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Nata

LumCAT: 1408-N	
Luminaire: 92.70.044.00	
Report No: NATA0100	Voltage(V): 38.4000
Test No: GC2018070613	Current(A): 0.2000
LampCAT: NICHIA NTCWT012B-V3	Power (W): 7.6800
Lamp flux(lm): 732.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 39	Width(mm): 39
Phm Type: C	Height(mm):0

Photometric Results

Lumens(lm): 615.29
Efficiency(%): 84.06%
Lumens(lm)/Power(W): 80.49
Central intensity(cd): 579.813
Maximum intensity(cd): 579.813
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=57.6
[C90/270]Total=57.6
Field angle(10%Imax): [C0/180]Total=100.2
[C90/270]Total=100.2
Maximum s/h(1/2): C0_180=0.85 C90_270=0.85
Maximum s/h(1/4): C0_180=0.90 C90_270=0.90
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.45%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.050%

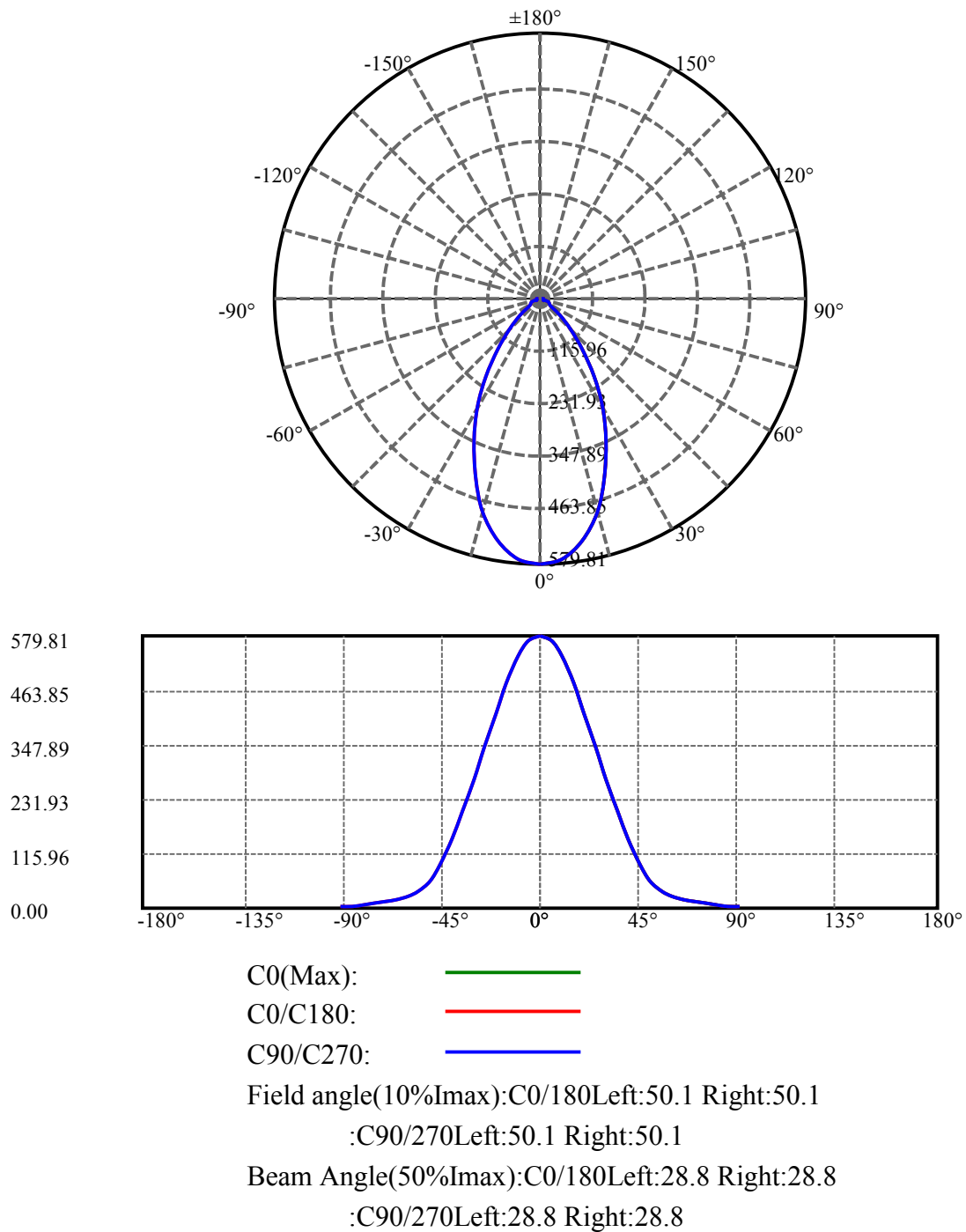
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	579.813	3.467	3.467	.474%	.564%
5.0	570.040	27.233	30.7	3.720%	4.990%
10.0	536.325	51.049	81.749	6.974%	13.286%
15.0	480.629	68.186	149.935	9.315%	24.368%
20.0	414.829	77.770	227.705	10.624%	37.008%
25.0	341.597	79.132	306.837	10.810%	49.869%
30.0	273.500	74.958	381.795	10.240%	62.051%
35.0	206.062	64.786	446.58	8.851%	72.581%
40.0	145.968	51.430	498.01	7.026%	80.939%
45.0	92.405	35.816	533.826	4.893%	86.760%
50.0	58.360	24.505	558.331	3.348%	90.743%
55.0	37.445	16.813	575.144	2.297%	93.475%
60.0	26.179	12.427	587.571	1.698%	95.495%
65.0	18.650	9.265	596.837	1.266%	97.001%
70.0	13.620	7.015	603.852	.958%	98.141%
75.0	9.497	5.028	608.88	.687%	98.958%
80.0	6.483	3.500	612.38	.478%	99.527%
85.0	4.005	2.187	614.567	.299%	99.883%
90.0	2.636	0.722	615.289	.099%	100.000%

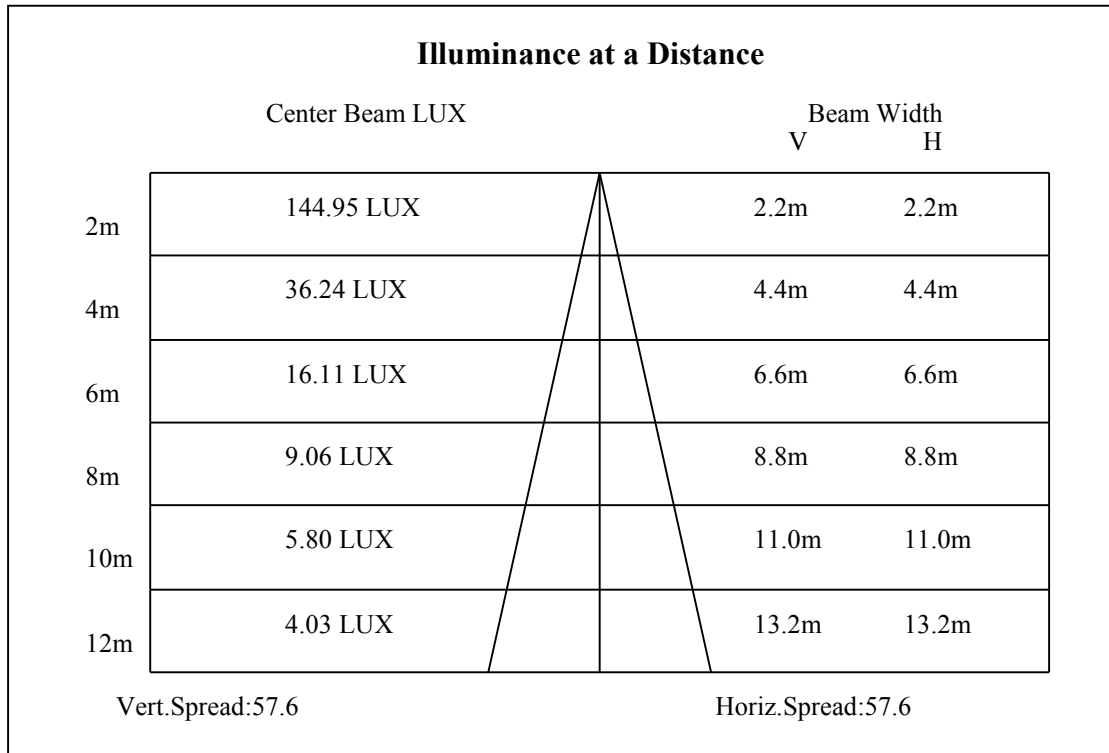
ZONAL LUMEN SUMMARY

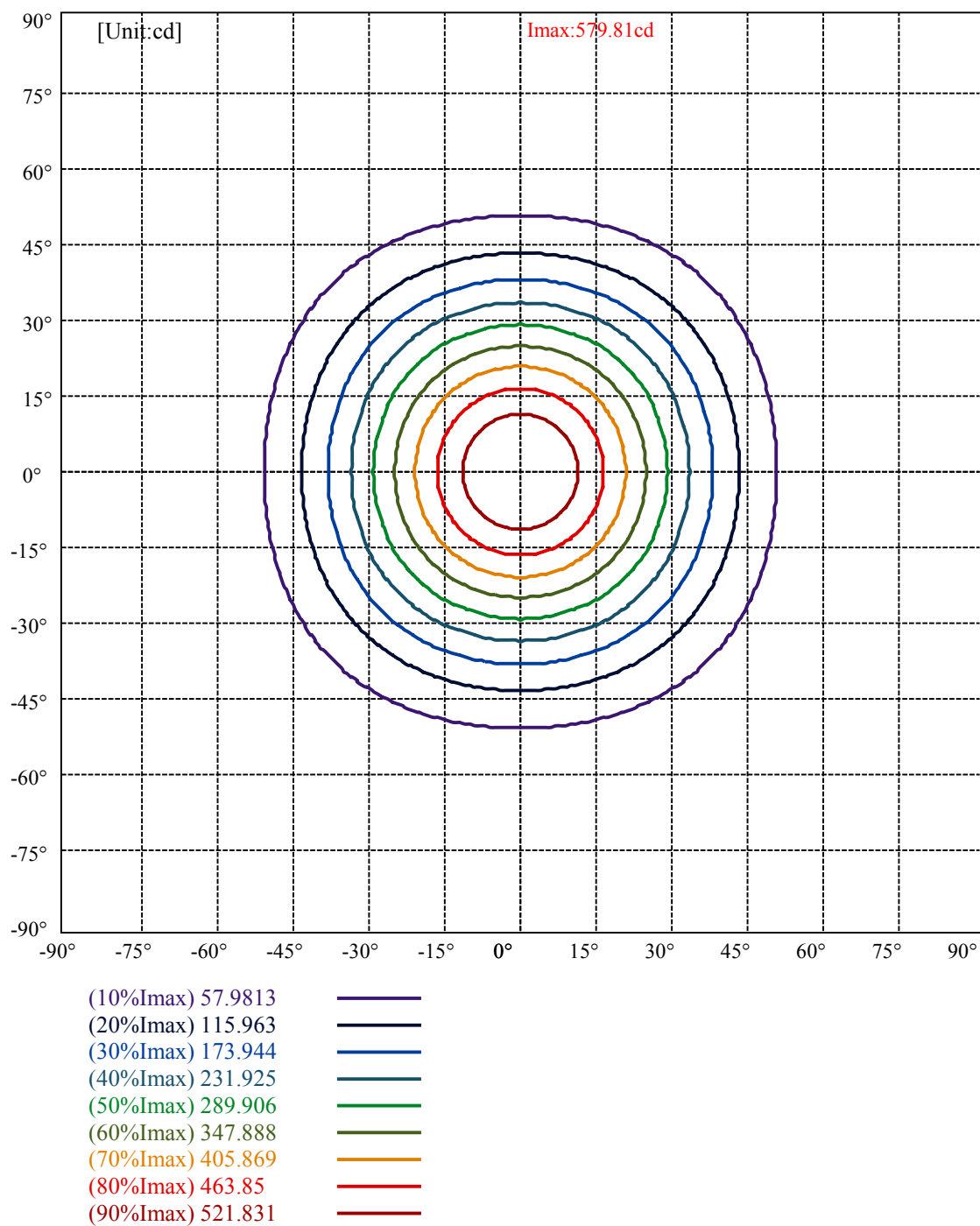
Zone	Lumens	%Lamp	%Fixt
0-30	381.79	52.16%	62.05%
0-40	498.01	68.03%	80.94%
0-60	587.57	80.27%	95.50%
0-90	614.57	83.96%	99.88%
0-120	614.57	83.96%	99.88%
0-180	615.29	84.06%	100.00%
60-90	39.42	5.39%	6.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-39.44	492.23	67.24%	80.00%

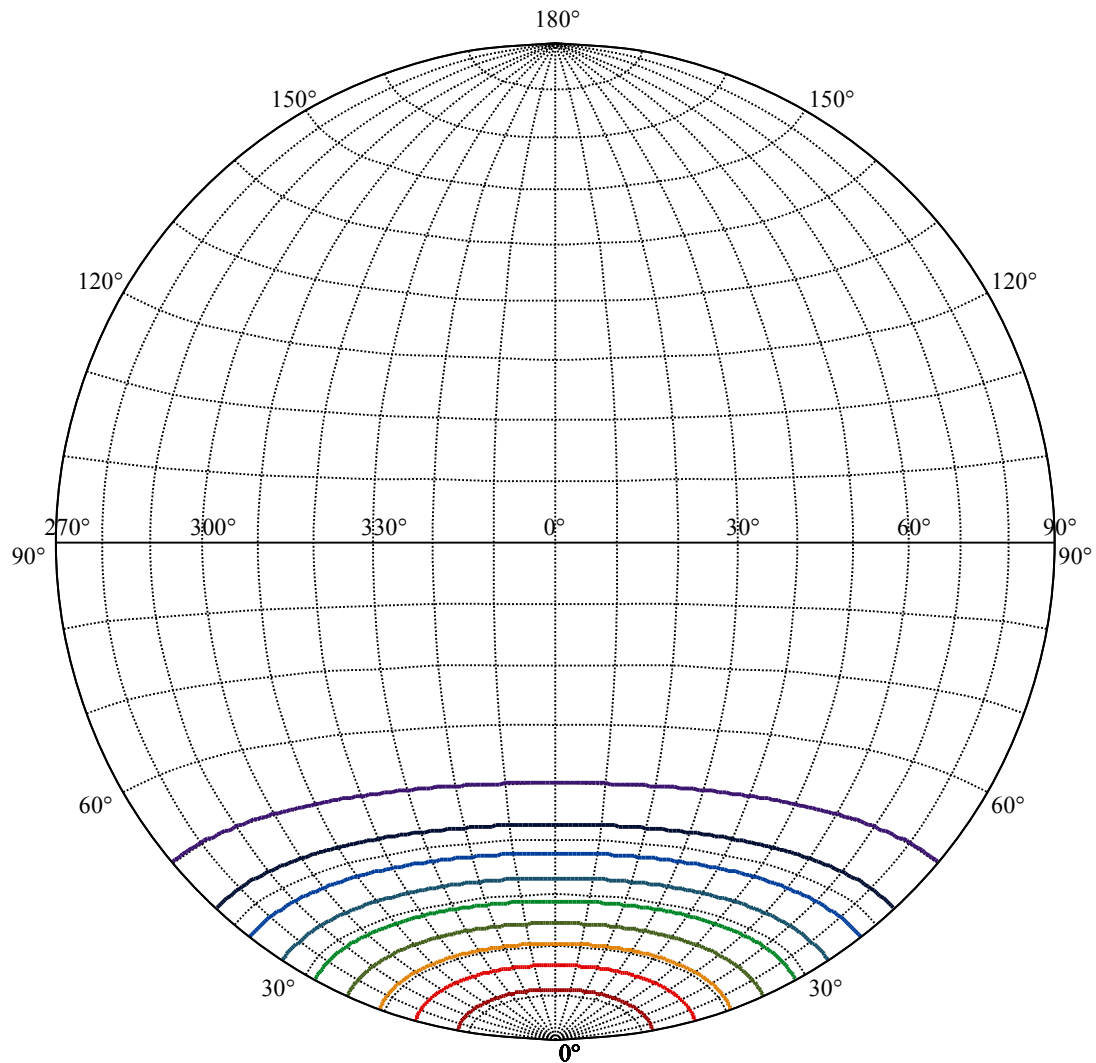
ZONAL LUMEN SUMMARY

0-10	81.75
10-20	145.96
20-30	154.09
30-40	116.22
40-50	60.32
50-60	29.24
60-70	16.28
70-80	8.53
80-90	2.19
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







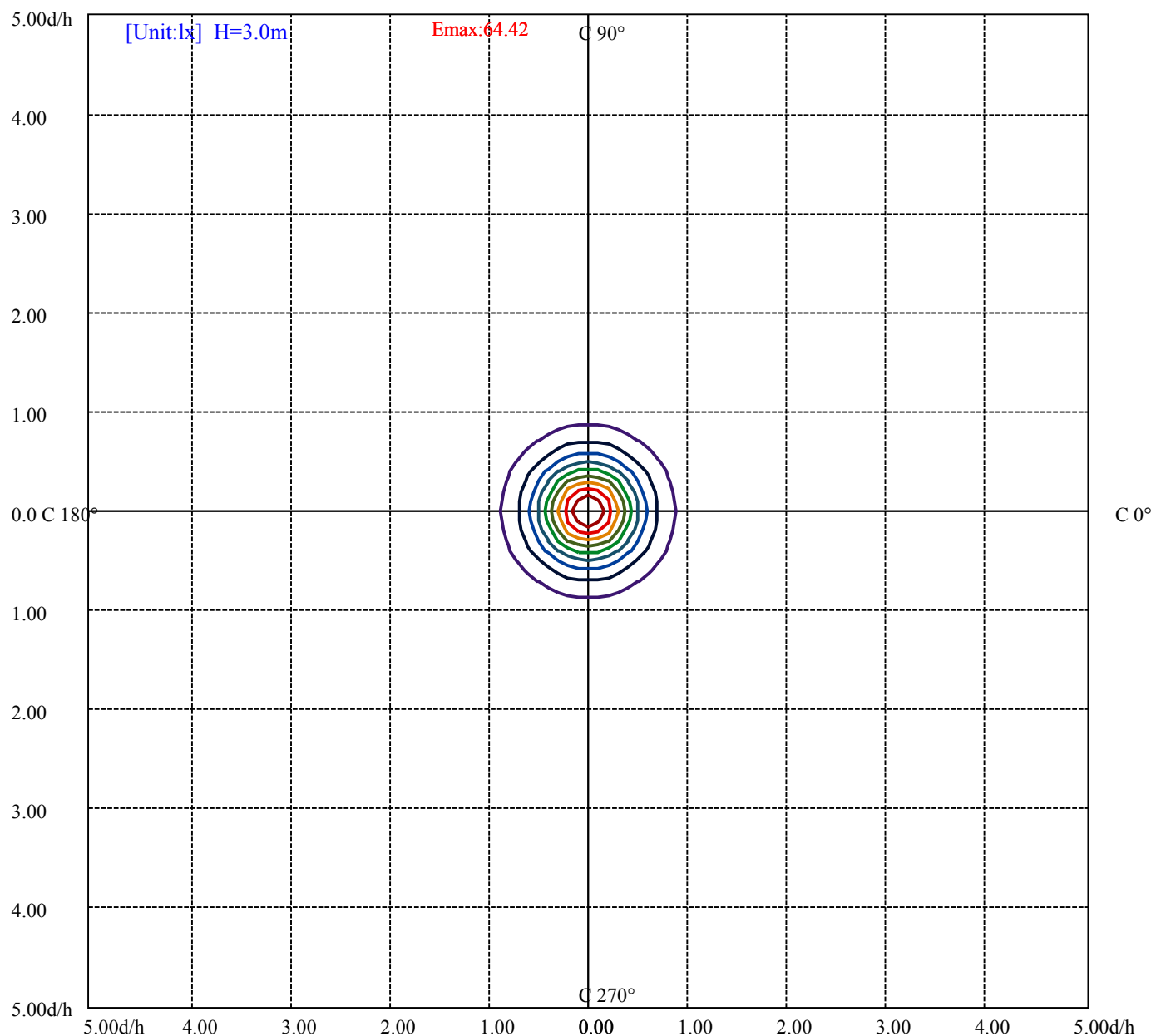


House

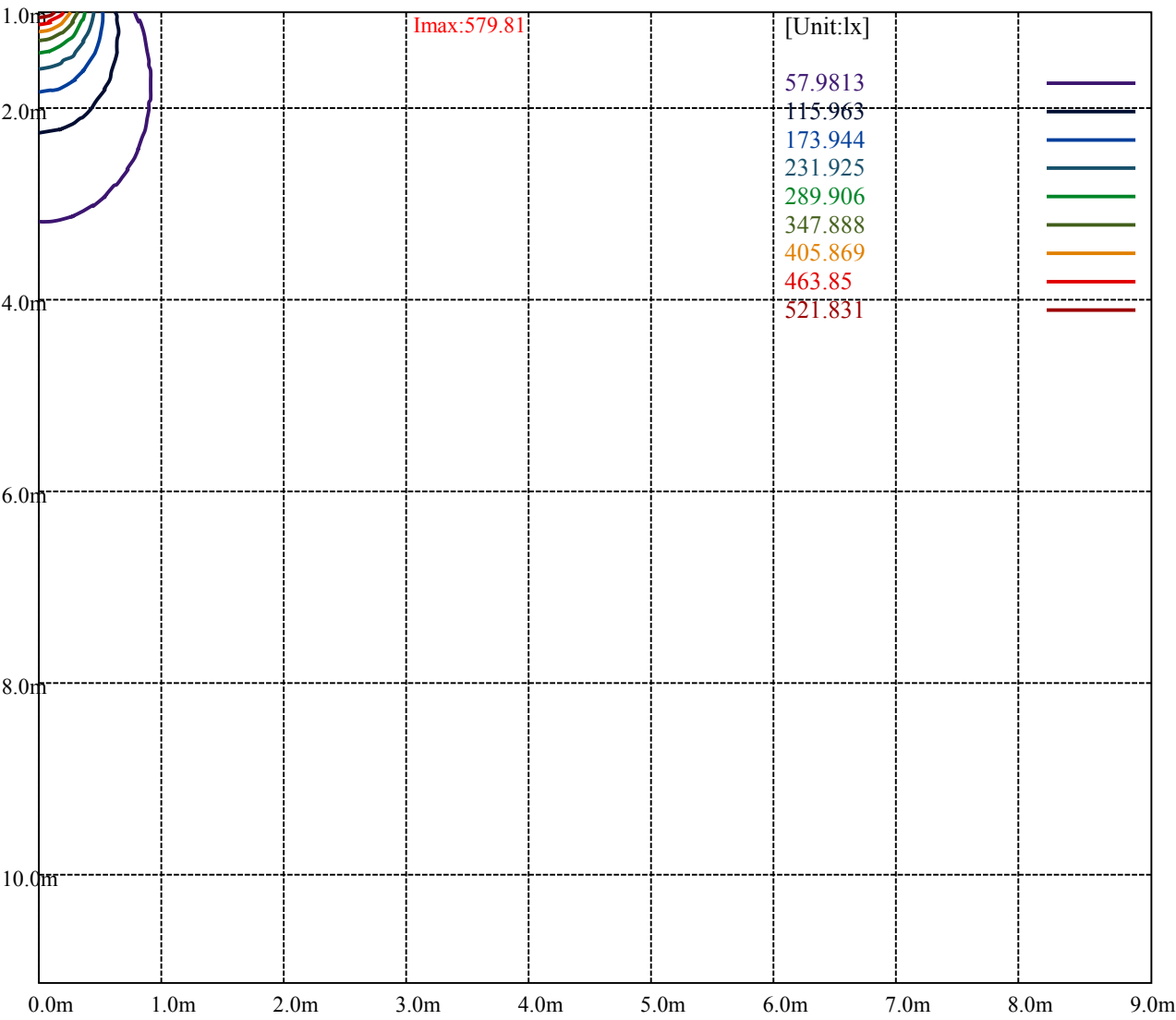
[Unit:cd]

Road

Imax:579.81	
(10%Imax) 57.9813	
(20%Imax) 115.963	
(30%Imax) 173.944	
(40%Imax) 231.925	
(50%Imax) 289.906	
(60%Imax) 347.888	
(70%Imax) 405.869	
(80%Imax) 463.85	
(90%Imax) 521.831	



(10%Emax)	6.442356	—
(20%Emax)	12.88467	—
(30%Emax)	19.32711	—
(40%Emax)	25.76945	—
(50%Emax)	32.21178	—
(60%Emax)	38.65411	—
(70%Emax)	45.09655	—
(80%Emax)	51.53889	—
(90%Emax)	57.98122	—



Luminance Table

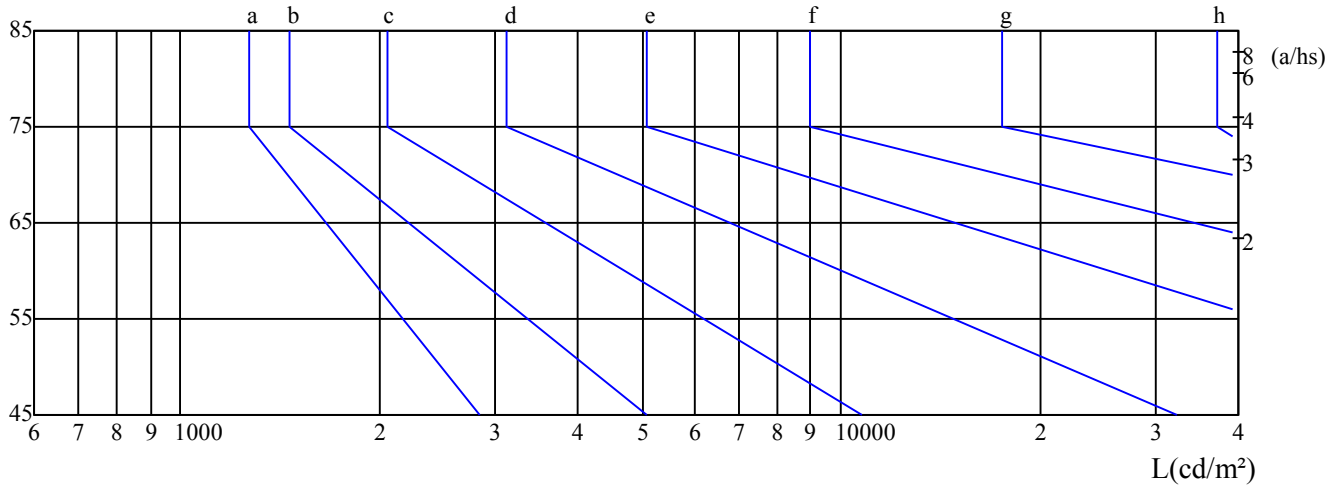
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

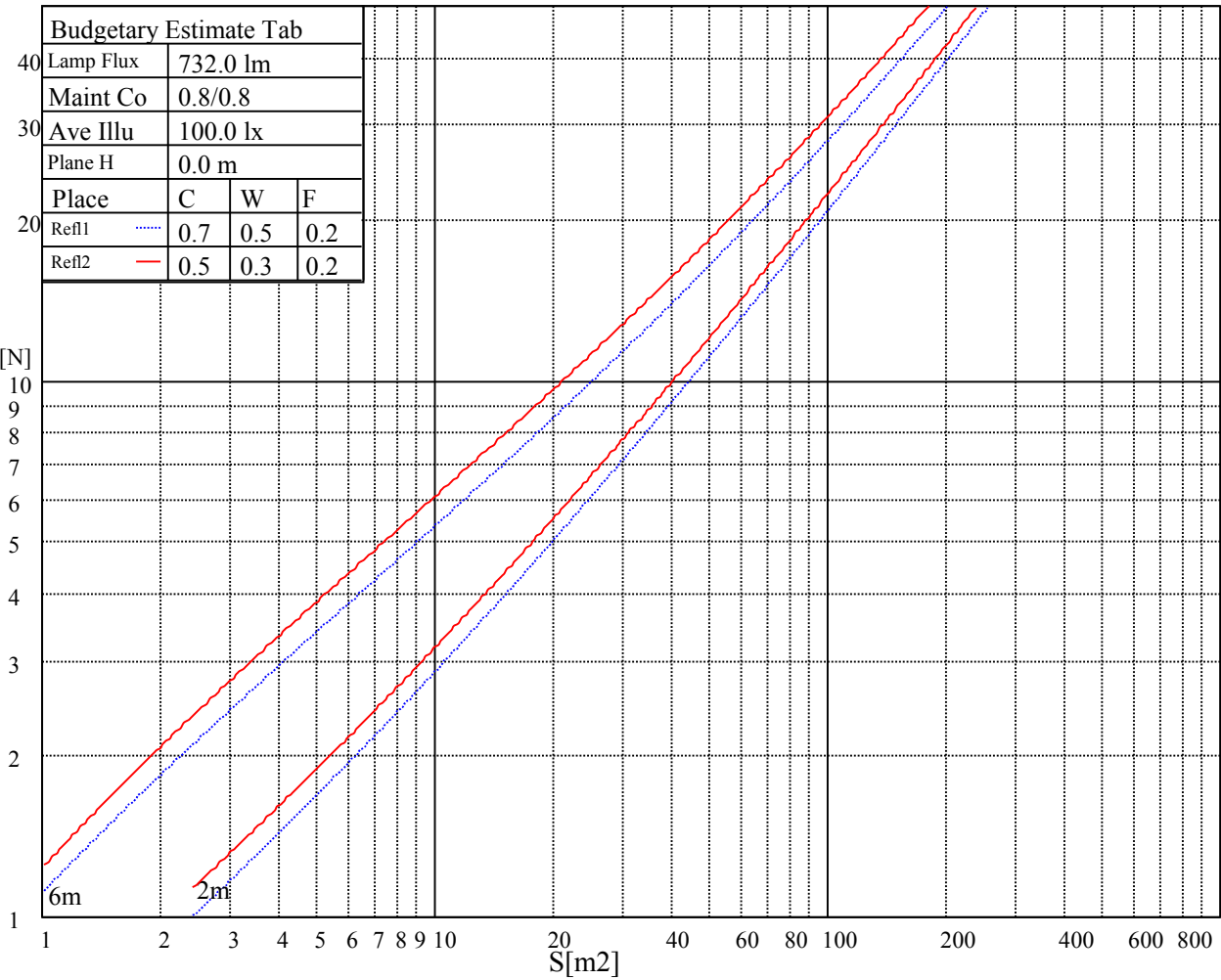
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

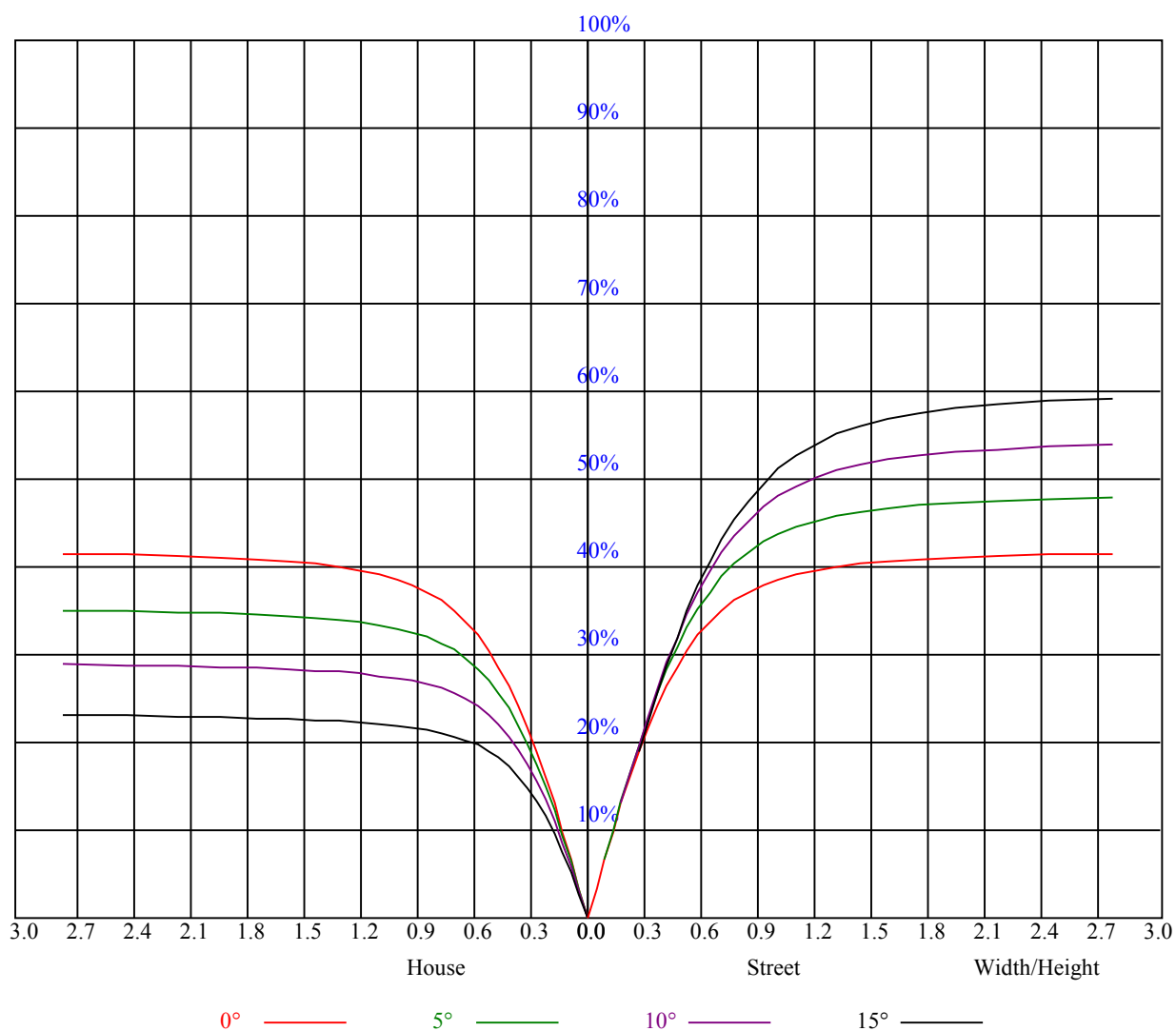
C0 ———

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	1.01	1.01	1.01	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.92	0.89	0.87	0.90	0.88	0.86	0.87	0.85	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.77
2	0.85	0.81	0.77	0.83	0.79	0.76	0.80	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.72	0.70
3	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.64
4	0.72	0.67	0.63	0.71	0.67	0.63	0.70	0.65	0.62	0.68	0.64	0.61	0.66	0.63	0.61	0.59
5	0.67	0.62	0.58	0.67	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.62	0.59	0.56	0.55
6	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.51
7	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.49	0.56	0.52	0.49	0.55	0.52	0.49	0.47
8	0.56	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.46	0.44
9	0.52	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.50	0.46	0.43	0.42
10	0.50	0.44	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.48	0.44	0.41	0.47	0.43	0.40	0.39



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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	582.44	572.86	541.37	489.51	425.42	352.53	286.51	216.26	153.17
45.0	576.39	573.36	553.10	505.58	447.55	375.59	304.46	235.86	170.29
90.0	579.30	573.63	546.10	493.64	431.09	355.55	284.31	214.78	158.40
135.0	581.12	576.77	549.24	500.02	433.90	357.59	288.77	218.85	159.06
180.0	582.44	569.06	533.55	474.97	411.66	344.87	276.27	207.67	148.87
225.0	576.39	561.85	516.92	454.66	391.40	316.74	249.35	183.89	121.89
270.0	579.30	565.54	527.88	469.52	393.05	317.29	251.33	189.39	129.00
315.0	581.12	567.25	522.43	457.13	384.57	312.61	246.98	181.80	127.07
360.0	582.44	572.86	541.37	489.51	425.42	352.53	286.51	216.26	153.17
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	100.42	62.10	38.92	27.25	19.10	13.87	9.69	6.66	4.02
45.0	111.54	73.11	45.86	31.11	21.53	15.86	11.12	7.49	4.51
90.0	103.67	66.12	43.00	29.68	20.81	15.36	10.63	7.05	4.35
135.0	103.67	67.50	42.23	28.96	21.09	15.36	10.74	7.38	4.35
180.0	91.34	56.05	35.62	25.44	18.00	13.05	9.19	6.22	3.96
225.0	71.46	43.16	29.79	21.31	15.42	11.40	7.87	5.18	3.47
270.0	78.62	49.55	32.04	22.68	16.90	12.22	8.42	5.95	3.63
315.0	78.51	49.28	32.10	23.01	16.35	11.84	8.31	5.95	3.74
360.0	100.42	62.10	38.92	27.25	19.10	13.87	9.69	6.66	4.02
C/ γ (°)	90.0								
0.0	2.53								
45.0	2.81								
90.0	2.81								
135.0	2.75								
180.0	2.75								
225.0	2.42								
270.0	2.48								
315.0	2.53								
360.0	2.53								