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Nata

LumCAT: 4-2705-L

Luminaire:

Report No: NATA0100

Test No: GC2020010626

LampCAT: LUMINUS CXM-14-AC40

Lamp flux(lm): 2559.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 34.3500

Current(A): 0.6000

Power (W): 20.6580

PF: 0.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 2552.55

Efficiency(%): 99.75%

Lumens(lm)/Power(W): 123.56

Central intensity(cd): 11403.980

Maximum intensity(cd): 11403.980

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.8

[C90/270]Total=22.8

Field angle(10%Imax): [C0/180]Total=41.1

[C90/270]Total=41.1

Maximum s/h(1/2): C0_180=0.39 C90_270=0.39

Maximum s/h(1/4): C0_180=0.37 C90_270=0.37

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 99.75%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.465%

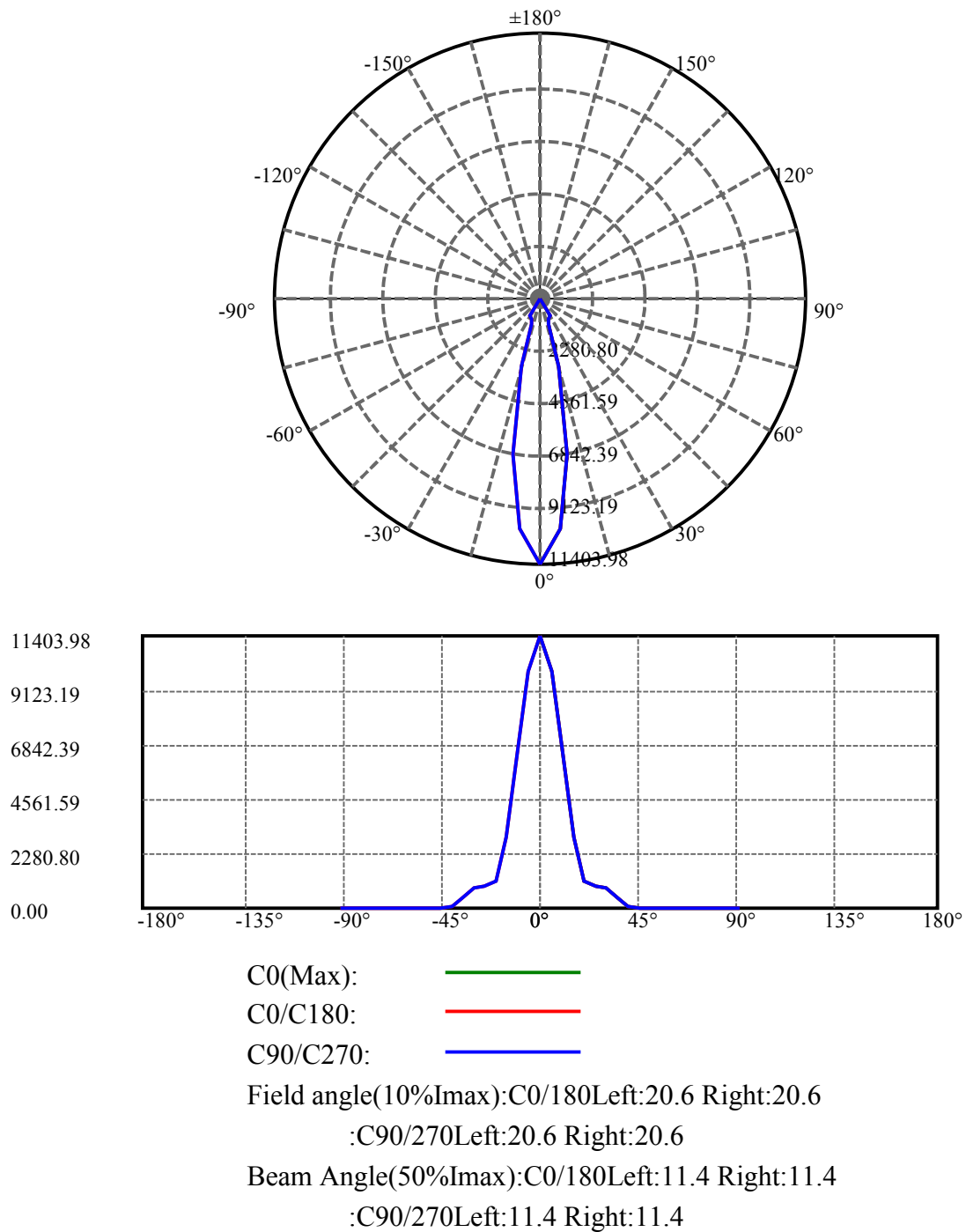
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11403.984	0.000	0	.000%	.000%
5.0	9909.352	254.795	254.795	9.957%	9.982%
10.0	6758.930	596.277	851.072	23.301%	33.342%
15.0	3009.164	579.437	1430.509	22.643%	56.042%
20.0	1166.970	344.172	1774.681	13.449%	69.526%
25.0	932.709	220.218	1994.898	8.606%	78.153%
30.0	815.674	221.259	2216.158	8.646%	86.821%
35.0	428.449	183.206	2399.363	7.159%	93.999%
40.0	42.209	78.526	2477.889	3.069%	97.075%
45.0	23.252	12.121	2490.01	.474%	97.550%
50.0	18.907	8.519	2498.529	.333%	97.884%
55.0	16.305	7.656	2506.185	.299%	98.184%
60.0	14.808	7.192	2513.377	.281%	98.465%
65.0	13.760	6.945	2520.322	.271%	98.737%
70.0	12.930	6.758	2527.08	.264%	99.002%
75.0	12.270	6.587	2533.667	.257%	99.260%
80.0	11.798	6.440	2540.107	.252%	99.512%
85.0	11.377	6.297	2546.404	.246%	99.759%
90.0	11.074	6.147	2552.551	.240%	100.000%

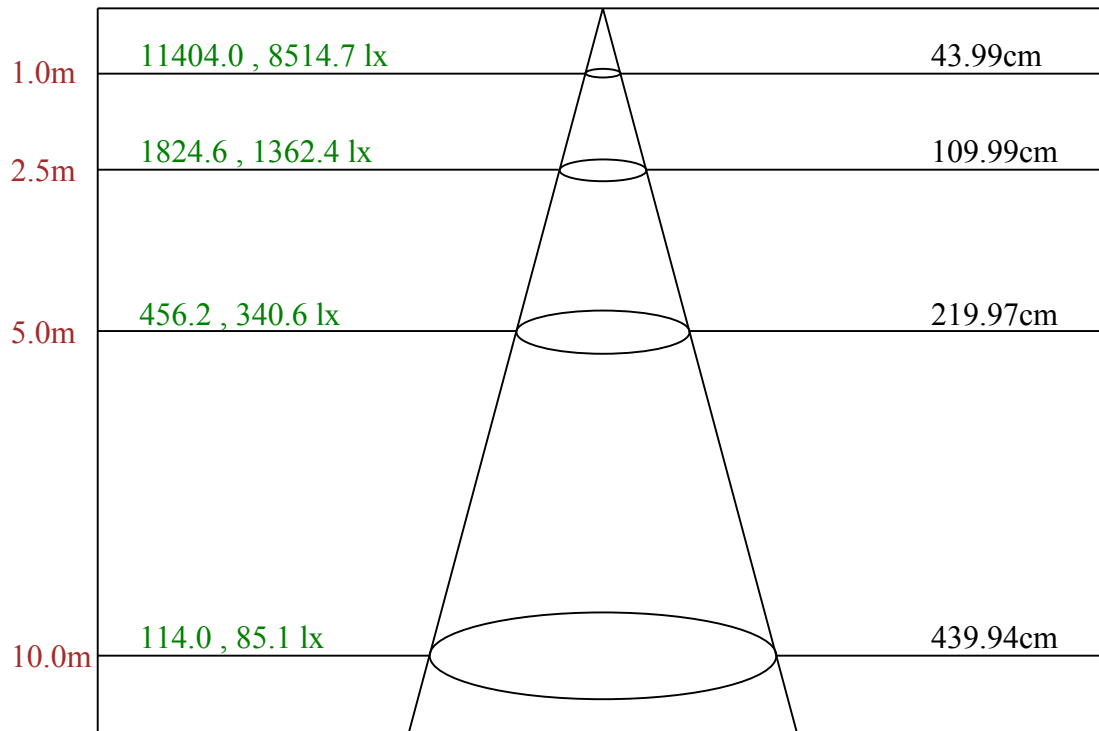
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2216.16	86.60%	86.82%
0-40	2477.89	96.83%	97.08%
0-60	2513.38	98.22%	98.47%
0-90	2546.40	99.51%	99.76%
0-120	2546.40	99.51%	99.76%
0-180	2552.55	99.75%	100.00%
60-90	40.22	1.57%	1.58%
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%
0-26.07	2042.04	79.80%	80.00%

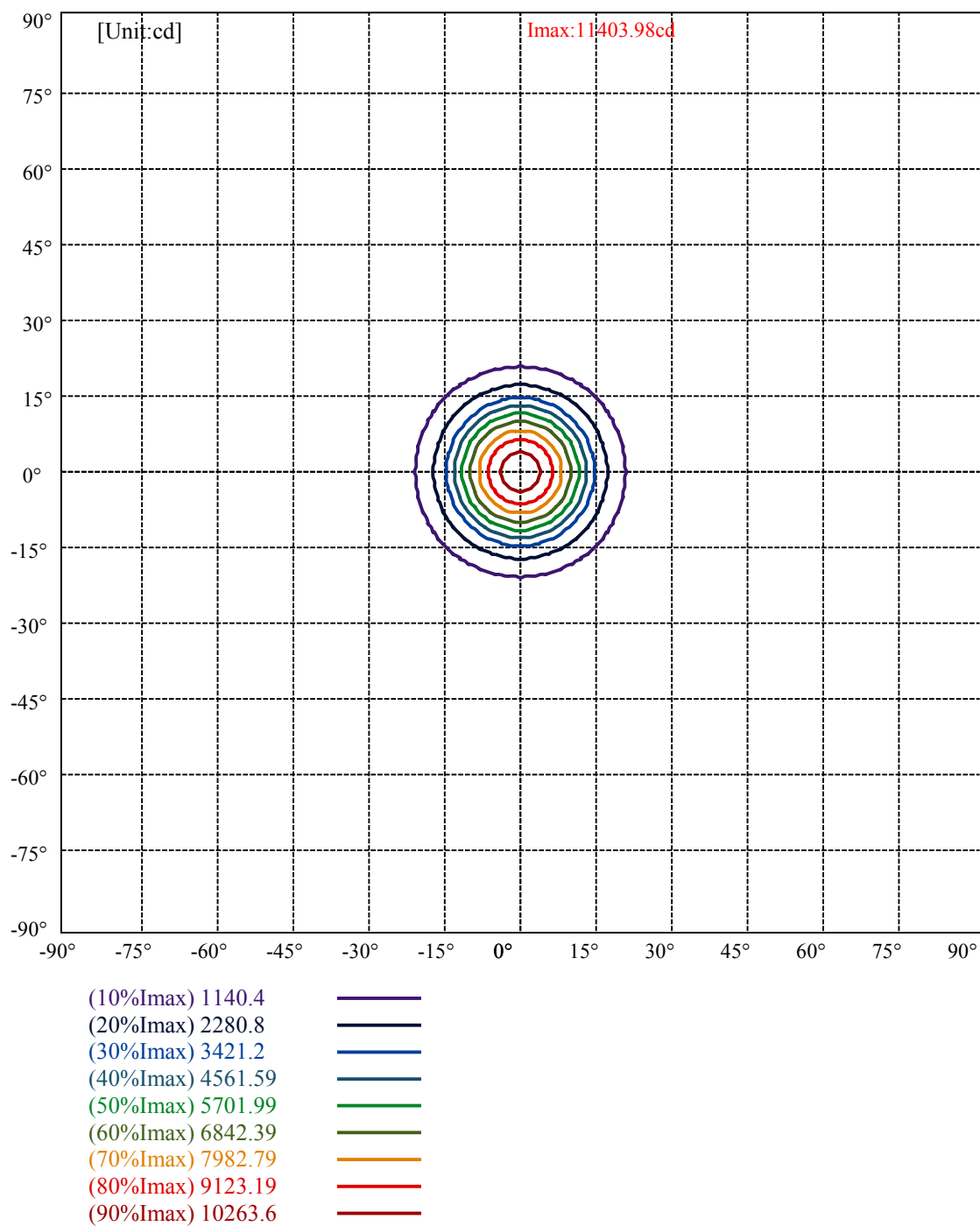
ZONAL LUMEN SUMMARY

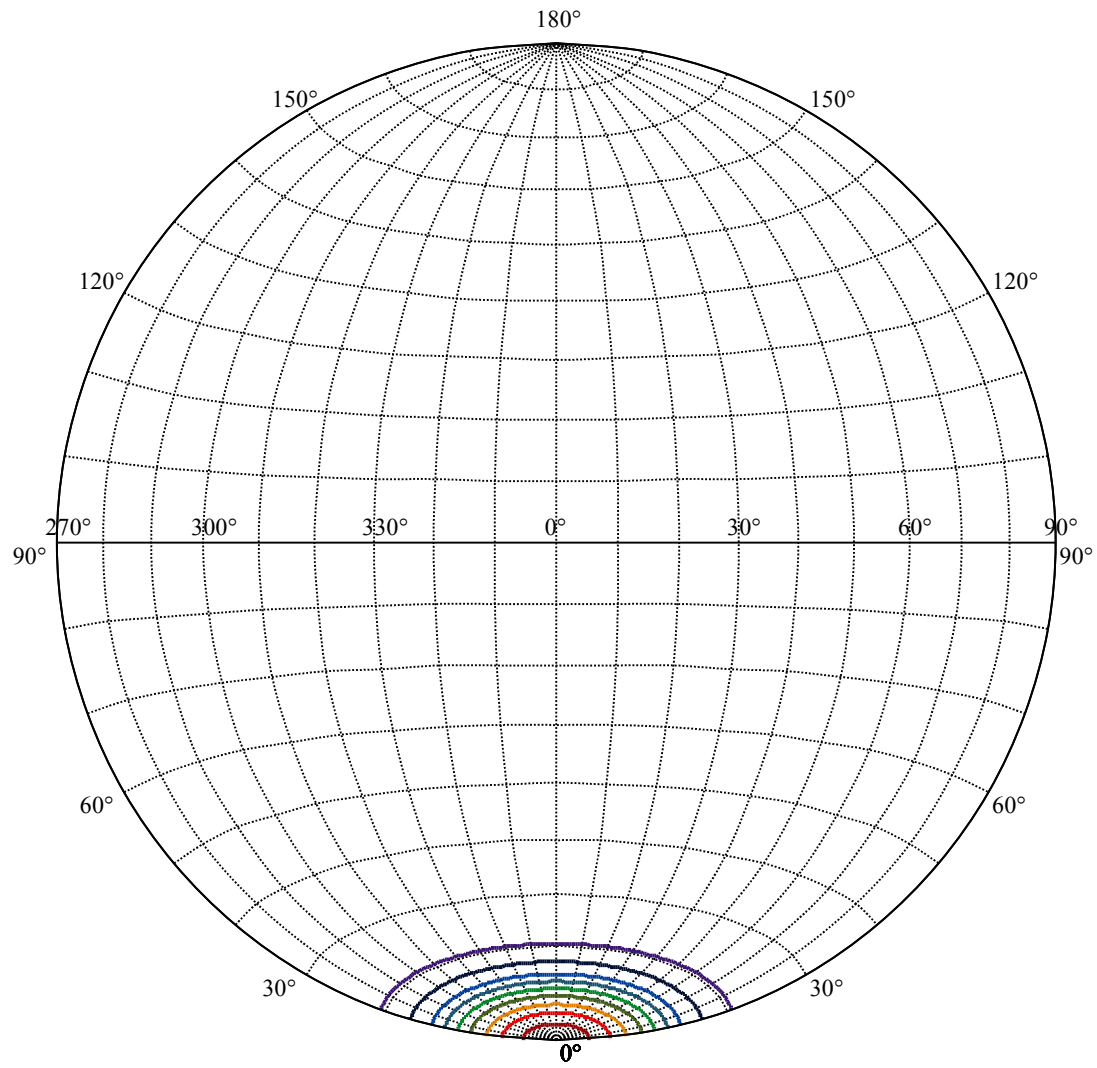
0-10	851.07
10-20	923.61
20-30	441.48
30-40	261.73
40-50	20.64
50-60	14.85
60-70	13.70
70-80	13.03
80-90	6.30
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 24.81



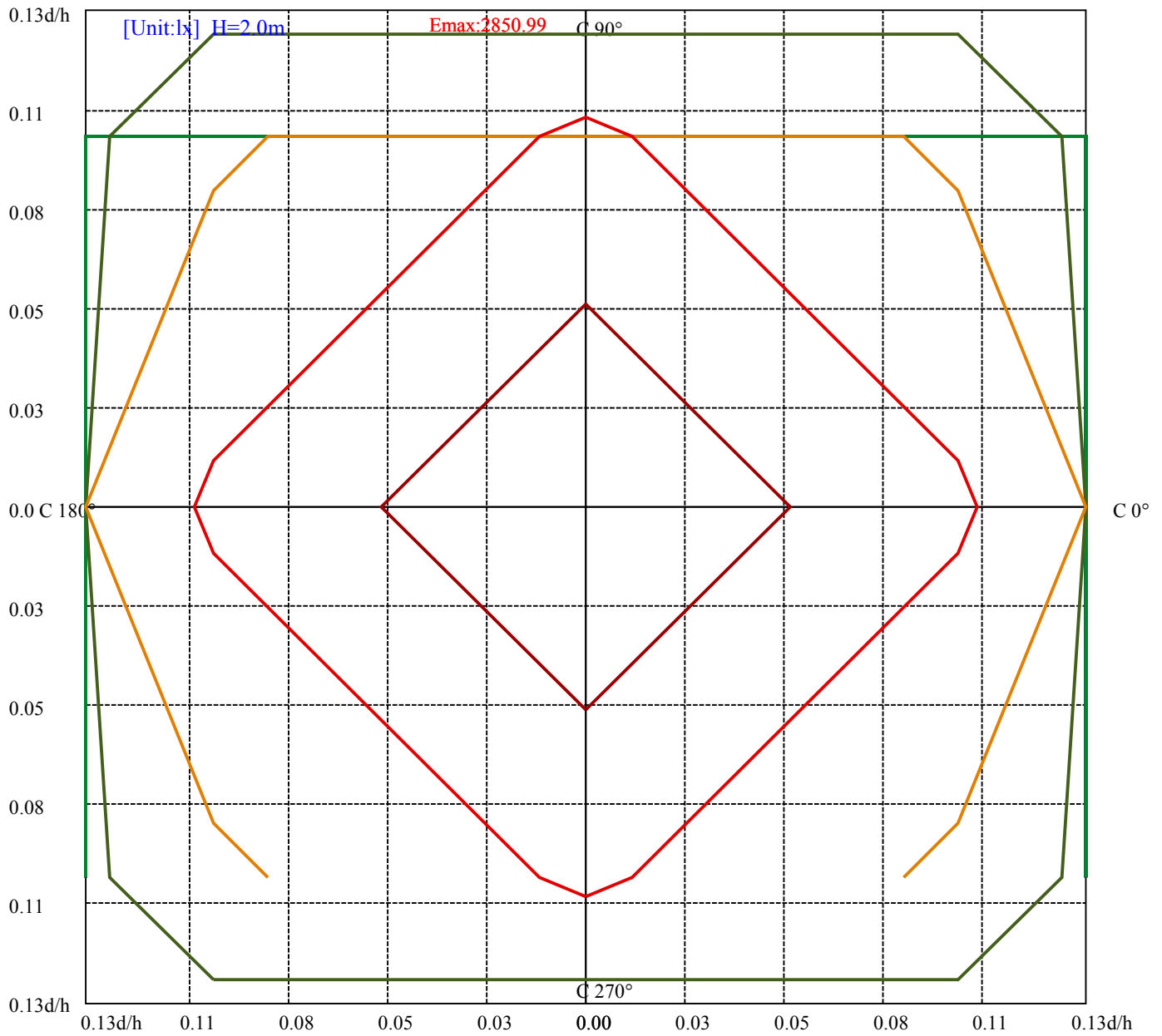


House

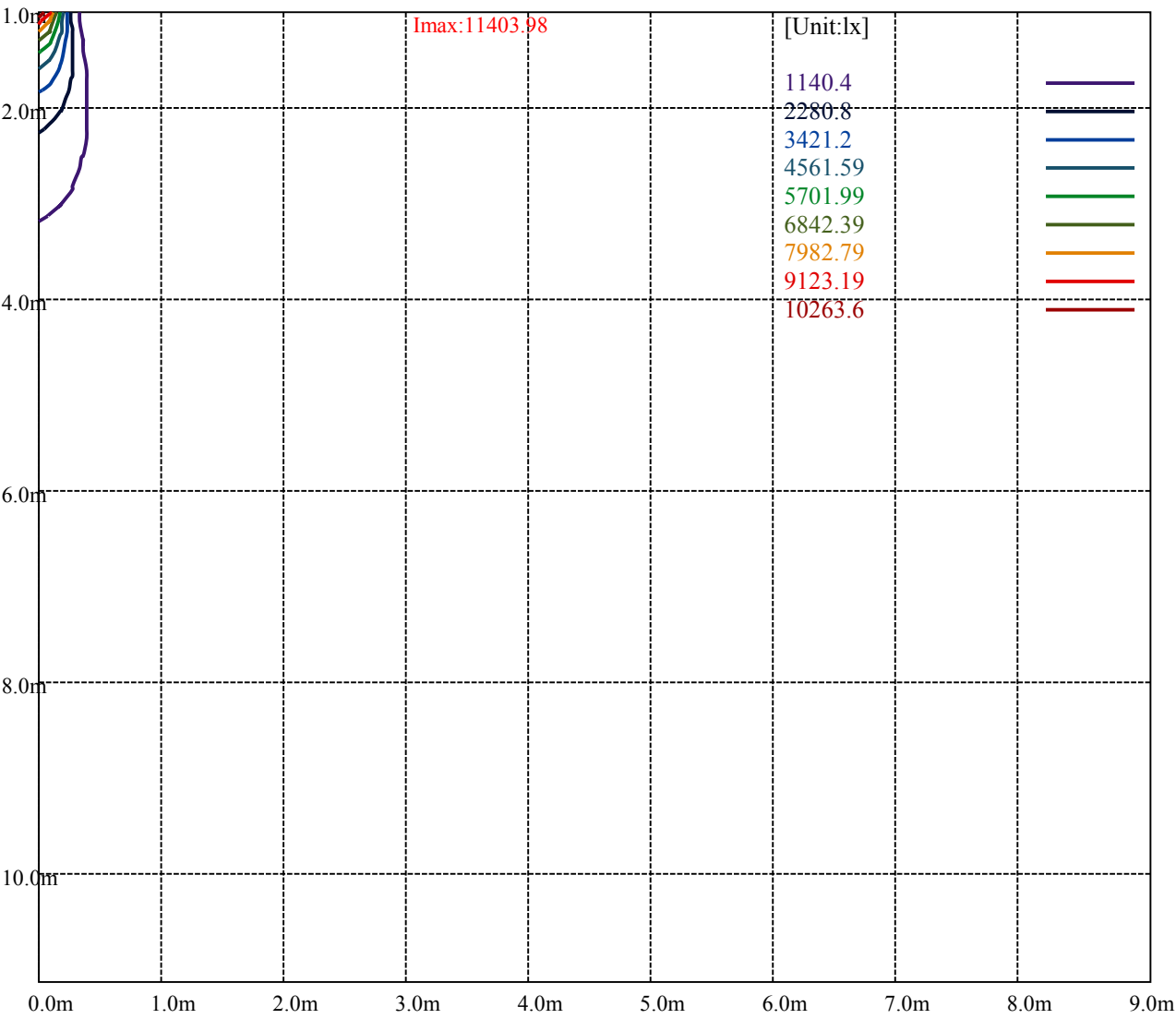
[Unit:cd]

Road

Imax:11403.98		
(10%Imax)	1140.4	—
(20%Imax)	2280.8	—
(30%Imax)	3421.2	—
(40%Imax)	4561.59	—
(50%Imax)	5701.99	—
(60%Imax)	6842.39	—
(70%Imax)	7982.79	—
(80%Imax)	9123.19	—
(90%Imax)	10263.6	—



(10%Emax) 285.0975	—
(20%Emax) 570.1975	—
(30%Emax) 855.295	—
(40%Emax) 1140.395	—
(50%Emax) 1425.493	—
(60%Emax) 1710.59	—
(70%Emax) 1995.69	—
(80%Emax) 2280.788	—
(90%Emax) 2565.875	—



Luminance Table

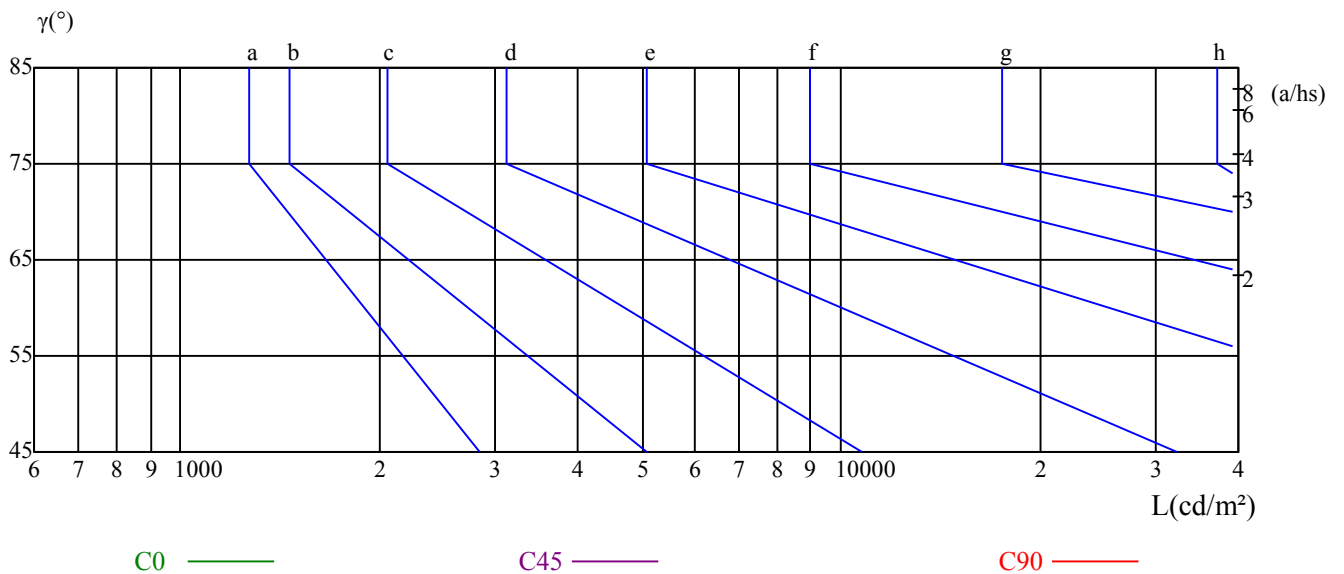
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

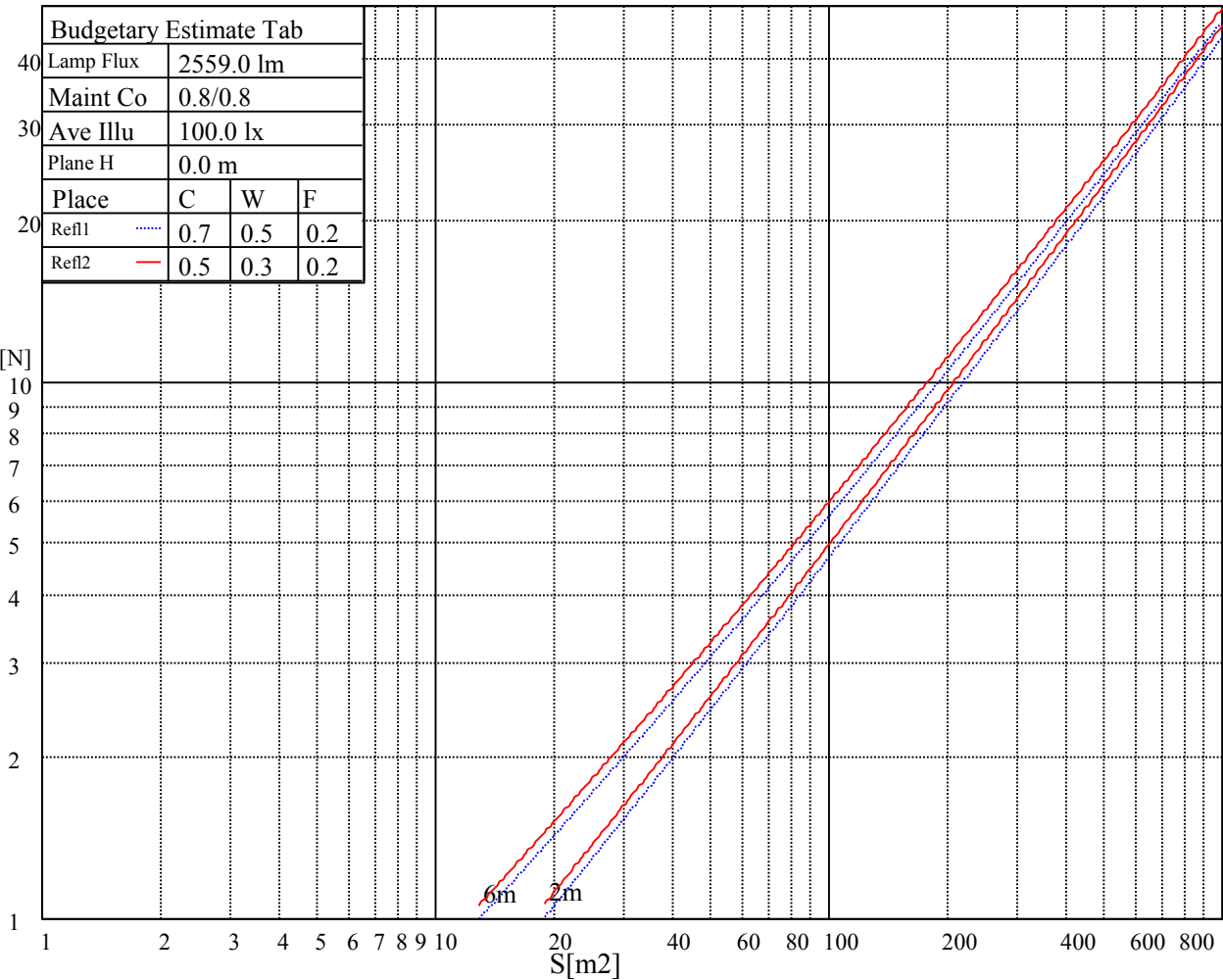
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

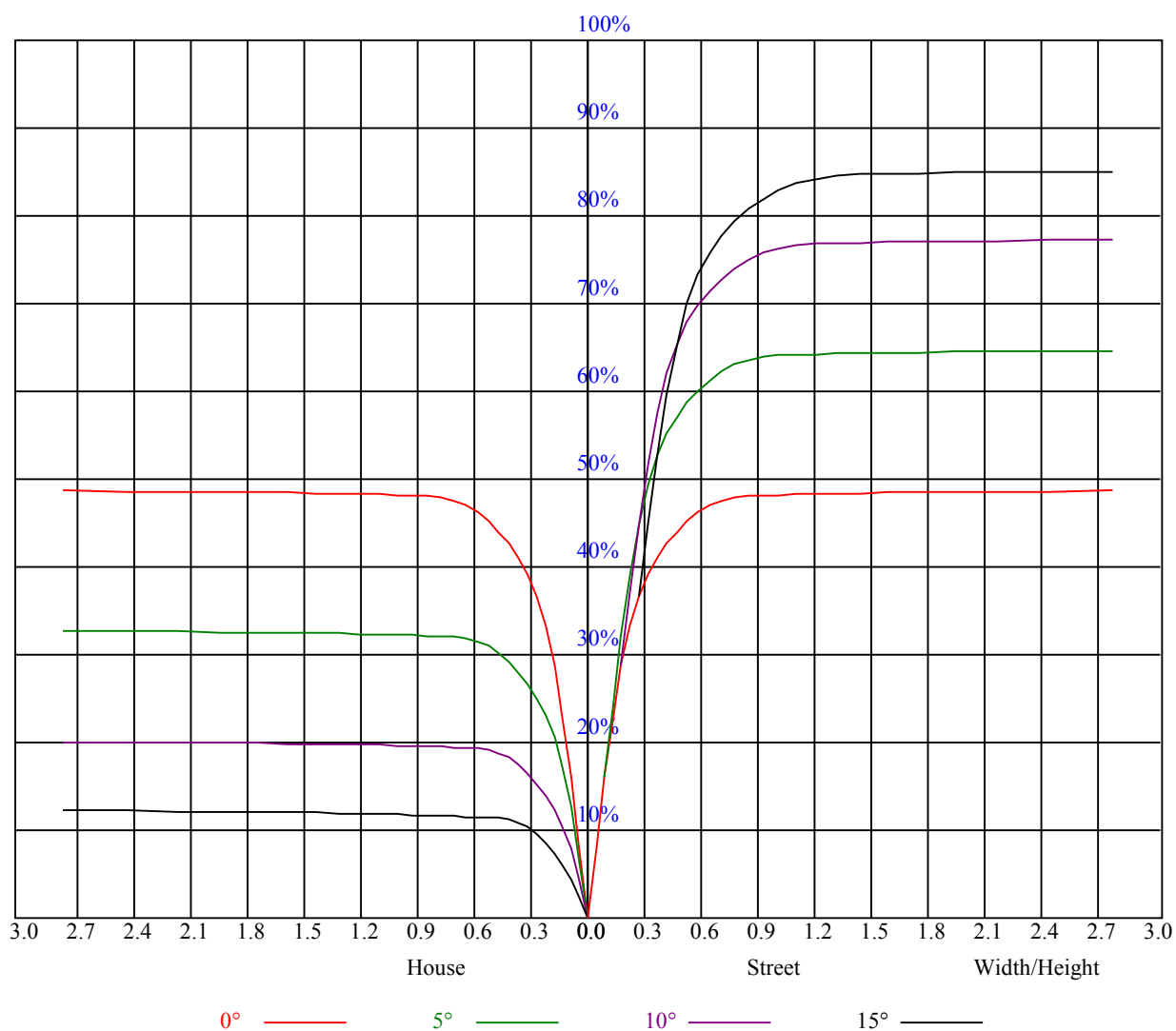
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.95
2	1.06	1.03	1.00	1.04	1.01	0.99	1.01	0.99	0.97	0.98	0.96	0.94	0.95	0.94	0.93	0.91
3	1.01	0.97	0.94	0.99	0.96	0.93	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.89	0.87
4	0.96	0.92	0.89	0.95	0.91	0.88	0.93	0.90	0.87	0.91	0.88	0.86	0.90	0.87	0.85	0.84
5	0.92	0.88	0.84	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.83	0.87	0.84	0.82	0.81
6	0.89	0.84	0.81	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.80	0.84	0.81	0.79	0.78
7	0.85	0.81	0.78	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.75
8	0.82	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.73
9	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.70
10	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.72	0.69	0.68



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	11649.38	9495.00	5889.38	2896.88	1102.50	937.69	814.50	314.44	25.65
45.0	11604.38	9208.13	5535.00	2880.00	1020.38	835.88	704.81	288.56	39.94
90.0	11148.75	9264.38	5646.38	1989.56	1112.74	905.74	802.80	268.37	27.90
135.0	11213.44	10175.63	7745.63	3948.75	1318.50	986.63	863.44	588.94	50.34
180.0	11649.38	10338.75	7928.44	3672.00	1221.75	1001.81	857.59	579.09	47.93
225.0	11604.38	10870.88	7967.81	3486.94	1107.90	836.55	800.04	526.11	70.26
270.0	11148.75	10434.38	7678.13	3335.63	1339.31	1023.19	875.81	576.00	51.41
315.0	11213.44	9487.69	5680.69	1863.56	1112.68	934.20	806.40	286.09	24.24
360.0	11649.38	9495.00	5889.38	2896.88	1102.50	937.69	814.50	314.44	25.65
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	19.97	16.76	14.74	13.73	12.94	12.38	11.93	11.42	11.19
45.0	24.19	19.52	16.93	15.19	13.78	12.88	12.60	12.21	11.31
90.0	21.49	18.68	15.69	14.40	13.28	12.66	12.04	11.59	11.31
135.0	23.18	19.18	16.88	15.36	14.57	13.67	12.38	11.76	11.36
180.0	22.78	19.41	16.37	14.74	13.56	12.66	12.15	11.70	11.36
225.0	32.51	22.11	18.90	16.54	14.74	13.61	12.60	12.26	11.64
270.0	23.63	19.74	16.71	15.19	14.06	13.05	12.49	11.98	11.53
315.0	18.28	15.86	14.23	13.33	13.16	12.54	11.98	11.48	11.31
360.0	19.97	16.76	14.74	13.73	12.94	12.38	11.93	11.42	11.19
C/ γ (°)	90.0								
0.0	11.03								
45.0	11.08								
90.0	11.08								
135.0	11.08								
180.0	11.08								
225.0	11.14								
270.0	11.08								
315.0	11.03								
360.0	11.03								