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## Nata

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LumCAT: 2-1564-M	
Luminaire: BJB47.319.6105	
Report No: NT2017072707	Voltage(V): 38.0000
Test No: GC2017072707	Current(A): 0.3500
LampCAT: CXA1512	Power (W): 13.3000
Lamp flux(lm): 1488.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 68	Width(mm): 68
Phm Type: C	Height(mm): 45

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## Photometric Results

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Lumens(lm): 1332.42  
Efficiency(%): 89.54%  
Lumens(lm)/Power(W): 100.18  
Central intensity(cd): 2386.062  
Maximum intensity(cd): 2386.062  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=39.2  
                                  [C90/270]Total=39.2  
Field angle(10%Imax): [C0/180]Total=75.9  
                                  [C90/270]Total=75.9  
Maximum s/h(1/2): C0\_180=0.63 C90\_270=0.63  
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(%): 89.76%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.480%

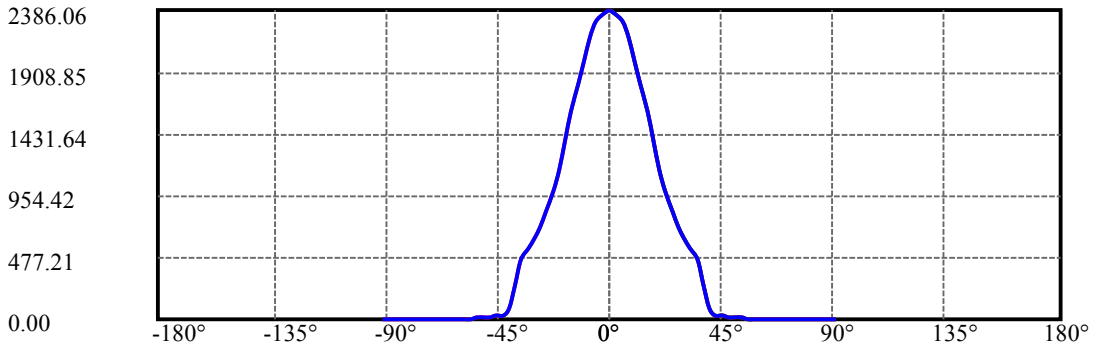
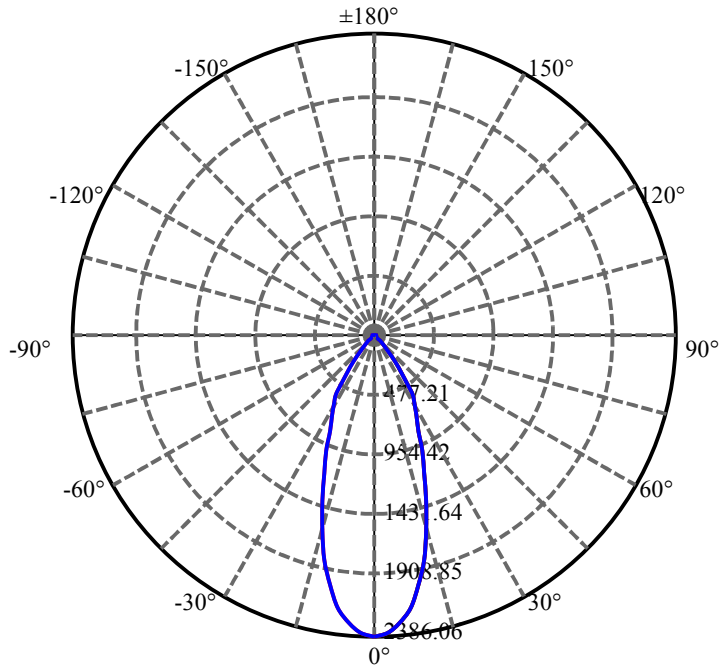
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2386.062	3.568	3.568	.240%	.268%
2.5	2363.802	28.265	31.833	1.900%	2.389%
5.0	2292.359	54.770	86.603	3.681%	6.500%
7.5	2171.943	77.716	164.319	5.223%	12.332%
10.0	2007.145	95.546	259.864	6.421%	19.503%
12.5	1816.399	107.773	367.638	7.243%	27.592%
15.0	1600.262	113.540	481.178	7.630%	36.113%
17.5	1376.473	113.468	594.646	7.626%	44.629%
20.0	1157.317	108.509	703.155	7.292%	52.773%
22.5	988.574	103.708	806.863	6.970%	60.556%
25.0	831.296	96.309	903.172	6.472%	67.784%
27.5	711.207	90.025	993.197	6.050%	74.541%
30.0	625.698	85.763	1078.959	5.764%	80.977%
32.5	554.526	81.677	1160.637	5.489%	87.107%
35.0	456.246	71.739	1232.375	4.821%	92.491%
37.5	272.456	45.468	1277.843	3.056%	95.904%
40.0	85.850	15.128	1292.971	1.017%	97.039%
42.5	35.422	6.560	1299.531	.441%	97.531%
45.0	23.026	4.463	1303.995	.300%	97.866%
47.5	14.831	2.998	1306.992	.201%	98.091%
50.0	10.094	2.120	1309.112	.142%	98.251%
52.5	8.007	1.741	1310.853	.117%	98.381%
55.0	6.963	1.564	1312.417	.105%	98.499%
57.5	6.449	1.491	1313.908	.100%	98.610%
60.0	6.136	1.457	1315.364	.098%	98.720%
62.5	5.934	1.443	1316.807	.097%	98.828%
65.0	5.788	1.438	1318.245	.097%	98.936%
67.5	5.683	1.439	1319.685	.097%	99.044%
70.0	5.600	1.443	1321.127	.097%	99.152%
72.5	5.628	1.471	1322.599	.099%	99.263%
75.0	5.697	1.509	1324.107	.101%	99.376%
77.5	5.683	1.521	1325.628	.102%	99.490%
80.0	5.628	1.519	1327.148	.102%	99.604%
82.5	5.593	1.520	1328.668	.102%	99.718%
85.0	5.572	1.522	1330.189	.102%	99.832%
87.5	5.461	1.496	1331.685	.101%	99.945%
90.0	5.377	0.737	1332.422	.050%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1078.96	72.51%	80.98%
0-40	1292.97	86.89%	97.04%
0-60	1315.36	88.40%	98.72%
0-90	1331.69	89.49%	99.94%
0-120	1331.69	89.49%	99.94%
0-180	1332.42	89.54%	100.00%
60-90	17.78	1.19%	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%
0-29.62	1065.94	71.64%	80.00%

ZONAL LUMEN SUMMARY

0-10	259.86
10-20	443.29
20-30	375.80
30-40	214.01
40-50	16.14
50-60	6.25
60-70	5.76
70-80	6.02
80-90	4.54
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: —————

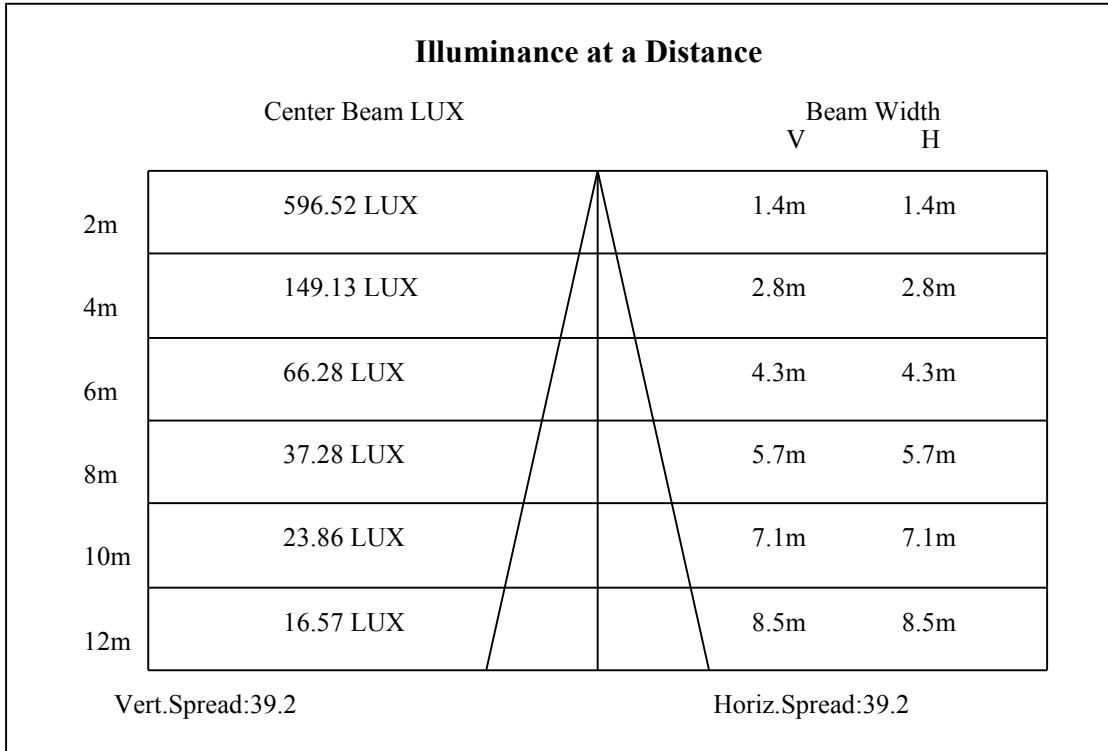
C90/C270: —————

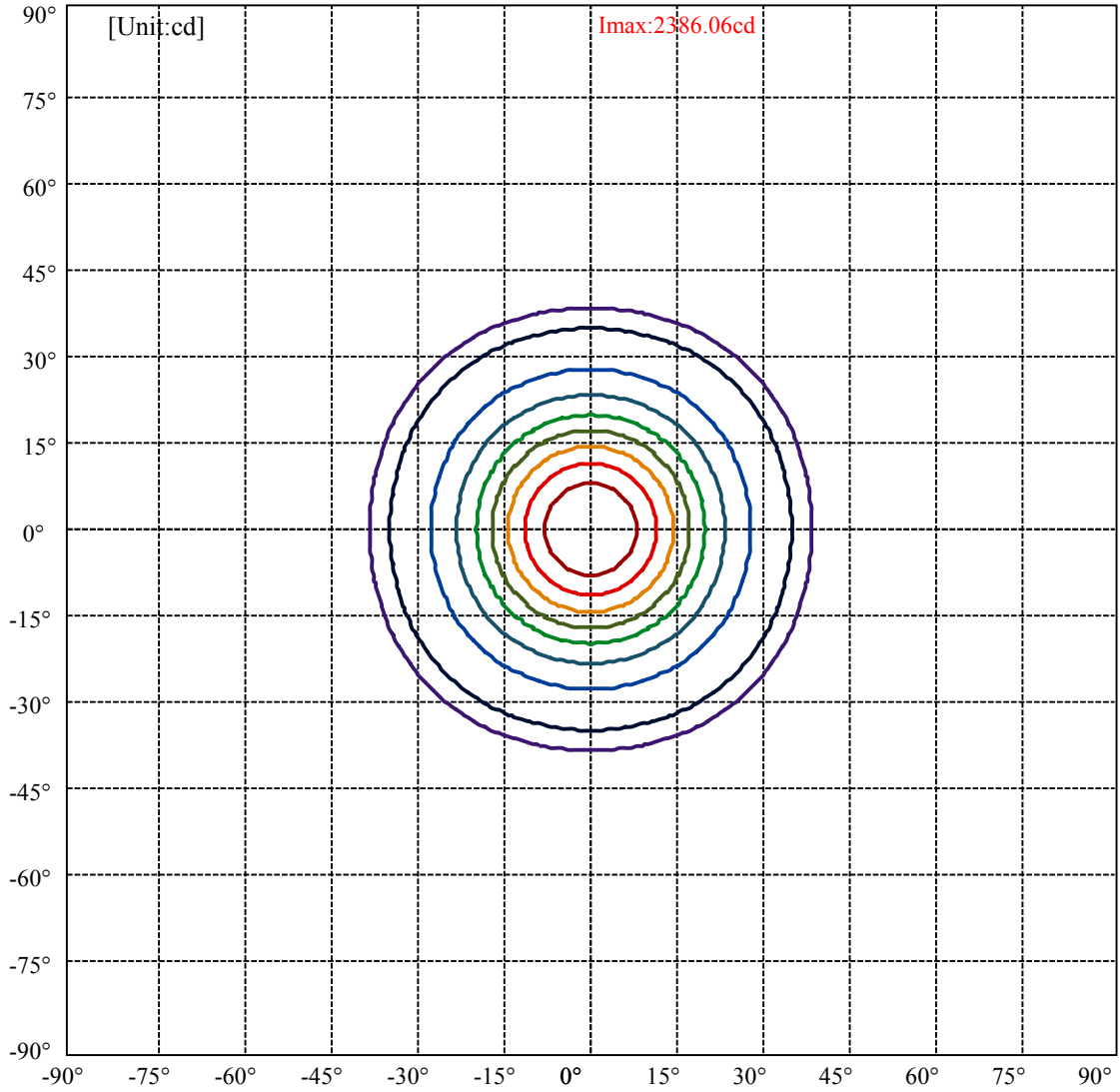
Field angle(10%Imax):C0/180Left:38.0 Right:38.0

:C90/270Left:38.0 Right:38.0

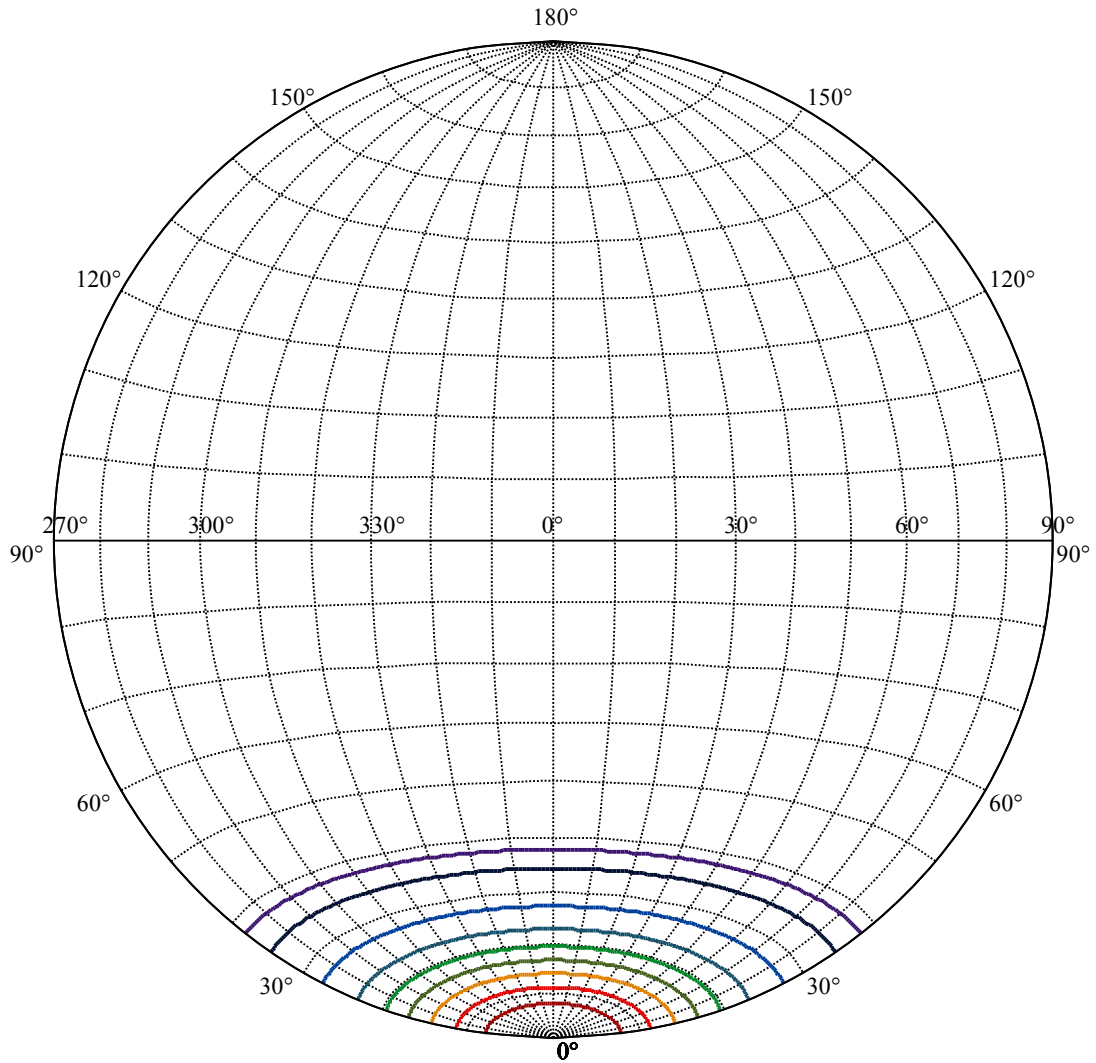
Beam Angle(50%Imax):C0/180Left:19.6 Right:19.6

:C90/270Left:19.6 Right:19.6





(10%Imax) 238.606	—
(20%Imax) 477.212	—
(30%Imax) 715.819	—
(40%Imax) 954.425	—
(50%Imax) 1193.03	—
(60%Imax) 1431.64	—
(70%Imax) 1670.24	—
(80%Imax) 1908.85	—
(90%Imax) 2147.46	—



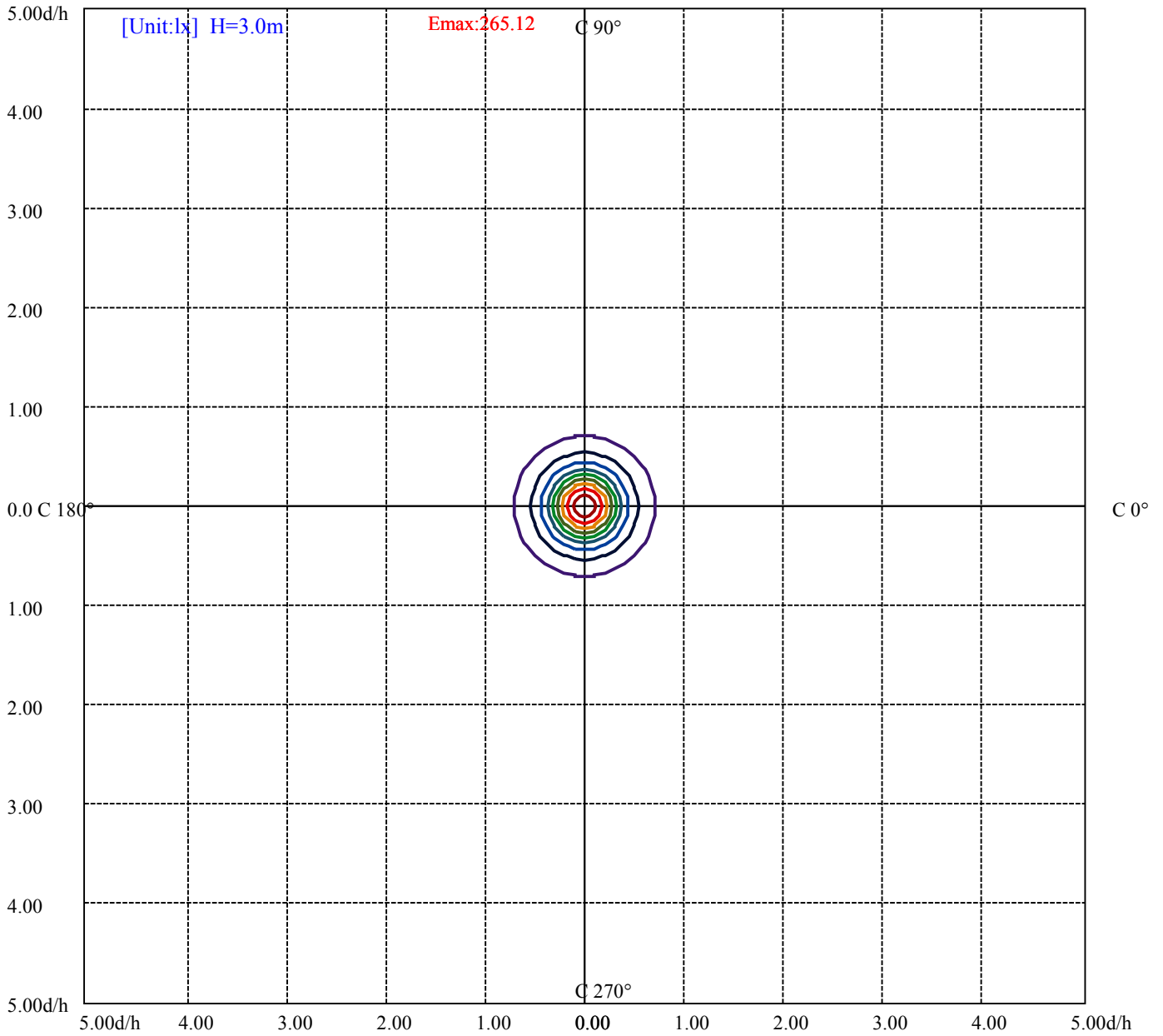
House

[Unit:cd]

Road

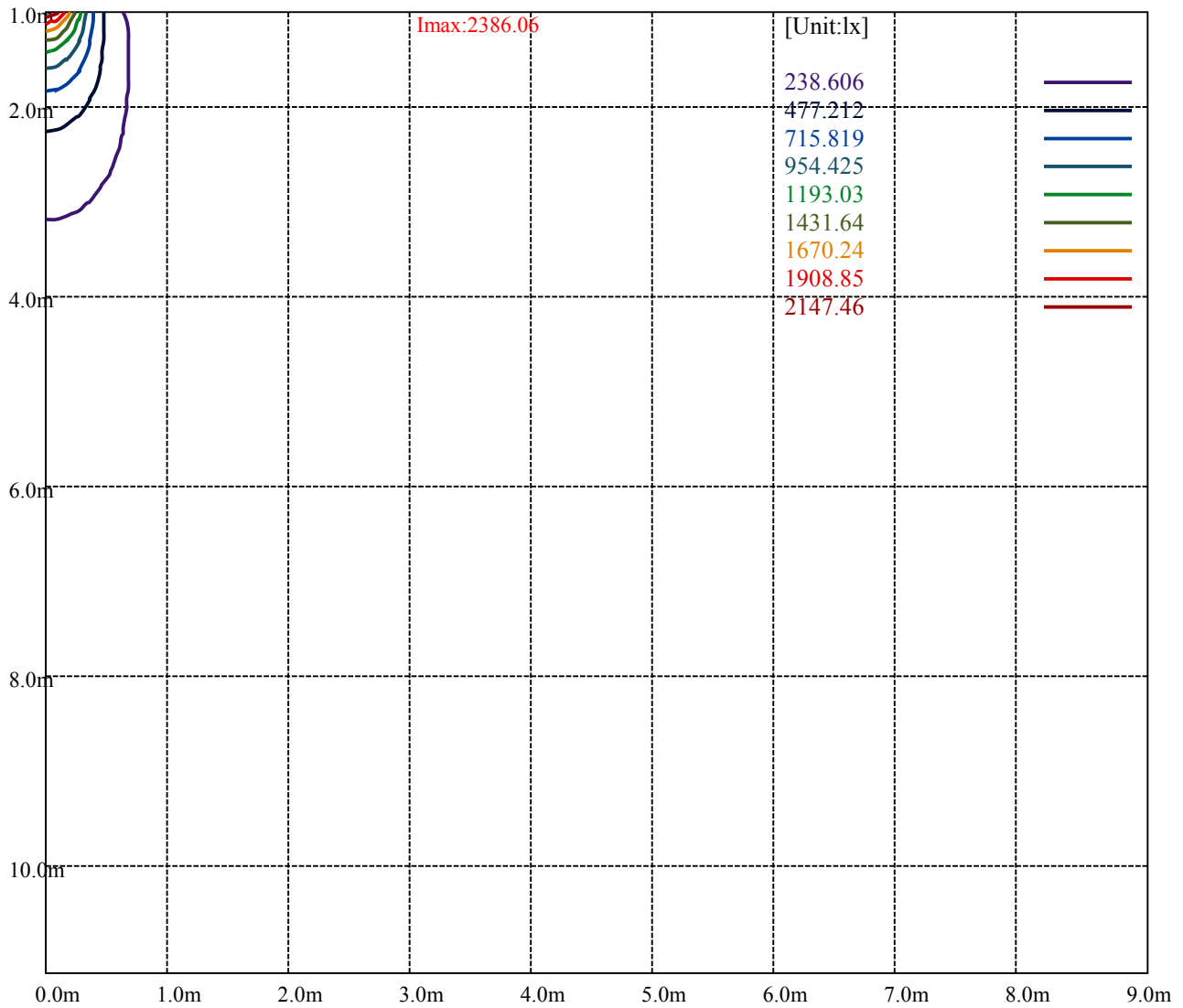
**I<sub>max</sub>:2386.06**

(10%I <sub>max</sub> ) 238.606	—
(20%I <sub>max</sub> ) 477.212	—
(30%I <sub>max</sub> ) 715.819	—
(40%I <sub>max</sub> ) 954.425	—
(50%I <sub>max</sub> ) 1193.03	—
(60%I <sub>max</sub> ) 1431.64	—
(70%I <sub>max</sub> ) 1670.24	—
(80%I <sub>max</sub> ) 1908.85	—
(90%I <sub>max</sub> ) 2147.46	—



- (10%E<sub>max</sub>) 26.51178 ———
- (20%E<sub>max</sub>) 53.02356 ———
- (30%E<sub>max</sub>) 79.53533 ———
- (40%E<sub>max</sub>) 106.0471 ———
- (50%E<sub>max</sub>) 132.5589 ———
- (60%E<sub>max</sub>) 159.0711 ———
- (70%E<sub>max</sub>) 185.5822 ———
- (80%E<sub>max</sub>) 212.0944 ———
- (90%E<sub>max</sub>) 238.6055 ———





Luminance Table

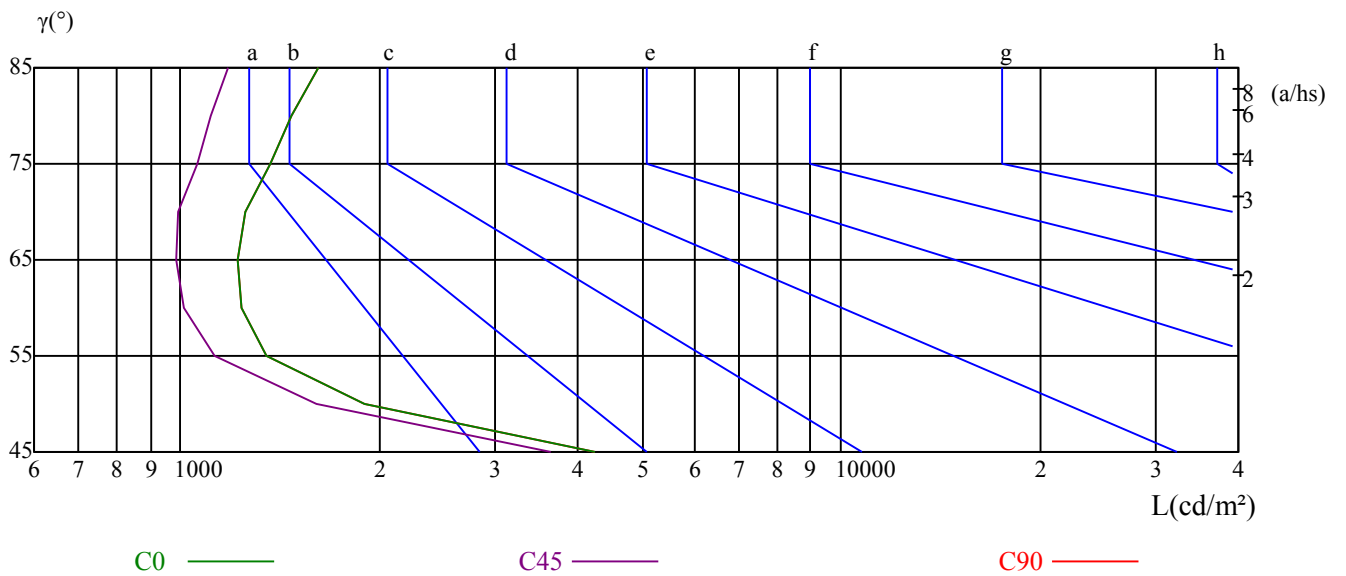
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4238	1899	1350	1237	1224	1256	1372	1475	1614
C45	3638	1605	1124	1013	985	991	1060	1111	1182
C90	4238	1899	1350	1237	1224	1256	1372	1475	1614

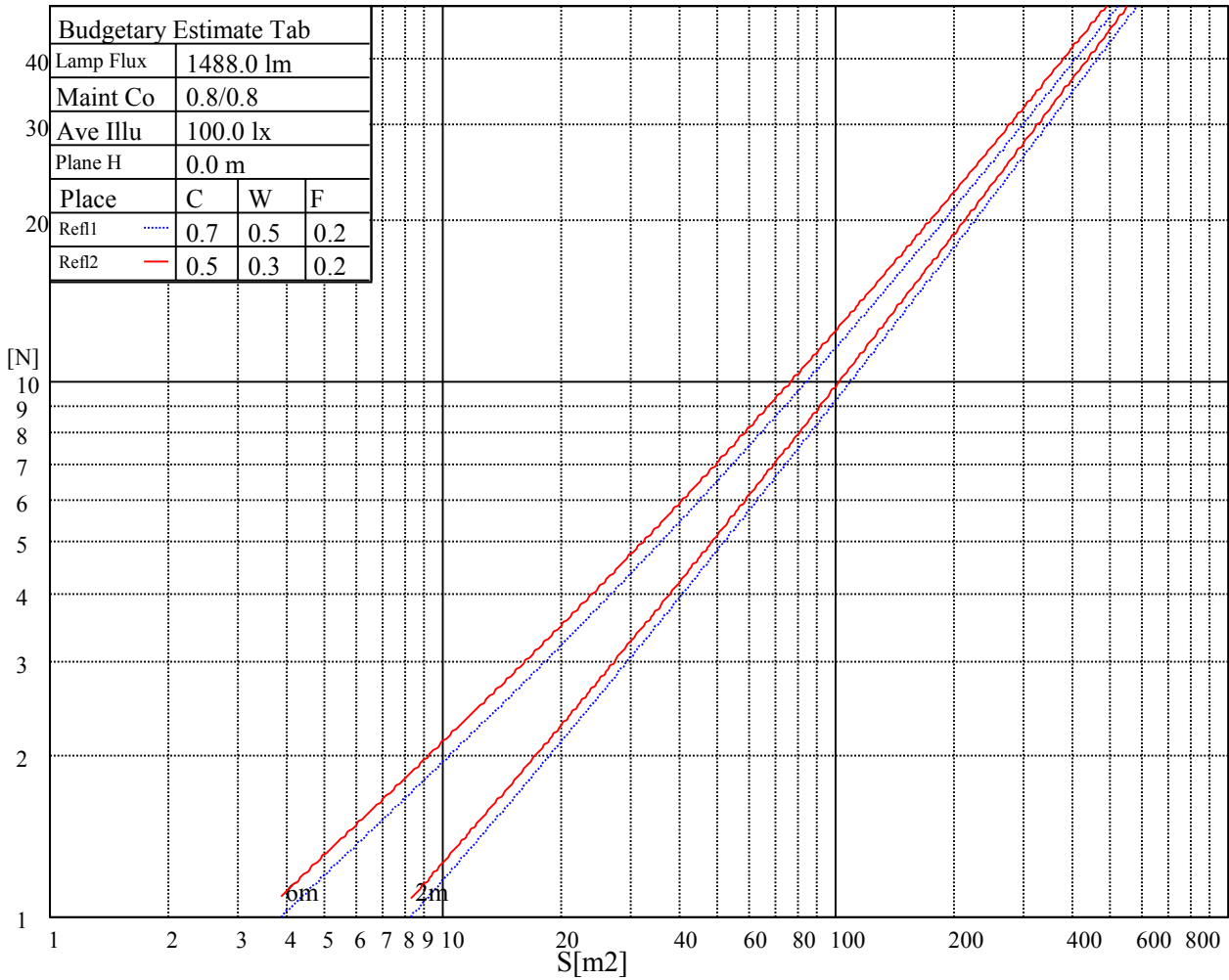
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2962	2962	2962	4761	4761	4761	13826	13826	13826

Glare Table

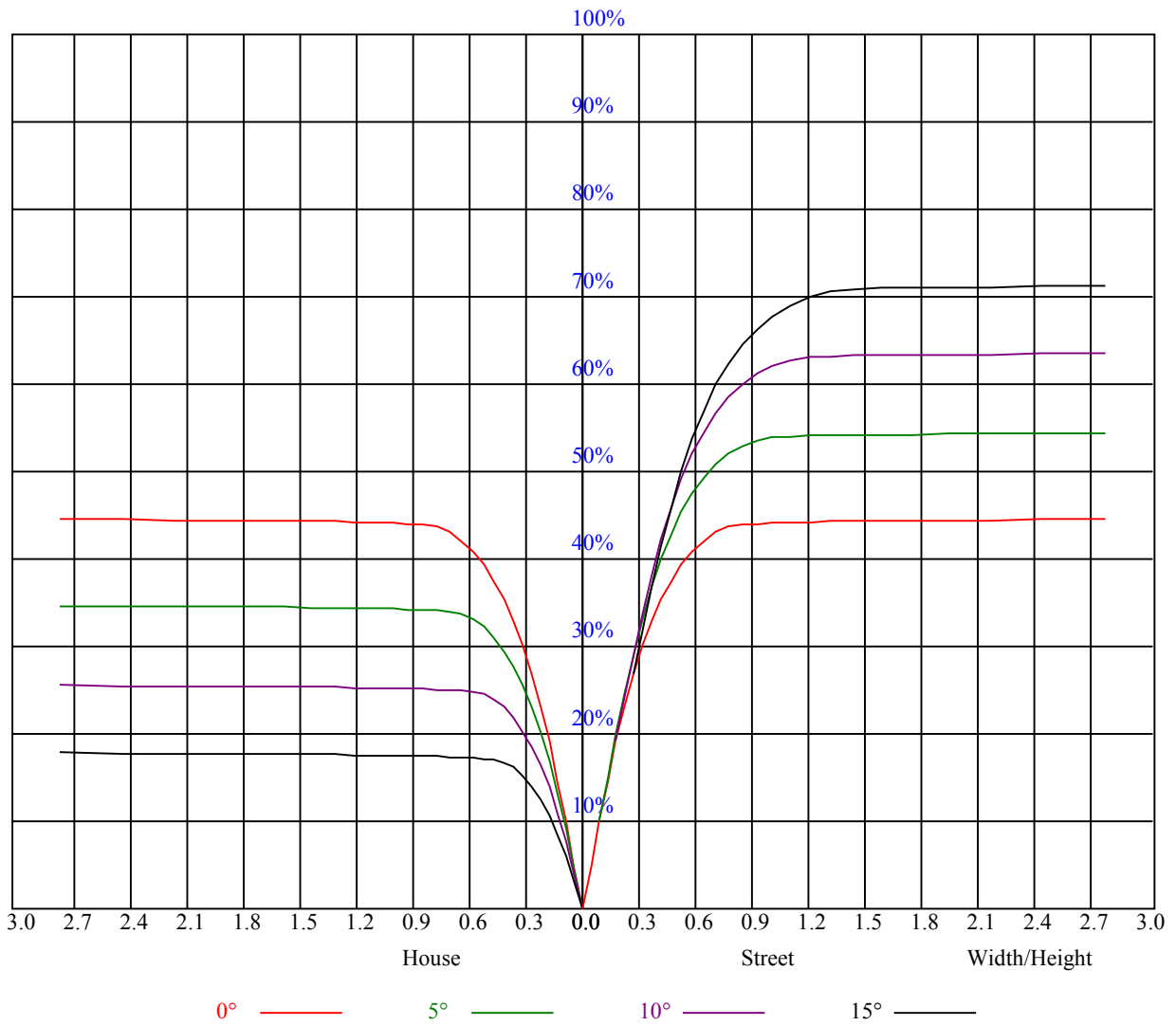
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.92	0.92	0.92	0.90
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.87	0.86	0.84
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.86	0.84	0.83	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.75
4	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.67
6	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
7	0.71	0.66	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.61
8	0.68	0.63	0.60	0.67	0.63	0.60	0.67	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
9	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	0.56	0.55
10	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53



Intensity data(cd)

C/γ(°)	0.0	2.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
0.0	2391.35	2379.66	2317.89	2202.69	2041.30	1847.63	1631.15	1413.55	1195.95
45.0	2383.56	2374.65	2318.45	2205.47	2051.32	1876.02	1658.97	1433.03	1214.32
90.0	2390.24	2373.54	2307.87	2184.88	2021.82	1827.60	1601.10	1381.27	1160.89
135.0	2379.11	2362.97	2299.52	2197.68	2051.32	1860.99	1666.77	1425.24	1204.86
180.0	2391.35	2351.28	2263.35	2133.68	1961.72	1780.85	1561.58	1329.52	1109.53
225.0	2383.56	2349.61	2271.14	2141.47	1966.17	1771.95	1537.65	1332.30	1110.42
270.0	2390.24	2365.19	2288.95	2167.63	1997.89	1806.45	1594.97	1366.80	1159.78
315.0	2379.11	2353.51	2271.70	2142.03	1965.61	1759.70	1549.90	1330.07	1102.79
360.0	2391.35	2379.66	2317.89	2202.69	2041.30	1847.63	1631.15	1413.55	1195.95

C/γ(°)	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5
0.0	1016.20	860.37	732.93	642.22	575.44	504.76	342.26	131.56	42.57
45.0	1035.68	875.96	754.08	658.36	579.89	508.66	349.49	135.90	42.52
90.0	997.05	843.79	724.08	633.26	558.91	469.70	285.60	92.60	36.45
135.0	1017.87	855.37	721.80	640.55	562.64	472.48	288.83	86.48	34.62
180.0	937.51	778.79	677.67	595.92	527.08	394.12	191.22	49.08	28.38
225.0	956.60	797.71	678.50	603.88	536.04	394.74	185.82	47.69	27.49
270.0	985.59	825.87	698.43	619.40	552.62	453.00	283.82	69.40	34.84
315.0	962.10	812.51	702.16	612.00	543.60	452.50	252.60	74.07	36.51
360.0	1016.20	860.37	732.93	642.22	575.44	504.76	342.26	131.56	42.57

C/γ(°)	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0
0.0	28.05	18.20	11.24	8.63	7.29	6.62	6.29	6.07	5.84
45.0	28.27	18.53	11.69	8.79	7.35	6.62	6.23	6.07	5.84
90.0	23.82	15.08	10.30	8.01	6.90	6.40	6.12	5.84	5.79
135.0	22.20	14.53	10.02	7.85	6.90	6.46	6.12	5.90	5.84
180.0	18.70	12.35	9.13	7.57	6.73	6.34	6.07	5.90	5.73
225.0	18.53	11.91	8.85	7.40	6.73	6.29	6.07	5.84	5.79
270.0	21.65	13.69	9.79	7.90	6.96	6.46	6.07	5.95	5.73
315.0	22.98	14.36	9.74	7.90	6.85	6.40	6.12	5.90	5.73
360.0	28.05	18.20	11.24	8.63	7.29	6.62	6.29	6.07	5.84

C/γ(°)	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5
0.0	5.73	5.62	5.51	5.68	5.84	5.57	5.51	5.51	5.45
45.0	5.73	5.57	5.57	5.57	5.57	5.51	5.57	5.57	5.45
90.0	5.62	5.57	5.51	5.51	5.51	5.57	5.51	5.62	5.51
135.0	5.68	5.57	5.57	5.62	5.57	5.62	5.51	5.45	5.62
180.0	5.73	5.73	6.29	6.40	5.95	5.68	5.62	5.57	5.40
225.0	5.68	5.62	5.57	5.57	5.62	5.62	5.62	5.57	5.40
270.0	5.68	5.62	5.57	5.68	5.90	5.90	5.84	5.79	5.40
315.0	5.62	5.51	5.45	5.57	5.51	5.57	5.57	5.51	5.45
360.0	5.73	5.62	5.51	5.68	5.84	5.57	5.51	5.51	5.45

C/γ(°)	90.0
0.0	5.34
45.0	5.34
90.0	5.34
135.0	5.40
180.0	5.40
225.0	5.40
270.0	5.40
315.0	5.40
360.0	5.34