

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: P400942

Luminaire Tested: **ENT-SA1A-735-U-T4FT**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400942  
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: ENT-SA1A-735-U-T4FT  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3500K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2459 lumens  
Efficiency: N/A  
Efficacy: 122.3 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 - G1

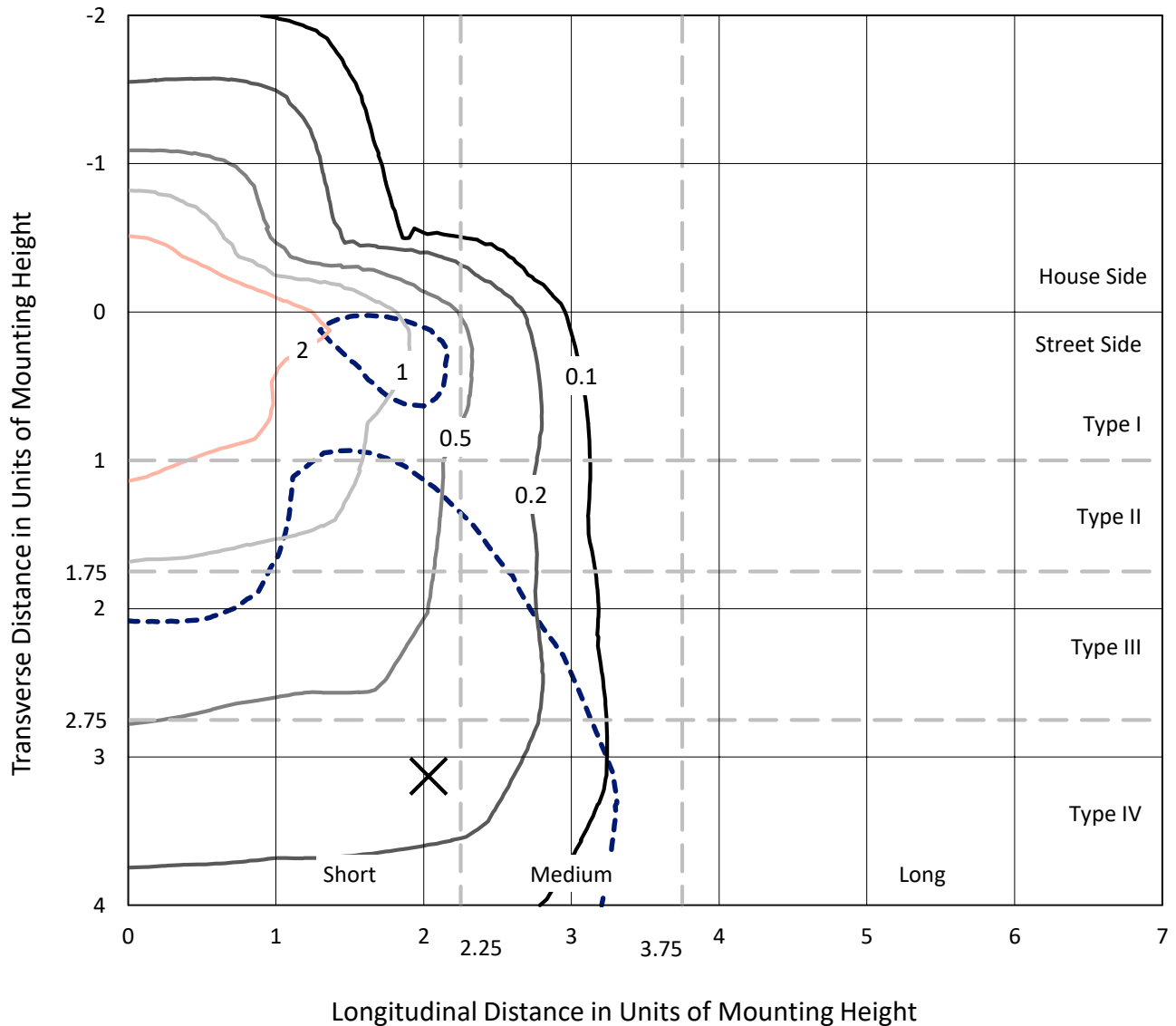
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P400942  
 CATALOG NUMBER: ENT-SA1A-735-U-T4FT

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

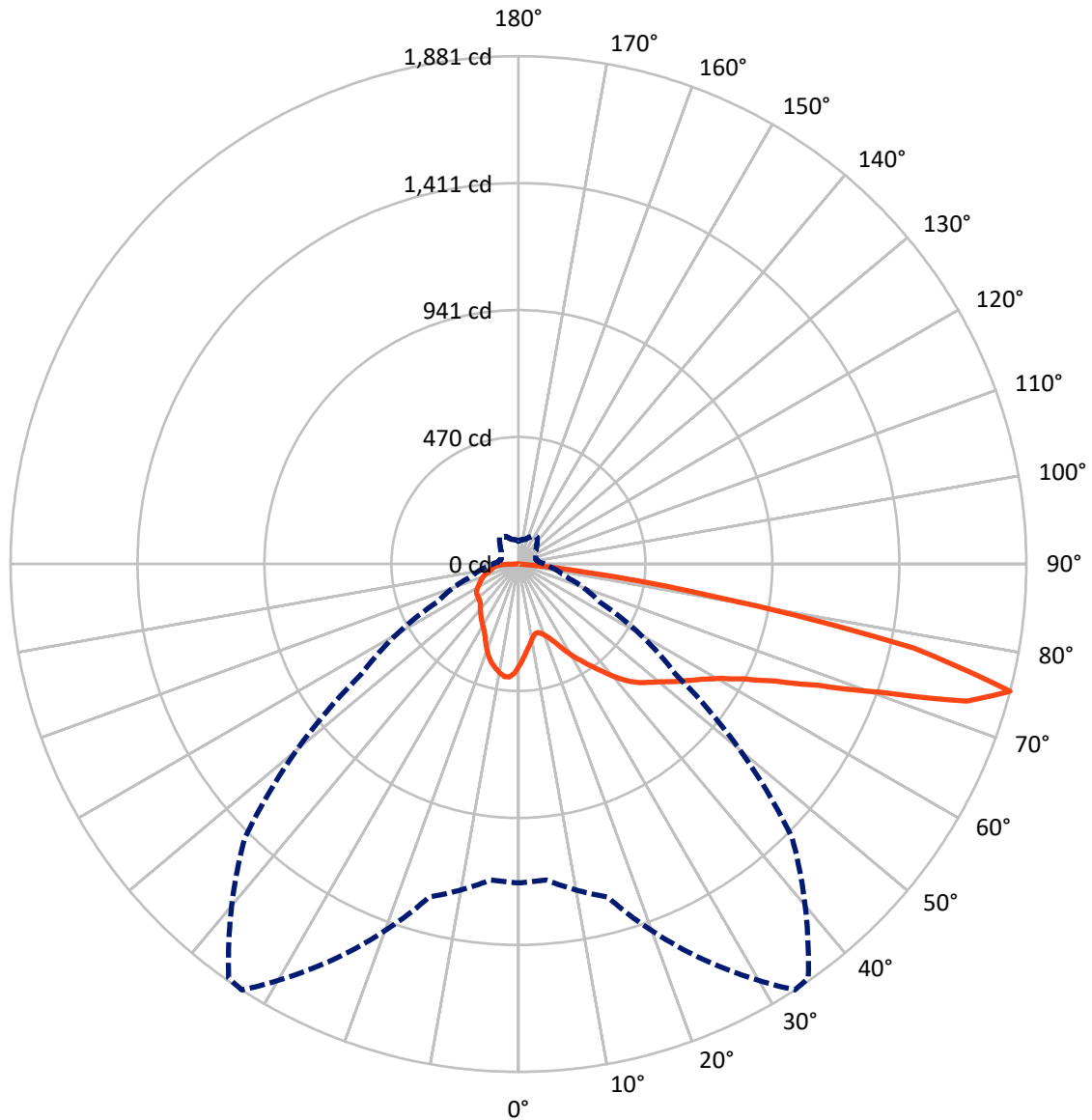


Based on 10 foot mounting height. Maximum calculated value = 4 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P400942

CATALOG NUMBER: ENT-SA1A-735-U-T4FT

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P400942

CATALOG NUMBER: ENT-SA1A-735-U-T4FT

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 597.4    | 0.0    | 597.4  |
|                    | % Fixture | 24.3     | 0.0    | 24.3   |
| <b>Street Side</b> | Lumens    | 1861.6   | 0.0    | 1861.6 |
|                    | % Fixture | 75.7     | 0.0    | 75.7   |
| <b>Total</b>       | Lumens    | 2459.0   | 0.0    | 2459.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 35.2   | 1.4       |
| 10°-20°   | 99.0   | 4.0       |
| 20°-30°   | 164.6  | 6.7       |
| 30°-40°   | 245.6  | 10.0      |
| 40°-50°   | 343.1  | 14.0      |
| 50°-60°   | 457.9  | 18.6      |
| 60°-70°   | 567.8  | 23.1      |
| 70°-80°   | 490.9  | 20.0      |
| 80°-90°   | 54.9   | 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°    | 2459.0 | 100.0     |
| 0°-180°   | 2459.0 | 100.0     |



REPORT NUMBER: P400942

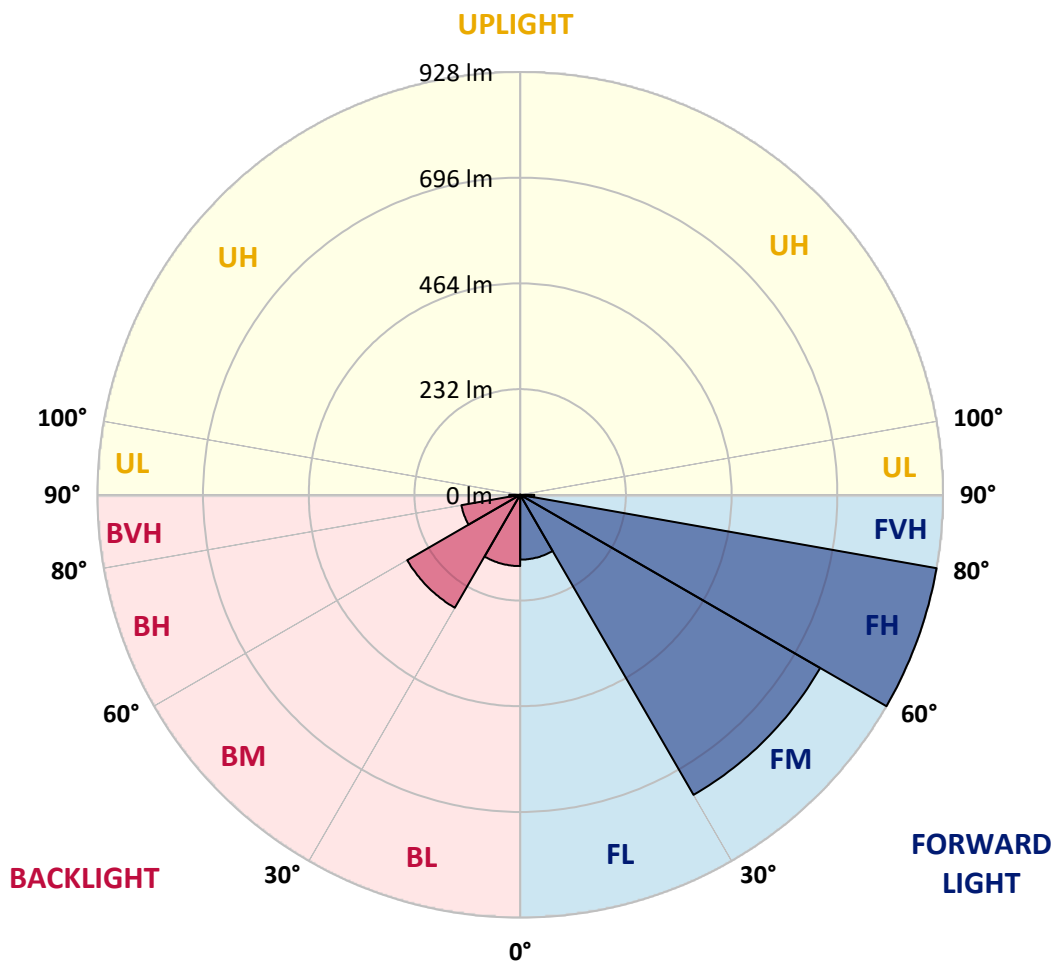
CATALOG NUMBER: ENT-SA1A-735-U-T4FT

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 142.4  | 5.8       |                         |      |         |
| FM   | (30°-60°)   | 760.3  | 30.9      |                         |      |         |
| FH   | (60°-80°)   | 927.9  | 37.7      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 31.0   | 1.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 156.4  | 6.4       | B1/500                  |      |         |
| BM   | (30°-60°)   | 286.2  | 11.6      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 130.8  | 5.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 23.9   | 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-G1**

Type IV Short





REPORT NUMBER: P400942

CATALOG NUMBER: ENT-SA1A-735-U-T4FT

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 33°    | 35°    | 45°    | 55°    | 65°   | 75°   | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|
| 0°    | 376.8  | 376.8  | 376.8  | 376.8  | 376.8  | 376.8  | 376.8  | 376.8  | 376.8 | 376.8 | 376.8  |
| 2.5°  | 341.7  | 342.5  | 344.7  | 347.2  | 348.7  | 348.7  | 352.7  | 357.4  | 363.3 | 368.4 | 373.9  |
| 5°    | 313.3  | 314.4  | 316.2  | 319.5  | 323.5  | 324.2  | 332.2  | 340.6  | 351.2 | 362.6 | 373.5  |
| 7.5°  | 285.2  | 287.3  | 291.0  | 295.4  | 301.6  | 303.0  | 314.4  | 325.7  | 340.3 | 357.4 | 375.3  |
| 10°   | 263.6  | 265.1  | 266.9  | 273.1  | 280.8  | 283.3  | 298.3  | 312.5  | 332.6 | 353.8 | 377.5  |
| 12.5° | 257.8  | 257.8  | 257.8  | 260.7  | 266.9  | 269.1  | 284.8  | 303.0  | 325.7 | 351.2 | 380.8  |
| 15°   | 266.2  | 265.8  | 261.8  | 259.6  | 263.2  | 265.1  | 278.6  | 296.5  | 322.0 | 352.0 | 387.0  |
| 17.5° | 285.2  | 284.1  | 274.6  | 267.3  | 269.8  | 270.9  | 279.7  | 295.0  | 320.9 | 354.9 | 396.1  |
| 20°   | 310.0  | 307.4  | 292.8  | 281.9  | 281.5  | 282.2  | 288.8  | 299.4  | 322.8 | 360.0 | 406.0  |
| 22.5° | 342.8  | 341.4  | 319.8  | 303.0  | 300.1  | 300.1  | 303.0  | 309.6  | 327.5 | 365.8 | 419.5  |
| 25°   | 385.2  | 381.2  | 355.3  | 332.6  | 326.0  | 324.2  | 323.9  | 323.9  | 335.9 | 374.6 | 436.3  |
| 27.5° | 428.6  | 423.9  | 397.6  | 366.9  | 358.2  | 354.9  | 349.0  | 344.7  | 346.9 | 384.1 | 456.4  |
| 30°   | 467.7  | 461.1  | 438.9  | 407.1  | 394.0  | 388.8  | 378.3  | 369.1  | 363.3 | 397.2 | 483.0  |
| 32.5° | 489.2  | 486.7  | 471.4  | 442.5  | 427.5  | 425.4  | 407.8  | 395.8  | 385.6 | 414.4 | 518.8  |
| 35°   | 518.1  | 514.8  | 504.9  | 481.2  | 463.3  | 457.8  | 444.7  | 430.5  | 414.0 | 437.4 | 564.1  |
| 37.5° | 544.7  | 542.9  | 539.3  | 522.8  | 503.9  | 498.4  | 486.3  | 471.4  | 449.1 | 471.4 | 614.8  |
| 40°   | 571.8  | 569.6  | 568.1  | 562.3  | 548.8  | 545.1  | 539.3  | 521.7  | 491.8 | 508.6 | 664.9  |
| 42.5° | 611.2  | 606.4  | 591.1  | 590.7  | 591.8  | 594.8  | 595.1  | 575.8  | 538.5 | 555.0 | 708.7  |
| 45°   | 662.7  | 649.5  | 615.2  | 614.1  | 626.9  | 634.6  | 653.2  | 636.8  | 587.1 | 602.4 | 757.6  |
| 47.5° | 689.0  | 675.5  | 640.0  | 637.8  | 654.6  | 666.0  | 712.0  | 695.9  | 637.5 | 655.7 | 808.4  |
| 50°   | 701.7  | 693.0  | 661.9  | 668.9  | 686.0  | 697.0  | 767.8  | 755.0  | 689.7 | 713.4 | 872.2  |
| 52.5° | 719.6  | 705.0  | 683.1  | 697.7  | 723.3  | 734.6  | 817.8  | 815.7  | 733.9 | 776.2 | 942.3  |
| 55°   | 713.4  | 705.8  | 709.8  | 729.5  | 761.6  | 778.4  | 868.2  | 868.2  | 778.8 | 843.4 | 1011.7 |
| 57.5° | 718.5  | 713.4  | 746.6  | 764.2  | 804.7  | 828.8  | 928.8  | 912.8  | 816.7 | 899.6 | 1058.5 |
| 60°   | 762.0  | 747.4  | 773.3  | 808.0  | 860.2  | 883.6  | 998.2  | 959.5  | 847.8 | 948.2 | 1066.8 |
| 62.5° | 838.7  | 827.0  | 829.5  | 869.3  | 936.9  | 963.9  | 1066.8 | 1000.8 | 868.6 | 968.6 | 1035.4 |
| 65°   | 965.7  | 960.2  | 928.8  | 952.9  | 1046.0 | 1070.5 | 1152.6 | 1036.5 | 862.8 | 953.3 | 952.6  |
| 67.5° | 1136.6 | 1114.7 | 1072.3 | 1093.9 | 1201.2 | 1226.0 | 1256.0 | 1050.1 | 824.8 | 861.7 | 765.6  |
| 70°   | 1278.2 | 1260.0 | 1240.6 | 1297.2 | 1420.6 | 1434.1 | 1363.7 | 1037.3 | 732.4 | 674.4 | 513.3  |
| 72.5° | 1368.4 | 1355.3 | 1373.2 | 1539.7 | 1737.2 | 1711.6 | 1469.9 | 947.8  | 571.4 | 412.9 | 256.7  |
| 75°   | 1181.1 | 1174.9 | 1277.2 | 1614.9 | 1881.4 | 1871.9 | 1433.1 | 709.4  | 331.5 | 181.8 | 116.8  |
| 77.5° | 594.0  | 661.6  | 769.3  | 1145.7 | 1496.9 | 1498.8 | 1044.2 | 341.0  | 139.5 | 101.9 | 80.3   |
| 80°   | 167.2  | 169.4  | 256.7  | 472.5  | 747.4  | 796.3  | 395.0  | 115.7  | 79.6  | 75.9  | 59.9   |
| 82.5° | 39.8   | 36.9   | 65.7   | 139.8  | 250.8  | 261.1  | 118.7  | 41.6   | 44.5  | 47.5  | 36.9   |
| 85°   | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.7    | 4.4    | 4.4    | 10.6  | 13.5  | 10.6   |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.4    | 0.4    | 0.4    | 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: P400942

CATALOG NUMBER: ENT-SA1A-735-U-T4FT

**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 | 376.8 |
| 2.5°  | 376.4 | 380.1 | 385.9 | 391.0 | 395.4 | 398.7 | 403.8 | 404.5 | 406.0 | 406.7 | 407.5 |
| 5°    | 379.7 | 386.7 | 397.6 | 407.1 | 413.7 | 415.5 | 419.9 | 419.5 | 419.9 | 419.9 | 419.5 |
| 7.5°  | 384.1 | 393.6 | 408.9 | 419.5 | 423.2 | 422.1 | 421.0 | 417.0 | 413.7 | 412.2 | 410.4 |
| 10°   | 389.6 | 400.5 | 418.4 | 426.1 | 424.3 | 418.4 | 411.5 | 404.2 | 398.3 | 395.4 | 394.7 |
| 12.5° | 395.0 | 409.3 | 426.1 | 428.3 | 421.0 | 410.4 | 398.7 | 390.7 | 383.0 | 379.0 | 379.0 |
| 15°   | 404.2 | 419.9 | 432.3 | 427.9 | 414.8 | 401.3 | 385.2 | 374.2 | 365.5 | 360.0 | 359.6 |
| 17.5° | 415.1 | 431.9 | 438.9 | 426.1 | 407.1 | 388.1 | 368.8 | 354.5 | 343.2 | 337.7 | 334.4 |
| 20°   | 428.6 | 444.3 | 442.1 | 420.2 | 395.8 | 372.4 | 348.3 | 331.2 | 319.5 | 313.6 | 312.5 |
| 22.5° | 444.0 | 457.1 | 443.2 | 410.7 | 380.4 | 350.5 | 324.2 | 307.1 | 299.4 | 295.0 | 295.4 |
| 25°   | 462.6 | 472.8 | 443.6 | 399.4 | 358.5 | 321.7 | 298.7 | 290.6 | 289.5 | 287.7 | 288.4 |
| 27.5° | 486.0 | 489.2 | 442.1 | 384.1 | 330.4 | 291.4 | 277.8 | 281.1 | 284.1 | 283.0 | 283.7 |
| 30°   | 513.7 | 509.0 | 438.9 | 361.8 | 295.7 | 263.6 | 264.3 | 271.6 | 275.7 | 274.6 | 274.9 |
| 32.5° | 546.2 | 528.7 | 432.7 | 334.8 | 262.9 | 246.8 | 252.7 | 260.0 | 264.0 | 264.0 | 264.3 |
| 35°   | 582.7 | 552.4 | 420.6 | 299.8 | 239.9 | 236.6 | 241.7 | 247.5 | 250.1 | 248.6 | 249.7 |
| 37.5° | 621.1 | 572.9 | 401.3 | 260.7 | 222.7 | 228.6 | 231.5 | 232.9 | 232.6 | 230.4 | 229.3 |
| 40°   | 656.8 | 588.9 | 366.6 | 222.0 | 208.5 | 220.2 | 221.6 | 217.6 | 212.9 | 208.8 | 206.3 |
| 42.5° | 684.2 | 597.3 | 318.4 | 193.9 | 195.0 | 210.7 | 211.8 | 203.7 | 194.6 | 188.4 | 186.9 |
| 45°   | 712.3 | 600.2 | 270.5 | 171.2 | 180.4 | 201.2 | 204.1 | 193.1 | 180.7 | 173.4 | 172.3 |
| 47.5° | 744.5 | 607.5 | 223.4 | 155.5 | 168.0 | 194.6 | 199.3 | 185.8 | 172.0 | 161.0 | 159.2 |
| 50°   | 787.5 | 621.4 | 188.0 | 143.5 | 159.2 | 191.3 | 197.9 | 180.0 | 162.5 | 150.4 | 149.0 |
| 52.5° | 842.3 | 641.9 | 155.2 | 134.0 | 152.3 | 186.2 | 195.7 | 174.2 | 155.5 | 140.9 | 138.7 |
| 55°   | 889.4 | 649.5 | 134.0 | 126.0 | 144.9 | 180.0 | 193.9 | 172.0 | 147.9 | 131.4 | 128.9 |
| 57.5° | 910.9 | 627.6 | 119.0 | 117.9 | 137.3 | 172.3 | 190.2 | 164.7 | 139.5 | 126.7 | 124.5 |
| 60°   | 901.1 | 573.2 | 107.7 | 110.6 | 128.5 | 162.5 | 180.7 | 157.4 | 133.6 | 123.0 | 120.9 |
| 62.5° | 857.3 | 510.4 | 99.3  | 103.7 | 118.7 | 150.1 | 169.8 | 150.8 | 128.5 | 119.0 | 116.1 |
| 65°   | 780.2 | 441.4 | 93.1  | 97.5  | 109.9 | 138.0 | 161.0 | 143.1 | 122.7 | 113.2 | 110.6 |
| 67.5° | 636.8 | 351.2 | 86.5  | 91.3  | 102.6 | 128.2 | 153.0 | 136.9 | 116.1 | 109.9 | 107.7 |
| 70°   | 421.3 | 236.2 | 80.3  | 85.1  | 95.3  | 118.7 | 144.6 | 130.3 | 109.9 | 105.9 | 103.0 |
| 72.5° | 193.5 | 127.1 | 73.8  | 78.5  | 86.9  | 108.1 | 134.0 | 120.5 | 101.5 | 98.9  | 94.6  |
| 75°   | 95.7  | 78.1  | 65.7  | 70.1  | 76.7  | 95.3  | 121.6 | 112.1 | 93.8  | 89.5  | 84.3  |
| 77.5° | 69.7  | 58.4  | 56.6  | 61.0  | 66.4  | 84.3  | 108.4 | 103.3 | 86.2  | 80.0  | 77.0  |
| 80°   | 51.8  | 45.3  | 47.5  | 51.8  | 57.0  | 76.3  | 101.5 | 96.8  | 79.6  | 73.4  | 71.2  |
| 82.5° | 31.8  | 30.3  | 36.5  | 41.6  | 47.8  | 70.1  | 96.8  | 88.4  | 71.6  | 65.7  | 63.2  |
| 85°   | 9.1   | 11.0  | 18.6  | 27.0  | 34.0  | 56.6  | 90.2  | 77.4  | 60.2  | 50.4  | 48.6  |
| 87.5° | 0.0   | 1.1   | 5.8   | 12.4  | 20.1  | 37.6  | 69.4  | 60.6  | 46.0  | 37.2  | 35.8  |
| 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)