
P.Q.L., Inc. 4 LAMPS

LumCAT: 4 LAMPS	Luminaire: 4000K
Report No: /	Voltage(V):
Test No:	Current(A):
LampCAT: LED SMD 4' 15WT8/40K/FR/V4/1900Lm	Power (W): 67.900
Lamp flux(lm)	PF:
Number of Lamps: 4	Ballast type:
Length(mm): 1200	Width(mm): 500
Phm Type: C	Height(mm): 150

Photometric Results

Lumens(lm): 6794.26
Lumens(lm)/Power(W): 100.06
Central intensity(cd): 2507.938
Maximum intensity(cd): 2517.028
Angle of maximum intensity: C=30.0 γ =0.0
Beam Angle(50%Imax): [H]Left=54.7 Right=53.6
[V]Left=48.4 Right=50.6
Field angle(10%Imax): [H]Left=82.3 Right=81.4
[V]Left=83.7 Right=85.0
Maximum s/h: C0_180=1.09 C90_270=1.23
Up flux rate of LUM(%): 1.70%
Down flux rate of LUM(%): 98.30%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 74.711%

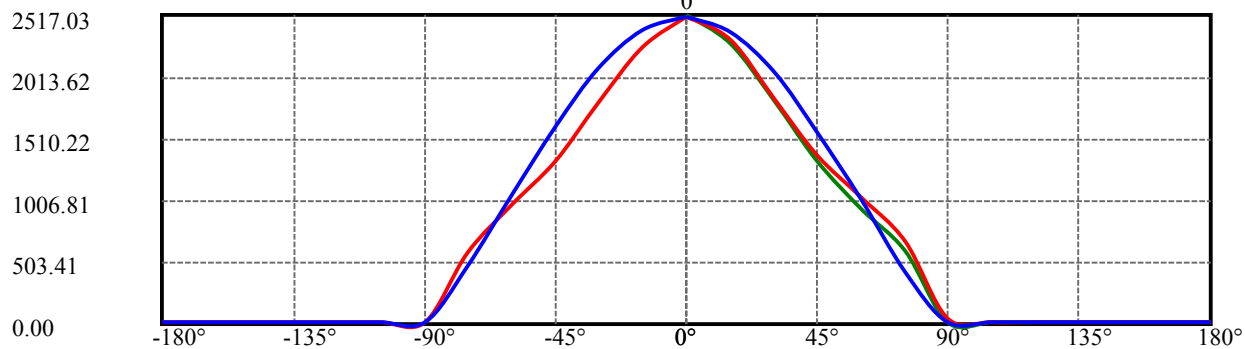
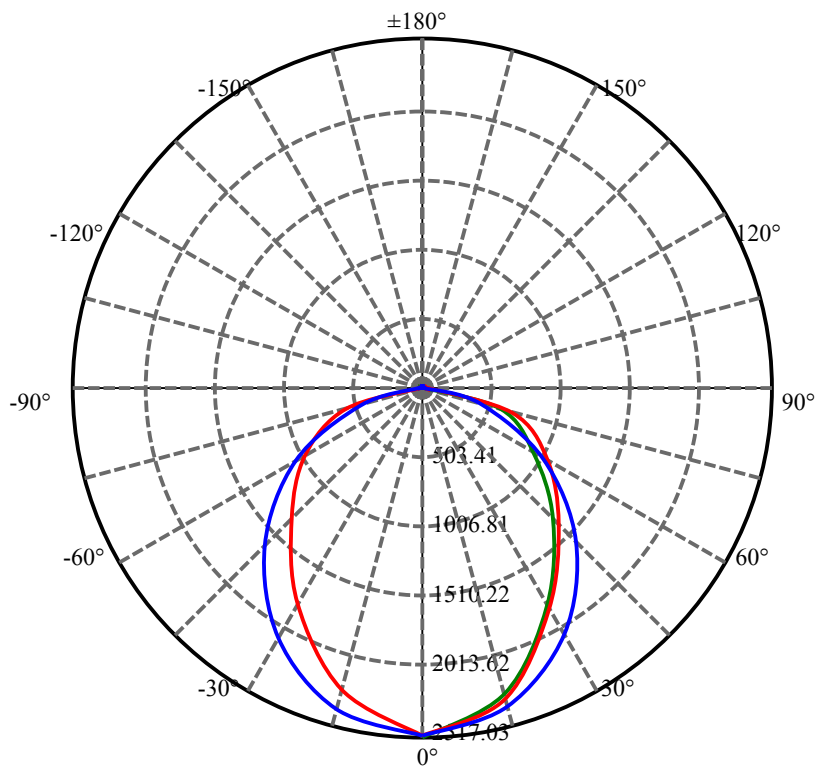
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2506.612	.000	.000	.000%	.000%
15.0	2327.409	517.468	517.468	7.616%	7.616%
30.0	1916.285	1331.868	1849.336	19.603%	27.219%
45.0	1431.922	1671.617	3520.954	24.603%	51.823%
60.0	958.176	1555.105	5076.059	22.889%	74.711%
75.0	542.724	1137.220	6213.278	16.738%	91.449%
90.0	29.962	465.653	6678.931	6.854%	98.303%
105.0	14.858	36.443	6715.374	.536%	98.839%
120.0	15.511	23.010	6738.384	.339%	99.178%
135.0	17.045	21.183	6759.567	.312%	99.489%
150.0	18.892	17.942	6777.509	.264%	99.754%
165.0	20.360	12.319	6789.828	.181%	99.935%
180.0	20.985	4.426	6794.254	.065%	100.000%

ZONAL LUMEN SUMMARY

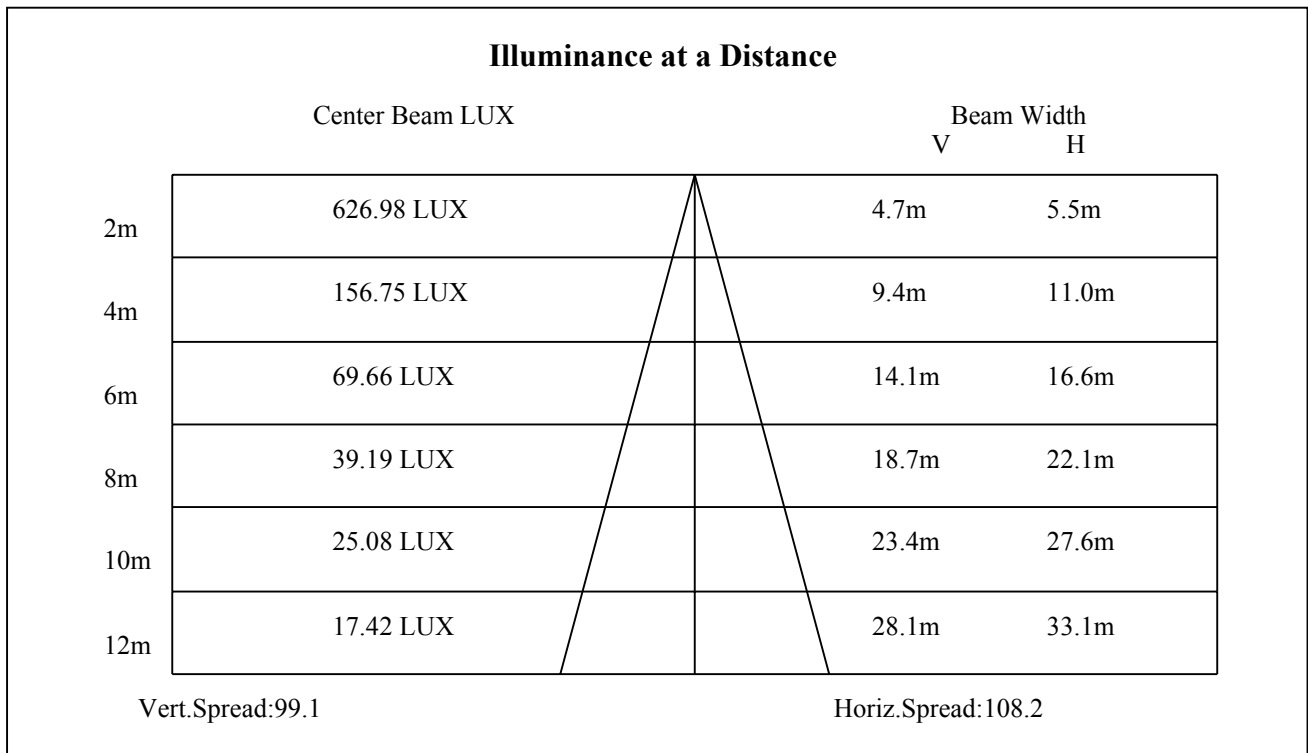
Zone	Lumens	%Fixt
0-30	1849.34	27.22%
0-40	1849.34	27.22%
0-60	5076.06	74.71%
0-90	6678.93	98.30%
90-120	59.45	0.88%
90-130	59.45	0.88%
90-150	98.58	1.45%
90-180	110.90	1.63%
0-180	6794.25	100.00%

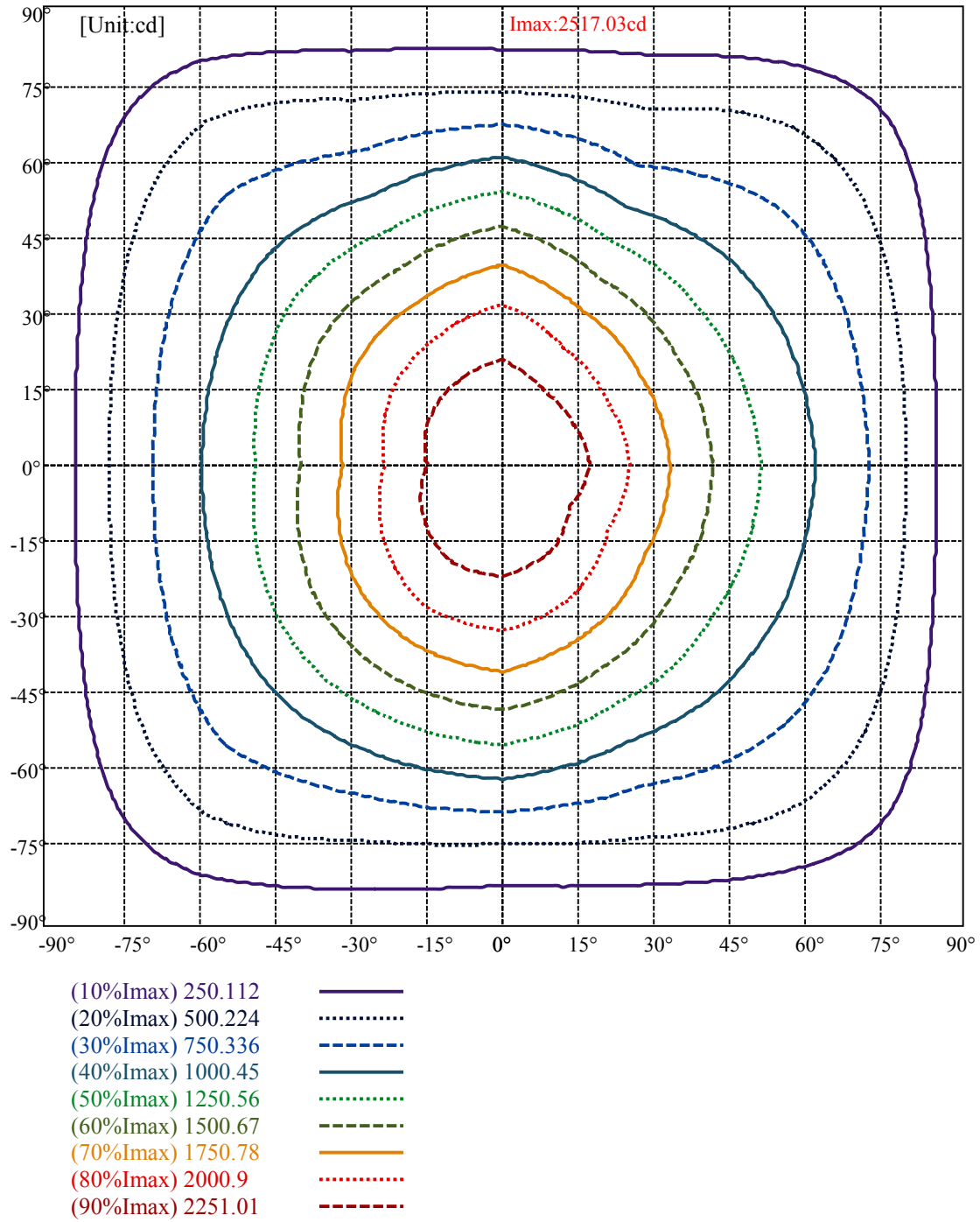
ZONAL LUMEN SUMMARY

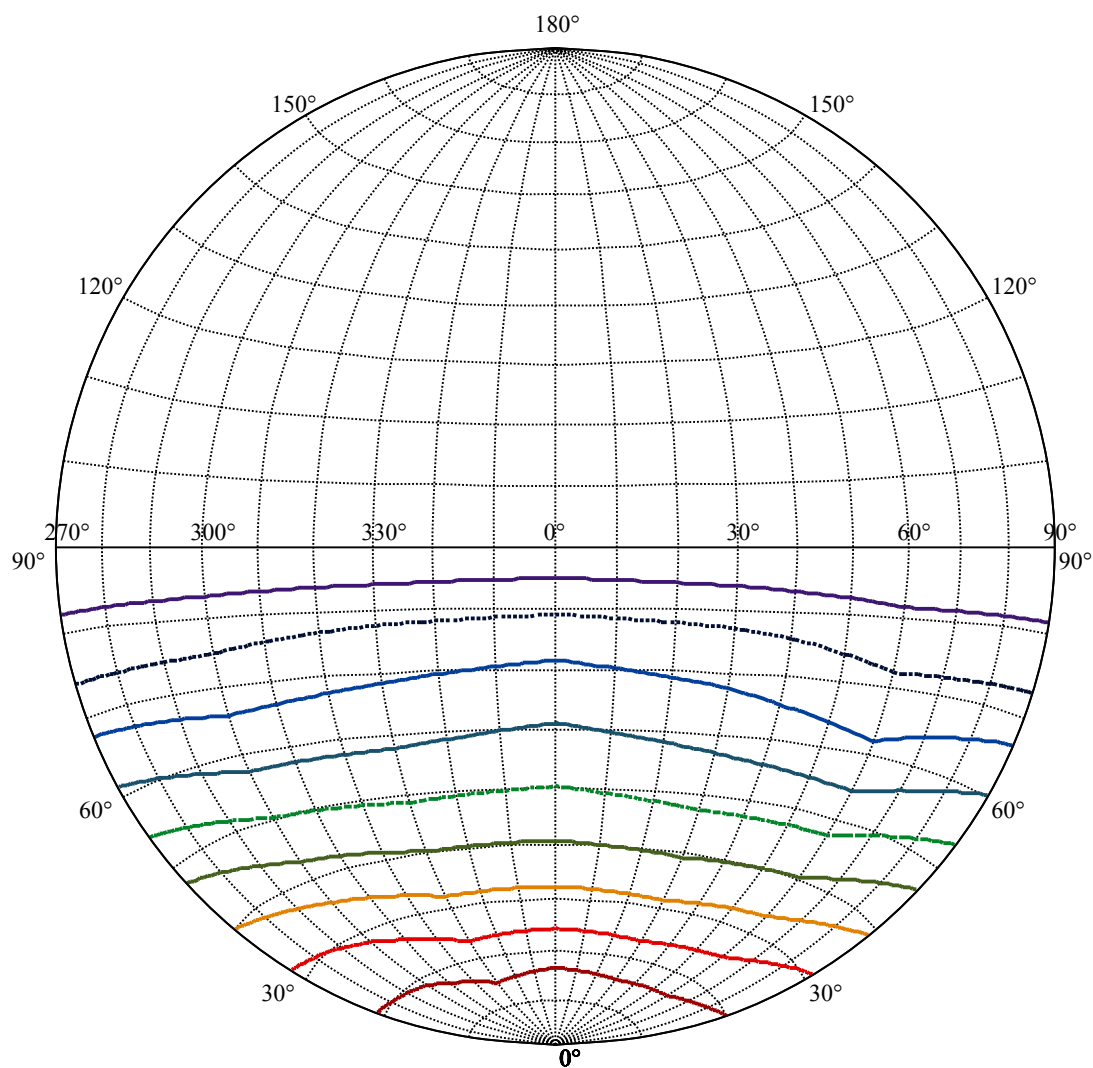
0-10	0.00
10-20	517.47
20-30	1331.87
30-40	0.00
40-50	1671.62
50-60	1555.11
60-70	0.00
70-80	1137.22
80-90	465.65
90-100	0.00
100-110	36.44
110-120	23.01
120-130	0.00
130-140	21.18
140-150	17.94
150-160	0.00
160-170	12.32
170-180	0.00



C30(Max): —
C0/C180: —
C90/C270: —





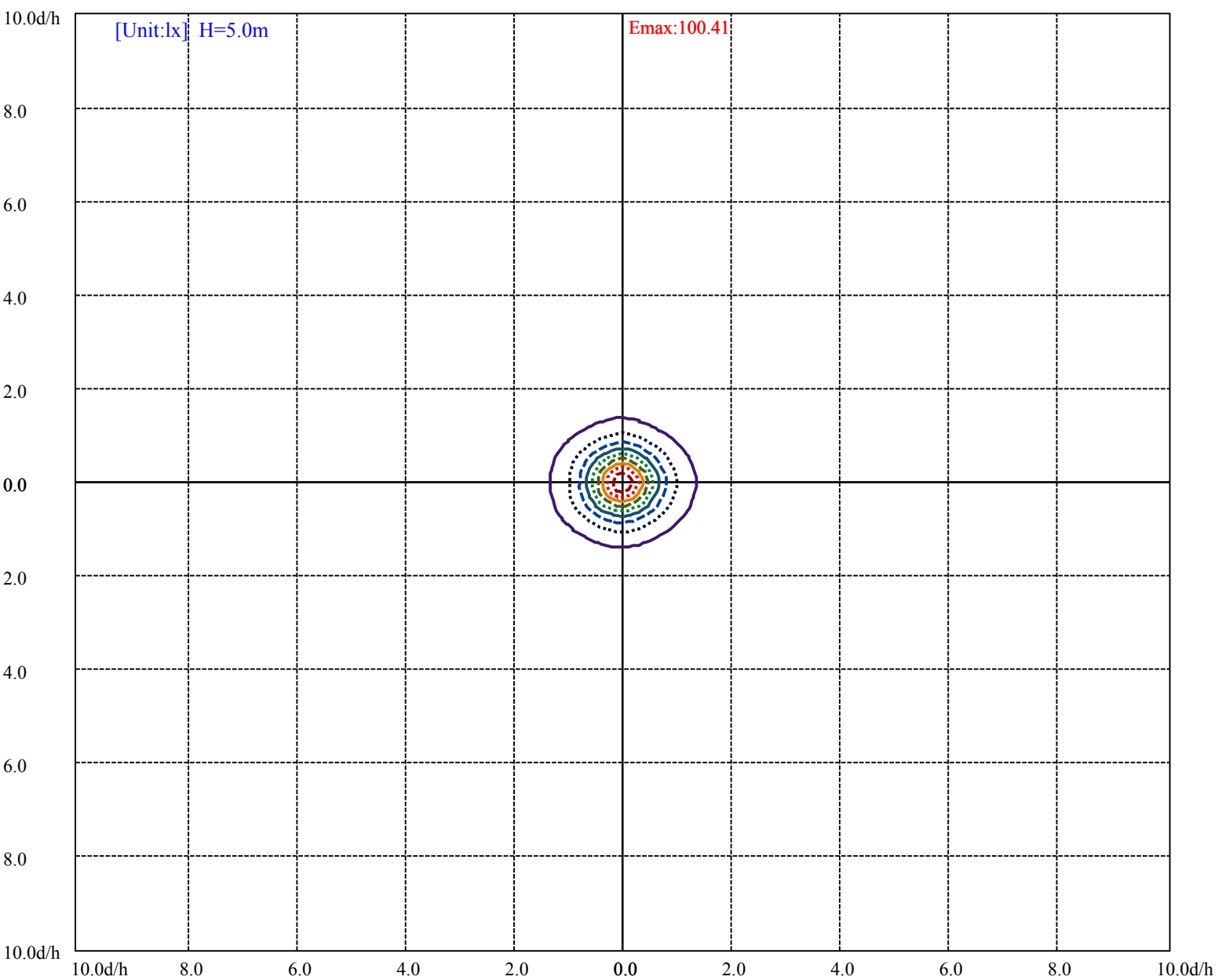


House

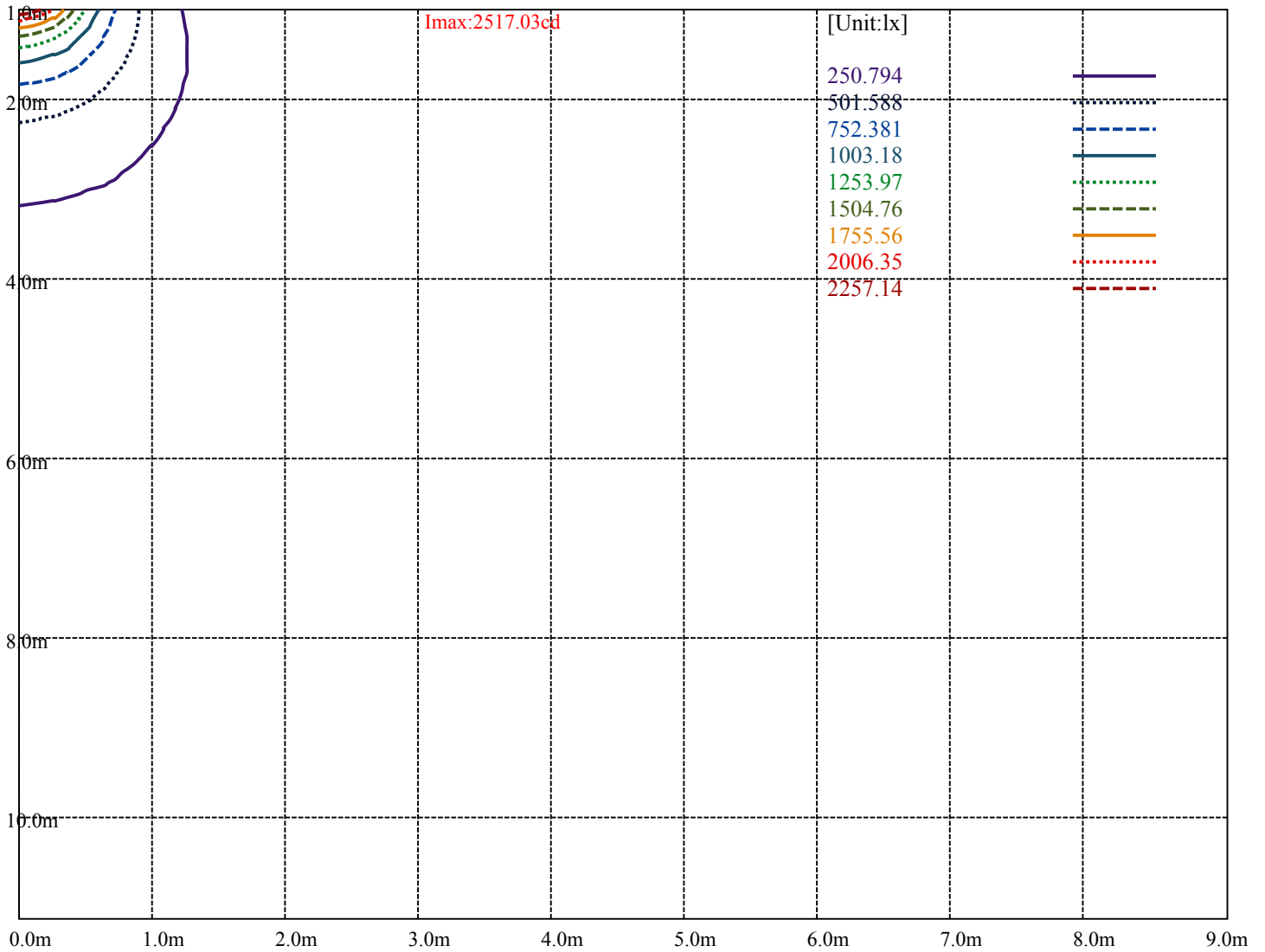
Road

I_{max}:2517.03cd

(10%I _{max}) 251.703	—
(20%I _{max}) 503.406	·····
(30%I _{max}) 755.108	- - - - -
(40%I _{max}) 1006.81	—
(50%I _{max}) 1258.51	·····
(60%I _{max}) 1510.22	- - - - -
(70%I _{max}) 1761.92	—
(80%I _{max}) 2013.62	·····
(90%I _{max}) 2265.33	- - - - -



- (10%Emax) 10.04084 ————
- (20%Emax) 20.08164 ······
- (30%Emax) 30.12248 - - - -
- (40%Emax) 40.1632 ————
- (50%Emax) 50.204 ······
- (60%Emax) 60.2448 - - - -
- (70%Emax) 70.2856 ————
- (80%Emax) 80.32681 ······
- (90%Emax) 90.3676 - - - -



Imax:2517.03cd

[Unit:lx]

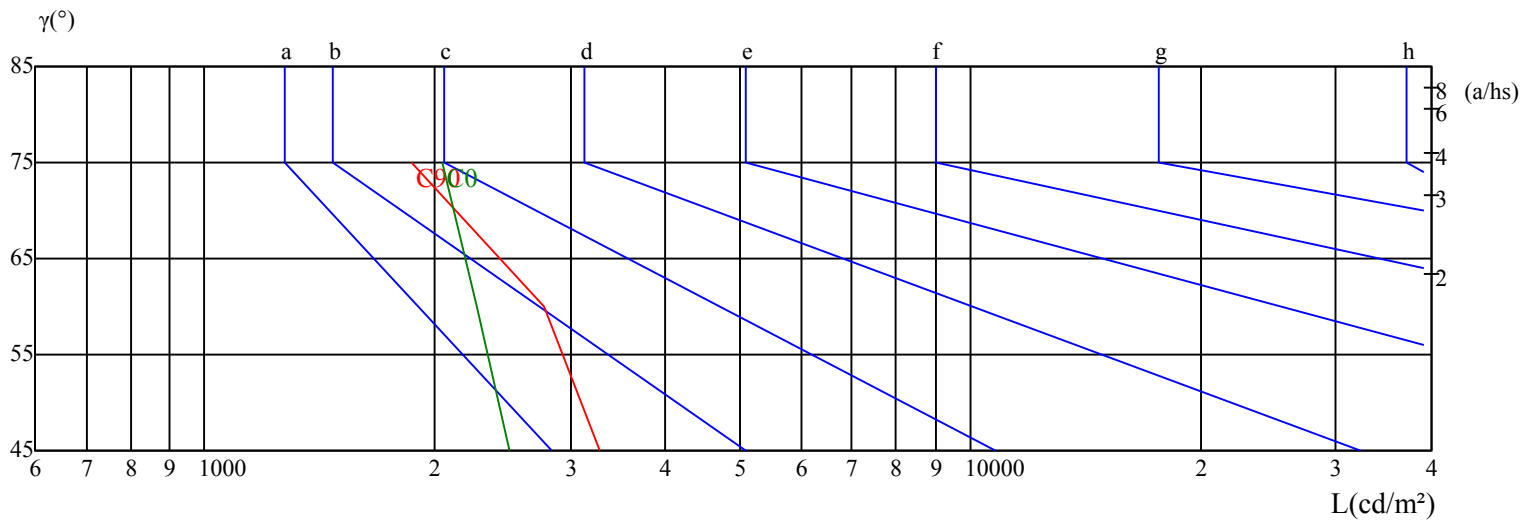
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	2505	0	0	2266	0	0	2040	0	0
C45	0	0	0	0	0	0	0	0	0
C90	3281	0	0	2777	0	0	1856	0	0

Glare Table

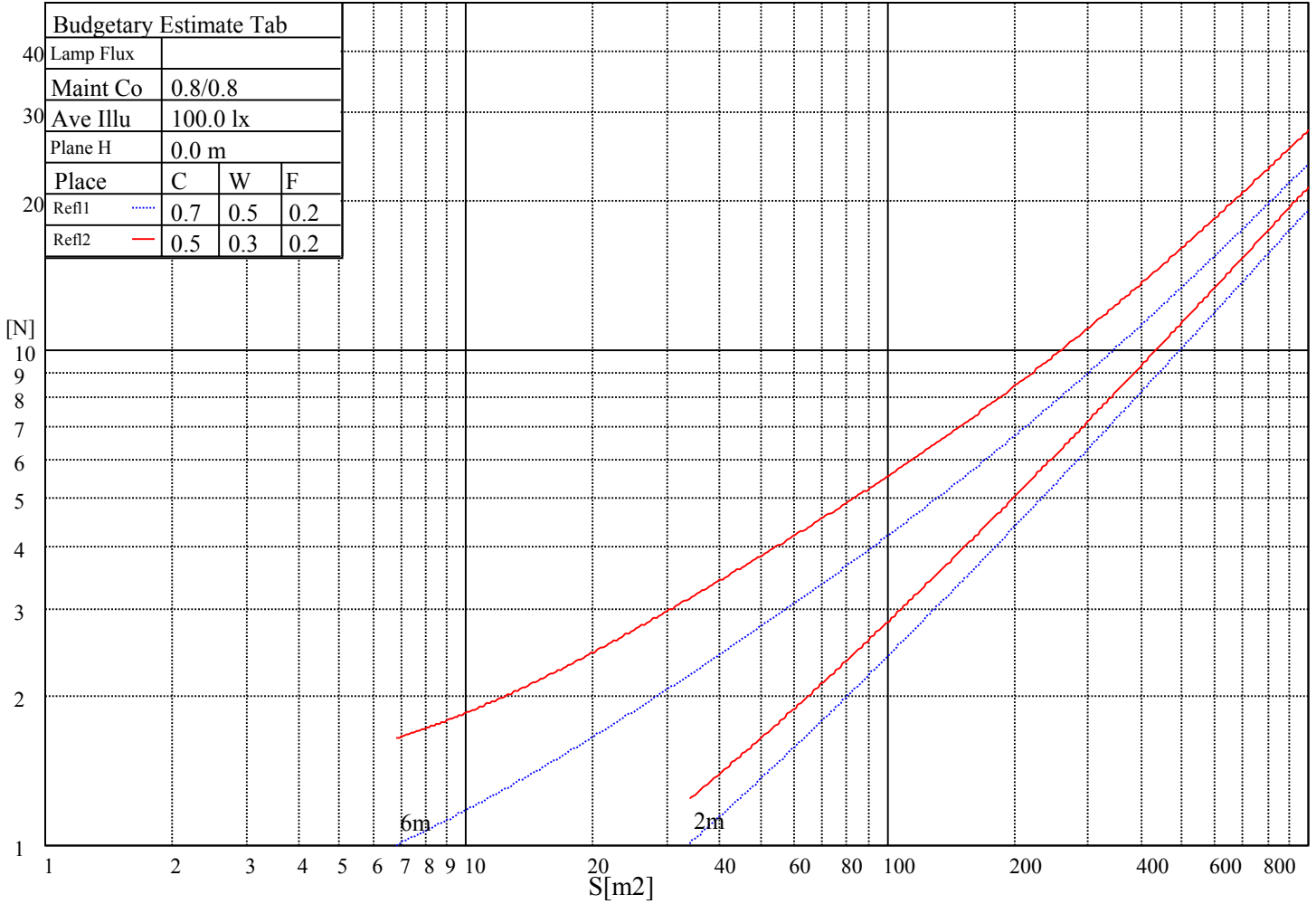
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

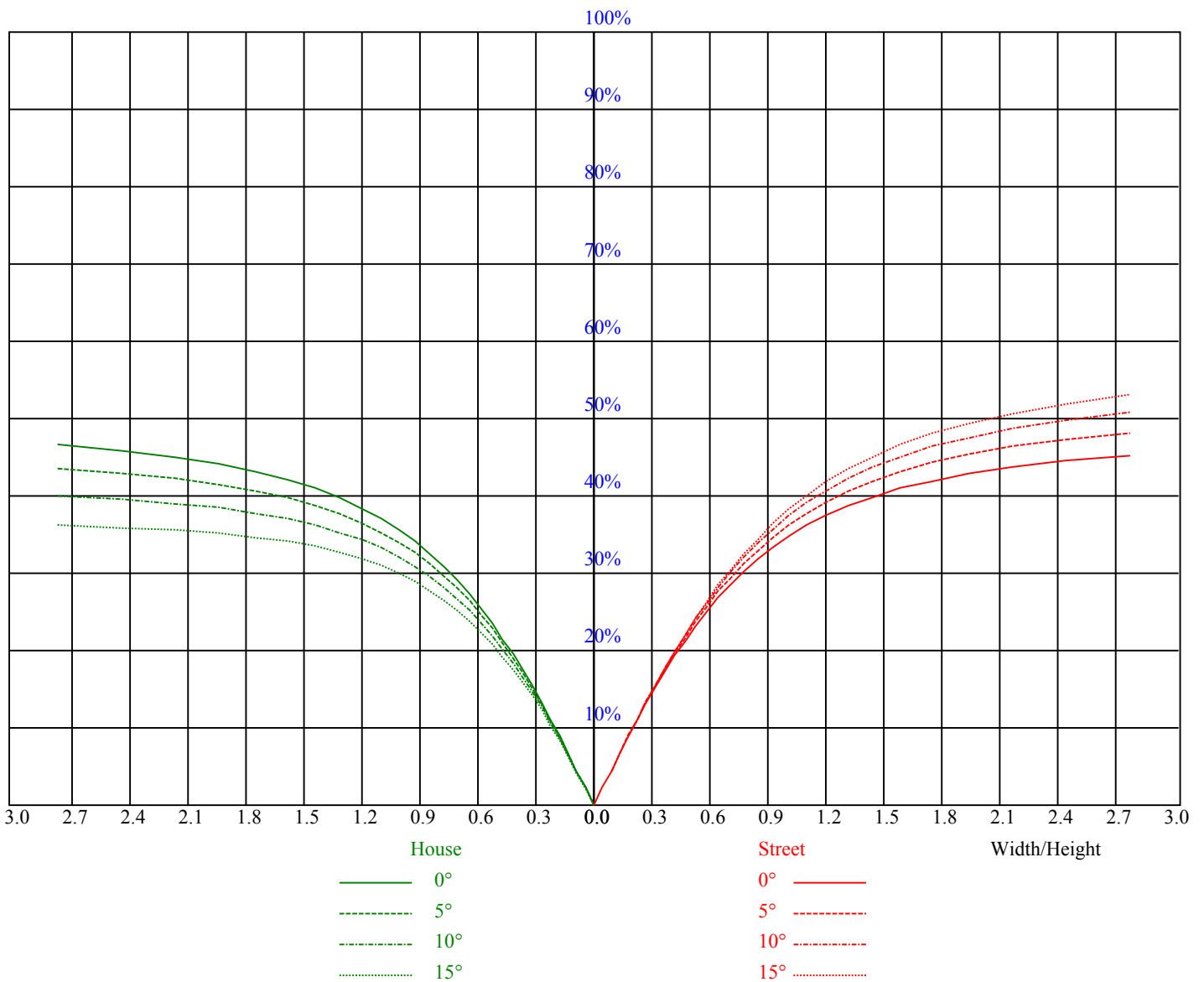


Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	8.2	9.8	8.6	10.1	10.4	8.2	9.8	8.5	10.1	10.4
	3H	10.2	11.7	10.6	12.0	12.4	9.8	11.3	10.2	11.6	11.9
	4H	11.0	12.3	11.4	12.7	13.1	10.3	11.5	10.7	11.9	12.3
	6H	11.8	13.1	12.2	13.5	13.9	10.8	12.1	11.2	12.5	12.9
	8H	12.1	13.4	12.5	13.8	14.2	11.0	12.3	11.5	12.7	13.1
	12H	12.1	13.1	12.6	13.6	14.0	11.0	12.0	11.4	12.4	12.9
4H	2H	8.6	9.9	9.0	10.2	10.6	8.6	9.8	9.0	10.2	10.6
	3H	10.8	11.8	11.3	12.3	12.7	10.3	11.3	10.8	11.8	12.2
	4H	12.0	13.0	12.5	13.5	13.9	11.1	12.2	11.6	12.6	13.1
	6H	12.9	14.0	13.4	14.4	14.9	11.8	12.9	12.3	13.3	13.7
	8H	13.1	13.8	13.6	14.3	14.9	11.9	12.6	12.4	13.1	13.7
	12H	13.3	14.0	13.9	14.6	15.1	12.1	12.8	12.6	13.3	13.9
8H	4H	12.2	12.9	12.7	13.4	14.0	11.4	12.1	11.9	12.6	13.2
	6H	13.3	14.0	13.8	14.5	15.0	12.2	12.9	12.8	13.4	14.0
	8H	13.7	14.4	14.2	14.9	15.5	12.6	13.3	13.1	13.8	14.3
	12H	14.0	14.7	14.5	15.2	15.8	12.8	13.6	13.4	14.1	14.6
12H	4H	12.2	12.9	12.7	13.4	14.0	11.5	12.2	12.0	12.7	13.3
	6H	13.3	14.1	13.9	14.6	15.1	12.3	13.1	12.9	13.6	14.1
	8H	13.8	14.5	14.3	15.0	15.6	12.7	13.4	13.3	14.0	14.5
Variation with the observer position at spacings:											
S = 1.0H	0.2/-0.8					0.2/-0.6					
S = 1.5H	0.6/-0.5					0.6/-0.5					
S = 2.0H	0.7/-0.5					0.8/-0.7					
Standard tables:	BKBF					BK4					
Uncorrected UGR	-1.9					-5.5					
According 1000lm											

五、灯具的概算曲线



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 RHOF=20 CU															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	0.98
1	0.93	0.86	0.80	0.91	0.84	0.78	0.86	0.80	0.76	0.81	0.77	0.73	0.77	0.74	0.70	0.68
2	0.80	0.71	0.63	0.78	0.69	0.62	0.74	0.67	0.60	0.70	0.64	0.59	0.67	0.62	0.57	0.54
3	0.69	0.59	0.51	0.67	0.58	0.51	0.64	0.56	0.49	0.61	0.54	0.48	0.58	0.52	0.47	0.44
4	0.60	0.50	0.42	0.59	0.49	0.41	0.56	0.47	0.41	0.53	0.46	0.40	0.51	0.44	0.39	0.36
5	0.53	0.42	0.35	0.52	0.42	0.34	0.49	0.40	0.34	0.47	0.39	0.33	0.45	0.38	0.33	0.30
6	0.47	0.36	0.29	0.46	0.36	0.29	0.44	0.35	0.28	0.42	0.34	0.28	0.40	0.33	0.28	0.25
7	0.42	0.32	0.25	0.41	0.31	0.25	0.39	0.30	0.24	0.37	0.30	0.24	0.36	0.29	0.24	0.21
8	0.38	0.28	0.21	0.37	0.28	0.21	0.35	0.27	0.21	0.34	0.26	0.21	0.32	0.26	0.20	0.18
9	0.34	0.25	0.19	0.33	0.25	0.19	0.32	0.24	0.18	0.31	0.23	0.18	0.29	0.23	0.18	0.16
10	0.31	0.22	0.17	0.30	0.22	0.17	0.29	0.22	0.16	0.28	0.21	0.16	0.27	0.21	0.16	0.14



Intensity data(cd)

C/γ(°)	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0
0.0	2507.94	2318.17	1835.22	1381.81	1032.95	671.59	40.57	14.20	14.43
30.0	2517.03	2282.94	1806.81	1322.72	930.68	587.50	17.39	15.80	16.82
60.0	2503.39	2296.58	1876.12	1344.65	808.40	430.22	16.82	15.57	16.70
90.0	2501.12	2374.98	2044.30	1565.90	1013.63	422.72	17.84	15.68	16.48
120.0	2502.26	2345.44	1940.44	1422.26	895.79	467.16	19.43	15.45	16.48
150.0	2507.94	2304.53	1876.12	1414.76	953.40	628.41	30.91	15.45	16.36
180.0	2507.94	2244.53	1792.26	1332.72	972.27	572.27	17.05	15.34	16.36
210.0	2517.03	2342.03	1918.96	1463.29	974.88	649.88	48.98	14.20	14.43
240.0	2503.39	2402.26	2039.76	1527.26	996.58	512.61	71.59	14.20	14.32
270.0	2501.12	2392.03	2072.26	1605.10	1054.77	464.32	21.82	13.98	14.32
300.0	2502.26	2363.62	1967.03	1439.76	919.31	499.20	36.59	14.09	14.66
330.0	2507.94	2261.80	1826.12	1362.83	945.45	606.81	20.57	14.32	14.77
360.0	2507.94	2318.17	1835.22	1381.81	1032.95	671.59	40.57	14.20	14.43

C/γ(°)	135.0	150.0	165.0	180.0
0.0	16.02	18.07	19.89	20.91
30.0	18.30	19.89	20.91	21.14
60.0	18.18	19.89	21.02	21.14
90.0	18.07	19.77	20.80	20.91
120.0	18.07	19.89	20.91	21.02
150.0	17.95	19.66	20.80	20.80
180.0	18.18	19.55	20.57	20.91
210.0	15.91	18.07	20.11	21.14
240.0	15.68	17.84	19.89	21.14
270.0	15.80	17.95	19.89	20.91
300.0	16.02	17.95	19.77	21.02
330.0	16.36	18.18	19.77	20.80
360.0	16.02	18.07	19.89	20.91