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## Nata

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LumCAT: 2969-E  
Luminaire: 92.76.263.00  
Report No: NT2017011101  
Test No: GC2017011101  
LampCAT: brideglux VERO 18  
Lamp flux(lm): 3743.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 30.0000  
Current(A): 0.9500  
Power (W): 28.5000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 3438.04  
Efficiency(%): 91.85%  
Lumens(lm)/Power(W): 120.63  
Central intensity(cd): 14167.390  
Maximum intensity(cd): 14167.390  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=22.4  
                                  [C90/270]Total=22.4  
Field angle(10%Imax): [C0/180]Total=49.5  
                                  [C90/270]Total=49.5  
Maximum s/h(1/2): C0\_180=0.38 C90\_270=0.38  
Maximum s/h(1/4): C0\_180=0.37 C90\_270=0.37  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 94.03%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.326%

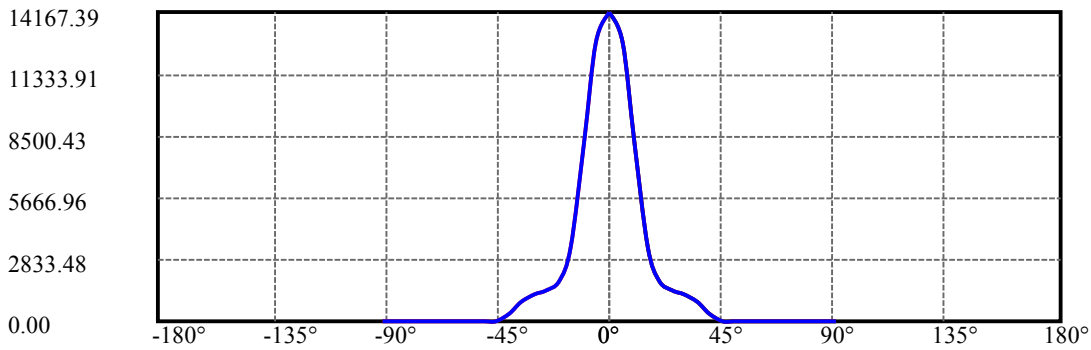
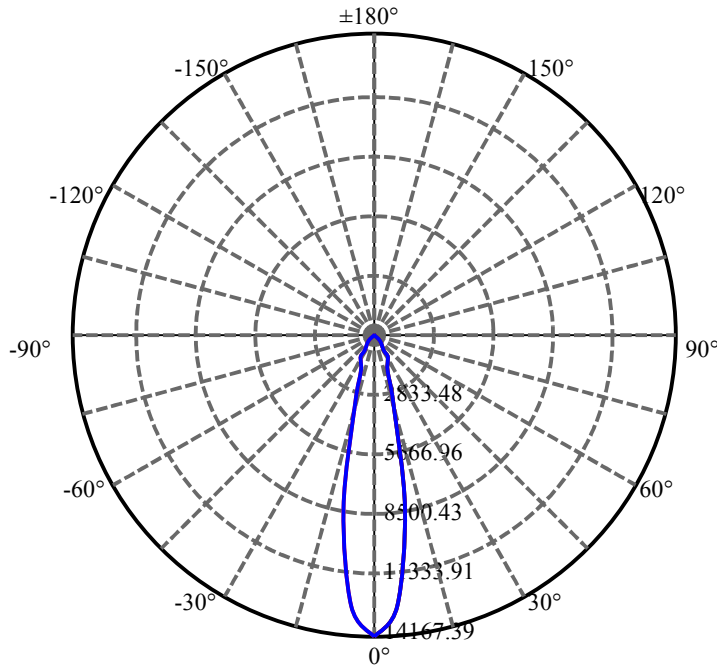
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14167.388	84.724	84.724	2.264%	2.464%
5.0	12798.135	611.409	696.133	16.335%	20.248%
10.0	8279.175	788.037	1484.17	21.054%	43.169%
15.0	3396.292	481.826	1965.997	12.873%	57.184%
20.0	1866.412	349.904	2315.901	9.348%	67.361%
25.0	1391.895	322.436	2638.337	8.614%	76.740%
30.0	1189.968	326.133	2964.47	8.713%	86.226%
35.0	836.073	262.860	3227.33	7.023%	93.871%
40.0	360.874	127.149	3354.479	3.397%	97.569%
45.0	39.620	15.356	3369.836	.410%	98.016%
50.0	15.664	6.577	3376.413	.176%	98.207%
55.0	15.072	6.767	3383.18	.181%	98.404%
60.0	14.783	7.017	3390.197	.187%	98.608%
65.0	15.113	7.508	3397.705	.201%	98.827%
70.0	16.035	8.259	3405.965	.221%	99.067%
75.0	16.627	8.803	3414.768	.235%	99.323%
80.0	17.632	9.518	3424.286	.254%	99.600%
85.0	18.003	9.831	3434.117	.263%	99.886%
90.0	14.322	3.925	3438.042	.105%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2964.47	79.20%	86.23%
0-40	3354.48	89.62%	97.57%
0-60	3390.20	90.57%	98.61%
0-90	3434.12	91.75%	99.89%
0-120	3434.12	91.75%	99.89%
0-180	3438.04	91.85%	100.00%
60-90	50.94	1.36%	1.48%
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%
0-26.72	2750.43	73.48%	80.00%

ZONAL LUMEN SUMMARY

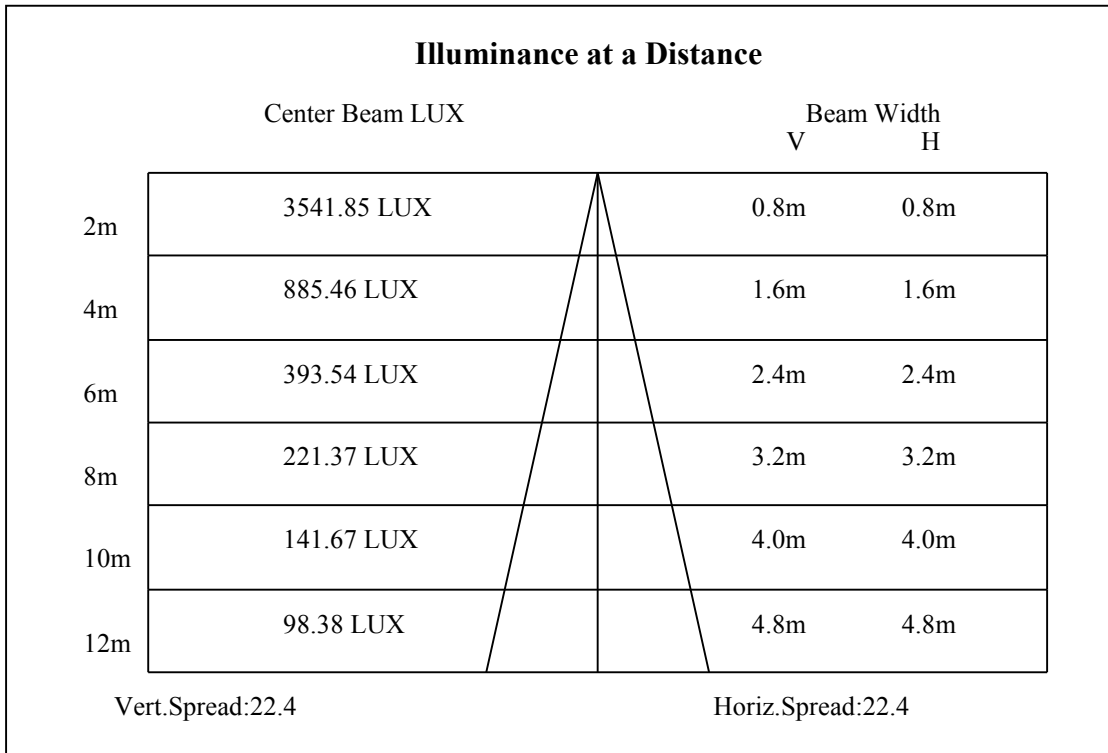
0-10	1484.17
10-20	831.73
20-30	648.57
30-40	390.01
40-50	21.93
50-60	13.78
60-70	15.77
70-80	18.32
80-90	9.83
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

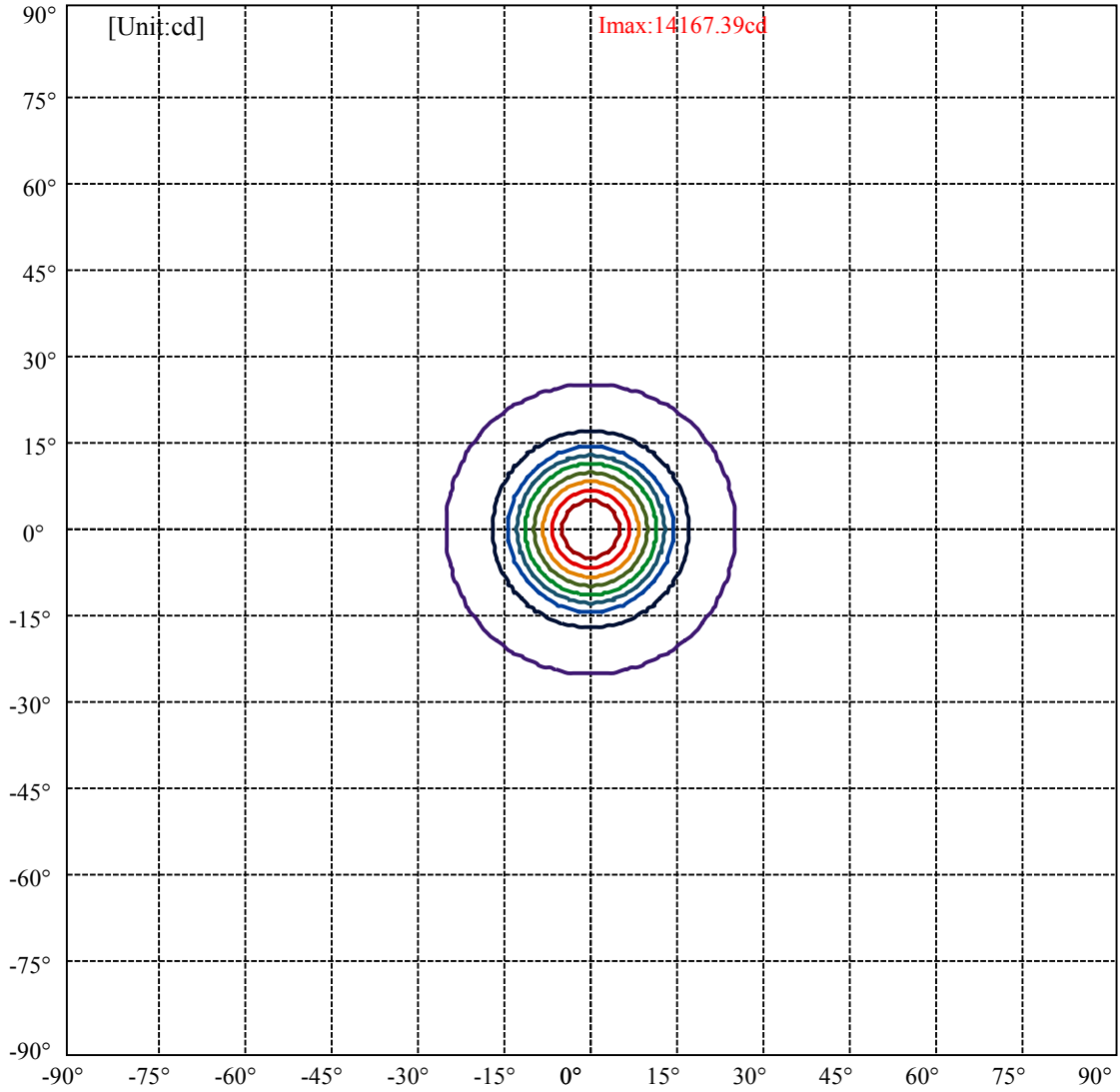


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

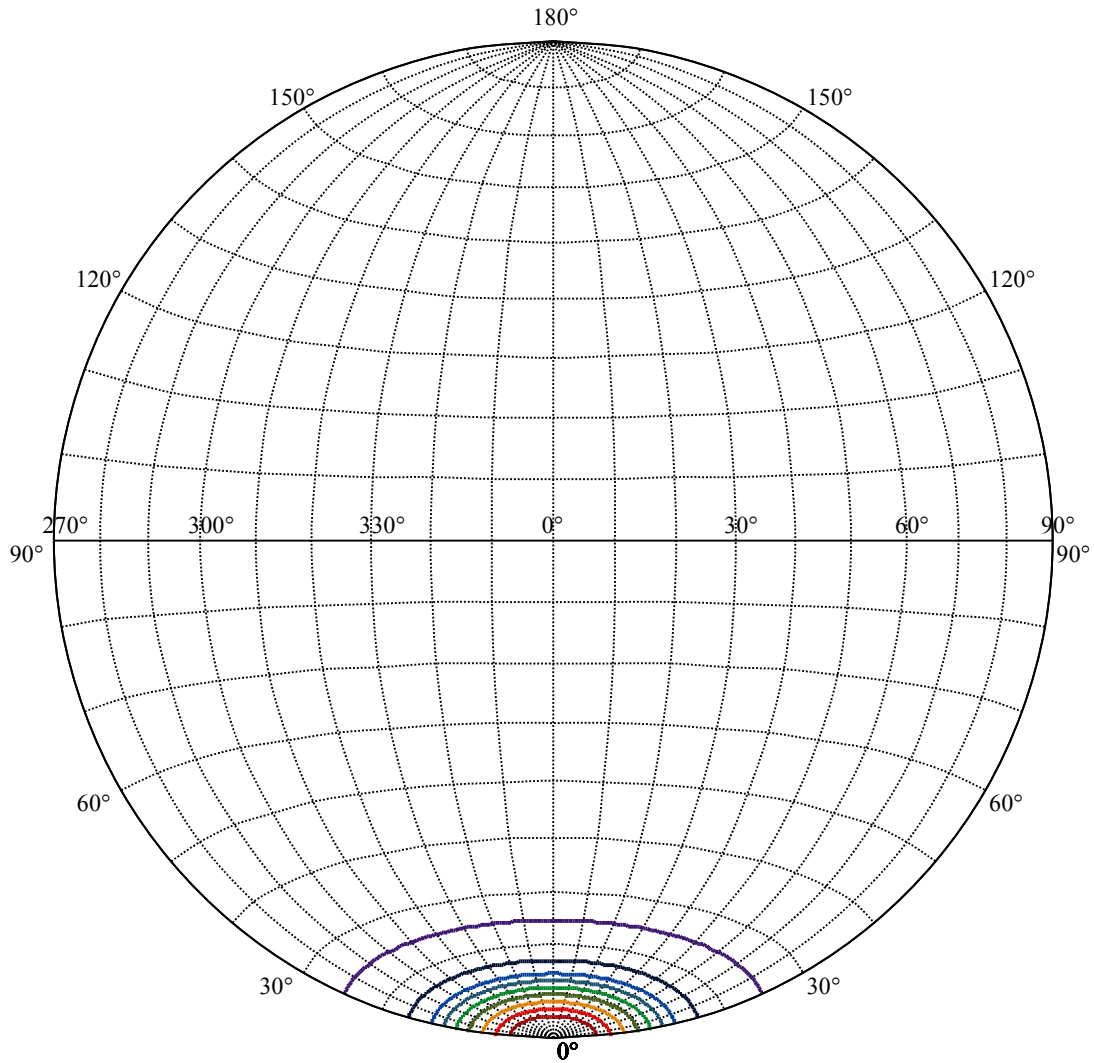
Field angle(10%Imax):C0/180Left:24.7 Right:24.7  
:C90/270Left:24.7 Right:24.7

Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2  
:C90/270Left:11.2 Right:11.2





(10%Imax) 1416.74	—
(20%Imax) 2833.48	—
(30%Imax) 4250.22	—
(40%Imax) 5666.96	—
(50%Imax) 7083.69	—
(60%Imax) 8500.43	—
(70%Imax) 9917.17	—
(80%Imax) 11333.9	—
(90%Imax) 12750.6	—



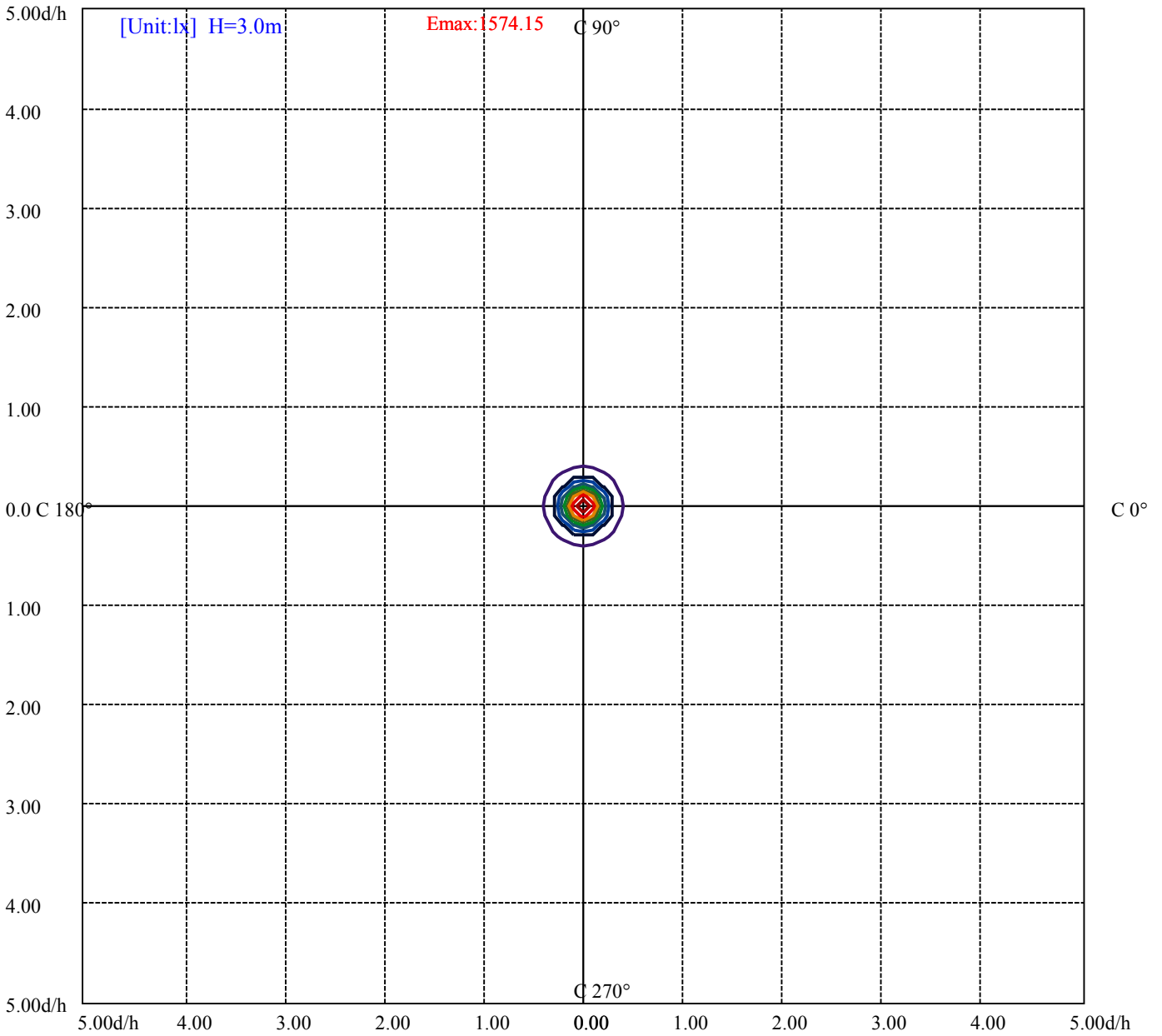
House

[Unit:cd]

Road

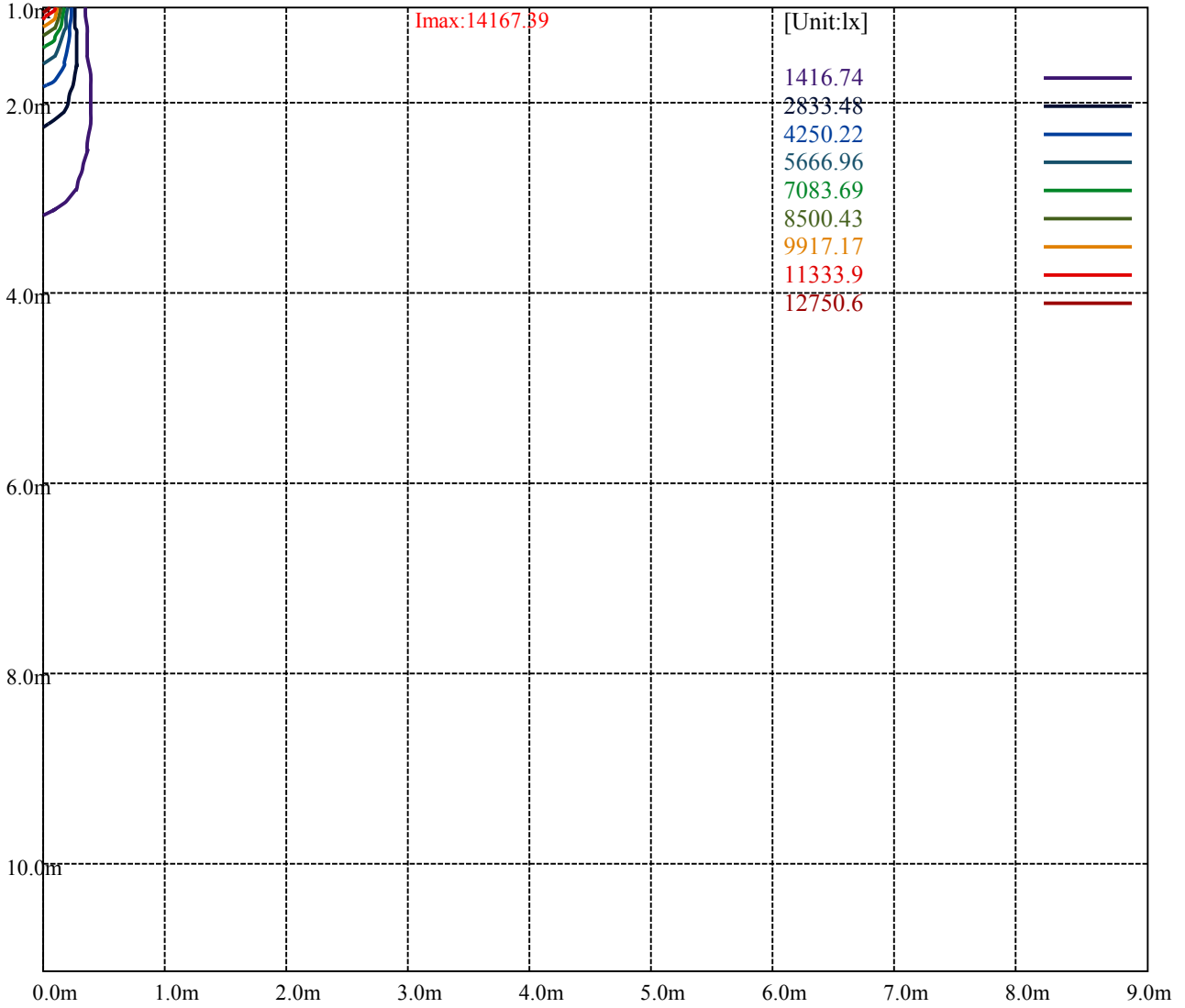
**Imax:14167.39**

(10%Imax)	1416.74	—
(20%Imax)	2833.48	—
(30%Imax)	4250.22	—
(40%Imax)	5666.96	—
(50%Imax)	7083.69	—
(60%Imax)	8500.43	—
(70%Imax)	9917.17	—
(80%Imax)	11333.9	—
(90%Imax)	12750.6	—



- (10%Emax) 157.4144
- (20%Emax) 314.83
- (30%Emax) 472.2445
- (40%Emax) 629.66
- (50%Emax) 787.0745
- (60%Emax) 944.49
- (70%Emax) 1101.904
- (80%Emax) 1259.322
- (90%Emax) 1416.733





Luminance Table

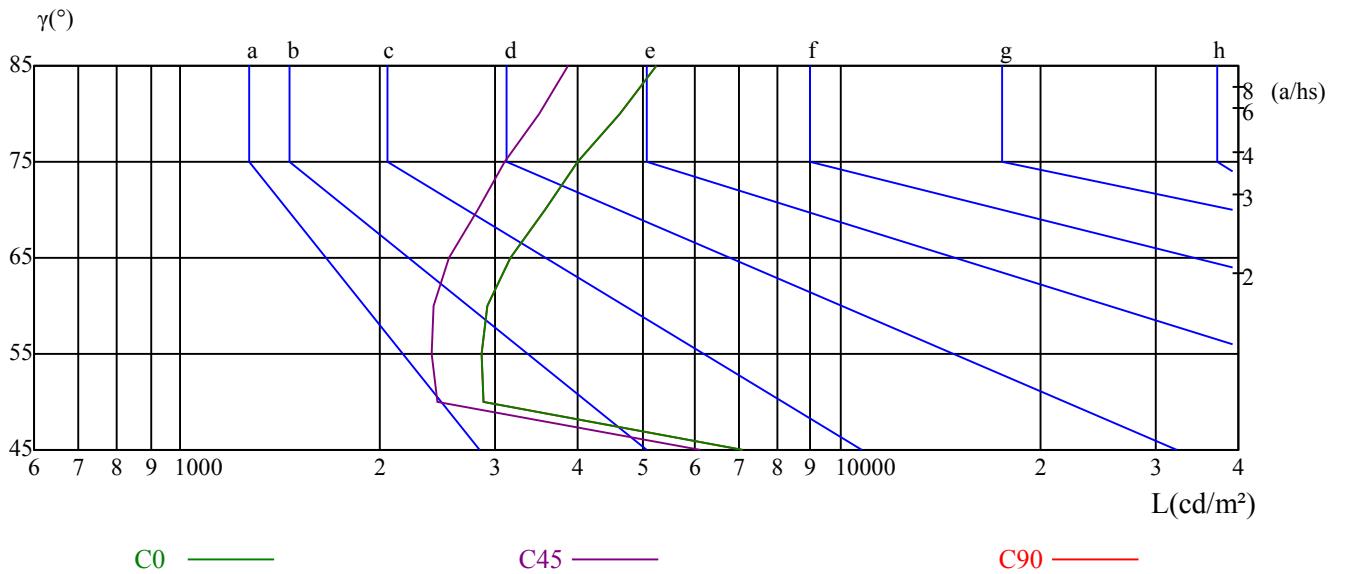
$\gamma$	45	50	55	60	65	70	75	80	85
C0	7084	2871	2857	2923	3149	3560	3982	4622	5256
C45	6119	2443	2393	2409	2549	2825	3091	3496	3857
C90	7084	2871	2857	2923	3149	3560	3982	4622	5256

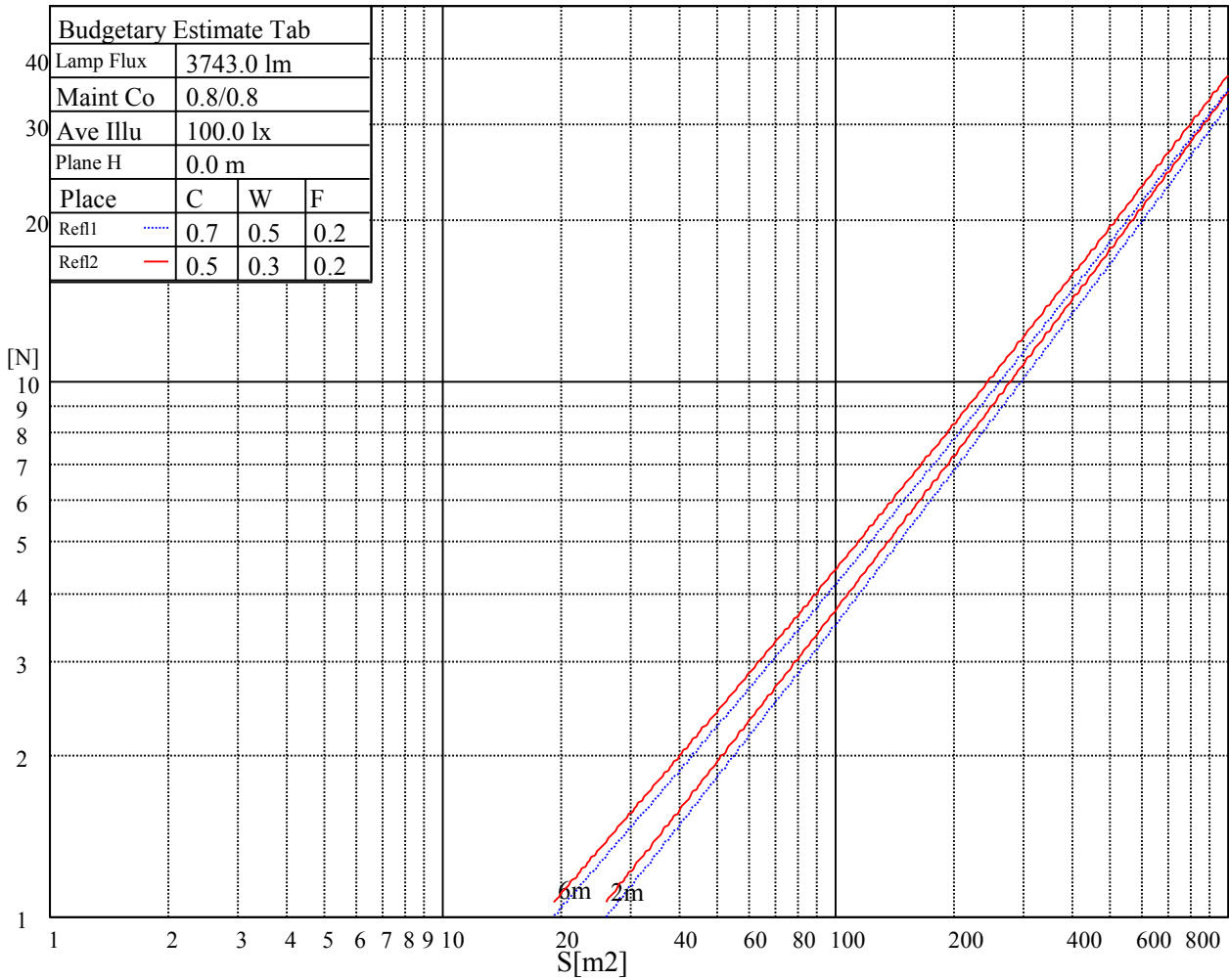
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7298	7298	7298	13111	13111	13111	42156	42156	42156

Glare Table

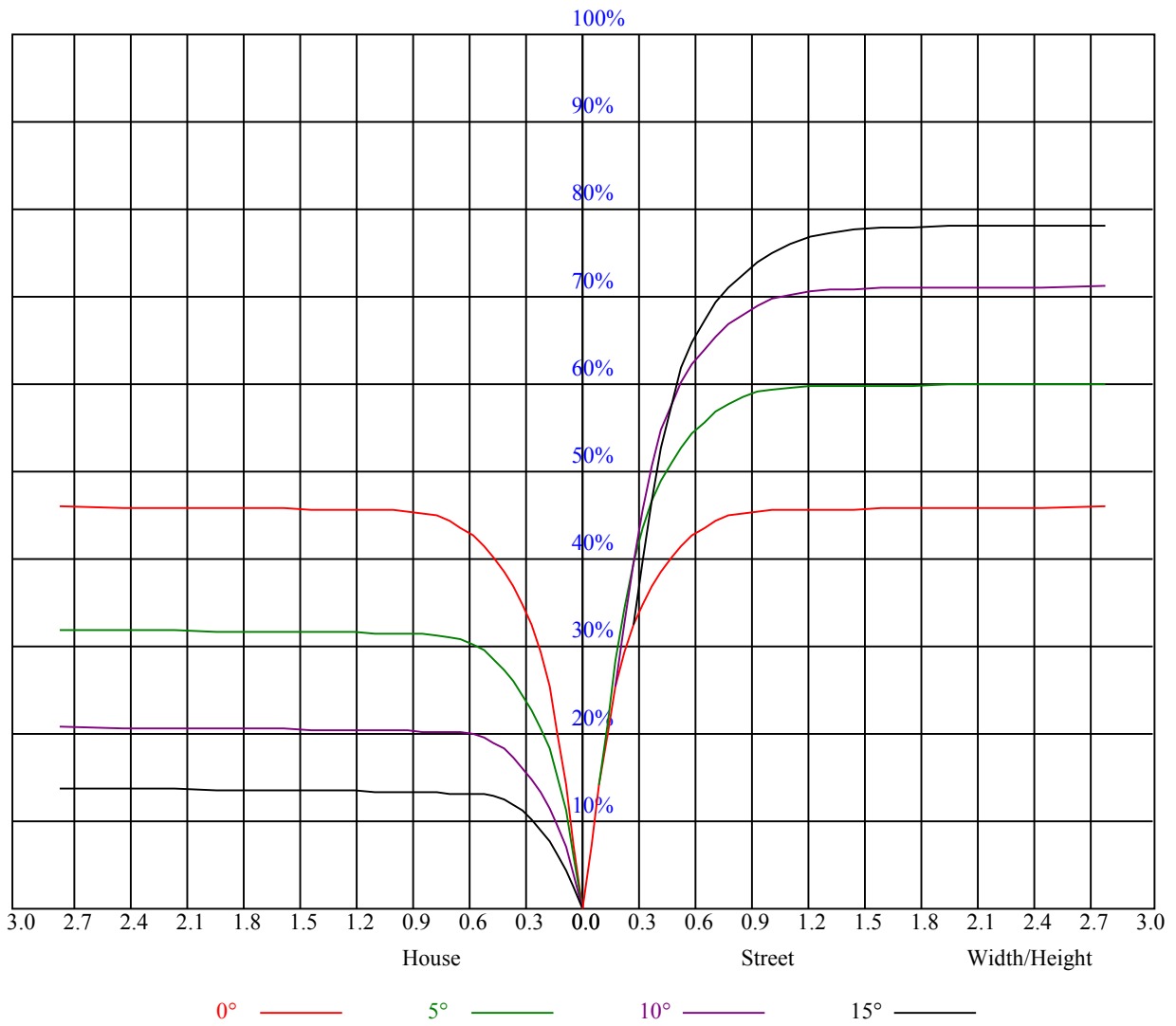
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.03	1.00	0.97	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.86
2	0.97	0.94	0.90	0.96	0.92	0.89	0.93	0.90	0.87	0.90	0.88	0.86	0.87	0.85	0.84	0.82
3	0.93	0.88	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.82	0.80	0.79
4	0.89	0.84	0.81	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.77	0.76
5	0.85	0.80	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	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	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.71
7	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.69
8	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.67
9	0.74	0.70	0.67	0.73	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
10	0.72	0.67	0.65	0.71	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63



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	14149.49	13108.93	8076.77	3105.18	1707.85	1358.24	1196.93	782.90	343.00
45.0	14199.05	13984.33	10455.21	4079.68	2085.54	1427.61	1223.35	920.54	457.52
90.0	14204.55	13720.05	9274.80	3636.48	1950.65	1404.49	1209.59	895.60	401.47
135.0	14116.46	13758.59	10284.54	4272.38	2077.83	1488.17	1265.75	991.57	550.56
180.0	14149.49	13141.96	8453.91	3610.05	1939.64	1403.94	1223.35	877.05	396.41
225.0	14199.05	10867.03	6283.04	2805.67	1739.78	1360.44	1084.12	739.52	247.48
270.0	14204.55	12828.14	7030.70	3066.64	1835.58	1389.62	1228.31	812.08	298.96
315.0	14116.46	10976.04	6374.43	2594.26	1594.43	1302.63	1088.35	669.32	191.60
360.0	14149.49	13108.93	8076.77	3105.18	1707.85	1358.24	1196.93	782.90	343.00

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	30.23	15.64	15.09	14.76	14.76	15.86	17.51	18.55	20.10
45.0	43.05	15.91	15.31	14.92	14.81	15.20	16.30	18.94	21.25
90.0	45.31	15.64	15.03	14.76	14.53	14.53	14.81	15.42	16.74
135.0	77.90	15.86	15.14	14.76	14.59	14.53	14.53	15.42	15.09
180.0	43.66	15.53	14.98	14.65	14.48	14.42	14.48	14.53	14.59
225.0	19.10	15.64	15.03	14.81	14.81	15.86	15.97	15.91	15.20
270.0	37.71	15.69	15.09	14.81	15.36	17.07	18.39	19.32	19.16
315.0	19.99	15.42	14.92	14.81	17.56	20.81	21.03	22.96	21.91
360.0	30.23	15.64	15.09	14.76	14.76	15.86	17.51	18.55	20.10

C/γ(°)	90.0
0.0	14.26
45.0	14.42
90.0	14.37
135.0	14.26
180.0	14.20
225.0	14.42
270.0	14.37
315.0	14.26
360.0	14.26