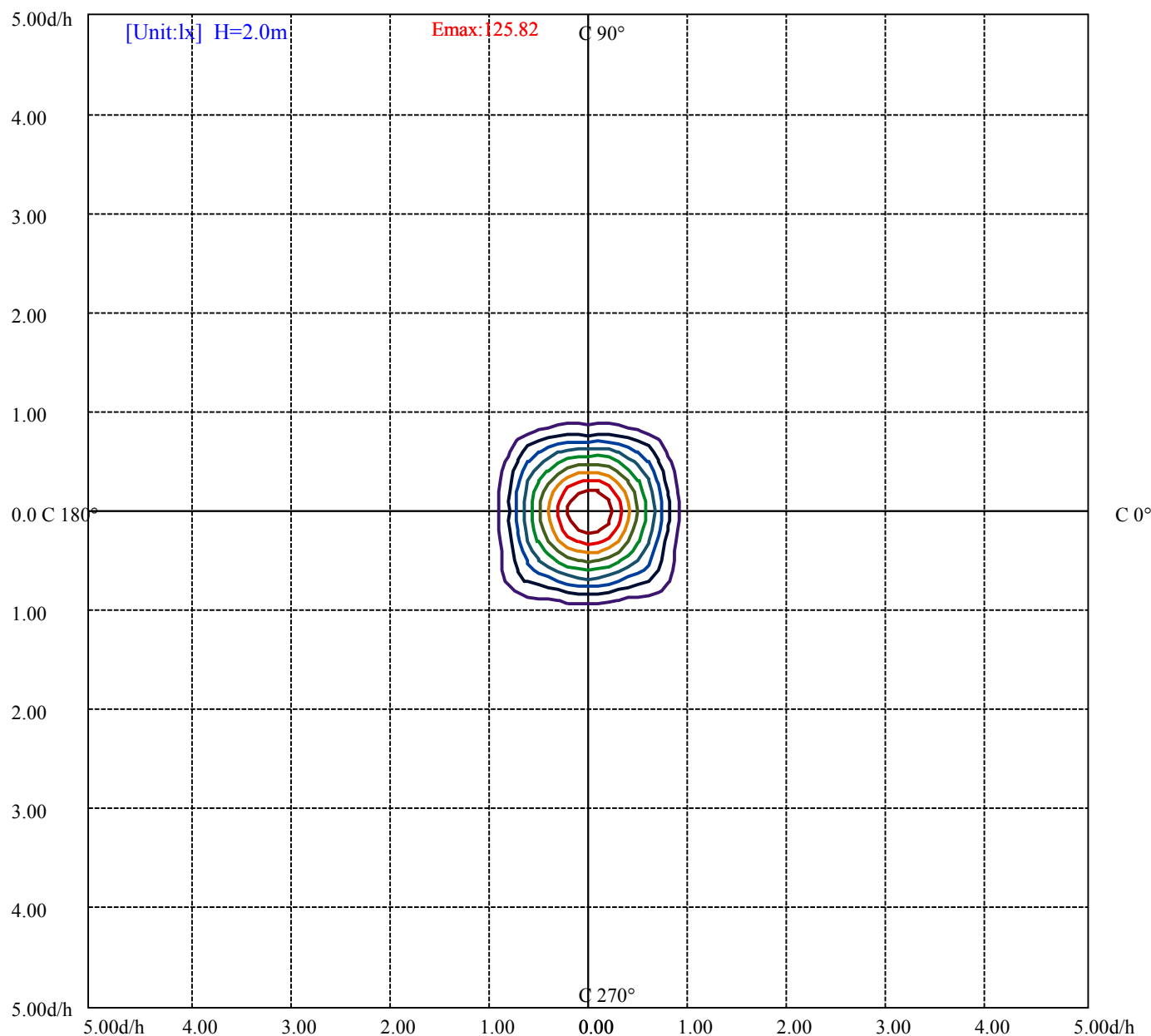
House

[Unit:cd]

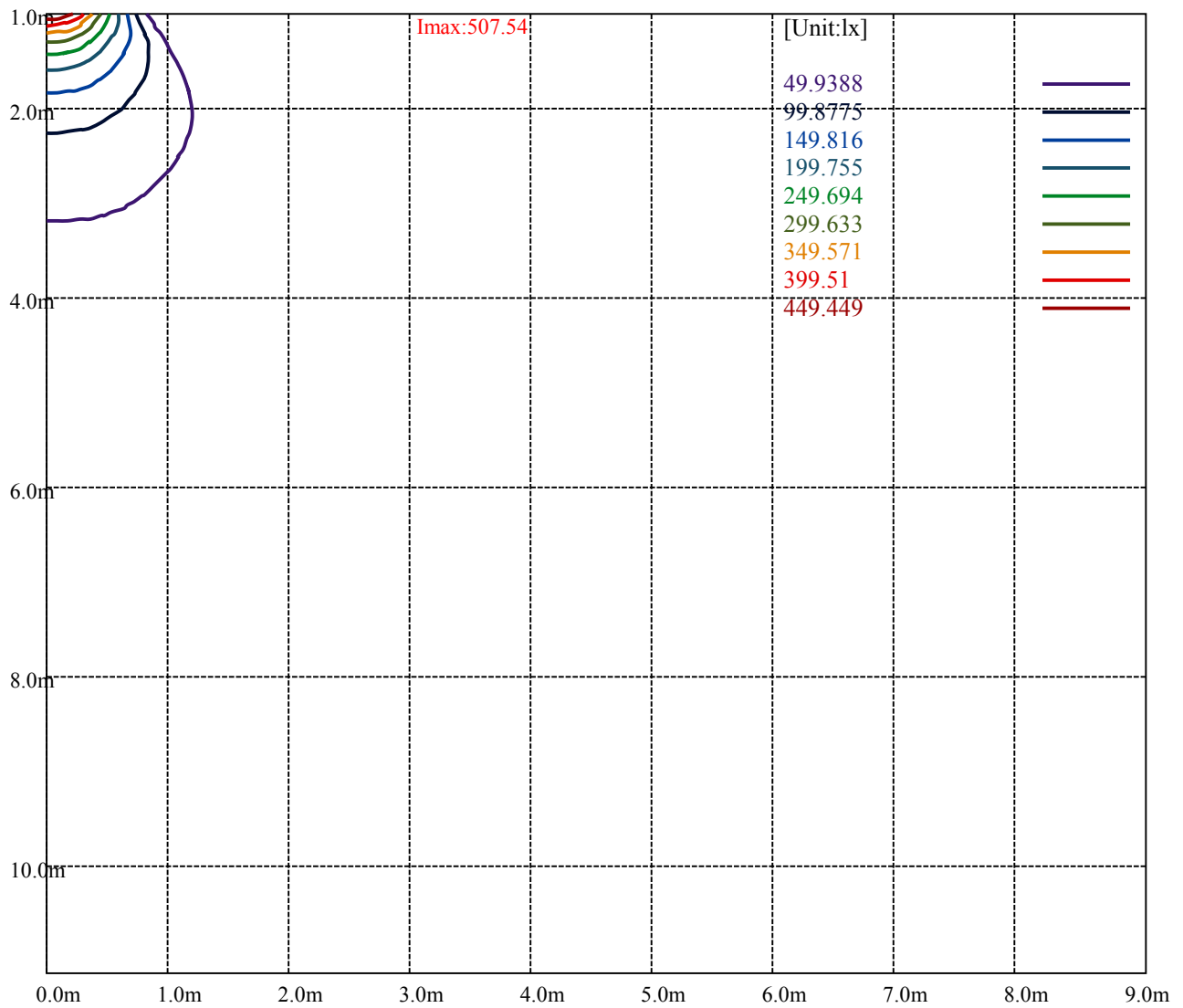
Road

Imax:507.54
 (10%Imax) 50.7537
 (20%Imax) 101.507
 (30%Imax) 152.261
 (40%Imax) 203.015
 (50%Imax) 253.769
 (60%Imax) 304.522
 (70%Imax) 355.276
 (80%Imax) 406.03
 (90%Imax) 456.784





(10%Emax)	12.58173	—
(20%Emax)	25.1635	—
(30%Emax)	37.74525	—
(40%Emax)	50.327	—
(50%Emax)	62.9085	—
(60%Emax)	75.49025	—
(70%Emax)	88.072	—
(80%Emax)	100.6537	—
(90%Emax)	113.2355	—



Luminance Table

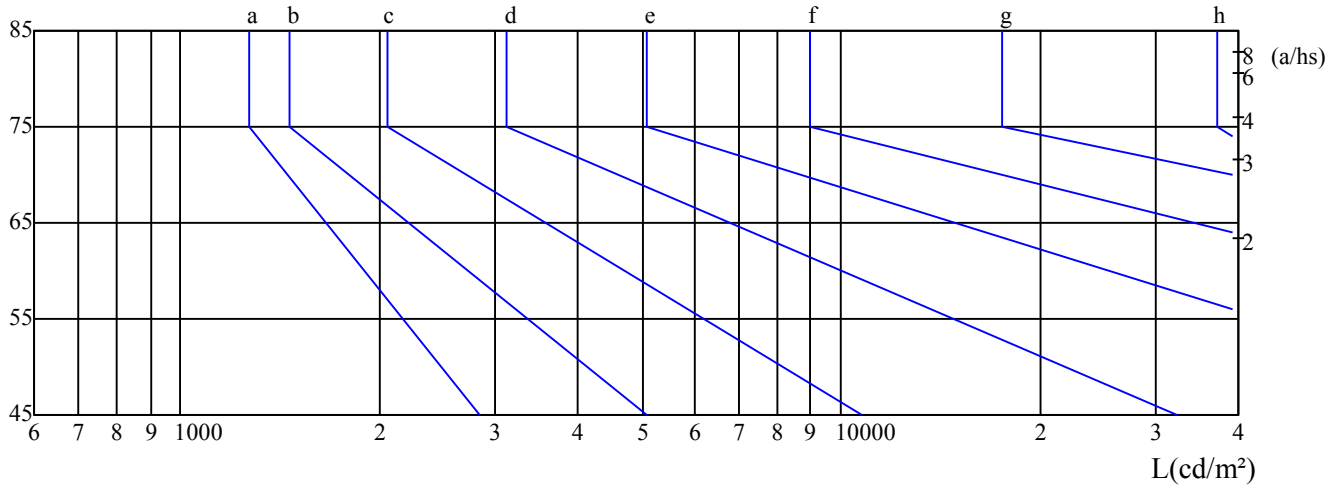
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

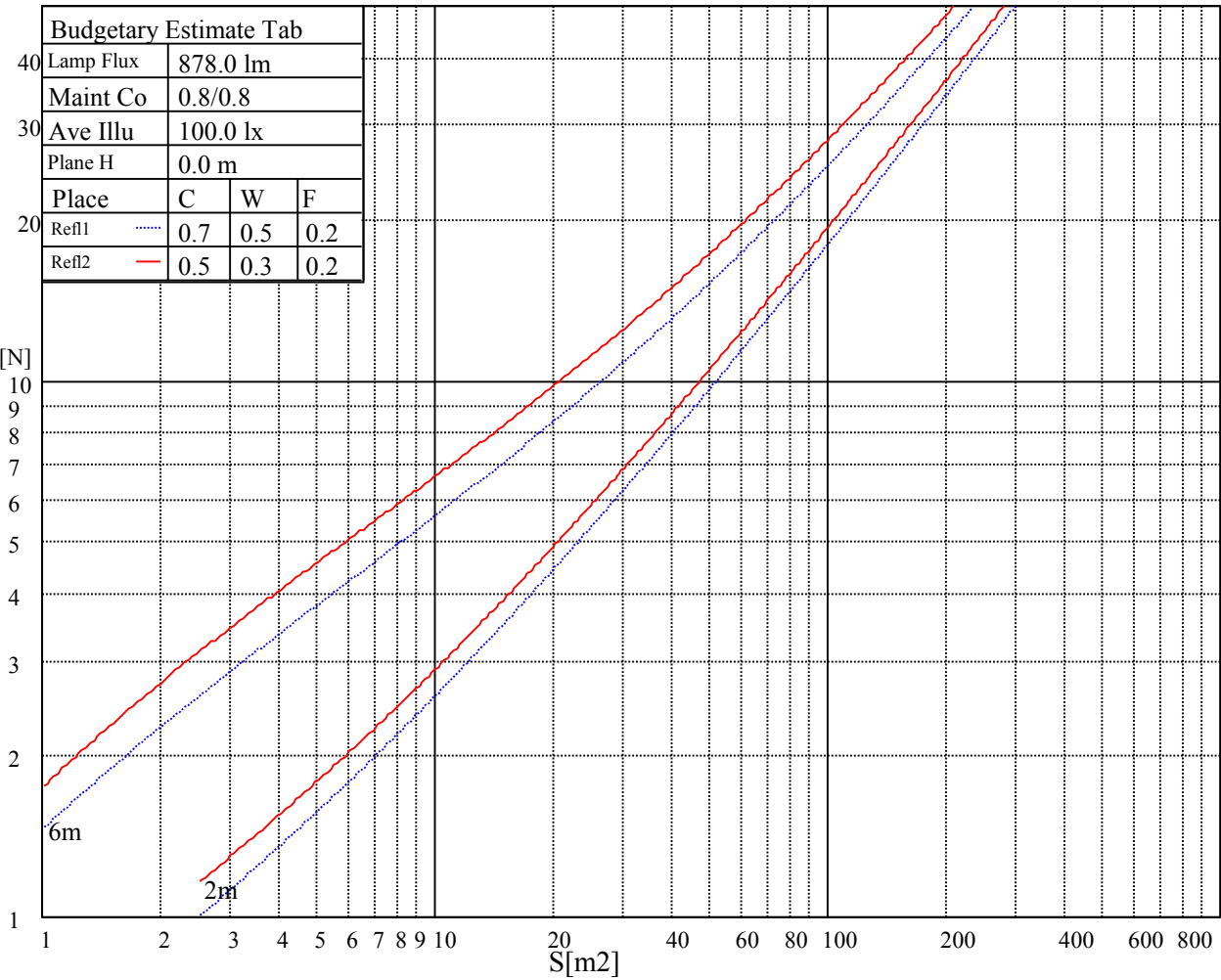
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

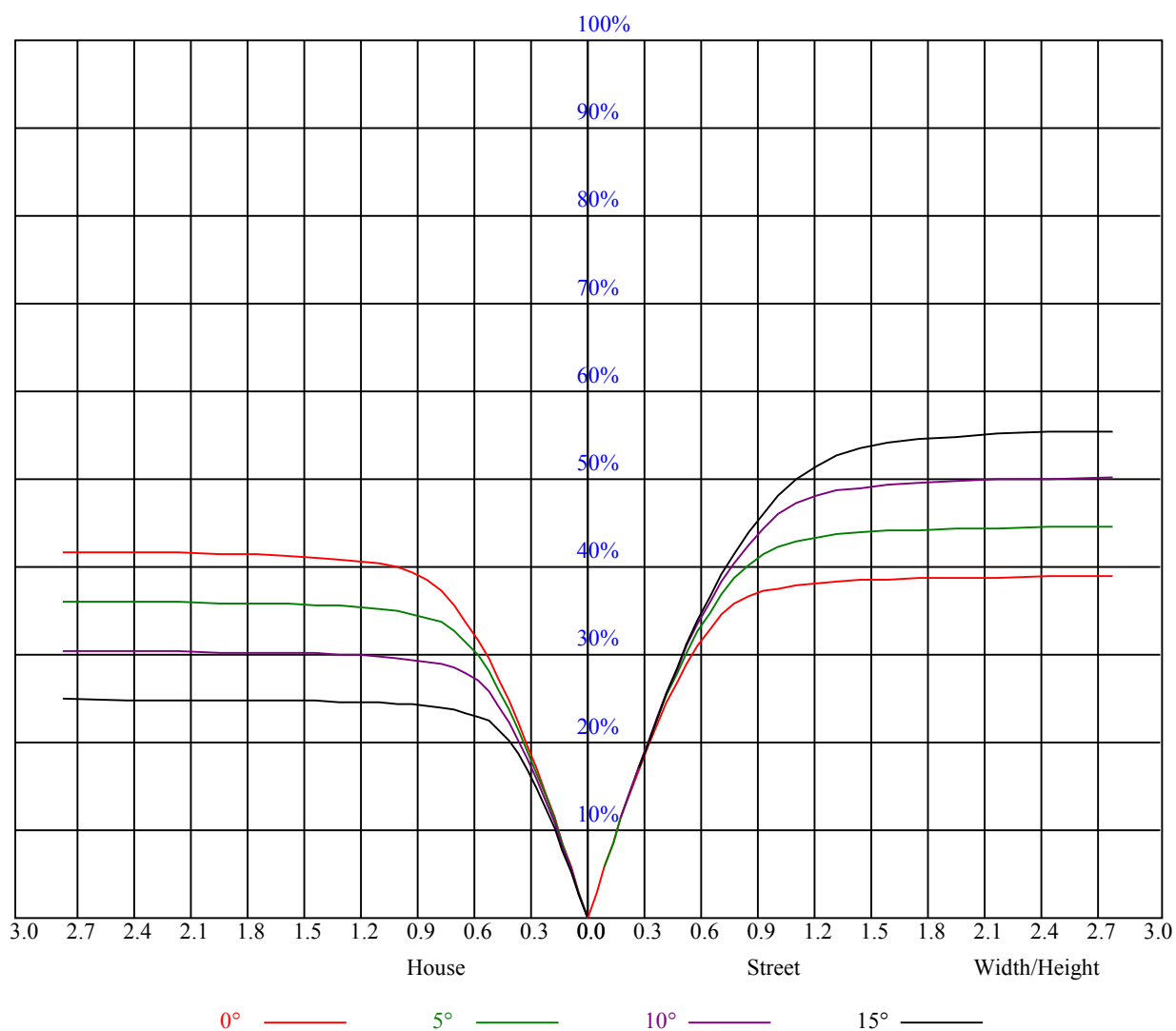
C0 ———

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	0.97	0.97	0.97	0.95	0.95	0.95	0.90	0.90	0.90	0.87	0.87	0.87	0.83	0.83	0.83	0.81
1	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.82	0.81	0.81	0.79	0.78	0.78	0.77	0.76	0.74
2	0.82	0.78	0.75	0.80	0.77	0.74	0.77	0.75	0.72	0.75	0.73	0.71	0.73	0.71	0.69	0.68
3	0.75	0.70	0.66	0.74	0.69	0.66	0.71	0.68	0.65	0.69	0.66	0.64	0.68	0.65	0.63	0.61
4	0.69	0.64	0.60	0.68	0.63	0.59	0.66	0.62	0.59	0.64	0.61	0.58	0.63	0.60	0.57	0.56
5	0.64	0.58	0.54	0.63	0.58	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.58	0.55	0.52	0.51
6	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.51	0.48	0.54	0.51	0.48	0.47
7	0.55	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.44	0.51	0.47	0.44	0.43
8	0.51	0.45	0.41	0.50	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.47	0.44	0.41	0.39
9	0.47	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.38	0.45	0.41	0.38	0.44	0.41	0.38	0.36
10	0.44	0.39	0.35	0.44	0.39	0.35	0.43	0.38	0.35	0.42	0.38	0.35	0.42	0.38	0.35	0.34



Intensity data(cd)

Appendix Page: 15 Total:15

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	499.39	500.85	502.31	487.01	461.64	428.51	391.95	326.64	183.83
22.5	504.68	502.37	498.38	486.11	461.76	432.00	398.03	348.75	208.63
45.0	503.27	501.08	494.89	481.11	456.13	424.69	392.51	347.34	296.55
67.5	504.00	501.41	495.28	481.33	456.53	427.78	393.69	330.36	190.91
90.0	504.17	499.56	489.83	471.15	444.77	412.14	373.39	258.30	116.66
112.5	505.29	500.29	490.22	475.14	449.16	418.22	383.74	327.77	190.69
135.0	506.19	499.22	487.18	471.60	447.81	412.71	383.91	345.32	297.28
157.5	506.98	501.53	491.74	473.29	451.63	425.31	388.97	344.25	207.84
180.0	499.39	500.57	490.28	471.15	444.04	419.12	381.43	292.67	156.26
202.5	504.68	501.53	487.35	469.13	452.93	424.52	391.84	338.51	200.08
225.0	503.27	503.89	496.13	477.51	461.76	436.33	403.31	367.37	320.68
247.5	504.00	504.45	497.31	476.21	457.03	434.19	399.21	352.69	233.89
270.0	504.17	506.93	501.53	482.68	464.46	440.27	403.43	351.17	206.04
292.5	505.29	507.54	499.44	483.36	468.51	439.03	402.81	354.71	230.79
315.0	506.19	507.26	497.81	491.63	474.58	442.41	407.59	367.54	325.86
337.5	506.98	499.95	497.76	488.19	461.14	428.91	393.58	342.62	204.86
360.0	499.39	500.85	502.31	487.01	461.64	428.51	391.95	326.64	183.83
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	58.67	40.73	23.91	14.06	8.33	5.40	3.71	2.98	2.70
22.5	74.70	40.95	26.21	15.47	9.11	5.85	3.94	2.98	2.81
45.0	144.73	43.03	22.05	15.58	9.39	5.74	3.77	2.87	2.76
67.5	60.30	41.23	25.65	14.46	8.72	5.63	3.71	2.93	2.81
90.0	52.03	34.88	19.63	11.59	6.92	4.67	3.38	2.87	2.81
112.5	61.54	41.51	26.21	14.68	8.61	5.57	3.66	2.87	2.76
135.0	143.33	43.82	23.63	15.86	9.62	5.79	3.60	2.81	2.76
157.5	77.46	43.20	28.29	16.31	9.45	5.91	3.94	2.87	2.81
180.0	55.97	40.39	22.84	13.44	7.88	5.06	3.54	2.81	2.81
202.5	72.00	42.98	28.35	16.26	9.45	5.91	3.88	2.98	2.87
225.0	257.34	91.91	29.08	20.53	12.66	7.71	4.61	3.26	2.81
247.5	91.41	46.13	31.67	17.66	10.18	6.30	4.16	3.09	2.81
270.0	70.88	47.70	30.38	16.71	9.90	6.24	4.16	3.15	2.81
292.5	88.71	45.62	30.99	17.27	10.01	6.41	4.11	3.04	2.76
315.0	245.48	87.24	28.24	19.63	12.32	7.54	4.67	3.21	2.76
337.5	72.39	41.18	26.78	15.64	9.23	5.85	3.77	2.98	2.76
360.0	58.67	40.73	23.91	14.06	8.33	5.40	3.71	2.98	2.70
C/ γ (°)	90.0								
0.0	2.64								
22.5	2.76								
45.0	2.70								
67.5	2.76								
90.0	2.76								
112.5	2.70								
135.0	2.70								
157.5	2.70								
180.0	2.70								
202.5	2.76								
225.0	2.76								
247.5	2.76								
270.0	2.81								
292.5	2.70								
315.0	2.70								
337.5	2.70								
360.0	2.64								