
Nata

Client:

LumCAT: 3-1742-N

Luminaire: 92.70.045.00+92.70.061.00

Report No: nata-0100

Test No: GC2018060109

LampCAT: NICHIA NFCWD084B-V3

Lamp flux(lm): 2152.5

Number of Lamps: 1

Length(mm): 86

Phm Type: C

Voltage(V): 34.0000

Current(A): 0.5000

Power (W): 17.0000

PF: 0.0000

Ballast type: DC

Width(mm): 86

Height(mm): 0

Photometric Results

Lumens(lm): 1681.35, Efficiency(%): 78.11% , Luminous Efficacy(lm/W): 98.90

Central intensity(cd): 6922.517, Maximum intensity(cd): 6922.517

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.4

[C90/270]Total=23.4

Field angle(10%Imax): [C0/180]Total=46.8

[C90/270]Total=46.8

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 79.96%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.712%

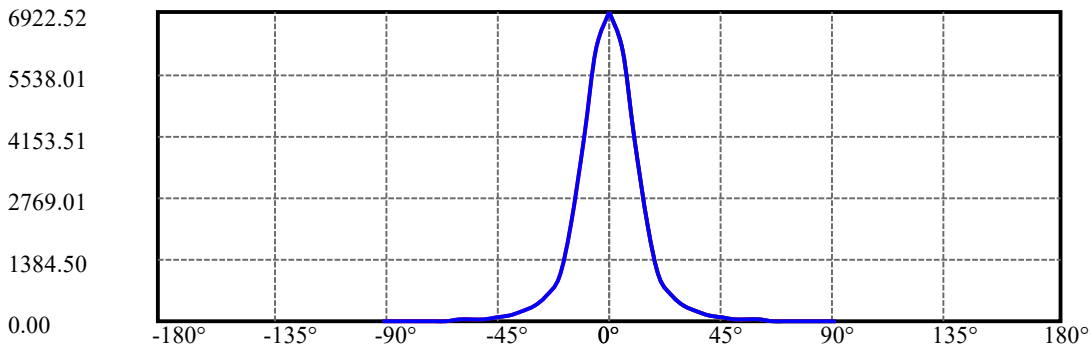
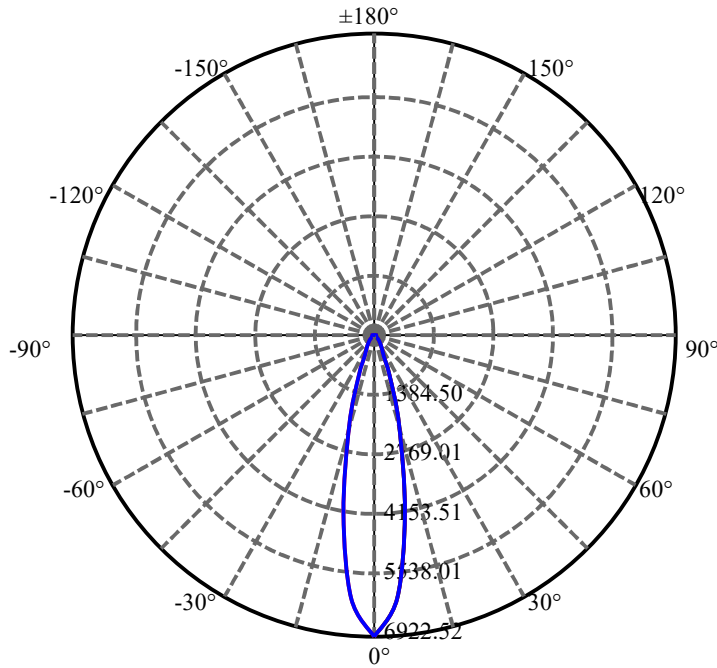
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6922.516	41.398	41.398	1.923%	2.462%
5.0	6052.281	289.138	330.536	13.433%	19.659%
10.0	4145.540	394.585	725.121	18.331%	43.127%
15.0	2146.787	304.561	1029.682	14.149%	61.241%
20.0	1001.572	187.769	1217.451	8.723%	72.409%
25.0	546.270	126.545	1343.996	5.879%	79.935%
30.0	349.519	95.792	1439.788	4.450%	85.633%
35.0	224.327	70.528	1510.316	3.277%	89.827%
40.0	143.532	50.571	1560.888	2.349%	92.835%
45.0	92.219	35.743	1596.631	1.661%	94.961%
50.0	58.470	24.551	1621.182	1.141%	96.421%
55.0	34.899	15.670	1636.852	.728%	97.353%
60.0	22.091	10.487	1647.339	.487%	97.977%
65.0	16.496	8.195	1655.534	.381%	98.464%
70.0	14.205	7.316	1662.851	.340%	98.900%
75.0	12.250	6.486	1669.337	.301%	99.285%
80.0	10.316	5.569	1674.905	.259%	99.617%
85.0	8.300	4.532	1679.437	.211%	99.886%
90.0	6.985	1.914	1681.352	.089%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1439.79	66.89%	85.63%
0-40	1560.89	72.51%	92.84%
0-60	1647.34	76.53%	97.98%
0-90	1679.44	78.02%	99.89%
0-120	1679.44	78.02%	99.89%
0-180	1681.35	78.11%	100.00%
60-90	42.59	1.98%	2.53%
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%
0-25.06	1345.08	62.49%	80.00%

ZONAL LUMEN SUMMARY

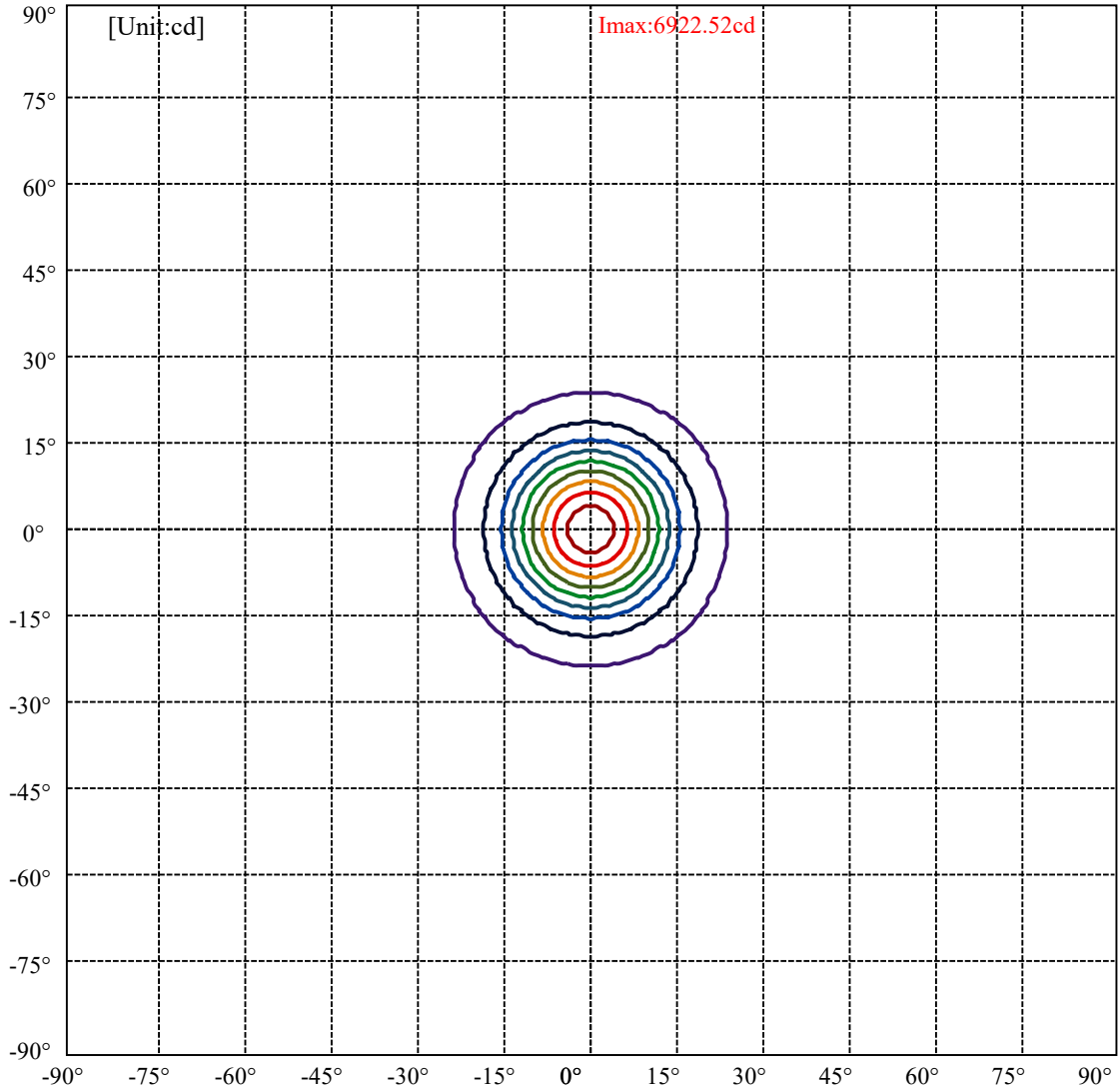
0-10	725.12
10-20	492.33
20-30	222.34
30-40	121.10
40-50	60.29
50-60	26.16
60-70	15.51
70-80	12.05
80-90	4.53
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



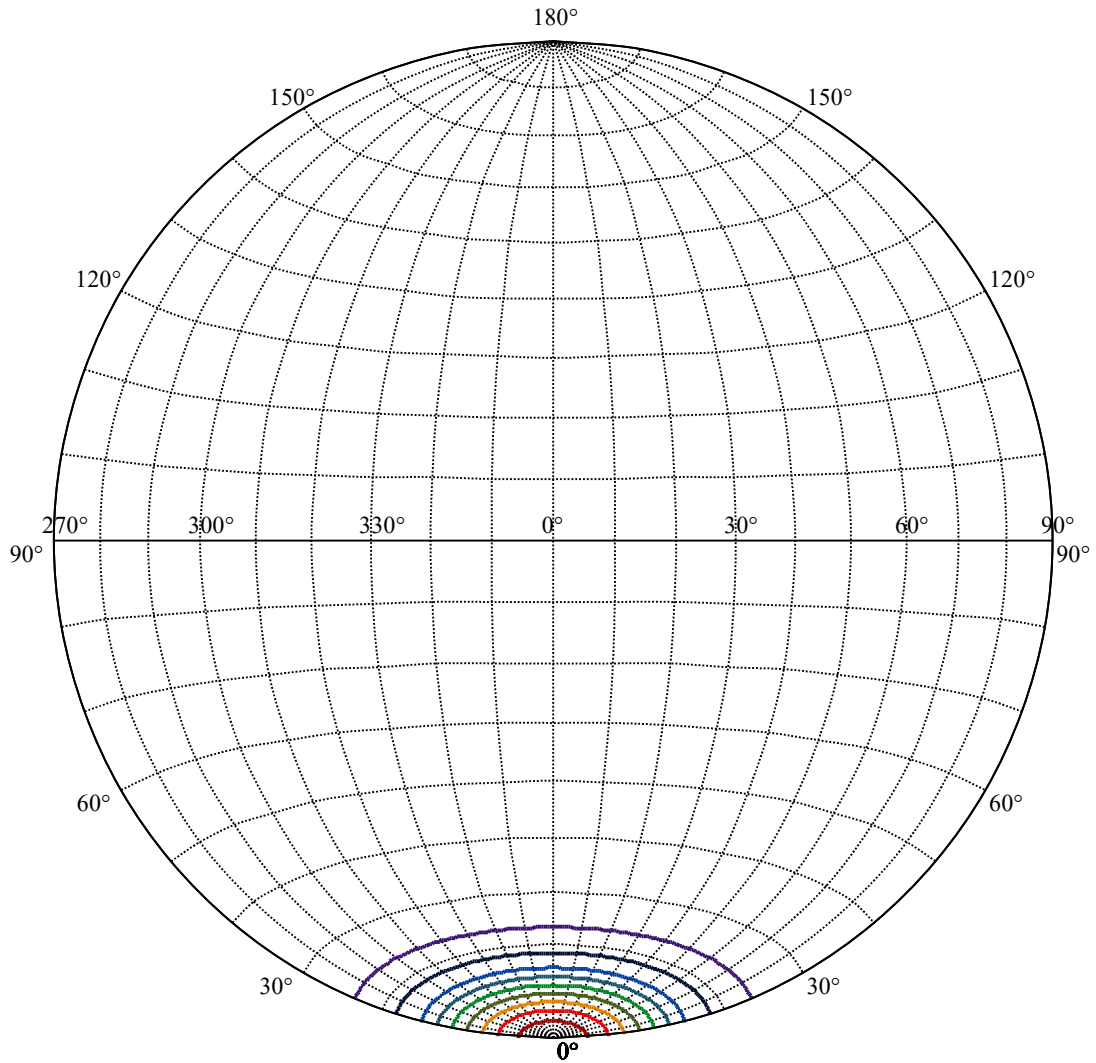
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:23.4 Right:23.4
:C90/270Left:23.4 Right:23.4

Beam Angle(50%Imax):C0/180Left:11.7 Right:11.7
:C90/270Left:11.7 Right:11.7



(10%Imax) 692.252	—
(20%Imax) 1384.5	—
(30%Imax) 2076.76	—
(40%Imax) 2769.01	—
(50%Imax) 3461.26	—
(60%Imax) 4153.51	—
(70%Imax) 4845.76	—
(80%Imax) 5538.01	—
(90%Imax) 6230.27	—



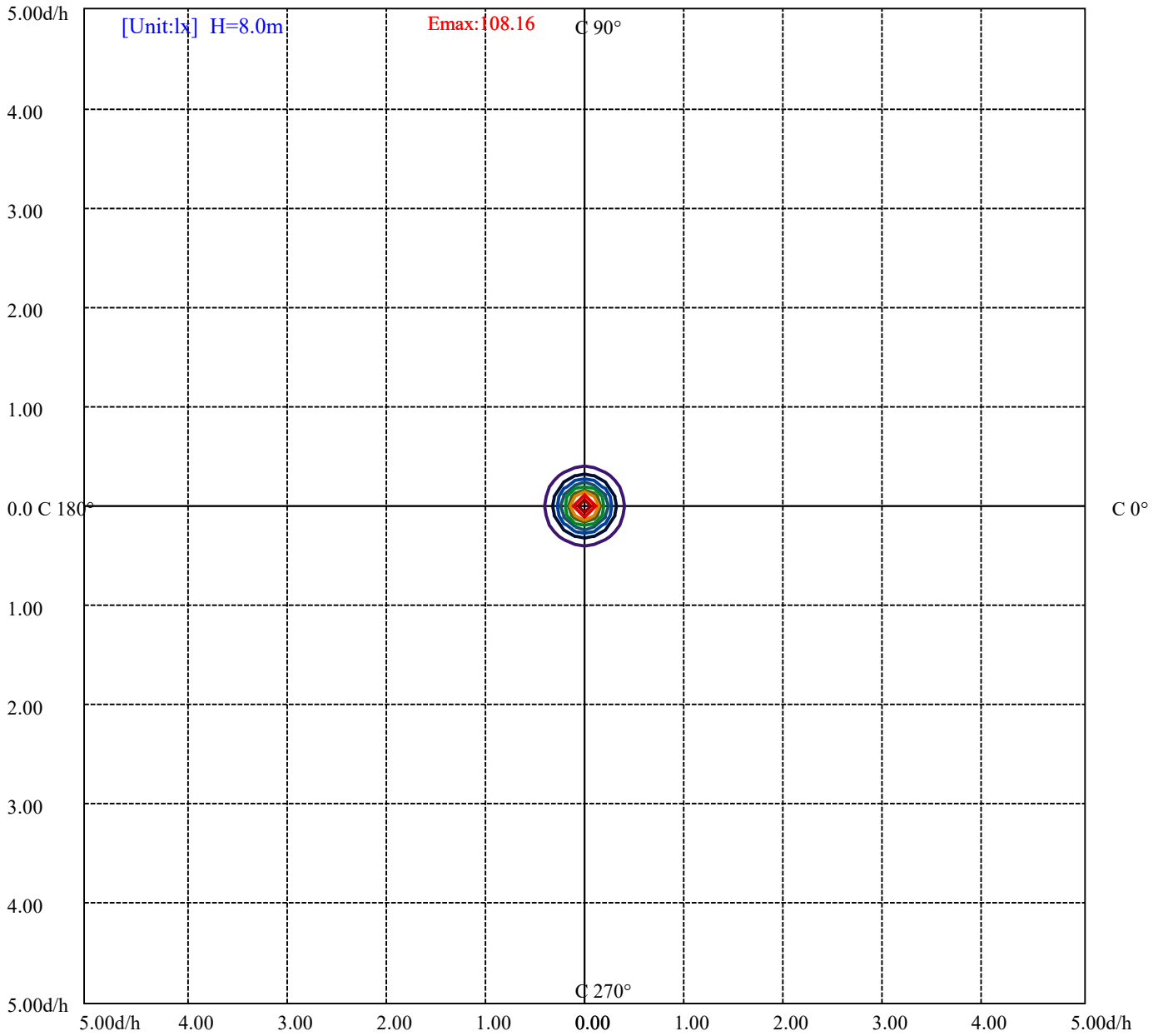
House

[Unit:cd]

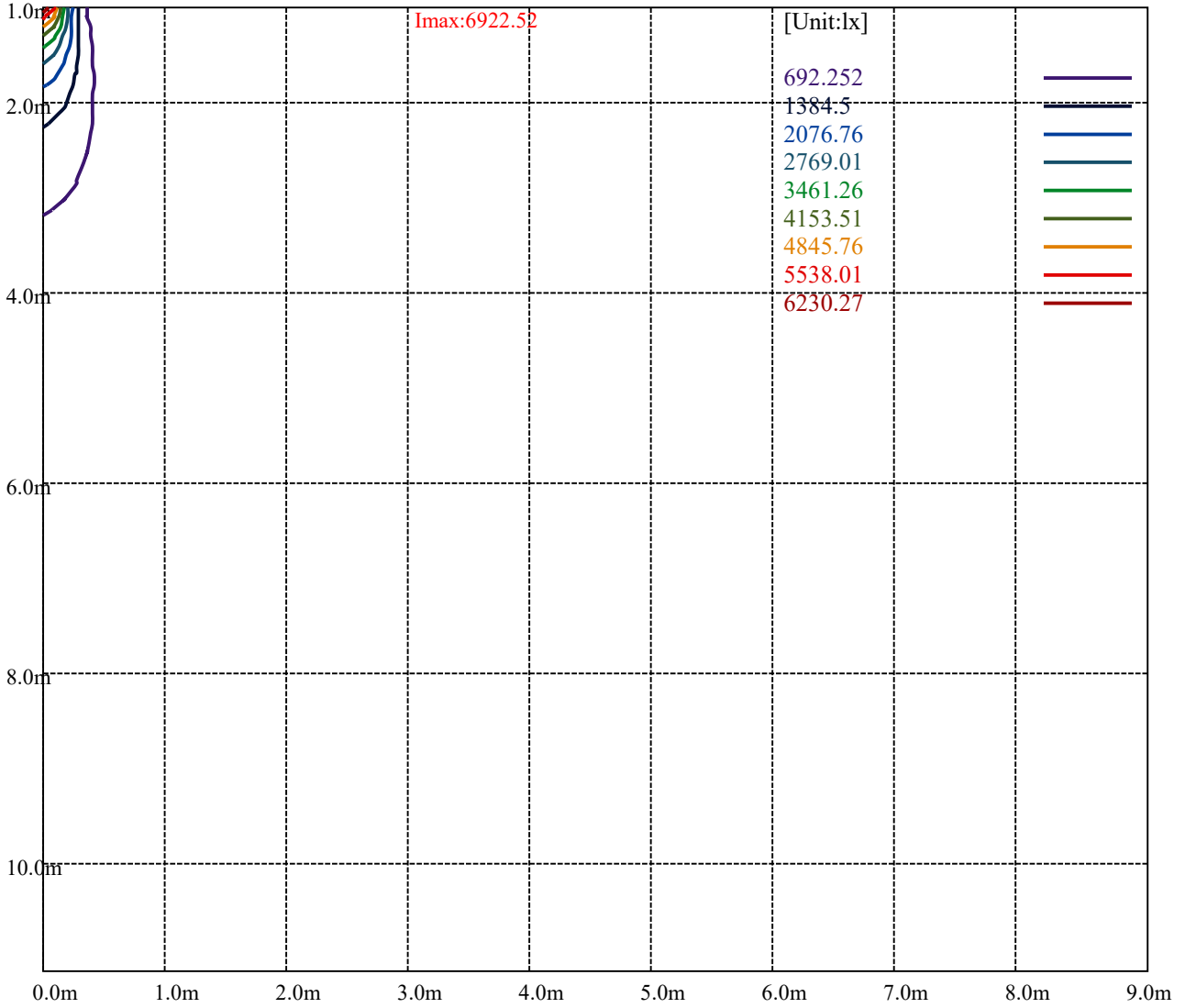
Road

Imax:6922.52

(10%Imax) 692.252	—
(20%Imax) 1384.5	—
(30%Imax) 2076.76	—
(40%Imax) 2769.01	—
(50%Imax) 3461.26	—
(60%Imax) 4153.51	—
(70%Imax) 4845.76	—
(80%Imax) 5538.01	—
(90%Imax) 6230.27	—



(10%Emax) 10.81639	—
(20%Emax) 21.63281	—
(30%Emax) 32.44922	—
(40%Emax) 43.26563	—
(50%Emax) 54.08203	—
(60%Emax) 64.89828	—
(70%Emax) 75.71469	—
(80%Emax) 86.5311	—
(90%Emax) 97.3475	—



Luminance Table

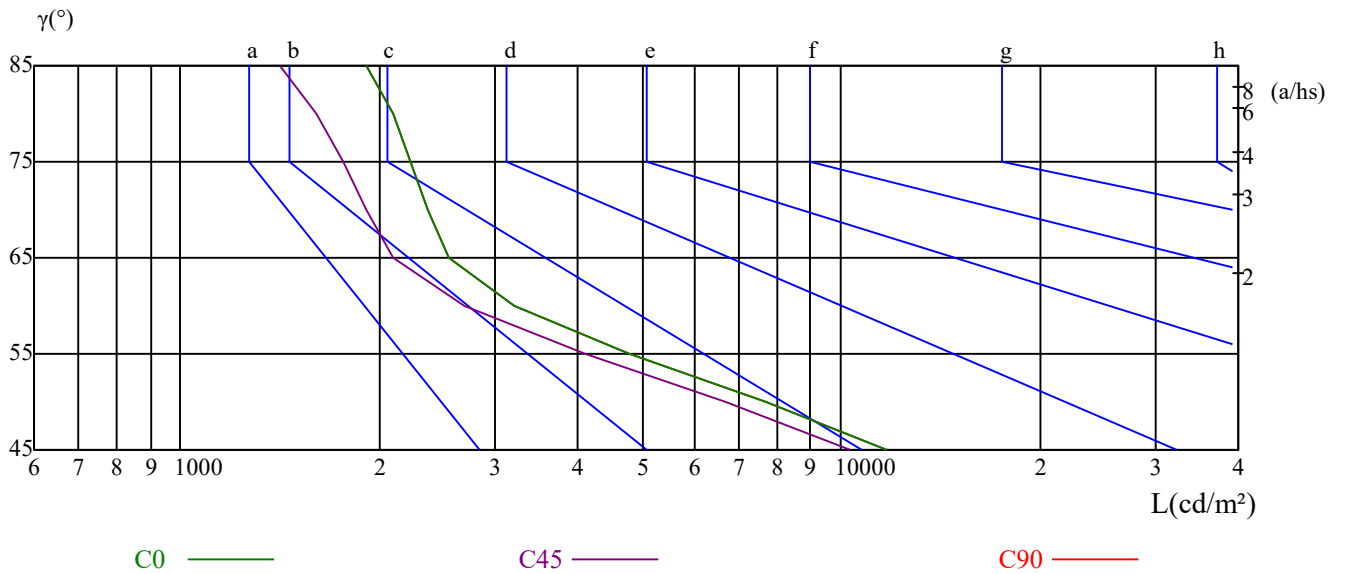
γ	45	50	55	60	65	70	75	80	85
C0	11756	7707	4799	3201	2547	2366	2233	2094	1917
C45	10330	6674	4093	2685	2097	1908	1759	1603	1418
C90	11756	7707	4799	3201	2547	2366	2233	2094	1917

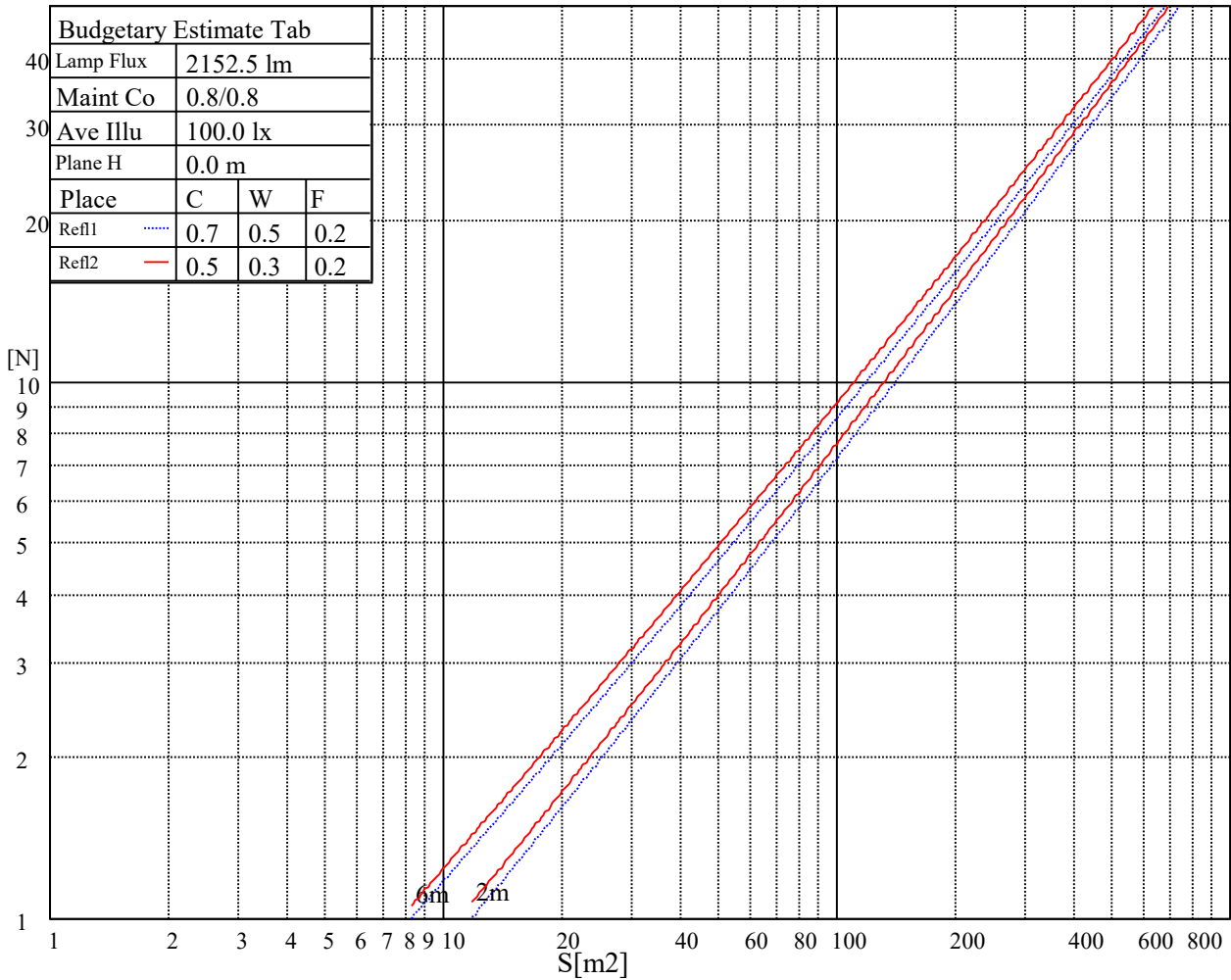
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5278	5278	5278	6399	6399	6399	12876	12876	12876

Glare Table

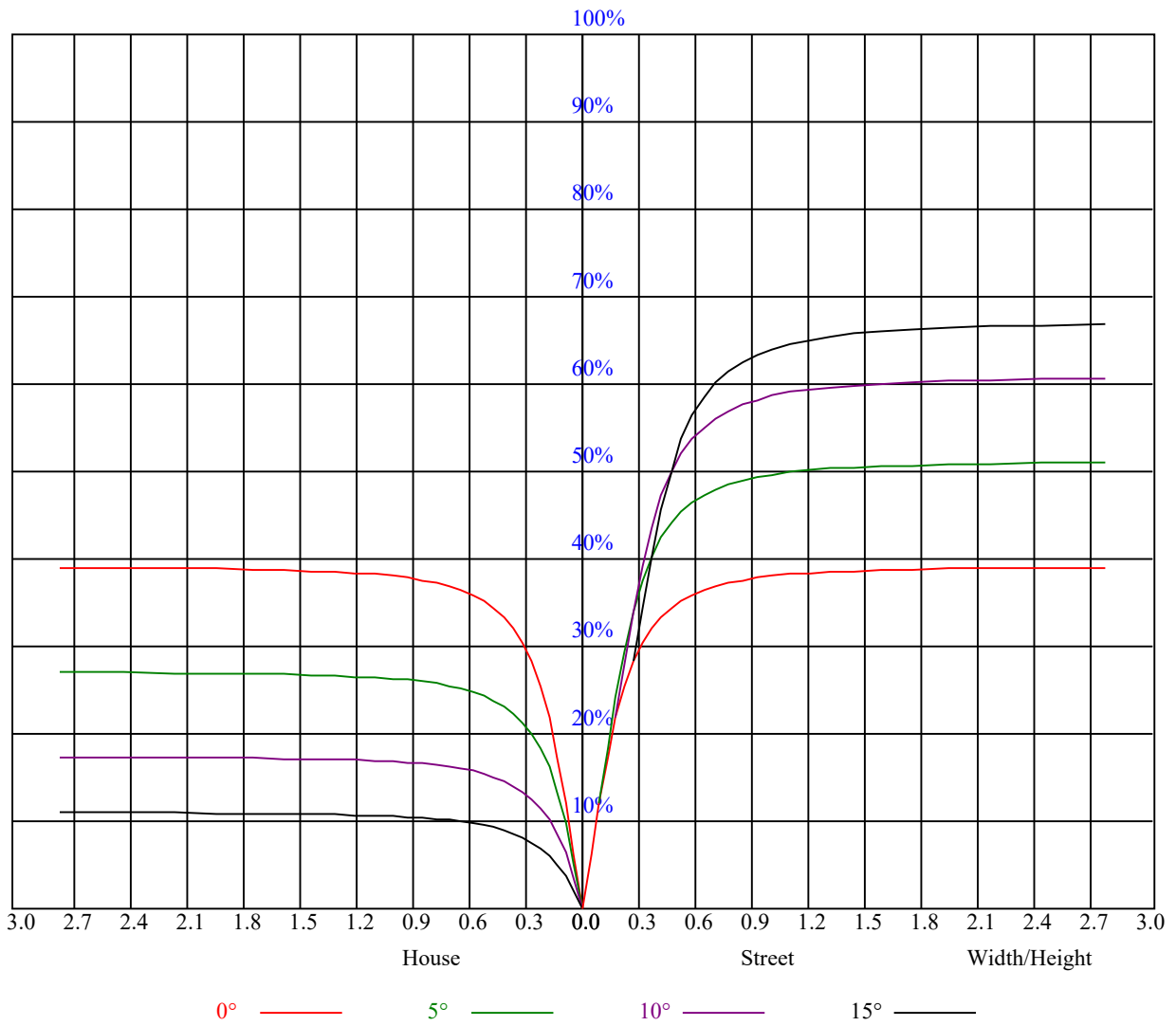
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

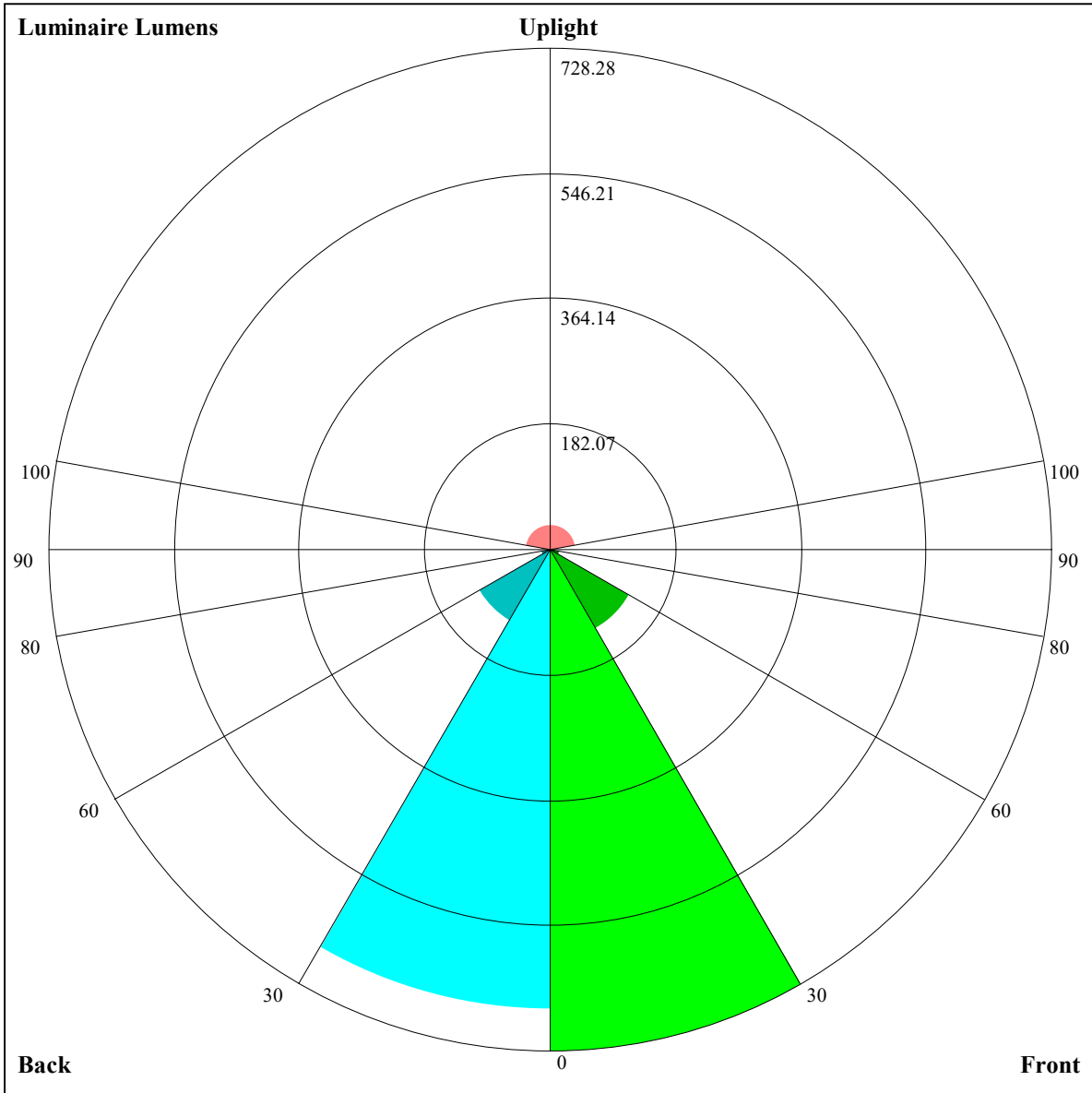
Luminance Limiting Curve





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	0.95	0.95	0.95	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.80
1	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.80	0.79	0.79	0.78	0.76	0.76	0.75	0.74	0.73
2	0.82	0.79	0.77	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.71	0.70
3	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.67
4	0.75	0.71	0.68	0.74	0.71	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.64
5	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.67	0.65	0.63	0.62
6	0.69	0.65	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
7	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
8	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
9	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.55
10	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54





Luminaire Lumens:

FL=728.28,FM=132.58,FH=15.39,FVH=4.71

BL=667.65,BM=118.58,BH=14.69,BVH=4.54

UL=7.62,UH=36.27

BUG Rating:B2-U2-G0

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	6913.98	6329.83	4611.52	2510.57	1200.78	617.73	388.70	279.14	159.83
45.0	6886.45	6436.64	4672.09	2661.43	1228.31	621.59	412.37	279.14	164.01
90.0	6954.72	6120.07	4173.28	2134.54	962.33	542.03	341.79	215.82	143.15
135.0	6934.90	6349.10	4414.97	2277.68	1070.85	567.63	361.72	218.08	147.50
180.0	6913.98	5746.24	3711.90	1777.22	848.20	489.78	307.88	194.62	128.23
225.0	6886.45	5646.03	3511.50	1658.85	815.88	474.09	302.42	185.26	125.03
270.0	6954.72	5930.12	4112.16	2084.44	949.72	530.74	339.15	211.25	141.88
315.0	6934.90	5860.20	3956.90	2069.57	936.51	526.56	342.12	211.31	138.63
360.0	6913.98	6329.83	4611.52	2510.57	1200.78	617.73	388.70	279.14	159.83
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	103.23	66.95	40.14	24.89	17.56	14.87	12.77	10.90	8.70
45.0	108.30	68.38	40.25	24.94	17.56	14.98	12.94	11.12	8.97
90.0	94.48	59.68	35.13	22.63	16.79	14.42	12.55	10.63	8.64
135.0	94.86	59.79	36.17	22.68	16.68	14.42	12.44	10.52	8.37
180.0	81.26	52.47	30.89	19.77	15.69	13.71	11.78	9.74	7.87
225.0	78.62	48.78	29.84	19.16	15.31	13.38	11.51	9.47	7.71
270.0	89.19	55.72	33.31	21.64	16.08	13.87	12.00	10.08	7.98
315.0	87.81	55.99	33.47	21.03	16.30	13.98	12.00	10.08	8.15
360.0	103.23	66.95	40.14	24.89	17.56	14.87	12.77	10.90	8.70
C/ γ (°)	90.0								
0.0	7.05								
45.0	7.05								
90.0	6.94								
135.0	6.94								
180.0	6.99								
225.0	6.99								
270.0	6.99								
315.0	6.94								
360.0	7.05								