

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: P401213

Luminaire Tested: **ENC-SA1B-827-U-T4W-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401213  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENC-SA1B-827-U-T4W-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1879 lumens  
Efficiency: N/A  
Efficacy: 74.0 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 - G1

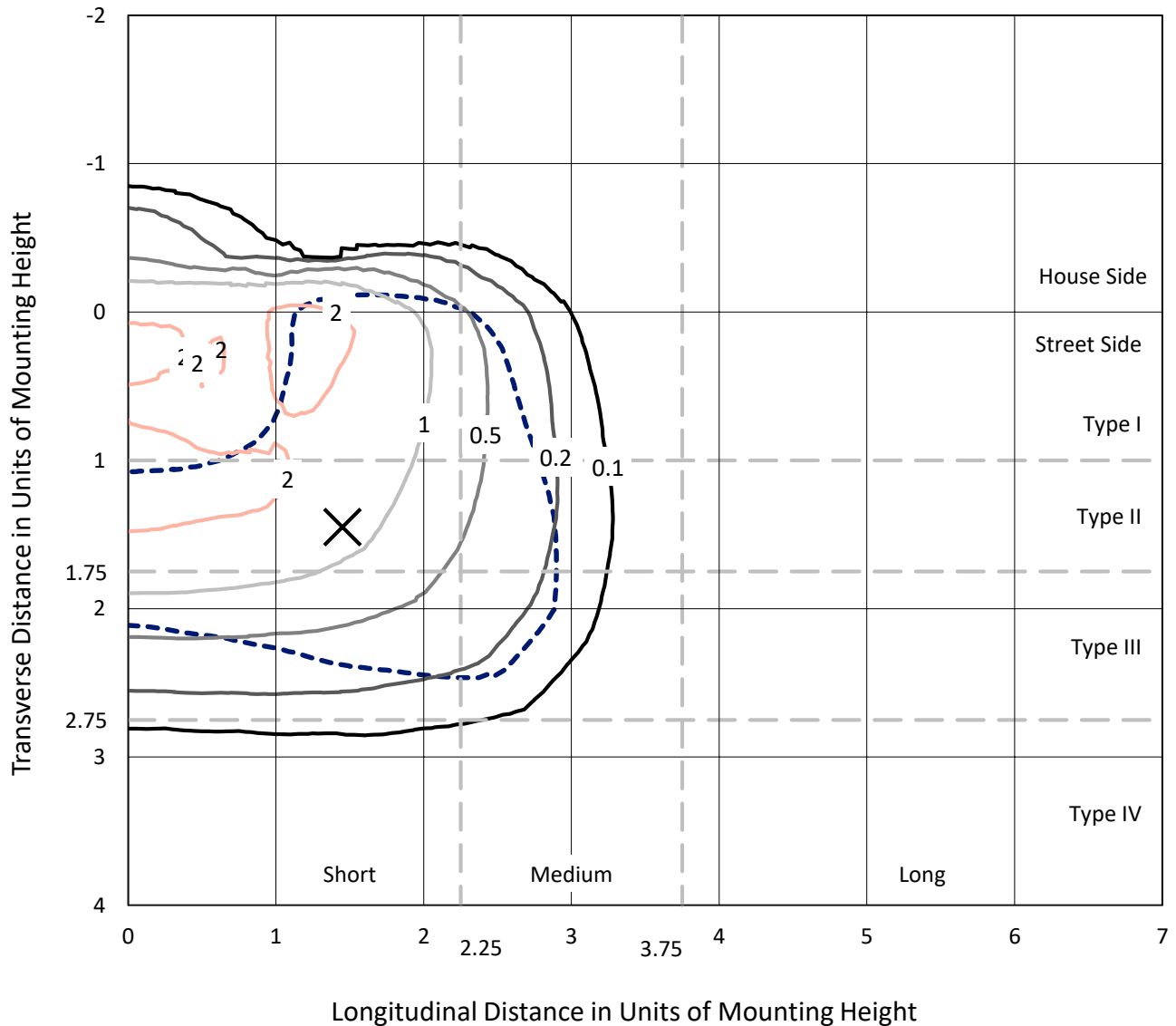
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

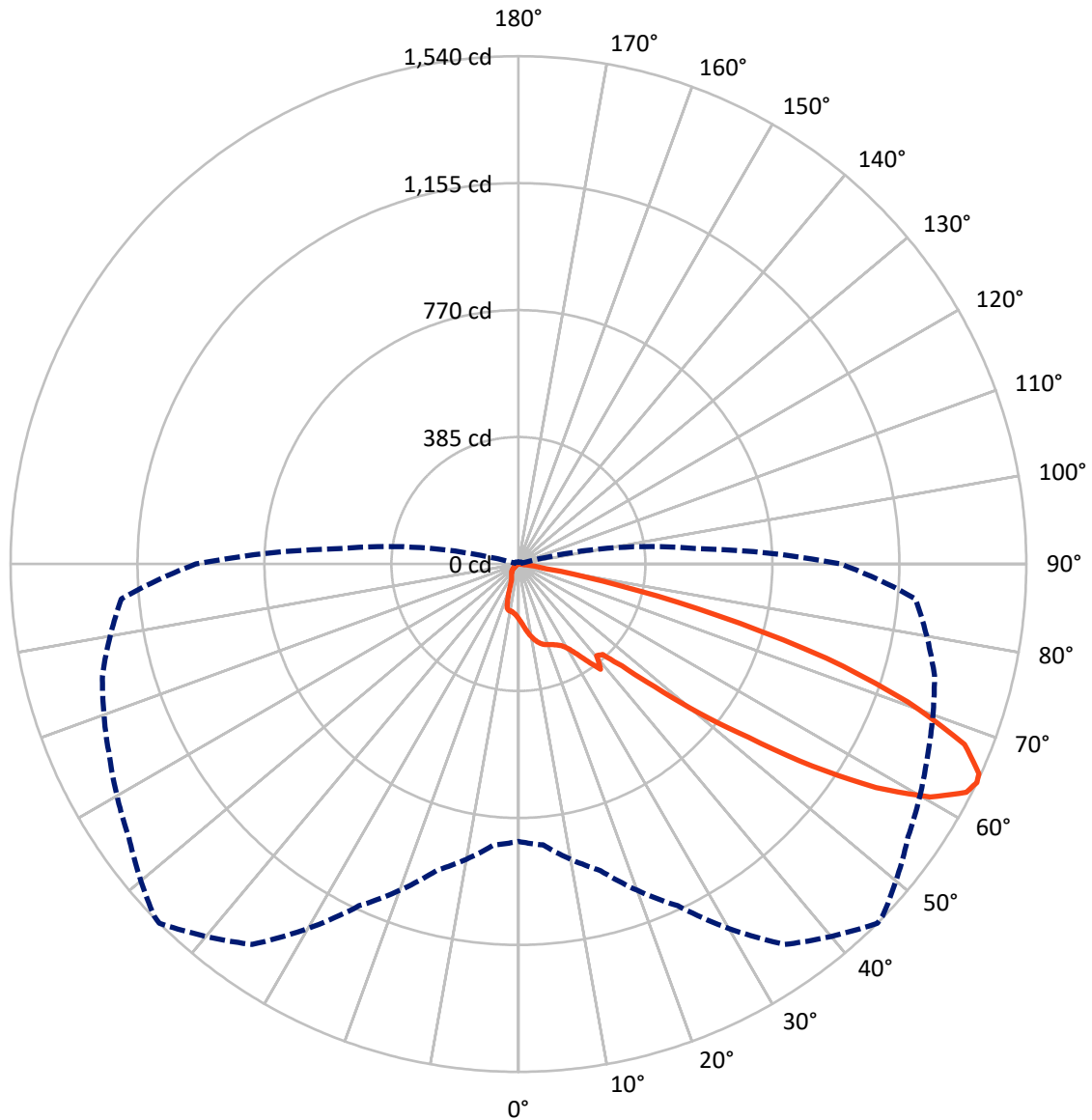
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.5 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 64-Deg Vertical

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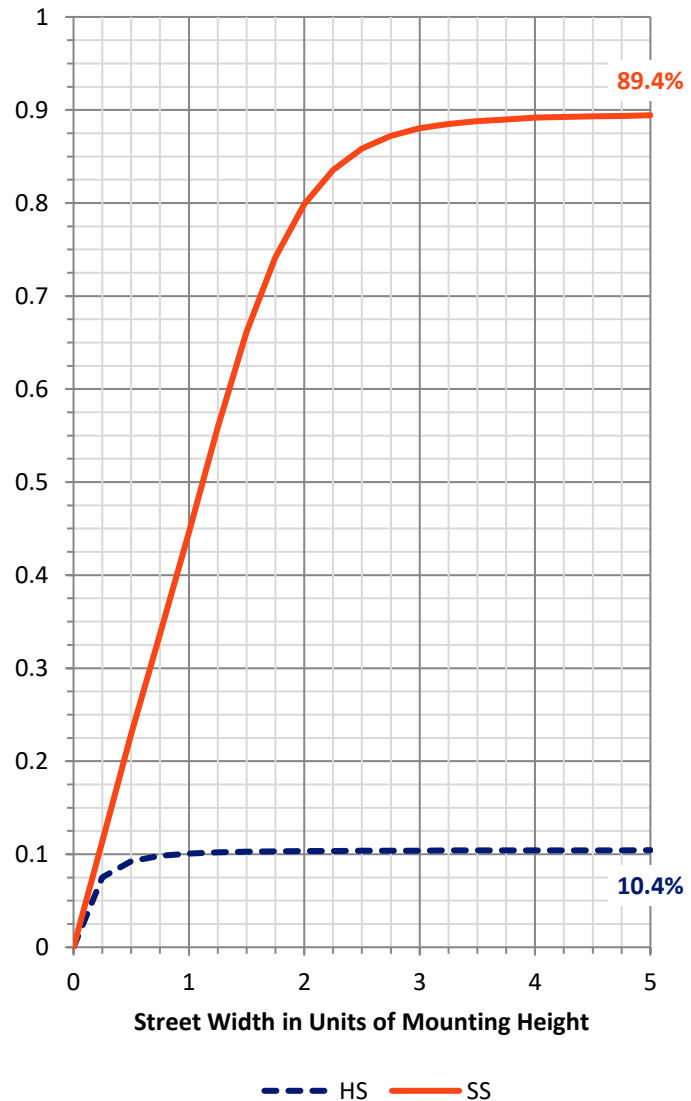
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 198.3    | 0.0    | 198.3  |
|                    | % Fixture | 10.6     | 0.0    | 10.6   |
| <b>Street Side</b> | Lumens    | 1680.7   | 0.0    | 1680.7 |
|                    | % Fixture | 89.4     | 0.0    | 89.4   |
| <b>Total</b>       | Lumens    | 1879.0   | 0.0    | 1879.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 16.9   | 0.9       |
| 10°-20°   | 52.7   | 2.8       |
| 20°-30°   | 85.7   | 4.6       |
| 30°-40°   | 136.2  | 7.2       |
| 40°-50°   | 259.5  | 13.8      |
| 50°-60°   | 534.6  | 28.5      |
| 60°-70°   | 597.1  | 31.8      |
| 70°-80°   | 188.6  | 10.0      |
| 80°-90°   | 7.7    | 0.4       |
| 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°    | 1879.0 | 100.0     |
| 0°-180°   | 1879.0 | 100.0     |



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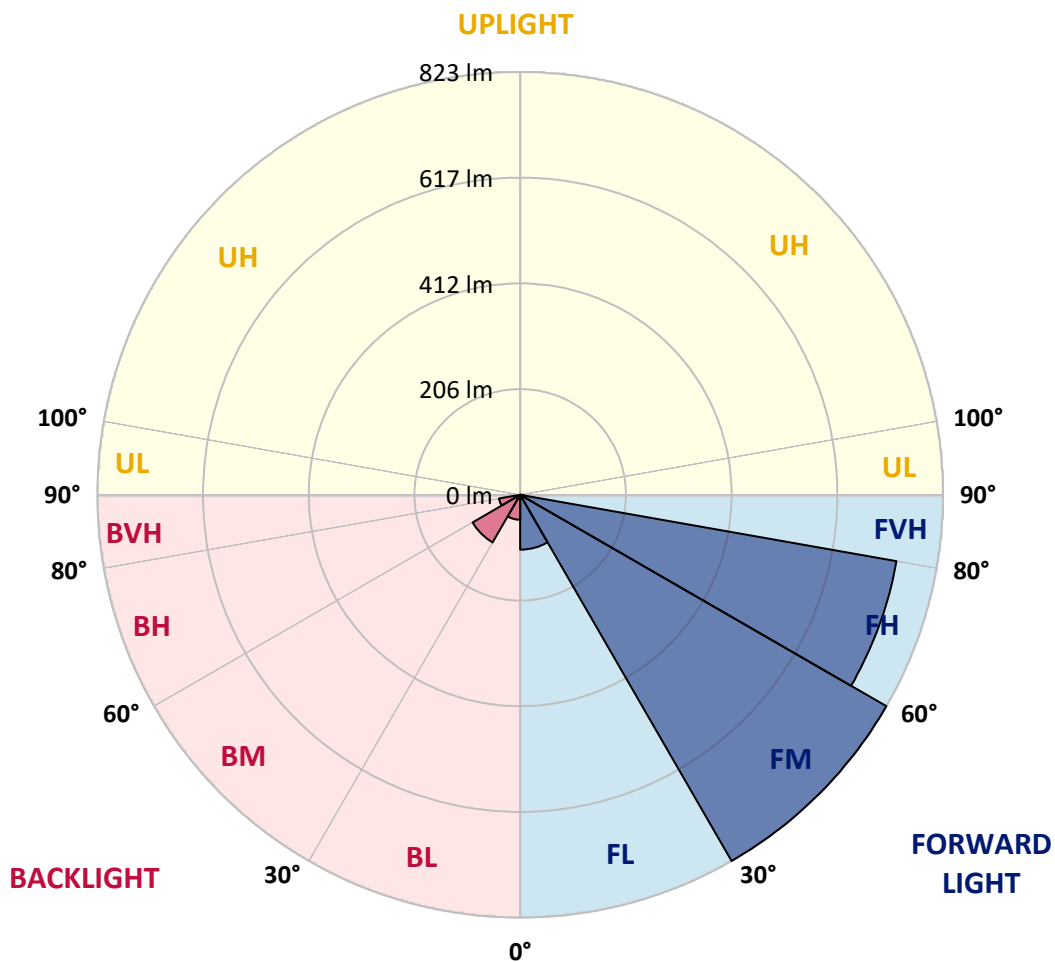
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 106.7  | 5.7       |                         |      |         |
| FM   | (30°-60°)   | 823.3  | 43.8      |                         |      |         |
| FH   | (60°-80°)   | 743.9  | 39.6      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 6.8    | 0.4       |                         |      | G0/10   |
| BL   | (0°-30°)    | 48.6   | 2.6       | B0/110                  |      |         |
| BM   | (30°-60°)   | 107.0  | 5.7       | B0/220                  |      |         |
| BH   | (60°-80°)   | 41.8   | 2.2       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.9    | 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-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 46°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  | 166.5  |
| 2.5°  | 183.7  | 184.5  | 183.4  | 182.0  | 180.5  | 178.0  | 178.4  | 175.1  | 172.6  | 170.8  | 168.0  |
| 5°    | 207.0  | 206.7  | 204.5  | 201.3  | 198.1  | 193.4  | 192.7  | 187.7  | 182.3  | 176.6  | 171.2  |
| 7.5°  | 230.7  | 229.6  | 227.4  | 223.1  | 217.1  | 211.0  | 209.2  | 202.0  | 194.1  | 185.5  | 176.2  |
| 10°   | 250.0  | 249.3  | 246.8  | 242.1  | 235.0  | 225.6  | 225.6  | 215.6  | 205.2  | 194.8  | 183.7  |
| 12.5° | 265.8  | 265.0  | 262.2  | 256.5  | 247.9  | 239.6  | 238.5  | 229.6  | 218.1  | 205.9  | 192.3  |
| 15°   | 275.4  | 274.7  | 271.5  | 265.0  | 257.5  | 250.0  | 248.9  | 240.3  | 229.9  | 216.0  | 200.2  |
| 17.5° | 277.9  | 277.2  | 274.7  | 269.0  | 263.3  | 256.8  | 255.4  | 247.9  | 238.9  | 224.6  | 208.5  |
| 20°   | 276.9  | 275.4  | 274.0  | 269.3  | 264.7  | 260.4  | 259.7  | 254.3  | 246.4  | 234.2  | 217.1  |
| 22.5° | 274.0  | 272.6  | 271.5  | 268.3  | 265.8  | 265.4  | 264.7  | 261.5  | 256.5  | 246.1  | 229.9  |
| 25°   | 272.9  | 271.9  | 270.8  | 268.6  | 268.3  | 271.9  | 271.5  | 271.1  | 269.0  | 260.0  | 243.2  |
| 27.5° | 279.0  | 278.7  | 276.1  | 272.6  | 274.4  | 280.4  | 280.8  | 282.6  | 281.2  | 275.4  | 262.5  |
| 30°   | 300.5  | 298.7  | 293.0  | 285.1  | 289.8  | 297.6  | 299.1  | 304.8  | 305.2  | 305.9  | 288.3  |
| 32.5° | 329.5  | 326.7  | 317.0  | 307.0  | 309.8  | 324.5  | 324.9  | 333.8  | 352.8  | 341.0  | 302.3  |
| 35°   | 349.6  | 346.0  | 331.3  | 325.9  | 340.3  | 363.5  | 366.8  | 385.0  | 386.5  | 343.5  | 301.2  |
| 37.5° | 405.8  | 400.4  | 373.6  | 341.0  | 354.9  | 405.1  | 408.7  | 405.4  | 375.4  | 339.9  | 316.6  |
| 40°   | 481.0  | 476.0  | 452.0  | 397.2  | 357.8  | 365.3  | 367.1  | 376.8  | 382.5  | 365.0  | 366.1  |
| 42.5° | 578.8  | 572.4  | 547.6  | 480.7  | 402.6  | 375.0  | 378.6  | 398.3  | 435.9  | 444.1  | 486.4  |
| 45°   | 678.7  | 675.2  | 650.1  | 577.7  | 484.2  | 440.9  | 442.7  | 466.7  | 534.0  | 586.0  | 621.8  |
| 47.5° | 776.5  | 777.2  | 755.7  | 694.5  | 603.2  | 555.2  | 553.0  | 584.2  | 669.4  | 706.3  | 742.8  |
| 50°   | 914.4  | 913.7  | 875.4  | 837.4  | 766.1  | 709.2  | 705.6  | 723.1  | 805.2  | 818.8  | 875.4  |
| 52.5° | 1071.3 | 1070.6 | 1012.9 | 995.0  | 964.9  | 873.2  | 882.9  | 867.8  | 926.9  | 951.3  | 1031.5 |
| 55°   | 1145.8 | 1139.3 | 1115.0 | 1137.6 | 1173.4 | 1081.3 | 1079.9 | 1022.6 | 1068.8 | 1089.6 | 1164.4 |
| 57.5° | 1138.3 | 1140.8 | 1164.1 | 1238.9 | 1356.4 | 1279.4 | 1281.5 | 1175.2 | 1202.0 | 1214.9 | 1269.7 |
| 60°   | 1095.6 | 1097.4 | 1151.5 | 1276.2 | 1447.7 | 1434.5 | 1427.0 | 1317.7 | 1300.2 | 1294.8 | 1320.9 |
| 62.5° | 973.9  | 974.6  | 1062.3 | 1222.4 | 1447.0 | 1524.0 | 1516.9 | 1418.0 | 1363.2 | 1328.8 | 1281.2 |
| 64°   | 841.3  | 855.0  | 962.4  | 1143.3 | 1408.0 | 1539.8 | 1535.8 | 1442.4 | 1368.9 | 1305.9 | 1208.1 |
| 65°   | 732.5  | 752.9  | 882.9  | 1073.1 | 1363.9 | 1534.4 | 1529.7 | 1438.1 | 1361.0 | 1262.9 | 1132.5 |
| 67.5° | 499.6  | 510.4  | 627.2  | 844.6  | 1195.9 | 1458.8 | 1457.4 | 1382.9 | 1275.4 | 1091.0 | 888.6  |
| 70°   | 294.8  | 302.7  | 389.0  | 589.5  | 919.1  | 1253.2 | 1272.2 | 1245.4 | 1058.8 | 783.7  | 565.9  |
| 72.5° | 91.7   | 96.3   | 171.6  | 327.4  | 602.4  | 976.4  | 1001.1 | 981.7  | 770.8  | 489.6  | 313.8  |
| 75°   | 34.4   | 35.8   | 56.6   | 142.2  | 299.8  | 624.3  | 631.8  | 654.4  | 469.6  | 258.6  | 137.2  |
| 77.5° | 19.0   | 19.3   | 27.9   | 53.4   | 131.8  | 306.6  | 313.8  | 310.9  | 249.6  | 122.1  | 43.7   |
| 80°   | 9.3    | 9.7    | 13.6   | 23.6   | 51.2   | 86.7   | 102.8  | 135.7  | 88.1   | 60.2   | 14.0   |
| 82.5° | 3.2    | 2.9    | 6.1    | 10.7   | 17.2   | 23.3   | 26.1   | 37.6   | 36.9   | 33.0   | 5.0    |
| 85°   | 0.0    | 0.0    | 0.4    | 0.4    | 0.4    | 0.7    | 0.7    | 4.7    | 9.3    | 10.7   | 1.4    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.7    | 0.7    |
| 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°    | 166.5  | 166.5 | 166.5 | 166.5 | 166.5 | 166.5 | 166.5 | 166.5 | 166.5 | 166.5 | 166.5 |
| 2.5°  | 166.5  | 165.8 | 163.3 | 160.8 | 159.0 | 156.9 | 156.5 | 155.1 | 154.7 | 154.7 | 154.7 |
| 5°    | 168.3  | 166.2 | 161.5 | 157.6 | 154.0 | 150.8 | 149.4 | 147.9 | 146.8 | 146.5 | 146.5 |
| 7.5°  | 172.3  | 169.1 | 161.5 | 155.8 | 150.4 | 146.5 | 144.3 | 142.9 | 141.8 | 141.8 | 141.8 |
| 10°   | 178.0  | 173.0 | 163.7 | 155.8 | 149.4 | 144.3 | 141.1 | 139.0 | 137.5 | 137.2 | 137.5 |
| 12.5° | 185.2  | 178.7 | 167.3 | 157.6 | 150.1 | 143.6 | 136.8 | 124.3 | 116.0 | 111.4 | 110.7 |
| 15°   | 192.0  | 184.5 | 171.2 | 160.1 | 151.1 | 136.8 | 112.1 | 92.8  | 79.9  | 75.9  | 75.2  |
| 17.5° | 199.5  | 191.6 | 176.6 | 163.7 | 147.2 | 110.3 | 79.9  | 63.8  | 61.2  | 62.0  | 62.0  |
| 20°   | 208.8  | 199.5 | 182.3 | 167.3 | 126.8 | 78.4  | 58.4  | 56.2  | 56.9  | 58.4  | 58.4  |
| 22.5° | 219.6  | 209.5 | 190.2 | 165.1 | 96.7  | 57.3  | 53.4  | 53.7  | 54.4  | 55.9  | 55.9  |
| 25°   | 233.5  | 223.1 | 198.8 | 149.0 | 67.3  | 50.1  | 50.5  | 50.9  | 51.9  | 53.4  | 53.7  |
| 27.5° | 254.3  | 241.8 | 209.2 | 125.0 | 50.9  | 46.6  | 46.9  | 48.0  | 49.1  | 50.9  | 50.9  |
| 30°   | 276.5  | 261.1 | 218.5 | 96.3  | 44.4  | 42.6  | 43.0  | 44.1  | 45.8  | 47.3  | 48.0  |
| 32.5° | 286.2  | 272.6 | 220.3 | 65.9  | 41.2  | 39.4  | 38.7  | 39.8  | 41.2  | 42.6  | 43.0  |
| 35°   | 291.6  | 285.8 | 211.7 | 47.6  | 38.7  | 36.5  | 35.1  | 34.7  | 35.1  | 36.2  | 36.2  |
| 37.5° | 318.1  | 314.1 | 194.5 | 40.8  | 36.2  | 34.0  | 31.9  | 30.1  | 29.4  | 29.0  | 29.4  |
| 40°   | 368.9  | 360.3 | 171.9 | 37.6  | 34.0  | 31.5  | 28.7  | 25.8  | 23.3  | 22.2  | 22.2  |
| 42.5° | 481.0  | 437.7 | 139.7 | 35.5  | 31.9  | 29.0  | 24.7  | 20.8  | 17.9  | 17.2  | 17.2  |
| 45°   | 601.7  | 533.7 | 104.9 | 33.7  | 29.7  | 26.1  | 20.8  | 16.5  | 14.0  | 13.3  | 13.3  |
| 47.5° | 717.8  | 604.6 | 73.4  | 31.5  | 27.2  | 22.9  | 17.2  | 13.3  | 11.5  | 11.1  | 11.1  |
| 50°   | 839.6  | 666.2 | 51.2  | 29.0  | 24.7  | 19.7  | 14.0  | 10.7  | 9.7   | 9.7   | 9.7   |
| 52.5° | 958.1  | 711.7 | 37.6  | 26.5  | 21.5  | 16.5  | 11.8  | 9.7   | 9.0   | 9.0   | 9.0   |
| 55°   | 1047.6 | 729.2 | 28.7  | 23.3  | 18.3  | 14.0  | 10.7  | 9.3   | 8.6   | 8.2   | 8.2   |
| 57.5° | 1107.5 | 714.6 | 23.3  | 19.3  | 15.4  | 12.2  | 9.7   | 8.6   | 7.9   | 7.5   | 7.5   |
| 60°   | 1106.0 | 665.8 | 18.6  | 15.8  | 12.5  | 10.4  | 9.0   | 7.9   | 7.2   | 6.8   | 6.8   |
| 62.5° | 1041.2 | 586.7 | 14.7  | 12.5  | 10.4  | 9.0   | 7.9   | 7.2   | 6.4   | 6.1   | 5.7   |
| 64°   | 977.8  | 537.6 | 12.5  | 10.7  | 9.3   | 8.2   | 7.2   | 6.4   | 5.7   | 5.0   | 5.0   |
| 65°   | 909.0  | 491.1 | 11.5  | 9.7   | 8.2   | 7.5   | 6.8   | 6.1   | 5.0   | 4.3   | 4.3   |
| 67.5° | 691.3  | 363.5 | 9.3   | 7.5   | 6.4   | 6.1   | 5.4   | 4.7   | 3.6   | 2.9   | 2.9   |
| 70°   | 448.8  | 235.3 | 7.9   | 6.1   | 5.4   | 5.4   | 5.0   | 3.9   | 2.9   | 2.5   | 2.1   |
| 72.5° | 229.9  | 117.1 | 6.4   | 5.0   | 4.7   | 4.7   | 4.3   | 3.2   | 2.5   | 2.1   | 1.8   |
| 75°   | 97.4   | 47.6  | 5.4   | 4.3   | 3.9   | 3.6   | 3.2   | 2.9   | 2.1   | 1.8   | 1.8   |
| 77.5° | 34.0   | 17.9  | 5.0   | 4.3   | 3.2   | 2.9   | 2.9   | 2.9   | 2.9   | 2.5   | 2.1   |
| 80°   | 11.5   | 6.8   | 3.2   | 3.2   | 3.6   | 3.9   | 3.9   | 3.6   | 3.9   | 3.2   | 2.5   |
| 82.5° | 4.7    | 2.5   | 1.1   | 1.4   | 2.5   | 2.9   | 3.2   | 3.2   | 3.2   | 2.5   | 2.1   |
| 85°   | 1.1    | 0.7   | 0.7   | 1.1   | 1.1   | 1.4   | 1.4   | 1.8   | 1.8   | 1.4   | 1.4   |
| 87.5° | 0.7    | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 1.1   | 0.7   | 1.1   | 1.1   | 1.1   |
| 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)