

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 EX4C409050 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 EX4C409050 4LBSQLWWLI
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

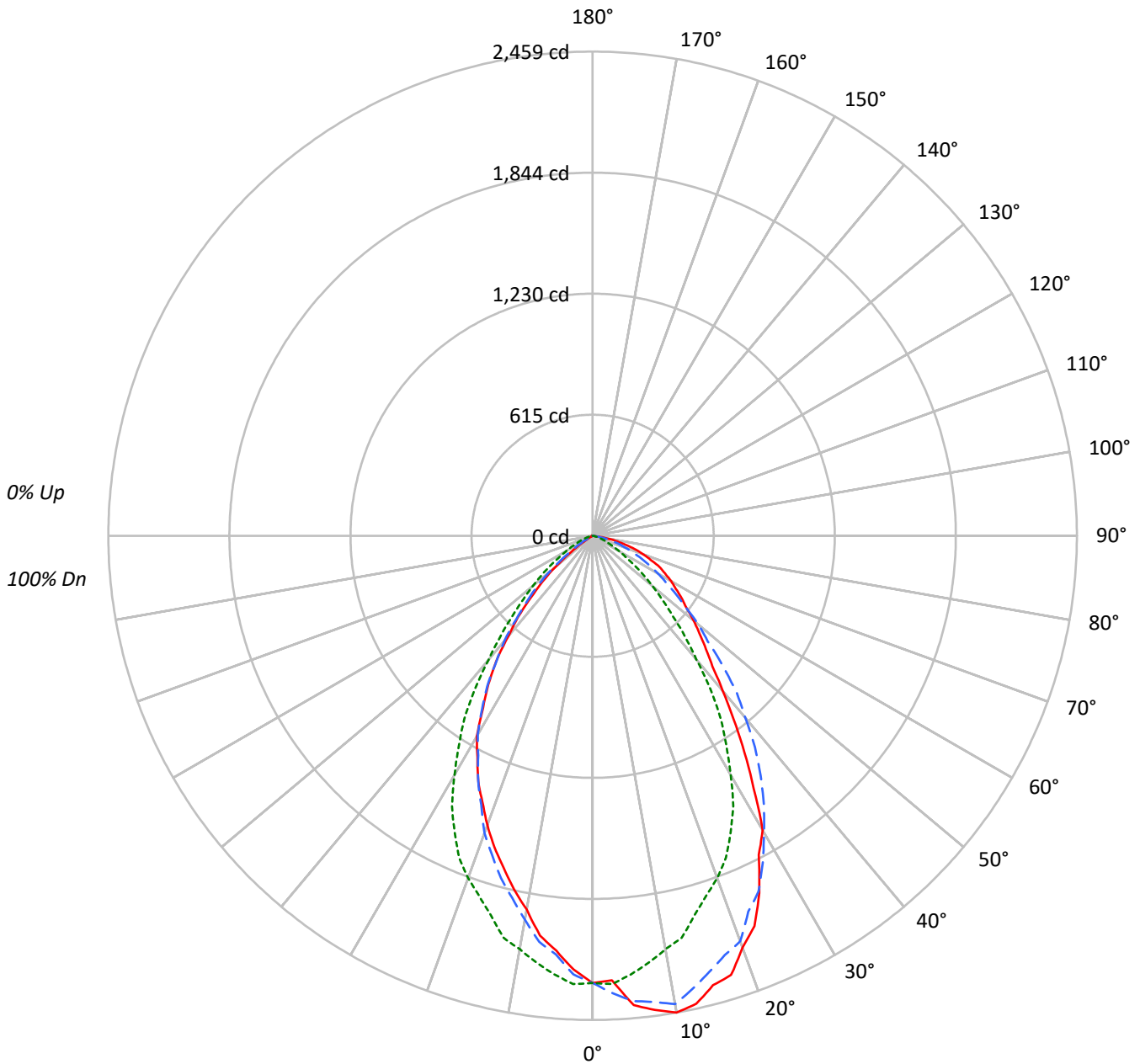
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3255.0 lumens
Efficiency: N/A
Efficacy: 69.3 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 EX4C409050 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

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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°	219107	219107	219107
5°	231809	216525	204921
10°	240897	208888	188871
15°	236086	199366	174343
20°	228425	189837	160481
25°	213066	176527	146388
30°	192337	156227	131058
35°	158429	133740	108721
40°	129295	103235	83686
45°	111089	78394	60191
50°	100544	59684	38008
55°	92523	43048	13744
60°	88808	29410	2103
65°	85777	19909	639
70°	76792	13824	790
75°	62967	7121	0
80°	39341	3001	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409050 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.8	6.5
10°-20°	573.2	17.6
20°-30°	765.4	23.5
30°-40°	726.6	22.3
40°-50°	502.3	15.4
50°-60°	277.5	8.5
60°-70°	137.8	4.2
70°-80°	54.3	1.7
80°-90°	5.2	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°	1551.4	47.7
0°-40°	2278.0	70.0
0°-60°	3057.7	93.9
0°-90°	3255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3255.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2271	2271	2271	2271	2271	
5°	2393	2372	2236	2135	2116	229
15°	2363	2293	1996	1800	1745	669
25°	2001	1993	1658	1375	1375	912
35°	1345	1487	1135	934	923	843
45°	814	934	574	471	441	635
55°	550	517	256	131	82	495
65°	376	272	87	3	3	365
75°	169	104	19	0	0	180
85°	0	3	0	0	0	16
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C40D010 EX4C409050 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8
2.5°	2259.9	2322.5	2327.9	2322.5	2330.7	2327.9	2341.6	2327.9	2344.4	2319.8	2325.3
5°	2393.3	2368.8	2420.5	2393.3	2393.3	2390.7	2382.4	2379.7	2390.7	2355.2	2371.6
7.5°	2428.7	2464.2	2510.5	2453.3	2455.9	2455.9	2439.6	2434.2	2434.2	2368.8	2387.9
10°	2458.7	2436.9	2461.4	2439.6	2458.7	2455.9	2466.8	2431.4	2455.9	2417.9	2415.1
12.5°	2434.2	2426.0	2458.7	2423.3	2412.4	2415.1	2401.5	2393.3	2401.5	2357.9	2355.2
15°	2363.4	2371.6	2420.5	2382.4	2377.0	2371.6	2355.2	2327.9	2349.8	2289.9	2292.6
17.5°	2338.9	2325.3	2333.5	2300.7	2309.0	2303.5	2300.7	2276.3	2270.8	2232.7	2232.7
20°	2224.6	2254.4	2254.4	2232.7	2232.7	2230.0	2194.6	2216.4	2191.8	2180.9	2191.8
22.5°	2145.5	2148.3	2148.3	2129.2	2132.0	2121.1	2102.0	2088.4	2102.0	2088.4	2066.6
25°	2001.3	2006.7	2039.4	2004.0	1998.5	2009.4	1993.1	1984.9	1982.2	1949.6	1993.1
27.5°	1827.0	1881.4	1878.7	1865.1	1881.4	1859.6	1851.5	1854.2	1862.4	1859.6	1870.5
30°	1726.3	1734.4	1742.6	1731.7	1734.4	1726.3	1726.3	1729.0	1750.7	1742.6	1739.8
32.5°	1522.0	1549.2	1571.1	1571.1	1573.8	1582.0	1579.2	1636.4	1650.0	1622.8	1617.4
35°	1345.0	1364.1	1383.1	1385.9	1421.3	1424.0	1426.8	1443.1	1481.2	1489.4	1486.6
37.5°	1176.3	1195.3	1200.7	1225.3	1244.3	1263.3	1285.2	1307.0	1339.6	1366.8	1353.3
40°	1026.5	1034.6	1048.3	1059.2	1097.2	1097.2	1108.1	1151.8	1187.2	1208.9	1206.2
42.5°	901.3	904.0	914.8	933.9	969.3	961.1	969.3	999.3	1050.9	1053.7	1083.7
45°	814.1	811.4	819.6	822.2	844.1	855.0	860.4	882.2	925.7	931.2	933.9
47.5°	735.2	732.4	746.1	751.5	759.6	770.5	770.5	773.3	789.6	803.3	792.4
50°	669.8	669.8	669.8	675.2	688.9	686.1	688.9	699.8	707.9	702.4	699.8
52.5°	599.0	609.9	618.1	620.8	623.5	623.5	626.3	620.8	618.1	609.9	593.5
55°	550.0	560.9	560.9	560.9	560.9	571.8	558.2	560.9	560.9	539.1	517.4
57.5°	501.0	511.9	520.0	509.2	520.0	509.2	503.7	501.0	495.5	473.7	441.1
60°	460.2	465.6	462.9	460.2	465.6	457.4	452.0	441.1	435.7	405.7	383.9
62.5°	413.9	416.6	419.3	413.9	408.5	405.7	394.8	378.5	367.6	343.1	324.0
65°	375.7	367.6	364.8	362.2	356.7	348.5	340.4	321.3	313.1	291.3	272.2
67.5°	318.5	315.9	321.3	313.1	299.5	299.5	291.3	275.0	255.9	242.4	223.3
70°	272.2	269.6	264.1	255.9	253.2	242.4	242.4	223.3	217.8	193.3	177.0
72.5°	223.3	223.3	215.1	206.9	198.7	193.3	190.6	177.0	168.9	155.2	141.6
75°	168.9	168.9	166.1	157.9	152.4	147.0	144.3	133.4	125.2	111.7	103.5
77.5°	119.8	119.8	108.9	103.5	106.1	100.7	95.3	92.6	89.8	81.7	70.8
80°	70.8	68.1	60.0	62.6	60.0	60.0	57.2	54.4	49.0	43.5	38.1
82.5°	19.1	21.8	21.8	21.8	24.5	19.1	19.1	19.1	21.8	21.8	13.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.8	2.8
87.5°	2.8	5.4	10.9	10.9	10.9	10.9	10.9	8.2	8.2	8.2	5.4
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 EX4C409050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8
2.5°	2298.1	2295.3	2298.1	2279.0	2322.5	2289.9	2284.4	2279.0	2298.1	2279.0	2251.8
5°	2347.0	2319.8	2311.6	2303.5	2327.9	2289.9	2281.7	2284.4	2270.8	2235.5	2238.1
7.5°	2363.4	2338.9	2314.4	2262.7	2284.4	2276.3	2254.4	2238.1	2216.4	2186.4	2180.9
10°	2368.8	2341.6	2306.2	2289.9	2257.2	2246.3	2238.1	2210.9	2183.7	2132.0	2118.3
12.5°	2352.5	2319.8	2276.3	2262.7	2238.1	2202.7	2183.7	2156.4	2132.0	2091.1	2061.1
15°	2281.7	2254.4	2240.9	2194.6	2183.7	2161.8	2123.8	2085.7	2050.3	1995.8	1979.4
17.5°	2200.0	2189.2	2175.5	2140.1	2137.4	2115.7	2080.2	2047.5	2001.3	1916.8	1889.6
20°	2115.7	2115.7	2072.0	2058.5	2085.7	2042.1	2014.9	1984.9	1889.6	1848.8	1799.8
22.5°	2053.0	2023.1	1998.5	1976.8	1979.4	1952.2	1914.2	1854.2	1818.8	1769.8	1712.6
25°	1930.5	1941.4	1887.0	1878.7	1887.0	1824.2	1805.2	1756.2	1704.4	1658.1	1614.6
27.5°	1854.2	1824.2	1788.9	1758.9	1758.9	1734.4	1680.0	1669.1	1590.1	1546.6	1492.0
30°	1739.8	1718.1	1688.1	1644.6	1639.1	1620.1	1576.5	1549.2	1467.6	1402.2	1372.3
32.5°	1595.5	1587.4	1562.9	1513.9	1497.6	1475.7	1421.3	1375.0	1336.9	1263.3	1228.0
35°	1492.0	1462.2	1410.4	1369.6	1355.9	1317.8	1274.2	1241.6	1200.7	1135.4	1089.1
37.5°	1336.9	1307.0	1257.9	1208.9	1208.9	1170.9	1110.9	1078.3	1021.1	982.9	944.8
40°	1200.7	1162.6	1113.7	1056.5	1048.3	993.8	969.3	914.8	879.4	819.6	814.1
42.5°	1048.3	1012.9	969.3	925.7	893.1	865.9	803.3	762.4	724.3	694.3	686.1
45°	909.4	863.1	825.0	770.5	737.9	705.2	664.4	637.2	607.2	574.5	555.4
47.5°	789.6	751.5	697.0	648.0	615.4	599.0	552.7	522.8	498.3	476.5	462.9
50°	667.1	620.8	590.9	536.4	530.9	492.8	454.7	430.2	416.6	397.6	378.5
52.5°	574.5	530.9	490.1	449.3	427.4	413.9	378.5	353.9	335.0	321.3	310.4
55°	484.6	446.5	413.9	373.0	359.4	340.4	299.5	294.1	275.0	255.9	242.4
57.5°	416.6	381.1	343.1	315.9	291.3	277.8	245.0	223.3	212.4	196.1	182.4
60°	353.9	315.9	285.9	253.2	242.4	223.3	198.7	179.7	166.1	152.4	138.9
62.5°	296.8	264.1	231.5	204.2	187.9	177.0	157.9	141.6	128.0	117.1	106.1
65°	245.0	215.1	187.9	160.7	152.4	138.9	125.2	111.7	100.7	87.2	76.3
67.5°	201.5	174.3	147.0	128.0	119.8	114.4	98.0	84.4	76.3	68.1	57.2
70°	157.9	138.9	117.1	100.7	92.6	84.4	73.5	65.4	54.4	49.0	40.9
72.5°	122.6	106.1	87.2	73.5	68.1	62.6	51.7	43.5	38.1	32.6	27.2
75°	87.2	73.5	62.6	49.0	46.3	43.5	35.4	30.0	24.5	19.1	16.3
77.5°	60.0	49.0	38.1	32.6	30.0	24.5	21.8	16.3	13.7	10.9	8.2
80°	32.6	24.5	19.1	16.3	13.7	10.9	10.9	8.2	5.4	5.4	2.8
82.5°	10.9	8.2	5.4	2.8	2.8	2.8	2.8	2.8	2.8	0.0	2.8
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°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	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 EX4C409050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8
2.5°	2268.1	2238.1	2246.3	2246.3	2240.9	2240.9	2235.5	2227.2	2230.0	2213.6	2178.3
5°	2243.6	2205.5	2200.0	2205.5	2183.7	2178.3	2167.4	2183.7	2134.6	2153.7	2132.0
7.5°	2172.8	2137.4	2129.2	2148.3	2121.1	2104.7	2102.0	2123.8	2080.2	2058.5	2033.9
10°	2093.8	2080.2	2055.7	2042.1	2033.9	2036.6	2014.9	1987.7	1979.4	1974.0	1952.2
12.5°	2023.1	1993.1	1971.3	1955.0	1949.6	1949.6	1914.2	1908.7	1884.2	1878.7	1846.1
15°	1938.6	1903.3	1889.6	1867.9	1848.8	1859.6	1818.8	1807.9	1799.8	1764.4	1769.8
17.5°	1865.1	1827.0	1794.4	1780.7	1764.4	1748.1	1709.9	1718.1	1699.0	1699.0	1650.0
20°	1769.8	1729.0	1704.4	1677.2	1677.2	1655.5	1628.3	1630.9	1606.4	1582.0	1538.3
22.5°	1669.1	1625.5	1595.5	1584.6	1557.4	1552.0	1519.4	1511.1	1478.5	1481.2	1443.1
25°	1562.9	1519.4	1478.5	1481.2	1456.7	1445.9	1426.8	1388.7	1375.0	1358.7	1347.8
27.5°	1437.6	1407.7	1372.3	1369.6	1323.3	1326.0	1301.5	1290.6	1257.9	1266.1	1241.6
30°	1323.3	1279.8	1247.0	1238.9	1219.8	1214.4	1176.3	1159.9	1165.4	1143.5	1130.0
32.5°	1206.2	1140.9	1127.2	1110.9	1100.0	1086.4	1059.2	1070.0	1045.5	1050.9	1029.2
35°	1050.9	1023.7	988.3	988.3	977.5	966.6	947.6	958.5	933.9	923.0	901.3
37.5°	920.3	895.8	860.4	871.3	852.2	835.9	819.6	822.2	800.5	797.8	775.9
40°	778.7	765.1	740.6	740.6	727.0	727.0	718.8	710.7	697.0	680.7	656.1
42.5°	645.3	634.4	623.5	626.3	607.2	623.5	601.7	615.4	571.8	569.1	552.7
45°	547.2	522.8	525.5	514.6	503.7	509.2	490.1	495.5	471.1	465.6	449.3
47.5°	443.9	435.7	419.3	413.9	413.9	405.7	397.6	394.8	383.9	370.3	348.5
50°	364.8	335.0	329.4	321.3	315.9	315.9	305.0	288.7	291.3	277.8	255.9
52.5°	285.9	261.4	250.5	247.8	236.9	231.5	217.8	206.9	198.7	193.3	179.7
55°	220.5	198.7	185.2	185.2	168.9	168.9	149.8	141.6	130.7	119.8	111.7
57.5°	166.1	155.2	141.6	130.7	125.2	111.7	100.7	87.2	78.9	62.6	51.7
60°	125.2	114.4	100.7	92.6	87.2	73.5	60.0	49.0	30.0	24.5	21.8
62.5°	92.6	81.7	68.1	62.6	57.2	46.3	32.6	16.3	8.2	8.2	8.2
65°	68.1	54.4	43.5	38.1	32.6	24.5	10.9	5.4	2.8	2.8	2.8
67.5°	46.3	35.4	24.5	21.8	16.3	8.2	2.8	2.8	2.8	2.8	2.8
70°	30.0	21.8	10.9	8.2	5.4	2.8	2.8	2.8	2.8	2.8	2.8
72.5°	19.1	10.9	5.4	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	10.9	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	5.4	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.8	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	2.8	2.8	2.8
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 EX4C409050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8	2270.8
2.5°	2216.4	2197.3	2208.1	2183.7	2194.6	2213.6	2200.0	2205.5
5°	2140.1	2129.2	2115.7	2080.2	2107.4	2129.2	2118.3	2115.7
7.5°	2058.5	2020.3	2039.4	2028.5	2023.1	2044.8	2020.3	2047.5
10°	1974.0	1946.8	1944.1	1925.0	1925.0	1941.4	1944.1	1927.7
12.5°	1848.8	1835.2	1835.2	1832.4	1829.7	1846.1	1848.8	1840.7
15°	1758.9	1753.5	1739.8	1737.2	1720.9	1745.3	1748.1	1745.3
17.5°	1650.0	1652.7	1639.1	1639.1	1650.0	1658.1	1636.4	1658.1
20°	1576.5	1562.9	1557.4	1532.9	1546.6	1560.2	1560.2	1562.9
22.5°	1470.3	1448.5	1456.7	1443.1	1434.9	1454.0	1454.0	1462.2
25°	1350.5	1350.5	1355.9	1347.8	1353.3	1364.1	1355.9	1375.0
27.5°	1236.1	1247.0	1247.0	1236.1	1241.6	1274.2	1287.9	1266.1
30°	1130.0	1132.7	1140.9	1135.4	1151.8	1162.6	1159.9	1176.3
32.5°	1010.2	1023.7	1029.2	1021.1	1026.5	1050.9	1037.4	1034.6
35°	917.6	893.1	890.4	893.1	904.0	909.4	904.0	923.0
37.5°	784.2	775.9	765.1	767.8	775.9	786.9	792.4	805.9
40°	656.1	645.3	645.3	642.6	634.4	664.4	664.4	664.4
42.5°	544.6	541.8	528.2	528.2	539.1	547.2	541.8	560.9
45°	446.5	435.7	427.4	427.4	435.7	435.7	443.9	441.1
47.5°	351.3	340.4	343.1	335.0	343.1	353.9	340.4	343.1
50°	264.1	264.1	258.7	264.1	261.4	264.1	258.7	253.2
52.5°	179.7	204.2	206.9	196.1	171.5	149.8	136.1	147.0
55°	103.5	92.6	92.6	89.8	84.4	81.7	73.5	81.7
57.5°	51.7	46.3	46.3	46.3	43.5	40.9	35.4	35.4
60°	21.8	19.1	19.1	16.3	13.7	10.9	8.2	10.9
62.5°	8.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4
65°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
67.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
70°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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)