

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: STREETWORKS

Report Number: P231305

Luminaire Tested: **ARCH-M-AF48-130-D-U-T4W-7050**

Issue Date: 3/3/2020

#### Test Information

Test Method: LM-79-08  
Report Number: P231305  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29615)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-130-D-U-T4W-7050  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 845mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

#### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 16066 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 131  
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: 28.75 FT

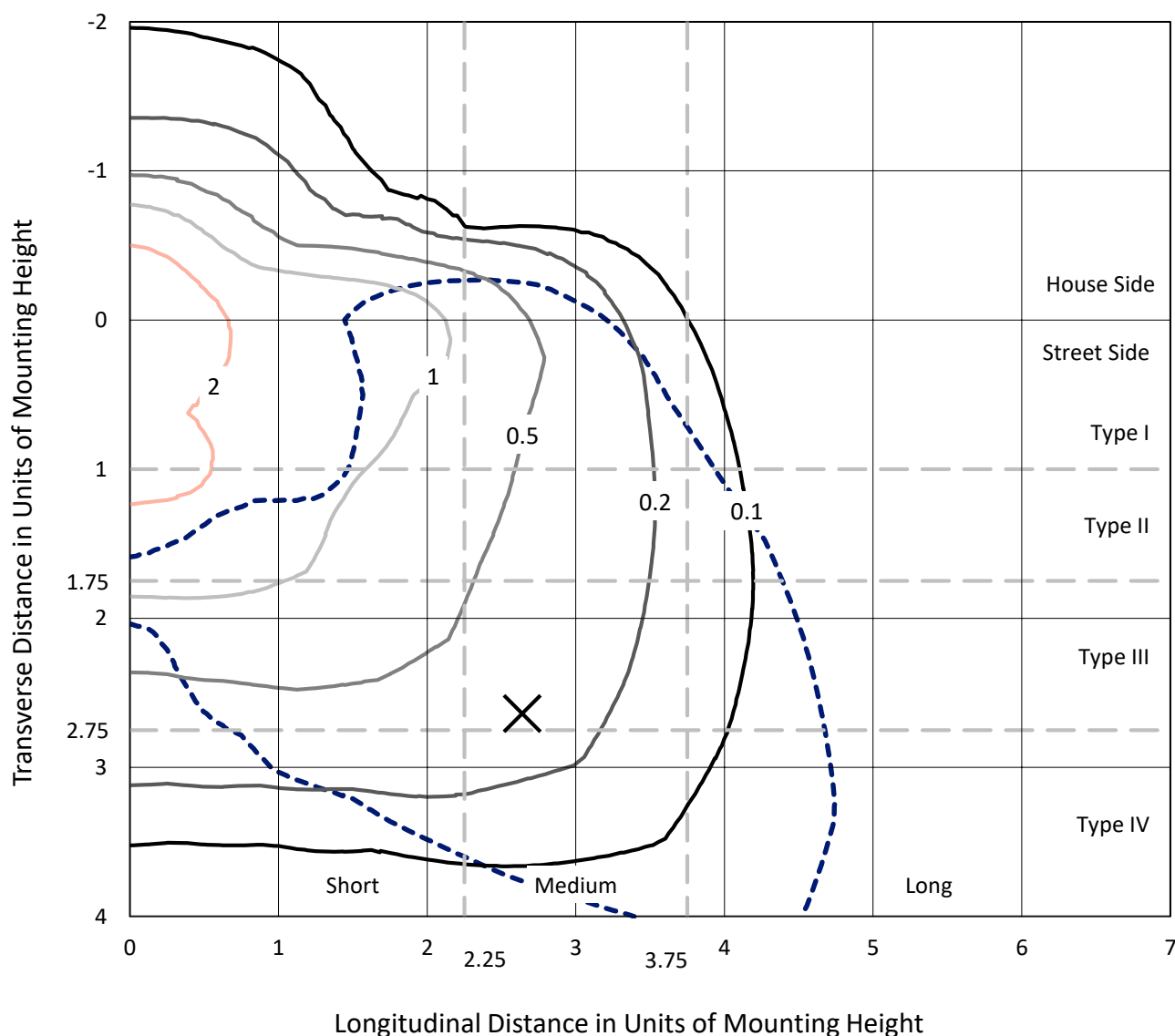


REPORT NUMBER: P231305

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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

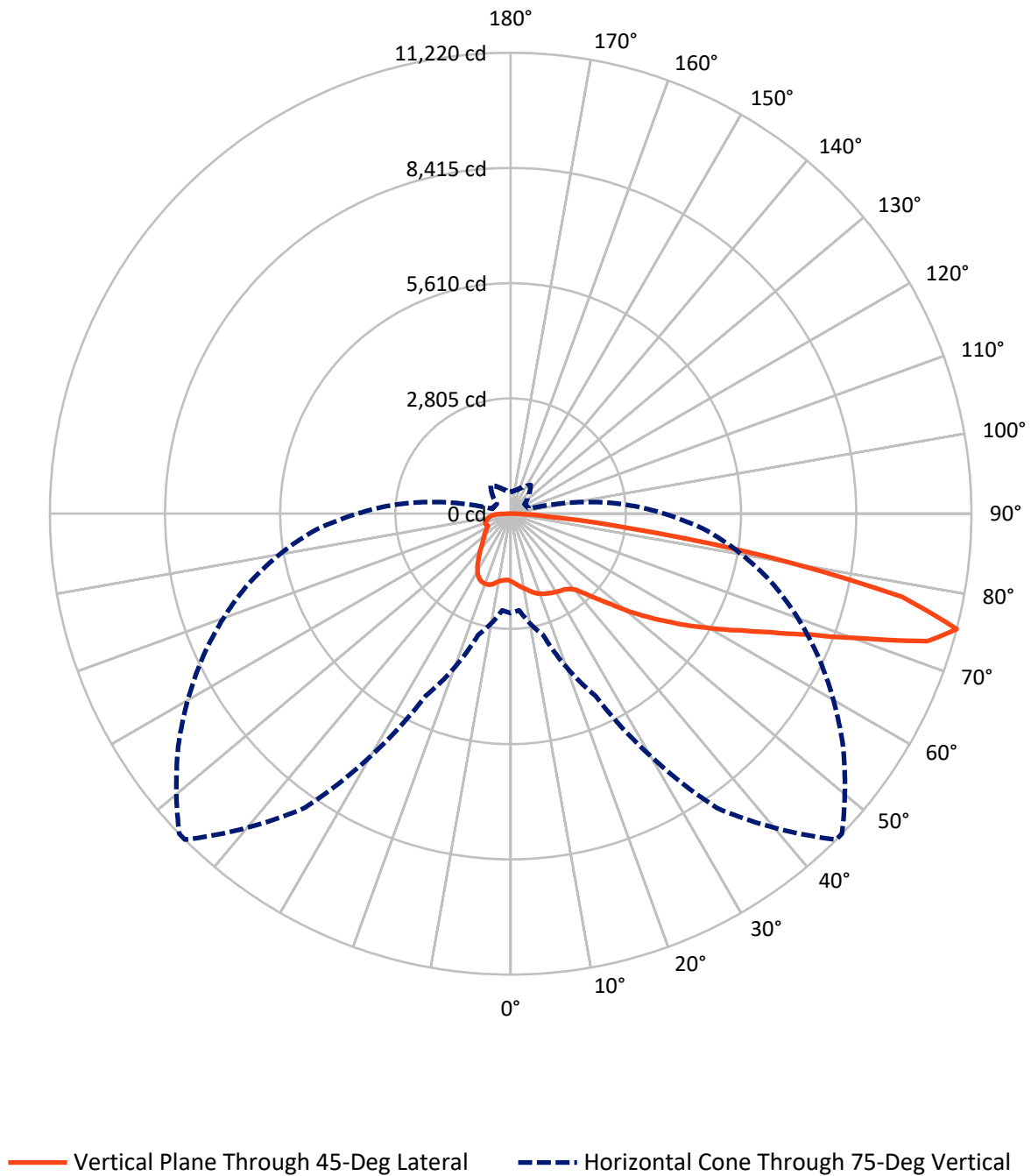


Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P231305

CATALOG NUMBER: ARCH-M-AF48-130-D-U-T4W-7050

## Luminous Intensity Polar Plot



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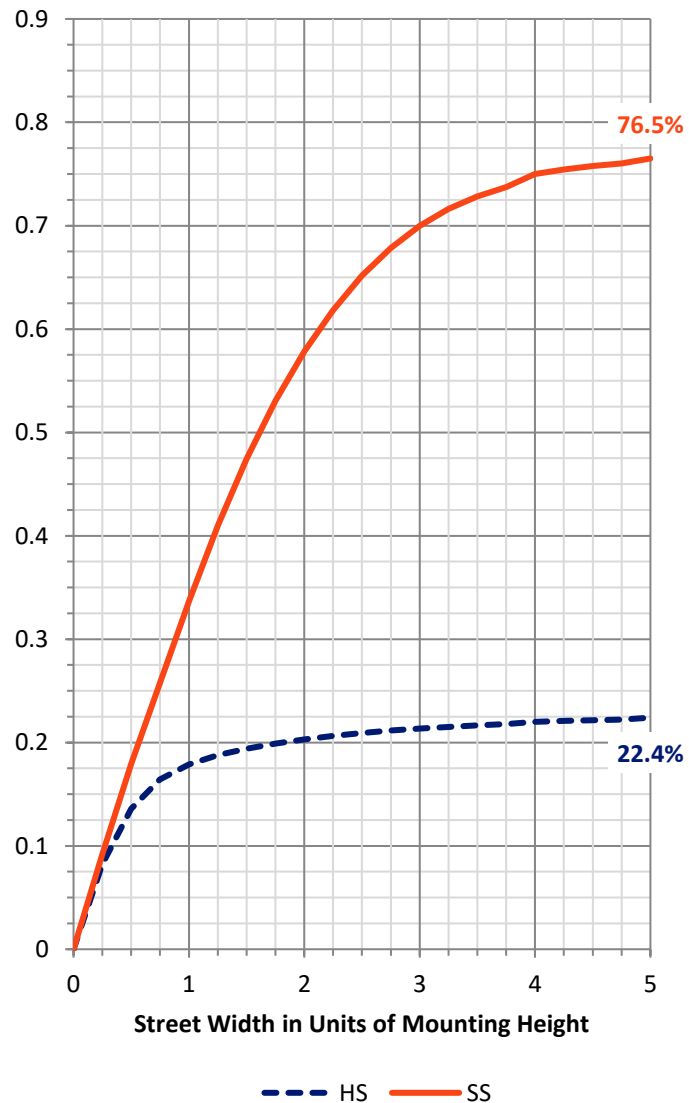
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3721.8   | 0.0    | 3721.8  |
|                    | % Fixture | 23.2     | 0.0    | 23.2    |
| <b>Street Side</b> | Lumens    | 12344.2  | 0.0    | 12344.2 |
|                    | % Fixture | 76.8     | 0.0    | 76.8    |
| <b>Total</b>       | Lumens    | 16066.0  | 0.0    | 16066.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 163.2   | 1.0       |
| 10°-20°   | 528.9   | 3.3       |
| 20°-30°   | 907.6   | 5.6       |
| 30°-40°   | 1269.4  | 7.9       |
| 40°-50°   | 1862.1  | 11.6      |
| 50°-60°   | 2900.7  | 18.1      |
| 60°-70°   | 4173.8  | 26.0      |
| 70°-80°   | 3635.8  | 22.6      |
| 80°-90°   | 624.4   | 3.9       |
| 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°    | 16066.0 | 100.0     |
| 0°-180°   | 16066.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P231305

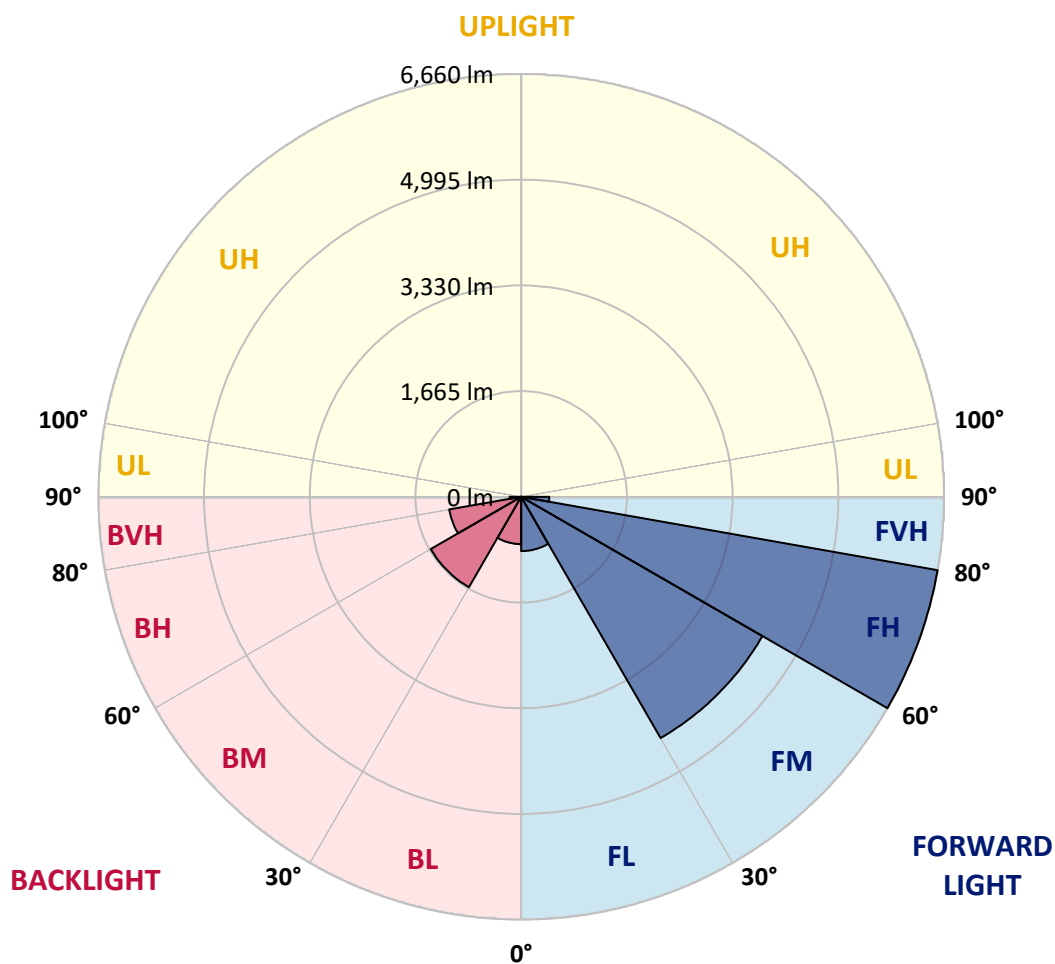
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 854.3  | 5.3       |                         |      |         |
| FM   | (30°-60°)   | 4387.3 | 27.3      |                         |      |         |
| FH   | (60°-80°)   | 6659.5 | 41.5      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 443.0  | 2.8       |                         |      | G3/500  |
| BL   | (0°-30°)    | 745.4  | 4.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1644.8 | 10.2      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1150.2 | 7.2       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 181.4  | 1.1       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type IV Medium





REPORT NUMBER: P231305

CATALOG NUMBER: ARCH-M-AF48-130-D-U-T4W-7050

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 46°     | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| 0°    | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0  | 1647.0  | 1647.0 | 1647.0 | 1647.0 | 1647.0 |
| 2.5°  | 1728.2 | 1715.7 | 1715.7 | 1706.4 | 1706.4 | 1690.7  | 1684.5  | 1681.4 | 1665.7 | 1656.4 | 1647.0 |
| 5°    | 1828.3 | 1812.6 | 1809.5 | 1787.6 | 1778.3 | 1743.9  | 1740.7  | 1718.9 | 1690.7 | 1662.6 | 1640.7 |
| 7.5°  | 1918.9 | 1909.5 | 1893.9 | 1872.0 | 1843.9 | 1800.1  | 1797.0  | 1762.6 | 1715.7 | 1678.2 | 1647.0 |
| 10°   | 1984.5 | 1978.3 | 1956.4 | 1928.3 | 1897.0 | 1853.3  | 1850.1  | 1812.6 | 1756.4 | 1712.6 | 1668.9 |
| 12.5° | 2062.6 | 2053.3 | 2025.1 | 1987.6 | 1953.3 | 1912.6  | 1909.5  | 1878.3 | 1815.8 | 1759.5 | 1703.2 |
| 15°   | 2137.7 | 2125.2 | 2090.8 | 2053.3 | 2015.8 | 1981.4  | 1981.4  | 1947.0 | 1881.4 | 1815.8 | 1750.1 |
| 17.5° | 2175.2 | 2168.9 | 2134.5 | 2093.9 | 2062.6 | 2037.6  | 2034.5  | 2003.3 | 1937.6 | 1868.9 | 1797.0 |
| 20°   | 2187.7 | 2190.8 | 2159.5 | 2115.8 | 2093.9 | 2081.4  | 2078.3  | 2056.4 | 1984.5 | 1918.9 | 1850.1 |
| 22.5° | 2184.5 | 2193.9 | 2168.9 | 2122.0 | 2115.8 | 2115.8  | 2115.8  | 2090.8 | 2034.5 | 1968.9 | 1900.1 |
| 25°   | 2197.0 | 2209.5 | 2190.8 | 2134.5 | 2134.5 | 2147.0  | 2147.0  | 2134.5 | 2084.5 | 2028.3 | 1959.5 |
| 27.5° | 2240.8 | 2250.2 | 2234.5 | 2156.4 | 2159.5 | 2178.3  | 2175.2  | 2178.3 | 2147.0 | 2093.9 | 2025.1 |
| 30°   | 2293.9 | 2306.4 | 2287.7 | 2190.8 | 2187.7 | 2206.4  | 2206.4  | 2222.0 | 2200.2 | 2143.9 | 2087.6 |
| 32.5° | 2437.7 | 2434.5 | 2375.2 | 2228.3 | 2218.9 | 2237.7  | 2237.7  | 2253.3 | 2240.8 | 2197.0 | 2143.9 |
| 35°   | 2865.8 | 2819.0 | 2687.7 | 2350.2 | 2256.4 | 2265.8  | 2265.8  | 2293.9 | 2300.2 | 2265.8 | 2218.9 |
| 37.5° | 3303.4 | 3287.7 | 3187.7 | 2675.2 | 2393.9 | 2325.2  | 2322.0  | 2362.7 | 2390.8 | 2362.7 | 2331.4 |
| 40°   | 3744.0 | 3731.5 | 3709.6 | 3109.6 | 2681.4 | 2431.4  | 2422.0  | 2456.4 | 2506.4 | 2487.7 | 2468.9 |
| 42.5° | 4153.4 | 4147.2 | 4169.0 | 3537.8 | 3047.1 | 2659.6  | 2631.4  | 2590.8 | 2662.7 | 2656.4 | 2656.4 |
| 45°   | 4475.3 | 4490.9 | 4503.4 | 3937.8 | 3444.0 | 2953.3  | 2919.0  | 2781.4 | 2878.3 | 2903.3 | 2922.1 |
| 47.5° | 4656.6 | 4669.1 | 4712.8 | 4328.4 | 3840.9 | 3294.0  | 3269.0  | 3044.0 | 3172.1 | 3247.1 | 3300.2 |
| 50°   | 4916.0 | 4881.6 | 4919.1 | 4709.7 | 4319.1 | 3737.8  | 3669.0  | 3397.1 | 3559.6 | 3690.9 | 3815.9 |
| 52.5° | 5166.0 | 5109.7 | 5141.0 | 5150.4 | 4862.8 | 4172.2  | 4100.3  | 3812.8 | 4015.9 | 4222.2 | 4444.1 |
| 55°   | 5391.0 | 5387.9 | 5419.1 | 5578.5 | 5387.9 | 4637.8  | 4556.6  | 4272.2 | 4566.0 | 4787.8 | 5162.9 |
| 57.5° | 5572.3 | 5603.5 | 5741.0 | 6075.4 | 5994.2 | 5144.1  | 5053.5  | 4806.6 | 5153.5 | 5375.4 | 5997.3 |
| 60°   | 5784.8 | 5834.8 | 6062.9 | 6497.3 | 6547.3 | 5675.4  | 5581.6  | 5403.5 | 5756.7 | 5981.7 | 6963.0 |
| 62.5° | 5856.7 | 5928.5 | 6397.3 | 6941.1 | 7125.5 | 6256.7  | 6172.3  | 6053.6 | 6391.1 | 6594.2 | 7925.6 |
| 65°   | 5378.5 | 5516.0 | 6581.7 | 7169.3 | 7747.4 | 6956.7  | 6884.9  | 6781.7 | 7022.4 | 7156.8 | 8578.7 |
| 67.5° | 5247.3 | 5309.8 | 6222.3 | 7497.4 | 8331.8 | 7856.8  | 7784.9  | 7606.8 | 7613.0 | 7556.8 | 8791.3 |
| 70°   | 5062.9 | 5131.6 | 5853.5 | 7744.3 | 9169.4 | 9088.2  | 9000.6  | 8475.6 | 8153.7 | 7813.1 | 8372.5 |
| 72.5° | 4312.8 | 4290.9 | 5044.1 | 7078.6 | 9572.6 | 10613.3 | 10510.1 | 9410.0 | 8553.7 | 7591.2 | 7066.1 |
| 75°   | 2422.0 | 2359.5 | 3059.6 | 4897.2 | 8741.3 | 11219.6 | 11216.4 | 9882.0 | 8272.5 | 6613.0 | 4809.7 |
| 77.5° | 703.2  | 684.4  | 1009.4 | 2053.3 | 5884.8 | 9747.6  | 9866.3  | 8913.1 | 6903.6 | 4750.3 | 2640.8 |
| 80°   | 331.3  | 337.5  | 434.4  | 678.2  | 2512.7 | 6291.1  | 6631.7  | 5869.2 | 4125.3 | 2190.8 | 1090.7 |
| 82.5° | 209.4  | 212.5  | 296.9  | 437.5  | 1062.6 | 2856.5  | 3137.7  | 2640.8 | 1634.5 | 946.9  | 481.3  |
| 85°   | 131.3  | 131.3  | 196.9  | 287.5  | 634.4  | 912.6   | 990.7   | 900.1  | 700.1  | 515.7  | 262.5  |
| 87.5° | 71.9   | 71.9   | 118.8  | 165.6  | 346.9  | 293.8   | 303.1   | 359.4  | 437.5  | 315.6  | 131.3  |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P231305

CATALOG NUMBER: ARCH-M-AF48-130-D-U-T4W-7050

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 | 1647.0 |
| 2.5°  | 1643.9 | 1637.6 | 1628.2 | 1625.1 | 1622.0 | 1618.9 | 1622.0 | 1628.2 | 1622.0 | 1622.0 | 1625.1 |
| 5°    | 1634.5 | 1628.2 | 1615.7 | 1615.7 | 1618.9 | 1622.0 | 1637.6 | 1647.0 | 1650.1 | 1650.1 | 1650.1 |
| 7.5°  | 1634.5 | 1625.1 | 1615.7 | 1618.9 | 1625.1 | 1637.6 | 1662.6 | 1678.2 | 1690.7 | 1693.9 | 1693.9 |
| 10°   | 1650.1 | 1637.6 | 1631.4 | 1637.6 | 1656.4 | 1665.7 | 1690.7 | 1715.7 | 1731.4 | 1737.6 | 1737.6 |
| 12.5° | 1678.2 | 1665.7 | 1665.7 | 1678.2 | 1703.2 | 1715.7 | 1737.6 | 1756.4 | 1775.1 | 1784.5 | 1784.5 |
| 15°   | 1725.1 | 1709.5 | 1712.6 | 1734.5 | 1762.6 | 1775.1 | 1790.8 | 1797.0 | 1812.6 | 1825.1 | 1825.1 |
| 17.5° | 1768.9 | 1753.3 | 1759.5 | 1784.5 | 1803.3 | 1809.5 | 1818.9 | 1815.8 | 1822.0 | 1831.4 | 1834.5 |
| 20°   | 1818.9 | 1803.3 | 1806.4 | 1822.0 | 1825.1 | 1818.9 | 1818.9 | 1809.5 | 1806.4 | 1822.0 | 1828.3 |
| 22.5° | 1868.9 | 1853.3 | 1850.1 | 1840.8 | 1825.1 | 1809.5 | 1800.1 | 1790.8 | 1784.5 | 1800.1 | 1806.4 |
| 25°   | 1928.3 | 1906.4 | 1890.8 | 1850.1 | 1809.5 | 1781.4 | 1768.9 | 1762.6 | 1759.5 | 1775.1 | 1781.4 |
| 27.5° | 1993.9 | 1972.0 | 1925.1 | 1837.6 | 1772.0 | 1725.1 | 1715.7 | 1715.7 | 1722.0 | 1731.4 | 1737.6 |
| 30°   | 2056.4 | 2034.5 | 1950.1 | 1809.5 | 1706.4 | 1637.6 | 1628.2 | 1637.6 | 1653.2 | 1662.6 | 1672.0 |
| 32.5° | 2118.9 | 2097.0 | 1965.8 | 1765.8 | 1609.5 | 1522.0 | 1515.7 | 1531.4 | 1556.4 | 1562.6 | 1568.9 |
| 35°   | 2203.3 | 2181.4 | 1984.5 | 1703.2 | 1487.6 | 1393.8 | 1387.6 | 1397.0 | 1418.9 | 1428.2 | 1437.6 |
| 37.5° | 2322.0 | 2309.5 | 2012.6 | 1634.5 | 1375.1 | 1272.0 | 1253.2 | 1247.0 | 1259.5 | 1256.3 | 1268.8 |
| 40°   | 2478.3 | 2487.7 | 2062.6 | 1543.9 | 1265.7 | 1159.5 | 1118.8 | 1100.1 | 1087.6 | 1062.6 | 1075.1 |
| 42.5° | 2706.4 | 2712.7 | 2118.9 | 1440.7 | 1172.0 | 1053.2 | 1000.1 | 965.7  | 940.7  | 900.1  | 906.3  |
| 45°   | 3040.8 | 2987.7 | 2184.5 | 1331.3 | 1087.6 | 968.8  | 906.3  | 865.7  | 831.3  | 796.9  | 800.1  |
| 47.5° | 3484.6 | 3322.1 | 2256.4 | 1240.7 | 1003.2 | 900.1  | 843.8  | 796.9  | 756.3  | 728.2  | 731.3  |
| 50°   | 4031.5 | 3737.8 | 2328.3 | 1156.3 | 918.8  | 846.9  | 796.9  | 746.9  | 706.3  | 678.2  | 675.0  |
| 52.5° | 4753.5 | 4237.8 | 2375.2 | 1062.6 | 834.4  | 800.1  | 756.3  | 709.4  | 659.4  | 625.0  | 621.9  |
| 55°   | 5503.5 | 4819.1 | 2415.8 | 950.1  | 753.2  | 746.9  | 725.1  | 671.9  | 612.5  | 568.8  | 562.5  |
| 57.5° | 6328.6 | 5441.0 | 2447.1 | 840.7  | 690.7  | 703.2  | 696.9  | 634.4  | 568.8  | 528.2  | 525.0  |
| 60°   | 7078.6 | 6084.8 | 2347.0 | 743.8  | 634.4  | 659.4  | 665.7  | 612.5  | 578.2  | 587.5  | 590.7  |
| 62.5° | 7834.9 | 6581.7 | 1965.8 | 671.9  | 596.9  | 631.3  | 684.4  | 681.3  | 665.7  | 681.3  | 684.4  |
| 65°   | 8106.8 | 6684.9 | 1393.8 | 612.5  | 559.4  | 643.8  | 743.8  | 737.6  | 665.7  | 637.5  | 631.3  |
| 67.5° | 7953.7 | 6378.6 | 937.6  | 565.7  | 531.3  | 659.4  | 806.3  | 737.6  | 640.7  | 603.2  | 590.7  |
| 70°   | 7225.5 | 5625.4 | 687.5  | 518.8  | 506.3  | 656.3  | 840.7  | 734.4  | 628.2  | 587.5  | 571.9  |
| 72.5° | 5762.9 | 4340.9 | 553.2  | 475.0  | 468.8  | 640.7  | 859.4  | 728.2  | 615.7  | 571.9  | 553.2  |
| 75°   | 3731.5 | 2700.2 | 465.7  | 431.3  | 412.5  | 615.7  | 850.1  | 709.4  | 600.0  | 543.8  | 531.3  |
| 77.5° | 1731.4 | 1162.6 | 396.9  | 381.3  | 359.4  | 578.2  | 821.9  | 671.9  | 565.7  | 512.5  | 496.9  |
| 80°   | 806.3  | 550.0  | 334.4  | 331.3  | 321.9  | 546.9  | 784.4  | 628.2  | 525.0  | 481.3  | 456.3  |
| 82.5° | 431.3  | 331.3  | 271.9  | 271.9  | 281.3  | 509.4  | 737.6  | 575.0  | 471.9  | 450.0  | 384.4  |
| 85°   | 228.1  | 190.6  | 196.9  | 212.5  | 240.6  | 450.0  | 675.0  | 518.8  | 412.5  | 343.8  | 334.4  |
| 87.5° | 115.6  | 121.9  | 121.9  | 143.8  | 184.4  | 365.7  | 556.3  | 428.2  | 350.0  | 281.3  | 275.0  |
| 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)