

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: FAIL-SAFE

Report Number: P646278

Luminaire Tested: **FLDSQ4C55D010 FEU4C559030 F4LC-SQLWW-H-D2W**

Issue Date: 12/13/2022

Test Information

Test Method: LM-79-08
Report Number: P646278
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 12/13/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FLDSQ4C55D010 FEU4C559030 F4LC-SQLWW-H-D2W
Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQLWW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

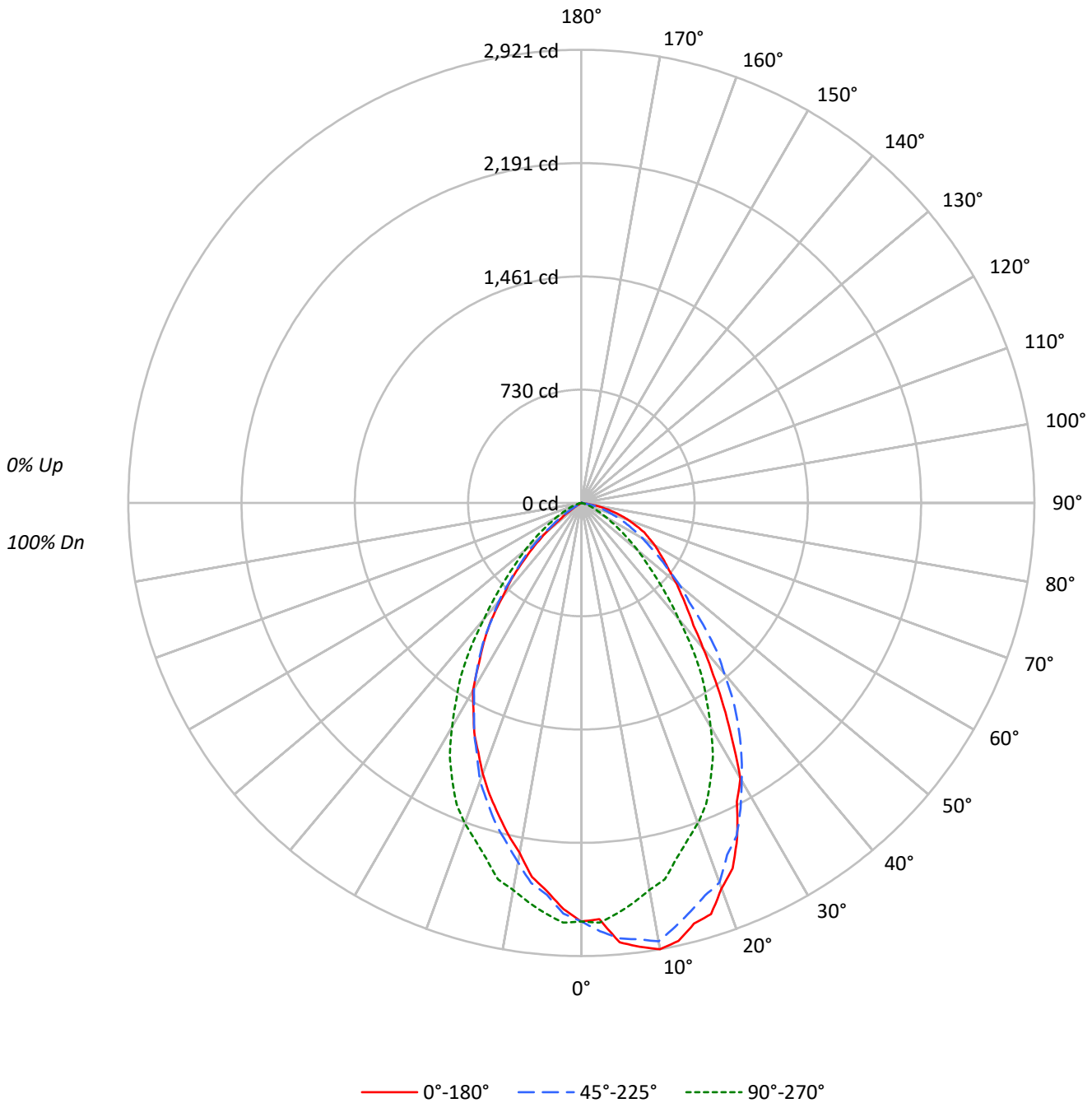
Lumens per Lamp: N/A
Luminaire Lumens: 3867.0 lumens
Efficiency: N/A
Efficacy: 60.5 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 63.9
Input Voltage (V):
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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Luminous Intensity Polar Plot





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CATALOG NUMBER: FLDSQ4C55D010 FEU4C559030 F4LC-SQLWW-H-D2W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	260298	260298	260298
5°	275395	257234	243442
10°	286192	248157	224378
15°	280469	236845	207117
20°	271366	225529	190648
25°	253128	209723	173919
30°	228503	185608	155704
35°	188219	158889	129170
40°	153605	122645	99418
45°	131980	93145	71503
50°	119443	70897	45168
55°	109917	51140	16334
60°	105501	34948	2489
65°	101896	23630	753
70°	91236	16419	931
75°	74785	8463	0
80°	46731	3612	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.8	6.5
10°-20°	681.0	17.6
20°-30°	909.3	23.5
30°-40°	863.2	22.3
40°-50°	596.7	15.4
50°-60°	329.7	8.5
60°-70°	163.7	4.2
70°-80°	64.5	1.7
80°-90°	6.1	0.2
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°-30°	1843.1	47.7
0°-40°	2706.3	70.0
0°-60°	3632.6	93.9
0°-90°	3867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3867.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2698	2698	2698	2698	2698	
5°	2843	2818	2656	2536	2513	272
15°	2808	2724	2371	2138	2073	794
25°	2378	2368	1970	1634	1634	1084
35°	1598	1766	1349	1110	1097	1001
45°	967	1110	683	560	524	754
55°	653	615	304	155	97	588
65°	446	323	104	3	3	433
75°	201	123	23	0	0	214
85°	0	3	0	0	0	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7
2.5°	2684.8	2759.2	2765.6	2759.2	2768.9	2765.6	2781.9	2765.6	2785.2	2756.0	2762.5
5°	2843.3	2814.2	2875.6	2843.3	2843.3	2840.2	2830.4	2827.1	2840.2	2798.1	2817.5
7.5°	2885.4	2927.5	2982.5	2914.5	2917.7	2917.7	2898.3	2891.9	2891.9	2814.2	2836.9
10°	2921.0	2895.0	2924.2	2898.3	2921.0	2917.7	2930.6	2888.6	2917.7	2872.5	2869.2
12.5°	2891.9	2882.1	2921.0	2878.9	2866.0	2869.2	2853.1	2843.3	2853.1	2801.2	2798.1
15°	2807.7	2817.5	2875.6	2830.4	2823.9	2817.5	2798.1	2765.6	2791.6	2720.4	2723.7
17.5°	2778.7	2762.5	2772.2	2733.3	2743.1	2736.6	2733.3	2704.3	2697.7	2652.5	2652.5
20°	2642.8	2678.3	2678.3	2652.5	2652.5	2649.3	2607.2	2633.1	2603.9	2591.0	2603.9
22.5°	2548.9	2552.2	2552.2	2529.5	2532.8	2519.9	2497.2	2481.0	2497.2	2481.0	2455.1
25°	2377.6	2384.1	2422.8	2380.8	2374.3	2387.2	2367.8	2358.1	2354.9	2316.1	2367.8
27.5°	2170.5	2235.1	2232.0	2215.8	2235.1	2209.3	2199.7	2202.8	2212.6	2209.3	2222.2
30°	2050.9	2060.5	2070.3	2057.3	2060.5	2050.9	2050.9	2054.0	2079.9	2070.3	2067.0
32.5°	1808.2	1840.5	1866.5	1866.5	1869.7	1879.4	1876.1	1944.0	1960.3	1927.9	1921.5
35°	1597.9	1620.6	1643.2	1646.5	1688.6	1691.7	1695.0	1714.4	1759.7	1769.4	1766.1
37.5°	1397.5	1420.0	1426.5	1455.6	1478.3	1500.9	1526.8	1552.7	1591.5	1623.8	1607.7
40°	1219.5	1229.2	1245.4	1258.3	1303.5	1303.5	1316.5	1368.3	1410.4	1436.2	1432.9
42.5°	1070.7	1073.9	1086.8	1109.5	1151.6	1141.8	1151.6	1187.2	1248.5	1251.8	1287.5
45°	967.2	963.9	973.7	976.8	1002.8	1015.7	1022.2	1048.1	1099.8	1106.2	1109.5
47.5°	873.4	870.1	886.4	892.8	902.4	915.4	915.4	918.7	938.1	954.3	941.4
50°	795.7	795.7	795.7	802.2	818.4	815.1	818.4	831.4	841.0	834.5	831.4
52.5°	711.6	724.5	734.3	737.6	740.7	740.7	744.0	737.6	734.3	724.5	705.1
55°	653.4	666.3	666.3	666.3	666.3	679.3	663.2	666.3	666.3	640.5	614.6
57.5°	595.3	608.2	617.8	604.9	617.8	604.9	598.4	595.3	588.7	562.8	524.0
60°	546.7	553.2	549.9	546.7	553.2	543.4	537.0	524.0	517.6	482.0	456.1
62.5°	491.7	494.9	498.2	491.7	485.3	482.0	469.0	449.6	436.7	407.6	384.9
65°	446.3	436.7	433.4	430.2	423.8	414.0	404.4	381.7	372.0	346.1	323.4
67.5°	378.4	375.2	381.7	372.0	355.9	355.9	346.1	326.7	304.0	287.9	265.2
70°	323.4	320.2	313.8	304.0	300.9	287.9	287.9	265.2	258.8	229.6	210.2
72.5°	265.2	265.2	255.5	245.9	236.1	229.6	226.5	210.2	200.6	184.4	168.2
75°	200.6	200.6	197.3	187.6	181.1	174.6	171.5	158.5	148.8	132.7	122.9
77.5°	142.3	142.3	129.4	122.9	126.1	119.6	113.2	110.0	106.7	97.1	84.1
80°	84.1	80.9	71.2	74.4	71.2	71.2	67.9	64.6	58.2	51.7	45.2
82.5°	22.7	25.9	25.9	25.9	29.1	22.7	22.7	22.7	25.9	25.9	16.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.3
87.5°	3.3	6.5	12.9	12.9	12.9	12.9	12.9	9.8	9.8	9.8	6.5
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°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7
2.5°	2730.2	2726.9	2730.2	2707.5	2759.2	2720.4	2713.9	2707.5	2730.2	2707.5	2675.1
5°	2788.3	2756.0	2746.2	2736.6	2765.6	2720.4	2710.8	2713.9	2697.7	2655.8	2658.9
7.5°	2807.7	2778.7	2749.5	2688.1	2713.9	2704.3	2678.3	2658.9	2633.1	2597.5	2591.0
10°	2814.2	2781.9	2739.8	2720.4	2681.6	2668.7	2658.9	2626.6	2594.3	2532.8	2516.6
12.5°	2794.8	2756.0	2704.3	2688.1	2658.9	2616.9	2594.3	2561.9	2532.8	2484.3	2448.7
15°	2710.8	2678.3	2662.2	2607.2	2594.3	2568.3	2523.1	2477.8	2435.8	2371.0	2351.6
17.5°	2613.7	2600.8	2584.5	2542.5	2539.3	2513.4	2471.4	2432.5	2377.6	2277.2	2244.9
20°	2513.4	2513.4	2461.6	2445.5	2477.8	2426.0	2393.7	2358.1	2244.9	2196.4	2138.2
22.5°	2439.1	2403.4	2374.3	2348.4	2351.6	2319.3	2274.0	2202.8	2160.8	2102.6	2034.7
25°	2293.4	2306.4	2241.7	2232.0	2241.7	2167.2	2144.7	2086.4	2024.9	1969.9	1918.2
27.5°	2202.8	2167.2	2125.3	2089.7	2089.7	2060.5	1995.9	1982.9	1889.0	1837.3	1772.6
30°	2067.0	2041.1	2005.5	1953.8	1947.3	1924.7	1872.9	1840.5	1743.6	1665.9	1630.3
32.5°	1895.5	1885.9	1856.7	1798.6	1779.2	1753.2	1688.6	1633.6	1588.3	1500.9	1458.9
35°	1772.6	1737.1	1675.6	1627.1	1610.9	1565.6	1513.8	1475.0	1426.5	1348.9	1293.9
37.5°	1588.3	1552.7	1494.4	1436.2	1436.2	1391.0	1319.8	1281.0	1213.1	1167.7	1122.5
40°	1426.5	1381.2	1323.1	1255.1	1245.4	1180.6	1151.6	1086.8	1044.8	973.7	967.2
42.5°	1245.4	1203.3	1151.6	1099.8	1061.0	1028.7	954.3	905.7	860.5	824.9	815.1
45°	1080.4	1025.4	980.1	915.4	876.6	837.8	789.3	757.0	721.3	682.6	659.9
47.5°	938.1	892.8	828.1	769.9	731.1	711.6	656.6	621.1	592.0	566.1	549.9
50°	792.6	737.6	702.0	637.2	630.7	585.5	540.3	511.1	494.9	472.3	449.6
52.5°	682.6	630.7	582.2	533.8	507.8	491.7	449.6	420.5	397.9	381.7	368.8
55°	575.7	530.5	491.7	443.2	427.0	404.4	355.9	349.4	326.7	304.0	287.9
57.5°	494.9	452.8	407.6	375.2	346.1	330.0	291.1	265.2	252.3	232.9	216.7
60°	420.5	375.2	339.6	300.9	287.9	265.2	236.1	213.5	197.3	181.1	165.0
62.5°	352.6	313.8	275.0	242.6	223.2	210.2	187.6	168.2	152.1	139.1	126.1
65°	291.1	255.5	223.2	190.9	181.1	165.0	148.8	132.7	119.6	103.5	90.6
67.5°	239.4	207.1	174.6	152.1	142.3	135.9	116.5	100.2	90.6	80.9	67.9
70°	187.6	165.0	139.1	119.6	110.0	100.2	87.3	77.7	64.6	58.2	48.5
72.5°	145.6	126.1	103.5	87.3	80.9	74.4	61.5	51.7	45.2	38.8	32.3
75°	103.5	87.3	74.4	58.2	55.0	51.7	42.1	35.6	29.1	22.7	19.4
77.5°	71.2	58.2	45.2	38.8	35.6	29.1	25.9	19.4	16.2	12.9	9.8
80°	38.8	29.1	22.7	19.4	16.2	12.9	12.9	9.8	6.5	6.5	3.3
82.5°	12.9	9.8	6.5	3.3	3.3	3.3	3.3	3.3	3.3	0.0	3.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7
2.5°	2694.5	2658.9	2668.7	2668.7	2662.2	2662.2	2655.8	2646.0	2649.3	2629.8	2587.8
5°	2665.4	2620.1	2613.7	2620.1	2594.3	2587.8	2574.9	2594.3	2536.0	2558.7	2532.8
7.5°	2581.4	2539.3	2529.5	2552.2	2519.9	2500.4	2497.2	2523.1	2471.4	2445.5	2416.4
10°	2487.5	2471.4	2442.2	2426.0	2416.4	2419.5	2393.7	2361.4	2351.6	2345.1	2319.3
12.5°	2403.4	2367.8	2342.0	2322.6	2316.1	2316.1	2274.0	2267.6	2238.4	2232.0	2193.2
15°	2303.1	2261.1	2244.9	2219.0	2196.4	2209.3	2160.8	2147.8	2138.2	2096.1	2102.6
17.5°	2215.8	2170.5	2131.7	2115.5	2096.1	2076.7	2031.4	2041.1	2018.4	2018.4	1960.3
20°	2102.6	2054.0	2024.9	1992.6	1992.6	1966.7	1934.4	1937.6	1908.4	1879.4	1827.6
22.5°	1982.9	1931.1	1895.5	1882.6	1850.3	1843.8	1805.0	1795.3	1756.5	1759.7	1714.4
25°	1856.7	1805.0	1756.5	1759.7	1730.6	1717.7	1695.0	1649.8	1633.6	1614.2	1601.2
27.5°	1707.9	1672.3	1630.3	1627.1	1572.1	1575.3	1546.2	1533.3	1494.4	1504.2	1475.0
30°	1572.1	1520.4	1481.5	1471.8	1449.2	1442.7	1397.5	1377.9	1384.5	1358.5	1342.5
32.5°	1432.9	1355.4	1339.2	1319.8	1306.8	1290.6	1258.3	1271.2	1242.1	1248.5	1222.7
35°	1248.5	1216.2	1174.2	1174.2	1161.2	1148.3	1125.7	1138.7	1109.5	1096.6	1070.7
37.5°	1093.3	1064.3	1022.2	1035.1	1012.4	993.1	973.7	976.8	951.0	947.8	921.8
40°	925.1	908.9	879.9	879.9	863.7	863.7	853.9	844.3	828.1	808.7	779.5
42.5°	766.6	753.7	740.7	744.0	721.3	740.7	714.9	731.1	679.3	676.1	656.6
45°	650.1	621.1	624.3	611.3	598.4	604.9	582.2	588.7	559.6	553.2	533.8
47.5°	527.3	517.6	498.2	491.7	491.7	482.0	472.3	469.0	456.1	439.9	414.0
50°	433.4	397.9	391.3	381.7	375.2	375.2	362.3	342.9	346.1	330.0	304.0
52.5°	339.6	310.5	297.6	294.4	281.5	275.0	258.8	245.9	236.1	229.6	213.5
55°	262.0	236.1	220.0	220.0	200.6	200.6	177.9	168.2	155.2	142.3	132.7
57.5°	197.3	184.4	168.2	155.2	148.8	132.7	119.6	103.5	93.8	74.4	61.5
60°	148.8	135.9	119.6	110.0	103.5	87.3	71.2	58.2	35.6	29.1	25.9
62.5°	110.0	97.1	80.9	74.4	67.9	55.0	38.8	19.4	9.8	9.8	9.8
65°	80.9	64.6	51.7	45.2	38.8	29.1	12.9	6.5	3.3	3.3	3.3
67.5°	55.0	42.1	29.1	25.9	19.4	9.8	3.3	3.3	3.3	3.3	3.3
70°	35.6	25.9	12.9	9.8	6.5	3.3	3.3	3.3	3.3	3.3	3.3
72.5°	22.7	12.9	6.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	12.9	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	6.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P646278
 CATALOG NUMBER: FLDSQ4C55D010 FEU4C559030 F4LC-SQLWW-H-D2W

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7	2697.7
2.5°	2633.1	2610.4	2623.3	2594.3	2607.2	2629.8	2613.7	2620.1
5°	2542.5	2529.5	2513.4	2471.4	2503.7	2529.5	2516.6	2513.4
7.5°	2445.5	2400.1	2422.8	2409.9	2403.4	2429.3	2400.1	2432.5
10°	2345.1	2312.8	2309.7	2287.0	2287.0	2306.4	2309.7	2290.1
12.5°	2196.4	2180.3	2180.3	2177.0	2173.7	2193.2	2196.4	2186.7
15°	2089.7	2083.2	2067.0	2063.8	2044.4	2073.4	2076.7	2073.4
17.5°	1960.3	1963.4	1947.3	1947.3	1960.3	1969.9	1944.0	1969.9
20°	1872.9	1856.7	1850.3	1821.1	1837.3	1853.6	1853.6	1856.7
22.5°	1746.7	1720.9	1730.6	1714.4	1704.6	1727.3	1727.3	1737.1
25°	1604.4	1604.4	1610.9	1601.2	1607.7	1620.6	1610.9	1633.6
27.5°	1468.6	1481.5	1481.5	1468.6	1475.0	1513.8	1530.0	1504.2
30°	1342.5	1345.6	1355.4	1348.9	1368.3	1381.2	1377.9	1397.5
32.5°	1200.1	1216.2	1222.7	1213.1	1219.5	1248.5	1232.5	1229.2
35°	1090.1	1061.0	1057.8	1061.0	1073.9	1080.4	1073.9	1096.6
37.5°	931.6	921.8	908.9	912.2	921.8	934.9	941.4	957.4
40°	779.5	766.6	766.6	763.4	753.7	789.3	789.3	789.3
42.5°	647.0	643.7	627.6	627.6	640.5	650.1	643.7	666.3
45°	530.5	517.6	507.8	507.8	517.6	517.6	527.3	524.0
47.5°	417.3	404.4	407.6	397.9	407.6	420.5	404.4	407.6
50°	313.8	313.8	307.3	313.8	310.5	313.8	307.3	300.9
52.5°	213.5	242.6	245.9	232.9	203.8	177.9	161.7	174.6
55°	122.9	110.0	110.0	106.7	100.2	97.1	87.3	97.1
57.5°	61.5	55.0	55.0	55.0	51.7	48.5	42.1	42.1
60°	25.9	22.7	22.7	19.4	16.2	12.9	9.8	12.9
62.5°	9.8	6.5	6.5	6.5	6.5	6.5	6.5	6.5
65°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
67.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)