

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: P226847

Luminaire Tested: **IST-AF-450-LED-E1-SL2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226847
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35945)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: IST-AF-450-LED-E1-SL2-8030
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II W/SPILL CONTROL
Light Source: (16) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2472.6 lumens
Efficiency: N/A
Efficacy: 97.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U1 - G1

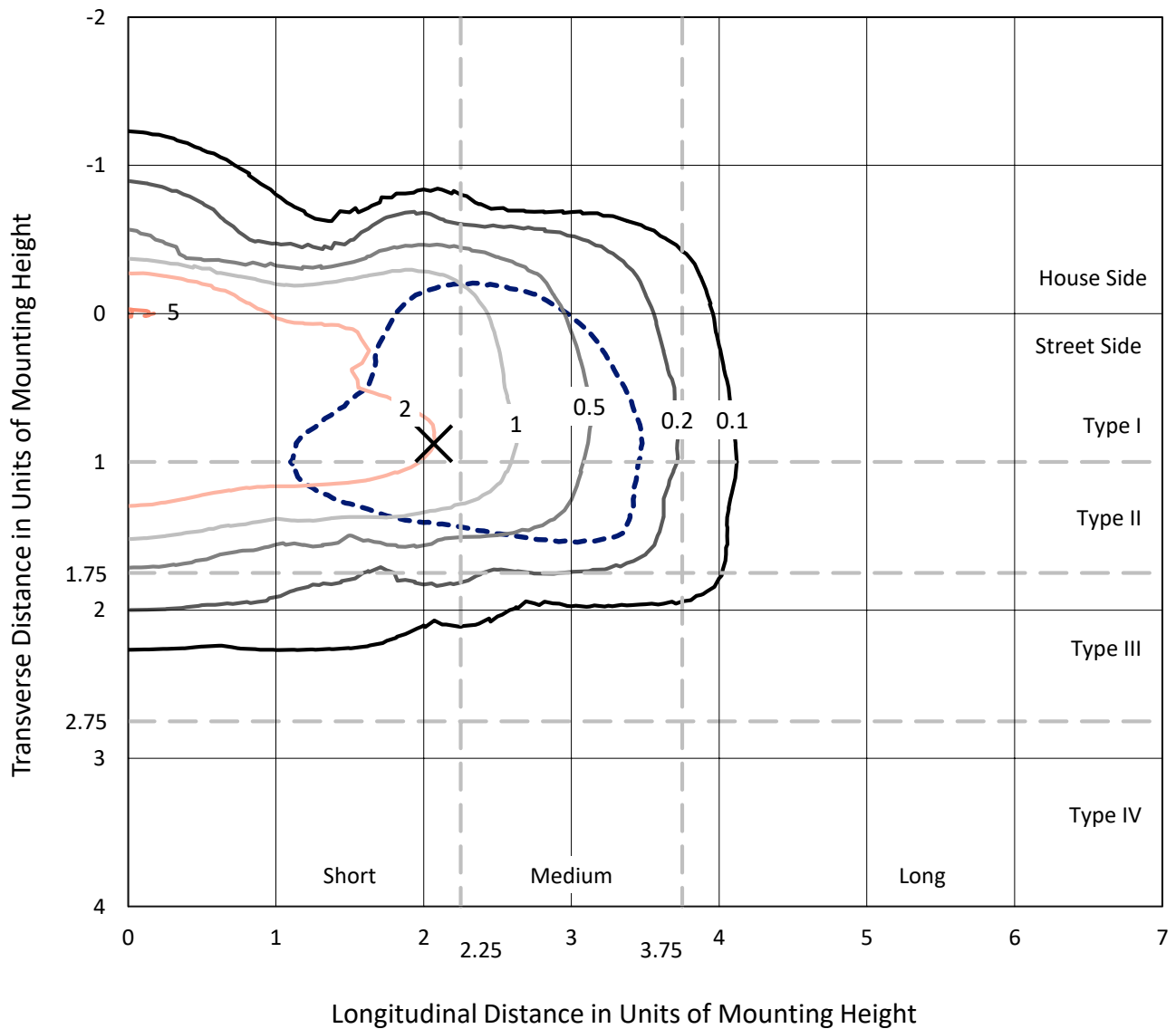
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

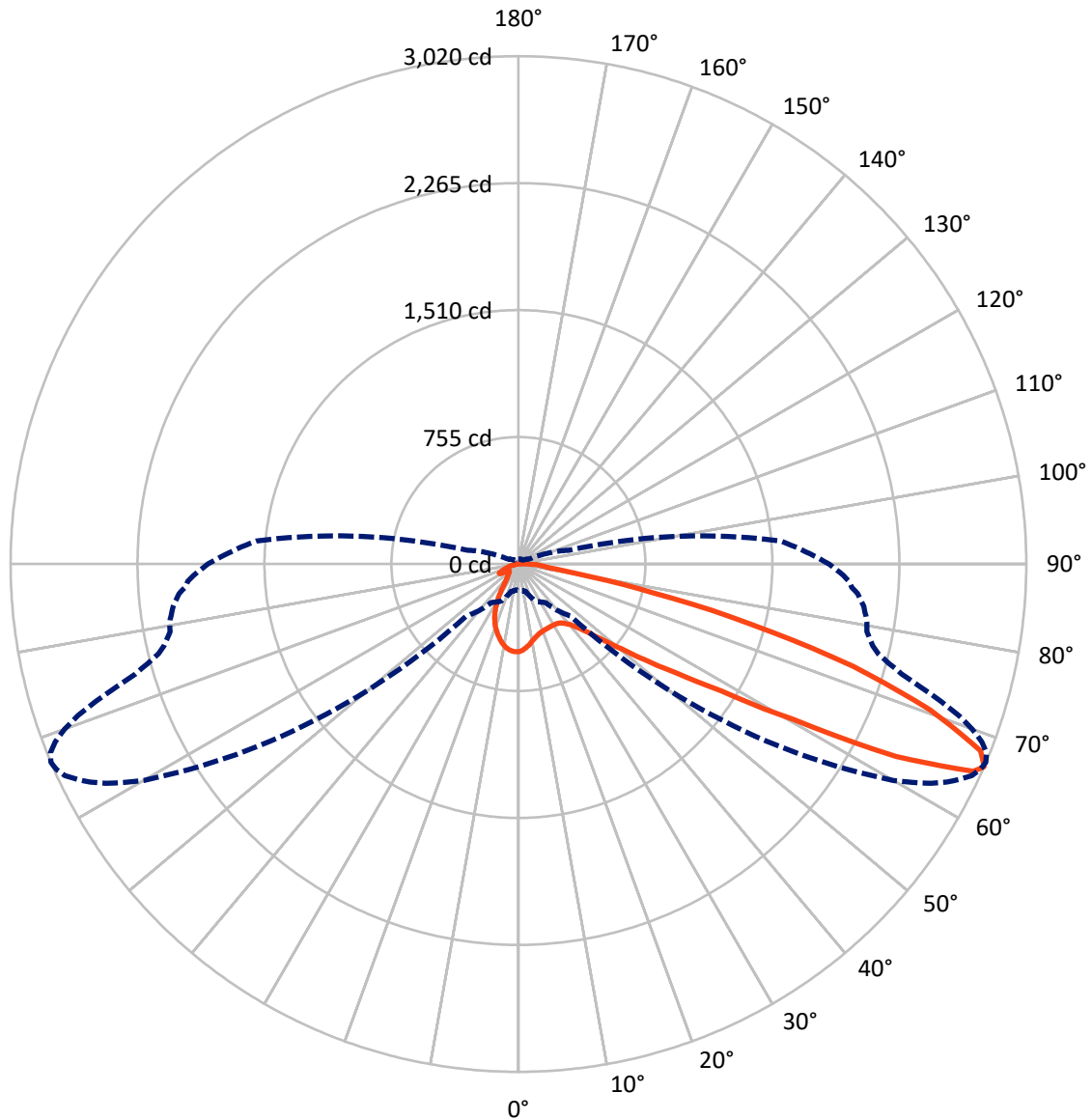
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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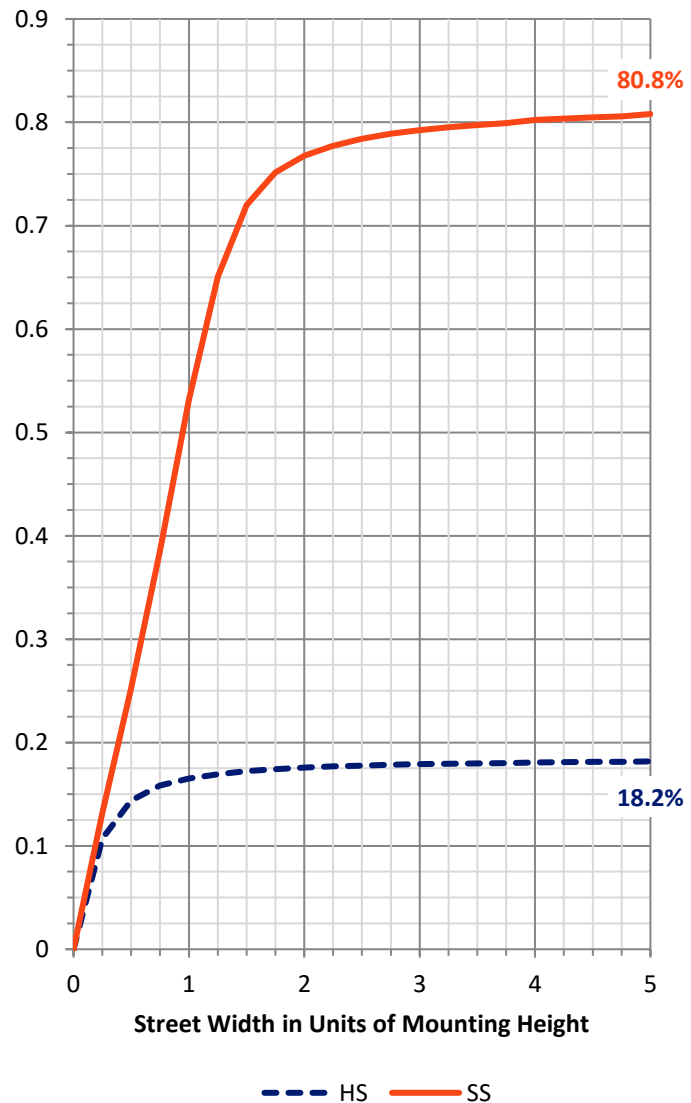
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	456.5	0.2	456.7
	% Fixture	18.5	0.0	18.5
Street Side	Lumens	2015.2	0.7	2015.9
	% Fixture	81.5	0.0	81.5
Total	Lumens	2471.7	0.9	2472.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	1.8
10°-20°	107.4	4.3
20°-30°	147.3	6.0
30°-40°	210.4	8.5
40°-50°	341.2	13.8
50°-60°	540.6	21.9
60°-70°	685.1	27.7
70°-80°	340.6	13.8
80°-90°	53.9	2.2
90°-100°	0.9	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2471.7	100.0
0°-180°	2472.6	100.0



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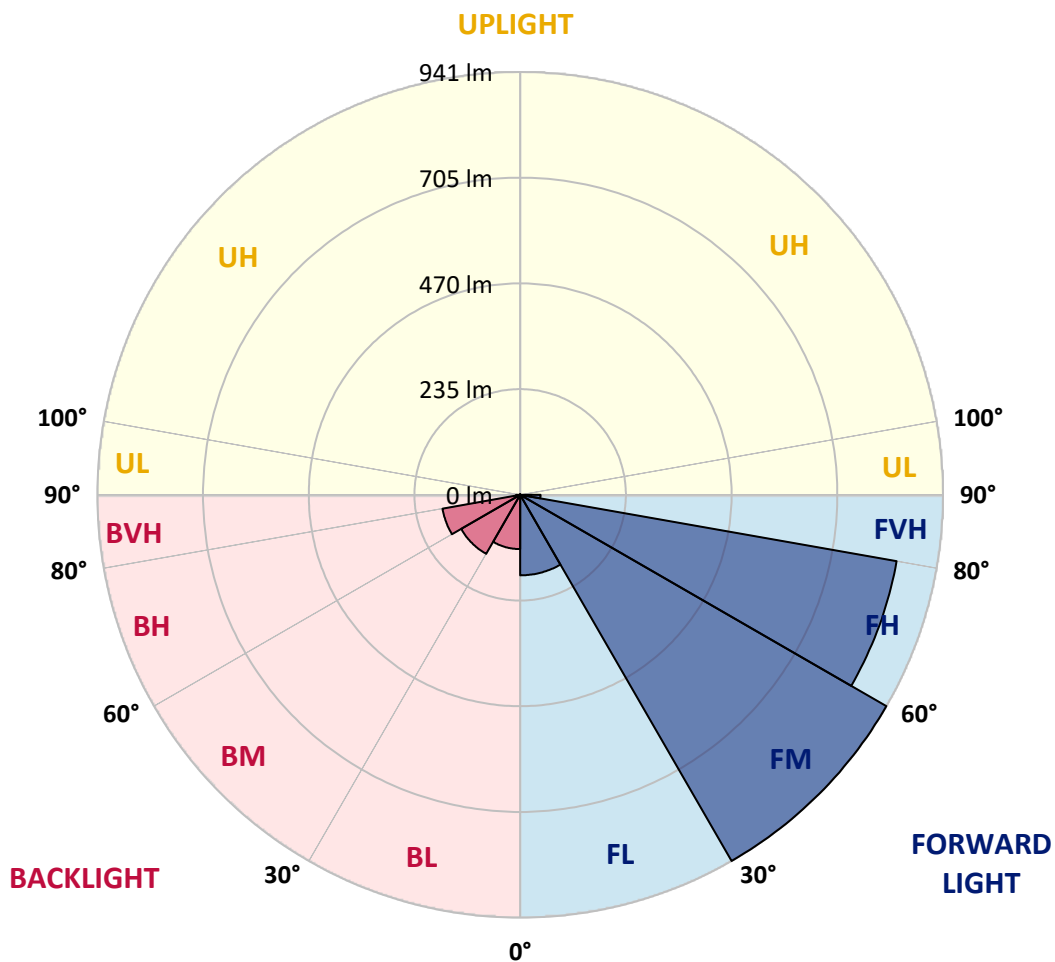
CATALOG NUMBER: IST-AF-450-LED-E1-SL2-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	179.1	7.2			
FM	(30°-60°)	940.6	38.0			
FH	(60°-80°)	850.2	34.4			G1/1800
FVH	(80°-90°)	45.2	1.8			G1/100
BL	(0°-30°)	120.7	4.9	B1/500		
BM	(30°-60°)	151.7	6.1	B0/220		
BH	(60°-80°)	175.4	7.1	B1/500		G1/500
BVH	(80°-90°)	8.7	0.4			G0/10
UL	(90°-100°)	0.9	0.0		U1/10	
UH	(100°-180°)	0.2	0.0		U1/10	

BUG Rating: B1-U1-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	63°
0°	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5
2.5°	483.7	484.8	491.1	494.5	499.3	500.8	506.3	508.6	510.4	510.1	510.1
5°	440.2	443.6	446.5	453.2	460.3	468.8	479.6	487.8	489.3	491.1	492.2
7.5°	407.2	409.4	414.6	419.4	428.3	440.2	455.4	465.9	468.1	468.8	471.4
10°	383.8	385.2	389.7	396.0	406.4	417.9	433.9	444.7	448.0	449.5	451.7
12.5°	365.5	367.8	371.9	378.6	389.7	401.6	418.3	429.1	431.3	433.2	436.5
15°	354.0	355.5	359.2	366.7	376.7	388.6	404.9	417.9	419.4	421.3	424.2
17.5°	351.8	352.9	355.1	360.7	368.5	380.0	396.8	407.5	410.1	412.7	415.7
20°	360.7	361.5	362.2	362.9	367.4	374.8	391.2	402.7	404.9	407.2	410.9
22.5°	380.0	381.2	379.3	376.7	373.3	374.8	388.6	400.5	402.0	404.2	407.2
25°	413.5	412.4	406.8	402.7	390.8	381.2	389.3	399.4	401.2	403.4	406.8
27.5°	452.8	451.4	448.0	436.9	417.2	397.5	393.8	401.2	402.3	404.2	407.2
30°	495.2	495.6	492.6	480.3	455.1	422.0	403.8	405.7	406.4	407.9	409.8
32.5°	533.5	539.0	538.7	537.9	501.9	455.1	423.1	415.7	414.6	415.7	416.4
35°	577.7	578.8	589.2	594.4	565.0	503.4	451.4	435.0	430.6	430.9	430.2
37.5°	625.2	626.7	644.5	653.5	630.8	558.4	488.9	463.6	459.5	455.4	452.5
40°	694.3	700.3	709.5	719.6	708.4	632.3	538.3	504.1	493.7	493.0	487.0
42.5°	797.6	795.7	791.3	799.5	786.1	715.1	598.1	561.3	553.5	543.1	534.9
45°	899.0	903.1	883.8	887.5	888.2	811.0	684.7	633.0	628.9	616.7	607.8
47.5°	967.4	962.9	936.9	955.8	1002.3	922.8	785.0	730.7	722.2	715.9	710.3
50°	971.1	967.4	950.6	984.1	1083.3	1121.5	924.6	861.5	849.2	838.1	834.7
52.5°	880.4	875.2	880.8	948.8	1112.6	1288.0	1121.9	1023.8	1013.8	1004.5	991.5
55°	718.8	724.8	751.2	848.9	1067.7	1406.1	1510.1	1274.6	1231.5	1231.1	1199.2
57.5°	536.8	530.9	550.6	642.3	954.0	1448.1	1866.7	1808.4	1712.2	1647.2	1568.8
60°	362.2	363.7	381.9	429.1	663.9	1402.4	2105.6	2308.8	2275.0	2261.3	2240.1
62.5°	251.1	253.4	270.1	314.3	388.2	1128.2	2175.5	2589.3	2649.9	2700.0	2687.7
65°	175.7	176.1	192.8	261.2	290.9	579.5	2021.3	2626.4	2716.7	2802.9	2880.2
66°	154.9	155.3	169.0	243.0	279.0	437.2	1887.5	2574.8	2677.7	2778.0	2857.9
67.5°	132.6	134.9	145.6	206.5	267.5	337.3	1559.2	2420.6	2528.4	2638.7	2744.2
70°	91.0	91.8	101.4	167.5	250.4	296.1	888.6	1889.8	2038.7	2232.7	2344.9
72.5°	65.0	64.3	65.4	103.6	257.1	294.2	467.0	1243.8	1452.2	1622.3	1743.8
75°	58.0	56.1	51.3	64.3	187.6	321.3	312.8	732.2	890.8	1045.7	1170.2
77.5°	51.6	48.7	46.1	49.4	92.9	302.8	280.8	419.4	500.4	615.9	711.8
80°	39.4	37.5	39.0	42.7	55.7	278.6	279.0	279.0	300.9	338.8	376.7
82.5°	26.0	23.8	27.1	35.3	42.0	209.9	288.3	246.3	242.2	240.7	243.3
85°	16.3	14.1	18.9	26.4	32.3	109.6	295.7	260.0	241.1	222.9	204.7
87.5°	5.9	6.7	9.7	15.2	21.2	47.6	259.3	229.2	216.2	193.5	172.4
90°	1.5	1.1	1.9	4.5	4.8	8.9	39.7	63.5	37.9	18.9	15.2
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	63°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°
0°	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5
2.5°	510.4	512.3	513.0	512.3	512.7	514.9	514.1	515.3	515.3	516.0	516.0
5°	493.7	495.2	498.2	497.8	500.8	501.9	503.0	504.5	506.3	507.5	509.7
7.5°	474.0	477.0	479.6	481.1	482.9	486.7	487.8	491.1	494.1	497.1	499.3
10°	455.1	459.2	462.1	463.3	467.3	469.2	473.3	475.9	479.6	483.3	486.7
12.5°	439.1	442.8	444.3	448.0	451.7	455.4	457.3	462.1	465.9	470.7	475.1
15°	427.2	430.9	433.9	436.5	440.2	443.9	446.9	451.7	456.2	461.0	465.1
17.5°	419.8	422.0	425.7	428.0	432.4	436.9	440.2	445.8	450.6	454.7	460.3
20°	414.2	416.8	420.2	423.5	427.6	433.2	436.1	442.1	447.3	452.1	457.3
22.5°	411.2	413.8	417.2	420.5	425.0	429.4	434.3	439.5	445.0	450.2	455.4
25°	410.1	412.4	415.3	418.7	423.5	428.3	432.4	438.4	443.2	448.8	455.1
27.5°	410.5	412.0	415.3	418.3	423.1	427.6	431.7	437.6	443.2	448.4	454.7
30°	412.0	413.1	416.4	419.0	423.1	427.6	431.3	437.6	442.4	448.0	454.7
32.5°	417.2	418.7	420.2	422.0	425.7	429.1	433.5	439.1	443.6	449.1	454.7
35°	429.4	428.3	429.4	430.2	432.8	436.1	439.5	444.3	448.4	453.2	459.2
37.5°	448.8	446.5	447.3	446.9	446.9	449.1	452.5	455.8	459.2	464.0	469.9
40°	484.4	478.9	477.4	473.3	472.2	474.0	476.3	476.6	480.7	487.0	489.6
42.5°	530.5	523.1	524.2	517.5	515.6	513.4	516.4	514.5	517.1	521.2	526.8
45°	603.3	596.2	588.8	578.0	580.3	572.1	569.9	570.6	570.2	571.7	578.4
47.5°	690.2	680.9	676.1	672.0	664.2	659.4	653.1	643.8	646.0	649.0	654.9
50°	817.3	814.3	805.0	791.6	789.8	782.7	780.9	772.7	769.7	769.4	769.0
52.5°	987.1	967.7	964.0	951.4	941.7	935.0	932.8	921.3	909.8	916.5	915.7
55°	1194.0	1178.0	1157.6	1146.4	1138.6	1122.6	1118.6	1104.1	1097.4	1093.7	1084.4
57.5°	1541.7	1485.6	1443.6	1422.8	1393.5	1363.7	1353.3	1323.6	1300.6	1284.2	1285.4
60°	2148.0	2048.0	1930.3	1877.5	1755.3	1737.5	1653.5	1633.1	1582.6	1549.1	1529.8
62.5°	2679.2	2652.1	2595.6	2518.7	2396.1	2255.0	2191.4	2065.1	1966.3	1923.2	1863.4
65°	2932.9	2971.2	2986.8	2972.3	2923.3	2837.1	2761.3	2638.0	2472.3	2378.7	2262.4
66°	2919.9	2976.8	3005.4	3020.2	3002.4	2951.5	2872.0	2770.6	2642.4	2499.8	2369.4
67.5°	2824.8	2880.2	2919.9	2965.2	2965.2	2949.3	2917.0	2849.3	2758.7	2634.2	2517.2
70°	2436.2	2511.3	2581.5	2595.2	2633.9	2622.0	2647.6	2604.5	2583.0	2531.0	2468.2
72.5°	1898.0	1960.7	2020.9	2081.1	2071.1	2058.1	2055.5	2064.4	2020.5	2036.1	2019.8
75°	1262.3	1370.4	1432.1	1426.2	1430.2	1433.6	1406.1	1344.8	1392.4	1332.2	1352.2
77.5°	767.1	817.3	834.0	815.4	791.3	760.1	709.9	680.6	638.6	641.9	614.1
80°	402.3	408.6	395.3	357.7	337.3	318.7	261.5	235.9	212.1	203.2	183.1
82.5°	230.7	215.5	199.1	186.5	162.3	146.0	123.7	109.6	94.4	81.0	76.2
85°	186.9	166.4	151.2	137.1	120.7	106.2	87.7	73.2	62.0	53.9	52.0
87.5°	154.2	140.1	124.4	111.1	95.1	80.2	62.0	48.3	38.3	30.8	28.6
90°	13.7	18.6	13.4	7.4	11.1	5.9	3.3	3.7	3.0	3.0	3.3
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: IST-AF-450-LED-E1-SL2-8030

CANDELA DISTRIBUTION (continued):

	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P226847

CATALOG NUMBER: IST-AF-450-LED-E1-SL2-8030

CANDELA DISTRIBUTION (continued):

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°
0°	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5
2.5°	517.1	517.1	517.9	518.6	519.0	519.0	519.0	519.7	520.1	519.0	520.1
5°	510.8	512.7	514.1	515.3	515.6	516.7	517.9	518.6	519.7	519.7	520.5
7.5°	502.3	505.6	507.5	509.3	511.2	513.0	515.3	516.7	517.5	519.0	520.1
10°	491.5	495.6	499.3	502.3	504.9	508.6	511.5	513.8	517.1	517.5	520.1
12.5°	480.0	485.9	488.9	494.5	498.2	503.7	506.7	510.1	513.8	515.6	518.6
15°	471.8	477.0	482.6	487.8	493.7	500.4	504.1	508.6	513.8	517.9	521.6
17.5°	465.5	472.5	478.9	485.5	493.0	500.0	505.6	510.4	517.1	519.3	523.1
20°	463.6	471.4	477.7	484.8	492.6	501.9	508.6	513.8	520.5	524.2	527.5
22.5°	462.9	470.3	477.7	486.3	494.8	504.5	511.5	518.2	524.9	528.3	530.9
25°	462.1	469.9	478.1	487.8	497.1	507.1	515.3	521.6	527.9	531.2	533.5
27.5°	462.1	470.3	479.2	488.9	498.9	510.1	517.9	523.8	529.4	532.3	533.1
30°	461.8	470.3	478.9	489.6	500.4	511.9	520.5	526.0	530.9	532.7	532.0
32.5°	462.5	471.4	480.7	491.5	502.6	513.8	522.7	529.0	531.6	531.2	530.9
35°	466.2	474.4	485.2	495.9	507.5	517.9	526.4	530.9	533.1	532.3	530.5
37.5°	476.3	484.4	495.2	507.1	516.0	527.9	535.7	539.0	539.4	537.2	532.7
40°	497.1	505.2	514.9	527.9	538.7	546.8	554.3	558.0	555.8	551.7	546.8
42.5°	530.1	540.5	552.0	562.4	575.1	586.2	588.1	590.3	586.6	578.8	572.8
45°	583.2	589.6	604.4	612.2	628.6	634.1	638.2	639.3	631.2	624.8	614.4
47.5°	659.8	672.0	682.4	689.9	701.7	709.2	717.4	713.6	707.3	696.5	682.8
50°	780.1	787.9	801.3	814.7	827.3	832.5	832.5	828.8	824.7	803.9	787.2
52.5°	928.0	928.7	948.0	964.0	974.8	967.0	976.3	967.0	964.4	949.9	936.2
55°	1099.2	1092.2	1115.6	1129.7	1139.4	1148.7	1146.8	1145.7	1136.0	1119.7	1103.0
57.5°	1262.0	1282.4	1293.5	1314.3	1319.2	1325.5	1322.9	1319.2	1313.6	1304.3	1296.9
60°	1496.7	1510.5	1520.5	1524.6	1538.3	1540.2	1549.5	1534.3	1538.0	1527.2	1503.8
62.5°	1816.2	1801.4	1809.2	1809.2	1805.1	1790.6	1798.4	1804.3	1794.3	1785.4	1781.7
65°	2174.0	2126.0	2080.0	2072.2	2051.0	2046.2	2040.2	2025.4	2019.1	2003.5	1990.8
66°	2281.0	2206.7	2163.2	2136.4	2110.8	2105.2	2097.1	2081.5	2068.8	2046.9	2025.7
67.5°	2401.0	2305.1	2239.7	2201.8	2170.3	2149.5	2133.1	2110.8	2090.8	2058.1	2024.3
70°	2393.1	2314.0	2235.3	2177.7	2130.1	2087.4	2062.2	2014.2	1973.4	1926.6	1887.9
72.5°	2010.9	1996.8	1951.1	1918.8	1860.4	1837.8	1770.9	1740.4	1684.0	1623.4	1604.8
75°	1397.9	1342.6	1319.2	1306.2	1280.5	1209.9	1163.9	1173.9	1107.8	1048.7	1014.9
77.5°	611.1	622.2	557.6	528.6	506.3	468.1	432.4	407.9	393.8	384.5	342.5
80°	169.0	147.5	145.6	135.2	133.0	118.5	120.4	110.0	102.9	101.4	98.1
82.5°	73.9	72.4	70.2	69.1	68.0	66.5	64.6	64.3	62.0	60.2	60.6
85°	49.0	48.7	47.6	46.4	44.6	42.0	40.1	38.6	39.0	37.1	36.8
87.5°	28.6	27.9	27.5	26.0	25.6	23.4	23.8	21.9	21.5	21.2	20.1
90°	4.1	4.5	5.6	5.2	3.7	7.1	5.9	5.2	5.6	4.5	4.5
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5°
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5°
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5°
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10°
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5°
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15°
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5°
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20°
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25°
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5°
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30°
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5°
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35°
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5°
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40°
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5°
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45°
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5°
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50°
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5°
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55°
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.5°
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°



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REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

86°	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	110°	86°
520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	520.5	110°	0.0
521.2	521.9	522.3	521.9	522.7	522.3	522.7	522.3	520.5	520.1	519.7	112.5°	0.0
521.9	523.4	523.8	524.2	523.4	524.2	522.7	516.7	510.1	502.6	496.7	115°	0.0
522.7	524.5	525.7	525.7	526.0	525.3	519.7	506.7	491.1	475.5	463.6	117.5°	0.0
522.3	524.9	526.0	526.4	526.4	524.9	511.5	490.7	467.0	443.2	419.0	120°	0.0
521.2	523.4	525.3	525.3	525.7	520.5	499.7	469.9	436.1	400.5	368.1	122.5°	0.0
523.4	525.7	525.7	525.7	525.3	516.4	487.0	443.9	398.6	350.3	302.4	125°	0.0
526.8	527.9	527.1	527.1	525.7	512.3	472.9	418.3	358.9	295.0	228.1	127.5°	0.0
529.7	530.5	530.1	528.3	526.4	507.8	458.4	391.2	311.3	228.1	161.6	130°	0.0
532.7	533.5	531.6	528.6	526.0	501.9	441.0	356.6	257.4	156.0	107.0	132.5°	0.0
533.1	533.8	530.5	526.4	522.7	493.0	419.8	319.9	198.4	101.0	83.6	135°	0.0
532.7	532.0	526.4	521.2	517.1	482.2	396.4	274.2	132.3	76.2	72.8	137.5°	0.0
530.1	526.8	522.3	516.4	510.4	470.3	373.0	223.3	83.6	66.1	66.1	140°	0.0
526.4	523.1	517.5	509.7	503.0	458.8	346.2	171.3	66.9	60.9	61.7	142.5°	0.0
524.9	521.2	513.0	504.9	496.3	448.4	318.0	115.2	60.2	57.6	58.0	145°	0.0
527.9	521.6	513.4	504.1	494.1	439.5	288.6	80.2	56.8	53.9	54.6	147.5°	0.0
537.9	532.0	522.3	510.4	499.7	434.3	257.4	66.5	53.5	50.9	50.9	150°	0.0
562.1	554.3	541.3	527.1	514.1	437.6	229.6	60.6	50.9	48.3	48.3	152.5°	0.0
601.1	591.8	576.6	560.6	543.5	454.0	198.0	58.3	49.0	45.3	44.6	155°	0.0
667.9	655.7	635.6	616.7	596.2	482.2	166.1	56.8	46.8	43.5	42.0	157.5°	0.0
773.1	754.9	731.1	706.2	681.3	533.8	140.8	55.4	45.3	42.0	40.5	160°	0.0
908.3	896.0	866.3	833.6	803.9	636.7	126.3	54.2	44.2	40.1	39.0	162.5°	0.0
1080.7	1060.6	1037.2	1007.9	972.6	770.1	124.8	53.9	43.1	38.6	37.9	165°	0.0
1262.7	1254.9	1215.1	1196.9	1158.7	947.7	151.9	54.6	42.4	37.5	36.4	167.5°	0.0
1470.4	1473.3	1436.2	1416.1	1384.5	1172.8	241.8	56.8	42.4	36.4	35.3	170°	0.0
1741.9	1746.8	1702.9	1679.1	1652.4	1425.0	380.0	60.6	43.5	35.3	34.2	172.5°	0.0
1964.4	1938.4	1910.2	1868.6	1834.8	1565.8	365.9	67.2	45.0	34.2	33.1	175°	0.0
1987.5	1968.9	1933.2	1888.3	1847.1	1566.6	319.5	69.5	45.3	33.8	32.7	177.5°	0.0
1984.5	1951.4	1911.0	1873.1	1832.6	1526.5	247.0	72.4	46.4	33.1	31.9	180°	0.0
1847.1	1800.6	1761.2	1708.9	1666.5	1366.0	151.9	72.1	45.0	30.8	30.1		
1523.1	1499.3	1452.5	1410.6	1366.3	1105.6	104.0	64.3	39.7	27.9	28.2		
985.2	958.1	910.5	886.8	861.9	707.3	81.0	52.4	33.8	24.9	26.0		
328.8	318.0	300.5	310.2	295.7	275.6	59.4	39.7	27.1	21.5	23.0		
98.4	96.2	99.6	93.6	99.2	84.0	39.0	27.9	20.8	18.6	20.4		
58.3	57.6	57.6	57.6	56.1	52.4	25.6	19.3	16.0	15.6	17.1		
35.7	34.9	35.3	34.9	35.7	31.9	17.5	13.4	11.9	11.5	13.7		
20.4	20.4	20.8	20.1	20.4	19.7	12.3	8.5	7.8	7.4	10.0		
4.8	4.8	3.7	3.3	3.7	5.2	3.3	2.6	2.2	1.9	3.3		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

'226847
 IST-AF-450-LED-E1-SL2-8030

REPORT NUMBER: P226847
 CATALOG NUMBER: IST-AF-450

TION (continued):

CANDELA DISTRIBUTION (con

87°	88°	89°	90°	95°	105°	115°	125°	135°	145°		155°	165°
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0°	520.5	520.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5°	516.7	514.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5°	487.4	480.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5°	445.0	436.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10°	396.8	384.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5°	335.1	310.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15°	263.8	231.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5°	181.7	155.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20°	127.4	117.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.5°	98.4	98.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25°	81.7	85.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5°	72.1	75.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30°	66.1	69.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5°	62.0	63.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35°	57.2	58.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5°	53.1	53.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40°	49.4	49.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5°	46.1	45.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45°	42.7	43.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5°	40.9	41.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50°	39.0	39.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5°	37.5	37.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55°	36.0	35.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.5°	34.9	34.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60°	33.8	33.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5°	33.1	31.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°	32.3	31.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66°	31.9	31.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5°	31.6	30.8
										70°	30.1	29.3
										72.5°	27.9	27.5
										75°	25.6	24.9
										77.5°	22.7	22.3
										80°	19.3	18.9
										82.5°	16.3	15.6
										85°	13.0	12.3
										87.5°	8.9	8.2
										90°	2.2	2.6
										92.5°	0.0	0.0
										95°	0.0	0.0
										97.5°	0.0	0.0
										100°	0.0	0.0
										102.5°	0.0	0.0
										105°	0.0	0.0
										107.5°	0.0	0.0



REPORT NUMBER: P226847

CATALOG NUMBER: IST-AF-450-LED-E1-S

0-LED-E1-SL2-8030

tinued):

175°	180°
520.5	520.5
511.9	515.3
478.1	477.0
430.2	430.6
372.2	373.0
297.2	292.7
212.9	214.7
148.2	147.9
118.9	119.6
101.8	101.8
90.6	90.6
79.9	80.2
72.4	73.2
65.8	66.1
59.1	59.4
53.5	53.5
49.8	50.2
47.2	47.2
44.6	44.6
42.4	43.1
40.1	40.5
37.9	38.3
35.7	35.7
33.8	33.8
32.3	31.9
31.2	30.5
30.1	29.7
29.7	29.3
29.3	29.0
28.6	28.2
27.5	27.1
25.3	24.5
23.0	22.3
21.2	20.1
17.8	17.1
13.0	12.3
7.8	7.8
1.9	1.9
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0

CANDELA DISTRIBUTION (continued):

	155°	165°	175°
110°	0.0	0.0	0.0
112.5°	0.0	0.0	0.0
115°	0.0	0.0	0.0
117.5°	0.0	0.0	0.0
120°	0.0	0.0	0.0
122.5°	0.0	0.0	0.0
125°	0.0	0.0	0.0
127.5°	0.0	0.0	0.0
130°	0.0	0.0	0.0
132.5°	0.0	0.0	0.0
135°	0.0	0.0	0.0
137.5°	0.0	0.0	0.0
140°	0.0	0.0	0.0
142.5°	0.0	0.0	0.0
145°	0.0	0.0	0.0
147.5°	0.0	0.0	0.0
150°	0.0	0.0	0.0
152.5°	0.0	0.0	0.0
155°	0.0	0.0	0.0
157.5°	0.0	0.0	0.0
160°	0.0	0.0	0.0
162.5°	0.0	0.0	0.0
165°	0.0	0.0	0.0
167.5°	0.0	0.0	0.0
170°	0.0	0.0	0.0
172.5°	0.0	0.0	0.0
175°	0.0	0.0	0.0
177.5°	0.0	0.0	0.0
180°	0.0	0.0	0.0

