

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: P197419

Luminaire Tested: **8WSL-LD2-75-UPL8-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197419
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-LD2-75-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

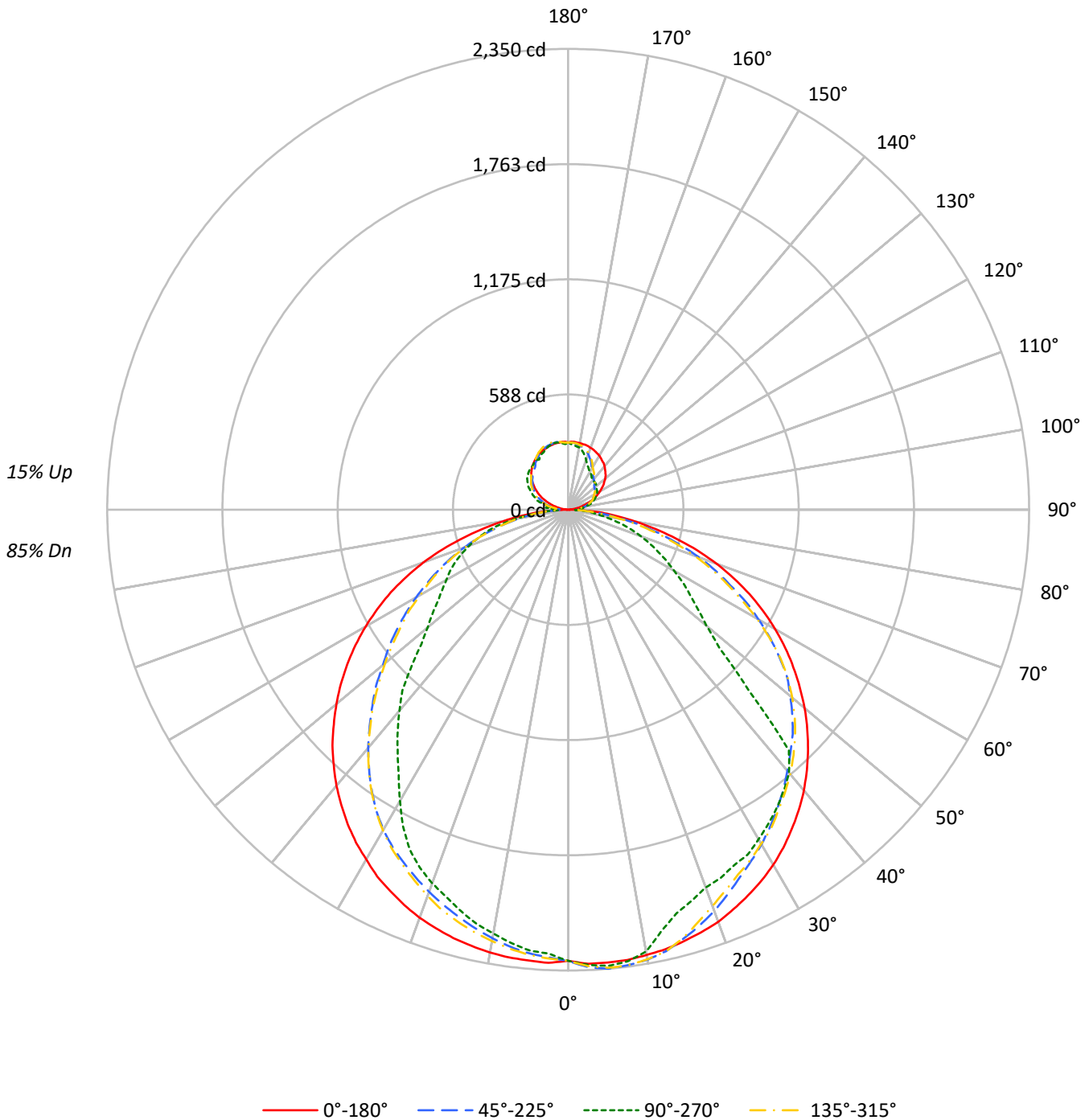
Lumens per Lamp: N/A
Luminaire Lumens: 7631.1 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 67.2
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°	6517	6517	6517	6517
5°	6591	6640	6563	6416
10°	6632	6582	6596	6313
15°	6682	6248	6631	6212
20°	6742	6178	6675	6111
25°	6783	6251	6706	5974
30°	6840	6349	6736	5607
35°	6874	6414	6772	5238
40°	6913	6476	6795	4946
45°	6927	5210	6808	4519
50°	6936	4049	6795	4125
55°	6922	3747	6788	4002
60°	6908	3531	6754	4061
65°	6835	3385	6686	4259
70°	6650	3264	6487	4447
75°	6227	3073	6039	4691
80°	5665	2812	5424	4460
85°	5525	3042	4963	4004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.7	2.9
10°-20°	621.1	8.1
20°-30°	940.2	12.3
30°-40°	1135.3	14.9
40°-50°	1159.0	15.2
50°-60°	1013.3	13.3
60°-70°	785.4	10.3
70°-80°	472.2	6.2
80°-90°	145.8	1.9
90°-100°	61.5	0.8
100°-110°	117.5	1.5
110°-120°	159.6	2.1
120°-130°	181.5	2.4
130°-140°	184.1	2.4
140°-150°	169.4	2.2
150°-160°	139.8	1.8
160°-170°	94.0	1.2
170°-180°	32.7	0.4
0°-30°	1779.9	23.3
0°-40°	2915.2	38.2
0°-60°	5087.6	66.7
0°-90°	6491.0	85.1
90°-120°	338.6	4.4
90°-150°	873.6	11.4
90°-180°	1140.0	14.9
0°-180°	7631.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2301	2301	2301	2301	2301	
5°	2318	2335	2308	2256	2318	221
15°	2278	2131	2261	2118	2278	644
25°	2170	2000	2146	1912	2170	1002
35°	1988	1855	1958	1515	1988	1244
45°	1729	1301	1700	1128	1729	1334
55°	1402	759	1374	810	1402	1253
65°	1020	505	998	636	1020	1006
75°	569	281	552	429	569	604
85°	170	94	153	123	170	171
90°	2	52	2	59	2	11
95°	15	71	15	113	15	19
105°	79	121	76	153	79	84
115°	153	155	150	207	153	151
125°	219	177	214	254	219	195
135°	268	195	266	281	268	207
145°	303	207	300	298	303	190
155°	328	241	325	315	328	151
165°	342	300	340	342	342	97
175°	347	330	347	340	347	33
180°	342	342	342	342	342	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7
2.5°	2317.9	2305.6	2335.1	2340.1	2322.8	2327.8	2330.2	2303.1	2313.0	2276.0	2285.9
5°	2317.9	2315.4	2349.9	2345.0	2335.1	2337.6	2345.0	2313.0	2308.0	2263.7	2271.1
7.5°	2315.4	2320.4	2342.5	2337.6	2322.8	2330.2	2342.5	2317.9	2303.1	2251.4	2248.9
10°	2305.6	2313.0	2330.2	2315.4	2288.3	2300.7	2327.8	2313.0	2293.3	2231.7	2219.4
12.5°	2295.7	2300.7	2305.6	2244.0	2199.7	2229.2	2305.6	2300.7	2278.5	2209.5	2187.3
15°	2278.5	2285.9	2266.2	2177.5	2130.7	2160.3	2261.2	2281.0	2261.2	2177.5	2150.4
17.5°	2258.8	2266.2	2224.3	2125.8	2091.3	2106.1	2204.6	2256.3	2239.1	2147.9	2113.5
20°	2236.6	2244.0	2177.5	2071.6	2049.4	2061.7	2150.4	2229.2	2214.4	2113.5	2074.0
22.5°	2204.6	2216.9	2123.3	2034.6	2032.2	2032.2	2098.7	2197.2	2182.4	2071.6	2029.7
25°	2170.1	2182.4	2069.1	2000.1	2000.1	2000.1	2051.9	2155.3	2145.5	2027.2	1985.4
27.5°	2133.2	2145.5	2019.8	1975.5	1982.9	1970.6	2012.5	2108.5	2108.5	1982.9	1938.6
30°	2091.3	2103.6	1970.6	1936.1	1941.0	1936.1	1968.1	2059.3	2059.3	1931.2	1884.4
32.5°	2042.0	2054.3	1916.4	1889.3	1899.1	1894.2	1926.2	2010.0	2012.5	1877.0	1820.3
35°	1987.8	2002.6	1859.7	1845.0	1854.8	1847.4	1869.6	1958.3	1958.3	1817.9	1746.4
37.5°	1931.2	1946.0	1800.6	1795.7	1805.5	1798.2	1815.4	1904.1	1899.1	1756.3	1667.6
40°	1869.6	1886.8	1739.0	1739.0	1751.4	1746.4	1761.2	1847.4	1837.6	1694.7	1586.3
42.5°	1800.6	1822.8	1677.5	1679.9	1665.1	1684.8	1699.6	1788.3	1768.6	1625.7	1497.6
45°	1729.2	1756.3	1618.3	1574.0	1300.6	1556.8	1635.6	1729.2	1699.6	1556.8	1411.4
47.5°	1652.8	1687.3	1549.4	1386.8	1046.9	1364.6	1566.6	1655.3	1620.8	1482.9	1327.7
50°	1574.0	1613.4	1477.9	1226.7	918.8	1202.1	1490.3	1581.4	1542.0	1406.5	1231.6
52.5°	1487.8	1532.1	1409.0	1086.3	832.6	1064.1	1411.4	1510.0	1460.7	1325.2	1152.8
55°	1401.6	1448.4	1315.4	965.6	758.7	945.9	1320.3	1418.8	1374.5	1241.5	1066.6
57.5°	1312.9	1359.7	1221.8	859.7	694.6	840.0	1216.8	1335.1	1285.8	1155.3	980.4
60°	1219.3	1266.1	1120.8	763.6	623.2	748.8	1110.9	1241.5	1192.2	1066.6	896.6
62.5°	1120.8	1167.6	1024.7	674.9	564.1	662.6	995.1	1150.3	1096.1	973.0	810.4
65°	1019.8	1054.3	911.4	591.2	505.0	581.3	891.7	1037.0	997.6	874.4	729.1
67.5°	913.9	948.3	812.9	517.3	448.3	507.4	790.7	936.0	891.7	778.4	647.8
70°	803.0	832.6	709.4	445.8	394.1	438.5	684.8	822.7	783.3	677.4	561.6
72.5°	689.7	716.8	598.6	379.3	337.5	374.4	573.9	709.4	670.0	571.5	482.8
75°	569.0	596.1	495.1	312.8	280.8	307.9	472.9	588.7	551.8	470.5	401.5
77.5°	455.7	487.7	391.7	246.3	224.2	241.4	371.9	475.4	438.5	376.9	322.7
80°	347.3	374.4	290.7	187.2	172.4	184.7	271.0	362.1	332.5	290.7	251.2
82.5°	251.2	266.0	199.5	137.9	130.6	135.5	184.7	256.2	241.4	209.4	184.7
85°	170.0	167.5	123.2	96.1	93.6	96.1	110.8	155.2	152.7	140.4	118.2
87.5°	71.4	66.5	56.7	39.4	34.5	36.9	44.3	59.1	56.7	59.1	56.7
90°	2.5	24.6	39.4	49.3	51.7	49.3	39.4	24.6	2.5	27.1	44.3
92.5°	4.9	32.0	46.8	54.2	59.1	54.2	44.3	32.0	4.9	41.9	44.3
95°	14.8	44.3	54.2	66.5	71.4	66.5	54.2	41.9	14.8	36.9	66.5
97.5°	29.6	56.7	64.0	73.9	76.4	71.4	61.6	56.7	27.1	66.5	69.0
100°	44.3	71.4	83.7	83.7	86.2	83.7	81.3	69.0	41.9	73.9	83.7
102.5°	61.6	81.3	96.1	103.5	103.5	103.5	96.1	81.3	56.7	91.1	115.8
105°	78.8	88.7	105.9	115.8	120.7	115.8	105.9	91.1	76.4	105.9	123.2
107.5°	98.5	96.1	115.8	125.6	130.6	125.6	115.8	98.5	93.6	118.2	137.9
110°	118.2	105.9	125.6	135.5	137.9	135.5	125.6	105.9	113.3	133.0	152.7



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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°	135.5	113.3	135.5	145.3	147.8	145.3	135.5	115.8	130.6	142.9	167.5
115°	152.7	120.7	140.4	152.7	155.2	152.7	140.4	123.2	150.3	155.2	179.8
117.5°	170.0	130.6	145.3	160.1	162.6	160.1	147.8	133.0	167.5	170.0	192.1
120°	187.2	142.9	152.7	165.0	170.0	167.5	152.7	145.3	182.3	182.3	202.0
122.5°	202.0	152.7	160.1	170.0	174.9	170.0	160.1	157.6	199.5	194.6	214.3
125°	219.2	162.6	165.0	174.9	177.4	174.9	167.5	165.0	214.3	204.4	221.7
127.5°	231.5	174.9	170.0	179.8	182.3	179.8	172.4	177.4	229.1	224.2	229.1
130°	246.3	187.2	174.9	184.7	187.2	187.2	174.9	192.1	241.4	238.9	238.9
132.5°	258.6	199.5	179.8	189.7	192.1	192.1	182.3	202.0	253.7	251.2	246.3
135°	268.5	216.8	189.7	189.7	194.6	194.6	192.1	219.2	266.0	263.6	258.6
137.5°	278.3	231.5	197.1	192.1	194.6	194.6	202.0	234.0	275.9	275.9	266.0
140°	288.2	246.3	202.0	197.1	197.1	202.0	209.4	248.8	285.7	285.7	268.5
142.5°	298.1	258.6	209.4	204.4	199.5	209.4	216.8	263.6	293.1	295.6	275.9
145°	303.0	271.0	219.2	211.8	206.9	219.2	229.1	275.9	300.5	305.4	290.7
147.5°	310.4	283.3	231.5	216.8	216.8	224.2	238.9	285.7	307.9	312.8	298.1
150°	317.8	293.1	241.4	224.2	219.2	231.5	248.8	295.6	315.3	320.2	307.9
152.5°	322.7	303.0	256.2	234.0	229.1	243.9	266.0	303.0	320.2	325.1	317.8
155°	327.6	310.4	273.4	243.9	241.4	253.7	280.8	310.4	325.1	330.1	325.1
157.5°	332.5	317.8	285.7	258.6	248.8	268.5	293.1	320.2	330.1	335.0	332.5
160°	335.0	322.7	300.5	273.4	268.5	285.7	305.4	322.7	332.5	339.9	337.5
162.5°	339.9	327.6	310.4	290.7	285.7	300.5	315.3	330.1	337.5	342.4	342.4
165°	342.4	332.5	320.2	305.4	300.5	315.3	322.7	335.0	339.9	342.4	344.9
167.5°	342.4	337.5	327.6	315.3	312.8	325.1	332.5	339.9	342.4	342.4	347.3
170°	344.9	339.9	332.5	325.1	322.7	332.5	335.0	342.4	344.9	342.4	349.8
172.5°	344.9	342.4	337.5	330.1	325.1	337.5	339.9	342.4	344.9	342.4	347.3
175°	347.3	342.4	342.4	337.5	330.1	342.4	342.4	342.4	347.3	342.4	344.9
177.5°	347.3	342.4	342.4	339.9	335.0	342.4	342.4	342.4	347.3	342.4	344.9
180°	342.4	342.4	342.4	342.4	342.4	342.4	342.4	342.4	342.4	342.4	342.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2300.7	2300.7	2300.7	2300.7	2300.7	2300.7
2.5°	2283.4	2266.2	2271.1	2290.8	2283.4	2317.9
5°	2266.2	2256.3	2256.3	2278.5	2276.0	2317.9
7.5°	2239.1	2229.2	2234.1	2258.8	2263.7	2315.4
10°	2207.1	2194.7	2199.7	2234.1	2246.5	2305.6
12.5°	2172.6	2162.7	2167.6	2207.1	2224.3	2295.7
15°	2133.2	2118.4	2133.2	2175.0	2197.2	2278.5
17.5°	2088.8	2069.1	2086.4	2140.5	2167.6	2258.8
20°	2044.5	2027.2	2037.1	2096.2	2135.6	2236.6
22.5°	2000.1	1975.5	1985.4	2046.9	2096.2	2204.6
25°	1948.4	1911.5	1931.2	1997.7	2054.3	2170.1
27.5°	1879.4	1822.8	1864.7	1948.4	2005.1	2133.2
30°	1788.3	1714.4	1776.0	1889.3	1953.3	2091.3
32.5°	1687.3	1608.5	1677.5	1822.8	1899.1	2042.0
35°	1586.3	1514.9	1576.5	1748.9	1842.5	1987.8
37.5°	1490.3	1428.7	1485.3	1670.1	1783.4	1931.2
40°	1399.1	1337.5	1396.7	1583.9	1719.3	1869.6
42.5°	1308.0	1251.3	1308.0	1492.7	1652.8	1800.6
45°	1216.8	1128.2	1211.9	1404.0	1581.4	1729.2
47.5°	1118.3	1014.9	1110.9	1308.0	1505.0	1652.8
50°	1024.7	936.0	1019.8	1219.3	1426.2	1574.0
52.5°	943.4	872.0	938.5	1128.2	1344.9	1487.8
55°	867.1	810.4	867.1	1039.5	1258.7	1401.6
57.5°	798.1	761.1	800.5	963.1	1170.0	1312.9
60°	739.0	716.8	741.4	869.5	1081.4	1219.3
62.5°	682.3	679.9	684.8	795.6	987.8	1120.8
65°	623.2	635.5	623.2	716.8	894.2	1019.8
67.5°	564.1	588.7	569.0	638.0	793.2	913.9
70°	509.9	537.0	509.9	556.7	692.2	803.0
72.5°	448.3	482.8	448.3	480.3	586.2	689.7
75°	389.2	428.6	391.7	401.5	485.3	569.0
77.5°	325.1	362.1	332.5	325.1	391.7	455.7
80°	258.6	273.4	258.6	256.2	303.0	347.3
82.5°	179.8	192.1	179.8	187.2	221.7	251.2
85°	118.2	123.2	118.2	120.7	147.8	170.0
87.5°	49.3	49.3	49.3	61.6	66.5	71.4
90°	54.2	59.1	54.2	44.3	27.1	2.5
92.5°	56.7	61.6	56.7	49.3	32.0	4.9
95°	101.0	113.3	96.1	61.6	51.7	14.8
97.5°	81.3	88.7	83.7	71.4	64.0	29.6
100°	96.1	103.5	96.1	101.0	78.8	44.3
102.5°	113.3	118.2	115.8	118.2	96.1	61.6
105°	147.8	152.7	147.8	128.1	110.8	78.8
107.5°	157.6	170.0	160.1	142.9	125.6	98.5
110°	170.0	179.8	172.4	157.6	137.9	118.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	182.3	194.6	187.2	174.9	147.8	135.5
115°	197.1	206.9	202.0	187.2	162.6	152.7
117.5°	211.8	219.2	214.3	197.1	177.4	170.0
120°	224.2	234.0	229.1	209.4	189.7	187.2
122.5°	234.0	243.9	238.9	221.7	202.0	202.0
125°	243.9	253.7	248.8	231.5	211.8	219.2
127.5°	251.2	263.6	258.6	238.9	234.0	231.5
130°	261.1	268.5	266.0	246.3	246.3	246.3
132.5°	266.0	275.9	271.0	256.2	261.1	258.6
135°	268.5	280.8	275.9	268.5	273.4	268.5
137.5°	273.4	283.3	280.8	275.9	285.7	278.3
140°	280.8	285.7	288.2	280.8	295.6	288.2
142.5°	288.2	290.7	295.6	288.2	305.4	298.1
145°	293.1	298.1	303.0	303.0	312.8	303.0
147.5°	293.1	300.5	300.5	307.9	322.7	310.4
150°	300.5	295.6	310.4	317.8	327.6	317.8
152.5°	310.4	307.9	320.2	327.6	332.5	322.7
155°	312.8	315.3	322.7	335.0	337.5	327.6
157.5°	322.7	320.2	332.5	342.4	342.4	332.5
160°	330.1	330.1	342.4	347.3	344.9	335.0
162.5°	337.5	337.5	349.8	349.8	347.3	339.9
165°	342.4	342.4	354.7	352.2	347.3	342.4
167.5°	344.9	347.3	357.2	354.7	347.3	342.4
170°	347.3	347.3	357.2	352.2	347.3	344.9
172.5°	347.3	344.9	354.7	349.8	344.9	344.9
175°	344.9	339.9	349.8	344.9	344.9	347.3
177.5°	342.4	335.0	342.4	342.4	344.9	347.3
180°	342.4	342.4	342.4	342.4	342.4	342.4

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