
Nata

Client:

LumCAT: 1681-S

Luminaire: 92.70.125.00

Report No: nata-0100

Test No: GC2018060213

LampCAT: NICHIA NFCWS024B-V3

Lamp flux(lm): 1056.0

Number of Lamps: 1

Length(mm): 47

Phm Type: C

Voltage(V): 36.5000

Current(A): 0.3000

Power (W): 10.9500

PF: 0.0000

Ballast type: DC

Width(mm): 47

Height(mm): 0

Photometric Results

Lumens(lm): 950.14, Efficiency(%): 89.98% , Luminous Efficacy(lm/W): 86.77

Central intensity(cd): 1374.758, Maximum intensity(cd): 1374.758

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=53.8

[C90/270]Total=53.8

Field angle(10%Imax): [C0/180]Total=75.4

[C90/270]Total=75.4

Maximum s/h(1/2): C0_180=0.80 C90_270=0.80

Maximum s/h(1/4): C0_180=0.83 C90_270=0.83

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.67%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.938%

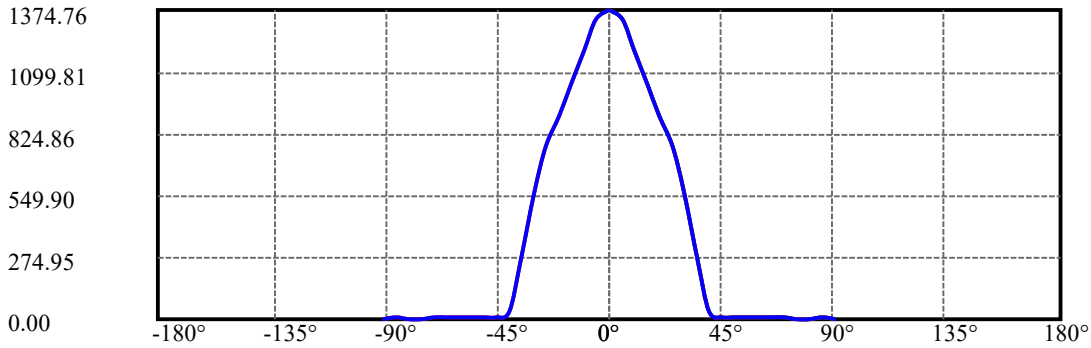
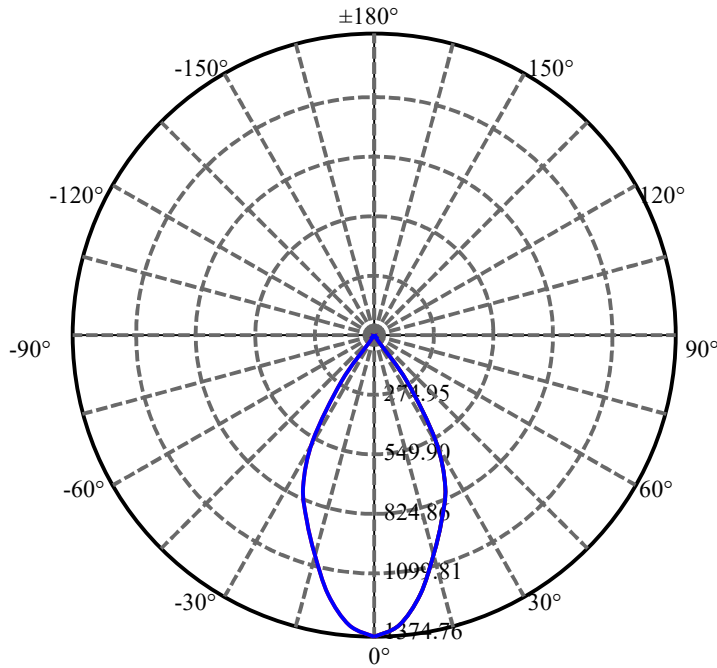
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1374.758	8.221	8.221	.779%	.865%
5.0	1331.195	63.596	71.817	6.022%	7.559%
10.0	1198.798	114.105	185.922	10.805%	19.568%
15.0	1037.937	147.250	333.173	13.944%	35.066%
20.0	902.003	169.102	502.275	16.013%	52.863%
25.0	767.438	177.779	680.054	16.835%	71.574%
30.0	560.054	153.493	833.547	14.535%	87.729%
35.0	260.603	81.933	915.48	7.759%	96.352%
40.0	33.550	11.821	927.301	1.119%	97.597%
45.0	10.254	3.974	931.276	.376%	98.015%
50.0	5.437	2.283	933.559	.216%	98.255%
55.0	4.590	2.061	935.62	.195%	98.472%
60.0	4.411	2.094	937.714	.198%	98.692%
65.0	4.315	2.144	939.858	.203%	98.918%
70.0	4.288	2.208	942.066	.209%	99.151%
75.0	4.267	2.259	944.325	.214%	99.388%
80.0	4.267	2.303	946.628	.218%	99.631%
85.0	4.363	2.383	949.011	.226%	99.881%
90.0	4.109	1.126	950.137	.107%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	833.55	78.93%	87.73%
0-40	927.30	87.81%	97.60%
0-60	937.71	88.80%	98.69%
0-90	949.01	89.87%	99.88%
0-120	949.01	89.87%	99.88%
0-180	950.14	89.98%	100.00%
60-90	13.39	1.27%	1.41%
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%
0-27.61	760.11	71.98%	80.00%

ZONAL LUMEN SUMMARY

0-10	185.92
10-20	316.35
20-30	331.27
30-40	93.75
40-50	6.26
50-60	4.16
60-70	4.35
70-80	4.56
80-90	2.38
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: ———

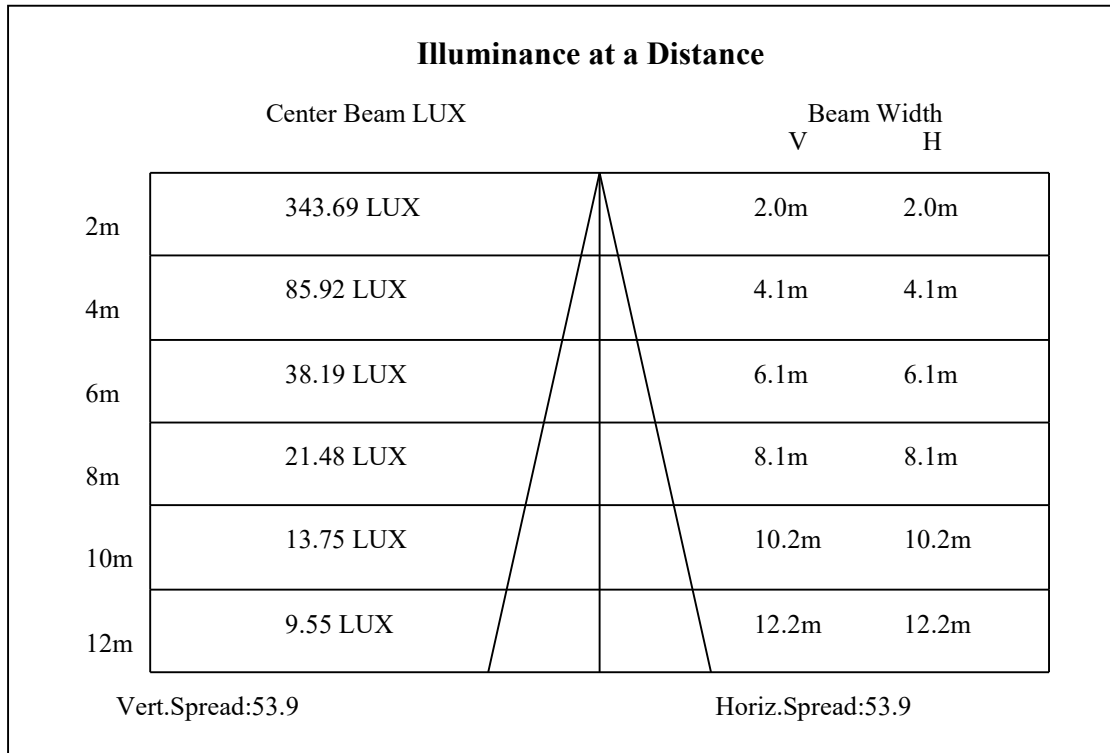
C90/C270: ———

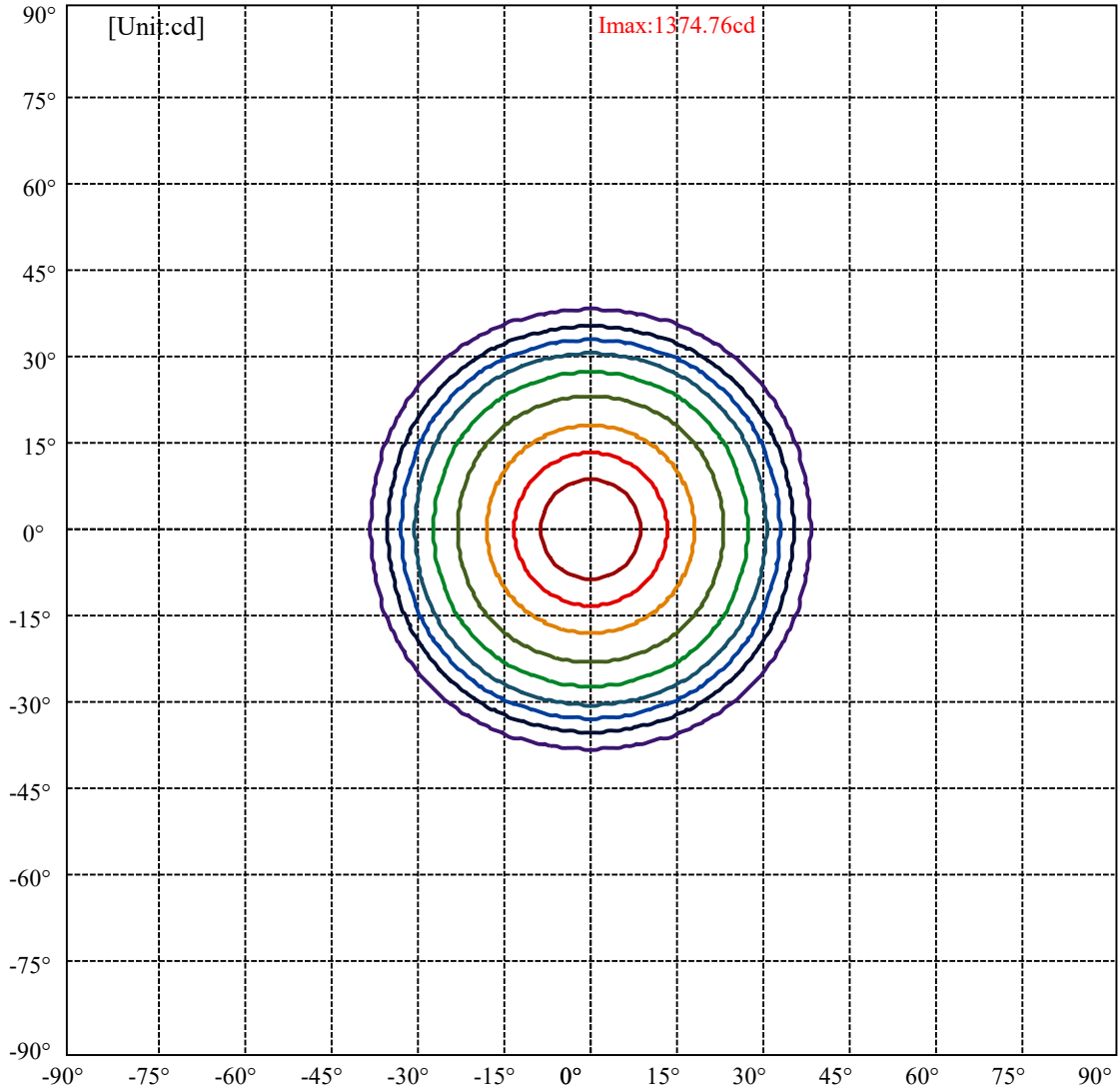
Field angle(10%Imax):C0/180Left:37.7 Right:37.7

:C90/270Left:37.7 Right:37.7

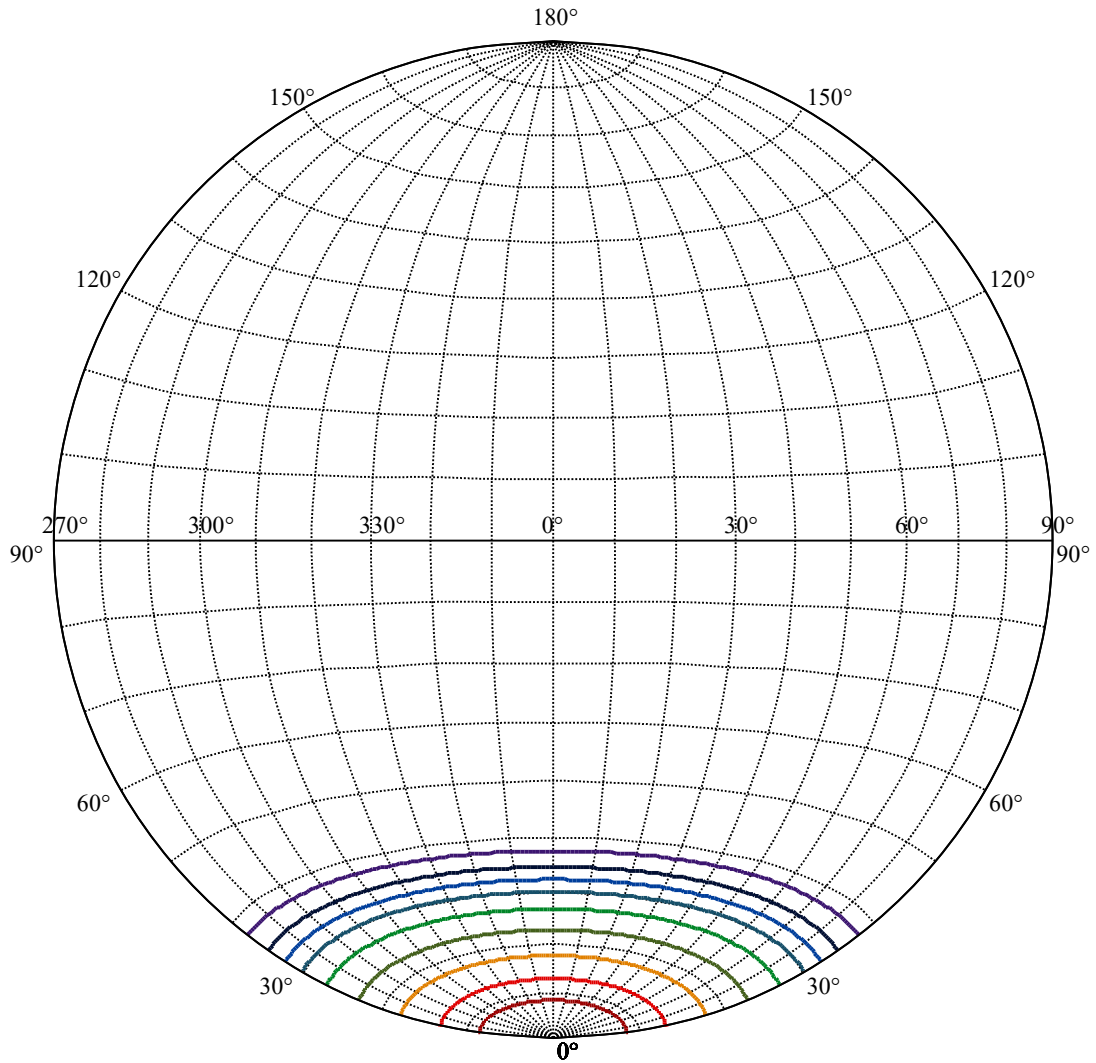
Beam Angle(50%Imax):C0/180Left:26.9 Right:26.9

:C90/270Left:26.9 Right:26.9





(10%Imax) 137.476	—
(20%Imax) 274.952	—
(30%Imax) 412.428	—
(40%Imax) 549.903	—
(50%Imax) 687.379	—
(60%Imax) 824.855	—
(70%Imax) 962.331	—
(80%Imax) 1099.81	—
(90%Imax) 1237.28	—



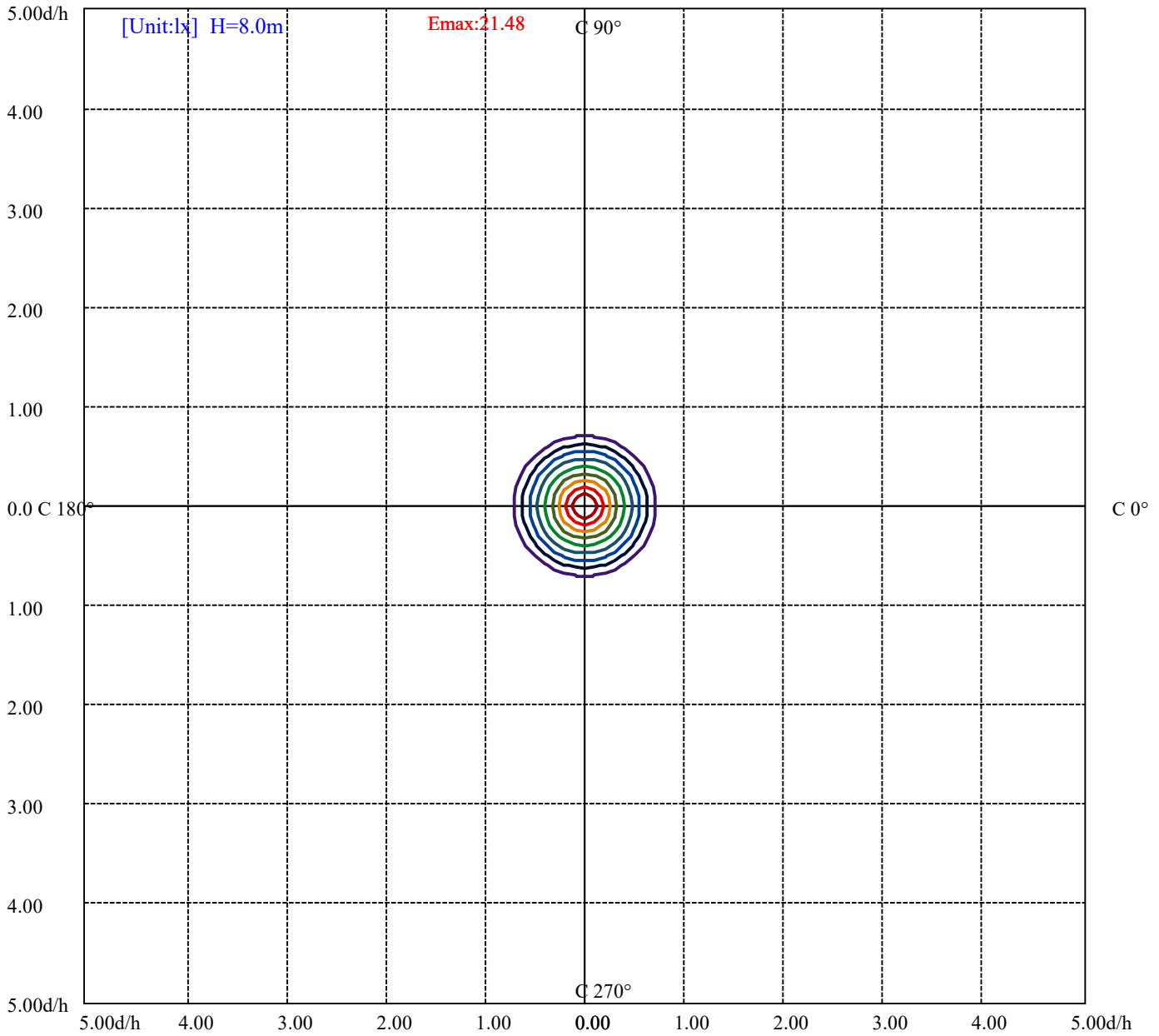
House

[Unit:cd]

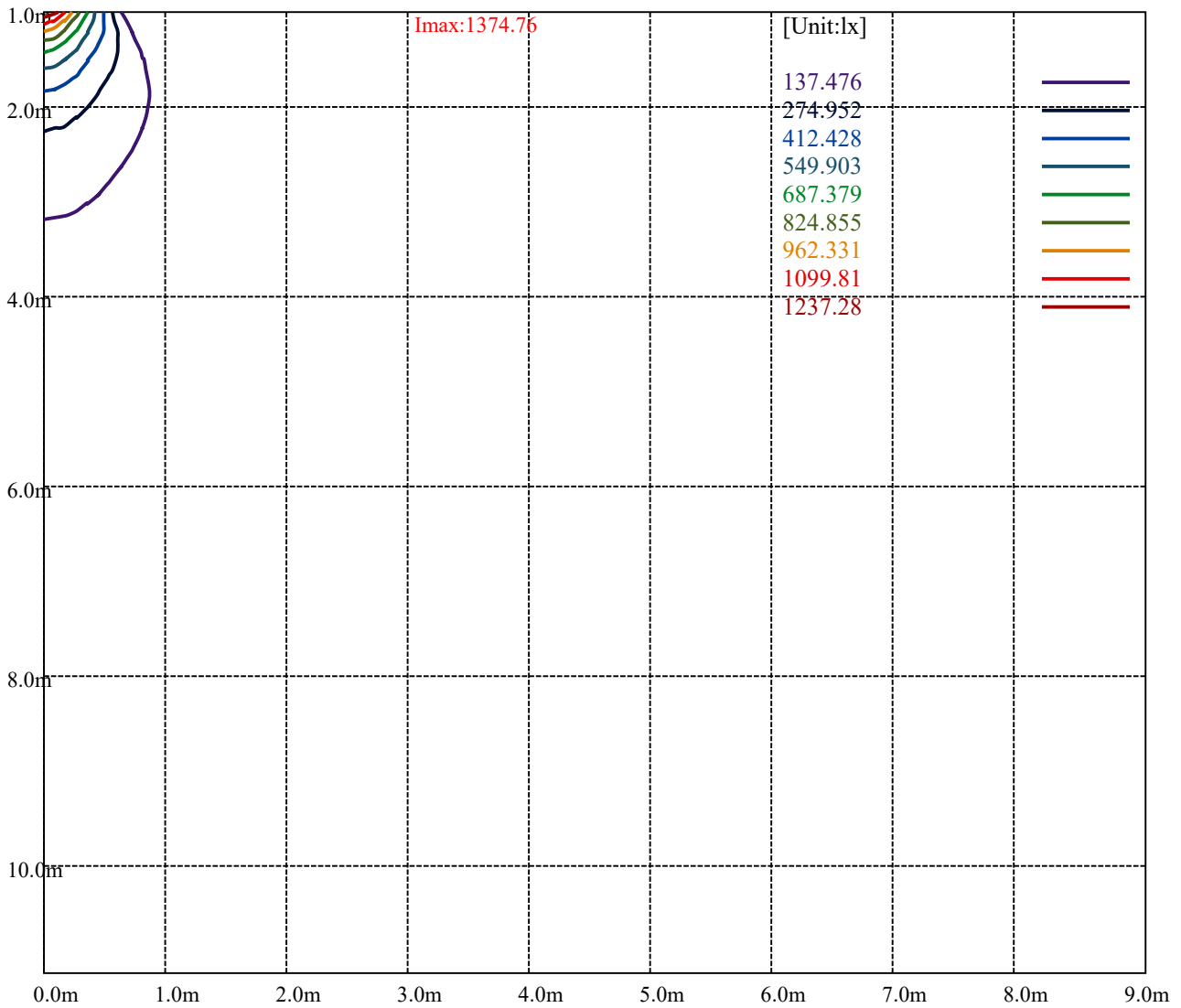
Road

Imax:1374.76

(10%Imax)	137.476	—
(20%Imax)	274.952	—
(30%Imax)	412.428	—
(40%Imax)	549.903	—
(50%Imax)	687.379	—
(60%Imax)	824.855	—
(70%Imax)	962.331	—
(80%Imax)	1099.81	—
(90%Imax)	1237.28	—



- (10%Emax) 2.148062 ———
- (20%Emax) 4.296109 ———
- (30%Emax) 6.444172 ———
- (40%Emax) 8.592235 ———
- (50%Emax) 10.7403 ———
- (60%Emax) 12.88834 ———
- (70%Emax) 15.03641 ———
- (80%Emax) 17.18453 ———
- (90%Emax) 19.3325 ———



Luminance Table

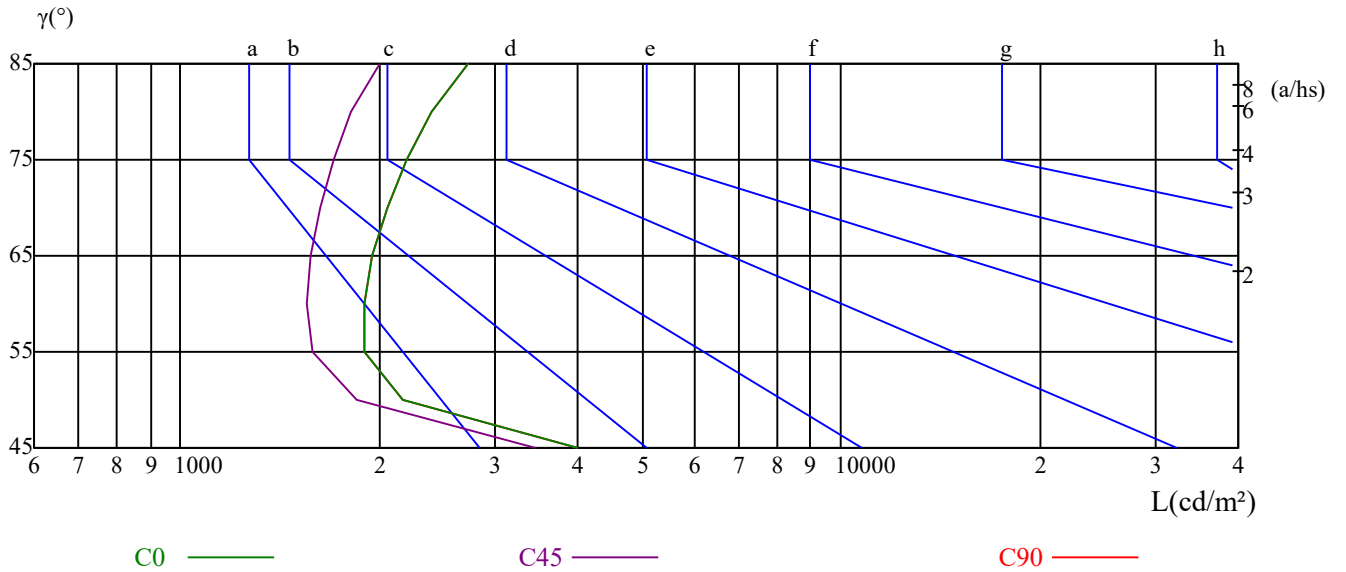
γ	45	50	55	60	65	70	75	80	85
C0	4007	2175	1895	1897	1951	2061	2207	2408	2732
C45	3450	1845	1583	1558	1574	1631	1708	1818	2002
C90	4007	2175	1895	1897	1951	2061	2207	2408	2732

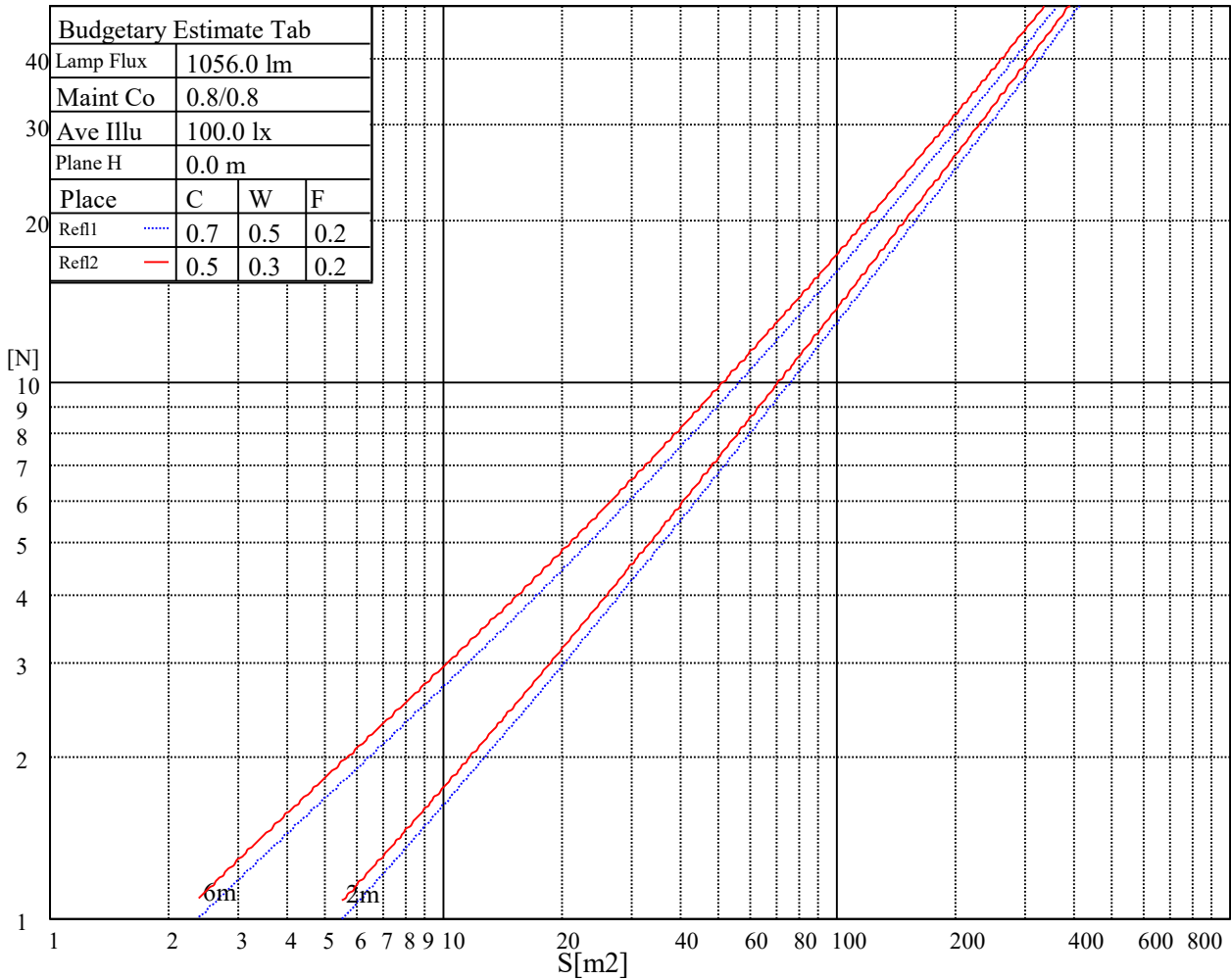
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4622	4622	4622	7463	7463	7463	22663	22663	22663

Glare Table

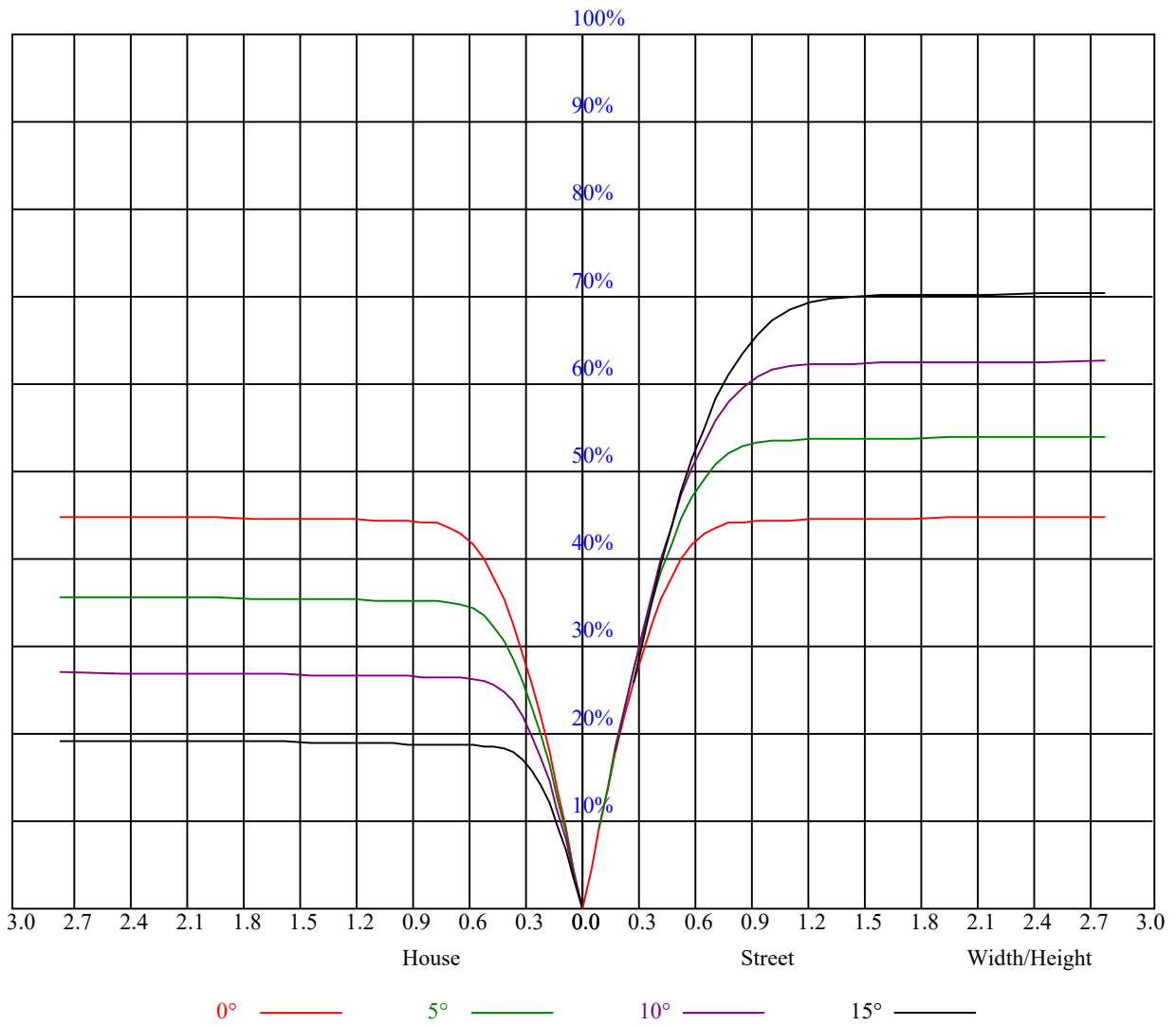
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

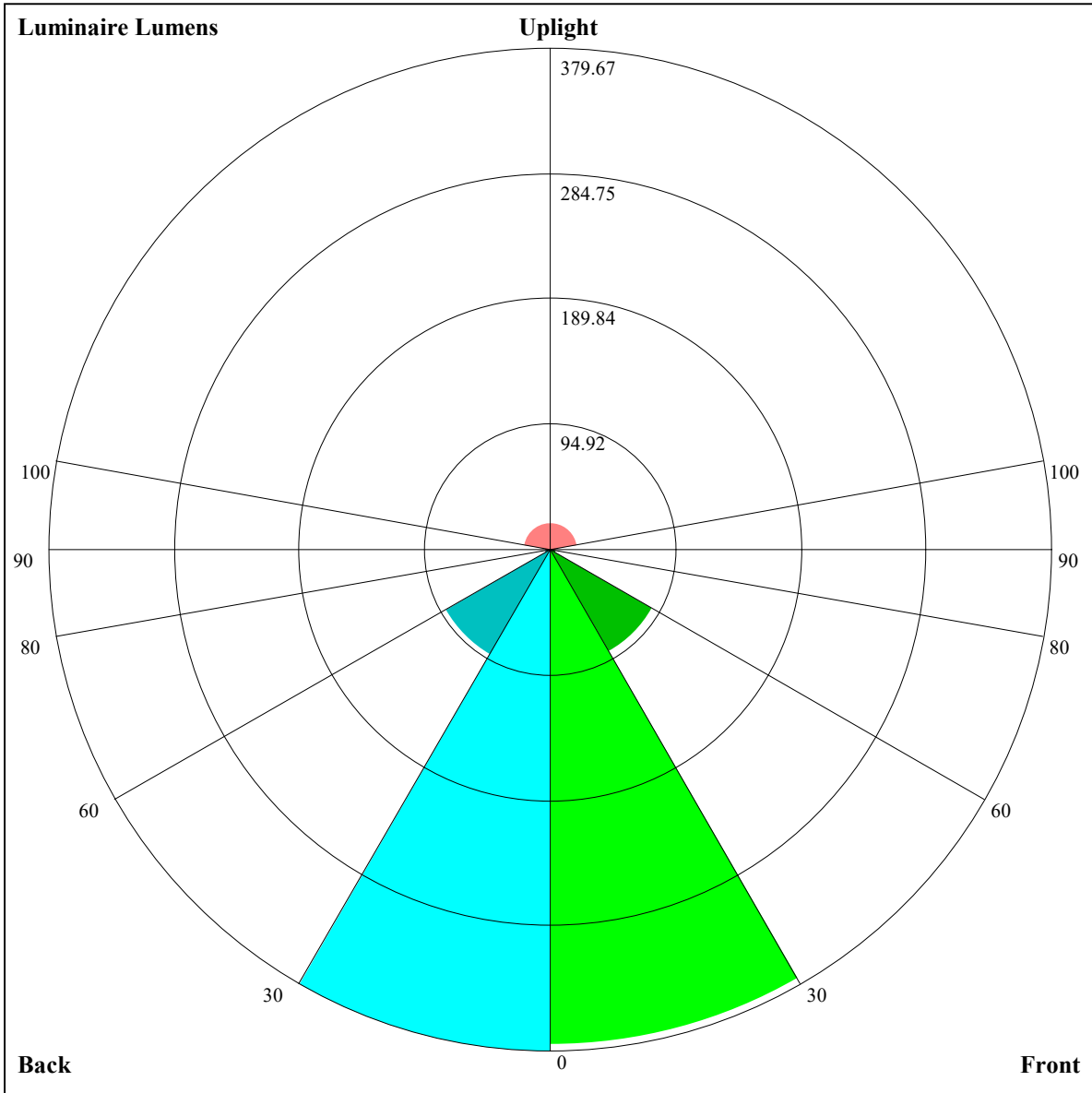
Luminance Limiting Curve





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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.93	0.93	0.93	0.91
1	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.84
2	0.94	0.91	0.88	0.93	0.89	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.81	0.80
3	0.89	0.85	0.81	0.87	0.84	0.81	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.74	0.72	0.69	0.68
6	0.76	0.71	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.66	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.61	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.59
9	0.66	0.61	0.58	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.56
10	0.63	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.54





Luminaire Lumens:

FL=375.46,FM=89.64,FH=4.44,FVH=2.36

BL=379.67,BM=92.08,BH=4.41,BVH=2.32

UL=4.48,UH=21.33

BUG Rating:B1-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	1373.66	1336.22	1198.03	1040.02	901.27	762.53	560.47	283.54	30.01
45.0	1376.41	1324.66	1196.93	1010.84	867.14	740.51	510.37	287.94	27.03
90.0	1372.56	1308.69	1095.73	979.40	850.40	700.59	452.18	128.12	21.91
135.0	1376.41	1325.21	1193.62	1022.95	881.45	759.23	562.13	287.39	33.91
180.0	1373.66	1316.40	1192.52	1023.55	903.31	777.07	577.98	242.30	34.80
225.0	1376.41	1340.07	1233.81	1083.51	930.89	791.11	609.20	278.64	35.57
270.0	1372.56	1358.79	1266.85	1105.53	976.15	838.51	648.56	338.05	53.07
315.0	1376.41	1339.52	1212.89	1037.70	905.40	769.96	559.54	238.83	32.10
360.0	1373.66	1336.22	1198.03	1040.02	901.27	762.53	560.47	283.54	30.01
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	9.80	5.18	4.57	4.40	4.29	4.29	4.29	4.24	4.51
45.0	8.31	5.07	4.62	4.46	4.40	4.35	4.24	4.29	4.57
90.0	7.38	4.96	4.62	4.46	4.40	4.40	4.40	4.40	4.46
135.0	10.46	5.67	4.62	4.46	4.35	4.29	4.29	4.29	4.35
180.0	10.85	5.56	4.51	4.35	4.24	4.24	4.18	4.18	4.18
225.0	11.95	5.73	4.57	4.35	4.24	4.18	4.18	4.18	4.18
270.0	13.49	6.11	4.62	4.40	4.29	4.29	4.29	4.35	4.40
315.0	9.80	5.23	4.57	4.40	4.29	4.24	4.24	4.18	4.24
360.0	9.80	5.18	4.57	4.40	4.29	4.29	4.29	4.24	4.51
C/γ(°)	90.0								
0.0	4.07								
45.0	4.07								
90.0	4.13								
135.0	4.13								
180.0	4.13								
225.0	4.07								
270.0	4.13								
315.0	4.13								
360.0	4.07								