

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: P401482

Luminaire Tested: **ENV-SA1D-735-U-T4FT**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401482  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1D-735-U-T4FT  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3500K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5078 lumens  
Efficiency: N/A  
Efficacy: 117.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 43.1  
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

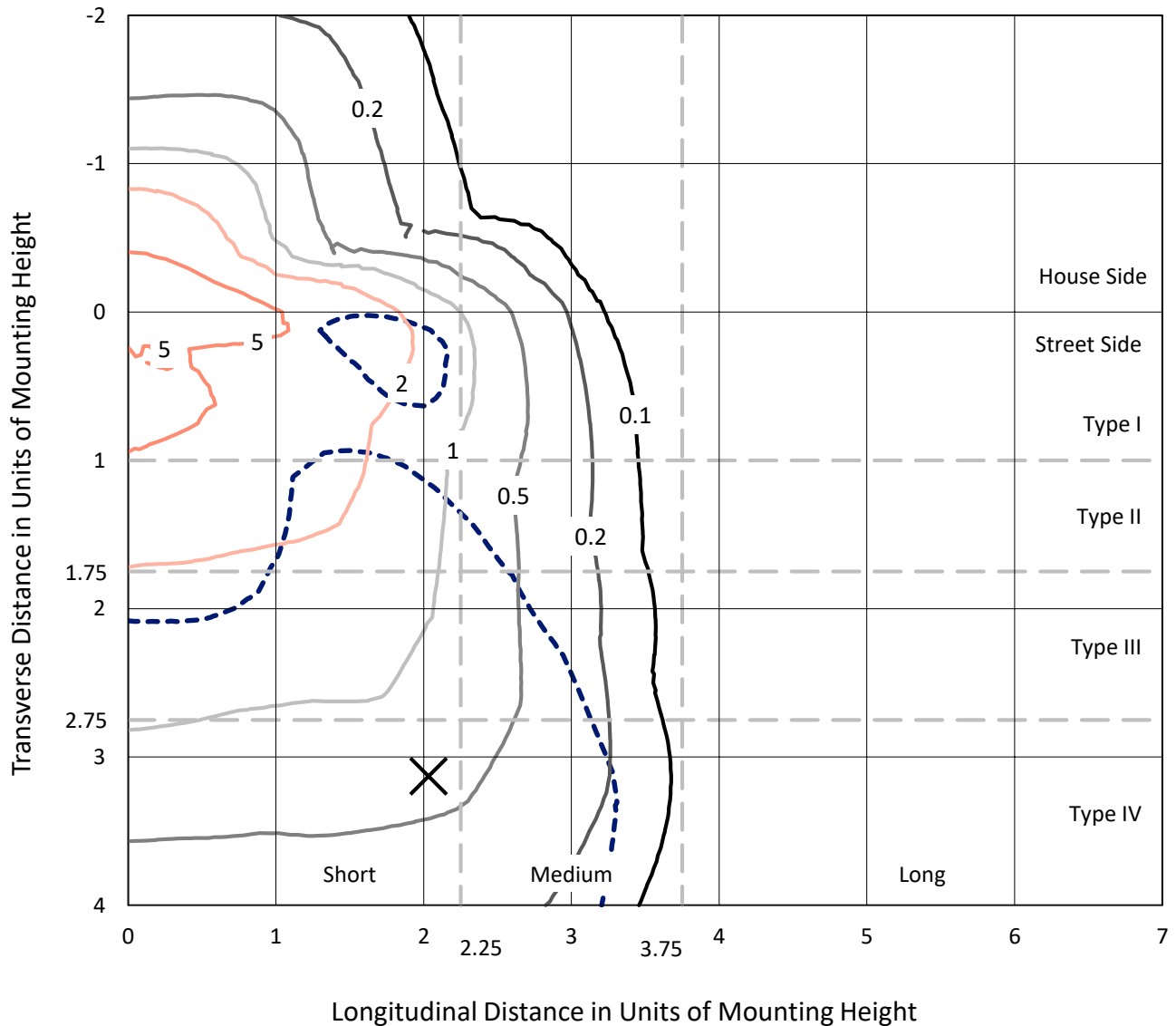


REPORT NUMBER: P401482

CATALOG NUMBER: ENV-SA1D-735-U-T4FT

### Iso-Footcandle Lines of Horizontal Illumination

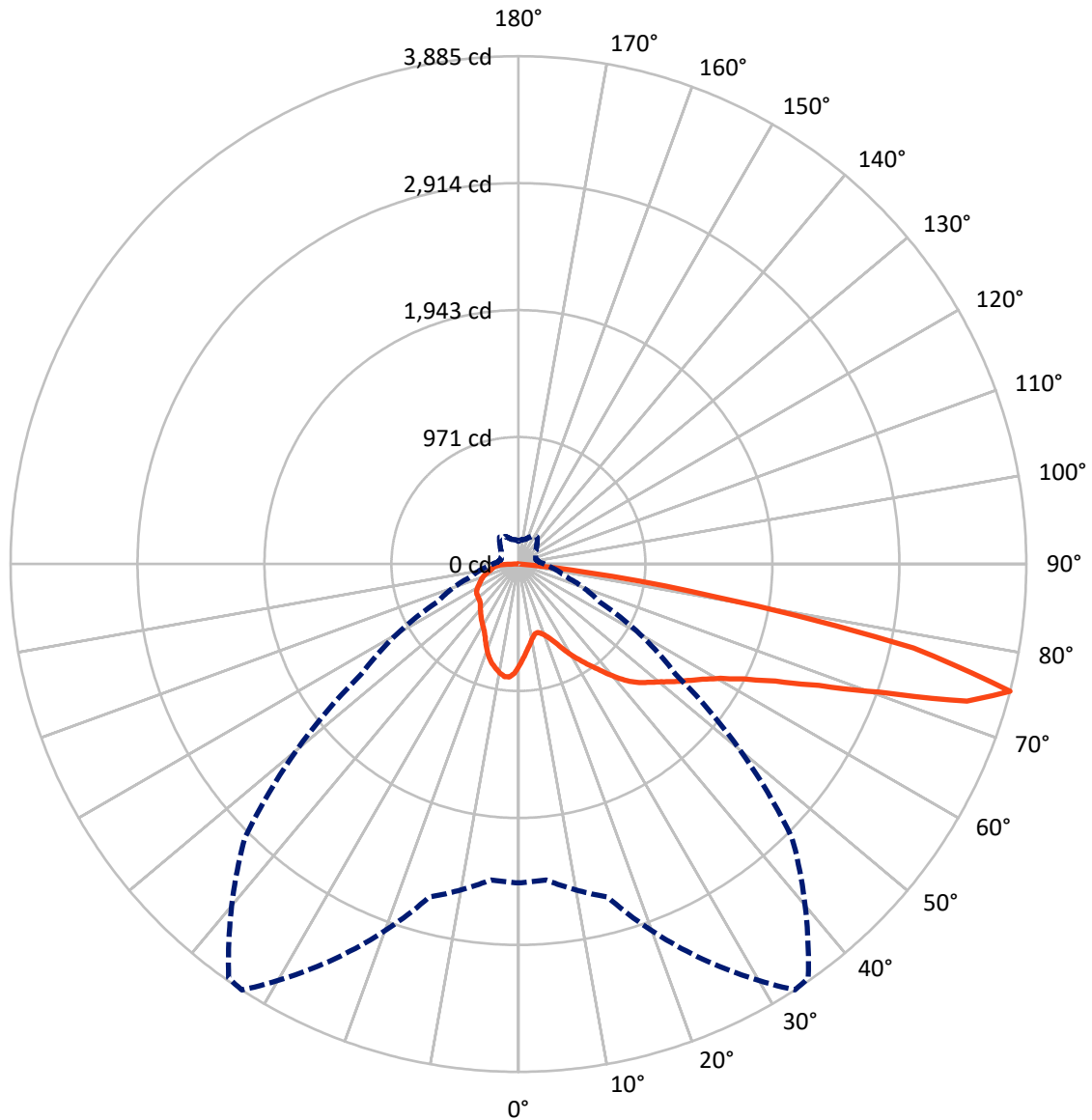
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P401482  
CATALOG NUMBER: ENV-SA1D-735-U-T4FT

### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P401482

CATALOG NUMBER: ENV-SA1D-735-U-T4FT

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1233.6   | 0.0    | 1233.6 |
|                    | % Fixture | 24.3     | 0.0    | 24.3   |
| <b>Street Side</b> | Lumens    | 3844.4   | 0.0    | 3844.4 |
|                    | % Fixture | 75.7     | 0.0    | 75.7   |
| <b>Total</b>       | Lumens    | 5078.0   | 0.0    | 5078.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 72.7   | 1.4       |
| 10°-20°   | 204.5  | 4.0       |
| 20°-30°   | 339.9  | 6.7       |
| 30°-40°   | 507.1  | 10.0      |
| 40°-50°   | 708.4  | 14.0      |
| 50°-60°   | 945.7  | 18.6      |
| 60°-70°   | 1172.5 | 23.1      |
| 70°-80°   | 1013.8 | 20.0      |
| 80°-90°   | 113.3  | 2.2       |
| 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°    | 5078.0 | 100.0     |
| 0°-180°   | 5078.0 | 100.0     |



REPORT NUMBER: P401482

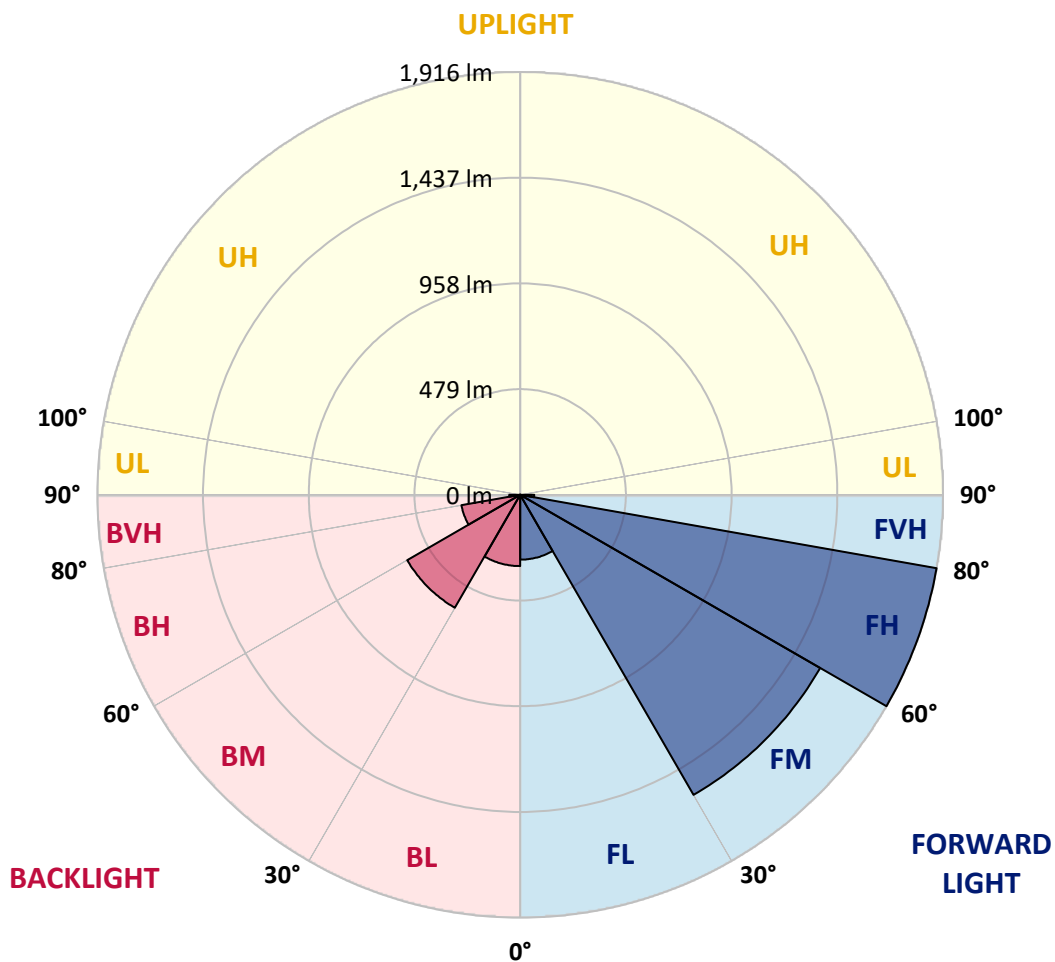
CATALOG NUMBER: ENV-SA1D-735-U-T4FT

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 294.0  | 5.8       |                         |      |         |
| FM   | (30°-60°)   | 1570.1 | 30.9      |                         |      |         |
| FH   | (60°-80°)   | 1916.2 | 37.7      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 64.1   | 1.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 323.1  | 6.4       | B1/500                  |      |         |
| BM   | (30°-60°)   | 591.1  | 11.6      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 270.1  | 5.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 49.3   | 1.0       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type IV Short





REPORT NUMBER: P401482

CATALOG NUMBER: ENV-SA1D-735-U-T4FT

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 33°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  | 778.1  |
| 2.5°  | 705.7  | 707.2  | 711.8  | 717.0  | 720.0  | 720.0  | 728.3  | 738.1  | 750.2  | 760.8  | 772.1  |
| 5°    | 646.9  | 649.2  | 652.9  | 659.7  | 668.0  | 669.5  | 686.1  | 703.5  | 725.3  | 748.7  | 771.3  |
| 7.5°  | 588.9  | 593.4  | 600.9  | 610.0  | 622.8  | 625.8  | 649.2  | 672.5  | 702.7  | 738.1  | 775.1  |
| 10°   | 544.4  | 547.4  | 551.2  | 564.0  | 579.8  | 585.1  | 616.0  | 645.4  | 686.9  | 730.6  | 779.6  |
| 12.5° | 532.3  | 532.3  | 532.3  | 538.3  | 551.2  | 555.7  | 588.1  | 625.8  | 672.5  | 725.3  | 786.4  |
| 15°   | 549.6  | 548.9  | 540.6  | 536.1  | 543.6  | 547.4  | 575.3  | 612.2  | 665.0  | 726.8  | 799.2  |
| 17.5° | 588.9  | 586.6  | 567.0  | 551.9  | 557.2  | 559.4  | 577.5  | 609.2  | 662.7  | 732.9  | 818.1  |
| 20°   | 640.1  | 634.8  | 604.7  | 582.1  | 581.3  | 582.8  | 596.4  | 618.3  | 666.5  | 743.4  | 838.4  |
| 22.5° | 708.0  | 705.0  | 660.5  | 625.8  | 619.8  | 619.8  | 625.8  | 639.4  | 676.3  | 755.5  | 866.3  |
| 25°   | 795.4  | 787.1  | 733.6  | 686.9  | 673.3  | 669.5  | 668.8  | 668.8  | 693.7  | 773.6  | 901.0  |
| 27.5° | 885.2  | 875.4  | 821.1  | 757.7  | 739.6  | 732.9  | 720.8  | 711.8  | 716.3  | 793.2  | 942.5  |
| 30°   | 965.8  | 952.3  | 906.3  | 840.7  | 813.5  | 803.0  | 781.1  | 762.3  | 750.2  | 820.3  | 997.5  |
| 32.5° | 1010.3 | 1005.0 | 973.4  | 913.8  | 882.9  | 878.4  | 842.2  | 817.3  | 796.2  | 855.8  | 1071.4 |
| 35°   | 1069.9 | 1063.1 | 1042.7 | 993.7  | 956.8  | 945.5  | 918.3  | 888.9  | 855.0  | 903.3  | 1164.9 |
| 37.5° | 1124.9 | 1121.2 | 1113.6 | 1079.7 | 1040.5 | 1029.2 | 1004.3 | 973.4  | 927.4  | 973.4  | 1269.7 |
| 40°   | 1180.7 | 1176.2 | 1173.2 | 1161.1 | 1133.2 | 1125.7 | 1113.6 | 1077.4 | 1015.6 | 1050.3 | 1373.0 |
| 42.5° | 1262.2 | 1252.4 | 1220.7 | 1219.9 | 1222.2 | 1228.2 | 1229.0 | 1189.0 | 1112.1 | 1146.0 | 1463.5 |
| 45°   | 1368.5 | 1341.3 | 1270.4 | 1268.2 | 1294.6 | 1310.4 | 1348.9 | 1314.9 | 1212.4 | 1244.1 | 1564.5 |
| 47.5° | 1422.7 | 1394.9 | 1321.7 | 1317.2 | 1351.9 | 1375.2 | 1470.3 | 1437.1 | 1316.4 | 1354.1 | 1669.3 |
| 50°   | 1449.1 | 1431.0 | 1367.0 | 1381.3 | 1416.7 | 1439.3 | 1585.6 | 1559.2 | 1424.3 | 1473.3 | 1801.2 |
| 52.5° | 1486.1 | 1455.9 | 1410.7 | 1440.8 | 1493.6 | 1517.0 | 1688.9 | 1684.4 | 1515.5 | 1602.9 | 1946.0 |
| 55°   | 1473.3 | 1457.4 | 1465.7 | 1506.4 | 1572.8 | 1607.5 | 1793.0 | 1793.0 | 1608.2 | 1741.7 | 2089.3 |
| 57.5° | 1483.8 | 1473.3 | 1541.9 | 1578.1 | 1661.8 | 1711.5 | 1918.1 | 1884.9 | 1686.6 | 1857.8 | 2185.8 |
| 60°   | 1573.5 | 1543.4 | 1596.9 | 1668.5 | 1776.4 | 1824.6 | 2061.4 | 1981.4 | 1750.7 | 1958.1 | 2203.1 |
| 62.5° | 1731.9 | 1707.8 | 1713.0 | 1795.2 | 1934.7 | 1990.5 | 2203.1 | 2066.6 | 1793.7 | 2000.3 | 2138.3 |
| 65°   | 1994.3 | 1983.0 | 1918.1 | 1967.9 | 2160.1 | 2210.7 | 2380.3 | 2140.5 | 1781.6 | 1968.6 | 1967.1 |
| 67.5° | 2347.1 | 2301.9 | 2214.4 | 2258.9 | 2480.6 | 2531.8 | 2593.7 | 2168.4 | 1703.2 | 1779.4 | 1581.1 |
| 70°   | 2639.7 | 2602.0 | 2562.0 | 2678.9 | 2933.7 | 2961.6 | 2816.1 | 2142.0 | 1512.5 | 1392.6 | 1060.1 |
| 72.5° | 2825.9 | 2798.8 | 2835.7 | 3179.5 | 3587.4 | 3534.6 | 3035.5 | 1957.3 | 1180.0 | 852.7  | 530.0  |
| 75°   | 2439.1 | 2426.3 | 2637.4 | 3334.8 | 3885.2 | 3865.6 | 2959.3 | 1465.0 | 684.6  | 375.5  | 241.3  |
| 77.5° | 1226.7 | 1366.2 | 1588.6 | 2366.0 | 3091.3 | 3095.1 | 2156.4 | 704.2  | 288.0  | 210.4  | 165.9  |
| 80°   | 345.3  | 349.8  | 530.0  | 975.6  | 1543.4 | 1644.4 | 815.8  | 239.0  | 164.4  | 156.8  | 123.7  |
| 82.5° | 82.2   | 76.2   | 135.7  | 288.8  | 518.0  | 539.1  | 245.0  | 86.0   | 92.0   | 98.0   | 76.2   |
| 85°   | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 1.5    | 9.0    | 9.0    | 21.9   | 27.9   | 21.9   |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 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    |



REPORT NUMBER: P401482

CATALOG NUMBER: ENV-SA1D-735-U-T4FT

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 778.1  | 778.1  | 778.1 | 778.1 | 778.1 | 778.1 | 778.1 | 778.1 | 778.1 | 778.1 | 778.1 |
| 2.5°  | 777.3  | 784.9  | 797.0 | 807.5 | 816.6 | 823.3 | 833.9 | 835.4 | 838.4 | 839.9 | 841.4 |
| 5°    | 784.1  | 798.5  | 821.1 | 840.7 | 854.3 | 858.0 | 867.1 | 866.3 | 867.1 | 867.1 | 866.3 |
| 7.5°  | 793.2  | 812.8  | 844.5 | 866.3 | 873.9 | 871.6 | 869.3 | 861.0 | 854.3 | 851.2 | 847.5 |
| 10°   | 804.5  | 827.1  | 864.1 | 879.9 | 876.1 | 864.1 | 849.7 | 834.6 | 822.6 | 816.6 | 815.0 |
| 12.5° | 815.8  | 845.2  | 879.9 | 884.4 | 869.3 | 847.5 | 823.3 | 806.8 | 790.9 | 782.6 | 782.6 |
| 15°   | 834.6  | 867.1  | 892.7 | 883.7 | 856.5 | 828.6 | 795.4 | 772.8 | 754.7 | 743.4 | 742.7 |
| 17.5° | 857.3  | 892.0  | 906.3 | 879.9 | 840.7 | 801.5 | 761.5 | 732.1 | 708.7 | 697.4 | 690.6 |
| 20°   | 885.2  | 917.6  | 913.1 | 867.8 | 817.3 | 769.1 | 719.3 | 683.9 | 659.7 | 647.7 | 645.4 |
| 22.5° | 916.8  | 944.0  | 915.3 | 848.2 | 785.6 | 723.8 | 669.5 | 634.1 | 618.3 | 609.2 | 610.0 |
| 25°   | 955.3  | 976.4  | 916.1 | 824.8 | 740.4 | 664.3 | 616.8 | 600.2 | 597.9 | 594.1 | 595.6 |
| 27.5° | 1003.5 | 1010.3 | 913.1 | 793.2 | 682.3 | 601.7 | 573.8 | 580.6 | 586.6 | 584.3 | 585.8 |
| 30°   | 1060.8 | 1051.0 | 906.3 | 747.2 | 610.7 | 544.4 | 545.9 | 561.0 | 569.3 | 567.0 | 567.7 |
| 32.5° | 1127.9 | 1091.8 | 893.5 | 691.4 | 542.9 | 509.7 | 521.8 | 536.8 | 545.1 | 545.1 | 545.9 |
| 35°   | 1203.3 | 1140.8 | 868.6 | 619.0 | 495.4 | 488.6 | 499.1 | 511.2 | 516.5 | 513.5 | 515.7 |
| 37.5° | 1282.5 | 1183.0 | 828.6 | 538.3 | 459.9 | 472.0 | 478.0 | 481.0 | 480.3 | 475.8 | 473.5 |
| 40°   | 1356.4 | 1216.2 | 757.0 | 458.4 | 430.5 | 454.6 | 457.7 | 449.4 | 439.6 | 431.3 | 426.0 |
| 42.5° | 1412.9 | 1233.5 | 657.5 | 400.4 | 402.6 | 435.0 | 437.3 | 420.7 | 401.9 | 389.1 | 386.0 |
| 45°   | 1471.0 | 1239.5 | 558.7 | 353.6 | 372.5 | 415.4 | 421.5 | 398.9 | 373.2 | 358.1 | 355.9 |
| 47.5° | 1537.4 | 1254.6 | 461.4 | 321.2 | 346.8 | 401.9 | 411.7 | 383.8 | 355.1 | 332.5 | 328.7 |
| 50°   | 1626.3 | 1283.3 | 388.3 | 296.3 | 328.7 | 395.1 | 408.7 | 371.7 | 335.5 | 310.6 | 307.6 |
| 52.5° | 1739.4 | 1325.5 | 320.4 | 276.7 | 314.4 | 384.5 | 404.1 | 359.6 | 321.2 | 291.0 | 286.5 |
| 55°   | 1836.7 | 1341.3 | 276.7 | 260.1 | 299.3 | 371.7 | 400.4 | 355.1 | 305.4 | 271.4 | 266.2 |
| 57.5° | 1881.2 | 1296.1 | 245.8 | 243.5 | 283.5 | 355.9 | 392.8 | 340.0 | 288.0 | 261.6 | 257.1 |
| 60°   | 1860.8 | 1183.7 | 222.4 | 228.5 | 265.4 | 335.5 | 373.2 | 325.0 | 276.0 | 254.1 | 249.6 |
| 62.5° | 1770.3 | 1054.1 | 205.1 | 214.1 | 245.0 | 309.9 | 350.6 | 311.4 | 265.4 | 245.8 | 239.8 |
| 65°   | 1611.2 | 911.6  | 192.3 | 201.3 | 226.9 | 285.0 | 332.5 | 295.6 | 253.3 | 233.7 | 228.5 |
| 67.5° | 1314.9 | 725.3  | 178.7 | 188.5 | 211.9 | 264.6 | 315.9 | 282.7 | 239.8 | 226.9 | 222.4 |
| 70°   | 870.1  | 487.8  | 165.9 | 175.7 | 196.8 | 245.0 | 298.6 | 269.2 | 226.9 | 218.7 | 212.6 |
| 72.5° | 399.6  | 262.4  | 152.3 | 162.1 | 179.4 | 223.2 | 276.7 | 248.8 | 209.6 | 204.3 | 195.3 |
| 75°   | 197.5  | 161.4  | 135.7 | 144.8 | 158.3 | 196.8 | 251.1 | 231.5 | 193.8 | 184.7 | 174.2 |
| 77.5° | 144.0  | 120.6  | 116.9 | 125.9 | 137.2 | 174.2 | 223.9 | 213.4 | 177.9 | 165.1 | 159.1 |
| 80°   | 107.1  | 93.5   | 98.0  | 107.1 | 117.6 | 157.6 | 209.6 | 199.8 | 164.4 | 151.5 | 147.0 |
| 82.5° | 65.6   | 62.6   | 75.4  | 86.0  | 98.8  | 144.8 | 199.8 | 182.5 | 147.8 | 135.7 | 130.4 |
| 85°   | 18.8   | 22.6   | 38.5  | 55.8  | 70.1  | 116.9 | 186.2 | 159.8 | 124.4 | 104.0 | 100.3 |
| 87.5° | 0.0    | 2.3    | 12.1  | 25.6  | 41.5  | 77.7  | 143.3 | 125.2 | 95.0  | 76.9  | 73.9  |
| 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)