

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: P367818

Luminaire Tested: **MSA-SA3B-730-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367818
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-730-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13041 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

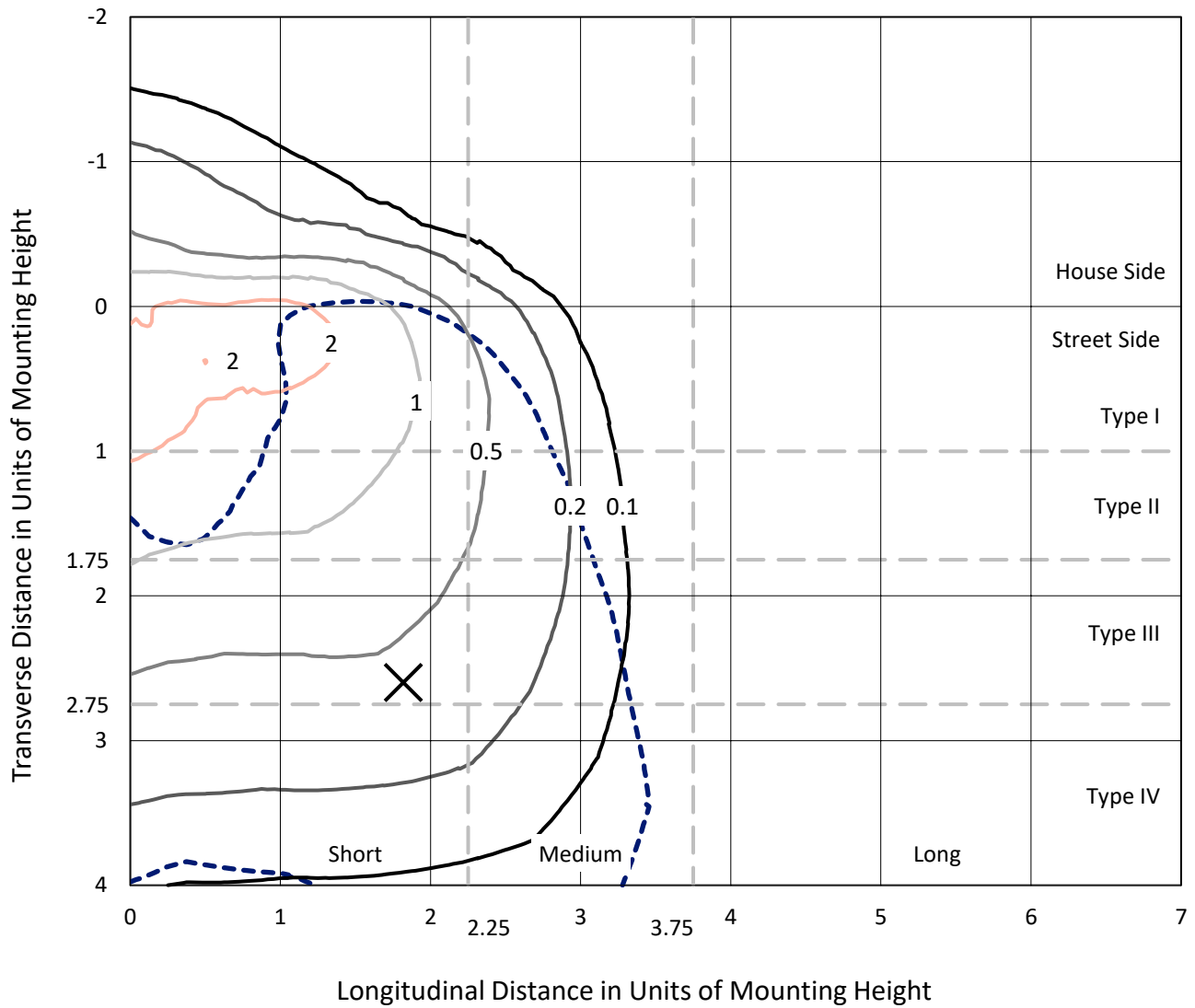
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367818
 CATALOG NUMBER: MSA-SA3B-730-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

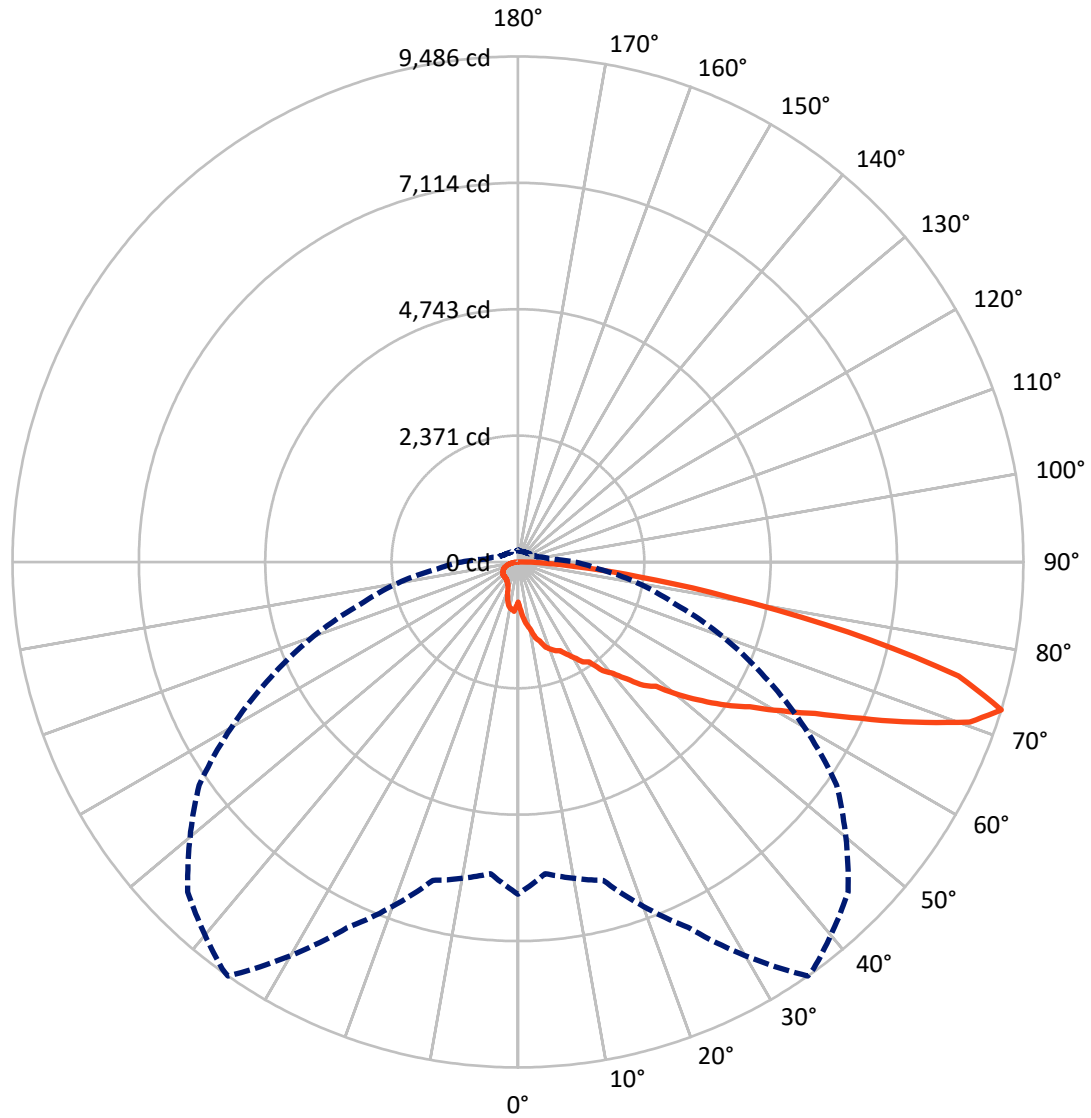
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P367818
CATALOG NUMBER: MSA-SA3B-730-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P367818
 CATALOG NUMBER: MSA-SA3B-730-U-SL4

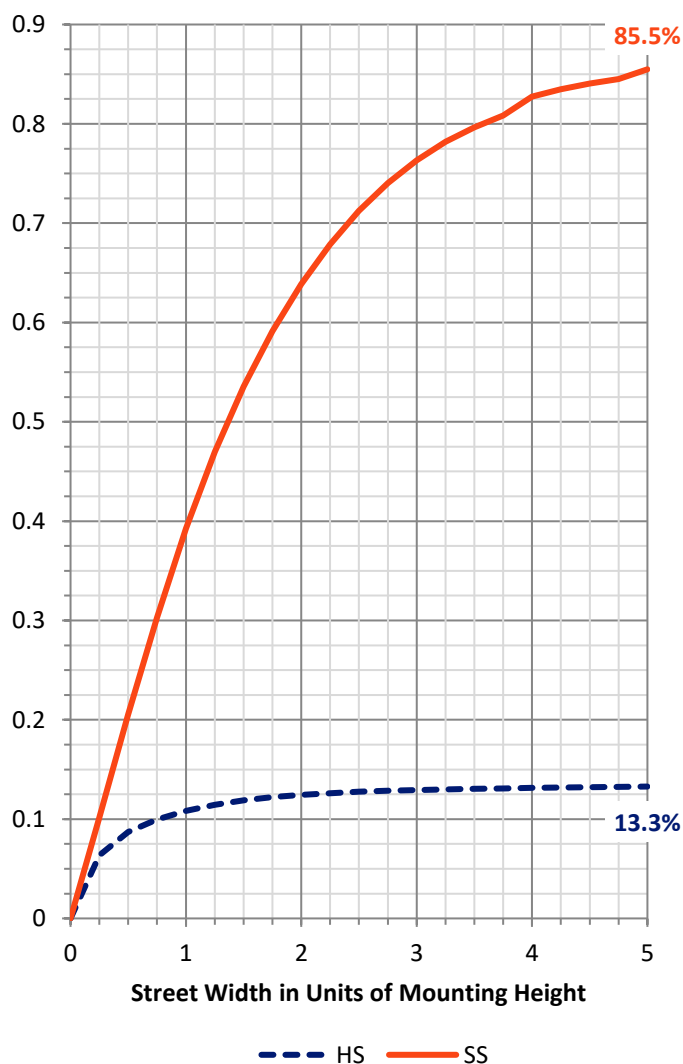
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1750.1 | 0.0 | 1750.1 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 11290.9 | 0.0 | 11290.9 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 13041.0 | 0.0 | 13041.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 100.2 | 0.8 |
| 10°-20° | 352.8 | 2.7 |
| 20°-30° | 613.1 | 4.7 |
| 30°-40° | 1024.6 | 7.9 |
| 40°-50° | 1778.4 | 13.6 |
| 50°-60° | 2688.4 | 20.6 |
| 60°-70° | 3482.8 | 26.7 |
| 70°-80° | 2570.0 | 19.7 |
| 80°-90° | 430.7 | 3.3 |
| 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° | 13041.0 | 100.0 |
| 0°-180° | 13041.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P367818

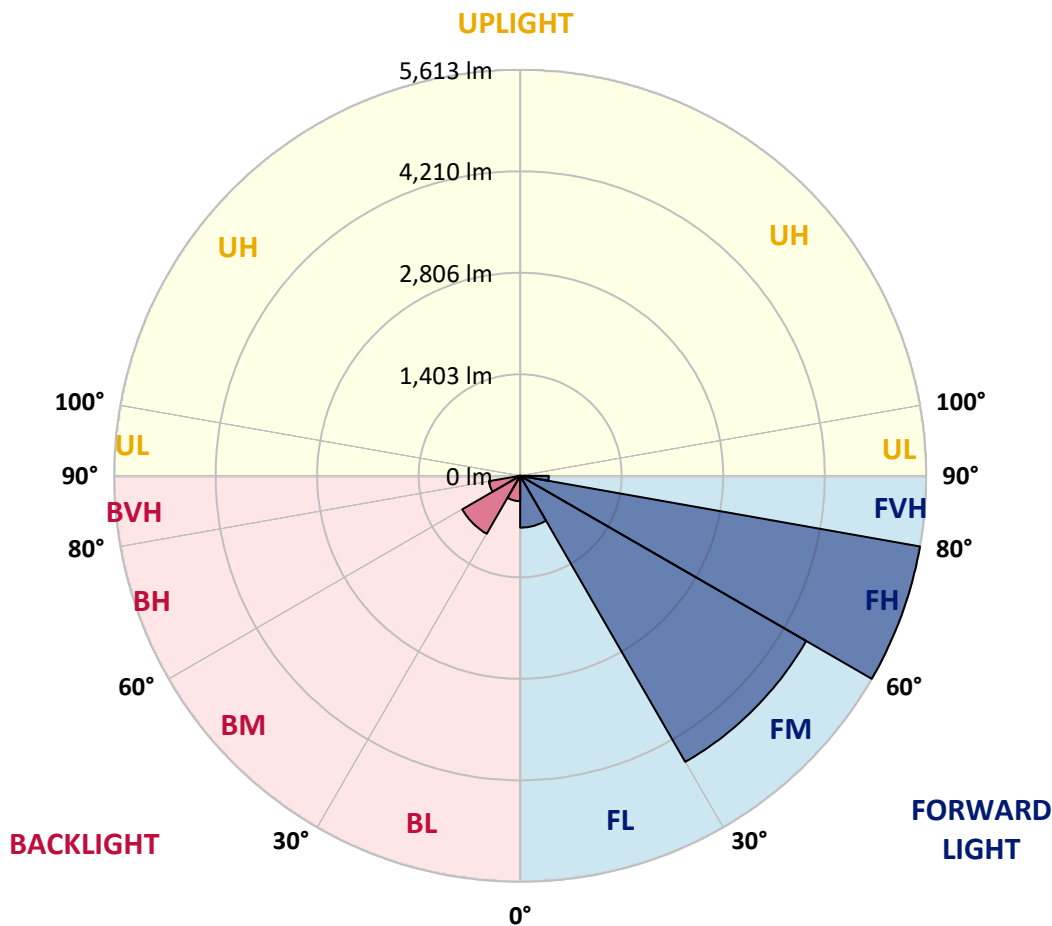
CATALOG NUMBER: MSA-SA3B-730-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 716.2 | 5.5 | | | |
| FM (30°-60°) | 4566.5 | 35.0 | | | |
| FH (60°-80°) | 5612.7 | 43.0 | | | G3/7500 |
| FVH (80°-90°) | 395.5 | 3.0 | | | G3/500 |
| BL (0°-30°) | 349.8 | 2.7 | B1/500 | | |
| BM (30°-60°) | 924.9 | 7.1 | B1/1000 | | |
| BH (60°-80°) | 440.1 | 3.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 35.3 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G3

Type IV Short





REPORT NUMBER: P367818

CATALOG NUMBER: MSA-SA3B-730-U-SL4

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 |
| 2.5° | 940.1 | 895.0 | 856.1 | 854.4 | 890.6 | 904.5 | 898.9 | 886.7 | 872.2 | 841.6 | 908.4 |
| 5° | 1177.8 | 1113.2 | 1101.0 | 1086.5 | 1053.7 | 1062.6 | 1009.1 | 1049.8 | 1062.6 | 1092.1 | 1136.6 |
| 7.5° | 1318.0 | 1280.2 | 1250.7 | 1238.4 | 1181.7 | 1175.0 | 1135.5 | 1193.4 | 1217.9 | 1214.0 | 1280.2 |
| 10° | 1373.1 | 1338.6 | 1340.9 | 1300.8 | 1282.4 | 1290.2 | 1294.7 | 1295.8 | 1310.8 | 1323.1 | 1289.7 |
| 12.5° | 1401.5 | 1414.9 | 1463.9 | 1436.6 | 1460.0 | 1469.4 | 1516.2 | 1468.3 | 1470.0 | 1407.1 | 1441.6 |
| 15° | 1544.6 | 1578.0 | 1549.6 | 1548.5 | 1541.2 | 1556.8 | 1596.9 | 1564.6 | 1589.7 | 1569.6 | 1525.1 |
| 17.5° | 1717.1 | 1727.1 | 1672.6 | 1650.3 | 1679.3 | 1674.3 | 1664.3 | 1669.3 | 1606.9 | 1722.7 | 1668.1 |
| 20° | 1770.0 | 1809.5 | 1737.7 | 1650.3 | 1746.1 | 1758.9 | 1756.6 | 1734.9 | 1628.1 | 1795.1 | 1742.2 |
| 22.5° | 1923.6 | 1870.2 | 1813.4 | 1757.8 | 1806.7 | 1814.0 | 1801.7 | 1750.0 | 1714.3 | 1777.8 | 1819.5 |
| 25° | 1993.2 | 1980.4 | 1908.0 | 1901.4 | 1847.4 | 1821.8 | 1842.9 | 1827.9 | 1792.8 | 1905.8 | 1859.6 |
| 27.5° | 2152.4 | 2137.4 | 1970.9 | 2039.4 | 1960.9 | 1954.2 | 1842.4 | 1892.5 | 1927.5 | 1919.2 | 1988.2 |
| 30° | 2332.7 | 2350.0 | 2106.8 | 2175.2 | 2084.5 | 2072.2 | 1959.8 | 2023.3 | 2047.2 | 2055.0 | 2141.3 |
| 32.5° | 2533.1 | 2580.4 | 2338.9 | 2282.6 | 2234.2 | 2242.6 | 2147.4 | 2031.6 | 2124.6 | 2306.6 | 2343.9 |
| 35° | 2750.2 | 2769.7 | 2516.4 | 2431.8 | 2305.5 | 2296.6 | 2298.2 | 2312.7 | 2406.8 | 2614.4 | 2643.3 |
| 37.5° | 3151.5 | 3061.3 | 2839.2 | 2625.0 | 2582.7 | 2499.7 | 2555.9 | 2600.5 | 2694.5 | 3012.9 | 3134.3 |
| 40° | 3398.6 | 3331.8 | 2993.4 | 2869.3 | 2752.4 | 2760.2 | 2865.4 | 2864.9 | 3086.9 | 3415.3 | 3600.7 |
| 42.5° | 3627.4 | 3554.5 | 3235.6 | 3110.9 | 3000.1 | 3027.4 | 3057.4 | 3110.3 | 3536.1 | 4065.5 | 4150.1 |
| 45° | 3811.6 | 3651.9 | 3422.6 | 3394.7 | 3303.5 | 3267.3 | 3394.7 | 3479.3 | 4073.2 | 4591.4 | 4640.4 |
| 47.5° | 3936.9 | 3805.5 | 3581.2 | 3556.7 | 3489.4 | 3577.9 | 3925.7 | 3980.3 | 4489.6 | 5119.7 | 5115.8 |
| 50° | 4127.2 | 3947.5 | 3744.8 | 3732.0 | 3921.8 | 3969.2 | 4393.3 | 4387.7 | 4894.8 | 5558.3 | 5466.4 |
| 52.5° | 4346.5 | 4120.0 | 3900.1 | 4037.6 | 4327.1 | 4350.4 | 4718.4 | 4868.1 | 5337.3 | 5981.3 | 5741.4 |
| 55° | 4598.7 | 4345.4 | 4132.8 | 4316.5 | 4747.3 | 4678.3 | 5050.6 | 5416.3 | 5891.1 | 6427.1 | 5940.1 |
| 57.5° | 4910.9 | 4603.7 | 4431.7 | 4711.1 | 5130.8 | 5192.0 | 5526.5 | 5986.9 | 6337.0 | 6704.3 | 6084.8 |
| 60° | 5240.4 | 4879.8 | 4722.2 | 4988.3 | 5667.9 | 5738.1 | 6065.3 | 6461.1 | 6836.8 | 6965.4 | 6057.5 |
| 62.5° | 5554.9 | 5164.8 | 5022.3 | 5350.7 | 6263.5 | 6437.2 | 6678.7 | 6930.9 | 7252.6 | 7028.8 | 5727.5 |
| 65° | 5905.0 | 5514.3 | 5424.7 | 5917.3 | 7071.1 | 7243.7 | 7559.3 | 7483.6 | 7395.1 | 6804.0 | 5181.4 |
| 67.5° | 6275.7 | 5878.9 | 5895.6 | 6574.6 | 8023.5 | 8053.0 | 8537.8 | 8034.6 | 7227.5 | 6208.4 | 4264.7 |
| 70° | 6475.0 | 6068.7 | 6240.7 | 7275.4 | 8992.5 | 8950.2 | 9049.3 | 8182.7 | 6544.6 | 4907.6 | 2939.4 |
| 72.5° | 6233.4 | 5871.1 | 6186.1 | 7570.4 | 9485.7 | 9440.0 | 8762.1 | 7303.8 | 5116.9 | 3051.9 | 1524.0 |
| 75° | 5277.7 | 4928.2 | 5410.2 | 6748.3 | 8539.5 | 8581.8 | 7456.9 | 5431.4 | 2929.4 | 1227.3 | 632.9 |
| 77.5° | 3586.2 | 3405.9 | 3818.9 | 5030.1 | 6343.1 | 6489.5 | 5532.7 | 3176.0 | 1230.1 | 508.2 | 382.9 |
| 80° | 1895.2 | 1809.5 | 2114.5 | 2897.7 | 4016.5 | 4125.6 | 3253.4 | 1581.9 | 630.1 | 329.0 | 273.3 |
| 82.5° | 1029.7 | 993.5 | 1157.2 | 1490.0 | 2282.1 | 2377.3 | 1687.1 | 1050.9 | 424.7 | 205.9 | 167.0 |
| 85° | 691.9 | 677.9 | 786.5 | 800.4 | 1079.3 | 1110.4 | 883.9 | 809.3 | 254.9 | 100.7 | 110.2 |
| 87.5° | 346.2 | 332.3 | 414.1 | 365.7 | 411.9 | 412.4 | 405.2 | 516.5 | 64.6 | 33.4 | 20.0 |
| 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: P367818
 CATALOG NUMBER: MSA-SA3B-730-U-SL4

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 0° | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 | 753.6 |
| 2.5° | 909.5 | 890.0 | 822.7 | 822.1 | 832.1 | 825.4 | 830.5 | 803.2 | 791.5 | 844.9 | 842.1 |
| 5° | 1130.5 | 1072.0 | 1015.8 | 996.3 | 973.5 | 924.0 | 926.7 | 927.3 | 919.0 | 950.7 | 952.9 |
| 7.5° | 1260.2 | 1190.0 | 1138.3 | 1034.7 | 953.5 | 890.0 | 898.4 | 907.8 | 898.4 | 940.7 | 956.2 |
| 10° | 1279.1 | 1223.4 | 1161.6 | 1046.4 | 992.4 | 935.1 | 877.2 | 826.0 | 819.9 | 800.4 | 806.5 |
| 12.5° | 1391.5 | 1345.3 | 1216.2 | 1089.8 | 1026.9 | 939.0 | 833.2 | 774.8 | 725.8 | 734.2 | 718.6 |
| 15° | 1483.9 | 1451.1 | 1296.3 | 1131.0 | 980.7 | 871.6 | 759.2 | 679.1 | 635.1 | 630.1 | 614.5 |
| 17.5° | 1609.1 | 1562.4 | 1303.6 | 1102.6 | 921.2 | 790.4 | 663.5 | 572.7 | 553.8 | 546.0 | 538.2 |
| 20° | 1669.3 | 1585.2 | 1277.4 | 1013.6 | 851.6 | 693.5 | 568.9 | 490.9 | 485.4 | 499.3 | 496.5 |
| 22.5° | 1721.6 | 1604.1 | 1254.0 | 959.6 | 743.1 | 595.6 | 504.3 | 453.1 | 447.0 | 464.8 | 468.1 |
| 25° | 1752.2 | 1658.1 | 1228.4 | 904.5 | 675.7 | 522.7 | 455.9 | 426.9 | 428.0 | 451.4 | 448.6 |
| 27.5° | 1890.2 | 1677.1 | 1163.9 | 839.4 | 598.4 | 468.7 | 432.5 | 417.5 | 411.3 | 443.6 | 446.4 |
| 30° | 1977.1 | 1800.6 | 1149.4 | 770.3 | 541.0 | 429.1 | 411.3 | 405.2 | 404.1 | 443.1 | 445.8 |
| 32.5° | 2138.5 | 1841.8 | 1156.1 | 695.2 | 489.3 | 416.9 | 395.7 | 395.2 | 406.3 | 443.6 | 448.1 |
| 35° | 2362.2 | 2015.5 | 1123.8 | 652.3 | 460.9 | 398.0 | 383.5 | 388.0 | 406.9 | 447.5 | 453.6 |
| 37.5° | 2798.6 | 2179.1 | 1133.8 | 612.3 | 451.4 | 391.9 | 380.2 | 382.9 | 413.6 | 457.5 | 474.2 |
| 40° | 3144.3 | 2475.8 | 1118.2 | 592.2 | 438.6 | 390.7 | 372.9 | 384.1 | 413.0 | 463.1 | 478.1 |
| 42.5° | 3645.2 | 2712.3 | 1119.9 | 572.2 | 438.0 | 386.3 | 371.8 | 385.2 | 411.9 | 458.1 | 478.7 |
| 45° | 4074.9 | 2924.4 | 1143.8 | 560.5 | 432.5 | 393.5 | 370.1 | 386.8 | 404.7 | 440.3 | 463.1 |
| 47.5° | 4427.2 | 3161.0 | 1168.3 | 549.4 | 430.3 | 400.2 | 368.5 | 375.2 | 392.4 | 420.2 | 440.8 |
| 50° | 4714.5 | 3327.4 | 1199.5 | 547.1 | 430.3 | 396.9 | 364.0 | 363.5 | 377.9 | 400.2 | 419.7 |
| 52.5° | 4938.2 | 3444.8 | 1220.6 | 549.9 | 430.3 | 384.1 | 358.5 | 354.0 | 362.9 | 379.0 | 398.5 |
| 55° | 5100.2 | 3481.0 | 1203.4 | 557.2 | 429.7 | 372.4 | 348.4 | 344.5 | 349.0 | 360.1 | 378.5 |
| 57.5° | 5165.3 | 3385.8 | 1100.4 | 544.4 | 429.7 | 364.0 | 336.2 | 331.7 | 336.2 | 344.5 | 362.9 |
| 60° | 5002.2 | 3079.7 | 951.8 | 511.5 | 421.4 | 352.9 | 322.3 | 319.5 | 326.2 | 333.4 | 351.2 |
| 62.5° | 4593.1 | 2672.8 | 793.2 | 472.6 | 404.1 | 343.4 | 308.9 | 309.5 | 320.0 | 330.1 | 347.9 |
| 65° | 3957.5 | 2180.8 | 661.2 | 433.0 | 382.4 | 328.4 | 295.0 | 298.9 | 313.9 | 327.3 | 345.1 |
| 67.5° | 3114.2 | 1615.8 | 556.6 | 394.6 | 351.8 | 303.9 | 279.4 | 280.5 | 291.1 | 303.9 | 321.2 |
| 70° | 2081.7 | 1028.1 | 457.5 | 349.5 | 311.7 | 272.2 | 255.5 | 251.6 | 248.8 | 259.9 | 275.0 |
| 72.5° | 1055.9 | 607.3 | 375.7 | 298.9 | 268.3 | 237.7 | 224.9 | 214.9 | 207.1 | 213.7 | 225.4 |
| 75° | 553.3 | 424.7 | 303.4 | 248.2 | 221.5 | 202.0 | 192.6 | 179.2 | 173.7 | 177.6 | 185.9 |
| 77.5° | 391.3 | 332.3 | 245.5 | 196.5 | 180.3 | 160.3 | 162.0 | 148.1 | 143.6 | 145.8 | 154.7 |
| 80° | 300.6 | 263.3 | 188.7 | 148.6 | 139.2 | 119.7 | 125.2 | 116.9 | 111.3 | 110.2 | 116.9 |
| 82.5° | 204.8 | 198.2 | 134.1 | 104.1 | 97.4 | 83.5 | 91.3 | 87.9 | 80.7 | 76.3 | 79.6 |
| 85° | 138.0 | 131.4 | 81.8 | 60.1 | 57.3 | 43.4 | 55.7 | 53.4 | 47.3 | 40.6 | 41.2 |
| 87.5° | 23.9 | 44.0 | 23.4 | 15.0 | 13.9 | 5.0 | 12.8 | 12.2 | 11.1 | 5.6 | 4.5 |
| 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)