

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: P400803

Luminaire Tested: **ENT-SA1-750-U-SL3-HSS-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400803  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1-750-U-SL3-HSS-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 5000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 647 lumens  
Efficiency: N/A  
Efficacy: 49.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G0

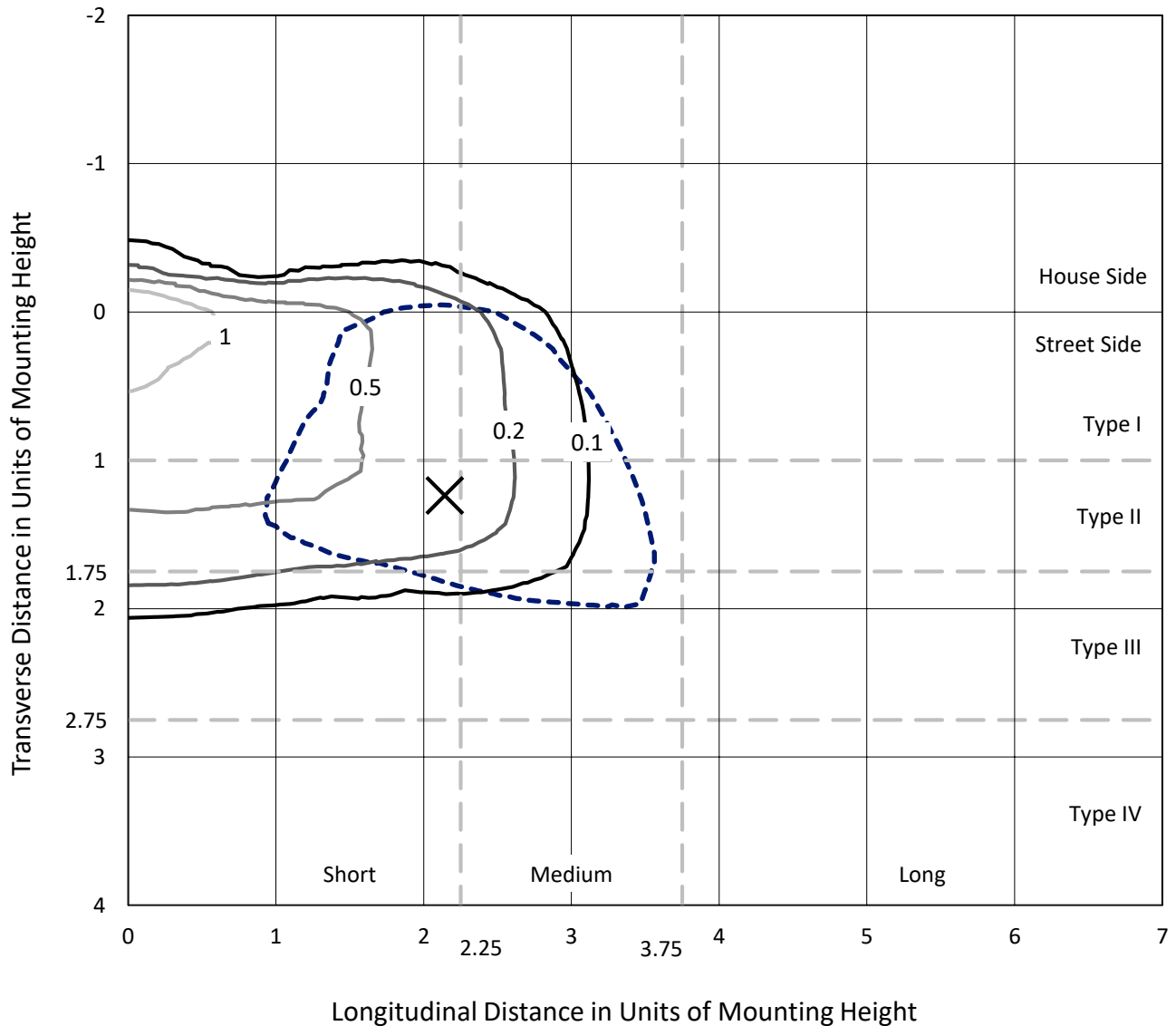
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

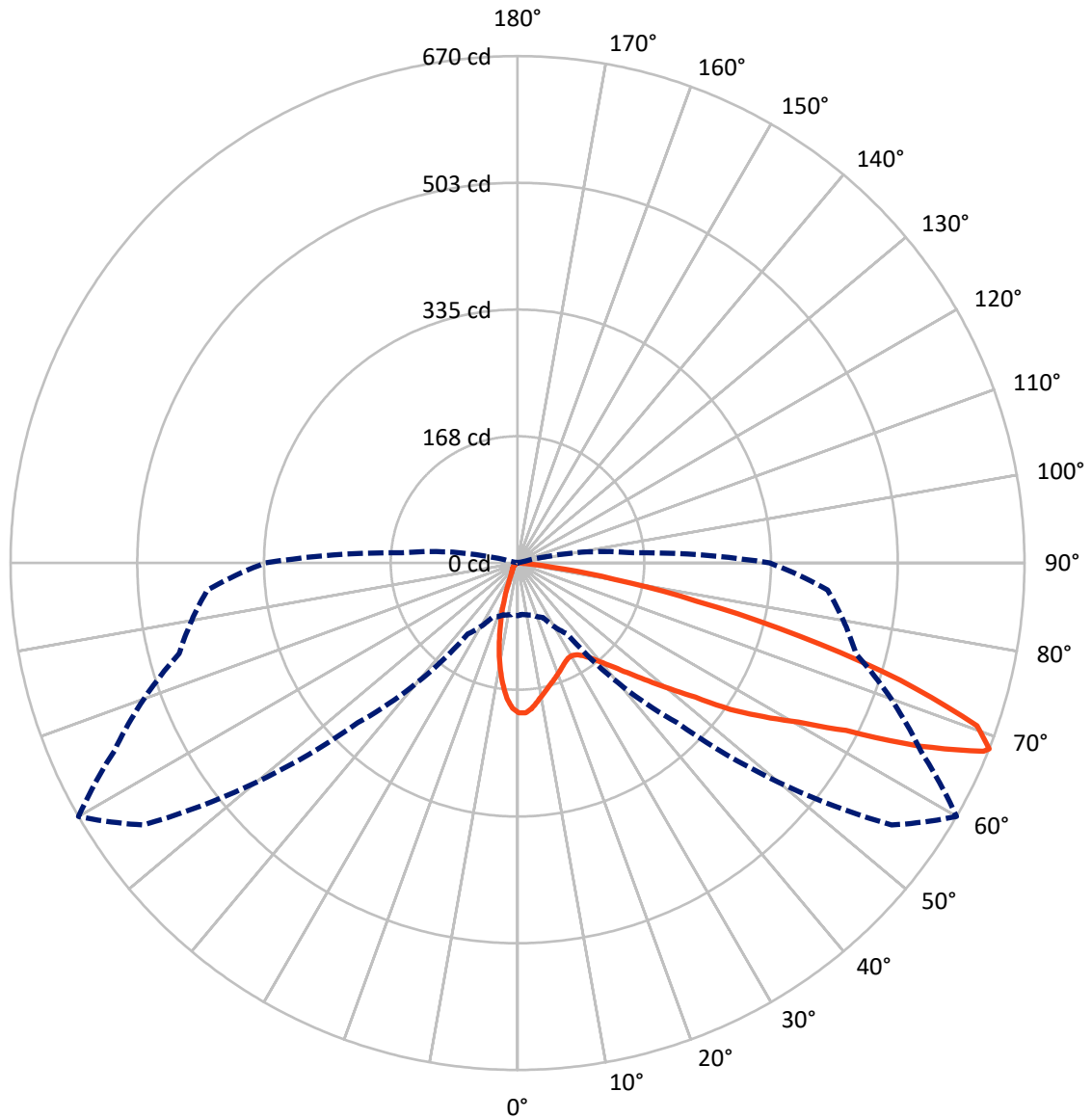
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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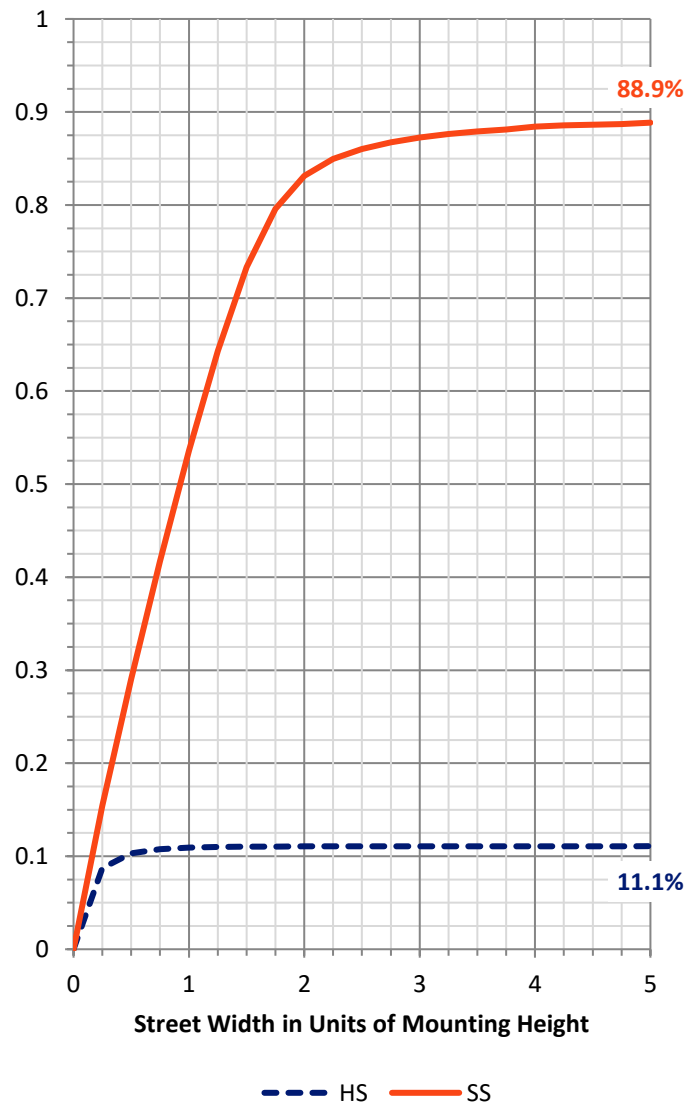
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| <b>House Side</b>  | Lumens    | 72.3     | 0.0    | 72.3  |
|                    | % Fixture | 11.2     | 0.0    | 11.2  |
| <b>Street Side</b> | Lumens    | 574.7    | 0.0    | 574.7 |
|                    | % Fixture | 88.8     | 0.0    | 88.8  |
| <b>Total</b>       | Lumens    | 647.0    | 0.0    | 647.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0 |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 16.1   | 2.5       |
| 10°-20°   | 32.8   | 5.1       |
| 20°-30°   | 43.2   | 6.7       |
| 30°-40°   | 59.6   | 9.2       |
| 40°-50°   | 90.3   | 14.0      |
| 50°-60°   | 145.7  | 22.5      |
| 60°-70°   | 173.0  | 26.7      |
| 70°-80°   | 81.6   | 12.6      |
| 80°-90°   | 4.9    | 0.8       |
| 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°    | 647.0  | 100.0     |
| 0°-180°   | 647.0  | 100.0     |

**Coefficient of Utilization**



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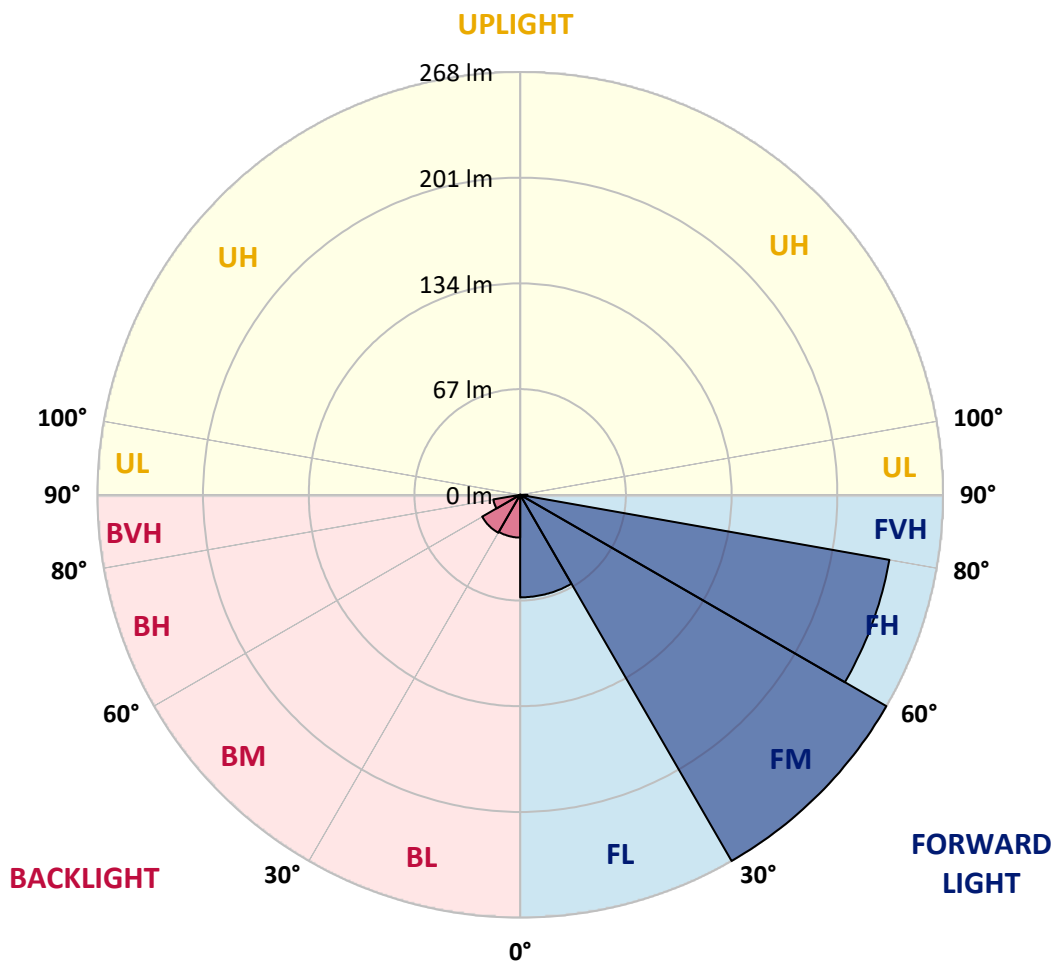
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|--------|-----------|-------------------------|------|--------|
|      |             |        |           | B                       | U    | G      |
| FL   | (0°-30°)    | 64.9   | 10.0      |                         |      |        |
| FM   | (30°-60°)   | 267.7  | 41.4      |                         |      |        |
| FH   | (60°-80°)   | 237.4  | 36.7      |                         |      | G0/660 |
| FVH  | (80°-90°)   | 4.7    | 0.7       |                         |      | G0/10  |
| BL   | (0°-30°)    | 27.1   | 4.2       | B0/110                  |      |        |
| BM   | (30°-60°)   | 27.8   | 4.3       | B0/220                  |      |        |
| BH   | (60°-80°)   | 17.2   | 2.7       | 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°   | 60°   | 65°   | 75°   | 85°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 |
| 2.5°  | 196.3 | 195.8 | 197.1 | 197.4 | 197.7 | 198.4 | 198.3 | 198.4 | 198.5 | 198.3 | 196.9 |
| 5°    | 182.9 | 183.7 | 184.8 | 186.2 | 187.6 | 190.9 | 192.2 | 193.5 | 194.4 | 195.1 | 193.9 |
| 7.5°  | 169.7 | 171.3 | 172.1 | 174.8 | 177.0 | 180.4 | 183.2 | 185.5 | 187.7 | 190.1 | 188.9 |
| 10°   | 159.2 | 159.7 | 160.5 | 162.9 | 166.2 | 171.4 | 175.1 | 178.0 | 180.6 | 184.6 | 183.7 |
| 12.5° | 148.9 | 149.2 | 150.7 | 153.4 | 156.8 | 163.1 | 168.1 | 171.4 | 174.3 | 179.4 | 179.5 |
| 15°   | 141.3 | 141.4 | 142.4 | 144.8 | 148.7 | 155.6 | 161.9 | 165.5 | 169.7 | 175.9 | 176.2 |
| 17.5° | 136.3 | 136.2 | 136.5 | 138.0 | 141.7 | 148.2 | 155.9 | 160.2 | 165.1 | 173.0 | 173.3 |
| 20°   | 134.8 | 134.6 | 134.1 | 133.8 | 136.1 | 141.7 | 150.4 | 155.1 | 160.9 | 170.9 | 171.0 |
| 22.5° | 136.1 | 135.7 | 134.7 | 132.8 | 133.5 | 137.1 | 144.4 | 150.1 | 157.2 | 169.8 | 169.1 |
| 25°   | 139.3 | 139.3 | 138.0 | 135.0 | 133.5 | 134.3 | 140.1 | 145.6 | 153.5 | 169.3 | 167.6 |
| 27.5° | 144.6 | 144.4 | 142.6 | 139.5 | 136.7 | 134.6 | 137.4 | 142.6 | 150.7 | 169.9 | 167.0 |
| 30°   | 150.9 | 150.3 | 148.4 | 146.2 | 142.7 | 138.2 | 138.0 | 141.8 | 149.4 | 172.0 | 167.4 |
| 32.5° | 157.0 | 157.0 | 156.2 | 154.1 | 150.7 | 144.8 | 141.4 | 144.5 | 151.1 | 175.4 | 168.8 |
| 35°   | 164.4 | 164.3 | 164.6 | 163.8 | 160.8 | 154.6 | 149.1 | 150.6 | 156.1 | 181.1 | 172.2 |
| 37.5° | 170.4 | 170.5 | 172.4 | 173.7 | 172.4 | 165.8 | 160.1 | 160.1 | 164.7 | 189.7 | 178.1 |
| 40°   | 176.2 | 176.4 | 179.9 | 183.8 | 184.1 | 178.8 | 173.3 | 173.2 | 175.9 | 200.2 | 187.1 |
| 42.5° | 181.5 | 182.3 | 187.4 | 194.0 | 197.8 | 194.3 | 190.2 | 188.9 | 190.2 | 216.2 | 201.7 |
| 45°   | 187.1 | 188.8 | 195.8 | 205.4 | 211.7 | 211.8 | 210.2 | 208.7 | 209.3 | 234.0 | 221.2 |
| 47.5° | 194.3 | 196.3 | 205.1 | 216.8 | 228.7 | 231.7 | 233.2 | 232.6 | 230.9 | 256.7 | 246.5 |
| 50°   | 206.1 | 207.9 | 216.2 | 229.3 | 245.6 | 256.7 | 260.5 | 261.2 | 258.9 | 281.7 | 275.1 |
| 52.5° | 226.0 | 227.1 | 234.8 | 245.2 | 263.5 | 284.2 | 294.3 | 294.4 | 289.3 | 311.0 | 306.1 |
| 55°   | 247.4 | 250.3 | 259.3 | 271.4 | 290.1 | 313.4 | 338.7 | 341.4 | 325.5 | 336.7 | 328.7 |
| 57.5° | 247.8 | 250.5 | 265.4 | 288.6 | 327.9 | 358.8 | 381.3 | 383.2 | 365.6 | 357.3 | 350.0 |
| 60°   | 221.6 | 223.1 | 243.8 | 277.7 | 341.4 | 419.9 | 429.8 | 426.8 | 393.7 | 378.6 | 376.6 |
| 62.5° | 156.4 | 157.1 | 181.7 | 226.4 | 311.5 | 449.1 | 503.7 | 487.7 | 433.6 | 410.0 | 416.6 |
| 65°   | 98.5  | 98.1  | 108.4 | 144.0 | 231.7 | 420.3 | 595.0 | 583.4 | 507.1 | 449.3 | 447.8 |
| 67.5° | 72.7  | 70.9  | 73.7  | 84.7  | 132.4 | 330.0 | 611.8 | 664.3 | 577.0 | 465.7 | 420.8 |
| 68°   | 69.7  | 68.2  | 71.0  | 79.6  | 114.5 | 298.7 | 603.7 | 670.1 | 588.1 | 463.0 | 411.6 |
| 70°   | 59.2  | 57.7  | 60.2  | 66.6  | 79.7  | 193.9 | 532.6 | 644.3 | 598.2 | 440.6 | 362.7 |
| 72.5° | 42.0  | 42.8  | 49.2  | 57.2  | 67.5  | 99.5  | 392.2 | 529.1 | 514.5 | 391.9 | 276.0 |
| 75°   | 24.9  | 26.3  | 34.7  | 46.1  | 62.0  | 65.6  | 253.0 | 384.7 | 377.5 | 271.4 | 149.5 |
| 77.5° | 8.8   | 9.3   | 17.2  | 30.7  | 51.2  | 52.0  | 141.0 | 241.8 | 224.9 | 110.9 | 44.1  |
| 80°   | 3.2   | 3.2   | 6.4   | 17.1  | 33.0  | 39.7  | 74.9  | 129.1 | 88.8  | 28.8  | 12.2  |
| 82.5° | 0.5   | 0.5   | 1.4   | 5.8   | 14.6  | 21.2  | 34.8  | 45.9  | 26.3  | 6.4   | 6.0   |
| 85°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.2   | 0.2   | 10.2  | 10.3  | 4.8   | 0.9   | 2.6   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.2   | 0.2   | 0.2   | 0.2   | 0.3   |
| 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°    | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 | 198.0 |
| 2.5°  | 196.4 | 196.2 | 195.0 | 192.8 | 190.9 | 187.8 | 187.3 | 184.3 | 183.2 | 182.3 | 183.2 |
| 5°    | 193.0 | 191.8 | 187.7 | 182.8 | 176.1 | 168.2 | 163.6 | 157.2 | 155.9 | 152.4 | 154.5 |
| 7.5°  | 187.4 | 184.6 | 177.1 | 166.4 | 154.1 | 142.1 | 132.8 | 123.9 | 116.4 | 113.7 | 113.0 |
| 10°   | 181.5 | 177.6 | 164.9 | 148.4 | 130.6 | 112.1 | 98.4  | 85.5  | 78.4  | 71.7  | 71.5  |
| 12.5° | 175.9 | 170.0 | 151.6 | 128.7 | 103.8 | 81.8  | 64.0  | 50.5  | 42.0  | 37.4  | 38.6  |
| 15°   | 171.4 | 163.6 | 138.2 | 108.9 | 77.5  | 52.7  | 36.2  | 27.6  | 24.6  | 23.2  | 23.4  |
| 17.5° | 167.0 | 156.7 | 125.3 | 88.3  | 55.2  | 32.5  | 23.5  | 20.5  | 19.7  | 19.3  | 19.1  |
| 20°   | 163.0 | 150.0 | 111.6 | 69.6  | 36.4  | 22.5  | 19.3  | 18.3  | 18.0  | 17.8  | 17.8  |
| 22.5° | 159.1 | 142.9 | 98.0  | 51.6  | 24.9  | 18.4  | 17.3  | 16.9  | 16.7  | 16.4  | 16.4  |
| 25°   | 155.4 | 136.1 | 84.4  | 36.1  | 19.1  | 16.5  | 15.7  | 15.3  | 14.8  | 14.5  | 14.5  |
| 27.5° | 152.7 | 131.0 | 71.8  | 25.6  | 16.0  | 14.8  | 14.1  | 13.3  | 12.7  | 12.3  | 12.3  |
| 30°   | 150.9 | 125.9 | 59.6  | 19.3  | 14.3  | 13.2  | 12.2  | 11.2  | 10.3  | 9.8   | 9.7   |
| 32.5° | 150.0 | 121.7 | 48.3  | 15.8  | 12.7  | 11.5  | 10.3  | 9.2   | 8.2   | 7.6   | 7.6   |
| 35°   | 150.4 | 118.5 | 37.0  | 13.4  | 11.5  | 10.1  | 8.8   | 7.5   | 6.6   | 6.0   | 5.9   |
| 37.5° | 153.3 | 116.6 | 27.6  | 11.9  | 10.3  | 8.8   | 7.5   | 6.1   | 5.3   | 4.8   | 4.7   |
| 40°   | 158.6 | 117.0 | 21.0  | 10.8  | 9.4   | 7.7   | 6.1   | 5.0   | 4.3   | 3.8   | 3.8   |
| 42.5° | 169.5 | 120.2 | 16.6  | 9.9   | 8.5   | 6.6   | 5.2   | 4.2   | 3.5   | 3.2   | 3.1   |
| 45°   | 183.9 | 126.2 | 13.6  | 9.1   | 7.5   | 5.6   | 4.4   | 3.5   | 2.9   | 2.5   | 2.5   |
| 47.5° | 205.6 | 135.9 | 11.7  | 8.3   | 6.5   | 4.7   | 3.6   | 2.9   | 2.2   | 2.0   | 1.9   |
| 50°   | 230.8 | 149.4 | 10.3  | 7.5   | 5.7   | 4.0   | 3.1   | 2.2   | 1.8   | 1.4   | 1.4   |
| 52.5° | 256.4 | 164.4 | 9.3   | 6.7   | 4.9   | 3.4   | 2.4   | 1.6   | 1.2   | 1.0   | 1.0   |
| 55°   | 280.0 | 177.1 | 8.3   | 6.0   | 4.2   | 2.9   | 2.0   | 1.3   | 0.9   | 0.7   | 0.7   |
| 57.5° | 302.9 | 188.6 | 7.2   | 5.3   | 3.4   | 2.3   | 1.5   | 1.0   | 0.7   | 0.4   | 0.4   |
| 60°   | 331.5 | 203.5 | 6.3   | 4.5   | 2.7   | 1.9   | 1.2   | 0.8   | 0.4   | 0.3   | 0.2   |
| 62.5° | 366.1 | 214.4 | 5.3   | 3.6   | 2.2   | 1.4   | 0.9   | 0.5   | 0.3   | 0.1   | 0.1   |
| 65°   | 378.8 | 200.0 | 4.4   | 3.0   | 1.8   | 1.1   | 0.7   | 0.4   | 0.2   | 0.1   | 0.1   |
| 67.5° | 343.3 | 161.2 | 3.5   | 2.3   | 1.3   | 0.8   | 0.5   | 0.3   | 0.2   | 0.1   | 0.1   |
| 68°   | 333.4 | 153.3 | 3.4   | 2.2   | 1.2   | 0.8   | 0.4   | 0.3   | 0.1   | 0.1   | 0.0   |
| 70°   | 281.5 | 123.1 | 2.7   | 1.6   | 1.0   | 0.7   | 0.4   | 0.2   | 0.1   | 0.1   | 0.0   |
| 72.5° | 208.7 | 84.9  | 2.0   | 1.1   | 0.7   | 0.4   | 0.3   | 0.2   | 0.1   | 0.1   | 0.0   |
| 75°   | 110.1 | 33.0  | 1.5   | 0.9   | 0.5   | 0.4   | 0.3   | 0.3   | 0.2   | 0.1   | 0.1   |
| 77.5° | 31.6  | 10.4  | 1.2   | 0.7   | 0.5   | 0.5   | 0.5   | 0.4   | 0.4   | 0.3   | 0.2   |
| 80°   | 9.2   | 3.4   | 0.8   | 0.4   | 0.5   | 0.5   | 0.7   | 0.5   | 0.5   | 0.4   | 0.4   |
| 82.5° | 4.9   | 1.3   | 0.4   | 0.3   | 0.3   | 0.4   | 0.5   | 0.4   | 0.3   | 0.2   | 0.1   |
| 85°   | 2.1   | 0.4   | 0.3   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.1   | 0.1   |
| 87.5° | 0.1   | 0.2   | 0.2   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   |
| 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)