

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: P401790

Luminaire Tested: **ENC-SA1F-722-U-T4W**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401790  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENC-SA1F-722-U-T4W  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2200K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5723 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 66.1  
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

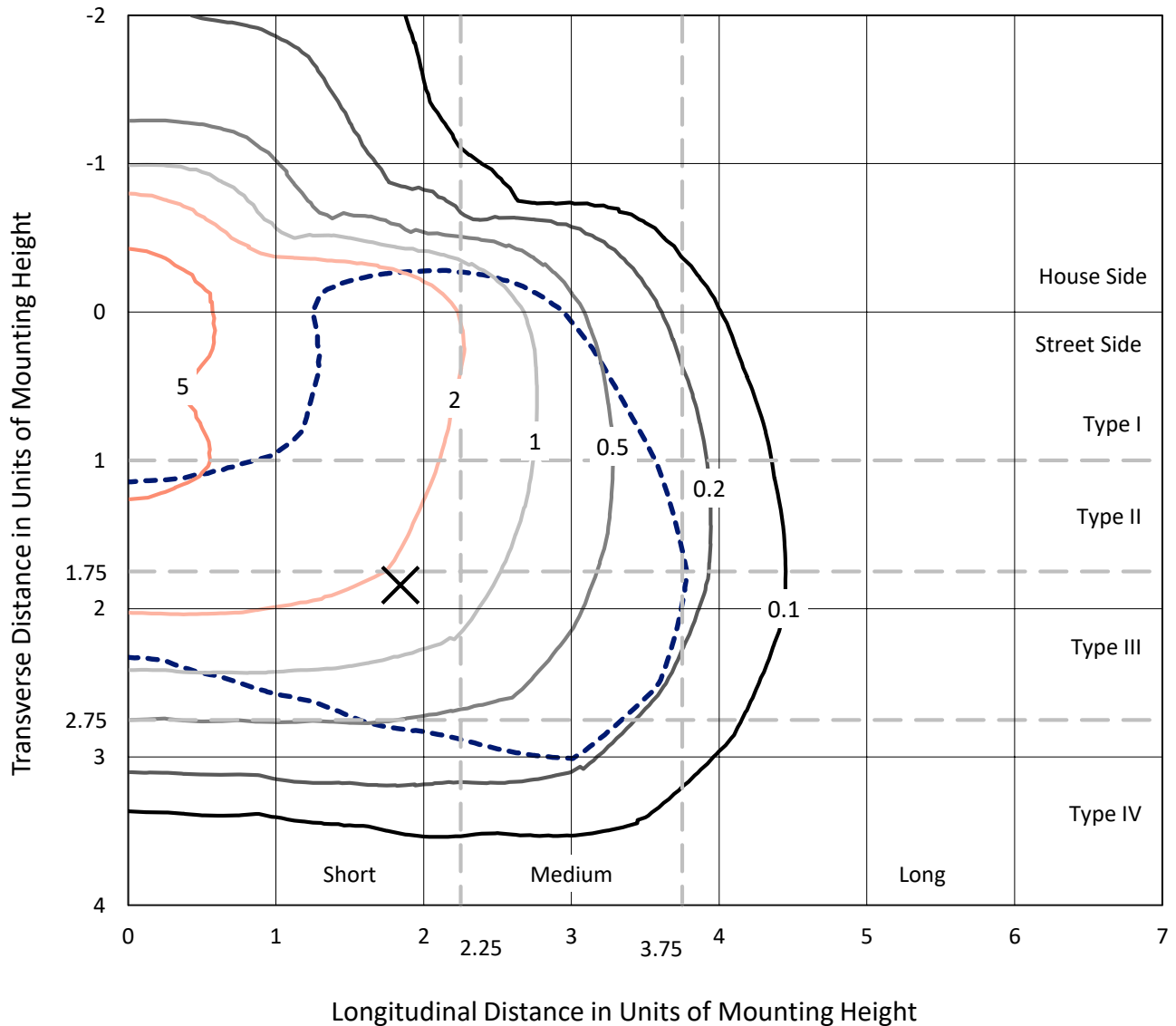


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

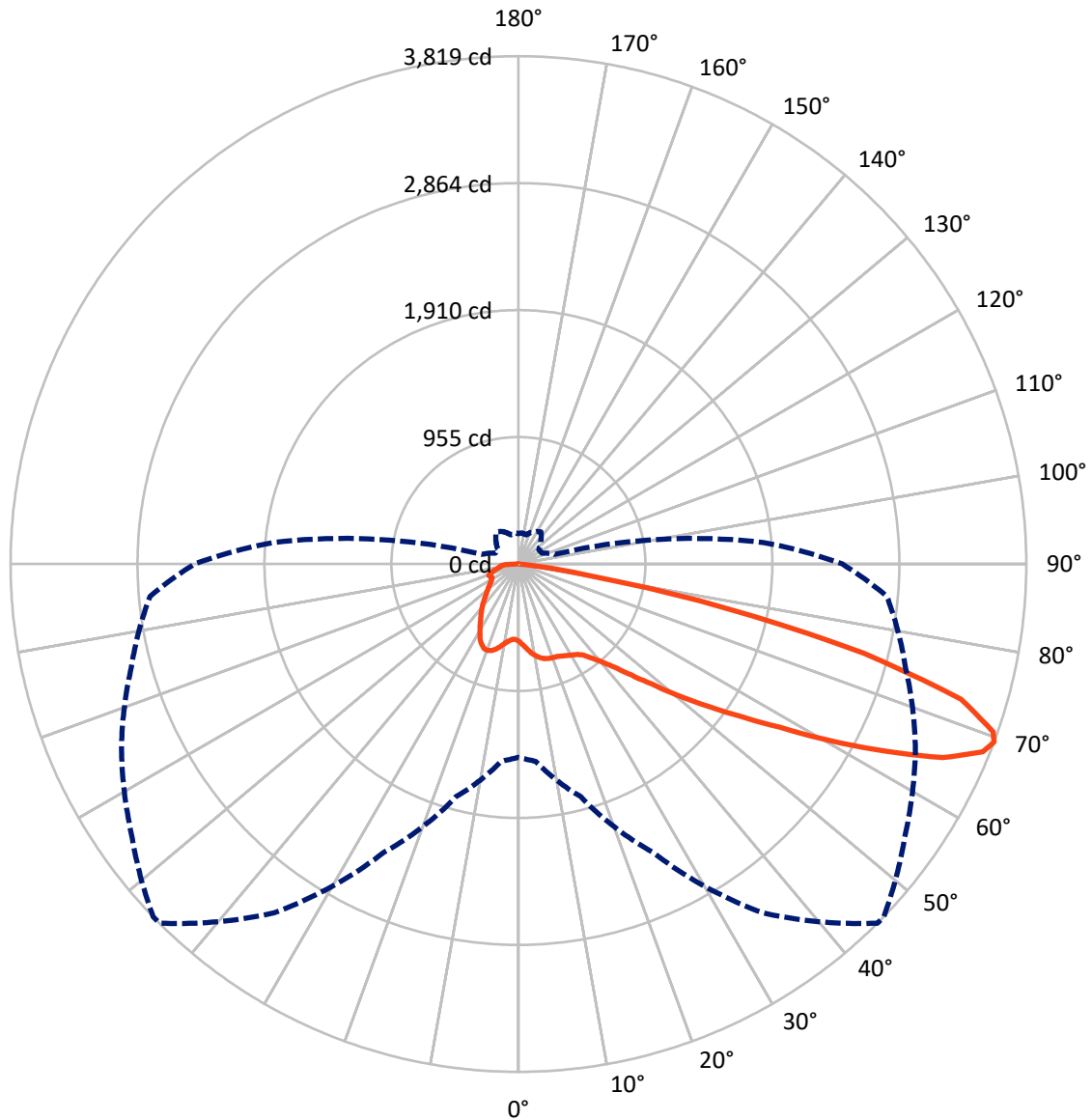


Based on 10 foot mounting height. Maximum calculated value = 7.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1347.4   | 0.0    | 1347.4 |
|                    | % Fixture | 23.5     | 0.0    | 23.5   |
| <b>Street Side</b> | Lumens    | 4375.6   | 0.0    | 4375.6 |
|                    | % Fixture | 76.5     | 0.0    | 76.5   |
| <b>Total</b>       | Lumens    | 5723.0   | 0.0    | 5723.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.1   | 1.0       |
| 10°-20°   | 196.1  | 3.4       |
| 20°-30°   | 331.4  | 5.8       |
| 30°-40°   | 479.6  | 8.4       |
| 40°-50°   | 724.1  | 12.7      |
| 50°-60°   | 1220.9 | 21.3      |
| 60°-70°   | 1679.7 | 29.3      |
| 70°-80°   | 930.8  | 16.3      |
| 80°-90°   | 101.3  | 1.8       |
| 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°    | 5723.0 | 100.0     |
| 0°-180°   | 5723.0 | 100.0     |

**Coefficient of Utilization**



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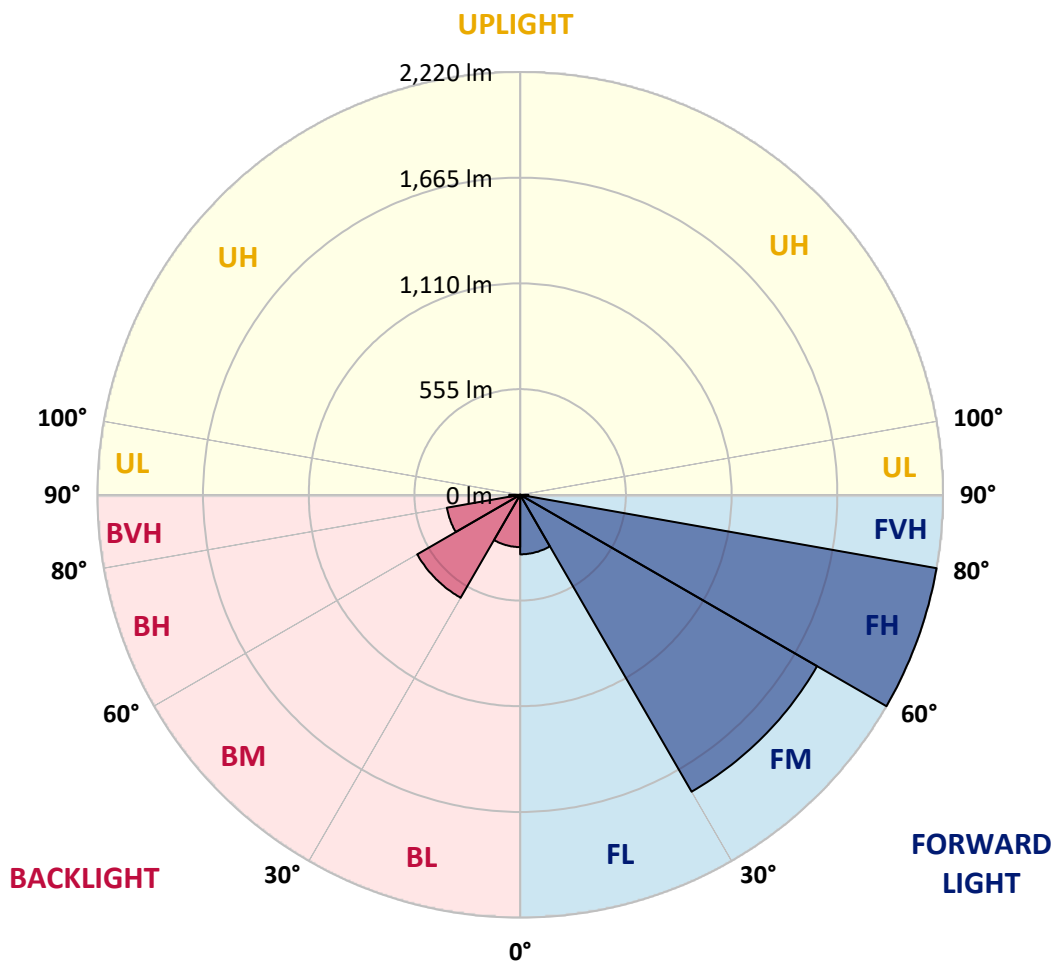
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 312.4  | 5.5       |                         |      |         |
| FM   | (30°-60°)   | 1799.9 | 31.5      |                         |      |         |
| FH   | (60°-80°)   | 2219.9 | 38.8      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 43.4   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 274.4  | 4.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 624.6  | 10.9      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 390.5  | 6.8       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 57.9   | 1.0       |                         |      | 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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 46°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  | 580.9  |
| 2.5°  | 617.5  | 616.7  | 617.5  | 614.3  | 611.0  | 606.1  | 604.5  | 598.8  | 594.7  | 589.0  | 584.2  |
| 5°    | 663.1  | 665.5  | 664.7  | 660.6  | 647.6  | 637.8  | 637.8  | 625.6  | 612.6  | 600.4  | 589.0  |
| 7.5°  | 712.7  | 712.7  | 707.8  | 699.7  | 686.7  | 672.0  | 670.4  | 654.1  | 635.4  | 618.3  | 600.4  |
| 10°   | 748.5  | 750.1  | 742.8  | 731.4  | 715.1  | 699.7  | 698.1  | 679.3  | 661.4  | 639.5  | 617.5  |
| 12.5° | 773.7  | 773.7  | 767.2  | 756.6  | 737.1  | 722.5  | 720.8  | 703.7  | 685.0  | 662.3  | 637.0  |
| 15°   | 786.7  | 785.1  | 779.4  | 768.0  | 750.9  | 738.7  | 736.3  | 721.6  | 706.2  | 683.4  | 656.6  |
| 17.5° | 784.3  | 784.3  | 779.4  | 768.0  | 755.8  | 746.1  | 744.4  | 733.9  | 722.5  | 700.5  | 673.6  |
| 20°   | 773.7  | 772.9  | 771.3  | 762.3  | 754.2  | 750.1  | 748.5  | 743.6  | 736.3  | 717.6  | 692.4  |
| 22.5° | 764.0  | 763.1  | 760.7  | 755.0  | 751.8  | 754.2  | 754.2  | 753.4  | 752.6  | 737.9  | 713.5  |
| 25°   | 769.6  | 768.8  | 764.0  | 755.8  | 755.0  | 766.4  | 767.2  | 769.6  | 771.3  | 759.1  | 733.9  |
| 27.5° | 809.5  | 807.1  | 793.2  | 772.1  | 764.8  | 779.4  | 781.0  | 788.4  | 786.7  | 773.7  | 751.8  |
| 30°   | 887.6  | 888.4  | 857.5  | 812.0  | 787.5  | 794.1  | 794.9  | 803.0  | 800.6  | 790.0  | 772.1  |
| 32.5° | 1005.6 | 1005.6 | 955.1  | 886.0  | 824.2  | 811.1  | 808.7  | 816.0  | 825.8  | 812.0  | 794.1  |
| 35°   | 1155.3 | 1151.2 | 1090.2 | 983.6  | 886.8  | 840.4  | 838.8  | 835.5  | 852.6  | 839.6  | 813.6  |
| 37.5° | 1305.8 | 1291.2 | 1231.8 | 1114.6 | 974.7  | 897.4  | 890.9  | 881.1  | 890.9  | 863.2  | 840.4  |
| 40°   | 1427.0 | 1424.6 | 1375.8 | 1257.0 | 1078.8 | 966.5  | 961.7  | 918.5  | 925.0  | 903.1  | 894.1  |
| 42.5° | 1560.5 | 1562.1 | 1529.5 | 1409.9 | 1203.3 | 1060.1 | 1047.1 | 980.4  | 999.1  | 990.9  | 986.9  |
| 45°   | 1706.9 | 1705.3 | 1680.9 | 1555.6 | 1355.4 | 1190.3 | 1174.0 | 1091.8 | 1130.1 | 1125.2 | 1148.0 |
| 47.5° | 1819.2 | 1828.1 | 1814.3 | 1725.6 | 1536.0 | 1348.1 | 1335.9 | 1235.8 | 1293.6 | 1332.6 | 1375.8 |
| 50°   | 1972.1 | 1971.3 | 1933.9 | 1897.3 | 1745.9 | 1549.9 | 1537.7 | 1426.2 | 1509.2 | 1566.1 | 1645.1 |
| 52.5° | 2161.7 | 2155.2 | 2077.9 | 2064.9 | 2001.4 | 1770.4 | 1759.8 | 1643.4 | 1762.2 | 1811.8 | 1972.1 |
| 55°   | 2280.5 | 2279.7 | 2239.8 | 2262.6 | 2264.2 | 2016.1 | 2003.0 | 1899.7 | 2034.0 | 2090.9 | 2333.4 |
| 57.5° | 2379.7 | 2380.5 | 2413.9 | 2493.6 | 2547.3 | 2314.6 | 2309.8 | 2183.7 | 2319.5 | 2399.3 | 2685.6 |
| 60°   | 2456.2 | 2472.5 | 2566.0 | 2748.3 | 2837.8 | 2695.4 | 2674.2 | 2540.8 | 2631.9 | 2663.7 | 2954.9 |
| 62.5° | 2425.3 | 2446.4 | 2630.3 | 2898.8 | 3129.0 | 3098.9 | 3091.6 | 2898.8 | 2898.0 | 2881.7 | 3155.9 |
| 65°   | 2181.2 | 2226.8 | 2516.4 | 2893.1 | 3321.0 | 3509.0 | 3498.4 | 3236.4 | 3145.3 | 3064.0 | 3216.1 |
| 67.5° | 1785.0 | 1794.8 | 2143.8 | 2671.8 | 3319.4 | 3766.9 | 3755.5 | 3482.1 | 3299.1 | 3099.7 | 3039.5 |
| 69°   | 1453.1 | 1488.9 | 1811.8 | 2391.9 | 3202.3 | 3819.0 | 3819.0 | 3550.5 | 3293.4 | 3014.3 | 2780.8 |
| 70°   | 1257.0 | 1258.6 | 1570.2 | 2169.0 | 3042.8 | 3788.0 | 3795.4 | 3550.5 | 3247.0 | 2902.9 | 2551.4 |
| 72.5° | 589.0  | 625.6  | 822.5  | 1415.6 | 2457.8 | 3482.1 | 3500.0 | 3316.2 | 2977.7 | 2501.0 | 1914.4 |
| 75°   | 176.5  | 183.1  | 274.2  | 671.2  | 1408.3 | 2682.4 | 2722.2 | 2758.9 | 2425.3 | 1841.1 | 1178.9 |
| 77.5° | 105.0  | 104.1  | 132.6  | 227.8  | 651.7  | 1590.6 | 1608.5 | 1764.7 | 1573.5 | 1023.5 | 535.3  |
| 80°   | 51.3   | 52.9   | 70.8   | 110.6  | 244.1  | 577.6  | 635.4  | 825.0  | 697.2  | 400.3  | 196.1  |
| 82.5° | 17.1   | 18.7   | 29.3   | 44.7   | 103.3  | 186.3  | 205.8  | 258.7  | 222.9  | 145.6  | 83.8   |
| 85°   | 0.0    | 0.0    | 0.8    | 1.6    | 5.7    | 13.8   | 13.8   | 30.9   | 46.4   | 51.3   | 27.7   |
| 87.5° | 0.0    | 0.0    | 0.8    | 0.8    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 2.4    |
| 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°    | 580.9  | 580.9  | 580.9 | 580.9 | 580.9 | 580.9 | 580.9 | 580.9 | 580.9 | 580.9 | 580.9 |
| 2.5°  | 581.7  | 580.1  | 576.8 | 573.6 | 571.9 | 567.9 | 568.7 | 567.1 | 566.3 | 566.3 | 567.1 |
| 5°    | 583.3  | 580.9  | 576.0 | 572.8 | 569.5 | 567.9 | 571.9 | 573.6 | 575.2 | 575.2 | 576.0 |
| 7.5°  | 593.1  | 588.2  | 582.5 | 578.5 | 579.3 | 581.7 | 588.2 | 593.1 | 595.5 | 597.2 | 598.8 |
| 10°   | 609.4  | 603.7  | 595.5 | 594.7 | 596.4 | 602.9 | 611.8 | 619.1 | 625.6 | 629.7 | 629.7 |
| 12.5° | 626.5  | 619.1  | 612.6 | 614.3 | 621.6 | 631.3 | 640.3 | 648.4 | 654.1 | 658.2 | 659.0 |
| 15°   | 645.2  | 637.8  | 631.3 | 635.4 | 647.6 | 659.0 | 667.1 | 670.4 | 672.8 | 676.9 | 677.7 |
| 17.5° | 662.3  | 655.7  | 650.1 | 660.6 | 671.2 | 680.2 | 682.6 | 681.0 | 677.7 | 680.2 | 681.8 |
| 20°   | 680.2  | 674.5  | 671.2 | 682.6 | 689.9 | 690.7 | 684.2 | 676.9 | 668.8 | 668.8 | 669.6 |
| 22.5° | 702.1  | 694.8  | 693.2 | 698.9 | 696.4 | 686.7 | 670.4 | 659.0 | 647.6 | 646.0 | 648.4 |
| 25°   | 723.3  | 716.0  | 715.1 | 711.1 | 689.9 | 664.7 | 642.7 | 629.7 | 620.8 | 621.6 | 626.5 |
| 27.5° | 744.4  | 739.5  | 740.4 | 718.4 | 671.2 | 633.0 | 603.7 | 593.1 | 595.5 | 597.2 | 602.1 |
| 30°   | 765.6  | 765.6  | 768.8 | 718.4 | 645.2 | 588.2 | 560.6 | 559.7 | 566.3 | 571.1 | 576.8 |
| 32.5° | 790.0  | 797.3  | 791.6 | 709.4 | 610.2 | 542.7 | 520.7 | 522.3 | 529.6 | 537.8 | 542.7 |
| 35°   | 813.6  | 830.7  | 814.4 | 689.1 | 562.2 | 501.2 | 483.3 | 480.8 | 486.5 | 493.8 | 496.3 |
| 37.5° | 851.0  | 878.7  | 833.9 | 657.4 | 512.6 | 464.6 | 446.7 | 440.1 | 434.5 | 440.1 | 439.3 |
| 40°   | 916.1  | 949.5  | 848.6 | 604.5 | 464.6 | 430.4 | 411.7 | 399.5 | 385.6 | 373.4 | 373.4 |
| 42.5° | 1020.2 | 1042.2 | 856.7 | 540.2 | 416.6 | 396.2 | 377.5 | 359.6 | 338.5 | 316.5 | 316.5 |
| 45°   | 1190.3 | 1195.2 | 860.0 | 471.9 | 372.6 | 362.0 | 342.5 | 325.4 | 297.8 | 275.8 | 270.9 |
| 47.5° | 1417.3 | 1396.1 | 868.1 | 406.0 | 334.4 | 331.9 | 315.7 | 296.1 | 266.0 | 245.7 | 243.3 |
| 50°   | 1722.4 | 1631.2 | 903.9 | 353.1 | 303.5 | 305.9 | 293.7 | 270.9 | 242.4 | 227.8 | 224.5 |
| 52.5° | 2065.7 | 1928.2 | 931.6 | 310.8 | 276.6 | 283.9 | 275.0 | 253.0 | 228.6 | 216.4 | 214.0 |
| 55°   | 2440.7 | 2213.8 | 925.0 | 282.3 | 256.3 | 264.4 | 261.2 | 242.4 | 220.5 | 209.9 | 207.5 |
| 57.5° | 2746.7 | 2414.7 | 868.1 | 257.1 | 235.9 | 247.3 | 250.6 | 235.9 | 215.6 | 205.8 | 203.4 |
| 60°   | 2976.1 | 2524.5 | 750.9 | 235.9 | 219.7 | 233.5 | 242.4 | 231.9 | 214.8 | 209.1 | 206.6 |
| 62.5° | 3080.2 | 2514.8 | 598.8 | 219.7 | 207.5 | 223.7 | 243.3 | 238.4 | 227.0 | 231.1 | 231.9 |
| 65°   | 3021.6 | 2391.9 | 449.1 | 207.5 | 200.1 | 225.4 | 257.1 | 257.1 | 240.0 | 247.3 | 248.1 |
| 67.5° | 2721.4 | 2070.6 | 327.1 | 198.5 | 192.8 | 233.5 | 283.1 | 266.9 | 234.3 | 240.0 | 237.6 |
| 69°   | 2435.9 | 1852.5 | 280.7 | 193.6 | 187.1 | 237.6 | 294.5 | 268.5 | 227.8 | 234.3 | 227.8 |
| 70°   | 2226.0 | 1655.6 | 252.2 | 189.6 | 184.7 | 237.6 | 297.8 | 266.9 | 224.5 | 229.4 | 222.1 |
| 72.5° | 1584.0 | 1149.6 | 207.5 | 181.4 | 175.7 | 219.7 | 292.1 | 257.9 | 215.6 | 209.9 | 196.1 |
| 75°   | 921.0  | 635.4  | 176.5 | 172.5 | 155.4 | 192.8 | 277.4 | 248.1 | 206.6 | 196.1 | 186.3 |
| 77.5° | 386.5  | 283.9  | 150.5 | 157.0 | 137.5 | 171.7 | 259.5 | 238.4 | 196.1 | 181.4 | 176.5 |
| 80°   | 157.0  | 141.6  | 125.3 | 135.9 | 119.6 | 151.3 | 239.2 | 222.1 | 180.6 | 166.0 | 158.6 |
| 82.5° | 82.2   | 78.1   | 96.0  | 109.8 | 99.3  | 139.1 | 225.4 | 210.7 | 167.6 | 153.0 | 144.0 |
| 85°   | 24.4   | 32.5   | 54.5  | 74.8  | 75.7  | 125.3 | 218.9 | 195.3 | 145.6 | 126.1 | 124.5 |
| 87.5° | 1.6    | 6.5    | 18.7  | 39.1  | 49.6  | 96.0  | 177.4 | 160.3 | 118.0 | 99.3  | 100.1 |
| 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)