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Nata

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LumCAT: 2-1133-M

Luminaire:

Report No: NT2014122402

Voltage(V): 219.9000

Test No: GC2014122402

Current(A): 0.0790

LampCAT: XICATO XTM 19

Power (W): 14.4000

Lamp flux(lm): 1294.0

PF: 0.8260

Number of Lamps: 1

Ballast type: DC

Length(mm): 68

Width(mm): 68

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 1099.39

Efficiency(%): 84.96%

Lumens(lm)/Power(W): 77.05

Central intensity(cd): 1844.825

Maximum intensity(cd): 1844.825

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=44.1

[C90/270]Total=44.1

Field angle(10%Imax): [C0/180]Total=71.8

[C90/270]Total=71.8

Maximum s/h(1/2): C0\_180=0.69 C90\_270=0.69

Maximum s/h(1/4): C0\_180=0.72 C90\_270=0.72

Up flux rate of lamp(%): 3.36%

Down flux rate of lamp(%): 82.38%

Up flux rate of LUM(%): 4.66%

Down flux rate of LUM(%): 96.08%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 93.481%

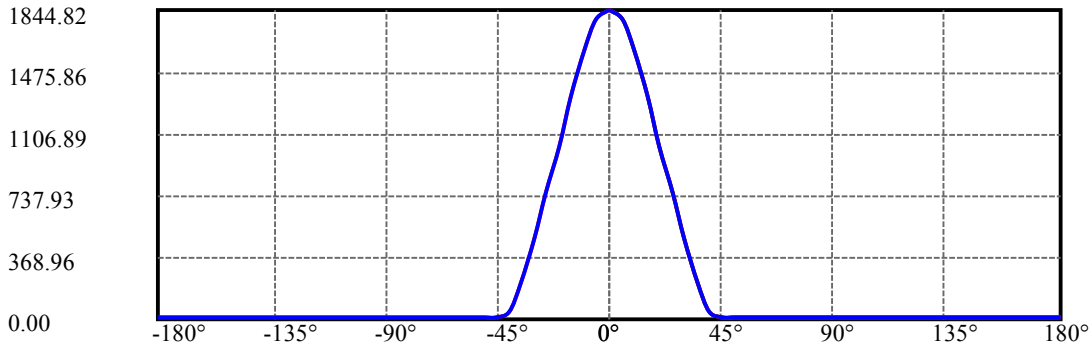
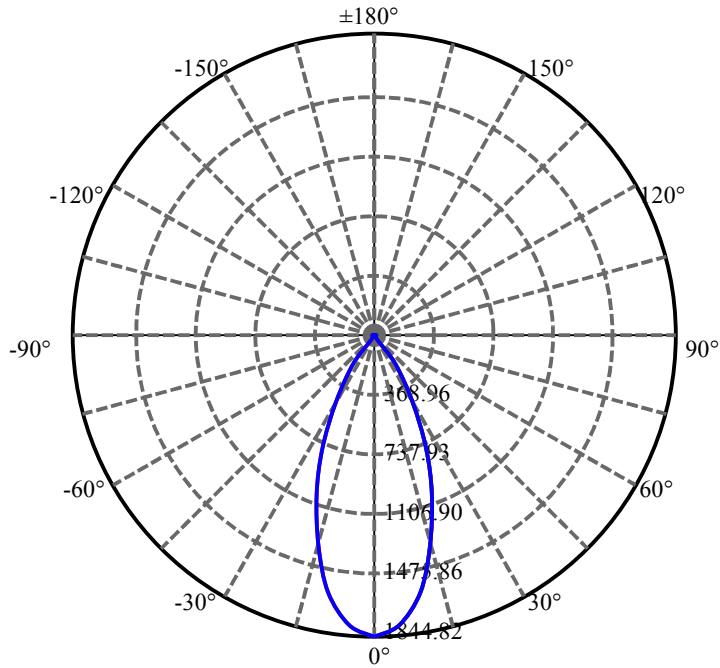
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1844.825	11.032	11.032	.853%	1.004%
5.0	1782.790	85.170	96.202	6.582%	8.750%
10.0	1604.238	152.696	248.898	11.800%	22.640%
15.0	1332.808	189.083	437.982	14.612%	39.839%
20.0	1032.774	193.618	631.6	14.963%	57.450%
25.0	760.394	176.147	807.748	13.613%	73.472%
30.0	477.418	130.845	938.593	10.112%	85.374%
35.0	216.052	67.927	1006.52	5.249%	91.552%
40.0	43.676	15.389	1021.908	1.189%	92.952%
45.0	14.512	5.625	1027.533	.435%	93.464%
50.0	8.183	3.436	1030.969	.266%	93.776%
55.0	6.742	3.027	1033.996	.234%	94.052%
60.0	6.595	3.131	1037.127	.242%	94.336%
65.0	6.532	3.245	1040.372	.251%	94.632%
70.0	6.497	3.347	1043.719	.259%	94.936%
75.0	6.490	3.436	1047.155	.266%	95.249%
80.0	6.490	3.503	1050.658	.271%	95.567%
85.0	6.497	3.548	1054.206	.274%	95.890%
90.0	6.462	3.542	1057.748	.274%	96.212%
95.0	6.497	3.548	1061.296	.274%	96.535%
100.0	6.469	3.492	1064.788	.270%	96.853%
105.0	6.476	3.429	1068.217	.265%	97.164%
110.0	6.455	3.325	1071.542	.257%	97.467%
115.0	6.455	3.207	1074.749	.248%	97.759%
120.0	6.455	3.064	1077.814	.237%	98.037%
125.0	6.469	2.905	1080.718	.224%	98.302%
130.0	6.504	2.731	1083.449	.211%	98.550%
135.0	6.567	2.545	1085.995	.197%	98.781%
140.0	6.644	2.341	1088.336	.181%	98.994%
145.0	6.812	2.142	1090.477	.166%	99.189%
150.0	7.288	1.997	1092.475	.154%	99.371%
155.0	8.176	1.894	1094.369	.146%	99.543%
160.0	9.351	1.753	1096.122	.135%	99.703%
165.0	10.575	1.500	1097.622	.116%	99.839%
170.0	11.603	1.104	1098.726	.085%	99.940%
175.0	12.337	0.589	1099.316	.046%	99.993%
180.0	12.603	0.075	1099.391	.006%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	938.59	72.53%	85.37%
0-40	1021.91	78.97%	92.95%
0-60	1037.13	80.15%	94.34%
0-90	1057.75	81.74%	96.21%
0-120	1077.81	83.29%	98.04%
0-180	1099.39	84.96%	100.00%
60-90	23.75	1.84%	2.16%
90-120	23.61	1.82%	2.15%
90-130	29.24	2.26%	2.66%
90-150	38.27	2.96%	3.48%
90-180	45.11	3.49%	4.10%
0-27.74	879.51	67.97%	80.00%

## ZONAL LUMEN SUMMARY

0-10	248.90
10-20	382.70
20-30	306.99
30-40	83.32
40-50	9.06
50-60	6.16
60-70	6.59
70-80	6.94
80-90	7.09
90-100	7.04
100-110	6.75
110-120	6.27
120-130	5.64
130-140	4.89
140-150	4.14
150-160	3.65
160-170	2.60
170-180	0.59



C0(Max): —————

C0/C180: —————

C90/C270: —————

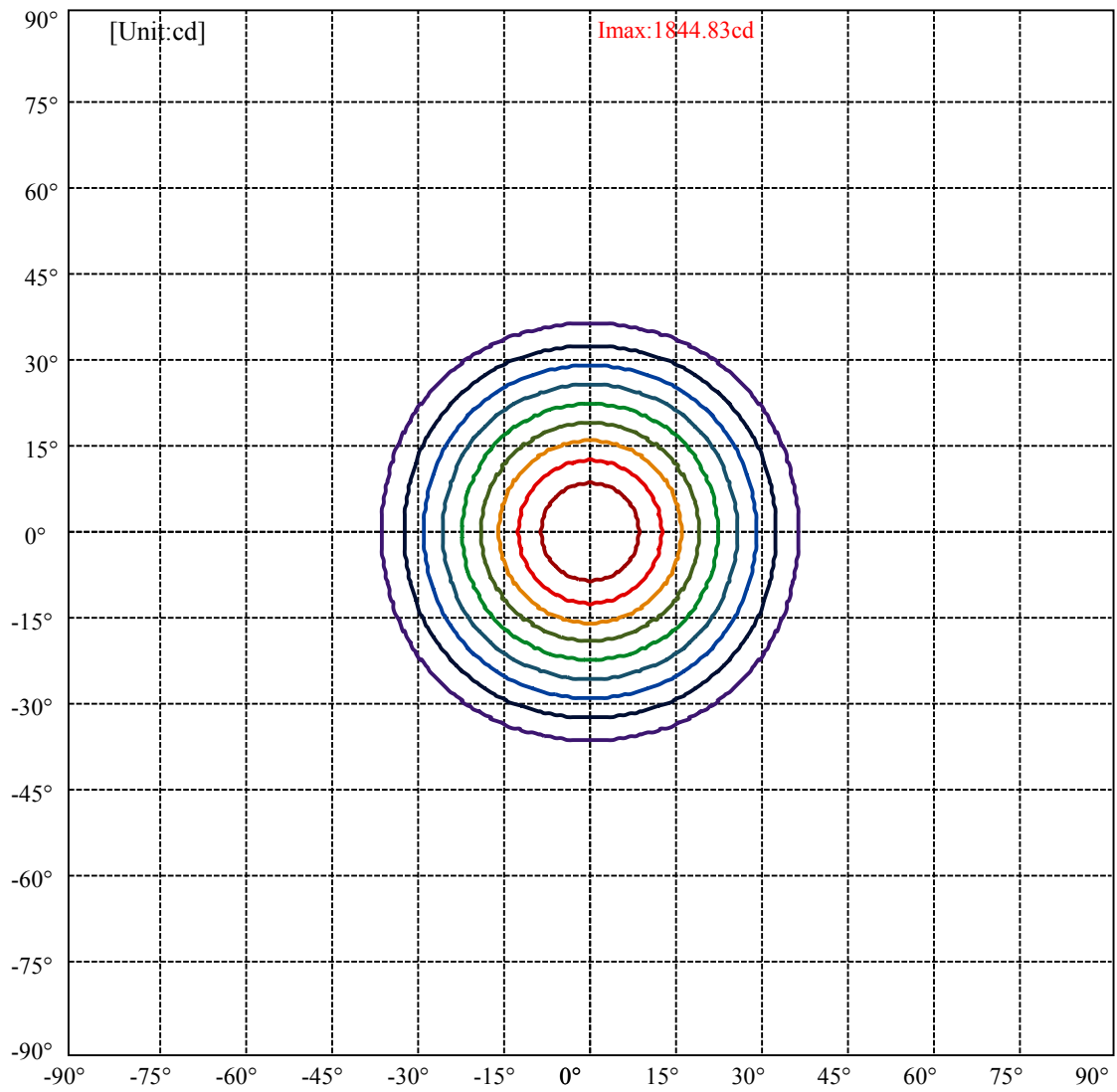
Field angle(10%Imax):C0/180Left:35.9 Right:35.9

:C90/270Left:35.9 Right:35.9

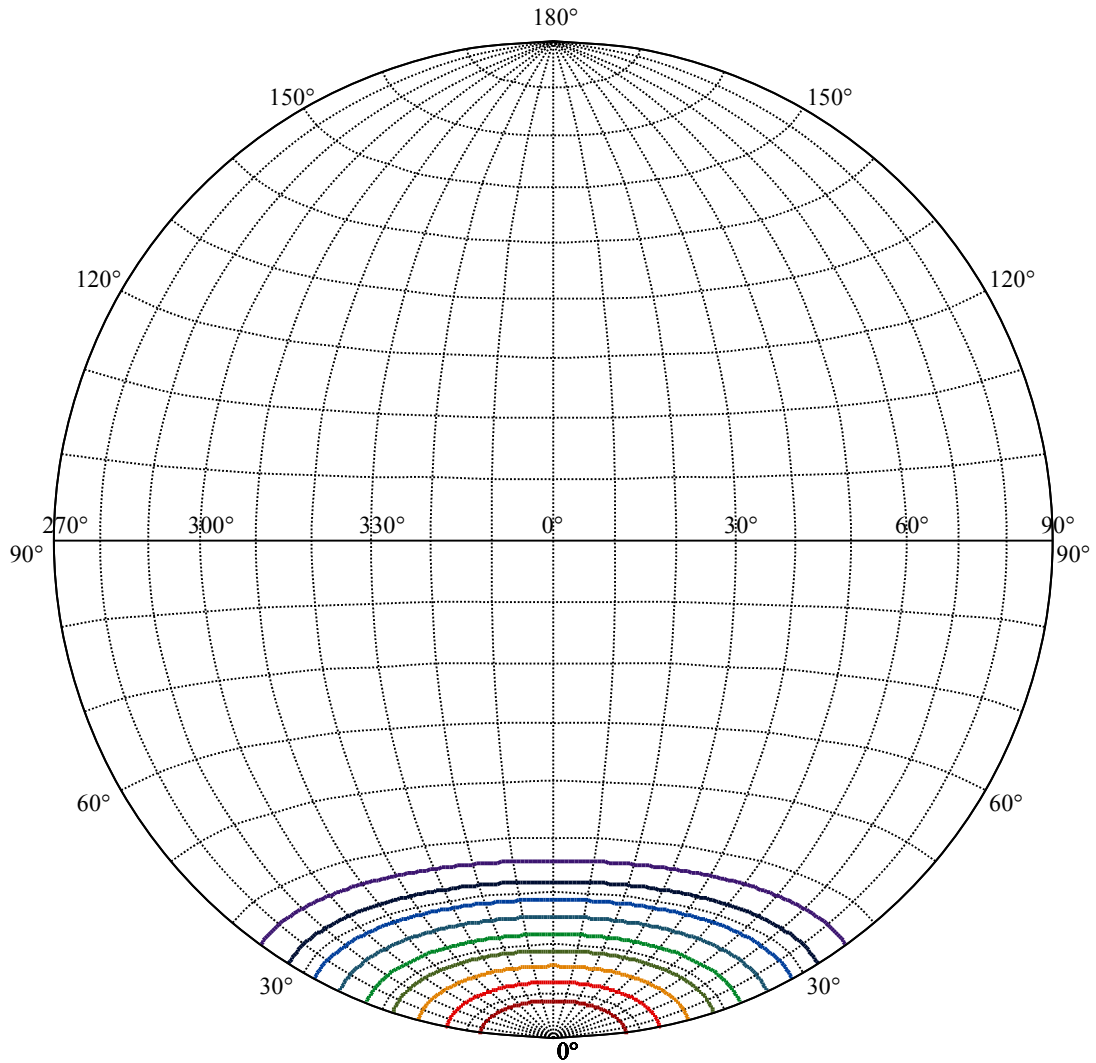
Beam Angle(50%Imax):C0/180Left:22.0 Right:22.0

:C90/270Left:22.0 Right:22.0





(10%Imax) 184.482	—
(20%Imax) 368.965	—
(30%Imax) 553.447	—
(40%Imax) 737.93	—
(50%Imax) 922.412	—
(60%Imax) 1106.89	—
(70%Imax) 1291.38	—
(80%Imax) 1475.86	—
(90%Imax) 1660.34	—



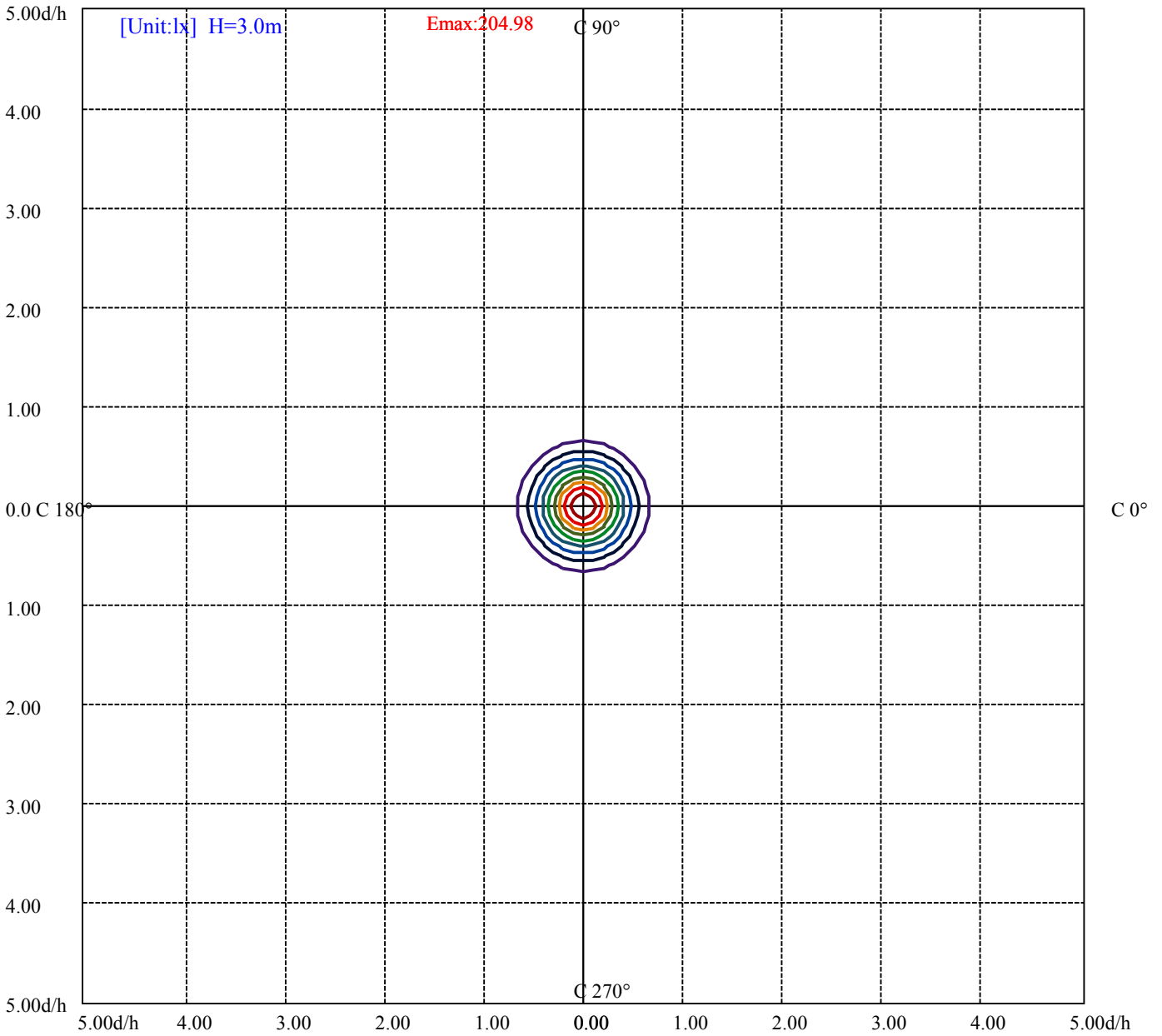
House

[Unit:cd]

Road

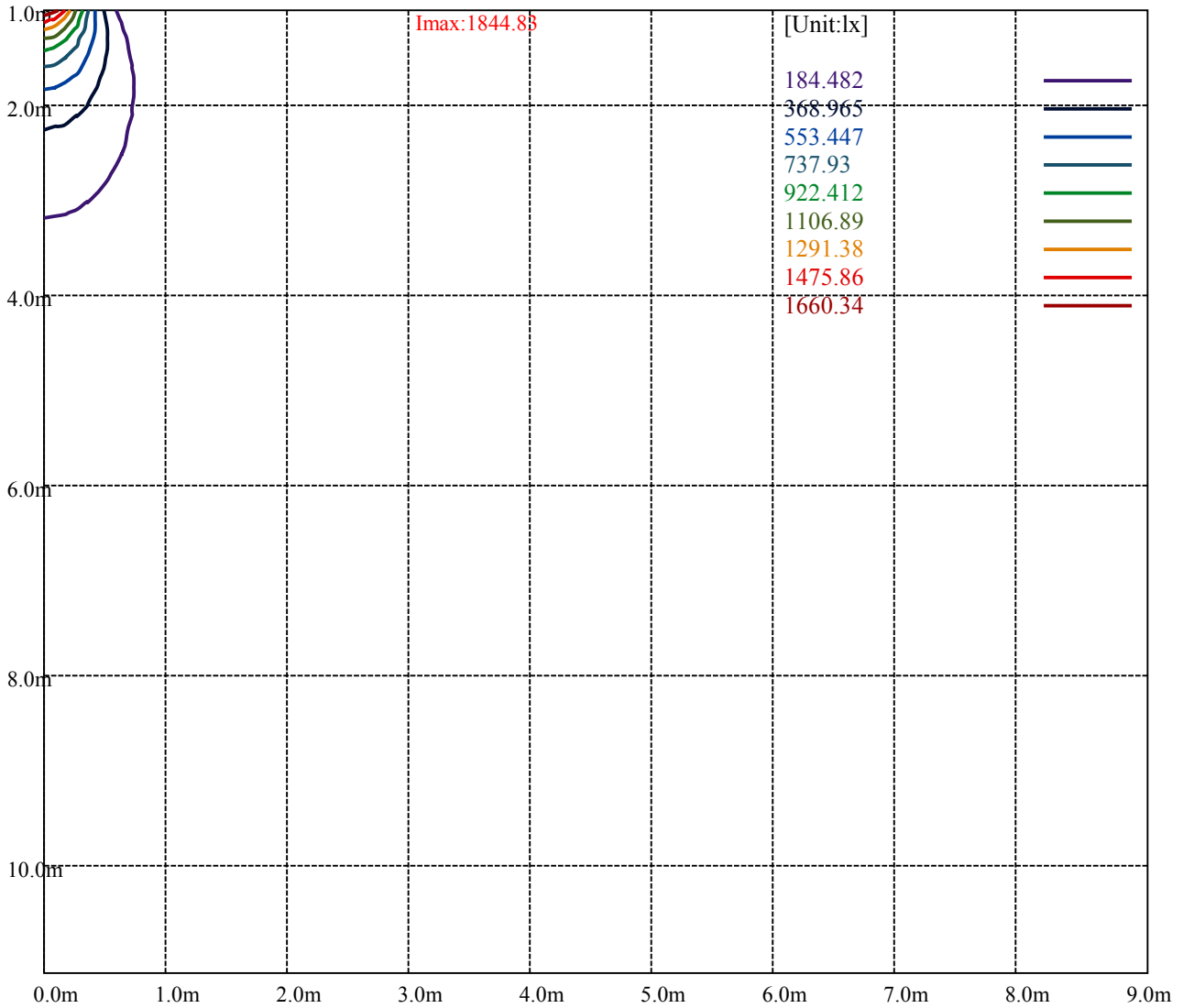
**Imax:1844.83**

(10%Imax) 184.482	—
(20%Imax) 368.965	—
(30%Imax) 553.447	—
(40%Imax) 737.93	—
(50%Imax) 922.412	—
(60%Imax) 1106.89	—
(70%Imax) 1291.38	—
(80%Imax) 1475.86	—
(90%Imax) 1660.34	—



- (10%Emax) 20.498
- (20%Emax) 40.99611
- (30%Emax) 61.49411
- (40%Emax) 81.99211
- (50%Emax) 102.4901
- (60%Emax) 122.9878
- (70%Emax) 143.4867
- (80%Emax) 163.9844
- (90%Emax) 184.4822





Luminance Table

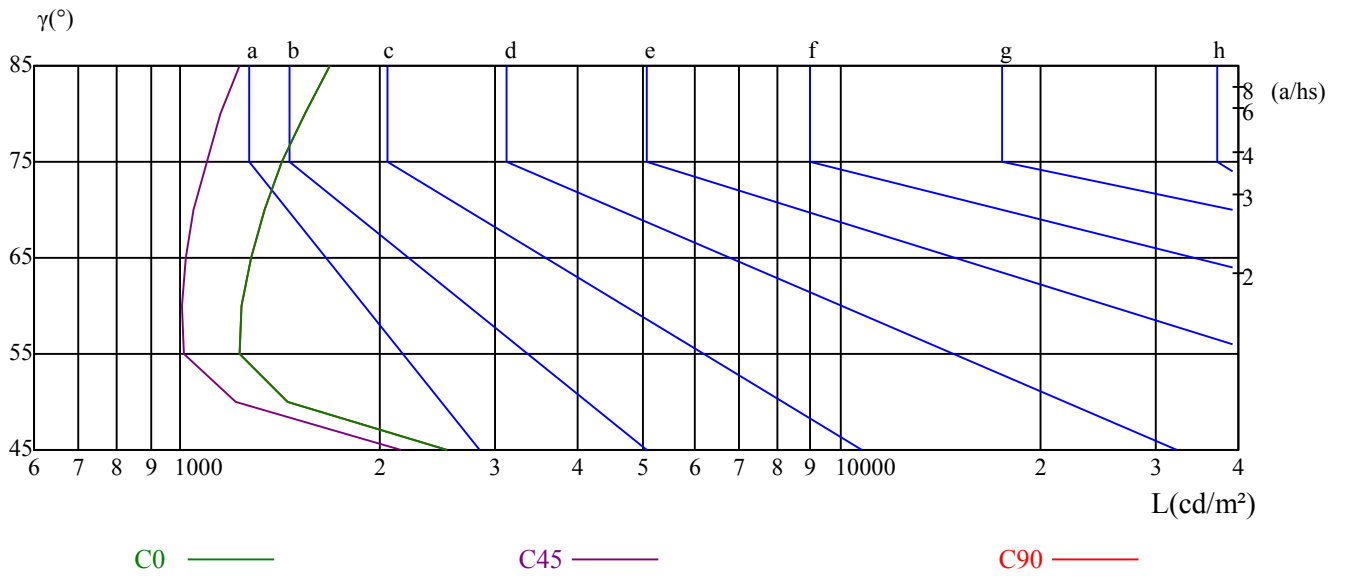
$\gamma$	45	50	55	60	65	70	75	80	85
C0	2536	1454	1227	1241	1282	1342	1427	1539	1684
C45	2154	1216	1011	1005	1021	1050	1094	1152	1228
C90	2536	1454	1227	1241	1282	1342	1427	1539	1684

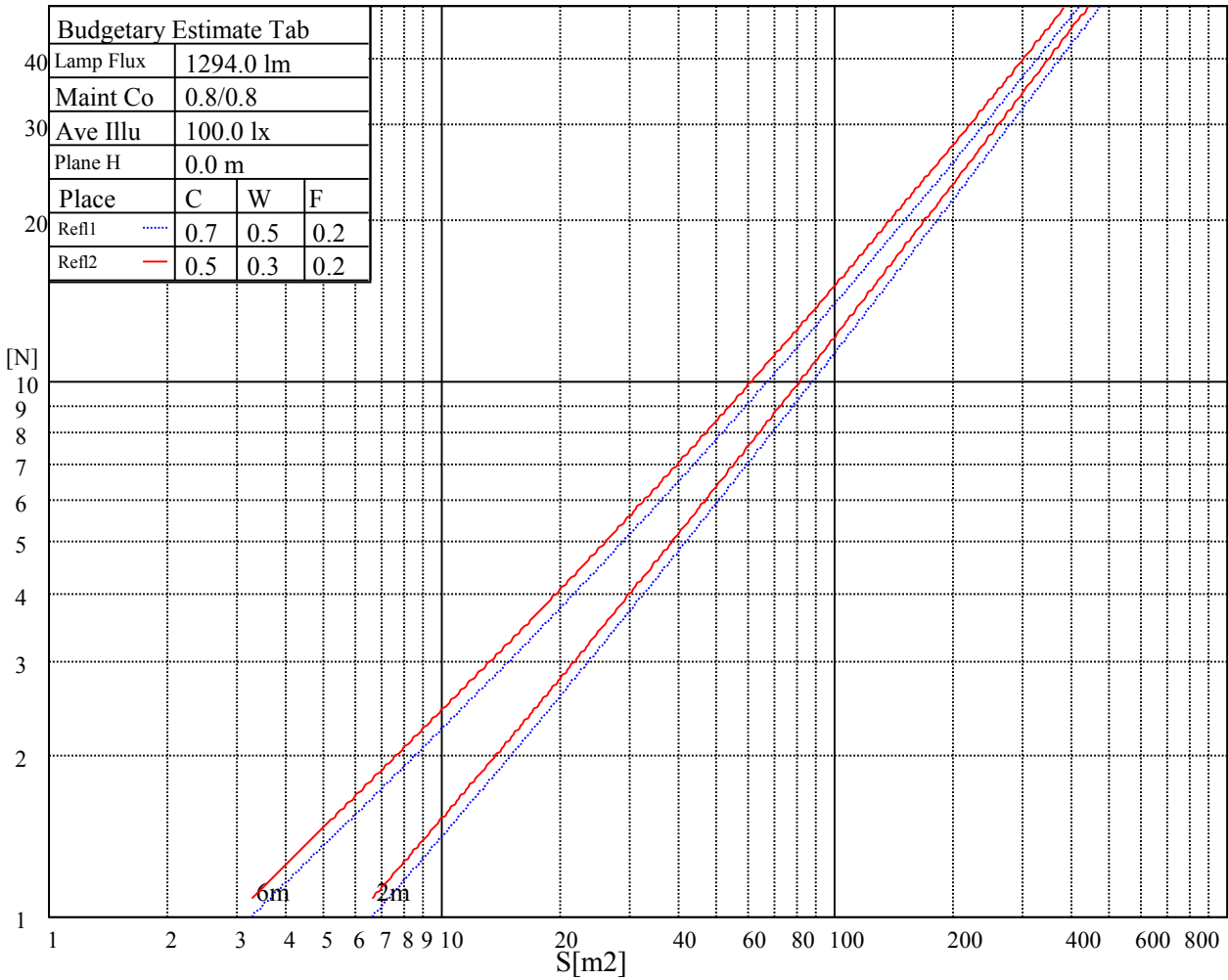
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3343	3343	3343	5423	5423	5423	16122	16122	16122

Glare Table

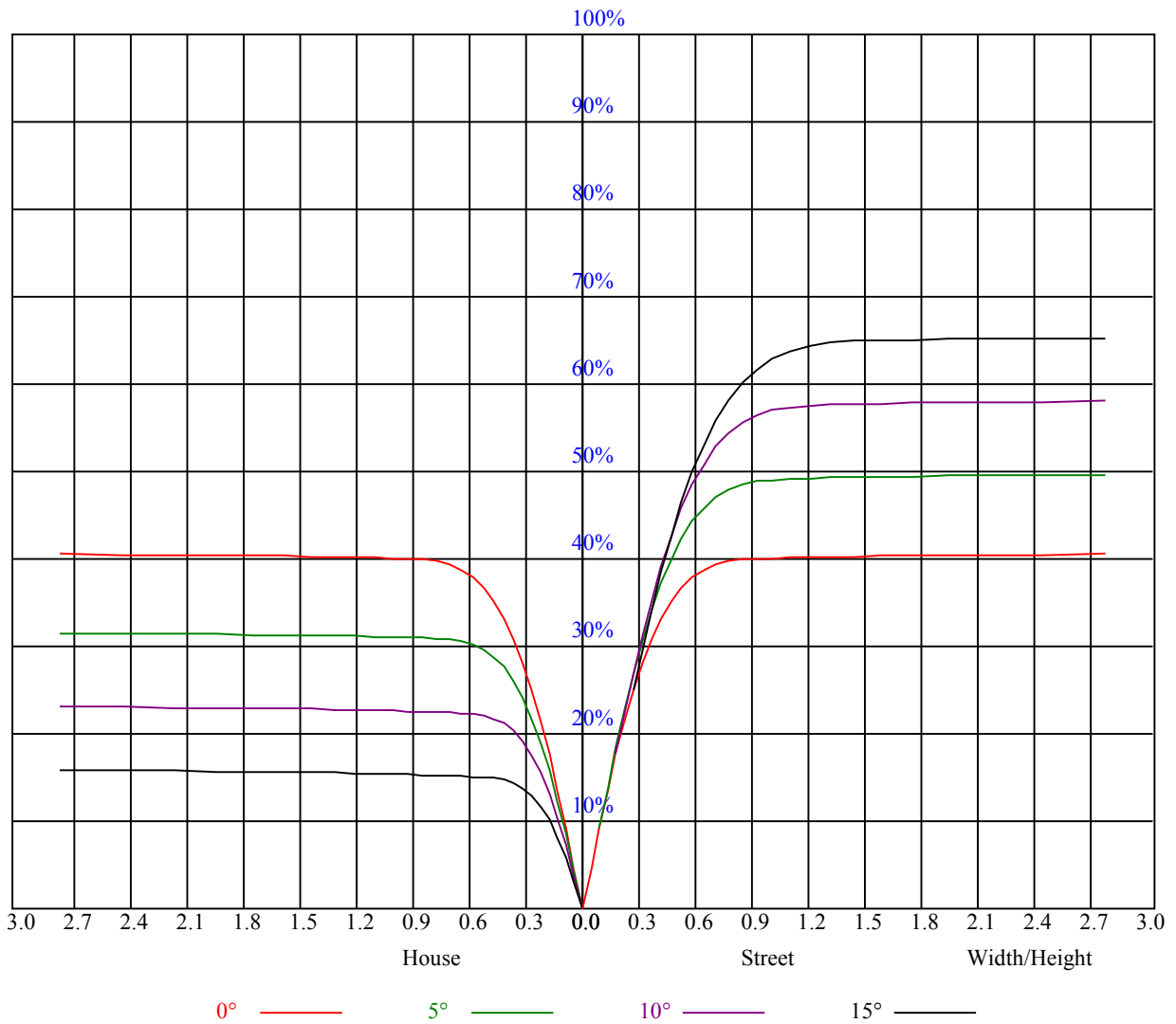
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.01	1.01	1.01	0.99	0.99	0.99	0.93	0.93	0.93	0.89	0.89	0.89	0.84	0.84	0.84	0.82
1	0.94	0.91	0.89	0.91	0.89	0.88	0.87	0.86	0.84	0.84	0.82	0.81	0.80	0.79	0.78	0.76
2	0.88	0.85	0.82	0.86	0.83	0.81	0.83	0.80	0.78	0.80	0.78	0.76	0.77	0.76	0.74	0.73
3	0.83	0.79	0.76	0.82	0.78	0.75	0.79	0.76	0.73	0.76	0.74	0.72	0.74	0.72	0.70	0.69
4	0.79	0.74	0.71	0.78	0.74	0.71	0.75	0.72	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.66
5	0.75	0.70	0.67	0.74	0.70	0.67	0.72	0.68	0.66	0.70	0.67	0.65	0.69	0.66	0.64	0.63
6	0.71	0.67	0.64	0.71	0.66	0.63	0.69	0.65	0.63	0.67	0.64	0.62	0.66	0.63	0.61	0.60
7	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
8	0.65	0.61	0.58	0.65	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.55
9	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.59	0.56	0.54	0.53
10	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.57	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	1848.60	1796.01	1611.93	1351.76	1042.92	758.13	465.51	290.38	38.27
45.0	1841.33	1816.15	1686.35	1395.40	1102.22	816.32	547.75	285.35	52.03
90.0	1846.36	1803.84	1639.35	1377.50	1066.47	800.48	513.96	233.93	48.06
135.0	1843.01	1807.76	1660.61	1408.27	1122.92	836.46	572.93	284.23	67.08
180.0	1848.60	1776.98	1591.23	1324.91	1018.30	777.26	474.80	199.02	43.53
225.0	1841.33	1747.33	1524.65	1262.80	961.68	683.71	404.97	149.11	35.02
270.0	1846.36	1768.59	1581.72	1290.22	1000.95	718.96	454.88	157.72	37.77
315.0	1843.01	1745.65	1538.08	1251.61	946.74	691.83	384.55	128.69	27.64
360.0	1848.60	1796.01	1611.93	1351.76	1042.92	758.13	465.51	290.38	38.27
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.26	8.11	6.71	6.55	6.49	6.43	6.49	6.43	6.43
45.0	17.12	8.67	6.88	6.71	6.60	6.60	6.55	6.55	6.55
90.0	16.84	8.50	6.77	6.66	6.55	6.55	6.55	6.60	6.60
135.0	18.80	9.12	6.88	6.66	6.55	6.49	6.49	6.49	6.49
180.0	15.72	8.17	6.71	6.55	6.49	6.49	6.43	6.43	6.43
225.0	11.64	7.61	6.71	6.60	6.55	6.49	6.49	6.49	6.49
270.0	11.75	7.83	6.66	6.55	6.55	6.49	6.49	6.49	6.49
315.0	10.97	7.44	6.60	6.49	6.49	6.43	6.43	6.43	6.49
360.0	13.26	8.11	6.71	6.55	6.49	6.43	6.49	6.43	6.43
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	6.43	6.49	6.43	6.49	6.43	6.43	6.43	6.43	6.49
45.0	6.49	6.60	6.55	6.55	6.49	6.49	6.49	6.49	6.49
90.0	6.49	6.43	6.43	6.43	6.49	6.43	6.43	6.43	6.49
135.0	6.43	6.60	6.43	6.43	6.43	6.43	6.43	6.43	6.49
180.0	6.43	6.43	6.43	6.43	6.38	6.43	6.43	6.43	6.43
225.0	6.49	6.55	6.55	6.49	6.49	6.49	6.49	6.55	6.60
270.0	6.49	6.43	6.49	6.49	6.49	6.49	6.49	6.49	6.55
315.0	6.43	6.43	6.43	6.49	6.43	6.43	6.43	6.49	6.49
360.0	6.43	6.49	6.43	6.49	6.43	6.43	6.43	6.43	6.49
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	6.60	6.77	6.99	7.55	8.62	9.85	11.19	12.25	13.04
45.0	6.55	6.55	6.60	6.88	7.50	8.50	9.62	10.63	11.58
90.0	6.49	6.49	6.55	6.94	7.67	8.78	10.02	11.08	11.92
135.0	6.49	6.49	6.55	6.88	7.72	8.84	10.24	11.36	12.31
180.0	6.43	6.49	6.60	7.16	8.11	9.51	10.85	11.97	12.76
225.0	6.66	6.83	7.05	7.55	8.45	9.57	10.57	11.47	11.97
270.0	6.66	6.77	7.05	7.55	8.56	9.62	10.80	11.75	12.31
315.0	6.66	6.77	7.11	7.78	8.78	10.13	11.30	12.31	12.81
360.0	6.60	6.77	6.99	7.55	8.62	9.85	11.19	12.25	13.04
C/γ(°)	180.0								
0.0	13.20								
45.0	11.97								
90.0	12.37								
135.0	12.87								
180.0	13.20								
225.0	11.97								
270.0	12.37								
315.0	12.87								
360.0	13.20								