

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: **LD4C35D010 EX4C359030 4LBSQLWWH**

Issue Date: 2/18/2022



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: LD4C35D010 EX4C359030 4LBSQLWWH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

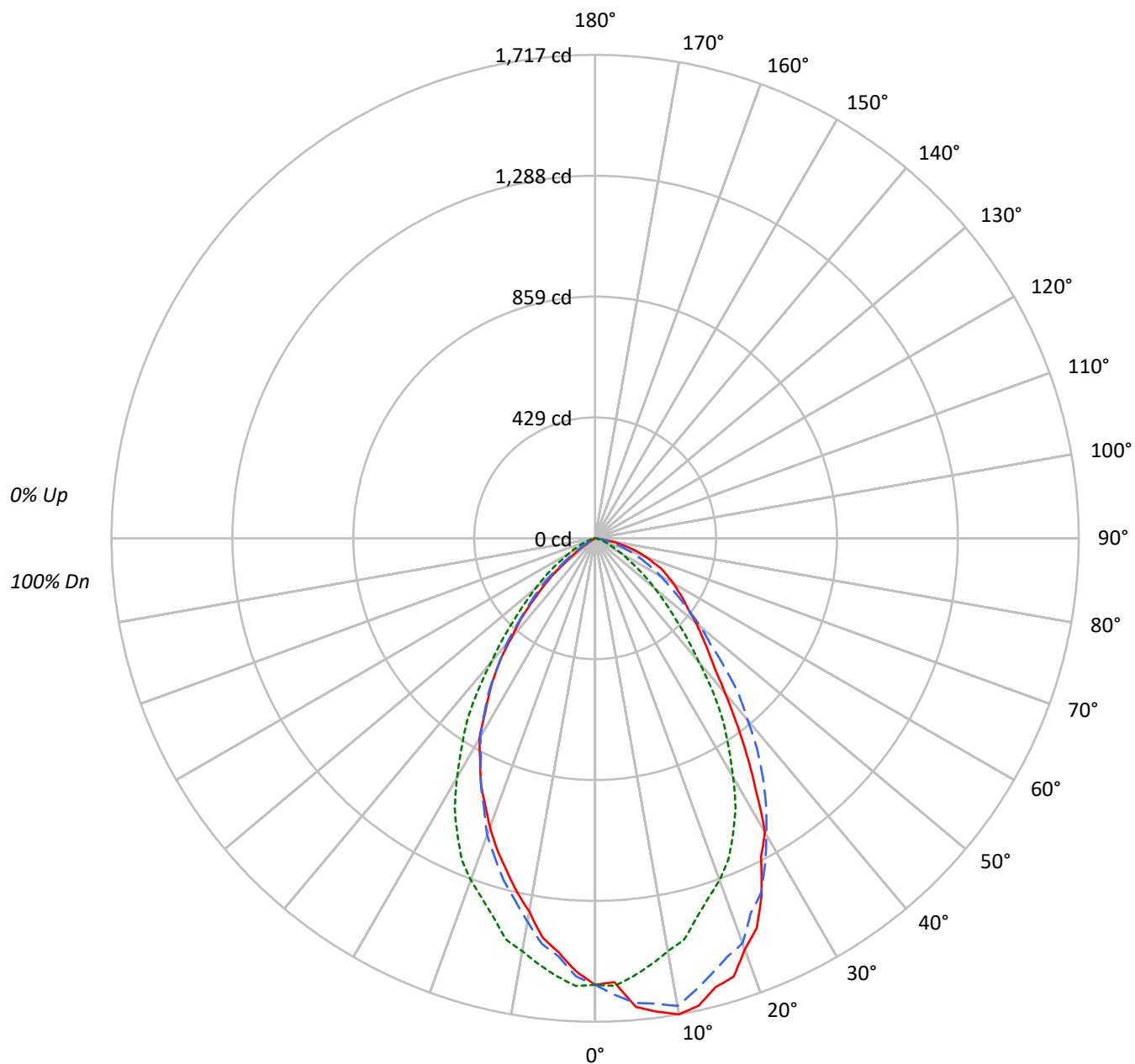
Lumens per Lamp: N/A
Luminaire Lumens: 2273.0 lumens
Efficiency: N/A
Efficacy: 56.3 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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

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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	89	102	96	92	88	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	74	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	67	62	83	74	67	62	72	66	61		70	65	60		68
6	80	69	61	56	78	68	61	56	66	60	55		65	59	55		63
7	75	63	56	51	73	63	56	51	61	55	50		60	54	50		59
8	70	59	52	47	69	58	51	46	57	51	46		56	50	46		55
9	66	55	48	43	65	54	47	43	53	47	43		52	46	42		51
10	62	51	44	40	61	51	44	40	50	44	39		49	43	39		48

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	153002	153002	153002
5°	161878	151195	143097
10°	168227	145869	131887
15°	164863	139220	121749
20°	159505	132562	112066
25°	148783	123274	102226
30°	134312	109098	91517
35°	110641	93397	75928
40°	90286	72085	58432
45°	77575	54746	42028
50°	70206	41671	26539
55°	64615	30061	9606
60°	62023	20533	1467
65°	59909	13904	434
70°	53630	9648	536
75°	43954	4958	0
80°	27505	2111	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.6	6.5
10°-20°	400.3	17.6
20°-30°	534.5	23.5
30°-40°	507.4	22.3
40°-50°	350.7	15.4
50°-60°	193.8	8.5
60°-70°	96.2	4.2
70°-80°	37.9	1.7
80°-90°	3.6	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°	1083.3	47.7
0°-40°	1590.7	70.0
0°-60°	2135.2	93.9
0°-90°	2273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2273.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1586	1586	1586	1586	1586	
5°	1671	1656	1561	1491	1477	160
15°	1650	1601	1394	1257	1219	467
25°	1398	1392	1158	960	960	637
35°	939	1038	793	652	645	588
45°	568	652	401	329	308	443
55°	384	361	179	91	57	346
65°	262	190	61	2	2	255
75°	118	72	13	0	0	126
85°	0	2	0	0	0	11
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°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1578.1	1621.8	1625.6	1621.8	1627.6	1625.6	1635.2	1625.6	1637.1	1620.0	1623.8
5°	1671.3	1654.2	1690.3	1671.3	1671.3	1669.4	1663.7	1661.8	1669.4	1644.7	1656.1
7.5°	1696.0	1720.7	1753.1	1713.2	1715.0	1715.0	1703.6	1699.8	1699.8	1654.2	1667.5
10°	1717.0	1701.7	1718.8	1703.6	1717.0	1715.0	1722.6	1697.9	1715.0	1688.4	1686.5
12.5°	1699.8	1694.1	1717.0	1692.2	1684.6	1686.5	1677.0	1671.3	1677.0	1646.6	1644.7
15°	1650.4	1656.1	1690.3	1663.7	1659.9	1656.1	1644.7	1625.6	1640.9	1599.0	1601.0
17.5°	1633.3	1623.8	1629.5	1606.6	1612.4	1608.6	1606.6	1589.6	1585.7	1559.1	1559.1
20°	1553.4	1574.3	1574.3	1559.1	1559.1	1557.2	1532.5	1547.7	1530.6	1523.0	1530.6
22.5°	1498.2	1500.2	1500.2	1486.8	1488.8	1481.2	1467.9	1458.3	1467.9	1458.3	1443.1
25°	1397.5	1401.3	1424.1	1399.4	1395.6	1403.2	1391.8	1386.1	1384.2	1361.4	1391.8
27.5°	1275.8	1313.8	1311.9	1302.4	1313.8	1298.6	1292.9	1294.8	1300.5	1298.6	1306.2
30°	1205.5	1211.2	1216.9	1209.3	1211.2	1205.5	1205.5	1207.4	1222.6	1216.9	1215.0
32.5°	1062.8	1081.8	1097.1	1097.1	1099.0	1104.7	1102.8	1142.7	1152.2	1133.2	1129.4
35°	939.3	952.6	965.9	967.8	992.5	994.4	996.3	1007.7	1034.3	1040.0	1038.1
37.5°	821.4	834.7	838.5	855.6	868.9	882.2	897.5	912.7	935.5	954.5	945.0
40°	716.8	722.5	732.0	739.6	766.2	766.2	773.8	804.3	829.0	844.2	842.3
42.5°	629.4	631.2	638.8	652.2	676.9	671.2	676.9	697.8	733.9	735.8	756.8
45°	568.5	566.6	572.3	574.2	589.4	597.0	600.8	616.0	646.4	650.2	652.2
47.5°	513.4	511.5	521.0	524.8	530.5	538.1	538.1	540.0	551.4	560.9	553.3
50°	467.7	467.7	467.7	471.5	481.1	479.1	481.1	488.7	494.3	490.5	488.7
52.5°	418.3	425.9	431.6	433.5	435.4	435.4	437.3	433.5	431.6	425.9	414.5
55°	384.1	391.7	391.7	391.7	391.7	399.3	389.8	391.7	391.7	376.5	361.3
57.5°	349.9	357.5	363.1	355.5	363.1	355.5	351.7	349.9	346.0	330.8	308.0
60°	321.4	325.2	323.2	321.4	325.2	319.4	315.6	308.0	304.2	283.3	268.1
62.5°	289.0	290.9	292.8	289.0	285.2	283.3	275.7	264.3	256.7	239.6	226.2
65°	262.4	256.7	254.8	252.9	249.1	243.4	237.7	224.4	218.6	203.4	190.1
67.5°	222.4	220.6	224.4	218.6	209.2	209.2	203.4	192.0	178.7	169.2	155.9
70°	190.1	188.2	184.4	178.7	176.8	169.2	169.2	155.9	152.1	135.0	123.6
72.5°	155.9	155.9	150.2	144.5	138.8	135.0	133.1	123.6	117.9	108.4	98.8
75°	117.9	117.9	116.0	110.2	106.4	102.6	100.8	93.2	87.5	78.0	72.3
77.5°	83.7	83.7	76.1	72.3	74.1	70.3	66.5	64.7	62.7	57.1	49.5
80°	49.5	47.5	41.9	43.7	41.9	41.9	39.9	38.0	34.2	30.4	26.6
82.5°	13.3	15.2	15.2	15.2	17.1	13.3	13.3	13.3	15.2	15.2	9.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9
87.5°	1.9	3.8	7.6	7.6	7.6	7.6	7.6	5.7	5.7	5.7	3.8
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°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1604.8	1602.8	1604.8	1591.4	1621.8	1599.0	1595.2	1591.4	1604.8	1591.4	1572.4
5°	1639.0	1620.0	1614.2	1608.6	1625.6	1599.0	1593.4	1595.2	1585.7	1561.0	1562.9
7.5°	1650.4	1633.3	1616.2	1580.0	1595.2	1589.6	1574.3	1562.9	1547.7	1526.8	1523.0
10°	1654.2	1635.2	1610.4	1599.0	1576.2	1568.6	1562.9	1543.9	1524.9	1488.8	1479.2
12.5°	1642.8	1620.0	1589.6	1580.0	1562.9	1538.2	1524.9	1505.8	1488.8	1460.3	1439.3
15°	1593.4	1574.3	1564.8	1532.5	1524.9	1509.6	1483.0	1456.5	1431.7	1393.7	1382.3
17.5°	1536.3	1528.7	1519.2	1494.4	1492.6	1477.4	1452.7	1429.8	1397.5	1338.5	1319.5
20°	1477.4	1477.4	1446.9	1437.5	1456.5	1426.0	1407.0	1386.1	1319.5	1291.0	1256.8
22.5°	1433.7	1412.7	1395.6	1380.4	1382.3	1363.3	1336.7	1294.8	1270.1	1235.9	1196.0
25°	1348.1	1355.7	1317.7	1311.9	1317.7	1273.9	1260.6	1226.4	1190.2	1157.9	1127.5
27.5°	1294.8	1273.9	1249.2	1228.3	1228.3	1211.2	1173.2	1165.6	1110.4	1080.0	1041.9
30°	1215.0	1199.8	1178.8	1148.4	1144.6	1131.3	1100.9	1081.8	1024.9	979.2	958.3
32.5°	1114.2	1108.5	1091.4	1057.2	1045.8	1030.5	992.5	960.2	933.6	882.2	857.5
35°	1041.9	1021.1	984.9	956.4	946.9	920.3	889.8	867.0	838.5	792.9	760.6
37.5°	933.6	912.7	878.4	844.2	844.2	817.6	775.8	753.0	713.0	686.4	659.8
40°	838.5	811.9	777.7	737.8	732.0	694.0	676.9	638.8	614.1	572.3	568.5
42.5°	732.0	707.3	676.9	646.4	623.6	604.6	560.9	532.4	505.8	484.9	479.1
45°	635.0	602.7	576.1	538.1	515.3	492.5	463.9	444.9	424.0	401.2	387.9
47.5°	551.4	524.8	486.7	452.5	429.7	418.3	385.9	365.1	347.9	332.8	323.2
50°	465.9	433.5	412.6	374.5	370.7	344.1	317.6	300.4	290.9	277.6	264.3
52.5°	401.2	370.7	342.2	313.8	298.5	289.0	264.3	247.2	233.9	224.4	216.8
55°	338.4	311.8	289.0	260.5	251.0	237.7	209.2	205.4	192.0	178.7	169.2
57.5°	290.9	266.2	239.6	220.6	203.4	194.0	171.1	155.9	148.3	136.9	127.4
60°	247.2	220.6	199.6	176.8	169.2	155.9	138.8	125.5	116.0	106.4	97.0
62.5°	207.2	184.4	161.6	142.6	131.2	123.6	110.2	98.8	89.4	81.8	74.1
65°	171.1	150.2	131.2	112.2	106.4	97.0	87.5	78.0	70.3	60.9	53.3
67.5°	140.7	121.7	102.6	89.4	83.7	79.9	68.5	58.9	53.3	47.5	39.9
70°	110.2	97.0	81.8	70.3	64.7	58.9	51.3	45.7	38.0	34.2	28.5
72.5°	85.6	74.1	60.9	51.3	47.5	43.7	36.1	30.4	26.6	22.8	19.0
75°	60.9	51.3	43.7	34.2	32.3	30.4	24.7	20.9	17.1	13.3	11.4
77.5°	41.9	34.2	26.6	22.8	20.9	17.1	15.2	11.4	9.5	7.6	5.7
80°	22.8	17.1	13.3	11.4	9.5	7.6	7.6	5.7	3.8	3.8	1.9
82.5°	7.6	5.7	3.8	1.9	1.9	1.9	1.9	1.9	1.9	0.0	1.9
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°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1583.8	1562.9	1568.6	1568.6	1564.8	1564.8	1561.0	1555.3	1557.2	1545.8	1521.1
5°	1566.7	1540.1	1536.3	1540.1	1524.9	1521.1	1513.5	1524.9	1490.6	1504.0	1488.8
7.5°	1517.3	1492.6	1486.8	1500.2	1481.2	1469.7	1467.9	1483.0	1452.7	1437.5	1420.3
10°	1462.1	1452.7	1435.5	1426.0	1420.3	1422.2	1407.0	1388.0	1382.3	1378.5	1363.3
12.5°	1412.7	1391.8	1376.6	1365.2	1361.4	1361.4	1336.7	1332.9	1315.7	1311.9	1289.1
15°	1353.7	1329.1	1319.5	1304.3	1291.0	1298.6	1270.1	1262.5	1256.8	1232.1	1235.9
17.5°	1302.4	1275.8	1253.0	1243.5	1232.1	1220.7	1194.0	1199.8	1186.4	1186.4	1152.2
20°	1235.9	1207.4	1190.2	1171.2	1171.2	1156.0	1137.0	1138.9	1121.8	1104.7	1074.2
22.5°	1165.6	1135.1	1114.2	1106.6	1087.6	1083.8	1061.0	1055.2	1032.4	1034.3	1007.7
25°	1091.4	1061.0	1032.4	1034.3	1017.3	1009.7	996.3	969.7	960.2	948.8	941.2
27.5°	1003.9	983.0	958.3	956.4	924.1	925.9	908.9	901.3	878.4	884.1	867.0
30°	924.1	893.7	870.8	865.1	851.8	848.0	821.4	809.9	813.8	798.5	789.1
32.5°	842.3	796.7	787.1	775.8	768.2	758.6	739.6	747.2	730.1	733.9	718.7
35°	733.9	714.9	690.2	690.2	682.6	675.0	661.7	669.3	652.2	644.6	629.4
37.5°	642.6	625.6	600.8	608.4	595.1	583.7	572.3	574.2	559.0	557.1	541.8
40°	543.8	534.3	517.2	517.2	507.7	507.7	501.9	496.3	486.7	475.3	458.2
42.5°	450.6	443.0	435.4	437.3	424.0	435.4	420.2	429.7	399.3	397.4	385.9
45°	382.1	365.1	366.9	359.3	351.7	355.5	342.2	346.0	329.0	325.2	313.8
47.5°	310.0	304.2	292.8	289.0	289.0	283.3	277.6	275.7	268.1	258.6	243.4
50°	254.8	233.9	230.0	224.4	220.6	220.6	213.0	201.6	203.4	194.0	178.7
52.5°	199.6	182.5	174.9	173.0	165.4	161.6	152.1	144.5	138.8	135.0	125.5
55°	154.0	138.8	129.3	129.3	117.9	117.9	104.6	98.8	91.3	83.7	78.0
57.5°	116.0	108.4	98.8	91.3	87.5	78.0	70.3	60.9	55.1	43.7	36.1
60°	87.5	79.9	70.3	64.7	60.9	51.3	41.9	34.2	20.9	17.1	15.2
62.5°	64.7	57.1	47.5	43.7	39.9	32.3	22.8	11.4	5.7	5.7	5.7
65°	47.5	38.0	30.4	26.6	22.8	17.1	7.6	3.8	1.9	1.9	1.9
67.5°	32.3	24.7	17.1	15.2	11.4	5.7	1.9	1.9	1.9	1.9	1.9
70°	20.9	15.2	7.6	5.7	3.8	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	13.3	7.6	3.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.9	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	1.9	1.9	1.9
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: LD4C35D010 EX4C359030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1547.7	1534.4	1542.0	1524.9	1532.5	1545.8	1536.3	1540.1
5°	1494.4	1486.8	1477.4	1452.7	1471.7	1486.8	1479.2	1477.4
7.5°	1437.5	1410.8	1424.1	1416.5	1412.7	1427.9	1410.8	1429.8
10°	1378.5	1359.5	1357.6	1344.3	1344.3	1355.7	1357.6	1346.1
12.5°	1291.0	1281.5	1281.5	1279.6	1277.7	1289.1	1291.0	1285.3
15°	1228.3	1224.5	1215.0	1213.1	1201.7	1218.8	1220.7	1218.8
17.5°	1152.2	1154.1	1144.6	1144.6	1152.2	1157.9	1142.7	1157.9
20°	1100.9	1091.4	1087.6	1070.4	1080.0	1089.5	1089.5	1091.4
22.5°	1026.7	1011.5	1017.3	1007.7	1002.0	1015.3	1015.3	1021.1
25°	943.1	943.1	946.9	941.2	945.0	952.6	946.9	960.2
27.5°	863.2	870.8	870.8	863.2	867.0	889.8	899.3	884.1
30°	789.1	790.9	796.7	792.9	804.3	811.9	809.9	821.4
32.5°	705.4	714.9	718.7	713.0	716.8	733.9	724.4	722.5
35°	640.8	623.6	621.8	623.6	631.2	635.0	631.2	644.6
37.5°	547.6	541.8	534.3	536.2	541.8	549.5	553.3	562.8
40°	458.2	450.6	450.6	448.7	443.0	463.9	463.9	463.9
42.5°	380.3	378.3	368.9	368.9	376.5	382.1	378.3	391.7
45°	311.8	304.2	298.5	298.5	304.2	304.2	310.0	308.0
47.5°	245.3	237.7	239.6	233.9	239.6	247.2	237.7	239.6
50°	184.4	184.4	180.6	184.4	182.5	184.4	180.6	176.8
52.5°	125.5	142.6	144.5	136.9	119.8	104.6	95.1	102.6
55°	72.3	64.7	64.7	62.7	58.9	57.1	51.3	57.1
57.5°	36.1	32.3	32.3	32.3	30.4	28.5	24.7	24.7
60°	15.2	13.3	13.3	11.4	9.5	7.6	5.7	7.6
62.5°	5.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8
65°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
67.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)