

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: P197464

Luminaire Tested: **8WSL-LD2-65-UPL15-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197464
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-65-UPL15-UNV-L850-CD1-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L850
Light Source: (476) 5000K CCT, 80 CRI LEDS
EL236N0119D850
Ballast/Driver: OSRAM
OT50W

Summary

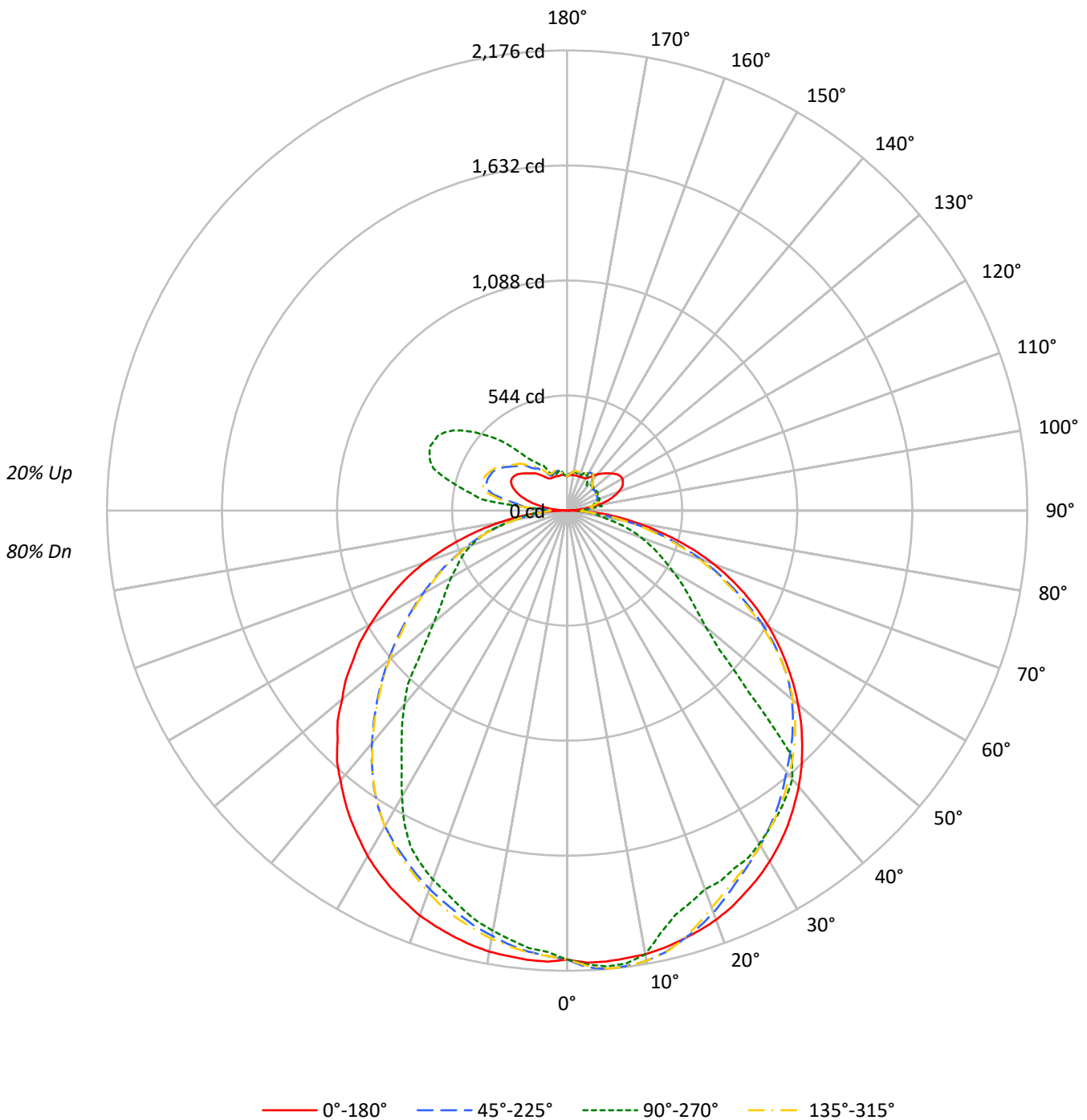
Lumens per Lamp: N/A
Luminaire Lumens: 7512.7 lumens
Efficiency: N/A
Efficacy: 130.4 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 57.6
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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	50	30	10	0
RCR																					
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80			
1	104	99	95	91	99	95	91	88	87	84	81	80	77	75	73	71	70	66			
2	94	86	80	74	90	83	77	72	76	71	67	70	66	62	64	61	58	55			
3	86	76	68	62	82	73	66	60	67	61	56	61	57	53	56	53	49	46			
4	79	67	59	52	75	64	57	51	59	53	48	55	49	45	50	46	42	40			
5	72	60	51	45	69	58	50	44	53	46	41	49	43	39	45	41	37	34			
6	67	54	45	39	64	52	44	38	48	41	36	44	39	34	41	36	32	30			
7	62	49	40	34	59	47	39	33	44	37	32	40	35	30	38	33	29	26			
8	58	44	36	30	55	43	35	30	40	33	28	37	31	27	34	29	26	24			
9	54	41	33	27	51	39	32	27	37	30	26	34	28	24	32	27	23	21			
10	50	37	30	25	48	36	29	24	34	27	23	32	26	22	30	25	21	19			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6013	6013	6013	6013
5°	6085	6154	6064	5904
10°	6127	6127	6092	5804
15°	6161	5803	6111	5696
20°	6208	5745	6142	5598
25°	6231	5835	6155	5477
30°	6266	5947	6170	5110
35°	6287	6034	6169	4719
40°	6299	6128	6164	4425
45°	6297	4872	6151	3983
50°	6283	3759	6122	3619
55°	6259	3466	6103	3515
60°	6241	3272	6075	3590
65°	6191	3169	6028	3757
70°	6096	3088	5934	4017
75°	5815	2934	5629	4268
80°	5447	2664	5287	4254
85°	5467	3484	5070	5070



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.0	2.7
10°-20°	573.3	7.6
20°-30°	866.4	11.5
30°-40°	1042.7	13.9
40°-50°	1060.4	14.1
50°-60°	923.0	12.3
60°-70°	720.0	9.6
70°-80°	445.1	5.9
80°-90°	156.6	2.1
90°-100°	147.4	2.0
100°-110°	285.5	3.8
110°-120°	312.3	4.2
120°-130°	273.9	3.6
130°-140°	205.2	2.7
140°-150°	140.5	1.9
150°-160°	89.4	1.2
160°-170°	52.3	0.7
170°-180°	16.9	0.2
0°-30°	1641.7	21.9
0°-40°	2684.4	35.7
0°-60°	4667.7	62.1
0°-90°	5989.4	79.7
90°-120°	745.2	9.9
90°-150°	1364.7	18.2
90°-180°	1523.0	20.3
0°-180°	7512.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2123	2123	2123	2123	2123	
5°	2140	2164	2133	2076	2140	204
15°	2101	1979	2084	1942	2101	594
25°	1994	1867	1969	1752	1994	920
35°	1818	1745	1784	1365	1818	1137
45°	1572	1216	1535	994	1572	1213
55°	1267	702	1236	712	1267	1133
65°	924	473	899	561	924	913
75°	531	268	514	390	531	563
85°	168	107	156	156	168	168
90°	2	68	2	107	2	13
95°	66	112	51	224	66	68
105°	210	139	202	597	210	218
115°	290	158	290	716	290	284
125°	295	166	295	660	295	262
135°	249	166	249	483	249	193
145°	195	166	200	288	195	124
155°	173	200	171	197	173	80
165°	171	180	168	183	171	48
175°	168	176	168	171	168	16
180°	163	163	163	163	163	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8
2.5°	2139.9	2130.1	2161.8	2164.2	2147.2	2154.5	2154.5	2127.7	2135.0	2103.3	2108.2
5°	2139.9	2142.3	2176.4	2174.0	2164.2	2166.7	2174.0	2139.9	2132.6	2088.7	2093.6
7.5°	2135.0	2147.2	2171.6	2169.1	2159.4	2161.8	2174.0	2144.7	2125.2	2074.1	2071.6
10°	2130.1	2142.3	2161.8	2149.6	2130.1	2137.4	2161.8	2142.3	2117.9	2057.0	2042.4
12.5°	2117.9	2130.1	2139.9	2078.9	2044.8	2074.1	2142.3	2130.1	2103.3	2032.6	2013.1
15°	2100.9	2115.5	2103.3	2018.0	1979.0	2005.8	2103.3	2113.1	2083.8	2000.9	1976.6
17.5°	2081.4	2098.4	2066.8	1971.7	1942.5	1954.6	2052.1	2091.1	2061.9	1969.3	1940.0
20°	2059.4	2078.9	2022.9	1923.0	1905.9	1915.6	1998.5	2066.8	2037.5	1935.1	1903.5
22.5°	2030.2	2052.1	1971.7	1888.8	1896.1	1888.8	1949.8	2035.1	2003.4	1898.6	1862.0
25°	1993.6	2018.0	1920.5	1859.6	1866.9	1864.5	1908.3	1993.6	1969.3	1854.7	1815.7
27.5°	1957.1	1981.4	1874.2	1840.1	1852.3	1837.7	1869.3	1949.8	1930.3	1808.4	1771.8
30°	1915.6	1942.5	1827.9	1806.0	1818.2	1808.4	1830.3	1905.9	1886.4	1759.7	1723.1
32.5°	1869.3	1896.1	1779.2	1764.5	1781.6	1769.4	1784.0	1857.2	1835.2	1706.0	1662.2
35°	1818.2	1845.0	1728.0	1728.0	1745.0	1730.4	1737.7	1808.4	1784.0	1652.4	1593.9
37.5°	1762.1	1791.3	1671.9	1684.1	1703.6	1689.0	1689.0	1757.2	1728.0	1593.9	1515.9
40°	1703.6	1735.3	1613.4	1640.2	1657.3	1640.2	1635.4	1703.6	1667.0	1535.4	1435.5
42.5°	1640.2	1674.4	1559.8	1591.5	1569.6	1591.5	1579.3	1647.6	1611.0	1472.1	1352.6
45°	1572.0	1615.9	1506.2	1486.7	1216.2	1472.1	1523.3	1589.1	1535.4	1411.1	1269.8
47.5°	1501.3	1547.6	1447.7	1306.3	977.3	1291.7	1462.3	1525.7	1472.1	1345.3	1186.9
50°	1425.8	1479.4	1386.8	1150.4	853.0	1135.7	1394.1	1459.9	1389.2	1274.7	1104.1
52.5°	1347.8	1406.3	1318.5	1016.3	770.2	1001.7	1321.0	1389.2	1321.0	1199.1	1023.6
55°	1267.3	1328.3	1238.1	892.0	701.9	889.6	1235.7	1313.7	1235.7	1123.6	943.2
57.5°	1186.9	1255.2	1152.8	801.8	643.4	789.7	1140.6	1235.7	1162.5	1045.6	865.2
60°	1101.6	1165.0	1060.2	704.4	577.6	701.9	1045.6	1155.2	1072.4	965.1	789.7
62.5°	1013.9	1084.6	960.3	619.1	524.0	616.6	943.2	1065.1	984.6	882.3	716.5
65°	923.7	991.9	865.2	550.8	472.8	545.9	848.1	972.4	899.3	799.4	648.3
67.5°	831.1	894.5	770.2	485.0	421.6	480.1	750.7	875.0	811.6	714.1	575.2
70°	736.0	794.5	672.7	421.6	372.9	419.2	655.6	775.0	716.5	626.4	509.4
72.5°	636.1	689.7	570.3	360.7	321.7	358.3	555.7	672.7	611.7	533.7	450.9
75°	531.3	582.5	475.3	299.8	268.1	297.3	460.6	563.0	514.3	448.4	382.6
77.5°	431.4	482.6	377.8	231.5	204.7	226.7	360.7	460.6	419.2	363.1	312.0
80°	333.9	375.3	277.8	173.0	163.3	173.0	270.5	353.4	324.1	285.2	243.7
82.5°	246.2	270.5	187.7	141.4	141.4	141.4	182.8	251.0	238.8	212.0	185.2
85°	168.2	168.2	126.7	107.2	107.2	107.2	124.3	148.7	156.0	141.4	141.4
87.5°	70.7	73.1	65.8	58.5	56.1	58.5	63.4	60.9	60.9	68.2	85.3
90°	2.4	31.7	53.6	65.8	68.2	63.4	48.7	29.2	2.4	41.4	75.6
92.5°	17.1	68.2	63.4	82.9	85.3	78.0	65.8	53.6	9.7	75.6	80.4
95°	65.8	80.4	124.3	126.7	112.1	107.2	121.9	75.6	51.2	102.4	204.7
97.5°	104.8	121.9	112.1	146.2	165.7	146.2	117.0	117.0	97.5	158.4	238.8
100°	143.8	129.2	114.5	126.7	146.2	129.2	109.7	129.2	136.5	185.2	292.5
102.5°	180.4	143.8	143.8	124.3	126.7	121.9	138.9	141.4	170.6	209.6	360.7
105°	209.6	148.7	151.1	141.4	138.9	141.4	151.1	151.1	202.3	231.5	392.4
107.5°	236.4	153.5	148.7	156.0	158.4	156.0	148.7	153.5	231.5	246.2	399.7
110°	258.3	156.0	151.1	156.0	163.3	156.0	151.1	158.4	255.9	260.8	404.6



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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°	277.8	158.4	156.0	153.5	160.9	153.5	156.0	163.3	275.4	268.1	404.6
115°	290.0	160.9	156.0	156.0	158.4	156.0	158.4	165.7	290.0	270.5	399.7
117.5°	297.3	165.7	158.4	160.9	163.3	160.9	158.4	170.6	299.8	280.3	397.3
120°	302.2	182.8	158.4	163.3	165.7	163.3	158.4	185.2	302.2	285.2	387.5
122.5°	299.8	190.1	160.9	163.3	168.2	163.3	160.9	192.5	299.8	282.7	375.3
125°	294.9	197.4	160.9	160.9	165.7	163.3	163.3	197.4	294.9	277.8	358.3
127.5°	285.2	214.5	160.9	163.3	163.3	163.3	163.3	212.0	285.2	280.3	341.2
130°	273.0	226.7	156.0	165.7	163.3	168.2	160.9	226.7	273.0	273.0	326.6
132.5°	260.8	231.5	156.0	165.7	165.7	168.2	158.4	231.5	260.8	263.2	312.0
135°	248.6	236.4	165.7	163.3	165.7	165.7	168.2	236.4	248.6	253.5	302.2
137.5°	236.4	238.8	177.9	156.0	163.3	158.4	182.8	238.8	238.8	238.8	287.6
140°	224.2	236.4	187.7	151.1	153.5	156.0	192.5	238.8	229.1	231.5	263.2
142.5°	209.6	229.1	195.0	163.3	151.1	168.2	199.9	236.4	214.5	224.2	251.0
145°	195.0	221.8	209.6	180.4	165.7	187.7	216.9	229.1	199.9	219.3	243.7
147.5°	182.8	209.6	212.0	190.1	182.8	197.4	219.3	219.3	185.2	209.6	226.7
150°	175.5	197.4	204.7	197.4	190.1	207.2	214.5	202.3	175.5	202.3	212.0
152.5°	173.0	187.7	187.7	207.2	204.7	216.9	197.4	192.5	170.6	195.0	192.5
155°	173.0	185.2	180.4	190.1	199.9	199.9	187.7	187.7	170.6	195.0	182.8
157.5°	170.6	187.7	180.4	177.9	182.8	187.7	187.7	190.1	170.6	190.1	182.8
160°	170.6	190.1	182.8	175.5	177.9	185.2	190.1	190.1	170.6	190.1	185.2
162.5°	170.6	185.2	185.2	177.9	177.9	187.7	190.1	187.7	170.6	185.2	190.1
165°	170.6	185.2	187.7	182.8	180.4	192.5	190.1	182.8	168.2	182.8	192.5
167.5°	170.6	180.4	190.1	185.2	185.2	192.5	192.5	180.4	168.2	175.5	192.5
170°	170.6	177.9	187.7	185.2	187.7	195.0	187.7	177.9	170.6	173.0	185.2
172.5°	170.6	173.0	182.8	185.2	185.2	190.1	182.8	173.0	170.6	168.2	177.9
175°	168.2	173.0	177.9	177.9	175.5	182.8	175.5	170.6	168.2	165.7	170.6
177.5°	165.7	168.2	173.0	173.0	168.2	173.0	168.2	165.7	165.7	163.3	168.2
180°	163.3	163.3	163.3	163.3	163.3	163.3	163.3	163.3	163.3	163.3	163.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2122.8	2122.8	2122.8	2122.8	2122.8	2122.8
2.5°	2105.7	2088.7	2093.6	2108.2	2105.7	2139.9
5°	2083.8	2076.5	2076.5	2098.4	2096.0	2139.9
7.5°	2059.4	2047.3	2054.6	2078.9	2086.2	2135.0
10°	2027.8	2018.0	2020.4	2057.0	2069.2	2130.1
12.5°	1996.1	1986.3	1993.6	2027.8	2044.8	2117.9
15°	1959.5	1942.5	1962.0	1998.5	2020.4	2100.9
17.5°	1915.6	1896.1	1915.6	1964.4	1991.2	2081.4
20°	1876.6	1857.2	1869.3	1920.5	1957.1	2059.4
22.5°	1832.8	1808.4	1818.2	1874.2	1920.5	2030.2
25°	1784.0	1752.4	1767.0	1827.9	1879.1	1993.6
27.5°	1720.7	1667.0	1703.6	1779.2	1827.9	1957.1
30°	1632.9	1562.2	1620.7	1725.5	1781.6	1915.6
32.5°	1530.6	1455.0	1518.4	1659.7	1728.0	1869.3
35°	1430.6	1364.8	1423.3	1591.5	1674.4	1818.2
37.5°	1342.9	1282.0	1335.6	1513.5	1615.9	1762.1
40°	1252.7	1196.7	1250.3	1430.6	1557.4	1703.6
42.5°	1169.9	1116.2	1167.4	1347.8	1494.0	1640.2
45°	1082.1	994.4	1077.2	1262.5	1425.8	1572.0
47.5°	989.5	896.9	982.2	1179.6	1357.5	1501.3
50°	904.2	821.3	899.3	1094.3	1284.4	1425.8
52.5°	828.7	758.0	826.2	1009.0	1208.9	1347.8
55°	758.0	711.7	760.4	931.0	1138.2	1267.3
57.5°	701.9	670.2	704.4	855.5	1060.2	1186.9
60°	653.2	633.7	655.6	779.9	977.3	1101.6
62.5°	599.6	592.2	599.6	706.8	896.9	1013.9
65°	553.2	560.6	553.2	641.0	811.6	923.7
67.5°	509.4	526.4	511.8	570.3	726.3	831.1
70°	460.6	485.0	463.1	506.9	638.5	736.0
72.5°	409.5	438.7	409.5	446.0	545.9	636.1
75°	355.8	390.0	358.3	380.2	458.2	531.3
77.5°	297.3	319.3	302.2	309.5	372.9	431.4
80°	236.4	260.8	238.8	243.7	294.9	333.9
82.5°	197.4	214.5	199.9	185.2	219.3	246.2
85°	146.2	156.0	151.1	143.8	151.1	168.2
87.5°	90.2	95.1	90.2	90.2	78.0	70.7
90°	99.9	107.2	99.9	78.0	43.9	2.4
92.5°	102.4	112.1	102.4	85.3	82.9	17.1
95°	229.1	224.2	243.7	221.8	126.7	65.8
97.5°	355.8	407.0	368.0	265.7	170.6	104.8
100°	409.5	458.2	426.5	331.5	195.0	143.8
102.5°	472.8	526.4	492.3	387.5	219.3	180.4
105°	550.8	597.1	567.9	409.5	241.3	209.6
107.5°	592.2	662.9	604.4	419.2	255.9	236.4
110°	614.2	689.7	633.7	421.6	268.1	258.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	631.2	704.4	645.9	421.6	273.0	277.8
115°	631.2	716.5	645.9	414.3	280.3	290.0
117.5°	631.2	709.2	645.9	407.0	290.0	297.3
120°	609.3	706.8	628.8	397.3	292.5	302.2
122.5°	592.2	687.3	604.4	385.1	292.5	299.8
125°	560.6	660.5	575.2	370.5	287.6	294.9
127.5°	526.4	621.5	538.6	353.4	290.0	285.2
130°	494.8	577.6	502.1	336.3	280.3	273.0
132.5°	453.3	528.9	460.6	324.1	270.5	260.8
135°	414.3	482.6	424.1	314.4	258.3	248.6
137.5°	372.9	433.8	382.6	294.9	246.2	236.4
140°	324.1	372.9	333.9	273.0	238.8	224.2
142.5°	292.5	319.3	302.2	263.2	229.1	209.6
145°	273.0	287.6	280.3	253.5	224.2	195.0
147.5°	253.5	268.1	260.8	234.0	212.0	182.8
150°	246.2	246.2	255.9	216.9	204.7	175.5
152.5°	219.3	238.8	229.1	197.4	199.9	173.0
155°	187.7	197.4	197.4	190.1	199.9	173.0
157.5°	175.5	182.8	185.2	190.1	195.0	170.6
160°	175.5	177.9	185.2	192.5	192.5	170.6
162.5°	180.4	177.9	190.1	197.4	187.7	170.6
165°	185.2	182.8	195.0	199.9	182.8	170.6
167.5°	190.1	190.1	199.9	197.4	177.9	170.6
170°	190.1	195.0	199.9	190.1	175.5	170.6
172.5°	182.8	185.2	190.1	177.9	168.2	170.6
175°	173.0	170.6	177.9	170.6	168.2	168.2
177.5°	168.2	160.9	168.2	165.7	163.3	165.7
180°	163.3	163.3	163.3	163.3	163.3	163.3

(END OF REPORT)