Amazonas 500 IES Test Report

LumCAT: F500
Luminaire: AL reflector cup15 degree

Report No: WJH-GM-06	Voltage(V): 223.0000
Test No: 09	Current(A): 2.2330
LampCAT: CSP	Power (W): 498.0000
Lamp flux(lm): 50.0	PF: 0.9780
Number of Lamps: 240	Ballast type:
Length(mm): 230	Width(mm): 190
Phm Type: C	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%

Equipment: GMS-1800	Date: 2016/9/27	Operator: Andy chen
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 10.22

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Zonal flux distribution table

γ(°)	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%

Zonal flux distribution table

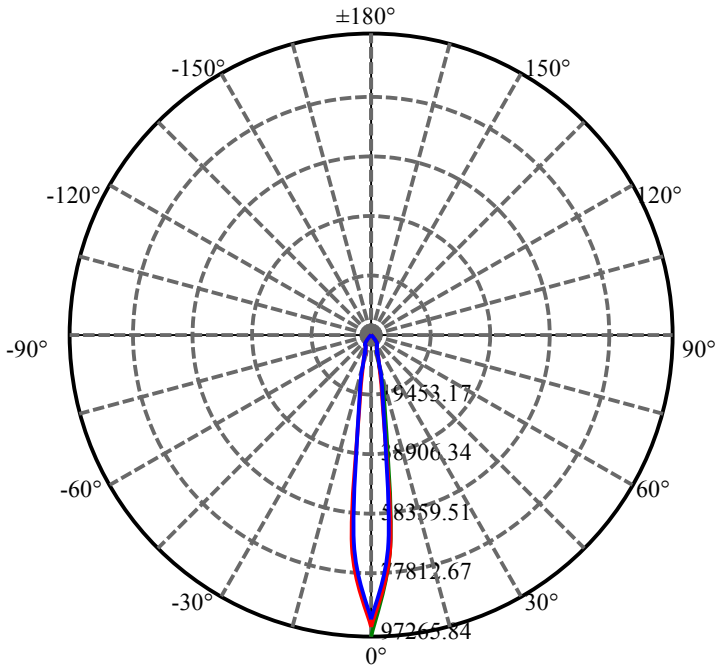
ZONAL LUMEN SUMMARY

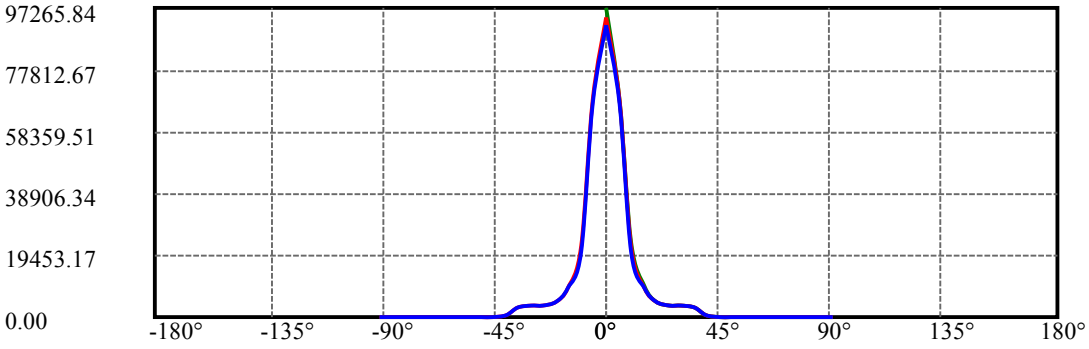
Zone	Lumens	%Lamp	%Fixt
0-30	10080.98	84.01%	84.37%
0-40	11592.81	96.61%	97.02%
0-60	11903.45	99.20%	99.62%
0-90	11947.27	99.56%	99.99%
0-120	11947.27	99.56%	99.99%
0-180	11948.40	99.57%	100.00%
60-90	71.88	0.60%	0.60%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	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

Light Distribution Curve [Unit:cd]





C30(Max):

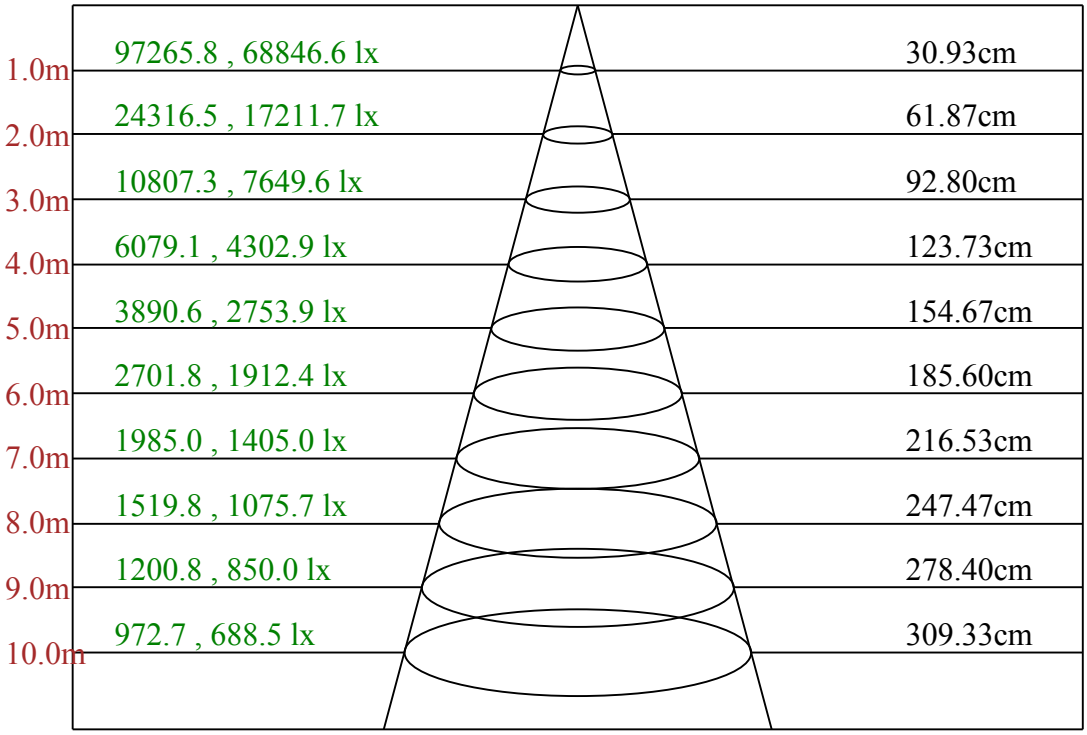
C0/C180:

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

Lux distance Curve



Max , Ave

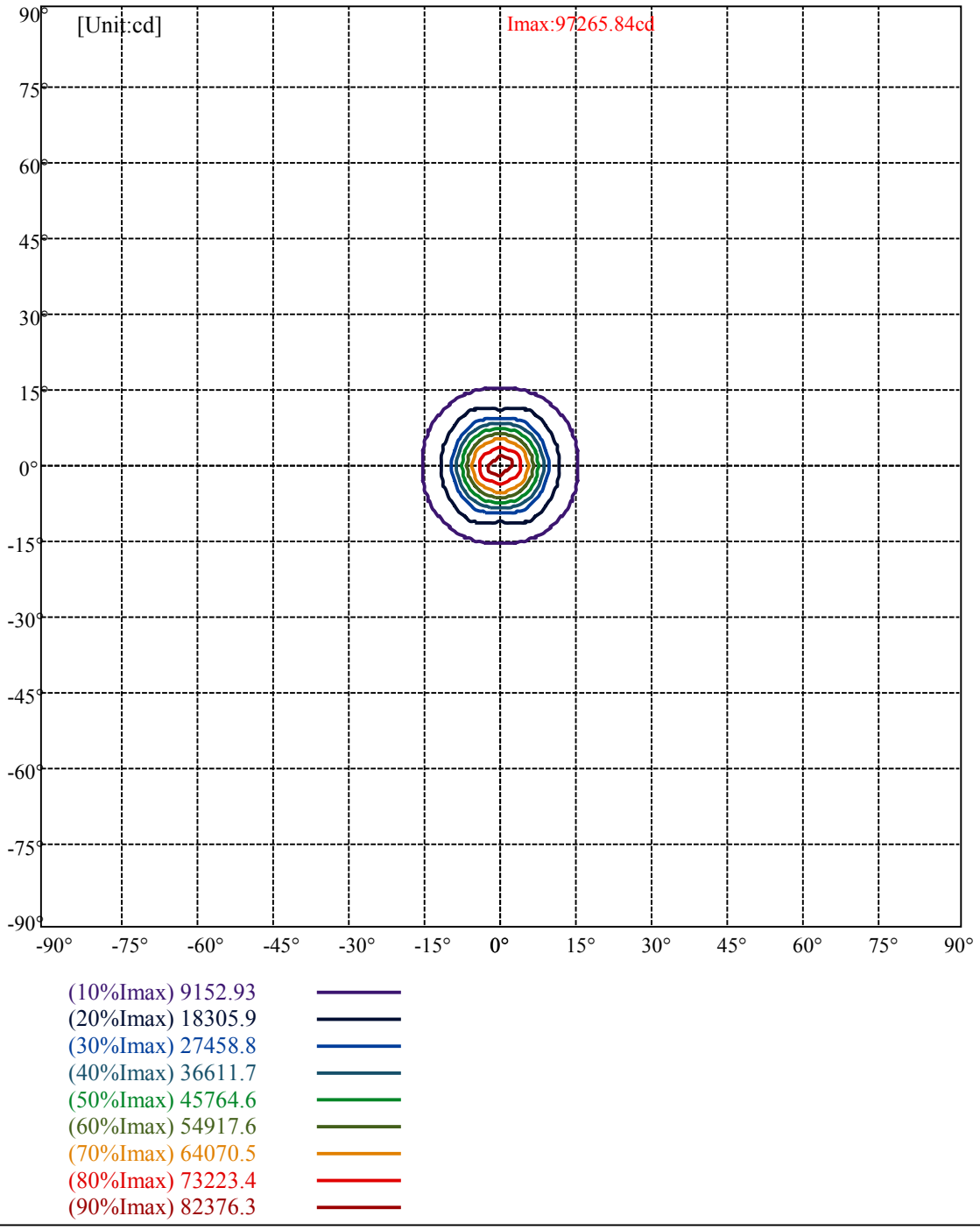
Beam angle of C30plane17.58

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

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

Operator: Andy chen
Distance(m): 10.22

ISO-Intensity(V-H)



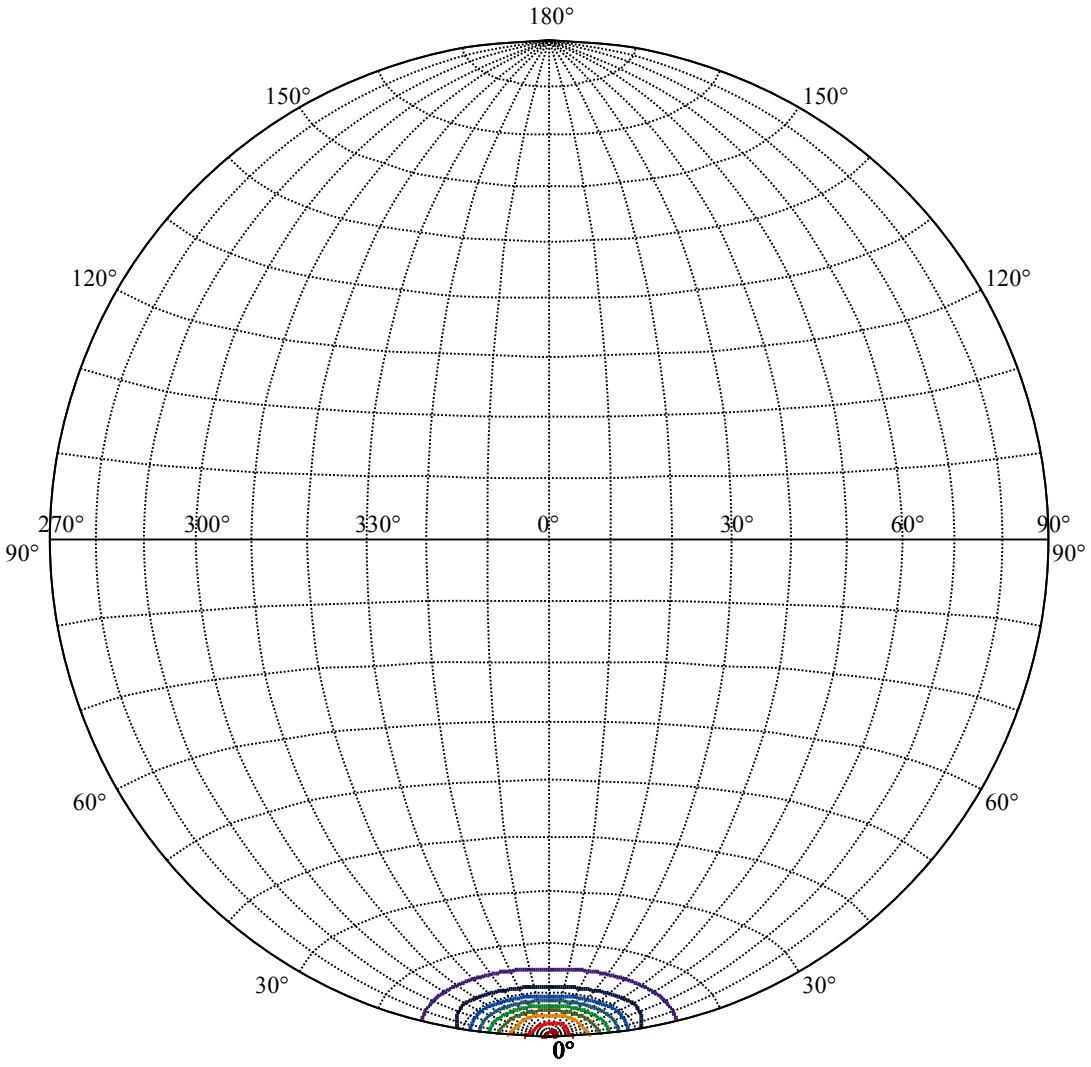
(10%Imax) 9152.93
(20%Imax) 18305.9
(30%Imax) 27458.8
(40%Imax) 36611.7
(50%Imax) 45764.6
(60%Imax) 54917.6
(70%Imax) 64070.5
(80%Imax) 73223.4
(90%Imax) 82376.3

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

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

Operator: Andy chen
Distance(m): 10.22

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:97265.84

(10%Imax) 9726.58
(20%Imax) 19453.2
(30%Imax) 29179.8
(40%Imax) 38906.3
(50%Imax) 48632.9
(60%Imax) 58359.5
(70%Imax) 68086.1
(80%Imax) 77812.7
(90%Imax) 87539.3

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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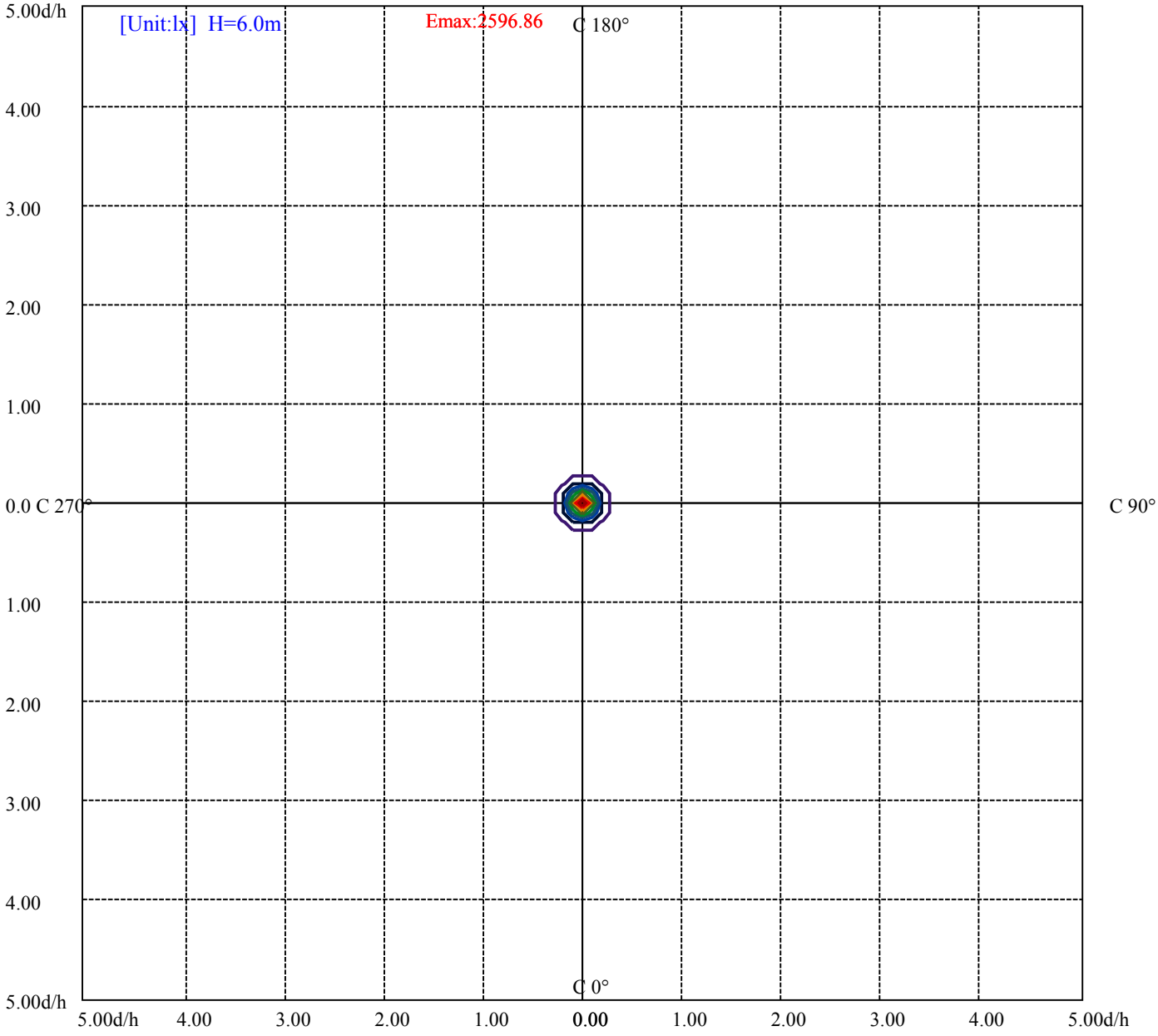
ISO illuminance diagram



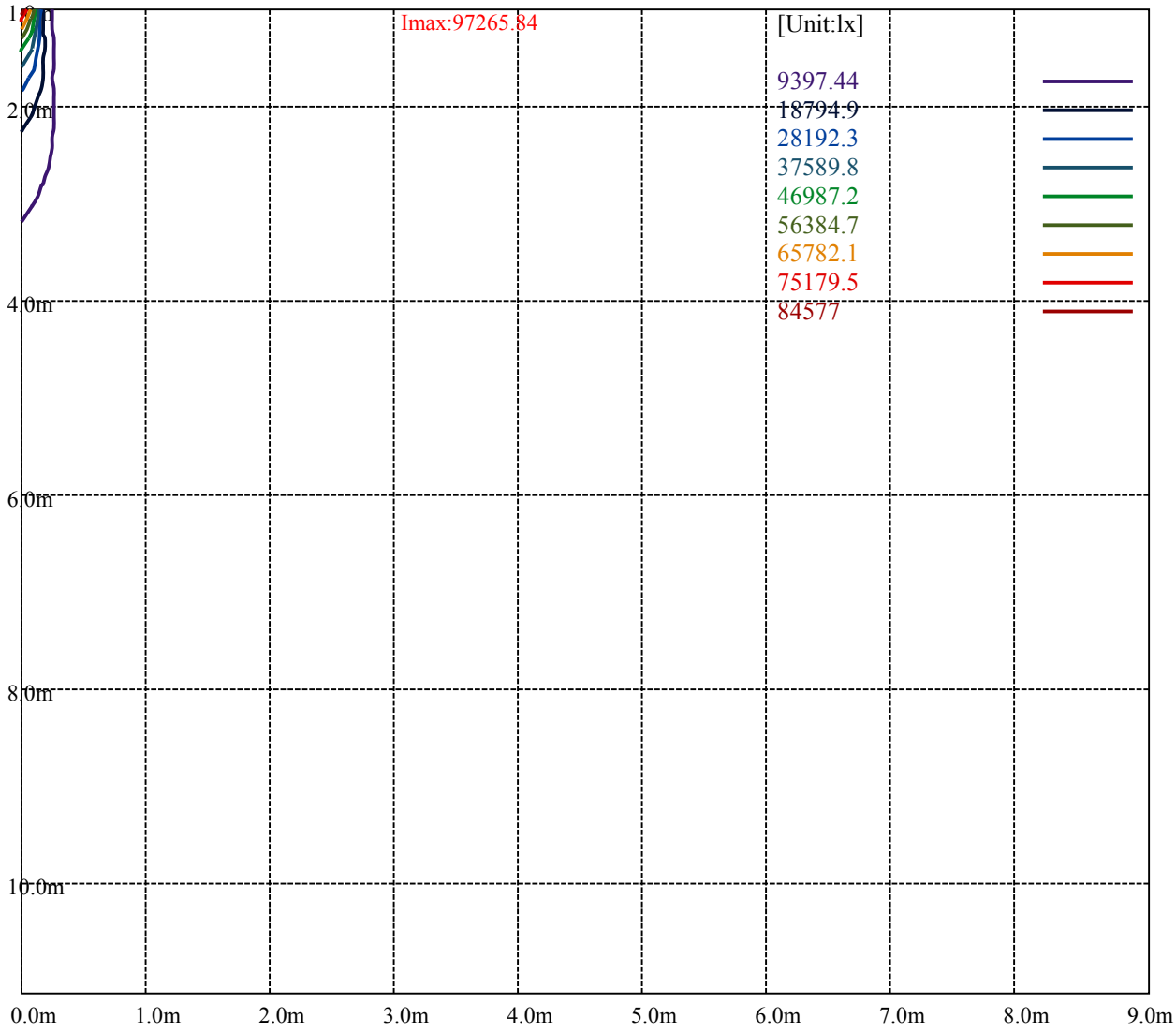
(10%Emax) 259.6859
(20%Emax) 519.3723
(30%Emax) 779.0583
(40%Emax) 1038.745
(50%Emax) 1298.431
(60%Emax) 1558.114
(70%Emax) 1817.8
(80%Emax) 2077.486
(90%Emax) 2337.172

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

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

Operator: Andy chen
Distance(m): 10.22

Space ISO Lux diagram



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 Limitting Curve(no luminous side)

Luminance Table

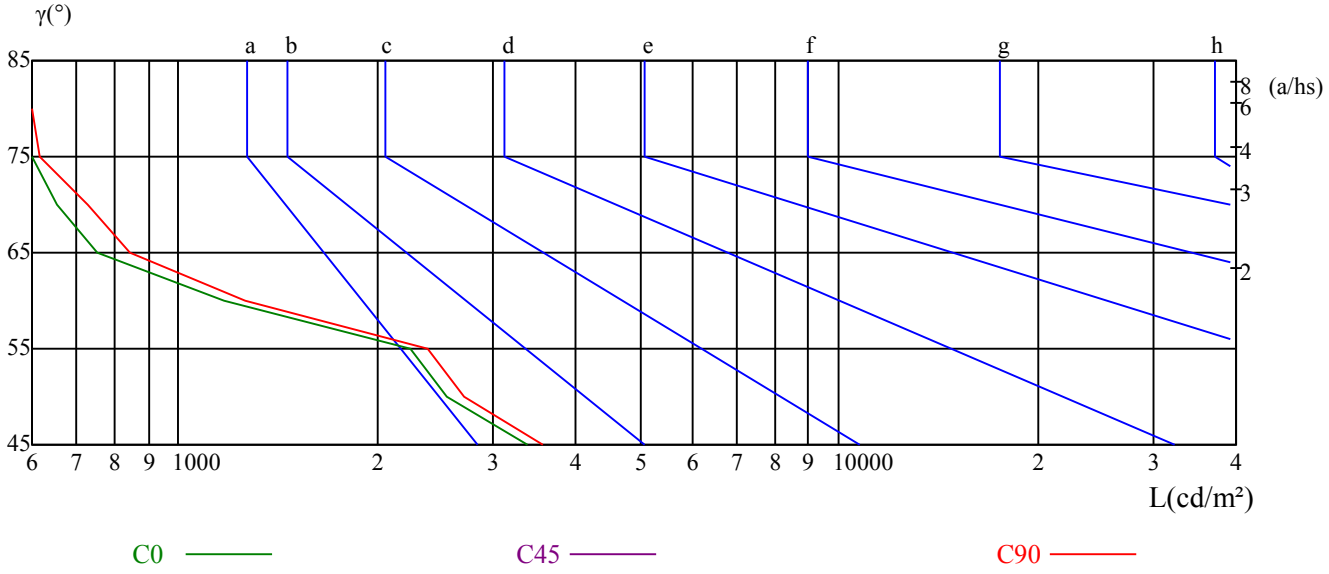
γ	45	50	55	60	65	70	75	80	85
C0	3372	2543	2244	1169	756	655	543	395	190
C45	0	0	0	0	0	0	0	0	0
C90	3553	2704	2387	1265	842	729	618	455	220

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 Limitting Curve



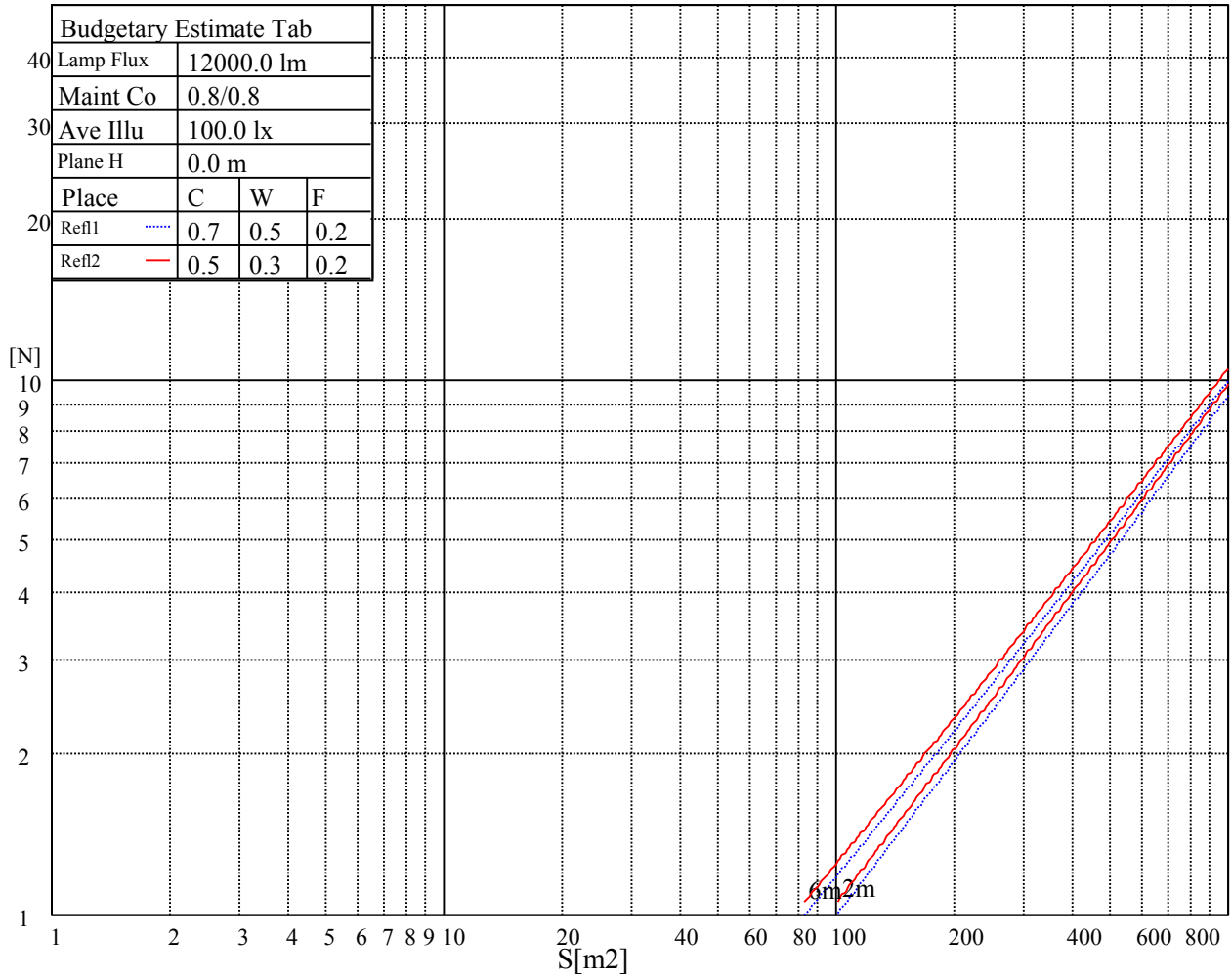
Equipment: GMS-1800 Date: 2016/9/27 Operator: Andy chen
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 10.22

UGR Glare

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

Budgetary Estimate Table



Utilization factor table for indoor luminaire

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	COEFFCIENTS 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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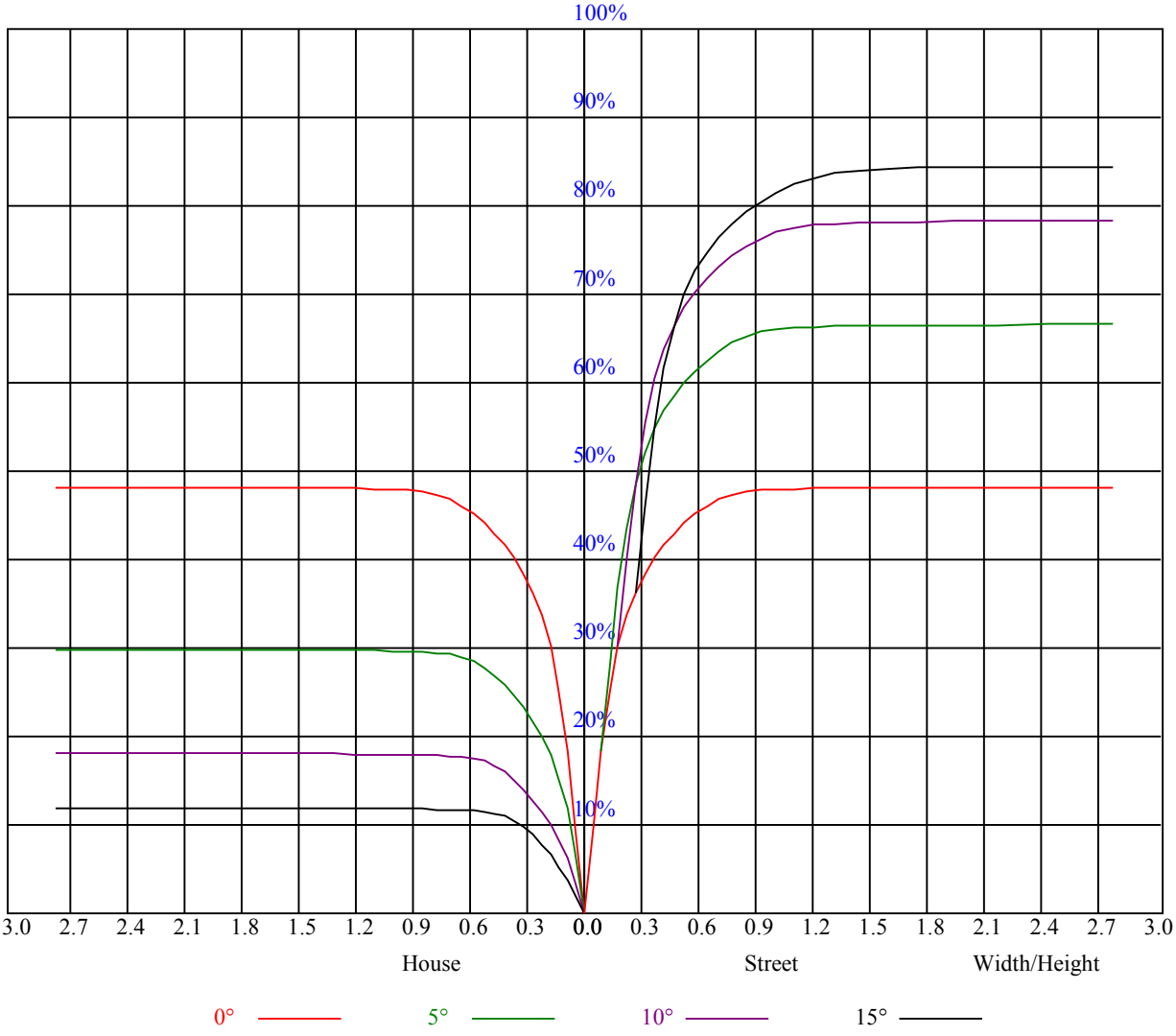
Coefficient Utilization Curve



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

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

Operator: Andy chen
Distance(m): 10.22

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