

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: P400746

Luminaire Tested: **ENT-SA1-730-U-T4W-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400746  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1-730-U-T4W-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 703 lumens  
Efficiency: N/A  
Efficacy: 54.1 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

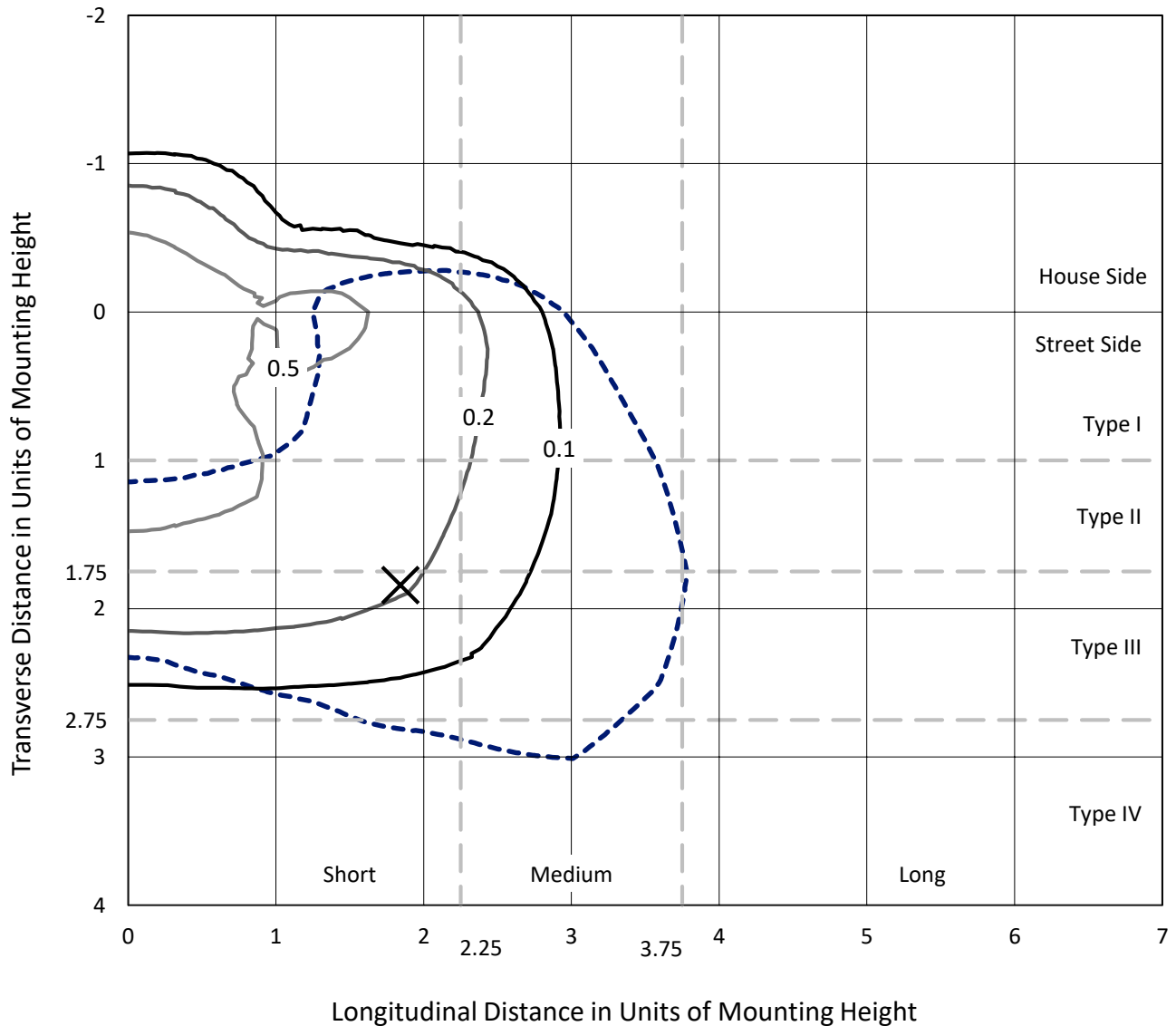


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

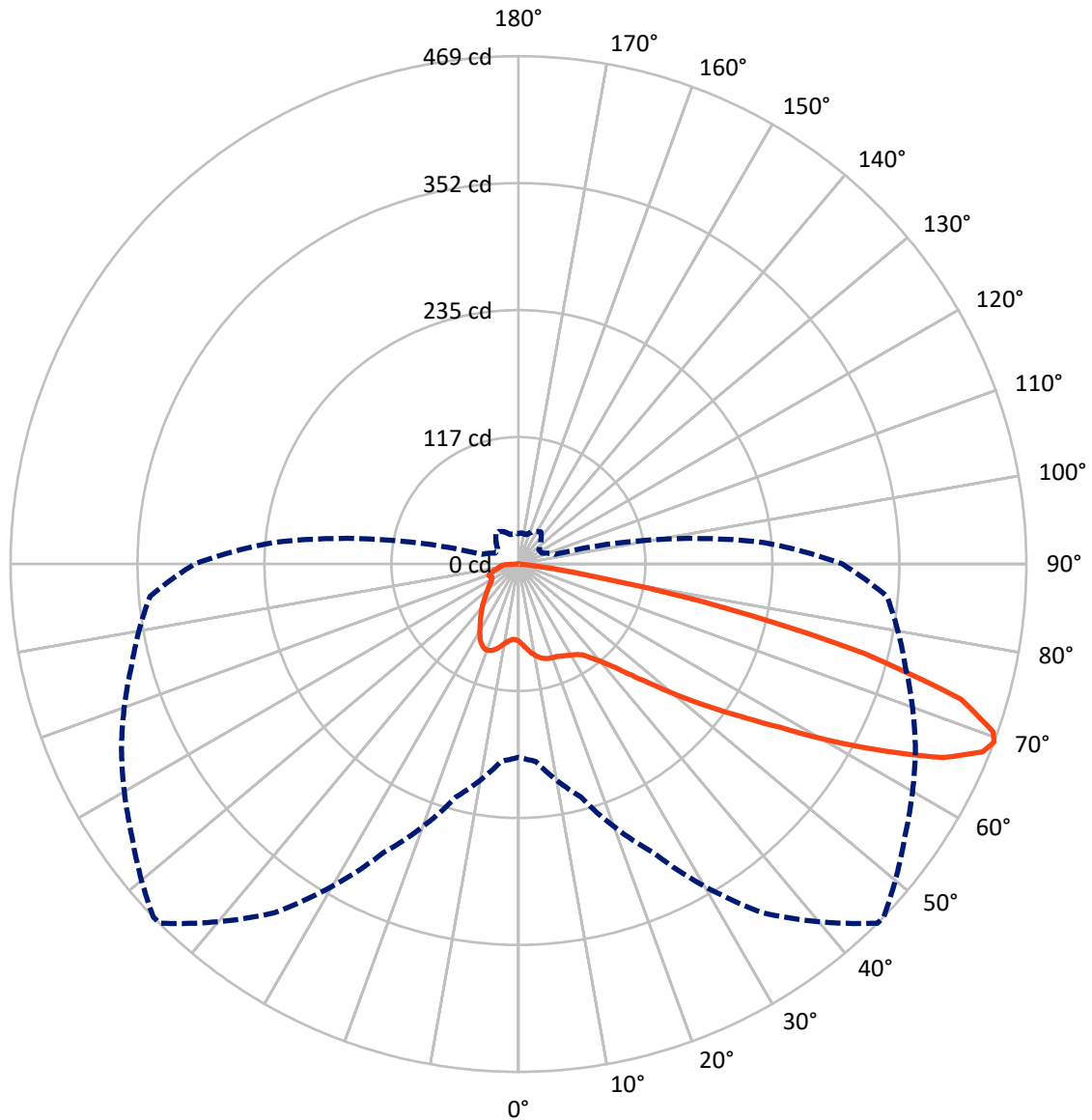


Based on 10 foot mounting height. Maximum calculated value = 0.9 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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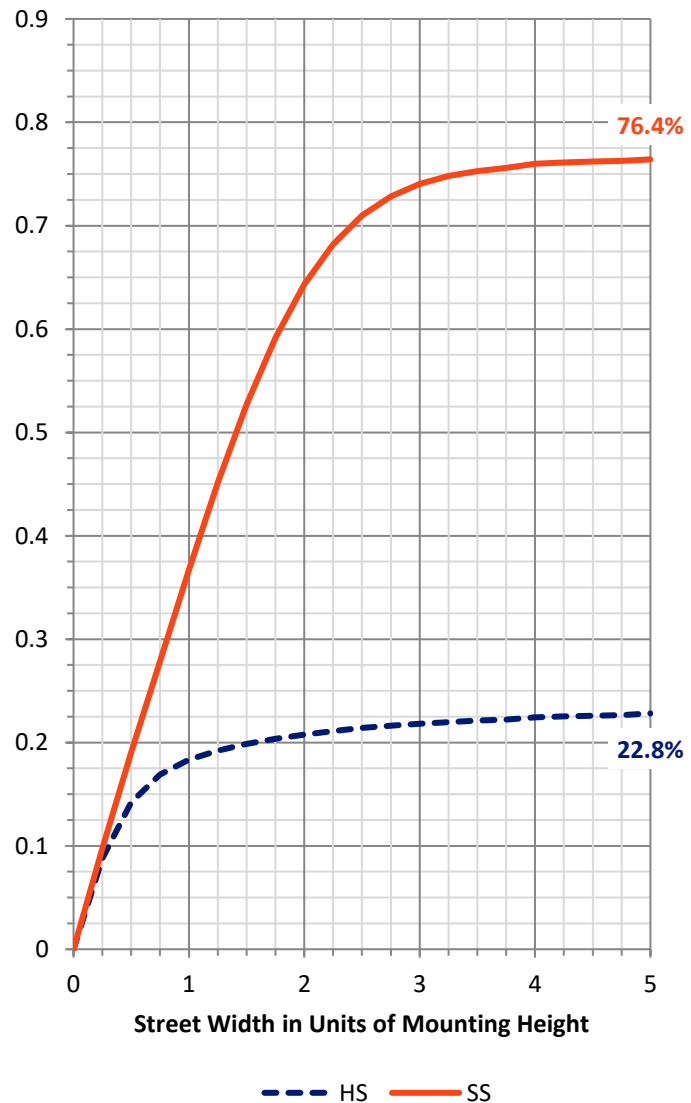
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total |
|--------------------|-----------|----------|--------|-------|
| <b>House Side</b>  | Lumens    | 165.5    | 0.0    | 165.5 |
|                    | % Fixture | 23.5     | 0.0    | 23.5  |
| <b>Street Side</b> | Lumens    | 537.5    | 0.0    | 537.5 |
|                    | % Fixture | 76.5     | 0.0    | 76.5  |
| <b>Total</b>       | Lumens    | 703.0    | 0.0    | 703.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0 |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 7.3    | 1.0       |
| 10°-20°   | 24.1   | 3.4       |
| 20°-30°   | 40.7   | 5.8       |
| 30°-40°   | 58.9   | 8.4       |
| 40°-50°   | 89.0   | 12.7      |
| 50°-60°   | 150.0  | 21.3      |
| 60°-70°   | 206.3  | 29.4      |
| 70°-80°   | 114.3  | 16.3      |
| 80°-90°   | 12.5   | 1.8       |
| 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°    | 703.0  | 100.0     |
| 0°-180°   | 703.0  | 100.0     |



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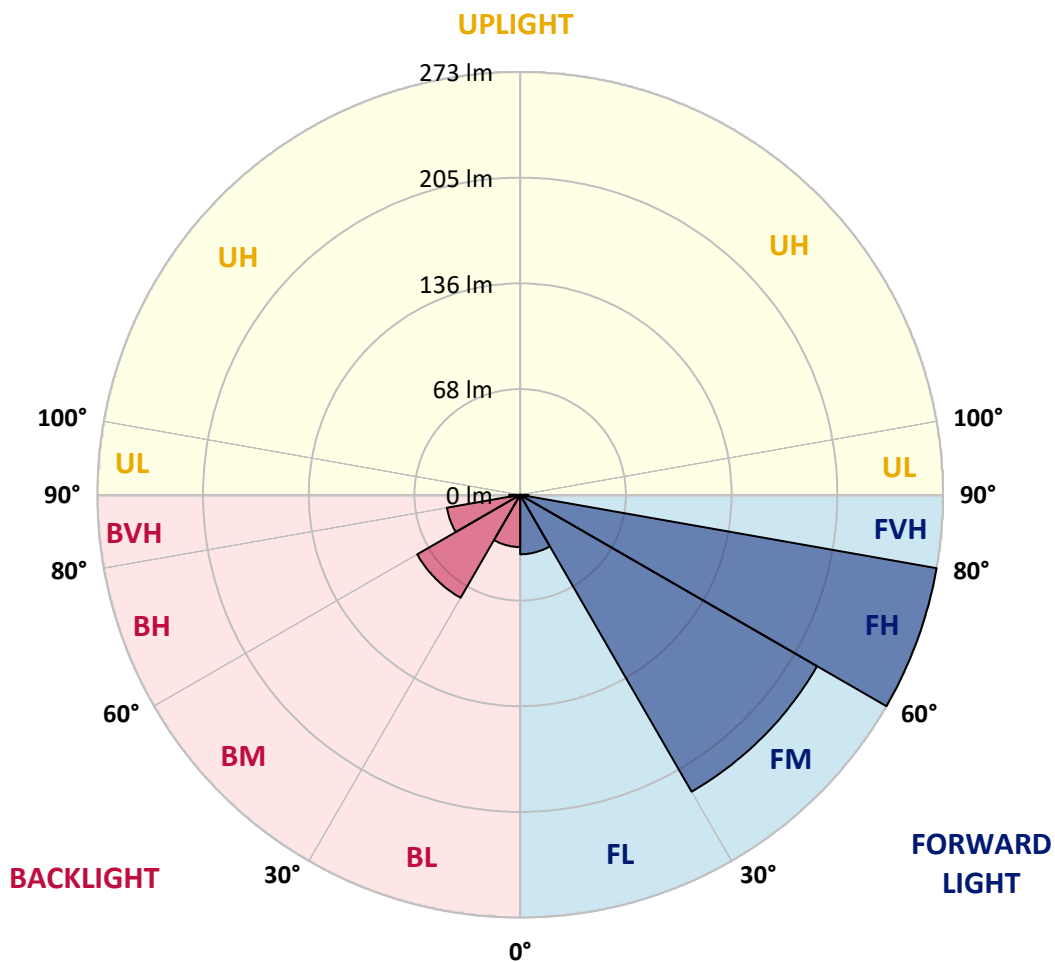
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|--------|-----------|-------------------------|------|--------|
|      |             |        |           | B                       | U    | G      |
| FL   | (0°-30°)    | 38.4   | 5.5       |                         |      |        |
| FM   | (30°-60°)   | 221.1  | 31.4      |                         |      |        |
| FH   | (60°-80°)   | 272.7  | 38.8      |                         |      | G0/660 |
| FVH  | (80°-90°)   | 5.3    | 0.8       |                         |      | G0/10  |
| BL   | (0°-30°)    | 33.7   | 4.8       | B0/110                  |      |        |
| BM   | (30°-60°)   | 76.7   | 10.9      | B0/220                  |      |        |
| BH   | (60°-80°)   | 48.0   | 6.8       | B0/110                  |      | G0/110 |
| BVH  | (80°-90°)   | 7.1    | 1.0       |                         |      | 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°   | 45°   | 46°   | 55°   | 65°   | 75°   | 85°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  | 71.4  |
| 2.5°  | 75.9  | 75.8  | 75.9  | 75.5  | 75.1  | 74.5  | 74.3  | 73.6  | 73.1  | 72.4  | 71.8  |
| 5°    | 81.4  | 81.7  | 81.6  | 81.2  | 79.6  | 78.4  | 78.4  | 76.9  | 75.3  | 73.8  | 72.4  |
| 7.5°  | 87.5  | 87.5  | 86.9  | 85.9  | 84.3  | 82.5  | 82.3  | 80.4  | 78.1  | 76.0  | 73.8  |
| 10°   | 91.9  | 92.1  | 91.2  | 89.8  | 87.8  | 85.9  | 85.7  | 83.4  | 81.3  | 78.6  | 75.9  |
| 12.5° | 95.0  | 95.0  | 94.2  | 92.9  | 90.5  | 88.7  | 88.5  | 86.4  | 84.1  | 81.4  | 78.3  |
| 15°   | 96.6  | 96.4  | 95.7  | 94.3  | 92.2  | 90.7  | 90.4  | 88.6  | 86.7  | 83.9  | 80.7  |
| 17.5° | 96.3  | 96.3  | 95.7  | 94.3  | 92.8  | 91.6  | 91.4  | 90.1  | 88.7  | 86.0  | 82.7  |
| 20°   | 95.0  | 94.9  | 94.7  | 93.6  | 92.6  | 92.1  | 91.9  | 91.3  | 90.4  | 88.1  | 85.0  |
| 22.5° | 93.8  | 93.7  | 93.4  | 92.7  | 92.3  | 92.6  | 92.6  | 92.5  | 92.4  | 90.6  | 87.6  |
| 25°   | 94.5  | 94.4  | 93.8  | 92.8  | 92.7  | 94.1  | 94.2  | 94.5  | 94.7  | 93.2  | 90.1  |
| 27.5° | 99.4  | 99.1  | 97.4  | 94.8  | 93.9  | 95.7  | 95.9  | 96.8  | 96.6  | 95.0  | 92.3  |
| 30°   | 109.0 | 109.1 | 105.3 | 99.7  | 96.7  | 97.5  | 97.6  | 98.6  | 98.3  | 97.0  | 94.8  |
| 32.5° | 123.5 | 123.5 | 117.3 | 108.8 | 101.2 | 99.6  | 99.3  | 100.2 | 101.4 | 99.7  | 97.5  |
| 35°   | 141.9 | 141.4 | 133.9 | 120.8 | 108.9 | 103.2 | 103.0 | 102.6 | 104.7 | 103.1 | 99.9  |
| 37.5° | 160.4 | 158.6 | 151.3 | 136.9 | 119.7 | 110.2 | 109.4 | 108.2 | 109.4 | 106.0 | 103.2 |
| 40°   | 175.3 | 175.0 | 169.0 | 154.4 | 132.5 | 118.7 | 118.1 | 112.8 | 113.6 | 110.9 | 109.8 |
| 42.5° | 191.7 | 191.9 | 187.9 | 173.2 | 147.8 | 130.2 | 128.6 | 120.4 | 122.7 | 121.7 | 121.2 |
| 45°   | 209.7 | 209.5 | 206.5 | 191.1 | 166.5 | 146.2 | 144.2 | 134.1 | 138.8 | 138.2 | 141.0 |
| 47.5° | 223.5 | 224.6 | 222.9 | 212.0 | 188.7 | 165.6 | 164.1 | 151.8 | 158.9 | 163.7 | 169.0 |
| 50°   | 242.3 | 242.2 | 237.6 | 233.1 | 214.5 | 190.4 | 188.9 | 175.2 | 185.4 | 192.4 | 202.1 |
| 52.5° | 265.5 | 264.7 | 255.2 | 253.6 | 245.8 | 217.5 | 216.2 | 201.9 | 216.5 | 222.6 | 242.3 |
| 55°   | 280.1 | 280.0 | 275.1 | 277.9 | 278.1 | 247.6 | 246.0 | 233.4 | 249.8 | 256.8 | 286.6 |
| 57.5° | 292.3 | 292.4 | 296.5 | 306.3 | 312.9 | 284.3 | 283.7 | 268.2 | 284.9 | 294.7 | 329.9 |
| 60°   | 301.7 | 303.7 | 315.2 | 337.6 | 348.6 | 331.1 | 328.5 | 312.1 | 323.3 | 327.2 | 363.0 |
| 62.5° | 297.9 | 300.5 | 323.1 | 356.1 | 384.4 | 380.7 | 379.8 | 356.1 | 356.0 | 354.0 | 387.7 |
| 65°   | 267.9 | 273.5 | 309.1 | 355.4 | 407.9 | 431.0 | 429.7 | 397.6 | 386.4 | 376.4 | 395.1 |
| 67.5° | 219.3 | 220.5 | 263.3 | 328.2 | 407.7 | 462.7 | 461.3 | 427.7 | 405.3 | 380.8 | 373.4 |
| 69°   | 178.5 | 182.9 | 222.6 | 293.8 | 393.4 | 469.1 | 469.1 | 436.1 | 404.6 | 370.3 | 341.6 |
| 70°   | 154.4 | 154.6 | 192.9 | 266.4 | 373.8 | 465.3 | 466.2 | 436.1 | 398.9 | 356.6 | 313.4 |
| 72.5° | 72.4  | 76.9  | 101.0 | 173.9 | 301.9 | 427.7 | 429.9 | 407.3 | 365.8 | 307.2 | 235.2 |
| 75°   | 21.7  | 22.5  | 33.7  | 82.4  | 173.0 | 329.5 | 334.4 | 338.9 | 297.9 | 226.2 | 144.8 |
| 77.5° | 12.9  | 12.8  | 16.3  | 28.0  | 80.1  | 195.4 | 197.6 | 216.8 | 193.3 | 125.7 | 65.8  |
| 80°   | 6.3   | 6.5   | 8.7   | 13.6  | 30.0  | 71.0  | 78.1  | 101.3 | 85.6  | 49.2  | 24.1  |
| 82.5° | 2.1   | 2.3   | 3.6   | 5.5   | 12.7  | 22.9  | 25.3  | 31.8  | 27.4  | 17.9  | 10.3  |
| 85°   | 0.0   | 0.0   | 0.1   | 0.2   | 0.7   | 1.7   | 1.7   | 3.8   | 5.7   | 6.3   | 3.4   |
| 87.5° | 0.0   | 0.0   | 0.1   | 0.1   | 0.2   | 0.2   | 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°    | 71.4  | 71.4  | 71.4  | 71.4 | 71.4 | 71.4 | 71.4 | 71.4 | 71.4 | 71.4 | 71.4 |
| 2.5°  | 71.5  | 71.3  | 70.9  | 70.5 | 70.3 | 69.8 | 69.9 | 69.7 | 69.6 | 69.6 | 69.7 |
| 5°    | 71.7  | 71.4  | 70.8  | 70.4 | 70.0 | 69.8 | 70.3 | 70.5 | 70.7 | 70.7 | 70.8 |
| 7.5°  | 72.9  | 72.3  | 71.6  | 71.1 | 71.2 | 71.5 | 72.3 | 72.9 | 73.2 | 73.4 | 73.6 |
| 10°   | 74.9  | 74.2  | 73.2  | 73.1 | 73.3 | 74.1 | 75.2 | 76.1 | 76.9 | 77.4 | 77.4 |
| 12.5° | 77.0  | 76.1  | 75.3  | 75.5 | 76.4 | 77.6 | 78.7 | 79.7 | 80.4 | 80.9 | 81.0 |
| 15°   | 79.3  | 78.4  | 77.6  | 78.1 | 79.6 | 81.0 | 81.9 | 82.3 | 82.6 | 83.1 | 83.2 |
| 17.5° | 81.4  | 80.6  | 79.9  | 81.2 | 82.4 | 83.5 | 83.8 | 83.6 | 83.2 | 83.5 | 83.7 |
| 20°   | 83.5  | 82.8  | 82.4  | 83.8 | 84.7 | 84.8 | 84.0 | 83.1 | 82.1 | 82.1 | 82.2 |
| 22.5° | 86.2  | 85.3  | 85.1  | 85.8 | 85.5 | 84.3 | 82.3 | 81.0 | 79.6 | 79.4 | 79.7 |
| 25°   | 88.8  | 87.9  | 87.8  | 87.3 | 84.7 | 81.6 | 79.0 | 77.4 | 76.3 | 76.4 | 77.0 |
| 27.5° | 91.4  | 90.8  | 90.9  | 88.2 | 82.4 | 77.8 | 74.2 | 72.9 | 73.2 | 73.4 | 74.0 |
| 30°   | 94.0  | 94.0  | 94.4  | 88.2 | 79.3 | 72.3 | 68.9 | 68.8 | 69.6 | 70.2 | 70.9 |
| 32.5° | 97.0  | 97.9  | 97.2  | 87.1 | 75.0 | 66.7 | 64.0 | 64.2 | 65.1 | 66.1 | 66.7 |
| 35°   | 99.9  | 102.0 | 100.0 | 84.6 | 69.1 | 61.6 | 59.4 | 59.1 | 59.8 | 60.7 | 61.0 |
| 37.5° | 104.5 | 107.9 | 102.4 | 80.8 | 63.0 | 57.1 | 54.9 | 54.1 | 53.4 | 54.1 | 54.0 |
| 40°   | 112.5 | 116.6 | 104.2 | 74.3 | 57.1 | 52.9 | 50.6 | 49.1 | 47.4 | 45.9 | 45.9 |
| 42.5° | 125.3 | 128.0 | 105.2 | 66.4 | 51.2 | 48.7 | 46.4 | 44.2 | 41.6 | 38.9 | 38.9 |
| 45°   | 146.2 | 146.8 | 105.6 | 58.0 | 45.8 | 44.5 | 42.1 | 40.0 | 36.6 | 33.9 | 33.3 |
| 47.5° | 174.1 | 171.5 | 106.6 | 49.9 | 41.1 | 40.8 | 38.8 | 36.4 | 32.7 | 30.2 | 29.9 |
| 50°   | 211.6 | 200.4 | 111.0 | 43.4 | 37.3 | 37.6 | 36.1 | 33.3 | 29.8 | 28.0 | 27.6 |
| 52.5° | 253.7 | 236.9 | 114.4 | 38.2 | 34.0 | 34.9 | 33.8 | 31.1 | 28.1 | 26.6 | 26.3 |
| 55°   | 299.8 | 271.9 | 113.6 | 34.7 | 31.5 | 32.5 | 32.1 | 29.8 | 27.1 | 25.8 | 25.5 |
| 57.5° | 337.4 | 296.6 | 106.6 | 31.6 | 29.0 | 30.4 | 30.8 | 29.0 | 26.5 | 25.3 | 25.0 |
| 60°   | 365.6 | 310.1 | 92.2  | 29.0 | 27.0 | 28.7 | 29.8 | 28.5 | 26.4 | 25.7 | 25.4 |
| 62.5° | 378.4 | 308.9 | 73.6  | 27.0 | 25.5 | 27.5 | 29.9 | 29.3 | 27.9 | 28.4 | 28.5 |
| 65°   | 371.2 | 293.8 | 55.2  | 25.5 | 24.6 | 27.7 | 31.6 | 31.6 | 29.5 | 30.4 | 30.5 |
| 67.5° | 334.3 | 254.3 | 40.2  | 24.4 | 23.7 | 28.7 | 34.8 | 32.8 | 28.8 | 29.5 | 29.2 |
| 69°   | 299.2 | 227.6 | 34.5  | 23.8 | 23.0 | 29.2 | 36.2 | 33.0 | 28.0 | 28.8 | 28.0 |
| 70°   | 273.4 | 203.4 | 31.0  | 23.3 | 22.7 | 29.2 | 36.6 | 32.8 | 27.6 | 28.2 | 27.3 |
| 72.5° | 194.6 | 141.2 | 25.5  | 22.3 | 21.6 | 27.0 | 35.9 | 31.7 | 26.5 | 25.8 | 24.1 |
| 75°   | 113.1 | 78.1  | 21.7  | 21.2 | 19.1 | 23.7 | 34.1 | 30.5 | 25.4 | 24.1 | 22.9 |
| 77.5° | 47.5  | 34.9  | 18.5  | 19.3 | 16.9 | 21.1 | 31.9 | 29.3 | 24.1 | 22.3 | 21.7 |
| 80°   | 19.3  | 17.4  | 15.4  | 16.7 | 14.7 | 18.6 | 29.4 | 27.3 | 22.2 | 20.4 | 19.5 |
| 82.5° | 10.1  | 9.6   | 11.8  | 13.5 | 12.2 | 17.1 | 27.7 | 25.9 | 20.6 | 18.8 | 17.7 |
| 85°   | 3.0   | 4.0   | 6.7   | 9.2  | 9.3  | 15.4 | 26.9 | 24.0 | 17.9 | 15.5 | 15.3 |
| 87.5° | 0.2   | 0.8   | 2.3   | 4.8  | 6.1  | 11.8 | 21.8 | 19.7 | 14.5 | 12.2 | 12.3 |
| 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)