

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 EX4C409035 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 EX4C409035 4LBSQLWWLI
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

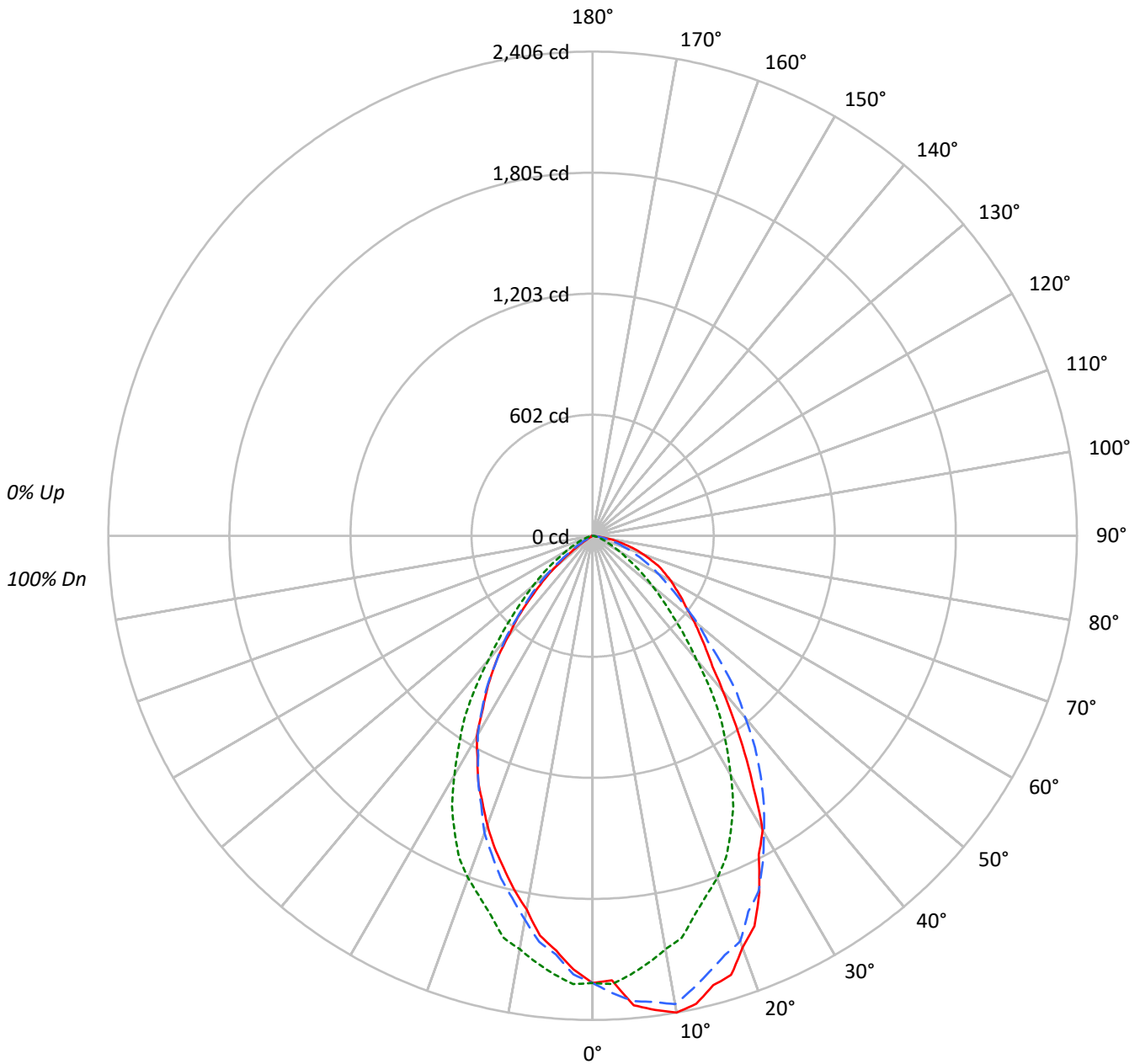
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3185.0 lumens
Efficiency: N/A
Efficacy: 67.8 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 (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

TEST NUMBER: P#
CATALOG NUMBER: LD4C40D010 EX4C409035 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409035 4LBSQLWWLI

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°	214389	214389	214389
5°	226830	211866	200514
10°	235714	204391	184805
15°	231002	195070	170597
20°	223506	185751	157031
25°	208488	172737	143247
30°	188204	152874	128240
35°	155025	130866	106389
40°	126512	101005	81885
45°	108701	76716	58894
50°	98382	58393	37197
55°	90538	42123	13458
60°	86898	28792	2046
65°	83928	19475	616
70°	75155	13513	762
75°	61587	6971	0
80°	38507	2945	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409035 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.2	6.5
10°-20°	560.9	17.6
20°-30°	748.9	23.5
30°-40°	711.0	22.3
40°-50°	491.4	15.4
50°-60°	271.5	8.5
60°-70°	134.8	4.2
70°-80°	53.1	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°	1518.0	47.7
0°-40°	2229.0	70.0
0°-60°	2992.0	93.9
0°-90°	3185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3185.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2222	2222	2222	2222	2222	
5°	2342	2321	2187	2089	2070	224
15°	2312	2243	1953	1761	1708	654
25°	1958	1950	1622	1346	1346	893
35°	1316	1455	1111	914	903	825
45°	797	914	562	461	432	621
55°	538	506	250	128	80	484
65°	368	266	85	3	3	357
75°	165	101	19	0	0	176
85°	0	3	0	0	0	15
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409035 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9
2.5°	2211.3	2272.6	2277.9	2272.6	2280.6	2277.9	2291.2	2277.9	2294.0	2269.9	2275.3
5°	2341.9	2317.9	2368.5	2341.9	2341.9	2339.3	2331.2	2328.5	2339.3	2304.6	2320.6
7.5°	2376.5	2411.2	2456.5	2400.5	2403.1	2403.1	2387.2	2381.8	2381.8	2317.9	2336.5
10°	2405.8	2384.4	2408.5	2387.2	2405.8	2403.1	2413.8	2379.1	2403.1	2365.9	2363.2
12.5°	2381.8	2373.8	2405.8	2371.2	2360.5	2363.2	2349.9	2341.9	2349.9	2307.2	2304.6
15°	2312.5	2320.6	2368.5	2331.2	2325.9	2320.6	2304.6	2277.9	2299.3	2240.6	2243.3
17.5°	2288.6	2275.3	2283.3	2251.3	2259.3	2254.0	2251.3	2227.4	2221.9	2184.7	2184.7
20°	2176.7	2206.0	2206.0	2184.7	2184.7	2182.1	2147.4	2168.7	2144.7	2134.0	2144.7
22.5°	2099.4	2102.1	2102.1	2083.4	2086.1	2075.5	2056.8	2043.4	2056.8	2043.4	2022.1
25°	1958.3	1963.6	1995.5	1960.9	1955.6	1966.2	1950.2	1942.2	1939.6	1907.6	1950.2
27.5°	1787.7	1840.9	1838.3	1825.0	1840.9	1819.6	1811.7	1814.3	1822.4	1819.6	1830.3
30°	1689.2	1697.1	1705.1	1694.5	1697.1	1689.2	1689.2	1691.8	1713.1	1705.1	1702.4
32.5°	1489.3	1515.9	1537.3	1537.3	1539.9	1547.9	1545.2	1601.2	1614.5	1587.9	1582.6
35°	1316.1	1334.8	1353.4	1356.1	1390.8	1393.4	1396.1	1412.0	1449.3	1457.3	1454.6
37.5°	1151.0	1169.6	1174.9	1198.9	1217.6	1236.2	1257.6	1278.9	1310.8	1337.4	1324.2
40°	1004.4	1012.4	1025.7	1036.4	1073.6	1073.6	1084.3	1127.0	1161.6	1182.9	1180.2
42.5°	881.9	884.5	895.2	913.8	948.5	940.5	948.5	977.8	1028.3	1031.1	1060.4
45°	796.6	793.9	801.9	804.6	826.0	836.6	841.9	863.2	905.8	911.1	913.8
47.5°	719.4	716.7	730.0	735.4	743.3	753.9	753.9	756.6	772.6	786.0	775.3
50°	655.4	655.4	655.4	660.7	674.1	671.4	674.1	684.7	692.7	687.3	684.7
52.5°	586.1	596.7	604.8	607.5	610.1	610.1	612.8	607.5	604.8	596.7	580.8
55°	538.2	548.8	548.8	548.8	548.8	559.5	546.2	548.8	548.8	527.5	506.2
57.5°	490.3	500.9	508.9	498.2	508.9	498.2	492.9	490.3	484.8	463.5	431.6
60°	450.3	455.6	452.9	450.3	455.6	447.6	442.3	431.6	426.3	397.0	375.7
62.5°	405.0	407.6	410.3	405.0	399.7	397.0	386.3	370.3	359.7	335.7	317.0
65°	367.6	359.7	357.0	354.4	349.0	341.0	333.1	314.4	306.4	285.1	266.4
67.5°	311.7	309.1	314.4	306.4	293.1	293.1	285.1	269.1	250.4	237.2	218.5
70°	266.4	263.8	258.4	250.4	247.8	237.2	237.2	218.5	213.1	189.1	173.2
72.5°	218.5	218.5	210.4	202.5	194.5	189.1	186.5	173.2	165.2	151.9	138.5
75°	165.2	165.2	162.5	154.5	149.2	143.8	141.2	130.6	122.5	109.3	101.2
77.5°	117.2	117.2	106.6	101.2	103.9	98.5	93.2	90.6	87.9	80.0	69.3
80°	69.3	66.6	58.7	61.3	58.7	58.7	55.9	53.2	47.9	42.6	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	10.6	10.6	10.6	10.6	10.6	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9
2.5°	2248.7	2245.9	2248.7	2230.0	2272.6	2240.6	2235.3	2230.0	2248.7	2230.0	2203.3
5°	2296.6	2269.9	2261.9	2254.0	2277.9	2240.6	2232.7	2235.3	2221.9	2187.4	2190.0
7.5°	2312.5	2288.6	2264.6	2214.0	2235.3	2227.4	2206.0	2190.0	2168.7	2139.4	2134.0
10°	2317.9	2291.2	2256.6	2240.6	2208.7	2198.0	2190.0	2163.4	2136.8	2086.1	2072.8
12.5°	2301.9	2269.9	2227.4	2214.0	2190.0	2155.3	2136.8	2110.0	2086.1	2046.2	2016.8
15°	2232.7	2206.0	2192.7	2147.4	2136.8	2115.4	2078.1	2040.8	2006.2	1952.8	1936.9
17.5°	2152.7	2142.1	2128.7	2094.1	2091.5	2070.2	2035.5	2003.5	1958.3	1875.6	1849.0
20°	2070.2	2070.2	2027.5	2014.2	2040.8	1998.1	1971.5	1942.2	1849.0	1809.0	1761.1
22.5°	2008.9	1979.6	1955.6	1934.3	1936.9	1910.3	1873.0	1814.3	1779.7	1731.8	1675.8
25°	1889.0	1899.6	1846.4	1838.3	1846.4	1785.0	1766.4	1718.4	1667.8	1622.5	1579.9
27.5°	1814.3	1785.0	1750.4	1721.1	1721.1	1697.1	1643.9	1633.2	1555.9	1513.3	1460.0
30°	1702.4	1681.1	1651.8	1609.2	1603.9	1585.2	1542.6	1515.9	1436.1	1372.1	1342.7
32.5°	1561.2	1553.3	1529.3	1481.4	1465.4	1444.0	1390.8	1345.5	1308.2	1236.2	1201.6
35°	1460.0	1430.7	1380.1	1340.1	1326.8	1289.5	1246.8	1214.9	1174.9	1111.0	1065.7
37.5°	1308.2	1278.9	1230.8	1182.9	1182.9	1145.7	1087.0	1055.1	999.1	961.8	924.5
40°	1174.9	1137.6	1089.7	1033.8	1025.7	972.4	948.5	895.2	860.5	801.9	796.6
42.5°	1025.7	991.1	948.5	905.8	873.9	847.2	786.0	746.0	708.7	679.4	671.4
45°	889.8	844.5	807.3	753.9	722.0	690.1	650.1	623.5	594.1	562.2	543.5
47.5°	772.6	735.4	682.0	634.1	602.2	586.1	540.8	511.6	487.6	466.3	452.9
50°	652.8	607.5	578.2	524.8	519.5	482.2	445.0	421.0	407.6	389.0	370.3
52.5°	562.2	519.5	479.5	439.6	418.2	405.0	370.3	346.3	327.8	314.4	303.7
55°	474.2	436.9	405.0	365.0	351.7	333.1	293.1	287.8	269.1	250.4	237.2
57.5°	407.6	372.9	335.7	309.1	285.1	271.8	239.8	218.5	207.8	191.8	178.5
60°	346.3	309.1	279.7	247.8	237.2	218.5	194.5	175.9	162.5	149.2	135.9
62.5°	290.4	258.4	226.5	199.8	183.8	173.2	154.5	138.5	125.3	114.6	103.9
65°	239.8	210.4	183.8	157.2	149.2	135.9	122.5	109.3	98.5	85.3	74.6
67.5°	197.2	170.6	143.8	125.3	117.2	111.9	95.9	82.6	74.6	66.6	55.9
70°	154.5	135.9	114.6	98.5	90.6	82.6	71.9	64.0	53.2	47.9	40.0
72.5°	119.9	103.9	85.3	71.9	66.6	61.3	50.6	42.6	37.3	31.9	26.6
75°	85.3	71.9	61.3	47.9	45.3	42.6	34.7	29.3	24.0	18.7	16.0
77.5°	58.7	47.9	37.3	31.9	29.3	24.0	21.3	16.0	13.4	10.6	8.0
80°	31.9	24.0	18.7	16.0	13.4	10.6	10.6	8.0	5.3	5.3	2.7
82.5°	10.6	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9
2.5°	2219.3	2190.0	2198.0	2198.0	2192.7	2192.7	2187.4	2179.3	2182.1	2166.0	2131.4
5°	2195.3	2158.0	2152.7	2158.0	2136.8	2131.4	2120.8	2136.8	2088.7	2107.4	2086.1
7.5°	2126.1	2091.5	2083.4	2102.1	2075.5	2059.4	2056.8	2078.1	2035.5	2014.2	1990.2
10°	2048.8	2035.5	2011.5	1998.1	1990.2	1992.8	1971.5	1944.9	1936.9	1931.5	1910.3
12.5°	1979.6	1950.2	1928.9	1913.0	1907.6	1907.6	1873.0	1867.7	1843.7	1838.3	1806.4
15°	1896.9	1862.3	1849.0	1827.7	1809.0	1819.6	1779.7	1769.0	1761.1	1726.4	1731.8
17.5°	1825.0	1787.7	1755.8	1742.4	1726.4	1710.5	1673.1	1681.1	1662.5	1662.5	1614.5
20°	1731.8	1691.8	1667.8	1641.2	1641.2	1619.9	1593.3	1595.9	1571.9	1547.9	1505.3
22.5°	1633.2	1590.5	1561.2	1550.6	1523.9	1518.6	1486.7	1478.6	1446.7	1449.3	1412.0
25°	1529.3	1486.7	1446.7	1449.3	1425.4	1414.8	1396.1	1358.8	1345.5	1329.5	1318.8
27.5°	1406.7	1377.4	1342.7	1340.1	1294.8	1297.4	1273.5	1262.9	1230.8	1238.9	1214.9
30°	1294.8	1252.2	1220.2	1212.3	1193.6	1188.3	1151.0	1134.9	1140.3	1118.9	1105.7
32.5°	1180.2	1116.3	1103.0	1087.0	1076.4	1063.0	1036.4	1047.0	1023.0	1028.3	1007.1
35°	1028.3	1001.7	967.1	967.1	956.4	945.8	927.2	937.9	913.8	903.2	881.9
37.5°	900.5	876.6	841.9	852.6	833.9	817.9	801.9	804.6	783.3	780.7	759.3
40°	762.0	748.6	724.7	724.7	711.3	711.3	703.3	695.4	682.0	666.0	642.0
42.5°	631.4	620.7	610.1	612.8	594.1	610.1	588.8	602.2	559.5	556.9	540.8
45°	535.5	511.6	514.2	503.5	492.9	498.2	479.5	484.8	460.9	455.6	439.6
47.5°	434.3	426.3	410.3	405.0	405.0	397.0	389.0	386.3	375.7	362.3	341.0
50°	357.0	327.8	322.3	314.4	309.1	309.1	298.4	282.5	285.1	271.8	250.4
52.5°	279.7	255.7	245.1	242.5	231.8	226.5	213.1	202.5	194.5	189.1	175.9
55°	215.8	194.5	181.2	181.2	165.2	165.2	146.5	138.5	127.9	117.2	109.3
57.5°	162.5	151.9	138.5	127.9	122.5	109.3	98.5	85.3	77.2	61.3	50.6
60°	122.5	111.9	98.5	90.6	85.3	71.9	58.7	47.9	29.3	24.0	21.3
62.5°	90.6	80.0	66.6	61.3	55.9	45.3	31.9	16.0	8.0	8.0	8.0
65°	66.6	53.2	42.6	37.3	31.9	24.0	10.6	5.3	2.7	2.7	2.7
67.5°	45.3	34.7	24.0	21.3	16.0	8.0	2.7	2.7	2.7	2.7	2.7
70°	29.3	21.3	10.6	8.0	5.3	2.7	2.7	2.7	2.7	2.7	2.7
72.5°	18.7	10.6	5.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	10.6	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 EX4C409035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9	2221.9
2.5°	2168.7	2150.0	2160.7	2136.8	2147.4	2166.0	2152.7	2158.0
5°	2094.1	2083.4	2070.2	2035.5	2062.1	2083.4	2072.8	2070.2
7.5°	2014.2	1976.8	1995.5	1984.9	1979.6	2000.9	1976.8	2003.5
10°	1931.5	1904.9	1902.3	1883.6	1883.6	1899.6	1902.3	1886.2
12.5°	1809.0	1795.7	1795.7	1793.0	1790.3	1806.4	1809.0	1801.1
15°	1721.1	1715.8	1702.4	1699.8	1683.9	1707.8	1710.5	1707.8
17.5°	1614.5	1617.2	1603.9	1603.9	1614.5	1622.5	1601.2	1622.5
20°	1542.6	1529.3	1523.9	1499.9	1513.3	1526.7	1526.7	1529.3
22.5°	1438.7	1417.4	1425.4	1412.0	1404.0	1422.7	1422.7	1430.7
25°	1321.4	1321.4	1326.8	1318.8	1324.2	1334.8	1326.8	1345.5
27.5°	1209.6	1220.2	1220.2	1209.6	1214.9	1246.8	1260.2	1238.9
30°	1105.7	1108.3	1116.3	1111.0	1127.0	1137.6	1134.9	1151.0
32.5°	988.5	1001.7	1007.1	999.1	1004.4	1028.3	1015.1	1012.4
35°	897.9	873.9	871.3	873.9	884.5	889.8	884.5	903.2
37.5°	767.3	759.3	748.6	751.3	759.3	770.0	775.3	788.6
40°	642.0	631.4	631.4	628.8	620.7	650.1	650.1	650.1
42.5°	532.9	530.1	516.9	516.9	527.5	535.5	530.1	548.8
45°	436.9	426.3	418.2	418.2	426.3	426.3	434.3	431.6
47.5°	343.7	333.1	335.7	327.8	335.7	346.3	333.1	335.7
50°	258.4	258.4	253.1	258.4	255.7	258.4	253.1	247.8
52.5°	175.9	199.8	202.5	191.8	167.8	146.5	133.2	143.8
55°	101.2	90.6	90.6	87.9	82.6	80.0	71.9	80.0
57.5°	50.6	45.3	45.3	45.3	42.6	40.0	34.7	34.7
60°	21.3	18.7	18.7	16.0	13.4	10.6	8.0	10.6
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)