

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: P271577

Luminaire Tested: **ISS-AF-450-LED-E1-T2-7027-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P271577  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29758)-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-T2-7027-ULG  
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II, WITH UPLIGHT GLOW  
Light Source: (16) 2700K CCT, 70 CRI LEDs and (1) UPLIGHT LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

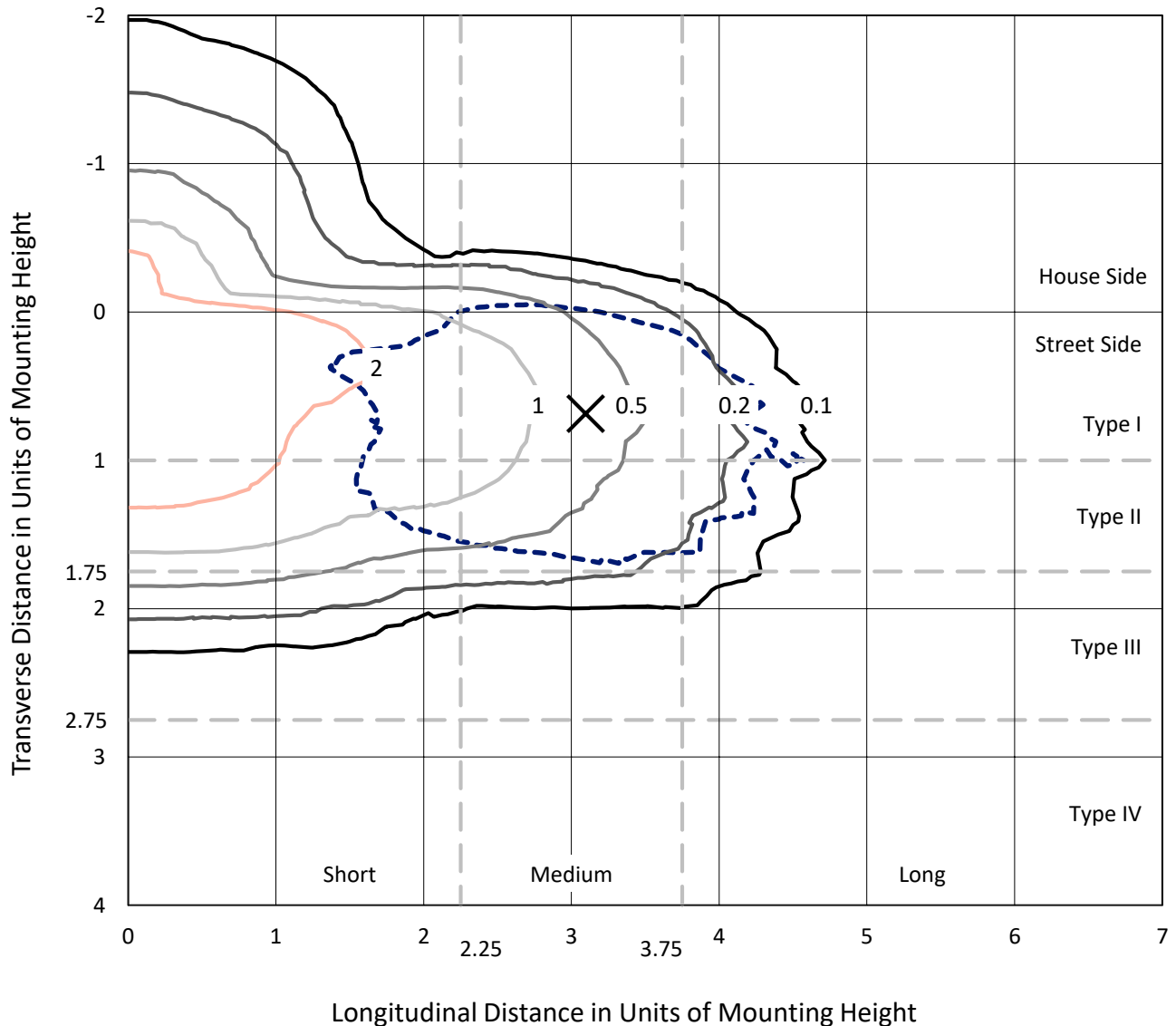
Lumens per Lamp: N/A  
Luminaire Lumens: 3948.7 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type II - Medium - Non-Cutoff  
BUG Rating: B1 - U5 - G1  
  
Input Watts (W): 42.01  
Input Voltage (V): 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

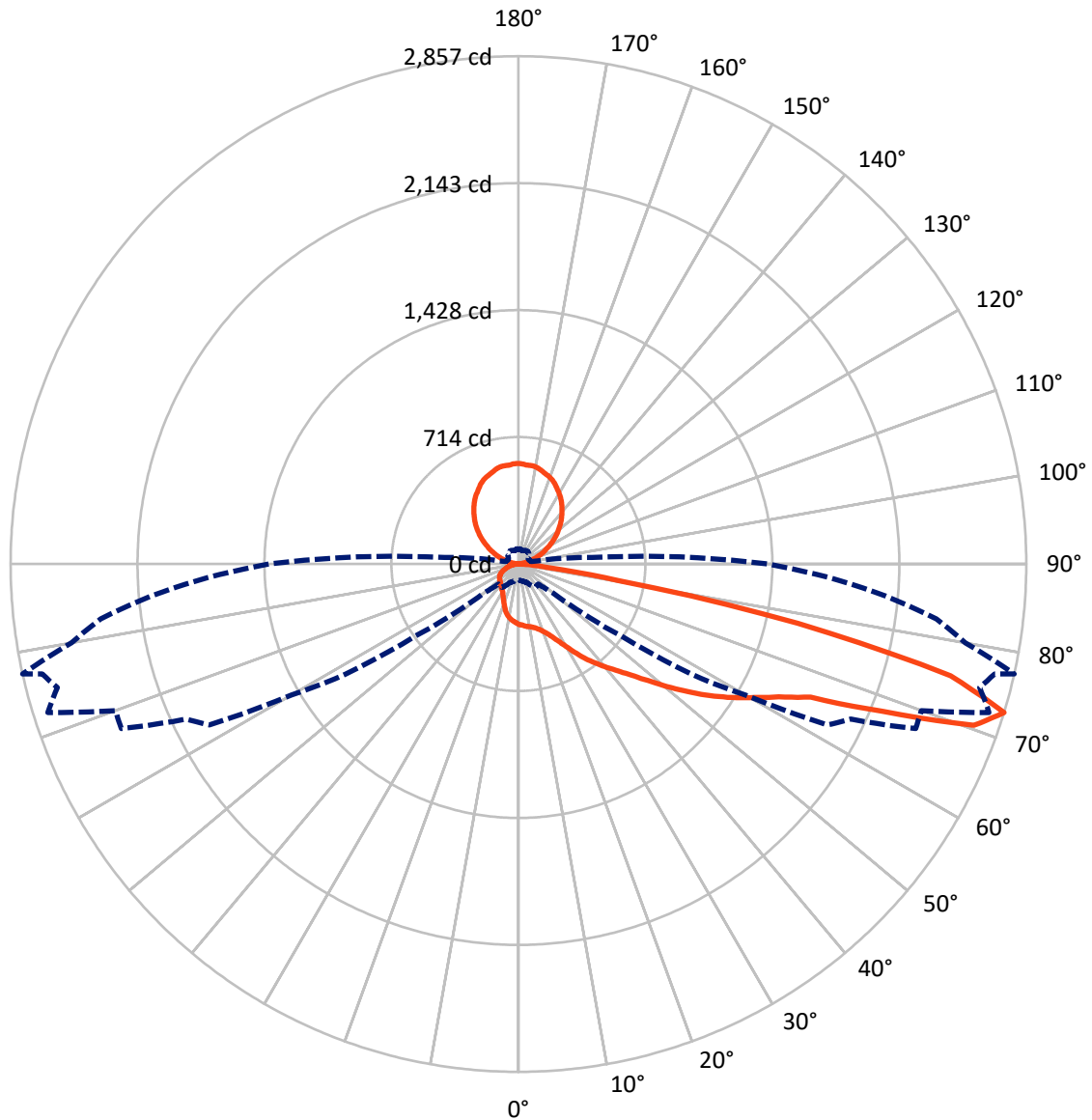
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 fc  
 Type II - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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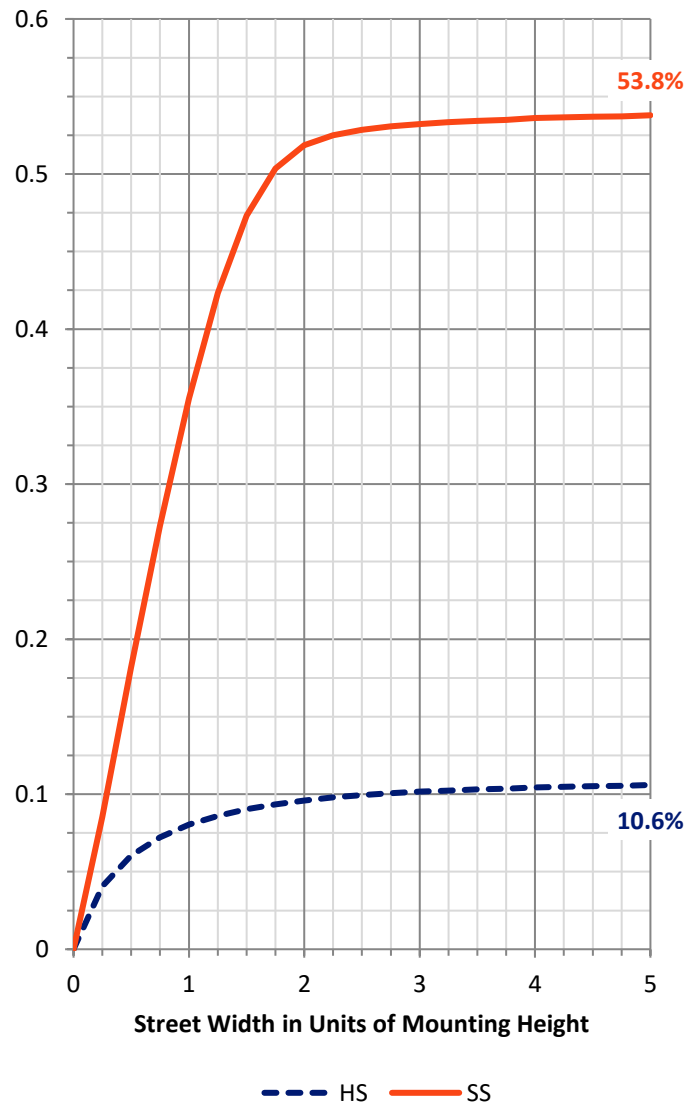
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 422.4    | 699.9  | 1122.2 |
|                    | % Fixture | 10.7     | 17.7   | 28.4   |
| <b>Street Side</b> | Lumens    | 2126.5   | 699.9  | 2826.4 |
|                    | % Fixture | 53.9     | 17.7   | 71.6   |
| <b>Total</b>       | Lumens    | 2548.9   | 1399.8 | 3948.7 |
|                    | % Fixture | 64.6     | 35.4   | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 31.6   | 0.8       |
| 10°-20°   | 96.9   | 2.5       |
| 20°-30°   | 172.1  | 4.4       |
| 30°-40°   | 272.6  | 6.9       |
| 40°-50°   | 409.0  | 10.4      |
| 50°-60°   | 530.0  | 13.4      |
| 60°-70°   | 602.2  | 15.3      |
| 70°-80°   | 399.6  | 10.1      |
| 80°-90°   | 35.0   | 0.9       |
| 90°-100°  | 4.7    | 0.1       |
| 100°-110° | 67.7   | 1.7       |
| 110°-120° | 150.2  | 3.8       |
| 120°-130° | 219.7  | 5.6       |
| 130°-140° | 260.7  | 6.6       |
| 140°-150° | 264.3  | 6.7       |
| 150°-160° | 226.8  | 5.7       |
| 160°-170° | 152.2  | 3.9       |
| 170°-180° | 53.3   | 1.4       |
| 0°-90°    | 2548.9 | 64.6      |
| 0°-180°   | 3948.7 | 100.0     |



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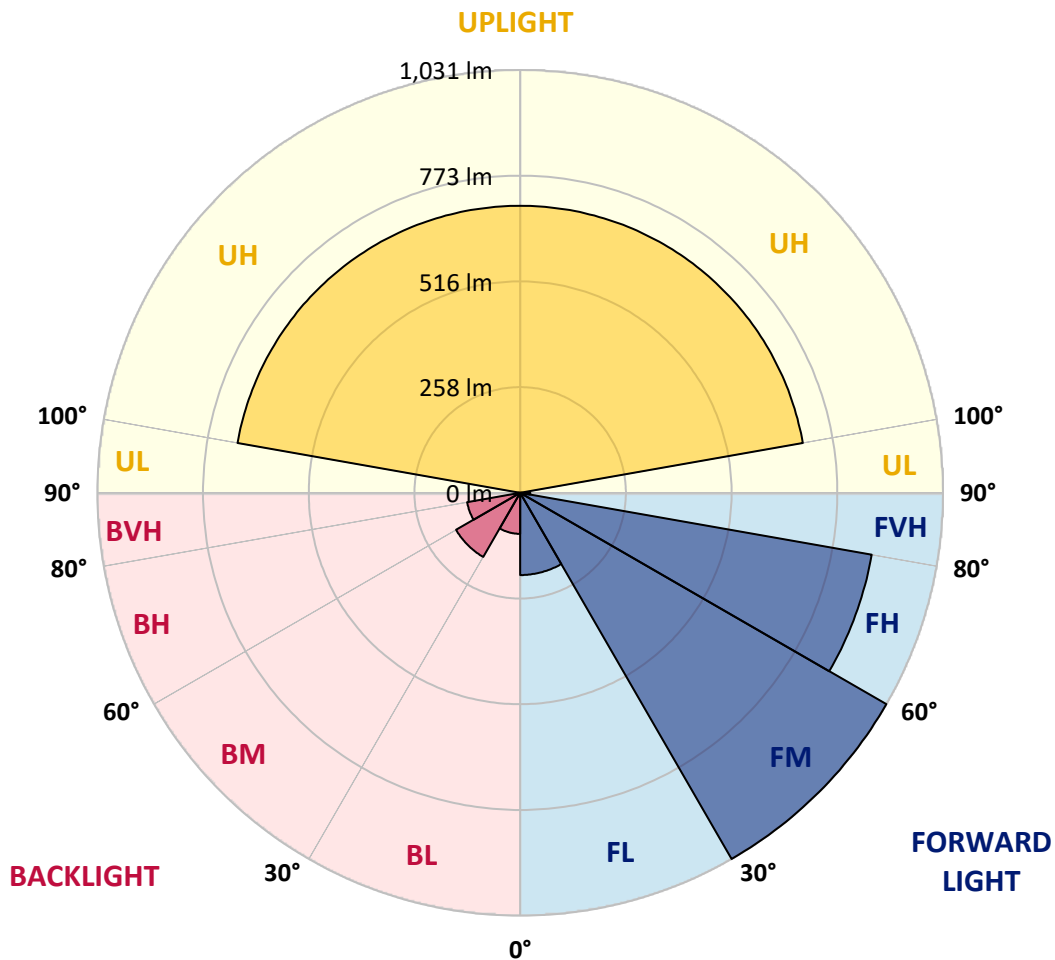
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |         |         |
|------|-------------|--------|-----------|-------------------------|---------|---------|
|      |             |        |           | B                       | U       | G       |
| FL   | (0°-30°)    | 200.5  | 5.1       |                         |         |         |
| FM   | (30°-60°)   | 1031.1 | 26.1      |                         |         |         |
| FH   | (60°-80°)   | 870.5  | 22.0      |                         |         | G1/1800 |
| FVH  | (80°-90°)   | 24.4   | 0.6       |                         |         | G1/100  |
| BL   | (0°-30°)    | 100.1  | 2.5       | B0/110                  |         |         |
| BM   | (30°-60°)   | 180.4  | 4.6       | B0/220                  |         |         |
| BH   | (60°-80°)   | 131.3  | 3.3       | B1/500                  |         | G1/500  |
| BVH  | (80°-90°)   | 10.5   | 0.3       |                         |         | G1/100  |
| UL   | (90°-100°)  | 4.7    | 0.1       |                         | U1/10   |         |
| UH   | (100°-180°) | 699.9  | 17.7      |                         | U4/1000 |         |

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

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 5°    | 15°   | 25°    | 35°    | 37.5°  | 40°    | 42.5°  | 45°    | 47.5°  | 50°    |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 340.3 | 340.3 | 340.3 | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  |
| 2.5°   | 368.7 | 367.0 | 366.1 | 364.4  | 362.6  | 361.7  | 359.2  | 357.5  | 360.1  | 359.2  | 359.2  |
| 5°     | 396.2 | 394.4 | 391.9 | 389.3  | 385.9  | 383.3  | 380.7  | 378.2  | 379.8  | 378.2  | 376.4  |
| 7.5°   | 418.5 | 416.8 | 413.4 | 410.7  | 407.3  | 403.9  | 400.5  | 399.7  | 397.9  | 395.3  | 394.4  |
| 10°    | 431.5 | 429.7 | 428.0 | 426.2  | 421.1  | 418.5  | 414.2  | 411.6  | 412.5  | 409.1  | 409.1  |
| 12.5°  | 443.4 | 441.8 | 440.9 | 440.9  | 436.6  | 434.0  | 432.3  | 429.7  | 431.5  | 426.2  | 424.6  |
| 15°    | 454.6 | 452.9 | 450.3 | 452.9  | 452.0  | 451.2  | 450.3  | 449.4  | 452.0  | 446.9  | 447.7  |
| 17.5°  | 472.7 | 471.8 | 466.7 | 463.3  | 464.1  | 466.7  | 468.4  | 467.5  | 467.5  | 465.0  | 465.8  |
| 20°    | 501.1 | 501.1 | 494.2 | 488.2  | 478.7  | 478.7  | 479.5  | 478.7  | 480.4  | 482.1  | 484.6  |
| 22.5°  | 522.5 | 520.7 | 518.2 | 513.0  | 502.7  | 494.2  | 494.2  | 490.7  | 493.3  | 494.2  | 499.3  |
| 25°    | 550.0 | 548.2 | 542.3 | 542.3  | 532.0  | 520.7  | 519.1  | 513.9  | 519.8  | 508.8  | 517.3  |
| 27.5°  | 583.4 | 581.8 | 574.1 | 570.6  | 565.6  | 551.6  | 548.2  | 549.1  | 555.2  | 538.8  | 547.4  |
| 30°    | 625.7 | 624.0 | 614.5 | 605.0  | 596.5  | 581.8  | 580.0  | 579.2  | 593.0  | 574.1  | 585.2  |
| 32.5°  | 678.8 | 678.8 | 668.6 | 655.8  | 638.5  | 618.8  | 611.8  | 612.7  | 631.7  | 611.0  | 629.9  |
| 35°    | 759.7 | 749.4 | 730.5 | 710.6  | 692.6  | 669.5  | 660.1  | 658.3  | 675.4  | 654.9  | 676.3  |
| 37.5°  | 811.3 | 804.4 | 787.3 | 772.6  | 752.8  | 730.5  | 723.7  | 726.2  | 740.8  | 710.6  | 741.7  |
| 40°    | 857.7 | 856.8 | 845.7 | 836.2  | 816.4  | 794.1  | 802.6  | 837.1  | 875.8  | 817.3  | 818.2  |
| 42.5°  | 888.6 | 890.3 | 889.5 | 890.3  | 879.2  | 855.9  | 870.5  | 918.7  | 984.9  | 950.5  | 918.7  |
| 45°    | 893.7 | 899.8 | 902.3 | 919.5  | 930.7  | 917.0  | 924.7  | 975.4  | 1107.8 | 1161.1 | 1017.5 |
| 47.5°  | 906.7 | 912.7 | 907.6 | 928.2  | 979.7  | 978.8  | 1009.9 | 1028.6 | 1046.7 | 1055.4 | 1163.7 |
| 50°    | 923.9 | 935.0 | 929.8 | 947.0  | 989.1  | 1013.3 | 1039.9 | 1064.0 | 1049.3 | 995.2  | 1024.3 |
| 52.5°  | 924.7 | 937.7 | 965.9 | 983.1  | 1024.3 | 1019.3 | 1037.4 | 1024.3 | 1046.7 | 990.9  | 1019.3 |
| 55°    | 849.1 | 851.6 | 934.1 | 1020.9 | 1093.1 | 1078.5 | 1067.4 | 1038.1 | 1066.5 | 996.8  | 1033.1 |
| 57.5°  | 729.6 | 738.2 | 824.1 | 970.3  | 1124.9 | 1137.8 | 1134.4 | 1131.9 | 1154.2 | 1061.3 | 1101.0 |
| 60°    | 598.1 | 608.4 | 690.1 | 861.9  | 1058.8 | 1092.2 | 1138.7 | 1167.1 | 1224.7 | 1187.6 | 1253.0 |
| 62.5°  | 373.0 | 380.7 | 470.9 | 685.8  | 934.1  | 1000.4 | 1068.3 | 1101.7 | 1185.1 | 1202.3 | 1313.1 |
| 65°    | 178.0 | 180.5 | 215.8 | 373.0  | 678.8  | 803.5  | 904.1  | 975.4  | 1077.7 | 1155.0 | 1304.6 |
| 67.5°  | 138.4 | 139.2 | 152.2 | 198.5  | 348.0  | 431.5  | 545.7  | 640.2  | 749.4  | 960.7  | 1146.5 |
| 70°    | 110.9 | 110.9 | 121.2 | 146.2  | 215.8  | 226.9  | 256.1  | 287.9  | 334.3  | 504.5  | 654.9  |
| 72.5°  | 92.9  | 92.9  | 99.7  | 115.2  | 159.9  | 162.4  | 160.7  | 158.1  | 158.1  | 199.3  | 254.4  |
| 75°    | 78.2  | 77.3  | 81.7  | 92.0   | 118.6  | 122.0  | 120.4  | 114.4  | 107.4  | 107.4  | 121.2  |
| 77.5°  | 63.6  | 63.6  | 67.0  | 72.2   | 86.0   | 87.7   | 87.7   | 82.6   | 76.4   | 77.3   | 83.4   |
| 80°    | 49.9  | 49.9  | 52.4  | 55.9   | 60.2   | 59.3   | 59.3   | 54.2   | 49.9   | 49.0   | 52.4   |
| 82.5°  | 36.1  | 37.0  | 43.0  | 40.4   | 38.6   | 36.1   | 36.1   | 35.2   | 31.8   | 29.3   | 30.9   |
| 85°    | 11.2  | 12.0  | 20.6  | 24.1   | 19.8   | 16.3   | 15.5   | 12.8   | 13.7   | 11.2   | 12.8   |
| 87.5°  | 0.0   | 0.0   | 0.0   | 0.0    | 0.9    | 0.0    | 0.0    | 0.0    | 0.9    | 0.0    | 0.9    |
| 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   |
| 110°   | 99.2  | 100.1 | 101.1 | 104.0  | 108.0  | 108.4  | 109.0  | 109.4  | 110.0  | 110.4  | 110.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 15°   | 25°   | 35°   | 37.5° | 40°   | 42.5° | 45°   | 47.5° | 50°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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°  | 70°    | 72.5°  | 75°    | 77°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  |
| 2.5°   | 354.9  | 356.6  | 353.2  | 353.2  | 348.9  | 351.5  | 347.3  | 348.0  | 343.7  | 345.5  | 345.5  |
| 5°     | 372.1  | 373.0  | 368.7  | 367.0  | 362.6  | 362.6  | 358.3  | 358.3  | 352.3  | 354.1  | 352.3  |
| 7.5°   | 388.4  | 388.4  | 384.1  | 380.7  | 376.4  | 374.8  | 369.6  | 367.0  | 361.7  | 361.0  | 358.3  |
| 10°    | 402.2  | 402.2  | 396.2  | 392.8  | 387.6  | 385.0  | 378.2  | 375.5  | 369.6  | 365.3  | 362.6  |
| 12.5°  | 419.4  | 417.7  | 410.7  | 407.3  | 398.8  | 397.9  | 387.6  | 385.9  | 377.3  | 374.8  | 370.4  |
| 15°    | 440.0  | 441.8  | 430.6  | 429.7  | 417.7  | 416.8  | 403.1  | 402.2  | 389.3  | 388.4  | 382.5  |
| 17.5°  | 462.4  | 465.8  | 456.4  | 455.5  | 440.9  | 440.9  | 424.6  | 423.7  | 406.6  | 405.7  | 397.9  |
| 20°    | 482.1  | 486.4  | 480.4  | 482.1  | 469.3  | 470.2  | 452.0  | 452.0  | 428.0  | 426.2  | 419.4  |
| 22.5°  | 500.2  | 508.8  | 503.6  | 513.0  | 500.2  | 506.1  | 482.1  | 486.4  | 458.0  | 454.6  | 444.3  |
| 25°    | 518.2  | 529.4  | 527.7  | 543.1  | 533.8  | 544.0  | 519.1  | 527.7  | 490.7  | 493.3  | 479.5  |
| 27.5°  | 536.3  | 550.9  | 549.1  | 571.5  | 568.1  | 588.7  | 567.2  | 576.6  | 536.3  | 538.8  | 523.4  |
| 30°    | 566.3  | 582.7  | 576.6  | 599.9  | 599.9  | 633.3  | 617.0  | 631.7  | 587.0  | 592.2  | 574.1  |
| 32.5°  | 606.7  | 625.7  | 607.6  | 637.7  | 636.0  | 679.7  | 666.9  | 691.9  | 647.9  | 654.9  | 632.6  |
| 35°    | 650.6  | 680.6  | 651.5  | 685.0  | 679.7  | 725.3  | 716.8  | 757.1  | 710.6  | 718.5  | 696.2  |
| 37.5°  | 708.1  | 744.2  | 705.6  | 734.8  | 711.5  | 764.0  | 758.9  | 813.9  | 766.6  | 786.4  | 759.7  |
| 40°    | 776.0  | 804.4  | 756.2  | 781.2  | 742.4  | 796.7  | 788.0  | 863.7  | 819.8  | 851.6  | 827.6  |
| 42.5°  | 838.7  | 858.5  | 794.9  | 825.9  | 779.5  | 834.4  | 819.1  | 910.2  | 872.3  | 921.3  | 894.6  |
| 45°    | 895.5  | 917.9  | 833.6  | 868.0  | 816.4  | 876.6  | 850.0  | 954.8  | 928.9  | 1002.9 | 976.3  |
| 47.5°  | 976.3  | 943.6  | 868.9  | 913.6  | 855.9  | 922.1  | 886.9  | 1007.2 | 997.7  | 1102.6 | 1071.7 |
| 50°    | 949.7  | 971.1  | 898.0  | 944.5  | 892.1  | 972.9  | 934.1  | 1069.9 | 1072.6 | 1210.8 | 1192.9 |
| 52.5°  | 952.2  | 988.3  | 920.4  | 984.9  | 934.1  | 1043.3 | 1002.9 | 1145.6 | 1157.6 | 1315.7 | 1290.9 |
| 55°    | 967.7  | 1020.9 | 953.9  | 1040.8 | 993.4  | 1121.5 | 1093.1 | 1227.3 | 1247.8 | 1414.7 | 1400.0 |
| 57.5°  | 1006.4 | 1080.3 | 1011.5 | 1124.9 | 1076.0 | 1210.8 | 1185.1 | 1311.4 | 1339.8 | 1513.5 | 1509.2 |
| 60°    | 1155.0 | 1242.6 | 1122.4 | 1247.8 | 1182.6 | 1312.3 | 1277.9 | 1400.0 | 1428.3 | 1608.0 | 1619.1 |
| 62.5°  | 1320.9 | 1473.0 | 1401.6 | 1532.3 | 1359.6 | 1491.1 | 1389.7 | 1509.2 | 1510.8 | 1709.4 | 1744.6 |
| 65°    | 1363.9 | 1597.6 | 1658.6 | 1901.8 | 1811.6 | 1946.5 | 1675.9 | 1755.7 | 1652.6 | 1894.2 | 1944.8 |
| 67.5°  | 1347.5 | 1633.7 | 1803.0 | 2077.2 | 2179.5 | 2414.9 | 2369.4 | 2341.9 | 2102.9 | 2276.6 | 2337.6 |
| 70°    | 989.1  | 1292.5 | 1706.8 | 1985.3 | 2280.0 | 2434.7 | 2679.6 | 2704.5 | 2694.3 | 2670.1 | 2710.5 |
| 72.5°  | 450.3  | 706.4  | 1155.0 | 1473.0 | 1959.5 | 2063.5 | 2418.3 | 2411.5 | 2775.9 | 2685.7 | 2749.3 |
| 75°    | 177.1  | 272.5  | 550.0  | 822.5  | 1355.4 | 1483.3 | 1885.5 | 1785.8 | 2240.5 | 2108.1 | 2243.9 |
| 77.5°  | 97.1   | 122.0  | 206.3  | 353.2  | 739.9  | 807.8  | 1154.2 | 987.5  | 1389.7 | 1160.3 | 1205.7 |
| 80°    | 58.4   | 73.0   | 94.5   | 134.0  | 314.6  | 332.6  | 492.5  | 397.1  | 568.1  | 431.5  | 418.5  |
| 82.5°  | 31.8   | 39.5   | 47.3   | 66.1   | 116.9  | 129.7  | 170.2  | 153.0  | 182.2  | 155.6  | 152.2  |
| 85°    | 12.8   | 17.2   | 18.1   | 26.6   | 38.6   | 44.6   | 54.2   | 58.4   | 71.3   | 65.3   | 63.6   |
| 87.5°  | 0.0    | 0.9    | 0.0    | 1.8    | 0.0    | 1.8    | 0.0    | 2.5    | 2.5    | 4.3    | 5.2    |
| 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    | 5.9    | 5.4    | 4.9    | 4.7    |
| 100°   | 30.9   | 31.4   | 30.9   | 30.5   | 29.9   | 29.5   | 28.7   | 27.9   | 27.3   | 26.5   | 26.3   |
| 102.5° | 49.9   | 50.0   | 49.9   | 49.6   | 49.2   | 49.0   | 48.6   | 48.1   | 47.6   | 47.1   | 47.3   |
| 105°   | 69.5   | 69.7   | 69.7   | 69.7   | 69.7   | 69.7   | 69.2   | 68.7   | 68.2   | 67.7   | 68.1   |
| 107.5° | 90.8   | 91.3   | 91.1   | 90.8   | 90.5   | 90.3   | 90.1   | 89.8   | 89.5   | 89.3   | 89.5   |
| 110°   | 111.4  | 111.9  | 111.9  | 111.9  | 111.9  | 111.9  | 111.7  | 111.4  | 111.1  | 110.9  | 111.1  |



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CATALOG NUMBER: ISS-AF-450-LED-E1-T2-7027-ULG

**CANDELA DISTRIBUTION (continued):**

|        | 52.5° | 55°   | 57.5° | 60°   | 62.5° | 65°   | 67.5° | 70°   | 72.5° | 75°   | 77°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 132.9 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.3 | 132.9 | 132.7 | 132.5 | 132.9 |
| 115°   | 154.6 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.0 | 155.5 |
| 117.5° | 176.4 | 176.7 | 176.9 | 177.1 | 177.4 | 177.7 | 177.4 | 177.1 | 176.9 | 176.7 | 177.1 |
| 120°   | 199.7 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.2 | 200.6 |
| 122.5° | 223.6 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.9 | 224.3 | 224.6 | 224.8 | 225.6 |
| 125°   | 248.1 | 248.3 | 248.5 | 248.8 | 249.1 | 249.3 | 249.3 | 249.3 | 249.3 | 249.3 | 249.9 |
| 127.5° | 272.4 | 272.8 | 272.6 | 272.4 | 272.1 | 271.8 | 272.1 | 272.4 | 272.6 | 272.8 | 273.4 |
| 130°   | 294.9 | 295.5 | 295.5 | 295.5 | 295.5 | 295.5 | 295.6 | 295.9 | 296.2 | 296.4 | 297.0 |
| 132.5° | 318.2 | 319.0 | 319.0 | 319.0 | 319.0 | 319.0 | 319.2 | 319.4 | 319.8 | 320.0 | 320.5 |
| 135°   | 340.7 | 341.5 | 341.5 | 341.5 | 341.5 | 341.5 | 341.7 | 342.1 | 342.3 | 342.5 | 343.0 |
| 137.5° | 361.7 | 362.2 | 362.2 | 362.2 | 362.2 | 362.2 | 362.4 | 362.6 | 362.9 | 363.2 | 363.9 |
| 140°   | 382.6 | 382.8 | 382.8 | 382.8 | 382.8 | 382.8 | 383.3 | 383.8 | 384.3 | 384.7 | 385.6 |
| 142.5° | 403.9 | 404.3 | 404.3 | 404.3 | 404.3 | 404.3 | 404.6 | 404.9 | 405.1 | 405.3 | 405.9 |
| 145°   | 425.4 | 426.0 | 425.8 | 425.4 | 425.2 | 425.0 | 425.2 | 425.4 | 425.8 | 426.0 | 426.5 |
| 147.5° | 445.4 | 445.6 | 445.1 | 444.6 | 444.1 | 443.7 | 443.9 | 444.1 | 444.4 | 444.6 | 445.2 |
| 150°   | 462.1 | 462.3 | 461.8 | 461.3 | 460.8 | 460.3 | 460.3 | 460.3 | 460.3 | 460.3 | 461.1 |
| 152.5° | 477.8 | 478.0 | 477.8 | 477.4 | 477.2 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 | 477.6 |
| 155°   | 494.4 | 494.7 | 494.4 | 494.2 | 493.9 | 493.7 | 493.9 | 494.2 | 494.4 | 494.7 | 495.2 |
| 157.5° | 509.4 | 509.4 | 508.9 | 508.4 | 507.9 | 507.5 | 507.6 | 507.9 | 508.2 | 508.4 | 509.4 |
| 160°   | 522.2 | 522.2 | 521.6 | 521.2 | 520.7 | 520.2 | 520.2 | 520.2 | 520.2 | 520.2 | 520.7 |
| 162.5° | 531.8 | 532.0 | 531.4 | 531.0 | 530.4 | 530.0 | 529.6 | 529.0 | 528.6 | 528.0 | 528.5 |
| 165°   | 542.6 | 542.8 | 541.9 | 541.3 | 540.6 | 539.8 | 539.3 | 538.8 | 538.4 | 537.8 | 538.3 |
| 167.5° | 549.7 | 549.7 | 549.1 | 548.7 | 548.1 | 547.7 | 547.9 | 548.1 | 548.4 | 548.7 | 549.4 |
| 170°   | 554.7 | 554.5 | 554.3 | 554.1 | 553.7 | 553.5 | 554.1 | 554.5 | 555.1 | 555.5 | 556.5 |
| 172.5° | 558.3 | 558.5 | 557.9 | 557.5 | 556.9 | 556.5 | 556.7 | 556.9 | 557.3 | 557.5 | 558.0 |
| 175°   | 562.2 | 562.4 | 561.6 | 560.9 | 560.3 | 559.5 | 558.9 | 558.5 | 557.9 | 557.5 | 558.0 |
| 177.5° | 566.3 | 566.3 | 565.6 | 564.9 | 564.1 | 563.3 | 563.3 | 563.3 | 563.3 | 563.3 | 564.0 |
| 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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CATALOG NUMBER: ISS-AF-450-LED-E1-T2-7027-ULG

**CANDELA DISTRIBUTION (continued):**

|        | 77.5°  | 80°    | 82.5°  | 85°    | 87.5°  | 90°    | 95°   | 100°  | 102.5° | 105°  | 107.5° |
|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|-------|--------|
| 0°     | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3  | 340.3 | 340.3 | 340.3  | 340.3 | 340.3  |
| 2.5°   | 343.0  | 345.5  | 342.1  | 342.1  | 337.8  | 340.3  | 337.8 | 335.2 | 330.8  | 331.7 | 325.7  |
| 5°     | 348.9  | 350.7  | 346.4  | 344.6  | 342.1  | 341.2  | 336.1 | 330.8 | 324.8  | 324.8 | 318.0  |
| 7.5°   | 354.9  | 354.9  | 348.9  | 348.9  | 343.0  | 341.2  | 333.5 | 324.8 | 316.2  | 315.5 | 305.1  |
| 10°    | 358.3  | 357.5  | 349.8  | 349.8  | 341.2  | 340.3  | 330.8 | 318.0 | 306.0  | 302.5 | 287.9  |
| 12.5°  | 365.3  | 364.4  | 354.9  | 353.2  | 342.1  | 342.1  | 328.3 | 311.2 | 293.9  | 287.9 | 267.2  |
| 15°    | 373.9  | 374.8  | 363.5  | 361.0  | 348.0  | 347.3  | 328.3 | 302.5 | 279.4  | 269.9 | 245.0  |
| 17.5°  | 387.6  | 388.4  | 373.0  | 370.4  | 354.9  | 352.3  | 329.2 | 292.2 | 259.5  | 249.2 | 226.9  |
| 20°    | 405.7  | 403.1  | 382.5  | 381.6  | 361.0  | 358.3  | 328.3 | 276.7 | 239.8  | 229.4 | 209.8  |
| 22.5°  | 428.0  | 425.3  | 398.8  | 396.2  | 372.1  | 367.9  | 327.4 | 260.4 | 221.7  | 210.6 | 197.6  |
| 25°    | 458.9  | 455.5  | 422.8  | 419.4  | 389.3  | 382.5  | 326.5 | 243.2 | 206.3  | 197.6 | 189.9  |
| 27.5°  | 497.6  | 490.7  | 451.2  | 447.7  | 407.3  | 398.8  | 323.1 | 223.5 | 190.8  | 184.8 | 181.4  |
| 30°    | 544.0  | 537.9  | 487.3  | 482.1  | 431.5  | 420.2  | 319.7 | 205.4 | 179.6  | 177.1 | 174.5  |
| 32.5°  | 599.0  | 593.0  | 531.1  | 525.1  | 462.4  | 446.0  | 313.7 | 190.8 | 172.7  | 172.7 | 169.3  |
| 35°    | 656.6  | 651.5  | 578.4  | 574.1  | 496.8  | 475.2  | 306.0 | 178.0 | 166.7  | 166.7 | 163.3  |
| 37.5°  | 708.1  | 712.4  | 629.9  | 626.5  | 531.1  | 504.5  | 297.4 | 169.3 | 161.5  | 159.9 | 156.5  |
| 40°    | 764.0  | 774.2  | 678.1  | 680.6  | 567.2  | 535.4  | 287.1 | 162.4 | 155.6  | 153.8 | 153.0  |
| 42.5°  | 820.7  | 840.5  | 728.7  | 738.2  | 603.3  | 567.2  | 279.4 | 158.1 | 153.0  | 149.6 | 148.7  |
| 45°    | 891.2  | 919.5  | 791.5  | 809.6  | 645.4  | 605.9  | 276.7 | 153.0 | 145.3  | 140.9 | 138.4  |
| 47.5°  | 978.8  | 1016.7 | 868.9  | 889.5  | 701.3  | 652.3  | 281.9 | 151.3 | 140.0  | 134.9 | 129.7  |
| 50°    | 1082.9 | 1119.0 | 960.7  | 969.5  | 764.0  | 703.0  | 293.0 | 153.8 | 138.4  | 130.6 | 122.9  |
| 52.5°  | 1192.9 | 1220.3 | 1057.9 | 1048.5 | 829.3  | 752.8  | 306.0 | 154.7 | 134.0  | 126.3 | 116.9  |
| 55°    | 1306.2 | 1321.8 | 1148.1 | 1123.2 | 888.6  | 802.6  | 323.1 | 153.8 | 130.6  | 122.0 | 110.0  |
| 57.5°  | 1417.2 | 1422.3 | 1228.2 | 1204.0 | 947.0  | 861.9  | 344.6 | 151.3 | 125.4  | 116.9 | 103.9  |
| 60°    | 1525.4 | 1534.0 | 1316.6 | 1294.3 | 1010.6 | 938.5  | 375.5 | 147.0 | 118.6  | 112.6 | 98.8   |
| 62.5°  | 1644.1 | 1672.5 | 1422.3 | 1425.8 | 1098.3 | 1057.9 | 434.0 | 141.8 | 111.7  | 104.8 | 91.1   |
| 65°    | 1805.6 | 1913.9 | 1596.7 | 1677.6 | 1266.8 | 1283.0 | 545.7 | 127.2 | 102.2  | 93.6  | 84.2   |
| 67.5°  | 2210.4 | 2328.9 | 2020.5 | 2053.2 | 1661.2 | 1564.1 | 616.1 | 108.2 | 90.2   | 84.2  | 78.2   |
| 70°    | 2717.5 | 2632.3 | 2413.2 | 2215.5 | 1891.5 | 1608.0 | 542.3 | 91.1  | 79.9   | 76.4  | 73.0   |
| 72.5°  | 2856.7 | 2551.5 | 2371.1 | 2074.5 | 1748.9 | 1402.5 | 415.1 | 78.2  | 71.3   | 69.6  | 67.0   |
| 75°    | 2510.3 | 2068.5 | 2078.9 | 1648.3 | 1449.9 | 1069.2 | 283.7 | 67.0  | 61.8   | 61.1  | 60.2   |
| 77.5°  | 1605.5 | 1063.1 | 1294.3 | 814.8  | 837.1  | 495.1  | 138.4 | 55.9  | 53.3   | 53.3  | 51.6   |
| 80°    | 570.6  | 354.1  | 400.5  | 256.9  | 233.8  | 157.2  | 74.8  | 44.6  | 43.0   | 43.8  | 43.0   |
| 82.5°  | 170.9  | 135.7  | 133.2  | 103.9  | 80.8   | 66.1   | 41.2  | 34.3  | 32.7   | 33.5  | 31.8   |
| 85°    | 68.7   | 53.3   | 44.6   | 34.3   | 28.4   | 25.8   | 22.4  | 23.2  | 20.6   | 22.4  | 19.8   |
| 87.5°  | 4.3    | 3.4    | 2.5    | 3.4    | 0.0    | 1.8    | 4.3   | 3.4   | 0.9    | 3.4   | 2.5    |
| 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    | 4.1    | 4.0    | 4.0    | 4.0    | 4.0   | 4.4   | 4.7    | 4.9   | 5.4    |
| 100°   | 26.3   | 26.1   | 25.7   | 25.5   | 25.1   | 24.5   | 25.5  | 26.1  | 26.3   | 26.5  | 27.3   |
| 102.5° | 47.3   | 47.6   | 47.9   | 48.1   | 47.6   | 47.1   | 48.1  | 47.6  | 47.3   | 47.1  | 47.6   |
| 105°   | 68.2   | 68.7   | 69.2   | 69.7   | 68.7   | 67.7   | 69.7  | 68.7  | 68.2   | 67.7  | 68.2   |
| 107.5° | 89.5   | 89.8   | 90.1   | 90.3   | 89.8   | 89.3   | 90.3  | 89.8  | 89.5   | 89.3  | 89.5   |
| 110°   | 111.1  | 111.4  | 111.7  | 111.9  | 111.4  | 110.9  | 111.9 | 111.4 | 111.1  | 110.9 | 111.1  |



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REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

|        | 77.5° | 80°   | 82.5° | 85°   | 87.5° | 90°   | 95°   | 100°  | 102.5° | 105°  | 107.5° |        |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|--------|
| 112.5° | 132.9 | 133.5 | 133.9 | 134.5 | 133.5 | 132.5 | 134.5 | 133.5 | 132.9  | 132.5 | 132.7  | 0°     |
| 115°   | 155.6 | 156.0 | 156.6 | 157.0 | 156.6 | 156.0 | 157.0 | 156.0 | 155.6  | 155.0 | 155.0  | 2.5°   |
| 117.5° | 177.1 | 177.7 | 178.1 | 178.7 | 177.7 | 176.7 | 178.7 | 177.7 | 177.1  | 176.7 | 176.9  | 5°     |
| 120°   | 200.7 | 201.2 | 201.7 | 202.2 | 201.2 | 200.2 | 202.2 | 201.2 | 200.7  | 200.2 | 200.2  | 7.5°   |
| 122.5° | 225.7 | 226.7 | 227.7 | 228.7 | 228.2 | 227.7 | 228.7 | 226.7 | 225.7  | 224.8 | 224.6  | 10°    |
| 125°   | 250.1 | 250.8 | 251.4 | 252.2 | 251.7 | 251.3 | 252.2 | 250.8 | 250.1  | 249.3 | 249.3  | 12.5°  |
| 127.5° | 273.6 | 274.3 | 275.0 | 275.8 | 274.3 | 272.8 | 275.8 | 274.3 | 273.6  | 272.8 | 272.6  | 15°    |
| 130°   | 297.2 | 297.9 | 298.6 | 299.3 | 298.3 | 297.4 | 299.3 | 297.9 | 297.2  | 296.4 | 296.2  | 17.5°  |
| 132.5° | 320.8 | 321.4 | 322.1 | 322.9 | 322.0 | 321.0 | 322.9 | 321.4 | 320.8  | 320.0 | 319.8  | 20°    |
| 135°   | 343.1 | 343.5 | 344.1 | 344.5 | 344.1 | 343.5 | 344.5 | 343.5 | 343.1  | 342.5 | 342.3  | 22.5°  |
| 137.5° | 364.2 | 365.1 | 366.1 | 367.0 | 366.1 | 365.1 | 367.0 | 365.1 | 364.2  | 363.2 | 362.9  | 25°    |
| 140°   | 385.7 | 386.7 | 387.7 | 388.7 | 387.7 | 386.7 | 388.7 | 386.7 | 385.7  | 384.7 | 384.3  | 27.5°  |
| 142.5° | 406.1 | 406.8 | 407.5 | 408.3 | 407.8 | 407.3 | 408.3 | 406.8 | 406.1  | 405.3 | 405.1  | 30°    |
| 145°   | 426.8 | 427.4 | 428.1 | 428.9 | 428.0 | 427.0 | 428.9 | 427.4 | 426.8  | 426.0 | 425.8  | 32.5°  |
| 147.5° | 445.4 | 446.1 | 446.7 | 447.5 | 446.1 | 444.6 | 447.5 | 446.1 | 445.4  | 444.6 | 444.4  | 35°    |
| 150°   | 461.3 | 462.3 | 463.3 | 464.2 | 462.8 | 461.3 | 464.2 | 462.3 | 461.3  | 460.3 | 460.3  | 37.5°  |
| 152.5° | 477.8 | 478.4 | 479.2 | 480.0 | 478.4 | 477.0 | 480.0 | 478.4 | 477.8  | 477.0 | 477.0  | 40°    |
| 155°   | 495.4 | 496.1 | 496.9 | 497.6 | 496.7 | 495.7 | 497.6 | 496.1 | 495.4  | 494.7 | 494.4  | 42.5°  |
| 157.5° | 509.6 | 510.9 | 512.1 | 513.3 | 511.9 | 510.3 | 513.3 | 510.9 | 509.6  | 508.4 | 508.2  | 45°    |
| 160°   | 520.9 | 521.6 | 522.4 | 523.2 | 522.2 | 521.2 | 523.2 | 521.6 | 520.9  | 520.2 | 520.2  | 47.5°  |
| 162.5° | 528.6 | 529.0 | 529.6 | 530.0 | 528.6 | 527.0 | 530.0 | 529.0 | 528.6  | 528.0 | 528.6  | 50°    |
| 165°   | 538.4 | 538.8 | 539.3 | 539.8 | 538.8 | 537.8 | 539.8 | 538.8 | 538.4  | 537.8 | 538.4  | 52.5°  |
| 167.5° | 549.7 | 550.6 | 551.6 | 552.5 | 551.6 | 550.6 | 552.5 | 550.6 | 549.7  | 548.7 | 548.4  | 55°    |
| 170°   | 556.7 | 557.9 | 559.3 | 560.5 | 559.5 | 558.5 | 560.5 | 557.9 | 556.7  | 555.5 | 555.1  | 57.5°  |
| 172.5° | 558.3 | 558.9 | 559.6 | 560.5 | 558.9 | 557.5 | 560.5 | 558.9 | 558.3  | 557.5 | 557.3  | 60°    |
| 175°   | 558.3 | 558.9 | 559.6 | 560.5 | 558.9 | 557.5 | 560.5 | 558.9 | 558.3  | 557.5 | 557.9  | 62.5°  |
| 177.5° | 564.1 | 564.9 | 565.6 | 566.3 | 564.9 | 563.3 | 566.3 | 564.9 | 564.1  | 563.3 | 563.3  | 65°    |
| 180°   | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3 | 565.3  | 565.3 | 565.3  | 67.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 70°    |
|        |       |       |       |       |       |       |       |       |        |       |        | 72.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 75°    |
|        |       |       |       |       |       |       |       |       |        |       |        | 77.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 80°    |
|        |       |       |       |       |       |       |       |       |        |       |        | 82.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 85°    |
|        |       |       |       |       |       |       |       |       |        |       |        | 87.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 90°    |
|        |       |       |       |       |       |       |       |       |        |       |        | 92.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 95°    |
|        |       |       |       |       |       |       |       |       |        |       |        | 97.5°  |
|        |       |       |       |       |       |       |       |       |        |       |        | 100°   |
|        |       |       |       |       |       |       |       |       |        |       |        | 102.5° |
|        |       |       |       |       |       |       |       |       |        |       |        | 105°   |
|        |       |       |       |       |       |       |       |       |        |       |        | 107.5° |
|        |       |       |       |       |       |       |       |       |        |       |        | 110°   |

NUMBER: P271577  
 NUMBER: ISS-AF-450-LED-E1-T2-7027-ULG

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

**CANDELA DISTRIBUTION**

| 110°  | 112.5° | 115°  | 117.5° | 120°  | 122.5° | 125°  | 127.5° | 130°  | 135°  | 145°  | 110°   |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|-------|-------|--------|-------|
| 340.3 | 340.3  | 340.3 | 340.3  | 340.3 | 340.3  | 340.3 | 340.3  | 340.3 | 340.3 | 340.3 | 112.5° | 132.9 |
| 329.9 | 324.0  | 326.5 | 324.0  | 325.7 | 320.5  | 322.3 | 318.0  | 318.0 | 317.1 | 312.8 | 115°   | 155.0 |
| 318.9 | 312.8  | 311.9 | 306.0  | 306.8 | 299.9  | 299.0 | 291.3  | 291.3 | 284.4 | 271.6 | 117.5° | 177.1 |
| 303.4 | 293.9  | 293.0 | 281.0  | 280.2 | 270.7  | 267.2 | 258.7  | 257.8 | 250.1 | 242.4 | 120°   | 200.2 |
| 283.7 | 269.0  | 266.3 | 251.0  | 251.9 | 241.5  | 240.7 | 234.5  | 234.5 | 231.1 | 231.1 | 122.5° | 224.3 |
| 261.2 | 245.0  | 243.2 | 231.1  | 232.0 | 225.1  | 226.0 | 222.6  | 224.3 | 226.0 | 232.0 | 125°   | 249.3 |
| 240.7 | 227.7  | 226.0 | 218.3  | 219.2 | 217.4  | 220.1 | 220.1  | 222.6 | 226.9 | 237.2 | 127.5° | 272.4 |
| 223.5 | 212.3  | 213.2 | 209.8  | 213.2 | 212.3  | 217.4 | 216.6  | 221.7 | 226.9 | 239.8 | 130°   | 295.9 |
| 208.0 | 202.0  | 204.5 | 203.6  | 208.0 | 208.0  | 212.3 | 213.2  | 217.4 | 224.3 | 238.9 | 132.5° | 319.4 |
| 197.6 | 195.9  | 198.5 | 198.5  | 202.0 | 202.7  | 207.1 | 209.8  | 212.3 | 219.2 | 232.0 | 135°   | 342.1 |
| 191.7 | 190.8  | 193.3 | 194.2  | 196.8 | 197.6  | 202.0 | 202.0  | 206.3 | 210.6 | 217.4 | 137.5° | 362.6 |
| 183.1 | 181.4  | 184.8 | 184.8  | 188.3 | 187.4  | 192.5 | 190.8  | 195.1 | 196.8 | 198.5 | 140°   | 383.8 |
| 177.1 | 174.5  | 177.1 | 176.2  | 178.8 | 176.2  | 178.8 | 176.2  | 178.8 | 178.8 | 176.2 | 142.5° | 404.9 |
| 170.9 | 168.4  | 169.3 | 165.8  | 168.4 | 165.0  | 165.8 | 162.4  | 164.1 | 162.4 | 163.3 | 145°   | 425.4 |
| 165.0 | 161.5  | 161.5 | 157.2  | 157.2 | 153.0  | 154.7 | 151.3  | 154.7 | 157.2 | 156.5 | 147.5° | 444.1 |
| 156.5 | 153.8  | 153.8 | 150.4  | 152.2 | 150.4  | 153.8 | 152.2  | 153.0 | 149.6 | 143.5 | 150°   | 460.3 |
| 151.3 | 153.0  | 152.2 | 154.7  | 153.0 | 150.4  | 147.8 | 142.7  | 141.8 | 140.0 | 136.6 | 152.5° | 477.0 |
| 143.5 | 145.3  | 140.9 | 144.4  | 141.8 | 142.7  | 140.9 | 138.4  | 136.6 | 134.9 | 131.5 | 155°   | 494.2 |
| 132.3 | 132.3  | 128.9 | 134.0  | 131.5 | 136.6  | 134.9 | 134.9  | 133.2 | 130.6 | 128.1 | 157.5° | 507.9 |
| 122.9 | 123.8  | 120.4 | 124.7  | 122.9 | 129.7  | 128.9 | 131.5  | 131.5 | 129.7 | 122.9 | 160°   | 520.2 |
| 116.9 | 115.2  | 112.6 | 116.9  | 116.0 | 122.0  | 122.9 | 128.1  | 127.2 | 128.1 | 122.0 | 162.5° | 529.0 |
| 111.7 | 108.2  | 105.7 | 108.2  | 108.2 | 113.5  | 115.2 | 121.2  | 122.0 | 123.8 | 120.4 | 165°   | 538.8 |
| 105.7 | 101.4  | 99.7  | 101.4  | 101.4 | 106.6  | 109.1 | 113.5  | 116.0 | 121.2 | 119.5 | 167.5° | 548.1 |
| 100.5 | 94.5   | 92.9  | 94.5   | 95.4  | 100.5  | 103.1 | 107.4  | 110.9 | 117.8 | 116.9 | 170°   | 554.5 |
| 94.5  | 89.4   | 87.7  | 90.2   | 91.1  | 96.3   | 98.8  | 103.1  | 105.7 | 113.5 | 113.5 | 172.5° | 556.9 |
| 87.7  | 83.4   | 83.4  | 84.2   | 86.0  | 91.1   | 92.9  | 98.8   | 99.7  | 109.1 | 110.0 | 175°   | 558.5 |
| 81.7  | 79.1   | 79.1  | 79.9   | 81.7  | 86.0   | 86.8  | 92.9   | 93.6  | 103.1 | 105.7 | 177.5° | 563.3 |
| 76.4  | 74.8   | 74.8  | 75.6   | 76.4  | 79.9   | 80.8  | 86.8   | 88.6  | 97.1  | 101.4 | 180°   | 565.3 |
| 71.3  | 69.6   | 68.7  | 68.7   | 71.3  | 73.9   | 75.6  | 81.7   | 82.6  | 90.2  | 95.4  |        |       |
| 65.3  | 63.6   | 63.6  | 62.7   | 65.3  | 67.0   | 70.4  | 73.9   | 75.6  | 83.4  | 86.8  |        |       |
| 59.3  | 57.6   | 57.6  | 56.8   | 58.4  | 61.8   | 62.7  | 66.1   | 67.0  | 73.9  | 77.3  |        |       |
| 51.6  | 49.9   | 49.9  | 49.9   | 51.6  | 52.4   | 53.3  | 56.8   | 58.4  | 64.5  | 67.9  |        |       |
| 43.0  | 41.2   | 42.1  | 41.2   | 43.8  | 40.4   | 43.0  | 46.4   | 48.1  | 51.6  | 49.9  |        |       |
| 32.7  | 30.0   | 30.9  | 30.9   | 31.8  | 29.3   | 30.9  | 32.7   | 34.3  | 37.0  | 36.1  |        |       |
| 20.6  | 18.1   | 19.8  | 18.1   | 19.8  | 17.2   | 19.0  | 19.0   | 20.6  | 19.0  | 18.1  |        |       |
| 4.3   | 1.8    | 4.3   | 1.8    | 5.2   | 0.0    | 2.5   | 0.0    | 1.8   | 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   |        |       |
| 1.0   | 1.0    | 1.0   | 1.0    | 1.0   | 1.0    | 1.0   | 1.0    | 1.0   | 1.0   | 1.0   |        |       |
| 5.9   | 6.4    | 6.8   | 8.4    | 9.8   | 11.3   | 12.8  | 11.8   | 10.8  | 8.8   | 4.0   |        |       |
| 27.9  | 28.7   | 29.5  | 29.9   | 30.5  | 30.9   | 31.4  | 30.9   | 30.5  | 29.5  | 21.6  |        |       |
| 48.1  | 48.6   | 49.0  | 49.2   | 49.6  | 49.9   | 50.0  | 49.9   | 49.6  | 49.0  | 44.2  |        |       |
| 68.7  | 69.2   | 69.7  | 69.7   | 69.7  | 69.7   | 69.7  | 69.5   | 69.2  | 68.7  | 64.8  |        |       |
| 89.8  | 90.1   | 90.3  | 90.5   | 90.8  | 91.1   | 91.3  | 90.8   | 90.3  | 89.3  | 86.3  |        |       |
| 111.4 | 111.7  | 111.9 | 111.9  | 111.9 | 111.9  | 111.9 | 111.4  | 110.9 | 110.0 | 108.0 |        |       |

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 ISS-AF-450-LED-E1-T2-7027-ULG

REPORT NUMBER: P271577  
 CATALOG NUMBER: ISS-AF-450

**TION (continued):**

**CANDELA DISTRIBUTION (con**

| 112.5° | 115°  | 117.5° | 120°  | 122.5° | 125°  | 127.5° | 130°  | 135°  | 145°  |        | 155°  | 165°  |
|--------|-------|--------|-------|--------|-------|--------|-------|-------|-------|--------|-------|-------|
| 133.3  | 133.5 | 133.5  | 133.5 | 133.5  | 133.5 | 132.9  | 132.5 | 131.5 | 129.5 | 0°     | 340.3 | 340.3 |
| 155.0  | 155.0 | 155.0  | 155.0 | 155.0  | 155.0 | 154.6  | 154.1 | 153.1 | 151.2 | 2.5°   | 308.5 | 305.1 |
| 177.4  | 177.7 | 177.4  | 177.1 | 176.9  | 176.7 | 176.4  | 176.2 | 175.7 | 173.7 | 5°     | 264.7 | 258.7 |
| 200.2  | 200.2 | 200.2  | 200.2 | 200.2  | 200.2 | 199.7  | 199.2 | 198.3 | 197.3 | 7.5°   | 238.1 | 236.3 |
| 223.9  | 223.8 | 223.8  | 223.8 | 223.8  | 223.8 | 223.6  | 223.3 | 222.8 | 221.8 | 10°    | 232.9 | 235.4 |
| 249.3  | 249.3 | 249.1  | 248.8 | 248.5  | 248.3 | 248.1  | 247.8 | 247.3 | 246.3 | 12.5°  | 238.9 | 243.2 |
| 272.1  | 271.8 | 272.1  | 272.4 | 272.6  | 272.8 | 272.4  | 271.8 | 270.9 | 269.0 | 15°    | 246.7 | 254.4 |
| 295.6  | 295.5 | 295.5  | 295.5 | 295.5  | 295.5 | 294.9  | 294.5 | 293.5 | 292.5 | 17.5°  | 252.6 | 262.9 |
| 319.2  | 319.0 | 319.0  | 319.0 | 319.0  | 319.0 | 318.2  | 317.6 | 316.0 | 315.0 | 20°    | 253.5 | 263.8 |
| 341.7  | 341.5 | 341.5  | 341.5 | 341.5  | 341.5 | 340.7  | 340.1 | 338.6 | 338.6 | 22.5°  | 245.8 | 252.6 |
| 362.4  | 362.2 | 362.2  | 362.2 | 362.2  | 362.2 | 361.7  | 361.2 | 360.2 | 360.2 | 25°    | 226.0 | 229.4 |
| 383.3  | 382.8 | 382.8  | 382.8 | 382.8  | 382.8 | 382.6  | 382.3 | 381.8 | 380.8 | 27.5°  | 201.1 | 200.2 |
| 404.6  | 404.3 | 404.3  | 404.3 | 404.3  | 404.3 | 403.9  | 403.4 | 402.4 | 402.4 | 30°    | 175.3 | 173.6 |
| 425.2  | 425.0 | 425.2  | 425.4 | 425.8  | 426.0 | 425.4  | 425.0 | 424.0 | 423.0 | 32.5°  | 165.8 | 159.9 |
| 443.9  | 443.7 | 444.1  | 444.6 | 445.1  | 445.6 | 445.4  | 445.1 | 444.6 | 443.7 | 35°    | 151.3 | 149.6 |
| 460.3  | 460.3 | 460.8  | 461.3 | 461.8  | 462.3 | 462.1  | 461.8 | 461.3 | 460.3 | 37.5°  | 146.2 | 160.7 |
| 477.0  | 477.0 | 477.2  | 477.4 | 477.8  | 478.0 | 477.8  | 477.4 | 477.0 | 476.0 | 40°    | 140.0 | 158.1 |
| 493.9  | 493.7 | 493.9  | 494.2 | 494.4  | 494.7 | 494.4  | 494.2 | 493.7 | 493.7 | 42.5°  | 134.9 | 145.3 |
| 507.6  | 507.5 | 507.9  | 508.4 | 508.9  | 509.4 | 509.4  | 509.4 | 509.4 | 509.4 | 45°    | 125.4 | 129.7 |
| 520.2  | 520.2 | 520.7  | 521.2 | 521.6  | 522.2 | 522.2  | 522.2 | 522.2 | 522.2 | 47.5°  | 121.2 | 119.5 |
| 529.6  | 530.0 | 530.4  | 531.0 | 531.4  | 532.0 | 531.8  | 531.4 | 531.0 | 531.0 | 50°    | 117.8 | 117.8 |
| 539.3  | 539.8 | 540.6  | 541.3 | 541.9  | 542.8 | 542.6  | 542.3 | 541.8 | 541.8 | 52.5°  | 115.2 | 113.5 |
| 547.9  | 547.7 | 548.1  | 548.7 | 549.1  | 549.7 | 549.7  | 549.7 | 549.7 | 550.6 | 55°    | 111.7 | 110.0 |
| 554.1  | 553.5 | 553.7  | 554.1 | 554.3  | 554.5 | 554.7  | 555.1 | 555.5 | 556.5 | 57.5°  | 109.1 | 104.8 |
| 556.7  | 556.5 | 556.9  | 557.5 | 557.9  | 558.5 | 558.3  | 557.9 | 557.5 | 558.5 | 60°    | 106.6 | 102.2 |
| 558.9  | 559.5 | 560.3  | 560.9 | 561.6  | 562.4 | 562.2  | 561.9 | 561.4 | 561.4 | 62.5°  | 104.8 | 99.7  |
| 563.3  | 563.3 | 564.1  | 564.9 | 565.6  | 566.3 | 566.3  | 566.3 | 566.3 | 567.3 | 65°    | 102.2 | 97.1  |
| 565.3  | 565.3 | 565.3  | 565.3 | 565.3  | 565.3 | 565.3  | 565.3 | 565.3 | 565.3 | 67.5°  | 98.8  | 92.0  |
|        |       |        |       |        |       |        |       |       |       | 70°    | 92.0  | 86.0  |
|        |       |        |       |        |       |        |       |       |       | 72.5°  | 85.1  | 78.2  |
|        |       |        |       |        |       |        |       |       |       | 75°    | 74.8  | 68.7  |
|        |       |        |       |        |       |        |       |       |       | 77.5°  | 62.7  | 55.9  |
|        |       |        |       |        |       |        |       |       |       | 80°    | 47.3  | 43.0  |
|        |       |        |       |        |       |        |       |       |       | 82.5°  | 34.3  | 29.3  |
|        |       |        |       |        |       |        |       |       |       | 85°    | 15.5  | 11.2  |
|        |       |        |       |        |       |        |       |       |       | 87.5°  | 0.0   | 0.0   |
|        |       |        |       |        |       |        |       |       |       | 90°    | 0.0   | 0.0   |
|        |       |        |       |        |       |        |       |       |       | 92.5°  | 0.0   | 0.0   |
|        |       |        |       |        |       |        |       |       |       | 95°    | 1.0   | 1.0   |
|        |       |        |       |        |       |        |       |       |       | 97.5°  | 3.0   | 2.0   |
|        |       |        |       |        |       |        |       |       |       | 100°   | 13.7  | 9.8   |
|        |       |        |       |        |       |        |       |       |       | 102.5° | 37.3  | 31.4  |
|        |       |        |       |        |       |        |       |       |       | 105°   | 59.8  | 55.0  |
|        |       |        |       |        |       |        |       |       |       | 107.5° | 82.5  | 78.5  |
|        |       |        |       |        |       |        |       |       |       | 110°   | 104.0 | 101.1 |

REPORT NUMBER: P271577

CATALOG NUMBER: ISS-AF-450-LED-E1-1

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**tinued):**

| 175°  | 180°  |
|-------|-------|
| 340.3 | 340.3 |
| 303.4 | 302.5 |
| 256.9 | 255.3 |
| 236.3 | 235.4 |
| 236.3 | 236.3 |
| 246.7 | 246.7 |
| 258.7 | 258.7 |
| 267.2 | 268.1 |
| 269.9 | 270.7 |
| 256.9 | 256.9 |
| 232.0 | 232.0 |
| 199.3 | 202.7 |
| 170.2 | 173.6 |
| 151.3 | 153.8 |
| 145.3 | 146.2 |
| 159.9 | 160.7 |
| 157.2 | 159.0 |
| 134.9 | 135.7 |
| 121.2 | 121.2 |
| 116.0 | 115.2 |
| 116.0 | 114.4 |
| 119.5 | 118.6 |
| 114.4 | 114.4 |
| 111.7 | 111.7 |
| 109.1 | 109.1 |
| 108.2 | 107.4 |
| 108.2 | 106.6 |
| 106.6 | 103.9 |
| 100.5 | 93.6  |
| 86.0  | 79.9  |
| 69.6  | 68.7  |
| 54.2  | 55.0  |
| 41.2  | 41.2  |
| 30.0  | 25.0  |
| 8.6   | 8.6   |
| 0.0   | 0.0   |
| 0.0   | 0.0   |
| 0.0   | 0.0   |
| 1.0   | 1.0   |
| 2.0   | 2.0   |
| 7.8   | 7.8   |
| 27.5  | 27.5  |
| 53.0  | 53.0  |
| 75.5  | 76.5  |
| 100.1 | 99.2  |

**CANDELA DISTRIBUTION (continued):**

|        | 155°  | 165°  | 175°  |
|--------|-------|-------|-------|
| 112.5° | 126.6 | 123.7 | 121.7 |
| 115°   | 148.2 | 146.2 | 144.3 |
| 117.5° | 170.8 | 168.8 | 166.8 |
| 120°   | 194.3 | 192.3 | 191.4 |
| 122.5° | 218.8 | 216.9 | 216.0 |
| 125°   | 243.4 | 242.5 | 241.5 |
| 127.5° | 267.0 | 265.0 | 264.0 |
| 130°   | 288.5 | 287.5 | 286.6 |
| 132.5° | 312.1 | 311.2 | 308.2 |
| 135°   | 334.7 | 332.7 | 330.8 |
| 137.5° | 357.3 | 356.3 | 353.3 |
| 140°   | 378.8 | 377.8 | 375.9 |
| 142.5° | 399.5 | 400.5 | 398.5 |
| 145°   | 420.0 | 420.0 | 418.1 |
| 147.5° | 439.7 | 438.7 | 435.8 |
| 150°   | 456.4 | 455.4 | 453.5 |
| 152.5° | 473.0 | 474.0 | 471.1 |
| 155°   | 491.7 | 492.7 | 490.7 |
| 157.5° | 506.5 | 507.5 | 505.5 |
| 160°   | 519.2 | 519.2 | 517.2 |
| 162.5° | 528.0 | 529.0 | 526.0 |
| 165°   | 537.8 | 538.8 | 536.8 |
| 167.5° | 547.7 | 548.7 | 545.7 |
| 170°   | 554.5 | 555.5 | 552.5 |
| 172.5° | 556.5 | 558.5 | 555.5 |
| 175°   | 558.5 | 559.5 | 558.5 |
| 177.5° | 563.3 | 564.3 | 562.4 |
| 180°   | 565.3 | 565.3 | 565.3 |



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|       |
|-------|
| 180°  |
| <hr/> |
| 121.7 |
| 143.3 |
| 165.8 |
| 189.5 |
| 215.0 |
| 239.5 |
| 262.0 |
| 284.7 |
| 307.2 |
| 329.8 |
| 352.3 |
| 375.0 |
| 396.5 |
| 417.2 |
| 435.8 |
| 452.5 |
| 470.2 |
| 489.8 |
| 503.5 |
| 515.3 |
| 525.1 |
| 535.9 |
| 544.7 |
| 551.6 |
| 554.5 |
| 556.5 |
| 561.4 |
| 565.3 |

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