

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: **LD4C40D010 EX4C409040 4LBSQLWWLI**

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: LD4C40D010 EX4C409040 4LBSQLWWLI  
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

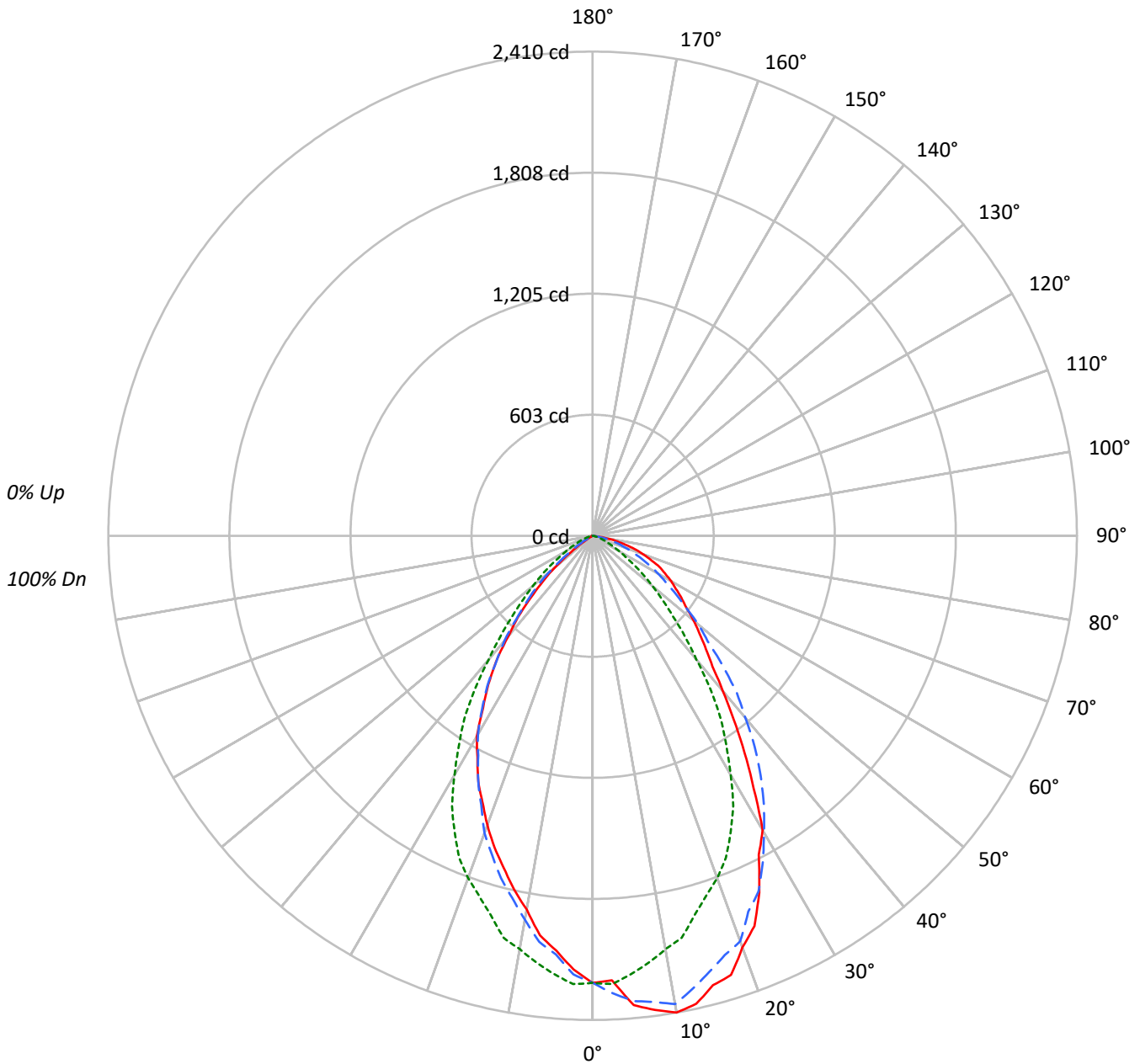
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3190.0 lumens  
Efficiency: N/A  
Efficacy: 67.9 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): 47  
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									
RC	80									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																			
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°	214726	214726	214726
5°	227179	212195	200824
10°	236086	204714	185099
15°	231371	195380	170856
20°	223856	186038	157277
25°	208807	173004	143471
30°	188493	153108	128440
35°	155272	131078	106554
40°	126713	101169	82011
45°	108878	76838	58990
50°	98532	58483	37257
55°	90672	42190	13475
60°	87033	28831	2065
65°	84065	19498	616
70°	75268	13542	762
75°	61699	6971	0
80°	38563	2945	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	208.5	6.5
10°-20°	561.8	17.6
20°-30°	750.1	23.5
30°-40°	712.1	22.3
40°-50°	492.2	15.4
50°-60°	272.0	8.5
60°-70°	135.0	4.2
70°-80°	53.2	1.7
80°-90°	5.1	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°	1520.4	47.7
0°-40°	2232.5	70.0
0°-60°	2996.7	93.9
0°-90°	3190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3190.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2225	2225	2225	2225	2225	
5°	2346	2324	2191	2092	2073	225
15°	2316	2247	1956	1764	1710	655
25°	1961	1953	1625	1348	1348	894
35°	1318	1457	1113	915	905	826
45°	798	915	563	462	432	622
55°	539	507	251	128	80	485
65°	368	267	85	3	3	357
75°	166	101	19	0	0	176
85°	0	3	0	0	0	15
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°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2214.8	2276.1	2281.5	2276.1	2284.2	2281.5	2294.8	2281.5	2297.6	2273.5	2278.8
5°	2345.5	2321.5	2372.2	2345.5	2345.5	2342.9	2334.9	2332.2	2342.9	2308.2	2324.2
7.5°	2380.2	2415.0	2460.3	2404.3	2406.9	2406.9	2390.9	2385.6	2385.6	2321.5	2340.2
10°	2409.6	2388.2	2412.2	2390.9	2409.6	2406.9	2417.6	2382.9	2406.9	2369.6	2366.9
12.5°	2385.6	2377.5	2409.6	2374.9	2364.3	2366.9	2353.6	2345.5	2353.6	2310.8	2308.2
15°	2316.2	2324.2	2372.2	2334.9	2329.5	2324.2	2308.2	2281.5	2302.9	2244.1	2246.8
17.5°	2292.2	2278.8	2286.9	2254.8	2262.8	2257.5	2254.8	2230.9	2225.4	2188.1	2188.1
20°	2180.1	2209.4	2209.4	2188.1	2188.1	2185.5	2150.8	2172.1	2148.1	2137.4	2148.1
22.5°	2102.7	2105.4	2105.4	2086.7	2089.4	2078.7	2060.0	2046.6	2060.0	2046.6	2025.3
25°	1961.3	1966.7	1998.7	1964.0	1958.6	1969.3	1953.3	1945.2	1942.6	1910.6	1953.3
27.5°	1790.5	1843.8	1841.2	1827.8	1843.8	1822.5	1814.6	1817.2	1825.2	1822.5	1833.2
30°	1691.8	1699.8	1707.8	1697.2	1699.8	1691.8	1691.8	1694.4	1715.8	1707.8	1705.1
32.5°	1491.6	1518.3	1539.7	1539.7	1542.3	1550.4	1547.7	1603.7	1617.1	1590.4	1585.1
35°	1318.2	1336.9	1355.5	1358.2	1392.9	1395.6	1398.3	1414.3	1451.6	1459.6	1456.9
37.5°	1152.8	1171.4	1176.7	1200.8	1219.5	1238.1	1259.5	1280.9	1312.9	1339.5	1326.2
40°	1006.0	1014.0	1027.3	1038.0	1075.3	1075.3	1086.0	1128.8	1163.5	1184.8	1182.1
42.5°	883.3	885.9	896.6	915.3	950.0	941.9	950.0	979.4	1030.0	1032.7	1062.1
45°	797.9	795.2	803.2	805.8	827.3	837.9	843.2	864.6	907.2	912.6	915.3
47.5°	720.5	717.8	731.2	736.5	744.5	755.1	755.1	757.8	773.8	787.2	776.5
50°	656.4	656.4	656.4	661.8	675.1	672.4	675.1	685.8	693.8	688.4	685.8
52.5°	587.0	597.7	605.7	608.4	611.1	611.1	613.8	608.4	605.7	597.7	581.7
55°	539.0	549.7	549.7	549.7	549.7	560.4	547.1	549.7	549.7	528.4	507.0
57.5°	491.0	501.7	509.6	499.0	509.6	499.0	493.7	491.0	485.6	464.3	432.3
60°	451.0	456.3	453.6	451.0	456.3	448.3	443.0	432.3	427.0	397.6	376.3
62.5°	405.6	408.2	411.0	405.6	400.3	397.6	386.9	370.9	360.3	336.2	317.5
65°	368.2	360.3	357.5	354.9	349.6	341.5	333.6	314.9	306.8	285.5	266.8
67.5°	312.2	309.6	314.9	306.8	293.6	293.6	285.5	269.5	250.8	237.5	218.8
70°	266.8	264.2	258.8	250.8	248.2	237.5	237.5	218.8	213.5	189.4	173.4
72.5°	218.8	218.8	210.8	202.8	194.8	189.4	186.8	173.4	165.5	152.1	138.7
75°	165.5	165.5	162.8	154.7	149.4	144.1	141.4	130.8	122.7	109.5	101.4
77.5°	117.4	117.4	106.7	101.4	104.0	98.7	93.4	90.7	88.0	80.1	69.4
80°	69.4	66.7	58.8	61.4	58.8	58.8	56.0	53.3	48.0	42.7	37.3
82.5°	18.7	21.3	21.3	21.3	24.0	18.7	18.7	18.7	21.3	21.3	13.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7
87.5°	2.7	5.3	10.7	10.7	10.7	10.7	10.7	8.0	8.0	8.0	5.3
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°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2252.2	2249.5	2252.2	2233.5	2276.1	2244.1	2238.8	2233.5	2252.2	2233.5	2206.8
5°	2300.2	2273.5	2265.5	2257.5	2281.5	2244.1	2236.2	2238.8	2225.4	2190.8	2193.4
7.5°	2316.2	2292.2	2268.2	2217.5	2238.8	2230.9	2209.4	2193.4	2172.1	2142.7	2137.4
10°	2321.5	2294.8	2260.1	2244.1	2212.1	2201.5	2193.4	2166.8	2140.1	2089.4	2076.0
12.5°	2305.5	2273.5	2230.9	2217.5	2193.4	2158.7	2140.1	2113.3	2089.4	2049.4	2020.0
15°	2236.2	2209.4	2196.1	2150.8	2140.1	2118.7	2081.4	2044.0	2009.3	1955.9	1939.9
17.5°	2156.1	2145.4	2132.1	2097.4	2094.7	2073.4	2038.7	2006.6	1961.3	1878.5	1851.9
20°	2073.4	2073.4	2030.7	2017.4	2044.0	2001.3	1974.6	1945.2	1851.9	1811.8	1763.9
22.5°	2012.0	1982.7	1958.6	1937.3	1939.9	1913.3	1875.9	1817.2	1782.5	1734.5	1678.4
25°	1891.9	1902.6	1849.3	1841.2	1849.3	1787.8	1769.2	1721.1	1670.4	1625.0	1582.4
27.5°	1817.2	1787.8	1753.2	1723.8	1723.8	1699.8	1646.5	1635.8	1558.3	1515.7	1462.2
30°	1705.1	1683.8	1654.4	1611.7	1606.4	1587.7	1545.0	1518.3	1438.3	1374.2	1344.8
32.5°	1563.7	1555.7	1531.7	1483.7	1467.7	1446.3	1392.9	1347.6	1310.2	1238.1	1203.5
35°	1462.2	1433.0	1382.3	1342.2	1328.9	1291.5	1248.8	1216.8	1176.7	1112.8	1067.4
37.5°	1310.2	1280.9	1232.8	1184.8	1184.8	1147.5	1088.7	1056.7	1000.7	963.3	925.9
40°	1176.7	1139.4	1091.4	1035.4	1027.3	973.9	950.0	896.6	861.9	803.2	797.9
42.5°	1027.3	992.6	950.0	907.2	875.2	848.6	787.2	747.2	709.9	680.5	672.4
45°	891.2	845.9	808.5	755.1	723.1	691.1	651.1	624.4	595.1	563.1	544.4
47.5°	773.8	736.5	683.1	635.1	603.1	587.0	541.6	512.4	488.3	467.0	453.6
50°	653.8	608.4	579.1	525.6	520.3	483.0	445.7	421.6	408.2	389.6	370.9
52.5°	563.1	520.3	480.3	440.3	418.9	405.6	370.9	346.9	328.3	314.9	304.2
55°	474.9	437.6	405.6	365.6	352.2	333.6	293.6	288.2	269.5	250.8	237.5
57.5°	408.2	373.5	336.2	309.6	285.5	272.2	240.1	218.8	208.1	192.2	178.8
60°	346.9	309.6	280.2	248.2	237.5	218.8	194.8	176.2	162.8	149.4	136.1
62.5°	290.8	258.8	226.9	200.1	184.1	173.4	154.7	138.7	125.5	114.8	104.0
65°	240.1	210.8	184.1	157.4	149.4	136.1	122.7	109.5	98.7	85.4	74.7
67.5°	197.5	170.8	144.1	125.5	117.4	112.1	96.1	82.7	74.7	66.7	56.0
70°	154.7	136.1	114.8	98.7	90.7	82.7	72.0	64.1	53.3	48.0	40.0
72.5°	120.1	104.0	85.4	72.0	66.7	61.4	50.7	42.7	37.3	32.0	26.7
75°	85.4	72.0	61.4	48.0	45.4	42.7	34.7	29.4	24.0	18.7	16.0
77.5°	58.8	48.0	37.3	32.0	29.4	24.0	21.3	16.0	13.4	10.7	8.0
80°	32.0	24.0	18.7	16.0	13.4	10.7	10.7	8.0	5.3	5.3	2.7
82.5°	10.7	8.0	5.3	2.7	2.7	2.7	2.7	2.7	2.7	0.0	2.7
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°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	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°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2222.8	2193.4	2201.5	2201.5	2196.1	2196.1	2190.8	2182.8	2185.5	2169.4	2134.8
5°	2198.8	2161.4	2156.1	2161.4	2140.1	2134.8	2124.1	2140.1	2092.0	2110.7	2089.4
7.5°	2129.4	2094.7	2086.7	2105.4	2078.7	2062.6	2060.0	2081.4	2038.7	2017.4	1993.3
10°	2052.0	2038.7	2014.7	2001.3	1993.3	1995.9	1974.6	1948.0	1939.9	1934.6	1913.3
12.5°	1982.7	1953.3	1932.0	1916.0	1910.6	1910.6	1875.9	1870.6	1846.6	1841.2	1809.2
15°	1899.9	1865.3	1851.9	1830.6	1811.8	1822.5	1782.5	1771.8	1763.9	1729.1	1734.5
17.5°	1827.8	1790.5	1758.5	1745.1	1729.1	1713.2	1675.7	1683.8	1665.1	1665.1	1617.1
20°	1734.5	1694.4	1670.4	1643.7	1643.7	1622.4	1595.8	1598.4	1574.3	1550.4	1507.6
22.5°	1635.8	1593.0	1563.7	1553.0	1526.3	1521.0	1489.0	1481.0	1449.0	1451.6	1414.3
25°	1531.7	1489.0	1449.0	1451.6	1427.6	1417.0	1398.3	1360.9	1347.6	1331.6	1320.9
27.5°	1408.9	1379.6	1344.8	1342.2	1296.9	1299.5	1275.5	1264.9	1232.8	1240.8	1216.8
30°	1296.9	1254.2	1222.1	1214.2	1195.5	1190.1	1152.8	1136.7	1142.1	1120.7	1107.4
32.5°	1182.1	1118.1	1104.7	1088.7	1078.1	1064.7	1038.0	1048.7	1024.6	1030.0	1008.6
35°	1030.0	1003.3	968.6	968.6	957.9	947.3	928.7	939.3	915.3	904.6	883.3
37.5°	901.9	878.0	843.2	853.9	835.2	819.2	803.2	805.8	784.5	781.9	760.4
40°	763.2	749.8	725.8	725.8	712.5	712.5	704.4	696.5	683.1	667.1	643.0
42.5°	632.4	621.7	611.1	613.8	595.1	611.1	589.7	603.1	560.4	557.7	541.6
45°	536.3	512.4	515.0	504.3	493.7	499.0	480.3	485.6	461.7	456.3	440.3
47.5°	435.0	427.0	411.0	405.6	405.6	397.6	389.6	386.9	376.3	362.9	341.5
50°	357.5	328.3	322.8	314.9	309.6	309.6	298.9	282.9	285.5	272.2	250.8
52.5°	280.2	256.1	245.5	242.9	232.2	226.9	213.5	202.8	194.8	189.4	176.2
55°	216.1	194.8	181.5	181.5	165.5	165.5	146.8	138.7	128.1	117.4	109.5
57.5°	162.8	152.1	138.7	128.1	122.7	109.5	98.7	85.4	77.4	61.4	50.7
60°	122.7	112.1	98.7	90.7	85.4	72.0	58.8	48.0	29.4	24.0	21.3
62.5°	90.7	80.1	66.7	61.4	56.0	45.4	32.0	16.0	8.0	8.0	8.0
65°	66.7	53.3	42.7	37.3	32.0	24.0	10.7	5.3	2.7	2.7	2.7
67.5°	45.4	34.7	24.0	21.3	16.0	8.0	2.7	2.7	2.7	2.7	2.7
70°	29.4	21.3	10.7	8.0	5.3	2.7	2.7	2.7	2.7	2.7	2.7
72.5°	18.7	10.7	5.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	10.7	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	5.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.7	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	2.7	2.7	2.7
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: LD4C40D010 EX4C409040 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2172.1	2153.4	2164.0	2140.1	2150.8	2169.4	2156.1	2161.4
5°	2097.4	2086.7	2073.4	2038.7	2065.4	2086.7	2076.0	2073.4
7.5°	2017.4	1979.9	1998.7	1988.0	1982.7	2004.0	1979.9	2006.6
10°	1934.6	1907.9	1905.3	1886.6	1886.6	1902.6	1905.3	1889.2
12.5°	1811.8	1798.6	1798.6	1795.8	1793.1	1809.2	1811.8	1803.9
15°	1723.8	1718.5	1705.1	1702.5	1686.5	1710.4	1713.2	1710.4
17.5°	1617.1	1619.7	1606.4	1606.4	1617.1	1625.0	1603.7	1625.0
20°	1545.0	1531.7	1526.3	1502.3	1515.7	1529.1	1529.1	1531.7
22.5°	1440.9	1419.6	1427.6	1414.3	1406.2	1424.9	1424.9	1433.0
25°	1323.5	1323.5	1328.9	1320.9	1326.2	1336.9	1328.9	1347.6
27.5°	1211.4	1222.1	1222.1	1211.4	1216.8	1248.8	1262.2	1240.8
30°	1107.4	1110.0	1118.1	1112.8	1128.8	1139.4	1136.7	1152.8
32.5°	990.0	1003.3	1008.6	1000.7	1006.0	1030.0	1016.7	1014.0
35°	899.3	875.2	872.6	875.2	885.9	891.2	885.9	904.6
37.5°	768.5	760.4	749.8	752.5	760.4	771.2	776.5	789.8
40°	643.0	632.4	632.4	629.8	621.7	651.1	651.1	651.1
42.5°	533.7	531.0	517.7	517.7	528.4	536.3	531.0	549.7
45°	437.6	427.0	418.9	418.9	427.0	427.0	435.0	432.3
47.5°	344.3	333.6	336.2	328.3	336.2	346.9	333.6	336.2
50°	258.8	258.8	253.5	258.8	256.1	258.8	253.5	248.2
52.5°	176.2	200.1	202.8	192.2	168.1	146.8	133.4	144.1
55°	101.4	90.7	90.7	88.0	82.7	80.1	72.0	80.1
57.5°	50.7	45.4	45.4	45.4	42.7	40.0	34.7	34.7
60°	21.3	18.7	18.7	16.0	13.4	10.7	8.0	10.7
62.5°	8.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3
65°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
67.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
70°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)