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NT

Client:

LumCAT: 61-0204

Luminaire: 92.70.427.00

Report No: 20240718-B004

Ballast type: AC

Test No: 20240718-C004

LampCAT: LUMINUS CXM-6-AC40

Lamp flux(lm): 1082.5

Number of Lamps: 1

Length(mm): 45

Phm Type: C

Voltage(V): 220.000

Current(A): 0.082

Power (W): 10.100

PF: 0.554

Width(mm): 45

Height(mm): 21

Photometric Results

Lumens(lm): 964.67, Efficiency(%): 89.12% , Luminous Efficacy(lm/W): 95.51

Central intensity(cd): 1862.976, Maximum intensity(cd): 1862.976

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.4

[C90/270]Total=36.4

Field angle(10%Imax): [C0/180]Total=73.6

[C90/270]Total=73.6

Maximum s/h(1/2): C0_180=0.58 C90_270=0.58

Maximum s/h(1/4): C0_180=0.64 C90_270=0.64

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.12%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.641%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1862.976	0.000	0	0.00%	0.00%
1.0	1858.075	1.780	1.78	0.16%	0.18%
2.0	1844.102	5.314	7.094	0.49%	0.74%
3.0	1820.693	8.765	15.859	0.81%	1.64%
4.0	1785.287	12.070	27.93	1.12%	2.90%
5.0	1737.884	15.157	43.086	1.40%	4.47%
6.0	1691.725	18.024	61.11	1.67%	6.33%
7.0	1633.787	20.641	81.751	1.91%	8.47%
8.0	1569.339	22.924	104.675	2.12%	10.85%
9.0	1508.403	24.943	129.619	2.30%	13.44%
10.0	1437.591	26.660	156.279	2.46%	16.20%
11.0	1363.230	27.986	184.265	2.59%	19.10%
12.0	1305.659	29.175	213.439	2.70%	22.13%
13.0	1215.212	29.916	243.356	2.76%	25.23%
14.0	1166.156	30.481	273.837	2.82%	28.39%
15.0	1117.451	31.350	305.187	2.90%	31.64%
16.0	1059.367	31.896	337.084	2.95%	34.94%
17.0	996.784	32.020	369.104	2.96%	38.26%
18.0	939.835	31.931	401.034	2.95%	41.57%
19.0	885.782	31.762	432.796	2.93%	44.86%
20.0	833.492	31.467	464.264	2.91%	48.13%
21.0	780.997	31.001	495.265	2.86%	51.34%
22.0	729.388	30.352	525.617	2.80%	54.49%
23.0	683.316	29.642	555.26	2.74%	57.56%
24.0	636.440	28.855	584.114	2.67%	60.55%
25.0	592.643	27.947	612.061	2.58%	63.45%
26.0	550.821	26.992	639.052	2.49%	66.25%
27.0	507.244	25.886	664.938	2.39%	68.93%
28.0	470.016	24.742	689.68	2.29%	71.49%
29.0	430.221	23.553	713.233	2.18%	73.94%
30.0	393.359	22.236	735.47	2.05%	76.24%
31.0	360.177	20.970	756.439	1.94%	78.41%
32.0	328.399	19.727	776.166	1.82%	80.46%
33.0	297.602	18.442	794.608	1.70%	82.37%
34.0	274.032	17.299	811.908	1.60%	84.16%
35.0	246.848	16.177	828.084	1.49%	85.84%
36.0	209.233	14.522	842.606	1.34%	87.35%
37.0	179.927	12.692	855.298	1.17%	88.66%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	155.121	11.183	866.482	1.03%	89.82%
39.0	132.290	9.810	876.292	0.91%	90.84%
40.0	113.058	8.557	884.849	0.79%	91.73%
41.0	94.858	7.404	892.253	0.68%	92.49%
42.0	80.403	6.368	898.62	0.59%	93.15%
43.0	66.606	5.446	904.066	0.50%	93.72%
44.0	56.796	4.658	908.723	0.43%	94.20%
45.0	47.908	4.024	912.747	0.37%	94.62%
46.0	40.534	3.459	916.206	0.32%	94.98%
47.0	34.740	2.994	919.2	0.28%	95.29%
48.0	30.212	2.626	921.825	0.24%	95.56%
49.0	26.950	2.347	924.173	0.22%	95.80%
50.0	24.272	2.136	926.308	0.20%	96.02%
51.0	22.151	1.964	928.273	0.18%	96.23%
52.0	20.607	1.835	930.107	0.17%	96.42%
53.0	19.473	1.744	931.851	0.16%	96.60%
54.0	18.369	1.668	933.519	0.15%	96.77%
55.0	17.250	1.590	935.109	0.15%	96.94%
56.0	16.247	1.514	936.622	0.14%	97.09%
57.0	15.135	1.435	938.057	0.13%	97.24%
58.0	14.162	1.355	939.412	0.13%	97.38%
59.0	13.336	1.286	940.698	0.12%	97.51%
60.0	12.538	1.222	941.92	0.11%	97.64%
61.0	11.909	1.167	943.087	0.11%	97.76%
62.0	11.331	1.120	944.207	0.10%	97.88%
63.0	10.775	1.075	945.282	0.10%	97.99%
64.0	10.329	1.036	946.317	0.10%	98.10%
65.0	9.883	1.000	947.318	0.09%	98.20%
66.0	9.481	0.966	948.284	0.09%	98.30%
67.0	9.078	0.933	949.217	0.09%	98.40%
68.0	8.705	0.901	950.118	0.08%	98.49%
69.0	8.398	0.873	950.99	0.08%	98.58%
70.0	8.076	0.846	951.836	0.08%	98.67%
71.0	7.769	0.819	952.655	0.08%	98.75%
72.0	7.462	0.792	953.447	0.07%	98.84%
73.0	7.096	0.761	954.209	0.07%	98.92%
74.0	6.767	0.729	954.937	0.07%	98.99%
75.0	6.518	0.702	955.639	0.06%	99.06%

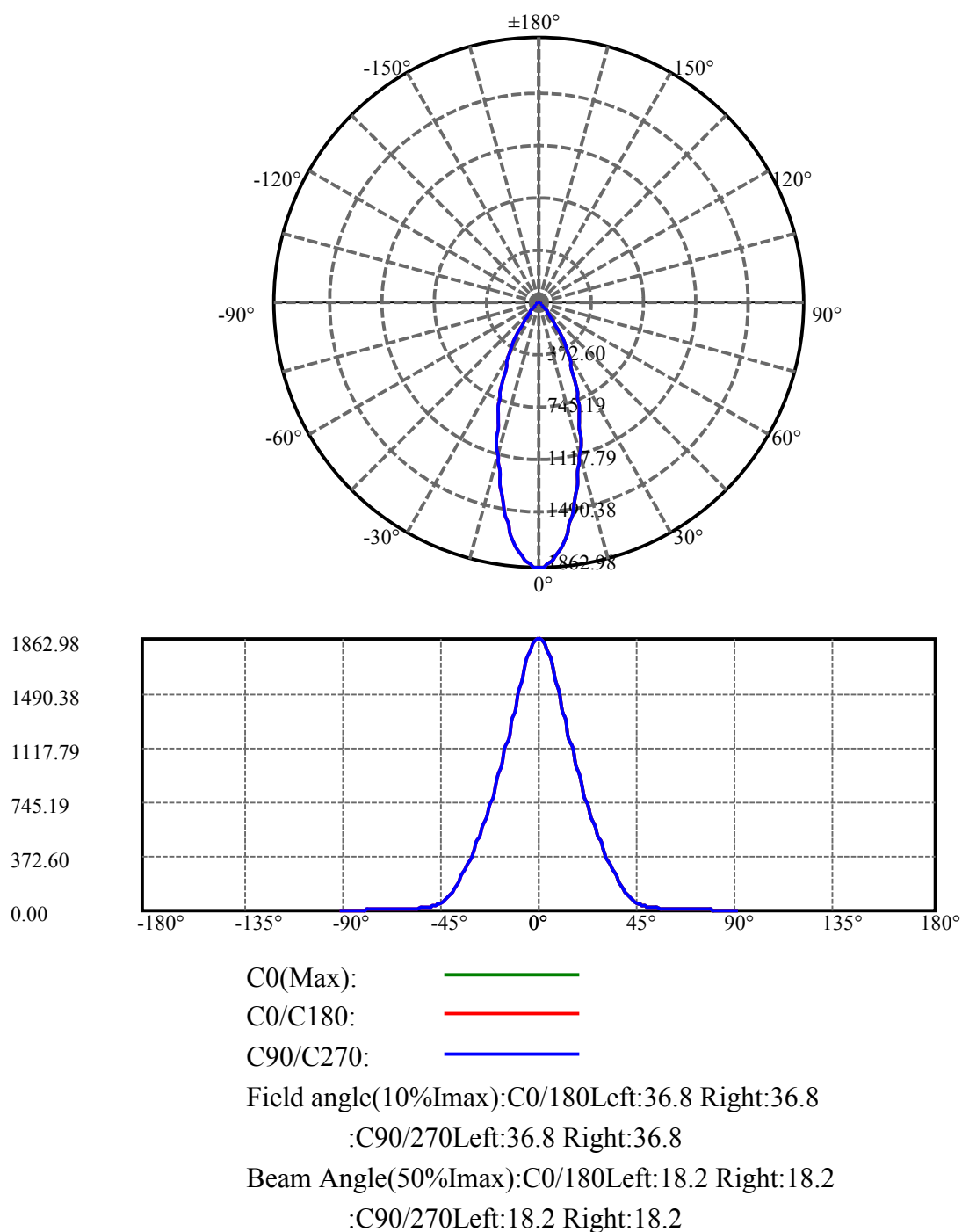
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.255	0.678	956.317	0.06%	99.13%
77.0	6.035	0.655	956.972	0.06%	99.20%
78.0	5.874	0.638	957.61	0.06%	99.27%
79.0	5.743	0.624	958.234	0.06%	99.33%
80.0	5.618	0.612	958.847	0.06%	99.40%
81.0	5.530	0.603	959.45	0.06%	99.46%
82.0	5.479	0.597	960.047	0.06%	99.52%
83.0	5.486	0.596	960.643	0.06%	99.58%
84.0	5.465	0.597	961.239	0.06%	99.64%
85.0	5.384	0.592	961.831	0.05%	99.71%
86.0	5.260	0.582	962.413	0.05%	99.77%
87.0	5.201	0.573	962.986	0.05%	99.82%
88.0	5.150	0.567	963.553	0.05%	99.88%
89.0	5.113	0.563	964.115	0.05%	99.94%
90.0	5.077	0.559	964.674	0.05%	100.00%

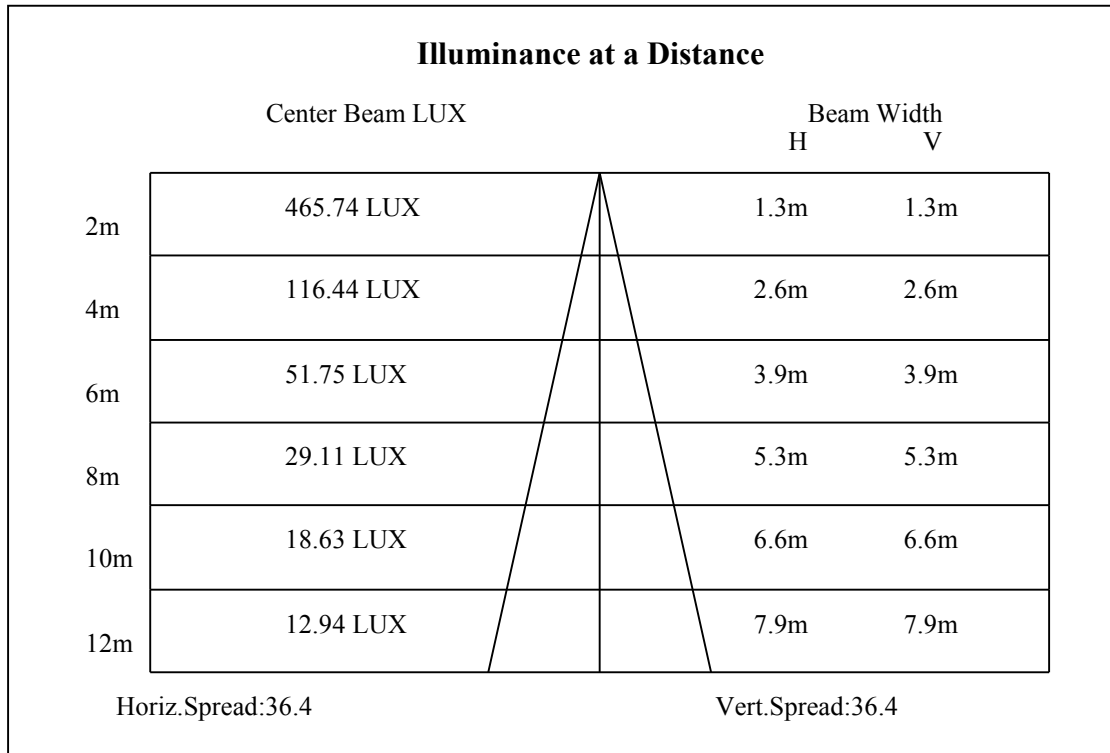
Zonal flux distribution table

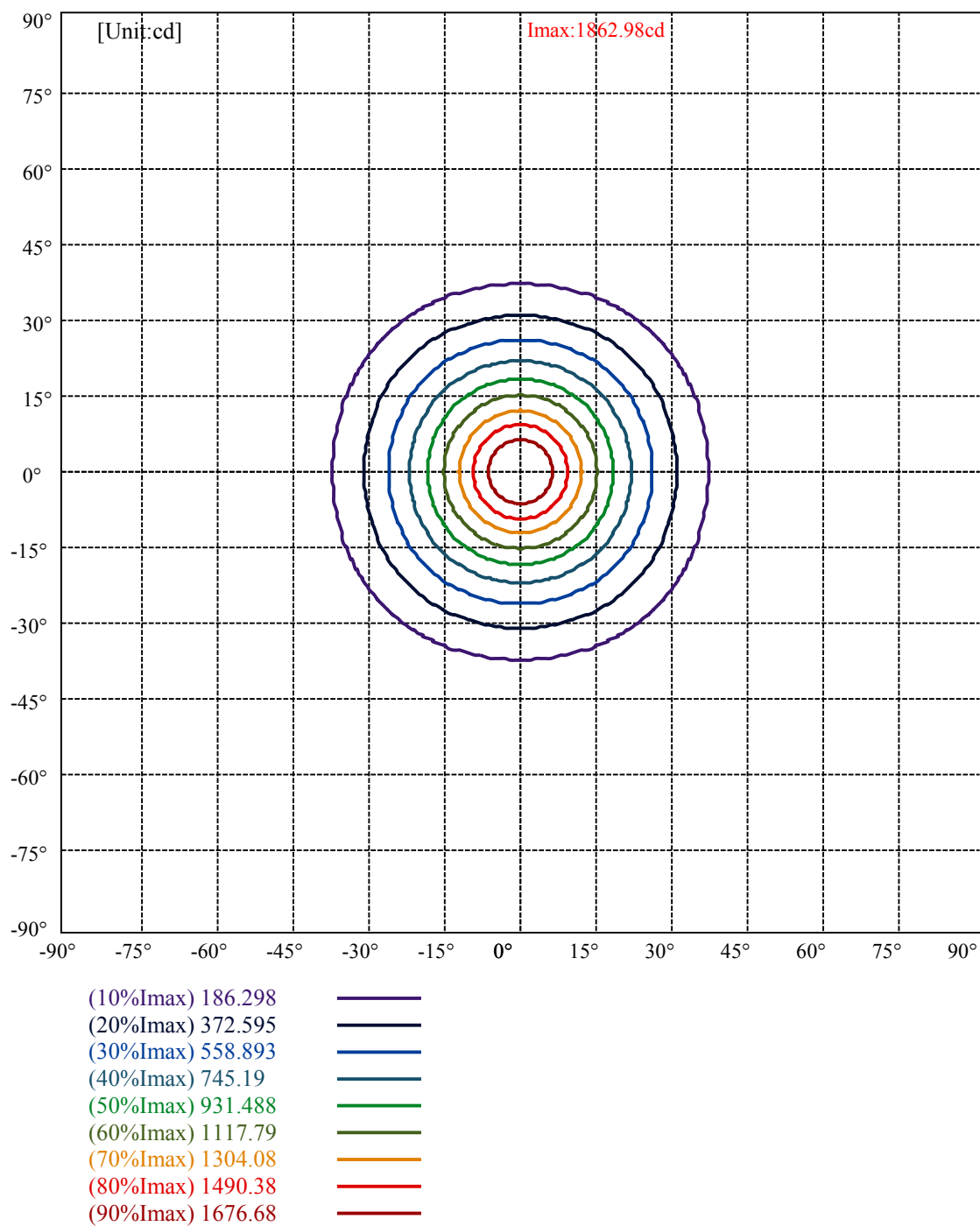
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	735.47	67.94%	76.24%
0-40	884.85	81.74%	91.73%
0-60	941.92	87.01%	97.64%
0-90	964.12	89.06%	99.94%
0-120	964.12	89.06%	99.94%
0-180	964.67	89.12%	100.00%
60-90	22.20	2.05%	2.30%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.78	771.74	71.29%	80.00%

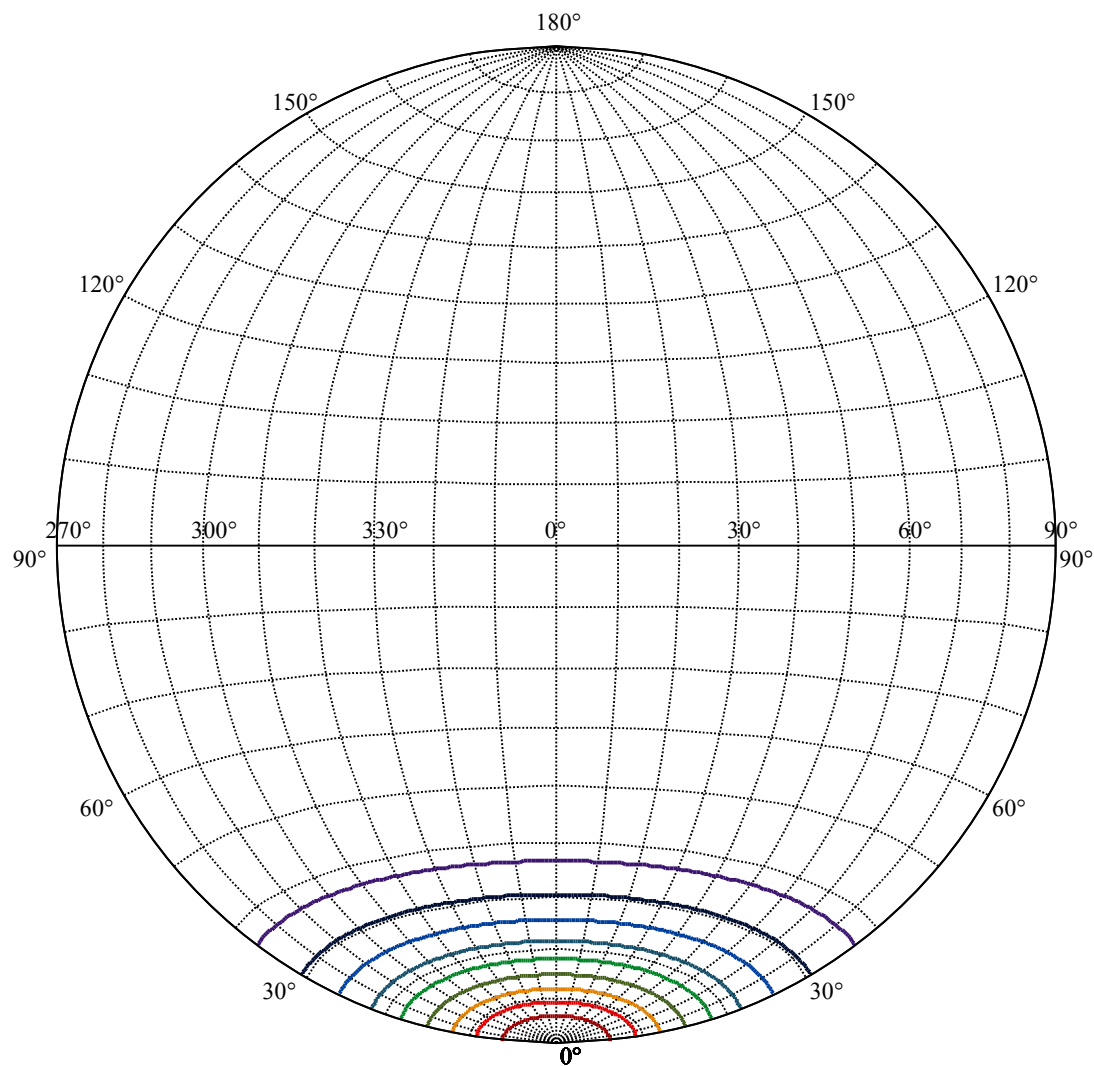
ZONAL LUMEN SUMMARY

0-10	156.28
10-20	307.99
20-30	271.21
30-40	149.38
40-50	41.46
50-60	15.61
60-70	9.92
70-80	7.01
80-90	5.27
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







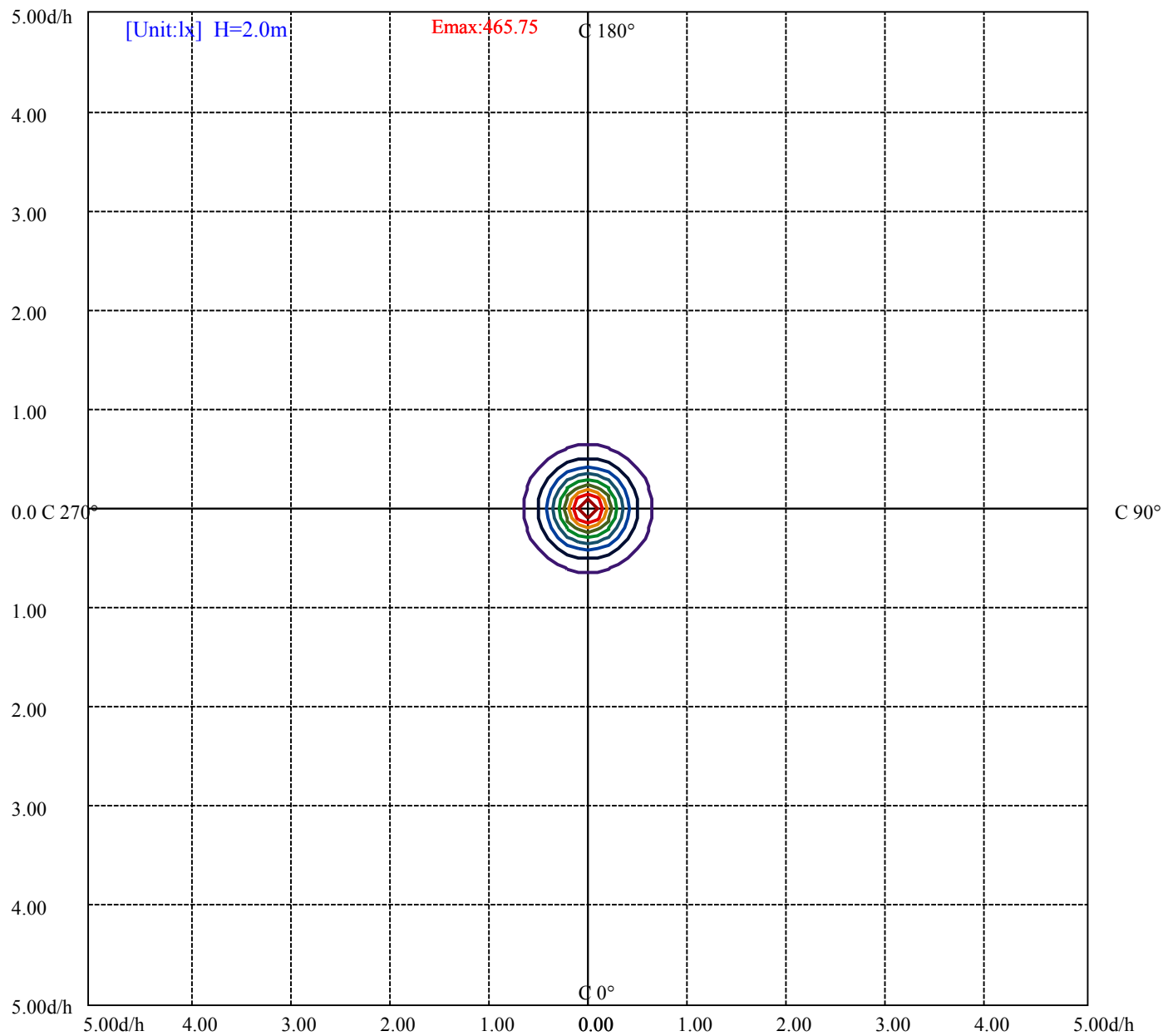


House

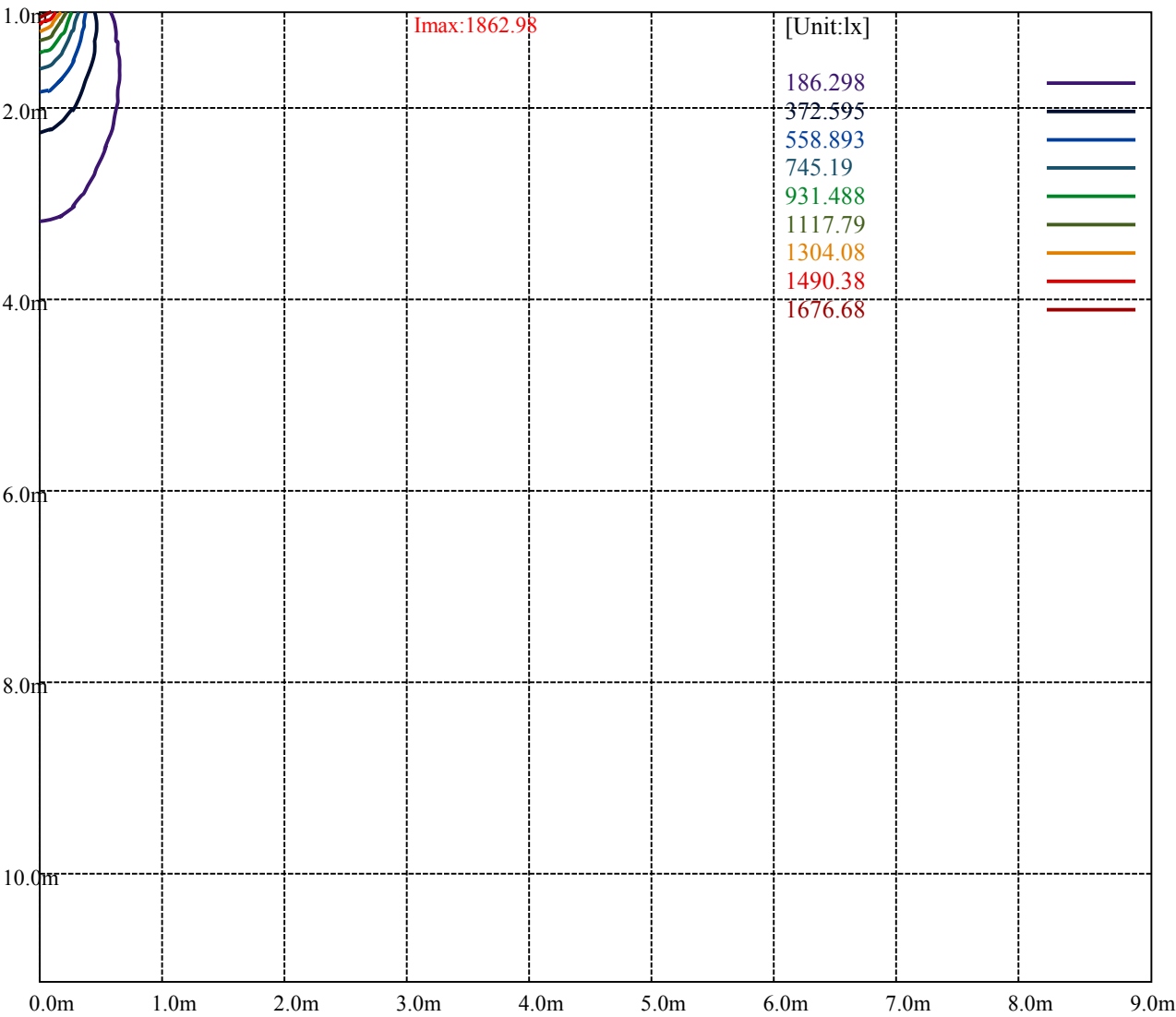
[Unit:cd]

Road

	Imax:1862.98	
(10%Imax)	186.298	—
(20%Imax)	372.595	—
(30%Imax)	558.893	—
(40%Imax)	745.19	—
(50%Imax)	931.488	—
(60%Imax)	1117.79	—
(70%Imax)	1304.08	—
(80%Imax)	1490.38	—
(90%Imax)	1676.68	—



(10%Emax) 46.5745	—
(20%Emax) 93.14875	—
(30%Emax) 139.7233	—
(40%Emax) 186.2975	—
(50%Emax) 232.872	—
(60%Emax) 279.4475	—
(70%Emax) 326.02	—
(80%Emax) 372.595	—
(90%Emax) 419.17	—



Luminance Table

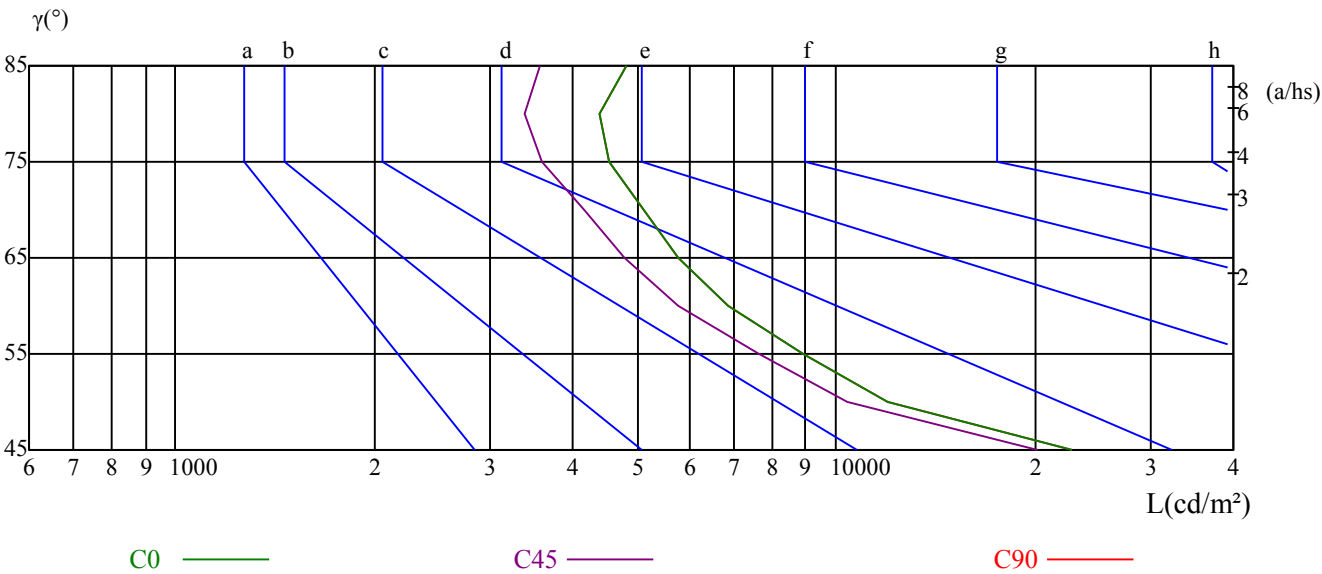
γ	45	50	55	60	65	70	75	80	85
C0	22812	11983	8912	6848	5772	5110	4536	4381	4816
C45	20156	10438	7645	5778	4781	4145	3591	3369	3571
C90	22812	11983	8912	6848	5772	5110	4536	4381	4816

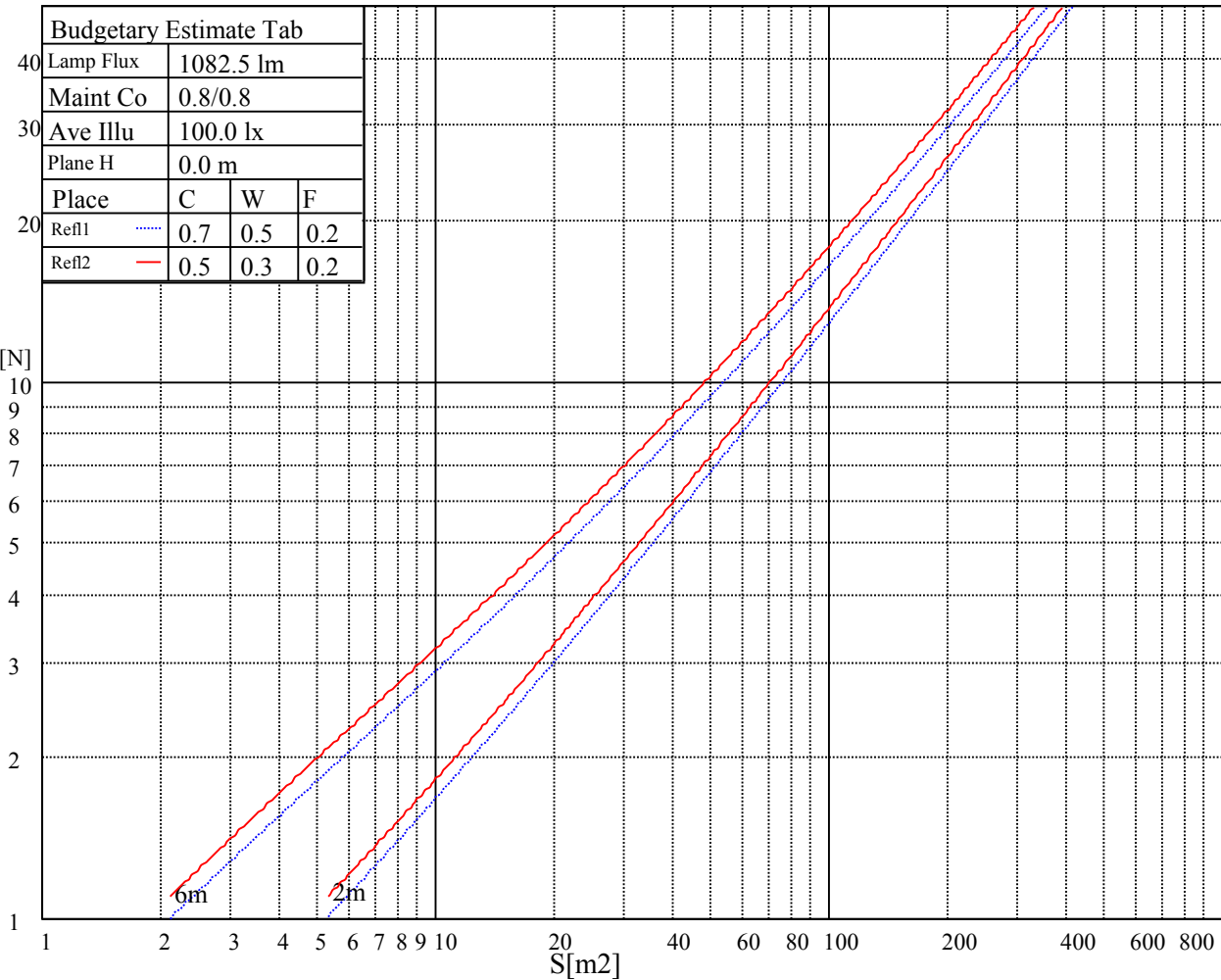
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11548	11548	11548	12436	12436	12436	30506	30506	30506

Glare Table

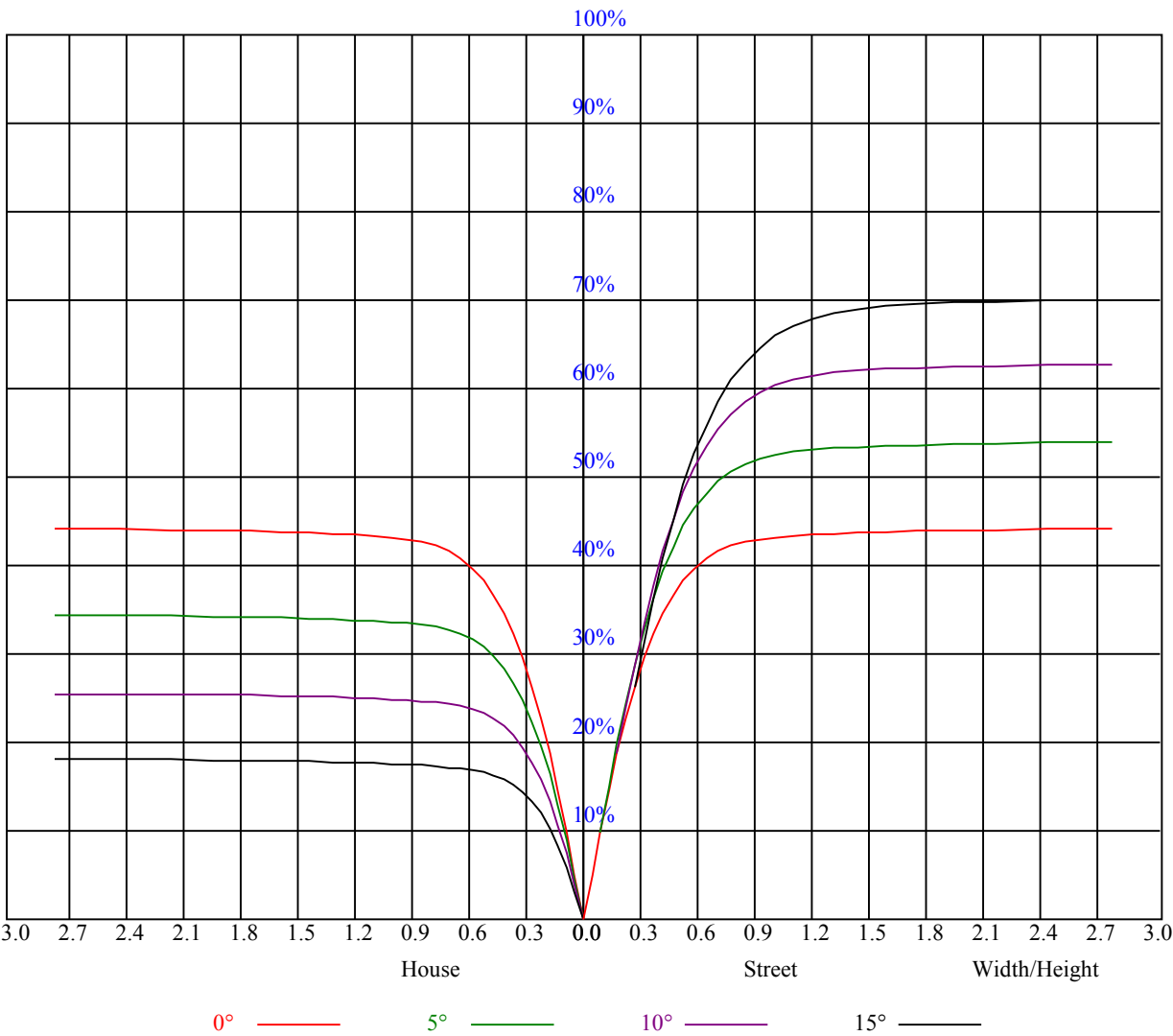
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

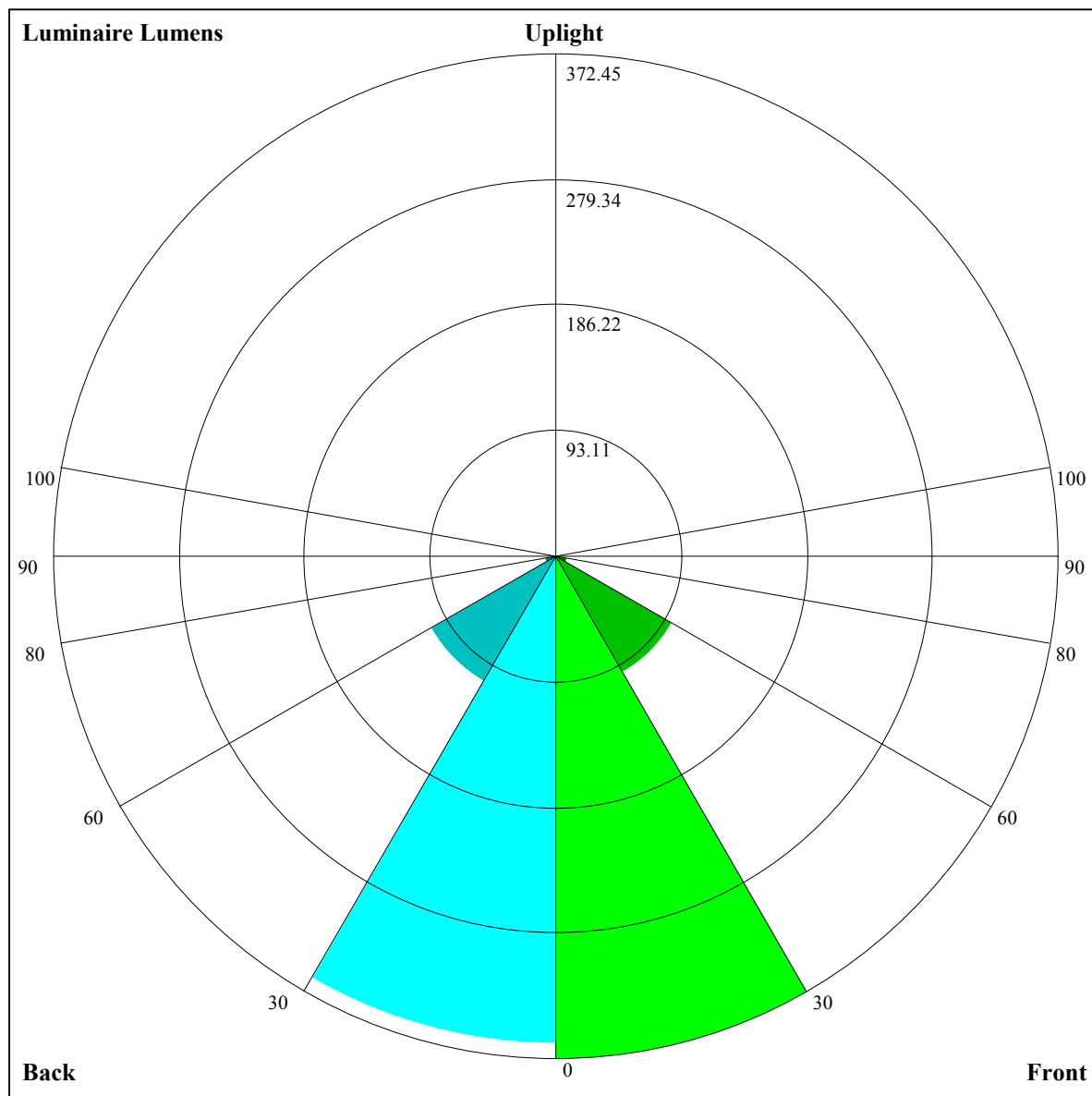
Luminance Limiting Curve





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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.99	0.96	0.94	0.97	0.95	0.93	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.86	0.85	0.83
2	0.92	0.88	0.86	0.90	0.87	0.85	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.78
3	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.75	0.79	0.76	0.74	0.73
4	0.81	0.76	0.73	0.80	0.76	0.72	0.78	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.68
5	0.76	0.71	0.68	0.76	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.64
6	0.72	0.67	0.64	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
7	0.68	0.63	0.60	0.68	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.58
8	0.65	0.60	0.57	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.55
9	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.52
10	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.57	0.53	0.50	0.49





Luminaire Lumens:

FL=372.45,FM=99.86,FH=8.19,FVH=2.9

BL=361.41,BM=106.68,BH=8.62,BVH=2.92

UL=0,UH=0

BUG Rating:B1-U0-G0

Intensity data(cd)										Appendix Page: 17 Total:19	
C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0		
0.0	1868.10	1864.59	1852.88	1831.81	1795.53	1756.90	1715.35	1664.44	1598.31		
45.0	1863.41	1864.00	1851.71	1833.57	1806.06	1762.76	1718.86	1669.12	1605.92		
90.0	1855.81	1834.15	1809.57	1762.76	1714.18	1647.47	1589.53	1530.42	1466.05		
135.0	1864.59	1858.15	1838.25	1810.16	1761.59	1710.09	1655.07	1596.55	1515.79		
180.0	1868.10	1861.66	1843.52	1819.52	1780.31	1732.32	1684.34	1611.77	1550.90		
225.0	1863.41	1851.13	1835.91	1810.74	1774.46	1722.38	1669.71	1610.60	1551.49		
270.0	1855.81	1865.76	1866.34	1858.73	1837.08	1806.06	1776.80	1730.57	1666.19		
315.0	1864.59	1865.17	1854.64	1838.25	1813.09	1765.10	1724.13	1656.83	1600.06		
360.0	1868.10	1864.59	1852.88	1831.81	1795.53	1756.90	1715.35	1664.44	1598.31		
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0		
0.0	1544.47	1471.90	1416.30	1353.68	1244.25	1156.29	1156.29	1098.41	1042.29		
45.0	1548.56	1493.55	1434.44	1359.54	1298.67	1242.49	1185.14	1114.33	1056.97		
90.0	1405.77	1329.69	1163.19	1163.19	1149.32	1077.75	1021.86	964.63	898.85		
135.0	1452.00	1367.14	1302.77	1237.22	1158.80	1100.87	1044.69	991.43	927.05		
180.0	1470.14	1405.77	1341.39	1279.36	1198.60	1140.08	1081.55	1024.20	958.07		
225.0	1491.80	1415.13	1354.27	1295.16	1157.05	1157.05	1084.07	1029.29	977.50		
270.0	1611.77	1552.08	1490.63	1413.38	1352.51	1292.24	1217.91	1162.90	1091.50		
315.0	1542.71	1465.46	1402.84	1343.74	1162.49	1162.49	1148.09	1089.75	1022.04		
360.0	1544.47	1471.90	1416.30	1353.68	1244.25	1156.29	1156.29	1098.41	1042.29		
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0		
0.0	970.07	917.75	863.79	812.18	749.79	702.39	643.81	599.91	554.50		
45.0	1002.55	932.91	881.41	813.52	764.36	715.79	668.97	612.79	570.07		
90.0	845.83	794.50	732.70	685.83	629.29	585.28	542.50	504.00	459.93		
135.0	878.48	830.49	787.19	731.59	691.21	652.00	603.43	567.73	531.44		
180.0	906.57	857.41	814.69	764.36	725.15	677.16	639.71	602.26	556.61		
225.0	914.18	866.13	819.37	774.43	721.52	680.50	640.00	601.73	563.22		
270.0	1034.15	975.63	908.33	857.41	805.33	753.83	697.06	649.07	609.28		
315.0	966.85	911.43	860.46	808.66	748.44	699.58	656.04	603.66	561.52		
360.0	970.07	917.75	863.79	812.18	749.79	702.39	643.81	599.91	554.50		
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0		
0.0	502.83	463.38	425.63	380.81	346.10	311.98	279.56	241.29	211.91		
45.0	527.35	485.80	438.39	404.45	371.68	339.49	300.86	300.86	263.47		
90.0	425.22	392.22	362.43	327.67	299.58	272.66	245.50	212.26	186.75		
135.0	487.55	454.19	422.59	385.14	355.29	326.61	299.11	299.11	236.08		
180.0	517.98	481.70	437.22	403.86	371.68	341.24	311.98	297.35	297.35		
225.0	516.93	481.05	437.46	405.03	374.08	337.44	308.76	281.49	249.42		
270.0	567.14	526.18	478.77	443.66	400.94	368.17	337.15	299.69	299.69		
315.0	512.95	475.61	439.27	396.26	362.08	329.60	297.88	260.19	230.11		
360.0	502.83	463.38	425.63	380.81	346.10	311.98	279.56	241.29	211.91		
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0		
0.0	185.69	161.46	133.90	114.24	97.50	80.12	68.06	55.95	47.87		
45.0	204.54	179.31	157.02	131.44	113.18	97.32	79.94	68.06	57.82		
90.0	157.25	135.71	115.76	93.87	79.36	67.07	56.42	45.88	39.03		
135.0	210.15	177.67	154.44	133.20	110.20	93.87	79.77	64.61	54.60		
180.0	224.67	200.85	172.99	150.99	130.80	108.97	93.64	77.83	67.01		
225.0	225.72	202.37	180.42	153.68	133.26	115.41	99.66	82.52	71.46		
270.0	264.87	207.23	181.77	157.95	136.53	112.89	96.09	81.81	69.29		
315.0	200.97	174.81	144.67	122.96	103.64	83.22	69.64	56.18	47.29		
360.0	185.69	161.46	133.90	114.24	97.50	80.12	68.06	55.95	47.87		

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	41.02	34.35	30.43	27.39	25.11	23.29	21.71	21.01	20.31
45.0	47.34	40.44	34.76	30.14	25.87	23.29	21.36	19.37	18.14
90.0	33.42	29.26	25.69	23.47	21.83	19.96	18.73	17.38	16.50
135.0	46.12	37.81	32.77	28.85	26.10	23.41	22.18	21.59	21.59
180.0	57.82	49.98	41.61	36.11	31.84	28.38	25.05	22.88	21.07
225.0	61.45	50.80	43.54	36.64	32.13	28.62	25.05	22.65	20.66
270.0	55.95	47.23	40.20	33.36	29.32	25.69	23.47	21.54	20.13
315.0	40.15	34.41	28.91	25.75	23.41	21.54	19.66	18.43	17.38
360.0	41.02	34.35	30.43	27.39	25.11	23.29	21.71	21.01	20.31
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	19.31	17.79	16.44	14.92	13.87	13.23	12.47	11.94	11.41
45.0	17.15	15.92	15.04	14.28	13.40	12.82	12.17	11.53	10.94
90.0	15.57	14.63	13.81	13.05	12.41	11.76	11.06	10.48	10.01
135.0	21.59	21.13	20.07	18.26	16.44	14.46	13.34	12.76	12.35
180.0	19.20	17.97	16.85	15.63	14.86	14.16	13.23	12.58	12.00
225.0	19.02	17.38	16.33	15.33	14.46	13.81	12.99	12.29	11.53
270.0	18.61	17.56	16.62	15.74	14.63	13.93	13.23	12.52	11.76
315.0	16.50	15.63	14.81	13.87	13.23	12.52	11.82	11.18	10.65
360.0	19.31	17.79	16.44	14.92	13.87	13.23	12.47	11.94	11.41
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.77	10.36	9.95	9.60	9.19	8.90	8.54	8.19	7.78
45.0	10.48	10.07	9.54	9.25	8.84	8.49	8.08	7.72	7.43
90.0	9.54	9.07	8.72	8.25	7.96	7.67	7.32	7.02	6.79
135.0	11.88	11.76	11.35	10.83	10.53	10.24	10.07	9.89	9.66
180.0	11.29	10.77	10.30	9.89	9.36	8.95	8.60	8.25	7.84
225.0	11.00	10.48	9.95	9.60	9.13	8.66	8.37	8.02	7.72
270.0	11.18	10.48	10.01	9.60	9.13	8.66	8.43	7.96	7.67
315.0	10.07	9.66	9.25	8.84	8.49	8.08	7.78	7.55	7.26
360.0	10.77	10.36	9.95	9.60	9.19	8.90	8.54	8.19	7.78
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.43	7.08	6.61	6.38	6.20	5.97	5.85	5.74	5.56
45.0	7.08	6.79	6.50	6.32	6.14	5.97	5.79	5.68	5.56
90.0	6.55	6.32	6.14	6.03	5.91	5.74	5.68	5.56	5.50
135.0	9.31	8.60	7.90	7.32	6.67	6.26	5.97	5.79	5.68
180.0	7.61	7.20	6.91	6.67	6.38	6.14	6.03	5.85	5.68
225.0	7.32	6.96	6.73	6.50	6.20	6.03	5.85	5.74	5.62
270.0	7.37	7.08	6.85	6.61	6.38	6.20	6.03	5.85	5.79
315.0	7.02	6.73	6.50	6.32	6.14	5.97	5.79	5.74	5.56
360.0	7.43	7.08	6.61	6.38	6.20	5.97	5.85	5.74	5.56
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.56	5.56	5.68	5.56	5.44	5.33	5.33	5.27	5.27
45.0	5.50	5.44	5.44	5.50	5.38	5.27	5.27	5.21	5.21
90.0	5.44	5.38	5.44	5.33	5.15	5.09	5.03	4.97	4.97
135.0	5.56	5.50	5.44	5.44	5.50	5.38	5.27	5.27	5.15
180.0	5.56	5.50	5.50	5.50	5.62	5.33	5.27	5.21	5.15
225.0	5.50	5.44	5.44	5.44	5.33	5.27	5.21	5.15	5.09
270.0	5.62	5.56	5.50	5.62	5.44	5.33	5.21	5.15	5.09
315.0	5.50	5.44	5.44	5.33	5.21	5.09	5.03	4.97	4.97
360.0	5.56	5.56	5.68	5.56	5.44	5.33	5.33	5.27	5.27

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Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	5.21
45.0	5.21
90.0	4.97
135.0	5.09
180.0	5.09
225.0	5.09
270.0	5.03
315.0	4.92
360.0	5.21