

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: P400978

Luminaire Tested: **ENT-SA1A-740-U-T4W-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400978
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-740-U-T4W-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2039 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B0 - U0 - G1

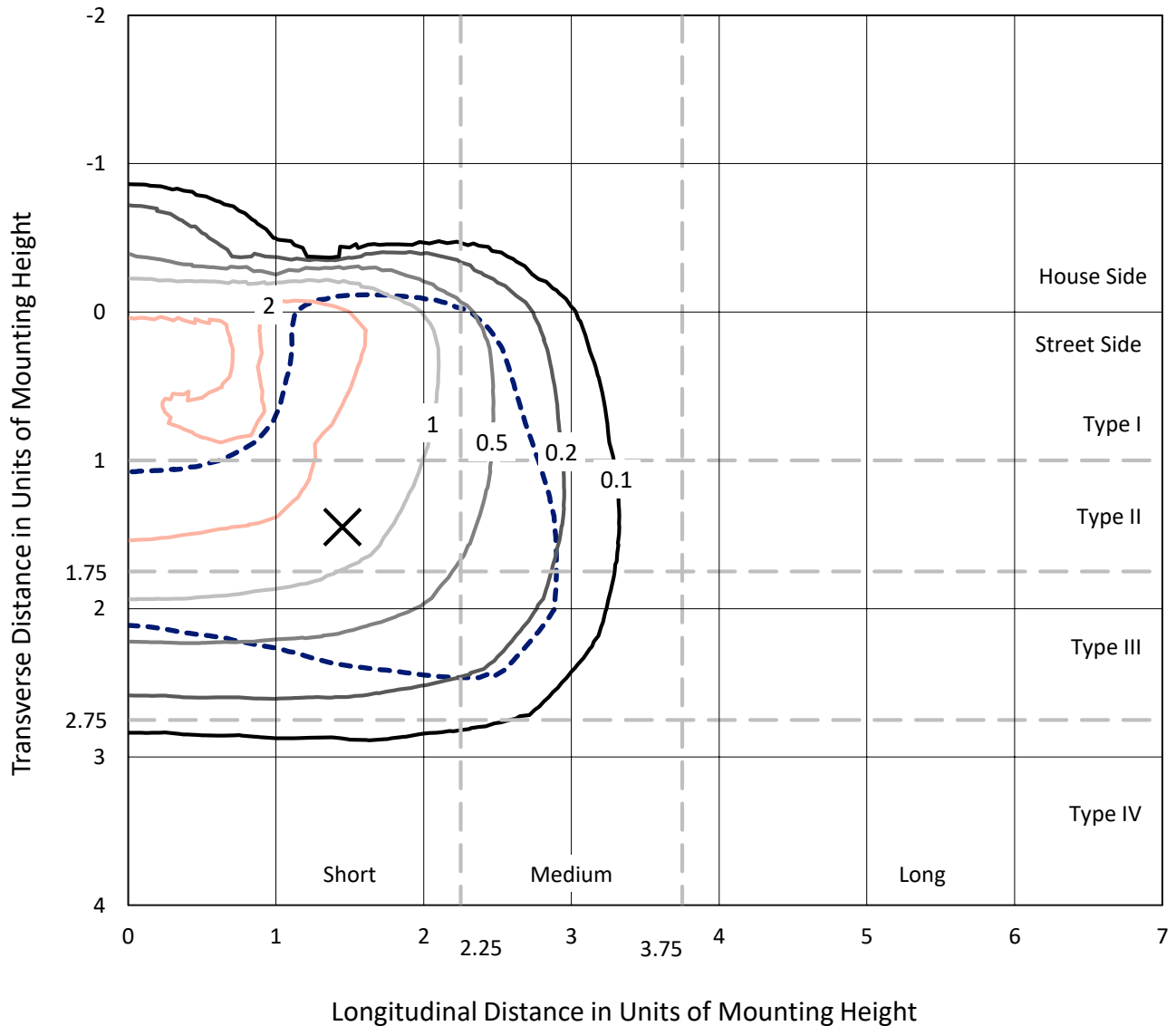
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P400978
 CATALOG NUMBER: ENT-SA1A-740-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

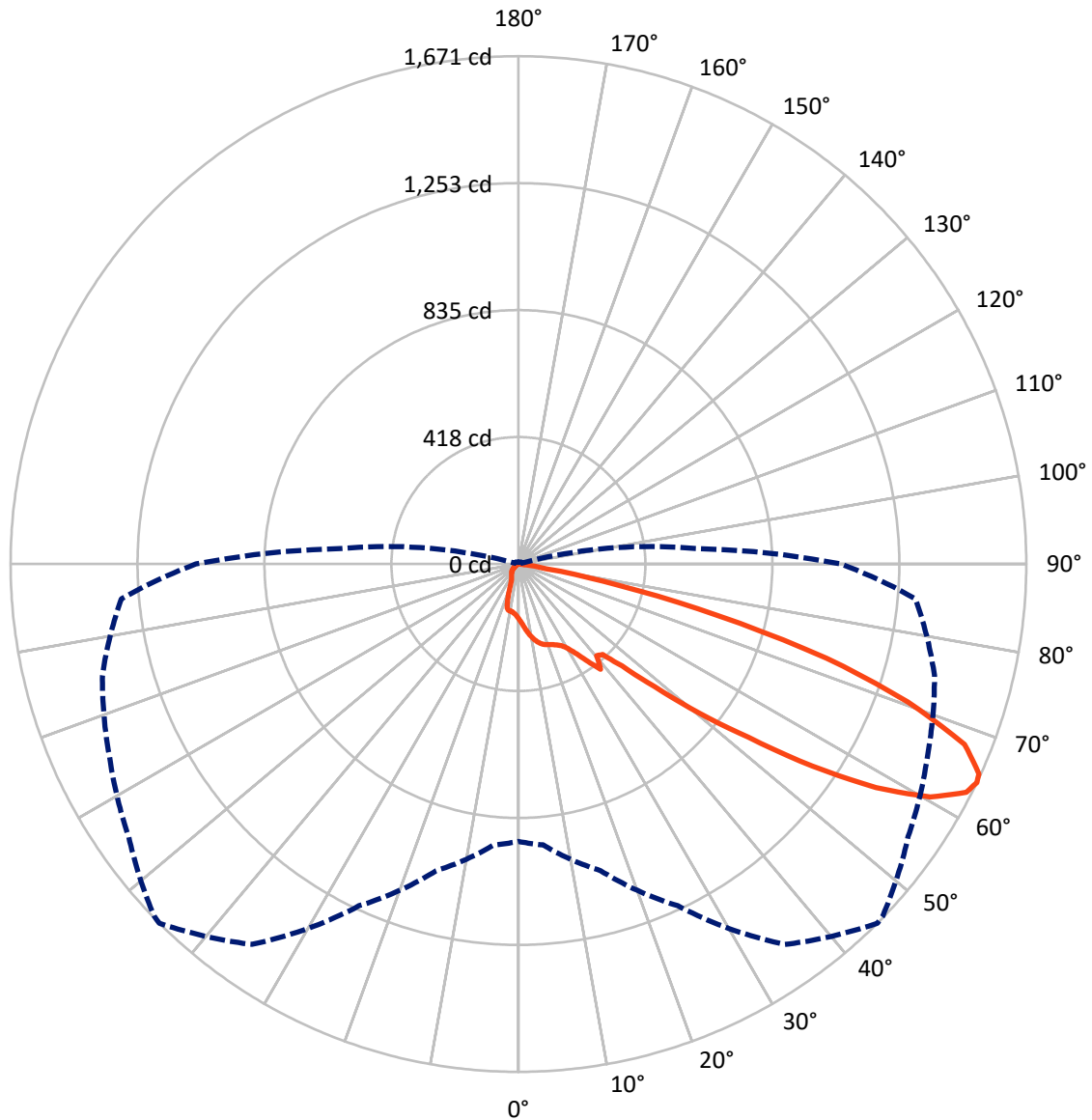
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Short - Full Cutoff

REPORT NUMBER: P400978
CATALOG NUMBER: ENT-SA1A-740-U-T4W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

REPORT NUMBER: P400978

CATALOG NUMBER: ENT-SA1A-740-U-T4W-HSS

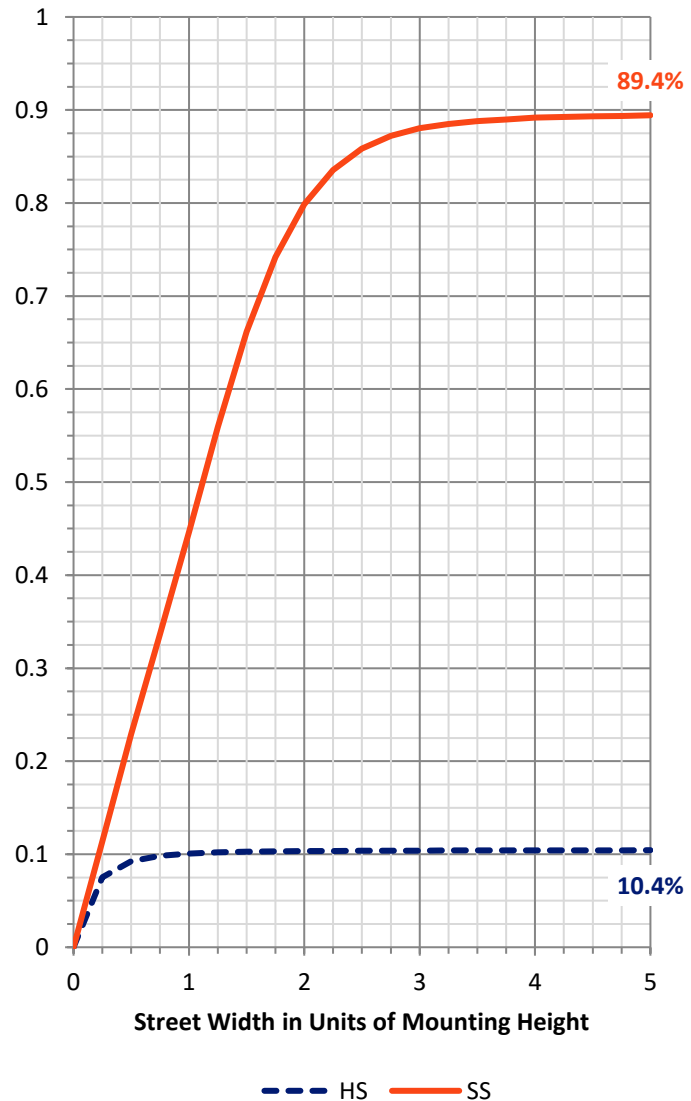
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 215.2 | 0.0 | 215.2 |
| | % Fixture | 10.6 | 0.0 | 10.6 |
| Street Side | Lumens | 1823.9 | 0.0 | 1823.9 |
| | % Fixture | 89.4 | 0.0 | 89.4 |
| Total | Lumens | 2039.0 | 0.0 | 2039.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 18.3 | 0.9 |
| 10°-20° | 57.2 | 2.8 |
| 20°-30° | 93.0 | 4.6 |
| 30°-40° | 147.8 | 7.2 |
| 40°-50° | 281.6 | 13.8 |
| 50°-60° | 580.2 | 28.5 |
| 60°-70° | 648.0 | 31.8 |
| 70°-80° | 204.7 | 10.0 |
| 80°-90° | 8.3 | 0.4 |
| 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° | 2039.0 | 100.0 |
| 0°-180° | 2039.0 | 100.0 |



REPORT NUMBER: P400978

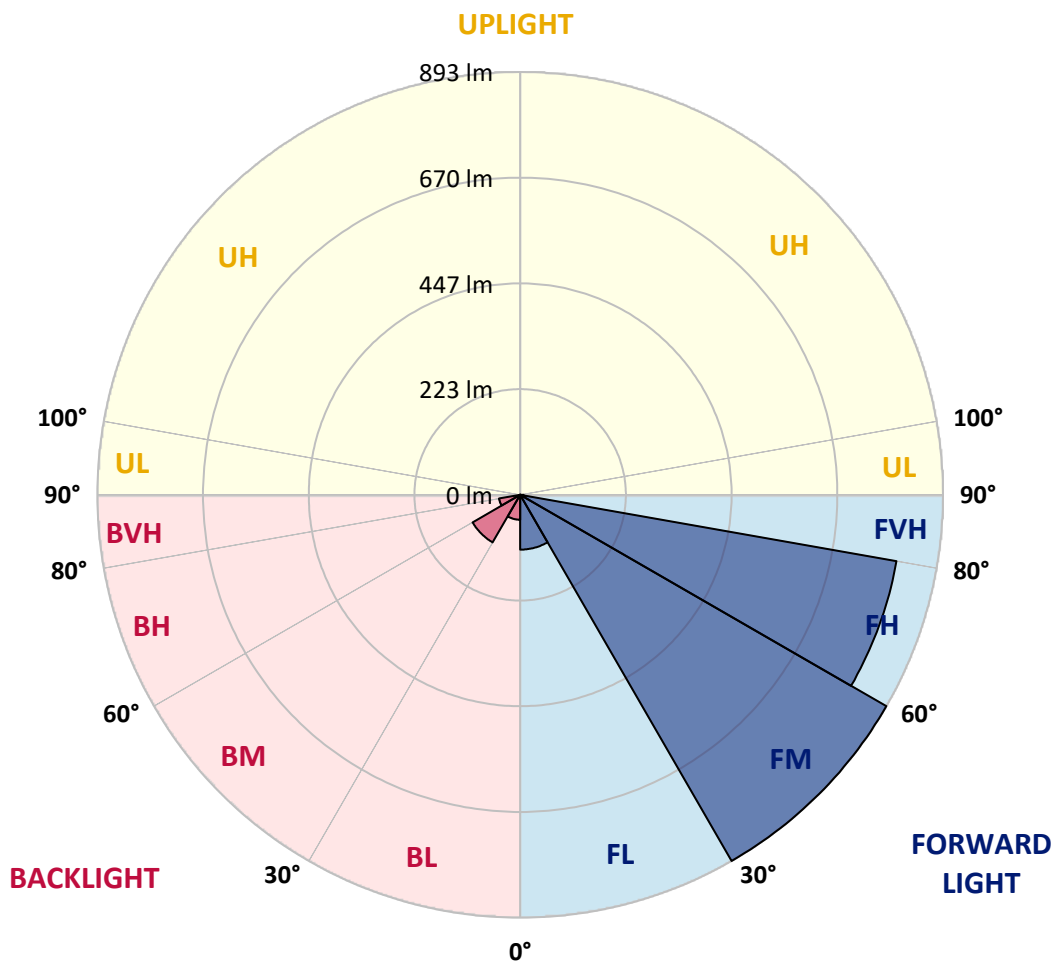
CATALOG NUMBER: ENT-SA1A-740-U-T4W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 115.8 | 5.7 | | | |
| FM | (30°-60°) | 893.4 | 43.8 | | | |
| FH | (60°-80°) | 807.3 | 39.6 | | | G1/1800 |
| FVH | (80°-90°) | 7.3 | 0.4 | | | G0/10 |
| BL | (0°-30°) | 52.7 | 2.6 | B0/110 | | |
| BM | (30°-60°) | 116.1 | 5.7 | B0/220 | | |
| BH | (60°-80°) | 45.3 | 2.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.0 | 0.0 | | | 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: P400978

CATALOG NUMBER: ENT-SA1A-740-U-T4W-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 |
| 2.5° | 199.4 | 200.2 | 199.0 | 197.4 | 195.9 | 193.2 | 193.6 | 190.1 | 187.3 | 185.4 | 182.3 |
| 5° | 224.7 | 224.3 | 221.9 | 218.4 | 214.9 | 209.9 | 209.1 | 203.7 | 197.8 | 191.6 | 185.8 |
| 7.5° | 250.3 | 249.1 | 246.8 | 242.1 | 235.5 | 228.9 | 227.0 | 219.2 | 210.7 | 201.3 | 191.2 |
| 10° | 271.3 | 270.5 | 267.8 | 262.7 | 255.0 | 244.9 | 244.9 | 234.0 | 222.7 | 211.4 | 199.4 |
| 12.5° | 288.4 | 287.6 | 284.5 | 278.3 | 269.0 | 260.0 | 258.9 | 249.1 | 236.7 | 223.5 | 208.7 |
| 15° | 298.9 | 298.1 | 294.6 | 287.6 | 279.5 | 271.3 | 270.1 | 260.8 | 249.5 | 234.4 | 217.3 |
| 17.5° | 301.6 | 300.8 | 298.1 | 291.9 | 285.7 | 278.7 | 277.1 | 269.0 | 259.2 | 243.7 | 226.2 |
| 20° | 300.4 | 298.9 | 297.3 | 292.3 | 287.2 | 282.6 | 281.8 | 276.0 | 267.4 | 254.2 | 235.5 |
| 22.5° | 297.3 | 295.8 | 294.6 | 291.1 | 288.4 | 288.0 | 287.2 | 283.7 | 278.3 | 267.0 | 249.5 |
| 25° | 296.2 | 295.0 | 293.8 | 291.5 | 291.1 | 295.0 | 294.6 | 294.2 | 291.9 | 282.2 | 263.9 |
| 27.5° | 302.8 | 302.4 | 299.7 | 295.8 | 297.7 | 304.3 | 304.7 | 306.7 | 305.1 | 298.9 | 284.9 |
| 30° | 326.1 | 324.2 | 317.9 | 309.4 | 314.4 | 323.0 | 324.5 | 330.8 | 331.1 | 331.9 | 312.9 |
| 32.5° | 357.6 | 354.5 | 344.0 | 333.1 | 336.2 | 352.1 | 352.5 | 362.2 | 382.8 | 370.0 | 328.0 |
| 35° | 379.3 | 375.5 | 359.5 | 353.7 | 369.2 | 394.5 | 398.0 | 417.8 | 419.4 | 372.7 | 326.9 |
| 37.5° | 440.4 | 434.5 | 405.4 | 370.0 | 385.2 | 439.6 | 443.5 | 440.0 | 407.3 | 368.8 | 343.6 |
| 40° | 522.0 | 516.5 | 490.5 | 431.0 | 388.3 | 396.4 | 398.4 | 408.9 | 415.1 | 396.1 | 397.2 |
| 42.5° | 628.1 | 621.1 | 594.3 | 521.6 | 436.9 | 406.9 | 410.8 | 432.2 | 473.0 | 482.0 | 527.8 |
| 45° | 736.5 | 732.6 | 705.4 | 626.9 | 525.5 | 478.5 | 480.4 | 506.4 | 579.5 | 635.9 | 674.7 |
| 47.5° | 842.6 | 843.4 | 820.1 | 753.6 | 654.5 | 602.4 | 600.1 | 633.9 | 726.4 | 766.5 | 806.1 |
| 50° | 992.3 | 991.5 | 949.9 | 908.7 | 831.4 | 769.6 | 765.7 | 784.7 | 873.7 | 888.5 | 949.9 |
| 52.5° | 1162.5 | 1161.7 | 1099.2 | 1079.7 | 1047.1 | 947.6 | 958.1 | 941.7 | 1005.9 | 1032.3 | 1119.4 |
| 55° | 1243.4 | 1236.4 | 1209.9 | 1234.4 | 1273.3 | 1173.4 | 1171.8 | 1109.7 | 1159.8 | 1182.3 | 1263.6 |
| 57.5° | 1235.2 | 1237.9 | 1263.2 | 1344.4 | 1471.9 | 1388.3 | 1390.7 | 1275.2 | 1304.4 | 1318.4 | 1377.8 |
| 60° | 1188.9 | 1190.9 | 1249.6 | 1384.8 | 1571.0 | 1556.6 | 1548.5 | 1429.9 | 1410.9 | 1405.0 | 1433.4 |
| 62.5° | 1056.8 | 1057.6 | 1152.8 | 1326.5 | 1570.2 | 1653.8 | 1646.0 | 1538.7 | 1479.3 | 1442.0 | 1390.3 |
| 64° | 913.0 | 927.8 | 1044.4 | 1240.6 | 1527.9 | 1670.9 | 1666.6 | 1565.2 | 1485.5 | 1417.1 | 1311.0 |
| 65° | 794.8 | 817.0 | 958.1 | 1164.5 | 1480.1 | 1665.1 | 1660.0 | 1560.5 | 1476.9 | 1370.4 | 1229.0 |
| 67.5° | 542.2 | 553.9 | 680.6 | 916.5 | 1297.8 | 1583.1 | 1581.5 | 1500.7 | 1384.1 | 1183.9 | 964.3 |
| 70° | 319.9 | 328.4 | 422.1 | 639.7 | 997.3 | 1360.0 | 1380.6 | 1351.4 | 1148.9 | 850.4 | 614.1 |
| 72.5° | 99.5 | 104.6 | 186.2 | 355.2 | 653.7 | 1059.5 | 1086.3 | 1065.3 | 836.4 | 531.3 | 340.5 |
| 75° | 37.3 | 38.9 | 61.4 | 154.3 | 325.3 | 677.5 | 685.6 | 710.1 | 509.5 | 280.6 | 148.9 |
| 77.5° | 20.6 | 21.0 | 30.3 | 57.9 | 143.0 | 332.7 | 340.5 | 337.4 | 270.9 | 132.5 | 47.4 |
| 80° | 10.1 | 10.5 | 14.8 | 25.7 | 55.6 | 94.1 | 111.5 | 147.3 | 95.6 | 65.3 | 15.2 |
| 82.5° | 3.5 | 3.1 | 6.6 | 11.7 | 18.7 | 25.3 | 28.4 | 40.8 | 40.0 | 35.8 | 5.4 |
| 85° | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.8 | 0.8 | 5.1 | 10.1 | 11.7 | 1.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 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 | 0.0 |



REPORT NUMBER: P400978

CATALOG NUMBER: ENT-SA1A-740-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 | 180.7 |
| 2.5° | 180.7 | 180.0 | 177.2 | 174.5 | 172.6 | 170.2 | 169.8 | 168.3 | 167.9 | 167.9 | 167.9 |
| 5° | 182.7 | 180.3 | 175.3 | 171.0 | 167.1 | 163.6 | 162.1 | 160.5 | 159.4 | 159.0 | 159.0 |
| 7.5° | 187.0 | 183.5 | 175.3 | 169.1 | 163.2 | 159.0 | 156.6 | 155.1 | 153.9 | 153.9 | 153.9 |
| 10° | 193.2 | 187.7 | 177.6 | 169.1 | 162.1 | 156.6 | 153.1 | 150.8 | 149.2 | 148.9 | 149.2 |
| 12.5° | 200.9 | 193.9 | 181.5 | 171.0 | 162.9 | 155.9 | 148.5 | 134.9 | 125.9 | 120.9 | 120.1 |
| 15° | 208.3 | 200.2 | 185.8 | 173.7 | 164.0 | 148.5 | 121.7 | 100.7 | 86.7 | 82.4 | 81.6 |
| 17.5° | 216.5 | 207.9 | 191.6 | 177.6 | 159.7 | 119.7 | 86.7 | 69.2 | 66.5 | 67.2 | 67.2 |
| 20° | 226.6 | 216.5 | 197.8 | 181.5 | 137.6 | 85.1 | 63.4 | 61.0 | 61.8 | 63.4 | 63.4 |
| 22.5° | 238.3 | 227.4 | 206.4 | 179.2 | 104.9 | 62.2 | 57.9 | 58.3 | 59.1 | 60.6 | 60.6 |
| 25° | 253.4 | 242.1 | 215.7 | 161.7 | 73.1 | 54.4 | 54.8 | 55.2 | 56.4 | 57.9 | 58.3 |
| 27.5° | 276.0 | 262.4 | 227.0 | 135.6 | 55.2 | 50.5 | 50.9 | 52.1 | 53.2 | 55.2 | 55.2 |
| 30° | 300.1 | 283.3 | 237.1 | 104.6 | 48.2 | 46.3 | 46.6 | 47.8 | 49.7 | 51.3 | 52.1 |
| 32.5° | 310.5 | 295.8 | 239.0 | 71.5 | 44.7 | 42.8 | 42.0 | 43.1 | 44.7 | 46.3 | 46.6 |
| 35° | 316.4 | 310.2 | 229.7 | 51.7 | 42.0 | 39.6 | 38.1 | 37.7 | 38.1 | 39.3 | 39.3 |
| 37.5° | 345.1 | 340.9 | 211.0 | 44.3 | 39.3 | 36.9 | 34.6 | 32.6 | 31.9 | 31.5 | 31.9 |
| 40° | 400.3 | 391.0 | 186.6 | 40.8 | 36.9 | 34.2 | 31.1 | 28.0 | 25.3 | 24.1 | 24.1 |
| 42.5° | 522.0 | 475.0 | 151.6 | 38.5 | 34.6 | 31.5 | 26.8 | 22.5 | 19.4 | 18.7 | 18.7 |
| 45° | 653.0 | 579.1 | 113.9 | 36.5 | 32.3 | 28.4 | 22.5 | 17.9 | 15.2 | 14.4 | 14.4 |
| 47.5° | 778.9 | 656.1 | 79.7 | 34.2 | 29.5 | 24.9 | 18.7 | 14.4 | 12.4 | 12.0 | 12.0 |
| 50° | 911.0 | 722.9 | 55.6 | 31.5 | 26.8 | 21.4 | 15.2 | 11.7 | 10.5 | 10.5 | 10.5 |
| 52.5° | 1039.7 | 772.3 | 40.8 | 28.8 | 23.3 | 17.9 | 12.8 | 10.5 | 9.7 | 9.7 | 9.7 |
| 55° | 1136.9 | 791.3 | 31.1 | 25.3 | 19.8 | 15.2 | 11.7 | 10.1 | 9.3 | 8.9 | 8.9 |
| 57.5° | 1201.8 | 775.4 | 25.3 | 21.0 | 16.7 | 13.2 | 10.5 | 9.3 | 8.6 | 8.2 | 8.2 |
| 60° | 1200.2 | 722.5 | 20.2 | 17.1 | 13.6 | 11.3 | 9.7 | 8.6 | 7.8 | 7.4 | 7.4 |
| 62.5° | 1129.9 | 636.6 | 15.9 | 13.6 | 11.3 | 9.7 | 8.6 | 7.8 | 7.0 | 6.6 | 6.2 |
| 64° | 1061.1 | 583.4 | 13.6 | 11.7 | 10.1 | 8.9 | 7.8 | 7.0 | 6.2 | 5.4 | 5.4 |
| 65° | 986.4 | 532.9 | 12.4 | 10.5 | 8.9 | 8.2 | 7.4 | 6.6 | 5.4 | 4.7 | 4.7 |
| 67.5° | 750.1 | 394.5 | 10.1 | 8.2 | 7.0 | 6.6 | 5.8 | 5.1 | 3.9 | 3.1 | 3.1 |
| 70° | 487.0 | 255.4 | 8.6 | 6.6 | 5.8 | 5.8 | 5.4 | 4.3 | 3.1 | 2.7 | 2.3 |
| 72.5° | 249.5 | 127.1 | 7.0 | 5.4 | 5.1 | 5.1 | 4.7 | 3.5 | 2.7 | 2.3 | 1.9 |
| 75° | 105.7 | 51.7 | 5.8 | 4.7 | 4.3 | 3.9 | 3.5 | 3.1 | 2.3 | 1.9 | 1.9 |
| 77.5° | 36.9 | 19.4 | 5.4 | 4.7 | 3.5 | 3.1 | 3.1 | 3.1 | 3.1 | 2.7 | 2.3 |
| 80° | 12.4 | 7.4 | 3.5 | 3.5 | 3.9 | 4.3 | 4.3 | 3.9 | 4.3 | 3.5 | 2.7 |
| 82.5° | 5.1 | 2.7 | 1.2 | 1.6 | 2.7 | 3.1 | 3.5 | 3.5 | 3.5 | 2.7 | 2.3 |
| 85° | 1.2 | 0.8 | 0.8 | 1.2 | 1.2 | 1.6 | 1.6 | 1.9 | 1.9 | 1.6 | 1.6 |
| 87.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 1.2 | 0.8 | 1.2 | 1.2 | 1.2 |
| 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)