

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: P226717

Luminaire Tested: **IST-AF-450-LED-E1-T4W-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P226717  
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-8030  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE  
Light Source: (16) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

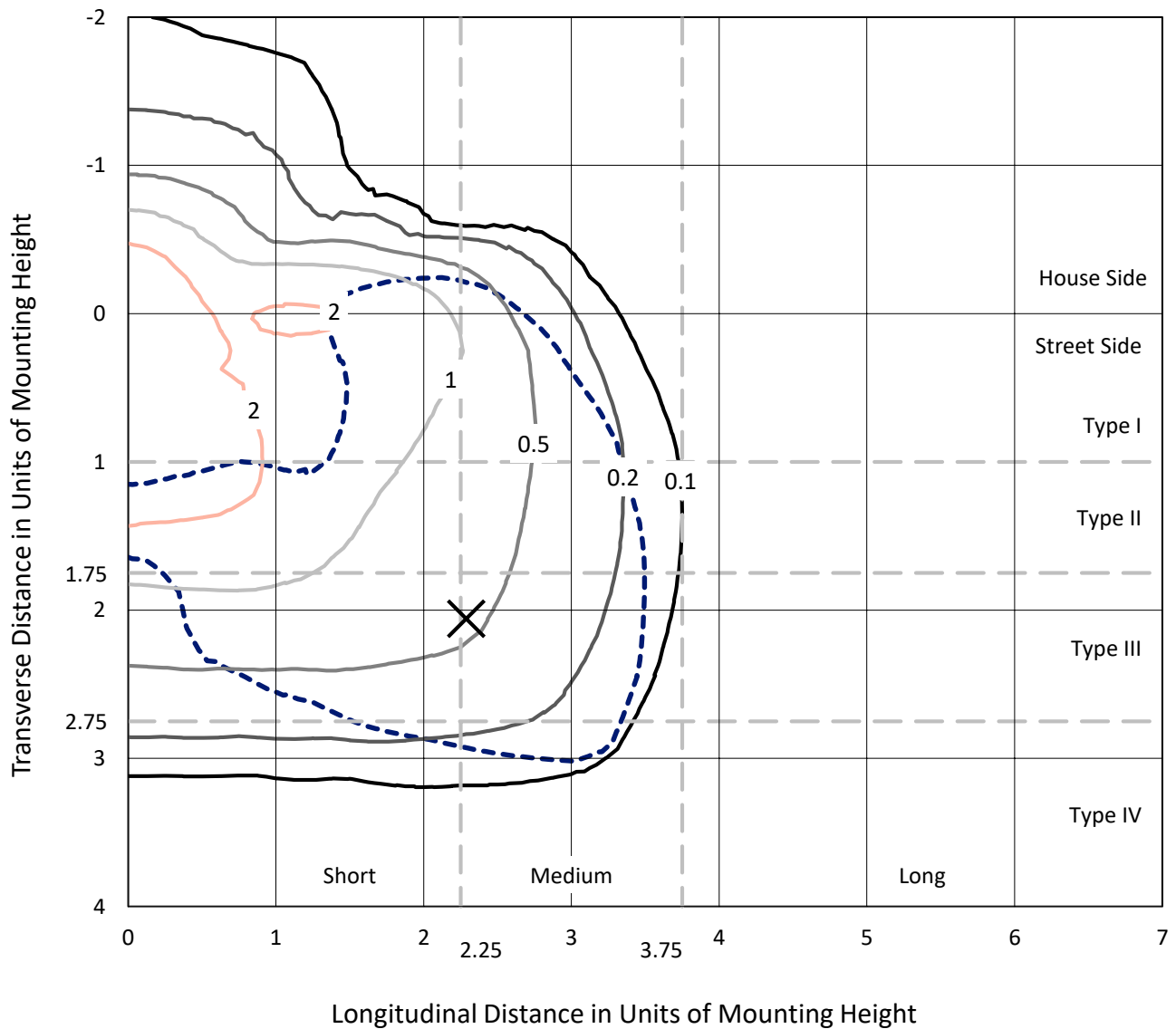
Lumens per Lamp: N/A  
Luminaire Lumens: 2561.4 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium - Semi-Cutoff  
BUG Rating: B1 - U1 - G1  
  
Input Watts (W): 25.31  
Input Voltage (V): 120  
Input 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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 CATALOG NUMBER: IST-AF-450-LED-E1-T4W-8030

### Iso-Footcandle Lines of Horizontal Illumination

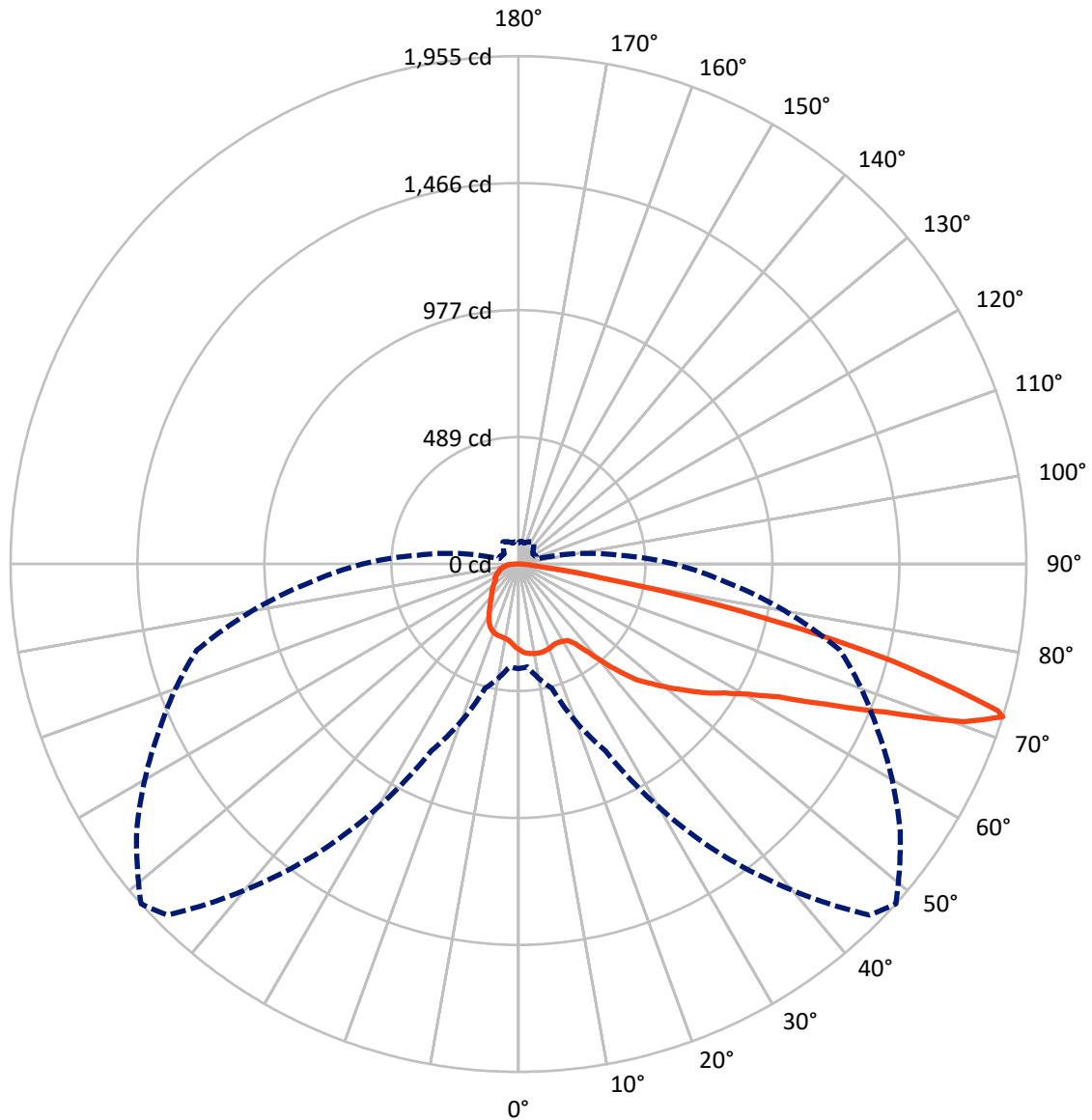
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 fc  
 Type IV - Medium - 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
<b>House Side</b>	Lumens	556.3	1.2	557.5
	% Fixture	21.7	0.0	21.8
<b>Street Side</b>	Lumens	2003.5	0.4	2003.9
	% Fixture	78.2	0.0	78.2
<b>Total</b>	Lumens	2559.9	1.6	2561.4
	% Fixture	99.9	0.1	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.1	1.2
10°-20°	91.0	3.6
20°-30°	140.3	5.5
30°-40°	210.4	8.2
40°-50°	350.3	13.7
50°-60°	547.4	21.4
60°-70°	723.1	28.2
70°-80°	418.3	16.3
80°-90°	48.0	1.9
90°-100°	1.6	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°	2559.9	99.9
0°-180°	2561.4	100.0



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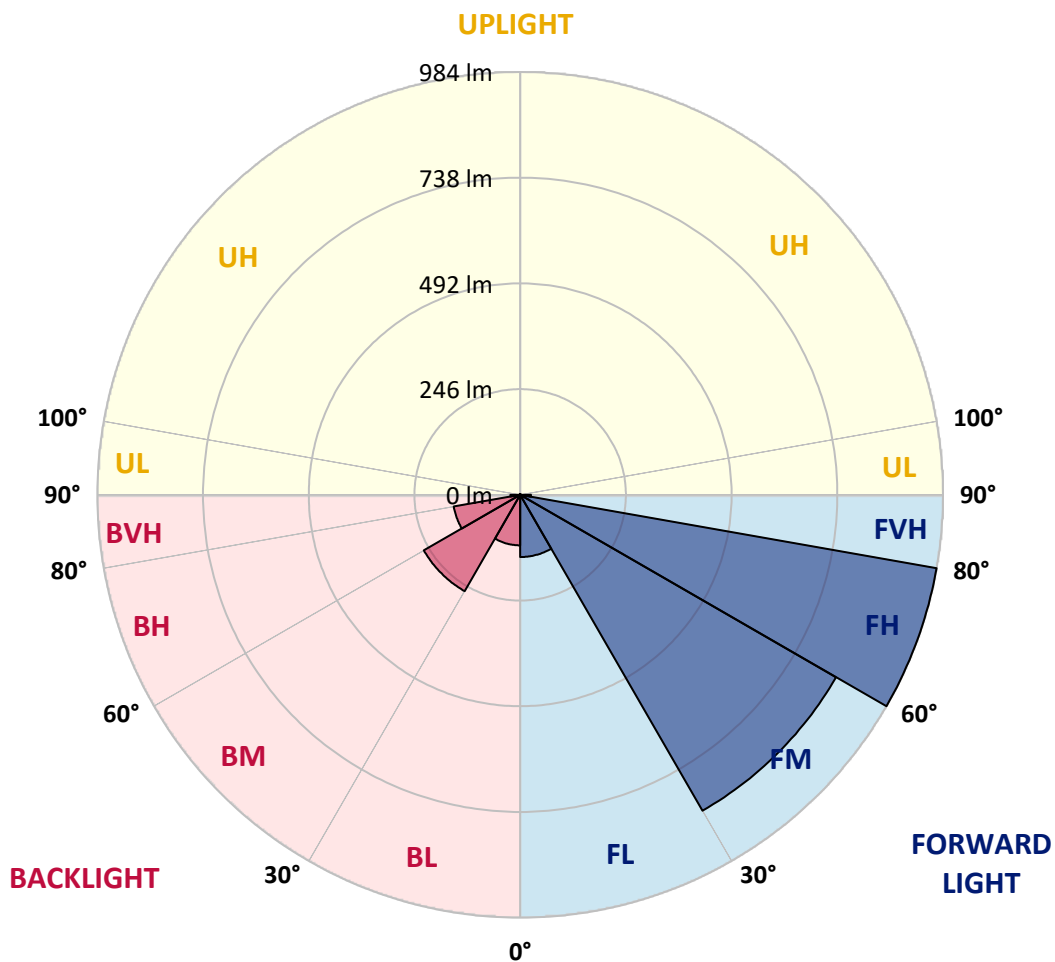
CATALOG NUMBER: IST-AF-450-LED-E1-T4W-8030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	144.8	5.7			
FM	(30°-60°)	849.2	33.2			
FH	(60°-80°)	984.4	38.4			G1/1800
FVH	(80°-90°)	25.2	1.0			G1/100
BL	(0°-30°)	117.7	4.6	B1/500		
BM	(30°-60°)	258.9	10.1	B1/1000		
BH	(60°-80°)	157.0	6.1	B1/500		G1/500
BVH	(80°-90°)	22.8	0.9			G1/100
UL	(90°-100°)	1.6	0.1		U1/10	
UH	(100°-180°)	1.2	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°	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5
2.5°	347.0	346.6	346.6	343.6	342.5	340.7	339.2	336.9	334.7	332.1	328.8
5°	363.7	364.8	363.3	358.9	353.3	347.3	345.1	339.9	332.9	326.5	320.6
7.5°	379.7	380.0	376.0	368.5	360.0	350.7	347.7	340.7	332.9	324.3	315.8
10°	391.2	391.6	385.6	375.2	363.7	353.3	349.9	342.9	333.2	323.9	313.2
12.5°	397.9	398.2	389.3	378.6	364.8	354.4	351.4	344.0	334.0	322.1	310.2
15°	396.8	397.9	390.4	378.6	364.1	354.8	351.1	344.7	332.1	320.2	307.6
17.5°	389.3	390.8	384.9	371.9	360.3	352.9	348.8	342.5	330.3	317.6	303.9
20°	374.8	376.7	374.1	361.5	353.7	347.7	345.1	339.2	327.7	314.7	300.5
22.5°	358.5	360.3	359.6	349.2	345.5	342.5	339.9	335.5	325.4	312.4	299.1
25°	346.6	348.1	347.0	338.1	339.2	339.2	337.7	334.3	325.1	313.2	299.1
27.5°	366.3	366.3	356.6	338.4	336.6	339.9	339.2	337.3	329.9	316.9	302.0
30°	438.4	432.8	415.3	369.6	346.2	344.7	344.4	343.3	336.6	325.1	311.3
32.5°	519.0	513.4	492.6	435.4	386.7	354.8	351.4	351.8	349.9	339.2	325.4
35°	590.7	589.9	573.6	511.5	449.5	390.1	376.7	367.8	367.0	362.6	351.8
37.5°	648.6	648.6	650.1	579.5	517.5	446.2	423.5	395.3	395.3	392.7	386.0
40°	714.8	717.7	721.1	641.2	590.3	513.0	487.4	444.7	431.7	435.8	437.2
42.5°	801.7	805.4	803.2	717.4	656.8	592.9	561.3	509.7	477.7	484.4	500.0
45°	860.4	861.9	877.8	796.9	740.4	660.5	633.8	562.8	531.2	545.0	572.5
47.5°	926.9	930.6	933.2	887.1	838.5	737.0	688.0	614.5	594.0	614.8	658.3
50°	991.9	987.1	994.1	992.3	931.3	805.0	746.7	662.7	664.2	692.5	763.8
52.5°	1048.4	1032.0	1048.4	1068.8	1051.0	874.9	806.9	719.6	741.1	775.7	888.2
55°	1091.8	1052.4	1079.9	1137.9	1133.8	936.5	875.6	795.4	831.4	878.6	1039.4
57.5°	1003.0	1007.9	1083.6	1184.3	1182.5	998.9	935.8	890.1	934.3	987.1	1218.5
60°	920.2	941.7	1058.8	1191.8	1216.3	1066.9	1016.8	997.8	1038.7	1103.0	1390.1
62.5°	876.4	896.8	1018.3	1178.0	1270.1	1167.6	1125.6	1111.1	1166.9	1238.9	1543.2
65°	890.1	902.7	1015.7	1198.8	1332.2	1319.9	1301.7	1277.6	1305.4	1373.0	1612.3
67.5°	851.5	872.3	994.1	1235.6	1445.5	1505.7	1520.9	1494.9	1471.5	1462.2	1511.6
70°	633.8	653.8	781.6	1083.6	1538.4	1828.1	1818.8	1731.9	1574.4	1442.9	1181.0
72°	402.7	397.1	494.8	793.9	1367.5	1911.0	1954.8	1793.9	1527.6	1281.3	802.1
72.5°	292.7	319.1	410.5	705.8	1299.1	1865.6	1929.5	1773.9	1466.3	1210.3	705.5
75°	71.3	75.4	98.4	253.0	760.8	1403.9	1484.1	1370.4	1070.3	718.5	312.8
77.5°	48.3	50.2	65.0	89.2	223.6	800.6	880.8	756.7	478.9	244.4	139.3
80°	36.0	37.1	47.2	63.2	92.9	273.0	322.1	256.0	119.2	135.6	99.2
82.5°	25.3	26.0	35.7	46.4	61.7	63.9	85.1	94.0	77.3	88.8	58.0
85°	17.5	17.5	26.0	31.9	39.0	31.6	33.8	47.2	52.4	52.8	35.3
87.5°	9.3	10.4	15.2	20.4	20.4	14.5	16.0	24.1	29.3	31.6	21.2
90°	3.3	3.3	6.3	7.8	4.8	3.7	3.3	4.8	7.1	10.0	6.7
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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**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°	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5	329.5
2.5°	328.0	325.8	322.8	321.3	320.6	319.1	317.6	316.9	316.9	315.4	315.8
5°	317.6	314.3	310.2	307.2	306.9	306.9	307.6	307.6	308.0	306.9	308.3
7.5°	312.4	308.7	302.8	299.4	296.8	296.5	297.9	300.9	302.4	301.3	302.8
10°	308.7	304.6	297.9	293.9	292.0	291.3	292.4	295.3	300.2	300.2	301.7
12.5°	305.0	299.8	293.1	290.1	288.7	289.0	290.5	292.7	297.9	299.8	300.5
15°	301.3	295.3	289.8	285.7	285.7	286.8	288.7	291.3	296.1	299.4	300.2
17.5°	297.6	291.6	286.8	283.5	283.5	284.9	286.8	290.1	293.5	298.3	298.3
20°	294.2	289.4	283.1	280.1	279.7	280.8	283.1	286.4	289.0	293.9	294.2
22.5°	292.4	286.4	280.5	276.0	274.2	273.4	275.6	279.0	281.6	286.4	287.2
25°	291.6	284.9	277.5	269.3	264.5	263.0	264.1	268.2	270.4	274.2	275.3
27.5°	294.2	287.9	276.4	261.5	251.5	247.4	248.5	251.1	251.9	256.0	257.8
30°	303.1	295.7	278.6	253.4	235.2	227.7	227.7	228.1	229.2	232.6	232.9
32.5°	317.6	310.6	285.3	244.8	218.4	208.0	205.4	203.6	203.6	203.2	203.6
35°	344.4	338.4	296.8	235.2	200.2	188.7	182.4	179.1	175.7	174.2	173.9
37.5°	383.0	377.8	313.2	224.0	184.3	172.7	164.9	158.3	154.5	154.2	156.0
40°	440.6	435.4	331.4	211.4	169.0	160.5	152.3	145.3	141.2	141.5	143.4
42.5°	511.5	495.6	351.1	194.3	156.8	152.3	143.4	137.5	133.4	131.1	130.8
45°	594.4	567.6	369.6	178.3	143.4	145.3	136.7	130.0	124.8	118.9	118.1
47.5°	697.7	639.7	386.0	162.3	128.9	137.8	129.7	123.3	115.5	108.5	107.4
50°	805.4	722.6	400.1	145.3	115.9	129.7	122.6	114.0	103.3	97.0	97.0
52.5°	929.9	822.1	418.3	126.3	105.9	120.7	113.7	102.5	93.6	92.9	92.9
55°	1068.4	926.5	430.9	111.4	98.1	111.1	107.7	104.4	101.4	102.2	102.5
57.5°	1213.3	1035.4	419.8	101.0	91.8	108.8	118.5	114.0	104.8	104.4	104.0
60°	1338.1	1120.1	358.1	94.4	86.9	112.6	127.1	114.0	104.8	109.6	110.0
62.5°	1419.9	1160.2	238.5	85.8	79.9	106.2	124.1	110.7	105.1	118.9	120.0
65°	1408.7	1115.2	137.1	79.9	75.4	97.7	120.0	106.6	98.1	105.9	103.6
67.5°	1242.6	934.7	99.2	77.3	72.1	91.8	112.6	100.7	91.4	101.0	97.0
70°	893.1	636.4	85.4	75.0	69.8	84.7	107.4	97.0	87.7	94.4	88.0
72°	599.2	387.1	78.4	73.2	67.6	80.2	103.6	94.0	84.3	88.0	81.0
72.5°	510.1	305.4	76.5	72.4	66.9	79.1	102.5	93.2	83.6	87.3	80.6
75°	190.6	119.6	68.0	66.9	61.7	73.6	98.1	89.9	79.9	78.8	75.8
77.5°	98.1	75.8	58.0	59.1	55.4	67.2	93.2	84.7	73.6	69.5	68.0
80°	71.3	55.0	46.8	50.2	47.2	60.6	86.6	76.9	66.9	62.4	60.6
82.5°	45.0	34.2	35.7	39.7	40.1	53.5	78.8	69.1	59.4	55.7	52.8
85°	21.5	20.4	25.3	29.3	32.3	45.3	72.1	61.3	52.0	44.6	45.0
87.5°	11.5	15.6	15.2	19.7	24.9	37.1	63.9	50.2	41.6	33.4	33.8
90°	2.6	4.1	4.5	7.8	10.0	16.0	41.2	28.6	27.9	11.9	10.4
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-8030

**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)