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## Nata

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LumCAT: 2-1567-M	
Luminaire: BJB47.319.2131	
Report No: NT2017080811	Voltage(V): 38.5000
Test No: GC2017080811	Current(A): 0.5000
LampCAT: CREE CXA1816	Power (W): 19.2500
Lamp flux(lm): 2010.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1831.82  
Efficiency(%): 91.14%  
Lumens(lm)/Power(W): 97.03  
Central intensity(cd): 6312.004  
Maximum intensity(cd): 6312.004  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=24.7  
                                  [C90/270]Total=24.7  
Field angle(10%Imax): [C0/180]Total=63.2  
                                  [C90/270]Total=63.2  
Maximum s/h(1/2): C0\_180=0.42 C90\_270=0.42  
Maximum s/h(1/4): C0\_180=0.42 C90\_270=0.42  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 92.93%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.875%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2017/8/8  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.46

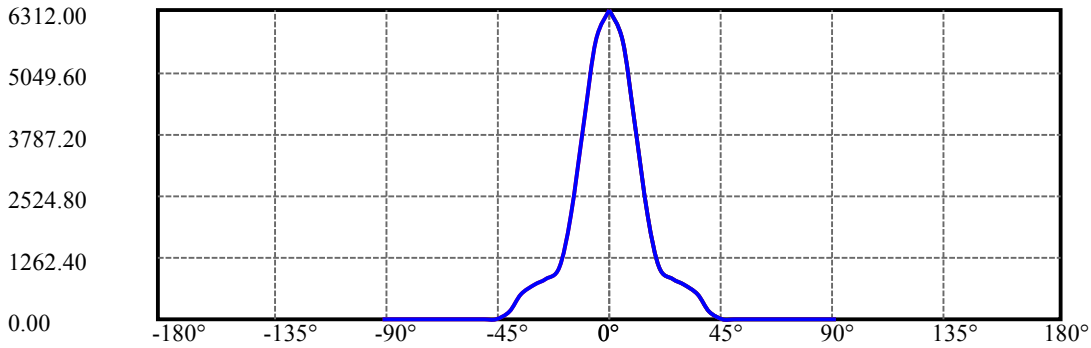
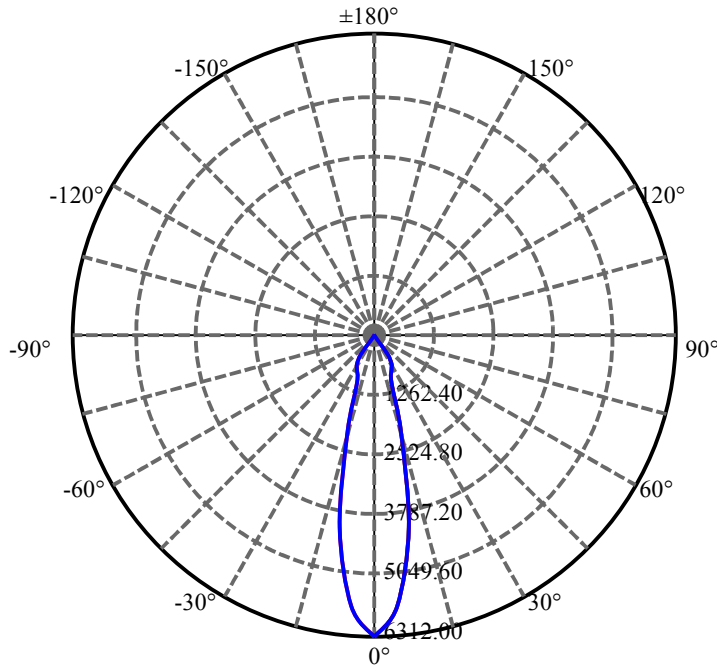
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6312.004	37.747	37.747	1.878%	2.061%
5.0	5671.385	270.941	308.688	13.480%	16.851%
10.0	4071.541	387.542	696.23	19.281%	38.008%
15.0	2135.700	302.988	999.218	15.074%	54.548%
20.0	1075.126	201.558	1200.776	10.028%	65.551%
25.0	814.016	188.569	1389.345	9.382%	75.845%
30.0	695.937	190.735	1580.08	9.489%	86.257%
35.0	491.974	154.676	1734.756	7.695%	94.701%
40.0	155.998	54.964	1789.72	2.735%	97.702%
45.0	17.530	6.795	1796.514	.338%	98.073%
50.0	10.970	4.606	1801.121	.229%	98.324%
55.0	9.391	4.217	1805.337	.210%	98.554%
60.0	8.654	4.108	1809.445	.204%	98.779%
65.0	8.195	4.071	1813.516	.203%	99.001%
70.0	7.868	4.053	1817.569	.202%	99.222%
75.0	7.666	4.059	1821.628	.202%	99.444%
80.0	7.562	4.082	1825.71	.203%	99.666%
85.0	7.471	4.080	1829.789	.203%	99.889%
90.0	7.409	2.030	1831.82	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1580.08	78.61%	86.26%
0-40	1789.72	89.04%	97.70%
0-60	1809.45	90.02%	98.78%
0-90	1829.79	91.03%	99.89%
0-120	1829.79	91.03%	99.89%
0-180	1831.82	91.14%	100.00%
60-90	24.45	1.22%	1.33%
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%
0-27.00	1465.46	72.91%	80.00%

ZONAL LUMEN SUMMARY

0-10	696.23
10-20	504.55
20-30	379.30
30-40	209.64
40-50	11.40
50-60	8.32
60-70	8.12
70-80	8.14
80-90	4.08
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: —————

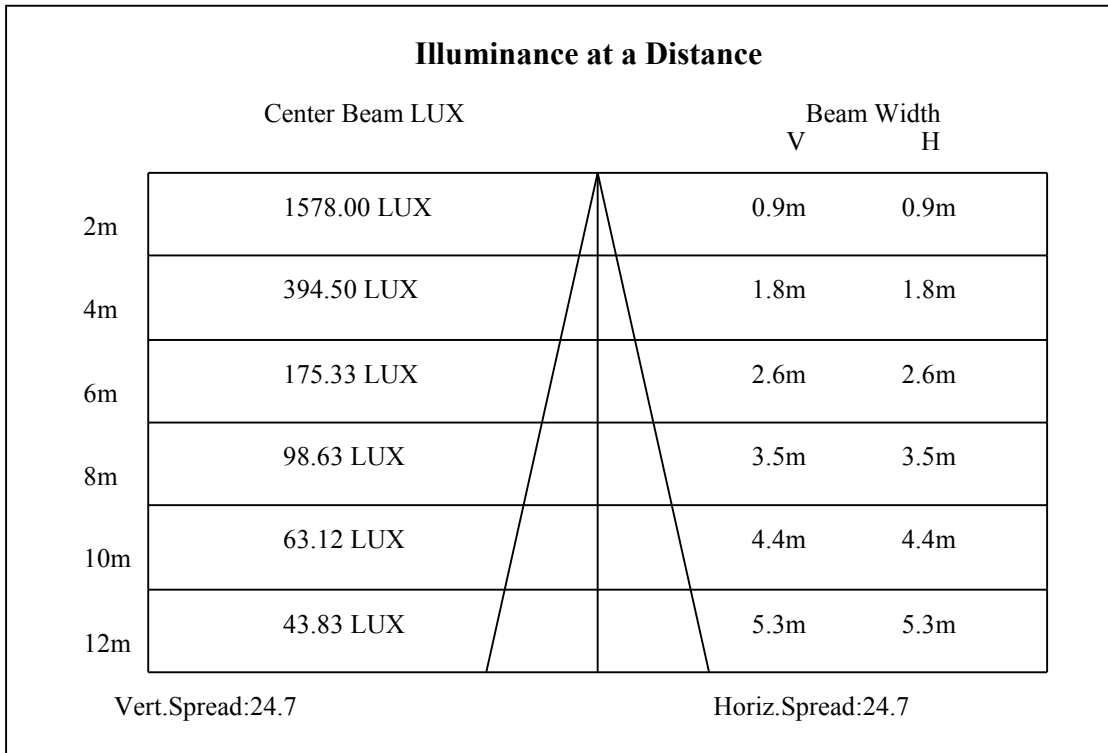
C90/C270: —————

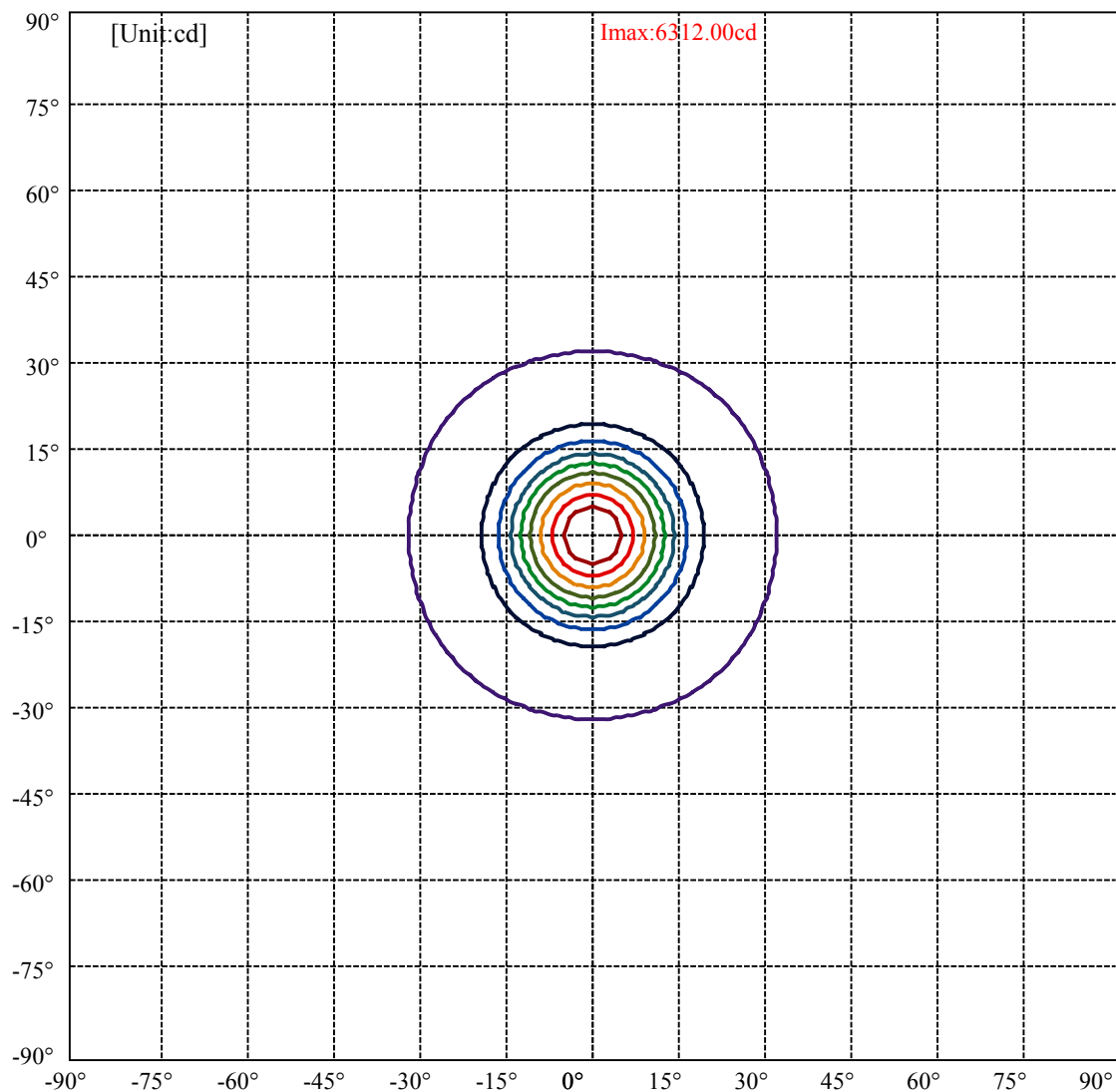
Field angle(10%Imax):C0/180Left:31.6 Right:31.6

:C90/270Left:31.6 Right:31.6

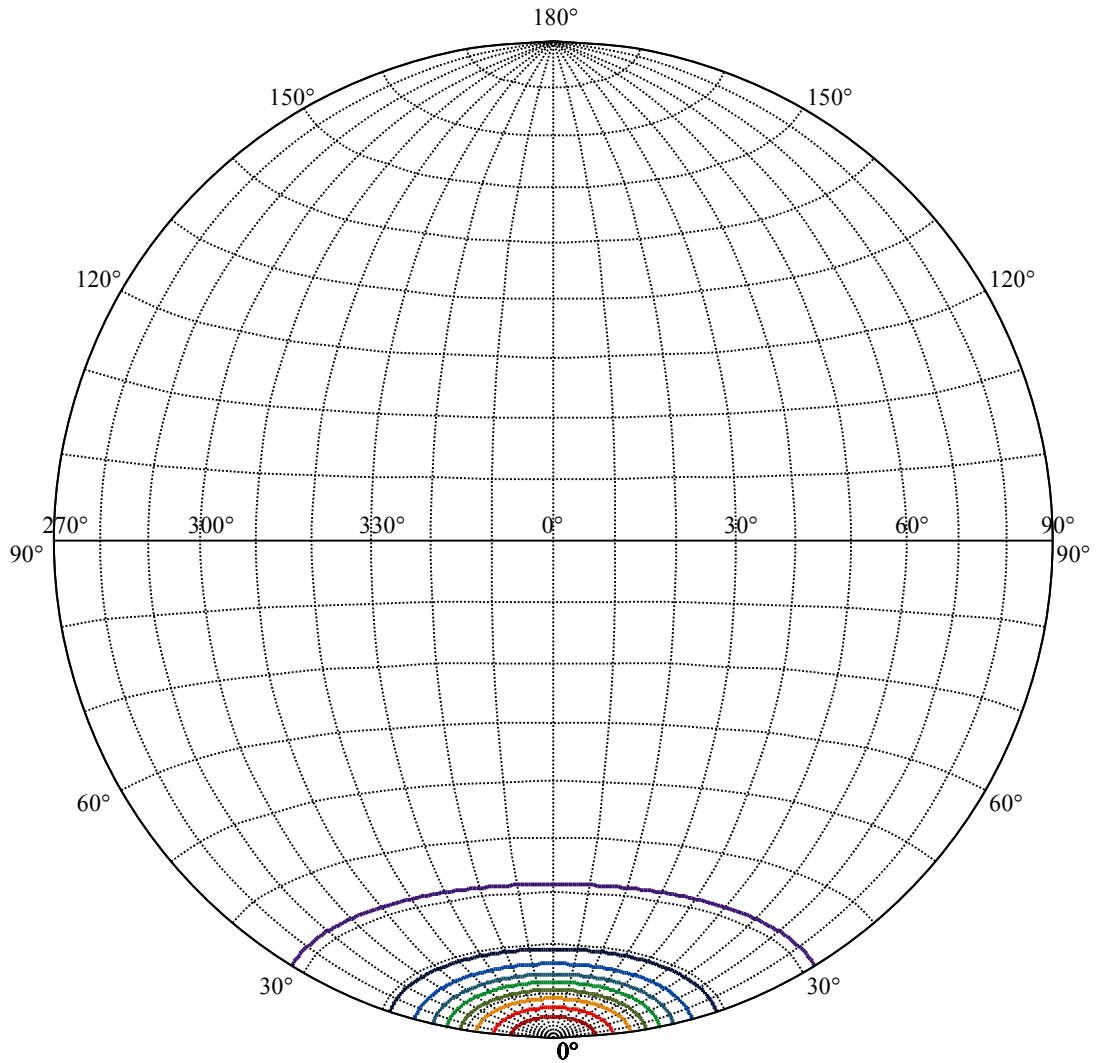
Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4

:C90/270Left:12.4 Right:12.4





(10%Imax) 631.2	—
(20%Imax) 1262.4	—
(30%Imax) 1893.6	—
(40%Imax) 2524.8	—
(50%Imax) 3156	—
(60%Imax) 3787.2	—
(70%Imax) 4418.4	—
(80%Imax) 5049.6	—
(90%Imax) 5680.8	—



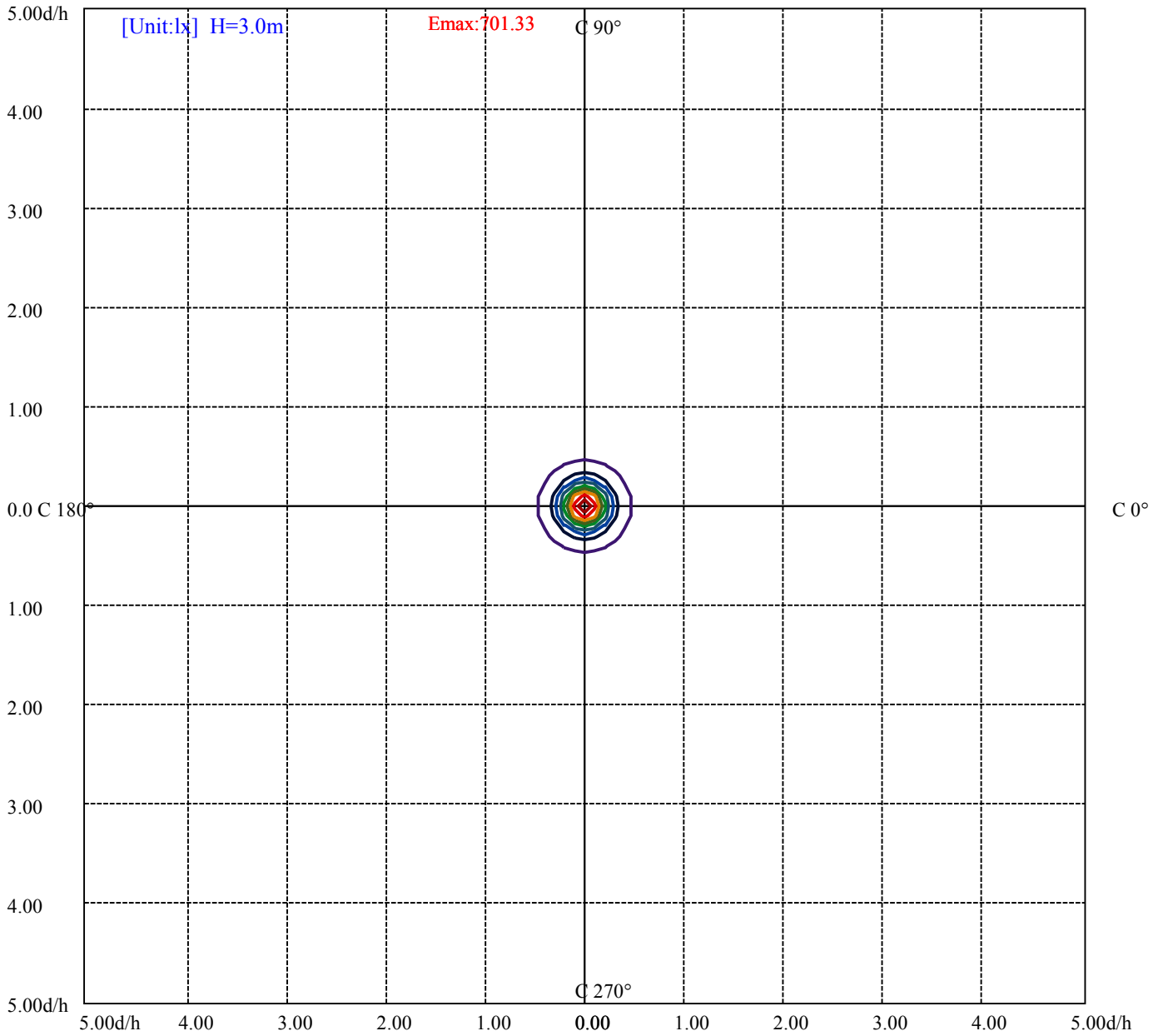
House

[Unit:cd]

Road

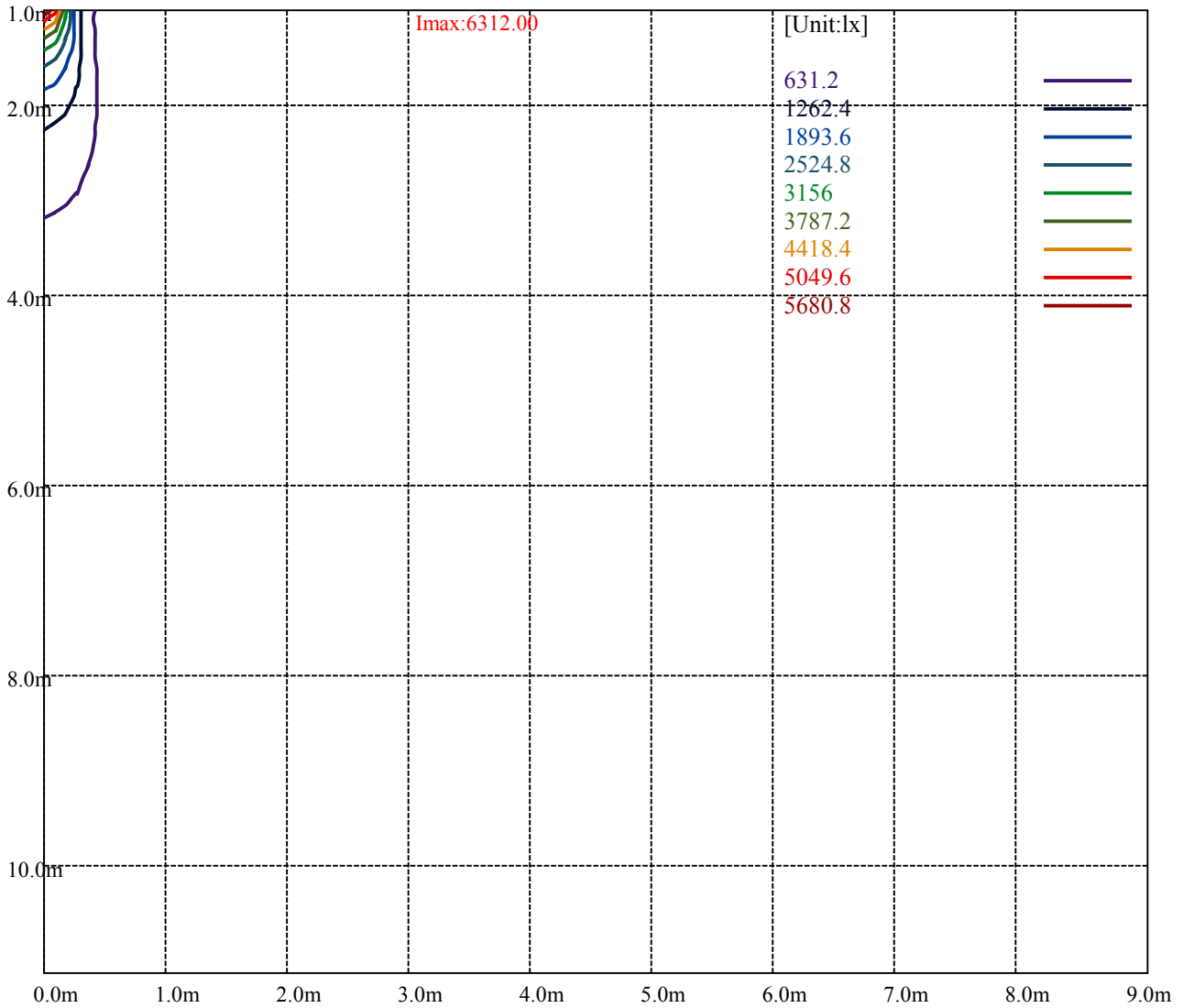
Imax:6312.00

(10%Imax) 631.2	—
(20%Imax) 1262.4	—
(30%Imax) 1893.6	—
(40%Imax) 2524.8	—
(50%Imax) 3156	—
(60%Imax) 3787.2	—
(70%Imax) 4418.4	—
(80%Imax) 5049.6	—
(90%Imax) 5680.8	—



(10%Emax) 70.13311	—
(20%Emax) 140.2667	—
(30%Emax) 210.4	—
(40%Emax) 280.5322	—
(50%Emax) 350.6656	—
(60%Emax) 420.7989	—
(70%Emax) 490.9323	—
(80%Emax) 561.0656	—
(90%Emax) 631.1989	—





Luminance Table

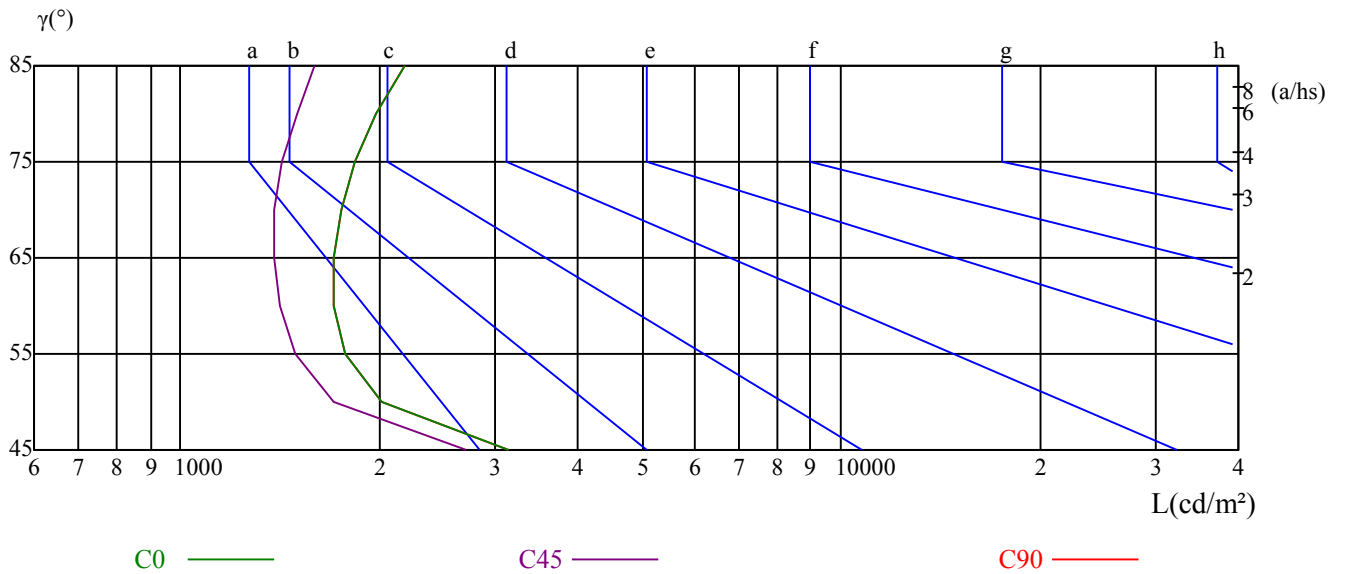
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3134	2011	1780	1711	1708	1747	1836	1982	2181
C45	2707	1711	1491	1410	1382	1386	1425	1499	1601
C90	3134	2011	1780	1711	1708	1747	1836	1982	2181

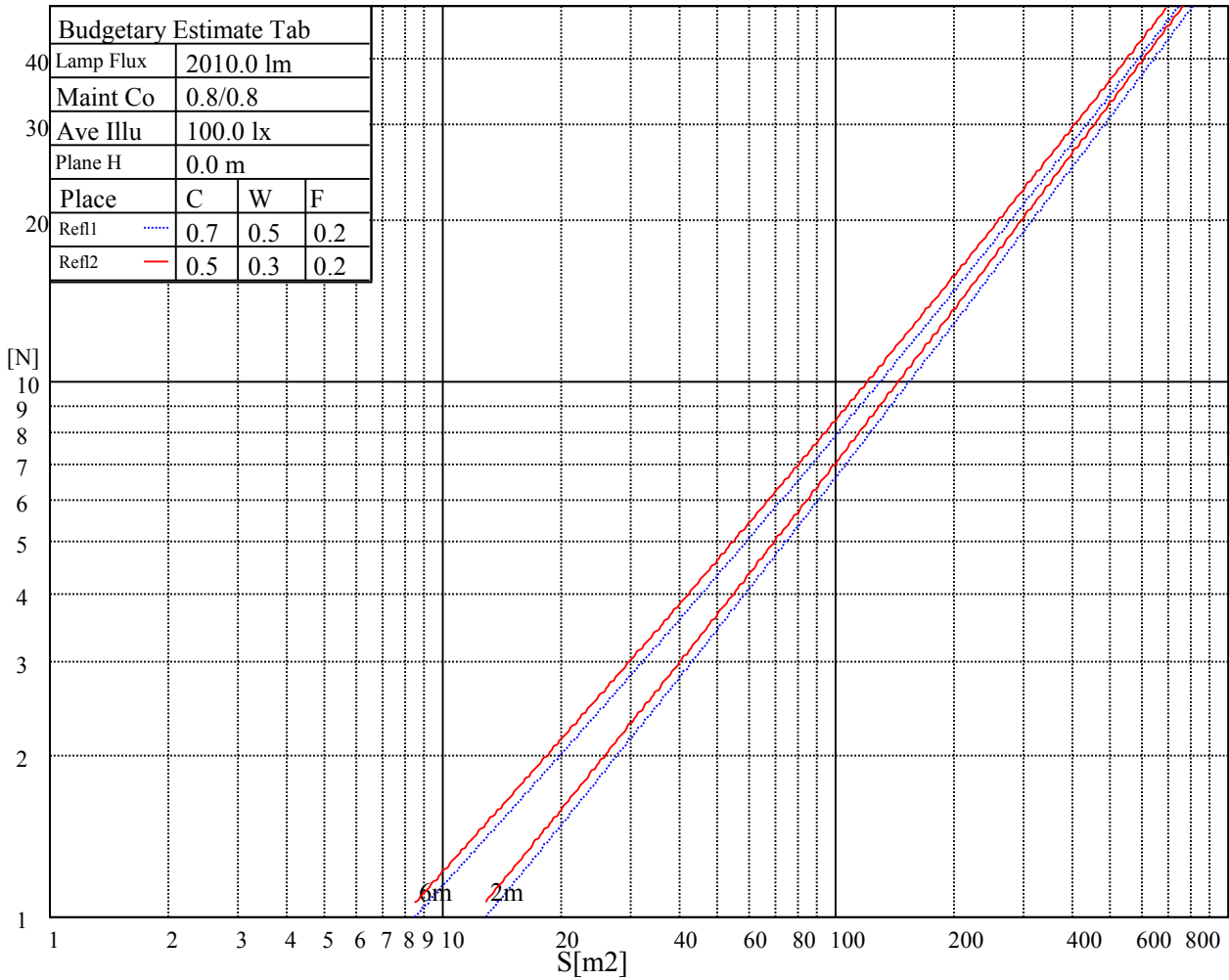
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3957	3957	3957	6045	6045	6045	17494	17494	17494

Glare Table

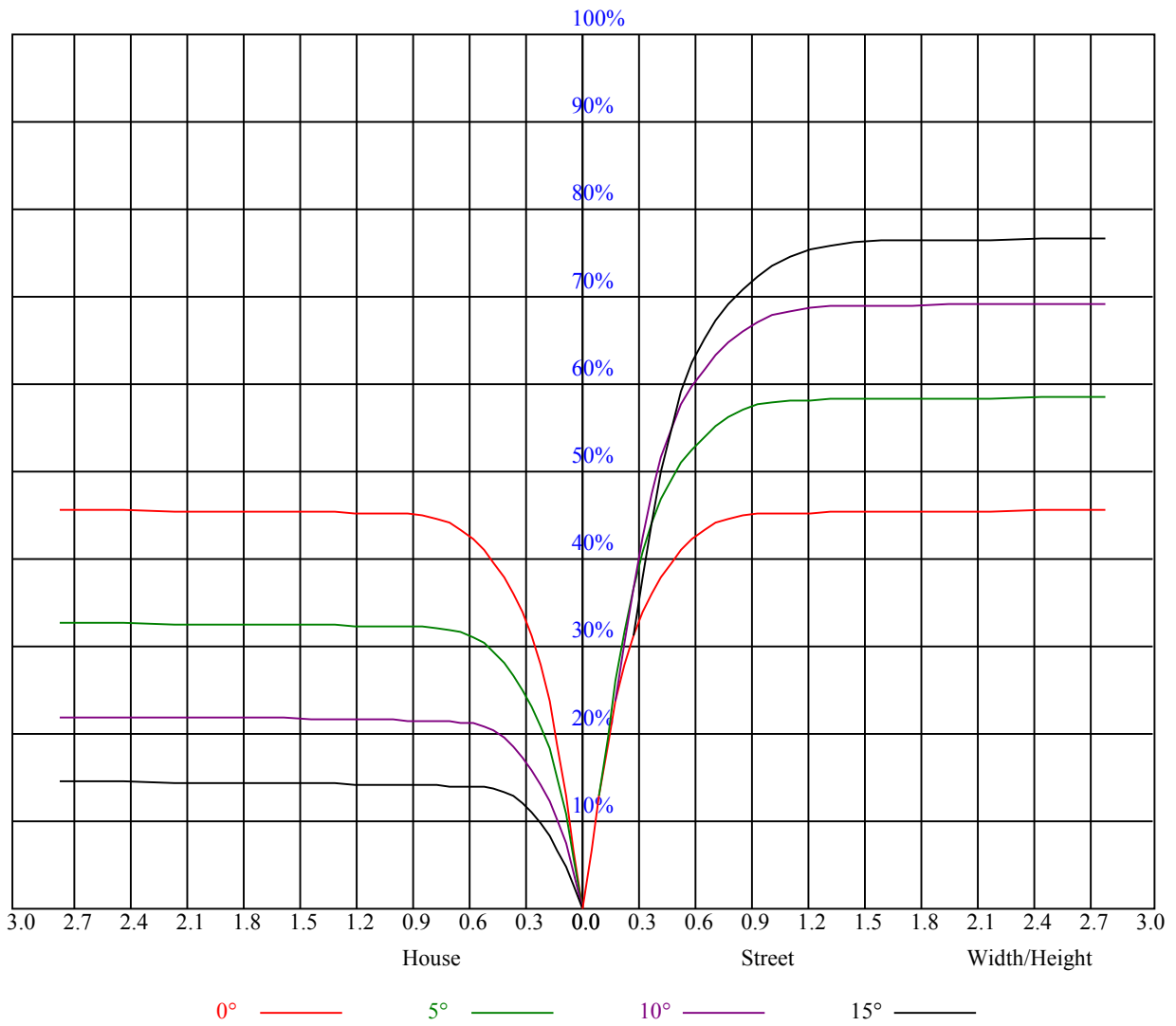
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	0.99	0.97	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.96	0.93	0.90	0.95	0.91	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.92	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.80	0.78
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.75
5	0.84	0.79	0.76	0.83	0.79	0.75	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.72
6	0.80	0.76	0.72	0.80	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.73	0.70	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
8	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.72	0.68	0.66	0.65
9	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.70	0.66	0.63	0.69	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.61



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	6290.30	6189.01	4883.43	3080.87	1345.66	878.74	750.74	619.96	283.27
45.0	6329.81	5664.78	3986.88	1961.72	1014.53	789.70	680.62	479.72	175.25
90.0	6273.60	5124.40	3260.07	1290.56	904.95	753.19	618.51	351.16	33.67
135.0	6354.30	5285.79	3561.15	1679.57	956.65	779.68	671.71	400.69	46.58
180.0	6290.30	5036.47	3316.84	1469.76	908.40	765.49	645.17	335.58	29.33
225.0	6329.81	5722.65	4095.40	2133.68	1062.67	805.72	708.61	531.75	141.63
270.0	6273.60	6182.89	4804.96	2814.30	1318.39	876.51	753.52	646.67	296.07
315.0	6354.30	6165.08	4663.60	2655.14	1089.77	863.10	738.61	570.26	242.20
360.0	6290.30	6189.01	4883.43	3080.87	1345.66	878.74	750.74	619.96	283.27

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	23.26	12.35	9.91	9.02	8.40	8.07	7.79	7.68	7.57
45.0	16.14	10.35	9.29	8.51	8.13	7.79	7.62	7.46	7.40
90.0	12.41	9.91	8.96	8.40	8.01	7.68	7.57	7.46	7.40
135.0	14.25	10.24	9.13	8.63	8.13	7.85	7.68	7.57	7.46
180.0	13.36	10.13	8.96	8.51	8.07	7.85	7.62	7.57	7.46
225.0	17.92	10.57	9.35	8.51	8.18	7.79	7.62	7.57	7.51
270.0	22.20	12.74	9.79	8.79	8.35	7.96	7.74	7.57	7.46
315.0	20.70	11.46	9.74	8.85	8.29	7.96	7.68	7.62	7.51
360.0	23.26	12.35	9.91	9.02	8.40	8.07	7.79	7.68	7.57

C/γ(°)	90.0
0.0	7.46
45.0	7.40
90.0	7.35
135.0	7.40
180.0	7.40
225.0	7.40
270.0	7.40
315.0	7.46
360.0	7.46