

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P197408

Luminaire Tested: **8WSL-LD2-60-UPL8-UNV-L850-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197408  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28106)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8WSL-LD2-60-UPL8-UNV-L850-CD1-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L850  
Light Source: (476) 5000K CCT, 80 CRI LEDS  
EL236N0119D850  
Ballast/Driver: OSRAM  
OT50W

**Summary**

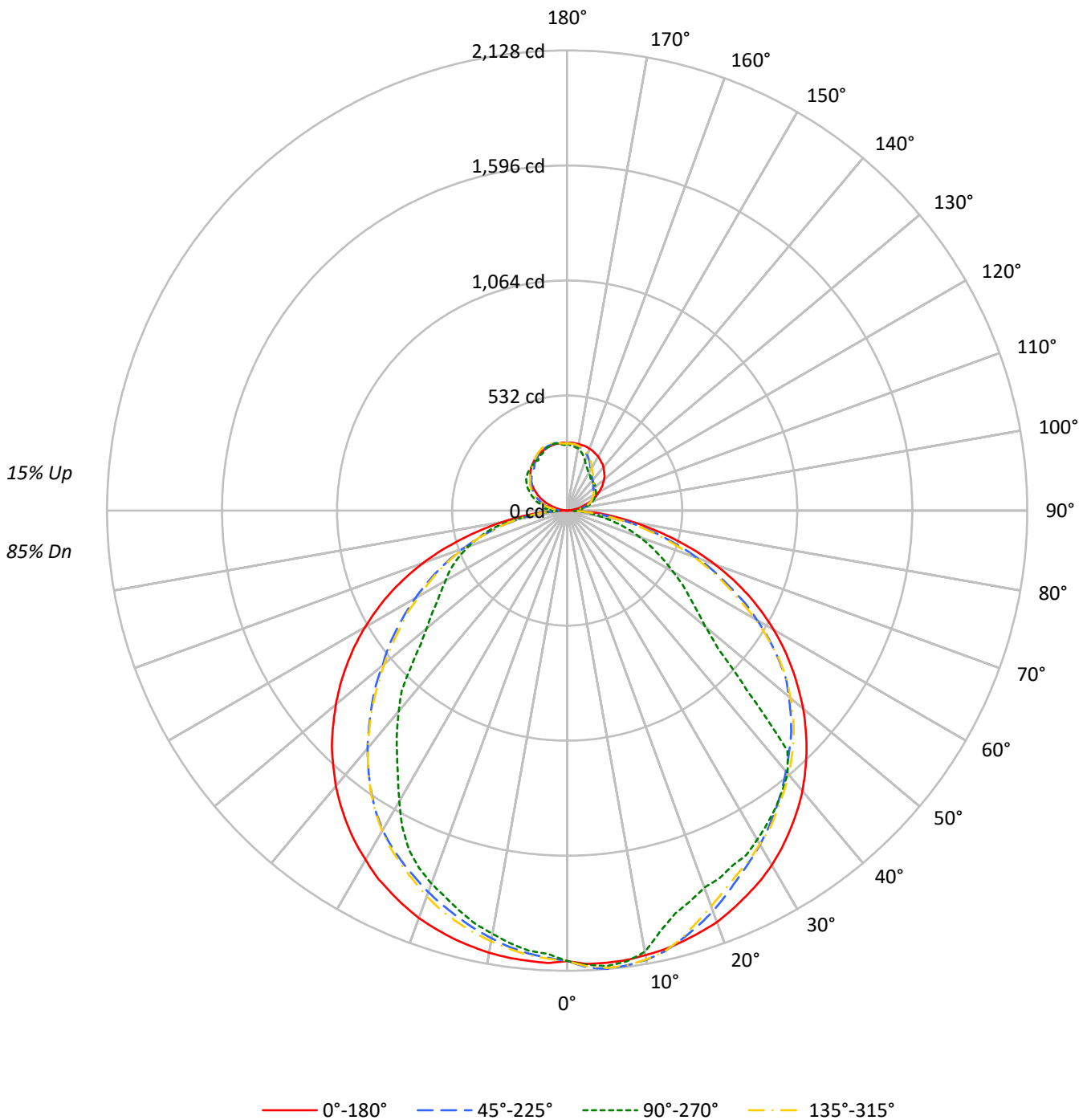
Lumens per Lamp: N/A  
Luminaire Lumens: 6908.9 lumens  
Efficiency: N/A  
Efficacy: 129.1 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36  
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 53.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

TEST NUMBER: P197408

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	105	101	96	92	101	97	93	90	90	87	84	83	81	79	78	76	74	71
2	96	88	81	75	92	84	78	73	78	73	69	73	69	65	68	65	62	59
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	50
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	53	49	45	42
5	73	61	52	45	70	59	51	44	55	48	43	51	45	41	48	43	39	37
6	68	55	46	40	65	53	45	39	50	43	37	47	40	36	44	38	34	32
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25
9	54	41	33	28	52	40	33	27	38	31	26	36	30	26	34	29	25	23
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	5900	5900	5900	5900
5°	5967	6012	5942	5809
10°	6004	5959	5972	5715
15°	6050	5657	6004	5624
20°	6104	5593	6044	5533
25°	6141	5660	6071	5409
30°	6193	5748	6098	5077
35°	6223	5807	6131	4743
40°	6259	5863	6152	4478
45°	6272	4717	6164	4092
50°	6280	3666	6152	3734
55°	6266	3392	6145	3623
60°	6254	3196	6115	3677
65°	6188	3064	6054	3857
70°	6021	2955	5874	4027
75°	5639	2782	5467	4246
80°	5129	2546	4912	4037
85°	5002	2753	4495	3624



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	198.0	2.9
10°-20°	562.3	8.1
20°-30°	851.2	12.3
30°-40°	1027.8	14.9
40°-50°	1049.4	15.2
50°-60°	917.4	13.3
60°-70°	711.1	10.3
70°-80°	427.5	6.2
80°-90°	132.0	1.9
90°-100°	55.6	0.8
100°-110°	106.4	1.5
110°-120°	144.5	2.1
120°-130°	164.3	2.4
130°-140°	166.7	2.4
140°-150°	153.4	2.2
150°-160°	126.6	1.8
160°-170°	85.1	1.2
170°-180°	29.6	0.4
0°-30°	1611.5	23.3
0°-40°	2639.3	38.2
0°-60°	4606.2	66.7
0°-90°	5876.8	85.1
90°-120°	306.6	4.4
90°-150°	790.9	11.4
90°-180°	1032.0	14.9
0°-180°	6908.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2083	2083	2083	2083	2083	
5°	2099	2114	2090	2043	2099	200
15°	2063	1929	2047	1918	2063	583
25°	1965	1811	1942	1731	1965	907
35°	1800	1679	1773	1372	1800	1127
45°	1566	1178	1539	1021	1566	1207
55°	1269	687	1244	734	1269	1134
65°	923	457	903	575	923	911
75°	515	254	500	388	515	547
85°	154	85	138	112	154	155
90°	2	47	2	54	2	10
95°	13	65	13	103	13	17
105°	71	109	69	138	71	76
115°	138	140	136	187	138	137
125°	198	161	194	230	198	176
135°	243	176	241	254	243	188
145°	274	187	272	270	274	172
155°	297	219	294	286	297	137
165°	310	272	308	310	310	87
175°	314	299	314	308	314	30
180°	310	310	310	310	310	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9
2.5°	2098.6	2087.4	2114.2	2118.6	2103.0	2107.5	2109.7	2085.2	2094.1	2060.6	2069.6
5°	2098.6	2096.3	2127.5	2123.1	2114.2	2116.4	2123.1	2094.1	2089.6	2049.5	2056.2
7.5°	2096.3	2100.8	2120.9	2116.4	2103.0	2109.7	2120.9	2098.6	2085.2	2038.3	2036.1
10°	2087.4	2094.1	2109.7	2096.3	2071.8	2082.9	2107.5	2094.1	2076.3	2020.5	2009.3
12.5°	2078.5	2082.9	2087.4	2031.6	1991.5	2018.3	2087.4	2082.9	2062.9	2000.4	1980.4
15°	2062.9	2069.6	2051.7	1971.4	1929.1	1955.8	2047.3	2065.1	2047.3	1971.4	1946.9
17.5°	2045.0	2051.7	2013.8	1924.6	1893.4	1906.8	1996.0	2042.8	2027.2	1944.7	1913.5
20°	2025.0	2031.6	1971.4	1875.5	1855.5	1866.6	1946.9	2018.3	2004.9	1913.5	1877.8
22.5°	1996.0	2007.1	1922.4	1842.1	1839.9	1839.9	1900.1	1989.3	1975.9	1875.5	1837.6
25°	1964.7	1975.9	1873.3	1810.9	1810.9	1810.9	1857.7	1951.4	1942.4	1835.4	1797.5
27.5°	1931.3	1942.4	1828.7	1788.6	1795.3	1784.1	1822.0	1909.0	1909.0	1795.3	1755.1
30°	1893.4	1904.5	1784.1	1752.9	1757.3	1752.9	1781.9	1864.4	1864.4	1748.4	1706.0
32.5°	1848.8	1859.9	1735.0	1710.5	1719.4	1715.0	1744.0	1819.8	1822.0	1699.4	1648.1
35°	1799.7	1813.1	1683.7	1670.4	1679.3	1672.6	1692.7	1773.0	1773.0	1645.8	1581.2
37.5°	1748.4	1761.8	1630.2	1625.8	1634.7	1628.0	1643.6	1723.9	1719.4	1590.1	1509.8
40°	1692.7	1708.3	1574.5	1574.5	1585.6	1581.2	1594.5	1672.6	1663.7	1534.3	1436.2
42.5°	1630.2	1650.3	1518.7	1520.9	1507.6	1525.4	1538.8	1619.1	1601.2	1471.9	1355.9
45°	1565.6	1590.1	1465.2	1425.1	1177.5	1409.4	1480.8	1565.6	1538.8	1409.4	1277.9
47.5°	1496.4	1527.6	1402.8	1255.6	947.8	1235.5	1418.4	1498.6	1467.4	1342.5	1202.0
50°	1425.1	1460.7	1338.1	1110.6	831.8	1088.3	1349.2	1431.7	1396.1	1273.4	1115.1
52.5°	1347.0	1387.1	1275.6	983.5	753.8	963.4	1277.9	1367.1	1322.5	1199.8	1043.7
55°	1268.9	1311.3	1190.9	874.2	686.9	856.4	1195.3	1284.6	1244.4	1124.0	965.6
57.5°	1188.7	1231.0	1106.1	778.3	628.9	760.5	1101.7	1208.7	1164.1	1045.9	887.6
60°	1103.9	1146.3	1014.7	691.3	564.2	678.0	1005.8	1124.0	1079.4	965.6	811.8
62.5°	1014.7	1057.1	927.7	611.1	510.7	599.9	901.0	1041.5	992.4	880.9	733.7
65°	923.3	954.5	825.1	535.2	457.2	526.3	807.3	938.9	903.2	791.7	660.1
67.5°	827.4	858.6	735.9	468.3	405.9	459.4	715.9	847.4	807.3	704.7	586.5
70°	727.0	753.8	642.3	403.7	356.8	397.0	620.0	744.9	709.2	613.3	508.5
72.5°	624.4	649.0	541.9	343.4	305.5	339.0	519.6	642.3	606.6	517.4	437.1
75°	515.2	539.7	448.3	283.2	254.2	278.8	428.2	533.0	499.5	426.0	363.5
77.5°	412.6	441.6	354.6	223.0	202.9	218.6	336.7	430.4	397.0	341.2	292.1
80°	314.4	339.0	263.2	169.5	156.1	167.3	245.3	327.8	301.1	263.2	227.5
82.5°	227.5	240.9	180.6	124.9	118.2	122.7	167.3	231.9	218.6	189.6	167.3
85°	153.9	151.6	111.5	87.0	84.7	87.0	100.4	140.5	138.3	127.1	107.0
87.5°	64.7	60.2	51.3	35.7	31.2	33.5	40.1	53.5	51.3	53.5	51.3
90°	2.2	22.3	35.7	44.6	46.8	44.6	35.7	22.3	2.2	24.5	40.1
92.5°	4.5	29.0	42.4	49.1	53.5	49.1	40.1	29.0	4.5	37.9	40.1
95°	13.4	40.1	49.1	60.2	64.7	60.2	49.1	37.9	13.4	33.5	60.2
97.5°	26.8	51.3	58.0	66.9	69.1	64.7	55.8	51.3	24.5	60.2	62.4
100°	40.1	64.7	75.8	75.8	78.1	75.8	73.6	62.4	37.9	66.9	75.8
102.5°	55.8	73.6	87.0	93.7	93.7	93.7	87.0	73.6	51.3	82.5	104.8
105°	71.4	80.3	95.9	104.8	109.3	104.8	95.9	82.5	69.1	95.9	111.5
107.5°	89.2	87.0	104.8	113.7	118.2	113.7	104.8	89.2	84.7	107.0	124.9
110°	107.0	95.9	113.7	122.7	124.9	122.7	113.7	95.9	102.6	120.4	138.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	122.7	102.6	122.7	131.6	133.8	131.6	122.7	104.8	118.2	129.3	151.6
115°	138.3	109.3	127.1	138.3	140.5	138.3	127.1	111.5	136.0	140.5	162.8
117.5°	153.9	118.2	131.6	145.0	147.2	145.0	133.8	120.4	151.6	153.9	174.0
120°	169.5	129.3	138.3	149.4	153.9	151.6	138.3	131.6	165.0	165.0	182.9
122.5°	182.9	138.3	145.0	153.9	158.3	153.9	145.0	142.7	180.6	176.2	194.0
125°	198.5	147.2	149.4	158.3	160.6	158.3	151.6	149.4	194.0	185.1	200.7
127.5°	209.6	158.3	153.9	162.8	165.0	162.8	156.1	160.6	207.4	202.9	207.4
130°	223.0	169.5	158.3	167.3	169.5	169.5	158.3	174.0	218.6	216.3	216.3
132.5°	234.2	180.6	162.8	171.7	174.0	174.0	165.0	182.9	229.7	227.5	223.0
135°	243.1	196.3	171.7	171.7	176.2	176.2	174.0	198.5	240.9	238.6	234.2
137.5°	252.0	209.6	178.4	174.0	176.2	176.2	182.9	211.9	249.8	249.8	240.9
140°	260.9	223.0	182.9	178.4	178.4	182.9	189.6	225.2	258.7	258.7	243.1
142.5°	269.8	234.2	189.6	185.1	180.6	189.6	196.3	238.6	265.4	267.6	249.8
145°	274.3	245.3	198.5	191.8	187.3	198.5	207.4	249.8	272.1	276.5	263.2
147.5°	281.0	256.5	209.6	196.3	196.3	202.9	216.3	258.7	278.8	283.2	269.8
150°	287.7	265.4	218.6	202.9	198.5	209.6	225.2	267.6	285.5	289.9	278.8
152.5°	292.1	274.3	231.9	211.9	207.4	220.8	240.9	274.3	289.9	294.4	287.7
155°	296.6	281.0	247.5	220.8	218.6	229.7	254.2	281.0	294.4	298.8	294.4
157.5°	301.1	287.7	258.7	234.2	225.2	243.1	265.4	289.9	298.8	303.3	301.1
160°	303.3	292.1	272.1	247.5	243.1	258.7	276.5	292.1	301.1	307.8	305.5
162.5°	307.8	296.6	281.0	263.2	258.7	272.1	285.5	298.8	305.5	310.0	310.0
165°	310.0	301.1	289.9	276.5	272.1	285.5	292.1	303.3	307.8	310.0	312.2
167.5°	310.0	305.5	296.6	285.5	283.2	294.4	301.1	307.8	310.0	310.0	314.4
170°	312.2	307.8	301.1	294.4	292.1	301.1	303.3	310.0	312.2	310.0	316.7
172.5°	312.2	310.0	305.5	298.8	294.4	305.5	307.8	310.0	312.2	310.0	314.4
175°	314.4	310.0	310.0	305.5	298.8	310.0	310.0	310.0	314.4	310.0	312.2
177.5°	314.4	310.0	310.0	307.8	303.3	310.0	310.0	310.0	314.4	310.0	312.2
180°	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2082.9	2082.9	2082.9	2082.9	2082.9	2082.9
2.5°	2067.3	2051.7	2056.2	2074.0	2067.3	2098.6
5°	2051.7	2042.8	2042.8	2062.9	2060.6	2098.6
7.5°	2027.2	2018.3	2022.7	2045.0	2049.5	2096.3
10°	1998.2	1987.0	1991.5	2022.7	2033.9	2087.4
12.5°	1967.0	1958.1	1962.5	1998.2	2013.8	2078.5
15°	1931.3	1917.9	1931.3	1969.2	1989.3	2062.9
17.5°	1891.1	1873.3	1888.9	1938.0	1962.5	2045.0
20°	1851.0	1835.4	1844.3	1897.8	1933.5	2025.0
22.5°	1810.9	1788.6	1797.5	1853.2	1897.8	1996.0
25°	1764.0	1730.6	1748.4	1808.6	1859.9	1964.7
27.5°	1701.6	1650.3	1688.2	1764.0	1815.3	1931.3
30°	1619.1	1552.2	1607.9	1710.5	1768.5	1893.4
32.5°	1527.6	1456.3	1518.7	1650.3	1719.4	1848.8
35°	1436.2	1371.5	1427.3	1583.4	1668.1	1799.7
37.5°	1349.2	1293.5	1344.8	1512.0	1614.6	1748.4
40°	1266.7	1211.0	1264.5	1434.0	1556.6	1692.7
42.5°	1184.2	1132.9	1184.2	1351.5	1496.4	1630.2
45°	1101.7	1021.4	1097.2	1271.2	1431.7	1565.6
47.5°	1012.5	918.8	1005.8	1184.2	1362.6	1496.4
50°	927.7	847.4	923.3	1103.9	1291.2	1425.1
52.5°	854.1	789.5	849.7	1021.4	1217.7	1347.0
55°	785.0	733.7	785.0	941.1	1139.6	1268.9
57.5°	722.6	689.1	724.8	872.0	1059.3	1188.7
60°	669.0	649.0	671.3	787.2	979.0	1103.9
62.5°	617.7	615.5	620.0	720.3	894.3	1014.7
65°	564.2	575.4	564.2	649.0	809.5	923.3
67.5°	510.7	533.0	515.2	577.6	718.1	827.4
70°	461.6	486.2	461.6	504.0	626.7	727.0
72.5°	405.9	437.1	405.9	434.9	530.8	624.4
75°	352.4	388.0	354.6	363.5	439.3	515.2
77.5°	294.4	327.8	301.1	294.4	354.6	412.6
80°	234.2	247.5	234.2	231.9	274.3	314.4
82.5°	162.8	174.0	162.8	169.5	200.7	227.5
85°	107.0	111.5	107.0	109.3	133.8	153.9
87.5°	44.6	44.6	44.6	55.8	60.2	64.7
90°	49.1	53.5	49.1	40.1	24.5	2.2
92.5°	51.3	55.8	51.3	44.6	29.0	4.5
95°	91.4	102.6	87.0	55.8	46.8	13.4
97.5°	73.6	80.3	75.8	64.7	58.0	26.8
100°	87.0	93.7	87.0	91.4	71.4	40.1
102.5°	102.6	107.0	104.8	107.0	87.0	55.8
105°	133.8	138.3	133.8	116.0	100.4	71.4
107.5°	142.7	153.9	145.0	129.3	113.7	89.2
110°	153.9	162.8	156.1	142.7	124.9	107.0





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	165.0	176.2	169.5	158.3	133.8	122.7
115°	178.4	187.3	182.9	169.5	147.2	138.3
117.5°	191.8	198.5	194.0	178.4	160.6	153.9
120°	202.9	211.9	207.4	189.6	171.7	169.5
122.5°	211.9	220.8	216.3	200.7	182.9	182.9
125°	220.8	229.7	225.2	209.6	191.8	198.5
127.5°	227.5	238.6	234.2	216.3	211.9	209.6
130°	236.4	243.1	240.9	223.0	223.0	223.0
132.5°	240.9	249.8	245.3	231.9	236.4	234.2
135°	243.1	254.2	249.8	243.1	247.5	243.1
137.5°	247.5	256.5	254.2	249.8	258.7	252.0
140°	254.2	258.7	260.9	254.2	267.6	260.9
142.5°	260.9	263.2	267.6	260.9	276.5	269.8
145°	265.4	269.8	274.3	274.3	283.2	274.3
147.5°	265.4	272.1	272.1	278.8	292.1	281.0
150°	272.1	267.6	281.0	287.7	296.6	287.7
152.5°	281.0	278.8	289.9	296.6	301.1	292.1
155°	283.2	285.5	292.1	303.3	305.5	296.6
157.5°	292.1	289.9	301.1	310.0	310.0	301.1
160°	298.8	298.8	310.0	314.4	312.2	303.3
162.5°	305.5	305.5	316.7	316.7	314.4	307.8
165°	310.0	310.0	321.1	318.9	314.4	310.0
167.5°	312.2	314.4	323.4	321.1	314.4	310.0
170°	314.4	314.4	323.4	318.9	314.4	312.2
172.5°	314.4	312.2	321.1	316.7	312.2	312.2
175°	312.2	307.8	316.7	312.2	312.2	314.4
177.5°	310.0	303.3	310.0	310.0	312.2	314.4
180°	310.0	310.0	310.0	310.0	310.0	310.0

(END OF REPORT)