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## Nata

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LumCAT: 4-2218-M	
Luminaire: BJB47.319.2011	
Report No: NT2017040613	Voltage(V): 217.5000
Test No: GC2017040613	Current(A): 0.1370
LampCAT: LUMILEDS 1208	Power (W): 28.1000
Lamp flux(lm): 3235.0	PF: 0.9430
Number of Lamps: 1	Ballast type: AC
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 2935.19  
Efficiency(%): 90.73%  
Lumens(lm)/Power(W): 104.46  
Central intensity(cd): 3050.950  
Maximum intensity(cd): 3050.950  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=63.7  
                                  [C90/270]Total=63.7  
Field angle(10%Imax): [C0/180]Total=79.0  
                                  [C90/270]Total=79.0  
Maximum s/h(1/2): C0\_180=1.04 C90\_270=1.04  
Maximum s/h(1/4): C0\_180=0.93 C90\_270=0.93  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 91.21%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.269%

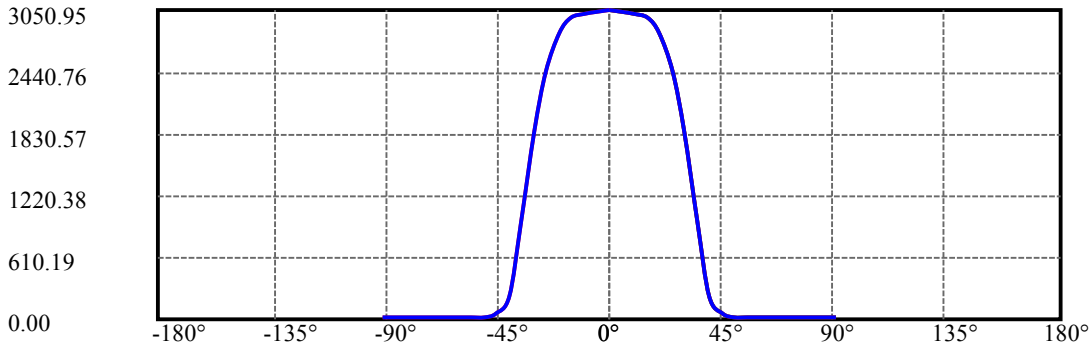
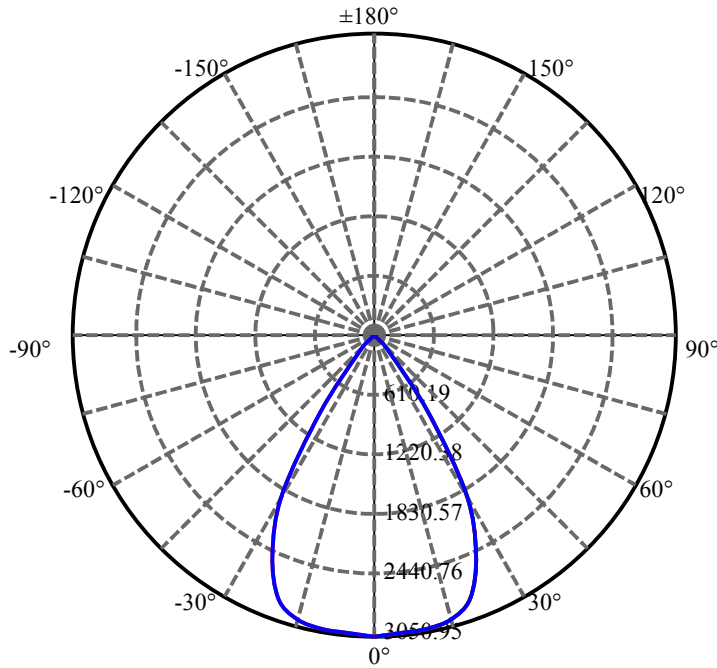
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3050.950	18.245	18.245	.564%	.622%
5.0	3029.823	144.745	162.99	4.474%	5.553%
10.0	3020.532	287.503	450.493	8.887%	15.348%
15.0	2980.065	422.777	873.271	13.069%	29.752%
20.0	2823.705	529.371	1402.642	16.364%	47.787%
25.0	2444.435	566.260	1968.902	17.504%	67.079%
30.0	1861.113	510.073	2478.975	15.767%	84.457%
35.0	947.060	297.754	2776.729	9.204%	94.601%
40.0	231.099	81.425	2858.154	2.517%	97.376%
45.0	50.728	19.662	2877.816	.608%	98.045%
50.0	21.087	8.854	2886.67	.274%	98.347%
55.0	14.611	6.560	2893.23	.203%	98.571%
60.0	13.331	6.328	2899.558	.196%	98.786%
65.0	12.718	6.318	2905.876	.195%	99.001%
70.0	12.340	6.356	2912.232	.196%	99.218%
75.0	12.188	6.453	2918.685	.199%	99.438%
80.0	12.154	6.561	2925.246	.203%	99.661%
85.0	12.126	6.622	2931.867	.205%	99.887%
90.0	12.112	3.320	2935.187	.103%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2478.98	76.63%	84.46%
0-40	2858.15	88.35%	97.38%
0-60	2899.56	89.63%	98.79%
0-90	2931.87	90.63%	99.89%
0-120	2931.87	90.63%	99.89%
0-180	2935.19	90.73%	100.00%
60-90	38.64	1.19%	1.32%
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%
0-28.72	2348.15	72.59%	80.00%

ZONAL LUMEN SUMMARY

0-10	450.49
10-20	952.15
20-30	1076.33
30-40	379.18
40-50	28.52
50-60	12.89
60-70	12.67
70-80	13.01
80-90	6.62
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: —————

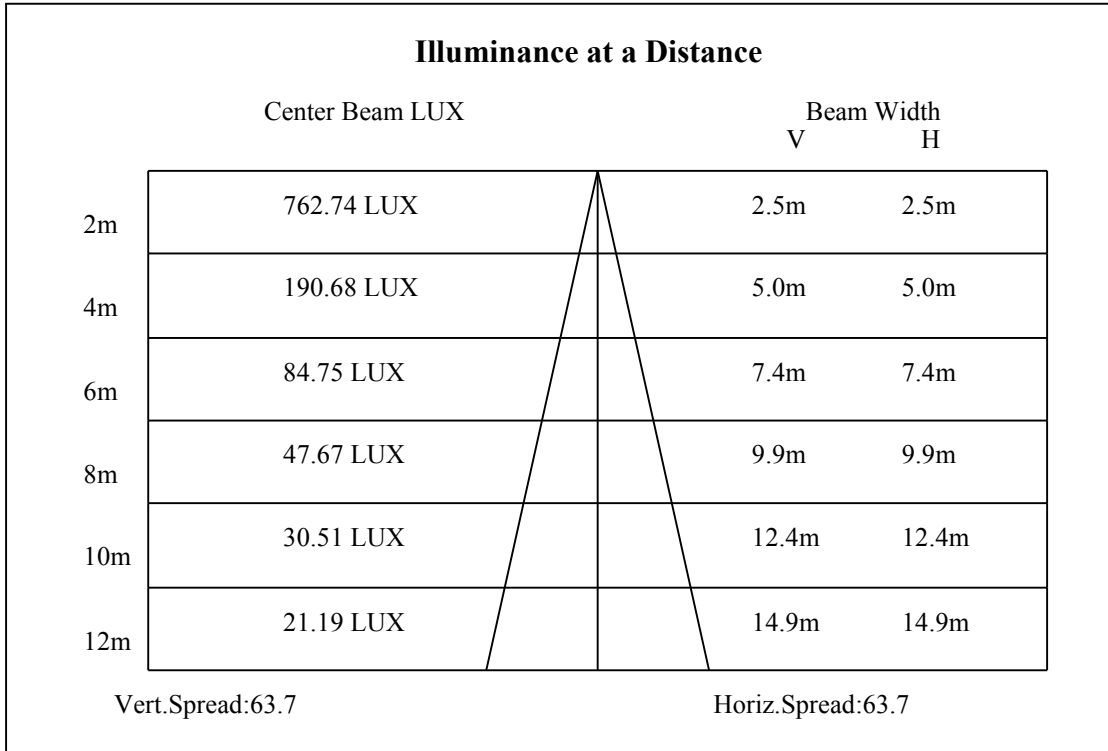
C90/C270: —————

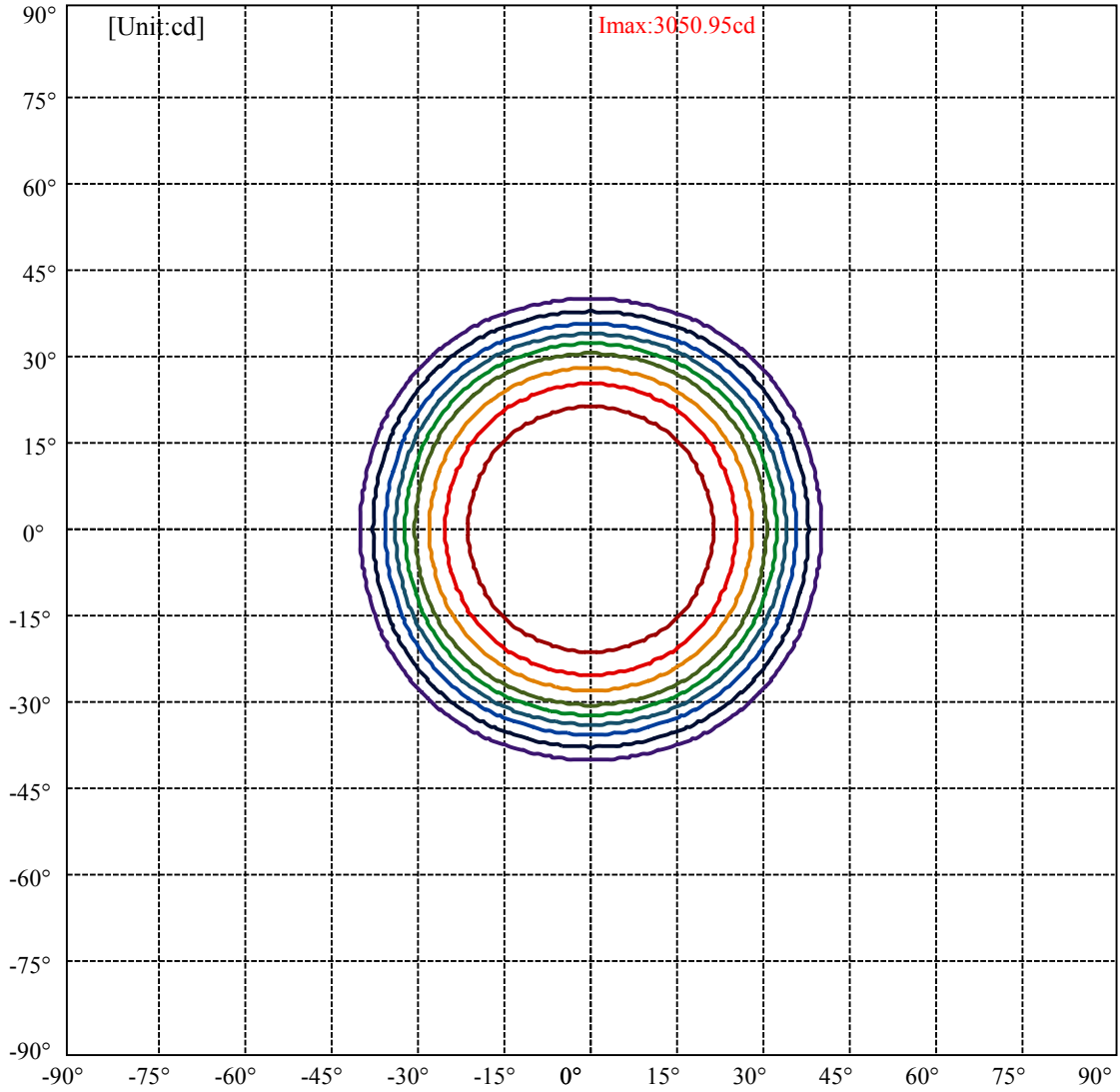
Field angle(10%Imax):C0/180Left:39.5 Right:39.5

:C90/270Left:39.5 Right:39.5

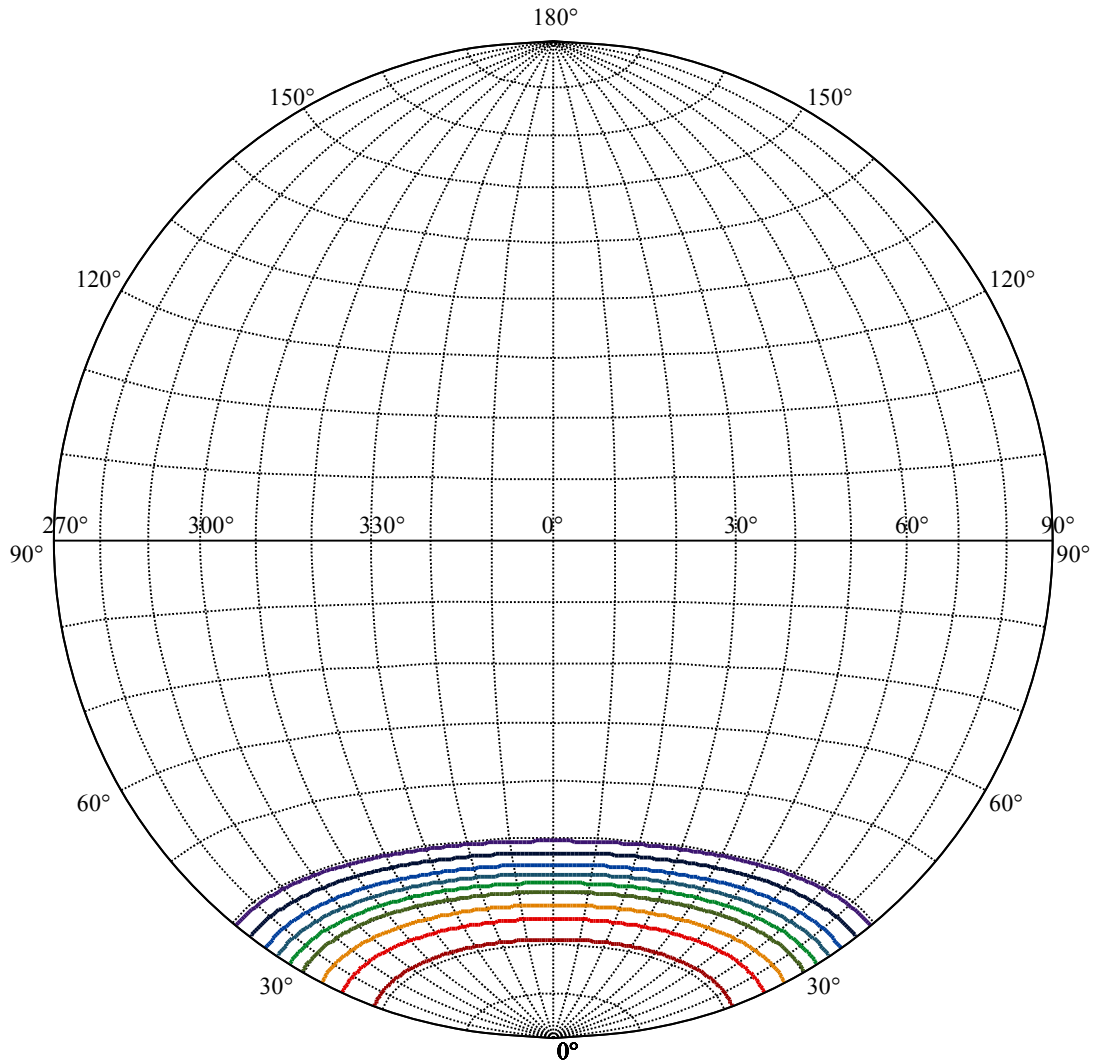
Beam Angle(50%Imax):C0/180Left:31.8 Right:31.8

:C90/270Left:31.8 Right:31.8





(10%Imax) 305.095	—
(20%Imax) 610.19	—
(30%Imax) 915.285	—
(40%Imax) 1220.38	—
(50%Imax) 1525.48	—
(60%Imax) 1830.57	—
(70%Imax) 2135.67	—
(80%Imax) 2440.76	—
(90%Imax) 2745.86	—



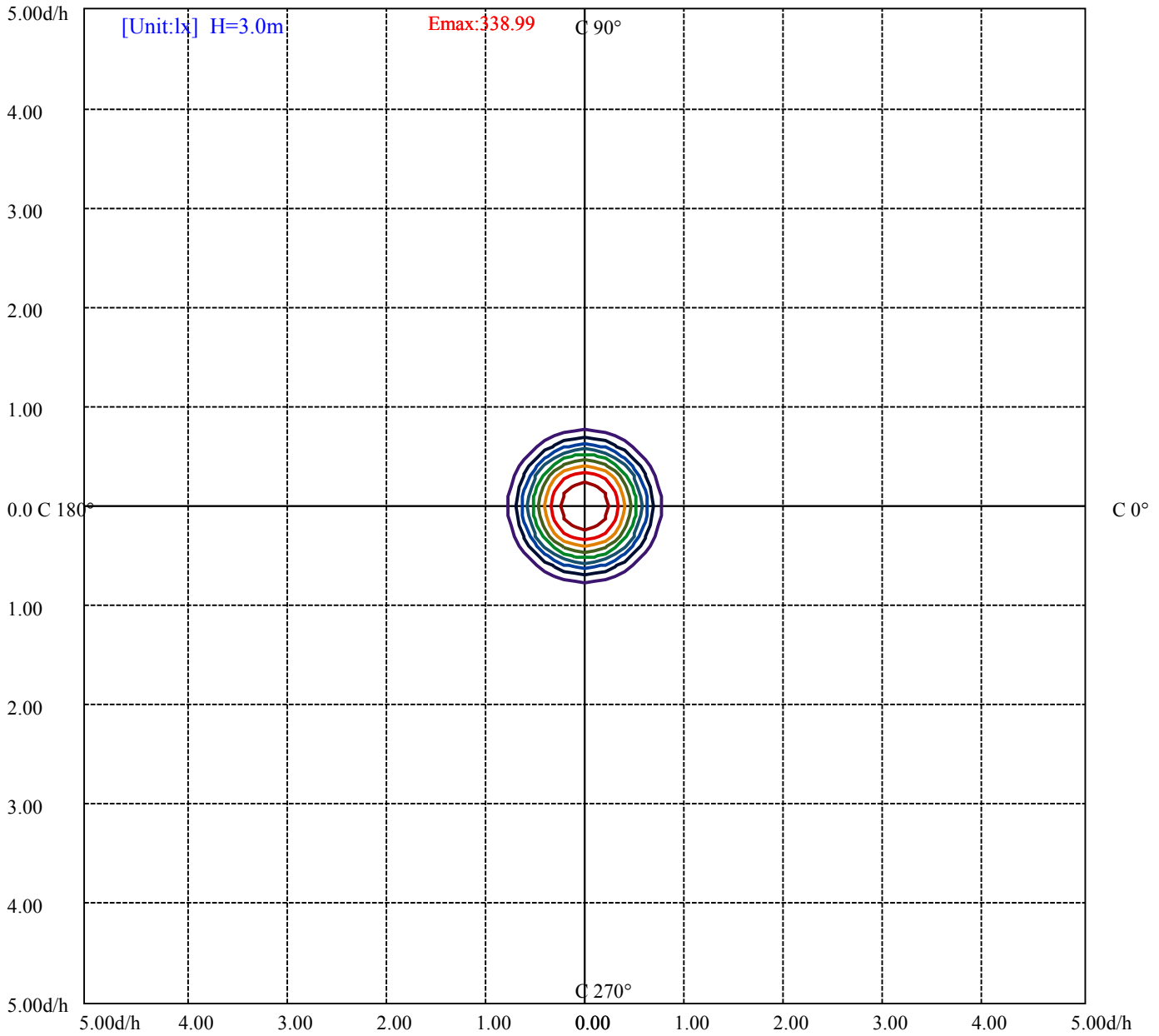
House

[Unit:cd]

Road

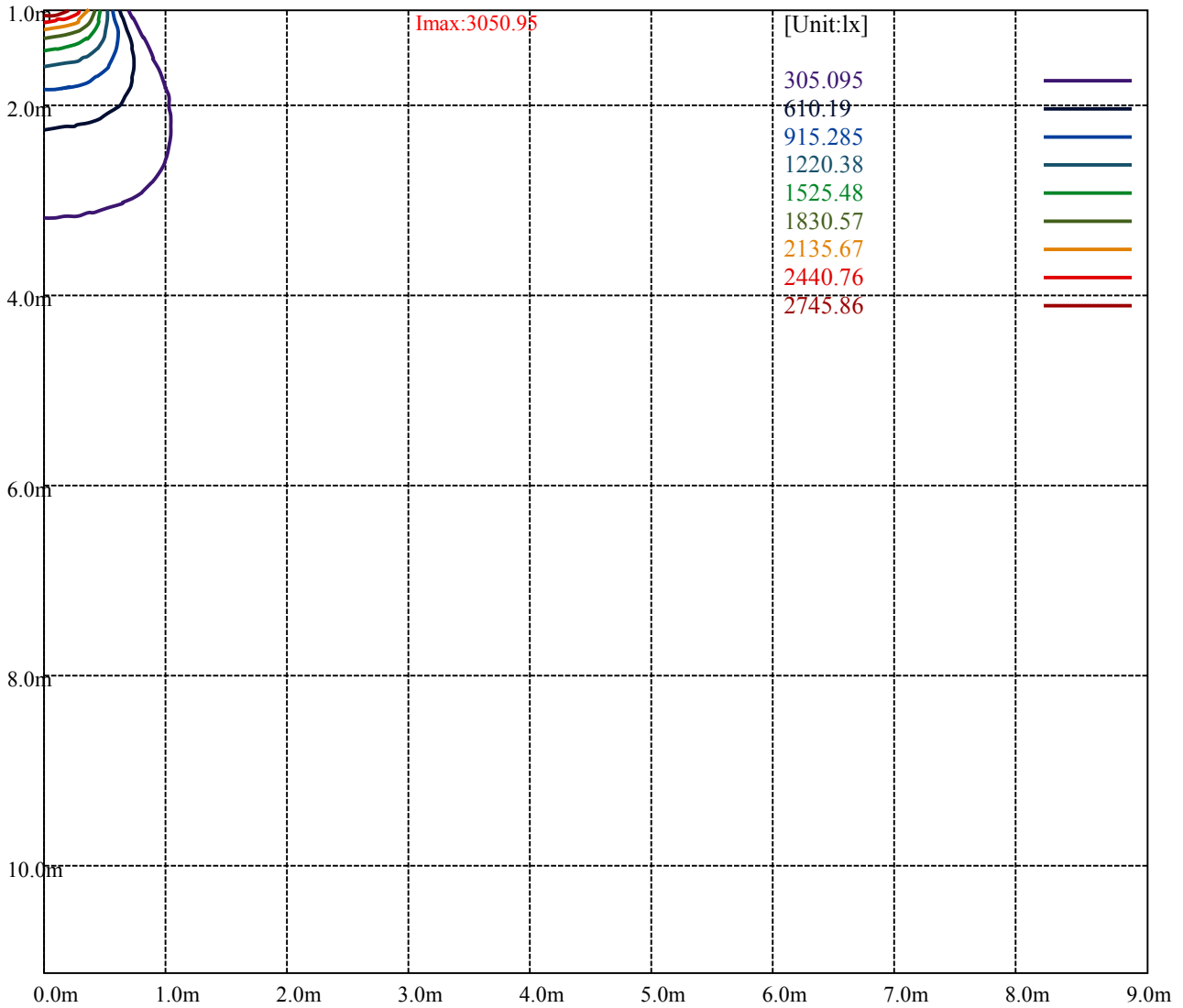
**Imax:3050.95**

(10%Imax) 305.095	—
(20%Imax) 610.19	—
(30%Imax) 915.285	—
(40%Imax) 1220.38	—
(50%Imax) 1525.48	—
(60%Imax) 1830.57	—
(70%Imax) 2135.67	—
(80%Imax) 2440.76	—
(90%Imax) 2745.86	—



- (10%Emax) 33.89944
- (20%Emax) 67.79889
- (30%Emax) 101.6983
- (40%Emax) 135.5978
- (50%Emax) 169.4967
- (60%Emax) 203.3967
- (70%Emax) 237.2955
- (80%Emax) 271.1956
- (90%Emax) 305.0945





Luminance Table

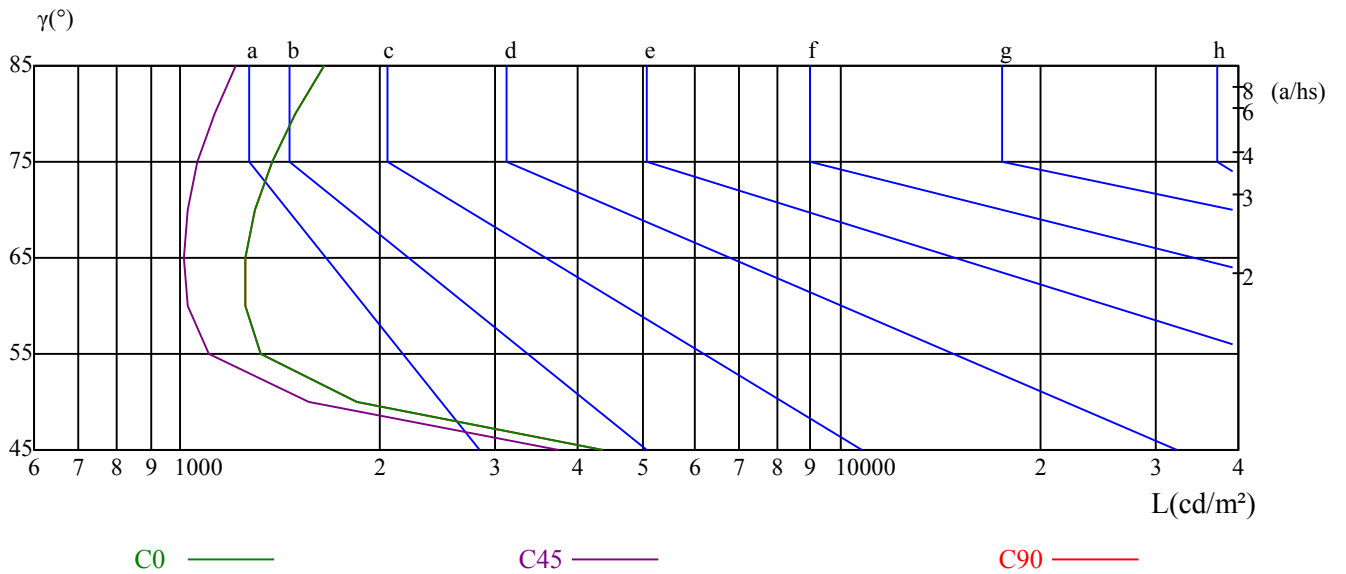
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4348	1849	1321	1254	1257	1295	1375	1494	1651
C45	3738	1565	1101	1029	1013	1023	1063	1126	1209
C90	4348	1849	1321	1254	1257	1295	1375	1494	1651

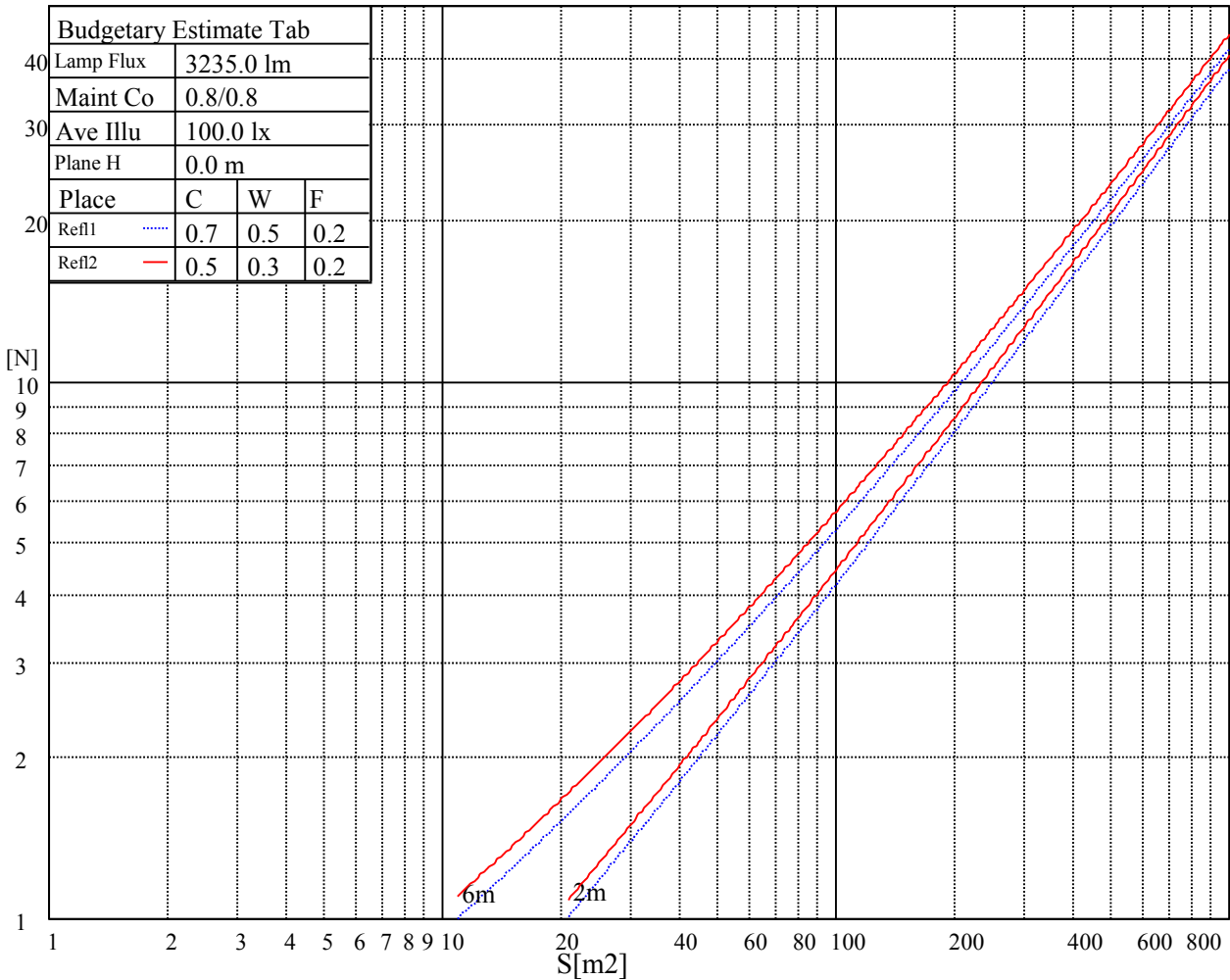
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3009	3009	3009	4709	4709	4709	13913	13913	13913

Glare Table

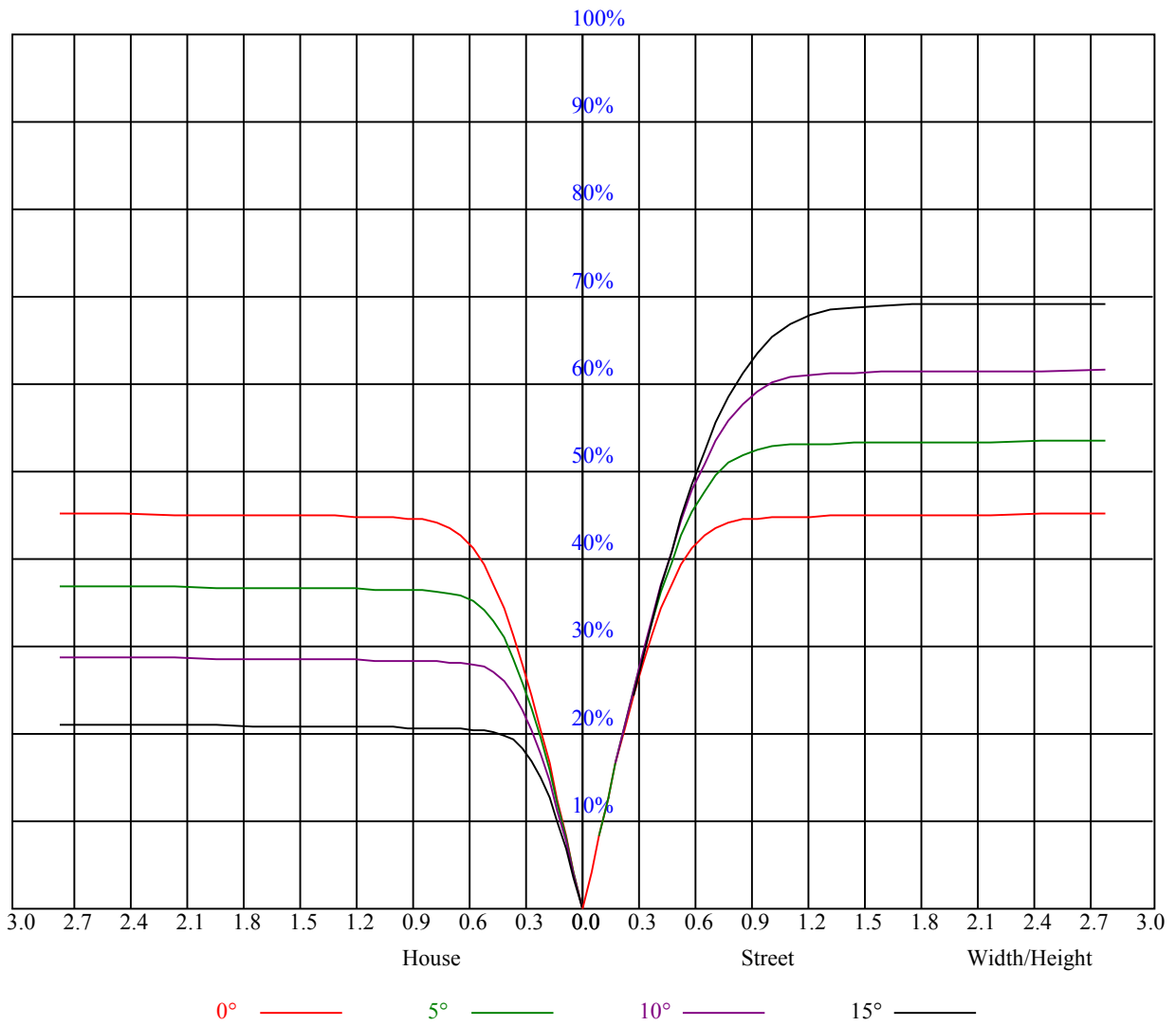
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.98	0.96	0.99	0.97	0.95	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.87	0.87	0.85
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.89	0.84	0.81	0.88	0.84	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.75
4	0.84	0.79	0.75	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.75	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	0.68	0.67
6	0.75	0.70	0.66	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.64
7	0.71	0.66	0.63	0.71	0.66	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.60
8	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
9	0.64	0.59	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.62	0.58	0.55	0.54
10	0.61	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	0.52



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	3046.27	2993.97	3020.39	2968.64	2806.22	2415.87	1783.83	821.99	287.39
45.0	3057.28	3029.20	2997.27	2999.47	2859.08	2522.68	1962.21	1153.98	305.56
90.0	3066.09	3042.42	2973.05	2966.44	2791.91	2457.72	1926.42	1016.18	194.13
135.0	3034.16	3063.89	2991.76	2982.96	2854.12	2552.41	2089.94	1290.52	295.65
180.0	3046.27	3033.61	3016.54	3006.63	2844.21	2502.86	1974.32	1063.25	185.04
225.0	3057.28	3044.07	3057.83	2966.44	2805.67	2371.28	1733.18	753.39	139.57
270.0	3066.09	3024.80	3063.89	2991.21	2851.37	2433.49	1788.23	867.69	286.29
315.0	3034.16	3006.63	3043.52	2958.73	2777.04	2299.16	1630.77	609.47	155.15
360.0	3046.27	2993.97	3020.39	2968.64	2806.22	2415.87	1783.83	821.99	287.39

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	61.22	24.39	15.20	13.43	12.72	12.33	12.17	12.11	12.11
45.0	60.78	24.67	15.36	13.54	12.83	12.44	12.28	12.22	12.17
90.0	41.90	18.39	14.31	13.27	12.72	12.33	12.17	12.17	12.11
135.0	57.31	20.76	14.65	13.49	12.88	12.44	12.22	12.17	12.11
180.0	42.01	18.39	14.20	13.27	12.66	12.33	12.11	12.11	12.06
225.0	41.18	19.88	14.31	13.16	12.66	12.28	12.17	12.17	12.17
270.0	53.96	22.30	14.65	13.32	12.72	12.33	12.22	12.17	12.17
315.0	47.46	19.93	14.20	13.16	12.55	12.22	12.17	12.11	12.11
360.0	61.22	24.39	15.20	13.43	12.72	12.33	12.17	12.11	12.11

C/γ(°)	90.0
0.0	12.11
45.0	12.17
90.0	12.11
135.0	12.11
180.0	12.06
225.0	12.17
270.0	12.11
315.0	12.06
360.0	12.11