

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: P596087

Luminaire Tested: **MSA-SA3A-AMB-U-SLL-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596087
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-24)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-AMB-U-SLL-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH
AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (48) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1392 lumens
Efficiency: N/A
Efficacy: 23.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

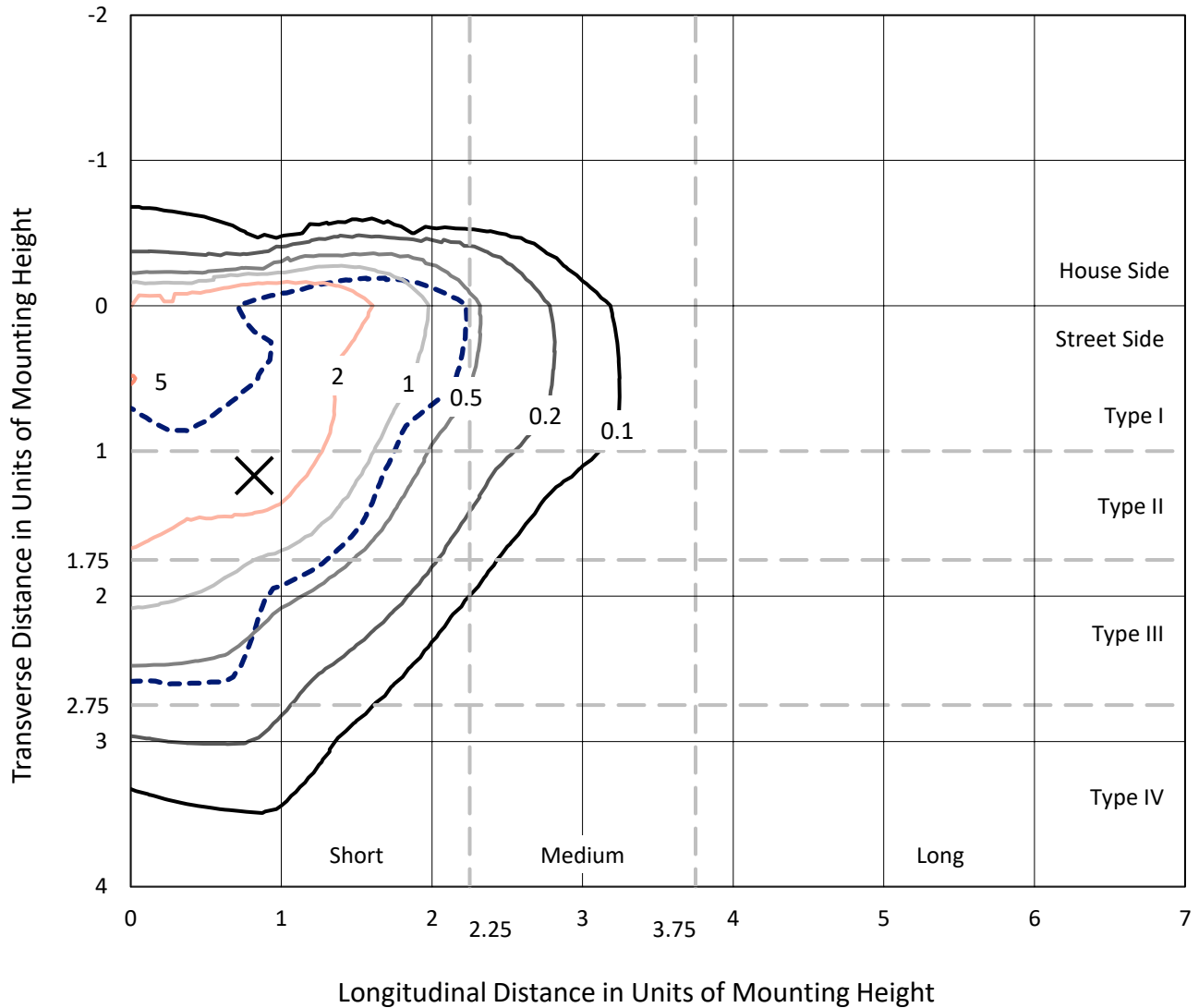
Input Watts (W): 59.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596087
 CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

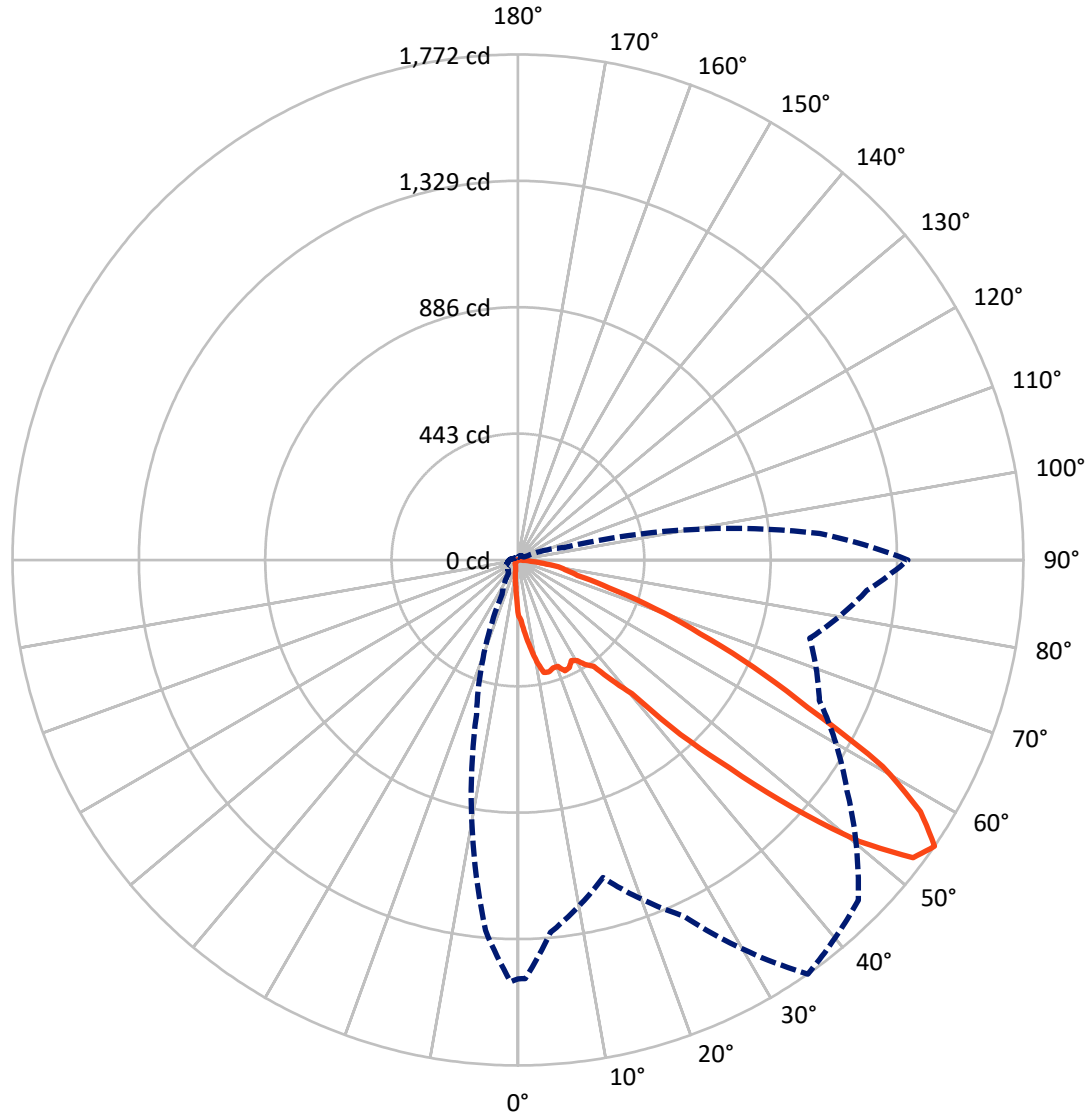
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type III - Short - N/A

REPORT NUMBER: P596087
CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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 CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

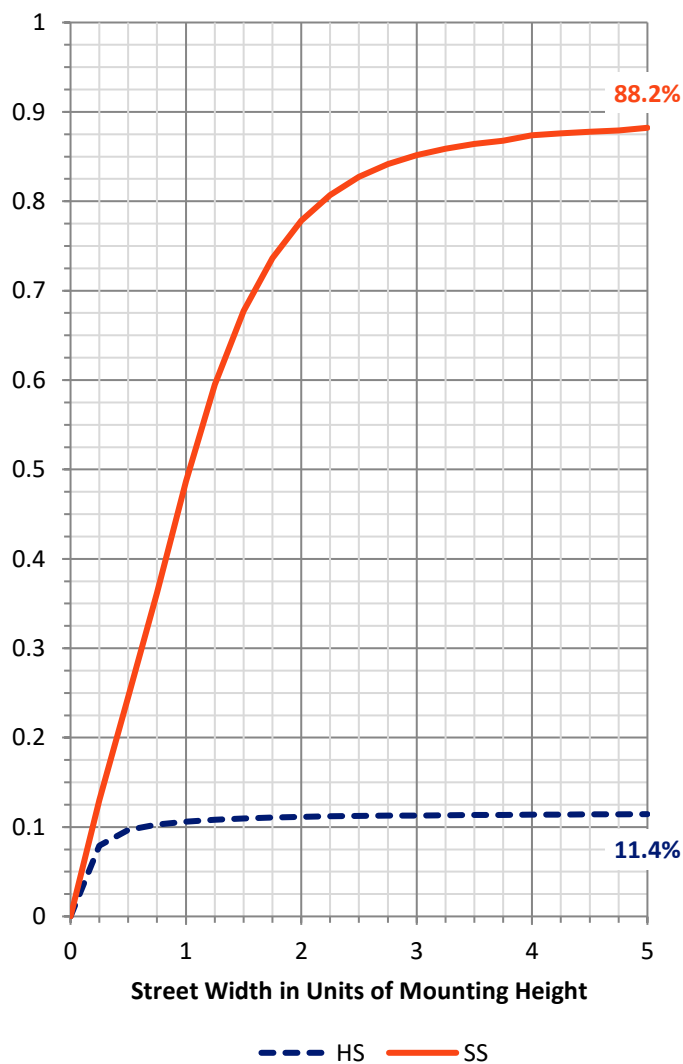
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 161.4 | 0.0 | 161.4 |
| | % Fixture | 11.6 | 0.0 | 11.6 |
| Street Side | Lumens | 1230.6 | 0.0 | 1230.6 |
| | % Fixture | 88.4 | 0.0 | 88.4 |
| Total | Lumens | 1392.0 | 0.0 | 1392.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 17.3 | 1.2 |
| 10°-20° | 45.0 | 3.2 |
| 20°-30° | 99.0 | 7.1 |
| 30°-40° | 148.9 | 10.7 |
| 40°-50° | 268.7 | 19.3 |
| 50°-60° | 388.6 | 27.9 |
| 60°-70° | 302.0 | 21.7 |
| 70°-80° | 107.2 | 7.7 |
| 80°-90° | 15.4 | 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° | 1392.0 | 100.0 |
| 0°-180° | 1392.0 | 100.0 |

Coefficient of Utilization



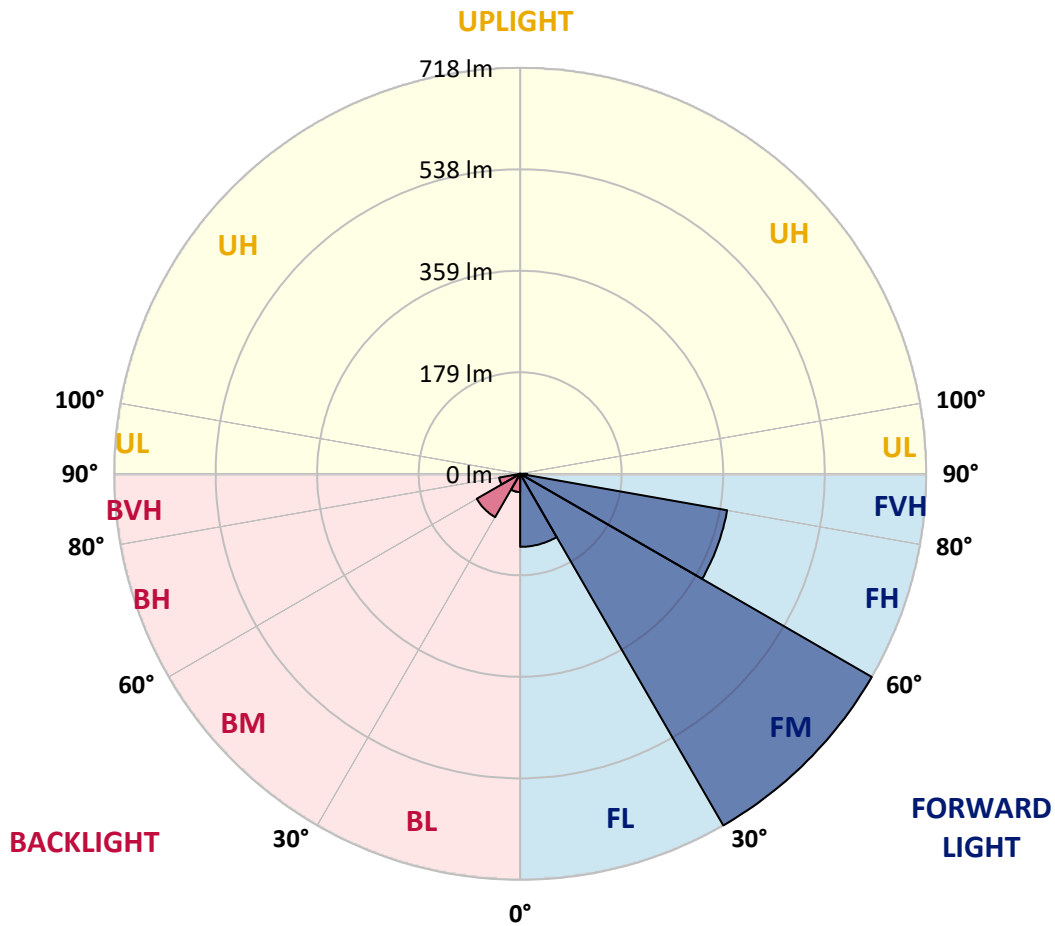
REPORT NUMBER: P596087
 CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 129.1 | 9.3 | | | |
| FM (30°-60°) | 717.6 | 51.5 | | | |
| FH (60°-80°) | 371.4 | 26.7 | | | G0/660 |
| FVH (80°-90°) | 12.6 | 0.9 | | | G1/100 |
| BL (0°-30°) | 32.3 | 2.3 | B0/110 | | |
| BM (30°-60°) | 88.5 | 6.4 | B0/220 | | |
| BH (60°-80°) | 37.8 | 2.7 | B0/110 | | G0/110 |
| BVH (80°-90°) | 2.8 | 0.2 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type III Short





REPORT NUMBER: P596087

CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 |
| 2.5° | 269.8 | 267.4 | 259.4 | 249.8 | 217.9 | 211.5 | 214.7 | 210.7 | 201.1 | 211.5 | 209.1 |
| 5° | 316.9 | 308.9 | 298.5 | 296.9 | 275.4 | 257.8 | 231.5 | 230.7 | 254.6 | 313.7 | 292.1 |
| 7.5° | 300.9 | 308.9 | 297.7 | 336.0 | 331.3 | 307.3 | 313.7 | 316.9 | 332.0 | 329.7 | 299.3 |
| 10° | 279.4 | 278.6 | 281.0 | 312.1 | 324.9 | 362.4 | 378.3 | 345.6 | 335.2 | 327.3 | 271.4 |
| 12.5° | 253.0 | 249.8 | 265.8 | 339.2 | 375.2 | 404.7 | 419.1 | 391.9 | 354.4 | 312.1 | 268.2 |
| 15° | 287.3 | 285.8 | 304.1 | 344.8 | 387.9 | 407.1 | 407.9 | 390.3 | 368.8 | 327.3 | 276.2 |
| 17.5° | 351.2 | 348.8 | 377.5 | 385.5 | 404.7 | 398.3 | 392.7 | 391.9 | 377.5 | 384.7 | 340.0 |
| 20° | 435.0 | 427.8 | 459.8 | 438.2 | 394.3 | 398.3 | 385.5 | 387.9 | 400.7 | 471.7 | 453.4 |
| 22.5° | 624.2 | 625.0 | 638.6 | 530.8 | 455.0 | 422.2 | 423.8 | 423.0 | 501.3 | 637.8 | 587.5 |
| 25° | 773.5 | 770.3 | 803.8 | 660.1 | 499.7 | 418.3 | 410.3 | 441.4 | 567.5 | 713.6 | 693.6 |
| 27.5° | 697.6 | 692.8 | 710.4 | 617.0 | 518.0 | 399.1 | 362.4 | 405.5 | 565.1 | 601.0 | 648.9 |
| 30° | 699.2 | 691.2 | 710.4 | 572.3 | 494.9 | 409.5 | 364.8 | 415.9 | 509.2 | 587.5 | 693.6 |
| 32.5° | 775.0 | 776.6 | 752.7 | 619.4 | 503.7 | 438.2 | 383.9 | 407.9 | 524.4 | 633.8 | 755.1 |
| 35° | 842.1 | 838.9 | 800.6 | 670.5 | 553.1 | 458.2 | 417.5 | 463.8 | 565.9 | 702.4 | 810.2 |
| 37.5° | 967.4 | 973.8 | 899.6 | 739.9 | 593.9 | 532.4 | 478.9 | 521.2 | 613.0 | 755.9 | 930.7 |
| 40° | 1083.9 | 1099.1 | 985.8 | 810.2 | 703.2 | 615.4 | 606.6 | 613.8 | 684.9 | 783.8 | 1030.5 |
| 42.5° | 1198.1 | 1202.9 | 1103.9 | 917.9 | 826.1 | 835.7 | 786.2 | 747.1 | 769.5 | 833.3 | 1099.1 |
| 45° | 1277.9 | 1281.1 | 1151.8 | 952.2 | 967.4 | 1040.0 | 1066.4 | 937.1 | 887.6 | 897.2 | 1146.2 |
| 47.5° | 1352.9 | 1358.5 | 1181.3 | 1008.9 | 1124.7 | 1297.9 | 1305.8 | 1125.5 | 985.8 | 929.9 | 1172.5 |
| 50° | 1382.5 | 1396.8 | 1223.6 | 1056.0 | 1230.8 | 1550.1 | 1533.3 | 1237.2 | 1053.6 | 968.2 | 1156.6 |
| 52.5° | 1418.4 | 1424.0 | 1259.6 | 1104.7 | 1348.9 | 1734.5 | 1669.8 | 1347.4 | 1112.7 | 998.5 | 1178.9 |
| 55° | 1468.7 | 1467.9 | 1310.6 | 1152.6 | 1377.7 | 1772.0 | 1687.4 | 1408.0 | 1166.2 | 1059.2 | 1227.6 |
| 57.5° | 1495.8 | 1502.2 | 1352.9 | 1197.3 | 1337.8 | 1664.2 | 1533.3 | 1375.3 | 1144.6 | 1076.8 | 1242.8 |
| 60° | 1459.9 | 1455.1 | 1359.3 | 1190.9 | 1226.0 | 1469.5 | 1314.6 | 1202.1 | 1083.1 | 1076.0 | 1191.7 |
| 62.5° | 1355.3 | 1338.6 | 1292.3 | 1155.8 | 1015.3 | 1140.6 | 1091.9 | 975.4 | 938.7 | 1024.1 | 1111.1 |
| 65° | 1185.3 | 1188.5 | 1157.4 | 1088.7 | 886.0 | 908.3 | 880.4 | 785.4 | 759.9 | 916.3 | 932.3 |
| 67.5° | 1004.9 | 998.5 | 1004.1 | 994.5 | 735.9 | 688.8 | 661.7 | 606.6 | 577.9 | 755.9 | 760.7 |
| 70° | 763.1 | 742.3 | 795.0 | 841.3 | 576.3 | 510.8 | 451.8 | 404.7 | 427.0 | 594.7 | 569.9 |
| 72.5° | 478.1 | 500.5 | 561.9 | 683.3 | 424.6 | 333.6 | 252.2 | 254.6 | 300.1 | 466.9 | 409.5 |
| 75° | 279.4 | 285.0 | 343.2 | 495.7 | 285.8 | 215.5 | 180.4 | 180.4 | 224.3 | 347.2 | 287.3 |
| 77.5° | 172.4 | 175.6 | 191.6 | 318.5 | 190.8 | 174.0 | 148.5 | 158.8 | 162.8 | 225.9 | 192.4 |
| 80° | 88.6 | 87.8 | 94.2 | 153.3 | 134.1 | 144.5 | 109.4 | 125.3 | 112.5 | 128.5 | 129.3 |
| 82.5° | 33.5 | 31.1 | 35.1 | 70.2 | 76.6 | 75.8 | 45.5 | 67.0 | 67.0 | 91.8 | 78.2 |
| 85° | 1.6 | 1.6 | 2.4 | 34.3 | 28.7 | 25.5 | 13.6 | 21.6 | 27.9 | 35.1 | 24.7 |
| 87.5° | 0.8 | 0.8 | 1.6 | 1.6 | 3.2 | 3.2 | 2.4 | 4.8 | 4.8 | 7.2 | 4.0 |
| 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: P596087

CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 |
| 2.5° | 252.2 | 221.9 | 253.0 | 212.3 | 205.9 | 215.5 | 206.7 | 183.6 | 190.8 | 159.6 | 184.4 |
| 5° | 303.3 | 270.6 | 250.6 | 224.3 | 191.6 | 166.8 | 159.6 | 153.3 | 162.0 | 145.3 | 162.8 |
| 7.5° | 301.7 | 257.0 | 227.5 | 182.8 | 150.9 | 132.5 | 128.5 | 126.1 | 126.9 | 120.5 | 124.5 |
| 10° | 257.8 | 220.3 | 190.0 | 157.2 | 144.5 | 126.1 | 110.2 | 95.8 | 89.4 | 78.2 | 74.2 |
| 12.5° | 240.3 | 213.1 | 184.4 | 155.6 | 135.7 | 110.9 | 86.2 | 64.7 | 54.3 | 48.7 | 43.1 |
| 15° | 247.4 | 220.3 | 184.4 | 148.5 | 111.7 | 80.6 | 55.1 | 42.3 | 35.1 | 31.9 | 30.3 |
| 17.5° | 291.3 | 251.4 | 186.0 | 131.7 | 89.4 | 55.9 | 40.7 | 31.1 | 27.1 | 27.1 | 25.5 |
| 20° | 396.7 | 308.1 | 179.6 | 107.8 | 63.9 | 42.3 | 31.1 | 27.1 | 25.5 | 24.7 | 23.9 |
| 22.5° | 506.1 | 389.5 | 181.2 | 87.0 | 47.9 | 32.7 | 27.1 | 23.9 | 23.9 | 23.9 | 23.9 |
| 25° | 593.1 | 435.8 | 180.4 | 69.4 | 38.3 | 28.7 | 24.7 | 23.1 | 22.3 | 22.3 | 22.3 |
| 27.5° | 597.8 | 439.0 | 170.0 | 59.9 | 32.7 | 26.3 | 23.9 | 22.3 | 20.8 | 20.8 | 20.8 |
| 30° | 658.5 | 540.4 | 171.6 | 51.1 | 29.5 | 23.9 | 22.3 | 20.8 | 19.2 | 20.0 | 19.2 |
| 32.5° | 768.7 | 581.9 | 171.6 | 42.3 | 27.1 | 23.1 | 20.8 | 19.2 | 18.4 | 18.4 | 18.4 |
| 35° | 843.7 | 649.7 | 159.6 | 39.1 | 25.5 | 22.3 | 20.0 | 18.4 | 17.6 | 16.8 | 16.8 |
| 37.5° | 959.4 | 695.2 | 152.5 | 36.7 | 24.7 | 21.6 | 20.0 | 17.6 | 16.8 | 16.0 | 16.0 |
| 40° | 1040.8 | 745.5 | 142.1 | 32.7 | 25.5 | 21.6 | 19.2 | 16.8 | 15.2 | 14.4 | 14.4 |
| 42.5° | 1143.8 | 811.0 | 136.5 | 29.5 | 23.9 | 20.8 | 18.4 | 16.8 | 14.4 | 13.6 | 13.6 |
| 45° | 1240.4 | 862.0 | 134.1 | 27.1 | 22.3 | 22.3 | 18.4 | 16.0 | 13.6 | 12.8 | 12.0 |
| 47.5° | 1265.9 | 906.0 | 138.9 | 24.7 | 21.6 | 22.3 | 17.6 | 15.2 | 12.8 | 12.0 | 11.2 |
| 50° | 1282.7 | 973.0 | 148.5 | 23.9 | 20.8 | 21.6 | 18.4 | 14.4 | 12.8 | 11.2 | 10.4 |
| 52.5° | 1310.6 | 1029.7 | 163.6 | 23.9 | 20.8 | 20.8 | 19.2 | 15.2 | 12.8 | 11.2 | 10.4 |
| 55° | 1367.3 | 1062.4 | 167.6 | 24.7 | 20.8 | 19.2 | 18.4 | 15.2 | 12.8 | 10.4 | 9.6 |
| 57.5° | 1380.9 | 1051.2 | 157.2 | 24.7 | 20.8 | 19.2 | 17.6 | 15.2 | 12.8 | 10.4 | 8.8 |
| 60° | 1286.7 | 977.0 | 134.9 | 23.9 | 20.0 | 18.4 | 16.8 | 14.4 | 12.0 | 9.6 | 8.0 |
| 62.5° | 1139.8 | 863.6 | 100.6 | 22.3 | 19.2 | 17.6 | 15.2 | 12.8 | 10.4 | 8.0 | 7.2 |
| 65° | 951.4 | 686.4 | 69.4 | 20.0 | 17.6 | 16.0 | 13.6 | 12.0 | 9.6 | 7.2 | 6.4 |
| 67.5° | 723.2 | 529.2 | 47.1 | 18.4 | 16.8 | 15.2 | 13.6 | 12.0 | 9.6 | 7.2 | 5.6 |
| 70° | 529.2 | 352.0 | 31.1 | 16.8 | 16.0 | 15.2 | 12.8 | 10.4 | 8.8 | 6.4 | 5.6 |
| 72.5° | 371.2 | 202.7 | 22.3 | 15.2 | 13.6 | 12.0 | 11.2 | 10.4 | 8.8 | 6.4 | 4.8 |
| 75° | 255.4 | 129.3 | 18.4 | 13.6 | 12.0 | 10.4 | 10.4 | 10.4 | 9.6 | 8.0 | 5.6 |
| 77.5° | 177.2 | 95.8 | 15.2 | 12.8 | 11.2 | 9.6 | 10.4 | 10.4 | 8.0 | 5.6 | 4.0 |
| 80° | 124.5 | 54.3 | 11.2 | 10.4 | 9.6 | 8.8 | 8.0 | 8.0 | 6.4 | 4.0 | 2.4 |
| 82.5° | 76.6 | 24.7 | 8.0 | 8.0 | 7.2 | 4.8 | 7.2 | 7.2 | 6.4 | 4.0 | 2.4 |
| 85° | 20.0 | 6.4 | 5.6 | 6.4 | 5.6 | 4.0 | 5.6 | 6.4 | 5.6 | 4.8 | 2.4 |
| 87.5° | 4.0 | 4.0 | 4.8 | 5.6 | 4.8 | 4.8 | 6.4 | 6.4 | 5.6 | 4.8 | 3.2 |
| 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: P596087
 CATALOG NUMBER: MSA-SA3A-AMB-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 |
| 2.5° | 178.0 | 158.8 | 134.1 | 130.1 | 121.3 | 119.7 | 113.3 | 139.7 | 139.7 | 169.2 | 167.6 |
| 5° | 152.5 | 141.3 | 123.7 | 93.4 | 80.6 | 86.2 | 101.4 | 122.9 | 130.9 | 150.1 | 145.3 |
| 7.5° | 111.7 | 103.8 | 91.8 | 71.8 | 52.7 | 51.9 | 70.2 | 87.8 | 98.2 | 107.8 | 110.9 |
| 10° | 69.4 | 67.8 | 59.1 | 54.3 | 51.1 | 44.7 | 45.5 | 59.9 | 71.0 | 79.0 | 81.4 |
| 12.5° | 43.9 | 43.1 | 42.3 | 40.7 | 40.7 | 38.3 | 39.1 | 46.3 | 53.5 | 59.1 | 59.9 |
| 15° | 30.3 | 30.3 | 31.1 | 32.7 | 34.3 | 34.3 | 34.3 | 37.5 | 40.7 | 42.3 | 44.7 |
| 17.5° | 25.5 | 26.3 | 25.5 | 27.1 | 30.3 | 30.3 | 31.9 | 33.5 | 38.3 | 38.3 | 40.7 |
| 20° | 23.9 | 23.1 | 23.1 | 24.7 | 26.3 | 27.9 | 30.3 | 39.1 | 44.7 | 43.9 | 42.3 |
| 22.5° | 23.1 | 21.6 | 21.6 | 22.3 | 23.9 | 26.3 | 39.1 | 59.9 | 67.0 | 59.9 | 50.3 |
| 25° | 21.6 | 20.8 | 20.0 | 20.8 | 22.3 | 25.5 | 55.1 | 79.0 | 102.2 | 91.8 | 76.6 |
| 27.5° | 20.8 | 19.2 | 19.2 | 19.2 | 20.8 | 25.5 | 60.7 | 95.8 | 138.1 | 155.6 | 146.1 |
| 30° | 19.2 | 17.6 | 17.6 | 18.4 | 18.4 | 22.3 | 51.9 | 98.2 | 165.2 | 195.6 | 214.7 |
| 32.5° | 17.6 | 16.8 | 16.0 | 16.8 | 18.4 | 20.0 | 27.9 | 53.5 | 82.2 | 99.0 | 93.4 |
| 35° | 16.8 | 15.2 | 15.2 | 15.2 | 16.8 | 18.4 | 21.6 | 27.9 | 37.5 | 39.1 | 39.9 |
| 37.5° | 15.2 | 14.4 | 14.4 | 15.2 | 16.0 | 17.6 | 20.0 | 23.9 | 32.7 | 35.9 | 37.5 |
| 40° | 14.4 | 13.6 | 13.6 | 13.6 | 15.2 | 16.0 | 19.2 | 23.1 | 31.1 | 36.7 | 37.5 |
| 42.5° | 12.8 | 12.0 | 12.0 | 12.8 | 13.6 | 14.4 | 17.6 | 22.3 | 30.3 | 35.9 | 37.5 |
| 45° | 12.0 | 11.2 | 11.2 | 12.0 | 12.8 | 13.6 | 16.8 | 20.8 | 30.3 | 35.1 | 37.5 |
| 47.5° | 11.2 | 10.4 | 10.4 | 11.2 | 12.0 | 12.8 | 16.0 | 20.8 | 29.5 | 35.9 | 38.3 |
| 50° | 10.4 | 9.6 | 9.6 | 10.4 | 11.2 | 12.0 | 14.4 | 20.0 | 29.5 | 35.1 | 37.5 |
| 52.5° | 9.6 | 9.6 | 8.8 | 9.6 | 11.2 | 12.0 | 14.4 | 19.2 | 27.9 | 32.7 | 34.3 |
| 55° | 9.6 | 8.8 | 8.8 | 9.6 | 10.4 | 12.0 | 13.6 | 18.4 | 26.3 | 30.3 | 32.7 |
| 57.5° | 8.8 | 8.8 | 8.0 | 8.8 | 9.6 | 11.2 | 12.8 | 17.6 | 25.5 | 29.5 | 31.1 |
| 60° | 8.0 | 8.0 | 8.0 | 8.0 | 9.6 | 10.4 | 12.0 | 16.8 | 23.9 | 27.9 | 30.3 |
| 62.5° | 7.2 | 7.2 | 7.2 | 7.2 | 8.8 | 9.6 | 11.2 | 15.2 | 21.6 | 25.5 | 27.1 |
| 65° | 6.4 | 6.4 | 6.4 | 6.4 | 8.0 | 8.0 | 9.6 | 14.4 | 20.0 | 22.3 | 23.9 |
| 67.5° | 6.4 | 6.4 | 6.4 | 6.4 | 7.2 | 7.2 | 8.8 | 12.8 | 19.2 | 20.8 | 21.6 |
| 70° | 6.4 | 6.4 | 5.6 | 5.6 | 6.4 | 7.2 | 8.8 | 12.0 | 17.6 | 19.2 | 20.0 |
| 72.5° | 6.4 | 6.4 | 6.4 | 4.8 | 4.8 | 6.4 | 8.0 | 11.2 | 16.0 | 16.8 | 17.6 |
| 75° | 7.2 | 7.2 | 6.4 | 4.8 | 4.0 | 5.6 | 7.2 | 10.4 | 14.4 | 14.4 | 15.2 |
| 77.5° | 4.8 | 5.6 | 5.6 | 4.8 | 3.2 | 4.8 | 7.2 | 9.6 | 12.8 | 12.0 | 13.6 |
| 80° | 4.0 | 4.8 | 4.8 | 4.0 | 2.4 | 4.0 | 5.6 | 8.0 | 9.6 | 9.6 | 10.4 |
| 82.5° | 4.0 | 4.8 | 4.0 | 3.2 | 0.8 | 2.4 | 4.0 | 4.8 | 6.4 | 6.4 | 7.2 |
| 85° | 4.0 | 4.0 | 4.0 | 2.4 | 0.0 | 2.4 | 3.2 | 4.0 | 4.8 | 4.0 | 5.6 |
| 87.5° | 4.8 | 4.8 | 4.0 | 3.2 | 0.8 | 2.4 | 2.4 | 3.2 | 3.2 | 1.6 | 4.0 |
| 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: P596087
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| 0° | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 | 194.8 |
| 2.5° | 176.4 | 169.2 | 180.4 | 187.6 | 182.0 | 176.4 | 205.9 | 209.1 | 261.8 | 269.8 |
| 5° | 162.0 | 156.4 | 150.9 | 146.9 | 162.0 | 197.2 | 234.7 | 242.7 | 297.7 | 316.9 |
| 7.5° | 116.5 | 122.9 | 126.1 | 125.3 | 136.5 | 185.2 | 239.5 | 265.8 | 301.7 | 300.9 |
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| 12.5° | 70.2 | 87.8 | 102.2 | 125.3 | 142.1 | 158.8 | 205.9 | 226.7 | 244.2 | 253.0 |
| 15° | 51.1 | 60.7 | 78.2 | 106.2 | 127.7 | 157.2 | 204.3 | 253.8 | 273.8 | 287.3 |
| 17.5° | 44.7 | 48.7 | 56.7 | 82.2 | 117.3 | 159.6 | 215.5 | 313.7 | 336.8 | 351.2 |
| 20° | 43.1 | 46.3 | 53.5 | 70.2 | 105.4 | 144.5 | 251.4 | 376.7 | 400.7 | 435.0 |
| 22.5° | 47.1 | 49.5 | 57.5 | 71.0 | 99.8 | 158.0 | 316.1 | 519.6 | 593.9 | 624.2 |
| 25° | 55.9 | 62.3 | 88.6 | 113.3 | 139.7 | 196.4 | 364.0 | 652.9 | 730.3 | 773.5 |
| 27.5° | 144.5 | 154.8 | 170.0 | 162.0 | 169.2 | 186.8 | 312.9 | 593.1 | 669.7 | 697.6 |
| 30° | 208.3 | 175.6 | 138.1 | 111.7 | 111.7 | 122.9 | 290.5 | 609.8 | 678.5 | 699.2 |
| 32.5° | 79.8 | 60.7 | 54.3 | 55.9 | 76.6 | 105.4 | 301.7 | 703.2 | 748.7 | 775.0 |
| 35° | 39.1 | 41.5 | 45.5 | 52.7 | 71.8 | 110.2 | 318.5 | 767.9 | 827.7 | 842.1 |
| 37.5° | 38.3 | 39.9 | 45.5 | 51.9 | 73.4 | 117.3 | 322.5 | 897.2 | 958.6 | 967.4 |
| 40° | 39.9 | 40.7 | 44.7 | 51.9 | 71.8 | 127.7 | 344.8 | 993.8 | 1088.7 | 1083.9 |
| 42.5° | 40.7 | 43.1 | 46.3 | 51.1 | 68.6 | 133.3 | 367.2 | 1072.0 | 1186.9 | 1198.1 |
| 45° | 42.3 | 44.7 | 47.9 | 51.9 | 64.7 | 136.5 | 391.1 | 1135.8 | 1290.7 | 1277.9 |
| 47.5° | 43.9 | 47.1 | 50.3 | 51.9 | 60.7 | 136.5 | 433.4 | 1199.7 | 1355.3 | 1352.9 |
| 50° | 43.9 | 47.1 | 51.9 | 50.3 | 59.1 | 129.3 | 484.5 | 1249.2 | 1400.0 | 1382.5 |
| 52.5° | 40.7 | 45.5 | 51.9 | 49.5 | 58.3 | 128.5 | 520.4 | 1283.5 | 1432.0 | 1418.4 |
| 55° | 37.5 | 45.5 | 51.1 | 47.1 | 57.5 | 131.7 | 561.9 | 1303.5 | 1479.1 | 1468.7 |
| 57.5° | 37.5 | 44.7 | 49.5 | 46.3 | 57.5 | 142.9 | 581.1 | 1287.5 | 1492.6 | 1495.8 |
| 60° | 35.9 | 45.5 | 44.7 | 44.7 | 61.5 | 145.3 | 574.7 | 1177.3 | 1425.6 | 1459.9 |
| 62.5° | 32.7 | 44.7 | 40.7 | 42.3 | 61.5 | 146.1 | 540.4 | 1043.2 | 1282.7 | 1355.3 |
| 65° | 29.5 | 35.9 | 38.3 | 38.3 | 59.1 | 139.7 | 457.4 | 878.8 | 1127.1 | 1185.3 |
| 67.5° | 25.5 | 31.1 | 34.3 | 33.5 | 55.9 | 130.9 | 356.8 | 674.5 | 937.1 | 1004.9 |
| 70° | 23.1 | 27.1 | 29.5 | 29.5 | 49.5 | 119.7 | 264.2 | 476.5 | 694.4 | 763.1 |
| 72.5° | 20.0 | 23.9 | 23.9 | 23.1 | 41.5 | 94.2 | 191.6 | 276.2 | 409.5 | 478.1 |
| 75° | 16.8 | 19.2 | 19.2 | 17.6 | 27.9 | 62.3 | 103.0 | 178.8 | 249.8 | 279.4 |
| 77.5° | 15.2 | 16.0 | 14.4 | 13.6 | 19.2 | 32.7 | 53.5 | 129.3 | 166.8 | 172.4 |
| 80° | 12.8 | 12.0 | 11.2 | 10.4 | 13.6 | 16.8 | 23.9 | 65.5 | 83.8 | 88.6 |
| 82.5° | 8.0 | 8.0 | 7.2 | 6.4 | 9.6 | 11.2 | 12.0 | 28.7 | 29.5 | 33.5 |
| 85° | 5.6 | 4.8 | 4.8 | 2.4 | 5.6 | 6.4 | 4.8 | 1.6 | 1.6 | 1.6 |
| 87.5° | 4.0 | 3.2 | 3.2 | 0.8 | 2.4 | 2.4 | 1.6 | 1.6 | 0.8 | 0.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)