

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: P880572

Luminaire Tested: **LD4C40D010 EU4409027 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: P880572
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 EU4409027 4LBDWNH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

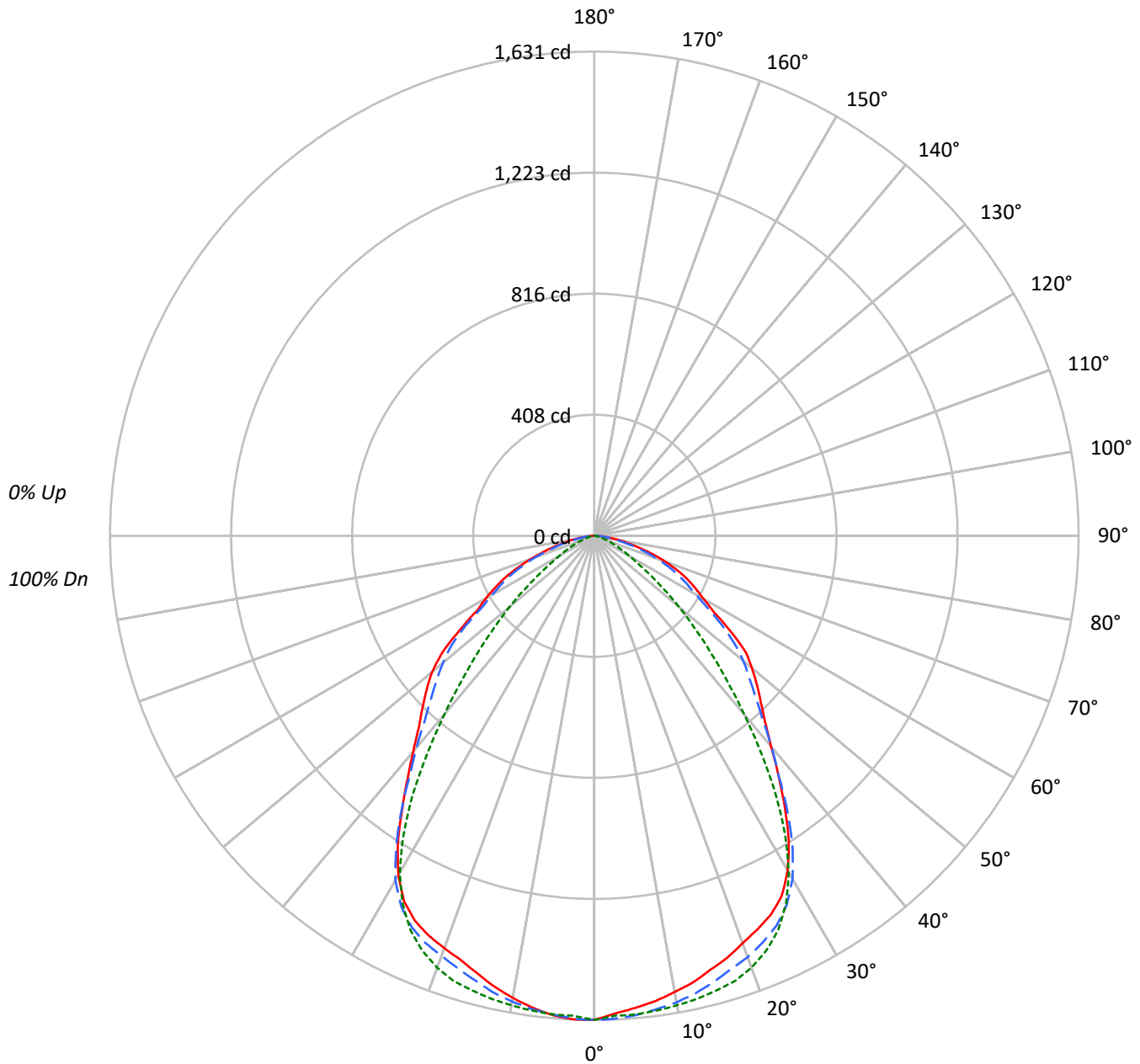
Lumens per Lamp: N/A
Luminaire Lumens: 3319.0 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	200349	200349	200349
5°	196798	199573	199882
10°	194683	200321	197190
15°	192422	201668	194011
20°	190890	202395	193191
25°	190792	198613	193856
30°	184715	185793	187211
35°	167824	159935	169323
40°	148474	125926	152082
45°	137742	95888	142103
50°	132355	70984	136196
55°	119838	48921	118211
60°	104180	33293	103565
65°	100639	24099	95552
70°	91021	16236	81071
75°	74998	10680	64318
80°	60348	7075	47897
85°	49617	3524	31716



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.9	4.6
10°-20°	440.2	13.3
20°-30°	665.0	20.0
30°-40°	695.9	21.0
40°-50°	563.6	17.0
50°-60°	410.0	12.4
60°-70°	252.9	7.6
70°-80°	114.2	3.4
80°-90°	23.2	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°	1259.1	37.9
0°-40°	1955.1	58.9
0°-60°	2928.7	88.2
0°-90°	3319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3319.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1631	1631	1631	1631	1631	
5°	1596	1621	1618	1618	1621	151
15°	1513	1556	1586	1551	1525	428
25°	1408	1450	1465	1455	1430	645
35°	1119	1134	1066	1134	1129	697
45°	793	768	552	778	818	616
55°	560	524	228	529	552	499
65°	346	311	83	306	329	339
75°	158	136	22	118	136	171
85°	35	28	2	20	22	40
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°	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8
2.5°	1610.7	1610.7	1625.9	1643.3	1628.3	1613.2	1623.2	1618.3	1635.9	1635.9	1628.3
5°	1595.8	1600.7	1613.2	1628.3	1615.8	1600.7	1613.2	1608.3	1625.9	1625.9	1620.8
7.5°	1580.7	1583.1	1598.2	1615.8	1603.2	1588.2	1598.2	1595.8	1610.7	1613.2	1608.3
10°	1560.6	1563.1	1578.2	1595.8	1583.1	1570.6	1580.7	1578.2	1598.2	1598.2	1595.8
12.5°	1540.5	1543.0	1558.1	1573.1	1560.6	1548.1	1558.1	1558.1	1578.2	1580.7	1578.2
15°	1512.9	1517.9	1530.5	1545.5	1538.1	1522.9	1533.0	1533.0	1550.6	1555.5	1555.5
17.5°	1490.4	1492.9	1505.4	1520.5	1510.4	1497.8	1507.8	1507.8	1525.4	1530.5	1530.5
20°	1460.1	1465.2	1477.7	1492.9	1485.3	1475.3	1482.8	1482.8	1502.9	1507.8	1510.4
22.5°	1435.1	1440.1	1450.1	1470.3	1457.7	1450.1	1460.1	1457.7	1480.4	1482.8	1482.8
25°	1407.5	1412.6	1425.1	1437.6	1430.1	1422.6	1430.1	1430.1	1447.6	1450.1	1450.1
27.5°	1367.4	1369.9	1382.4	1395.0	1387.5	1377.4	1387.5	1385.0	1402.4	1405.1	1402.4
30°	1302.1	1307.2	1312.2	1329.8	1322.2	1314.6	1324.7	1319.7	1337.3	1337.3	1334.7
32.5°	1219.3	1219.3	1229.5	1242.0	1231.9	1226.8	1234.4	1236.9	1249.5	1249.5	1242.0
35°	1119.0	1124.1	1131.5	1139.0	1131.5	1126.5	1134.1	1131.5	1146.6	1141.5	1134.1
37.5°	1018.7	1021.2	1028.7	1038.7	1028.7	1021.2	1023.6	1021.2	1033.7	1033.7	1021.2
40°	925.8	930.9	935.8	945.9	935.8	930.9	933.4	925.8	940.9	935.8	928.3
42.5°	850.5	853.0	860.5	865.6	855.6	853.0	855.6	850.5	858.1	853.0	838.0
45°	792.8	792.8	795.4	802.8	792.8	790.3	790.3	785.2	792.8	782.8	767.8
47.5°	742.6	745.1	747.7	752.7	745.1	737.7	740.2	730.1	735.1	727.5	707.5
50°	692.5	697.4	700.1	705.0	697.4	692.5	695.0	684.9	684.9	672.4	654.9
52.5°	642.4	644.8	642.4	647.3	642.4	634.8	637.3	627.2	627.2	612.3	594.7
55°	559.5	562.0	564.6	569.5	564.6	557.0	562.0	554.6	554.6	544.4	524.3
57.5°	476.6	479.3	481.7	484.2	484.2	479.3	481.7	476.6	474.2	466.6	451.6
60°	424.0	424.0	424.0	426.5	424.0	421.5	421.5	416.5	416.5	406.4	391.5
62.5°	383.9	386.4	386.4	388.8	386.4	383.9	381.4	376.3	373.9	363.8	351.2
65°	346.2	346.2	343.8	348.7	346.2	343.8	343.8	338.7	333.8	323.7	311.1
67.5°	301.0	303.5	301.0	303.5	303.5	301.0	298.6	293.5	291.0	283.4	268.5
70°	253.4	253.4	253.4	256.0	253.4	253.4	256.0	248.4	246.0	235.8	223.3
72.5°	205.7	208.3	208.3	205.7	208.3	203.2	203.2	203.2	200.7	190.7	178.1
75°	158.0	160.6	160.6	163.1	160.6	158.0	158.0	155.5	153.1	145.5	135.5
77.5°	117.9	117.9	120.4	120.4	120.4	117.9	117.9	112.9	112.9	107.9	97.8
80°	85.3	85.3	82.9	85.3	85.3	82.9	82.9	80.2	80.2	75.3	67.7
82.5°	55.2	57.7	57.7	57.7	57.7	55.2	55.2	55.2	52.6	50.1	45.2
85°	35.2	35.2	35.2	35.2	37.6	35.2	37.6	35.2	35.2	30.1	27.6
87.5°	15.1	15.1	15.1	17.6	17.6	15.1	15.1	15.1	15.1	15.1	12.5
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°	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8
2.5°	1628.3	1630.8	1623.2	1633.3	1625.9	1628.3	1630.8	1628.3	1618.3	1618.3	1645.9
5°	1618.3	1623.2	1615.8	1628.3	1623.2	1623.2	1628.3	1625.9	1615.8	1618.3	1643.3
7.5°	1608.3	1615.8	1610.7	1623.2	1615.8	1615.8	1620.8	1620.8	1610.7	1613.2	1635.9
10°	1593.2	1603.2	1600.7	1613.2	1605.8	1605.8	1613.2	1613.2	1603.2	1605.8	1628.3
12.5°	1580.7	1590.7	1588.2	1600.7	1595.8	1598.2	1600.7	1605.8	1593.2	1598.2	1618.3
15°	1560.6	1570.6	1570.6	1583.1	1578.2	1583.1	1588.2	1595.8	1585.6	1585.6	1605.8
17.5°	1538.1	1550.6	1550.6	1560.6	1560.6	1563.1	1573.1	1580.7	1570.6	1573.1	1590.7
20°	1512.9	1528.0	1528.0	1540.5	1538.1	1543.0	1550.6	1558.1	1548.1	1548.1	1568.2
22.5°	1487.8	1500.4	1502.9	1510.4	1510.4	1512.9	1520.5	1525.4	1512.9	1512.9	1533.0
25°	1452.7	1465.2	1467.7	1472.8	1467.7	1467.7	1472.8	1477.7	1465.2	1465.2	1482.8
27.5°	1405.1	1417.6	1417.6	1415.1	1410.0	1412.6	1410.0	1412.6	1400.0	1397.5	1415.1
30°	1334.7	1342.3	1342.3	1339.8	1332.2	1332.2	1324.7	1327.3	1309.7	1309.7	1324.7
32.5°	1239.5	1246.9	1242.0	1236.9	1226.8	1221.9	1216.8	1214.3	1196.8	1196.8	1214.3
35°	1126.5	1131.5	1124.1	1114.0	1101.4	1093.8	1086.4	1076.4	1063.7	1066.4	1076.4
37.5°	1011.1	1011.1	1001.1	981.0	971.0	958.4	945.9	945.9	925.8	923.3	930.9
40°	913.3	903.3	885.7	858.1	840.5	828.0	810.4	800.4	785.2	785.2	797.9
42.5°	825.5	805.4	782.8	745.1	727.5	712.6	690.0	680.0	662.4	659.8	667.3
45°	747.7	727.5	695.0	654.9	632.3	614.7	582.0	569.5	554.6	551.9	557.0
47.5°	684.9	662.4	622.3	569.5	547.0	524.3	491.8	474.2	461.7	454.1	461.7
50°	629.7	599.6	557.0	501.8	471.7	451.6	411.5	393.9	376.3	371.4	373.9
52.5°	569.5	539.4	494.2	436.5	408.9	378.8	341.2	316.2	301.0	293.5	301.0
55°	504.3	474.2	429.1	371.4	341.2	313.7	273.4	253.4	235.8	228.4	235.8
57.5°	434.0	406.4	366.3	308.6	281.0	256.0	218.3	198.3	180.7	175.6	180.7
60°	373.9	351.2	311.1	256.0	233.3	205.7	173.1	153.1	137.9	135.5	137.9
62.5°	333.8	308.6	271.0	218.3	195.7	173.1	143.0	123.0	110.3	107.9	110.3
65°	293.5	266.0	230.8	185.6	163.1	145.5	115.4	97.8	85.3	82.9	85.3
67.5°	248.4	223.3	193.2	153.1	135.5	117.9	92.9	75.3	65.3	62.8	65.3
70°	205.7	183.2	153.1	123.0	105.4	92.9	70.2	57.7	47.7	45.2	47.7
72.5°	163.1	143.0	117.9	92.9	82.9	70.2	55.2	42.6	35.2	32.6	35.2
75°	125.4	110.3	90.3	67.7	60.2	52.6	37.6	30.1	25.2	22.5	25.2
77.5°	87.8	77.8	62.8	50.1	42.6	37.6	27.6	20.1	17.6	15.1	17.6
80°	60.2	52.6	42.6	32.6	27.6	22.5	17.6	12.5	10.0	10.0	10.0
82.5°	40.1	32.6	25.2	20.1	17.6	15.1	10.0	7.6	7.6	5.1	5.1
85°	22.5	20.1	15.1	12.5	10.0	7.6	5.1	5.1	2.5	2.5	2.5
87.5°	10.0	7.6	5.1	5.1	2.5	2.5	2.5	2.5	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°	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8
2.5°	1638.4	1630.8	1640.8	1630.8	1625.9	1630.8	1625.9	1640.8	1628.3	1618.3	1628.3
5°	1635.9	1625.9	1635.9	1628.3	1620.8	1623.2	1618.3	1633.3	1618.3	1610.7	1615.8
7.5°	1630.8	1623.2	1628.3	1620.8	1613.2	1615.8	1610.7	1623.2	1608.3	1600.7	1605.8
10°	1623.2	1615.8	1618.3	1613.2	1605.8	1605.8	1600.7	1610.7	1593.2	1583.1	1588.2
12.5°	1613.2	1603.2	1608.3	1600.7	1590.7	1590.7	1585.6	1593.2	1575.6	1565.5	1568.2
15°	1600.7	1590.7	1590.7	1583.1	1573.1	1573.1	1563.1	1570.6	1550.6	1540.5	1540.5
17.5°	1585.6	1573.1	1573.1	1565.5	1553.0	1550.6	1543.0	1550.6	1528.0	1517.9	1517.9
20°	1563.1	1553.0	1550.6	1545.5	1533.0	1530.5	1520.5	1522.9	1505.4	1497.8	1495.3
22.5°	1533.0	1522.9	1525.4	1517.9	1507.8	1505.4	1495.3	1502.9	1485.3	1477.7	1480.4
25°	1480.4	1475.3	1480.4	1477.7	1470.3	1470.3	1465.2	1470.3	1455.2	1450.1	1452.7
27.5°	1420.0	1417.6	1420.0	1420.0	1415.1	1415.1	1415.1	1422.6	1407.5	1405.1	1405.1
30°	1332.2	1332.2	1334.7	1337.3	1337.3	1342.3	1339.8	1349.8	1339.8	1334.7	1339.8
32.5°	1216.8	1226.8	1234.4	1234.4	1234.4	1239.5	1244.4	1252.0	1242.0	1244.4	1244.4
35°	1086.4	1093.8	1098.9	1111.4	1104.0	1121.5	1126.5	1136.6	1134.1	1139.0	1136.6
37.5°	940.9	951.0	961.0	978.6	975.9	996.0	1006.0	1026.1	1021.2	1031.2	1036.1
40°	805.4	820.4	835.5	848.0	858.1	878.1	898.2	923.3	930.9	938.3	940.9
42.5°	674.9	690.0	715.0	732.6	747.7	780.3	807.9	838.0	845.6	860.5	865.6
45°	569.5	582.0	612.3	634.8	647.3	695.0	727.5	765.2	777.8	795.4	802.8
47.5°	471.7	494.2	524.3	551.9	569.5	619.7	662.4	702.5	720.1	740.2	750.2
50°	386.4	411.5	451.6	476.6	501.8	557.0	604.7	647.3	664.9	687.4	697.4
52.5°	316.2	343.8	381.4	408.9	436.5	494.2	544.4	584.6	607.2	622.3	637.3
55°	248.4	278.5	316.2	346.2	368.8	431.6	474.2	514.3	529.4	541.9	549.5
57.5°	193.2	215.7	253.4	278.5	306.1	361.2	404.0	434.0	446.5	461.7	466.6
60°	150.6	173.1	208.3	233.3	258.5	311.1	353.8	383.9	396.4	408.9	416.5
62.5°	120.4	143.0	175.6	198.3	220.8	268.5	306.1	336.2	351.2	363.8	371.4
65°	95.4	115.4	143.0	165.6	183.2	225.7	263.4	291.0	306.1	318.6	326.2
67.5°	75.3	92.9	117.9	133.0	150.6	185.6	218.3	243.3	256.0	271.0	278.5
70°	57.7	70.2	92.9	105.4	117.9	148.0	173.1	198.3	210.8	220.8	225.7
72.5°	42.6	52.6	70.2	80.2	87.8	112.9	133.0	150.6	160.6	170.7	175.6
75°	30.1	37.6	50.1	57.7	62.8	80.2	97.8	110.3	117.9	125.4	133.0
77.5°	20.1	25.2	32.6	37.6	42.6	55.2	65.3	75.3	82.9	90.3	92.9
80°	12.5	17.6	22.5	25.2	27.6	35.2	45.2	50.1	55.2	60.2	62.8
82.5°	7.6	10.0	12.5	15.1	17.6	22.5	27.6	32.6	35.2	40.1	42.6
85°	2.5	5.1	5.1	7.6	7.6	12.5	15.1	17.6	20.1	22.5	25.2
87.5°	0.0	0.0	2.5	2.5	2.5	2.5	5.1	5.1	5.1	5.1	5.1
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: P880572

CATALOG NUMBER: LD4C40D010 EU4409027 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8	1630.8
2.5°	1638.4	1630.8	1625.9	1623.2	1640.8	1618.3	1628.3	1630.8
5°	1628.3	1620.8	1615.8	1613.2	1628.3	1608.3	1615.8	1620.8
7.5°	1613.2	1608.3	1600.7	1598.2	1613.2	1590.7	1600.7	1603.2
10°	1595.8	1588.2	1583.1	1580.7	1593.2	1570.6	1580.7	1580.7
12.5°	1573.1	1568.2	1558.1	1558.1	1568.2	1548.1	1555.5	1555.5
15°	1543.0	1538.1	1528.0	1528.0	1538.1	1517.9	1525.4	1525.4
17.5°	1517.9	1512.9	1505.4	1502.9	1512.9	1492.9	1500.4	1497.8
20°	1497.8	1492.9	1482.8	1482.8	1490.4	1470.3	1477.7	1477.7
22.5°	1480.4	1477.7	1467.7	1467.7	1477.7	1457.7	1462.8	1457.7
25°	1452.7	1450.1	1440.1	1442.7	1447.6	1427.6	1435.1	1430.1
27.5°	1407.5	1407.5	1397.5	1395.0	1402.4	1385.0	1389.9	1387.5
30°	1337.3	1339.8	1327.3	1327.3	1329.8	1314.6	1322.2	1319.7
32.5°	1242.0	1244.4	1234.4	1231.9	1239.5	1226.8	1231.9	1231.9
35°	1136.6	1139.0	1131.5	1131.5	1139.0	1131.5	1131.5	1129.0
37.5°	1031.2	1036.1	1031.2	1033.7	1038.7	1031.2	1036.1	1033.7
40°	945.9	951.0	943.4	948.3	953.4	945.9	953.4	948.3
42.5°	868.1	875.7	870.6	875.7	880.6	875.7	880.6	873.2
45°	810.4	815.5	812.9	815.5	820.4	817.9	820.4	817.9
47.5°	755.1	765.2	760.2	765.2	772.7	767.8	772.7	765.2
50°	705.0	712.6	710.1	715.0	717.5	715.0	720.1	712.6
52.5°	639.7	647.3	644.8	644.8	649.8	644.8	649.8	644.8
55°	554.6	557.0	557.0	559.5	557.0	554.6	557.0	551.9
57.5°	471.7	476.6	469.2	476.6	474.2	471.7	471.7	466.6
60°	418.9	426.5	421.5	426.5	424.0	424.0	424.0	421.5
62.5°	376.3	381.4	376.3	378.8	378.8	378.8	376.3	373.9
65°	328.7	336.2	331.1	333.8	331.1	328.7	331.1	328.7
67.5°	281.0	283.4	283.4	281.0	281.0	281.0	281.0	276.0
70°	228.4	230.8	228.4	233.3	230.8	228.4	230.8	225.7
72.5°	178.1	180.7	178.1	180.7	178.1	178.1	178.1	178.1
75°	133.0	135.5	135.5	135.5	135.5	135.5	130.5	135.5
77.5°	95.4	95.4	95.4	97.8	95.4	95.4	95.4	95.4
80°	65.3	65.3	65.3	67.7	65.3	67.7	65.3	67.7
82.5°	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6
85°	22.5	25.2	25.2	22.5	22.5	22.5	22.5	22.5
87.5°	5.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)