

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: P231212

Luminaire Tested: **ARCH-M-AF48-110-D-U-T3-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231212
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29624)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-110-D-U-T3-7030-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 720mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS
WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9478 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 111
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

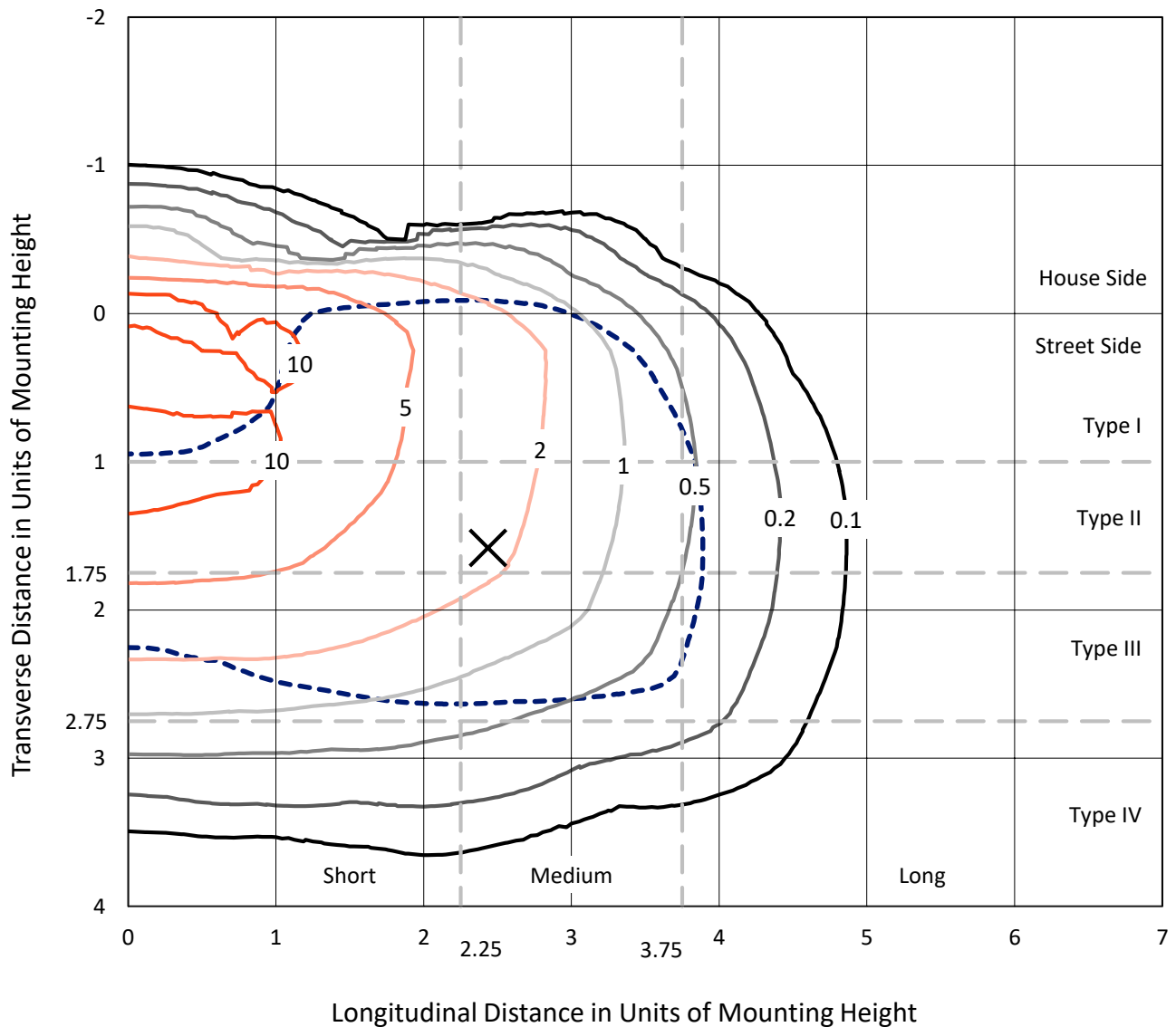


REPORT NUMBER: P231212

CATALOG NUMBER: ARCH-M-AF48-110-D-U-T3-7030-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

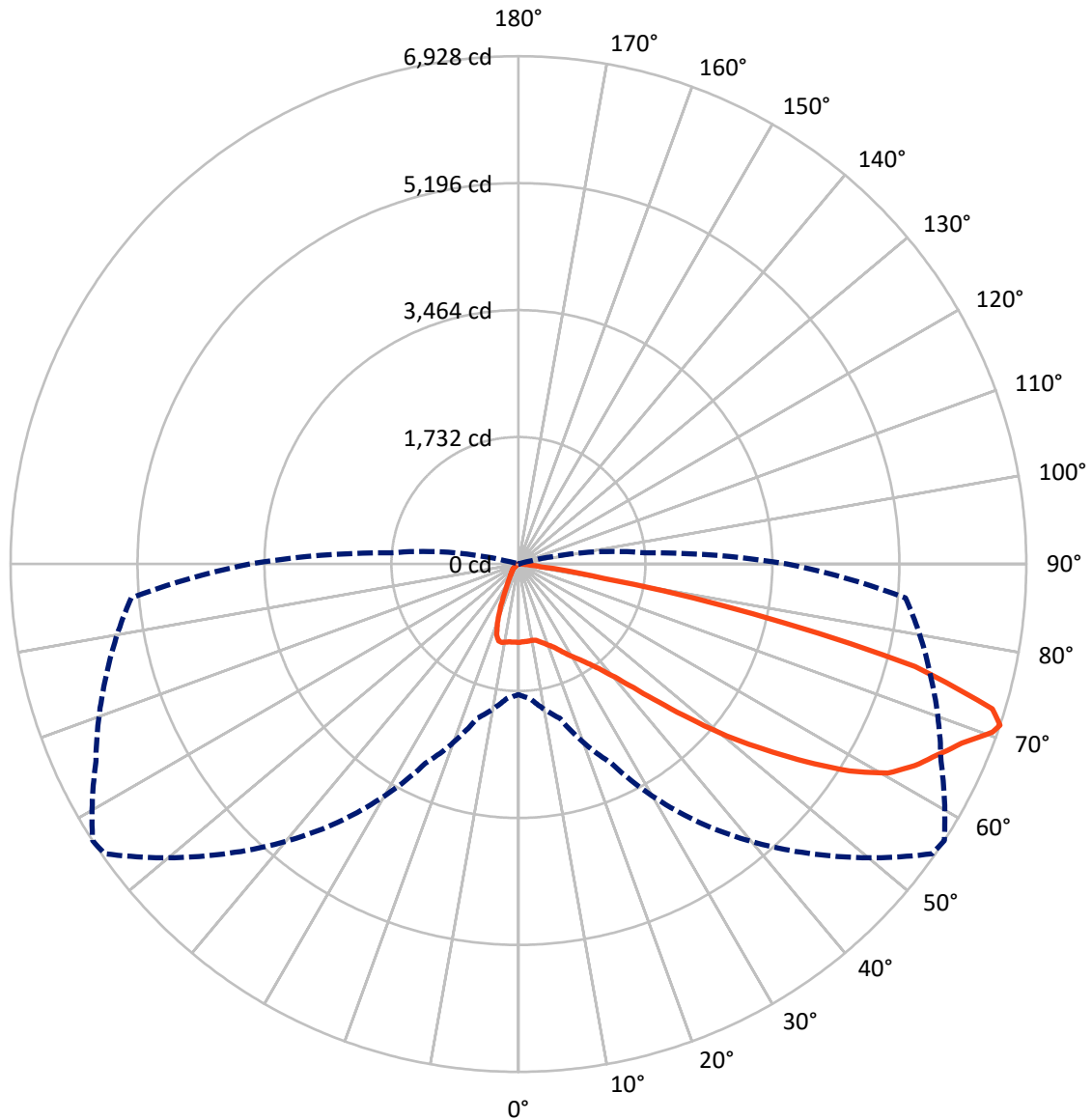


Based on 10 foot mounting height. Maximum calculated value = 13.3 fc
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P231212

CATALOG NUMBER: ARCH-M-AF48-110-D-U-T3-7030-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

REPORT NUMBER: P231212

CATALOG NUMBER: ARCH-M-AF48-110-D-U-T3-7030-HSS

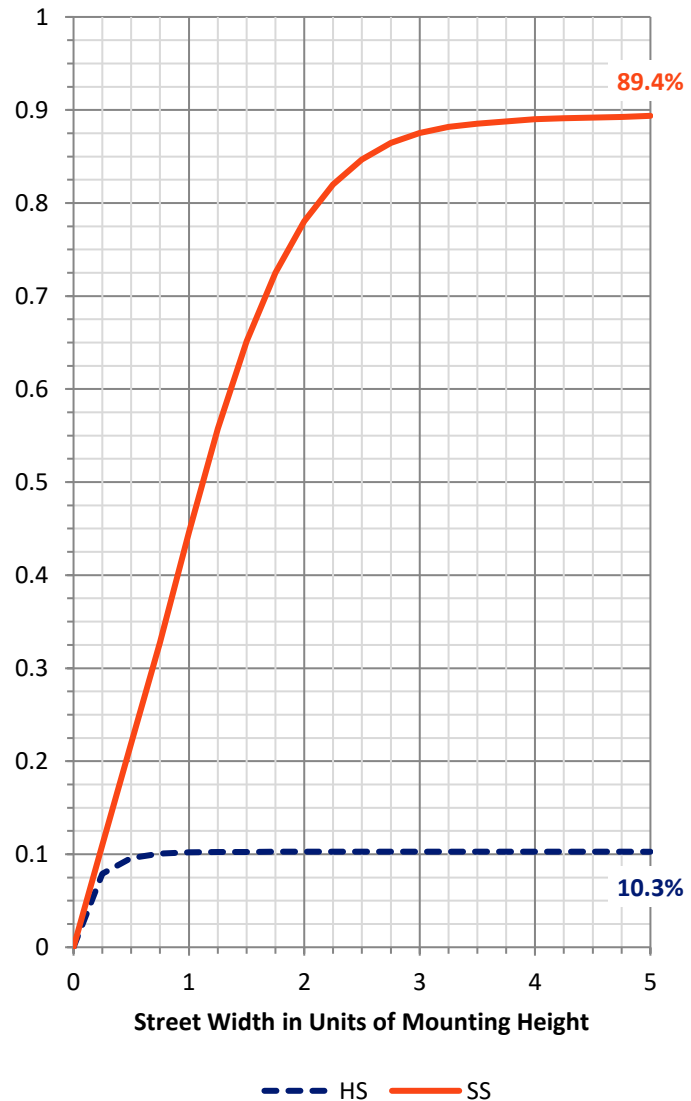
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 982.2 | 0.0 | 982.2 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 8495.8 | 0.0 | 8495.8 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 9478.0 | 0.0 | 9478.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.6 | 1.1 |
| 10°-20° | 269.0 | 2.8 |
| 20°-30° | 419.6 | 4.4 |
| 30°-40° | 709.2 | 7.5 |
| 40°-50° | 1377.4 | 14.5 |
| 50°-60° | 2313.1 | 24.4 |
| 60°-70° | 2760.5 | 29.1 |
| 70°-80° | 1454.8 | 15.3 |
| 80°-90° | 73.9 | 0.8 |
| 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° | 9478.0 | 100.0 |
| 0°-180° | 9478.0 | 100.0 |



REPORT NUMBER: P231212

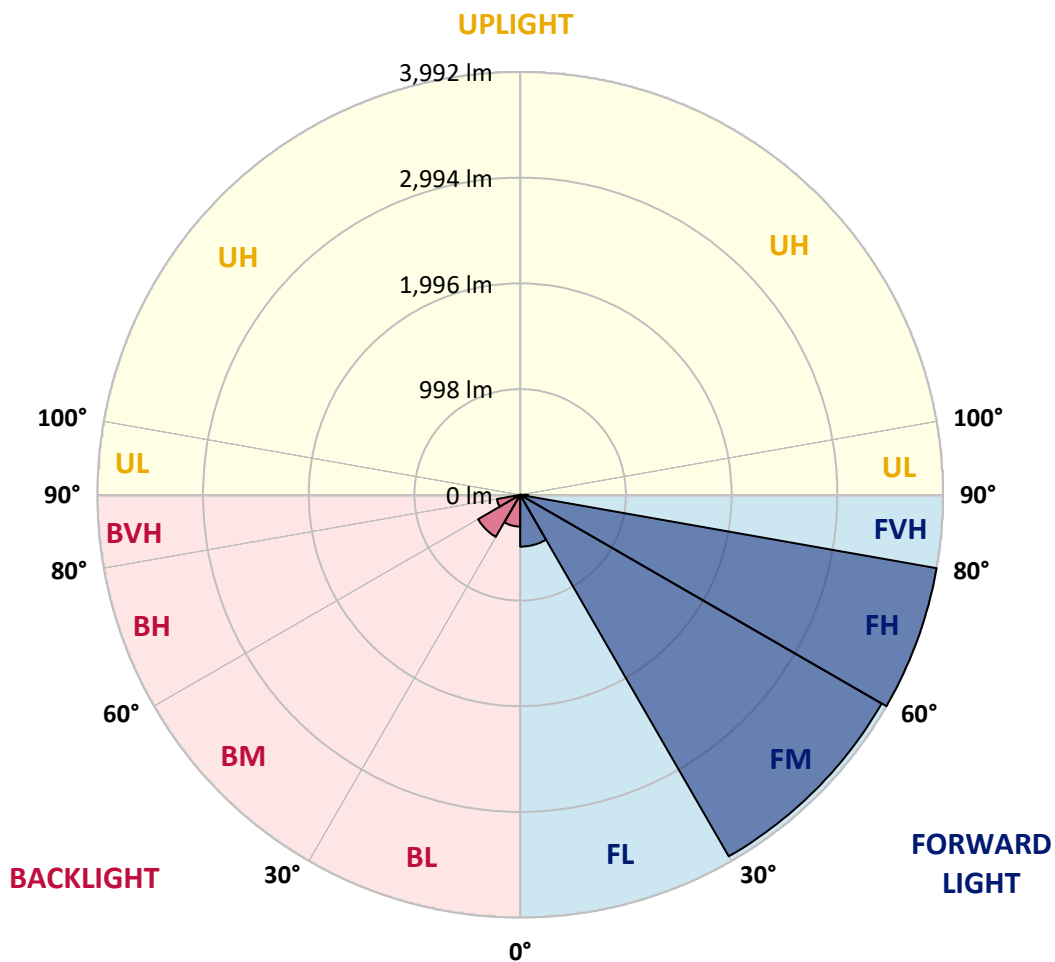
CATALOG NUMBER: ARCH-M-AF48-110-D-U-T3-7030-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 489.3 | 5.2 | | | |
| FM | (30°-60°) | 3941.0 | 41.6 | | | |
| FH | (60°-80°) | 3992.2 | 42.1 | | | G2/5000 |
| FVH | (80°-90°) | 73.2 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 299.8 | 3.2 | B1/500 | | |
| BM | (30°-60°) | 458.6 | 4.8 | B1/1000 | | |
| BH | (60°-80°) | 223.0 | 2.4 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 0.7 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type III Medium





REPORT NUMBER: P231212

CATALOG NUMBER: ARCH-M-AF48-110-D-U-T3-7030-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 |
| 2.5° | 1055.7 | 1055.7 | 1055.7 | 1057.9 | 1060.1 | 1060.1 | 1064.5 | 1062.3 | 1062.3 | 1062.3 | 1066.7 |
| 5° | 1027.0 | 1029.2 | 1031.4 | 1035.8 | 1044.7 | 1051.3 | 1062.3 | 1062.3 | 1064.5 | 1068.9 | 1071.2 |
| 7.5° | 987.2 | 989.4 | 996.1 | 1004.9 | 1022.6 | 1038.0 | 1055.7 | 1060.1 | 1066.7 | 1077.8 | 1082.2 |
| 10° | 962.9 | 967.4 | 976.2 | 987.2 | 1007.1 | 1027.0 | 1049.1 | 1055.7 | 1075.6 | 1095.5 | 1106.5 |
| 12.5° | 956.3 | 958.5 | 967.4 | 985.0 | 1009.3 | 1033.6 | 1062.3 | 1068.9 | 1097.7 | 1128.6 | 1146.2 |
| 15° | 967.4 | 969.6 | 974.0 | 993.9 | 1022.6 | 1053.5 | 1091.0 | 1099.9 | 1135.2 | 1170.5 | 1192.6 |
| 17.5° | 987.2 | 987.2 | 991.6 | 1009.3 | 1040.2 | 1075.6 | 1124.2 | 1137.4 | 1177.2 | 1216.9 | 1241.2 |
| 20° | 1000.5 | 1000.5 | 1007.1 | 1024.8 | 1060.1 | 1106.5 | 1163.9 | 1181.6 | 1225.8 | 1269.9 | 1292.0 |
| 22.5° | 1013.7 | 1015.9 | 1022.6 | 1042.4 | 1082.2 | 1146.2 | 1212.5 | 1230.2 | 1281.0 | 1327.4 | 1349.4 |
| 25° | 1051.3 | 1049.1 | 1051.3 | 1068.9 | 1115.3 | 1194.8 | 1278.8 | 1300.8 | 1353.9 | 1404.7 | 1415.7 |
| 27.5° | 1155.1 | 1150.7 | 1122.0 | 1110.9 | 1146.2 | 1245.6 | 1362.7 | 1384.8 | 1446.6 | 1497.4 | 1497.4 |
| 30° | 1393.6 | 1384.8 | 1314.1 | 1223.5 | 1194.8 | 1292.0 | 1442.2 | 1473.1 | 1552.6 | 1596.8 | 1583.5 |
| 32.5° | 1696.2 | 1676.3 | 1585.8 | 1431.2 | 1316.3 | 1353.9 | 1526.1 | 1561.5 | 1663.1 | 1700.6 | 1671.9 |
| 35° | 2027.5 | 2025.3 | 1912.6 | 1713.9 | 1550.4 | 1482.0 | 1634.3 | 1676.3 | 1804.4 | 1837.5 | 1791.2 |
| 37.5° | 2378.6 | 2387.5 | 2312.4 | 2038.5 | 1846.4 | 1691.8 | 1777.9 | 1826.5 | 1983.3 | 2023.1 | 1978.9 |
| 40° | 2769.6 | 2767.3 | 2738.6 | 2414.0 | 2201.9 | 1989.9 | 1985.5 | 2029.7 | 2219.6 | 2281.5 | 2219.6 |
| 42.5° | 3264.3 | 3259.9 | 3156.1 | 2864.5 | 2632.6 | 2378.6 | 2288.1 | 2303.5 | 2515.6 | 2617.2 | 2526.6 |
| 45° | 3767.8 | 3736.9 | 3617.6 | 3365.9 | 3160.5 | 2860.1 | 2687.8 | 2687.8 | 2868.9 | 3008.1 | 2866.7 |
| 47.5° | 4048.3 | 4017.4 | 3968.8 | 3829.7 | 3767.8 | 3432.1 | 3178.1 | 3147.2 | 3288.6 | 3429.9 | 3231.1 |
| 50° | 4417.1 | 4417.1 | 4295.7 | 4242.7 | 4348.7 | 4112.4 | 3719.2 | 3688.3 | 3756.8 | 3869.4 | 3608.8 |
| 52.5° | 4708.7 | 4655.7 | 4569.5 | 4615.9 | 4918.5 | 4810.3 | 4260.3 | 4200.7 | 4253.7 | 4282.4 | 3937.9 |
| 55° | 4830.1 | 4779.4 | 4772.7 | 4942.8 | 5411.0 | 5260.8 | 4814.7 | 4761.7 | 4757.3 | 4615.9 | 4225.0 |
| 57.5° | 4854.4 | 4810.3 | 4894.2 | 5192.4 | 5890.3 | 5629.7 | 5366.8 | 5327.1 | 5203.4 | 4850.0 | 4518.7 |
| 60° | 4649.0 | 4671.1 | 4874.3 | 5329.3 | 6173.0 | 5949.9 | 5832.8 | 5790.9 | 5506.0 | 5048.8 | 4845.6 |
| 62.5° | 4227.2 | 4280.2 | 4660.1 | 5342.5 | 6069.2 | 6080.2 | 6091.2 | 6062.5 | 5740.1 | 5229.9 | 5174.7 |
| 65° | 3728.1 | 3743.5 | 4200.7 | 5159.2 | 5888.1 | 6040.4 | 6281.2 | 6279.0 | 5919.0 | 5433.1 | 5545.7 |
| 67.5° | 3072.1 | 3098.6 | 3494.0 | 4540.8 | 5525.8 | 6022.8 | 6530.7 | 6524.1 | 6122.2 | 5665.0 | 5766.6 |
| 70° | 2285.9 | 2319.0 | 2639.2 | 3531.5 | 4717.5 | 5801.9 | 6857.6 | 6862.0 | 6336.4 | 5841.7 | 5614.2 |
| 71° | 1782.3 | 1841.9 | 2177.7 | 2999.2 | 4304.5 | 5578.9 | 6888.5 | 6928.3 | 6360.7 | 5817.4 | 5300.6 |
| 72.5° | 874.6 | 945.3 | 1367.1 | 2111.4 | 3542.6 | 5079.7 | 6685.3 | 6762.6 | 6208.3 | 5514.8 | 4532.0 |
| 75° | 227.5 | 240.7 | 408.6 | 863.6 | 1899.4 | 3365.9 | 5391.1 | 5587.7 | 5075.3 | 4198.5 | 2769.6 |
| 77.5° | 143.6 | 148.0 | 192.1 | 335.7 | 711.2 | 1278.8 | 3167.1 | 3264.3 | 2899.9 | 2126.9 | 976.2 |
| 80° | 101.6 | 103.8 | 121.5 | 216.4 | 415.2 | 373.2 | 1139.6 | 1181.6 | 1049.1 | 563.2 | 174.5 |
| 82.5° | 61.8 | 61.8 | 88.3 | 139.1 | 256.2 | 203.2 | 300.4 | 320.2 | 282.7 | 156.8 | 57.4 |
| 85° | 35.3 | 37.5 | 55.2 | 95.0 | 121.5 | 99.4 | 112.6 | 119.3 | 121.5 | 103.8 | 24.3 |
| 87.5° | 28.7 | 30.9 | 48.6 | 79.5 | 66.3 | 48.6 | 48.6 | 50.8 | 53.0 | 61.8 | 11.0 |
| 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: P231212

CATALOG NUMBER: ARCH-M-AF48-110-D-U-T3-7030-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 | 1071.2 |
| 2.5° | 1066.7 | 1066.7 | 1068.9 | 1066.7 | 1066.7 | 1066.7 | 1068.9 | 1068.9 | 1068.9 | 1073.4 | 1075.6 |
| 5° | 1071.2 | 1071.2 | 1071.2 | 1068.9 | 1066.7 | 1066.7 | 1071.2 | 1073.4 | 1073.4 | 1080.0 | 1080.0 |
| 7.5° | 1082.2 | 1082.2 | 1077.8 | 1073.4 | 1068.9 | 1062.3 | 1064.5 | 1066.7 | 1064.5 | 1066.7 | 1066.7 |
| 10° | 1106.5 | 1106.5 | 1099.9 | 1091.0 | 1077.8 | 1057.9 | 1031.4 | 998.3 | 967.4 | 956.3 | 951.9 |
| 12.5° | 1146.2 | 1144.0 | 1130.8 | 1115.3 | 1086.6 | 1018.2 | 918.8 | 801.7 | 704.5 | 678.0 | 669.2 |
| 15° | 1190.4 | 1186.0 | 1170.5 | 1144.0 | 1066.7 | 885.6 | 678.0 | 527.8 | 435.1 | 413.0 | 408.6 |
| 17.5° | 1236.8 | 1230.2 | 1208.1 | 1155.1 | 976.2 | 658.2 | 437.3 | 331.3 | 280.5 | 276.1 | 278.3 |
| 20° | 1285.4 | 1276.6 | 1245.6 | 1133.0 | 788.5 | 439.5 | 282.7 | 256.2 | 251.8 | 251.8 | 254.0 |
| 22.5° | 1340.6 | 1329.6 | 1287.6 | 1053.5 | 574.2 | 291.5 | 242.9 | 240.7 | 238.5 | 236.3 | 236.3 |
| 25° | 1404.7 | 1391.4 | 1327.4 | 909.9 | 395.3 | 238.5 | 231.9 | 225.3 | 220.9 | 216.4 | 214.2 |
| 27.5° | 1482.0 | 1464.3 | 1358.3 | 733.2 | 271.7 | 223.1 | 218.6 | 207.6 | 198.8 | 189.9 | 189.9 |
| 30° | 1559.3 | 1537.2 | 1349.4 | 552.1 | 220.9 | 207.6 | 198.8 | 185.5 | 172.3 | 163.4 | 161.2 |
| 32.5° | 1641.0 | 1618.9 | 1292.0 | 371.0 | 201.0 | 189.9 | 178.9 | 159.0 | 143.6 | 132.5 | 130.3 |
| 35° | 1762.4 | 1744.8 | 1179.4 | 245.2 | 181.1 | 167.9 | 152.4 | 132.5 | 112.6 | 101.6 | 99.4 |
| 37.5° | 1943.5 | 1921.5 | 1040.2 | 187.7 | 159.0 | 139.1 | 125.9 | 103.8 | 83.9 | 72.9 | 70.7 |
| 40° | 2186.5 | 2120.2 | 874.6 | 165.6 | 139.1 | 114.8 | 97.2 | 75.1 | 59.6 | 53.0 | 53.0 |
| 42.5° | 2469.2 | 2312.4 | 695.7 | 150.2 | 123.7 | 95.0 | 70.7 | 50.8 | 42.0 | 39.8 | 39.8 |
| 45° | 2769.6 | 2491.3 | 516.8 | 139.1 | 108.2 | 75.1 | 50.8 | 35.3 | 30.9 | 28.7 | 28.7 |
| 47.5° | 3078.8 | 2637.0 | 360.0 | 125.9 | 90.6 | 57.4 | 35.3 | 26.5 | 22.1 | 19.9 | 19.9 |
| 50° | 3368.1 | 2732.0 | 254.0 | 112.6 | 77.3 | 42.0 | 26.5 | 19.9 | 15.5 | 15.5 | 15.5 |
| 52.5° | 3569.1 | 2723.2 | 183.3 | 97.2 | 59.6 | 28.7 | 17.7 | 13.3 | 13.3 | 13.3 | 13.3 |
| 55° | 3745.7 | 2690.0 | 143.6 | 83.9 | 46.4 | 19.9 | 13.3 | 11.0 | 11.0 | 8.8 | 8.8 |
| 57.5° | 3895.9 | 2637.0 | 121.5 | 68.5 | 33.1 | 15.5 | 8.8 | 8.8 | 6.6 | 6.6 | 6.6 |
| 60° | 4024.0 | 2570.8 | 101.6 | 57.4 | 22.1 | 11.0 | 6.6 | 4.4 | 4.4 | 2.2 | 4.4 |
| 62.5° | 4198.5 | 2528.8 | 88.3 | 44.2 | 15.5 | 6.6 | 4.4 | 2.2 | 2.2 | 0.0 | 0.0 |
| 65° | 4326.6 | 2449.3 | 75.1 | 30.9 | 8.8 | 4.4 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 |
| 67.5° | 4331.0 | 2305.7 | 55.2 | 17.7 | 6.6 | 4.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 3982.1 | 1965.6 | 35.3 | 8.8 | 4.4 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 71° | 3661.8 | 1740.4 | 28.7 | 6.6 | 4.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 3016.9 | 1278.8 | 22.1 | 6.6 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 1663.1 | 463.8 | 11.0 | 4.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 532.3 | 141.3 | 6.6 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 90.6 | 22.1 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 30.9 | 8.8 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 8.8 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 4.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)