

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: P879422

Luminaire Tested: **LD4C40D010 EU4409035 4LBDWWH**

Issue Date: 10/1/2024

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: P879422
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C40D010 EU4409035 4LBDWWH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

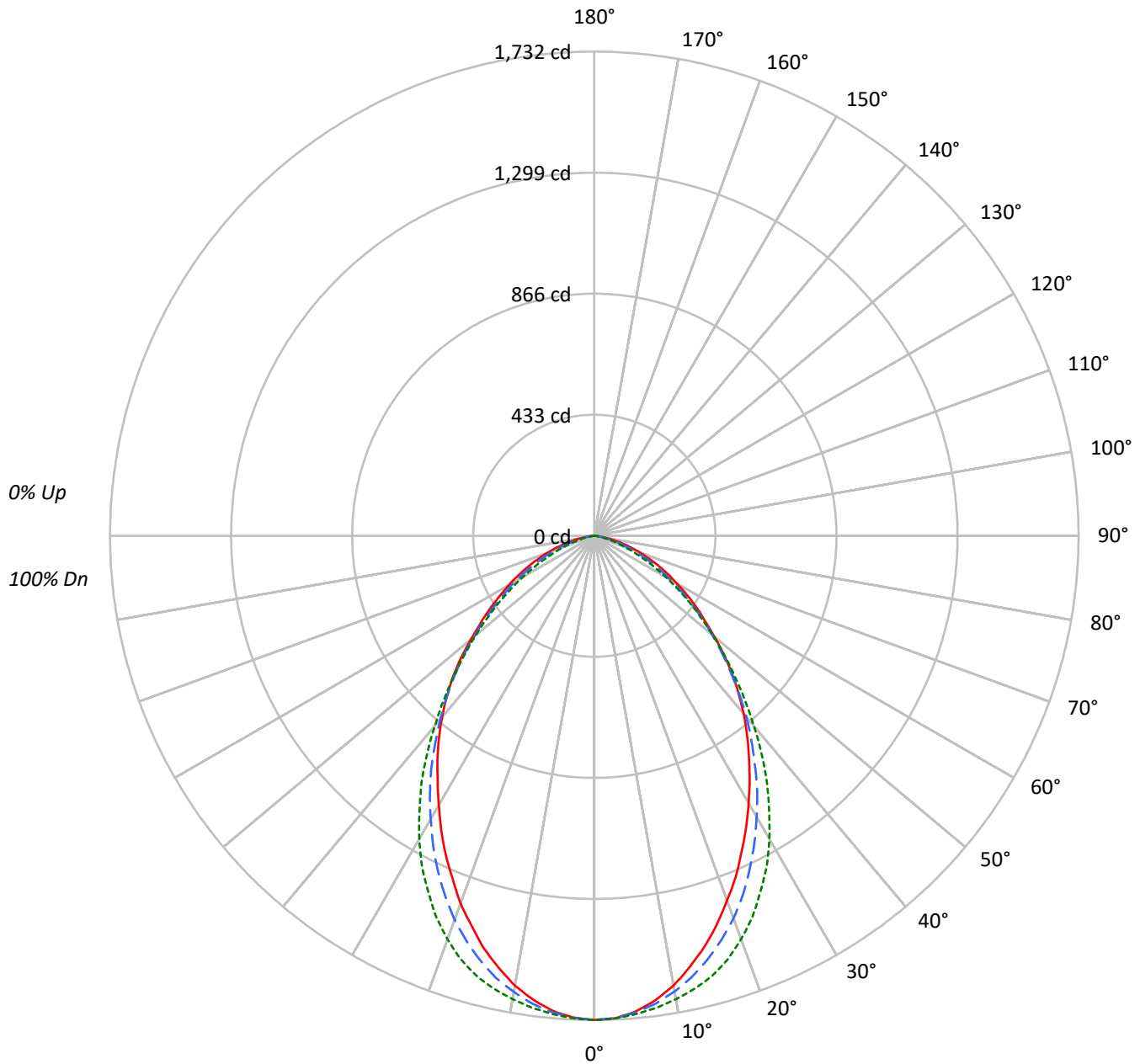
Lumens per Lamp: N/A
Luminaire Lumens: 3098.0 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88		
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77		
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67		
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59		
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52		
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42		
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35		
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	212782	212782	212782
5°	210623	211795	210389
10°	203765	209965	203852
15°	193592	207264	194240
20°	181451	200748	182955
25°	168995	190467	170554
30°	156556	177664	157733
35°	144427	161510	146617
40°	133223	142300	135676
45°	120681	123339	124329
50°	106973	105654	109649
55°	95378	88974	97541
60°	83467	72213	86587
65°	73052	55843	75639
70°	61459	40913	64656
75°	47989	26581	50742
80°	31483	13937	34667
85°	10713	6343	14378



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	5.2
10°-20°	441.8	14.3
20°-30°	607.6	19.6
30°-40°	633.9	20.5
40°-50°	542.3	17.5
50°-60°	387.9	12.5
60°-70°	225.1	7.3
70°-80°	86.8	2.8
80°-90°	11.0	0.4
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°	1211.1	39.1
0°-40°	1844.9	59.6
0°-60°	2775.1	89.6
0°-90°	3098.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3098.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1732	1732	1732	1732	1732	
5°	1708	1711	1717	1711	1706	161
15°	1522	1568	1630	1574	1527	427
25°	1247	1315	1405	1324	1258	574
35°	963	1001	1077	1017	978	603
45°	695	689	710	706	716	535
55°	445	423	415	434	455	398
65°	251	222	192	230	260	250
75°	101	76	56	80	107	109
85°	8	6	4	6	10	15
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°	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0
2.5°	1727.6	1726.3	1726.9	1726.9	1726.9	1726.3	1727.6	1727.6	1726.9	1726.9	1726.9
5°	1707.9	1706.6	1707.2	1707.9	1707.9	1707.9	1708.5	1709.1	1709.8	1710.4	1711.0
7.5°	1676.1	1674.2	1676.1	1678.6	1678.6	1679.2	1679.9	1680.5	1682.4	1685.6	1687.5
10°	1633.4	1633.4	1634.1	1636.0	1639.2	1638.5	1640.4	1643.6	1647.4	1651.9	1655.1
12.5°	1579.4	1580.7	1582.6	1584.5	1587.6	1589.6	1592.7	1596.6	1602.9	1609.3	1616.3
15°	1522.1	1522.8	1523.4	1527.9	1531.0	1535.5	1538.0	1545.7	1551.4	1560.3	1567.9
17.5°	1457.9	1457.3	1459.2	1463.0	1470.6	1472.5	1475.7	1484.0	1492.2	1504.3	1514.5
20°	1387.9	1391.7	1394.3	1399.4	1403.8	1408.9	1411.5	1421.6	1431.2	1442.6	1456.0
22.5°	1321.8	1318.6	1323.0	1328.8	1332.6	1336.4	1340.8	1351.7	1361.8	1375.8	1389.2
25°	1246.7	1248.6	1251.8	1256.3	1261.3	1266.4	1271.5	1283.0	1288.7	1303.3	1315.4
27.5°	1175.5	1178.7	1179.9	1185.6	1190.1	1193.9	1196.5	1209.8	1214.9	1227.6	1239.7
30°	1103.6	1106.8	1106.8	1113.1	1116.3	1120.1	1126.5	1135.4	1143.0	1151.9	1160.8
32.5°	1034.3	1034.3	1036.8	1042.5	1045.7	1050.2	1052.1	1058.4	1066.1	1075.0	1084.5
35°	963.0	964.9	967.5	967.5	973.2	975.7	978.3	984.6	989.7	993.6	1001.2
37.5°	897.5	897.5	895.6	898.8	902.6	902.0	905.8	909.0	912.1	916.6	922.9
40°	830.7	830.7	828.2	830.1	832.6	832.0	830.7	833.9	836.4	839.6	846.0
42.5°	762.7	761.4	760.7	760.7	762.0	760.7	762.0	762.7	762.7	762.7	766.5
45°	694.6	697.8	694.0	692.7	690.8	688.9	688.2	688.9	691.4	688.2	688.9
47.5°	627.8	629.1	626.5	624.6	622.7	621.4	622.7	618.9	620.2	620.8	618.3
50°	559.7	557.2	557.2	555.3	555.9	555.3	554.0	552.8	552.8	549.6	547.7
52.5°	496.8	498.0	499.3	494.9	495.5	492.3	493.0	489.8	489.8	486.0	487.2
55°	445.3	443.3	443.3	441.4	440.8	437.6	437.0	435.1	430.6	428.1	423.0
57.5°	391.8	391.2	388.6	389.3	385.5	384.8	383.6	380.4	377.2	374.0	368.3
60°	339.7	340.3	340.3	339.0	337.1	333.9	334.6	330.1	325.7	319.9	314.9
62.5°	296.4	294.5	293.9	292.6	288.8	288.8	285.6	282.4	278.0	272.2	267.8
65°	251.3	251.9	250.0	248.1	244.3	243.6	241.1	238.5	234.1	228.4	222.0
67.5°	210.5	209.3	208.6	206.7	202.9	202.3	200.4	194.6	190.8	185.1	180.0
70°	171.1	169.8	170.5	167.3	163.5	161.6	160.9	156.5	150.8	146.3	141.2
72.5°	134.2	134.2	133.6	130.4	128.5	127.2	124.7	119.6	116.4	111.3	107.5
75°	101.1	100.5	99.2	97.3	94.8	93.5	92.2	89.1	84.6	78.9	75.7
77.5°	70.0	70.6	69.3	68.7	65.5	63.6	63.0	61.1	57.2	53.4	50.3
80°	44.5	43.9	43.3	42.0	41.3	40.7	38.8	37.5	33.7	31.8	29.9
82.5°	24.2	22.9	22.9	22.3	21.0	20.4	19.7	18.4	17.8	16.5	15.3
85°	7.6	8.3	7.6	7.6	7.6	7.0	7.0	7.0	6.4	6.4	5.7
87.5°	0.6	1.3	0.6	0.6	1.3	0.6	0.6	1.3	0.6	0.6	1.3
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°	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0
2.5°	1726.9	1727.6	1727.6	1728.2	1728.2	1728.2	1728.2	1728.2	1728.2	1728.2	1728.2
5°	1713.0	1713.0	1714.2	1715.5	1715.5	1715.5	1716.1	1717.4	1717.4	1717.4	1716.8
7.5°	1690.1	1692.6	1695.1	1697.7	1698.3	1699.0	1700.2	1702.8	1702.8	1702.8	1702.8
10°	1660.2	1665.9	1669.1	1672.9	1674.8	1676.1	1679.9	1680.5	1682.4	1683.1	1682.4
12.5°	1622.0	1629.6	1636.6	1643.0	1645.5	1648.1	1651.9	1655.7	1657.6	1659.5	1658.9
15°	1579.4	1587.6	1598.5	1605.5	1610.5	1614.4	1620.1	1625.2	1628.4	1629.6	1629.6
17.5°	1527.9	1538.0	1549.5	1560.9	1564.1	1570.5	1576.8	1583.8	1587.6	1588.3	1587.6
20°	1470.6	1482.1	1491.6	1503.0	1510.0	1513.2	1522.1	1531.0	1534.9	1535.5	1534.9
22.5°	1402.5	1413.4	1426.1	1438.2	1443.9	1449.6	1459.2	1468.1	1473.2	1477.0	1473.2
25°	1326.9	1342.1	1354.2	1364.4	1372.7	1378.4	1390.5	1397.5	1405.7	1405.1	1405.7
27.5°	1252.4	1265.2	1278.5	1290.6	1295.7	1302.0	1311.6	1323.0	1330.0	1334.5	1333.9
30°	1176.1	1186.3	1197.7	1208.5	1216.8	1221.9	1235.9	1241.0	1249.9	1252.4	1250.5
32.5°	1095.3	1102.3	1113.8	1128.4	1131.6	1136.7	1145.6	1158.3	1161.5	1162.7	1163.4
35°	1009.5	1022.8	1032.4	1041.3	1043.8	1048.3	1058.4	1068.0	1071.2	1076.9	1074.3
37.5°	929.9	937.6	942.0	950.9	958.6	962.4	967.5	973.8	980.2	982.7	982.1
40°	850.4	854.3	858.1	867.6	868.2	868.2	875.9	884.8	884.8	887.3	887.3
42.5°	769.0	769.7	774.7	779.8	781.1	782.4	790.0	791.3	795.1	797.0	799.5
45°	690.1	694.0	697.1	697.8	701.0	701.6	703.5	705.4	711.1	709.9	711.1
47.5°	618.3	620.2	622.1	622.1	624.0	623.4	626.5	624.6	628.4	629.7	631.6
50°	547.7	550.8	548.9	550.2	549.6	551.5	550.2	550.2	550.2	552.8	554.7
52.5°	482.8	483.4	481.5	482.1	482.1	480.9	482.1	481.5	480.9	480.9	481.5
55°	423.0	420.4	419.2	416.6	413.4	417.3	415.4	414.1	416.6	415.4	416.6
57.5°	365.1	361.9	359.4	358.1	353.7	356.2	353.7	352.4	352.4	352.4	355.6
60°	310.4	307.2	304.0	300.2	299.6	298.3	297.0	293.9	294.5	293.9	295.1
62.5°	262.7	256.3	251.9	248.7	248.1	246.2	244.3	241.1	241.7	241.7	242.3
65°	218.8	211.8	205.5	201.0	201.0	197.8	194.6	194.6	190.8	192.1	192.7
67.5°	174.9	169.2	162.8	159.7	157.7	155.2	153.3	152.0	150.1	150.1	151.4
70°	135.5	129.8	126.6	121.5	120.9	118.9	116.4	114.5	113.9	113.9	113.2
72.5°	102.4	97.3	93.5	90.3	88.4	86.5	84.0	83.3	82.1	82.1	83.3
75°	71.2	68.1	64.9	61.7	60.4	59.8	57.9	56.6	56.6	56.0	56.6
77.5°	47.7	44.5	41.3	40.1	38.8	37.5	36.9	36.3	34.3	34.3	34.3
80°	27.4	26.1	24.8	22.9	22.9	22.3	21.0	20.4	19.7	19.7	19.7
82.5°	14.0	13.4	12.1	11.4	11.4	11.4	10.8	10.8	10.2	10.2	10.2
85°	5.7	5.1	4.5	4.5	4.5	4.5	4.5	4.5	5.1	4.5	5.1
87.5°	0.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0
2.5°	1728.2	1727.6	1727.6	1727.6	1727.6	1727.6	1726.9	1726.9	1726.3	1726.3	1726.3
5°	1717.4	1716.8	1716.1	1715.5	1714.9	1714.2	1713.6	1713.0	1711.0	1710.4	1709.1
7.5°	1702.1	1700.9	1699.0	1698.3	1697.1	1695.1	1692.6	1691.3	1688.8	1685.6	1684.3
10°	1681.8	1679.2	1677.3	1674.2	1673.5	1671.0	1664.6	1661.4	1657.0	1653.2	1648.7
12.5°	1657.0	1654.4	1650.0	1645.5	1643.0	1637.3	1631.5	1626.4	1620.7	1612.5	1606.1
15°	1626.4	1622.6	1613.7	1612.5	1608.6	1599.7	1592.1	1582.6	1573.7	1564.7	1557.1
17.5°	1585.7	1577.5	1573.0	1567.3	1562.8	1551.4	1543.1	1532.3	1520.2	1510.0	1499.2
20°	1532.3	1523.4	1515.8	1512.6	1506.9	1496.7	1486.5	1473.2	1461.1	1448.3	1438.8
22.5°	1468.7	1463.0	1451.5	1447.7	1440.7	1430.5	1418.5	1405.7	1394.3	1380.3	1367.6
25°	1400.6	1392.4	1383.5	1375.8	1370.7	1361.2	1345.9	1336.4	1323.7	1308.4	1298.9
27.5°	1328.1	1318.6	1305.9	1300.8	1296.3	1283.6	1270.9	1258.8	1248.6	1235.3	1227.0
30°	1244.2	1237.2	1228.9	1222.5	1216.2	1206.0	1194.6	1180.6	1169.7	1163.4	1151.9
32.5°	1158.9	1153.2	1142.4	1139.2	1132.2	1123.9	1115.7	1105.5	1094.1	1084.5	1075.6
35°	1068.0	1062.2	1054.6	1048.9	1046.3	1040.6	1031.7	1022.8	1017.1	1006.3	1001.8
37.5°	977.0	975.1	967.5	961.7	959.8	952.8	948.4	942.0	933.8	931.2	926.1
40°	883.5	882.2	877.8	877.1	873.3	871.4	865.1	860.0	856.2	854.3	851.1
42.5°	797.6	796.4	792.6	793.2	789.4	788.1	787.5	783.0	779.8	776.0	776.6
45°	713.0	711.8	709.2	708.0	709.9	709.2	708.0	706.0	706.0	706.7	704.8
47.5°	631.6	632.9	630.4	631.6	631.6	629.7	629.7	632.3	632.9	634.2	635.4
50°	554.7	558.5	557.2	559.1	559.7	560.4	558.5	561.7	561.0	566.7	565.5
52.5°	484.7	485.3	487.9	488.5	489.1	489.8	493.0	495.5	496.1	498.7	503.1
55°	417.3	417.9	423.0	423.0	426.2	426.8	431.3	432.5	434.4	441.4	442.7
57.5°	353.7	357.5	360.0	361.3	363.2	366.4	368.9	374.6	377.8	382.3	386.7
60°	296.4	300.9	304.0	305.3	307.9	311.7	314.9	321.2	326.9	332.0	335.2
62.5°	243.6	247.4	250.0	254.4	254.4	257.6	265.2	269.1	275.4	279.9	285.6
65°	196.5	199.1	203.5	203.5	206.1	211.2	217.5	223.3	229.6	236.0	241.7
67.5°	153.9	155.8	158.4	160.9	162.2	168.6	173.6	181.9	187.6	192.1	199.1
70°	116.4	117.7	120.9	123.4	125.3	129.8	135.5	141.2	146.9	152.0	159.0
72.5°	83.3	85.9	89.1	91.0	92.2	95.4	101.1	106.9	111.9	117.0	120.9
75°	57.2	59.2	60.4	62.3	64.2	66.8	70.6	74.4	80.1	85.2	89.7
77.5°	35.6	37.5	39.4	40.1	40.7	43.3	45.8	49.6	53.4	57.2	60.4
80°	21.0	21.6	22.3	22.9	24.2	26.1	27.4	29.9	32.4	35.0	38.2
82.5°	10.8	11.4	12.1	12.1	12.1	12.7	14.6	15.9	16.5	17.8	19.7
85°	4.5	4.5	4.5	5.1	5.1	5.7	5.7	6.4	6.4	7.0	7.6
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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: P879422

CATALOG NUMBER: LD4C40D010 EU4409035 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0	1732.0
2.5°	1725.7	1725.7	1725.7	1725.0	1725.7	1725.7	1725.7	1725.0
5°	1709.1	1707.9	1707.9	1707.2	1706.6	1706.6	1707.2	1706.0
7.5°	1681.8	1679.9	1678.6	1678.6	1678.0	1677.3	1677.3	1674.2
10°	1646.2	1642.4	1642.4	1641.1	1636.0	1635.4	1634.1	1634.1
12.5°	1601.6	1597.2	1594.6	1591.5	1588.3	1585.7	1585.1	1582.6
15°	1548.8	1543.1	1538.7	1537.4	1532.3	1528.5	1528.5	1527.2
17.5°	1491.6	1482.7	1479.5	1476.3	1469.3	1468.7	1467.4	1461.7
20°	1426.7	1418.5	1414.0	1410.8	1406.4	1400.0	1398.7	1399.4
22.5°	1358.7	1347.2	1343.4	1340.2	1335.8	1330.0	1330.0	1325.6
25°	1288.1	1277.9	1274.1	1270.2	1263.2	1260.7	1257.5	1258.2
27.5°	1216.2	1206.6	1203.5	1196.5	1192.0	1188.8	1185.6	1185.6
30°	1141.1	1136.0	1130.9	1130.3	1121.4	1117.6	1114.4	1111.9
32.5°	1068.6	1062.2	1059.7	1057.2	1052.7	1047.6	1047.0	1042.5
35°	997.4	991.0	987.8	985.3	980.2	978.3	976.4	977.6
37.5°	922.3	921.0	919.1	916.0	912.8	912.1	909.6	912.8
40°	848.5	847.9	845.3	846.0	846.0	844.7	846.0	846.0
42.5°	777.3	777.3	774.7	776.0	776.6	777.9	779.8	781.1
45°	708.0	707.3	708.0	709.2	708.0	711.1	713.7	715.6
47.5°	636.7	637.3	639.9	640.5	641.8	646.3	646.3	646.3
50°	568.7	571.8	570.6	574.4	573.7	576.3	573.7	573.7
52.5°	503.8	507.0	507.6	508.2	512.0	512.7	512.7	512.0
55°	445.9	450.3	448.4	451.6	453.5	454.8	456.7	455.4
57.5°	392.5	394.4	396.3	396.9	399.5	400.7	402.0	400.7
60°	339.7	343.5	346.7	347.3	348.6	349.8	350.5	352.4
62.5°	290.1	296.4	297.7	298.3	301.5	303.4	304.7	306.0
65°	246.2	250.6	253.8	255.7	258.2	258.2	260.2	260.2
67.5°	203.5	208.0	209.9	211.2	215.0	215.6	218.8	218.8
70°	164.7	167.9	169.2	171.1	174.9	177.5	178.7	180.0
72.5°	127.2	131.0	132.9	135.5	138.0	139.9	140.6	142.5
75°	92.9	98.6	99.2	101.8	103.7	106.2	107.5	106.9
77.5°	64.9	66.8	69.3	70.6	72.5	74.4	76.3	76.3
80°	40.1	42.6	43.3	43.9	46.4	47.7	49.0	49.0
82.5°	21.0	22.3	23.5	24.2	25.4	25.4	26.1	26.7
85°	8.3	8.9	8.9	8.9	9.5	10.2	10.2	10.2
87.5°	1.3	1.9	1.3	1.3	1.9	1.9	1.9	1.9
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)