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Nata

Client:

LumCAT: 3-2115-N

Luminaire: 92.70.131.00

Report No:

Voltage(V): 35.0600

Test No: GC2019082206

Current(A): 0.3980

LampCAT: TRIDONIC SLE 13MM G7

Power (W): 13.9200

Lamp flux(lm): 1702.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 81

Width(mm): 81

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1473.78, Efficiency(%): 86.59% , Luminous Efficacy(lm/W): 105.88

Central intensity(cd): 9645.117, Maximum intensity(cd): 9645.117

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=15.2

[C90/270]Total=15.2

Field angle(10%Imax): [C0/180]Total=40.8

[C90/270]Total=40.8

Maximum s/h(1/2): C0_180=0.26 C90_270=0.26

Maximum s/h(1/4): C0_180=0.30 C90_270=0.30

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.59%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.814%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9645.117	0.000	0	.000%	.000%
1.0	9548.086	9.184	9.184	.540%	.623%
2.0	9220.992	26.939	36.123	1.583%	2.451%
3.0	8637.258	42.711	78.834	2.509%	5.349%
4.0	7888.008	55.315	134.149	3.250%	9.102%
5.0	7024.711	64.154	198.303	3.769%	13.455%
6.0	6078.656	68.862	267.165	4.046%	18.128%
7.0	5219.156	70.125	337.29	4.120%	22.886%
8.0	4536.070	69.816	407.106	4.102%	27.623%
9.0	3895.383	68.332	475.439	4.015%	32.260%
10.0	3337.875	65.458	540.897	3.846%	36.701%
11.0	2928.586	62.615	603.512	3.679%	40.950%
12.0	2556.281	59.957	663.469	3.523%	45.018%
13.0	2218.359	56.663	720.132	3.329%	48.863%
14.0	1964.109	53.535	773.667	3.145%	52.495%
15.0	1749.094	50.977	824.644	2.995%	55.954%
16.0	1544.414	48.259	872.903	2.835%	59.229%
17.0	1367.311	45.343	918.246	2.664%	62.305%
18.0	1230.195	42.827	961.074	2.516%	65.211%
19.0	1105.727	40.640	1001.714	2.388%	67.969%
20.0	997.826	38.501	1040.215	2.262%	70.581%
21.0	905.991	36.557	1076.772	2.148%	73.062%
22.0	820.223	34.689	1111.461	2.038%	75.415%
23.0	754.080	33.033	1144.494	1.941%	77.657%
24.0	692.775	31.633	1176.127	1.859%	79.803%
25.0	639.063	30.283	1206.41	1.779%	81.858%
26.0	594.991	29.130	1235.54	1.712%	83.835%
27.0	546.441	27.925	1263.466	1.641%	85.729%
28.0	490.380	26.250	1289.716	1.542%	87.511%
29.0	436.008	24.237	1313.953	1.424%	89.155%
30.0	373.648	21.861	1335.813	1.284%	90.638%
31.0	304.432	18.870	1354.683	1.109%	91.919%
32.0	225.302	15.176	1369.86	.892%	92.948%
33.0	165.403	11.510	1381.37	.676%	93.729%
34.0	113.780	8.449	1389.819	.496%	94.303%
35.0	79.657	6.007	1395.826	.353%	94.710%
36.0	57.319	4.361	1400.188	.256%	95.006%
37.0	45.949	3.368	1403.556	.198%	95.235%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	40.458	2.884	1406.44	.169%	95.431%
39.0	35.501	2.593	1409.033	.152%	95.606%
40.0	31.591	2.340	1411.372	.137%	95.765%
41.0	28.631	2.144	1413.517	.126%	95.911%
42.0	26.030	1.986	1415.503	.117%	96.045%
43.0	23.709	1.842	1417.345	.108%	96.170%
44.0	22.191	1.732	1419.078	.102%	96.288%
45.0	20.798	1.652	1420.73	.097%	96.400%
46.0	19.603	1.580	1422.31	.093%	96.507%
47.0	18.682	1.523	1423.833	.089%	96.611%
48.0	17.937	1.480	1425.313	.087%	96.711%
49.0	17.205	1.443	1426.756	.085%	96.809%
50.0	16.615	1.410	1428.166	.083%	96.905%
51.0	16.130	1.385	1429.552	.081%	96.999%
52.0	15.687	1.365	1430.917	.080%	97.091%
53.0	15.321	1.349	1432.266	.079%	97.183%
54.0	15.019	1.337	1433.603	.079%	97.274%
55.0	14.766	1.330	1434.932	.078%	97.364%
56.0	14.576	1.326	1436.258	.078%	97.454%
57.0	14.400	1.325	1437.583	.078%	97.544%
58.0	14.252	1.325	1438.908	.078%	97.634%
59.0	14.140	1.327	1440.235	.078%	97.724%
60.0	14.013	1.330	1441.565	.078%	97.814%
61.0	13.915	1.333	1442.898	.078%	97.904%
62.0	13.809	1.336	1444.234	.078%	97.995%
63.0	13.725	1.339	1445.573	.079%	98.086%
64.0	13.535	1.338	1446.911	.079%	98.177%
65.0	13.275	1.327	1448.238	.078%	98.267%
66.0	12.909	1.306	1449.544	.077%	98.355%
67.0	12.480	1.277	1450.821	.075%	98.442%
68.0	12.108	1.246	1452.066	.073%	98.526%
69.0	11.658	1.212	1453.279	.071%	98.609%
70.0	11.306	1.179	1454.458	.069%	98.689%
71.0	10.976	1.152	1455.61	.068%	98.767%
72.0	10.702	1.127	1456.737	.066%	98.843%
73.0	10.434	1.105	1457.842	.065%	98.918%
74.0	10.223	1.086	1458.928	.064%	98.992%
75.0	10.020	1.070	1459.998	.063%	99.065%

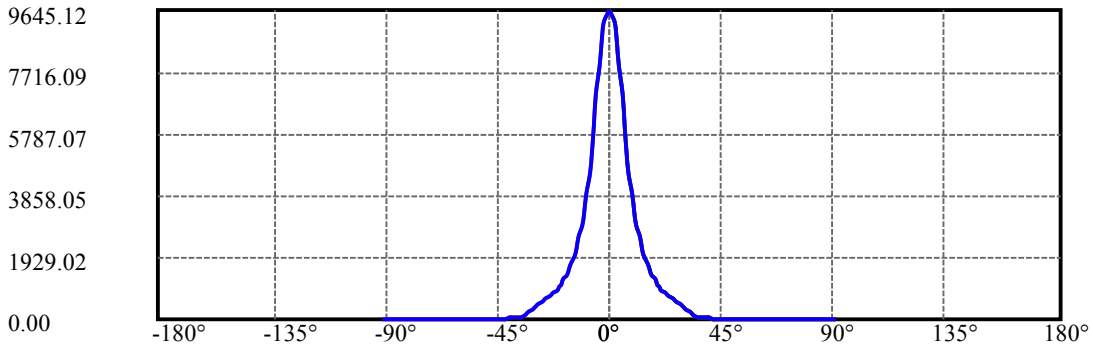
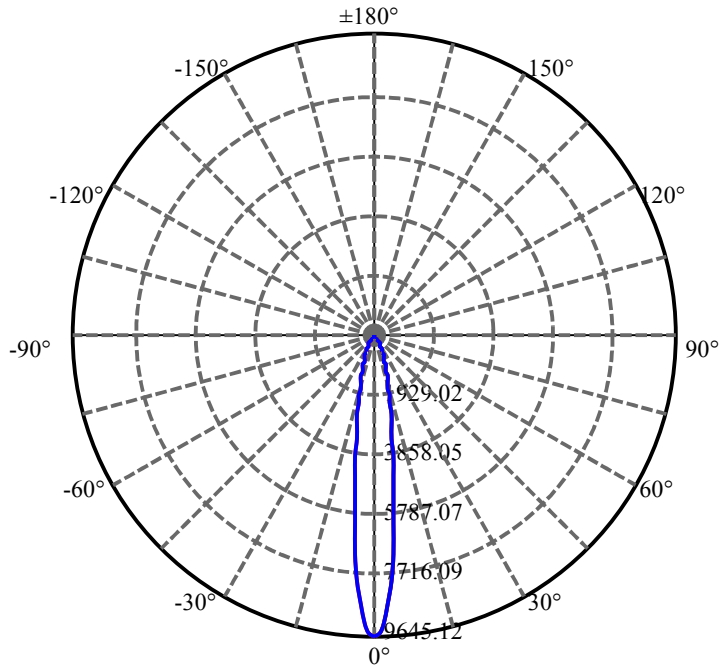
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.809	1.053	1461.05	.062%	99.136%
77.0	9.605	1.035	1462.085	.061%	99.206%
78.0	9.408	1.018	1463.103	.060%	99.275%
79.0	9.183	0.999	1464.102	.059%	99.343%
80.0	8.979	0.979	1465.081	.058%	99.409%
81.0	8.782	0.960	1466.042	.056%	99.475%
82.0	8.564	0.941	1466.982	.055%	99.538%
83.0	8.339	0.919	1467.901	.054%	99.601%
84.0	8.156	0.899	1468.8	.053%	99.662%
85.0	7.952	0.879	1469.679	.052%	99.721%
86.0	7.748	0.858	1470.537	.050%	99.780%
87.0	7.559	0.838	1471.375	.049%	99.837%
88.0	7.390	0.819	1472.194	.048%	99.892%
89.0	7.221	0.801	1472.995	.047%	99.946%
90.0	7.179	0.790	1473.784	.046%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1335.81	78.48%	90.64%
0-40	1411.37	82.92%	95.77%
0-60	1441.57	84.70%	97.81%
0-90	1472.99	86.54%	99.95%
0-120	1472.99	86.54%	99.95%
0-180	1473.78	86.59%	100.00%
60-90	32.76	1.92%	2.22%
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%
0-24.10	1179.03	69.27%	80.00%

ZONAL LUMEN SUMMARY

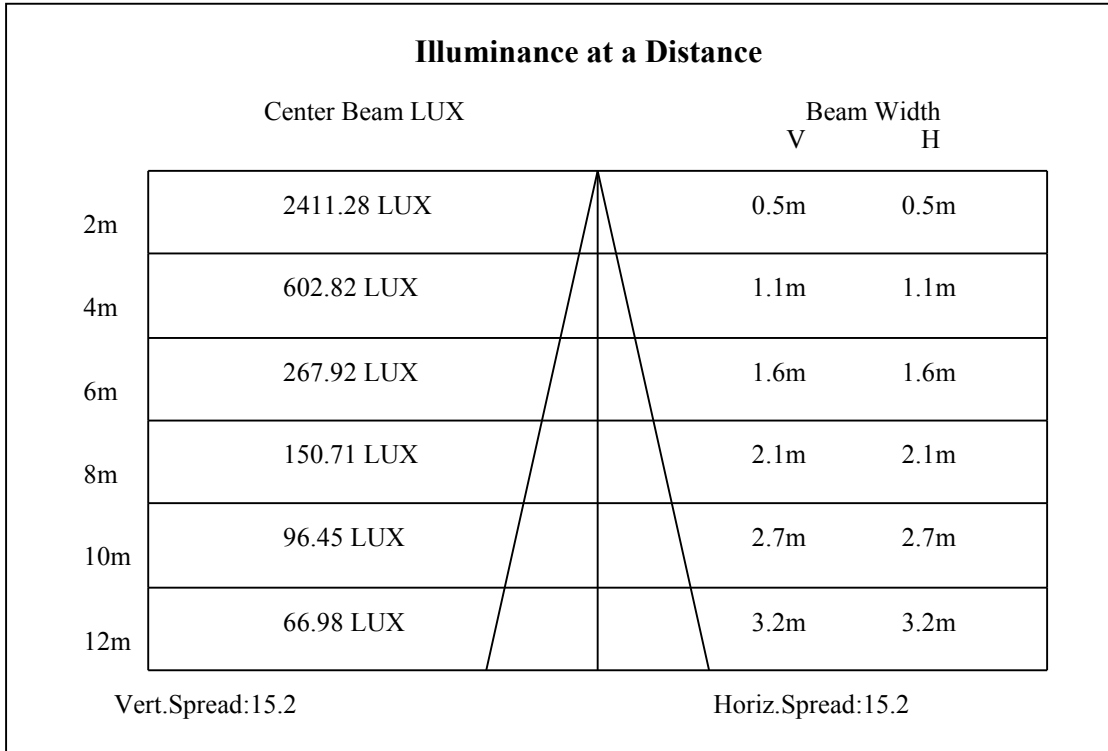
0-10	540.90
10-20	499.32
20-30	295.60
30-40	75.56
40-50	16.79
50-60	13.40
60-70	12.89
70-80	10.62
80-90	7.91
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

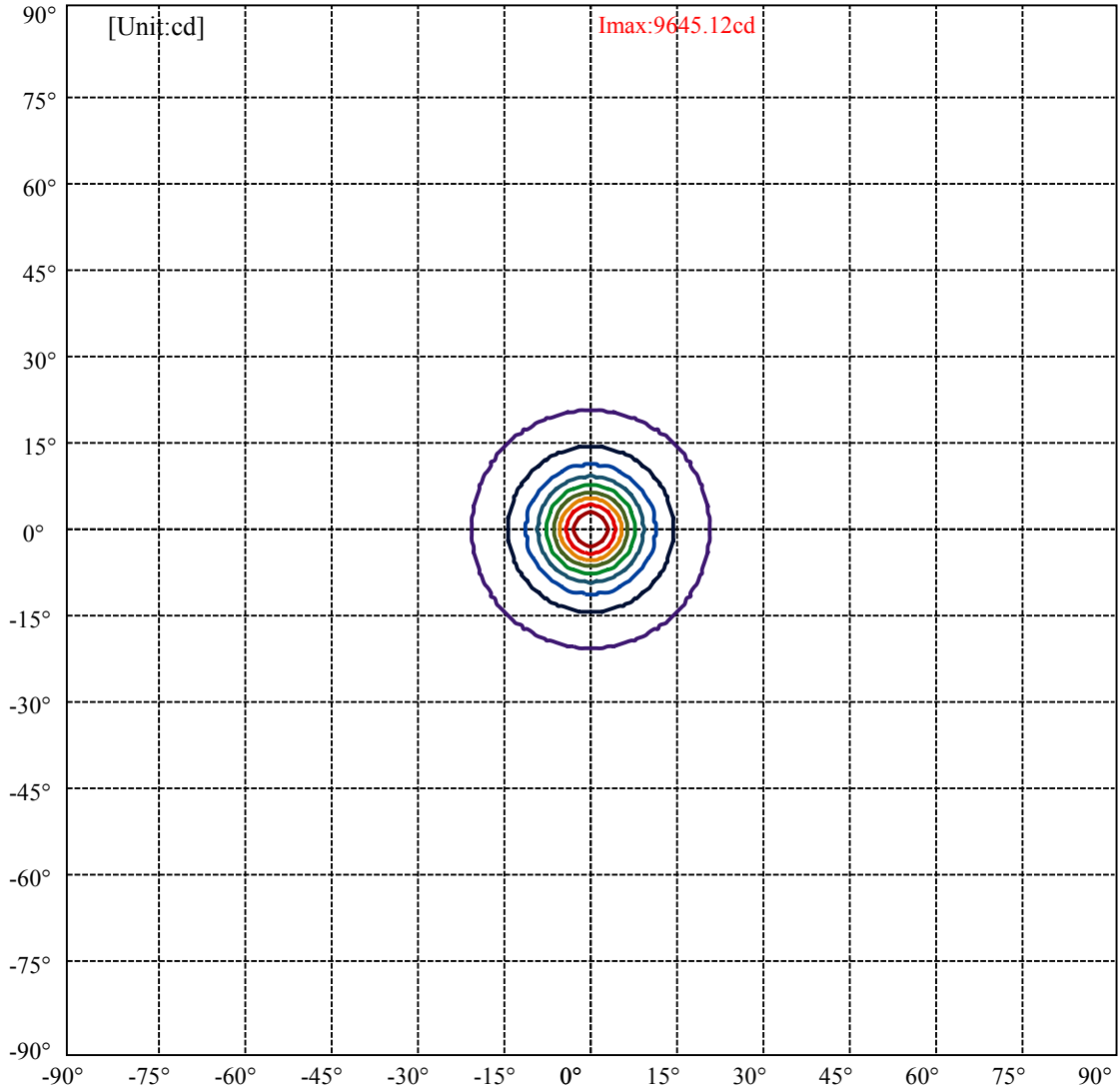


C0(Max): —————
C0/C180: —————
C90/C270: —————

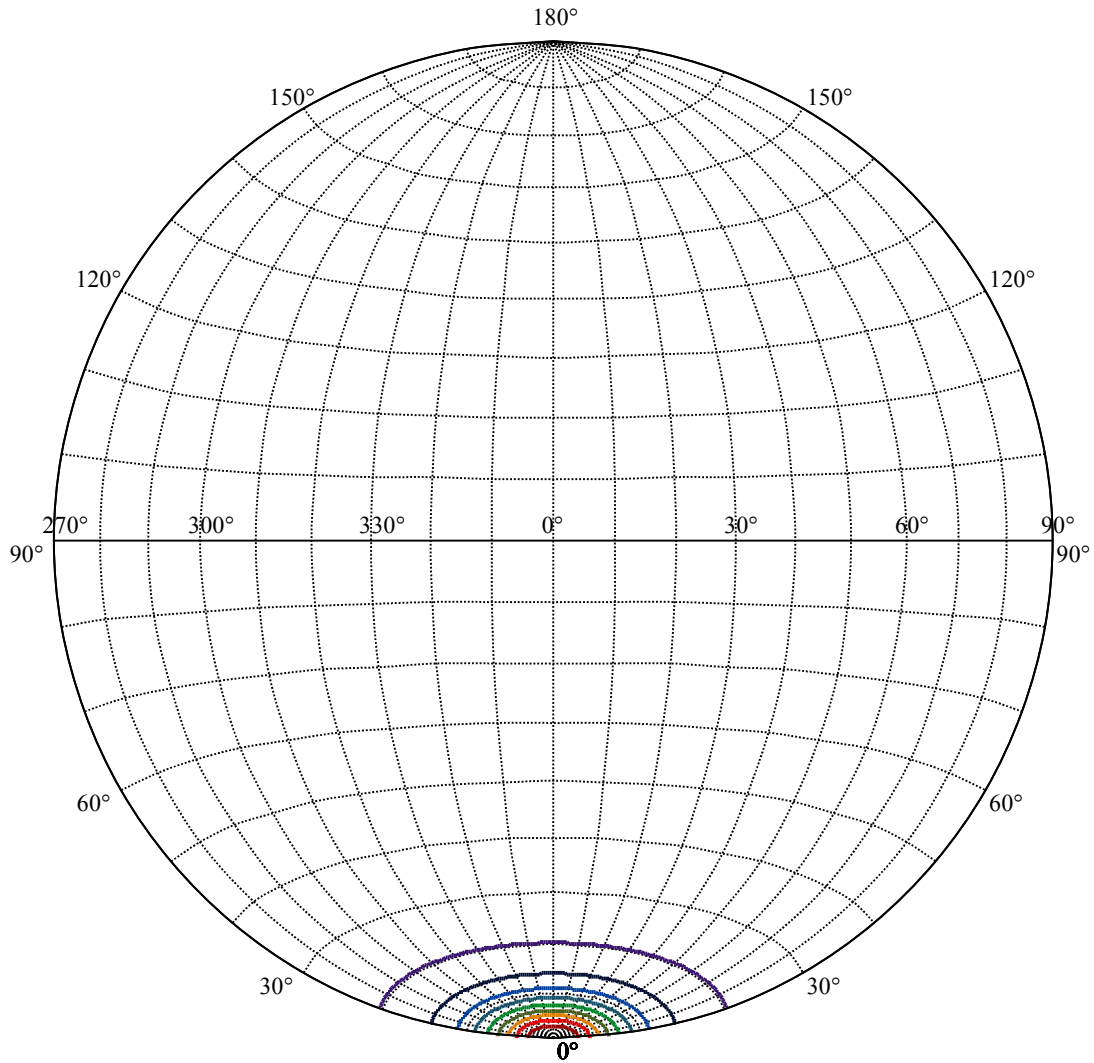
Field angle(10%Imax):C0/180Left:20.4 Right:20.4
:C90/270Left:20.4 Right:20.4

Beam Angle(50%Imax):C0/180Left:7.6 Right:7.6
:C90/270Left:7.6 Right:7.6





(10%Imax) 964.512	—
(20%Imax) 1929.02	—
(30%Imax) 2893.54	—
(40%Imax) 3858.05	—
(50%Imax) 4822.56	—
(60%Imax) 5787.07	—
(70%Imax) 6751.58	—
(80%Imax) 7716.09	—
(90%Imax) 8680.61	—



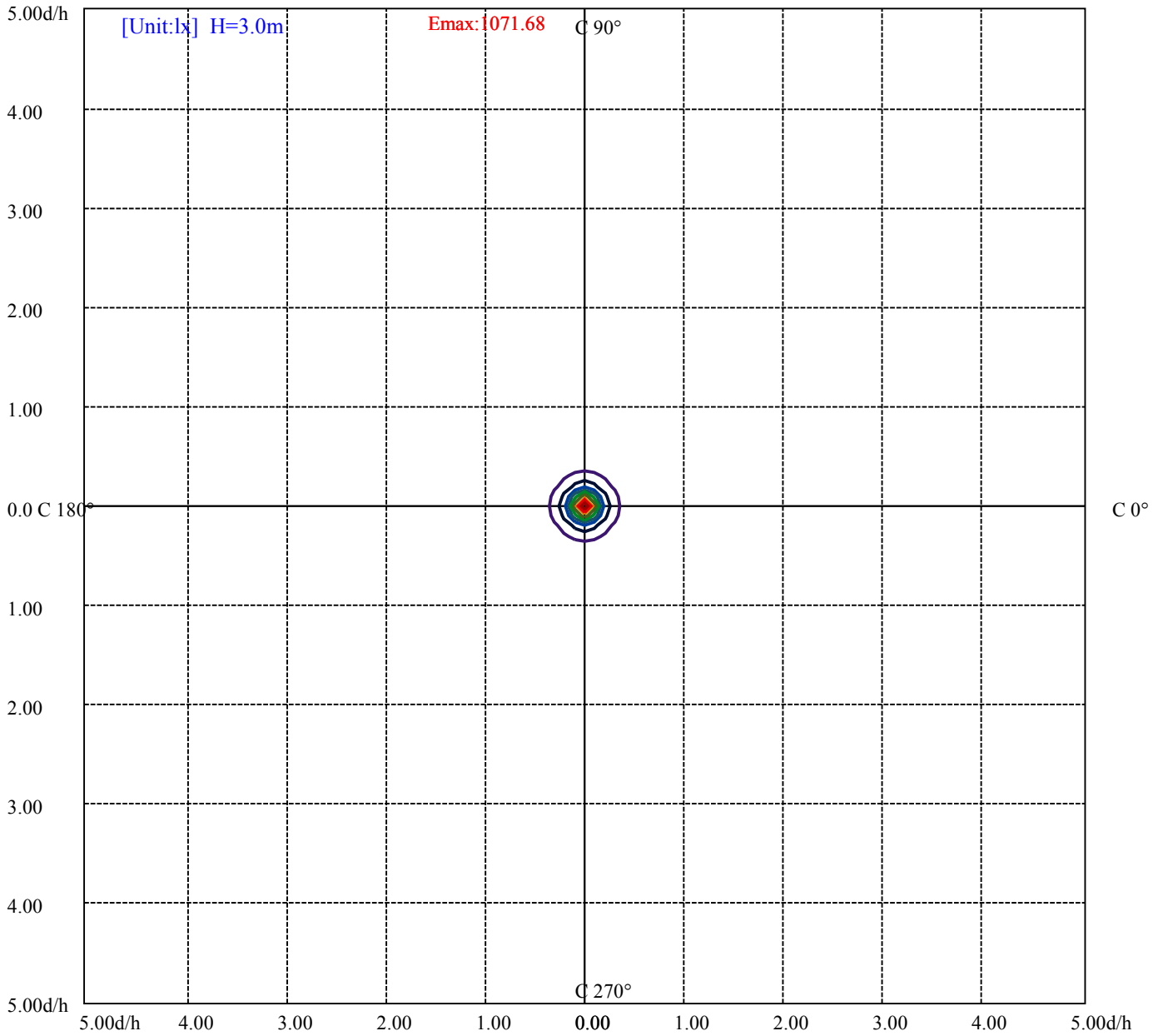
House

[Unit:cd]

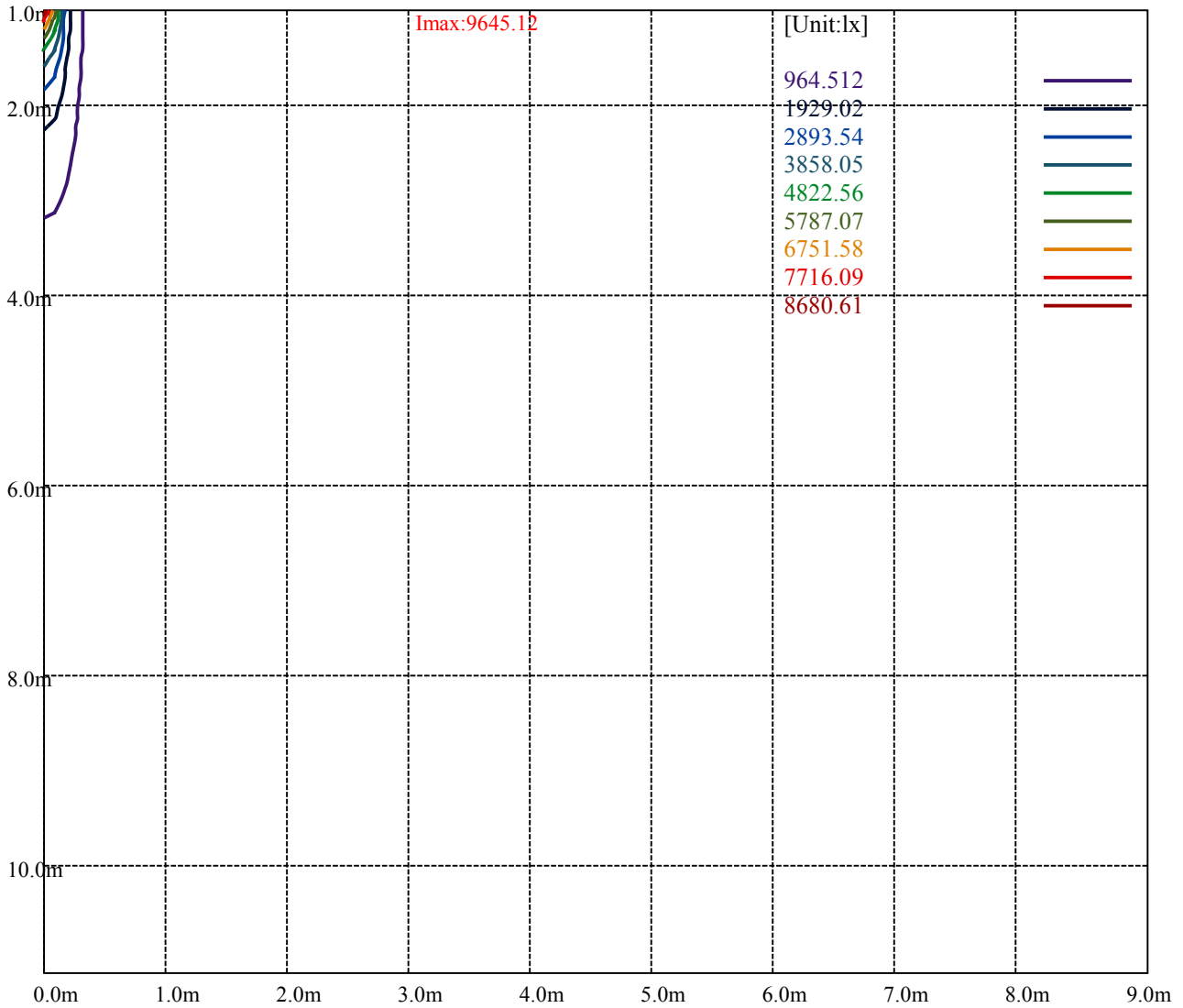
Road

Imax:9645.12

(10%Imax)	964.512	—
(20%Imax)	1929.02	—
(30%Imax)	2893.54	—
(40%Imax)	3858.05	—
(50%Imax)	4822.56	—
(60%Imax)	5787.07	—
(70%Imax)	6751.58	—
(80%Imax)	7716.09	—
(90%Imax)	8680.61	—



(10%Emax) 107.1678	—
(20%Emax) 214.3356	—
(30%Emax) 321.5033	—
(40%Emax) 428.6711	—
(50%Emax) 535.8389	—
(60%Emax) 643.0067	—
(70%Emax) 750.1744	—
(80%Emax) 857.3422	—
(90%Emax) 964.51	—



Luminance Table

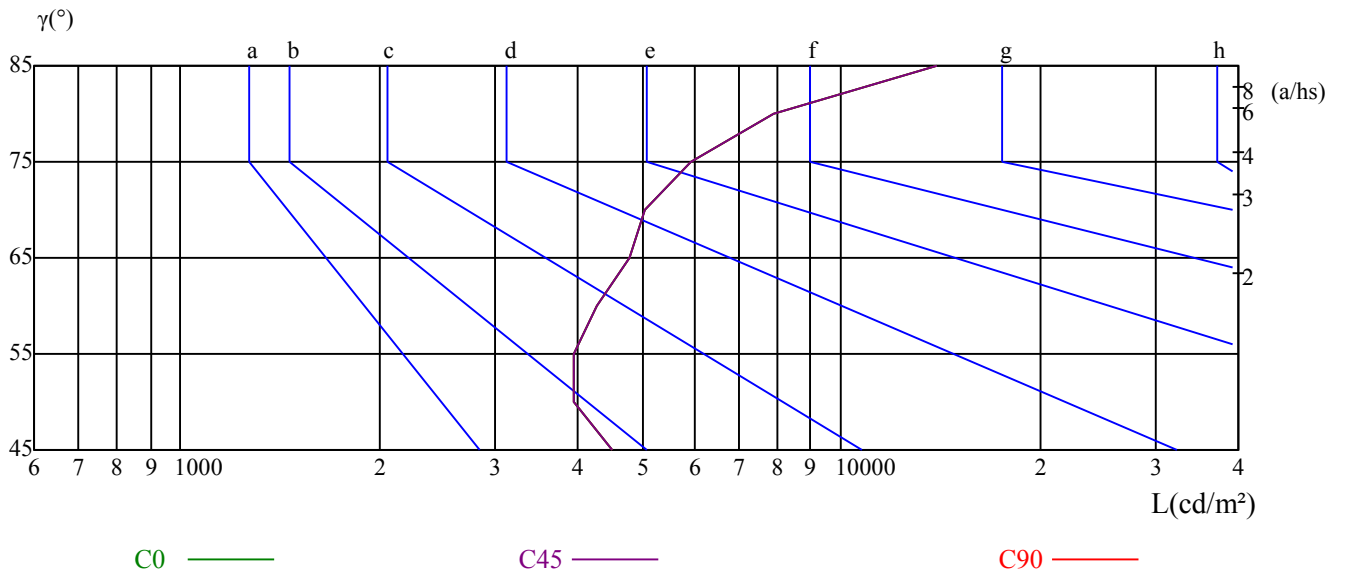
γ	45	50	55	60	65	70	75	80	85
C0	4494	3949	3933	4282	4799	5051	5915	7901	13941
C45	4494	3949	3933	4282	4799	5051	5915	7901	13941
C90	4494	3949	3933	4282	4799	5051	5915	7901	13941

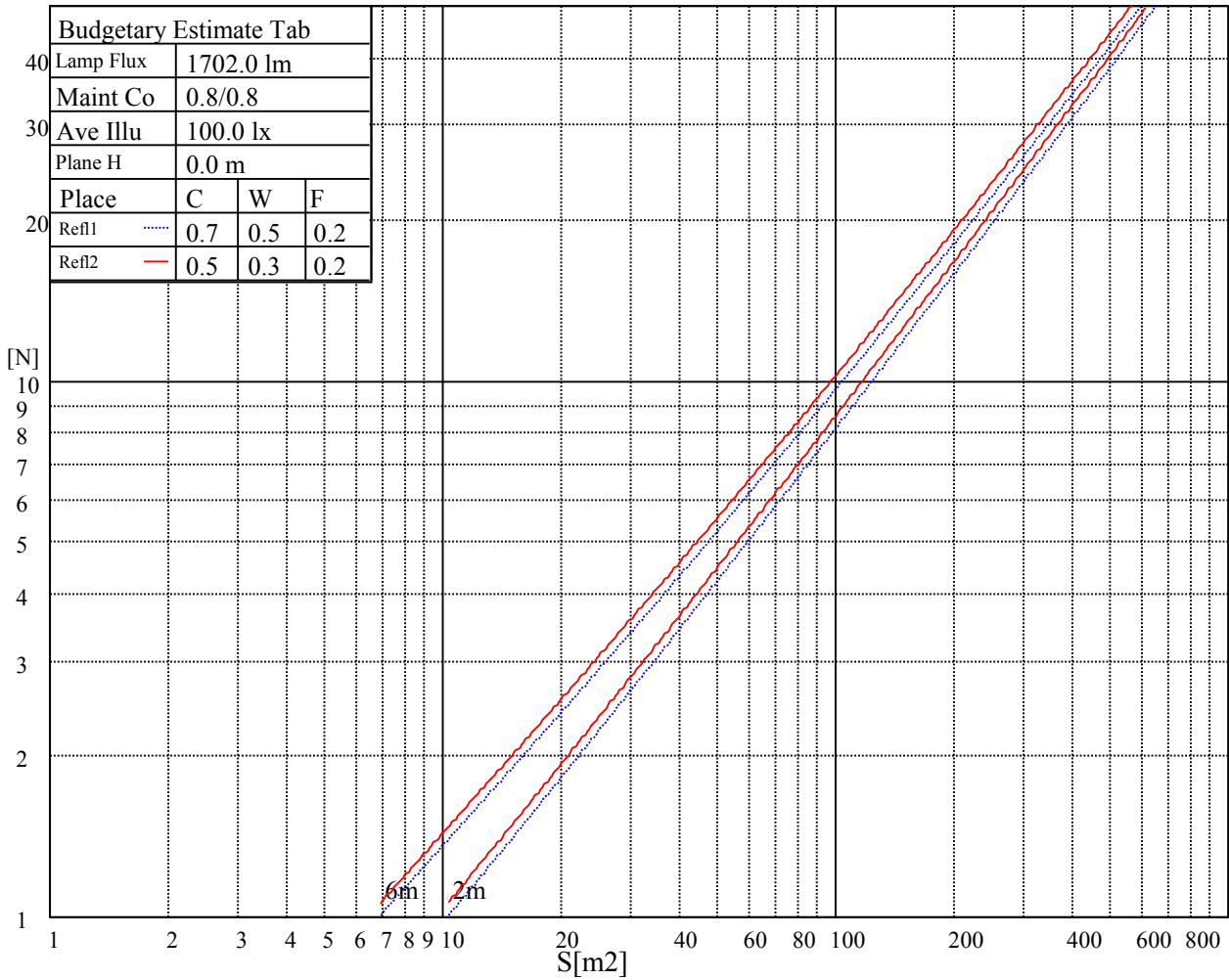
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4799	4799	4799	5915	5915	5915	13941	13941	13941

Glare Table

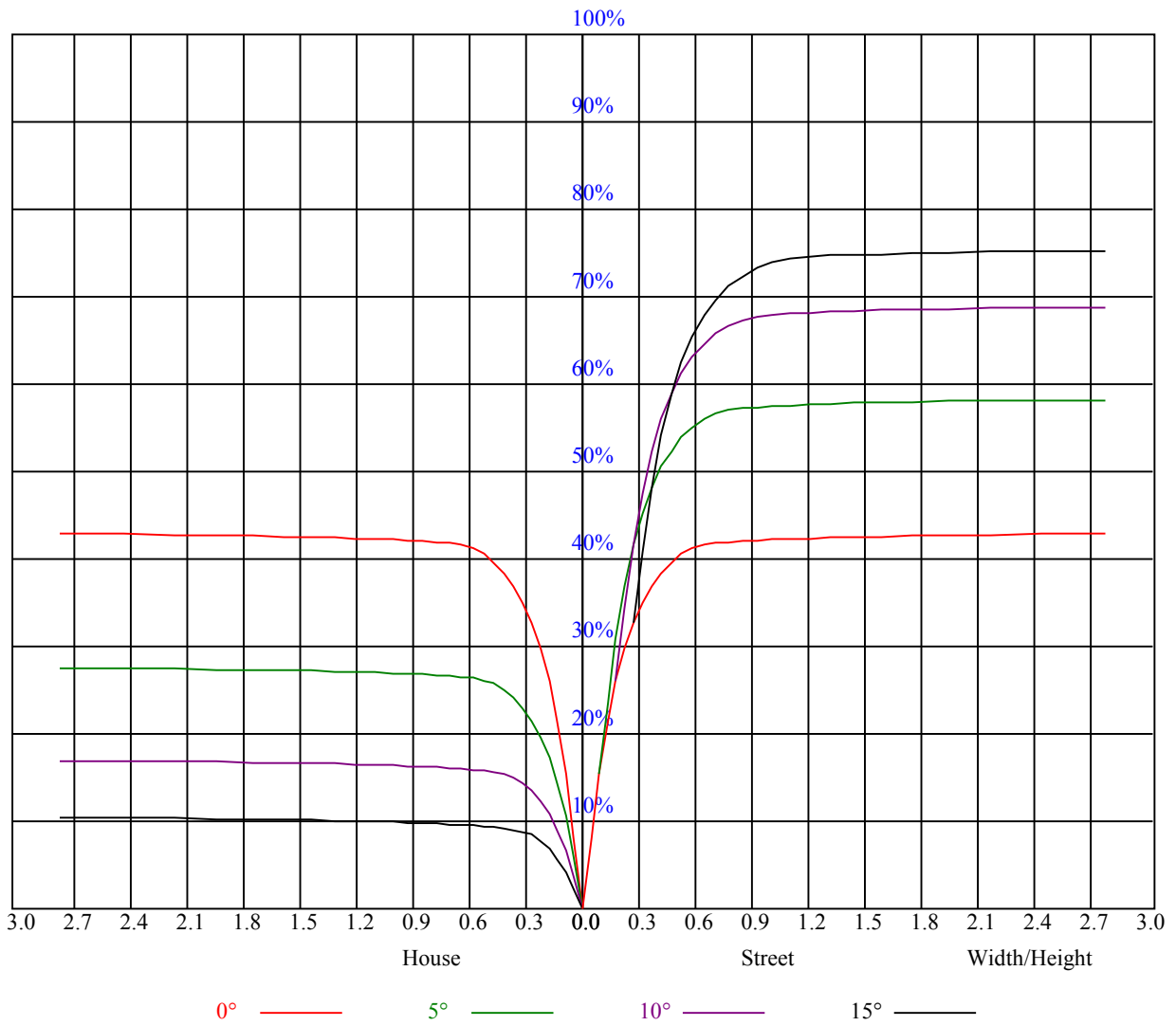
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

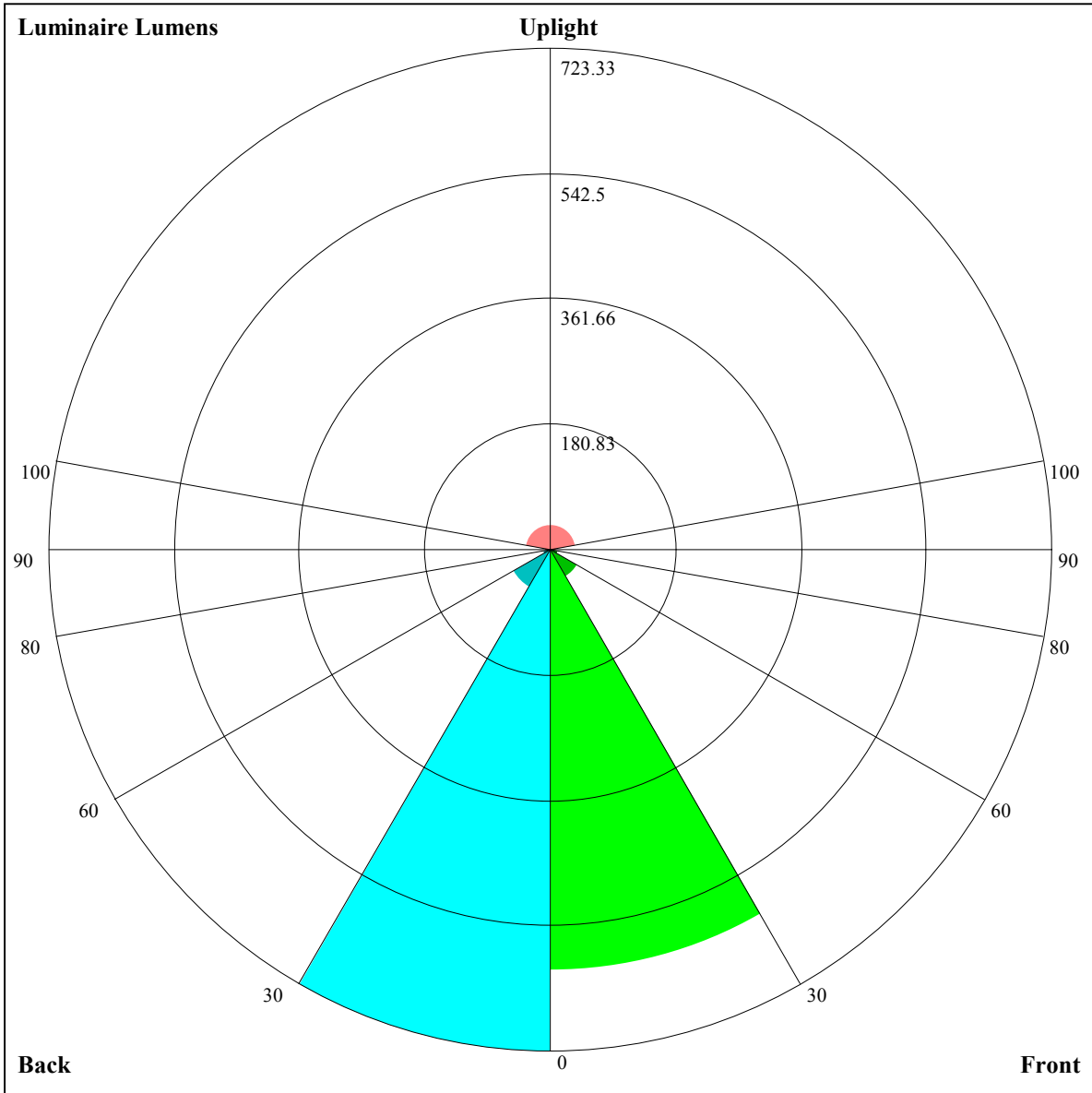
Luminance Limiting Curve





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	0.90	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	0.80	0.79
3	0.88	0.84	0.82	0.87	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.80	0.77	0.83	0.80	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.75	0.72	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	0.69
7	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
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	0.64
9	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.63
10	0.68	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61





Luminaire Lumens:
FL=606.11,FM=45.23,FH=11.58,FVH=4.29
BL=723.33,BM=61.76,BH=12,BVH=4.44
UL=7.83,UH=37.27

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	9601.88	9216.56	8449.88	7422.19	6447.94	5418.56	4591.69	4017.94	3529.69
45.0	9765.00	9533.25	9026.44	8282.81	7388.44	6345.56	5387.06	4573.13	3981.94
90.0	9667.69	9520.88	9200.81	8491.50	7720.31	6869.81	5808.38	5055.19	4408.88
135.0	9561.94	9694.69	9671.63	9492.19	9031.50	8336.25	7513.88	6494.63	5642.44
180.0	9601.88	9797.06	9785.81	9615.38	9220.50	8582.06	7709.63	6490.13	5580.00
225.0	9765.00	9830.81	9733.50	9311.63	8675.44	7794.00	6611.63	5724.56	4947.19
270.0	9667.69	9642.38	9393.19	8922.38	8098.88	7228.13	6227.44	5313.38	4618.69
315.0	9529.88	9149.06	8506.69	7560.00	6521.06	5623.31	4779.56	4084.31	3579.75
360.0	9601.88	9216.56	8449.88	7422.19	6447.94	5418.56	4591.69	4017.94	3529.69
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3003.19	2647.13	2345.06	2046.38	1799.44	1607.63	1434.94	1252.13	1135.13
45.0	3447.56	2981.25	2624.63	2315.25	1996.31	1775.81	1581.75	1421.44	1251.00
90.0	3792.94	3265.31	2869.31	2484.00	2160.56	1921.50	1689.75	1506.94	1329.75
135.0	4832.44	4138.88	3610.13	3103.88	2676.38	2356.88	2116.69	1813.50	1622.81
180.0	4787.44	4006.13	3503.25	3075.75	2678.06	2333.81	2069.44	1814.63	1625.63
225.0	4210.88	3602.81	3155.06	2734.31	2387.81	2131.31	1890.00	1700.44	1512.00
270.0	3939.75	3368.25	2940.19	2575.69	2183.63	1923.75	1711.69	1512.00	1352.25
315.0	3148.88	2693.25	2381.06	2115.00	1864.69	1662.19	1498.50	1334.25	1109.93
360.0	3003.19	2647.13	2345.06	2046.38	1799.44	1607.63	1434.94	1252.13	1135.13
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1035.00	934.31	852.75	779.63	722.25	666.56	623.81	585.56	547.31
45.0	1132.31	1024.31	921.38	847.13	767.25	712.69	660.94	621.56	581.63
90.0	1112.68	1056.88	955.24	840.15	777.99	716.34	642.66	605.08	569.25
135.0	1477.13	1298.25	1172.81	1078.31	948.38	867.94	802.13	722.81	667.13
180.0	1438.31	1280.25	1116.45	1039.44	938.87	860.96	798.92	725.74	674.89
225.0	1351.13	1195.88	1113.69	991.97	907.31	832.67	749.76	692.49	646.37
270.0	1225.69	1095.75	972.56	865.69	759.94	684.00	614.25	552.94	502.88
315.0	1069.31	960.19	877.73	805.61	739.80	691.48	649.74	606.32	570.49
360.0	1035.00	934.31	852.75	779.63	722.25	666.56	623.81	585.56	547.31
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	478.13	401.06	331.88	289.69	180.45	120.54	74.59	53.16	46.91
45.0	538.88	468.00	405.00	335.25	288.56	175.78	118.58	72.17	51.92
90.0	536.40	496.91	440.10	368.21	300.43	224.21	155.93	106.09	67.28
135.0	621.00	575.44	545.63	495.56	411.75	344.81	287.44	192.99	131.63
180.0	630.51	586.18	546.13	486.39	404.04	334.80	263.76	181.29	129.60
225.0	600.75	565.54	512.10	430.59	372.43	292.05	203.85	149.01	85.67
270.0	454.50	398.81	357.19	309.94	285.75	188.83	143.38	103.95	78.81
315.0	511.37	431.10	350.04	273.54	192.04	121.39	75.71	51.58	45.45
360.0	478.13	401.06	331.88	289.69	180.45	120.54	74.59	53.16	46.91
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	40.73	35.38	31.28	27.84	25.03	23.06	21.21	19.97	18.84
45.0	45.68	40.28	35.72	31.78	28.46	25.82	23.68	22.11	20.93
90.0	52.03	46.41	41.40	36.62	33.30	30.04	27.56	24.98	23.34
135.0	86.29	55.69	47.25	41.79	36.84	33.13	29.53	26.49	24.64
180.0	75.43	52.71	47.42	41.01	34.99	31.73	28.35	24.92	23.23
225.0	54.11	48.32	42.58	36.23	33.36	29.93	26.94	24.53	22.84
270.0	64.63	53.66	46.46	40.28	35.44	31.95	29.19	26.44	24.64
315.0	39.66	35.16	31.56	28.46	25.31	23.40	21.77	20.25	19.07
360.0	40.73	35.38	31.28	27.84	25.03	23.06	21.21	19.97	18.84

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	17.89	17.10	16.48	15.92	15.30	14.91	14.57	14.23	13.95
45.0	19.80	18.84	18.00	17.38	16.82	16.14	15.75	15.36	15.02
90.0	21.88	20.48	19.58	18.79	18.00	17.33	16.82	16.31	15.86
135.0	22.50	21.04	19.86	18.96	17.94	17.38	16.76	16.26	15.75
180.0	21.60	20.36	19.24	18.45	17.66	16.99	16.43	15.86	15.47
225.0	21.43	20.14	19.18	18.34	17.72	17.10	16.54	16.14	15.81
270.0	23.12	21.49	20.42	19.46	18.56	17.78	17.21	16.65	16.20
315.0	18.17	17.38	16.71	16.20	15.64	15.30	14.96	14.68	14.51
360.0	17.89	17.10	16.48	15.92	15.30	14.91	14.57	14.23	13.95
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	13.84	13.73	13.67	13.61	13.56	13.50	13.44	13.39	13.39
45.0	14.79	14.63	14.46	14.23	14.18	14.01	13.89	13.84	13.73
90.0	15.53	15.19	15.02	14.79	14.63	14.51	14.34	14.23	14.06
135.0	15.41	15.08	14.79	14.63	14.46	14.29	14.12	14.01	13.84
180.0	15.08	14.74	14.51	14.34	14.18	14.06	14.01	13.84	13.78
225.0	15.47	15.24	15.02	14.79	14.57	14.46	14.34	14.23	14.18
270.0	15.75	15.41	15.13	14.91	14.63	14.51	14.29	14.06	14.01
315.0	14.29	14.12	14.01	13.89	13.84	13.78	13.67	13.73	13.50
360.0	13.84	13.73	13.67	13.61	13.56	13.50	13.44	13.39	13.39
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.28	13.05	12.83	12.21	11.76	11.31	10.97	10.58	10.29
45.0	13.84	13.50	13.28	12.66	12.32	11.81	11.48	11.08	10.74
90.0	14.06	13.89	13.44	13.11	12.43	12.04	11.59	11.31	11.03
135.0	13.78	13.56	13.50	13.33	12.94	12.54	12.04	11.70	11.25
180.0	13.73	13.61	13.50	13.33	13.11	12.88	12.26	11.98	11.42
225.0	13.95	13.95	13.84	13.44	13.16	12.60	12.21	11.70	11.42
270.0	13.78	13.61	13.22	12.88	12.49	12.15	11.76	11.48	11.19
315.0	13.39	13.11	12.60	12.32	11.64	11.53	10.97	10.63	10.46
360.0	13.28	13.05	12.83	12.21	11.76	11.31	10.97	10.58	10.29
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.07	9.90	9.68	9.51	9.28	9.06	8.89	8.66	8.49
45.0	10.52	10.29	10.07	9.90	9.68	9.51	9.28	9.06	8.78
90.0	10.80	10.58	10.35	10.18	9.96	9.79	9.56	9.34	9.11
135.0	10.91	10.58	10.35	10.13	9.96	9.73	9.51	9.28	9.11
180.0	11.14	10.74	10.46	10.24	10.01	9.79	9.56	9.39	9.17
225.0	11.03	10.74	10.58	10.29	10.13	9.90	9.73	9.45	9.28
270.0	10.91	10.69	10.46	10.29	10.07	9.84	9.68	9.45	9.23
315.0	10.24	9.96	9.84	9.62	9.39	9.23	9.06	8.83	8.66
360.0	10.07	9.90	9.68	9.51	9.28	9.06	8.89	8.66	8.49
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.33	8.10	7.88	7.76	7.59	7.43	7.31	7.03	6.98
45.0	8.61	8.44	8.21	7.99	7.76	7.59	7.43	7.31	7.09
90.0	8.89	8.66	8.44	8.21	7.99	7.71	7.48	7.31	7.20
135.0	8.89	8.66	8.49	8.33	8.16	7.93	7.76	7.59	7.43
180.0	9.00	8.78	8.55	8.38	8.16	7.99	7.76	7.65	7.43
225.0	9.06	8.83	8.61	8.38	8.21	7.99	7.76	7.59	7.37
270.0	9.00	8.78	8.49	8.27	8.04	7.82	7.59	7.43	7.20
315.0	8.49	8.27	8.04	7.93	7.71	7.54	7.37	7.20	7.09
360.0	8.33	8.10	7.88	7.76	7.59	7.43	7.31	7.03	6.98

Intensity data(cd)

C/γ(°)	90.0
0.0	6.98
45.0	7.03
90.0	7.14
135.0	7.31
180.0	7.37
225.0	7.31
270.0	7.14
315.0	7.14
360.0	6.98