

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: P401073

Luminaire Tested: **ENT-SA1B-727-U-SL3-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401073  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1B-727-U-SL3-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2402 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-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

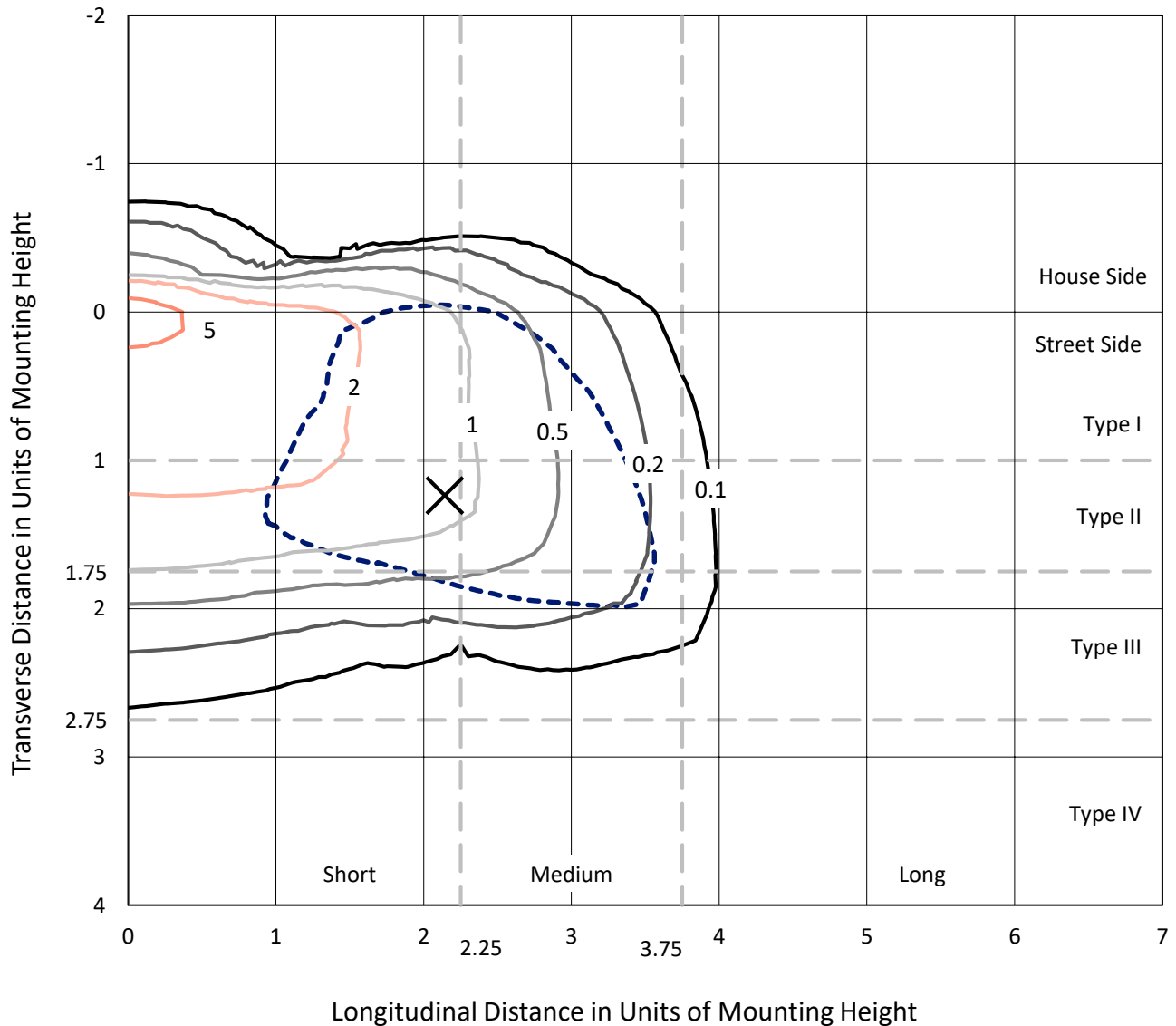


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

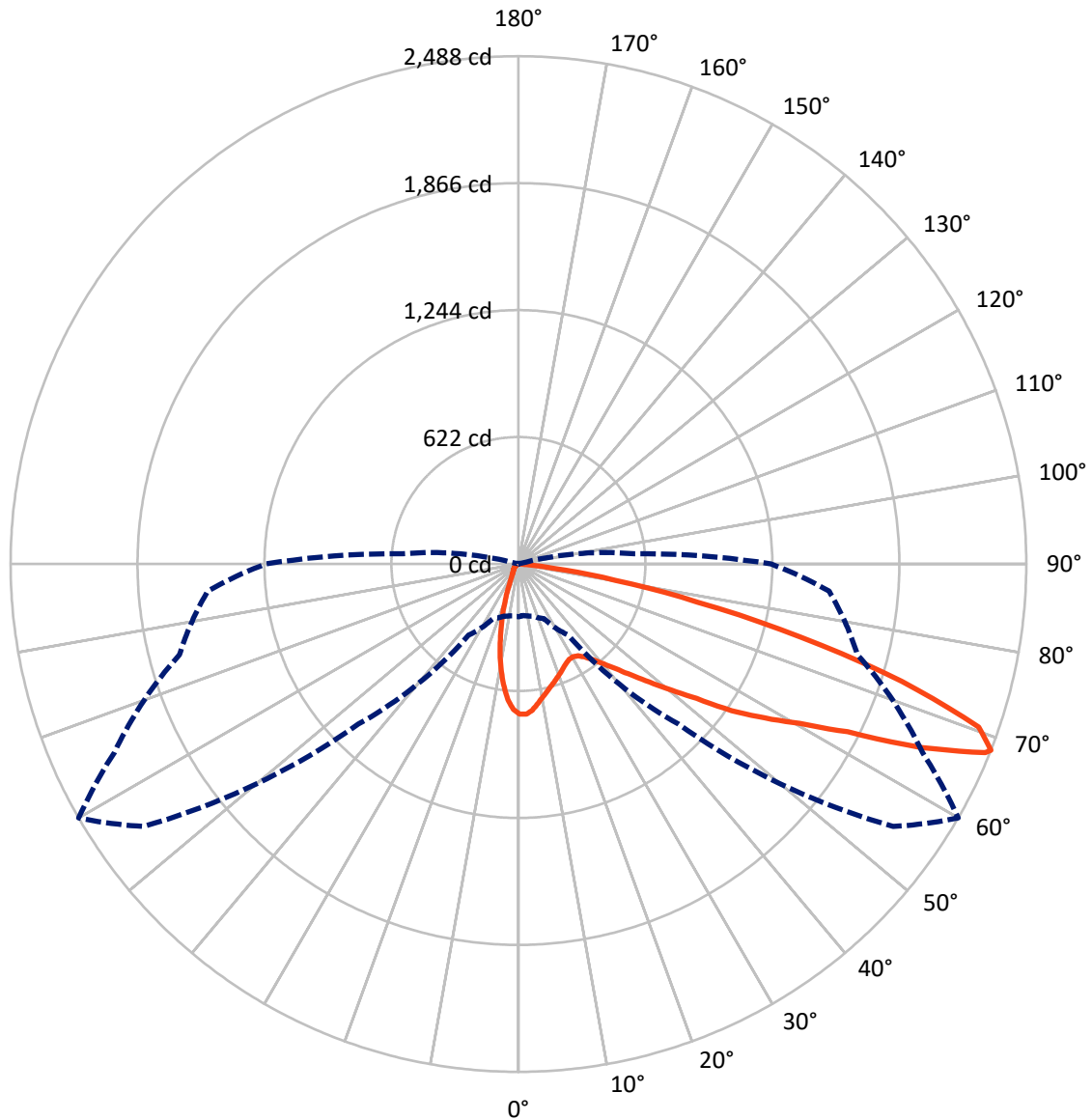


Based on 10 foot mounting height. Maximum calculated value = 7.4 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 268.5    | 0.0    | 268.5  |
|                    | % Fixture | 11.2     | 0.0    | 11.2   |
| <b>Street Side</b> | Lumens    | 2133.4   | 0.0    | 2133.4 |
|                    | % Fixture | 88.8     | 0.0    | 88.8   |
| <b>Total</b>       | Lumens    | 2402.0   | 0.0    | 2402.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.7   | 2.5       |
| 10°-20°   | 121.7  | 5.1       |
| 20°-30°   | 160.2  | 6.7       |
| 30°-40°   | 221.1  | 9.2       |
| 40°-50°   | 335.2  | 14.0      |
| 50°-60°   | 540.8  | 22.5      |
| 60°-70°   | 642.4  | 26.7      |
| 70°-80°   | 302.8  | 12.6      |
| 80°-90°   | 18.1   | 0.8       |
| 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°    | 2402.0 | 100.0     |
| 0°-180°   | 2402.0 | 100.0     |



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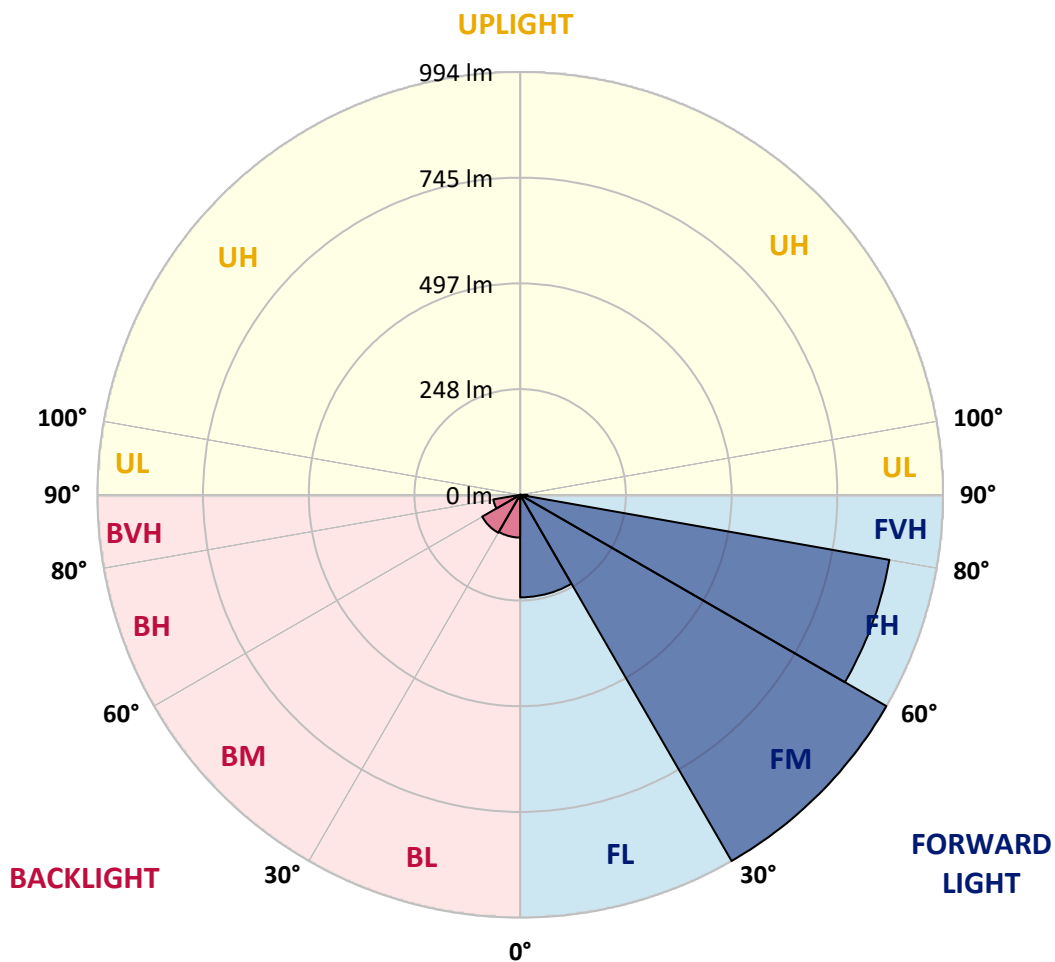
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 241.1  | 10.0      |                         |      |         |
| FM   | (30°-60°)   | 993.8  | 41.4      |                         |      |         |
| FH   | (60°-80°)   | 881.2  | 36.7      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 17.3   | 0.7       |                         |      | G1/100  |
| BL   | (0°-30°)    | 100.5  | 4.2       | B0/110                  |      |         |
| BM   | (30°-60°)   | 103.2  | 4.3       | B0/220                  |      |         |
| BH   | (60°-80°)   | 64.1   | 2.7       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.8    | 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°    | 55°    | 60°    | 65°    | 75°    | 85°    |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 735.2 | 735.2 | 735.2 | 735.2  | 735.2  | 735.2  | 735.2  | 735.2  | 735.2  | 735.2  | 735.2  |
| 2.5°  | 728.7 | 727.1 | 731.6 | 732.8  | 734.0  | 736.4  | 736.0  | 736.4  | 736.9  | 736.0  | 731.1  |
| 5°    | 679.0 | 681.8 | 685.9 | 691.2  | 696.5  | 708.7  | 713.6  | 718.5  | 721.8  | 724.2  | 719.7  |
| 7.5°  | 630.1 | 635.8 | 639.0 | 648.8  | 657.0  | 669.6  | 680.2  | 688.8  | 696.9  | 705.9  | 701.4  |
| 10°   | 591.0 | 593.0 | 595.8 | 604.8  | 617.0  | 636.2  | 650.0  | 660.6  | 670.4  | 685.5  | 681.8  |
| 12.5° | 552.6 | 553.9 | 559.6 | 569.4  | 582.0  | 605.6  | 624.0  | 636.2  | 647.2  | 665.9  | 666.3  |
| 15°   | 524.5 | 524.9 | 528.6 | 537.6  | 552.2  | 577.5  | 601.1  | 614.6  | 630.1  | 652.9  | 654.1  |
| 17.5° | 506.2 | 505.8 | 506.6 | 512.3  | 526.2  | 550.2  | 578.7  | 594.6  | 613.0  | 642.3  | 643.5  |
| 20°   | 500.5 | 499.7 | 498.0 | 496.8  | 505.4  | 526.2  | 558.3  | 575.9  | 597.5  | 634.6  | 635.0  |
| 22.5° | 505.4 | 503.7 | 500.1 | 493.1  | 495.6  | 509.0  | 535.9  | 557.1  | 583.6  | 630.5  | 627.6  |
| 25°   | 517.2 | 517.2 | 512.3 | 501.3  | 495.6  | 498.4  | 520.0  | 540.4  | 569.8  | 628.4  | 622.3  |
| 27.5° | 536.7 | 535.9 | 529.4 | 518.0  | 507.4  | 499.7  | 510.3  | 529.4  | 559.6  | 630.9  | 619.9  |
| 30°   | 560.4 | 557.9 | 551.0 | 542.9  | 529.8  | 513.1  | 512.3  | 526.6  | 554.7  | 638.6  | 621.5  |
| 32.5° | 582.8 | 582.8 | 579.9 | 572.2  | 559.6  | 537.6  | 524.9  | 536.3  | 560.8  | 651.3  | 626.8  |
| 35°   | 610.5 | 610.1 | 610.9 | 608.1  | 597.1  | 573.8  | 553.5  | 559.2  | 579.5  | 672.5  | 639.5  |
| 37.5° | 632.5 | 632.9 | 639.9 | 644.7  | 639.9  | 615.4  | 594.2  | 594.2  | 611.3  | 704.3  | 661.1  |
| 40°   | 654.1 | 654.9 | 668.0 | 682.2  | 683.5  | 663.9  | 643.5  | 643.1  | 652.9  | 743.4  | 694.5  |
| 42.5° | 673.7 | 676.9 | 695.7 | 720.1  | 734.4  | 721.4  | 706.3  | 701.4  | 706.3  | 802.5  | 748.7  |
| 45°   | 694.5 | 701.0 | 727.1 | 762.5  | 785.8  | 786.2  | 780.5  | 774.8  | 777.2  | 868.9  | 821.2  |
| 47.5° | 721.4 | 728.7 | 761.3 | 804.9  | 848.9  | 860.3  | 865.6  | 863.6  | 857.1  | 952.9  | 915.0  |
| 50°   | 765.0 | 771.9 | 802.5 | 851.4  | 911.7  | 952.9  | 967.1  | 969.6  | 961.0  | 1045.8 | 1021.3 |
| 52.5° | 839.2 | 843.2 | 871.8 | 910.5  | 978.1  | 1055.2 | 1092.6 | 1093.1 | 1073.9 | 1154.6 | 1136.3 |
| 55°   | 918.6 | 929.2 | 962.6 | 1007.5 | 1077.2 | 1163.6 | 1257.3 | 1267.5 | 1208.4 | 1250.0 | 1220.2 |
| 57.5° | 919.8 | 930.0 | 985.5 | 1071.5 | 1217.4 | 1331.9 | 1415.4 | 1422.8 | 1357.2 | 1326.6 | 1299.3 |
| 60°   | 822.8 | 828.1 | 905.2 | 1031.1 | 1267.5 | 1558.9 | 1595.6 | 1584.6 | 1461.5 | 1405.6 | 1398.3 |
| 62.5° | 580.8 | 583.2 | 674.5 | 840.4  | 1156.6 | 1667.3 | 1869.9 | 1810.8 | 1609.8 | 1522.2 | 1546.7 |
| 65°   | 365.6 | 364.4 | 402.3 | 534.7  | 860.3  | 1560.5 | 2208.9 | 2165.7 | 1882.5 | 1668.1 | 1662.4 |
| 67.5° | 269.8 | 263.3 | 273.5 | 314.6  | 491.5  | 1225.1 | 2271.3 | 2466.1 | 2142.1 | 1728.8 | 1562.2 |
| 68°   | 258.8 | 253.1 | 263.7 | 295.5  | 425.1  | 1109.0 | 2241.1 | 2487.7 | 2183.3 | 1719.1 | 1527.9 |
| 70°   | 219.7 | 214.4 | 223.3 | 247.4  | 295.9  | 719.7  | 1977.4 | 2391.9 | 2220.8 | 1635.9 | 1346.6 |
| 72.5° | 156.1 | 158.9 | 182.6 | 212.3  | 250.6  | 369.2  | 1456.2 | 1964.4 | 1910.2 | 1455.0 | 1024.6 |
| 75°   | 92.5  | 97.8  | 128.8 | 171.2  | 230.3  | 243.7  | 939.4  | 1428.1 | 1401.6 | 1007.5 | 555.1  |
| 77.5° | 32.6  | 34.6  | 64.0  | 114.1  | 189.9  | 193.2  | 523.3  | 897.8  | 835.1  | 411.6  | 163.8  |
| 80°   | 11.8  | 11.8  | 23.6  | 63.6   | 122.7  | 147.5  | 278.0  | 479.3  | 329.7  | 106.8  | 45.2   |
| 82.5° | 2.0   | 2.0   | 5.3   | 21.6   | 54.2   | 78.7   | 129.2  | 170.4  | 97.8   | 23.6   | 22.4   |
| 85°   | 0.0   | 0.0   | 0.0   | 0.0    | 0.8    | 0.8    | 37.9   | 38.3   | 17.9   | 3.3    | 9.8    |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.4    | 0.8    | 0.8    | 0.8    | 0.8    | 1.2    |
| 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°    | 735.2  | 735.2 | 735.2 | 735.2 | 735.2 | 735.2 | 735.2 | 735.2 | 735.2 | 735.2 | 735.2 |
| 2.5°  | 729.1  | 728.3 | 723.8 | 715.7 | 708.7 | 697.3 | 695.3 | 684.3 | 680.2 | 676.9 | 680.2 |
| 5°    | 716.5  | 712.0 | 696.9 | 678.6 | 653.7 | 624.4 | 607.3 | 583.6 | 578.7 | 565.7 | 573.4 |
| 7.5°  | 695.7  | 685.5 | 657.4 | 617.9 | 572.2 | 527.4 | 493.1 | 460.1 | 432.0 | 422.2 | 419.4 |
| 10°   | 673.7  | 659.4 | 612.1 | 551.0 | 485.0 | 416.1 | 365.2 | 317.5 | 291.0 | 266.1 | 265.3 |
| 12.5° | 652.9  | 631.3 | 562.8 | 477.7 | 385.5 | 303.6 | 237.6 | 187.5 | 156.1 | 139.0 | 143.5 |
| 15°   | 636.2  | 607.3 | 513.1 | 404.3 | 287.7 | 195.6 | 134.5 | 102.3 | 91.3  | 86.0  | 86.8  |
| 17.5° | 619.9  | 581.6 | 465.0 | 327.7 | 205.0 | 120.6 | 87.2  | 76.2  | 73.0  | 71.7  | 70.9  |
| 20°   | 605.2  | 556.7 | 414.5 | 258.4 | 135.3 | 83.5  | 71.7  | 68.1  | 66.8  | 66.0  | 66.0  |
| 22.5° | 590.5  | 530.6 | 363.9 | 191.5 | 92.5  | 68.5  | 64.4  | 62.8  | 61.9  | 60.7  | 60.7  |
| 25°   | 577.1  | 505.4 | 313.4 | 134.1 | 70.9  | 61.1  | 58.3  | 56.6  | 55.0  | 53.8  | 53.8  |
| 27.5° | 566.9  | 486.2 | 266.5 | 95.0  | 59.5  | 55.0  | 52.2  | 49.3  | 47.3  | 45.6  | 45.6  |
| 30°   | 560.4  | 467.5 | 221.3 | 71.7  | 53.0  | 48.9  | 45.2  | 41.6  | 38.3  | 36.3  | 35.9  |
| 32.5° | 556.7  | 452.0 | 179.3 | 58.7  | 47.3  | 42.8  | 38.3  | 34.2  | 30.6  | 28.1  | 28.1  |
| 35°   | 558.3  | 439.7 | 137.3 | 49.7  | 42.8  | 37.5  | 32.6  | 27.7  | 24.5  | 22.4  | 22.0  |
| 37.5° | 568.9  | 432.8 | 102.3 | 44.0  | 38.3  | 32.6  | 27.7  | 22.8  | 19.6  | 17.9  | 17.5  |
| 40°   | 588.9  | 434.5 | 77.8  | 39.9  | 35.0  | 28.5  | 22.8  | 18.7  | 15.9  | 14.3  | 14.3  |
| 42.5° | 629.3  | 446.3 | 61.5  | 36.7  | 31.4  | 24.5  | 19.2  | 15.5  | 13.0  | 11.8  | 11.4  |
| 45°   | 682.7  | 468.7 | 50.5  | 33.8  | 27.7  | 20.8  | 16.3  | 13.0  | 10.6  | 9.4   | 9.4   |
| 47.5° | 763.3  | 504.6 | 43.6  | 31.0  | 24.0  | 17.5  | 13.4  | 10.6  | 8.2   | 7.3   | 6.9   |
| 50°   | 856.7  | 554.7 | 38.3  | 27.7  | 21.2  | 14.7  | 11.4  | 8.2   | 6.5   | 5.3   | 5.3   |
| 52.5° | 952.0  | 610.5 | 34.6  | 24.9  | 18.3  | 12.6  | 9.0   | 6.1   | 4.5   | 3.7   | 3.7   |
| 55°   | 1039.7 | 657.4 | 31.0  | 22.4  | 15.5  | 10.6  | 7.3   | 4.9   | 3.3   | 2.4   | 2.4   |
| 57.5° | 1124.4 | 700.2 | 26.9  | 19.6  | 12.6  | 8.6   | 5.7   | 3.7   | 2.4   | 1.6   | 1.6   |
| 60°   | 1230.8 | 755.6 | 23.2  | 16.7  | 10.2  | 6.9   | 4.5   | 2.9   | 1.6   | 1.2   | 0.8   |
| 62.5° | 1359.2 | 796.0 | 19.6  | 13.4  | 8.2   | 5.3   | 3.3   | 2.0   | 1.2   | 0.4   | 0.4   |
| 65°   | 1406.5 | 742.6 | 16.3  | 11.0  | 6.5   | 4.1   | 2.4   | 1.6   | 0.8   | 0.4   | 0.4   |
| 67.5° | 1274.4 | 598.3 | 13.0  | 8.6   | 4.9   | 2.9   | 2.0   | 1.2   | 0.8   | 0.4   | 0.4   |
| 68°   | 1237.7 | 568.9 | 12.6  | 8.2   | 4.5   | 2.9   | 1.6   | 1.2   | 0.4   | 0.4   | 0.0   |
| 70°   | 1045.0 | 456.9 | 10.2  | 6.1   | 3.7   | 2.4   | 1.6   | 0.8   | 0.4   | 0.4   | 0.0   |
| 72.5° | 774.8  | 315.0 | 7.3   | 4.1   | 2.4   | 1.6   | 1.2   | 0.8   | 0.4   | 0.4   | 0.0   |
| 75°   | 408.8  | 122.7 | 5.7   | 3.3   | 2.0   | 1.6   | 1.2   | 1.2   | 0.8   | 0.4   | 0.4   |
| 77.5° | 117.4  | 38.7  | 4.5   | 2.4   | 2.0   | 2.0   | 2.0   | 1.6   | 1.6   | 1.2   | 0.8   |
| 80°   | 34.2   | 12.6  | 2.9   | 1.6   | 2.0   | 2.0   | 2.4   | 2.0   | 2.0   | 1.6   | 1.6   |
| 82.5° | 18.3   | 4.9   | 1.6   | 1.2   | 1.2   | 1.6   | 2.0   | 1.6   | 1.2   | 0.8   | 0.4   |
| 85°   | 7.7    | 1.6   | 1.2   | 0.8   | 0.8   | 0.8   | 0.8   | 0.8   | 0.8   | 0.4   | 0.4   |
| 87.5° | 0.4    | 0.8   | 0.8   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   |
| 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)