

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: P226500

Luminaire Tested: **ISW-AF-450-LED-E1-T4FT-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P226500  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35943)-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-T4FT-ULG  
Description: IMPACT ELITE LED WEDGE LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV FORWARD THROW, WITH UPLIGHT GLOW  
Light Source: (16) 4000K CCT, 70 CRI LEDs and (1) UPLIGHT LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

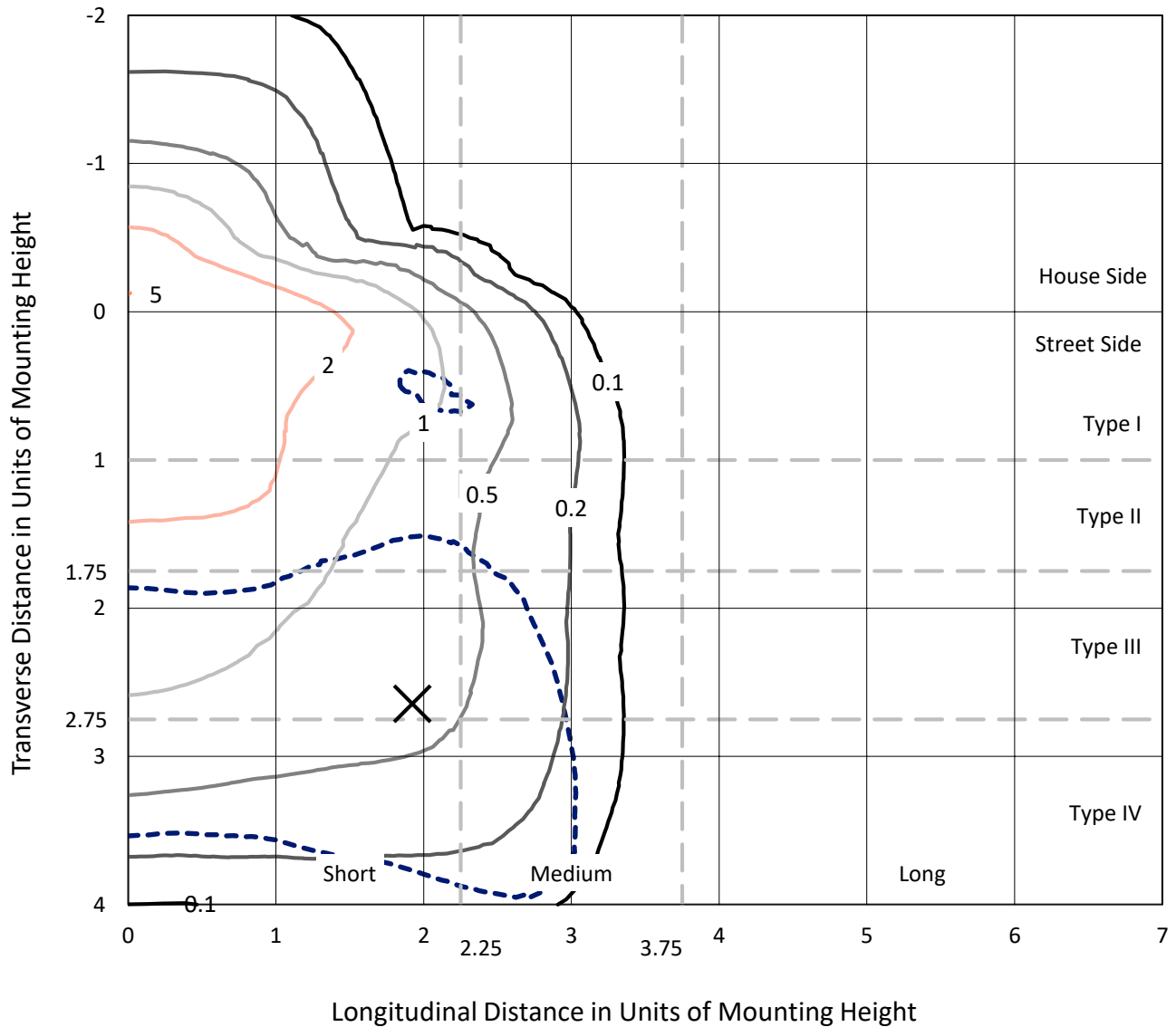
Lumens per Lamp: N/A  
Luminaire Lumens: 5027.2 lumens  
Efficiency: N/A  
Efficacy: 119.7 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U5 - G1  
  
Input Watts (W): 42.01  
Input Voltage (V): 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



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### Iso-Footcandle Lines of Horizontal Illumination

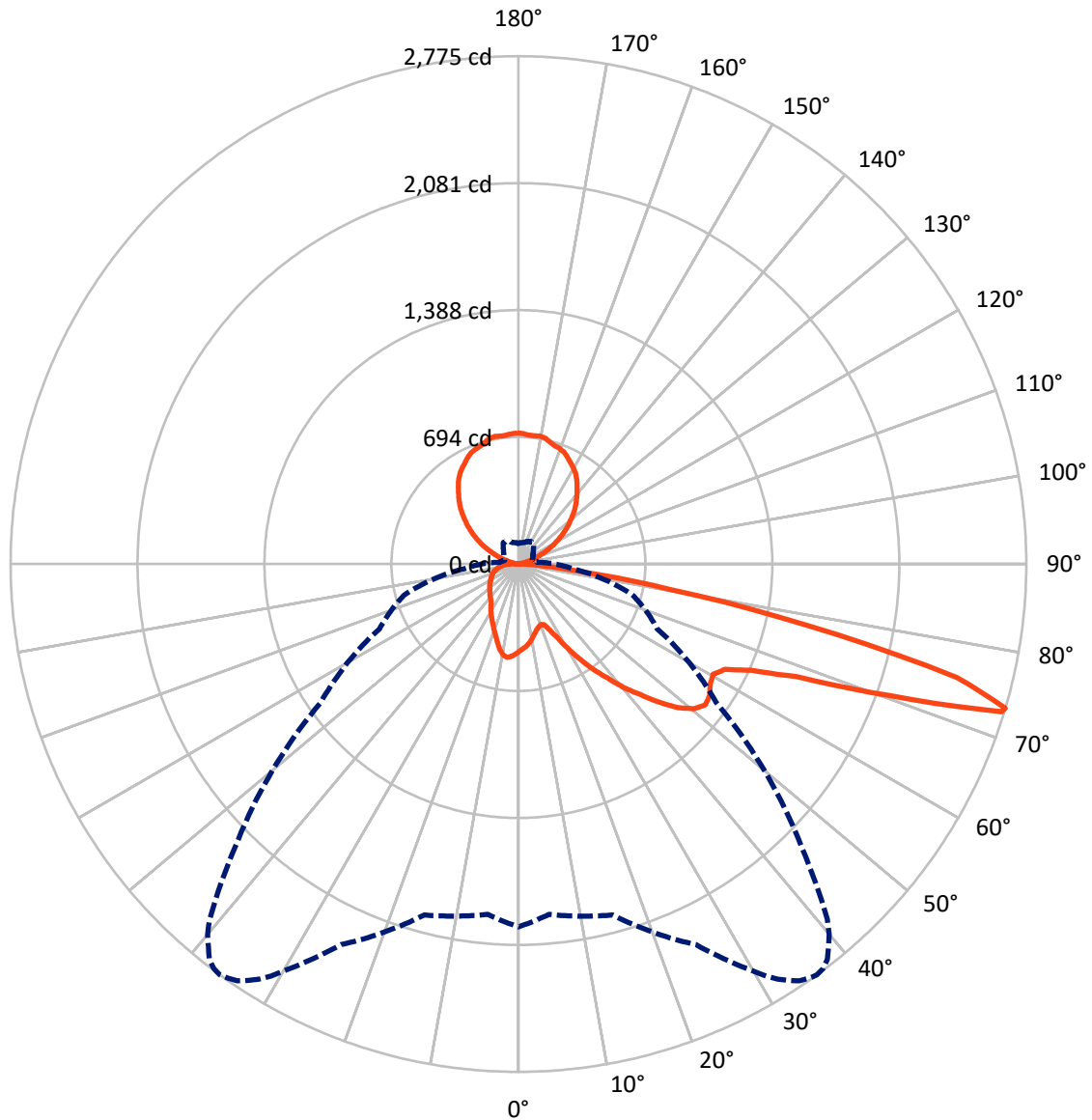
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 73-Deg Vertical

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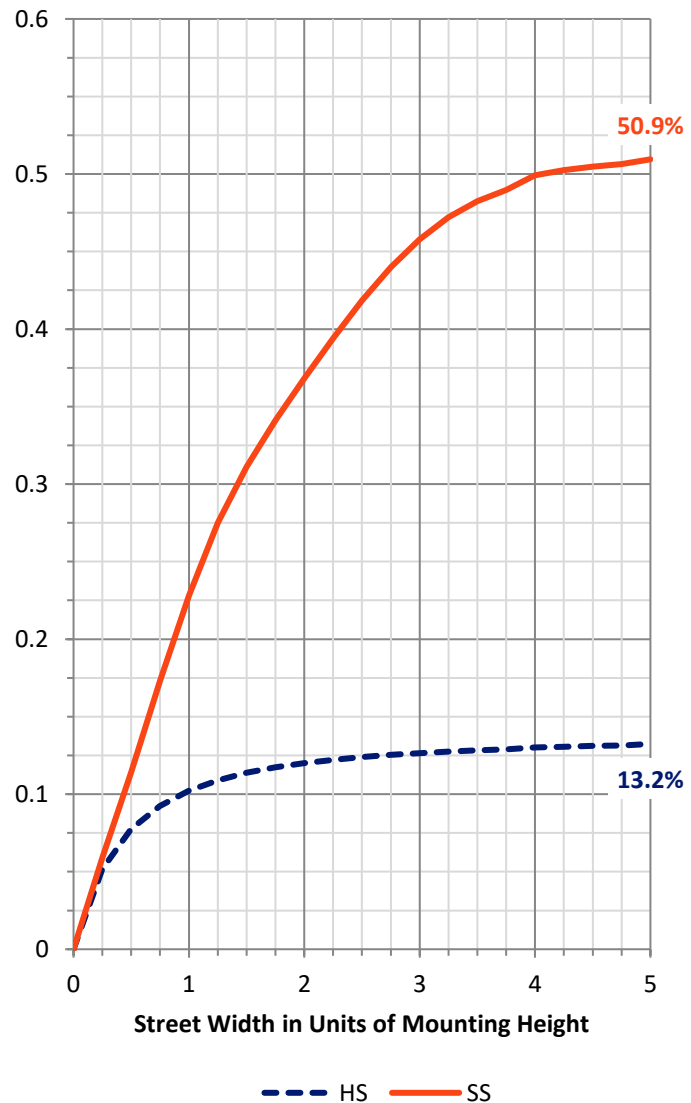
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	686.1	888.2	1574.3
	% Fixture	13.6	17.7	31.3
<b>Street Side</b>	Lumens	2565.2	887.7	3452.9
	% Fixture	51.0	17.7	68.7
<b>Total</b>	Lumens	3251.2	1776.0	5027.2
	% Fixture	64.7	35.3	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.9	0.9
10°-20°	119.1	2.4
20°-30°	195.2	3.9
30°-40°	323.4	6.4
40°-50°	475.3	9.5
50°-60°	599.3	11.9
60°-70°	784.7	15.6
70°-80°	635.2	12.6
80°-90°	74.1	1.5
90°-100°	10.5	0.2
100°-110°	58.7	1.2
110°-120°	169.9	3.4
120°-130°	279.4	5.6
130°-140°	344.6	6.9
140°-150°	352.5	7.0
150°-160°	297.0	5.9
160°-170°	195.5	3.9
170°-180°	67.8	1.3
0°-90°	3251.2	64.7
0°-180°	5027.2	100.0



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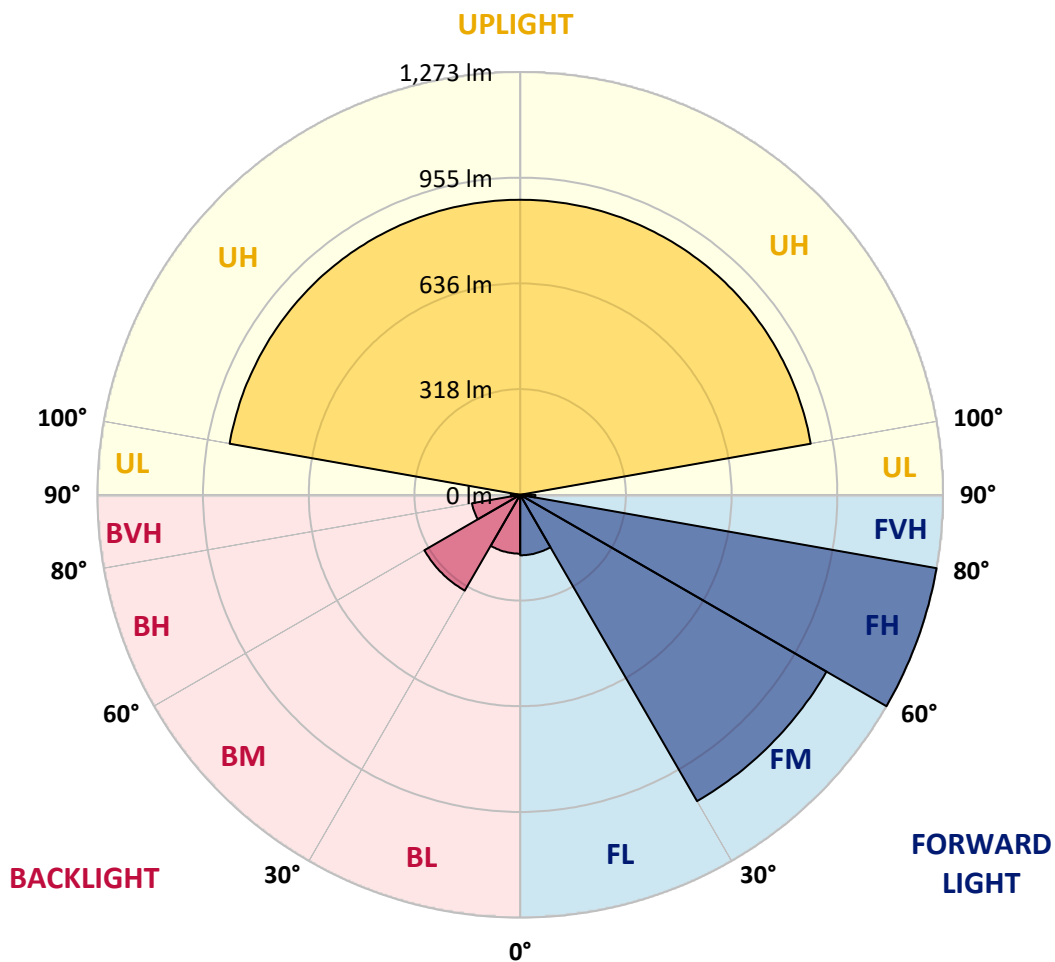
CATALOG NUMBER: ISW-AF-450-LED-E1-T4FT-ULG

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	182.0	3.6			
FM	(30°-60°)	1064.7	21.2			
FH	(60°-80°)	1272.9	25.3			G1/1800
FVH	(80°-90°)	45.6	0.9			G1/100
BL	(0°-30°)	177.2	3.5	B1/500		
BM	(30°-60°)	333.2	6.6	B1/1000		
BH	(60°-80°)	147.1	2.9	B1/500		G1/500
BVH	(80°-90°)	28.5	0.6			G1/100
UL	(90°-100°)	10.5	0.2		U2/50	
UH	(100°-180°)	888.2	17.7		U4/1000	

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

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	30°	31°	32°	33°	34°	35°	36°
0°	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5
2.5°	460.2	461.1	462.1	462.1	462.1	463.5	463.0	463.0	463.5	464.0	464.0
5°	443.0	443.4	446.3	447.2	450.0	449.5	449.5	449.5	451.4	450.0	450.9
7.5°	423.4	424.3	427.2	430.5	432.7	433.2	432.7	431.8	434.1	435.1	434.1
10°	400.2	400.6	404.4	407.1	410.8	410.4	411.8	411.8	412.8	412.2	414.1
12.5°	388.5	387.6	385.8	387.1	388.0	388.0	388.0	389.4	388.9	389.9	391.3
15°	387.1	384.7	375.4	372.1	371.2	371.2	370.8	370.3	371.7	373.2	373.2
17.5°	393.6	388.9	370.8	361.5	359.7	358.6	359.2	358.2	358.2	360.1	359.7
20°	425.3	417.0	380.5	360.1	354.5	354.5	354.0	352.6	352.6	353.1	353.1
22.5°	505.8	495.2	431.8	389.4	369.9	369.4	368.0	366.6	362.8	361.9	360.1
25°	618.2	605.6	497.1	451.4	423.9	423.0	416.0	415.0	406.2	406.6	400.6
27.5°	705.2	696.8	584.1	523.5	497.5	491.9	488.7	480.3	472.8	466.8	459.3
30°	735.1	733.7	672.2	623.3	584.1	577.7	568.8	565.1	554.3	545.9	540.8
32.5°	782.1	783.5	757.9	703.9	669.8	663.4	655.9	647.0	639.5	634.0	621.9
35°	849.3	849.7	832.0	791.5	752.3	743.5	739.3	729.1	722.0	715.0	709.0
37.5°	895.8	898.2	885.6	854.4	831.0	818.5	818.0	810.6	802.6	796.6	790.9
40°	985.2	972.6	931.2	911.1	892.0	890.7	886.5	882.3	884.1	880.9	886.9
42.5°	1075.6	1059.8	1002.0	973.5	962.0	964.2	962.9	963.3	968.9	967.5	974.1
45°	1153.0	1134.8	1079.8	1046.3	1055.6	1058.3	1066.3	1070.9	1068.6	1077.0	1077.0
47.5°	1230.3	1187.9	1122.7	1138.0	1144.6	1166.0	1171.6	1170.2	1178.1	1181.8	1171.6
50°	1175.8	1164.5	1159.4	1206.5	1235.8	1242.8	1250.8	1255.0	1258.6	1253.5	1243.3
52.5°	1060.7	1059.8	1132.0	1247.0	1271.7	1281.0	1288.5	1291.8	1290.4	1287.6	1279.2
55°	1022.0	1014.6	1077.0	1205.1	1242.8	1251.7	1262.4	1268.9	1275.4	1274.5	1267.9
57.5°	1074.7	1068.6	1069.1	1168.3	1205.1	1213.0	1220.0	1227.4	1229.3	1235.4	1235.8
60°	1227.4	1219.6	1155.7	1166.9	1204.2	1213.0	1213.9	1218.1	1218.6	1221.9	1222.3
62.5°	1447.8	1433.4	1336.0	1252.2	1265.2	1269.4	1272.7	1271.7	1269.9	1267.5	1267.5
65°	1689.1	1675.6	1550.3	1452.5	1414.7	1425.0	1408.7	1405.4	1401.6	1401.6	1397.5
67.5°	1976.0	1950.5	1853.5	1743.6	1689.1	1694.2	1701.7	1673.2	1663.0	1663.9	1642.0
70°	2268.6	2241.6	2199.1	2197.8	2225.2	2213.2	2178.7	2224.3	2170.3	2157.3	2152.6
72.5°	2107.0	2074.9	2083.6	2346.9	2593.7	2633.8	2671.9	2707.4	2739.1	2758.2	2760.9
73°	1983.0	1922.0	1985.3	2294.7	2568.6	2627.8	2675.2	2713.0	2747.0	2764.2	2775.0
75°	990.3	993.6	1305.7	1893.2	2244.9	2295.6	2369.7	2411.1	2472.6	2504.3	2476.4
77.5°	229.7	238.0	395.5	898.6	1345.8	1418.4	1477.7	1538.2	1609.4	1636.0	1612.7
80°	81.0	84.8	139.3	341.5	561.8	601.8	652.6	719.2	785.4	801.7	842.7
82.5°	42.9	47.1	73.6	148.1	239.9	262.3	275.3	302.8	326.1	340.0	347.5
85°	24.7	25.2	41.9	81.9	110.0	118.8	127.2	133.7	141.2	136.1	136.1
87.5°	9.8	10.7	21.4	38.7	53.1	59.1	59.1	59.1	58.7	51.7	47.1
90°	7.0	7.9	11.4	16.1	15.1	15.1	14.7	13.8	13.3	13.8	11.4
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	8.7	8.8	8.9	9.0	9.1	9.2	9.2
100°	8.2	8.2	9.2	10.2	11.3	11.5	11.7	11.9	12.1	12.3	13.2
102.5°	11.3	11.3	13.3	18.4	23.0	23.9	24.9	25.8	26.7	27.6	28.9
105°	21.5	22.5	27.6	36.8	43.0	44.2	45.4	46.6	47.9	49.1	50.6
107.5°	41.9	43.0	50.1	59.3	67.0	68.5	70.1	71.6	73.1	74.7	76.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	30°	31°	32°	33°	34°	35°	36°
110°	67.5	69.6	75.7	89.0	96.7	98.2	99.7	101.3	102.8	104.3	105.6
112.5°	101.3	101.3	108.4	123.8	130.4	131.8	133.1	134.4	135.7	137.1	138.0
115°	143.2	142.2	150.4	162.6	167.3	168.2	169.1	170.0	170.9	171.9	172.5
117.5°	188.2	188.2	193.3	201.5	204.1	204.6	205.1	205.6	206.1	206.6	206.9
120°	230.2	228.1	231.2	238.3	240.4	240.8	241.2	241.6	242.0	242.4	243.1
122.5°	269.0	266.0	267.0	273.1	275.2	275.6	276.0	276.4	276.8	277.2	277.8
125°	304.8	300.7	302.8	305.9	308.9	309.5	310.2	310.8	311.4	312.0	312.5
127.5°	337.6	336.6	336.6	340.6	343.7	344.3	344.9	345.6	346.2	346.8	346.9
130°	371.3	369.3	370.3	374.4	376.4	376.9	377.3	377.7	378.1	378.5	378.7
132.5°	405.1	403.0	402.0	410.2	411.7	412.0	412.4	412.7	413.0	413.3	413.4
135°	438.8	435.8	435.8	441.9	443.4	443.8	444.1	444.4	444.7	445.0	445.2
137.5°	470.6	467.5	469.5	470.6	472.6	473.0	473.4	473.8	474.2	474.6	475.1
140°	499.2	496.1	498.2	500.2	501.2	501.5	501.7	501.9	502.1	502.3	502.9
142.5°	529.9	526.8	528.9	529.9	531.4	531.7	532.0	532.3	532.7	533.0	533.4
145°	562.6	558.5	556.5	559.6	561.1	561.4	561.7	562.0	562.3	562.6	562.7
147.5°	588.2	585.1	584.1	587.2	587.2	587.2	587.2	587.2	587.2	587.2	587.3
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	606.6	606.6	606.6	606.6
152.5°	625.0	622.0	622.0	623.0	623.5	623.6	623.7	623.8	623.9	624.0	624.0
155°	643.4	639.3	639.3	641.4	642.9	643.2	643.5	643.8	644.2	644.5	644.3
157.5°	660.8	657.8	657.8	658.8	659.8	660.0	660.2	660.4	660.6	660.8	660.7
160°	678.2	675.1	674.1	671.1	670.5	670.4	670.3	670.2	670.1	670.0	670.0
162.5°	688.4	684.4	684.4	680.3	678.2	677.8	677.4	677.0	676.6	676.2	676.4
165°	696.6	693.6	691.5	691.5	690.0	689.7	689.4	689.1	688.8	688.4	688.4
167.5°	705.8	702.8	699.7	701.7	702.8	703.0	703.2	703.4	703.6	703.8	703.5
170°	714.0	711.0	707.9	707.9	708.4	708.5	708.6	708.7	708.8	708.9	708.7
172.5°	715.0	713.0	711.0	708.9	707.4	707.1	706.8	706.4	706.1	705.8	705.8
175°	716.1	714.0	713.0	711.0	708.9	708.5	708.1	707.7	707.3	706.9	706.8
177.5°	723.2	721.2	716.1	715.0	714.0	713.8	713.6	713.4	713.2	713.0	712.8
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):**

	37°	38°	39°	40°	41°	45°	55°	65°	75°	85°	90°
0°	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5
2.5°	464.9	465.3	464.4	466.3	464.9	464.9	467.2	471.4	474.6	475.6	478.4
5°	451.8	452.3	452.3	452.8	452.3	453.3	457.5	461.1	467.7	471.0	475.2
7.5°	435.1	436.5	436.0	436.9	436.9	437.9	444.4	450.5	457.0	463.0	468.2
10°	415.0	416.0	417.9	417.0	417.0	419.7	426.7	435.6	443.4	452.3	458.4
12.5°	391.3	393.6	393.1	395.1	396.0	397.8	409.5	419.2	429.0	439.3	447.2
15°	372.7	374.1	375.0	375.4	375.4	379.6	391.3	403.5	416.4	428.5	436.9
17.5°	360.6	360.6	361.5	361.9	362.8	365.7	377.8	391.3	406.2	421.1	430.5
20°	353.5	353.5	354.0	354.5	354.5	357.7	369.0	384.3	400.6	419.7	430.9
22.5°	359.2	357.7	357.3	357.3	355.5	355.5	366.1	382.5	402.9	427.6	442.1
25°	397.3	393.1	386.7	385.2	382.9	371.7	370.3	388.9	414.1	444.9	466.8
27.5°	454.6	450.5	446.3	441.1	437.4	417.0	388.9	405.7	435.6	479.4	506.4
30°	529.7	521.3	515.2	509.6	493.3	471.0	427.6	431.8	468.6	527.3	561.3
32.5°	613.5	604.7	595.4	582.3	578.1	541.8	486.3	475.2	510.6	583.2	618.6
35°	694.6	690.4	683.8	678.7	668.9	638.6	562.7	527.3	559.0	648.9	676.4
37.5°	788.7	780.7	781.2	777.0	771.4	745.8	641.9	590.2	611.2	711.8	729.1
40°	881.4	879.5	882.3	875.3	865.9	831.5	700.1	636.3	665.6	772.3	768.1
42.5°	968.9	970.4	967.1	959.1	948.9	891.1	737.4	675.5	714.5	825.4	799.3
45°	1069.1	1064.0	1050.5	1036.5	1023.9	942.3	757.4	719.2	761.6	882.7	831.0
47.5°	1163.6	1143.7	1132.0	1110.5	1085.9	989.0	784.5	765.4	813.8	936.8	861.3
50°	1233.1	1214.4	1194.8	1168.7	1142.6	1029.5	820.3	817.5	873.0	997.4	902.8
52.5°	1264.8	1247.5	1228.4	1201.9	1175.8	1058.9	868.3	868.3	942.9	1077.5	960.0
55°	1259.6	1247.0	1230.3	1206.1	1186.0	1074.7	917.7	924.2	1030.4	1164.1	1026.2
57.5°	1232.6	1225.6	1215.8	1199.0	1182.7	1086.8	975.9	980.1	1147.9	1247.5	1088.6
60°	1223.2	1220.5	1214.9	1205.1	1192.6	1113.4	1037.9	1047.2	1279.2	1323.9	1124.0
62.5°	1264.8	1259.2	1255.0	1245.1	1233.5	1178.5	1115.6	1118.5	1402.6	1333.2	1089.5
65°	1381.2	1371.0	1363.9	1350.9	1337.8	1276.8	1214.9	1184.6	1463.1	1246.1	972.6
67.5°	1625.3	1608.5	1588.4	1563.8	1527.9	1472.9	1313.2	1193.9	1408.2	1055.6	767.2
70°	2107.9	2071.6	2025.4	1972.8	1959.3	1799.1	1374.6	1124.9	1170.7	737.4	508.7
72.5°	2756.3	2718.6	2677.6	2634.3	2548.6	2196.4	1347.6	907.5	728.1	379.2	242.2
73°	2767.0	2741.4	2692.0	2641.7	2571.8	2189.4	1318.3	836.7	641.9	298.6	198.5
75°	2481.5	2471.2	2422.8	2325.9	2266.8	1849.4	970.8	484.9	280.9	184.4	129.0
77.5°	1610.3	1599.2	1571.7	1562.4	1453.4	1199.0	434.7	188.6	152.8	122.5	91.3
80°	858.1	805.9	796.6	759.3	679.6	461.7	148.6	115.5	101.6	81.9	63.8
82.5°	348.0	325.6	317.2	287.4	270.2	138.3	74.6	80.1	68.0	48.5	39.2
85°	128.1	117.8	115.1	93.6	82.4	41.0	45.6	56.4	42.4	27.0	19.5
87.5°	44.3	38.2	33.0	25.6	23.7	16.8	25.2	30.8	27.0	16.3	9.3
90°	11.3	10.6	10.1	9.5	9.9	9.0	9.9	13.4	13.9	9.9	9.0
92.5°	6.1	6.1	6.1	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1
95°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2	7.2
97.5°	9.2	9.2	9.2	9.2	9.2	9.2	12.3	10.2	9.2	8.2	8.2
100°	14.1	15.0	16.0	16.9	17.8	21.5	29.7	26.6	23.5	19.4	19.4
102.5°	30.3	31.6	32.9	34.3	35.6	40.9	51.1	48.1	43.0	39.9	38.9
105°	52.2	53.7	55.2	56.8	58.3	64.4	73.7	71.6	66.5	62.4	62.4
107.5°	77.7	79.3	80.8	82.3	83.9	90.0	97.2	96.2	92.1	89.0	88.0



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CATALOG NUMBER: ISW-AF-450-LED-E1-T4FT-ULG

**CANDELA DISTRIBUTION (continued):**

	37°	38°	39°	40°	41°	45°	55°	65°	75°	85°	90°
110°	106.8	108.0	109.3	110.5	111.7	116.6	122.8	123.8	121.7	118.7	119.7
112.5°	138.9	139.8	140.8	141.7	142.6	146.3	151.4	153.4	152.4	150.4	150.4
115°	173.1	173.7	174.3	174.9	175.5	178.0	183.1	186.2	183.1	181.1	182.1
117.5°	207.2	207.6	207.9	208.2	208.5	209.7	215.8	219.9	214.8	212.8	213.8
120°	243.7	244.3	244.9	245.5	246.1	248.6	251.6	255.7	250.6	248.6	248.6
122.5°	278.4	279.1	279.7	280.3	280.9	283.4	285.4	289.5	284.4	282.3	283.4
125°	313.0	313.5	314.0	314.6	315.1	317.1	320.2	322.2	317.1	317.1	317.1
127.5°	347.0	347.1	347.2	347.3	347.4	347.8	352.9	353.9	353.9	352.9	355.0
130°	378.9	379.1	379.3	379.5	379.7	380.5	385.7	389.7	389.7	387.7	388.7
132.5°	413.5	413.6	413.7	413.8	413.9	414.3	420.4	425.5	423.5	423.5	424.5
135°	445.4	445.6	445.8	446.0	446.2	447.0	453.2	458.3	457.3	460.3	461.4
137.5°	475.5	475.9	476.3	476.7	477.1	478.7	483.9	485.9	486.9	492.0	493.1
140°	503.5	504.1	504.7	505.3	506.0	508.4	511.5	513.5	515.6	520.7	522.7
142.5°	533.8	534.2	534.6	535.0	535.4	537.0	539.1	545.2	545.2	546.3	548.3
145°	562.8	562.9	563.0	563.1	563.2	563.6	568.8	574.9	573.9	570.8	572.9
147.5°	587.4	587.5	587.6	587.7	587.8	588.2	593.3	598.4	599.4	596.4	598.4
150°	606.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9	624.0
152.5°	624.0	624.0	624.0	624.0	624.0	624.0	625.0	628.1	632.2	637.3	642.4
155°	644.0	643.8	643.6	643.4	643.2	642.4	640.4	645.5	650.6	652.6	655.7
157.5°	660.6	660.5	660.4	660.3	660.2	659.8	658.8	662.9	664.9	664.9	670.0
160°	670.0	670.0	670.0	670.0	670.0	670.0	673.1	679.2	676.2	675.1	681.3
162.5°	676.6	676.8	677.0	677.2	677.4	678.2	682.3	686.4	685.4	683.3	689.5
165°	688.4	688.4	688.4	688.4	688.4	688.4	687.4	692.5	695.6	693.6	697.7
167.5°	703.2	702.9	702.6	702.3	701.9	700.7	693.6	699.7	703.8	703.8	709.9
170°	708.5	708.3	708.1	707.9	707.7	706.9	701.7	704.8	709.9	712.0	717.1
172.5°	705.8	705.8	705.8	705.8	705.8	705.8	704.8	707.9	709.9	712.0	717.1
175°	706.7	706.6	706.4	706.3	706.2	705.8	705.8	711.0	712.0	709.9	715.0
177.5°	712.6	712.4	712.2	712.0	711.8	711.0	709.9	715.0	717.1	714.0	718.1
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: P226500

CATALOG NUMBER: ISW-AF-450-LED-E1-T4FT-ULG

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5	477.5
2.5°	479.4	481.2	484.9	487.7	490.1	493.3	494.3	496.1	493.8	496.5
5°	477.5	483.0	490.1	496.5	502.7	507.8	510.0	510.6	511.0	512.9
7.5°	472.8	481.2	492.3	501.2	510.6	513.8	515.2	515.7	512.4	513.8
10°	463.5	477.0	491.0	501.7	506.4	504.0	500.3	494.3	491.4	491.4
12.5°	453.3	470.5	486.8	492.9	488.7	479.8	469.5	458.4	454.2	454.2
15°	444.9	466.8	480.3	476.1	464.0	447.2	433.2	421.6	417.9	416.4
17.5°	440.2	464.9	470.0	457.0	436.5	415.5	401.5	391.8	388.5	388.5
20°	444.0	466.8	458.4	434.1	408.6	389.4	377.4	370.8	367.5	369.0
22.5°	459.8	473.7	448.2	411.8	380.5	364.3	358.6	354.5	354.0	355.0
25°	486.3	483.0	439.3	388.5	354.5	342.9	342.4	340.9	340.5	340.0
27.5°	520.8	494.7	428.5	362.4	328.4	322.8	325.6	325.2	324.7	325.2
30°	566.4	504.9	412.8	334.0	303.7	303.7	307.9	306.5	304.6	305.1
32.5°	608.9	512.4	388.5	302.3	284.2	285.1	286.5	282.7	278.1	279.1
35°	645.2	512.4	355.9	273.9	264.1	264.1	265.0	261.8	258.1	256.7
37.5°	675.5	502.2	314.9	252.5	247.9	247.9	251.5	248.3	241.3	239.9
40°	693.7	479.8	277.1	236.6	239.9	240.4	235.3	229.7	223.1	221.8
42.5°	705.2	447.2	247.3	225.5	234.8	231.1	218.9	210.1	209.6	211.4
45°	715.6	410.4	223.6	214.3	229.1	221.3	205.0	196.6	199.4	201.2
47.5°	725.8	373.6	204.5	201.7	218.9	213.4	196.1	186.8	185.4	188.2
50°	750.0	322.3	182.6	186.8	206.3	204.5	188.2	177.5	168.6	168.2
52.5°	782.6	253.9	164.0	173.8	196.6	199.4	179.3	169.1	157.0	155.1
55°	819.0	194.7	148.6	163.5	187.3	191.9	176.0	160.7	147.7	145.8
57.5°	829.6	153.7	134.1	149.0	174.7	184.9	170.9	150.9	141.2	139.3
60°	792.9	127.7	122.0	137.0	162.1	178.0	163.1	143.5	134.6	133.2
62.5°	680.6	112.7	115.5	129.0	152.8	171.4	157.0	137.9	130.9	130.0
65°	519.4	102.5	110.0	122.5	144.4	165.4	152.8	135.5	130.0	129.0
67.5°	326.1	95.0	104.3	115.5	136.1	158.9	149.6	132.8	128.6	127.2
70°	180.8	87.2	96.9	107.6	127.7	152.8	145.4	128.6	128.1	125.3
72.5°	110.0	78.8	89.0	99.2	118.4	145.4	137.9	123.5	118.8	113.2
73°	104.9	77.7	87.2	97.4	116.0	143.5	136.5	121.6	116.9	111.3
75°	84.8	69.9	79.7	88.5	107.6	136.1	128.6	115.1	107.6	103.4
77.5°	62.4	59.6	68.9	77.3	96.9	125.8	117.4	105.3	96.5	94.1
80°	46.1	49.4	58.2	65.7	85.2	115.5	105.8	94.1	88.5	85.7
82.5°	31.2	38.2	46.5	52.7	75.5	104.3	93.6	82.4	86.1	71.7
85°	18.2	26.6	33.6	41.0	60.6	93.2	81.5	70.4	61.5	55.4
87.5°	12.1	14.9	20.5	27.9	43.8	73.1	64.8	54.9	40.1	40.1
90°	8.6	11.0	12.0	10.4	13.2	39.4	29.6	32.7	9.8	9.3
92.5°	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	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



REPORT NUMBER: P226500

CATALOG NUMBER: ISW-AF-450-LED-E1-T4FT-ULG

**CANDELA DISTRIBUTION (continued):**

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

(END OF REPORT)