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Nata

Client:

LumCAT: 3-2324-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): 78

Phm Type: C

Voltage(V): 220.4000

Current(A): 0.0700

Power (W): 14.3800

PF: 0.9200

Ballast type: AC

Width(mm): 78

Height(mm): 0

Photometric Results

Lumens(lm): 1594.27, Efficiency(%): 86.88% , Luminous Efficacy(lm/W): 110.87

Central intensity(cd): 7230.151, Maximum intensity(cd): 7230.151

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.4

[C90/270]Total=22.4

Field angle(10%Imax): [C0/180]Total=43.2

[C90/270]Total=43.2

Maximum s/h(1/2): C0_180=0.38 C90_270=0.38

Maximum s/h(1/4): C0_180=0.36 C90_270=0.36

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.88%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.697%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7230.151	0.000	0	.000%	.000%
1.0	7212.634	6.911	6.911	.377%	.433%
2.0	7148.366	20.612	27.523	1.123%	1.726%
3.0	7034.329	33.920	61.443	1.849%	3.854%
4.0	6875.862	46.562	108.005	2.537%	6.775%
5.0	6654.692	58.208	166.213	3.172%	10.426%
6.0	6332.015	68.249	234.461	3.719%	14.707%
7.0	5968.038	76.346	310.808	4.161%	19.495%
8.0	5505.223	82.112	392.92	4.475%	24.646%
9.0	4961.550	84.827	477.747	4.623%	29.967%
10.0	4351.230	84.277	562.024	4.593%	35.253%
11.0	3709.356	80.542	642.566	4.389%	40.305%
12.0	3083.549	74.256	716.822	4.047%	44.963%
13.0	2524.620	66.555	783.377	3.627%	49.137%
14.0	2059.137	58.672	842.049	3.197%	52.817%
15.0	1704.093	51.663	893.712	2.815%	56.058%
16.0	1388.608	45.317	939.029	2.470%	58.900%
17.0	1145.206	39.458	978.487	2.150%	61.375%
18.0	992.858	35.252	1013.739	1.921%	63.587%
19.0	909.233	33.092	1046.832	1.803%	65.662%
20.0	821.287	31.673	1078.505	1.726%	67.649%
21.0	749.107	30.155	1108.66	1.643%	69.540%
22.0	705.023	29.221	1137.881	1.592%	71.373%
23.0	668.962	28.830	1166.711	1.571%	73.182%
24.0	639.879	28.616	1195.327	1.559%	74.977%
25.0	621.956	28.691	1224.018	1.564%	76.776%
26.0	605.169	28.966	1252.985	1.579%	78.593%
27.0	591.103	29.267	1282.252	1.595%	80.429%
28.0	579.508	29.637	1311.889	1.615%	82.288%
29.0	569.549	30.063	1341.952	1.638%	84.174%
30.0	560.036	30.499	1372.45	1.662%	86.087%
31.0	550.268	30.898	1403.348	1.684%	88.025%
32.0	530.773	30.971	1434.319	1.688%	89.967%
33.0	489.532	30.059	1464.377	1.638%	91.853%
34.0	428.964	27.796	1492.174	1.515%	93.596%
35.0	357.834	24.435	1516.609	1.332%	95.129%
36.0	288.350	20.575	1537.184	1.121%	96.419%
37.0	215.950	16.447	1553.631	.896%	97.451%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	179.320	13.194	1566.825	.719%	98.279%
39.0	93.480	9.311	1576.136	.507%	98.863%
40.0	37.685	4.575	1580.71	.249%	99.150%
41.0	14.107	1.844	1582.555	.101%	99.265%
42.0	9.466	0.856	1583.411	.047%	99.319%
43.0	8.184	0.654	1584.065	.036%	99.360%
44.0	6.752	0.564	1584.629	.031%	99.395%
45.0	5.632	0.476	1585.105	.026%	99.425%
46.0	4.722	0.405	1585.51	.022%	99.451%
47.0	4.281	0.358	1585.868	.020%	99.473%
48.0	4.060	0.337	1586.205	.018%	99.494%
49.0	3.822	0.324	1586.529	.018%	99.515%
50.0	3.637	0.311	1586.84	.017%	99.534%
51.0	3.474	0.301	1587.14	.016%	99.553%
52.0	3.312	0.291	1587.432	.016%	99.571%
53.0	3.144	0.281	1587.712	.015%	99.589%
54.0	2.981	0.270	1587.982	.015%	99.606%
55.0	2.848	0.260	1588.243	.014%	99.622%
56.0	2.738	0.252	1588.495	.014%	99.638%
57.0	2.610	0.245	1588.74	.013%	99.653%
58.0	2.512	0.237	1588.976	.013%	99.668%
59.0	2.401	0.230	1589.206	.013%	99.683%
60.0	2.309	0.223	1589.429	.012%	99.697%
61.0	2.204	0.215	1589.644	.012%	99.710%
62.0	2.117	0.208	1589.852	.011%	99.723%
63.0	2.065	0.203	1590.056	.011%	99.736%
64.0	1.972	0.198	1590.254	.011%	99.748%
65.0	1.891	0.191	1590.445	.010%	99.760%
66.0	1.856	0.187	1590.632	.010%	99.772%
67.0	1.804	0.184	1590.816	.010%	99.784%
68.0	1.717	0.178	1590.994	.010%	99.795%
69.0	1.659	0.172	1591.166	.009%	99.806%
70.0	1.624	0.169	1591.335	.009%	99.816%
71.0	1.595	0.166	1591.501	.009%	99.827%
72.0	1.520	0.162	1591.663	.009%	99.837%
73.0	1.479	0.157	1591.82	.009%	99.847%
74.0	1.468	0.155	1591.975	.008%	99.856%
75.0	1.456	0.154	1592.13	.008%	99.866%

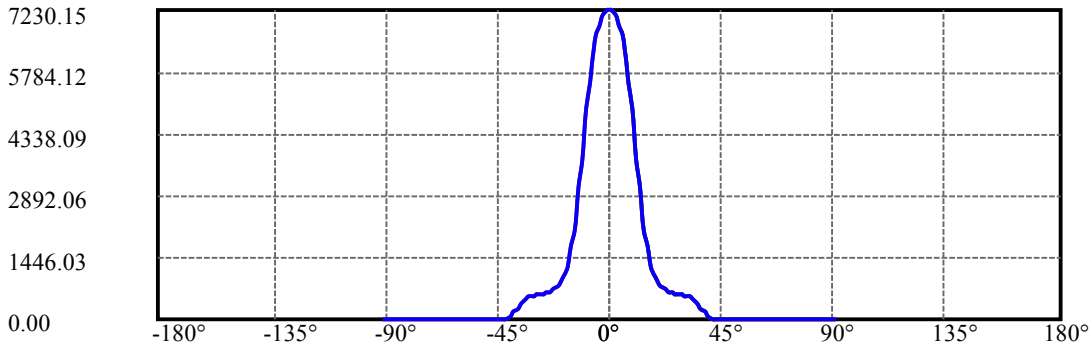
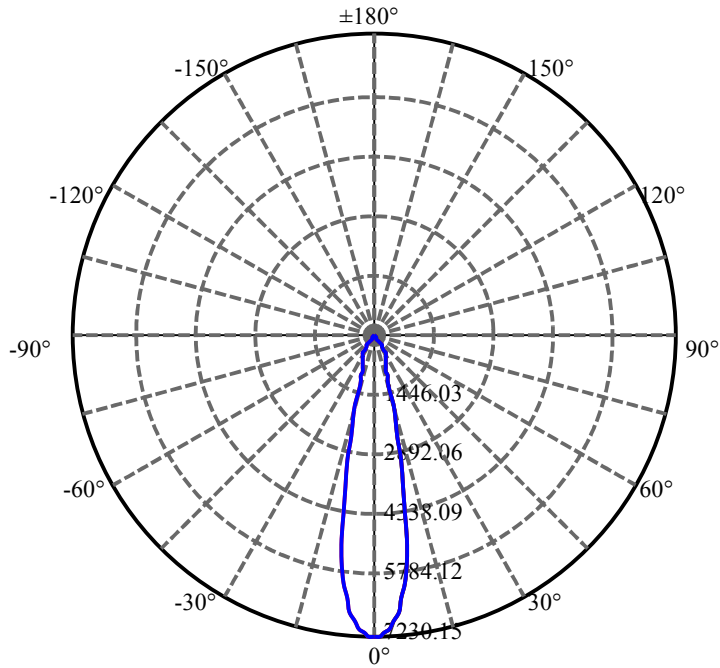
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.398	0.151	1592.281	.008%	99.875%
77.0	1.363	0.147	1592.428	.008%	99.885%
78.0	1.363	0.146	1592.574	.008%	99.894%
79.0	1.351	0.146	1592.72	.008%	99.903%
80.0	1.322	0.144	1592.864	.008%	99.912%
81.0	1.288	0.141	1593.005	.008%	99.921%
82.0	1.311	0.141	1593.146	.008%	99.930%
83.0	1.276	0.141	1593.287	.008%	99.939%
84.0	1.282	0.139	1593.426	.008%	99.947%
85.0	1.264	0.139	1593.565	.008%	99.956%
86.0	1.247	0.137	1593.703	.007%	99.965%
87.0	1.264	0.137	1593.84	.007%	99.973%
88.0	1.288	0.140	1593.98	.008%	99.982%
89.0	1.299	0.142	1594.122	.008%	99.991%
90.0	1.346	0.145	1594.267	.008%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1372.45	74.79%	86.09%
0-40	1580.71	86.14%	99.15%
0-60	1589.43	86.62%	99.70%
0-90	1594.12	86.87%	99.99%
0-120	1594.12	86.87%	99.99%
0-180	1594.27	86.88%	100.00%
60-90	4.92	0.27%	0.31%
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%
0-26.77	1275.41	69.50%	80.00%

ZONAL LUMEN SUMMARY

0-10	562.02
10-20	516.48
20-30	293.95
30-40	208.26
40-50	6.13
50-60	2.59
60-70	1.91
70-80	1.53
80-90	1.26
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: —————

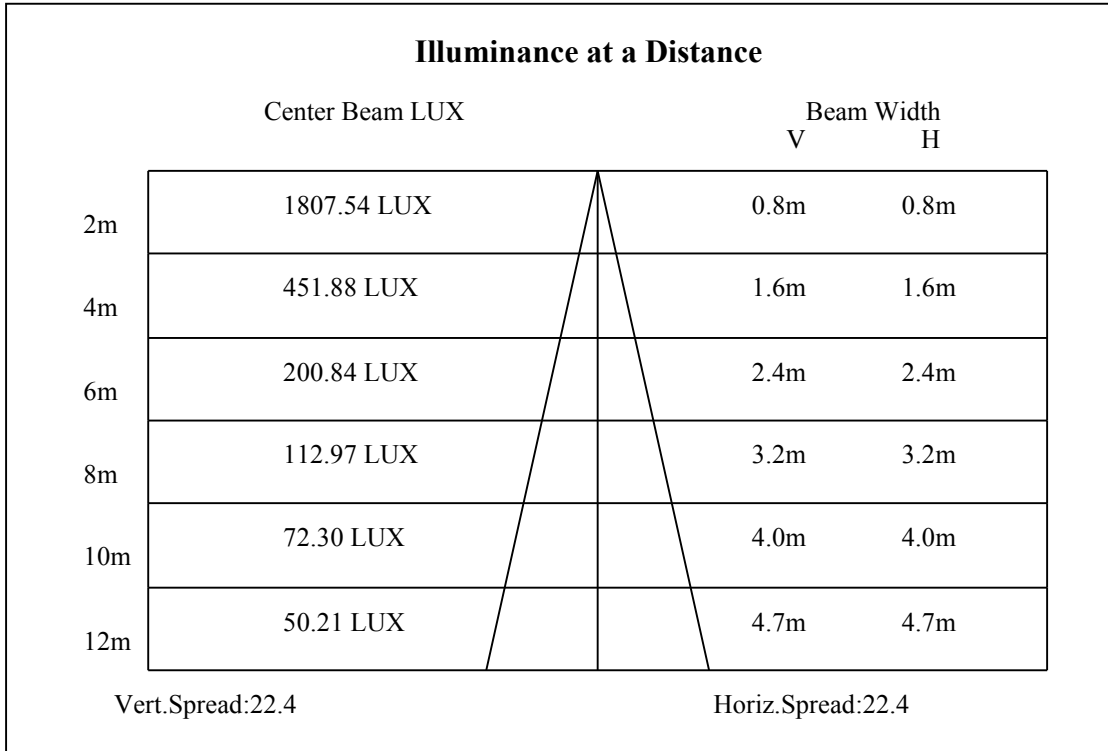
C90/C270: —————

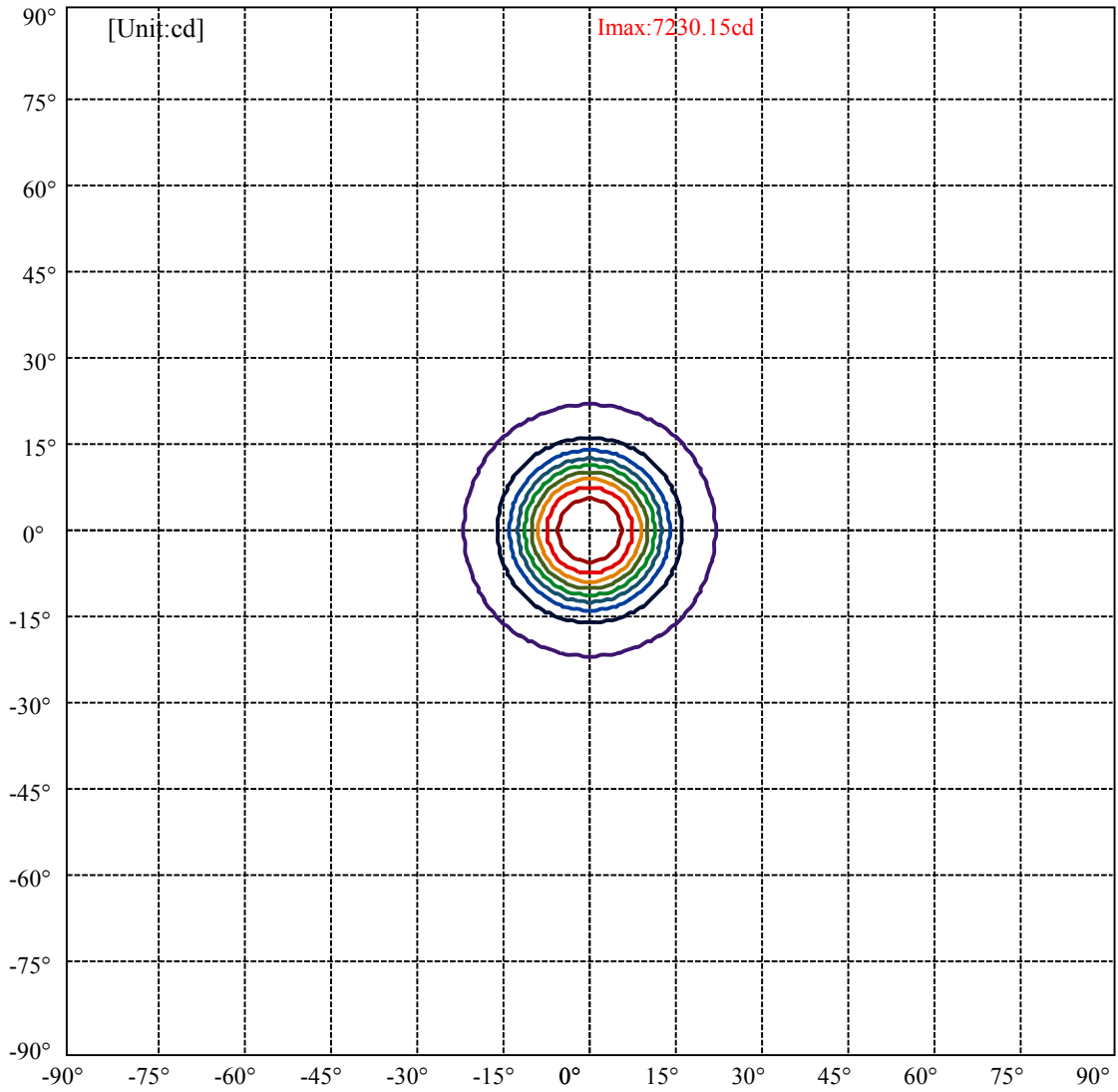
Field angle(10%Imax):C0/180Left:21.6 Right:21.6

:C90/270Left:21.6 Right:21.6

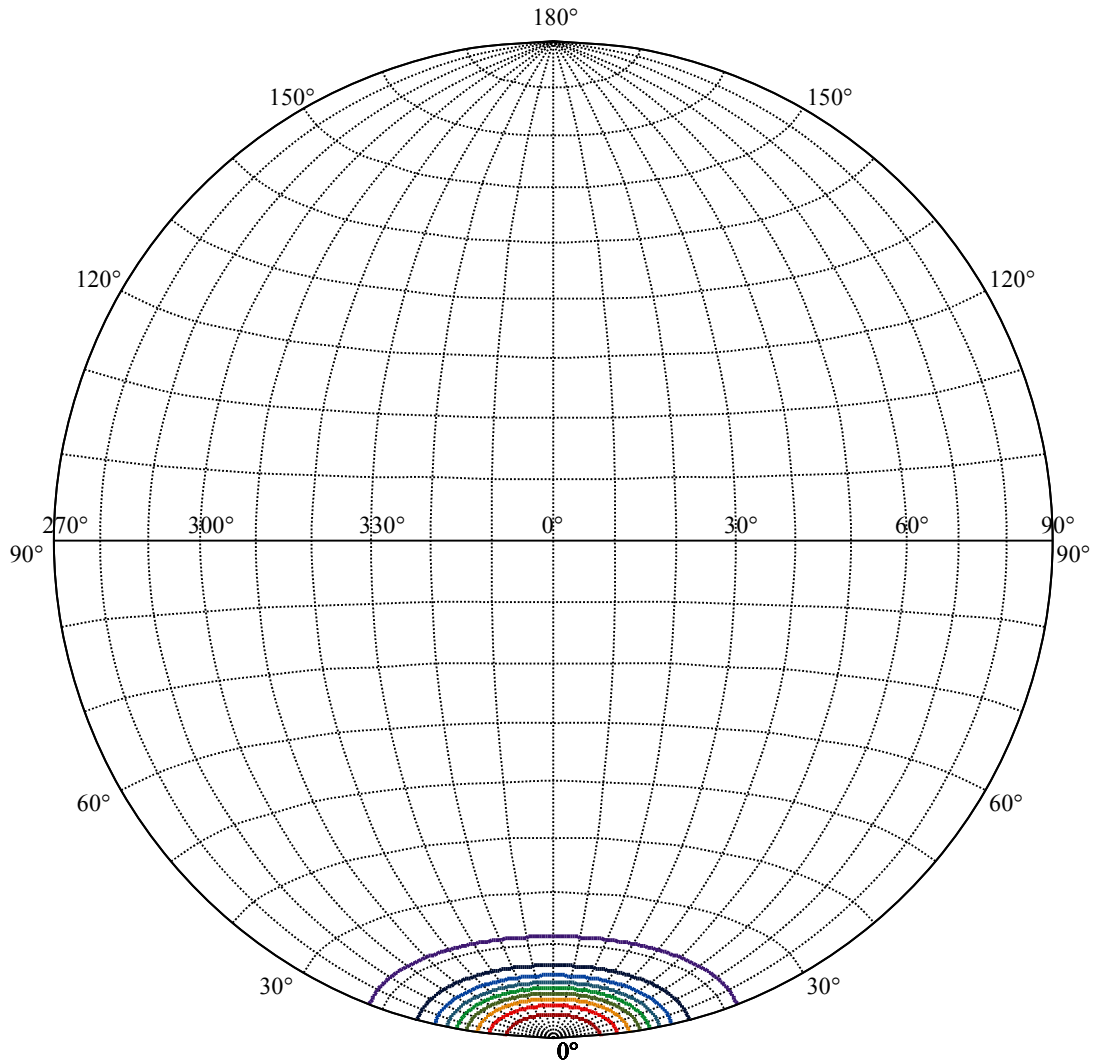
Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2

:C90/270Left:11.2 Right:11.2





(10%Imax) 723.015	—
(20%Imax) 1446.03	—
(30%Imax) 2169.05	—
(40%Imax) 2892.06	—
(50%Imax) 3615.08	—
(60%Imax) 4338.09	—
(70%Imax) 5061.11	—
(80%Imax) 5784.12	—
(90%Imax) 6507.14	—



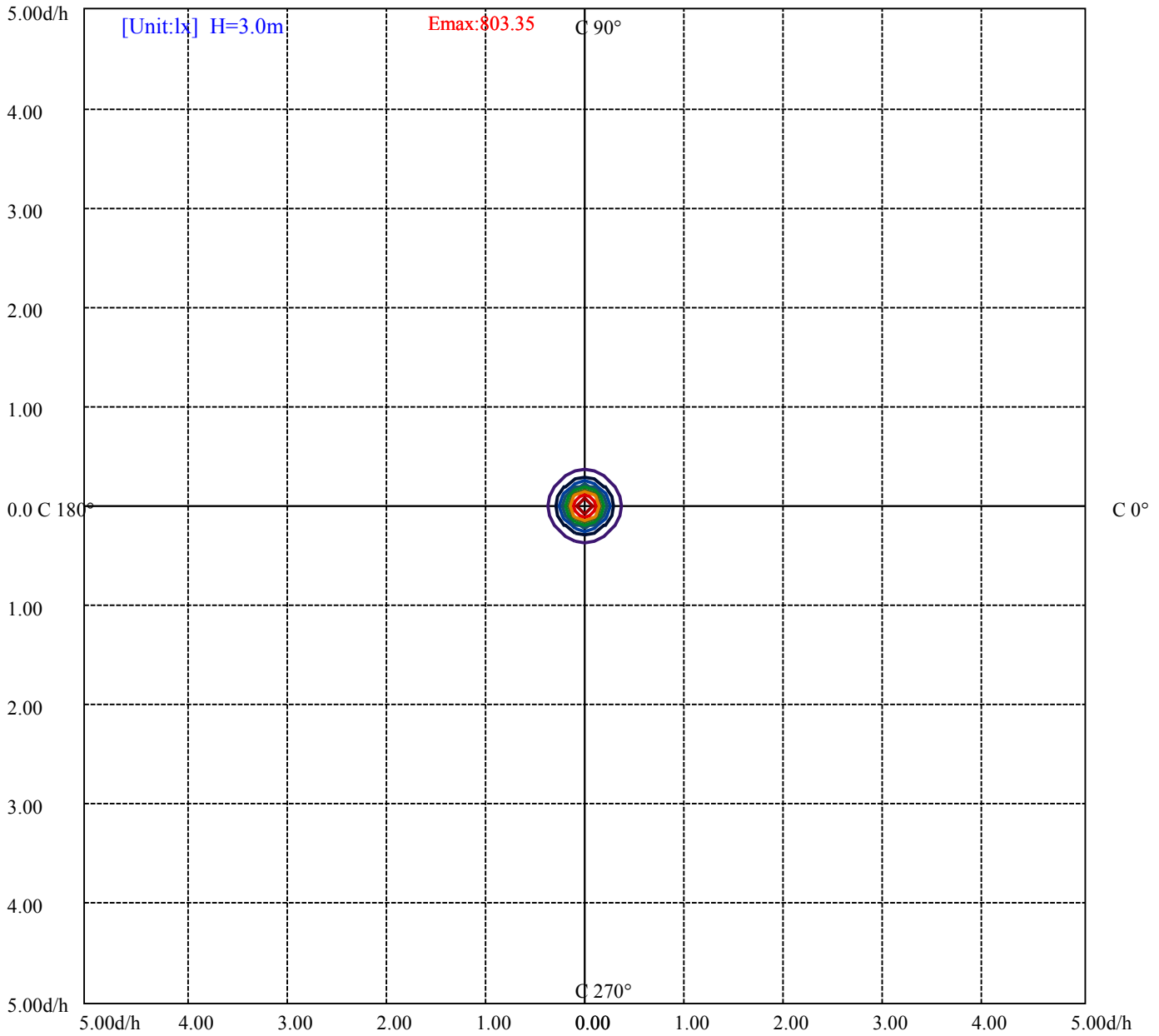
House

[Unit:cd]

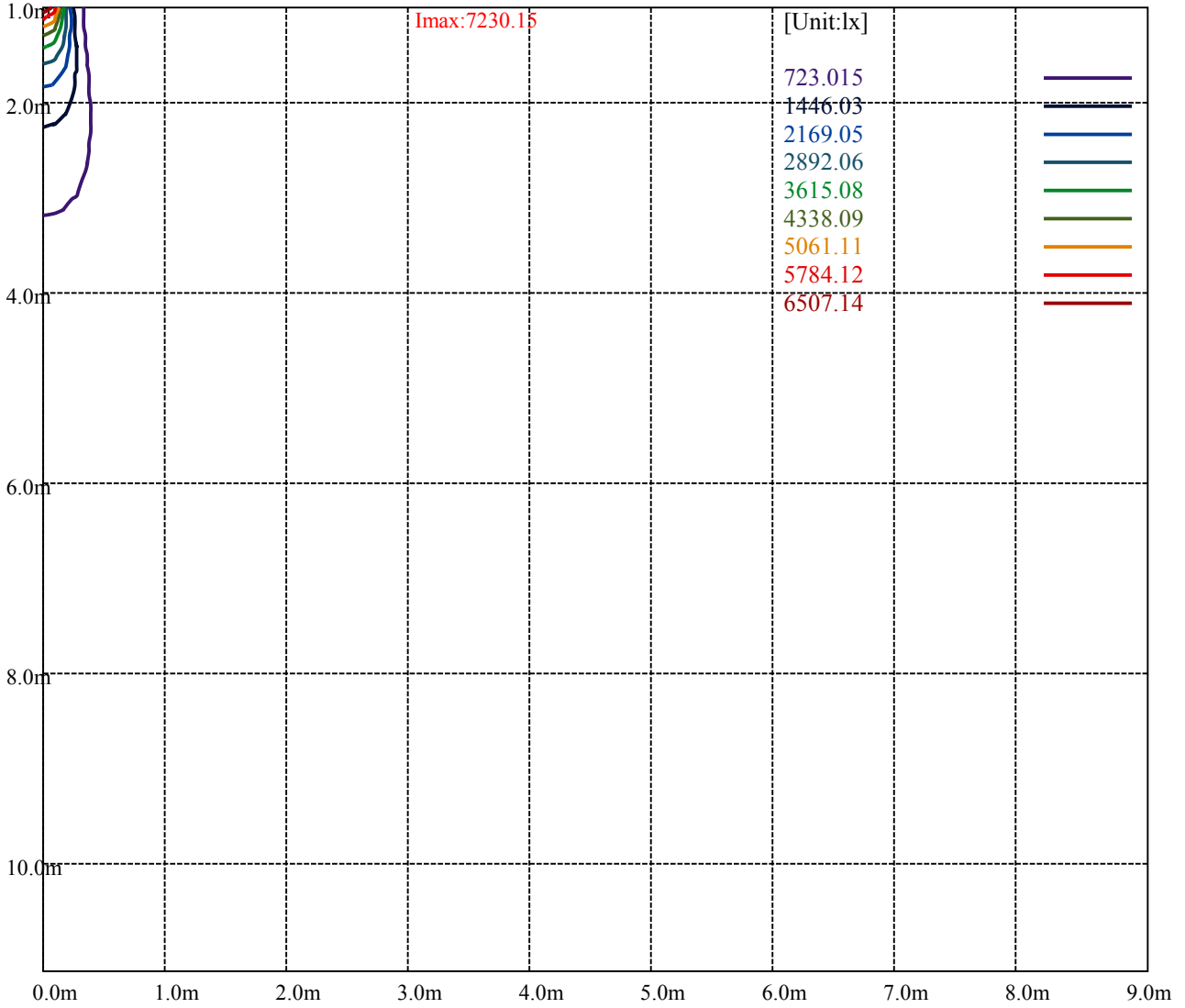
Road

Imax:7230.15

(10%Imax) 723.015	—
(20%Imax) 1446.03	—
(30%Imax) 2169.05	—
(40%Imax) 2892.06	—
(50%Imax) 3615.08	—
(60%Imax) 4338.09	—
(70%Imax) 5061.11	—
(80%Imax) 5784.12	—
(90%Imax) 6507.14	—



(10%E _{max}) 80.335	—
(20%E _{max}) 160.67	—
(30%E _{max}) 241.0045	—
(40%E _{max}) 321.34	—
(50%E _{max}) 401.6744	—
(60%E _{max}) 482.01	—
(70%E _{max}) 562.3445	—
(80%E _{max}) 642.68	—
(90%E _{max}) 723.0144	—



Luminance Table

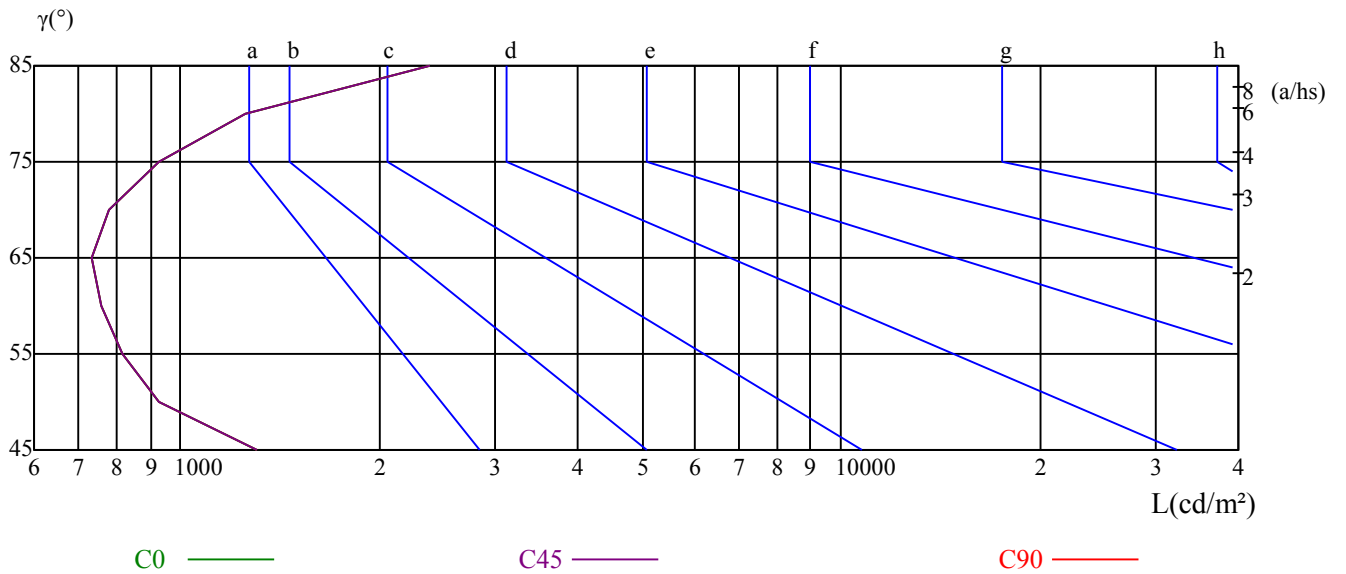
γ	45	50	55	60	65	70	75	80	85
C0	1309	930	816	759	735	781	925	1252	2385
C45	1309	930	816	759	735	781	925	1252	2385
C90	1309	930	816	759	735	781	925	1252	2385

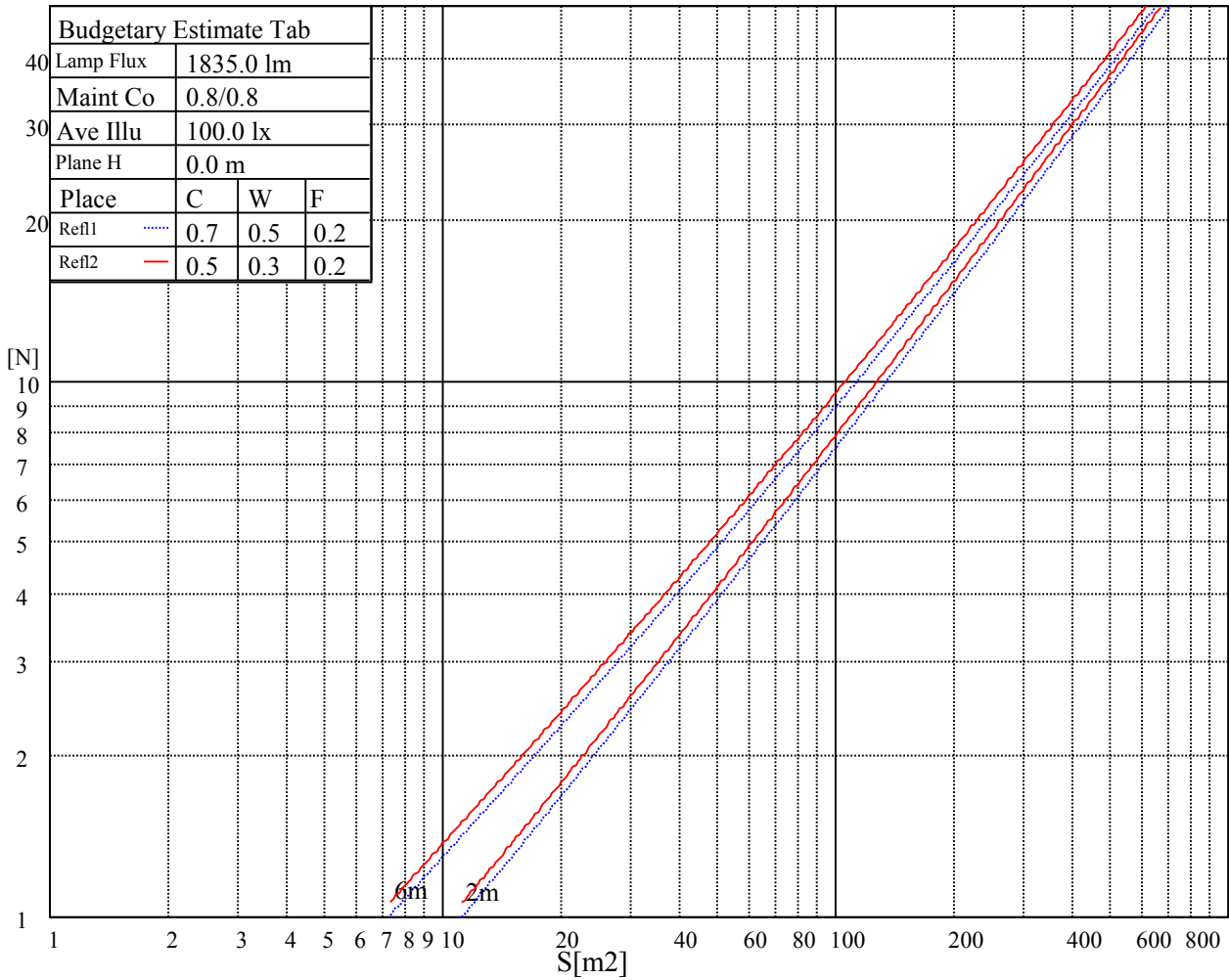
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
735	735	735	925	925	925	2385	2385	2385

Glare Table

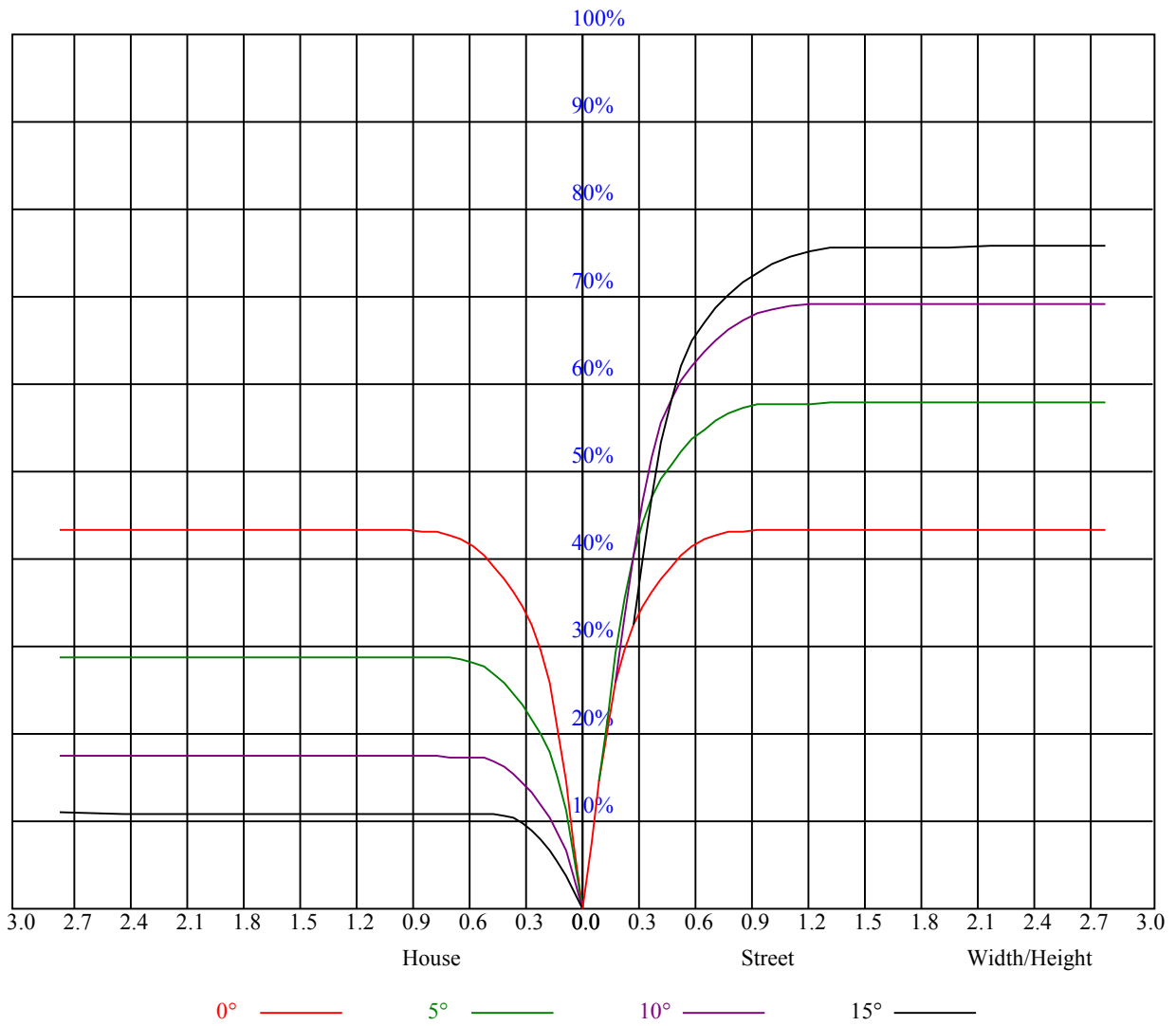
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

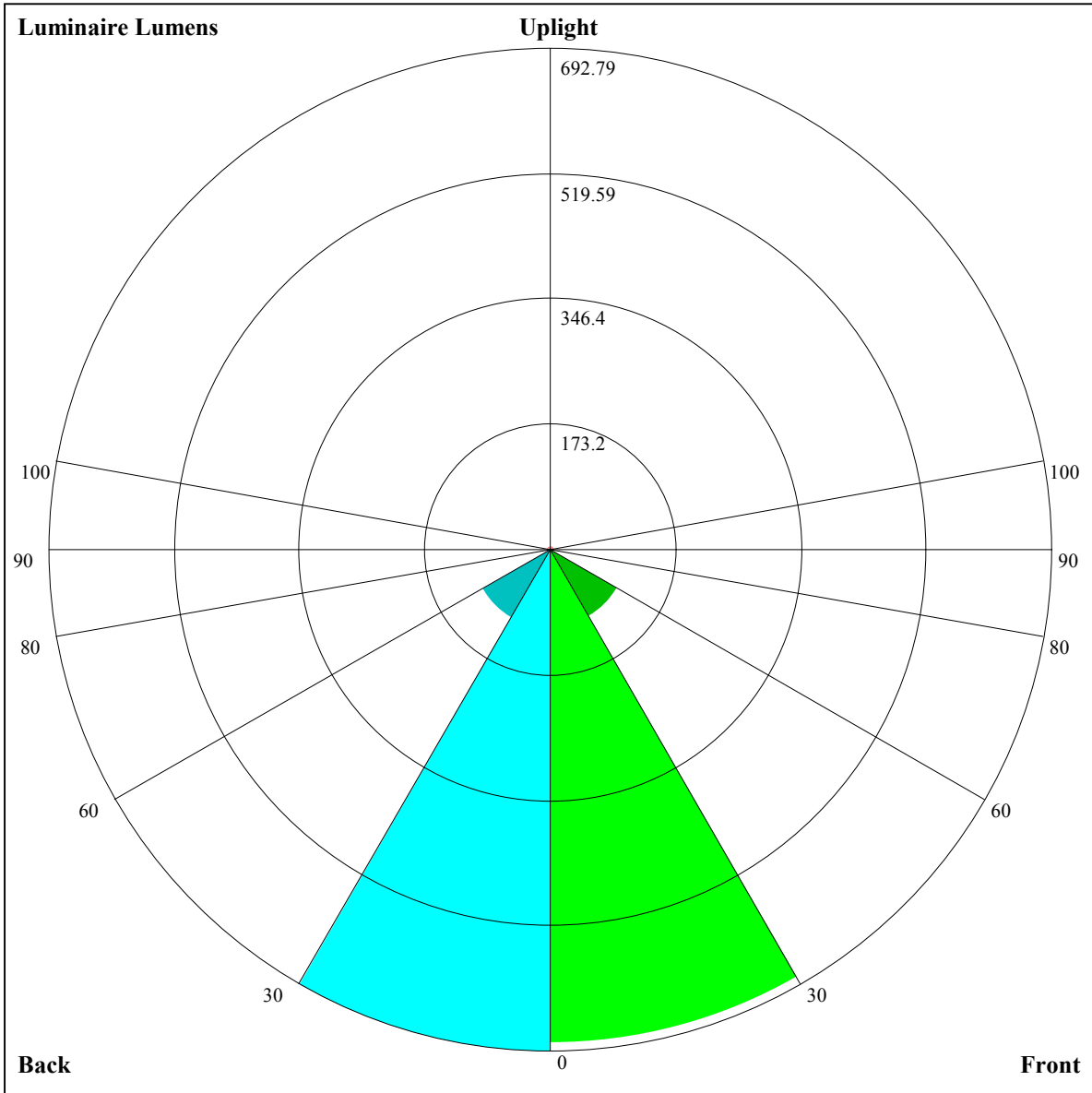
Luminance Limiting Curve





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





Luminaire Lumens:

FL=682.4,FM=107,FH=1.71,FVH=0.7

BL=692.79,BM=109.32,BH=1.72,BVH=0.71

UL=1.47,UH=6.99

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	7226.44	7189.32	7107.18	6986.53	6808.81	6556.37	6226.45	5807.89	5299.31
45.0	7239.43	7232.47	7175.86	7088.16	6948.48	6753.59	6488.63	6146.17	5724.83
90.0	7216.23	7148.48	7003.24	6853.82	6609.27	6286.31	5878.42	5382.83	4806.97
135.0	7238.50	7225.51	7176.32	7066.81	6899.76	6765.65	6332.71	6102.55	5652.90
180.0	7226.44	7238.04	7213.91	7092.80	7009.74	6809.27	6540.60	6206.03	5786.54
225.0	7239.43	7211.13	7131.78	6996.74	6797.67	6537.35	6203.71	5803.25	5326.69
270.0	7216.23	7241.29	7229.22	7152.66	7057.53	6891.41	6660.78	6364.27	5988.86
315.0	7238.50	7214.84	7149.41	7037.11	6875.63	6637.58	6324.82	5931.32	5455.69
360.0	7226.44	7189.32	7107.18	6986.53	6808.81	6556.37	6226.45	5807.89	5299.31
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4707.67	4058.48	3403.73	2787.96	2262.21	1835.30	1501.19	1247.83	885.93
45.0	5212.53	4617.18	3967.07	3317.42	2724.85	2224.62	1820.45	1500.27	1257.58
90.0	4178.20	3517.42	2890.97	2345.74	1906.30	1567.55	1309.55	1043.66	910.76
135.0	5118.80	4508.60	3848.28	3195.38	2604.20	2112.33	1720.68	1413.96	1183.33
180.0	5282.14	4703.03	4062.20	3399.56	2787.03	2269.63	1854.79	1526.72	1271.96
225.0	4767.06	4146.19	3506.75	2905.82	2387.96	1961.98	1618.13	1352.70	1147.60
270.0	5538.29	5015.78	4423.21	3776.81	3134.13	2564.30	2101.19	1727.18	1432.98
315.0	4887.71	4243.17	3572.64	2939.70	2390.28	1937.39	1706.76	1296.56	1071.50
360.0	4707.67	4058.48	3403.73	2787.96	2262.21	1835.30	1501.19	1247.83	885.93
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	885.93	847.14	770.67	714.66	673.50	646.40	624.87	609.55	594.38
45.0	1076.14	941.57	840.87	767.09	731.83	686.82	643.66	630.20	611.18
90.0	910.76	820.78	752.99	703.24	665.84	639.62	619.90	601.53	587.00
135.0	1015.35	893.77	804.22	738.32	690.53	656.65	632.52	614.89	601.90
180.0	1078.46	940.18	839.48	765.70	710.95	679.39	645.05	628.81	612.57
225.0	867.74	867.74	816.84	751.27	701.85	666.91	641.76	623.89	606.49
270.0	1207.93	1102.59	964.31	828.35	783.33	723.47	680.32	651.09	628.35
315.0	900.55	860.09	780.92	724.22	682.36	652.43	630.95	615.68	599.48
360.0	885.93	847.14	770.67	714.66	673.50	646.40	624.87	609.55	594.38
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	582.64	573.08	563.57	554.06	546.03	514.33	456.89	388.77	314.80
45.0	594.01	581.02	571.27	560.60	550.85	542.97	513.27	459.44	391.69
90.0	576.10	566.58	555.73	547.42	534.20	485.56	421.99	349.51	271.27
135.0	587.98	574.98	566.17	556.42	547.14	537.40	498.88	439.95	368.49
180.0	596.33	584.73	574.52	564.78	554.57	545.29	513.73	458.51	388.91
225.0	593.64	582.97	572.66	563.29	554.06	523.85	493.08	398.33	322.50
270.0	610.71	595.40	584.26	574.98	564.78	555.96	543.43	502.13	441.81
315.0	587.42	577.30	568.21	558.74	550.53	540.83	474.98	435.08	363.20
360.0	582.64	573.08	563.57	554.06	546.03	514.33	456.89	388.77	314.80
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	238.65	163.39	120.88	58.51	19.68	10.16	8.63	7.05	5.85
45.0	315.59	252.48	252.48	104.55	47.29	10.95	9.93	8.86	7.61
90.0	209.42	123.62	62.32	26.08	9.65	8.86	7.80	6.91	5.38
135.0	292.39	246.45	246.45	77.17	28.82	13.55	8.82	8.12	6.91
180.0	314.66	238.10	238.10	94.38	58.65	19.26	9.23	8.35	7.33
225.0	276.24	197.49	127.19	65.20	21.16	10.35	9.19	7.70	6.22
270.0	372.20	294.71	247.84	247.84	89.88	28.12	11.97	10.26	8.40
315.0	287.65	211.37	139.30	74.11	26.36	11.60	10.16	8.21	6.31
360.0	238.65	163.39	120.88	58.51	19.68	10.16	8.63	7.05	5.85

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	4.83	4.32	4.04	3.85	3.67	3.48	3.25	3.16	3.02
45.0	6.59	5.43	4.87	4.59	4.32	4.08	3.90	3.71	3.53
90.0	4.59	4.32	4.13	3.90	3.67	3.48	3.34	3.20	3.02
135.0	5.85	4.55	4.27	4.04	3.76	3.62	3.48	3.25	3.11
180.0	6.13	5.24	4.32	4.08	3.85	3.62	3.48	3.34	3.16
225.0	5.24	4.69	4.45	4.22	3.94	3.85	3.67	3.43	3.25
270.0	6.50	5.20	4.36	4.13	3.90	3.67	3.53	3.39	3.20
315.0	5.34	4.04	3.81	3.67	3.48	3.29	3.16	3.02	2.88
360.0	4.83	4.32	4.04	3.85	3.67	3.48	3.25	3.16	3.02
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	2.83	2.64	2.60	2.51	2.37	2.37	2.23	2.09	2.09
45.0	3.29	3.16	3.06	2.88	2.83	2.60	2.51	2.41	2.32
90.0	2.83	2.74	2.64	2.55	2.37	2.27	2.23	2.09	2.00
135.0	2.97	2.88	2.64	2.55	2.51	2.41	2.27	2.18	2.09
180.0	3.02	2.83	2.74	2.64	2.46	2.37	2.32	2.27	2.13
225.0	3.16	3.02	2.83	2.69	2.60	2.51	2.41	2.27	2.18
270.0	3.02	2.92	2.83	2.64	2.64	2.41	2.32	2.27	2.13
315.0	2.74	2.60	2.55	2.41	2.32	2.27	2.18	2.04	2.00
360.0	2.83	2.64	2.60	2.51	2.37	2.37	2.23	2.09	2.09
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	2.00	1.90	1.86	1.81	1.76	1.67	1.62	1.58	1.58
45.0	2.27	2.13	2.04	1.95	1.95	1.86	1.76	1.72	1.67
90.0	2.00	1.90	1.81	1.76	1.72	1.62	1.58	1.58	1.58
135.0	2.04	1.95	1.86	1.86	1.76	1.72	1.62	1.62	1.58
180.0	2.00	1.95	1.90	1.90	1.81	1.72	1.67	1.62	1.62
225.0	2.13	2.04	1.90	1.90	1.86	1.76	1.67	1.67	1.62
270.0	2.13	2.00	1.95	1.95	1.86	1.72	1.72	1.67	1.62
315.0	1.95	1.90	1.81	1.72	1.72	1.67	1.62	1.53	1.48
360.0	2.00	1.90	1.86	1.81	1.76	1.67	1.62	1.58	1.58
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.48	1.44	1.44	1.44	1.39	1.35	1.30	1.39	1.39
45.0	1.62	1.53	1.48	1.53	1.48	1.39	1.39	1.39	1.39
90.0	1.48	1.44	1.44	1.44	1.39	1.30	1.35	1.35	1.30
135.0	1.48	1.48	1.48	1.48	1.39	1.39	1.39	1.35	1.30
180.0	1.53	1.48	1.48	1.48	1.39	1.35	1.35	1.39	1.35
225.0	1.53	1.48	1.48	1.44	1.39	1.39	1.39	1.35	1.30
270.0	1.53	1.53	1.53	1.48	1.39	1.39	1.39	1.35	1.30
315.0	1.48	1.44	1.39	1.35	1.35	1.35	1.35	1.25	1.25
360.0	1.48	1.44	1.44	1.44	1.39	1.35	1.30	1.39	1.39
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.25	1.30	1.30	1.30	1.25	1.25	1.30	1.30	1.48
45.0	1.30	1.30	1.30	1.25	1.25	1.25	1.25	1.21	1.30
90.0	1.25	1.30	1.25	1.30	1.25	1.25	1.30	1.25	1.25
135.0	1.30	1.35	1.30	1.30	1.35	1.25	1.30	1.35	1.39
180.0	1.25	1.30	1.30	1.25	1.21	1.30	1.25	1.25	1.25
225.0	1.30	1.35	1.25	1.30	1.25	1.21	1.25	1.48	1.25
270.0	1.35	1.35	1.30	1.30	1.30	1.25	1.25	1.25	1.25
315.0	1.30	1.25	1.21	1.25	1.25	1.21	1.21	1.21	1.21
360.0	1.25	1.30	1.30	1.30	1.25	1.25	1.30	1.30	1.48

Intensity data(cd)

C/γ(°)	90.0
0.0	1.67
45.0	1.21
90.0	1.30
135.0	1.44
180.0	1.35
225.0	1.30
270.0	1.25
315.0	1.25
360.0	1.67