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Nata

LumCAT: 4-2220-A	
Luminaire: BJB 47.319.2021	
Report No: NT2017051012	Voltage(V): 218.3000
Test No: GC2017051012	Current(A): 0.1030
LampCAT: citizen CLU036	Power (W): 20.5000
Lamp flux(lm): 2279.0	PF: 0.9070
Number of Lamps: 1	Ballast type: DC
Length(feet)(ft.):0.328	Width(feet)(ft.):0.328
Phm Type: C	Height(feet)(ft.):0

Photometric Results

Lumens(lm): 2073.95
Efficiency(%): 91.00%
Lumens(lm)/Power(W): 103.20
Central intensity(cd): 7304.196
Maximum intensity(cd): 7304.196
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.7
 [C90/270]Total=26.7
Field angle(10%Imax): [C0/180]Total=59.5
 [C90/270]Total=59.5
Maximum s/h(1/2): C0_180=0.46 C90_270=0.46
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.83%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.892%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/10
Humidity(%): 60.0%

Operator: NT07
Distance(feet): 24.34

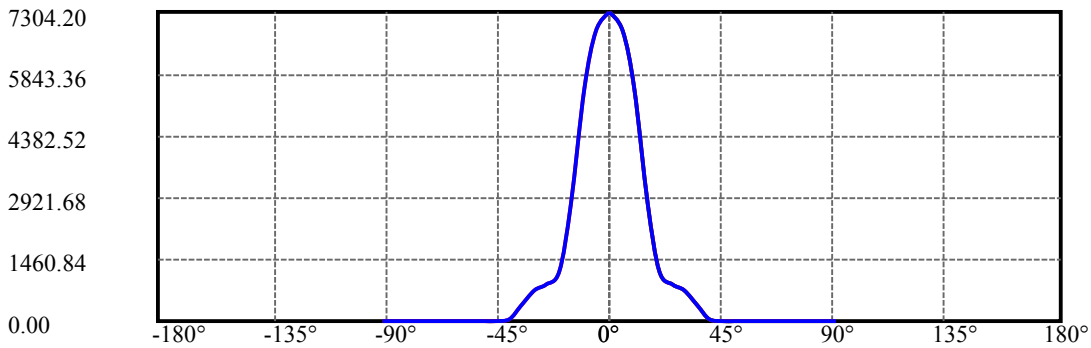
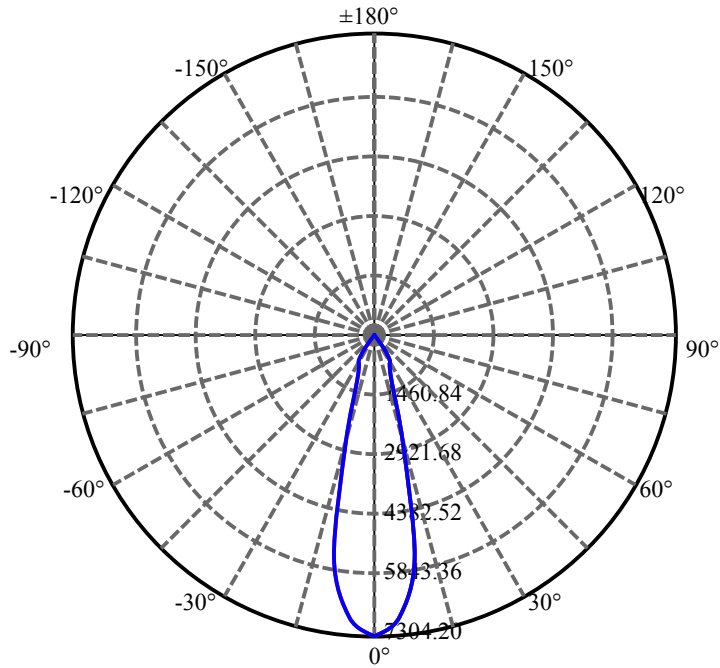
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7304.195	43.681	43.681	1.917%	2.106%
5.0	6867.116	328.065	371.745	14.395%	17.925%
10.0	5496.349	523.159	894.905	22.956%	43.150%
15.0	2752.682	390.519	1285.423	17.136%	61.979%
20.0	1201.578	225.265	1510.688	9.884%	72.841%
25.0	844.558	195.644	1706.333	8.585%	82.274%
30.0	724.033	198.435	1904.767	8.707%	91.842%
35.0	379.992	119.469	2024.236	5.242%	97.603%
40.0	24.865	8.761	2032.997	.384%	98.025%
45.0	11.342	4.396	2037.393	.193%	98.237%
50.0	9.958	4.181	2041.575	.183%	98.439%
55.0	9.201	4.131	2045.706	.181%	98.638%
60.0	8.857	4.205	2049.911	.184%	98.841%
65.0	8.589	4.267	2054.177	.187%	99.047%
70.0	8.389	4.321	2058.498	.190%	99.255%
75.0	8.272	4.380	2062.878	.192%	99.466%
80.0	8.169	4.410	2067.288	.193%	99.679%
85.0	8.141	4.446	2071.734	.195%	99.893%
90.0	8.093	2.218	2073.952	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1904.77	83.58%	91.84%
0-40	2033.00	89.21%	98.03%
0-60	2049.91	89.95%	98.84%
0-90	2071.73	90.91%	99.89%
0-120	2071.73	90.91%	99.89%
0-180	2073.95	91.00%	100.00%
60-90	26.03	1.14%	1.25%
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%
0-23.79	1659.16	72.80%	80.00%

ZONAL LUMEN SUMMARY

0-10	894.90
10-20	615.78
20-30	394.08
30-40	128.23
40-50	8.58
50-60	8.34
60-70	8.59
70-80	8.79
80-90	4.45
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: —————

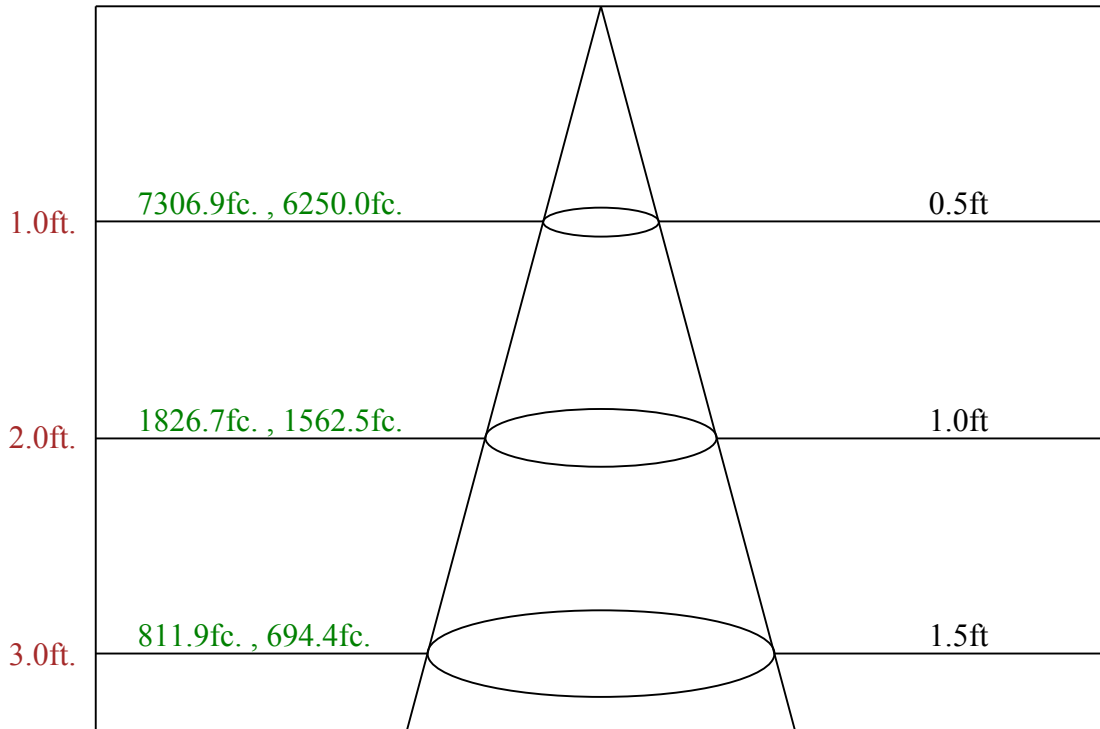
C90/C270: —————

Field angle(10%Imax):C0/180Left:29.7 Right:29.7

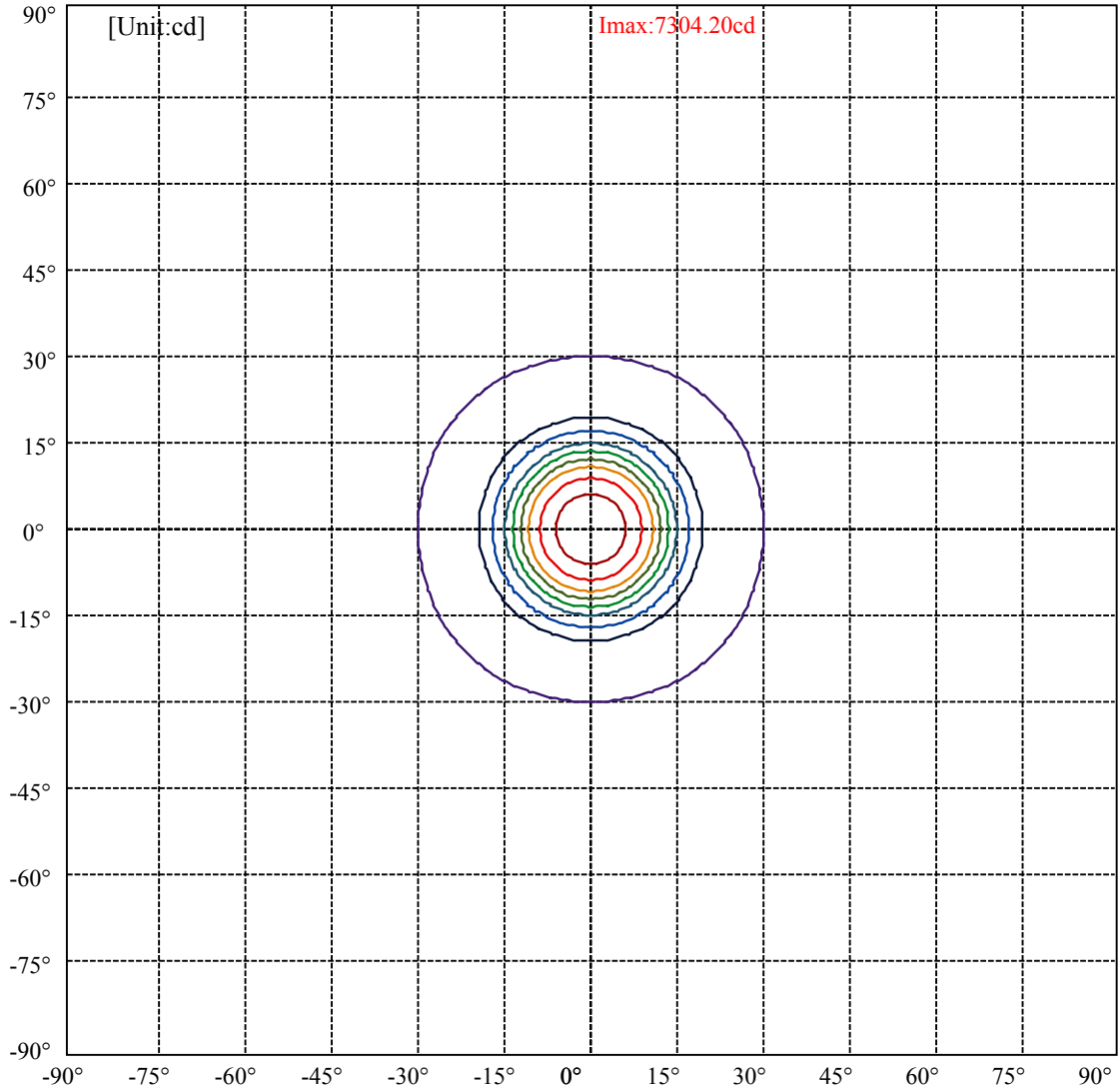
:C90/270Left:29.7 Right:29.7

Beam Angle(50%Imax):C0/180Left:13.4 Right:13.4

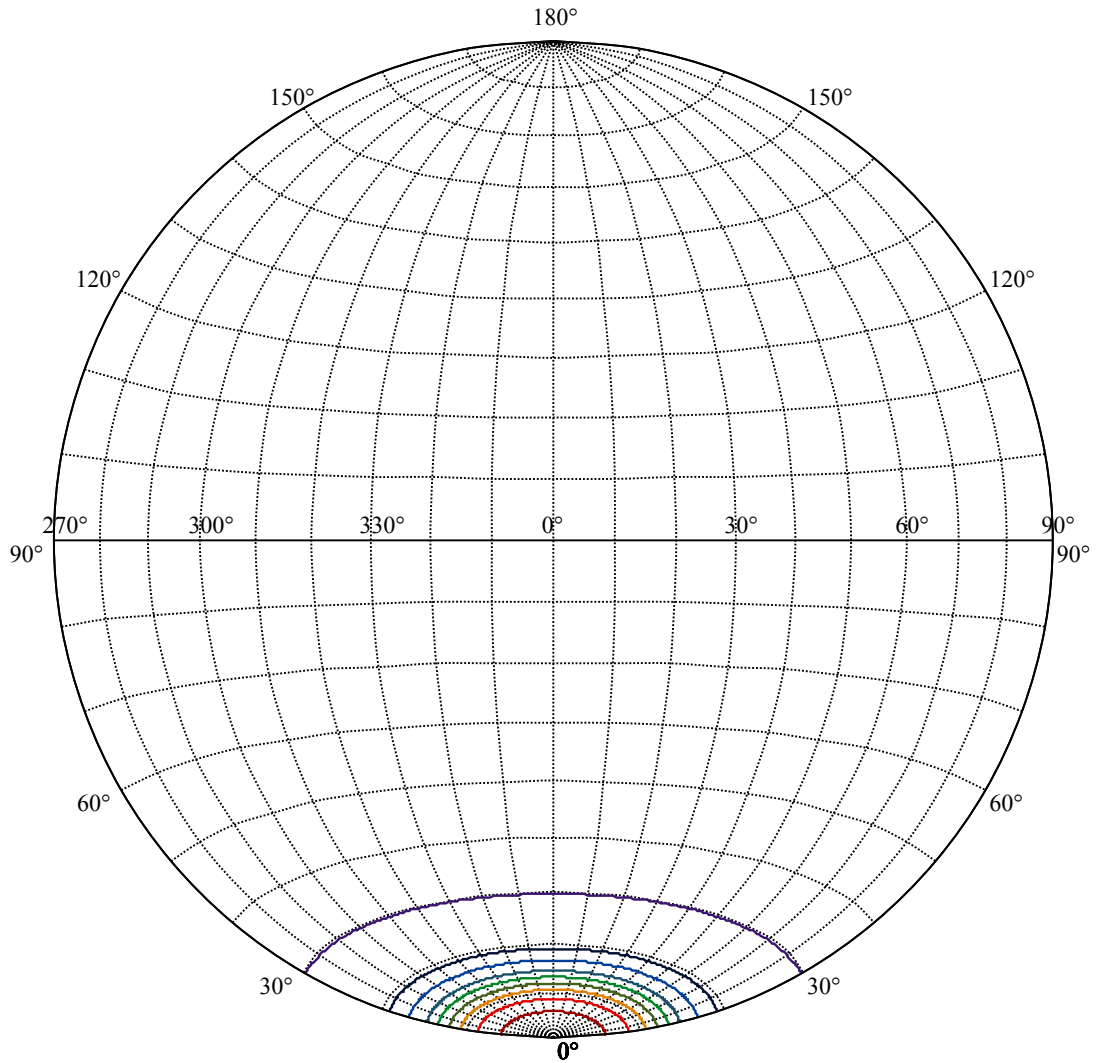
:C90/270Left:13.4 Right:13.4



Max , Ave Beam angle of C0 plane 27.52



(10%Imax) 730.42	—
(20%Imax) 1460.84	—
(30%Imax) 2191.26	—
(40%Imax) 2921.68	—
(50%Imax) 3652.1	—
(60%Imax) 4382.52	—
(70%Imax) 5112.94	—
(80%Imax) 5843.36	—
(90%Imax) 6573.78	—



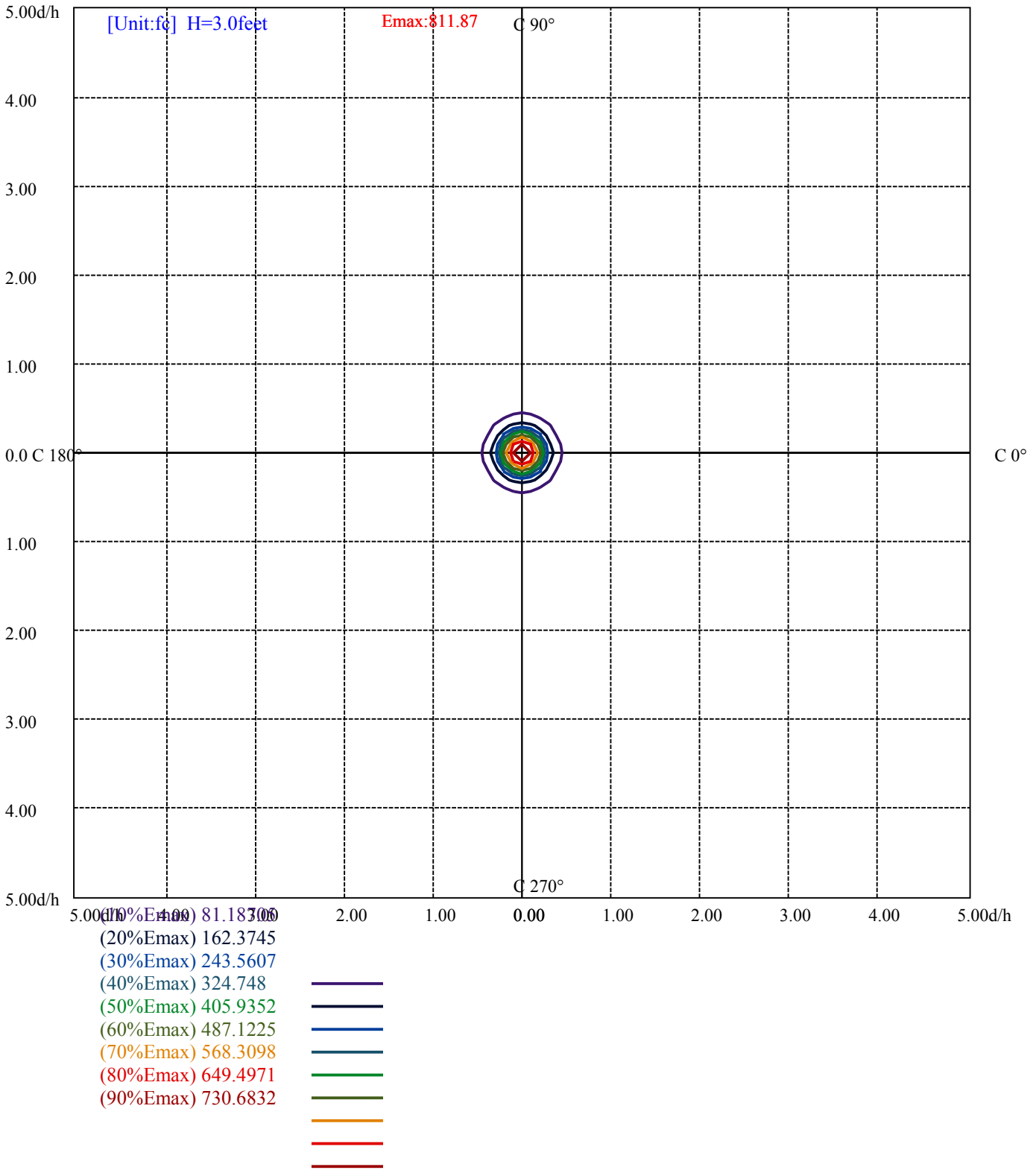
House

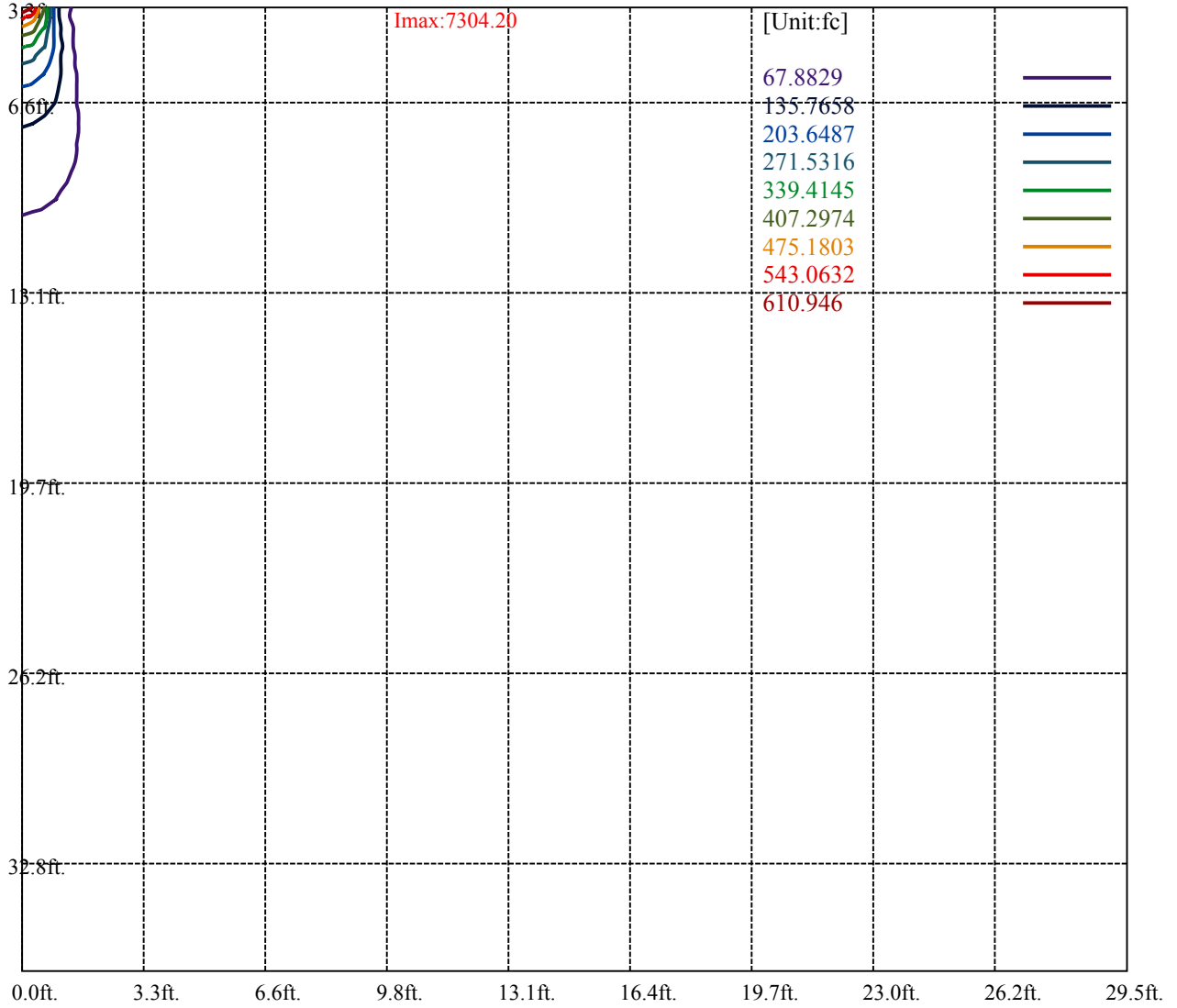
[Unit:cd]

Road

Imax:7304.20

(10%Imax) 730.42	—
(20%Imax) 1460.84	—
(30%Imax) 2191.26	—
(40%Imax) 2921.68	—
(50%Imax) 3652.1	—
(60%Imax) 4382.52	—
(70%Imax) 5112.94	—
(80%Imax) 5843.36	—
(90%Imax) 6573.78	—





Luminance Table

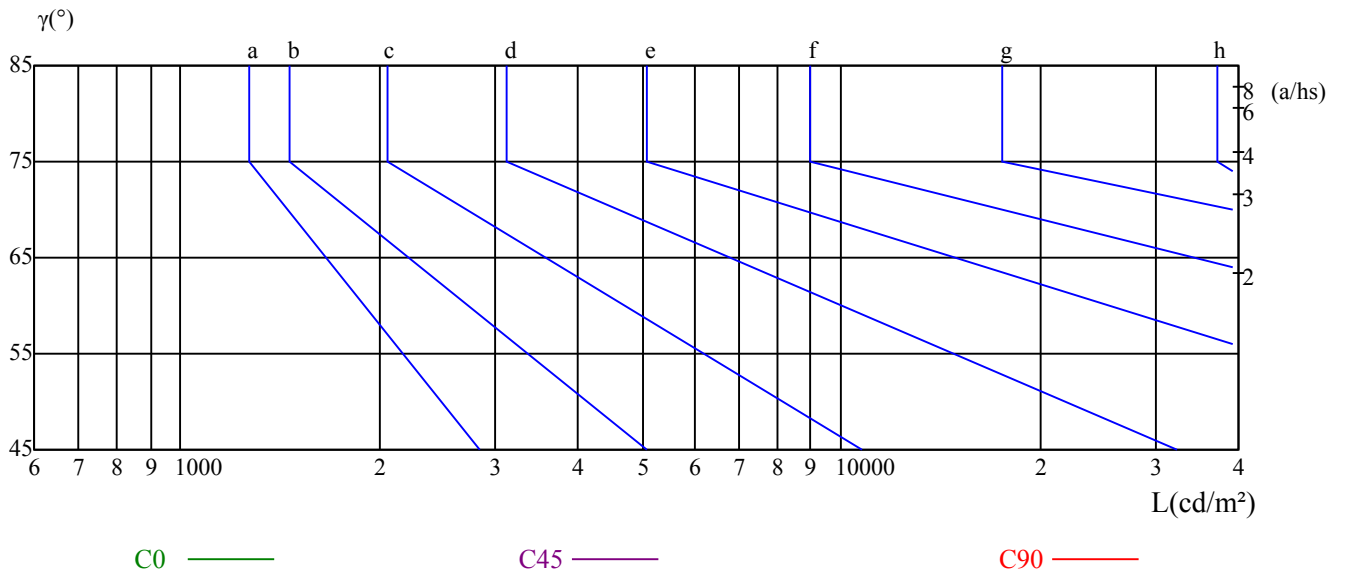
γ	45	50	55	60	65	70	75	80	85
C0	214	177	156	145	136	130	127	124	124
C45	157	130	114	105	98	93	91	89	88
C90	214	177	156	145	136	130	127	124	124

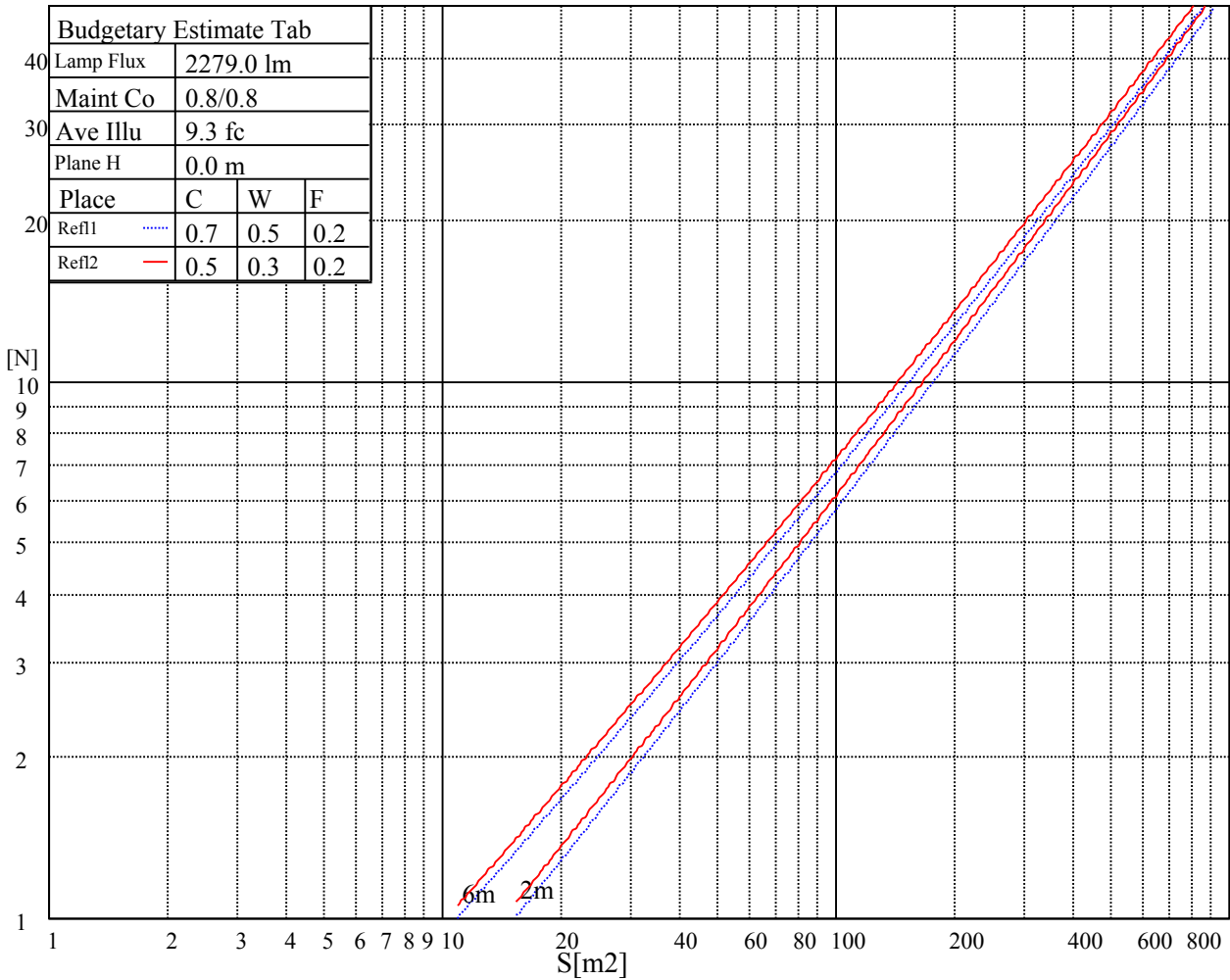
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2032	2032	2032	3196	3196	3196	9341	9341	9341

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 RHOF=20 CU															
0	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	0.99	0.97	1.00	0.98	0.96	0.96	0.94	0.93	0.93	0.91	0.90	0.90	0.88	0.87	0.86
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.85	0.84	0.83
3	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.84	0.82	0.85	0.83	0.81	0.80
4	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.83	0.80	0.78	0.77
5	0.86	0.81	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	0.75
6	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.78	0.76	0.74	0.72
7	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.74	0.71	0.70
8	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.69	0.68
9	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.67
10	0.73	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65

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	7294.42	6558.87	4967.74	2059.11	1027.90	792.26	689.86	301.71	16.19
45.0	7372.05	6755.42	5394.98	2502.86	1135.81	825.30	719.04	341.90	20.70
90.0	7313.69	6797.26	5229.81	2355.86	1096.94	823.86	714.19	340.36	19.27
135.0	7236.61	7107.23	6226.33	3792.28	1503.59	913.39	776.85	530.74	41.13
180.0	7294.42	7137.51	6188.34	3638.68	1453.49	921.92	758.62	523.26	40.91
225.0	7372.05	6985.01	5479.21	2788.61	1085.49	843.08	729.94	412.87	22.35
270.0	7313.69	6944.81	5630.07	2881.65	1271.25	853.37	729.50	463.57	22.41
315.0	7236.61	6650.81	4854.32	2002.40	1038.14	783.29	674.28	125.53	15.97
360.0	7294.42	6558.87	4967.74	2059.11	1027.90	792.26	689.86	301.71	16.19
C/\u03b3(\u00b0)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.63	9.58	9.03	8.75	8.48	8.31	8.15	8.09	8.20
45.0	11.18	9.86	9.19	8.86	8.64	8.42	8.26	8.20	8.20
90.0	11.01	9.91	9.19	8.86	8.53	8.42	8.26	8.20	8.15
135.0	12.39	10.41	9.41	8.97	8.70	8.42	8.37	8.26	8.15
180.0	12.00	10.24	9.25	8.86	8.59	8.31	8.20	8.09	8.04
225.0	11.45	9.97	9.25	8.86	8.64	8.37	8.31	8.15	8.15
270.0	11.45	10.13	9.30	8.92	8.64	8.48	8.37	8.20	8.15
315.0	10.63	9.58	8.97	8.75	8.48	8.37	8.26	8.15	8.09
360.0	10.63	9.58	9.03	8.75	8.48	8.31	8.15	8.09	8.20
C/\u03b3(\u00b0)	90.0								
0.0	8.04								
45.0	8.09								
90.0	8.09								
135.0	8.15								
180.0	8.04								
225.0	8.09								
270.0	8.15								
315.0	8.09								
360.0	8.04								