

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: McGRAW-EDISON

Report Number: P271572

Luminaire Tested: **ISS-AF-450-LED-E1-SL2-7027-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P271572  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29761)-DOWNLIGHT AND  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-AF-450-LED-E1-SL2-7027-ULG  
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II W/SPILL CONTROL, WITH UPLIGHT  
GLOW  
Light Source: (16) 2700K CCT, 70 CRI LEDs and (1) UPLIGHT LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3861.3 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U5 - G1

Input Watts (W): 42.01  
Input Voltage (V): 120  
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

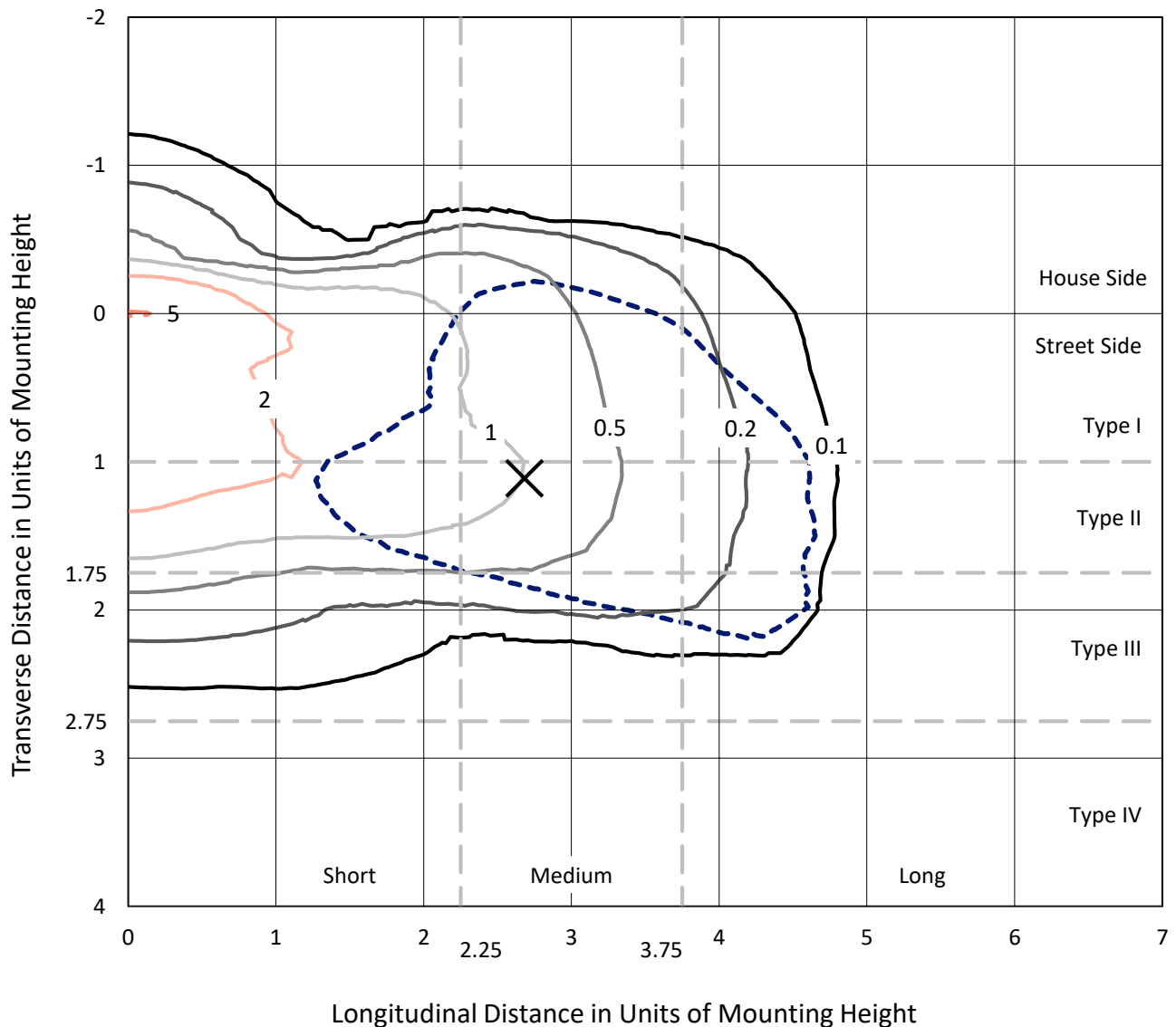


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

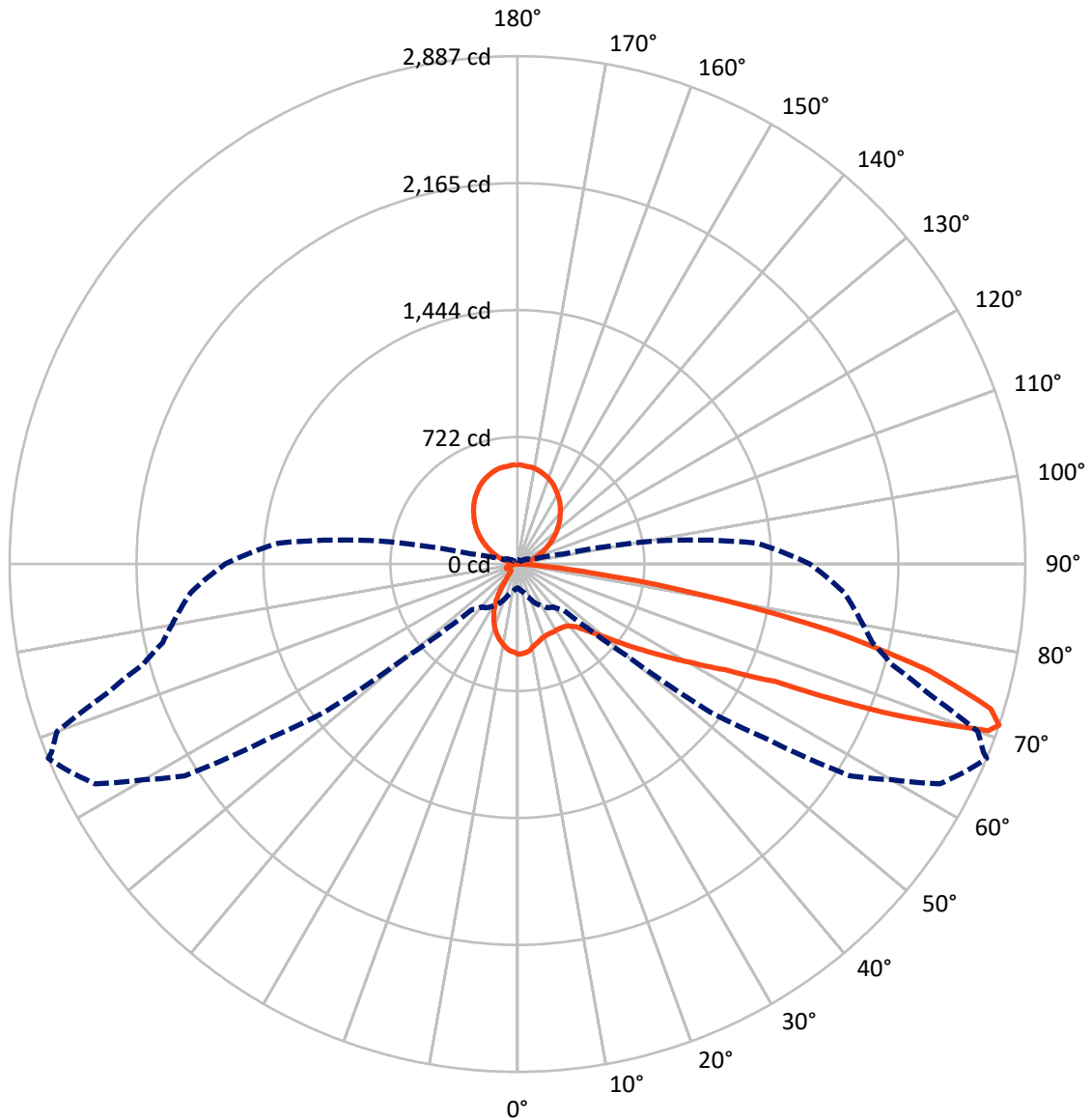


Based on 10 foot mounting height. Maximum calculated value = 5.1 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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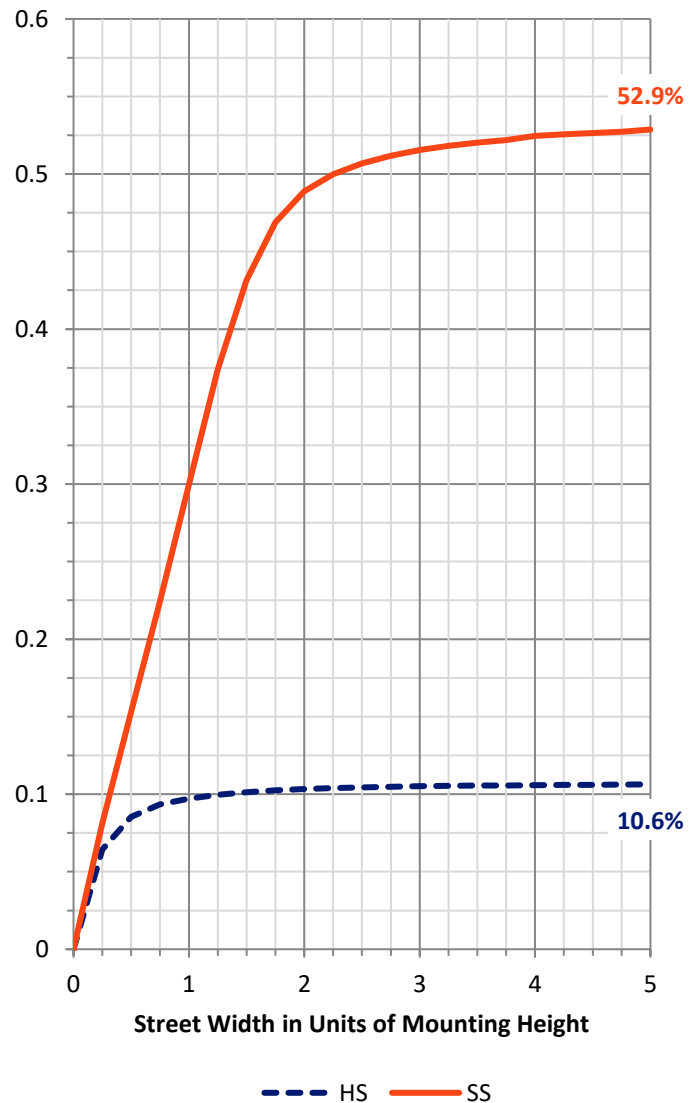
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 414.8    | 699.9  | 1114.7 |
|                    | % Fixture | 10.7     | 18.1   | 28.9   |
| <b>Street Side</b> | Lumens    | 2046.8   | 699.9  | 2746.6 |
|                    | % Fixture | 53.0     | 18.1   | 71.1   |
| <b>Total</b>       | Lumens    | 2461.5   | 1399.8 | 3861.3 |
|                    | % Fixture | 63.7     | 36.3   | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 44.8   | 1.2       |
| 10°-20°   | 107.1  | 2.8       |
| 20°-30°   | 145.6  | 3.8       |
| 30°-40°   | 199.0  | 5.2       |
| 40°-50°   | 299.9  | 7.8       |
| 50°-60°   | 475.3  | 12.3      |
| 60°-70°   | 629.2  | 16.3      |
| 70°-80°   | 501.3  | 13.0      |
| 80°-90°   | 59.4   | 1.5       |
| 90°-100°  | 4.7    | 0.1       |
| 100°-110° | 67.7   | 1.8       |
| 110°-120° | 150.2  | 3.9       |
| 120°-130° | 219.7  | 5.7       |
| 130°-140° | 260.7  | 6.8       |
| 140°-150° | 264.3  | 6.8       |
| 150°-160° | 226.8  | 5.9       |
| 160°-170° | 152.2  | 3.9       |
| 170°-180° | 53.3   | 1.4       |
| 0°-90°    | 2461.5 | 63.7      |
| 0°-180°   | 3861.3 | 100.0     |



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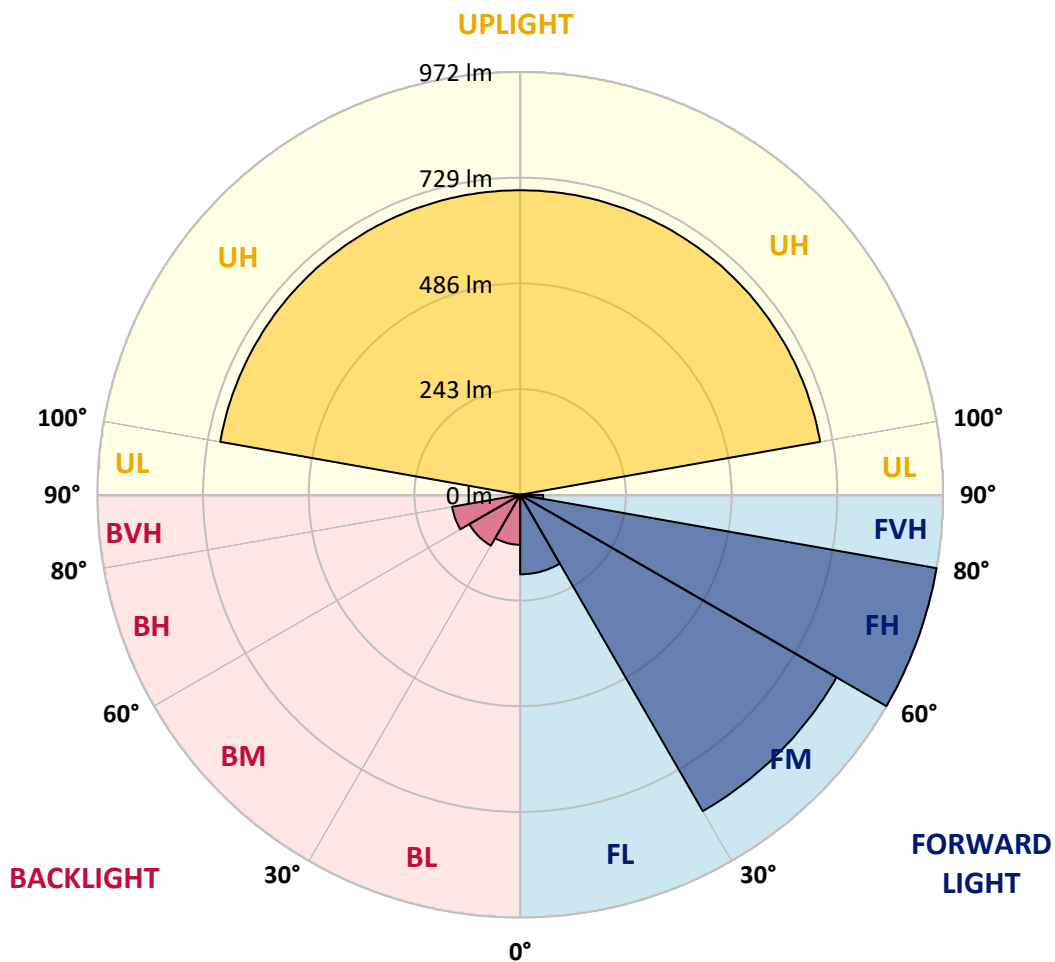
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |         |         |
|------|-------------|--------|-----------|-------------------------|---------|---------|
|      |             |        |           | B                       | U       | G       |
| FL   | (0°-30°)    | 182.6  | 4.7       |                         |         |         |
| FM   | (30°-60°)   | 839.4  | 21.7      |                         |         |         |
| FH   | (60°-80°)   | 971.7  | 25.2      |                         |         | G1/1800 |
| FVH  | (80°-90°)   | 53.0   | 1.4       |                         |         | G1/100  |
| BL   | (0°-30°)    | 114.8  | 3.0       | B1/500                  |         |         |
| BM   | (30°-60°)   | 134.8  | 3.5       | B0/220                  |         |         |
| BH   | (60°-80°)   | 158.8  | 4.1       | B1/500                  |         | G1/500  |
| BVH  | (80°-90°)   | 6.4    | 0.2       |                         |         | G0/10   |
| UL   | (90°-100°)  | 4.7    | 0.1       |                         | U1/10   |         |
| UH   | (100°-180°) | 699.9  | 18.1      |                         | U4/1000 |         |

**BUG Rating: B1-U5-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 5°    | 15°   | 25°   | 35°    | 37.5°  | 40°    | 42.5°  | 45°    | 47.5°  | 50°    |
|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 512.9 | 512.9 | 512.9 | 512.9 | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  |
| 2.5°   | 503.5 | 501.8 | 501.8 | 504.4 | 508.7  | 505.3  | 507.8  | 507.8  | 508.7  | 511.2  | 512.1  |
| 5°     | 466.6 | 463.2 | 466.6 | 470.0 | 479.4  | 477.7  | 480.3  | 482.9  | 488.0  | 488.9  | 495.8  |
| 7.5°   | 433.1 | 431.4 | 433.9 | 440.8 | 452.8  | 449.4  | 452.8  | 456.2  | 462.3  | 464.9  | 471.7  |
| 10°    | 407.3 | 404.7 | 408.1 | 413.3 | 425.3  | 424.4  | 426.2  | 430.5  | 437.4  | 439.1  | 447.6  |
| 12.5°  | 388.3 | 388.3 | 390.1 | 397.1 | 407.3  | 406.4  | 411.5  | 414.2  | 420.1  | 421.8  | 431.4  |
| 15°    | 378.9 | 376.3 | 379.7 | 385.8 | 396.2  | 396.2  | 399.6  | 402.1  | 410.7  | 411.5  | 420.1  |
| 17.5°  | 370.3 | 371.2 | 372.1 | 378.9 | 388.3  | 386.6  | 390.9  | 392.6  | 402.1  | 400.5  | 410.7  |
| 20°    | 370.3 | 372.1 | 371.2 | 375.5 | 382.4  | 378.9  | 384.0  | 384.9  | 395.3  | 392.6  | 403.9  |
| 22.5°  | 380.6 | 382.4 | 379.7 | 378.9 | 381.5  | 378.9  | 381.5  | 383.1  | 390.9  | 389.2  | 399.6  |
| 25°    | 398.7 | 402.1 | 398.7 | 392.6 | 390.1  | 383.1  | 384.9  | 387.5  | 393.5  | 389.2  | 398.7  |
| 27.5°  | 427.1 | 429.6 | 423.6 | 417.6 | 405.6  | 397.8  | 395.3  | 394.4  | 401.3  | 394.4  | 402.1  |
| 30°    | 459.8 | 463.2 | 458.0 | 446.7 | 429.6  | 416.7  | 411.5  | 409.0  | 413.3  | 403.0  | 410.7  |
| 32.5°  | 495.0 | 498.4 | 495.0 | 486.3 | 463.2  | 444.2  | 437.4  | 431.4  | 434.8  | 421.0  | 424.4  |
| 35°    | 531.0 | 534.4 | 537.8 | 532.8 | 502.6  | 481.1  | 470.0  | 464.9  | 464.0  | 446.7  | 447.6  |
| 37.5°  | 562.8 | 566.2 | 577.4 | 582.6 | 555.1  | 525.9  | 515.5  | 504.4  | 505.3  | 481.1  | 481.1  |
| 40°    | 601.4 | 605.7 | 620.4 | 632.4 | 614.4  | 579.0  | 567.1  | 555.1  | 555.1  | 523.3  | 524.1  |
| 42.5°  | 653.9 | 659.1 | 668.5 | 684.8 | 678.8  | 642.6  | 629.8  | 613.5  | 615.2  | 577.4  | 576.5  |
| 45°    | 727.8 | 731.2 | 731.2 | 741.6 | 742.4  | 708.0  | 699.4  | 683.1  | 686.6  | 638.4  | 641.0  |
| 47.5°  | 823.9 | 819.7 | 802.5 | 808.6 | 815.4  | 779.3  | 771.6  | 761.2  | 765.5  | 714.1  | 719.1  |
| 50°    | 913.4 | 909.9 | 874.7 | 876.4 | 901.3  | 864.3  | 861.8  | 848.9  | 855.0  | 803.4  | 811.1  |
| 52.5°  | 946.8 | 940.9 | 905.6 | 924.5 | 994.2  | 973.5  | 977.9  | 971.8  | 975.2  | 920.2  | 918.4  |
| 55°    | 909.1 | 909.1 | 887.5 | 921.9 | 1063.8 | 1074.9 | 1110.1 | 1123.9 | 1138.5 | 1083.4 | 1071.5 |
| 57.5°  | 804.3 | 811.1 | 814.5 | 875.6 | 1052.5 | 1100.6 | 1167.7 | 1226.2 | 1300.8 | 1297.4 | 1315.5 |
| 60°    | 630.7 | 642.6 | 662.5 | 762.1 | 1004.5 | 1083.4 | 1170.3 | 1257.9 | 1361.0 | 1427.1 | 1525.1 |
| 62.5°  | 442.5 | 452.8 | 469.2 | 537.8 | 864.3  | 1000.2 | 1125.6 | 1260.5 | 1391.9 | 1495.9 | 1624.9 |
| 65°    | 300.8 | 311.0 | 345.4 | 383.1 | 521.6  | 719.1  | 910.8  | 1134.2 | 1334.4 | 1527.7 | 1701.3 |
| 67.5°  | 216.5 | 222.5 | 249.2 | 312.8 | 347.1  | 383.1  | 454.5  | 717.5  | 964.0  | 1353.3 | 1606.8 |
| 70°    | 162.4 | 168.4 | 192.5 | 262.9 | 305.1  | 314.5  | 331.7  | 378.1  | 440.8  | 760.4  | 1093.0 |
| 71°    | 135.7 | 144.4 | 173.6 | 247.4 | 303.3  | 311.0  | 318.8  | 346.3  | 366.9  | 537.8  | 811.1  |
| 72.5°  | 95.4  | 101.4 | 128.9 | 228.6 | 291.3  | 309.4  | 327.3  | 326.5  | 324.7  | 366.9  | 490.7  |
| 75°    | 61.1  | 61.1  | 61.1  | 128.9 | 311.0  | 299.9  | 306.7  | 343.7  | 324.7  | 308.5  | 323.1  |
| 77.5°  | 48.1  | 47.3  | 44.6  | 64.5  | 243.1  | 304.2  | 322.2  | 331.7  | 349.7  | 322.2  | 307.6  |
| 80°    | 36.1  | 35.2  | 35.2  | 40.3  | 112.6  | 196.8  | 272.4  | 302.5  | 315.3  | 342.8  | 312.8  |
| 82.5°  | 19.0  | 19.0  | 20.6  | 24.1  | 42.1   | 68.7   | 140.9  | 232.0  | 259.5  | 261.1  | 263.8  |
| 85°    | 6.0   | 5.2   | 6.8   | 11.2  | 18.1   | 22.4   | 39.5   | 93.6   | 139.1  | 168.4  | 177.9  |
| 87.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 2.5    | 3.4    | 6.0    | 7.7    |
| 90°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 1.0   | 1.0   | 1.0   | 1.0   | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 97.5°  | 2.0   | 2.0   | 2.0   | 3.0   | 4.0    | 5.1    | 6.4    | 7.6    | 8.8    | 9.8    | 10.8   |
| 100°   | 7.8   | 7.8   | 9.8   | 13.7  | 21.6   | 23.5   | 25.5   | 27.5   | 29.5   | 29.9   | 30.5   |
| 102.5° | 27.5  | 27.5  | 31.4  | 37.3  | 44.2   | 45.4   | 46.6   | 47.9   | 49.0   | 49.2   | 49.6   |
| 105°   | 53.0  | 53.0  | 55.0  | 59.8  | 64.8   | 65.8   | 66.7   | 67.7   | 68.7   | 68.9   | 69.2   |
| 107.5° | 76.5  | 75.5  | 78.5  | 82.5  | 86.3   | 87.1   | 87.9   | 88.6   | 89.3   | 89.8   | 90.3   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 15°   | 25°   | 35°   | 37.5° | 40°   | 42.5° | 45°   | 47.5° | 50°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110°   | 99.2  | 100.1 | 101.1 | 104.0 | 108.0 | 108.4 | 109.0 | 109.4 | 110.0 | 110.4 | 110.9 |
| 112.5° | 121.7 | 121.7 | 123.7 | 126.6 | 129.5 | 130.1 | 130.5 | 131.1 | 131.5 | 132.1 | 132.5 |
| 115°   | 143.3 | 144.3 | 146.2 | 148.2 | 151.2 | 151.6 | 152.2 | 152.6 | 153.1 | 153.6 | 154.1 |
| 117.5° | 165.8 | 166.8 | 168.8 | 170.8 | 173.7 | 174.2 | 174.7 | 175.2 | 175.7 | 175.9 | 176.2 |
| 120°   | 189.5 | 191.4 | 192.3 | 194.3 | 197.3 | 197.4 | 197.8 | 198.1 | 198.3 | 198.7 | 199.2 |
| 122.5° | 215.0 | 216.0 | 216.9 | 218.8 | 221.8 | 222.0 | 222.3 | 222.6 | 222.8 | 223.0 | 223.3 |
| 125°   | 239.5 | 241.5 | 242.5 | 243.4 | 246.3 | 246.6 | 246.9 | 247.1 | 247.3 | 247.6 | 247.8 |
| 127.5° | 262.0 | 264.0 | 265.0 | 267.0 | 269.0 | 269.4 | 269.9 | 270.4 | 270.9 | 271.4 | 271.8 |
| 130°   | 284.7 | 286.6 | 287.5 | 288.5 | 292.5 | 292.7 | 292.9 | 293.3 | 293.5 | 293.9 | 294.5 |
| 132.5° | 307.2 | 308.2 | 311.2 | 312.1 | 315.0 | 315.2 | 315.6 | 315.8 | 316.0 | 316.8 | 317.6 |
| 135°   | 329.8 | 330.8 | 332.7 | 334.7 | 338.6 | 338.6 | 338.6 | 338.6 | 338.6 | 339.4 | 340.1 |
| 137.5° | 352.3 | 353.3 | 356.3 | 357.3 | 360.2 | 360.2 | 360.2 | 360.2 | 360.2 | 360.7 | 361.2 |
| 140°   | 375.0 | 375.9 | 377.8 | 378.8 | 380.8 | 381.0 | 381.3 | 381.6 | 381.8 | 382.0 | 382.3 |
| 142.5° | 396.5 | 398.5 | 400.5 | 399.5 | 402.4 | 402.4 | 402.4 | 402.4 | 402.4 | 402.9 | 403.4 |
| 145°   | 417.2 | 418.1 | 420.0 | 420.0 | 423.0 | 423.2 | 423.6 | 423.8 | 424.0 | 424.4 | 425.0 |
| 147.5° | 435.8 | 435.8 | 438.7 | 439.7 | 443.7 | 443.9 | 444.1 | 444.4 | 444.6 | 444.8 | 445.1 |
| 150°   | 452.5 | 453.5 | 455.4 | 456.4 | 460.3 | 460.5 | 460.8 | 461.1 | 461.3 | 461.5 | 461.8 |
| 152.5° | 470.2 | 471.1 | 474.0 | 473.0 | 476.0 | 476.2 | 476.6 | 476.8 | 477.0 | 477.2 | 477.4 |
| 155°   | 489.8 | 490.7 | 492.7 | 491.7 | 493.7 | 493.7 | 493.7 | 493.7 | 493.7 | 493.9 | 494.2 |
| 157.5° | 503.5 | 505.5 | 507.5 | 506.5 | 509.4 | 509.4 | 509.4 | 509.4 | 509.4 | 509.4 | 509.4 |
| 160°   | 515.3 | 517.2 | 519.2 | 519.2 | 522.2 | 522.2 | 522.2 | 522.2 | 522.2 | 522.2 | 522.2 |
| 162.5° | 525.1 | 526.0 | 529.0 | 528.0 | 531.0 | 531.0 | 531.0 | 531.0 | 531.0 | 531.2 | 531.4 |
| 165°   | 535.9 | 536.8 | 538.8 | 537.8 | 541.8 | 541.8 | 541.8 | 541.8 | 541.8 | 541.9 | 542.3 |
| 167.5° | 544.7 | 545.7 | 548.7 | 547.7 | 550.6 | 550.4 | 550.1 | 549.9 | 549.7 | 549.7 | 549.7 |
| 170°   | 551.6 | 552.5 | 555.5 | 554.5 | 556.5 | 556.3 | 556.1 | 555.7 | 555.5 | 555.3 | 555.1 |
| 172.5° | 554.5 | 555.5 | 558.5 | 556.5 | 558.5 | 558.3 | 557.9 | 557.7 | 557.5 | 557.7 | 557.9 |
| 175°   | 556.5 | 558.5 | 559.5 | 558.5 | 561.4 | 561.4 | 561.4 | 561.4 | 561.4 | 561.6 | 561.9 |
| 177.5° | 561.4 | 562.4 | 564.3 | 563.3 | 567.3 | 567.1 | 566.8 | 566.5 | 566.3 | 566.3 | 566.3 |
| 180°   | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 |





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**CANDELA DISTRIBUTION (continued):**

|        | 52.5°  | 55°    | 57.5°  | 60°    | 62.5°  | 65°    | 67.5°  | 68°    | 70°    | 72.5°  | 75°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  |
| 2.5°   | 509.5  | 512.9  | 510.3  | 513.8  | 509.5  | 514.7  | 510.3  | 512.9  | 513.8  | 510.3  | 514.7  |
| 5°     | 491.6  | 501.8  | 498.4  | 506.0  | 502.6  | 509.5  | 506.0  | 512.9  | 512.9  | 510.3  | 516.3  |
| 7.5°   | 469.2  | 479.4  | 480.3  | 488.0  | 488.0  | 496.7  | 496.7  | 503.5  | 506.9  | 506.9  | 515.5  |
| 10°    | 446.7  | 456.2  | 458.0  | 466.6  | 468.3  | 478.5  | 478.5  | 488.0  | 495.0  | 497.5  | 507.8  |
| 12.5°  | 429.6  | 441.7  | 441.7  | 451.1  | 449.4  | 464.9  | 466.6  | 475.1  | 482.0  | 488.0  | 501.8  |
| 15°    | 419.3  | 430.5  | 430.5  | 439.9  | 438.2  | 453.6  | 456.2  | 464.9  | 475.1  | 478.5  | 497.5  |
| 17.5°  | 409.0  | 420.1  | 417.6  | 430.5  | 429.6  | 446.7  | 445.1  | 458.0  | 466.6  | 471.7  | 493.2  |
| 20°    | 400.5  | 413.3  | 411.5  | 424.4  | 421.0  | 439.9  | 439.9  | 452.8  | 461.4  | 465.7  | 490.7  |
| 22.5°  | 396.2  | 409.9  | 406.4  | 419.3  | 416.7  | 435.6  | 435.6  | 448.5  | 458.0  | 464.9  | 489.8  |
| 25°    | 396.2  | 408.1  | 404.7  | 419.3  | 414.9  | 435.6  | 434.8  | 447.6  | 457.1  | 463.2  | 490.7  |
| 27.5°  | 397.8  | 409.9  | 407.3  | 421.0  | 417.6  | 435.6  | 437.4  | 448.5  | 458.0  | 464.9  | 492.3  |
| 30°    | 403.9  | 414.9  | 409.0  | 421.8  | 419.3  | 436.5  | 435.6  | 447.6  | 457.1  | 465.7  | 492.3  |
| 32.5°  | 416.7  | 422.7  | 414.9  | 426.2  | 421.0  | 438.2  | 438.2  | 446.7  | 458.0  | 468.3  | 492.3  |
| 35°    | 434.8  | 439.1  | 427.1  | 434.8  | 425.3  | 442.5  | 441.7  | 451.1  | 459.8  | 468.3  | 494.1  |
| 37.5°  | 460.5  | 465.7  | 446.7  | 453.6  | 438.2  | 451.9  | 448.5  | 459.8  | 468.3  | 473.5  | 502.6  |
| 40°    | 499.2  | 501.0  | 476.0  | 481.1  | 459.8  | 471.7  | 463.2  | 478.5  | 482.9  | 486.3  | 515.5  |
| 42.5°  | 546.5  | 548.1  | 516.3  | 519.8  | 492.3  | 502.6  | 488.0  | 504.4  | 510.3  | 509.5  | 541.3  |
| 45°    | 604.9  | 605.7  | 569.6  | 572.2  | 540.5  | 549.0  | 531.0  | 544.7  | 549.0  | 546.5  | 579.0  |
| 47.5°  | 668.5  | 675.3  | 635.0  | 638.4  | 604.9  | 609.2  | 586.9  | 602.3  | 602.3  | 599.8  | 633.2  |
| 50°    | 752.7  | 763.0  | 715.7  | 720.9  | 682.3  | 685.7  | 659.9  | 676.2  | 674.4  | 667.6  | 705.3  |
| 52.5°  | 857.5  | 867.0  | 817.1  | 823.9  | 782.7  | 784.5  | 752.7  | 771.6  | 766.4  | 755.3  | 799.1  |
| 55°    | 985.5  | 986.4  | 940.0  | 946.0  | 904.8  | 902.2  | 862.6  | 885.9  | 878.1  | 862.6  | 903.1  |
| 57.5°  | 1191.0 | 1166.0 | 1089.6 | 1087.8 | 1043.1 | 1039.7 | 988.9  | 1017.3 | 1004.5 | 971.8  | 1025.1 |
| 60°    | 1521.7 | 1529.5 | 1334.4 | 1304.2 | 1221.0 | 1205.4 | 1138.5 | 1171.1 | 1155.7 | 1102.4 | 1154.8 |
| 62.5°  | 1708.1 | 1831.0 | 1819.0 | 1710.7 | 1495.9 | 1437.5 | 1324.1 | 1362.7 | 1322.3 | 1244.2 | 1293.1 |
| 65°    | 1846.5 | 2013.2 | 2109.4 | 2213.3 | 2117.1 | 1878.3 | 1610.2 | 1664.3 | 1565.6 | 1416.9 | 1464.1 |
| 67.5°  | 1898.0 | 2099.1 | 2301.9 | 2449.7 | 2550.2 | 2568.3 | 2258.1 | 2272.6 | 2029.5 | 1732.2 | 1738.2 |
| 70°    | 1628.3 | 1924.7 | 2321.6 | 2509.0 | 2708.3 | 2806.2 | 2838.9 | 2823.5 | 2666.2 | 2245.1 | 2084.4 |
| 71°    | 1380.0 | 1739.1 | 2242.6 | 2451.4 | 2706.5 | 2801.1 | 2887.1 | 2857.8 | 2784.7 | 2448.8 | 2202.3 |
| 72.5°  | 934.9  | 1385.9 | 2011.5 | 2276.0 | 2616.3 | 2685.1 | 2814.0 | 2762.4 | 2746.9 | 2601.0 | 2312.1 |
| 75°    | 439.9  | 690.9  | 1308.7 | 1709.0 | 2214.2 | 2280.3 | 2415.4 | 2351.8 | 2311.2 | 2361.1 | 2199.6 |
| 77.5°  | 323.9  | 377.2  | 718.4  | 1062.0 | 1610.2 | 1703.8 | 1819.9 | 1741.6 | 1690.1 | 1739.9 | 1627.4 |
| 80°    | 294.7  | 296.4  | 372.1  | 560.3  | 960.6  | 1016.4 | 1060.3 | 996.7  | 918.4  | 915.0  | 811.1  |
| 82.5°  | 271.5  | 256.9  | 241.5  | 296.4  | 492.3  | 468.3  | 433.1  | 401.3  | 311.9  | 250.1  | 180.4  |
| 85°    | 172.7  | 189.0  | 171.8  | 162.4  | 195.9  | 161.5  | 128.0  | 122.9  | 86.8   | 58.4   | 54.2   |
| 87.5°  | 12.0   | 13.7   | 16.3   | 19.0   | 23.2   | 19.0   | 12.0   | 14.6   | 8.6    | 0.0    | 4.3    |
| 90°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 97.5°  | 11.8   | 12.8   | 11.3   | 9.8    | 8.4    | 6.8    | 6.4    | 6.3    | 5.9    | 5.4    | 4.9    |
| 100°   | 30.9   | 31.4   | 30.9   | 30.5   | 29.9   | 29.5   | 28.7   | 28.6   | 27.9   | 27.3   | 26.5   |
| 102.5° | 49.9   | 50.0   | 49.9   | 49.6   | 49.2   | 49.0   | 48.6   | 48.5   | 48.1   | 47.6   | 47.1   |
| 105°   | 69.5   | 69.7   | 69.7   | 69.7   | 69.7   | 69.7   | 69.2   | 69.1   | 68.7   | 68.2   | 67.7   |
| 107.5° | 90.8   | 91.3   | 91.1   | 90.8   | 90.5   | 90.3   | 90.1   | 90.0   | 89.8   | 89.5   | 89.3   |



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**CANDELA DISTRIBUTION (continued):**

|        | 52.5° | 55°   | 57.5° | 60°   | 62.5° | 65°   | 67.5° | 68°   | 70°   | 72.5° | 75°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110°   | 111.4 | 111.9 | 111.9 | 111.9 | 111.9 | 111.9 | 111.7 | 111.6 | 111.4 | 111.1 | 110.9 |
| 112.5° | 132.9 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.3 | 133.2 | 132.9 | 132.7 | 132.5 |
| 115°   | 154.6 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 |
| 117.5° | 176.4 | 176.7 | 176.9 | 177.1 | 177.4 | 177.7 | 177.4 | 177.3 | 177.1 | 176.9 | 176.7 |
| 120°   | 199.7 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 |
| 122.5° | 223.6 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.9 | 224.0 | 224.3 | 224.6 | 224.8 |
| 125°   | 248.1 | 248.3 | 248.5 | 248.8 | 249.1 | 249.3 | 249.3 | 249.3 | 249.3 | 249.3 | 249.3 |
| 127.5° | 272.4 | 272.8 | 272.6 | 272.4 | 272.1 | 271.8 | 272.1 | 272.2 | 272.4 | 272.6 | 272.8 |
| 130°   | 294.9 | 295.5 | 295.5 | 295.5 | 295.5 | 295.5 | 295.6 | 295.7 | 295.9 | 296.2 | 296.4 |
| 132.5° | 318.2 | 319.0 | 319.0 | 319.0 | 319.0 | 319.0 | 319.2 | 319.3 | 319.4 | 319.8 | 320.0 |
| 135°   | 340.7 | 341.5 | 341.5 | 341.5 | 341.5 | 341.5 | 341.7 | 341.9 | 342.1 | 342.3 | 342.5 |
| 137.5° | 361.7 | 362.2 | 362.2 | 362.2 | 362.2 | 362.2 | 362.4 | 362.5 | 362.6 | 362.9 | 363.2 |
| 140°   | 382.6 | 382.8 | 382.8 | 382.8 | 382.8 | 382.8 | 383.3 | 383.4 | 383.8 | 384.3 | 384.7 |
| 142.5° | 403.9 | 404.3 | 404.3 | 404.3 | 404.3 | 404.3 | 404.6 | 404.7 | 404.9 | 405.1 | 405.3 |
| 145°   | 425.4 | 426.0 | 425.8 | 425.4 | 425.2 | 425.0 | 425.2 | 425.3 | 425.4 | 425.8 | 426.0 |
| 147.5° | 445.4 | 445.6 | 445.1 | 444.6 | 444.1 | 443.7 | 443.9 | 443.9 | 444.1 | 444.4 | 444.6 |
| 150°   | 462.1 | 462.3 | 461.8 | 461.3 | 460.8 | 460.3 | 460.3 | 460.3 | 460.3 | 460.3 | 460.3 |
| 152.5° | 477.8 | 478.0 | 477.8 | 477.4 | 477.2 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 |
| 155°   | 494.4 | 494.7 | 494.4 | 494.2 | 493.9 | 493.7 | 493.9 | 494.0 | 494.2 | 494.4 | 494.7 |
| 157.5° | 509.4 | 509.4 | 508.9 | 508.4 | 507.9 | 507.5 | 507.6 | 507.7 | 507.9 | 508.2 | 508.4 |
| 160°   | 522.2 | 522.2 | 521.6 | 521.2 | 520.7 | 520.2 | 520.2 | 520.2 | 520.2 | 520.2 | 520.2 |
| 162.5° | 531.8 | 532.0 | 531.4 | 531.0 | 530.4 | 530.0 | 529.6 | 529.4 | 529.0 | 528.6 | 528.0 |
| 165°   | 542.6 | 542.8 | 541.9 | 541.3 | 540.6 | 539.8 | 539.3 | 539.3 | 538.8 | 538.4 | 537.8 |
| 167.5° | 549.7 | 549.7 | 549.1 | 548.7 | 548.1 | 547.7 | 547.9 | 548.0 | 548.1 | 548.4 | 548.7 |
| 170°   | 554.7 | 554.5 | 554.3 | 554.1 | 553.7 | 553.5 | 554.1 | 554.2 | 554.5 | 555.1 | 555.5 |
| 172.5° | 558.3 | 558.5 | 557.9 | 557.5 | 556.9 | 556.5 | 556.7 | 556.8 | 556.9 | 557.3 | 557.5 |
| 175°   | 562.2 | 562.4 | 561.6 | 560.9 | 560.3 | 559.5 | 558.9 | 558.8 | 558.5 | 557.9 | 557.5 |
| 177.5° | 566.3 | 566.3 | 565.6 | 564.9 | 564.1 | 563.3 | 563.3 | 563.3 | 563.3 | 563.3 | 563.3 |
| 180°   | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 |



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**CANDELA DISTRIBUTION (continued):**

|        | 77.5°  | 80°    | 85°    | 90°    | 95°    | 100°  | 102.5° | 105°  | 107.5° | 110°  | 112.5° |
|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|
| 0°     | 512.9  | 512.9  | 512.9  | 512.9  | 512.9  | 512.9 | 512.9  | 512.9 | 512.9  | 512.9 | 512.9  |
| 2.5°   | 508.7  | 512.9  | 514.7  | 513.8  | 512.1  | 510.3 | 504.4  | 508.7 | 502.6  | 506.9 | 501.8  |
| 5°     | 511.2  | 517.2  | 518.1  | 516.3  | 514.7  | 511.2 | 501.0  | 506.9 | 500.1  | 503.5 | 495.8  |
| 7.5°   | 510.3  | 519.8  | 520.7  | 519.0  | 515.5  | 509.5 | 499.2  | 503.5 | 492.3  | 495.0 | 484.5  |
| 10°    | 506.0  | 519.8  | 520.7  | 516.3  | 511.2  | 501.8 | 489.8  | 491.6 | 480.3  | 480.3 | 466.6  |
| 12.5°  | 501.8  | 518.1  | 522.5  | 516.3  | 507.8  | 495.0 | 481.1  | 479.4 | 466.6  | 465.7 | 450.2  |
| 15°    | 501.8  | 519.8  | 525.9  | 518.1  | 505.3  | 487.2 | 470.8  | 467.4 | 452.8  | 448.5 | 431.4  |
| 17.5°  | 501.0  | 519.8  | 528.5  | 518.1  | 502.6  | 479.4 | 458.9  | 455.4 | 436.5  | 429.6 | 409.9  |
| 20°    | 500.1  | 521.6  | 530.1  | 516.3  | 495.0  | 470.0 | 446.7  | 439.9 | 419.3  | 408.1 | 384.9  |
| 22.5°  | 499.2  | 525.0  | 531.9  | 514.7  | 489.8  | 458.0 | 433.9  | 421.8 | 397.8  | 383.1 | 355.7  |
| 25°    | 503.5  | 529.3  | 532.8  | 512.9  | 482.0  | 445.1 | 419.3  | 403.0 | 376.3  | 357.4 | 324.7  |
| 27.5°  | 505.3  | 533.5  | 534.4  | 509.5  | 472.6  | 431.4 | 403.9  | 381.5 | 351.5  | 328.2 | 291.3  |
| 30°    | 510.3  | 534.4  | 531.9  | 502.6  | 461.4  | 414.2 | 385.8  | 358.3 | 324.7  | 294.7 | 250.9  |
| 32.5°  | 512.1  | 537.1  | 530.1  | 495.0  | 450.2  | 397.1 | 365.3  | 333.5 | 292.9  | 257.7 | 204.5  |
| 35°    | 515.5  | 538.7  | 528.5  | 490.7  | 438.2  | 378.9 | 343.7  | 307.6 | 261.1  | 216.5 | 155.6  |
| 37.5°  | 520.7  | 546.5  | 532.8  | 488.9  | 432.2  | 363.5 | 319.7  | 281.0 | 223.4  | 170.9 | 103.1  |
| 40°    | 533.5  | 561.9  | 540.5  | 491.6  | 428.0  | 350.6 | 296.4  | 253.5 | 180.4  | 126.3 | 71.3   |
| 42.5°  | 559.4  | 588.6  | 560.3  | 504.4  | 430.5  | 339.4 | 272.4  | 224.3 | 136.6  | 90.2  | 59.3   |
| 45°    | 598.0  | 623.0  | 592.9  | 525.9  | 440.8  | 333.5 | 250.1  | 194.1 | 97.9   | 72.1  | 54.2   |
| 47.5°  | 654.8  | 678.8  | 641.0  | 560.3  | 458.9  | 330.8 | 226.8  | 162.4 | 75.5   | 65.3  | 52.4   |
| 50°    | 729.4  | 757.8  | 710.6  | 614.4  | 492.3  | 333.5 | 201.8  | 132.3 | 66.1   | 63.6  | 51.6   |
| 52.5°  | 821.4  | 848.9  | 801.6  | 694.3  | 547.3  | 348.0 | 175.3  | 115.2 | 62.7   | 62.7  | 50.8   |
| 55°    | 925.3  | 964.0  | 917.7  | 805.2  | 632.4  | 379.7 | 159.0  | 109.1 | 62.7   | 63.6  | 49.9   |
| 57.5°  | 1048.2 | 1080.9 | 1039.7 | 911.6  | 734.6  | 432.2 | 160.7  | 115.2 | 62.7   | 63.6  | 49.0   |
| 60°    | 1168.5 | 1208.8 | 1161.7 | 1047.4 | 851.5  | 511.2 | 195.9  | 146.1 | 65.3   | 66.1  | 49.0   |
| 62.5°  | 1294.0 | 1324.9 | 1286.2 | 1166.0 | 983.8  | 609.2 | 266.3  | 211.4 | 75.5   | 78.2  | 52.4   |
| 65°    | 1431.4 | 1482.1 | 1441.8 | 1343.0 | 1171.1 | 765.5 | 400.5  | 317.0 | 111.7  | 91.1  | 57.6   |
| 67.5°  | 1669.5 | 1690.1 | 1670.4 | 1580.1 | 1390.3 | 894.4 | 476.9  | 322.2 | 111.7  | 88.6  | 64.5   |
| 70°    | 1991.7 | 1945.3 | 1856.8 | 1688.4 | 1413.4 | 802.5 | 342.0  | 196.8 | 95.4   | 84.2  | 67.9   |
| 71°    | 2066.4 | 1995.1 | 1864.5 | 1661.8 | 1365.3 | 724.3 | 265.4  | 155.6 | 89.3   | 82.5  | 67.9   |
| 72.5°  | 2111.9 | 2005.5 | 1807.7 | 1583.5 | 1270.8 | 570.5 | 175.3  | 122.0 | 81.7   | 78.2  | 65.3   |
| 75°    | 2052.6 | 1856.0 | 1596.5 | 1370.5 | 1040.6 | 296.4 | 110.0  | 92.7  | 69.6   | 67.9  | 56.8   |
| 77.5°  | 1630.0 | 1457.2 | 1177.9 | 995.8  | 669.3  | 131.4 | 79.1   | 70.4  | 55.0   | 53.3  | 43.7   |
| 80°    | 760.4  | 610.1  | 357.4  | 306.7  | 210.6  | 77.3  | 54.2   | 48.1  | 39.5   | 37.8  | 30.9   |
| 82.5°  | 138.2  | 103.9  | 80.8   | 78.2   | 70.4   | 45.5  | 31.8   | 29.3  | 25.0   | 24.1  | 19.8   |
| 85°    | 47.3   | 45.5   | 34.3   | 34.3   | 35.2   | 24.1  | 18.1   | 17.2  | 12.8   | 12.8  | 8.6    |
| 87.5°  | 0.9    | 4.3    | 4.3    | 6.0    | 5.2    | 4.3   | 1.8    | 2.5   | 0.9    | 2.5   | 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    |
| 92.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0   | 0.0    | 0.0   | 0.0    | 0.0   | 0.0    |
| 95°    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0   | 1.0    | 1.0   | 1.0    | 1.0   | 1.0    |
| 97.5°  | 4.7    | 4.4    | 4.0    | 4.0    | 4.0    | 4.4   | 4.7    | 4.9   | 5.4    | 5.9   | 6.4    |
| 100°   | 26.3   | 26.1   | 25.5   | 24.5   | 25.5   | 26.1  | 26.3   | 26.5  | 27.3   | 27.9  | 28.7   |
| 102.5° | 47.3   | 47.6   | 48.1   | 47.1   | 48.1   | 47.6  | 47.3   | 47.1  | 47.6   | 48.1  | 48.6   |
| 105°   | 68.2   | 68.7   | 69.7   | 67.7   | 69.7   | 68.7  | 68.2   | 67.7  | 68.2   | 68.7  | 69.2   |
| 107.5° | 89.5   | 89.8   | 90.3   | 89.3   | 90.3   | 89.8  | 89.5   | 89.3  | 89.5   | 89.8  | 90.1   |



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REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

|        | 77.5° | 80°   | 85°   | 90°   | 95°   | 100°  | 102.5° | 105°  | 107.5° | 110°  | 112.5° |        |
|--------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|--------|
| 110°   | 111.1 | 111.4 | 111.9 | 110.9 | 111.9 | 111.4 | 111.1  | 110.9 | 111.1  | 111.4 | 111.7  | 0°     |
| 112.5° | 132.9 | 133.5 | 134.5 | 132.5 | 134.5 | 133.5 | 132.9  | 132.5 | 132.7  | 132.9 | 133.3  | 2.5°   |
| 115°   | 155.6 | 156.0 | 157.0 | 156.0 | 157.0 | 156.0 | 155.6  | 155.0 | 155.0  | 155.0 | 155.0  | 5°     |
| 117.5° | 177.1 | 177.7 | 178.7 | 176.7 | 178.7 | 177.7 | 177.1  | 176.7 | 176.9  | 177.1 | 177.4  | 7.5°   |
| 120°   | 200.7 | 201.2 | 202.2 | 200.2 | 202.2 | 201.2 | 200.7  | 200.2 | 200.2  | 200.2 | 200.2  | 10°    |
| 122.5° | 225.7 | 226.7 | 228.7 | 227.7 | 228.7 | 226.7 | 225.7  | 224.8 | 224.6  | 224.3 | 223.9  | 12.5°  |
| 125°   | 250.1 | 250.8 | 252.2 | 251.3 | 252.2 | 250.8 | 250.1  | 249.3 | 249.3  | 249.3 | 249.3  | 15°    |
| 127.5° | 273.6 | 274.3 | 275.8 | 272.8 | 275.8 | 274.3 | 273.6  | 272.8 | 272.6  | 272.4 | 272.1  | 17.5°  |
| 130°   | 297.2 | 297.9 | 299.3 | 297.4 | 299.3 | 297.9 | 297.2  | 296.4 | 296.2  | 295.9 | 295.6  | 20°    |
| 132.5° | 320.8 | 321.4 | 322.9 | 321.0 | 322.9 | 321.4 | 320.8  | 320.0 | 319.8  | 319.4 | 319.2  | 22.5°  |
| 135°   | 343.1 | 343.5 | 344.5 | 343.5 | 344.5 | 343.5 | 343.1  | 342.5 | 342.3  | 342.1 | 341.7  | 25°    |
| 137.5° | 364.2 | 365.1 | 367.0 | 365.1 | 367.0 | 365.1 | 364.2  | 363.2 | 362.9  | 362.6 | 362.4  | 27.5°  |
| 140°   | 385.7 | 386.7 | 388.7 | 386.7 | 388.7 | 386.7 | 385.7  | 384.7 | 384.3  | 383.8 | 383.3  | 30°    |
| 142.5° | 406.1 | 406.8 | 408.3 | 407.3 | 408.3 | 406.8 | 406.1  | 405.3 | 405.1  | 404.9 | 404.6  | 32.5°  |
| 145°   | 426.8 | 427.4 | 428.9 | 427.0 | 428.9 | 427.4 | 426.8  | 426.0 | 425.8  | 425.4 | 425.2  | 35°    |
| 147.5° | 445.4 | 446.1 | 447.5 | 444.6 | 447.5 | 446.1 | 445.4  | 444.6 | 444.4  | 444.1 | 443.9  | 37.5°  |
| 150°   | 461.3 | 462.3 | 464.2 | 461.3 | 464.2 | 462.3 | 461.3  | 460.3 | 460.3  | 460.3 | 460.3  | 40°    |
| 152.5° | 477.8 | 478.4 | 480.0 | 477.0 | 480.0 | 478.4 | 477.8  | 477.0 | 477.0  | 477.0 | 477.0  | 42.5°  |
| 155°   | 495.4 | 496.1 | 497.6 | 495.7 | 497.6 | 496.1 | 495.4  | 494.7 | 494.4  | 494.2 | 493.9  | 45°    |
| 157.5° | 509.6 | 510.9 | 513.3 | 510.3 | 513.3 | 510.9 | 509.6  | 508.4 | 508.2  | 507.9 | 507.6  | 47.5°  |
| 160°   | 520.9 | 521.6 | 523.2 | 521.2 | 523.2 | 521.6 | 520.9  | 520.2 | 520.2  | 520.2 | 520.2  | 50°    |
| 162.5° | 528.6 | 529.0 | 530.0 | 527.0 | 530.0 | 529.0 | 528.6  | 528.0 | 528.6  | 529.0 | 529.6  | 52.5°  |
| 165°   | 538.4 | 538.8 | 539.8 | 537.8 | 539.8 | 538.8 | 538.4  | 537.8 | 538.4  | 538.8 | 539.3  | 55°    |
| 167.5° | 549.7 | 550.6 | 552.5 | 550.6 | 552.5 | 550.6 | 549.7  | 548.7 | 548.4  | 548.1 | 547.9  | 57.5°  |
| 170°   | 556.7 | 557.9 | 560.5 | 558.5 | 560.5 | 557.9 | 556.7  | 555.5 | 555.1  | 554.5 | 554.1  | 60°    |
| 172.5° | 558.3 | 558.9 | 560.5 | 557.5 | 560.5 | 558.9 | 558.3  | 557.5 | 557.3  | 556.9 | 556.7  | 62.5°  |
| 175°   | 558.3 | 558.9 | 560.5 | 557.5 | 560.5 | 558.9 | 558.3  | 557.5 | 557.9  | 558.5 | 558.9  | 65°    |
| 177.5° | 564.1 | 564.9 | 566.3 | 563.3 | 566.3 | 564.9 | 564.1  | 563.3 | 563.3  | 563.3 | 563.3  | 67.5°  |
| 180°   | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3  | 565.3 | 565.3  | 565.3 | 565.3  | 70°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 71°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 72.5°  |
|        |       |       |       |       |       |       |        |       |        |       |        | 75°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 77.5°  |
|        |       |       |       |       |       |       |        |       |        |       |        | 80°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 82.5°  |
|        |       |       |       |       |       |       |        |       |        |       |        | 85°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 87.5°  |
|        |       |       |       |       |       |       |        |       |        |       |        | 90°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 92.5°  |
|        |       |       |       |       |       |       |        |       |        |       |        | 95°    |
|        |       |       |       |       |       |       |        |       |        |       |        | 97.5°  |
|        |       |       |       |       |       |       |        |       |        |       |        | 100°   |
|        |       |       |       |       |       |       |        |       |        |       |        | 102.5° |
|        |       |       |       |       |       |       |        |       |        |       |        | 105°   |
|        |       |       |       |       |       |       |        |       |        |       |        | 107.5° |

NUMBER: P271572  
 NUMBER: ISS-AF-450-LED-E1-SL2-7027-ULG

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

**CANDELA DISTRIBUTION**

| 115°  | 117.5° | 120°  | 122.5° | 125°  | 127.5° | 130°  | 135°  | 145°  | 155°  | 165°  | 110°   | 115°  |
|-------|--------|-------|--------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| 512.9 | 512.9  | 512.9 | 512.9  | 512.9 | 512.9  | 512.9 | 512.9 | 512.9 | 512.9 | 512.9 | 110°   | 111.9 |
| 506.0 | 499.2  | 505.3 | 499.2  | 502.6 | 495.8  | 500.1 | 497.5 | 497.5 | 495.0 | 493.2 | 112.5° | 133.5 |
| 498.4 | 489.8  | 494.1 | 487.2  | 490.7 | 480.3  | 482.9 | 478.5 | 470.0 | 464.9 | 458.0 | 115°   | 155.0 |
| 487.2 | 474.2  | 477.7 | 467.4  | 470.0 | 456.2  | 458.9 | 451.1 | 434.8 | 424.4 | 414.2 | 117.5° | 177.7 |
| 467.4 | 455.4  | 456.2 | 443.3  | 442.5 | 428.7  | 426.2 | 415.8 | 391.8 | 374.6 | 360.8 | 120°   | 200.2 |
| 447.6 | 433.9  | 432.2 | 416.7  | 414.2 | 397.8  | 394.4 | 378.1 | 342.8 | 309.4 | 287.9 | 122.5° | 223.8 |
| 427.1 | 409.9  | 404.7 | 388.3  | 378.9 | 365.3  | 355.7 | 331.7 | 281.0 | 237.2 | 208.8 | 125°   | 249.3 |
| 403.9 | 381.5  | 373.8 | 354.9  | 341.1 | 320.4  | 306.7 | 274.2 | 208.8 | 161.5 | 141.8 | 127.5° | 271.8 |
| 373.8 | 349.7  | 336.0 | 311.9  | 293.8 | 269.0  | 251.7 | 209.7 | 139.1 | 115.2 | 112.6 | 130°   | 295.5 |
| 340.3 | 311.9  | 294.7 | 264.6  | 242.4 | 215.6  | 188.1 | 141.8 | 98.8  | 93.6  | 97.1  | 132.5° | 319.0 |
| 305.1 | 269.9  | 247.4 | 210.6  | 180.4 | 149.5  | 123.8 | 94.5  | 80.8  | 79.9  | 85.1  | 135°   | 341.5 |
| 262.9 | 222.5  | 190.7 | 147.0  | 119.5 | 95.4   | 84.2  | 74.8  | 68.7  | 69.6  | 74.8  | 137.5° | 362.2 |
| 216.5 | 164.1  | 130.6 | 92.0   | 79.9  | 69.6   | 67.9  | 64.5  | 61.8  | 63.6  | 67.0  | 140°   | 382.8 |
| 161.5 | 104.8  | 84.2  | 66.1   | 65.3  | 59.3   | 61.1  | 59.3  | 58.4  | 59.3  | 61.8  | 142.5° | 404.3 |
| 109.1 | 69.6   | 66.1  | 56.8   | 58.4  | 54.2   | 56.8  | 55.9  | 55.0  | 55.0  | 56.8  | 145°   | 425.0 |
| 75.5  | 57.6   | 59.3  | 52.4   | 55.0  | 51.6   | 54.2  | 53.3  | 52.4  | 51.6  | 52.4  | 147.5° | 443.7 |
| 62.7  | 52.4   | 55.0  | 49.9   | 52.4  | 49.0   | 51.6  | 50.8  | 49.9  | 48.1  | 48.1  | 150°   | 460.3 |
| 57.6  | 49.9   | 52.4  | 47.3   | 50.8  | 46.4   | 49.9  | 48.1  | 46.4  | 44.6  | 45.5  | 152.5° | 477.0 |
| 55.9  | 48.1   | 50.8  | 45.5   | 49.0  | 44.6   | 47.3  | 46.4  | 43.0  | 42.1  | 43.0  | 155°   | 493.7 |
| 54.2  | 47.3   | 49.9  | 44.6   | 47.3  | 43.0   | 45.5  | 43.7  | 40.3  | 39.5  | 40.3  | 157.5° | 507.5 |
| 53.3  | 45.5   | 48.1  | 43.0   | 45.5  | 42.1   | 43.7  | 42.1  | 38.6  | 37.8  | 37.8  | 160°   | 520.2 |
| 52.4  | 44.6   | 47.3  | 41.2   | 43.7  | 38.6   | 41.2  | 39.5  | 36.1  | 35.2  | 35.2  | 162.5° | 530.0 |
| 52.4  | 43.7   | 45.5  | 39.5   | 42.1  | 36.9   | 38.6  | 36.9  | 35.2  | 33.5  | 33.5  | 165°   | 539.8 |
| 51.6  | 42.1   | 44.6  | 37.8   | 39.5  | 35.2   | 36.9  | 35.2  | 32.7  | 31.8  | 31.8  | 167.5° | 547.7 |
| 51.6  | 41.2   | 43.7  | 36.9   | 38.6  | 33.5   | 35.2  | 33.5  | 30.9  | 30.0  | 30.0  | 170°   | 553.5 |
| 54.2  | 43.0   | 44.6  | 37.8   | 38.6  | 33.5   | 34.3  | 31.8  | 29.3  | 29.3  | 28.4  | 172.5° | 556.5 |
| 59.3  | 48.1   | 48.1  | 39.5   | 39.5  | 33.5   | 34.3  | 30.9  | 27.5  | 27.5  | 27.5  | 175°   | 559.5 |
| 64.5  | 53.3   | 52.4  | 42.1   | 41.2  | 33.5   | 33.5  | 29.3  | 25.8  | 25.8  | 25.8  | 177.5° | 563.3 |
| 67.9  | 55.9   | 54.2  | 43.0   | 41.2  | 32.7   | 31.8  | 27.5  | 24.1  | 24.1  | 24.1  | 180°   | 565.3 |
| 67.0  | 55.9   | 53.3  | 42.1   | 39.5  | 30.9   | 30.9  | 26.6  | 23.2  | 23.2  | 22.4  |        |       |
| 63.6  | 52.4   | 49.9  | 39.5   | 37.8  | 29.3   | 29.3  | 25.0  | 21.5  | 21.5  | 20.6  |        |       |
| 54.2  | 44.6   | 42.1  | 33.5   | 31.8  | 25.8   | 25.0  | 20.6  | 19.0  | 18.1  | 18.1  |        |       |
| 42.1  | 35.2   | 32.7  | 26.6   | 25.8  | 20.6   | 19.8  | 17.2  | 15.5  | 15.5  | 14.6  |        |       |
| 30.0  | 25.0   | 23.2  | 18.1   | 16.3  | 13.7   | 14.6  | 12.8  | 12.0  | 12.0  | 11.2  |        |       |
| 18.1  | 12.8   | 12.8  | 10.3   | 11.2  | 8.6    | 9.4   | 9.4   | 8.6   | 6.8   | 6.8   |        |       |
| 9.4   | 6.0    | 7.7   | 4.3    | 6.0   | 2.5    | 4.3   | 3.4   | 3.4   | 2.5   | 2.5   |        |       |
| 1.8   | 0.0    | 0.9   | 0.0    | 0.9   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |        |       |
| 0.0   | 0.0    | 0.0   | 0.0    | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |        |       |
| 0.0   | 0.0    | 0.0   | 0.0    | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |        |       |
| 1.0   | 1.0    | 1.0   | 1.0    | 1.0   | 1.0    | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |        |       |
| 6.8   | 8.4    | 9.8   | 11.3   | 12.8  | 11.8   | 10.8  | 8.8   | 4.0   | 3.0   | 2.0   |        |       |
| 29.5  | 29.9   | 30.5  | 30.9   | 31.4  | 30.9   | 30.5  | 29.5  | 21.6  | 13.7  | 9.8   |        |       |
| 49.0  | 49.2   | 49.6  | 49.9   | 50.0  | 49.9   | 49.6  | 49.0  | 44.2  | 37.3  | 31.4  |        |       |
| 69.7  | 69.7   | 69.7  | 69.7   | 69.7  | 69.5   | 69.2  | 68.7  | 64.8  | 59.8  | 55.0  |        |       |
| 90.3  | 90.5   | 90.8  | 91.1   | 91.3  | 90.8   | 90.3  | 89.3  | 86.3  | 82.5  | 78.5  |        |       |

271572  
 ISS-AF-450-LED-E1-SL2-7027-ULG

REPORT NUMBER: P271572  
 CATALOG NUMBER: ISS-AF-450

**TION (continued):**

**CANDELA DISTRIBUTION (con**

| 117.5° | 120°  | 122.5° | 125°  | 127.5° | 130°  | 135°  | 145°  | 155°  | 165°  |        | 175°  | 180°  |
|--------|-------|--------|-------|--------|-------|-------|-------|-------|-------|--------|-------|-------|
| 111.9  | 111.9 | 111.9  | 111.9 | 111.4  | 110.9 | 110.0 | 108.0 | 104.0 | 101.1 | 0°     | 512.9 | 512.9 |
| 133.5  | 133.5 | 133.5  | 133.5 | 132.9  | 132.5 | 131.5 | 129.5 | 126.6 | 123.7 | 2.5°   | 488.0 | 488.9 |
| 155.0  | 155.0 | 155.0  | 155.0 | 154.6  | 154.1 | 153.1 | 151.2 | 148.2 | 146.2 | 5°     | 454.5 | 456.2 |
| 177.4  | 177.1 | 176.9  | 176.7 | 176.4  | 176.2 | 175.7 | 173.7 | 170.8 | 168.8 | 7.5°   | 406.4 | 409.0 |
| 200.2  | 200.2 | 200.2  | 200.2 | 199.7  | 199.2 | 198.3 | 197.3 | 194.3 | 192.3 | 10°    | 348.8 | 350.6 |
| 223.8  | 223.8 | 223.8  | 223.8 | 223.6  | 223.3 | 222.8 | 221.8 | 218.8 | 216.9 | 12.5°  | 274.9 | 274.9 |
| 249.1  | 248.8 | 248.5  | 248.3 | 248.1  | 247.8 | 247.3 | 246.3 | 243.4 | 242.5 | 15°    | 192.5 | 194.1 |
| 272.1  | 272.4 | 272.6  | 272.8 | 272.4  | 271.8 | 270.9 | 269.0 | 267.0 | 265.0 | 17.5°  | 134.8 | 135.7 |
| 295.5  | 295.5 | 295.5  | 295.5 | 294.9  | 294.5 | 293.5 | 292.5 | 288.5 | 287.5 | 20°    | 113.5 | 114.3 |
| 319.0  | 319.0 | 319.0  | 319.0 | 318.2  | 317.6 | 316.0 | 315.0 | 312.1 | 311.2 | 22.5°  | 101.4 | 102.2 |
| 341.5  | 341.5 | 341.5  | 341.5 | 340.7  | 340.1 | 338.6 | 338.6 | 334.7 | 332.7 | 25°    | 90.2  | 91.1  |
| 362.2  | 362.2 | 362.2  | 362.2 | 361.7  | 361.2 | 360.2 | 360.2 | 357.3 | 356.3 | 27.5°  | 78.2  | 79.1  |
| 382.8  | 382.8 | 382.8  | 382.8 | 382.6  | 382.3 | 381.8 | 380.8 | 378.8 | 377.8 | 30°    | 70.4  | 71.3  |
| 404.3  | 404.3 | 404.3  | 404.3 | 403.9  | 403.4 | 402.4 | 402.4 | 399.5 | 400.5 | 32.5°  | 63.6  | 64.5  |
| 425.2  | 425.4 | 425.8  | 426.0 | 425.4  | 425.0 | 424.0 | 423.0 | 420.0 | 420.0 | 35°    | 57.6  | 57.6  |
| 444.1  | 444.6 | 445.1  | 445.6 | 445.4  | 445.1 | 444.6 | 443.7 | 439.7 | 438.7 | 37.5°  | 53.3  | 53.3  |
| 460.8  | 461.3 | 461.8  | 462.3 | 462.1  | 461.8 | 461.3 | 460.3 | 456.4 | 455.4 | 40°    | 49.0  | 49.0  |
| 477.2  | 477.4 | 477.8  | 478.0 | 477.8  | 477.4 | 477.0 | 476.0 | 473.0 | 474.0 | 42.5°  | 46.4  | 46.4  |
| 493.9  | 494.2 | 494.4  | 494.7 | 494.4  | 494.2 | 493.7 | 493.7 | 491.7 | 492.7 | 45°    | 43.7  | 43.7  |
| 507.9  | 508.4 | 508.9  | 509.4 | 509.4  | 509.4 | 509.4 | 509.4 | 506.5 | 507.5 | 47.5°  | 41.2  | 41.2  |
| 520.7  | 521.2 | 521.6  | 522.2 | 522.2  | 522.2 | 522.2 | 522.2 | 519.2 | 519.2 | 50°    | 38.6  | 39.5  |
| 530.4  | 531.0 | 531.4  | 532.0 | 531.8  | 531.4 | 531.0 | 531.0 | 528.0 | 529.0 | 52.5°  | 36.1  | 36.1  |
| 540.6  | 541.3 | 541.9  | 542.8 | 542.6  | 542.3 | 541.8 | 541.8 | 537.8 | 538.8 | 55°    | 33.5  | 33.5  |
| 548.1  | 548.7 | 549.1  | 549.7 | 549.7  | 549.7 | 549.7 | 550.6 | 547.7 | 548.7 | 57.5°  | 30.9  | 31.8  |
| 553.7  | 554.1 | 554.3  | 554.5 | 554.7  | 555.1 | 555.5 | 556.5 | 554.5 | 555.5 | 60°    | 29.3  | 29.3  |
| 556.9  | 557.5 | 557.9  | 558.5 | 558.3  | 557.9 | 557.5 | 558.5 | 556.5 | 558.5 | 62.5°  | 27.5  | 27.5  |
| 560.3  | 560.9 | 561.6  | 562.4 | 562.2  | 561.9 | 561.4 | 561.4 | 558.5 | 559.5 | 65°    | 26.6  | 26.6  |
| 564.1  | 564.9 | 565.6  | 566.3 | 566.3  | 566.3 | 566.3 | 567.3 | 563.3 | 564.3 | 67.5°  | 25.0  | 25.0  |
| 565.3  | 565.3 | 565.3  | 565.3 | 565.3  | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 70°    | 23.2  | 23.2  |
|        |       |        |       |        |       |       |       |       |       | 71°    | 22.4  | 22.4  |
|        |       |        |       |        |       |       |       |       |       | 72.5°  | 20.6  | 20.6  |
|        |       |        |       |        |       |       |       |       |       | 75°    | 18.1  | 17.2  |
|        |       |        |       |        |       |       |       |       |       | 77.5°  | 14.6  | 14.6  |
|        |       |        |       |        |       |       |       |       |       | 80°    | 11.2  | 10.3  |
|        |       |        |       |        |       |       |       |       |       | 82.5°  | 6.8   | 6.0   |
|        |       |        |       |        |       |       |       |       |       | 85°    | 2.5   | 1.8   |
|        |       |        |       |        |       |       |       |       |       | 87.5°  | 0.0   | 0.0   |
|        |       |        |       |        |       |       |       |       |       | 90°    | 0.0   | 0.0   |
|        |       |        |       |        |       |       |       |       |       | 92.5°  | 0.0   | 0.0   |
|        |       |        |       |        |       |       |       |       |       | 95°    | 1.0   | 1.0   |
|        |       |        |       |        |       |       |       |       |       | 97.5°  | 2.0   | 2.0   |
|        |       |        |       |        |       |       |       |       |       | 100°   | 7.8   | 7.8   |
|        |       |        |       |        |       |       |       |       |       | 102.5° | 27.5  | 27.5  |
|        |       |        |       |        |       |       |       |       |       | 105°   | 53.0  | 53.0  |
|        |       |        |       |        |       |       |       |       |       | 107.5° | 75.5  | 76.5  |



REPORT NUMBER: P271572

CATALOG NUMBER: ISS-AF-450-LED-E1-S

**CANDELA DISTRIBUTION (continued):**

|        | 175°  | 180°  |
|--------|-------|-------|
| 110°   | 100.1 | 99.2  |
| 112.5° | 121.7 | 121.7 |
| 115°   | 144.3 | 143.3 |
| 117.5° | 166.8 | 165.8 |
| 120°   | 191.4 | 189.5 |
| 122.5° | 216.0 | 215.0 |
| 125°   | 241.5 | 239.5 |
| 127.5° | 264.0 | 262.0 |
| 130°   | 286.6 | 284.7 |
| 132.5° | 308.2 | 307.2 |
| 135°   | 330.8 | 329.8 |
| 137.5° | 353.3 | 352.3 |
| 140°   | 375.9 | 375.0 |
| 142.5° | 398.5 | 396.5 |
| 145°   | 418.1 | 417.2 |
| 147.5° | 435.8 | 435.8 |
| 150°   | 453.5 | 452.5 |
| 152.5° | 471.1 | 470.2 |
| 155°   | 490.7 | 489.8 |
| 157.5° | 505.5 | 503.5 |
| 160°   | 517.2 | 515.3 |
| 162.5° | 526.0 | 525.1 |
| 165°   | 536.8 | 535.9 |
| 167.5° | 545.7 | 544.7 |
| 170°   | 552.5 | 551.6 |
| 172.5° | 555.5 | 554.5 |
| 175°   | 558.5 | 556.5 |
| 177.5° | 562.4 | 561.4 |
| 180°   | 565.3 | 565.3 |

(END OF REPORT)

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report

