

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: P401099

Luminaire Tested: **ENV-SA1B-730-U-T2-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401099  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1B-730-U-T2-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2362 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 25.4  
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

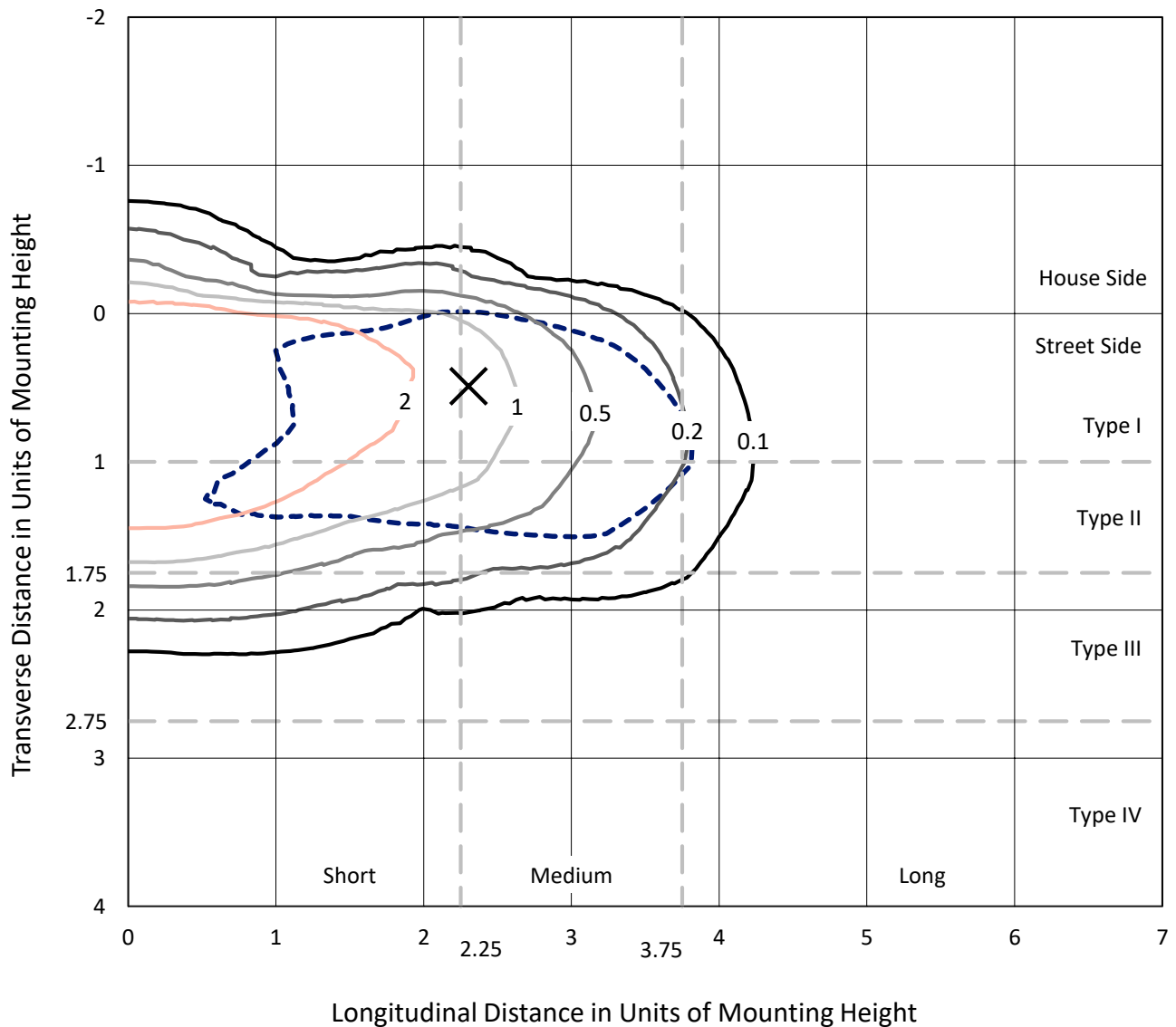


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

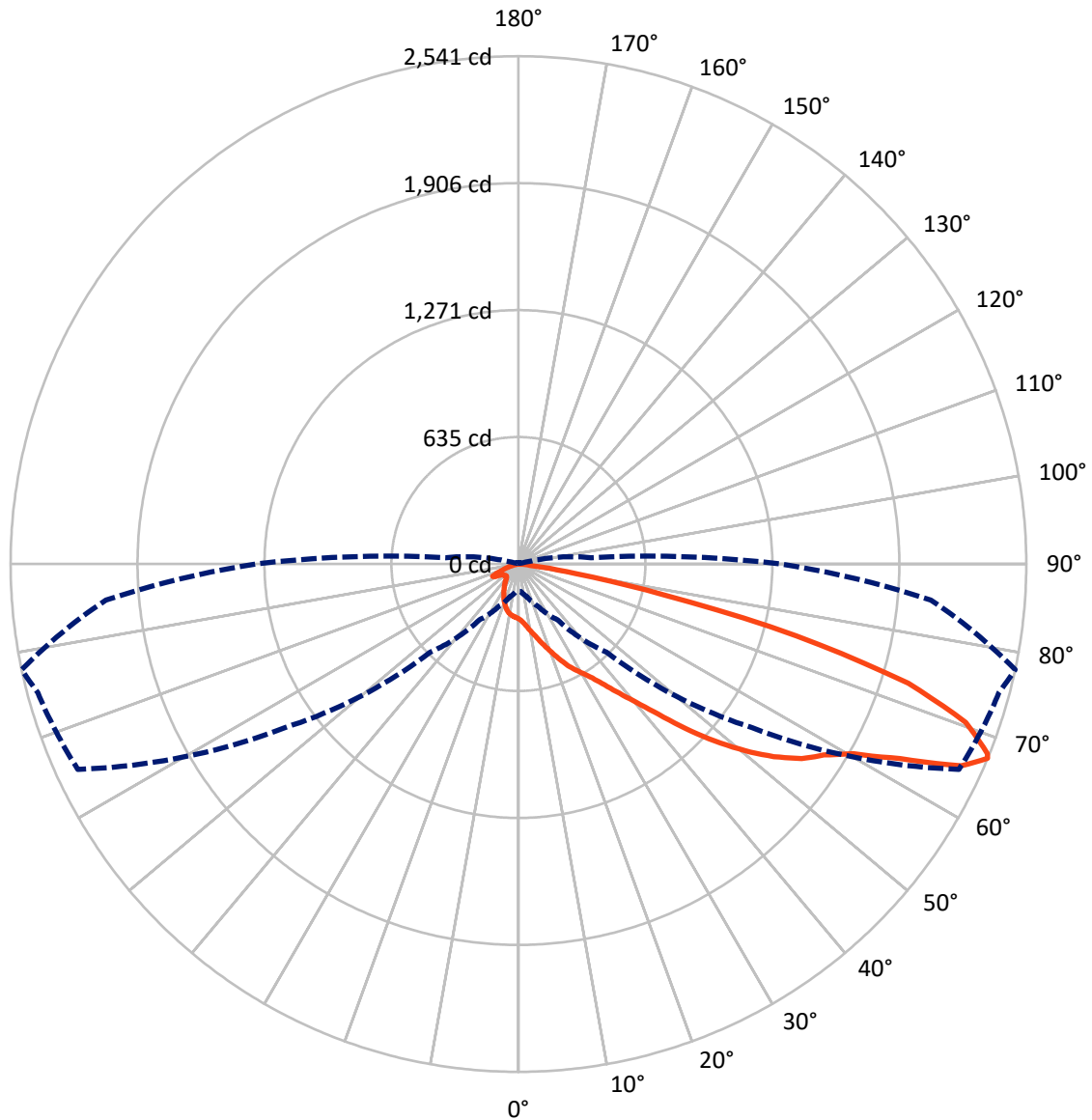


Based on 10 foot mounting height. Maximum calculated value = 4.3 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 67-Deg Vertical

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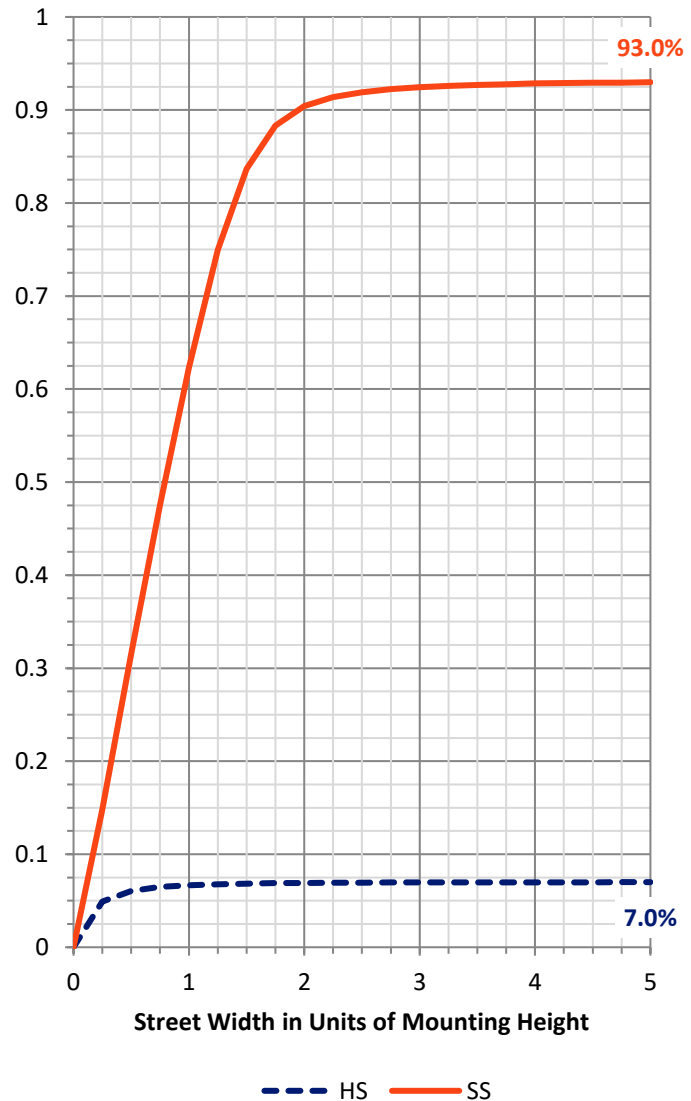
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 166.6    | 0.0    | 166.6  |
|                    | % Fixture | 7.1      | 0.0    | 7.1    |
| <b>Street Side</b> | Lumens    | 2195.4   | 0.0    | 2195.4 |
|                    | % Fixture | 92.9     | 0.0    | 92.9   |
| <b>Total</b>       | Lumens    | 2362.0   | 0.0    | 2362.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 26.4   | 1.1       |
| 10°-20°   | 75.7   | 3.2       |
| 20°-30°   | 133.8  | 5.7       |
| 30°-40°   | 235.9  | 10.0      |
| 40°-50°   | 405.4  | 17.2      |
| 50°-60°   | 610.2  | 25.8      |
| 60°-70°   | 600.5  | 25.4      |
| 70°-80°   | 262.4  | 11.1      |
| 80°-90°   | 11.6   | 0.5       |
| 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°    | 2362.0 | 100.0     |
| 0°-180°   | 2362.0 | 100.0     |



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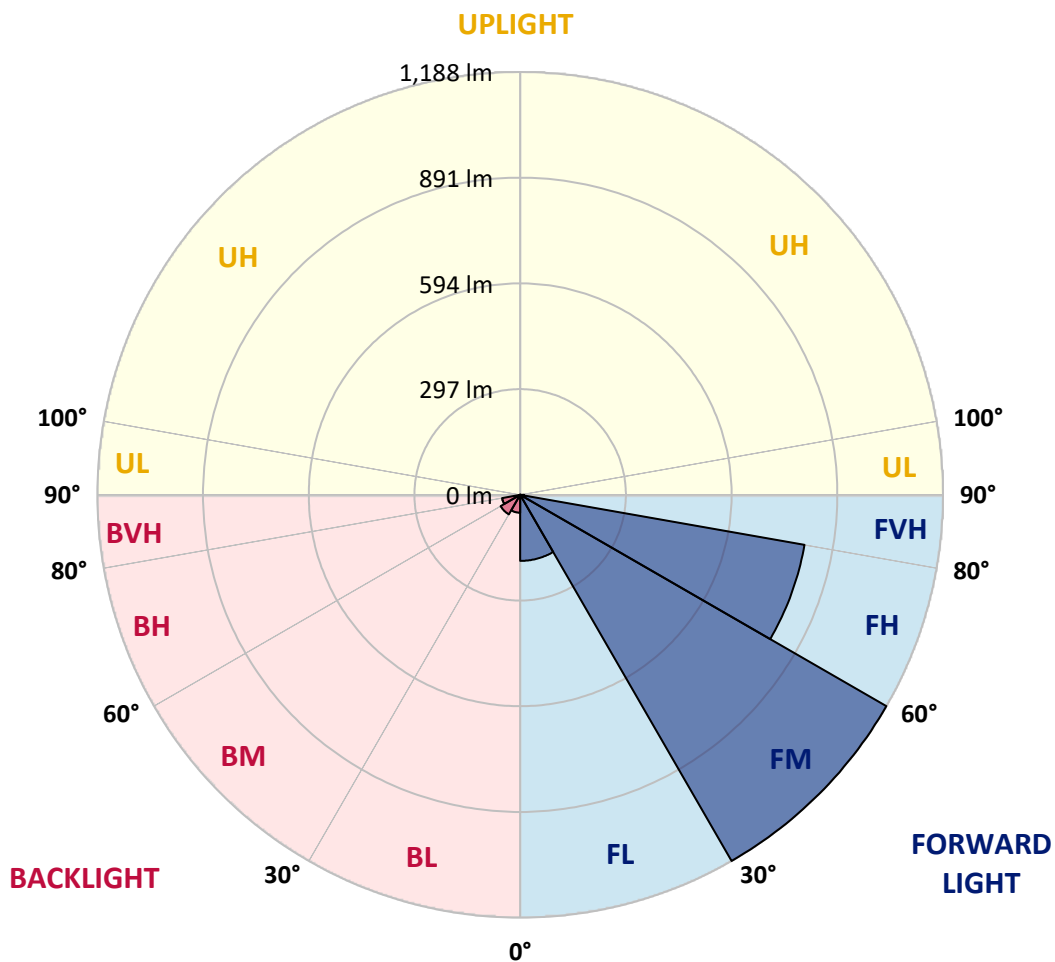
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 185.6  | 7.9       |                         |      |         |
| FM (30°-60°)   | 1188.1 | 50.3      |                         |      |         |
| FH (60°-80°)   | 811.2  | 34.3      |                         |      | G1/1800 |
| FVH (80°-90°)  | 10.4   | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 50.4   | 2.1       | B0/110                  |      |         |
| BM (30°-60°)   | 63.4   | 2.7       | B0/220                  |      |         |
| BH (60°-80°)   | 51.7   | 2.2       | B0/110                  |      | G0/110  |
| BVH (80°-90°)  | 1.2    | 0.1       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B0-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 78°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  | 274.2  |
| 2.5°  | 314.6  | 316.0  | 314.2  | 312.8  | 309.3  | 304.9  | 300.4  | 293.8  | 286.7  | 284.0  | 279.6  |
| 5°    | 353.2  | 353.2  | 353.2  | 349.7  | 346.6  | 338.1  | 327.9  | 317.7  | 304.4  | 299.5  | 289.3  |
| 7.5°  | 373.6  | 374.1  | 375.4  | 375.4  | 373.6  | 367.9  | 356.8  | 345.2  | 325.3  | 318.6  | 302.2  |
| 10°   | 375.9  | 377.6  | 381.2  | 386.5  | 390.5  | 393.6  | 387.0  | 374.5  | 350.6  | 342.6  | 318.6  |
| 12.5° | 370.1  | 371.0  | 376.7  | 386.5  | 399.4  | 412.3  | 412.7  | 405.1  | 378.5  | 367.4  | 338.6  |
| 15°   | 356.8  | 358.1  | 366.5  | 382.1  | 402.0  | 425.1  | 438.4  | 436.2  | 411.4  | 398.5  | 360.8  |
| 17.5° | 335.5  | 336.8  | 347.5  | 370.5  | 399.8  | 433.6  | 462.0  | 473.0  | 443.8  | 431.3  | 383.4  |
| 20°   | 334.6  | 335.0  | 339.0  | 356.3  | 390.9  | 438.4  | 485.0  | 511.2  | 483.3  | 469.9  | 410.0  |
| 22.5° | 391.4  | 387.8  | 379.0  | 367.9  | 383.0  | 437.1  | 505.9  | 551.6  | 532.1  | 511.2  | 440.7  |
| 25°   | 454.9  | 456.2  | 446.4  | 420.2  | 401.2  | 434.9  | 521.9  | 597.3  | 577.8  | 556.9  | 472.2  |
| 27.5° | 521.4  | 519.2  | 510.8  | 486.8  | 454.9  | 450.9  | 533.4  | 634.1  | 621.7  | 596.4  | 500.1  |
| 30°   | 586.2  | 584.4  | 578.2  | 553.8  | 519.2  | 492.1  | 542.3  | 667.4  | 663.4  | 635.5  | 522.7  |
| 32.5° | 660.3  | 663.4  | 655.4  | 623.5  | 581.3  | 548.0  | 561.4  | 702.5  | 714.0  | 679.8  | 546.3  |
| 35°   | 746.4  | 746.4  | 730.0  | 700.7  | 657.2  | 610.6  | 599.5  | 741.1  | 778.3  | 741.5  | 583.5  |
| 37.5° | 817.4  | 823.2  | 813.4  | 771.2  | 730.4  | 681.6  | 657.6  | 788.6  | 857.8  | 820.5  | 633.7  |
| 40°   | 873.3  | 883.1  | 883.5  | 841.8  | 804.1  | 772.1  | 738.9  | 855.6  | 957.6  | 909.7  | 693.6  |
| 42.5° | 925.2  | 927.0  | 934.6  | 910.6  | 872.9  | 864.4  | 830.3  | 935.0  | 1082.3 | 1026.0 | 773.5  |
| 45°   | 991.4  | 994.9  | 990.5  | 972.7  | 940.3  | 951.4  | 932.3  | 1035.7 | 1222.5 | 1175.1 | 867.5  |
| 47.5° | 1088.5 | 1097.0 | 1090.3 | 1058.4 | 1018.9 | 1039.7 | 1026.0 | 1136.0 | 1381.0 | 1323.3 | 969.6  |
| 50°   | 1179.5 | 1186.2 | 1193.3 | 1183.1 | 1143.6 | 1123.6 | 1106.7 | 1242.1 | 1516.8 | 1467.9 | 1069.9 |
| 52.5° | 1189.3 | 1195.5 | 1234.5 | 1270.5 | 1296.7 | 1244.3 | 1191.5 | 1349.5 | 1642.3 | 1601.5 | 1161.8 |
| 55°   | 1125.8 | 1129.8 | 1195.0 | 1266.0 | 1386.3 | 1404.0 | 1316.2 | 1455.5 | 1747.5 | 1719.6 | 1223.4 |
| 57.5° | 949.2  | 966.1  | 1058.8 | 1167.5 | 1364.1 | 1499.0 | 1493.2 | 1578.9 | 1815.9 | 1803.0 | 1302.9 |
| 60°   | 623.5  | 642.1  | 753.1  | 917.7  | 1200.8 | 1473.7 | 1687.6 | 1763.9 | 1911.7 | 1925.9 | 1442.2 |
| 62.5° | 323.1  | 344.8  | 442.4  | 588.4  | 870.2  | 1283.3 | 1753.7 | 2067.9 | 2095.4 | 2143.8 | 1690.7 |
| 65°   | 184.6  | 189.0  | 237.9  | 344.8  | 538.7  | 919.0  | 1674.3 | 2368.8 | 2337.3 | 2435.3 | 2008.0 |
| 67°   | 137.1  | 137.1  | 171.3  | 234.3  | 341.2  | 624.8  | 1428.0 | 2432.2 | 2489.5 | 2541.4 | 2071.9 |
| 67.5° | 122.9  | 129.6  | 158.9  | 216.1  | 306.2  | 554.3  | 1336.2 | 2415.4 | 2499.2 | 2531.6 | 2049.7 |
| 70°   | 84.3   | 88.8   | 114.0  | 154.9  | 206.3  | 288.4  | 876.0  | 2136.2 | 2407.8 | 2375.0 | 1857.6 |
| 72.5° | 50.6   | 52.4   | 75.4   | 111.4  | 154.0  | 154.4  | 477.9  | 1621.5 | 2040.4 | 2039.9 | 1517.2 |
| 75°   | 31.5   | 33.3   | 44.4   | 74.6   | 107.8  | 96.7   | 221.0  | 1103.2 | 1465.3 | 1436.9 | 1016.6 |
| 77.5° | 17.8   | 20.4   | 26.6   | 40.8   | 68.3   | 61.7   | 93.2   | 618.2  | 791.7  | 742.8  | 505.0  |
| 80°   | 7.1    | 8.4    | 15.1   | 19.5   | 38.6   | 36.8   | 38.2   | 217.4  | 320.4  | 288.9  | 169.1  |
| 82.5° | 1.8    | 2.2    | 5.3    | 9.3    | 15.1   | 15.1   | 12.0   | 59.5   | 75.9   | 70.6   | 43.5   |
| 85°   | 0.0    | 0.0    | 0.4    | 0.4    | 0.4    | 0.9    | 3.1    | 6.7    | 8.0    | 9.3    | 7.1    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.4    | 0.4    | 0.4    | 0.9    | 1.3    | 1.3    | 1.3    | 1.3    |
| 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°    | 274.2  | 274.2 | 274.2 | 274.2 | 274.2 | 274.2 | 274.2 | 274.2 | 274.2 | 274.2 | 274.2 |
| 2.5°  | 276.0  | 272.9 | 266.7 | 260.0 | 253.4 | 248.1 | 243.6 | 237.4 | 236.5 | 236.5 | 236.5 |
| 5°    | 281.8  | 274.7 | 260.5 | 246.3 | 232.1 | 219.2 | 209.9 | 202.4 | 195.7 | 193.5 | 195.3 |
| 7.5°  | 290.2  | 277.3 | 252.5 | 227.6 | 205.5 | 187.3 | 174.0 | 163.3 | 158.4 | 155.8 | 153.5 |
| 10°   | 301.3  | 281.3 | 241.8 | 205.5 | 177.5 | 155.8 | 141.6 | 131.4 | 126.5 | 123.4 | 123.8 |
| 12.5° | 313.3  | 284.4 | 228.5 | 181.5 | 150.4 | 130.5 | 118.5 | 110.1 | 102.1 | 97.2  | 98.5  |
| 15°   | 325.3  | 286.7 | 212.1 | 159.3 | 129.6 | 111.8 | 95.0  | 79.9  | 74.6  | 73.7  | 73.2  |
| 17.5° | 338.6  | 286.2 | 193.9 | 138.5 | 111.8 | 87.0  | 70.1  | 68.3  | 67.9  | 67.9  | 67.5  |
| 20°   | 352.3  | 284.0 | 173.1 | 121.1 | 94.1  | 66.1  | 63.5  | 62.6  | 61.2  | 60.8  | 60.4  |
| 22.5° | 367.4  | 280.0 | 154.0 | 106.1 | 70.1  | 60.4  | 56.8  | 54.1  | 51.9  | 50.6  | 51.0  |
| 25°   | 381.2  | 272.5 | 135.3 | 91.9  | 59.9  | 54.1  | 49.3  | 45.3  | 43.0  | 41.3  | 41.7  |
| 27.5° | 390.5  | 259.2 | 119.4 | 74.1  | 55.0  | 47.9  | 42.2  | 38.2  | 35.1  | 33.7  | 33.7  |
| 30°   | 391.4  | 240.1 | 105.2 | 60.8  | 50.1  | 42.2  | 35.9  | 31.5  | 29.7  | 28.8  | 28.4  |
| 32.5° | 390.5  | 220.5 | 94.5  | 55.9  | 45.7  | 36.8  | 30.6  | 27.5  | 25.7  | 24.9  | 24.9  |
| 35°   | 394.9  | 200.6 | 84.8  | 51.5  | 40.8  | 32.4  | 27.1  | 24.0  | 22.6  | 21.7  | 21.7  |
| 37.5° | 408.3  | 186.8 | 74.6  | 47.0  | 36.4  | 28.4  | 24.4  | 21.7  | 20.4  | 19.5  | 19.5  |
| 40°   | 426.5  | 175.3 | 62.1  | 42.6  | 32.0  | 25.7  | 22.2  | 20.0  | 18.2  | 17.3  | 17.3  |
| 42.5° | 458.4  | 170.8 | 51.9  | 38.2  | 28.0  | 23.1  | 20.4  | 17.8  | 16.0  | 15.1  | 15.1  |
| 45°   | 505.9  | 173.1 | 47.5  | 34.2  | 25.3  | 20.9  | 18.2  | 15.5  | 13.8  | 13.3  | 13.3  |
| 47.5° | 558.2  | 182.4 | 44.4  | 30.6  | 23.1  | 19.5  | 16.4  | 13.8  | 12.0  | 11.5  | 11.5  |
| 50°   | 616.8  | 197.0 | 41.7  | 27.1  | 20.9  | 17.8  | 14.6  | 12.0  | 10.7  | 10.2  | 10.2  |
| 52.5° | 672.7  | 215.7 | 39.1  | 24.4  | 19.5  | 16.0  | 12.9  | 10.7  | 9.8   | 9.3   | 9.3   |
| 55°   | 715.3  | 227.6 | 36.8  | 22.6  | 18.2  | 14.6  | 11.5  | 10.2  | 8.9   | 8.4   | 8.4   |
| 57.5° | 774.8  | 247.6 | 34.2  | 20.4  | 16.4  | 13.3  | 10.7  | 9.3   | 8.0   | 8.0   | 8.0   |
| 60°   | 895.5  | 301.3 | 30.2  | 18.6  | 14.6  | 12.0  | 10.2  | 8.4   | 7.5   | 7.1   | 7.1   |
| 62.5° | 1112.9 | 390.1 | 26.2  | 17.3  | 12.9  | 10.7  | 8.9   | 7.5   | 6.7   | 5.8   | 5.8   |
| 65°   | 1322.4 | 426.9 | 22.2  | 15.1  | 11.5  | 9.3   | 8.0   | 6.7   | 4.9   | 4.0   | 4.0   |
| 67°   | 1310.9 | 365.2 | 18.6  | 12.9  | 9.8   | 8.4   | 6.7   | 5.3   | 3.6   | 2.2   | 2.2   |
| 67.5° | 1279.8 | 339.9 | 18.2  | 12.4  | 9.3   | 8.0   | 6.7   | 4.9   | 3.1   | 1.8   | 1.8   |
| 70°   | 1087.6 | 237.9 | 14.2  | 9.8   | 8.0   | 7.1   | 5.3   | 3.6   | 1.8   | 0.9   | 0.9   |
| 72.5° | 883.5  | 188.6 | 11.1  | 8.0   | 6.7   | 5.3   | 4.4   | 2.2   | 1.3   | 0.4   | 0.4   |
| 75°   | 624.8  | 115.8 | 9.8   | 7.1   | 5.3   | 4.0   | 3.6   | 2.2   | 1.3   | 0.9   | 0.4   |
| 77.5° | 308.4  | 53.3  | 8.0   | 6.2   | 4.9   | 4.0   | 3.1   | 2.7   | 2.2   | 1.8   | 0.9   |
| 80°   | 90.5   | 17.3  | 5.3   | 4.4   | 4.4   | 4.0   | 3.6   | 3.1   | 2.7   | 2.2   | 1.3   |
| 82.5° | 20.4   | 6.2   | 1.8   | 2.2   | 3.1   | 3.1   | 3.1   | 2.2   | 1.8   | 0.9   | 0.4   |
| 85°   | 2.7    | 1.3   | 1.3   | 1.3   | 1.8   | 1.8   | 1.3   | 0.9   | 0.9   | 0.0   | 0.0   |
| 87.5° | 0.9    | 0.9   | 0.9   | 1.3   | 1.3   | 1.3   | 0.9   | 0.4   | 0.4   | 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)