

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: P226760

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226760
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-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) 4000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4876.9 lumens
Efficiency: N/A
Efficacy: 116.1 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

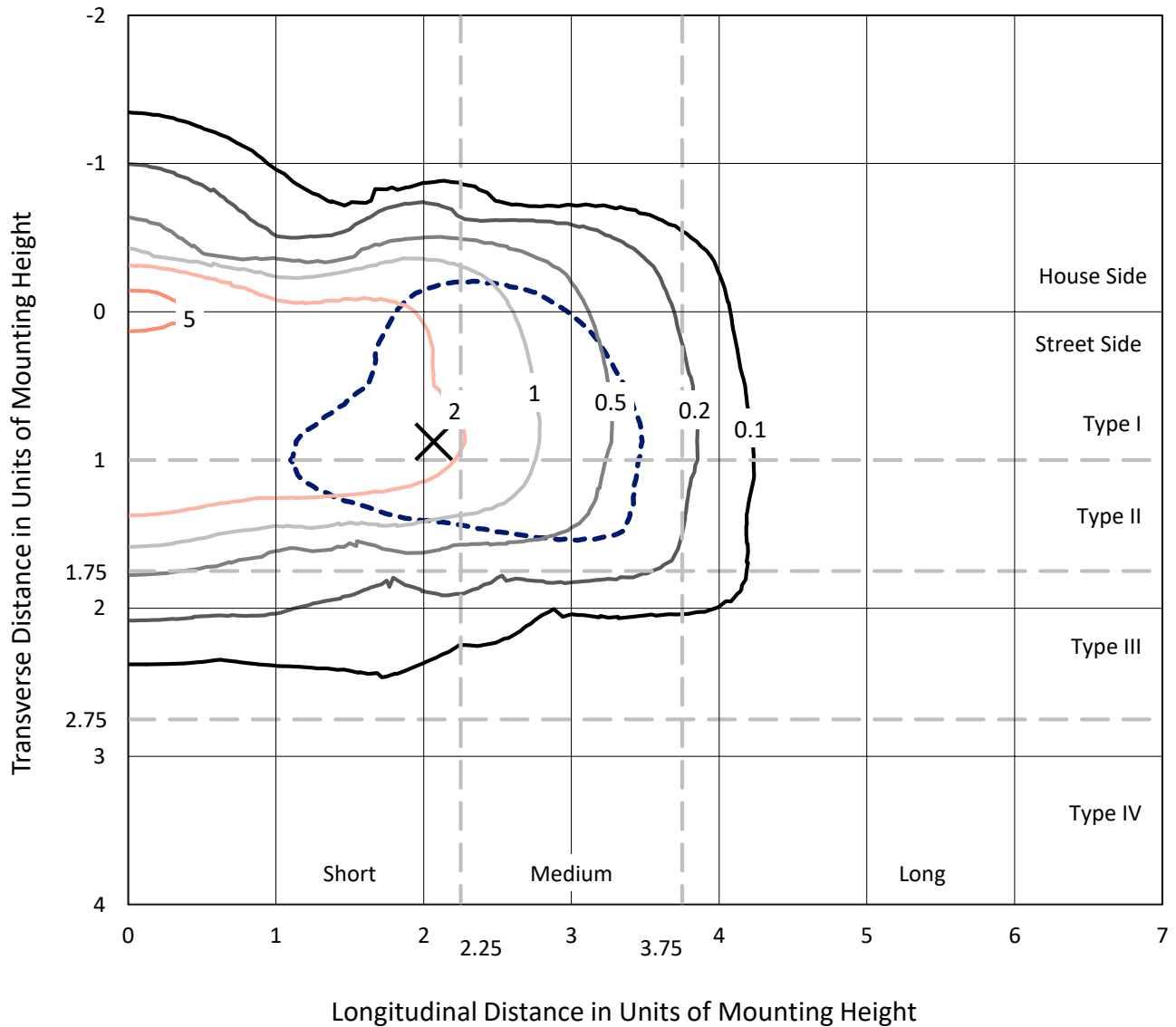
Input Watts (W): 42.01
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P226760
 CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-ULG

Iso-Footcandle Lines of Horizontal Illumination

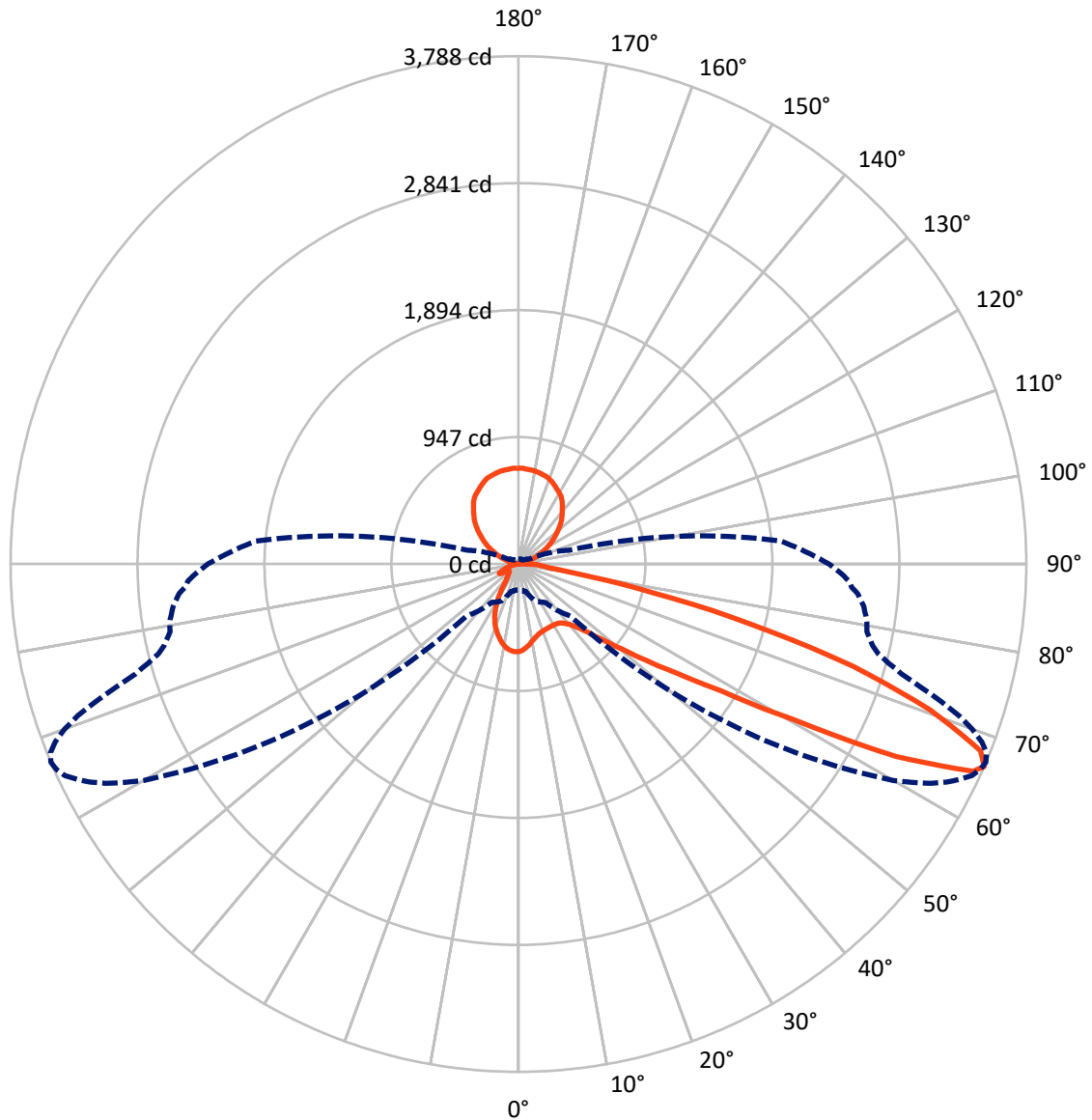
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P226760
CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-ULG

Luminous Intensity Polar Plot



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

REPORT NUMBER: P226760

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

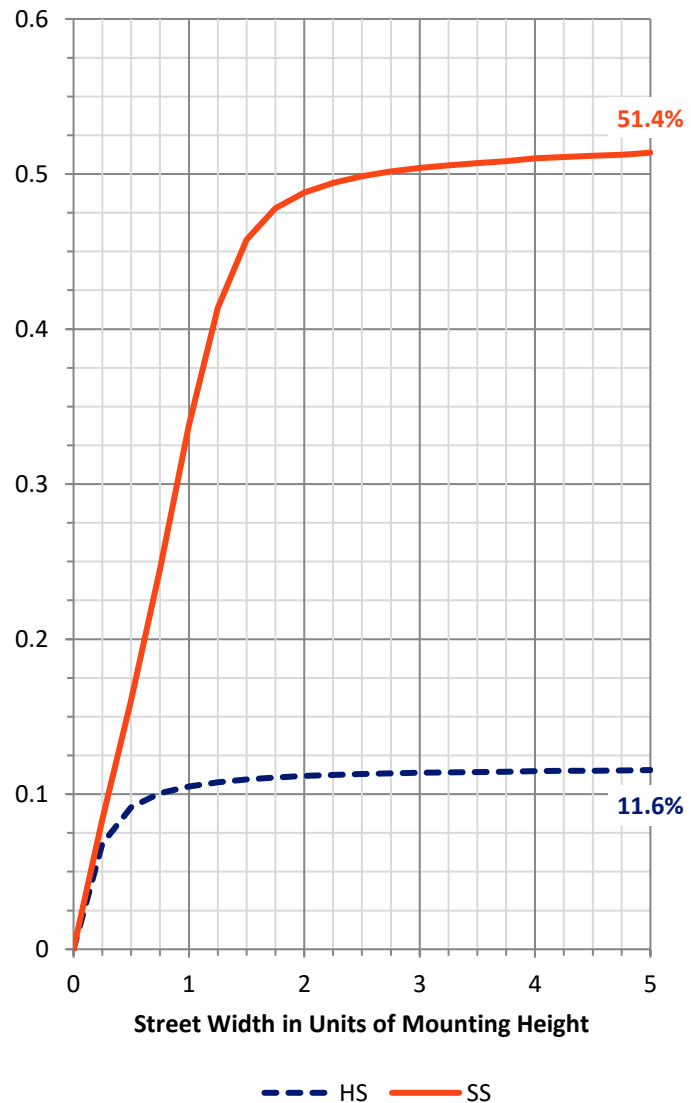
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 573.1 | 887.7 | 1460.8 |
| | % Fixture | 11.8 | 18.2 | 30.0 |
| Street Side | Lumens | 2527.7 | 888.4 | 3416.1 |
| | % Fixture | 51.8 | 18.2 | 70.0 |
| Total | Lumens | 3100.8 | 1776.1 | 4876.9 |
| | % Fixture | 63.6 | 36.4 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 56.6 | 1.2 |
| 10°-20° | 134.7 | 2.8 |
| 20°-30° | 184.7 | 3.8 |
| 30°-40° | 263.9 | 5.4 |
| 40°-50° | 427.9 | 8.8 |
| 50°-60° | 678.0 | 13.9 |
| 60°-70° | 859.2 | 17.6 |
| 70°-80° | 427.1 | 8.8 |
| 80°-90° | 68.7 | 1.4 |
| 90°-100° | 10.6 | 0.2 |
| 100°-110° | 58.7 | 1.2 |
| 110°-120° | 169.9 | 3.5 |
| 120°-130° | 279.4 | 5.7 |
| 130°-140° | 344.6 | 7.1 |
| 140°-150° | 352.5 | 7.2 |
| 150°-160° | 297.0 | 6.1 |
| 160°-170° | 195.5 | 4.0 |
| 170°-180° | 67.8 | 1.4 |
| 0°-90° | 3100.8 | 63.6 |
| 0°-180° | 4876.9 | 100.0 |



REPORT NUMBER: P226760

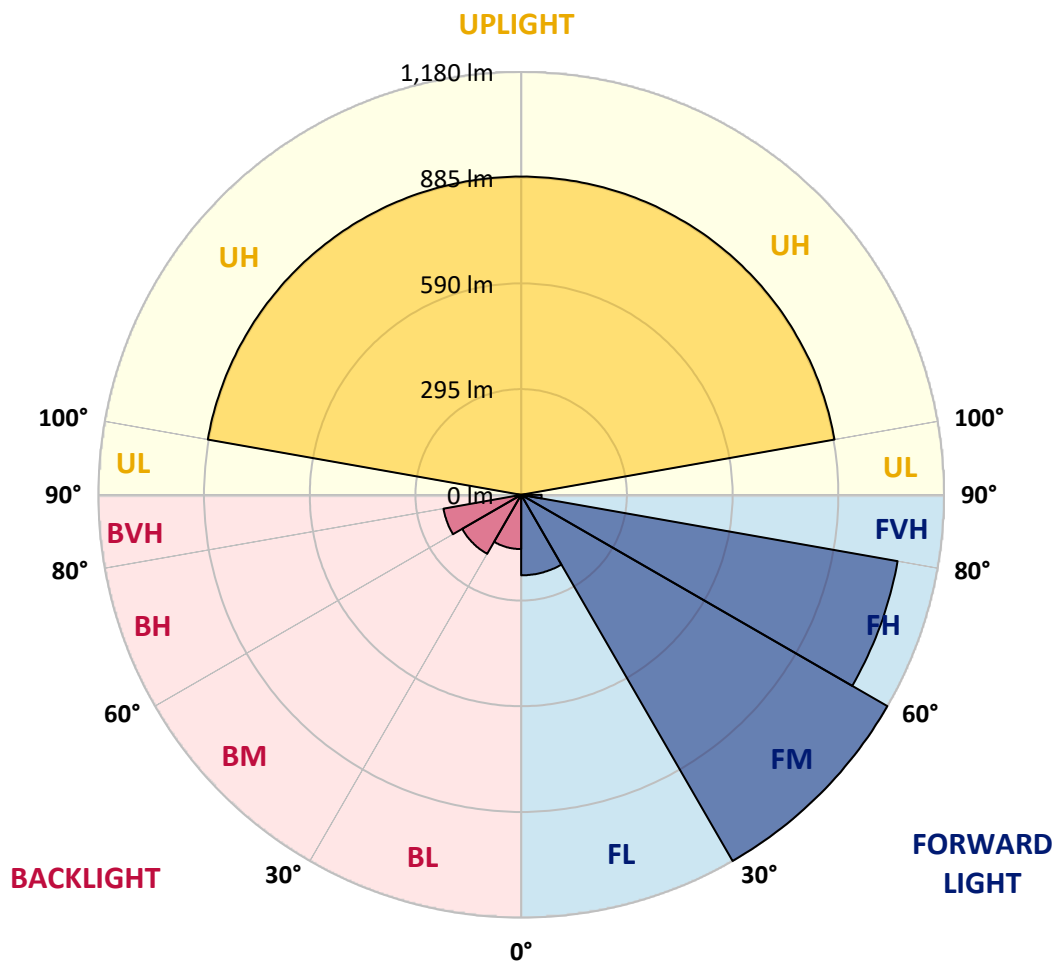
CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|---------|---------|
| | | | B | U | G |
| FL (0°-30°) | 224.6 | 4.6 | | | |
| FM (30°-60°) | 1179.6 | 24.2 | | | |
| FH (60°-80°) | 1066.2 | 21.9 | | | G1/1800 |
| FVH (80°-90°) | 57.3 | 1.2 | | | G1/100 |
| BL (0°-30°) | 151.4 | 3.1 | B1/500 | | |
| BM (30°-60°) | 190.2 | 3.9 | B0/220 | | |
| BH (60°-80°) | 220.0 | 4.5 | B1/500 | | G1/500 |
| BVH (80°-90°) | 11.4 | 0.2 | | | G1/100 |
| UL (90°-100°) | 10.6 | 0.2 | | U2/50 | |
| UH (100°-180°) | 887.7 | 18.2 | | U4/1000 | |

BUG Rating: B1-U5-G1

Type II Short





REPORT NUMBER: P226760

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

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 61° | 62° | 63° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 |
| 2.5° | 606.6 | 607.9 | 615.9 | 620.1 | 626.1 | 628.0 | 634.9 | 637.8 | 640.2 | 639.7 | 639.7 |
| 5° | 552.1 | 556.3 | 560.0 | 568.4 | 577.3 | 587.9 | 601.5 | 611.7 | 613.6 | 615.9 | 617.2 |
| 7.5° | 510.6 | 513.4 | 520.0 | 526.0 | 537.2 | 552.1 | 571.2 | 584.2 | 587.0 | 587.9 | 591.2 |
| 10° | 481.3 | 483.1 | 488.7 | 496.6 | 509.6 | 524.2 | 544.1 | 557.6 | 561.8 | 563.7 | 566.5 |
| 12.5° | 458.4 | 461.2 | 466.4 | 474.8 | 488.7 | 503.6 | 524.6 | 538.1 | 540.8 | 543.2 | 547.4 |
| 15° | 444.0 | 445.8 | 450.5 | 459.8 | 472.4 | 487.3 | 507.8 | 524.2 | 526.0 | 528.4 | 532.0 |
| 17.5° | 441.2 | 442.6 | 445.4 | 452.3 | 462.2 | 476.6 | 497.6 | 511.1 | 514.3 | 517.6 | 521.3 |
| 20° | 452.3 | 453.3 | 454.2 | 455.2 | 460.7 | 470.0 | 490.6 | 505.0 | 507.8 | 510.6 | 515.3 |
| 22.5° | 476.6 | 478.0 | 475.7 | 472.4 | 468.2 | 470.0 | 487.3 | 502.2 | 504.1 | 506.9 | 510.6 |
| 25° | 518.5 | 517.1 | 510.1 | 505.0 | 490.1 | 478.0 | 488.3 | 500.8 | 503.2 | 506.0 | 510.1 |
| 27.5° | 567.9 | 566.0 | 561.8 | 547.9 | 523.1 | 498.5 | 493.9 | 503.2 | 504.5 | 506.9 | 510.6 |
| 30° | 621.0 | 621.4 | 617.8 | 602.4 | 570.7 | 529.3 | 506.4 | 508.7 | 509.6 | 511.6 | 513.8 |
| 32.5° | 669.0 | 676.0 | 675.6 | 674.6 | 629.4 | 570.7 | 530.6 | 521.3 | 520.0 | 521.3 | 522.2 |
| 35° | 724.5 | 725.9 | 738.9 | 745.4 | 708.6 | 631.3 | 566.0 | 545.5 | 539.9 | 540.4 | 539.5 |
| 37.5° | 784.1 | 785.9 | 808.3 | 819.5 | 791.0 | 700.2 | 613.1 | 581.4 | 576.3 | 571.2 | 567.4 |
| 40° | 870.7 | 878.2 | 889.9 | 902.4 | 888.4 | 792.9 | 675.0 | 632.2 | 619.2 | 618.2 | 610.8 |
| 42.5° | 1000.2 | 997.9 | 992.4 | 1002.6 | 985.8 | 896.8 | 750.0 | 703.9 | 694.2 | 681.1 | 670.9 |
| 45° | 1127.4 | 1132.5 | 1108.4 | 1113.0 | 1113.9 | 1017.0 | 858.6 | 793.8 | 788.7 | 773.4 | 762.2 |
| 47.5° | 1213.1 | 1207.6 | 1175.0 | 1198.7 | 1256.9 | 1157.3 | 984.4 | 916.4 | 905.6 | 897.7 | 890.8 |
| 50° | 1217.8 | 1213.1 | 1192.1 | 1234.1 | 1358.5 | 1406.5 | 1159.6 | 1080.3 | 1065.0 | 1051.0 | 1046.8 |
| 52.5° | 1104.2 | 1097.6 | 1104.6 | 1189.9 | 1395.3 | 1615.2 | 1407.0 | 1284.0 | 1271.4 | 1259.8 | 1243.4 |
| 55° | 901.4 | 908.9 | 942.0 | 1064.5 | 1338.9 | 1763.4 | 1893.8 | 1598.5 | 1544.3 | 1543.9 | 1503.8 |
| 57.5° | 673.2 | 665.7 | 690.4 | 805.5 | 1196.3 | 1815.9 | 2341.0 | 2267.9 | 2147.3 | 2065.7 | 1967.4 |
| 60° | 454.2 | 456.1 | 478.9 | 538.1 | 832.5 | 1758.7 | 2640.6 | 2895.5 | 2853.0 | 2835.8 | 2809.2 |
| 62.5° | 315.0 | 317.7 | 338.7 | 394.1 | 486.8 | 1414.8 | 2728.2 | 3247.2 | 3323.1 | 3386.0 | 3370.6 |
| 65° | 220.3 | 220.9 | 241.8 | 327.5 | 364.8 | 726.8 | 2534.9 | 3293.8 | 3406.9 | 3515.1 | 3611.9 |
| 66° | 194.3 | 194.8 | 212.0 | 304.6 | 349.8 | 548.3 | 2367.1 | 3229.0 | 3358.0 | 3483.9 | 3584.0 |
| 67.5° | 166.3 | 169.1 | 182.6 | 259.0 | 335.4 | 423.0 | 1955.3 | 3035.7 | 3170.7 | 3309.1 | 3441.4 |
| 70° | 114.2 | 115.1 | 127.2 | 210.1 | 314.0 | 371.3 | 1114.4 | 2369.9 | 2556.8 | 2799.9 | 2940.6 |
| 72.5° | 81.5 | 80.6 | 82.0 | 130.0 | 322.4 | 369.0 | 585.6 | 1559.8 | 1821.2 | 2034.4 | 2186.9 |
| 75° | 72.6 | 70.4 | 64.2 | 80.6 | 235.3 | 402.9 | 392.3 | 918.2 | 1117.2 | 1311.4 | 1467.5 |
| 77.5° | 64.8 | 61.1 | 57.8 | 62.0 | 116.5 | 379.7 | 352.2 | 526.0 | 627.6 | 772.4 | 892.6 |
| 80° | 49.4 | 47.1 | 48.9 | 53.6 | 69.9 | 349.4 | 349.8 | 349.8 | 377.4 | 424.8 | 472.4 |
| 82.5° | 32.6 | 29.8 | 34.0 | 44.3 | 52.7 | 263.2 | 361.5 | 308.8 | 303.7 | 301.9 | 305.1 |
| 85° | 20.5 | 17.7 | 23.7 | 33.0 | 40.5 | 137.5 | 370.8 | 326.1 | 302.4 | 279.6 | 256.7 |
| 87.5° | 7.5 | 8.4 | 12.1 | 19.1 | 26.6 | 59.6 | 325.2 | 287.4 | 271.2 | 242.7 | 216.1 |
| 90° | 7.0 | 6.5 | 9.5 | 13.8 | 14.2 | 18.3 | 57.0 | 87.9 | 56.0 | 32.3 | 27.9 |
| 92.5° | 4.1 | 4.1 | 5.1 | 6.1 | 6.1 | 6.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 95° | 5.1 | 5.1 | 6.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.7 | 7.8 | 7.9 | 8.0 |
| 97.5° | 7.2 | 7.2 | 8.2 | 8.2 | 9.2 | 9.2 | 12.3 | 11.3 | 11.0 | 10.8 | 10.6 |
| 100° | 8.2 | 8.2 | 9.2 | 10.2 | 12.3 | 21.5 | 29.7 | 28.1 | 27.8 | 27.5 | 27.2 |
| 102.5° | 11.3 | 11.3 | 13.3 | 18.4 | 27.6 | 40.9 | 51.1 | 49.6 | 49.3 | 49.0 | 48.7 |
| 105° | 21.5 | 22.5 | 27.6 | 36.8 | 49.1 | 64.4 | 73.7 | 72.6 | 72.4 | 72.2 | 72.0 |
| 107.5° | 41.9 | 43.0 | 50.1 | 59.3 | 74.7 | 90.0 | 97.2 | 96.7 | 96.6 | 96.5 | 96.4 |



REPORT NUMBER: P226760

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

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 61° | 62° | 63° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110° | 67.5 | 69.6 | 75.7 | 89.0 | 104.3 | 116.6 | 122.8 | 123.3 | 123.4 | 123.5 | 123.6 |
| 112.5° | 101.3 | 101.3 | 108.4 | 123.8 | 137.1 | 146.3 | 151.4 | 152.4 | 152.6 | 152.8 | 153.0 |
| 115° | 143.2 | 142.2 | 150.4 | 162.6 | 171.9 | 178.0 | 183.1 | 184.6 | 184.9 | 185.3 | 185.6 |
| 117.5° | 188.2 | 188.2 | 193.3 | 201.5 | 206.6 | 209.7 | 215.8 | 217.9 | 218.3 | 218.7 | 219.1 |
| 120° | 230.2 | 228.1 | 231.2 | 238.3 | 242.4 | 248.6 | 251.6 | 253.7 | 254.1 | 254.5 | 254.9 |
| 122.5° | 269.0 | 266.0 | 267.0 | 273.1 | 277.2 | 283.4 | 285.4 | 287.4 | 287.9 | 288.3 | 288.7 |
| 125° | 304.8 | 300.7 | 302.8 | 305.9 | 312.0 | 317.1 | 320.2 | 321.2 | 321.4 | 321.6 | 321.8 |
| 127.5° | 337.6 | 336.6 | 336.6 | 340.6 | 346.8 | 347.8 | 352.9 | 353.4 | 353.5 | 353.6 | 353.7 |
| 130° | 371.3 | 369.3 | 370.3 | 374.4 | 378.5 | 380.5 | 385.7 | 387.7 | 388.1 | 388.5 | 388.9 |
| 132.5° | 405.1 | 403.0 | 402.0 | 410.2 | 413.3 | 414.3 | 420.4 | 423.0 | 423.5 | 424.0 | 424.5 |
| 135° | 438.8 | 435.8 | 435.8 | 441.9 | 445.0 | 447.0 | 453.2 | 455.7 | 456.2 | 456.7 | 457.3 |
| 137.5° | 470.6 | 467.5 | 469.5 | 470.6 | 474.6 | 478.7 | 483.9 | 484.9 | 485.1 | 485.3 | 485.5 |
| 140° | 499.2 | 496.1 | 498.2 | 500.2 | 502.3 | 508.4 | 511.5 | 512.5 | 512.7 | 512.9 | 513.1 |
| 142.5° | 529.9 | 526.8 | 528.9 | 529.9 | 533.0 | 537.0 | 539.1 | 542.2 | 542.8 | 543.4 | 544.0 |
| 145° | 562.6 | 558.5 | 556.5 | 559.6 | 562.6 | 563.6 | 568.8 | 571.8 | 572.4 | 573.1 | 573.7 |
| 147.5° | 588.2 | 585.1 | 584.1 | 587.2 | 587.2 | 588.2 | 593.3 | 595.9 | 596.4 | 596.9 | 597.4 |
| 150° | 608.7 | 605.6 | 606.6 | 606.6 | 606.6 | 606.6 | 610.7 | 612.2 | 612.5 | 612.8 | 613.2 |
| 152.5° | 625.0 | 622.0 | 622.0 | 623.0 | 624.0 | 624.0 | 625.0 | 626.6 | 626.9 | 627.2 | 627.5 |
| 155° | 643.4 | 639.3 | 639.3 | 641.4 | 644.5 | 642.4 | 640.4 | 642.9 | 643.4 | 643.9 | 644.5 |
| 157.5° | 660.8 | 657.8 | 657.8 | 658.8 | 660.8 | 659.8 | 658.8 | 660.8 | 661.2 | 661.6 | 662.1 |
| 160° | 678.2 | 675.1 | 674.1 | 671.1 | 670.0 | 670.0 | 673.1 | 676.2 | 676.8 | 677.4 | 678.0 |
| 162.5° | 688.4 | 684.4 | 684.4 | 680.3 | 676.2 | 678.2 | 682.3 | 684.4 | 684.8 | 685.2 | 685.6 |
| 165° | 696.6 | 693.6 | 691.5 | 691.5 | 688.4 | 688.4 | 687.4 | 690.0 | 690.5 | 691.0 | 691.5 |
| 167.5° | 705.8 | 702.8 | 699.7 | 701.7 | 703.8 | 700.7 | 693.6 | 696.6 | 697.2 | 697.9 | 698.5 |
| 170° | 714.0 | 711.0 | 707.9 | 707.9 | 708.9 | 706.9 | 701.7 | 703.3 | 703.6 | 703.9 | 704.2 |
| 172.5° | 715.0 | 713.0 | 711.0 | 708.9 | 705.8 | 705.8 | 704.8 | 706.3 | 706.7 | 707.0 | 707.3 |
| 175° | 716.1 | 714.0 | 713.0 | 711.0 | 706.9 | 705.8 | 705.8 | 708.4 | 708.9 | 709.4 | 709.9 |
| 177.5° | 723.2 | 721.2 | 716.1 | 715.0 | 713.0 | 711.0 | 709.9 | 712.5 | 713.0 | 713.5 | 714.0 |
| 180° | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 |



REPORT NUMBER: P226760

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

CANDELA DISTRIBUTION (continued):

| | 64° | 65° | 66° | 67° | 68° | 69° | 70° | 71° | 72° | 73° | 74° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 |
| 2.5° | 640.2 | 642.4 | 643.3 | 642.4 | 642.9 | 645.7 | 644.8 | 646.2 | 646.2 | 647.1 | 647.1 |
| 5° | 619.2 | 621.0 | 624.7 | 624.3 | 628.0 | 629.4 | 630.8 | 632.7 | 634.9 | 636.4 | 639.1 |
| 7.5° | 594.4 | 598.2 | 601.5 | 603.3 | 605.7 | 610.3 | 611.7 | 615.9 | 619.6 | 623.4 | 626.1 |
| 10° | 570.7 | 575.8 | 579.5 | 580.9 | 586.0 | 588.4 | 593.5 | 596.8 | 601.5 | 606.1 | 610.3 |
| 12.5° | 550.7 | 555.4 | 557.2 | 561.8 | 566.5 | 571.2 | 573.5 | 579.5 | 584.2 | 590.2 | 595.9 |
| 15° | 535.7 | 540.4 | 544.1 | 547.4 | 552.1 | 556.7 | 560.5 | 566.5 | 572.1 | 578.2 | 583.3 |
| 17.5° | 526.4 | 529.3 | 533.9 | 536.7 | 542.3 | 547.9 | 552.1 | 559.0 | 565.1 | 570.2 | 577.3 |
| 20° | 519.5 | 522.7 | 526.9 | 531.1 | 536.2 | 543.2 | 547.0 | 554.4 | 560.9 | 567.0 | 573.5 |
| 22.5° | 515.8 | 518.9 | 523.1 | 527.3 | 533.0 | 538.6 | 544.6 | 551.2 | 558.1 | 564.7 | 571.2 |
| 25° | 514.3 | 517.1 | 520.9 | 525.1 | 531.1 | 537.2 | 542.3 | 549.7 | 555.8 | 562.8 | 570.7 |
| 27.5° | 514.7 | 516.7 | 520.9 | 524.6 | 530.6 | 536.2 | 541.3 | 548.8 | 555.8 | 562.3 | 570.2 |
| 30° | 516.7 | 518.0 | 522.2 | 525.5 | 530.6 | 536.2 | 540.8 | 548.8 | 554.8 | 561.8 | 570.2 |
| 32.5° | 523.1 | 525.1 | 526.9 | 529.3 | 533.9 | 538.1 | 543.7 | 550.7 | 556.3 | 563.2 | 570.2 |
| 35° | 538.6 | 537.2 | 538.6 | 539.5 | 542.8 | 547.0 | 551.2 | 557.2 | 562.3 | 568.4 | 575.8 |
| 37.5° | 562.8 | 560.0 | 560.9 | 560.5 | 560.5 | 563.2 | 567.4 | 571.6 | 575.8 | 581.9 | 589.3 |
| 40° | 607.5 | 600.5 | 598.6 | 593.5 | 592.1 | 594.4 | 597.3 | 597.7 | 602.8 | 610.8 | 614.1 |
| 42.5° | 665.2 | 655.9 | 657.3 | 649.0 | 646.6 | 643.8 | 647.5 | 645.3 | 648.6 | 653.7 | 660.6 |
| 45° | 756.6 | 747.8 | 738.4 | 724.9 | 727.7 | 717.5 | 714.6 | 715.6 | 715.1 | 717.0 | 725.4 |
| 47.5° | 865.6 | 854.0 | 847.9 | 842.8 | 833.0 | 827.0 | 819.0 | 807.4 | 810.2 | 813.9 | 821.3 |
| 50° | 1024.9 | 1021.2 | 1009.6 | 992.8 | 990.4 | 981.6 | 979.3 | 969.0 | 965.3 | 964.8 | 964.3 |
| 52.5° | 1237.9 | 1213.6 | 1208.9 | 1193.1 | 1181.0 | 1172.6 | 1169.8 | 1155.4 | 1140.9 | 1149.3 | 1148.4 |
| 55° | 1497.3 | 1477.3 | 1451.7 | 1437.7 | 1427.9 | 1407.9 | 1402.8 | 1384.6 | 1376.2 | 1371.6 | 1359.9 |
| 57.5° | 1933.4 | 1863.0 | 1810.4 | 1784.3 | 1747.5 | 1710.3 | 1697.2 | 1659.9 | 1631.0 | 1610.5 | 1612.0 |
| 60° | 2693.7 | 2568.4 | 2420.7 | 2354.5 | 2201.3 | 2178.9 | 2073.6 | 2048.0 | 1984.6 | 1942.7 | 1918.4 |
| 62.5° | 3359.9 | 3325.9 | 3255.1 | 3158.7 | 3004.9 | 2827.8 | 2748.3 | 2589.8 | 2465.9 | 2411.8 | 2336.8 |
| 65° | 3678.1 | 3726.1 | 3745.6 | 3727.5 | 3665.9 | 3557.9 | 3462.9 | 3308.2 | 3100.5 | 2983.0 | 2837.2 |
| 66° | 3661.8 | 3733.1 | 3769.0 | 3787.6 | 3765.2 | 3701.4 | 3601.7 | 3474.6 | 3313.7 | 3134.9 | 2971.4 |
| 67.5° | 3542.6 | 3611.9 | 3661.8 | 3718.6 | 3718.6 | 3698.6 | 3658.1 | 3573.3 | 3459.6 | 3303.5 | 3156.8 |
| 70° | 3055.2 | 3149.4 | 3237.4 | 3254.6 | 3303.1 | 3288.2 | 3320.3 | 3266.3 | 3239.3 | 3174.0 | 3095.2 |
| 72.5° | 2380.2 | 2458.9 | 2534.4 | 2609.9 | 2597.3 | 2581.0 | 2577.7 | 2588.9 | 2534.0 | 2553.5 | 2532.9 |
| 75° | 1583.0 | 1718.7 | 1796.0 | 1788.5 | 1793.6 | 1797.8 | 1763.4 | 1686.4 | 1746.1 | 1670.7 | 1695.7 |
| 77.5° | 962.1 | 1024.9 | 1045.9 | 1022.6 | 992.4 | 953.2 | 890.3 | 853.4 | 800.9 | 805.1 | 770.1 |
| 80° | 504.5 | 512.5 | 495.7 | 448.7 | 423.0 | 399.8 | 328.0 | 295.8 | 266.0 | 254.8 | 229.7 |
| 82.5° | 289.3 | 270.2 | 249.7 | 233.8 | 203.6 | 183.1 | 155.2 | 137.5 | 118.4 | 101.6 | 95.5 |
| 85° | 234.4 | 208.7 | 189.7 | 172.0 | 151.4 | 133.3 | 110.0 | 91.8 | 77.8 | 67.5 | 65.3 |
| 87.5° | 193.3 | 175.6 | 156.1 | 139.3 | 119.3 | 100.7 | 77.8 | 60.6 | 48.0 | 38.7 | 35.9 |
| 90° | 26.3 | 32.5 | 26.0 | 18.5 | 23.2 | 16.7 | 13.4 | 13.9 | 12.9 | 12.9 | 13.4 |
| 92.5° | 7.2 | 7.2 | 7.1 | 7.0 | 6.9 | 6.8 | 6.6 | 6.5 | 6.4 | 6.3 | 6.2 |
| 95° | 8.1 | 8.2 | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.6 | 7.5 | 7.4 | 7.3 |
| 97.5° | 10.4 | 10.2 | 10.1 | 10.0 | 9.9 | 9.8 | 9.7 | 9.6 | 9.5 | 9.4 | 9.3 |
| 100° | 26.9 | 26.6 | 26.3 | 26.0 | 25.7 | 25.4 | 25.1 | 24.8 | 24.4 | 24.1 | 23.8 |
| 102.5° | 48.4 | 48.1 | 47.6 | 47.1 | 46.5 | 46.0 | 45.5 | 45.0 | 44.5 | 44.0 | 43.5 |
| 105° | 71.8 | 71.6 | 71.1 | 70.6 | 70.1 | 69.6 | 69.0 | 68.5 | 68.0 | 67.5 | 67.0 |
| 107.5° | 96.3 | 96.2 | 95.7 | 95.3 | 94.9 | 94.5 | 94.1 | 93.7 | 93.3 | 92.9 | 92.5 |



REPORT NUMBER: P226760

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

CANDELA DISTRIBUTION (continued):

| | 64° | 65° | 66° | 67° | 68° | 69° | 70° | 71° | 72° | 73° | 74° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110° | 123.7 | 123.8 | 123.6 | 123.4 | 123.2 | 123.0 | 122.8 | 122.5 | 122.3 | 122.1 | 121.9 |
| 112.5° | 153.2 | 153.4 | 153.3 | 153.2 | 153.1 | 153.0 | 152.9 | 152.8 | 152.7 | 152.6 | 152.5 |
| 115° | 185.9 | 186.2 | 185.9 | 185.6 | 185.3 | 184.9 | 184.6 | 184.3 | 184.0 | 183.7 | 183.4 |
| 117.5° | 219.5 | 219.9 | 219.4 | 218.9 | 218.4 | 217.9 | 217.4 | 216.9 | 216.4 | 215.8 | 215.3 |
| 120° | 255.3 | 255.7 | 255.2 | 254.7 | 254.2 | 253.7 | 253.2 | 252.7 | 252.2 | 251.6 | 251.1 |
| 122.5° | 289.1 | 289.5 | 289.0 | 288.5 | 288.0 | 287.4 | 286.9 | 286.4 | 285.9 | 285.4 | 284.9 |
| 125° | 322.0 | 322.2 | 321.7 | 321.2 | 320.7 | 320.2 | 319.7 | 319.2 | 318.6 | 318.1 | 317.6 |
| 127.5° | 353.8 | 353.9 | 353.9 | 353.9 | 353.9 | 353.9 | 353.9 | 353.9 | 353.9 | 353.9 | 353.9 |
| 130° | 389.3 | 389.7 | 389.7 | 389.7 | 389.7 | 389.7 | 389.7 | 389.7 | 389.7 | 389.7 | 389.7 |
| 132.5° | 425.0 | 425.5 | 425.3 | 425.1 | 424.9 | 424.7 | 424.5 | 424.3 | 424.1 | 423.9 | 423.7 |
| 135° | 457.8 | 458.3 | 458.2 | 458.1 | 458.0 | 457.9 | 457.8 | 457.7 | 457.6 | 457.5 | 457.4 |
| 137.5° | 485.7 | 485.9 | 486.0 | 486.1 | 486.2 | 486.3 | 486.4 | 486.5 | 486.6 | 486.7 | 486.8 |
| 140° | 513.3 | 513.5 | 513.7 | 513.9 | 514.1 | 514.3 | 514.5 | 514.7 | 515.0 | 515.2 | 515.4 |
| 142.5° | 544.6 | 545.2 | 545.2 | 545.2 | 545.2 | 545.2 | 545.2 | 545.2 | 545.2 | 545.2 | 545.2 |
| 145° | 574.3 | 574.9 | 574.8 | 574.7 | 574.6 | 574.5 | 574.4 | 574.3 | 574.2 | 574.1 | 574.0 |
| 147.5° | 597.9 | 598.4 | 598.5 | 598.6 | 598.7 | 598.8 | 598.9 | 599.0 | 599.1 | 599.2 | 599.3 |
| 150° | 613.5 | 613.8 | 614.1 | 614.4 | 614.7 | 615.0 | 615.3 | 615.6 | 615.9 | 616.2 | 616.5 |
| 152.5° | 627.8 | 628.1 | 628.5 | 628.9 | 629.3 | 629.7 | 630.1 | 630.5 | 631.0 | 631.4 | 631.8 |
| 155° | 645.0 | 645.5 | 646.0 | 646.5 | 647.0 | 647.5 | 648.0 | 648.6 | 649.1 | 649.6 | 650.1 |
| 157.5° | 662.5 | 662.9 | 663.1 | 663.3 | 663.5 | 663.7 | 663.9 | 664.1 | 664.3 | 664.5 | 664.7 |
| 160° | 678.6 | 679.2 | 678.9 | 678.6 | 678.3 | 678.0 | 677.7 | 677.4 | 677.1 | 676.8 | 676.5 |
| 162.5° | 686.0 | 686.4 | 686.3 | 686.2 | 686.1 | 686.0 | 685.9 | 685.8 | 685.7 | 685.6 | 685.5 |
| 165° | 692.0 | 692.5 | 692.8 | 693.2 | 693.5 | 693.8 | 694.1 | 694.4 | 694.7 | 695.0 | 695.3 |
| 167.5° | 699.1 | 699.7 | 700.1 | 700.5 | 700.9 | 701.3 | 701.7 | 702.2 | 702.6 | 703.0 | 703.4 |
| 170° | 704.5 | 704.8 | 705.3 | 705.8 | 706.3 | 706.9 | 707.4 | 707.9 | 708.4 | 708.9 | 709.4 |
| 172.5° | 707.6 | 707.9 | 708.1 | 708.3 | 708.5 | 708.7 | 708.9 | 709.1 | 709.3 | 709.5 | 709.7 |
| 175° | 710.4 | 711.0 | 711.1 | 711.2 | 711.3 | 711.4 | 711.5 | 711.6 | 711.7 | 711.8 | 711.9 |
| 177.5° | 714.5 | 715.0 | 715.2 | 715.5 | 715.7 | 715.9 | 716.1 | 716.3 | 716.5 | 716.7 | 716.9 |
| 180° | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 |



REPORT NUMBER: P226760

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

CANDELA DISTRIBUTION (continued):

| | 75° | 76° | 77° | 78° | 79° | 80° | 81° | 82° | 83° | 84° | 85° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 |
| 2.5° | 648.6 | 648.6 | 649.5 | 650.4 | 650.8 | 650.8 | 650.8 | 651.7 | 652.2 | 650.8 | 652.2 |
| 5° | 640.6 | 642.9 | 644.8 | 646.2 | 646.6 | 648.0 | 649.5 | 650.4 | 651.7 | 651.7 | 652.7 |
| 7.5° | 629.8 | 634.0 | 636.4 | 638.7 | 641.1 | 643.3 | 646.2 | 648.0 | 649.0 | 650.8 | 652.2 |
| 10° | 616.3 | 621.4 | 626.1 | 629.8 | 633.1 | 637.8 | 641.5 | 644.4 | 648.6 | 649.0 | 652.2 |
| 12.5° | 601.9 | 609.4 | 613.1 | 620.1 | 624.7 | 631.8 | 635.5 | 639.7 | 644.4 | 646.6 | 650.4 |
| 15° | 591.7 | 598.2 | 605.2 | 611.7 | 619.2 | 627.6 | 632.2 | 637.8 | 644.4 | 649.5 | 654.1 |
| 17.5° | 583.7 | 592.6 | 600.5 | 608.9 | 618.2 | 627.1 | 634.0 | 640.2 | 648.6 | 651.3 | 655.9 |
| 20° | 581.4 | 591.2 | 599.1 | 607.9 | 617.8 | 629.4 | 637.8 | 644.4 | 652.7 | 657.3 | 661.5 |
| 22.5° | 580.5 | 589.8 | 599.1 | 609.9 | 620.5 | 632.7 | 641.5 | 649.9 | 658.3 | 662.5 | 665.7 |
| 25° | 579.5 | 589.3 | 599.6 | 611.7 | 623.4 | 636.0 | 646.2 | 654.1 | 662.1 | 666.2 | 669.0 |
| 27.5° | 579.5 | 589.8 | 601.0 | 613.1 | 625.6 | 639.7 | 649.5 | 656.8 | 663.9 | 667.6 | 668.5 |
| 30° | 579.1 | 589.8 | 600.5 | 614.1 | 627.6 | 642.0 | 652.7 | 659.7 | 665.7 | 668.1 | 667.2 |
| 32.5° | 580.0 | 591.2 | 602.8 | 616.3 | 630.3 | 644.4 | 655.5 | 663.4 | 666.7 | 666.2 | 665.7 |
| 35° | 584.7 | 594.9 | 608.5 | 622.0 | 636.4 | 649.5 | 660.1 | 665.7 | 668.5 | 667.6 | 665.2 |
| 37.5° | 597.3 | 607.5 | 621.0 | 636.0 | 647.1 | 662.1 | 671.8 | 676.0 | 676.5 | 673.6 | 668.1 |
| 40° | 623.4 | 633.6 | 645.7 | 662.1 | 675.6 | 685.8 | 695.1 | 699.7 | 696.9 | 691.8 | 685.8 |
| 42.5° | 664.8 | 677.8 | 692.3 | 705.3 | 721.2 | 735.2 | 737.4 | 740.3 | 735.6 | 725.9 | 718.4 |
| 45° | 731.4 | 739.4 | 758.0 | 767.7 | 788.3 | 795.2 | 800.4 | 801.8 | 791.6 | 783.6 | 770.6 |
| 47.5° | 827.4 | 842.8 | 855.8 | 865.1 | 880.0 | 889.4 | 899.6 | 895.0 | 887.0 | 873.5 | 856.3 |
| 50° | 978.4 | 988.2 | 1004.9 | 1021.6 | 1037.5 | 1044.0 | 1044.0 | 1039.4 | 1034.2 | 1008.1 | 987.1 |
| 52.5° | 1163.8 | 1164.7 | 1188.9 | 1208.9 | 1222.4 | 1212.7 | 1224.4 | 1212.7 | 1209.4 | 1191.2 | 1174.0 |
| 55° | 1378.5 | 1369.7 | 1399.0 | 1416.7 | 1428.9 | 1440.5 | 1438.2 | 1436.7 | 1424.7 | 1404.2 | 1383.2 |
| 57.5° | 1582.6 | 1608.2 | 1622.2 | 1648.3 | 1654.3 | 1662.3 | 1659.0 | 1654.3 | 1647.4 | 1635.7 | 1626.4 |
| 60° | 1877.0 | 1894.3 | 1906.9 | 1912.0 | 1929.2 | 1931.5 | 1943.2 | 1924.1 | 1928.8 | 1915.3 | 1885.9 |
| 62.5° | 2277.7 | 2259.1 | 2268.8 | 2268.8 | 2263.7 | 2245.6 | 2255.3 | 2262.8 | 2250.2 | 2239.0 | 2234.3 |
| 65° | 2726.3 | 2666.2 | 2608.4 | 2598.7 | 2572.1 | 2566.1 | 2558.6 | 2540.0 | 2532.0 | 2512.5 | 2496.6 |
| 66° | 2860.5 | 2767.3 | 2712.8 | 2679.3 | 2647.1 | 2640.1 | 2629.9 | 2610.3 | 2594.5 | 2567.0 | 2540.4 |
| 67.5° | 3011.0 | 2890.8 | 2808.8 | 2761.3 | 2721.7 | 2695.6 | 2675.1 | 2647.1 | 2621.9 | 2581.0 | 2538.6 |
| 70° | 3001.2 | 2901.9 | 2803.2 | 2731.0 | 2671.3 | 2617.7 | 2586.1 | 2526.0 | 2474.7 | 2416.0 | 2367.6 |
| 72.5° | 2521.8 | 2504.1 | 2446.8 | 2406.3 | 2333.1 | 2304.7 | 2220.8 | 2182.7 | 2111.8 | 2035.9 | 2012.6 |
| 75° | 1753.1 | 1683.7 | 1654.3 | 1638.1 | 1605.9 | 1517.3 | 1459.5 | 1472.1 | 1389.3 | 1315.2 | 1272.8 |
| 77.5° | 766.4 | 780.3 | 699.3 | 663.0 | 634.9 | 587.0 | 542.3 | 511.6 | 493.9 | 482.2 | 429.5 |
| 80° | 212.0 | 184.9 | 182.6 | 169.6 | 166.7 | 148.6 | 151.0 | 137.9 | 129.1 | 127.2 | 123.0 |
| 82.5° | 92.7 | 90.8 | 88.1 | 86.6 | 85.2 | 83.4 | 81.0 | 80.6 | 77.8 | 75.5 | 75.9 |
| 85° | 61.5 | 61.1 | 59.6 | 58.2 | 56.0 | 52.7 | 50.3 | 48.5 | 48.9 | 46.5 | 46.1 |
| 87.5° | 35.9 | 35.0 | 34.5 | 32.6 | 32.1 | 29.4 | 29.8 | 27.5 | 27.0 | 26.6 | 25.2 |
| 90° | 14.3 | 14.6 | 15.8 | 15.1 | 13.1 | 17.1 | 15.4 | 14.3 | 14.5 | 13.0 | 12.8 |
| 92.5° | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| 95° | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 97.5° | 9.2 | 9.1 | 9.0 | 8.9 | 8.8 | 8.7 | 8.6 | 8.5 | 8.4 | 8.3 | 8.2 |
| 100° | 23.5 | 23.1 | 22.7 | 22.3 | 21.9 | 21.5 | 21.1 | 20.7 | 20.3 | 19.8 | 19.4 |
| 102.5° | 43.0 | 42.7 | 42.4 | 42.0 | 41.7 | 41.4 | 41.1 | 40.8 | 40.5 | 40.2 | 39.9 |
| 105° | 66.5 | 66.1 | 65.7 | 65.3 | 64.9 | 64.4 | 64.0 | 63.6 | 63.2 | 62.8 | 62.4 |
| 107.5° | 92.1 | 91.8 | 91.5 | 91.1 | 90.8 | 90.5 | 90.2 | 89.9 | 89.6 | 89.3 | 89.0 |



REPORT NUMBER: P226760
 CATALOG NUMBER: ISW-AF-450-LED-E1-SL2-ULG

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

| | 75° | 76° | 77° | 78° | 79° | 80° | 81° | 82° | 83° | 84° | 85° | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 110° | 121.7 | 121.4 | 121.1 | 120.8 | 120.5 | 120.2 | 119.9 | 119.6 | 119.3 | 119.0 | 118.7 | 0° |
| 112.5° | 152.4 | 152.2 | 152.0 | 151.8 | 151.6 | 151.4 | 151.2 | 151.0 | 150.8 | 150.6 | 150.4 | 2.5° |
| 115° | 183.1 | 182.9 | 182.7 | 182.5 | 182.3 | 182.1 | 181.9 | 181.7 | 181.5 | 181.3 | 181.1 | 5° |
| 117.5° | 214.8 | 214.6 | 214.4 | 214.2 | 214.0 | 213.8 | 213.6 | 213.4 | 213.2 | 213.0 | 212.8 | 7.5° |
| 120° | 250.6 | 250.4 | 250.2 | 250.0 | 249.8 | 249.6 | 249.4 | 249.2 | 249.0 | 248.8 | 248.6 | 10° |
| 122.5° | 284.4 | 284.2 | 284.0 | 283.8 | 283.6 | 283.4 | 283.2 | 282.9 | 282.7 | 282.5 | 282.3 | 12.5° |
| 125° | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 15° |
| 127.5° | 353.9 | 353.8 | 353.7 | 353.6 | 353.5 | 353.4 | 353.3 | 353.2 | 353.1 | 353.0 | 352.9 | 17.5° |
| 130° | 389.7 | 389.5 | 389.3 | 389.1 | 388.9 | 388.7 | 388.5 | 388.3 | 388.1 | 387.9 | 387.7 | 20° |
| 132.5° | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 423.5 | 22.5° |
| 135° | 457.3 | 457.6 | 457.9 | 458.2 | 458.5 | 458.8 | 459.1 | 459.4 | 459.7 | 460.0 | 460.3 | 25° |
| 137.5° | 486.9 | 487.4 | 487.9 | 488.5 | 489.0 | 489.5 | 490.0 | 490.5 | 491.0 | 491.5 | 492.0 | 27.5° |
| 140° | 515.6 | 516.1 | 516.6 | 517.1 | 517.6 | 518.1 | 518.6 | 519.1 | 519.7 | 520.2 | 520.7 | 30° |
| 142.5° | 545.2 | 545.3 | 545.4 | 545.5 | 545.6 | 545.7 | 545.8 | 545.9 | 546.1 | 546.2 | 546.3 | 32.5° |
| 145° | 573.9 | 573.6 | 573.3 | 573.0 | 572.6 | 572.3 | 572.0 | 571.7 | 571.4 | 571.1 | 570.8 | 35° |
| 147.5° | 599.4 | 599.1 | 598.8 | 598.5 | 598.2 | 597.9 | 597.6 | 597.3 | 597.0 | 596.7 | 596.4 | 37.5° |
| 150° | 616.8 | 617.1 | 617.5 | 617.8 | 618.1 | 618.4 | 618.7 | 619.0 | 619.3 | 619.6 | 619.9 | 40° |
| 152.5° | 632.2 | 632.7 | 633.2 | 633.7 | 634.2 | 634.7 | 635.3 | 635.8 | 636.3 | 636.8 | 637.3 | 42.5° |
| 155° | 650.6 | 650.8 | 651.0 | 651.2 | 651.4 | 651.6 | 651.8 | 652.0 | 652.2 | 652.4 | 652.6 | 45° |
| 157.5° | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 664.9 | 47.5° |
| 160° | 676.2 | 676.1 | 676.0 | 675.9 | 675.8 | 675.7 | 675.6 | 675.5 | 675.4 | 675.2 | 675.1 | 50° |
| 162.5° | 685.4 | 685.2 | 685.0 | 684.8 | 684.6 | 684.4 | 684.1 | 683.9 | 683.7 | 683.5 | 683.3 | 52.5° |
| 165° | 695.6 | 695.4 | 695.2 | 695.0 | 694.8 | 694.6 | 694.4 | 694.2 | 694.0 | 693.8 | 693.6 | 55° |
| 167.5° | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 703.8 | 57.5° |
| 170° | 709.9 | 710.1 | 710.3 | 710.5 | 710.7 | 711.0 | 711.2 | 711.4 | 711.6 | 711.8 | 712.0 | 60° |
| 172.5° | 709.9 | 710.1 | 710.3 | 710.5 | 710.7 | 711.0 | 711.2 | 711.4 | 711.6 | 711.8 | 712.0 | 62.5° |
| 175° | 712.0 | 711.8 | 711.6 | 711.4 | 711.2 | 711.0 | 710.7 | 710.5 | 710.3 | 710.1 | 709.9 | 65° |
| 177.5° | 717.1 | 716.8 | 716.5 | 716.2 | 715.9 | 715.6 | 715.2 | 714.9 | 714.6 | 714.3 | 714.0 | 66° |
| 180° | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 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: P226760
 NUMBER: ISW-AF-450-LED-E1-SL2-ULG

REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

| 86° | 87° | 88° | 89° | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 86° | |
|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|--------|-------|
| 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 652.7 | 110° | 118.9 |
| 653.7 | 654.6 | 655.0 | 654.6 | 655.5 | 655.0 | 655.5 | 655.0 | 652.7 | 652.2 | 651.7 | 112.5° | 150.4 |
| 654.6 | 656.4 | 656.8 | 657.3 | 656.4 | 657.3 | 655.5 | 648.0 | 639.7 | 630.3 | 622.9 | 115° | 181.3 |
| 655.5 | 657.9 | 659.2 | 659.2 | 659.7 | 658.8 | 651.7 | 635.5 | 615.9 | 596.3 | 581.4 | 117.5° | 213.0 |
| 655.0 | 658.3 | 659.7 | 660.1 | 660.1 | 658.3 | 641.5 | 615.4 | 585.6 | 555.8 | 525.5 | 120° | 248.6 |
| 653.7 | 656.4 | 658.8 | 658.8 | 659.2 | 652.7 | 626.6 | 589.3 | 547.0 | 502.2 | 461.7 | 122.5° | 282.5 |
| 656.4 | 659.2 | 659.2 | 659.2 | 658.8 | 647.5 | 610.8 | 556.7 | 499.9 | 439.4 | 379.2 | 125° | 317.1 |
| 660.6 | 662.1 | 661.0 | 661.0 | 659.2 | 642.4 | 593.1 | 524.6 | 450.0 | 369.9 | 286.0 | 127.5° | 353.3 |
| 664.3 | 665.2 | 664.8 | 662.5 | 660.1 | 636.9 | 574.9 | 490.6 | 390.4 | 286.0 | 202.6 | 130° | 387.9 |
| 668.1 | 669.0 | 666.7 | 663.0 | 659.7 | 629.4 | 553.0 | 447.2 | 322.8 | 195.7 | 134.2 | 132.5° | 423.7 |
| 668.5 | 669.4 | 665.2 | 660.1 | 655.5 | 618.2 | 526.4 | 401.1 | 248.8 | 126.7 | 104.9 | 135° | 460.5 |
| 668.1 | 667.2 | 660.1 | 653.7 | 648.6 | 604.7 | 497.1 | 343.8 | 165.8 | 95.5 | 91.3 | 137.5° | 492.2 |
| 664.8 | 660.6 | 655.0 | 647.5 | 640.2 | 589.8 | 467.7 | 280.0 | 104.9 | 83.0 | 83.0 | 140° | 521.1 |
| 660.1 | 655.9 | 649.0 | 639.1 | 630.8 | 575.4 | 434.2 | 214.8 | 83.9 | 76.4 | 77.3 | 142.5° | 546.7 |
| 658.3 | 653.7 | 643.3 | 633.1 | 622.4 | 562.3 | 398.7 | 144.4 | 75.5 | 72.2 | 72.6 | 145° | 571.2 |
| 662.1 | 654.1 | 643.8 | 632.2 | 619.6 | 551.2 | 362.0 | 100.7 | 71.3 | 67.5 | 68.4 | 147.5° | 596.8 |
| 674.6 | 667.2 | 655.0 | 640.2 | 626.6 | 544.6 | 322.8 | 83.4 | 67.1 | 63.8 | 63.8 | 150° | 620.7 |
| 704.9 | 695.1 | 678.8 | 661.0 | 644.8 | 548.8 | 288.0 | 75.9 | 63.8 | 60.6 | 60.6 | 152.5° | 638.3 |
| 753.8 | 742.2 | 723.0 | 703.0 | 681.6 | 569.3 | 248.3 | 73.1 | 61.5 | 56.9 | 56.0 | 155° | 653.3 |
| 837.7 | 822.2 | 797.1 | 773.4 | 747.8 | 604.7 | 208.3 | 71.3 | 58.7 | 54.5 | 52.7 | 157.5° | 665.9 |
| 969.5 | 946.6 | 916.9 | 885.7 | 854.5 | 669.4 | 176.6 | 69.5 | 56.9 | 52.7 | 50.7 | 160° | 676.4 |
| 1139.1 | 1123.7 | 1086.5 | 1045.5 | 1008.1 | 798.5 | 158.4 | 68.0 | 55.4 | 50.3 | 48.9 | 162.5° | 684.6 |
| 1355.2 | 1330.0 | 1300.7 | 1264.0 | 1219.7 | 965.8 | 156.5 | 67.5 | 54.0 | 48.5 | 47.6 | 165° | 694.4 |
| 1583.5 | 1573.7 | 1523.9 | 1501.1 | 1453.1 | 1188.5 | 190.6 | 68.4 | 53.1 | 47.1 | 45.6 | 167.5° | 705.0 |
| 1844.0 | 1847.7 | 1801.1 | 1775.9 | 1736.4 | 1470.8 | 303.3 | 71.3 | 53.1 | 45.6 | 44.3 | 170° | 713.0 |
| 2184.5 | 2190.5 | 2135.6 | 2105.7 | 2072.2 | 1787.1 | 476.6 | 75.9 | 54.5 | 44.3 | 42.9 | 172.5° | 713.0 |
| 2463.6 | 2430.9 | 2395.5 | 2343.4 | 2300.9 | 1963.7 | 458.9 | 84.3 | 56.4 | 42.9 | 41.4 | 175° | 711.0 |
| 2492.4 | 2469.2 | 2424.4 | 2368.0 | 2316.4 | 1964.6 | 400.7 | 87.2 | 56.9 | 42.4 | 41.0 | 177.5° | 714.8 |
| 2488.7 | 2447.2 | 2396.5 | 2349.0 | 2298.2 | 1914.2 | 309.9 | 90.8 | 58.2 | 41.4 | 40.1 | 180° | 716.1 |
| 2316.4 | 2258.1 | 2208.8 | 2143.1 | 2089.9 | 1713.0 | 190.6 | 90.4 | 56.4 | 38.7 | 37.7 | | |
| 1910.1 | 1880.3 | 1821.6 | 1769.0 | 1713.5 | 1386.4 | 130.4 | 80.6 | 49.8 | 35.0 | 35.4 | | |
| 1235.5 | 1201.5 | 1141.8 | 1112.0 | 1080.8 | 887.0 | 101.6 | 65.7 | 42.4 | 31.2 | 32.6 | | |
| 412.4 | 398.7 | 376.9 | 389.0 | 370.8 | 345.7 | 74.6 | 49.8 | 34.0 | 27.0 | 28.8 | | |
| 123.5 | 120.7 | 124.9 | 117.4 | 124.4 | 105.3 | 48.9 | 35.0 | 26.1 | 23.3 | 25.6 | | |
| 73.1 | 72.2 | 72.2 | 72.2 | 70.4 | 65.7 | 32.1 | 24.2 | 20.0 | 19.5 | 21.4 | | |
| 44.7 | 43.8 | 44.3 | 43.8 | 44.7 | 40.1 | 21.9 | 16.8 | 14.9 | 14.4 | 17.3 | | |
| 25.6 | 25.6 | 26.1 | 25.2 | 25.6 | 24.7 | 15.3 | 10.7 | 9.8 | 9.3 | 12.6 | | |
| 13.2 | 13.2 | 11.9 | 11.4 | 11.9 | 13.7 | 13.4 | 12.5 | 9.9 | 9.5 | 12.4 | | |
| 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 7.2 | 7.2 | 6.1 | 6.1 | | |
| 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 8.2 | 7.2 | 7.2 | 7.2 | | |
| 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 9.2 | 10.2 | 12.3 | 9.2 | 9.2 | | |
| 19.4 | 19.4 | 19.4 | 19.4 | 19.4 | 19.4 | 23.5 | 26.6 | 29.7 | 21.5 | 12.3 | | |
| 39.7 | 39.5 | 39.3 | 39.1 | 38.9 | 39.9 | 43.0 | 48.1 | 51.1 | 40.9 | 27.6 | | |
| 62.4 | 62.4 | 62.4 | 62.4 | 62.4 | 62.4 | 66.5 | 71.6 | 73.7 | 64.4 | 49.1 | | |
| 88.8 | 88.6 | 88.4 | 88.2 | 88.0 | 89.0 | 92.1 | 96.2 | 97.2 | 90.0 | 74.7 | | |

'226760
 ISW-AF-450-LED-E1-SL2-ULG

REPORT NUMBER: P226760
 CATALOG NUMBER: ISW-AF-4!

TION (continued):

CANDELA DISTRIBUTION (con

| 87° | 88° | 89° | 90° | 95° | 105° | 115° | 125° | 135° | 145° | | 155° | 165° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 119.1 | 119.3 | 119.5 | 119.7 | 118.7 | 121.7 | 123.8 | 122.8 | 116.6 | 104.3 | 0° | 652.7 | 652.7 |
| 150.4 | 150.4 | 150.4 | 150.4 | 150.4 | 152.4 | 153.4 | 151.4 | 146.3 | 137.1 | 2.5° | 648.0 | 644.8 |
| 181.5 | 181.7 | 181.9 | 182.1 | 181.1 | 183.1 | 186.2 | 183.1 | 178.0 | 171.9 | 5° | 611.2 | 602.4 |
| 213.2 | 213.4 | 213.6 | 213.8 | 212.8 | 214.8 | 219.9 | 215.8 | 209.7 | 206.6 | 7.5° | 558.1 | 547.9 |
| 248.6 | 248.6 | 248.6 | 248.6 | 248.6 | 250.6 | 255.7 | 251.6 | 248.6 | 242.4 | 10° | 497.6 | 482.2 |
| 282.7 | 282.9 | 283.2 | 283.4 | 282.3 | 284.4 | 289.5 | 285.4 | 283.4 | 277.2 | 12.5° | 420.2 | 389.9 |
| 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 317.1 | 322.2 | 320.2 | 317.1 | 312.0 | 15° | 330.8 | 290.2 |
| 353.7 | 354.1 | 354.6 | 355.0 | 352.9 | 353.9 | 353.9 | 352.9 | 347.8 | 346.8 | 17.5° | 227.8 | 195.2 |
| 388.1 | 388.3 | 388.5 | 388.7 | 387.7 | 389.7 | 389.7 | 385.7 | 380.5 | 378.5 | 20° | 159.8 | 147.7 |
| 423.9 | 424.1 | 424.3 | 424.5 | 423.5 | 423.5 | 425.5 | 420.4 | 414.3 | 413.3 | 22.5° | 123.5 | 123.9 |
| 460.7 | 460.9 | 461.1 | 461.4 | 460.3 | 457.3 | 458.3 | 453.2 | 447.0 | 445.0 | 25° | 102.5 | 107.1 |
| 492.4 | 492.7 | 492.9 | 493.1 | 492.0 | 486.9 | 485.9 | 483.9 | 478.7 | 474.6 | 27.5° | 90.4 | 95.0 |
| 521.5 | 521.9 | 522.3 | 522.7 | 520.7 | 515.6 | 513.5 | 511.5 | 508.4 | 502.3 | 30° | 83.0 | 87.2 |
| 547.1 | 547.5 | 547.9 | 548.3 | 546.3 | 545.2 | 545.2 | 539.1 | 537.0 | 533.0 | 32.5° | 77.8 | 79.7 |
| 571.6 | 572.0 | 572.4 | 572.9 | 570.8 | 573.9 | 574.9 | 568.8 | 563.6 | 562.6 | 35° | 71.7 | 72.6 |
| 597.2 | 597.6 | 598.0 | 598.4 | 596.4 | 599.4 | 598.4 | 593.3 | 588.2 | 587.2 | 37.5° | 66.6 | 66.6 |
| 621.5 | 622.4 | 623.2 | 624.0 | 619.9 | 616.8 | 613.8 | 610.7 | 606.6 | 606.6 | 40° | 62.0 | 61.5 |
| 639.3 | 640.4 | 641.4 | 642.4 | 637.3 | 632.2 | 628.1 | 625.0 | 624.0 | 624.0 | 42.5° | 57.8 | 57.3 |
| 653.9 | 654.5 | 655.1 | 655.7 | 652.6 | 650.6 | 645.5 | 640.4 | 642.4 | 644.5 | 45° | 53.6 | 54.0 |
| 667.0 | 668.0 | 669.0 | 670.0 | 664.9 | 664.9 | 662.9 | 658.8 | 659.8 | 660.8 | 47.5° | 51.2 | 51.8 |
| 677.6 | 678.8 | 680.1 | 681.3 | 675.1 | 676.2 | 679.2 | 673.1 | 670.0 | 670.0 | 50° | 48.9 | 49.4 |
| 685.8 | 687.0 | 688.2 | 689.5 | 683.3 | 685.4 | 686.4 | 682.3 | 678.2 | 676.2 | 52.5° | 47.1 | 47.1 |
| 695.2 | 696.0 | 696.8 | 697.7 | 693.6 | 695.6 | 692.5 | 687.4 | 688.4 | 688.4 | 55° | 45.2 | 44.7 |
| 706.2 | 707.5 | 708.7 | 709.9 | 703.8 | 703.8 | 699.7 | 693.6 | 700.7 | 703.8 | 57.5° | 43.8 | 42.9 |
| 714.0 | 715.0 | 716.1 | 717.1 | 712.0 | 709.9 | 704.8 | 701.7 | 706.9 | 708.9 | 60° | 42.4 | 41.4 |
| 714.0 | 715.0 | 716.1 | 717.1 | 712.0 | 709.9 | 707.9 | 704.8 | 705.8 | 705.8 | 62.5° | 41.4 | 40.1 |
| 712.0 | 713.0 | 714.0 | 715.0 | 709.9 | 712.0 | 711.0 | 705.8 | 705.8 | 706.9 | 65° | 40.5 | 39.6 |
| 715.7 | 716.5 | 717.3 | 718.1 | 714.0 | 717.1 | 715.0 | 709.9 | 711.0 | 713.0 | 66° | 40.1 | 39.2 |
| 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 716.1 | 67.5° | 39.6 | 38.7 |
| | | | | | | | | | | 70° | 37.7 | 36.8 |
| | | | | | | | | | | 72.5° | 35.0 | 34.5 |
| | | | | | | | | | | 75° | 32.1 | 31.2 |
| | | | | | | | | | | 77.5° | 28.4 | 27.9 |
| | | | | | | | | | | 80° | 24.2 | 23.7 |
| | | | | | | | | | | 82.5° | 20.5 | 19.5 |
| | | | | | | | | | | 85° | 16.3 | 15.3 |
| | | | | | | | | | | 87.5° | 11.2 | 10.2 |
| | | | | | | | | | | 90° | 10.9 | 10.4 |
| | | | | | | | | | | 92.5° | 6.1 | 5.1 |
| | | | | | | | | | | 95° | 7.2 | 6.1 |
| | | | | | | | | | | 97.5° | 8.2 | 8.2 |
| | | | | | | | | | | 100° | 10.2 | 9.2 |
| | | | | | | | | | | 102.5° | 18.4 | 13.3 |
| | | | | | | | | | | 105° | 36.8 | 27.6 |
| | | | | | | | | | | 107.5° | 59.3 | 50.1 |

REPORT NUMBER: P226760

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

50-LED-E1-SL2-ULG

tinued):

| 175° | 180° |
|-------|-------|
| 652.7 | 652.7 |
| 642.0 | 646.2 |
| 599.6 | 598.2 |
| 539.5 | 539.9 |
| 466.8 | 467.7 |
| 372.7 | 367.1 |
| 267.0 | 269.2 |
| 185.9 | 185.5 |
| 149.0 | 150.0 |
| 127.7 | 127.7 |
| 113.6 | 113.6 |
| 100.1 | 100.7 |
| 90.8 | 91.8 |
| 82.4 | 83.0 |
| 74.1 | 74.6 |
| 67.1 | 67.1 |
| 62.4 | 62.9 |
| 59.1 | 59.1 |
| 56.0 | 56.0 |
| 53.1 | 54.0 |
| 50.3 | 50.7 |
| 47.6 | 48.0 |
| 44.7 | 44.7 |
| 42.4 | 42.4 |
| 40.5 | 40.1 |
| 39.2 | 38.2 |
| 37.7 | 37.2 |
| 37.2 | 36.8 |
| 36.8 | 36.3 |
| 35.9 | 35.4 |
| 34.5 | 34.0 |
| 31.7 | 30.8 |
| 28.8 | 27.9 |
| 26.6 | 25.2 |
| 22.4 | 21.4 |
| 16.3 | 15.3 |
| 9.8 | 9.8 |
| 7.5 | 7.5 |
| 4.1 | 4.1 |
| 5.1 | 5.1 |
| 7.2 | 7.2 |
| 8.2 | 8.2 |
| 11.3 | 11.3 |
| 22.5 | 21.5 |
| 43.0 | 41.9 |

CANDELA DISTRIBUTION (continued):

| | 155° | 165° | 175° |
|--------|-------|-------|-------|
| 110° | 89.0 | 75.7 | 69.6 |
| 112.5° | 123.8 | 108.4 | 101.3 |
| 115° | 162.6 | 150.4 | 142.2 |
| 117.5° | 201.5 | 193.3 | 188.2 |
| 120° | 238.3 | 231.2 | 228.1 |
| 122.5° | 273.1 | 267.0 | 266.0 |
| 125° | 305.9 | 302.8 | 300.7 |
| 127.5° | 340.6 | 336.6 | 336.6 |
| 130° | 374.4 | 370.3 | 369.3 |
| 132.5° | 410.2 | 402.0 | 403.0 |
| 135° | 441.9 | 435.8 | 435.8 |
| 137.5° | 470.6 | 469.5 | 467.5 |
| 140° | 500.2 | 498.2 | 496.1 |
| 142.5° | 529.9 | 528.9 | 526.8 |
| 145° | 559.6 | 556.5 | 558.5 |
| 147.5° | 587.2 | 584.1 | 585.1 |
| 150° | 606.6 | 606.6 | 605.6 |
| 152.5° | 623.0 | 622.0 | 622.0 |
| 155° | 641.4 | 639.3 | 639.3 |
| 157.5° | 658.8 | 657.8 | 657.8 |
| 160° | 671.1 | 674.1 | 675.1 |
| 162.5° | 680.3 | 684.4 | 684.4 |
| 165° | 691.5 | 691.5 | 693.6 |
| 167.5° | 701.7 | 699.7 | 702.8 |
| 170° | 707.9 | 707.9 | 711.0 |
| 172.5° | 708.9 | 711.0 | 713.0 |
| 175° | 711.0 | 713.0 | 714.0 |
| 177.5° | 715.0 | 716.1 | 721.2 |
| 180° | 716.1 | 716.1 | 716.1 |

-SL2-ULG

180°

67.5
101.3
143.2
188.2
230.2
269.0
304.8
337.6
371.3
405.1
438.8
470.6
499.2
529.9
562.6
588.2
608.7
625.0
643.4
660.8
678.2
688.4
696.6
705.8
714.0
715.0
716.1
723.2
716.1

(END OF REPORT)