
Nata

LumCAT: 1408-N	
Luminaire: 92.70.044.00	
Report No: NT2017110703	Voltage(V): 20.1000
Test No: GC2017110403	Current(A): 0.3000
LampCAT: NICHIA NVNWS007Z-V1	Power (W): 6.0300
Lamp flux(lm): 824.0	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): 679.02
Efficiency(%): 82.41%
Lumens(lm)/Power(W): 112.61
Central intensity(cd): 694.537
Maximum intensity(cd): 694.537
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=55.4
[C90/270]Total=55.4
Field angle(10%Imax): [C0/180]Total=96.4
[C90/270]Total=96.4
Maximum s/h(1/2): C0_180=0.82 C90_270=0.82
Maximum s/h(1/4): C0_180=0.88 C90_270=0.88
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.83%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.049%

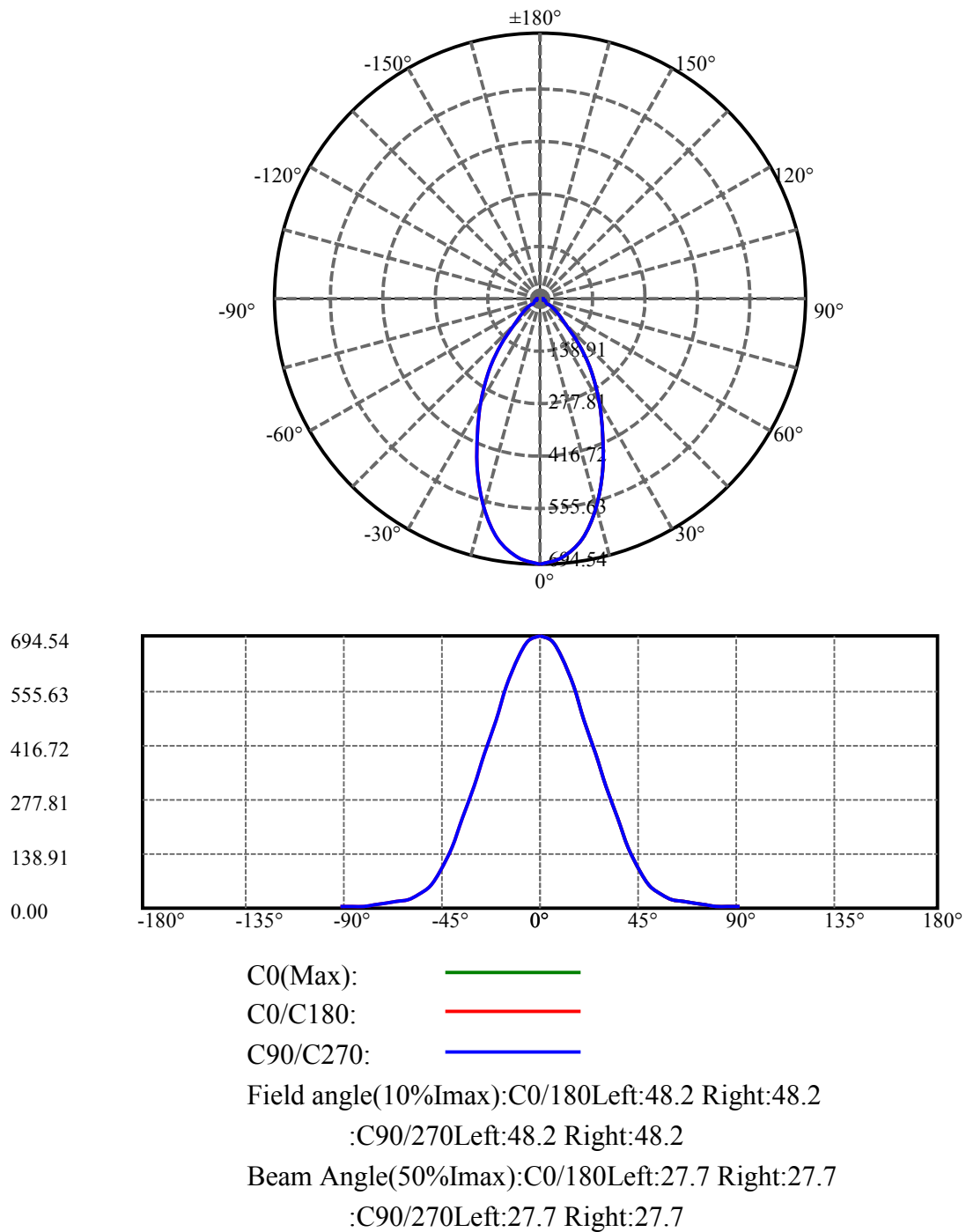
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	694.536	4.153	4.153	.504%	.612%
5.0	680.064	32.489	36.642	3.943%	5.396%
10.0	638.028	60.729	97.372	7.370%	14.340%
15.0	566.055	80.305	177.677	9.746%	26.167%
20.0	480.512	90.083	267.761	10.932%	39.434%
25.0	391.059	90.590	358.351	10.994%	52.775%
30.0	310.305	85.045	443.395	10.321%	65.300%
35.0	228.250	71.762	515.157	8.709%	75.868%
40.0	155.830	54.905	570.061	6.663%	83.954%
45.0	94.291	36.546	606.608	4.435%	89.336%
50.0	55.531	23.317	629.925	2.830%	92.770%
55.0	33.454	15.021	644.946	1.823%	94.982%
60.0	22.360	10.614	655.56	1.288%	96.545%
65.0	15.471	7.686	663.246	.933%	97.677%
70.0	11.225	5.782	669.028	.702%	98.529%
75.0	7.963	4.216	673.244	.512%	99.150%
80.0	5.547	2.994	676.238	.363%	99.591%
85.0	3.730	2.037	678.275	.247%	99.891%
90.0	2.712	0.743	679.018	.090%	100.000%

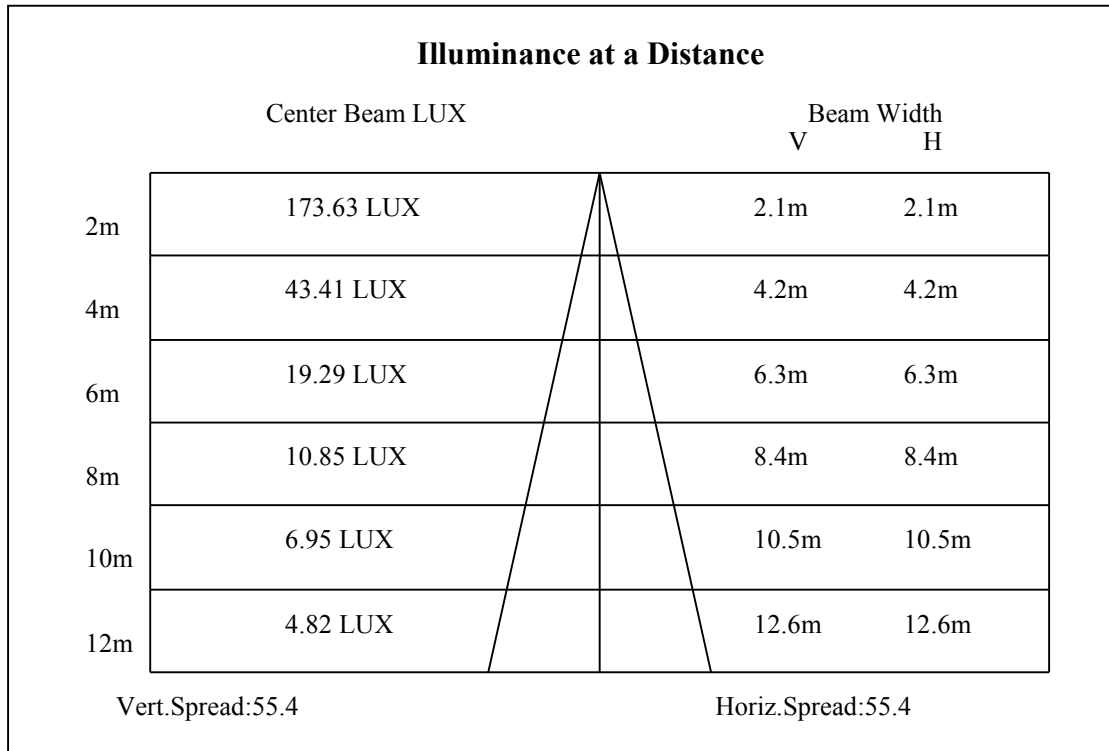
ZONAL LUMEN SUMMARY

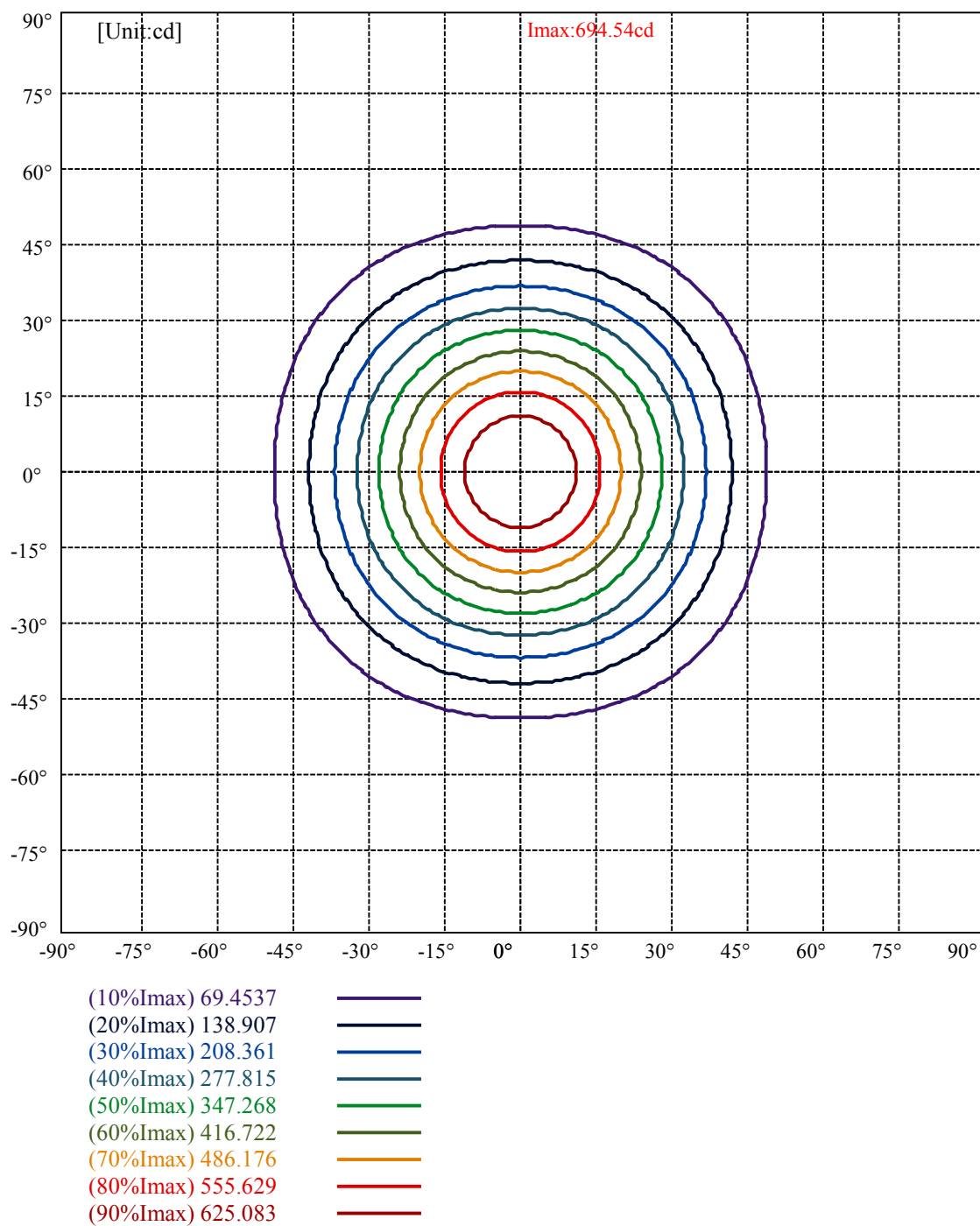
Zone	Lumens	%Lamp	%Fixt
0-30	443.40	53.81%	65.30%
0-40	570.06	69.18%	83.95%
0-60	655.56	79.56%	96.55%
0-90	678.27	82.31%	99.89%
0-120	678.27	82.31%	99.89%
0-180	679.02	82.41%	100.00%
60-90	33.33	4.04%	4.91%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.56	543.21	65.92%	80.00%

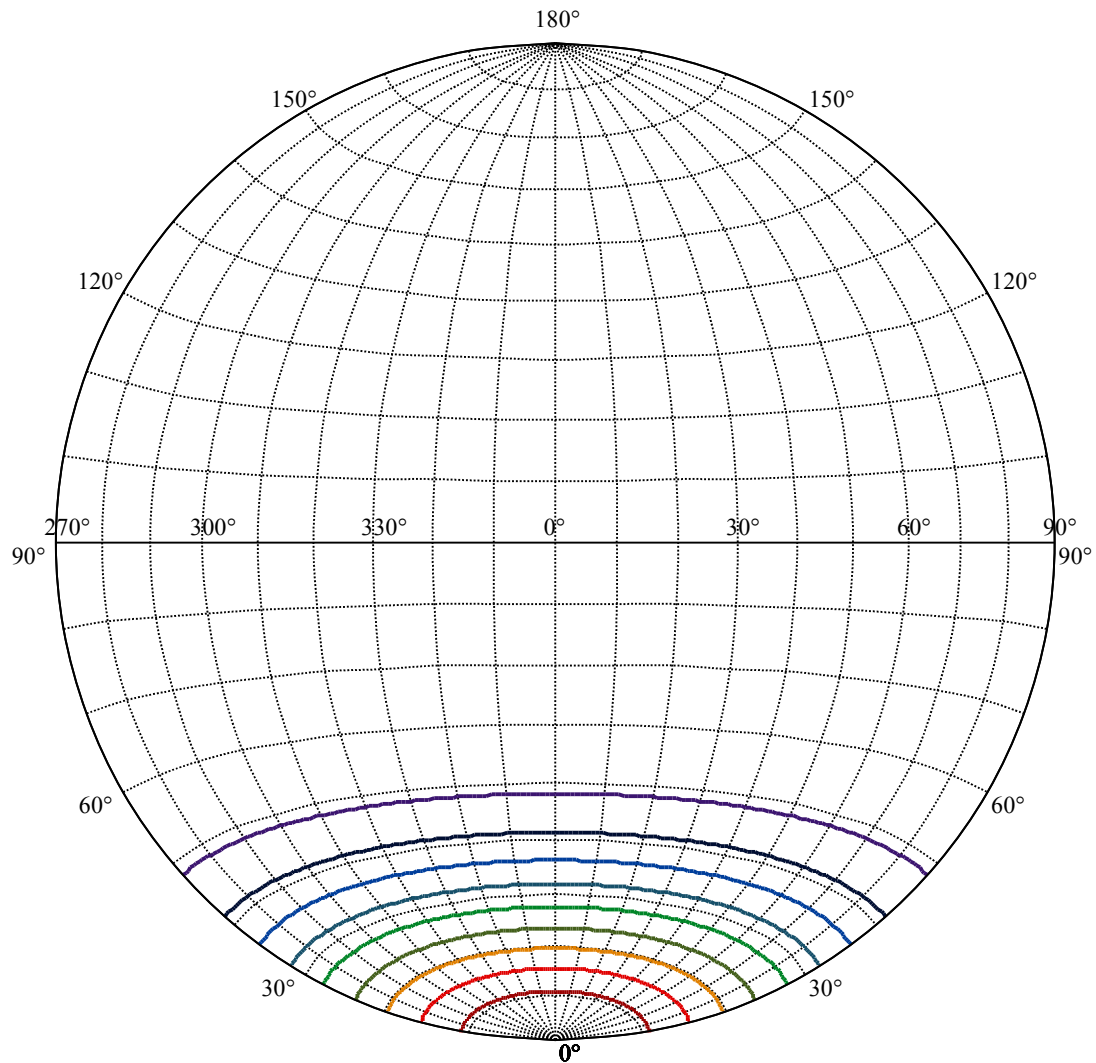
ZONAL LUMEN SUMMARY

0-10	97.37
10-20	170.39
20-30	175.63
30-40	126.67
40-50	59.86
50-60	25.64
60-70	13.47
70-80	7.21
80-90	2.04
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









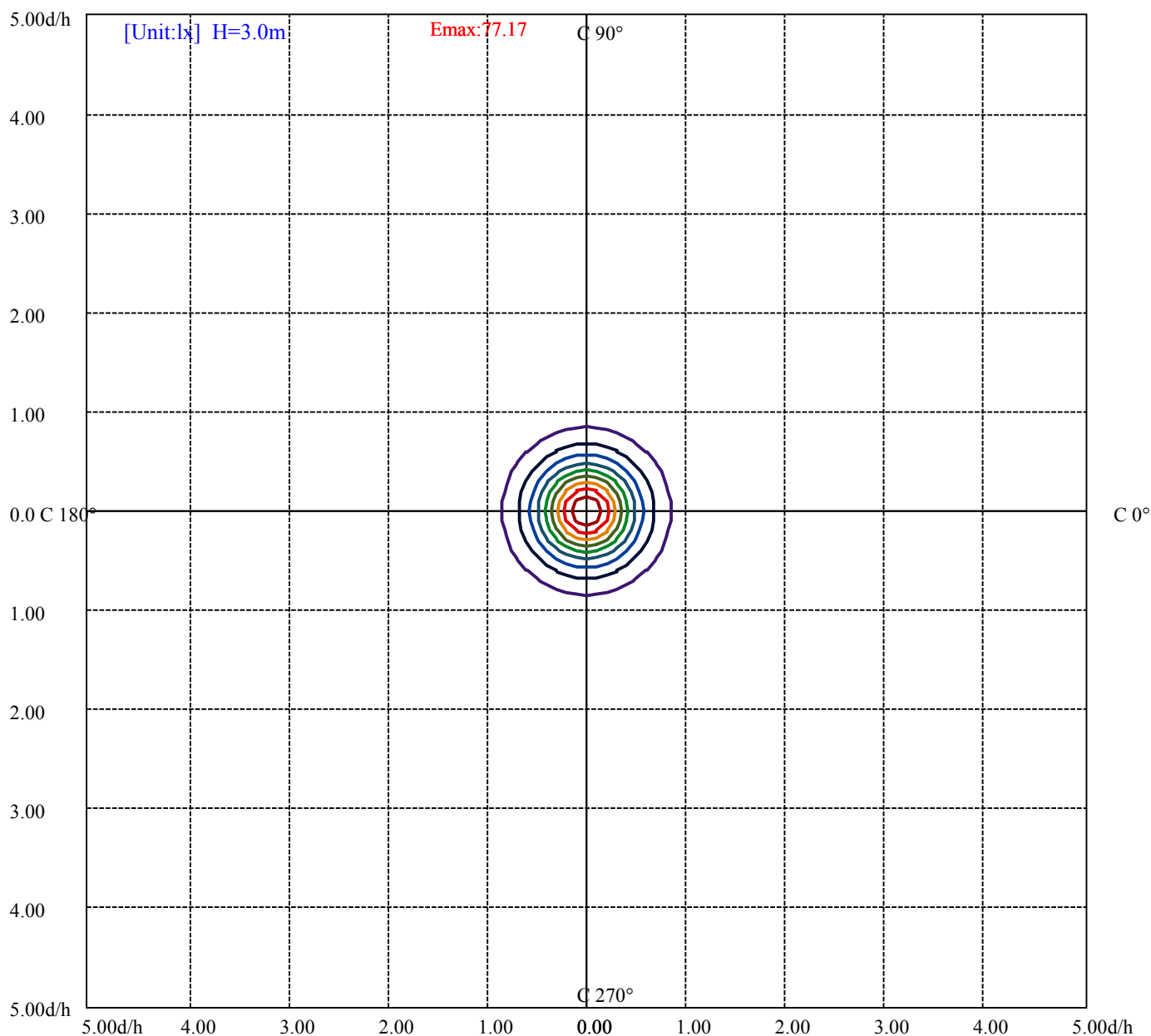
House

[Unit:cd]

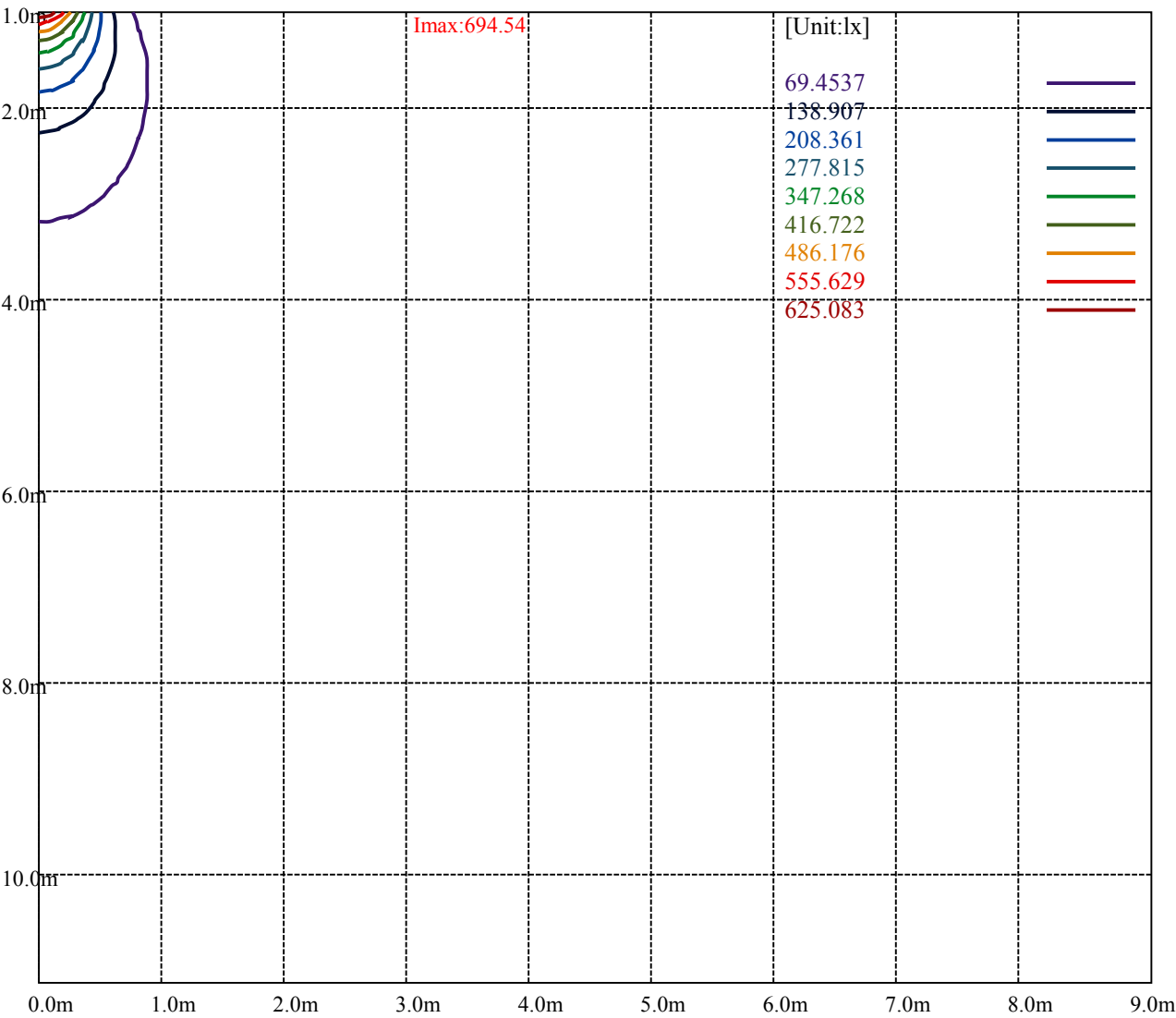
Road

Imax:694.54
 (10%Imax) 69.4537
 (20%Imax) 138.907
 (30%Imax) 208.361
 (40%Imax) 277.815
 (50%Imax) 347.268
 (60%Imax) 416.722
 (70%Imax) 486.176
 (80%Imax) 555.629
 (90%Imax) 625.083





(10%E _{max}) 7.717066	—
(20%E _{max}) 15.43411	—
(30%E _{max}) 23.15122	—
(40%E _{max}) 30.86822	—
(50%E _{max}) 38.58533	—
(60%E _{max}) 46.30244	—
(70%E _{max}) 54.01944	—
(80%E _{max}) 61.73656	—
(90%E _{max}) 69.45355	—



Luminance Table

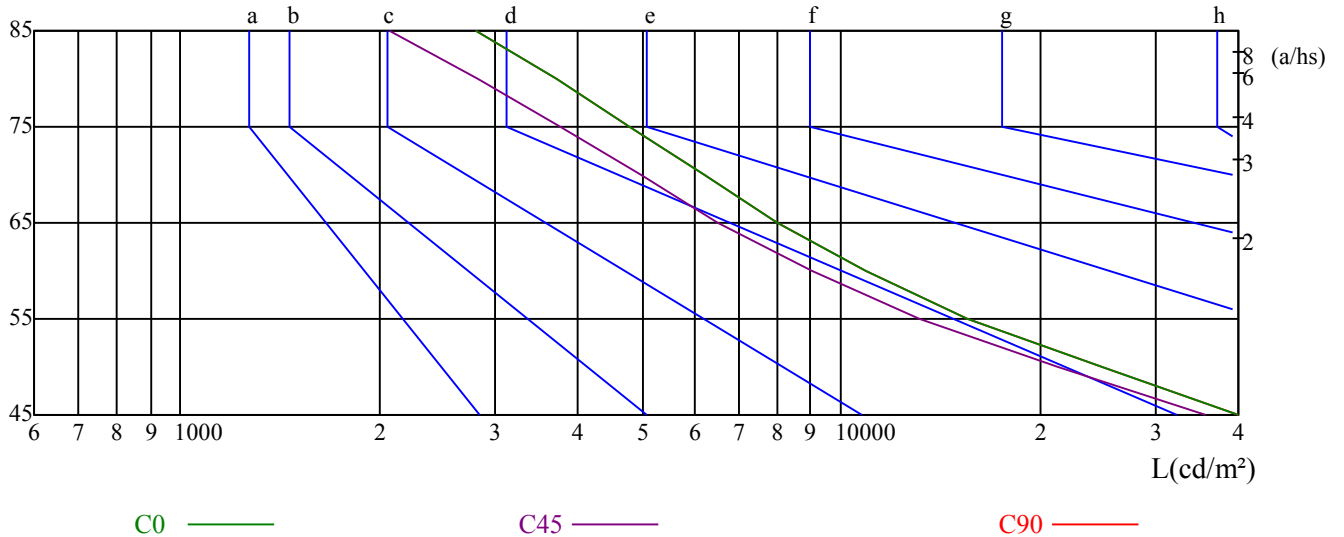
γ	45	50	55	60	65	70	75	80	85
C0	40829	24779	15519	10886	7989	6221	4801	3698	2804
C45	35632	21309	13140	9066	6533	4984	3758	2817	2067
C90	40829	24779	15519	10886	7989	6221	4801	3698	2804

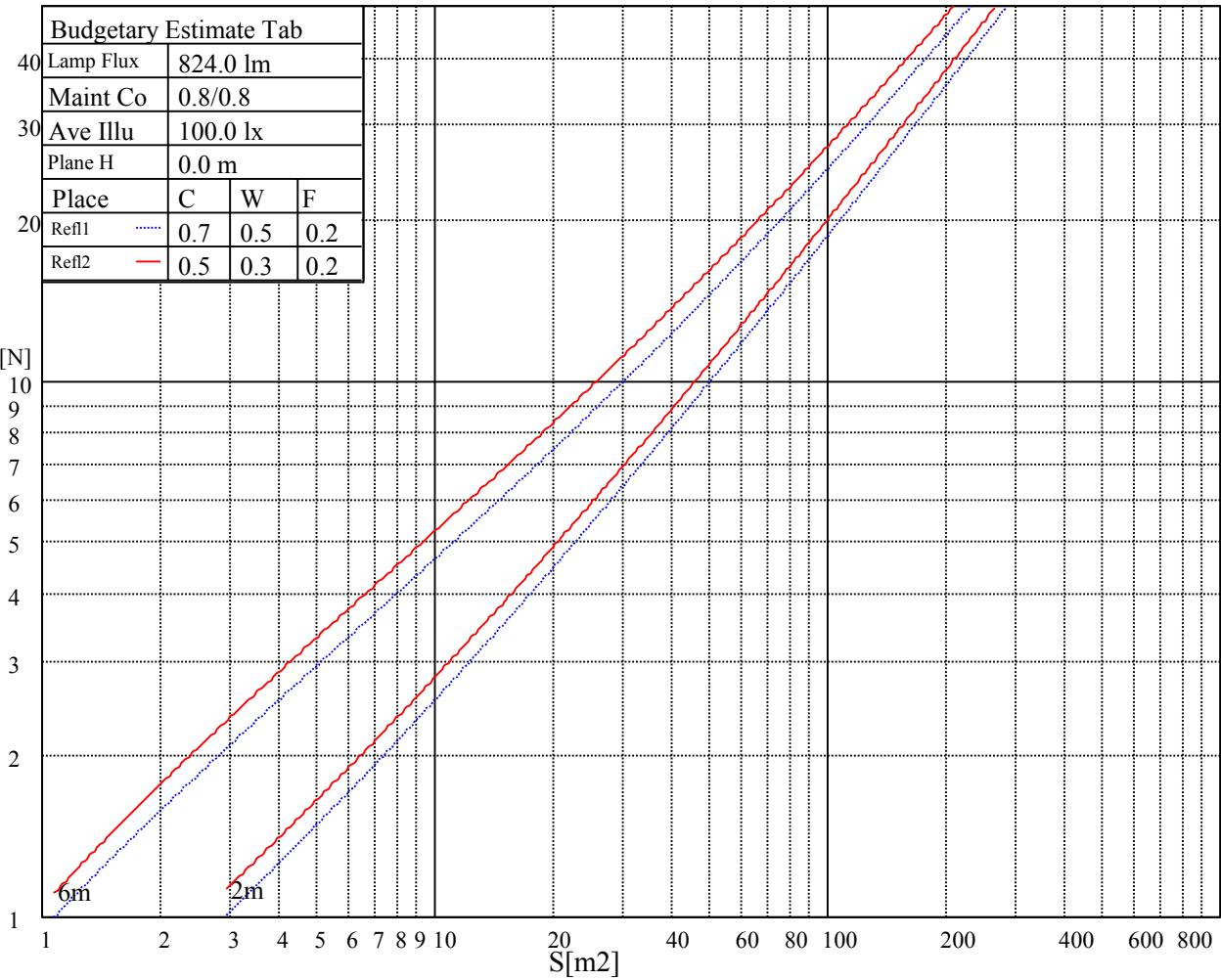
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
17300	17300	17300	14539	14539	14539	20226	20226	20226

Glare Table

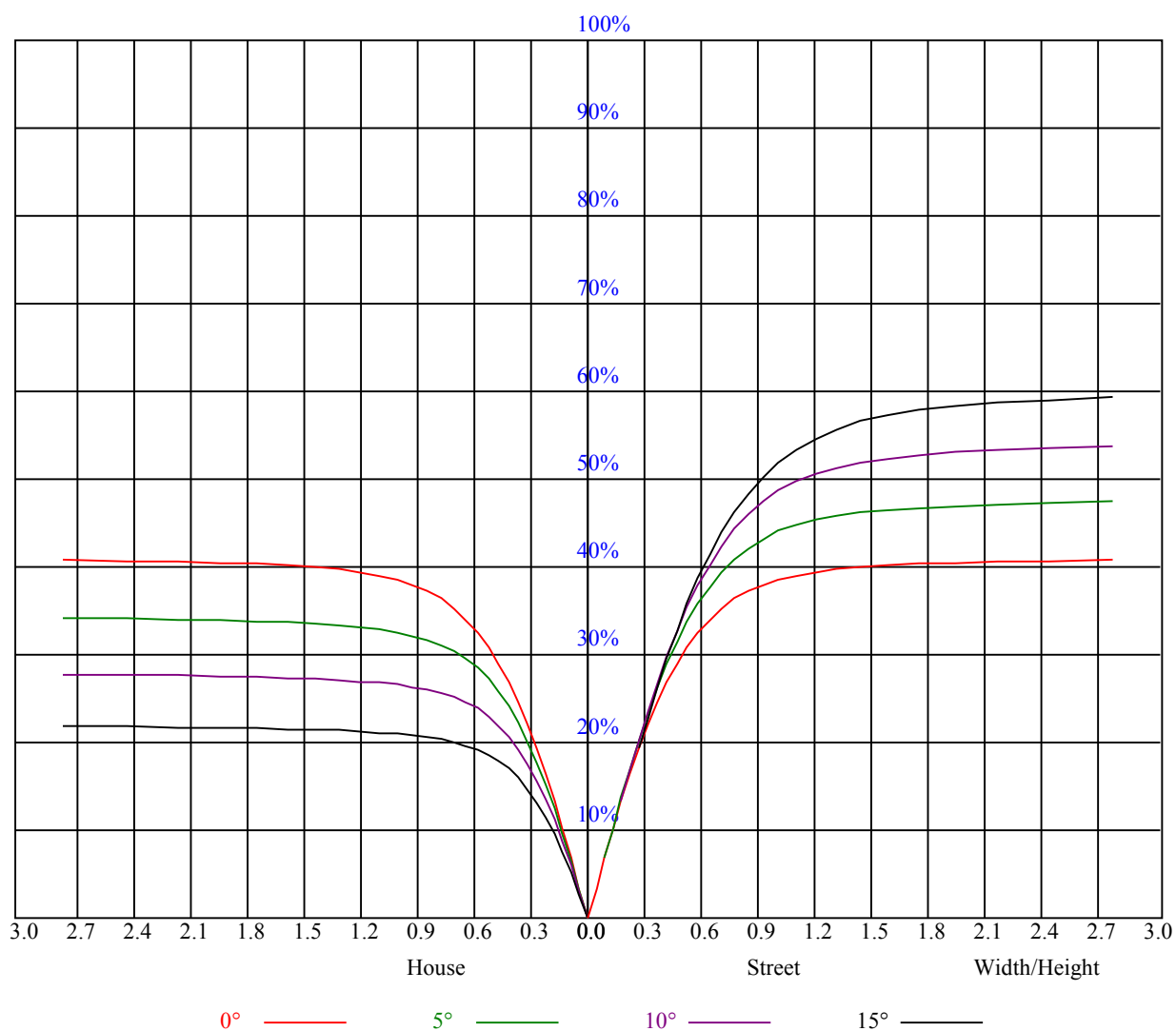
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

 $\gamma(^{\circ})$ 



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	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.90	0.88	0.86	0.89	0.86	0.84	0.85	0.83	0.82	0.82	0.81	0.79	0.79	0.78	0.77	0.76
2	0.84	0.80	0.77	0.82	0.79	0.76	0.79	0.77	0.74	0.77	0.75	0.72	0.75	0.73	0.71	0.70
3	0.77	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.72	0.69	0.67	0.70	0.68	0.65	0.64
4	0.72	0.67	0.63	0.71	0.66	0.63	0.69	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	0.66	0.62	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	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.51
7	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.48
8	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.46	0.45
9	0.53	0.48	0.44	0.52	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.44	0.43
10	0.50	0.45	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.48	0.44	0.41	0.48	0.44	0.41	0.40



Nata 1408-N

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	696.52	690.68	649.94	581.73	496.11	402.68	318.17	237.68	168.14		
45.0	694.26	681.10	645.04	570.93	485.82	392.39	314.10	231.13	156.97		
90.0	691.23	671.36	628.08	556.57	472.22	384.40	309.42	228.92	155.75		
135.0	696.13	680.00	637.33	570.44	482.62	394.64	313.27	231.62	165.61		
180.0	696.52	675.43	628.74	557.06	468.86	376.64	295.76	220.39	149.04		
225.0	694.26	678.74	636.67	561.13	478.61	387.21	305.67	220.67	143.15		
270.0	691.23	681.38	643.33	570.71	486.04	404.17	314.92	231.90	160.43		
315.0	696.13	681.82	635.08	559.87	473.82	386.33	311.12	223.69	147.55		
360.0	696.52	690.68	649.94	581.73	496.11	402.68	318.17	237.68	168.14		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	102.96	60.29	36.39	23.56	15.80	11.73	8.15	5.73	3.85		
45.0	95.74	56.21	33.36	22.63	15.47	11.23	7.98	5.67	3.69		
90.0	94.81	55.77	33.75	23.18	15.97	11.51	7.98	5.62	3.80		
135.0	100.15	59.90	36.89	24.61	17.01	12.28	9.03	6.28	4.02		
180.0	88.20	53.57	32.37	21.91	15.53	11.29	7.82	5.23	3.58		
225.0	87.59	51.31	31.38	21.09	14.92	10.79	7.71	5.29	3.74		
270.0	95.47	55.00	32.21	21.69	14.76	10.68	7.93	5.51	3.69		
315.0	89.41	52.19	31.27	20.21	14.31	10.30	7.10	5.07	3.47		
360.0	102.96	60.29	36.39	23.56	15.80	11.73	8.15	5.73	3.85		
C/γ(°)	90.0										
0.0	2.75										
45.0	2.70										
90.0	2.70										
135.0	2.70										
180.0	2.75										
225.0	2.70										
270.0	2.70										
315.0	2.70										
360.0	2.75										