

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: P214935

Luminaire Tested: **ARCH-AF16-50-D-U-T4W-HSS**

Issue Date: 3/3/2020

#### Test Information

Test Method: LM-79-08  
Report Number: P214935  
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-AF16-50-D-U-T4W-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 980mA LIGHT ENGINE 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: 4323 lumens  
Efficiency: N/A  
Efficacy: 81.6 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 - G2

Input Watts (W): 53  
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: 28.75 FT

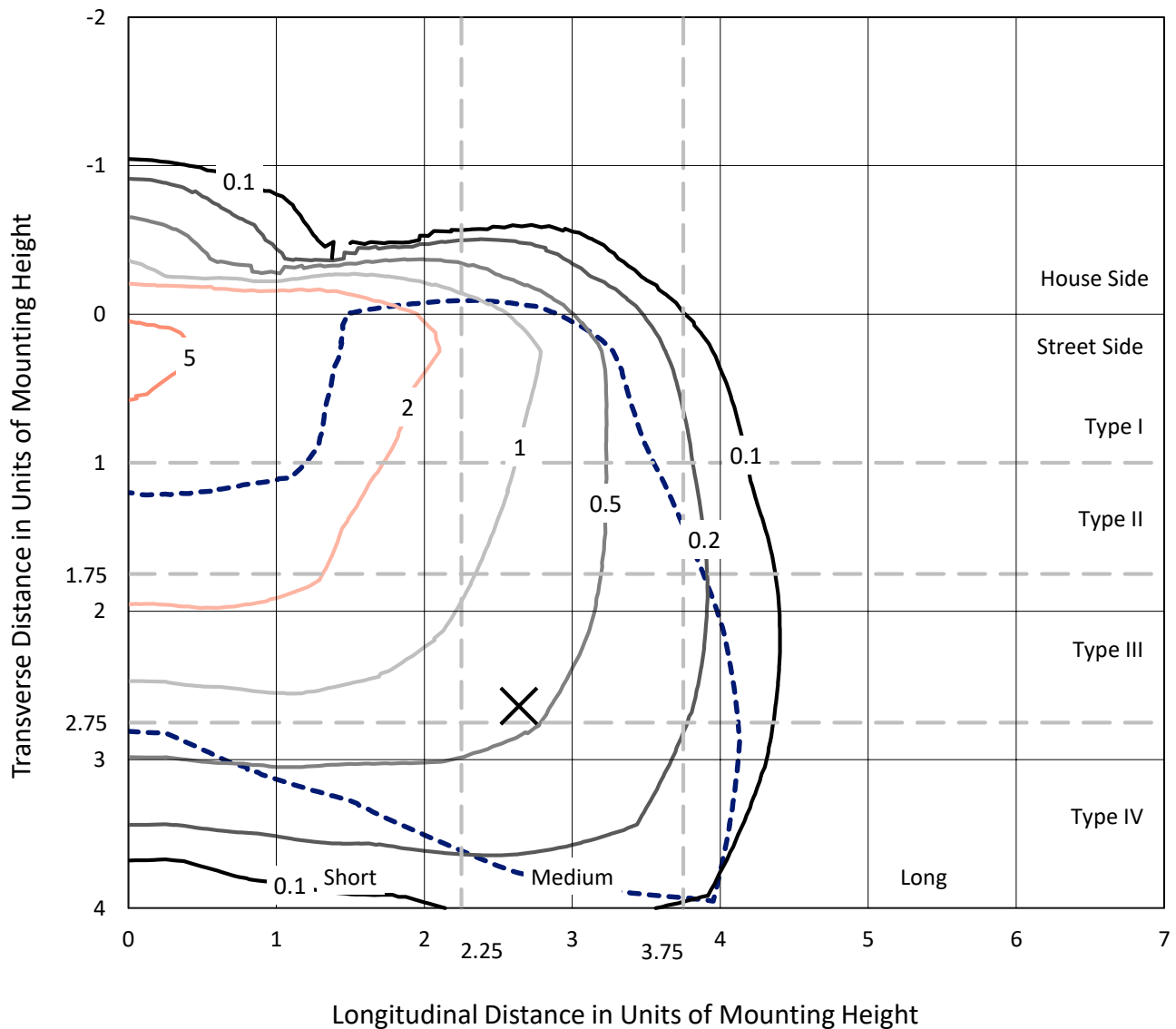


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

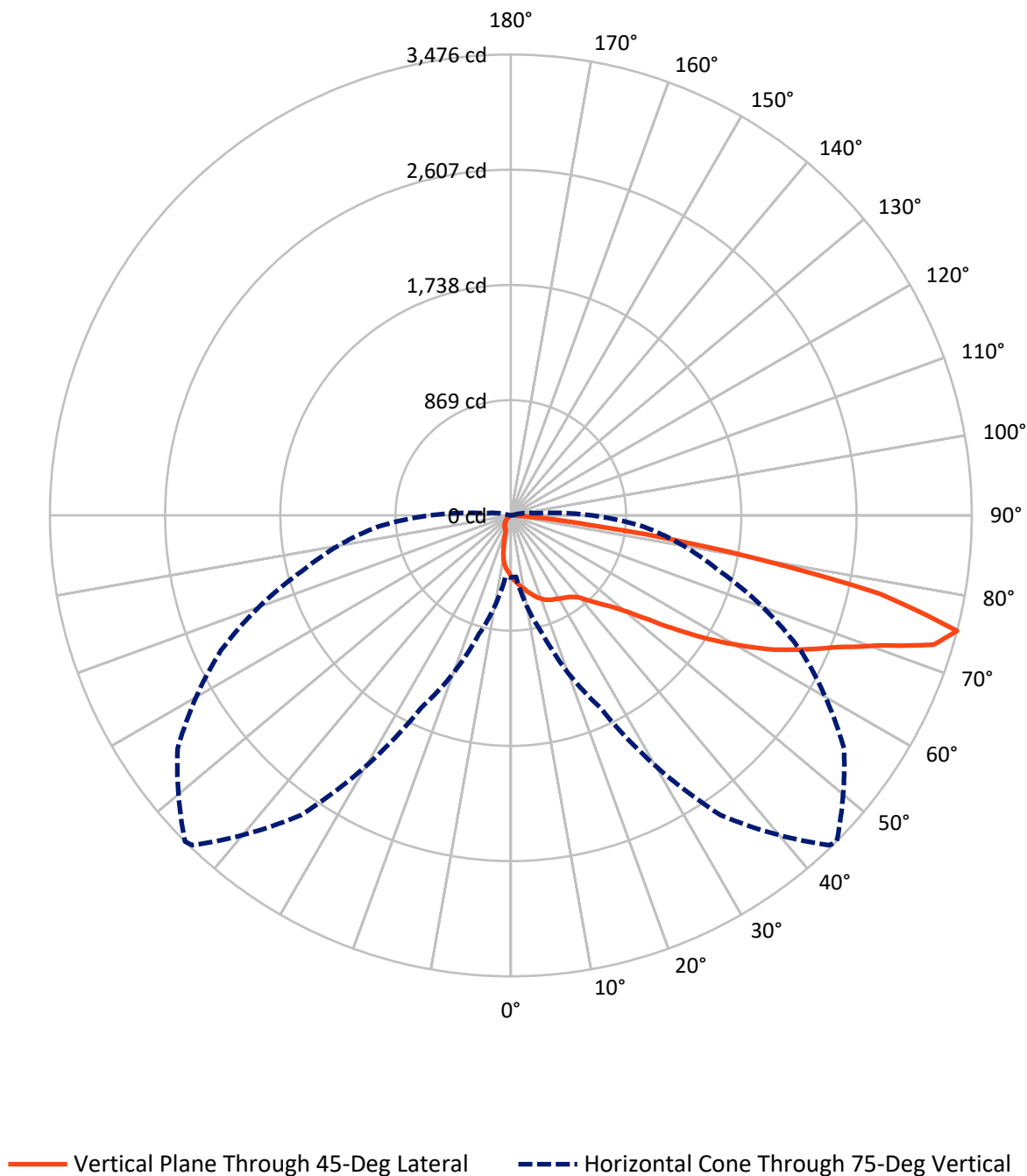


Based on 10 foot mounting height. Maximum calculated value = 6.2 fc  
 Type IV - Medium - Non-Cutoff

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## Luminous Intensity Polar Plot



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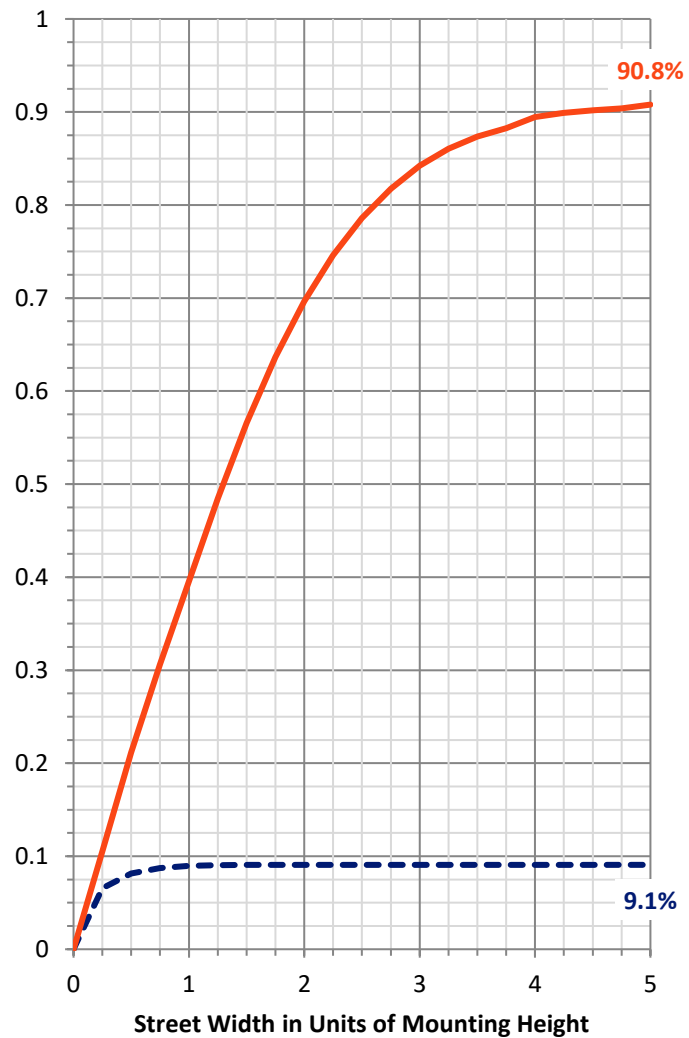
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 395.4    | 0.0    | 395.4  |
|                    | % Fixture | 9.1      | 0.0    | 9.1    |
| <b>Street Side</b> | Lumens    | 3927.6   | 0.0    | 3927.6 |
|                    | % Fixture | 90.9     | 0.0    | 90.9   |
| <b>Total</b>       | Lumens    | 4323.0   | 0.0    | 4323.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.6   | 1.0       |
| 10°-20°   | 123.6  | 2.9       |
| 20°-30°   | 204.7  | 4.7       |
| 30°-40°   | 296.3  | 6.9       |
| 40°-50°   | 485.2  | 11.2      |
| 50°-60°   | 864.5  | 20.0      |
| 60°-70°   | 1271.0 | 29.4      |
| 70°-80°   | 958.8  | 22.2      |
| 80°-90°   | 75.2   | 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°    | 4323.0 | 100.0     |
| 0°-180°   | 4323.0 | 100.0     |

**Coefficient of Utilization**



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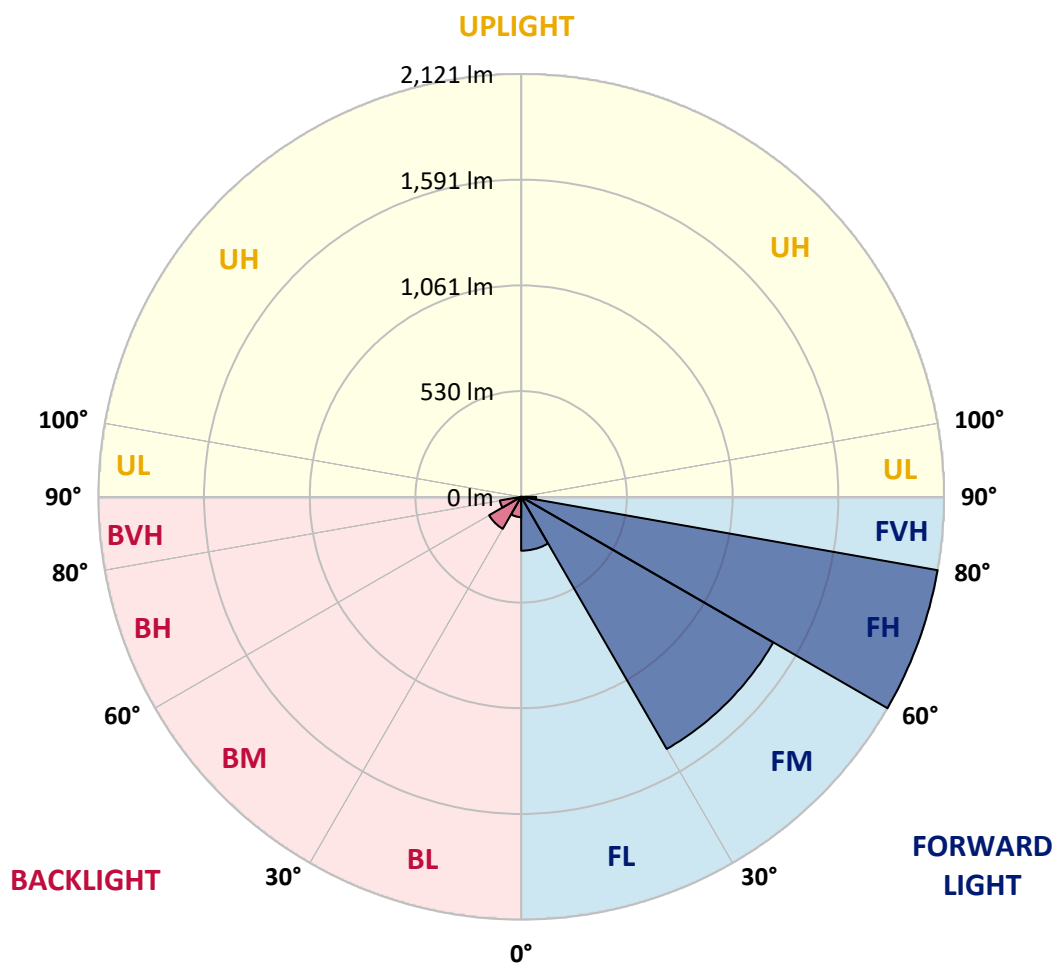
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 270.4  | 6.3       |                         |      |         |
| FM   | (30°-60°)   | 1460.7 | 33.8      |                         |      |         |
| FH   | (60°-80°)   | 2121.5 | 49.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 75.0   | 1.7       |                         |      | G1/100  |
| BL   | (0°-30°)    | 101.6  | 2.4       | B0/110                  |      |         |
| BM   | (30°-60°)   | 185.3  | 4.3       | B0/220                  |      |         |
| BH   | (60°-80°)   | 108.3  | 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-G2**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 44°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  | 462.4  |
| 2.5°  | 502.3  | 502.3  | 501.2  | 500.2  | 495.1  | 490.0  | 489.0  | 485.9  | 476.7  | 470.6  | 464.4  |
| 5°    | 544.2  | 545.2  | 543.2  | 538.1  | 526.8  | 515.6  | 514.5  | 506.4  | 489.0  | 476.7  | 463.4  |
| 7.5°  | 584.1  | 586.2  | 581.0  | 571.8  | 558.5  | 542.2  | 541.1  | 525.8  | 503.3  | 485.9  | 466.5  |
| 10°   | 617.9  | 617.9  | 610.7  | 599.4  | 585.1  | 567.7  | 565.7  | 548.3  | 522.7  | 501.2  | 475.7  |
| 12.5° | 654.7  | 653.7  | 643.4  | 628.1  | 611.7  | 595.4  | 594.3  | 572.9  | 548.3  | 520.7  | 489.0  |
| 15°   | 688.4  | 686.4  | 673.1  | 658.8  | 641.4  | 624.0  | 623.0  | 601.5  | 575.9  | 543.2  | 508.4  |
| 17.5° | 706.9  | 705.8  | 693.6  | 679.2  | 664.9  | 651.6  | 650.6  | 628.1  | 600.5  | 566.7  | 527.8  |
| 20°   | 709.9  | 711.0  | 700.7  | 688.4  | 680.3  | 673.1  | 673.1  | 652.6  | 623.0  | 587.2  | 548.3  |
| 22.5° | 711.0  | 714.0  | 706.9  | 690.5  | 688.4  | 689.5  | 691.5  | 675.1  | 644.5  | 610.7  | 569.8  |
| 25°   | 718.1  | 722.2  | 717.1  | 697.7  | 695.6  | 702.8  | 704.8  | 697.7  | 670.0  | 636.3  | 594.3  |
| 27.5° | 732.4  | 736.5  | 732.4  | 707.9  | 704.8  | 712.0  | 714.0  | 718.1  | 697.7  | 660.8  | 619.9  |
| 30°   | 761.1  | 762.1  | 752.9  | 722.2  | 716.1  | 725.3  | 728.3  | 739.6  | 723.2  | 684.4  | 644.5  |
| 32.5° | 811.2  | 801.0  | 773.4  | 732.4  | 727.3  | 737.5  | 740.6  | 752.9  | 746.8  | 706.9  | 670.0  |
| 35°   | 913.5  | 860.3  | 796.9  | 746.8  | 741.6  | 751.9  | 756.0  | 773.4  | 776.4  | 738.6  | 701.7  |
| 37.5° | 912.5  | 864.4  | 852.1  | 774.4  | 767.2  | 774.4  | 779.5  | 801.0  | 813.2  | 780.5  | 747.8  |
| 40°   | 976.9  | 956.5  | 956.5  | 826.5  | 803.0  | 813.2  | 818.4  | 839.8  | 861.3  | 835.8  | 802.0  |
| 42.5° | 1179.5 | 1166.2 | 1151.8 | 926.8  | 853.1  | 881.8  | 884.9  | 898.2  | 923.7  | 915.5  | 875.6  |
| 45°   | 1405.5 | 1393.3 | 1338.0 | 1096.6 | 939.1  | 944.2  | 951.3  | 972.8  | 1009.7 | 1025.0 | 977.9  |
| 47.5° | 1582.5 | 1570.2 | 1523.2 | 1301.2 | 1073.1 | 1028.1 | 1028.1 | 1070.0 | 1127.3 | 1166.2 | 1121.2 |
| 50°   | 1724.7 | 1710.4 | 1681.7 | 1519.1 | 1293.0 | 1148.8 | 1142.6 | 1191.7 | 1276.6 | 1337.0 | 1306.3 |
| 52.5° | 1862.8 | 1820.9 | 1803.5 | 1744.1 | 1541.6 | 1323.7 | 1307.3 | 1342.1 | 1459.8 | 1534.4 | 1508.9 |
| 55°   | 1954.9 | 1948.7 | 1930.3 | 1950.8 | 1802.4 | 1536.5 | 1522.2 | 1529.3 | 1676.6 | 1726.7 | 1695.0 |
| 57.5° | 2040.8 | 2039.8 | 2080.7 | 2175.8 | 2086.8 | 1779.9 | 1757.4 | 1746.2 | 1886.3 | 1874.0 | 1901.7 |
| 60°   | 2147.2 | 2128.8 | 2223.9 | 2359.9 | 2347.7 | 2017.3 | 1991.7 | 1969.2 | 2046.9 | 2012.1 | 2149.2 |
| 62.5° | 2152.3 | 2147.2 | 2340.5 | 2535.9 | 2606.5 | 2258.7 | 2229.0 | 2148.2 | 2187.1 | 2147.2 | 2385.5 |
| 65°   | 1956.9 | 1982.5 | 2389.6 | 2629.0 | 2823.3 | 2470.4 | 2434.6 | 2308.8 | 2311.9 | 2285.3 | 2663.8 |
| 67.5° | 1912.9 | 1926.2 | 2254.6 | 2729.2 | 2979.9 | 2684.2 | 2650.5 | 2494.0 | 2457.1 | 2459.2 | 2828.5 |
| 70°   | 1803.5 | 1823.9 | 2086.8 | 2722.1 | 3103.6 | 2969.6 | 2935.9 | 2766.1 | 2677.1 | 2577.8 | 2701.6 |
| 72.5° | 1377.9 | 1412.7 | 1758.5 | 2386.5 | 3069.9 | 3343.0 | 3333.8 | 3110.8 | 2765.0 | 2367.1 | 2043.9 |
| 75°   | 466.5  | 465.4  | 923.7  | 1603.0 | 2757.9 | 3457.6 | 3476.0 | 3067.8 | 2412.1 | 1632.6 | 1014.8 |
| 77.5° | 100.2  | 101.3  | 190.3  | 649.6  | 1832.1 | 2776.3 | 2846.9 | 2313.9 | 1555.9 | 727.3  | 232.2  |
| 80°   | 49.1   | 50.1   | 78.8   | 171.9  | 732.4  | 1556.9 | 1667.4 | 1189.7 | 574.9  | 145.3  | 38.9   |
| 82.5° | 24.6   | 25.6   | 40.9   | 91.0   | 271.1  | 553.4  | 591.3  | 437.8  | 164.7  | 81.8   | 19.4   |
| 85°   | 9.2    | 9.2    | 20.5   | 54.2   | 123.8  | 129.9  | 159.6  | 126.8  | 99.2   | 66.5   | 5.1    |
| 87.5° | 2.0    | 2.0    | 11.3   | 26.6   | 55.2   | 40.9   | 40.9   | 38.9   | 60.4   | 45.0   | 2.0    |
| 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°    | 462.4  | 462.4  | 462.4 | 462.4 | 462.4 | 462.4 | 462.4 | 462.4 | 462.4 | 462.4 | 462.4 |
| 2.5°  | 461.4  | 457.3  | 450.1 | 442.9 | 437.8 | 431.7 | 428.6 | 425.5 | 424.5 | 423.5 | 425.5 |
| 5°    | 456.2  | 450.1  | 436.8 | 425.5 | 415.3 | 407.1 | 401.0 | 394.9 | 391.8 | 389.7 | 390.8 |
| 7.5°  | 456.2  | 447.0  | 427.6 | 410.2 | 393.8 | 376.4 | 359.1 | 345.8 | 335.5 | 329.4 | 330.4 |
| 10°   | 461.4  | 449.1  | 423.5 | 400.0 | 369.3 | 332.5 | 294.6 | 266.0 | 246.5 | 235.3 | 235.3 |
| 12.5° | 472.6  | 456.2  | 424.5 | 387.7 | 335.5 | 271.1 | 213.8 | 179.0 | 164.7 | 156.5 | 157.5 |
| 15°   | 487.9  | 468.5  | 429.6 | 371.3 | 288.5 | 201.5 | 149.4 | 126.8 | 126.8 | 128.9 | 129.9 |
| 17.5° | 505.3  | 483.9  | 433.7 | 346.8 | 228.1 | 144.2 | 117.6 | 115.6 | 118.7 | 123.8 | 123.8 |
| 20°   | 522.7  | 499.2  | 435.8 | 307.9 | 170.8 | 114.6 | 111.5 | 111.5 | 113.5 | 118.7 | 119.7 |
| 22.5° | 544.2  | 518.6  | 433.7 | 259.8 | 127.9 | 108.4 | 107.4 | 107.4 | 107.4 | 113.5 | 113.5 |
| 25°   | 566.7  | 541.1  | 425.5 | 208.7 | 108.4 | 104.3 | 103.3 | 102.3 | 102.3 | 107.4 | 108.4 |
| 27.5° | 592.3  | 564.7  | 406.1 | 159.6 | 102.3 | 100.2 | 99.2  | 97.2  | 97.2  | 101.3 | 101.3 |
| 30°   | 617.9  | 591.3  | 376.4 | 120.7 | 97.2  | 96.2  | 94.1  | 92.1  | 90.0  | 94.1  | 94.1  |
| 32.5° | 645.5  | 618.9  | 337.6 | 96.2  | 90.0  | 90.0  | 89.0  | 85.9  | 83.9  | 85.9  | 87.0  |
| 35°   | 682.3  | 650.6  | 293.6 | 83.9  | 80.8  | 80.8  | 80.8  | 79.8  | 75.7  | 77.7  | 77.7  |
| 37.5° | 731.4  | 694.6  | 242.4 | 77.7  | 73.7  | 71.6  | 71.6  | 71.6  | 68.5  | 69.6  | 69.6  |
| 40°   | 793.8  | 745.7  | 193.3 | 72.6  | 68.5  | 63.4  | 61.4  | 62.4  | 60.4  | 60.4  | 59.3  |
| 42.5° | 878.7  | 801.0  | 145.3 | 68.5  | 64.4  | 57.3  | 53.2  | 52.2  | 50.1  | 49.1  | 49.1  |
| 45°   | 1000.4 | 868.5  | 104.3 | 64.4  | 61.4  | 50.1  | 46.0  | 43.0  | 37.8  | 34.8  | 34.8  |
| 47.5° | 1158.0 | 945.2  | 77.7  | 60.4  | 58.3  | 44.0  | 38.9  | 32.7  | 25.6  | 23.5  | 23.5  |
| 50°   | 1350.3 | 1031.1 | 65.5  | 54.2  | 53.2  | 38.9  | 30.7  | 21.5  | 14.3  | 12.3  | 13.3  |
| 52.5° | 1537.5 | 1111.9 | 58.3  | 48.1  | 47.1  | 33.8  | 22.5  | 11.3  | 6.1   | 6.1   | 6.1   |
| 55°   | 1695.0 | 1169.2 | 53.2  | 43.0  | 40.9  | 26.6  | 12.3  | 5.1   | 3.1   | 3.1   | 3.1   |
| 57.5° | 1837.2 | 1202.0 | 48.1  | 37.8  | 32.7  | 18.4  | 5.1   | 2.0   | 2.0   | 1.0   | 1.0   |
| 60°   | 1967.1 | 1221.4 | 41.9  | 32.7  | 25.6  | 10.2  | 2.0   | 1.0   | 1.0   | 0.0   | 0.0   |
| 62.5° | 2095.0 | 1235.7 | 35.8  | 26.6  | 19.4  | 4.1   | 1.0   | 1.0   | 0.0   | 0.0   | 0.0   |
| 65°   | 2192.2 | 1230.6 | 28.6  | 21.5  | 12.3  | 2.0   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 2189.1 | 1161.0 | 21.5  | 16.4  | 6.1   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 1957.9 | 977.9  | 14.3  | 10.2  | 2.0   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 1389.2 | 627.1  | 9.2   | 6.1   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 611.7  | 190.3  | 5.1   | 3.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5° | 119.7  | 44.0   | 3.1   | 2.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°   | 28.6   | 5.1    | 1.0   | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 12.3   | 2.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 3.1    | 1.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 2.0    | 1.0    | 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)