



NATA LIGHTING CO.,LTD  
www.nata.cn  
Email:info@nata.cn  
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111  
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

---

## Nata

---

LumCAT: 4-2221-A	
Luminaire: BJB 47.319.2011)	
Report No: NT2017060702	Voltage(V): 217.5000
Test No: GC2017060702	Current(A): 0.1370
LampCAT: LUXEON CoB 1208	Power (W): 28.1000
Lamp flux(lm): 3235.0	PF: 0.9430
Number of Lamps: 1	Ballast type: DC
Length(feet)(ft.):0.328	Width(feet)(ft.):0.328
Phm Type: C	Height(feet)(ft.):0.00

---

## Photometric Results

---

Lumens(lm): 2939.31  
Efficiency(%): 90.86%  
Lumens(lm)/Power(W): 105.90  
Central intensity(cd): 6551.712  
Maximum intensity(cd): 6551.712  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=37.1  
                                  [C90/270]Total=37.1  
Field angle(10%Imax): [C0/180]Total=68.5  
                                  [C90/270]Total=68.5  
Maximum s/h(1/2): C0\_180=0.62 C90\_270=0.62  
Maximum s/h(1/4): C0\_180=0.59 C90\_270=0.59  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 91.98%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.559%

---

Equipment: gms1980  
Temperature(°C): 25.0

Date: 2017/4/6  
Humidity(%): 60.0%

Operator: NT07  
Distance(feet): 24.34

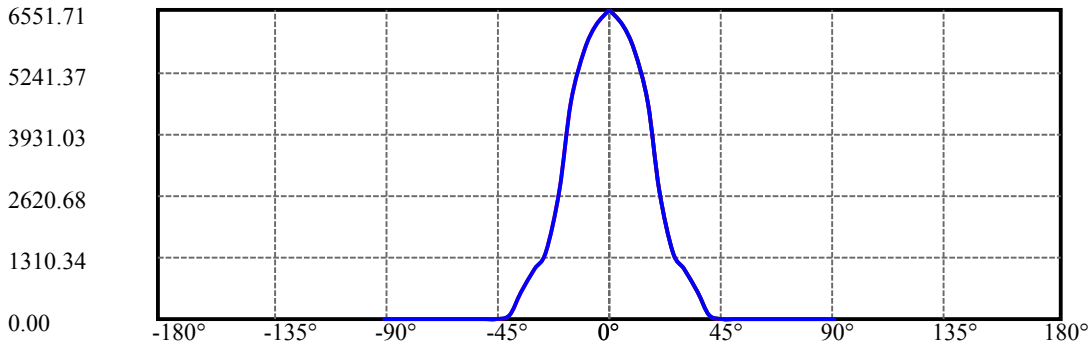
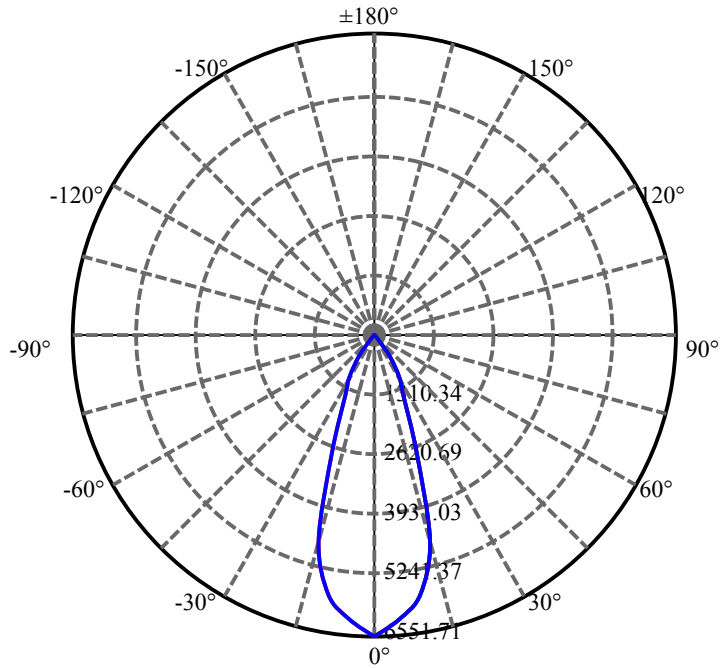
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6551.712	39.181	39.181	1.211%	1.333%
5.0	6214.973	296.910	336.09	9.178%	11.434%
10.0	5708.936	543.394	879.484	16.797%	29.921%
15.0	4617.993	655.147	1534.632	20.252%	52.211%
20.0	2720.268	509.980	2044.611	15.764%	69.561%
25.0	1440.482	333.692	2378.303	10.315%	80.914%
30.0	1070.358	293.352	2671.655	9.068%	90.894%
35.0	580.171	182.405	2854.06	5.638%	97.100%
40.0	65.978	23.246	2877.306	.719%	97.891%
45.0	17.301	6.706	2884.012	.207%	98.119%
50.0	15.154	6.363	2890.375	.197%	98.335%
55.0	14.060	6.313	2896.688	.195%	98.550%
60.0	13.427	6.374	2903.062	.197%	98.767%
65.0	12.993	6.455	2909.517	.200%	98.986%
70.0	12.691	6.537	2916.054	.202%	99.209%
75.0	12.450	6.592	2922.645	.204%	99.433%
80.0	12.319	6.650	2929.295	.206%	99.659%
85.0	12.223	6.674	2935.969	.206%	99.886%
90.0	12.188	3.340	2939.309	.103%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2671.65	82.59%	90.89%
0-40	2877.31	88.94%	97.89%
0-60	2903.06	89.74%	98.77%
0-90	2935.97	90.76%	99.89%
0-120	2935.97	90.76%	99.89%
0-180	2939.31	90.86%	100.00%
60-90	39.28	1.21%	1.34%
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%
0-24.60	2351.45	72.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	879.48
10-20	1165.13
20-30	627.04
30-40	205.65
40-50	13.07
50-60	12.69
60-70	12.99
70-80	13.24
80-90	6.67
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: —————

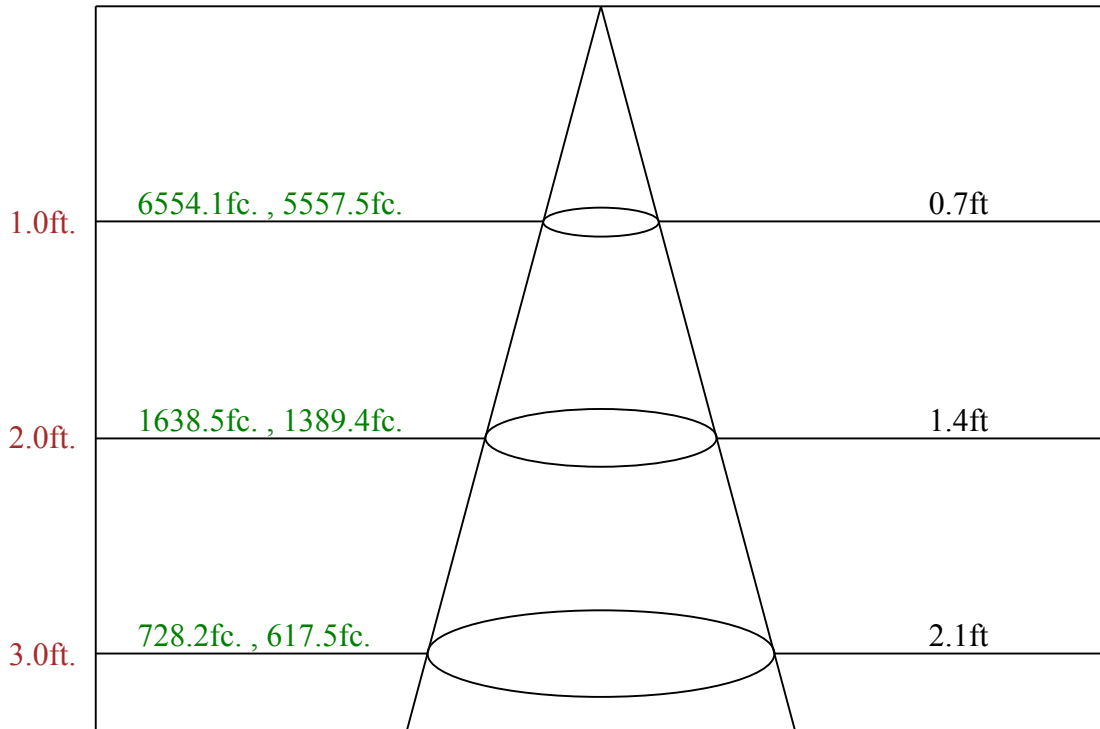
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.2 Right:34.2

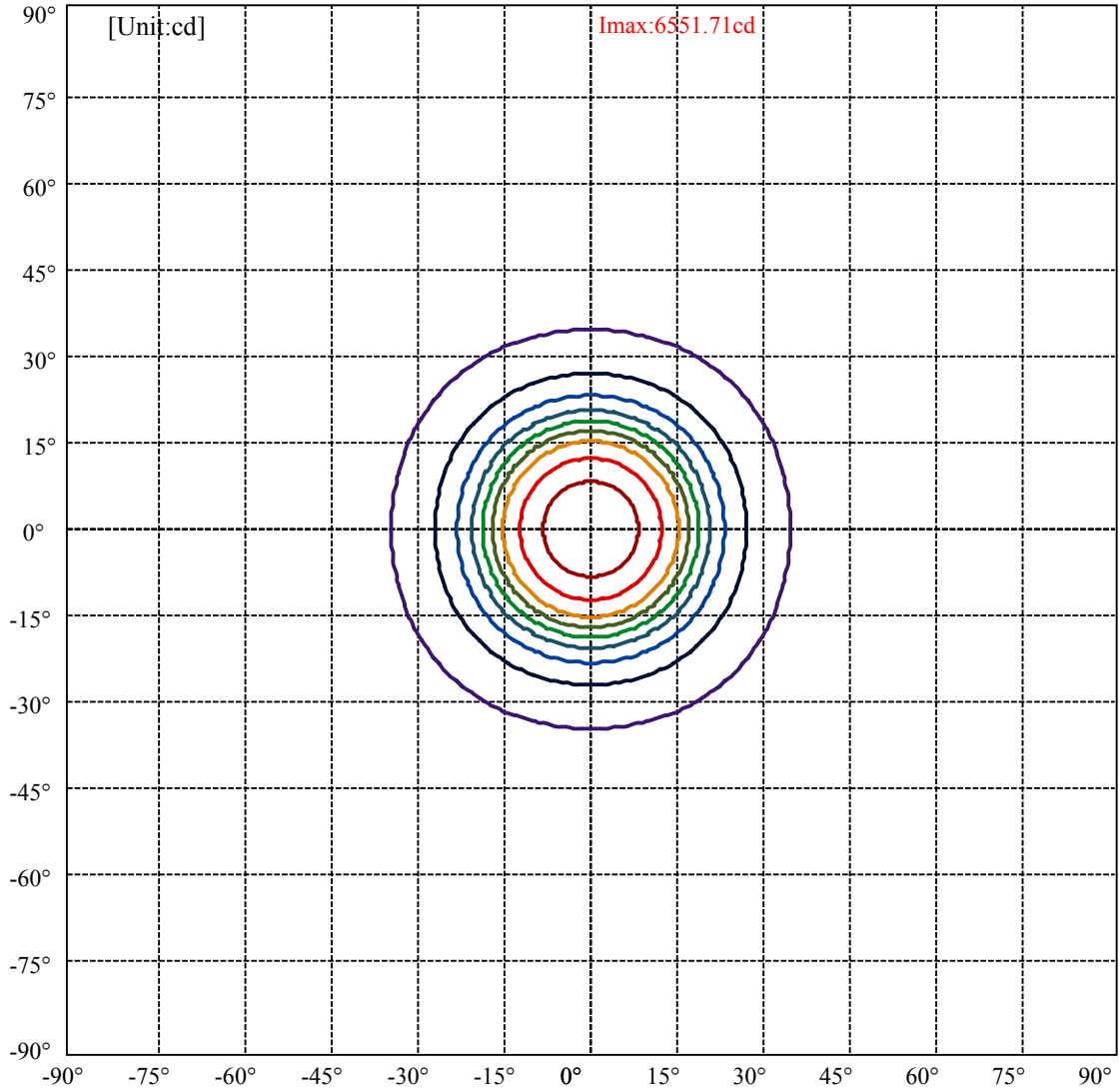
:C90/270Left:34.2 Right:34.2

Beam Angle(50%Imax):C0/180Left:18.5 Right:18.5

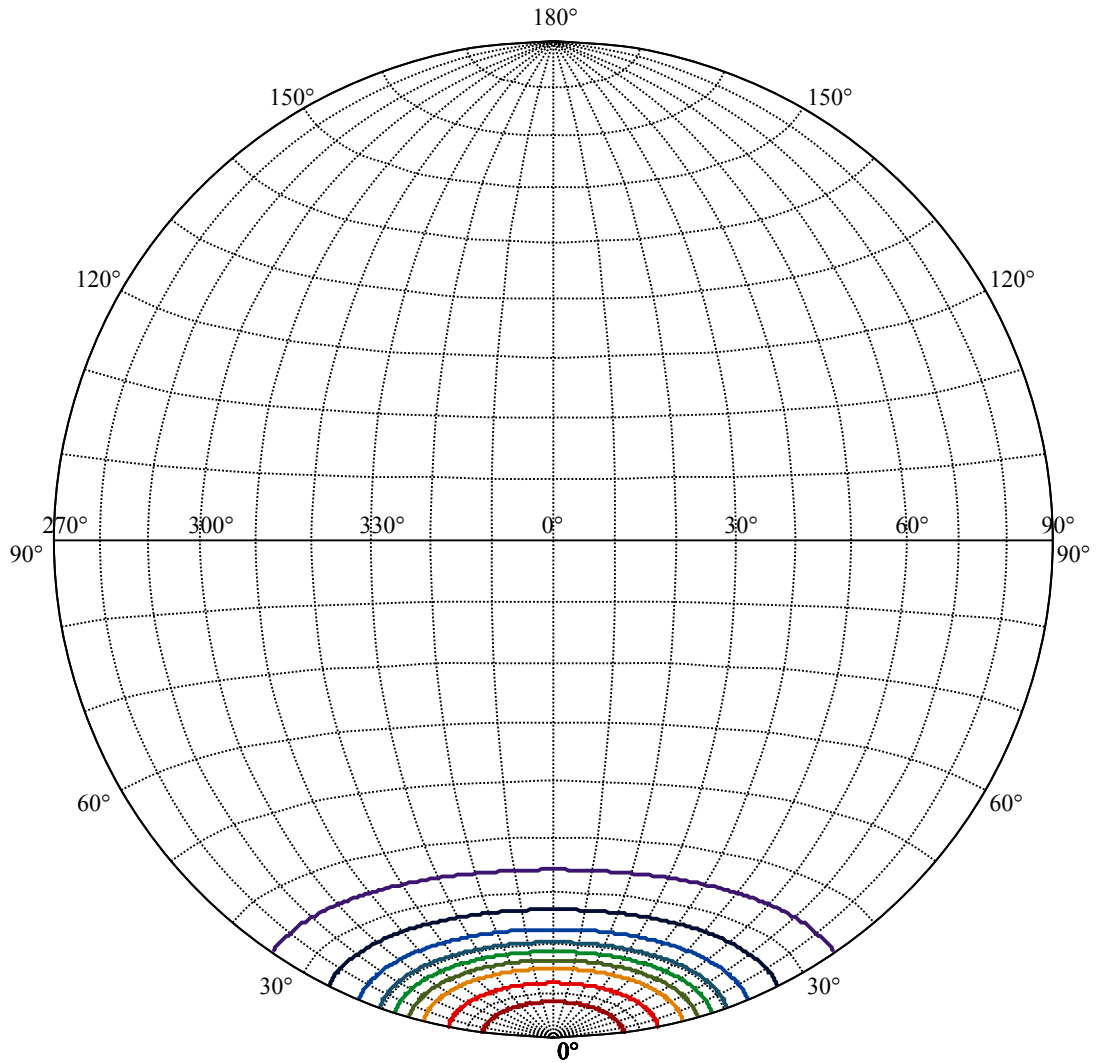
:C90/270Left:18.5 Right:18.5



Max , Ave      Beam angle of C0 plane 37.96



(10%Imax) 655.171	—
(20%Imax) 1310.34	—
(30%Imax) 1965.51	—
(40%Imax) 2620.68	—
(50%Imax) 3275.86	—
(60%Imax) 3931.03	—
(70%Imax) 4586.2	—
(80%Imax) 5241.37	—
(90%Imax) 5896.54	—



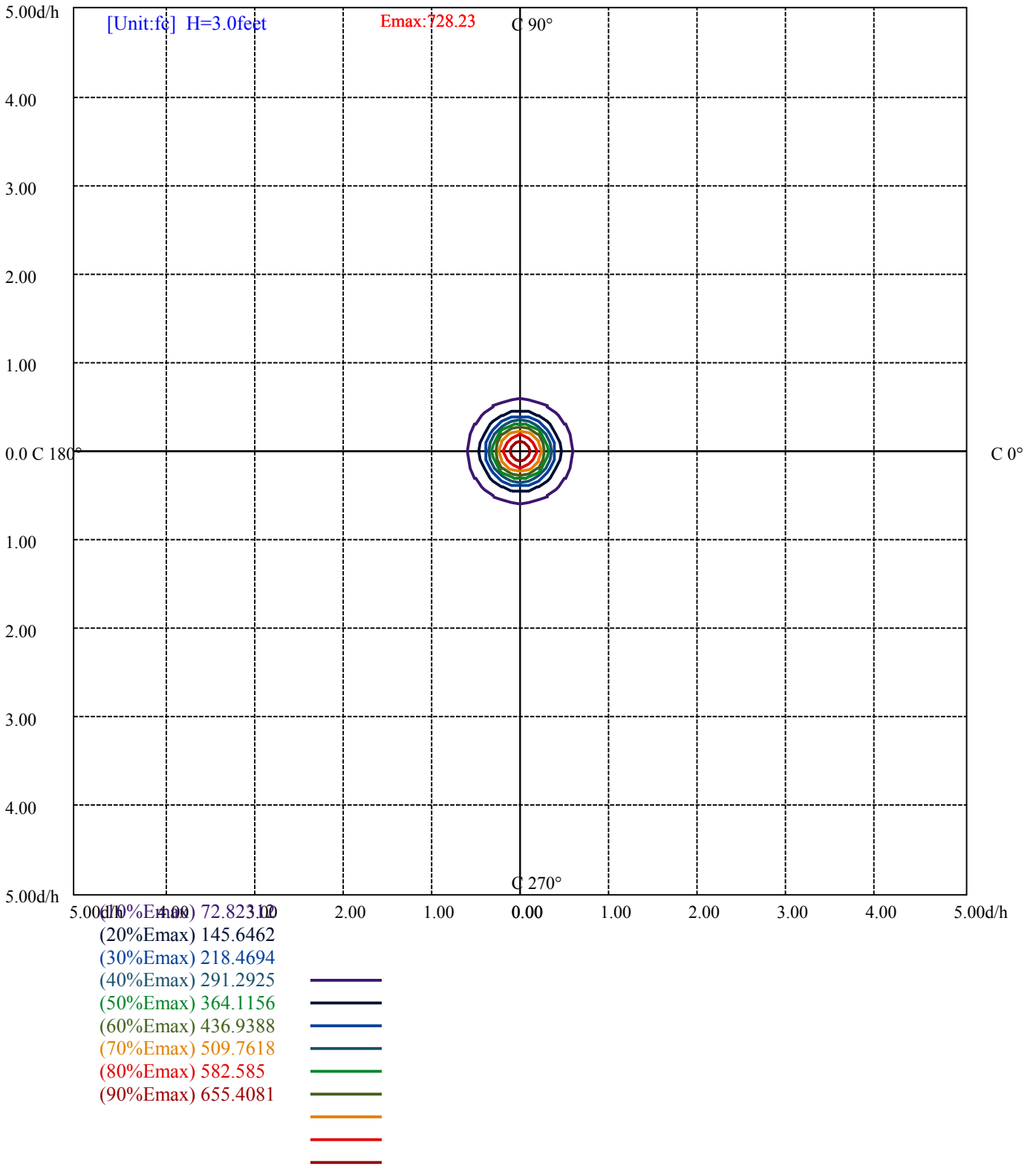
House

[Unit:cd]

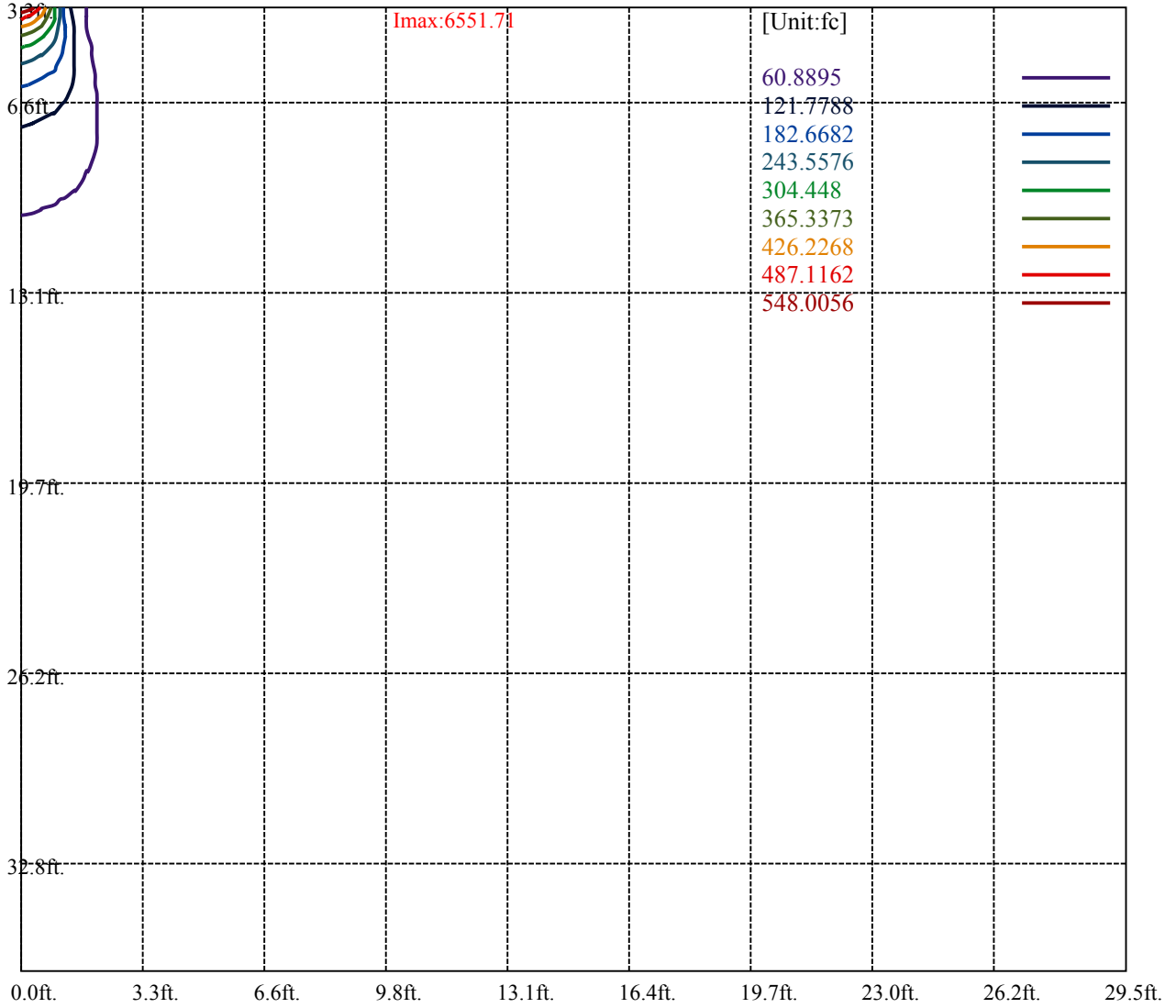
Road

**Imax:6551.71**

(10%Imax)	655.171	—
(20%Imax)	1310.34	—
(30%Imax)	1965.51	—
(40%Imax)	2620.68	—
(50%Imax)	3275.86	—
(60%Imax)	3931.03	—
(70%Imax)	4586.2	—
(80%Imax)	5241.37	—
(90%Imax)	5896.54	—







Luminance Table

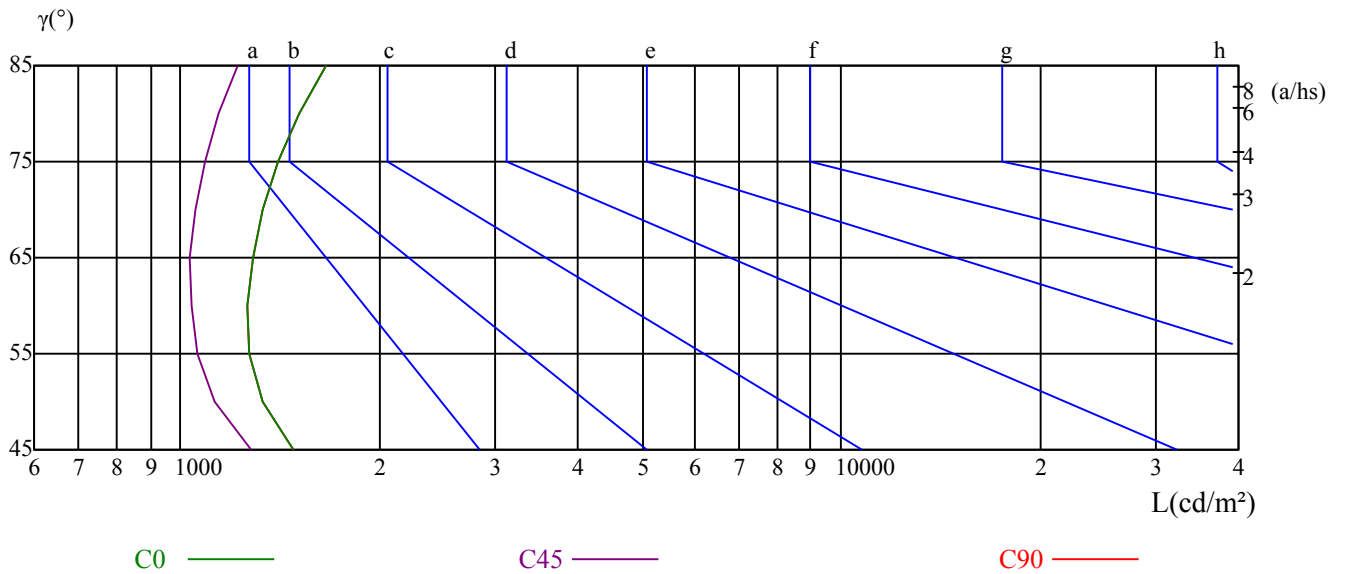
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1483	1328	1271	1263	1284	1332	1404	1514	1664
C45	1275	1125	1060	1036	1035	1052	1086	1142	1219
C90	1483	1328	1271	1263	1284	1332	1404	1514	1664

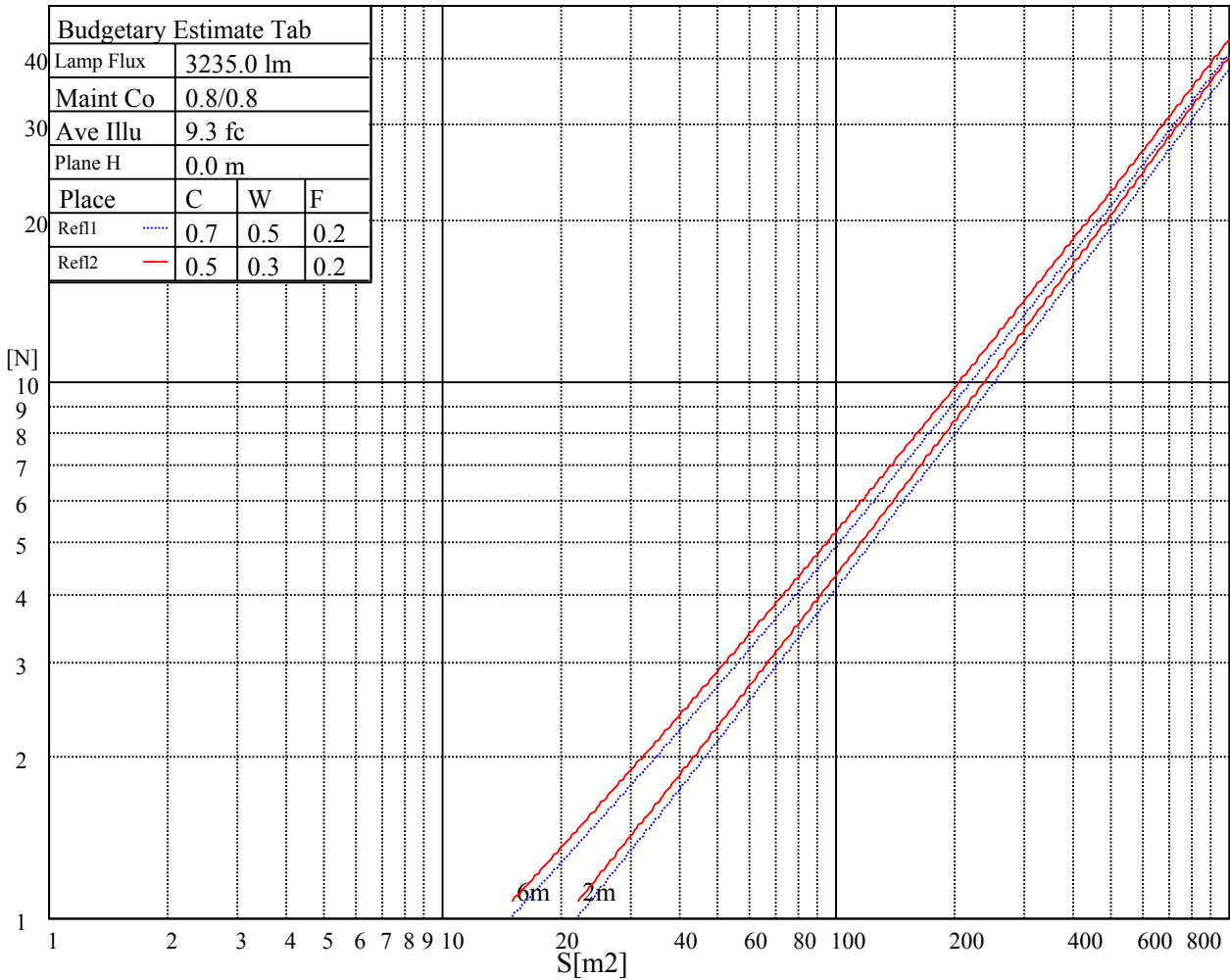
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3074	3074	3074	4810	4810	4810	14024	14024	14024

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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	0.99	0.97	1.00	0.97	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.91	0.87	0.84	0.90	0.87	0.84	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.79
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.78	0.81	0.79	0.77	0.75
5	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.73
6	0.80	0.76	0.73	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	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
9	0.72	0.67	0.65	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61

Intensity data(cd)

C/\u03b3(\u00b0)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	6556.12	6091.44	5564.00	4420.48	2440.65	1412.75	1044.97	477.34	29.07
45.0	6591.35	6253.86	5755.05	4726.59	2990.11	1520.66	1076.90	635.90	45.20
90.0	6569.88	6214.77	5728.07	4648.96	2835.96	1461.75	1051.69	591.53	32.37
135.0	6489.50	6367.82	5895.44	5077.30	3305.59	1617.56	1145.72	802.72	278.03
180.0	6556.12	6296.80	5818.91	4839.46	2886.06	1467.25	1093.64	699.11	52.25
225.0	6591.35	6223.58	5701.09	4468.38	2472.03	1343.93	1058.13	518.80	31.22
270.0	6569.88	6229.08	5750.09	4753.57	2691.16	1416.60	1078.55	580.85	33.31
315.0	6489.50	6042.44	5458.84	4009.21	2140.59	1283.36	1013.26	335.13	26.37
360.0	6556.12	6091.44	5564.00	4420.48	2440.65	1412.75	1044.97	477.34	29.07
C/\u03b3(\u00b0)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	16.63	14.92	13.98	13.32	12.94	12.61	12.39	12.22	12.17
45.0	16.74	15.03	14.04	13.43	13.05	12.77	12.55	12.39	12.28
90.0	16.63	14.98	13.98	13.38	12.94	12.72	12.44	12.33	12.22
135.0	19.93	15.80	14.42	13.71	13.16	12.83	12.50	12.39	12.22
180.0	17.89	15.25	14.04	13.38	12.94	12.61	12.39	12.22	12.11
225.0	16.68	14.92	13.87	13.32	12.94	12.66	12.44	12.33	12.28
270.0	17.23	15.25	14.09	13.49	13.05	12.72	12.50	12.39	12.28
315.0	16.68	15.09	14.04	13.38	12.94	12.61	12.39	12.28	12.22
360.0	16.63	14.92	13.98	13.32	12.94	12.61	12.39	12.22	12.17
C/\u03b3(\u00b0)	90.0								
0.0	12.17								
45.0	12.22								
90.0	12.22								
135.0	12.17								
180.0	12.11								
225.0	12.22								
270.0	12.22								
315.0	12.17								
360.0	12.17								