

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: LUMARK

Report Number: P144539

Luminaire Tested: **LDRL-RW-E03-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144539
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-E03-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (63) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8230.2 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 75.2
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

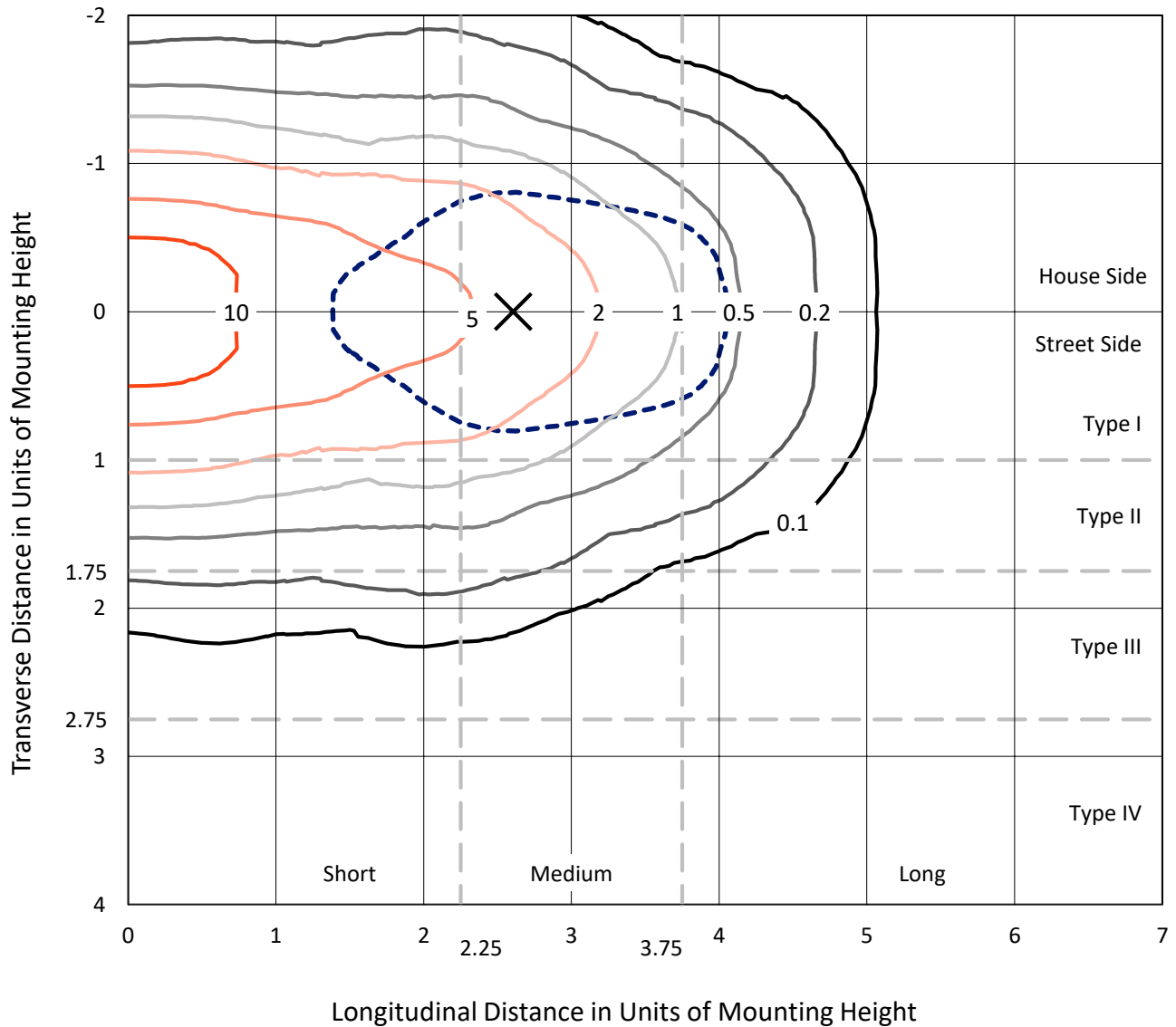


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Iso-Footcandle Lines of Horizontal Illumination

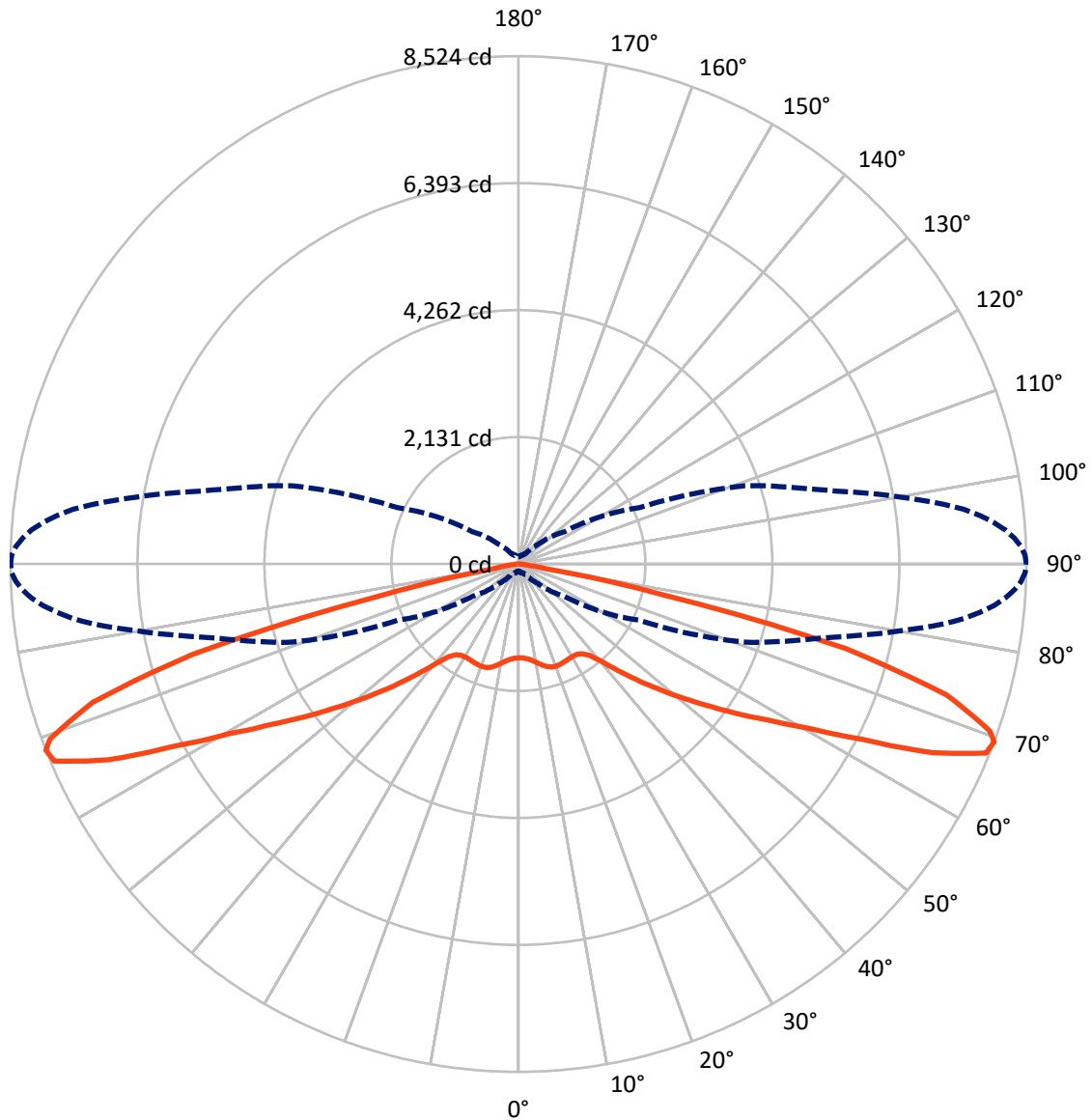
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.1 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4115.1	0.0	4115.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4115.1	0.0	4115.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	8230.2	0.0	8230.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	1.9
10°-20°	485.6	5.9
20°-30°	786.5	9.6
30°-40°	979.8	11.9
40°-50°	1219.8	14.8
50°-60°	1496.7	18.2
60°-70°	1845.9	22.4
70°-80°	1147.5	13.9
80°-90°	114.0	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	8230.2	100.0
0°-180°	8230.2	100.0



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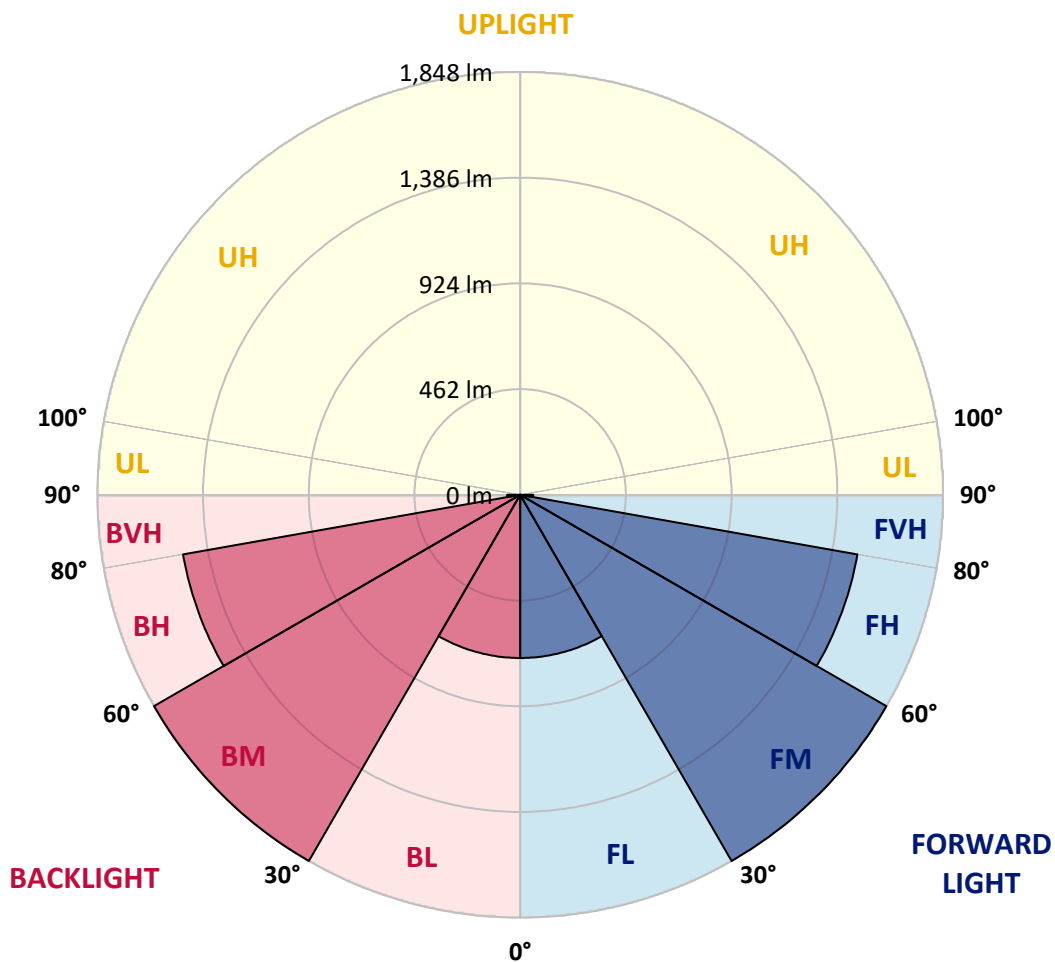
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	713.2	8.7			
FM	(30°-60°)	1848.2	22.5			
FH	(60°-80°)	1496.7	18.2			G1/1800
FVH	(80°-90°)	57.0	0.7			G1/100
BL	(0°-30°)	713.2	8.7	B2/1000		
BM	(30°-60°)	1848.2	22.5	B2/2500		
BH	(60°-80°)	1496.7	18.2	B3/2500		G3/2500
BVH	(80°-90°)	57.0	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1
2.5°	1580.2	1578.6	1581.6	1584.3	1583.4	1584.1	1583.0	1581.6	1581.7	1581.8	1581.9
5°	1592.5	1590.9	1593.6	1596.1	1596.9	1598.8	1599.4	1598.6	1598.9	1599.3	1599.7
7.5°	1607.3	1605.9	1609.5	1612.8	1619.1	1622.4	1625.6	1628.9	1629.2	1629.5	1629.8
10°	1621.3	1620.4	1626.2	1633.4	1643.5	1651.2	1660.5	1669.6	1670.3	1671.0	1671.7
12.5°	1630.4	1630.4	1639.1	1652.0	1669.5	1685.1	1701.0	1716.4	1717.8	1719.2	1720.6
15°	1629.8	1630.8	1644.3	1667.8	1698.0	1725.7	1745.2	1761.8	1763.2	1764.6	1766.0
17.5°	1618.6	1618.8	1638.0	1675.6	1722.6	1763.8	1789.0	1798.0	1798.5	1799.0	1799.5
20°	1587.0	1589.2	1616.4	1670.8	1741.8	1798.6	1822.4	1818.6	1817.7	1816.9	1816.1
22.5°	1533.0	1535.8	1571.9	1645.2	1745.4	1821.0	1845.7	1828.4	1825.8	1823.2	1820.6
25°	1458.0	1462.6	1501.8	1595.6	1721.3	1827.6	1860.8	1833.1	1829.0	1824.9	1820.8
27.5°	1371.1	1373.3	1419.6	1518.0	1665.2	1805.7	1867.6	1842.6	1837.5	1832.4	1827.2
30°	1270.6	1276.3	1324.6	1427.3	1586.0	1754.7	1864.9	1861.3	1855.6	1849.8	1844.0
32.5°	1170.6	1175.5	1222.8	1333.6	1494.7	1683.8	1851.2	1889.5	1884.7	1879.9	1875.0
35°	1069.8	1075.8	1124.5	1243.4	1404.0	1603.2	1829.5	1929.8	1927.8	1925.7	1923.6
37.5°	981.2	985.0	1033.0	1156.6	1324.6	1529.5	1801.3	1983.8	1988.5	1993.2	1998.0
40°	891.0	894.9	945.0	1071.6	1251.4	1466.4	1775.3	2051.8	2064.6	2077.5	2090.4
42.5°	804.4	807.8	856.2	982.6	1170.0	1412.0	1759.6	2134.0	2158.7	2183.4	2208.1
45°	715.7	717.9	763.3	886.4	1077.2	1348.4	1755.6	2226.3	2262.0	2297.6	2333.3
47.5°	628.2	633.5	680.4	797.1	971.1	1257.4	1749.6	2328.5	2375.8	2423.1	2470.4
50°	544.7	550.4	598.7	709.4	868.6	1149.4	1718.8	2444.4	2502.0	2559.7	2617.4
52.5°	459.5	465.2	513.5	619.3	773.5	1027.8	1633.3	2566.0	2634.6	2703.2	2771.7
55°	368.5	370.7	420.3	526.4	678.4	925.8	1497.1	2677.6	2760.6	2843.6	2926.6
57.5°	268.0	275.4	324.4	423.1	581.4	835.7	1324.0	2734.6	2838.2	2941.8	3045.5
60°	193.5	198.4	241.4	319.0	471.6	747.2	1170.2	2692.9	2831.2	2969.5	3107.9
62.5°	152.9	158.4	191.5	240.3	364.7	649.9	1070.0	2578.6	2772.7	2966.8	3160.8
65°	135.4	140.3	171.0	195.1	279.0	550.0	1007.0	2465.5	2727.4	2989.3	3251.2
67.5°	123.6	128.8	155.6	172.1	230.4	485.6	977.1	2380.0	2682.4	2984.9	3287.4
69°	118.1	122.8	147.4	162.8	217.3	463.6	945.0	2235.3	2535.2	2835.1	3134.9
70°	115.1	119.2	141.6	157.0	212.1	445.5	897.6	2063.2	2352.6	2642.0	2931.3
72.5°	106.6	109.3	128.2	142.5	194.0	355.7	677.0	1455.8	1701.1	1946.4	2191.7
75°	94.6	97.8	114.6	127.6	148.0	213.8	423.9	845.0	1013.1	1181.2	1349.2
77.5°	81.1	85.0	98.6	119.5	119.2	139.2	257.3	485.2	566.9	648.6	730.2
80°	69.6	72.9	85.2	118.1	99.7	110.2	191.8	362.0	394.8	427.7	460.6
82.5°	54.5	57.2	71.5	97.6	79.8	83.8	146.0	329.6	351.9	374.2	396.6
85°	34.2	35.4	52.0	67.4	56.7	50.6	94.0	253.8	270.0	286.2	302.4
87.5°	13.7	16.7	25.2	24.1	24.3	20.2	30.4	91.6	99.9	108.2	116.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1
2.5°	1582.0	1582.1	1581.6	1580.7	1581.6	1580.8	1581.0	1581.8	1581.6	1581.6	1581.0
5°	1600.1	1600.4	1600.4	1598.8	1599.6	1599.9	1600.2	1599.6	1599.9	1600.4	1599.4
7.5°	1630.1	1630.4	1631.2	1632.0	1631.4	1631.7	1632.2	1631.7	1630.9	1632.8	1631.4
10°	1672.4	1673.1	1673.1	1675.6	1674.4	1675.3	1677.8	1677.8	1676.4	1678.2	1677.8
12.5°	1722.1	1723.5	1723.2	1723.0	1724.0	1724.8	1727.6	1728.2	1728.7	1731.8	1730.6
15°	1767.3	1768.7	1769.8	1770.4	1772.2	1772.8	1774.4	1775.6	1776.4	1777.5	1778.0
17.5°	1800.0	1800.5	1802.2	1801.4	1804.0	1803.5	1805.4	1806.2	1807.0	1808.4	1809.2
20°	1815.3	1814.4	1814.8	1813.9	1813.9	1814.4	1814.7	1815.8	1815.3	1816.7	1817.8
22.5°	1817.9	1815.3	1813.6	1811.7	1810.9	1809.2	1809.2	1809.8	1807.8	1809.2	1810.9
25°	1816.7	1812.6	1809.6	1806.2	1803.2	1800.5	1798.8	1798.3	1796.9	1796.9	1798.3
27.5°	1822.0	1816.9	1812.6	1807.0	1803.2	1799.4	1795.8	1793.1	1790.4	1789.8	1789.8
30°	1838.3	1832.6	1827.6	1820.8	1814.7	1809.8	1804.8	1801.0	1795.8	1793.6	1791.2
32.5°	1870.2	1865.4	1858.6	1852.6	1845.4	1839.4	1832.8	1826.8	1820.8	1815.2	1813.1
35°	1921.5	1919.4	1915.6	1911.4	1904.6	1897.0	1891.4	1884.4	1877.5	1869.5	1867.4
37.5°	2002.7	2007.4	2005.2	2002.2	2000.2	1997.8	1990.4	1985.7	1981.0	1974.5	1973.2
40°	2103.3	2116.2	2129.0	2137.5	2134.5	2144.6	2146.2	2147.1	2143.0	2148.5	2149.6
42.5°	2232.8	2257.5	2280.8	2297.8	2317.6	2332.3	2351.5	2359.8	2375.4	2391.5	2400.8
45°	2369.0	2404.6	2438.1	2472.9	2507.1	2544.7	2581.1	2606.9	2644.4	2672.4	2689.9
47.5°	2517.7	2565.0	2605.0	2657.0	2706.6	2751.0	2814.9	2866.0	2911.8	2955.4	3001.2
50°	2675.0	2732.6	2782.0	2845.6	2905.8	2975.4	3050.2	3115.4	3187.2	3256.6	3318.2
52.5°	2840.3	2908.8	2975.4	3040.6	3113.8	3189.4	3270.5	3364.8	3450.8	3555.2	3630.0
55°	3009.6	3092.6	3163.7	3231.9	3309.4	3393.2	3489.7	3601.2	3710.6	3824.8	3938.3
57.5°	3149.1	3252.8	3330.2	3410.0	3493.6	3576.6	3696.4	3810.6	3949.2	4089.5	4231.4
60°	3246.2	3384.5	3478.5	3579.3	3676.0	3776.8	3906.0	4050.4	4223.8	4393.7	4586.6
62.5°	3354.9	3549.0	3680.7	3815.2	3932.8	4053.9	4226.6	4392.8	4615.6	4811.2	5054.0
65°	3513.1	3775.0	3969.0	4150.4	4308.2	4473.2	4677.8	4885.8	5140.6	5411.0	5715.4
67.5°	3589.8	3892.2	4146.2	4370.1	4571.8	4782.0	4993.2	5239.2	5526.4	5851.9	6186.2
69°	3434.8	3734.7	4026.8	4253.1	4465.5	4689.9	4916.0	5164.2	5447.0	5784.8	6139.1
70°	3220.6	3510.0	3820.5	4047.4	4261.6	4494.5	4724.6	4975.4	5245.8	5593.8	5952.2
72.5°	2437.0	2682.2	2983.6	3223.4	3448.6	3684.0	3921.0	4138.6	4412.8	4747.7	5077.9
75°	1517.3	1685.4	1956.4	2197.2	2378.4	2580.0	2802.6	3008.6	3284.0	3521.2	3838.8
77.5°	811.8	893.5	1051.6	1224.2	1325.0	1423.4	1568.4	1680.2	1796.1	1933.4	2064.6
80°	493.5	526.4	580.4	617.6	603.7	563.4	550.5	510.2	524.7	500.0	482.2
82.5°	418.8	441.2	474.0	496.5	480.0	415.6	342.8	288.5	250.2	213.4	181.4
85°	318.6	334.8	351.8	362.0	361.2	329.0	261.4	202.5	157.8	122.2	101.7
87.5°	124.9	133.2	145.5	143.6	149.8	151.0	118.1	91.2	64.9	43.8	38.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1	1576.1
2.5°	1579.9	1579.6	1579.9	1580.8	1580.8	1581.3	1580.8	1581.1	1580.2	1579.4	1579.9
5°	1599.4	1598.8	1599.4	1600.0	1600.0	1599.4	1600.8	1600.8	1600.1	1599.4	1599.6
7.5°	1632.8	1633.0	1632.2	1635.0	1632.6	1632.8	1634.4	1634.2	1633.6	1633.9	1634.2
10°	1679.4	1679.1	1679.6	1681.3	1678.8	1680.4	1682.4	1683.0	1681.6	1681.6	1681.8
12.5°	1730.9	1733.1	1733.4	1734.4	1734.4	1735.8	1736.1	1736.4	1737.4	1737.8	1736.1
15°	1780.2	1781.8	1783.0	1784.0	1782.7	1784.6	1786.8	1786.8	1786.6	1787.6	1786.0
17.5°	1810.6	1812.0	1813.9	1813.6	1813.9	1815.6	1817.0	1817.4	1818.0	1818.0	1818.3
20°	1820.2	1821.0	1822.1	1823.2	1823.8	1825.4	1826.6	1827.4	1827.9	1827.4	1827.6
22.5°	1812.5	1813.6	1815.8	1816.6	1817.0	1819.4	1820.5	1821.4	1821.8	1822.4	1821.6
25°	1799.4	1800.4	1802.6	1803.5	1804.0	1806.2	1807.6	1809.5	1810.0	1810.4	1810.6
27.5°	1790.4	1790.9	1792.6	1793.6	1793.9	1796.4	1798.3	1799.6	1799.9	1800.2	1800.2
30°	1790.6	1790.6	1792.5	1792.8	1792.6	1794.8	1795.8	1796.6	1797.2	1797.2	1797.5
32.5°	1809.6	1808.4	1810.0	1807.6	1807.9	1807.6	1807.4	1808.2	1807.6	1807.8	1806.8
35°	1863.0	1860.0	1857.4	1858.6	1854.7	1849.2	1852.3	1850.9	1847.8	1848.2	1849.0
37.5°	1965.4	1962.4	1965.2	1962.7	1963.5	1955.8	1957.8	1950.9	1949.0	1951.4	1944.3
40°	2147.4	2146.0	2151.2	2149.0	2150.4	2152.6	2154.5	2147.9	2137.0	2146.8	2147.1
42.5°	2399.4	2411.8	2416.7	2423.6	2431.0	2427.6	2434.3	2436.2	2424.1	2433.2	2435.4
45°	2715.6	2728.8	2744.1	2748.8	2760.8	2762.5	2767.4	2768.8	2757.9	2759.0	2761.4
47.5°	3047.0	3071.0	3089.1	3101.8	3114.4	3116.8	3119.6	3114.4	3115.2	3117.6	3117.6
50°	3372.4	3424.0	3456.0	3481.0	3502.6	3491.4	3501.0	3501.8	3505.1	3498.2	3502.3
52.5°	3714.7	3782.9	3836.6	3878.6	3891.7	3931.7	3915.3	3927.9	3936.4	3923.8	3932.0
55°	4049.0	4146.2	4232.5	4293.4	4336.1	4376.7	4383.0	4415.6	4411.8	4424.1	4418.6
57.5°	4366.8	4502.8	4626.0	4716.2	4777.6	4839.5	4881.4	4917.0	4920.6	4955.9	4935.9
60°	4751.2	4940.6	5099.2	5233.5	5324.2	5416.2	5488.9	5547.2	5560.6	5621.2	5601.2
62.5°	5269.9	5501.0	5703.7	5861.2	6063.2	6160.5	6301.8	6390.1	6445.2	6460.2	6488.4
65°	5999.0	6299.9	6567.4	6819.4	7046.6	7204.2	7367.7	7499.2	7604.8	7596.0	7639.3
67.5°	6540.8	6883.8	7205.8	7508.0	7752.4	7955.2	8143.2	8285.4	8379.6	8439.6	8465.1
69°	6484.3	6852.6	7207.7	7530.4	7782.6	8009.2	8192.2	8332.2	8440.2	8505.4	8524.3
70°	6296.6	6675.0	7045.2	7362.0	7619.0	7867.8	8054.1	8210.0	8312.8	8384.0	8395.0
72.5°	5446.4	5856.3	6183.8	6529.2	6776.7	7028.6	7145.8	7339.0	7473.0	7516.2	7515.4
75°	4107.8	4449.8	4737.6	4993.0	5214.3	5385.0	5440.4	5577.9	5689.2	5687.8	5677.4
77.5°	2212.0	2292.6	2400.3	2436.4	2504.7	2503.6	2435.1	2456.7	2519.8	2397.6	2437.0
80°	474.6	467.4	461.4	457.8	456.0	456.8	459.2	443.6	459.0	452.1	423.1
82.5°	165.2	161.4	157.6	160.3	158.4	160.0	159.5	161.4	161.1	160.6	156.7
85°	92.9	89.6	87.7	89.1	86.0	83.2	81.4	80.6	80.3	78.4	77.3
87.5°	35.4	35.1	34.8	33.4	30.1	27.6	26.0	22.8	21.4	19.4	18.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)