
Nata

Client:

LumCAT: 1408-N

Luminaire: 92.70.043.00

Report No:

Voltage(V): 9.4200

Test No: GC2019082601

Current(A): 0.2990

LampCAT: EDISON 2PHM10WW38P55020

Power (W): 2.8200

Lamp flux(lm): 323.7

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): 271.79, Efficiency(%): 83.98% , Luminous Efficacy(lm/W): 96.38

Central intensity(cd): 251.016, Maximum intensity(cd): 251.016

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.2

[C90/270]Total=57.2

Field angle(10%Imax): [C0/180]Total=101.4

[C90/270]Total=101.4

Maximum s/h(1/2): C0_180=0.86 C90_270=0.86

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(%): 83.98%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.091%

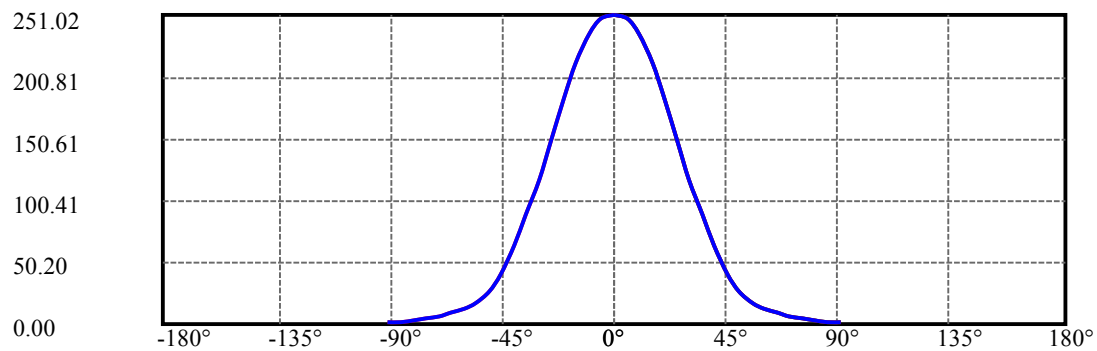
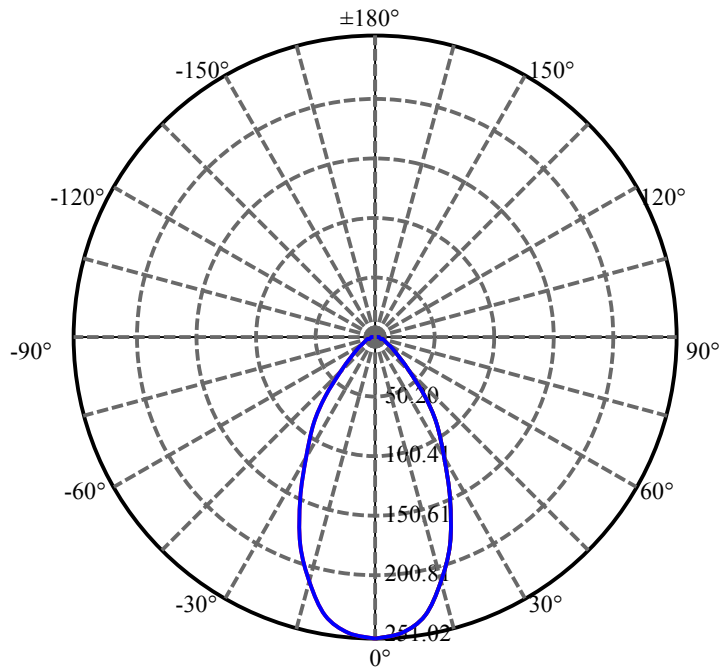
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	251.016	0.000	0	.000%	.000%
5.0	247.746	5.963	5.963	1.842%	2.194%
10.0	234.900	17.266	23.228	5.335%	8.546%
15.0	211.296	26.468	49.696	8.178%	18.285%
20.0	183.635	32.548	82.244	10.057%	30.260%
25.0	148.613	34.847	117.091	10.767%	43.081%
30.0	116.473	33.547	150.638	10.365%	55.424%
35.0	88.495	30.183	180.821	9.326%	66.529%
40.0	63.816	25.412	206.233	7.852%	75.879%
45.0	41.316	19.466	225.698	6.014%	83.041%
50.0	26.452	13.693	239.392	4.231%	88.079%
55.0	17.283	9.509	248.901	2.938%	91.578%
60.0	12.270	6.831	255.732	2.111%	94.091%
65.0	8.838	5.131	260.863	1.585%	95.979%
70.0	6.546	3.895	264.759	1.204%	97.412%
75.0	4.570	2.906	267.664	.898%	98.481%
80.0	2.995	2.024	269.689	.625%	99.226%
85.0	1.807	1.305	270.994	.403%	99.706%
90.0	1.111	0.799	271.793	.247%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	150.64	46.54%	55.42%
0-40	206.23	63.72%	75.88%
0-60	255.73	79.02%	94.09%
0-90	270.99	83.73%	99.71%
0-120	270.99	83.73%	99.71%
0-180	271.79	83.98%	100.00%
60-90	22.09	6.83%	8.13%
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%
0-42.88	217.43	67.18%	80.00%

ZONAL LUMEN SUMMARY

0-10	23.23
10-20	59.02
20-30	68.39
30-40	55.59
40-50	33.16
50-60	16.34
60-70	9.03
70-80	4.93
80-90	1.30
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



C0(Max):

C0/C180:

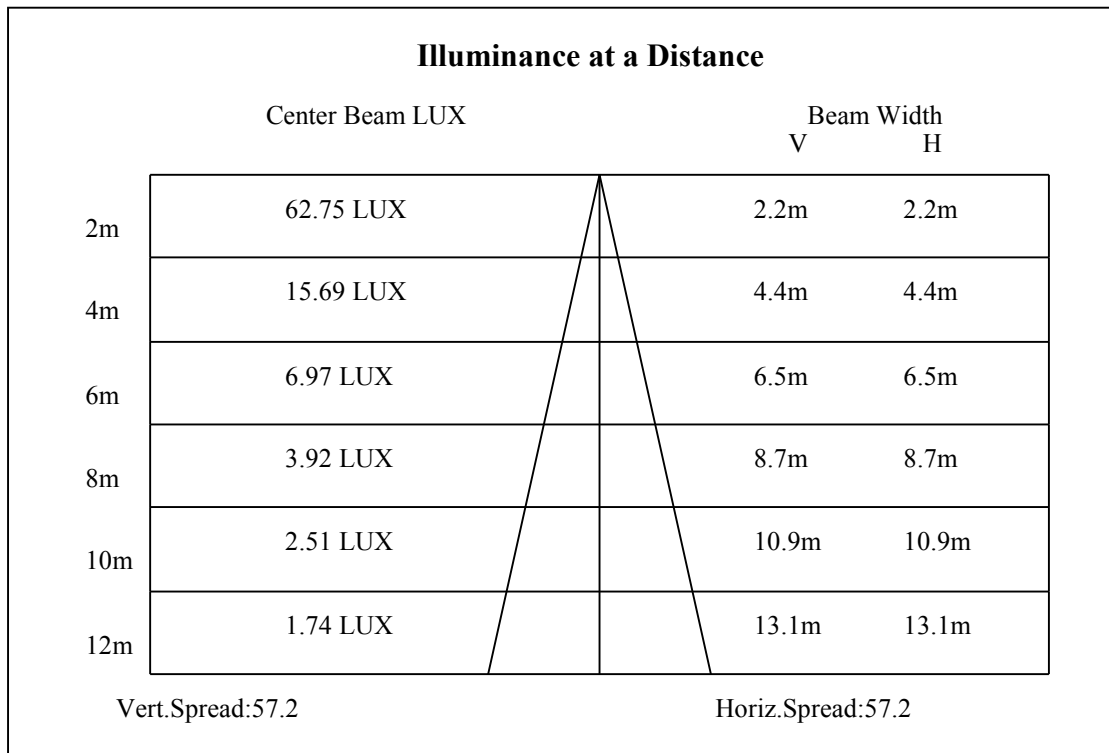
C90/C270:

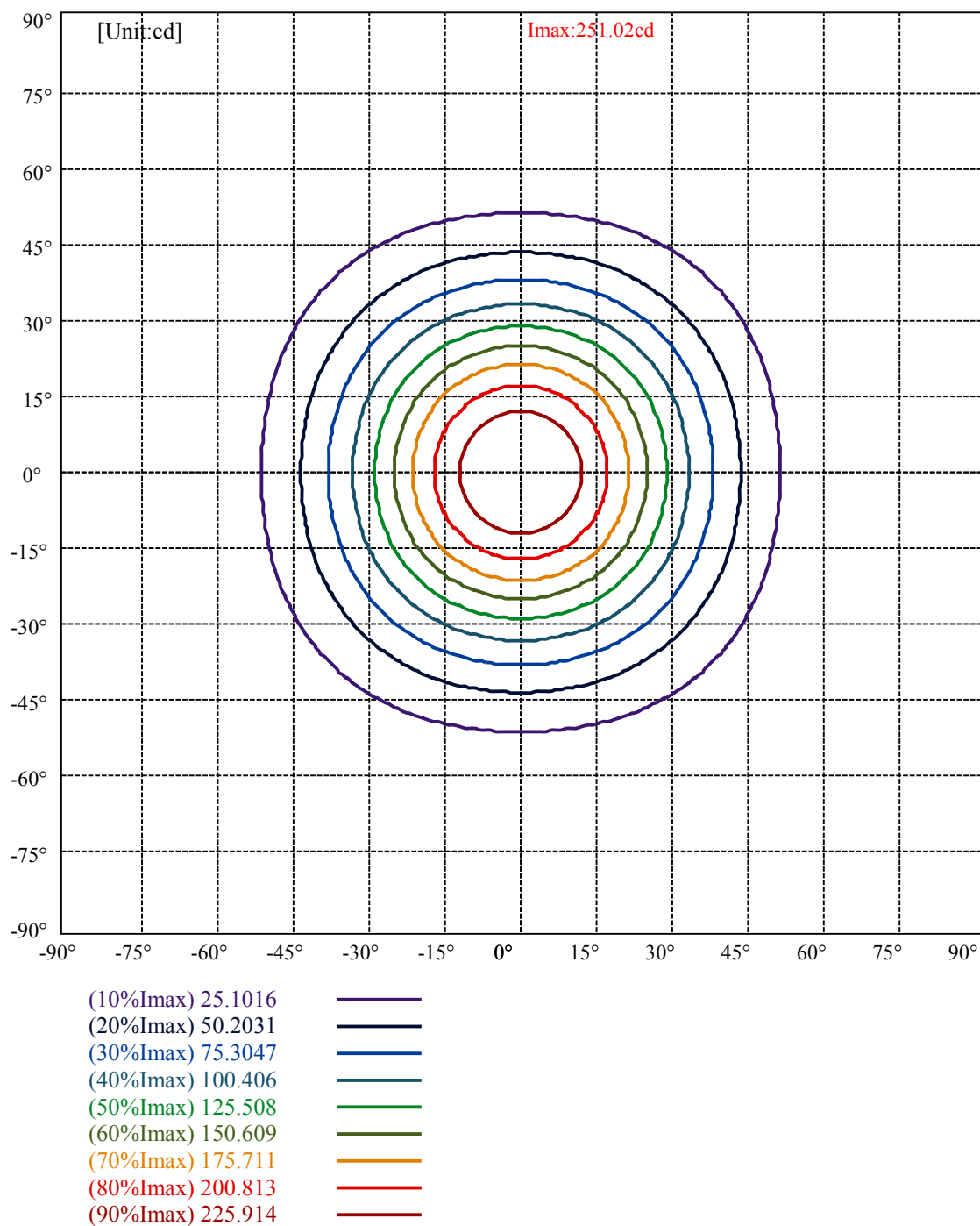
Field angle(10%Imax):C0/180Left:50.7 Right:50.7

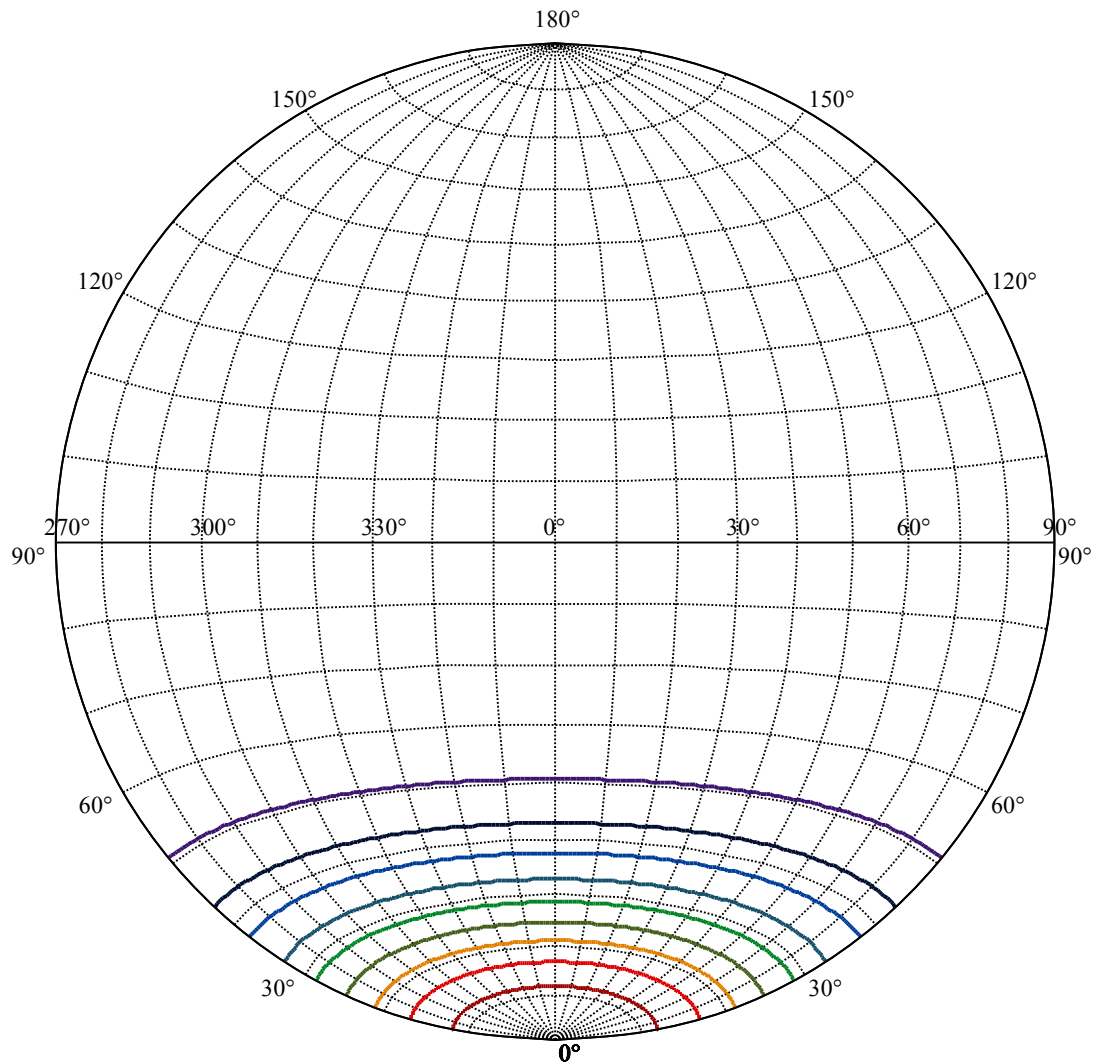
:C90/270Left:50.7 Right:50.7

Beam Angle(50%Imax):C0/180Left:28.6 Right:28.6

:C90/270Left:28.6 Right:28.6







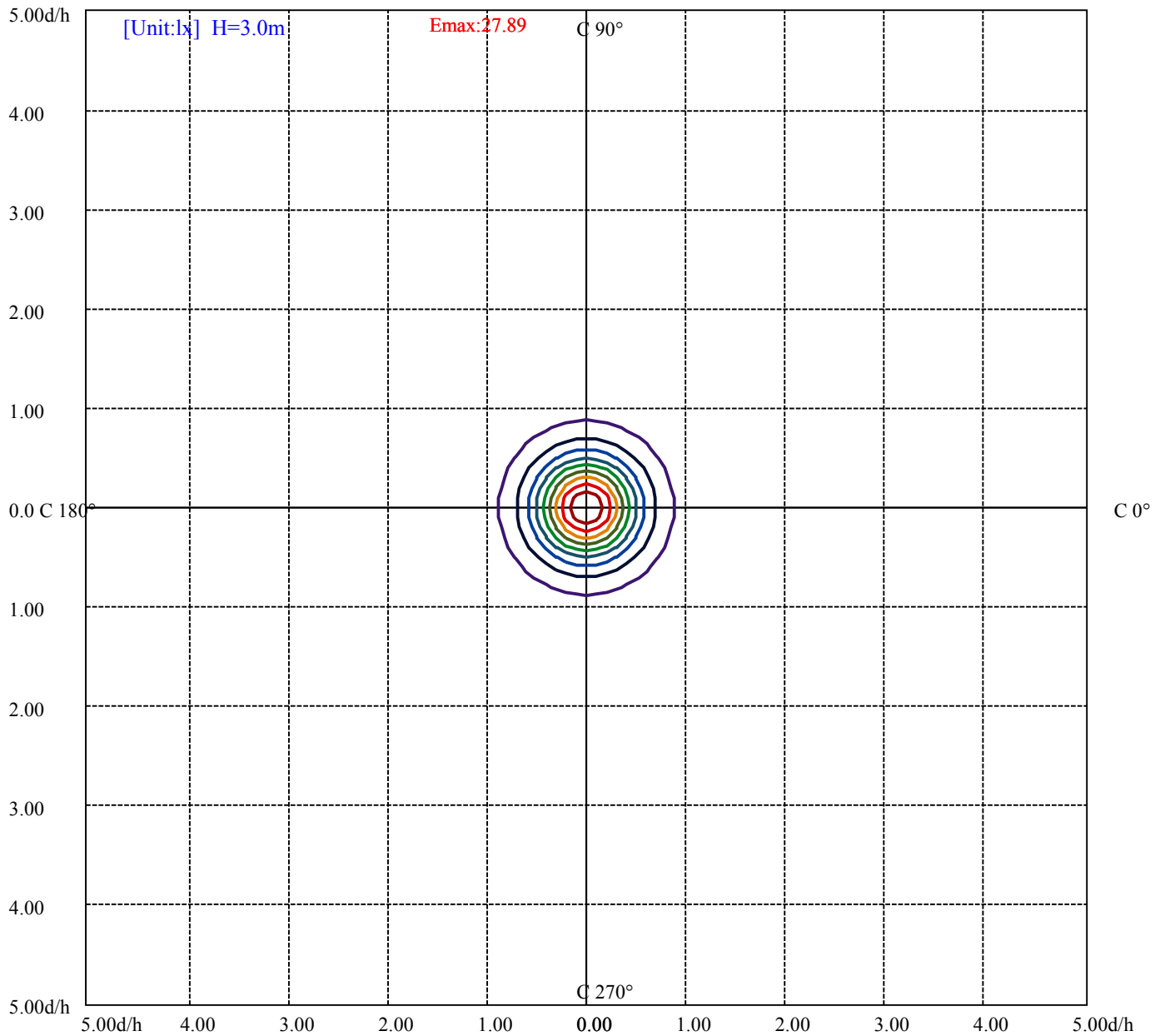
House

[Unit:cd]

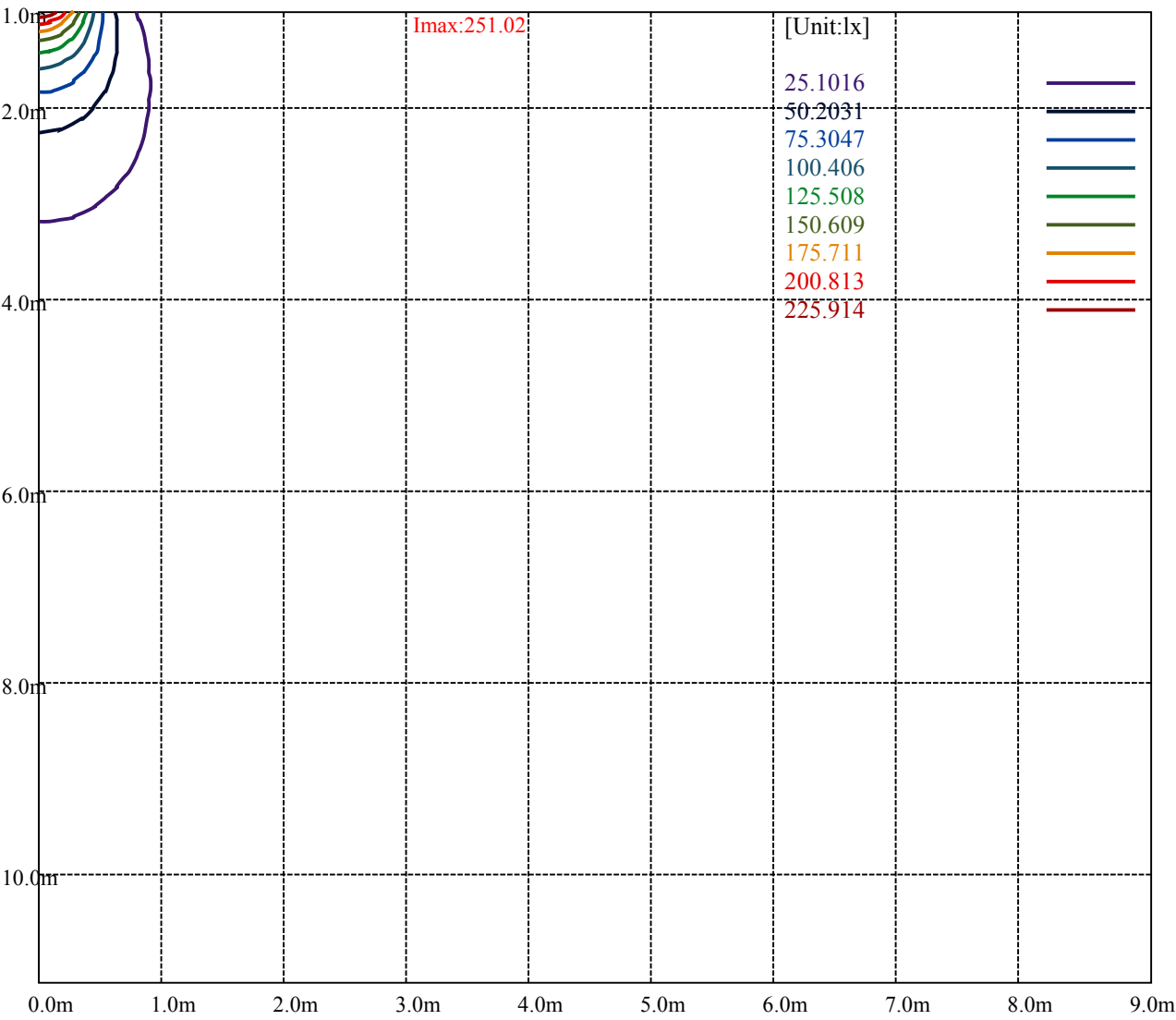
Road

Imax:251.02
 (10%Imax) 25.1016
 (20%Imax) 50.2031
 (30%Imax) 75.3047
 (40%Imax) 100.406
 (50%Imax) 125.508
 (60%Imax) 150.609
 (70%Imax) 175.711
 (80%Imax) 200.813
 (90%Imax) 225.914





(10%Emax) 2.789067	—
(20%Emax) 5.578122	—
(30%Emax) 8.367189	—
(40%Emax) 11.15622	—
(50%Emax) 13.94533	—
(60%Emax) 16.73433	—
(70%Emax) 19.52345	—
(80%Emax) 22.31244	—
(90%Emax) 25.10155	—



Luminance Table

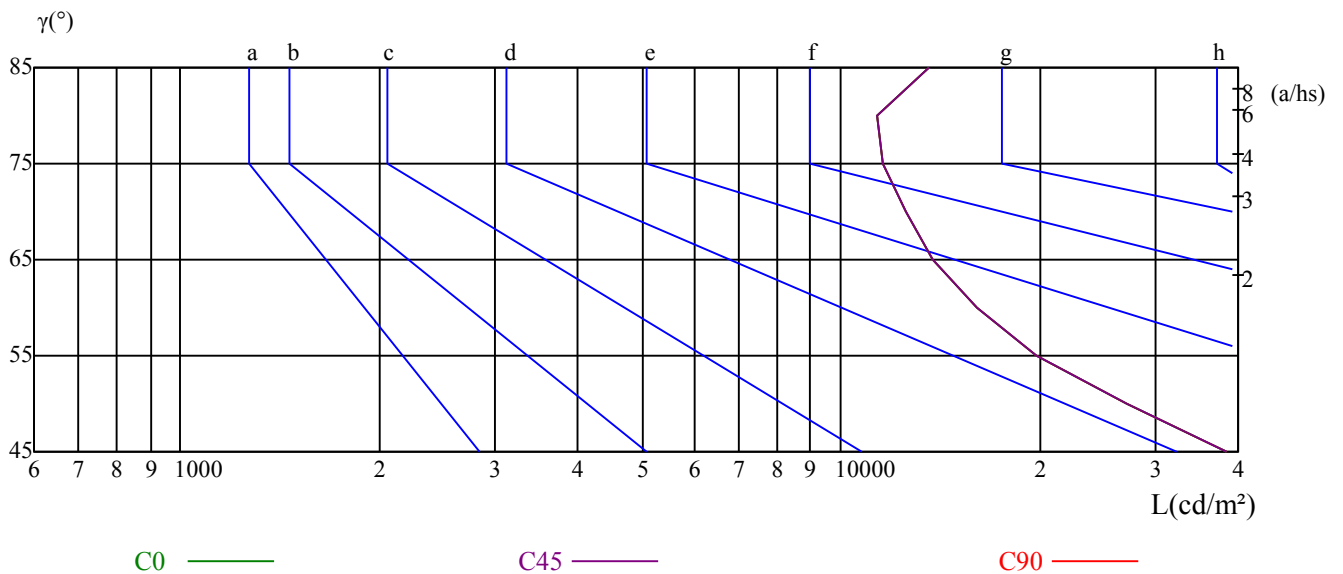
γ	45	50	55	60	65	70	75	80	85
C0	38415	27055	19810	16134	13750	12584	11610	11341	13631
C45	38415	27055	19810	16134	13750	12584	11610	11341	13631
C90	38415	27055	19810	16134	13750	12584	11610	11341	13631

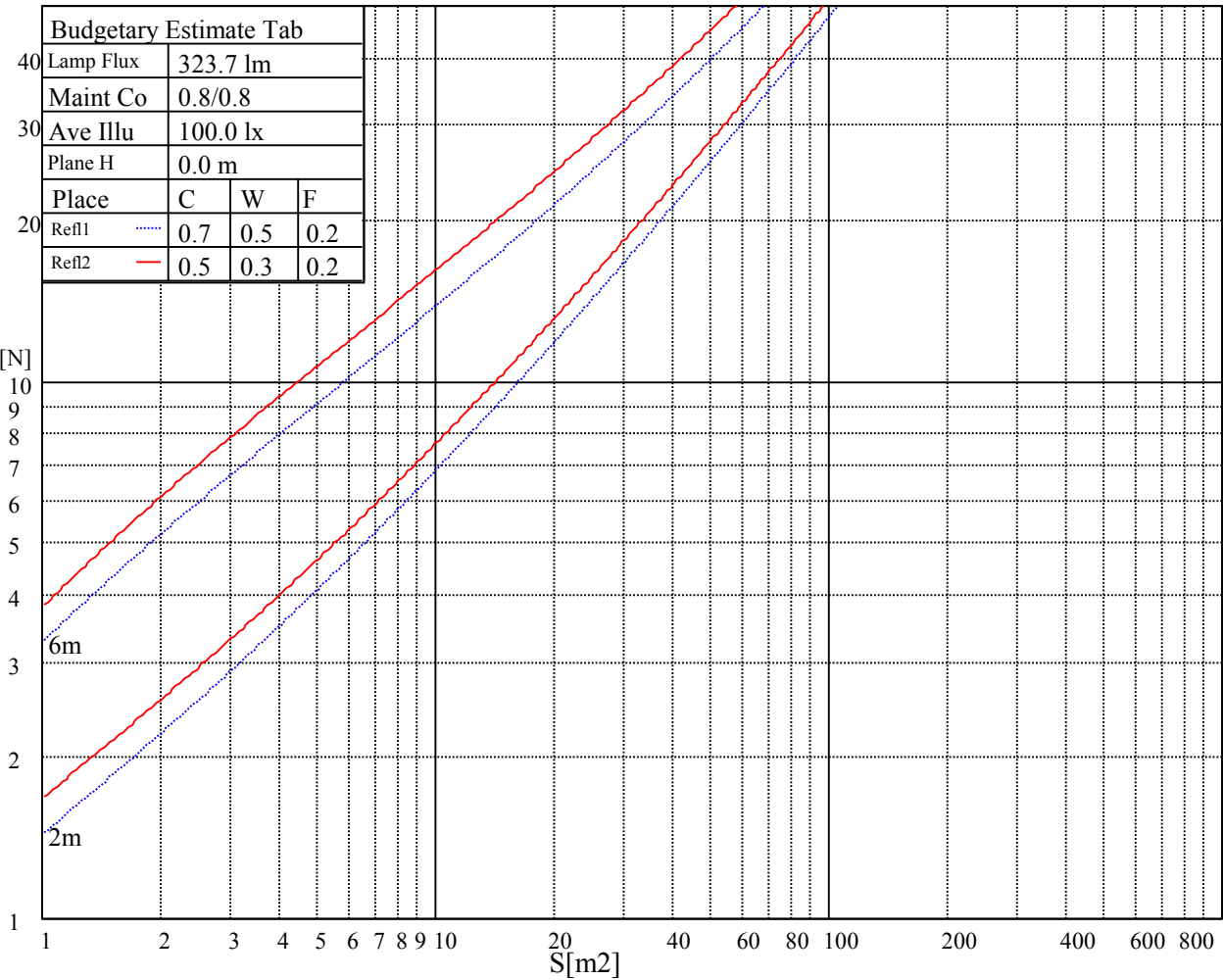
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13750	13750	13750	11610	11610	11610	13631	13631	13631

Glare Table

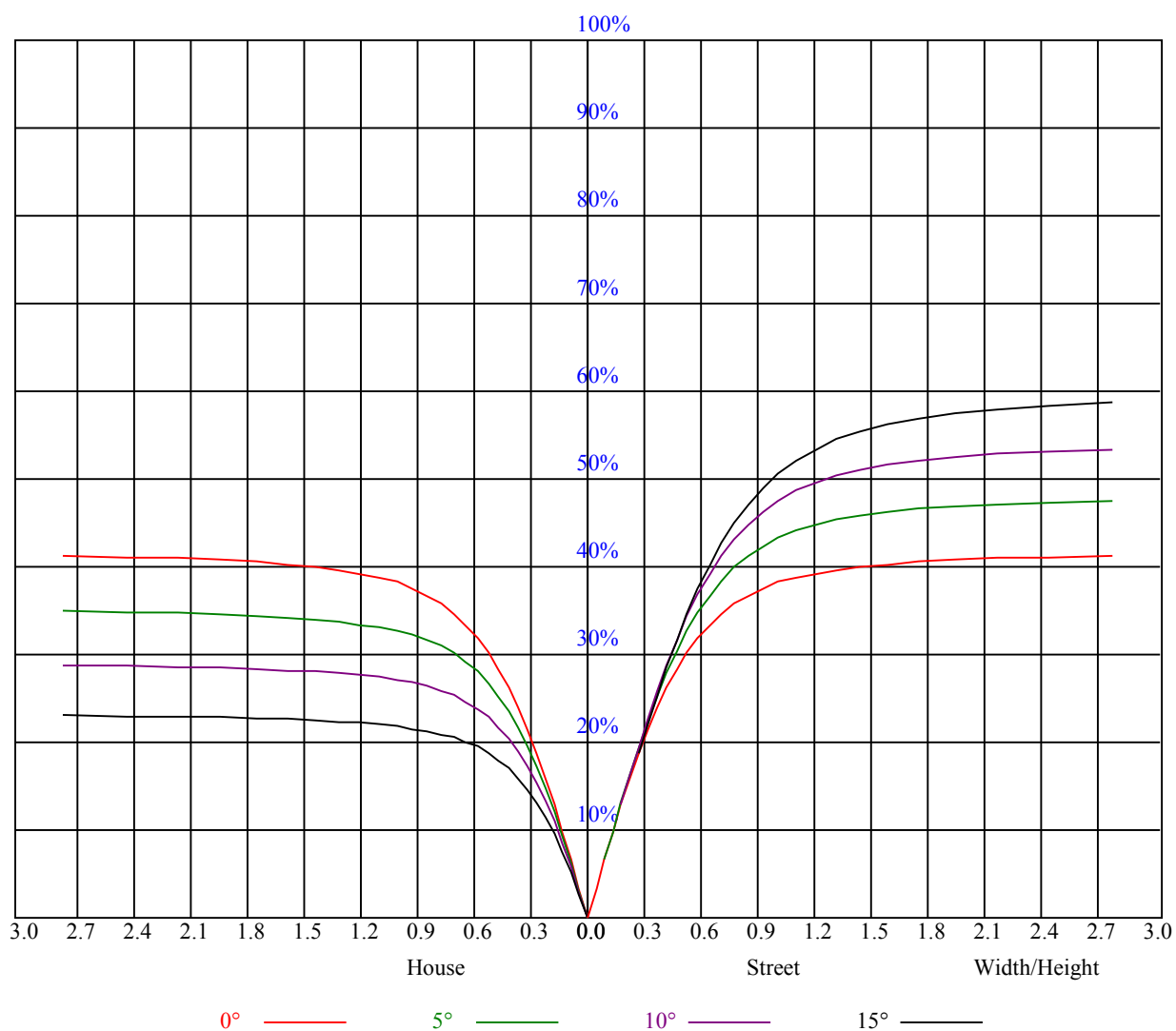
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

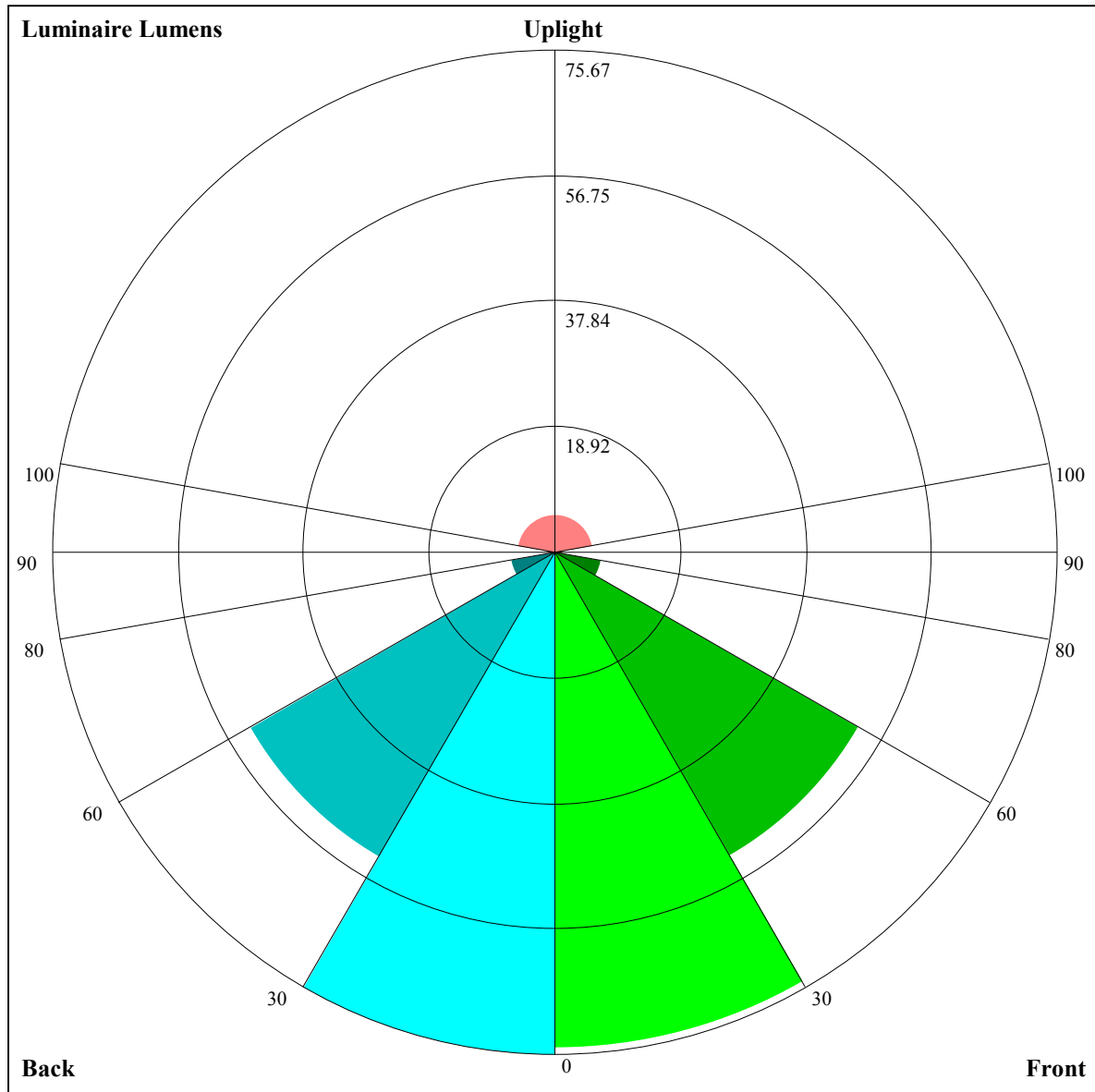
Luminance Limiting Curve





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	1.00	1.00	1.00	0.98	0.98	0.98	0.93	0.93	0.93	0.89	0.89	0.89	0.86	0.86	0.86	0.84
1	0.91	0.89	0.86	0.89	0.87	0.85	0.86	0.84	0.82	0.83	0.81	0.80	0.80	0.79	0.78	0.76
2	0.83	0.79	0.76	0.82	0.78	0.75	0.79	0.76	0.73	0.76	0.74	0.72	0.74	0.72	0.70	0.69
3	0.76	0.71	0.67	0.75	0.70	0.67	0.73	0.69	0.66	0.71	0.67	0.65	0.69	0.66	0.64	0.62
4	0.70	0.65	0.61	0.69	0.64	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.64	0.61	0.58	0.57
5	0.65	0.59	0.55	0.64	0.59	0.55	0.62	0.58	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
6	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.49	0.56	0.52	0.49	0.48
7	0.56	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.45	0.52	0.48	0.45	0.44
8	0.52	0.47	0.43	0.52	0.46	0.43	0.51	0.46	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.41
9	0.49	0.43	0.40	0.49	0.43	0.40	0.48	0.43	0.39	0.47	0.42	0.39	0.46	0.42	0.39	0.38
10	0.46	0.41	0.37	0.46	0.40	0.37	0.45	0.40	0.37	0.44	0.40	0.37	0.44	0.40	0.37	0.35





Luminaire Lumens:

FL=74.81,FM=52.7,FH=7.13,FVH=1.09

BL=75.67,BM=53.11,BH=6.84,BVH=1.01

UL=1.21,UH=5.77

BUG Rating:B0-U1-G0

Nata 1408-N

Intensity data(cd)										Appendix Page: 15 Total:15	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	252.06	245.81	233.33	210.21	178.93	140.01	106.14	79.26	57.49		
45.0	250.26	247.78	235.86	215.49	192.04	156.04	124.37	95.06	70.82		
90.0	250.20	248.29	234.68	212.12	185.40	153.28	122.51	93.71	67.56		
135.0	251.55	249.92	242.33	215.16	184.11	149.12	116.49	88.99	62.61		
180.0	252.06	248.68	236.93	209.87	182.31	148.28	117.23	89.44	64.41		
225.0	250.26	247.84	231.19	211.56	185.06	151.59	118.07	87.75	61.54		
270.0	250.20	248.63	233.94	210.49	185.96	153.17	120.43	93.04	67.95		
315.0	251.55	245.03	230.96	205.48	175.28	137.42	106.54	80.72	58.16		
360.0	252.06	245.81	233.33	210.21	178.93	140.01	106.14	79.26	57.49		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	39.43	26.04	17.61	12.66	9.23	6.86	4.84	3.26	1.97		
45.0	45.23	28.07	18.34	12.99	9.34	6.86	4.95	3.38	2.03		
90.0	43.48	27.96	17.66	12.43	8.89	6.58	4.56	2.93	1.80		
135.0	41.46	27.39	17.72	12.54	8.94	6.64	4.61	2.98	1.74		
180.0	40.84	26.10	16.59	11.76	8.27	6.24	4.28	2.70	1.69		
225.0	38.48	24.47	15.92	11.36	8.38	6.08	4.22	2.70	1.63		
270.0	43.99	27.28	17.83	12.49	8.94	6.64	4.61	3.09	1.80		
315.0	37.63	24.30	16.59	11.93	8.72	6.47	4.50	2.93	1.80		
360.0	39.43	26.04	17.61	12.66	9.23	6.86	4.84	3.26	1.97		
C/γ(°)	90.0										
0.0	1.13										
45.0	1.18										
90.0	1.13										
135.0	1.07										
180.0	1.07										
225.0	1.07										
270.0	1.13										
315.0	1.13										
360.0	1.13										