

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: INVUE

Report Number: P140773

Luminaire Tested: **ECM-F04-LED-E1-RW-8030**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P140773  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33689)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ECM-F04-LED-E1-RW-8030  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE  
Light Source: (28) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8241.9 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type I - Short - Full Cutoff  
BUG Rating: B3 - U0 - G3

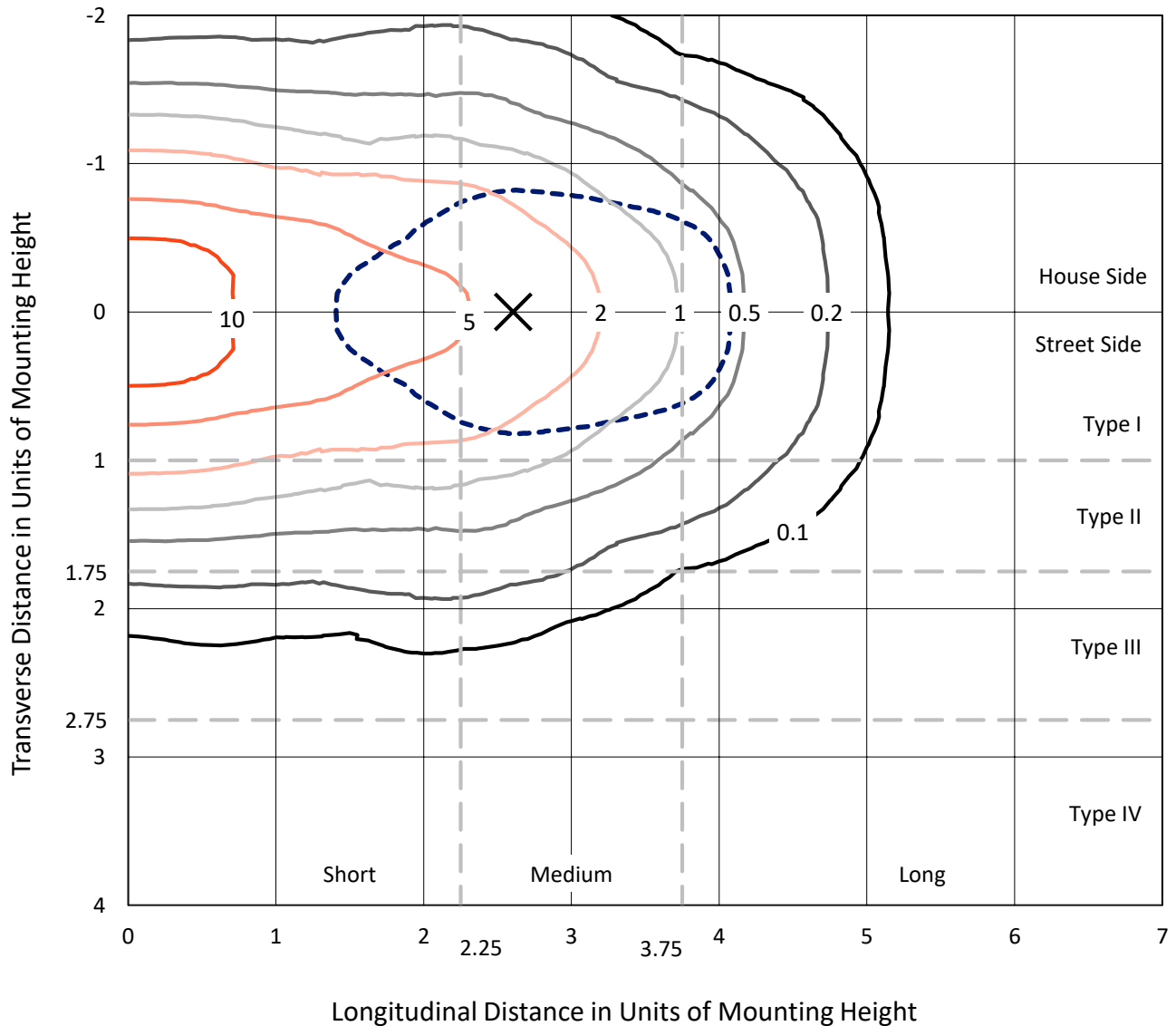
Input Watts (W): 102.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

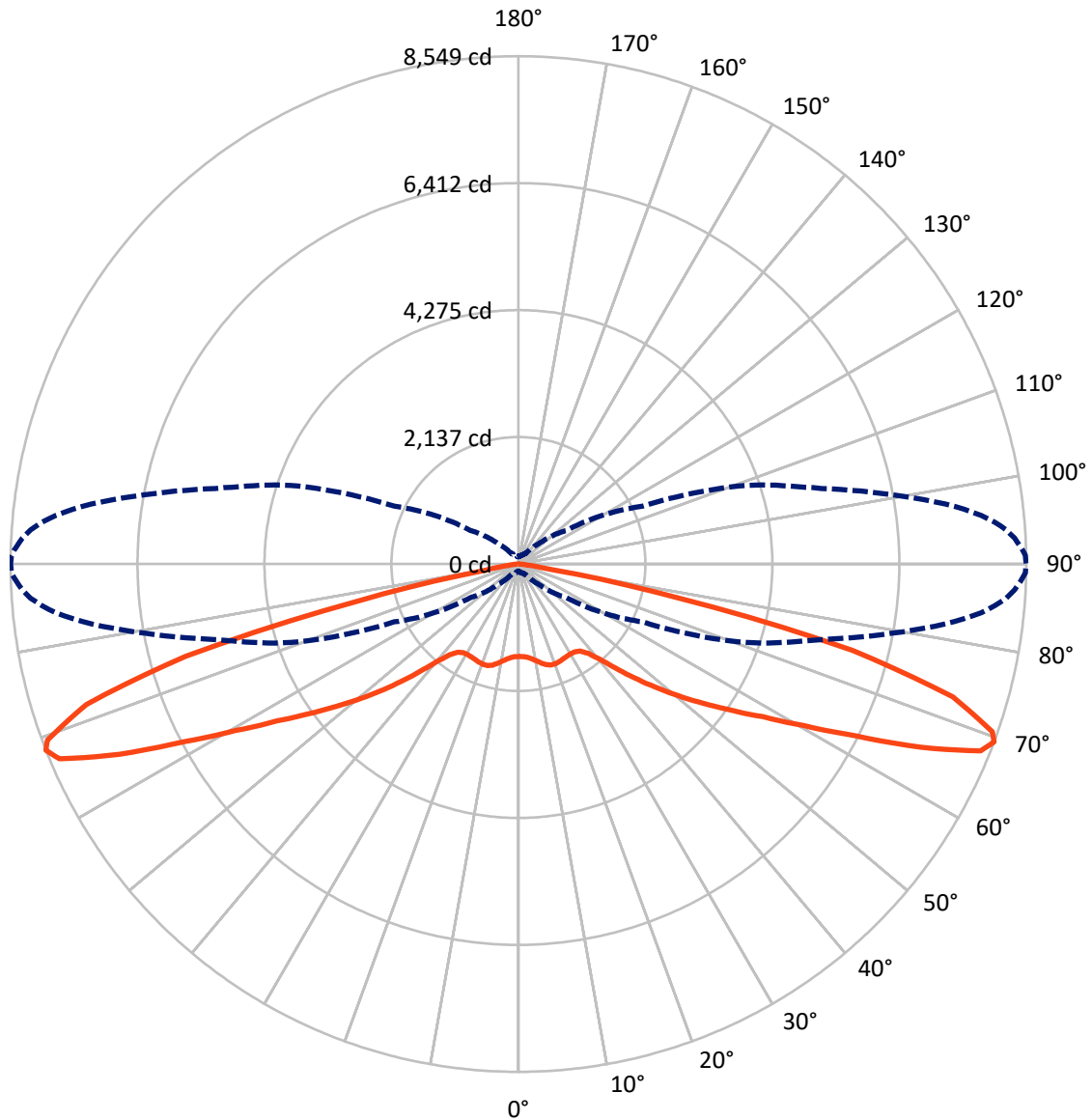
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.9 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	4120.9	0.0	4120.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4120.9	0.0	4120.9
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8241.9	0.0	8241.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.4	1.8
10°-20°	479.0	5.8
20°-30°	774.6	9.4
30°-40°	967.5	11.7
40°-50°	1210.1	14.7
50°-60°	1491.1	18.1
60°-70°	1846.1	22.4
70°-80°	1206.6	14.6
80°-90°	114.7	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°	8241.9	100.0
0°-180°	8241.9	100.0



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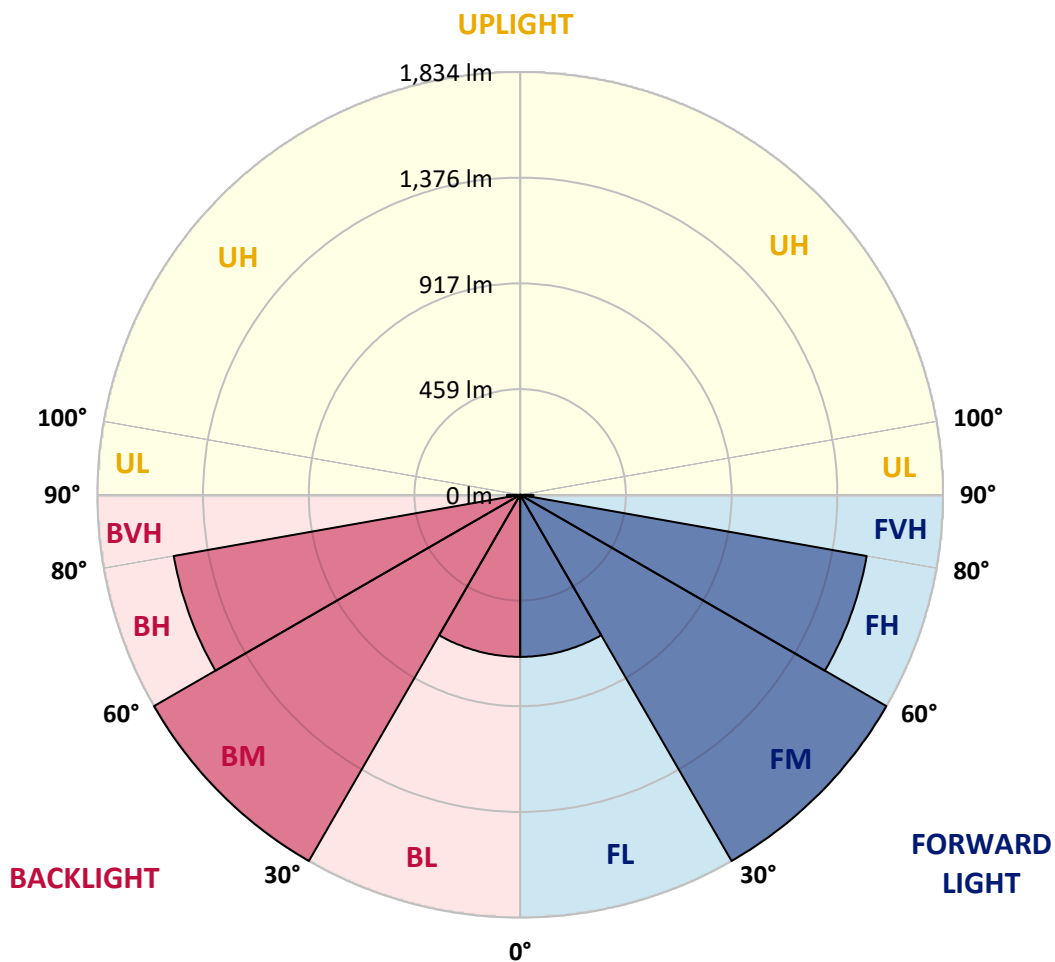
CATALOG NUMBER: ECM-F04-LED-E1-RW-8030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	702.9	8.5			
FM	(30°-60°)	1834.4	22.3			
FH	(60°-80°)	1526.3	18.5			G1/1800
FVH	(80°-90°)	57.3	0.7			G1/100
BL	(0°-30°)	702.9	8.5	B2/1000		
BM	(30°-60°)	1834.4	22.3	B2/2500		
BH	(60°-80°)	1526.3	18.5	B3/2500		G3/2500
BVH	(80°-90°)	57.3	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°	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0
2.5°	1566.2	1567.2	1564.4	1565.3	1566.2	1565.4	1563.9	1563.9	1563.4	1563.0	1562.5
5°	1576.5	1577.0	1575.6	1577.9	1578.4	1579.8	1579.7	1580.2	1579.9	1579.6	1579.4
7.5°	1590.9	1592.8	1591.4	1594.6	1597.8	1602.4	1604.8	1610.4	1610.3	1610.2	1610.1
10°	1604.4	1606.2	1606.2	1613.6	1621.5	1630.4	1639.6	1648.4	1649.0	1649.6	1650.1
12.5°	1614.6	1616.0	1618.2	1631.8	1649.4	1664.3	1680.6	1694.4	1695.0	1695.6	1696.1
15°	1610.4	1613.6	1624.4	1645.6	1676.8	1701.4	1721.4	1738.1	1739.2	1740.3	1741.5
17.5°	1596.0	1601.1	1616.4	1652.6	1700.5	1740.0	1763.6	1768.3	1769.0	1769.8	1770.6
20°	1564.9	1572.3	1596.4	1648.0	1718.6	1772.0	1795.8	1787.4	1786.6	1785.9	1785.1
22.5°	1512.8	1522.6	1552.8	1626.2	1720.0	1795.3	1818.4	1795.2	1792.6	1790.0	1787.4
25°	1443.2	1451.1	1485.4	1572.3	1698.6	1799.4	1832.9	1800.4	1796.2	1792.0	1787.8
27.5°	1358.6	1365.2	1407.9	1500.3	1645.6	1778.1	1842.2	1809.2	1803.8	1798.4	1793.0
30°	1263.4	1269.0	1315.9	1414.4	1571.4	1731.2	1841.2	1829.2	1822.8	1816.4	1810.0
32.5°	1168.6	1171.0	1212.8	1321.0	1488.7	1662.0	1825.9	1859.8	1853.6	1847.4	1841.1
35°	1064.6	1072.0	1116.6	1234.6	1395.4	1585.8	1805.4	1902.6	1899.0	1895.5	1892.0
37.5°	981.0	983.4	1031.2	1153.8	1319.6	1516.6	1779.4	1957.4	1959.9	1962.4	1964.9
40°	897.4	897.4	944.8	1072.1	1243.9	1454.4	1757.6	2024.8	2037.5	2050.2	2062.9
42.5°	805.9	812.4	858.8	985.6	1170.5	1401.4	1746.4	2105.5	2129.5	2153.4	2177.4
45°	720.4	724.6	772.0	896.0	1079.1	1341.0	1743.2	2195.6	2232.1	2268.5	2304.9
47.5°	636.4	642.4	687.4	801.2	979.2	1260.6	1739.0	2298.3	2344.8	2391.4	2437.9
50°	558.4	562.0	612.2	715.8	880.7	1156.6	1711.6	2413.0	2469.9	2526.8	2583.6
52.5°	475.6	483.0	524.4	631.2	781.2	1044.6	1639.6	2538.0	2606.7	2675.5	2744.2
55°	389.2	387.4	437.1	537.4	694.4	937.4	1506.8	2646.2	2729.2	2812.1	2895.1
57.5°	285.2	291.2	336.8	438.5	593.6	847.2	1350.3	2702.4	2805.9	2909.4	3012.9
60°	204.4	212.8	252.2	332.6	493.2	759.0	1190.5	2663.4	2800.5	2937.6	3074.8
62.5°	159.8	163.5	197.4	249.4	384.6	666.6	1083.2	2562.2	2751.2	2940.2	3129.3
65°	139.3	143.6	173.7	200.6	292.2	578.8	1018.6	2481.3	2730.8	2980.3	3229.9
67.5°	126.8	132.0	158.0	176.5	239.7	504.0	1003.3	2415.4	2708.1	3000.8	3293.5
69°	120.8	125.9	150.0	167.2	222.5	480.2	985.6	2304.4	2601.4	2898.5	3195.6
70°	118.0	122.2	145.4	161.6	217.0	466.4	945.7	2177.6	2464.7	2751.9	3039.0
72.5°	108.7	111.0	132.4	148.1	205.3	390.2	749.2	1629.9	1869.9	2109.8	2349.8
75°	96.2	99.8	119.4	135.6	164.9	249.9	491.4	985.2	1162.9	1340.6	1518.3
77.5°	82.7	85.9	102.6	129.6	126.8	151.4	282.4	550.4	646.5	742.5	838.6
80°	71.6	74.8	90.2	120.3	103.2	112.0	190.4	359.0	395.6	432.1	468.6
82.5°	56.2	58.5	75.7	98.0	79.9	83.2	142.6	313.5	335.5	357.5	379.6
85°	35.8	37.2	55.3	66.8	55.7	49.2	89.6	230.0	247.3	264.7	282.0
87.5°	12.6	17.6	24.6	23.2	23.2	17.6	31.6	85.0	91.8	98.6	105.3
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°	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0
2.5°	1562.1	1561.6	1562.0	1562.0	1561.6	1561.2	1561.1	1560.7	1559.8	1559.8	1559.3
5°	1579.1	1578.8	1579.7	1579.3	1579.8	1579.3	1579.2	1578.8	1579.2	1577.4	1577.0
7.5°	1610.0	1609.9	1609.9	1611.3	1610.4	1609.9	1610.8	1610.9	1610.8	1609.9	1609.9
10°	1650.7	1651.2	1652.2	1653.2	1653.2	1653.2	1655.0	1653.6	1656.4	1653.6	1655.0
12.5°	1696.7	1697.2	1699.6	1700.5	1701.4	1701.4	1701.4	1704.2	1706.1	1705.6	1706.0
15°	1742.6	1743.7	1744.2	1745.6	1745.6	1746.0	1747.8	1751.2	1750.2	1752.0	1752.0
17.5°	1771.3	1772.0	1771.6	1771.6	1772.5	1773.9	1775.8	1777.6	1777.2	1778.6	1779.4
20°	1784.4	1783.6	1782.2	1781.3	1780.9	1781.8	1781.8	1782.2	1783.2	1783.2	1783.2
22.5°	1784.8	1782.2	1779.0	1777.2	1774.8	1773.4	1774.4	1773.4	1773.4	1773.4	1772.5
25°	1783.6	1779.4	1774.4	1770.6	1766.9	1764.6	1762.3	1761.4	1759.5	1759.5	1759.4
27.5°	1787.6	1782.2	1777.1	1770.2	1765.0	1762.3	1759.0	1755.8	1754.0	1752.0	1752.0
30°	1803.6	1797.2	1790.6	1782.2	1775.2	1773.0	1767.0	1763.6	1759.0	1756.7	1755.8
32.5°	1834.9	1828.7	1819.9	1810.6	1805.0	1798.0	1793.0	1786.0	1780.8	1777.6	1773.4
35°	1888.4	1884.9	1877.5	1871.4	1863.0	1855.2	1845.0	1841.2	1830.6	1828.7	1823.6
37.5°	1967.4	1969.9	1968.5	1963.8	1958.3	1951.3	1947.2	1939.2	1935.1	1930.8	1926.2
40°	2075.6	2088.4	2092.6	2097.6	2099.0	2105.1	2098.1	2097.2	2091.6	2096.2	2093.4
42.5°	2201.4	2225.4	2238.4	2253.7	2270.4	2285.8	2297.9	2318.3	2316.0	2331.8	2342.9
45°	2341.3	2377.8	2411.1	2436.8	2468.8	2504.0	2535.2	2564.0	2596.5	2615.1	2642.5
47.5°	2484.5	2531.0	2578.9	2626.2	2671.8	2717.2	2773.0	2823.6	2872.9	2906.4	2948.6
50°	2640.4	2697.3	2754.9	2813.0	2877.6	2949.0	3011.3	3077.2	3145.0	3213.8	3262.1
52.5°	2812.9	2881.6	2944.4	3005.7	3085.6	3161.4	3242.2	3324.8	3427.4	3502.2	3568.7
55°	2978.0	3061.0	3129.8	3203.1	3286.8	3370.8	3469.8	3573.3	3682.0	3789.8	3887.4
57.5°	3116.4	3219.9	3301.6	3374.5	3464.2	3561.2	3667.6	3795.8	3919.8	4053.6	4179.5
60°	3211.9	3349.0	3447.4	3535.2	3639.3	3747.0	3886.0	4037.4	4200.4	4366.7	4528.4
62.5°	3318.3	3507.4	3642.0	3767.5	3890.6	4010.4	4167.0	4355.0	4576.2	4777.2	4991.4
65°	3479.4	3728.9	3927.8	4087.6	4262.2	4436.8	4619.4	4839.0	5090.4	5383.9	5633.3
67.5°	3586.2	3879.0	4131.6	4360.6	4564.6	4776.8	5007.2	5270.1	5573.4	5873.0	6183.3
69°	3492.7	3789.8	4056.9	4309.1	4532.5	4761.0	4995.2	5259.9	5569.7	5900.9	6228.4
70°	3326.2	3613.3	3889.2	4154.8	4373.2	4612.0	4842.3	5094.6	5408.5	5739.7	6096.0
72.5°	2589.7	2829.7	3113.0	3369.4	3630.0	3847.8	4056.0	4309.0	4625.8	4941.2	5288.2
75°	1696.0	1873.8	2132.9	2343.8	2569.1	2773.4	2924.4	3175.8	3368.0	3664.8	3987.2
77.5°	934.6	1030.7	1165.4	1337.2	1434.4	1549.6	1700.5	1792.0	1928.6	2136.2	2232.8
80°	505.1	541.6	598.2	634.0	662.8	634.5	619.2	646.6	635.0	631.7	600.6
82.5°	401.6	423.6	452.8	473.8	460.3	399.5	334.9	288.0	257.8	216.9	185.8
85°	299.4	316.8	328.0	341.8	339.5	307.0	245.7	190.0	149.1	118.9	103.6
87.5°	112.1	118.9	122.2	148.6	136.6	129.6	100.8	73.4	56.2	40.8	33.0
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):**

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0	1556.0
2.5°	1560.2	1559.8	1559.8	1559.8	1560.2	1559.3	1558.4	1559.3	1558.8	1558.8	1558.8
5°	1578.8	1578.3	1578.4	1578.8	1578.4	1578.8	1578.4	1576.5	1577.4	1577.9	1578.3
7.5°	1610.8	1610.4	1610.4	1612.7	1612.2	1611.8	1611.4	1612.2	1610.9	1610.8	1611.8
10°	1655.0	1656.8	1656.4	1657.8	1657.3	1656.4	1655.4	1656.4	1657.8	1658.2	1656.4
12.5°	1708.8	1709.3	1708.4	1710.8	1709.4	1712.6	1708.8	1710.8	1712.6	1709.8	1711.2
15°	1752.5	1752.6	1754.4	1754.8	1754.4	1755.4	1758.0	1756.7	1755.3	1757.6	1758.6
17.5°	1779.0	1780.4	1780.8	1781.4	1782.2	1783.2	1783.6	1783.2	1783.6	1784.6	1786.4
20°	1785.0	1784.6	1785.5	1786.0	1787.4	1787.4	1788.3	1787.8	1789.2	1789.7	1790.1
22.5°	1774.4	1774.8	1775.3	1776.7	1776.2	1777.2	1777.6	1779.0	1778.5	1779.4	1779.9
25°	1760.0	1760.8	1761.4	1760.9	1760.9	1761.4	1761.8	1761.4	1763.2	1764.2	1764.1
27.5°	1750.6	1750.6	1752.1	1751.6	1750.6	1751.6	1751.1	1751.2	1751.1	1751.6	1753.0
30°	1754.4	1753.0	1752.0	1752.0	1751.6	1750.7	1749.7	1748.4	1748.4	1748.8	1748.3
32.5°	1774.4	1771.6	1770.2	1768.8	1767.8	1765.5	1762.8	1761.8	1759.5	1759.4	1758.6
35°	1825.4	1822.2	1822.2	1817.1	1814.3	1812.9	1810.6	1803.6	1804.1	1801.3	1800.4
37.5°	1927.2	1921.6	1919.2	1923.9	1915.1	1918.8	1911.0	1907.6	1909.5	1904.4	1907.2
40°	2098.1	2107.0	2103.2	2108.4	2110.6	2111.6	2111.6	2103.7	2111.6	2099.0	2103.2
42.5°	2344.8	2368.0	2376.4	2379.1	2393.5	2389.8	2385.6	2385.2	2384.7	2390.8	2387.5
45°	2655.0	2658.3	2697.8	2705.1	2713.1	2721.9	2719.6	2729.8	2737.2	2727.0	2728.4
47.5°	2972.3	3005.2	3034.0	3049.9	3067.0	3058.2	3065.1	3069.4	3095.8	3093.0	3090.7
50°	3321.6	3376.8	3392.2	3409.4	3422.8	3449.8	3447.4	3463.7	3461.0	3482.8	3485.5
52.5°	3652.8	3713.6	3775.4	3802.3	3822.8	3853.8	3866.0	3883.6	3877.1	3875.2	3891.5
55°	3982.1	4083.8	4154.4	4223.6	4262.2	4303.5	4321.2	4346.2	4357.4	4362.5	4342.1
57.5°	4308.6	4430.8	4550.2	4635.6	4695.0	4757.3	4790.3	4817.7	4849.8	4860.4	4850.2
60°	4690.4	4869.2	5025.8	5140.0	5249.7	5317.5	5388.5	5440.6	5450.3	5494.4	5522.8
62.5°	5199.0	5416.9	5615.2	5781.5	5951.5	6078.4	6206.5	6257.7	6308.2	6342.6	6363.5
65°	5892.5	6179.6	6453.6	6690.0	6898.6	7109.5	7259.0	7337.6	7438.4	7458.3	7436.5
67.5°	6500.5	6839.2	7179.6	7480.6	7705.9	7924.6	8102.1	8232.2	8326.4	8372.9	8392.4
69°	6567.4	6911.6	7259.5	7559.6	7832.2	8050.6	8232.2	8361.3	8455.2	8535.4	8549.4
70°	6430.4	6816.9	7155.0	7457.8	7738.8	7961.4	8123.9	8271.6	8378.5	8440.2	8462.1
72.5°	5645.0	5992.4	6333.8	6682.6	6923.7	7190.8	7324.6	7443.0	7585.1	7666.0	7648.3
75°	4278.0	4578.5	4876.2	5137.2	5323.0	5421.5	5578.0	5692.8	5671.9	5808.0	5811.7
77.5°	2413.0	2452.0	2654.1	2627.2	2716.4	2718.6	2741.8	2782.3	2704.7	2864.0	2749.8
80°	585.2	577.3	619.2	570.0	565.8	561.6	547.6	575.0	578.8	550.4	555.5
82.5°	171.9	164.4	161.1	157.0	164.0	161.6	163.0	164.0	168.6	162.6	169.1
85°	94.3	88.8	88.3	85.9	85.5	80.4	79.9	79.9	76.6	77.6	77.1
87.5°	36.2	33.9	32.0	30.6	30.2	28.8	27.4	25.1	22.3	20.0	18.6
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)