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Nata

LumCAT: 1709-M	
Luminaire: 92.70.124.00	
Report No: NATA0100	Voltage(V): 36.1000
Test No: GC2018073006	Current(A): 0.3000
LampCAT: BRIDGELUX V6HD	Power (W): 10.8300
Lamp flux(lm): 1112.0	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1015.35
Efficiency(%): 91.31%
Lumens(lm)/Power(W): 93.75
Central intensity(cd): 6113.394
Maximum intensity(cd): 6113.394
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=12.8
 [C90/270]Total=12.8
Field angle(10%Imax): [C0/180]Total=34.5
 [C90/270]Total=34.5
Maximum s/h(1/2): C0_180=0.22 C90_270=0.22
Maximum s/h(1/4): C0_180=0.24 C90_270=0.24
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.82%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.152%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6113.394	5.850	5.85	.526%	.576%
2.0	5668.676	43.388	49.238	3.902%	4.849%
4.0	4531.073	69.319	118.557	6.234%	11.676%
6.0	3267.460	74.905	193.462	6.736%	19.054%
8.0	2219.530	67.746	261.207	6.092%	25.726%
10.0	1446.662	55.094	316.301	4.954%	31.152%
12.0	1030.105	46.971	363.272	4.224%	35.778%
14.0	794.705	42.164	405.436	3.792%	39.930%
16.0	663.478	40.108	445.544	3.607%	43.881%
18.0	581.588	39.415	484.959	3.545%	47.763%
20.0	516.436	38.738	523.697	3.484%	51.578%
22.0	464.435	38.156	561.853	3.431%	55.336%
24.0	427.637	38.146	599.999	3.430%	59.093%
26.0	402.813	38.727	638.726	3.483%	62.907%
28.0	385.429	39.684	678.41	3.569%	66.815%
30.0	371.885	40.780	719.19	3.667%	70.831%
32.0	358.975	41.719	760.91	3.752%	74.940%
34.0	346.449	42.488	803.398	3.821%	79.125%
36.0	334.647	43.139	846.537	3.879%	83.374%
38.0	319.843	43.186	889.723	3.884%	87.627%
40.0	285.068	40.187	929.909	3.614%	91.585%
42.0	217.411	31.905	961.814	2.869%	94.727%
44.0	126.465	19.267	981.081	1.733%	96.624%
46.0	54.884	8.659	989.739	.779%	97.477%
48.0	22.449	3.659	993.398	.329%	97.838%
50.0	13.826	2.323	995.721	.209%	98.066%
52.0	10.385	1.795	997.516	.161%	98.243%
54.0	7.790	1.382	998.898	.124%	98.379%
56.0	6.380	1.160	1000.058	.104%	98.494%
58.0	5.822	1.083	1001.141	.097%	98.600%
60.0	5.451	1.035	1002.176	.093%	98.702%
62.0	5.175	1.002	1003.178	.090%	98.801%
64.0	4.921	0.970	1004.148	.087%	98.896%
66.0	4.755	0.953	1005.101	.086%	98.990%
68.0	4.583	0.932	1006.033	.084%	99.082%
70.0	4.460	0.919	1006.952	.083%	99.172%
72.0	4.322	0.901	1007.854	.081%	99.261%
74.0	4.253	0.897	1008.75	.081%	99.350%

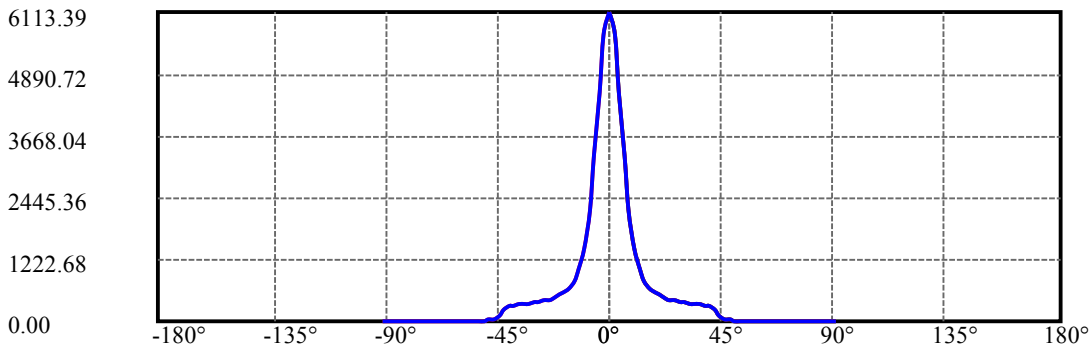
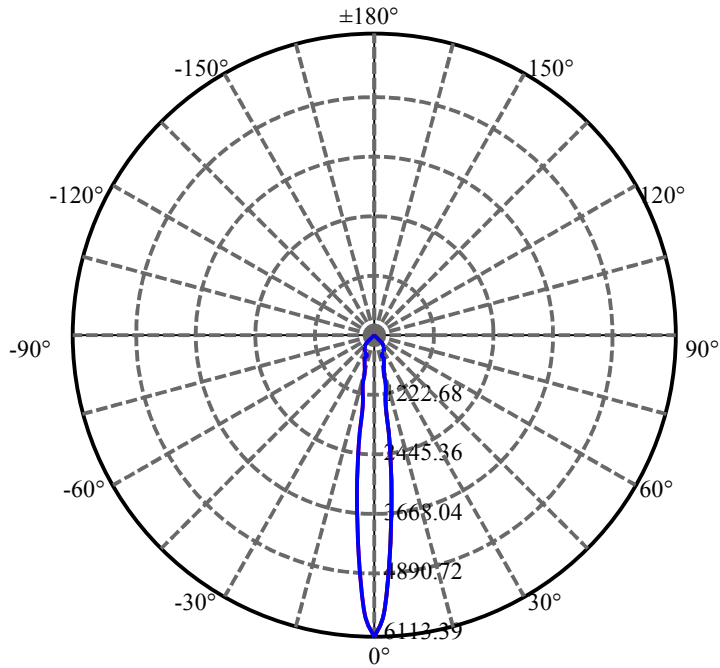
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.184	0.890	1009.641	.080%	99.437%
78.0	4.143	0.889	1010.529	.080%	99.525%
80.0	4.095	0.884	1011.414	.080%	99.612%
82.0	4.054	0.880	1012.294	.079%	99.699%
84.0	4.047	0.883	1013.177	.079%	99.786%
86.0	3.998	0.875	1014.051	.079%	99.872%
88.0	3.971	0.870	1014.922	.078%	99.957%
90.0	3.943	0.432	1015.354	.039%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	719.19	64.68%	70.83%
0-40	929.91	83.62%	91.58%
0-60	1002.18	90.12%	98.70%
0-90	1014.92	91.27%	99.96%
0-120	1014.92	91.27%	99.96%
0-180	1015.35	91.31%	100.00%
60-90	13.78	1.24%	1.36%
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%
0-34.41	812.28	73.05%	80.00%

ZONAL LUMEN SUMMARY

0-10	316.30
10-20	207.40
20-30	195.49
30-40	210.72
40-50	65.81
50-60	6.46
60-70	4.78
70-80	4.46
80-90	3.51
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: —————

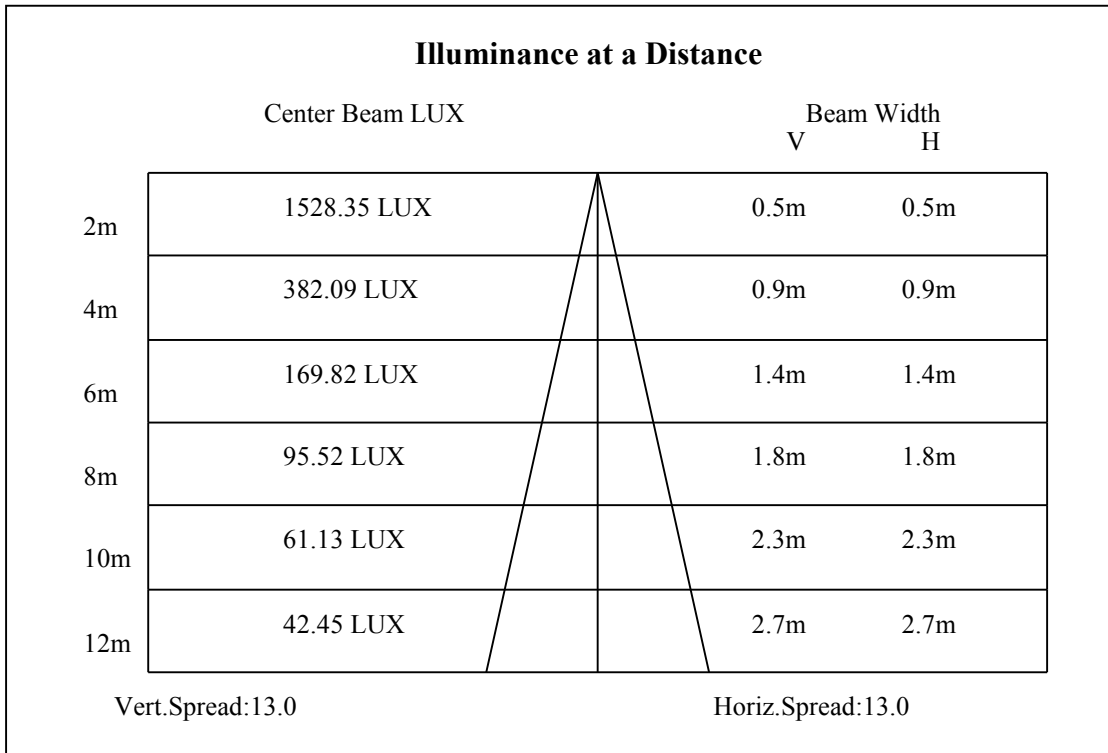
C90/C270: —————

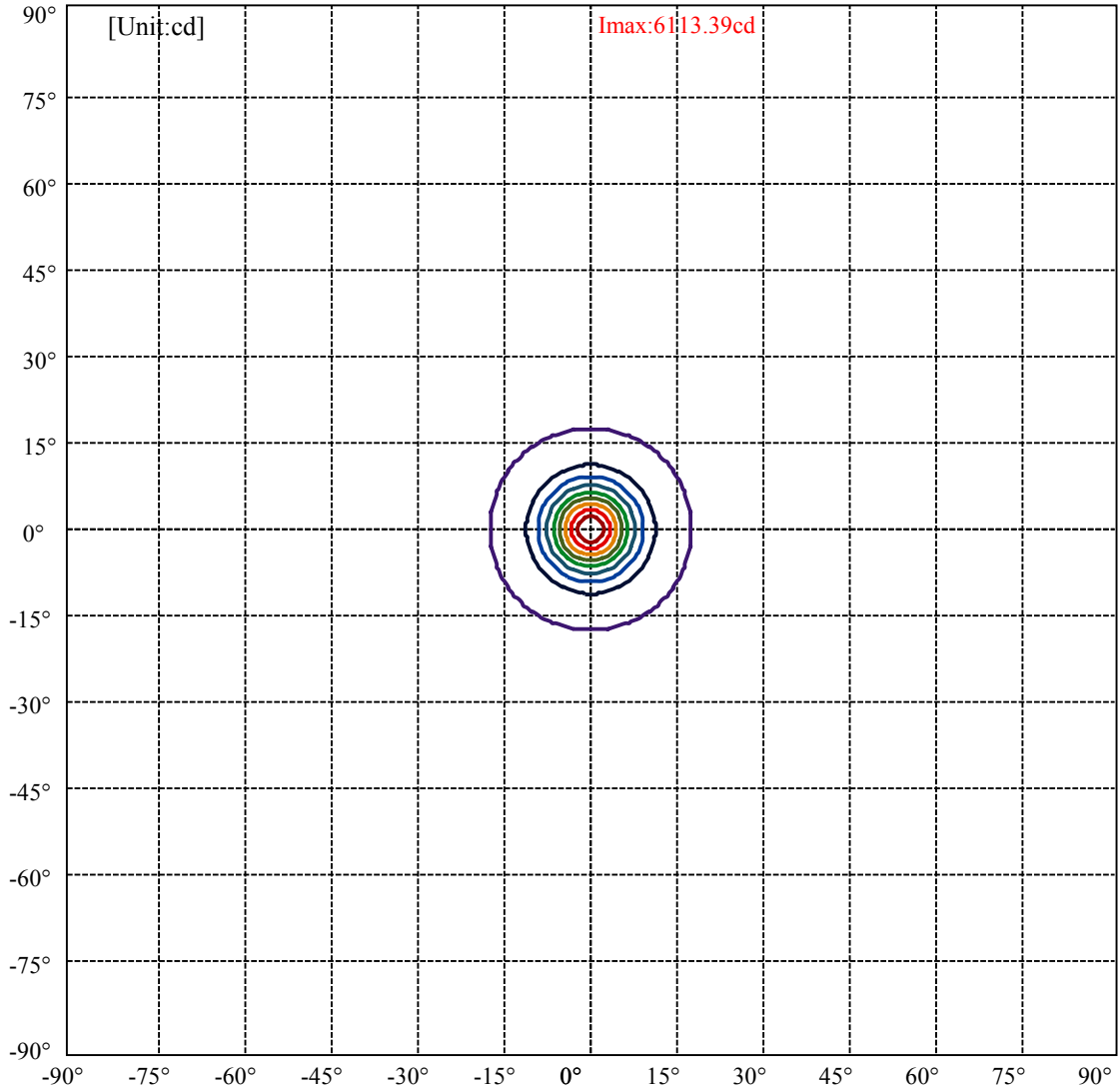
Field angle(10%Imax):C0/180Left:17.3 Right:17.3

:C90/270Left:17.3 Right:17.3

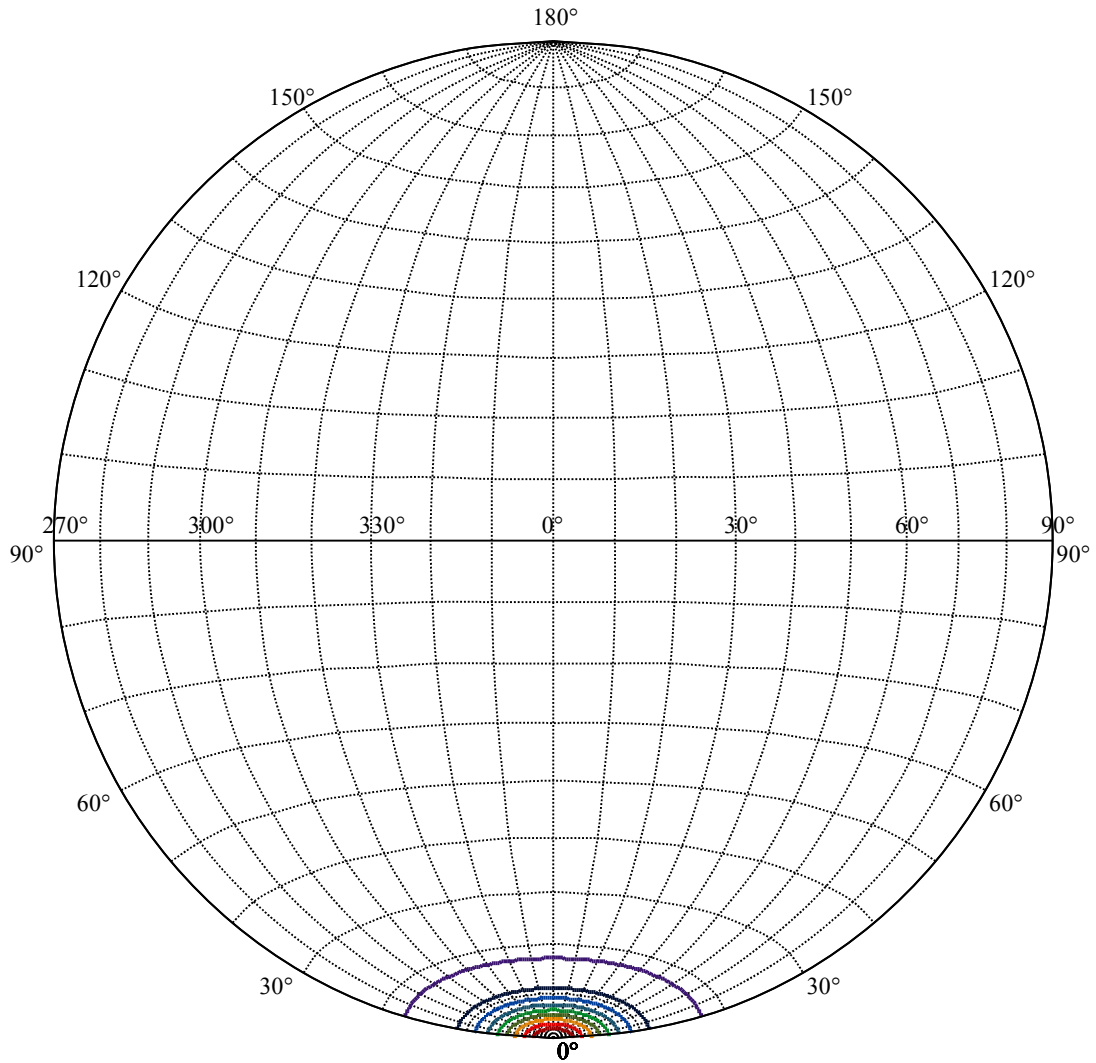
Beam Angle(50%Imax):C0/180Left:6.4 Right:6.4

:C90/270Left:6.4 Right:6.4





(10%Imax) 611.339	—
(20%Imax) 1222.68	—
(30%Imax) 1834.02	—
(40%Imax) 2445.36	—
(50%Imax) 3056.7	—
(60%Imax) 3668.04	—
(70%Imax) 4279.38	—
(80%Imax) 4890.72	—
(90%Imax) 5502.05	—



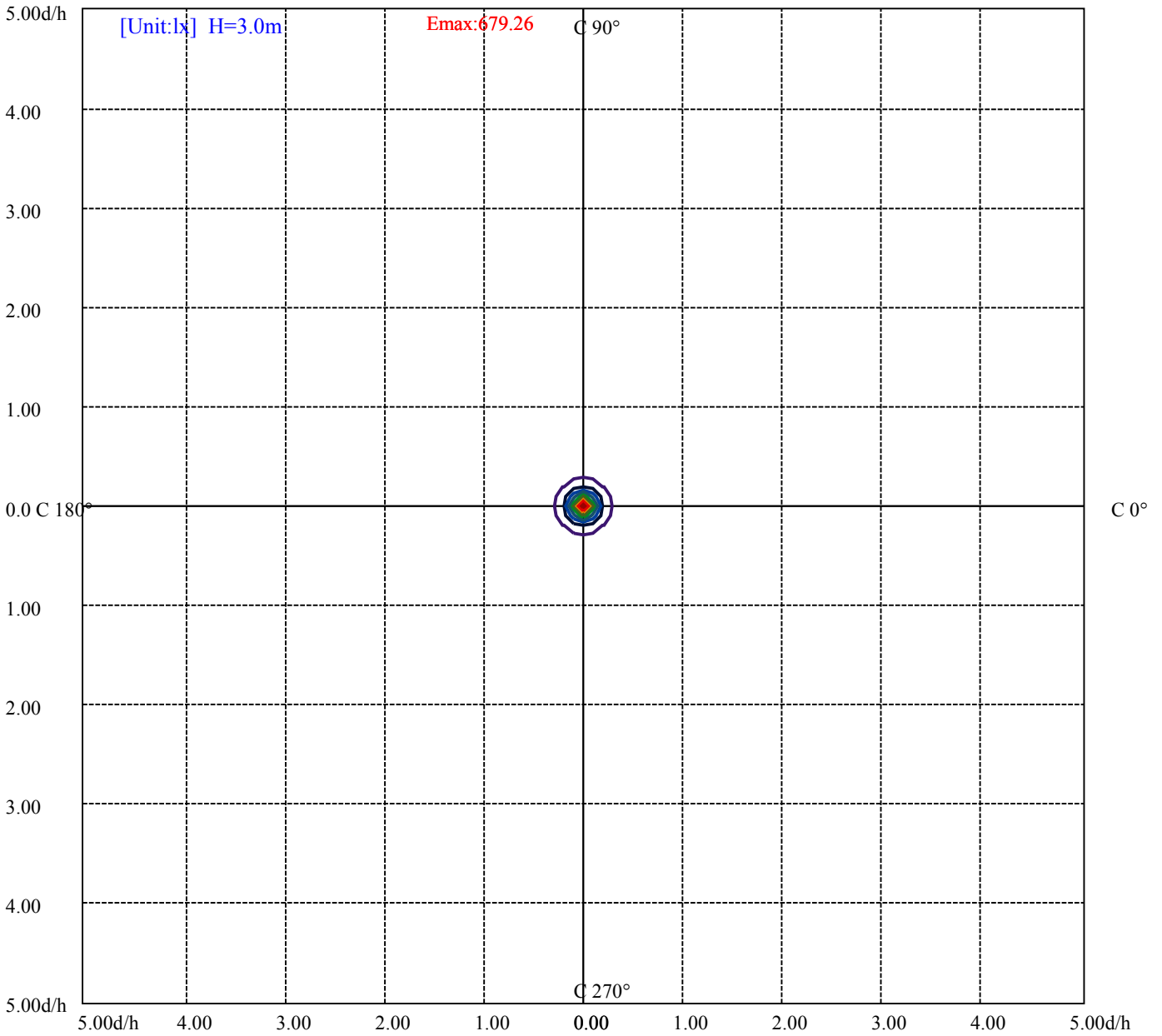
House

[Unit:cd]

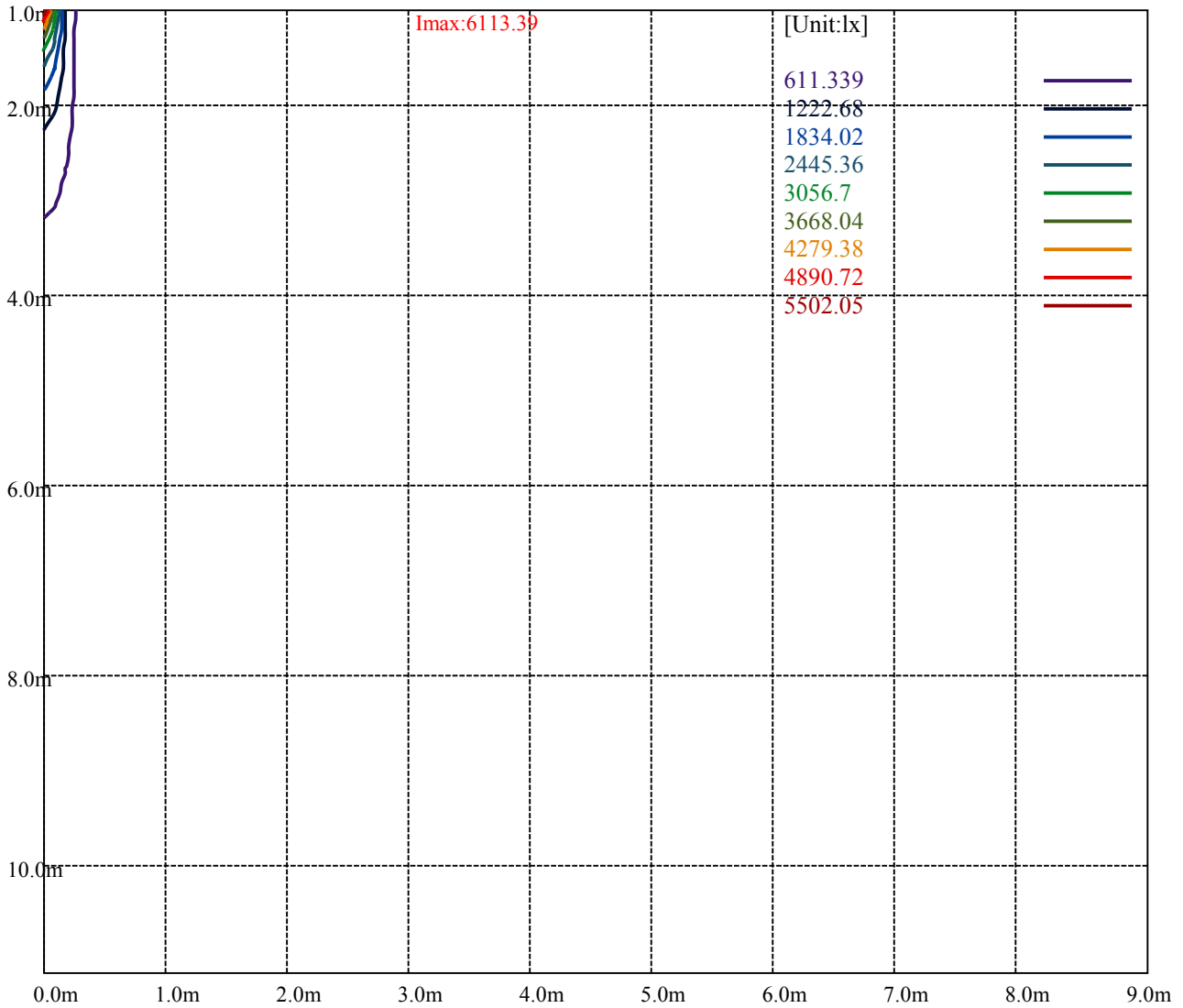
Road

Imax:6113.39

(10%Imax) 611.339	—
(20%Imax) 1222.68	—
(30%Imax) 1834.02	—
(40%Imax) 2445.36	—
(50%Imax) 3056.7	—
(60%Imax) 3668.04	—
(70%Imax) 4279.38	—
(80%Imax) 4890.72	—
(90%Imax) 5502.05	—



(10%Emax) 67.92622	—
(20%Emax) 135.8522	—
(30%Emax) 203.7789	—
(40%Emax) 271.7045	—
(50%Emax) 339.6311	—
(60%Emax) 407.5578	—
(70%Emax) 475.4833	—
(80%Emax) 543.41	—
(90%Emax) 611.3356	—



Luminance Table

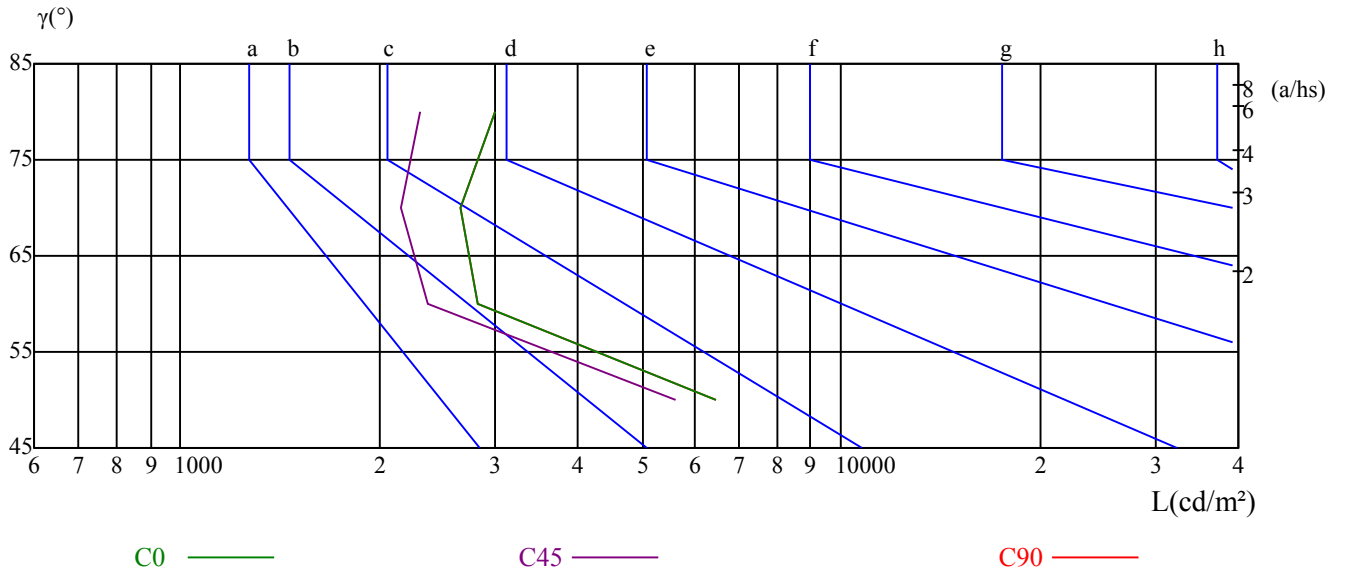
γ	45	50	55	60	65	70	75	80	85
C0	0	6475	0	2818	0	2663	0	3002	0
C45	0	5628	0	2372	0	2156	0	2304	0
C90	0	6475	0	2818	0	2663	0	3002	0

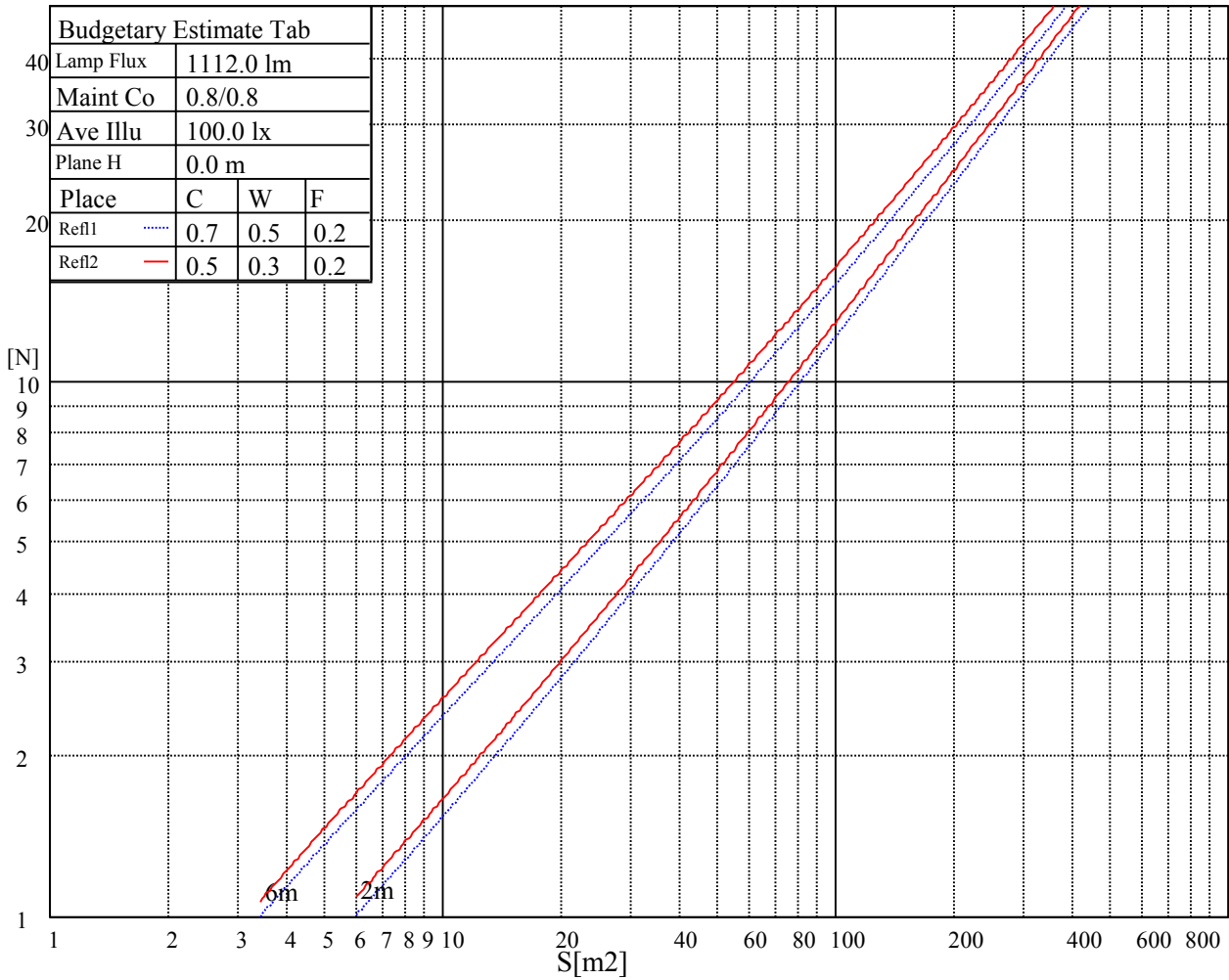
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4802	4802	4802	7603	7603	7603	22316	22316	22316

Glare Table

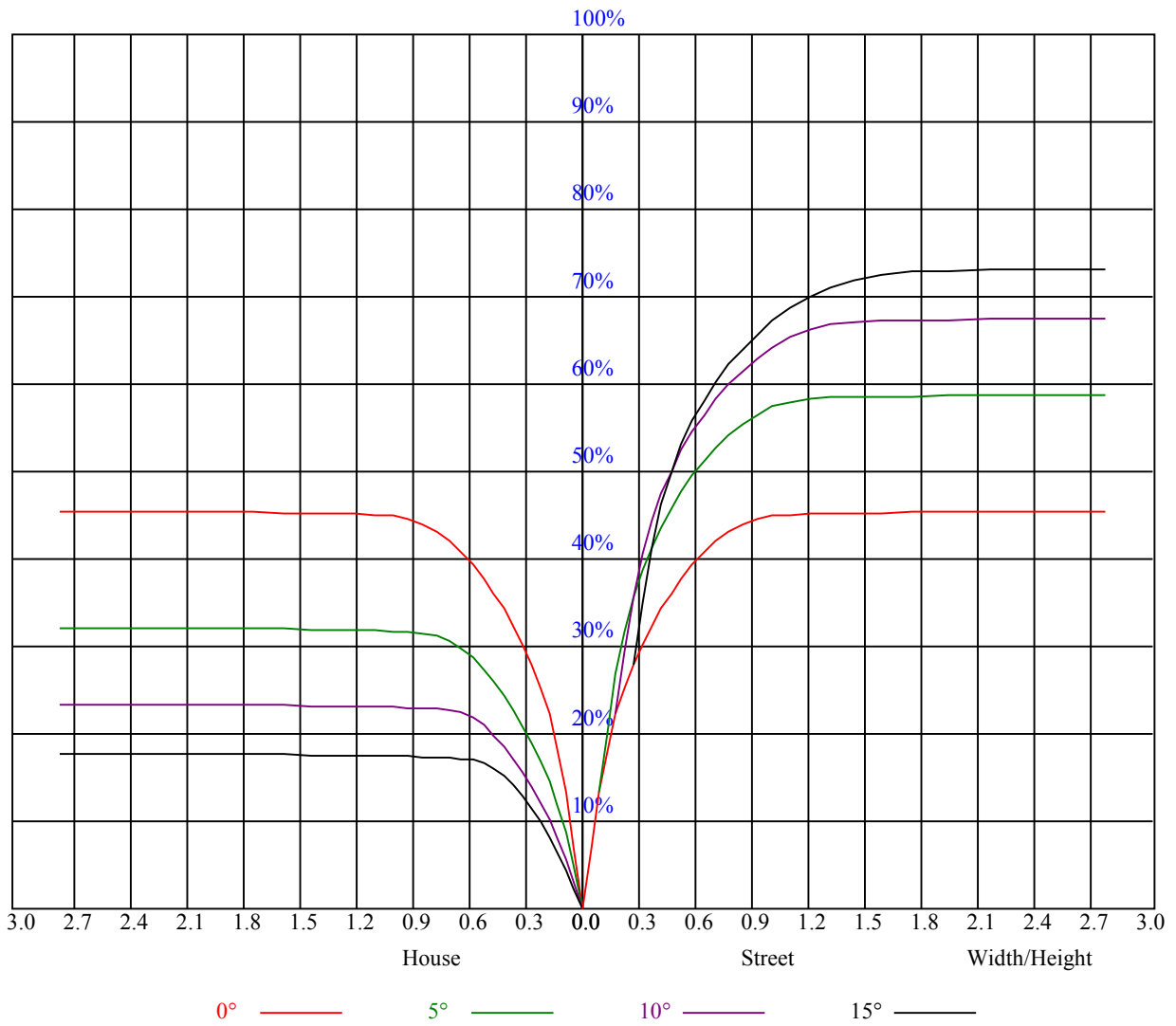
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	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	0.97	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	0.95	0.92	0.89	0.94	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.90	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.76
4	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
7	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.62
8	0.69	0.64	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.59
9	0.66	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.54



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	5785.33	6618.33	6264.32	4880.20	3562.70	2330.54	1504.69	1046.62	806.58
45.0	6251.10	6637.60	5821.11	4387.44	3036.91	1933.58	1258.59	928.80	743.81
90.0	6280.83	5796.89	4473.88	3251.63	2115.27	1342.28	969.43	754.55	640.80
135.0	6136.04	5162.09	3839.63	2603.62	1756.85	1173.25	889.71	716.83	612.23
180.0	5785.33	4360.47	2974.15	1961.11	1296.58	933.10	764.13	651.21	577.76
225.0	6251.10	5031.05	3509.85	2268.87	1496.98	1016.89	805.70	672.07	590.31
270.0	6281.38	5670.81	4382.49	3062.79	2011.76	1280.06	964.59	753.17	641.96
315.0	6136.04	6072.17	4983.15	3724.01	2479.19	1563.60	1084.01	834.38	694.37
360.0	5785.33	6618.33	6264.32	4880.20	3562.70	2330.54	1504.69	1046.62	806.58
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	668.38	584.70	524.69	469.08	428.89	398.61	382.64	368.33	355.66
45.0	642.51	567.63	506.52	450.36	414.02	393.10	378.79	365.57	352.36
90.0	569.89	509.82	453.17	417.71	395.25	381.32	368.11	355.61	343.22
135.0	546.71	485.60	436.60	404.66	389.80	374.93	362.82	350.71	337.50
180.0	509.05	454.88	417.60	398.72	384.29	370.75	358.64	346.86	334.63
225.0	527.88	471.17	432.91	411.99	396.46	383.85	370.97	358.53	346.47
270.0	579.19	514.78	463.02	429.44	406.87	391.45	378.79	365.57	354.01
315.0	609.09	542.91	480.97	439.13	406.92	389.41	374.33	360.62	347.74
360.0	668.38	584.70	524.69	469.08	428.89	398.61	382.64	368.33	355.66
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	343.55	330.89	317.12	298.96	226.72	132.63	52.19	17.89	14.98
45.0	341.35	328.69	317.12	284.64	194.62	98.94	30.17	17.40	13.87
90.0	330.78	319.16	302.59	234.38	134.34	47.62	18.77	15.58	11.18
135.0	327.04	314.92	278.03	182.51	90.24	24.72	16.52	12.66	8.59
180.0	322.69	292.02	204.48	110.94	31.77	16.30	13.16	8.64	6.83
225.0	334.52	321.64	251.72	161.43	62.65	17.73	14.65	10.74	7.38
270.0	341.35	328.69	300.61	216.54	118.37	35.35	16.30	13.05	9.19
315.0	335.90	322.74	308.87	249.90	153.00	65.79	17.84	14.65	11.07
360.0	343.55	330.89	317.12	298.96	226.72	132.63	52.19	17.89	14.98
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	11.01	7.93	6.94	5.84	5.45	5.18	5.01	4.84	4.62
45.0	8.97	7.05	6.39	6.00	5.67	5.40	5.12	4.90	4.73
90.0	8.26	6.77	5.89	5.62	5.34	5.07	4.90	4.68	4.51
135.0	6.72	5.95	5.62	5.34	5.12	4.79	4.68	4.51	4.40
180.0	5.95	5.67	5.29	5.07	4.73	4.51	4.46	4.29	4.29
225.0	6.61	5.56	5.29	5.07	4.90	4.62	4.51	4.35	4.29
270.0	6.94	5.78	5.51	5.29	5.07	4.84	4.62	4.51	4.40
315.0	7.87	6.33	5.67	5.40	5.12	4.96	4.73	4.57	4.40
360.0	11.01	7.93	6.94	5.84	5.45	5.18	5.01	4.84	4.62
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	4.46	4.40	4.29	4.18	4.18	4.07	4.02	4.02	3.96
45.0	4.51	4.46	4.29	4.24	4.24	4.13	4.13	3.96	4.02
90.0	4.40	4.29	4.24	4.18	4.07	4.02	4.02	4.02	3.96
135.0	4.29	4.18	4.18	4.07	4.07	4.02	3.96	4.07	3.96
180.0	4.18	4.13	4.07	4.13	4.02	4.02	4.07	3.96	3.96
225.0	4.18	4.18	4.07	4.07	4.02	4.02	4.02	3.96	3.91
270.0	4.24	4.18	4.18	4.13	4.07	4.07	4.07	4.02	4.02
315.0	4.29	4.18	4.13	4.13	4.07	4.07	4.07	3.96	3.96
360.0	4.46	4.40	4.29	4.18	4.18	4.07	4.02	4.02	3.96

Intensity data(cd)

C/γ(°)	90.0
0.0	3.96
45.0	3.96
90.0	3.96
135.0	3.91
180.0	3.96
225.0	3.91
270.0	3.96
315.0	3.91
360.0	3.96