

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: P401014

Luminaire Tested: **ENC-SA1A-760-U-T4FT**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401014  
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: ENC-SA1A-760-U-T4FT  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 5700K, 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: 2617 lumens  
Efficiency: N/A  
Efficacy: 130.2 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

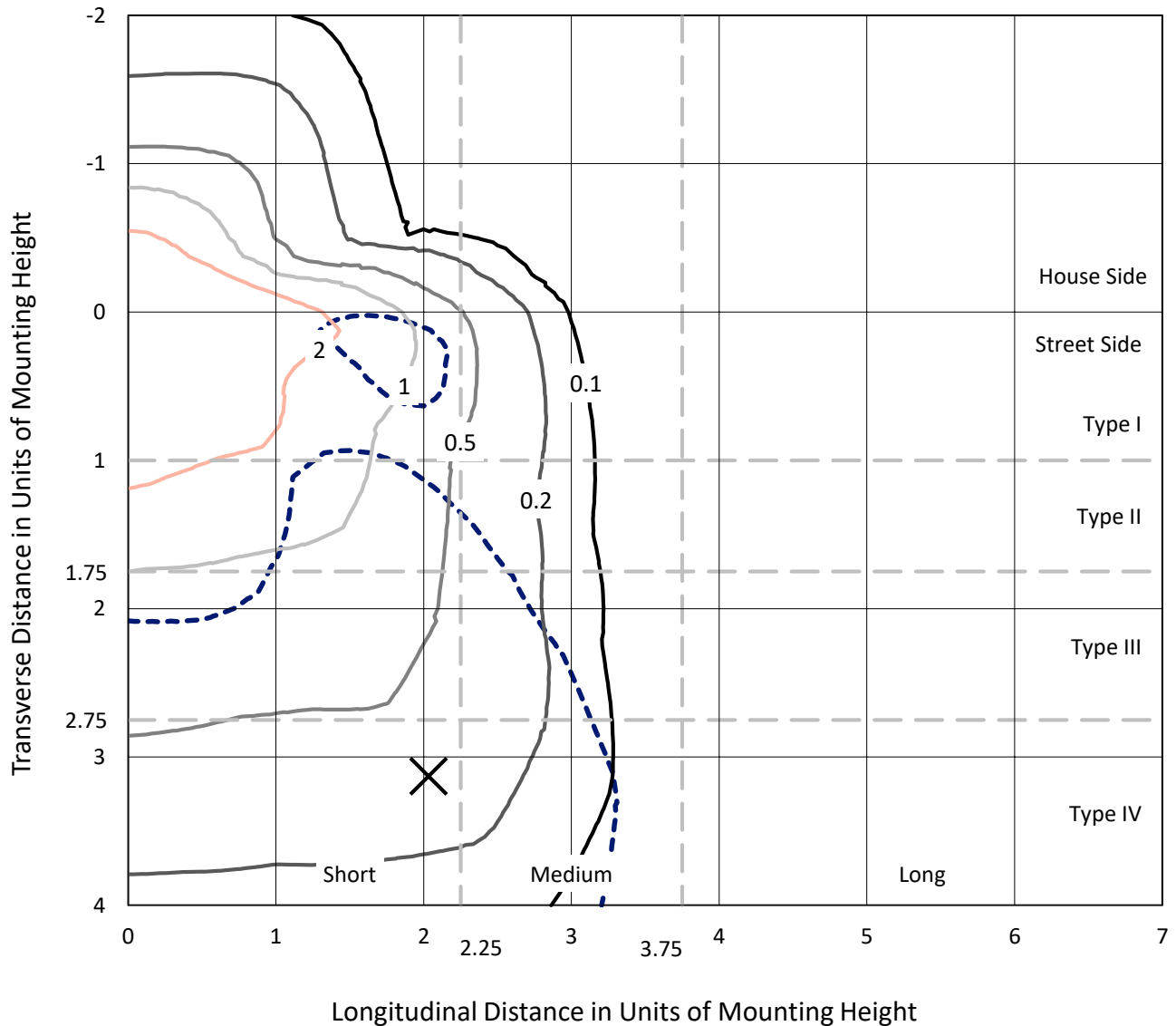


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### Iso-Footcandle Lines of Horizontal Illumination

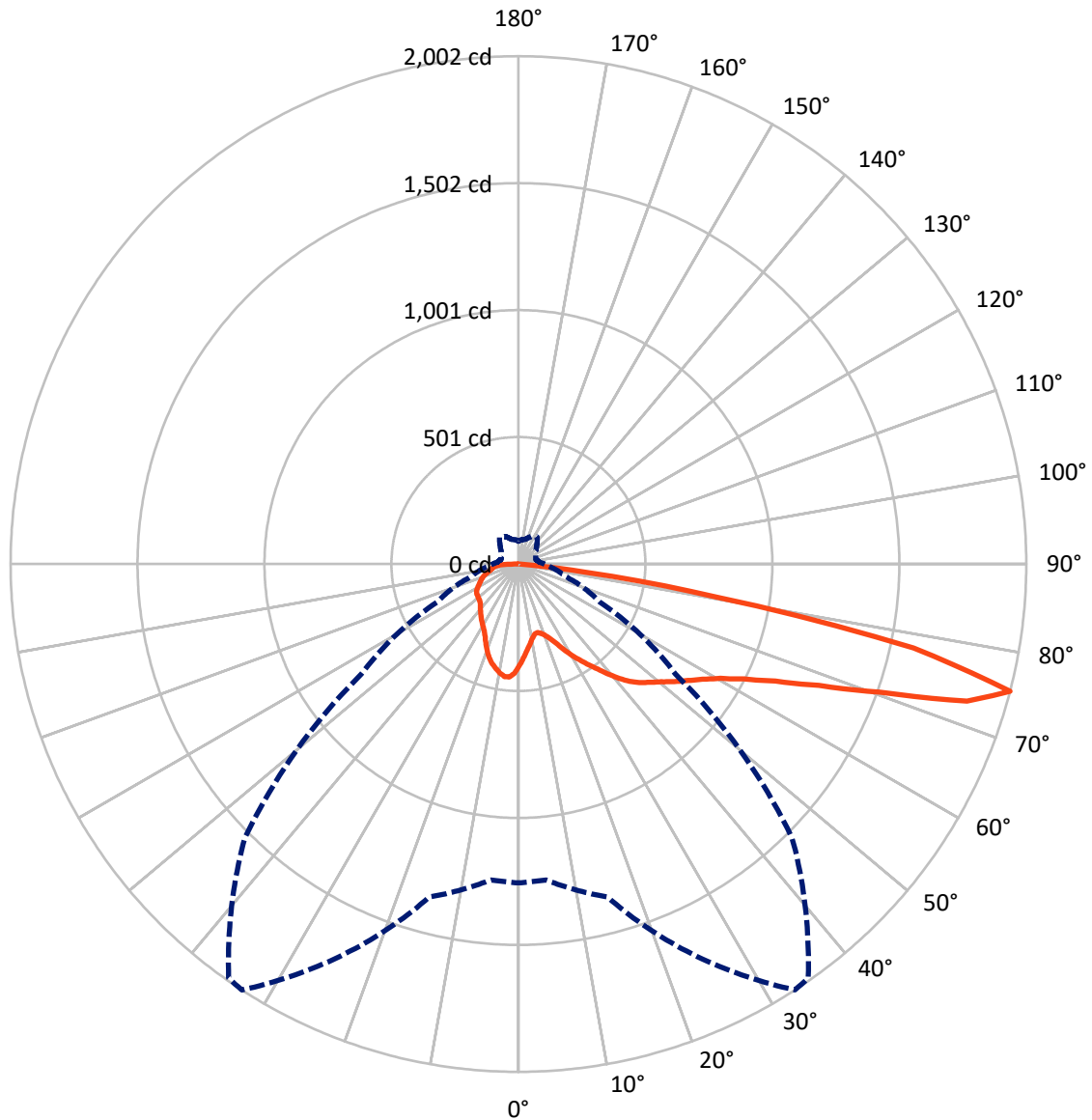
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 635.7    | 0.0    | 635.7  |
|                    | % Fixture | 24.3     | 0.0    | 24.3   |
| <b>Street Side</b> | Lumens    | 1981.3   | 0.0    | 1981.3 |
|                    | % Fixture | 75.7     | 0.0    | 75.7   |
| <b>Total</b>       | Lumens    | 2617.0   | 0.0    | 2617.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 37.5   | 1.4       |
| 10°-20°   | 105.4  | 4.0       |
| 20°-30°   | 175.2  | 6.7       |
| 30°-40°   | 261.4  | 10.0      |
| 40°-50°   | 365.1  | 14.0      |
| 50°-60°   | 487.4  | 18.6      |
| 60°-70°   | 604.3  | 23.1      |
| 70°-80°   | 522.5  | 20.0      |
| 80°-90°   | 58.4   | 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°    | 2617.0 | 100.0     |
| 0°-180°   | 2617.0 | 100.0     |



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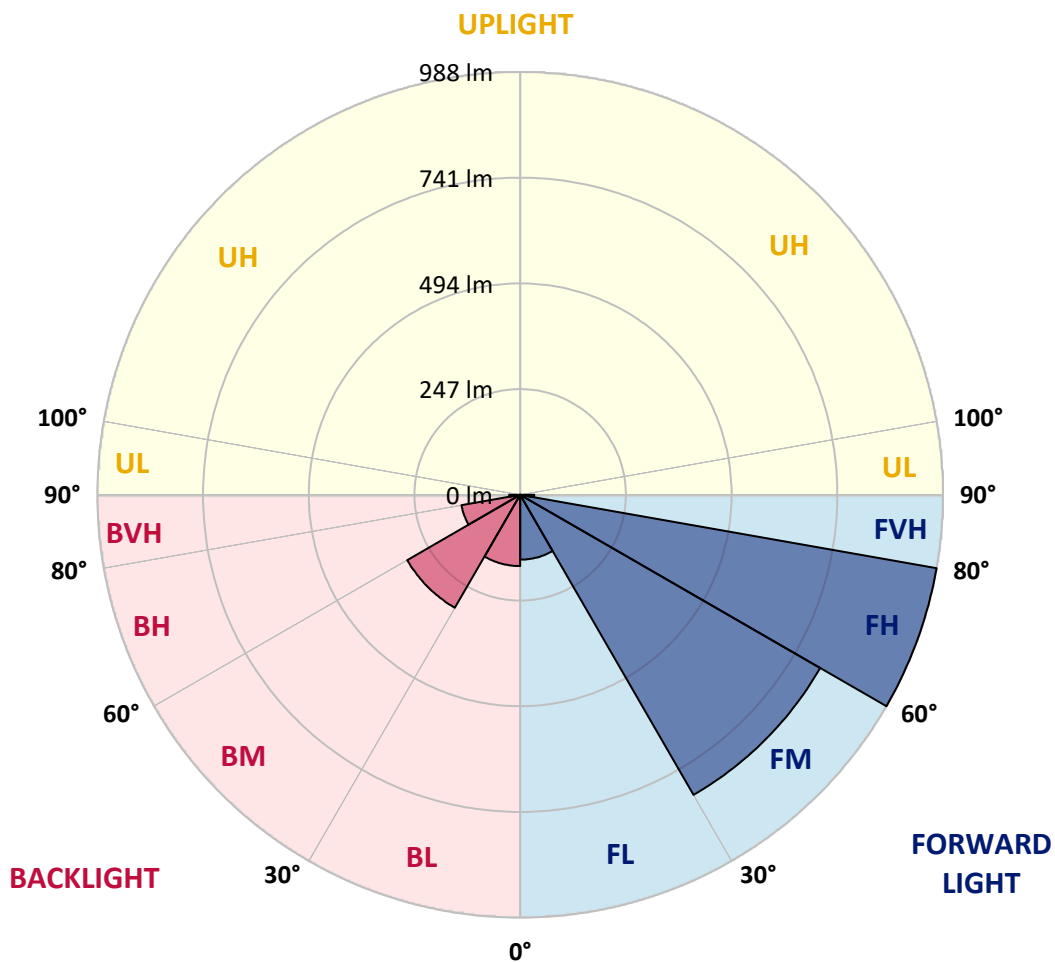
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 151.5  | 5.8       |                         |      |         |
| FM   | (30°-60°)   | 809.2  | 30.9      |                         |      |         |
| FH   | (60°-80°)   | 987.5  | 37.7      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 33.0   | 1.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 166.5  | 6.4       | B1/500                  |      |         |
| BM   | (30°-60°)   | 304.6  | 11.6      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 139.2  | 5.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 25.4   | 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°    | 33°    | 35°    | 45°    | 55°    | 65°   | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| 0°    | 401.0  | 401.0  | 401.0  | 401.0  | 401.0  | 401.0  | 401.0  | 401.0  | 401.0 | 401.0  | 401.0  |
| 2.5°  | 363.7  | 364.5  | 366.8  | 369.5  | 371.1  | 371.1  | 375.4  | 380.4  | 386.6 | 392.1  | 397.9  |
| 5°    | 333.4  | 334.6  | 336.5  | 340.0  | 344.3  | 345.0  | 353.6  | 362.5  | 373.8 | 385.8  | 397.5  |
| 7.5°  | 303.5  | 305.8  | 309.7  | 314.4  | 321.0  | 322.5  | 334.6  | 346.6  | 362.1 | 380.4  | 399.4  |
| 10°   | 280.5  | 282.1  | 284.0  | 290.6  | 298.8  | 301.5  | 317.5  | 332.6  | 354.0 | 376.5  | 401.8  |
| 12.5° | 274.3  | 274.3  | 274.3  | 277.4  | 284.0  | 286.4  | 303.1  | 322.5  | 346.6 | 373.8  | 405.3  |
| 15°   | 283.3  | 282.9  | 278.6  | 276.3  | 280.2  | 282.1  | 296.5  | 315.5  | 342.7 | 374.6  | 411.9  |
| 17.5° | 303.5  | 302.3  | 292.2  | 284.4  | 287.2  | 288.3  | 297.6  | 314.0  | 341.6 | 377.7  | 421.6  |
| 20°   | 329.9  | 327.2  | 311.6  | 300.0  | 299.6  | 300.4  | 307.4  | 318.6  | 343.5 | 383.1  | 432.1  |
| 22.5° | 364.9  | 363.3  | 340.4  | 322.5  | 319.4  | 319.4  | 322.5  | 329.5  | 348.5 | 389.3  | 446.5  |
| 25°   | 409.9  | 405.7  | 378.1  | 354.0  | 347.0  | 345.0  | 344.7  | 344.7  | 357.5 | 398.7  | 464.3  |
| 27.5° | 456.2  | 451.1  | 423.2  | 390.5  | 381.2  | 377.7  | 371.5  | 366.8  | 369.1 | 408.8  | 485.7  |
| 30°   | 497.8  | 490.8  | 467.1  | 433.3  | 419.3  | 413.8  | 402.6  | 392.8  | 386.6 | 422.8  | 514.1  |
| 32.5° | 520.7  | 518.0  | 501.6  | 470.9  | 455.0  | 452.7  | 434.0  | 421.2  | 410.3 | 441.0  | 552.2  |
| 35°   | 551.4  | 547.9  | 537.4  | 512.1  | 493.1  | 487.3  | 473.3  | 458.1  | 440.6 | 465.5  | 600.3  |
| 37.5° | 579.7  | 577.8  | 573.9  | 556.4  | 536.2  | 530.4  | 517.6  | 501.6  | 477.9 | 501.6  | 654.3  |
| 40°   | 608.5  | 606.2  | 604.6  | 598.4  | 584.0  | 580.1  | 573.9  | 555.3  | 523.4 | 541.3  | 707.6  |
| 42.5° | 650.5  | 645.4  | 629.1  | 628.7  | 629.9  | 633.0  | 633.4  | 612.8  | 573.1 | 590.6  | 754.2  |
| 45°   | 705.3  | 691.3  | 654.7  | 653.6  | 667.2  | 675.3  | 695.1  | 677.7  | 624.8 | 641.1  | 806.3  |
| 47.5° | 733.2  | 718.9  | 681.2  | 678.8  | 696.7  | 708.7  | 757.7  | 740.6  | 678.4 | 697.9  | 860.3  |
| 50°   | 746.8  | 737.5  | 704.5  | 711.9  | 730.1  | 741.8  | 817.2  | 803.6  | 734.0 | 759.3  | 928.3  |
| 52.5° | 765.9  | 750.3  | 727.0  | 742.6  | 769.8  | 781.8  | 870.4  | 868.1  | 781.0 | 826.1  | 1002.9 |
| 55°   | 759.3  | 751.1  | 755.4  | 776.4  | 810.6  | 828.4  | 924.0  | 924.0  | 828.8 | 897.6  | 1076.7 |
| 57.5° | 764.7  | 759.3  | 794.6  | 813.3  | 856.4  | 882.1  | 988.5  | 971.4  | 869.2 | 957.4  | 1126.5 |
| 60°   | 810.9  | 795.4  | 823.0  | 859.9  | 915.5  | 940.3  | 1062.3 | 1021.2 | 902.3 | 1009.1 | 1135.4 |
| 62.5° | 892.5  | 880.1  | 882.8  | 925.2  | 997.1  | 1025.8 | 1135.4 | 1065.1 | 924.4 | 1030.9 | 1102.0 |
| 65°   | 1027.8 | 1021.9 | 988.5  | 1014.2 | 1113.2 | 1139.3 | 1226.7 | 1103.1 | 918.2 | 1014.6 | 1013.8 |
| 67.5° | 1209.6 | 1186.3 | 1141.2 | 1164.2 | 1278.4 | 1304.8 | 1336.7 | 1117.5 | 877.8 | 917.0  | 814.8  |
| 70°   | 1360.4 | 1341.0 | 1320.4 | 1380.6 | 1511.9 | 1526.3 | 1451.3 | 1103.9 | 779.5 | 717.7  | 546.3  |
| 72.5° | 1456.4 | 1442.4 | 1461.4 | 1638.6 | 1848.8 | 1821.6 | 1564.4 | 1008.7 | 608.1 | 439.5  | 273.2  |
| 75°   | 1257.0 | 1250.4 | 1359.2 | 1718.6 | 2002.3 | 1992.2 | 1525.1 | 755.0  | 352.8 | 193.5  | 124.3  |
| 77.5° | 632.2  | 704.1  | 818.7  | 1219.3 | 1593.1 | 1595.1 | 1111.3 | 362.9  | 148.4 | 108.4  | 85.5   |
| 80°   | 178.0  | 180.3  | 273.2  | 502.8  | 795.4  | 847.5  | 420.4  | 123.2  | 84.7  | 80.8   | 63.7   |
| 82.5° | 42.4   | 39.2   | 69.9   | 148.8  | 266.9  | 277.8  | 126.3  | 44.3   | 47.4  | 50.5   | 39.2   |
| 85°   | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.8    | 4.7    | 4.7    | 11.3  | 14.4   | 11.3   |
| 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    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 | 401.0 |
| 2.5°  | 400.6 | 404.5 | 410.7 | 416.2 | 420.8 | 424.3 | 429.8 | 430.5 | 432.1 | 432.9 | 433.6 |
| 5°    | 404.1 | 411.5 | 423.2 | 433.3 | 440.2 | 442.2 | 446.9 | 446.5 | 446.9 | 446.9 | 446.5 |
| 7.5°  | 408.8 | 418.9 | 435.2 | 446.5 | 450.4 | 449.2 | 448.0 | 443.7 | 440.2 | 438.7 | 436.8 |
| 10°   | 414.6 | 426.3 | 445.3 | 453.5 | 451.5 | 445.3 | 437.9 | 430.1 | 423.9 | 420.8 | 420.0 |
| 12.5° | 420.4 | 435.6 | 453.5 | 455.8 | 448.0 | 436.8 | 424.3 | 415.8 | 407.6 | 403.3 | 403.3 |
| 15°   | 430.1 | 446.9 | 460.1 | 455.4 | 441.4 | 427.0 | 409.9 | 398.3 | 389.0 | 383.1 | 382.7 |
| 17.5° | 441.8 | 459.7 | 467.1 | 453.5 | 433.3 | 413.0 | 392.5 | 377.3 | 365.3 | 359.4 | 355.9 |
| 20°   | 456.2 | 472.9 | 470.6 | 447.2 | 421.2 | 396.3 | 370.7 | 352.4 | 340.0 | 333.8 | 332.6 |
| 22.5° | 472.5 | 486.5 | 471.7 | 437.1 | 404.9 | 373.0 | 345.0 | 326.8 | 318.6 | 314.0 | 314.4 |
| 25°   | 492.3 | 503.2 | 472.1 | 425.1 | 381.6 | 342.3 | 317.8 | 309.3 | 308.1 | 306.2 | 307.0 |
| 27.5° | 517.2 | 520.7 | 470.6 | 408.8 | 351.7 | 310.1 | 295.7 | 299.2 | 302.3 | 301.1 | 301.9 |
| 30°   | 546.7 | 541.7 | 467.1 | 385.1 | 314.7 | 280.5 | 281.3 | 289.1 | 293.4 | 292.2 | 292.6 |
| 32.5° | 581.3 | 562.6 | 460.5 | 356.3 | 279.8 | 262.7 | 268.9 | 276.7 | 280.9 | 280.9 | 281.3 |
| 35°   | 620.2 | 587.9 | 447.6 | 319.0 | 255.3 | 251.8 | 257.2 | 263.4 | 266.2 | 264.6 | 265.8 |
| 37.5° | 661.0 | 609.7 | 427.0 | 277.4 | 237.0 | 243.2 | 246.4 | 247.9 | 247.5 | 245.2 | 244.0 |
| 40°   | 699.0 | 626.8 | 390.1 | 236.2 | 221.9 | 234.3 | 235.9 | 231.6 | 226.5 | 222.3 | 219.5 |
| 42.5° | 728.2 | 635.7 | 338.8 | 206.3 | 207.5 | 224.2 | 225.4 | 216.8 | 207.1 | 200.5 | 198.9 |
| 45°   | 758.1 | 638.8 | 287.9 | 182.2 | 192.0 | 214.1 | 217.2 | 205.6 | 192.3 | 184.6 | 183.4 |
| 47.5° | 792.3 | 646.6 | 237.8 | 165.5 | 178.7 | 207.1 | 212.2 | 197.8 | 183.0 | 171.4 | 169.4 |
| 50°   | 838.1 | 661.3 | 200.1 | 152.7 | 169.4 | 203.6 | 210.6 | 191.6 | 172.9 | 160.1 | 158.5 |
| 52.5° | 896.4 | 683.1 | 165.1 | 142.6 | 162.0 | 198.2 | 208.3 | 185.3 | 165.5 | 150.0 | 147.7 |
| 55°   | 946.6 | 691.3 | 142.6 | 134.1 | 154.3 | 191.6 | 206.3 | 183.0 | 157.4 | 139.9 | 137.2 |
| 57.5° | 969.5 | 667.9 | 126.7 | 125.5 | 146.1 | 183.4 | 202.4 | 175.2 | 148.4 | 134.8 | 132.5 |
| 60°   | 959.0 | 610.1 | 114.6 | 117.7 | 136.8 | 172.9 | 192.3 | 167.5 | 142.2 | 130.9 | 128.6 |
| 62.5° | 912.4 | 543.2 | 105.7 | 110.4 | 126.3 | 159.7 | 180.7 | 160.5 | 136.8 | 126.7 | 123.6 |
| 65°   | 830.4 | 469.8 | 99.1  | 103.7 | 117.0 | 146.9 | 171.4 | 152.3 | 130.6 | 120.5 | 117.7 |
| 67.5° | 677.7 | 373.8 | 92.1  | 97.1  | 109.2 | 136.4 | 162.8 | 145.7 | 123.6 | 117.0 | 114.6 |
| 70°   | 448.4 | 251.4 | 85.5  | 90.5  | 101.4 | 126.3 | 153.9 | 138.7 | 117.0 | 112.7 | 109.6 |
| 72.5° | 205.9 | 135.2 | 78.5  | 83.5  | 92.5  | 115.0 | 142.6 | 128.2 | 108.0 | 105.3 | 100.6 |
| 75°   | 101.8 | 83.2  | 69.9  | 74.6  | 81.6  | 101.4 | 129.4 | 119.3 | 99.9  | 95.2  | 89.8  |
| 77.5° | 74.2  | 62.2  | 60.2  | 64.9  | 70.7  | 89.8  | 115.4 | 110.0 | 91.7  | 85.1  | 82.0  |
| 80°   | 55.2  | 48.2  | 50.5  | 55.2  | 60.6  | 81.2  | 108.0 | 103.0 | 84.7  | 78.1  | 75.8  |
| 82.5° | 33.8  | 32.3  | 38.9  | 44.3  | 50.9  | 74.6  | 103.0 | 94.0  | 76.2  | 69.9  | 67.2  |
| 85°   | 9.7   | 11.7  | 19.8  | 28.8  | 36.1  | 60.2  | 96.0  | 82.4  | 64.1  | 53.6  | 51.7  |
| 87.5° | 0.0   | 1.2   | 6.2   | 13.2  | 21.4  | 40.0  | 73.8  | 64.5  | 49.0  | 39.6  | 38.1  |
| 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)