

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

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: 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: -

Luminaire Equipment: Sample No. Condition Description

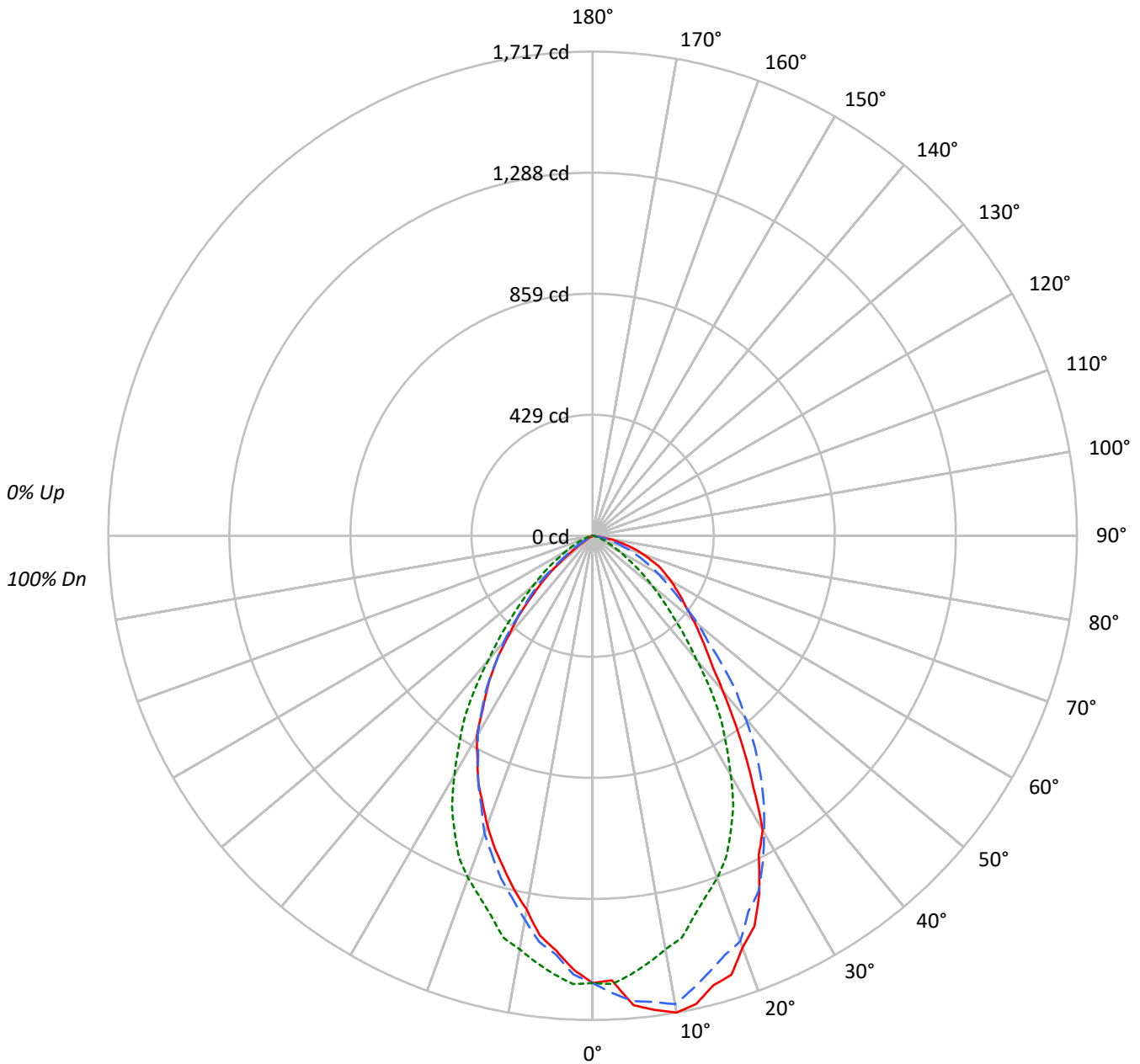
Summary

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									
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°	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)