



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client:

LumCAT: 2-2006-M

Luminaire: 92.70.131.00

Report No: GC2019091909

Test No: NATA07

LampCAT: TRIDONIC SLE G7 13MM

Lamp flux(lm): 1835.0

Number of Lamps: 1

Length(mm): 70

Phm Type: C

Voltage(V): 220.4000

Current(A): 0.0710

Power (W): 14.3900

PF: 0.9200

Ballast type: AC

Width(mm): 70

Height(mm): 0

Photometric Results

Lumens(lm): 1598.46, Efficiency(%): 87.11% , Luminous Efficacy(lm/W): 111.08

Central intensity(cd): 5684.107, Maximum intensity(cd): 5684.107

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.2

[C90/270]Total=25.2

Field angle(10%Imax): [C0/180]Total=60.4

[C90/270]Total=60.4

Maximum s/h(1/2): C0_180=0.43 C90_270=0.43

Maximum s/h(1/4): C0_180=0.41 C90_270=0.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.11%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.676%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5684.108	0.000	0	.000%	.000%
1.0	5667.113	5.431	5.431	.296%	.340%
2.0	5618.737	16.199	21.63	.883%	1.353%
3.0	5528.541	26.661	48.29	1.453%	3.021%
4.0	5410.096	36.615	84.906	1.995%	5.312%
5.0	5247.511	45.848	130.754	2.499%	8.180%
6.0	5037.651	54.051	184.805	2.946%	11.561%
7.0	4806.505	61.103	245.908	3.330%	15.384%
8.0	4517.354	66.729	312.637	3.636%	19.559%
9.0	4231.161	70.902	383.539	3.864%	23.994%
10.0	3852.162	73.151	456.69	3.986%	28.571%
11.0	3506.399	73.527	530.217	4.007%	33.171%
12.0	3122.295	72.461	602.678	3.949%	37.704%
13.0	2681.986	68.882	671.56	3.754%	42.013%
14.0	2319.054	64.013	735.573	3.488%	46.018%
15.0	1997.478	59.259	794.833	3.229%	49.725%
16.0	1675.033	53.813	848.645	2.933%	53.091%
17.0	1428.805	48.335	896.98	2.634%	56.115%
18.0	1162.920	42.732	939.712	2.329%	58.789%
19.0	1029.783	38.149	977.861	2.079%	61.175%
20.0	923.688	35.754	1013.615	1.948%	63.412%
21.0	829.263	33.660	1047.275	1.834%	65.518%
22.0	758.822	31.913	1079.188	1.739%	67.514%
23.0	705.638	30.728	1109.916	1.675%	69.437%
24.0	668.643	30.047	1139.963	1.637%	71.316%
25.0	641.114	29.781	1169.744	1.623%	73.180%
26.0	620.308	29.776	1199.52	1.623%	75.042%
27.0	603.168	29.933	1229.453	1.631%	76.915%
28.0	590.819	30.229	1259.682	1.647%	78.806%
29.0	580.535	30.646	1290.328	1.670%	80.723%
30.0	570.581	31.080	1321.408	1.694%	82.668%
31.0	560.146	31.467	1352.874	1.715%	84.636%
32.0	551.057	31.835	1384.709	1.735%	86.628%
33.0	530.883	31.874	1416.583	1.737%	88.622%
34.0	490.628	30.914	1447.497	1.685%	90.556%
35.0	443.059	28.997	1476.494	1.580%	92.370%
36.0	382.143	26.275	1502.769	1.432%	94.014%
37.0	318.681	22.857	1525.626	1.246%	95.444%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	251.268	19.024	1544.65	1.037%	96.634%
39.0	193.908	15.195	1559.845	.828%	97.584%
40.0	161.472	12.394	1572.239	.675%	98.360%
41.0	68.706	8.197	1580.436	.447%	98.873%
42.0	31.525	3.642	1584.077	.198%	99.100%
43.0	15.597	1.746	1585.823	.095%	99.210%
44.0	10.331	0.979	1586.802	.053%	99.271%
45.0	9.136	0.748	1587.55	.041%	99.318%
46.0	7.813	0.663	1588.212	.036%	99.359%
47.0	6.723	0.578	1588.791	.032%	99.395%
48.0	5.621	0.499	1589.29	.027%	99.426%
49.0	4.942	0.434	1589.723	.024%	99.454%
50.0	4.577	0.397	1590.12	.022%	99.478%
51.0	4.339	0.377	1590.497	.021%	99.502%
52.0	4.118	0.363	1590.86	.020%	99.525%
53.0	3.880	0.348	1591.208	.019%	99.546%
54.0	3.666	0.333	1591.541	.018%	99.567%
55.0	3.474	0.319	1591.86	.017%	99.587%
56.0	3.300	0.306	1592.166	.017%	99.606%
57.0	3.115	0.293	1592.459	.016%	99.625%
58.0	2.964	0.281	1592.74	.015%	99.642%
59.0	2.854	0.272	1593.012	.015%	99.659%
60.0	2.697	0.262	1593.274	.014%	99.676%
61.0	2.546	0.250	1593.525	.014%	99.691%
62.0	2.454	0.241	1593.766	.013%	99.706%
63.0	2.355	0.234	1593.999	.013%	99.721%
64.0	2.245	0.226	1594.225	.012%	99.735%
65.0	2.129	0.216	1594.442	.012%	99.749%
66.0	2.059	0.209	1594.65	.011%	99.762%
67.0	1.990	0.204	1594.854	.011%	99.775%
68.0	1.908	0.197	1595.052	.011%	99.787%
69.0	1.827	0.191	1595.242	.010%	99.799%
70.0	1.734	0.183	1595.425	.010%	99.810%
71.0	1.711	0.178	1595.603	.010%	99.821%
72.0	1.659	0.175	1595.778	.010%	99.832%
73.0	1.595	0.170	1595.948	.009%	99.843%
74.0	1.560	0.166	1596.114	.009%	99.853%
75.0	1.508	0.162	1596.276	.009%	99.864%

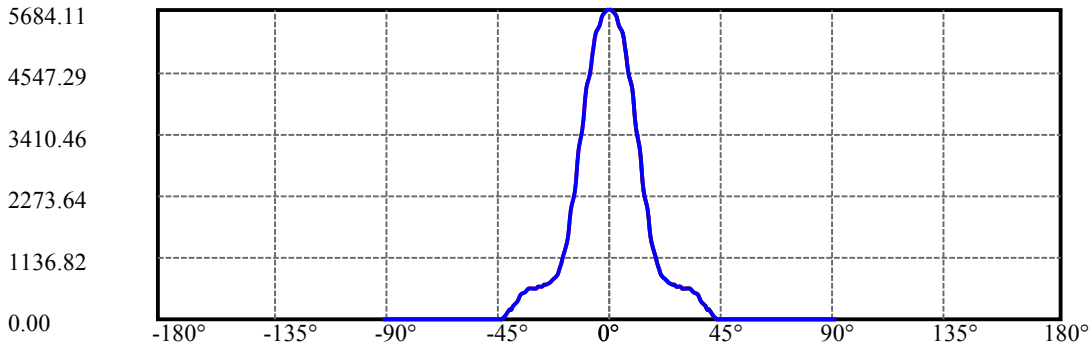
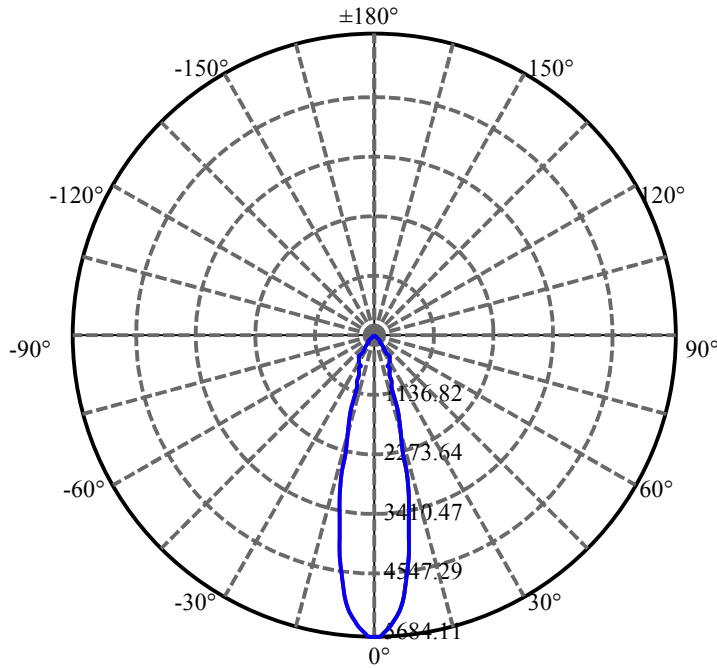
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.462	0.158	1596.434	.009%	99.873%
77.0	1.427	0.154	1596.588	.008%	99.883%
78.0	1.415	0.152	1596.74	.008%	99.893%
79.0	1.404	0.151	1596.892	.008%	99.902%
80.0	1.357	0.149	1597.041	.008%	99.911%
81.0	1.328	0.145	1597.186	.008%	99.920%
82.0	1.328	0.144	1597.33	.008%	99.929%
83.0	1.299	0.143	1597.473	.008%	99.938%
84.0	1.311	0.142	1597.615	.008%	99.947%
85.0	1.293	0.142	1597.757	.008%	99.956%
86.0	1.270	0.140	1597.897	.008%	99.965%
87.0	1.264	0.139	1598.036	.008%	99.974%
88.0	1.288	0.140	1598.176	.008%	99.982%
89.0	1.282	0.141	1598.317	.008%	99.991%
90.0	1.293	0.141	1598.458	.008%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1321.41	72.01%	82.67%
0-40	1572.24	85.68%	98.36%
0-60	1593.27	86.83%	99.68%
0-90	1598.32	87.10%	99.99%
0-120	1598.32	87.10%	99.99%
0-180	1598.46	87.11%	100.00%
60-90	5.30	0.29%	0.33%
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%
0-28.62	1278.77	69.69%	80.00%

ZONAL LUMEN SUMMARY

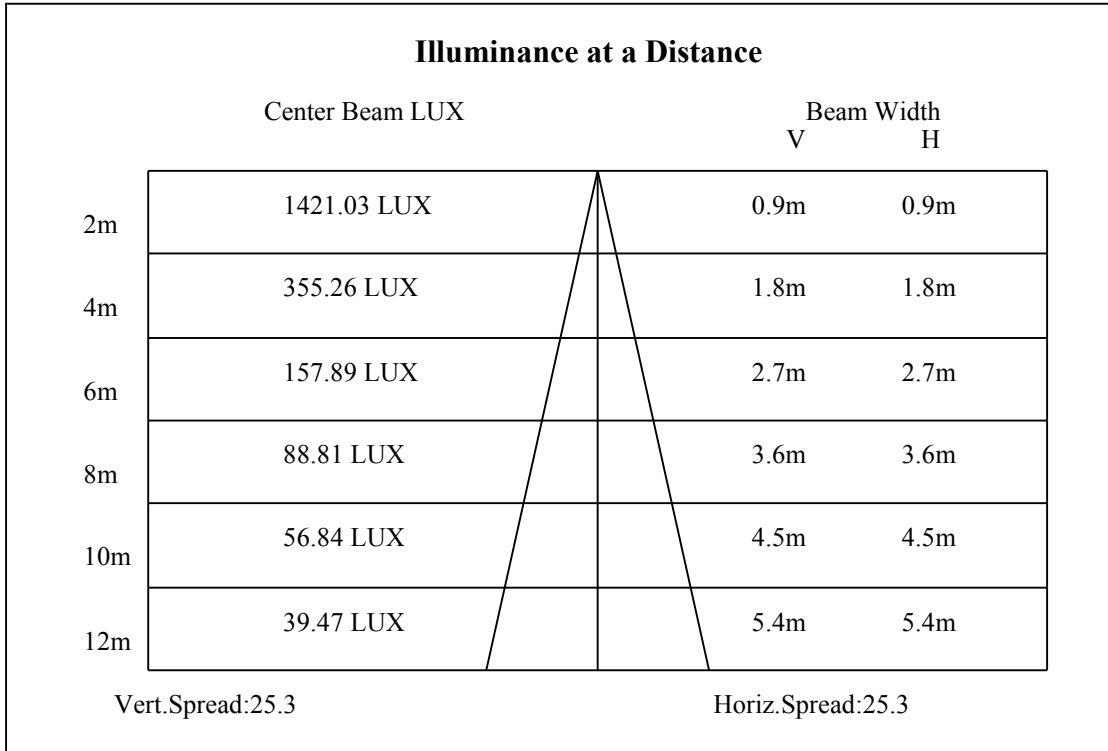
0-10	456.69
10-20	556.92
20-30	307.79
30-40	250.83
40-50	17.88
50-60	3.15
60-70	2.15
70-80	1.62
80-90	1.28
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

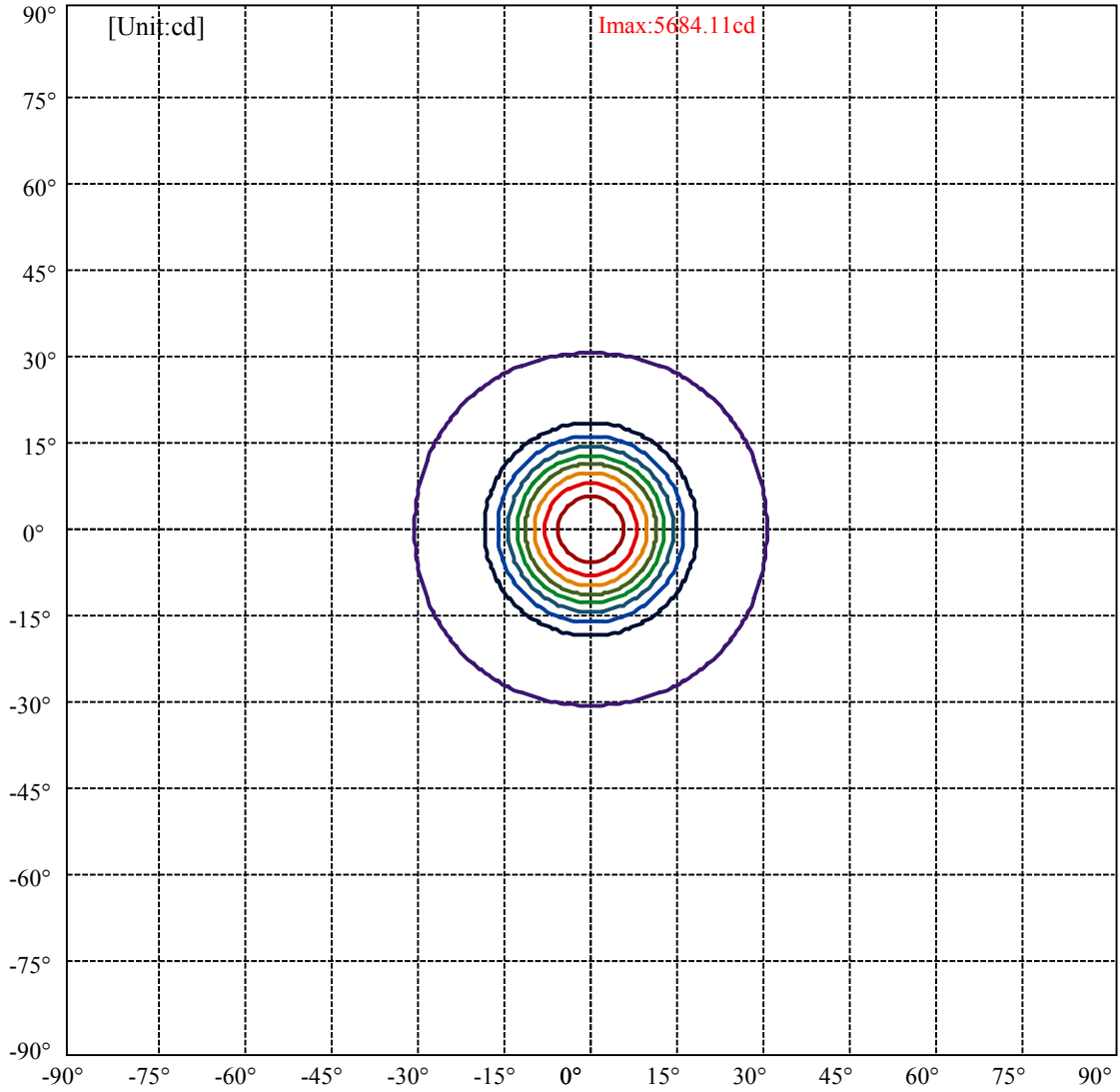


C0(Max): —————
C0/C180: —————
C90/C270: —————

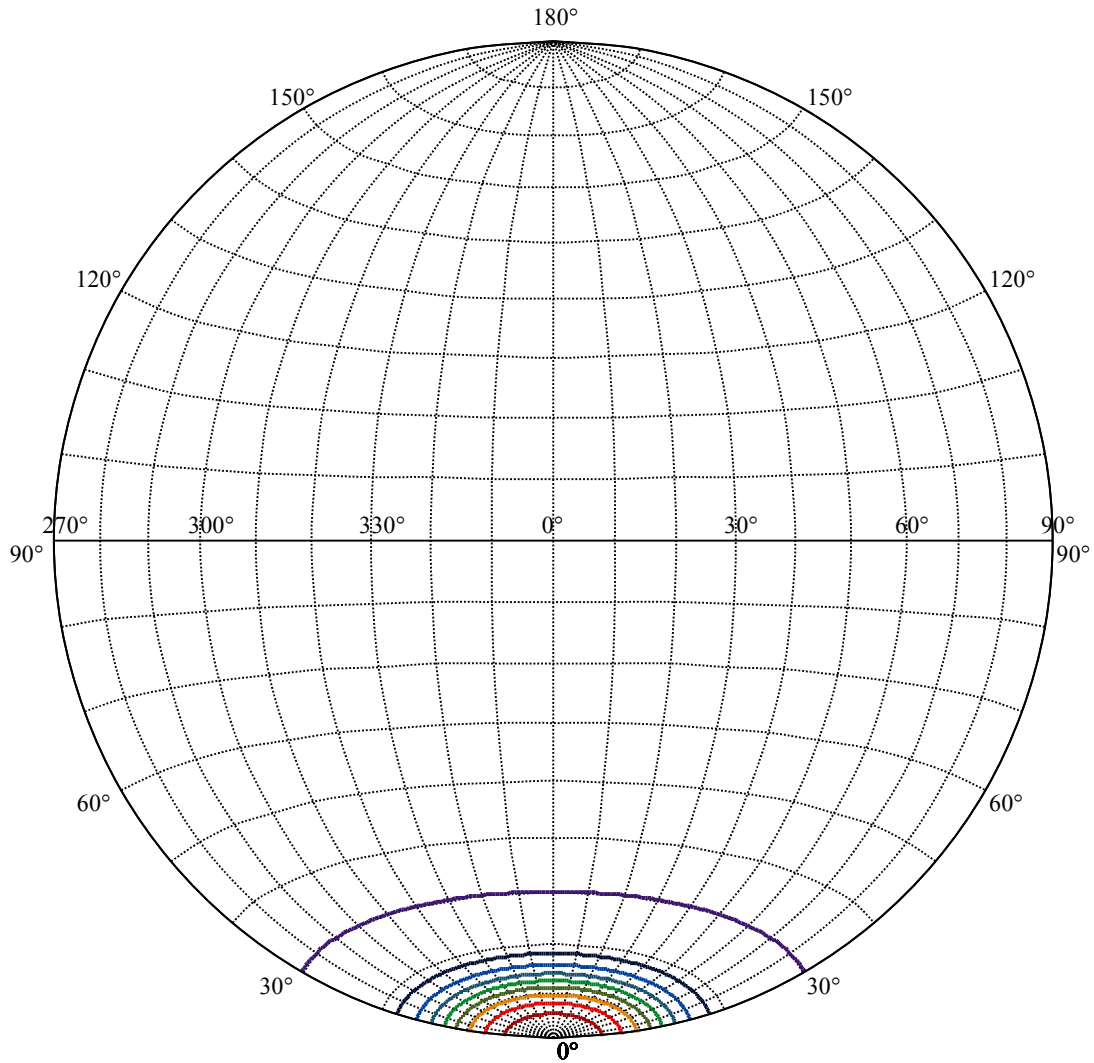
Field angle(10%Imax):C0/180Left:30.2 Right:30.2
:C90/270Left:30.2 Right:30.2

Beam Angle(50%Imax):C0/180Left:12.6 Right:12.6
:C90/270Left:12.6 Right:12.6





(10%Imax) 568.411	—
(20%Imax) 1136.82	—
(30%Imax) 1705.23	—
(40%Imax) 2273.64	—
(50%Imax) 2842.05	—
(60%Imax) 3410.46	—
(70%Imax) 3978.88	—
(80%Imax) 4547.29	—
(90%Imax) 5115.7	—



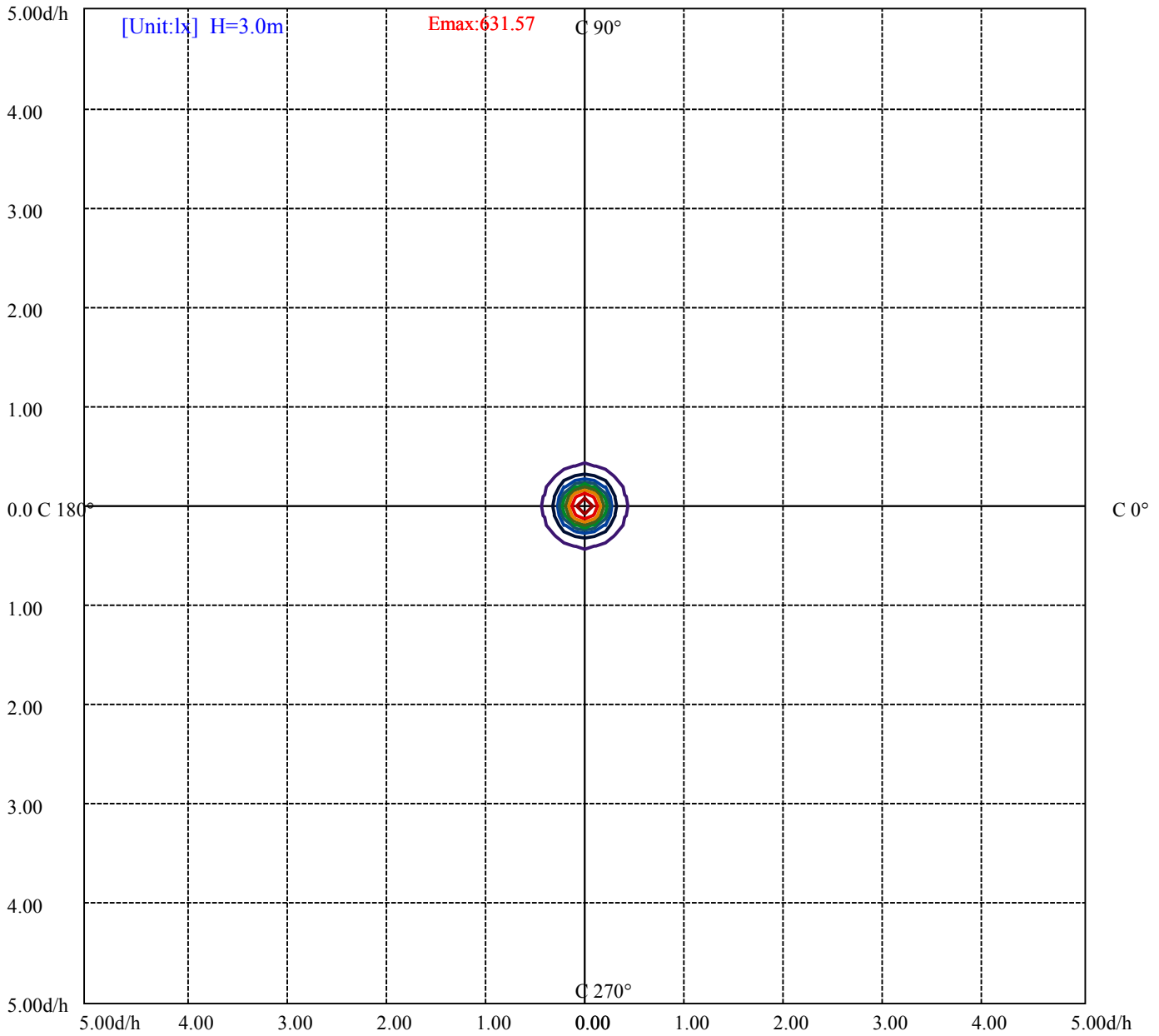
House

[Unit:cd]

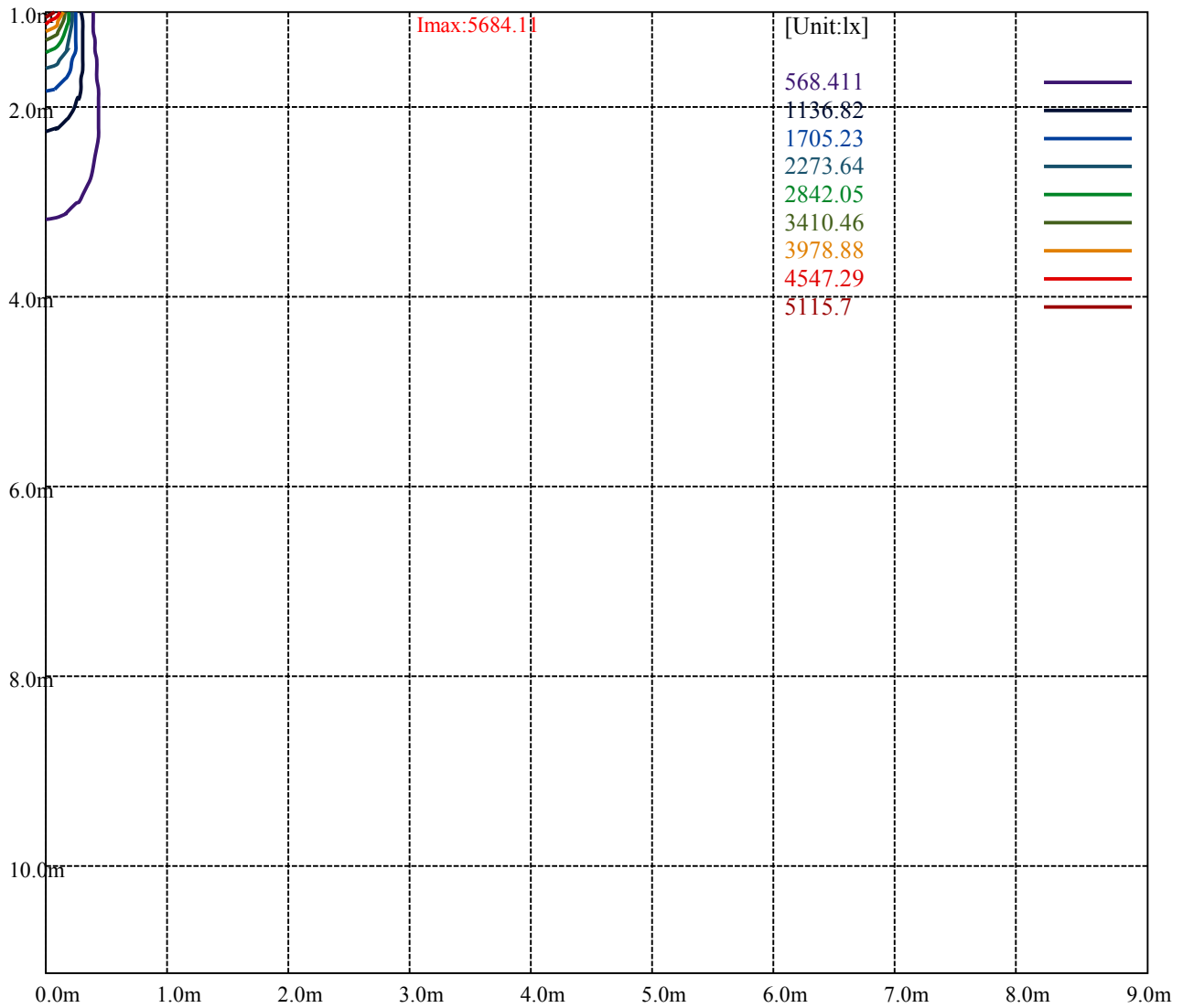
Road

Imax:5684.11

(10%Imax) 568.411	—
(20%Imax) 1136.82	—
(30%Imax) 1705.23	—
(40%Imax) 2273.64	—
(50%Imax) 2842.05	—
(60%Imax) 3410.46	—
(70%Imax) 3978.88	—
(80%Imax) 4547.29	—
(90%Imax) 5115.7	—



(10%Emax) 63.15678	—
(20%Emax) 126.3133	—
(30%Emax) 189.47	—
(40%Emax) 252.6266	—
(50%Emax) 315.7833	—
(60%Emax) 378.94	—
(70%Emax) 442.0967	—
(80%Emax) 505.2533	—
(90%Emax) 568.41	—



Luminance Table

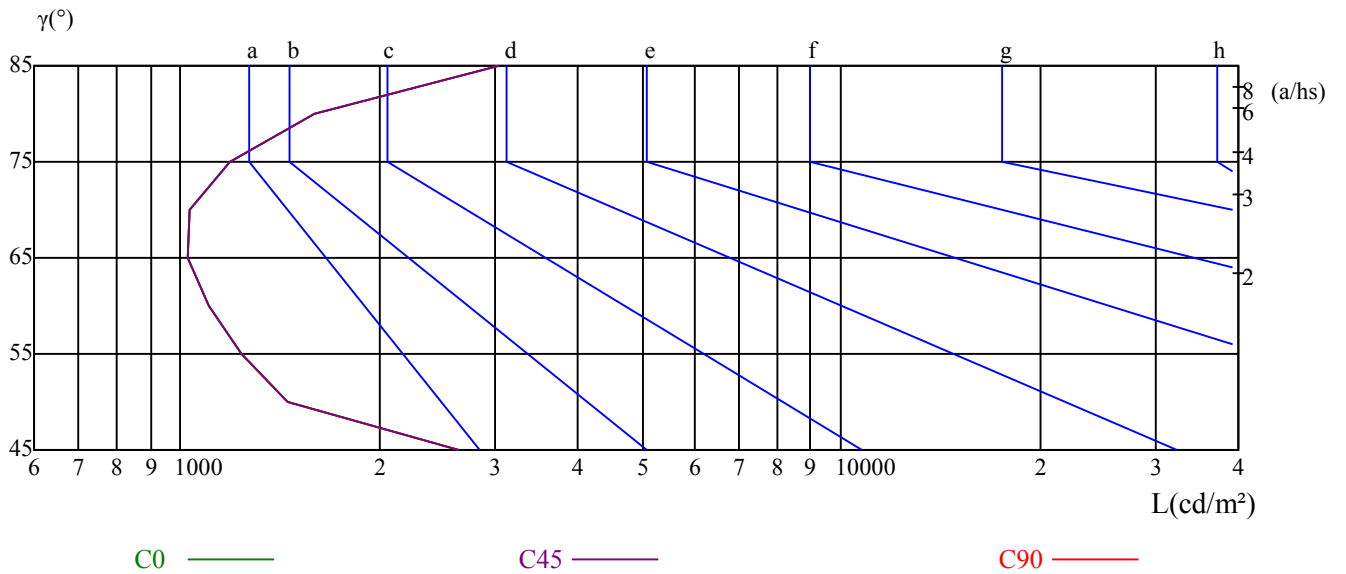
γ	45	50	55	60	65	70	75	80	85
C0	2637	1453	1236	1101	1028	1035	1189	1595	3029
C45	2637	1453	1236	1101	1028	1035	1189	1595	3029
C90	2637	1453	1236	1101	1028	1035	1189	1595	3029

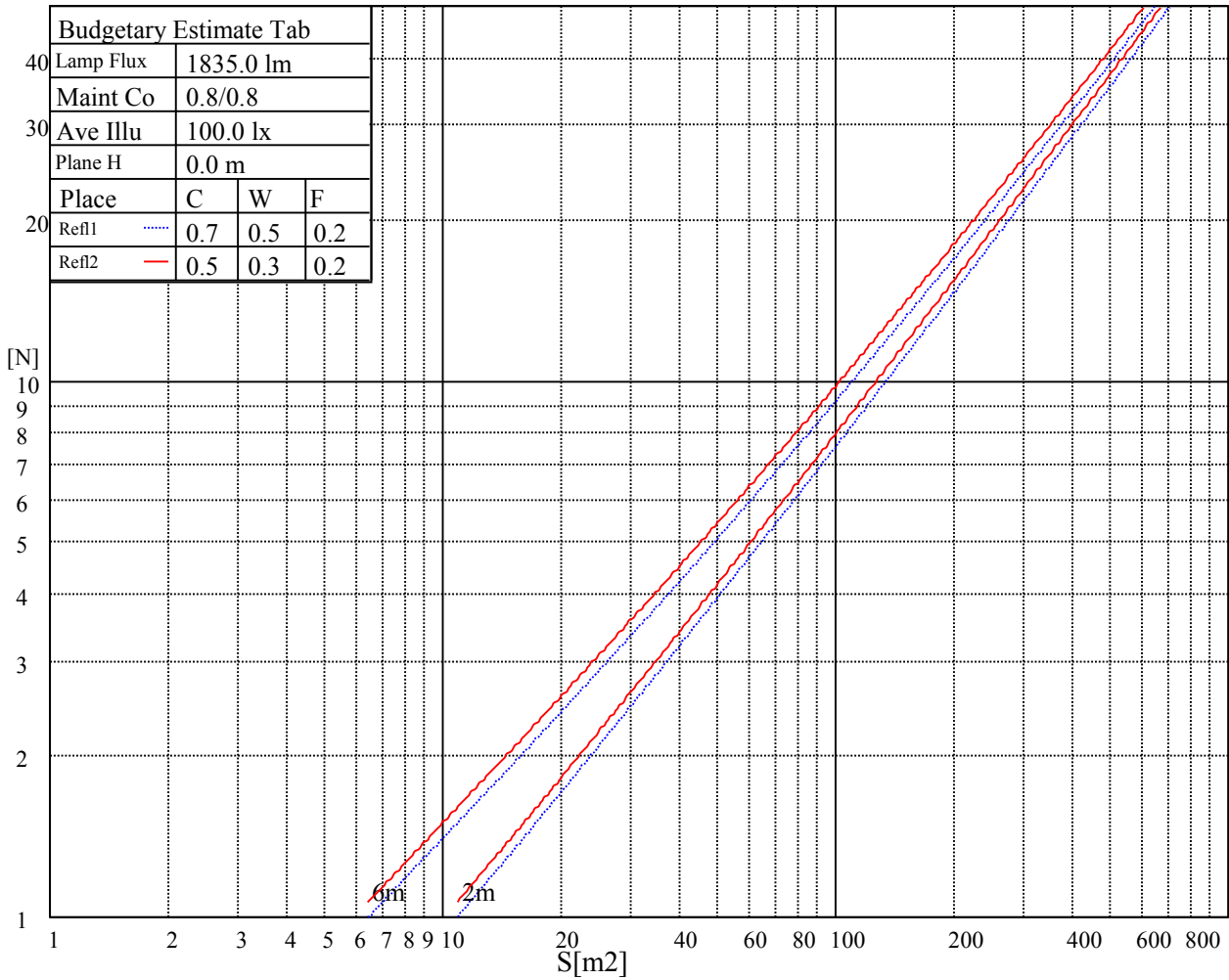
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1028	1028	1028	1189	1189	1189	3029	3029	3029

Glare Table

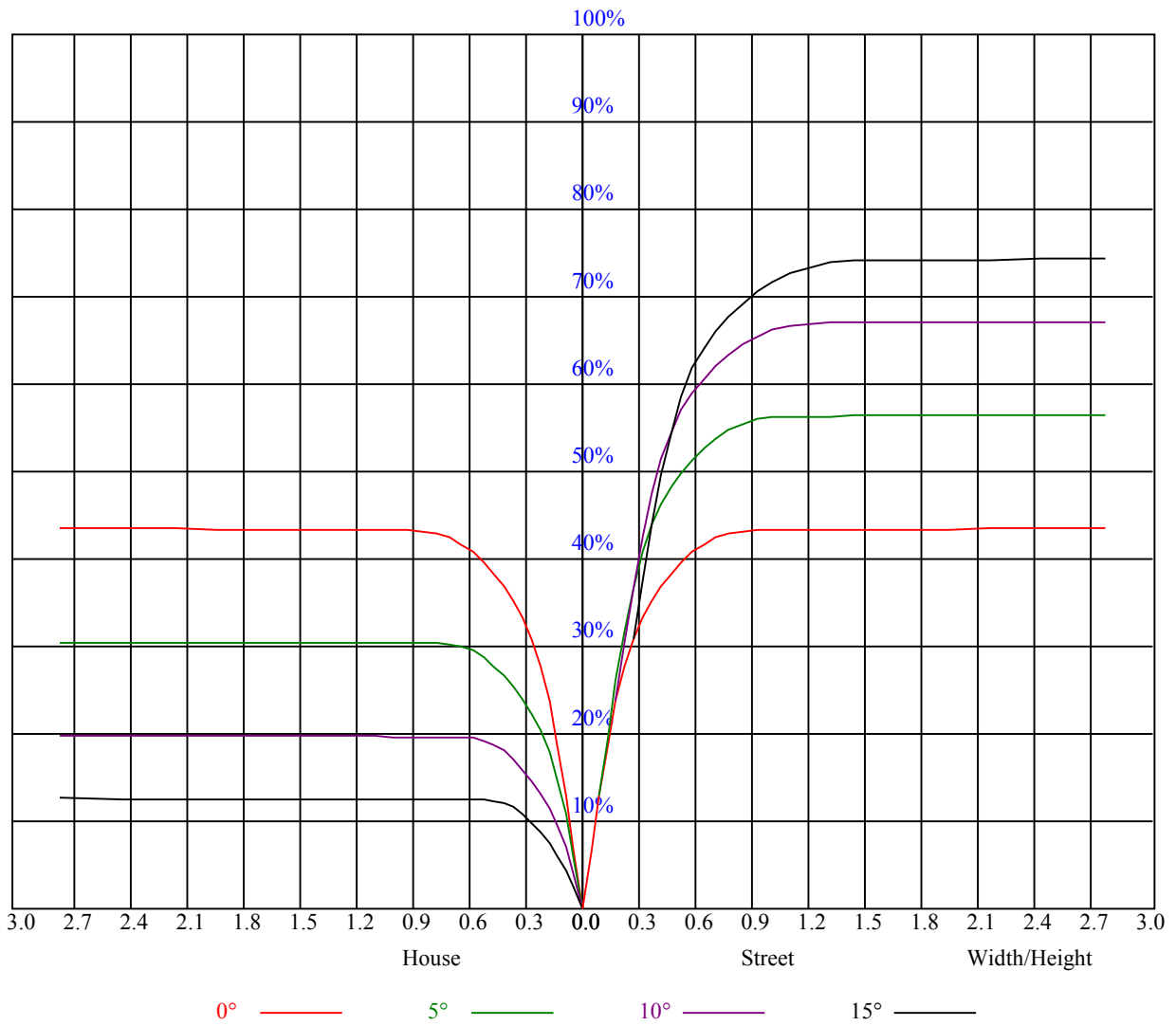
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

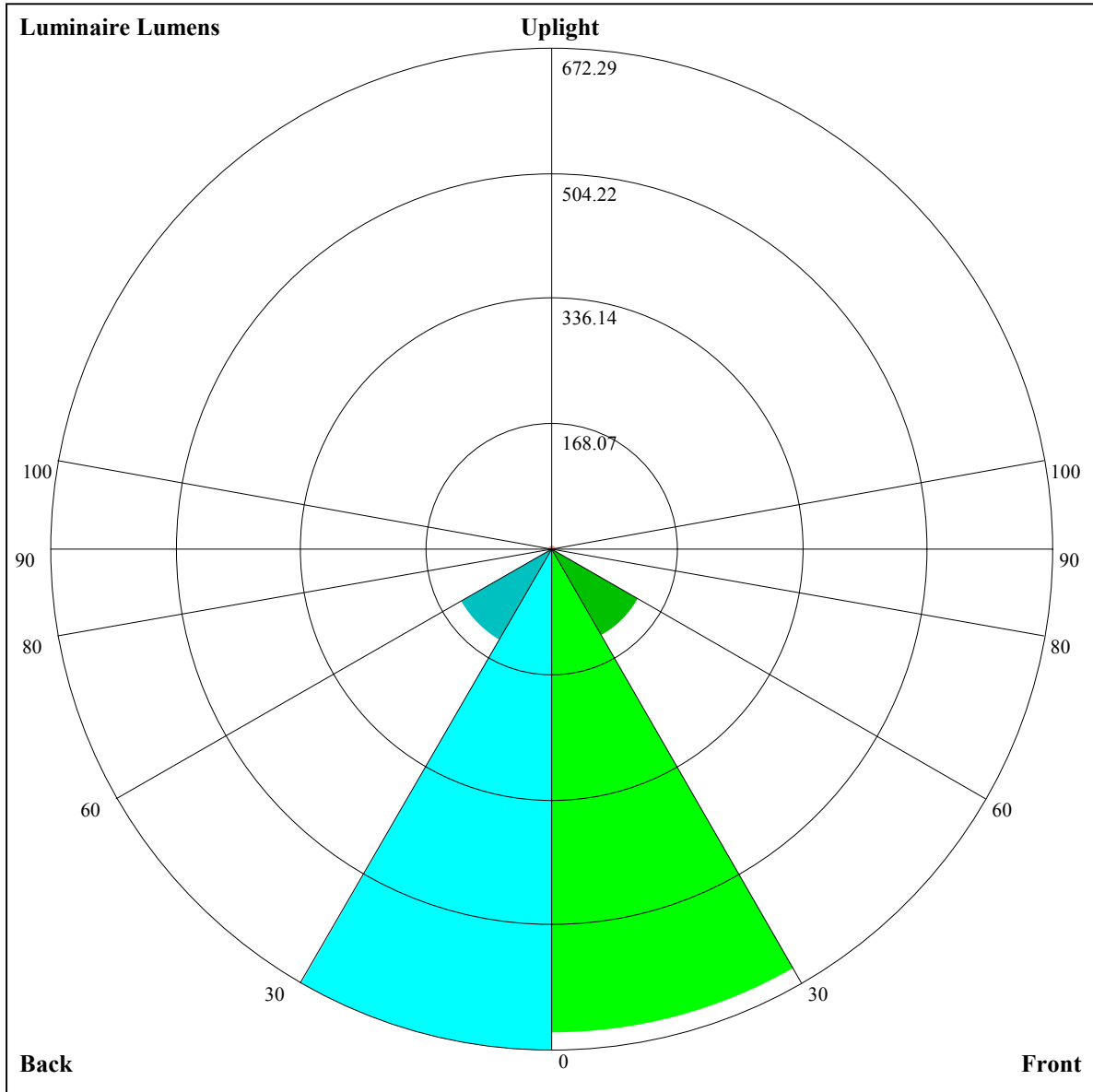
Luminance Limiting Curve





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	1.04	1.04	1.04	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.98	0.96	0.94	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.85	0.83
2	0.92	0.89	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.81	0.79
3	0.88	0.84	0.81	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.77	0.76
4	0.83	0.79	0.76	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
6	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.64
8	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57





Luminaire Lumens:

FL=650.86,FM=134.54,FH=1.86,FVH=0.71

BL=672.29,BM=140.84,BH=1.87,BVH=0.71

UL=1.41,UH=6.72

BUG Rating:B2-U1-G0

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	5683.99	5651.51	5582.83	5472.86	5329.93	5142.93	4915.09	4645.95	4329.01
45.0	5690.95	5686.78	5645.94	5572.16	5463.11	5303.48	5109.05	4875.18	4604.19
90.0	5677.50	5627.38	5542.93	5414.85	5245.94	5039.45	4792.58	4508.60	4186.56
135.0	5683.99	5688.63	5656.61	5591.19	5488.63	5342.46	5153.60	4927.62	4663.12
180.0	5683.99	5687.70	5675.18	5590.26	5489.10	5407.43	5159.63	5031.56	4783.30
225.0	5690.95	5655.22	5590.26	5483.99	5330.86	5182.84	4914.62	4653.84	4420.43
270.0	5677.50	5690.49	5669.61	5615.78	5527.15	5401.40	5223.67	5019.96	4767.99
315.0	5683.99	5649.19	5586.54	5487.24	5406.04	5160.10	5032.95	4789.34	4384.23
360.0	5683.99	5651.51	5582.83	5472.86	5329.93	5142.93	4915.09	4645.95	4329.01
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3976.35	3584.24	3164.29	2738.31	2325.78	1959.20	1766.62	1392.15	1263.61
45.0	4416.25	3933.19	3541.09	3294.22	2700.72	2450.14	2059.89	1721.15	1442.26
90.0	3831.57	3443.17	3198.16	2781.93	2219.98	2004.21	1690.52	1423.70	1209.32
135.0	4370.78	4032.03	3661.27	3263.13	3018.12	2456.64	2233.44	1891.91	1630.28
180.0	4500.24	4180.06	3822.29	3429.72	3013.94	2599.56	2212.56	1872.42	1585.65
225.0	4020.90	3649.67	3332.73	2919.28	2509.08	2127.64	1794.93	1518.83	1292.38
270.0	4548.04	4170.31	3895.61	3527.16	3053.85	2732.28	2348.06	2001.42	1697.94
315.0	4185.16	3824.61	3435.75	3024.62	2614.41	2222.77	1873.81	1578.69	1336.00
360.0	3976.35	3584.24	3164.29	2738.31	2325.78	1959.20	1766.62	1392.15	1263.61
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	915.21	915.21	841.62	771.32	717.35	676.38	647.19	625.70	609.69
45.0	1222.77	1052.94	924.87	829.27	759.67	705.84	666.86	638.56	616.75
90.0	916.93	916.93	821.52	752.11	700.04	659.11	632.85	613.59	597.03
135.0	1362.91	1163.38	1007.00	887.28	799.11	733.22	685.89	650.16	624.17
180.0	1346.21	1154.10	1004.68	889.60	804.22	739.72	690.99	655.73	634.38
225.0	1038.09	906.91	868.72	789.92	730.99	687.23	653.96	638.42	620.09
270.0	1439.48	1227.41	1058.51	930.43	832.99	760.60	707.70	668.25	640.88
315.0	1061.75	901.38	862.59	784.17	726.21	683.01	663.71	638.51	619.48
360.0	915.21	915.21	841.62	771.32	717.35	676.38	647.19	625.70	609.69
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	596.51	585.15	575.73	565.01	556.24	550.44	521.48	450.58	413.69
45.0	600.51	587.51	576.84	571.74	556.89	547.14	542.97	523.01	479.39
90.0	585.05	576.14	565.56	555.40	546.03	533.41	492.11	437.82	377.77
135.0	606.07	590.76	579.16	568.02	557.35	548.07	537.86	503.52	452.94
180.0	610.71	596.33	587.51	576.38	566.63	556.89	547.61	525.80	482.64
225.0	600.41	593.59	584.31	573.96	563.80	555.22	534.66	491.92	434.43
270.0	621.39	604.22	592.62	582.41	571.27	565.24	551.78	523.94	497.03
315.0	604.68	592.85	582.55	571.74	562.97	552.06	518.60	468.44	406.59
360.0	596.51	585.15	575.73	565.01	556.24	550.44	521.48	450.58	413.69
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	349.42	283.57	216.61	151.69	91.97	44.22	16.06	11.37	10.07
45.0	423.24	361.06	292.85	237.63	237.63	85.06	38.42	14.20	9.98
90.0	310.58	240.79	173.59	113.97	60.88	22.88	10.07	9.05	8.03
135.0	391.23	340.18	272.90	259.44	232.53	82.97	37.77	13.36	10.12
180.0	426.03	362.46	296.10	229.28	229.28	102.50	51.65	29.84	11.69
225.0	372.11	304.17	235.22	168.72	107.42	55.96	20.28	11.00	10.16
270.0	442.73	381.95	314.66	245.98	245.98	116.57	63.80	23.53	12.20
315.0	341.81	275.26	208.21	144.55	86.08	39.49	14.15	12.44	10.39
360.0	349.42	283.57	216.61	151.69	91.97	44.22	16.06	11.37	10.07

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	8.58	7.15	6.17	5.52	5.20	4.83	4.59	4.36	4.18
45.0	8.96	7.89	6.91	5.99	4.92	4.78	4.45	4.18	3.99
90.0	7.10	6.03	5.15	4.50	4.27	4.08	3.76	3.67	3.43
135.0	9.05	7.84	6.77	5.52	4.92	4.55	4.41	4.13	3.85
180.0	10.53	9.51	8.40	7.24	6.26	5.29	5.01	4.78	4.45
225.0	8.63	7.47	6.31	4.92	4.64	4.41	4.22	3.94	3.71
270.0	10.90	9.28	7.89	6.17	4.78	4.45	4.22	4.04	3.76
315.0	9.33	7.33	6.17	5.10	4.55	4.22	4.04	3.85	3.67
360.0	8.58	7.15	6.17	5.52	5.20	4.83	4.59	4.36	4.18
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.85	3.67	3.53	3.34	3.20	3.06	2.83	2.69	2.64
45.0	3.81	3.57	3.34	3.20	3.06	2.92	2.74	2.60	2.51
90.0	3.29	3.11	2.97	2.78	2.64	2.60	2.46	2.32	2.23
135.0	3.67	3.53	3.29	3.11	2.97	2.88	2.69	2.51	2.46
180.0	4.18	3.94	3.76	3.48	3.29	3.20	3.02	2.83	2.69
225.0	3.53	3.34	3.16	2.97	2.88	2.74	2.60	2.46	2.37
270.0	3.62	3.43	3.25	3.06	2.88	2.78	2.69	2.51	2.41
315.0	3.39	3.20	3.11	2.97	2.78	2.64	2.55	2.46	2.32
360.0	3.85	3.67	3.53	3.34	3.20	3.06	2.83	2.69	2.64
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	2.51	2.37	2.23	2.18	2.09	1.95	1.86	1.86	1.81
45.0	2.41	2.27	2.13	2.09	2.04	1.95	1.90	1.76	1.72
90.0	2.13	2.09	1.95	1.86	1.81	1.72	1.72	1.58	1.58
135.0	2.37	2.23	2.09	2.04	2.00	1.90	1.81	1.72	1.72
180.0	2.60	2.46	2.37	2.23	2.13	2.09	1.95	1.86	1.81
225.0	2.27	2.13	2.09	2.04	1.90	1.90	1.81	1.67	1.67
270.0	2.32	2.27	2.09	2.04	2.00	1.95	1.81	1.72	1.72
315.0	2.23	2.13	2.09	2.00	1.95	1.81	1.76	1.72	1.67
360.0	2.51	2.37	2.23	2.18	2.09	1.95	1.86	1.86	1.81
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.67	1.62	1.62	1.58	1.48	1.48	1.44	1.44	1.39
45.0	1.67	1.67	1.62	1.48	1.48	1.48	1.44	1.39	1.35
90.0	1.58	1.53	1.48	1.48	1.35	1.35	1.39	1.39	1.30
135.0	1.67	1.62	1.53	1.48	1.48	1.44	1.39	1.39	1.39
180.0	1.76	1.62	1.58	1.58	1.53	1.44	1.44	1.44	1.39
225.0	1.67	1.53	1.48	1.48	1.48	1.39	1.39	1.39	1.39
270.0	1.67	1.62	1.62	1.48	1.44	1.44	1.44	1.39	1.35
315.0	1.58	1.53	1.53	1.48	1.39	1.39	1.39	1.39	1.30
360.0	1.67	1.62	1.62	1.58	1.48	1.48	1.44	1.44	1.39
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.35	1.35	1.35	1.35	1.30	1.35	1.30	1.30	1.44
45.0	1.35	1.39	1.35	1.30	1.35	1.30	1.30	1.30	1.25
90.0	1.30	1.30	1.25	1.30	1.25	1.25	1.25	1.25	1.30
135.0	1.39	1.35	1.35	1.30	1.30	1.25	1.25	1.30	1.30
180.0	1.35	1.35	1.30	1.30	1.30	1.25	1.25	1.25	1.25
225.0	1.30	1.30	1.25	1.35	1.30	1.21	1.25	1.44	1.25
270.0	1.35	1.30	1.30	1.30	1.30	1.30	1.30	1.25	1.25
315.0	1.25	1.30	1.25	1.30	1.25	1.25	1.21	1.21	1.21
360.0	1.35	1.35	1.35	1.35	1.30	1.35	1.30	1.30	1.44

Intensity data(cd)

C/ γ ($^{\circ}$)	90.0
0.0	1.53
45.0	1.30
90.0	1.21
135.0	1.35
180.0	1.25
225.0	1.30
270.0	1.21
315.0	1.21
360.0	1.53