

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: P228024

Luminaire Tested: **ISC-AF-450-LED-E1-T4W-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228024
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29757)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISC-AF-450-LED-E1-T4W-7030
Description: IMPACT ELITE LED CYLINDER LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE
Light Source: (16) 3000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2652 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

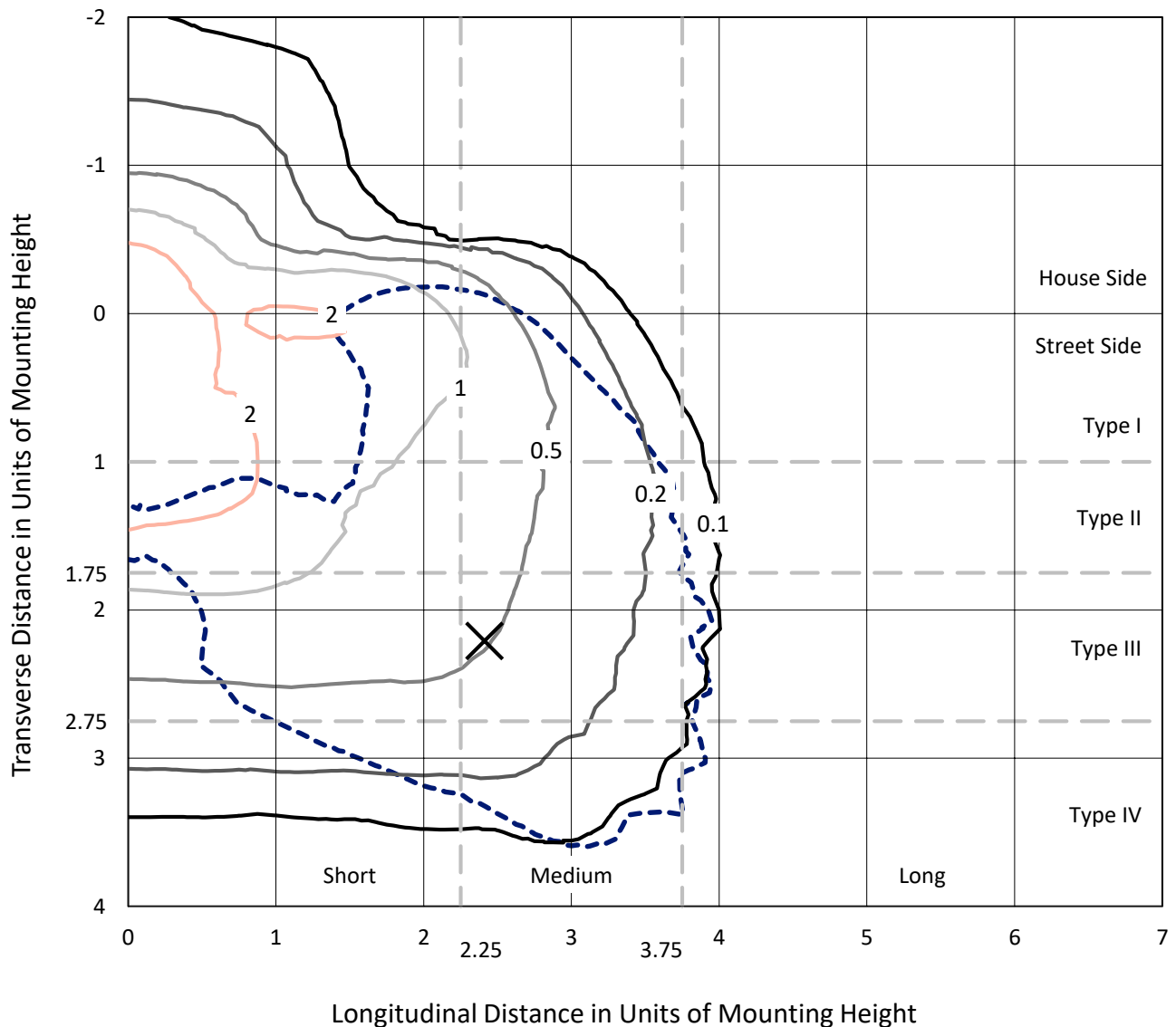
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

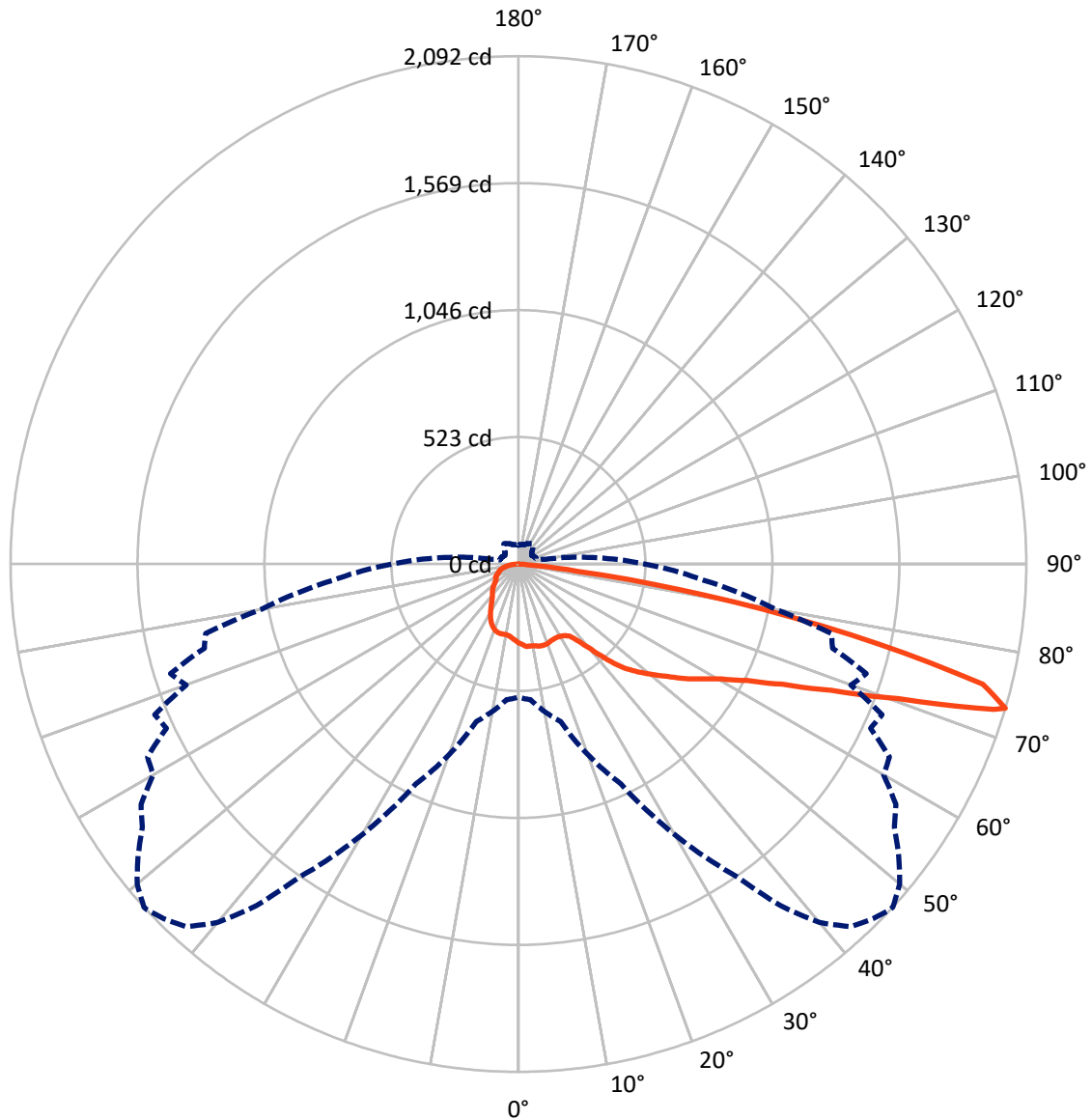
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	529.8	0.0	529.8
	% Fixture	20.0	0.0	20.0
Street Side	Lumens	2122.2	0.0	2122.2
	% Fixture	80.0	0.0	80.0
Total	Lumens	2652.0	0.0	2652.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.0	1.2
10°-20°	92.3	3.5
20°-30°	141.8	5.3
30°-40°	206.9	7.8
40°-50°	341.2	12.9
50°-60°	534.2	20.1
60°-70°	724.6	27.3
70°-80°	536.6	20.2
80°-90°	43.4	1.6
90°-100°	0.0	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°	2652.0	100.0
0°-180°	2652.0	100.0



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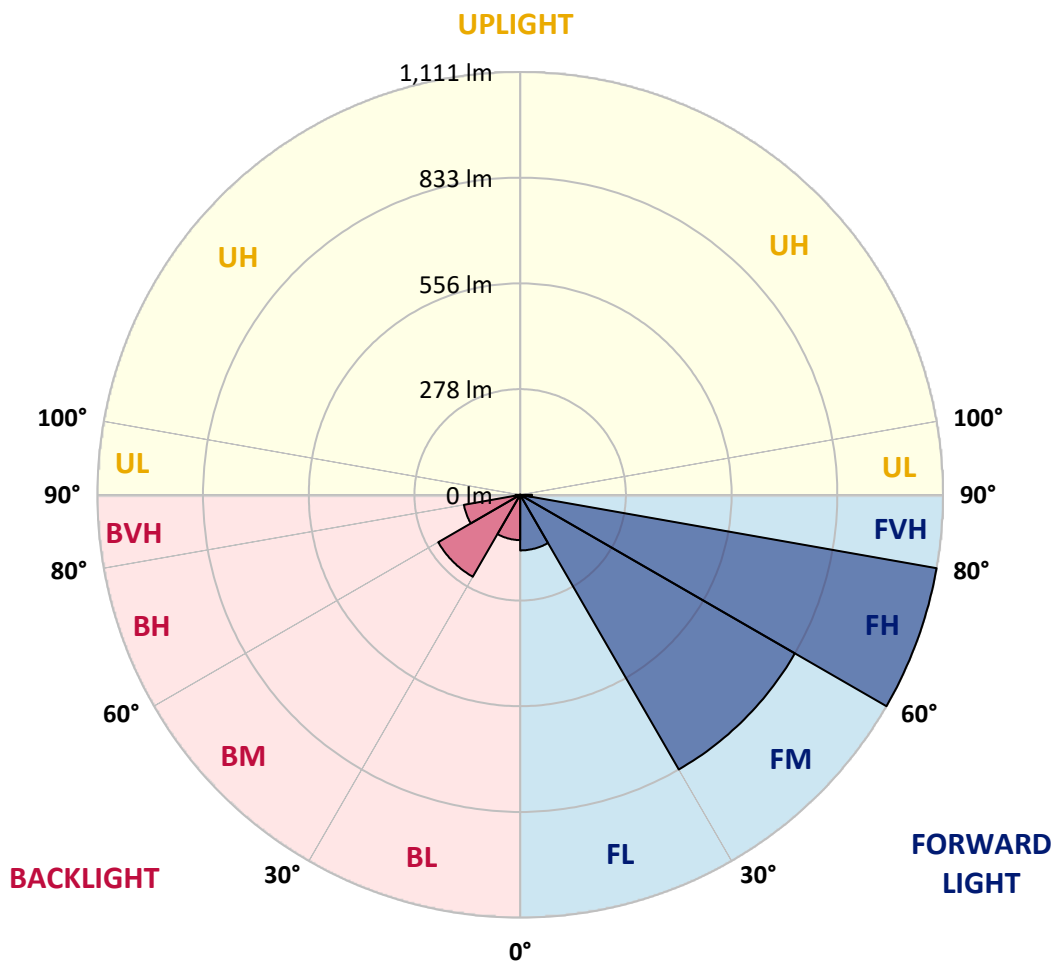
CATALOG NUMBER: ISC-AF-450-LED-E1-T4W-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	146.2	5.5			
FM	(30°-60°)	833.5	31.4			
FH	(60°-80°)	1111.2	41.9			G1/1800
FVH	(80°-90°)	31.3	1.2			G1/100
BL	(0°-30°)	118.9	4.5	B1/500		
BM	(30°-60°)	248.8	9.4	B1/1000		
BH	(60°-80°)	150.0	5.7	B1/500		G1/500
BVH	(80°-90°)	12.1	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47°	47.5°
0°	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7
2.5°	344.9	344.1	341.4	340.5	337.9	336.2	335.3	334.4	337.0	335.3	332.7
5°	366.8	365.1	361.6	356.3	351.1	347.6	346.7	344.9	344.9	343.2	341.4
7.5°	382.6	381.7	376.4	368.6	359.8	353.7	350.2	347.6	348.4	346.7	341.4
10°	397.5	395.7	386.9	377.3	364.2	357.2	352.8	348.4	351.9	349.3	342.3
12.5°	408.8	407.1	394.8	382.6	367.7	359.8	355.4	352.8	356.3	354.6	346.7
15°	415.0	413.2	401.0	386.1	370.3	361.6	359.8	358.1	360.7	357.2	350.2
17.5°	411.5	411.5	400.1	384.3	371.2	362.4	359.8	358.1	361.6	358.1	350.2
20°	398.3	400.1	392.2	375.6	365.9	359.8	357.2	353.7	357.2	353.7	348.4
22.5°	381.7	383.4	379.1	364.2	357.2	352.8	351.9	348.4	351.1	348.4	343.2
25°	366.8	366.8	365.1	351.9	351.1	347.6	348.4	346.7	348.4	344.9	341.4
27.5°	367.7	367.7	360.7	347.6	346.7	346.7	346.7	346.7	347.6	344.9	341.4
30°	419.3	421.1	401.0	364.2	351.1	349.3	350.2	349.3	350.2	349.3	344.9
32.5°	497.3	497.3	478.0	421.1	374.7	363.3	358.9	358.1	355.4	354.6	351.1
35°	574.3	573.4	554.2	491.1	432.5	410.6	396.6	383.4	377.3	371.2	365.1
37.5°	639.1	636.4	633.8	562.0	500.8	475.4	458.7	439.5	427.2	416.7	402.7
40°	699.5	703.9	713.5	627.7	569.0	545.4	528.8	504.3	492.0	478.9	462.2
42.5°	782.6	788.8	789.7	698.6	631.2	615.4	602.3	583.9	570.8	555.0	540.2
45°	863.2	864.1	866.7	774.8	707.4	687.2	677.6	660.1	643.5	623.3	611.1
47.5°	918.3	915.7	927.1	862.3	796.7	773.9	759.9	733.6	708.2	682.8	664.5
50°	985.8	983.1	983.1	962.1	900.0	873.7	849.2	800.2	773.0	741.5	715.2
52.5°	1045.3	1035.7	1041.8	1054.0	1008.5	975.2	932.4	877.2	841.3	802.8	769.5
55°	1126.7	1076.8	1090.8	1133.7	1116.2	1064.5	1007.6	949.0	907.8	864.1	833.4
57.5°	1098.7	1064.5	1105.7	1181.0	1180.1	1132.0	1083.8	1012.0	970.9	929.7	892.1
60°	998.0	1015.5	1104.8	1213.4	1217.7	1180.1	1140.7	1074.2	1041.8	998.9	961.2
62.5°	920.1	945.5	1068.0	1210.7	1260.6	1225.6	1193.2	1153.8	1131.1	1095.2	1056.7
65°	915.7	930.6	1049.7	1208.1	1321.0	1302.7	1287.8	1269.4	1265.0	1238.8	1194.1
67.5°	957.7	971.7	1081.2	1275.5	1410.3	1402.5	1424.4	1420.8	1440.1	1427.0	1390.2
70°	875.4	883.3	1018.1	1299.2	1614.3	1649.3	1698.4	1695.7	1736.9	1705.4	1662.5
72.5°	614.6	630.3	749.4	1073.3	1618.7	1806.0	1919.9	2016.2	2060.8	2068.7	2048.5
73°	548.9	561.2	671.5	999.8	1574.9	1774.5	1927.7	2026.7	2066.1	2090.6	2092.3
75°	190.8	197.0	293.3	605.8	1258.9	1548.7	1745.6	1834.9	1825.3	1897.1	1975.9
77.5°	61.3	62.2	76.2	156.7	607.6	961.2	1181.0	1263.3	1216.0	1293.9	1399.0
80°	37.6	39.4	49.9	70.9	159.3	291.5	493.8	618.1	592.7	665.3	777.4
82.5°	22.8	23.6	30.6	43.8	63.9	70.9	92.8	126.1	155.0	186.5	244.2
85°	10.5	11.4	14.9	20.1	26.3	27.1	26.3	24.5	28.0	32.4	37.6
87.5°	0.0	0.0	0.9	1.8	0.9	0.0	0.0	0.0	0.0	0.9	0.0
90°	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):

	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7
2.5°	335.3	332.7	332.7	329.2	330.9	327.4	329.2	325.7	327.4	323.0	325.7
5°	340.5	336.2	336.2	330.9	331.8	325.7	328.3	321.3	324.8	316.9	322.2
7.5°	343.2	335.3	338.8	329.2	333.5	323.0	328.3	316.9	323.9	311.7	320.4
10°	346.7	335.3	341.4	330.9	336.2	323.9	330.9	316.9	325.7	310.8	318.7
12.5°	351.9	339.7	344.9	332.7	339.7	325.7	332.7	318.7	327.4	310.8	320.4
15°	355.4	343.2	348.4	336.2	341.4	325.7	334.4	317.8	327.4	309.9	320.4
17.5°	354.6	343.2	348.4	334.4	340.5	324.8	333.5	316.9	325.7	307.3	318.7
20°	351.1	341.4	344.9	332.7	337.9	322.2	330.0	313.4	323.0	304.7	316.0
22.5°	346.7	337.0	341.4	330.0	335.3	319.5	326.5	311.7	321.3	302.9	313.4
25°	344.1	336.2	338.8	327.4	334.4	320.4	327.4	310.8	321.3	302.9	315.2
27.5°	343.2	336.2	341.4	330.9	337.0	324.8	331.8	316.9	325.7	306.4	318.7
30°	348.4	342.3	346.7	337.9	343.2	330.9	337.9	323.9	332.7	314.3	328.3
32.5°	354.6	348.4	352.8	344.9	352.8	340.5	349.3	335.3	345.8	327.4	340.5
35°	367.7	360.7	366.8	358.1	366.8	357.2	366.8	351.9	365.1	346.7	360.7
37.5°	401.8	382.6	388.7	379.1	387.8	375.6	392.2	377.3	392.2	374.7	394.0
40°	456.1	422.0	428.1	408.0	421.1	402.7	422.8	411.5	431.6	409.7	434.2
42.5°	527.0	494.6	488.5	457.9	469.2	447.4	467.5	447.4	474.5	453.5	484.1
45°	591.8	557.7	548.0	518.3	526.1	497.3	522.6	494.6	530.5	506.0	544.5
47.5°	645.2	604.9	597.1	562.9	576.9	549.8	581.3	551.5	595.3	570.8	615.4
50°	694.2	644.3	642.6	605.8	629.4	602.3	647.0	626.8	669.7	645.2	697.7
52.5°	750.3	687.2	696.0	662.7	700.4	677.6	729.2	700.4	756.4	730.1	787.9
55°	809.8	743.3	766.0	745.9	790.5	775.6	819.4	793.2	848.3	822.0	883.3
57.5°	875.4	818.5	858.8	849.2	888.6	870.2	919.2	895.6	950.7	928.8	990.1
60°	961.2	923.6	963.0	962.1	996.3	995.4	1026.9	1012.9	1065.4	1055.8	1111.8
62.5°	1072.4	1042.7	1084.7	1073.3	1114.4	1107.4	1146.0	1146.0	1183.6	1196.7	1252.8
65°	1222.1	1182.7	1232.6	1215.1	1256.3	1258.0	1282.5	1286.9	1332.4	1347.3	1395.5
67.5°	1425.2	1379.7	1419.1	1385.8	1433.1	1430.5	1451.5	1460.2	1466.4	1502.3	1507.5
70°	1717.6	1649.3	1685.2	1639.7	1648.5	1654.6	1615.2	1644.1	1574.1	1631.0	1553.9
72.5°	2033.7	1955.7	1893.6	1848.1	1757.9	1744.8	1630.1	1654.6	1505.8	1554.8	1399.0
73°	2050.3	1975.0	1891.0	1843.7	1736.9	1722.9	1600.3	1621.3	1456.7	1503.1	1339.4
75°	1863.8	1884.0	1681.7	1701.0	1515.4	1537.3	1345.6	1370.1	1167.8	1202.9	991.9
77.5°	1256.3	1323.7	1096.9	1181.9	951.6	1036.5	776.5	784.4	572.5	534.9	363.3
80°	622.4	680.2	482.4	527.0	353.7	347.6	211.9	176.0	149.7	153.2	157.6
82.5°	179.5	202.2	125.2	124.3	88.4	84.0	84.0	89.3	91.0	101.6	98.9
85°	34.1	41.1	35.9	48.1	42.9	47.3	43.8	50.8	47.3	58.7	50.8
87.5°	0.9	0.0	0.9	2.6	2.6	6.1	4.4	7.0	7.0	12.3	11.4
90°	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):

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7
2.5°	322.2	326.5	324.8	323.0	321.3	320.4	316.9	318.7	314.3	317.8	314.3
5°	315.2	320.4	317.8	314.3	312.5	310.8	304.7	309.0	302.0	308.2	302.9
7.5°	307.3	316.0	313.4	309.9	306.4	304.7	292.4	302.0	291.5	300.3	291.5
10°	304.7	314.3	310.8	306.4	302.9	301.2	286.3	297.7	286.3	295.9	284.5
12.5°	302.9	314.3	309.0	304.7	301.2	298.5	281.9	295.9	281.0	295.0	281.9
15°	301.2	314.3	307.3	302.0	298.5	295.9	278.4	294.1	277.5	293.3	278.4
17.5°	299.4	311.7	305.5	299.4	295.9	294.1	274.9	291.5	274.0	291.5	276.6
20°	296.8	309.0	302.0	295.9	292.4	289.8	270.5	288.0	269.6	287.1	270.5
22.5°	293.3	306.4	300.3	294.1	290.6	286.3	265.3	283.6	264.4	281.9	266.1
25°	294.1	308.2	300.3	294.1	288.9	284.5	261.8	281.9	260.0	277.5	260.0
27.5°	298.5	310.8	302.9	297.7	290.6	285.4	261.8	280.1	258.3	273.1	254.8
30°	307.3	319.5	312.5	304.7	298.5	291.5	266.1	281.0	258.3	267.9	249.5
32.5°	322.2	333.5	326.5	320.4	313.4	302.9	274.9	285.4	260.0	264.4	245.1
35°	341.4	355.4	351.9	347.6	338.8	320.4	289.8	291.5	263.5	260.9	239.0
37.5°	372.9	392.2	391.3	390.4	380.8	347.6	306.4	303.8	267.0	258.3	231.1
40°	414.1	436.8	443.0	449.1	429.0	379.9	325.7	316.0	268.8	253.0	218.9
42.5°	462.2	492.9	511.3	522.6	485.9	415.8	347.6	330.0	268.8	245.1	204.9
45°	521.8	557.7	592.7	604.9	548.9	454.4	370.3	341.4	265.3	232.9	186.5
47.5°	594.4	636.4	684.6	690.7	617.2	495.5	386.1	349.3	253.9	216.2	169.8
50°	675.0	725.7	796.7	792.3	689.9	538.4	396.6	354.6	233.7	197.0	149.7
52.5°	765.1	829.0	929.7	909.6	778.3	591.8	406.2	361.6	209.2	174.2	129.6
55°	878.1	954.2	1080.3	1037.4	876.3	650.5	420.2	362.4	176.8	147.1	114.7
57.5°	999.8	1081.2	1242.3	1164.3	968.2	696.0	414.1	334.4	144.4	124.3	103.3
60°	1146.0	1244.9	1404.2	1282.5	1045.3	711.7	371.2	275.8	123.4	112.1	98.0
62.5°	1309.7	1407.7	1537.3	1364.8	1089.1	685.5	275.8	190.8	105.9	99.8	90.2
65°	1483.9	1576.7	1601.2	1371.8	1060.2	569.9	170.7	125.2	91.9	89.3	83.2
67.5°	1644.1	1652.8	1540.8	1258.0	920.1	397.5	116.4	99.8	84.9	84.0	80.5
70°	1685.2	1533.8	1280.8	979.6	664.5	236.4	94.5	86.7	81.4	81.4	78.8
72.5°	1407.7	1167.8	856.2	593.6	362.4	126.1	80.5	78.8	77.0	77.0	75.3
73°	1320.2	1075.9	766.9	518.3	306.4	112.9	78.8	77.0	76.2	75.3	74.4
75°	877.2	675.8	435.1	262.6	142.7	81.4	70.0	70.0	69.2	70.0	69.2
77.5°	337.9	254.8	168.1	112.9	81.4	63.9	59.5	60.4	59.5	61.3	60.4
80°	148.8	147.1	111.2	79.7	59.5	48.1	48.1	48.1	49.0	49.9	49.9
82.5°	101.6	85.8	65.7	49.0	35.9	35.0	35.9	35.9	36.8	37.6	36.8
85°	56.0	47.3	35.0	21.9	19.3	23.6	23.6	23.6	22.8	22.8	21.9
87.5°	17.5	13.1	9.6	2.6	4.4	4.4	6.1	5.3	5.3	6.1	6.1
90°	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: ISC-AF-450-LED-E1-T4W-7030

CANDELA DISTRIBUTION (continued):

	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°
0°	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7	325.7
2.5°	317.8	315.2	317.8	313.4	316.9	313.4	316.0	316.0	315.2	315.2	315.2
5°	307.3	302.9	307.3	304.7	307.3	303.8	306.4	307.3	308.2	310.8	309.9
7.5°	299.4	290.6	300.3	291.5	299.4	291.5	298.5	299.4	302.0	305.5	308.2
10°	295.9	284.5	295.9	285.4	295.0	286.3	295.0	295.9	298.5	302.9	307.3
12.5°	294.1	281.9	294.1	283.6	294.1	285.4	294.1	296.8	298.5	302.0	307.3
15°	292.4	280.1	294.1	282.8	294.1	285.4	295.0	296.8	299.4	302.9	307.3
17.5°	291.5	277.5	292.4	281.9	292.4	283.6	294.1	294.1	297.7	302.0	304.7
20°	288.0	274.9	288.0	277.5	288.0	280.1	288.9	288.9	292.4	294.1	298.5
22.5°	282.8	268.8	281.0	271.4	281.0	273.1	280.1	280.1	282.8	285.4	288.0
25°	274.9	261.8	272.3	263.5	270.5	263.5	268.8	267.9	269.6	271.4	273.1
27.5°	266.1	253.0	261.8	252.1	256.5	249.5	253.0	251.3	252.1	253.0	253.9
30°	256.5	243.4	247.8	239.0	239.9	232.9	234.6	232.0	231.1	230.2	228.5
32.5°	246.0	232.0	232.0	223.2	221.5	215.4	215.4	211.9	209.2	205.7	202.2
35°	232.9	220.6	214.5	207.5	204.0	197.9	197.0	192.6	186.5	180.3	176.8
37.5°	219.7	205.7	197.0	190.0	186.5	182.1	181.2	177.7	170.7	163.7	158.5
40°	202.2	188.2	178.6	176.0	173.3	169.8	170.7	166.3	159.3	151.5	147.1
42.5°	184.7	172.5	164.6	163.7	162.0	161.1	162.0	158.5	150.6	143.6	138.3
45°	169.8	157.6	149.7	148.8	148.0	151.5	152.3	151.5	142.7	135.7	128.7
47.5°	155.0	140.1	134.8	133.1	133.9	139.2	140.9	143.6	135.7	127.8	118.2
50°	137.4	123.4	121.7	119.9	120.8	125.2	129.6	134.8	127.8	116.4	103.3
52.5°	121.7	109.4	110.3	108.6	110.3	113.8	117.3	126.1	117.3	105.9	99.8
55°	109.4	99.8	101.6	99.8	101.6	105.9	108.6	115.6	115.6	112.9	107.7
57.5°	100.7	93.7	95.4	93.7	96.3	99.8	102.4	117.3	126.1	119.1	108.6
60°	95.4	89.3	90.2	88.4	90.2	95.4	100.7	118.2	132.2	118.2	110.3
62.5°	87.5	82.3	81.4	81.4	83.2	91.9	94.5	110.3	130.4	117.3	111.2
65°	82.3	77.9	77.0	76.2	77.9	84.0	86.7	102.4	126.1	111.2	100.7
67.5°	79.7	76.2	74.4	72.7	74.4	79.7	82.3	96.3	119.1	105.9	94.5
70°	77.0	73.5	72.7	70.9	71.8	75.3	78.8	88.4	112.9	99.8	88.4
72.5°	73.5	70.0	69.2	66.5	67.4	70.9	72.7	83.2	105.1	93.7	82.3
73°	72.7	69.2	68.3	65.7	66.5	69.2	70.9	81.4	103.3	92.8	81.4
75°	68.3	64.8	63.9	62.2	63.0	63.0	64.8	74.4	98.0	87.5	76.2
77.5°	60.4	57.8	56.9	55.2	54.3	53.4	56.0	65.7	89.3	78.8	61.3
80°	49.9	47.3	46.4	42.9	42.9	42.9	46.4	56.0	66.5	56.9	47.3
82.5°	36.8	35.0	35.0	32.4	31.5	30.6	33.3	38.5	52.5	44.6	36.8
85°	21.9	21.0	21.9	19.3	20.1	19.3	21.9	27.1	28.9	22.8	17.5
87.5°	5.3	6.1	6.1	6.1	5.3	5.3	4.4	3.5	0.0	0.0	0.0
90°	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):

	175°	180°
0°	325.7	325.7
2.5°	314.3	313.4
5°	309.9	309.9
7.5°	308.2	308.2
10°	309.0	309.0
12.5°	309.0	310.8
15°	311.7	310.8
17.5°	309.0	309.0
20°	302.0	303.8
22.5°	292.4	292.4
25°	276.6	277.5
27.5°	255.6	257.4
30°	229.4	231.1
32.5°	199.6	201.4
35°	176.0	176.8
37.5°	160.2	160.2
40°	147.1	147.1
42.5°	134.8	133.9
45°	122.6	120.8
47.5°	110.3	109.4
50°	99.8	99.8
52.5°	101.6	101.6
55°	109.4	109.4
57.5°	110.3	109.4
60°	119.9	119.1
62.5°	125.2	127.8
65°	109.4	105.9
67.5°	104.2	98.9
70°	93.7	85.8
72.5°	83.2	78.8
73°	80.5	77.0
75°	71.8	70.0
77.5°	54.3	53.4
80°	45.5	44.6
82.5°	30.6	28.9
85°	13.1	12.3
87.5°	0.0	0.0
90°	0.0	0.0

(END OF REPORT)