

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: P146637

Luminaire Tested: **LDRL-T3-F06-E-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146637
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-F06-E-7060
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (42) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15175.2 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

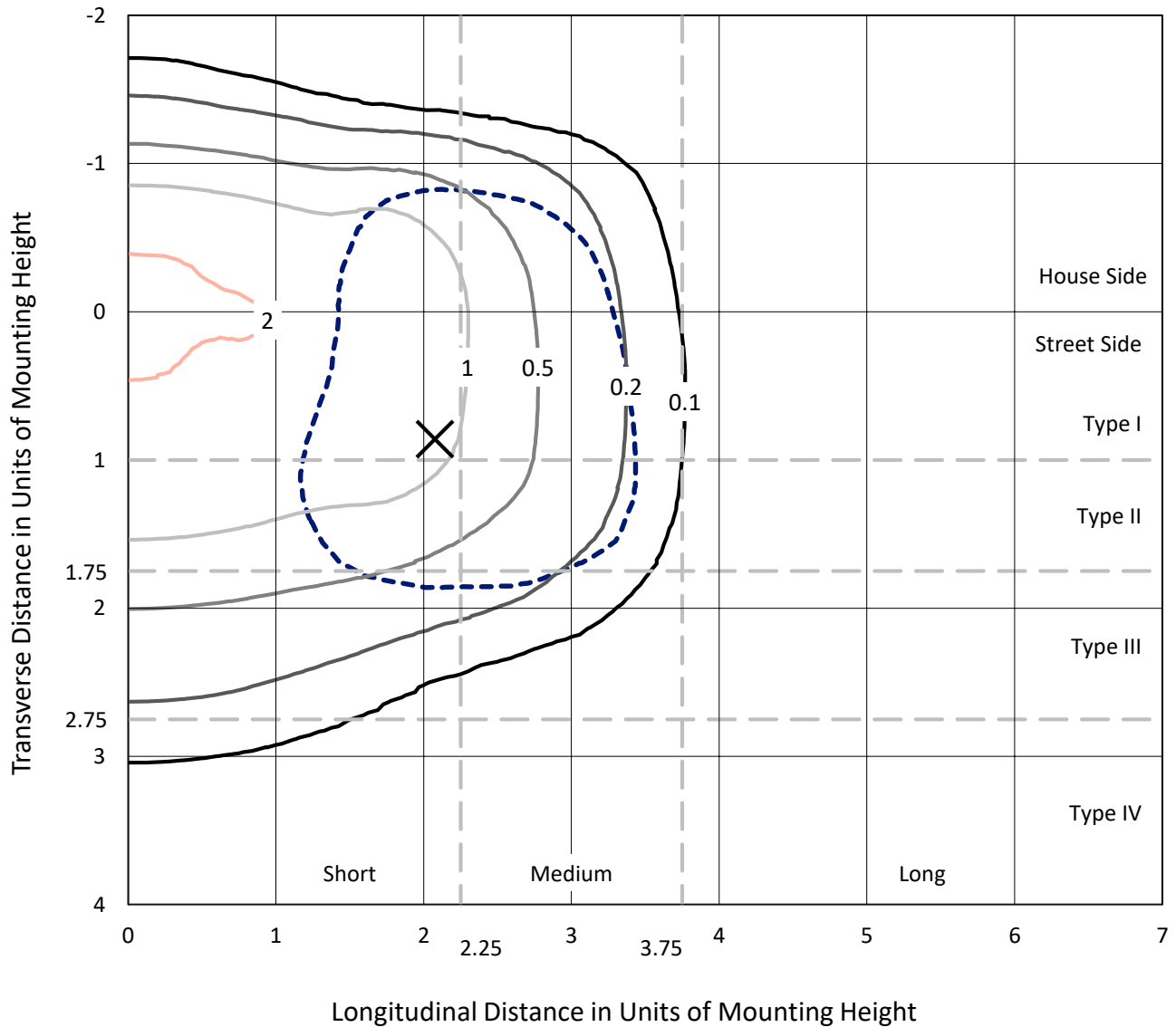
Input Watts (W): 156.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

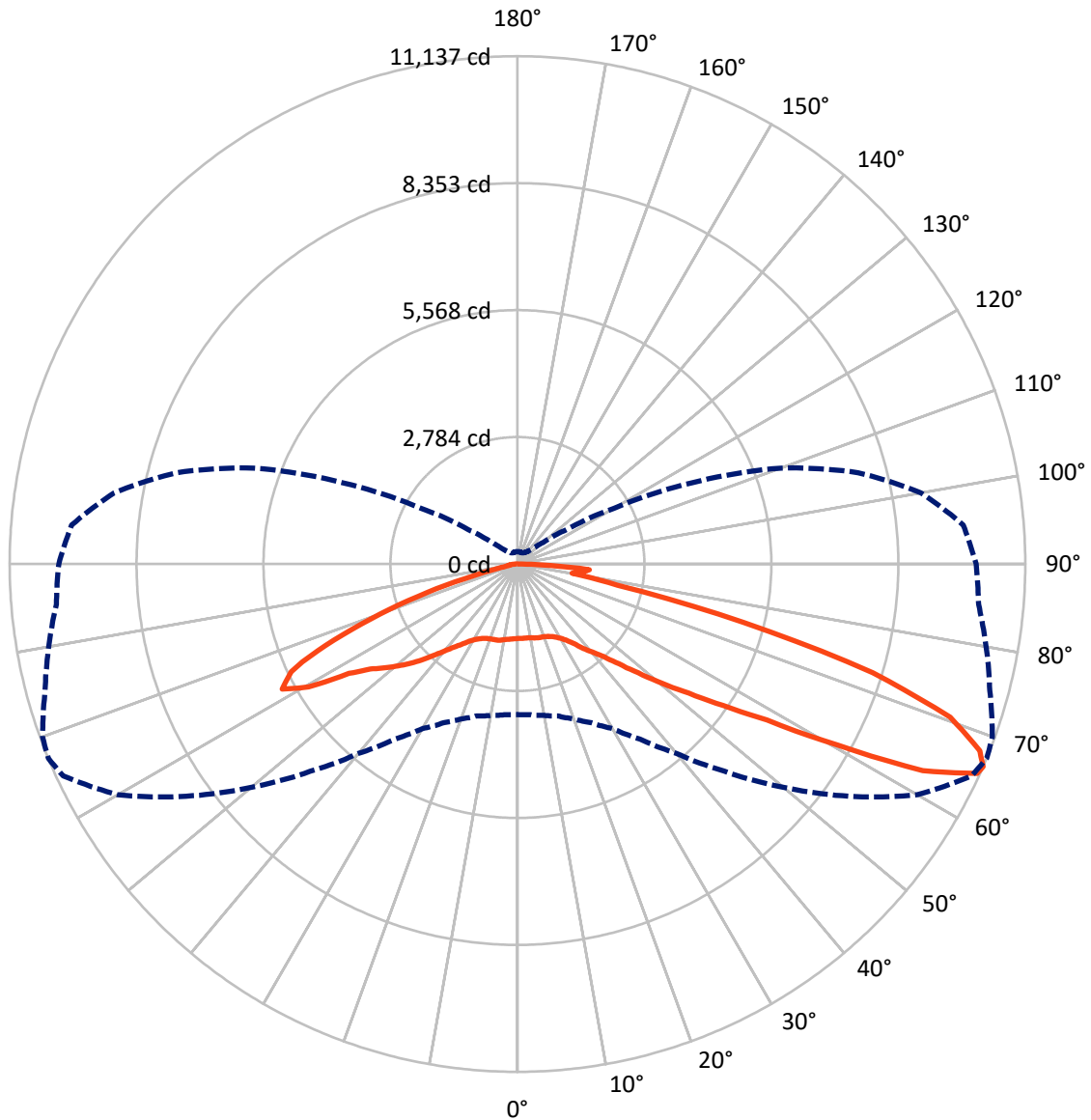
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5155.5	0.0	5155.5
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	10019.7	0.0	10019.7
	% Fixture	66.0	0.0	66.0
Total	Lumens	15175.2	0.0	15175.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.9	1.0
10°-20°	465.0	3.1
20°-30°	799.3	5.3
30°-40°	1285.6	8.5
40°-50°	2119.0	14.0
50°-60°	3321.5	21.9
60°-70°	4596.7	30.3
70°-80°	2080.3	13.7
80°-90°	351.0	2.3
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°	15175.2	100.0
0°-180°	15175.2	100.0



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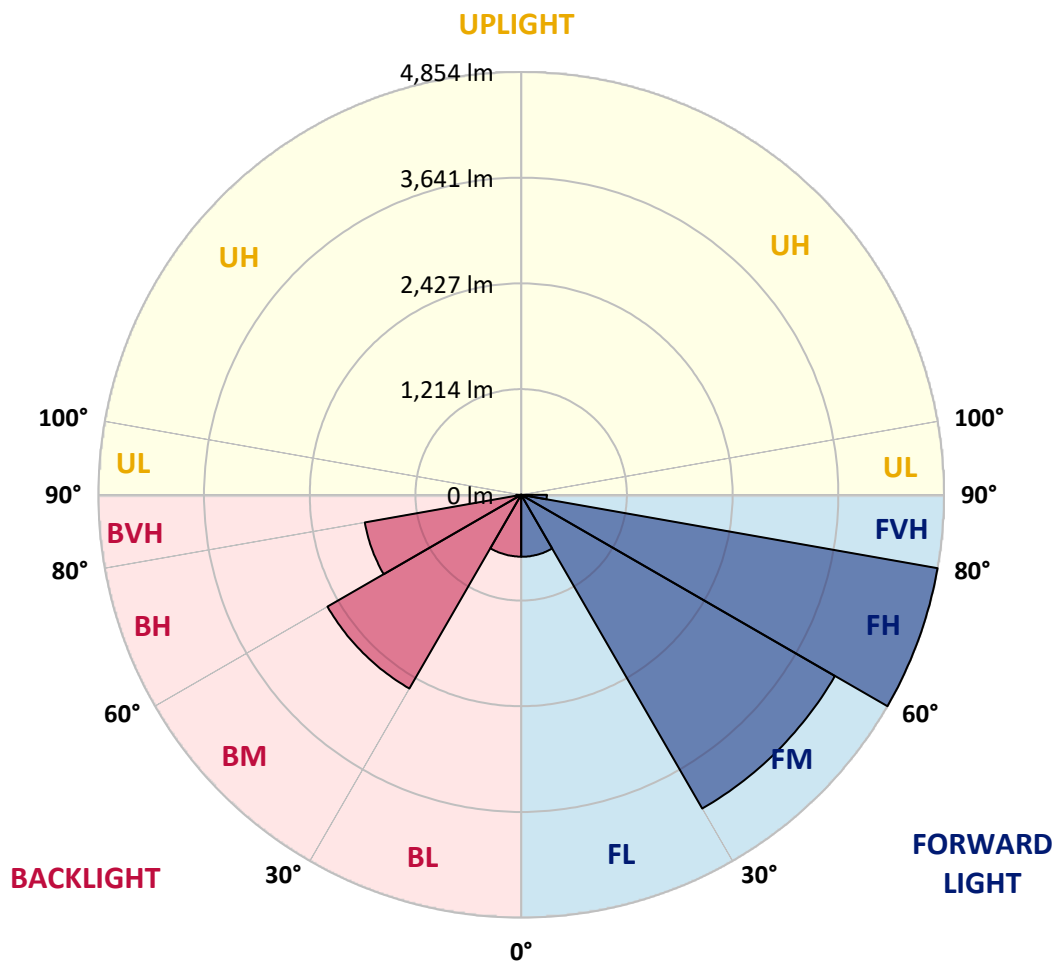
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	711.7	4.7			
FM	(30°-60°)	4158.6	27.4			
FH	(60°-80°)	4854.4	32.0			G2/5000
FVH	(80°-90°)	295.0	1.9			G3/500
BL	(0°-30°)	709.4	4.7	B2/1000		
BM	(30°-60°)	2567.5	16.9	B3/5000		
BH	(60°-80°)	1822.6	12.0	B3/2500		G3/2500
BVH	(80°-90°)	56.0	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5
2.5°	1631.5	1630.5	1629.4	1629.4	1628.4	1629.4	1630.5	1631.5	1630.5	1631.5	1630.5
5°	1628.4	1628.4	1627.4	1627.4	1627.4	1627.4	1628.4	1629.4	1628.4	1630.5	1628.4
7.5°	1615.2	1621.3	1619.3	1621.3	1623.3	1625.4	1626.4	1628.4	1631.5	1633.5	1631.5
10°	1597.9	1601.0	1602.0	1604.0	1608.1	1613.2	1617.2	1622.3	1629.4	1631.5	1633.5
12.5°	1566.4	1570.5	1573.5	1577.6	1583.7	1591.8	1598.9	1607.1	1619.3	1627.4	1634.5
15°	1543.0	1548.1	1549.1	1554.2	1560.3	1569.5	1578.6	1590.8	1607.1	1621.3	1635.5
17.5°	1558.3	1560.3	1558.3	1558.3	1560.3	1564.4	1571.5	1581.7	1598.9	1616.2	1633.5
20°	1604.0	1604.0	1602.0	1601.0	1598.9	1594.9	1593.9	1592.8	1604.0	1617.2	1632.5
22.5°	1647.7	1647.7	1646.7	1650.8	1649.8	1649.8	1646.7	1641.6	1636.6	1634.5	1644.7
25°	1675.2	1679.2	1681.3	1687.4	1691.4	1697.5	1699.6	1698.6	1691.4	1679.2	1676.2
27.5°	1719.9	1723.0	1725.0	1732.1	1740.2	1747.3	1754.5	1763.6	1763.6	1752.4	1737.2
30°	1806.3	1802.2	1804.3	1806.3	1813.4	1823.6	1832.7	1844.9	1851.0	1847.0	1826.6
32.5°	1886.6	1890.7	1892.7	1898.8	1905.9	1921.2	1932.3	1946.6	1959.8	1961.8	1951.7
35°	2004.5	2002.5	1999.4	2020.8	2028.9	2046.2	2059.4	2079.7	2089.9	2099.1	2093.0
37.5°	2190.5	2184.4	2180.4	2186.5	2197.7	2208.8	2228.1	2243.4	2260.7	2282.0	2274.9
40°	2453.8	2466.0	2448.7	2456.9	2466.0	2440.6	2457.9	2472.1	2501.6	2502.6	2501.6
42.5°	2796.4	2805.5	2801.4	2806.5	2790.3	2782.1	2775.0	2782.1	2818.7	2813.6	2789.3
45°	3138.9	3152.1	3149.1	3151.1	3182.6	3169.4	3180.6	3182.6	3220.2	3210.1	3191.8
47.5°	3431.7	3454.0	3459.1	3477.4	3520.1	3554.7	3602.4	3638.0	3656.3	3668.5	3682.7
50°	3663.4	3679.7	3708.2	3753.9	3815.9	3875.9	3983.6	4053.8	4117.8	4162.5	4208.3
52.5°	3816.9	3835.2	3878.9	3948.1	4037.5	4147.3	4273.3	4419.7	4554.9	4634.2	4702.3
55°	3879.9	3898.2	3952.1	4042.6	4161.5	4301.8	4482.7	4689.1	4869.0	5050.9	5155.6
57.5°	3843.4	3863.7	3925.7	4027.3	4170.7	4354.6	4579.3	4832.4	5095.7	5371.1	5581.6
60°	3735.6	3753.9	3824.0	3929.8	4093.4	4300.8	4570.1	4887.3	5257.3	5665.9	6065.4
62.5°	3587.2	3614.6	3676.6	3784.4	3947.0	4173.7	4480.7	4893.4	5424.0	6082.7	6860.3
65°	3398.1	3418.5	3473.3	3558.7	3737.6	3974.5	4298.7	4803.9	5497.2	6431.3	7541.3
66°	3300.5	3319.9	3370.7	3451.0	3614.6	3842.3	4166.6	4684.0	5415.9	6429.3	7613.5
67.5°	3128.8	3137.9	3174.5	3253.8	3360.5	3564.8	3865.7	4350.6	5071.3	6157.9	7412.3
70°	2624.6	2637.8	2673.4	2714.0	2753.7	2826.9	3037.3	3357.5	3933.8	4975.7	6172.1
72.5°	1815.5	1835.8	1874.4	1949.6	2011.6	2104.1	2186.5	2293.2	2484.3	3208.0	4415.6
75°	1312.3	1319.4	1376.3	1508.5	1633.5	1818.5	1982.2	2034.0	1968.9	1957.8	2594.1
77.5°	782.7	792.9	875.2	1008.4	1138.5	1389.5	1725.0	1984.2	2127.5	2076.7	1963.9
80°	329.3	343.6	392.4	426.9	534.7	745.1	1076.5	1483.1	1861.2	2094.0	2041.1
82.5°	105.7	123.0	145.4	175.9	207.4	277.5	430.0	643.4	1016.5	1515.6	1863.2
85°	38.6	39.6	54.9	76.2	84.4	97.6	125.0	193.1	343.6	568.2	1057.2
87.5°	15.2	18.3	21.3	29.5	30.5	31.5	35.6	45.7	44.7	38.6	200.2
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5
2.5°	1631.5	1633.5	1632.5	1633.5	1633.5	1631.5	1631.5	1635.5	1632.5	1634.5	1634.5
5°	1630.5	1632.5	1631.5	1633.5	1633.5	1632.5	1632.5	1638.6	1637.6	1640.6	1642.6
7.5°	1634.5	1635.5	1634.5	1634.5	1637.6	1636.6	1637.6	1639.6	1644.7	1649.8	1653.8
10°	1639.6	1641.6	1644.7	1645.7	1649.8	1648.7	1651.8	1654.8	1659.9	1665.0	1670.1
12.5°	1646.7	1652.8	1662.0	1664.0	1668.1	1671.1	1676.2	1679.2	1683.3	1691.4	1697.5
15°	1652.8	1664.0	1675.2	1679.2	1683.3	1687.4	1692.5	1695.5	1702.6	1709.7	1716.9
17.5°	1654.8	1668.1	1682.3	1687.4	1691.4	1698.6	1704.7	1710.8	1718.9	1728.0	1736.2
20°	1655.9	1674.2	1692.5	1698.6	1707.7	1717.9	1728.0	1733.1	1744.3	1755.5	1762.6
22.5°	1665.0	1687.4	1712.8	1724.0	1733.1	1751.4	1764.6	1772.8	1786.0	1795.1	1798.2
25°	1690.4	1713.8	1744.3	1761.6	1776.8	1803.3	1819.5	1834.8	1841.9	1854.1	1851.0
27.5°	1736.2	1754.5	1794.1	1817.5	1836.8	1871.4	1902.9	1917.1	1928.3	1934.4	1927.3
30°	1814.4	1821.6	1865.3	1893.7	1926.2	1980.1	2014.7	2033.0	2047.2	2048.2	2029.9
32.5°	1931.3	1920.2	1958.8	1999.4	2042.1	2107.2	2153.9	2173.3	2184.4	2185.5	2144.8
35°	2089.9	2070.6	2103.1	2142.8	2195.6	2281.0	2340.0	2362.3	2379.6	2371.5	2311.5
37.5°	2290.2	2289.1	2304.4	2355.2	2415.2	2525.0	2587.0	2599.2	2598.2	2573.8	2483.3
40°	2512.8	2494.5	2496.5	2533.1	2602.2	2746.6	2833.0	2853.3	2846.2	2810.6	2692.7
42.5°	2793.3	2785.2	2757.7	2777.1	2841.1	3016.9	3121.6	3142.0	3148.1	3089.1	2949.9
45°	3186.7	3179.6	3118.6	3122.7	3169.4	3354.4	3463.2	3496.7	3497.7	3441.8	3260.9
47.5°	3663.4	3657.3	3586.2	3565.8	3589.2	3753.9	3889.1	3896.2	3898.2	3821.0	3632.9
50°	4204.2	4186.9	4133.1	4111.7	4084.3	4266.2	4375.0	4374.0	4362.8	4277.4	4066.0
52.5°	4726.7	4765.3	4745.0	4703.3	4704.3	4835.4	4938.1	4881.2	4888.3	4807.0	4564.0
55°	5284.7	5383.3	5457.5	5472.8	5465.7	5532.8	5589.7	5488.0	5450.4	5437.2	5179.0
57.5°	5877.3	6129.4	6358.1	6453.7	6417.1	6540.1	6590.9	6485.2	6487.2	6590.9	6368.3
60°	6669.2	7305.5	7881.9	8060.8	8144.1	8347.4	8257.0	8250.9	8410.4	8544.6	8131.9
62.5°	7870.7	8924.8	9844.7	9977.9	10045.0	10090.7	10050.0	9939.2	10103.9	10120.2	9483.9
65°	8781.5	10018.5	10908.0	11074.7	11062.5	10829.7	10604.0	10382.4	10380.4	10217.8	9398.5
66°	8880.1	10122.2	10989.3	11136.7	11082.8	10724.0	10437.3	10149.7	10057.2	9813.2	8981.7
67.5°	8664.6	9941.3	10802.2	10934.4	10819.5	10273.7	9883.3	9494.0	9354.8	9015.3	8167.5
70°	7407.2	8722.5	9874.2	10065.3	9929.1	9204.3	8625.9	8198.0	7818.8	7484.4	6785.1
72.5°	5743.2	6727.1	7945.9	8145.1	8156.3	7589.1	6937.5	6526.9	6085.7	5750.3	5225.8
75°	3767.1	4511.2	5181.1	5114.0	5133.3	4687.0	4298.7	3957.2	3557.7	3293.4	3043.4
77.5°	2201.7	2468.0	2407.1	2240.3	2100.1	1650.8	1181.2	811.2	707.5	738.0	832.5
80°	1914.1	1764.6	1381.4	1214.7	1104.9	750.2	403.5	284.6	250.1	253.1	268.4
82.5°	2060.4	2137.7	1754.5	1444.4	1259.4	883.3	474.7	236.8	170.8	199.2	219.6
85°	1598.9	2035.0	1876.4	1585.7	1333.6	939.2	484.9	150.4	101.6	136.2	171.8
87.5°	455.4	720.7	576.4	509.3	410.7	280.6	115.9	60.0	54.9	71.2	98.6
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5	1633.5
2.5°	1635.5	1635.5	1638.6	1639.6	1640.6	1640.6	1642.6	1642.6	1643.7	1647.7	1646.7
5°	1645.7	1648.7	1652.8	1654.8	1657.9	1658.9	1662.0	1662.0	1665.0	1668.1	1667.0
7.5°	1657.9	1660.9	1664.0	1667.0	1670.1	1674.2	1673.1	1672.1	1671.1	1669.1	1667.0
10°	1675.2	1678.2	1681.3	1680.3	1678.2	1676.2	1668.1	1658.9	1654.8	1646.7	1640.6
12.5°	1703.6	1706.7	1703.6	1695.5	1684.3	1671.1	1653.8	1638.6	1629.4	1617.2	1610.1
15°	1725.0	1728.0	1721.9	1707.7	1689.4	1672.1	1648.7	1629.4	1613.2	1600.0	1589.8
17.5°	1741.2	1739.2	1726.0	1709.7	1690.4	1676.2	1654.8	1633.5	1614.2	1595.9	1581.7
20°	1764.6	1753.4	1734.1	1713.8	1694.5	1682.3	1665.0	1645.7	1625.4	1598.9	1580.6
22.5°	1795.1	1774.8	1749.4	1729.1	1710.8	1698.6	1681.3	1663.0	1643.7	1613.2	1587.8
25°	1838.8	1806.3	1776.8	1755.5	1739.2	1727.0	1705.7	1686.4	1665.0	1634.5	1602.0
27.5°	1899.8	1853.1	1822.6	1801.2	1785.0	1770.7	1743.3	1719.9	1692.5	1662.0	1623.3
30°	1979.1	1922.2	1888.6	1870.3	1853.1	1832.7	1803.3	1768.7	1733.1	1692.5	1650.8
32.5°	2077.7	2013.7	1982.2	1963.9	1941.5	1914.1	1875.4	1829.7	1776.8	1723.0	1671.1
35°	2218.0	2144.8	2110.2	2078.7	2046.2	2005.5	1947.6	1881.5	1811.4	1741.2	1677.2
37.5°	2357.2	2289.1	2246.4	2213.9	2163.1	2097.0	2016.7	1925.2	1831.7	1742.3	1665.0
40°	2554.4	2475.2	2425.3	2367.4	2285.1	2182.4	2065.5	1942.5	1826.6	1718.9	1627.4
42.5°	2796.4	2705.9	2631.7	2527.0	2398.9	2250.5	2088.9	1932.3	1791.1	1667.0	1566.4
45°	3102.3	2984.4	2860.4	2695.7	2499.6	2292.2	2087.9	1896.8	1730.1	1589.8	1490.2
47.5°	3459.1	3293.4	3085.0	2834.0	2565.6	2302.4	2055.3	1832.7	1638.6	1484.1	1369.2
50°	3826.1	3586.2	3290.4	2940.7	2599.2	2276.9	1983.2	1728.0	1518.6	1342.8	1218.8
52.5°	4278.4	3906.4	3476.4	3012.9	2584.9	2201.7	1863.2	1580.6	1357.0	1185.2	1042.9
55°	4817.1	4274.3	3653.3	3052.5	2521.9	2066.5	1681.3	1387.5	1152.7	996.2	868.1
57.5°	5708.6	4850.7	3955.2	3111.5	2397.9	1865.3	1459.7	1155.7	935.2	802.0	699.3
60°	7245.5	6032.9	4593.5	3256.8	2226.1	1578.6	1178.1	905.7	723.7	617.0	544.8
62.5°	8317.9	6749.5	4937.1	3207.0	1934.4	1243.2	871.1	647.5	527.6	457.4	408.6
65°	8109.6	6466.9	4523.4	2724.2	1515.6	879.3	579.4	438.1	370.0	326.3	301.9
66°	7735.5	6154.9	4208.3	2445.7	1314.3	732.9	477.8	362.9	318.2	286.7	270.4
67.5°	7053.4	5508.4	3642.1	1962.8	984.0	540.8	362.9	282.6	258.2	241.9	230.7
70°	5839.7	4355.7	2507.7	1159.8	520.4	302.9	230.7	208.4	197.2	190.1	189.1
72.5°	4477.6	3124.7	1450.5	561.1	278.5	201.3	176.9	168.7	164.7	162.6	162.6
75°	2765.9	1762.6	648.5	281.6	192.1	164.7	153.5	149.4	148.4	148.4	148.4
77.5°	972.8	614.0	290.7	206.3	168.7	148.4	139.3	137.2	139.3	139.3	139.3
80°	268.4	236.8	210.4	183.0	152.5	137.2	129.1	128.1	132.1	133.2	129.1
82.5°	209.4	197.2	179.9	163.7	139.3	125.0	121.0	123.0	125.0	122.0	115.9
85°	178.9	170.8	126.0	126.0	112.8	108.8	107.7	109.8	108.8	100.6	92.5
87.5°	101.6	89.5	68.1	74.2	79.3	81.3	68.1	73.2	72.2	64.0	60.0
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):

	160°	165°	170°	175°	180°
0°	1633.5	1633.5	1633.5	1633.5	1633.5
2.5°	1648.7	1648.7	1650.8	1650.8	1649.8
5°	1669.1	1669.1	1672.1	1670.1	1671.1
7.5°	1665.0	1660.9	1660.9	1658.9	1657.9
10°	1636.6	1629.4	1625.4	1627.4	1624.4
12.5°	1604.0	1597.9	1593.9	1592.8	1591.8
15°	1583.7	1576.6	1573.5	1571.5	1571.5
17.5°	1572.5	1564.4	1560.3	1557.3	1556.2
20°	1567.4	1557.3	1551.2	1548.1	1546.1
22.5°	1569.5	1557.3	1549.1	1545.1	1543.0
25°	1577.6	1562.3	1552.2	1547.1	1544.0
27.5°	1591.8	1571.5	1560.3	1553.2	1549.1
30°	1609.1	1580.6	1564.4	1554.2	1550.1
32.5°	1620.3	1581.7	1561.3	1546.1	1542.0
35°	1618.3	1570.5	1544.0	1524.7	1521.7
37.5°	1597.9	1541.0	1508.5	1483.1	1480.0
40°	1554.2	1496.3	1458.7	1433.3	1427.2
42.5°	1493.2	1433.3	1392.6	1369.2	1361.1
45°	1403.8	1330.6	1293.0	1273.7	1262.5
47.5°	1277.7	1208.6	1166.9	1150.7	1136.4
50°	1134.4	1058.2	1027.7	1009.4	993.1
52.5°	965.7	900.6	877.2	860.0	846.7
55°	802.0	756.3	728.8	710.5	711.5
57.5°	644.5	617.0	601.8	582.4	584.5
60°	507.2	483.8	483.8	471.7	467.6
62.5°	387.3	378.1	375.1	371.0	363.9
65°	293.8	293.8	294.8	294.8	290.7
66°	264.3	267.3	271.4	271.4	266.3
67.5°	228.7	232.8	236.8	238.9	238.9
70°	189.1	194.1	196.2	198.2	197.2
72.5°	165.7	169.8	169.8	170.8	168.7
75°	150.4	152.5	153.5	151.5	150.4
77.5°	139.3	140.3	139.3	138.2	137.2
80°	126.0	125.0	122.0	117.9	116.9
82.5°	108.8	104.7	102.7	96.6	95.6
85°	87.4	82.3	78.3	70.1	66.1
87.5°	57.9	55.9	52.9	38.6	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)