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Nata

LumCAT: 2-1283-N	
Luminaire: 92.70.051.00	
Report No: NATA0100	Voltage(V): 37.6000
Test No: GC2018080207	Current(A): 0.2000
LampCAT: BRIDGELUX V4 HD	Power (W): 7.5200
Lamp flux(lm): 718.0	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 57	Width(mm): 57
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 612.38
Efficiency(%): 85.29%
Lumens(lm)/Power(W): 82.21
Central intensity(cd): 6199.625
Maximum intensity(cd): 6199.625
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=10.8
 [C90/270]Total=10.8
Field angle(10%Imax): [C0/180]Total=28.5
 [C90/270]Total=28.5
Maximum s/h(1/2): C0_180=0.19 C90_270=0.19
Maximum s/h(1/4): C0_180=0.23 C90_270=0.23
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.10%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.930%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6199.626	5.933	5.933	.826%	.969%
2.0	5629.104	43.085	49.018	6.001%	8.004%
4.0	4088.144	62.543	111.56	8.711%	18.217%
6.0	2653.925	60.840	172.4	8.474%	28.152%
8.0	1881.965	57.442	229.842	8.000%	37.532%
10.0	1358.427	51.733	281.576	7.205%	45.980%
12.0	963.088	43.915	325.491	6.116%	53.151%
14.0	646.809	34.318	359.808	4.780%	58.755%
16.0	447.258	27.037	386.845	3.766%	63.170%
18.0	341.129	23.119	409.964	3.220%	66.946%
20.0	290.622	21.799	431.764	3.036%	70.505%
22.0	264.112	21.698	453.462	3.022%	74.049%
24.0	248.063	22.128	475.59	3.082%	77.662%
26.0	237.603	22.843	498.433	3.182%	81.392%
28.0	230.081	23.689	522.123	3.299%	85.261%
30.0	211.788	23.224	545.347	3.235%	89.053%
32.0	161.054	18.717	564.064	2.607%	92.109%
34.0	84.670	10.384	574.448	1.446%	93.805%
36.0	33.020	4.257	578.705	.593%	94.500%
38.0	17.776	2.400	581.105	.334%	94.892%
40.0	13.750	1.938	583.043	.270%	95.209%
42.0	11.989	1.759	584.803	.245%	95.496%
44.0	10.791	1.644	586.446	.229%	95.764%
46.0	9.993	1.576	588.023	.220%	96.022%
48.0	9.628	1.569	589.592	.219%	96.278%
50.0	9.346	1.570	591.162	.219%	96.535%
52.0	9.146	1.581	592.743	.220%	96.793%
54.0	9.181	1.629	594.372	.227%	97.059%
56.0	9.002	1.637	596.009	.228%	97.326%
58.0	8.768	1.631	597.639	.227%	97.592%
60.0	8.458	1.606	599.246	.224%	97.854%
62.0	7.584	1.469	600.714	.205%	98.094%
64.0	6.497	1.281	601.995	.178%	98.303%
66.0	5.719	1.146	603.141	.160%	98.491%
68.0	5.217	1.061	604.201	.148%	98.664%
70.0	4.680	0.964	605.166	.134%	98.821%
72.0	4.288	0.894	606.06	.125%	98.967%
74.0	4.088	0.862	606.922	.120%	99.108%

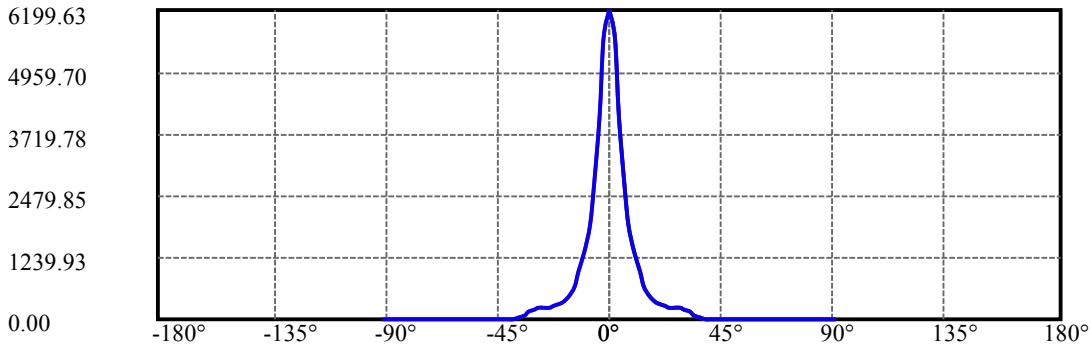
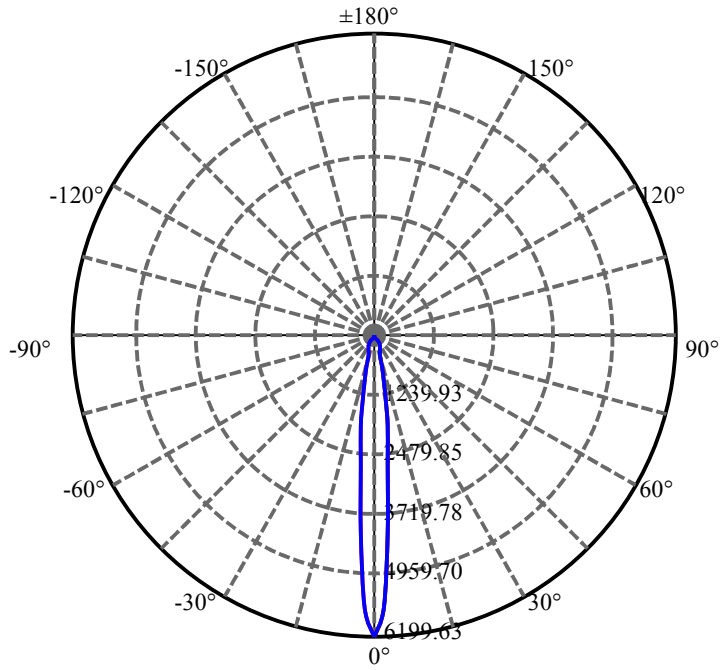
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.909	0.832	607.754	.116%	99.244%
78.0	3.751	0.805	608.558	.112%	99.375%
80.0	3.558	0.768	609.327	.107%	99.501%
82.0	3.400	0.738	610.065	.103%	99.621%
84.0	3.235	0.705	610.771	.098%	99.736%
86.0	3.118	0.682	611.453	.095%	99.848%
88.0	2.863	0.627	612.08	.087%	99.950%
90.0	2.773	0.304	612.384	.042%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	545.35	75.95%	89.05%
0-40	583.04	81.20%	95.21%
0-60	599.25	83.46%	97.85%
0-90	612.08	85.25%	99.95%
0-120	612.08	85.25%	99.95%
0-180	612.38	85.29%	100.00%
60-90	14.44	2.01%	2.36%
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%
0-25.25	489.91	68.23%	80.00%

ZONAL LUMEN SUMMARY

0-10	281.58
10-20	150.19
20-30	113.58
30-40	37.70
40-50	8.12
50-60	8.08
60-70	5.92
70-80	4.16
80-90	2.75
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



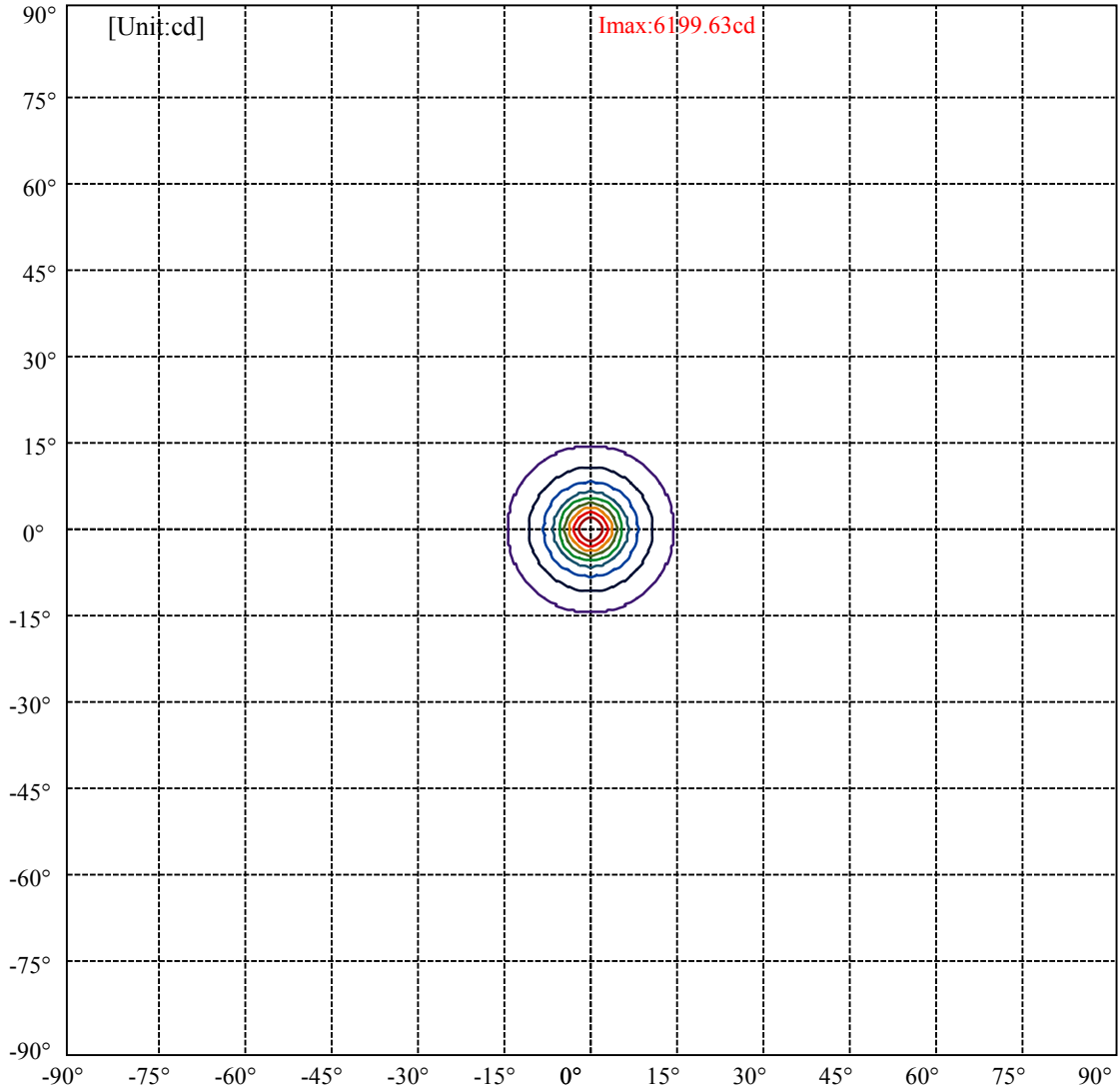
C0(Max): —————

C0/C180: —————

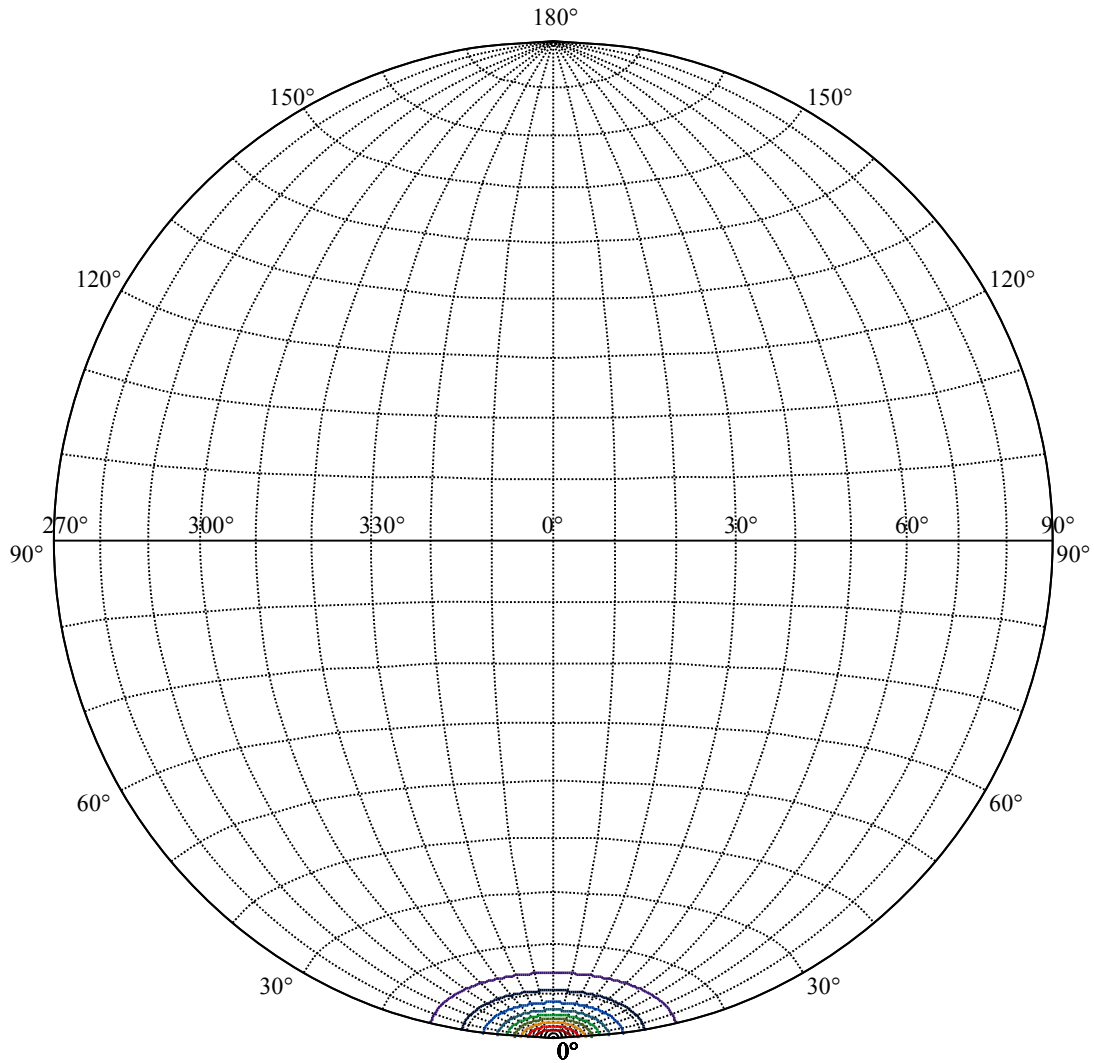
C90/C270: —————

Field angle(10%Imax):C0/180Left:14.3 Right:14.3
:C90/270Left:14.3 Right:14.3

Beam Angle(50%Imax):C0/180Left:5.4 Right:5.4
:C90/270Left:5.4 Right:5.4



(10%I _{max}) 619.963	—
(20%I _{max}) 1239.93	—
(30%I _{max}) 1859.89	—
(40%I _{max}) 2479.85	—
(50%I _{max}) 3099.81	—
(60%I _{max}) 3719.78	—
(70%I _{max}) 4339.74	—
(80%I _{max}) 4959.7	—
(90%I _{max}) 5579.66	—



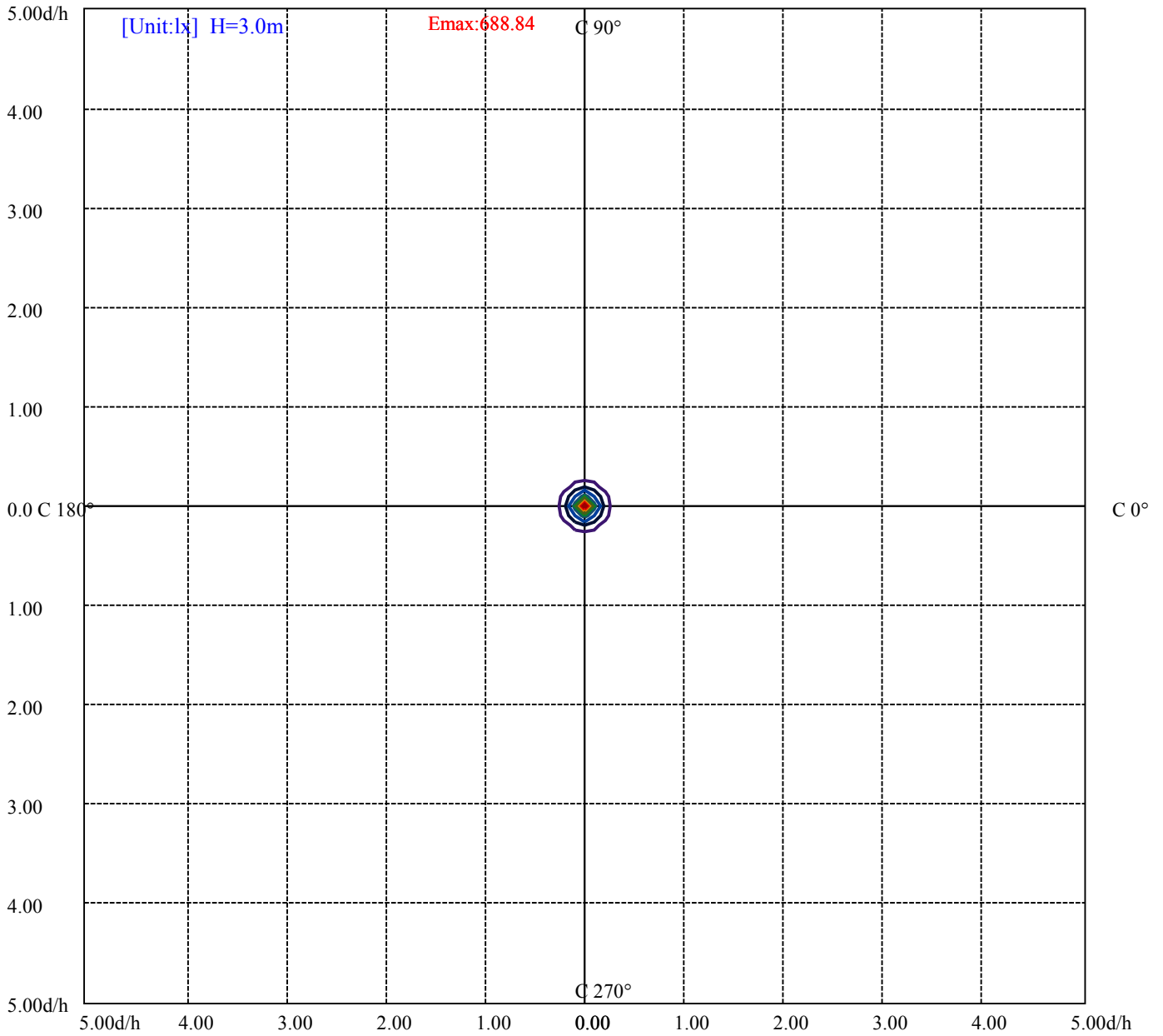
House

[Unit:cd]

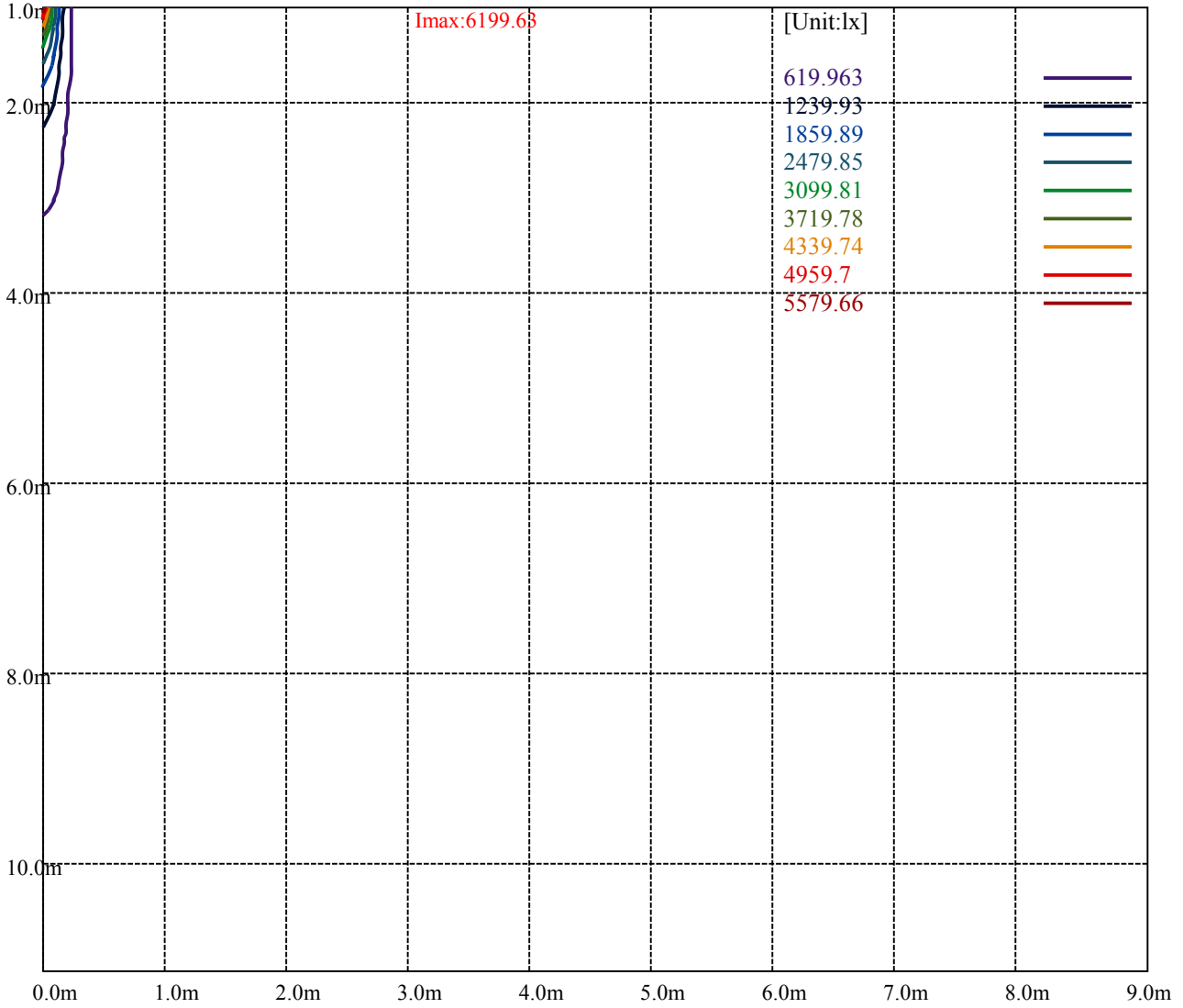
Road

Imax:6199.63

(10%Imax) 619.963	—
(20%Imax) 1239.93	—
(30%Imax) 1859.89	—
(40%Imax) 2479.85	—
(50%Imax) 3099.81	—
(60%Imax) 3719.78	—
(70%Imax) 4339.74	—
(80%Imax) 4959.7	—
(90%Imax) 5579.66	—



- (10%Emax) 68.88422
- (20%Emax) 137.7689
- (30%Emax) 206.6522
- (40%Emax) 275.5367
- (50%Emax) 344.4211
- (60%Emax) 413.3055
- (70%Emax) 482.19
- (80%Emax) 551.0745
- (90%Emax) 619.9578



Luminance Table

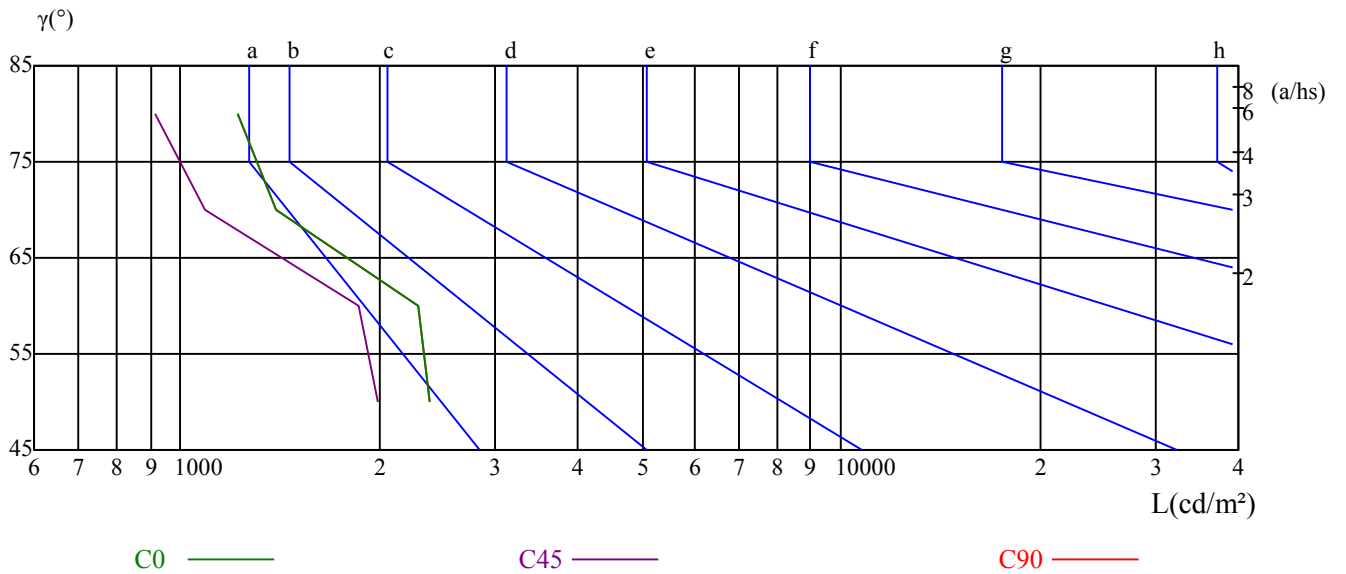
γ	45	50	55	60	65	70	75	80	85
C0	0	2383	0	2287	0	1392	0	1218	0
C45	0	1996	0	1856	0	1090	0	913	0
C90	0	2383	0	2287	0	1392	0	1218	0

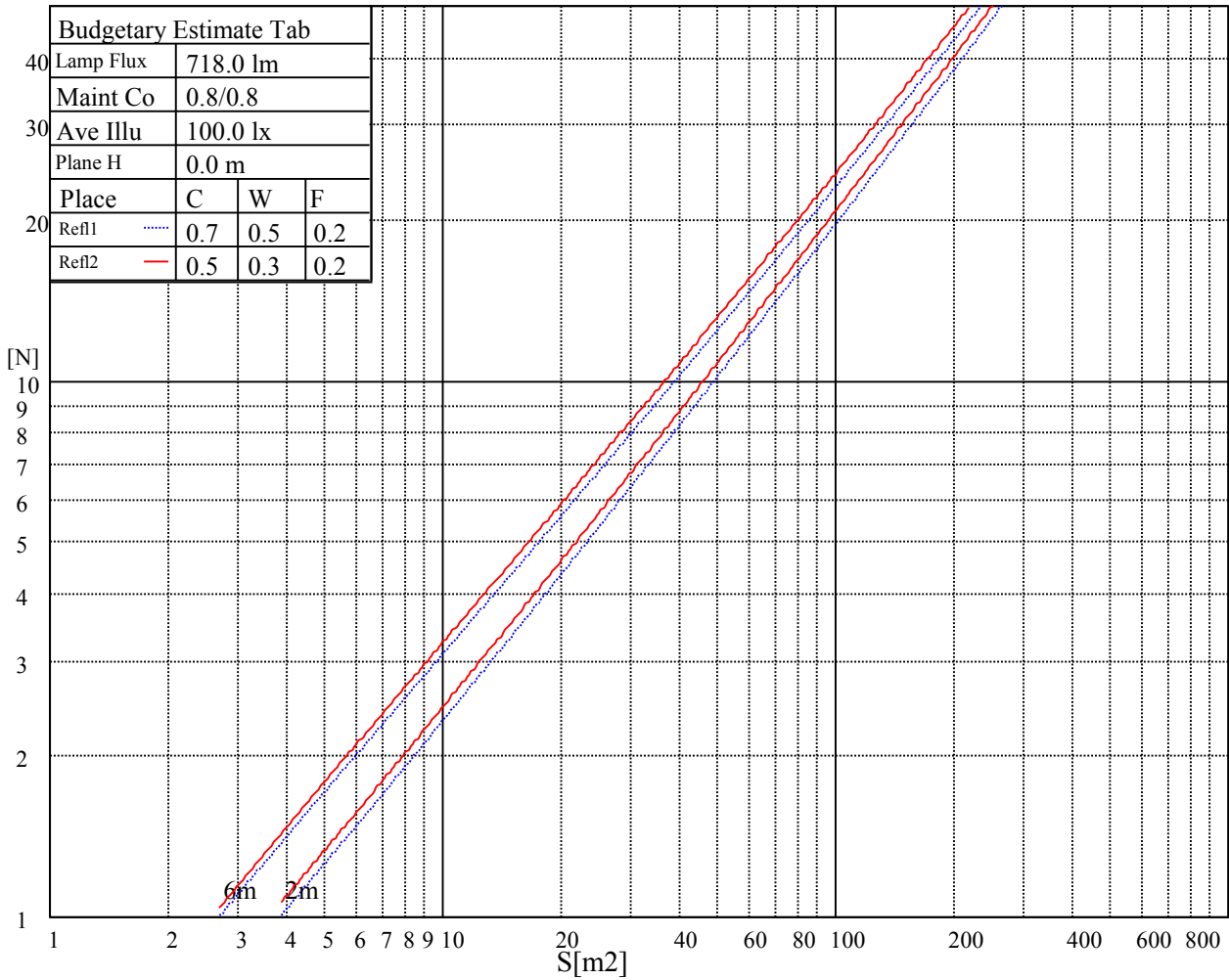
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
67663	68084	67954	58762	60432	60137	47732	44038	44281

Glare Table

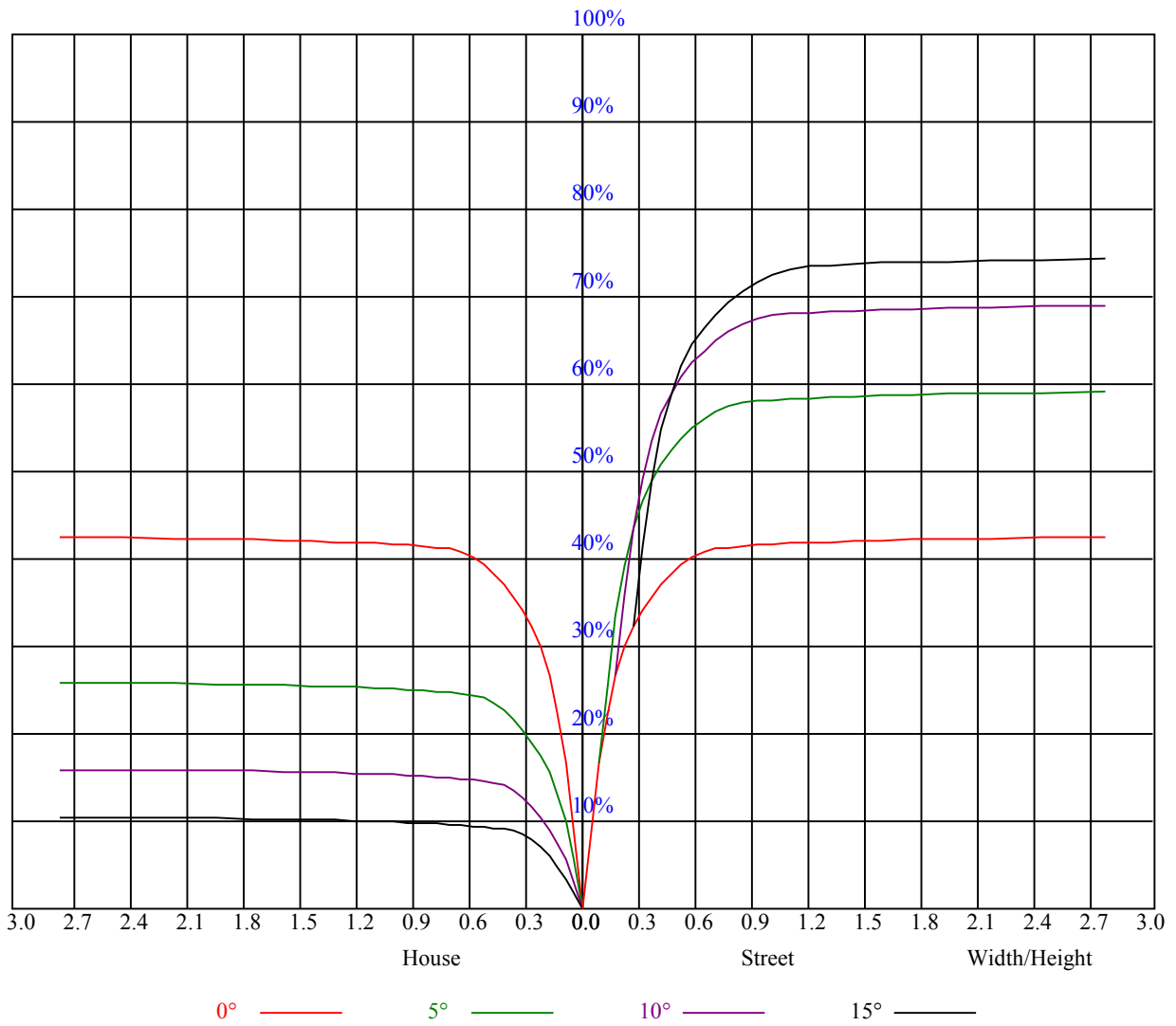
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.96	0.94	0.92	0.94	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.91	0.88	0.85	0.89	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.81	0.82	0.80	0.79	0.78
3	0.87	0.83	0.80	0.85	0.82	0.80	0.83	0.81	0.78	0.81	0.79	0.77	0.79	0.78	0.76	0.75
4	0.83	0.79	0.76	0.82	0.79	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
5	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.75	0.73	0.71	0.70
6	0.77	0.73	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.69	0.73	0.71	0.69	0.68
7	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
8	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.70	0.67	0.65	0.64
9	0.70	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.63
10	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61



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	6112.91	6611.72	5599.79	3657.95	2447.26	1788.23	1297.13	897.97	605.62
45.0	6145.40	6404.71	5279.91	3475.16	2232.54	1655.00	1213.99	802.17	529.64
90.0	6267.07	5666.96	3997.65	2519.93	1784.93	1289.42	912.72	626.21	438.58
135.0	6273.13	5485.82	3766.41	2358.07	1783.28	1294.93	895.22	604.52	431.64
180.0	6112.91	4672.09	2957.63	2078.93	1536.62	1052.13	752.46	508.01	370.09
225.0	6145.40	4799.82	3003.88	2056.36	1550.94	1084.45	723.61	482.46	340.30
270.0	6267.07	5517.75	3803.30	2374.03	1745.29	1265.20	905.13	594.61	405.77
315.0	6273.13	5873.97	4296.60	2710.98	1974.87	1438.07	1004.45	658.53	456.42
360.0	6112.91	6611.72	5599.79	3657.95	2447.26	1788.23	1297.13	897.97	605.62
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	443.75	361.72	311.07	278.59	256.23	245.77	238.12	221.33	153.66
45.0	388.70	306.11	278.59	248.41	243.51	241.15	231.68	205.75	140.83
90.0	320.70	268.62	238.67	223.75	211.91	204.92	195.29	152.34	80.49
135.0	322.63	281.89	255.96	240.93	234.49	230.47	216.65	147.99	63.65
180.0	298.85	267.57	254.14	245.77	238.01	228.04	185.49	101.41	40.19
225.0	273.74	253.09	247.75	244.95	234.15	222.10	181.36	109.29	46.85
270.0	317.12	279.14	248.91	236.03	227.22	221.11	207.67	157.41	57.92
315.0	363.54	306.83	277.81	266.09	255.30	247.09	238.06	192.92	93.76
360.0	443.75	361.72	311.07	278.59	256.23	245.77	238.12	221.33	153.66
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	68.82	25.38	18.11	14.09	12.17	10.90	10.41	9.97	9.80
45.0	56.32	22.63	15.53	12.55	11.34	10.79	11.07	11.56	10.79
90.0	30.39	17.89	13.60	12.11	10.85	10.08	9.63	9.47	9.52
135.0	22.02	14.65	11.78	11.18	10.24	9.25	8.59	7.93	7.43
180.0	16.79	12.72	11.29	10.41	9.36	8.53	7.98	7.38	7.21
225.0	18.22	13.87	11.78	10.74	9.97	9.36	8.81	8.42	8.64
270.0	21.36	15.20	13.32	12.17	11.01	10.35	10.24	10.46	10.63
315.0	30.23	19.88	14.59	12.66	11.40	10.68	10.30	9.58	9.14
360.0	68.82	25.38	18.11	14.09	12.17	10.90	10.41	9.97	9.80
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	9.63	9.03	8.37	8.09	8.20	7.10	6.44	5.73	5.23
45.0	10.08	9.69	9.08	8.48	7.93	6.83	6.00	5.45	5.07
90.0	9.91	9.91	9.19	8.75	7.82	6.44	5.56	4.96	4.57
135.0	7.43	7.65	7.98	8.37	7.49	6.44	5.56	5.01	4.51
180.0	7.65	7.71	8.09	7.87	6.72	6.22	5.45	5.07	4.40
225.0	9.36	9.58	9.52	8.86	7.54	6.39	5.51	4.96	4.40
270.0	10.46	9.86	9.36	8.75	7.16	6.06	5.45	5.23	4.57
315.0	8.92	8.59	8.53	8.48	7.82	6.50	5.78	5.34	4.68
360.0	9.63	9.03	8.37	8.09	8.20	7.10	6.44	5.73	5.23
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	4.51	4.29	4.13	3.96	3.80	3.63	3.47	3.36	3.14
45.0	4.40	4.18	3.96	3.80	3.69	3.52	3.30	3.19	2.92
90.0	4.18	3.96	3.80	3.63	3.41	3.25	3.08	3.03	2.75
135.0	4.24	4.02	3.85	3.69	3.52	3.30	3.14	3.08	2.81
180.0	4.18	3.96	3.80	3.63	3.41	3.25	3.14	2.97	2.75
225.0	4.13	3.96	3.74	3.58	3.36	3.25	3.14	2.86	2.75
270.0	4.24	4.07	3.91	3.74	3.52	3.41	3.19	3.19	2.81
315.0	4.40	4.24	4.07	3.96	3.74	3.58	3.41	3.25	2.97
360.0	4.51	4.29	4.13	3.96	3.80	3.63	3.47	3.36	3.14

Intensity data(cd)

C/γ(°)	90.0
0.0	2.97
45.0	2.81
90.0	2.70
135.0	2.70
180.0	2.70
225.0	2.70
270.0	2.75
315.0	2.86
360.0	2.97