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NATA

LumCAT: 3-1703-N	
Luminaire: 92.70.045.00+92.70.061.00	
Report No: NATA0100	Voltage(V):
Test No: GC2018102009	Current(A):
LampCAT: PHILIPS 1208 G7	Power (W): 24.6400
Lamp flux(lm): 3673.0	PF:
Number of Lamps: 1	Ballast type:
Length(mm): 86	Width(mm): 86
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2796.40
Efficiency(%): 76.13%
Lumens(lm)/Power(W): 114.89
Central intensity(cd): 6213.938
Maximum intensity(cd): 6213.938
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.8
[C90/270]Total=34.8
Field angle(10%Imax): [C0/180]Total=65.4
[C90/270]Total=65.4
Maximum s/h(1/2): C0_180=0.56 C90_270=0.56
Maximum s/h(1/4): C0_180=0.58 C90_270=0.58
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 77.07%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.607%

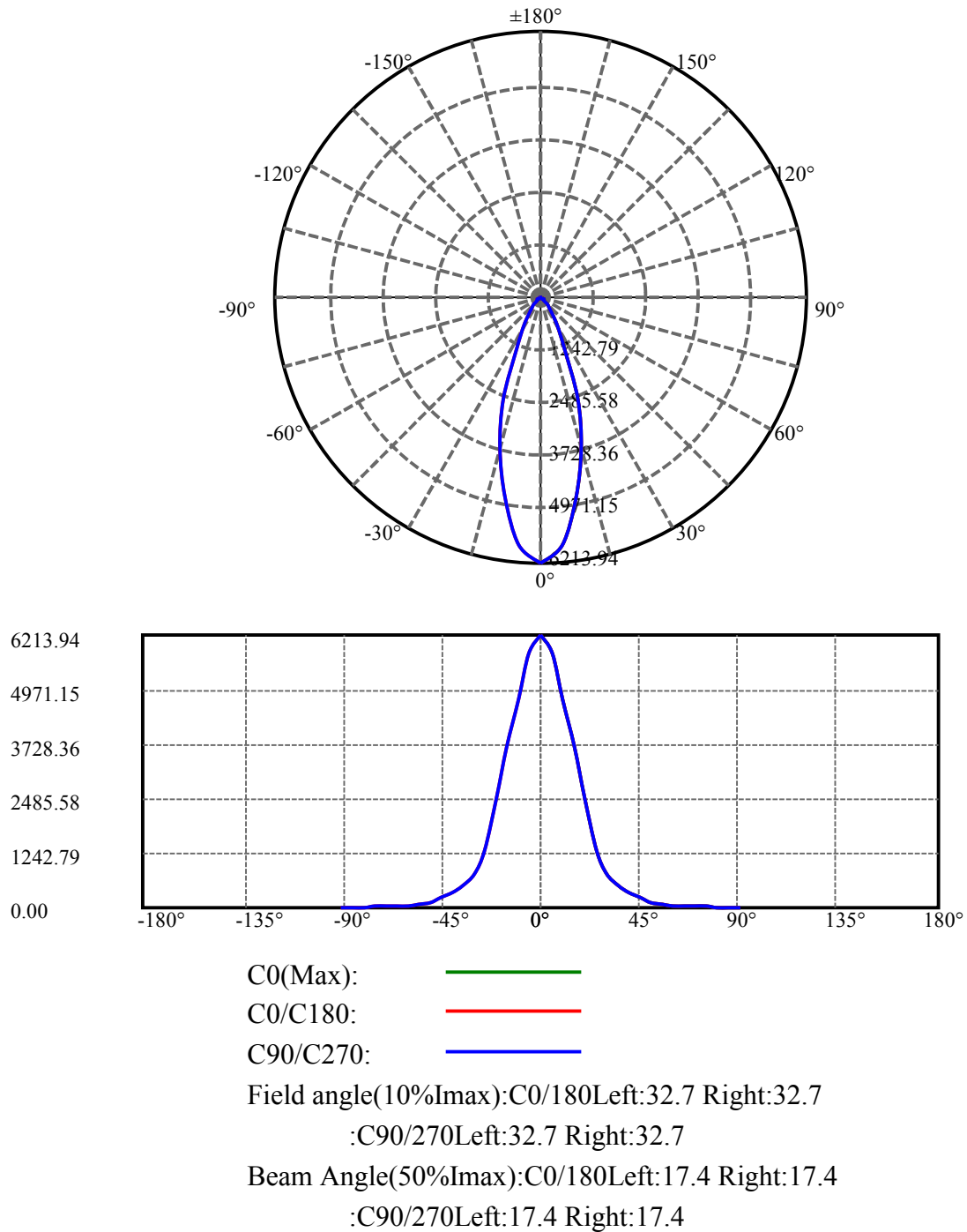
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6213.938	37.161	37.161	1.012%	1.329%
5.0	5783.766	276.310	313.47	7.523%	11.210%
10.0	4756.008	452.691	766.162	12.325%	27.398%
15.0	3653.157	518.267	1284.429	14.110%	45.931%
20.0	2513.813	471.275	1755.704	12.831%	62.784%
25.0	1313.297	304.229	2059.933	8.283%	73.664%
30.0	775.189	212.455	2272.388	5.784%	81.261%
35.0	490.071	154.078	2426.465	4.195%	86.771%
40.0	332.445	117.132	2543.598	3.189%	90.960%
45.0	216.064	83.744	2627.342	2.280%	93.954%
50.0	127.350	53.474	2680.816	1.456%	95.867%
55.0	72.907	32.736	2713.552	.891%	97.037%
60.0	44.860	21.295	2734.847	.580%	97.799%
65.0	32.161	15.977	2750.824	.435%	98.370%
70.0	26.824	13.817	2764.641	.376%	98.864%
75.0	21.931	11.611	2776.252	.316%	99.279%
80.0	17.726	9.569	2785.821	.261%	99.622%
85.0	13.753	7.510	2793.33	.204%	99.890%
90.0	11.215	3.074	2796.404	.084%	100.000%

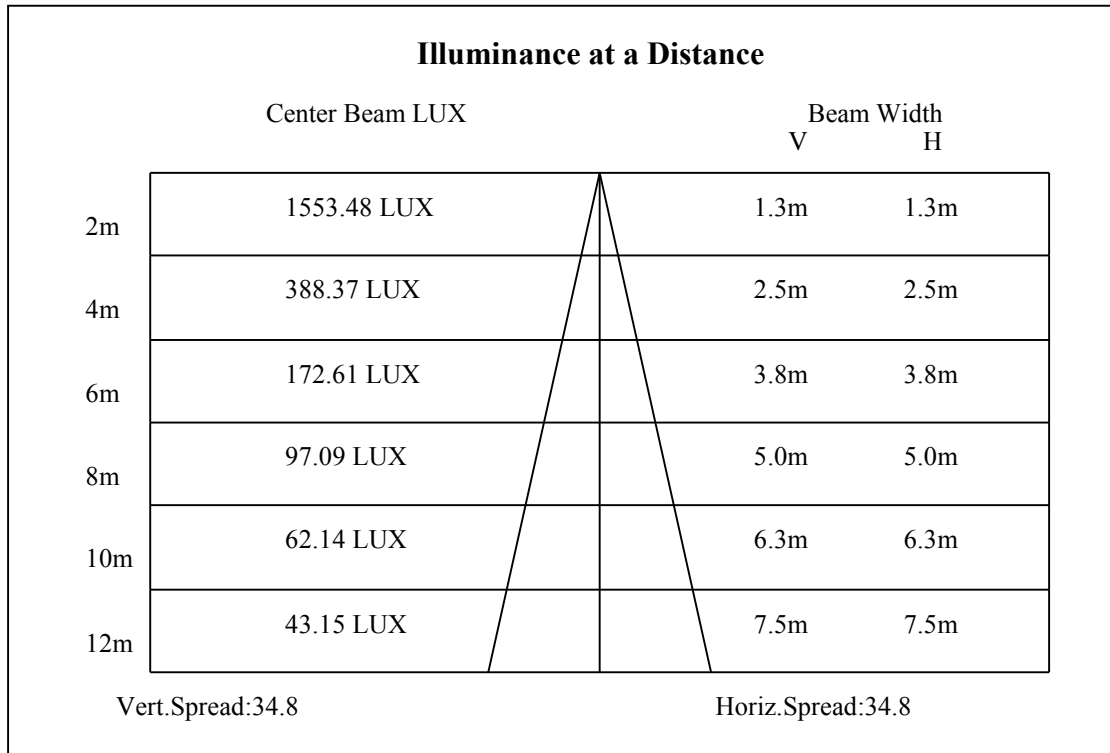
ZONAL LUMEN SUMMARY

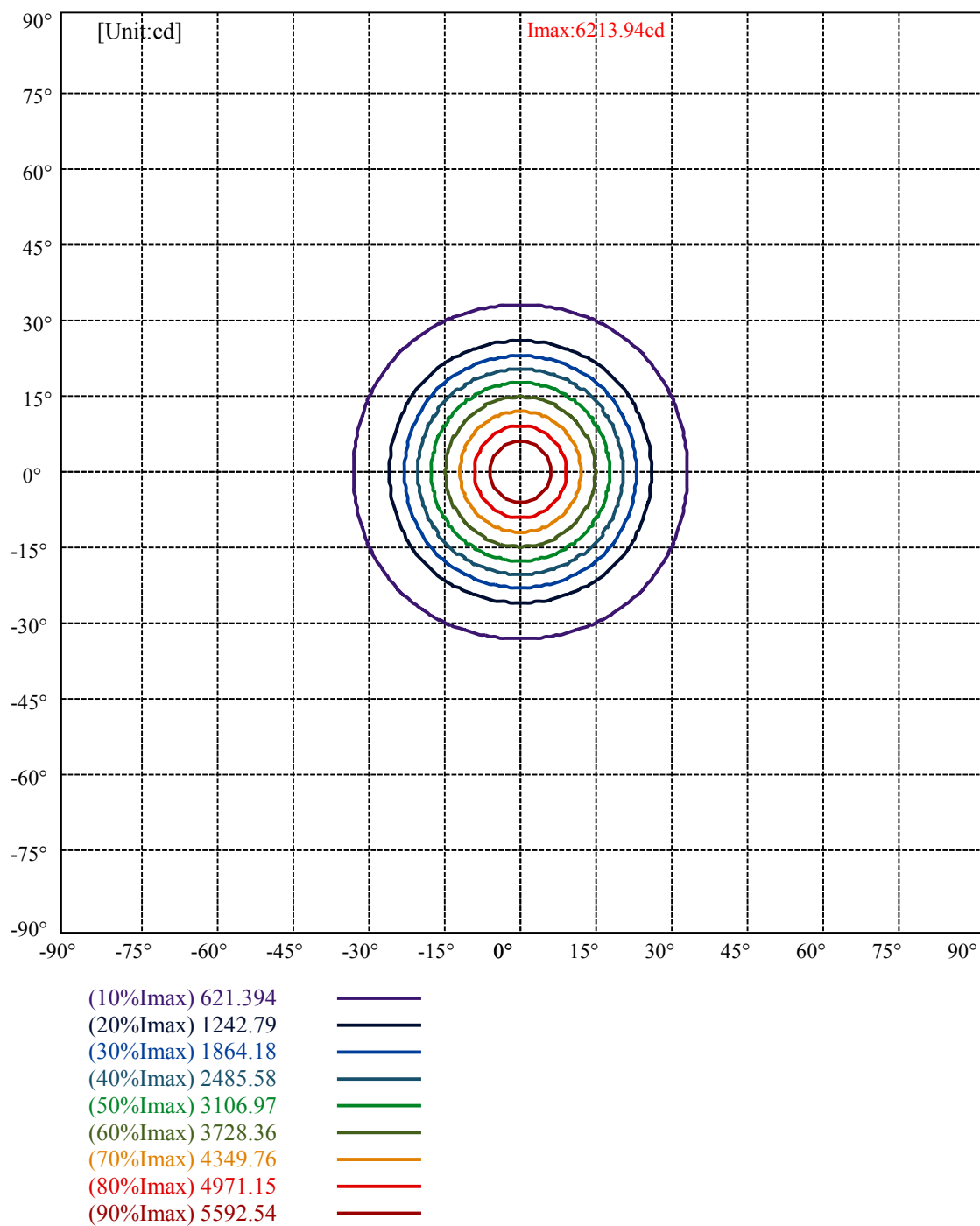
Zone	Lumens	%Lamp	%Fixt
0-30	2272.39	61.87%	81.26%
0-40	2543.60	69.25%	90.96%
0-60	2734.85	74.46%	97.80%
0-90	2793.33	76.05%	99.89%
0-120	2793.33	76.05%	99.89%
0-180	2796.40	76.13%	100.00%
60-90	79.78	2.17%	2.85%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.17	2237.12	60.91%	80.00%

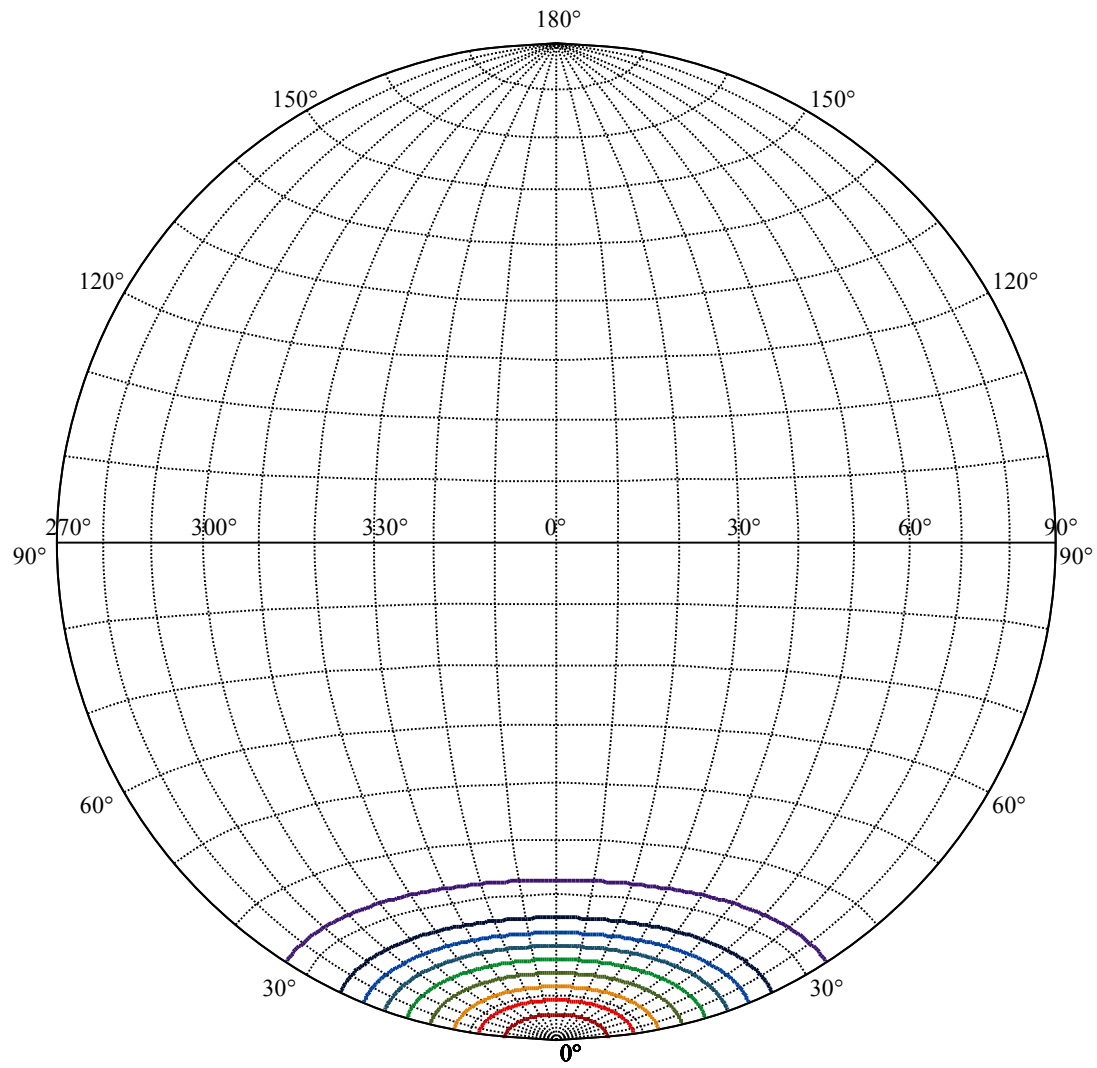
ZONAL LUMEN SUMMARY

0-10	766.16
10-20	989.54
20-30	516.68
30-40	271.21
40-50	137.22
50-60	54.03
60-70	29.79
70-80	21.18
80-90	7.51
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







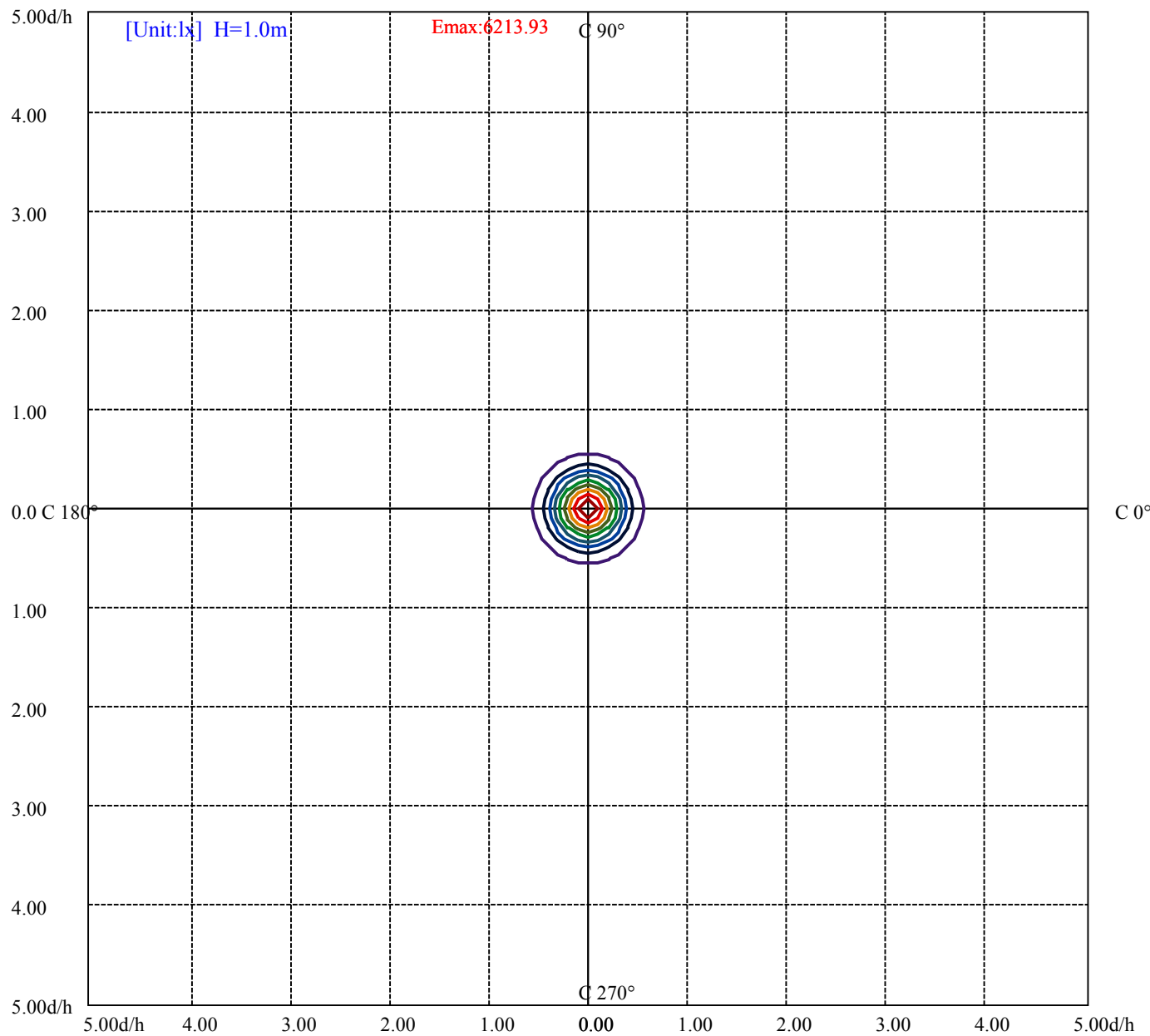


House

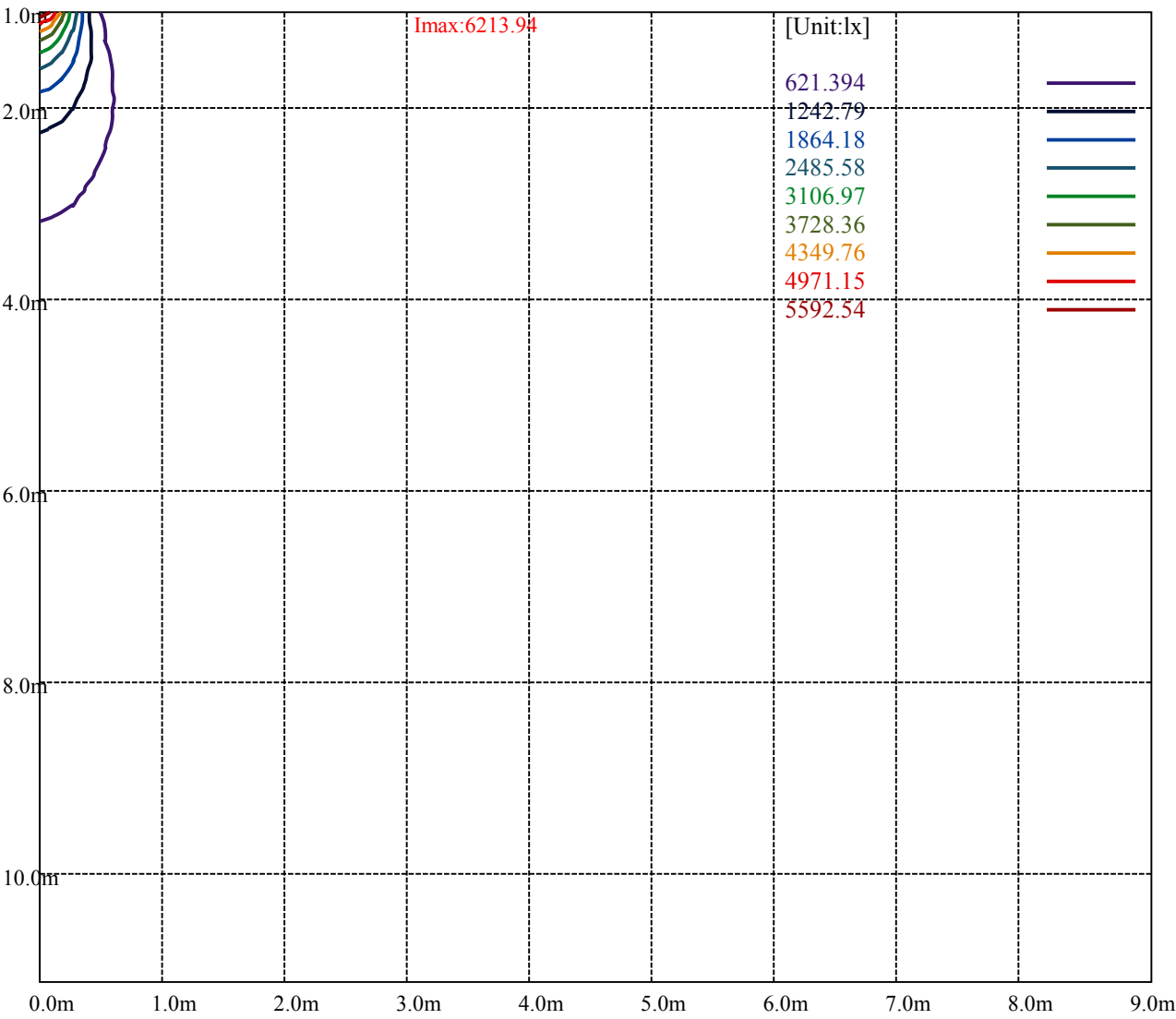
[Unit:cd]

Road

Imax:6213.94	
(10%Imax) 621.394	—
(20%Imax) 1242.79	—
(30%Imax) 1864.18	—
(40%Imax) 2485.58	—
(50%Imax) 3106.97	—
(60%Imax) 3728.36	—
(70%Imax) 4349.76	—
(80%Imax) 4971.15	—
(90%Imax) 5592.54	—



(10%Emax) 621.392	—
(20%Emax) 1242.78	—
(30%Emax) 1864.18	—
(40%Emax) 2485.57	—
(50%Emax) 3106.96	—
(60%Emax) 3728.35	—
(70%Emax) 4349.75	—
(80%Emax) 4971.14	—
(90%Emax) 5592.53	—



Luminance Table

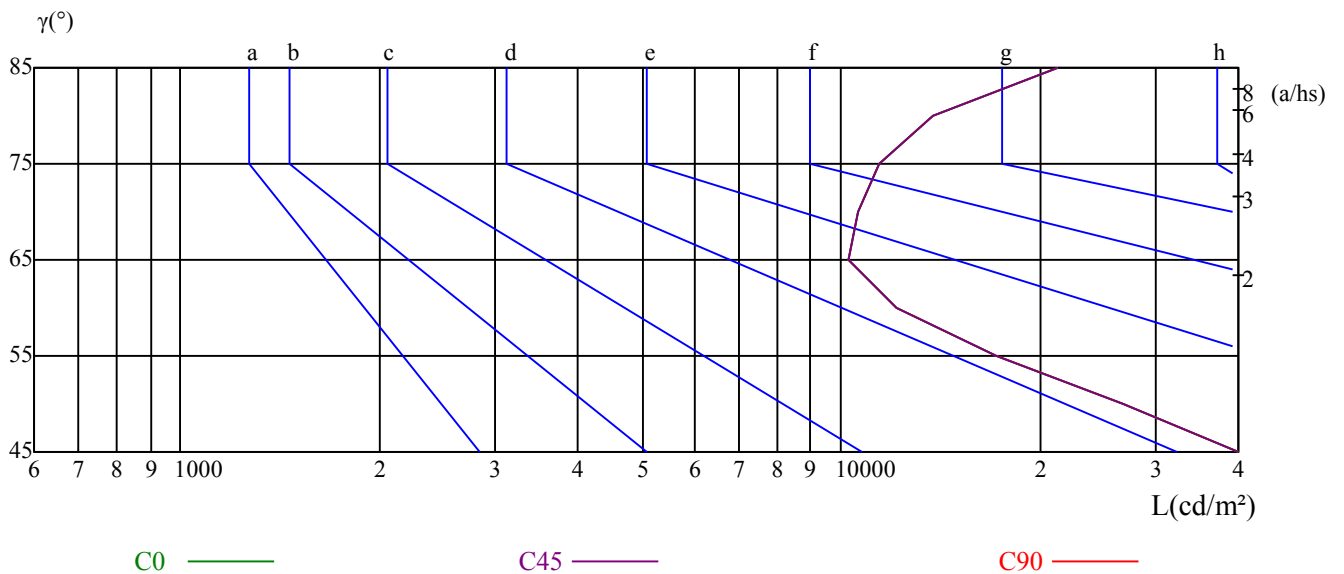
γ	45	50	55	60	65	70	75	80	85
C0	41314	26788	17186	12131	10289	10604	11457	13802	21336
C45	41314	26788	17186	12131	10289	10604	11457	13802	21336
C90	41314	26788	17186	12131	10289	10604	11457	13802	21336

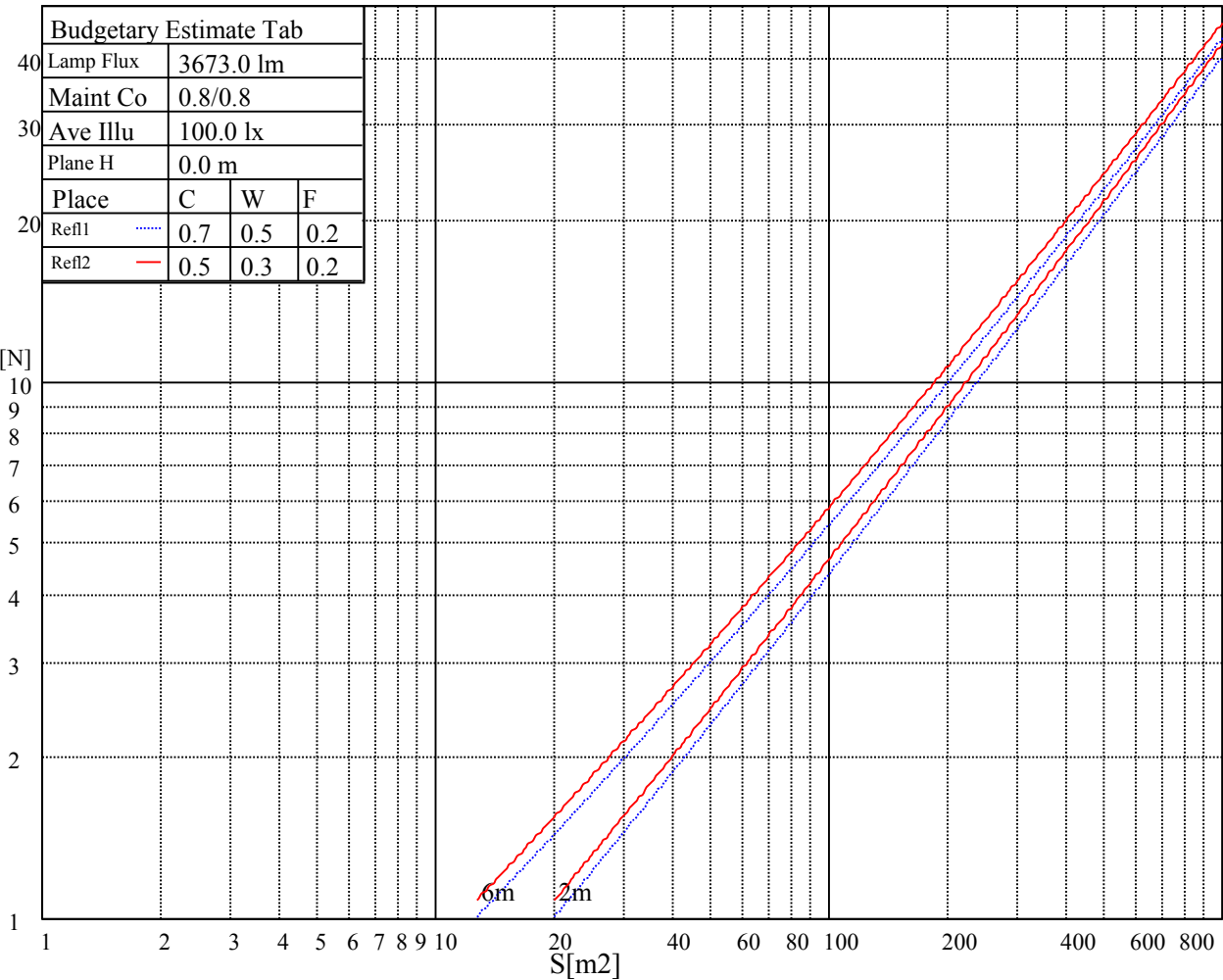
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10289	10289	10289	11457	11457	11457	21336	21336	21336

Glare Table

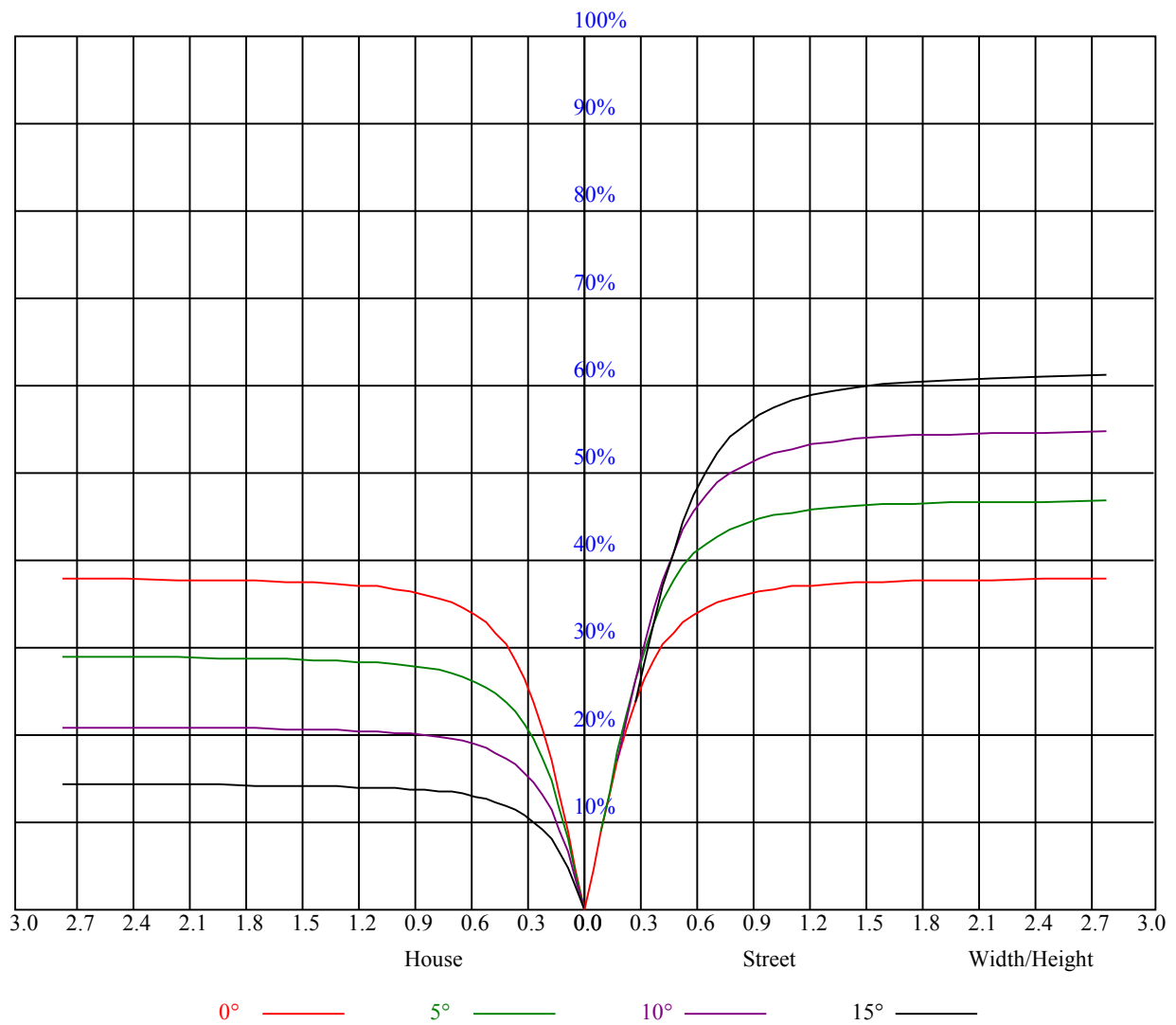
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.85	0.82	0.81	0.83	0.81	0.79	0.80	0.78	0.77	0.77	0.76	0.74	0.74	0.73	0.72	0.71
2	0.79	0.76	0.74	0.78	0.75	0.73	0.76	0.73	0.71	0.73	0.71	0.70	0.71	0.70	0.68	0.67
3	0.75	0.71	0.68	0.74	0.71	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.68	0.66	0.65	0.64
4	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.65	0.63	0.67	0.64	0.62	0.66	0.63	0.61	0.60
5	0.68	0.63	0.60	0.67	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.58
6	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55
7	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53
8	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.56	0.54	0.52	0.51
9	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.55	0.52	0.50	0.49
10	0.55	0.51	0.48	0.54	0.51	0.48	0.54	0.50	0.48	0.53	0.50	0.48	0.53	0.50	0.48	0.47



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Intensity data(cd)										Appendix Page: 14 Total:14	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	6208.31	5948.44	5004.00	3939.75	2814.19	1661.63	873.00	542.25	363.94		
45.0	6211.69	5851.13	4871.81	3792.94	2688.19	1540.13	816.19	519.75	352.69		
90.0	6217.31	5668.88	4636.69	3479.06	2338.88	1104.24	716.18	457.14	320.96		
135.0	6218.44	5860.69	4889.81	3786.75	2547.00	1456.88	785.81	487.69	340.31		
180.0	6208.31	5655.94	4619.81	3418.31	2291.06	1094.46	685.07	444.32	300.88		
225.0	6211.69	5748.75	4656.38	3479.63	2400.75	1086.53	739.24	475.26	317.31		
270.0	6217.31	5855.06	4766.63	3729.38	2551.50	1463.06	811.13	510.19	340.31		
315.0	6218.44	5681.25	4602.94	3599.44	2478.94	1099.46	774.90	483.98	323.16		
360.0	6208.31	5948.44	5004.00	3939.75	2814.19	1661.63	873.00	542.25	363.94		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	285.75	146.76	83.98	50.29	33.41	28.13	23.01	18.68	14.34		
45.0	225.39	141.13	79.54	47.42	33.92	27.84	22.61	18.45	14.12		
90.0	204.86	123.58	70.14	44.10	31.84	26.55	21.88	17.61	13.78		
135.0	209.59	126.68	74.36	45.39	32.63	27.17	22.50	18.17	14.01		
180.0	184.33	114.02	64.69	40.16	30.94	25.71	20.87	16.48	12.88		
225.0	194.74	114.92	66.99	40.61	30.60	25.82	21.15	16.88	13.28		
270.0	216.11	128.42	73.18	46.80	32.06	26.72	21.83	17.94	13.67		
315.0	207.73	123.30	70.37	44.10	31.89	26.66	21.60	17.61	13.95		
360.0	285.75	146.76	83.98	50.29	33.41	28.13	23.01	18.68	14.34		
C/ γ (°)	90.0										
0.0	11.31										
45.0	11.19										
90.0	11.19										
135.0	11.19										
180.0	11.19										
225.0	11.25										
270.0	11.19										
315.0	11.19										
360.0	11.31										