
P.Q.L., Inc. 4 LAMPS

LumCAT: 4 LAMPS	Luminaire: 5000K
Report No: /	Voltage(V):
Test No:	Current(A):
LampCAT: LED SMD 4' 15WT8/50K/FR/V4/2000Lm	Power (W): 67.400
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): 7003.71
Lumens(lm)/Power(W): 103.91
Central intensity(cd): 2604.528
Maximum intensity(cd): 2604.528
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [H]Left=54.9 Right=53.6
[V]Left=53.6 Right=46.1
Field angle(10%Imax): [H]Left=82.4 Right=81.6
[V]Left=84.2 Right=84.2
Maximum s/h: C0_180=1.06 C90_270=1.22
Up flux rate of LUM(%): 1.69%
Down flux rate of LUM(%): 98.31%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 74.970%

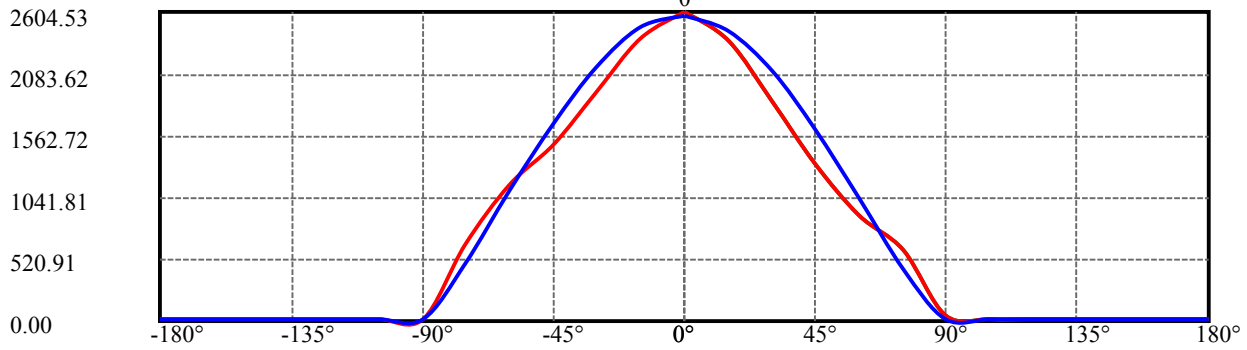
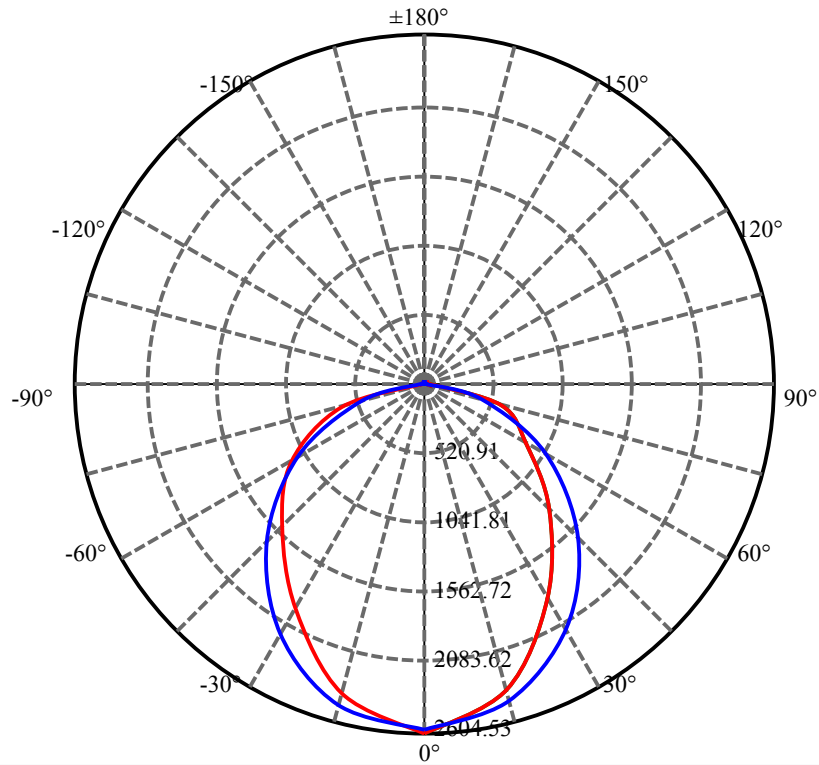
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2589.945	.000	.000	.000%	.000%
15.0	2416.840	535.962	535.962	7.653%	7.653%
30.0	1986.597	1382.003	1917.965	19.732%	27.385%
45.0	1480.975	1731.211	3649.176	24.718%	52.103%
60.0	980.429	1601.500	5250.676	22.866%	74.970%
75.0	552.184	1161.249	6411.925	16.580%	91.550%
90.0	30.180	473.522	6885.447	6.761%	98.311%
105.0	15.322	36.998	6922.445	.528%	98.840%
120.0	15.975	23.714	6946.158	.339%	99.178%
135.0	17.547	21.811	6967.970	.311%	99.490%
150.0	19.451	18.472	6986.441	.264%	99.753%
165.0	21.013	12.699	6999.141	.181%	99.935%
180.0	21.685	4.571	7003.711	.065%	100.000%

ZONAL LUMEN SUMMARY

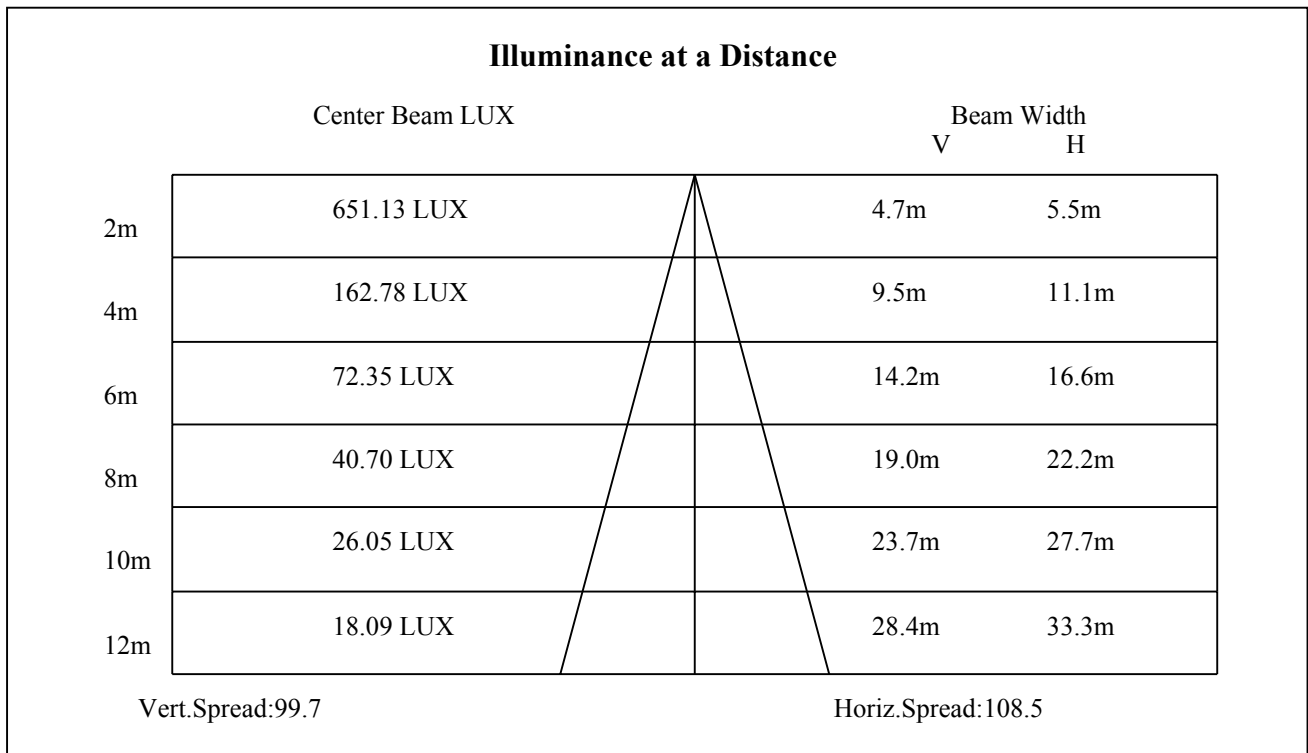
Zone	Lumens	%Fixt
0-30	1917.97	27.38%
0-40	1917.97	27.38%
0-60	5250.68	74.97%
0-90	6885.45	98.31%
90-120	60.71	0.87%
90-130	60.71	0.87%
90-150	100.99	1.44%
90-180	113.69	1.62%
0-180	7003.71	100.00%

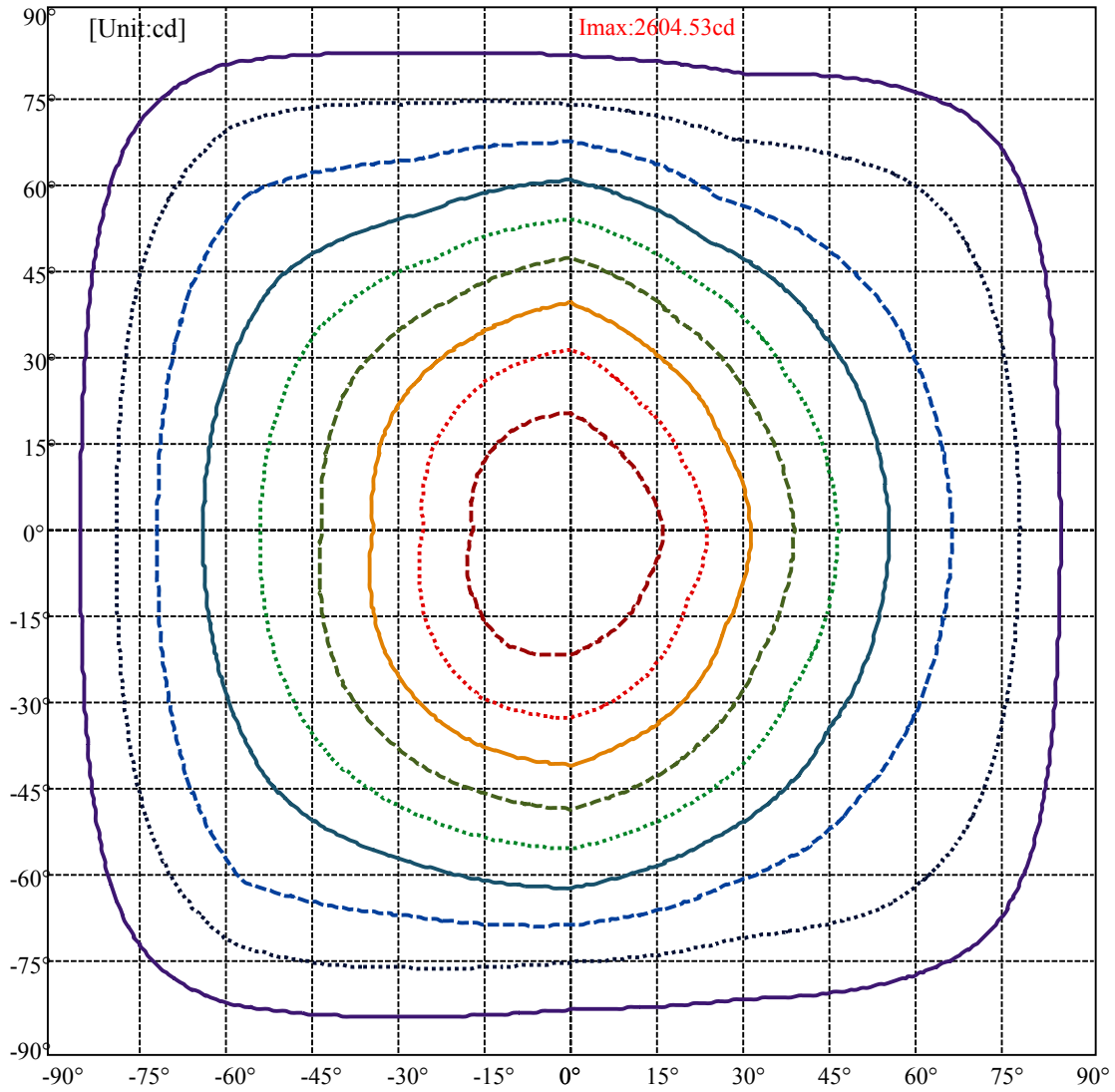
ZONAL LUMEN SUMMARY

0-10	0.00
10-20	535.96
20-30	1382.00
30-40	0.00
40-50	1731.21
50-60	1601.50
60-70	0.00
70-80	1161.25
80-90	473.52
90-100	0.00
100-110	37.00
110-120	23.71
120-130	0.00
130-140	21.81
140-150	18.47
150-160	0.00
160-170	12.70
170-180	0.00

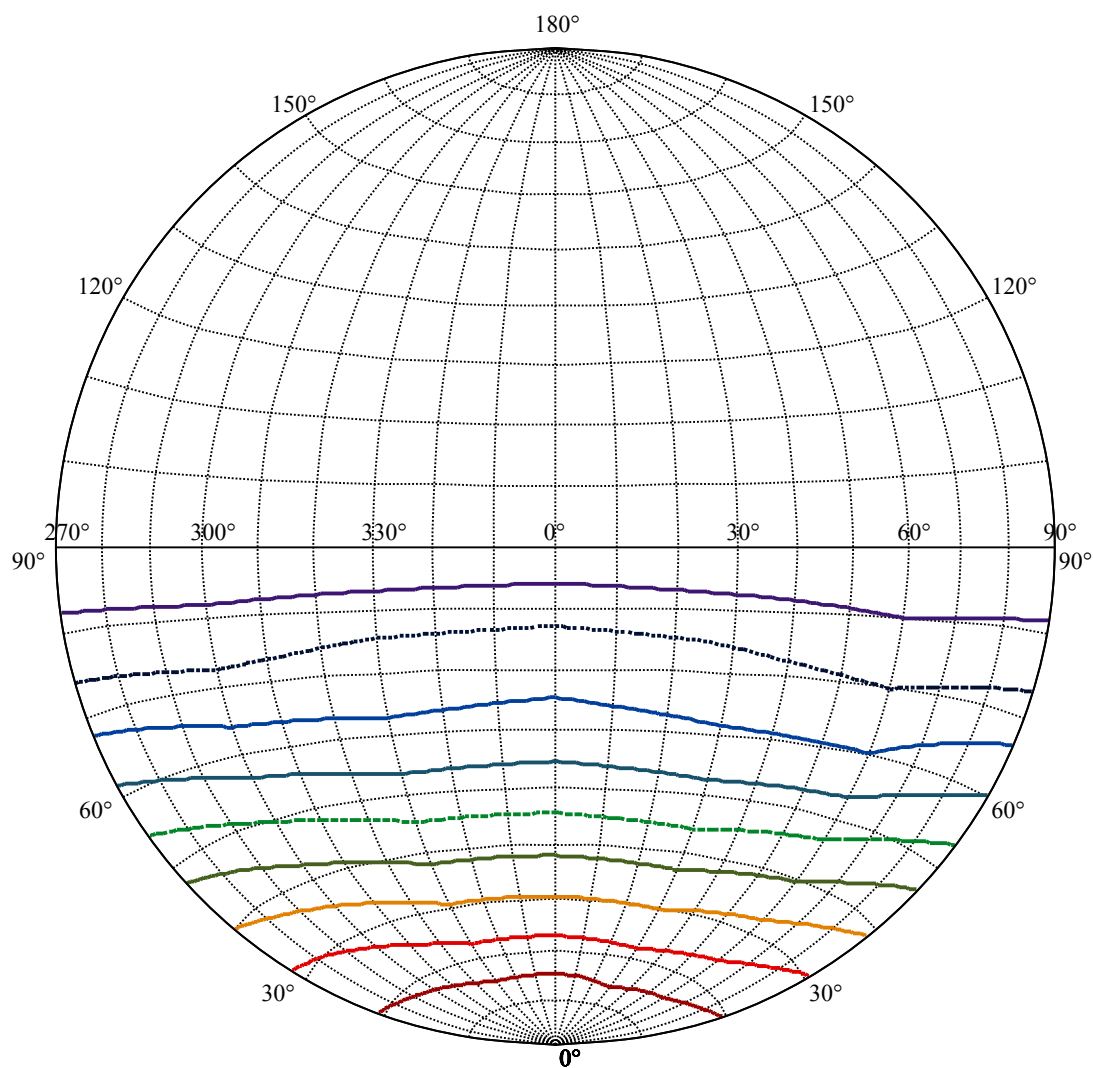


C0(Max): ———
C0/C180: ———
C90/C270: ———





- (10%Imax) 258.991 ————
- (20%Imax) 517.981 ······
- (30%Imax) 776.972 - - - - -
- (40%Imax) 1035.96 ————
- (50%Imax) 1294.95 ······
- (60%Imax) 1553.94 - - - - -
- (70%Imax) 1812.93 ————
- (80%Imax) 2071.93 ······
- (90%Imax) 2330.92 - - - - -

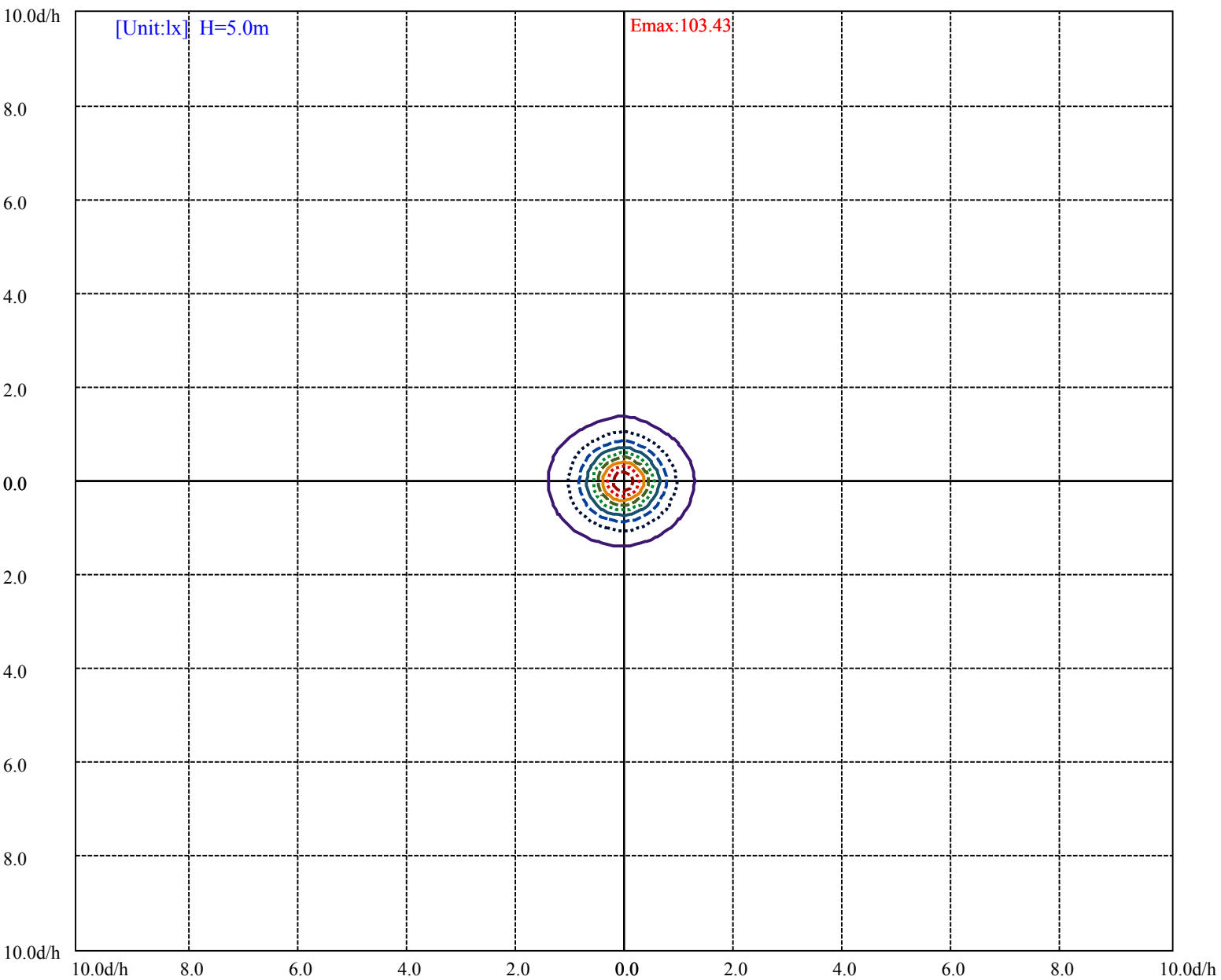


House

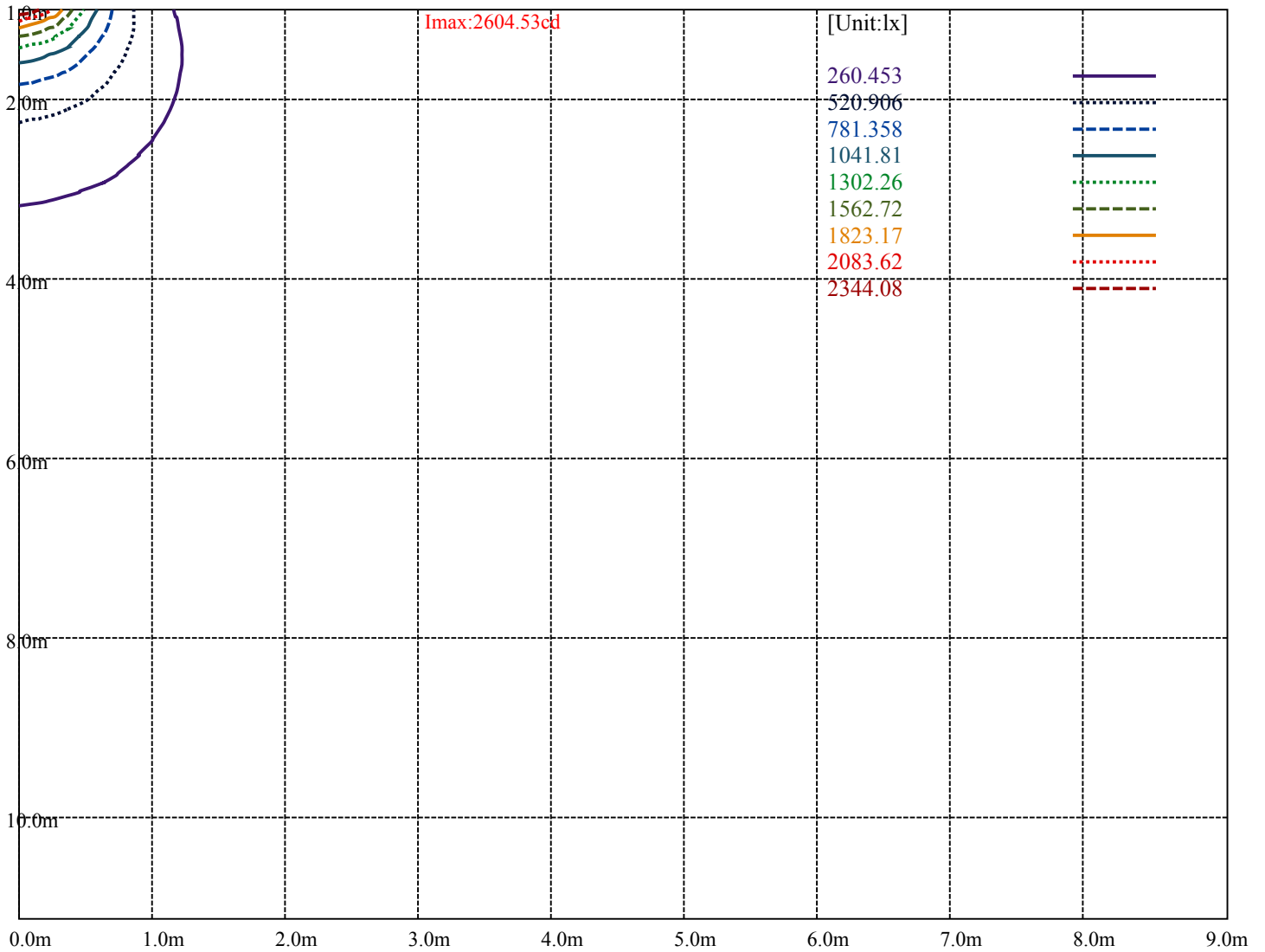
Road

I_{max}:2604.53cd

(10%I _{max}) 260.453	—
(20%I _{max}) 520.906	⋯
(30%I _{max}) 781.358	- - -
(40%I _{max}) 1041.81	—
(50%I _{max}) 1302.26	⋯
(60%I _{max}) 1562.72	- - -
(70%I _{max}) 1823.17	—
(80%I _{max}) 2083.62	⋯
(90%I _{max}) 2344.08	- - -



- (10%Emax) 10.34308 ————
- (20%Emax) 20.6862 ······
- (30%Emax) 31.02928 - - - -
- (40%Emax) 41.3724 ————
- (50%Emax) 51.7156 ······
- (60%Emax) 62.0584 - - - -
- (70%Emax) 72.4016 ————
- (80%Emax) 82.7448 ······
- (90%Emax) 93.088 - - - -



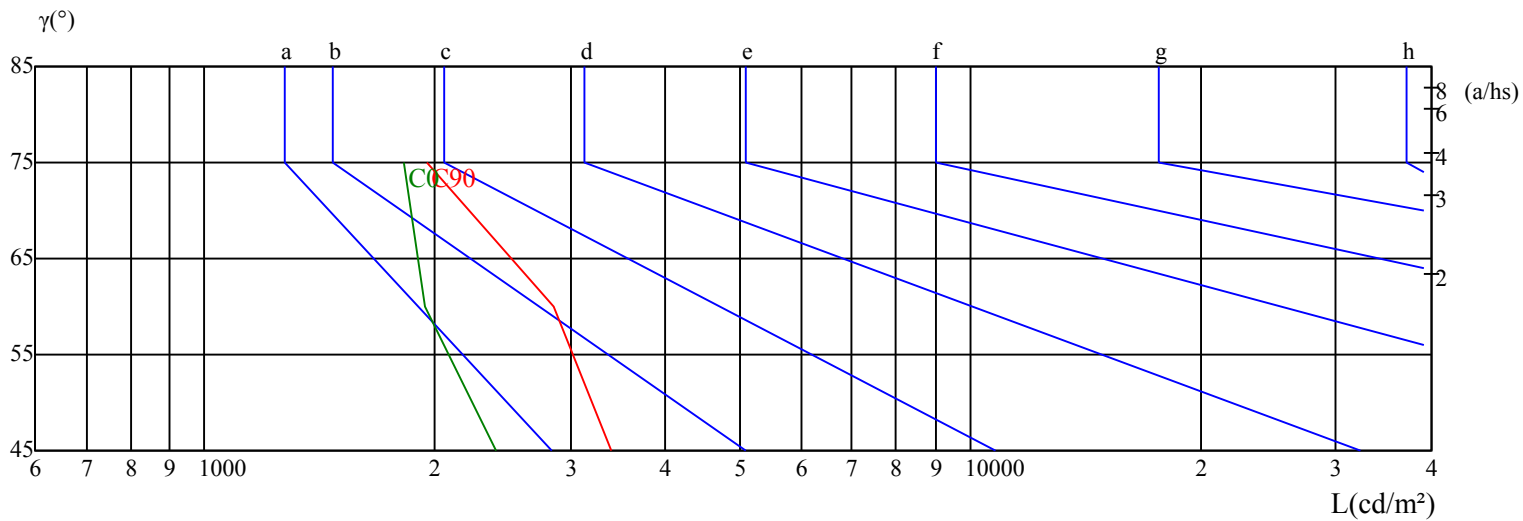
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	2396	0	0	1937	0	0	1819	0	0
C45	0	0	0	0	0	0	0	0	0
C90	3395	0	0	2858	0	0	1952	0	0

Glare Table

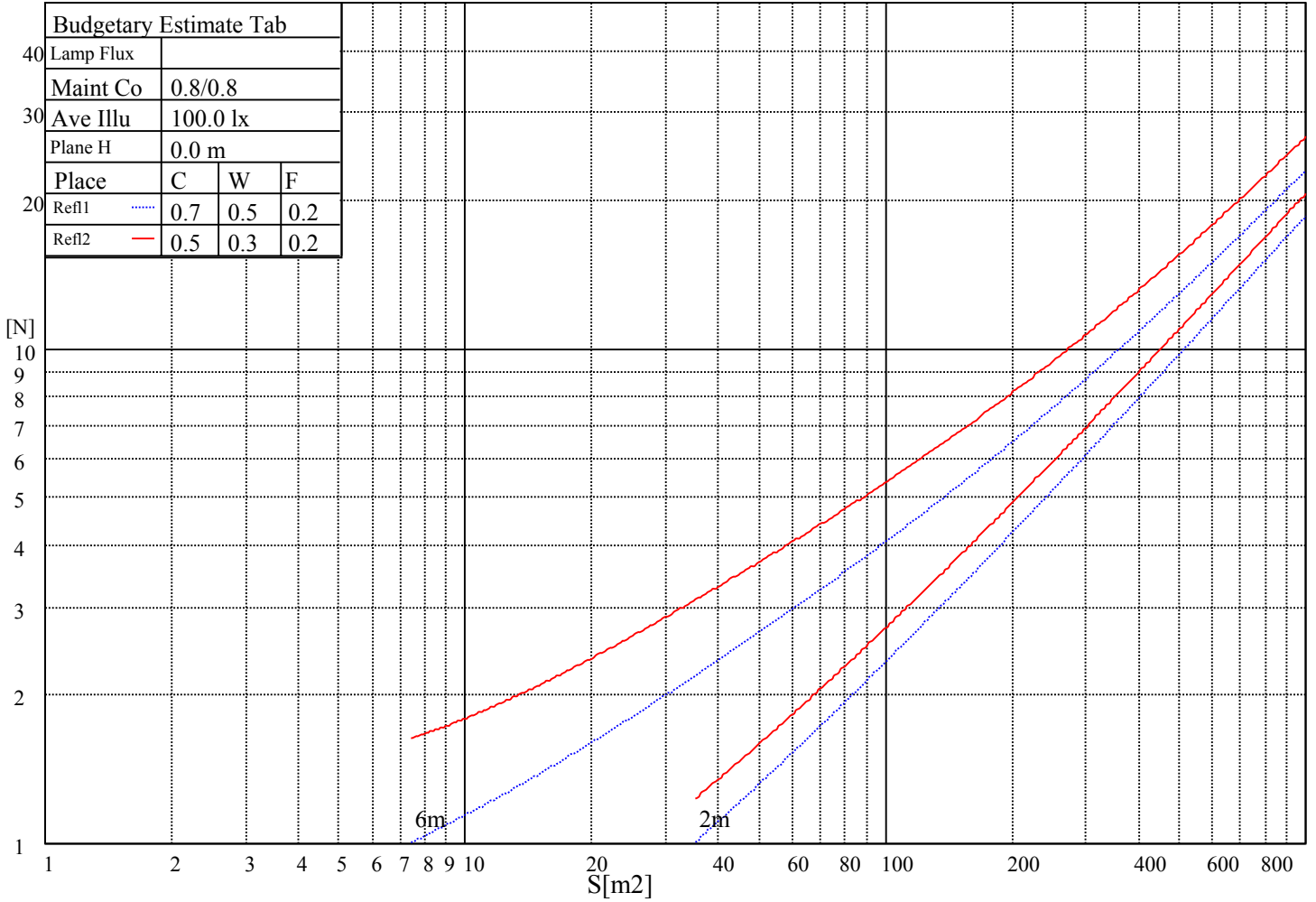
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

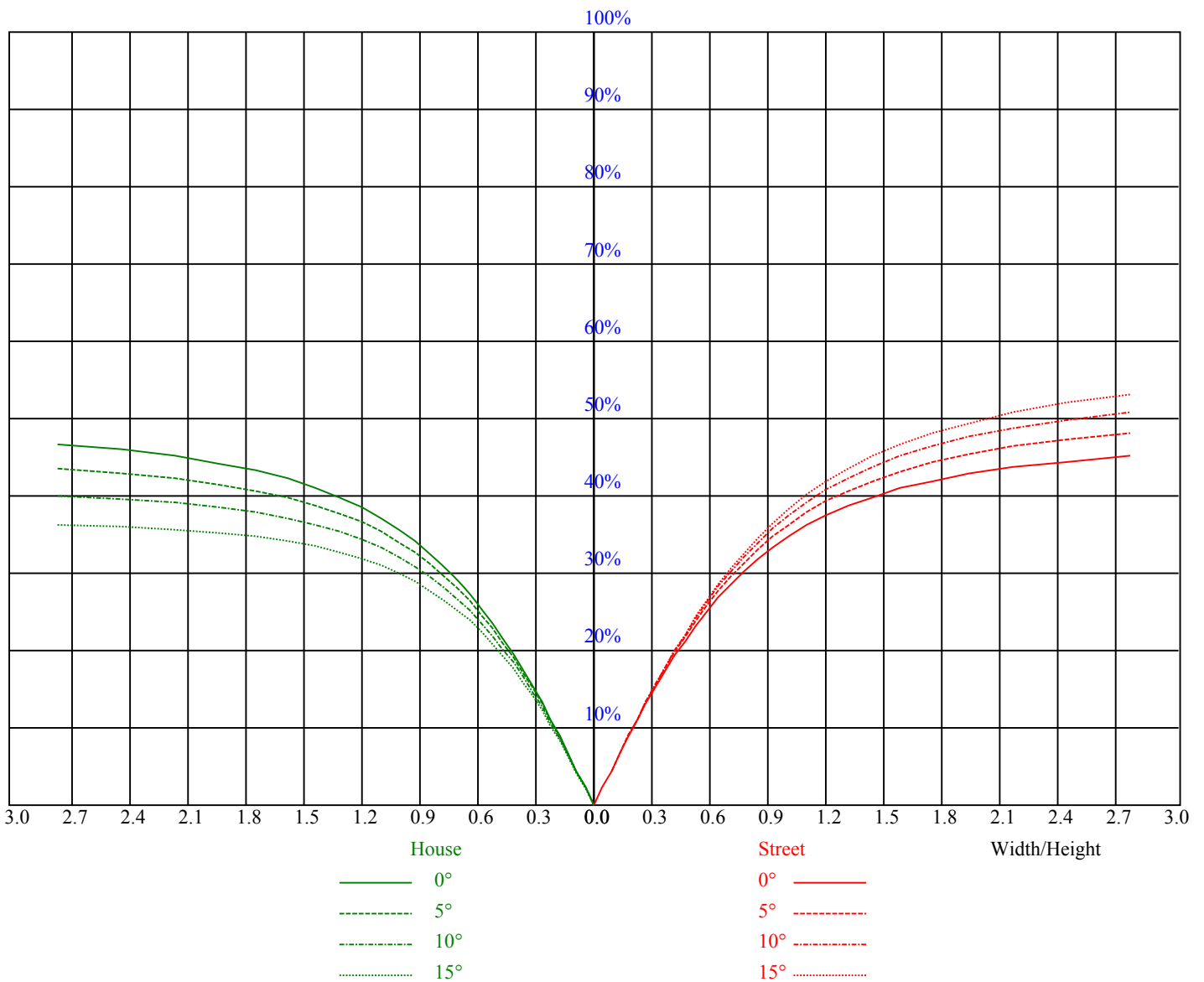


Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	7.3	8.9	7.7	9.2	9.5	8.0	9.7	8.4	9.9	10.2
	3H	9.2	10.7	9.6	11.0	11.3	9.6	11.1	10.0	11.4	11.8
	4H	10.0	11.2	10.4	11.6	12.0	10.1	11.4	10.5	11.7	12.1
	6H	10.8	12.1	11.2	12.4	12.8	10.7	11.9	11.1	12.3	12.7
	8H	11.1	12.4	11.5	12.7	13.1	10.9	12.2	11.3	12.5	12.9
	12H	11.1	12.1	11.5	12.5	13.0	10.8	11.9	11.3	12.3	12.8
4H	2H	7.7	9.0	8.1	9.4	9.8	8.3	9.5	8.7	9.9	10.3
	3H	9.8	10.8	10.2	11.2	11.7	10.0	11.0	10.5	11.5	11.9
	4H	10.9	12.0	11.4	12.4	12.9	10.8	11.8	11.3	12.3	12.7
	6H	11.9	12.9	12.3	13.3	13.8	11.5	12.5	12.0	13.0	13.4
	8H	12.0	12.7	12.6	13.3	13.8	11.6	12.3	12.1	12.8	13.4
	12H	12.3	13.0	12.8	13.5	14.1	11.8	12.5	12.4	13.1	13.6
8H	4H	11.1	11.8	11.6	12.3	12.9	11.0	11.7	11.5	12.2	12.8
	6H	12.2	12.9	12.7	13.4	14.0	11.8	12.5	12.3	13.0	13.6
	8H	12.6	13.3	13.2	13.8	14.4	12.2	12.9	12.7	13.4	13.9
	12H	13.0	13.7	13.5	14.2	14.7	12.4	13.2	13.0	13.7	14.2
12H	4H	11.2	11.9	11.7	12.4	12.9	11.1	11.8	11.6	12.3	12.8
	6H	12.3	13.0	12.8	13.5	14.0	11.9	12.6	12.4	13.1	13.7
	8H	12.7	13.5	13.3	14.0	14.5	12.3	13.0	12.8	13.5	14.1
Variation with the observer position at spacings:											
S = 1.0H	0.2/-0.8					0.3/-0.5					
S = 1.5H	0.6/-0.5					0.6/-0.5					
S = 2.0H	0.6/-0.6					0.9/-0.8					
Standard tables:	BKBF					BK3					
Uncorrected UGR	-2.8					-6.4					
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	0.87	0.80	0.91	0.84	0.79	0.86	0.81	0.76	0.82	0.77	0.73	0.77	0.74	0.70	0.68
2	0.80	0.71	0.63	0.78	0.70	0.63	0.74	0.67	0.61	0.70	0.64	0.59	0.67	0.62	0.57	0.55
3	0.69	0.59	0.51	0.68	0.58	0.51	0.64	0.56	0.50	0.61	0.54	0.48	0.58	0.52	0.47	0.45
4	0.60	0.50	0.42	0.59	0.49	0.42	0.56	0.47	0.41	0.53	0.46	0.40	0.51	0.44	0.39	0.37
5	0.53	0.43	0.35	0.52	0.42	0.35	0.49	0.41	0.34	0.47	0.39	0.33	0.45	0.38	0.33	0.30
6	0.47	0.37	0.29	0.46	0.36	0.29	0.44	0.35	0.29	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	0.31	0.24	0.37	0.30	0.24	0.36	0.29	0.24	0.21
8	0.38	0.28	0.22	0.37	0.28	0.21	0.35	0.27	0.21	0.34	0.26	0.21	0.32	0.26	0.21	0.18
9	0.34	0.25	0.19	0.33	0.25	0.19	0.32	0.24	0.19	0.31	0.23	0.18	0.30	0.23	0.18	0.16
10	0.31	0.22	0.17	0.31	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	2604.53	2362.48	1845.44	1321.58	882.95	598.86	40.80	14.66	15.23
30.0	2594.30	2324.98	1811.35	1274.99	814.77	505.34	17.73	16.36	17.50
60.0	2577.26	2360.21	1916.69	1364.20	790.00	377.84	17.27	16.25	17.27
90.0	2579.53	2446.57	2104.53	1620.44	1043.18	444.43	19.09	16.25	17.05
120.0	2587.48	2462.48	2050.67	1506.24	975.22	529.77	19.20	15.91	16.82
150.0	2596.57	2435.21	1992.03	1540.90	1089.77	712.50	29.55	15.68	16.59
180.0	2604.53	2385.21	1928.17	1489.88	1142.15	641.47	17.61	15.57	16.48
210.0	2594.30	2476.12	2041.69	1587.72	1109.88	755.90	48.98	14.43	14.55
240.0	2577.26	2515.89	2149.99	1618.17	1070.45	588.63	70.68	14.66	14.66
270.0	2579.53	2469.30	2142.83	1662.94	1096.70	487.27	23.64	14.55	14.77
300.0	2587.48	2413.62	2010.21	1470.45	912.49	443.29	38.07	14.66	15.23
330.0	2596.57	2349.98	1845.56	1314.20	837.61	540.91	19.55	14.89	15.57
360.0	2604.53	2362.48	1845.44	1321.58	882.95	598.86	40.80	14.66	15.23
C/ γ (°)	135.0	150.0	165.0	180.0					
0.0	16.93	18.98	20.91	21.70					
30.0	19.09	20.68	21.59	21.70					
60.0	18.98	20.57	21.59	21.70					
90.0	18.52	20.34	21.48	21.59					
120.0	18.41	20.23	21.48	21.70					
150.0	18.18	19.89	21.36	21.70					
180.0	18.18	19.77	21.25	21.70					
210.0	16.02	18.30	20.45	21.70					
240.0	16.02	18.18	20.34	21.70					
270.0	16.25	18.52	20.34	21.59					
300.0	16.82	18.75	20.57	21.70					
330.0	17.16	19.20	20.80	21.70					
360.0	16.93	18.98	20.91	21.70					