

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: P197423

Luminaire Tested: **8WSL-LD2-80-UPL8-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197423
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-LD2-80-UPL8-UNV-L840-CD1-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L840
Light Source: (476) 4000K CCT, 80 CRI LEDS
EL236N0119D840
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

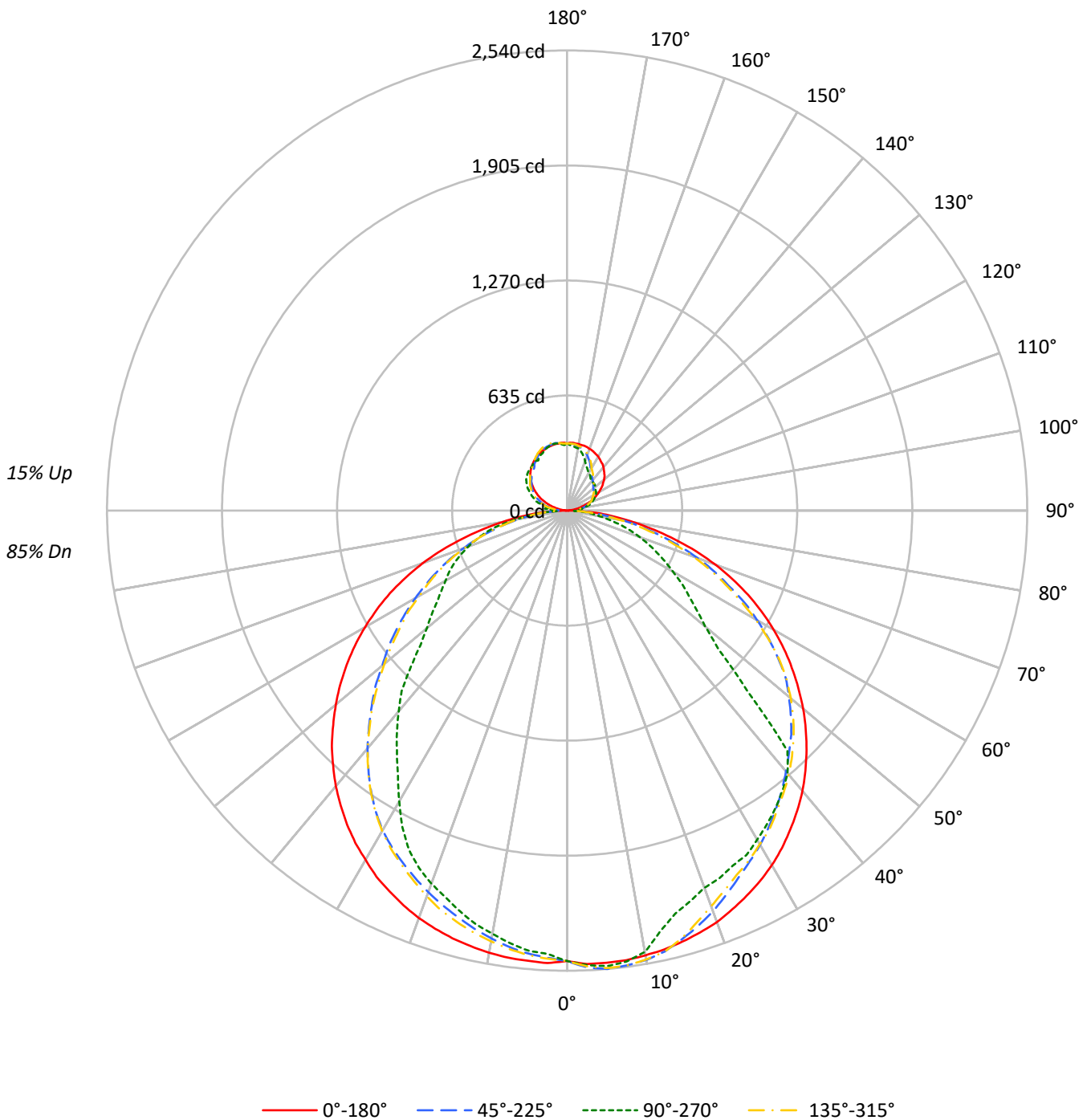
Lumens per Lamp: N/A
Luminaire Lumens: 8248.2 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 73.1
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	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°	7044	7044	7044	7044
5°	7124	7177	7094	6935
10°	7168	7114	7130	6823
15°	7222	6754	7167	6715
20°	7287	6677	7215	6605
25°	7331	6757	7248	6457
30°	7393	6862	7280	6061
35°	7430	6933	7319	5662
40°	7472	7000	7344	5346
45°	7487	5632	7359	4885
50°	7497	4376	7345	4458
55°	7481	4050	7337	4326
60°	7466	3816	7300	4389
65°	7388	3658	7227	4604
70°	7189	3528	7012	4807
75°	6731	3322	6527	5071
80°	6124	3041	5863	4820
85°	5970	3289	5366	4326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.4	2.9
10°-20°	671.3	8.1
20°-30°	1016.2	12.3
30°-40°	1227.1	14.9
40°-50°	1252.8	15.2
50°-60°	1095.3	13.3
60°-70°	848.9	10.3
70°-80°	510.4	6.2
80°-90°	157.6	1.9
90°-100°	66.4	0.8
100°-110°	127.0	1.5
110°-120°	172.5	2.1
120°-130°	196.2	2.4
130°-140°	199.0	2.4
140°-150°	183.1	2.2
150°-160°	151.1	1.8
160°-170°	101.6	1.2
170°-180°	35.3	0.4
0°-30°	1923.9	23.3
0°-40°	3151.0	38.2
0°-60°	5499.1	66.7
0°-90°	7016.0	85.1
90°-120°	366.0	4.4
90°-150°	944.2	11.4
90°-180°	1232.0	14.9
0°-180°	8248.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2487	2487	2487	2487	2487	
5°	2505	2524	2495	2439	2505	239
15°	2463	2303	2444	2290	2463	696
25°	2346	2162	2319	2066	2346	1083
35°	2149	2005	2117	1637	2149	1345
45°	1869	1406	1837	1219	1869	1442
55°	1515	820	1486	876	1515	1354
65°	1102	546	1078	687	1102	1088
75°	615	304	596	463	615	653
85°	184	101	165	133	184	185
90°	3	56	3	64	3	12
95°	16	77	16	122	16	20
105°	85	130	82	165	85	91
115°	165	168	162	224	165	163
125°	237	192	232	274	237	210
135°	290	210	288	304	290	224
145°	328	224	325	322	328	206
155°	354	261	351	341	354	163
165°	370	325	367	370	370	104
175°	375	357	375	367	375	36
180°	370	370	370	370	370	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7
2.5°	2505.4	2492.1	2524.0	2529.3	2510.7	2516.0	2518.7	2489.4	2500.0	2460.1	2470.8
5°	2505.4	2502.7	2540.0	2534.7	2524.0	2526.7	2534.7	2500.0	2494.7	2446.8	2454.8
7.5°	2502.7	2508.0	2532.0	2526.7	2510.7	2518.7	2532.0	2505.4	2489.4	2433.5	2430.8
10°	2492.1	2500.0	2518.7	2502.7	2473.4	2486.7	2516.0	2500.0	2478.7	2412.2	2398.9
12.5°	2481.4	2486.7	2492.1	2425.5	2377.6	2409.5	2492.1	2486.7	2462.8	2388.2	2364.3
15°	2462.8	2470.8	2449.5	2353.6	2303.0	2335.0	2444.1	2465.4	2444.1	2353.6	2324.3
17.5°	2441.5	2449.5	2404.2	2297.7	2260.4	2276.4	2382.9	2438.8	2420.2	2321.7	2284.4
20°	2417.5	2425.5	2353.6	2239.1	2215.2	2228.5	2324.3	2409.5	2393.5	2284.4	2241.8
22.5°	2382.9	2396.2	2295.0	2199.2	2196.5	2196.5	2268.4	2374.9	2358.9	2239.1	2193.9
25°	2345.6	2358.9	2236.5	2161.9	2161.9	2161.9	2217.8	2329.6	2319.0	2191.2	2145.9
27.5°	2305.7	2319.0	2183.2	2135.3	2143.3	2130.0	2175.2	2279.1	2279.1	2143.3	2095.3
30°	2260.4	2273.7	2130.0	2092.7	2098.0	2092.7	2127.3	2225.8	2225.8	2087.4	2036.8
32.5°	2207.2	2220.5	2071.4	2042.1	2052.8	2047.4	2082.0	2172.6	2175.2	2028.8	1967.6
35°	2148.6	2164.6	2010.2	1994.2	2004.8	1996.8	2020.8	2116.6	2116.6	1964.9	1887.7
37.5°	2087.4	2103.3	1946.3	1940.9	1951.6	1943.6	1962.2	2058.1	2052.8	1898.3	1802.5
40°	2020.8	2039.4	1879.7	1879.7	1893.0	1887.7	1903.7	1996.8	1986.2	1831.8	1714.6
42.5°	1946.3	1970.2	1813.1	1815.8	1799.8	1821.1	1837.1	1932.9	1911.6	1757.2	1618.8
45°	1869.0	1898.3	1749.2	1701.3	1405.8	1682.7	1767.9	1869.0	1837.1	1682.7	1525.6
47.5°	1786.5	1823.8	1674.7	1499.0	1131.5	1475.0	1693.3	1789.2	1751.9	1602.8	1435.1
50°	1701.3	1743.9	1597.5	1325.9	993.1	1299.3	1610.8	1709.3	1666.7	1520.3	1331.2
52.5°	1608.1	1656.0	1522.9	1174.1	899.9	1150.2	1525.6	1632.1	1578.8	1432.4	1246.0
55°	1514.9	1565.5	1421.7	1043.7	820.0	1022.4	1427.1	1533.6	1485.6	1341.9	1152.8
57.5°	1419.1	1469.7	1320.6	929.2	750.8	907.9	1315.3	1443.0	1389.8	1248.7	1059.7
60°	1317.9	1368.5	1211.4	825.4	673.6	809.4	1200.8	1341.9	1288.6	1152.8	969.1
62.5°	1211.4	1262.0	1107.6	729.5	609.7	716.2	1075.6	1243.4	1184.8	1051.7	875.9
65°	1102.3	1139.5	985.1	639.0	545.8	628.3	963.8	1120.9	1078.3	945.2	788.1
67.5°	987.8	1025.0	878.6	559.1	484.6	548.5	854.6	1011.7	963.8	841.3	700.2
70°	868.0	899.9	766.8	481.9	426.0	473.9	740.2	889.3	846.7	732.2	607.0
72.5°	745.5	774.8	647.0	410.0	364.8	404.7	620.4	766.8	724.2	617.7	521.8
75°	615.0	644.3	535.2	338.1	303.5	332.8	511.2	636.3	596.4	508.5	434.0
77.5°	492.6	527.2	423.3	266.2	242.3	260.9	402.0	513.9	473.9	407.4	348.8
80°	375.4	404.7	314.2	202.3	186.4	199.7	292.9	391.4	359.4	314.2	271.6
82.5°	271.6	287.5	215.7	149.1	141.1	146.4	199.7	276.9	260.9	226.3	199.7
85°	183.7	181.0	133.1	103.8	101.2	103.8	119.8	167.7	165.1	151.8	127.8
87.5°	77.2	71.9	61.2	42.6	37.3	39.9	47.9	63.9	61.2	63.9	61.2
90°	2.7	26.6	42.6	53.2	55.9	53.2	42.6	26.6	2.7	29.3	47.9
92.5°	5.3	34.6	50.6	58.6	63.9	58.6	47.9	34.6	5.3	45.3	47.9
95°	16.0	47.9	58.6	71.9	77.2	71.9	58.6	45.3	16.0	39.9	71.9
97.5°	31.9	61.2	69.2	79.9	82.5	77.2	66.6	61.2	29.3	71.9	74.5
100°	47.9	77.2	90.5	90.5	93.2	90.5	87.9	74.5	45.3	79.9	90.5
102.5°	66.6	87.9	103.8	111.8	111.8	111.8	103.8	87.9	61.2	98.5	125.1
105°	85.2	95.8	114.5	125.1	130.5	125.1	114.5	98.5	82.5	114.5	133.1
107.5°	106.5	103.8	125.1	135.8	141.1	135.8	125.1	106.5	101.2	127.8	149.1
110°	127.8	114.5	135.8	146.4	149.1	146.4	135.8	114.5	122.5	143.8	165.1



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CATALOG NUMBER: 8WSL-LD2-80-UPL8-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	146.4	122.5	146.4	157.1	159.7	157.1	146.4	125.1	141.1	154.4	181.0
115°	165.1	130.5	151.8	165.1	167.7	165.1	151.8	133.1	162.4	167.7	194.4
117.5°	183.7	141.1	157.1	173.1	175.7	173.1	159.7	143.8	181.0	183.7	207.7
120°	202.3	154.4	165.1	178.4	183.7	181.0	165.1	157.1	197.0	197.0	218.3
122.5°	218.3	165.1	173.1	183.7	189.0	183.7	173.1	170.4	215.7	210.3	231.6
125°	237.0	175.7	178.4	189.0	191.7	189.0	181.0	178.4	231.6	221.0	239.6
127.5°	250.3	189.0	183.7	194.4	197.0	194.4	186.4	191.7	247.6	242.3	247.6
130°	266.2	202.3	189.0	199.7	202.3	202.3	189.0	207.7	260.9	258.3	258.3
132.5°	279.6	215.7	194.4	205.0	207.7	207.7	197.0	218.3	274.2	271.6	266.2
135°	290.2	234.3	205.0	205.0	210.3	210.3	207.7	237.0	287.5	284.9	279.6
137.5°	300.9	250.3	213.0	207.7	210.3	210.3	218.3	252.9	298.2	298.2	287.5
140°	311.5	266.2	218.3	213.0	213.0	218.3	226.3	268.9	308.8	308.8	290.2
142.5°	322.2	279.6	226.3	221.0	215.7	226.3	234.3	284.9	316.8	319.5	298.2
145°	327.5	292.9	237.0	229.0	223.6	237.0	247.6	298.2	324.8	330.1	314.2
147.5°	335.5	306.2	250.3	234.3	234.3	242.3	258.3	308.8	332.8	338.1	322.2
150°	343.5	316.8	260.9	242.3	237.0	250.3	268.9	319.5	340.8	346.1	332.8
152.5°	348.8	327.5	276.9	252.9	247.6	263.6	287.5	327.5	346.1	351.4	343.5
155°	354.1	335.5	295.5	263.6	260.9	274.2	303.5	335.5	351.4	356.8	351.4
157.5°	359.4	343.5	308.8	279.6	268.9	290.2	316.8	346.1	356.8	362.1	359.4
160°	362.1	348.8	324.8	295.5	290.2	308.8	330.1	348.8	359.4	367.4	364.8
162.5°	367.4	354.1	335.5	314.2	308.8	324.8	340.8	356.8	364.8	370.1	370.1
165°	370.1	359.4	346.1	330.1	324.8	340.8	348.8	362.1	367.4	370.1	372.7
167.5°	370.1	364.8	354.1	340.8	338.1	351.4	359.4	367.4	370.1	370.1	375.4
170°	372.7	367.4	359.4	351.4	348.8	359.4	362.1	370.1	372.7	370.1	378.1
172.5°	372.7	370.1	364.8	356.8	351.4	364.8	367.4	370.1	372.7	370.1	375.4
175°	375.4	370.1	370.1	364.8	356.8	370.1	370.1	370.1	375.4	370.1	372.7
177.5°	375.4	370.1	370.1	367.4	362.1	370.1	370.1	370.1	375.4	370.1	372.7
180°	370.1	370.1	370.1	370.1	370.1	370.1	370.1	370.1	370.1	370.1	370.1



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CATALOG NUMBER: 8WSL-LD2-80-UPL8-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2486.7	2486.7	2486.7	2486.7	2486.7	2486.7
2.5°	2468.1	2449.5	2454.8	2476.1	2468.1	2505.4
5°	2449.5	2438.8	2438.8	2462.8	2460.1	2505.4
7.5°	2420.2	2409.5	2414.8	2441.5	2446.8	2502.7
10°	2385.6	2372.2	2377.6	2414.8	2428.2	2492.1
12.5°	2348.3	2337.6	2343.0	2385.6	2404.2	2481.4
15°	2305.7	2289.7	2305.7	2350.9	2374.9	2462.8
17.5°	2257.8	2236.5	2255.1	2313.7	2343.0	2441.5
20°	2209.8	2191.2	2201.8	2265.7	2308.3	2417.5
22.5°	2161.9	2135.3	2145.9	2212.5	2265.7	2382.9
25°	2106.0	2066.1	2087.4	2159.2	2220.5	2345.6
27.5°	2031.5	1970.2	2015.5	2106.0	2167.2	2305.7
30°	1932.9	1853.1	1919.6	2042.1	2111.3	2260.4
32.5°	1823.8	1738.6	1813.1	1970.2	2052.8	2207.2
35°	1714.6	1637.4	1704.0	1890.3	1991.5	2148.6
37.5°	1610.8	1544.2	1605.5	1805.1	1927.6	2087.4
40°	1512.3	1445.7	1509.6	1712.0	1858.4	2020.8
42.5°	1413.8	1352.5	1413.8	1613.4	1786.5	1946.3
45°	1315.3	1219.4	1309.9	1517.6	1709.3	1869.0
47.5°	1208.8	1096.9	1200.8	1413.8	1626.8	1786.5
50°	1107.6	1011.7	1102.3	1317.9	1541.6	1701.3
52.5°	1019.7	942.5	1014.4	1219.4	1453.7	1608.1
55°	937.2	875.9	937.2	1123.6	1360.5	1514.9
57.5°	862.6	822.7	865.3	1041.0	1264.7	1419.1
60°	798.7	774.8	801.4	939.8	1168.8	1317.9
62.5°	737.5	734.8	740.2	860.0	1067.6	1211.4
65°	673.6	686.9	673.6	774.8	966.5	1102.3
67.5°	609.7	636.3	615.0	689.6	857.3	987.8
70°	551.1	580.4	551.1	601.7	748.1	868.0
72.5°	484.6	521.8	484.6	519.2	633.7	745.5
75°	420.7	463.3	423.3	434.0	524.5	615.0
77.5°	351.4	391.4	359.4	351.4	423.3	492.6
80°	279.6	295.5	279.6	276.9	327.5	375.4
82.5°	194.4	207.7	194.4	202.3	239.6	271.6
85°	127.8	133.1	127.8	130.5	159.7	183.7
87.5°	53.2	53.2	53.2	66.6	71.9	77.2
90°	58.6	63.9	58.6	47.9	29.3	2.7
92.5°	61.2	66.6	61.2	53.2	34.6	5.3
95°	109.2	122.5	103.8	66.6	55.9	16.0
97.5°	87.9	95.8	90.5	77.2	69.2	31.9
100°	103.8	111.8	103.8	109.2	85.2	47.9
102.5°	122.5	127.8	125.1	127.8	103.8	66.6
105°	159.7	165.1	159.7	138.4	119.8	85.2
107.5°	170.4	183.7	173.1	154.4	135.8	106.5
110°	183.7	194.4	186.4	170.4	149.1	127.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	197.0	210.3	202.3	189.0	159.7	146.4
115°	213.0	223.6	218.3	202.3	175.7	165.1
117.5°	229.0	237.0	231.6	213.0	191.7	183.7
120°	242.3	252.9	247.6	226.3	205.0	202.3
122.5°	252.9	263.6	258.3	239.6	218.3	218.3
125°	263.6	274.2	268.9	250.3	229.0	237.0
127.5°	271.6	284.9	279.6	258.3	252.9	250.3
130°	282.2	290.2	287.5	266.2	266.2	266.2
132.5°	287.5	298.2	292.9	276.9	282.2	279.6
135°	290.2	303.5	298.2	290.2	295.5	290.2
137.5°	295.5	306.2	303.5	298.2	308.8	300.9
140°	303.5	308.8	311.5	303.5	319.5	311.5
142.5°	311.5	314.2	319.5	311.5	330.1	322.2
145°	316.8	322.2	327.5	327.5	338.1	327.5
147.5°	316.8	324.8	324.8	332.8	348.8	335.5
150°	324.8	319.5	335.5	343.5	354.1	343.5
152.5°	335.5	332.8	346.1	354.1	359.4	348.8
155°	338.1	340.8	348.8	362.1	364.8	354.1
157.5°	348.8	346.1	359.4	370.1	370.1	359.4
160°	356.8	356.8	370.1	375.4	372.7	362.1
162.5°	364.8	364.8	378.1	378.1	375.4	367.4
165°	370.1	370.1	383.4	380.7	375.4	370.1
167.5°	372.7	375.4	386.1	383.4	375.4	370.1
170°	375.4	375.4	386.1	380.7	375.4	372.7
172.5°	375.4	372.7	383.4	378.1	372.7	372.7
175°	372.7	367.4	378.1	372.7	372.7	375.4
177.5°	370.1	362.1	370.1	370.1	372.7	375.4
180°	370.1	370.1	370.1	370.1	370.1	370.1

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