

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: P401201

Luminaire Tested: **ENC-SA1B-827-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401201  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENC-SA1B-827-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2068 lumens  
Efficiency: N/A  
Efficacy: 81.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G1

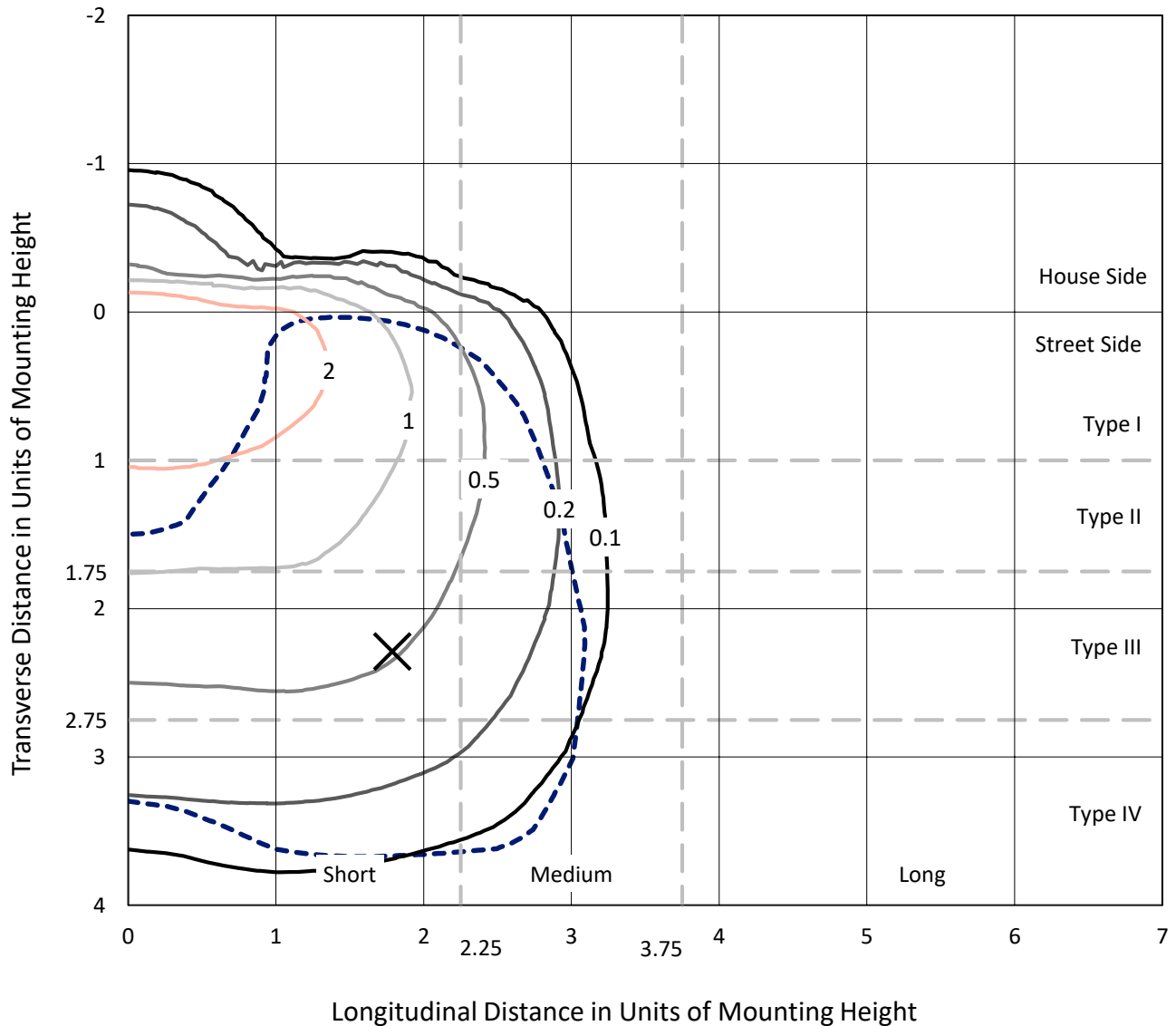
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

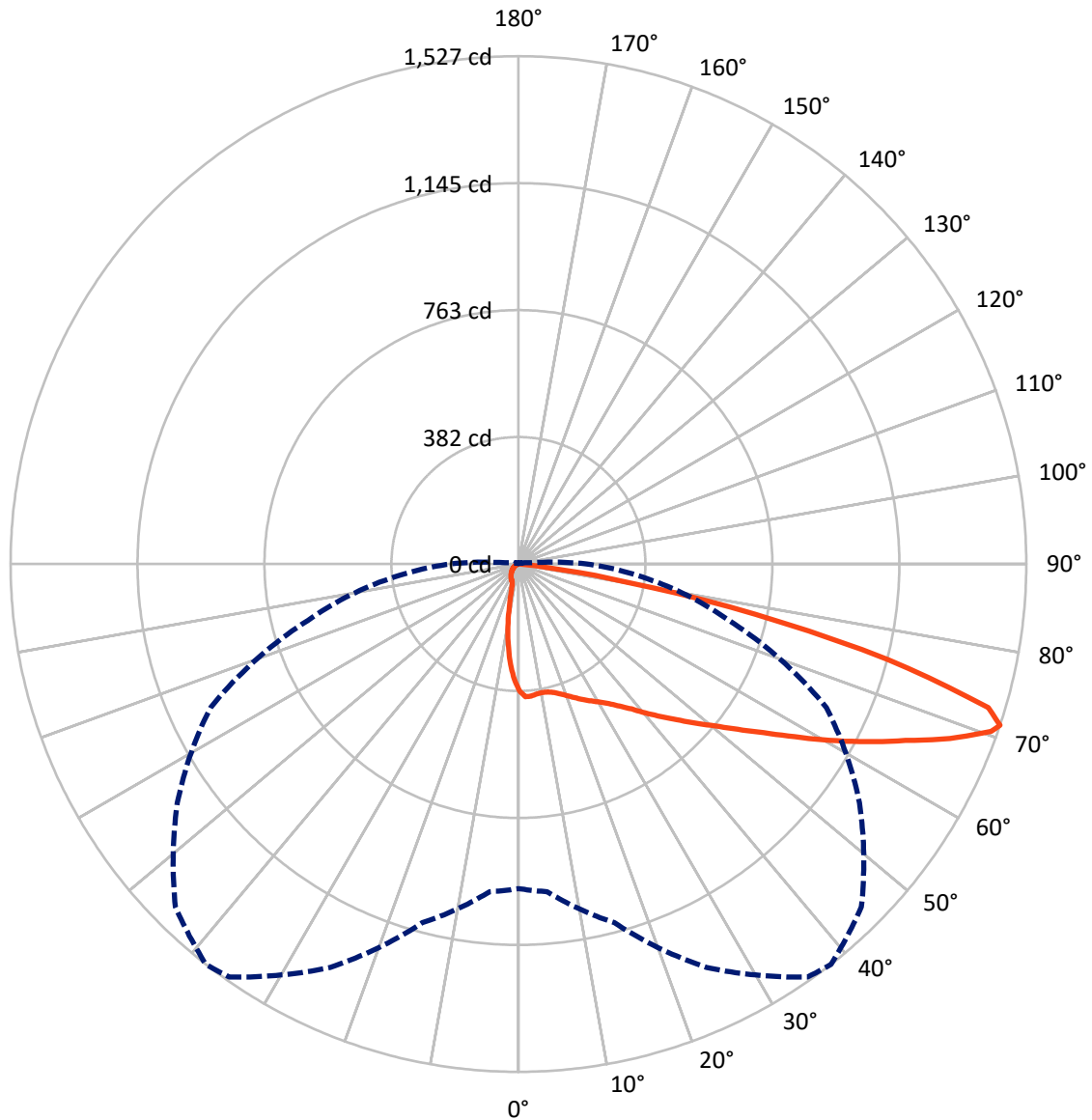


Based on 10 foot mounting height. Maximum calculated value = 3.9 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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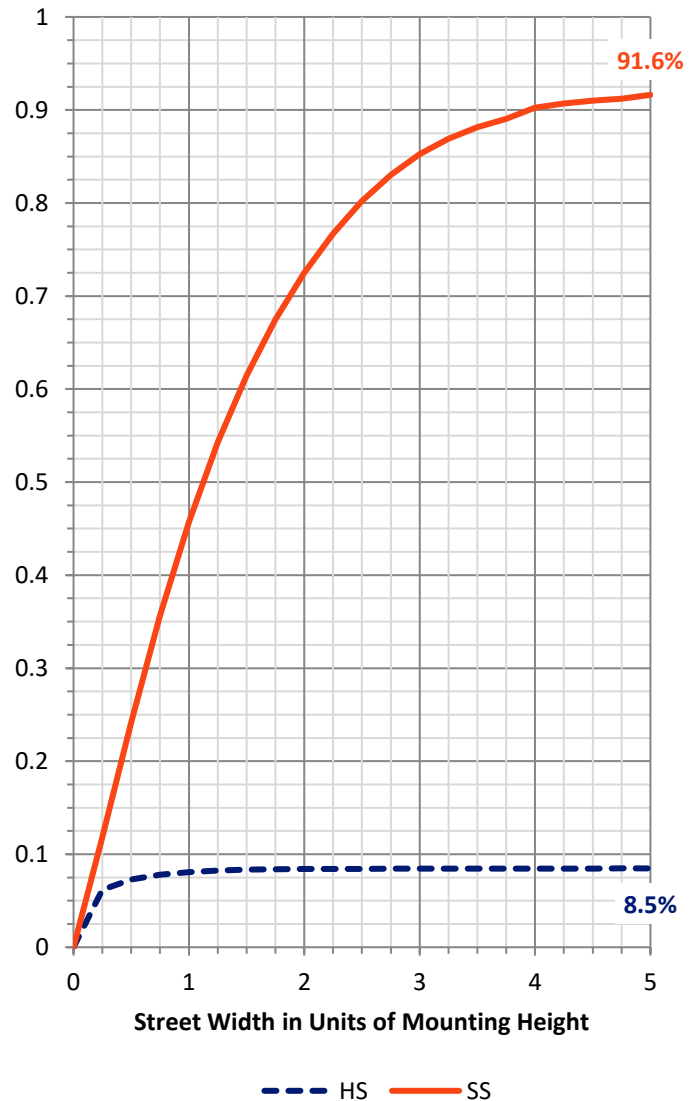
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 176.6    | 0.0    | 176.6  |
|                    | % Fixture | 8.5      | 0.0    | 8.5    |
| <b>Street Side</b> | Lumens    | 1891.4   | 0.0    | 1891.4 |
|                    | % Fixture | 91.5     | 0.0    | 91.5   |
| <b>Total</b>       | Lumens    | 2068.0   | 0.0    | 2068.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 32.2   | 1.6       |
| 10°-20°   | 78.0   | 3.8       |
| 20°-30°   | 125.0  | 6.0       |
| 30°-40°   | 190.2  | 9.2       |
| 40°-50°   | 296.4  | 14.3      |
| 50°-60°   | 433.4  | 21.0      |
| 60°-70°   | 555.9  | 26.9      |
| 70°-80°   | 339.8  | 16.4      |
| 80°-90°   | 17.1   | 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°    | 2068.0 | 100.0     |
| 0°-180°   | 2068.0 | 100.0     |



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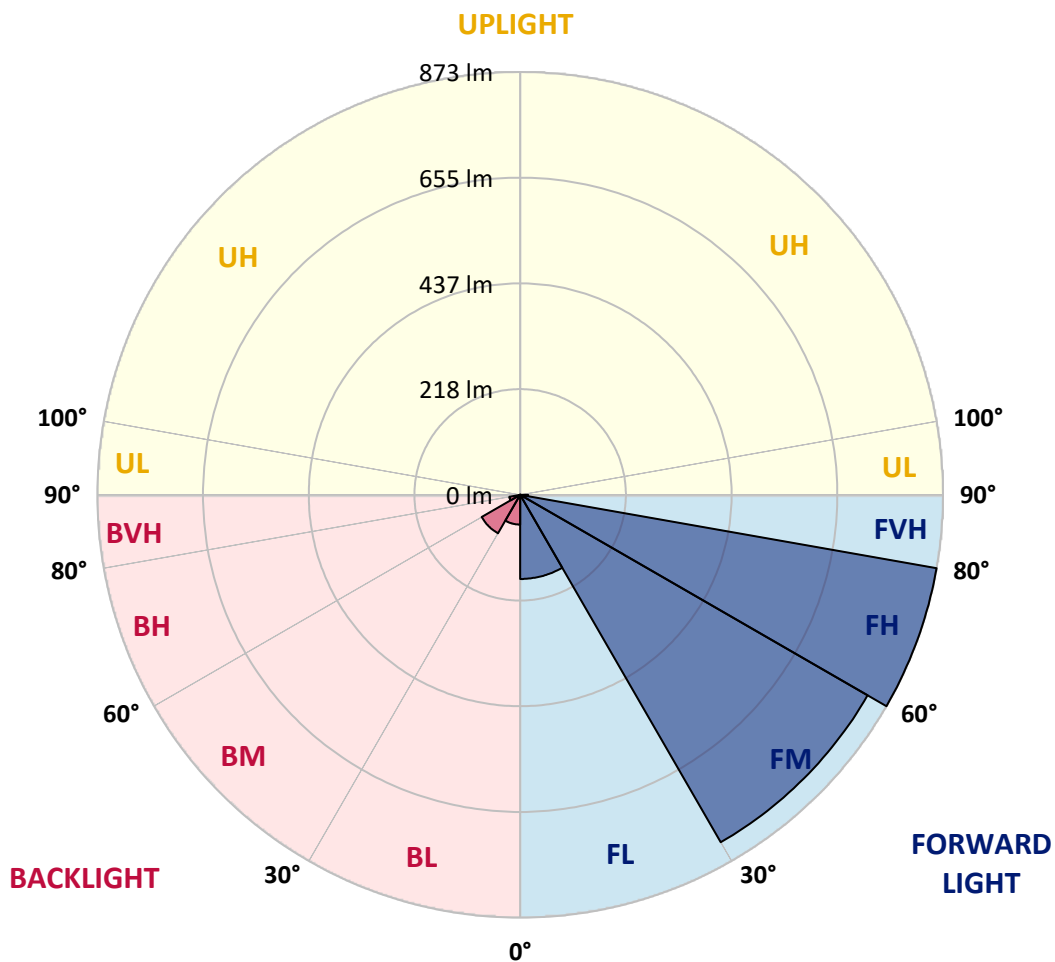
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 173.8  | 8.4       |                         |      |         |
| FM   | (30°-60°)   | 828.3  | 40.1      |                         |      |         |
| FH   | (60°-80°)   | 873.0  | 42.2      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 16.3   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 61.4   | 3.0       | B0/110                  |      |         |
| BM   | (30°-60°)   | 91.7   | 4.4       | B0/220                  |      |         |
| BH   | (60°-80°)   | 22.7   | 1.1       | 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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°     | 15°    | 25°    | 35°    | 38°    | 45°    | 55°    | 65°    | 75°    | 85°   |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| 0°    | 381.2 | 381.2  | 381.2  | 381.2  | 381.2  | 381.2  | 381.2  | 381.2  | 381.2  | 381.2  | 381.2 |
| 2.5°  | 403.8 | 402.7  | 403.8  | 402.7  | 400.6  | 399.5  | 398.1  | 394.1  | 390.6  | 386.3  | 379.8 |
| 5°    | 404.5 | 403.8  | 403.8  | 402.4  | 399.9  | 398.8  | 397.4  | 393.4  | 388.8  | 382.3  | 372.6 |
| 7.5°  | 400.6 | 400.2  | 399.5  | 398.1  | 395.2  | 394.5  | 393.4  | 388.8  | 384.1  | 377.3  | 365.5 |
| 10°   | 394.1 | 394.9  | 394.5  | 394.5  | 393.4  | 392.7  | 392.0  | 386.6  | 381.6  | 373.7  | 361.2 |
| 12.5° | 388.0 | 388.8  | 390.6  | 393.4  | 394.5  | 394.9  | 394.9  | 389.5  | 383.4  | 374.8  | 361.9 |
| 15°   | 384.1 | 385.5  | 390.6  | 396.3  | 399.5  | 400.6  | 401.7  | 395.9  | 388.8  | 379.4  | 365.8 |
| 17.5° | 383.0 | 385.2  | 394.9  | 403.8  | 409.9  | 410.6  | 410.6  | 403.5  | 395.9  | 385.2  | 370.5 |
| 20°   | 386.6 | 389.5  | 402.0  | 414.6  | 422.1  | 422.8  | 421.4  | 412.1  | 403.1  | 391.3  | 374.4 |
| 22.5° | 397.4 | 399.9  | 414.2  | 428.9  | 436.1  | 436.8  | 433.6  | 420.7  | 411.0  | 401.3  | 379.8 |
| 25°   | 416.0 | 417.4  | 432.8  | 446.8  | 450.8  | 451.8  | 446.5  | 431.0  | 419.9  | 411.0  | 387.3 |
| 27.5° | 440.7 | 441.4  | 455.4  | 465.8  | 466.5  | 466.2  | 460.4  | 444.3  | 433.2  | 425.7  | 398.8 |
| 30°   | 466.5 | 467.6  | 479.1  | 485.9  | 483.0  | 481.6  | 476.5  | 459.4  | 449.3  | 443.6  | 415.3 |
| 32.5° | 490.5 | 491.6  | 504.1  | 507.7  | 501.3  | 500.2  | 496.6  | 478.3  | 469.7  | 472.6  | 438.9 |
| 35°   | 514.2 | 514.2  | 528.5  | 530.3  | 524.6  | 524.6  | 524.6  | 502.7  | 501.3  | 510.9  | 471.9 |
| 37.5° | 535.3 | 538.9  | 553.9  | 553.2  | 552.2  | 552.9  | 555.0  | 538.5  | 543.6  | 560.0  | 515.2 |
| 40°   | 553.2 | 557.9  | 578.0  | 579.7  | 584.4  | 588.3  | 591.6  | 583.0  | 594.8  | 621.7  | 570.8 |
| 42.5° | 569.4 | 574.7  | 600.5  | 608.8  | 621.7  | 627.0  | 633.1  | 631.0  | 657.1  | 706.2  | 641.7 |
| 45°   | 590.1 | 595.9  | 622.4  | 642.1  | 660.0  | 667.2  | 680.8  | 690.1  | 733.5  | 789.4  | 718.4 |
| 47.5° | 617.7 | 621.7  | 646.0  | 677.2  | 701.6  | 714.5  | 735.6  | 759.6  | 812.3  | 877.5  | 786.8 |
| 50°   | 655.3 | 655.7  | 674.0  | 714.5  | 750.7  | 764.6  | 801.2  | 832.3  | 898.3  | 955.2  | 836.3 |
| 52.5° | 696.9 | 694.8  | 709.1  | 760.3  | 806.2  | 825.2  | 868.2  | 911.5  | 977.8  | 1011.5 | 858.5 |
| 55°   | 736.3 | 737.4  | 746.4  | 809.1  | 876.1  | 894.3  | 948.8  | 992.9  | 1050.6 | 1045.9 | 870.7 |
| 57.5° | 781.8 | 781.5  | 792.9  | 862.4  | 957.8  | 978.9  | 1035.9 | 1072.1 | 1094.6 | 1070.6 | 872.8 |
| 60°   | 824.8 | 823.8  | 841.3  | 926.2  | 1044.8 | 1076.0 | 1127.2 | 1125.8 | 1138.7 | 1086.4 | 871.0 |
| 62.5° | 863.2 | 865.7  | 896.5  | 1000.4 | 1142.3 | 1176.0 | 1201.8 | 1183.9 | 1187.4 | 1104.7 | 848.8 |
| 65°   | 909.7 | 914.4  | 964.2  | 1090.3 | 1262.7 | 1278.8 | 1288.8 | 1259.8 | 1224.0 | 1090.0 | 781.5 |
| 67.5° | 968.5 | 982.5  | 1052.7 | 1222.9 | 1388.1 | 1399.2 | 1399.6 | 1305.7 | 1222.5 | 1015.8 | 657.1 |
| 70°   | 991.8 | 1006.5 | 1118.3 | 1327.9 | 1493.8 | 1507.8 | 1464.0 | 1298.5 | 1126.2 | 795.4  | 443.6 |
| 71°   | 975.7 | 988.9  | 1116.5 | 1337.9 | 1515.6 | 1526.8 | 1458.3 | 1251.6 | 1021.2 | 655.3  | 343.6 |
| 72.5° | 859.2 | 893.6  | 1047.7 | 1274.9 | 1476.6 | 1476.9 | 1365.5 | 1140.9 | 812.3  | 409.2  | 172.7 |
| 75°   | 464.0 | 505.6  | 767.9  | 970.3  | 1139.1 | 1148.0 | 1050.6 | 792.2  | 393.1  | 106.1  | 41.9  |
| 77.5° | 153.0 | 172.3  | 344.3  | 503.8  | 714.5  | 728.4  | 642.4  | 351.9  | 124.0  | 35.8   | 21.9  |
| 80°   | 96.0  | 98.2   | 116.5  | 211.8  | 317.8  | 329.6  | 264.4  | 142.6  | 55.9   | 19.7   | 15.0  |
| 82.5° | 16.1  | 19.3   | 54.8   | 62.3   | 112.2  | 88.9   | 60.2   | 72.7   | 26.2   | 9.0    | 12.9  |
| 85°   | 0.0   | 0.0    | 0.4    | 0.4    | 1.8    | 0.4    | 0.4    | 14.7   | 1.4    | 1.4    | 6.8   |
| 87.5° | 0.0   | 0.0    | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 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   |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 | 381.2 |
| 2.5°  | 376.9 | 374.1 | 368.3 | 362.2 | 354.7 | 348.3 | 346.1 | 341.5 | 339.3 | 337.5 | 337.5 |
| 5°    | 366.5 | 361.5 | 349.4 | 336.8 | 324.6 | 311.7 | 299.9 | 288.8 | 283.4 | 275.9 | 279.5 |
| 7.5°  | 357.9 | 349.4 | 332.2 | 312.4 | 287.4 | 261.9 | 242.2 | 225.0 | 210.7 | 206.0 | 202.8 |
| 10°   | 351.9 | 341.1 | 316.0 | 285.9 | 249.4 | 213.2 | 182.7 | 154.4 | 137.9 | 127.9 | 127.9 |
| 12.5° | 351.1 | 337.5 | 304.9 | 258.7 | 206.0 | 156.9 | 119.3 | 92.4  | 79.2  | 73.1  | 72.7  |
| 15°   | 353.7 | 337.2 | 294.9 | 234.0 | 166.3 | 108.9 | 74.5  | 62.7  | 59.5  | 58.8  | 58.8  |
| 17.5° | 355.8 | 336.8 | 283.1 | 206.0 | 122.5 | 71.7  | 59.1  | 57.0  | 56.3  | 55.9  | 55.9  |
| 20°   | 357.9 | 335.0 | 269.4 | 174.5 | 86.7  | 58.4  | 55.2  | 54.1  | 53.7  | 53.4  | 53.4  |
| 22.5° | 360.8 | 333.2 | 255.5 | 138.7 | 64.1  | 54.5  | 52.7  | 51.6  | 51.2  | 51.2  | 51.2  |
| 25°   | 364.8 | 332.2 | 238.3 | 105.0 | 55.2  | 51.6  | 49.8  | 49.1  | 49.1  | 48.7  | 48.7  |
| 27.5° | 372.3 | 333.2 | 219.6 | 75.2  | 51.6  | 48.7  | 47.7  | 46.9  | 46.9  | 46.6  | 46.6  |
| 30°   | 382.7 | 336.5 | 196.4 | 58.8  | 48.7  | 45.9  | 44.8  | 44.4  | 44.1  | 44.1  | 44.1  |
| 32.5° | 397.4 | 341.5 | 170.9 | 50.2  | 45.1  | 43.0  | 41.9  | 41.6  | 41.6  | 41.6  | 41.2  |
| 35°   | 419.9 | 351.9 | 139.7 | 45.9  | 41.9  | 39.8  | 38.7  | 38.7  | 38.7  | 38.3  | 38.7  |
| 37.5° | 454.3 | 368.7 | 108.2 | 42.3  | 38.3  | 36.5  | 35.8  | 35.5  | 35.5  | 35.5  | 35.5  |
| 40°   | 497.7 | 395.9 | 78.8  | 39.1  | 35.1  | 33.3  | 32.6  | 32.2  | 31.9  | 31.9  | 31.9  |
| 42.5° | 553.6 | 426.0 | 57.3  | 35.5  | 32.2  | 30.5  | 29.7  | 29.0  | 28.3  | 27.9  | 27.9  |
| 45°   | 611.6 | 461.9 | 44.8  | 32.6  | 29.4  | 27.9  | 27.2  | 26.2  | 25.1  | 24.0  | 24.0  |
| 47.5° | 667.9 | 489.4 | 38.3  | 29.4  | 26.9  | 25.4  | 24.7  | 23.3  | 21.5  | 20.4  | 20.4  |
| 50°   | 703.4 | 498.0 | 34.4  | 26.5  | 24.4  | 23.3  | 22.2  | 20.4  | 17.9  | 16.8  | 16.8  |
| 52.5° | 714.5 | 482.3 | 30.8  | 24.0  | 22.2  | 21.1  | 19.7  | 17.2  | 14.7  | 13.3  | 13.3  |
| 55°   | 718.8 | 451.8 | 27.2  | 22.2  | 20.1  | 18.6  | 16.8  | 14.3  | 11.8  | 10.4  | 10.4  |
| 57.5° | 713.4 | 408.8 | 24.4  | 20.1  | 17.9  | 16.5  | 14.3  | 11.5  | 9.0   | 7.9   | 7.9   |
| 60°   | 695.1 | 346.5 | 21.9  | 17.9  | 15.8  | 14.0  | 11.8  | 9.0   | 6.8   | 5.4   | 5.7   |
| 62.5° | 645.7 | 268.0 | 19.0  | 15.0  | 13.6  | 11.8  | 9.3   | 6.8   | 4.3   | 3.6   | 3.6   |
| 65°   | 566.8 | 185.6 | 16.1  | 12.5  | 11.5  | 9.7   | 7.2   | 4.7   | 2.5   | 2.1   | 2.1   |
| 67.5° | 460.4 | 120.0 | 12.5  | 10.4  | 9.7   | 7.9   | 5.4   | 2.9   | 1.4   | 1.4   | 1.1   |
| 70°   | 289.2 | 59.5  | 10.0  | 7.9   | 7.9   | 6.1   | 3.9   | 1.8   | 1.1   | 1.1   | 1.1   |
| 71°   | 204.6 | 40.5  | 9.0   | 7.2   | 7.2   | 5.7   | 3.6   | 1.4   | 1.1   | 1.1   | 1.1   |
| 72.5° | 92.4  | 25.4  | 7.5   | 6.4   | 6.1   | 4.7   | 3.2   | 1.4   | 1.4   | 1.4   | 1.4   |
| 75°   | 29.0  | 14.0  | 5.4   | 5.0   | 5.0   | 3.9   | 2.9   | 1.8   | 1.8   | 1.8   | 1.8   |
| 77.5° | 19.3  | 10.7  | 3.6   | 3.2   | 3.9   | 3.9   | 2.9   | 2.1   | 2.1   | 2.1   | 2.1   |
| 80°   | 15.8  | 5.7   | 2.1   | 2.1   | 2.9   | 3.6   | 2.9   | 2.1   | 2.5   | 2.1   | 2.1   |
| 82.5° | 15.4  | 2.9   | 0.7   | 1.1   | 1.8   | 2.1   | 2.1   | 1.8   | 2.1   | 2.1   | 2.1   |
| 85°   | 6.4   | 0.7   | 0.4   | 0.7   | 0.7   | 1.1   | 1.1   | 1.4   | 1.8   | 1.8   | 1.8   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.4   | 0.4   | 0.7   | 0.7   | 1.1   | 1.4   | 1.4   |
| 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)