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## Nata

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LumCAT: 4-2220-A	
Luminaire: BJB 47.319.2011	
Report No: NT2017060701	Voltage(V): 217.5000
Test No: GC2017060701	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

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## Photometric Results

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Lumens(lm): 2923.69  
Efficiency(%): 90.38%  
Lumens(lm)/Power(W): 106.09  
Central intensity(cd): 10084.820  
Maximum intensity(cd): 10084.820  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=27.1  
                                  [C90/270]Total=27.1  
Field angle(10%Imax): [C0/180]Total=60.2  
                                  [C90/270]Total=60.2  
Maximum s/h(1/2): C0\_180=0.46 C90\_270=0.46  
Maximum s/h(1/4): C0\_180=0.45 C90\_270=0.45  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 92.15%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.883%

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Equipment: gms1980  
Temperature(°C): 25.0

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

Operator: NT07  
Distance(feet): 24.34

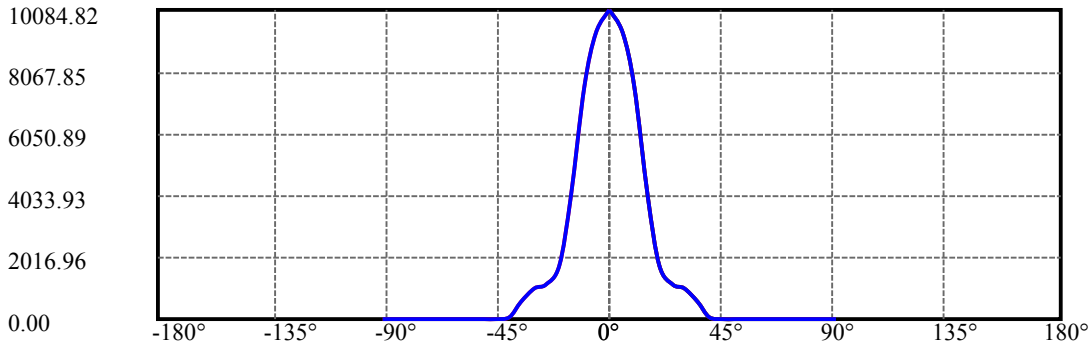
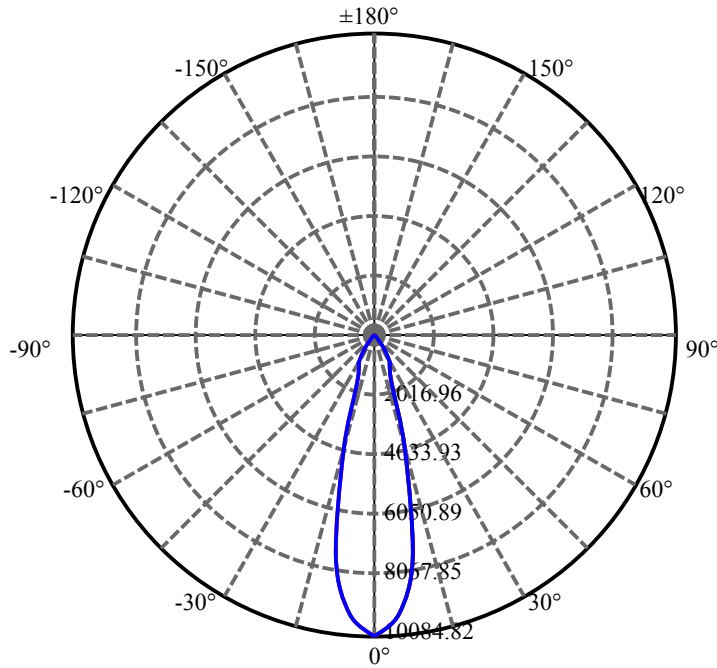
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10084.818	60.309	60.309	1.864%	2.063%
5.0	9320.223	445.258	505.567	13.764%	17.292%
10.0	7575.210	721.032	1226.599	22.288%	41.954%
15.0	3996.338	566.954	1793.553	17.526%	61.346%
20.0	1725.674	323.519	2117.072	10.001%	72.411%
25.0	1156.322	267.865	2384.937	8.280%	81.573%
30.0	1016.320	278.542	2663.479	8.610%	91.100%
35.0	574.899	180.747	2844.226	5.587%	97.282%
40.0	57.080	20.111	2864.338	.622%	97.970%
45.0	15.698	6.084	2870.422	.188%	98.178%
50.0	14.046	5.898	2876.32	.182%	98.380%
55.0	13.165	5.911	2882.231	.183%	98.582%
60.0	12.752	6.054	2888.285	.187%	98.789%
65.0	12.491	6.205	2894.49	.192%	99.001%
70.0	12.305	6.338	2900.828	.196%	99.218%
75.0	12.181	6.449	2907.278	.199%	99.439%
80.0	12.106	6.535	2913.812	.202%	99.662%
85.0	12.057	6.584	2920.396	.204%	99.887%
90.0	12.002	3.289	2923.686	.102%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2663.48	82.33%	91.10%
0-40	2864.34	88.54%	97.97%
0-60	2888.28	89.28%	98.79%
0-90	2920.40	90.28%	99.89%
0-120	2920.40	90.28%	99.89%
0-180	2923.69	90.38%	100.00%
60-90	38.17	1.18%	1.31%
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%
0-24.14	2338.95	72.30%	80.00%

ZONAL LUMEN SUMMARY

0-10	1226.60
10-20	890.47
20-30	546.41
30-40	200.86
40-50	11.98
50-60	11.96
60-70	12.54
70-80	12.98
80-90	6.58
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



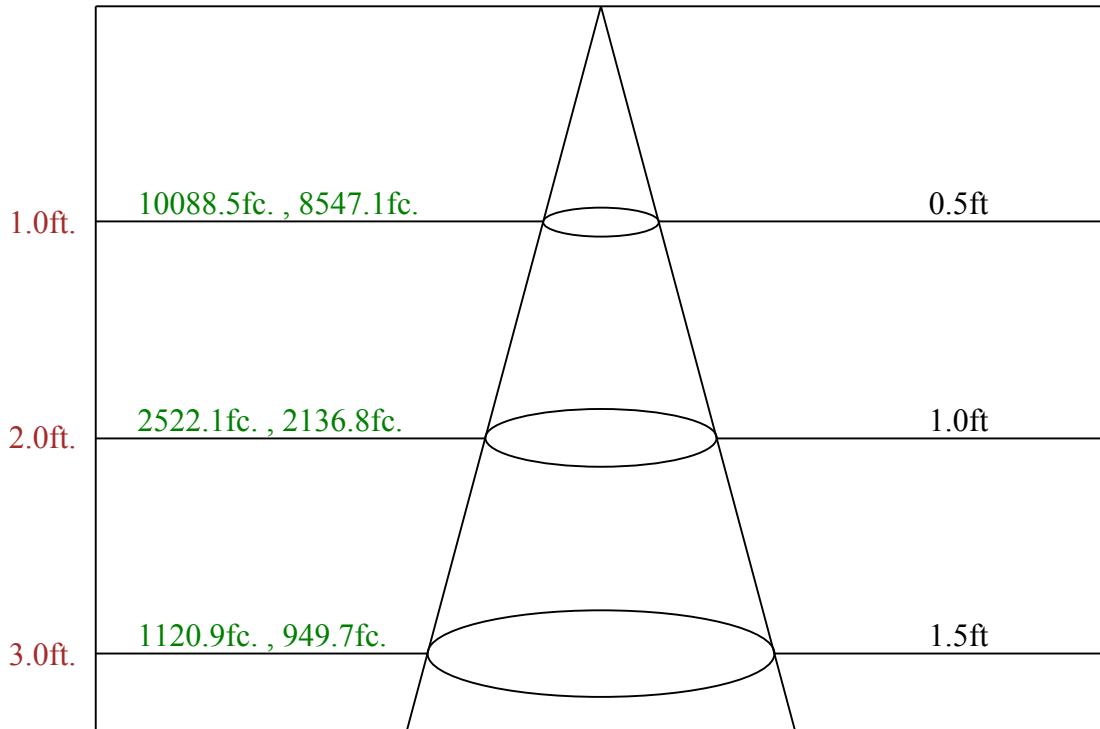
C0(Max): —————

C0/C180: —————

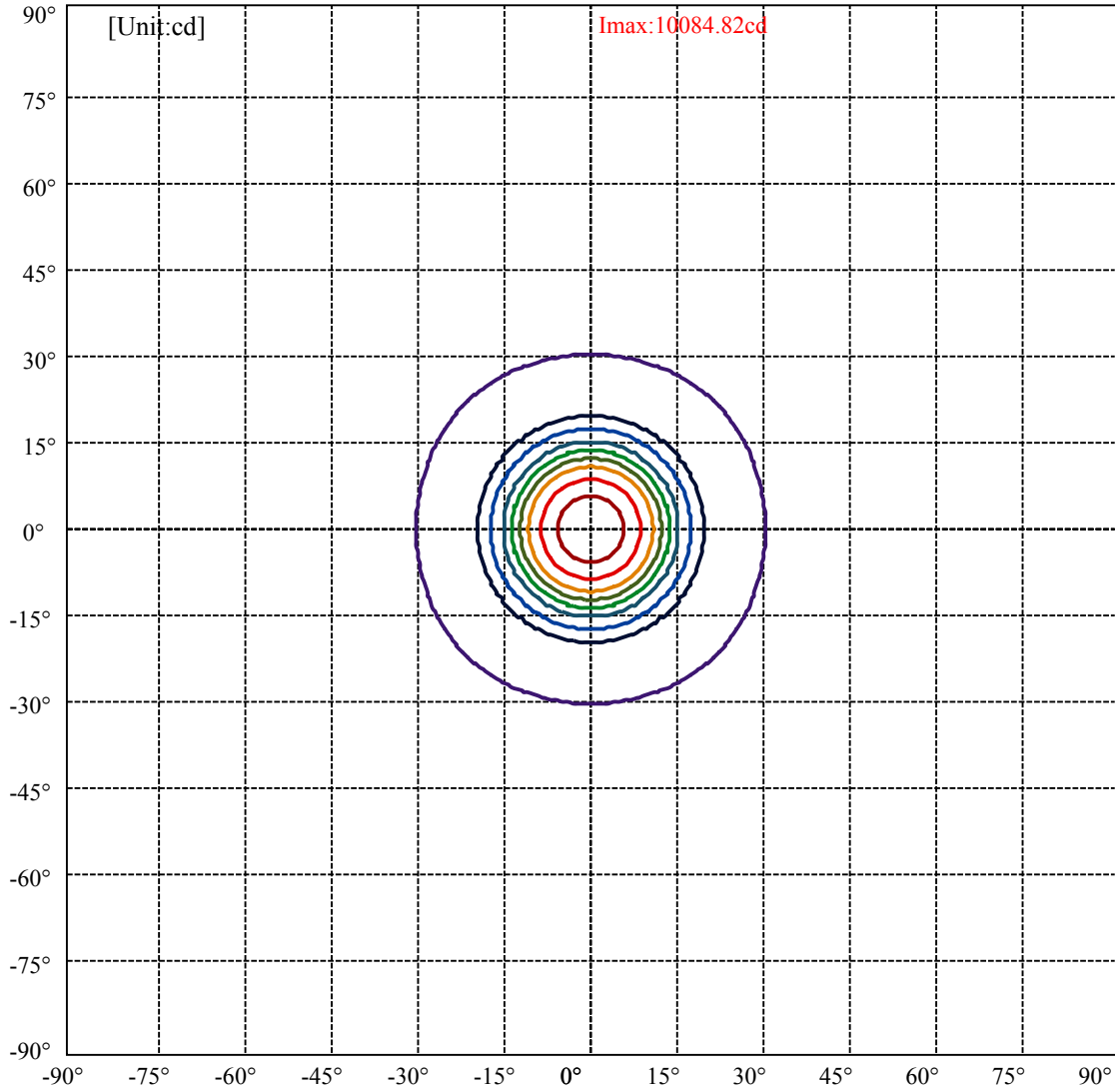
C90/C270: —————

Field angle(10%Imax):C0/180Left:30.1 Right:30.1  
:C90/270Left:30.1 Right:30.1

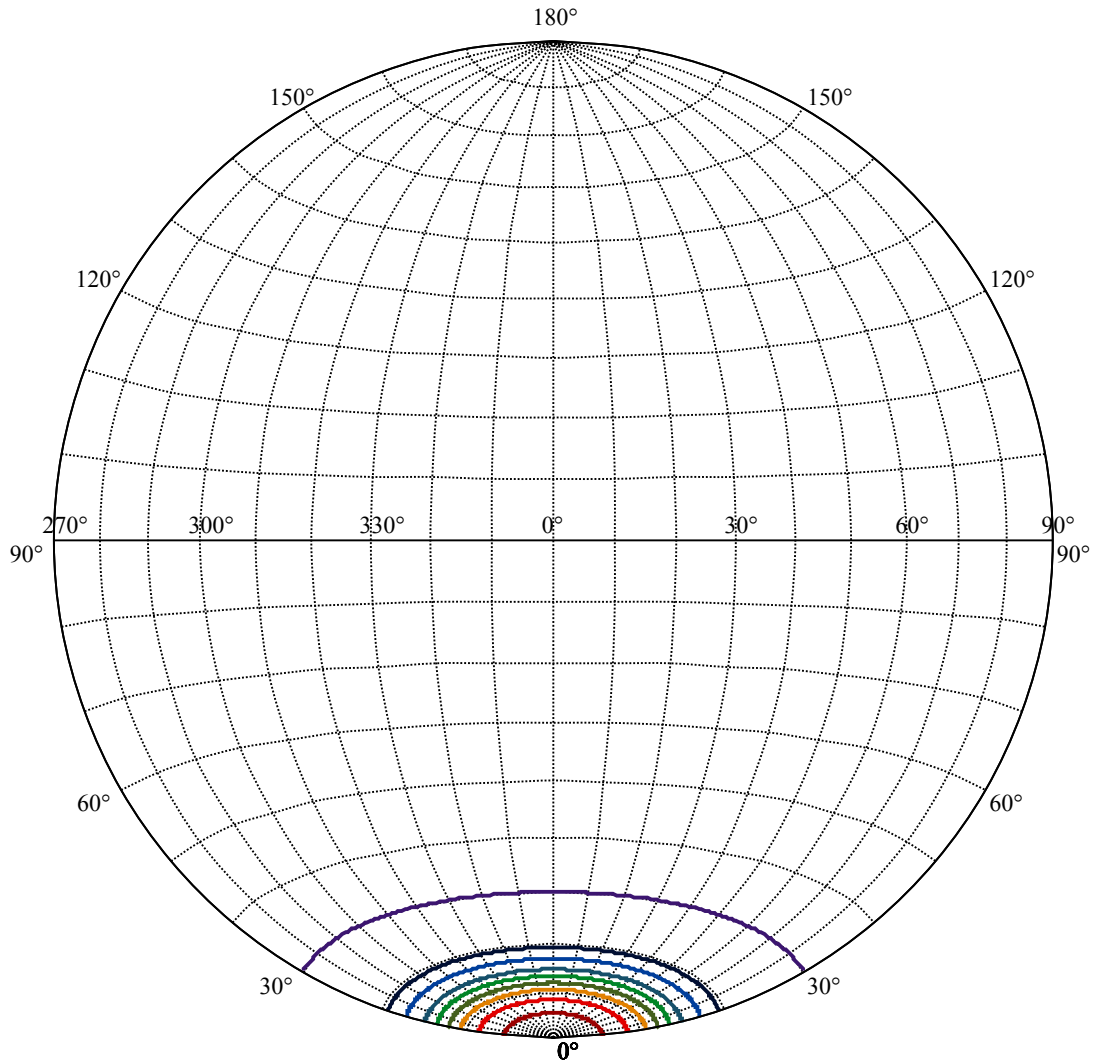
Beam Angle(50%Imax):C0/180Left:13.5 Right:13.5  
:C90/270Left:13.5 Right:13.5



Max , Ave      Beam angle of C0 plane 28.15



(10%Imax) 1008.48	—
(20%Imax) 2016.96	—
(30%Imax) 3025.45	—
(40%Imax) 4033.93	—
(50%Imax) 5042.41	—
(60%Imax) 6050.89	—
(70%Imax) 7059.37	—
(80%Imax) 8067.85	—
(90%Imax) 9076.34	—



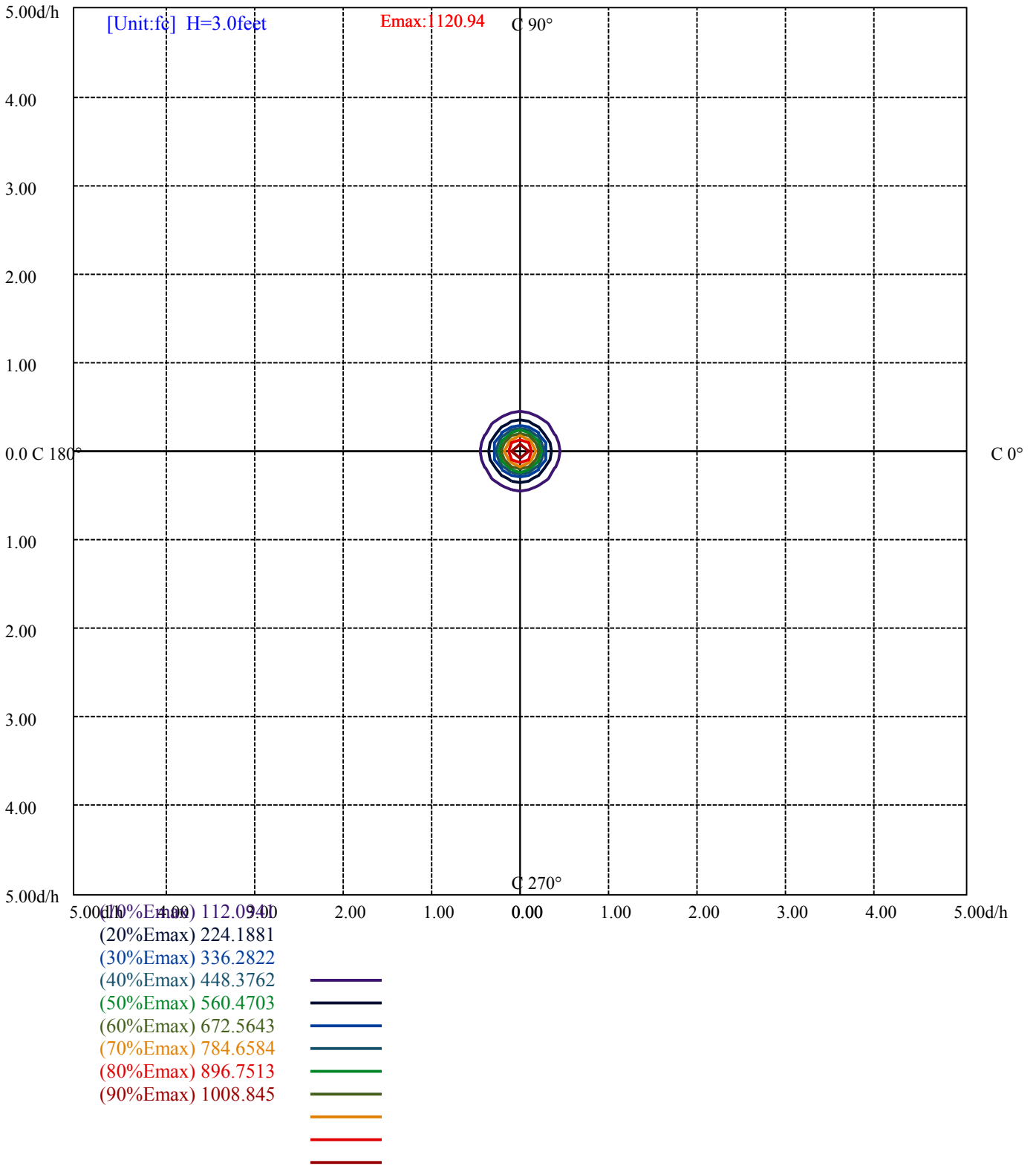
House

[Unit:cd]

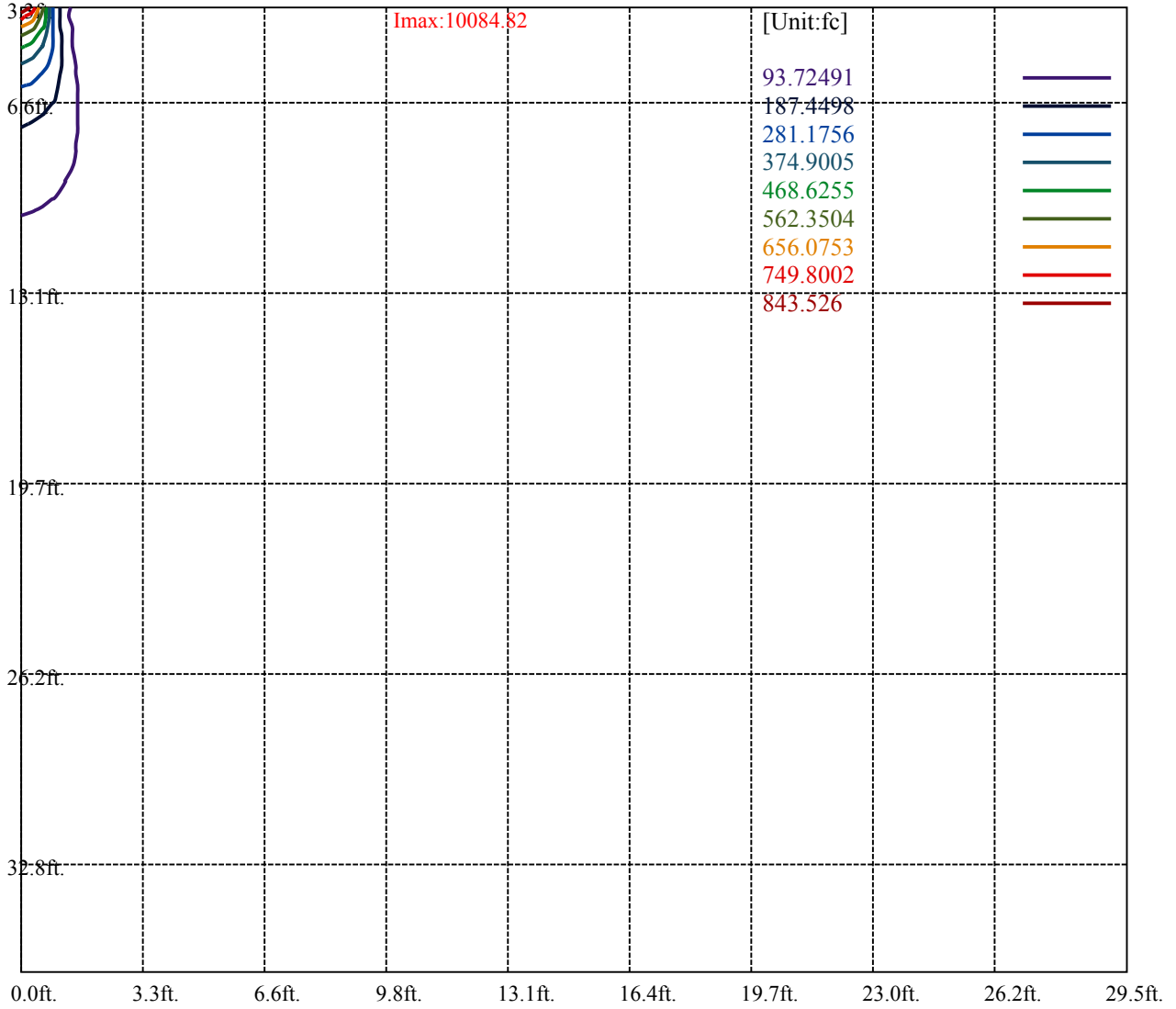
Road

Imax:10084.82

(10%Imax) 1008.48	—
(20%Imax) 2016.96	—
(30%Imax) 3025.45	—
(40%Imax) 4033.93	—
(50%Imax) 5042.41	—
(60%Imax) 6050.89	—
(70%Imax) 7059.37	—
(80%Imax) 8067.85	—
(90%Imax) 9076.34	—







Luminance Table

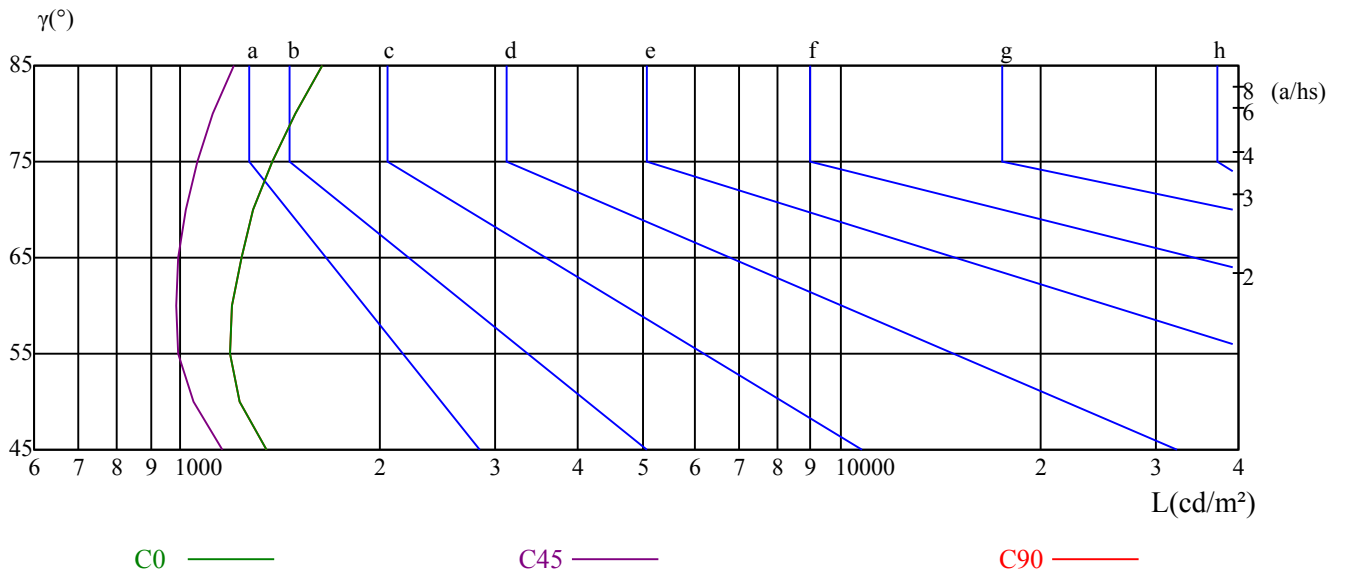
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1345	1231	1190	1200	1235	1291	1374	1488	1641
C45	1157	1043	992	984	995	1020	1062	1122	1202
C90	1345	1231	1190	1200	1235	1291	1374	1488	1641

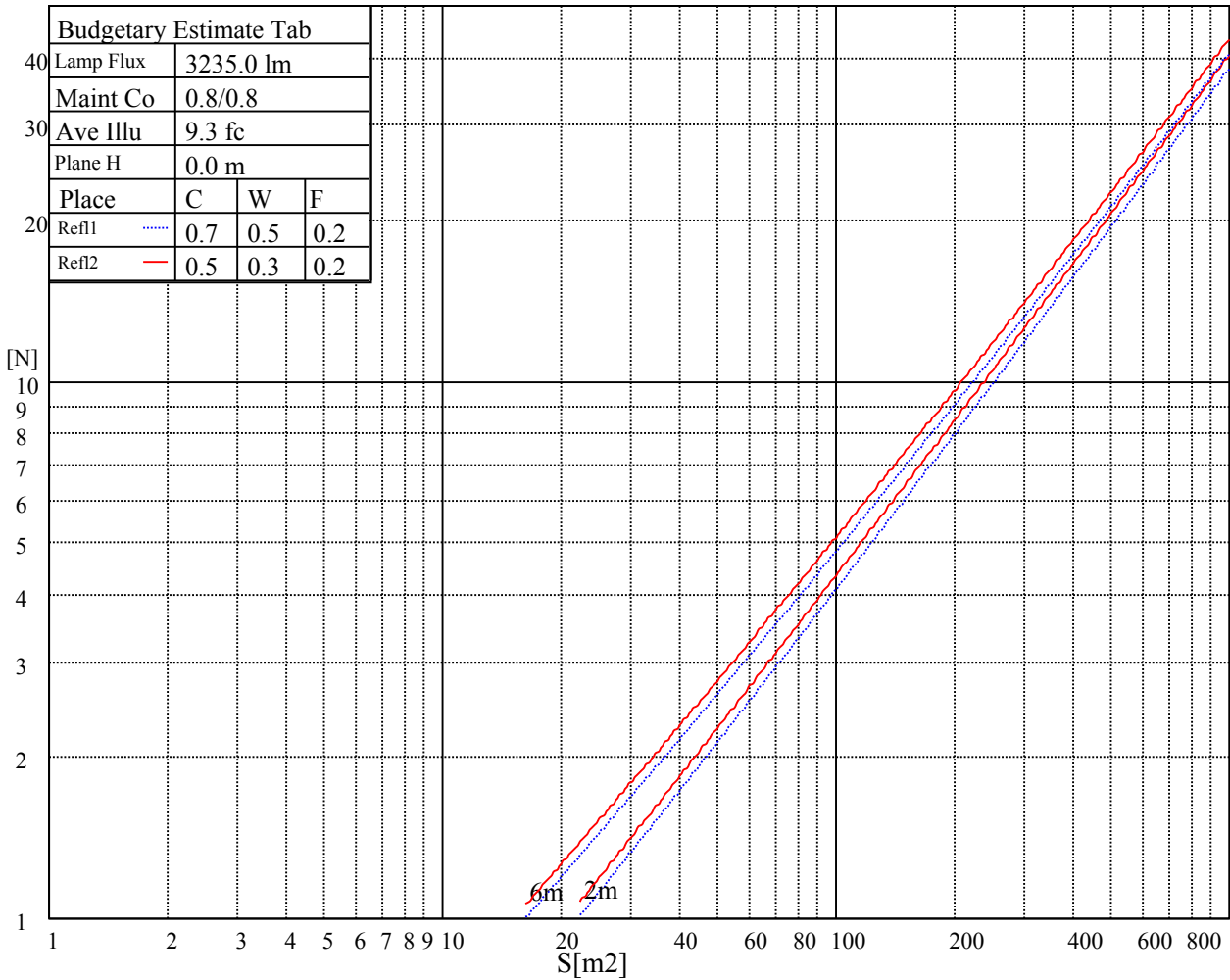
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2956	2956	2956	4706	4706	4706	13834	13834	13834

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	1.10	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	1.01	0.99	0.96	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.89	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	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.79
4	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.81	0.78	0.82	0.79	0.78	0.76
5	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.82	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.75	0.73	0.77	0.75	0.73	0.72
7	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.73	0.71	0.70
8	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.71	0.69	0.68
9	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.68	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64

Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	10111.11	9387.12	8095.49	4613.18	1890.09	1236.02	1033.96	624.34	38.04
45.0	10024.12	9620.00	8081.18	4739.81	1862.01	1231.06	1043.87	676.64	141.99
90.0	10100.10	9234.06	7084.11	3259.34	1575.71	1094.52	999.00	554.25	29.57
135.0	10103.95	9389.32	7706.79	4065.36	1718.31	1188.12	1020.75	600.11	33.20
180.0	10111.11	9312.24	7356.64	3711.35	1616.46	1092.87	995.36	460.38	28.13
225.0	10024.12	9088.16	7072.55	3479.56	1578.47	1090.45	1001.37	453.22	27.53
270.0	10100.10	9300.68	7720.01	4218.42	1869.72	1218.95	1031.21	702.52	127.24
315.0	10103.95	9230.21	7484.92	3883.68	1694.64	1098.60	1005.05	527.72	30.94
360.0	10111.11	9387.12	8095.49	4613.18	1890.09	1236.02	1033.96	624.34	38.04
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	15.80	14.09	13.21	12.88	12.61	12.39	12.28	12.22	12.17
45.0	15.75	14.04	13.16	12.77	12.50	12.28	12.17	12.06	12.00
90.0	15.47	13.98	13.05	12.66	12.39	12.22	12.11	12.06	11.95
135.0	15.97	14.26	13.27	12.83	12.55	12.39	12.22	12.17	12.11
180.0	15.58	13.93	13.16	12.77	12.50	12.28	12.22	12.11	12.11
225.0	15.36	13.87	13.05	12.61	12.39	12.22	12.11	12.00	12.00
270.0	16.24	14.31	13.32	12.83	12.55	12.39	12.17	12.11	12.06
315.0	15.42	13.87	13.10	12.66	12.44	12.28	12.17	12.11	12.06
360.0	15.80	14.09	13.21	12.88	12.61	12.39	12.28	12.22	12.17
C/ $\gamma$ (°)	90.0								
0.0	12.11								
45.0	11.95								
90.0	11.95								
135.0	12.00								
180.0	12.06								
225.0	11.95								
270.0	11.95								
315.0	12.06								
360.0	12.11								