

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: P197405

Luminaire Tested: **8WSL-LD2-60-UPL8-UNV-L830-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197405  
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-LD2-60-UPL8-UNV-L830-CD1-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L830  
Light Source: (476) 3000K CCT, 80 CRI LEDS  
EL236N0119D830  
Ballast/Driver: OSRAM  
OT50W

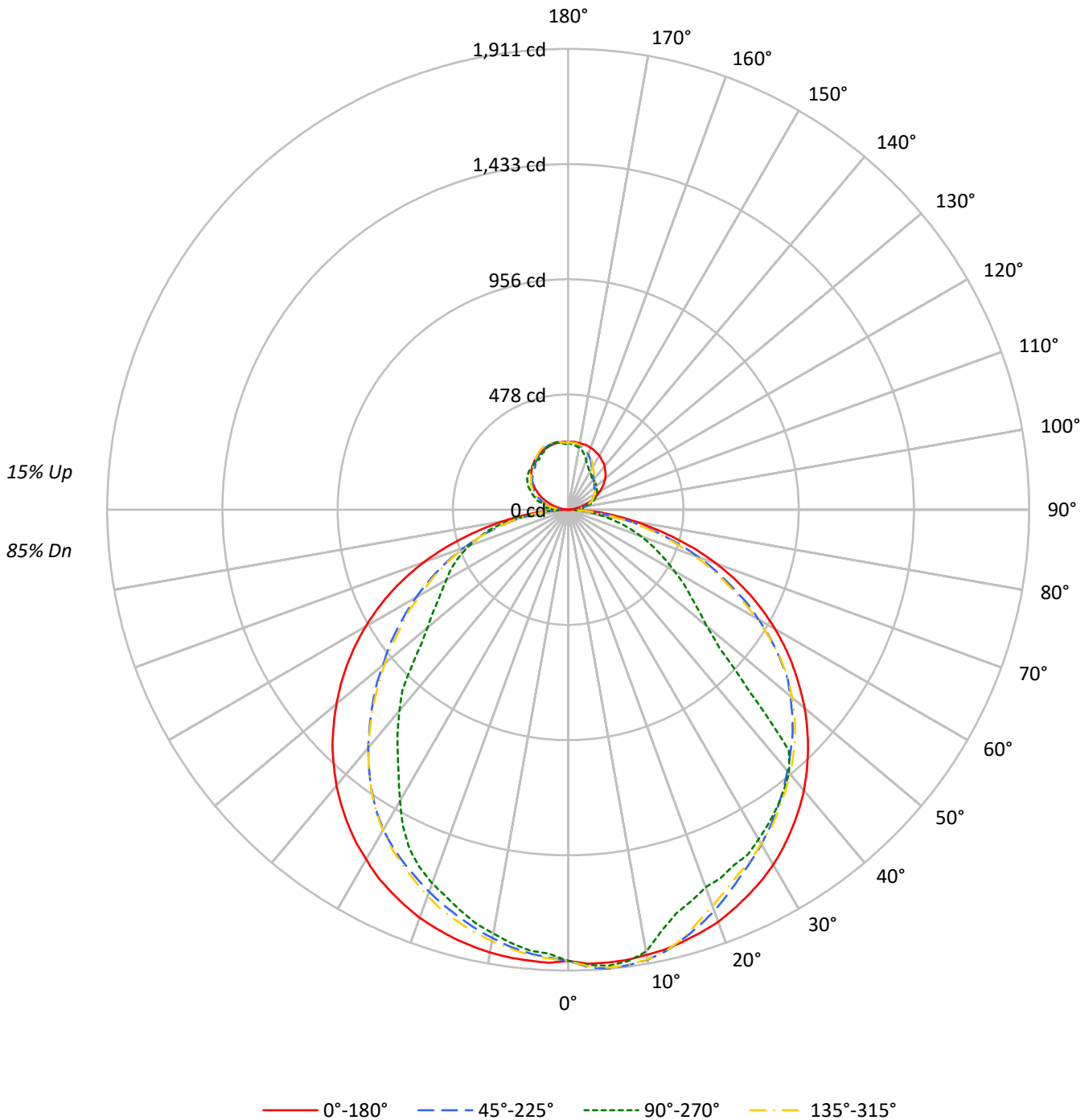
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6204.7 lumens  
Efficiency: N/A  
Efficacy: 116.0 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): 53.5  
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

TEST NUMBER: P197405

CATALOG NUMBER: 8WSL-LD2-60-UPL8-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P197405

CATALOG NUMBER: 8WSL-LD2-60-UPL8-UNV-L830-CD1-U

**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	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°	5299	5299	5299	5299
5°	5359	5399	5336	5217
10°	5392	5352	5363	5133
15°	5433	5080	5392	5051
20°	5482	5023	5427	4969
25°	5515	5083	5452	4858
30°	5562	5162	5477	4560
35°	5589	5215	5506	4259
40°	5621	5266	5525	4021
45°	5632	4236	5536	3675
50°	5640	3292	5525	3354
55°	5628	3047	5519	3254
60°	5616	2871	5492	3302
65°	5558	2752	5436	3463
70°	5407	2654	5275	3616
75°	5064	2499	4910	3814
80°	4607	2287	4411	3626
85°	4492	2473	4037	3253



TEST NUMBER: P197405

CATALOG NUMBER: 8WSL-LD2-60-UPL8-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.8	2.9
10°-20°	505.0	8.1
20°-30°	764.4	12.3
30°-40°	923.1	14.9
40°-50°	942.4	15.2
50°-60°	823.9	13.3
60°-70°	638.6	10.3
70°-80°	384.0	6.2
80°-90°	118.5	1.9
90°-100°	50.0	0.8
100°-110°	95.5	1.5
110°-120°	129.8	2.1
120°-130°	147.6	2.4
130°-140°	149.7	2.4
140°-150°	137.7	2.2
150°-160°	113.7	1.8
160°-170°	76.4	1.2
170°-180°	26.6	0.4
0°-30°	1447.2	23.3
0°-40°	2370.3	38.2
0°-60°	4136.7	66.7
0°-90°	5277.8	85.1
90°-120°	275.3	4.4
90°-150°	710.3	11.4
90°-180°	927.0	14.9
0°-180°	6204.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1871	1871	1871	1871	1871	
5°	1885	1899	1877	1835	1885	180
15°	1853	1732	1839	1722	1853	524
25°	1764	1626	1744	1554	1764	814
35°	1616	1508	1592	1232	1616	1012
45°	1406	1058	1382	917	1406	1084
55°	1140	617	1118	659	1140	1019
65°	829	411	811	517	829	818
75°	463	228	449	348	463	491
85°	138	76	124	100	138	139
90°	2	42	2	48	2	9
95°	12	58	12	92	12	15
105°	64	98	62	124	64	69
115°	124	126	122	168	124	123
125°	178	144	174	206	178	158
135°	218	158	216	228	218	169
145°	246	168	244	242	246	155
155°	266	196	264	256	266	123
165°	278	244	276	278	278	79
175°	282	268	282	276	282	27
180°	278	278	278	278	278	



TEST NUMBER: P197405

CATALOG NUMBER: 8WSL-LD2-60-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6
2.5°	1884.6	1874.6	1898.7	1902.7	1888.7	1892.7	1894.7	1872.6	1880.6	1850.6	1858.6
5°	1884.6	1882.6	1910.7	1906.7	1898.7	1900.7	1906.7	1880.6	1876.6	1840.6	1846.6
7.5°	1882.6	1886.7	1904.7	1900.7	1888.7	1894.7	1904.7	1884.6	1872.6	1830.6	1828.6
10°	1874.6	1880.6	1894.7	1882.6	1860.6	1870.6	1892.7	1880.6	1864.6	1814.6	1804.5
12.5°	1866.6	1870.6	1874.6	1824.6	1788.5	1812.5	1874.6	1870.6	1852.6	1796.5	1778.5
15°	1852.6	1858.6	1842.6	1770.5	1732.4	1756.5	1838.6	1854.6	1838.6	1770.5	1748.5
17.5°	1836.6	1842.6	1808.5	1728.4	1700.4	1712.4	1792.5	1834.6	1820.6	1746.5	1718.4
20°	1818.6	1824.6	1770.5	1684.4	1666.3	1676.4	1748.5	1812.5	1800.5	1718.4	1686.4
22.5°	1792.5	1802.5	1726.4	1654.3	1652.3	1652.3	1706.4	1786.5	1774.5	1684.4	1650.3
25°	1764.5	1774.5	1682.4	1626.3	1626.3	1626.3	1668.3	1752.5	1744.5	1648.3	1614.3
27.5°	1734.4	1744.5	1642.3	1606.3	1612.3	1602.3	1636.3	1714.4	1714.4	1612.3	1576.2
30°	1700.4	1710.4	1602.3	1574.2	1578.2	1574.2	1600.2	1674.4	1674.4	1570.2	1532.2
32.5°	1660.3	1670.3	1558.2	1536.2	1544.2	1540.2	1566.2	1634.3	1636.3	1526.1	1480.1
35°	1616.3	1628.3	1512.1	1500.1	1508.1	1502.1	1520.1	1592.2	1592.2	1478.1	1420.0
37.5°	1570.2	1582.2	1464.1	1460.1	1468.1	1462.1	1476.1	1548.2	1544.2	1428.0	1355.9
40°	1520.1	1534.2	1414.0	1414.0	1424.0	1420.0	1432.0	1502.1	1494.1	1377.9	1289.8
42.5°	1464.1	1482.1	1363.9	1365.9	1353.9	1369.9	1381.9	1454.0	1438.0	1321.9	1217.7
45°	1406.0	1428.0	1315.8	1279.8	1057.5	1265.8	1329.9	1406.0	1381.9	1265.8	1147.6
47.5°	1343.9	1371.9	1259.8	1127.6	851.2	1109.6	1273.8	1345.9	1317.9	1205.7	1079.5
50°	1279.8	1311.8	1201.7	997.4	747.1	977.4	1211.7	1285.8	1253.8	1143.6	1001.4
52.5°	1209.7	1245.8	1145.6	883.2	677.0	865.2	1147.6	1227.7	1187.7	1077.5	937.3
55°	1139.6	1177.7	1069.5	785.1	616.9	769.1	1073.5	1153.6	1117.6	1009.4	867.2
57.5°	1067.5	1105.6	993.4	699.0	564.8	683.0	989.4	1085.5	1045.5	939.3	797.1
60°	991.4	1029.4	911.3	620.9	506.7	608.9	903.3	1009.4	969.4	867.2	729.0
62.5°	911.3	949.3	833.2	548.8	458.6	538.8	809.1	935.3	891.3	791.1	658.9
65°	829.2	857.2	741.0	480.7	410.6	472.7	725.0	843.2	811.1	711.0	592.8
67.5°	743.0	771.1	660.9	420.6	364.5	412.6	642.9	761.1	725.0	632.9	526.7
70°	652.9	677.0	576.8	362.5	320.5	356.5	556.8	668.9	636.9	550.8	456.6
72.5°	560.8	582.8	486.7	308.4	274.4	304.4	466.7	576.8	544.8	464.7	392.6
75°	462.7	484.7	402.6	254.4	228.3	250.4	384.5	478.7	448.6	382.5	326.5
77.5°	370.5	396.6	318.4	200.3	182.3	196.3	302.4	386.5	356.5	306.4	262.4
80°	282.4	304.4	236.3	152.2	140.2	150.2	220.3	294.4	270.4	236.3	204.3
82.5°	204.3	216.3	162.2	112.2	106.1	110.2	150.2	208.3	196.3	170.2	150.2
85°	138.2	136.2	100.1	78.1	76.1	78.1	90.1	126.2	124.2	114.2	96.1
87.5°	58.1	54.1	46.1	32.0	28.0	30.0	36.1	48.1	46.1	48.1	46.1
90°	2.0	20.0	32.0	40.1	42.1	40.1	32.0	20.0	2.0	22.0	36.1
92.5°	4.0	26.0	38.1	44.1	48.1	44.1	36.1	26.0	4.0	34.0	36.1
95°	12.0	36.1	44.1	54.1	58.1	54.1	44.1	34.0	12.0	30.0	54.1
97.5°	24.0	46.1	52.1	60.1	62.1	58.1	50.1	46.1	22.0	54.1	56.1
100°	36.1	58.1	68.1	68.1	70.1	68.1	66.1	56.1	34.0	60.1	68.1
102.5°	50.1	66.1	78.1	84.1	84.1	84.1	78.1	66.1	46.1	74.1	94.1
105°	64.1	72.1	86.1	94.1	98.1	94.1	86.1	74.1	62.1	86.1	100.1
107.5°	80.1	78.1	94.1	102.1	106.1	102.1	94.1	80.1	76.1	96.1	112.2
110°	96.1	86.1	102.1	110.2	112.2	110.2	102.1	86.1	92.1	108.2	124.2



TEST NUMBER: P197405

CATALOG NUMBER: 8WSL-LD2-60-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	110.2	92.1	110.2	118.2	120.2	118.2	110.2	94.1	106.1	116.2	136.2
115°	124.2	98.1	114.2	124.2	126.2	124.2	114.2	100.1	122.2	126.2	146.2
117.5°	138.2	106.1	118.2	130.2	132.2	130.2	120.2	108.2	136.2	138.2	156.2
120°	152.2	116.2	124.2	134.2	138.2	136.2	124.2	118.2	148.2	148.2	164.2
122.5°	164.2	124.2	130.2	138.2	142.2	138.2	130.2	128.2	162.2	158.2	174.2
125°	178.3	132.2	134.2	142.2	144.2	142.2	136.2	134.2	174.2	166.2	180.3
127.5°	188.3	142.2	138.2	146.2	148.2	146.2	140.2	144.2	186.3	182.3	186.3
130°	200.3	152.2	142.2	150.2	152.2	152.2	142.2	156.2	196.3	194.3	194.3
132.5°	210.3	162.2	146.2	154.2	156.2	156.2	148.2	164.2	206.3	204.3	200.3
135°	218.3	176.2	154.2	154.2	158.2	158.2	156.2	178.3	216.3	214.3	210.3
137.5°	226.3	188.3	160.2	156.2	158.2	158.2	164.2	190.3	224.3	224.3	216.3
140°	234.3	200.3	164.2	160.2	160.2	164.2	170.2	202.3	232.3	232.3	218.3
142.5°	242.3	210.3	170.2	166.2	162.2	170.2	176.2	214.3	238.3	240.3	224.3
145°	246.3	220.3	178.3	172.2	168.2	178.3	186.3	224.3	244.3	248.3	236.3
147.5°	252.4	230.3	188.3	176.2	176.2	182.3	194.3	232.3	250.4	254.4	242.3
150°	258.4	238.3	196.3	182.3	178.3	188.3	202.3	240.3	256.4	260.4	250.4
152.5°	262.4	246.3	208.3	190.3	186.3	198.3	216.3	246.3	260.4	264.4	258.4
155°	266.4	252.4	222.3	198.3	196.3	206.3	228.3	252.4	264.4	268.4	264.4
157.5°	270.4	258.4	232.3	210.3	202.3	218.3	238.3	260.4	268.4	272.4	270.4
160°	272.4	262.4	244.3	222.3	218.3	232.3	248.3	262.4	270.4	276.4	274.4
162.5°	276.4	266.4	252.4	236.3	232.3	244.3	256.4	268.4	274.4	278.4	278.4
165°	278.4	270.4	260.4	248.3	244.3	256.4	262.4	272.4	276.4	278.4	280.4
167.5°	278.4	274.4	266.4	256.4	254.4	264.4	270.4	276.4	278.4	278.4	282.4
170°	280.4	276.4	270.4	264.4	262.4	270.4	272.4	278.4	280.4	278.4	284.4
172.5°	280.4	278.4	274.4	268.4	264.4	274.4	276.4	278.4	280.4	278.4	282.4
175°	282.4	278.4	278.4	274.4	268.4	278.4	278.4	278.4	282.4	278.4	280.4
177.5°	282.4	278.4	278.4	276.4	272.4	278.4	278.4	278.4	282.4	278.4	280.4
180°	278.4	278.4	278.4	278.4	278.4	278.4	278.4	278.4	278.4	278.4	278.4



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CATALOG NUMBER: 8WSL-LD2-60-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1870.6	1870.6	1870.6	1870.6	1870.6	1870.6
2.5°	1856.6	1842.6	1846.6	1862.6	1856.6	1884.6
5°	1842.6	1834.6	1834.6	1852.6	1850.6	1884.6
7.5°	1820.6	1812.5	1816.6	1836.6	1840.6	1882.6
10°	1794.5	1784.5	1788.5	1816.6	1826.6	1874.6
12.5°	1766.5	1758.5	1762.5	1794.5	1808.5	1866.6
15°	1734.4	1722.4	1734.4	1768.5	1786.5	1852.6
17.5°	1698.4	1682.4	1696.4	1740.4	1762.5	1836.6
20°	1662.3	1648.3	1656.3	1704.4	1736.4	1818.6
22.5°	1626.3	1606.3	1614.3	1664.3	1704.4	1792.5
25°	1584.2	1554.2	1570.2	1624.3	1670.3	1764.5
27.5°	1528.1	1482.1	1516.1	1584.2	1630.3	1734.4
30°	1454.0	1394.0	1444.0	1536.2	1588.2	1700.4
32.5°	1371.9	1307.8	1363.9	1482.1	1544.2	1660.3
35°	1289.8	1231.7	1281.8	1422.0	1498.1	1616.3
37.5°	1211.7	1161.6	1207.7	1357.9	1450.0	1570.2
40°	1137.6	1087.5	1135.6	1287.8	1398.0	1520.1
42.5°	1063.5	1017.4	1063.5	1213.7	1343.9	1464.1
45°	989.4	917.3	985.4	1141.6	1285.8	1406.0
47.5°	909.3	825.2	903.3	1063.5	1223.7	1343.9
50°	833.2	761.1	829.2	991.4	1159.6	1279.8
52.5°	767.1	709.0	763.1	917.3	1093.5	1209.7
55°	705.0	658.9	705.0	845.2	1023.4	1139.6
57.5°	648.9	618.9	650.9	783.1	951.3	1067.5
60°	600.8	582.8	602.8	707.0	879.2	991.4
62.5°	554.8	552.8	556.8	646.9	803.1	911.3
65°	506.7	516.7	506.7	582.8	727.0	829.2
67.5°	458.6	478.7	462.7	518.7	644.9	743.0
70°	414.6	436.6	414.6	452.6	562.8	652.9
72.5°	364.5	392.6	364.5	390.5	476.7	560.8
75°	316.4	348.5	318.4	326.5	394.6	462.7
77.5°	264.4	294.4	270.4	264.4	318.4	370.5
80°	210.3	222.3	210.3	208.3	246.3	282.4
82.5°	146.2	156.2	146.2	152.2	180.3	204.3
85°	96.1	100.1	96.1	98.1	120.2	138.2
87.5°	40.1	40.1	40.1	50.1	54.1	58.1
90°	44.1	48.1	44.1	36.1	22.0	2.0
92.5°	46.1	50.1	46.1	40.1	26.0	4.0
95°	82.1	92.1	78.1	50.1	42.1	12.0
97.5°	66.1	72.1	68.1	58.1	52.1	24.0
100°	78.1	84.1	78.1	82.1	64.1	36.1
102.5°	92.1	96.1	94.1	96.1	78.1	50.1
105°	120.2	124.2	120.2	104.1	90.1	64.1
107.5°	128.2	138.2	130.2	116.2	102.1	80.1
110°	138.2	146.2	140.2	128.2	112.2	96.1





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	148.2	158.2	152.2	142.2	120.2	110.2
115°	160.2	168.2	164.2	152.2	132.2	124.2
117.5°	172.2	178.3	174.2	160.2	144.2	138.2
120°	182.3	190.3	186.3	170.2	154.2	152.2
122.5°	190.3	198.3	194.3	180.3	164.2	164.2
125°	198.3	206.3	202.3	188.3	172.2	178.3
127.5°	204.3	214.3	210.3	194.3	190.3	188.3
130°	212.3	218.3	216.3	200.3	200.3	200.3
132.5°	216.3	224.3	220.3	208.3	212.3	210.3
135°	218.3	228.3	224.3	218.3	222.3	218.3
137.5°	222.3	230.3	228.3	224.3	232.3	226.3
140°	228.3	232.3	234.3	228.3	240.3	234.3
142.5°	234.3	236.3	240.3	234.3	248.3	242.3
145°	238.3	242.3	246.3	246.3	254.4	246.3
147.5°	238.3	244.3	244.3	250.4	262.4	252.4
150°	244.3	240.3	252.4	258.4	266.4	258.4
152.5°	252.4	250.4	260.4	266.4	270.4	262.4
155°	254.4	256.4	262.4	272.4	274.4	266.4
157.5°	262.4	260.4	270.4	278.4	278.4	270.4
160°	268.4	268.4	278.4	282.4	280.4	272.4
162.5°	274.4	274.4	284.4	284.4	282.4	276.4
165°	278.4	278.4	288.4	286.4	282.4	278.4
167.5°	280.4	282.4	290.4	288.4	282.4	278.4
170°	282.4	282.4	290.4	286.4	282.4	280.4
172.5°	282.4	280.4	288.4	284.4	280.4	280.4
175°	280.4	276.4	284.4	280.4	280.4	282.4
177.5°	278.4	272.4	278.4	278.4	280.4	282.4
180°	278.4	278.4	278.4	278.4	278.4	278.4

(END OF REPORT)