



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86 750 3771111
Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client: NT

LumCAT: 61-0212-1

Luminaire: 92.70.427.00

Report No: 20250519-B011

Ballast type: AC

Test No: 20250519-C011

Voltage(V): 36.780

LampCAT: CITIZEN CLU701

Current(A): 0.352

Lamp flux(lm): 1347.9

Power (W): 12.940

Number of Lamps: 1

PF: 0.000

Length(mm): 45

Width(mm): 45

Phm Type: C

Height(mm): 21

Photometric Results

Lumens(lm): 1166.85, Efficiency(%): 86.57% , Luminous Efficacy(lm/W): 90.17

Central intensity(cd): 1250.743, Maximum intensity(cd): 1277.721

Angle of maximum intensity: C=0.0 γ =11.0

Beam Angle(50%Imax): [C0/180]Total=58.0

[C90/270]Total=58.0

Field angle(10%Imax): [C0/180]Total=77.8

[C90/270]Total=77.8

Maximum s/h(1/2): C0_180=0.97 C90_270=0.97

Maximum s/h(1/4): C0_180=0.85 C90_270=0.85

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.57%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.767%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1250.743	0.000	0	0.00%	0.00%
1.0	1250.210	1.197	1.197	0.09%	0.10%
2.0	1250.876	3.590	4.786	0.27%	0.41%
3.0	1253.208	5.989	10.775	0.44%	0.92%
4.0	1256.072	8.399	19.175	0.62%	1.64%
5.0	1259.736	10.823	29.998	0.80%	2.57%
6.0	1263.599	13.261	43.258	0.98%	3.71%
7.0	1267.263	15.709	58.967	1.17%	5.05%
8.0	1271.593	18.170	77.138	1.35%	6.61%
9.0	1274.723	20.637	97.774	1.53%	8.38%
10.0	1276.389	23.087	120.861	1.71%	10.36%
11.0	1277.721	25.521	146.381	1.89%	12.55%
12.0	1276.256	27.919	174.3	2.07%	14.94%
13.0	1273.857	30.263	204.564	2.25%	17.53%
14.0	1266.996	32.523	237.086	2.41%	20.32%
15.0	1259.136	34.680	271.766	2.57%	23.29%
16.0	1246.280	36.711	308.477	2.72%	26.44%
17.0	1232.158	38.596	347.073	2.86%	29.74%
18.0	1212.507	40.307	387.381	2.99%	33.20%
19.0	1177.243	41.577	428.957	3.08%	36.76%
20.0	1147.740	42.554	471.511	3.16%	40.41%
21.0	1119.856	43.542	515.053	3.23%	44.14%
22.0	1076.158	44.130	559.183	3.27%	47.92%
23.0	1013.096	43.838	603.022	3.25%	51.68%
24.0	970.171	43.361	646.383	3.22%	55.40%
25.0	907.136	42.686	689.069	3.17%	59.05%
26.0	844.293	41.343	730.411	3.07%	62.60%
27.0	775.423	39.627	770.038	2.94%	65.99%
28.0	703.222	37.436	807.474	2.78%	69.20%
29.0	639.227	35.122	842.596	2.61%	72.21%
30.0	565.500	32.527	875.124	2.41%	75.00%
31.0	500.566	29.667	904.791	2.20%	77.54%
32.0	442.907	27.029	931.82	2.01%	79.86%
33.0	379.565	24.230	956.051	1.80%	81.93%
34.0	328.460	21.427	977.478	1.59%	83.77%
35.0	281.611	18.947	996.424	1.41%	85.39%
36.0	230.719	16.313	1012.737	1.21%	86.79%
37.0	190.079	13.724	1026.461	1.02%	87.97%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	167.817	11.946	1038.407	0.89%	88.99%
39.0	124.179	9.967	1048.374	0.74%	89.85%
40.0	101.411	7.868	1056.241	0.58%	90.52%
41.0	83.819	6.596	1062.837	0.49%	91.09%
42.0	69.284	5.562	1068.4	0.41%	91.56%
43.0	58.905	4.748	1073.148	0.35%	91.97%
44.0	51.298	4.159	1077.308	0.31%	92.33%
45.0	45.197	3.708	1081.016	0.28%	92.64%
46.0	41.580	3.394	1084.41	0.25%	92.93%
47.0	37.969	3.164	1087.574	0.23%	93.21%
48.0	35.351	2.964	1090.537	0.22%	93.46%
49.0	33.106	2.811	1093.349	0.21%	93.70%
50.0	31.141	2.679	1096.027	0.20%	93.93%
51.0	29.329	2.558	1098.586	0.19%	94.15%
52.0	27.697	2.447	1101.033	0.18%	94.36%
53.0	26.379	2.352	1103.385	0.17%	94.56%
54.0	24.820	2.257	1105.642	0.17%	94.75%
55.0	23.481	2.156	1107.798	0.16%	94.94%
56.0	22.415	2.074	1109.872	0.15%	95.12%
57.0	21.283	1.998	1111.87	0.15%	95.29%
58.0	20.350	1.925	1113.795	0.14%	95.45%
59.0	19.471	1.862	1115.657	0.14%	95.61%
60.0	18.731	1.805	1117.462	0.13%	95.77%
61.0	18.132	1.759	1119.221	0.13%	95.92%
62.0	17.679	1.726	1120.946	0.13%	96.07%
63.0	17.326	1.702	1122.649	0.13%	96.21%
64.0	17.133	1.691	1124.34	0.13%	96.36%
65.0	16.933	1.686	1126.026	0.13%	96.50%
66.0	16.780	1.682	1127.708	0.12%	96.65%
67.0	16.706	1.684	1129.391	0.12%	96.79%
68.0	16.653	1.690	1131.081	0.13%	96.93%
69.0	16.587	1.696	1132.777	0.13%	97.08%
70.0	16.560	1.702	1134.479	0.13%	97.23%
71.0	16.500	1.709	1136.188	0.13%	97.37%
72.0	16.453	1.713	1137.901	0.13%	97.52%
73.0	16.420	1.719	1139.62	0.13%	97.67%
74.0	16.380	1.724	1141.345	0.13%	97.81%
75.0	16.340	1.729	1143.074	0.13%	97.96%

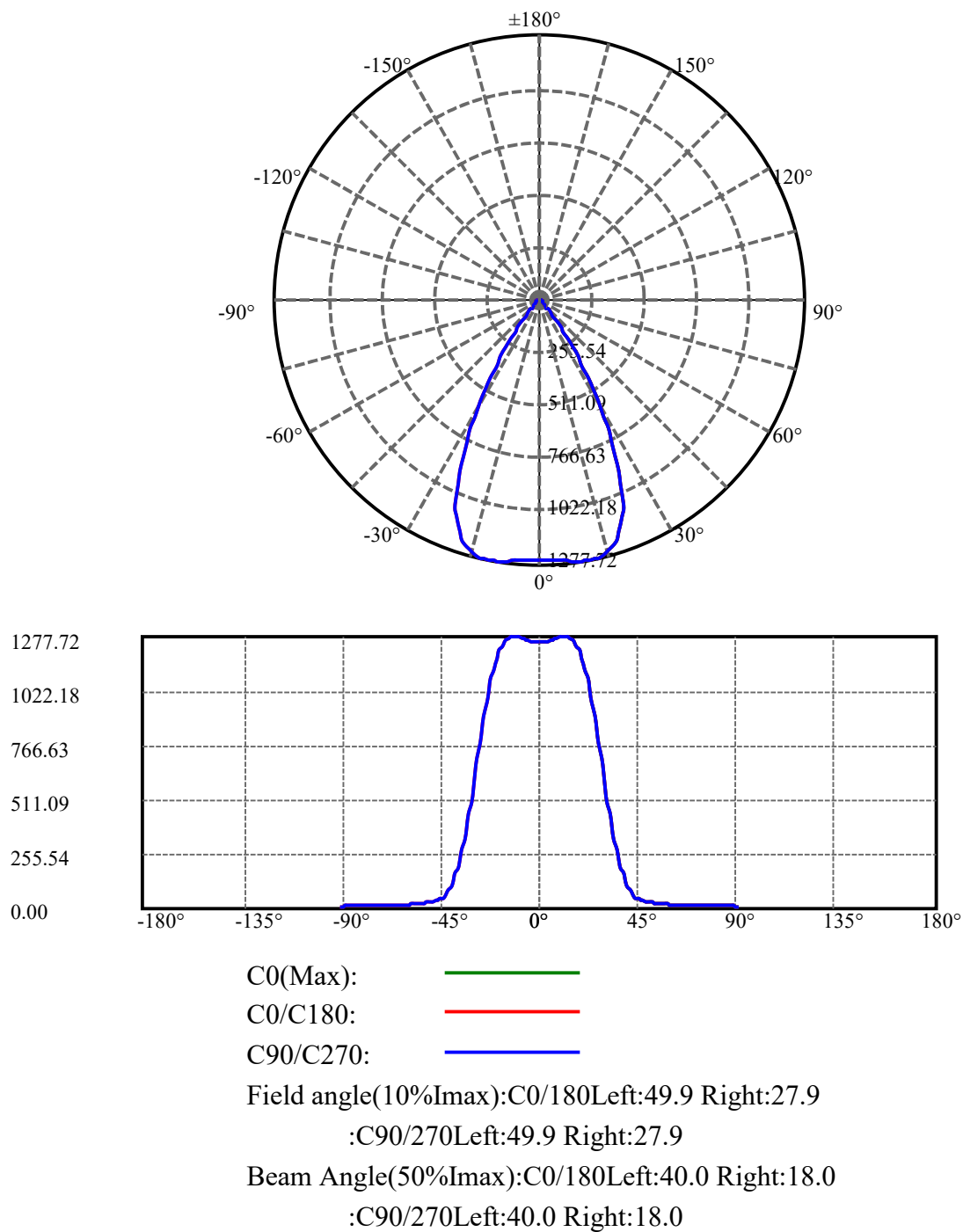
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	16.307	1.733	1144.807	0.13%	98.11%
77.0	16.233	1.735	1146.542	0.13%	98.26%
78.0	16.140	1.733	1148.275	0.13%	98.41%
79.0	16.020	1.728	1150.003	0.13%	98.56%
80.0	15.820	1.717	1151.719	0.13%	98.70%
81.0	15.554	1.697	1153.416	0.13%	98.85%
82.0	15.294	1.673	1155.089	0.12%	98.99%
83.0	14.955	1.644	1156.733	0.12%	99.13%
84.0	14.555	1.608	1158.341	0.12%	99.27%
85.0	14.122	1.565	1159.906	0.12%	99.40%
86.0	13.629	1.517	1161.423	0.11%	99.53%
87.0	13.009	1.458	1162.881	0.11%	99.66%
88.0	12.363	1.390	1164.27	0.10%	99.78%
89.0	11.724	1.320	1165.591	0.10%	99.89%
90.0	11.238	1.259	1166.85	0.09%	100.00%

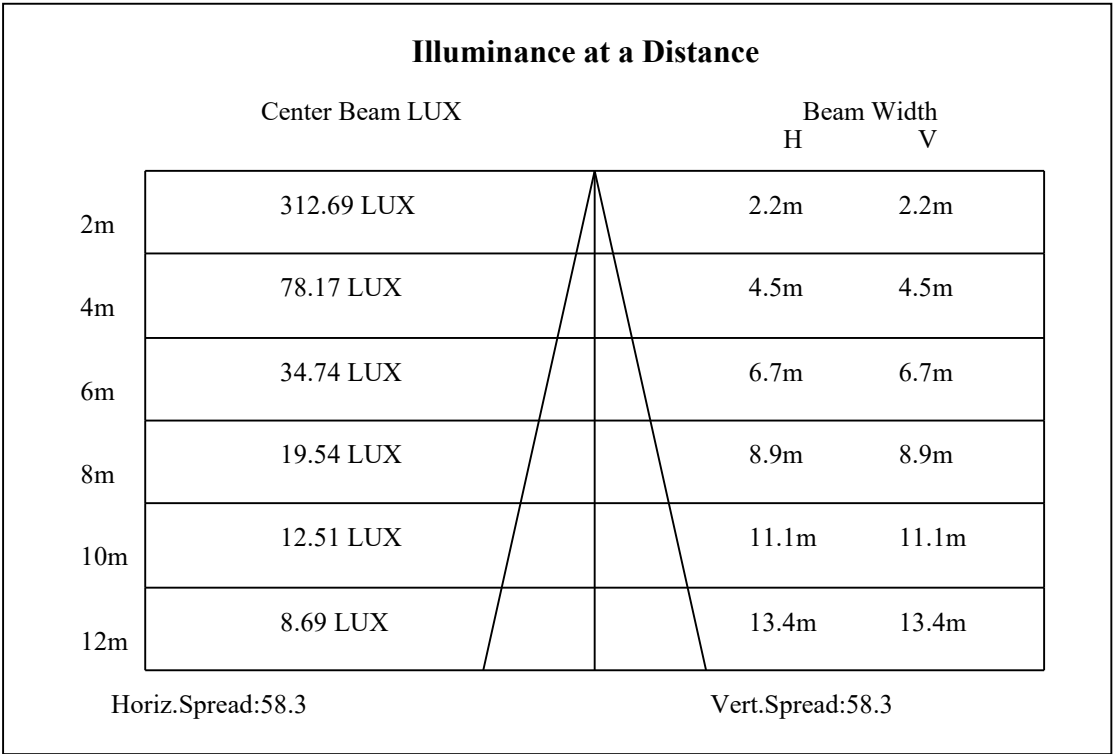
ZONAL LUMEN SUMMARY

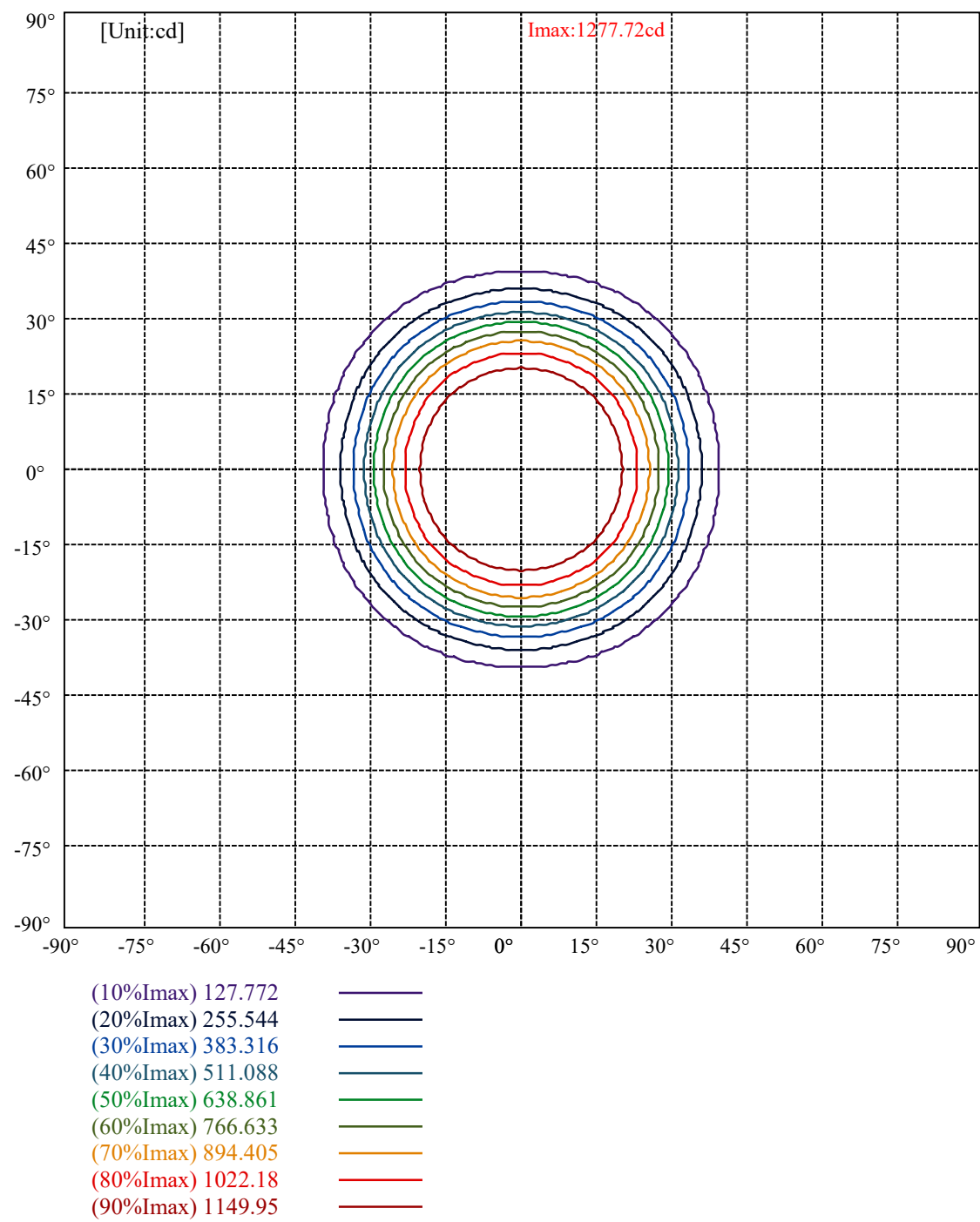
Zone	Lumens	%Lamp	%Fixt
0-30	875.12	64.92%	75.00%
0-40	1056.24	78.36%	90.52%
0-60	1117.46	82.90%	95.77%
0-90	1165.59	86.47%	99.89%
0-120	1165.59	86.47%	99.89%
0-180	1166.85	86.57%	100.00%
60-90	48.13	3.57%	4.12%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-32.07	933.48	69.25%	80.00%

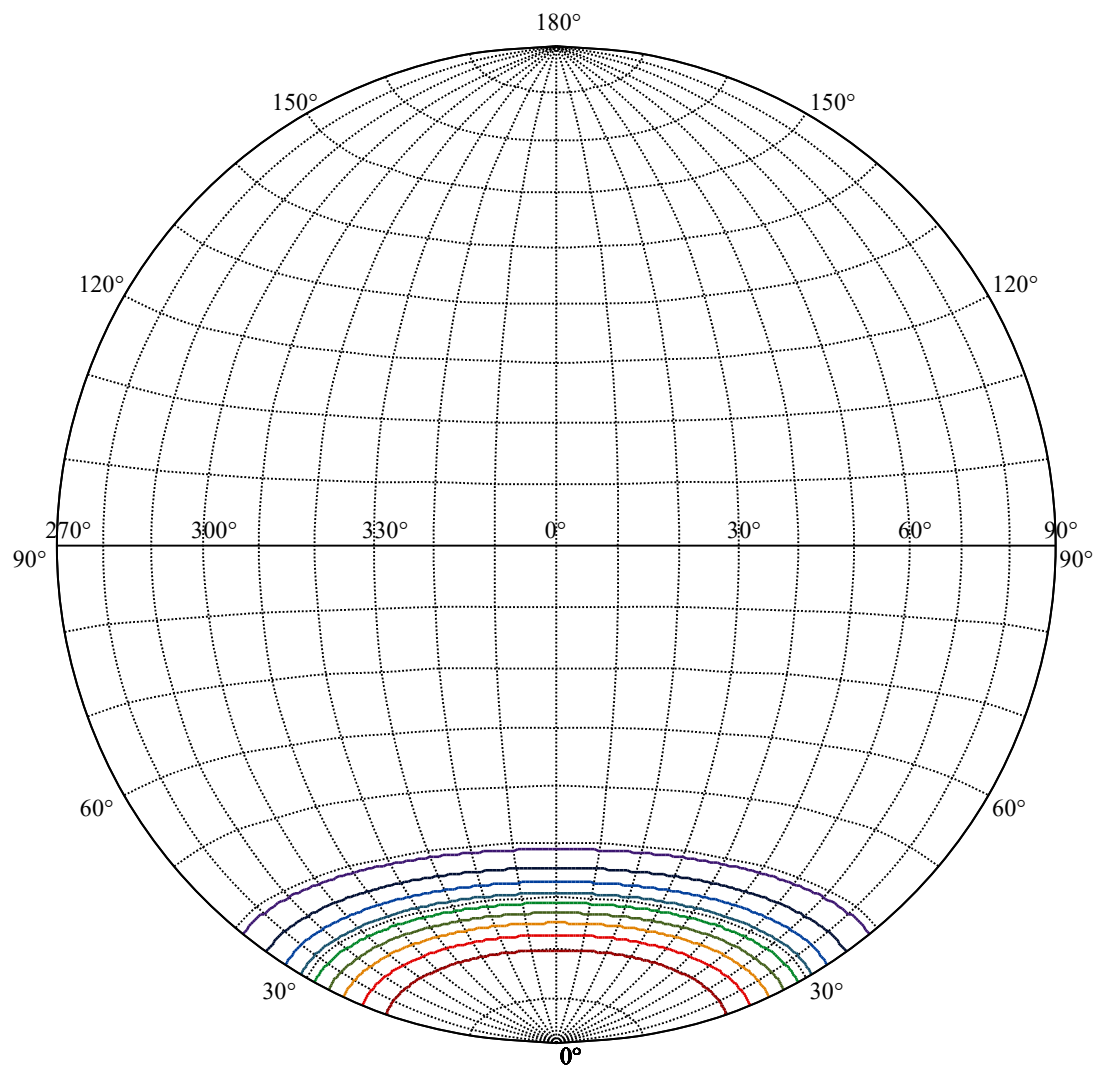
ZONAL LUMEN SUMMARY

0-10	120.86
10-20	350.65
20-30	403.61
30-40	181.12
40-50	39.79
50-60	21.43
60-70	17.02
70-80	17.24
80-90	13.87
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







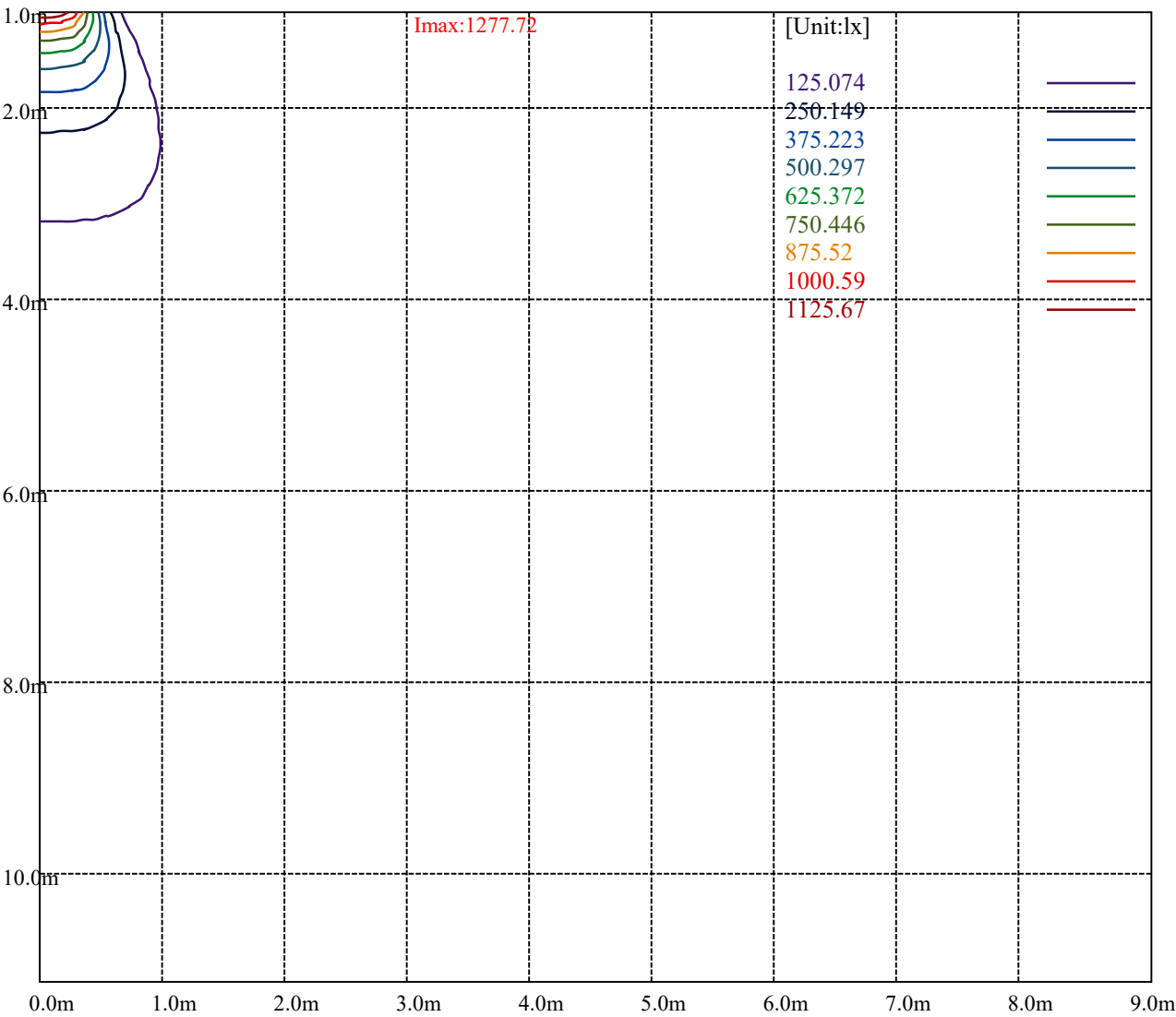


House

[Unit:cd]

Road

I _{max} :1277.72	
(10%I _{max})	127.772
(20%I _{max})	255.544
(30%I _{max})	383.316
(40%I _{max})	511.088
(50%I _{max})	638.861
(60%I _{max})	766.633
(70%I _{max})	894.405
(80%I _{max})	1022.18
(90%I _{max})	1149.95



Luminance Table

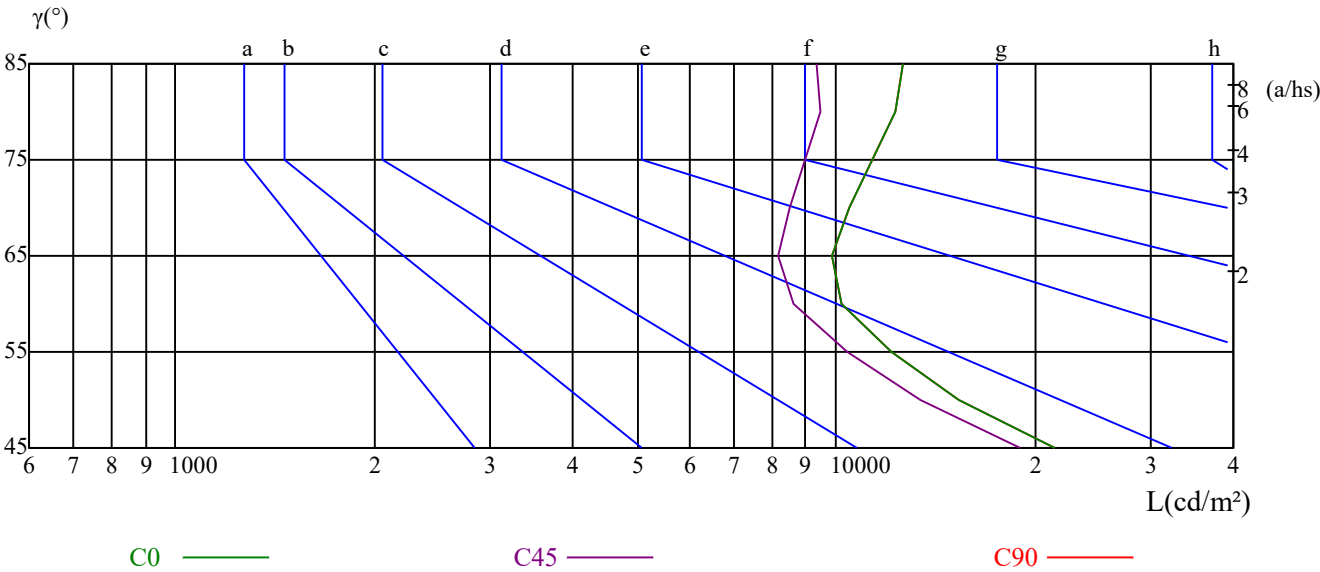
γ	45	50	55	60	65	70	75	80	85
C0	21521	15374	12131	10231	9889	10477	11372	12338	12633
C45	19015	13392	10407	8632	8192	8499	9003	9486	9366
C90	21521	15374	12131	10231	9889	10477	11372	12338	12633

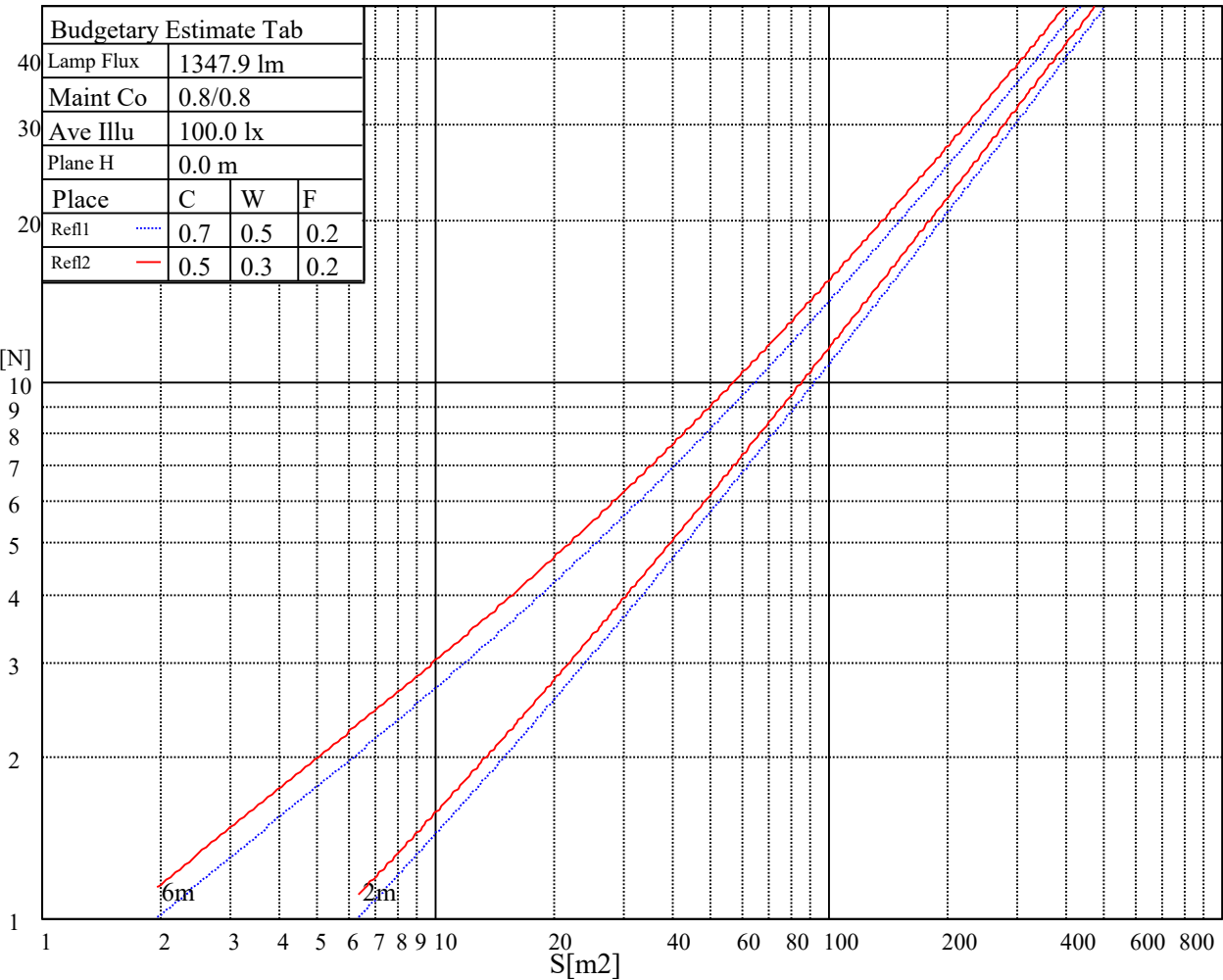
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
19786	19786	19786	31177	31177	31177	80015	80015	80015

Glare Table

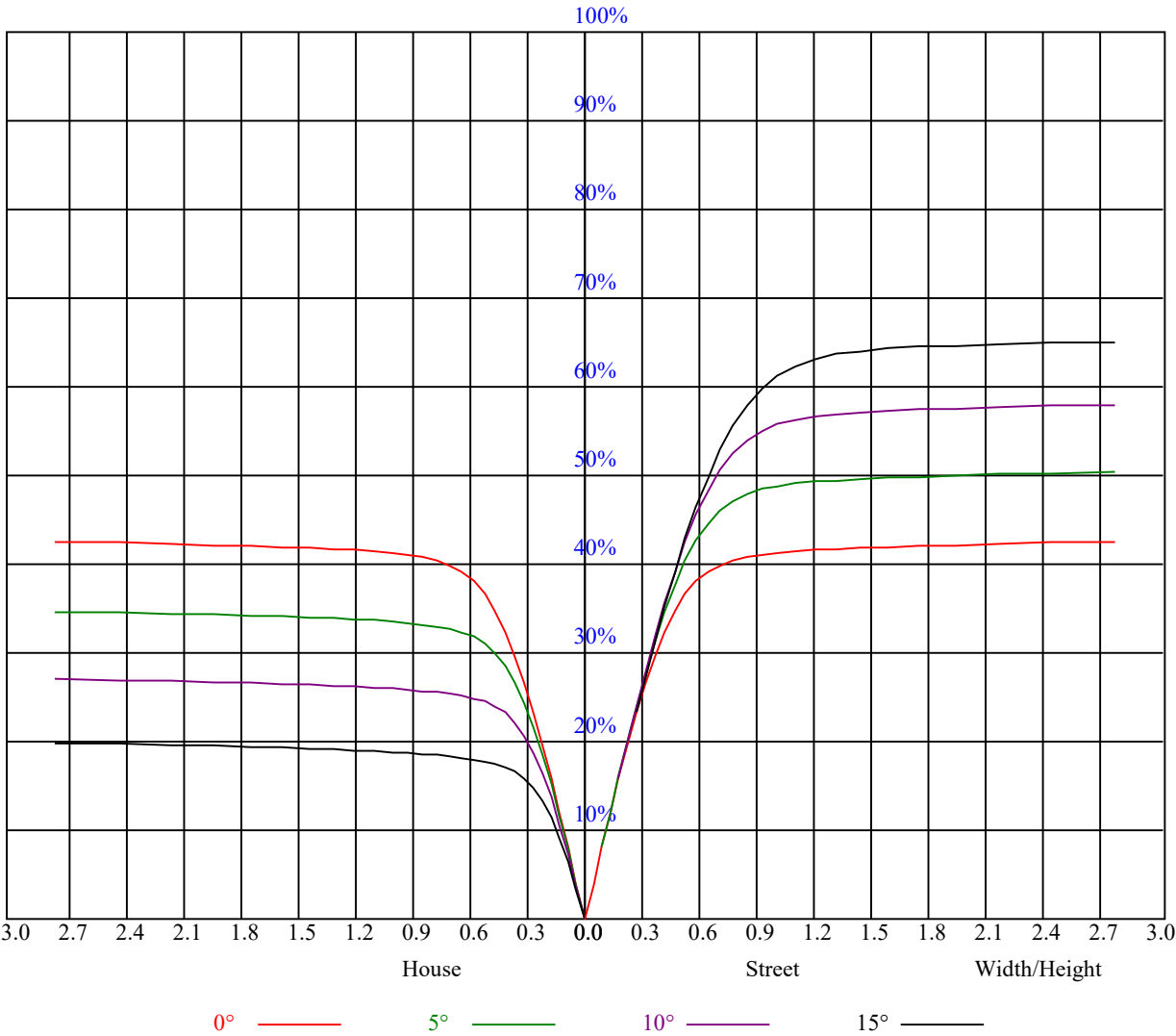
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

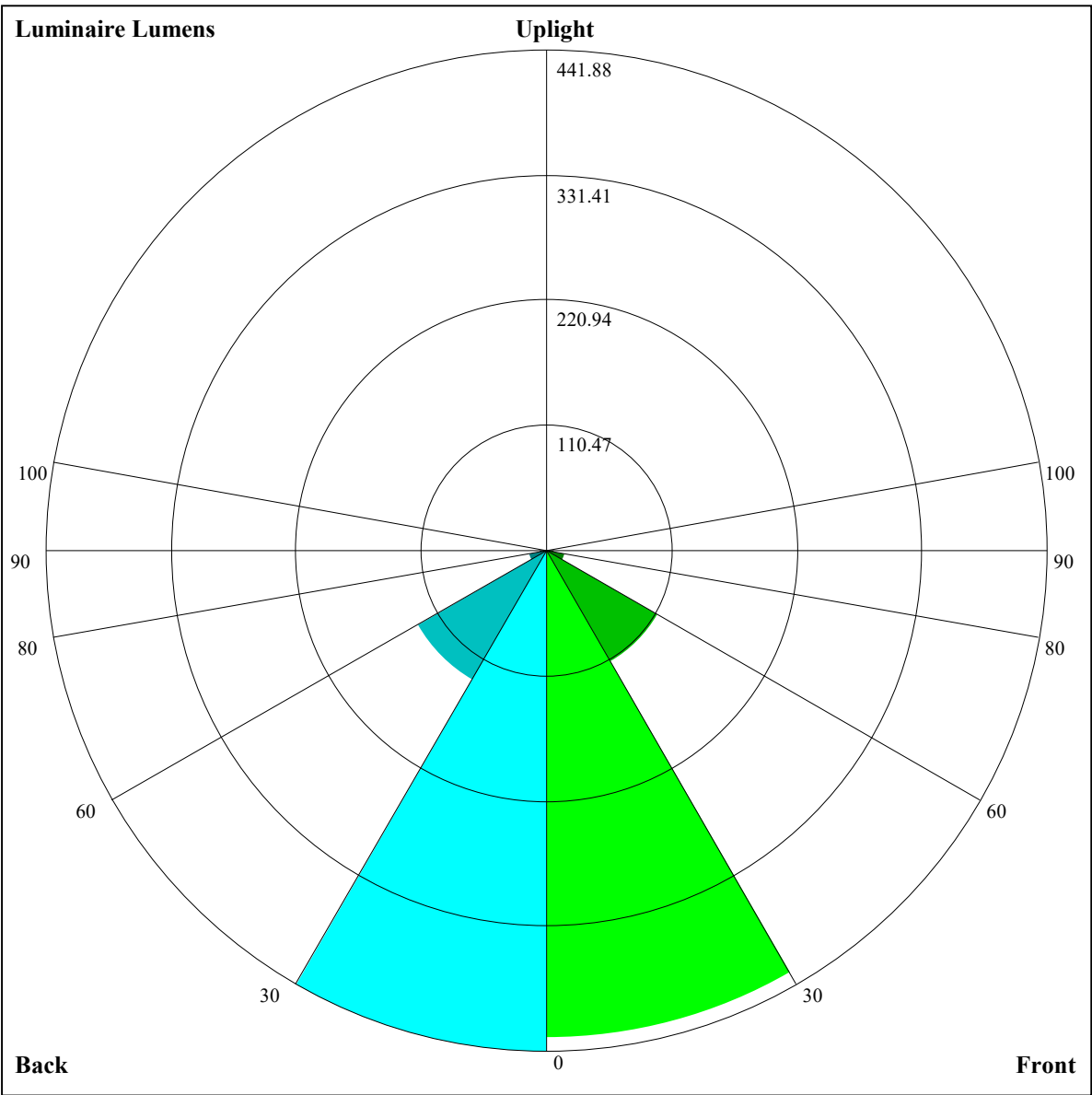
Luminance Limiting Curve





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	COEFFCIENTS 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	0.95	0.93	0.90	0.93	0.91	0.89	0.90	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.79	0.81	0.79	0.77	0.79	0.77	0.75	0.74
3	0.82	0.78	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.76	0.74	0.71	0.75	0.72	0.70	0.69
4	0.77	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.65	0.64
5	0.72	0.67	0.63	0.71	0.66	0.63	0.70	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.60
6	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.61	0.58	0.65	0.61	0.58	0.63	0.60	0.57	0.56
7	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.53
8	0.60	0.55	0.52	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.50
9	0.57	0.52	0.49	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.51	0.48	0.47
10	0.54	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.46	0.52	0.48	0.45	0.44





Luminaire Lumens:

FL=429.93,FM=113.41,FH=17.07,FVH=7.39

BL=441.88,BM=131.48,BH=17.08,BVH=7.69

UL=0,UH=0

BUG Rating:B1-U0-G0

Intensity data(cd)

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C/ γ (°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	1253.54	1253.54	1256.74	1263.13	1266.86	1269.53	1273.26	1276.99	1279.12
45.0	1252.47	1249.28	1250.88	1258.34	1262.60	1265.26	1269.53	1272.73	1275.92
90.0	1248.74	1251.41	1254.07	1261.00	1265.80	1270.06	1274.32	1277.52	1282.32
135.0	1248.21	1247.15	1247.15	1249.28	1255.14	1259.40	1264.73	1267.40	1273.79
180.0	1253.54	1254.07	1254.07	1251.94	1252.47	1256.74	1260.47	1265.80	1270.59
225.0	1252.47	1251.41	1248.21	1247.68	1249.28	1254.61	1258.87	1262.07	1266.86
270.0	1248.74	1249.28	1250.88	1248.21	1246.08	1247.68	1249.28	1254.61	1258.87
315.0	1248.21	1245.55	1245.01	1246.08	1250.34	1254.61	1258.34	1261.00	1265.26
360.0	1253.54	1253.54	1256.74	1263.13	1266.86	1269.53	1273.26	1276.99	1279.12
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1280.72	1280.19	1277.52	1272.19	1264.73	1254.07	1239.15	1219.44	1205.58
45.0	1279.65	1281.78	1280.72	1278.05	1274.86	1265.80	1253.54	1236.49	1213.57
90.0	1282.32	1281.25	1279.12	1273.79	1266.33	1251.94	1237.55	1213.04	1190.13
135.0	1278.05	1281.25	1278.05	1275.92	1274.32	1264.20	1254.61	1240.75	1221.57
180.0	1274.32	1278.05	1281.78	1283.38	1283.38	1280.19	1275.39	1267.40	1257.80
225.0	1271.13	1273.79	1275.92	1275.92	1274.32	1271.13	1266.86	1258.34	1247.68
270.0	1259.94	1262.07	1271.66	1273.79	1273.79	1273.26	1271.13	1267.40	1262.07
315.0	1271.66	1272.73	1276.99	1276.99	1279.12	1275.39	1274.86	1267.40	1258.87
360.0	1280.72	1280.19	1277.52	1272.19	1264.73	1254.07	1239.15	1219.44	1205.58
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1176.27	1136.84	1058.50	1058.50	1002.17	941.15	875.77	804.63	734.60
45.0	1188.53	1155.49	1116.59	1070.22	1016.93	956.72	906.09	824.56	769.13
90.0	1157.62	1055.62	1045.55	1022.32	961.94	895.91	830.36	755.17	682.38
135.0	1197.05	1167.21	1134.17	1094.20	1046.78	989.22	927.94	862.39	793.65
180.0	1241.82	1224.23	1200.78	1172.01	1137.90	1098.47	1051.57	997.22	938.06
225.0	1238.62	1213.04	1198.12	1169.88	1136.30	1037.98	1037.98	980.11	918.88
270.0	1256.21	1240.22	1225.30	1202.92	1172.54	1138.43	1097.40	1048.37	1011.60
315.0	1243.95	1225.30	1202.92	1168.81	1134.70	1046.88	1034.25	984.64	906.04
360.0	1176.27	1136.84	1058.50	1058.50	1002.17	941.15	875.77	804.63	734.60
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	661.22	588.69	516.86	449.02	384.81	338.02	273.64	235.60	193.66
45.0	696.13	622.05	548.51	479.24	412.62	351.34	294.85	284.20	229.47
90.0	606.81	533.91	462.93	394.99	333.49	299.81	247.69	202.29	164.13
135.0	724.90	652.43	580.49	511.74	471.24	380.12	345.48	289.52	269.27
180.0	900.23	808.57	767.54	698.79	599.67	558.64	490.43	425.95	365.20
225.0	851.52	783.79	714.14	642.57	571.00	529.06	435.01	373.19	337.22
270.0	927.94	859.73	818.69	717.44	674.81	600.21	530.40	460.05	394.51
315.0	834.63	776.60	704.65	630.21	556.88	486.06	419.02	356.88	299.44
360.0	661.22	588.69	516.86	449.02	384.81	338.02	273.64	235.60	193.66
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	151.08	127.90	103.81	84.41	69.65	58.89	51.11	45.35	41.41
45.0	160.51	128.75	103.81	83.93	69.28	62.67	51.42	47.85	43.59
90.0	131.79	105.25	85.37	70.02	58.46	50.84	45.08	40.98	38.10
135.0	226.48	161.15	130.99	106.31	86.70	71.78	60.59	52.17	46.10
180.0	309.24	278.87	278.87	178.31	146.07	118.94	97.95	80.41	69.12
225.0	284.14	235.17	193.76	157.79	127.74	103.60	83.61	68.64	57.77
270.0	333.22	278.33	278.33	177.14	143.35	114.68	91.50	74.71	61.92
315.0	249.29	205.22	167.60	135.52	110.04	89.15	73.01	61.12	52.38
360.0	151.08	127.90	103.81	84.41	69.65	58.89	51.11	45.35	41.41

Intensity data(cd)

Appendix Page: 18 Total:19

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	38.42	35.92	33.84	31.97	30.22	28.51	27.02	25.58	24.78
45.0	40.45	37.94	35.86	34.00	32.19	30.54	28.88	27.39	26.01
90.0	35.76	33.73	31.87	30.16	28.40	26.80	25.31	23.98	22.97
135.0	41.89	38.64	36.13	34.27	31.76	30.32	28.51	26.96	25.53
180.0	56.70	50.84	45.14	41.09	37.89	35.17	32.99	31.07	29.31
225.0	50.04	44.23	40.07	36.98	34.32	32.08	30.16	28.35	27.34
270.0	52.49	48.44	42.95	39.11	36.29	34.05	32.03	30.16	28.40
315.0	45.83	42.90	37.89	35.22	33.79	31.65	29.74	28.08	26.70
360.0	38.42	35.92	33.84	31.97	30.22	28.51	27.02	25.58	24.78
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	23.02	21.85	21.26	19.93	19.45	18.70	18.12	17.69	17.48
45.0	24.62	23.34	22.22	21.16	20.25	19.40	18.81	18.39	18.17
90.0	21.74	20.41	19.61	18.76	18.01	17.43	17.05	16.73	16.57
135.0	24.09	22.81	21.64	20.57	19.61	18.76	18.07	17.48	17.05
180.0	27.71	26.27	24.89	23.66	22.49	21.48	20.46	19.61	18.86
225.0	25.26	23.87	23.07	21.85	20.84	19.77	18.92	18.23	17.53
270.0	26.86	25.42	24.03	22.86	21.74	20.73	19.72	18.92	18.28
315.0	25.26	23.87	22.59	21.48	20.41	19.50	18.70	18.01	17.48
360.0	23.02	21.85	21.26	19.93	19.45	18.70	18.12	17.69	17.48
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	17.27	17.16	17.00	16.89	16.84	16.84	16.79	16.73	16.68
45.0	17.91	17.69	17.59	17.48	17.48	17.48	17.43	17.37	17.32
90.0	16.41	16.31	16.15	16.09	16.09	16.04	15.99	15.99	16.04
135.0	16.84	16.68	16.47	16.36	16.31	16.31	16.25	16.25	16.20
180.0	18.28	17.96	17.80	17.48	17.37	17.27	17.16	17.16	17.11
225.0	17.11	16.89	16.68	16.57	16.41	16.36	16.41	16.36	16.31
270.0	17.64	17.43	17.05	16.84	16.79	16.63	16.52	16.47	16.36
315.0	17.16	16.95	16.73	16.52	16.36	16.31	16.15	16.15	15.99
360.0	17.27	17.16	17.00	16.89	16.84	16.84	16.79	16.73	16.68
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	16.68	16.73	16.73	16.79	16.95	16.95	16.95	16.84	16.52
45.0	17.21	17.05	16.84	16.84	16.73	16.57	16.31	16.15	15.83
90.0	16.04	16.09	16.04	15.99	15.93	15.77	15.61	15.29	15.13
135.0	16.15	16.15	16.15	16.09	16.15	16.15	16.15	16.04	15.83
180.0	17.00	17.00	17.05	16.95	16.84	16.68	16.57	16.47	16.31
225.0	16.36	16.36	16.36	16.31	16.31	16.31	16.31	16.31	16.20
270.0	16.25	16.20	16.15	16.15	16.09	16.04	15.99	15.93	15.77
315.0	15.93	15.77	15.72	15.61	15.45	15.40	15.24	15.13	14.97
360.0	16.68	16.73	16.73	16.79	16.95	16.95	16.95	16.84	16.52
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	16.04	15.61	15.08	14.55	14.02	13.22	12.63	11.83	11.19
45.0	15.45	15.03	14.55	13.91	13.32	12.84	12.04	11.35	10.66
90.0	14.76	14.44	14.12	13.70	13.11	12.42	11.67	10.98	10.39
135.0	15.61	15.35	15.03	14.71	14.23	13.70	12.95	12.31	11.67
180.0	16.09	15.88	15.51	15.24	14.81	14.39	13.80	13.22	12.47
225.0	16.09	15.88	15.77	15.40	15.08	14.76	14.23	13.70	13.16
270.0	15.61	15.51	15.19	14.92	14.71	14.39	14.02	13.54	12.84
315.0	14.76	14.65	14.39	14.02	13.70	13.32	12.74	11.99	11.40
360.0	16.04	15.61	15.08	14.55	14.02	13.22	12.63	11.83	11.19

Intensity data(cd)

C/ $\gamma(^{\circ})$	90.0
0.0	10.98
45.0	10.34
90.0	10.18
135.0	10.98
180.0	11.72
225.0	12.63
270.0	12.10
315.0	10.98
360.0	10.98