

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: P197412

Luminaire Tested: **8WSL-LD2-65-UPL8-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197412
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-LD2-65-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

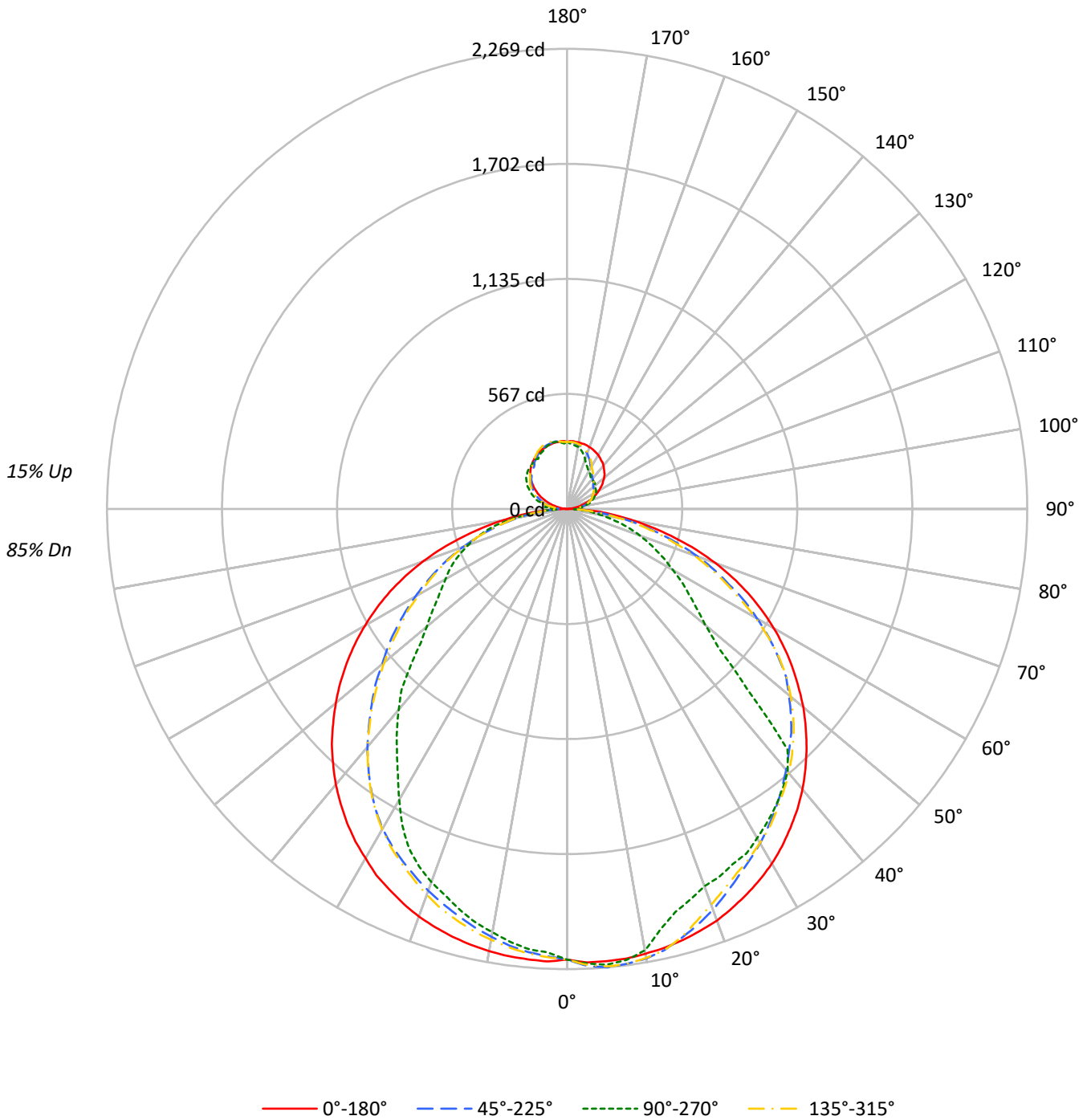
Lumens per Lamp: N/A
Luminaire Lumens: 7368.9 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 57.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	6293	6293	6293	6293
5°	6364	6412	6337	6195
10°	6404	6356	6370	6096
15°	6452	6034	6403	5999
20°	6511	5965	6446	5901
25°	6550	6036	6475	5769
30°	6605	6130	6504	5415
35°	6638	6194	6539	5058
40°	6676	6254	6561	4776
45°	6689	5031	6575	4364
50°	6698	3910	6562	3983
55°	6684	3618	6555	3865
60°	6670	3409	6522	3921
65°	6600	3268	6457	4113
70°	6422	3152	6265	4294
75°	6014	2968	5831	4530
80°	5471	2716	5238	4306
85°	5333	2938	4794	3864



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.2	2.9
10°-20°	599.7	8.1
20°-30°	907.9	12.3
30°-40°	1096.3	14.9
40°-50°	1119.2	15.2
50°-60°	978.5	13.3
60°-70°	758.4	10.3
70°-80°	456.0	6.2
80°-90°	140.8	1.9
90°-100°	59.4	0.8
100°-110°	113.5	1.5
110°-120°	154.2	2.1
120°-130°	175.2	2.4
130°-140°	177.8	2.4
140°-150°	163.6	2.2
150°-160°	135.0	1.8
160°-170°	90.8	1.2
170°-180°	31.5	0.4
0°-30°	1718.8	23.3
0°-40°	2815.1	38.2
0°-60°	4912.8	66.7
0°-90°	6268.0	85.1
90°-120°	327.0	4.4
90°-150°	843.6	11.4
90°-180°	1101.0	14.9
0°-180°	7368.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2222	2222	2222	2222	2222	
5°	2238	2255	2229	2179	2238	213
15°	2200	2058	2184	2046	2200	622
25°	2096	1931	2072	1846	2096	967
35°	1920	1791	1891	1463	1920	1202
45°	1670	1256	1641	1089	1670	1288
55°	1353	733	1327	783	1353	1210
65°	985	488	963	614	985	972
75°	550	271	533	414	550	583
85°	164	90	148	119	164	166
90°	2	50	2	57	2	11
95°	14	69	14	109	14	18
105°	76	117	74	148	76	82
115°	148	150	145	200	148	146
125°	212	171	207	245	212	188
135°	259	188	257	271	259	200
145°	293	200	290	288	293	184
155°	316	233	314	304	316	146
165°	331	290	328	331	331	93
175°	335	319	335	328	335	32
180°	331	331	331	331	331	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6
2.5°	2238.3	2226.4	2254.9	2259.7	2243.0	2247.8	2250.2	2224.0	2233.5	2197.8	2207.4
5°	2238.3	2235.9	2269.2	2264.4	2254.9	2257.3	2264.4	2233.5	2228.8	2185.9	2193.1
7.5°	2235.9	2240.7	2262.1	2257.3	2243.0	2250.2	2262.1	2238.3	2224.0	2174.0	2171.7
10°	2226.4	2233.5	2250.2	2235.9	2209.7	2221.6	2247.8	2233.5	2214.5	2155.0	2143.1
12.5°	2216.9	2221.6	2226.4	2166.9	2124.1	2152.6	2226.4	2221.6	2200.2	2133.6	2112.2
15°	2200.2	2207.4	2188.3	2102.7	2057.5	2086.0	2183.6	2202.6	2183.6	2102.7	2076.5
17.5°	2181.2	2188.3	2147.9	2052.7	2019.4	2033.7	2128.9	2178.8	2162.2	2074.1	2040.8
20°	2159.8	2166.9	2102.7	2000.4	1979.0	1990.9	2076.5	2152.6	2138.4	2040.8	2002.8
22.5°	2128.9	2140.7	2050.4	1964.7	1962.4	1962.4	2026.6	2121.7	2107.4	2000.4	1960.0
25°	2095.6	2107.4	1998.0	1931.4	1931.4	1931.4	1981.4	2081.3	2071.8	1957.6	1917.2
27.5°	2059.9	2071.8	1950.5	1907.6	1914.8	1902.9	1943.3	2036.1	2036.1	1914.8	1872.0
30°	2019.4	2031.3	1902.9	1869.6	1874.3	1869.6	1900.5	1988.5	1988.5	1864.8	1819.6
32.5°	1971.9	1983.8	1850.6	1824.4	1833.9	1829.2	1860.1	1940.9	1943.3	1812.5	1757.8
35°	1919.5	1933.8	1795.9	1781.6	1791.1	1784.0	1805.4	1891.0	1891.0	1755.4	1686.4
37.5°	1864.8	1879.1	1738.8	1734.0	1743.5	1736.4	1753.0	1838.7	1833.9	1695.9	1610.3
40°	1805.4	1822.0	1679.3	1679.3	1691.2	1686.4	1700.7	1784.0	1774.4	1636.5	1531.8
42.5°	1738.8	1760.2	1619.8	1622.2	1607.9	1627.0	1641.2	1726.9	1707.8	1569.9	1446.2
45°	1669.8	1695.9	1562.7	1519.9	1255.9	1503.3	1579.4	1669.8	1641.2	1503.3	1362.9
47.5°	1596.0	1629.3	1496.1	1339.2	1010.9	1317.8	1512.8	1598.4	1565.1	1431.9	1282.1
50°	1519.9	1558.0	1427.2	1184.5	887.2	1160.8	1439.1	1527.1	1489.0	1358.2	1189.3
52.5°	1436.7	1479.5	1360.6	1049.0	804.0	1027.6	1362.9	1458.1	1410.5	1279.7	1113.2
55°	1353.4	1398.6	1270.2	932.4	732.6	913.4	1274.9	1370.1	1327.3	1198.8	1029.9
57.5°	1267.8	1313.0	1179.8	830.1	670.8	811.1	1175.0	1289.2	1241.6	1115.6	946.7
60°	1177.4	1222.6	1082.3	737.4	601.8	723.1	1072.8	1198.8	1151.2	1029.9	865.8
62.5°	1082.3	1127.5	989.5	651.7	544.7	639.8	961.0	1110.8	1058.5	939.6	782.6
65°	984.7	1018.0	880.1	570.9	487.6	561.4	861.1	1001.4	963.3	844.4	704.1
67.5°	882.5	915.8	784.9	499.5	432.9	490.0	763.5	903.9	861.1	751.6	625.6
70°	775.4	804.0	685.0	430.5	380.6	423.4	661.3	794.5	756.4	654.1	542.3
72.5°	666.0	692.2	578.0	366.3	325.9	361.5	554.2	685.0	647.0	551.8	466.2
75°	549.5	575.6	478.1	302.1	271.2	297.3	456.7	568.5	532.8	454.3	387.7
77.5°	440.0	471.0	378.2	237.9	216.5	233.1	359.2	459.1	423.4	363.9	311.6
80°	335.4	361.5	280.7	180.8	166.5	178.4	261.6	349.7	321.1	280.7	242.6
82.5°	242.6	256.9	192.7	133.2	126.1	130.8	178.4	247.4	233.1	202.2	178.4
85°	164.1	161.7	118.9	92.8	90.4	92.8	107.0	149.9	147.5	135.6	114.2
87.5°	69.0	64.2	54.7	38.1	33.3	35.7	42.8	57.1	54.7	57.1	54.7
90°	2.4	23.8	38.1	47.6	50.0	47.6	38.1	23.8	2.4	26.2	42.8
92.5°	4.8	30.9	45.2	52.3	57.1	52.3	42.8	30.9	4.8	40.4	42.8
95°	14.3	42.8	52.3	64.2	69.0	64.2	52.3	40.4	14.3	35.7	64.2
97.5°	28.5	54.7	61.8	71.4	73.7	69.0	59.5	54.7	26.2	64.2	66.6
100°	42.8	69.0	80.9	80.9	83.3	80.9	78.5	66.6	40.4	71.4	80.9
102.5°	59.5	78.5	92.8	99.9	99.9	99.9	92.8	78.5	54.7	88.0	111.8
105°	76.1	85.6	102.3	111.8	116.6	111.8	102.3	88.0	73.7	102.3	118.9
107.5°	95.1	92.8	111.8	121.3	126.1	121.3	111.8	95.1	90.4	114.2	133.2
110°	114.2	102.3	121.3	130.8	133.2	130.8	121.3	102.3	109.4	128.4	147.5



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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°	130.8	109.4	130.8	140.3	142.7	140.3	130.8	111.8	126.1	138.0	161.7
115°	147.5	116.6	135.6	147.5	149.9	147.5	135.6	118.9	145.1	149.9	173.6
117.5°	164.1	126.1	140.3	154.6	157.0	154.6	142.7	128.4	161.7	164.1	185.5
120°	180.8	138.0	147.5	159.4	164.1	161.7	147.5	140.3	176.0	176.0	195.0
122.5°	195.0	147.5	154.6	164.1	168.9	164.1	154.6	152.2	192.7	187.9	206.9
125°	211.7	157.0	159.4	168.9	171.3	168.9	161.7	159.4	206.9	197.4	214.1
127.5°	223.6	168.9	164.1	173.6	176.0	173.6	166.5	171.3	221.2	216.5	221.2
130°	237.9	180.8	168.9	178.4	180.8	180.8	168.9	185.5	233.1	230.7	230.7
132.5°	249.8	192.7	173.6	183.2	185.5	185.5	176.0	195.0	245.0	242.6	237.9
135°	259.3	209.3	183.2	183.2	187.9	187.9	185.5	211.7	256.9	254.5	249.8
137.5°	268.8	223.6	190.3	185.5	187.9	187.9	195.0	226.0	266.4	266.4	256.9
140°	278.3	237.9	195.0	190.3	190.3	195.0	202.2	240.2	275.9	275.9	259.3
142.5°	287.8	249.8	202.2	197.4	192.7	202.2	209.3	254.5	283.1	285.4	266.4
145°	292.6	261.6	211.7	204.6	199.8	211.7	221.2	266.4	290.2	294.9	280.7
147.5°	299.7	273.5	223.6	209.3	209.3	216.5	230.7	275.9	297.3	302.1	287.8
150°	306.8	283.1	233.1	216.5	211.7	223.6	240.2	285.4	304.5	309.2	297.3
152.5°	311.6	292.6	247.4	226.0	221.2	235.5	256.9	292.6	309.2	314.0	306.8
155°	316.4	299.7	264.0	235.5	233.1	245.0	271.2	299.7	314.0	318.7	314.0
157.5°	321.1	306.8	275.9	249.8	240.2	259.3	283.1	309.2	318.7	323.5	321.1
160°	323.5	311.6	290.2	264.0	259.3	275.9	294.9	311.6	321.1	328.2	325.9
162.5°	328.2	316.4	299.7	280.7	275.9	290.2	304.5	318.7	325.9	330.6	330.6
165°	330.6	321.1	309.2	294.9	290.2	304.5	311.6	323.5	328.2	330.6	333.0
167.5°	330.6	325.9	316.4	304.5	302.1	314.0	321.1	328.2	330.6	330.6	335.4
170°	333.0	328.2	321.1	314.0	311.6	321.1	323.5	330.6	333.0	330.6	337.8
172.5°	333.0	330.6	325.9	318.7	314.0	325.9	328.2	330.6	333.0	330.6	335.4
175°	335.4	330.6	330.6	325.9	318.7	330.6	330.6	330.6	335.4	330.6	333.0
177.5°	335.4	330.6	330.6	328.2	323.5	330.6	330.6	330.6	335.4	330.6	333.0
180°	330.6	330.6	330.6	330.6	330.6	330.6	330.6	330.6	330.6	330.6	330.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2221.6	2221.6	2221.6	2221.6	2221.6	2221.6
2.5°	2205.0	2188.3	2193.1	2212.1	2205.0	2238.3
5°	2188.3	2178.8	2178.8	2200.2	2197.8	2238.3
7.5°	2162.2	2152.6	2157.4	2181.2	2185.9	2235.9
10°	2131.2	2119.3	2124.1	2157.4	2169.3	2226.4
12.5°	2097.9	2088.4	2093.2	2131.2	2147.9	2216.9
15°	2059.9	2045.6	2059.9	2100.3	2121.7	2200.2
17.5°	2017.1	1998.0	2014.7	2067.0	2093.2	2181.2
20°	1974.2	1957.6	1967.1	2024.2	2062.3	2159.8
22.5°	1931.4	1907.6	1917.2	1976.6	2024.2	2128.9
25°	1881.5	1845.8	1864.8	1929.1	1983.8	2095.6
27.5°	1814.9	1760.2	1800.6	1881.5	1936.2	2059.9
30°	1726.9	1655.5	1715.0	1824.4	1886.2	2019.4
32.5°	1629.3	1553.2	1619.8	1760.2	1833.9	1971.9
35°	1531.8	1462.8	1522.3	1688.8	1779.2	1919.5
37.5°	1439.1	1379.6	1434.3	1612.7	1722.1	1864.8
40°	1351.1	1291.6	1348.7	1529.4	1660.3	1805.4
42.5°	1263.0	1208.3	1263.0	1441.4	1596.0	1738.8
45°	1175.0	1089.4	1170.3	1355.8	1527.1	1669.8
47.5°	1079.9	980.0	1072.8	1263.0	1453.3	1596.0
50°	989.5	903.9	984.7	1177.4	1377.2	1519.9
52.5°	911.0	842.0	906.3	1089.4	1298.7	1436.7
55°	837.3	782.6	837.3	1003.8	1215.5	1353.4
57.5°	770.7	735.0	773.0	930.0	1129.8	1267.8
60°	713.6	692.2	716.0	839.6	1044.2	1177.4
62.5°	658.9	656.5	661.3	768.3	953.8	1082.3
65°	601.8	613.7	601.8	692.2	863.4	984.7
67.5°	544.7	568.5	549.5	616.1	765.9	882.5
70°	492.4	518.5	492.4	537.6	668.4	775.4
72.5°	432.9	466.2	432.9	463.8	566.1	666.0
75°	375.8	413.9	378.2	387.7	468.6	549.5
77.5°	314.0	349.7	321.1	314.0	378.2	440.0
80°	249.8	264.0	249.8	247.4	292.6	335.4
82.5°	173.6	185.5	173.6	180.8	214.1	242.6
85°	114.2	118.9	114.2	116.6	142.7	164.1
87.5°	47.6	47.6	47.6	59.5	64.2	69.0
90°	52.3	57.1	52.3	42.8	26.2	2.4
92.5°	54.7	59.5	54.7	47.6	30.9	4.8
95°	97.5	109.4	92.8	59.5	50.0	14.3
97.5°	78.5	85.6	80.9	69.0	61.8	28.5
100°	92.8	99.9	92.8	97.5	76.1	42.8
102.5°	109.4	114.2	111.8	114.2	92.8	59.5
105°	142.7	147.5	142.7	123.7	107.0	76.1
107.5°	152.2	164.1	154.6	138.0	121.3	95.1
110°	164.1	173.6	166.5	152.2	133.2	114.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	176.0	187.9	180.8	168.9	142.7	130.8
115°	190.3	199.8	195.0	180.8	157.0	147.5
117.5°	204.6	211.7	206.9	190.3	171.3	164.1
120°	216.5	226.0	221.2	202.2	183.2	180.8
122.5°	226.0	235.5	230.7	214.1	195.0	195.0
125°	235.5	245.0	240.2	223.6	204.6	211.7
127.5°	242.6	254.5	249.8	230.7	226.0	223.6
130°	252.1	259.3	256.9	237.9	237.9	237.9
132.5°	256.9	266.4	261.6	247.4	252.1	249.8
135°	259.3	271.2	266.4	259.3	264.0	259.3
137.5°	264.0	273.5	271.2	266.4	275.9	268.8
140°	271.2	275.9	278.3	271.2	285.4	278.3
142.5°	278.3	280.7	285.4	278.3	294.9	287.8
145°	283.1	287.8	292.6	292.6	302.1	292.6
147.5°	283.1	290.2	290.2	297.3	311.6	299.7
150°	290.2	285.4	299.7	306.8	316.4	306.8
152.5°	299.7	297.3	309.2	316.4	321.1	311.6
155°	302.1	304.5	311.6	323.5	325.9	316.4
157.5°	311.6	309.2	321.1	330.6	330.6	321.1
160°	318.7	318.7	330.6	335.4	333.0	323.5
162.5°	325.9	325.9	337.8	337.8	335.4	328.2
165°	330.6	330.6	342.5	340.1	335.4	330.6
167.5°	333.0	335.4	344.9	342.5	335.4	330.6
170°	335.4	335.4	344.9	340.1	335.4	333.0
172.5°	335.4	333.0	342.5	337.8	333.0	333.0
175°	333.0	328.2	337.8	333.0	333.0	335.4
177.5°	330.6	323.5	330.6	330.6	333.0	335.4
180°	330.6	330.6	330.6	330.6	330.6	330.6

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