

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: P214730

Luminaire Tested: **ARCH-AF24-50-D-U-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P214730  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29465)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF24-50-D-U-T3  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 670mA LIGHT ENGINE WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6773 lumens  
Efficiency: N/A  
Efficacy: 125.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

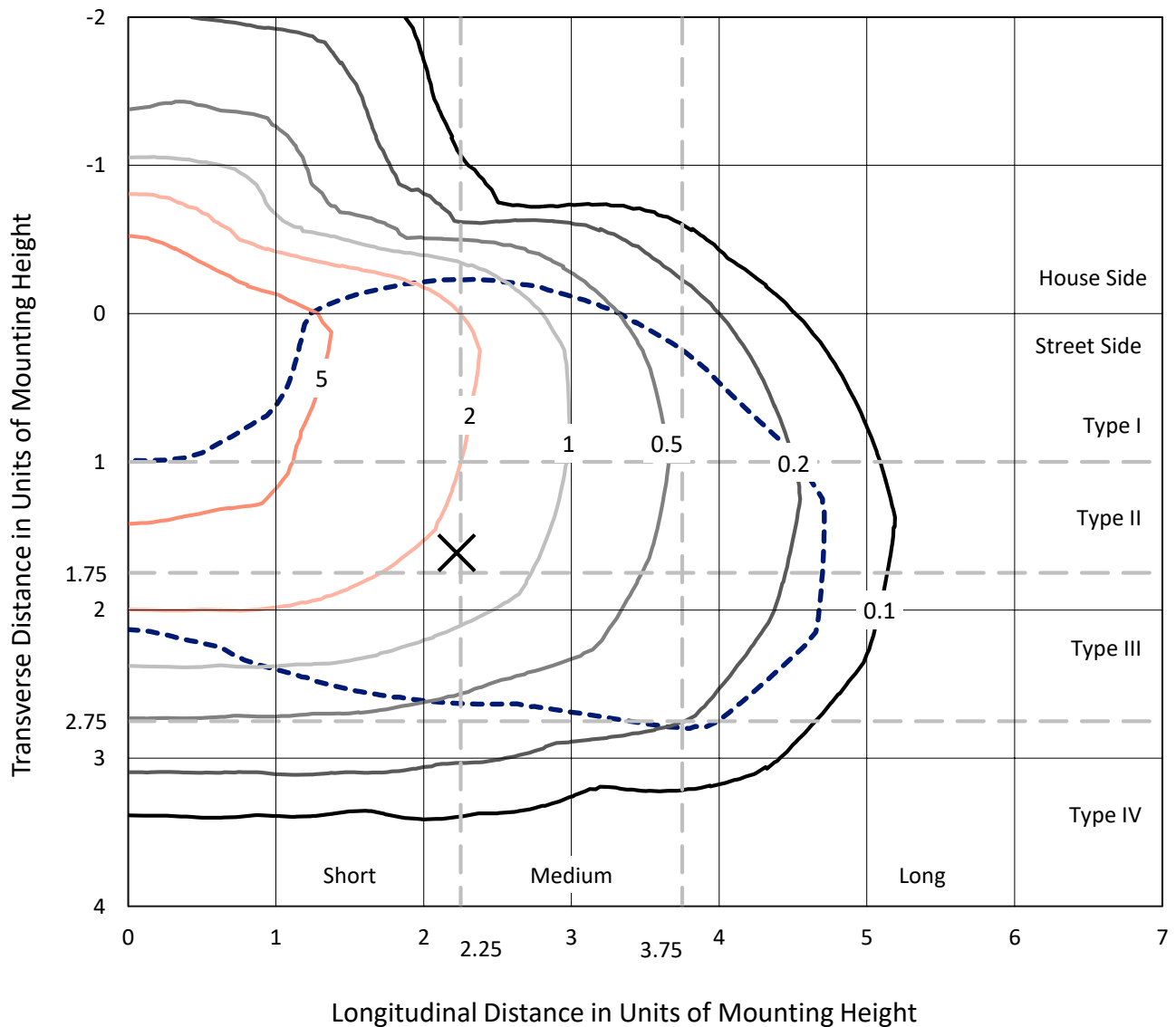
Input Watts (W): 54  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

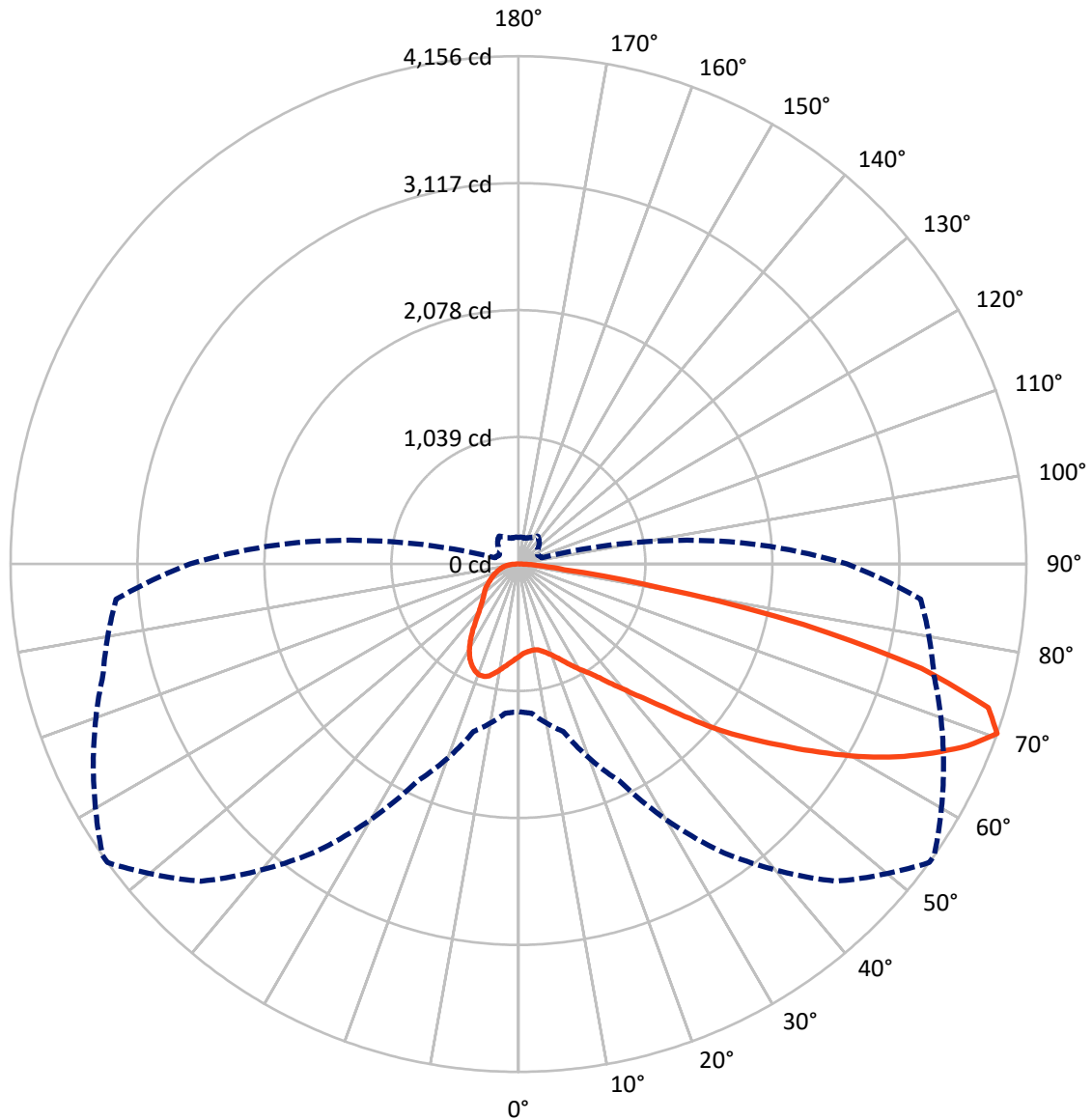


Based on 10 foot mounting height. Maximum calculated value = 8.8 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1536.1   | 0.0    | 1536.1 |
|                    | % Fixture | 22.7     | 0.0    | 22.7   |
| <b>Street Side</b> | Lumens    | 5236.9   | 0.0    | 5236.9 |
|                    | % Fixture | 77.3     | 0.0    | 77.3   |
| <b>Total</b>       | Lumens    | 6773.0   | 0.0    | 6773.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 74.4   | 1.1       |
| 10°-20°   | 237.6  | 3.5       |
| 20°-30°   | 412.8  | 6.1       |
| 30°-40°   | 603.3  | 8.9       |
| 40°-50°   | 946.8  | 14.0      |
| 50°-60°   | 1456.0 | 21.5      |
| 60°-70°   | 1778.9 | 26.3      |
| 70°-80°   | 1102.9 | 16.3      |
| 80°-90°   | 160.2  | 2.4       |
| 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°    | 6773.0 | 100.0     |
| 0°-180°   | 6773.0 | 100.0     |

**Coefficient of Utilization**



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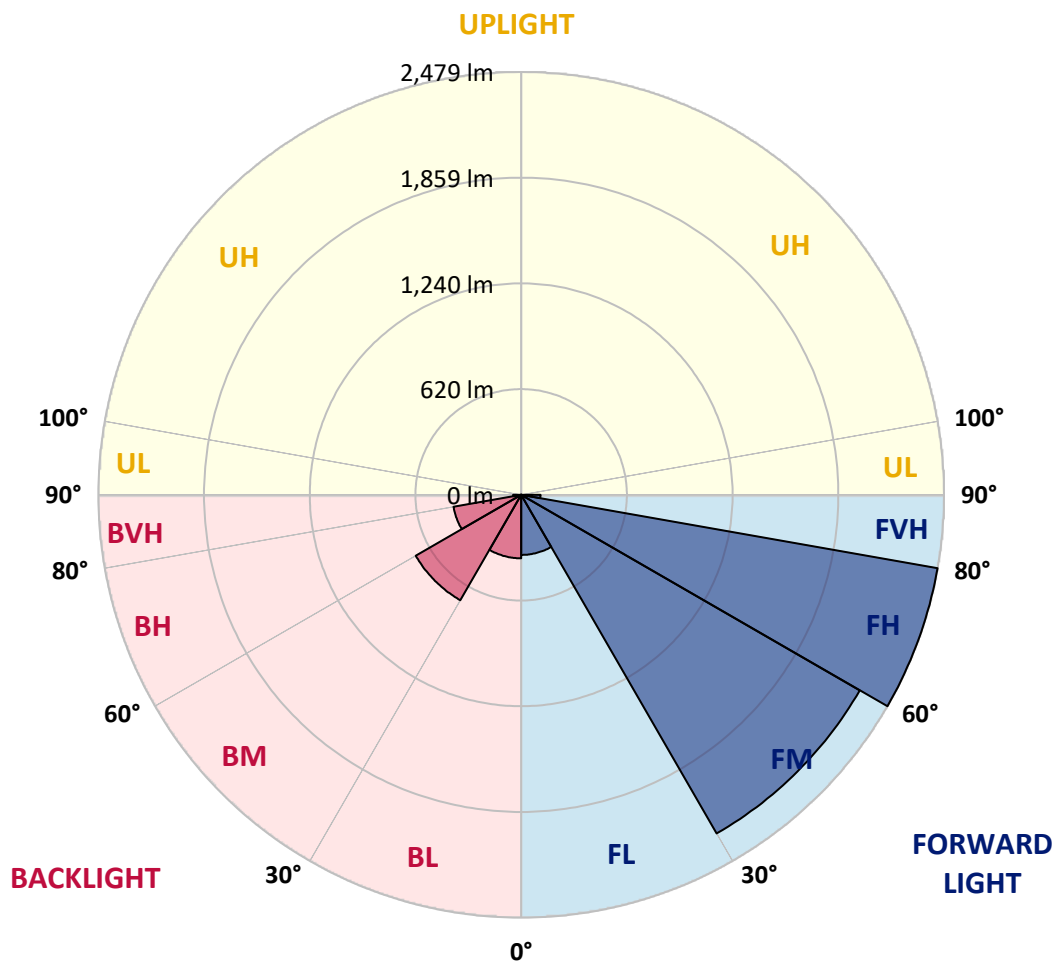
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 352.4  | 5.2       |                         |      |         |
| FM   | (30°-60°)   | 2292.3 | 33.8      |                         |      |         |
| FH   | (60°-80°)   | 2479.0 | 36.6      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 113.1  | 1.7       |                         |      | G2/225  |
| BL   | (0°-30°)    | 372.4  | 5.5       | B1/500                  |      |         |
| BM   | (30°-60°)   | 713.8  | 10.5      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 402.8  | 5.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 47.1   | 0.7       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 54°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  | 757.8  |
| 2.5°  | 728.0  | 725.5  | 725.5  | 729.3  | 730.5  | 734.2  | 734.2  | 735.4  | 739.2  | 745.3  | 752.8  |
| 5°    | 705.6  | 704.4  | 705.6  | 710.6  | 713.1  | 720.6  | 723.0  | 724.2  | 731.7  | 741.6  | 752.8  |
| 7.5°  | 683.3  | 682.1  | 684.6  | 692.0  | 699.5  | 710.6  | 716.8  | 718.1  | 729.3  | 742.9  | 757.8  |
| 10°   | 675.9  | 674.6  | 678.4  | 684.6  | 692.0  | 704.4  | 714.3  | 715.6  | 731.7  | 747.9  | 769.0  |
| 12.5° | 685.8  | 684.6  | 688.3  | 694.5  | 701.9  | 710.6  | 721.8  | 723.0  | 744.1  | 765.2  | 787.6  |
| 15°   | 710.6  | 710.6  | 711.9  | 715.6  | 723.0  | 730.5  | 740.4  | 741.6  | 763.9  | 788.8  | 811.1  |
| 17.5° | 749.1  | 746.5  | 746.5  | 745.3  | 750.3  | 754.0  | 766.4  | 767.7  | 791.3  | 813.6  | 835.9  |
| 20°   | 796.2  | 794.9  | 790.0  | 783.8  | 782.6  | 785.0  | 797.5  | 798.7  | 822.2  | 840.9  | 861.9  |
| 22.5° | 853.2  | 854.5  | 843.3  | 829.7  | 823.5  | 827.2  | 838.4  | 839.6  | 856.9  | 873.1  | 891.7  |
| 25°   | 928.9  | 925.2  | 909.1  | 889.3  | 876.8  | 876.8  | 888.0  | 888.0  | 904.1  | 914.0  | 926.4  |
| 27.5° | 1000.9 | 993.4  | 978.6  | 950.0  | 930.2  | 933.9  | 945.0  | 945.0  | 959.9  | 963.6  | 969.9  |
| 30°   | 1079.0 | 1071.5 | 1052.9 | 1016.9 | 990.9  | 988.5  | 1002.1 | 1000.9 | 1020.7 | 1019.5 | 1014.5 |
| 32.5° | 1174.4 | 1170.8 | 1139.8 | 1093.8 | 1059.2 | 1050.5 | 1062.8 | 1064.1 | 1076.5 | 1072.8 | 1056.6 |
| 35°   | 1308.4 | 1307.1 | 1278.7 | 1198.0 | 1152.1 | 1136.0 | 1143.5 | 1143.5 | 1152.1 | 1142.2 | 1114.9 |
| 37.5° | 1477.0 | 1479.6 | 1454.7 | 1335.7 | 1271.2 | 1243.9 | 1245.1 | 1243.9 | 1246.4 | 1235.2 | 1206.7 |
| 40°   | 1645.7 | 1652.0 | 1650.7 | 1506.8 | 1425.0 | 1377.8 | 1360.5 | 1358.0 | 1364.2 | 1359.3 | 1332.0 |
| 42.5° | 1867.7 | 1882.6 | 1847.9 | 1717.6 | 1625.9 | 1546.5 | 1499.4 | 1493.2 | 1506.8 | 1513.0 | 1487.0 |
| 45°   | 2098.4 | 2093.5 | 2038.8 | 1944.6 | 1861.6 | 1759.8 | 1670.6 | 1660.7 | 1670.6 | 1689.1 | 1661.9 |
| 47.5° | 2218.7 | 2215.0 | 2201.4 | 2154.2 | 2141.9 | 2025.2 | 1890.0 | 1881.4 | 1862.8 | 1888.8 | 1856.6 |
| 50°   | 2417.1 | 2420.8 | 2365.1 | 2360.0 | 2412.2 | 2347.7 | 2138.1 | 2118.2 | 2084.8 | 2105.8 | 2078.5 |
| 52.5° | 2561.0 | 2544.9 | 2510.1 | 2553.6 | 2716.0 | 2681.3 | 2371.2 | 2362.6 | 2331.5 | 2326.6 | 2314.2 |
| 55°   | 2619.3 | 2619.3 | 2625.5 | 2726.0 | 2957.9 | 2911.9 | 2624.3 | 2633.0 | 2590.7 | 2556.0 | 2572.1 |
| 57.5° | 2636.7 | 2644.1 | 2697.4 | 2863.6 | 3241.8 | 3091.8 | 2903.3 | 2915.7 | 2855.0 | 2785.5 | 2836.3 |
| 60°   | 2551.0 | 2573.4 | 2701.1 | 2941.7 | 3401.8 | 3282.8 | 3197.2 | 3200.9 | 3112.8 | 3011.2 | 3100.5 |
| 62.5° | 2331.5 | 2358.8 | 2587.0 | 2974.0 | 3375.8 | 3478.7 | 3475.1 | 3483.7 | 3363.4 | 3236.9 | 3348.5 |
| 65°   | 2062.5 | 2089.7 | 2332.8 | 2883.5 | 3356.0 | 3618.9 | 3729.3 | 3752.8 | 3597.8 | 3427.9 | 3503.5 |
| 67.5° | 1666.8 | 1702.8 | 1933.5 | 2578.3 | 3259.2 | 3734.2 | 3967.4 | 3992.2 | 3778.9 | 3527.1 | 3489.9 |
| 70°   | 1207.9 | 1225.3 | 1418.7 | 1959.5 | 2864.9 | 3671.0 | 4155.8 | 4154.6 | 3838.4 | 3519.7 | 3303.8 |
| 72.5° | 581.6  | 595.3  | 762.7  | 1216.6 | 2048.8 | 3115.4 | 4019.5 | 4043.0 | 3756.6 | 3411.7 | 2878.5 |
| 75°   | 239.4  | 253.0  | 308.8  | 513.4  | 1075.2 | 2058.7 | 3406.8 | 3462.6 | 3411.7 | 3062.0 | 2252.2 |
| 77.5° | 148.8  | 153.7  | 181.1  | 265.4  | 491.1  | 961.2  | 2384.9 | 2460.5 | 2703.7 | 2453.1 | 1487.0 |
| 80°   | 111.6  | 115.4  | 135.1  | 186.1  | 310.1  | 354.7  | 1184.4 | 1279.9 | 1638.3 | 1407.6 | 673.4  |
| 82.5° | 93.0   | 94.2   | 107.9  | 135.1  | 210.8  | 203.4  | 379.5  | 422.9  | 763.9  | 537.0  | 231.9  |
| 85°   | 86.8   | 89.3   | 96.8   | 96.8   | 133.9  | 127.8  | 157.5  | 164.9  | 222.0  | 183.5  | 80.6   |
| 87.5° | 44.6   | 42.1   | 85.6   | 75.7   | 69.5   | 62.0   | 67.0   | 71.9   | 83.1   | 88.1   | 36.0   |
| 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°    | 757.8  | 757.8  | 757.8  | 757.8 | 757.8 | 757.8 | 757.8 | 757.8 | 757.8 | 757.8 | 757.8 |
| 2.5°  | 755.2  | 759.0  | 765.2  | 771.4 | 778.9 | 787.6 | 792.5 | 798.7 | 803.6 | 801.2 | 799.9 |
| 5°    | 759.0  | 765.2  | 778.9  | 791.3 | 806.1 | 823.5 | 834.6 | 847.0 | 856.9 | 859.5 | 855.7 |
| 7.5°  | 765.2  | 776.3  | 794.9  | 817.2 | 837.1 | 859.5 | 876.8 | 894.2 | 906.5 | 909.1 | 909.1 |
| 10°   | 780.1  | 792.5  | 817.2  | 847.0 | 870.6 | 894.2 | 914.0 | 927.7 | 938.9 | 943.8 | 943.8 |
| 12.5° | 801.2  | 816.0  | 845.8  | 881.8 | 907.9 | 930.2 | 941.3 | 947.5 | 952.5 | 957.4 | 958.7 |
| 15°   | 825.9  | 842.1  | 878.1  | 916.5 | 943.8 | 954.9 | 954.9 | 953.7 | 953.7 | 956.2 | 958.7 |
| 17.5° | 850.8  | 868.2  | 905.3  | 946.2 | 963.6 | 957.4 | 948.8 | 945.0 | 942.5 | 941.3 | 945.0 |
| 20°   | 876.8  | 894.2  | 931.4  | 969.9 | 964.8 | 938.9 | 926.4 | 917.8 | 910.3 | 906.5 | 911.6 |
| 22.5° | 905.3  | 921.5  | 959.9  | 985.9 | 948.8 | 909.1 | 885.5 | 871.9 | 859.5 | 852.0 | 856.9 |
| 25°   | 938.9  | 954.9  | 992.2  | 990.9 | 920.2 | 864.4 | 827.2 | 804.9 | 791.3 | 783.8 | 783.8 |
| 27.5° | 978.6  | 992.2  | 1028.2 | 978.6 | 880.6 | 804.9 | 750.3 | 729.3 | 725.5 | 719.3 | 719.3 |
| 30°   | 1019.5 | 1030.6 | 1061.6 | 950.0 | 825.9 | 726.7 | 667.3 | 657.3 | 658.6 | 652.3 | 653.6 |
| 32.5° | 1061.6 | 1072.8 | 1081.5 | 907.9 | 755.2 | 638.7 | 599.0 | 591.6 | 590.3 | 585.3 | 580.4 |
| 35°   | 1121.2 | 1137.2 | 1083.9 | 850.8 | 669.7 | 565.5 | 537.0 | 529.6 | 522.1 | 504.7 | 504.7 |
| 37.5° | 1211.7 | 1229.1 | 1077.7 | 780.1 | 581.6 | 508.5 | 482.4 | 472.5 | 460.1 | 442.7 | 436.6 |
| 40°   | 1335.7 | 1335.7 | 1064.1 | 700.7 | 511.0 | 462.6 | 437.8 | 425.3 | 411.7 | 394.3 | 390.7 |
| 42.5° | 1482.1 | 1447.3 | 1043.0 | 620.1 | 458.9 | 431.6 | 409.3 | 395.6 | 379.5 | 359.7 | 357.2 |
| 45°   | 1653.2 | 1558.9 | 1013.2 | 548.2 | 420.4 | 413.0 | 399.4 | 375.7 | 348.5 | 327.4 | 323.7 |
| 47.5° | 1819.3 | 1659.3 | 984.7  | 497.4 | 388.2 | 405.5 | 394.3 | 354.7 | 317.5 | 287.8 | 284.0 |
| 50°   | 2001.7 | 1748.6 | 951.2  | 455.1 | 363.4 | 400.6 | 388.2 | 323.7 | 282.7 | 261.7 | 259.2 |
| 52.5° | 2184.0 | 1839.2 | 915.2  | 410.5 | 342.3 | 390.7 | 373.3 | 301.4 | 281.5 | 253.0 | 249.3 |
| 55°   | 2376.2 | 1944.6 | 873.1  | 360.9 | 317.5 | 370.8 | 353.4 | 300.1 | 290.2 | 253.0 | 244.3 |
| 57.5° | 2563.5 | 2061.2 | 804.9  | 312.5 | 290.2 | 341.1 | 346.1 | 292.7 | 271.6 | 250.5 | 240.6 |
| 60°   | 2770.6 | 2185.2 | 692.0  | 271.6 | 266.7 | 316.3 | 336.1 | 276.6 | 250.5 | 243.1 | 238.1 |
| 62.5° | 2936.8 | 2296.8 | 540.7  | 243.1 | 246.8 | 296.5 | 323.7 | 266.7 | 241.8 | 235.6 | 234.4 |
| 65°   | 3008.7 | 2299.3 | 388.2  | 218.3 | 227.0 | 277.8 | 311.3 | 258.0 | 234.4 | 231.9 | 230.7 |
| 67.5° | 2933.0 | 2172.8 | 272.8  | 194.7 | 205.9 | 260.4 | 295.1 | 249.3 | 227.0 | 228.2 | 225.8 |
| 70°   | 2688.7 | 1906.2 | 199.7  | 172.4 | 186.1 | 241.8 | 277.8 | 238.1 | 218.3 | 220.8 | 217.1 |
| 72.5° | 2249.7 | 1485.7 | 160.0  | 153.7 | 169.9 | 222.0 | 260.4 | 225.8 | 204.6 | 205.9 | 198.5 |
| 75°   | 1661.9 | 984.7  | 133.9  | 137.7 | 151.3 | 203.4 | 238.1 | 209.6 | 189.8 | 184.7 | 179.8 |
| 77.5° | 988.5  | 506.0  | 110.4  | 120.3 | 135.1 | 181.1 | 213.3 | 189.8 | 173.6 | 164.9 | 161.2 |
| 80°   | 408.1  | 204.6  | 90.5   | 101.7 | 117.8 | 161.2 | 188.5 | 166.2 | 155.0 | 146.4 | 141.4 |
| 82.5° | 162.4  | 100.5  | 71.9   | 83.1  | 99.2  | 140.1 | 164.9 | 146.4 | 135.1 | 129.0 | 115.4 |
| 85°   | 62.0   | 49.6   | 48.4   | 58.3  | 74.4  | 107.9 | 136.5 | 122.8 | 114.1 | 98.0  | 94.2  |
| 87.5° | 24.8   | 22.3   | 22.3   | 28.5  | 42.1  | 68.2  | 98.0  | 85.6  | 89.3  | 70.7  | 71.9  |
| 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)