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Nata

LumCAT: NA01D020045BW

Luminaire:

Report No: 200402-B017

Voltage(V): 6.5600

Test No: 200402-C017

Current(A): 0.1560

LampCAT: OSRAM 3030 DURIS S5

Power (W): 1.0230

Lamp flux(lm): 126.0

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): 116.09

Efficiency(%): 92.14%

Lumens(lm)/Power(W): 113.48

Central intensity(cd): 136.870

Maximum intensity(cd): 136.870

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=46.5

[C90/270]Total=46.5

Field angle(10%Imax): [C0/180]Total=93.6

[C90/270]Total=93.6

Maximum s/h(1/2): C0_180=0.72 C90_270=0.72

Maximum s/h(1/4): C0_180=0.77 C90_270=0.77

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.14%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.624%

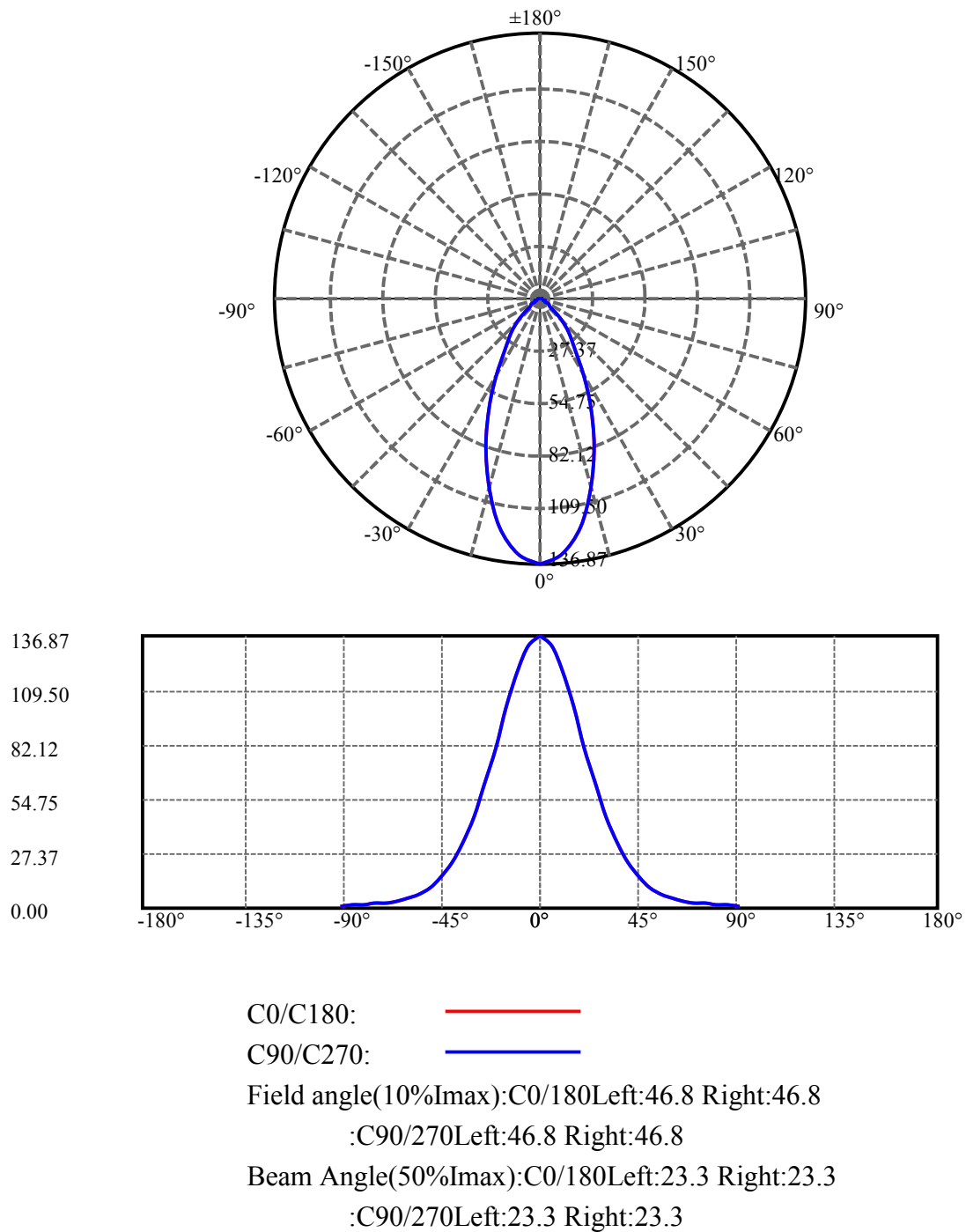
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	136.870	0.000	0	.000%	.000%
5.0	132.159	3.216	3.216	2.553%	2.770%
10.0	119.559	9.005	12.221	7.147%	10.527%
15.0	101.327	13.103	25.324	10.399%	21.814%
20.0	81.155	15.039	40.363	11.936%	34.768%
25.0	61.699	14.983	55.346	11.891%	47.674%
30.0	45.851	13.611	68.956	10.802%	59.398%
35.0	32.611	11.554	80.51	9.170%	69.351%
40.0	23.119	9.298	89.808	7.379%	77.360%
45.0	15.511	7.153	96.961	5.677%	83.521%
50.0	10.463	5.248	102.209	4.165%	88.042%
55.0	6.912	3.778	105.987	2.998%	91.296%
60.0	4.781	2.703	108.69	2.145%	93.624%
65.0	3.361	1.979	110.669	1.571%	95.329%
70.0	2.602	1.510	112.179	1.198%	96.630%
75.0	2.229	1.263	113.441	1.002%	97.717%
80.0	1.997	1.131	114.572	.897%	98.691%
85.0	1.575	0.971	115.543	.770%	99.527%
90.0	0.429	0.549	116.091	.435%	100.000%

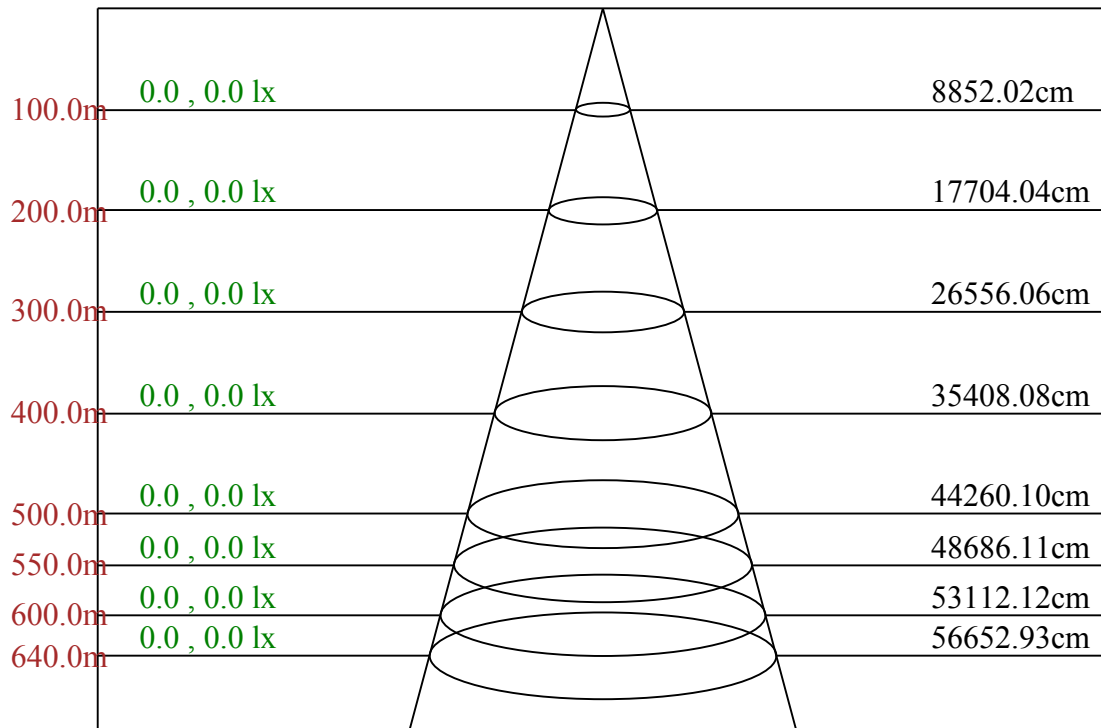
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	68.96	54.73%	59.40%
0-40	89.81	71.28%	77.36%
0-60	108.69	86.26%	93.62%
0-90	115.54	91.70%	99.53%
0-120	115.54	91.70%	99.53%
0-180	116.09	92.14%	100.00%
60-90	9.56	7.58%	8.23%
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%
0-42.14	92.87	73.71%	80.00%

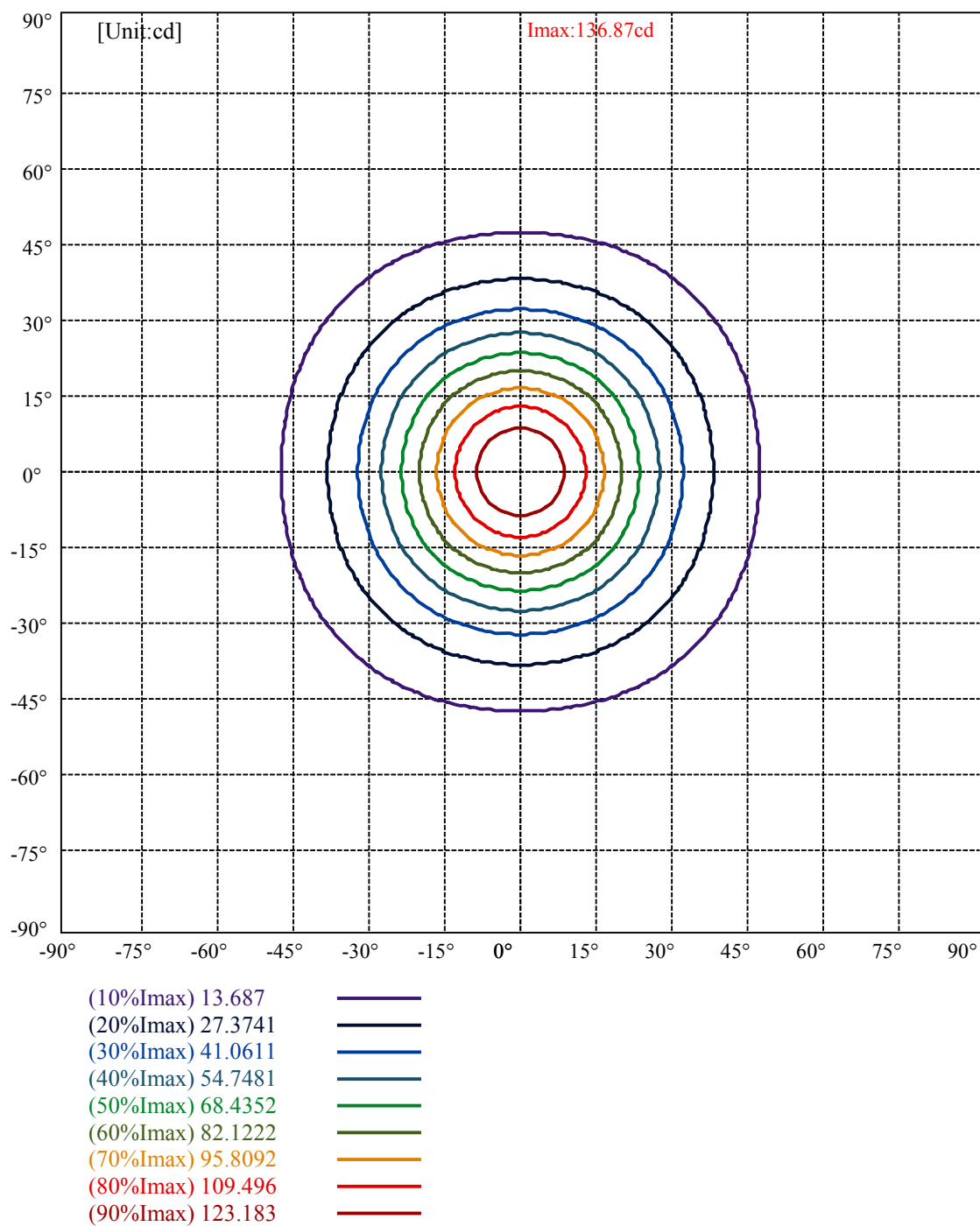
ZONAL LUMEN SUMMARY

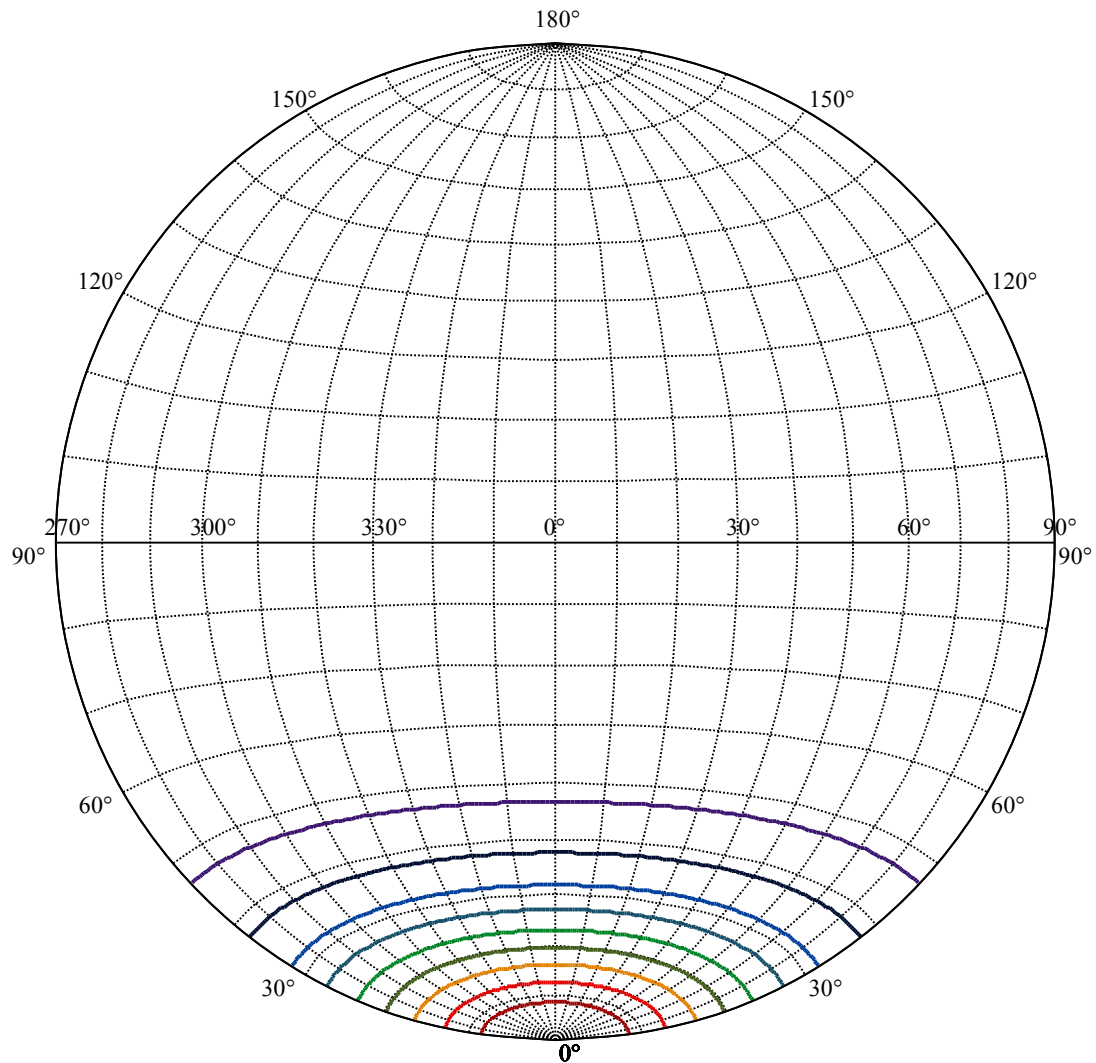
0-10	12.22
10-20	28.14
20-30	28.59
30-40	20.85
40-50	12.40
50-60	6.48
60-70	3.49
70-80	2.39
80-90	0.97
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 47.75





House

[Unit:cd]

Road

Imax:136.87

(10%Imax) 13.687

(20%Imax) 27.3741

(30%Imax) 41.0611

(40%Imax) 54.7481

(50%Imax) 68.4352

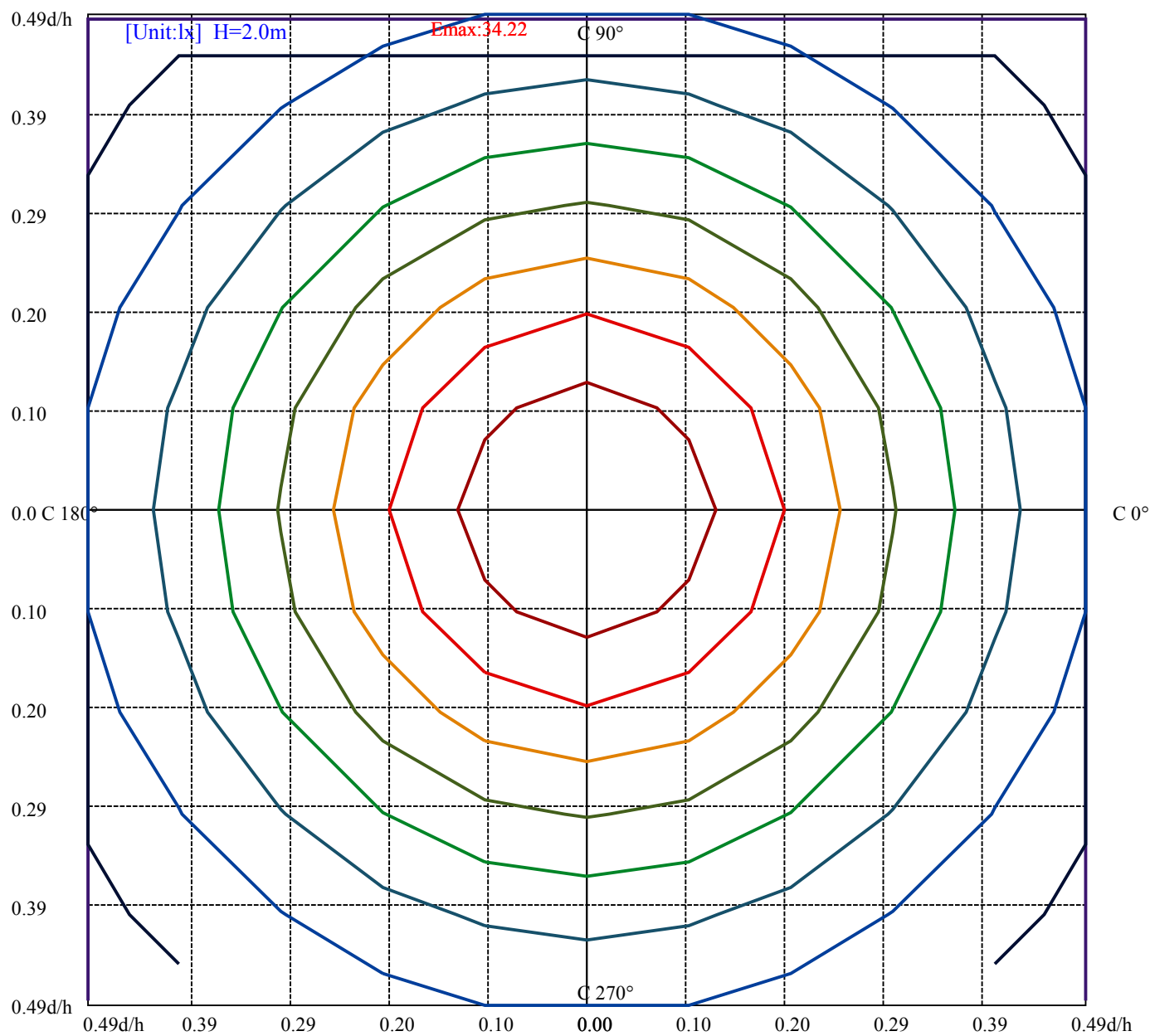
(60%Imax) 82.1222

(70%Imax) 95.8092

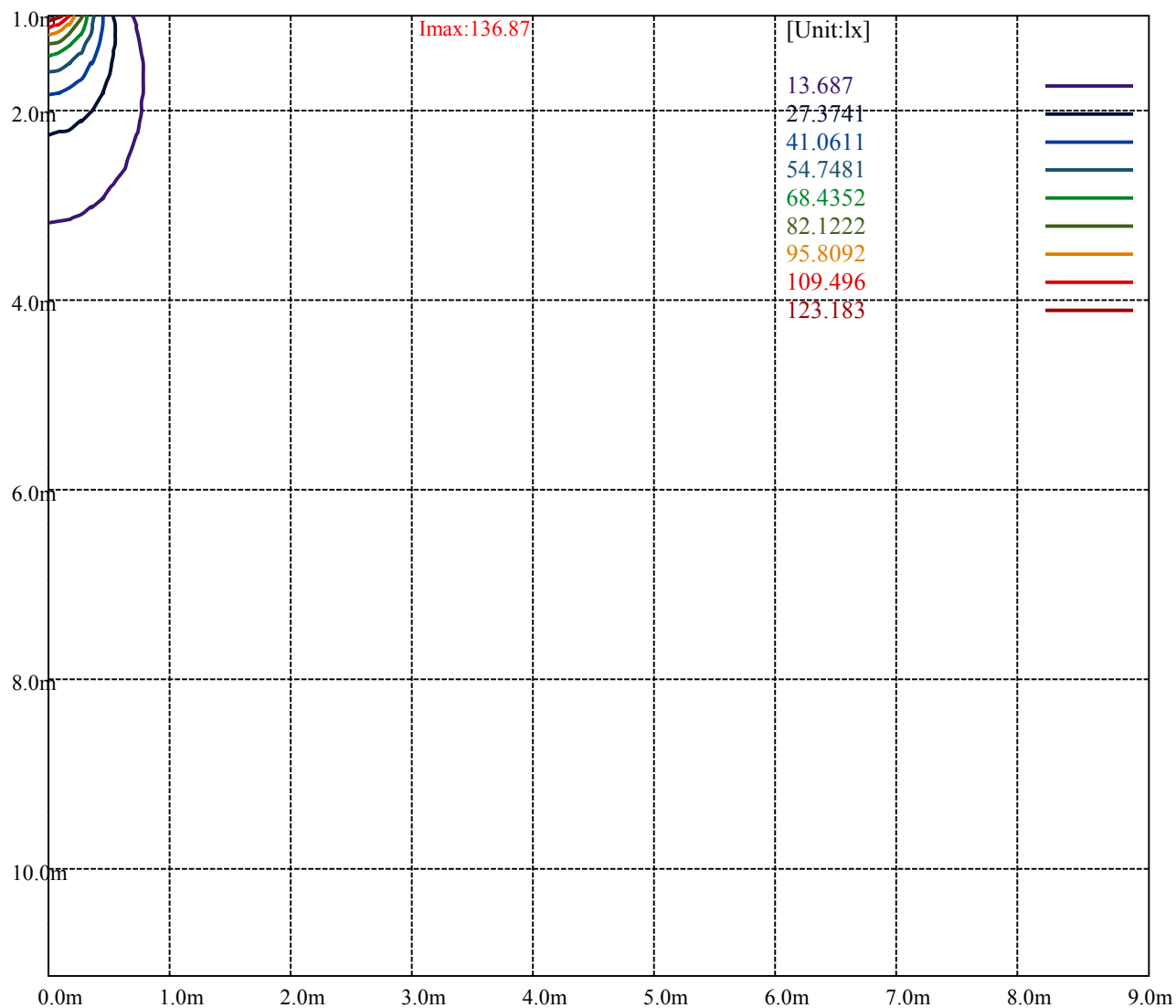
(80%Imax) 109.496

(90%Imax) 123.183





(10%Emax) 3.42175	—
(20%Emax) 6.8435	—
(30%Emax) 10.26528	—
(40%Emax) 13.68703	—
(50%Emax) 17.10877	—
(60%Emax) 20.53053	—
(70%Emax) 23.95227	—
(80%Emax) 27.374	—
(90%Emax) 30.79575	—



Luminance Table

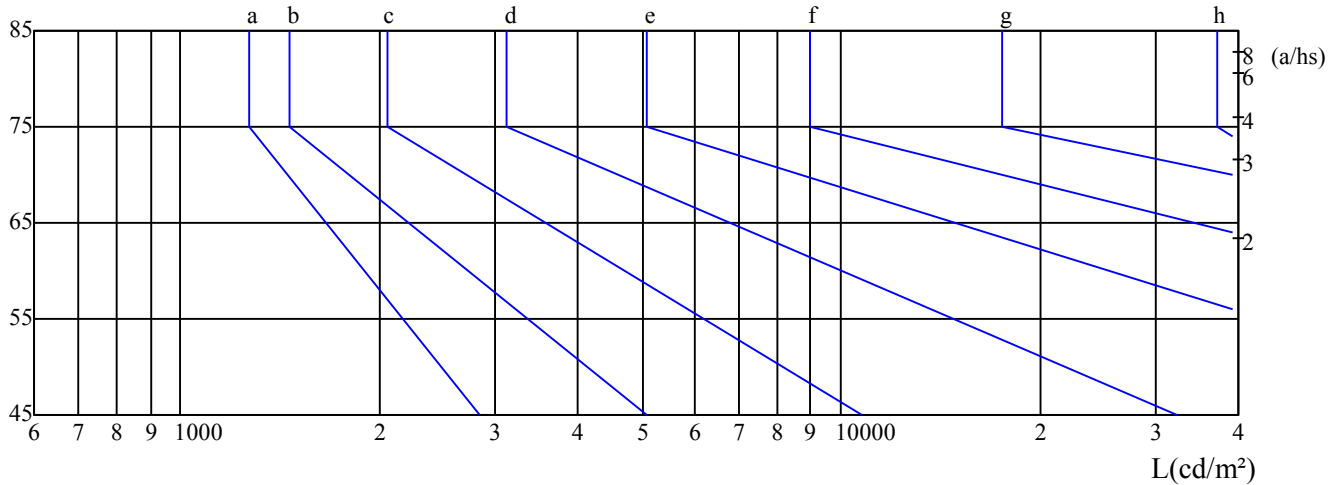
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

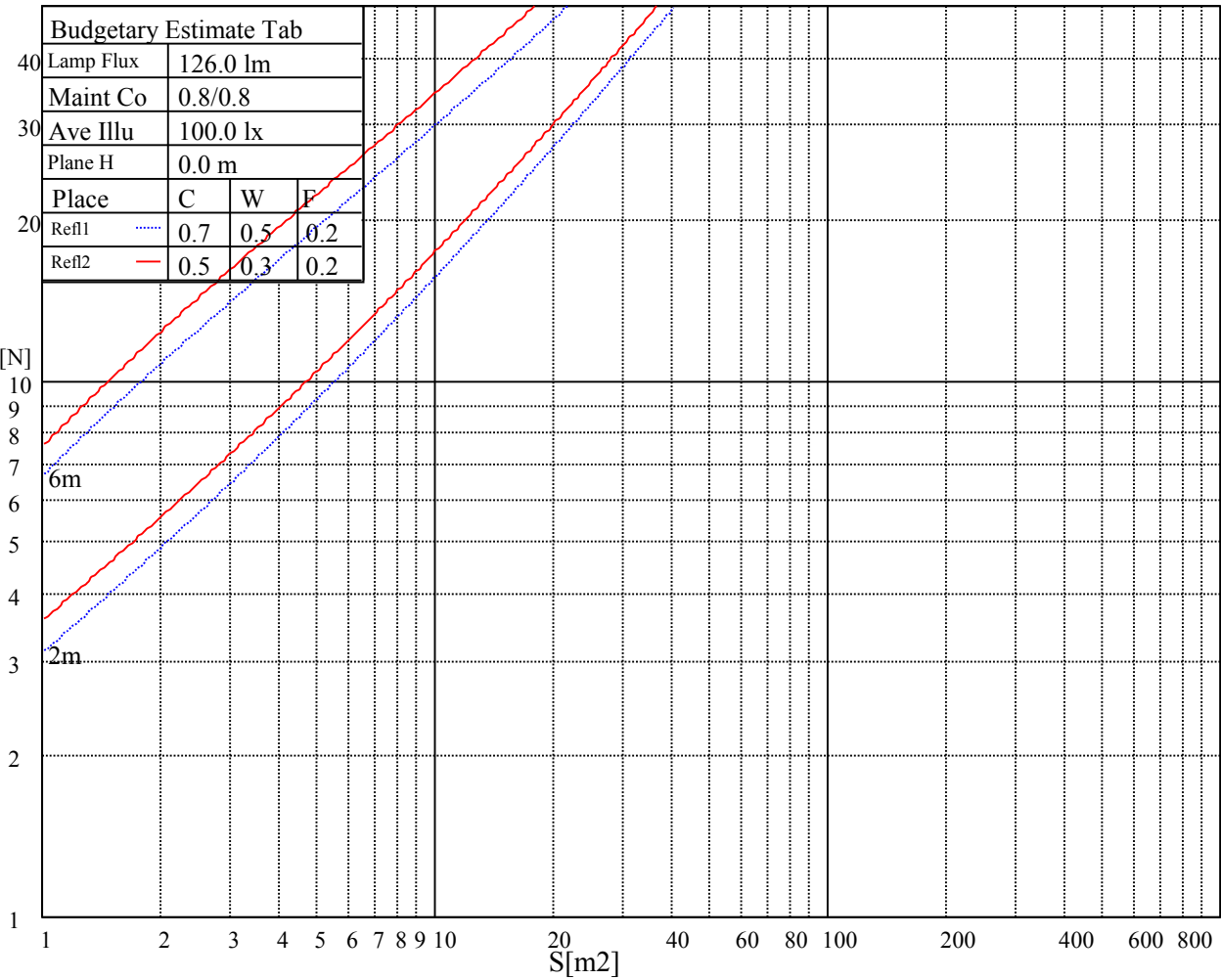
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

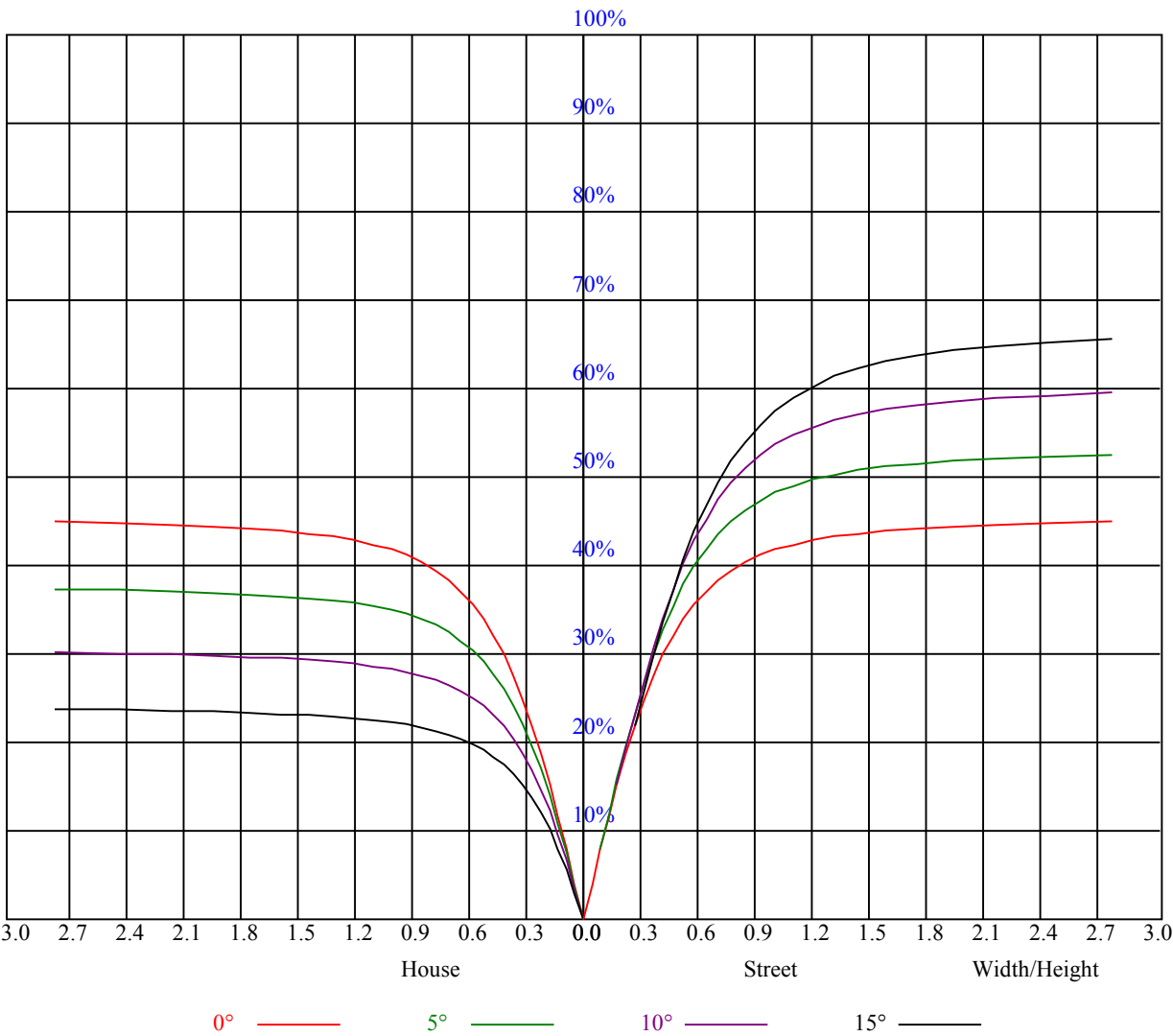
C0 ———

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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.00	0.97	0.95	0.98	0.95	0.93	0.94	0.92	0.90	0.91	0.89	0.88	0.88	0.86	0.85	0.83
2	0.92	0.87	0.83	0.90	0.86	0.82	0.87	0.84	0.81	0.84	0.81	0.79	0.81	0.79	0.77	0.76
3	0.84	0.79	0.75	0.83	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.70	0.69
4	0.78	0.72	0.68	0.77	0.71	0.67	0.75	0.70	0.66	0.73	0.69	0.65	0.71	0.68	0.65	0.63
5	0.72	0.66	0.62	0.71	0.66	0.61	0.70	0.65	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.58
6	0.67	0.61	0.57	0.67	0.61	0.57	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.58	0.55	0.54
7	0.63	0.57	0.53	0.62	0.57	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.51	0.50
8	0.59	0.53	0.49	0.59	0.53	0.49	0.58	0.52	0.49	0.57	0.52	0.48	0.56	0.51	0.48	0.47
9	0.56	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.45	0.53	0.49	0.45	0.53	0.48	0.45	0.44
10	0.53	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.42	0.41



Appendix Page: 14 Total:14

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	135.68	126.39	112.44	94.11	74.87	56.14	41.63	29.14	19.91
45.0	137.03	131.34	117.51	99.96	78.64	58.78	42.75	30.32	21.15
90.0	137.81	134.61	120.94	101.59	80.49	61.48	45.17	32.18	23.46
135.0	136.97	138.26	128.14	111.94	90.62	70.09	53.72	38.59	27.79
180.0	135.68	135.51	126.00	108.34	88.14	68.85	51.75	37.24	26.66
225.0	137.03	133.71	122.51	103.61	84.77	64.35	47.70	33.81	24.19
270.0	137.81	131.51	118.24	100.01	79.99	60.47	45.45	32.63	22.73
315.0	136.97	125.94	110.70	91.07	71.72	53.44	38.64	27.00	19.07
360.0	135.68	126.39	112.44	94.11	74.87	56.14	41.63	29.14	19.91
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.73	8.94	5.96	4.28	3.04	2.48	2.14	1.91	1.46
45.0	14.01	9.68	6.36	4.50	3.26	2.59	2.31	2.03	1.46
90.0	15.75	10.58	7.09	4.78	3.26	2.53	2.14	1.91	1.41
135.0	18.84	13.11	8.49	5.68	3.99	2.93	2.36	2.08	1.69
180.0	18.23	12.38	8.10	5.63	3.77	2.76	2.31	2.08	1.69
225.0	16.03	10.69	7.20	4.95	3.43	2.70	2.36	2.14	1.80
270.0	15.02	10.07	6.58	4.50	3.21	2.48	2.08	1.86	1.58
315.0	12.49	8.27	5.51	3.94	2.93	2.36	2.14	1.97	1.52
360.0	13.73	8.94	5.96	4.28	3.04	2.48	2.14	1.91	1.46
C/ γ (°)	90.0								
0.0	0.39								
45.0	0.39								
90.0	0.34								
135.0	0.45								
180.0	0.51								
225.0	0.51								
270.0	0.45								
315.0	0.39								
360.0	0.39								