

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: P231289

Luminaire Tested: **ARCH-M-AF48-100-D-U-T4W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231289
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-AF48-100-D-U-T4W
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 660mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13552.1 lumens
Efficiency: N/A
Efficacy: 134.2 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

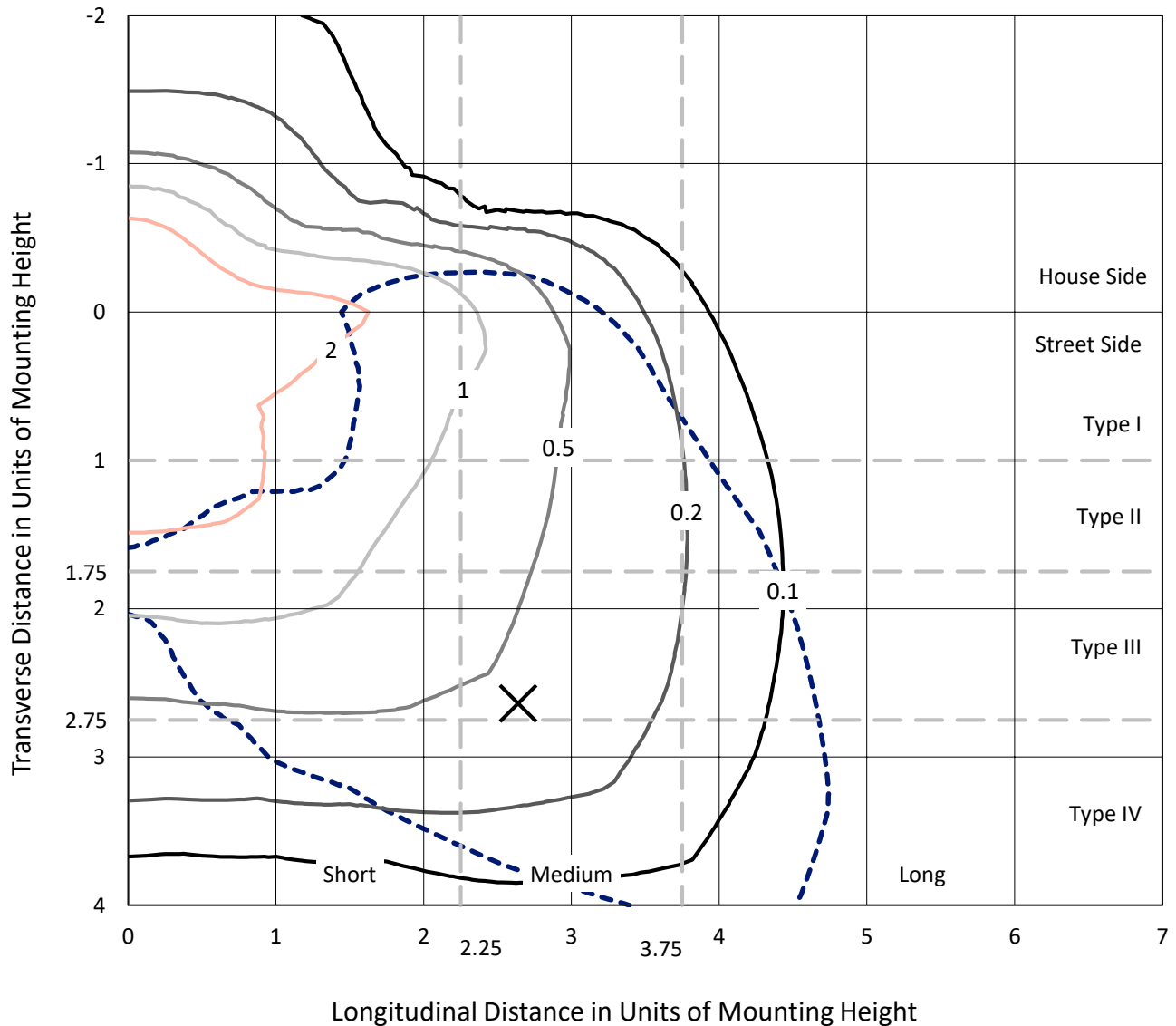
Input Watts (W): 101
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P231289
 CATALOG NUMBER: ARCH-M-AF48-100-D-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

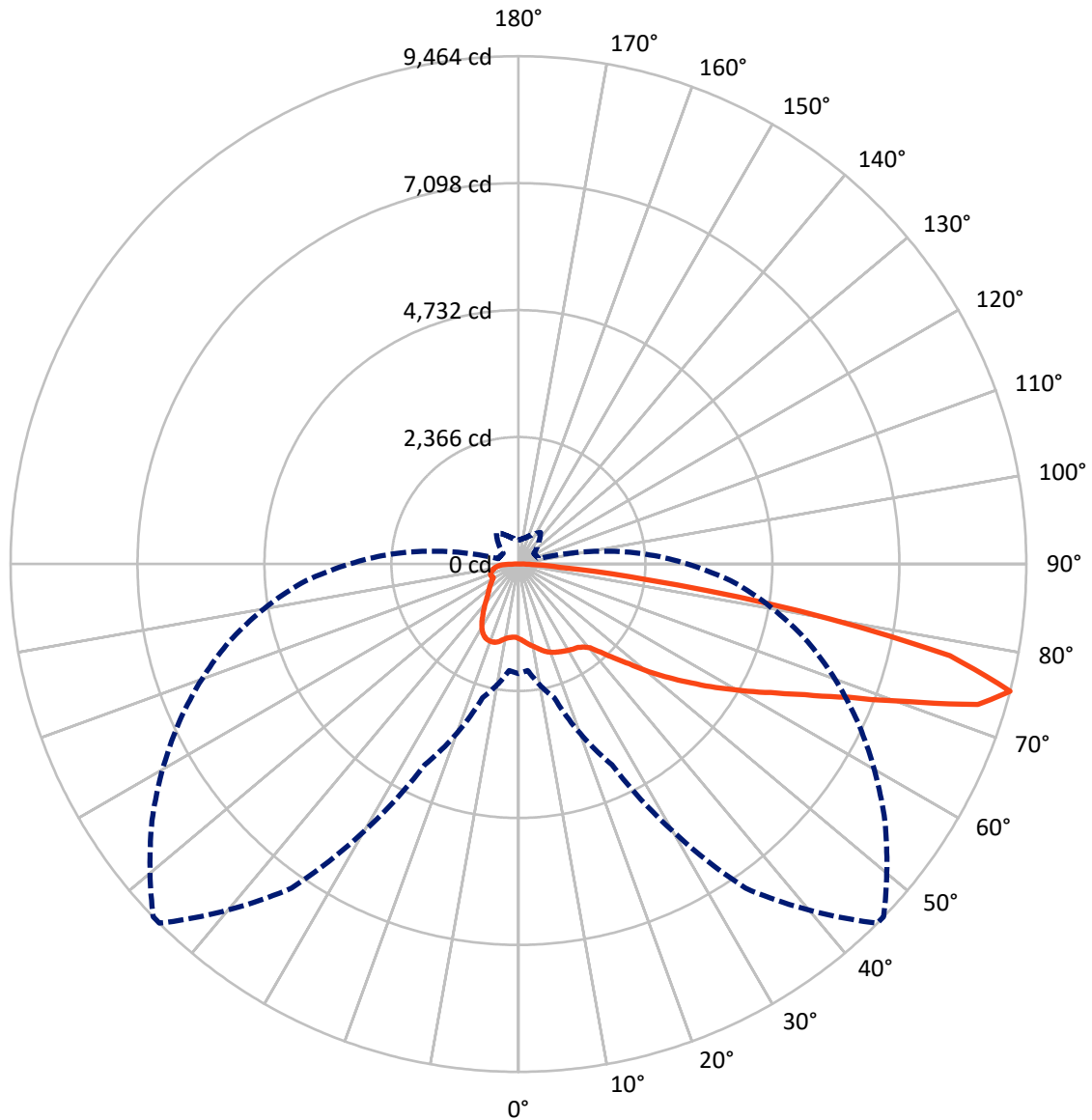
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.1 fc
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P231289
CATALOG NUMBER: ARCH-M-AF48-100-D-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical



REPORT NUMBER: P231289

CATALOG NUMBER: ARCH-M-AF48-100-D-U-T4W

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3139.5 | 0.0 | 3139.5 |
| | % Fixture | 23.2 | 0.0 | 23.2 |
| Street Side | Lumens | 10412.6 | 0.0 | 10412.6 |
| | % Fixture | 76.8 | 0.0 | 76.8 |
| Total | Lumens | 13552.1 | 0.0 | 13552.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 137.7 | 1.0 |
| 10°-20° | 446.1 | 3.3 |
| 20°-30° | 765.6 | 5.6 |
| 30°-40° | 1070.8 | 7.9 |
| 40°-50° | 1570.7 | 11.6 |
| 50°-60° | 2446.8 | 18.1 |
| 60°-70° | 3520.7 | 26.0 |
| 70°-80° | 3066.9 | 22.6 |
| 80°-90° | 526.7 | 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° | 13552.1 | 100.0 |
| 0°-180° | 13552.1 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P231289

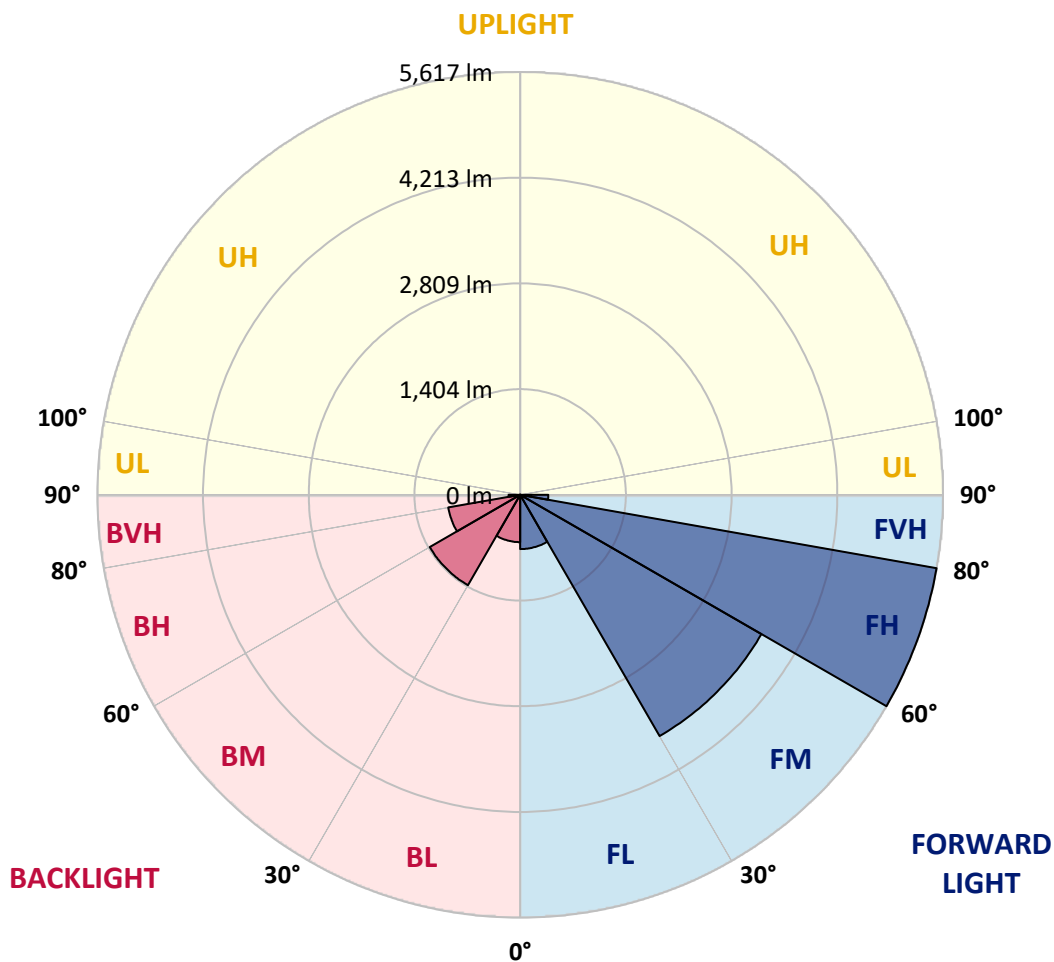
CATALOG NUMBER: ARCH-M-AF48-100-D-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 720.6 | 5.3 | | | |
| FM | (30°-60°) | 3700.8 | 27.3 | | | |
| FH | (60°-80°) | 5617.5 | 41.5 | | | G3/7500 |
| FVH | (80°-90°) | 373.7 | 2.8 | | | G3/500 |
| BL | (0°-30°) | 628.8 | 4.6 | B2/1000 | | |
| BM | (30°-60°) | 1387.5 | 10.2 | B2/2500 | | |
| BH | (60°-80°) | 970.2 | 7.2 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 153.0 | 1.1 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Medium





REPORT NUMBER: P231289

CATALOG NUMBER: ARCH-M-AF48-100-D-U-T4W

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 |
| 2.5° | 1457.8 | 1447.3 | 1447.3 | 1439.4 | 1439.4 | 1426.2 | 1420.9 | 1418.3 | 1405.1 | 1397.1 | 1389.3 |
| 5° | 1542.2 | 1529.0 | 1526.3 | 1507.9 | 1500.0 | 1471.0 | 1468.3 | 1449.9 | 1426.2 | 1402.5 | 1384.1 |
| 7.5° | 1618.6 | 1610.7 | 1597.5 | 1579.1 | 1555.4 | 1518.5 | 1515.8 | 1486.9 | 1447.3 | 1415.7 | 1389.3 |
| 10° | 1674.0 | 1668.7 | 1650.2 | 1626.5 | 1600.2 | 1563.3 | 1560.6 | 1529.0 | 1481.5 | 1444.6 | 1407.7 |
| 12.5° | 1739.9 | 1732.0 | 1708.2 | 1676.6 | 1647.7 | 1613.4 | 1610.7 | 1584.3 | 1531.7 | 1484.2 | 1436.7 |
| 15° | 1803.2 | 1792.6 | 1763.6 | 1732.0 | 1700.3 | 1671.4 | 1671.4 | 1642.3 | 1587.0 | 1531.7 | 1476.3 |
| 17.5° | 1834.8 | 1829.5 | 1800.5 | 1766.2 | 1739.9 | 1718.8 | 1716.2 | 1689.8 | 1634.5 | 1576.5 | 1515.8 |
| 20° | 1845.3 | 1848.0 | 1821.6 | 1784.7 | 1766.2 | 1755.7 | 1753.0 | 1734.6 | 1674.0 | 1618.6 | 1560.6 |
| 22.5° | 1842.7 | 1850.6 | 1829.5 | 1790.0 | 1784.7 | 1784.7 | 1784.7 | 1763.6 | 1716.2 | 1660.8 | 1602.8 |
| 25° | 1853.3 | 1863.8 | 1848.0 | 1800.5 | 1800.5 | 1811.0 | 1811.0 | 1800.5 | 1758.4 | 1710.9 | 1652.9 |
| 27.5° | 1890.1 | 1898.1 | 1884.9 | 1819.0 | 1821.6 | 1837.4 | 1834.8 | 1837.4 | 1811.0 | 1766.2 | 1708.2 |
| 30° | 1935.0 | 1945.6 | 1929.7 | 1848.0 | 1845.3 | 1861.2 | 1861.2 | 1874.4 | 1855.8 | 1808.5 | 1761.0 |
| 32.5° | 2056.2 | 2053.6 | 2003.6 | 1879.6 | 1871.7 | 1887.5 | 1887.5 | 1900.7 | 1890.1 | 1853.3 | 1808.5 |
| 35° | 2417.4 | 2377.8 | 2267.2 | 1982.4 | 1903.3 | 1911.3 | 1911.3 | 1935.0 | 1940.2 | 1911.3 | 1871.7 |
| 37.5° | 2786.4 | 2773.3 | 2688.9 | 2256.6 | 2019.3 | 1961.3 | 1958.7 | 1993.0 | 2016.6 | 1993.0 | 1966.6 |
| 40° | 3158.2 | 3147.6 | 3129.2 | 2623.1 | 2261.8 | 2050.9 | 2043.0 | 2072.1 | 2114.2 | 2098.4 | 2082.6 |
| 42.5° | 3503.5 | 3498.3 | 3516.7 | 2984.2 | 2570.3 | 2243.4 | 2219.7 | 2185.4 | 2246.1 | 2240.8 | 2240.8 |
| 45° | 3775.0 | 3788.2 | 3798.7 | 3321.6 | 2905.1 | 2491.2 | 2462.2 | 2346.2 | 2428.0 | 2449.0 | 2464.8 |
| 47.5° | 3927.9 | 3938.5 | 3975.4 | 3651.1 | 3239.9 | 2778.5 | 2757.5 | 2567.7 | 2675.7 | 2739.1 | 2783.9 |
| 50° | 4146.7 | 4117.8 | 4149.4 | 3972.7 | 3643.2 | 3152.9 | 3094.9 | 2865.6 | 3002.7 | 3113.4 | 3218.8 |
| 52.5° | 4357.7 | 4310.2 | 4336.6 | 4344.5 | 4101.9 | 3519.4 | 3458.7 | 3216.2 | 3387.5 | 3561.5 | 3748.7 |
| 55° | 4547.4 | 4544.8 | 4571.2 | 4705.6 | 4544.8 | 3912.1 | 3843.5 | 3603.7 | 3851.5 | 4038.6 | 4355.0 |
| 57.5° | 4700.4 | 4726.7 | 4842.8 | 5124.8 | 5056.2 | 4339.2 | 4262.7 | 4054.5 | 4347.1 | 4534.2 | 5058.9 |
| 60° | 4879.6 | 4921.8 | 5114.2 | 5480.7 | 5522.8 | 4787.3 | 4708.2 | 4558.0 | 4855.8 | 5045.7 | 5873.5 |
| 62.5° | 4940.2 | 5000.9 | 5396.3 | 5855.0 | 6010.6 | 5277.7 | 5206.5 | 5106.4 | 5391.1 | 5562.4 | 6685.4 |
| 65° | 4536.9 | 4652.9 | 5551.9 | 6047.5 | 6535.1 | 5868.2 | 5807.6 | 5720.5 | 5923.5 | 6036.9 | 7236.4 |
| 67.5° | 4426.2 | 4478.9 | 5248.7 | 6324.3 | 7028.1 | 6627.4 | 6566.7 | 6416.6 | 6421.8 | 6374.3 | 7415.7 |
| 70° | 4270.6 | 4328.6 | 4937.6 | 6532.5 | 7734.6 | 7666.1 | 7592.2 | 7149.4 | 6877.8 | 6590.5 | 7062.4 |
| 72.5° | 3637.9 | 3619.5 | 4254.9 | 5971.0 | 8074.7 | 8952.6 | 8865.5 | 7937.6 | 7215.3 | 6403.4 | 5960.4 |
| 75° | 2043.0 | 1990.4 | 2580.8 | 4130.9 | 7373.4 | 9463.9 | 9461.4 | 8335.6 | 6978.1 | 5578.2 | 4057.1 |
| 77.5° | 593.1 | 577.4 | 851.5 | 1732.0 | 4964.0 | 8222.3 | 8322.5 | 7518.5 | 5823.4 | 4007.0 | 2227.6 |
| 80° | 279.5 | 284.7 | 366.4 | 572.0 | 2119.6 | 5306.7 | 5594.0 | 4950.8 | 3479.8 | 1848.0 | 920.0 |
| 82.5° | 176.7 | 179.2 | 250.4 | 369.1 | 896.3 | 2409.5 | 2646.8 | 2227.6 | 1378.7 | 798.7 | 406.0 |
| 85° | 110.7 | 110.7 | 166.1 | 242.5 | 535.1 | 769.8 | 835.6 | 759.2 | 590.5 | 435.0 | 221.5 |
| 87.5° | 60.7 | 60.7 | 100.1 | 139.7 | 292.7 | 247.8 | 255.7 | 303.2 | 369.1 | 266.3 | 110.7 |
| 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: P231289

CATALOG NUMBER: ARCH-M-AF48-100-D-U-T4W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 | 1389.3 |
| 2.5° | 1386.6 | 1381.4 | 1373.4 | 1370.9 | 1368.2 | 1365.5 | 1368.2 | 1373.4 | 1368.2 | 1368.2 | 1370.9 |
| 5° | 1378.7 | 1373.4 | 1362.9 | 1362.9 | 1365.5 | 1368.2 | 1381.4 | 1389.3 | 1391.9 | 1391.9 | 1391.9 |
| 7.5° | 1378.7 | 1370.9 | 1362.9 | 1365.5 | 1370.9 | 1381.4 | 1402.5 | 1415.7 | 1426.2 | 1428.9 | 1428.9 |
| 10° | 1391.9 | 1381.4 | 1376.1 | 1381.4 | 1397.1 | 1405.1 | 1426.2 | 1447.3 | 1460.5 | 1465.7 | 1465.7 |
| 12.5° | 1415.7 | 1405.1 | 1405.1 | 1415.7 | 1436.7 | 1447.3 | 1465.7 | 1481.5 | 1497.4 | 1505.3 | 1505.3 |
| 15° | 1455.1 | 1442.0 | 1444.6 | 1463.1 | 1486.9 | 1497.4 | 1510.6 | 1515.8 | 1529.0 | 1539.5 | 1539.5 |
| 17.5° | 1492.1 | 1478.9 | 1484.2 | 1505.3 | 1521.1 | 1526.3 | 1534.2 | 1531.7 | 1536.9 | 1544.9 | 1547.4 |
| 20° | 1534.2 | 1521.1 | 1523.7 | 1536.9 | 1539.5 | 1534.2 | 1534.2 | 1526.3 | 1523.7 | 1536.9 | 1542.2 |
| 22.5° | 1576.5 | 1563.3 | 1560.6 | 1552.7 | 1539.5 | 1526.3 | 1518.5 | 1510.6 | 1505.3 | 1518.5 | 1523.7 |
| 25° | 1626.5 | 1608.1 | 1594.9 | 1560.6 | 1526.3 | 1502.6 | 1492.1 | 1486.9 | 1484.2 | 1497.4 | 1502.6 |
| 27.5° | 1681.9 | 1663.4 | 1623.9 | 1550.1 | 1494.7 | 1455.1 | 1447.3 | 1447.3 | 1452.6 | 1460.5 | 1465.7 |
| 30° | 1734.6 | 1716.2 | 1645.0 | 1526.3 | 1439.4 | 1381.4 | 1373.4 | 1381.4 | 1394.6 | 1402.5 | 1410.3 |
| 32.5° | 1787.3 | 1768.9 | 1658.2 | 1489.4 | 1357.7 | 1283.8 | 1278.6 | 1291.8 | 1312.9 | 1318.1 | 1323.4 |
| 35° | 1858.5 | 1840.1 | 1674.0 | 1436.7 | 1254.9 | 1175.8 | 1170.5 | 1178.3 | 1196.9 | 1204.7 | 1212.6 |
| 37.5° | 1958.7 | 1948.1 | 1697.7 | 1378.7 | 1159.9 | 1073.0 | 1057.1 | 1051.8 | 1062.4 | 1059.8 | 1070.3 |
| 40° | 2090.5 | 2098.4 | 1739.9 | 1302.3 | 1067.7 | 978.0 | 943.8 | 927.9 | 917.4 | 896.3 | 906.8 |
| 42.5° | 2282.9 | 2288.2 | 1787.3 | 1215.3 | 988.6 | 888.4 | 843.6 | 814.6 | 793.5 | 759.2 | 764.5 |
| 45° | 2565.0 | 2520.2 | 1842.7 | 1123.0 | 917.4 | 817.2 | 764.5 | 730.2 | 701.2 | 672.2 | 674.8 |
| 47.5° | 2939.3 | 2802.3 | 1903.3 | 1046.6 | 846.2 | 759.2 | 711.8 | 672.2 | 637.9 | 614.3 | 616.8 |
| 50° | 3400.7 | 3152.9 | 1964.0 | 975.4 | 775.1 | 714.4 | 672.2 | 630.0 | 595.8 | 572.0 | 569.4 |
| 52.5° | 4009.7 | 3574.7 | 2003.6 | 896.3 | 703.9 | 674.8 | 637.9 | 598.4 | 556.3 | 527.2 | 524.6 |
| 55° | 4642.4 | 4065.0 | 2037.8 | 801.4 | 635.4 | 630.0 | 611.6 | 566.8 | 516.7 | 479.8 | 474.5 |
| 57.5° | 5338.3 | 4589.7 | 2064.1 | 709.1 | 582.6 | 593.1 | 587.9 | 535.1 | 479.8 | 445.5 | 442.8 |
| 60° | 5971.0 | 5132.7 | 1979.8 | 627.4 | 535.1 | 556.3 | 561.5 | 516.7 | 487.7 | 495.6 | 498.3 |
| 62.5° | 6609.0 | 5551.9 | 1658.2 | 566.8 | 503.5 | 532.5 | 577.4 | 574.7 | 561.5 | 574.7 | 577.4 |
| 65° | 6838.3 | 5638.8 | 1175.8 | 516.7 | 471.9 | 543.1 | 627.4 | 622.2 | 561.5 | 537.8 | 532.5 |
| 67.5° | 6709.1 | 5380.5 | 790.8 | 477.1 | 448.2 | 556.3 | 680.2 | 622.2 | 540.4 | 508.8 | 498.3 |
| 70° | 6094.9 | 4745.2 | 580.0 | 437.6 | 427.1 | 553.6 | 709.1 | 619.5 | 529.9 | 495.6 | 482.4 |
| 72.5° | 4861.2 | 3661.7 | 466.6 | 400.7 | 395.5 | 540.4 | 725.0 | 614.3 | 519.4 | 482.4 | 466.6 |
| 75° | 3147.6 | 2277.7 | 392.8 | 363.8 | 348.0 | 519.4 | 717.1 | 598.4 | 506.2 | 458.7 | 448.2 |
| 77.5° | 1460.5 | 980.7 | 334.8 | 321.6 | 303.2 | 487.7 | 693.4 | 566.8 | 477.1 | 432.3 | 419.2 |
| 80° | 680.2 | 464.0 | 282.0 | 279.5 | 271.5 | 461.4 | 661.6 | 529.9 | 442.8 | 406.0 | 384.9 |
| 82.5° | 363.8 | 279.5 | 229.3 | 229.3 | 237.2 | 429.7 | 622.2 | 485.1 | 398.0 | 379.6 | 324.3 |
| 85° | 192.4 | 160.8 | 166.1 | 179.2 | 203.0 | 379.6 | 569.4 | 437.6 | 348.0 | 290.0 | 282.0 |
| 87.5° | 97.6 | 102.8 | 102.8 | 121.2 | 155.5 | 308.4 | 469.2 | 361.2 | 295.2 | 237.2 | 232.0 |
| 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)