

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: P271832

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271832
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35945)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISW-AF-450-LED-E1-SL2-7027-ULG
Description: IMPACT ELITE LED WEDGE 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: 4337.6 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B1 - U5 - G1

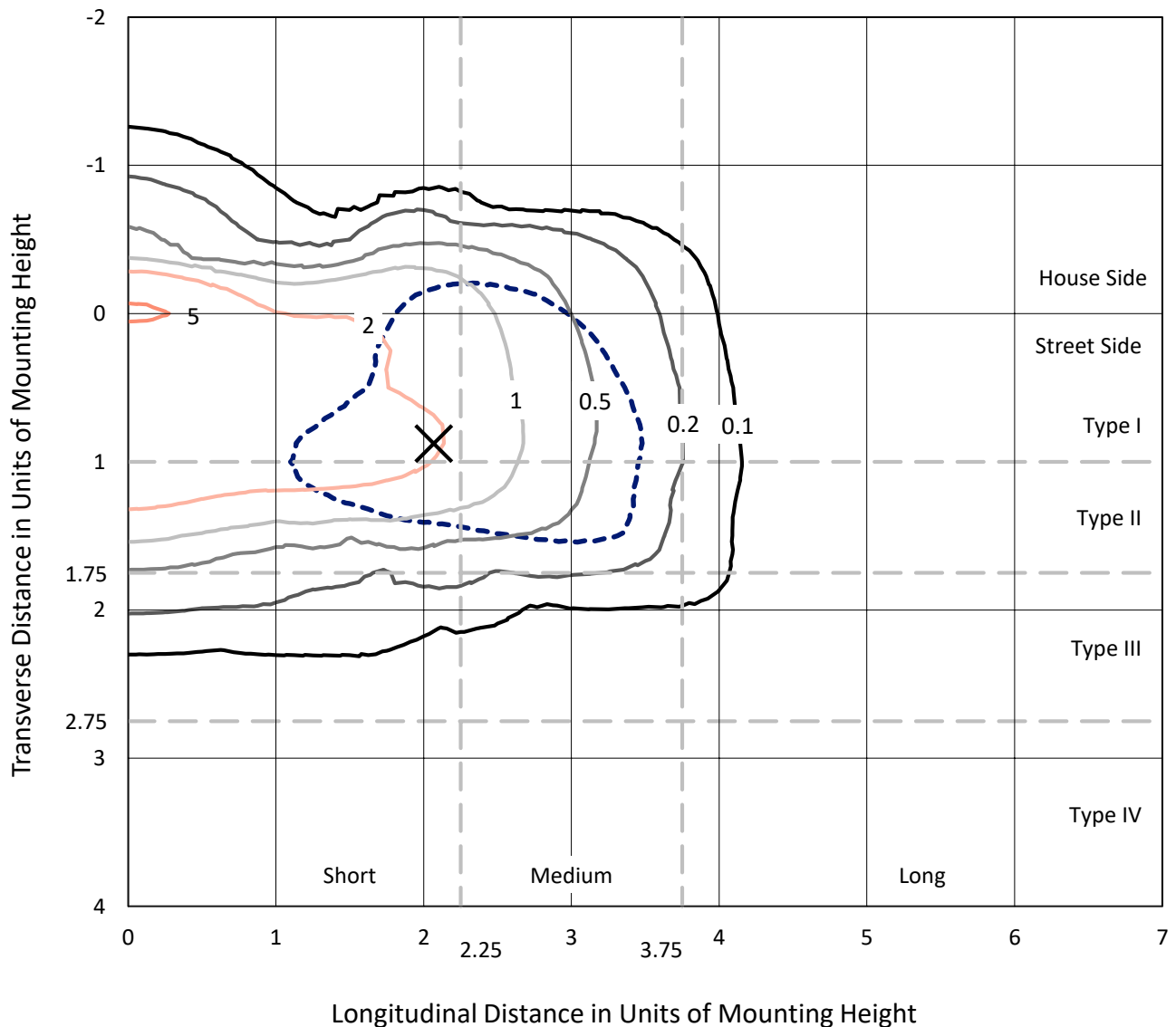
Input Watts (W): 42.01
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

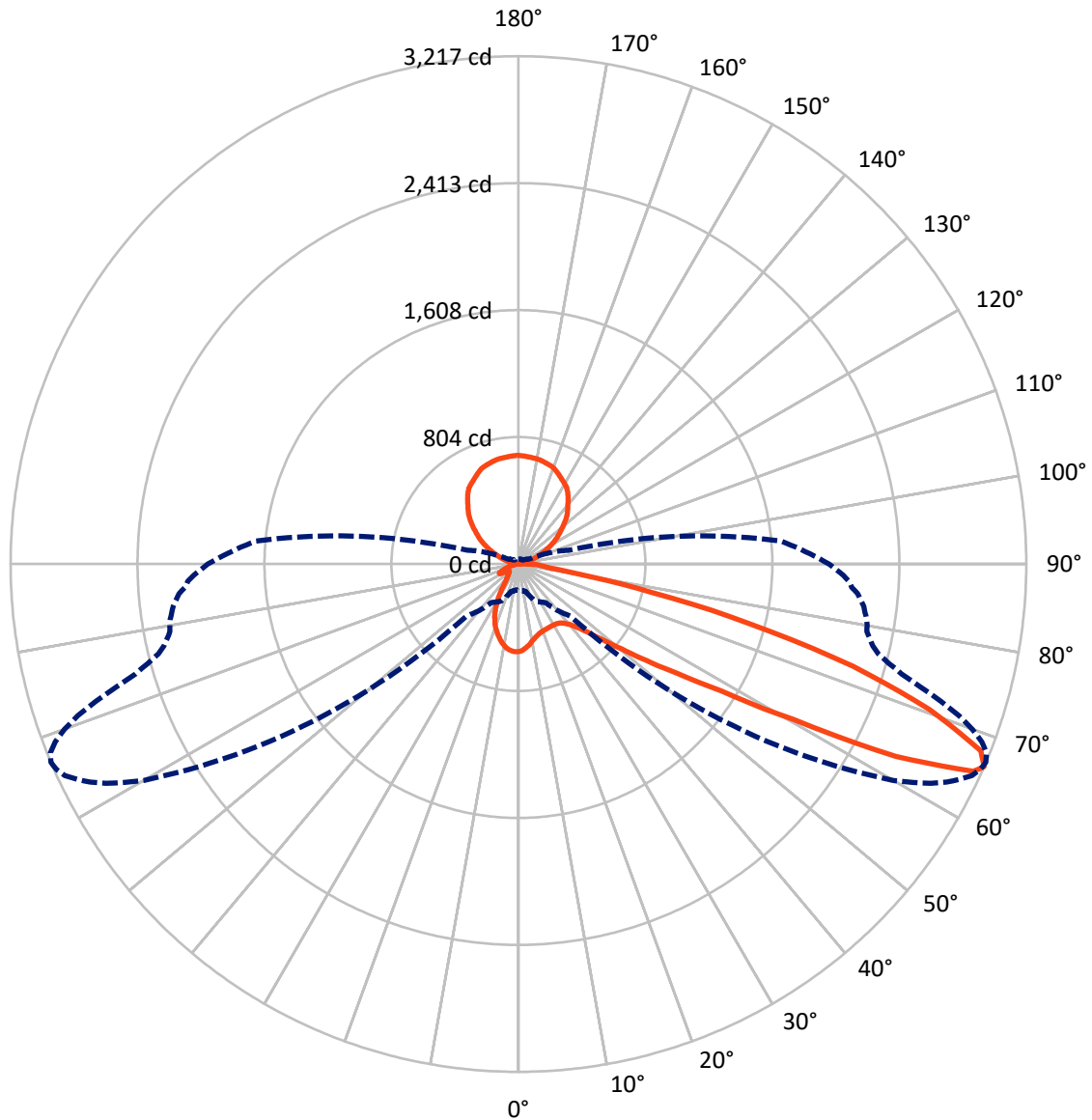
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.5 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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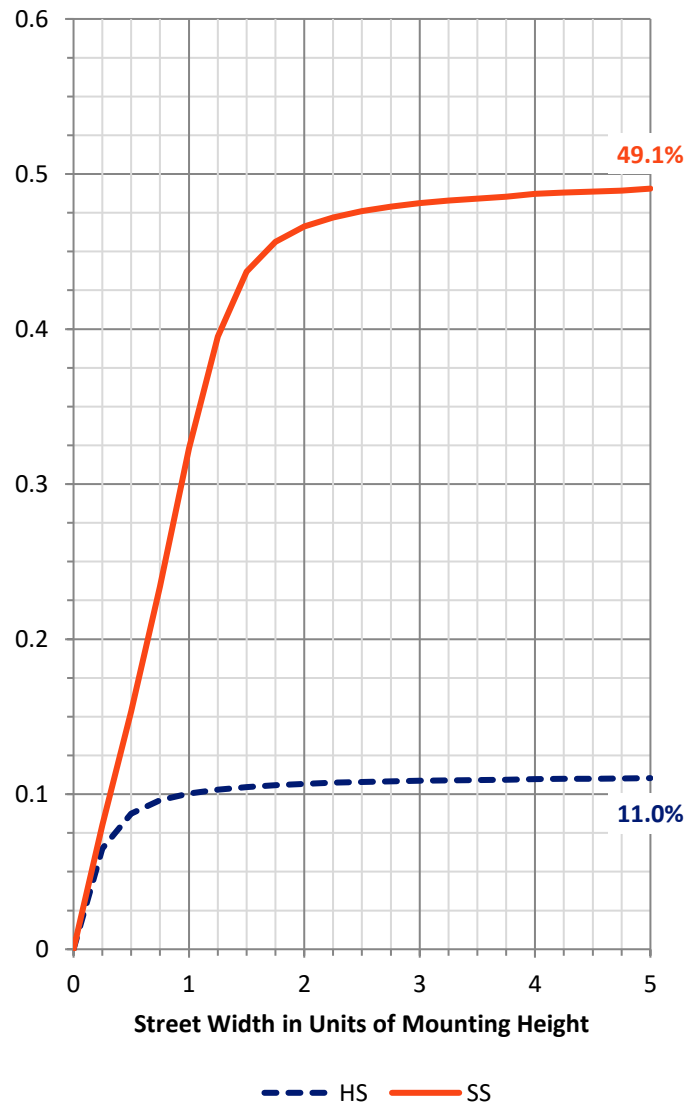
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 486.8 | 851.7 | 1338.5 |
| | % Fixture | 11.2 | 19.6 | 30.9 |
| Street Side | Lumens | 2146.9 | 852.2 | 2999.1 |
| | % Fixture | 49.5 | 19.6 | 69.1 |
| Total | Lumens | 2633.6 | 1703.9 | 4337.6 |
| | % Fixture | 60.7 | 39.3 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 48.1 | 1.1 |
| 10°-20° | 114.4 | 2.6 |
| 20°-30° | 156.9 | 3.6 |
| 30°-40° | 224.1 | 5.2 |
| 40°-50° | 363.4 | 8.4 |
| 50°-60° | 575.8 | 13.3 |
| 60°-70° | 729.7 | 16.8 |
| 70°-80° | 362.7 | 8.4 |
| 80°-90° | 58.4 | 1.3 |
| 90°-100° | 10.0 | 0.2 |
| 100°-110° | 56.3 | 1.3 |
| 110°-120° | 163.0 | 3.8 |
| 120°-130° | 268.1 | 6.2 |
| 130°-140° | 330.6 | 7.6 |
| 140°-150° | 338.2 | 7.8 |
| 150°-160° | 284.9 | 6.6 |
| 160°-170° | 187.6 | 4.3 |
| 170°-180° | 65.0 | 1.5 |
| 0°-90° | 2633.6 | 60.7 |
| 0°-180° | 4337.6 | 100.0 |



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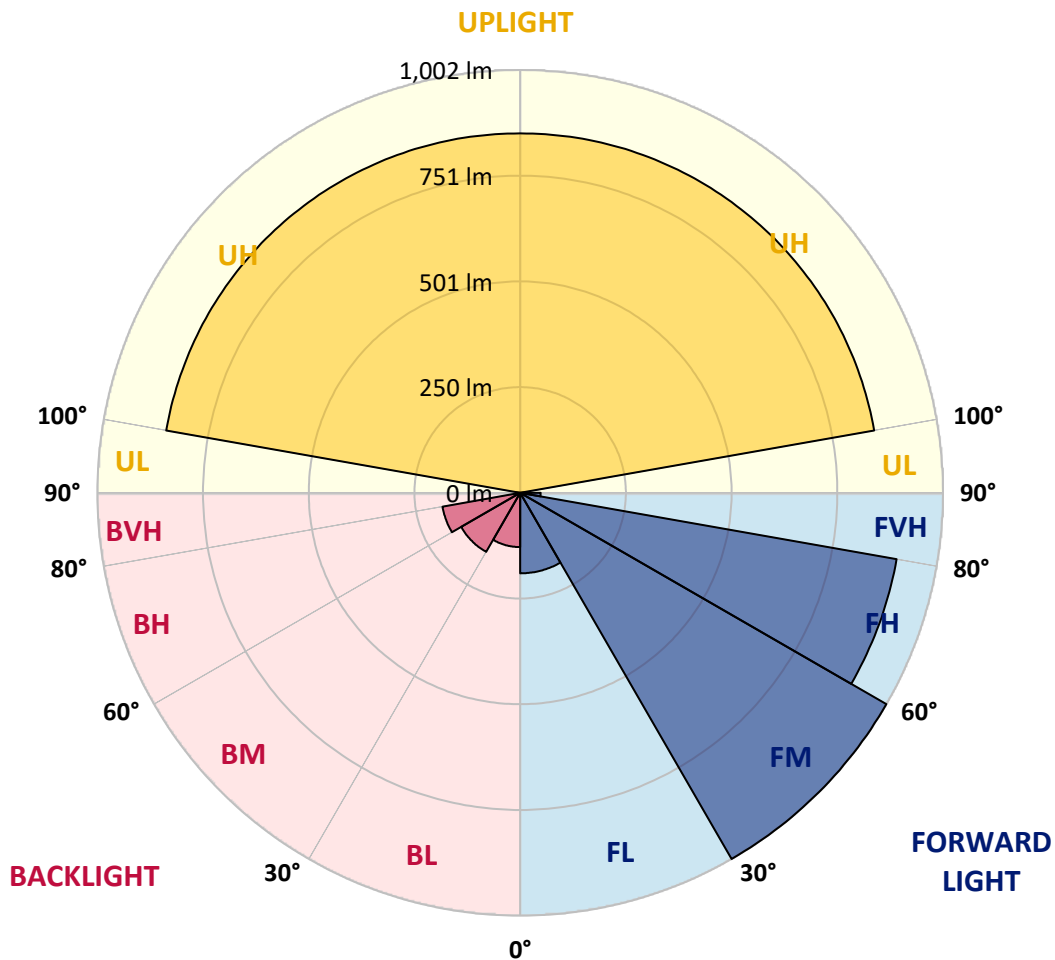
CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|---------|---------|
| | | | B | U | G |
| FL (0°-30°) | 190.8 | 4.4 | | | |
| FM (30°-60°) | 1001.8 | 23.1 | | | |
| FH (60°-80°) | 905.6 | 20.9 | | | G1/1800 |
| FVH (80°-90°) | 48.7 | 1.1 | | | G1/100 |
| BL (0°-30°) | 128.6 | 3.0 | B1/500 | | |
| BM (30°-60°) | 161.6 | 3.7 | B0/220 | | |
| BH (60°-80°) | 186.9 | 4.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 9.8 | 0.2 | | | G0/10 |
| UL (90°-100°) | 10.0 | 0.2 | | U2/50 | |
| UH (100°-180°) | 851.7 | 19.6 | | U4/1000 | |

BUG Rating: B1-U5-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 61° | 62° | 63° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 |
| 2.5° | 515.2 | 516.3 | 523.2 | 526.7 | 531.8 | 533.3 | 539.3 | 541.7 | 543.7 | 543.3 | 543.3 |
| 5° | 468.8 | 472.5 | 475.7 | 482.7 | 490.3 | 499.4 | 510.9 | 519.5 | 521.1 | 523.2 | 524.3 |
| 7.5° | 433.6 | 436.0 | 441.6 | 446.6 | 456.2 | 468.8 | 485.2 | 496.1 | 498.6 | 499.4 | 502.2 |
| 10° | 408.7 | 410.3 | 415.1 | 421.8 | 432.8 | 445.1 | 462.2 | 473.7 | 477.2 | 478.8 | 481.1 |
| 12.5° | 389.3 | 391.8 | 396.1 | 403.2 | 415.1 | 427.8 | 445.5 | 457.0 | 459.3 | 461.4 | 465.0 |
| 15° | 377.1 | 378.6 | 382.6 | 390.5 | 401.3 | 413.8 | 431.3 | 445.1 | 446.6 | 448.7 | 451.8 |
| 17.5° | 374.8 | 375.9 | 378.3 | 384.3 | 392.5 | 404.8 | 422.7 | 434.0 | 436.8 | 439.6 | 442.8 |
| 20° | 384.3 | 385.0 | 385.8 | 386.6 | 391.3 | 399.3 | 416.6 | 428.9 | 431.3 | 433.6 | 437.7 |
| 22.5° | 404.8 | 405.9 | 404.0 | 401.3 | 397.7 | 399.3 | 413.8 | 426.5 | 428.1 | 430.5 | 433.6 |
| 25° | 440.3 | 439.2 | 433.3 | 428.9 | 416.3 | 405.9 | 414.7 | 425.3 | 427.3 | 429.7 | 433.3 |
| 27.5° | 482.3 | 480.8 | 477.2 | 465.3 | 444.3 | 423.4 | 419.4 | 427.3 | 428.5 | 430.5 | 433.6 |
| 30° | 527.5 | 527.8 | 524.7 | 511.7 | 484.6 | 449.5 | 430.1 | 432.1 | 432.8 | 434.5 | 436.5 |
| 32.5° | 568.2 | 574.2 | 573.7 | 573.0 | 534.5 | 484.6 | 450.7 | 442.8 | 441.6 | 442.8 | 443.5 |
| 35° | 615.2 | 616.5 | 627.6 | 633.0 | 601.9 | 536.2 | 480.8 | 463.3 | 458.6 | 458.9 | 458.1 |
| 37.5° | 665.9 | 667.5 | 686.6 | 696.0 | 671.8 | 594.7 | 520.7 | 493.8 | 489.5 | 485.2 | 481.9 |
| 40° | 739.6 | 745.9 | 755.7 | 766.4 | 754.6 | 673.4 | 573.4 | 537.0 | 525.9 | 525.1 | 518.7 |
| 42.5° | 849.4 | 847.6 | 842.8 | 851.5 | 837.2 | 761.7 | 637.1 | 597.8 | 589.6 | 578.5 | 569.7 |
| 45° | 957.5 | 961.8 | 941.3 | 945.3 | 946.0 | 863.8 | 729.2 | 674.3 | 669.9 | 656.8 | 647.3 |
| 47.5° | 1030.4 | 1025.5 | 997.8 | 1018.0 | 1067.5 | 982.8 | 836.1 | 778.3 | 769.2 | 762.5 | 756.6 |
| 50° | 1034.3 | 1030.4 | 1012.5 | 1048.1 | 1153.9 | 1194.6 | 984.8 | 917.6 | 904.5 | 892.6 | 889.1 |
| 52.5° | 937.7 | 932.2 | 938.2 | 1010.5 | 1185.0 | 1371.8 | 1194.9 | 1090.5 | 1079.9 | 1069.9 | 1056.0 |
| 55° | 765.6 | 771.9 | 800.1 | 904.1 | 1137.2 | 1497.7 | 1608.4 | 1357.6 | 1311.6 | 1311.3 | 1277.2 |
| 57.5° | 571.7 | 565.4 | 586.4 | 684.1 | 1016.2 | 1542.3 | 1988.3 | 1926.1 | 1823.6 | 1754.4 | 1670.9 |
| 60° | 385.8 | 387.3 | 406.8 | 457.0 | 707.1 | 1493.7 | 2242.7 | 2459.1 | 2423.1 | 2408.4 | 2385.9 |
| 62.5° | 267.4 | 269.9 | 287.6 | 334.8 | 413.5 | 1201.7 | 2317.1 | 2757.9 | 2822.4 | 2875.7 | 2862.7 |
| 65° | 187.2 | 187.6 | 205.4 | 278.1 | 309.8 | 617.2 | 2152.9 | 2797.4 | 2893.6 | 2985.3 | 3067.7 |
| 66° | 165.0 | 165.4 | 180.0 | 258.8 | 297.2 | 465.7 | 2010.5 | 2742.4 | 2852.1 | 2958.8 | 3044.0 |
| 67.5° | 141.2 | 143.5 | 155.0 | 219.9 | 284.9 | 359.3 | 1660.7 | 2578.2 | 2693.0 | 2810.4 | 2922.8 |
| 70° | 96.9 | 97.7 | 108.1 | 178.4 | 266.7 | 315.3 | 946.5 | 2012.8 | 2171.5 | 2378.0 | 2497.5 |
| 72.5° | 69.2 | 68.5 | 69.7 | 110.4 | 273.8 | 313.4 | 497.4 | 1324.7 | 1546.7 | 1727.9 | 1857.3 |
| 75° | 61.7 | 59.7 | 54.5 | 68.5 | 199.9 | 342.3 | 333.1 | 779.9 | 948.8 | 1113.8 | 1246.4 |
| 77.5° | 55.0 | 51.8 | 49.0 | 52.6 | 98.9 | 322.5 | 299.1 | 446.6 | 533.0 | 656.0 | 758.1 |
| 80° | 42.0 | 40.0 | 41.5 | 45.5 | 59.4 | 296.8 | 297.2 | 297.2 | 320.4 | 360.8 | 401.3 |
| 82.5° | 27.7 | 25.3 | 28.8 | 37.5 | 44.7 | 223.6 | 307.0 | 262.3 | 257.9 | 256.4 | 259.3 |
| 85° | 17.3 | 15.0 | 20.2 | 28.0 | 34.5 | 116.7 | 314.9 | 276.9 | 256.7 | 237.4 | 218.0 |
| 87.5° | 6.4 | 7.2 | 10.3 | 16.2 | 22.5 | 50.7 | 276.2 | 244.1 | 230.2 | 206.1 | 183.6 |
| 90° | 6.5 | 6.1 | 8.8 | 12.6 | 12.9 | 16.3 | 49.1 | 75.5 | 48.4 | 28.5 | 24.6 |
| 92.5° | 4.0 | 4.0 | 4.9 | 5.9 | 5.9 | 5.9 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 95° | 4.9 | 4.9 | 5.9 | 6.8 | 6.8 | 6.8 | 6.8 | 7.4 | 7.5 | 7.5 | 7.6 |
| 97.5° | 6.8 | 6.8 | 7.8 | 7.8 | 8.8 | 8.8 | 11.8 | 10.8 | 10.6 | 10.4 | 10.2 |
| 100° | 7.8 | 7.8 | 8.8 | 9.8 | 11.8 | 20.6 | 28.5 | 26.9 | 26.7 | 26.4 | 26.1 |
| 102.5° | 10.8 | 10.8 | 12.8 | 17.7 | 26.5 | 39.3 | 49.0 | 47.6 | 47.3 | 47.0 | 46.7 |
| 105° | 20.6 | 21.6 | 26.5 | 35.3 | 47.1 | 61.8 | 70.7 | 69.7 | 69.5 | 69.3 | 69.1 |
| 107.5° | 40.2 | 41.2 | 48.1 | 57.0 | 71.7 | 86.3 | 93.2 | 92.7 | 92.6 | 92.5 | 92.4 |



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CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 61° | 62° | 63° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110° | 64.8 | 66.7 | 72.7 | 85.4 | 100.1 | 111.9 | 117.8 | 118.3 | 118.4 | 118.5 | 118.6 |
| 112.5° | 97.2 | 97.2 | 104.0 | 118.8 | 131.5 | 140.3 | 145.3 | 146.2 | 146.4 | 146.6 | 146.9 |
| 115° | 137.4 | 136.5 | 144.3 | 156.0 | 164.9 | 170.8 | 175.7 | 177.1 | 177.4 | 177.8 | 178.0 |
| 117.5° | 180.6 | 180.6 | 185.5 | 193.3 | 198.3 | 201.2 | 207.1 | 209.0 | 209.5 | 209.8 | 210.2 |
| 120° | 220.8 | 218.8 | 221.8 | 228.7 | 232.6 | 238.5 | 241.5 | 243.4 | 243.8 | 244.2 | 244.6 |
| 122.5° | 258.2 | 255.2 | 256.2 | 262.0 | 266.0 | 271.8 | 273.8 | 275.8 | 276.2 | 276.6 | 276.9 |
| 125° | 292.5 | 288.5 | 290.5 | 293.5 | 299.3 | 304.3 | 307.2 | 308.2 | 308.4 | 308.6 | 308.7 |
| 127.5° | 323.9 | 322.9 | 322.9 | 326.8 | 332.7 | 333.7 | 338.6 | 339.1 | 339.2 | 339.3 | 339.4 |
| 130° | 356.3 | 354.3 | 355.3 | 359.2 | 363.2 | 365.1 | 370.0 | 372.0 | 372.3 | 372.8 | 373.2 |
| 132.5° | 388.7 | 386.7 | 385.7 | 393.5 | 396.5 | 397.5 | 403.4 | 405.9 | 406.3 | 406.8 | 407.3 |
| 135° | 421.0 | 418.1 | 418.1 | 424.0 | 427.0 | 428.9 | 434.8 | 437.3 | 437.7 | 438.2 | 438.7 |
| 137.5° | 451.5 | 448.5 | 450.5 | 451.5 | 455.4 | 459.3 | 464.2 | 465.2 | 465.4 | 465.6 | 465.8 |
| 140° | 479.0 | 476.0 | 478.0 | 480.0 | 481.9 | 487.8 | 490.7 | 491.7 | 491.9 | 492.1 | 492.3 |
| 142.5° | 508.4 | 505.5 | 507.5 | 508.4 | 511.3 | 515.3 | 517.2 | 520.2 | 520.7 | 521.4 | 521.9 |
| 145° | 539.8 | 535.9 | 534.0 | 536.8 | 539.8 | 540.8 | 545.7 | 548.7 | 549.2 | 549.9 | 550.4 |
| 147.5° | 564.3 | 561.4 | 560.5 | 563.3 | 563.3 | 564.3 | 569.3 | 571.7 | 572.2 | 572.7 | 573.2 |
| 150° | 584.0 | 581.0 | 582.0 | 582.0 | 582.0 | 582.0 | 586.0 | 587.4 | 587.7 | 588.0 | 588.3 |
| 152.5° | 599.7 | 596.7 | 596.7 | 597.7 | 598.7 | 598.7 | 599.7 | 601.1 | 601.4 | 601.8 | 602.0 |
| 155° | 617.3 | 613.5 | 613.5 | 615.4 | 618.3 | 616.3 | 614.4 | 616.9 | 617.3 | 617.9 | 618.3 |
| 157.5° | 634.0 | 631.1 | 631.1 | 632.0 | 634.0 | 633.0 | 632.0 | 634.0 | 634.5 | 634.8 | 635.2 |
| 160° | 650.7 | 647.8 | 646.8 | 643.8 | 642.8 | 642.8 | 645.8 | 648.8 | 649.4 | 649.9 | 650.6 |
| 162.5° | 660.5 | 656.6 | 656.6 | 652.7 | 648.8 | 650.7 | 654.7 | 656.6 | 657.0 | 657.4 | 657.8 |
| 165° | 668.4 | 665.5 | 663.5 | 663.5 | 660.5 | 660.5 | 659.5 | 662.1 | 662.5 | 662.9 | 663.5 |
| 167.5° | 677.2 | 674.3 | 671.3 | 673.3 | 675.3 | 672.3 | 665.5 | 668.4 | 669.0 | 669.6 | 670.1 |
| 170° | 685.0 | 682.2 | 679.2 | 679.2 | 680.2 | 678.2 | 673.3 | 674.8 | 675.1 | 675.3 | 675.6 |
| 172.5° | 686.0 | 684.1 | 682.2 | 680.2 | 677.2 | 677.2 | 676.2 | 677.7 | 678.0 | 678.3 | 678.6 |
| 175° | 687.0 | 685.0 | 684.1 | 682.2 | 678.2 | 677.2 | 677.2 | 679.7 | 680.2 | 680.6 | 681.2 |
| 177.5° | 693.9 | 692.0 | 687.0 | 686.0 | 684.1 | 682.2 | 681.2 | 683.6 | 684.1 | 684.6 | 685.0 |
| 180° | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 |



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CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

CANDELA DISTRIBUTION (continued):

| | 64° | 65° | 66° | 67° | 68° | 69° | 70° | 71° | 72° | 73° | 74° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 |
| 2.5° | 543.7 | 545.6 | 546.3 | 545.6 | 546.0 | 548.4 | 547.6 | 548.9 | 548.9 | 549.7 | 549.7 |
| 5° | 525.9 | 527.5 | 530.6 | 530.2 | 533.3 | 534.5 | 535.7 | 537.4 | 539.3 | 540.5 | 542.8 |
| 7.5° | 504.8 | 508.0 | 510.9 | 512.4 | 514.4 | 518.3 | 519.5 | 523.2 | 526.2 | 529.4 | 531.8 |
| 10° | 484.6 | 489.0 | 492.2 | 493.3 | 497.8 | 499.7 | 504.1 | 506.8 | 510.9 | 514.8 | 518.3 |
| 12.5° | 467.7 | 471.6 | 473.2 | 477.2 | 481.1 | 485.2 | 487.2 | 492.2 | 496.1 | 501.3 | 506.0 |
| 15° | 455.0 | 458.9 | 462.2 | 465.0 | 468.8 | 472.9 | 476.0 | 481.1 | 485.9 | 491.0 | 495.3 |
| 17.5° | 447.2 | 449.5 | 453.5 | 455.8 | 460.7 | 465.3 | 468.8 | 474.8 | 480.0 | 484.3 | 490.3 |
| 20° | 441.2 | 443.9 | 447.5 | 451.1 | 455.4 | 461.4 | 464.5 | 470.8 | 476.4 | 481.5 | 487.2 |
| 22.5° | 438.0 | 440.8 | 444.3 | 448.0 | 452.7 | 457.3 | 462.5 | 468.1 | 474.0 | 479.5 | 485.2 |
| 25° | 436.8 | 439.2 | 442.3 | 445.9 | 451.1 | 456.2 | 460.7 | 466.8 | 472.0 | 478.0 | 484.6 |
| 27.5° | 437.3 | 438.8 | 442.3 | 445.5 | 450.7 | 455.4 | 459.8 | 466.1 | 472.0 | 477.6 | 484.3 |
| 30° | 438.8 | 440.0 | 443.5 | 446.3 | 450.7 | 455.4 | 459.3 | 466.1 | 471.3 | 477.2 | 484.3 |
| 32.5° | 444.3 | 445.9 | 447.5 | 449.5 | 453.5 | 457.0 | 461.8 | 467.7 | 472.5 | 478.3 | 484.3 |
| 35° | 457.3 | 456.2 | 457.3 | 458.1 | 461.0 | 464.5 | 468.1 | 473.2 | 477.6 | 482.7 | 489.0 |
| 37.5° | 478.0 | 475.7 | 476.4 | 476.0 | 476.0 | 478.3 | 481.9 | 485.5 | 489.0 | 494.2 | 500.5 |
| 40° | 516.0 | 510.1 | 508.4 | 504.1 | 502.9 | 504.8 | 507.3 | 507.6 | 512.0 | 518.7 | 521.5 |
| 42.5° | 565.0 | 557.1 | 558.3 | 551.2 | 549.2 | 546.8 | 550.0 | 548.1 | 550.8 | 555.2 | 561.1 |
| 45° | 642.6 | 635.0 | 627.2 | 615.7 | 618.0 | 609.3 | 607.0 | 607.7 | 607.3 | 608.9 | 616.1 |
| 47.5° | 735.2 | 725.3 | 720.1 | 715.8 | 707.4 | 702.4 | 695.6 | 685.7 | 688.1 | 691.2 | 697.5 |
| 50° | 870.5 | 867.3 | 857.4 | 843.1 | 841.3 | 833.6 | 831.7 | 822.9 | 819.8 | 819.4 | 819.1 |
| 52.5° | 1051.3 | 1030.7 | 1026.9 | 1013.3 | 1003.0 | 996.0 | 993.5 | 981.3 | 969.0 | 976.2 | 975.3 |
| 55° | 1271.7 | 1254.8 | 1232.9 | 1221.1 | 1212.7 | 1195.7 | 1191.4 | 1175.9 | 1168.9 | 1164.9 | 1155.0 |
| 57.5° | 1642.0 | 1582.4 | 1537.6 | 1515.4 | 1484.2 | 1452.5 | 1441.4 | 1409.8 | 1385.3 | 1367.8 | 1369.1 |
| 60° | 2287.8 | 2181.4 | 2056.0 | 1999.8 | 1869.6 | 1850.6 | 1761.1 | 1739.4 | 1685.6 | 1650.0 | 1629.3 |
| 62.5° | 2853.6 | 2824.7 | 2764.6 | 2682.7 | 2552.2 | 2401.8 | 2334.1 | 2199.6 | 2094.3 | 2048.5 | 1984.7 |
| 65° | 3123.9 | 3164.5 | 3181.3 | 3165.8 | 3113.5 | 3021.8 | 2941.1 | 2809.7 | 2633.2 | 2533.5 | 2409.6 |
| 66° | 3110.0 | 3170.6 | 3201.0 | 3216.8 | 3197.9 | 3143.7 | 3059.0 | 2950.9 | 2814.5 | 2662.5 | 2523.6 |
| 67.5° | 3008.7 | 3067.7 | 3110.0 | 3158.4 | 3158.4 | 3141.2 | 3106.9 | 3034.8 | 2938.3 | 2805.8 | 2681.1 |
| 70° | 2594.8 | 2674.7 | 2749.5 | 2764.3 | 2805.4 | 2792.7 | 2820.0 | 2774.1 | 2751.1 | 2695.7 | 2628.9 |
| 72.5° | 2021.5 | 2088.4 | 2152.5 | 2216.6 | 2205.9 | 2192.0 | 2189.3 | 2198.8 | 2152.1 | 2168.7 | 2151.4 |
| 75° | 1344.5 | 1459.7 | 1525.3 | 1519.0 | 1523.3 | 1526.8 | 1497.7 | 1432.3 | 1483.0 | 1419.0 | 1440.3 |
| 77.5° | 817.1 | 870.5 | 888.3 | 868.5 | 842.8 | 809.6 | 756.1 | 724.9 | 680.2 | 683.7 | 654.1 |
| 80° | 428.5 | 435.3 | 420.9 | 381.0 | 359.3 | 339.5 | 278.6 | 251.3 | 225.9 | 216.4 | 195.0 |
| 82.5° | 245.8 | 229.4 | 212.1 | 198.6 | 172.9 | 155.5 | 131.7 | 116.7 | 100.5 | 86.2 | 81.0 |
| 85° | 199.1 | 177.2 | 161.1 | 146.1 | 128.5 | 113.2 | 93.3 | 78.0 | 66.0 | 57.4 | 55.3 |
| 87.5° | 164.2 | 149.2 | 132.6 | 118.3 | 101.3 | 85.5 | 66.0 | 51.5 | 40.7 | 32.9 | 30.5 |
| 90° | 23.3 | 28.7 | 23.1 | 16.8 | 20.8 | 15.2 | 12.4 | 12.8 | 11.9 | 11.9 | 12.4 |
| 92.5° | 6.8 | 6.8 | 6.7 | 6.6 | 6.6 | 6.5 | 6.4 | 6.3 | 6.2 | 6.1 | 6.0 |
| 95° | 7.7 | 7.8 | 7.7 | 7.6 | 7.5 | 7.5 | 7.4 | 7.3 | 7.2 | 7.1 | 7.0 |
| 97.5° | 10.0 | 9.8 | 9.7 | 9.6 | 9.5 | 9.4 | 9.3 | 9.3 | 9.2 | 9.1 | 8.9 |
| 100° | 25.8 | 25.5 | 25.2 | 25.0 | 24.6 | 24.3 | 24.1 | 23.7 | 23.4 | 23.2 | 22.9 |
| 102.5° | 46.4 | 46.2 | 45.6 | 45.2 | 44.6 | 44.2 | 43.7 | 43.2 | 42.7 | 42.2 | 41.7 |
| 105° | 68.9 | 68.7 | 68.2 | 67.7 | 67.2 | 66.7 | 66.3 | 65.8 | 65.3 | 64.8 | 64.3 |
| 107.5° | 92.3 | 92.3 | 91.9 | 91.4 | 91.1 | 90.7 | 90.3 | 89.9 | 89.5 | 89.1 | 88.8 |



REPORT NUMBER: P271832

CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

CANDELA DISTRIBUTION (continued):

| | 64° | 65° | 66° | 67° | 68° | 69° | 70° | 71° | 72° | 73° | 74° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110° | 118.7 | 118.8 | 118.6 | 118.4 | 118.1 | 117.9 | 117.8 | 117.6 | 117.4 | 117.2 | 117.0 |
| 112.5° | 147.1 | 147.2 | 147.1 | 147.1 | 147.0 | 146.9 | 146.7 | 146.6 | 146.5 | 146.4 | 146.3 |
| 115° | 178.3 | 178.7 | 178.3 | 178.0 | 177.8 | 177.4 | 177.1 | 176.9 | 176.6 | 176.2 | 176.0 |
| 117.5° | 210.7 | 211.0 | 210.6 | 210.0 | 209.6 | 209.0 | 208.6 | 208.0 | 207.6 | 207.1 | 206.6 |
| 120° | 245.0 | 245.3 | 244.9 | 244.4 | 243.9 | 243.4 | 242.9 | 242.5 | 241.9 | 241.5 | 240.9 |
| 122.5° | 277.4 | 277.8 | 277.3 | 276.8 | 276.3 | 275.8 | 275.3 | 274.8 | 274.3 | 273.8 | 273.4 |
| 125° | 308.9 | 309.2 | 308.7 | 308.2 | 307.7 | 307.2 | 306.7 | 306.2 | 305.7 | 305.2 | 304.7 |
| 127.5° | 339.5 | 339.6 | 339.6 | 339.6 | 339.6 | 339.6 | 339.6 | 339.6 | 339.6 | 339.6 | 339.6 |
| 130° | 373.5 | 374.0 | 374.0 | 374.0 | 374.0 | 374.0 | 374.0 | 374.0 | 374.0 | 374.0 | 374.0 |
| 132.5° | 407.8 | 408.3 | 408.1 | 407.9 | 407.7 | 407.5 | 407.3 | 407.1 | 406.9 | 406.8 | 406.6 |
| 135° | 439.2 | 439.7 | 439.6 | 439.5 | 439.5 | 439.3 | 439.2 | 439.1 | 439.0 | 438.9 | 438.8 |
| 137.5° | 466.0 | 466.2 | 466.3 | 466.4 | 466.5 | 466.6 | 466.7 | 466.8 | 466.8 | 467.0 | 467.1 |
| 140° | 492.5 | 492.7 | 492.9 | 493.1 | 493.3 | 493.5 | 493.7 | 493.9 | 494.1 | 494.2 | 494.4 |
| 142.5° | 522.5 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 |
| 145° | 551.0 | 551.6 | 551.5 | 551.4 | 551.3 | 551.2 | 551.1 | 551.0 | 550.9 | 550.8 | 550.8 |
| 147.5° | 573.7 | 574.2 | 574.3 | 574.4 | 574.5 | 574.6 | 574.6 | 574.7 | 574.8 | 574.9 | 575.1 |
| 150° | 588.6 | 588.9 | 589.2 | 589.5 | 589.7 | 590.1 | 590.4 | 590.6 | 590.9 | 591.3 | 591.5 |
| 152.5° | 602.3 | 602.7 | 603.0 | 603.4 | 603.8 | 604.2 | 604.6 | 605.0 | 605.4 | 605.7 | 606.2 |
| 155° | 618.8 | 619.3 | 619.8 | 620.3 | 620.8 | 621.3 | 621.8 | 622.3 | 622.7 | 623.2 | 623.7 |
| 157.5° | 635.6 | 636.0 | 636.2 | 636.4 | 636.6 | 636.8 | 637.0 | 637.2 | 637.3 | 637.5 | 637.8 |
| 160° | 651.1 | 651.7 | 651.5 | 651.1 | 650.8 | 650.6 | 650.2 | 649.9 | 649.7 | 649.4 | 649.0 |
| 162.5° | 658.2 | 658.5 | 658.5 | 658.4 | 658.3 | 658.2 | 658.1 | 658.0 | 657.9 | 657.8 | 657.6 |
| 165° | 663.9 | 664.5 | 664.7 | 665.0 | 665.4 | 665.6 | 665.9 | 666.3 | 666.5 | 666.8 | 667.1 |
| 167.5° | 670.8 | 671.3 | 671.8 | 672.1 | 672.5 | 672.9 | 673.3 | 673.7 | 674.1 | 674.4 | 674.9 |
| 170° | 676.0 | 676.2 | 676.7 | 677.2 | 677.7 | 678.2 | 678.7 | 679.2 | 679.7 | 680.2 | 680.6 |
| 172.5° | 678.8 | 679.2 | 679.4 | 679.6 | 679.7 | 679.9 | 680.2 | 680.4 | 680.6 | 680.7 | 680.9 |
| 175° | 681.6 | 682.2 | 682.3 | 682.4 | 682.4 | 682.5 | 682.6 | 682.7 | 682.8 | 682.9 | 683.0 |
| 177.5° | 685.6 | 686.0 | 686.2 | 686.5 | 686.7 | 686.8 | 687.0 | 687.2 | 687.5 | 687.7 | 687.8 |
| 180° | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 |



REPORT NUMBER: P271832

CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

CANDELA DISTRIBUTION (continued):

| | 75° | 76° | 77° | 78° | 79° | 80° | 81° | 82° | 83° | 84° | 85° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 |
| 2.5° | 550.8 | 550.8 | 551.6 | 552.4 | 552.7 | 552.7 | 552.7 | 553.5 | 554.0 | 552.7 | 554.0 |
| 5° | 544.0 | 546.0 | 547.6 | 548.9 | 549.2 | 550.4 | 551.6 | 552.4 | 553.5 | 553.5 | 554.3 |
| 7.5° | 534.9 | 538.5 | 540.5 | 542.5 | 544.5 | 546.3 | 548.9 | 550.4 | 551.2 | 552.7 | 554.0 |
| 10° | 523.5 | 527.8 | 531.8 | 534.9 | 537.7 | 541.7 | 544.8 | 547.2 | 550.8 | 551.2 | 554.0 |
| 12.5° | 511.2 | 517.5 | 520.7 | 526.7 | 530.6 | 536.6 | 539.7 | 543.3 | 547.2 | 549.2 | 552.4 |
| 15° | 502.5 | 508.0 | 514.0 | 519.5 | 525.9 | 533.0 | 537.0 | 541.7 | 547.2 | 551.6 | 555.5 |
| 17.5° | 495.8 | 503.3 | 510.1 | 517.2 | 525.1 | 532.5 | 538.5 | 543.7 | 550.8 | 553.2 | 557.1 |
| 20° | 493.8 | 502.2 | 508.8 | 516.3 | 524.7 | 534.5 | 541.7 | 547.2 | 554.3 | 558.3 | 561.9 |
| 22.5° | 493.0 | 501.0 | 508.8 | 518.0 | 527.0 | 537.4 | 544.8 | 552.0 | 559.0 | 562.7 | 565.4 |
| 25° | 492.2 | 500.5 | 509.2 | 519.5 | 529.4 | 540.2 | 548.9 | 555.5 | 562.2 | 565.8 | 568.2 |
| 27.5° | 492.2 | 501.0 | 510.5 | 520.7 | 531.3 | 543.3 | 551.6 | 557.8 | 563.9 | 567.0 | 567.8 |
| 30° | 491.8 | 501.0 | 510.1 | 521.5 | 533.0 | 545.2 | 554.3 | 560.3 | 565.4 | 567.4 | 566.7 |
| 32.5° | 492.6 | 502.2 | 512.0 | 523.5 | 535.4 | 547.2 | 556.7 | 563.5 | 566.2 | 565.8 | 565.4 |
| 35° | 496.5 | 505.3 | 516.7 | 528.2 | 540.5 | 551.6 | 560.7 | 565.4 | 567.8 | 567.0 | 565.0 |
| 37.5° | 507.3 | 516.0 | 527.5 | 540.2 | 549.7 | 562.2 | 570.5 | 574.2 | 574.6 | 572.1 | 567.4 |
| 40° | 529.4 | 538.2 | 548.4 | 562.2 | 573.7 | 582.4 | 590.4 | 594.3 | 591.9 | 587.6 | 582.4 |
| 42.5° | 564.7 | 575.7 | 588.0 | 599.1 | 612.6 | 624.4 | 626.4 | 628.7 | 624.8 | 616.5 | 610.1 |
| 45° | 621.2 | 627.9 | 643.7 | 652.1 | 669.5 | 675.4 | 679.7 | 680.9 | 672.2 | 665.6 | 654.4 |
| 47.5° | 702.7 | 715.8 | 726.9 | 734.7 | 747.4 | 755.4 | 764.1 | 760.1 | 753.4 | 741.9 | 727.3 |
| 50° | 830.9 | 839.3 | 853.5 | 867.8 | 881.1 | 886.6 | 886.6 | 882.8 | 878.5 | 856.3 | 838.5 |
| 52.5° | 988.5 | 989.2 | 1009.8 | 1026.9 | 1038.2 | 1030.0 | 1039.9 | 1030.0 | 1027.2 | 1011.7 | 997.1 |
| 55° | 1170.9 | 1163.2 | 1188.2 | 1203.3 | 1213.5 | 1223.4 | 1221.4 | 1220.3 | 1209.9 | 1192.6 | 1174.7 |
| 57.5° | 1344.1 | 1365.9 | 1377.7 | 1399.9 | 1405.1 | 1411.8 | 1409.0 | 1405.1 | 1399.1 | 1389.2 | 1381.3 |
| 60° | 1594.2 | 1608.9 | 1619.6 | 1623.9 | 1638.5 | 1640.5 | 1650.4 | 1634.2 | 1638.1 | 1626.7 | 1601.7 |
| 62.5° | 1934.5 | 1918.6 | 1927.0 | 1927.0 | 1922.6 | 1907.1 | 1915.5 | 1921.8 | 1911.1 | 1901.6 | 1897.7 |
| 65° | 2315.5 | 2264.4 | 2215.4 | 2207.0 | 2184.6 | 2179.4 | 2173.1 | 2157.2 | 2150.5 | 2133.8 | 2120.4 |
| 66° | 2429.5 | 2350.3 | 2304.1 | 2275.6 | 2248.3 | 2242.3 | 2233.5 | 2216.9 | 2203.5 | 2180.2 | 2157.5 |
| 67.5° | 2557.3 | 2455.2 | 2385.4 | 2345.1 | 2311.6 | 2289.4 | 2271.9 | 2248.3 | 2226.9 | 2192.0 | 2156.0 |
| 70° | 2548.9 | 2464.7 | 2380.8 | 2319.4 | 2268.8 | 2223.3 | 2196.4 | 2145.3 | 2101.9 | 2052.0 | 2010.9 |
| 72.5° | 2141.8 | 2126.7 | 2078.0 | 2043.6 | 1981.5 | 1957.4 | 1886.2 | 1853.7 | 1793.6 | 1729.1 | 1709.4 |
| 75° | 1488.9 | 1430.0 | 1405.1 | 1391.1 | 1363.9 | 1288.7 | 1239.6 | 1250.4 | 1179.9 | 1117.0 | 1081.0 |
| 77.5° | 650.9 | 662.8 | 593.9 | 563.1 | 539.3 | 498.6 | 460.7 | 434.5 | 419.4 | 409.5 | 364.8 |
| 80° | 180.0 | 157.0 | 155.0 | 144.0 | 141.7 | 126.2 | 128.2 | 117.0 | 109.6 | 108.1 | 104.5 |
| 82.5° | 78.7 | 77.2 | 74.8 | 73.6 | 72.4 | 70.9 | 68.8 | 68.5 | 66.0 | 64.0 | 64.5 |
| 85° | 52.2 | 51.8 | 50.7 | 49.5 | 47.5 | 44.7 | 42.7 | 41.1 | 41.5 | 39.5 | 39.2 |
| 87.5° | 30.5 | 29.6 | 29.3 | 27.7 | 27.3 | 25.0 | 25.3 | 23.4 | 23.0 | 22.5 | 21.4 |
| 90° | 13.1 | 13.4 | 14.4 | 13.7 | 11.9 | 15.5 | 14.0 | 12.9 | 13.1 | 11.8 | 11.6 |
| 92.5° | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| 95° | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 97.5° | 8.8 | 8.7 | 8.6 | 8.5 | 8.4 | 8.4 | 8.3 | 8.2 | 8.1 | 7.9 | 7.8 |
| 100° | 22.5 | 22.2 | 21.8 | 21.4 | 21.0 | 20.6 | 20.2 | 19.9 | 19.4 | 19.0 | 18.7 |
| 102.5° | 41.2 | 41.0 | 40.6 | 40.3 | 40.1 | 39.7 | 39.4 | 39.2 | 38.9 | 38.5 | 38.3 |
| 105° | 63.8 | 63.4 | 63.0 | 62.6 | 62.3 | 61.8 | 61.4 | 61.1 | 60.6 | 60.3 | 59.8 |
| 107.5° | 88.3 | 88.0 | 87.8 | 87.5 | 87.1 | 86.9 | 86.6 | 86.2 | 86.0 | 85.7 | 85.4 |



REPORT NUMBER: P271832
 CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

| | 75° | 76° | 77° | 78° | 79° | 80° | 81° | 82° | 83° | 84° | 85° | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 110° | 116.8 | 116.5 | 116.2 | 115.9 | 115.6 | 115.3 | 115.1 | 114.7 | 114.4 | 114.2 | 113.8 | 0° |
| 112.5° | 146.2 | 146.1 | 145.9 | 145.6 | 145.4 | 145.3 | 145.1 | 144.9 | 144.6 | 144.4 | 144.3 | 2.5° |
| 115° | 175.7 | 175.5 | 175.3 | 175.1 | 174.9 | 174.7 | 174.5 | 174.3 | 174.1 | 173.9 | 173.7 | 5° |
| 117.5° | 206.1 | 205.9 | 205.7 | 205.5 | 205.4 | 205.2 | 204.9 | 204.7 | 204.5 | 204.4 | 204.2 | 7.5° |
| 120° | 240.5 | 240.3 | 240.0 | 239.8 | 239.7 | 239.5 | 239.3 | 239.1 | 238.9 | 238.7 | 238.5 | 10° |
| 122.5° | 272.8 | 272.6 | 272.5 | 272.3 | 272.1 | 271.8 | 271.6 | 271.5 | 271.3 | 271.1 | 270.9 | 12.5° |
| 125° | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 15° |
| 127.5° | 339.6 | 339.5 | 339.4 | 339.3 | 339.2 | 339.1 | 339.0 | 338.9 | 338.8 | 338.8 | 338.6 | 17.5° |
| 130° | 374.0 | 373.8 | 373.5 | 373.3 | 373.2 | 373.0 | 372.8 | 372.5 | 372.3 | 372.2 | 372.0 | 20° |
| 132.5° | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 406.3 | 22.5° |
| 135° | 438.7 | 439.0 | 439.3 | 439.6 | 439.9 | 440.2 | 440.5 | 440.8 | 441.1 | 441.3 | 441.7 | 25° |
| 137.5° | 467.2 | 467.7 | 468.2 | 468.6 | 469.2 | 469.6 | 470.2 | 470.6 | 471.1 | 471.6 | 472.1 | 27.5° |
| 140° | 494.7 | 495.1 | 495.7 | 496.1 | 496.7 | 497.1 | 497.6 | 498.1 | 498.6 | 499.1 | 499.5 | 30° |
| 142.5° | 523.2 | 523.3 | 523.4 | 523.4 | 523.5 | 523.6 | 523.7 | 523.8 | 523.9 | 524.0 | 524.1 | 32.5° |
| 145° | 550.6 | 550.3 | 550.0 | 549.8 | 549.4 | 549.1 | 548.9 | 548.5 | 548.2 | 548.0 | 547.7 | 35° |
| 147.5° | 575.2 | 574.8 | 574.6 | 574.3 | 573.9 | 573.7 | 573.4 | 573.1 | 572.8 | 572.5 | 572.2 | 37.5° |
| 150° | 591.8 | 592.2 | 592.4 | 592.7 | 593.0 | 593.3 | 593.6 | 593.9 | 594.2 | 594.5 | 594.8 | 40° |
| 152.5° | 606.5 | 607.1 | 607.5 | 608.1 | 608.5 | 609.1 | 609.5 | 609.9 | 610.5 | 610.9 | 611.5 | 42.5° |
| 155° | 624.2 | 624.4 | 624.6 | 624.8 | 625.0 | 625.2 | 625.4 | 625.6 | 625.8 | 626.0 | 626.2 | 45° |
| 157.5° | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 638.0 | 47.5° |
| 160° | 648.8 | 648.7 | 648.6 | 648.5 | 648.4 | 648.3 | 648.1 | 648.0 | 647.9 | 647.9 | 647.8 | 50° |
| 162.5° | 657.6 | 657.4 | 657.2 | 657.0 | 656.8 | 656.6 | 656.4 | 656.2 | 656.0 | 655.9 | 655.7 | 52.5° |
| 165° | 667.4 | 667.2 | 667.0 | 666.8 | 666.6 | 666.5 | 666.3 | 666.0 | 665.8 | 665.6 | 665.5 | 55° |
| 167.5° | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 675.3 | 57.5° |
| 170° | 681.2 | 681.4 | 681.5 | 681.7 | 681.9 | 682.2 | 682.4 | 682.5 | 682.7 | 682.9 | 683.1 | 60° |
| 172.5° | 681.2 | 681.4 | 681.5 | 681.7 | 681.9 | 682.2 | 682.4 | 682.5 | 682.7 | 682.9 | 683.1 | 62.5° |
| 175° | 683.1 | 682.9 | 682.7 | 682.5 | 682.4 | 682.2 | 681.9 | 681.7 | 681.5 | 681.4 | 681.2 | 65° |
| 177.5° | 688.0 | 687.7 | 687.5 | 687.1 | 686.8 | 686.6 | 686.2 | 685.9 | 685.7 | 685.4 | 685.0 | 66° |
| 180° | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 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° |

NUMBER: P271832
 NUMBER: ISW-AF-450-LED-E1-SL2-7027-ULG

REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

| 86° | 87° | 88° | 89° | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 86° | |
|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|--------|-------|
| 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 554.3 | 110° | 114.1 |
| 555.2 | 555.9 | 556.3 | 555.9 | 556.7 | 556.3 | 556.7 | 556.3 | 554.3 | 554.0 | 553.5 | 112.5° | 144.3 |
| 555.9 | 557.5 | 557.8 | 558.3 | 557.5 | 558.3 | 556.7 | 550.4 | 543.3 | 535.4 | 529.0 | 115° | 173.9 |
| 556.7 | 558.7 | 559.8 | 559.8 | 560.3 | 559.5 | 553.5 | 539.7 | 523.2 | 506.5 | 493.8 | 117.5° | 204.4 |
| 556.3 | 559.0 | 560.3 | 560.7 | 560.7 | 559.0 | 544.8 | 522.7 | 497.4 | 472.0 | 446.3 | 120° | 238.5 |
| 555.2 | 557.5 | 559.5 | 559.5 | 559.8 | 554.3 | 532.2 | 500.5 | 464.5 | 426.5 | 392.1 | 122.5° | 271.1 |
| 557.5 | 559.8 | 559.8 | 559.8 | 559.5 | 550.0 | 518.7 | 472.9 | 424.6 | 373.2 | 322.1 | 125° | 304.3 |
| 561.1 | 562.2 | 561.5 | 561.5 | 559.8 | 545.6 | 503.7 | 445.5 | 382.2 | 314.1 | 242.9 | 127.5° | 339.0 |
| 564.2 | 565.0 | 564.7 | 562.7 | 560.7 | 540.9 | 488.3 | 416.6 | 331.6 | 242.9 | 172.1 | 130° | 372.2 |
| 567.4 | 568.2 | 566.2 | 563.1 | 560.3 | 534.5 | 469.6 | 379.8 | 274.3 | 166.2 | 113.9 | 132.5° | 406.6 |
| 567.8 | 568.5 | 565.0 | 560.7 | 556.7 | 525.1 | 447.2 | 340.6 | 211.3 | 107.7 | 89.0 | 135° | 441.9 |
| 567.4 | 566.7 | 560.7 | 555.2 | 550.8 | 513.7 | 422.2 | 291.9 | 140.9 | 81.0 | 77.5 | 137.5° | 472.3 |
| 564.7 | 561.1 | 556.3 | 550.0 | 543.7 | 501.0 | 397.3 | 237.8 | 89.0 | 70.4 | 70.4 | 140° | 500.0 |
| 560.7 | 557.1 | 551.2 | 542.8 | 535.7 | 488.7 | 368.8 | 182.4 | 71.2 | 64.9 | 65.7 | 142.5° | 524.5 |
| 559.0 | 555.2 | 546.3 | 537.7 | 528.7 | 477.6 | 338.8 | 122.7 | 64.0 | 61.4 | 61.7 | 145° | 548.1 |
| 562.2 | 555.5 | 546.8 | 537.0 | 526.2 | 468.1 | 307.4 | 85.5 | 60.5 | 57.4 | 58.2 | 147.5° | 572.6 |
| 573.0 | 566.7 | 556.3 | 543.7 | 532.2 | 462.5 | 274.3 | 70.9 | 57.0 | 54.2 | 54.2 | 150° | 595.6 |
| 598.7 | 590.4 | 576.5 | 561.5 | 547.6 | 466.1 | 244.5 | 64.5 | 54.2 | 51.5 | 51.5 | 152.5° | 612.5 |
| 640.2 | 630.3 | 614.1 | 597.0 | 578.9 | 483.5 | 210.9 | 62.2 | 52.2 | 48.3 | 47.5 | 155° | 626.7 |
| 711.5 | 698.3 | 677.1 | 656.8 | 635.0 | 513.7 | 176.9 | 60.5 | 49.9 | 46.4 | 44.7 | 157.5° | 639.0 |
| 823.4 | 804.1 | 778.7 | 752.2 | 725.7 | 568.5 | 149.9 | 59.0 | 48.3 | 44.7 | 43.1 | 160° | 648.9 |
| 967.5 | 954.4 | 922.6 | 888.0 | 856.3 | 678.2 | 134.6 | 57.9 | 47.1 | 42.7 | 41.5 | 162.5° | 656.8 |
| 1151.0 | 1129.7 | 1104.7 | 1073.5 | 1035.8 | 820.2 | 132.9 | 57.4 | 45.9 | 41.1 | 40.3 | 165° | 666.3 |
| 1344.9 | 1336.6 | 1294.3 | 1274.9 | 1234.1 | 1009.3 | 161.9 | 58.2 | 45.2 | 40.0 | 38.8 | 167.5° | 676.4 |
| 1566.0 | 1569.2 | 1529.6 | 1508.3 | 1474.7 | 1249.1 | 257.5 | 60.5 | 45.2 | 38.8 | 37.5 | 170° | 684.1 |
| 1855.3 | 1860.5 | 1813.8 | 1788.4 | 1760.0 | 1517.9 | 404.8 | 64.5 | 46.4 | 37.5 | 36.4 | 172.5° | 684.1 |
| 2092.3 | 2064.7 | 2034.6 | 1990.3 | 1954.3 | 1667.7 | 389.8 | 71.7 | 47.9 | 36.4 | 35.2 | 175° | 682.2 |
| 2116.9 | 2097.1 | 2059.2 | 2011.2 | 1967.3 | 1668.6 | 340.3 | 74.0 | 48.3 | 36.0 | 34.9 | 177.5° | 685.9 |
| 2113.7 | 2078.5 | 2035.4 | 1995.0 | 1951.8 | 1625.8 | 263.1 | 77.2 | 49.5 | 35.2 | 34.0 | 180° | 687.0 |
| 1967.3 | 1917.8 | 1875.9 | 1820.1 | 1775.1 | 1455.0 | 161.9 | 76.7 | 47.9 | 32.9 | 32.1 | | |
| 1622.2 | 1597.0 | 1547.2 | 1502.3 | 1455.3 | 1177.6 | 110.9 | 68.5 | 42.3 | 29.6 | 30.0 | | |
| 1049.3 | 1020.5 | 969.8 | 944.5 | 918.0 | 753.4 | 86.2 | 55.8 | 36.0 | 26.5 | 27.7 | | |
| 350.2 | 338.8 | 320.1 | 330.4 | 314.9 | 293.6 | 63.3 | 42.3 | 28.8 | 23.0 | 24.5 | | |
| 104.8 | 102.5 | 106.0 | 99.7 | 105.6 | 89.4 | 41.5 | 29.6 | 22.2 | 19.9 | 21.8 | | |
| 62.2 | 61.4 | 61.4 | 61.4 | 59.7 | 55.8 | 27.3 | 20.6 | 17.0 | 16.6 | 18.1 | | |
| 38.0 | 37.2 | 37.5 | 37.2 | 38.0 | 34.0 | 18.5 | 14.2 | 12.7 | 12.3 | 14.6 | | |
| 21.8 | 21.8 | 22.2 | 21.4 | 21.8 | 21.0 | 13.0 | 9.2 | 8.4 | 7.9 | 10.7 | | |
| 11.9 | 11.9 | 10.8 | 10.4 | 10.8 | 12.4 | 12.4 | 11.6 | 9.3 | 8.8 | 11.4 | | |
| 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 6.8 | 6.8 | 5.9 | 5.9 | | |
| 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 7.8 | 6.8 | 6.8 | 6.8 | | |
| 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 8.8 | 9.8 | 11.8 | 8.8 | 8.8 | | |
| 18.7 | 18.7 | 18.7 | 18.7 | 18.7 | 18.7 | 22.5 | 25.5 | 28.5 | 20.6 | 11.8 | | |
| 38.1 | 37.9 | 37.7 | 37.5 | 37.3 | 38.3 | 41.2 | 46.2 | 49.0 | 39.3 | 26.5 | | |
| 59.8 | 59.8 | 59.8 | 59.8 | 59.8 | 59.8 | 63.8 | 68.7 | 70.7 | 61.8 | 47.1 | | |
| 85.2 | 85.0 | 84.8 | 84.6 | 84.4 | 85.4 | 88.3 | 92.3 | 93.2 | 86.3 | 71.7 | | |

'271832
 ISW-AF-450-LED-E1-SL2-7027-ULG

REPORT NUMBER: P271832
 CATALOG NUMBER: ISW-AF-4!

TION (continued):

CANDELA DISTRIBUTION (con

| 87° | 88° | 89° | 90° | 95° | 105° | 115° | 125° | 135° | 145° | | 155° | 165° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 114.3 | 114.4 | 114.6 | 114.8 | 113.8 | 116.8 | 118.8 | 117.8 | 111.9 | 100.1 | 0° | 554.3 | 554.3 |
| 144.3 | 144.3 | 144.3 | 144.3 | 144.3 | 146.2 | 147.2 | 145.3 | 140.3 | 131.5 | 2.5° | 550.4 | 547.6 |
| 174.1 | 174.3 | 174.5 | 174.7 | 173.7 | 175.7 | 178.7 | 175.7 | 170.8 | 164.9 | 5° | 519.1 | 511.7 |
| 204.5 | 204.7 | 204.9 | 205.2 | 204.2 | 206.1 | 211.0 | 207.1 | 201.2 | 198.3 | 7.5° | 474.0 | 465.3 |
| 238.5 | 238.5 | 238.5 | 238.5 | 238.5 | 240.5 | 245.3 | 241.5 | 238.5 | 232.6 | 10° | 422.7 | 409.5 |
| 271.3 | 271.5 | 271.6 | 271.8 | 270.9 | 272.8 | 277.8 | 273.8 | 271.8 | 266.0 | 12.5° | 356.9 | 331.1 |
| 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 304.3 | 309.2 | 307.2 | 304.3 | 299.3 | 15° | 280.9 | 246.6 |
| 339.4 | 339.8 | 340.2 | 340.5 | 338.6 | 339.6 | 339.6 | 338.6 | 333.7 | 332.7 | 17.5° | 193.5 | 165.7 |
| 372.3 | 372.5 | 372.8 | 373.0 | 372.0 | 374.0 | 374.0 | 370.0 | 365.1 | 363.2 | 20° | 135.7 | 125.4 |
| 406.8 | 406.9 | 407.1 | 407.3 | 406.3 | 406.3 | 408.3 | 403.4 | 397.5 | 396.5 | 22.5° | 104.8 | 105.2 |
| 442.1 | 442.2 | 442.4 | 442.7 | 441.7 | 438.7 | 439.7 | 434.8 | 428.9 | 427.0 | 25° | 87.0 | 91.0 |
| 472.5 | 472.7 | 472.9 | 473.0 | 472.1 | 467.2 | 466.2 | 464.2 | 459.3 | 455.4 | 27.5° | 76.7 | 80.7 |
| 500.4 | 500.7 | 501.2 | 501.5 | 499.5 | 494.7 | 492.7 | 490.7 | 487.8 | 481.9 | 30° | 70.4 | 74.0 |
| 524.9 | 525.3 | 525.7 | 526.0 | 524.1 | 523.2 | 523.2 | 517.2 | 515.3 | 511.3 | 32.5° | 66.0 | 67.6 |
| 548.4 | 548.9 | 549.2 | 549.7 | 547.7 | 550.6 | 551.6 | 545.7 | 540.8 | 539.8 | 35° | 60.9 | 61.7 |
| 573.0 | 573.4 | 573.7 | 574.2 | 572.2 | 575.2 | 574.2 | 569.3 | 564.3 | 563.3 | 37.5° | 56.5 | 56.5 |
| 596.4 | 597.1 | 597.9 | 598.7 | 594.8 | 591.8 | 588.9 | 586.0 | 582.0 | 582.0 | 40° | 52.6 | 52.2 |
| 613.5 | 614.4 | 615.4 | 616.3 | 611.5 | 606.5 | 602.7 | 599.7 | 598.7 | 598.7 | 42.5° | 49.0 | 48.7 |
| 627.4 | 627.9 | 628.5 | 629.2 | 626.2 | 624.2 | 619.3 | 614.4 | 616.3 | 618.3 | 45° | 45.5 | 45.9 |
| 640.0 | 640.9 | 641.9 | 642.8 | 638.0 | 638.0 | 636.0 | 632.0 | 633.0 | 634.0 | 47.5° | 43.5 | 43.8 |
| 650.1 | 651.3 | 652.5 | 653.7 | 647.8 | 648.8 | 651.7 | 645.8 | 642.8 | 642.8 | 50° | 41.5 | 42.0 |
| 658.0 | 659.2 | 660.3 | 661.5 | 655.7 | 657.6 | 658.5 | 654.7 | 650.7 | 648.8 | 52.5° | 40.0 | 40.0 |
| 667.0 | 667.8 | 668.6 | 669.3 | 665.5 | 667.4 | 664.5 | 659.5 | 660.5 | 660.5 | 55° | 38.4 | 38.0 |
| 677.6 | 678.8 | 679.9 | 681.2 | 675.3 | 675.3 | 671.3 | 665.5 | 672.3 | 675.3 | 57.5° | 37.2 | 36.4 |
| 685.0 | 686.0 | 687.0 | 688.0 | 683.1 | 681.2 | 676.2 | 673.3 | 678.2 | 680.2 | 60° | 36.0 | 35.2 |
| 685.0 | 686.0 | 687.0 | 688.0 | 683.1 | 681.2 | 679.2 | 676.2 | 677.2 | 677.2 | 62.5° | 35.2 | 34.0 |
| 683.1 | 684.1 | 685.0 | 686.0 | 681.2 | 683.1 | 682.2 | 677.2 | 677.2 | 678.2 | 65° | 34.5 | 33.7 |
| 686.7 | 687.5 | 688.2 | 689.0 | 685.0 | 688.0 | 686.0 | 681.2 | 682.2 | 684.1 | 66° | 34.0 | 33.2 |
| 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 687.0 | 67.5° | 33.7 | 32.9 |
| | | | | | | | | | | 70° | 32.1 | 31.2 |
| | | | | | | | | | | 72.5° | 29.6 | 29.3 |
| | | | | | | | | | | 75° | 27.3 | 26.5 |
| | | | | | | | | | | 77.5° | 24.2 | 23.7 |
| | | | | | | | | | | 80° | 20.6 | 20.2 |
| | | | | | | | | | | 82.5° | 17.3 | 16.6 |
| | | | | | | | | | | 85° | 13.8 | 13.0 |
| | | | | | | | | | | 87.5° | 9.5 | 8.7 |
| | | | | | | | | | | 90° | 10.2 | 9.6 |
| | | | | | | | | | | 92.5° | 5.9 | 4.9 |
| | | | | | | | | | | 95° | 6.8 | 5.9 |
| | | | | | | | | | | 97.5° | 7.8 | 7.8 |
| | | | | | | | | | | 100° | 9.8 | 8.8 |
| | | | | | | | | | | 102.5° | 17.7 | 12.8 |
| | | | | | | | | | | 105° | 35.3 | 26.5 |
| | | | | | | | | | | 107.5° | 57.0 | 48.1 |



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CATALOG NUMBER: ISW-AF-450-LED-E1-

50-LED-E1-SL2-7027-ULG

tinued):

| 175° | 180° |
|-------|-------|
| 554.3 | 554.3 |
| 545.2 | 548.9 |
| 509.2 | 508.0 |
| 458.1 | 458.6 |
| 396.4 | 397.3 |
| 316.6 | 311.8 |
| 226.7 | 228.7 |
| 157.9 | 157.6 |
| 126.6 | 127.4 |
| 108.4 | 108.4 |
| 96.6 | 96.6 |
| 85.1 | 85.5 |
| 77.2 | 78.0 |
| 70.1 | 70.4 |
| 62.9 | 63.3 |
| 57.0 | 57.0 |
| 53.0 | 53.4 |
| 50.2 | 50.2 |
| 47.5 | 47.5 |
| 45.2 | 45.9 |
| 42.7 | 43.1 |
| 40.3 | 40.7 |
| 38.0 | 38.0 |
| 36.0 | 36.0 |
| 34.5 | 34.0 |
| 33.2 | 32.5 |
| 32.1 | 31.7 |
| 31.7 | 31.2 |
| 31.2 | 30.8 |
| 30.5 | 30.0 |
| 29.3 | 28.8 |
| 26.9 | 26.1 |
| 24.5 | 23.7 |
| 22.5 | 21.4 |
| 19.0 | 18.1 |
| 13.8 | 13.0 |
| 8.4 | 8.4 |
| 6.8 | 6.8 |
| 4.0 | 4.0 |
| 4.9 | 4.9 |
| 6.8 | 6.8 |
| 7.8 | 7.8 |
| 10.8 | 10.8 |
| 21.6 | 20.6 |
| 41.2 | 40.2 |

CANDELA DISTRIBUTION (continued):

| | 155° | 165° | 175° |
|--------|-------|-------|-------|
| 110° | 85.4 | 72.7 | 66.7 |
| 112.5° | 118.8 | 104.0 | 97.2 |
| 115° | 156.0 | 144.3 | 136.5 |
| 117.5° | 193.3 | 185.5 | 180.6 |
| 120° | 228.7 | 221.8 | 218.8 |
| 122.5° | 262.0 | 256.2 | 255.2 |
| 125° | 293.5 | 290.5 | 288.5 |
| 127.5° | 326.8 | 322.9 | 322.9 |
| 130° | 359.2 | 355.3 | 354.3 |
| 132.5° | 393.5 | 385.7 | 386.7 |
| 135° | 424.0 | 418.1 | 418.1 |
| 137.5° | 451.5 | 450.5 | 448.5 |
| 140° | 480.0 | 478.0 | 476.0 |
| 142.5° | 508.4 | 507.5 | 505.5 |
| 145° | 536.8 | 534.0 | 535.9 |
| 147.5° | 563.3 | 560.5 | 561.4 |
| 150° | 582.0 | 582.0 | 581.0 |
| 152.5° | 597.7 | 596.7 | 596.7 |
| 155° | 615.4 | 613.5 | 613.5 |
| 157.5° | 632.0 | 631.1 | 631.1 |
| 160° | 643.8 | 646.8 | 647.8 |
| 162.5° | 652.7 | 656.6 | 656.6 |
| 165° | 663.5 | 663.5 | 665.5 |
| 167.5° | 673.3 | 671.3 | 674.3 |
| 170° | 679.2 | 679.2 | 682.2 |
| 172.5° | 680.2 | 682.2 | 684.1 |
| 175° | 682.2 | 684.1 | 685.0 |
| 177.5° | 686.0 | 687.0 | 692.0 |
| 180° | 687.0 | 687.0 | 687.0 |

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| |
|-------|
| 180° |
| 64.8 |
| 97.2 |
| 137.4 |
| 180.6 |
| 220.8 |
| 258.2 |
| 292.5 |
| 323.9 |
| 356.3 |
| 388.7 |
| 421.0 |
| 451.5 |
| 479.0 |
| 508.4 |
| 539.8 |
| 564.3 |
| 584.0 |
| 599.7 |
| 617.3 |
| 634.0 |
| 650.7 |
| 660.5 |
| 668.4 |
| 677.2 |
| 685.0 |
| 686.0 |
| 687.0 |
| 693.9 |
| 687.0 |

(END OF REPORT)