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Nata

LumCAT: LN01D03536DA-N

Luminaire: 97.70.267.00

Report No: 200623-B007

Test No: 200623-C007

LampCAT: CITIZEN CLU7B2

Lamp flux(lm): 318.9

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 21.9600

Current(A): 0.1600

Power (W): 3.5140

PF: 0.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 292.33

Efficiency(%): 91.67%

Lumens(lm)/Power(W): 83.19

Central intensity(cd): 657.605

Maximum intensity(cd): 657.605

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=37.0

[C90/270]Total=37.0

Field angle(10%Imax): [C0/180]Total=59.7

[C90/270]Total=59.7

Maximum s/h(1/2): C0_180=0.62 C90_270=0.62

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.67%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.134%

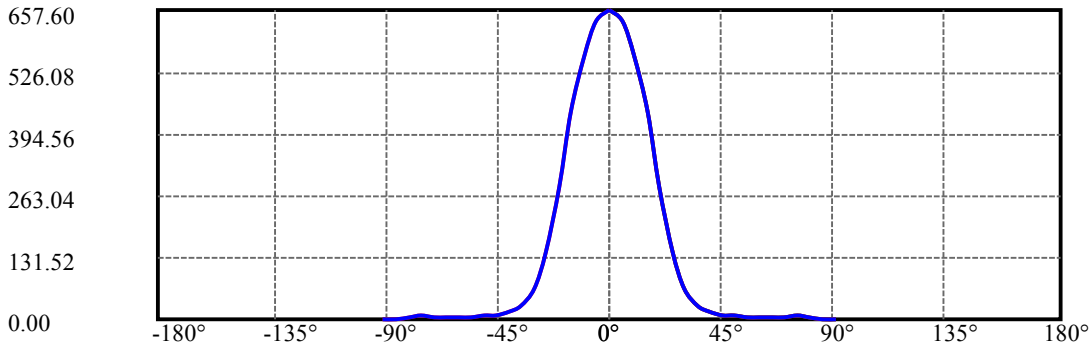
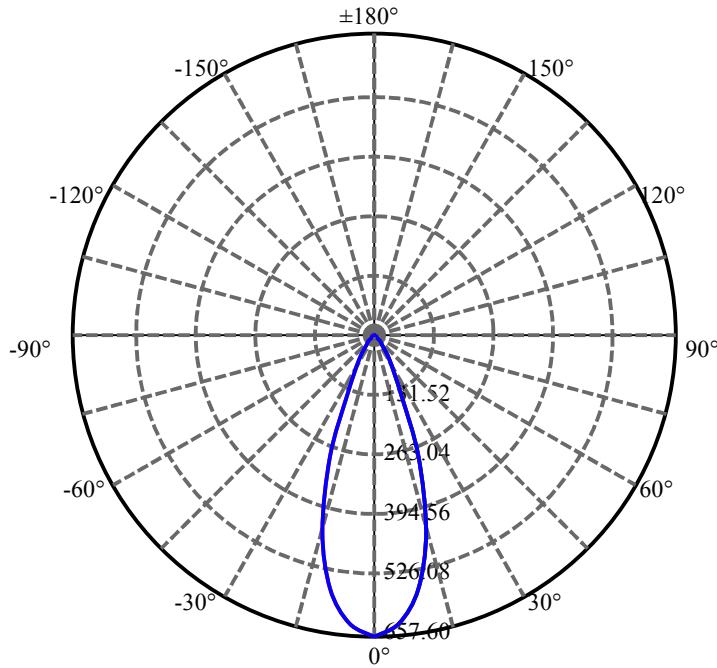
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	657.605	0.000	0	.000%	.000%
5.0	632.081	15.418	15.418	4.835%	5.274%
10.0	559.357	42.621	58.039	13.366%	19.854%
15.0	441.471	59.368	117.408	18.618%	40.162%
20.0	281.130	59.553	176.96	18.676%	60.534%
25.0	142.123	44.391	221.352	13.921%	75.719%
30.0	63.541	26.027	247.379	8.162%	84.622%
35.0	27.956	13.474	260.852	4.225%	89.231%
40.0	16.355	7.393	268.245	2.318%	91.760%
45.0	10.188	4.915	273.16	1.541%	93.442%
50.0	6.764	3.425	276.585	1.074%	94.613%
55.0	4.725	2.498	279.084	.783%	95.468%
60.0	3.698	1.947	281.031	.611%	96.134%
65.0	3.038	1.638	282.668	.514%	96.694%
70.0	3.565	1.672	284.34	.524%	97.266%
75.0	6.405	2.606	286.946	.817%	98.157%
80.0	4.542	2.929	289.875	.919%	99.159%
85.0	1.624	1.676	291.551	.525%	99.733%
90.0	1.230	0.782	292.332	.245%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	247.38	77.58%	84.62%
0-40	268.25	84.12%	91.76%
0-60	281.03	88.13%	96.13%
0-90	291.55	91.43%	99.73%
0-120	291.55	91.43%	99.73%
0-180	292.33	91.67%	100.00%
60-90	12.47	3.91%	4.26%
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%
0-27.40	233.87	73.34%	80.00%

ZONAL LUMEN SUMMARY

0-10	58.04
10-20	118.92
20-30	70.42
30-40	20.87
40-50	8.34
50-60	4.45
60-70	3.31
70-80	5.54
80-90	1.68
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



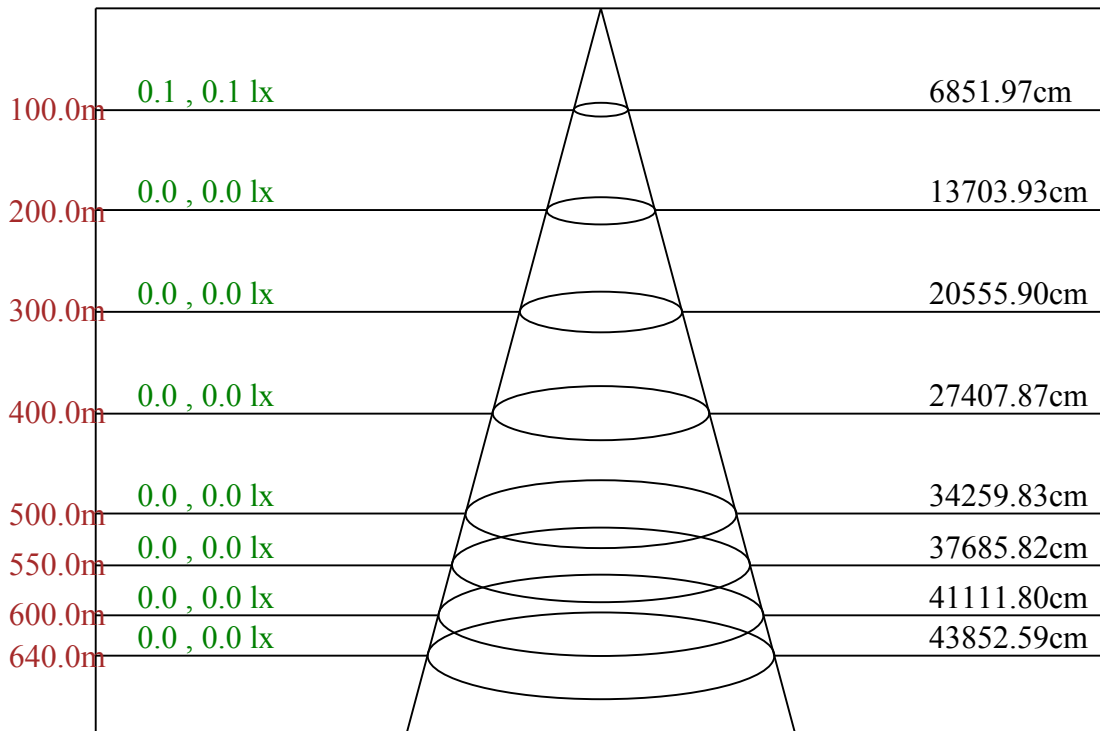
C0(Max): —————

C0/C180: —————

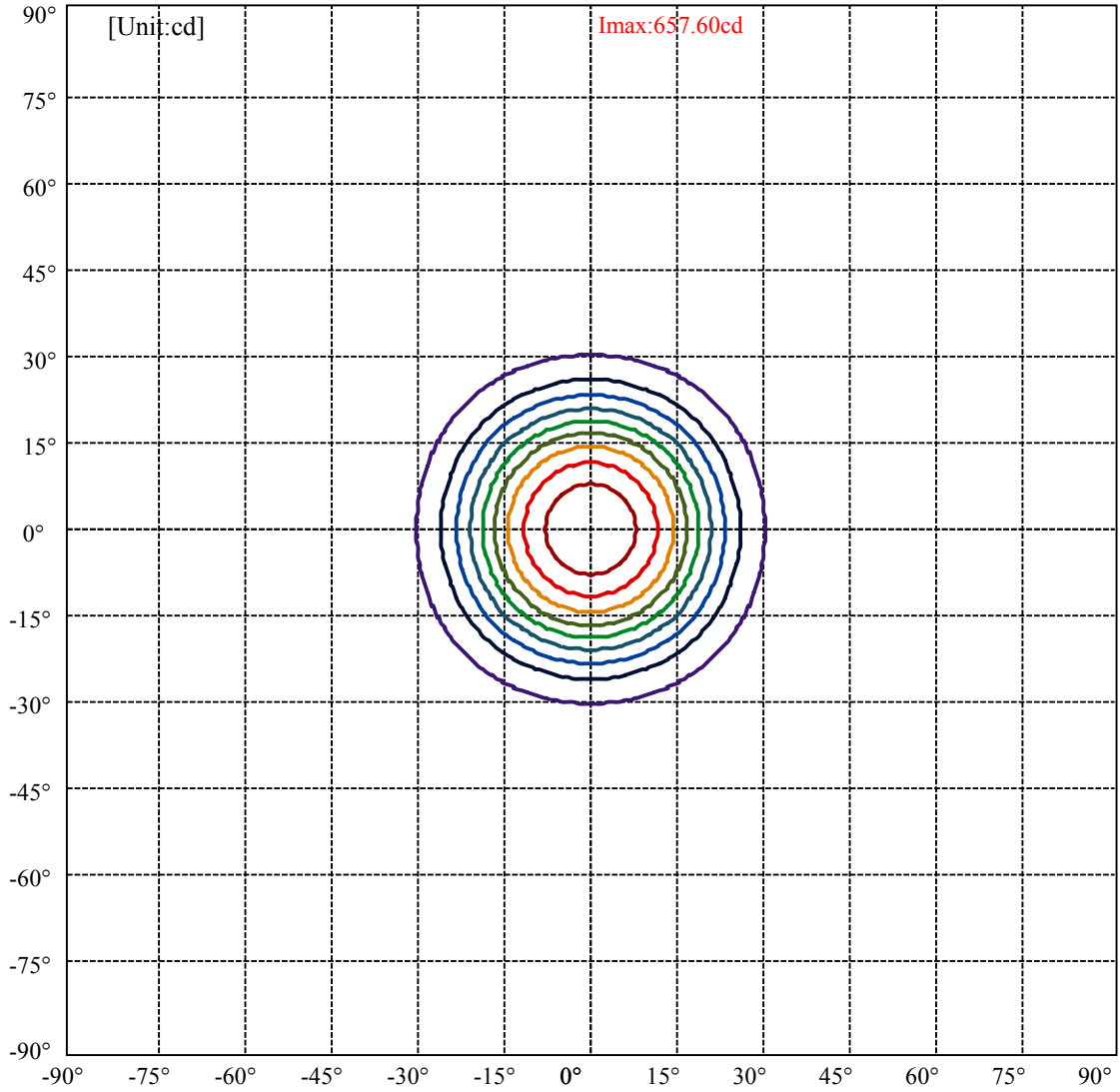
C90/C270: —————

Field angle(10%Imax):C0/180Left:29.9 Right:29.9
:C90/270Left:29.9 Right:29.9

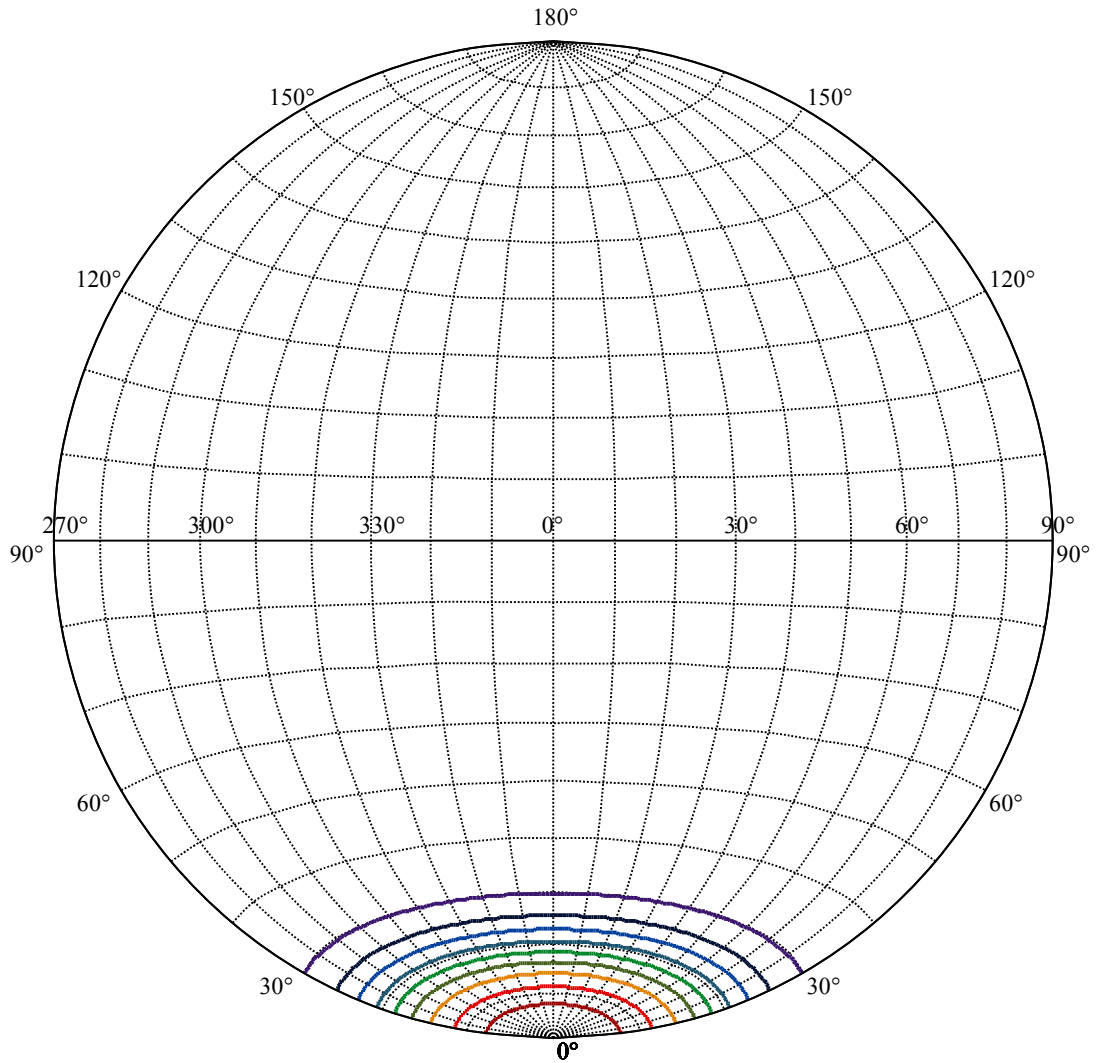
Beam Angle(50%Imax):C0/180Left:18.5 Right:18.5
:C90/270Left:18.5 Right:18.5



Max , Ave Beam angle of C0 plane 37.82



(10%Imax) 65.7605	—
(20%Imax) 131.521	—
(30%Imax) 197.281	—
(40%Imax) 263.042	—
(50%Imax) 328.802	—
(60%Imax) 394.563	—
(70%Imax) 460.323	—
(80%Imax) 526.084	—
(90%Imax) 591.844	—












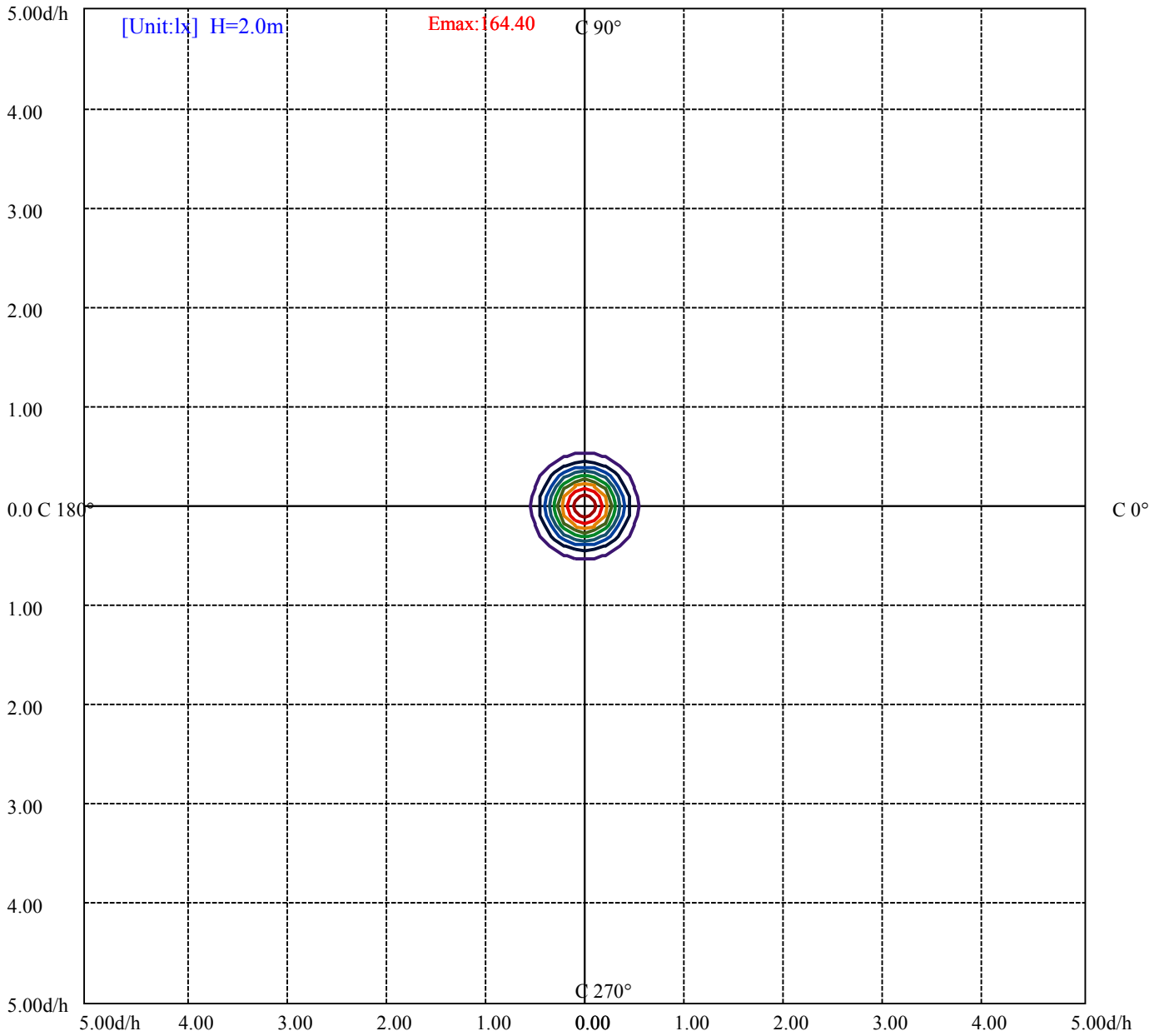
House

[Unit:cd]

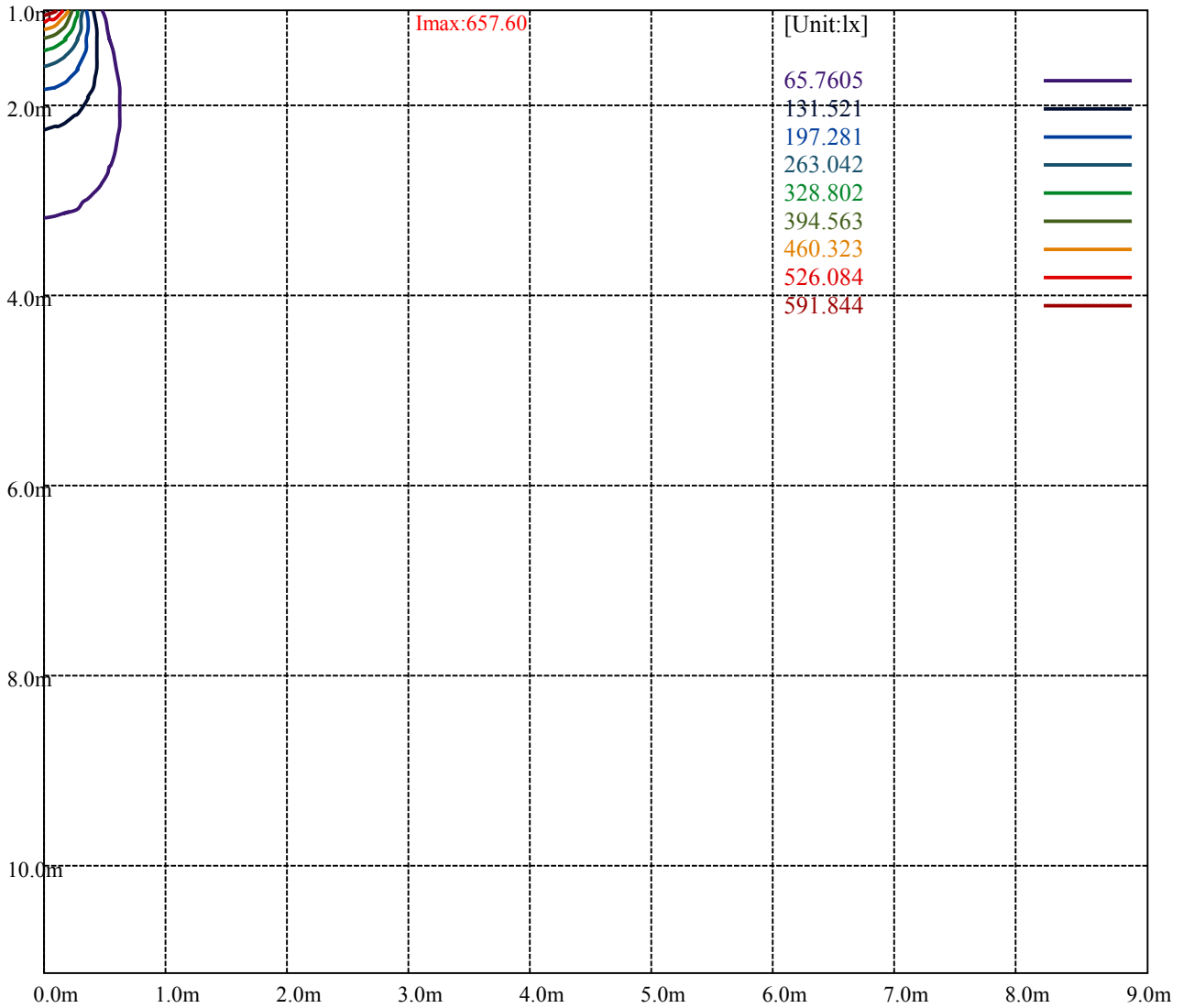
Road

Imax:657.60

(10%Imax) 65.7605	
(20%Imax) 131.521	
(30%Imax) 197.281	
(40%Imax) 263.042	
(50%Imax) 328.802	
(60%Imax) 394.563	
(70%Imax) 460.323	
(80%Imax) 526.084	
(90%Imax) 591.844	



(10%Emax) 16.4401	—
(20%Emax) 32.88025	—
(30%Emax) 49.32025	—
(40%Emax) 65.7605	—
(50%Emax) 82.2005	—
(60%Emax) 98.6405	—
(70%Emax) 115.0807	—
(80%Emax) 131.5208	—
(90%Emax) 147.9608	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

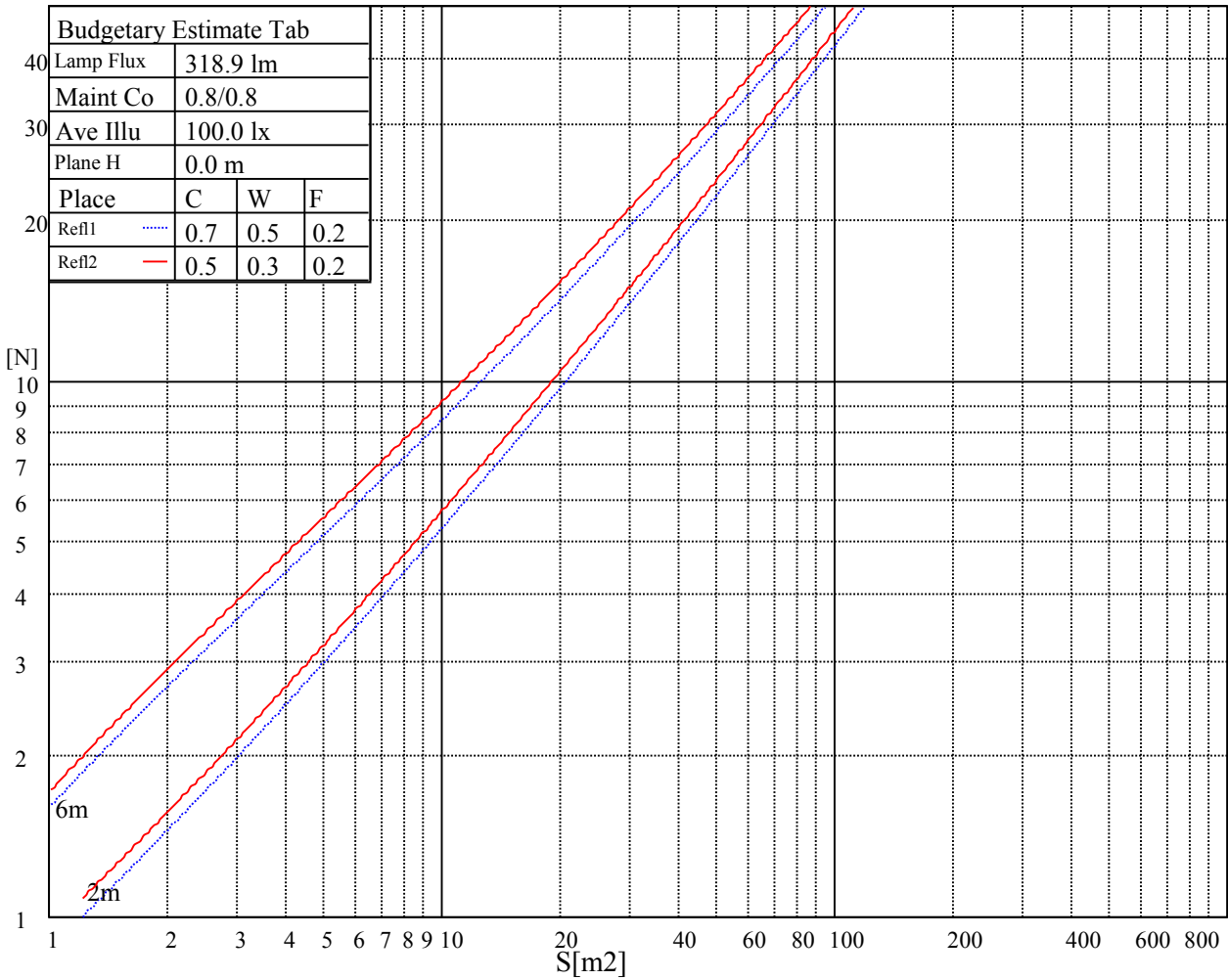
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

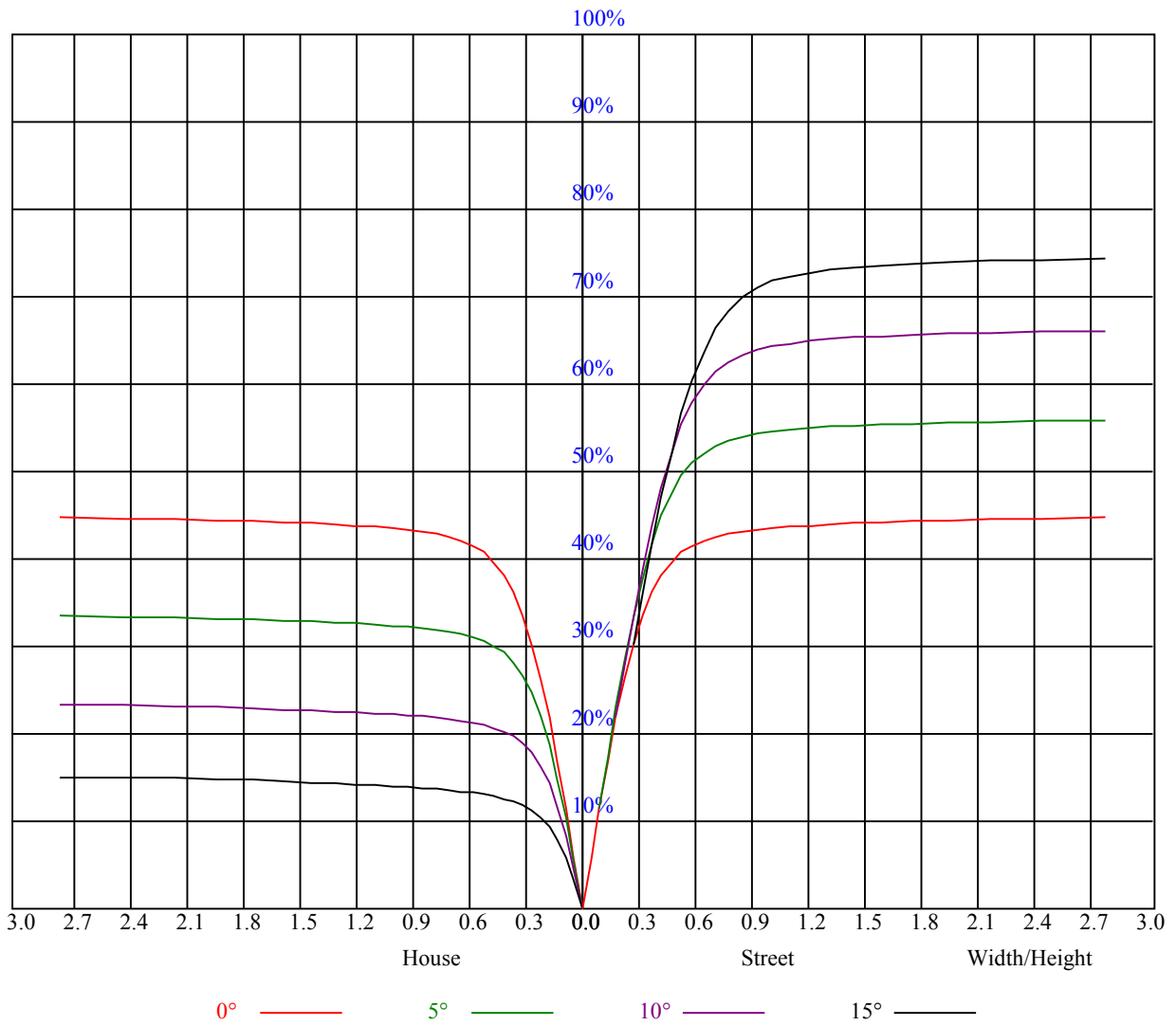
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	0.99	0.97	1.00	0.97	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.92	0.89	0.94	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.90	0.85	0.82	0.88	0.85	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.76
4	0.85	0.80	0.77	0.84	0.80	0.76	0.82	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.72
5	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.73	0.70	0.69
6	0.77	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.66
7	0.73	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.63
8	0.70	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
9	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58
10	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56



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	657.51	647.21	590.57	495.39	348.81	196.43	91.80	38.48	21.99
45.0	654.98	660.21	610.59	516.54	356.12	182.36	84.21	35.27	19.63
90.0	660.38	653.96	593.49	462.83	280.07	136.80	57.21	25.82	15.36
135.0	657.56	641.08	566.38	440.16	260.94	131.51	54.84	25.09	15.02
180.0	657.51	607.78	506.59	377.61	218.98	100.80	43.43	21.21	13.11
225.0	654.98	603.56	511.71	375.02	217.58	104.91	44.83	21.83	13.73
270.0	660.38	621.96	547.48	430.09	281.25	142.14	64.13	27.34	15.64
315.0	657.56	620.89	548.04	434.14	285.30	142.03	67.89	28.63	16.37
360.0	657.51	647.21	590.57	495.39	348.81	196.43	91.80	38.48	21.99
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	12.83	8.27	5.57	4.22	3.32	2.81	2.59	2.81	1.80
45.0	12.26	7.93	5.46	4.11	3.32	2.87	2.48	2.14	1.69
90.0	9.68	6.41	4.50	3.54	2.98	7.37	19.69	12.77	1.74
135.0	9.39	6.36	4.50	3.54	2.87	2.48	2.14	1.86	1.46
180.0	8.33	5.85	4.22	3.32	2.87	2.59	2.81	1.80	1.41
225.0	8.89	6.08	4.33	3.54	2.93	2.48	2.14	1.80	1.46
270.0	9.90	6.47	4.50	3.60	2.98	5.34	17.16	11.19	1.86
315.0	10.24	6.75	4.73	3.71	3.04	2.59	2.25	1.97	1.58
360.0	12.83	8.27	5.57	4.22	3.32	2.81	2.59	2.81	1.80
C/ γ (°)	90.0								
0.0	1.35								
45.0	1.29								
90.0	1.18								
135.0	1.18								
180.0	1.24								
225.0	1.24								
270.0	1.18								
315.0	1.18								
360.0	1.35								