

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: P563837

Luminaire Tested: **LD4C40D010 EX4C409030 4LBSQLWWLI**

Issue Date: 2/18/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P563837  
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, DIM TO WARM  
Light Source: -  
Ballast/Driver: -

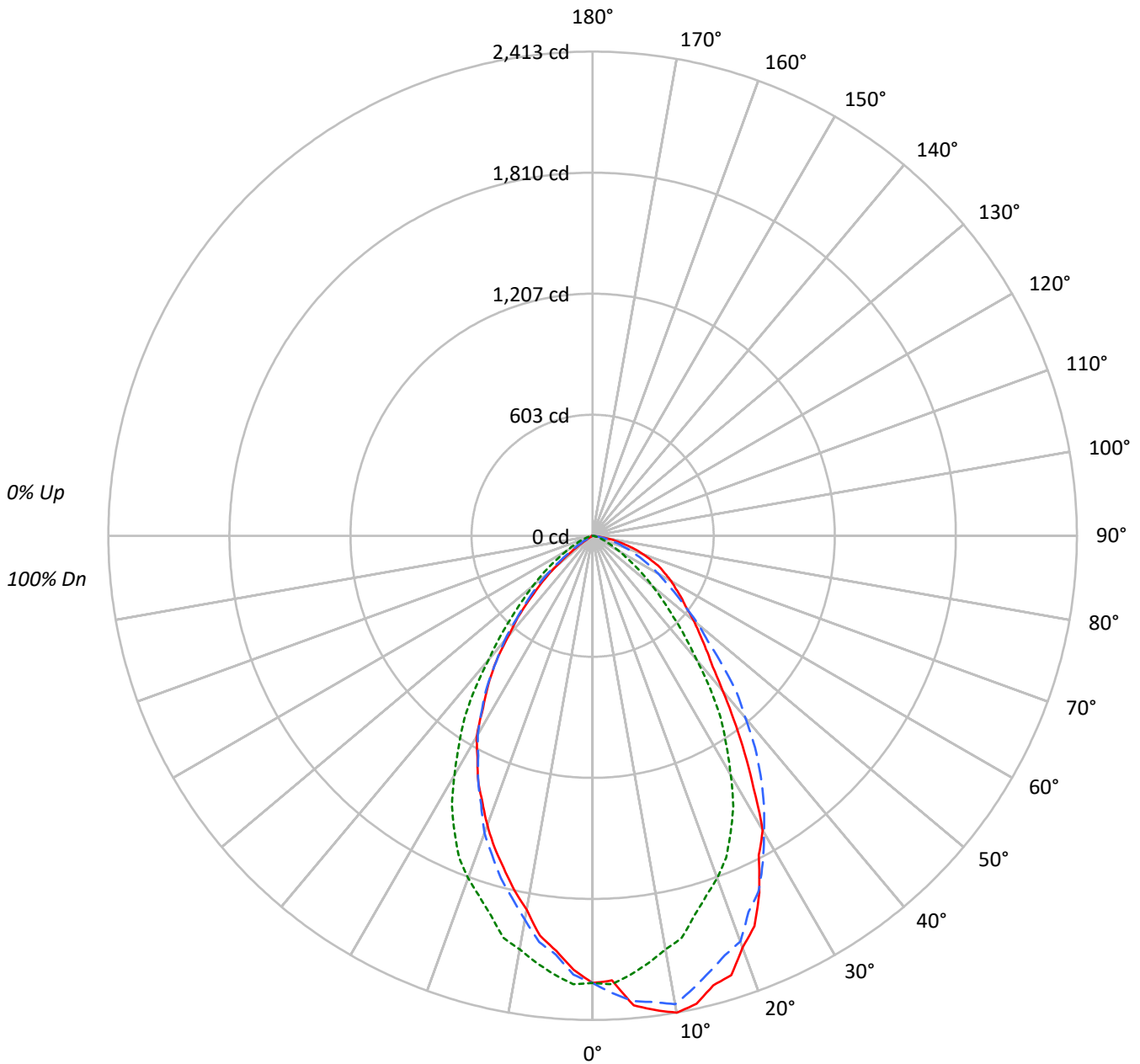
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3195.0 lumens  
Efficiency: N/A  
Efficacy: 68.0 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				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
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80			80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72			72
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64			64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58			58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53			53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48			48
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44			44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41			41
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38			38

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

	0°	90°	180°
0°	215064	215064	215064
5°	227538	212534	201144
10°	236459	205037	185393
15°	231731	195690	171136
20°	224215	186336	157513
25°	209137	173280	143694
30°	188794	153353	128641
35°	155508	131278	106719
40°	126915	101333	82137
45°	109042	76947	59072
50°	98682	58573	37317
55°	90807	42241	13508
60°	87168	28869	2065
65°	84179	19521	616
70°	75381	13542	762
75°	61811	6971	0
80°	38674	2945	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	208.8	6.5
10°-20°	562.6	17.6
20°-30°	751.3	23.5
30°-40°	713.2	22.3
40°-50°	493.0	15.4
50°-60°	272.4	8.5
60°-70°	135.3	4.2
70°-80°	53.3	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°	1522.8	47.7
0°-40°	2236.0	70.0
0°-60°	3001.4	93.9
0°-90°	3195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3195.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2229	2229	2229	2229	2229	
5°	2349	2328	2194	2095	2077	225
15°	2320	2250	1959	1767	1713	656
25°	1964	1956	1628	1350	1350	896
35°	1320	1459	1114	917	906	827
45°	799	917	564	462	433	623
55°	540	508	251	128	80	486
65°	369	267	86	3	3	358
75°	166	102	19	0	0	177
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°	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9
2.5°	2218.2	2279.7	2285.0	2279.7	2287.8	2285.0	2298.5	2285.0	2301.2	2277.1	2282.4
5°	2349.2	2325.1	2376.0	2349.2	2349.2	2346.6	2338.5	2335.8	2346.6	2311.9	2327.9
7.5°	2384.0	2418.8	2464.2	2408.1	2410.7	2410.7	2394.7	2389.3	2389.3	2325.1	2343.9
10°	2413.4	2391.9	2416.1	2394.7	2413.4	2410.7	2421.3	2386.7	2410.7	2373.3	2370.6
12.5°	2389.3	2381.3	2413.4	2378.6	2367.9	2370.6	2357.3	2349.2	2357.3	2314.4	2311.9
15°	2319.8	2327.9	2376.0	2338.5	2333.3	2327.9	2311.9	2285.0	2306.5	2247.7	2250.4
17.5°	2295.8	2282.4	2290.5	2258.4	2266.4	2261.0	2258.4	2234.4	2228.9	2191.6	2191.6
20°	2183.6	2212.9	2212.9	2191.6	2191.6	2188.9	2154.1	2175.5	2151.5	2140.8	2151.5
22.5°	2106.0	2108.8	2108.8	2089.9	2092.7	2082.0	2063.3	2049.9	2063.3	2049.9	2028.5
25°	1964.4	1969.8	2001.8	1967.1	1961.7	1972.4	1956.4	1948.3	1945.7	1913.7	1956.4
27.5°	1793.3	1846.7	1844.1	1830.8	1846.7	1825.4	1817.4	1820.1	1828.1	1825.4	1836.0
30°	1694.5	1702.5	1710.5	1699.8	1702.5	1694.5	1694.5	1697.1	1718.5	1710.5	1707.8
32.5°	1494.0	1520.7	1542.2	1542.2	1544.7	1552.9	1550.1	1606.3	1619.6	1592.9	1587.5
35°	1320.2	1339.0	1357.7	1360.4	1395.1	1397.7	1400.5	1416.5	1453.9	1461.9	1459.2
37.5°	1154.6	1173.2	1178.6	1202.6	1221.5	1240.1	1261.5	1282.9	1314.9	1341.6	1328.4
40°	1007.6	1015.6	1029.0	1039.7	1077.0	1077.0	1087.7	1130.5	1165.3	1186.7	1183.9
42.5°	884.7	887.3	898.0	916.7	951.5	943.5	951.5	980.9	1031.5	1034.3	1063.7
45°	799.1	796.4	804.5	807.0	828.5	839.2	844.6	865.9	908.7	914.0	916.7
47.5°	721.6	719.0	732.3	737.7	745.6	756.3	756.3	759.0	775.0	788.4	777.8
50°	657.4	657.4	657.4	662.8	676.2	673.5	676.2	686.9	694.8	689.5	686.9
52.5°	587.9	598.6	606.7	609.4	612.0	612.0	614.7	609.4	606.7	598.6	582.6
55°	539.8	550.5	550.5	550.5	550.5	561.2	548.0	550.5	550.5	529.1	507.8
57.5°	491.8	502.5	510.4	499.8	510.4	499.8	494.5	491.8	486.3	465.0	432.9
60°	451.7	457.0	454.3	451.7	457.0	449.0	443.6	432.9	427.6	398.2	376.9
62.5°	406.3	408.9	411.6	406.3	400.9	398.2	387.6	371.5	360.8	336.7	318.0
65°	368.7	360.8	358.1	355.5	350.1	342.1	334.2	315.3	307.3	285.9	267.2
67.5°	312.7	310.0	315.3	307.3	294.0	294.0	285.9	270.0	251.1	237.9	219.1
70°	267.2	264.6	259.3	251.1	248.6	237.9	237.9	219.1	213.8	189.7	173.7
72.5°	219.1	219.1	211.1	203.1	195.1	189.7	187.1	173.7	165.8	152.4	138.9
75°	165.8	165.8	163.1	154.9	149.6	144.2	141.7	131.0	122.9	109.7	101.5
77.5°	117.6	117.6	106.9	101.5	104.2	98.9	93.5	90.8	88.2	80.3	69.6
80°	69.6	66.8	58.9	61.4	58.9	58.9	56.1	53.4	48.0	42.7	37.3
82.5°	18.7	21.4	21.4	21.4	24.1	18.7	18.7	18.7	21.4	21.4	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°	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9
2.5°	2255.7	2253.0	2255.7	2237.0	2279.7	2247.7	2242.3	2237.0	2255.7	2237.0	2210.3
5°	2303.8	2277.1	2269.1	2261.0	2285.0	2247.7	2239.7	2242.3	2228.9	2194.3	2196.8
7.5°	2319.8	2295.8	2271.7	2221.0	2242.3	2234.4	2212.9	2196.8	2175.5	2146.1	2140.8
10°	2325.1	2298.5	2263.7	2247.7	2215.7	2205.0	2196.8	2170.2	2143.4	2092.7	2079.3
12.5°	2309.1	2277.1	2234.4	2221.0	2196.8	2162.2	2143.4	2116.7	2092.7	2052.6	2023.2
15°	2239.7	2212.9	2199.6	2154.1	2143.4	2122.0	2084.6	2047.2	2012.5	1959.0	1943.0
17.5°	2159.5	2148.8	2135.4	2100.6	2098.1	2076.7	2041.9	2009.8	1964.4	1881.5	1854.8
20°	2076.7	2076.7	2033.9	2020.6	2047.2	2004.4	1977.7	1948.3	1854.8	1814.7	1766.7
22.5°	2015.2	1985.8	1961.7	1940.3	1943.0	1916.3	1878.9	1820.1	1785.3	1737.2	1681.1
25°	1894.9	1905.6	1852.2	1844.1	1852.2	1790.6	1772.0	1723.8	1673.0	1627.6	1584.9
27.5°	1820.1	1790.6	1756.0	1726.5	1726.5	1702.5	1649.1	1638.4	1560.8	1518.1	1464.6
30°	1707.8	1686.4	1657.0	1614.3	1608.9	1590.2	1547.5	1520.7	1440.6	1376.4	1347.0
32.5°	1566.1	1558.1	1534.0	1486.0	1470.0	1448.5	1395.1	1349.7	1312.3	1240.1	1205.4
35°	1464.6	1435.3	1384.4	1344.3	1330.9	1293.6	1250.7	1218.7	1178.6	1114.5	1069.1
37.5°	1312.3	1282.9	1234.7	1186.7	1186.7	1149.2	1090.4	1058.4	1002.2	964.8	927.4
40°	1178.6	1141.2	1093.2	1037.0	1029.0	975.5	951.5	898.0	863.2	804.5	799.1
42.5°	1029.0	994.2	951.5	908.7	876.6	849.9	788.4	748.4	710.9	681.5	673.5
45°	892.6	847.2	809.8	756.3	724.2	692.2	652.1	625.4	596.0	563.9	545.2
47.5°	775.0	737.7	684.2	636.1	604.0	587.9	542.5	513.2	489.1	467.7	454.3
50°	654.9	609.4	580.0	526.5	521.1	483.8	446.3	422.2	408.9	390.2	371.5
52.5°	563.9	521.1	481.0	441.1	419.6	406.3	371.5	347.4	328.8	315.3	304.7
55°	475.6	438.3	406.3	366.2	352.8	334.2	294.0	288.7	270.0	251.1	237.9
57.5°	408.9	374.1	336.7	310.0	285.9	272.6	240.5	219.1	208.4	192.5	179.0
60°	347.4	310.0	280.6	248.6	237.9	219.1	195.1	176.4	163.1	149.6	136.3
62.5°	291.3	259.3	227.2	200.4	184.4	173.7	154.9	138.9	125.6	114.9	104.2
65°	240.5	211.1	184.4	157.7	149.6	136.3	122.9	109.7	98.9	85.5	74.9
67.5°	197.7	171.1	144.2	125.6	117.6	112.2	96.2	82.8	74.9	66.8	56.1
70°	154.9	136.3	114.9	98.9	90.8	82.8	72.1	64.2	53.4	48.0	40.1
72.5°	120.3	104.2	85.5	72.1	66.8	61.4	50.8	42.7	37.3	32.0	26.7
75°	85.5	72.1	61.4	48.0	45.5	42.7	34.8	29.4	24.1	18.7	16.0
77.5°	58.9	48.0	37.3	32.0	29.4	24.1	21.4	16.0	13.4	10.7	8.0
80°	32.0	24.1	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°	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9
2.5°	2226.3	2196.8	2205.0	2205.0	2199.6	2199.6	2194.3	2186.2	2188.9	2172.8	2138.2
5°	2202.2	2164.8	2159.5	2164.8	2143.4	2138.2	2127.5	2143.4	2095.3	2114.0	2092.7
7.5°	2132.8	2098.1	2089.9	2108.8	2082.0	2065.9	2063.3	2084.6	2041.9	2020.6	1996.5
10°	2055.3	2041.9	2017.8	2004.4	1996.5	1999.1	1977.7	1951.0	1943.0	1937.7	1916.3
12.5°	1985.8	1956.4	1935.0	1918.9	1913.7	1913.7	1878.9	1873.6	1849.5	1844.1	1812.0
15°	1902.9	1868.2	1854.8	1833.4	1814.7	1825.4	1785.3	1774.6	1766.7	1731.9	1737.2
17.5°	1830.8	1793.3	1761.3	1747.9	1731.9	1715.8	1678.4	1686.4	1667.7	1667.7	1619.6
20°	1737.2	1697.1	1673.0	1646.3	1646.3	1625.0	1598.2	1600.9	1576.8	1552.9	1510.0
22.5°	1638.4	1595.6	1566.1	1555.4	1528.7	1523.4	1491.3	1483.3	1451.2	1453.9	1416.5
25°	1534.0	1491.3	1451.2	1453.9	1429.9	1419.2	1400.5	1363.0	1349.7	1333.7	1323.0
27.5°	1411.2	1381.8	1347.0	1344.3	1298.9	1301.5	1277.5	1266.8	1234.7	1242.8	1218.7
30°	1298.9	1256.1	1224.0	1216.1	1197.3	1192.0	1154.6	1138.5	1143.9	1122.5	1109.2
32.5°	1183.9	1119.8	1106.4	1090.4	1079.8	1066.3	1039.7	1050.4	1026.3	1031.5	1010.2
35°	1031.5	1004.9	970.1	970.1	959.4	948.7	930.1	940.8	916.7	906.0	884.7
37.5°	903.3	879.4	844.6	855.3	836.5	820.5	804.5	807.0	785.7	783.1	761.7
40°	764.3	751.0	727.0	727.0	713.6	713.6	705.5	697.6	684.2	668.1	644.1
42.5°	633.4	622.7	612.0	614.7	596.0	612.0	590.7	604.0	561.2	558.6	542.5
45°	537.2	513.2	515.8	505.1	494.5	499.8	481.0	486.3	462.4	457.0	441.1
47.5°	435.7	427.6	411.6	406.3	406.3	398.2	390.2	387.6	376.9	363.4	342.1
50°	358.1	328.8	323.4	315.3	310.0	310.0	299.4	283.3	285.9	272.6	251.1
52.5°	280.6	256.5	245.9	243.2	232.5	227.2	213.8	203.1	195.1	189.7	176.4
55°	216.5	195.1	181.8	181.8	165.8	165.8	147.0	138.9	128.3	117.6	109.7
57.5°	163.1	152.4	138.9	128.3	122.9	109.7	98.9	85.5	77.5	61.4	50.8
60°	122.9	112.2	98.9	90.8	85.5	72.1	58.9	48.0	29.4	24.1	21.4
62.5°	90.8	80.3	66.8	61.4	56.1	45.5	32.0	16.0	8.0	8.0	8.0
65°	66.8	53.4	42.7	37.3	32.0	24.1	10.7	5.3	2.7	2.7	2.7
67.5°	45.5	34.8	24.1	21.4	16.0	8.0	2.7	2.7	2.7	2.7	2.7
70°	29.4	21.4	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: P563837

CATALOG NUMBER: LD4C40D010 EX4C409030 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9	2228.9
2.5°	2175.5	2156.8	2167.4	2143.4	2154.1	2172.8	2159.5	2164.8
5°	2100.6	2089.9	2076.7	2041.9	2068.6	2089.9	2079.3	2076.7
7.5°	2020.6	1983.0	2001.8	1991.2	1985.8	2007.1	1983.0	2009.8
10°	1937.7	1910.9	1908.3	1889.6	1889.6	1905.6	1908.3	1892.2
12.5°	1814.7	1801.4	1801.4	1798.7	1796.0	1812.0	1814.7	1806.8
15°	1726.5	1721.2	1707.8	1705.1	1689.2	1713.2	1715.8	1713.2
17.5°	1619.6	1622.2	1608.9	1608.9	1619.6	1627.6	1606.3	1627.6
20°	1547.5	1534.0	1528.7	1504.6	1518.1	1531.5	1531.5	1534.0
22.5°	1443.2	1421.8	1429.9	1416.5	1408.4	1427.1	1427.1	1435.3
25°	1325.6	1325.6	1330.9	1323.0	1328.4	1339.0	1330.9	1349.7
27.5°	1213.3	1224.0	1224.0	1213.3	1218.7	1250.7	1264.2	1242.8
30°	1109.2	1111.8	1119.8	1114.5	1130.5	1141.2	1138.5	1154.6
32.5°	991.6	1004.9	1010.2	1002.2	1007.6	1031.5	1018.3	1015.6
35°	900.7	876.6	874.0	876.6	887.3	892.6	887.3	906.0
37.5°	769.7	761.7	751.0	753.6	761.7	772.5	777.8	791.1
40°	644.1	633.4	633.4	630.8	622.7	652.1	652.1	652.1
42.5°	534.5	531.8	518.5	518.5	529.1	537.2	531.8	550.5
45°	438.3	427.6	419.6	419.6	427.6	427.6	435.7	432.9
47.5°	344.8	334.2	336.7	328.8	336.7	347.4	334.2	336.7
50°	259.3	259.3	253.9	259.3	256.5	259.3	253.9	248.6
52.5°	176.4	200.4	203.1	192.5	168.3	147.0	133.6	144.2
55°	101.5	90.8	90.8	88.2	82.8	80.3	72.1	80.3
57.5°	50.8	45.5	45.5	45.5	42.7	40.1	34.8	34.8
60°	21.4	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)