

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: P226738

Luminaire Tested: **IST-AF-450-LED-E1-T4W-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226738
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35944)
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-T4W-7050
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE
Light Source: (16) 5000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3139 lumens
Efficiency: N/A
Efficacy: 124.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Medium - Semi-Cutoff
BUG Rating: B1 - U1 - G1

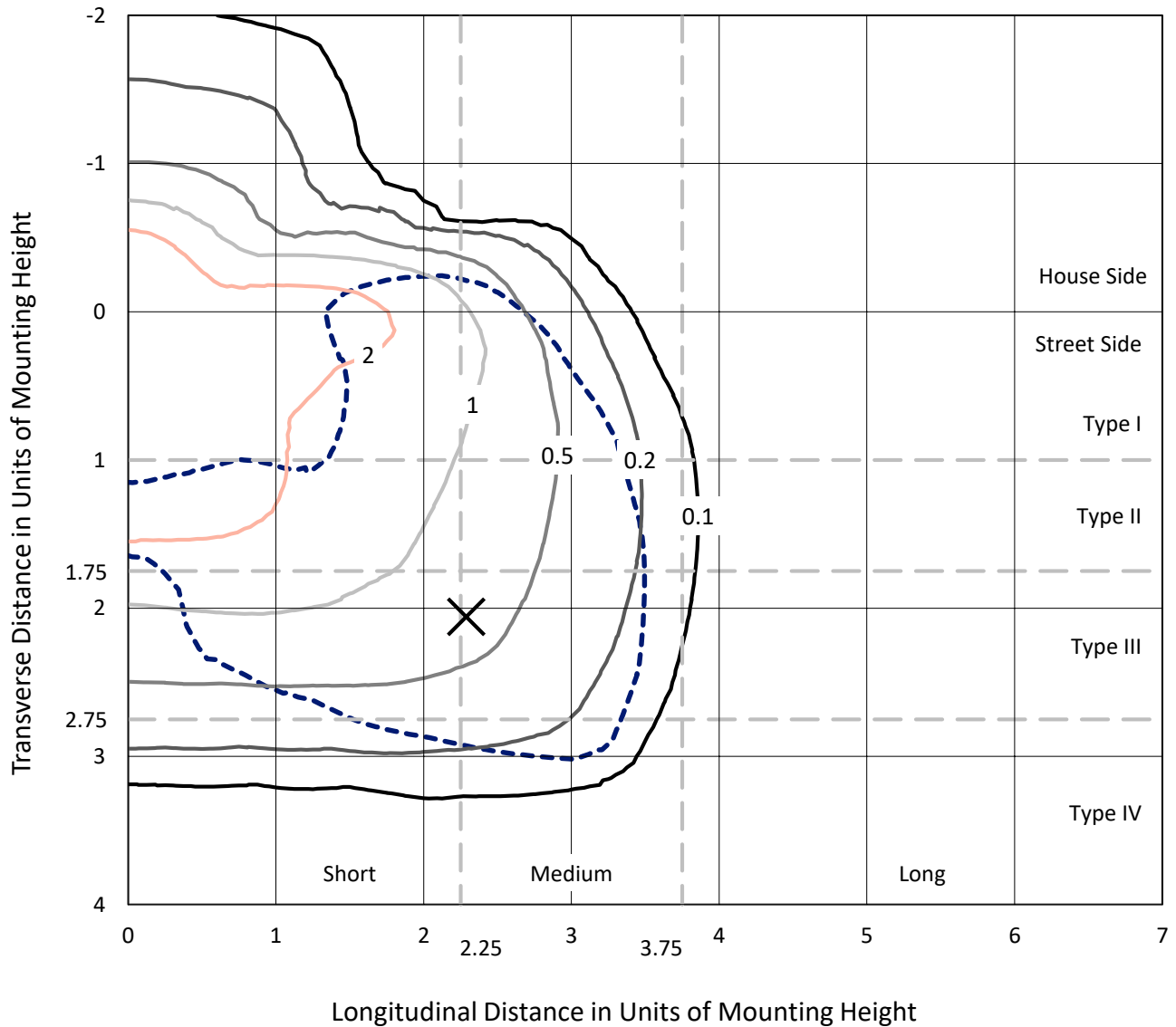
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

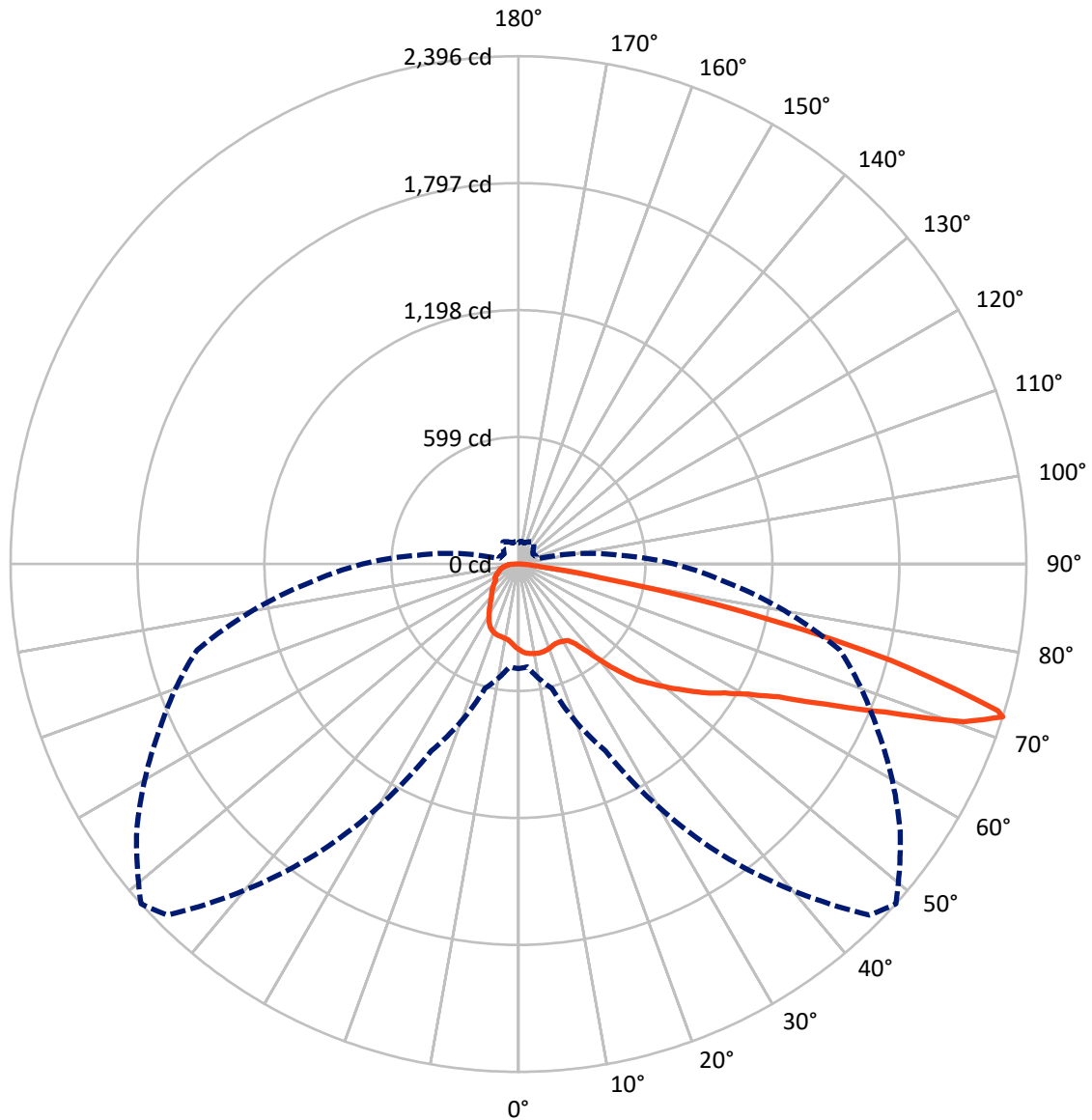
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 fc
 Type IV - Medium - Semi-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	681.8	1.4	683.2
	% Fixture	21.7	0.0	21.8
Street Side	Lumens	2455.3	0.5	2455.8
	% Fixture	78.2	0.0	78.2
Total	Lumens	3137.1	1.9	3139.0
	% Fixture	99.9	0.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	1.2
10°-20°	111.5	3.6
20°-30°	172.0	5.5
30°-40°	257.8	8.2
40°-50°	429.3	13.7
50°-60°	670.8	21.4
60°-70°	886.1	28.2
70°-80°	512.6	16.3
80°-90°	58.8	1.9
90°-100°	1.9	0.1
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°	3137.1	99.9
0°-180°	3139.0	100.0



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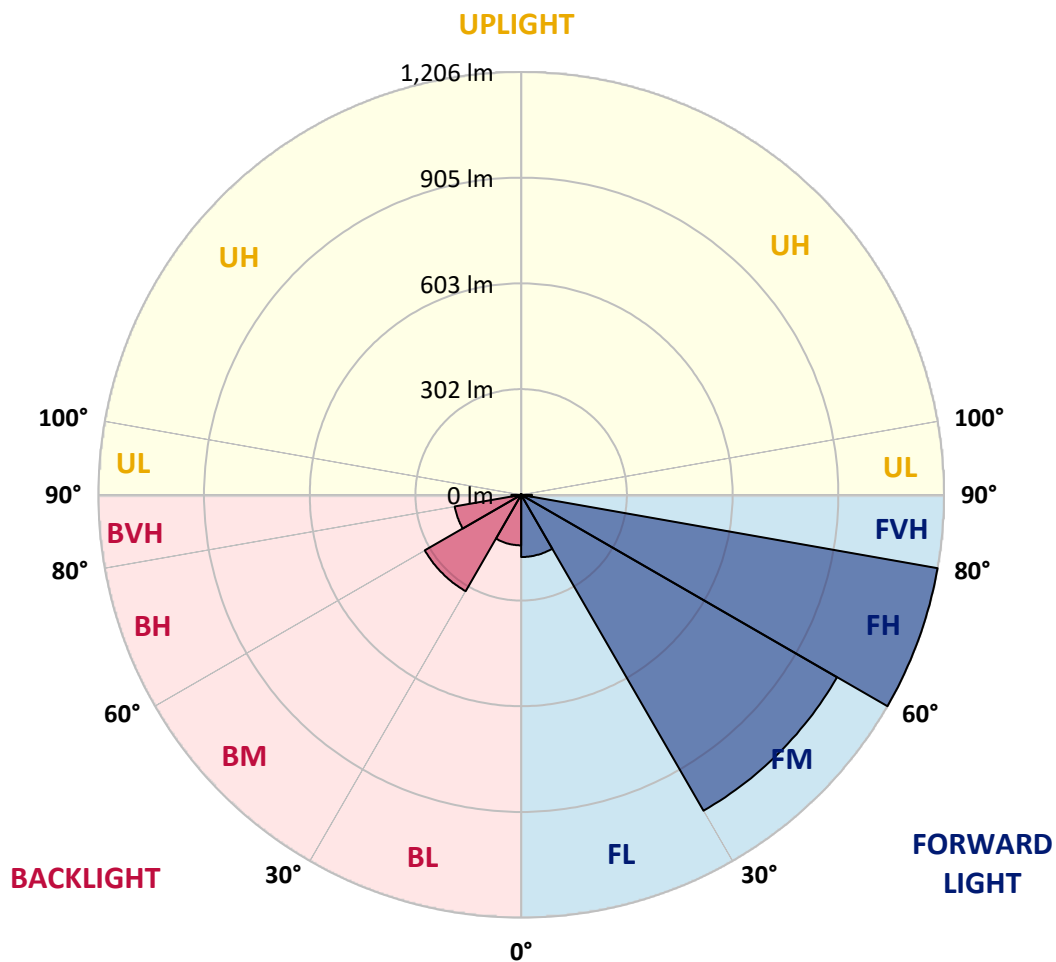
CATALOG NUMBER: IST-AF-450-LED-E1-T4W-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	177.5	5.7			
FM	(30°-60°)	1040.7	33.2			
FH	(60°-80°)	1206.3	38.4			G1/1800
FVH	(80°-90°)	30.8	1.0			G1/100
BL	(0°-30°)	144.2	4.6	B1/500		
BM	(30°-60°)	317.2	10.1	B1/1000		
BH	(60°-80°)	192.4	6.1	B1/500		G1/500
BVH	(80°-90°)	27.9	0.9			G1/100
UL	(90°-100°)	1.9	0.1		U1/10	
UH	(100°-180°)	1.4	0.0		U1/10	

BUG Rating: B1-U1-G1

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
0°	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8
2.5°	425.2	424.8	424.8	421.1	419.8	417.5	415.7	412.9	410.2	407.0	402.9
5°	445.7	447.1	445.2	439.8	433.0	425.7	422.9	416.6	407.9	400.2	392.9
7.5°	465.3	465.7	460.7	451.6	441.1	429.8	426.1	417.5	407.9	397.4	387.0
10°	479.4	479.8	472.6	459.8	445.7	433.0	428.9	420.2	408.4	397.0	383.8
12.5°	487.6	488.0	477.1	463.9	447.1	434.3	430.7	421.6	409.3	394.7	380.1
15°	486.2	487.6	478.5	463.9	446.2	434.8	430.2	422.5	407.0	392.4	377.0
17.5°	477.1	478.9	471.7	455.7	441.6	432.5	427.5	419.8	404.7	389.2	372.4
20°	459.4	461.6	458.4	443.0	433.4	426.1	422.9	415.7	401.5	385.6	368.3
22.5°	439.3	441.6	440.7	427.9	423.4	419.8	416.6	411.1	398.8	382.9	366.5
25°	424.8	426.6	425.2	414.3	415.7	415.7	413.8	409.7	398.4	383.8	366.5
27.5°	448.9	448.9	437.1	414.7	412.5	416.6	415.7	413.4	404.3	388.3	370.1
30°	537.2	530.4	509.0	453.0	424.3	422.5	422.0	420.7	412.5	398.4	381.5
32.5°	636.0	629.2	603.7	533.6	473.9	434.8	430.7	431.1	428.9	415.7	398.8
35°	723.9	723.0	702.9	626.9	550.9	478.0	461.6	450.7	449.8	444.3	431.1
37.5°	794.9	794.9	796.7	710.2	634.2	546.8	519.0	484.4	484.4	481.2	473.0
40°	875.9	879.6	883.7	785.8	723.4	628.7	597.3	544.9	529.0	534.0	535.8
42.5°	982.5	987.0	984.3	879.1	804.9	726.6	687.9	624.6	585.5	593.7	612.8
45°	1054.4	1056.2	1075.8	976.5	907.3	809.5	776.7	689.7	651.0	667.9	701.6
47.5°	1135.9	1140.4	1143.6	1087.2	1027.5	903.2	843.1	753.0	728.0	753.5	806.7
50°	1215.6	1209.6	1218.3	1216.0	1141.3	986.6	915.1	812.2	814.0	848.6	936.0
52.5°	1284.8	1264.7	1284.8	1309.8	1287.9	1072.1	988.8	881.8	908.2	950.6	1088.5
55°	1338.0	1289.8	1323.4	1394.5	1389.5	1147.7	1073.1	974.7	1018.9	1076.7	1273.8
57.5°	1229.2	1235.1	1328.0	1451.4	1449.1	1224.2	1146.8	1090.8	1145.0	1209.6	1493.3
60°	1127.7	1154.1	1297.5	1460.5	1490.5	1307.5	1246.1	1222.8	1272.9	1351.7	1703.6
62.5°	1074.0	1099.0	1247.9	1443.6	1556.5	1430.9	1379.4	1361.7	1430.0	1518.3	1891.2
65°	1090.8	1106.3	1244.7	1469.1	1632.6	1617.5	1595.2	1565.6	1599.8	1682.7	1975.8
67.5°	1043.5	1069.0	1218.3	1514.2	1771.4	1845.2	1863.8	1832.0	1803.3	1791.9	1852.5
70°	776.7	801.3	957.9	1328.0	1885.2	2240.3	2229.0	2122.4	1929.4	1768.2	1447.3
72°	493.5	486.7	606.4	972.9	1675.8	2341.9	2395.6	2198.5	1872.0	1570.2	982.9
72.5°	358.7	391.1	503.1	865.0	1592.1	2286.3	2364.6	2173.9	1796.9	1483.2	864.5
75°	87.4	92.4	120.6	310.0	932.4	1720.4	1818.8	1679.5	1311.6	880.5	383.3
77.5°	59.2	61.5	79.7	109.3	274.1	981.1	1079.4	927.4	586.8	299.6	170.7
80°	44.2	45.5	57.8	77.4	113.8	334.6	394.7	313.7	146.1	166.2	121.6
82.5°	31.0	31.9	43.7	56.9	75.6	78.3	104.3	115.2	94.7	108.8	71.0
85°	21.4	21.4	31.9	39.2	47.8	38.7	41.4	57.8	64.2	64.6	43.2
87.5°	11.4	12.7	18.7	25.0	25.0	17.8	19.6	29.6	36.0	38.7	25.9
90°	4.1	4.1	7.7	9.6	5.9	4.6	4.1	5.9	8.6	12.3	8.2
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°	48°	55°	65°	75°	85°
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8	403.8
2.5°	402.0	399.3	395.6	393.8	392.9	391.1	389.2	388.3	388.3	386.5	387.0
5°	389.2	385.2	380.1	376.5	376.0	376.0	377.0	377.0	377.4	376.0	377.9
7.5°	382.9	378.3	371.0	366.9	363.8	363.3	365.1	368.8	370.6	369.2	371.0
10°	378.3	373.3	365.1	360.1	357.8	356.9	358.3	361.9	367.9	367.9	369.7
12.5°	373.8	367.4	359.2	355.6	353.7	354.2	356.0	358.7	365.1	367.4	368.3
15°	369.2	361.9	355.1	350.1	350.1	351.5	353.7	356.9	362.8	366.9	367.9
17.5°	364.7	357.4	351.5	347.4	347.4	349.2	351.5	355.6	359.7	365.6	365.6
20°	360.6	354.6	346.9	343.3	342.8	344.2	346.9	351.0	354.2	360.1	360.6
22.5°	358.3	351.0	343.7	338.3	336.0	335.1	337.8	341.9	345.1	351.0	351.9
25°	357.4	349.2	340.1	330.1	324.1	322.3	323.7	328.7	331.4	336.0	337.3
27.5°	360.6	352.8	338.7	320.5	308.2	303.2	304.6	307.8	308.7	313.7	316.0
30°	371.5	362.4	341.4	310.5	288.2	279.1	279.1	279.5	280.9	285.0	285.4
32.5°	389.2	380.6	349.6	300.0	267.7	254.9	251.8	249.5	249.5	249.0	249.5
35°	422.0	414.7	363.8	288.2	245.4	231.3	223.5	219.4	215.3	213.5	213.1
37.5°	469.4	463.0	383.8	274.5	225.8	211.7	202.1	193.9	189.4	188.9	191.2
40°	539.9	533.6	406.1	259.0	207.1	196.7	186.7	178.0	173.0	173.5	175.7
42.5°	626.9	607.3	430.2	238.1	192.1	186.7	175.7	168.4	163.4	160.7	160.3
45°	728.4	695.6	453.0	218.5	175.7	178.0	167.5	159.3	153.0	145.7	144.8
47.5°	855.0	784.0	473.0	198.9	158.0	168.9	158.9	151.1	141.6	132.9	131.6
50°	987.0	885.5	490.3	178.0	142.0	158.9	150.2	139.8	126.6	118.8	118.8
52.5°	1139.5	1007.5	512.6	154.8	129.7	148.0	139.3	125.7	114.7	113.8	113.8
55°	1309.3	1135.4	528.1	136.6	120.2	136.1	132.0	127.9	124.3	125.2	125.7
57.5°	1486.9	1268.8	514.4	123.8	112.4	133.4	145.2	139.8	128.4	127.9	127.5
60°	1639.9	1372.6	438.9	115.6	106.5	137.9	155.7	139.8	128.4	134.3	134.8
62.5°	1740.0	1421.8	292.3	105.2	97.9	130.2	152.1	135.7	128.8	145.7	147.0
65°	1726.4	1366.7	168.0	97.9	92.4	119.7	147.0	130.7	120.2	129.7	127.0
67.5°	1522.9	1145.4	121.6	94.7	88.3	112.4	137.9	123.4	112.0	123.8	118.8
70°	1094.5	779.9	104.7	92.0	85.6	103.8	131.6	118.8	107.4	115.6	107.9
72°	734.3	474.4	96.1	89.7	82.9	98.3	127.0	115.2	103.3	107.9	99.2
72.5°	625.1	374.2	93.8	88.8	81.9	97.0	125.7	114.3	102.4	107.0	98.8
75°	233.5	146.6	83.3	81.9	75.6	90.1	120.2	110.2	97.9	96.5	92.9
77.5°	120.2	92.9	71.0	72.4	67.8	82.4	114.3	103.8	90.1	85.1	83.3
80°	87.4	67.4	57.4	61.5	57.8	74.2	106.1	94.2	81.9	76.5	74.2
82.5°	55.1	41.9	43.7	48.7	49.2	65.6	96.5	84.7	72.8	68.3	64.6
85°	26.4	25.0	31.0	36.0	39.6	55.5	88.3	75.1	63.7	54.6	55.1
87.5°	14.1	19.1	18.7	24.1	30.5	45.5	78.3	61.5	51.0	41.0	41.4
90°	3.2	5.0	5.5	9.6	12.3	19.6	50.5	35.1	34.1	14.6	12.7
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-T4W-7050

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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

(END OF REPORT)