



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: 3-1938-M

Luminaire:

Report No:

Voltage(V): 32.9100

Test No: GC2019081203

Current(A): 0.2970

LampCAT: TRIDONIC SLE G7 17MM

Power (W): 9.7700

Lamp flux(lm): 1190.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 78

Width(mm): 78

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1003.32, Efficiency(%): 84.31% , Luminous Efficacy(lm/W): 102.69

Central intensity(cd): 3881.461, Maximum intensity(cd): 3881.461

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=18.8

[C90/270]Total=18.8

Field angle(10%Imax): [C0/180]Total=60.8

[C90/270]Total=60.8

Maximum s/h(1/2): C0_180=0.32 C90_270=0.32

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(%): 84.31%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.260%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/12
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	3881.461	0.000	0	.000%	.000%
1.0	3868.313	3.708	3.708	.312%	.370%
2.0	3816.352	11.030	14.738	.927%	1.469%
3.0	3712.641	18.007	32.745	1.513%	3.264%
4.0	3559.570	24.342	57.087	2.046%	5.690%
5.0	3315.516	29.576	86.663	2.485%	8.638%
6.0	3025.969	33.326	119.99	2.801%	11.959%
7.0	2675.953	35.392	155.381	2.974%	15.487%
8.0	2344.078	35.927	191.309	3.019%	19.068%
9.0	2034.000	35.482	226.791	2.982%	22.604%
10.0	1779.328	34.509	261.3	2.900%	26.043%
11.0	1588.711	33.654	294.954	2.828%	29.398%
12.0	1451.391	33.233	328.186	2.793%	32.710%
13.0	1338.750	33.112	361.298	2.783%	36.010%
14.0	1237.669	32.978	394.276	2.771%	39.297%
15.0	1164.480	32.978	427.254	2.771%	42.584%
16.0	1091.960	33.063	460.317	2.778%	45.879%
17.0	1023.405	32.942	493.259	2.768%	49.162%
18.0	954.295	32.608	525.867	2.740%	52.412%
19.0	890.487	32.095	557.962	2.697%	55.611%
20.0	830.285	31.495	589.457	2.647%	58.750%
21.0	774.042	30.806	620.264	2.589%	61.821%
22.0	724.226	30.108	650.372	2.530%	64.822%
23.0	675.914	29.379	679.751	2.469%	67.750%
24.0	633.030	28.618	708.369	2.405%	70.602%
25.0	591.532	27.844	736.213	2.340%	73.377%
26.0	554.977	27.063	763.276	2.274%	76.075%
27.0	520.313	26.307	789.583	2.211%	78.697%
28.0	489.143	25.557	815.141	2.148%	81.244%
29.0	451.406	24.607	839.748	2.068%	83.697%
30.0	409.099	23.233	862.982	1.952%	86.012%
31.0	357.595	21.336	884.318	1.793%	88.139%
32.0	305.304	18.991	903.309	1.596%	90.032%
33.0	263.630	16.761	920.07	1.408%	91.702%
34.0	209.152	14.308	934.378	1.202%	93.128%
35.0	163.596	11.576	945.954	.973%	94.282%
36.0	121.184	9.067	955.021	.762%	95.186%
37.0	84.973	6.724	961.745	.565%	95.856%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	52.038	4.573	966.318	.384%	96.312%
39.0	29.644	2.788	969.106	.234%	96.590%
40.0	20.292	1.742	970.848	.146%	96.763%
41.0	17.789	1.356	972.204	.114%	96.898%
42.0	15.996	1.227	973.431	.103%	97.021%
43.0	14.505	1.130	974.561	.095%	97.133%
44.0	13.198	1.046	975.607	.088%	97.237%
45.0	11.862	0.963	976.57	.081%	97.333%
46.0	10.568	0.877	977.447	.074%	97.421%
47.0	9.408	0.794	978.241	.067%	97.500%
48.0	8.536	0.725	978.967	.061%	97.572%
49.0	7.847	0.673	979.64	.057%	97.639%
50.0	7.425	0.637	980.276	.054%	97.703%
51.0	7.109	0.615	980.891	.052%	97.764%
52.0	6.827	0.598	981.489	.050%	97.824%
53.0	6.588	0.584	982.073	.049%	97.882%
54.0	6.349	0.570	982.643	.048%	97.939%
55.0	6.145	0.558	983.201	.047%	97.994%
56.0	5.963	0.547	983.748	.046%	98.049%
57.0	5.822	0.539	984.287	.045%	98.103%
58.0	5.681	0.532	984.819	.045%	98.156%
59.0	5.569	0.526	985.345	.044%	98.208%
60.0	5.456	0.521	985.865	.044%	98.260%
61.0	5.358	0.516	986.381	.043%	98.311%
62.0	5.280	0.513	986.894	.043%	98.362%
63.0	5.217	0.511	987.405	.043%	98.413%
64.0	5.154	0.509	987.914	.043%	98.464%
65.0	5.112	0.508	988.422	.043%	98.515%
66.0	5.084	0.509	988.93	.043%	98.565%
67.0	5.358	0.525	989.455	.044%	98.618%
68.0	5.927	0.572	990.027	.048%	98.675%
69.0	6.384	0.628	990.655	.053%	98.737%
70.0	6.560	0.665	991.32	.056%	98.804%
71.0	6.659	0.683	992.003	.057%	98.872%
72.0	6.666	0.693	992.696	.058%	98.941%
73.0	6.757	0.702	993.398	.059%	99.011%
74.0	6.757	0.710	994.108	.060%	99.082%
75.0	6.848	0.719	994.827	.060%	99.153%

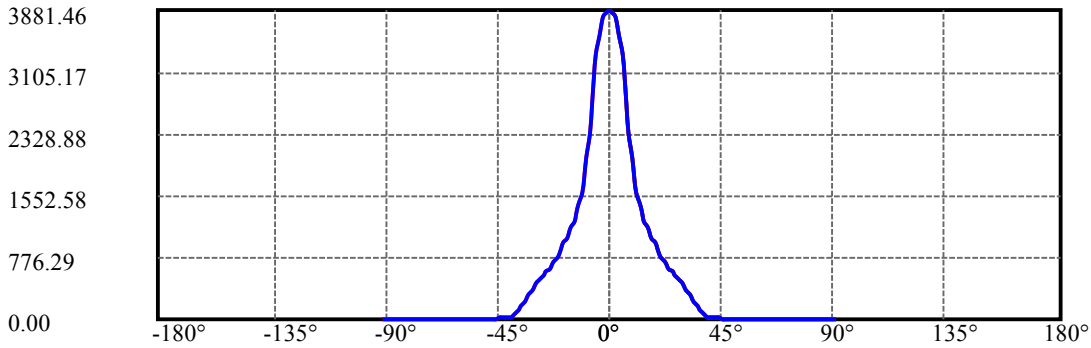
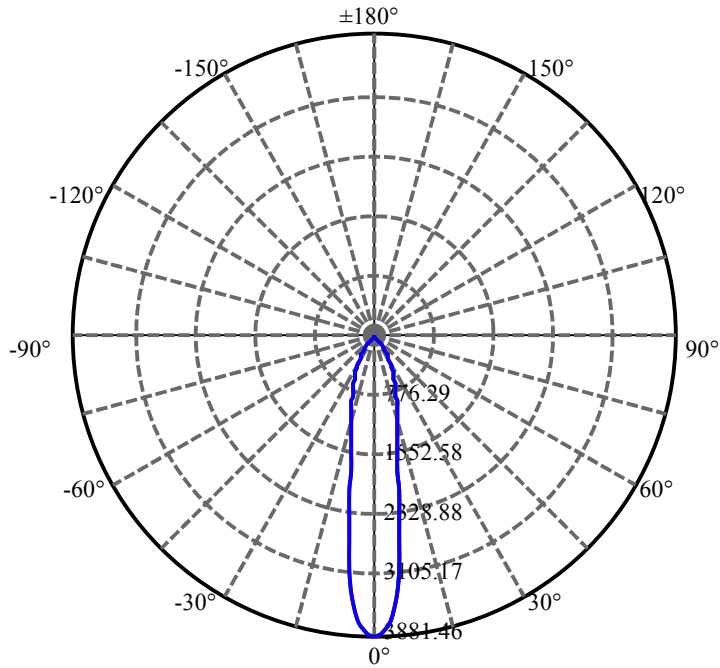
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.877	0.729	995.556	.061%	99.226%
77.0	6.792	0.729	996.284	.061%	99.298%
78.0	6.258	0.699	996.983	.059%	99.368%
79.0	5.414	0.627	997.61	.053%	99.431%
80.0	4.971	0.560	998.17	.047%	99.486%
81.0	4.887	0.533	998.703	.045%	99.539%
82.0	4.816	0.526	999.229	.044%	99.592%
83.0	4.802	0.523	999.752	.044%	99.644%
84.0	4.809	0.524	1000.276	.044%	99.696%
85.0	4.760	0.522	1000.798	.044%	99.748%
86.0	4.718	0.518	1001.316	.044%	99.800%
87.0	4.676	0.514	1001.83	.043%	99.851%
88.0	4.613	0.509	1002.339	.043%	99.902%
89.0	4.493	0.499	1002.838	.042%	99.952%
90.0	4.359	0.485	1003.324	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	862.98	72.52%	86.01%
0-40	970.85	81.58%	96.76%
0-60	985.87	82.85%	98.26%
0-90	1002.84	84.27%	99.95%
0-120	1002.84	84.27%	99.95%
0-180	1003.32	84.31%	100.00%
60-90	17.49	1.47%	1.74%
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%
0-27.51	802.66	67.45%	80.00%

ZONAL LUMEN SUMMARY

0-10	261.30
10-20	328.16
20-30	273.52
30-40	107.87
40-50	9.43
50-60	5.59
60-70	5.45
70-80	6.85
80-90	4.67
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



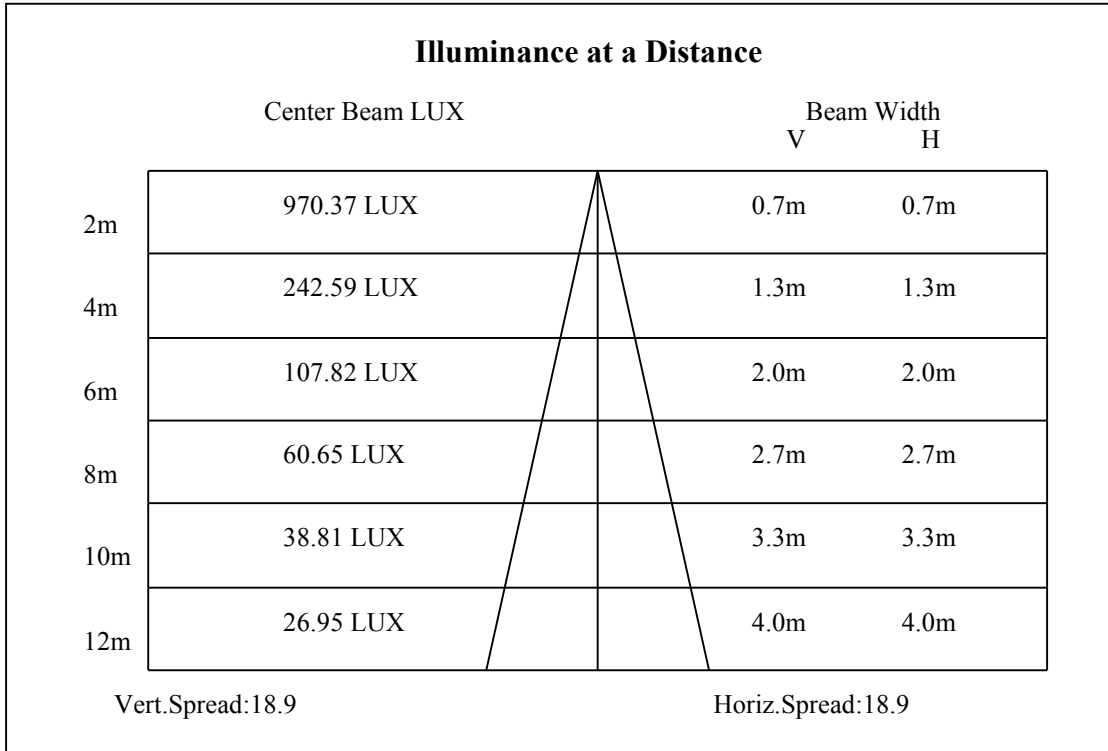
C0(Max): —————

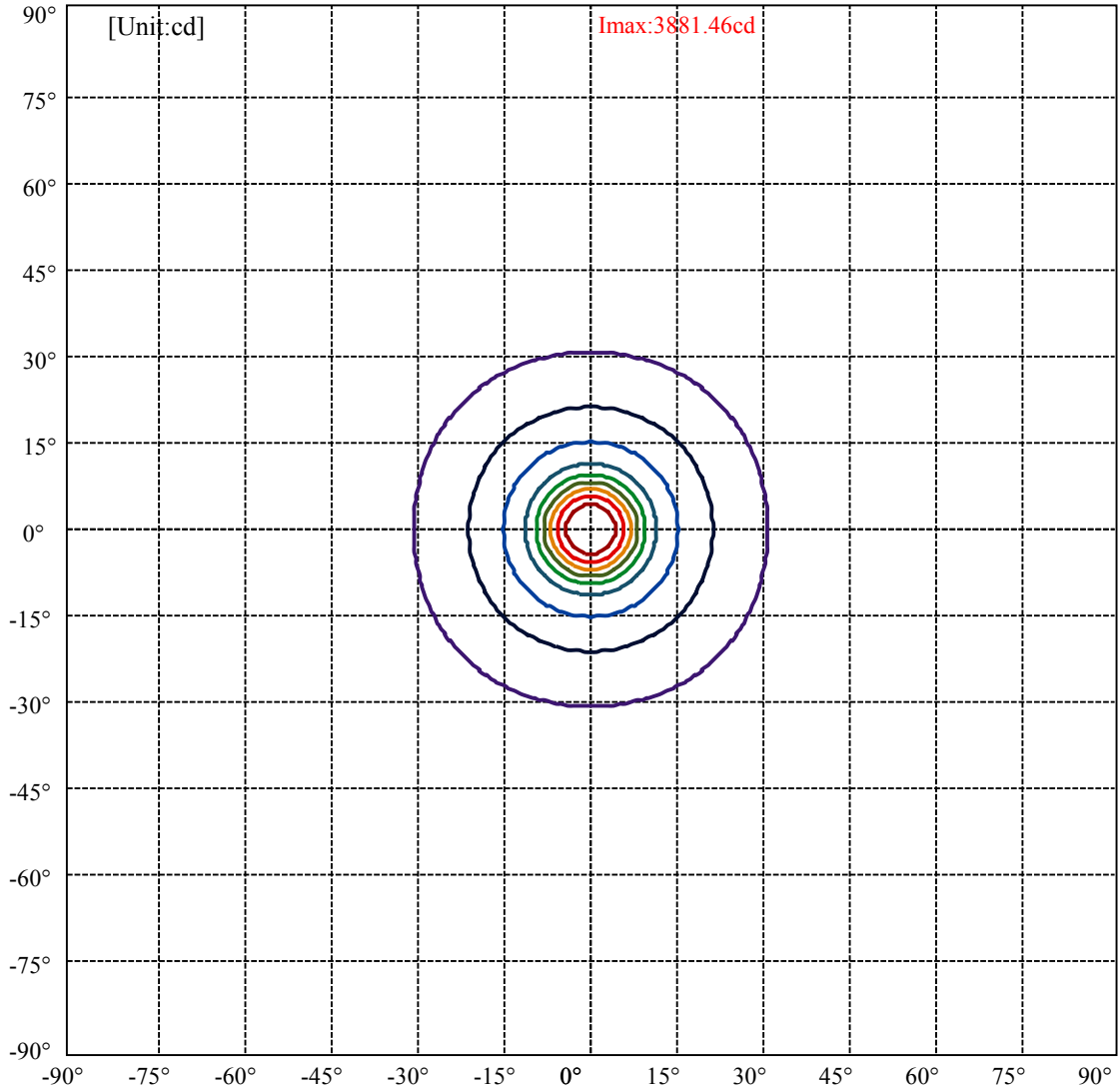
C0/C180: —————

C90/C270: —————

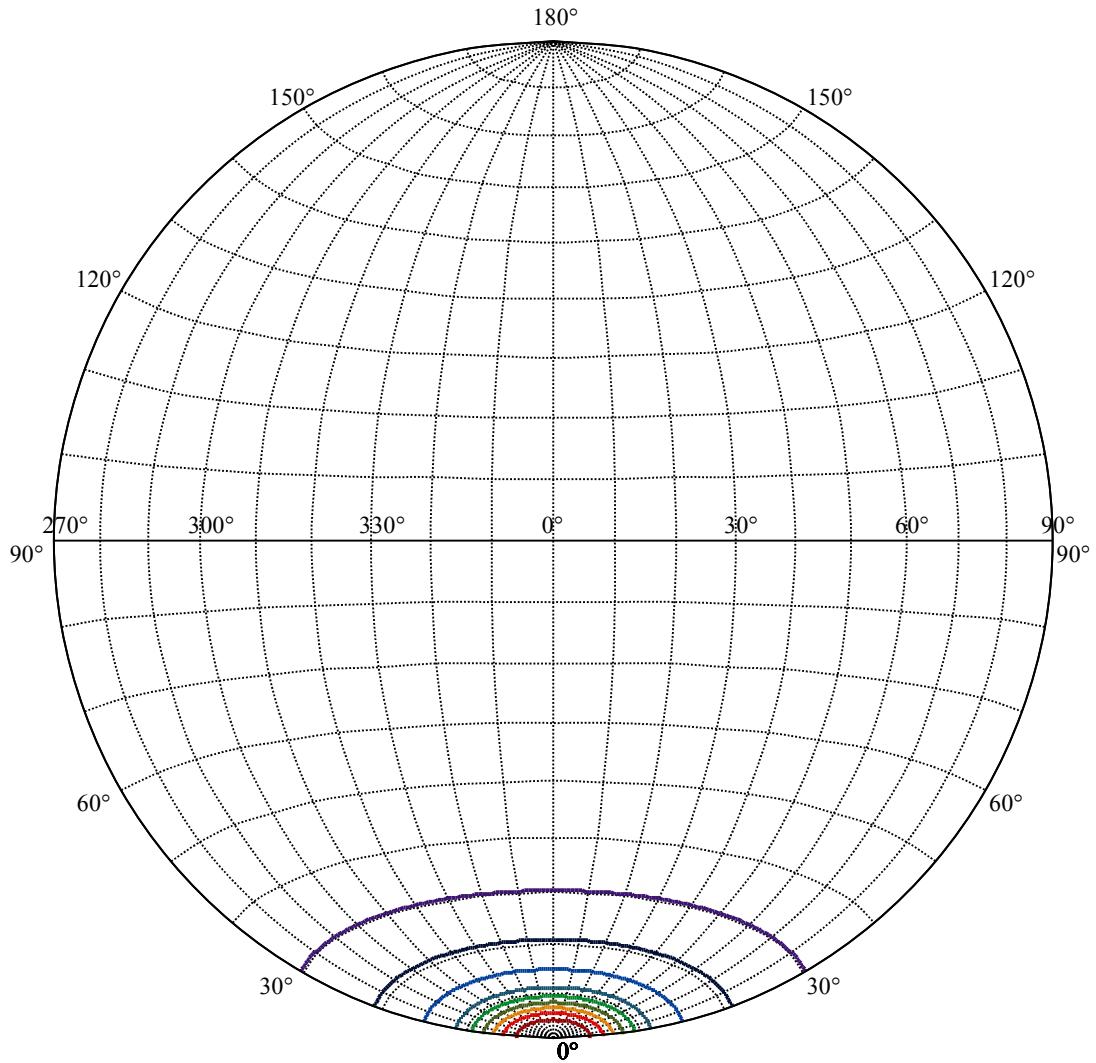
Field angle(10%Imax):C0/180Left:30.4 Right:30.4
:C90/270Left:30.4 Right:30.4

Beam Angle(50%Imax):C0/180Left:9.4 Right:9.4
:C90/270Left:9.4 Right:9.4





(10%Imax) 388.146	—
(20%Imax) 776.292	—
(30%Imax) 1164.44	—
(40%Imax) 1552.58	—
(50%Imax) 1940.73	—
(60%Imax) 2328.88	—
(70%Imax) 2717.02	—
(80%Imax) 3105.17	—
(90%Imax) 3493.31	—



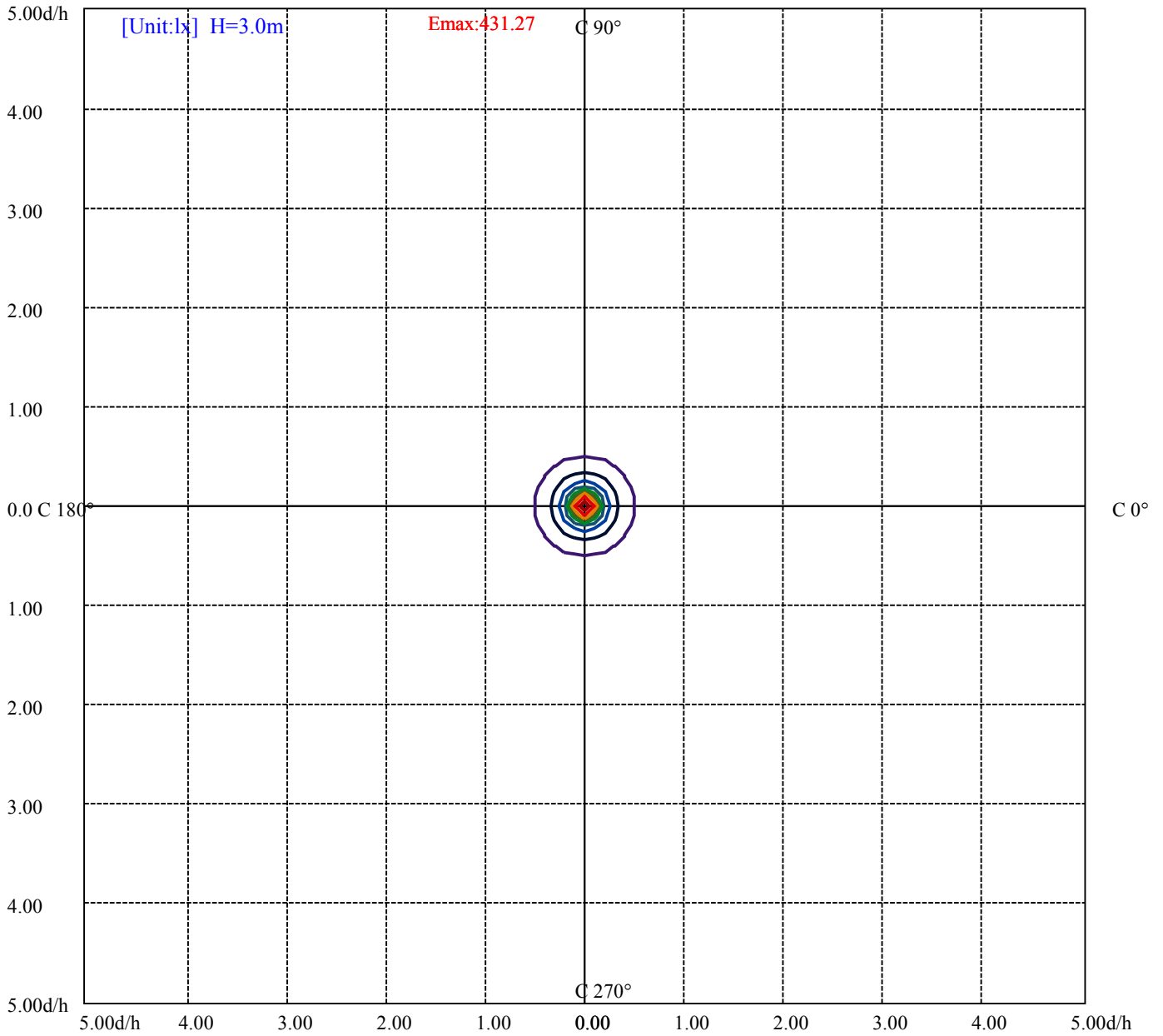
House

[Unit:cd]

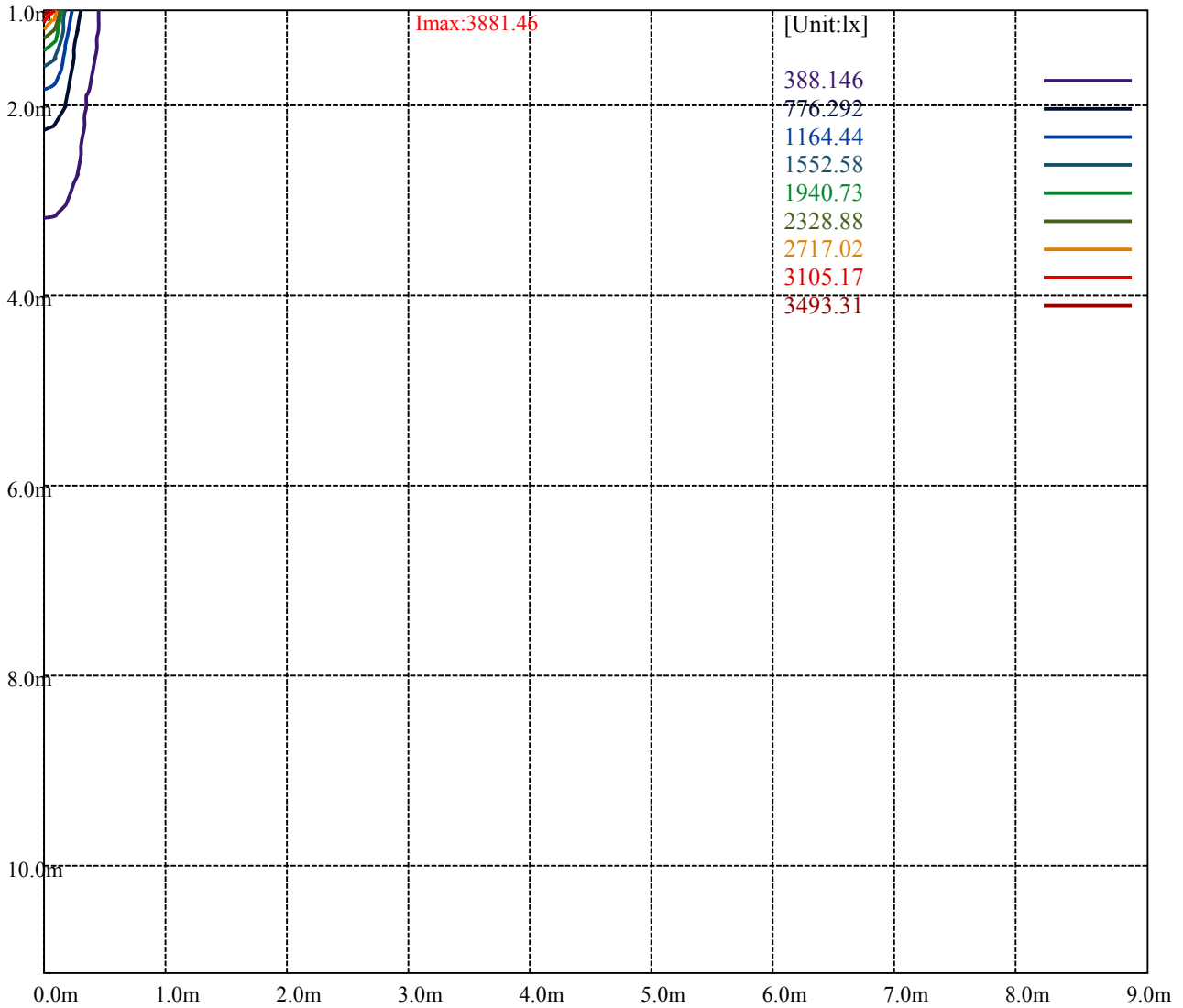
Road

Imax:3881.46

(10%Imax) 388.146	—
(20%Imax) 776.292	—
(30%Imax) 1164.44	—
(40%Imax) 1552.58	—
(50%Imax) 1940.73	—
(60%Imax) 2328.88	—
(70%Imax) 2717.02	—
(80%Imax) 3105.17	—
(90%Imax) 3493.31	—



(10%Emax) 43.12733	—
(20%Emax) 86.25467	—
(30%Emax) 129.3822	—
(40%Emax) 172.5089	—
(50%Emax) 215.6367	—
(60%Emax) 258.7644	—
(70%Emax) 301.8911	—
(80%Emax) 345.0189	—
(90%Emax) 388.1456	—



Luminance Table

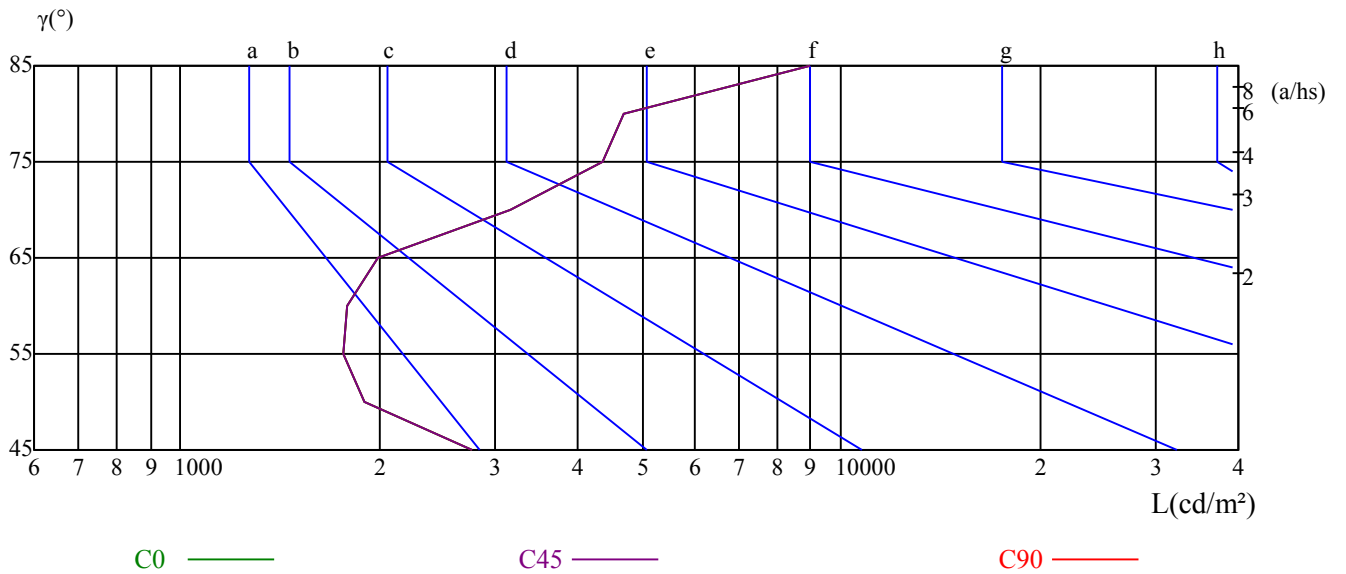
γ	45	50	55	60	65	70	75	80	85
C0	2757	1899	1761	1794	1988	3153	4349	4705	8977
C45	2757	1899	1761	1794	1988	3153	4349	4705	8977
C90	2757	1899	1761	1794	1988	3153	4349	4705	8977

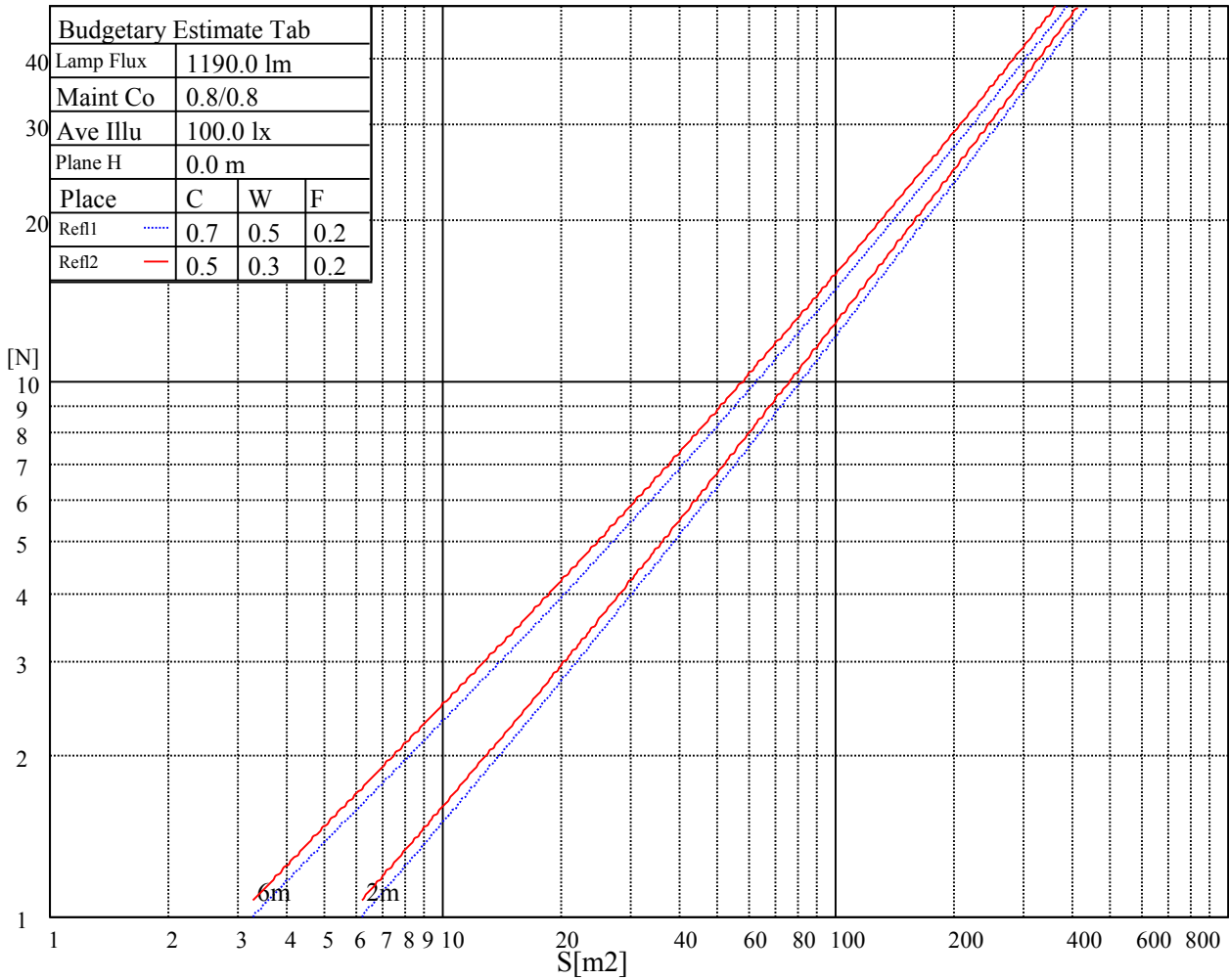
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1988	1988	1988	4349	4349	4349	8977	8977	8977

Glare Table

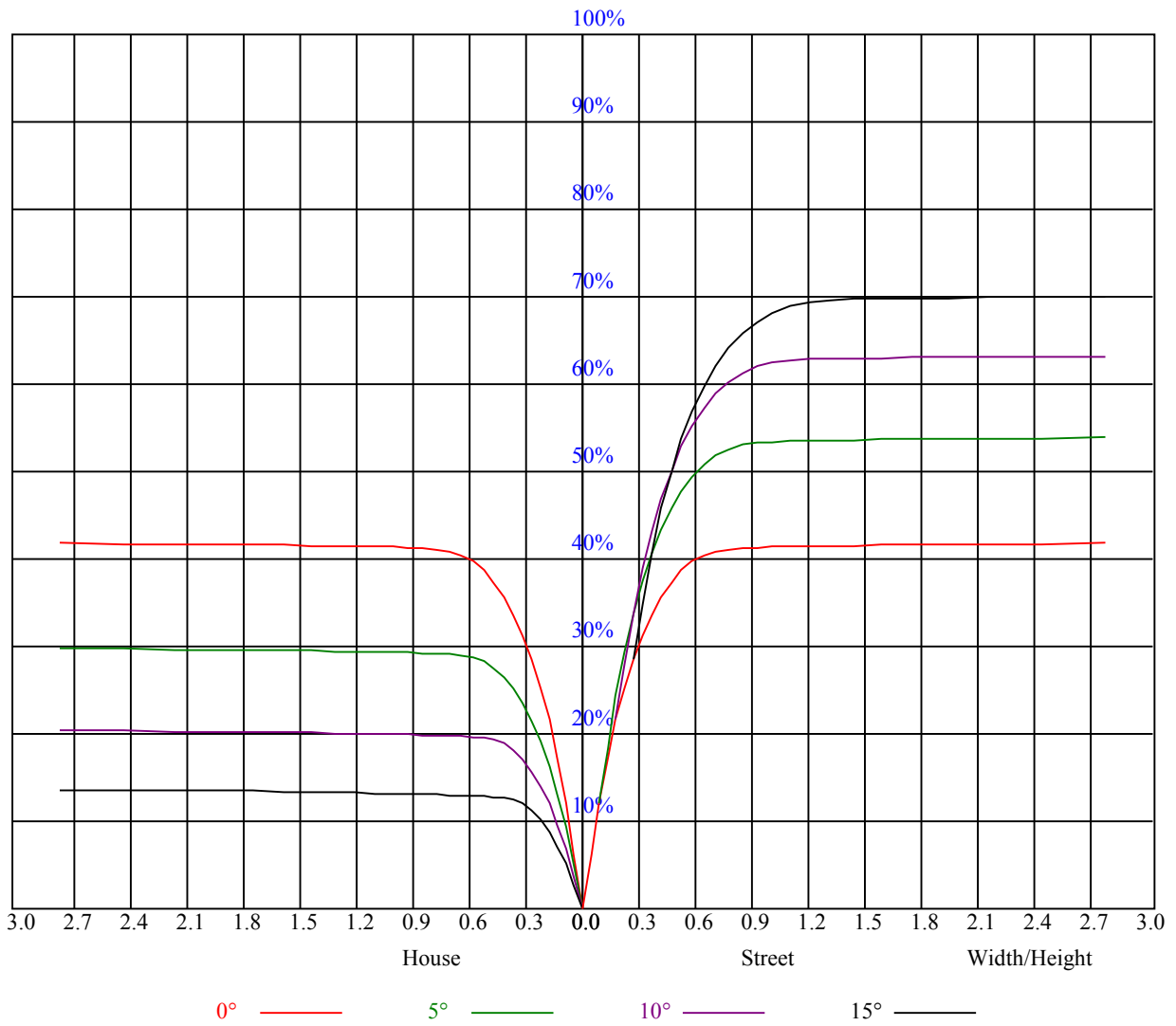
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

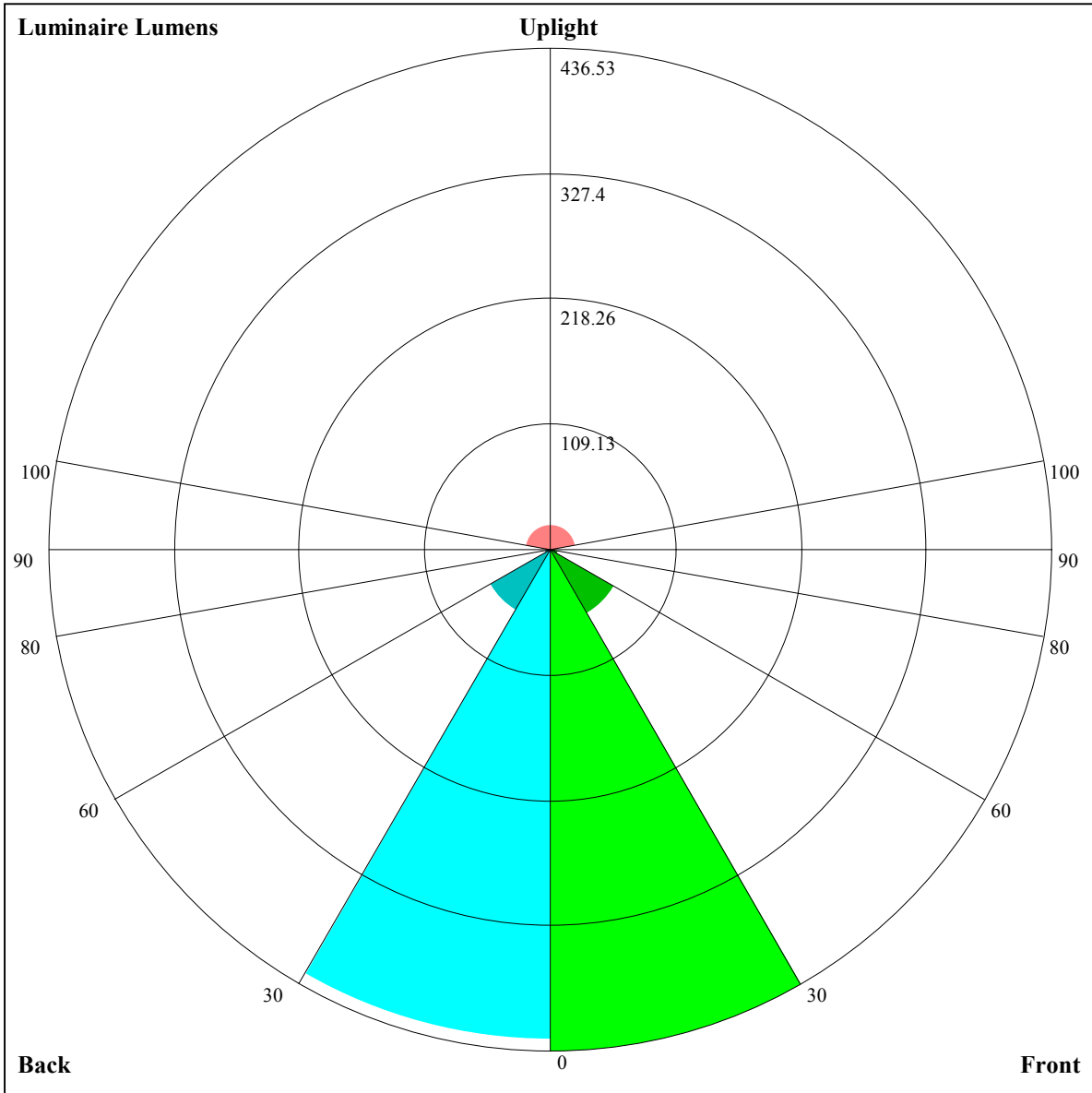
Luminance Limiting Curve





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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.94	0.92	0.90	0.92	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.89	0.86	0.83	0.87	0.85	0.82	0.85	0.82	0.80	0.82	0.80	0.79	0.80	0.78	0.77	0.76
3	0.84	0.80	0.77	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.70	0.69
5	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.71	0.69	0.67	0.66
6	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
7	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
8	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.58
9	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.54





Luminaire Lumens:

FL=436.53,FM=63.87,FH=6.36,FVH=2.6

BL=426.05,BM=60.72,BH=5.47,BVH=2.52

UL=4.76,UH=22.63

BUG Rating:B1-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	3889.13	3887.44	3849.75	3763.69	3638.25	3412.13	3102.19	2786.63	2459.25
45.0	3867.19	3885.75	3858.75	3810.94	3717.56	3521.81	3288.38	2995.88	2637.56
90.0	3885.75	3879.00	3840.75	3738.94	3602.81	3400.31	3097.69	2742.75	2428.31
135.0	3882.94	3882.94	3848.63	3789.56	3636.56	3416.06	3196.69	2813.63	2496.38
180.0	3890.81	3862.69	3801.38	3682.13	3489.19	3243.94	2949.75	2547.00	2238.75
225.0	3867.19	3830.06	3744.00	3593.81	3386.25	3072.38	2765.81	2406.94	2044.13
270.0	3885.75	3866.63	3799.13	3698.44	3542.63	3250.69	2943.56	2624.06	2270.81
315.0	3882.94	3852.00	3788.44	3623.63	3463.31	3206.81	2863.69	2490.75	2177.44
360.0	3889.13	3887.44	3849.75	3763.69	3638.25	3412.13	3102.19	2786.63	2459.25
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2083.50	1832.06	1632.38	1482.75	1352.81	1268.44	1193.06	1105.31	1038.94
45.0	2290.50	2010.94	1755.00	1584.00	1438.88	1330.31	1249.31	1167.75	1091.81
90.0	2101.50	1825.31	1638.00	1478.25	1373.06	1275.19	1175.63	1114.03	1044.84
135.0	2164.50	1880.44	1674.56	1518.19	1373.63	1284.75	1204.88	1114.88	1044.00
180.0	1965.38	1695.94	1540.69	1419.19	1315.69	1226.25	1116.28	1074.09	1008.28
225.0	1832.63	1620.00	1449.56	1361.81	1279.13	1172.25	1113.86	1047.04	982.13
270.0	1962.00	1734.75	1542.38	1416.38	1310.63	1221.75	1148.06	1072.13	999.00
315.0	1872.00	1635.19	1477.13	1350.56	1266.19	1122.41	1114.76	1040.46	978.24
360.0	2083.50	1832.06	1632.38	1482.75	1352.81	1268.44	1193.06	1105.31	1038.94
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	977.06	910.13	848.25	798.75	745.31	698.06	657.56	613.69	576.56
45.0	1023.75	957.38	887.06	831.94	777.94	719.44	672.75	631.69	587.25
90.0	962.89	900.06	842.85	775.29	727.48	681.75	634.16	590.68	555.81
135.0	977.63	902.25	843.19	789.75	733.50	684.00	640.69	599.06	564.75
180.0	934.82	866.81	810.73	752.96	701.10	658.63	618.08	572.57	538.99
225.0	907.65	850.95	798.64	736.37	690.47	647.04	600.81	560.42	526.89
270.0	938.25	887.06	814.50	763.88	723.38	664.88	624.94	591.75	549.56
315.0	912.32	849.26	797.06	743.40	694.63	653.51	615.26	572.40	540.00
360.0	977.06	910.13	848.25	798.75	745.31	698.06	657.56	613.69	576.56
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	538.88	504.56	473.06	436.50	374.06	325.69	284.63	219.21	176.18
45.0	549.00	517.50	483.75	446.06	394.88	339.19	290.25	255.66	187.43
90.0	519.58	490.11	455.63	410.40	365.96	313.37	261.62	217.18	174.83
135.0	528.75	495.56	466.31	430.31	375.75	328.50	287.44	223.26	180.17
180.0	507.88	475.71	437.18	393.08	341.10	288.23	242.83	193.56	153.06
225.0	493.48	463.16	416.81	364.67	316.24	265.05	215.38	173.03	132.58
270.0	515.25	490.50	444.94	401.63	354.94	296.44	285.19	199.46	153.51
315.0	509.68	476.04	433.58	390.15	337.84	285.98	241.71	191.87	151.03
360.0	538.88	504.56	473.06	436.50	374.06	325.69	284.63	219.21	176.18
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	135.79	94.22	57.99	33.24	20.48	18.17	16.37	14.91	13.61
45.0	146.64	109.80	68.18	40.73	23.40	19.35	16.76	15.41	13.84
90.0	125.49	90.73	60.08	30.94	20.64	18.11	16.14	14.63	13.33
135.0	139.78	103.16	63.62	38.64	21.54	18.62	16.43	15.02	13.73
180.0	110.59	73.13	45.68	24.69	19.41	17.16	15.75	14.06	12.94
225.0	87.41	56.36	32.29	20.59	18.34	16.82	15.30	13.84	12.54
270.0	115.14	80.94	44.61	25.20	19.63	17.16	15.58	14.12	12.71
315.0	108.62	71.44	43.88	23.12	18.90	16.93	15.64	14.06	12.88
360.0	135.79	94.22	57.99	33.24	20.48	18.17	16.37	14.91	13.61

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	12.32	11.03	9.84	8.83	7.99	7.59	7.26	6.98	6.75
45.0	12.38	11.14	10.01	8.94	8.10	7.59	7.14	6.92	6.69
90.0	12.04	10.80	9.62	8.55	7.82	7.31	7.03	6.75	6.53
135.0	12.38	10.97	9.84	8.94	8.10	7.59	7.31	6.98	6.69
180.0	11.64	10.13	9.17	8.49	7.82	7.48	7.20	6.86	6.64
225.0	11.14	10.01	8.72	7.99	7.54	7.20	6.86	6.64	6.36
270.0	11.31	10.13	9.00	8.27	7.65	7.26	6.98	6.69	6.41
315.0	11.70	10.35	9.06	8.27	7.76	7.37	7.09	6.81	6.64
360.0	12.32	11.03	9.84	8.83	7.99	7.59	7.26	6.98	6.75
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.53	6.36	6.19	6.08	5.96	5.85	5.74	5.63	5.57
45.0	6.47	6.24	6.08	5.96	5.85	5.74	5.63	5.51	5.46
90.0	6.24	6.08	5.85	5.68	5.57	5.40	5.29	5.23	5.12
135.0	6.41	6.19	5.96	5.85	5.68	5.57	5.46	5.34	5.29
180.0	6.41	6.19	6.02	5.85	5.68	5.63	5.51	5.34	5.29
225.0	6.13	5.96	5.79	5.63	5.51	5.40	5.34	5.23	5.18
270.0	6.24	6.02	5.85	5.68	5.57	5.46	5.29	5.23	5.12
315.0	6.36	6.13	5.96	5.85	5.63	5.51	5.40	5.34	5.23
360.0	6.53	6.36	6.19	6.08	5.96	5.85	5.74	5.63	5.57
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.51	5.46	5.46	5.46	7.09	9.45	10.80	11.64	12.38
45.0	5.34	5.29	5.29	5.23	5.46	6.64	7.99	8.33	8.33
90.0	5.06	5.01	4.95	4.89	4.89	4.84	4.84	4.78	4.78
135.0	5.18	5.12	5.06	5.01	5.01	4.95	4.89	4.84	4.84
180.0	5.23	5.18	5.12	5.12	5.34	6.58	7.59	7.99	8.21
225.0	5.12	5.06	5.01	5.01	5.18	5.18	5.18	5.18	5.12
270.0	5.06	5.01	4.95	4.89	4.89	4.84	4.84	4.78	4.73
315.0	5.23	5.12	5.06	5.06	5.01	4.95	4.95	4.95	4.89
360.0	5.51	5.46	5.46	5.46	7.09	9.45	10.80	11.64	12.38
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	12.71	13.16	13.39	13.50	13.73	13.73	13.11	8.78	5.91
45.0	8.10	7.99	7.88	7.88	7.59	7.26	6.58	5.79	5.06
90.0	4.78	4.73	4.73	4.73	4.73	4.67	4.67	4.67	4.61
135.0	4.84	4.78	4.78	4.78	4.78	4.78	4.73	4.78	4.73
180.0	8.55	8.89	9.00	9.34	9.51	9.23	6.75	5.18	5.40
225.0	4.73	4.95	4.73	5.01	5.18	5.12	4.73	4.61	4.56
270.0	4.73	4.73	4.67	4.67	4.67	4.67	4.67	4.67	4.67
315.0	4.89	4.84	4.89	4.89	4.84	4.89	4.84	4.84	4.84
360.0	12.71	13.16	13.39	13.50	13.73	13.73	13.11	8.78	5.91
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.96	5.29	5.23	5.23	5.06	5.06	5.01	4.95	4.95
45.0	4.95	4.89	4.84	4.84	4.84	4.84	4.73	4.78	4.84
90.0	4.61	4.67	4.67	4.67	4.67	4.67	4.61	4.67	4.33
135.0	4.73	4.73	4.73	4.73	4.73	4.67	4.61	4.50	4.39
180.0	4.84	4.89	4.89	4.89	4.78	4.73	4.73	4.39	4.33
225.0	4.56	4.56	4.61	4.61	4.56	4.50	4.50	4.39	4.33
270.0	4.61	4.67	4.61	4.67	4.61	4.56	4.50	4.50	4.39
315.0	4.84	4.84	4.84	4.84	4.84	4.73	4.73	4.73	4.39
360.0	5.96	5.29	5.23	5.23	5.06	5.06	5.01	4.95	4.95

Intensity data(cd)

C/γ(°)	90.0
0.0	4.39
45.0	4.33
90.0	4.33
135.0	4.39
180.0	4.33
225.0	4.33
270.0	4.39
315.0	4.39
360.0	4.39