

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: P226635

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226635
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-ULG
Description: IMPACT ELITE LED WEDGE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE, 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: 4335 lumens
Efficiency: N/A
Efficacy: 117.8 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

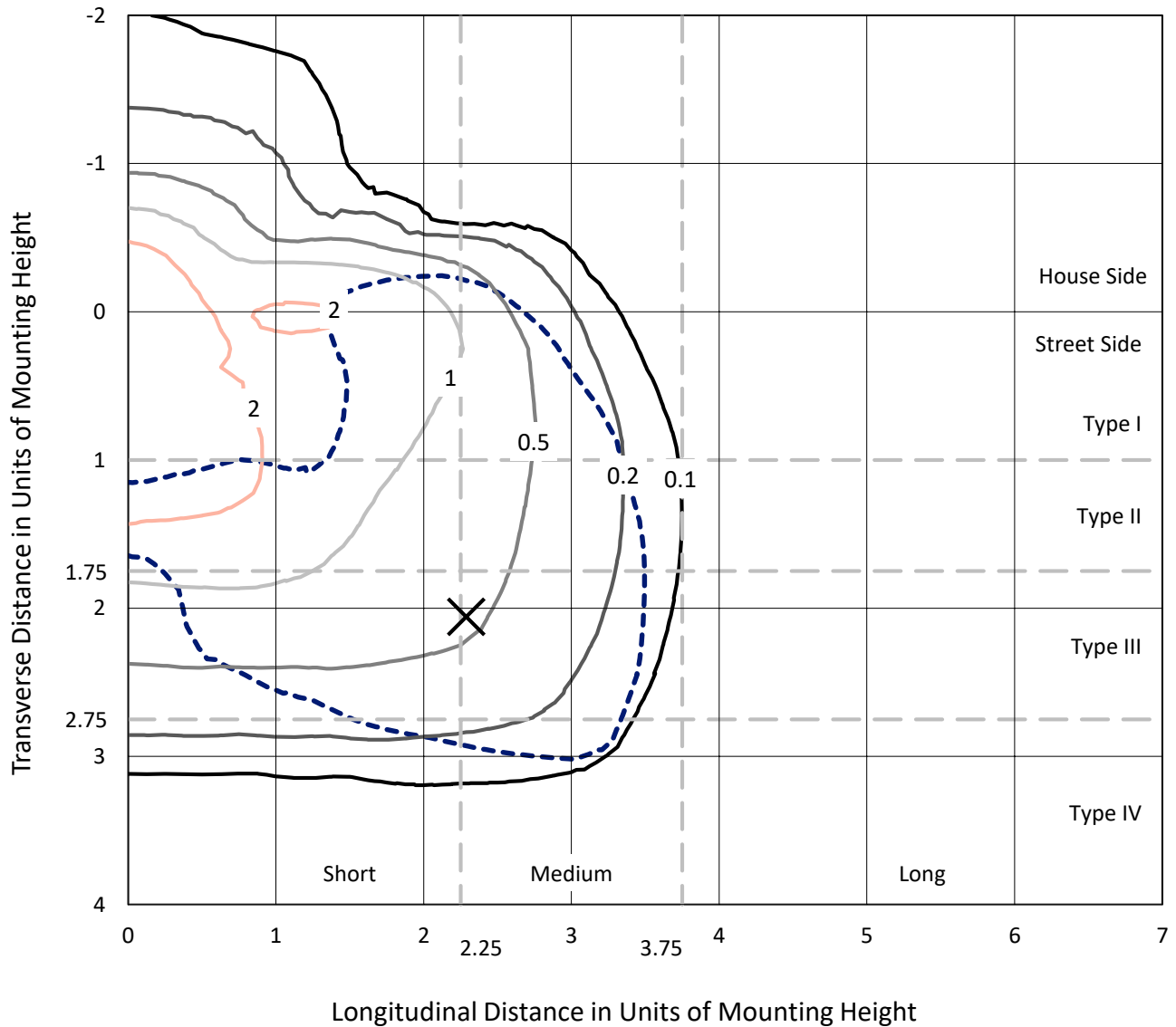
Input Watts (W): 36.79
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

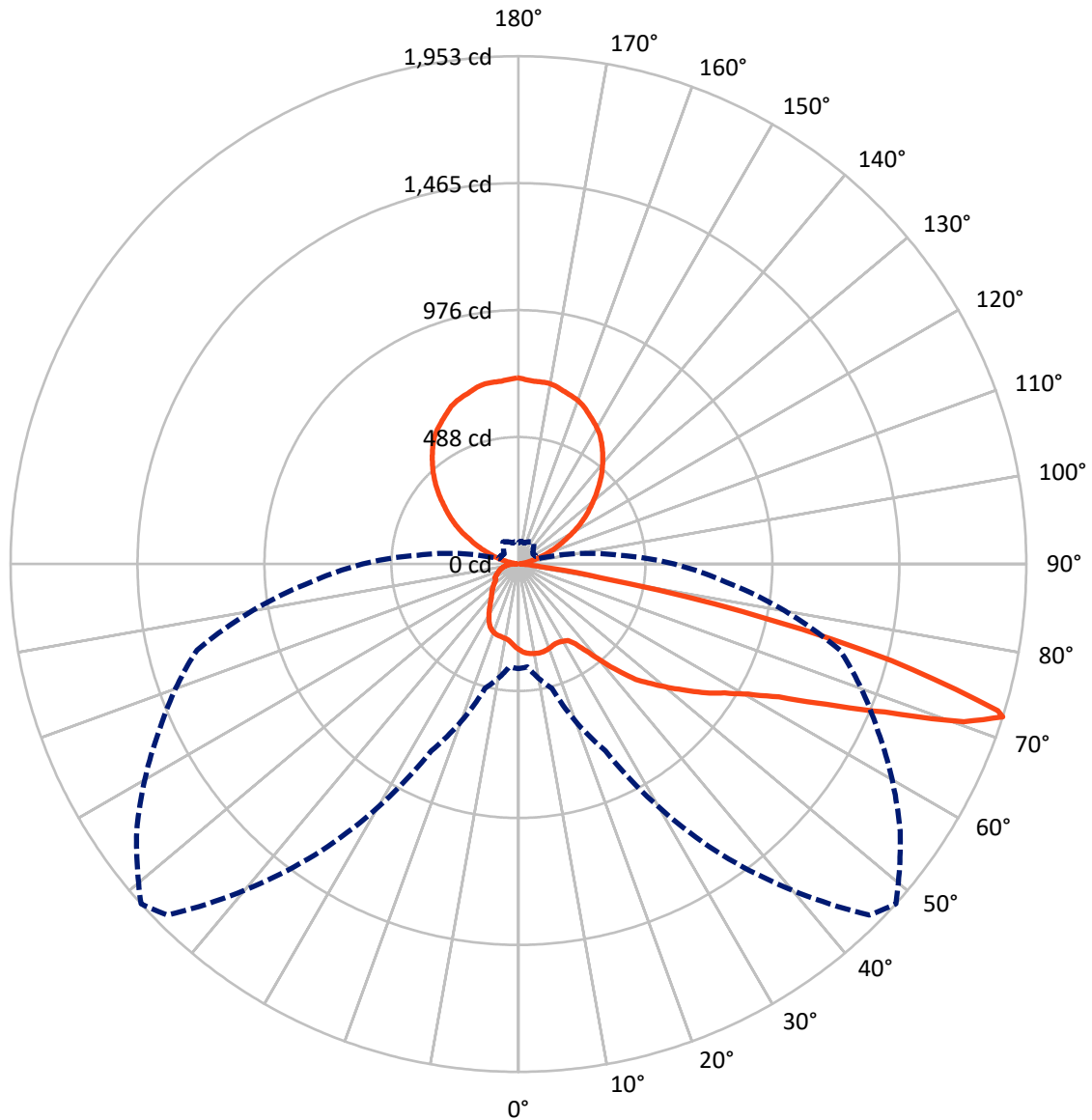
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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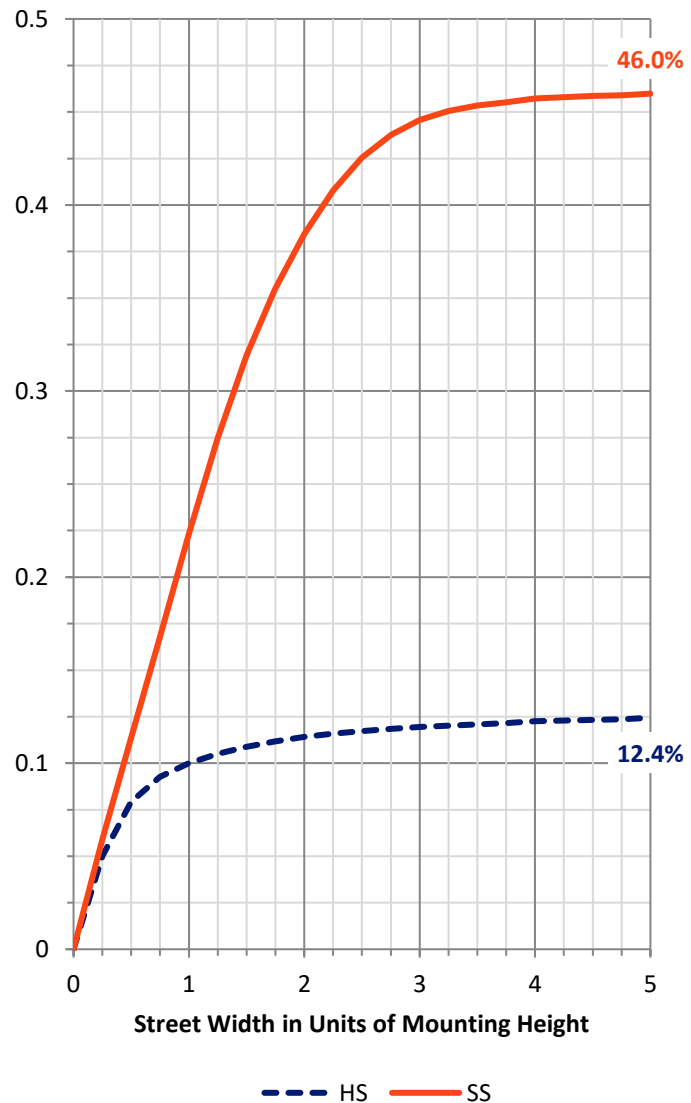
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	556.3	888.6	1444.9
	% Fixture	12.8	20.5	33.3
Street Side	Lumens	2002.1	887.9	2890.0
	% Fixture	46.2	20.5	66.7
Total	Lumens	2558.4	1776.5	4335.0
	% Fixture	59.0	41.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.1	0.7
10°-20°	90.9	2.1
20°-30°	140.2	3.2
30°-40°	210.2	4.8
40°-50°	350.0	8.1
50°-60°	546.9	12.6
60°-70°	722.4	16.7
70°-80°	417.9	9.6
80°-90°	49.0	1.1
90°-100°	11.0	0.3
100°-110°	58.7	1.4
110°-120°	169.9	3.9
120°-130°	279.4	6.4
130°-140°	344.6	7.9
140°-150°	352.5	8.1
150°-160°	297.0	6.9
160°-170°	195.5	4.5
170°-180°	67.8	1.6
0°-90°	2558.4	59.0
0°-180°	4335.0	100.0



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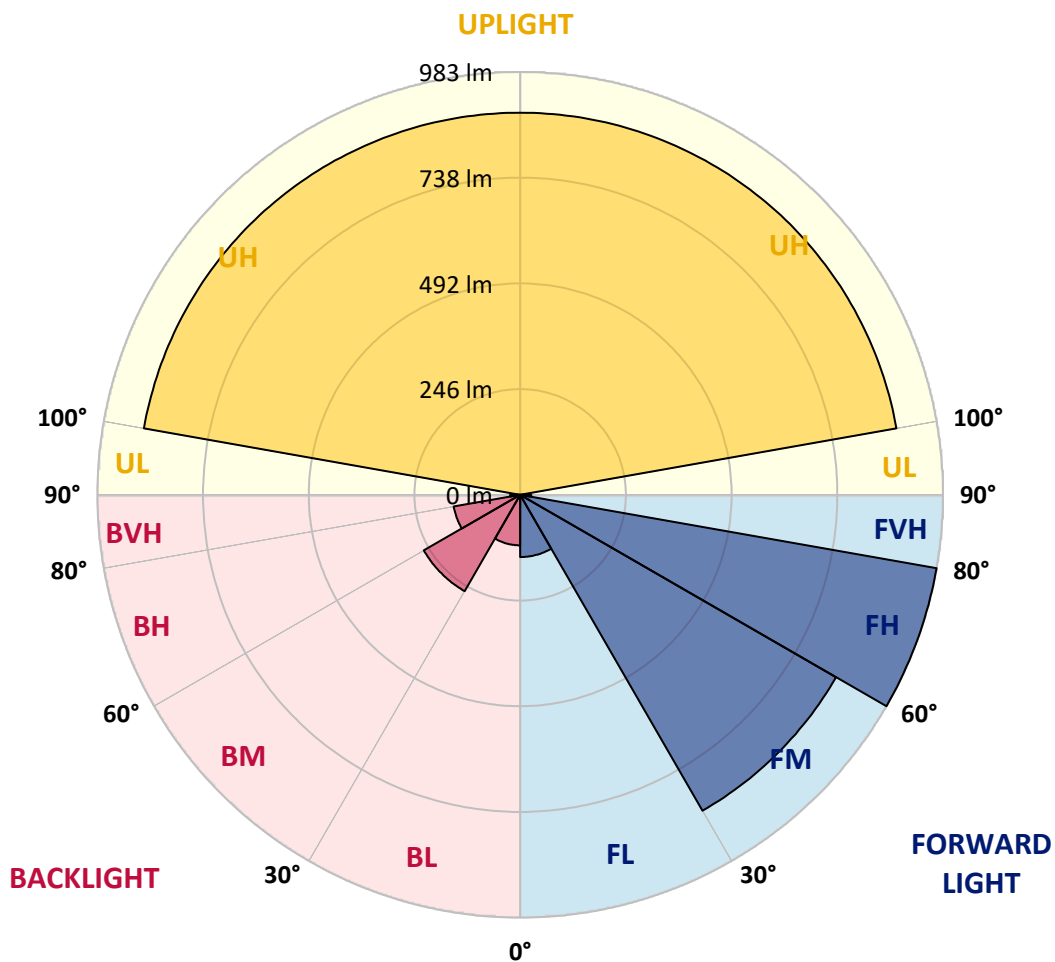
CATALOG NUMBER: ISW-AF-350-LED-E1-T4W-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	144.7	3.3			
FM (30°-60°)	848.4	19.6			
FH (60°-80°)	983.4	22.7			G1/1800
FVH (80°-90°)	25.7	0.6			G1/100
BL (0°-30°)	117.6	2.7	B1/500		
BM (30°-60°)	258.6	6.0	B1/1000		
BH (60°-80°)	156.8	3.6	B1/500		G1/500
BVH (80°-90°)	23.3	0.5			G1/100
UL (90°-100°)	11.0	0.3		U2/50	
UH (100°-180°)	888.6	20.5		U4/1000	

BUG Rating: B1-U5-G1

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
0°	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2
2.5°	346.7	346.3	346.3	343.3	342.2	340.3	338.8	336.7	334.4	331.7	328.5
5°	363.4	364.5	362.9	358.5	352.9	347.0	344.7	339.6	332.6	326.2	320.3
7.5°	379.3	379.7	375.6	368.2	359.7	350.4	347.4	340.3	332.6	324.0	315.5
10°	390.8	391.2	385.2	374.8	363.4	352.9	349.6	342.6	332.9	323.7	312.8
12.5°	397.5	397.8	388.9	378.2	364.5	354.0	351.1	343.7	333.7	321.8	309.9
15°	396.4	397.5	390.1	378.2	363.8	354.5	350.8	344.4	331.7	319.9	307.3
17.5°	388.9	390.5	384.5	371.5	360.0	352.6	348.5	342.2	329.9	317.3	303.6
20°	374.5	376.3	373.7	361.1	353.3	347.4	344.7	338.8	327.3	314.4	300.2
22.5°	358.1	360.0	359.3	348.8	345.1	342.2	339.6	335.1	325.1	312.1	298.8
25°	346.3	347.7	346.7	337.8	338.8	338.8	337.4	334.0	324.8	312.8	298.8
27.5°	365.9	365.9	356.3	338.1	336.2	339.6	338.8	337.0	329.6	316.6	301.8
30°	437.9	432.4	414.9	369.3	345.9	344.4	344.0	342.9	336.2	324.8	311.0
32.5°	518.4	512.9	492.1	435.0	386.4	354.5	351.1	351.5	349.6	338.8	325.1
35°	590.1	589.3	573.1	511.1	449.1	389.6	376.3	367.4	366.7	362.2	351.5
37.5°	648.0	648.0	649.5	579.0	517.0	445.7	423.1	394.9	394.9	392.3	385.7
40°	714.0	717.0	720.4	640.6	589.7	512.5	486.9	444.3	431.3	435.4	436.8
42.5°	800.9	804.7	802.4	716.7	656.1	592.3	560.8	509.2	477.3	484.0	499.5
45°	859.6	861.0	877.0	796.1	739.7	659.9	633.1	562.3	530.7	544.4	571.9
47.5°	926.0	929.7	932.3	886.3	837.7	736.3	687.3	613.9	593.4	614.2	657.7
50°	990.9	986.1	993.2	991.3	930.5	804.2	745.9	662.1	663.6	691.8	763.0
52.5°	1047.3	1031.0	1047.3	1067.8	1050.0	874.0	806.1	718.9	740.4	774.9	887.4
55°	1090.8	1051.4	1078.9	1136.8	1132.7	935.6	874.7	794.6	830.6	877.7	1038.4
57.5°	1002.1	1006.9	1082.6	1183.1	1181.3	998.0	934.9	889.3	933.4	986.1	1217.3
60°	919.3	940.8	1057.7	1190.6	1215.1	1065.9	1015.8	996.9	1037.7	1101.9	1388.8
62.5°	875.5	895.9	1017.3	1176.9	1268.9	1166.5	1124.5	1110.1	1165.8	1237.8	1541.7
65°	889.3	901.8	1014.7	1197.7	1330.9	1318.7	1300.5	1276.3	1304.2	1371.7	1610.7
67.5°	850.7	871.5	993.2	1234.4	1444.1	1504.2	1519.4	1493.4	1470.1	1460.8	1510.2
70°	633.1	653.2	780.8	1082.6	1536.9	1826.4	1817.1	1730.2	1572.9	1441.4	1179.9
72°	402.3	396.7	494.4	793.1	1366.2	1909.1	1952.9	1792.2	1526.1	1280.0	801.3
72.5°	292.5	318.9	410.1	705.1	1297.8	1863.8	1927.6	1772.2	1464.9	1209.1	704.8
75°	71.3	75.3	98.3	252.8	760.1	1402.5	1482.7	1369.1	1069.2	717.8	312.5
77.5°	48.3	50.1	65.0	89.1	223.4	799.7	879.9	756.0	478.4	244.2	139.2
80°	36.0	37.1	47.2	63.1	92.8	272.8	321.8	255.7	119.2	135.4	99.1
82.5°	25.3	26.0	35.6	46.4	61.6	63.8	85.0	93.9	77.2	88.7	57.9
85°	17.5	17.5	26.0	31.9	39.0	31.5	33.8	47.2	52.4	52.7	35.3
87.5°	9.3	10.4	15.2	20.5	20.5	14.4	16.0	24.1	29.4	31.5	21.2
90°	8.5	8.5	13.5	16.0	13.0	10.8	10.5	12.0	16.3	19.2	13.8
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.4	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	10.1	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	23.9	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	44.0	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	67.2	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	92.2	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	118.5	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	147.8	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	179.5	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	211.5	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	249.5	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	284.0	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	318.0	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	349.3	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	382.1	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	416.1	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	448.9	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	480.3	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	509.3	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	537.7	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	565.2	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	589.7	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	607.8	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.3	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	641.8	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	659.5	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	671.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	679.4	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.1	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	698.6	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	705.3	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.5	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	710.6	709.9	715.0	717.1	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2	329.2
2.5°	327.8	325.5	322.5	321.0	320.3	318.9	317.3	316.6	316.6	315.1	315.5
5°	317.3	313.9	309.9	306.9	306.6	306.6	307.3	307.3	307.7	306.6	308.0
7.5°	312.1	308.4	302.5	299.1	296.6	296.1	297.7	300.6	302.1	301.0	302.5
10°	308.4	304.3	297.7	293.6	291.7	290.9	292.1	295.0	299.8	299.8	301.4
12.5°	304.7	299.5	292.9	289.9	288.4	288.8	290.2	292.5	297.7	299.5	300.2
15°	301.0	295.0	289.5	285.4	285.4	286.5	288.4	290.9	295.8	299.1	299.8
17.5°	297.3	291.3	286.5	283.2	283.2	284.7	286.5	289.9	293.2	298.0	298.0
20°	293.9	289.1	282.8	279.9	279.5	280.6	282.8	286.1	288.8	293.6	293.9
22.5°	292.1	286.1	280.2	275.8	273.9	273.1	275.4	278.8	281.3	286.1	286.8
25°	291.3	284.7	277.2	269.0	264.2	262.8	263.9	267.9	270.2	273.9	275.0
27.5°	293.9	287.7	276.1	261.3	251.2	247.1	248.3	250.9	251.6	255.7	257.6
30°	302.8	295.4	278.3	253.1	235.0	227.5	227.5	227.9	229.0	232.3	232.7
32.5°	317.3	310.3	285.0	244.6	218.2	207.9	205.2	203.4	203.4	203.1	203.4
35°	344.0	338.1	296.6	235.0	200.1	188.5	182.2	178.9	175.5	174.1	173.7
37.5°	382.7	377.5	312.8	223.8	184.1	172.6	164.8	158.1	154.4	154.1	155.9
40°	440.2	435.0	331.0	211.1	168.9	160.3	152.2	145.2	141.1	141.4	143.2
42.5°	511.1	495.1	350.8	194.1	156.6	152.2	143.2	137.3	133.2	131.0	130.6
45°	593.8	567.1	369.3	178.1	143.2	145.2	136.6	129.9	124.7	118.8	118.0
47.5°	697.0	639.1	385.7	162.1	128.8	137.7	129.5	123.3	115.4	108.3	107.3
50°	804.7	721.9	399.7	145.2	115.8	129.5	122.4	114.0	103.2	96.9	96.9
52.5°	928.9	821.3	417.9	126.2	105.8	120.6	113.5	102.4	93.5	92.8	92.8
55°	1067.3	925.6	430.6	111.3	98.0	111.0	107.6	104.2	101.3	102.1	102.4
57.5°	1212.1	1034.3	419.4	101.0	91.7	108.7	118.4	114.0	104.6	104.2	103.9
60°	1336.8	1119.0	357.7	94.3	86.8	112.4	126.9	114.0	104.6	109.5	109.9
62.5°	1418.4	1159.0	238.2	85.7	79.8	106.2	124.0	110.6	105.1	118.8	119.9
65°	1407.4	1114.1	137.0	79.8	75.3	97.6	119.9	106.5	98.0	105.8	103.5
67.5°	1241.5	933.7	99.1	77.2	72.0	91.7	112.4	100.6	91.3	101.0	96.9
70°	892.2	635.8	85.3	75.0	69.8	84.6	107.3	96.9	87.6	94.3	88.0
72°	598.6	386.7	78.4	73.1	67.5	80.2	103.5	93.9	84.3	88.0	80.9
72.5°	509.5	305.0	76.4	72.3	66.8	79.1	102.4	93.2	83.5	87.3	80.5
75°	190.4	119.5	67.9	66.8	61.6	73.4	98.0	89.8	79.8	78.7	75.7
77.5°	98.0	75.7	57.9	59.0	55.3	67.2	93.2	84.6	73.4	69.4	67.9
80°	71.3	54.9	46.7	50.1	47.2	60.5	86.4	76.8	66.8	62.4	60.5
82.5°	44.9	34.2	35.6	39.7	40.1	53.4	78.7	69.0	59.3	55.6	52.7
85°	21.5	20.5	25.3	29.4	32.3	45.3	72.0	61.3	52.0	44.5	44.9
87.5°	11.5	15.5	15.2	19.6	24.9	37.1	63.8	50.1	41.5	33.5	33.8
90°	9.7	11.3	13.7	17.0	17.2	23.1	49.4	36.7	35.0	17.0	15.5
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



REPORT NUMBER: P226635

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

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)