

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: P880575

Luminaire Tested: **LD4C40D010 EU4409040 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: P880575
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 EU4409040 4LBDWNH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

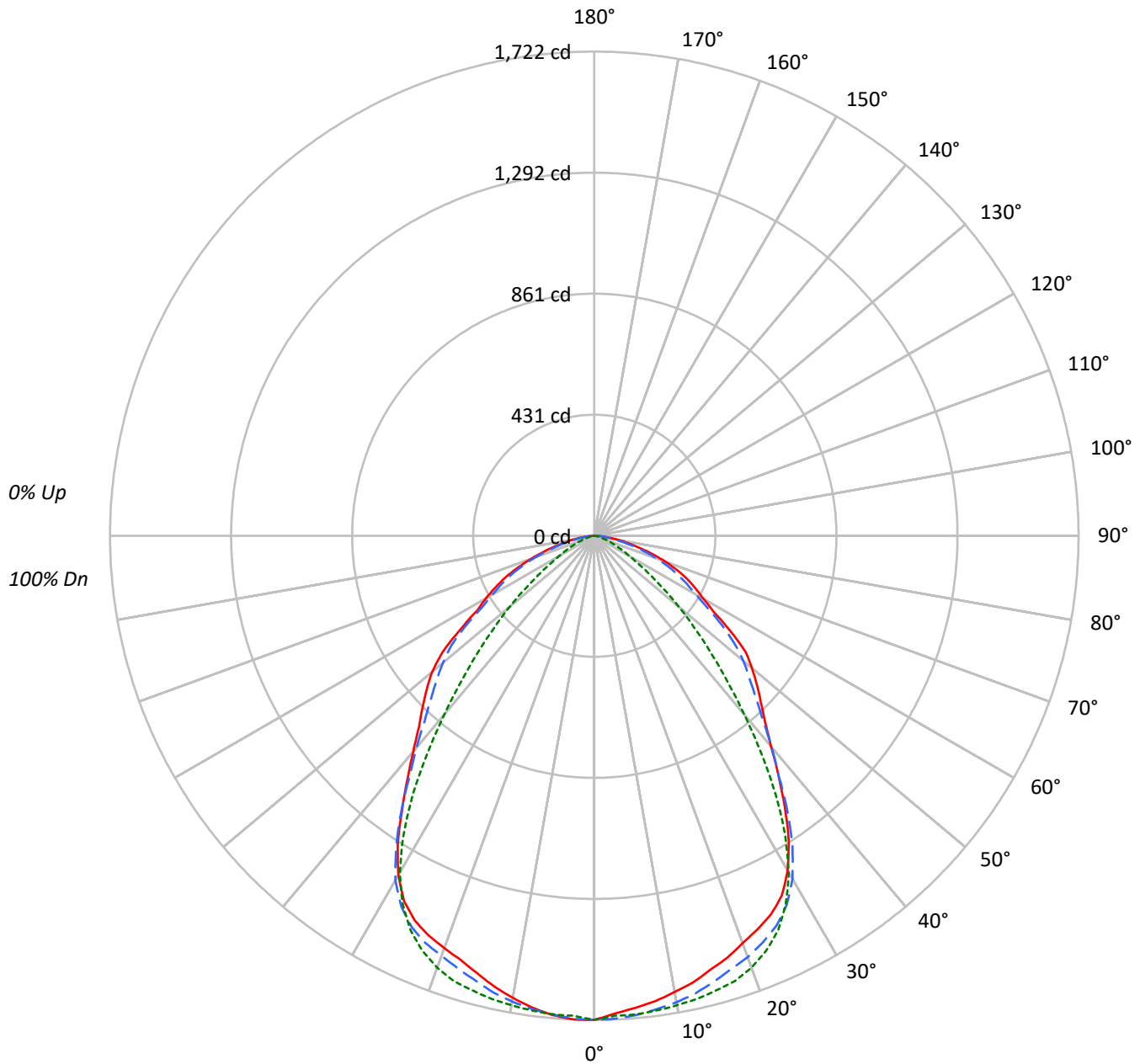
Lumens per Lamp: N/A
Luminaire Lumens: 3504.0 lumens
Efficiency: N/A
Efficacy: 74.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	211517	211517	211517
5°	207762	210697	211018
10°	205536	211486	208181
15°	203144	212912	204822
20°	201533	213678	203964
25°	201433	209688	204659
30°	195014	196148	197652
35°	177182	168843	178757
40°	156749	132950	160566
45°	145421	101239	150025
50°	139732	74941	143784
55°	126521	51641	124808
60°	110003	35136	109340
65°	106249	25436	100872
70°	96086	17134	85597
75°	79175	11297	67878
80°	63744	7499	50585
85°	52296	3665	33548



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.5	4.6
10°-20°	464.7	13.3
20°-30°	702.1	20.0
30°-40°	734.7	21.0
40°-50°	595.1	17.0
50°-60°	432.8	12.4
60°-70°	266.9	7.6
70°-80°	120.6	3.4
80°-90°	24.5	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°	1329.3	37.9
0°-40°	2064.0	58.9
0°-60°	3091.9	88.2
0°-90°	3504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3504.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1722	1722	1722	1722	1722	
5°	1685	1711	1708	1708	1711	160
15°	1597	1642	1674	1637	1610	451
25°	1486	1531	1547	1536	1510	681
35°	1181	1197	1126	1197	1192	736
45°	837	811	583	821	864	651
55°	591	554	241	559	583	527
65°	366	328	88	323	347	358
75°	167	143	24	124	143	181
85°	37	29	3	21	24	43
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°	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7
2.5°	1700.5	1700.5	1716.5	1734.9	1719.1	1703.1	1713.7	1708.5	1727.1	1727.1	1719.1
5°	1684.7	1689.9	1703.1	1719.1	1705.9	1689.9	1703.1	1697.9	1716.5	1716.5	1711.1
7.5°	1668.8	1671.4	1687.3	1705.9	1692.5	1676.7	1687.3	1684.7	1700.5	1703.1	1697.9
10°	1647.6	1650.2	1666.2	1684.7	1671.4	1658.2	1668.8	1666.2	1687.3	1687.3	1684.7
12.5°	1626.4	1629.0	1645.0	1660.8	1647.6	1634.4	1645.0	1645.0	1666.2	1668.8	1666.2
15°	1597.2	1602.5	1615.8	1631.6	1623.8	1607.8	1618.4	1618.4	1637.0	1642.2	1642.2
17.5°	1573.5	1576.1	1589.3	1605.2	1594.6	1581.3	1591.9	1591.9	1610.4	1615.8	1615.8
20°	1541.5	1546.9	1560.1	1576.1	1568.1	1557.5	1565.5	1565.5	1586.7	1591.9	1594.6
22.5°	1515.1	1520.4	1530.9	1552.3	1538.9	1530.9	1541.5	1538.9	1562.9	1565.5	1565.5
25°	1486.0	1491.4	1504.6	1517.7	1509.8	1501.9	1509.8	1509.8	1528.3	1530.9	1530.9
27.5°	1443.6	1446.2	1459.4	1472.8	1464.8	1454.2	1464.8	1462.2	1480.6	1483.4	1480.6
30°	1374.7	1380.1	1385.3	1403.9	1395.9	1387.9	1398.5	1393.3	1411.9	1411.9	1409.1
32.5°	1287.2	1287.2	1298.0	1311.2	1300.6	1295.2	1303.2	1305.8	1319.2	1319.2	1311.2
35°	1181.4	1186.7	1194.6	1202.5	1194.6	1189.3	1197.3	1194.6	1210.5	1205.1	1197.3
37.5°	1075.5	1078.1	1086.1	1096.6	1086.1	1078.1	1080.7	1078.1	1091.3	1091.3	1078.1
40°	977.4	982.8	988.0	998.6	988.0	982.8	985.4	977.4	993.4	988.0	980.0
42.5°	897.9	900.5	908.5	913.9	903.3	900.5	903.3	897.9	905.9	900.5	884.7
45°	837.0	837.0	839.8	847.6	837.0	834.4	834.4	829.0	837.0	826.4	810.6
47.5°	784.0	786.6	789.4	794.6	786.6	778.8	781.4	770.8	776.1	768.1	746.9
50°	731.1	736.3	739.1	744.3	736.3	731.1	733.7	723.1	723.1	709.9	691.4
52.5°	678.2	680.8	678.2	683.4	678.2	670.2	672.8	662.2	662.2	646.4	627.8
55°	590.7	593.3	596.1	601.3	596.1	588.1	593.3	585.5	585.5	574.7	553.5
57.5°	503.2	506.0	508.6	511.2	511.2	506.0	508.6	503.2	500.6	492.6	476.8
60°	447.7	447.7	447.7	450.3	447.7	445.0	445.0	439.7	439.7	429.1	413.3
62.5°	405.3	407.9	407.9	410.5	407.9	405.3	402.7	397.3	394.7	384.1	370.8
65°	365.5	365.5	362.9	368.2	365.5	362.9	362.9	357.6	352.4	341.8	328.4
67.5°	317.8	320.4	317.8	320.4	320.4	317.8	315.2	309.8	307.2	299.2	283.4
70°	267.5	267.5	267.5	270.3	267.5	267.5	270.3	262.3	259.7	248.9	235.7
72.5°	217.1	219.9	219.9	217.1	219.9	214.5	214.5	214.5	211.9	201.3	188.0
75°	166.8	169.6	169.6	172.2	169.6	166.8	166.8	164.2	161.6	153.6	143.0
77.5°	124.5	124.5	127.1	127.1	127.1	124.5	124.5	119.2	119.2	113.9	103.3
80°	90.1	90.1	87.5	90.1	90.1	87.5	87.5	84.7	84.7	79.5	71.5
82.5°	58.3	60.9	60.9	60.9	60.9	58.3	58.3	58.3	55.5	52.9	47.7
85°	37.1	37.1	37.1	37.1	39.7	37.1	39.7	37.1	37.1	31.8	29.2
87.5°	16.0	16.0	16.0	18.6	18.6	16.0	16.0	16.0	16.0	16.0	13.2
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°	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7
2.5°	1719.1	1721.7	1713.7	1724.3	1716.5	1719.1	1721.7	1719.1	1708.5	1708.5	1737.7
5°	1708.5	1713.7	1705.9	1719.1	1713.7	1713.7	1719.1	1716.5	1705.9	1708.5	1734.9
7.5°	1697.9	1705.9	1700.5	1713.7	1705.9	1705.9	1711.1	1711.1	1700.5	1703.1	1727.1
10°	1682.0	1692.5	1689.9	1703.1	1695.3	1695.3	1703.1	1703.1	1692.5	1695.3	1719.1
12.5°	1668.8	1679.3	1676.7	1689.9	1684.7	1687.3	1689.9	1695.3	1682.0	1687.3	1708.5
15°	1647.6	1658.2	1658.2	1671.4	1666.2	1671.4	1676.7	1684.7	1674.0	1674.0	1695.3
17.5°	1623.8	1637.0	1637.0	1647.6	1647.6	1650.2	1660.8	1668.8	1658.2	1660.8	1679.3
20°	1597.2	1613.2	1613.2	1626.4	1623.8	1629.0	1637.0	1645.0	1634.4	1634.4	1655.6
22.5°	1570.7	1584.0	1586.7	1594.6	1594.6	1597.2	1605.2	1610.4	1597.2	1597.2	1618.4
25°	1533.7	1546.9	1549.5	1554.9	1549.5	1549.5	1554.9	1560.1	1546.9	1546.9	1565.5
27.5°	1483.4	1496.6	1496.6	1494.0	1488.6	1491.4	1488.6	1491.4	1478.0	1475.4	1494.0
30°	1409.1	1417.1	1417.1	1414.5	1406.5	1406.5	1398.5	1401.3	1382.7	1382.7	1398.5
32.5°	1308.6	1316.4	1311.2	1305.8	1295.2	1290.0	1284.6	1282.0	1263.5	1263.5	1282.0
35°	1189.3	1194.6	1186.7	1176.1	1162.8	1154.8	1147.0	1136.4	1123.0	1125.8	1136.4
37.5°	1067.5	1067.5	1056.9	1035.7	1025.1	1011.8	998.6	998.6	977.4	974.8	982.8
40°	964.2	953.6	935.1	905.9	887.3	874.1	855.6	845.0	829.0	829.0	842.4
42.5°	871.5	850.3	826.4	786.6	768.1	752.3	728.5	717.9	699.3	696.6	704.5
45°	789.4	768.1	733.7	691.4	667.6	649.0	614.5	601.3	585.5	582.7	588.1
47.5°	723.1	699.3	657.0	601.3	577.5	553.5	519.2	500.6	487.4	479.4	487.4
50°	664.8	633.0	588.1	529.8	498.0	476.8	434.5	415.9	397.3	392.1	394.7
52.5°	601.3	569.5	521.8	460.8	431.7	399.9	360.2	333.8	317.8	309.8	317.8
55°	532.4	500.6	453.0	392.1	360.2	331.2	288.7	267.5	248.9	241.1	248.9
57.5°	458.2	429.1	386.7	325.8	296.6	270.3	230.5	209.3	190.8	185.4	190.8
60°	394.7	370.8	328.4	270.3	246.3	217.1	182.8	161.6	145.6	143.0	145.6
62.5°	352.4	325.8	286.1	230.5	206.6	182.8	151.0	129.8	116.5	113.9	116.5
65°	309.8	280.8	243.7	196.0	172.2	153.6	121.8	103.3	90.1	87.5	90.1
67.5°	262.3	235.7	204.0	161.6	143.0	124.5	98.1	79.5	68.9	66.3	68.9
70°	217.1	193.4	161.6	129.8	111.3	98.1	74.1	60.9	50.3	47.7	50.3
72.5°	172.2	151.0	124.5	98.1	87.5	74.1	58.3	45.0	37.1	34.4	37.1
75°	132.4	116.5	95.3	71.5	63.5	55.5	39.7	31.8	26.6	23.8	26.6
77.5°	92.7	82.1	66.3	52.9	45.0	39.7	29.2	21.2	18.6	16.0	18.6
80°	63.5	55.5	45.0	34.4	29.2	23.8	18.6	13.2	10.6	10.6	10.6
82.5°	42.4	34.4	26.6	21.2	18.6	16.0	10.6	8.0	8.0	5.4	5.4
85°	23.8	21.2	16.0	13.2	10.6	8.0	5.4	5.4	2.6	2.6	2.6
87.5°	10.6	8.0	5.4	5.4	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°	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7
2.5°	1729.7	1721.7	1732.3	1721.7	1716.5	1721.7	1716.5	1732.3	1719.1	1708.5	1719.1
5°	1727.1	1716.5	1727.1	1719.1	1711.1	1713.7	1708.5	1724.3	1708.5	1700.5	1705.9
7.5°	1721.7	1713.7	1719.1	1711.1	1703.1	1705.9	1700.5	1713.7	1697.9	1689.9	1695.3
10°	1713.7	1705.9	1708.5	1703.1	1695.3	1695.3	1689.9	1700.5	1682.0	1671.4	1676.7
12.5°	1703.1	1692.5	1697.9	1689.9	1679.3	1679.3	1674.0	1682.0	1663.4	1652.8	1655.6
15°	1689.9	1679.3	1679.3	1671.4	1660.8	1660.8	1650.2	1658.2	1637.0	1626.4	1626.4
17.5°	1674.0	1660.8	1660.8	1652.8	1639.6	1637.0	1629.0	1637.0	1613.2	1602.5	1602.5
20°	1650.2	1639.6	1637.0	1631.6	1618.4	1615.8	1605.2	1607.8	1589.3	1581.3	1578.7
22.5°	1618.4	1607.8	1610.4	1602.5	1591.9	1589.3	1578.7	1586.7	1568.1	1560.1	1562.9
25°	1562.9	1557.5	1562.9	1560.1	1552.3	1552.3	1546.9	1552.3	1536.3	1530.9	1533.7
27.5°	1499.2	1496.6	1499.2	1499.2	1494.0	1494.0	1494.0	1501.9	1486.0	1483.4	1483.4
30°	1406.5	1406.5	1409.1	1411.9	1411.9	1417.1	1414.5	1425.1	1414.5	1409.1	1414.5
32.5°	1284.6	1295.2	1303.2	1303.2	1303.2	1308.6	1313.8	1321.8	1311.2	1313.8	1313.8
35°	1147.0	1154.8	1160.2	1173.4	1165.6	1184.0	1189.3	1199.9	1197.3	1202.5	1199.9
37.5°	993.4	1004.0	1014.5	1033.1	1030.3	1051.5	1062.1	1083.3	1078.1	1088.7	1093.9
40°	850.3	866.1	882.1	895.3	905.9	927.1	948.2	974.8	982.8	990.6	993.4
42.5°	712.5	728.5	754.9	773.5	789.4	823.8	852.9	884.7	892.7	908.5	913.9
45°	601.3	614.5	646.4	670.2	683.4	733.7	768.1	807.8	821.2	839.8	847.6
47.5°	498.0	521.8	553.5	582.7	601.3	654.2	699.3	741.7	760.3	781.4	792.0
50°	407.9	434.5	476.8	503.2	529.8	588.1	638.4	683.4	701.9	725.7	736.3
52.5°	333.8	362.9	402.7	431.7	460.8	521.8	574.7	617.2	641.0	657.0	672.8
55°	262.3	294.0	333.8	365.5	389.3	455.6	500.6	542.9	558.9	572.1	580.1
57.5°	204.0	227.7	267.5	294.0	323.2	381.4	426.5	458.2	471.4	487.4	492.6
60°	159.0	182.8	219.9	246.3	272.9	328.4	373.5	405.3	418.5	431.7	439.7
62.5°	127.1	151.0	185.4	209.3	233.1	283.4	323.2	355.0	370.8	384.1	392.1
65°	100.7	121.8	151.0	174.8	193.4	238.3	278.1	307.2	323.2	336.4	344.4
67.5°	79.5	98.1	124.5	140.4	159.0	196.0	230.5	256.9	270.3	286.1	294.0
70°	60.9	74.1	98.1	111.3	124.5	156.2	182.8	209.3	222.5	233.1	238.3
72.5°	45.0	55.5	74.1	84.7	92.7	119.2	140.4	159.0	169.6	180.2	185.4
75°	31.8	39.7	52.9	60.9	66.3	84.7	103.3	116.5	124.5	132.4	140.4
77.5°	21.2	26.6	34.4	39.7	45.0	58.3	68.9	79.5	87.5	95.3	98.1
80°	13.2	18.6	23.8	26.6	29.2	37.1	47.7	52.9	58.3	63.5	66.3
82.5°	8.0	10.6	13.2	16.0	18.6	23.8	29.2	34.4	37.1	42.4	45.0
85°	2.6	5.4	5.4	8.0	8.0	13.2	16.0	18.6	21.2	23.8	26.6
87.5°	0.0	0.0	2.6	2.6	2.6	2.6	5.4	5.4	5.4	5.4	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: P880575

CATALOG NUMBER: LD4C40D010 EU4409040 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7	1721.7
2.5°	1729.7	1721.7	1716.5	1713.7	1732.3	1708.5	1719.1	1721.7
5°	1719.1	1711.1	1705.9	1703.1	1719.1	1697.9	1705.9	1711.1
7.5°	1703.1	1697.9	1689.9	1687.3	1703.1	1679.3	1689.9	1692.5
10°	1684.7	1676.7	1671.4	1668.8	1682.0	1658.2	1668.8	1668.8
12.5°	1660.8	1655.6	1645.0	1645.0	1655.6	1634.4	1642.2	1642.2
15°	1629.0	1623.8	1613.2	1613.2	1623.8	1602.5	1610.4	1610.4
17.5°	1602.5	1597.2	1589.3	1586.7	1597.2	1576.1	1584.0	1581.3
20°	1581.3	1576.1	1565.5	1565.5	1573.5	1552.3	1560.1	1560.1
22.5°	1562.9	1560.1	1549.5	1549.5	1560.1	1538.9	1544.3	1538.9
25°	1533.7	1530.9	1520.4	1523.1	1528.3	1507.2	1515.1	1509.8
27.5°	1486.0	1486.0	1475.4	1472.8	1480.6	1462.2	1467.4	1464.8
30°	1411.9	1414.5	1401.3	1401.3	1403.9	1387.9	1395.9	1393.3
32.5°	1311.2	1313.8	1303.2	1300.6	1308.6	1295.2	1300.6	1300.6
35°	1199.9	1202.5	1194.6	1194.6	1202.5	1194.6	1194.6	1191.9
37.5°	1088.7	1093.9	1088.7	1091.3	1096.6	1088.7	1093.9	1091.3
40°	998.6	1004.0	996.0	1001.2	1006.6	998.6	1006.6	1001.2
42.5°	916.5	924.5	919.1	924.5	929.7	924.5	929.7	921.9
45°	855.6	860.9	858.2	860.9	866.1	863.5	866.1	863.5
47.5°	797.2	807.8	802.6	807.8	815.8	810.6	815.8	807.8
50°	744.3	752.3	749.7	754.9	757.5	754.9	760.3	752.3
52.5°	675.4	683.4	680.8	680.8	686.0	680.8	686.0	680.8
55°	585.5	588.1	588.1	590.7	588.1	585.5	588.1	582.7
57.5°	498.0	503.2	495.4	503.2	500.6	498.0	498.0	492.6
60°	442.3	450.3	445.0	450.3	447.7	447.7	447.7	445.0
62.5°	397.3	402.7	397.3	399.9	399.9	399.9	397.3	394.7
65°	347.0	355.0	349.6	352.4	349.6	347.0	349.6	347.0
67.5°	296.6	299.2	299.2	296.6	296.6	296.6	296.6	291.4
70°	241.1	243.7	241.1	246.3	243.7	241.1	243.7	238.3
72.5°	188.0	190.8	188.0	190.8	188.0	188.0	188.0	188.0
75°	140.4	143.0	143.0	143.0	143.0	143.0	137.8	143.0
77.5°	100.7	100.7	100.7	103.3	100.7	100.7	100.7	100.7
80°	68.9	68.9	68.9	71.5	68.9	71.5	68.9	71.5
82.5°	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
85°	23.8	26.6	26.6	23.8	23.8	23.8	23.8	23.8
87.5°	5.4	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)