

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: P226638

Luminaire Tested: **ISW-AF-350-LED-E1-T4W-7050-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35944)-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-350-LED-E1-T4W-7050-ULG
Description: IMPACT ELITE LED WEDGE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE, WITH UPLIGHT GLOW
Light Source: (16) 5000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4237.7 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B1 - U5 - G1

Input Watts (W): 36.79
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

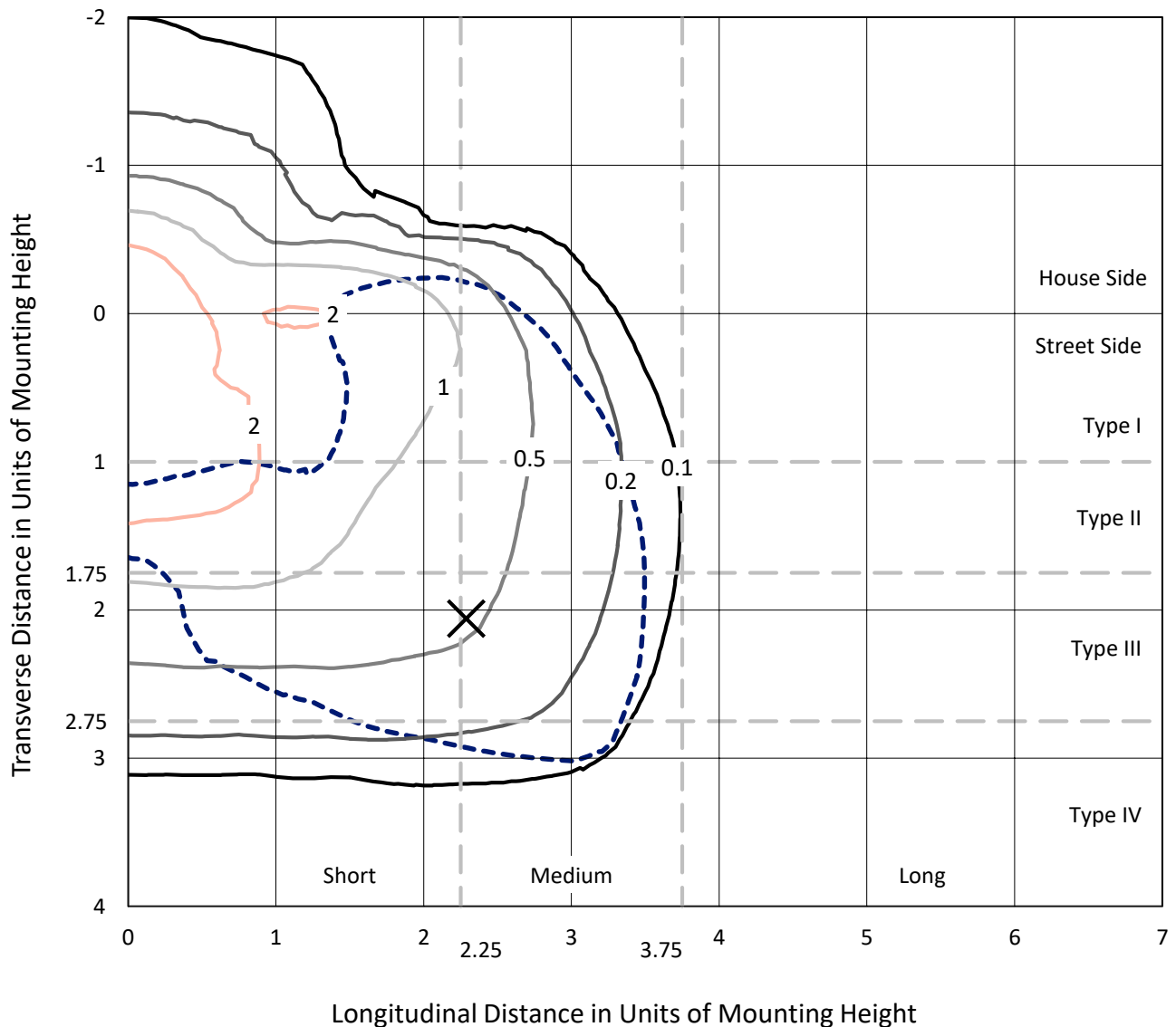


REPORT NUMBER: P226638

CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

Iso-Footcandle Lines of Horizontal Illumination

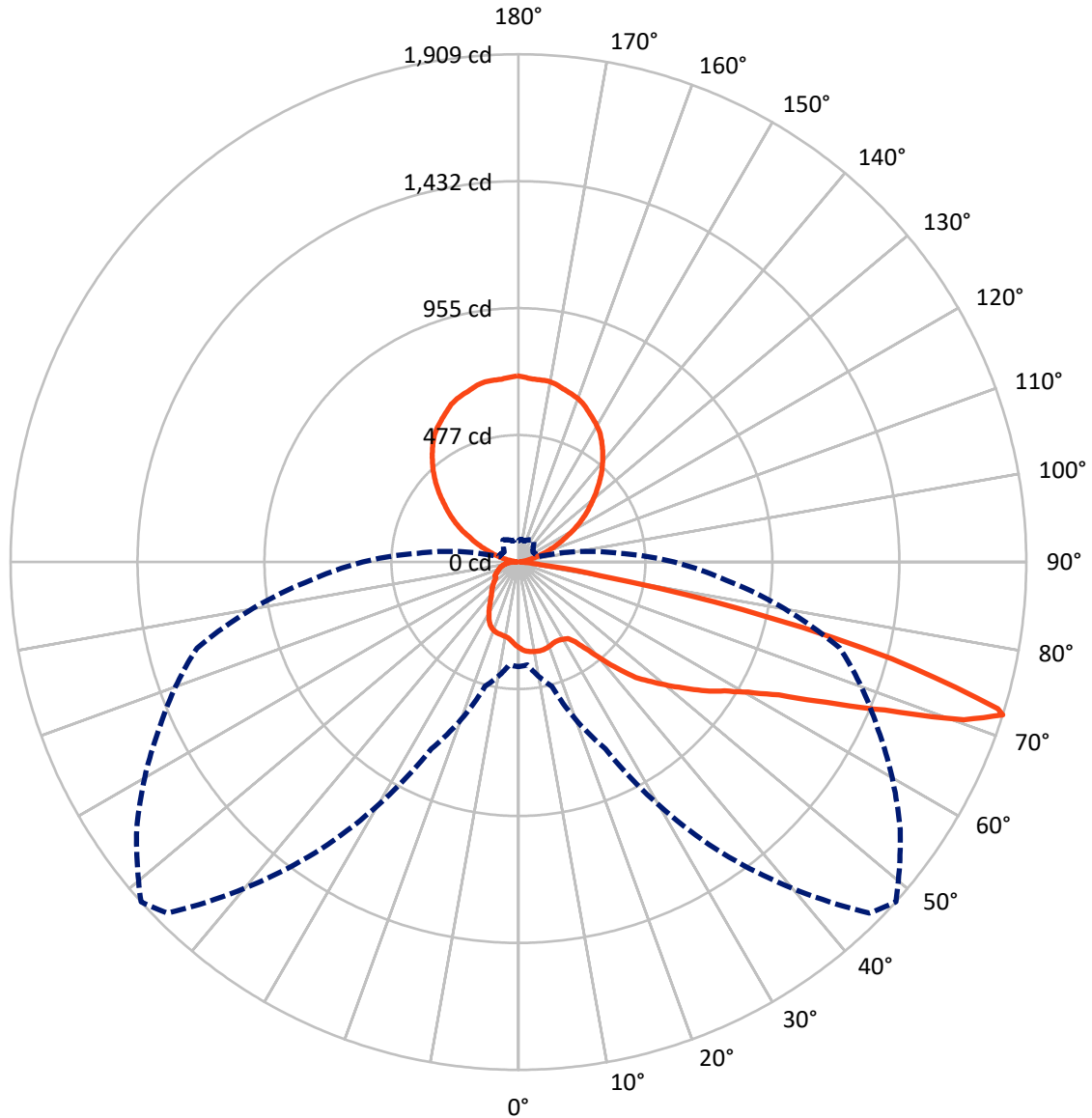
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P226638
CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 48-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P226638

CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

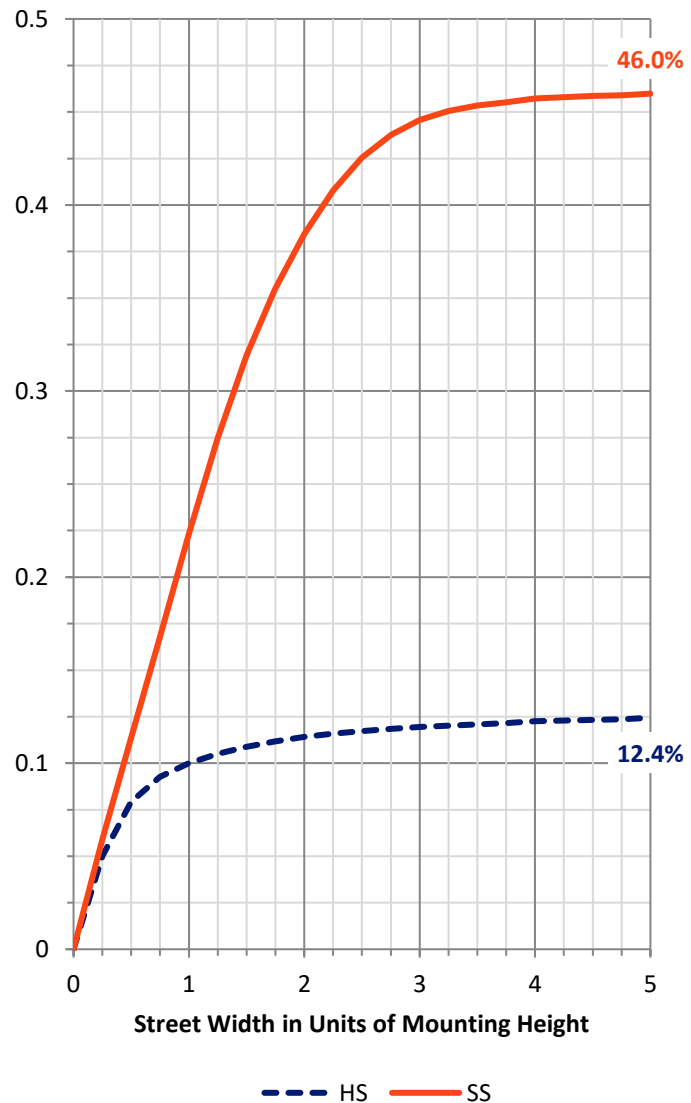
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	543.8	868.7	1412.5
	% Fixture	12.8	20.5	33.3
Street Side	Lumens	1957.2	868.0	2825.2
	% Fixture	46.2	20.5	66.7
Total	Lumens	2501.0	1736.7	4237.7
	% Fixture	59.0	41.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.4	0.7
10°-20°	88.9	2.1
20°-30°	137.1	3.2
30°-40°	205.4	4.8
40°-50°	342.1	8.1
50°-60°	534.6	12.6
60°-70°	706.2	16.7
70°-80°	408.5	9.6
80°-90°	47.9	1.1
90°-100°	10.8	0.3
100°-110°	57.4	1.4
110°-120°	166.1	3.9
120°-130°	273.2	6.4
130°-140°	336.8	7.9
140°-150°	344.6	8.1
150°-160°	290.3	6.9
160°-170°	191.2	4.5
170°-180°	66.3	1.6
0°-90°	2501.0	59.0
0°-180°	4237.7	100.0



REPORT NUMBER: P226638

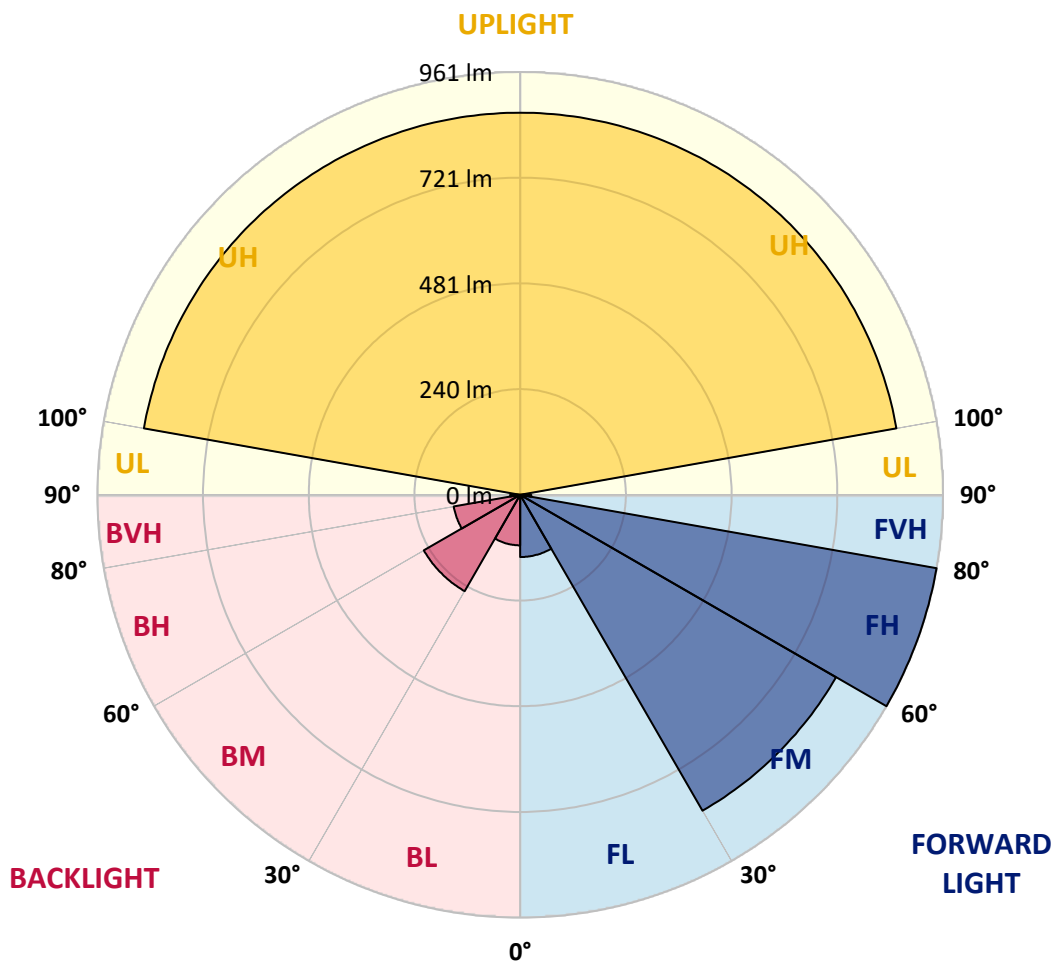
CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	141.4	3.3			
FM (30°-60°)	829.3	19.6			
FH (60°-80°)	961.4	22.7			G1/1800
FVH (80°-90°)	25.1	0.6			G1/100
BL (0°-30°)	114.9	2.7	B1/500		
BM (30°-60°)	252.8	6.0	B1/1000		
BH (60°-80°)	153.3	3.6	B1/500		G1/500
BVH (80°-90°)	22.8	0.5			G1/100
UL (90°-100°)	10.8	0.3		U2/50	
UH (100°-180°)	868.7	20.5		U4/1000	

BUG Rating: B1-U5-G1

Type IV Medium





REPORT NUMBER: P226638

CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
0°	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8
2.5°	338.9	338.5	338.5	335.6	334.5	332.7	331.2	329.1	326.9	324.3	321.1
5°	355.2	356.3	354.8	350.5	345.0	339.2	337.0	332.0	325.1	318.9	313.1
7.5°	370.8	371.2	367.2	359.9	351.6	342.5	339.6	332.7	325.1	316.7	308.4
10°	382.0	382.4	376.6	366.4	355.2	345.0	341.8	334.9	325.4	316.4	305.8
12.5°	388.6	388.9	380.2	369.7	356.3	346.1	343.2	336.0	326.2	314.6	302.9
15°	387.5	388.6	381.3	369.7	355.6	346.5	342.9	336.7	324.3	312.7	300.4
17.5°	380.2	381.7	375.9	363.2	351.9	344.7	340.7	334.5	322.5	310.2	296.8
20°	366.1	367.9	365.3	353.0	345.4	339.6	337.0	331.2	320.0	307.3	293.5
22.5°	350.1	351.9	351.2	341.0	337.4	334.5	332.0	327.6	317.8	305.1	292.1
25°	338.5	339.9	338.9	330.2	331.2	331.2	329.8	326.5	317.5	305.8	292.1
27.5°	357.7	357.7	348.3	330.5	328.7	332.0	331.2	329.4	322.2	309.5	295.0
30°	428.1	422.7	405.6	361.0	338.1	336.7	336.3	335.2	328.7	317.5	304.0
32.5°	506.8	501.4	481.1	425.2	377.7	346.5	343.2	343.6	341.8	331.2	317.8
35°	576.9	576.1	560.2	499.6	439.0	380.9	367.9	359.2	358.5	354.1	343.6
37.5°	633.5	633.5	634.9	566.0	505.4	435.7	413.6	386.0	386.0	383.5	377.0
40°	698.0	700.9	704.2	626.2	576.5	501.0	476.0	434.3	421.6	425.6	427.0
42.5°	782.9	786.6	784.4	700.6	641.4	579.0	548.2	497.8	466.6	473.1	488.3
45°	840.3	841.7	857.3	778.2	723.1	645.1	618.9	549.7	518.8	532.2	559.1
47.5°	905.2	908.8	911.4	866.4	818.9	719.8	671.9	600.1	580.1	600.4	642.9
50°	968.7	964.0	970.9	969.1	909.6	786.2	729.2	647.2	648.7	676.3	745.9
52.5°	1023.8	1007.9	1023.8	1043.8	1026.4	854.4	788.0	702.8	723.8	757.5	867.5
55°	1066.3	1027.8	1054.7	1111.3	1107.3	914.6	855.1	776.8	812.0	858.0	1015.1
57.5°	979.6	984.3	1058.3	1156.6	1154.8	975.6	913.9	869.3	912.5	964.0	1190.0
60°	898.7	919.7	1034.0	1163.9	1187.8	1042.0	993.0	974.5	1014.4	1077.2	1357.6
62.5°	855.9	875.8	994.5	1150.5	1240.4	1140.3	1099.3	1085.2	1139.6	1210.0	1507.1
65°	869.3	881.6	991.9	1170.8	1301.0	1289.1	1271.3	1247.7	1274.9	1340.9	1574.6
67.5°	831.6	851.9	970.9	1206.7	1411.7	1470.5	1485.3	1459.9	1437.1	1428.0	1476.3
70°	618.9	638.5	763.3	1058.3	1502.4	1785.4	1776.3	1691.4	1537.6	1409.1	1153.4
72°	393.3	387.8	483.3	775.3	1335.5	1866.3	1909.1	1752.0	1491.9	1251.3	783.3
72.5°	285.9	311.7	400.9	689.3	1268.7	1822.0	1884.4	1732.4	1432.0	1182.0	689.0
75°	69.7	73.6	96.1	247.1	743.0	1371.0	1449.4	1338.4	1045.2	701.7	305.5
77.5°	47.2	49.0	63.5	87.1	218.4	781.8	860.2	739.0	467.7	238.7	136.1
80°	35.2	36.3	46.1	61.7	90.7	266.7	314.6	250.0	116.5	132.4	96.9
82.5°	24.7	25.4	34.8	45.4	60.2	62.4	83.1	91.8	75.5	86.7	56.6
85°	17.1	17.1	25.4	31.2	38.1	30.8	33.0	46.1	51.2	51.5	34.5
87.5°	9.1	10.2	14.9	20.0	20.0	14.1	15.6	23.6	28.7	30.8	20.7
90°	8.3	8.3	13.2	15.6	12.7	10.6	10.3	11.7	15.9	18.8	13.5
92.5°	4.0	4.0	5.0	6.0	6.0	6.0	6.3	7.0	7.0	6.0	6.0
95°	5.0	5.0	6.0	7.0	7.0	7.0	7.0	7.0	8.0	7.0	7.0
97.5°	7.0	7.0	8.0	8.0	9.0	9.0	9.9	12.0	10.0	9.0	8.0
100°	8.0	8.0	9.0	10.0	12.0	21.0	23.4	29.0	26.0	23.0	19.0
102.5°	11.0	11.0	13.0	18.0	27.0	40.0	43.0	50.0	47.0	42.0	39.0
105°	21.0	22.0	27.0	36.0	48.0	63.0	65.7	72.0	70.0	65.0	61.0
107.5°	41.0	42.0	49.0	58.0	73.0	88.0	90.1	95.0	94.0	90.0	87.0



REPORT NUMBER: P226638

CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
110°	66.0	68.0	74.0	87.0	102.0	114.0	115.8	120.0	121.0	119.0	116.0
112.5°	99.0	99.0	106.0	121.0	134.0	143.0	144.5	148.0	150.0	149.0	147.0
115°	140.0	139.0	147.0	159.0	168.0	174.0	175.5	179.0	182.0	179.0	177.0
117.5°	184.0	184.0	189.0	197.0	202.0	205.0	206.8	211.0	215.0	210.0	208.0
120°	225.0	223.0	226.0	233.0	237.0	243.0	243.9	246.0	250.0	245.0	243.0
122.5°	263.0	260.0	261.0	267.0	271.0	277.0	277.6	279.0	283.0	278.0	276.0
125°	298.0	294.0	296.0	299.0	305.0	310.0	310.9	313.0	315.0	310.0	310.0
127.5°	330.0	329.0	329.0	333.0	339.0	340.0	341.5	345.0	346.0	346.0	345.0
130°	363.0	361.0	362.0	366.0	370.0	372.0	373.5	377.0	381.0	381.0	379.0
132.5°	396.0	394.0	393.0	401.0	404.0	405.0	406.8	411.0	416.0	414.0	414.0
135°	429.0	426.0	426.0	432.0	435.0	437.0	438.8	443.0	448.0	447.0	450.0
137.5°	460.0	457.0	459.0	460.0	464.0	468.0	469.5	473.0	475.0	476.0	481.0
140°	488.0	485.0	487.0	489.0	491.0	497.0	497.9	500.0	502.0	504.0	509.0
142.5°	518.0	515.0	517.0	518.0	521.0	525.0	525.6	527.0	533.0	533.0	534.0
145°	550.0	546.0	544.0	547.0	550.0	551.0	552.5	556.0	562.0	561.0	558.0
147.5°	575.0	572.0	571.0	574.0	574.0	575.0	576.5	580.0	585.0	586.0	583.0
150°	595.0	592.0	593.0	593.0	593.0	593.0	594.2	597.0	600.0	603.0	606.0
152.5°	611.0	608.0	608.0	609.0	610.0	610.0	610.3	611.0	614.0	618.0	623.0
155°	629.0	625.0	625.0	627.0	630.0	628.0	627.4	626.0	631.0	636.0	638.0
157.5°	646.0	643.0	643.0	644.0	646.0	645.0	644.7	644.0	648.0	650.0	650.0
160°	663.0	660.0	659.0	656.0	655.0	655.0	655.9	658.0	664.0	661.0	660.0
162.5°	673.0	669.0	669.0	665.0	661.0	663.0	664.2	667.0	671.0	670.0	668.0
165°	681.0	678.0	676.0	676.0	673.0	673.0	672.7	672.0	677.0	680.0	678.0
167.5°	690.0	687.0	684.0	686.0	688.0	685.0	682.9	678.0	684.0	688.0	688.0
170°	698.0	695.0	692.0	692.0	693.0	691.0	689.5	686.0	689.0	694.0	696.0
172.5°	699.0	697.0	695.0	693.0	690.0	690.0	689.7	689.0	692.0	694.0	696.0
175°	700.0	698.0	697.0	695.0	691.0	690.0	690.0	690.0	695.0	696.0	694.0
177.5°	707.0	705.0	700.0	699.0	697.0	695.0	694.7	694.0	699.0	701.0	698.0
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: P226638

CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8	321.8
2.5°	320.4	318.2	315.3	313.8	313.1	311.7	310.2	309.5	309.5	308.0	308.4
5°	310.2	306.9	302.9	300.0	299.7	299.7	300.4	300.4	300.8	299.7	301.1
7.5°	305.1	301.5	295.7	292.4	289.9	289.5	291.0	293.9	295.3	294.2	295.7
10°	301.5	297.5	291.0	287.0	285.2	284.4	285.5	288.4	293.1	293.1	294.6
12.5°	297.9	292.8	286.3	283.4	281.9	282.3	283.7	285.9	291.0	292.8	293.5
15°	294.2	288.4	283.0	279.0	279.0	280.1	281.9	284.4	289.2	292.4	293.1
17.5°	290.6	284.8	280.1	276.8	276.8	278.3	280.1	283.4	286.6	291.3	291.3
20°	287.3	282.6	276.5	273.6	273.2	274.3	276.5	279.7	282.3	287.0	287.3
22.5°	285.5	279.7	273.9	269.6	267.8	267.0	269.2	272.5	275.0	279.7	280.4
25°	284.8	278.3	271.0	263.0	258.3	256.9	258.0	261.9	264.1	267.8	268.8
27.5°	287.3	281.2	269.9	255.4	245.6	241.6	242.7	245.3	246.0	250.0	251.8
30°	296.0	288.8	272.1	247.4	229.7	222.4	222.4	222.8	223.9	227.1	227.5
32.5°	310.2	303.3	278.6	239.1	213.3	203.2	200.6	198.8	198.8	198.5	198.8
35°	336.3	330.5	289.9	229.7	195.6	184.3	178.1	174.9	171.6	170.2	169.8
37.5°	374.1	369.0	305.8	218.8	180.0	168.7	161.1	154.6	150.9	150.6	152.4
40°	430.3	425.2	323.6	206.4	165.1	156.7	148.8	141.9	137.9	138.2	140.0
42.5°	499.6	484.0	342.9	189.7	153.1	148.8	140.0	134.2	130.2	128.1	127.7
45°	580.5	554.4	361.0	174.1	140.0	141.9	133.5	127.0	121.9	116.1	115.4
47.5°	681.4	624.8	377.0	158.5	125.9	134.6	126.6	120.5	112.8	105.9	104.9
50°	786.6	705.7	390.7	141.9	113.2	126.6	119.7	111.4	100.9	94.7	94.7
52.5°	908.1	802.9	408.5	123.4	103.4	117.9	111.0	100.1	91.4	90.7	90.7
55°	1043.4	904.8	420.9	108.8	95.8	108.5	105.2	101.9	99.0	99.8	100.1
57.5°	1184.9	1011.1	410.0	98.7	89.6	106.3	115.7	111.4	102.3	101.9	101.6
60°	1306.8	1093.9	349.7	92.2	84.9	109.9	124.1	111.4	102.3	107.0	107.4
62.5°	1386.6	1133.0	232.9	83.8	78.0	103.8	121.2	108.1	102.7	116.1	117.2
65°	1375.8	1089.1	133.9	78.0	73.6	95.4	117.2	104.1	95.8	103.4	101.2
67.5°	1213.6	912.8	96.9	75.5	70.4	89.6	109.9	98.3	89.3	98.7	94.7
70°	872.2	621.5	83.4	73.3	68.2	82.7	104.9	94.7	85.6	92.2	86.0
72°	585.2	378.0	76.6	71.5	66.0	78.4	101.2	91.8	82.4	86.0	79.1
72.5°	498.1	298.2	74.7	70.7	65.3	77.3	100.1	91.1	81.6	85.3	78.7
75°	186.1	116.8	66.4	65.3	60.2	71.8	95.8	87.8	78.0	76.9	74.0
77.5°	95.8	74.0	56.6	57.7	54.1	65.7	91.1	82.7	71.8	67.8	66.4
80°	69.7	53.7	45.7	49.0	46.1	59.1	84.5	75.1	65.3	61.0	59.1
82.5°	43.9	33.4	34.8	38.8	39.2	52.2	76.9	67.5	58.0	54.4	51.5
85°	21.0	20.0	24.7	28.7	31.6	44.3	70.4	59.9	50.8	43.5	43.9
87.5°	11.2	15.2	14.9	19.2	24.3	36.3	62.4	49.0	40.6	32.7	33.0
90°	9.5	11.0	13.4	16.6	16.8	22.6	48.3	35.9	34.2	16.6	15.2
92.5°	6.0	6.0	6.0	7.0	7.0	6.0	6.0	6.0	5.0	4.0	4.0
95°	7.0	7.0	7.0	8.0	7.0	7.0	7.0	7.0	6.0	5.0	5.0
97.5°	8.0	8.0	9.0	10.0	12.0	9.0	9.0	8.0	8.0	7.0	7.0
100°	19.0	19.0	23.0	26.0	29.0	21.0	12.0	10.0	9.0	8.0	8.0
102.5°	38.0	39.0	42.0	47.0	50.0	40.0	27.0	18.0	13.0	11.0	11.0
105°	61.0	61.0	65.0	70.0	72.0	63.0	48.0	36.0	27.0	22.0	21.0
107.5°	86.0	87.0	90.0	94.0	95.0	88.0	73.0	58.0	49.0	42.0	41.0



REPORT NUMBER: P226638

CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-7050-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	117.0	116.0	119.0	121.0	120.0	114.0	102.0	87.0	74.0	68.0	66.0
112.5°	147.0	147.0	149.0	150.0	148.0	143.0	134.0	121.0	106.0	99.0	99.0
115°	178.0	177.0	179.0	182.0	179.0	174.0	168.0	159.0	147.0	139.0	140.0
117.5°	209.0	208.0	210.0	215.0	211.0	205.0	202.0	197.0	189.0	184.0	184.0
120°	243.0	243.0	245.0	250.0	246.0	243.0	237.0	233.0	226.0	223.0	225.0
122.5°	277.0	276.0	278.0	283.0	279.0	277.0	271.0	267.0	261.0	260.0	263.0
125°	310.0	310.0	310.0	315.0	313.0	310.0	305.0	299.0	296.0	294.0	298.0
127.5°	347.0	345.0	346.0	346.0	345.0	340.0	339.0	333.0	329.0	329.0	330.0
130°	380.0	379.0	381.0	381.0	377.0	372.0	370.0	366.0	362.0	361.0	363.0
132.5°	415.0	414.0	414.0	416.0	411.0	405.0	404.0	401.0	393.0	394.0	396.0
135°	451.0	450.0	447.0	448.0	443.0	437.0	435.0	432.0	426.0	426.0	429.0
137.5°	482.0	481.0	476.0	475.0	473.0	468.0	464.0	460.0	459.0	457.0	460.0
140°	511.0	509.0	504.0	502.0	500.0	497.0	491.0	489.0	487.0	485.0	488.0
142.5°	536.0	534.0	533.0	533.0	527.0	525.0	521.0	518.0	517.0	515.0	518.0
145°	560.0	558.0	561.0	562.0	556.0	551.0	550.0	547.0	544.0	546.0	550.0
147.5°	585.0	583.0	586.0	585.0	580.0	575.0	574.0	574.0	571.0	572.0	575.0
150°	610.0	606.0	603.0	600.0	597.0	593.0	593.0	593.0	593.0	592.0	595.0
152.5°	628.0	623.0	618.0	614.0	611.0	610.0	610.0	609.0	608.0	608.0	611.0
155°	641.0	638.0	636.0	631.0	626.0	628.0	630.0	627.0	625.0	625.0	629.0
157.5°	655.0	650.0	650.0	648.0	644.0	645.0	646.0	644.0	643.0	643.0	646.0
160°	666.0	660.0	661.0	664.0	658.0	655.0	655.0	656.0	659.0	660.0	663.0
162.5°	674.0	668.0	670.0	671.0	667.0	663.0	661.0	665.0	669.0	669.0	673.0
165°	682.0	678.0	680.0	677.0	672.0	673.0	673.0	676.0	676.0	678.0	681.0
167.5°	694.0	688.0	688.0	684.0	678.0	685.0	688.0	686.0	684.0	687.0	690.0
170°	701.0	696.0	694.0	689.0	686.0	691.0	693.0	692.0	692.0	695.0	698.0
172.5°	701.0	696.0	694.0	692.0	689.0	690.0	690.0	693.0	695.0	697.0	699.0
175°	699.0	694.0	696.0	695.0	690.0	690.0	691.0	695.0	697.0	698.0	700.0
177.5°	702.0	698.0	701.0	699.0	694.0	695.0	697.0	699.0	700.0	705.0	707.0
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0

(END OF REPORT)