

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: P227284

Luminaire Tested: **ISW-AF-450-LED-E1-SLR-7030-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P227284  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35948)-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-SLR-7030-ULG  
Description: IMPACT ELITE LED WEDGE LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-90° SPILL LIGHT ELIMINATOR RIGHT, WITH  
UPLIGHT GLOW  
Light Source: (16) 3000K CCT, 70 CRI LEDs and (1) UPLIGHT LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4130.8 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type IV - 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

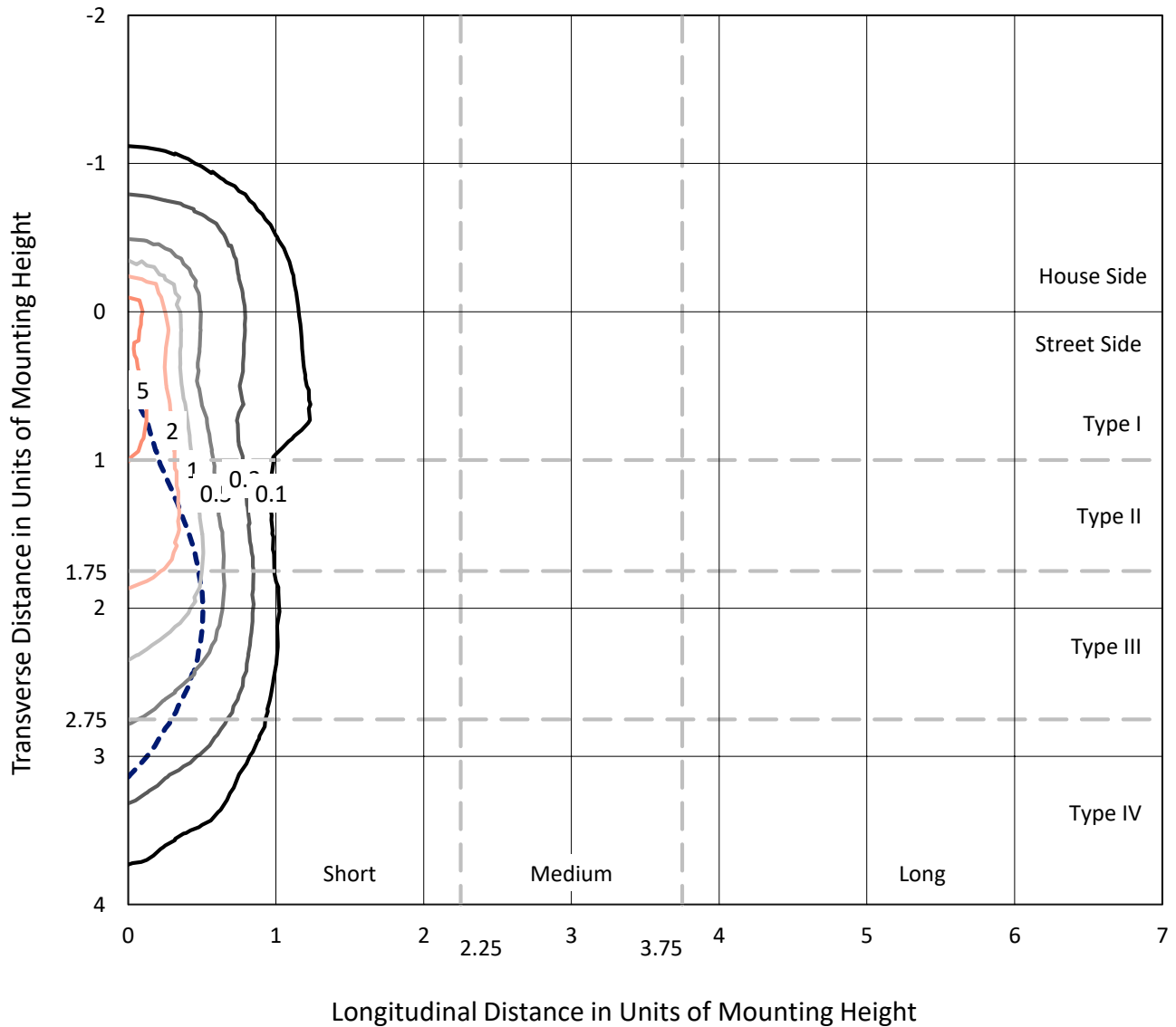


REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

### Iso-Footcandle Lines of Horizontal Illumination

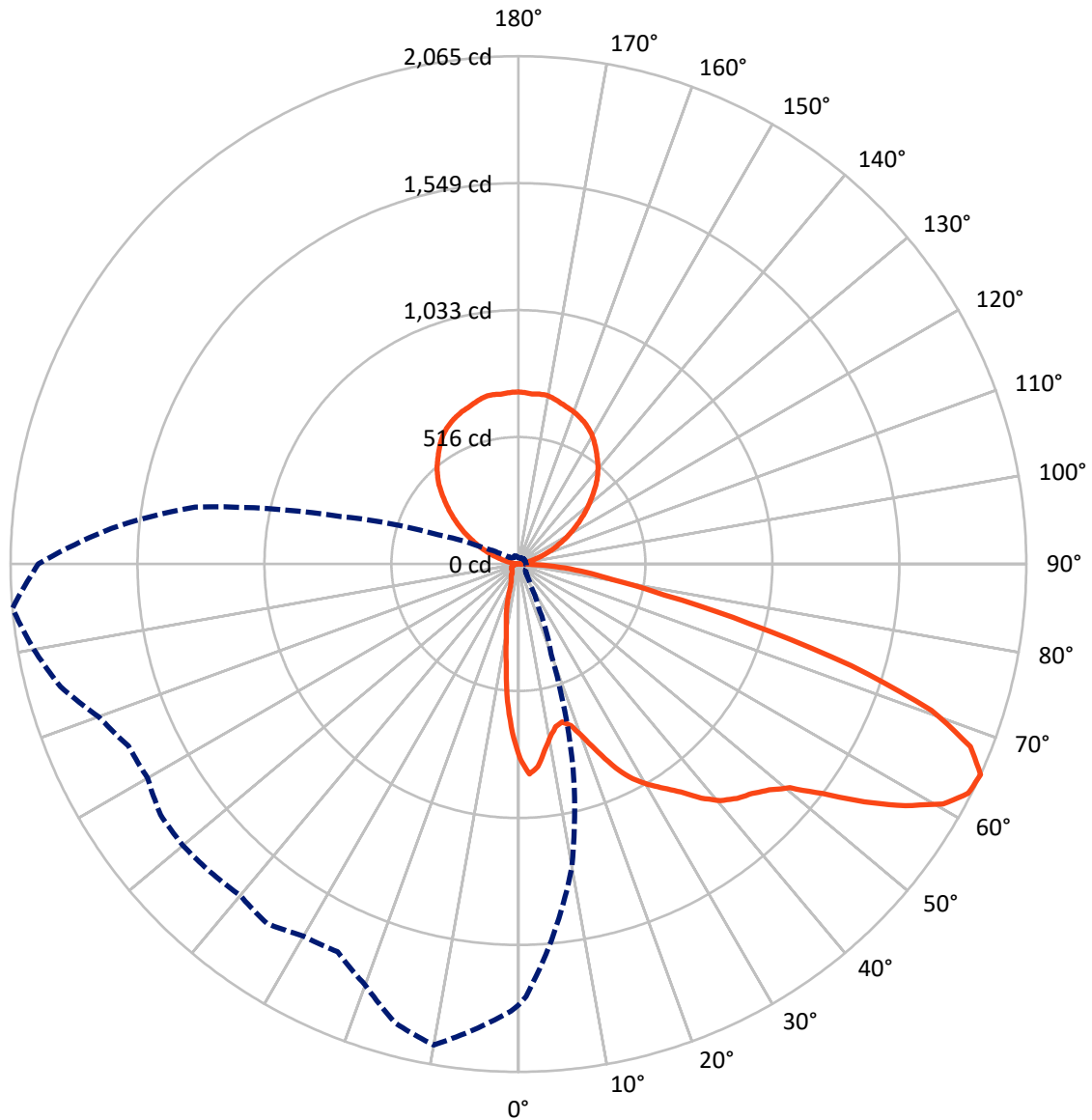
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.9 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P227284  
CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

### Luminous Intensity Polar Plot



— Vertical Plane Through 275-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

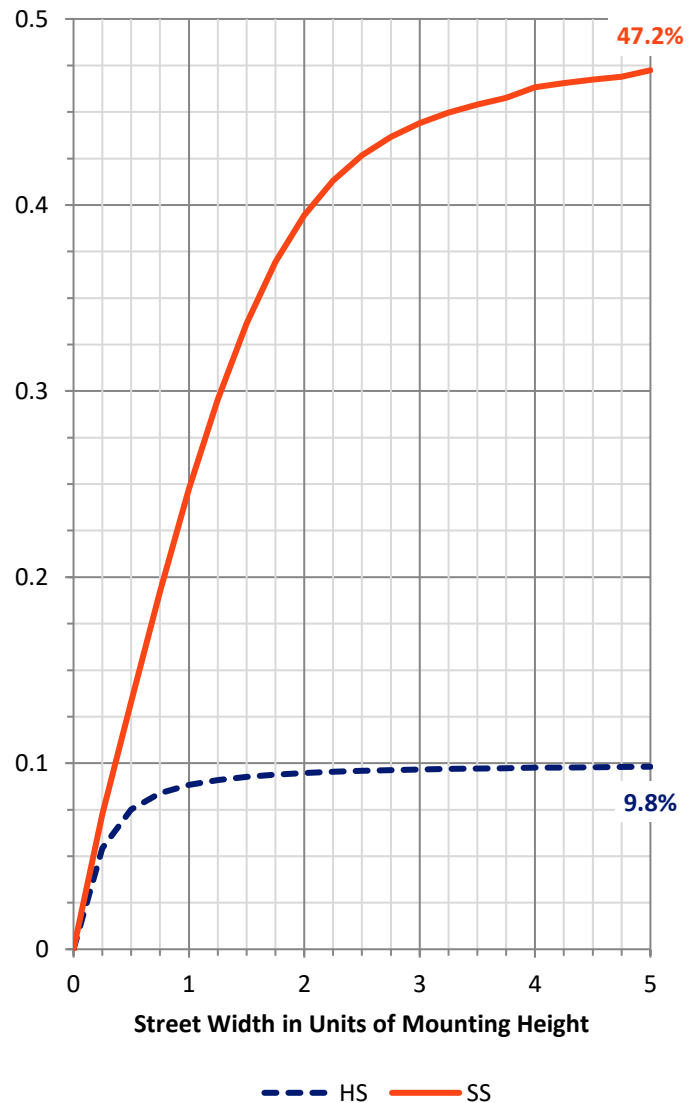
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	411.3	867.6	1278.8
	% Fixture	10.0	21.0	31.0
<b>Street Side</b>	Lumens	1984.3	867.7	2852.0
	% Fixture	48.0	21.0	69.0
<b>Total</b>	Lumens	2395.6	1735.2	4130.8
	% Fixture	58.0	42.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.6	1.4
10°-20°	112.8	2.7
20°-30°	160.8	3.9
30°-40°	233.3	5.6
40°-50°	333.7	8.1
50°-60°	512.4	12.4
60°-70°	593.1	14.4
70°-80°	302.6	7.3
80°-90°	88.3	2.1
90°-100°	9.4	0.2
100°-110°	57.4	1.4
110°-120°	166.1	4.0
120°-130°	273.2	6.6
130°-140°	336.8	8.2
140°-150°	344.6	8.3
150°-160°	290.3	7.0
160°-170°	191.2	4.6
170°-180°	66.3	1.6
0°-90°	2395.6	58.0
0°-180°	4130.8	100.0



REPORT NUMBER: P227284

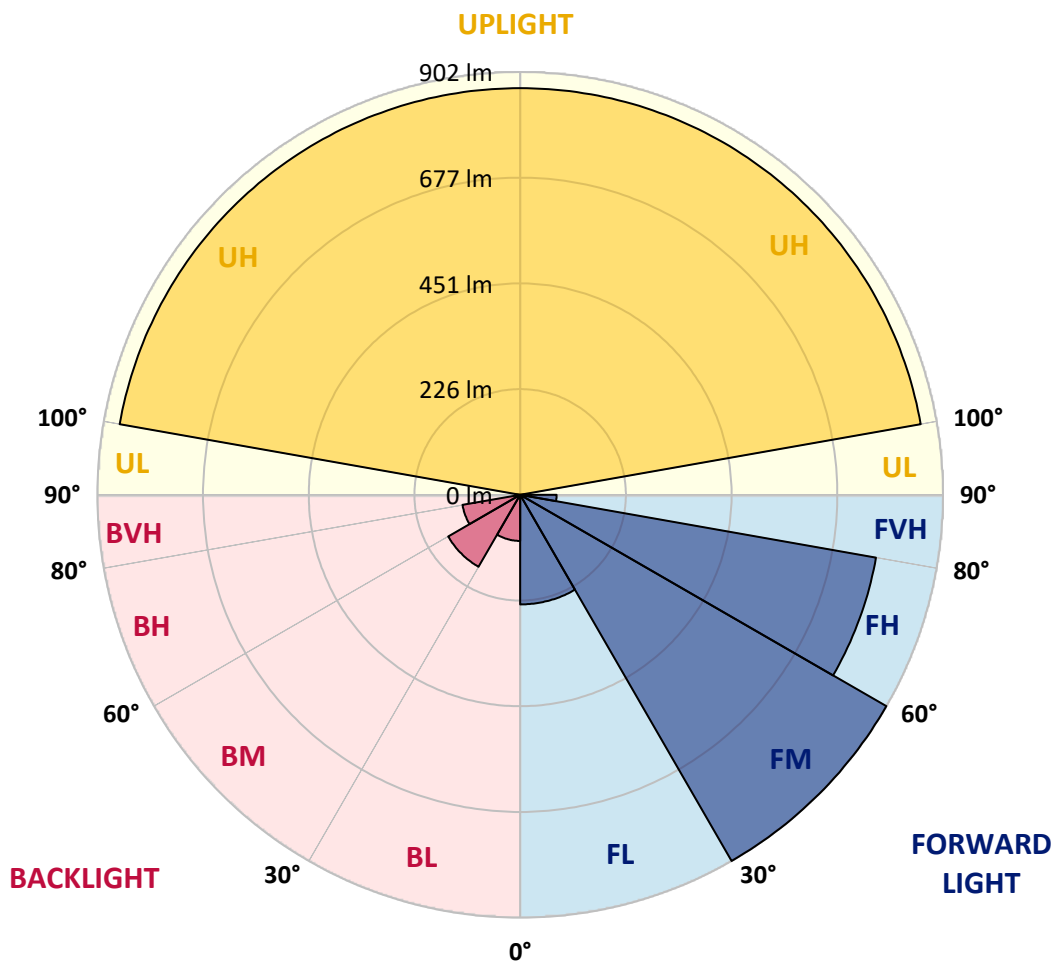
CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	233.9	5.7			
FM	(30°-60°)	902.1	21.8			
FH	(60°-80°)	770.7	18.7			G1/1800
FVH	(80°-90°)	77.7	1.9			G1/100
BL	(0°-30°)	98.3	2.4	B0/110		
BM	(30°-60°)	177.4	4.3	B0/220		
BH	(60°-80°)	124.9	3.0	B1/500		G1/500
BVH	(80°-90°)	10.7	0.3			G1/100
UL	(90°-100°)	9.4	0.2		U1/10	
UH	(100°-180°)	867.6	21.0		U4/1000	

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

Type IV Short





REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	10°	15°	20°	25°	30°	35°	40°	45°
0°	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1
2.5°	818.9	814.1	808.0	797.6	788.3	775.0	771.8	755.2	744.8	747.2	728.2
5°	768.9	766.1	751.2	727.8	712.5	682.3	665.0	656.1	631.1	627.9	621.0
7.5°	698.8	690.4	666.2	637.2	611.0	588.8	561.0	539.6	520.7	509.0	488.4
10°	638.8	629.9	603.7	568.2	536.8	505.8	483.2	455.4	428.4	407.4	390.9
12.5°	609.8	600.1	569.5	528.3	493.3	454.6	422.8	395.4	380.4	370.0	356.3
15°	621.0	606.9	570.3	521.1	477.6	436.5	402.6	373.2	355.5	339.3	323.2
17.5°	666.6	649.3	607.3	548.1	487.6	434.4	386.1	352.6	324.4	300.2	278.5
20°	744.8	731.9	671.0	588.0	509.4	435.7	372.0	328.1	293.8	263.2	234.1
22.5°	836.2	816.9	757.3	642.0	537.2	442.9	363.1	307.5	266.8	225.7	194.3
25°	932.2	917.3	838.3	714.5	579.9	457.8	356.3	289.4	235.0	189.4	154.8
27.5°	1009.5	996.2	918.1	784.3	619.0	470.7	346.2	272.0	209.6	154.8	116.5
30°	1072.8	1061.5	979.7	841.5	666.6	475.1	332.1	251.9	181.4	124.9	96.3
32.5°	1143.7	1131.3	1039.0	881.4	687.9	471.1	316.0	232.9	158.8	110.4	82.6
35°	1221.5	1207.0	1105.1	924.5	705.7	457.0	302.3	219.2	147.9	100.3	73.3
37.5°	1290.8	1281.6	1164.7	967.2	725.8	433.6	289.0	204.3	140.7	93.1	66.1
40°	1344.8	1342.4	1230.8	1002.7	741.5	416.7	278.1	192.6	131.4	90.3	63.7
42.5°	1388.4	1387.6	1284.8	1034.5	745.6	401.8	269.6	182.2	122.9	83.4	64.9
45°	1430.3	1429.9	1337.2	1078.9	748.4	402.6	263.2	175.7	115.7	79.0	61.3
47.5°	1470.2	1476.2	1392.0	1140.5	778.2	416.3	260.7	169.7	110.0	74.2	58.0
50°	1537.1	1531.0	1478.6	1223.9	826.2	442.9	256.7	164.4	104.8	69.7	54.8
52.5°	1664.0	1657.2	1610.4	1335.6	878.6	470.3	251.5	157.2	98.7	64.9	51.2
55°	1819.2	1828.5	1763.6	1471.4	949.9	493.3	245.8	147.5	90.7	59.2	48.8
57.5°	1910.3	1902.6	1828.5	1549.6	993.8	505.0	242.2	136.2	78.2	54.4	46.3
59°	1931.6	1918.7	1817.6	1562.9	1005.5	499.3	240.2	125.3	71.7	52.0	45.1
60°	1929.6	1913.9	1800.3	1554.4	1008.7	492.5	237.0	118.9	68.1	50.8	44.7
62.5°	1888.1	1863.5	1701.9	1452.0	963.6	458.2	223.7	103.6	63.3	49.2	42.3
65°	1793.8	1759.1	1536.7	1252.2	860.0	390.1	193.4	97.9	64.5	48.4	40.7
67.5°	1631.0	1603.2	1324.3	1036.1	685.5	315.2	167.2	95.5	66.1	49.2	38.3
70°	1326.7	1302.9	1033.3	775.8	513.4	250.7	151.9	94.3	64.9	47.2	36.3
72.5°	935.8	894.7	686.7	543.3	325.6	201.5	131.8	89.1	63.3	45.5	33.0
75°	569.5	577.1	436.5	395.8	205.5	138.2	103.6	75.0	56.0	40.7	29.8
77.5°	375.6	375.2	322.0	279.3	104.4	85.8	73.3	57.6	43.9	33.4	25.8
80°	254.7	257.5	233.7	190.6	58.0	51.6	48.0	41.9	32.2	25.4	21.4
82.5°	156.8	157.2	181.0	142.7	38.7	32.6	30.6	28.2	23.0	19.7	16.5
85°	54.4	55.6	63.3	100.8	26.2	21.4	21.4	19.7	17.3	13.3	10.9
87.5°	23.4	23.0	27.4	27.4	12.9	10.9	10.1	10.1	9.7	7.3	6.0
90°	6.6	6.2	6.2	7.6	9.0	10.3	10.4	10.8	10.8	9.9	8.6
92.5°	4.0	4.0	4.0	4.5	5.0	5.5	6.0	6.0	6.0	6.0	6.0
95°	5.0	5.0	5.0	5.5	6.0	6.5	7.0	7.0	7.0	7.0	7.0
97.5°	7.0	7.0	7.0	7.5	8.0	8.0	8.0	8.5	9.0	9.0	9.0
100°	8.0	8.0	8.0	8.5	9.0	9.5	10.0	11.0	12.0	16.5	21.0
102.5°	11.0	11.0	11.0	12.0	13.0	15.5	18.0	22.5	27.0	33.5	40.0
105°	21.0	21.2	22.0	24.5	27.0	31.5	36.0	42.0	48.0	55.5	63.0
107.5°	41.0	41.2	42.0	45.5	49.0	53.5	58.0	65.5	73.0	80.5	88.0



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

	0°	1°	5°	10°	15°	20°	25°	30°	35°	40°	45°
110°	66.0	66.4	68.0	71.0	74.0	80.5	87.0	94.5	102.0	108.0	114.0
112.5°	99.0	99.0	99.0	102.5	106.0	113.5	121.0	127.5	134.0	138.5	143.0
115°	140.0	139.8	139.0	143.0	147.0	153.0	159.0	163.5	168.0	171.0	174.0
117.5°	184.0	184.0	184.0	186.5	189.0	193.0	197.0	199.5	202.0	203.5	205.0
120°	225.0	224.6	223.0	224.5	226.0	229.5	233.0	235.0	237.0	240.0	243.0
122.5°	263.0	262.4	260.0	260.5	261.0	264.0	267.0	269.0	271.0	274.0	277.0
125°	298.0	297.2	294.0	295.0	296.0	297.5	299.0	302.0	305.0	307.5	310.0
127.5°	330.0	329.8	329.0	329.0	329.0	331.0	333.0	336.0	339.0	339.5	340.0
130°	363.0	362.6	361.0	361.5	362.0	364.0	366.0	368.0	370.0	371.0	372.0
132.5°	396.0	395.6	394.0	393.5	393.0	397.0	401.0	402.5	404.0	404.5	405.0
135°	429.0	428.4	426.0	426.0	426.0	429.0	432.0	433.5	435.0	436.0	437.0
137.5°	460.0	459.4	457.0	458.0	459.0	459.5	460.0	462.0	464.0	466.0	468.0
140°	488.0	487.4	485.0	486.0	487.0	488.0	489.0	490.0	491.0	494.0	497.0
142.5°	518.0	517.4	515.0	516.0	517.0	517.5	518.0	519.5	521.0	523.0	525.0
145°	550.0	549.2	546.0	545.0	544.0	545.5	547.0	548.5	550.0	550.5	551.0
147.5°	575.0	574.4	572.0	571.5	571.0	572.5	574.0	574.0	574.0	574.5	575.0
150°	595.0	594.4	592.0	592.5	593.0	593.0	593.0	593.0	593.0	593.0	593.0
152.5°	611.0	610.4	608.0	608.0	608.0	608.5	609.0	609.5	610.0	610.0	610.0
155°	629.0	628.2	625.0	625.0	625.0	626.0	627.0	628.5	630.0	629.0	628.0
157.5°	646.0	645.4	643.0	643.0	643.0	643.5	644.0	645.0	646.0	645.5	645.0
160°	663.0	662.4	660.0	659.5	659.0	657.5	656.0	655.5	655.0	655.0	655.0
162.5°	673.0	672.2	669.0	669.0	669.0	667.0	665.0	663.0	661.0	662.0	663.0
165°	681.0	680.4	678.0	677.0	676.0	676.0	676.0	674.5	673.0	673.0	673.0
167.5°	690.0	689.4	687.0	685.5	684.0	685.0	686.0	687.0	688.0	686.5	685.0
170°	698.0	697.4	695.0	693.5	692.0	692.0	692.0	692.5	693.0	692.0	691.0
172.5°	699.0	698.6	697.0	696.0	695.0	694.0	693.0	691.5	690.0	690.0	690.0
175°	700.0	699.6	698.0	697.5	697.0	696.0	695.0	693.0	691.0	690.5	690.0
177.5°	707.0	706.6	705.0	702.5	700.0	699.5	699.0	698.0	697.0	696.0	695.0
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0





REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1
2.5°	722.6	718.2	705.7	702.4	706.5	698.4	696.4	694.4	679.5	687.1	678.3
5°	604.1	602.9	577.5	582.8	577.5	568.6	565.0	573.5	558.6	561.8	563.8
7.5°	464.3	459.4	442.5	431.2	424.4	418.3	410.7	398.2	407.8	405.8	421.1
10°	376.8	366.3	355.9	340.1	331.3	322.8	313.9	309.1	297.8	296.6	291.4
12.5°	345.4	330.5	317.2	303.5	294.2	277.3	263.2	254.3	247.0	235.8	227.3
15°	303.5	291.0	273.6	260.3	245.8	230.5	216.8	205.5	200.3	189.8	185.0
17.5°	261.2	242.2	221.3	208.0	187.8	172.1	160.8	153.5	145.9	139.4	133.8
20°	210.4	185.8	163.2	146.3	130.6	115.3	110.0	101.2	97.9	95.5	97.5
22.5°	160.0	134.6	111.2	98.3	89.9	85.8	81.4	79.8	78.6	78.2	79.0
25°	117.3	95.9	84.6	79.8	76.6	74.2	72.5	71.3	70.5	70.1	70.5
27.5°	90.7	79.4	73.8	70.5	68.1	66.5	65.7	64.5	64.1	63.7	64.1
30°	78.6	72.5	68.5	65.3	62.5	59.6	58.4	58.0	58.4	58.8	58.4
32.5°	68.5	64.1	59.6	56.8	54.8	53.2	53.2	52.4	52.4	53.6	54.0
35°	62.1	57.6	54.4	50.8	48.4	46.7	45.5	44.7	45.1	45.1	46.3
37.5°	56.8	53.6	50.8	47.6	45.1	43.5	42.7	41.9	41.5	41.1	41.1
40°	53.2	51.2	48.8	45.5	43.1	41.5	40.7	39.9	39.5	39.1	39.1
42.5°	53.2	49.2	47.6	44.7	41.9	40.3	39.1	38.3	37.5	37.5	37.5
45°	58.4	50.4	47.6	44.3	41.5	39.5	38.3	37.1	36.3	36.3	35.9
47.5°	56.8	56.4	48.4	44.3	41.9	39.5	37.9	36.7	35.9	35.5	35.1
50°	54.0	58.8	54.0	45.5	41.9	39.1	37.5	36.3	35.1	34.7	34.7
52.5°	52.4	54.8	56.0	47.2	42.3	39.1	37.1	35.9	35.1	34.3	33.9
55°	48.4	51.6	53.6	46.3	42.3	38.3	36.3	35.1	33.9	33.4	33.0
57.5°	44.3	46.7	51.6	46.3	41.1	37.9	35.5	33.9	33.0	32.6	32.2
59°	43.1	43.1	45.9	47.6	40.3	37.5	35.1	33.4	32.6	32.2	31.4
60°	41.9	41.9	43.5	48.8	39.9	37.1	34.7	33.0	31.8	31.8	31.4
62.5°	40.3	39.1	39.9	45.5	38.7	36.3	33.9	32.2	31.0	31.0	30.6
65°	38.3	36.7	36.7	37.9	36.3	34.7	33.0	31.4	29.8	29.8	30.2
67.5°	36.3	34.7	34.3	34.3	33.4	33.0	31.4	29.8	29.0	29.0	29.0
70°	33.4	32.2	31.8	31.0	31.0	30.6	29.4	28.2	27.4	27.8	27.4
72.5°	30.2	29.4	28.6	28.6	28.2	27.8	26.6	25.8	25.4	25.8	25.8
75°	27.0	25.8	25.8	25.0	25.0	24.6	23.4	23.0	22.6	23.0	23.4
77.5°	23.0	22.2	21.8	21.8	21.8	21.8	20.2	19.7	19.7	20.6	20.6
80°	18.9	18.5	18.1	18.1	18.1	17.7	16.9	16.5	16.5	16.9	17.3
82.5°	14.5	13.7	13.7	14.1	14.5	14.5	13.3	12.5	12.5	13.3	14.1
85°	9.7	9.7	9.7	10.1	10.1	10.5	9.7	8.5	8.9	9.3	10.5
87.5°	5.2	5.6	5.2	4.8	5.6	5.2	5.2	4.8	5.2	5.6	6.0
90°	8.6	8.6	9.2	9.8	9.4	9.8	8.8	8.2	7.4	7.4	8.8
92.5°	6.5	7.0	7.0	7.0	6.5	6.0	6.0	6.0	6.0	6.0	6.0
95°	7.0	7.0	7.5	8.0	7.5	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	10.5	12.0	11.0	10.0	9.5	9.0	8.5	8.0	8.0	8.0	8.5
100°	25.0	29.0	27.5	26.0	24.5	23.0	21.0	19.0	19.0	19.0	21.0
102.5°	45.0	50.0	48.5	47.0	44.5	42.0	40.5	39.0	38.0	39.0	40.5
105°	67.5	72.0	71.0	70.0	67.5	65.0	63.0	61.0	61.0	61.0	63.0
107.5°	91.5	95.0	94.5	94.0	92.0	90.0	88.5	87.0	86.0	87.0	88.5



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
110°	117.0	120.0	120.5	121.0	120.0	119.0	117.5	116.0	117.0	116.0	117.5
112.5°	145.5	148.0	149.0	150.0	149.5	149.0	148.0	147.0	147.0	147.0	148.0
115°	176.5	179.0	180.5	182.0	180.5	179.0	178.0	177.0	178.0	177.0	178.0
117.5°	208.0	211.0	213.0	215.0	212.5	210.0	209.0	208.0	209.0	208.0	209.0
120°	244.5	246.0	248.0	250.0	247.5	245.0	244.0	243.0	243.0	243.0	244.0
122.5°	278.0	279.0	281.0	283.0	280.5	278.0	277.0	276.0	277.0	276.0	277.0
125°	311.5	313.0	314.0	315.0	312.5	310.0	310.0	310.0	310.0	310.0	310.0
127.5°	342.5	345.0	345.5	346.0	346.0	346.0	345.5	345.0	347.0	345.0	345.5
130°	374.5	377.0	379.0	381.0	381.0	381.0	380.0	379.0	380.0	379.0	380.0
132.5°	408.0	411.0	413.5	416.0	415.0	414.0	414.0	414.0	415.0	414.0	414.0
135°	440.0	443.0	445.5	448.0	447.5	447.0	448.5	450.0	451.0	450.0	448.5
137.5°	470.5	473.0	474.0	475.0	475.5	476.0	478.5	481.0	482.0	481.0	478.5
140°	498.5	500.0	501.0	502.0	503.0	504.0	506.5	509.0	511.0	509.0	506.5
142.5°	526.0	527.0	530.0	533.0	533.0	533.0	533.5	534.0	536.0	534.0	533.5
145°	553.5	556.0	559.0	562.0	561.5	561.0	559.5	558.0	560.0	558.0	559.5
147.5°	577.5	580.0	582.5	585.0	585.5	586.0	584.5	583.0	585.0	583.0	584.5
150°	595.0	597.0	598.5	600.0	601.5	603.0	604.5	606.0	610.0	606.0	604.5
152.5°	610.5	611.0	612.5	614.0	616.0	618.0	620.5	623.0	628.0	623.0	620.5
155°	627.0	626.0	628.5	631.0	633.5	636.0	637.0	638.0	641.0	638.0	637.0
157.5°	644.5	644.0	646.0	648.0	649.0	650.0	650.0	650.0	655.0	650.0	650.0
160°	656.5	658.0	661.0	664.0	662.5	661.0	660.5	660.0	666.0	660.0	660.5
162.5°	665.0	667.0	669.0	671.0	670.5	670.0	669.0	668.0	674.0	668.0	669.0
165°	672.5	672.0	674.5	677.0	678.5	680.0	679.0	678.0	682.0	678.0	679.0
167.5°	681.5	678.0	681.0	684.0	686.0	688.0	688.0	688.0	694.0	688.0	688.0
170°	688.5	686.0	687.5	689.0	691.5	694.0	695.0	696.0	701.0	696.0	695.0
172.5°	689.5	689.0	690.5	692.0	693.0	694.0	695.0	696.0	701.0	696.0	695.0
175°	690.0	690.0	692.5	695.0	695.5	696.0	695.0	694.0	699.0	694.0	695.0
177.5°	694.5	694.0	696.5	699.0	700.0	701.0	699.5	698.0	702.0	698.0	699.5
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1
2.5°	686.3	679.5	675.8	690.0	688.7	676.7	676.7	685.1	685.5	678.3	686.7
5°	566.2	559.4	565.8	560.2	563.4	563.0	567.8	559.0	562.6	559.4	551.7
7.5°	419.9	433.6	440.9	431.6	443.3	449.4	440.9	449.4	436.1	425.2	435.7
10°	289.0	304.3	301.5	316.4	322.0	325.2	331.3	323.6	314.3	311.5	303.9
12.5°	224.1	220.9	219.6	225.7	229.3	224.1	228.5	223.7	218.8	210.4	210.0
15°	175.3	170.1	166.4	159.6	157.2	158.4	160.4	160.4	150.7	151.1	154.8
17.5°	133.0	131.8	129.0	123.3	119.7	120.9	120.5	118.5	117.3	118.1	122.5
20°	99.9	98.7	100.3	102.0	100.8	101.2	99.5	97.5	96.7	97.5	98.3
22.5°	79.0	80.6	82.6	85.0	85.4	87.5	87.1	87.5	85.8	85.0	83.0
25°	72.1	72.9	71.7	72.1	72.1	74.2	73.8	73.8	72.1	71.7	72.1
27.5°	63.7	63.3	63.3	64.1	64.1	65.3	66.1	65.3	63.7	63.3	63.7
30°	58.8	58.4	58.0	58.4	58.0	58.4	59.2	59.2	58.4	57.2	57.6
32.5°	54.0	54.0	53.6	54.0	53.6	53.6	54.4	53.2	53.2	52.8	52.8
35°	47.6	48.4	49.2	49.6	49.6	49.6	50.4	49.2	48.8	48.4	48.4
37.5°	41.1	41.9	44.3	45.5	45.9	46.7	47.2	46.3	45.5	44.7	43.9
40°	39.1	39.1	39.9	41.5	43.1	43.5	44.3	43.1	42.7	41.5	40.3
42.5°	37.5	37.9	37.9	38.3	38.7	39.5	40.7	39.5	38.7	37.9	36.7
45°	36.3	36.3	36.3	36.3	35.9	35.9	36.3	35.5	35.1	34.7	34.7
47.5°	35.5	35.1	34.7	34.3	33.9	33.4	33.4	32.6	32.6	32.6	32.6
50°	34.7	33.9	33.4	33.0	32.2	32.2	32.2	31.4	31.0	31.0	31.4
52.5°	33.4	33.0	32.6	32.2	31.8	31.4	31.4	30.6	30.2	30.2	30.2
55°	33.0	32.6	31.8	31.4	31.0	31.4	31.0	30.6	29.8	29.8	29.8
57.5°	31.8	32.2	31.8	31.0	31.0	31.0	31.0	30.2	29.8	29.0	29.4
59°	31.4	31.8	31.4	31.0	30.6	31.0	31.0	29.8	29.4	29.0	29.0
60°	31.0	31.4	31.0	30.6	30.6	31.0	30.6	30.2	29.4	28.2	28.6
62.5°	30.6	30.6	30.2	30.2	29.8	30.2	29.8	29.0	28.2	27.4	27.0
65°	29.8	29.8	29.4	29.4	29.0	29.0	29.0	28.2	27.4	26.6	26.6
67.5°	29.4	29.0	28.6	28.6	28.2	28.2	28.2	27.4	26.2	25.8	25.4
70°	27.8	27.4	27.4	27.0	26.6	27.0	27.4	26.2	25.0	24.2	23.8
72.5°	26.2	25.8	25.8	25.4	25.4	25.8	26.2	25.0	23.4	22.6	22.2
75°	23.8	23.4	23.4	23.4	23.4	24.2	24.2	23.0	21.8	20.6	19.7
77.5°	20.6	21.0	21.0	21.0	21.0	21.8	21.8	21.0	19.7	18.9	17.7
80°	17.7	17.7	18.1	18.1	18.5	18.5	18.1	17.7	17.3	16.5	14.9
82.5°	14.9	14.9	14.9	14.9	14.9	14.5	13.7	14.5	14.5	13.7	12.5
85°	11.7	11.7	11.7	12.1	12.1	10.9	9.7	9.7	10.9	10.5	9.7
87.5°	6.9	6.9	7.3	8.5	7.7	7.3	6.0	6.4	6.0	6.9	5.6
90°	10.6	10.2	10.2	8.4	7.8	7.0	7.0	7.5	8.0	8.0	8.0
92.5°	6.0	6.5	7.0	7.0	7.0	6.5	6.0	6.0	6.0	6.0	6.0
95°	7.0	7.5	8.0	7.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	9.0	9.5	10.0	11.0	12.0	10.5	9.0	9.0	9.0	8.5	8.0
100°	23.0	24.5	26.0	27.5	29.0	25.0	21.0	16.5	12.0	11.0	10.0
102.5°	42.0	44.5	47.0	48.5	50.0	45.0	40.0	33.5	27.0	22.5	18.0
105°	65.0	67.5	70.0	71.0	72.0	67.5	63.0	55.5	48.0	42.0	36.0
107.5°	90.0	92.0	94.0	94.5	95.0	91.5	88.0	80.5	73.0	65.5	58.0



REPORT NUMBER: P227284  
 CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	
110°	119.0	120.0	121.0	120.5	120.0	117.0	114.0	108.0	102.0	94.5	87.0	0°
112.5°	149.0	149.5	150.0	149.0	148.0	145.5	143.0	138.5	134.0	127.5	121.0	2.5°
115°	179.0	180.5	182.0	180.5	179.0	176.5	174.0	171.0	168.0	163.5	159.0	5°
117.5°	210.0	212.5	215.0	213.0	211.0	208.0	205.0	203.5	202.0	199.5	197.0	7.5°
120°	245.0	247.5	250.0	248.0	246.0	244.5	243.0	240.0	237.0	235.0	233.0	10°
122.5°	278.0	280.5	283.0	281.0	279.0	278.0	277.0	274.0	271.0	269.0	267.0	12.5°
125°	310.0	312.5	315.0	314.0	313.0	311.5	310.0	307.5	305.0	302.0	299.0	15°
127.5°	346.0	346.0	346.0	345.5	345.0	342.5	340.0	339.5	339.0	336.0	333.0	17.5°
130°	381.0	381.0	381.0	379.0	377.0	374.5	372.0	371.0	370.0	368.0	366.0	20°
132.5°	414.0	415.0	416.0	413.5	411.0	408.0	405.0	404.5	404.0	402.5	401.0	22.5°
135°	447.0	447.5	448.0	445.5	443.0	440.0	437.0	436.0	435.0	433.5	432.0	25°
137.5°	476.0	475.5	475.0	474.0	473.0	470.5	468.0	466.0	464.0	462.0	460.0	27.5°
140°	504.0	503.0	502.0	501.0	500.0	498.5	497.0	494.0	491.0	490.0	489.0	30°
142.5°	533.0	533.0	533.0	530.0	527.0	526.0	525.0	523.0	521.0	519.5	518.0	32.5°
145°	561.0	561.5	562.0	559.0	556.0	553.5	551.0	550.5	550.0	548.5	547.0	35°
147.5°	586.0	585.5	585.0	582.5	580.0	577.5	575.0	574.5	574.0	574.0	574.0	37.5°
150°	603.0	601.5	600.0	598.5	597.0	595.0	593.0	593.0	593.0	593.0	593.0	40°
152.5°	618.0	616.0	614.0	612.5	611.0	610.5	610.0	610.0	610.0	609.5	609.0	42.5°
155°	636.0	633.5	631.0	628.5	626.0	627.0	628.0	629.0	630.0	628.5	627.0	45°
157.5°	650.0	649.0	648.0	646.0	644.0	644.5	645.0	645.5	646.0	645.0	644.0	47.5°
160°	661.0	662.5	664.0	661.0	658.0	656.5	655.0	655.0	655.0	655.5	656.0	50°
162.5°	670.0	670.5	671.0	669.0	667.0	665.0	663.0	662.0	661.0	663.0	665.0	52.5°
165°	680.0	678.5	677.0	674.5	672.0	672.5	673.0	673.0	673.0	674.5	676.0	55°
167.5°	688.0	686.0	684.0	681.0	678.0	681.5	685.0	686.5	688.0	687.0	686.0	57.5°
170°	694.0	691.5	689.0	687.5	686.0	688.5	691.0	692.0	693.0	692.5	692.0	59°
172.5°	694.0	693.0	692.0	690.5	689.0	689.5	690.0	690.0	690.0	691.5	693.0	60°
175°	696.0	695.5	695.0	692.5	690.0	690.0	690.0	690.5	691.0	693.0	695.0	62.5°
177.5°	701.0	700.0	699.0	696.5	694.0	694.5	695.0	696.0	697.0	698.0	699.0	65°
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	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: P227284  
 NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

**CANDELA DISTRIBUTION**

160°	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	110°	160°
791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	110°	80.5
687.5	689.1	692.8	691.6	704.9	700.8	710.1	722.6	734.3	728.6	730.3	112.5°	113.5
565.4	567.4	552.1	561.4	575.1	569.5	567.4	586.0	581.5	602.5	585.2	115°	153.0
418.7	413.9	406.6	403.0	392.9	392.9	411.9	420.3	419.1	433.6	448.6	117.5°	193.0
294.2	288.6	279.7	277.3	287.3	292.2	300.6	309.1	320.4	336.9	346.6	120°	229.5
216.0	214.0	216.0	222.1	231.3	238.2	251.1	266.0	278.5	291.8	304.7	122.5°	264.0
163.2	167.2	172.5	176.5	183.8	196.7	203.5	220.0	231.3	243.0	257.9	125°	297.5
126.9	129.4	130.6	132.2	138.2	147.5	147.5	164.4	179.3	194.7	207.1	127.5°	331.0
96.7	96.7	92.7	95.1	95.9	95.1	99.9	109.6	119.3	129.4	149.1	130°	364.0
81.0	78.6	77.4	77.0	77.4	79.0	81.8	85.4	87.1	91.5	99.1	132.5°	397.0
71.7	71.3	70.1	70.1	70.9	71.3	74.2	77.4	78.2	79.4	82.2	135°	429.0
63.3	64.1	65.3	64.9	65.3	66.1	68.1	70.9	72.5	72.9	75.0	137.5°	459.5
57.2	58.0	58.4	59.6	59.6	60.0	61.7	64.5	65.7	67.7	69.7	140°	488.0
53.2	53.6	54.0	53.6	54.0	54.0	56.0	58.8	60.5	61.7	62.9	142.5°	517.5
48.8	48.4	48.4	48.4	47.2	46.7	47.6	50.4	50.8	52.0	54.8	145°	545.5
43.5	42.3	41.5	41.5	41.5	41.9	43.9	46.7	47.2	48.4	50.8	147.5°	572.5
38.7	38.3	38.3	38.7	39.1	39.9	41.5	44.3	44.7	45.9	48.0	150°	593.0
36.3	36.3	36.3	36.7	37.1	37.5	39.5	42.3	43.1	44.3	46.7	152.5°	608.5
34.7	35.1	34.7	34.7	35.1	35.9	37.9	41.1	42.3	43.5	45.9	155°	626.0
33.4	33.4	33.4	33.9	33.9	34.7	37.1	40.3	41.1	42.7	46.3	157.5°	643.5
31.8	32.6	32.2	32.6	33.0	33.9	36.3	39.5	40.7	43.1	47.2	160°	657.5
31.0	31.0	31.0	31.4	32.2	32.6	34.7	38.3	39.9	43.1	49.6	162.5°	667.0
30.6	29.8	29.8	30.2	31.0	31.8	33.9	37.5	39.5	42.7	49.2	165°	676.0
30.2	29.0	28.6	29.0	29.8	30.2	32.6	36.3	39.1	41.5	47.6	167.5°	685.0
29.0	28.2	27.8	28.2	29.0	29.8	31.8	35.5	37.5	40.7	45.5	170°	692.0
28.6	27.4	27.4	27.8	28.6	29.0	31.0	34.7	36.7	41.1	46.7	172.5°	694.0
27.0	26.6	26.6	27.0	27.0	27.8	30.2	33.9	35.5	41.9	39.1	175°	696.0
25.8	25.8	25.8	25.8	26.2	26.6	29.4	33.0	33.9	36.3	33.4	177.5°	699.5
25.0	25.0	25.0	25.0	25.0	25.8	28.2	31.8	32.2	31.8	30.6	180°	700.0
23.4	23.4	23.4	23.4	23.8	24.2	26.6	29.8	29.8	29.0	29.0		
22.2	21.8	21.8	21.8	21.8	22.2	24.6	27.8	27.4	27.0	27.0		
19.7	19.7	19.7	19.7	19.7	19.7	22.2	25.4	25.0	24.6	24.2		
17.3	17.3	17.7	17.3	16.9	16.5	18.9	22.6	22.6	22.2	21.8		
14.9	14.5	14.9	14.5	13.7	13.7	15.7	18.9	19.3	18.9	18.1		
12.1	11.7	11.7	11.7	10.1	10.1	12.1	15.3	15.3	14.9	14.1		
9.3	8.9	8.5	8.1	6.9	6.9	8.5	11.3	11.7	10.1	9.7		
4.8	4.8	4.8	3.6	3.2	2.8	4.4	6.9	6.9	5.6	4.8		
7.5	7.0	6.0	5.0	5.0	5.0	6.0	7.4	7.5	8.0	8.0		
5.5	5.0	4.5	4.0	4.0	4.0	4.5	5.0	5.5	6.0	6.0		
6.5	6.0	5.5	5.0	5.0	5.0	5.5	6.0	6.5	7.0	7.0		
8.0	8.0	7.5	7.0	7.0	7.0	7.5	8.0	8.0	8.0	8.5		
9.5	9.0	8.5	8.0	8.0	8.0	8.5	9.0	9.5	10.0	11.0		
15.5	13.0	12.0	11.0	11.0	11.0	12.0	13.0	15.5	18.0	22.5		
31.5	27.0	24.5	22.0	21.0	22.0	24.5	27.0	31.5	36.0	42.0		
53.5	49.0	45.5	42.0	41.0	42.0	45.5	49.0	53.5	58.0	65.5		

'227284  
 ISW-AF-450-LED-E1-SLR-7030-ULG

REPORT NUMBER: P227284  
 CATALOG NUMBER: ISW-AF-4!

**TION (continued):**

**CANDELA DISTRIBUTION (con**

165°	170°	175°	180°	185°	190°	195°	200°	205°	210°		215°	220°
74.0	71.0	68.0	66.0	68.0	71.0	74.0	80.5	87.0	94.5	0°	791.1	791.1
106.0	102.5	99.0	99.0	99.0	102.5	106.0	113.5	121.0	127.5	2.5°	740.3	744.0
147.0	143.0	139.0	140.0	139.0	143.0	147.0	153.0	159.0	163.5	5°	598.1	612.2
189.0	186.5	184.0	184.0	184.0	186.5	189.0	193.0	197.0	199.5	7.5°	452.2	471.1
226.0	224.5	223.0	225.0	223.0	224.5	226.0	229.5	233.0	235.0	10°	362.3	375.2
261.0	260.5	260.0	263.0	260.0	260.5	261.0	264.0	267.0	269.0	12.5°	318.0	336.5
296.0	295.0	294.0	298.0	294.0	295.0	296.0	297.5	299.0	302.0	15°	272.8	293.0
329.0	329.0	329.0	330.0	329.0	329.0	329.0	331.0	333.0	336.0	17.5°	223.7	248.3
362.0	361.5	361.0	363.0	361.0	361.5	362.0	364.0	366.0	368.0	20°	170.9	195.1
393.0	393.5	394.0	396.0	394.0	393.5	393.0	397.0	401.0	402.5	22.5°	120.1	140.7
426.0	426.0	426.0	429.0	426.0	426.0	426.0	429.0	432.0	433.5	25°	87.5	96.7
459.0	458.0	457.0	460.0	457.0	458.0	459.0	459.5	460.0	462.0	27.5°	77.8	81.4
487.0	486.0	485.0	488.0	485.0	486.0	487.0	488.0	489.0	490.0	30°	72.9	75.4
517.0	516.0	515.0	518.0	515.0	516.0	517.0	517.5	518.0	519.5	32.5°	65.7	68.1
544.0	545.0	546.0	550.0	546.0	545.0	544.0	545.5	547.0	548.5	35°	57.6	60.9
571.0	571.5	572.0	575.0	572.0	571.5	571.0	572.5	574.0	574.0	37.5°	53.6	56.0
593.0	592.5	592.0	595.0	592.0	592.5	593.0	593.0	593.0	593.0	40°	51.2	51.6
608.0	608.0	608.0	611.0	608.0	608.0	608.0	608.5	609.0	609.5	42.5°	49.2	49.2
625.0	625.0	625.0	629.0	625.0	625.0	625.0	626.0	627.0	628.5	45°	48.0	49.2
643.0	643.0	643.0	646.0	643.0	643.0	643.0	643.5	644.0	645.0	47.5°	48.8	54.0
659.0	659.5	660.0	663.0	660.0	659.5	659.0	657.5	656.0	655.5	50°	54.8	53.2
669.0	669.0	669.0	673.0	669.0	669.0	669.0	667.0	665.0	663.0	52.5°	56.0	50.0
676.0	677.0	678.0	681.0	678.0	677.0	676.0	676.0	676.0	674.5	55°	51.2	48.0
684.0	685.5	687.0	690.0	687.0	685.5	684.0	685.0	686.0	687.0	57.5°	45.9	41.9
692.0	693.5	695.0	698.0	695.0	693.5	692.0	692.0	692.0	692.5	59°	41.1	38.7
695.0	696.0	697.0	699.0	697.0	696.0	695.0	694.0	693.0	691.5	60°	38.3	37.5
697.0	697.5	698.0	700.0	698.0	697.5	697.0	696.0	695.0	693.0	62.5°	35.1	35.9
700.0	702.5	705.0	707.0	705.0	702.5	700.0	699.5	699.0	698.0	65°	32.6	34.3
700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	67.5°	31.4	32.6
										70°	29.4	30.2
										72.5°	27.4	27.8
										75°	24.6	25.0
										77.5°	21.8	21.8
										80°	17.7	17.7
										82.5°	13.7	13.3
										85°	8.9	8.5
										87.5°	4.0	3.2
										90°	8.0	7.5
										92.5°	6.0	6.0
										95°	7.0	7.0
										97.5°	9.0	9.0
										100°	12.0	16.5
										102.5°	27.0	33.5
										105°	48.0	55.5
										107.5°	73.0	80.5



REPORT NUMBER: P227284

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

50-LED-E1-SLR-7030-ULG

**tinued):**

**CANDELA DISTRIBUTION (continued):**

225°	230°	235°	240°	245°	250°	255°	260°	265°		215°	220°	225°
791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	791.1	110°	102.0	108.0	114.0
762.1	773.4	782.2	780.6	799.6	810.9	812.5	824.2	835.4	112.5°	134.0	138.5	143.0
623.5	639.2	654.5	665.8	695.6	720.2	739.1	759.3	783.1	115°	168.0	171.0	174.0
496.9	510.2	535.2	553.3	584.8	613.4	641.2	673.0	700.0	117.5°	202.0	203.5	205.0
389.3	406.2	429.6	463.5	491.7	524.3	559.4	589.6	634.7	120°	237.0	240.0	243.0
349.8	360.3	379.6	395.8	430.8	465.5	505.0	546.5	588.0	122.5°	271.0	274.0	277.0
309.1	327.6	345.8	369.2	399.8	437.7	480.4	525.1	571.9	125°	305.0	307.5	310.0
269.6	294.2	313.9	339.3	373.6	421.5	477.2	532.8	587.6	127.5°	339.0	339.5	340.0
221.3	244.2	278.9	304.7	349.4	409.5	480.8	557.8	631.9	130°	370.0	371.0	372.0
174.1	198.7	238.2	276.5	325.6	403.0	495.3	598.9	698.0	132.5°	404.0	404.5	405.0
124.5	158.0	197.1	245.4	305.1	399.0	515.0	649.7	783.1	135°	435.0	436.0	437.0
93.1	116.5	164.0	216.8	282.1	391.7	536.0	696.8	841.1	137.5°	464.0	466.0	468.0
83.0	99.5	130.6	186.2	253.9	377.6	551.7	741.5	893.9	140°	491.0	494.0	497.0
72.5	85.4	110.0	157.2	228.5	355.9	558.6	765.3	930.6	142.5°	521.0	523.0	525.0
63.7	75.8	100.8	145.9	215.6	331.3	557.4	789.1	976.5	145°	550.0	550.5	551.0
58.0	68.5	96.7	143.1	205.5	308.7	558.6	827.4	1044.6	147.5°	574.0	574.5	575.0
53.6	65.7	93.5	137.0	200.7	296.2	563.4	861.2	1103.0	150°	593.0	593.0	593.0
53.6	64.9	85.4	128.6	198.3	297.4	565.4	887.4	1146.6	152.5°	610.0	610.0	610.0
56.4	60.9	79.4	123.7	199.9	306.3	563.0	914.0	1188.9	155°	630.0	629.0	628.0
53.6	56.8	75.4	122.9	199.9	312.7	570.3	947.1	1244.5	157.5°	646.0	645.5	645.0
50.8	52.8	74.2	121.7	195.9	318.8	600.1	1008.7	1317.0	160°	655.0	655.0	655.0
47.2	49.6	72.5	119.7	191.4	326.4	652.9	1112.3	1437.1	162.5°	661.0	662.0	663.0
42.7	47.6	70.1	116.5	188.6	340.1	706.9	1217.1	1580.2	165°	673.0	673.0	673.0
41.1	45.5	64.5	108.8	185.8	355.1	764.5	1317.4	1708.8	167.5°	688.0	686.5	685.0
39.9	43.9	59.6	103.2	183.4	362.3	781.8	1355.7	1758.3	170°	693.0	692.0	691.0
39.1	43.1	56.8	98.3	180.5	362.7	794.3	1370.2	1765.6	172.5°	690.0	690.0	690.0
37.9	41.5	51.2	88.3	171.7	362.3	795.5	1379.5	1744.6	175°	691.0	690.5	690.0
35.9	39.9	51.6	83.0	155.6	345.4	745.6	1334.8	1661.2	177.5°	697.0	696.0	695.0
34.3	38.7	54.4	84.2	138.6	301.9	652.1	1195.7	1482.7	180°	700.0	700.0	700.0
31.8	37.9	56.8	87.1	133.8	250.7	493.3	976.5	1241.7				
29.4	37.5	58.8	89.1	128.6	206.3	341.8	692.4	929.3				
26.6	34.3	53.6	75.8	106.4	149.9	220.0	453.0	640.8				
23.0	27.4	39.1	53.2	78.2	104.8	130.2	273.6	419.1				
18.9	20.6	27.8	34.3	52.0	62.1	72.1	154.4	293.0				
14.1	14.5	18.9	21.8	29.4	34.3	43.1	94.7	237.4				
8.1	9.3	12.9	14.5	17.7	21.8	28.2	60.5	186.2				
3.2	4.0	7.7	8.5	9.7	12.1	15.7	35.1	58.0				
7.0	7.0	7.0	8.0	9.0	9.0	9.0	8.0	7.0				
6.0	6.5	7.0	7.0	7.0	6.5	6.0	6.0	6.0				
7.0	7.0	7.0	7.5	8.0	7.5	7.0	7.0	7.0				
9.0	10.5	12.0	11.0	10.0	9.5	9.0	8.5	8.0				
21.0	25.0	29.0	27.5	26.0	24.5	23.0	21.0	19.0				
40.0	45.0	50.0	48.5	47.0	44.5	42.0	40.5	39.0				
63.0	67.5	72.0	71.0	70.0	67.5	65.0	63.0	61.0				
88.0	91.5	95.0	94.5	94.0	92.0	90.0	88.5	87.0				



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-

SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

230°	235°	240°	245°	250°	255°	260°	265°		270°	275°	280°	285°
117.0	120.0	120.5	121.0	120.0	119.0	117.5	116.0	0°	791.1	791.1	791.1	791.1
145.5	148.0	149.0	150.0	149.5	149.0	148.0	147.0	2.5°	846.7	855.2	862.4	868.1
176.5	179.0	180.5	182.0	180.5	179.0	178.0	177.0	5°	808.4	828.2	852.0	872.1
208.0	211.0	213.0	215.0	212.5	210.0	209.0	208.0	7.5°	740.3	765.3	804.0	827.8
244.5	246.0	248.0	250.0	247.5	245.0	244.0	243.0	10°	675.8	712.5	754.8	789.1
278.0	279.0	281.0	283.0	280.5	278.0	277.0	276.0	12.5°	631.9	677.5	717.8	756.0
311.5	313.0	314.0	315.0	312.5	310.0	310.0	310.0	15°	619.8	666.2	702.4	737.5
342.5	345.0	345.5	346.0	346.0	346.0	345.5	345.0	17.5°	644.0	690.4	721.4	742.7
374.5	377.0	379.0	381.0	381.0	381.0	380.0	379.0	20°	700.8	750.4	770.2	768.5
408.0	411.0	413.5	416.0	415.0	414.0	414.0	414.0	22.5°	778.6	830.6	830.6	814.5
440.0	443.0	445.5	448.0	447.5	447.0	448.5	450.0	25°	881.4	918.9	898.3	867.7
470.5	473.0	474.0	475.0	475.5	476.0	478.5	481.0	27.5°	954.3	989.4	953.5	903.1
498.5	500.0	501.0	502.0	503.0	504.0	506.5	509.0	30°	1014.8	1040.6	995.0	934.2
526.0	527.0	530.0	533.0	533.0	533.0	533.5	534.0	32.5°	1068.0	1086.9	1026.9	966.8
553.5	556.0	559.0	562.0	561.5	561.0	559.5	558.0	35°	1131.7	1138.5	1059.9	995.8
577.5	580.0	582.5	585.0	585.5	586.0	584.5	583.0	37.5°	1202.2	1207.8	1107.5	1027.7
595.0	597.0	598.5	600.0	601.5	603.0	604.5	606.0	40°	1285.2	1265.1	1142.5	1057.1
610.5	611.0	612.5	614.0	616.0	618.0	620.5	623.0	42.5°	1336.4	1303.3	1167.9	1072.4
627.0	626.0	628.5	631.0	633.5	636.0	637.0	638.0	45°	1376.7	1331.5	1179.6	1081.3
644.5	644.0	646.0	648.0	649.0	650.0	650.0	650.0	47.5°	1426.3	1373.1	1200.2	1097.4
656.5	658.0	661.0	664.0	662.5	661.0	660.5	660.0	50°	1491.5	1430.7	1252.2	1142.9
665.0	667.0	669.0	671.0	670.5	670.0	669.0	668.0	52.5°	1625.3	1550.0	1345.7	1222.3
672.5	672.0	674.5	677.0	678.5	680.0	679.0	678.0	55°	1779.3	1708.0	1495.2	1353.3
681.5	678.0	681.0	684.0	686.0	688.0	688.0	688.0	57.5°	1902.6	1854.7	1628.6	1471.8
688.5	686.0	687.5	689.0	691.5	694.0	695.0	696.0	59°	1948.2	1927.6	1722.9	1572.1
689.5	689.0	690.5	692.0	693.0	694.0	695.0	696.0	60°	1965.1	1982.8	1772.8	1633.4
690.0	690.0	692.5	695.0	695.5	696.0	695.0	694.0	62.5°	1976.8	2053.7	1935.3	1816.4
694.5	694.0	696.5	699.0	700.0	701.0	699.5	698.0	65°	1952.6	2065.4	2000.9	1928.0
700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	67.5°	1847.4	1982.4	1969.9	1905.8
								70°	1632.2	1782.5	1826.0	1735.0
								72.5°	1228.0	1414.6	1651.9	1509.3
								75°	800.0	972.5	1410.5	1292.9
								77.5°	500.9	606.9	1006.3	905.6
								80°	333.3	390.1	638.8	581.5
								82.5°	250.7	276.5	439.3	413.1
								85°	132.2	168.5	341.8	433.2
								87.5°	49.6	55.2	257.1	387.3
								90°	7.0	7.0	8.4	9.0
								92.5°	6.0	6.0	6.0	6.0
								95°	7.0	7.0	7.0	7.0
								97.5°	8.0	8.0	8.5	9.0
								100°	19.0	19.0	21.0	23.0
								102.5°	38.0	39.0	40.5	42.0
								105°	61.0	61.0	63.0	65.0
								107.5°	86.0	87.0	88.5	90.0



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

ULG

**CANDELA DISTRIBUTION (continued):**

290°	295°	300°	305°	310°	315°	320°		270°	275°	280°	285°	290°
791.1	791.1	791.1	791.1	791.1	791.1	791.1	110°	117.0	116.0	117.5	119.0	120.0
872.9	880.2	884.6	881.4	886.6	887.8	882.2	112.5°	147.0	147.0	148.0	149.0	149.5
889.0	909.2	923.7	933.8	937.8	941.4	939.8	115°	178.0	177.0	178.0	179.0	180.5
859.2	890.3	917.3	935.8	942.2	947.1	942.6	117.5°	209.0	208.0	209.0	210.0	212.5
826.2	858.4	883.8	902.3	901.9	906.8	898.3	120°	243.0	243.0	244.0	245.0	247.5
795.1	826.6	849.1	848.3	842.7	828.6	826.2	122.5°	277.0	276.0	277.0	278.0	280.5
770.6	787.1	792.7	791.5	775.4	767.3	766.1	125°	310.0	310.0	310.0	310.0	312.5
758.5	757.7	744.8	730.7	715.3	714.5	704.1	127.5°	347.0	345.0	345.5	346.0	346.0
760.5	734.3	710.5	686.3	669.8	666.2	667.4	130°	380.0	379.0	380.0	381.0	381.0
785.9	739.5	694.8	670.2	650.9	645.2	647.6	132.5°	415.0	414.0	414.0	414.0	415.0
817.7	755.6	700.0	662.6	646.8	640.0	641.2	135°	451.0	450.0	448.5	447.0	447.5
839.1	774.2	717.4	671.0	649.7	643.2	647.2	137.5°	482.0	481.0	478.5	476.0	475.5
866.5	799.6	740.7	692.8	660.9	652.5	655.3	140°	511.0	509.0	506.5	504.0	503.0
893.5	827.0	773.8	719.4	680.7	665.0	669.4	142.5°	536.0	534.0	533.5	533.0	533.0
922.5	858.8	805.2	755.6	710.1	685.5	691.2	145°	560.0	558.0	559.5	561.0	561.5
956.3	895.9	850.0	804.4	757.7	737.1	739.5	147.5°	585.0	583.0	584.5	586.0	585.5
989.0	932.2	902.7	868.9	841.5	810.1	810.1	150°	610.0	606.0	604.5	603.0	601.5
1008.3	979.3	971.3	961.6	945.5	922.9	918.1	152.5°	628.0	623.0	620.5	618.0	616.0
1032.1	1035.3	1053.9	1073.2	1078.1	1055.9	1049.0	155°	641.0	638.0	637.0	636.0	633.5
1076.8	1110.7	1171.6	1224.3	1234.8	1253.0	1232.0	157.5°	655.0	650.0	650.0	650.0	649.0
1139.7	1202.2	1304.9	1391.2	1415.8	1417.4	1419.0	160°	666.0	660.0	660.5	661.0	662.5
1211.5	1300.9	1436.7	1539.5	1583.4	1595.1	1586.7	162.5°	674.0	668.0	669.0	670.0	670.5
1334.4	1415.4	1564.1	1674.9	1731.3	1758.7	1751.5	165°	682.0	678.0	679.0	680.0	678.5
1456.1	1556.8	1687.8	1797.0	1857.1	1887.7	1894.2	167.5°	694.0	688.0	688.0	688.0	686.0
1539.1	1633.4	1754.3	1855.1	1914.3	1951.0	1954.2	170°	701.0	696.0	695.0	694.0	691.5
1589.9	1676.1	1794.2	1882.9	1942.1	1973.1	1984.4	172.5°	701.0	696.0	695.0	694.0	693.0
1743.8	1759.5	1840.1	1898.6	1940.1	1954.2	1962.7	175°	699.0	694.0	695.0	696.0	695.5
1816.0	1750.3	1741.0	1777.3	1780.9	1771.6	1759.9	177.5°	702.0	698.0	699.5	701.0	700.0
1715.6	1562.1	1505.2	1500.4	1485.5	1479.5	1442.4	180°	700.0	700.0	700.0	700.0	700.0
1489.9	1268.7	1168.3	1113.9	1147.0	1145.8	1107.9						
1255.4	1030.1	899.9	821.7	812.1	810.5	777.4						
1019.6	808.4	694.4	656.5	611.0	597.3	602.9						
735.1	577.1	552.9	581.9	585.6	575.1	567.8						
463.1	434.0	457.4	510.2	541.2	527.5	532.8						
386.1	341.8	343.4	399.0	419.9	423.2	412.3						
428.4	342.2	280.5	273.6	266.4	167.7	233.3						
386.1	264.8	156.0	128.6	79.0	45.5	47.2						
9.0	9.0	8.0	7.0	7.0	7.0	7.5						
6.5	7.0	7.0	7.0	6.5	6.0	6.0						
7.5	8.0	7.5	7.0	7.0	7.0	7.0						
9.5	10.0	11.0	12.0	10.5	9.0	9.0						
24.5	26.0	27.5	29.0	25.0	21.0	16.5						
44.5	47.0	48.5	50.0	45.0	40.0	33.5						
67.5	70.0	71.0	72.0	67.5	63.0	55.5						
92.0	94.0	94.5	95.0	91.5	88.0	80.5						



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

295°	300°	305°	310°	315°	320°		325°	330°	335°	340°	345°	350°
121.0	120.5	120.0	117.0	114.0	108.0	0°	791.1	791.1	791.1	791.1	791.1	791.1
150.0	149.0	148.0	145.5	143.0	138.5	2.5°	881.0	873.3	864.9	853.6	855.6	841.9
182.0	180.5	179.0	176.5	174.0	171.0	5°	927.3	914.0	895.9	872.9	851.6	824.2
215.0	213.0	211.0	208.0	205.0	203.5	7.5°	922.5	901.1	870.9	836.2	808.0	768.5
250.0	248.0	246.0	244.5	243.0	240.0	10°	881.0	853.2	828.6	792.7	756.0	721.4
283.0	281.0	279.0	278.0	277.0	274.0	12.5°	822.9	807.2	785.9	758.9	723.4	687.9
315.0	314.0	313.0	311.5	310.0	307.5	15°	759.7	760.9	748.0	740.7	723.0	694.8
346.0	345.5	345.0	342.5	340.0	339.5	17.5°	707.7	719.8	726.6	737.9	739.9	726.2
381.0	379.0	377.0	374.5	372.0	371.0	20°	673.0	690.0	711.3	742.3	775.0	789.1
416.0	413.5	411.0	408.0	405.0	404.5	22.5°	653.7	674.6	708.9	765.3	825.0	860.8
448.0	445.5	443.0	440.0	437.0	436.0	25°	650.1	677.9	725.8	794.7	872.1	922.5
475.0	474.0	473.0	470.5	468.0	466.0	27.5°	656.1	692.4	749.2	827.8	904.0	976.9
502.0	501.0	500.0	498.5	497.0	494.0	30°	675.4	717.8	779.8	864.5	943.4	1016.0
533.0	530.0	527.0	526.0	525.0	523.0	32.5°	694.0	746.4	814.9	897.5	976.9	1049.0
562.0	559.0	556.0	553.5	551.0	550.5	35°	723.8	776.6	846.7	922.9	999.9	1081.7
585.0	582.5	580.0	577.5	575.0	574.5	37.5°	769.3	815.7	871.7	942.6	1022.8	1107.5
600.0	598.5	597.0	595.0	593.0	593.0	40°	834.2	864.9	901.1	957.2	1034.1	1124.8
614.0	612.5	611.0	610.5	610.0	610.0	42.5°	931.4	937.8	950.3	979.3	1044.2	1145.0
631.0	628.5	626.0	627.0	628.0	629.0	45°	1056.7	1037.4	1026.5	1022.4	1066.8	1157.9
648.0	646.0	644.0	644.5	645.0	645.5	47.5°	1202.2	1164.3	1120.8	1099.8	1110.3	1178.4
664.0	661.0	658.0	656.5	655.0	655.0	50°	1391.6	1329.9	1244.5	1184.0	1178.8	1238.9
671.0	669.0	667.0	665.0	663.0	662.0	52.5°	1565.3	1484.7	1377.1	1305.8	1276.7	1351.7
677.0	674.5	672.0	672.5	673.0	673.0	55°	1729.3	1667.3	1545.5	1456.9	1446.8	1501.2
684.0	681.0	678.0	681.5	685.0	686.5	57.5°	1873.2	1819.6	1720.1	1604.4	1608.4	1661.2
689.0	687.5	686.0	688.5	691.0	692.0	59°	1947.8	1903.0	1810.7	1693.0	1701.9	1774.5
692.0	690.5	689.0	689.5	690.0	690.0	60°	1974.4	1936.9	1849.0	1749.9	1761.2	1836.5
695.0	692.5	690.0	690.0	690.0	690.5	62.5°	1972.3	1948.2	1884.5	1837.7	1895.4	1950.6
699.0	696.5	694.0	694.5	695.0	696.0	65°	1784.1	1747.5	1740.2	1822.0	1933.2	1986.4
700.0	700.0	700.0	700.0	700.0	700.0	67.5°	1419.0	1436.3	1505.2	1645.9	1832.5	1909.9
						70°	1053.9	1084.5	1176.4	1352.9	1609.2	1743.0
						72.5°	775.0	805.6	890.3	1083.7	1323.9	1442.4
						75°	608.1	617.4	678.3	830.2	1043.4	1140.5
						77.5°	561.8	534.0	509.0	590.4	703.7	787.1
						80°	523.1	470.3	411.5	436.1	463.5	552.1
						82.5°	406.2	371.2	325.2	356.7	369.6	372.4
						85°	237.8	211.6	268.0	379.6	375.6	328.9
						87.5°	83.8	108.8	122.5	210.4	254.3	220.0
						90°	8.0	9.2	11.6	11.5	13.0	8.0
						92.5°	6.0	6.0	6.0	5.5	5.0	4.5
						95°	7.0	7.0	7.0	6.5	6.0	5.5
						97.5°	9.0	8.5	8.0	8.0	8.0	7.5
						100°	12.0	11.0	10.0	9.5	9.0	8.5
						102.5°	27.0	22.5	18.0	15.5	13.0	12.0
						105°	48.0	42.0	36.0	31.5	27.0	24.5
						107.5°	73.0	65.5	58.0	53.5	49.0	45.5



REPORT NUMBER: P227284

CATALOG NUMBER: ISW-AF-450-LED-E1-SLR-7030-ULG

**CANDELA DISTRIBUTION (continued):**

355°	359°	360°		325°	330°	335°	340°	345°	350°	355°
791.1	791.1	791.1	110°	102.0	94.5	87.0	80.5	74.0	71.0	68.0
831.0	819.7	818.9	112.5°	134.0	127.5	121.0	113.5	106.0	102.5	99.0
802.4	777.0	768.9	115°	168.0	163.5	159.0	153.0	147.0	143.0	139.0
734.3	704.9	698.8	117.5°	202.0	199.5	197.0	193.0	189.0	186.5	184.0
677.1	644.4	638.8	120°	237.0	235.0	233.0	229.5	226.0	224.5	223.0
647.6	616.6	609.8	122.5°	271.0	269.0	267.0	264.0	261.0	260.5	260.0
658.9	624.7	621.0	125°	305.0	302.0	299.0	297.5	296.0	295.0	294.0
701.2	665.0	666.6	127.5°	339.0	336.0	333.0	331.0	329.0	329.0	329.0
773.8	750.4	744.8	130°	370.0	368.0	366.0	364.0	362.0	361.5	361.0
868.9	843.5	836.2	132.5°	404.0	402.5	401.0	397.0	393.0	393.5	394.0
949.9	937.0	932.2	135°	435.0	433.5	432.0	429.0	426.0	426.0	426.0
1008.3	1014.4	1009.5	137.5°	464.0	462.0	460.0	459.5	459.0	458.0	457.0
1055.1	1075.2	1072.8	140°	491.0	490.0	489.0	488.0	487.0	486.0	485.0
1103.0	1142.1	1143.7	142.5°	521.0	519.5	518.0	517.5	517.0	516.0	515.0
1138.5	1207.4	1221.5	145°	550.0	548.5	547.0	545.5	544.0	545.0	546.0
1184.0	1276.3	1290.8	147.5°	574.0	574.0	574.0	572.5	571.0	571.5	572.0
1218.7	1327.1	1344.8	150°	593.0	593.0	593.0	593.0	593.0	592.5	592.0
1252.6	1369.0	1388.4	152.5°	610.0	609.5	609.0	608.5	608.0	608.0	608.0
1280.4	1410.5	1430.3	155°	630.0	628.5	627.0	626.0	625.0	625.0	625.0
1311.8	1450.8	1470.2	157.5°	646.0	645.0	644.0	643.5	643.0	643.0	643.0
1368.2	1514.1	1537.1	160°	655.0	655.5	656.0	657.5	659.0	659.5	660.0
1489.5	1631.4	1664.0	162.5°	661.0	663.0	665.0	667.0	669.0	669.0	669.0
1664.8	1793.4	1819.2	165°	673.0	674.5	676.0	676.0	676.0	677.0	678.0
1822.8	1903.4	1910.3	167.5°	688.0	687.0	686.0	685.0	684.0	685.5	687.0
1887.7	1933.6	1931.6	170°	693.0	692.5	692.0	692.0	692.0	693.5	695.0
1935.3	1940.9	1929.6	172.5°	690.0	691.5	693.0	694.0	695.0	696.0	697.0
1961.1	1907.5	1888.1	175°	691.0	693.0	695.0	696.0	697.0	697.5	698.0
1893.7	1819.2	1793.8	177.5°	697.0	698.0	699.0	699.5	700.0	702.5	705.0
1699.5	1660.0	1631.0	180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0
1445.6	1345.7	1326.7								
1095.8	964.0	935.8								
765.7	607.7	569.5								
503.4	390.1	375.6								
326.4	259.1	254.7								
227.7	170.1	156.8								
139.8	56.8	54.4								
43.5	26.2	23.4								
6.2	6.6	6.6								
4.0	4.0	4.0								
5.0	5.0	5.0								
7.0	7.0	7.0								
8.0	8.0	8.0								
11.0	11.0	11.0								
22.0	21.2	21.0								
42.0	41.2	41.0								



359°	360°
66.4	66.0
99.0	99.0
139.8	140.0
184.0	184.0
224.6	225.0
262.4	263.0
297.2	298.0
329.8	330.0
362.6	363.0
395.6	396.0
428.4	429.0
459.4	460.0
487.4	488.0
517.4	518.0
549.2	550.0
574.4	575.0
594.4	595.0
610.4	611.0
628.2	629.0
645.4	646.0
662.4	663.0
672.2	673.0
680.4	681.0
689.4	690.0
697.4	698.0
698.6	699.0
699.6	700.0
706.6	707.0
700.0	700.0

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