

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: P197468

Luminaire Tested: **8WSL-LD2-70-UPL15-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197468
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-LD2-70-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
OT85W1202772A0DIML

Summary

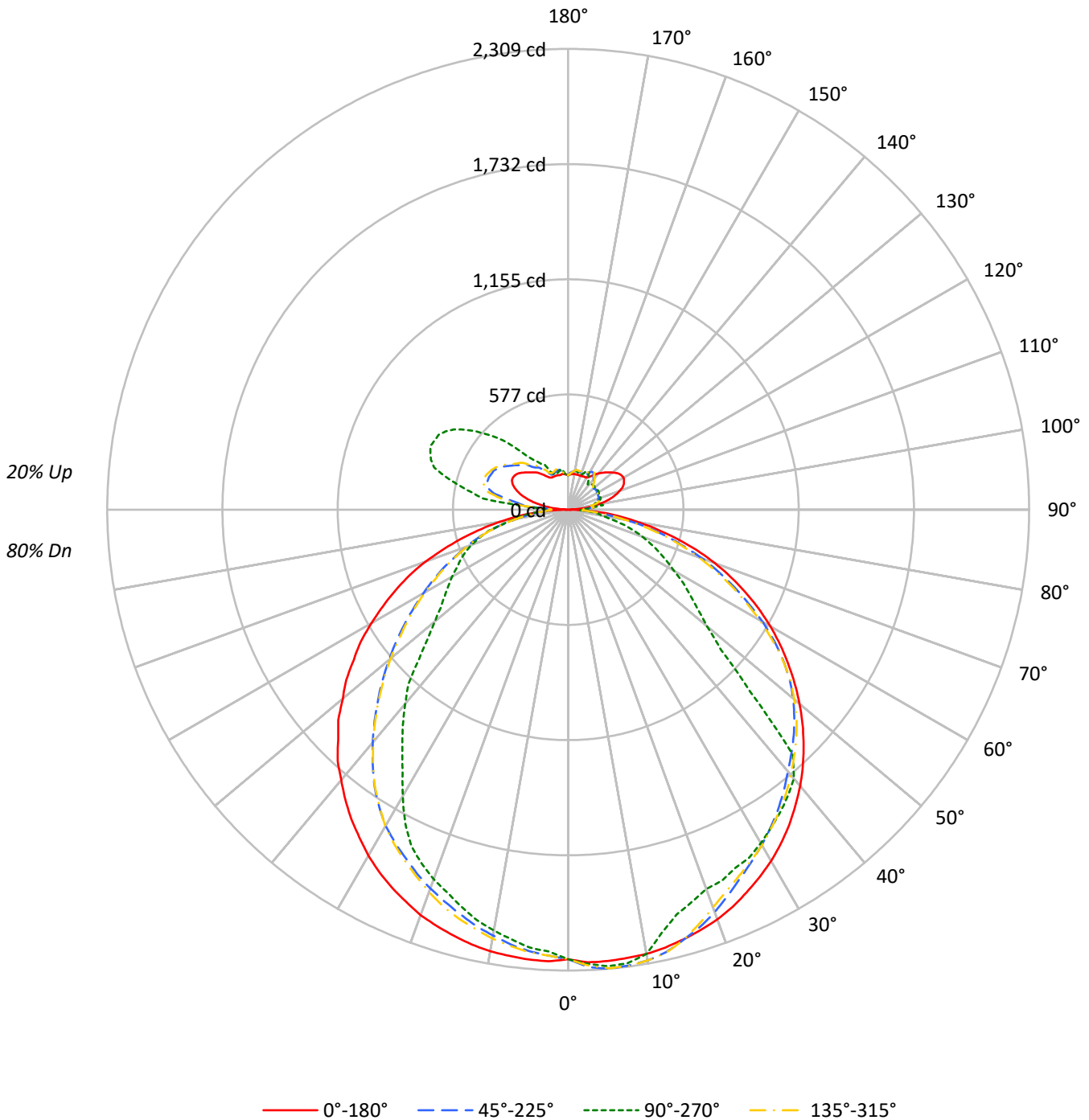
Lumens per Lamp: N/A
Luminaire Lumens: 7970.2 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 63.6
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	
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	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°	6379	6379	6379	6379
5°	6455	6529	6433	6264
10°	6500	6500	6463	6158
15°	6536	6157	6483	6043
20°	6586	6095	6516	5939
25°	6610	6190	6530	5811
30°	6647	6309	6546	5421
35°	6670	6402	6545	5007
40°	6683	6501	6540	4694
45°	6681	5168	6525	4226
50°	6666	3988	6495	3840
55°	6640	3678	6474	3729
60°	6621	3472	6445	3809
65°	6568	3362	6395	3986
70°	6467	3276	6296	4261
75°	6169	3113	5971	4528
80°	5778	2825	5610	4514
85°	5798	3699	5379	5379



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.3	2.7
10°-20°	608.2	7.6
20°-30°	919.1	11.5
30°-40°	1106.2	13.9
40°-50°	1125.0	14.1
50°-60°	979.2	12.3
60°-70°	763.8	9.6
70°-80°	472.2	5.9
80°-90°	166.1	2.1
90°-100°	156.4	2.0
100°-110°	302.8	3.8
110°-120°	331.4	4.2
120°-130°	290.5	3.6
130°-140°	217.7	2.7
140°-150°	149.0	1.9
150°-160°	94.9	1.2
160°-170°	55.5	0.7
170°-180°	17.9	0.2
0°-30°	1741.7	21.9
0°-40°	2847.8	35.7
0°-60°	4952.0	62.1
0°-90°	6354.1	79.7
90°-120°	790.6	9.9
90°-150°	1447.8	18.2
90°-180°	1616.0	20.3
0°-180°	7970.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2252	2252	2252	2252	2252	
5°	2270	2296	2262	2203	2270	216
15°	2229	2100	2211	2061	2229	630
25°	2115	1981	2089	1859	2115	976
35°	1929	1851	1893	1448	1929	1207
45°	1668	1290	1629	1055	1668	1286
55°	1344	745	1311	755	1344	1202
65°	980	502	954	595	980	968
75°	564	284	546	414	564	597
85°	178	114	166	166	178	178
90°	3	72	3	114	3	13
95°	70	119	54	238	70	72
105°	222	147	215	634	222	232
115°	308	168	308	760	308	301
125°	313	176	313	701	313	278
135°	264	176	264	512	264	205
145°	207	176	212	305	207	132
155°	184	212	181	209	184	85
165°	181	191	178	194	181	51
175°	178	186	178	181	178	17
180°	173	173	173	173	173	



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CATALOG NUMBER: 8WSL-LD2-70-UPL15-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1
2.5°	2270.2	2259.8	2293.4	2296.0	2277.9	2285.7	2285.7	2257.2	2265.0	2231.4	2236.6
5°	2270.2	2272.8	2309.0	2306.4	2296.0	2298.6	2306.4	2270.2	2262.4	2215.9	2221.0
7.5°	2265.0	2277.9	2303.8	2301.2	2290.9	2293.4	2306.4	2275.3	2254.7	2200.4	2197.8
10°	2259.8	2272.8	2293.4	2280.5	2259.8	2267.6	2293.4	2272.8	2246.9	2182.3	2166.7
12.5°	2246.9	2259.8	2270.2	2205.5	2169.3	2200.4	2272.8	2259.8	2231.4	2156.4	2135.7
15°	2228.8	2244.3	2231.4	2140.9	2099.5	2128.0	2231.4	2241.7	2210.7	2122.8	2096.9
17.5°	2208.1	2226.2	2192.6	2091.8	2060.7	2073.7	2177.1	2218.5	2187.4	2089.2	2058.2
20°	2184.8	2205.5	2146.1	2040.1	2022.0	2032.3	2120.2	2192.6	2161.6	2053.0	2019.4
22.5°	2153.8	2177.1	2091.8	2003.9	2011.6	2003.9	2068.5	2159.0	2125.4	2014.2	1975.4
25°	2115.0	2140.9	2037.5	1972.8	1980.6	1978.0	2024.5	2115.0	2089.2	1967.7	1926.3
27.5°	2076.2	2102.1	1988.3	1952.1	1965.1	1949.6	1983.2	2068.5	2047.8	1918.5	1879.7
30°	2032.3	2060.7	1939.2	1915.9	1928.9	1918.5	1941.8	2022.0	2001.3	1866.8	1828.0
32.5°	1983.2	2011.6	1887.5	1872.0	1890.1	1877.2	1892.7	1970.2	1947.0	1809.9	1763.4
35°	1928.9	1957.3	1833.2	1833.2	1851.3	1835.8	1843.5	1918.5	1892.7	1753.0	1691.0
37.5°	1869.4	1900.4	1773.7	1786.7	1807.3	1791.8	1791.8	1864.2	1833.2	1691.0	1608.3
40°	1807.3	1841.0	1711.7	1740.1	1758.2	1740.1	1734.9	1807.3	1768.6	1628.9	1522.9
42.5°	1740.1	1776.3	1654.8	1688.4	1665.1	1688.4	1675.5	1747.9	1709.1	1561.7	1435.0
45°	1667.7	1714.3	1597.9	1577.2	1290.2	1561.7	1616.0	1685.8	1628.9	1497.1	1347.1
47.5°	1592.7	1641.9	1535.9	1385.9	1036.8	1370.4	1551.4	1618.6	1561.7	1427.3	1259.2
50°	1512.6	1569.5	1471.2	1220.4	905.0	1204.9	1479.0	1548.8	1473.8	1352.3	1171.3
52.5°	1429.8	1491.9	1398.8	1078.2	817.1	1062.7	1401.4	1473.8	1401.4	1272.1	1086.0
55°	1344.5	1409.2	1313.5	946.3	744.7	943.7	1310.9	1393.6	1310.9	1192.0	1000.6
57.5°	1259.2	1331.6	1223.0	850.7	682.6	837.7	1210.1	1310.9	1233.3	1109.2	917.9
60°	1168.7	1235.9	1124.7	747.2	612.8	744.7	1109.2	1225.6	1137.7	1023.9	837.7
62.5°	1075.6	1150.6	1018.7	656.7	555.9	654.2	1000.6	1129.9	1044.6	936.0	760.2
65°	979.9	1052.3	917.9	584.3	501.6	579.2	899.8	1031.7	954.1	848.1	687.8
67.5°	881.7	948.9	817.1	514.5	447.3	509.4	796.4	928.2	861.0	757.6	610.2
70°	780.9	842.9	713.6	447.3	395.6	444.7	695.5	822.2	760.2	664.5	540.4
72.5°	674.8	731.7	605.0	382.7	341.3	380.1	589.5	713.6	649.0	566.2	478.3
75°	563.7	618.0	504.2	318.0	284.4	315.4	488.7	597.3	545.6	475.8	405.9
77.5°	457.7	512.0	400.8	245.6	217.2	240.5	382.7	488.7	444.7	385.3	331.0
80°	354.2	398.2	294.8	183.6	173.2	183.6	287.0	374.9	343.9	302.5	258.6
82.5°	261.1	287.0	199.1	150.0	150.0	150.0	193.9	266.3	253.4	224.9	196.5
85°	178.4	178.4	134.5	113.8	113.8	113.8	131.9	157.7	165.5	150.0	150.0
87.5°	75.0	77.6	69.8	62.1	59.5	62.1	67.2	64.6	64.6	72.4	90.5
90°	2.6	33.6	56.9	69.8	72.4	67.2	51.7	31.0	2.6	44.0	80.2
92.5°	18.1	72.4	67.2	87.9	90.5	82.7	69.8	56.9	10.3	80.2	85.3
95°	69.8	85.3	131.9	134.5	118.9	113.8	129.3	80.2	54.3	108.6	217.2
97.5°	111.2	129.3	118.9	155.1	175.8	155.1	124.1	124.1	103.4	168.1	253.4
100°	152.6	137.0	121.5	134.5	155.1	137.0	116.4	137.0	144.8	196.5	310.3
102.5°	191.3	152.6	152.6	131.9	134.5	129.3	147.4	150.0	181.0	222.4	382.7
105°	222.4	157.7	160.3	150.0	147.4	150.0	160.3	160.3	214.6	245.6	416.3
107.5°	250.8	162.9	157.7	165.5	168.1	165.5	157.7	162.9	245.6	261.1	424.0
110°	274.1	165.5	160.3	165.5	173.2	165.5	160.3	168.1	271.5	276.7	429.2



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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°	294.8	168.1	165.5	162.9	170.7	162.9	165.5	173.2	292.2	284.4	429.2
115°	307.7	170.7	165.5	165.5	168.1	165.5	168.1	175.8	307.7	287.0	424.0
117.5°	315.4	175.8	168.1	170.7	173.2	170.7	168.1	181.0	318.0	297.3	421.5
120°	320.6	193.9	168.1	173.2	175.8	173.2	168.1	196.5	320.6	302.5	411.1
122.5°	318.0	201.7	170.7	173.2	178.4	173.2	170.7	204.3	318.0	299.9	398.2
125°	312.9	209.4	170.7	170.7	175.8	173.2	173.2	209.4	312.9	294.8	380.1
127.5°	302.5	227.5	170.7	173.2	173.2	173.2	173.2	224.9	302.5	297.3	362.0
130°	289.6	240.5	165.5	175.8	173.2	178.4	170.7	240.5	289.6	289.6	346.5
132.5°	276.7	245.6	165.5	175.8	175.8	178.4	168.1	245.6	276.7	279.2	331.0
135°	263.7	250.8	175.8	173.2	175.8	175.8	178.4	250.8	263.7	268.9	320.6
137.5°	250.8	253.4	188.7	165.5	173.2	168.1	193.9	253.4	253.4	253.4	305.1
140°	237.9	250.8	199.1	160.3	162.9	165.5	204.3	253.4	243.0	245.6	279.2
142.5°	222.4	243.0	206.8	173.2	160.3	178.4	212.0	250.8	227.5	237.9	266.3
145°	206.8	235.3	222.4	191.3	175.8	199.1	230.1	243.0	212.0	232.7	258.6
147.5°	193.9	222.4	224.9	201.7	193.9	209.4	232.7	232.7	196.5	222.4	240.5
150°	186.2	209.4	217.2	209.4	201.7	219.8	227.5	214.6	186.2	214.6	224.9
152.5°	183.6	199.1	199.1	219.8	217.2	230.1	209.4	204.3	181.0	206.8	204.3
155°	183.6	196.5	191.3	201.7	212.0	212.0	199.1	199.1	181.0	206.8	193.9
157.5°	181.0	199.1	191.3	188.7	193.9	199.1	199.1	201.7	181.0	201.7	193.9
160°	181.0	201.7	193.9	186.2	188.7	196.5	201.7	201.7	181.0	201.7	196.5
162.5°	181.0	196.5	196.5	188.7	188.7	199.1	201.7	199.1	181.0	196.5	201.7
165°	181.0	196.5	199.1	193.9	191.3	204.3	201.7	193.9	178.4	193.9	204.3
167.5°	181.0	191.3	201.7	196.5	196.5	204.3	204.3	191.3	178.4	186.2	204.3
170°	181.0	188.7	199.1	196.5	199.1	206.8	199.1	188.7	181.0	183.6	196.5
172.5°	181.0	183.6	193.9	196.5	196.5	201.7	193.9	183.6	181.0	178.4	188.7
175°	178.4	183.6	188.7	188.7	186.2	193.9	186.2	181.0	178.4	175.8	181.0
177.5°	175.8	178.4	183.6	183.6	178.4	183.6	178.4	175.8	175.8	173.2	178.4
180°	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2252.1	2252.1	2252.1	2252.1	2252.1	2252.1
2.5°	2234.0	2215.9	2221.0	2236.6	2234.0	2270.2
5°	2210.7	2202.9	2202.9	2226.2	2223.6	2270.2
7.5°	2184.8	2171.9	2179.7	2205.5	2213.3	2265.0
10°	2151.2	2140.9	2143.5	2182.3	2195.2	2259.8
12.5°	2117.6	2107.3	2115.0	2151.2	2169.3	2246.9
15°	2078.8	2060.7	2081.4	2120.2	2143.5	2228.8
17.5°	2032.3	2011.6	2032.3	2084.0	2112.4	2208.1
20°	1990.9	1970.2	1983.2	2037.5	2076.2	2184.8
22.5°	1944.4	1918.5	1928.9	1988.3	2037.5	2153.8
25°	1892.7	1859.1	1874.6	1939.2	1993.5	2115.0
27.5°	1825.4	1768.6	1807.3	1887.5	1939.2	2076.2
30°	1732.4	1657.4	1719.4	1830.6	1890.1	2032.3
32.5°	1623.8	1543.6	1610.8	1760.8	1833.2	1983.2
35°	1517.8	1447.9	1510.0	1688.4	1776.3	1928.9
37.5°	1424.7	1360.0	1416.9	1605.7	1714.3	1869.4
40°	1329.0	1269.5	1326.4	1517.8	1652.2	1807.3
42.5°	1241.1	1184.2	1238.5	1429.8	1585.0	1740.1
45°	1148.0	1054.9	1142.8	1339.3	1512.6	1667.7
47.5°	1049.8	951.5	1042.0	1251.4	1440.2	1592.7
50°	959.3	871.4	954.1	1160.9	1362.6	1512.6
52.5°	879.1	804.1	876.5	1070.4	1282.5	1429.8
55°	804.1	755.0	806.7	987.7	1207.5	1344.5
57.5°	744.7	711.0	747.2	907.6	1124.7	1259.2
60°	692.9	672.3	695.5	827.4	1036.8	1168.7
62.5°	636.1	628.3	636.1	749.8	951.5	1075.6
65°	586.9	594.7	586.9	680.0	861.0	979.9
67.5°	540.4	558.5	543.0	605.0	770.5	881.7
70°	488.7	514.5	491.3	537.8	677.4	780.9
72.5°	434.4	465.4	434.4	473.2	579.2	674.8
75°	377.5	413.7	380.1	403.4	486.1	563.7
77.5°	315.4	338.7	320.6	328.4	395.6	457.7
80°	250.8	276.7	253.4	258.6	312.9	354.2
82.5°	209.4	227.5	212.0	196.5	232.7	261.1
85°	155.1	165.5	160.3	152.6	160.3	178.4
87.5°	95.7	100.8	95.7	95.7	82.7	75.0
90°	106.0	113.8	106.0	82.7	46.5	2.6
92.5°	108.6	118.9	108.6	90.5	87.9	18.1
95°	243.0	237.9	258.6	235.3	134.5	69.8
97.5°	377.5	431.8	390.4	281.8	181.0	111.2
100°	434.4	486.1	452.5	351.6	206.8	152.6
102.5°	501.6	558.5	522.3	411.1	232.7	191.3
105°	584.3	633.5	602.4	434.4	256.0	222.4
107.5°	628.3	703.3	641.2	444.7	271.5	250.8
110°	651.6	731.7	672.3	447.3	284.4	274.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	669.7	747.2	685.2	447.3	289.6	294.8
115°	669.7	760.2	685.2	439.6	297.3	307.7
117.5°	669.7	752.4	685.2	431.8	307.7	315.4
120°	646.4	749.8	667.1	421.5	310.3	320.6
122.5°	628.3	729.1	641.2	408.5	310.3	318.0
125°	594.7	700.7	610.2	393.0	305.1	312.9
127.5°	558.5	659.3	571.4	374.9	307.7	302.5
130°	524.9	612.8	532.6	356.8	297.3	289.6
132.5°	480.9	561.1	488.7	343.9	287.0	276.7
135°	439.6	512.0	449.9	333.5	274.1	263.7
137.5°	395.6	460.2	405.9	312.9	261.1	250.8
140°	343.9	395.6	354.2	289.6	253.4	237.9
142.5°	310.3	338.7	320.6	279.2	243.0	222.4
145°	289.6	305.1	297.3	268.9	237.9	206.8
147.5°	268.9	284.4	276.7	248.2	224.9	193.9
150°	261.1	261.1	271.5	230.1	217.2	186.2
152.5°	232.7	253.4	243.0	209.4	212.0	183.6
155°	199.1	209.4	209.4	201.7	212.0	183.6
157.5°	186.2	193.9	196.5	201.7	206.8	181.0
160°	186.2	188.7	196.5	204.3	204.3	181.0
162.5°	191.3	188.7	201.7	209.4	199.1	181.0
165°	196.5	193.9	206.8	212.0	193.9	181.0
167.5°	201.7	201.7	212.0	209.4	188.7	181.0
170°	201.7	206.8	212.0	201.7	186.2	181.0
172.5°	193.9	196.5	201.7	188.7	178.4	181.0
175°	183.6	181.0	188.7	181.0	178.4	178.4
177.5°	178.4	170.7	178.4	175.8	173.2	175.8
180°	173.2	173.2	173.2	173.2	173.2	173.2

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