



NATA LIGHTING CO.,LTD.
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Nata

Client: NT

LumCAT: 1-1898-A

Luminaire: 92.70.481.00

Report No: 20260330-B010

Ballast type: DC

Test No: 20260330-C010

Voltage(V): 35.270

LampCAT: CITIZEN CLU028

Current(A): 0.363

Lamp flux(lm): 1607.0

Power (W): 12.800

Number of Lamps: 1

PF: 0.000

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 19

Photometric Results

Lumens(lm): 1472.31, Efficiency(%): 91.62% , Luminous Efficacy(lm/W): 115.02

Central intensity(cd): 6961.311, Maximum intensity(cd): 6961.311

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.4

[C90/270]Total=17.4

Field angle(10%Imax): [C0/180]Total=40.0

[C90/270]Total=40.0

Maximum s/h(1/2): C0_180=0.30 C90_270=0.30

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(%): 91.62%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.341%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2026/3/30
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.16

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6961.312	0.000	0	0.00%	0.00%
1.0	6905.200	6.635	6.635	0.41%	0.45%
2.0	6733.403	19.575	26.21	1.22%	1.78%
3.0	6451.900	31.535	57.745	1.96%	3.92%
4.0	6094.462	41.997	99.742	2.61%	6.77%
5.0	5622.598	50.406	150.148	3.14%	10.20%
6.0	5075.534	56.222	206.37	3.50%	14.02%
7.0	4476.343	59.288	265.658	3.69%	18.04%
8.0	3869.181	59.727	325.385	3.72%	22.10%
9.0	3278.905	57.931	383.317	3.60%	26.04%
10.0	2621.788	53.399	436.716	3.32%	29.66%
11.0	2234.553	48.525	485.241	3.02%	32.96%
12.0	1866.417	44.829	530.07	2.79%	36.00%
13.0	1590.336	41.023	571.093	2.55%	38.79%
14.0	1353.743	37.684	608.777	2.34%	41.35%
15.0	1157.331	34.473	643.25	2.15%	43.69%
16.0	1002.934	31.654	674.904	1.97%	45.84%
17.0	891.665	29.504	704.408	1.84%	47.84%
18.0	810.004	28.057	732.465	1.75%	49.75%
19.0	745.512	27.063	759.528	1.68%	51.59%
20.0	694.078	26.348	785.876	1.64%	53.38%
21.0	660.788	26.016	811.892	1.62%	55.14%
22.0	632.764	25.994	837.887	1.62%	56.91%
23.0	613.392	26.148	864.034	1.63%	58.69%
24.0	596.370	26.450	890.484	1.65%	60.48%
25.0	583.983	26.839	917.323	1.67%	62.30%
26.0	573.432	27.321	944.644	1.70%	64.16%
27.0	563.269	27.810	972.453	1.73%	66.05%
28.0	555.350	28.321	1000.774	1.76%	67.97%
29.0	547.641	28.857	1029.632	1.80%	69.93%
30.0	541.086	29.395	1059.027	1.83%	71.93%
31.0	533.021	29.891	1088.918	1.86%	73.96%
32.0	525.522	30.326	1119.244	1.89%	76.02%
33.0	515.988	30.683	1149.927	1.91%	78.10%
34.0	505.395	30.910	1180.837	1.92%	80.20%
35.0	490.837	30.939	1211.777	1.93%	82.30%
36.0	473.039	30.690	1242.467	1.91%	84.39%
37.0	451.297	30.147	1272.613	1.88%	86.44%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	421.626	29.137	1301.75	1.81%	88.42%
39.0	380.753	27.387	1329.138	1.70%	90.28%
40.0	345.345	25.324	1354.461	1.58%	92.00%
41.0	297.267	22.883	1377.344	1.42%	93.55%
42.0	247.836	19.805	1397.149	1.23%	94.89%
43.0	193.507	16.349	1413.498	1.02%	96.01%
44.0	148.356	12.903	1426.4	0.80%	96.88%
45.0	108.207	9.860	1436.26	0.61%	97.55%
46.0	73.260	7.097	1443.357	0.44%	98.03%
47.0	47.900	4.819	1448.176	0.30%	98.36%
48.0	32.314	3.243	1451.419	0.20%	98.58%
49.0	22.959	2.270	1453.688	0.14%	98.74%
50.0	18.092	1.712	1455.4	0.11%	98.85%
51.0	14.925	1.397	1456.797	0.09%	98.95%
52.0	12.040	1.157	1457.954	0.07%	99.02%
53.0	9.597	0.941	1458.895	0.06%	99.09%
54.0	7.772	0.766	1459.661	0.05%	99.14%
55.0	6.492	0.637	1460.297	0.04%	99.18%
56.0	5.643	0.548	1460.846	0.03%	99.22%
57.0	4.992	0.486	1461.332	0.03%	99.25%
58.0	4.657	0.446	1461.778	0.03%	99.28%
59.0	4.395	0.423	1462.201	0.03%	99.31%
60.0	4.206	0.406	1462.608	0.03%	99.34%
61.0	4.038	0.393	1463.001	0.02%	99.37%
62.0	3.912	0.383	1463.384	0.02%	99.39%
63.0	3.807	0.375	1463.76	0.02%	99.42%
64.0	3.702	0.368	1464.128	0.02%	99.44%
65.0	3.639	0.363	1464.491	0.02%	99.47%
66.0	3.587	0.361	1464.852	0.02%	99.49%
67.0	3.545	0.359	1465.211	0.02%	99.52%
68.0	3.461	0.355	1465.566	0.02%	99.54%
69.0	3.398	0.350	1465.915	0.02%	99.57%
70.0	3.356	0.347	1466.262	0.02%	99.59%
71.0	3.293	0.344	1466.606	0.02%	99.61%
72.0	3.272	0.341	1466.947	0.02%	99.64%
73.0	3.220	0.339	1467.287	0.02%	99.66%
74.0	3.146	0.335	1467.622	0.02%	99.68%
75.0	3.115	0.331	1467.952	0.02%	99.70%

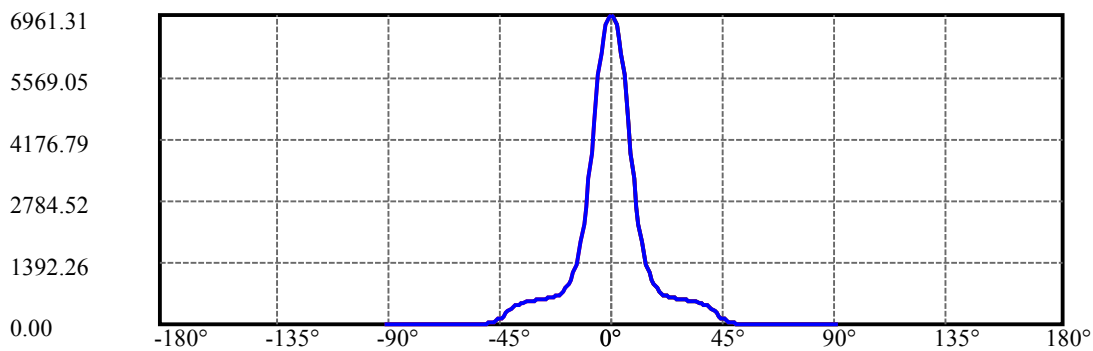
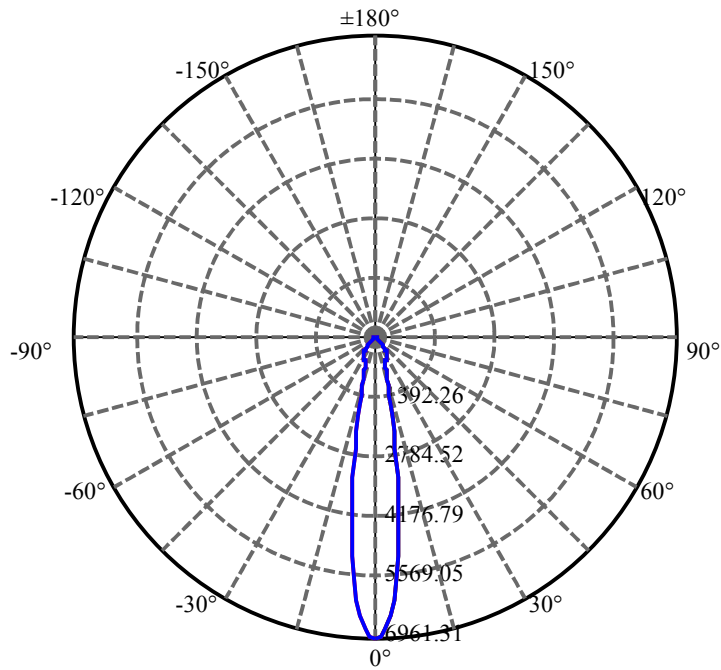
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.042	0.327	1468.279	0.02%	99.73%
77.0	2.979	0.321	1468.6	0.02%	99.75%
78.0	2.947	0.317	1468.917	0.02%	99.77%
79.0	2.905	0.314	1469.232	0.02%	99.79%
80.0	2.863	0.311	1469.543	0.02%	99.81%
81.0	2.832	0.308	1469.851	0.02%	99.83%
82.0	2.748	0.303	1470.153	0.02%	99.85%
83.0	2.695	0.296	1470.449	0.02%	99.87%
84.0	2.622	0.290	1470.739	0.02%	99.89%
85.0	2.507	0.280	1471.019	0.02%	99.91%
86.0	2.433	0.270	1471.289	0.02%	99.93%
87.0	2.391	0.264	1471.553	0.02%	99.95%
88.0	2.339	0.259	1471.812	0.02%	99.97%
89.0	2.276	0.253	1472.065	0.02%	99.98%
90.0	2.223	0.247	1472.312	0.02%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1059.03	65.90%	71.93%
0-40	1354.46	84.29%	92.00%
0-60	1462.61	91.01%	99.34%
0-90	1472.07	91.60%	99.98%
0-120	1472.07	91.60%	99.98%
0-180	1472.31	91.62%	100.00%
60-90	9.46	0.59%	0.64%
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%
0-33.90	1177.85	73.29%	80.00%

ZONAL LUMEN SUMMARY

0-10	436.72
10-20	349.16
20-30	273.15
30-40	295.43
40-50	100.94
50-60	7.21
60-70	3.65
70-80	3.28
80-90	2.52
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



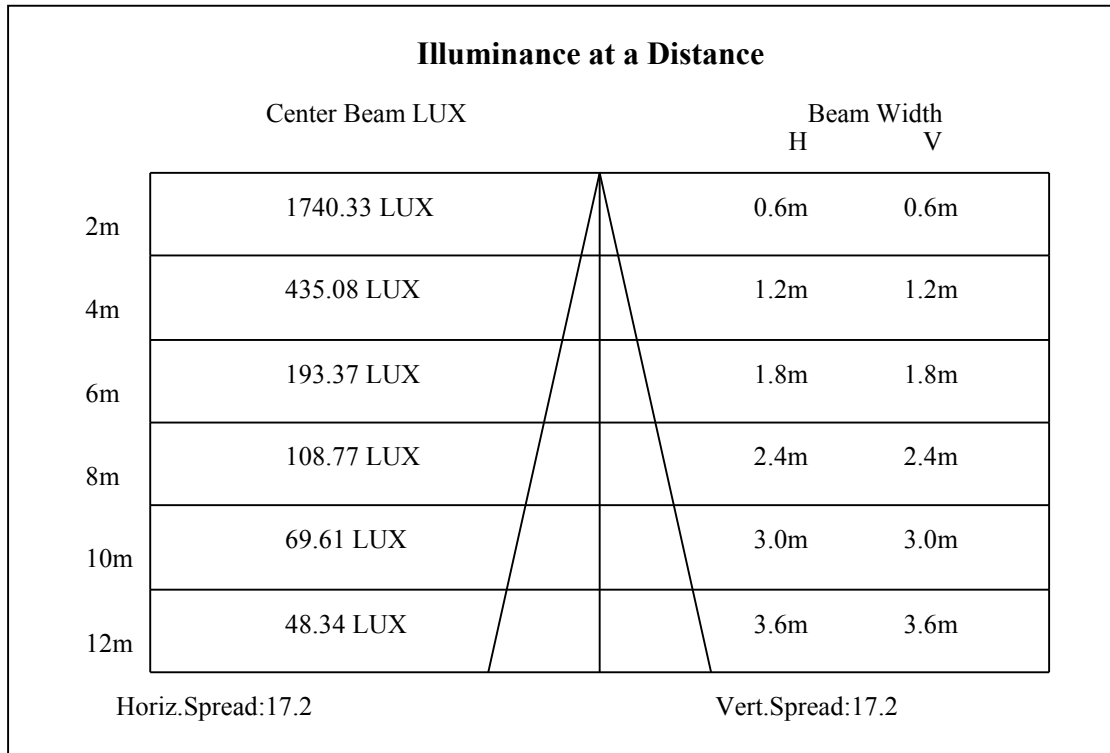
C0(Max): —————

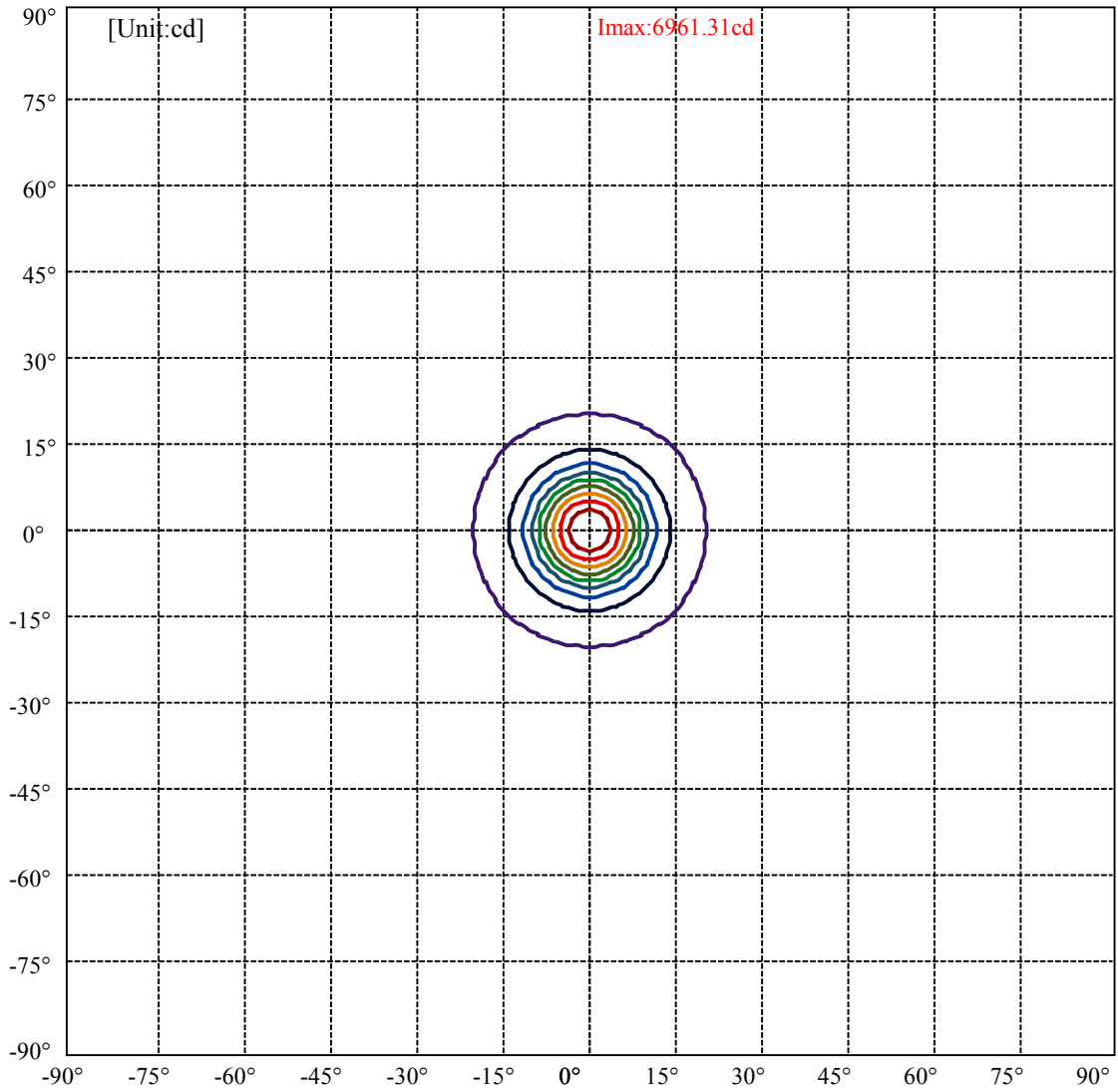
C0/C180: —————

C90/C270: —————

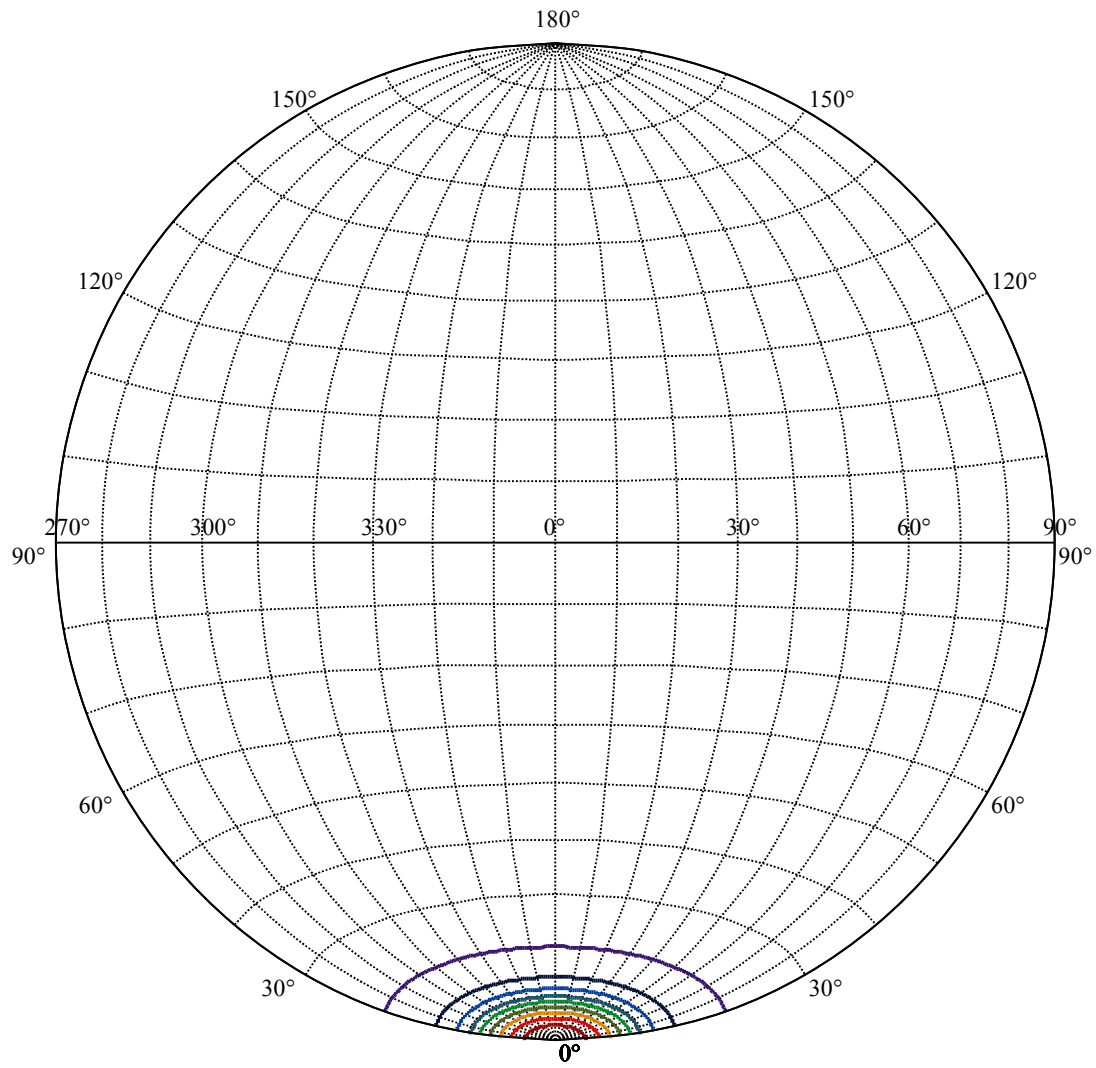
Field angle(10%Imax):C0/180Left:20.0 Right:20.0
:C90/270Left:20.0 Right:20.0

Beam Angle(50%Imax):C0/180Left:8.7 Right:8.7
:C90/270Left:8.7 Right:8.7





(10%Imax) 696.131	—
(20%Imax) 1392.26	—
(30%Imax) 2088.39	—
(40%Imax) 2784.52	—
(50%Imax) 3480.66	—
(60%Imax) 4176.79	—
(70%Imax) 4872.92	—
(80%Imax) 5569.05	—
(90%Imax) 6265.18	—



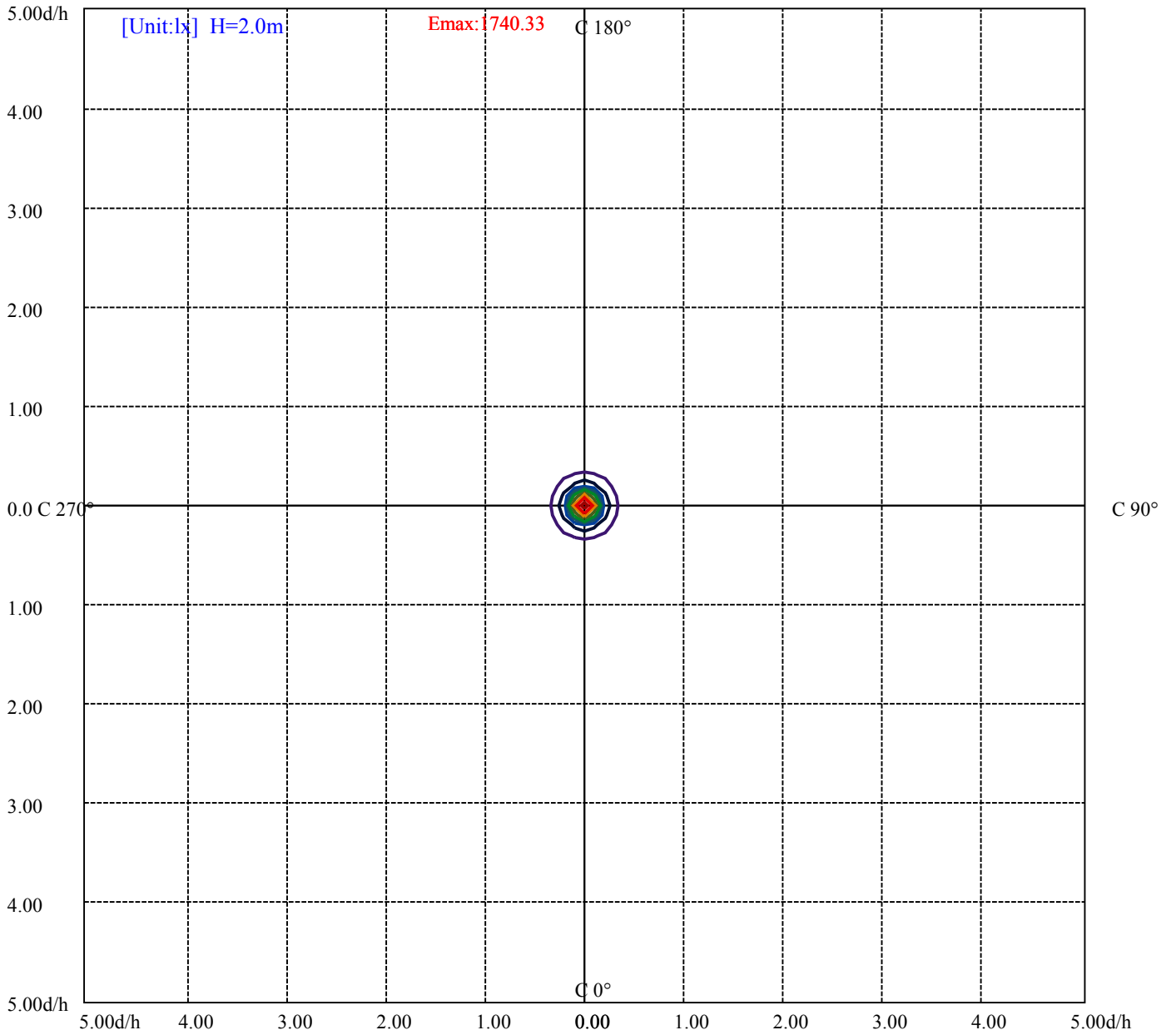
House

[Unit:cd]

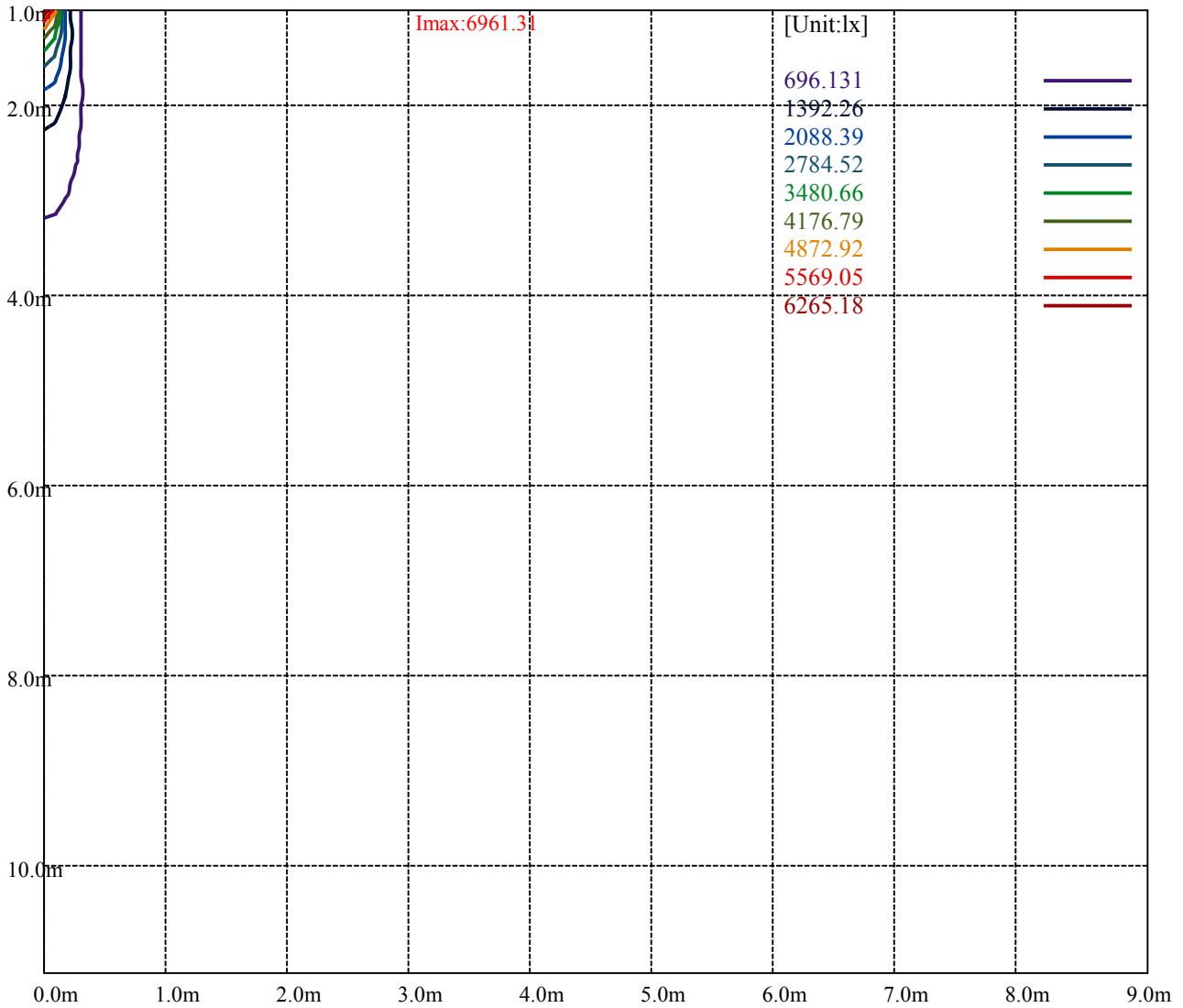
Road

Imax:6961.31

(10%Imax) 696.131	—
(20%Imax) 1392.26	—
(30%Imax) 2088.39	—
(40%Imax) 2784.52	—
(50%Imax) 3480.66	—
(60%Imax) 4176.79	—
(70%Imax) 4872.92	—
(80%Imax) 5569.05	—
(90%Imax) 6265.18	—



- (10%Emax) 174.0325
- (20%Emax) 348.065
- (30%Emax) 522.0975
- (40%Emax) 696.13
- (50%Emax) 870.1625
- (60%Emax) 1044.195
- (70%Emax) 1218.228
- (80%Emax) 1392.26
- (90%Emax) 1566.292



Luminance Table

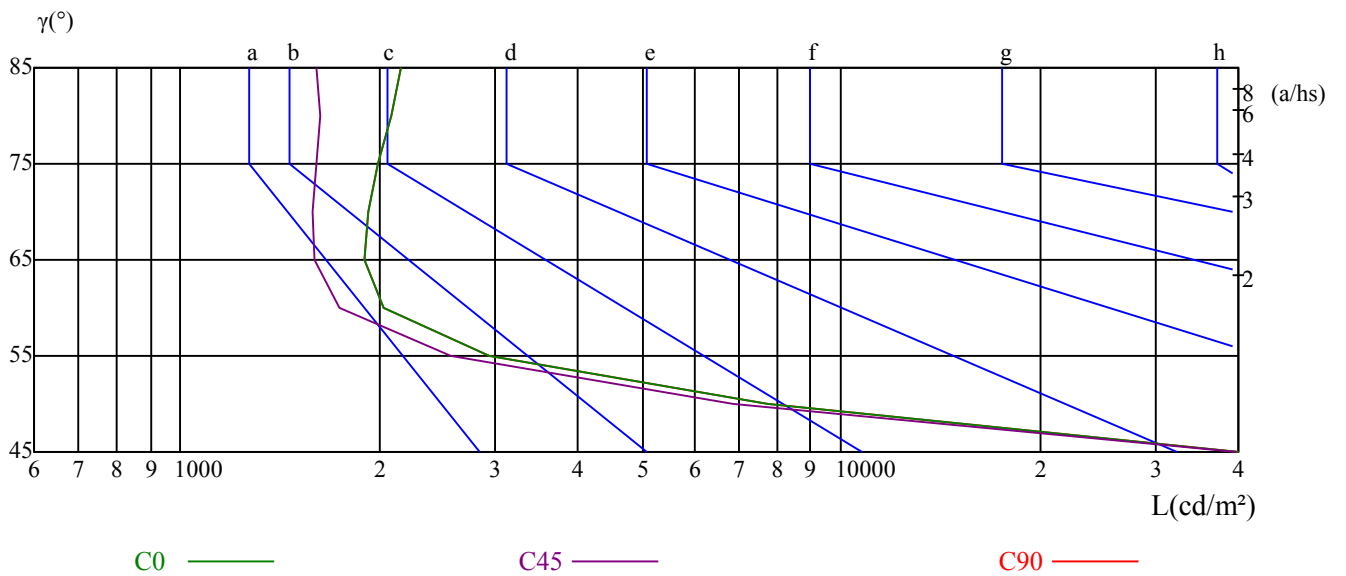
γ	45	50	55	60	65	70	75	80	85
C0	44356	7749	2935	2029	1898	1920	1991	2090	2153
C45	39815	6863	2562	1743	1600	1585	1602	1629	1611
C90	44356	7749	2935	2029	1898	1920	1991	2090	2153

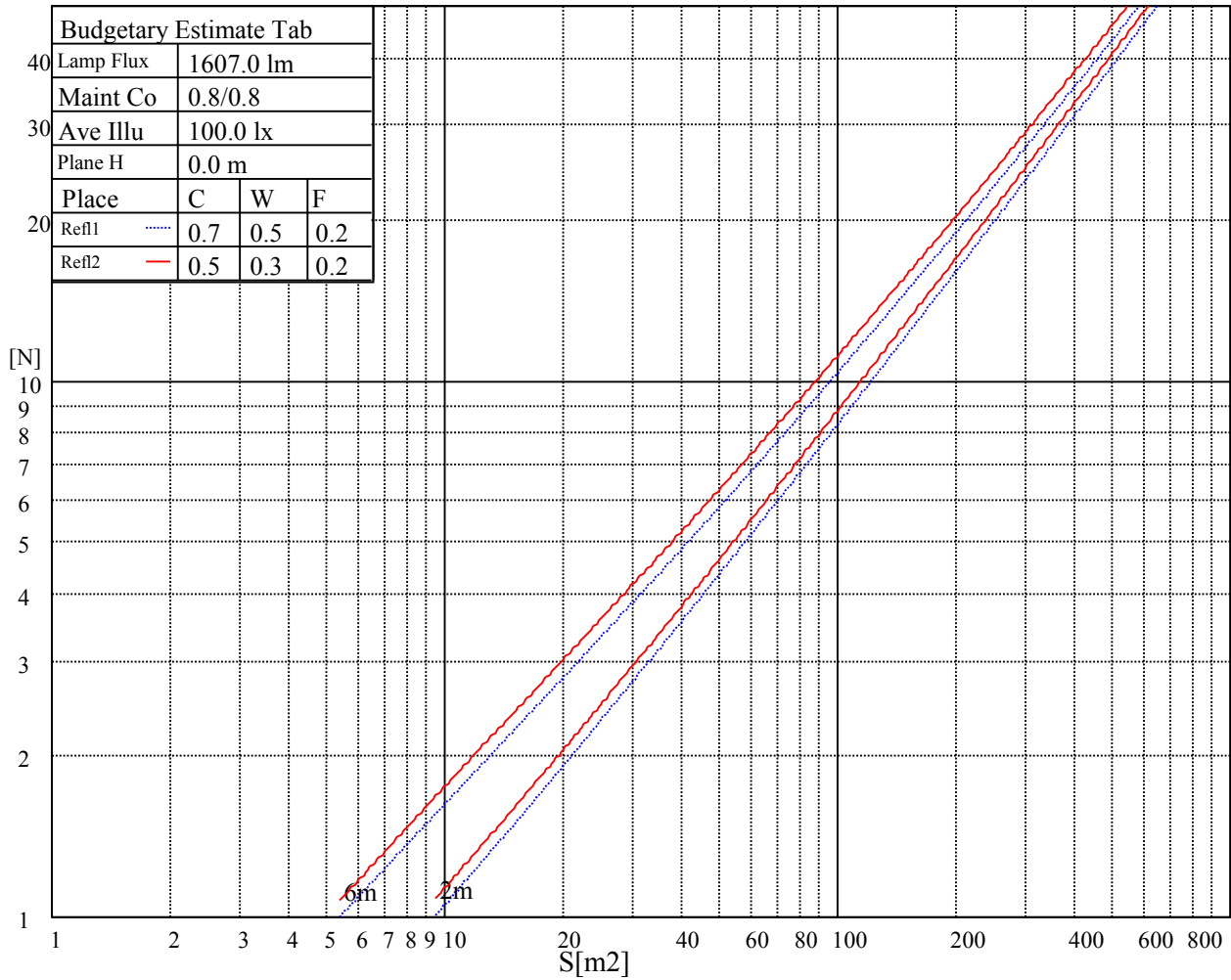
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3445	3445	3445	4814	4814	4814	11504	11504	11504

Glare Table

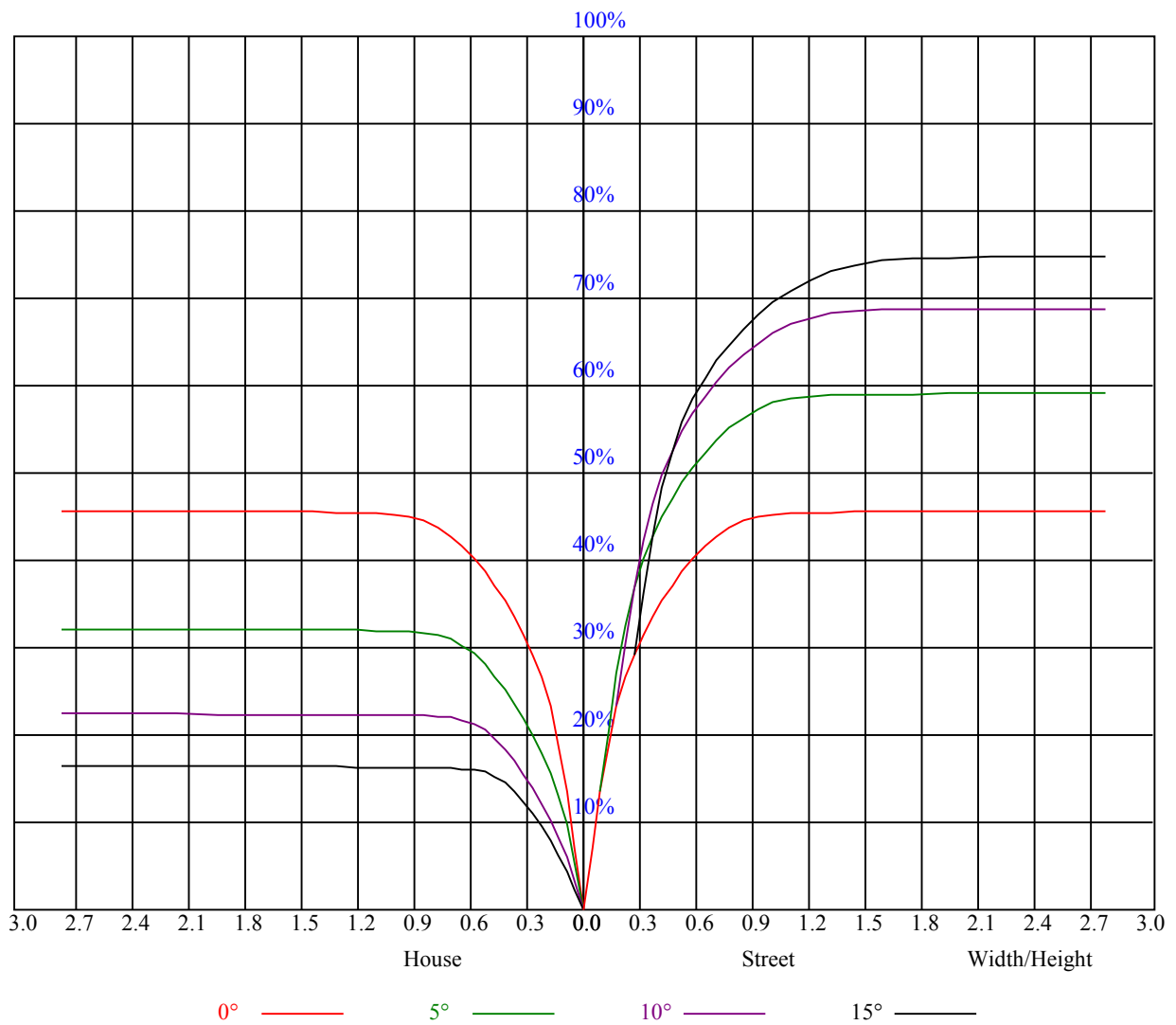
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

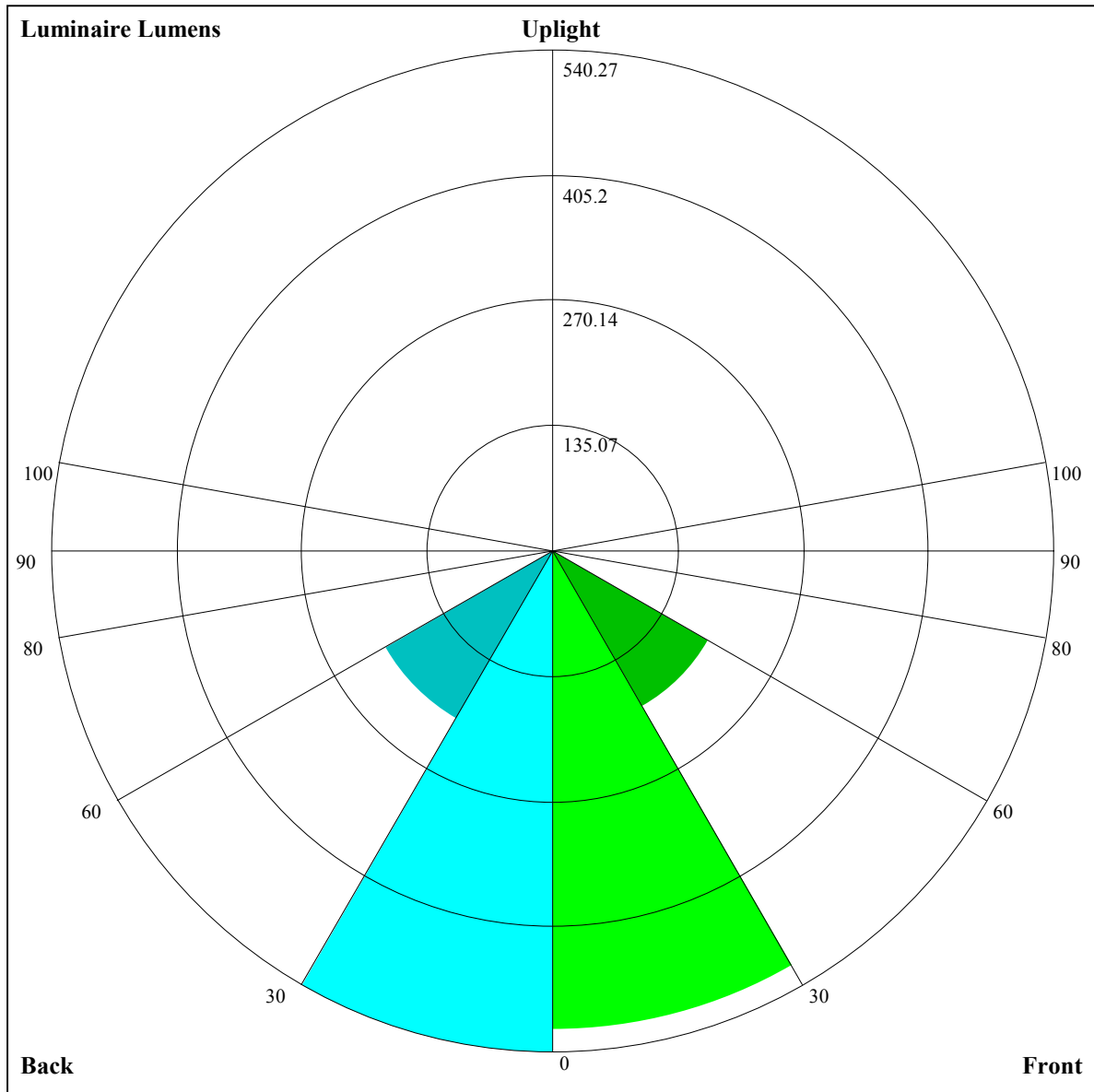
Luminance Limiting Curve





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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.02	1.00	0.98	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.80	0.79	0.77
4	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.69
6	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.66
7	0.73	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.63
8	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
9	0.67	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58
10	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55





Luminaire Lumens:

FL=516.38,FM=192.93,FH=3.49,FVH=1.38

BL=540.27,BM=208.43,BH=3.58,BVH=1.4

UL=0,UH=0

BUG Rating:B2-U0-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	6991.94	6905.51	6724.28	6437.32	6056.39	5433.81	4882.55	4139.15	3553.49
45.0	6902.16	7001.17	6995.29	6854.33	6644.57	6310.62	5766.92	5245.86	4533.50
90.0	7017.95	7011.24	6899.64	6626.95	6306.43	5891.94	5277.75	4731.52	4166.84
135.0	6933.20	7022.14	7042.28	6901.32	6689.88	6381.94	5988.43	5396.89	4874.16
180.0	6991.94	6951.66	6815.74	6575.77	6164.63	5751.81	5275.23	4741.59	4056.92
225.0	6902.16	6712.53	6344.19	5973.32	5526.95	5023.51	4338.84	3786.74	3254.78
270.0	7017.95	6916.42	6707.50	6322.37	5935.57	5467.37	4947.16	4237.32	3665.92
315.0	6933.20	6720.92	6338.31	5923.82	5431.29	4719.77	4127.40	3531.67	2847.84
360.0	6991.94	6905.51	6724.28	6437.32	6056.39	5433.81	4882.55	4139.15	3553.49
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3007.26	2070.87	1673.58	1673.58	1413.81	1169.31	1026.92	914.32	830.50
45.0	3950.36	3386.51	2855.39	2278.96	1901.38	1590.93	1348.45	1116.87	979.26
90.0	3599.63	3053.41	2456.00	1643.38	1643.38	1451.23	1199.68	1049.32	909.03
135.0	4309.48	3613.90	3088.65	2616.26	2111.99	1771.33	1501.16	1241.89	1085.82
180.0	3525.80	2902.38	2452.64	2066.68	1672.32	1428.16	1238.53	1060.65	948.22
225.0	2652.34	1650.51	1650.51	1523.47	1311.19	1139.94	977.50	880.00	798.03
270.0	3138.15	2641.43	2113.67	1773.01	1500.32	1283.00	1077.43	952.41	838.30
315.0	2048.22	1655.29	1585.98	1356.00	1168.30	996.04	888.98	808.01	744.16
360.0	3007.26	2070.87	1673.58	1673.58	1413.81	1169.31	1026.92	914.32	830.50
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	753.22	709.67	675.86	652.70	630.38	617.63	604.46	594.64	585.74
45.0	878.58	782.92	727.55	683.91	644.48	620.99	601.69	588.26	578.19
90.0	821.94	755.49	690.46	653.62	625.10	599.76	581.80	567.96	554.87
135.0	963.32	874.38	789.64	737.61	693.14	663.78	633.57	616.79	598.33
180.0	862.63	797.19	734.26	698.18	672.17	651.19	631.05	615.95	606.72
225.0	736.61	679.80	644.23	618.64	597.66	582.39	571.23	562.59	551.60
270.0	766.14	711.60	661.26	630.21	603.37	584.91	569.80	554.70	547.15
315.0	697.59	653.04	629.38	611.42	595.81	586.50	577.35	570.98	564.85
360.0	753.22	709.67	675.86	652.70	630.38	617.63	604.46	594.64	585.74
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	573.49	565.02	557.22	549.58	540.27	532.38	518.28	505.53	489.25
45.0	568.96	560.57	554.70	549.67	544.63	539.60	532.05	524.49	512.75
90.0	540.69	532.63	522.90	517.70	506.29	501.92	490.51	482.04	468.44
135.0	591.62	584.07	578.19	570.64	564.77	558.06	551.34	542.11	532.88
180.0	592.46	582.39	571.48	563.09	555.54	547.99	539.60	529.53	513.59
225.0	544.04	540.10	533.30	528.61	523.65	517.36	507.80	498.99	486.90
270.0	537.08	527.01	519.46	511.91	505.20	496.81	488.41	474.15	463.24
315.0	557.80	551.01	543.88	537.50	523.82	510.06	499.91	486.32	459.63
360.0	573.49	565.02	557.22	549.58	540.27	532.38	518.28	505.53	489.25
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	466.26	435.05	387.14	344.60	289.81	244.17	198.44	144.65	104.13
45.0	503.52	489.25	453.17	428.84	428.84	324.21	281.08	237.37	191.98
90.0	452.42	434.97	407.19	374.55	331.51	293.17	253.06	212.45	163.11
135.0	516.10	504.36	486.74	463.24	424.65	424.65	375.56	279.49	231.58
180.0	505.20	486.74	462.40	431.36	422.13	372.29	286.71	226.13	180.48
225.0	466.18	438.41	406.77	354.25	309.36	262.54	217.15	162.44	121.66
270.0	443.11	423.81	423.81	348.21	301.64	262.04	221.34	177.63	128.63
315.0	431.53	397.80	345.77	300.97	254.82	195.08	149.35	107.90	65.28
360.0	466.26	435.05	387.14	344.60	289.81	244.17	198.44	144.65	104.13

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	68.63	40.61	22.40	17.28	15.02	12.50	9.98	8.31	6.88
45.0	139.45	101.53	68.55	43.88	28.36	24.16	20.47	17.12	13.26
90.0	124.94	89.78	55.04	38.51	29.37	23.49	19.13	14.68	11.83
135.0	183.92	127.28	87.01	55.46	30.04	20.05	16.53	14.01	11.16
180.0	136.77	87.68	54.79	32.30	20.31	15.44	13.17	11.08	9.15
225.0	77.03	48.83	31.30	22.82	19.97	16.78	13.76	10.49	8.47
270.0	93.72	63.60	43.38	30.79	26.18	20.39	16.61	13.26	9.98
315.0	41.20	26.77	20.72	17.45	14.43	11.91	9.73	7.38	6.04
360.0	68.63	40.61	22.40	17.28	15.02	12.50	9.98	8.31	6.88
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.62	5.03	4.78	4.53	4.28	4.11	4.03	3.86	3.69
45.0	10.57	7.97	6.54	5.71	5.03	4.61	4.36	4.20	3.94
90.0	9.48	7.80	6.63	5.62	5.12	4.87	4.61	4.36	4.28
135.0	9.15	7.55	6.29	5.20	4.87	4.53	4.36	4.11	4.03
180.0	7.22	6.13	5.29	4.95	4.70	4.45	4.20	4.03	3.86
225.0	6.88	6.04	5.37	4.78	4.53	4.28	4.11	3.94	3.86
270.0	8.05	6.71	5.96	5.12	4.78	4.53	4.36	4.20	4.11
315.0	5.20	4.70	4.28	4.03	3.94	3.78	3.61	3.61	3.52
360.0	5.62	5.03	4.78	4.53	4.28	4.11	4.03	3.86	3.69
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.61	3.44	3.44	3.36	3.27	3.19	3.19	3.10	3.10
45.0	3.86	3.86	3.69	3.61	3.61	3.52	3.44	3.44	3.36
90.0	4.11	4.03	3.94	3.86	3.86	3.78	3.69	3.69	3.61
135.0	3.94	3.78	3.78	3.69	3.61	3.52	3.44	3.36	3.27
180.0	3.69	3.61	3.52	3.52	3.44	3.36	3.36	3.27	3.19
225.0	3.78	3.61	3.61	3.52	3.52	3.44	3.36	3.27	3.19
270.0	4.03	3.94	3.86	3.86	3.86	3.78	3.69	3.69	3.69
315.0	3.44	3.36	3.27	3.27	3.19	3.10	3.02	3.02	2.94
360.0	3.61	3.44	3.44	3.36	3.27	3.19	3.19	3.10	3.10
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.10	3.02	2.94	2.94	2.85	2.77	2.77	2.77	2.77
45.0	3.27	3.27	3.19	3.10	3.10	3.02	3.02	2.94	2.85
90.0	3.61	3.52	3.52	3.44	3.36	3.27	3.19	3.19	3.10
135.0	3.27	3.19	3.10	3.10	3.02	2.94	2.94	2.85	2.77
180.0	3.19	3.19	3.10	3.10	3.02	2.94	2.94	2.85	2.85
225.0	3.19	3.10	3.02	3.02	2.94	2.94	2.85	2.77	2.77
270.0	3.61	3.52	3.52	3.44	3.36	3.36	3.27	3.27	3.19
315.0	2.94	2.94	2.77	2.77	2.68	2.60	2.60	2.60	2.60
360.0	3.10	3.02	2.94	2.94	2.85	2.77	2.77	2.77	2.77
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.77	2.68	2.68	2.68	2.52	2.43	2.43	2.43	2.35
45.0	2.85	2.68	2.68	2.60	2.52	2.43	2.43	2.35	2.35
90.0	3.02	2.94	2.85	2.77	2.60	2.52	2.43	2.35	2.27
135.0	2.77	2.68	2.68	2.68	2.60	2.52	2.52	2.43	2.35
180.0	2.85	2.77	2.77	2.60	2.52	2.43	2.43	2.43	2.35
225.0	2.68	2.60	2.52	2.43	2.43	2.35	2.27	2.27	2.18
270.0	3.19	3.10	2.85	2.77	2.52	2.43	2.35	2.27	2.18
315.0	2.52	2.52	2.52	2.43	2.35	2.35	2.27	2.18	2.18
360.0	2.77	2.68	2.68	2.68	2.52	2.43	2.43	2.43	2.35

Intensity data(cd)

C/ γ ($^{\circ}$)	90.0
0.0	2.18
45.0	2.27
90.0	2.18
135.0	2.35
180.0	2.27
225.0	2.18
270.0	2.18
315.0	2.18
360.0	2.18