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Nata

Client:

LumCAT: 3-1545-A3

Luminaire: 99.02.73.172+92.76.365.00

Report No:

Voltage(V): 34.3900

Test No: GC20190824010

Current(A): 0.3970

LampCAT: TRIDONIC SLE 13MM G7

Power (W): 13.6500

Lamp flux(lm): 1702.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 84

Width(mm): 84

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1473.30, Efficiency(%): 86.56% , Luminous Efficacy(lm/W): 107.93

Central intensity(cd): 14158.130, Maximum intensity(cd): 14158.130

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=25.2

[C90/270]Total=25.2

Maximum s/h(1/2): C0_180=0.22 C90_270=0.22

Maximum s/h(1/4): C0_180=0.22 C90_270=0.22

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.56%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.389%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14158.125	0.000	0	.000%	.000%
1.0	13998.516	13.472	13.472	.792%	.914%
2.0	13271.414	39.140	52.613	2.300%	3.571%
3.0	12373.805	61.335	113.948	3.604%	7.734%
4.0	11023.805	78.319	192.267	4.602%	13.050%
5.0	9391.852	87.827	280.094	5.160%	19.011%
6.0	7737.398	90.019	370.113	5.289%	25.121%
7.0	6140.953	86.143	456.256	5.061%	30.968%
8.0	4652.297	77.245	533.501	4.538%	36.211%
9.0	3529.898	66.312	599.813	3.896%	40.712%
10.0	2628.352	55.730	655.543	3.274%	44.495%
11.0	1972.969	45.977	701.52	2.701%	47.615%
12.0	1633.472	39.424	740.943	2.316%	50.291%
13.0	1287.380	34.663	775.606	2.037%	52.644%
14.0	1089.816	30.428	806.034	1.788%	54.709%
15.0	968.836	28.262	834.296	1.661%	56.628%
16.0	881.304	27.110	861.406	1.593%	58.468%
17.0	810.415	26.345	887.751	1.548%	60.256%
18.0	758.095	25.861	913.612	1.519%	62.011%
19.0	721.673	25.745	939.357	1.513%	63.759%
20.0	688.345	25.807	965.164	1.516%	65.510%
21.0	660.973	25.910	991.074	1.522%	67.269%
22.0	639.612	26.136	1017.21	1.536%	69.043%
23.0	618.131	26.391	1043.6	1.551%	70.834%
24.0	598.929	26.609	1070.21	1.563%	72.640%
25.0	583.727	26.891	1097.101	1.580%	74.465%
26.0	568.603	27.201	1124.302	1.598%	76.312%
27.0	554.196	27.470	1151.771	1.614%	78.176%
28.0	541.772	27.748	1179.519	1.630%	80.060%
29.0	529.559	28.029	1207.548	1.647%	81.962%
30.0	517.275	28.264	1235.812	1.661%	83.880%
31.0	504.162	28.425	1264.237	1.670%	85.810%
32.0	479.138	28.170	1292.408	1.655%	87.722%
33.0	445.929	27.253	1319.66	1.601%	89.572%
34.0	401.084	25.633	1345.293	1.506%	91.312%
35.0	339.300	22.994	1368.287	1.351%	92.872%
36.0	265.655	19.262	1387.549	1.132%	94.180%
37.0	207.218	15.422	1402.971	.906%	95.226%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	142.650	11.678	1414.649	.686%	96.019%
39.0	82.195	7.675	1422.324	.451%	96.540%
40.0	51.630	4.667	1426.991	.274%	96.857%
41.0	30.895	2.939	1429.93	.173%	97.056%
42.0	21.270	1.895	1431.825	.111%	97.185%
43.0	18.619	1.478	1433.303	.087%	97.285%
44.0	16.530	1.327	1434.63	.078%	97.375%
45.0	14.358	1.187	1435.817	.070%	97.456%
46.0	12.952	1.068	1436.885	.063%	97.528%
47.0	11.876	0.987	1437.872	.058%	97.595%
48.0	11.257	0.935	1438.807	.055%	97.659%
49.0	10.898	0.910	1439.717	.053%	97.720%
50.0	10.688	0.900	1440.617	.053%	97.782%
51.0	10.533	0.898	1441.515	.053%	97.843%
52.0	10.392	0.898	1442.413	.053%	97.903%
53.0	10.252	0.898	1443.311	.053%	97.964%
54.0	10.090	0.897	1444.207	.053%	98.025%
55.0	9.984	0.896	1445.103	.053%	98.086%
56.0	9.844	0.896	1445.999	.053%	98.147%
57.0	9.717	0.894	1446.894	.053%	98.208%
58.0	9.605	0.894	1447.787	.052%	98.268%
59.0	9.485	0.892	1448.68	.052%	98.329%
60.0	9.323	0.889	1449.568	.052%	98.389%
61.0	9.113	0.880	1450.448	.052%	98.449%
62.0	8.888	0.867	1451.315	.051%	98.508%
63.0	8.592	0.850	1452.166	.050%	98.565%
64.0	8.304	0.829	1452.995	.049%	98.622%
65.0	8.058	0.810	1453.804	.048%	98.677%
66.0	7.840	0.793	1454.598	.047%	98.730%
67.0	7.706	0.782	1455.379	.046%	98.784%
68.0	7.629	0.777	1456.156	.046%	98.836%
69.0	7.573	0.776	1456.932	.046%	98.889%
70.0	7.559	0.777	1457.709	.046%	98.942%
71.0	7.552	0.781	1458.49	.046%	98.995%
72.0	7.566	0.786	1459.276	.046%	99.048%
73.0	7.566	0.791	1460.067	.046%	99.102%
74.0	7.552	0.795	1460.862	.047%	99.156%
75.0	7.580	0.799	1461.661	.047%	99.210%

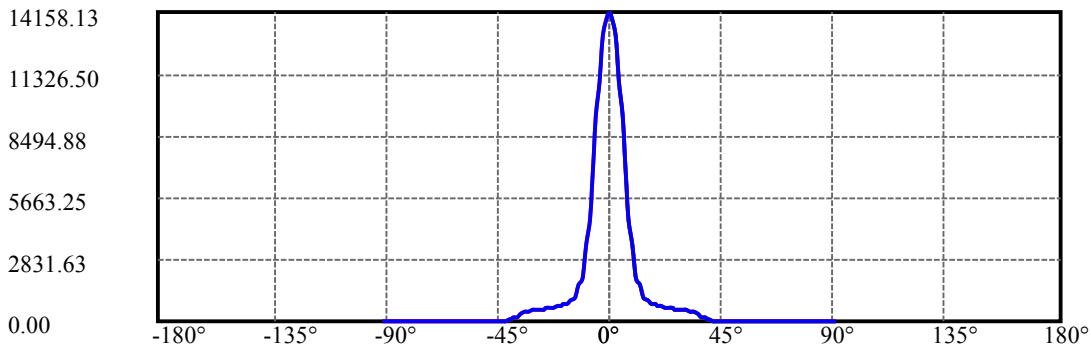
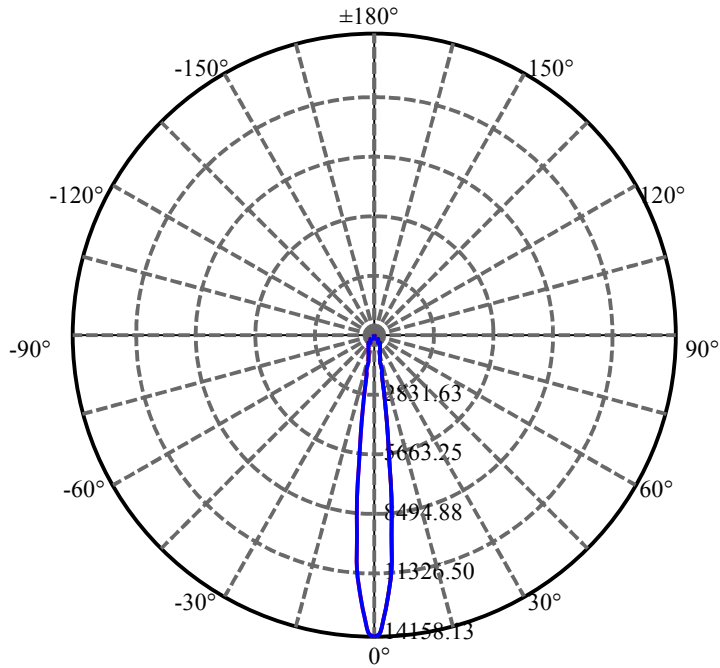
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.573	0.804	1462.466	.047%	99.265%
77.0	7.467	0.802	1463.267	.047%	99.319%
78.0	7.348	0.793	1464.061	.047%	99.373%
79.0	7.214	0.782	1464.843	.046%	99.426%
80.0	7.158	0.775	1465.618	.046%	99.478%
81.0	7.144	0.773	1466.391	.045%	99.531%
82.0	7.130	0.774	1467.165	.045%	99.584%
83.0	7.102	0.774	1467.939	.045%	99.636%
84.0	7.066	0.772	1468.711	.045%	99.688%
85.0	7.052	0.771	1469.481	.045%	99.741%
86.0	7.031	0.770	1470.251	.045%	99.793%
87.0	7.010	0.768	1471.02	.045%	99.845%
88.0	6.947	0.765	1471.784	.045%	99.897%
89.0	6.919	0.760	1472.544	.045%	99.949%
90.0	6.891	0.757	1473.301	.044%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1235.81	72.61%	83.88%
0-40	1426.99	83.84%	96.86%
0-60	1449.57	85.17%	98.39%
0-90	1472.54	86.52%	99.95%
0-120	1472.54	86.52%	99.95%
0-180	1473.30	86.56%	100.00%
60-90	23.86	1.40%	1.62%
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%
0-27.97	1178.64	69.25%	80.00%

ZONAL LUMEN SUMMARY

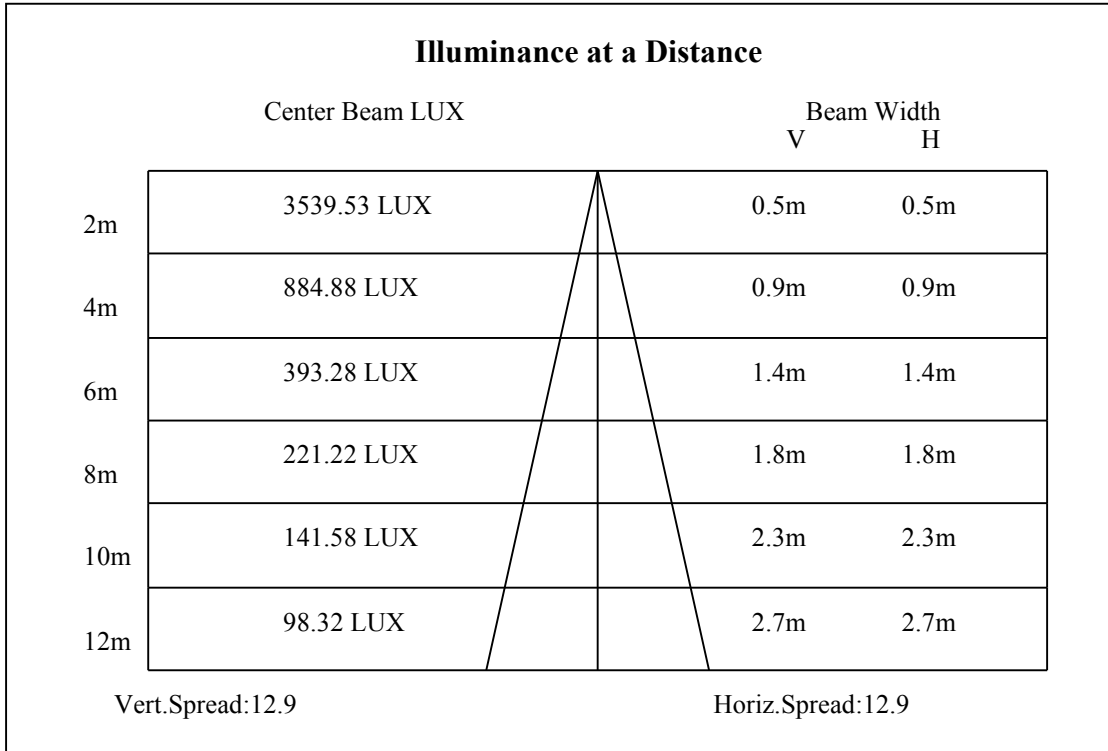
0-10	655.54
10-20	309.62
20-30	270.65
30-40	191.18
40-50	13.63
50-60	8.95
60-70	8.14
70-80	7.91
80-90	6.93
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

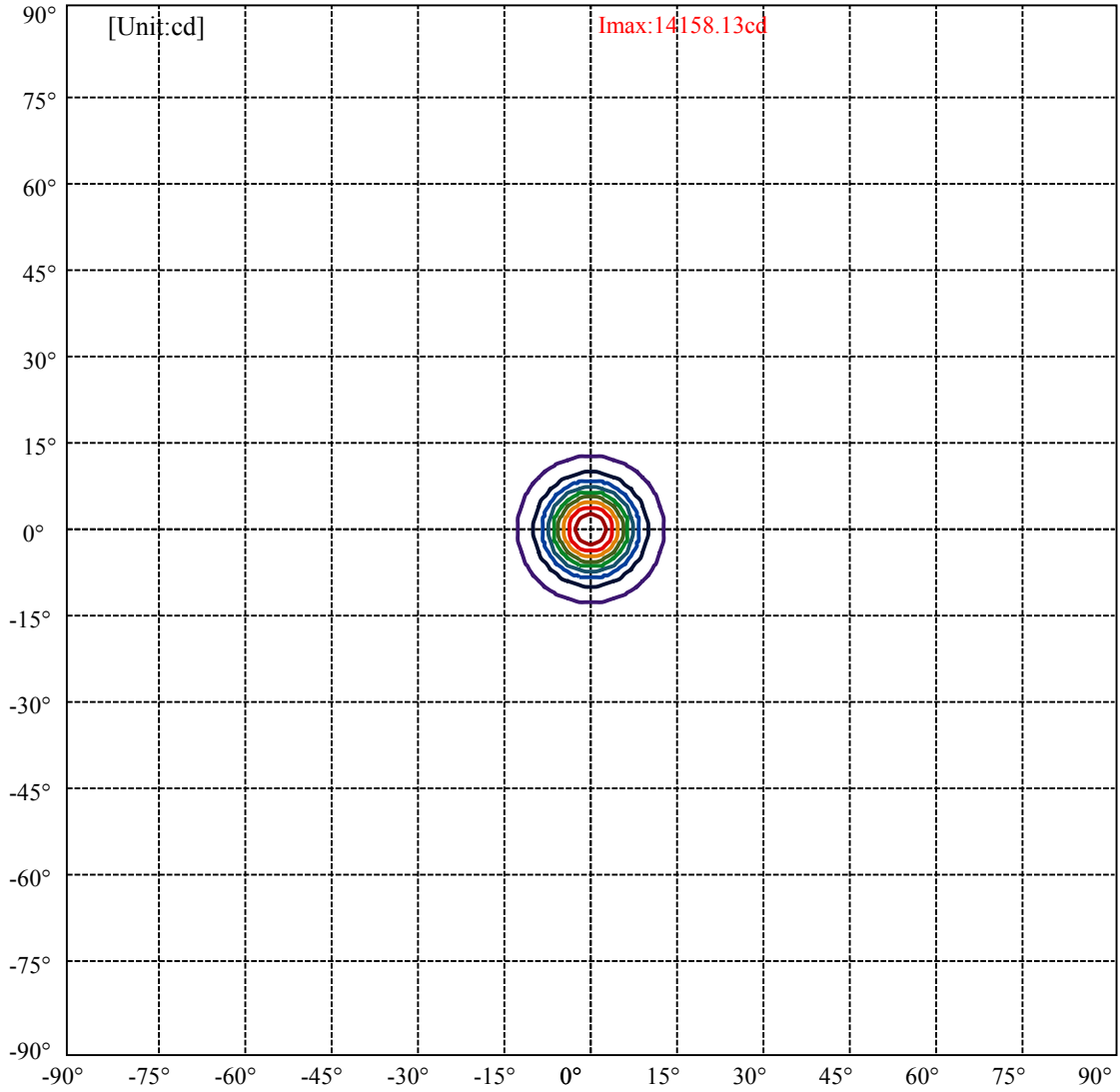


C0(Max): —————
C0/C180: —————
C90/C270: —————

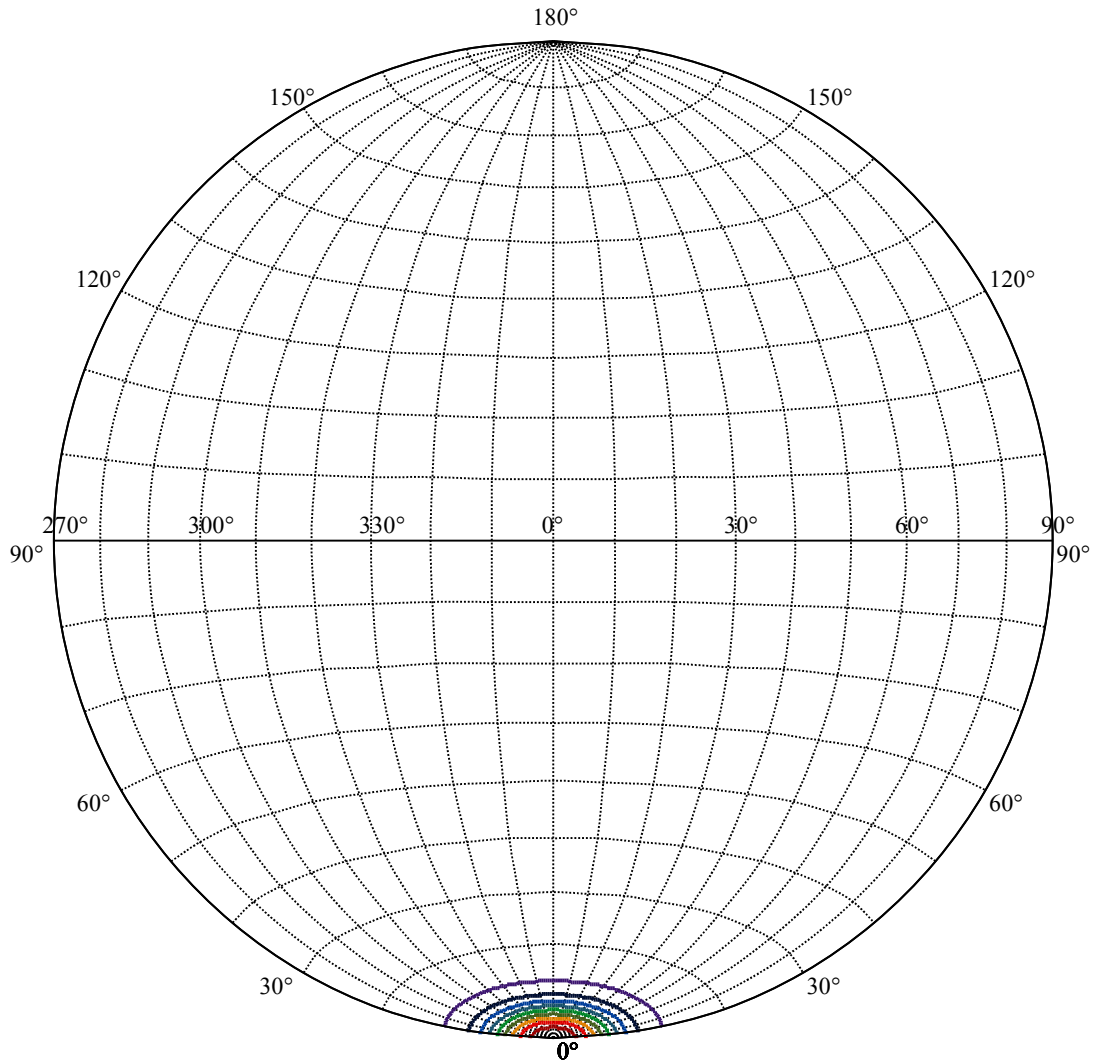
Field angle(10%Imax):C0/180Left:12.6 Right:12.6
:C90/270Left:12.6 Right:12.6

Beam Angle(50%Imax):C0/180Left:6.4 Right:6.4
:C90/270Left:6.4 Right:6.4





(10%Imax)	1415.81	—
(20%Imax)	2831.63	—
(30%Imax)	4247.44	—
(40%Imax)	5663.25	—
(50%Imax)	7079.06	—
(60%Imax)	8494.88	—
(70%Imax)	9910.69	—
(80%Imax)	11326.5	—
(90%Imax)	12742.3	—



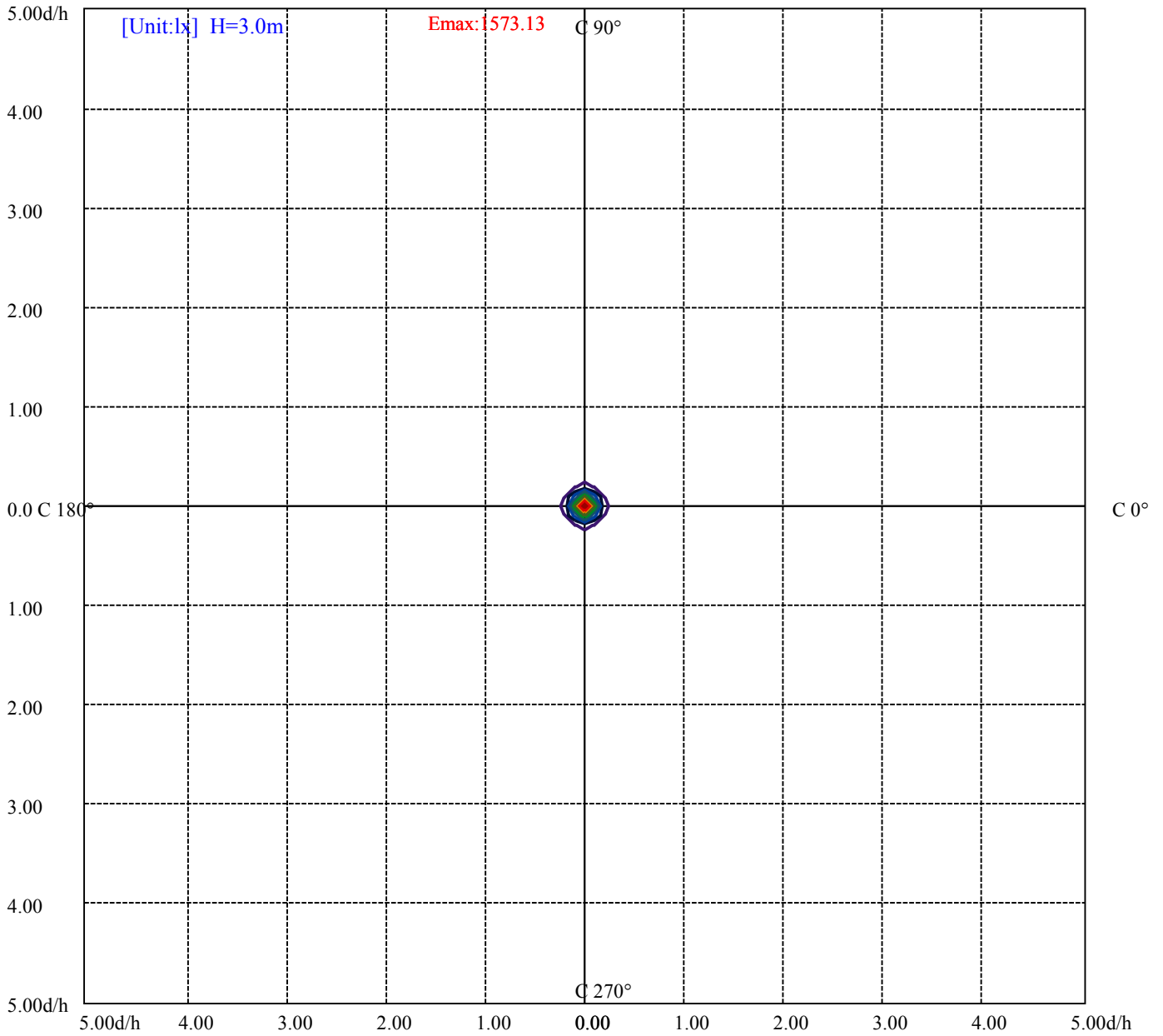
House

[Unit:cd]

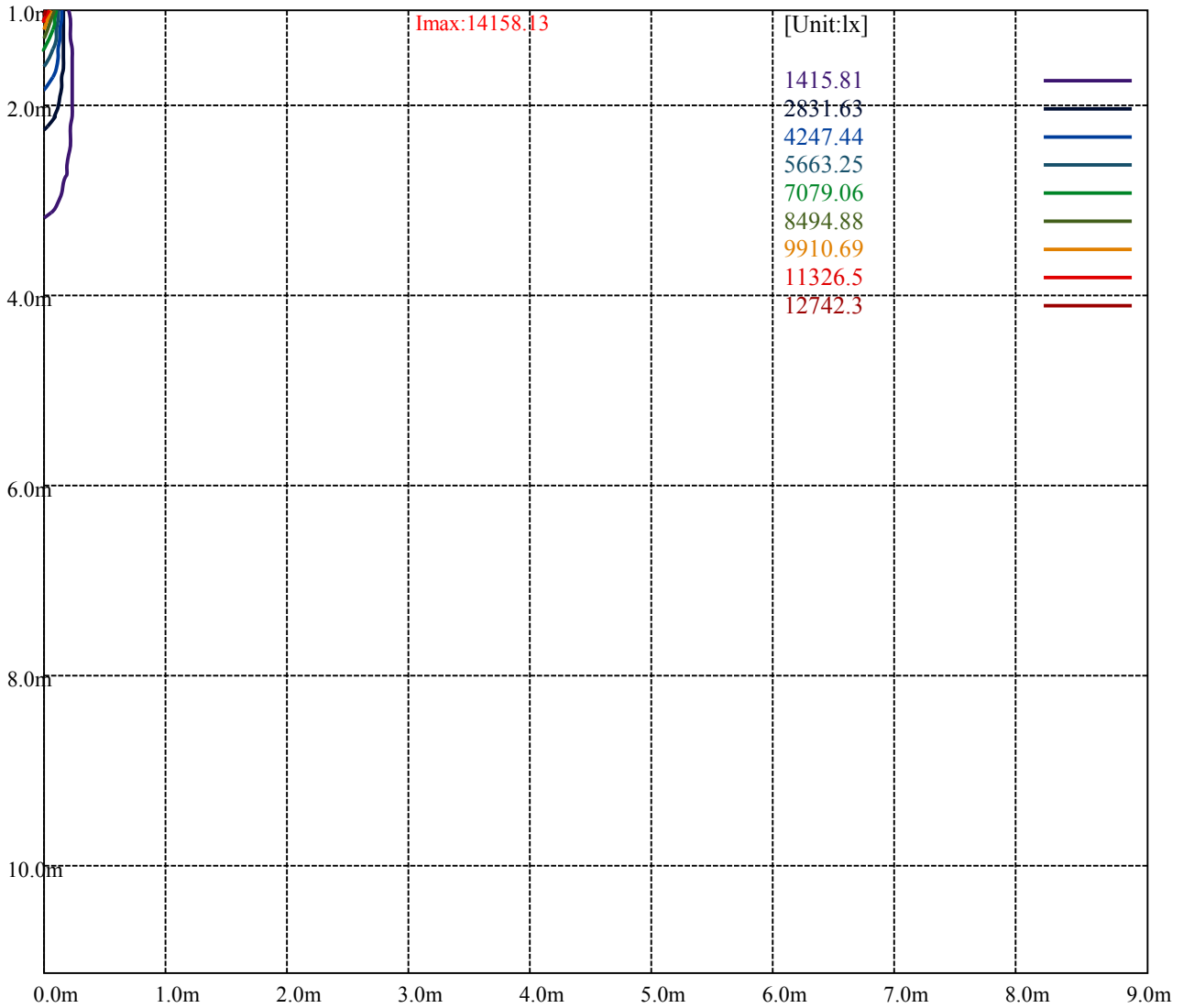
Road

Imax:14158.13

(10%Imax)	1415.81	—
(20%Imax)	2831.63	—
(30%Imax)	4247.44	—
(40%Imax)	5663.25	—
(50%Imax)	7079.06	—
(60%Imax)	8494.88	—
(70%Imax)	9910.69	—
(80%Imax)	11326.5	—
(90%Imax)	12742.3	—



- (10%Emax) 157.3122
- (20%Emax) 314.6245
- (30%Emax) 471.9367
- (40%Emax) 629.2489
- (50%Emax) 786.5611
- (60%Emax) 943.8734
- (70%Emax) 1101.186
- (80%Emax) 1258.5
- (90%Emax) 1415.811



Luminance Table

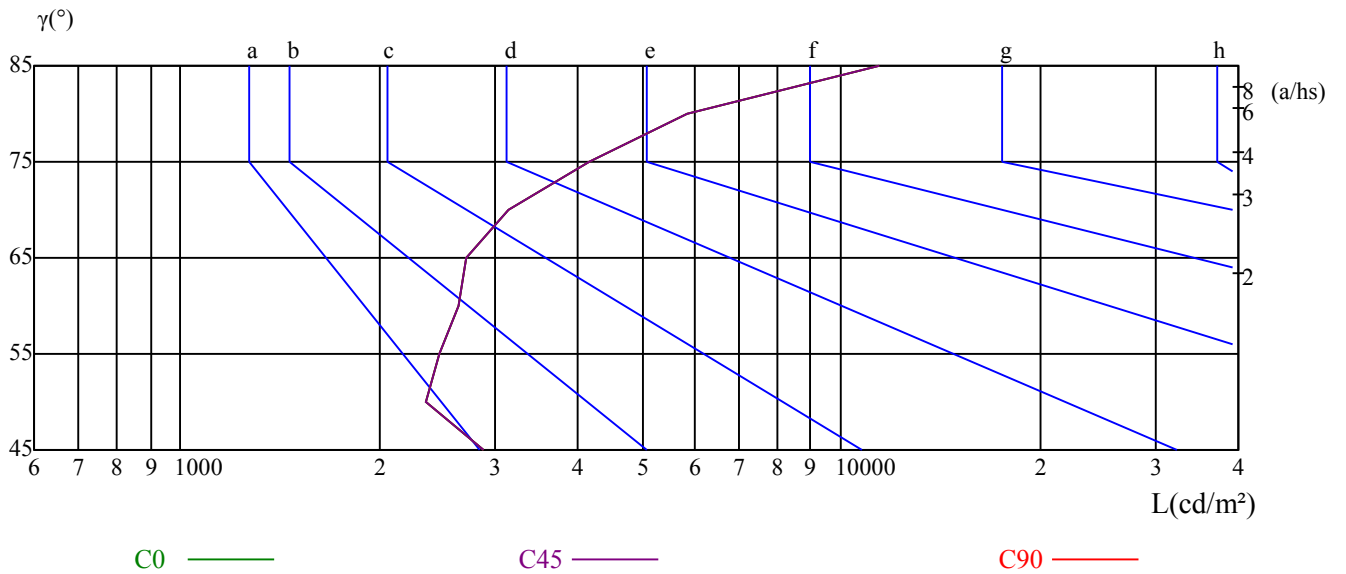
γ	45	50	55	60	65	70	75	80	85
C0	2878	2356	2467	2643	2702	3132	4150	5842	11468
C45	2878	2356	2467	2643	2702	3132	4150	5842	11468
C90	2878	2356	2467	2643	2702	3132	4150	5842	11468

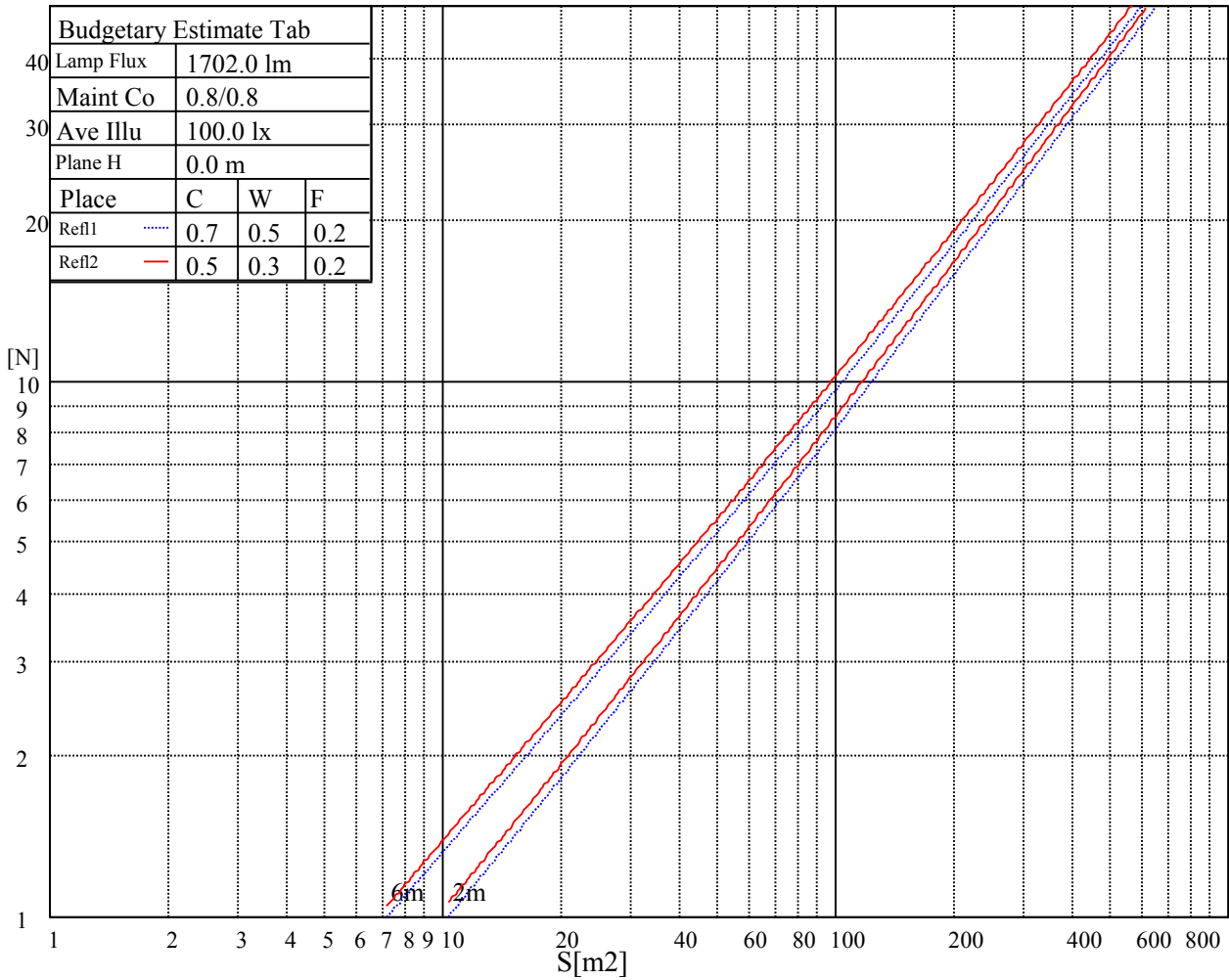
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2702	2702	2702	4150	4150	4150	11468	11468	11468

Glare Table

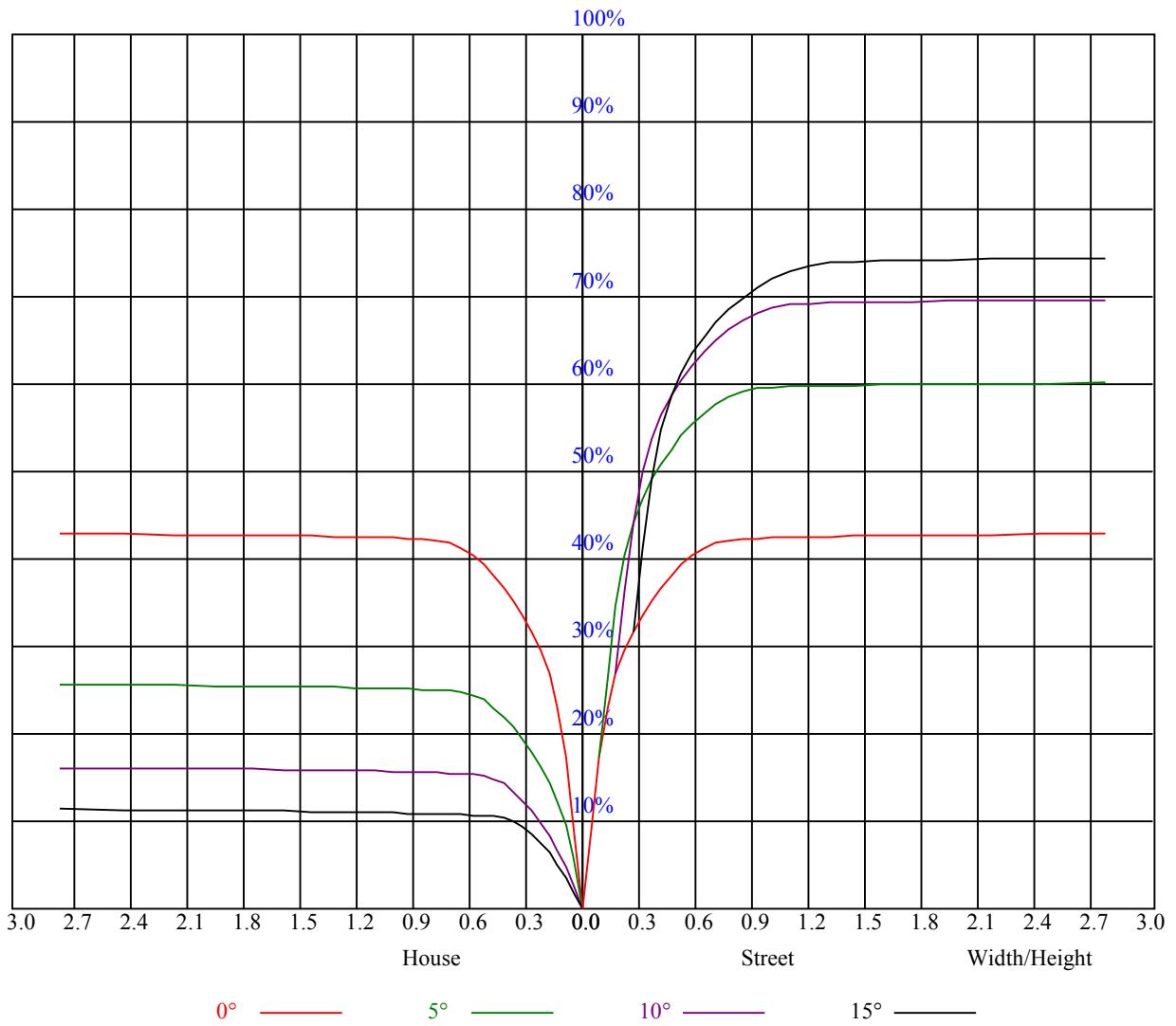
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

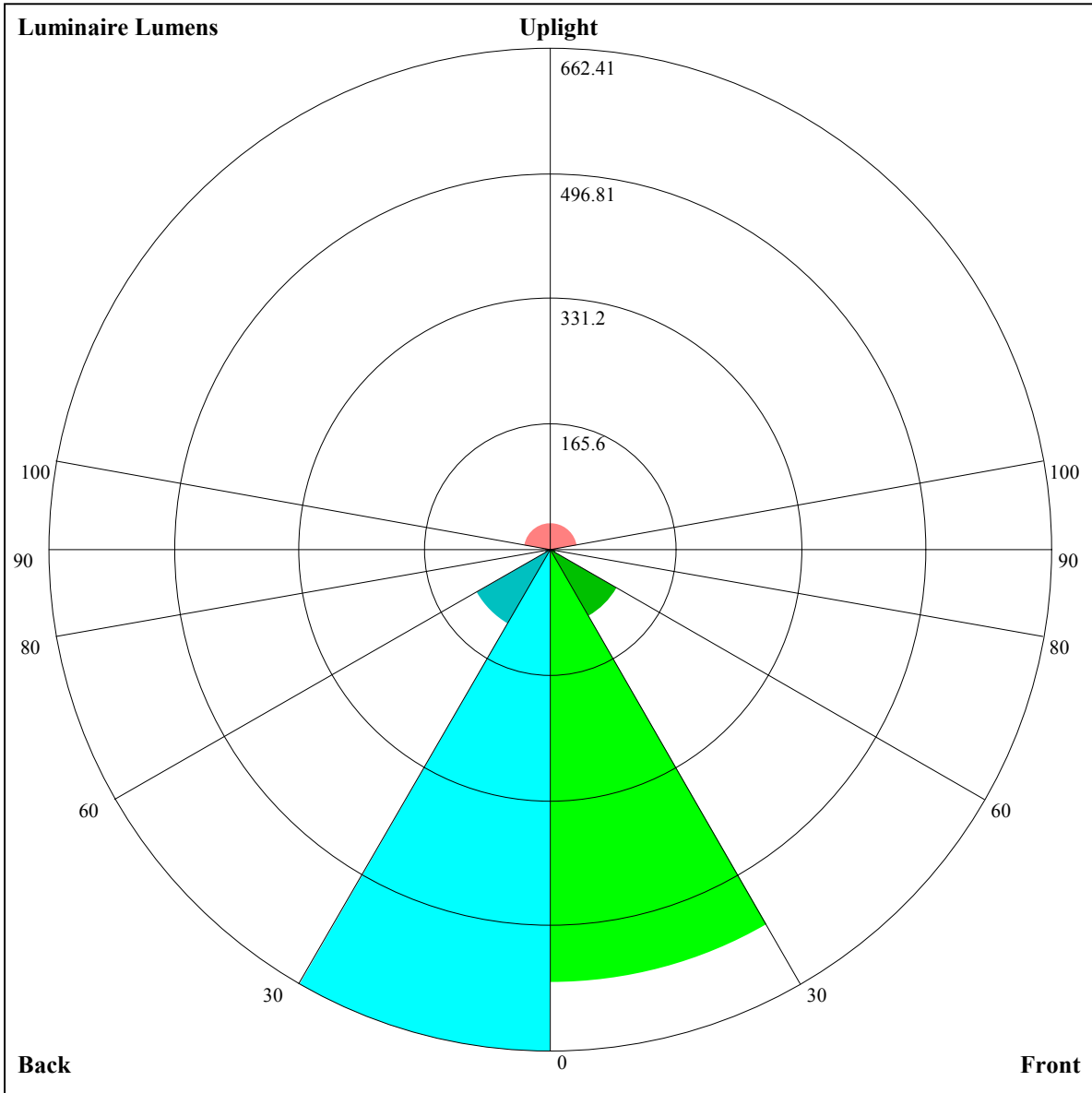
Luminance Limiting Curve





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	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.97	0.95	0.94	0.95	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.89	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.83	0.82	0.81	0.79
3	0.88	0.84	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.80	0.79	0.81	0.79	0.77	0.76
4	0.84	0.80	0.78	0.83	0.80	0.77	0.81	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.75	0.73
5	0.81	0.77	0.74	0.80	0.76	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	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.70	0.69
7	0.75	0.71	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.67
8	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.65
9	0.71	0.67	0.64	0.70	0.67	0.64	0.70	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	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61





Luminaire Lumens:

FL=572.91,FM=102.63,FH=7.94,FVH=3.89

BL=662.41,BM=113.28,BH=8.18,BVH=3.73

UL=7.52,UH=35.78

BUG Rating:B2-U2-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	14197.50	13528.13	12172.50	10726.88	9090.00	7188.75	5473.13	4207.50	3116.25
45.0	14338.13	14045.63	13218.75	12183.75	10867.50	9348.75	7385.63	5838.75	4516.88
90.0	14197.50	14130.00	13696.88	12802.50	11184.75	10113.75	8298.56	6688.69	5218.31
135.0	13899.38	14338.13	14428.13	14191.88	13573.13	12352.50	10923.75	9247.50	7301.25
180.0	14197.50	14535.00	14557.50	14208.75	13455.00	11189.81	10348.31	8542.13	6494.06
225.0	14338.13	14332.50	13860.00	12886.88	11223.00	9765.56	7765.31	6016.50	4285.69
270.0	14197.50	13966.88	13224.38	11986.88	10485.00	8583.75	6834.38	5056.88	3616.88
315.0	13899.38	13111.88	11013.19	10002.94	8312.06	6591.94	4870.13	3529.69	2669.06
360.0	14197.50	13528.13	12172.50	10726.88	9090.00	7188.75	5473.13	4207.50	3116.25
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2846.25	1953.00	1592.44	1356.19	1159.31	1014.19	924.75	856.69	788.63
45.0	3285.00	2840.63	2127.38	1721.25	1440.00	1256.06	1094.06	987.75	889.88
90.0	3730.50	2885.06	2293.31	1825.88	1495.69	1287.56	1107.00	983.36	891.17
135.0	5523.75	4185.00	3015.00	2902.50	1767.38	1402.31	1175.63	1017.56	911.81
180.0	4865.63	3406.50	2395.13	1820.81	1411.31	1105.09	1001.31	907.31	834.98
225.0	3088.69	2152.69	1551.38	1114.99	1011.71	878.79	819.51	772.09	727.20
270.0	2885.63	2018.81	1484.44	1211.63	1031.63	893.25	822.38	771.75	727.31
315.0	2013.75	1585.13	1324.69	1114.54	982.01	881.27	806.06	753.92	712.35
360.0	2846.25	1953.00	1592.44	1356.19	1159.31	1014.19	924.75	856.69	788.63
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	745.31	716.06	688.50	669.94	653.63	635.63	620.44	604.69	587.25
45.0	811.69	757.13	713.81	685.13	667.13	650.25	628.88	611.44	597.94
90.0	810.17	755.33	710.89	676.69	656.49	636.08	617.06	605.08	591.75
135.0	840.38	781.31	724.50	686.81	657.56	630.56	615.38	607.50	590.06
180.0	781.37	747.39	715.73	676.63	639.84	609.53	581.29	561.43	547.88
225.0	701.16	679.44	656.38	634.61	614.76	593.49	574.99	560.81	545.68
270.0	699.75	679.50	658.13	639.00	622.13	601.31	584.44	567.56	552.38
315.0	674.94	657.23	638.83	618.98	605.36	588.21	568.97	551.31	535.89
360.0	745.31	716.06	688.50	669.94	653.63	635.63	620.44	604.69	587.25
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	570.94	551.81	535.50	521.44	507.94	478.69	426.38	363.38	287.44
45.0	580.50	567.56	555.19	536.63	523.69	509.63	494.44	451.13	393.75
90.0	577.80	565.82	554.23	541.52	528.24	514.52	499.16	473.63	413.27
135.0	572.63	557.44	542.25	528.19	515.25	503.44	492.19	481.50	437.06
180.0	535.28	526.50	518.85	509.79	500.74	490.73	478.01	441.62	382.95
225.0	534.49	524.98	514.58	505.29	497.48	470.19	425.31	367.76	288.96
270.0	541.13	529.31	516.94	507.94	497.81	456.75	406.69	347.63	291.94
315.0	520.82	510.75	498.94	487.41	462.15	409.16	345.26	282.04	219.04
360.0	570.94	551.81	535.50	521.44	507.94	478.69	426.38	363.38	287.44
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	209.98	145.13	80.78	37.07	24.92	22.11	19.13	15.86	13.67
45.0	311.63	284.63	175.05	101.19	57.99	30.38	23.46	19.91	16.03
90.0	343.01	277.65	201.88	132.30	81.11	38.31	26.10	23.29	20.25
135.0	383.63	320.63	290.81	180.17	121.16	70.37	29.48	25.43	23.57
180.0	316.41	253.91	191.70	115.14	61.93	25.93	18.00	15.81	13.84
225.0	222.75	156.83	88.65	37.74	18.96	17.16	14.85	12.71	11.93
270.0	196.99	131.79	69.19	28.63	23.34	21.49	19.74	18.11	17.04
315.0	140.85	87.19	43.14	25.31	23.63	21.43	19.41	17.83	15.92
360.0	209.98	145.13	80.78	37.07	24.92	22.11	19.13	15.86	13.67

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	11.76	10.63	9.84	9.28	8.94	8.72	8.55	8.44	8.27
45.0	12.88	11.08	10.35	9.79	9.45	9.23	9.06	8.89	8.78
90.0	16.65	13.33	12.77	12.21	11.70	11.36	11.14	10.91	10.80
135.0	20.70	18.84	15.81	13.61	12.94	12.66	12.32	11.98	11.53
180.0	12.71	12.09	9.84	9.56	9.39	9.28	9.17	9.06	9.00
225.0	11.14	9.68	9.39	9.17	8.94	8.78	8.66	8.55	8.44
270.0	13.78	13.16	12.99	13.22	13.39	13.73	13.95	14.18	14.18
315.0	15.24	14.79	14.01	13.22	12.43	11.76	11.42	11.14	11.03
360.0	11.76	10.63	9.84	9.28	8.94	8.72	8.55	8.44	8.27
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.10	7.99	7.93	7.82	7.71	7.65	7.59	7.54	7.48
45.0	8.72	8.66	8.55	8.44	8.38	8.33	8.21	8.16	8.04
90.0	10.58	10.58	10.41	10.46	10.35	10.29	10.07	9.84	9.56
135.0	10.91	10.63	10.24	10.13	10.18	10.35	10.46	10.41	10.18
180.0	8.94	8.94	8.94	8.89	8.89	8.89	8.83	8.66	8.49
225.0	8.33	8.21	8.21	8.16	8.10	8.04	8.04	7.99	7.99
270.0	14.29	14.01	13.73	13.22	12.83	12.21	11.76	11.14	10.69
315.0	10.86	10.86	10.74	10.63	10.41	10.13	9.62	9.17	8.66
360.0	8.10	7.99	7.93	7.82	7.71	7.65	7.59	7.54	7.48
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.43	7.37	7.26	7.26	7.14	7.09	7.03	7.03	6.98
45.0	7.99	7.93	7.88	7.76	7.76	7.71	7.76	7.88	8.04
90.0	9.17	8.72	8.27	7.82	7.43	7.26	7.20	7.14	7.14
135.0	9.79	9.17	8.94	8.27	7.88	7.48	7.31	7.26	7.26
180.0	8.27	8.10	7.93	7.76	7.71	7.59	7.54	7.48	7.43
225.0	8.10	8.21	8.33	8.38	8.44	8.55	8.44	8.44	8.38
270.0	9.90	9.17	8.33	7.99	7.88	7.88	7.88	7.82	7.82
315.0	8.10	7.76	7.54	7.48	7.43	7.48	7.43	7.43	7.37
360.0	7.43	7.37	7.26	7.26	7.14	7.09	7.03	7.03	6.98
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.98	6.92	6.86	6.86	6.81	6.75	6.75	6.69	6.69
45.0	8.16	8.16	8.16	8.27	8.38	8.44	8.38	8.38	8.55
90.0	7.09	7.09	7.09	7.03	6.98	6.98	6.92	6.92	6.86
135.0	7.20	7.20	7.14	7.14	7.14	7.09	7.09	7.09	7.03
180.0	7.37	7.37	7.31	7.31	7.31	7.26	7.20	7.20	7.14
225.0	8.49	8.55	8.78	9.00	9.17	8.61	8.10	7.26	7.03
270.0	7.82	7.82	7.71	7.65	7.54	7.43	7.26	7.14	6.98
315.0	7.43	7.43	7.37	7.37	7.26	7.20	7.09	7.03	6.98
360.0	6.98	6.92	6.86	6.86	6.81	6.75	6.75	6.69	6.69
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.75	6.69	6.69	6.69	6.64	6.64	6.58	6.64	6.58
45.0	8.72	8.83	8.72	8.78	8.83	8.94	8.94	8.78	8.83
90.0	6.81	6.81	6.81	6.75	6.75	6.75	6.69	6.64	6.64
135.0	6.98	6.92	6.86	6.81	6.81	6.69	6.69	6.64	6.58
180.0	7.09	7.03	7.09	7.03	6.98	6.98	6.92	6.92	6.81
225.0	6.98	6.98	6.98	6.98	6.98	6.86	6.86	6.81	6.81
270.0	6.92	6.92	6.86	6.81	6.81	6.75	6.81	6.64	6.58
315.0	6.92	6.86	6.81	6.69	6.64	6.64	6.58	6.53	6.53
360.0	6.75	6.69	6.69	6.69	6.64	6.64	6.58	6.64	6.58

Intensity data(cd)

C/ γ (°)	90.0
0.0	6.53
45.0	8.78
90.0	6.64
135.0	6.58
180.0	6.69
225.0	6.86
270.0	6.53
315.0	6.53
360.0	6.53