
Nata

Client:

LumCAT: 1407-N

Luminaire: 92.70.043.00

Report No:

Voltage(V): 9.3100

Test No: GC2019082601

Current(A): 0.2990

LampCAT: EDISON 2PHM10WW38P55020

Power (W): 2.8100

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): 275.55, Efficiency(%): 85.14% , Luminous Efficacy(lm/W): 98.06

Central intensity(cd): 325.519, Maximum intensity(cd): 325.519

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=44.2

[C90/270]Total=44.2

Field angle(10%Imax): [C0/180]Total=95.8

[C90/270]Total=95.8

Maximum s/h(1/2): C0_180=0.68 C90_270=0.68

Maximum s/h(1/4): C0_180=0.76 C90_270=0.76

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.14%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.133%

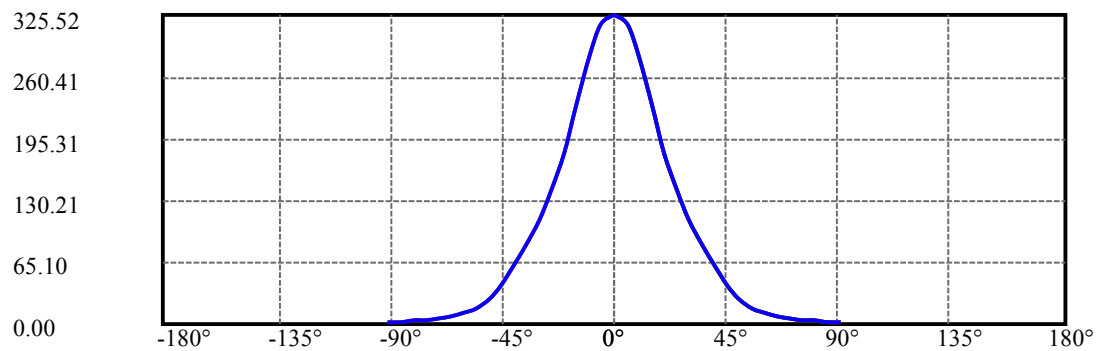
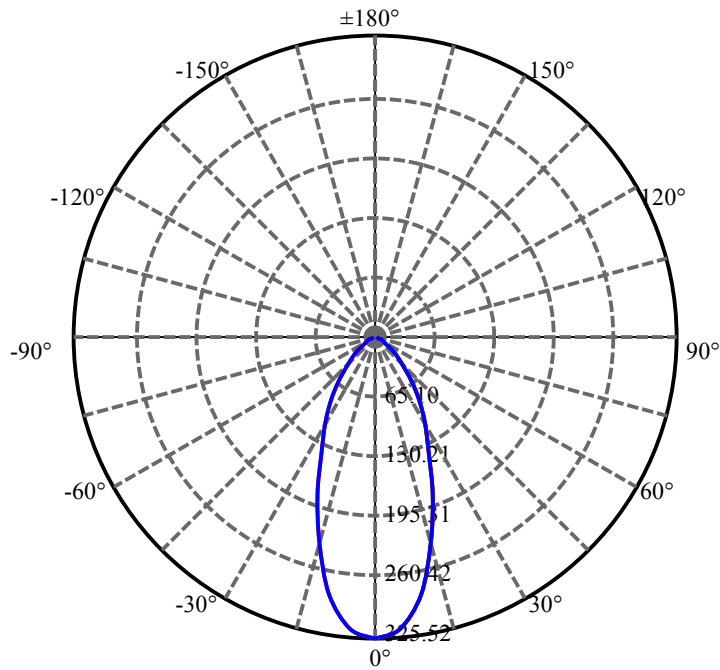
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	325.519	0.000	0	.000%	.000%
5.0	315.591	7.664	7.664	2.368%	2.781%
10.0	281.292	21.352	29.017	6.597%	10.531%
15.0	229.444	30.297	59.313	9.361%	21.526%
20.0	180.105	33.753	93.066	10.429%	33.775%
25.0	139.113	33.480	126.546	10.345%	45.926%
30.0	108.295	31.310	157.856	9.674%	57.288%
35.0	83.721	28.276	186.131	8.737%	67.550%
40.0	62.255	24.355	210.486	7.525%	76.389%
45.0	41.048	19.127	229.614	5.910%	83.331%
50.0	26.255	13.600	243.213	4.202%	88.266%
55.0	17.058	9.418	252.631	2.910%	91.684%
60.0	12.143	6.750	259.381	2.085%	94.133%
65.0	8.824	5.097	264.478	1.575%	95.983%
70.0	6.525	3.887	268.364	1.201%	97.394%
75.0	4.577	2.902	271.266	.897%	98.447%
80.0	3.087	2.051	273.317	.634%	99.191%
85.0	1.927	1.362	274.679	.421%	99.686%
90.0	1.238	0.866	275.546	.268%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	157.86	48.77%	57.29%
0-40	210.49	65.04%	76.39%
0-60	259.38	80.14%	94.13%
0-90	274.68	84.87%	99.69%
0-120	274.68	84.87%	99.69%
0-180	275.55	85.14%	100.00%
60-90	22.05	6.81%	8.00%
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%
0-42.60	220.44	68.11%	80.00%

ZONAL LUMEN SUMMARY

0-10	29.02
10-20	64.05
20-30	64.79
30-40	52.63
40-50	32.73
50-60	16.17
60-70	8.98
70-80	4.95
80-90	1.36
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:

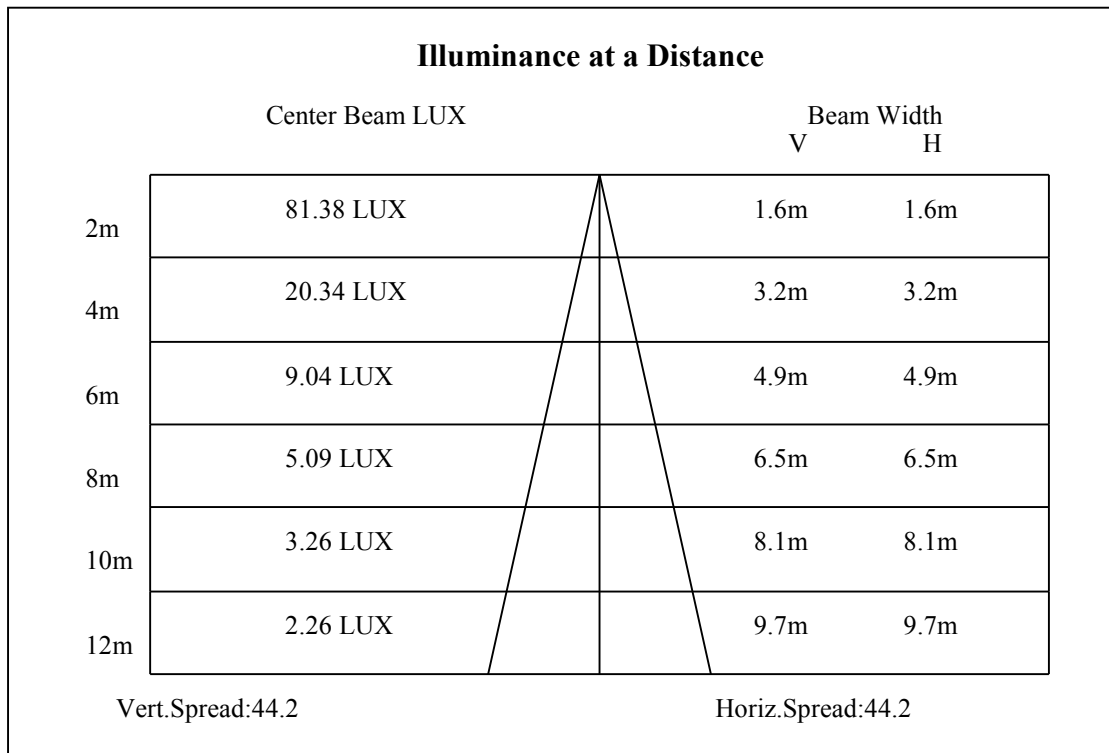
C90/C270:

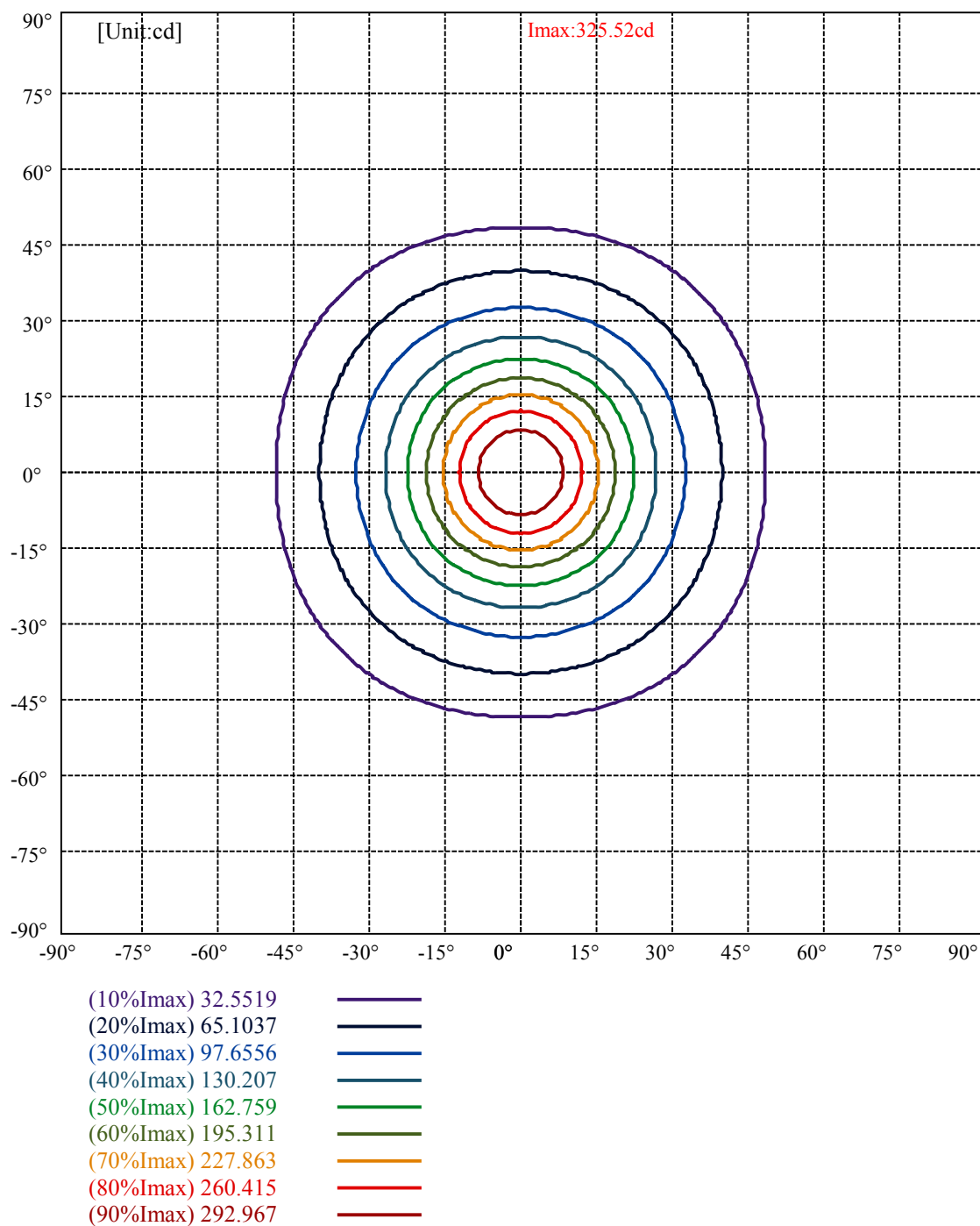
Field angle(10%Imax):C0/180Left:47.9 Right:47.9

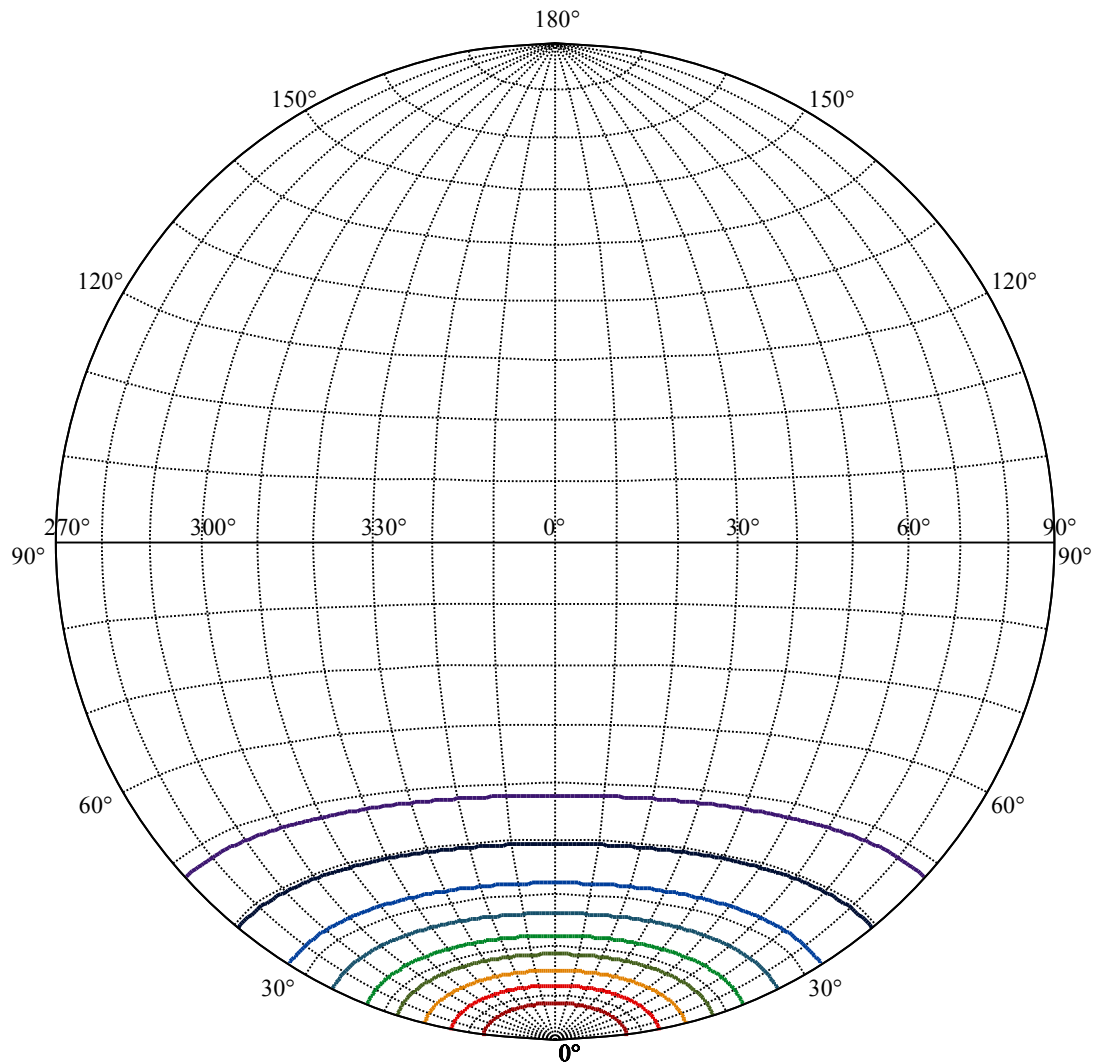
:C90/270Left:47.9 Right:47.9

Beam Angle(50%Imax):C0/180Left:22.1 Right:22.1

:C90/270Left:22.1 Right:22.1







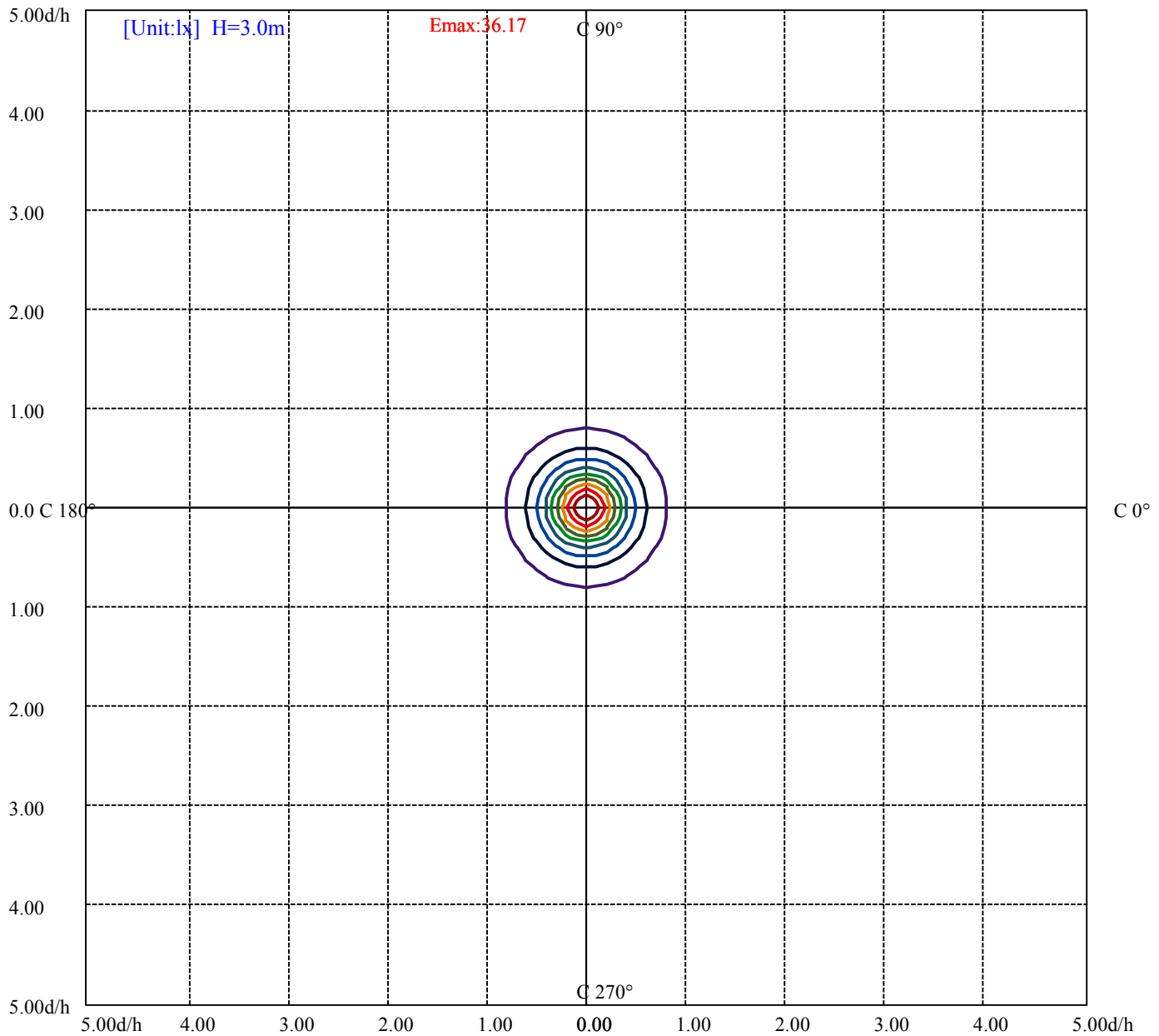
House

[Unit:cd]

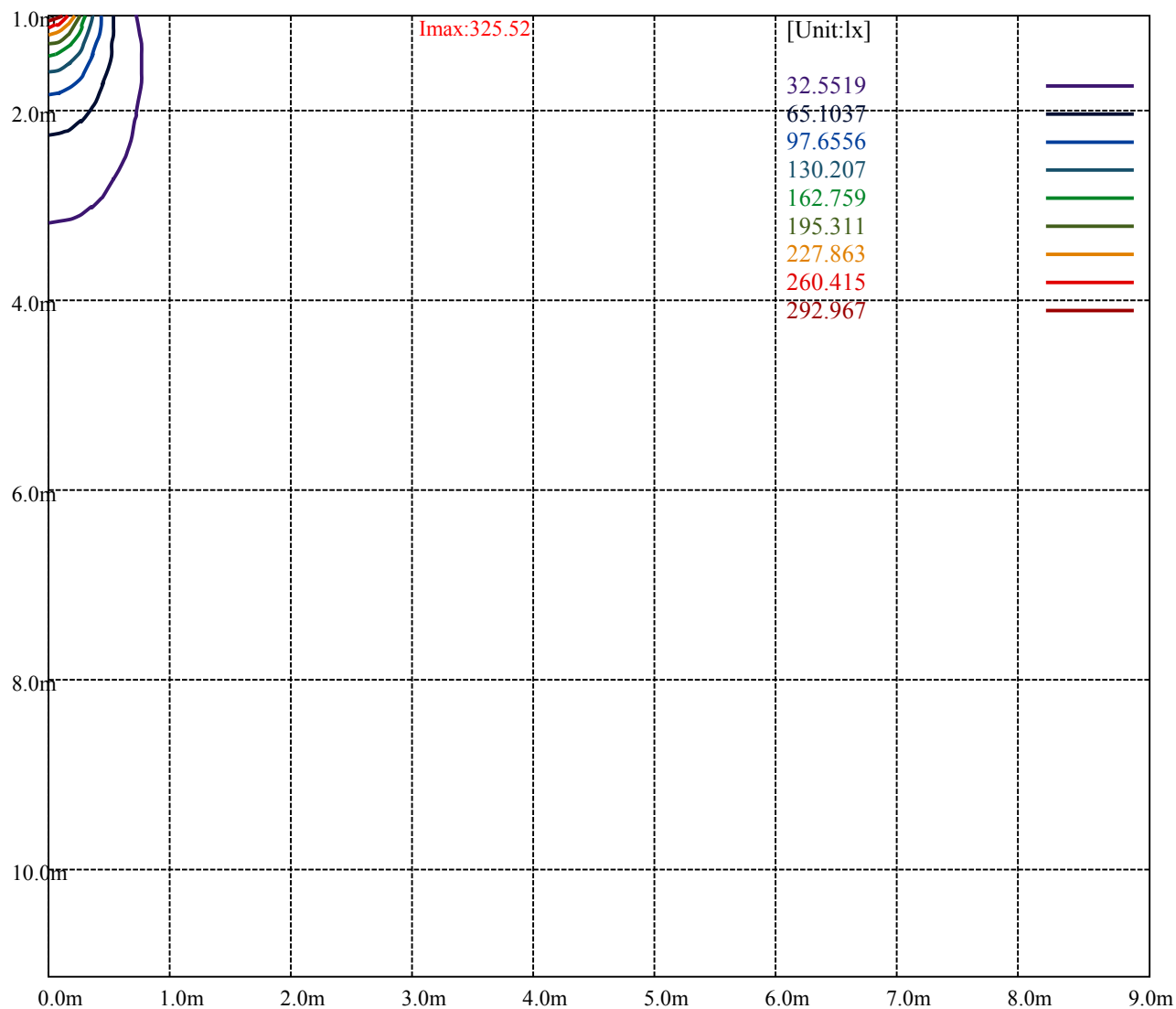
Road

Imax:325.52
 (10%Imax) 32.5519
 (20%Imax) 65.1037
 (30%Imax) 97.6556
 (40%Imax) 130.207
 (50%Imax) 162.759
 (60%Imax) 195.311
 (70%Imax) 227.863
 (80%Imax) 260.415
 (90%Imax) 292.967





(10%Emax) 3.616867	—
(20%Emax) 7.233744	—
(30%Emax) 10.85061	—
(40%Emax) 14.46744	—
(50%Emax) 18.08433	—
(60%Emax) 21.70122	—
(70%Emax) 25.31811	—
(80%Emax) 28.935	—
(90%Emax) 32.55189	—



Luminance Table

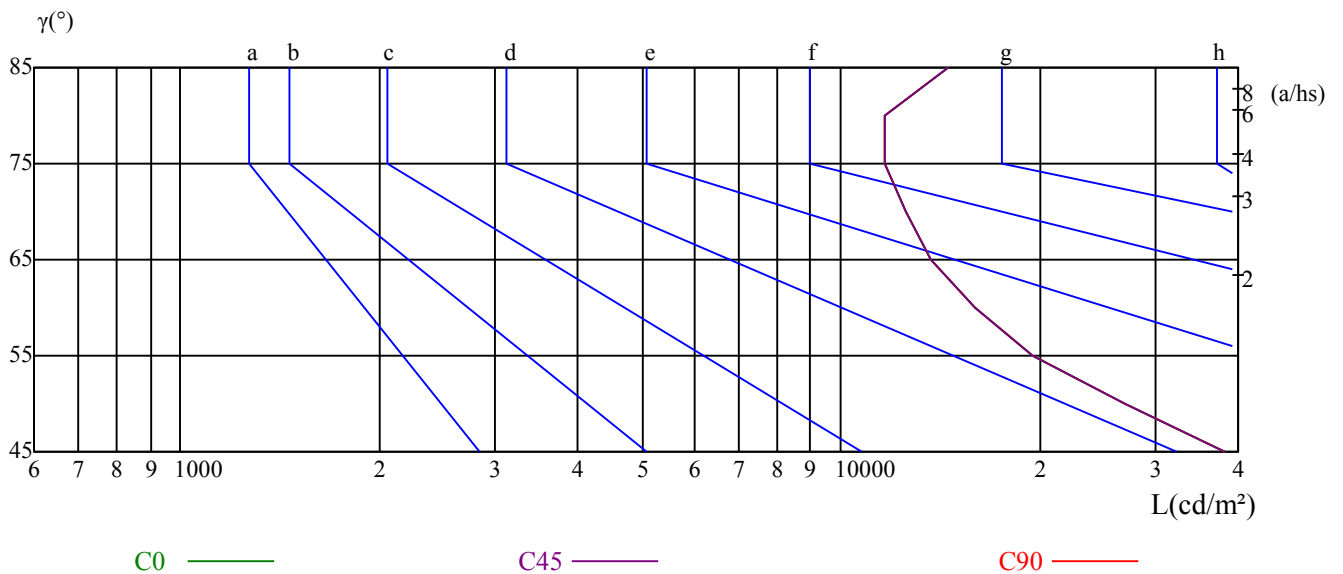
γ	45	50	55	60	65	70	75	80	85
C0	38167	26854	19553	15967	13728	12543	11628	11687	14533
C45	38167	26854	19553	15967	13728	12543	11628	11687	14533
C90	38167	26854	19553	15967	13728	12543	11628	11687	14533

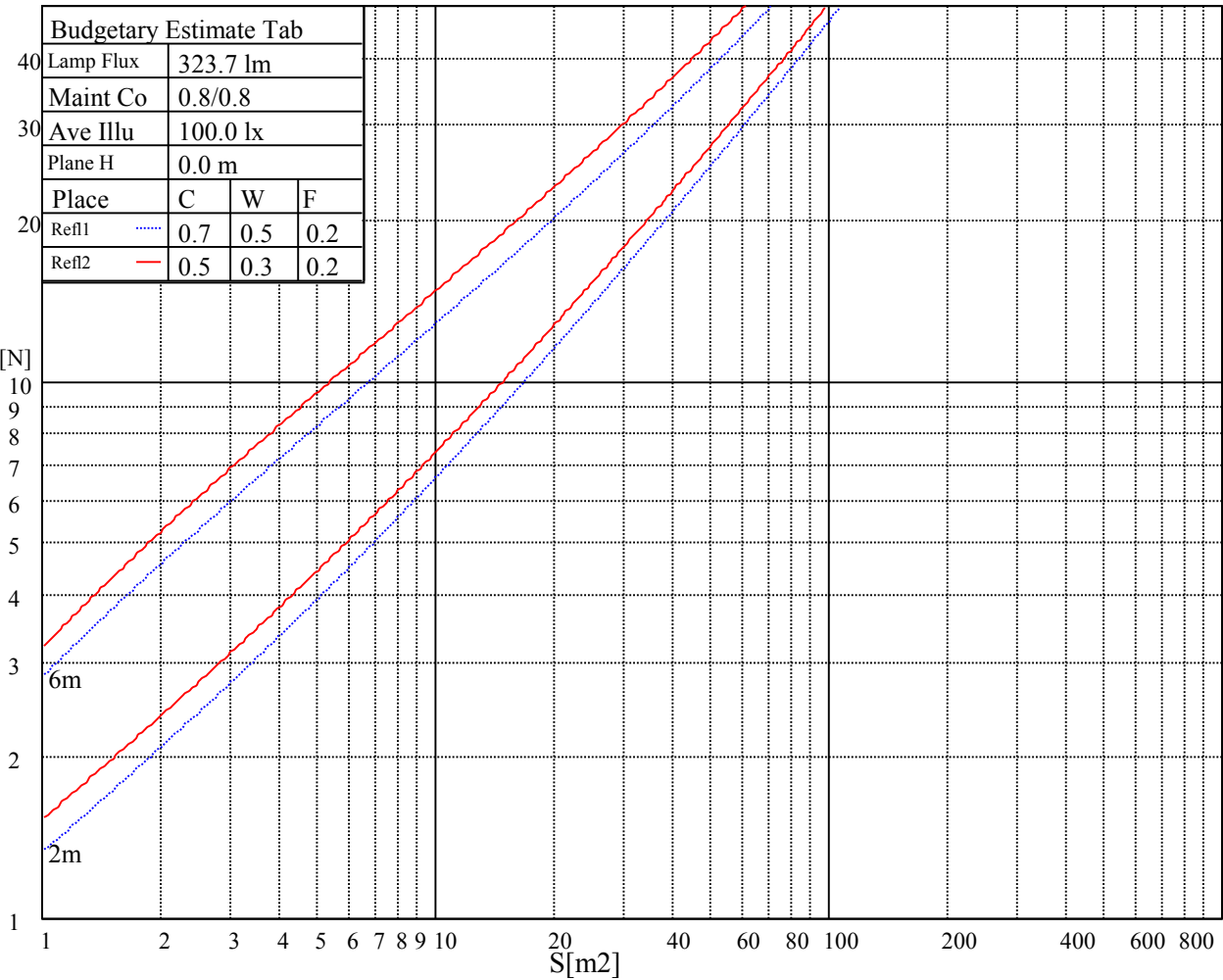
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13728	13728	13728	11628	11628	11628	14533	14533	14533

Glare Table

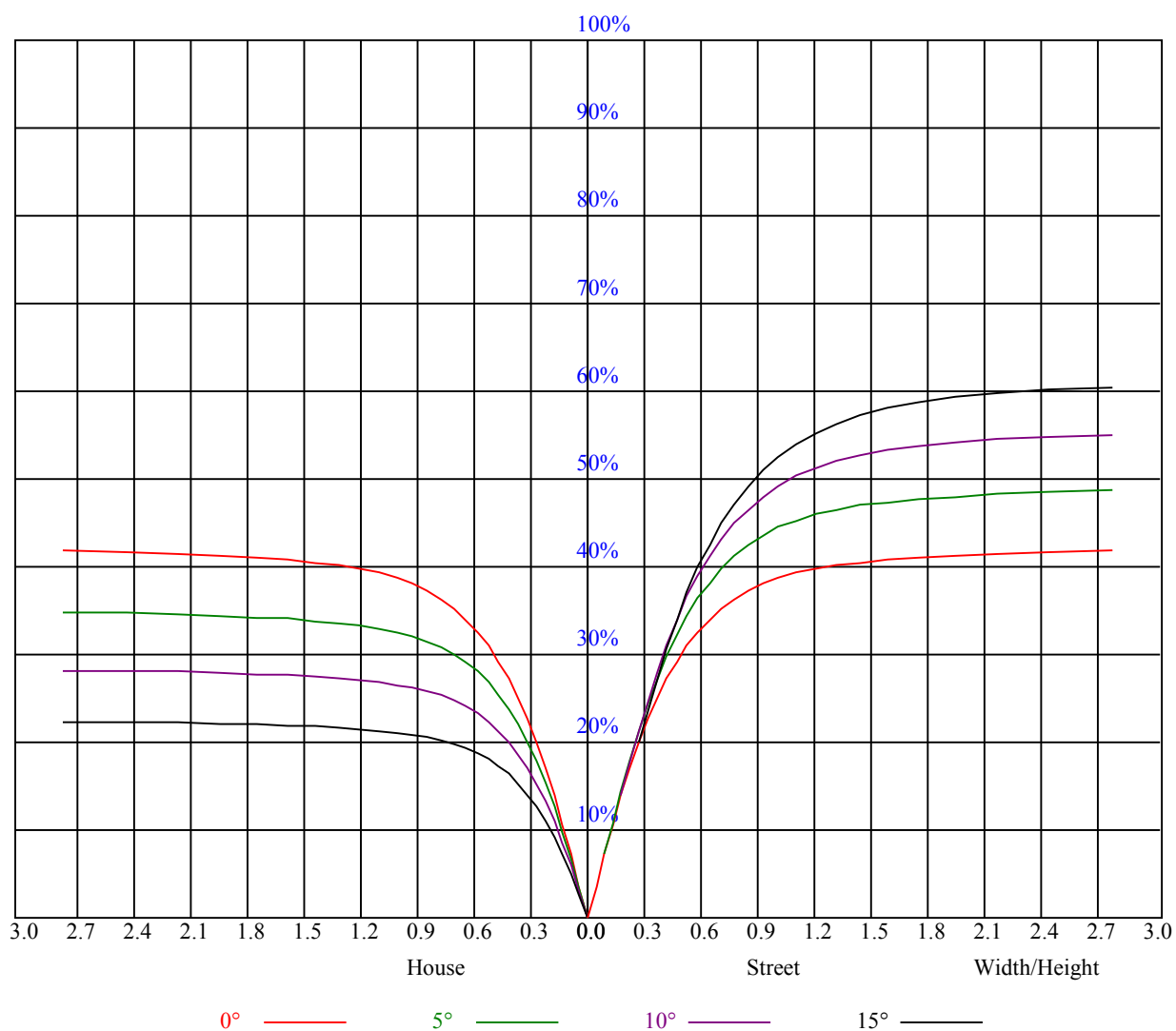
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

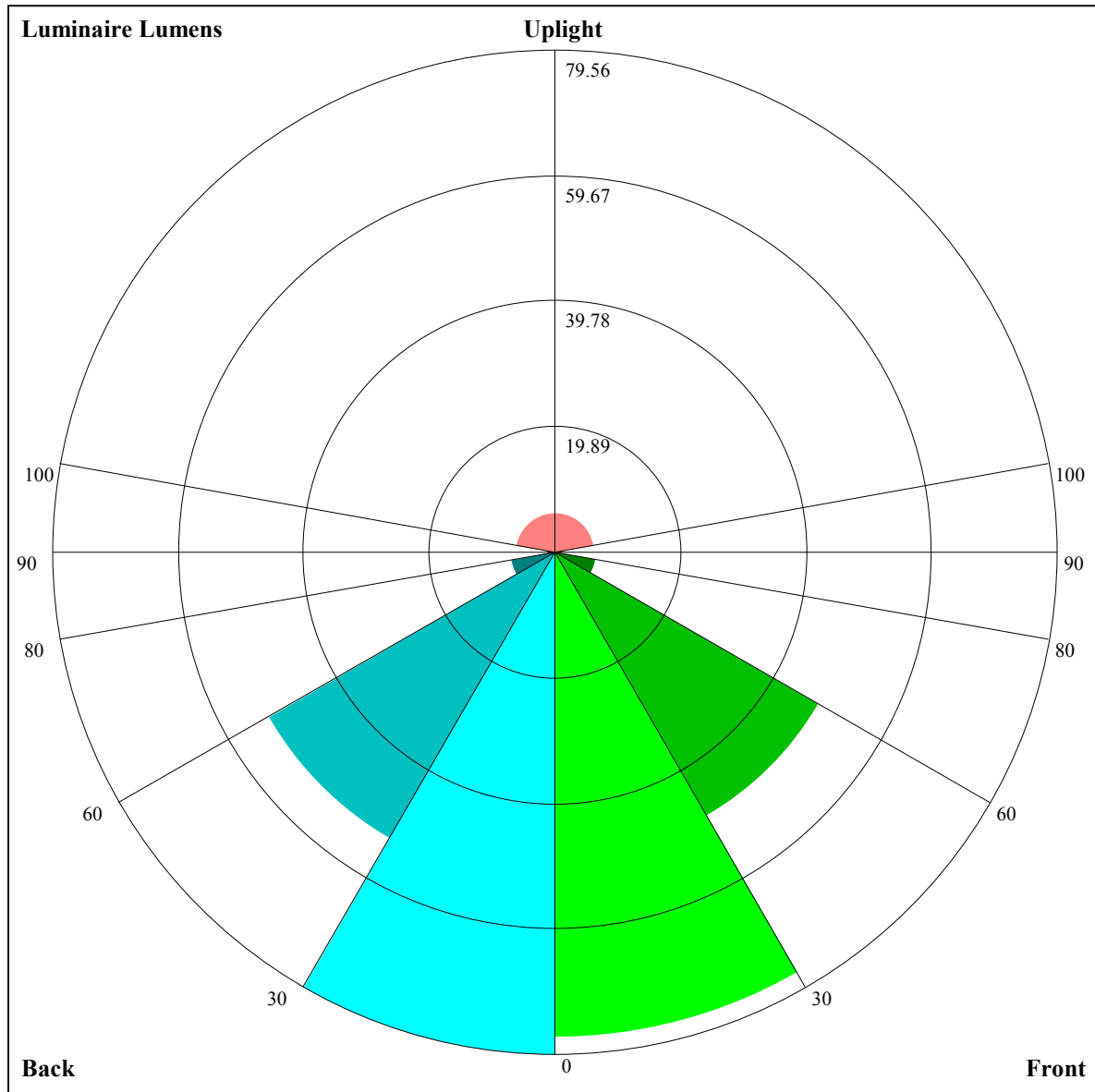
Luminance Limiting Curve





RHOC	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	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.93	0.90	0.88	0.91	0.88	0.86	0.87	0.85	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.77
2	0.85	0.81	0.77	0.83	0.80	0.76	0.80	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.71	0.70
3	0.78	0.73	0.69	0.77	0.72	0.68	0.74	0.70	0.67	0.72	0.69	0.66	0.70	0.67	0.65	0.64
4	0.72	0.66	0.62	0.71	0.66	0.62	0.69	0.65	0.61	0.67	0.63	0.60	0.65	0.62	0.60	0.58
5	0.67	0.61	0.57	0.66	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.61	0.58	0.55	0.53
6	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.51	0.59	0.54	0.51	0.57	0.54	0.51	0.49
7	0.58	0.52	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.47	0.54	0.50	0.47	0.46
8	0.54	0.49	0.45	0.54	0.48	0.45	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.43
9	0.51	0.45	0.42	0.51	0.45	0.42	0.50	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.40
10	0.48	0.43	0.39	0.48	0.42	0.39	0.47	0.42	0.39	0.46	0.42	0.39	0.46	0.42	0.39	0.37





Luminaire Lumens:

FL=76.86,FM=48.12,FH=6.61,FVH=1.01

BL=79.56,BM=52.39,BH=7.24,BVH=1.18

UL=1.35,UH=6.43

BUG Rating:B0-U1-G0

Nata 1407-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	324.68	315.68	275.34	223.71	172.07	133.59	103.44	78.98	56.76		
45.0	325.13	319.39	285.58	232.43	182.19	138.99	110.03	85.28	64.86		
90.0	326.31	317.31	284.34	230.85	179.72	137.93	107.49	83.19	62.33		
135.0	325.97	319.84	298.01	252.56	198.90	151.54	117.00	91.69	71.89		
180.0	324.68	318.43	289.07	238.05	190.18	151.03	122.23	94.22	70.93		
225.0	325.13	313.03	275.06	220.50	174.43	134.44	100.35	79.88	60.47		
270.0	326.31	312.41	277.03	221.63	174.38	132.24	101.98	79.43	55.86		
315.0	325.97	308.64	265.89	215.83	168.98	133.14	103.84	77.12	54.96		
360.0	324.68	315.68	275.34	223.71	172.07	133.59	103.44	78.98	56.76		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	36.28	23.18	15.19	11.03	8.33	6.02	4.16	2.87	1.74		
45.0	42.58	25.88	16.99	12.26	8.89	6.64	4.61	3.04	1.86		
90.0	42.13	27.34	17.89	12.66	9.00	6.58	4.50	2.93	1.80		
135.0	49.95	32.79	20.03	13.78	9.96	7.31	5.18	3.60	2.25		
180.0	46.86	29.70	19.24	13.61	9.84	7.37	5.46	3.83	2.64		
225.0	40.28	26.10	16.65	11.81	8.55	6.41	4.56	3.04	1.91		
270.0	36.39	23.63	15.98	11.48	8.33	6.19	4.28	2.87	1.63		
315.0	33.92	21.43	14.51	10.52	7.71	5.68	3.88	2.53	1.58		
360.0	36.28	23.18	15.19	11.03	8.33	6.02	4.16	2.87	1.74		
C/γ(°)	90.0										
0.0	1.13										
45.0	1.18										
90.0	1.13										
135.0	1.35										
180.0	1.58										
225.0	1.29										
270.0	1.13										
315.0	1.13										
360.0	1.13										