
Amazonas 500 IES Test Report

LumCAT: A500

Luminaire: AL reflector cup 15 degree

Report No: WJH-GM-06

Test No: 09

LampCAT: CSP

Lamp flux(lm): 50.0

Number of Lamps: 240

Length(mm): 230

Phm Type: C

Voltage(V): 223.0000

Current(A): 2.2330

Power (W): 498.0000

PF: 0.9780

Ballast type:

Width(mm): 190

Height(mm): 60

Photometric Results

Lumens(lm): 11948.40

Efficiency(%): 99.57%

Lumens(lm)/Power(W): 23.99

Central intensity(cd): 93974.430

Maximum intensity(cd): 97265.840

Angle of maximum intensity: C=30.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=14.6

[C90/270]Total=14.5

Field angle(10%Imax): [C0/180]Total=29.9

[C90/270]Total=30.3

Maximum s/h(1/2): C0_180=0.26 C90_270=0.26

Maximum s/h(1/4): C0_180=0.38 C90_270=0.25

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 99.57%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.624%

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Zonal flux distribution table

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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	91898.550	.000	.000	.000%	.000%
5.0	66925.630	1898.698	1898.698	15.822%	15.822%
10.0	23393.570	3231.002	5129.700	26.925%	42.748%
15.0	9560.614	1954.820	7084.520	16.290%	59.038%
20.0	4932.939	1194.472	8278.992	9.954%	68.992%
25.0	3692.878	904.689	9183.682	7.539%	76.531%
30.0	3397.522	897.296	10080.980	7.477%	84.008%
35.0	2739.500	903.719	10984.700	7.531%	91.539%
40.0	905.330	608.112	11592.810	5.068%	96.607%
45.0	143.864	194.267	11787.080	1.619%	98.226%
50.0	99.439	49.163	11836.240	.410%	98.635%
55.0	80.613	39.149	11875.390	.326%	98.962%
60.0	40.786	28.061	11903.450	.234%	99.195%
65.0	23.963	15.740	11919.190	.131%	99.327%
70.0	18.529	10.759	11929.950	.090%	99.416%
75.0	13.514	8.376	11938.330	.070%	99.486%
80.0	8.220	5.815	11944.140	.048%	99.535%
85.0	3.309	3.133	11947.270	.026%	99.561%
90.0	.818	1.130	11948.400	.009%	99.570%

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Zonal flux distribution table

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	10080.98	84.01%	84.37%
0-40	11592.81	96.61%	97.02%
0-60	11903.45	99.20%	99.62%
0-90	11947.27	99.56%	99.99%
0-120	11947.27	99.56%	99.99%
0-180	11948.40	99.57%	100.00%
60-90	71.88	0.60%	0.60%
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%
0-27.09	9558.72	79.66%	80.00%

ZONAL LUMEN SUMMARY

0-10	5129.70
10-20	3149.29
20-30	1801.99
30-40	1511.83
40-50	243.43
50-60	67.21
60-70	26.50
70-80	14.19
80-90	3.13
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

Equipment: GMS-1800
Temperature(°C): 25.0

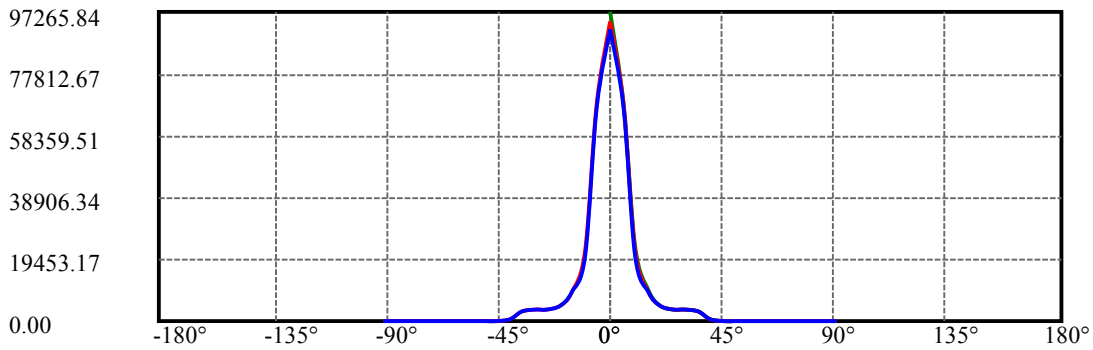
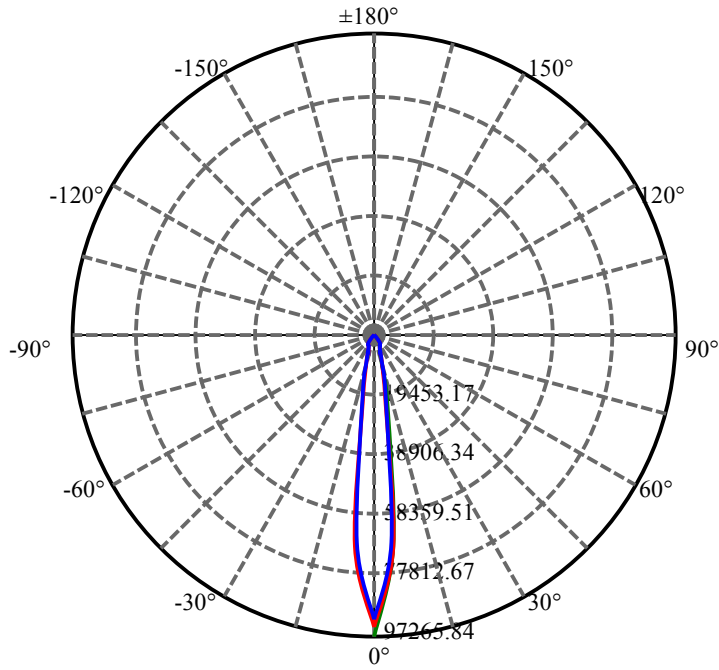
Date: 2016/9/27
Humidity(%): 65.0%

Operator: Andy Chen
Distance(m): 10.22

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Light Distribution Curve [Unit:cd]

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C30(Max): ———

C0/C180: ———

C90/C270: ———

Field angle(10%Imax):C0/180Left:14.9 Right:14.9

:C90/270Left:15.1 Right:15.1

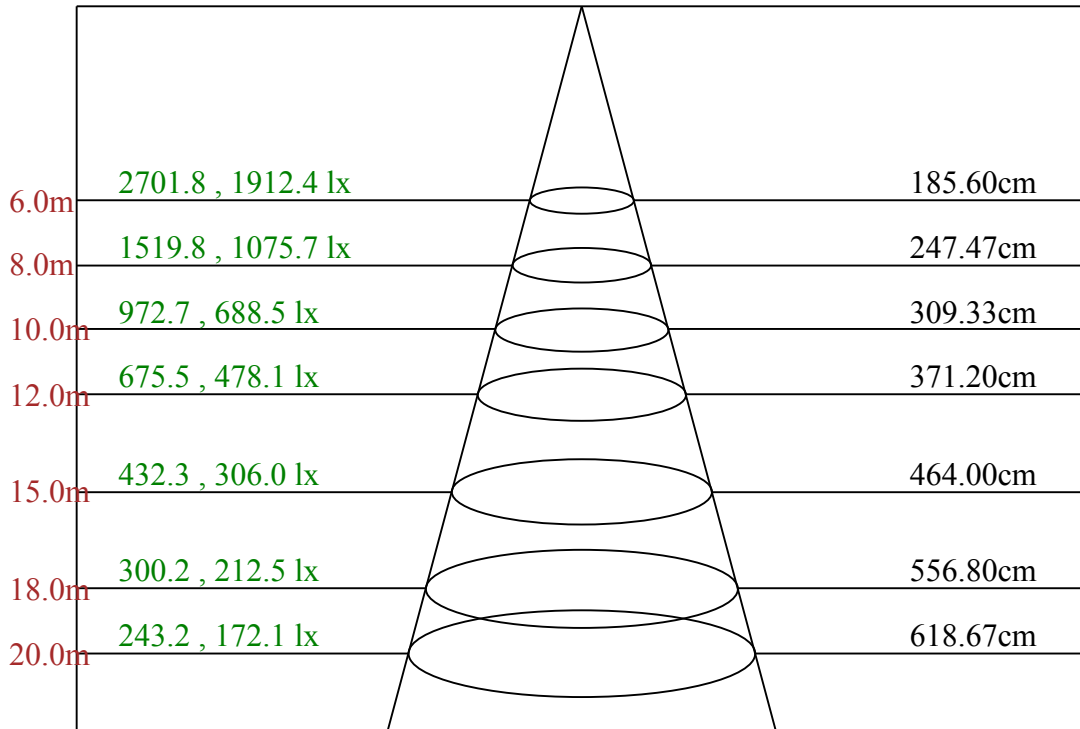
Beam Angle(50%Imax):C0/180Left:7.3 Right:7.3

:C90/270Left:7.3 Right:7.3

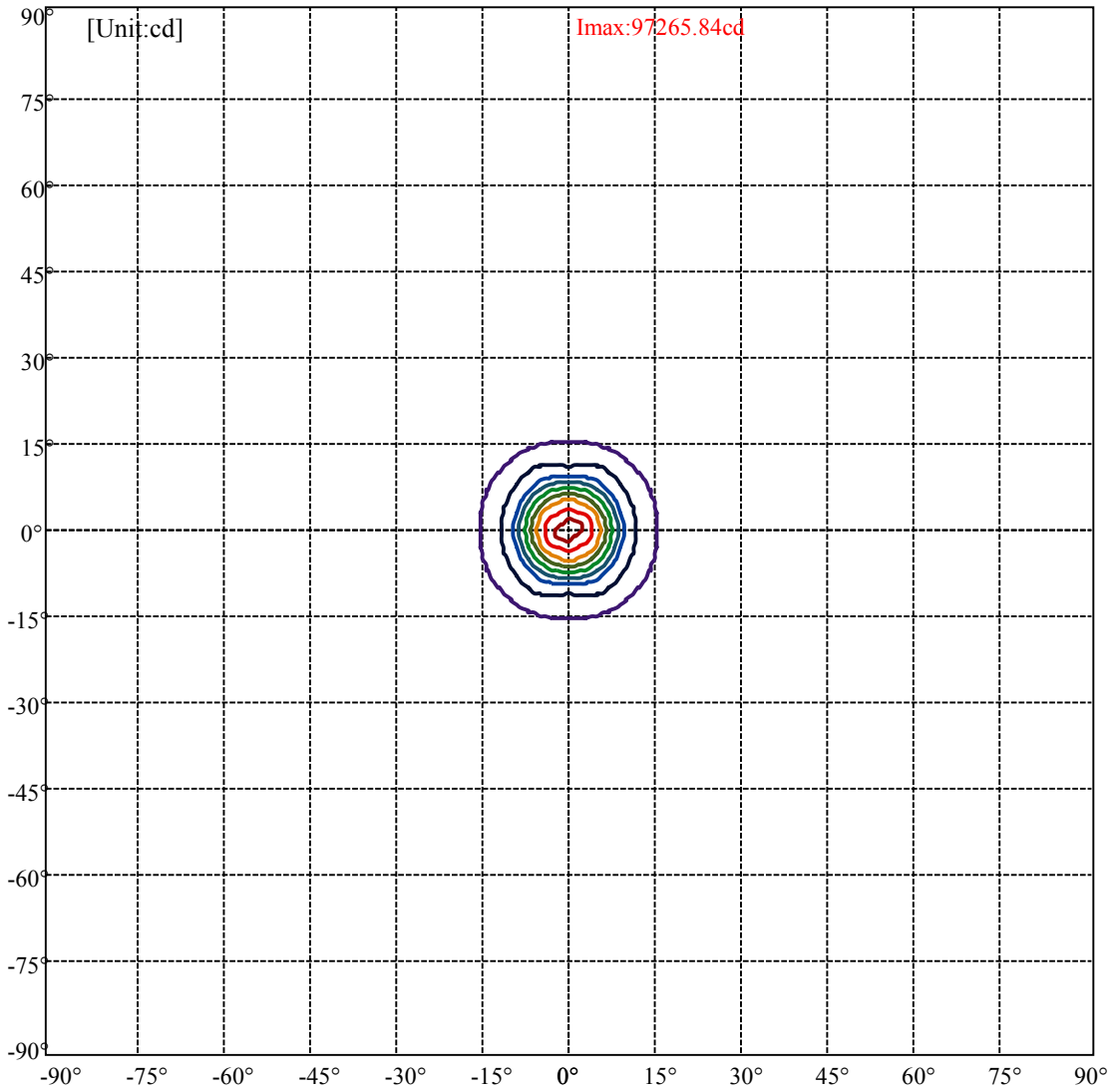
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Lux distance Curve

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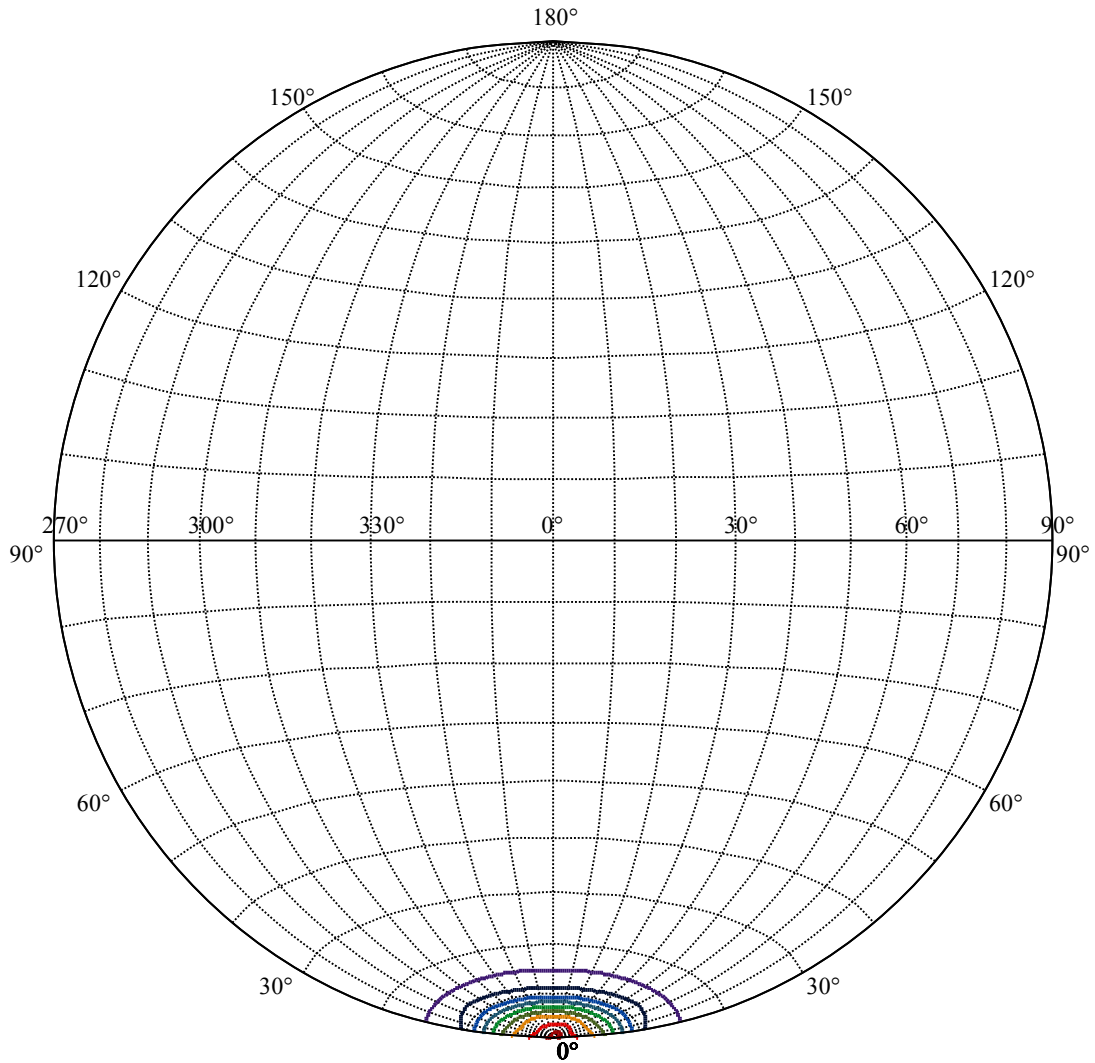
Max , Ave Beam angle of C30plane17.58



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ISO candela diagram on circular web

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House

[Unit:cd]

Road

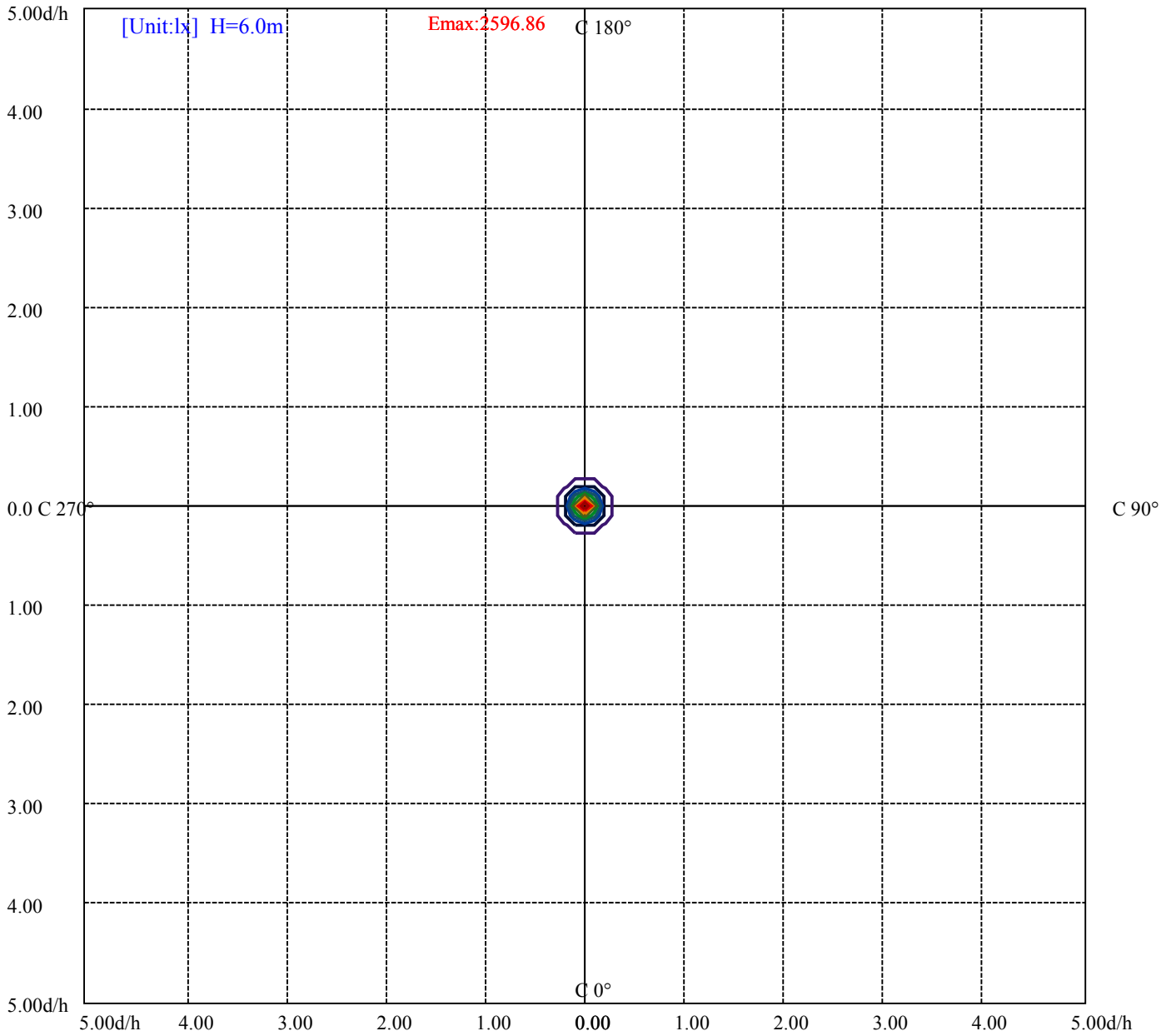
I_{max}:97265.84

(10%I _{max}) 9726.58	—
(20%I _{max}) 19453.2	—
(30%I _{max}) 29179.8	—
(40%I _{max}) 38906.3	—
(50%I _{max}) 48632.9	—
(60%I _{max}) 58359.5	—
(70%I _{max}) 68086.1	—
(80%I _{max}) 77812.7	—
(90%I _{max}) 87539.3	—

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ISO illuminance diagram

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(10%Emax) 259.6859	—
(20%Emax) 519.3723	—
(30%Emax) 779.0583	—
(40%Emax) 1038.745	—
(50%Emax) 1298.431	—
(60%Emax) 1558.114	—
(70%Emax) 1817.8	—
(80%Emax) 2077.486	—
(90%Emax) 2337.172	—

Equipment: GMS-1800
Temperature(°C): 25.0

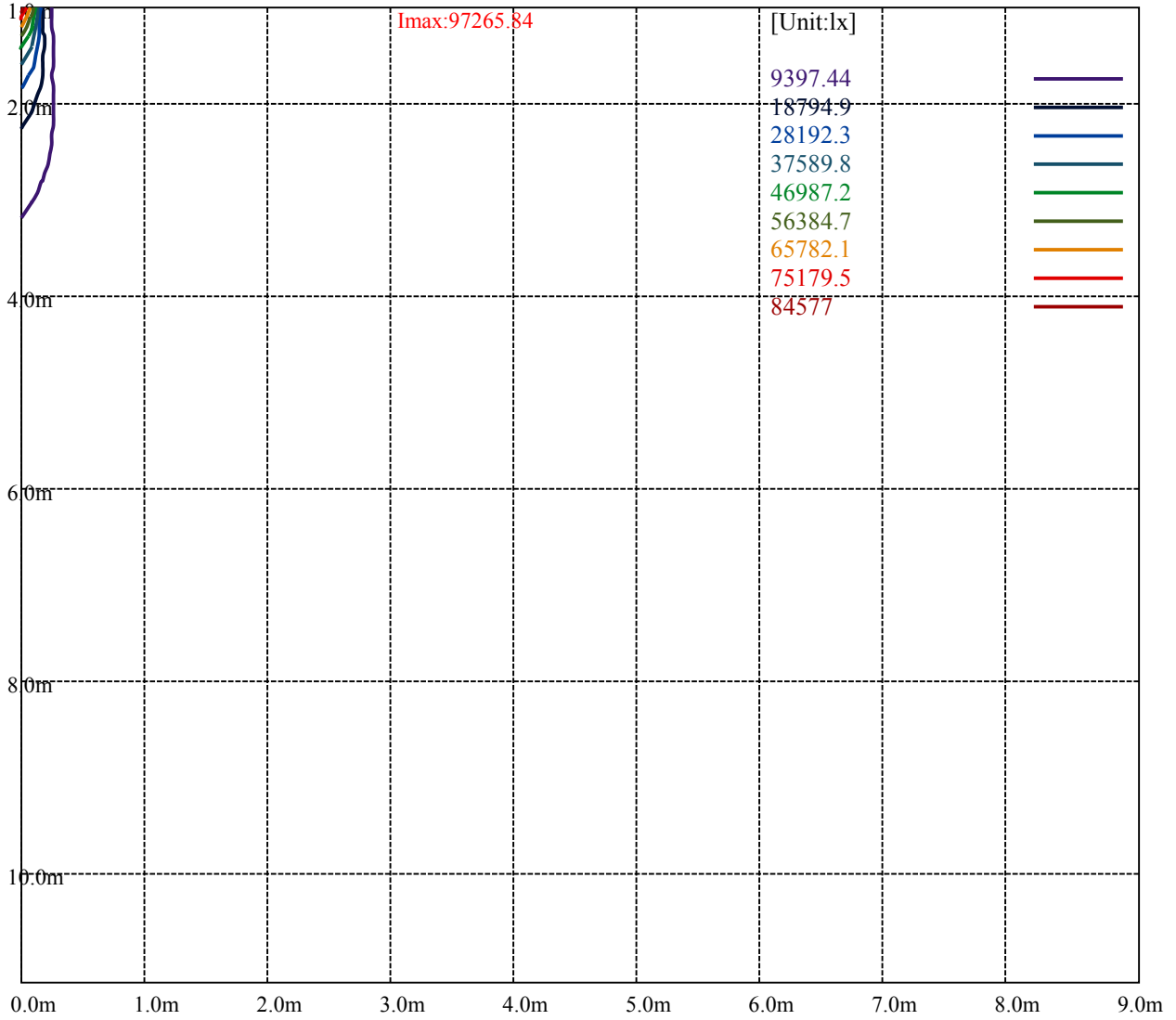
Date: 2016/9/27
Humidity(%): 65.0%

Operator: Andy Chen
Distance(m): 10.22

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Space ISO Lux diagram

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Equipment: GMS-1800
Temperature(°C): 25.0

Date: 2016/9/27
Humidity(%): 65.0%

Operator: Andy Chen
Distance(m): 10.22

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Luminance Limiting Curve(no luminous side)

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Luminance Table

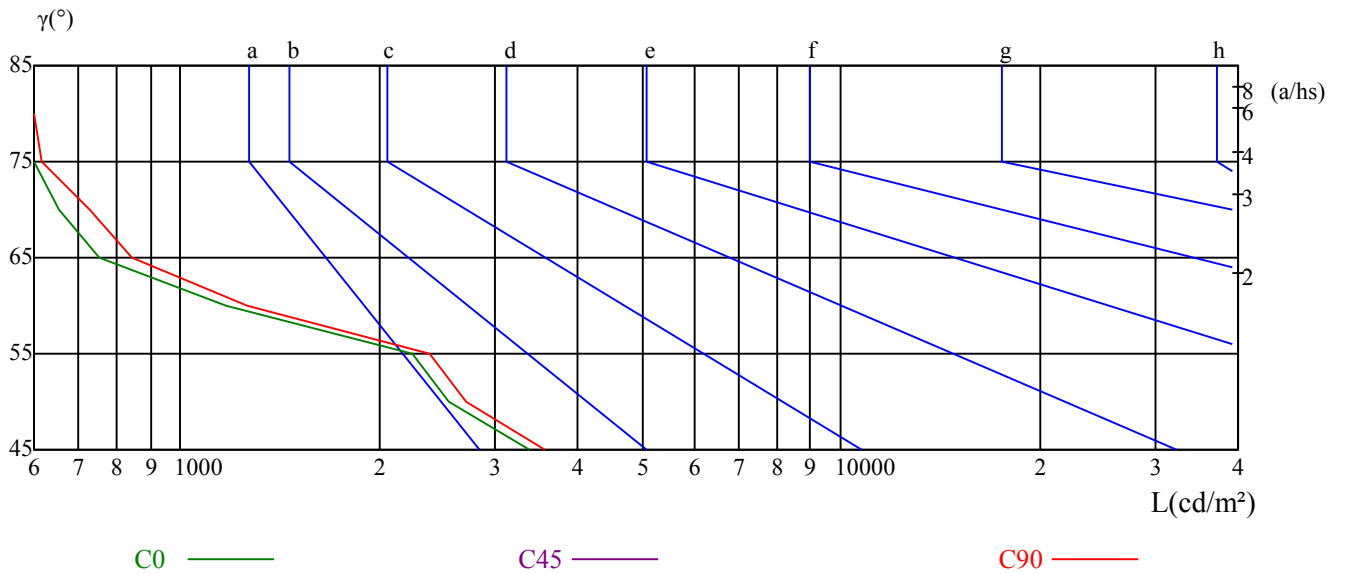
γ	45	50	55	60	65	70	75	80	85
C0	3372	2543	2244	1169	756	655	543	395	190
C45	0	0	0	0	0	0	0	0	0
C90	3553	2704	2387	1265	842	729	618	455	220

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
1267	1313	0	1183	1219	0	878	878	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



Equipment: GMS-1800
Temperature(°C): 25.0

Date: 2016/9/27
Humidity(%): 65.0%

Operator: Andy Chen
Distance(m): 10.22

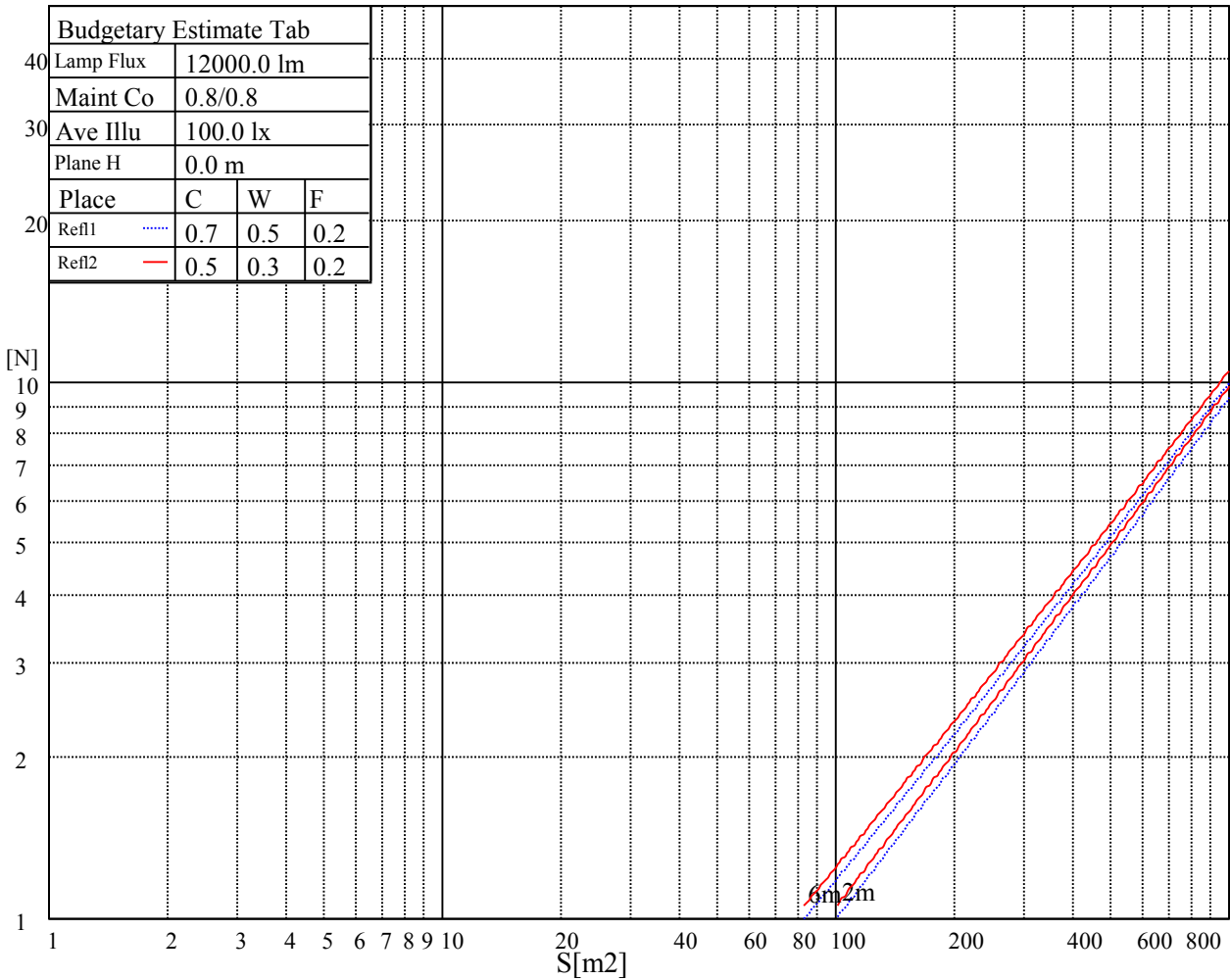
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UGR Glare

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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	9.0	9.6	9.2	9.8	10.0	9.0	9.7	9.3	9.9	10.1
	3H	8.8	9.4	9.1	9.6	9.9	8.9	9.5	9.2	9.7	9.9
	4H	8.6	9.1	9.0	9.4	9.7	8.7	9.2	9.1	9.5	9.8
	6H	8.6	9.1	9.0	9.4	9.7	8.7	9.2	9.1	9.5	9.8
	8H	8.6	9.1	9.0	9.4	9.7	8.7	9.2	9.1	9.5	9.8
	12H	8.4	8.8	8.8	9.2	9.6	8.5	8.9	8.9	9.3	9.7
4H	2H	8.6	9.1	9.0	9.4	9.7	8.7	9.2	9.0	9.5	9.8
	3H	8.4	8.8	8.8	9.2	9.6	8.5	8.9	8.9	9.3	9.7
	4H	8.5	8.8	8.9	9.2	9.6	8.5	8.9	8.9	9.3	9.7
	6H	8.5	8.8	8.9	9.2	9.6	8.6	8.9	9.0	9.3	9.7
	8H	8.2	8.4	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
	12H	8.2	8.4	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
8H	4H	8.2	8.4	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
	6H	8.2	8.4	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
	8H	8.2	8.5	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
	12H	8.2	8.5	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
12H	4H	8.2	8.4	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
	6H	8.2	8.4	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
	8H	8.2	8.5	8.7	8.9	9.4	8.3	8.5	8.8	9.0	9.5
Variation with the observer position at spacings:											
S = 1.0H		5.1/-10.8					5.0/-11.0				
S = 1.5H		7.9/-12.4					7.8/-12.7				
S = 2.0H		9.9/-12.7					9.8/-13.1				
Standard tables:		BK0					BK0				
Uncorrected UGR		-4.1					-4.1				

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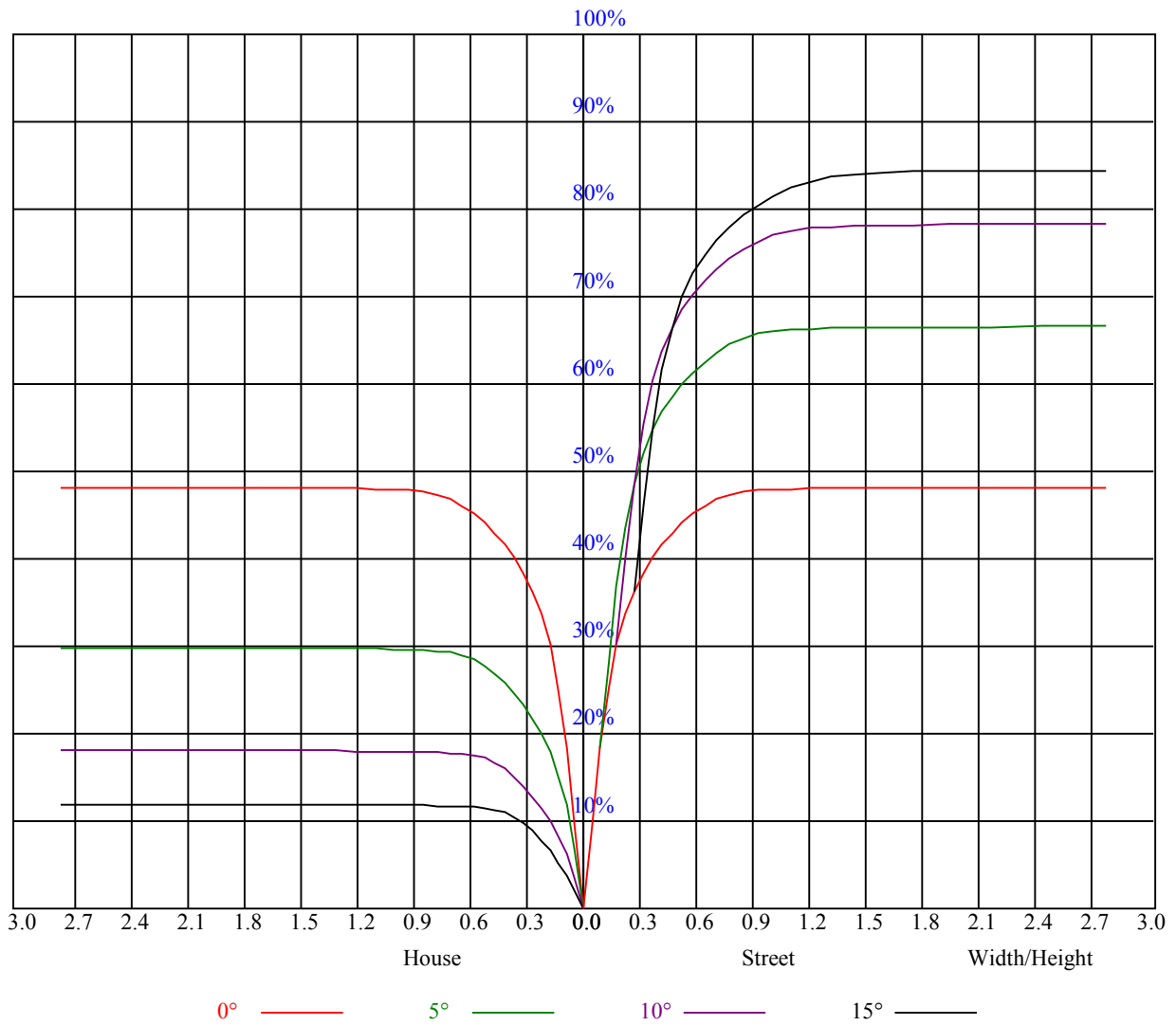


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Utilization factor table for indoor luminaire

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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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96
2	1.07	1.03	1.01	1.05	1.02	1.00	1.02	1.00	0.98	0.99	0.97	0.95	0.96	0.95	0.94	0.92
3	1.02	0.98	0.95	1.00	0.97	0.94	0.98	0.95	0.93	0.96	0.93	0.91	0.93	0.92	0.90	0.89
4	0.97	0.93	0.90	0.96	0.92	0.90	0.94	0.91	0.89	0.92	0.90	0.88	0.91	0.88	0.87	0.85
5	0.94	0.89	0.86	0.93	0.89	0.86	0.91	0.88	0.85	0.90	0.87	0.84	0.88	0.86	0.84	0.82
6	0.90	0.86	0.83	0.89	0.85	0.82	0.88	0.84	0.82	0.87	0.84	0.81	0.86	0.83	0.81	0.80
7	0.87	0.83	0.80	0.86	0.82	0.79	0.85	0.82	0.79	0.84	0.81	0.79	0.83	0.80	0.78	0.77
8	0.84	0.80	0.77	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.75
9	0.82	0.77	0.75	0.81	0.77	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.74	0.73
10	0.79	0.75	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.71



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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	93974.43	68186.47	22364.26	9250.23	5064.91	3665.28	3362.78	2884.74	862.14
30.0	97265.84	68385.00	23301.01	9718.65	4992.60	3702.37	3405.62	2748.38	893.80
60.0	89711.26	64832.36	25501.55	9702.25	4922.60	3701.32	3400.92	2541.49	944.37
90.0	91529.27	66932.59	20392.03	9271.65	4702.33	3684.61	3409.28	2972.51	893.49
120.0	88906.70	64832.36	25501.55	9702.25	4922.60	3701.32	3400.92	2541.49	944.37
150.0	90003.84	68385.00	23301.01	9718.65	4992.60	3702.37	3405.62	2748.38	893.80
180.0	93974.43	68186.47	22364.26	9250.23	5064.91	3665.28	3362.78	2884.74	862.14
210.0	97265.84	68385.00	23301.01	9718.65	4992.60	3702.37	3405.62	2748.38	893.80
240.0	89711.26	64832.36	25501.55	9702.25	4922.60	3701.32	3400.92	2541.49	944.37
270.0	91529.27	66932.59	20392.03	9271.65	4702.33	3684.61	3409.28	2972.51	893.49
300.0	88906.70	64832.36	25501.55	9702.25	4922.60	3701.32	3400.92	2541.49	944.37
330.0	90003.84	68385.00	23301.01	9718.65	4992.60	3702.37	3405.62	2748.38	893.80
360.0	93974.43	68186.47	22364.26	9250.23	5064.91	3665.28	3362.78	2884.74	862.14

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	137.09	98.32	81.61	39.50	23.41	18.29	13.37	8.36	3.34
30.0	142.21	99.06	80.98	40.96	23.93	18.49	13.48	8.15	3.34
60.0	151.61	100.31	78.99	41.59	24.14	18.60	13.48	8.05	3.24
90.0	138.45	99.58	82.13	40.12	24.24	18.70	13.79	8.57	3.34
120.0	151.61	100.31	78.99	41.59	24.14	18.60	13.48	8.05	3.24
150.0	142.21	99.06	80.98	40.96	23.93	18.49	13.48	8.15	3.34
180.0	137.09	98.32	81.61	39.50	23.41	18.29	13.37	8.36	3.34
210.0	142.21	99.06	80.98	40.96	23.93	18.49	13.48	8.15	3.34
240.0	151.61	100.31	78.99	41.59	24.14	18.60	13.48	8.05	3.24
270.0	138.45	99.58	82.13	40.12	24.24	18.70	13.79	8.57	3.34
300.0	151.61	100.31	78.99	41.59	24.14	18.60	13.48	8.05	3.24
330.0	142.21	99.06	80.98	40.96	23.93	18.49	13.48	8.15	3.34
360.0	137.09	98.32	81.61	39.50	23.41	18.29	13.37	8.36	3.34

C/γ(°)	90.0
0.0	0.73
30.0	0.84
60.0	0.84
90.0	0.84
120.0	0.84
150.0	0.84
180.0	0.73
210.0	0.84
240.0	0.84
270.0	0.84
300.0	0.84
330.0	0.84
360.0	0.73