

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: P880573

Luminaire Tested: **LD4C40D010 EU4409030 4LBDWNH**

Issue Date: 10/4/2024

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: P880573
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C40D010 EU4409030 4LBDWNH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

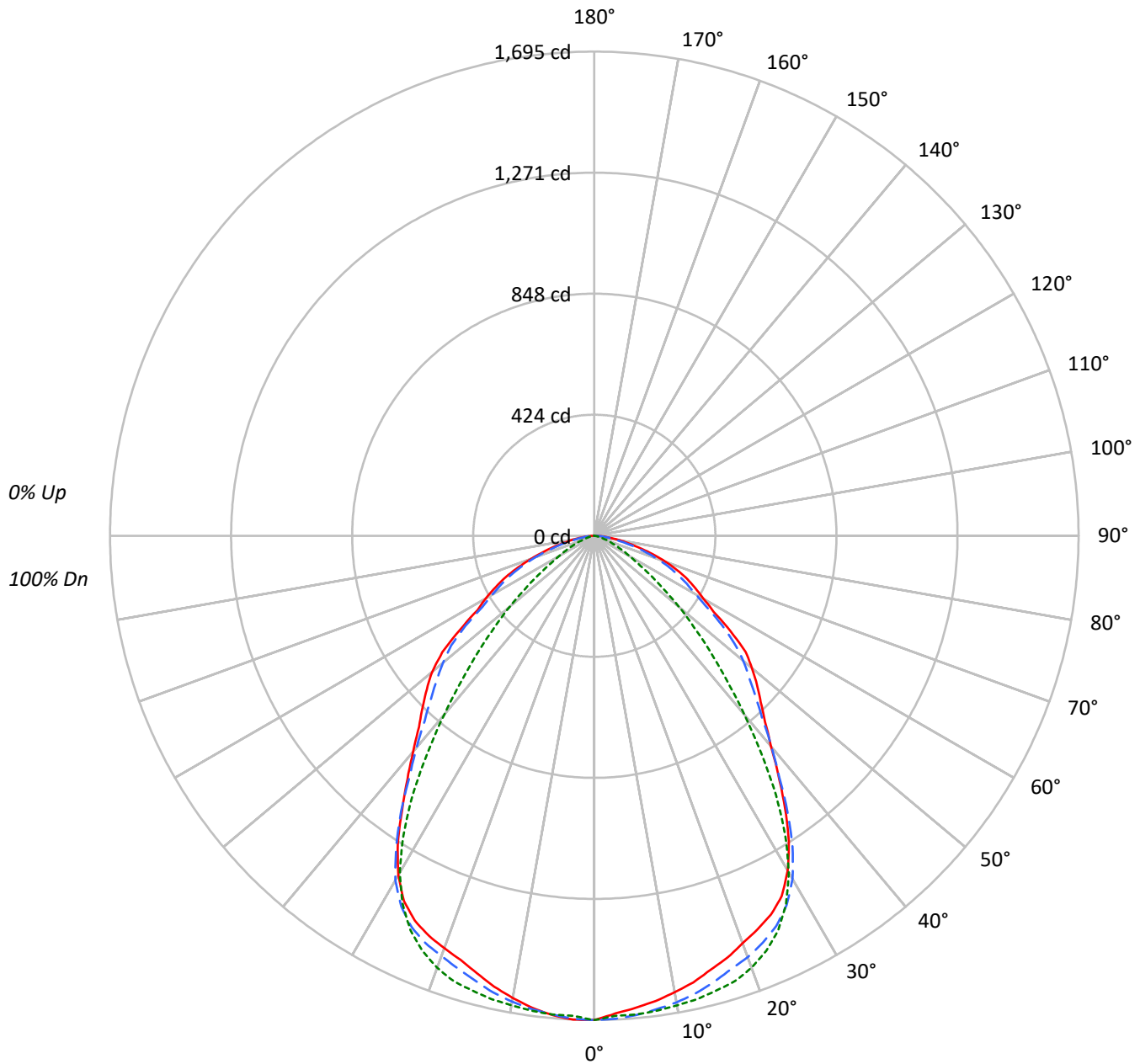
Lumens per Lamp: N/A
Luminaire Lumens: 3450.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
Input Voltage (V): NR
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66		
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58		
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51		
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46		
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41		
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37		
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34		
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	208261	208261	208261
5°	204568	207454	207762
10°	202367	208231	204962
15°	200015	209630	201668
20°	198434	210383	200827
25°	198329	206462	201501
30°	192006	193127	194602
35°	174453	166249	176012
40°	154328	130897	158097
45°	143180	99675	147715
50°	137573	73794	141567
55°	124572	50848	122880
60°	108308	34596	107669
65°	104622	25029	99302
70°	94613	16882	84304
75°	77941	11107	66833
80°	62754	7358	49807
85°	51591	3665	32984



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.0	4.6
10°-20°	457.5	13.3
20°-30°	691.2	20.0
30°-40°	723.4	21.0
40°-50°	585.9	17.0
50°-60°	426.2	12.4
60°-70°	262.8	7.6
70°-80°	118.7	3.4
80°-90°	24.1	0.7
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°	1308.8	37.9
0°-40°	2032.2	58.9
0°-60°	3044.3	88.2
0°-90°	3450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3450.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1695	1695	1695	1695	1695	
5°	1659	1685	1682	1682	1685	157
15°	1573	1617	1648	1612	1586	444
25°	1463	1507	1523	1513	1486	670
35°	1163	1179	1108	1179	1174	725
45°	824	798	574	808	850	641
55°	582	545	237	550	574	519
65°	360	323	86	318	342	352
75°	164	141	23	122	141	178
85°	37	29	3	21	23	42
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°	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2
2.5°	1674.3	1674.3	1690.0	1708.2	1692.6	1676.9	1687.3	1682.2	1700.5	1700.5	1692.6
5°	1658.8	1663.9	1676.9	1692.6	1679.6	1663.9	1676.9	1671.7	1690.0	1690.0	1684.7
7.5°	1643.0	1645.6	1661.3	1679.6	1666.5	1650.9	1661.3	1658.8	1674.3	1676.9	1671.7
10°	1622.2	1624.8	1640.5	1658.8	1645.6	1632.6	1643.0	1640.5	1661.3	1661.3	1658.8
12.5°	1601.3	1603.9	1619.6	1635.2	1622.2	1609.2	1619.6	1619.6	1640.5	1643.0	1640.5
15°	1572.6	1577.8	1590.9	1606.5	1598.8	1583.1	1593.5	1593.5	1611.8	1616.9	1616.9
17.5°	1549.2	1551.8	1564.8	1580.5	1570.1	1556.9	1567.3	1567.3	1585.6	1590.9	1590.9
20°	1517.8	1523.1	1536.1	1551.8	1543.9	1533.5	1541.4	1541.4	1562.2	1567.3	1570.1
22.5°	1491.8	1496.9	1507.3	1528.4	1515.2	1507.3	1517.8	1515.2	1538.8	1541.4	1541.4
25°	1463.1	1468.4	1481.4	1494.4	1486.5	1478.8	1486.5	1486.5	1504.8	1507.3	1507.3
27.5°	1421.4	1423.9	1436.9	1450.1	1442.2	1431.8	1442.2	1439.7	1457.8	1460.5	1457.8
30°	1353.5	1358.8	1364.0	1382.2	1374.4	1366.5	1377.0	1371.8	1390.1	1390.1	1387.4
32.5°	1267.4	1267.4	1278.0	1291.0	1280.6	1275.3	1283.1	1285.7	1298.8	1298.8	1291.0
35°	1163.2	1168.4	1176.1	1184.0	1176.1	1171.0	1178.9	1176.1	1191.9	1186.6	1178.9
37.5°	1058.9	1061.5	1069.3	1079.7	1069.3	1061.5	1064.0	1061.5	1074.5	1074.5	1061.5
40°	962.3	967.6	972.8	983.2	972.8	967.6	970.2	962.3	978.1	972.8	964.9
42.5°	884.1	886.6	894.5	899.8	889.4	886.6	889.4	884.1	891.9	886.6	871.1
45°	824.1	824.1	826.8	834.5	824.1	821.5	821.5	816.2	824.1	813.7	798.1
47.5°	772.0	774.5	777.3	782.4	774.5	766.8	769.4	759.0	764.1	756.2	735.4
50°	719.8	725.0	727.7	732.8	725.0	719.8	722.4	712.0	712.0	699.0	680.7
52.5°	667.7	670.3	667.7	672.8	667.7	659.8	662.4	652.0	652.0	636.4	618.1
55°	581.6	584.1	586.9	592.0	586.9	579.0	584.1	576.4	576.4	565.9	545.0
57.5°	495.4	498.2	500.7	503.3	503.3	498.2	500.7	495.4	492.9	485.0	469.5
60°	440.8	440.8	440.8	443.3	440.8	438.2	438.2	432.9	432.9	422.5	406.9
62.5°	399.1	401.6	401.6	404.2	401.6	399.1	396.5	391.2	388.6	378.2	365.0
65°	359.9	359.9	357.3	362.5	359.9	357.3	357.3	352.1	346.9	336.5	323.3
67.5°	312.9	315.5	312.9	315.5	315.5	312.9	310.4	305.1	302.5	294.6	279.1
70°	263.4	263.4	263.4	266.1	263.4	263.4	266.1	258.2	255.7	245.1	232.1
72.5°	213.8	216.5	216.5	213.8	216.5	211.2	211.2	211.2	208.7	198.2	185.1
75°	164.2	167.0	167.0	169.5	167.0	164.2	164.2	161.7	159.1	151.2	140.8
77.5°	122.5	122.5	125.1	125.1	125.1	122.5	122.5	117.4	117.4	112.1	101.7
80°	88.7	88.7	86.1	88.7	88.7	86.1	86.1	83.4	83.4	78.3	70.4
82.5°	57.4	60.0	60.0	60.0	60.0	57.4	57.4	57.4	54.7	52.1	47.0
85°	36.6	36.6	36.6	36.6	39.1	36.6	39.1	36.6	36.6	31.3	28.7
87.5°	15.7	15.7	15.7	18.3	18.3	15.7	15.7	15.7	15.7	15.7	13.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2
2.5°	1692.6	1695.2	1687.3	1697.7	1690.0	1692.6	1695.2	1692.6	1682.2	1682.2	1710.9
5°	1682.2	1687.3	1679.6	1692.6	1687.3	1687.3	1692.6	1690.0	1679.6	1682.2	1708.2
7.5°	1671.7	1679.6	1674.3	1687.3	1679.6	1679.6	1684.7	1684.7	1674.3	1676.9	1700.5
10°	1656.0	1666.5	1663.9	1676.9	1669.2	1669.2	1676.9	1676.9	1666.5	1669.2	1692.6
12.5°	1643.0	1653.5	1650.9	1663.9	1658.8	1661.3	1663.9	1669.2	1656.0	1661.3	1682.2
15°	1622.2	1632.6	1632.6	1645.6	1640.5	1645.6	1650.9	1658.8	1648.2	1648.2	1669.2
17.5°	1598.8	1611.8	1611.8	1622.2	1622.2	1624.8	1635.2	1643.0	1632.6	1635.2	1653.5
20°	1572.6	1588.3	1588.3	1601.3	1598.8	1603.9	1611.8	1619.6	1609.2	1609.2	1630.0
22.5°	1546.5	1559.6	1562.2	1570.1	1570.1	1572.6	1580.5	1585.6	1572.6	1572.6	1593.5
25°	1510.1	1523.1	1525.6	1530.9	1525.6	1525.6	1530.9	1536.1	1523.1	1523.1	1541.4
27.5°	1460.5	1473.5	1473.5	1470.9	1465.6	1468.4	1465.6	1468.4	1455.2	1452.7	1470.9
30°	1387.4	1395.2	1395.2	1392.7	1384.8	1384.8	1377.0	1379.7	1361.4	1361.4	1377.0
32.5°	1288.4	1296.1	1291.0	1285.7	1275.3	1270.1	1264.8	1262.3	1244.0	1244.0	1262.3
35°	1171.0	1176.1	1168.4	1158.0	1144.9	1137.0	1129.3	1118.9	1105.7	1108.5	1118.9
37.5°	1051.0	1051.0	1040.6	1019.8	1009.3	996.2	983.2	983.2	962.3	959.8	967.6
40°	949.4	938.9	920.6	891.9	873.6	860.7	842.4	831.9	816.2	816.2	829.4
42.5°	858.1	837.2	813.7	774.5	756.2	740.7	717.3	706.8	688.6	685.8	693.7
45°	777.3	756.2	722.4	680.7	657.3	639.0	605.0	592.0	576.4	573.7	579.0
47.5°	712.0	688.6	646.9	592.0	568.6	545.0	511.2	492.9	479.9	472.0	479.9
50°	654.6	623.3	579.0	521.6	490.3	469.5	427.8	409.5	391.2	386.1	388.6
52.5°	592.0	560.7	513.7	453.7	425.0	393.8	354.6	328.6	312.9	305.1	312.9
55°	524.2	492.9	446.0	386.1	354.6	326.1	284.2	263.4	245.1	237.4	245.1
57.5°	451.2	422.5	380.8	320.8	292.1	266.1	227.0	206.1	187.8	182.5	187.8
60°	388.6	365.0	323.3	266.1	242.5	213.8	180.0	159.1	143.4	140.8	143.4
62.5°	346.9	320.8	281.6	227.0	203.4	180.0	148.7	127.8	114.7	112.1	114.7
65°	305.1	276.5	239.9	192.9	169.5	151.2	120.0	101.7	88.7	86.1	88.7
67.5°	258.2	232.1	200.8	159.1	140.8	122.5	96.6	78.3	67.8	65.3	67.8
70°	213.8	190.4	159.1	127.8	109.5	96.6	73.0	60.0	49.6	47.0	49.6
72.5°	169.5	148.7	122.5	96.6	86.1	73.0	57.4	44.3	36.6	33.8	36.6
75°	130.4	114.7	93.8	70.4	62.6	54.7	39.1	31.3	26.1	23.4	26.1
77.5°	91.3	80.8	65.3	52.1	44.3	39.1	28.7	20.9	18.3	15.7	18.3
80°	62.6	54.7	44.3	33.8	28.7	23.4	18.3	13.0	10.4	10.4	10.4
82.5°	41.7	33.8	26.1	20.9	18.3	15.7	10.4	7.9	7.9	5.3	5.3
85°	23.4	20.9	15.7	13.0	10.4	7.9	5.3	5.3	2.6	2.6	2.6
87.5°	10.4	7.9	5.3	5.3	2.6	2.6	2.6	2.6	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°	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2
2.5°	1703.0	1695.2	1705.6	1695.2	1690.0	1695.2	1690.0	1705.6	1692.6	1682.2	1692.6
5°	1700.5	1690.0	1700.5	1692.6	1684.7	1687.3	1682.2	1697.7	1682.2	1674.3	1679.6
7.5°	1695.2	1687.3	1692.6	1684.7	1676.9	1679.6	1674.3	1687.3	1671.7	1663.9	1669.2
10°	1687.3	1679.6	1682.2	1676.9	1669.2	1669.2	1663.9	1674.3	1656.0	1645.6	1650.9
12.5°	1676.9	1666.5	1671.7	1663.9	1653.5	1653.5	1648.2	1656.0	1637.7	1627.3	1630.0
15°	1663.9	1653.5	1653.5	1645.6	1635.2	1635.2	1624.8	1632.6	1611.8	1601.3	1601.3
17.5°	1648.2	1635.2	1635.2	1627.3	1614.3	1611.8	1603.9	1611.8	1588.3	1577.8	1577.8
20°	1624.8	1614.3	1611.8	1606.5	1593.5	1590.9	1580.5	1583.1	1564.8	1556.9	1554.3
22.5°	1593.5	1583.1	1585.6	1577.8	1567.3	1564.8	1554.3	1562.2	1543.9	1536.1	1538.8
25°	1538.8	1533.5	1538.8	1536.1	1528.4	1528.4	1523.1	1528.4	1512.6	1507.3	1510.1
27.5°	1476.1	1473.5	1476.1	1476.1	1470.9	1470.9	1470.9	1478.8	1463.1	1460.5	1460.5
30°	1384.8	1384.8	1387.4	1390.1	1390.1	1395.2	1392.7	1403.1	1392.7	1387.4	1392.7
32.5°	1264.8	1275.3	1283.1	1283.1	1283.1	1288.4	1293.5	1301.4	1291.0	1293.5	1293.5
35°	1129.3	1137.0	1142.3	1155.3	1147.6	1165.7	1171.0	1181.4	1178.9	1184.0	1181.4
37.5°	978.1	988.5	998.9	1017.2	1014.5	1035.3	1045.7	1066.6	1061.5	1071.9	1077.0
40°	837.2	852.8	868.5	881.5	891.9	912.8	933.6	959.8	967.6	975.3	978.1
42.5°	701.5	717.3	743.2	761.5	777.3	811.1	839.8	871.1	878.9	894.5	899.8
45°	592.0	605.0	636.4	659.8	672.8	722.4	756.2	795.4	808.5	826.8	834.5
47.5°	490.3	513.7	545.0	573.7	592.0	644.1	688.6	730.3	748.5	769.4	779.8
50°	401.6	427.8	469.5	495.4	521.6	579.0	628.6	672.8	691.1	714.5	725.0
52.5°	328.6	357.3	396.5	425.0	453.7	513.7	565.9	607.7	631.1	646.9	662.4
55°	258.2	289.5	328.6	359.9	383.3	448.6	492.9	534.6	550.3	563.3	571.2
57.5°	200.8	224.2	263.4	289.5	318.2	375.5	419.9	451.2	464.2	479.9	485.0
60°	156.5	180.0	216.5	242.5	268.7	323.3	367.8	399.1	412.0	425.0	432.9
62.5°	125.1	148.7	182.5	206.1	229.5	279.1	318.2	349.5	365.0	378.2	386.1
65°	99.1	120.0	148.7	172.1	190.4	234.7	273.8	302.5	318.2	331.2	339.1
67.5°	78.3	96.6	122.5	138.3	156.5	192.9	227.0	252.9	266.1	281.6	289.5
70°	60.0	73.0	96.6	109.5	122.5	153.8	180.0	206.1	219.1	229.5	234.7
72.5°	44.3	54.7	73.0	83.4	91.3	117.4	138.3	156.5	167.0	177.4	182.5
75°	31.3	39.1	52.1	60.0	65.3	83.4	101.7	114.7	122.5	130.4	138.3
77.5°	20.9	26.1	33.8	39.1	44.3	57.4	67.8	78.3	86.1	93.8	96.6
80°	13.0	18.3	23.4	26.1	28.7	36.6	47.0	52.1	57.4	62.6	65.3
82.5°	7.9	10.4	13.0	15.7	18.3	23.4	28.7	33.8	36.6	41.7	44.3
85°	2.6	5.3	5.3	7.9	7.9	13.0	15.7	18.3	20.9	23.4	26.1
87.5°	0.0	0.0	2.6	2.6	2.6	2.6	5.3	5.3	5.3	5.3	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: P880573

CATALOG NUMBER: LD4C40D010 EU4409030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2	1695.2
2.5°	1703.0	1695.2	1690.0	1687.3	1705.6	1682.2	1692.6	1695.2
5°	1692.6	1684.7	1679.6	1676.9	1692.6	1671.7	1679.6	1684.7
7.5°	1676.9	1671.7	1663.9	1661.3	1676.9	1653.5	1663.9	1666.5
10°	1658.8	1650.9	1645.6	1643.0	1656.0	1632.6	1643.0	1643.0
12.5°	1635.2	1630.0	1619.6	1619.6	1630.0	1609.2	1616.9	1616.9
15°	1603.9	1598.8	1588.3	1588.3	1598.8	1577.8	1585.6	1585.6
17.5°	1577.8	1572.6	1564.8	1562.2	1572.6	1551.8	1559.6	1556.9
20°	1556.9	1551.8	1541.4	1541.4	1549.2	1528.4	1536.1	1536.1
22.5°	1538.8	1536.1	1525.6	1525.6	1536.1	1515.2	1520.5	1515.2
25°	1510.1	1507.3	1496.9	1499.7	1504.8	1483.9	1491.8	1486.5
27.5°	1463.1	1463.1	1452.7	1450.1	1457.8	1439.7	1444.8	1442.2
30°	1390.1	1392.7	1379.7	1379.7	1382.2	1366.5	1374.4	1371.8
32.5°	1291.0	1293.5	1283.1	1280.6	1288.4	1275.3	1280.6	1280.6
35°	1181.4	1184.0	1176.1	1176.1	1184.0	1176.1	1176.1	1173.6
37.5°	1071.9	1077.0	1071.9	1074.5	1079.7	1071.9	1077.0	1074.5
40°	983.2	988.5	980.6	985.8	991.1	983.2	991.1	985.8
42.5°	902.4	910.2	904.9	910.2	915.3	910.2	915.3	907.6
45°	842.4	847.7	844.9	847.7	852.8	850.2	852.8	850.2
47.5°	785.0	795.4	790.2	795.4	803.2	798.1	803.2	795.4
50°	732.8	740.7	738.1	743.2	745.8	743.2	748.5	740.7
52.5°	665.0	672.8	670.3	670.3	675.4	670.3	675.4	670.3
55°	576.4	579.0	579.0	581.6	579.0	576.4	579.0	573.7
57.5°	490.3	495.4	487.7	495.4	492.9	490.3	490.3	485.0
60°	435.5	443.3	438.2	443.3	440.8	440.8	440.8	438.2
62.5°	391.2	396.5	391.2	393.8	393.8	393.8	391.2	388.6
65°	341.6	349.5	344.2	346.9	344.2	341.6	344.2	341.6
67.5°	292.1	294.6	294.6	292.1	292.1	292.1	292.1	286.9
70°	237.4	239.9	237.4	242.5	239.9	237.4	239.9	234.7
72.5°	185.1	187.8	185.1	187.8	185.1	185.1	185.1	185.1
75°	138.3	140.8	140.8	140.8	140.8	140.8	135.7	140.8
77.5°	99.1	99.1	99.1	101.7	99.1	99.1	99.1	99.1
80°	67.8	67.8	67.8	70.4	67.8	70.4	67.8	70.4
82.5°	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
85°	23.4	26.1	26.1	23.4	23.4	23.4	23.4	23.4
87.5°	5.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)