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Nata

LumCAT: 3-2723-L	
Luminaire: 99.70.131.00	
Report No: 220816-B016	Voltage(V): 35.5300
Test No: 220816-C016	Current(A): 0.4810
LampCAT: CITIZEN CLU038	Power (W): 17.0890
Lamp flux(lm): 2260.9	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1938.43
Efficiency(%): 85.74%
Lumens(lm)/Power(W): 113.43
Central intensity(cd): 3637.010
Maximum intensity(cd): 3637.010
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=42.8
 [C90/270]Total=42.8
Field angle(10%Imax): [C0/180]Total=67.0
 [C90/270]Total=67.0
Maximum s/h(1/2): C0_180=0.69 C90_270=0.69
Maximum s/h(1/4): C0_180=0.67 C90_270=0.67
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 85.74%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.540%

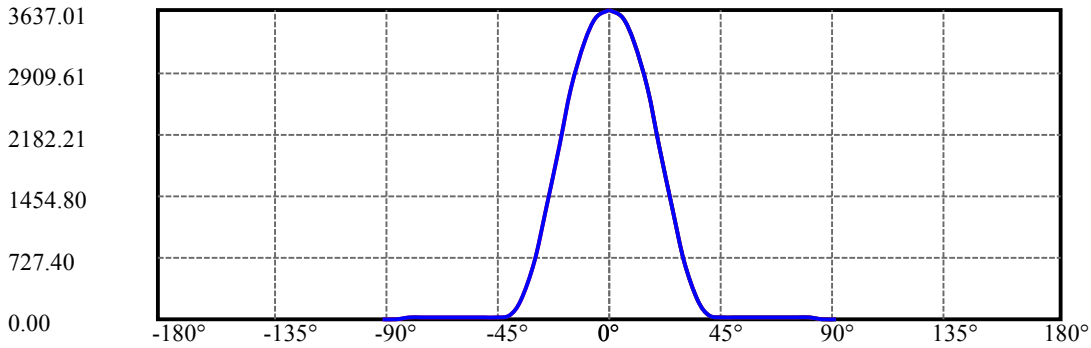
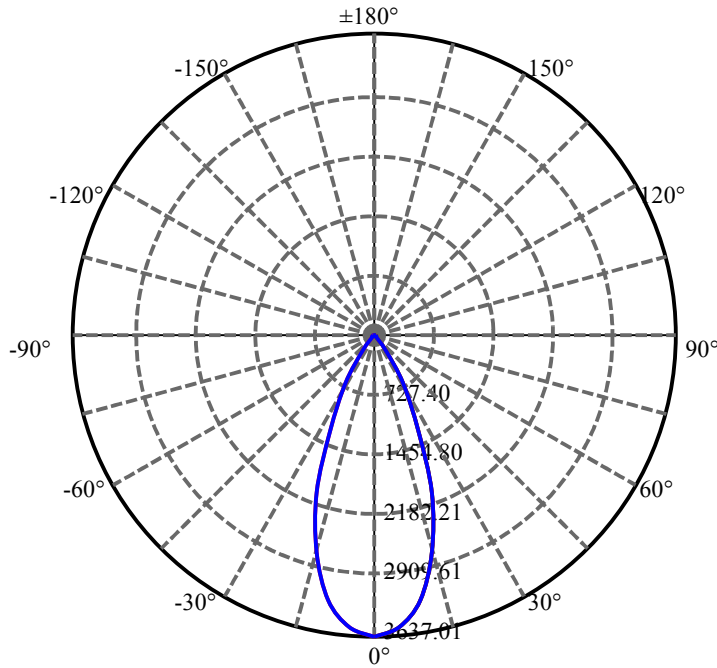
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3637.010	0.000	0	.000%	.000%
5.0	3540.135	85.801	85.801	3.795%	4.426%
10.0	3255.786	243.112	328.912	10.753%	16.968%
15.0	2719.504	354.450	683.362	15.678%	35.253%
20.0	2029.507	391.385	1074.748	17.311%	55.444%
25.0	1277.801	346.876	1421.623	15.343%	73.339%
30.0	678.972	247.631	1669.255	10.953%	86.114%
35.0	231.729	134.107	1803.362	5.932%	93.032%
40.0	40.774	45.465	1848.827	2.011%	95.378%
45.0	28.173	12.766	1861.593	.565%	96.036%
50.0	22.639	10.267	1871.86	.454%	96.566%
55.0	20.249	9.325	1881.186	.412%	97.047%
60.0	21.048	9.546	1890.731	.422%	97.539%
65.0	20.719	10.154	1900.885	.449%	98.063%
70.0	17.313	9.630	1910.515	.426%	98.560%
75.0	15.648	8.616	1919.13	.381%	99.005%
80.0	14.796	8.146	1927.276	.360%	99.425%
85.0	8.843	6.423	1933.7	.284%	99.756%
90.0	8.418	4.726	1938.426	.209%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1669.25	73.83%	86.11%
0-40	1848.83	81.78%	95.38%
0-60	1890.73	83.63%	97.54%
0-90	1933.70	85.53%	99.76%
0-120	1933.70	85.53%	99.76%
0-180	1938.43	85.74%	100.00%
60-90	52.51	2.32%	2.71%
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%
0-27.61	1550.74	68.59%	80.00%

ZONAL LUMEN SUMMARY

0-10	328.91
10-20	745.84
20-30	594.51
30-40	179.57
40-50	23.03
50-60	18.87
60-70	19.78
70-80	16.76
80-90	6.42
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: —————

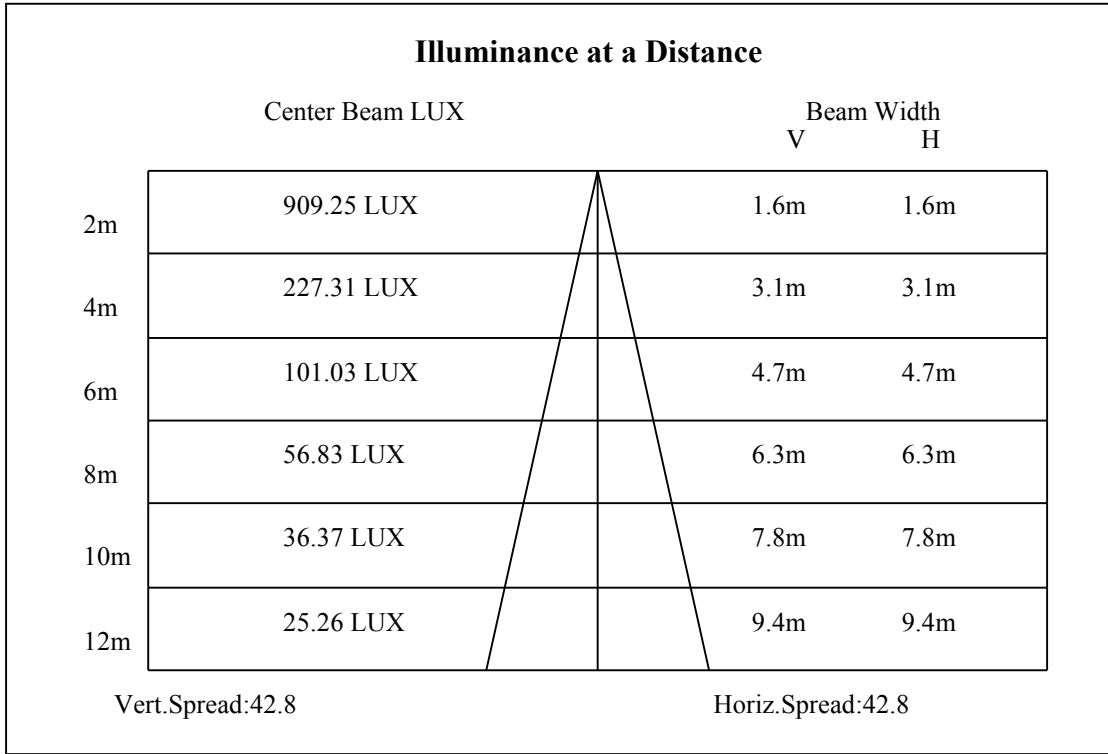
C90/C270: —————

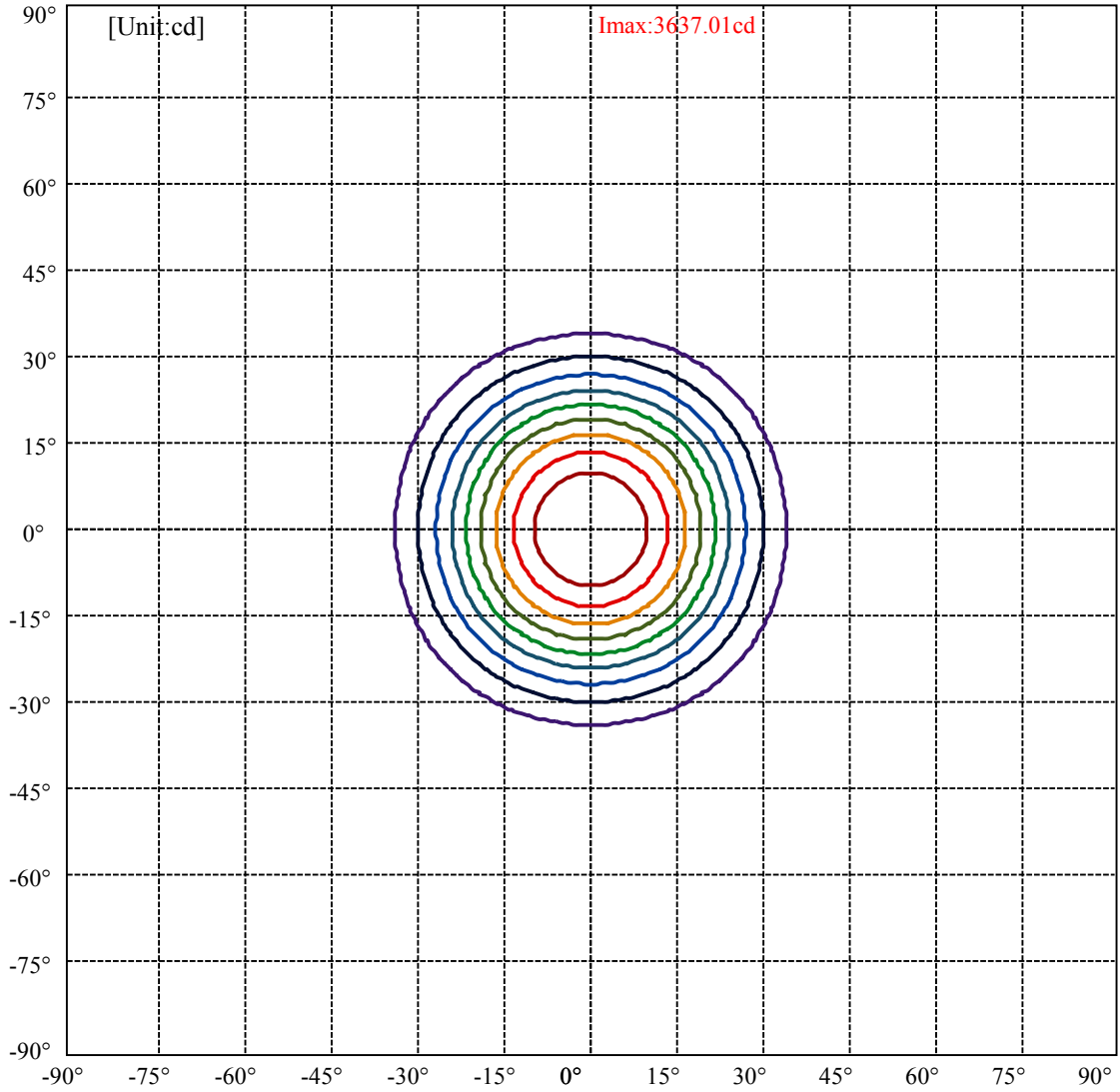
Field angle(10%Imax):C0/180Left:33.5 Right:33.5

:C90/270Left:33.5 Right:33.5

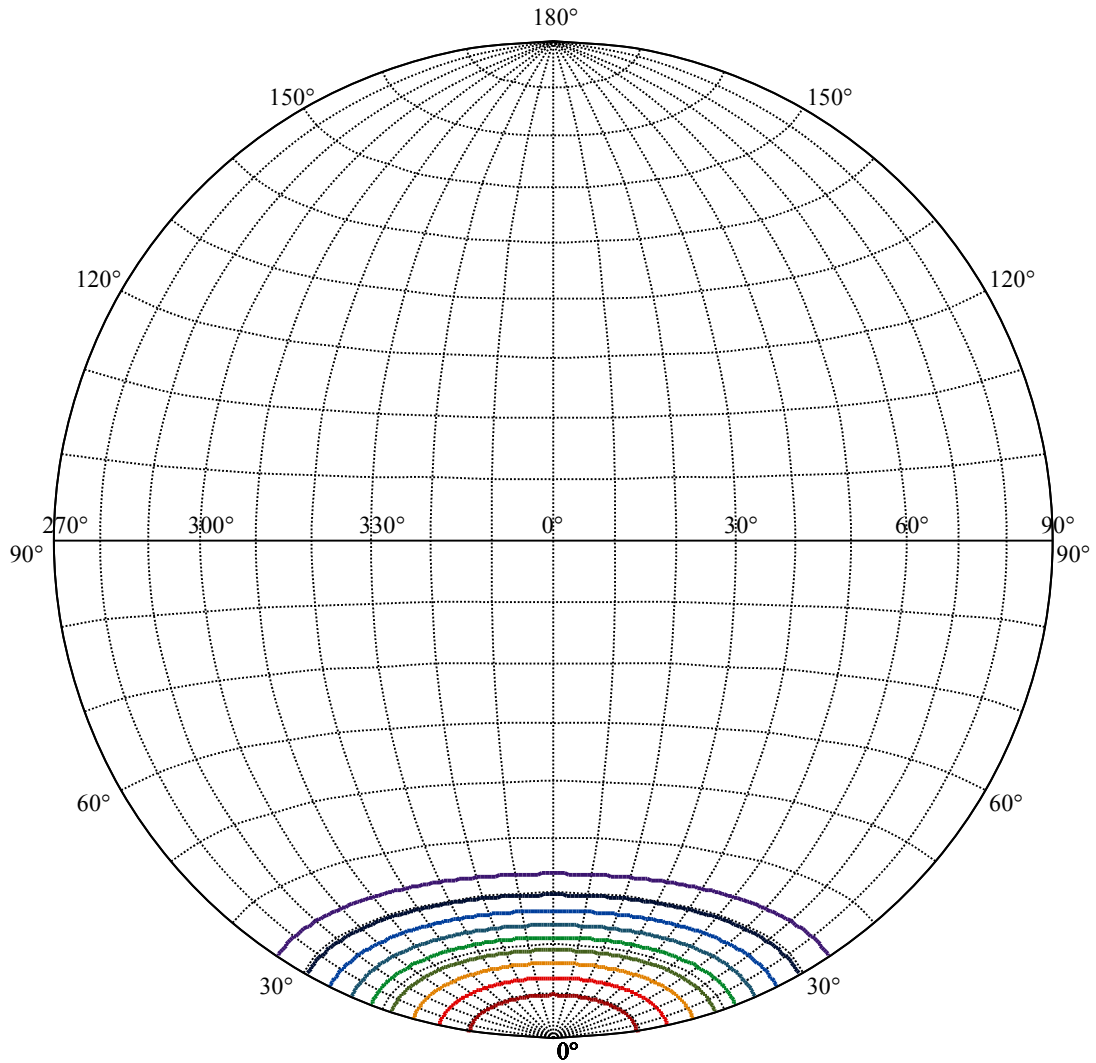
Beam Angle(50%Imax):C0/180Left:21.4 Right:21.4

:C90/270Left:21.4 Right:21.4





(10%Imax) 363.701	—
(20%Imax) 727.402	—
(30%Imax) 1091.1	—
(40%Imax) 1454.8	—
(50%Imax) 1818.5	—
(60%Imax) 2182.21	—
(70%Imax) 2545.91	—
(80%Imax) 2909.61	—
(90%Imax) 3273.31	—



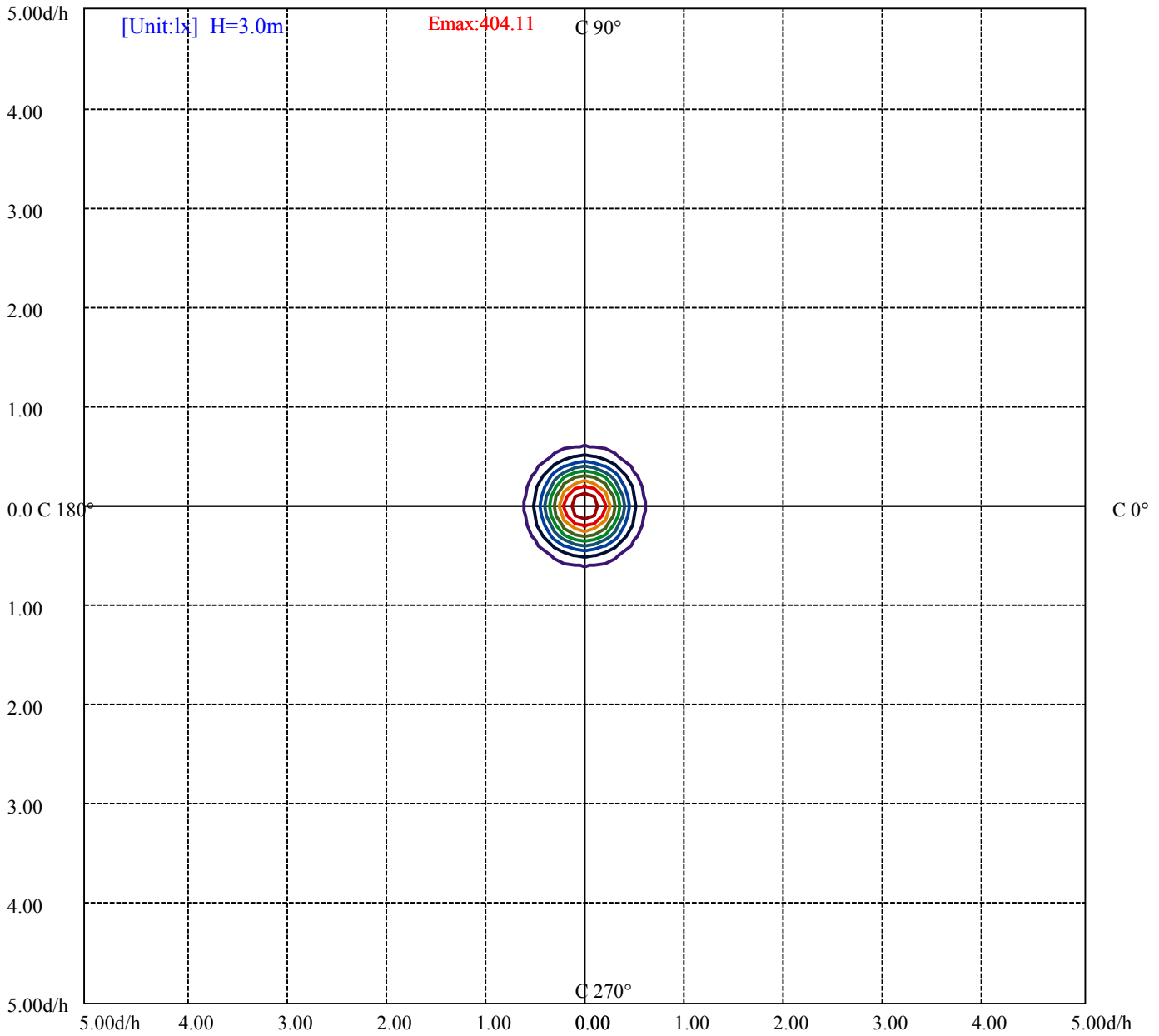
House

[Unit:cd]

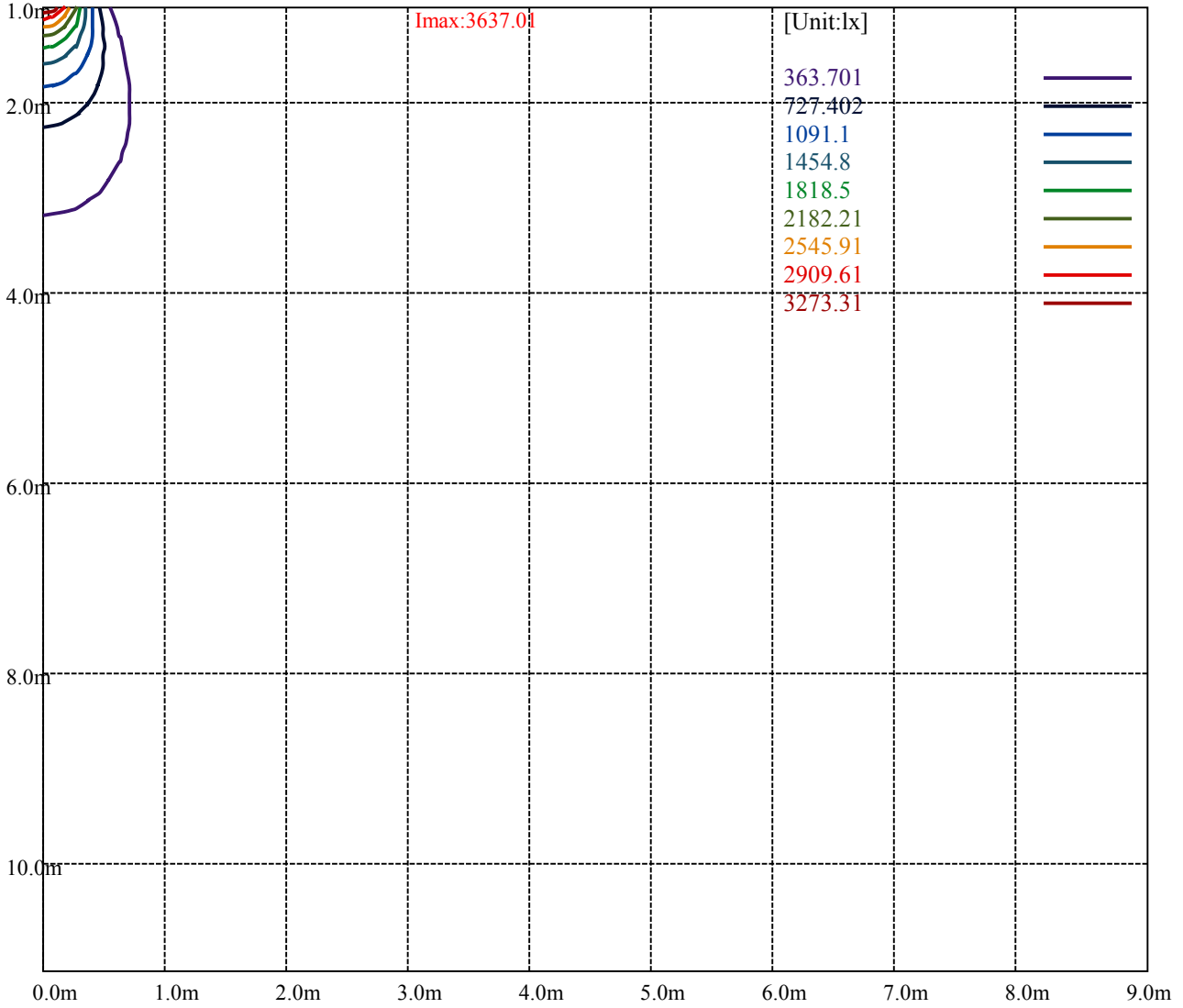
Road

Imax:3637.01

(10%Imax)	363.701	—
(20%Imax)	727.402	—
(30%Imax)	1091.1	—
(40%Imax)	1454.8	—
(50%Imax)	1818.5	—
(60%Imax)	2182.21	—
(70%Imax)	2545.91	—
(80%Imax)	2909.61	—
(90%Imax)	3273.31	—



- (10%Emax) 40.41122
- (20%Emax) 80.82233
- (30%Emax) 121.2333
- (40%Emax) 161.6445
- (50%Emax) 202.0556
- (60%Emax) 242.4667
- (70%Emax) 282.8778
- (80%Emax) 323.29
- (90%Emax) 363.7011



Luminance Table

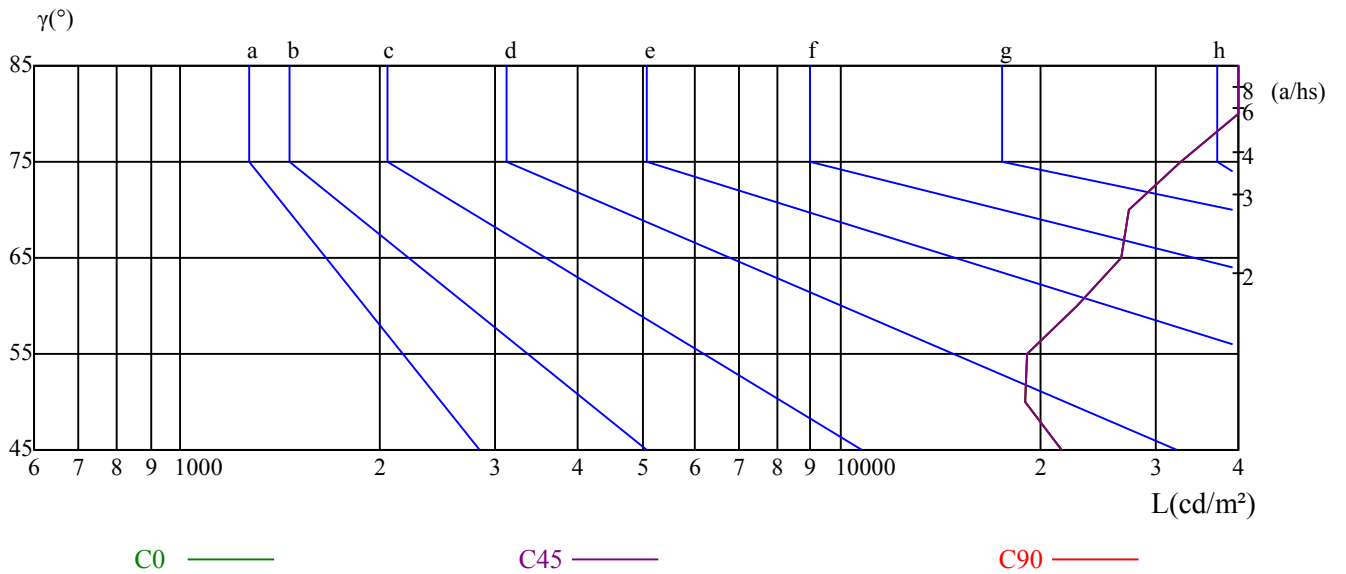
γ	45	50	55	60	65	70	75	80	85
C0	21549	19048	19093	22767	26515	27378	32698	46084	54877
C45	21549	19048	19093	22767	26515	27378	32698	46084	54877
C90	21549	19048	19093	22767	26515	27378	32698	46084	54877

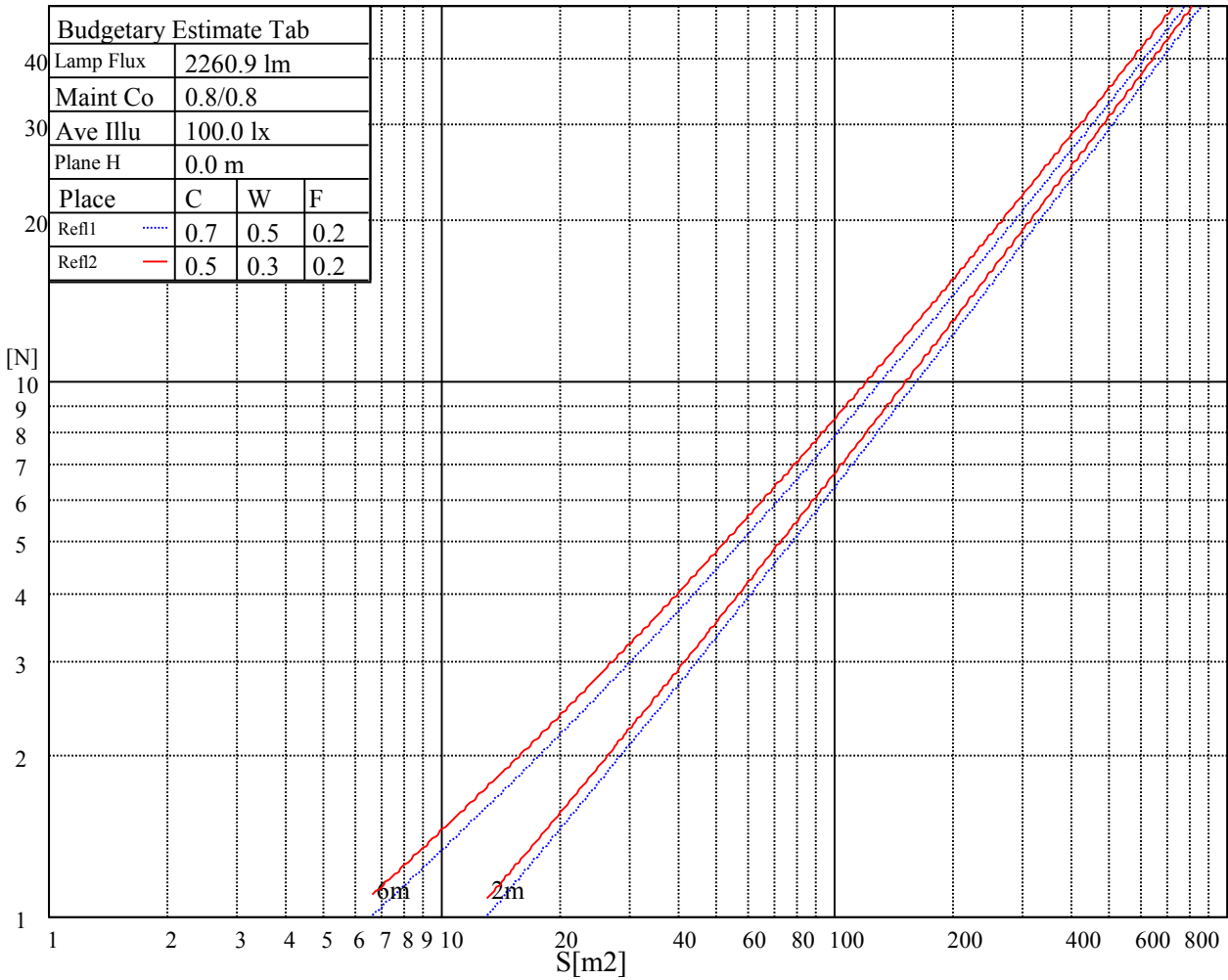
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
26515	26515	26515	32698	32698	32698	54877	54877	54877

Glare Table

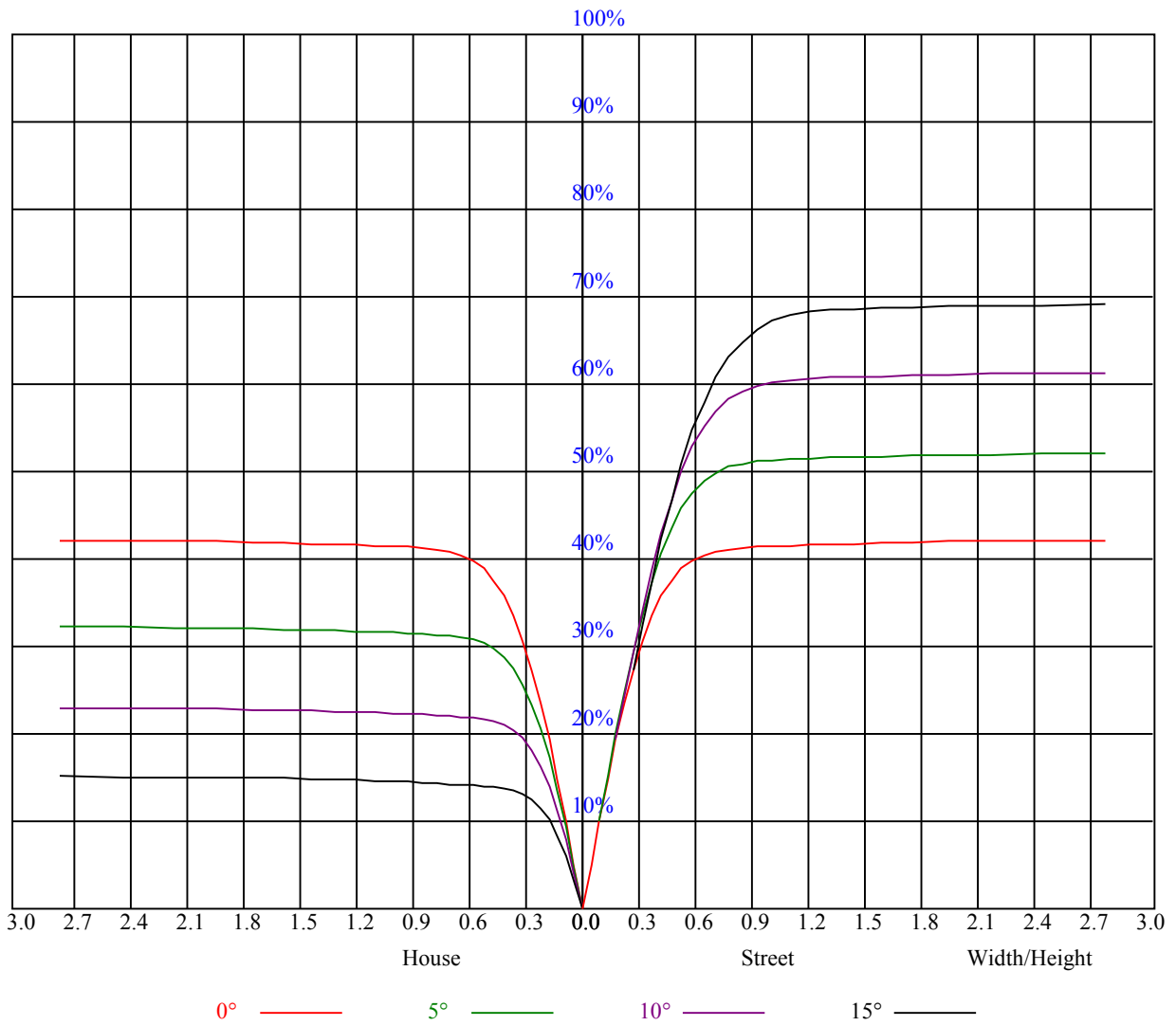
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.02	1.02	1.02	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.86
1	0.95	0.93	0.91	0.93	0.92	0.90	0.90	0.88	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.89	0.86	0.83	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.79	0.77	0.76
3	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
5	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
6	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.61
7	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
8	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56
9	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.53
10	0.60	0.55	0.53	0.60	0.55	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.51



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	3629.39	3603.70	3374.84	2924.90	2274.79	1518.92	874.78	314.30	50.01
45.0	3643.13	3548.72	3238.01	2751.02	2031.60	1334.88	654.29	323.86	38.90
90.0	3637.16	3484.79	3166.31	2589.69	1871.46	1171.87	587.55	140.66	35.19
135.0	3638.35	3523.63	3238.61	2693.06	2003.51	1267.36	668.04	311.31	39.56
180.0	3629.39	3461.49	3110.74	2503.65	1772.27	1103.22	502.82	81.38	34.18
225.0	3643.13	3558.88	3269.08	2716.96	2065.66	1170.20	676.52	187.27	40.39
270.0	3637.16	3590.55	3356.92	2840.65	2171.42	1465.74	783.36	304.14	46.43
315.0	3638.35	3549.32	3291.79	2736.09	2045.34	1190.22	684.41	190.91	41.53
360.0	3629.39	3603.70	3374.84	2924.90	2274.79	1518.92	874.78	314.30	50.01
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	30.71	24.08	20.55	20.79	21.15	18.46	15.66	15.66	9.14
45.0	27.43	23.00	20.02	20.97	20.73	17.15	15.42	14.58	8.72
90.0	26.71	21.69	19.90	20.91	19.90	16.79	15.48	13.92	8.66
135.0	28.26	22.59	20.08	20.85	20.14	17.09	15.77	14.52	8.66
180.0	25.93	21.27	20.08	21.27	19.84	16.67	15.95	12.97	8.60
225.0	28.14	22.41	20.32	21.09	21.21	17.45	15.60	15.24	8.90
270.0	29.52	23.36	20.55	21.33	21.87	17.99	15.95	15.95	9.20
315.0	28.68	22.71	20.50	21.15	20.91	16.91	15.36	15.54	8.84
360.0	30.71	24.08	20.55	20.79	21.15	18.46	15.66	15.66	9.14
C/γ(°)	90.0								
0.0	8.43								
45.0	8.43								
90.0	8.43								
135.0	8.37								
180.0	8.43								
225.0	8.48								
270.0	8.43								
315.0	8.37								
360.0	8.43								