

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: P144538

Luminaire Tested: **LDRL-RW-E03-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P144538  
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-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE  
Light Source: (63) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7605.2 lumens  
Efficiency: N/A  
Efficacy: 101.1 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

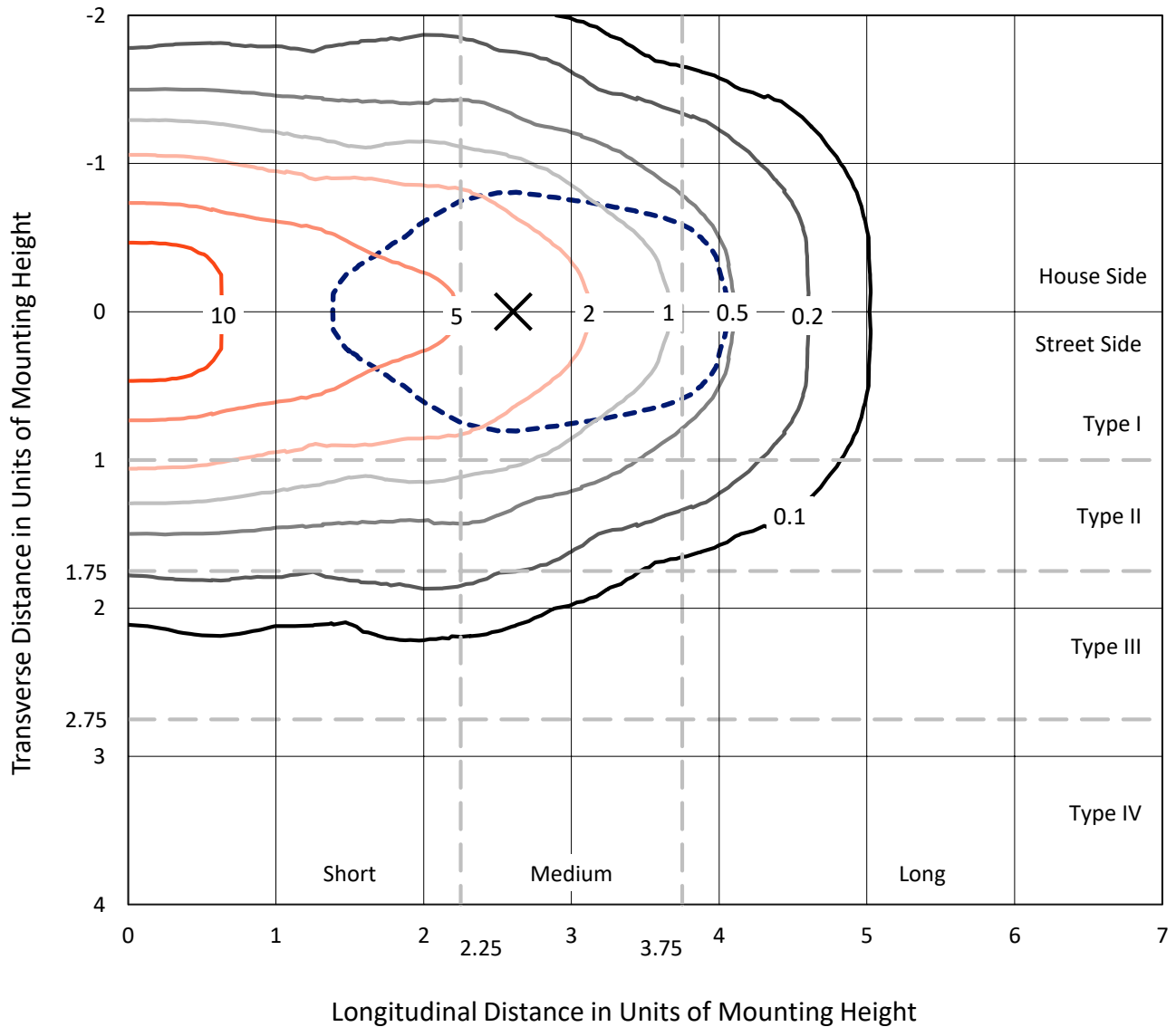
Input Watts (W): 75.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

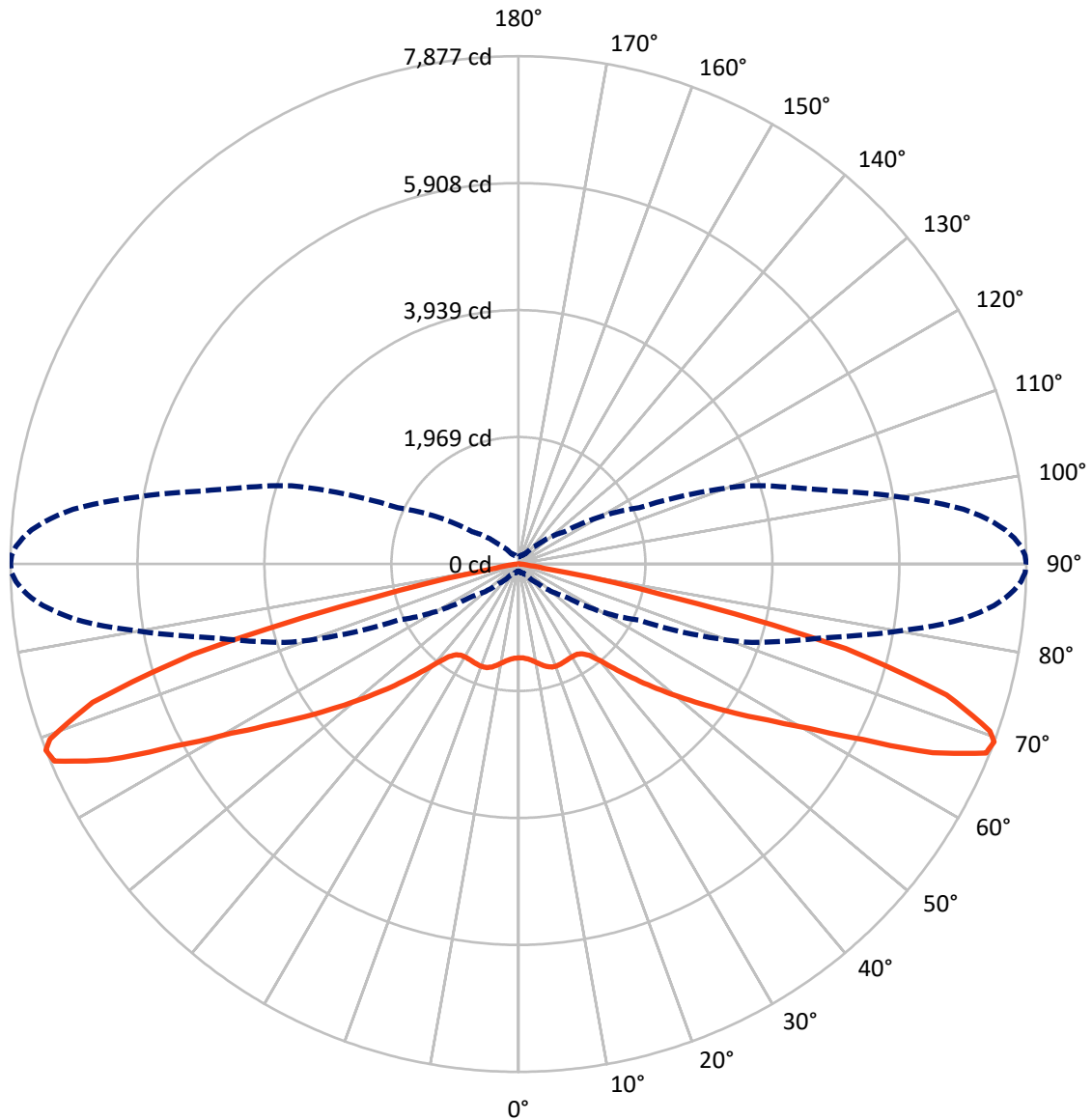
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.9 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
<b>House Side</b>	Lumens	3802.6	0.0	3802.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3802.6	0.0	3802.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	7605.2	0.0	7605.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.5	1.9
10°-20°	448.8	5.9
20°-30°	726.8	9.6
30°-40°	905.4	11.9
40°-50°	1127.2	14.8
50°-60°	1383.1	18.2
60°-70°	1705.8	22.4
70°-80°	1060.4	13.9
80°-90°	105.3	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°	7605.2	100.0
0°-180°	7605.2	100.0



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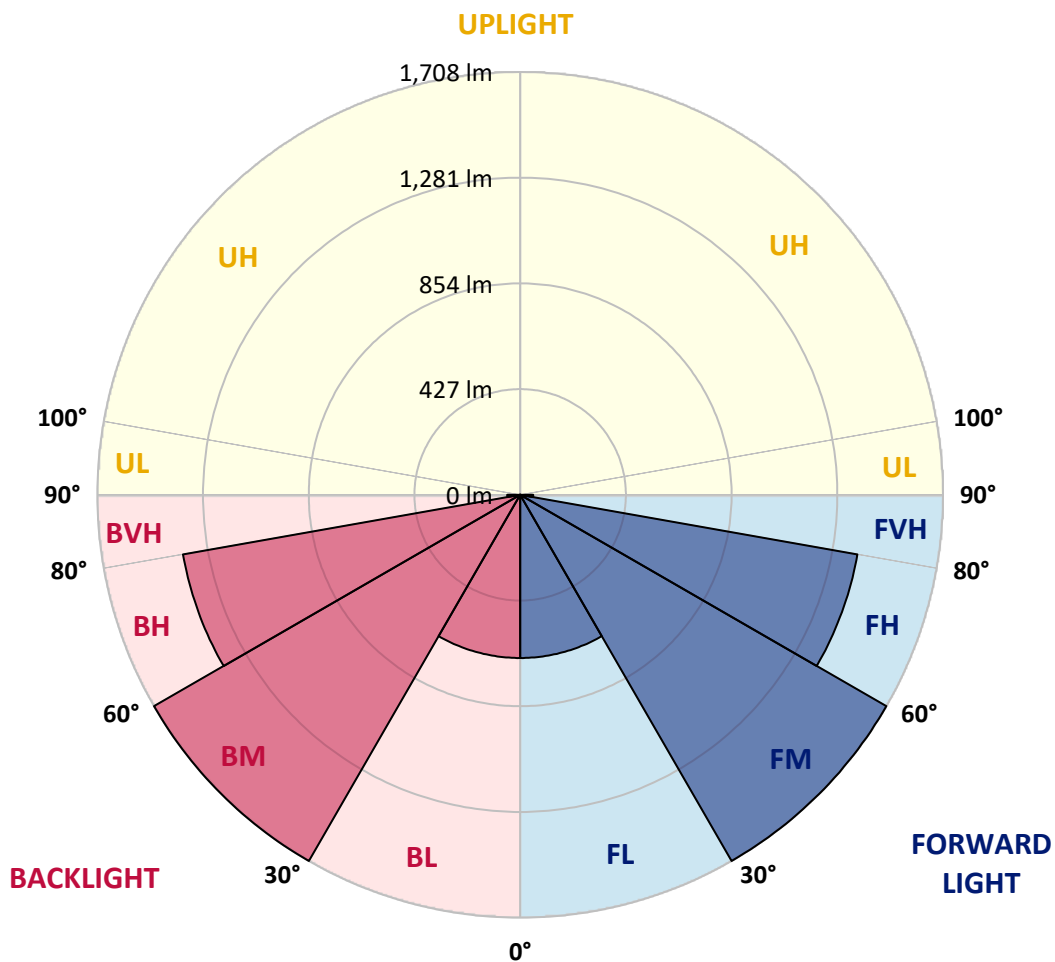
CATALOG NUMBER: LDRL-RW-E03-E-8030

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	659.0	8.7			
FM (30°-60°)	1707.8	22.5			
FH (60°-80°)	1383.1	18.2			G1/1800
FVH (80°-90°)	52.7	0.7			G1/100
BL (0°-30°)	659.0	8.7	B2/1000		
BM (30°-60°)	1707.8	22.5	B2/2500		
BH (60°-80°)	1383.1	18.2	B3/2500		G3/2500
BVH (80°-90°)	52.7	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°	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4
2.5°	1460.2	1458.6	1461.4	1464.0	1463.2	1463.8	1462.7	1461.4	1461.6	1461.6	1461.8
5°	1471.6	1470.1	1472.6	1474.8	1475.6	1477.4	1477.9	1477.2	1477.5	1477.9	1478.2
7.5°	1485.2	1483.9	1487.3	1490.3	1496.2	1499.2	1502.2	1505.2	1505.5	1505.8	1506.0
10°	1498.2	1497.4	1502.7	1509.3	1518.7	1525.8	1534.4	1542.7	1543.4	1544.0	1544.7
12.5°	1506.6	1506.5	1514.6	1526.6	1542.8	1557.2	1571.8	1586.0	1587.4	1588.7	1590.0
15°	1506.1	1507.0	1519.4	1541.2	1569.0	1594.6	1612.6	1628.0	1629.3	1630.6	1631.9
17.5°	1495.6	1495.8	1513.6	1548.3	1591.8	1629.8	1653.1	1661.5	1662.0	1662.4	1662.8
20°	1466.5	1468.6	1493.6	1544.0	1609.6	1662.0	1684.0	1680.4	1679.7	1679.0	1678.2
22.5°	1416.6	1419.2	1452.6	1520.2	1612.9	1682.8	1705.6	1689.6	1687.2	1684.7	1682.3
25°	1347.2	1351.6	1387.8	1474.4	1590.6	1688.8	1719.4	1693.8	1690.1	1686.3	1682.5
27.5°	1267.0	1269.0	1311.8	1402.8	1538.7	1668.6	1725.8	1702.8	1698.0	1693.2	1688.5
30°	1174.0	1179.4	1224.0	1318.9	1465.6	1621.5	1723.2	1720.0	1714.7	1709.4	1704.0
32.5°	1081.7	1086.2	1130.1	1232.4	1381.1	1555.9	1710.6	1746.0	1741.6	1737.2	1732.7
35°	988.5	994.0	1039.1	1149.0	1297.4	1481.4	1690.6	1783.3	1781.4	1779.4	1777.5
37.5°	906.7	910.2	954.6	1068.8	1224.0	1413.4	1664.5	1833.2	1837.5	1841.8	1846.2
40°	823.4	827.0	873.3	990.2	1156.4	1355.1	1640.4	1896.0	1907.8	1919.8	1931.6
42.5°	743.4	746.4	791.2	908.0	1081.2	1304.8	1626.0	1971.9	1994.7	2017.6	2040.4
45°	661.3	663.3	705.4	819.1	995.3	1246.0	1622.2	2057.2	2090.2	2123.2	2156.1
47.5°	580.6	585.4	628.7	736.6	897.4	1161.9	1616.6	2151.7	2195.4	2239.1	2282.8
50°	503.4	508.6	553.2	655.6	802.6	1062.2	1588.3	2258.8	2312.0	2365.3	2418.6
52.5°	424.6	429.9	474.5	572.2	714.8	949.7	1509.3	2371.2	2434.5	2497.9	2561.2
55°	340.5	342.5	388.4	486.4	626.9	855.6	1383.4	2474.2	2551.0	2627.7	2704.4
57.5°	247.6	254.4	299.8	391.0	537.3	772.2	1223.4	2526.9	2622.7	2718.4	2814.2
60°	178.8	183.3	223.1	294.7	435.8	690.4	1081.4	2488.4	2616.3	2744.1	2871.9
62.5°	141.3	146.4	177.0	222.0	337.0	600.6	988.7	2382.8	2562.2	2741.5	2920.8
65°	125.1	129.6	158.0	180.2	257.8	508.2	930.5	2278.2	2520.3	2762.3	3004.3
67.5°	114.2	119.0	143.9	159.0	212.9	448.6	902.9	2199.3	2478.8	2758.3	3037.7
69°	109.1	113.4	136.2	150.4	200.8	428.4	873.2	2065.6	2342.6	2619.8	2896.8
70°	106.4	110.2	130.9	145.0	196.0	411.7	829.4	1906.6	2173.9	2441.3	2708.7
72.5°	98.5	101.0	118.5	131.7	179.2	328.6	625.7	1345.2	1571.9	1798.6	2025.2
75°	87.4	90.4	105.8	118.0	136.8	197.5	391.7	780.8	936.2	1091.5	1246.8
77.5°	74.9	78.5	91.2	110.4	110.2	128.6	237.8	448.4	523.8	599.3	674.8
80°	64.3	67.4	78.8	109.1	92.2	101.8	177.2	334.4	364.8	395.2	425.6
82.5°	50.4	53.0	66.1	90.2	73.6	77.4	135.0	304.6	325.2	345.8	366.4
85°	31.6	32.6	48.1	62.2	52.4	46.8	86.8	234.4	249.4	264.4	279.4
87.5°	12.6	15.4	23.2	22.3	22.5	18.8	28.1	84.6	92.2	100.0	107.6
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4
2.5°	1461.8	1461.9	1461.4	1460.6	1461.4	1460.7	1461.0	1461.7	1461.4	1461.4	1461.0
5°	1478.6	1478.9	1478.9	1477.4	1478.2	1478.4	1478.6	1478.2	1478.4	1479.0	1478.0
7.5°	1506.2	1506.5	1507.3	1508.0	1507.6	1507.8	1508.3	1507.8	1507.0	1508.8	1507.6
10°	1545.3	1546.0	1546.0	1548.3	1547.3	1548.0	1550.3	1550.3	1549.0	1550.8	1550.3
12.5°	1591.3	1592.6	1592.4	1592.1	1593.2	1593.9	1596.4	1596.9	1597.4	1600.2	1599.2
15°	1633.1	1634.4	1635.4	1635.9	1637.6	1638.2	1639.7	1640.7	1641.4	1642.5	1643.0
17.5°	1663.3	1663.8	1665.3	1664.6	1667.0	1666.6	1668.4	1669.1	1669.8	1671.1	1671.8
20°	1677.4	1676.7	1676.9	1676.2	1676.2	1676.7	1676.9	1677.9	1677.4	1678.7	1679.7
22.5°	1679.8	1677.4	1675.9	1674.1	1673.4	1671.8	1671.8	1672.4	1670.6	1671.8	1673.4
25°	1678.7	1674.9	1672.2	1669.1	1666.3	1663.8	1662.2	1661.8	1660.4	1660.5	1661.8
27.5°	1683.7	1679.0	1674.9	1669.8	1666.3	1662.8	1659.4	1656.9	1654.4	1653.8	1653.9
30°	1698.7	1693.4	1688.8	1682.5	1677.0	1672.4	1667.8	1664.2	1659.4	1657.4	1655.2
32.5°	1728.2	1723.8	1717.4	1711.9	1705.3	1699.7	1693.6	1688.1	1682.5	1677.4	1675.4
35°	1775.6	1773.6	1770.1	1766.3	1760.0	1752.9	1747.8	1741.2	1734.9	1727.6	1725.6
37.5°	1850.6	1854.9	1852.9	1850.1	1848.3	1846.0	1839.2	1834.9	1830.6	1824.6	1823.2
40°	1943.6	1955.4	1967.4	1975.2	1972.4	1981.8	1983.3	1984.1	1980.2	1985.3	1986.4
42.5°	2063.3	2086.1	2107.6	2123.3	2141.6	2155.2	2172.9	2180.6	2195.0	2209.9	2218.5
45°	2189.1	2222.0	2253.0	2285.1	2316.8	2351.4	2385.2	2408.9	2443.6	2469.4	2485.6
47.5°	2326.5	2370.2	2407.2	2455.2	2501.0	2542.1	2601.1	2648.4	2690.7	2731.0	2773.3
50°	2471.9	2525.2	2570.7	2629.4	2685.1	2749.5	2818.6	2878.8	2945.2	3009.2	3066.2
52.5°	2624.6	2688.0	2749.5	2809.8	2877.4	2947.2	3022.1	3109.3	3188.8	3285.2	3354.4
55°	2781.1	2857.9	2923.4	2986.4	3058.1	3135.6	3224.7	3327.8	3428.8	3534.4	3639.2
57.5°	2909.9	3005.7	3077.4	3151.0	3228.3	3305.0	3415.6	3521.2	3649.3	3779.0	3910.2
60°	2999.7	3127.5	3214.4	3307.5	3396.9	3490.1	3609.4	3742.8	3903.0	4060.0	4238.3
62.5°	3100.1	3279.4	3401.2	3525.5	3634.2	3746.0	3905.6	4059.2	4265.1	4445.8	4670.2
65°	3246.3	3488.3	3667.6	3835.2	3981.0	4133.4	4322.6	4514.8	4750.2	5000.2	5281.5
67.5°	3317.2	3596.7	3831.4	4038.2	4224.6	4418.8	4614.0	4841.4	5106.7	5407.5	5716.5
69°	3174.0	3451.0	3721.0	3930.2	4126.4	4333.7	4542.6	4772.0	5033.3	5345.5	5672.9
70°	2976.1	3243.5	3530.4	3740.0	3938.0	4153.2	4365.9	4597.6	4847.5	5169.0	5500.2
72.5°	2251.9	2478.6	2757.0	2978.6	3186.8	3404.2	3623.2	3824.2	4077.7	4387.2	4692.2
75°	1402.1	1557.4	1807.8	2030.4	2197.8	2384.1	2589.7	2780.1	3034.6	3253.8	3547.3
77.5°	750.2	825.6	971.8	1131.3	1224.4	1315.4	1449.3	1552.6	1659.7	1786.6	1907.8
80°	456.0	486.4	536.3	570.8	557.8	520.6	508.6	471.4	484.9	462.1	445.6
82.5°	387.0	407.6	438.0	458.8	443.6	384.1	316.8	266.6	231.2	197.2	167.6
85°	294.4	309.4	325.1	334.5	333.7	304.1	241.6	187.1	145.8	113.0	93.9
87.5°	115.4	123.0	134.4	132.6	138.5	139.5	109.2	84.4	60.0	40.5	35.4
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°	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4	1456.4
2.5°	1460.0	1459.7	1460.0	1460.7	1460.7	1461.2	1460.7	1461.0	1460.2	1459.4	1459.9
5°	1478.0	1477.4	1477.9	1478.4	1478.4	1477.9	1479.1	1479.2	1478.7	1477.9	1478.2
7.5°	1508.8	1509.1	1508.2	1510.8	1508.6	1508.8	1510.3	1510.1	1509.6	1509.8	1510.1
10°	1551.8	1551.6	1552.1	1553.6	1551.4	1552.9	1554.6	1555.1	1553.8	1553.8	1554.1
12.5°	1599.4	1601.4	1601.7	1602.8	1602.8	1604.0	1604.2	1604.5	1605.6	1605.8	1604.3
15°	1645.0	1646.6	1647.6	1648.6	1647.3	1649.1	1651.1	1651.1	1650.8	1651.9	1650.3
17.5°	1673.2	1674.4	1676.2	1676.0	1676.2	1677.7	1679.0	1679.4	1680.0	1680.0	1680.2
20°	1682.0	1682.8	1683.8	1684.8	1685.2	1686.8	1687.8	1688.6	1689.1	1688.6	1688.8
22.5°	1674.9	1675.9	1678.0	1678.7	1679.0	1681.2	1682.2	1683.0	1683.5	1684.0	1683.3
25°	1662.8	1663.8	1665.8	1666.6	1667.0	1669.0	1670.4	1672.1	1672.6	1672.9	1673.1
27.5°	1654.4	1654.9	1656.4	1657.4	1657.7	1660.0	1661.7	1663.0	1663.2	1663.6	1663.5
30°	1654.6	1654.6	1656.4	1656.7	1656.4	1658.4	1659.4	1660.2	1660.8	1660.7	1661.0
32.5°	1672.1	1671.1	1672.6	1670.4	1670.6	1670.4	1670.0	1670.8	1670.3	1670.6	1669.6
35°	1721.4	1718.7	1716.4	1717.4	1713.9	1708.8	1711.6	1710.4	1707.6	1707.8	1708.6
37.5°	1816.2	1813.4	1815.9	1813.6	1814.4	1807.4	1809.1	1802.8	1801.0	1803.2	1796.7
40°	1984.3	1983.0	1987.8	1985.8	1987.1	1989.1	1990.9	1984.8	1974.7	1983.8	1984.1
42.5°	2217.2	2228.6	2233.2	2239.5	2246.4	2243.3	2249.4	2251.2	2240.0	2248.4	2250.4
45°	2509.4	2521.6	2535.8	2540.1	2551.2	2552.7	2557.3	2558.6	2548.4	2549.4	2551.7
47.5°	2815.6	2837.9	2854.6	2866.2	2877.8	2880.1	2882.6	2877.8	2878.6	2880.9	2880.9
50°	3116.4	3164.0	3193.6	3216.6	3236.6	3226.2	3235.1	3235.8	3238.9	3232.6	3236.4
52.5°	3432.6	3495.6	3545.2	3584.0	3596.2	3633.2	3617.9	3629.6	3637.4	3625.8	3633.4
55°	3741.5	3831.4	3911.2	3967.4	4006.8	4044.4	4050.2	4080.3	4076.7	4088.2	4083.1
57.5°	4035.2	4160.8	4274.8	4358.0	4414.8	4472.0	4510.8	4543.6	4547.0	4579.5	4561.1
60°	4390.5	4565.4	4712.0	4836.1	4919.9	5005.0	5072.0	5126.0	5138.4	5194.4	5175.9
62.5°	4869.8	5083.2	5270.5	5416.2	5602.8	5692.6	5823.2	5904.8	5955.7	5969.6	5995.7
65°	5543.5	5821.6	6068.6	6301.6	6511.4	6657.0	6808.2	6929.8	7027.2	7019.2	7059.1
67.5°	6044.0	6361.1	6658.6	6937.8	7163.8	7351.1	7524.8	7656.2	7743.2	7798.8	7822.3
69°	5991.9	6332.2	6660.4	6958.6	7191.6	7401.0	7570.1	7699.4	7799.2	7859.5	7877.0
70°	5818.5	6168.2	6510.2	6802.9	7040.4	7270.3	7442.5	7586.6	7681.5	7747.3	7757.5
72.5°	5032.8	5411.6	5714.2	6033.4	6262.0	6494.8	6603.1	6781.6	6905.4	6945.4	6944.7
75°	3796.0	4111.9	4377.8	4613.8	4818.3	4976.0	5027.2	5154.4	5257.2	5255.8	5246.2
77.5°	2044.0	2118.5	2218.0	2251.4	2314.5	2313.4	2250.1	2270.2	2328.4	2215.5	2251.9
80°	438.6	432.0	426.4	423.1	421.3	422.0	424.4	409.9	424.1	417.8	390.9
82.5°	152.7	149.2	145.6	148.2	146.4	147.9	147.4	149.2	148.9	148.4	144.8
85°	85.8	82.8	81.0	82.3	79.5	77.0	75.2	74.4	74.2	72.4	71.4
87.5°	32.7	32.4	32.2	30.9	27.8	25.6	24.0	21.0	19.7	18.0	16.7
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)