

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: P400841

Luminaire Tested: **ENC-SA1-827-U-SL4-HSS-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400841  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENC-SA1-827-U-SL4-HSS-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 466 lumens  
Efficiency: N/A  
Efficacy: 35.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G0

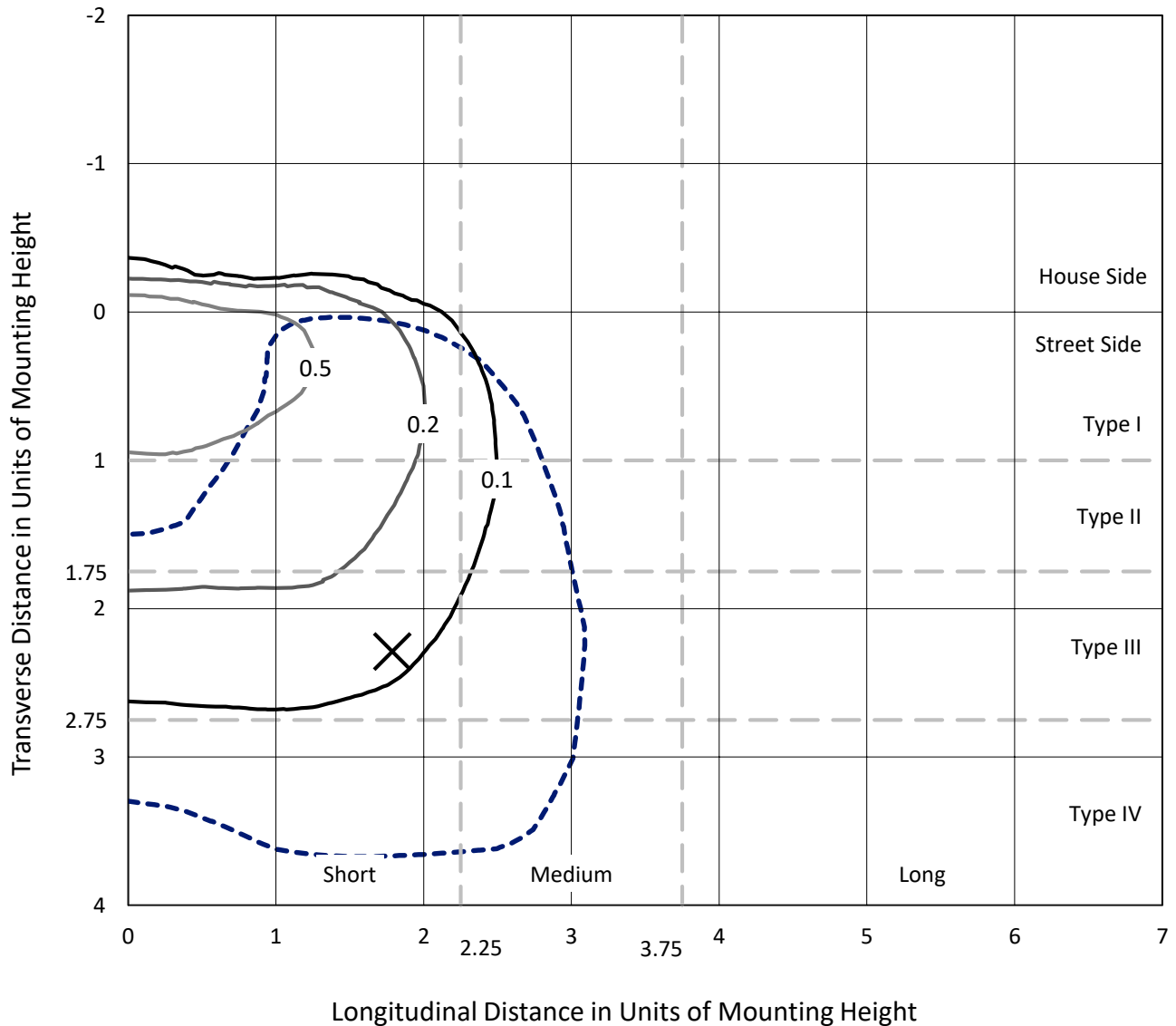
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

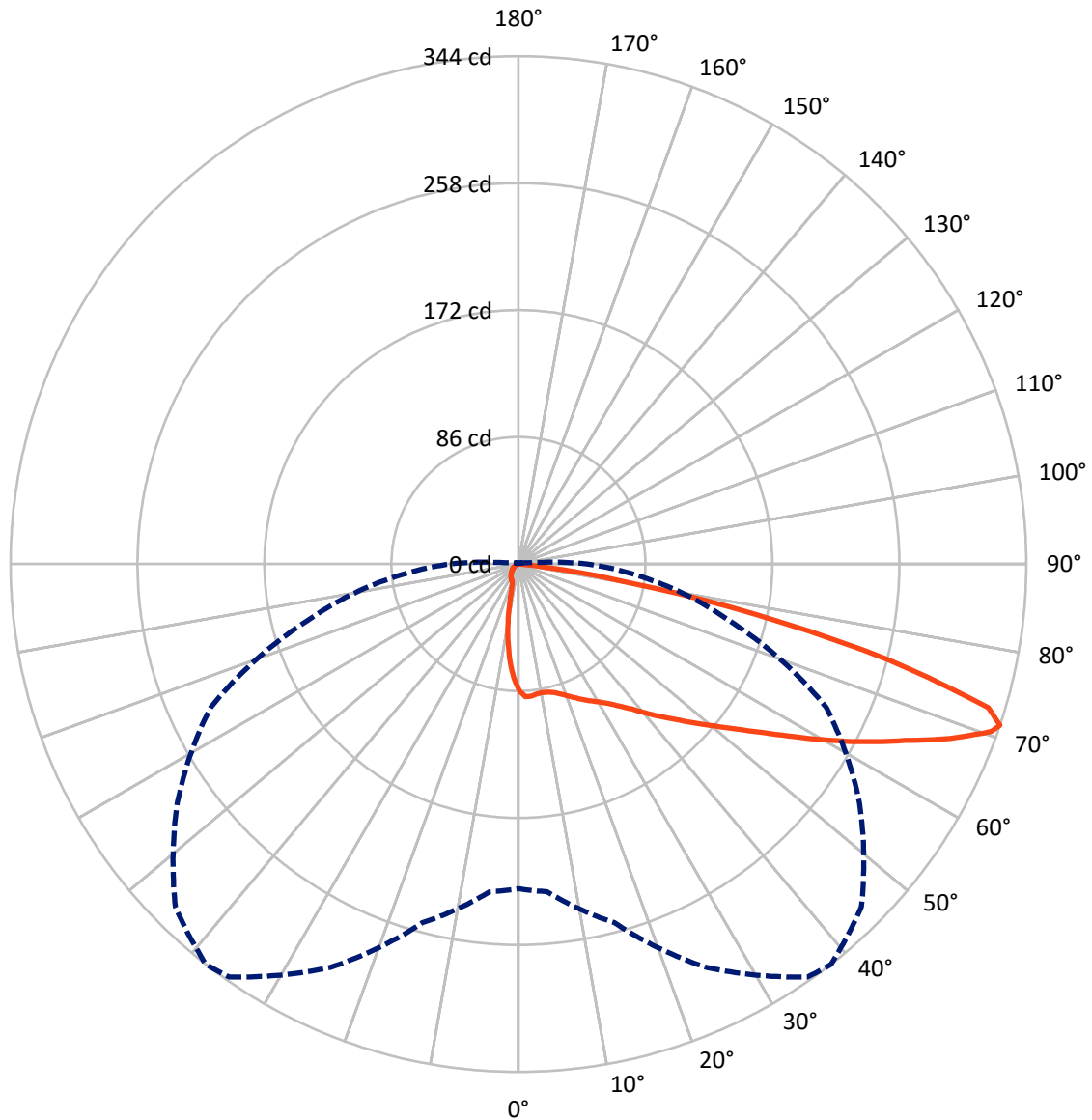
× Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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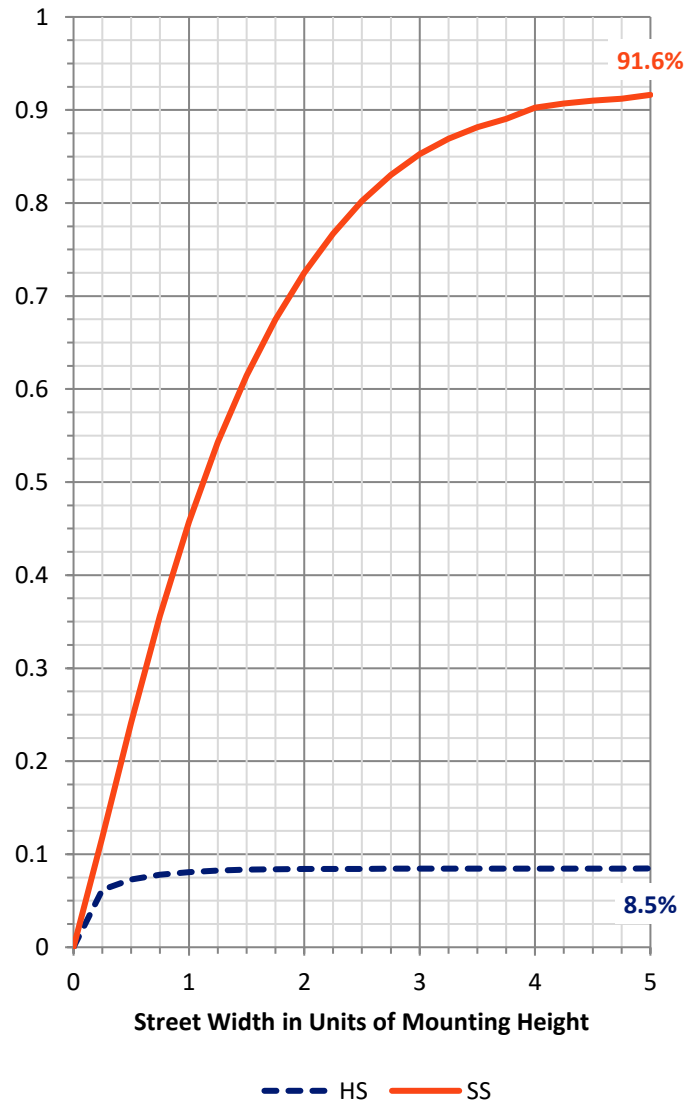
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| <b>House Side</b>  | Lumens    | 39.8     | 0.0    | 39.8  |
|                    | % Fixture | 8.5      | 0.0    | 8.5   |
| <b>Street Side</b> | Lumens    | 426.2    | 0.0    | 426.2 |
|                    | % Fixture | 91.5     | 0.0    | 91.5  |
| <b>Total</b>       | Lumens    | 466.0    | 0.0    | 466.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0 |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 7.3    | 1.6       |
| 10°-20°   | 17.6   | 3.8       |
| 20°-30°   | 28.2   | 6.0       |
| 30°-40°   | 42.9   | 9.2       |
| 40°-50°   | 66.8   | 14.3      |
| 50°-60°   | 97.7   | 21.0      |
| 60°-70°   | 125.3  | 26.9      |
| 70°-80°   | 76.6   | 16.4      |
| 80°-90°   | 3.8    | 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°    | 466.0  | 100.0     |
| 0°-180°   | 466.0  | 100.0     |



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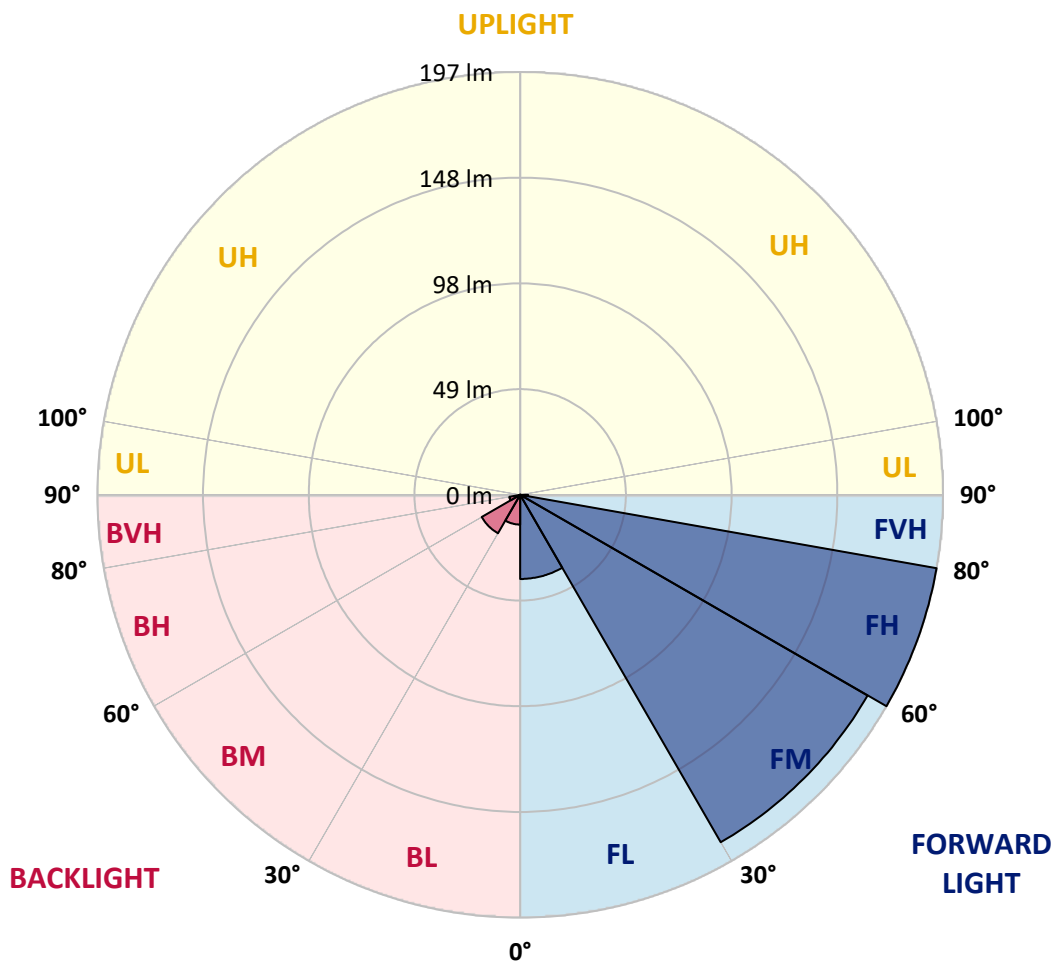
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|----------------|--------|-----------|-------------------------|------|--------|
|                |        |           | B                       | U    | G      |
| FL (0°-30°)    | 39.2   | 8.4       |                         |      |        |
| FM (30°-60°)   | 186.6  | 40.1      |                         |      |        |
| FH (60°-80°)   | 196.7  | 42.2      |                         |      | G0/660 |
| FVH (80°-90°)  | 3.7    | 0.8       |                         |      | G0/10  |
| BL (0°-30°)    | 13.8   | 3.0       | B0/110                  |      |        |
| BM (30°-60°)   | 20.7   | 4.4       | B0/220                  |      |        |
| BH (60°-80°)   | 5.1    | 1.1       | 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 IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 15°   | 25°   | 35°   | 38°   | 45°   | 55°   | 65°   | 75°   | 85°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  | 85.9  |
| 2.5°  | 91.0  | 90.8  | 91.0  | 90.8  | 90.3  | 90.0  | 89.7  | 88.8  | 88.0  | 87.0  | 85.6  |
| 5°    | 91.2  | 91.0  | 91.0  | 90.7  | 90.1  | 89.9  | 89.5  | 88.7  | 87.6  | 86.2  | 84.0  |
| 7.5°  | 90.3  | 90.2  | 90.0  | 89.7  | 89.1  | 88.9  | 88.7  | 87.6  | 86.6  | 85.0  | 82.4  |
| 10°   | 88.8  | 89.0  | 88.9  | 88.9  | 88.7  | 88.5  | 88.3  | 87.1  | 86.0  | 84.2  | 81.4  |
| 12.5° | 87.4  | 87.6  | 88.0  | 88.7  | 88.9  | 89.0  | 89.0  | 87.8  | 86.4  | 84.5  | 81.5  |
| 15°   | 86.6  | 86.9  | 88.0  | 89.3  | 90.0  | 90.3  | 90.5  | 89.2  | 87.6  | 85.5  | 82.4  |
| 17.5° | 86.3  | 86.8  | 89.0  | 91.0  | 92.4  | 92.5  | 92.5  | 90.9  | 89.2  | 86.8  | 83.5  |
| 20°   | 87.1  | 87.8  | 90.6  | 93.4  | 95.1  | 95.3  | 95.0  | 92.9  | 90.8  | 88.2  | 84.4  |
| 22.5° | 89.5  | 90.1  | 93.3  | 96.6  | 98.3  | 98.4  | 97.7  | 94.8  | 92.6  | 90.4  | 85.6  |
| 25°   | 93.7  | 94.1  | 97.5  | 100.7 | 101.6 | 101.8 | 100.6 | 97.1  | 94.6  | 92.6  | 87.3  |
| 27.5° | 99.3  | 99.5  | 102.6 | 105.0 | 105.1 | 105.0 | 103.8 | 100.1 | 97.6  | 95.9  | 89.9  |
| 30°   | 105.1 | 105.4 | 108.0 | 109.5 | 108.8 | 108.5 | 107.4 | 103.5 | 101.2 | 100.0 | 93.6  |
| 32.5° | 110.5 | 110.8 | 113.6 | 114.4 | 113.0 | 112.7 | 111.9 | 107.8 | 105.9 | 106.5 | 98.9  |
| 35°   | 115.9 | 115.9 | 119.1 | 119.5 | 118.2 | 118.2 | 118.2 | 113.3 | 113.0 | 115.1 | 106.3 |
| 37.5° | 120.6 | 121.4 | 124.8 | 124.7 | 124.4 | 124.6 | 125.1 | 121.4 | 122.5 | 126.2 | 116.1 |
| 40°   | 124.7 | 125.7 | 130.2 | 130.6 | 131.7 | 132.6 | 133.3 | 131.4 | 134.0 | 140.1 | 128.6 |
| 42.5° | 128.3 | 129.5 | 135.3 | 137.2 | 140.1 | 141.3 | 142.7 | 142.2 | 148.1 | 159.1 | 144.6 |
| 45°   | 133.0 | 134.3 | 140.2 | 144.7 | 148.7 | 150.3 | 153.4 | 155.5 | 165.3 | 177.9 | 161.9 |
| 47.5° | 139.2 | 140.1 | 145.6 | 152.6 | 158.1 | 161.0 | 165.8 | 171.2 | 183.0 | 197.7 | 177.3 |
| 50°   | 147.7 | 147.8 | 151.9 | 161.0 | 169.2 | 172.3 | 180.5 | 187.6 | 202.4 | 215.3 | 188.4 |
| 52.5° | 157.0 | 156.6 | 159.8 | 171.3 | 181.7 | 185.9 | 195.6 | 205.4 | 220.3 | 227.9 | 193.5 |
| 55°   | 165.9 | 166.2 | 168.2 | 182.3 | 197.4 | 201.5 | 213.8 | 223.7 | 236.7 | 235.7 | 196.2 |
| 57.5° | 176.2 | 176.1 | 178.7 | 194.3 | 215.8 | 220.6 | 233.4 | 241.6 | 246.7 | 241.3 | 196.7 |
| 60°   | 185.9 | 185.6 | 189.6 | 208.7 | 235.4 | 242.5 | 254.0 | 253.7 | 256.6 | 244.8 | 196.3 |
| 62.5° | 194.5 | 195.1 | 202.0 | 225.4 | 257.4 | 265.0 | 270.8 | 266.8 | 267.6 | 248.9 | 191.3 |
| 65°   | 205.0 | 206.1 | 217.3 | 245.7 | 284.5 | 288.2 | 290.4 | 283.9 | 275.8 | 245.6 | 176.1 |
| 67.5° | 218.2 | 221.4 | 237.2 | 275.6 | 312.8 | 315.3 | 315.4 | 294.2 | 275.5 | 228.9 | 148.1 |
| 70°   | 223.5 | 226.8 | 252.0 | 299.2 | 336.6 | 339.8 | 329.9 | 292.6 | 253.8 | 179.2 | 100.0 |
| 71°   | 219.9 | 222.8 | 251.6 | 301.5 | 341.5 | 344.0 | 328.6 | 282.0 | 230.1 | 147.7 | 77.4  |
| 72.5° | 193.6 | 201.4 | 236.1 | 287.3 | 332.7 | 332.8 | 307.7 | 257.1 | 183.0 | 92.2  | 38.9  |
| 75°   | 104.6 | 113.9 | 173.0 | 218.6 | 256.7 | 258.7 | 236.7 | 178.5 | 88.6  | 23.9  | 9.4   |
| 77.5° | 34.5  | 38.8  | 77.6  | 113.5 | 161.0 | 164.1 | 144.8 | 79.3  | 27.9  | 8.1   | 4.9   |
| 80°   | 21.6  | 22.1  | 26.2  | 47.7  | 71.6  | 74.3  | 59.6  | 32.1  | 12.6  | 4.4   | 3.4   |
| 82.5° | 3.6   | 4.4   | 12.4  | 14.0  | 25.3  | 20.0  | 13.6  | 16.4  | 5.9   | 2.0   | 2.9   |
| 85°   | 0.0   | 0.0   | 0.1   | 0.1   | 0.4   | 0.1   | 0.1   | 3.3   | 0.3   | 0.3   | 1.5   |
| 87.5° | 0.0   | 0.0   | 0.1   | 0.1   | 0.1   | 0.1   | 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   |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°   | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 0°    | 85.9  | 85.9  | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 |
| 2.5°  | 84.9  | 84.3  | 83.0 | 81.6 | 79.9 | 78.5 | 78.0 | 76.9 | 76.5 | 76.1 | 76.1 |
| 5°    | 82.6  | 81.5  | 78.7 | 75.9 | 73.2 | 70.2 | 67.6 | 65.1 | 63.9 | 62.2 | 63.0 |
| 7.5°  | 80.7  | 78.7  | 74.8 | 70.4 | 64.8 | 59.0 | 54.6 | 50.7 | 47.5 | 46.4 | 45.7 |
| 10°   | 79.3  | 76.9  | 71.2 | 64.4 | 56.2 | 48.0 | 41.2 | 34.8 | 31.1 | 28.8 | 28.8 |
| 12.5° | 79.1  | 76.1  | 68.7 | 58.3 | 46.4 | 35.4 | 26.9 | 20.8 | 17.8 | 16.5 | 16.4 |
| 15°   | 79.7  | 76.0  | 66.4 | 52.7 | 37.5 | 24.5 | 16.8 | 14.1 | 13.4 | 13.2 | 13.2 |
| 17.5° | 80.2  | 75.9  | 63.8 | 46.4 | 27.6 | 16.1 | 13.3 | 12.8 | 12.7 | 12.6 | 12.6 |
| 20°   | 80.7  | 75.5  | 60.7 | 39.3 | 19.5 | 13.2 | 12.4 | 12.2 | 12.1 | 12.0 | 12.0 |
| 22.5° | 81.3  | 75.1  | 57.6 | 31.2 | 14.5 | 12.3 | 11.9 | 11.6 | 11.5 | 11.5 | 11.5 |
| 25°   | 82.2  | 74.8  | 53.7 | 23.7 | 12.4 | 11.6 | 11.2 | 11.1 | 11.1 | 11.0 | 11.0 |
| 27.5° | 83.9  | 75.1  | 49.5 | 17.0 | 11.6 | 11.0 | 10.7 | 10.6 | 10.6 | 10.5 | 10.5 |
| 30°   | 86.2  | 75.8  | 44.2 | 13.2 | 11.0 | 10.3 | 10.1 | 10.0 | 9.9  | 9.9  | 9.9  |
| 32.5° | 89.5  | 76.9  | 38.5 | 11.3 | 10.2 | 9.7  | 9.4  | 9.4  | 9.4  | 9.4  | 9.3  |
| 35°   | 94.6  | 79.3  | 31.5 | 10.3 | 9.4  | 9.0  | 8.7  | 8.7  | 8.7  | 8.6  | 8.7  |
| 37.5° | 102.4 | 83.1  | 24.4 | 9.5  | 8.6  | 8.2  | 8.1  | 8.0  | 8.0  | 8.0  | 8.0  |
| 40°   | 112.1 | 89.2  | 17.8 | 8.8  | 7.9  | 7.5  | 7.3  | 7.3  | 7.2  | 7.2  | 7.2  |
| 42.5° | 124.7 | 96.0  | 12.9 | 8.0  | 7.3  | 6.9  | 6.7  | 6.5  | 6.4  | 6.3  | 6.3  |
| 45°   | 137.8 | 104.1 | 10.1 | 7.3  | 6.6  | 6.3  | 6.1  | 5.9  | 5.7  | 5.4  | 5.4  |
| 47.5° | 150.5 | 110.3 | 8.6  | 6.6  | 6.1  | 5.7  | 5.6  | 5.2  | 4.8  | 4.6  | 4.6  |
| 50°   | 158.5 | 112.2 | 7.8  | 6.0  | 5.5  | 5.2  | 5.0  | 4.6  | 4.0  | 3.8  | 3.8  |
| 52.5° | 161.0 | 108.7 | 6.9  | 5.4  | 5.0  | 4.8  | 4.4  | 3.9  | 3.3  | 3.0  | 3.0  |
| 55°   | 162.0 | 101.8 | 6.1  | 5.0  | 4.5  | 4.2  | 3.8  | 3.2  | 2.7  | 2.3  | 2.3  |
| 57.5° | 160.8 | 92.1  | 5.5  | 4.5  | 4.0  | 3.7  | 3.2  | 2.6  | 2.0  | 1.8  | 1.8  |
| 60°   | 156.6 | 78.1  | 4.9  | 4.0  | 3.6  | 3.1  | 2.7  | 2.0  | 1.5  | 1.2  | 1.3  |
| 62.5° | 145.5 | 60.4  | 4.3  | 3.4  | 3.1  | 2.7  | 2.1  | 1.5  | 1.0  | 0.8  | 0.8  |
| 65°   | 127.7 | 41.8  | 3.6  | 2.8  | 2.6  | 2.2  | 1.6  | 1.0  | 0.6  | 0.5  | 0.5  |
| 67.5° | 103.8 | 27.0  | 2.8  | 2.3  | 2.2  | 1.8  | 1.2  | 0.6  | 0.3  | 0.3  | 0.2  |
| 70°   | 65.2  | 13.4  | 2.3  | 1.8  | 1.8  | 1.4  | 0.9  | 0.4  | 0.2  | 0.2  | 0.2  |
| 71°   | 46.1  | 9.1   | 2.0  | 1.6  | 1.6  | 1.3  | 0.8  | 0.3  | 0.2  | 0.2  | 0.2  |
| 72.5° | 20.8  | 5.7   | 1.7  | 1.5  | 1.4  | 1.0  | 0.7  | 0.3  | 0.3  | 0.3  | 0.3  |
| 75°   | 6.5   | 3.1   | 1.2  | 1.1  | 1.1  | 0.9  | 0.6  | 0.4  | 0.4  | 0.4  | 0.4  |
| 77.5° | 4.4   | 2.4   | 0.8  | 0.7  | 0.9  | 0.9  | 0.6  | 0.5  | 0.5  | 0.5  | 0.5  |
| 80°   | 3.6   | 1.3   | 0.5  | 0.5  | 0.6  | 0.8  | 0.6  | 0.5  | 0.6  | 0.5  | 0.5  |
| 82.5° | 3.5   | 0.6   | 0.2  | 0.2  | 0.4  | 0.5  | 0.5  | 0.4  | 0.5  | 0.5  | 0.5  |
| 85°   | 1.5   | 0.2   | 0.1  | 0.2  | 0.2  | 0.2  | 0.2  | 0.3  | 0.4  | 0.4  | 0.4  |
| 87.5° | 0.0   | 0.0   | 0.0  | 0.0  | 0.1  | 0.1  | 0.2  | 0.2  | 0.2  | 0.3  | 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  |

(END OF REPORT)