

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: PORTFOLIO

Report Number: P#

Luminaire Tested: **LD4C50D010 EX4C509050 4LBSQLWWH**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/18/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C50D010 EX4C509050 4LBSQLWWH  
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

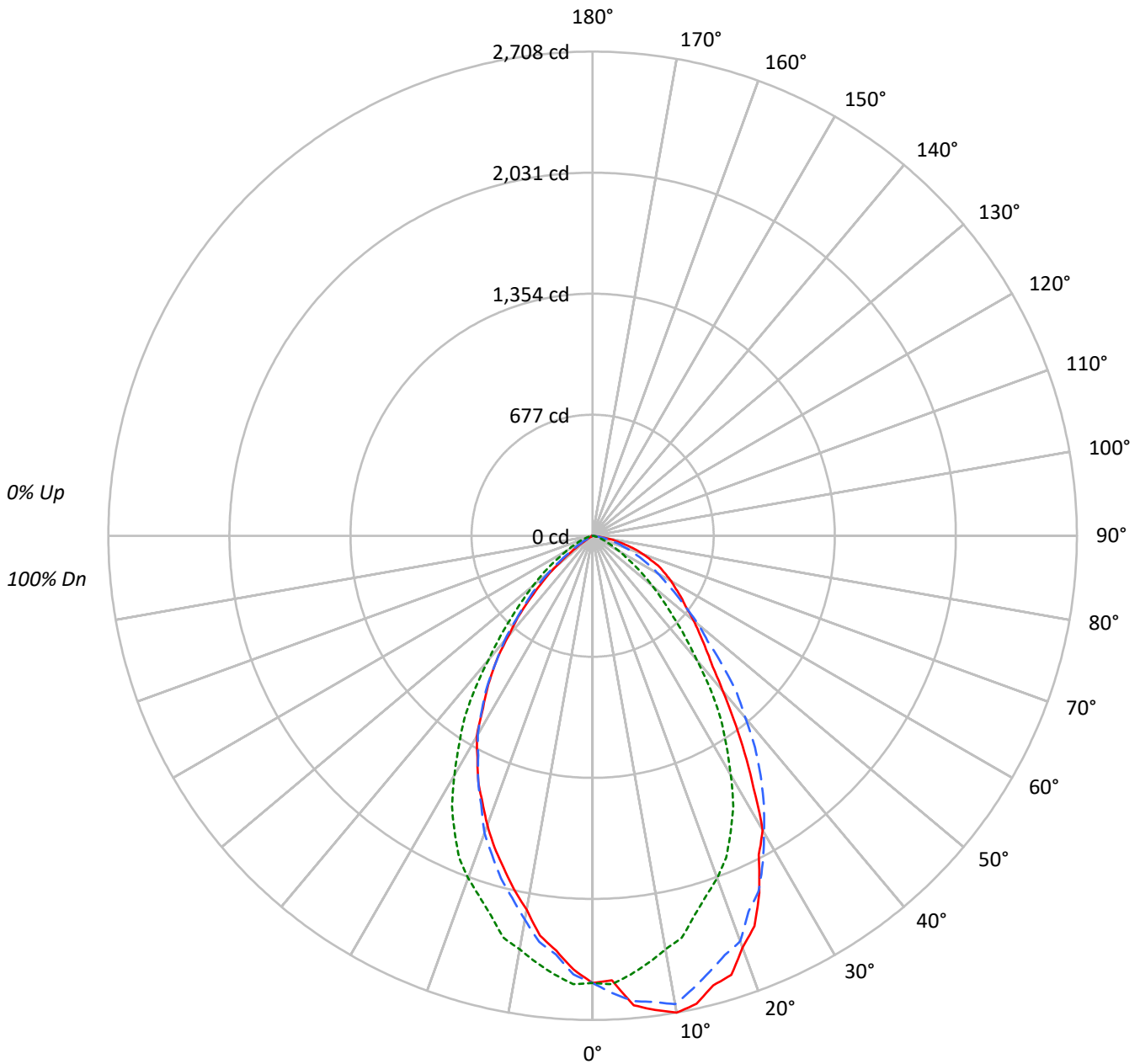
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3585.0 lumens  
Efficiency: N/A  
Efficacy: 61.4 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): 58.4  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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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**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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90	90	90	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80	80	80	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72	72	72	72
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64	64	64	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58	58	58	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53	53	53	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48	48	48	48
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44	44	44	44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41	41	41	41
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38	38	38	38

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	241319	241319	241319
5°	255316	238473	225688
10°	265323	230061	208016
15°	260021	219574	192014
20°	251580	209080	176745
25°	234667	194424	161229
30°	211835	172071	144339
35°	174496	147298	119747
40°	142407	113702	92163
45°	122360	86349	66290
50°	110736	65733	41866
55°	101910	47422	15140
60°	97801	32401	2316
65°	94476	21918	708
70°	84578	15206	875
75°	69342	7829	0
80°	43341	3334	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	234.3	6.5
10°-20°	631.3	17.6
20°-30°	843.0	23.5
30°-40°	800.3	22.3
40°-50°	553.2	15.4
50°-60°	305.6	8.5
60°-70°	151.8	4.2
70°-80°	59.8	1.7
80°-90°	5.7	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°	1708.7	47.7
0°-40°	2508.9	70.0
0°-60°	3367.7	93.9
0°-90°	3585.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3585.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2501	2501	2501	2501	2501	
5°	2636	2612	2462	2351	2330	252
15°	2603	2525	2198	1982	1922	736
25°	2204	2195	1826	1514	1514	1005
35°	1481	1637	1250	1029	1017	928
45°	897	1029	633	519	486	699
55°	606	570	282	144	90	545
65°	414	300	96	3	3	402
75°	186	114	21	0	0	198
85°	0	3	0	0	0	17
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°	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0
2.5°	2489.0	2558.0	2564.0	2558.0	2567.0	2564.0	2579.0	2564.0	2582.0	2555.0	2561.0
5°	2636.0	2608.9	2665.9	2636.0	2636.0	2633.0	2624.0	2620.9	2633.0	2594.0	2612.0
7.5°	2675.0	2714.0	2765.0	2702.0	2704.9	2704.9	2687.0	2681.0	2681.0	2608.9	2630.0
10°	2708.0	2683.9	2710.9	2687.0	2708.0	2704.9	2716.9	2677.9	2704.9	2663.0	2659.9
12.5°	2681.0	2671.9	2708.0	2669.0	2657.0	2659.9	2645.0	2636.0	2645.0	2597.0	2594.0
15°	2603.0	2612.0	2665.9	2624.0	2618.0	2612.0	2594.0	2564.0	2588.0	2522.0	2525.1
17.5°	2576.1	2561.0	2570.1	2534.0	2543.0	2537.0	2534.0	2507.1	2501.0	2459.0	2459.0
20°	2450.1	2483.0	2483.0	2459.0	2459.0	2456.1	2417.1	2441.1	2414.0	2402.1	2414.0
22.5°	2363.0	2366.1	2366.1	2345.1	2348.1	2336.1	2315.1	2300.1	2315.1	2300.1	2276.1
25°	2204.2	2210.2	2246.1	2207.1	2201.1	2213.1	2195.2	2186.1	2183.2	2147.2	2195.2
27.5°	2012.2	2072.1	2069.2	2054.2	2072.1	2048.2	2039.2	2042.2	2051.2	2048.2	2060.2
30°	1901.3	1910.2	1919.3	1907.3	1910.2	1901.3	1901.3	1904.3	1928.2	1919.3	1916.2
32.5°	1676.3	1706.3	1730.4	1730.4	1733.3	1742.4	1739.3	1802.3	1817.3	1787.4	1781.4
35°	1481.4	1502.4	1523.4	1526.4	1565.4	1568.4	1571.4	1589.4	1631.3	1640.4	1637.3
37.5°	1295.5	1316.5	1322.5	1349.5	1370.5	1391.4	1415.5	1439.5	1475.4	1505.4	1490.5
40°	1130.6	1139.5	1154.6	1166.5	1208.5	1208.5	1220.5	1268.5	1307.5	1331.5	1328.4
42.5°	992.7	995.6	1007.6	1028.6	1067.6	1058.6	1067.6	1100.6	1157.5	1160.6	1193.6
45°	896.7	893.6	902.7	905.6	929.7	941.7	947.7	971.6	1019.6	1025.6	1028.6
47.5°	809.7	806.7	821.7	827.7	836.6	848.6	848.6	851.7	869.6	884.7	872.7
50°	737.7	737.7	737.7	743.7	758.7	755.7	758.7	770.7	779.7	773.7	770.7
52.5°	659.7	671.7	680.7	683.8	686.7	686.7	689.8	683.8	680.7	671.7	653.7
55°	605.8	617.8	617.8	617.8	617.8	629.7	614.8	617.8	617.8	593.8	569.8
57.5°	551.8	563.8	572.8	560.8	572.8	560.8	554.8	551.8	545.7	521.8	485.8
60°	506.8	512.8	509.8	506.8	512.8	503.8	497.8	485.8	479.8	446.8	422.8
62.5°	455.9	458.8	461.8	455.9	449.9	446.8	434.8	416.8	404.9	377.8	356.8
65°	413.8	404.9	401.8	398.9	392.9	383.8	374.9	353.9	344.8	320.9	299.8
67.5°	350.8	347.9	353.9	344.8	329.9	329.9	320.9	302.9	281.9	266.9	245.9
70°	299.8	296.9	290.9	281.9	278.9	266.9	266.9	245.9	239.9	212.9	194.9
72.5°	245.9	245.9	236.9	227.9	218.9	212.9	210.0	194.9	186.0	170.9	155.9
75°	186.0	186.0	182.9	173.9	167.9	161.9	159.0	147.0	137.9	123.0	114.0
77.5°	131.9	131.9	120.0	114.0	116.9	110.9	104.9	102.0	98.9	90.0	78.0
80°	78.0	75.0	66.0	69.0	66.0	66.0	63.0	59.9	53.9	47.9	41.9
82.5°	21.0	24.0	24.0	24.0	27.0	21.0	21.0	21.0	24.0	24.0	15.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	3.1
87.5°	3.1	6.0	12.0	12.0	12.0	12.0	12.0	9.0	9.0	9.0	6.0
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°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0
2.5°	2531.1	2528.0	2531.1	2510.0	2558.0	2522.0	2516.0	2510.0	2531.1	2510.0	2480.1
5°	2585.0	2555.0	2546.0	2537.0	2564.0	2522.0	2513.1	2516.0	2501.0	2462.1	2465.0
7.5°	2603.0	2576.1	2549.0	2492.0	2516.0	2507.1	2483.0	2465.0	2441.1	2408.0	2402.1
10°	2608.9	2579.0	2540.0	2522.0	2486.1	2474.1	2465.0	2435.1	2405.1	2348.1	2333.1
12.5°	2591.0	2555.0	2507.1	2492.0	2465.0	2426.0	2405.1	2375.0	2348.1	2303.1	2270.1
15°	2513.1	2483.0	2468.1	2417.1	2405.1	2381.0	2339.1	2297.1	2258.1	2198.1	2180.1
17.5°	2423.1	2411.1	2396.1	2357.1	2354.1	2330.1	2291.1	2255.1	2204.2	2111.2	2081.2
20°	2330.1	2330.1	2282.1	2267.2	2297.1	2249.1	2219.1	2186.1	2081.2	2036.2	1982.3
22.5°	2261.2	2228.2	2201.1	2177.2	2180.1	2150.2	2108.2	2042.2	2003.2	1949.3	1886.3
25°	2126.2	2138.2	2078.3	2069.2	2078.3	2009.2	1988.3	1934.2	1877.2	1826.2	1778.3
27.5°	2042.2	2009.2	1970.3	1937.3	1937.3	1910.2	1850.3	1838.3	1751.3	1703.3	1643.3
30°	1916.2	1892.3	1859.3	1811.3	1805.3	1784.3	1736.4	1706.3	1616.4	1544.4	1511.4
32.5°	1757.3	1748.3	1721.3	1667.4	1649.4	1625.3	1565.4	1514.4	1472.5	1391.4	1352.5
35°	1643.3	1610.4	1553.4	1508.4	1493.4	1451.5	1403.4	1367.4	1322.5	1250.5	1199.6
37.5°	1472.5	1439.5	1385.4	1331.5	1331.5	1289.6	1223.5	1187.6	1124.6	1082.5	1040.6
40°	1322.5	1280.5	1226.6	1163.6	1154.6	1094.5	1067.6	1007.6	968.6	902.7	896.7
42.5°	1154.6	1115.6	1067.6	1019.6	983.6	953.7	884.7	839.7	797.7	764.7	755.7
45°	1001.6	950.6	908.7	848.6	812.7	776.7	731.7	701.8	668.7	632.8	611.8
47.5°	869.6	827.7	767.7	713.7	677.8	659.7	608.7	575.8	548.8	524.8	509.8
50°	734.8	683.8	650.8	590.7	584.7	542.8	500.9	473.8	458.8	437.9	416.8
52.5°	632.8	584.7	539.7	494.9	470.8	455.9	416.8	389.8	368.9	353.9	341.9
55°	533.8	491.8	455.9	410.9	395.8	374.9	329.9	323.9	302.9	281.9	266.9
57.5°	458.8	419.8	377.8	347.9	320.9	305.9	269.9	245.9	233.9	215.9	200.9
60°	389.8	347.9	314.9	278.9	266.9	245.9	218.9	198.0	182.9	167.9	153.0
62.5°	326.9	290.9	255.0	224.9	206.9	194.9	173.9	155.9	141.0	129.0	116.9
65°	269.9	236.9	206.9	176.9	167.9	153.0	137.9	123.0	110.9	96.0	84.0
67.5°	221.9	192.0	161.9	141.0	131.9	125.9	108.0	92.9	84.0	75.0	63.0
70°	173.9	153.0	129.0	110.9	102.0	92.9	80.9	72.0	59.9	53.9	45.0
72.5°	135.0	116.9	96.0	80.9	75.0	69.0	57.0	47.9	41.9	36.0	30.0
75°	96.0	80.9	69.0	53.9	51.0	47.9	39.0	33.0	27.0	21.0	18.0
77.5°	66.0	53.9	41.9	36.0	33.0	27.0	24.0	18.0	15.0	12.0	9.0
80°	36.0	27.0	21.0	18.0	15.0	12.0	12.0	9.0	6.0	6.0	3.1
82.5°	12.0	9.0	6.0	3.1	3.1	3.1	3.1	3.1	3.1	0.0	3.1
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°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	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°	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0
2.5°	2498.0	2465.0	2474.1	2474.1	2468.1	2468.1	2462.1	2453.0	2456.1	2438.0	2399.1
5°	2471.0	2429.1	2423.1	2429.1	2405.1	2399.1	2387.1	2405.1	2351.1	2372.1	2348.1
7.5°	2393.1	2354.1	2345.1	2366.1	2336.1	2318.0	2315.1	2339.1	2291.1	2267.2	2240.2
10°	2306.1	2291.1	2264.1	2249.1	2240.2	2243.1	2219.1	2189.2	2180.1	2174.1	2150.2
12.5°	2228.2	2195.2	2171.2	2153.2	2147.2	2147.2	2108.2	2102.2	2075.2	2069.2	2033.3
15°	2135.1	2096.2	2081.2	2057.2	2036.2	2048.2	2003.2	1991.2	1982.3	1943.3	1949.3
17.5°	2054.2	2012.2	1976.3	1961.2	1943.3	1925.3	1883.2	1892.3	1871.2	1871.2	1817.3
20°	1949.3	1904.3	1877.2	1847.3	1847.3	1823.3	1793.3	1796.3	1769.3	1742.4	1694.3
22.5°	1838.3	1790.3	1757.3	1745.3	1715.3	1709.3	1673.4	1664.3	1628.4	1631.3	1589.4
25°	1721.3	1673.4	1628.4	1631.3	1604.4	1592.4	1571.4	1529.5	1514.4	1496.5	1484.5
27.5°	1583.4	1550.4	1511.4	1508.4	1457.4	1460.4	1433.5	1421.5	1385.4	1394.5	1367.4
30°	1457.4	1409.5	1373.4	1364.5	1343.5	1337.5	1295.5	1277.5	1283.6	1259.5	1244.6
32.5°	1328.4	1256.5	1241.5	1223.5	1211.5	1196.5	1166.5	1178.5	1151.5	1157.5	1133.5
35°	1157.5	1127.5	1088.5	1088.5	1076.5	1064.6	1043.7	1055.6	1028.6	1016.6	992.7
37.5°	1013.6	986.7	947.7	959.6	938.6	920.6	902.7	905.6	881.6	878.7	854.6
40°	857.7	842.6	815.7	815.7	800.7	800.7	791.6	782.7	767.7	749.7	722.7
42.5°	710.7	698.7	686.7	689.8	668.7	686.7	662.8	677.8	629.7	626.8	608.7
45°	602.7	575.8	578.7	566.8	554.8	560.8	539.7	545.7	518.8	512.8	494.9
47.5°	488.9	479.8	461.8	455.9	455.9	446.8	437.9	434.8	422.8	407.8	383.8
50°	401.8	368.9	362.8	353.9	347.9	347.9	335.9	317.9	320.9	305.9	281.9
52.5°	314.9	287.8	275.9	272.9	260.9	255.0	239.9	227.9	218.9	212.9	198.0
55°	242.8	218.9	204.0	204.0	186.0	186.0	165.0	155.9	143.9	131.9	123.0
57.5°	182.9	170.9	155.9	143.9	137.9	123.0	110.9	96.0	86.9	69.0	57.0
60°	137.9	125.9	110.9	102.0	96.0	80.9	66.0	53.9	33.0	27.0	24.0
62.5°	102.0	90.0	75.0	69.0	63.0	51.0	36.0	18.0	9.0	9.0	9.0
65°	75.0	59.9	47.9	41.9	36.0	27.0	12.0	6.0	3.1	3.1	3.1
67.5°	51.0	39.0	27.0	24.0	18.0	9.0	3.1	3.1	3.1	3.1	3.1
70°	33.0	24.0	12.0	9.0	6.0	3.1	3.1	3.1	3.1	3.1	3.1
72.5°	21.0	12.0	6.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	12.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	6.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.1	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	3.1	3.1	3.1
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: P#

CATALOG NUMBER: LD4C50D010 EX4C509050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0	2501.0
2.5°	2441.1	2420.0	2432.0	2405.1	2417.1	2438.0	2423.1	2429.1
5°	2357.1	2345.1	2330.1	2291.1	2321.1	2345.1	2333.1	2330.1
7.5°	2267.2	2225.1	2246.1	2234.2	2228.2	2252.1	2225.1	2255.1
10°	2174.1	2144.2	2141.2	2120.2	2120.2	2138.2	2141.2	2123.1
12.5°	2036.2	2021.3	2021.3	2018.2	2015.2	2033.3	2036.2	2027.3
15°	1937.3	1931.3	1916.2	1913.3	1895.3	1922.2	1925.3	1922.2
17.5°	1817.3	1820.2	1805.3	1805.3	1817.3	1826.2	1802.3	1826.2
20°	1736.4	1721.3	1715.3	1688.3	1703.3	1718.4	1718.4	1721.3
22.5°	1619.3	1595.4	1604.4	1589.4	1580.3	1601.4	1601.4	1610.4
25°	1487.4	1487.4	1493.4	1484.5	1490.5	1502.4	1493.4	1514.4
27.5°	1361.5	1373.4	1373.4	1361.5	1367.4	1403.4	1418.4	1394.5
30°	1244.6	1247.5	1256.5	1250.5	1268.5	1280.5	1277.5	1295.5
32.5°	1112.6	1127.5	1133.5	1124.6	1130.6	1157.5	1142.6	1139.5
35°	1010.6	983.6	980.7	983.6	995.6	1001.6	995.6	1016.6
37.5°	863.7	854.6	842.6	845.7	854.6	866.7	872.7	887.6
40°	722.7	710.7	710.7	707.8	698.7	731.7	731.7	731.7
42.5°	599.8	596.7	581.8	581.8	593.8	602.7	596.7	617.8
45°	491.8	479.8	470.8	470.8	479.8	479.8	488.9	485.8
47.5°	386.9	374.9	377.8	368.9	377.8	389.8	374.9	377.8
50°	290.9	290.9	284.9	290.9	287.8	290.9	284.9	278.9
52.5°	198.0	224.9	227.9	215.9	188.9	165.0	149.9	161.9
55°	114.0	102.0	102.0	98.9	92.9	90.0	80.9	90.0
57.5°	57.0	51.0	51.0	51.0	47.9	45.0	39.0	39.0
60°	24.0	21.0	21.0	18.0	15.0	12.0	9.0	12.0
62.5°	9.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
65°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
67.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
70°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)