SOTEN LIGHTING LTD.
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SOTEN

LumCAT: D1059
Luminaire: A25
Report No:
Test No:
LampCAT: Lumileds1208 3000K Ra80
Lamp flux(lm): 3920.0
Number of Lamps: 1
Length(mm): 122
Phm Type: C

Voltage(V): 220.8000
Current(A): 0.1640
Power (W): 35.4300
PF: 0.9760
Ballast type: Tridonic 40W 900mA
Width(mm): 122
Height(mm): 72

Photometric Results

Lumens(lm): 2992.53
Efficiency(%): 76.34%
Lumens(lm)/Power(W): 84.46
Central intensity(cd): 8303.970
Maximum intensity(cd): 8303.970
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=28.0
[C90/270]Total=28.0
Field angle(10%Imax): [C0/180]Total=62.7
[C90/270]Total=62.7
Maximum s/h(1/2): C0_180=0.48 C90_270=0.48
Maximum s/h(1/4): C0_180=0.69 C90_270=0.51
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.34%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.013%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8303.970	.000	.000	.000%	.000%
5.0	7382.308	187.525	187.525	4.784%	4.784%
10.0	5669.653	466.910	654.435	11.911%	16.695%
15.0	3771.385	560.036	1214.471	14.287%	30.981%
20.0	2375.016	506.550	1721.021	12.922%	43.904%
25.0	1486.531	405.005	2126.025	10.332%	54.235%
30.0	938.600	306.902	2432.928	7.829%	62.064%
35.0	537.211	217.324	2650.251	5.544%	67.608%
40.0	270.996	134.843	2785.095	3.440%	71.048%
45.0	163.108	80.378	2865.472	2.050%	73.099%
50.0	86.217	50.380	2915.852	1.285%	74.384%
55.0	47.935	29.169	2945.021	.744%	75.128%
60.0	29.837	17.977	2962.998	.459%	75.587%
65.0	17.912	11.608	2974.606	.296%	75.883%
70.0	11.090	7.344	2981.950	.187%	76.070%
75.0	6.821	4.682	2986.632	.119%	76.190%
80.0	4.223	2.955	2989.587	.075%	76.265%
85.0	2.506	1.828	2991.415	.047%	76.312%
90.0	1.578	1.118	2992.533	.029%	76.340%

Zonal flux distribution table

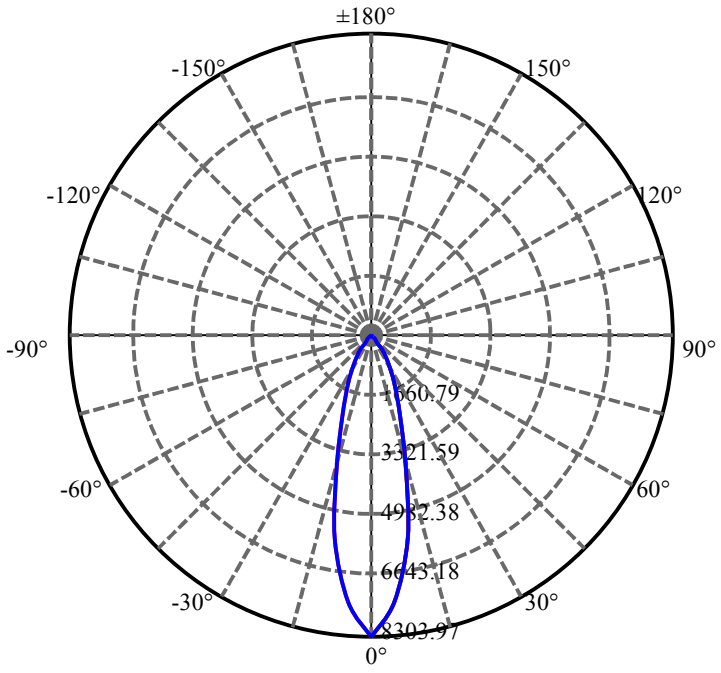
ZONAL LUMEN SUMMARY

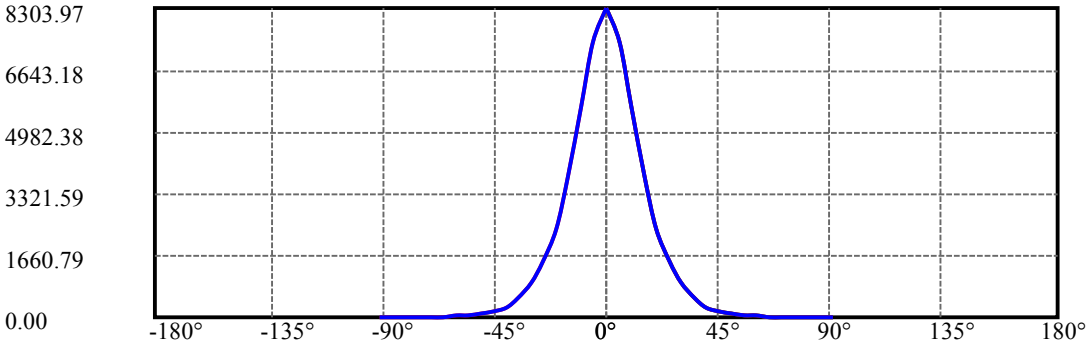
Zone	Lumens	%Lamp	%Fixt
0-30	2432.93	62.06%	81.30%
0-40	2785.10	71.05%	93.07%
0-60	2963.00	75.59%	99.01%
0-90	2991.42	76.31%	99.96%
0-120	2991.42	76.31%	99.96%
0-180	2992.53	76.34%	100.00%
60-90	46.39	1.18%	1.55%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.37	2394.03	61.07%	80.00%

ZONAL LUMEN SUMMARY

0-10	654.43
10-20	1066.59
20-30	711.91
30-40	352.17
40-50	130.76
50-60	47.15
60-70	18.95
70-80	7.64
80-90	1.83
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]





C0(Max):

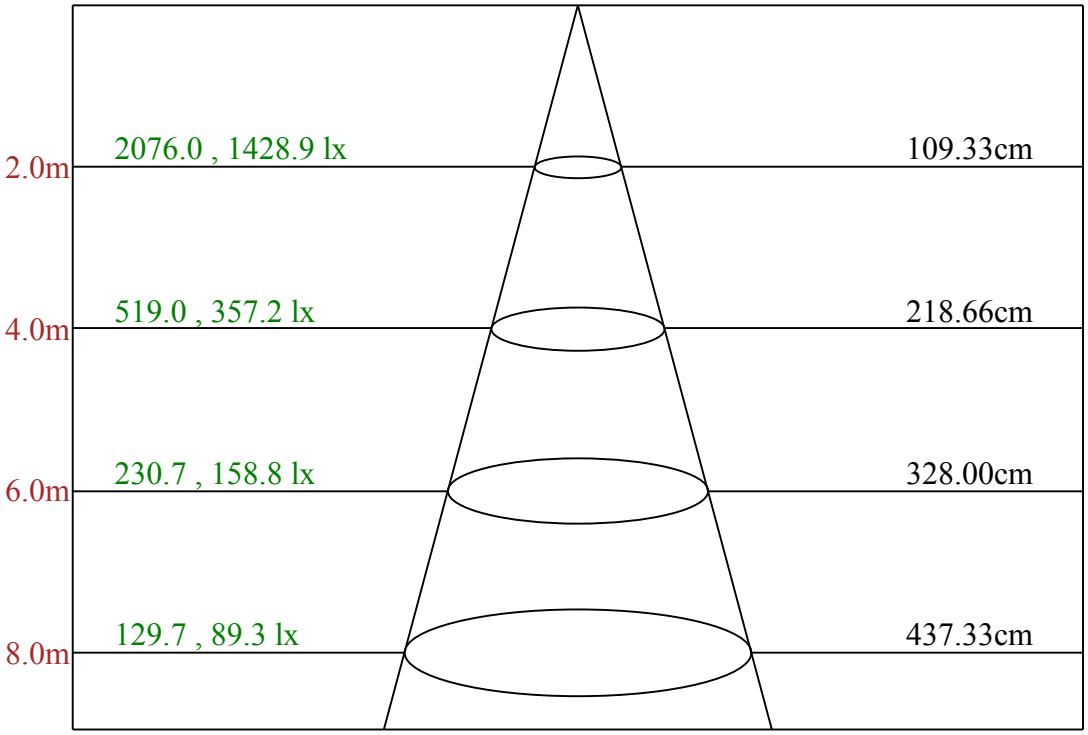
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:31.3 Right:31.3
:C90/270Left:31.3 Right:31.3

Beam Angle(50%Imax):C0/180Left:14.0 Right:14.0
:C90/270Left:14.0 Right:14.0

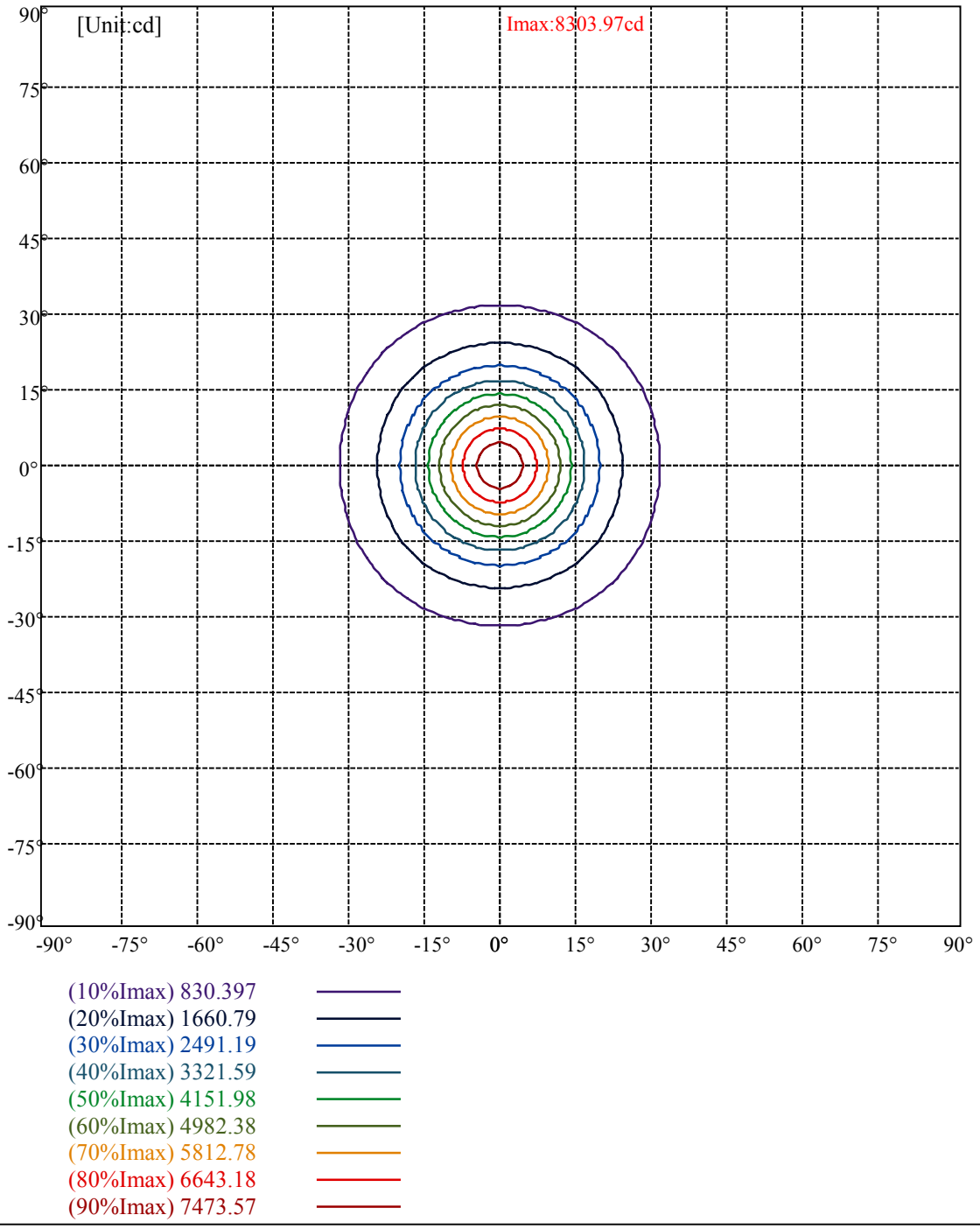
Lux distance Curve



Max , Ave

Beam angle of C0plane30.57

ISO-Intensity(V-H)



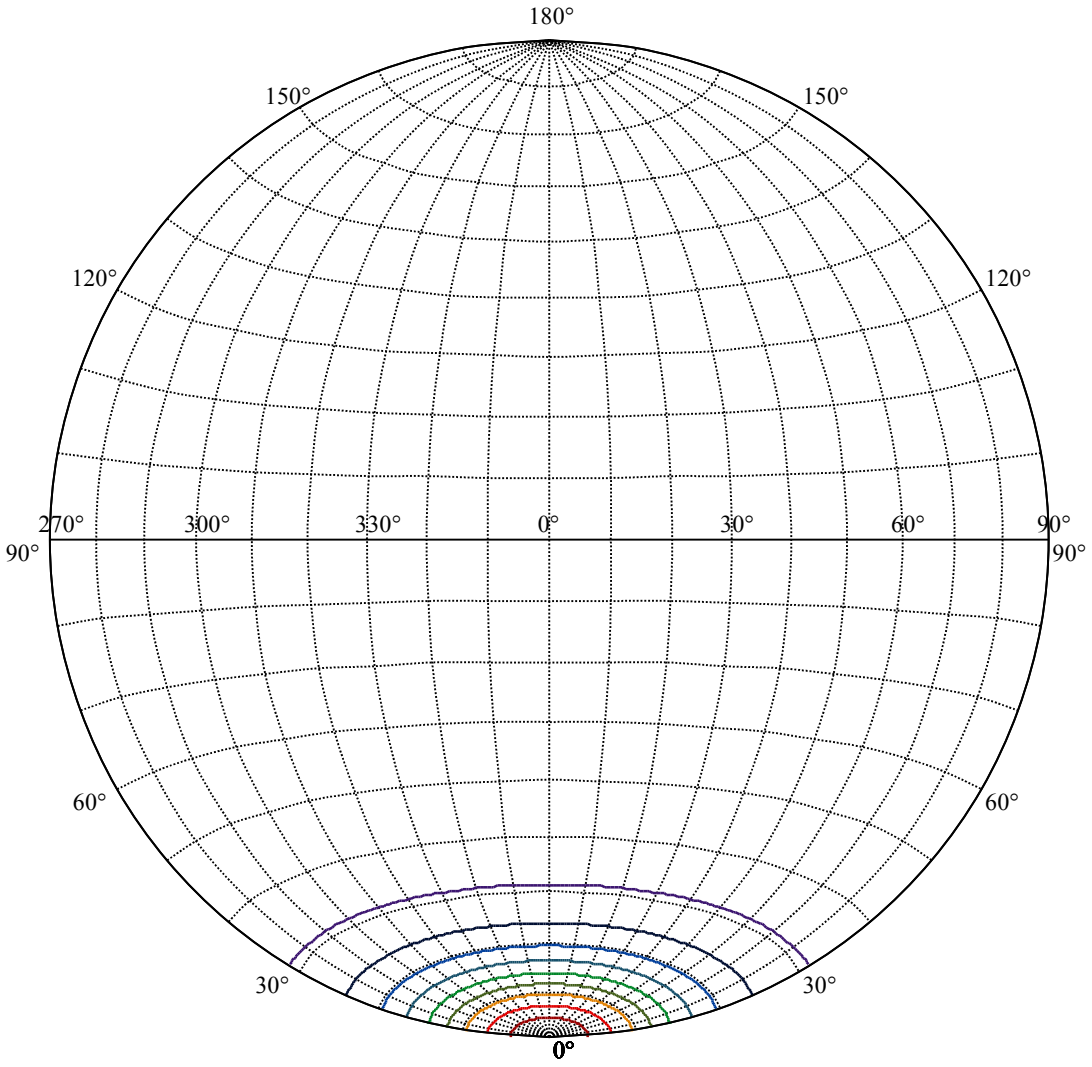
(10%Imax) 830.397
(20%Imax) 1660.79
(30%Imax) 2491.19
(40%Imax) 3321.59
(50%Imax) 4151.98
(60%Imax) 4982.38
(70%Imax) 5812.78
(80%Imax) 6643.18
(90%Imax) 7473.57

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2018/12/4
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.81

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:8303.97

(10%Imax) 830.397
(20%Imax) 1660.79
(30%Imax) 2491.19
(40%Imax) 3321.59
(50%Imax) 4151.98
(60%Imax) 4982.38
(70%Imax) 5812.78
(80%Imax) 6643.18
(90%Imax) 7473.57

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2018/12/4
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.81

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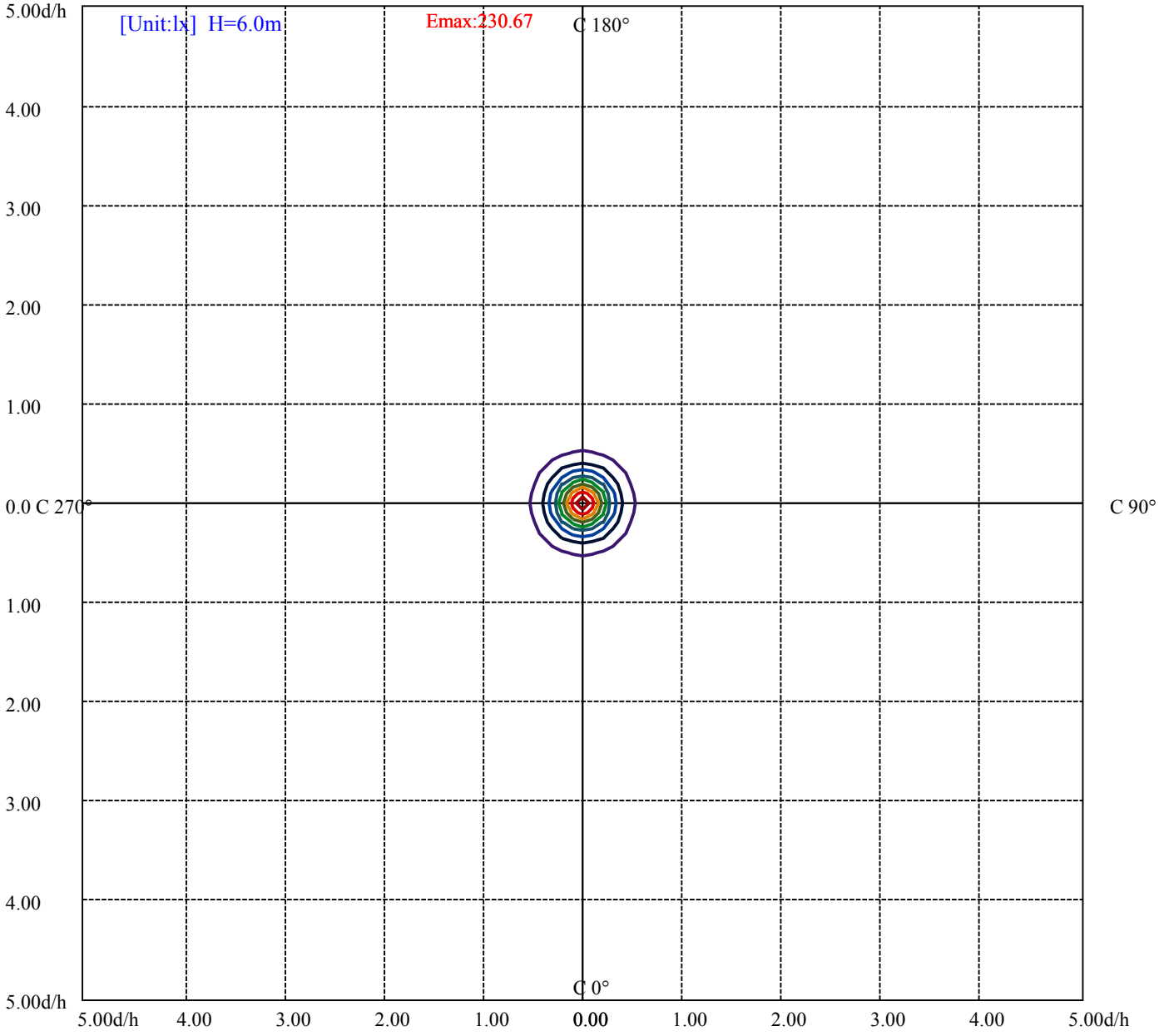
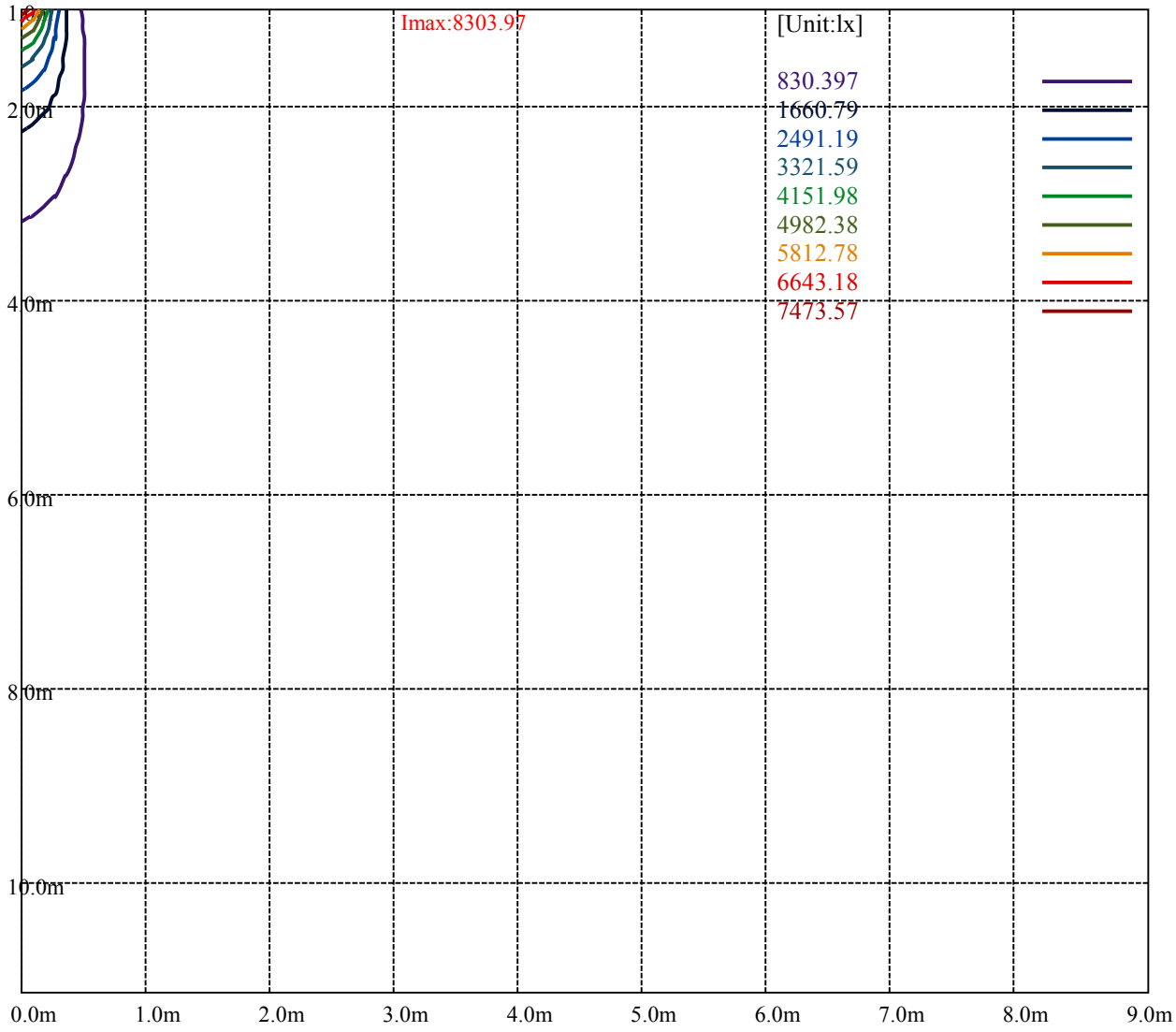
ISO illuminance diagram



(10%Emax) 23.0665
(20%Emax) 46.13306
(30%Emax) 69.19944
(40%Emax) 92.26611
(50%Emax) 115.3325
(60%Emax) 138.3992
(70%Emax) 161.4655
(80%Emax) 184.5319
(90%Emax) 207.5986

Equipment: GMS 1800
Temperature(°C): 25.0
Date: 2018/12/4
Humidity(%): 60.0%
Operator: 01
Distance(m): 6.81

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2018/12/4
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.81

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Luminance Limitting Curve(no luminous side)

Luminance Table

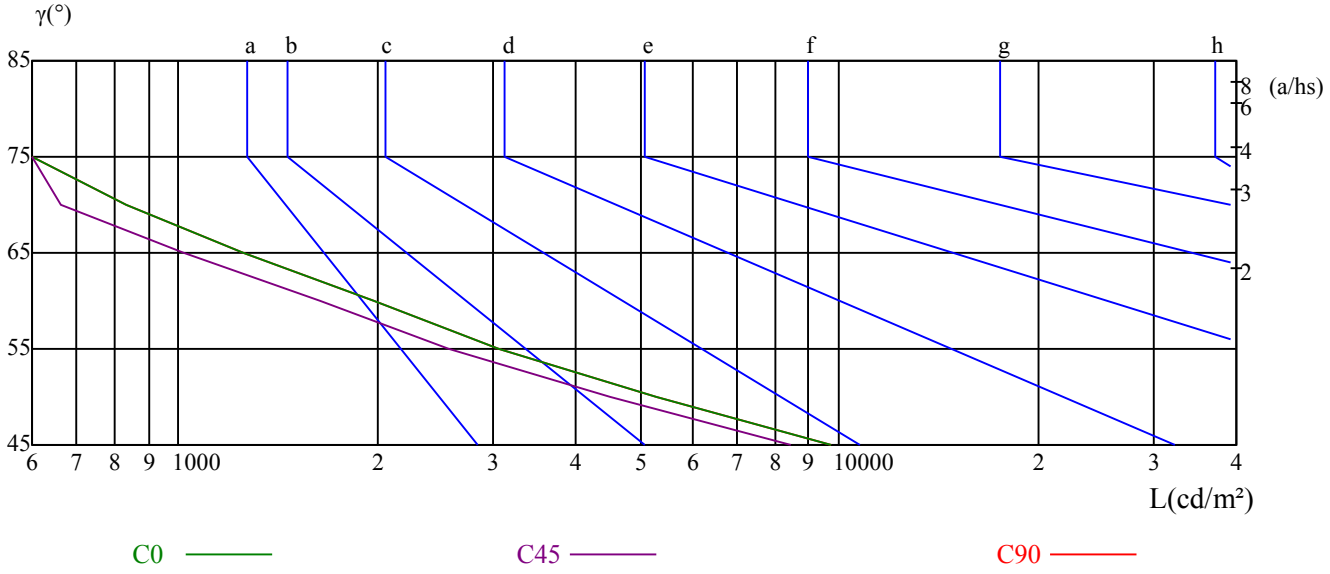
γ	45	50	55	60	65	70	75	80	85
C0	9746	5291	3047	1983	1257	831	553	376	249
C45	8447	4518	2562	1639	1021	662	430	285	183
C90	9746	5291	3047	1983	1257	831	553	376	249

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
2848	2848	2848	1771	1771	1771	1932	1932	1932

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
Temperature(°C): 25.0

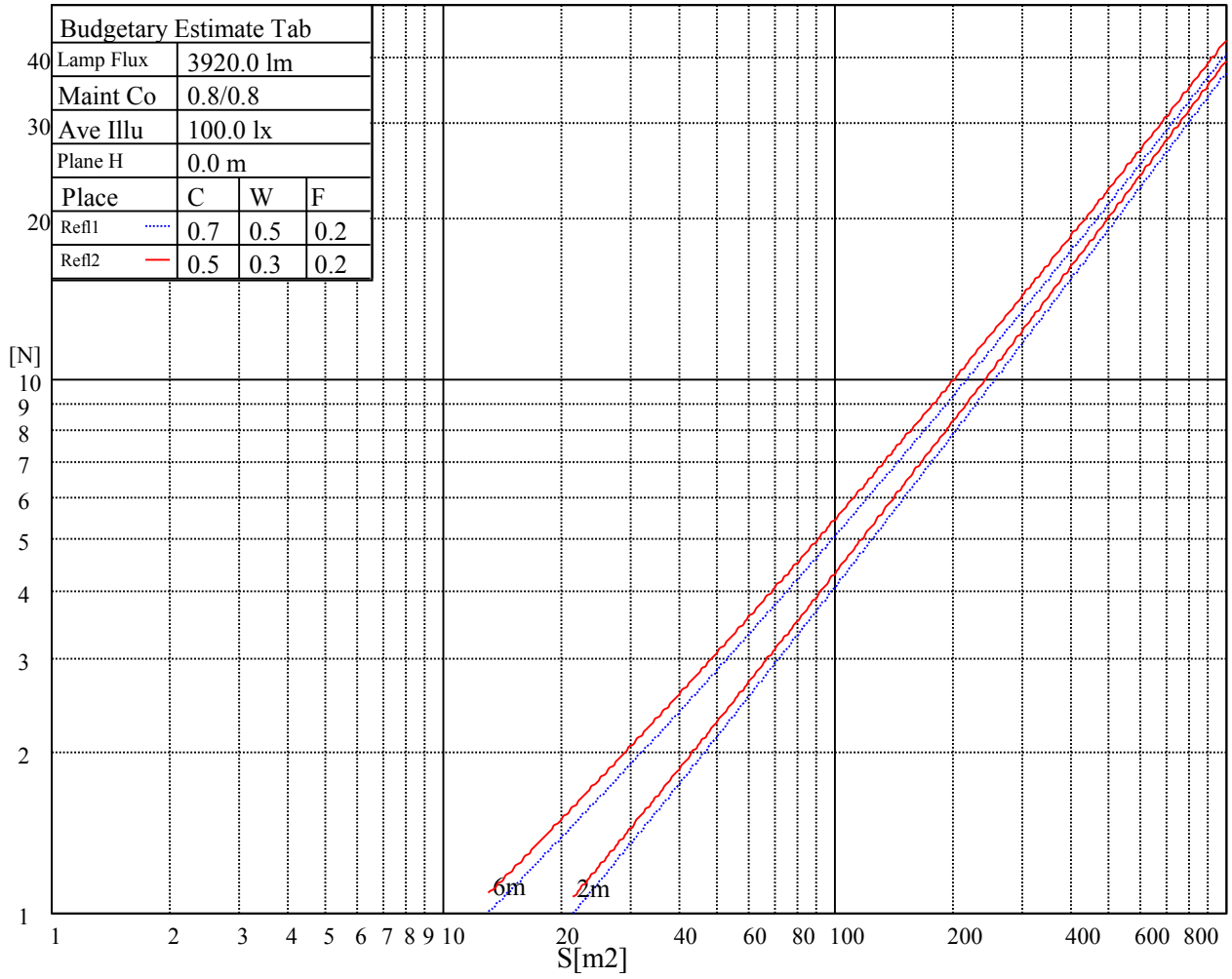
Date: 2018/12/4
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.81

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	8.6	9.3	8.8	9.5	9.7	8.6	9.3	8.8	9.5	9.7
	3H	8.5	9.1	8.8	9.4	9.6	8.5	9.1	8.8	9.4	9.6
	4H	8.3	8.9	8.7	9.2	9.5	8.3	8.9	8.7	9.2	9.5
	6H	8.3	8.9	8.7	9.2	9.5	8.3	8.9	8.7	9.2	9.5
	8H	8.3	8.9	8.7	9.2	9.5	8.3	8.9	8.7	9.2	9.5
	12H	8.2	8.6	8.6	9.0	9.3	8.2	8.6	8.6	9.0	9.3
4H	2H	8.3	8.8	8.6	9.1	9.5	8.3	8.8	8.6	9.1	9.5
	3H	8.2	8.6	8.6	9.0	9.4	8.2	8.6	8.6	9.0	9.4
	4H	8.2	8.7	8.7	9.0	9.4	8.2	8.7	8.7	9.0	9.4
	6H	8.3	8.7	8.7	9.1	9.5	8.3	8.7	8.7	9.1	9.5
	8H	8.1	8.3	8.6	8.8	9.3	8.1	8.3	8.6	8.8	9.3
	12H	8.1	8.3	8.6	8.8	9.3	8.1	8.3	8.6	8.8	9.3
8H	4H	8.0	8.3	8.5	8.8	9.3	8.0	8.3	8.5	8.8	9.3
	6H	8.1	8.3	8.6	8.8	9.3	8.1	8.3	8.6	8.8	9.3
	8H	8.1	8.3	8.6	8.8	9.3	8.1	8.3	8.6	8.8	9.3
	12H	8.1	8.4	8.6	8.8	9.3	8.1	8.4	8.6	8.8	9.3
12H	4H	8.0	8.3	8.5	8.8	9.3	8.0	8.3	8.5	8.8	9.3
	6H	8.1	8.3	8.6	8.8	9.3	8.1	8.3	8.6	8.8	9.3
	8H	8.1	8.4	8.6	8.8	9.3	8.1	8.4	8.6	8.8	9.3

Variation with the observer position at spacings:		
S = 1.0H	4.0/-5.4	4.0/-5.4
S = 1.5H	6.5/-7.2	6.5/-7.2
S = 2.0H	8.6/-8.2	8.6/-8.2
Standard tables:	BK0	BK0
Uncorrected UGR	-5.3	-5.3

Budgetary Estimate Table



Equipment: GMS 1800
Temperature(°C): 25.0

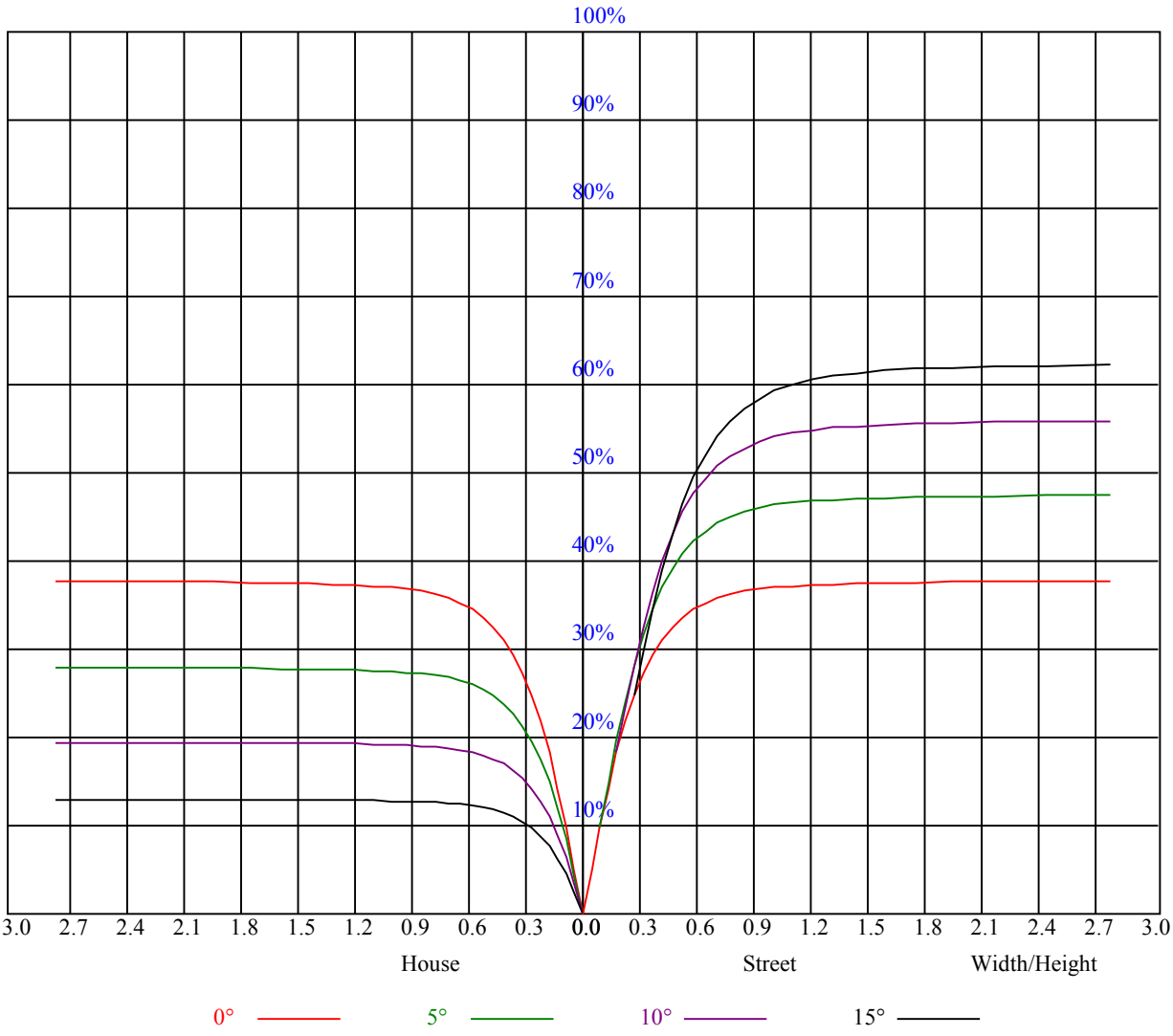
Date: 2018/12/4
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.81

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.85	0.83	0.82	0.84	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.76	0.75	0.74	0.74	0.72
2	0.80	0.77	0.75	0.79	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.71	0.72	0.71	0.69	0.68
3	0.75	0.72	0.69	0.74	0.71	0.69	0.72	0.70	0.68	0.71	0.68	0.67	0.69	0.67	0.66	0.65
4	0.71	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.67	0.65	0.63	0.66	0.64	0.62	0.61
5	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.64	0.62	0.60	0.63	0.61	0.59	0.58
6	0.64	0.60	0.58	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.55
7	0.61	0.57	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.53
8	0.59	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.57	0.54	0.51	0.56	0.53	0.51	0.50
9	0.56	0.52	0.50	0.56	0.52	0.50	0.55	0.52	0.49	0.55	0.51	0.49	0.54	0.51	0.49	0.48
10	0.54	0.50	0.48	0.54	0.50	0.48	0.53	0.50	0.47	0.53	0.49	0.47	0.52	0.49	0.47	0.46

Coefficient Utilization Curve



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2018/12/4
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.81

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	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
45.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
90.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
135.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
180.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
225.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
270.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
315.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00
360.0	8303.97	7382.31	5669.65	3771.39	2375.02	1486.53	938.60	537.21	271.00

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
45.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
90.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
135.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
180.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
225.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
270.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
315.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51
360.0	163.11	86.22	47.93	29.84	17.91	11.09	6.82	4.22	2.51

C/γ(°)	90.0
0.0	1.58
45.0	1.58
90.0	1.58
135.0	1.58
180.0	1.58
225.0	1.58
270.0	1.58
315.0	1.58
360.0	1.58