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Nata

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LumCAT: 3-1941-M  
Luminaire: BJB 47.319.2021  
Report No: GC2017070605  
Test No: NT-0010  
LampCAT: SEOUL SAWx15  
Lamp flux(lm): 2402.0  
Number of Lamps: 1  
Length(mm): 78  
Phm Type: C

Voltage(V): 34.5600  
Current(A): 0.5000  
Power (W): 17.2800  
PF: 0.0000  
Ballast type: DC  
Width(mm): 78  
Height(mm): 0

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Photometric Results

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Lumens(lm): 2150.78  
Efficiency(%): 89.54%  
Lumens(lm)/Power(W): 124.47  
Central intensity(cd): 2644.842  
Maximum intensity(cd): 2644.842  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=57.8  
                                  [C90/270]Total=57.8  
Field angle(10%Imax): [C0/180]Total=76.5  
                                  [C90/270]Total=76.5  
Maximum s/h(1/2): C0\_180=0.94 C90\_270=0.94  
Maximum s/h(1/4): C0\_180=0.85 C90\_270=0.85  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 89.54%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.667%

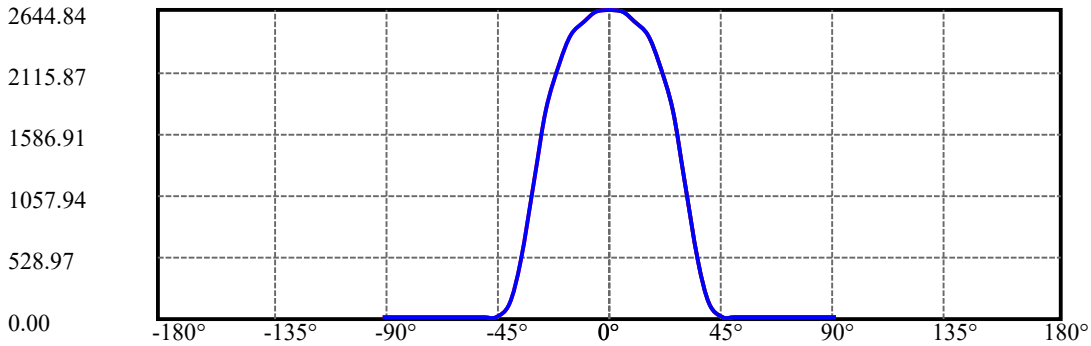
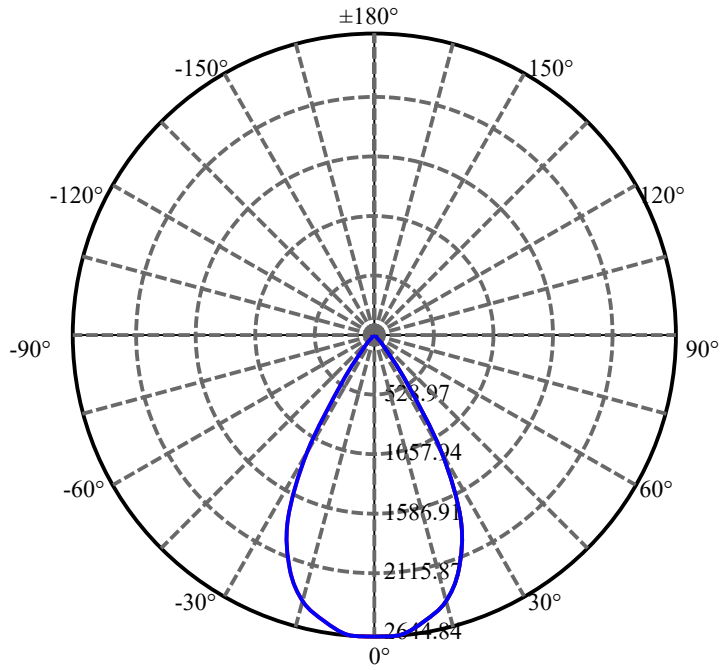
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2644.842	0.000	0	.000%	.000%
5.0	2636.147	63.133	63.133	2.628%	2.935%
10.0	2550.791	185.553	248.686	7.725%	11.563%
15.0	2429.679	295.438	544.124	12.300%	25.299%
20.0	2188.082	380.568	924.692	15.844%	42.993%
25.0	1790.590	417.289	1341.982	17.373%	62.395%
30.0	1192.850	377.557	1719.539	15.718%	79.949%
35.0	507.153	250.337	1969.876	10.422%	91.589%
40.0	131.894	106.620	2076.496	4.439%	96.546%
45.0	22.177	28.528	2105.024	1.188%	97.872%
50.0	12.883	7.084	2112.108	.295%	98.202%
55.0	10.873	5.165	2117.274	.215%	98.442%
60.0	10.101	4.848	2122.122	.202%	98.667%
65.0	9.489	4.762	2126.884	.198%	98.889%
70.0	9.127	4.714	2131.597	.196%	99.108%
75.0	8.939	4.722	2136.32	.197%	99.327%
80.0	8.897	4.773	2141.092	.199%	99.549%
85.0	8.904	4.837	2145.929	.201%	99.774%
90.0	8.828	4.855	2150.784	.202%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1719.54	71.59%	79.95%
0-40	2076.50	86.45%	96.55%
0-60	2122.12	88.35%	98.67%
0-90	2145.93	89.34%	99.77%
0-120	2145.93	89.34%	99.77%
0-180	2150.78	89.54%	100.00%
60-90	28.66	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%
0-30.02	1720.63	71.63%	80.00%

ZONAL LUMEN SUMMARY

0-10	248.69
10-20	676.01
20-30	794.85
30-40	356.96
40-50	35.61
50-60	10.01
60-70	9.48
70-80	9.49
80-90	4.84
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: —————

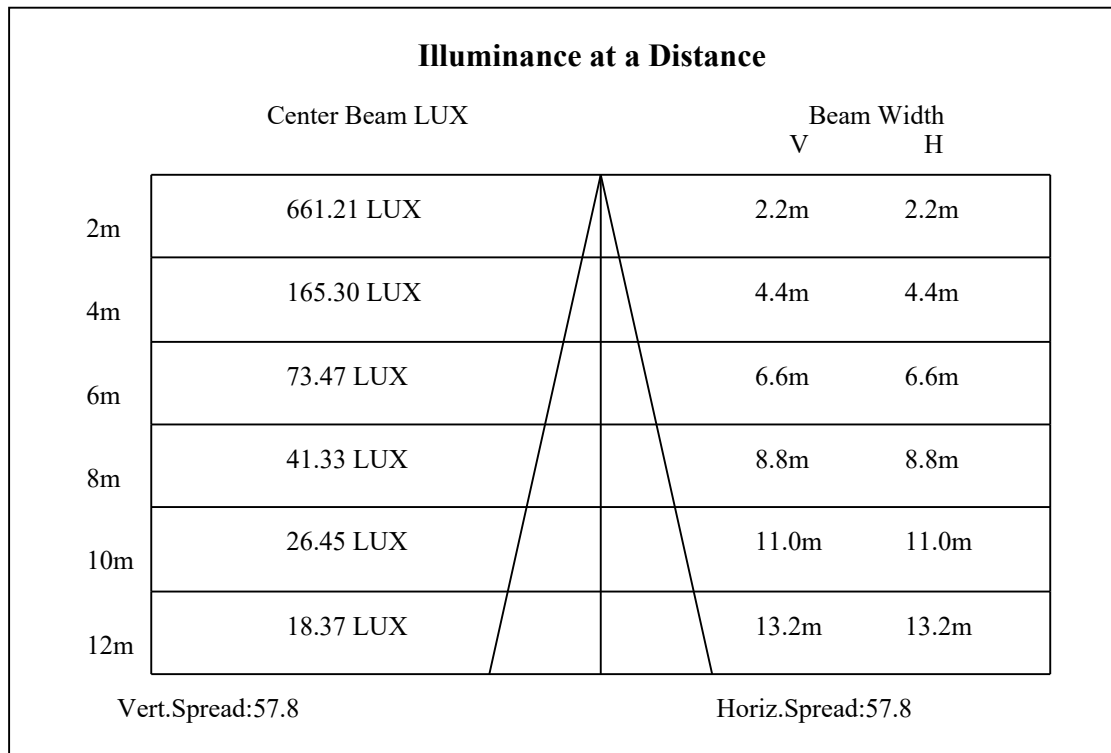
C90/C270: —————

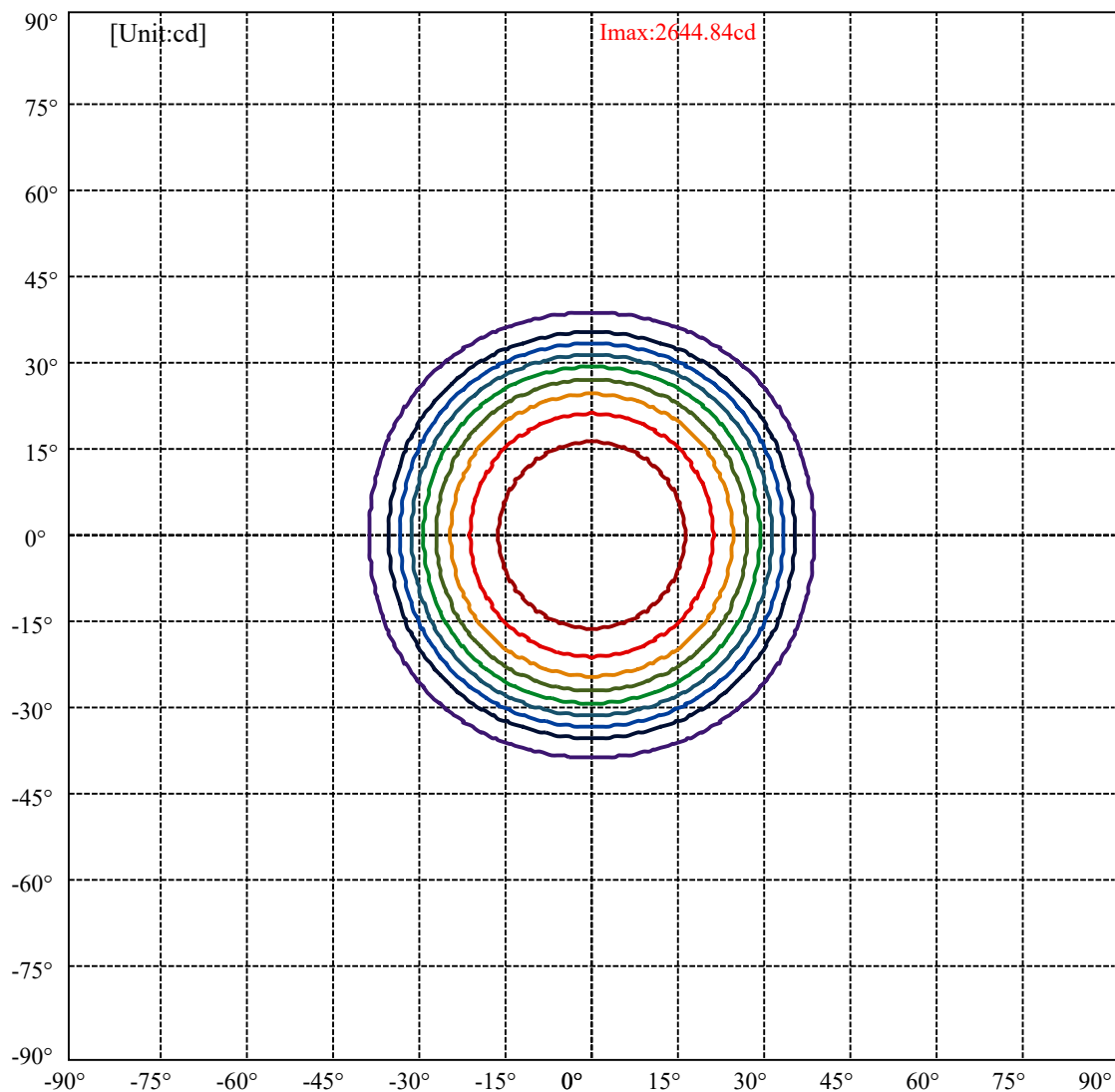
Field angle(10%Imax):C0/180Left:38.2 Right:38.2

:C90/270Left:38.2 Right:38.2

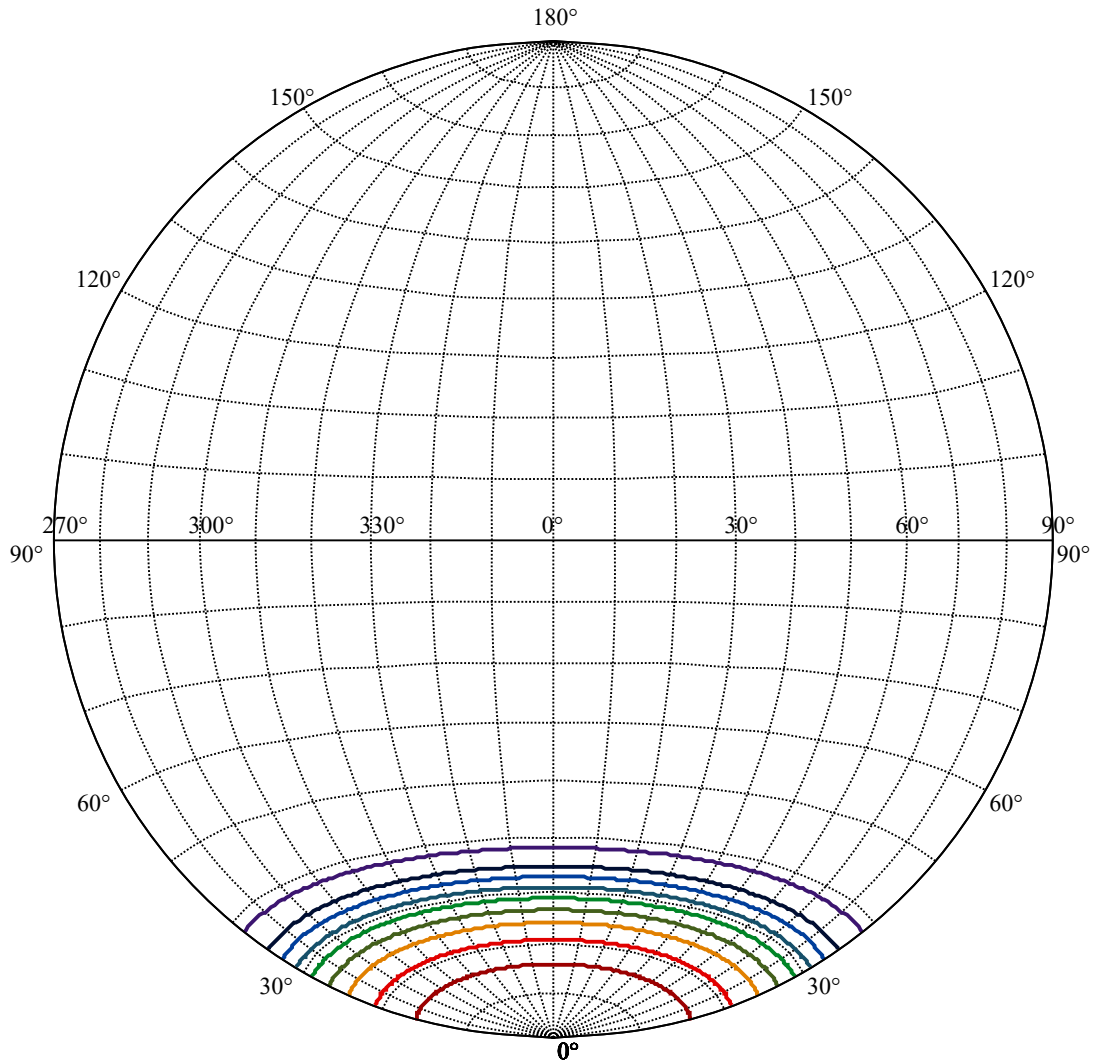
Beam Angle(50%Imax):C0/180Left:28.9 Right:28.9

:C90/270Left:28.9 Right:28.9





(10%Imax) 264.484	—
(20%Imax) 528.968	—
(30%Imax) 793.453	—
(40%Imax) 1057.94	—
(50%Imax) 1322.42	—
(60%Imax) 1586.91	—
(70%Imax) 1851.39	—
(80%Imax) 2115.87	—
(90%Imax) 2380.36	—



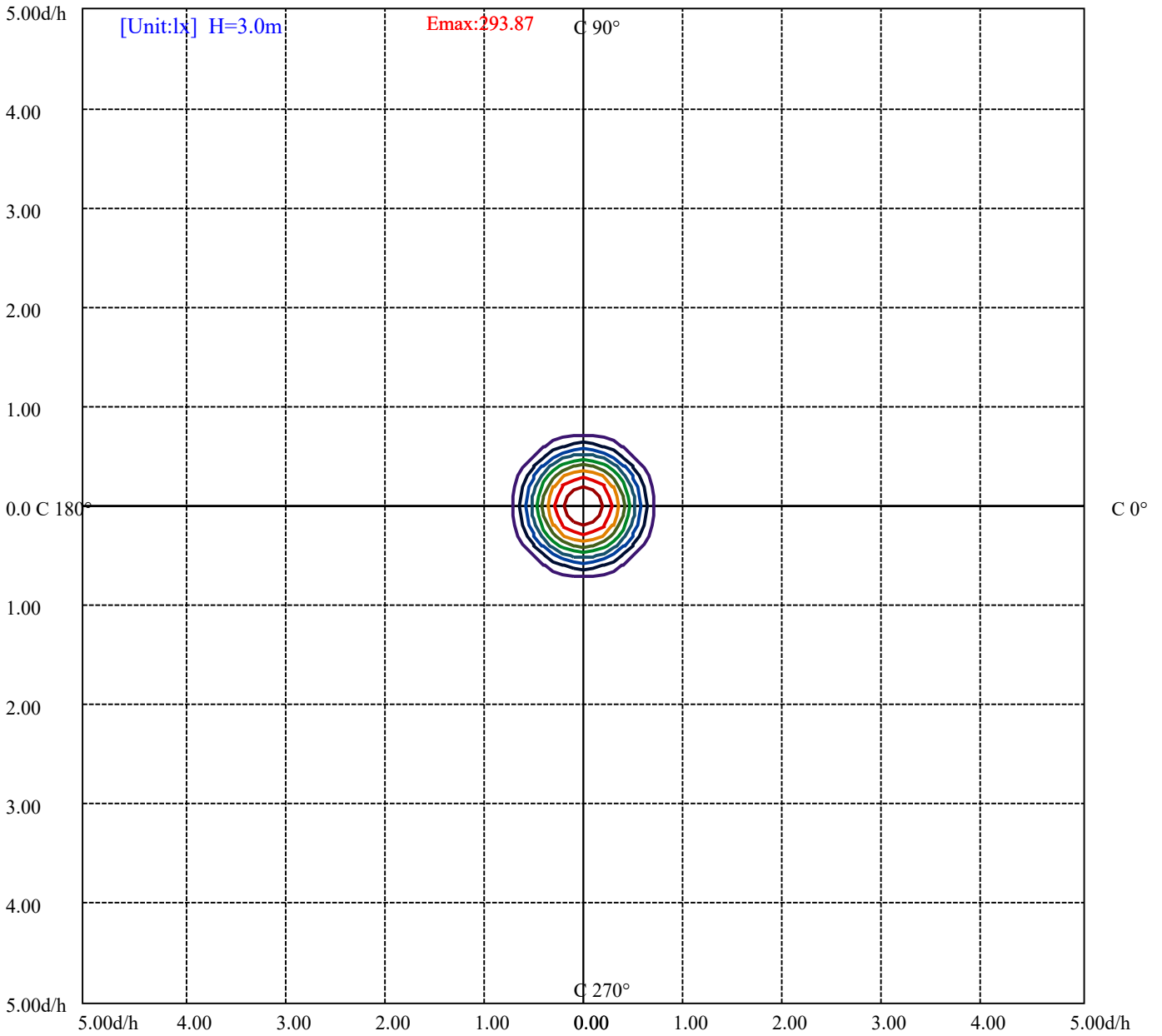
House

[Unit:cd]

Road

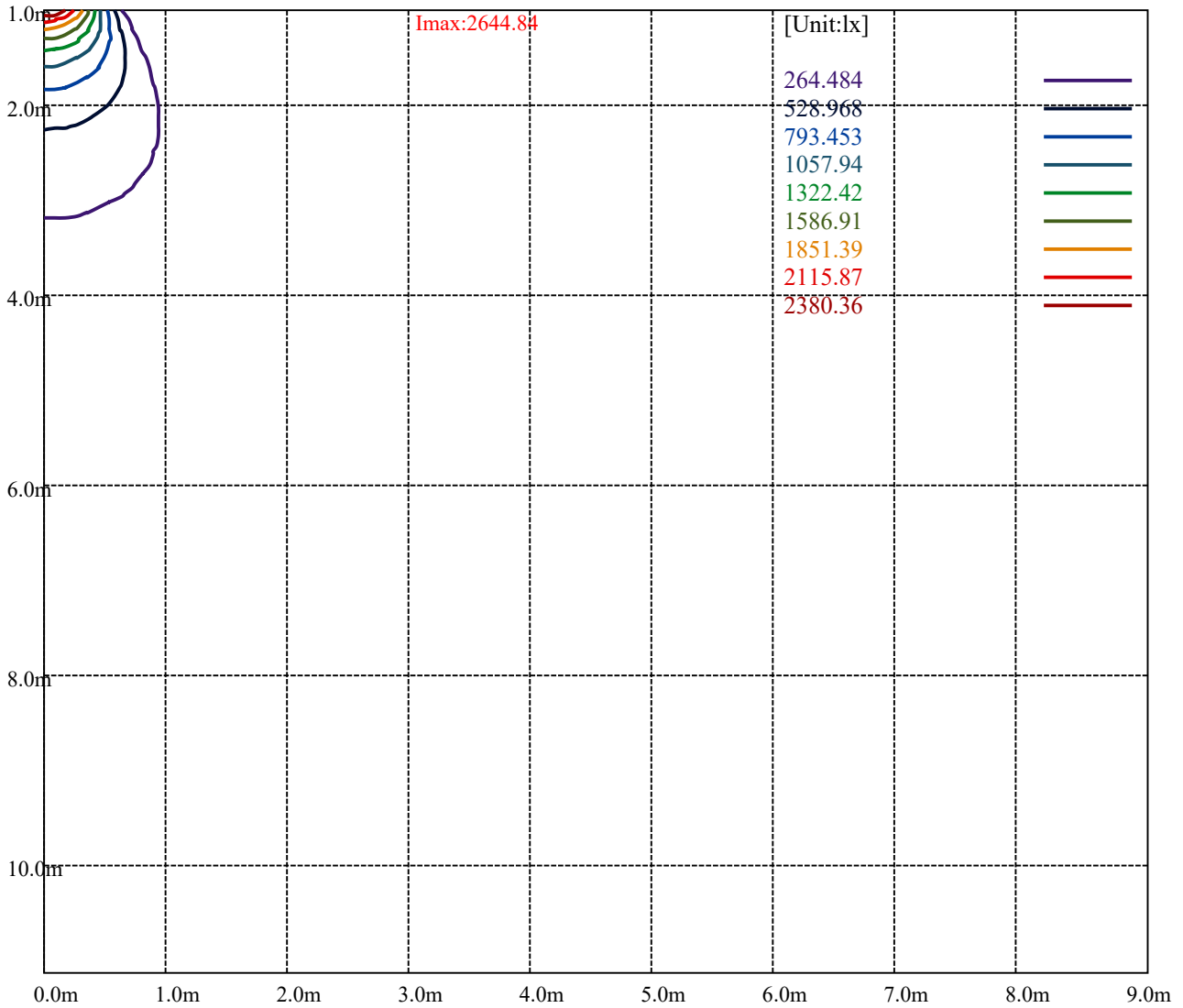
**Imax:2644.84**

(10%Imax)	264.484	—
(20%Imax)	528.968	—
(30%Imax)	793.453	—
(40%Imax)	1057.94	—
(50%Imax)	1322.42	—
(60%Imax)	1586.91	—
(70%Imax)	1851.39	—
(80%Imax)	2115.87	—
(90%Imax)	2380.36	—



- (10%Emax) 29.38711
- (20%Emax) 58.77422
- (30%Emax) 88.16145
- (40%Emax) 117.5489
- (50%Emax) 146.9356
- (60%Emax) 176.3233
- (70%Emax) 205.71
- (80%Emax) 235.0967
- (90%Emax) 264.4845





Luminance Table

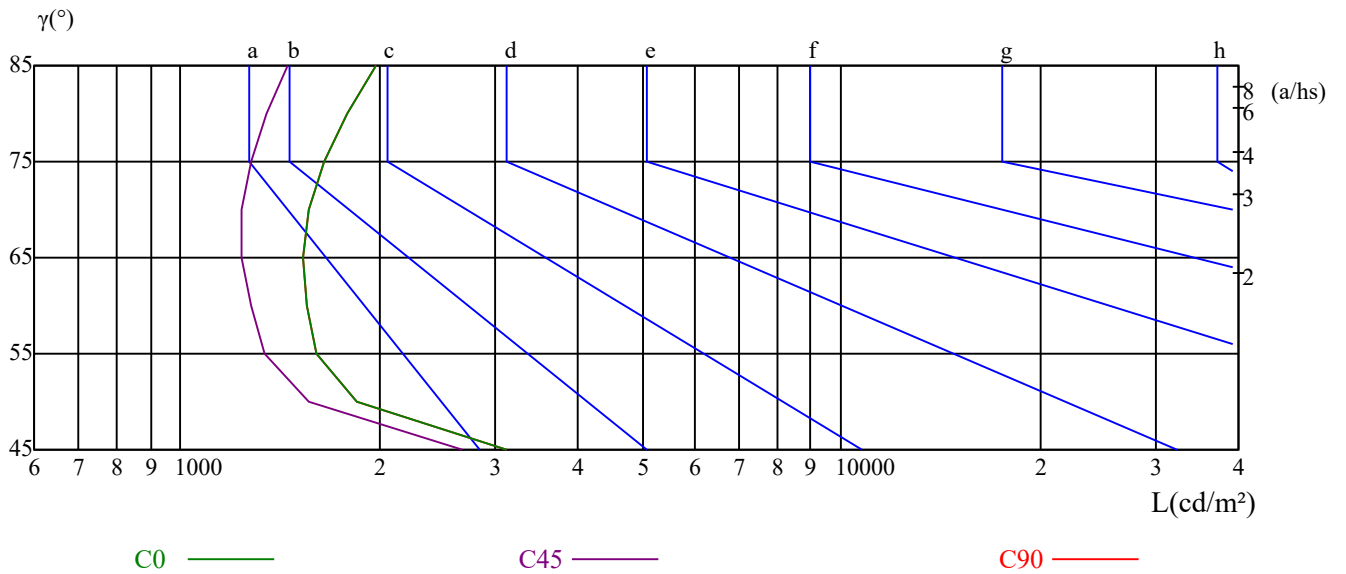
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3117	1852	1611	1557	1536	1568	1650	1789	1982
C45	2678	1567	1343	1276	1237	1239	1275	1349	1451
C90	3117	1852	1611	1557	1536	1568	1650	1789	1982

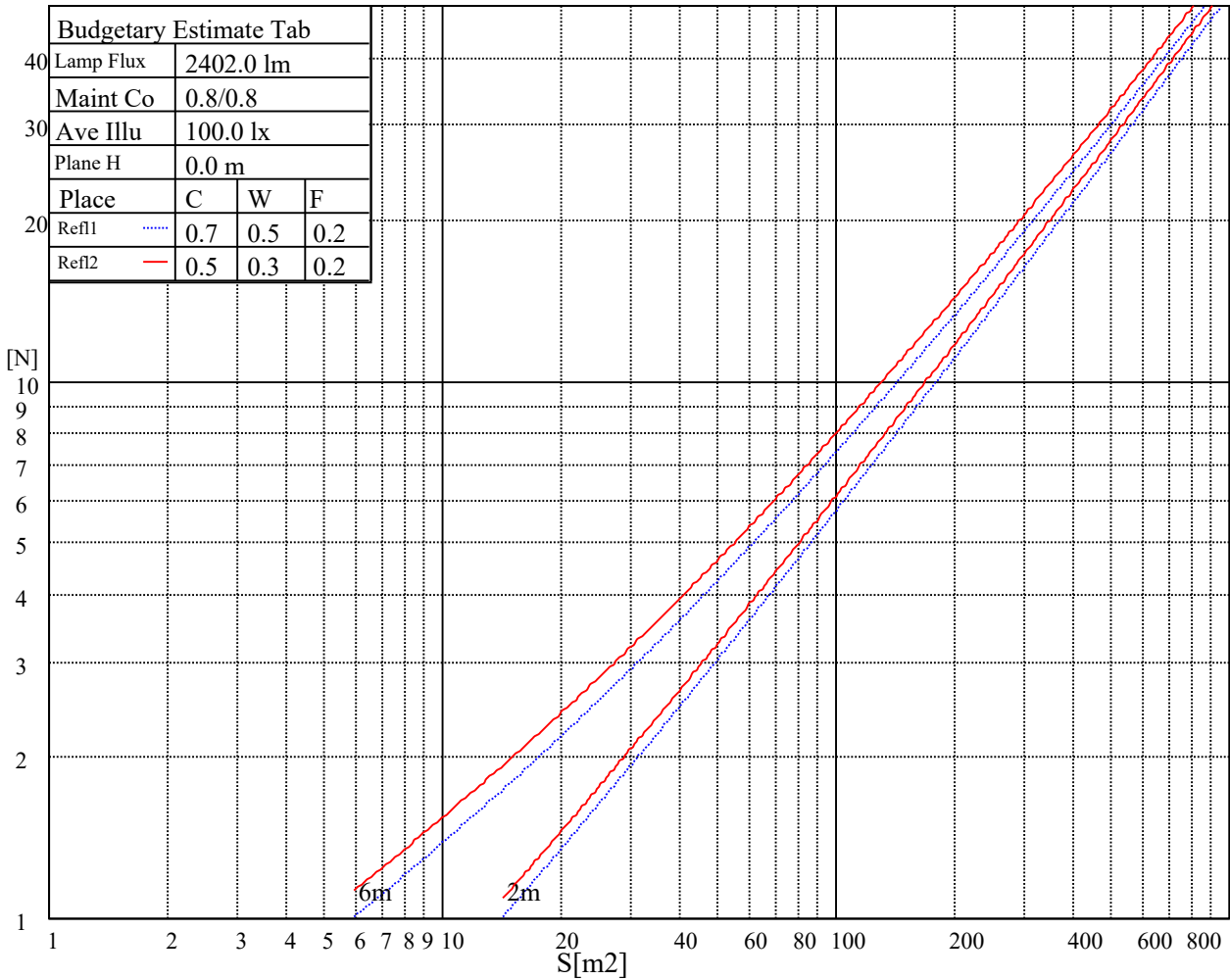
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3690	3690	3690	5677	5677	5677	16792	16792	16792

Glare Table

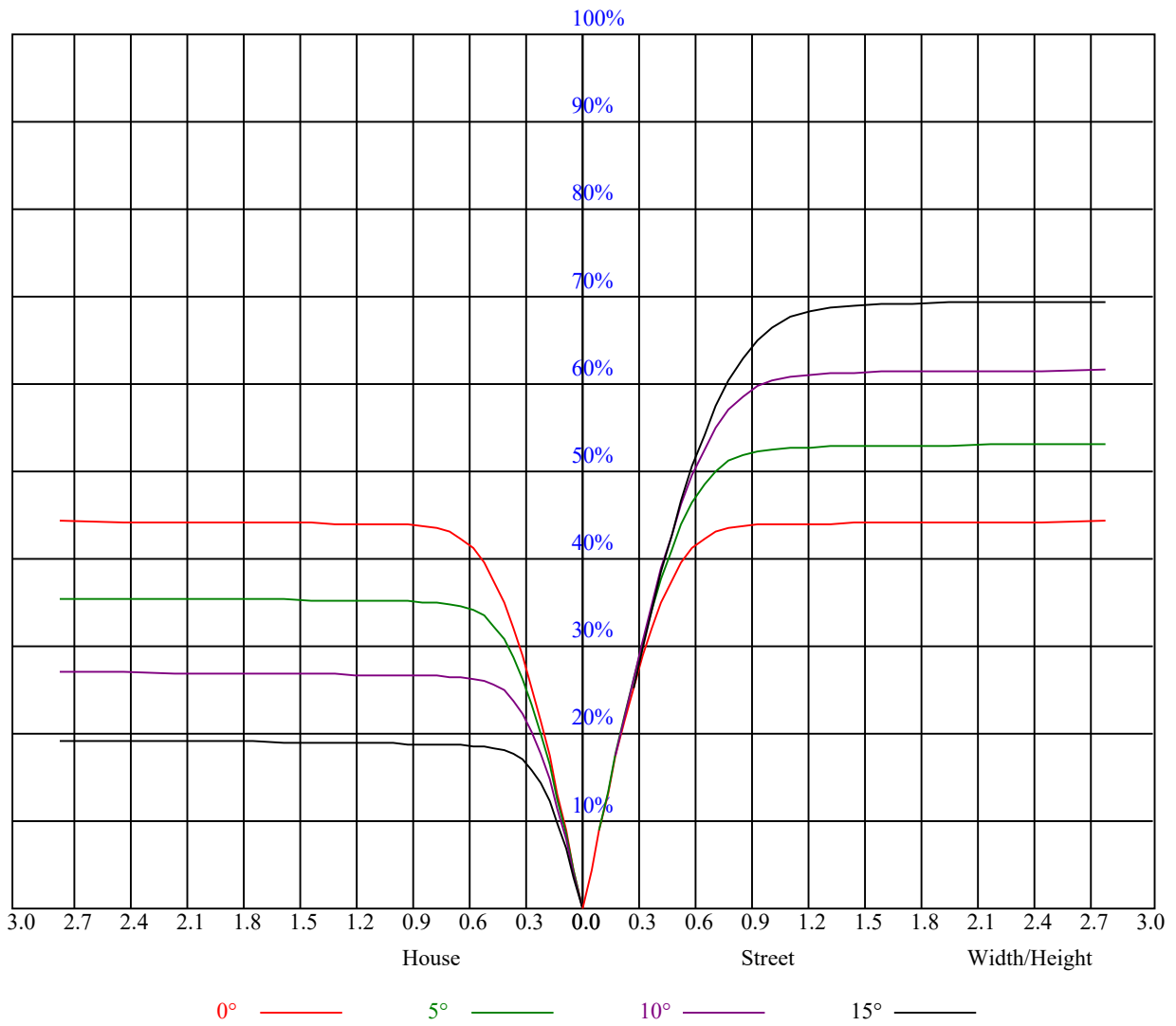
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.97	0.95	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.86	0.83	0.86	0.84	0.82	0.83	0.82	0.80	0.79
3	0.87	0.83	0.79	0.86	0.82	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.77	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.70	0.69
5	0.77	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.65
6	0.73	0.67	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.61
7	0.69	0.63	0.60	0.68	0.63	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.58
8	0.65	0.60	0.56	0.64	0.60	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.54
9	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.51
10	0.58	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.49



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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	2649.57	2654.58	2583.90	2482.62	2275.04	1931.67	1426.91	671.71	292.17
45.0	2640.67	2655.14	2581.68	2471.49	2223.84	1866.00	1291.67	531.47	95.61
90.0	2642.89	2631.21	2537.71	2383.56	2095.84	1632.26	1066.40	350.38	59.05
135.0	2646.23	2646.23	2539.38	2419.73	2151.49	1715.18	1129.17	433.53	70.07
180.0	2649.57	2601.71	2503.21	2354.06	2084.71	1662.87	1053.76	351.83	63.61
225.0	2640.67	2616.74	2526.58	2401.37	2151.49	1731.88	1086.21	464.69	76.80
270.0	2642.89	2641.78	2572.77	2475.94	2291.73	1920.54	1396.30	656.69	304.41
315.0	2646.23	2641.78	2561.09	2448.67	2230.52	1864.33	1092.39	596.92	93.44
360.0	2649.57	2654.58	2583.90	2482.62	2275.04	1931.67	1426.91	671.71	292.17

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	28.38	13.58	11.07	10.30	9.63	9.18	9.02	8.90	8.96
45.0	23.15	12.86	10.80	10.07	9.46	9.13	8.90	8.90	8.90
90.0	17.14	12.41	10.74	9.96	9.41	9.07	8.85	8.90	8.90
135.0	19.53	12.86	10.91	10.07	9.52	9.07	8.96	8.90	8.90
180.0	17.86	12.08	10.57	10.02	9.41	9.07	8.96	8.90	8.90
225.0	21.09	12.63	10.69	10.02	9.35	9.13	8.90	8.85	8.85
270.0	27.32	13.41	11.07	10.13	9.63	9.18	8.96	8.90	8.90
315.0	22.93	13.25	11.13	10.24	9.52	9.18	8.96	8.90	8.90
360.0	28.38	13.58	11.07	10.30	9.63	9.18	9.02	8.90	8.96

C/γ(°)	90.0
0.0	8.85
45.0	8.79
90.0	8.85
135.0	8.79
180.0	8.85
225.0	8.79
270.0	8.79
315.0	8.90
360.0	8.85