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## Nata

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LumCAT: 4-1820-E  
Luminaire: 92.76.227.00  
Report No: NT2015121703  
Test No: GC2015121703  
LampCAT: BRIDGELUX VERO29  
Lamp flux(lm): 4634.6  
Number of Lamps: 1  
Length(feet)(ft.):0.000  
Phm Type: C

Voltage(V): 36.7000  
Current(A): 1.0500  
Power (W): 38.5000  
PF: 0.0000  
Ballast type: DC  
Width(feet)(ft.):0.000  
Height(feet)(ft.):0.000

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## Photometric Results

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Lumens(lm): 4147.02  
Efficiency(%): 89.48%  
Lumens(lm)/Power(W): 108.43  
Central intensity(cd): 5279.358  
Maximum intensity(cd): 5279.358  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=56.2  
                                  [C90/270]Total=56.2  
Field angle(10%Imax): [C0/180]Total=79.1  
                                  [C90/270]Total=79.1  
Maximum s/h(1/2): C0\_180=0.86 C90\_270=0.86  
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(%): 90.08%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.232%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2015-12-17  
Humidity(%): 60.0%

Operator: NT07  
Distance(feet): 24.34

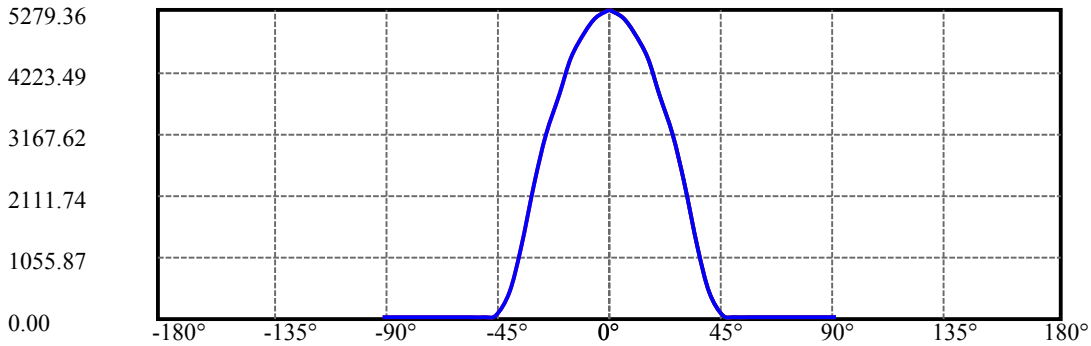
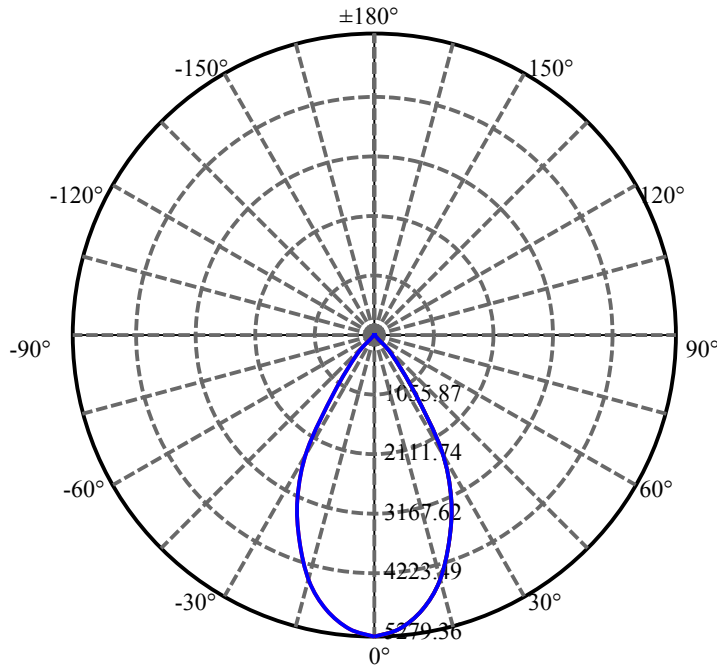
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5279.358	31.572	31.572	.681%	.761%
5.0	5164.579	246.729	278.301	5.324%	6.711%
10.0	4889.848	465.431	743.731	10.043%	17.934%
15.0	4466.767	633.693	1377.424	13.673%	33.215%
20.0	3820.611	716.265	2093.69	15.455%	50.487%
25.0	3145.565	728.679	2822.369	15.723%	68.058%
30.0	2327.385	637.863	3460.232	13.763%	83.439%
35.0	1220.194	383.628	3843.86	8.278%	92.690%
40.0	455.482	160.483	4004.343	3.463%	96.560%
45.0	71.043	27.536	4031.878	.594%	97.224%
50.0	23.172	9.730	4041.608	.210%	97.458%
55.0	18.988	8.526	4050.134	.184%	97.664%
60.0	18.864	8.955	4059.088	.193%	97.880%
65.0	19.077	9.477	4068.565	.204%	98.108%
70.0	22.903	11.797	4080.363	.255%	98.393%
75.0	41.285	21.859	4102.222	.472%	98.920%
80.0	40.343	21.777	4123.999	.470%	99.445%
85.0	33.316	18.192	4142.191	.393%	99.884%
90.0	17.604	4.825	4147.016	.104%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	3460.23	74.66%	83.44%
0-40	4004.34	86.40%	96.56%
0-60	4059.09	87.58%	97.88%
0-90	4142.19	89.38%	99.88%
0-120	4142.19	89.38%	99.88%
0-180	4147.02	89.48%	100.00%
60-90	92.06	1.99%	2.22%
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%
0-28.88	3317.61	71.58%	80.00%

ZONAL LUMEN SUMMARY

0-10	743.73
10-20	1349.96
20-30	1366.54
30-40	544.11
40-50	37.27
50-60	17.48
60-70	21.27
70-80	43.64
80-90	18.19
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

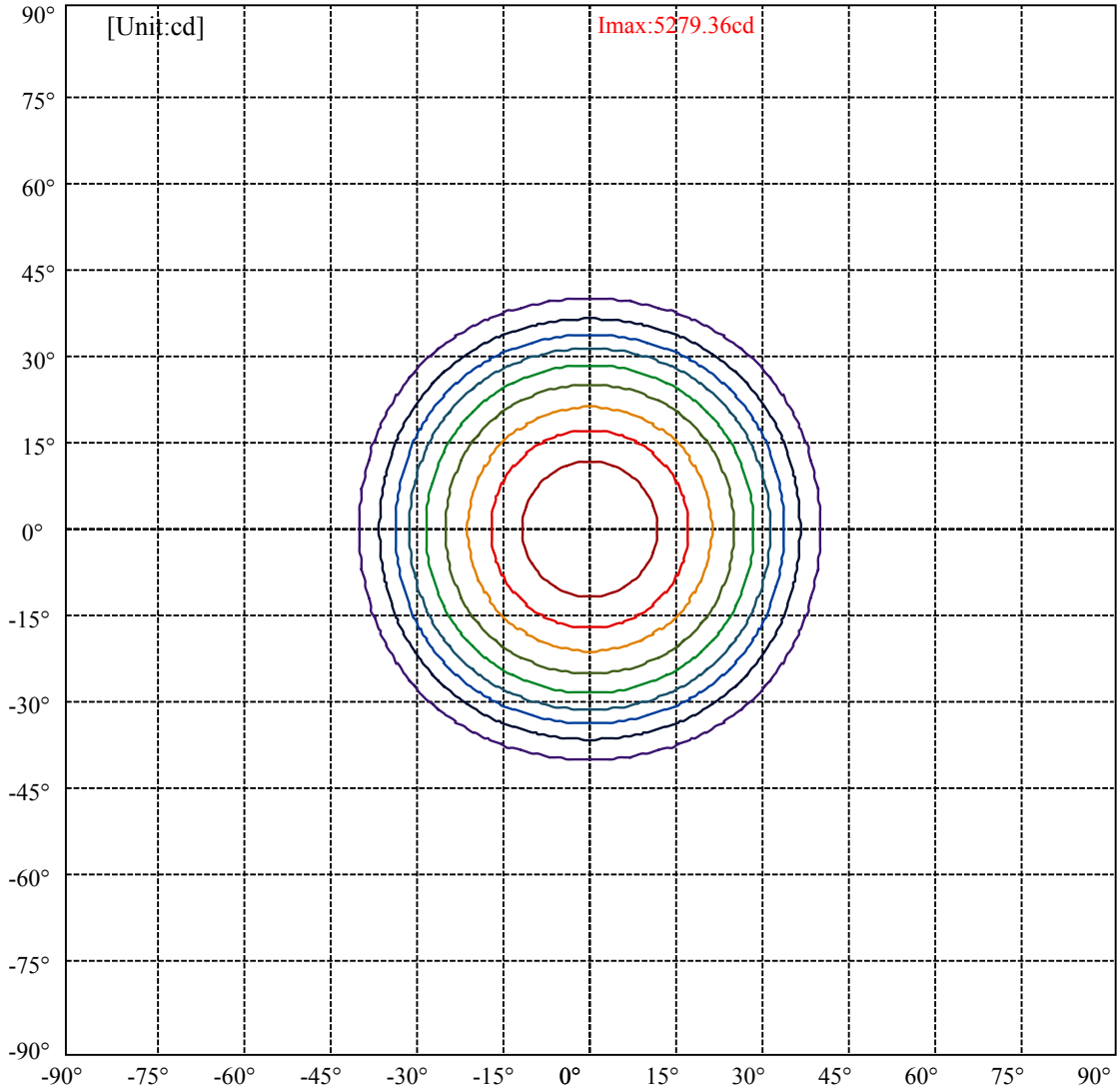


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

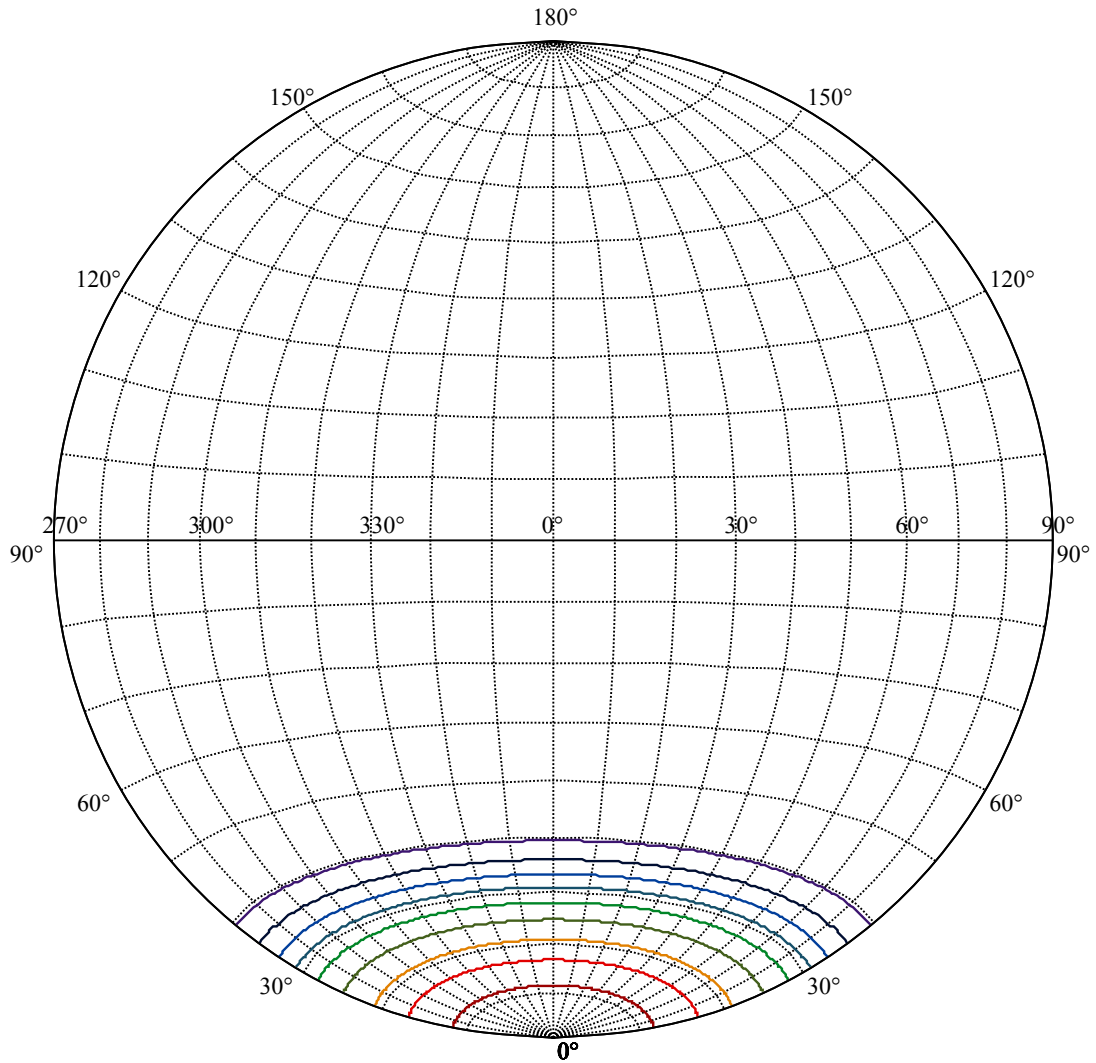
Field angle(10%Imax):C0/180Left:39.5 Right:39.5  
:C90/270Left:39.5 Right:39.5

Beam Angle(50%Imax):C0/180Left:28.1 Right:28.1  
:C90/270Left:28.1 Right:28.1





(10%Imax) 527.936	—
(20%Imax) 1055.87	—
(30%Imax) 1583.81	—
(40%Imax) 2111.74	—
(50%Imax) 2639.68	—
(60%Imax) 3167.61	—
(70%Imax) 3695.55	—
(80%Imax) 4223.49	—
(90%Imax) 4751.42	—



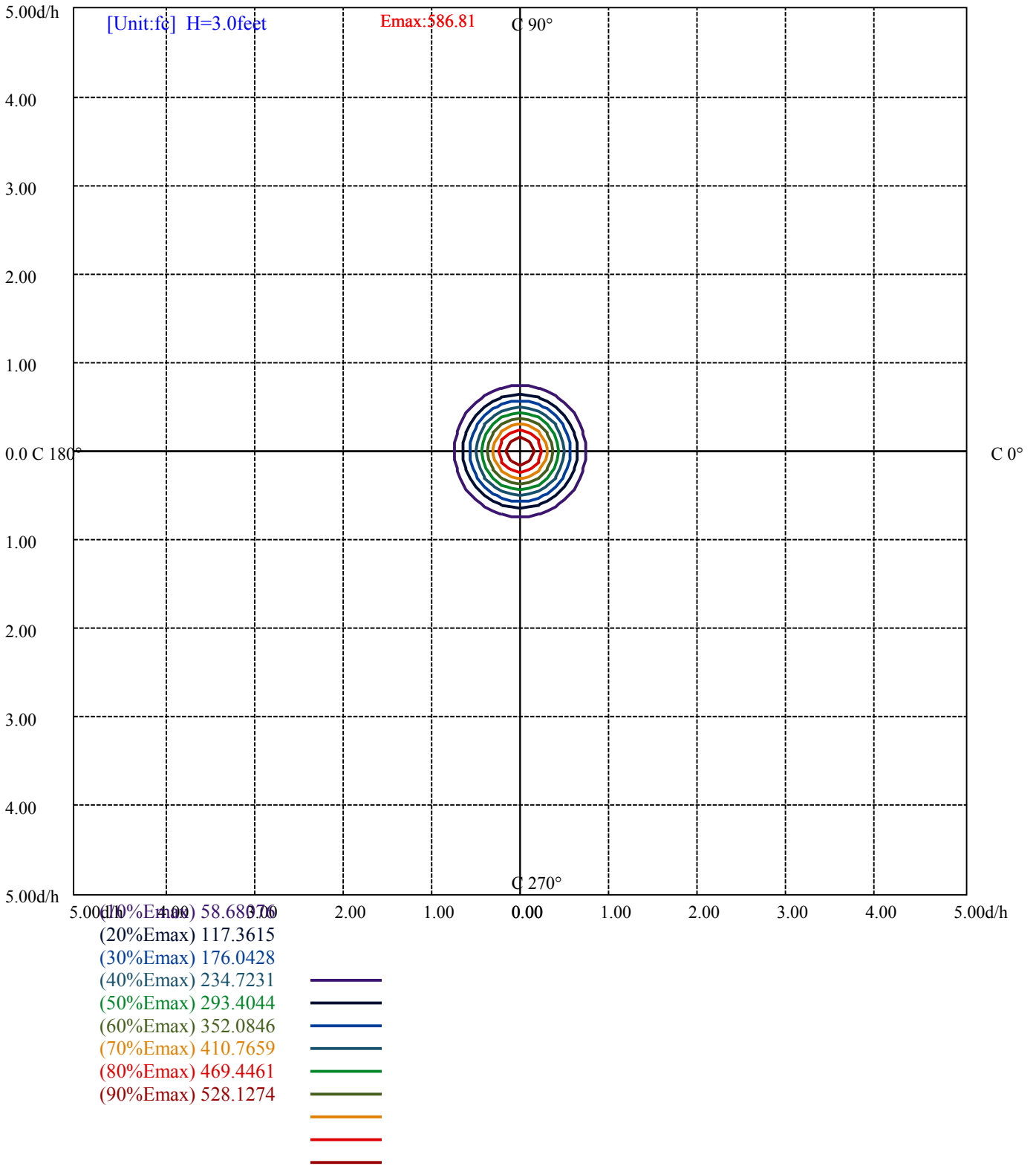
House

[Unit:cd]

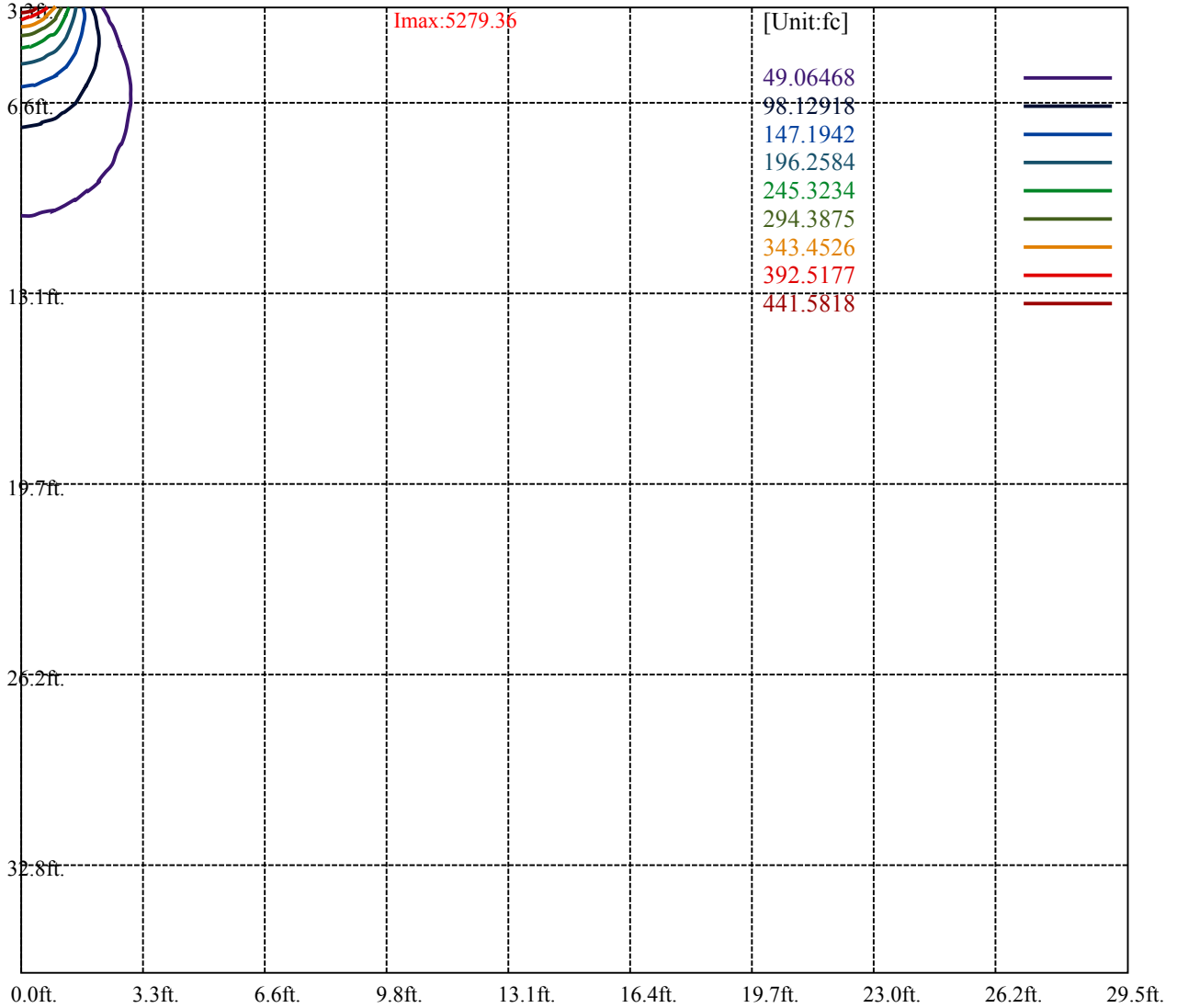
Road

Imax:5279.36

(10%Imax)	527.936	—
(20%Imax)	1055.87	—
(30%Imax)	1583.81	—
(40%Imax)	2111.74	—
(50%Imax)	2639.68	—
(60%Imax)	3167.61	—
(70%Imax)	3695.55	—
(80%Imax)	4223.49	—
(90%Imax)	4751.42	—







Luminance Table

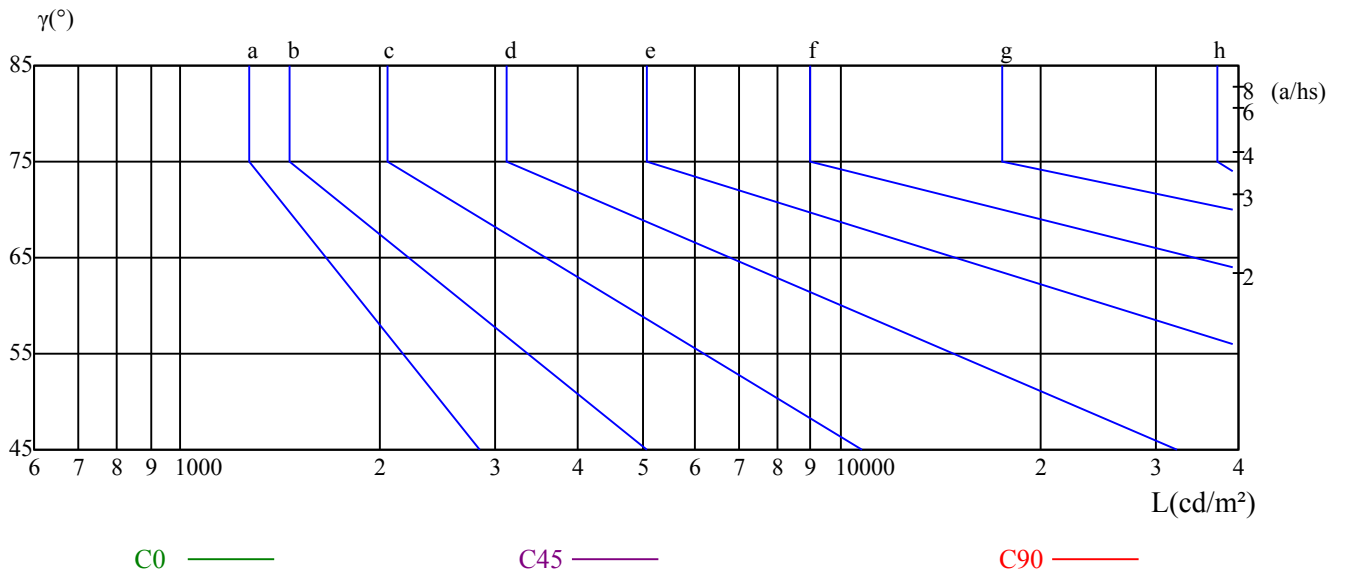
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

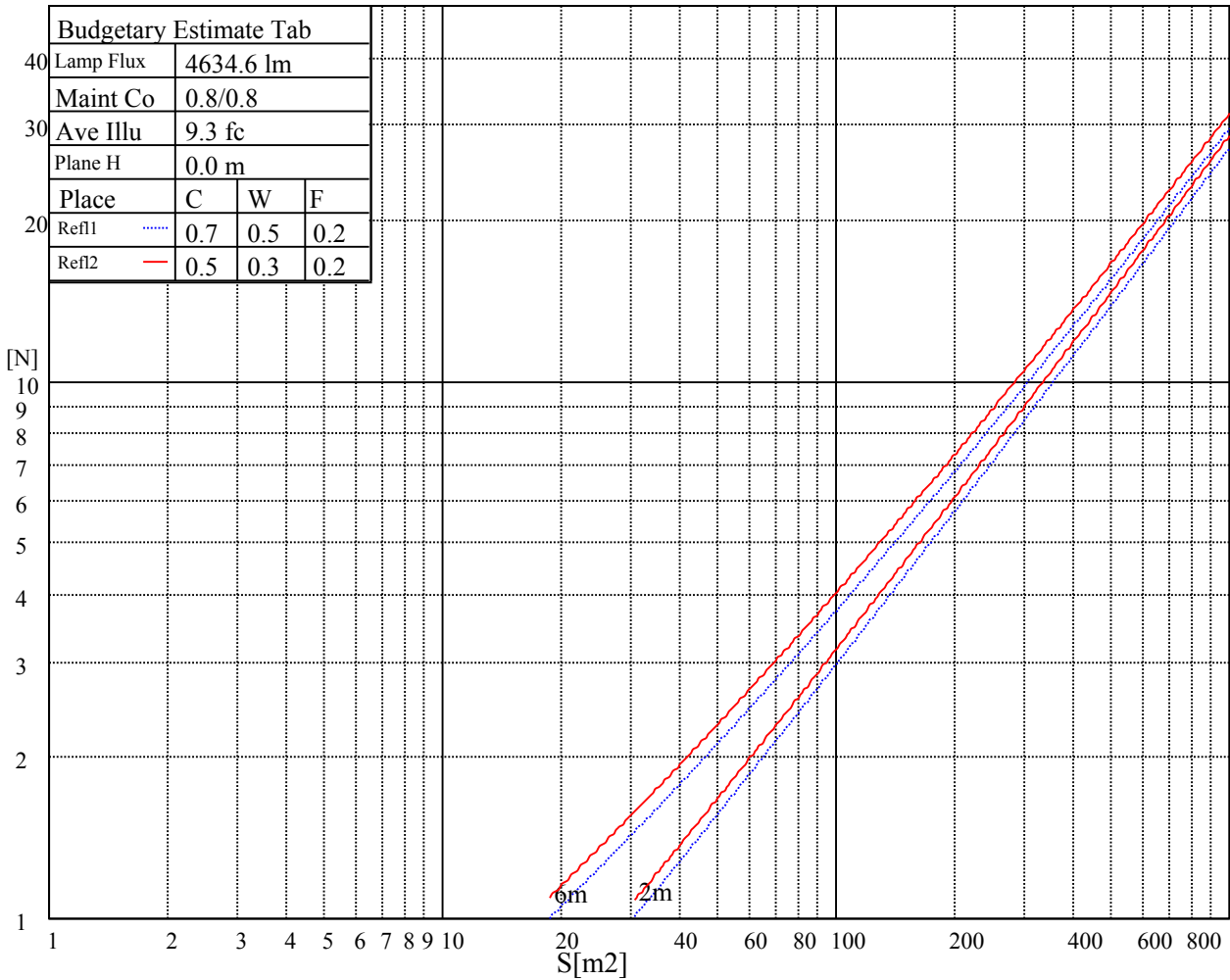
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.83
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	0.78
3	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.77	0.75	0.74
4	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.70	0.77	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.66
6	0.74	0.69	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
7	0.70	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.60
8	0.67	0.62	0.59	0.67	0.62	0.59	0.66	0.61	0.58	0.65	0.61	0.58	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	0.55	0.61	0.58	0.55	0.54
10	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	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	5248.53	5124.65	4860.93	4433.14	3789.81	3139.32	2315.12	1136.97	444.08
22.5	5330.01	5168.42	4892.86	4469.75	3823.83	3136.73	2334.56	1199.02	451.52
45.0	5300.28	5167.21	4890.00	4469.64	3824.49	3156.27	2311.16	1278.24	457.90
67.5	5303.58	5175.47	4899.91	4474.71	3818.44	3144.44	2339.35	1173.58	453.06
90.0	5272.20	5169.80	4892.31	4472.78	3841.56	3150.33	2333.84	1322.90	474.81
112.5	5273.30	5175.47	4899.91	4474.71	3818.44	3144.44	2339.35	1173.58	453.06
135.0	5257.89	5167.21	4890.00	4469.64	3824.49	3156.27	2311.16	1278.24	457.90
157.5	5249.08	5168.42	4892.86	4469.75	3823.83	3136.73	2334.56	1199.02	451.52
180.0	5248.53	5124.65	4860.93	4433.14	3789.81	3139.32	2315.12	1136.97	444.08
202.5	5330.01	5168.42	4892.86	4469.75	3823.83	3136.73	2334.56	1199.02	451.52
225.0	5300.28	5167.21	4890.00	4469.64	3824.49	3156.27	2311.16	1278.24	457.90
247.5	5303.58	5175.47	4899.91	4474.71	3818.44	3144.44	2339.35	1173.58	453.06
270.0	5272.20	5169.80	4892.31	4472.78	3841.56	3150.33	2333.84	1322.90	474.81
292.5	5273.30	5175.47	4899.91	4474.71	3818.44	3144.44	2339.35	1173.58	453.06
315.0	5257.89	5167.21	4890.00	4469.64	3824.49	3156.27	2311.16	1278.24	457.90
337.5	5249.08	5168.42	4892.86	4469.75	3823.83	3136.73	2334.56	1199.02	451.52
360.0	5248.53	5124.65	4860.93	4433.14	3789.81	3139.32	2315.12	1136.97	444.08

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	65.46	22.85	18.83	18.72	18.94	22.35	41.73	40.80	33.09
22.5	69.48	23.01	18.94	18.83	18.99	21.53	41.62	39.81	33.69
45.0	83.96	23.95	19.05	18.83	18.99	22.96	41.07	41.24	34.25
67.5	64.91	22.13	18.99	18.94	19.21	22.52	41.18	40.52	33.69
90.0	66.18	24.33	19.10	18.99	19.27	26.87	40.80	38.81	30.17
112.5	64.91	22.13	18.99	18.94	19.21	22.52	41.18	40.52	33.69
135.0	83.96	23.95	19.05	18.83	18.99	22.96	41.07	41.24	34.25
157.5	69.48	23.01	18.94	18.83	18.99	21.53	41.62	39.81	33.69
180.0	65.46	22.85	18.83	18.72	18.94	22.35	41.73	40.80	33.09
202.5	69.48	23.01	18.94	18.83	18.99	21.53	41.62	39.81	33.69
225.0	83.96	23.95	19.05	18.83	18.99	22.96	41.07	41.24	34.25
247.5	64.91	22.13	18.99	18.94	19.21	22.52	41.18	40.52	33.69
270.0	66.18	24.33	19.10	18.99	19.27	26.87	40.80	38.81	30.17
292.5	64.91	22.13	18.99	18.94	19.21	22.52	41.18	40.52	33.69
315.0	83.96	23.95	19.05	18.83	18.99	22.96	41.07	41.24	34.25
337.5	69.48	23.01	18.94	18.83	18.99	21.53	41.62	39.81	33.69
360.0	65.46	22.85	18.83	18.72	18.94	22.35	41.73	40.80	33.09

C/γ(°)	90.0
0.0	17.45
22.5	17.62
45.0	17.62
67.5	17.62
90.0	17.67
112.5	17.62
135.0	17.62
157.5	17.62
180.0	17.45
202.5	17.62
225.0	17.62
247.5	17.62
270.0	17.67
292.5	17.62
315.0	17.62
337.5	17.62
360.0	17.45