

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: P400790

Luminaire Tested: **ENV-SA1-740-U-T3-HSS-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400790  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1-740-U-T3-HSS-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 593 lumens  
Efficiency: N/A  
Efficacy: 45.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B0 - U0 - G0

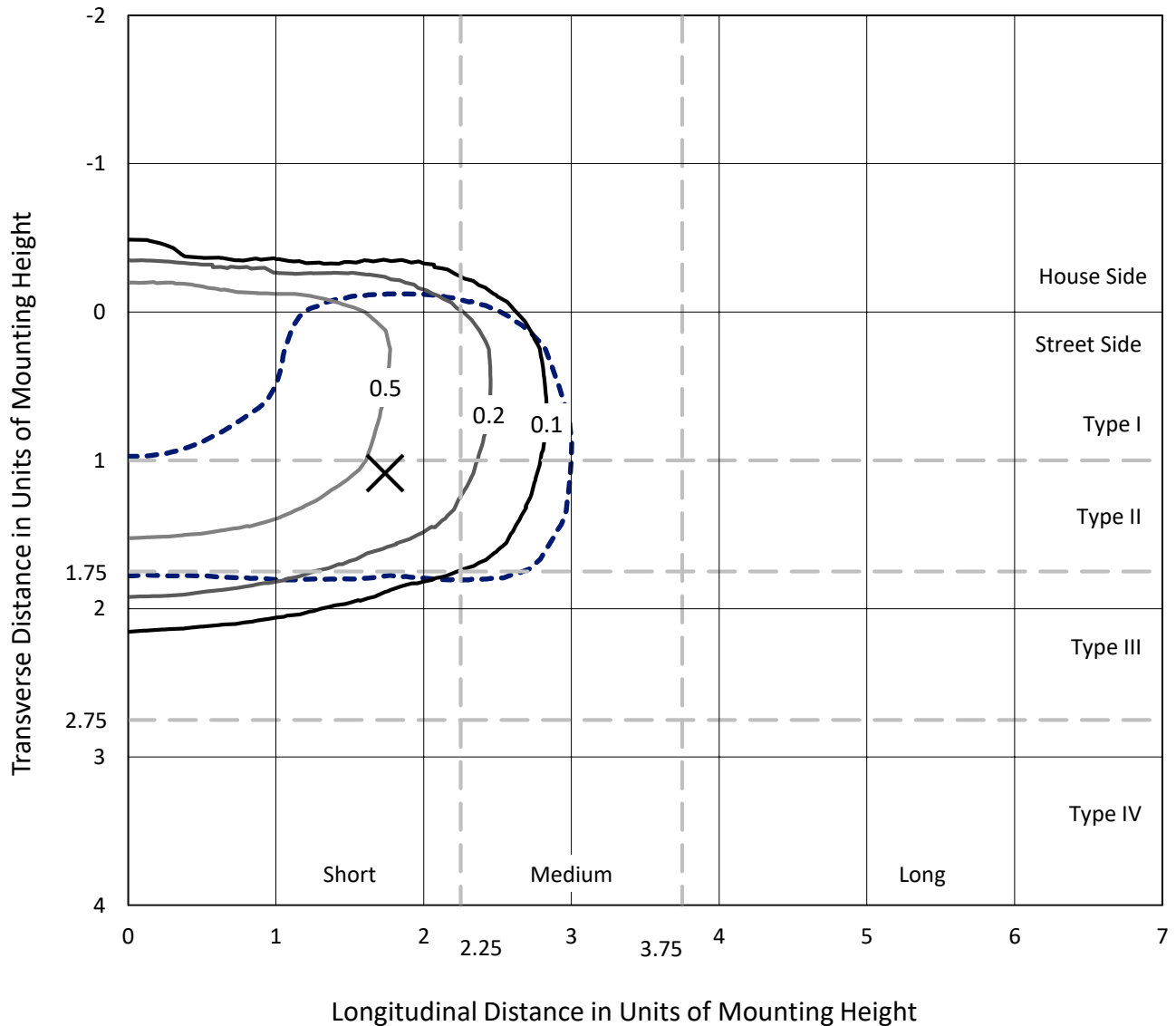
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

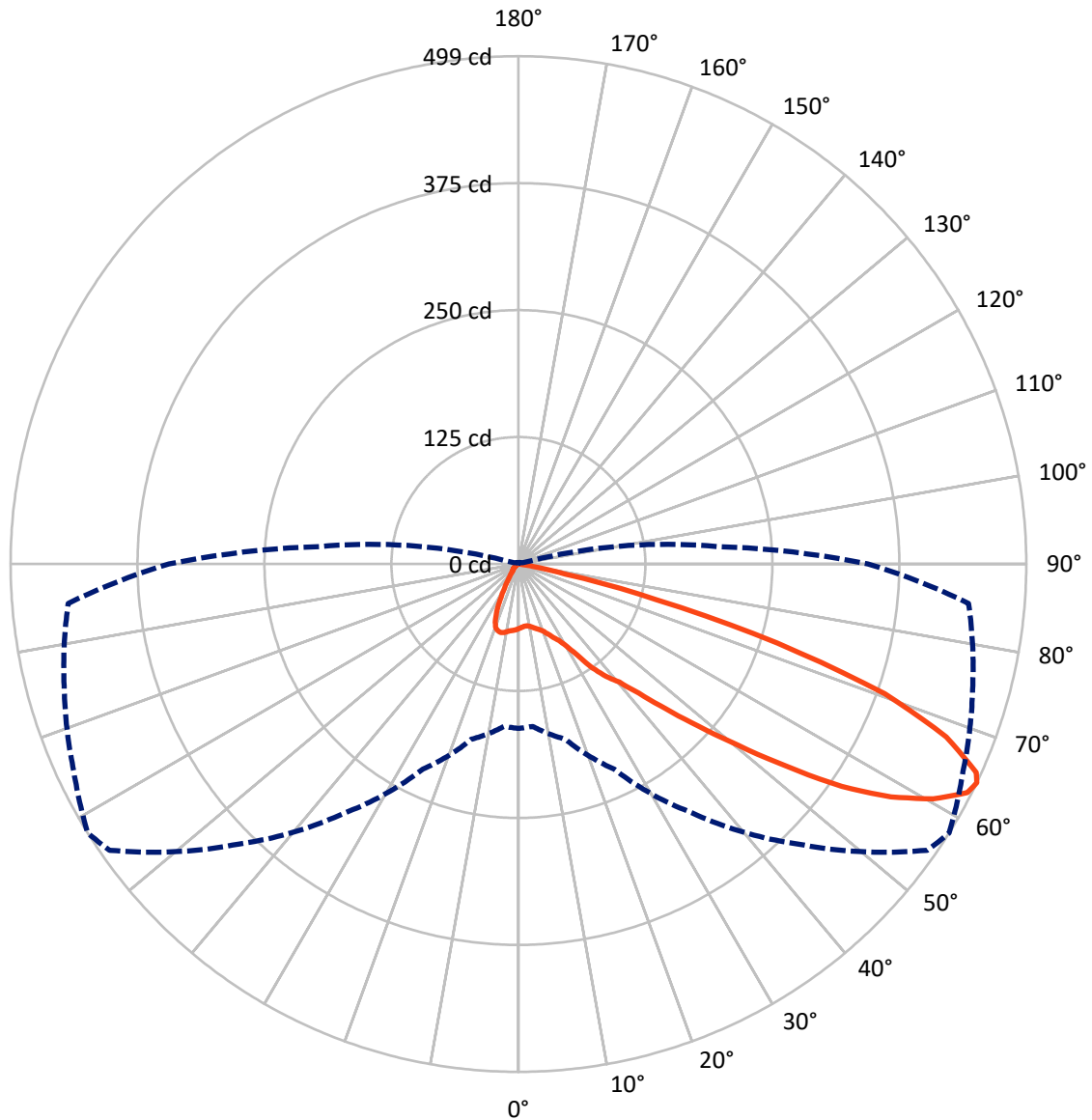
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.9 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 64-Deg Vertical

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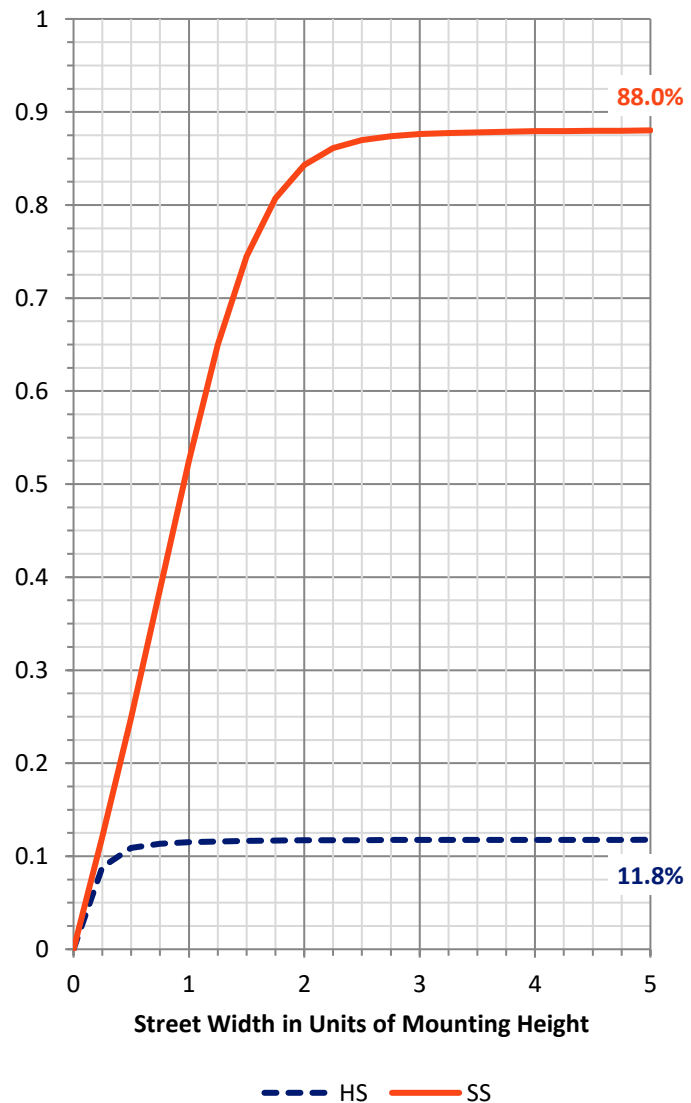
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| <b>House Side</b>  | Lumens    | 70.7     | 0.0    | 70.7  |
|                    | % Fixture | 11.9     | 0.0    | 11.9  |
| <b>Street Side</b> | Lumens    | 522.3    | 0.0    | 522.3 |
|                    | % Fixture | 88.1     | 0.0    | 88.1  |
| <b>Total</b>       | Lumens    | 593.0    | 0.0    | 593.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0 |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 6.0    | 1.0       |
| 10°-20°   | 17.5   | 3.0       |
| 20°-30°   | 31.4   | 5.3       |
| 30°-40°   | 55.1   | 9.3       |
| 40°-50°   | 100.8  | 17.0      |
| 50°-60°   | 172.4  | 29.1      |
| 60°-70°   | 167.2  | 28.2      |
| 70°-80°   | 41.4   | 7.0       |
| 80°-90°   | 1.2    | 0.2       |
| 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°    | 593.0  | 100.0     |
| 0°-180°   | 593.0  | 100.0     |



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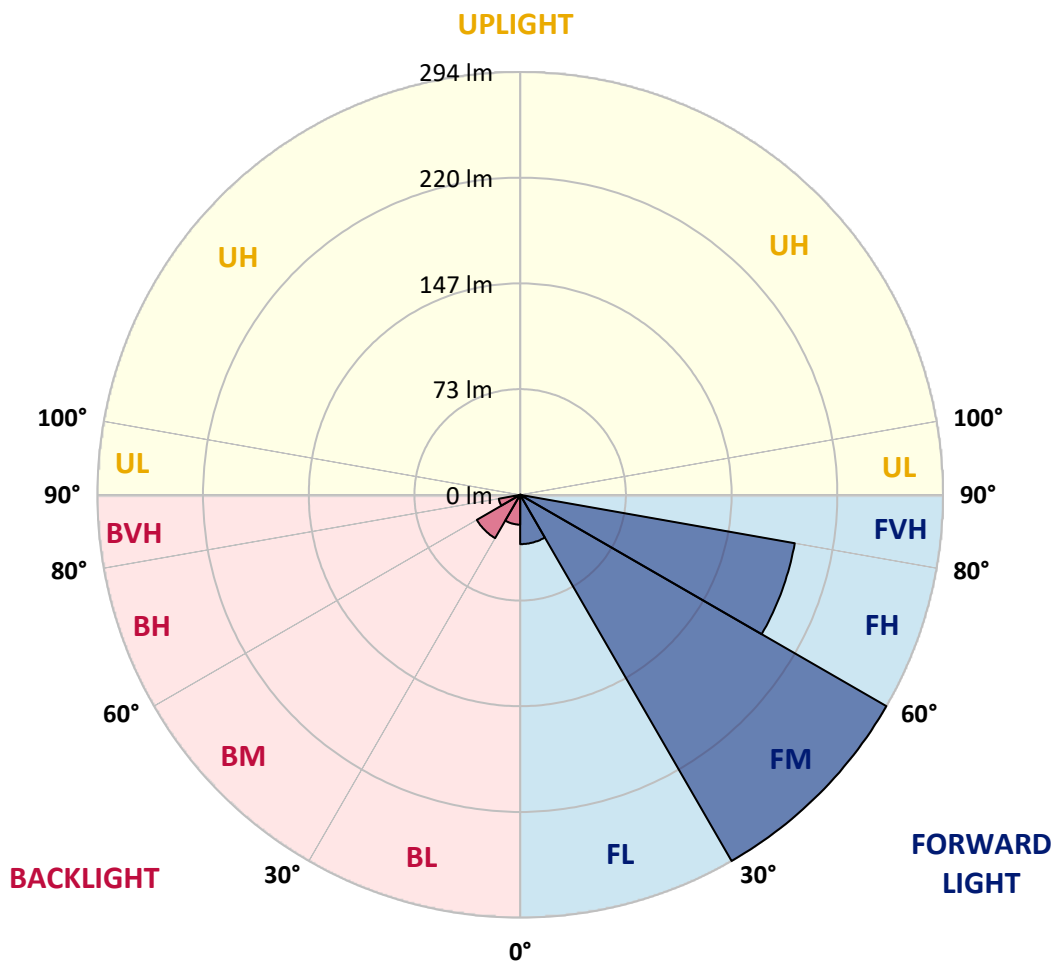
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|--------|-----------|-------------------------|------|--------|
|      |             |        |           | B                       | U    | G      |
| FL   | (0°-30°)    | 34.2   | 5.8       |                         |      |        |
| FM   | (30°-60°)   | 293.5  | 49.5      |                         |      |        |
| FH   | (60°-80°)   | 193.5  | 32.6      |                         |      | G0/660 |
| FVH  | (80°-90°)   | 1.0    | 0.2       |                         |      | G0/10  |
| BL   | (0°-30°)    | 20.7   | 3.5       | B0/110                  |      |        |
| BM   | (30°-60°)   | 34.7   | 5.9       | B0/220                  |      |        |
| BH   | (60°-80°)   | 15.1   | 2.5       | B0/110                  |      | G0/110 |
| BVH  | (80°-90°)   | 0.2    | 0.0       |                         |      | G0/10  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |        |

**BUG Rating: B0-U0-G0**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 15°   | 25°   | 35°   | 45°   | 55°   | 58°   | 65°   | 75°   | 85°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  | 63.5  |
| 2.5°  | 60.9  | 60.9  | 61.1  | 61.2  | 61.5  | 61.9  | 62.3  | 62.4  | 62.6  | 63.2  | 63.4  |
| 5°    | 57.6  | 57.7  | 57.9  | 58.5  | 59.2  | 60.1  | 61.2  | 61.5  | 62.4  | 63.5  | 64.3  |
| 7.5°  | 56.3  | 56.4  | 56.7  | 57.4  | 58.4  | 59.7  | 61.0  | 61.4  | 62.6  | 64.4  | 65.5  |
| 10°   | 56.1  | 56.1  | 56.5  | 57.5  | 58.7  | 60.3  | 61.8  | 62.3  | 64.0  | 66.0  | 67.8  |
| 12.5° | 56.1  | 56.1  | 56.6  | 57.8  | 59.2  | 61.3  | 63.3  | 64.1  | 65.9  | 68.6  | 70.8  |
| 15°   | 57.0  | 57.3  | 57.6  | 58.4  | 60.0  | 62.3  | 65.1  | 65.9  | 68.2  | 71.4  | 74.2  |
| 17.5° | 64.1  | 63.8  | 62.8  | 61.8  | 61.4  | 63.4  | 66.7  | 67.9  | 71.3  | 75.4  | 78.3  |
| 20°   | 77.7  | 77.6  | 75.6  | 70.8  | 66.5  | 65.4  | 69.2  | 70.7  | 75.6  | 81.0  | 83.2  |
| 22.5° | 94.1  | 94.7  | 91.6  | 85.1  | 76.4  | 70.8  | 73.0  | 74.9  | 81.3  | 87.8  | 89.1  |
| 25°   | 110.5 | 111.1 | 108.3 | 100.2 | 89.4  | 79.6  | 78.1  | 79.9  | 87.1  | 93.6  | 93.0  |
| 27.5° | 129.8 | 129.2 | 126.4 | 117.2 | 104.7 | 91.6  | 85.0  | 85.4  | 90.9  | 98.2  | 96.4  |
| 30°   | 143.9 | 143.2 | 140.4 | 134.2 | 122.4 | 107.5 | 94.9  | 93.9  | 95.6  | 103.6 | 101.7 |
| 32.5° | 156.9 | 157.4 | 155.3 | 147.0 | 135.9 | 123.9 | 109.7 | 107.1 | 106.4 | 113.2 | 110.1 |
| 35°   | 169.7 | 169.6 | 168.8 | 161.5 | 150.6 | 139.2 | 127.4 | 125.5 | 125.3 | 131.9 | 123.5 |
| 37.5° | 185.1 | 184.3 | 182.9 | 175.4 | 166.8 | 155.9 | 143.3 | 140.3 | 139.8 | 141.1 | 131.3 |
| 40°   | 201.5 | 202.5 | 200.2 | 192.4 | 183.0 | 174.9 | 157.2 | 152.7 | 149.0 | 152.8 | 146.6 |
| 42.5° | 226.0 | 226.8 | 222.7 | 217.3 | 205.2 | 197.6 | 179.7 | 173.6 | 171.8 | 177.6 | 170.6 |
| 45°   | 256.7 | 255.3 | 252.5 | 248.8 | 238.7 | 227.2 | 208.6 | 202.7 | 200.9 | 210.9 | 199.3 |
| 47.5° | 280.6 | 280.4 | 280.5 | 279.8 | 278.2 | 264.4 | 242.2 | 238.3 | 236.4 | 250.8 | 238.1 |
| 50°   | 295.8 | 296.6 | 300.4 | 309.9 | 316.9 | 311.1 | 285.1 | 280.3 | 278.9 | 293.8 | 276.6 |
| 52.5° | 307.2 | 309.3 | 315.5 | 334.4 | 356.9 | 358.9 | 337.3 | 330.5 | 327.3 | 331.4 | 307.5 |
| 55°   | 313.0 | 314.0 | 323.5 | 351.4 | 386.6 | 400.8 | 391.8 | 386.1 | 372.8 | 364.9 | 343.8 |
| 57.5° | 299.4 | 297.9 | 314.3 | 349.7 | 402.0 | 434.5 | 438.4 | 431.9 | 410.6 | 404.5 | 387.9 |
| 60°   | 263.7 | 263.1 | 281.6 | 324.2 | 388.6 | 442.4 | 472.9 | 468.9 | 449.4 | 434.8 | 419.2 |
| 62.5° | 201.2 | 202.3 | 221.9 | 265.3 | 340.9 | 419.7 | 492.1 | 495.4 | 474.7 | 453.0 | 442.3 |
| 64°   | 161.6 | 160.3 | 178.3 | 222.4 | 299.1 | 389.5 | 490.7 | 499.4 | 482.4 | 462.5 | 444.4 |
| 65°   | 135.7 | 132.9 | 150.1 | 190.0 | 263.7 | 367.5 | 480.6 | 494.6 | 482.9 | 464.8 | 436.9 |
| 67.5° | 71.4  | 73.0  | 80.3  | 115.4 | 178.1 | 277.9 | 432.8 | 453.9 | 458.6 | 433.3 | 380.7 |
| 70°   | 32.0  | 32.3  | 37.0  | 58.9  | 98.5  | 180.2 | 348.1 | 382.2 | 384.9 | 356.0 | 275.8 |
| 72.5° | 10.6  | 10.8  | 16.3  | 23.6  | 41.4  | 83.5  | 235.1 | 266.1 | 271.9 | 230.8 | 149.6 |
| 75°   | 6.6   | 6.8   | 8.7   | 12.7  | 19.2  | 29.2  | 119.1 | 140.2 | 141.4 | 102.4 | 54.4  |
| 77.5° | 4.2   | 4.4   | 5.3   | 7.6   | 10.5  | 11.1  | 39.1  | 47.3  | 53.5  | 36.9  | 16.9  |
| 80°   | 2.6   | 2.6   | 3.4   | 4.6   | 5.5   | 4.7   | 10.6  | 14.0  | 16.9  | 12.4  | 5.7   |
| 82.5° | 1.0   | 1.0   | 1.8   | 2.5   | 2.3   | 1.6   | 2.9   | 3.7   | 6.5   | 6.1   | 2.7   |
| 85°   | 0.0   | 0.0   | 0.1   | 0.2   | 0.1   | 0.2   | 0.5   | 0.8   | 1.2   | 1.8   | 0.9   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.1   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| 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°    | 63.5  | 63.5  | 63.5 | 63.5 | 63.5 | 63.5 | 63.5 | 63.5 | 63.5 | 63.5 | 63.5 |
| 2.5°  | 63.7  | 64.0  | 64.4 | 64.5 | 64.6 | 64.3 | 64.6 | 64.3 | 64.5 | 64.5 | 64.5 |
| 5°    | 64.7  | 65.1  | 65.4 | 65.5 | 65.4 | 64.6 | 64.8 | 64.3 | 64.2 | 64.2 | 64.2 |
| 7.5°  | 66.0  | 66.4  | 66.9 | 66.6 | 65.9 | 64.8 | 64.7 | 64.0 | 63.6 | 63.6 | 63.7 |
| 10°   | 68.5  | 68.8  | 69.0 | 68.3 | 67.0 | 65.4 | 64.2 | 62.5 | 61.8 | 61.4 | 61.4 |
| 12.5° | 71.5  | 71.9  | 71.7 | 70.7 | 68.2 | 64.8 | 61.4 | 58.3 | 56.0 | 55.1 | 54.2 |
| 15°   | 74.8  | 75.3  | 75.0 | 72.7 | 68.1 | 62.1 | 55.5 | 48.1 | 43.4 | 40.5 | 39.9 |
| 17.5° | 78.7  | 79.1  | 78.0 | 73.8 | 66.5 | 56.3 | 43.8 | 33.7 | 27.0 | 24.5 | 24.4 |
| 20°   | 83.4  | 83.2  | 80.5 | 73.9 | 63.5 | 45.5 | 29.3 | 21.1 | 18.2 | 17.6 | 17.4 |
| 22.5° | 88.8  | 87.8  | 82.9 | 73.3 | 55.4 | 30.9 | 18.9 | 16.7 | 16.3 | 16.1 | 16.1 |
| 25°   | 91.8  | 90.1  | 83.8 | 71.4 | 42.7 | 19.7 | 16.0 | 15.6 | 15.1 | 14.7 | 14.6 |
| 27.5° | 94.2  | 91.6  | 84.1 | 65.3 | 28.4 | 15.1 | 14.5 | 14.0 | 13.4 | 12.7 | 12.6 |
| 30°   | 98.6  | 94.7  | 84.7 | 54.5 | 17.4 | 12.9 | 12.6 | 11.8 | 10.9 | 10.2 | 10.0 |
| 32.5° | 106.5 | 100.8 | 86.9 | 40.8 | 12.7 | 11.4 | 10.5 | 9.5  | 8.4  | 7.8  | 7.8  |
| 35°   | 115.0 | 106.6 | 88.0 | 26.9 | 11.1 | 10.0 | 8.7  | 7.5  | 6.5  | 5.9  | 5.8  |
| 37.5° | 122.8 | 115.0 | 87.7 | 16.5 | 9.9  | 8.6  | 7.1  | 5.9  | 5.0  | 4.6  | 4.6  |
| 40°   | 138.7 | 129.6 | 83.2 | 11.3 | 8.7  | 7.2  | 5.8  | 4.6  | 4.1  | 3.7  | 3.7  |
| 42.5° | 161.4 | 145.6 | 73.2 | 9.7  | 7.6  | 6.0  | 4.6  | 3.8  | 3.4  | 3.1  | 3.1  |
| 45°   | 186.8 | 163.2 | 58.4 | 8.7  | 6.6  | 5.0  | 3.8  | 3.2  | 2.7  | 2.6  | 2.6  |
| 47.5° | 220.2 | 184.6 | 42.9 | 7.8  | 5.7  | 4.3  | 3.2  | 2.6  | 2.4  | 2.3  | 2.3  |
| 50°   | 249.4 | 202.0 | 29.3 | 6.8  | 5.0  | 3.6  | 2.7  | 2.4  | 2.2  | 2.1  | 2.1  |
| 52.5° | 275.9 | 214.0 | 19.3 | 5.9  | 4.5  | 3.0  | 2.5  | 2.2  | 2.1  | 2.0  | 2.0  |
| 55°   | 307.2 | 223.3 | 13.1 | 5.2  | 3.9  | 2.7  | 2.4  | 2.2  | 2.0  | 2.0  | 1.9  |
| 57.5° | 333.7 | 228.7 | 9.3  | 4.4  | 3.5  | 2.5  | 2.3  | 2.1  | 1.9  | 1.8  | 1.8  |
| 60°   | 349.2 | 222.3 | 6.8  | 3.8  | 3.1  | 2.3  | 2.1  | 1.9  | 1.8  | 1.6  | 1.6  |
| 62.5° | 353.5 | 209.8 | 5.3  | 3.3  | 2.6  | 2.1  | 1.9  | 1.6  | 1.5  | 1.4  | 1.4  |
| 64°   | 343.6 | 196.4 | 4.5  | 2.9  | 2.3  | 1.9  | 1.8  | 1.5  | 1.3  | 1.1  | 1.1  |
| 65°   | 329.7 | 184.0 | 4.1  | 2.6  | 2.1  | 1.8  | 1.6  | 1.4  | 1.1  | 0.9  | 0.9  |
| 67.5° | 274.7 | 146.7 | 3.3  | 2.2  | 1.6  | 1.5  | 1.3  | 1.1  | 0.8  | 0.5  | 0.5  |
| 70°   | 195.1 | 102.6 | 2.5  | 1.8  | 1.4  | 1.4  | 1.2  | 0.9  | 0.4  | 0.2  | 0.2  |
| 72.5° | 103.2 | 53.3  | 2.1  | 1.4  | 1.1  | 1.1  | 1.0  | 0.5  | 0.3  | 0.2  | 0.1  |
| 75°   | 36.1  | 17.6  | 1.8  | 1.2  | 1.0  | 0.8  | 0.7  | 0.4  | 0.3  | 0.2  | 0.1  |
| 77.5° | 11.0  | 5.8   | 1.5  | 1.2  | 0.9  | 0.7  | 0.8  | 0.7  | 0.7  | 0.4  | 0.3  |
| 80°   | 3.5   | 2.1   | 0.9  | 0.8  | 0.9  | 0.9  | 0.8  | 0.7  | 0.8  | 0.5  | 0.4  |
| 82.5° | 1.3   | 0.8   | 0.3  | 0.4  | 0.4  | 0.5  | 0.5  | 0.4  | 0.3  | 0.1  | 0.0  |
| 85°   | 0.4   | 0.3   | 0.2  | 0.3  | 0.3  | 0.3  | 0.2  | 0.2  | 0.1  | 0.0  | 0.0  |
| 87.5° | 0.2   | 0.2   | 0.2  | 0.2  | 0.2  | 0.2  | 0.1  | 0.1  | 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  |

(END OF REPORT)