

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: P597006

Luminaire Tested: **MSA-SA3A-835-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-835-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9931 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

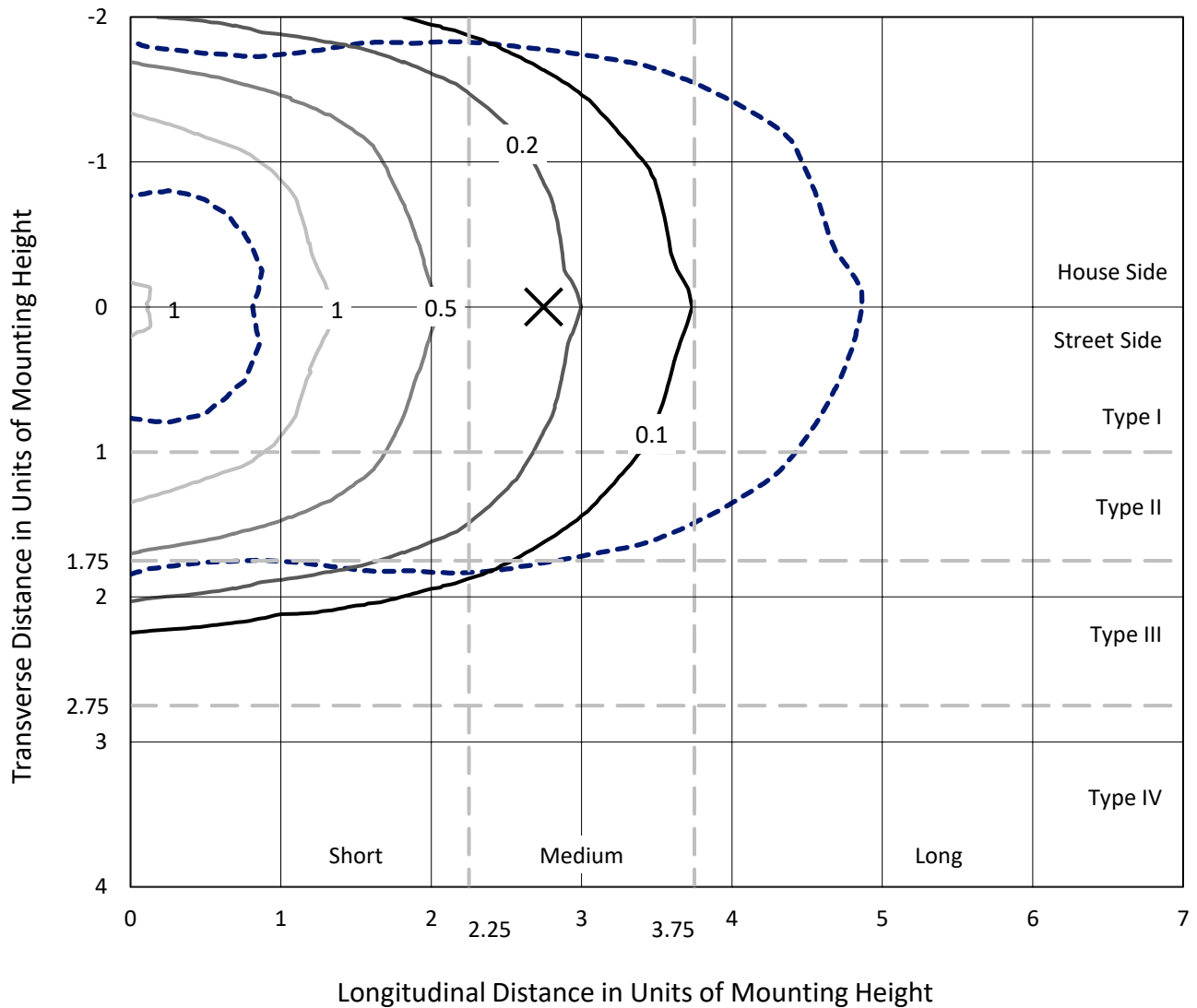
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P597006
 CATALOG NUMBER: MSA-SA3A-835-U-RW

Iso-Footcandle Lines of Horizontal Illumination

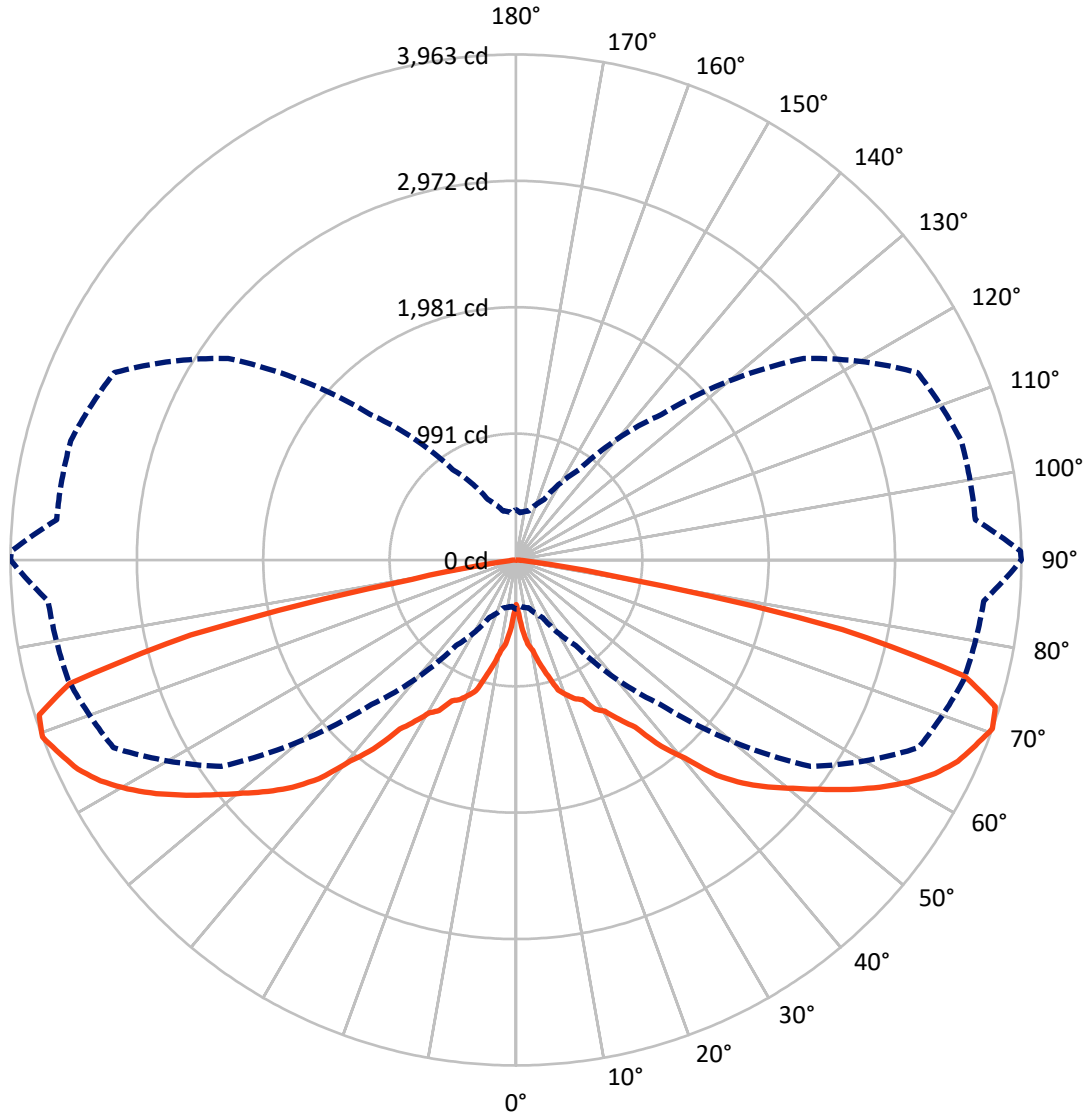
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type III - Short - N/A

REPORT NUMBER: P597006
CATALOG NUMBER: MSA-SA3A-835-U-RW

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P597006

CATALOG NUMBER: MSA-SA3A-835-U-RW

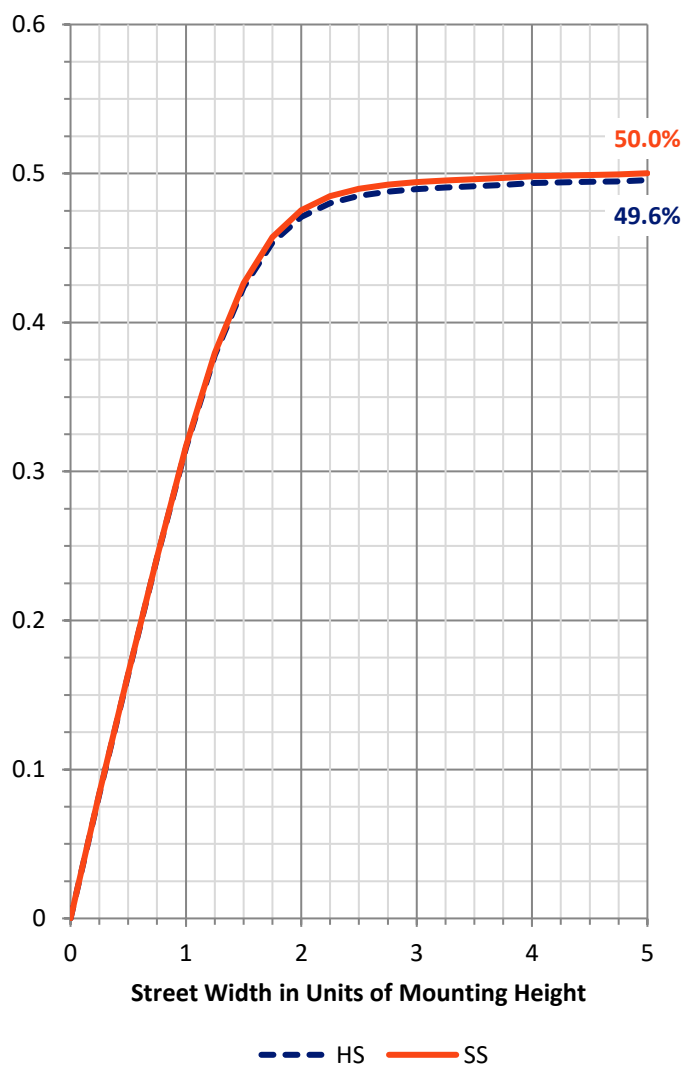
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 4947.1 | 0.0 | 4947.1 |
| | % Fixture | 49.8 | 0.0 | 49.8 |
| Street Side | Lumens | 4983.9 | 0.0 | 4983.9 |
| | % Fixture | 50.2 | 0.0 | 50.2 |
| Total | Lumens | 9931.0 | 0.0 | 9931.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.6 | 0.5 |
| 10°-20° | 241.0 | 2.4 |
| 20°-30° | 521.0 | 5.2 |
| 30°-40° | 994.1 | 10.0 |
| 40°-50° | 1806.0 | 18.2 |
| 50°-60° | 2536.9 | 25.5 |
| 60°-70° | 2422.3 | 24.4 |
| 70°-80° | 1243.1 | 12.5 |
| 80°-90° | 114.0 | 1.1 |
| 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° | 9931.0 | 100.0 |
| 0°-180° | 9931.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P597006

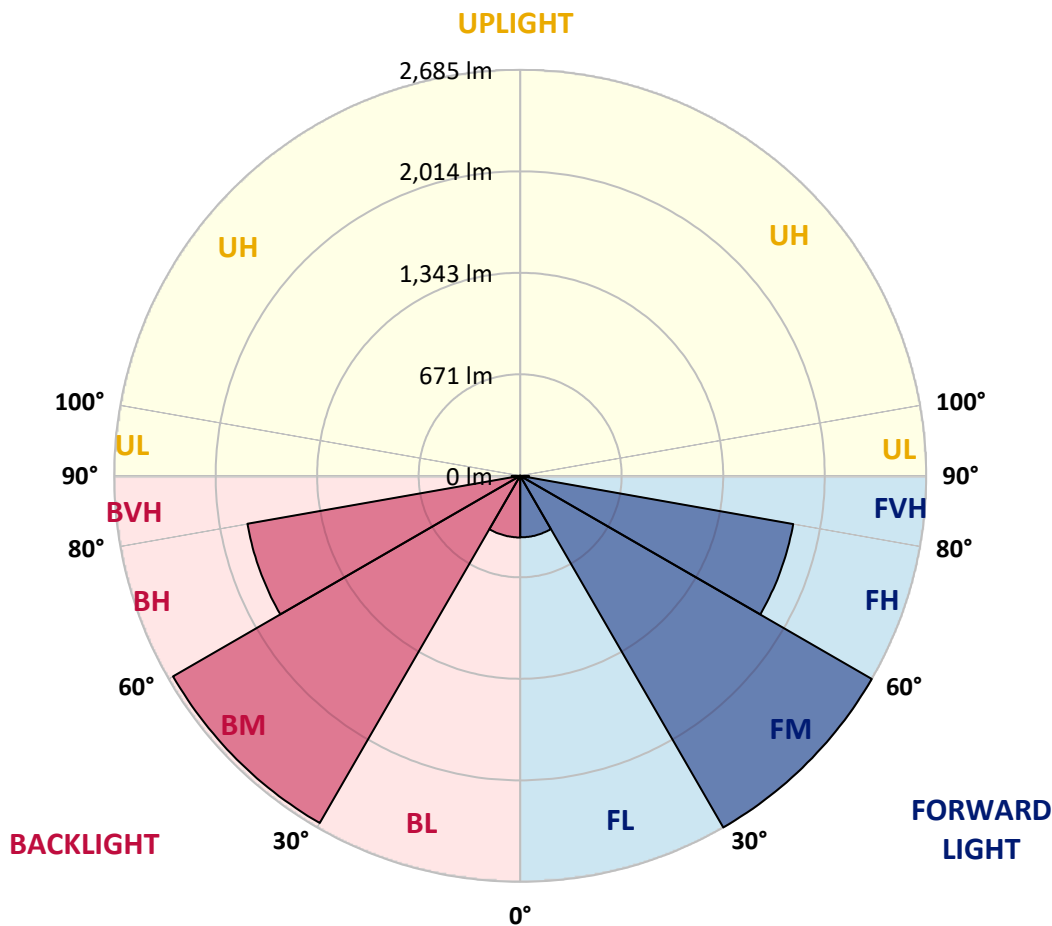
CATALOG NUMBER: MSA-SA3A-835-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 406.9 | 4.1 | | | |
| FM (30°-60°) | 2685.5 | 27.0 | | | |
| FH (60°-80°) | 1833.7 | 18.5 | | | G2/5000 |
| FVH (80°-90°) | 57.8 | 0.6 | | | G1/100 |
| BL (0°-30°) | 407.7 | 4.1 | B1/500 | | |
| BM (30°-60°) | 2651.6 | 26.7 | B3/5000 | | |
| BH (60°-80°) | 1831.7 | 18.4 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 56.1 | 0.6 | | | 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 III Short





REPORT NUMBER: P597006

CATALOG NUMBER: MSA-SA3A-835-U-RW

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 |
| 2.5° | 422.2 | 406.5 | 386.8 | 398.5 | 403.3 | 411.7 | 410.5 | 406.5 | 389.2 | 418.2 | 421.4 |
| 5° | 528.5 | 503.5 | 494.3 | 492.6 | 495.1 | 487.0 | 513.2 | 505.5 | 519.6 | 545.8 | 551.8 |
| 7.5° | 601.7 | 583.2 | 563.5 | 569.5 | 544.6 | 540.9 | 574.8 | 604.9 | 612.6 | 660.5 | 663.7 |
| 10° | 636.3 | 618.2 | 623.5 | 619.8 | 617.0 | 640.4 | 656.1 | 678.2 | 710.0 | 714.4 | 721.3 |
| 12.5° | 665.7 | 673.0 | 695.9 | 695.1 | 732.9 | 774.4 | 768.4 | 791.3 | 796.5 | 852.1 | 835.2 |
| 15° | 740.2 | 755.1 | 753.5 | 767.5 | 784.0 | 852.1 | 852.5 | 891.5 | 927.3 | 949.1 | 943.4 |
| 17.5° | 849.3 | 854.5 | 832.8 | 833.6 | 881.5 | 909.2 | 940.2 | 933.4 | 1026.7 | 1069.4 | 1072.2 |
| 20° | 914.5 | 927.7 | 902.8 | 869.8 | 954.7 | 992.9 | 1010.2 | 970.4 | 1070.2 | 1127.8 | 1127.8 |
| 22.5° | 1028.4 | 994.1 | 956.3 | 934.2 | 1009.0 | 1049.7 | 1047.7 | 1036.4 | 1089.5 | 1191.4 | 1181.7 |
| 25° | 1091.1 | 1071.8 | 1052.9 | 1058.5 | 1096.4 | 1117.3 | 1145.1 | 1118.9 | 1168.8 | 1244.5 | 1212.7 |
| 27.5° | 1210.3 | 1174.5 | 1081.5 | 1155.5 | 1155.5 | 1139.8 | 1198.6 | 1211.1 | 1178.5 | 1301.6 | 1325.4 |
| 30° | 1345.1 | 1332.6 | 1201.0 | 1279.5 | 1255.4 | 1211.1 | 1323.8 | 1315.7 | 1261.0 | 1386.6 | 1375.7 |
| 32.5° | 1472.7 | 1513.8 | 1389.0 | 1345.9 | 1382.1 | 1399.1 | 1339.9 | 1364.0 | 1374.5 | 1495.6 | 1490.4 |
| 35° | 1668.3 | 1702.9 | 1537.5 | 1526.6 | 1466.3 | 1450.6 | 1495.6 | 1503.7 | 1504.5 | 1632.1 | 1608.7 |
| 37.5° | 2006.8 | 1956.9 | 1793.5 | 1716.6 | 1723.5 | 1704.5 | 1713.4 | 1649.8 | 1658.7 | 1843.8 | 1855.5 |
| 40° | 2254.3 | 2198.0 | 2016.1 | 1960.9 | 1825.7 | 1906.6 | 1834.9 | 1828.5 | 1810.8 | 2050.7 | 2044.2 |
| 42.5° | 2527.6 | 2450.4 | 2249.1 | 2175.5 | 2031.8 | 1998.8 | 1965.8 | 2040.2 | 2035.4 | 2257.6 | 2306.7 |
| 45° | 2734.1 | 2577.9 | 2472.9 | 2427.0 | 2340.9 | 2260.0 | 2228.6 | 2262.0 | 2246.7 | 2411.7 | 2497.4 |
| 47.5° | 2864.5 | 2728.9 | 2608.1 | 2511.5 | 2429.0 | 2627.4 | 2468.5 | 2423.8 | 2392.8 | 2577.5 | 2660.1 |
| 50° | 2968.4 | 2811.8 | 2669.3 | 2637.1 | 2702.3 | 2877.8 | 2627.0 | 2528.4 | 2566.3 | 2702.3 | 2814.6 |
| 52.5° | 2996.5 | 2830.7 | 2702.7 | 2682.2 | 2858.5 | 2890.3 | 2849.6 | 2683.8 | 2673.7 | 2852.0 | 2987.7 |
| 55° | 2910.4 | 2751.4 | 2690.6 | 2802.9 | 2997.7 | 2971.2 | 3033.2 | 2927.3 | 2856.1 | 3005.0 | 3175.6 |
| 57.5° | 2688.6 | 2530.9 | 2516.4 | 2678.2 | 2923.7 | 3149.9 | 3180.5 | 3096.8 | 3003.4 | 3161.1 | 3362.4 |
| 60° | 2324.4 | 2180.3 | 2216.9 | 2395.6 | 2765.9 | 3087.9 | 3250.5 | 3174.0 | 3145.1 | 3302.0 | 3535.5 |
| 62.5° | 1757.3 | 1645.0 | 1742.8 | 1991.9 | 2477.7 | 3007.8 | 3347.1 | 3335.0 | 3293.2 | 3451.7 | 3688.4 |
| 65° | 1120.5 | 1061.4 | 1161.2 | 1414.3 | 2030.6 | 2862.1 | 3393.4 | 3409.5 | 3448.1 | 3567.3 | 3806.7 |
| 67.5° | 651.2 | 619.8 | 680.6 | 887.9 | 1446.1 | 2350.1 | 3307.3 | 3538.3 | 3558.4 | 3626.8 | 3884.4 |
| 70° | 385.2 | 364.7 | 389.6 | 498.7 | 818.7 | 1601.1 | 2821.0 | 3481.9 | 3634.1 | 3681.6 | 3962.9 |
| 72.5° | 293.8 | 274.5 | 263.6 | 295.0 | 427.4 | 827.1 | 1907.4 | 2951.5 | 3573.3 | 3645.3 | 3929.9 |
| 75° | 254.0 | 235.5 | 222.6 | 225.4 | 254.4 | 392.8 | 1034.0 | 2111.1 | 3044.8 | 3319.3 | 3630.0 |
| 77.5° | 218.1 | 201.6 | 192.4 | 191.6 | 195.2 | 215.7 | 432.3 | 1144.7 | 1907.0 | 2386.0 | 2617.0 |
| 80° | 174.7 | 161.8 | 159.8 | 159.8 | 154.6 | 152.9 | 214.9 | 435.5 | 725.7 | 860.5 | 825.1 |
| 82.5° | 127.6 | 114.7 | 127.6 | 126.0 | 117.9 | 111.5 | 136.8 | 188.4 | 223.8 | 176.7 | 139.7 |
| 85° | 86.1 | 74.5 | 84.1 | 85.7 | 78.1 | 58.0 | 82.1 | 94.2 | 96.6 | 60.4 | 49.9 |
| 87.5° | 30.2 | 29.4 | 47.5 | 41.5 | 33.8 | 19.7 | 30.2 | 32.6 | 34.2 | 21.3 | 14.5 |
| 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: P597006
 CATALOG NUMBER: MSA-SA3A-835-U-RW

CANDELA DISTRIBUTION (continued):

| | 91° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 | 348.6 |
| 2.5° | 422.6 | 417.8 | 393.6 | 397.3 | 406.5 | 410.9 | 415.4 | 397.3 | 388.4 | 416.6 | 413.8 |
| 5° | 553.4 | 535.7 | 516.0 | 513.2 | 514.4 | 497.1 | 507.1 | 502.7 | 504.7 | 522.8 | 526.5 |
| 7.5° | 662.9 | 641.6 | 615.4 | 594.9 | 559.5 | 531.3 | 555.0 | 567.1 | 570.7 | 602.9 | 615.0 |
| 10° | 722.1 | 704.0 | 696.3 | 657.7 | 646.0 | 642.4 | 636.7 | 617.4 | 638.8 | 631.1 | 637.1 |
| 12.5° | 838.0 | 834.4 | 794.5 | 769.2 | 771.6 | 778.4 | 743.0 | 723.7 | 695.9 | 739.4 | 723.7 |
| 15° | 936.6 | 952.3 | 912.4 | 866.2 | 843.2 | 854.9 | 827.9 | 799.7 | 774.8 | 788.1 | 771.2 |
| 17.5° | 1062.6 | 1062.2 | 984.5 | 935.0 | 933.0 | 932.2 | 892.3 | 830.3 | 860.1 | 850.9 | 851.7 |
| 20° | 1129.4 | 1118.5 | 1021.9 | 964.8 | 1013.5 | 996.2 | 960.3 | 880.6 | 915.3 | 926.5 | 933.8 |
| 22.5° | 1185.3 | 1179.3 | 1062.2 | 1020.3 | 1051.7 | 1052.1 | 1016.3 | 974.4 | 970.0 | 1005.0 | 986.1 |
| 25° | 1224.4 | 1248.5 | 1138.2 | 1128.2 | 1141.9 | 1128.2 | 1093.2 | 1065.8 | 1048.1 | 1100.4 | 1048.1 |
| 27.5° | 1316.9 | 1282.7 | 1149.9 | 1207.1 | 1215.5 | 1146.7 | 1190.6 | 1158.4 | 1109.3 | 1174.1 | 1195.4 |
| 30° | 1383.0 | 1403.1 | 1232.0 | 1318.2 | 1308.1 | 1244.5 | 1262.6 | 1261.4 | 1202.6 | 1329.0 | 1314.1 |
| 32.5° | 1496.5 | 1472.3 | 1366.0 | 1359.2 | 1383.4 | 1380.5 | 1349.9 | 1364.8 | 1379.3 | 1471.1 | 1493.2 |
| 35° | 1612.8 | 1638.5 | 1451.8 | 1498.1 | 1491.2 | 1447.8 | 1527.8 | 1518.6 | 1561.7 | 1750.0 | 1687.6 |
| 37.5° | 1875.2 | 1752.4 | 1644.2 | 1638.1 | 1684.0 | 1690.9 | 1665.1 | 1705.7 | 1798.7 | 1943.6 | 2010.4 |
| 40° | 2047.1 | 1991.1 | 1807.2 | 1814.4 | 1750.8 | 1860.3 | 1787.9 | 1918.7 | 1989.5 | 2233.8 | 2210.1 |
| 42.5° | 2307.1 | 2170.6 | 1993.9 | 2018.1 | 2005.2 | 1952.5 | 2047.9 | 2115.1 | 2216.5 | 2402.9 | 2523.2 |
| 45° | 2500.7 | 2313.5 | 2229.8 | 2214.9 | 2213.3 | 2305.1 | 2293.0 | 2400.4 | 2436.7 | 2576.7 | 2676.6 |
| 47.5° | 2647.6 | 2488.6 | 2364.6 | 2381.5 | 2332.4 | 2594.4 | 2454.8 | 2488.2 | 2561.4 | 2693.5 | 2809.8 |
| 50° | 2821.9 | 2644.8 | 2503.9 | 2545.7 | 2665.3 | 2765.9 | 2639.5 | 2582.4 | 2618.2 | 2774.0 | 2903.6 |
| 52.5° | 2983.2 | 2796.9 | 2641.9 | 2677.0 | 2872.2 | 2826.3 | 2812.6 | 2668.1 | 2663.7 | 2788.8 | 2936.2 |
| 55° | 3172.0 | 2961.9 | 2825.1 | 2936.2 | 3005.4 | 2948.6 | 2926.9 | 2751.0 | 2642.3 | 2712.0 | 2850.8 |
| 57.5° | 3357.2 | 3125.3 | 2989.3 | 3012.2 | 3100.0 | 3043.6 | 2880.6 | 2609.7 | 2474.1 | 2487.8 | 2628.3 |
| 60° | 3530.6 | 3275.5 | 3163.2 | 3141.0 | 3211.1 | 2990.1 | 2704.7 | 2350.9 | 2171.0 | 2138.0 | 2259.6 |
| 62.5° | 3679.2 | 3401.0 | 3294.8 | 3234.4 | 3301.2 | 2992.1 | 2430.6 | 1935.6 | 1737.9 | 1626.1 | 1720.6 |
| 65° | 3797.1 | 3505.3 | 3429.6 | 3398.2 | 3422.4 | 2810.2 | 2003.6 | 1421.2 | 1178.9 | 1054.9 | 1110.1 |
| 67.5° | 3875.6 | 3563.6 | 3529.0 | 3570.1 | 3248.1 | 2340.5 | 1484.4 | 909.6 | 685.4 | 617.8 | 652.4 |
| 70° | 3956.9 | 3615.2 | 3614.0 | 3474.3 | 2754.2 | 1613.6 | 867.0 | 524.4 | 398.9 | 372.7 | 394.4 |
| 72.5° | 3929.5 | 3554.0 | 3572.1 | 3038.4 | 1908.6 | 862.5 | 457.6 | 296.6 | 270.1 | 279.3 | 298.6 |
| 75° | 3638.9 | 3231.2 | 3143.8 | 2184.3 | 1082.7 | 400.9 | 263.6 | 224.6 | 223.0 | 237.1 | 256.0 |
| 77.5° | 2639.5 | 2250.3 | 2019.3 | 1238.1 | 464.1 | 216.9 | 194.0 | 187.6 | 187.6 | 198.8 | 215.7 |
| 80° | 870.2 | 753.1 | 784.9 | 479.0 | 219.4 | 149.7 | 151.3 | 154.2 | 153.3 | 156.2 | 170.3 |
| 82.5° | 142.9 | 148.1 | 229.0 | 195.6 | 132.4 | 102.2 | 114.3 | 119.9 | 121.6 | 108.7 | 123.6 |
| 85° | 50.7 | 57.2 | 97.4 | 90.6 | 76.5 | 51.5 | 75.3 | 84.1 | 82.9 | 72.4 | 80.1 |
| 87.5° | 15.7 | 20.1 | 35.4 | 27.4 | 22.9 | 14.1 | 28.2 | 33.0 | 41.5 | 16.9 | 15.3 |
| 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)