



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: 2-1793-N

Luminaire: 92.70.131.00

Report No:

Voltage(V): 34.9200

Test No: GC2019082206

Current(A): 0.3980

LampCAT: TRIDONIC SLE 13MM G7

Power (W): 13.9000

Lamp flux(lm): 1702.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 69

Width(mm): 69

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1480.01, Efficiency(%): 86.96% , Luminous Efficacy(lm/W): 106.48

Central intensity(cd): 8655.188, Maximum intensity(cd): 8655.188

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.6

[C90/270]Total=17.6

Field angle(10%Imax): [C0/180]Total=42.0

[C90/270]Total=42.0

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

Maximum s/h(1/4): C0_180=0.32 C90_270=0.32

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.96%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.740%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8655.188	0.000	0	.000%	.000%
1.0	8580.164	8.247	8.247	.485%	.557%
2.0	8330.977	24.272	32.519	1.426%	2.197%
3.0	7914.727	38.854	71.374	2.283%	4.823%
4.0	7410.727	51.299	122.673	3.014%	8.289%
5.0	6841.406	61.312	183.985	3.602%	12.431%
6.0	6142.219	68.232	252.217	4.009%	17.042%
7.0	5462.789	72.032	324.249	4.232%	21.909%
8.0	4839.891	73.734	397.984	4.332%	26.891%
9.0	4157.859	72.922	470.905	4.284%	31.818%
10.0	3539.250	69.656	540.561	4.093%	36.524%
11.0	3044.813	65.788	606.35	3.865%	40.969%
12.0	2603.461	61.744	668.093	3.628%	45.141%
13.0	2205.352	57.068	725.162	3.353%	48.997%
14.0	1914.047	52.728	777.89	3.098%	52.560%
15.0	1672.594	49.239	827.129	2.893%	55.887%
16.0	1464.075	45.961	873.09	2.700%	58.992%
17.0	1311.054	43.216	916.306	2.539%	61.912%
18.0	1155.396	40.666	956.972	2.389%	64.660%
19.0	1043.705	38.260	995.232	2.248%	67.245%
20.0	952.031	36.528	1031.76	2.146%	69.713%
21.0	861.743	34.828	1066.588	2.046%	72.066%
22.0	788.583	33.164	1099.752	1.949%	74.307%
23.0	729.450	31.852	1131.604	1.871%	76.459%
24.0	675.851	30.725	1162.329	1.805%	78.535%
25.0	634.113	29.786	1192.115	1.750%	80.548%
26.0	597.734	29.078	1221.193	1.708%	82.512%
27.0	559.287	28.307	1249.5	1.663%	84.425%
28.0	506.763	26.990	1276.49	1.586%	86.249%
29.0	452.566	25.099	1301.589	1.475%	87.945%
30.0	392.625	22.820	1324.409	1.341%	89.486%
31.0	329.513	20.096	1344.505	1.181%	90.844%
32.0	264.431	17.016	1361.52	1.000%	91.994%
33.0	201.811	13.736	1375.256	.807%	92.922%
34.0	149.337	10.627	1385.883	.624%	93.640%
35.0	101.060	7.776	1393.659	.457%	94.166%
36.0	71.641	5.499	1399.158	.323%	94.537%
37.0	53.880	4.094	1403.252	.241%	94.814%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	46.526	3.351	1406.603	.197%	95.040%
39.0	41.597	3.008	1409.611	.177%	95.243%
40.0	37.392	2.755	1412.366	.162%	95.429%
41.0	34.270	2.552	1414.918	.150%	95.602%
42.0	31.493	2.389	1417.307	.140%	95.763%
43.0	28.680	2.229	1419.536	.131%	95.914%
44.0	26.592	2.086	1421.622	.123%	96.055%
45.0	24.764	1.974	1423.596	.116%	96.188%
46.0	22.866	1.863	1425.459	.109%	96.314%
47.0	21.516	1.765	1427.224	.104%	96.433%
48.0	20.412	1.695	1428.919	.100%	96.548%
49.0	19.315	1.631	1430.55	.096%	96.658%
50.0	18.485	1.576	1432.126	.093%	96.765%
51.0	17.796	1.535	1433.661	.090%	96.868%
52.0	17.220	1.503	1435.164	.088%	96.970%
53.0	16.685	1.475	1436.639	.087%	97.070%
54.0	16.249	1.452	1438.09	.085%	97.168%
55.0	15.912	1.436	1439.526	.084%	97.265%
56.0	15.588	1.423	1440.949	.084%	97.361%
57.0	15.321	1.413	1442.363	.083%	97.456%
58.0	15.061	1.405	1443.767	.083%	97.551%
59.0	14.857	1.399	1445.166	.082%	97.646%
60.0	14.639	1.393	1446.56	.082%	97.740%
61.0	14.435	1.387	1447.947	.082%	97.834%
62.0	14.266	1.383	1449.33	.081%	97.927%
63.0	14.070	1.378	1450.708	.081%	98.020%
64.0	13.866	1.371	1452.079	.081%	98.113%
65.0	13.591	1.359	1453.438	.080%	98.205%
66.0	13.296	1.342	1454.779	.079%	98.295%
67.0	12.980	1.321	1456.101	.078%	98.384%
68.0	12.642	1.298	1457.399	.076%	98.472%
69.0	12.333	1.274	1458.673	.075%	98.558%
70.0	12.009	1.250	1459.923	.073%	98.643%
71.0	11.700	1.225	1461.148	.072%	98.726%
72.0	11.405	1.201	1462.35	.071%	98.807%
73.0	11.116	1.178	1463.527	.069%	98.886%
74.0	10.814	1.153	1464.68	.068%	98.964%
75.0	10.533	1.128	1465.808	.066%	99.040%

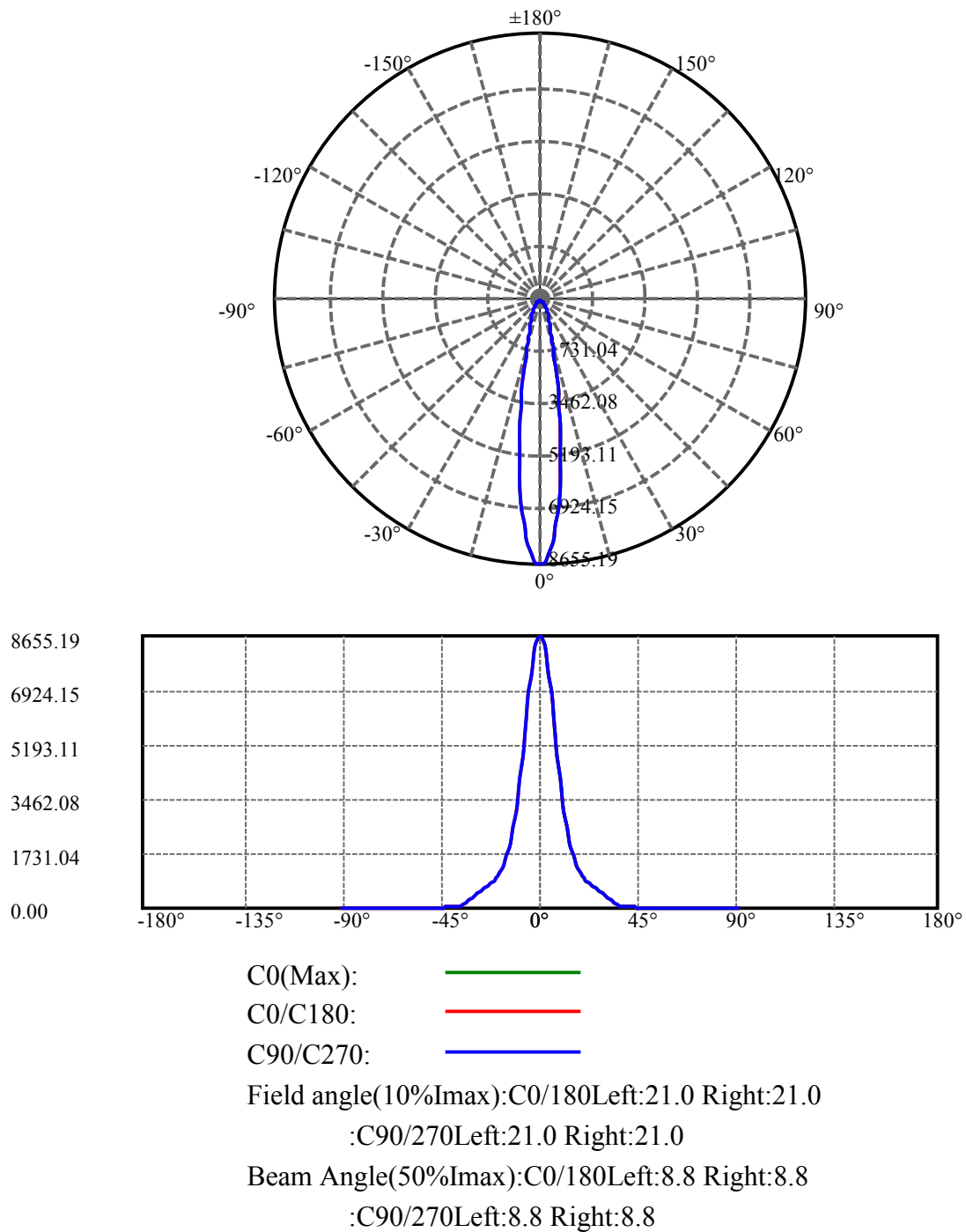
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	10.266	1.104	1466.912	.065%	99.115%
77.0	10.005	1.081	1467.993	.063%	99.188%
78.0	9.788	1.060	1469.052	.062%	99.260%
79.0	9.527	1.038	1470.09	.061%	99.330%
80.0	9.274	1.014	1471.104	.060%	99.398%
81.0	9.049	0.991	1472.095	.058%	99.465%
82.0	8.817	0.969	1473.064	.057%	99.531%
83.0	8.578	0.946	1474.009	.056%	99.595%
84.0	8.360	0.923	1474.932	.054%	99.657%
85.0	8.170	0.902	1475.834	.053%	99.718%
86.0	7.980	0.883	1476.717	.052%	99.777%
87.0	7.727	0.860	1477.577	.051%	99.836%
88.0	7.488	0.833	1478.41	.049%	99.892%
89.0	7.277	0.809	1479.22	.048%	99.947%
90.0	7.144	0.791	1480.01	.046%	100.000%

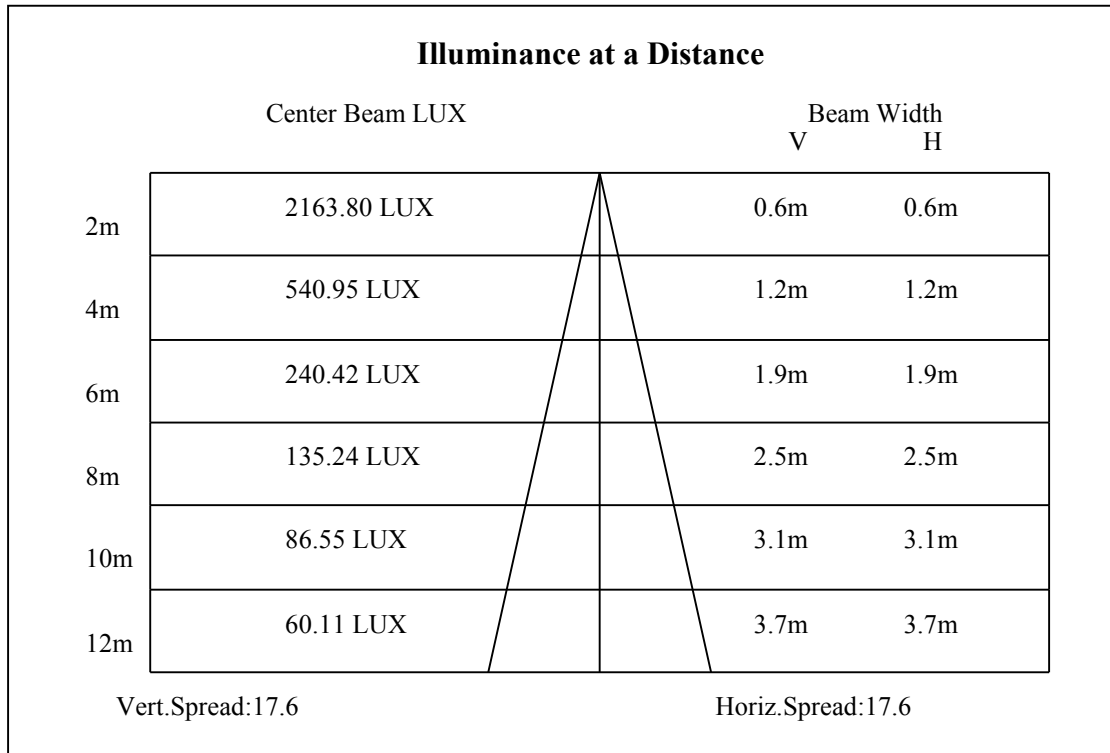
ZONAL LUMEN SUMMARY

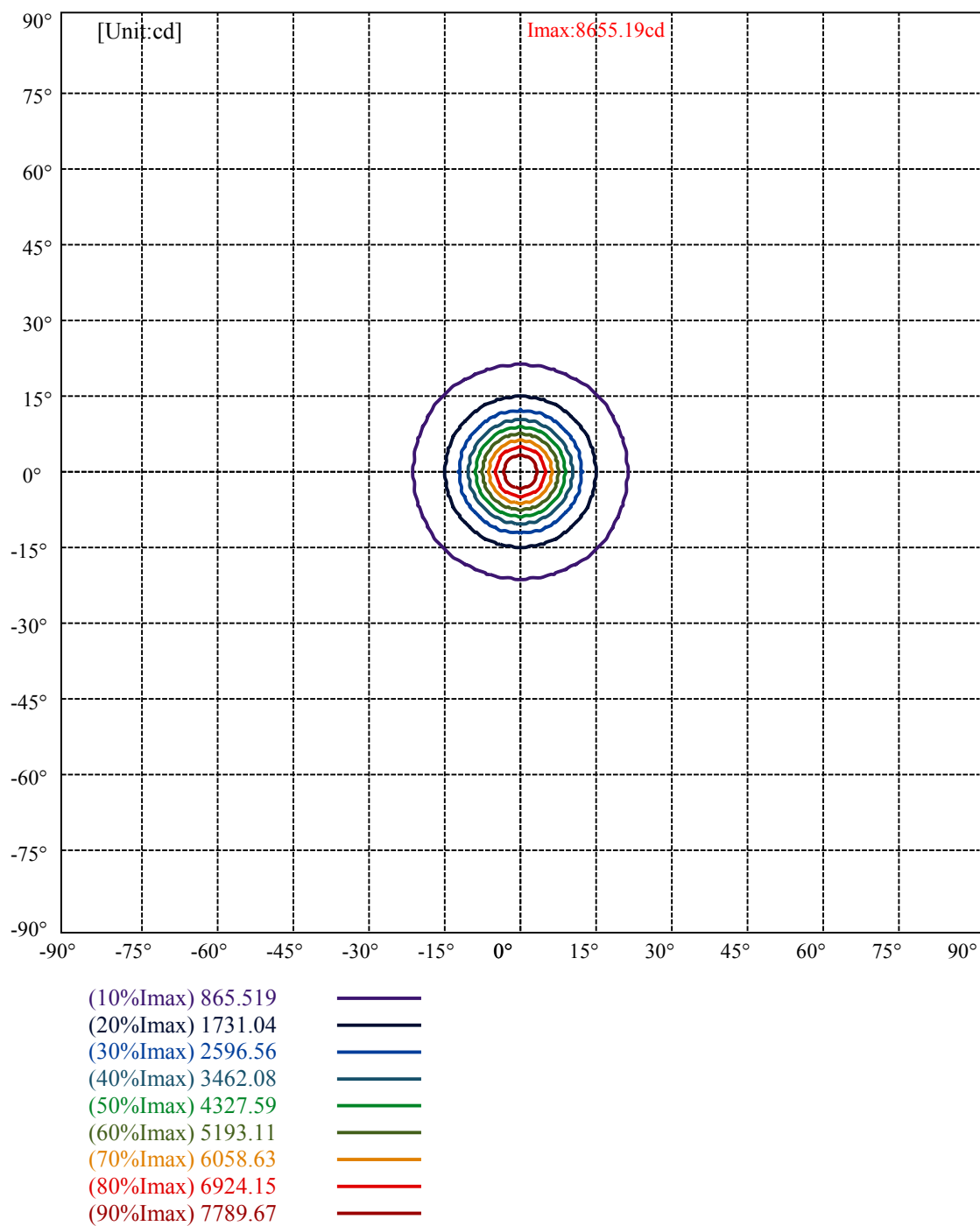
Zone	Lumens	%Lamp	%Fixt
0-30	1324.41	77.81%	89.49%
0-40	1412.37	82.98%	95.43%
0-60	1446.56	84.99%	97.74%
0-90	1479.22	86.91%	99.95%
0-120	1479.22	86.91%	99.95%
0-180	1480.01	86.96%	100.00%
60-90	34.05	2.00%	2.30%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.73	1184.01	69.57%	80.00%

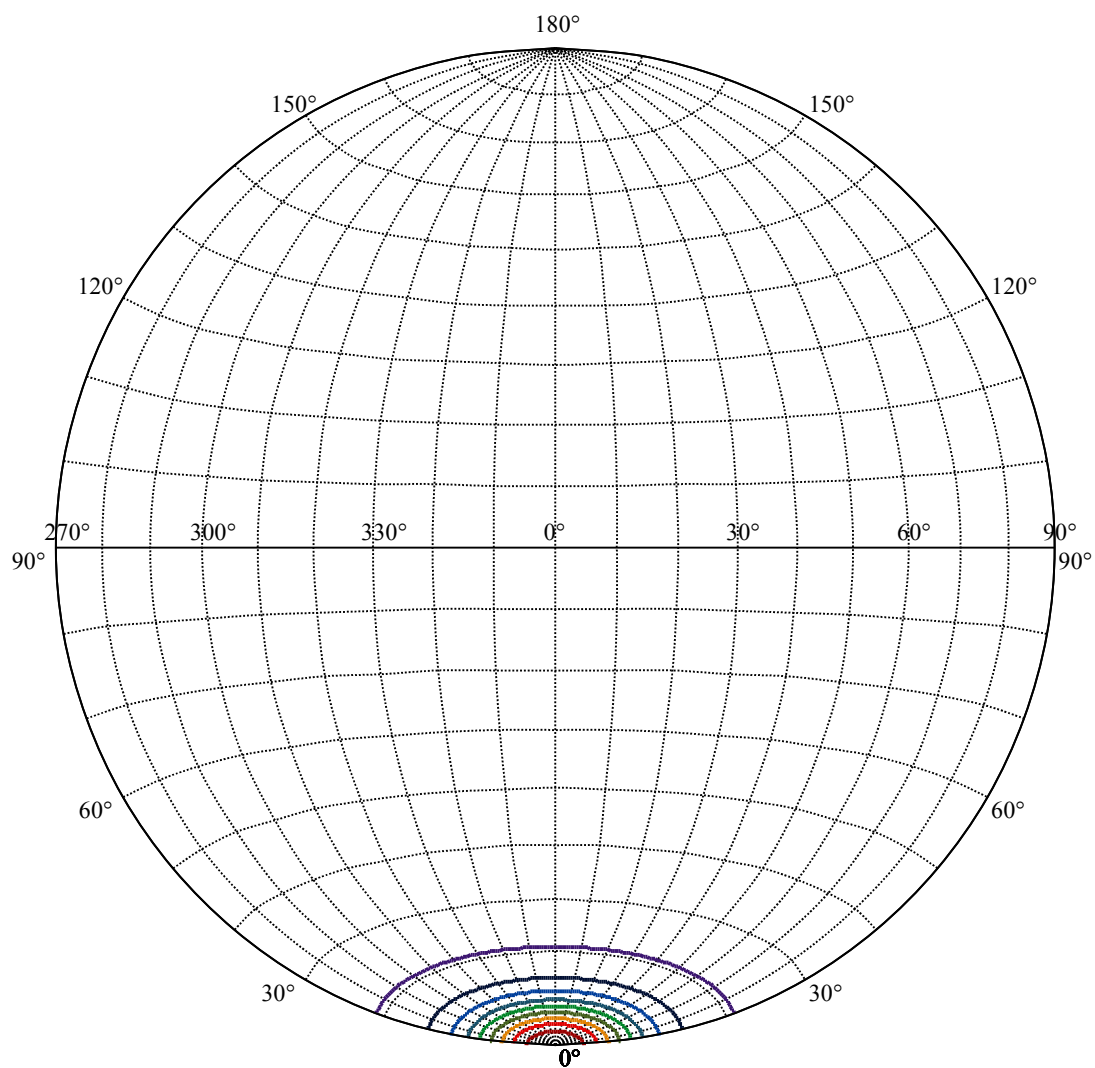
ZONAL LUMEN SUMMARY

0-10	540.56
10-20	491.20
20-30	292.65
30-40	87.96
40-50	19.76
50-60	14.43
60-70	13.36
70-80	11.18
80-90	8.12
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









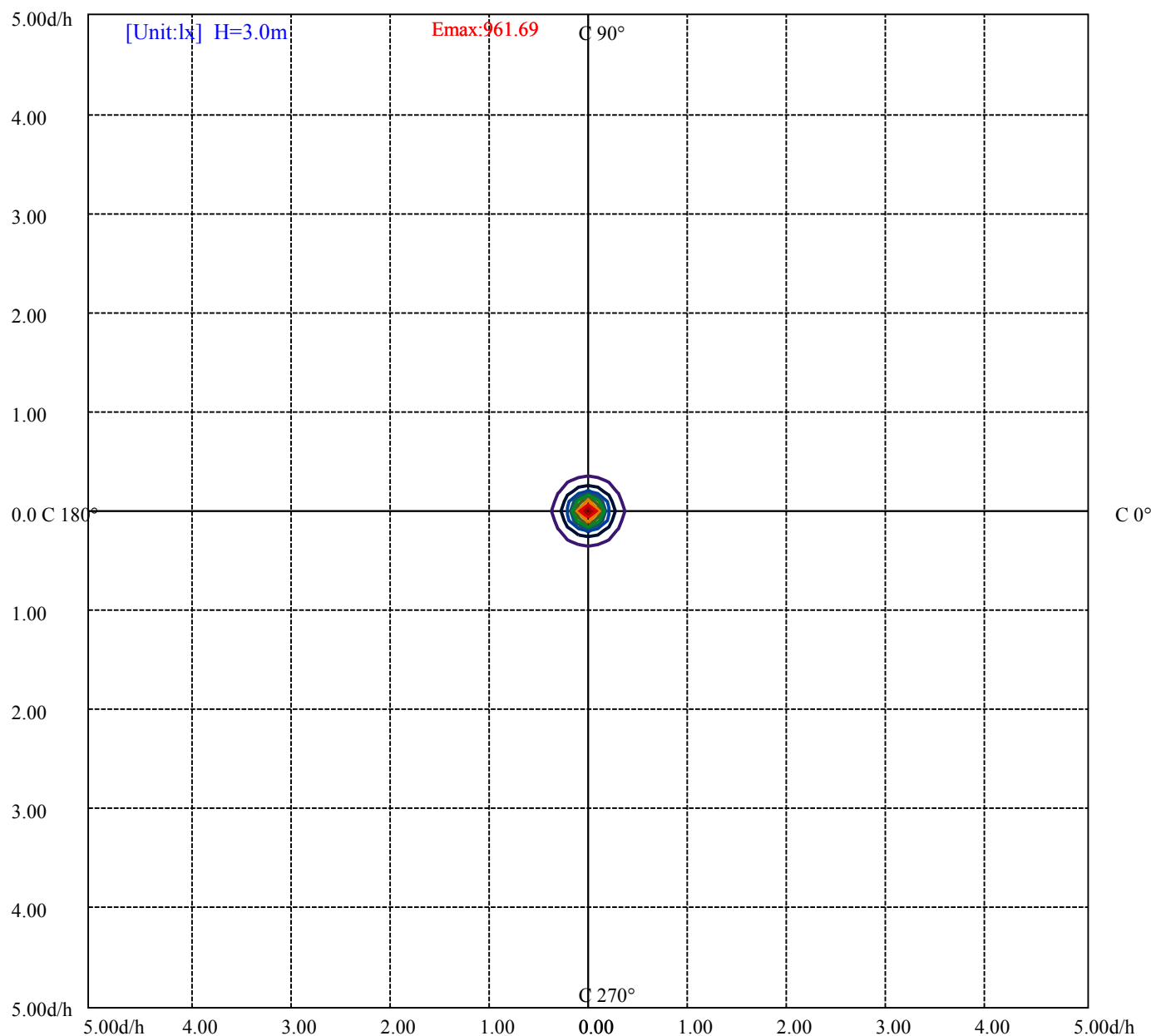
House

[Unit:cd]

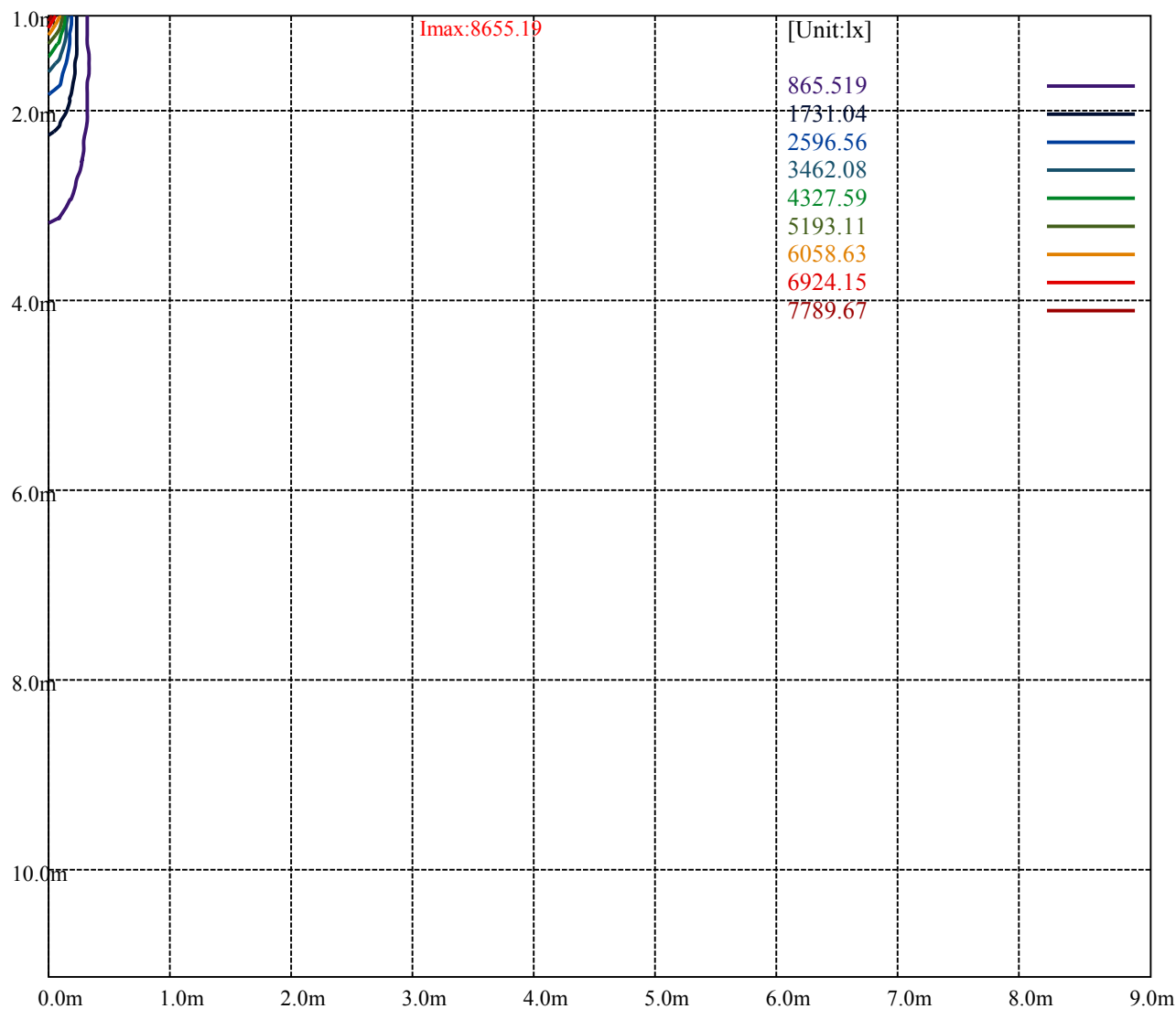
Road

Imax:8655.19

(10%Imax)	865.519	—
(20%Imax)	1731.04	—
(30%Imax)	2596.56	—
(40%Imax)	3462.08	—
(50%Imax)	4327.59	—
(60%Imax)	5193.11	—
(70%Imax)	6058.63	—
(80%Imax)	6924.15	—
(90%Imax)	7789.67	—



(10%Emax)	96.16867	—
(20%Emax)	192.3378	—
(30%Emax)	288.5056	—
(40%Emax)	384.6744	—
(50%Emax)	480.8433	—
(60%Emax)	577.0122	—
(70%Emax)	673.18	—
(80%Emax)	769.3489	—
(90%Emax)	865.5178	—



Luminance Table

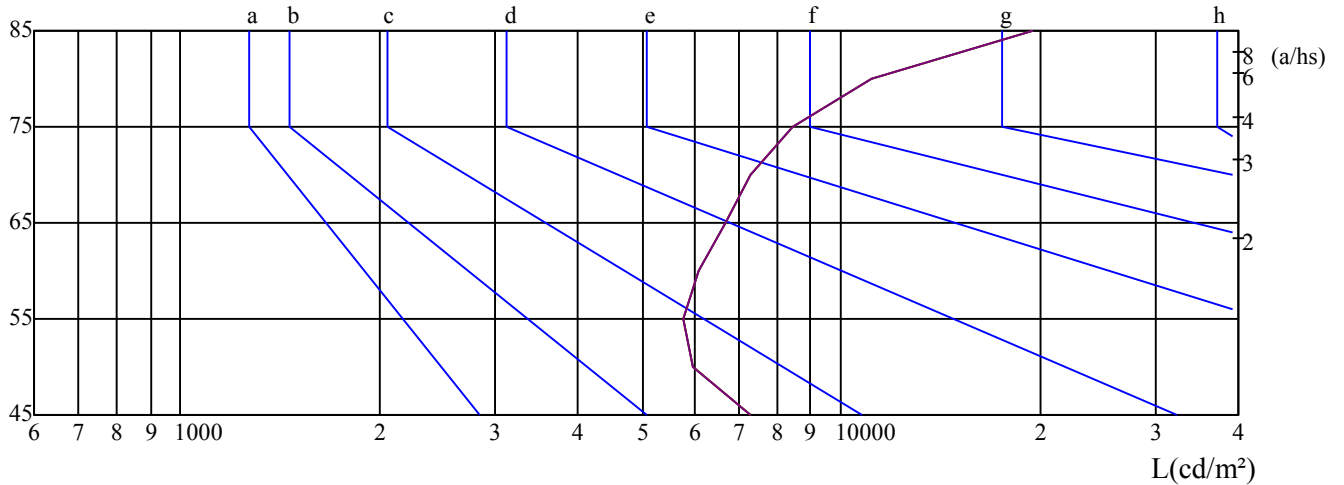
γ	45	50	55	60	65	70	75	80	85
C0	7292	5988	5776	6096	6697	7311	8474	11121	19520
C45	7292	5988	5776	6096	6697	7311	8474	11121	19520
C90	7292	5988	5776	6096	6697	7311	8474	11121	19520

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6697	6697	6697	8474	8474	8474	19520	19520	19520

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

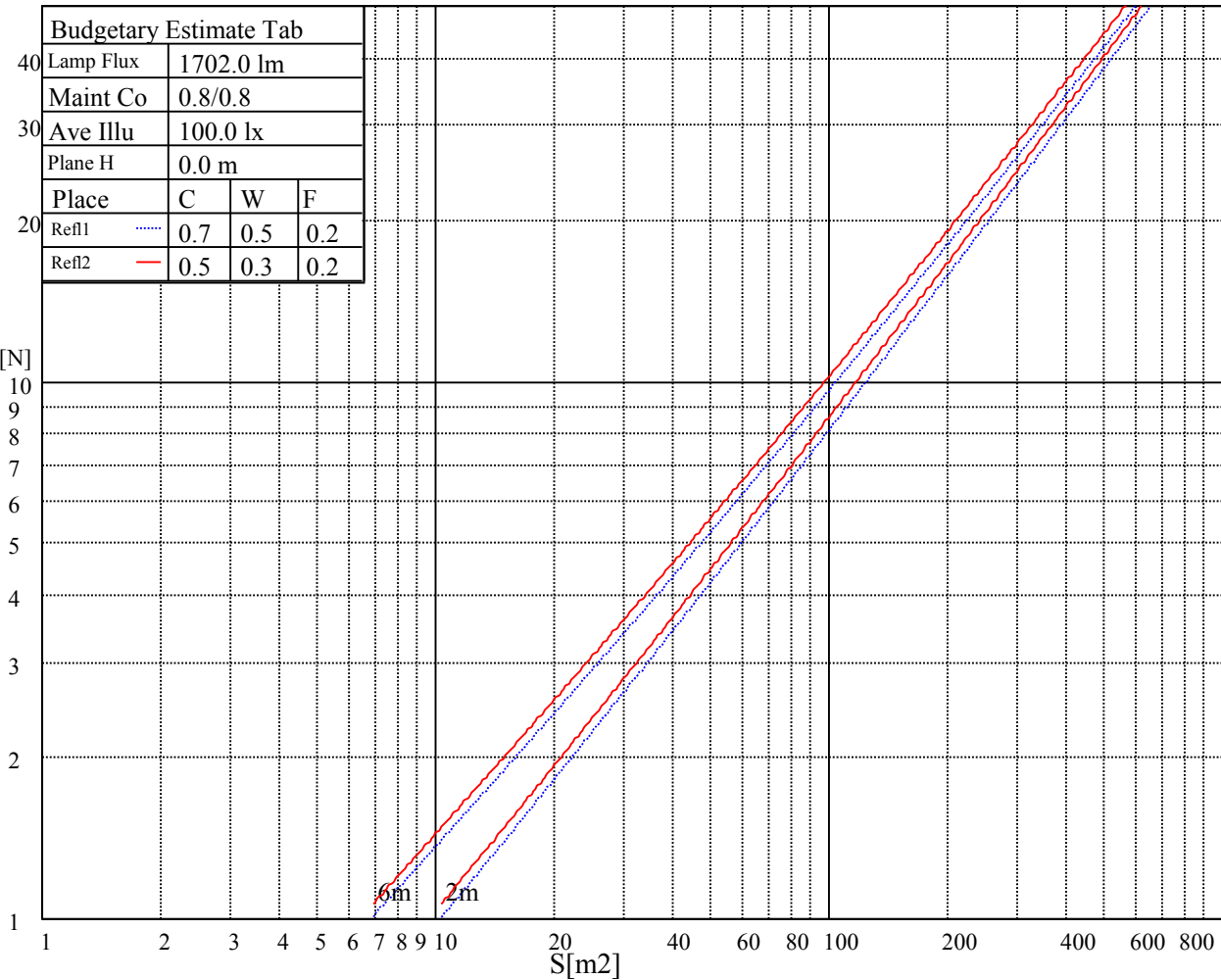
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

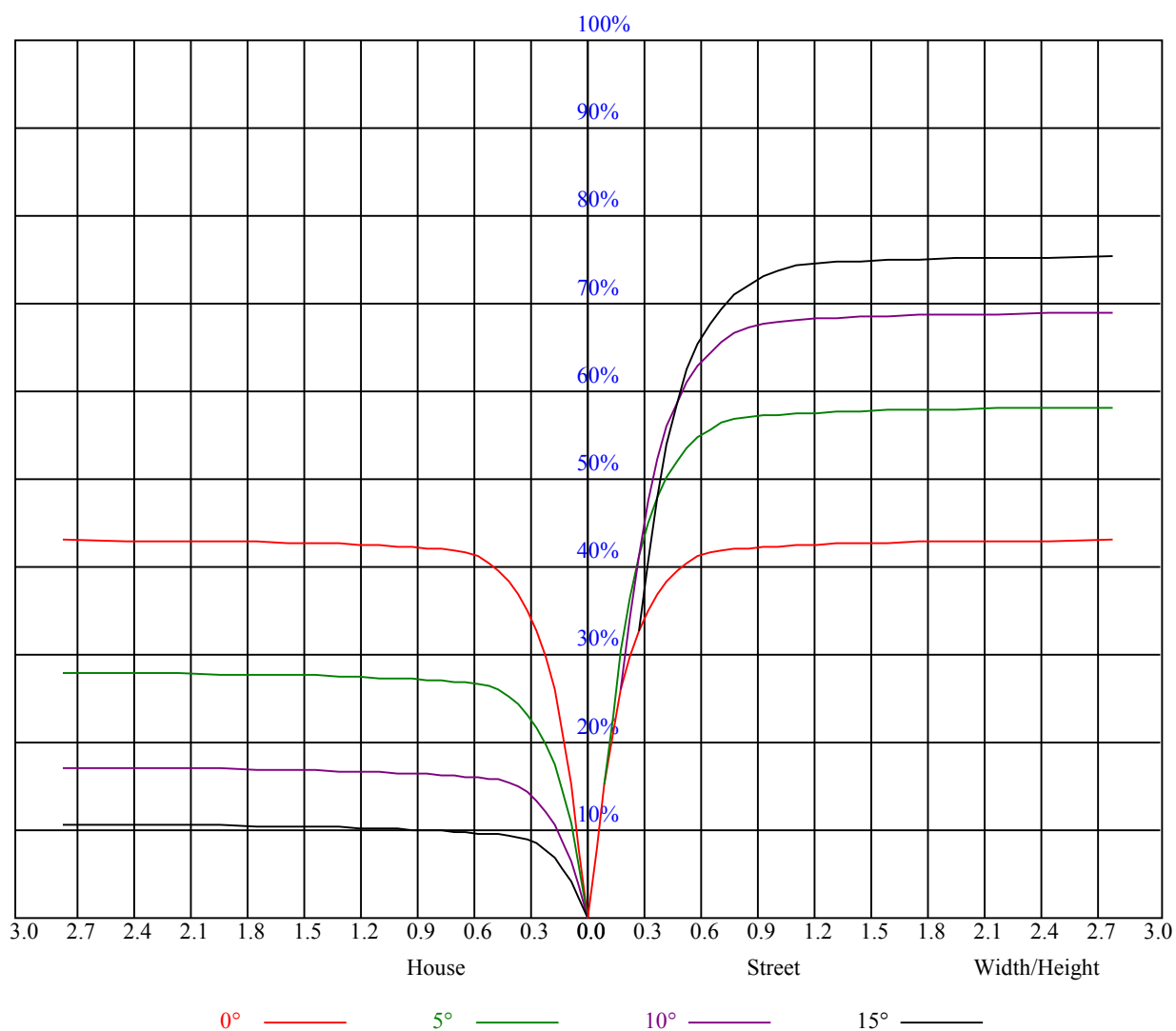
C0 ———

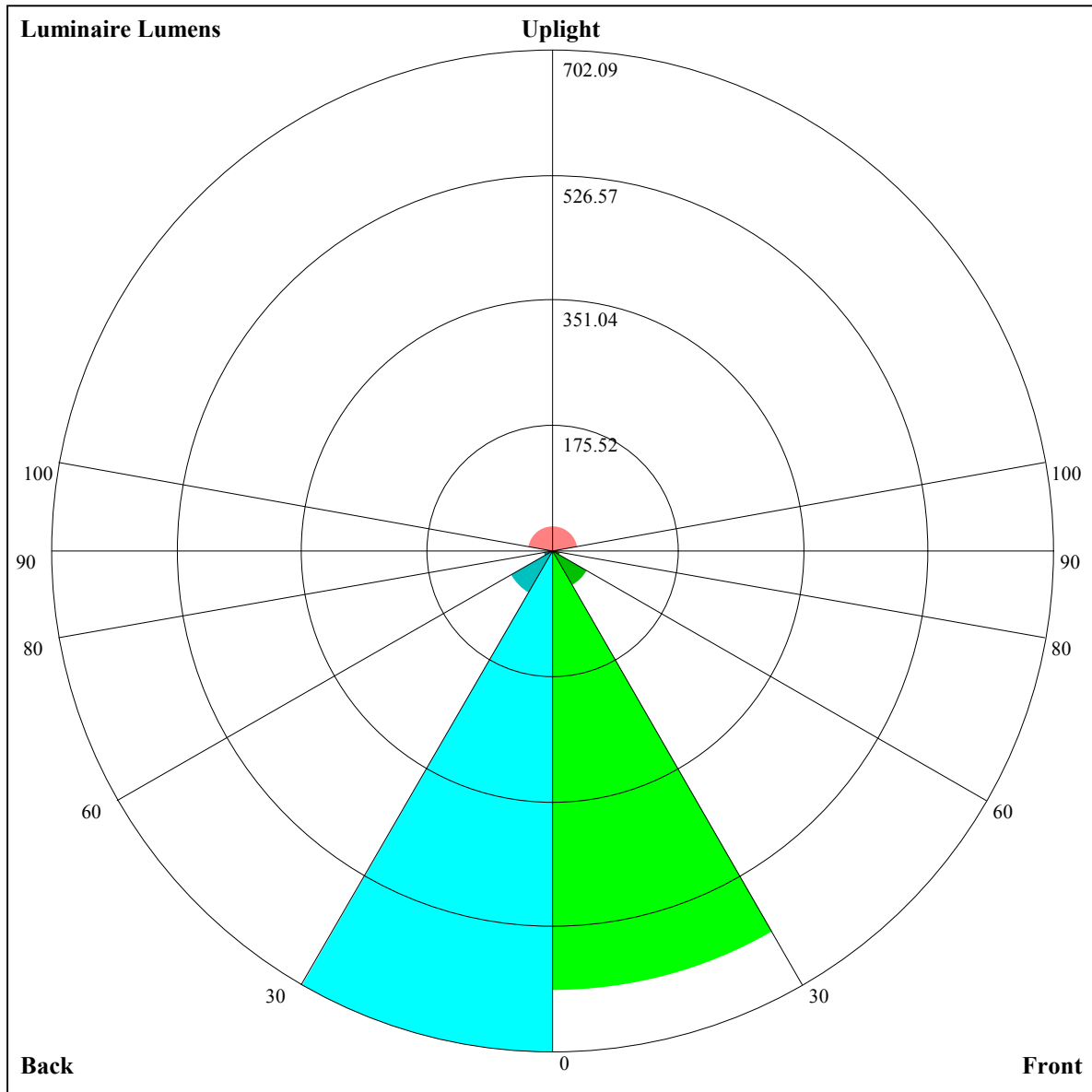
C45 ———

C90 ———



RHOC	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	1.04	1.04	1.04	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.90	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	0.86	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	0.77	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	0.79	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	0.68
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	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
9	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
10	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.62	0.61





Luminaire Lumens:

FL=617.71,FM=54.87,FH=12.11,FVH=4.39

BL=702.09,BM=68.37,BH=12.45,BVH=4.51

UL=7.79,UH=37.09

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	8659.13	8383.50	7906.50	7279.88	6693.19	6081.75	5288.63	4669.88	4089.38
45.0	8730.56	8614.13	8308.13	7917.75	7328.81	6693.19	6101.44	5383.69	4760.44
90.0	8695.69	8692.31	8524.69	8151.75	7705.13	7175.81	6419.81	5784.75	5126.06
135.0	8535.38	8782.88	8839.69	8741.25	8433.00	7984.13	7381.13	6663.38	6015.94
180.0	8659.13	8805.94	8785.69	8568.00	8170.31	7662.94	6996.38	6283.13	5630.63
225.0	8730.56	8673.19	8453.25	7986.94	7498.69	6915.38	6231.94	5520.38	4888.13
270.0	8695.69	8525.81	8161.31	7698.38	7096.50	6491.81	5774.06	5068.13	4450.50
315.0	8535.38	8163.56	7668.56	6973.88	6360.19	5726.25	4944.38	4329.00	3758.06
360.0	8659.13	8383.50	7906.50	7279.88	6693.19	6081.75	5288.63	4669.88	4089.38
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3479.63	2941.31	2541.38	2206.69	1880.44	1667.25	1468.69	1319.63	1177.88
45.0	4088.81	3477.94	2988.56	2577.38	2171.25	1908.00	1689.75	1467.56	1319.63
90.0	4332.94	3742.31	3216.94	2707.88	2298.94	1999.69	1702.13	1534.50	1357.88
135.0	5291.44	4554.56	3925.69	3353.06	2747.25	2354.06	2031.75	1748.25	1524.94
180.0	4988.81	4195.13	3613.50	3108.38	2630.25	2234.25	1946.25	1694.25	1487.81
225.0	4183.31	3532.50	3021.19	2541.38	2207.81	1895.63	1657.69	1483.88	1338.19
270.0	3791.81	3204.00	2750.06	2363.63	1971.56	1723.50	1528.31	1342.13	1185.75
315.0	3106.13	2666.25	2301.19	1969.31	1735.31	1530.00	1356.19	1122.41	1096.37
360.0	3479.63	2941.31	2541.38	2206.69	1880.44	1667.25	1468.69	1319.63	1177.88
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1067.06	957.94	862.88	792.00	726.19	680.06	634.50	597.38	563.63
45.0	1179.00	1063.69	944.44	860.06	783.00	709.88	664.31	628.88	592.31
90.0	1121.34	1078.03	977.51	875.48	803.14	739.07	679.95	641.64	606.88
135.0	1364.06	1209.38	1087.88	991.13	890.44	817.31	748.69	696.94	655.31
180.0	1334.25	1112.51	1071.90	963.45	870.41	802.29	736.59	682.37	641.31
225.0	1115.55	1076.18	981.51	869.01	808.82	749.25	694.46	648.39	612.90
270.0	1062.00	946.69	853.31	780.19	713.81	664.88	618.75	577.69	546.19
315.0	999.90	905.23	836.83	762.64	712.86	672.86	629.55	599.63	563.34
360.0	1067.06	957.94	862.88	792.00	726.19	680.06	634.50	597.38	563.63
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	510.75	435.94	370.69	307.13	286.31	176.06	128.03	85.89	58.56
45.0	559.69	508.50	442.69	382.50	302.63	286.31	182.25	131.34	80.49
90.0	577.24	535.28	483.58	422.16	351.51	285.13	227.98	167.91	113.12
135.0	622.13	584.44	549.56	494.44	417.38	354.94	296.44	250.82	164.25
180.0	606.88	570.66	528.69	475.93	402.81	342.79	279.84	203.29	147.94
225.0	579.49	537.86	477.34	410.29	349.65	280.86	212.96	157.44	108.51
270.0	510.75	453.38	402.19	344.81	289.69	217.24	165.88	121.05	80.16
315.0	507.38	428.06	365.79	303.75	236.14	172.13	121.11	76.95	55.46
360.0	510.75	435.94	370.69	307.13	286.31	176.06	128.03	85.89	58.56
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	50.34	44.33	39.49	35.44	32.46	29.93	27.34	25.14	23.51
45.0	56.87	48.04	42.53	38.48	34.93	32.23	29.42	27.23	25.20
90.0	74.70	53.16	48.26	43.26	38.48	35.72	32.96	29.48	27.39
135.0	115.26	73.86	55.86	49.44	43.82	39.49	36.34	32.79	30.26
180.0	102.04	61.65	52.37	46.74	40.67	37.07	34.37	31.05	28.69
225.0	62.61	52.14	46.74	41.23	37.35	34.54	31.50	28.74	26.66
270.0	61.54	53.49	47.03	41.68	38.08	34.71	31.67	29.25	26.94
315.0	49.78	44.38	39.94	36.51	33.36	30.49	28.35	25.76	24.08
360.0	50.34	44.33	39.49	35.44	32.46	29.93	27.34	25.14	23.51

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	22.11	20.36	19.46	18.56	17.55	16.99	16.43	15.98	15.53
45.0	23.29	21.83	20.42	19.41	18.51	17.55	16.99	16.48	15.86
90.0	25.48	23.34	21.94	20.76	19.74	18.79	18.06	17.49	16.93
135.0	28.01	25.54	23.96	22.56	21.04	20.25	19.29	18.62	17.94
180.0	26.72	24.36	22.73	21.43	20.08	19.18	18.28	17.49	16.99
225.0	24.53	22.95	21.49	20.36	19.35	18.39	17.72	17.10	16.65
270.0	25.31	23.51	21.99	21.04	19.86	18.96	18.34	17.83	17.16
315.0	22.67	21.04	20.14	19.18	18.39	17.78	17.27	16.76	16.43
360.0	22.11	20.36	19.46	18.56	17.55	16.99	16.43	15.98	15.53
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	15.24	14.96	14.68	14.51	14.23	14.12	13.95	13.78	13.67
45.0	15.53	15.30	14.96	14.79	14.63	14.34	14.23	14.06	13.89
90.0	16.43	16.03	15.75	15.47	15.19	14.96	14.74	14.57	14.34
135.0	17.38	16.99	16.54	16.20	15.92	15.69	15.41	15.13	14.96
180.0	16.37	15.86	15.53	15.24	14.91	14.79	14.51	14.34	14.23
225.0	16.20	15.86	15.58	15.36	15.08	14.85	14.68	14.46	14.29
270.0	16.76	16.48	16.03	15.69	15.47	15.13	14.91	14.63	14.40
315.0	16.09	15.81	15.64	15.30	15.08	14.96	14.68	14.51	14.34
360.0	15.24	14.96	14.68	14.51	14.23	14.12	13.95	13.78	13.67
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.50	13.22	12.99	12.71	12.32	12.04	11.81	11.53	11.25
45.0	13.78	13.67	13.39	13.11	12.83	12.38	12.21	11.87	11.53
90.0	14.23	14.06	13.84	13.50	13.16	12.83	12.49	12.15	11.87
135.0	14.68	14.46	14.29	14.01	13.67	13.39	12.94	12.66	12.26
180.0	13.95	13.89	13.67	13.50	13.28	12.99	12.60	12.26	11.98
225.0	14.12	14.01	13.67	13.33	13.05	12.66	12.38	11.93	11.70
270.0	14.18	13.89	13.50	13.16	12.83	12.49	12.15	11.87	11.53
315.0	14.12	13.73	13.39	13.05	12.71	12.38	12.09	11.81	11.48
360.0	13.50	13.22	12.99	12.71	12.32	12.04	11.81	11.53	11.25
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.91	10.63	10.35	10.07	9.84	9.62	9.39	9.11	8.89
45.0	11.25	10.97	10.69	10.41	10.13	9.90	9.68	9.45	9.23
90.0	11.59	11.31	10.97	10.69	10.41	10.13	9.96	9.68	9.39
135.0	11.98	11.76	11.42	11.08	10.86	10.52	10.29	10.01	9.73
180.0	11.64	11.36	11.08	10.80	10.46	10.18	9.96	9.73	9.51
225.0	11.42	11.03	10.80	10.58	10.24	10.01	9.79	9.56	9.28
270.0	11.25	10.97	10.63	10.35	10.13	9.90	9.68	9.45	9.17
315.0	11.19	10.91	10.58	10.29	10.07	9.79	9.56	9.23	9.00
360.0	10.91	10.63	10.35	10.07	9.84	9.62	9.39	9.11	8.89
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.66	8.49	8.27	8.10	7.93	7.76	7.54	7.20	6.92
45.0	8.94	8.78	8.55	8.33	8.16	7.93	7.76	7.65	7.31
90.0	9.17	8.89	8.61	8.38	8.10	7.88	7.71	7.48	7.37
135.0	9.45	9.23	8.94	8.66	8.44	8.16	7.93	7.71	7.54
180.0	9.28	9.00	8.83	8.55	8.38	8.16	7.88	7.71	7.48
225.0	9.11	8.89	8.66	8.44	8.27	8.10	7.88	7.71	7.43
270.0	8.94	8.72	8.44	8.27	8.04	7.93	7.76	7.31	7.14
315.0	8.83	8.55	8.33	8.16	8.04	7.93	7.37	7.14	7.03
360.0	8.66	8.49	8.27	8.10	7.93	7.76	7.54	7.20	6.92

Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	6.92
45.0	7.14
90.0	7.20
135.0	7.31
180.0	7.26
225.0	7.20
270.0	7.09
315.0	7.03
360.0	6.92