

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: STREETWORKS

Report Number: P214925

Luminaire Tested: **ARCH-AF24-40-D-U-T4W-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P214925  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF24-40-D-U-T4W-7030-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 500mA LIGHT ENGINE WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3202 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 40  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 28.75 FT

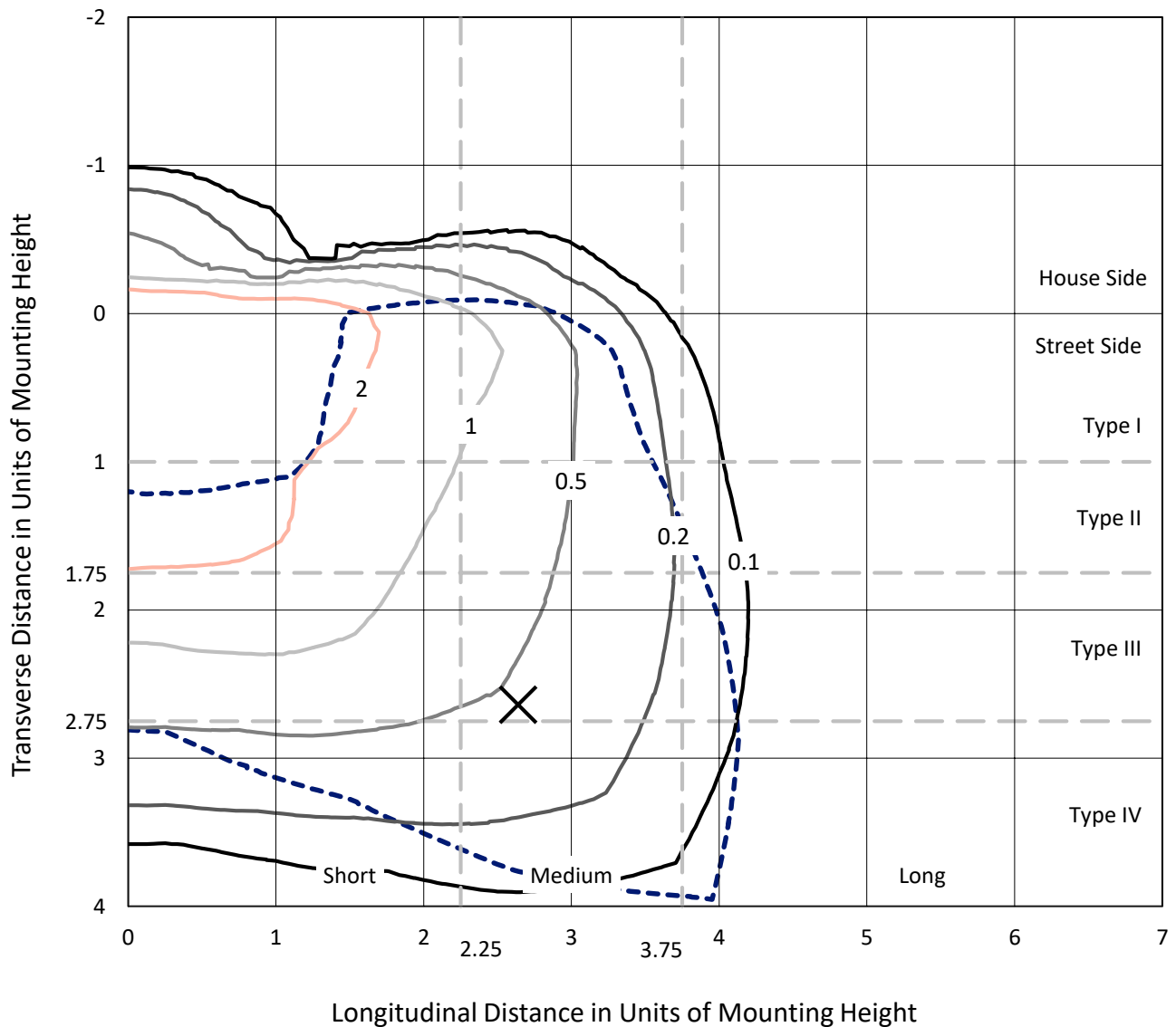


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

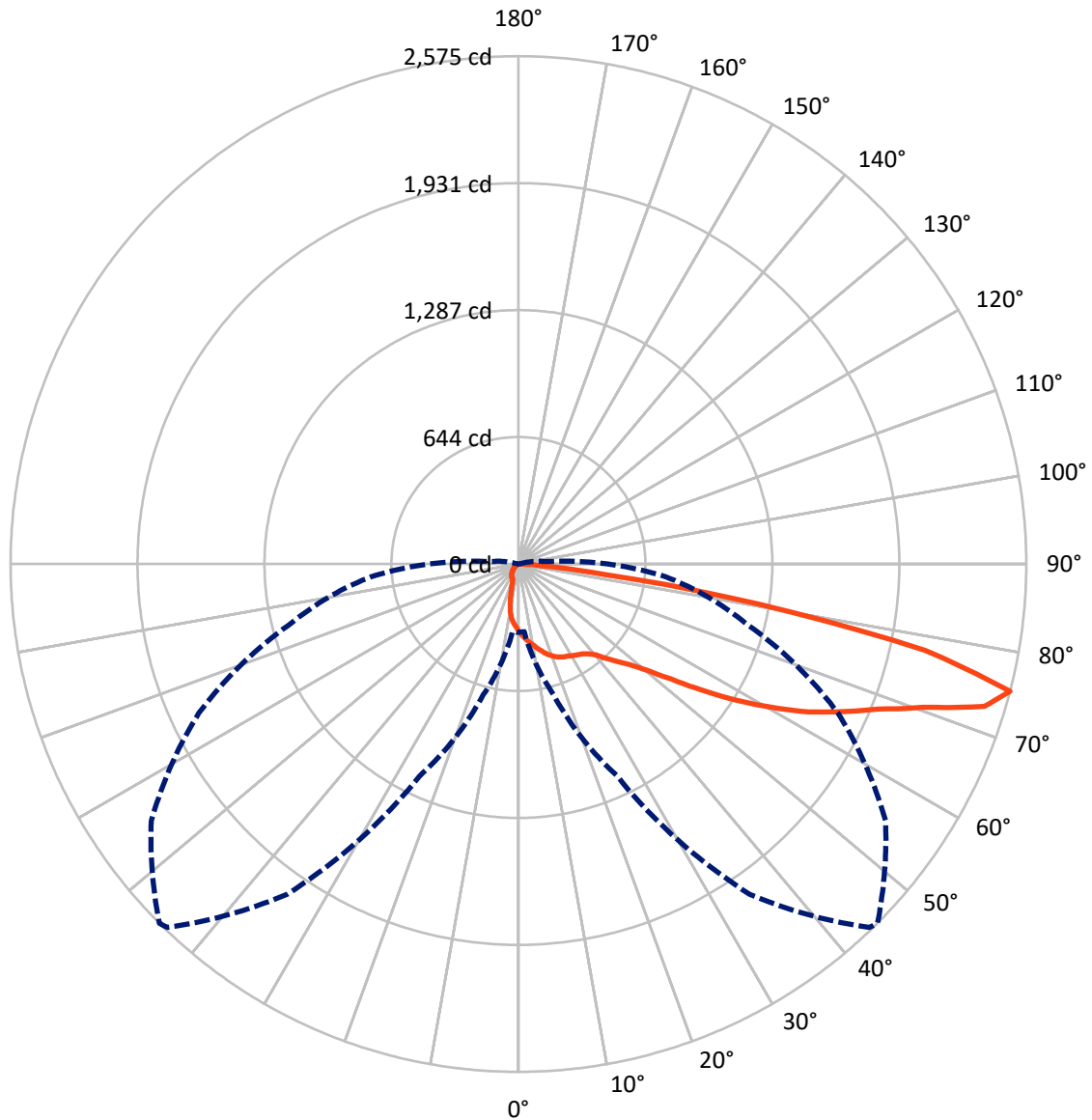


Based on 10 foot mounting height. Maximum calculated value = 4.6 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical



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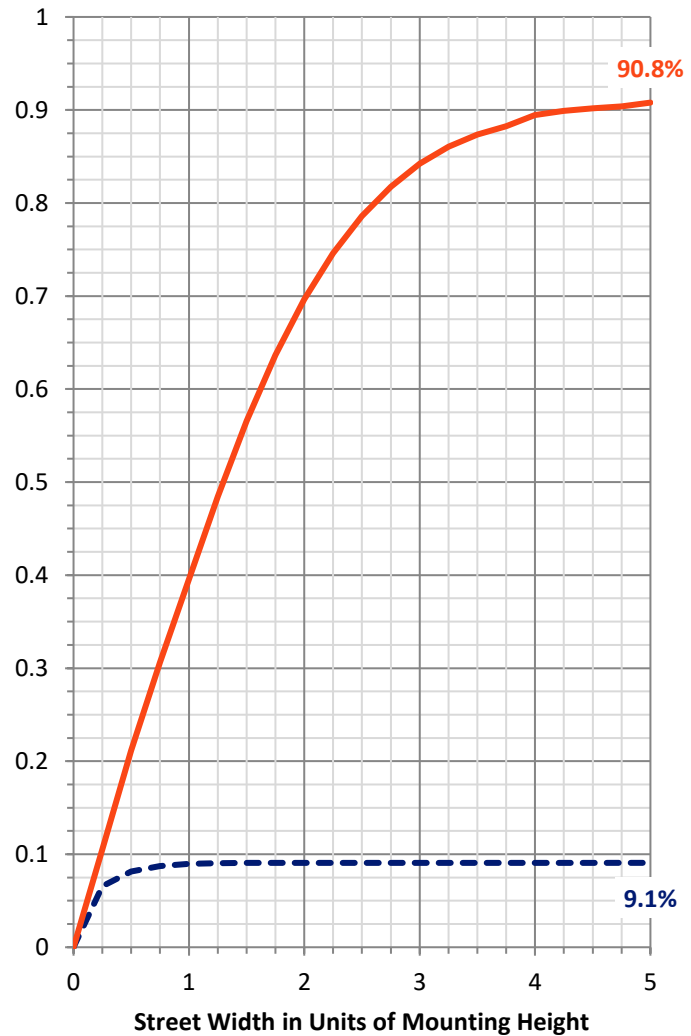
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 292.9    | 0.0    | 292.9  |
|                    | % Fixture | 9.1      | 0.0    | 9.1    |
| <b>Street Side</b> | Lumens    | 2909.1   | 0.0    | 2909.1 |
|                    | % Fixture | 90.9     | 0.0    | 90.9   |
| <b>Total</b>       | Lumens    | 3202.0   | 0.0    | 3202.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 32.3   | 1.0       |
| 10°-20°   | 91.6   | 2.9       |
| 20°-30°   | 151.7  | 4.7       |
| 30°-40°   | 219.5  | 6.9       |
| 40°-50°   | 359.4  | 11.2      |
| 50°-60°   | 640.3  | 20.0      |
| 60°-70°   | 941.4  | 29.4      |
| 70°-80°   | 710.2  | 22.2      |
| 80°-90°   | 55.7   | 1.7       |
| 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°    | 3202.0 | 100.0     |
| 0°-180°   | 3202.0 | 100.0     |



--- HS    — SS

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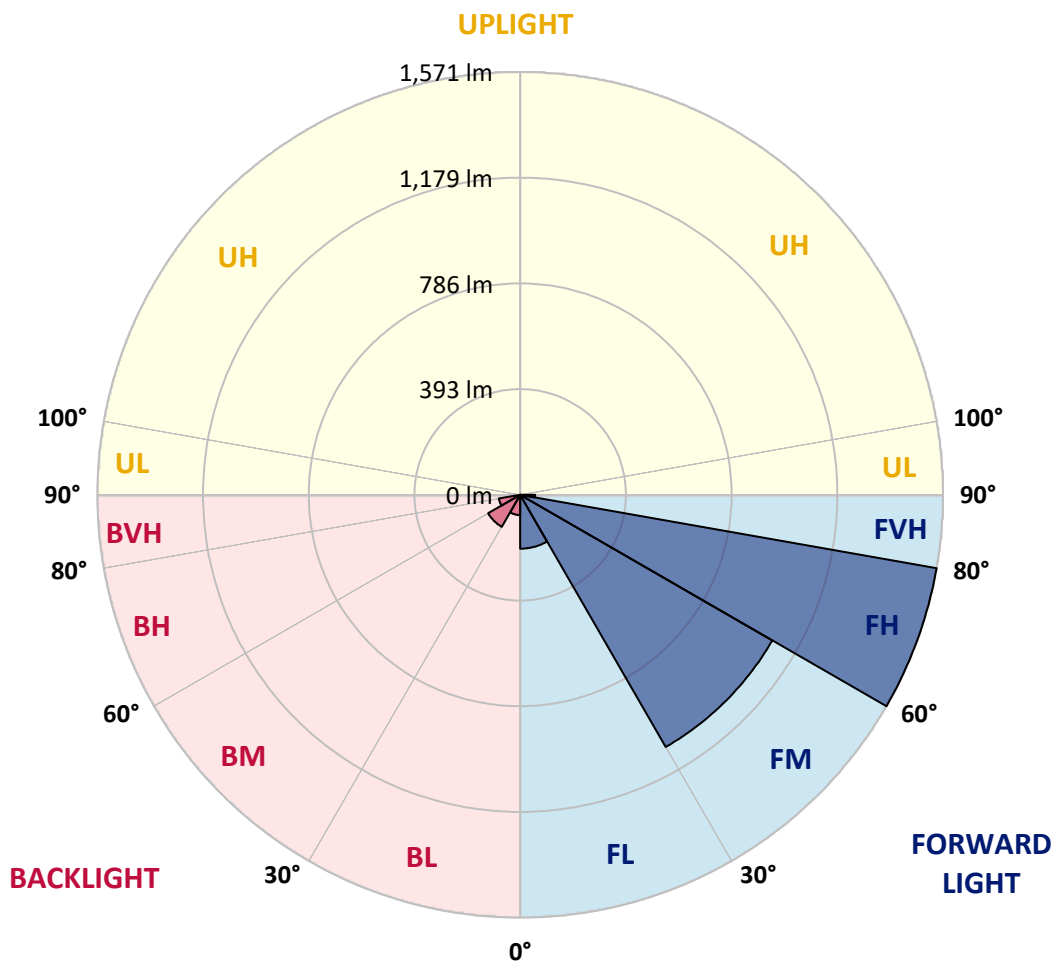
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 200.3  | 6.3       |                         |      |         |
| FM   | (30°-60°)   | 1081.9 | 33.8      |                         |      |         |
| FH   | (60°-80°)   | 1571.3 | 49.1      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 55.6   | 1.7       |                         |      | G1/100  |
| BL   | (0°-30°)    | 75.3   | 2.4       | B0/110                  |      |         |
| BM   | (30°-60°)   | 137.2  | 4.3       | B0/220                  |      |         |
| BH   | (60°-80°)   | 80.2   | 2.5       | 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-G1**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 44°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  | 342.5  |
| 2.5°  | 372.0  | 372.0  | 371.3  | 370.5  | 366.7  | 362.9  | 362.2  | 359.9  | 353.1  | 348.5  | 344.0  |
| 5°    | 403.1  | 403.8  | 402.3  | 398.5  | 390.2  | 381.9  | 381.1  | 375.1  | 362.2  | 353.1  | 343.2  |
| 7.5°  | 432.6  | 434.2  | 430.4  | 423.5  | 413.7  | 401.6  | 400.8  | 389.4  | 372.8  | 359.9  | 345.5  |
| 10°   | 457.6  | 457.6  | 452.3  | 444.0  | 433.4  | 420.5  | 419.0  | 406.1  | 387.2  | 371.3  | 352.3  |
| 12.5° | 484.9  | 484.2  | 476.6  | 465.2  | 453.1  | 441.0  | 440.2  | 424.3  | 406.1  | 385.7  | 362.2  |
| 15°   | 509.9  | 508.4  | 498.6  | 487.9  | 475.1  | 462.2  | 461.4  | 445.5  | 426.6  | 402.3  | 376.6  |
| 17.5° | 523.6  | 522.8  | 513.7  | 503.1  | 492.5  | 482.6  | 481.9  | 465.2  | 444.8  | 419.8  | 391.0  |
| 20°   | 525.8  | 526.6  | 519.0  | 509.9  | 503.9  | 498.6  | 498.6  | 483.4  | 461.4  | 434.9  | 406.1  |
| 22.5° | 526.6  | 528.9  | 523.6  | 511.4  | 509.9  | 510.7  | 512.2  | 500.1  | 477.3  | 452.3  | 422.0  |
| 25°   | 531.9  | 534.9  | 531.1  | 516.7  | 515.2  | 520.5  | 522.0  | 516.7  | 496.3  | 471.3  | 440.2  |
| 27.5° | 542.5  | 545.5  | 542.5  | 524.3  | 522.0  | 527.3  | 528.9  | 531.9  | 516.7  | 489.5  | 459.2  |
| 30°   | 563.7  | 564.5  | 557.7  | 534.9  | 530.4  | 537.2  | 539.5  | 547.8  | 535.7  | 506.9  | 477.3  |
| 32.5° | 600.8  | 593.3  | 572.8  | 542.5  | 538.7  | 546.3  | 548.6  | 557.7  | 553.1  | 523.6  | 496.3  |
| 35°   | 676.6  | 637.2  | 590.2  | 553.1  | 549.3  | 556.9  | 559.9  | 572.8  | 575.1  | 547.0  | 519.8  |
| 37.5° | 675.9  | 640.2  | 631.1  | 573.6  | 568.3  | 573.6  | 577.4  | 593.3  | 602.4  | 578.1  | 553.9  |
| 40°   | 723.6  | 708.4  | 708.4  | 612.2  | 594.8  | 602.4  | 606.1  | 622.1  | 638.0  | 619.0  | 594.0  |
| 42.5° | 873.6  | 863.8  | 853.1  | 686.5  | 631.9  | 653.1  | 655.4  | 665.2  | 684.2  | 678.1  | 648.6  |
| 45°   | 1041.1 | 1032.0 | 991.0  | 812.2  | 695.6  | 699.3  | 704.6  | 720.6  | 747.8  | 759.2  | 724.3  |
| 47.5° | 1172.1 | 1163.0 | 1128.2 | 963.8  | 794.8  | 761.5  | 761.5  | 792.5  | 835.0  | 863.8  | 830.4  |
| 50°   | 1277.4 | 1266.8 | 1245.6 | 1125.2 | 957.7  | 850.9  | 846.3  | 882.7  | 945.6  | 990.3  | 967.6  |
| 52.5° | 1379.7 | 1348.7 | 1335.8 | 1291.8 | 1141.8 | 980.4  | 968.3  | 994.1  | 1081.2 | 1136.5 | 1117.6 |
| 55°   | 1447.9 | 1443.4 | 1429.7 | 1444.9 | 1335.0 | 1138.0 | 1127.4 | 1132.7 | 1241.8 | 1279.0 | 1255.5 |
| 57.5° | 1511.6 | 1510.8 | 1541.1 | 1611.6 | 1545.7 | 1318.4 | 1301.7 | 1293.4 | 1397.2 | 1388.1 | 1408.5 |
| 60°   | 1590.4 | 1576.7 | 1647.2 | 1748.0 | 1738.9 | 1494.1 | 1475.2 | 1458.5 | 1516.1 | 1490.4 | 1591.9 |
| 62.5° | 1594.2 | 1590.4 | 1733.6 | 1878.3 | 1930.6 | 1673.0 | 1651.0 | 1591.1 | 1619.9 | 1590.4 | 1766.9 |
| 65°   | 1449.4 | 1468.4 | 1769.9 | 1947.2 | 2091.2 | 1829.8 | 1803.3 | 1710.1 | 1712.4 | 1692.7 | 1973.0 |
| 67.5° | 1416.9 | 1426.7 | 1669.9 | 2021.5 | 2207.1 | 1988.2 | 1963.1 | 1847.2 | 1819.9 | 1821.5 | 2095.0 |
| 70°   | 1335.8 | 1350.9 | 1545.7 | 2016.2 | 2298.8 | 2199.5 | 2174.5 | 2048.8 | 1982.8 | 1909.4 | 2001.0 |
| 72.5° | 1020.6 | 1046.4 | 1302.5 | 1767.7 | 2273.8 | 2476.1 | 2469.3 | 2304.1 | 2048.0 | 1753.3 | 1513.8 |
| 75°   | 345.5  | 344.7  | 684.2  | 1187.3 | 2042.7 | 2561.0 | 2574.6 | 2272.3 | 1786.6 | 1209.3 | 751.6  |
| 77.5° | 74.3   | 75.0   | 140.9  | 481.1  | 1357.0 | 2056.3 | 2108.6 | 1713.9 | 1152.4 | 538.7  | 172.0  |
| 80°   | 36.4   | 37.1   | 58.3   | 127.3  | 542.5  | 1153.2 | 1235.0 | 881.2  | 425.8  | 107.6  | 28.8   |
| 82.5° | 18.2   | 18.9   | 30.3   | 67.4   | 200.8  | 409.9  | 437.9  | 324.3  | 122.0  | 60.6   | 14.4   |
| 85°   | 6.8    | 6.8    | 15.2   | 40.2   | 91.7   | 96.2   | 118.2  | 94.0   | 73.5   | 49.2   | 3.8    |
| 87.5° | 1.5    | 1.5    | 8.3    | 19.7   | 40.9   | 30.3   | 30.3   | 28.8   | 44.7   | 33.3   | 1.5    |
| 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°    | 342.5  | 342.5 | 342.5 | 342.5 | 342.5 | 342.5 | 342.5 | 342.5 | 342.5 | 342.5 | 342.5 |
| 2.5°  | 341.7  | 338.7 | 333.4 | 328.1 | 324.3 | 319.7 | 317.5 | 315.2 | 314.4 | 313.7 | 315.2 |
| 5°    | 337.9  | 333.4 | 323.5 | 315.2 | 307.6 | 301.6 | 297.0 | 292.5 | 290.2 | 288.7 | 289.4 |
| 7.5°  | 337.9  | 331.1 | 316.7 | 303.8 | 291.7 | 278.8 | 265.9 | 256.1 | 248.5 | 244.0 | 244.7 |
| 10°   | 341.7  | 332.6 | 313.7 | 296.3 | 273.5 | 246.2 | 218.2 | 197.0 | 182.6 | 174.3 | 174.3 |
| 12.5° | 350.0  | 337.9 | 314.4 | 287.2 | 248.5 | 200.8 | 158.4 | 132.6 | 122.0 | 115.9 | 116.7 |
| 15°   | 361.4  | 347.0 | 318.2 | 275.0 | 213.7 | 149.3 | 110.6 | 94.0  | 94.0  | 95.5  | 96.2  |
| 17.5° | 374.3  | 358.4 | 321.3 | 256.9 | 169.0 | 106.8 | 87.1  | 85.6  | 87.9  | 91.7  | 91.7  |
| 20°   | 387.2  | 369.7 | 322.8 | 228.1 | 126.5 | 84.9  | 82.6  | 82.6  | 84.1  | 87.9  | 88.6  |
| 22.5° | 403.1  | 384.1 | 321.3 | 192.5 | 94.7  | 80.3  | 79.6  | 79.6  | 79.6  | 84.1  | 84.1  |
| 25°   | 419.8  | 400.8 | 315.2 | 154.6 | 80.3  | 77.3  | 76.5  | 75.8  | 75.8  | 79.6  | 80.3  |
| 27.5° | 438.7  | 418.2 | 300.8 | 118.2 | 75.8  | 74.3  | 73.5  | 72.0  | 72.0  | 75.0  | 75.0  |
| 30°   | 457.6  | 437.9 | 278.8 | 89.4  | 72.0  | 71.2  | 69.7  | 68.2  | 66.7  | 69.7  | 69.7  |
| 32.5° | 478.1  | 458.4 | 250.0 | 71.2  | 66.7  | 66.7  | 65.9  | 63.6  | 62.1  | 63.6  | 64.4  |
| 35°   | 505.4  | 481.9 | 217.5 | 62.1  | 59.9  | 59.9  | 59.9  | 59.1  | 56.1  | 57.6  | 57.6  |
| 37.5° | 541.7  | 514.5 | 179.6 | 57.6  | 54.6  | 53.0  | 53.0  | 53.0  | 50.8  | 51.5  | 51.5  |
| 40°   | 588.0  | 552.3 | 143.2 | 53.8  | 50.8  | 47.0  | 45.5  | 46.2  | 44.7  | 44.7  | 43.9  |
| 42.5° | 650.8  | 593.3 | 107.6 | 50.8  | 47.7  | 42.4  | 39.4  | 38.6  | 37.1  | 36.4  | 36.4  |
| 45°   | 741.0  | 643.3 | 77.3  | 47.7  | 45.5  | 37.1  | 34.1  | 31.8  | 28.0  | 25.8  | 25.8  |
| 47.5° | 857.7  | 700.1 | 57.6  | 44.7  | 43.2  | 32.6  | 28.8  | 24.2  | 18.9  | 17.4  | 17.4  |
| 50°   | 1000.1 | 763.7 | 48.5  | 40.2  | 39.4  | 28.8  | 22.7  | 15.9  | 10.6  | 9.1   | 9.8   |
| 52.5° | 1138.8 | 823.6 | 43.2  | 35.6  | 34.9  | 25.0  | 16.7  | 8.3   | 4.5   | 4.5   | 4.5   |
| 55°   | 1255.5 | 866.0 | 39.4  | 31.8  | 30.3  | 19.7  | 9.1   | 3.8   | 2.3   | 2.3   | 2.3   |
| 57.5° | 1360.8 | 890.3 | 35.6  | 28.0  | 24.2  | 13.6  | 3.8   | 1.5   | 1.5   | 0.8   | 0.8   |
| 60°   | 1457.0 | 904.7 | 31.1  | 24.2  | 18.9  | 7.6   | 1.5   | 0.8   | 0.8   | 0.0   | 0.0   |
| 62.5° | 1551.7 | 915.3 | 26.5  | 19.7  | 14.4  | 3.0   | 0.8   | 0.8   | 0.0   | 0.0   | 0.0   |
| 65°   | 1623.7 | 911.5 | 21.2  | 15.9  | 9.1   | 1.5   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 1621.4 | 860.0 | 15.9  | 12.1  | 4.5   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 1450.2 | 724.3 | 10.6  | 7.6   | 1.5   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 1028.9 | 464.5 | 6.8   | 4.5   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 453.1  | 140.9 | 3.8   | 2.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5° | 88.6   | 32.6  | 2.3   | 1.5   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°   | 21.2   | 3.8   | 0.8   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 9.1    | 1.5   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 2.3    | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 1.5    | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 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   |

(END OF REPORT)