

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 EX4C409030 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 EX4C409030 4LBSQLWWLI
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

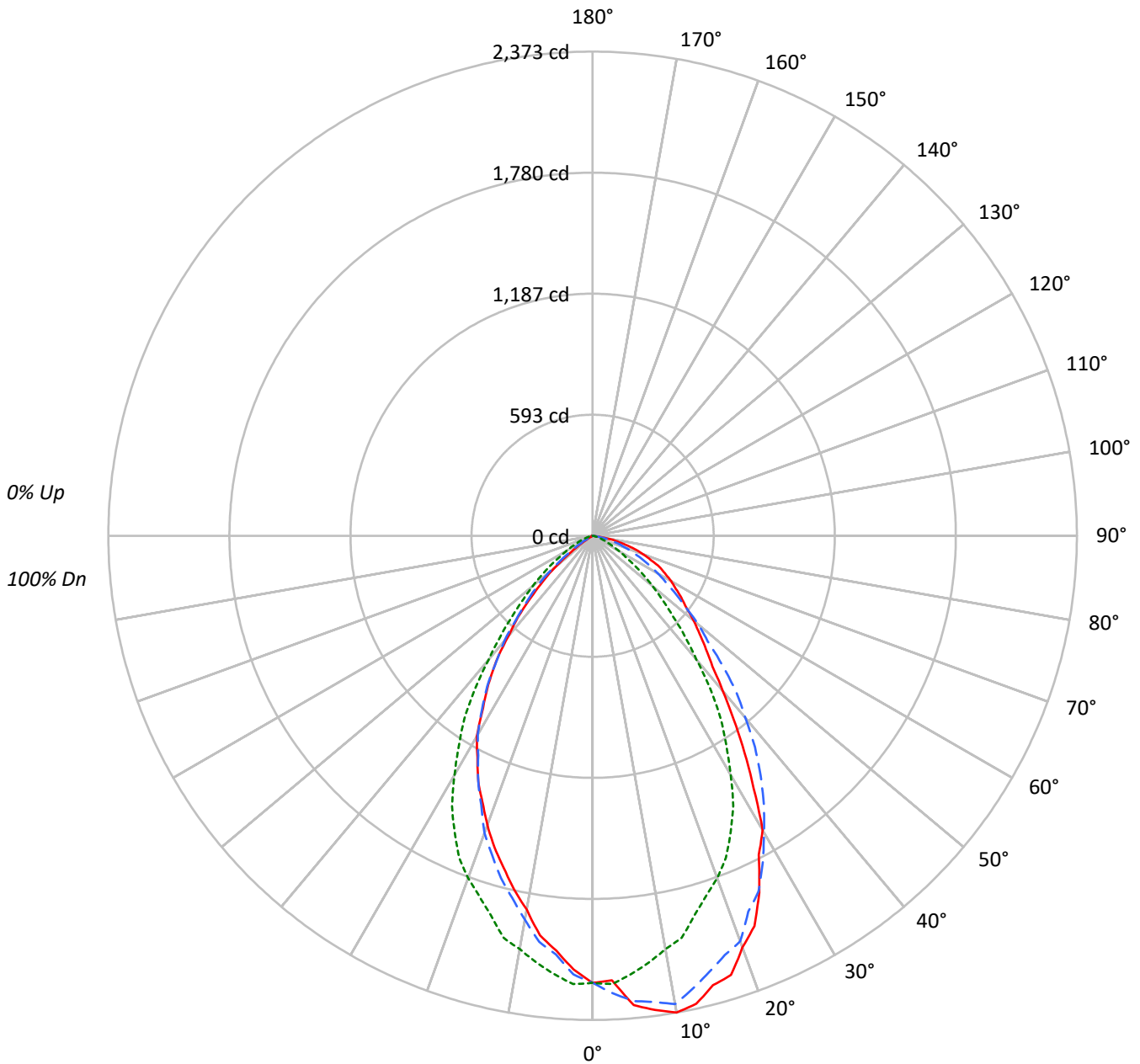
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3141.0 lumens
Efficiency: N/A
Efficacy: 66.8 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_{in}): 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°	211426	211426	211426
5°	223692	208941	197744
10°	232461	201569	182258
15°	227815	192383	168239
20°	220426	183184	154854
25°	205603	170353	141267
30°	185596	150757	126468
35°	152881	129064	104917
40°	124773	99620	80751
45°	107200	75651	58076
50°	97016	57582	36687
55°	89276	41534	13273
60°	85701	28387	2026
65°	82763	19201	616
70°	74112	13316	762
75°	60767	6860	0
80°	38007	2889	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.3	6.5
10°-20°	553.1	17.6
20°-30°	738.6	23.5
30°-40°	701.1	22.3
40°-50°	484.7	15.4
50°-60°	267.8	8.5
60°-70°	133.0	4.2
70°-80°	52.4	1.7
80°-90°	5.0	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°	1497.0	47.7
0°-40°	2198.2	70.0
0°-60°	2950.6	93.9
0°-90°	3141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3141.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2191	2191	2191	2191	2191	
5°	2310	2288	2157	2060	2042	221
15°	2281	2212	1926	1737	1684	645
25°	1931	1923	1600	1327	1327	880
35°	1298	1434	1096	901	891	813
45°	786	901	554	455	426	613
55°	531	499	247	126	79	478
65°	362	263	84	3	3	352
75°	163	100	18	0	0	174
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°	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2
2.5°	2180.7	2241.2	2246.4	2241.2	2249.1	2246.4	2259.6	2246.4	2262.3	2238.6	2243.8
5°	2309.5	2285.8	2335.8	2309.5	2309.5	2306.9	2299.0	2296.3	2306.9	2272.8	2288.5
7.5°	2343.7	2377.9	2422.5	2367.4	2369.9	2369.9	2354.2	2348.9	2348.9	2285.8	2304.3
10°	2372.6	2351.5	2375.2	2354.2	2372.6	2369.9	2380.4	2346.3	2369.9	2333.2	2330.5
12.5°	2348.9	2341.0	2372.6	2338.4	2327.9	2330.5	2317.4	2309.5	2317.4	2275.3	2272.8
15°	2280.6	2288.5	2335.8	2299.0	2293.8	2288.5	2272.8	2246.4	2267.5	2209.7	2212.3
17.5°	2257.0	2243.8	2251.8	2220.2	2228.1	2222.8	2220.2	2196.6	2191.2	2154.5	2154.5
20°	2146.7	2175.5	2175.5	2154.5	2154.5	2151.9	2117.7	2138.7	2115.1	2104.6	2115.1
22.5°	2070.4	2073.1	2073.1	2054.6	2057.3	2046.8	2028.4	2015.2	2028.4	2015.2	1994.2
25°	1931.2	1936.5	1968.0	1933.8	1928.5	1939.0	1923.3	1915.4	1912.8	1881.3	1923.3
27.5°	1763.0	1815.5	1812.9	1799.8	1815.5	1794.5	1786.7	1789.3	1797.2	1794.5	1805.0
30°	1665.8	1673.7	1681.6	1671.1	1673.7	1665.8	1665.8	1668.4	1689.4	1681.6	1678.9
32.5°	1468.7	1495.0	1516.1	1516.1	1518.6	1526.6	1523.9	1579.1	1592.2	1566.0	1560.7
35°	1297.9	1316.4	1334.7	1337.4	1371.5	1374.1	1376.8	1392.5	1429.3	1437.2	1434.5
37.5°	1135.1	1153.4	1158.7	1182.3	1200.8	1219.1	1240.2	1261.2	1292.7	1318.9	1305.9
40°	990.6	998.4	1011.6	1022.1	1058.8	1058.8	1069.3	1111.4	1145.6	1166.6	1163.9
42.5°	869.7	872.3	882.8	901.2	935.4	927.5	935.4	964.3	1014.1	1016.8	1045.7
45°	785.6	782.9	790.9	793.4	814.5	825.0	830.3	851.3	893.3	898.5	901.2
47.5°	709.4	706.8	719.9	725.2	733.0	743.5	743.5	746.2	761.9	775.1	764.6
50°	646.3	646.3	646.3	651.6	664.8	662.1	664.8	675.3	683.1	677.8	675.3
52.5°	578.0	588.5	596.4	599.1	601.7	601.7	604.3	599.1	596.4	588.5	572.7
55°	530.7	541.2	541.2	541.2	541.2	551.7	538.7	541.2	541.2	520.2	499.2
57.5°	483.5	494.0	501.8	491.3	501.8	491.3	486.1	483.5	478.1	457.1	425.6
60°	444.1	449.3	446.6	444.1	449.3	441.4	436.1	425.6	420.4	391.5	370.5
62.5°	399.4	402.0	404.6	399.4	394.1	391.5	381.0	365.2	354.7	331.0	312.6
65°	362.5	354.7	352.0	349.5	344.2	336.3	328.5	310.0	302.1	281.1	262.7
67.5°	307.4	304.8	310.0	302.1	289.0	289.0	281.1	265.4	246.9	233.9	215.4
70°	262.7	260.1	254.9	246.9	244.4	233.9	233.9	215.4	210.2	186.5	170.8
72.5°	215.4	215.4	207.5	199.7	191.8	186.5	183.9	170.8	163.0	149.8	136.6
75°	163.0	163.0	160.3	152.3	147.1	141.8	139.3	128.8	120.8	107.8	99.8
77.5°	115.6	115.6	105.1	99.8	102.4	97.2	91.9	89.3	86.7	78.9	68.4
80°	68.4	65.7	57.9	60.4	57.9	57.9	55.2	52.5	47.2	42.0	36.7
82.5°	18.4	21.0	21.0	21.0	23.7	18.4	18.4	18.4	21.0	21.0	13.2
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	5.2	10.5	10.5	10.5	10.5	10.5	7.9	7.9	7.9	5.2
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°	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2
2.5°	2217.6	2214.9	2217.6	2199.2	2241.2	2209.7	2204.4	2199.2	2217.6	2199.2	2172.9
5°	2264.8	2238.6	2230.7	2222.8	2246.4	2209.7	2201.8	2204.4	2191.2	2157.2	2159.7
7.5°	2280.6	2257.0	2233.3	2183.4	2204.4	2196.6	2175.5	2159.7	2138.7	2109.8	2104.6
10°	2285.8	2259.6	2225.4	2209.7	2178.2	2167.7	2159.7	2133.5	2107.2	2057.3	2044.1
12.5°	2270.1	2238.6	2196.6	2183.4	2159.7	2125.6	2107.2	2080.9	2057.3	2017.9	1989.0
15°	2201.8	2175.5	2162.4	2117.7	2107.2	2086.1	2049.4	2012.6	1978.5	1925.9	1910.1
17.5°	2123.0	2112.5	2099.3	2065.1	2062.6	2041.6	2007.4	1975.8	1931.2	1849.7	1823.4
20°	2041.6	2041.6	1999.5	1986.4	2012.6	1970.5	1944.3	1915.4	1823.4	1784.0	1736.8
22.5°	1981.1	1952.2	1928.5	1907.5	1910.1	1883.9	1847.1	1789.3	1755.1	1707.8	1652.7
25°	1862.9	1873.4	1820.9	1812.9	1820.9	1760.3	1742.0	1694.7	1644.7	1600.1	1558.1
27.5°	1789.3	1760.3	1726.3	1697.3	1697.3	1673.7	1621.2	1610.7	1534.4	1492.4	1439.8
30°	1678.9	1657.9	1629.0	1587.0	1581.7	1563.3	1521.3	1495.0	1416.2	1353.1	1324.2
32.5°	1539.6	1531.8	1508.1	1460.9	1445.1	1424.0	1371.5	1326.9	1290.1	1219.1	1185.0
35°	1439.8	1411.0	1361.0	1321.6	1308.4	1271.7	1229.6	1198.1	1158.7	1095.7	1051.0
37.5°	1290.1	1261.2	1213.8	1166.6	1166.6	1129.8	1072.0	1040.5	985.3	948.5	911.7
40°	1158.7	1121.9	1074.7	1019.5	1011.6	959.0	935.4	882.8	848.6	790.9	785.6
42.5°	1011.6	977.4	935.4	893.3	861.8	835.5	775.1	735.7	698.9	670.0	662.1
45°	877.5	832.9	796.1	743.5	712.0	680.5	641.1	614.8	585.9	554.4	536.0
47.5°	761.9	725.2	672.6	625.3	593.8	578.0	533.3	504.5	480.8	459.8	446.6
50°	643.8	599.1	570.2	517.6	512.3	475.6	438.8	415.1	402.0	383.6	365.2
52.5°	554.4	512.3	472.9	433.6	412.5	399.4	365.2	341.5	323.2	310.0	299.5
55°	467.6	430.9	399.4	360.0	346.8	328.5	289.0	283.8	265.4	246.9	233.9
57.5°	402.0	367.8	331.0	304.8	281.1	268.0	236.4	215.4	204.9	189.2	176.0
60°	341.5	304.8	275.9	244.4	233.9	215.4	191.8	173.4	160.3	147.1	134.0
62.5°	286.4	254.9	223.4	197.0	181.3	170.8	152.3	136.6	123.5	113.0	102.4
65°	236.4	207.5	181.3	155.0	147.1	134.0	120.8	107.8	97.2	84.1	73.6
67.5°	194.4	168.2	141.8	123.5	115.6	110.3	94.6	81.4	73.6	65.7	55.2
70°	152.3	134.0	113.0	97.2	89.3	81.4	70.9	63.1	52.5	47.2	39.4
72.5°	118.3	102.4	84.1	70.9	65.7	60.4	49.9	42.0	36.7	31.5	26.2
75°	84.1	70.9	60.4	47.2	44.7	42.0	34.2	28.9	23.7	18.4	15.7
77.5°	57.9	47.2	36.7	31.5	28.9	23.7	21.0	15.7	13.2	10.5	7.9
80°	31.5	23.7	18.4	15.7	13.2	10.5	10.5	7.9	5.2	5.2	2.7
82.5°	10.5	7.9	5.2	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°	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2
2.5°	2188.7	2159.7	2167.7	2167.7	2162.4	2162.4	2157.2	2149.2	2151.9	2136.1	2102.0
5°	2165.0	2128.2	2123.0	2128.2	2107.2	2102.0	2091.5	2107.2	2059.9	2078.3	2057.3
7.5°	2096.7	2062.6	2054.6	2073.1	2046.8	2031.0	2028.4	2049.4	2007.4	1986.4	1962.7
10°	2020.5	2007.4	1983.7	1970.5	1962.7	1965.3	1944.3	1918.0	1910.1	1904.9	1883.9
12.5°	1952.2	1923.3	1902.3	1886.5	1881.3	1881.3	1847.1	1841.9	1818.2	1812.9	1781.4
15°	1870.7	1836.6	1823.4	1802.4	1784.0	1794.5	1755.1	1744.6	1736.8	1702.6	1707.8
17.5°	1799.8	1763.0	1731.5	1718.3	1702.6	1686.8	1650.0	1657.9	1639.5	1639.5	1592.2
20°	1707.8	1668.4	1644.7	1618.5	1618.5	1597.5	1571.2	1573.8	1550.1	1526.6	1484.5
22.5°	1610.7	1568.6	1539.6	1529.1	1502.9	1497.6	1466.1	1458.2	1426.7	1429.3	1392.5
25°	1508.1	1466.1	1426.7	1429.3	1405.7	1395.2	1376.8	1340.0	1326.9	1311.1	1300.6
27.5°	1387.3	1358.4	1324.2	1321.6	1276.9	1279.5	1255.9	1245.4	1213.8	1221.8	1198.1
30°	1276.9	1234.9	1203.3	1195.5	1177.1	1171.8	1135.1	1119.2	1124.6	1103.5	1090.4
32.5°	1163.9	1100.9	1087.7	1072.0	1061.5	1048.3	1022.1	1032.6	1008.9	1014.1	993.1
35°	1014.1	987.9	953.7	953.7	943.2	932.7	914.4	924.9	901.2	890.7	869.7
37.5°	888.0	864.5	830.3	840.8	822.4	806.6	790.9	793.4	772.4	769.9	748.8
40°	751.4	738.3	714.7	714.7	701.5	701.5	693.6	685.8	672.6	656.8	633.2
42.5°	622.7	612.2	601.7	604.3	585.9	601.7	580.7	593.8	551.7	549.2	533.3
45°	528.1	504.5	507.1	496.6	486.1	491.3	472.9	478.1	454.6	449.3	433.6
47.5°	428.3	420.4	404.6	399.4	399.4	391.5	383.6	381.0	370.5	357.3	336.3
50°	352.0	323.2	317.9	310.0	304.8	304.8	294.3	278.5	281.1	268.0	246.9
52.5°	275.9	252.2	241.7	239.1	228.6	223.4	210.2	199.7	191.8	186.5	173.4
55°	212.8	191.8	178.7	178.7	163.0	163.0	144.5	136.6	126.1	115.6	107.8
57.5°	160.3	149.8	136.6	126.1	120.8	107.8	97.2	84.1	76.2	60.4	49.9
60°	120.8	110.3	97.2	89.3	84.1	70.9	57.9	47.2	28.9	23.7	21.0
62.5°	89.3	78.9	65.7	60.4	55.2	44.7	31.5	15.7	7.9	7.9	7.9
65°	65.7	52.5	42.0	36.7	31.5	23.7	10.5	5.2	2.7	2.7	2.7
67.5°	44.7	34.2	23.7	21.0	15.7	7.9	2.7	2.7	2.7	2.7	2.7
70°	28.9	21.0	10.5	7.9	5.2	2.7	2.7	2.7	2.7	2.7	2.7
72.5°	18.4	10.5	5.2	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	10.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	5.2	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 EX4C409030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2	2191.2
2.5°	2138.7	2120.3	2130.8	2107.2	2117.7	2136.1	2123.0	2128.2
5°	2065.1	2054.6	2041.6	2007.4	2033.6	2054.6	2044.1	2041.6
7.5°	1986.4	1949.5	1968.0	1957.5	1952.2	1973.2	1949.5	1975.8
10°	1904.9	1878.6	1876.0	1857.6	1857.6	1873.4	1876.0	1860.2
12.5°	1784.0	1770.9	1770.9	1768.3	1765.6	1781.4	1784.0	1776.2
15°	1697.3	1692.1	1678.9	1676.3	1660.6	1684.2	1686.8	1684.2
17.5°	1592.2	1594.8	1581.7	1581.7	1592.2	1600.1	1579.1	1600.1
20°	1521.3	1508.1	1502.9	1479.2	1492.4	1505.6	1505.6	1508.1
22.5°	1418.8	1397.8	1405.7	1392.5	1384.6	1403.0	1403.0	1411.0
25°	1303.2	1303.2	1308.4	1300.6	1305.9	1316.4	1308.4	1326.9
27.5°	1192.8	1203.3	1203.3	1192.8	1198.1	1229.6	1242.8	1221.8
30°	1090.4	1093.0	1100.9	1095.7	1111.4	1121.9	1119.2	1135.1
32.5°	974.8	987.9	993.1	985.3	990.6	1014.1	1001.1	998.4
35°	885.5	861.8	859.2	861.8	872.3	877.5	872.3	890.7
37.5°	756.7	748.8	738.3	740.9	748.8	759.4	764.6	777.7
40°	633.2	622.7	622.7	620.1	612.2	641.1	641.1	641.1
42.5°	525.5	522.8	509.7	509.7	520.2	528.1	522.8	541.2
45°	430.9	420.4	412.5	412.5	420.4	420.4	428.3	425.6
47.5°	339.0	328.5	331.0	323.2	331.0	341.5	328.5	331.0
50°	254.9	254.9	249.6	254.9	252.2	254.9	249.6	244.4
52.5°	173.4	197.0	199.7	189.2	165.5	144.5	131.3	141.8
55°	99.8	89.3	89.3	86.7	81.4	78.9	70.9	78.9
57.5°	49.9	44.7	44.7	44.7	42.0	39.4	34.2	34.2
60°	21.0	18.4	18.4	15.7	13.2	10.5	7.9	10.5
62.5°	7.9	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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)