

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: P401016

Luminaire Tested: **ENC-SA1A-760-U-T4W**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401016  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENC-SA1A-760-U-T4W  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 5700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2733 lumens  
Efficiency: N/A  
Efficacy: 136.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

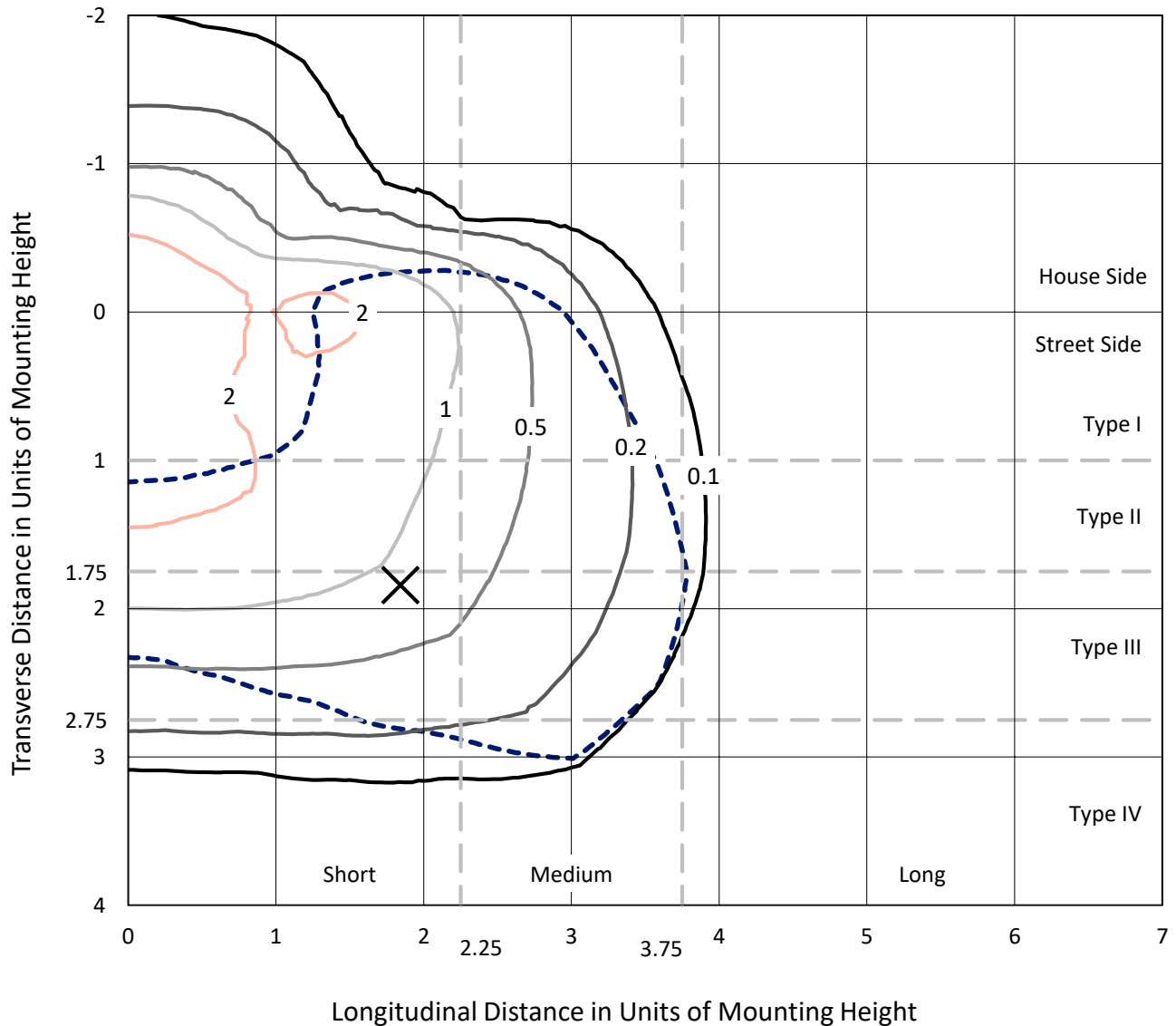
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

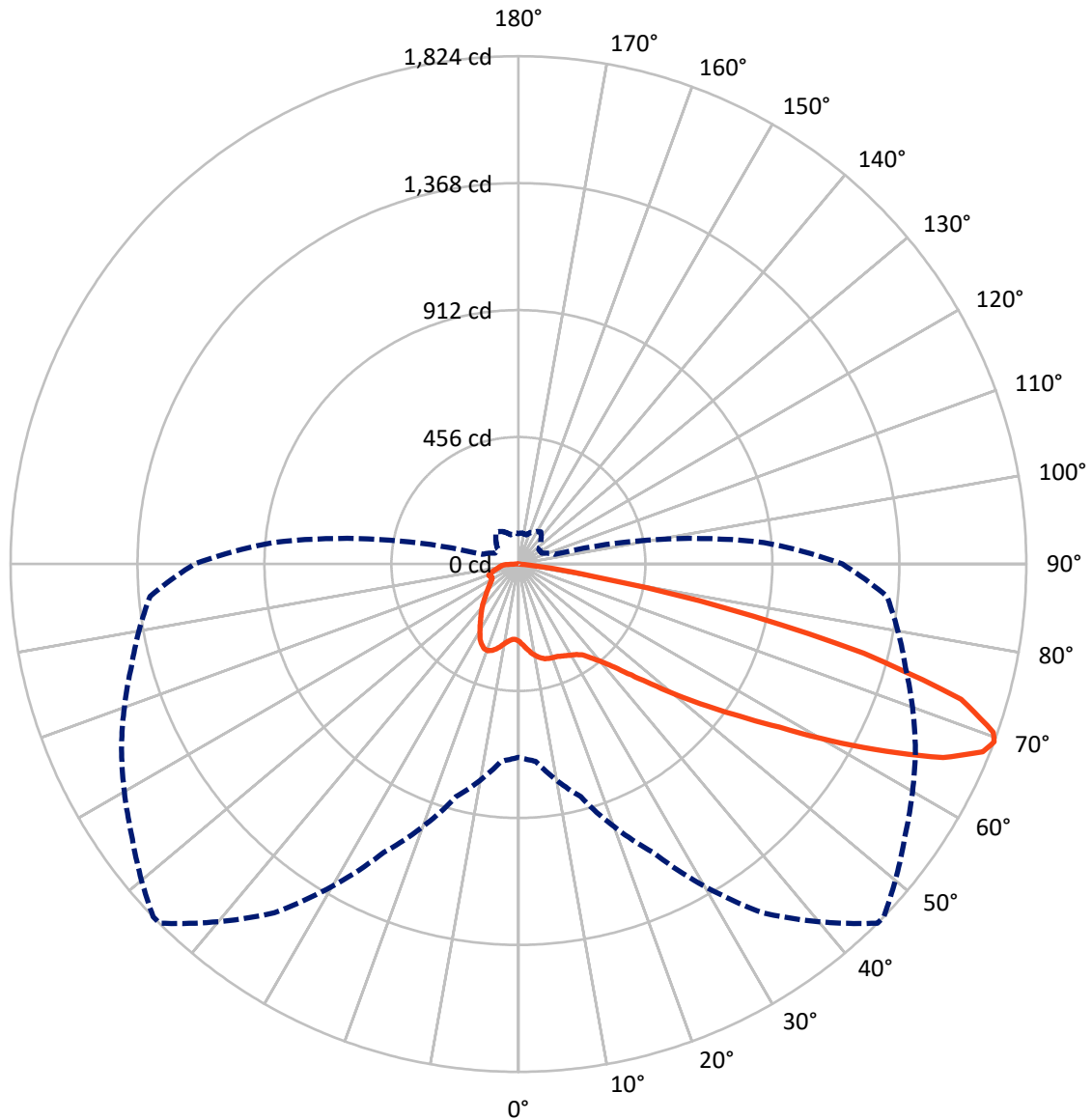
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 643.4    | 0.0    | 643.4  |
|                    | % Fixture | 23.5     | 0.0    | 23.5   |
| <b>Street Side</b> | Lumens    | 2089.6   | 0.0    | 2089.6 |
|                    | % Fixture | 76.5     | 0.0    | 76.5   |
| <b>Total</b>       | Lumens    | 2733.0   | 0.0    | 2733.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 28.2   | 1.0       |
| 10°-20°   | 93.7   | 3.4       |
| 20°-30°   | 158.3  | 5.8       |
| 30°-40°   | 229.0  | 8.4       |
| 40°-50°   | 345.8  | 12.7      |
| 50°-60°   | 583.0  | 21.3      |
| 60°-70°   | 802.1  | 29.3      |
| 70°-80°   | 444.5  | 16.3      |
| 80°-90°   | 48.4   | 1.8       |
| 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°    | 2733.0 | 100.0     |
| 0°-180°   | 2733.0 | 100.0     |



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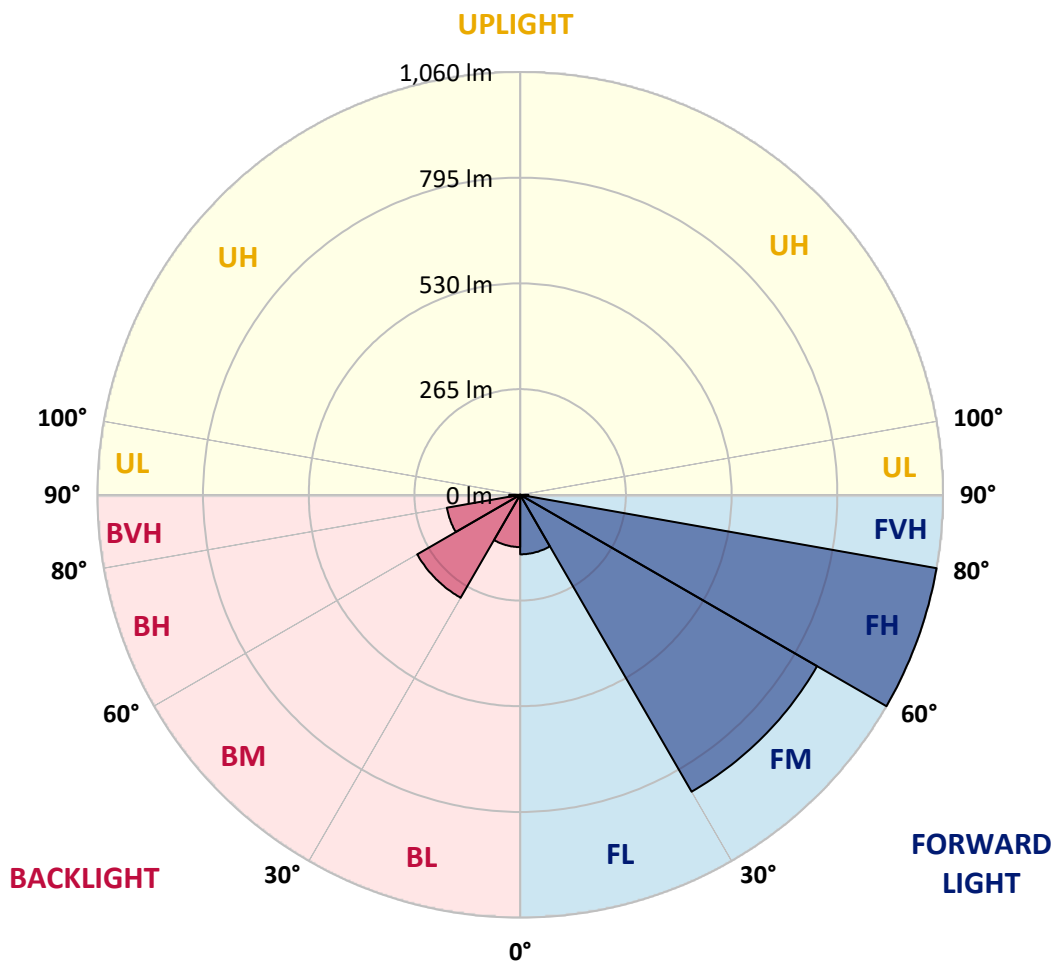
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 149.2  | 5.5       |                         |      |         |
| FM   | (30°-60°)   | 859.6  | 31.5      |                         |      |         |
| FH   | (60°-80°)   | 1060.1 | 38.8      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 20.7   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 131.0  | 4.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 298.3  | 10.9      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 186.5  | 6.8       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 27.7   | 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





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 46°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  | 277.4  |
| 2.5°  | 294.9  | 294.5  | 294.9  | 293.3  | 291.8  | 289.5  | 288.7  | 286.0  | 284.0  | 281.3  | 279.0  |
| 5°    | 316.6  | 317.8  | 317.4  | 315.5  | 309.3  | 304.6  | 304.6  | 298.8  | 292.6  | 286.7  | 281.3  |
| 7.5°  | 340.3  | 340.3  | 338.0  | 334.1  | 327.9  | 320.9  | 320.1  | 312.4  | 303.4  | 295.3  | 286.7  |
| 10°   | 357.4  | 358.2  | 354.7  | 349.3  | 341.5  | 334.1  | 333.4  | 324.4  | 315.9  | 305.4  | 294.9  |
| 12.5° | 369.5  | 369.5  | 366.4  | 361.3  | 352.0  | 345.0  | 344.2  | 336.1  | 327.1  | 316.3  | 304.2  |
| 15°   | 375.7  | 374.9  | 372.2  | 366.8  | 358.6  | 352.8  | 351.6  | 344.6  | 337.2  | 326.4  | 313.5  |
| 17.5° | 374.5  | 374.5  | 372.2  | 366.8  | 360.9  | 356.3  | 355.5  | 350.4  | 345.0  | 334.5  | 321.7  |
| 20°   | 369.5  | 369.1  | 368.3  | 364.0  | 360.2  | 358.2  | 357.4  | 355.1  | 351.6  | 342.7  | 330.6  |
| 22.5° | 364.8  | 364.4  | 363.3  | 360.5  | 359.0  | 360.2  | 360.2  | 359.8  | 359.4  | 352.4  | 340.7  |
| 25°   | 367.5  | 367.2  | 364.8  | 360.9  | 360.5  | 366.0  | 366.4  | 367.5  | 368.3  | 362.5  | 350.4  |
| 27.5° | 386.6  | 385.4  | 378.8  | 368.7  | 365.2  | 372.2  | 373.0  | 376.5  | 375.7  | 369.5  | 359.0  |
| 30°   | 423.9  | 424.3  | 409.5  | 387.7  | 376.1  | 379.2  | 379.6  | 383.5  | 382.3  | 377.3  | 368.7  |
| 32.5° | 480.2  | 480.2  | 456.1  | 423.1  | 393.6  | 387.4  | 386.2  | 389.7  | 394.4  | 387.7  | 379.2  |
| 35°   | 551.7  | 549.8  | 520.6  | 469.7  | 423.5  | 401.3  | 400.6  | 399.0  | 407.2  | 401.0  | 388.5  |
| 37.5° | 623.6  | 616.6  | 588.2  | 532.3  | 465.5  | 428.5  | 425.4  | 420.8  | 425.4  | 412.2  | 401.3  |
| 40°   | 681.5  | 680.3  | 657.0  | 600.3  | 515.2  | 461.6  | 459.2  | 438.6  | 441.8  | 431.3  | 427.0  |
| 42.5° | 745.2  | 746.0  | 730.4  | 673.3  | 574.6  | 506.2  | 500.0  | 468.2  | 477.1  | 473.2  | 471.3  |
| 45°   | 815.1  | 814.3  | 802.7  | 742.9  | 647.3  | 568.4  | 560.6  | 521.4  | 539.7  | 537.3  | 548.2  |
| 47.5° | 868.7  | 873.0  | 866.4  | 824.1  | 733.5  | 643.8  | 638.0  | 590.2  | 617.8  | 636.4  | 657.0  |
| 50°   | 941.8  | 941.4  | 923.5  | 906.0  | 833.8  | 740.1  | 734.3  | 681.1  | 720.7  | 747.9  | 785.6  |
| 52.5° | 1032.3 | 1029.2 | 992.3  | 986.1  | 955.8  | 845.4  | 840.4  | 784.8  | 841.5  | 865.2  | 941.8  |
| 55°   | 1089.0 | 1088.6 | 1069.6 | 1080.5 | 1081.3 | 962.8  | 956.5  | 907.2  | 971.3  | 998.5  | 1114.3 |
| 57.5° | 1136.4 | 1136.8 | 1152.7 | 1190.8 | 1216.5 | 1105.3 | 1103.0 | 1042.8 | 1107.7 | 1145.8 | 1282.5 |
| 60°   | 1173.0 | 1180.7 | 1225.4 | 1312.4 | 1355.2 | 1287.2 | 1277.1 | 1213.4 | 1256.9 | 1272.0 | 1411.1 |
| 62.5° | 1158.2 | 1168.3 | 1256.1 | 1384.3 | 1494.3 | 1479.9 | 1476.4 | 1384.3 | 1383.9 | 1376.2 | 1507.1 |
| 65°   | 1041.6 | 1063.4 | 1201.7 | 1381.6 | 1586.0 | 1675.7 | 1670.7 | 1545.5 | 1502.0 | 1463.2 | 1535.8 |
| 67.5° | 852.4  | 857.1  | 1023.8 | 1275.9 | 1585.2 | 1798.9 | 1793.4 | 1662.9 | 1575.5 | 1480.3 | 1451.5 |
| 69°   | 693.9  | 711.0  | 865.2  | 1142.3 | 1529.2 | 1823.7 | 1823.7 | 1695.5 | 1572.7 | 1439.5 | 1328.0 |
| 70°   | 600.3  | 601.0  | 749.9  | 1035.8 | 1453.1 | 1809.0 | 1812.5 | 1695.5 | 1550.6 | 1386.3 | 1218.4 |
| 72.5° | 281.3  | 298.8  | 392.8  | 676.0  | 1173.7 | 1662.9 | 1671.4 | 1583.6 | 1422.0 | 1194.3 | 914.2  |
| 75°   | 84.3   | 87.4   | 130.9  | 320.5  | 672.5  | 1281.0 | 1300.0 | 1317.5 | 1158.2 | 879.2  | 563.0  |
| 77.5° | 50.1   | 49.7   | 63.3   | 108.8  | 311.2  | 759.6  | 768.1  | 842.7  | 751.4  | 488.8  | 255.6  |
| 80°   | 24.5   | 25.3   | 33.8   | 52.8   | 116.6  | 275.9  | 303.4  | 394.0  | 333.0  | 191.2  | 93.6   |
| 82.5° | 8.2    | 8.9    | 14.0   | 21.4   | 49.3   | 89.0   | 98.3   | 123.6  | 106.5  | 69.5   | 40.0   |
| 85°   | 0.0    | 0.0    | 0.4    | 0.8    | 2.7    | 6.6    | 6.6    | 14.8   | 22.1   | 24.5   | 13.2   |
| 87.5° | 0.0    | 0.0    | 0.4    | 0.4    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 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    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 277.4  | 277.4  | 277.4 | 277.4 | 277.4 | 277.4 | 277.4 | 277.4 | 277.4 | 277.4 | 277.4 |
| 2.5°  | 277.8  | 277.0  | 275.5 | 273.9 | 273.1 | 271.2 | 271.6 | 270.8 | 270.4 | 270.4 | 270.8 |
| 5°    | 278.6  | 277.4  | 275.1 | 273.5 | 272.0 | 271.2 | 273.1 | 273.9 | 274.7 | 274.7 | 275.1 |
| 7.5°  | 283.2  | 280.9  | 278.2 | 276.2 | 276.6 | 277.8 | 280.9 | 283.2 | 284.4 | 285.2 | 286.0 |
| 10°   | 291.0  | 288.3  | 284.4 | 284.0 | 284.8 | 287.9 | 292.2 | 295.7 | 298.8 | 300.7 | 300.7 |
| 12.5° | 299.2  | 295.7  | 292.6 | 293.3 | 296.8 | 301.5 | 305.8 | 309.7 | 312.4 | 314.3 | 314.7 |
| 15°   | 308.1  | 304.6  | 301.5 | 303.4 | 309.3 | 314.7 | 318.6 | 320.1 | 321.3 | 323.3 | 323.6 |
| 17.5° | 316.3  | 313.2  | 310.4 | 315.5 | 320.5 | 324.8 | 326.0 | 325.2 | 323.6 | 324.8 | 325.6 |
| 20°   | 324.8  | 322.1  | 320.5 | 326.0 | 329.5 | 329.9 | 326.7 | 323.3 | 319.4 | 319.4 | 319.8 |
| 22.5° | 335.3  | 331.8  | 331.0 | 333.7 | 332.6 | 327.9 | 320.1 | 314.7 | 309.3 | 308.5 | 309.7 |
| 25°   | 345.4  | 341.9  | 341.5 | 339.6 | 329.5 | 317.4 | 306.9 | 300.7 | 296.4 | 296.8 | 299.2 |
| 27.5° | 355.5  | 353.2  | 353.6 | 343.1 | 320.5 | 302.3 | 288.3 | 283.2 | 284.4 | 285.2 | 287.5 |
| 30°   | 365.6  | 365.6  | 367.2 | 343.1 | 308.1 | 280.9 | 267.7 | 267.3 | 270.4 | 272.7 | 275.5 |
| 32.5° | 377.3  | 380.8  | 378.0 | 338.8 | 291.4 | 259.1 | 248.7 | 249.4 | 252.9 | 256.8 | 259.1 |
| 35°   | 388.5  | 396.7  | 388.9 | 329.1 | 268.5 | 239.3 | 230.8 | 229.6 | 232.3 | 235.8 | 237.0 |
| 37.5° | 406.4  | 419.6  | 398.2 | 313.9 | 244.8 | 221.8 | 213.3 | 210.2 | 207.5 | 210.2 | 209.8 |
| 40°   | 437.5  | 453.4  | 405.2 | 288.7 | 221.8 | 205.5 | 196.6 | 190.8 | 184.2 | 178.3 | 178.3 |
| 42.5° | 487.2  | 497.7  | 409.1 | 258.0 | 198.9 | 189.2 | 180.3 | 171.7 | 161.6 | 151.1 | 151.1 |
| 45°   | 568.4  | 570.7  | 410.7 | 225.3 | 177.9 | 172.9 | 163.6 | 155.4 | 142.2 | 131.7 | 129.4 |
| 47.5° | 676.8  | 666.7  | 414.6 | 193.9 | 159.7 | 158.5 | 150.7 | 141.4 | 127.0 | 117.3 | 116.2 |
| 50°   | 822.5  | 779.0  | 431.6 | 168.6 | 144.9 | 146.1 | 140.3 | 129.4 | 115.8 | 108.8 | 107.2 |
| 52.5° | 986.5  | 920.8  | 444.9 | 148.4 | 132.1 | 135.6 | 131.3 | 120.8 | 109.2 | 103.3 | 102.2 |
| 55°   | 1165.6 | 1057.2 | 441.8 | 134.8 | 122.4 | 126.3 | 124.7 | 115.8 | 105.3 | 100.2 | 99.1  |
| 57.5° | 1311.7 | 1153.1 | 414.6 | 122.8 | 112.7 | 118.1 | 119.7 | 112.7 | 103.0 | 98.3  | 97.1  |
| 60°   | 1421.2 | 1205.6 | 358.6 | 112.7 | 104.9 | 111.5 | 115.8 | 110.7 | 102.6 | 99.9  | 98.7  |
| 62.5° | 1471.0 | 1200.9 | 286.0 | 104.9 | 99.1  | 106.8 | 116.2 | 113.8 | 108.4 | 110.3 | 110.7 |
| 65°   | 1443.0 | 1142.3 | 214.5 | 99.1  | 95.6  | 107.6 | 122.8 | 122.8 | 114.6 | 118.1 | 118.5 |
| 67.5° | 1299.6 | 988.8  | 156.2 | 94.8  | 92.1  | 111.5 | 135.2 | 127.4 | 111.9 | 114.6 | 113.4 |
| 69°   | 1163.2 | 884.7  | 134.0 | 92.5  | 89.4  | 113.4 | 140.6 | 128.2 | 108.8 | 111.9 | 108.8 |
| 70°   | 1063.0 | 790.6  | 120.4 | 90.5  | 88.2  | 113.4 | 142.2 | 127.4 | 107.2 | 109.6 | 106.1 |
| 72.5° | 756.5  | 549.0  | 99.1  | 86.6  | 83.9  | 104.9 | 139.5 | 123.2 | 103.0 | 100.2 | 93.6  |
| 75°   | 439.8  | 303.4  | 84.3  | 82.4  | 74.2  | 92.1  | 132.5 | 118.5 | 98.7  | 93.6  | 89.0  |
| 77.5° | 184.5  | 135.6  | 71.9  | 75.0  | 65.7  | 82.0  | 123.9 | 113.8 | 93.6  | 86.6  | 84.3  |
| 80°   | 75.0   | 67.6   | 59.8  | 64.9  | 57.1  | 72.3  | 114.2 | 106.1 | 86.3  | 79.3  | 75.8  |
| 82.5° | 39.2   | 37.3   | 45.8  | 52.5  | 47.4  | 66.4  | 107.6 | 100.6 | 80.0  | 73.0  | 68.8  |
| 85°   | 11.7   | 15.5   | 26.0  | 35.7  | 36.1  | 59.8  | 104.5 | 93.2  | 69.5  | 60.2  | 59.4  |
| 87.5° | 0.8    | 3.1    | 8.9   | 18.6  | 23.7  | 45.8  | 84.7  | 76.5  | 56.3  | 47.4  | 47.8  |
| 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)