

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: P401018

Luminaire Tested: **ENC-SA1A-827-U-SL2**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401018  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENC-SA1A-827-U-SL2  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1985 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G1

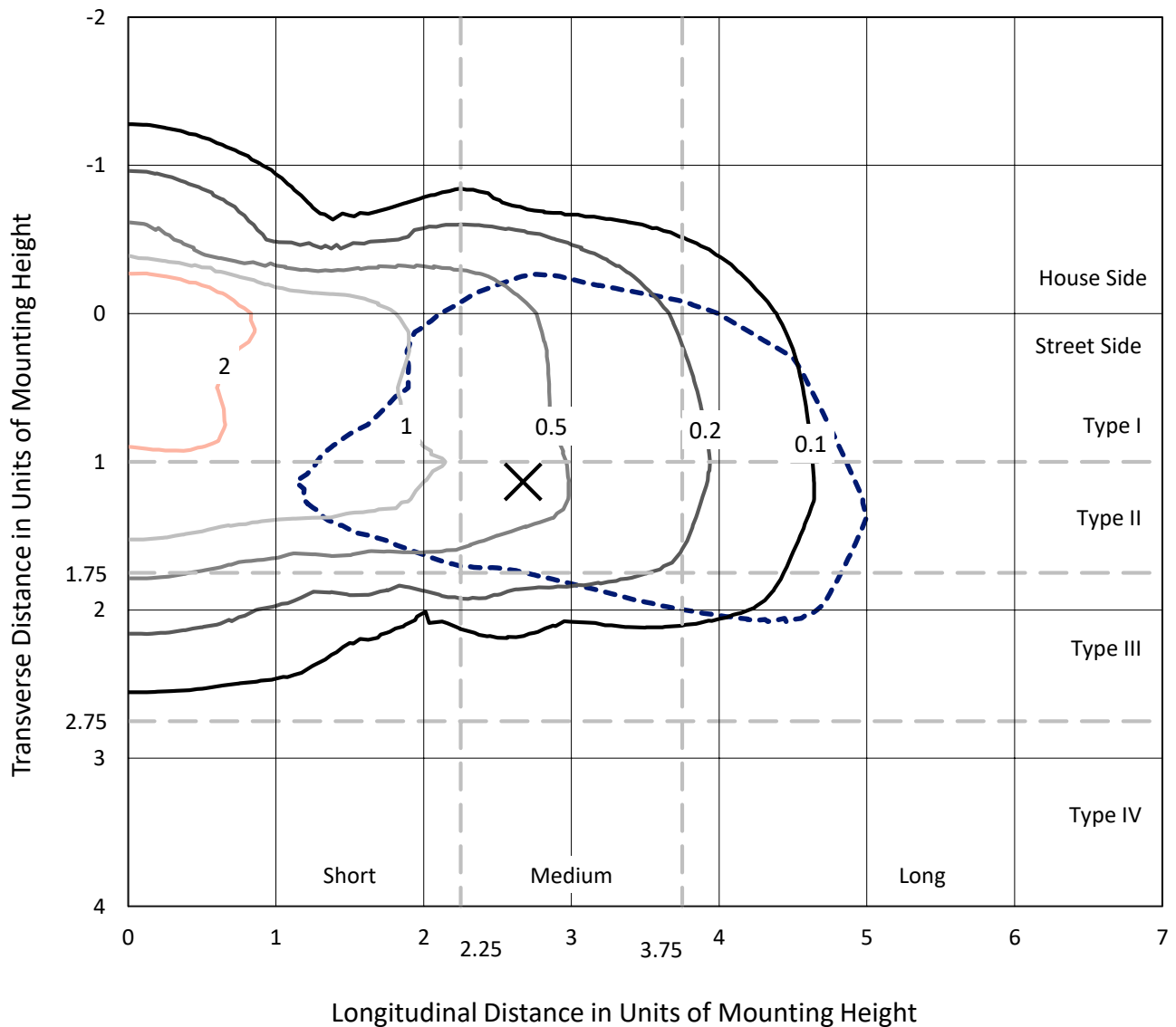
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

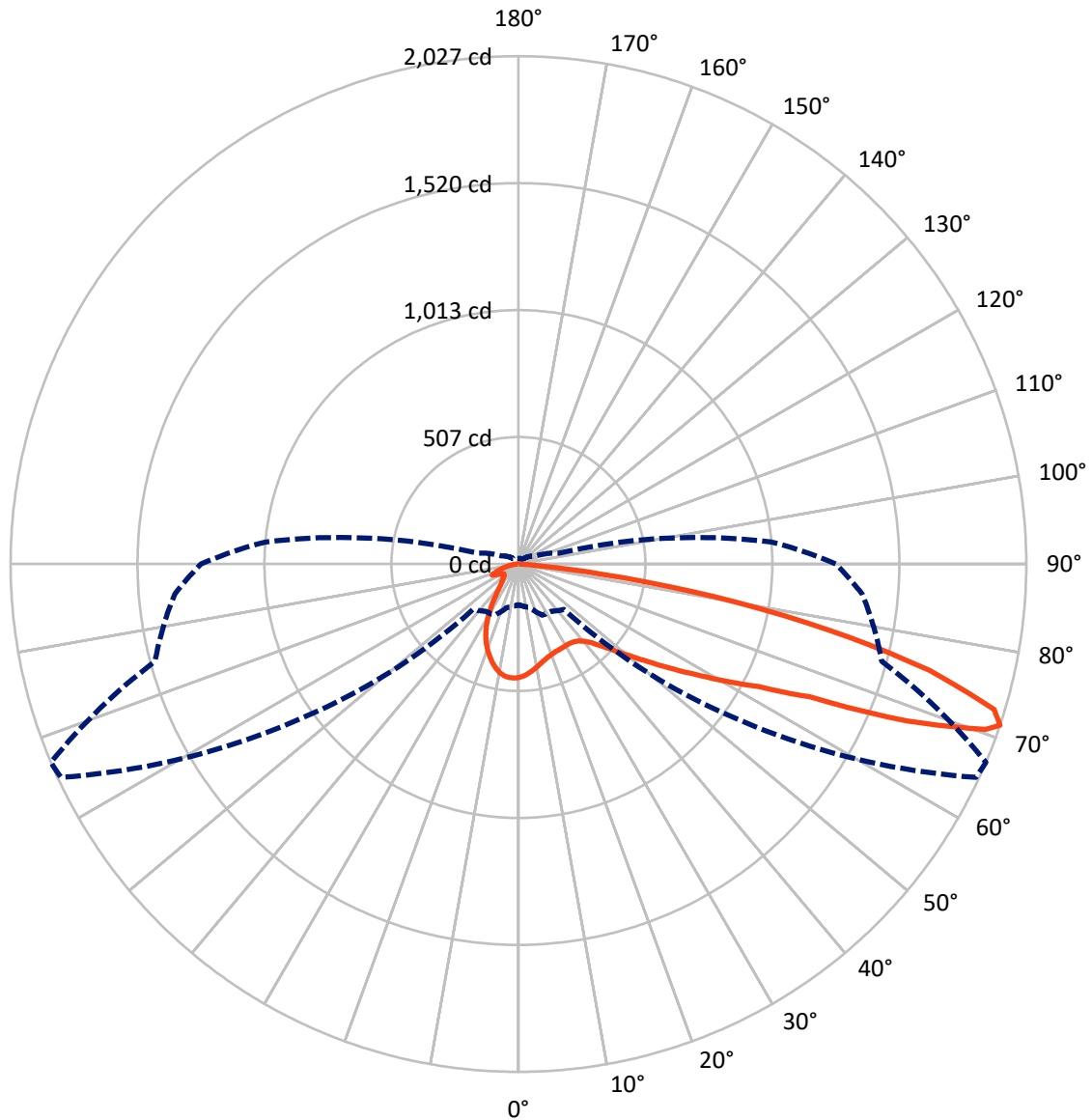


Based on 10 foot mounting height. Maximum calculated value = 4.5 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 406.7    | 0.0    | 406.7  |
|                    | % Fixture | 20.5     | 0.0    | 20.5   |
| <b>Street Side</b> | Lumens    | 1578.3   | 0.0    | 1578.3 |
|                    | % Fixture | 79.5     | 0.0    | 79.5   |
| <b>Total</b>       | Lumens    | 1985.0   | 0.0    | 1985.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 40.1   | 2.0       |
| 10°-20°   | 98.6   | 5.0       |
| 20°-30°   | 133.1  | 6.7       |
| 30°-40°   | 175.3  | 8.8       |
| 40°-50°   | 249.7  | 12.6      |
| 50°-60°   | 381.4  | 19.2      |
| 60°-70°   | 476.2  | 24.0      |
| 70°-80°   | 384.4  | 19.4      |
| 80°-90°   | 46.3   | 2.3       |
| 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°    | 1985.0 | 100.0     |
| 0°-180°   | 1985.0 | 100.0     |



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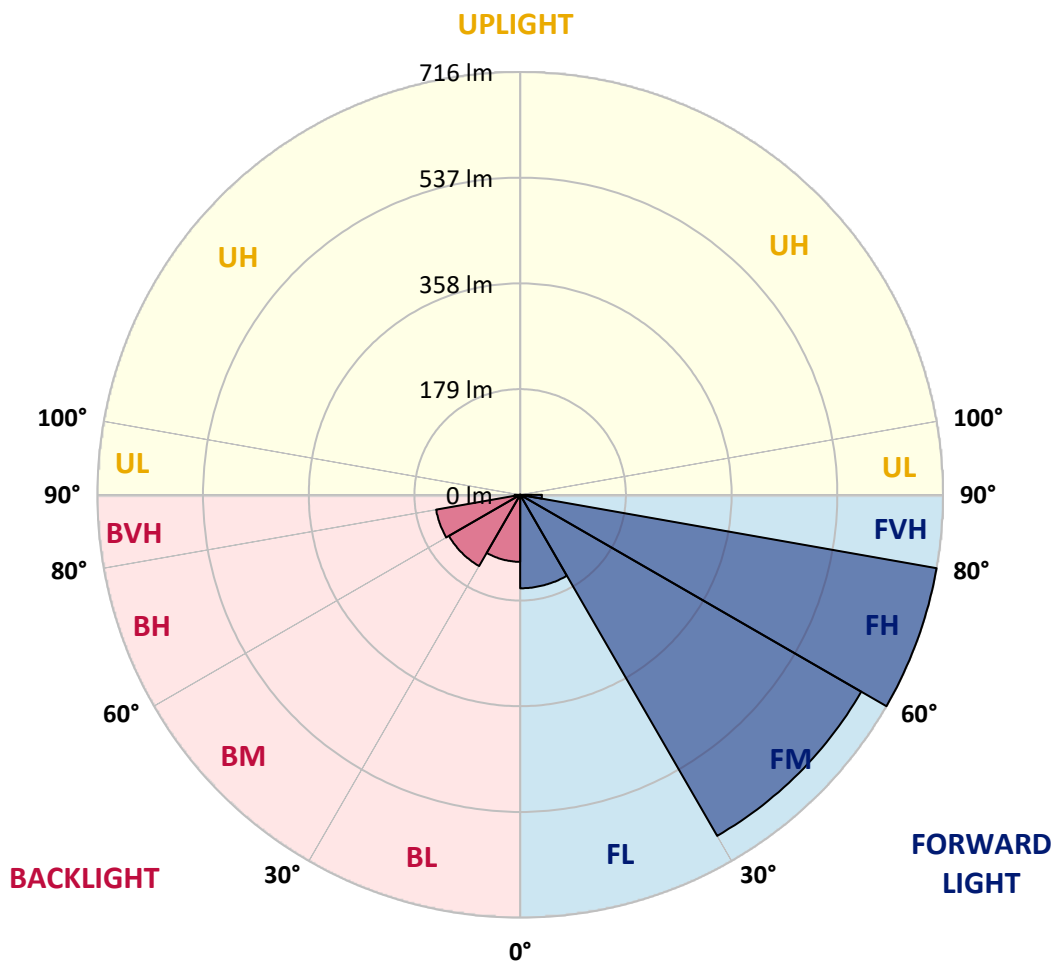
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 158.3  | 8.0       |                         |      |         |
| FM (30°-60°)   | 667.0  | 33.6      |                         |      |         |
| FH (60°-80°)   | 716.1  | 36.1      |                         |      | G1/1800 |
| FVH (80°-90°)  | 37.0   | 1.9       |                         |      | G1/100  |
| BL (0°-30°)    | 113.5  | 5.7       | B1/500                  |      |         |
| BM (30°-60°)   | 139.3  | 7.0       | B0/220                  |      |         |
| BH (60°-80°)   | 144.5  | 7.3       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 9.4    | 0.5       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 15°   | 25°   | 35°   | 45°    | 55°    | 65°    | 67°    | 75°    | 85°    |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 0°    | 452.6 | 452.6 | 452.6 | 452.6 | 452.6 | 452.6  | 452.6  | 452.6  | 452.6  | 452.6  | 452.6  |
| 2.5°  | 426.9 | 428.9 | 429.2 | 433.2 | 434.6 | 439.2  | 441.8  | 446.1  | 446.6  | 449.2  | 450.9  |
| 5°    | 399.2 | 399.5 | 401.2 | 404.6 | 410.1 | 418.3  | 424.6  | 435.2  | 437.2  | 444.6  | 451.2  |
| 7.5°  | 374.3 | 375.8 | 378.6 | 383.8 | 390.1 | 399.8  | 409.5  | 424.1  | 426.9  | 438.9  | 451.5  |
| 10°   | 357.5 | 358.9 | 361.2 | 366.9 | 373.2 | 384.1  | 395.8  | 412.6  | 415.8  | 432.3  | 450.6  |
| 12.5° | 344.0 | 345.5 | 347.2 | 353.5 | 360.3 | 371.2  | 383.2  | 402.1  | 405.2  | 424.3  | 448.6  |
| 15°   | 335.2 | 335.5 | 337.8 | 342.9 | 350.6 | 361.2  | 373.2  | 392.6  | 396.3  | 418.1  | 448.1  |
| 17.5° | 329.8 | 330.3 | 332.3 | 336.3 | 343.2 | 353.5  | 365.2  | 384.9  | 389.2  | 412.9  | 448.3  |
| 20°   | 330.0 | 330.6 | 331.8 | 333.2 | 338.0 | 346.9  | 359.2  | 379.2  | 383.5  | 409.8  | 450.3  |
| 22.5° | 336.0 | 336.3 | 336.6 | 334.6 | 336.3 | 342.6  | 354.6  | 375.2  | 379.8  | 408.3  | 452.6  |
| 25°   | 347.5 | 347.5 | 346.9 | 342.3 | 338.6 | 341.2  | 352.0  | 373.8  | 378.3  | 407.2  | 454.9  |
| 27.5° | 363.2 | 364.3 | 361.5 | 356.0 | 347.5 | 343.2  | 351.5  | 372.6  | 377.2  | 407.2  | 456.1  |
| 30°   | 384.6 | 385.2 | 384.1 | 376.9 | 362.9 | 351.2  | 353.2  | 371.8  | 376.3  | 406.6  | 456.3  |
| 32.5° | 406.3 | 408.1 | 409.5 | 403.2 | 386.3 | 365.5  | 360.0  | 372.9  | 376.9  | 406.3  | 455.5  |
| 35°   | 428.3 | 429.5 | 436.3 | 435.2 | 416.9 | 386.9  | 371.2  | 377.5  | 380.9  | 407.8  | 456.1  |
| 37.5° | 447.2 | 449.8 | 459.8 | 467.5 | 453.2 | 416.1  | 390.3  | 387.5  | 389.5  | 414.9  | 459.2  |
| 40°   | 467.5 | 471.2 | 486.1 | 500.6 | 494.4 | 452.6  | 417.5  | 405.5  | 404.9  | 428.1  | 466.9  |
| 42.5° | 490.4 | 494.6 | 513.8 | 534.9 | 536.9 | 499.2  | 453.8  | 430.9  | 430.3  | 450.6  | 483.8  |
| 45°   | 517.2 | 521.2 | 547.2 | 572.4 | 584.7 | 551.2  | 498.4  | 466.9  | 467.2  | 482.1  | 510.6  |
| 47.5° | 550.4 | 556.6 | 581.8 | 613.8 | 635.8 | 609.8  | 552.4  | 517.2  | 514.9  | 529.5  | 554.6  |
| 50°   | 596.9 | 602.1 | 622.9 | 654.1 | 692.7 | 680.7  | 620.4  | 577.8  | 576.1  | 582.9  | 613.5  |
| 52.5° | 645.8 | 647.5 | 657.5 | 689.8 | 754.7 | 766.7  | 704.1  | 652.9  | 646.4  | 650.1  | 686.7  |
| 55°   | 648.7 | 652.4 | 658.9 | 699.8 | 810.4 | 869.8  | 796.4  | 741.5  | 733.0  | 730.4  | 769.8  |
| 57.5° | 589.2 | 595.2 | 603.8 | 656.7 | 812.7 | 989.0  | 927.6  | 845.0  | 829.5  | 816.7  | 858.7  |
| 60°   | 463.2 | 470.9 | 486.6 | 551.5 | 754.7 | 1057.0 | 1146.4 | 961.0  | 947.3  | 903.6  | 945.6  |
| 62.5° | 334.9 | 338.0 | 353.2 | 382.3 | 598.9 | 1061.0 | 1374.5 | 1112.4 | 1078.4 | 988.1  | 1020.4 |
| 65°   | 269.8 | 274.9 | 279.5 | 279.2 | 354.6 | 941.0  | 1525.9 | 1381.9 | 1279.3 | 1082.7 | 1102.7 |
| 67.5° | 222.3 | 224.0 | 235.2 | 254.6 | 241.2 | 581.2  | 1541.1 | 1775.7 | 1671.7 | 1210.2 | 1200.4 |
| 70°   | 185.7 | 186.3 | 197.5 | 232.3 | 230.9 | 300.0  | 1292.2 | 2002.3 | 1977.1 | 1419.3 | 1353.3 |
| 71°   | 162.6 | 167.5 | 179.7 | 224.9 | 229.7 | 256.3  | 1097.9 | 2014.3 | 2026.8 | 1501.3 | 1377.0 |
| 72.5° | 128.0 | 128.0 | 145.4 | 206.3 | 231.7 | 236.6  | 809.0  | 1948.8 | 1985.1 | 1594.5 | 1335.9 |
| 75°   | 75.2  | 74.6  | 84.0  | 143.7 | 236.9 | 235.7  | 441.8  | 1619.6 | 1693.1 | 1611.4 | 1236.5 |
| 77.5° | 42.3  | 43.1  | 48.3  | 80.0  | 188.0 | 226.3  | 253.7  | 1179.3 | 1265.9 | 1347.9 | 1045.6 |
| 80°   | 19.4  | 20.6  | 24.3  | 38.9  | 110.9 | 195.5  | 181.2  | 765.8  | 798.7  | 810.1  | 494.1  |
| 82.5° | 5.1   | 5.7   | 7.4   | 14.9  | 42.9  | 133.2  | 134.0  | 320.6  | 331.2  | 191.5  | 106.0  |
| 85°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.6   | 16.3   | 38.0   | 57.7   | 48.0   | 25.4   | 21.7   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.6    | 0.9    | 1.1    | 1.1    | 1.1    | 1.4    |
| 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°    | 452.6  | 452.6  | 452.6 | 452.6 | 452.6 | 452.6 | 452.6 | 452.6 | 452.6 | 452.6 | 452.6 |
| 2.5°  | 452.3  | 453.5  | 455.5 | 455.2 | 454.6 | 451.2 | 453.2 | 451.2 | 450.9 | 450.1 | 450.3 |
| 5°    | 453.5  | 455.2  | 456.3 | 453.8 | 449.5 | 442.1 | 439.5 | 432.9 | 428.6 | 426.3 | 425.2 |
| 7.5°  | 455.2  | 456.3  | 455.8 | 448.6 | 437.5 | 423.5 | 411.5 | 402.1 | 392.1 | 390.3 | 389.8 |
| 10°   | 455.2  | 456.3  | 451.8 | 438.1 | 418.9 | 396.9 | 378.6 | 363.2 | 347.8 | 342.0 | 342.9 |
| 12.5° | 454.1  | 454.6  | 444.1 | 422.1 | 394.3 | 364.3 | 338.6 | 313.2 | 293.5 | 281.5 | 279.2 |
| 15°   | 453.2  | 452.3  | 433.8 | 402.1 | 365.2 | 328.0 | 289.2 | 254.9 | 231.5 | 215.7 | 213.7 |
| 17.5° | 453.2  | 450.1  | 421.5 | 379.2 | 333.5 | 282.3 | 230.9 | 193.7 | 167.7 | 158.6 | 158.3 |
| 20°   | 453.8  | 446.9  | 408.3 | 355.5 | 294.0 | 228.0 | 172.3 | 140.6 | 130.9 | 129.4 | 129.7 |
| 22.5° | 454.3  | 442.6  | 394.1 | 328.6 | 250.0 | 170.0 | 123.2 | 111.7 | 112.6 | 116.0 | 115.7 |
| 25°   | 453.8  | 436.9  | 377.2 | 298.6 | 202.0 | 122.6 | 99.4  | 96.6  | 101.7 | 105.7 | 106.9 |
| 27.5° | 452.3  | 429.5  | 359.2 | 262.9 | 154.0 | 96.6  | 86.9  | 86.6  | 91.7  | 95.4  | 95.2  |
| 30°   | 448.1  | 420.6  | 338.3 | 225.2 | 111.2 | 82.3  | 78.3  | 79.2  | 82.6  | 86.0  | 86.0  |
| 32.5° | 443.5  | 410.6  | 316.3 | 184.0 | 85.4  | 74.6  | 73.2  | 73.4  | 75.7  | 78.3  | 78.0  |
| 35°   | 438.6  | 400.9  | 293.8 | 141.2 | 74.9  | 70.0  | 69.4  | 69.2  | 70.0  | 70.6  | 70.6  |
| 37.5° | 435.8  | 392.3  | 268.9 | 106.3 | 69.2  | 67.2  | 66.0  | 64.9  | 64.6  | 64.0  | 63.4  |
| 40°   | 436.9  | 386.6  | 244.9 | 82.3  | 65.7  | 64.0  | 62.3  | 60.6  | 59.4  | 58.9  | 58.6  |
| 42.5° | 444.9  | 384.9  | 218.3 | 70.9  | 62.6  | 61.2  | 58.9  | 56.0  | 54.9  | 54.9  | 54.6  |
| 45°   | 463.5  | 390.1  | 193.5 | 65.2  | 59.7  | 58.0  | 54.3  | 52.3  | 51.4  | 51.7  | 51.7  |
| 47.5° | 492.6  | 404.6  | 171.2 | 62.3  | 57.7  | 55.2  | 50.9  | 48.9  | 48.3  | 48.6  | 48.6  |
| 50°   | 536.4  | 432.1  | 148.3 | 59.7  | 55.4  | 52.0  | 48.3  | 46.0  | 45.1  | 45.1  | 45.1  |
| 52.5° | 600.4  | 477.2  | 131.7 | 58.0  | 53.4  | 49.4  | 45.7  | 43.1  | 42.0  | 42.0  | 41.7  |
| 55°   | 678.4  | 536.1  | 125.4 | 56.9  | 50.9  | 47.1  | 43.1  | 40.6  | 38.9  | 38.3  | 38.6  |
| 57.5° | 763.8  | 612.4  | 134.6 | 56.6  | 48.0  | 44.6  | 40.6  | 37.4  | 35.7  | 35.4  | 35.1  |
| 60°   | 851.8  | 688.1  | 160.9 | 55.2  | 45.7  | 41.4  | 37.7  | 34.9  | 33.1  | 32.6  | 32.3  |
| 62.5° | 927.8  | 763.5  | 204.3 | 54.0  | 44.0  | 38.6  | 34.6  | 32.0  | 30.6  | 29.7  | 29.7  |
| 65°   | 1019.6 | 850.1  | 270.6 | 55.4  | 43.1  | 35.7  | 31.7  | 29.4  | 28.3  | 27.4  | 27.4  |
| 67.5° | 1144.7 | 978.4  | 320.9 | 62.3  | 45.1  | 33.4  | 28.6  | 26.9  | 26.0  | 25.4  | 25.4  |
| 70°   | 1267.9 | 1050.4 | 223.2 | 73.2  | 50.3  | 31.4  | 25.7  | 24.6  | 24.0  | 23.4  | 23.4  |
| 71°   | 1266.2 | 1011.9 | 167.7 | 75.7  | 52.0  | 30.9  | 24.6  | 23.7  | 23.1  | 22.9  | 22.6  |
| 72.5° | 1202.7 | 919.8  | 120.3 | 73.4  | 51.1  | 29.1  | 23.1  | 22.3  | 21.7  | 21.7  | 21.4  |
| 75°   | 1078.7 | 810.7  | 94.0  | 61.4  | 42.9  | 26.0  | 20.6  | 20.0  | 19.4  | 19.1  | 19.4  |
| 77.5° | 883.8  | 648.7  | 74.0  | 48.6  | 32.6  | 21.4  | 18.3  | 17.4  | 17.1  | 16.9  | 17.1  |
| 80°   | 406.1  | 282.6  | 54.0  | 37.7  | 24.3  | 17.1  | 15.4  | 15.1  | 14.9  | 14.6  | 14.6  |
| 82.5° | 97.7   | 79.2   | 28.9  | 25.1  | 16.6  | 13.1  | 12.3  | 12.3  | 12.3  | 12.0  | 12.0  |
| 85°   | 21.4   | 21.4   | 11.7  | 11.7  | 10.0  | 9.1   | 9.7   | 9.7   | 9.7   | 9.1   | 9.1   |
| 87.5° | 1.1    | 3.4    | 3.7   | 5.4   | 5.7   | 5.4   | 6.6   | 6.9   | 6.6   | 6.3   | 6.0   |
| 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)