

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: P563827

Luminaire Tested: **LD4C35D010 EX4C359030 4LBSQLWWH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P563827
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, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

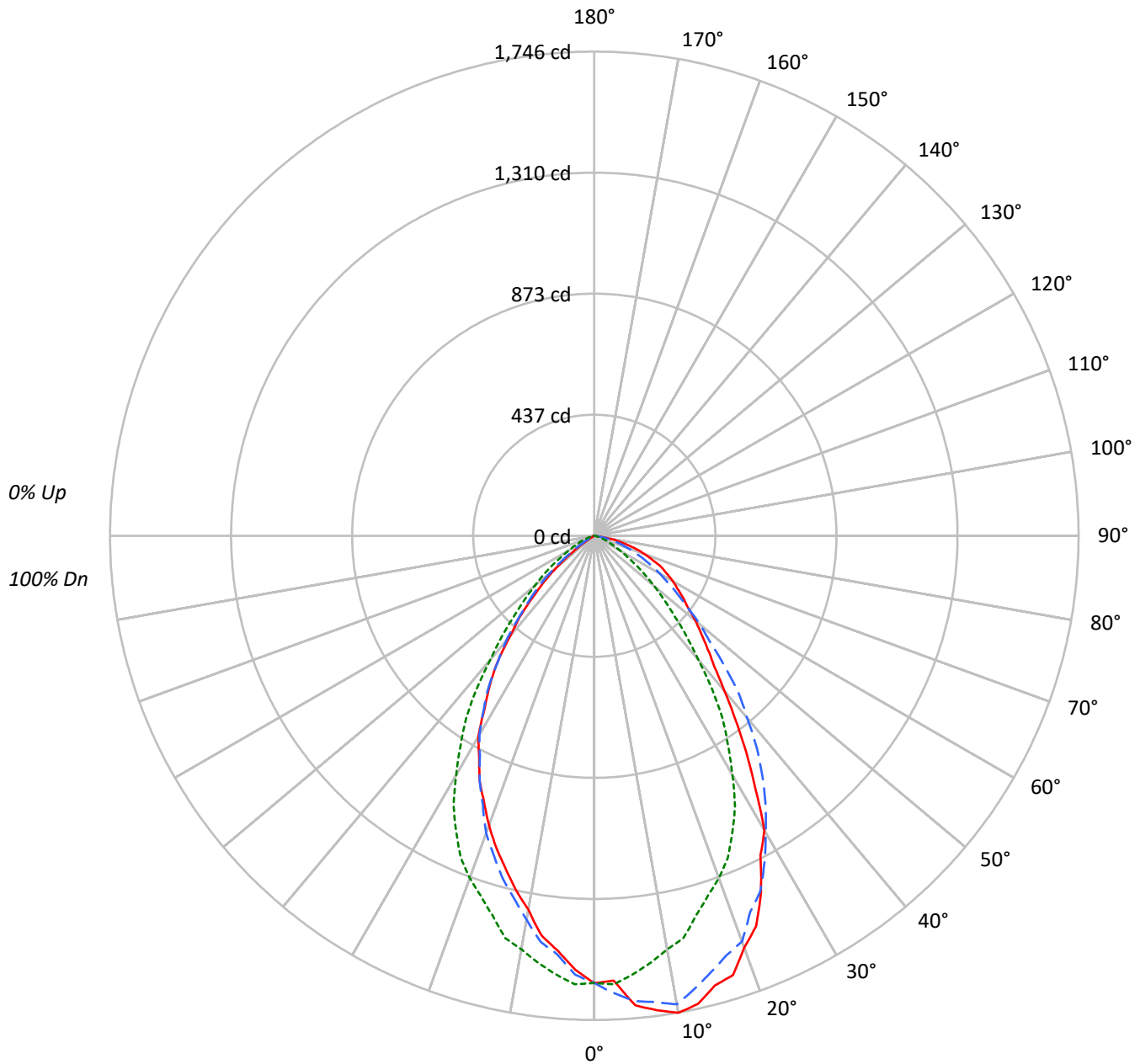
Lumens per Lamp: N/A
Luminaire Lumens: 2312.1 lumens
Efficiency: N/A
Efficacy: 57.2 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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					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	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°	155637	155637	155637
5°	164658	153790	145557
10°	171118	148377	134160
15°	167700	141618	123847
20°	162247	134841	113997
25°	151338	125393	103983
30°	136618	110970	93088
35°	112549	94999	77236
40°	91835	73320	59439
45°	78912	55688	42752
50°	71407	42391	26990
55°	65725	30583	9774
60°	63084	20880	1486
65°	60937	14133	434
70°	54561	9818	536
75°	44699	5033	0
80°	28005	2167	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.1	6.5
10°-20°	407.2	17.6
20°-30°	543.7	23.5
30°-40°	516.1	22.3
40°-50°	356.8	15.4
50°-60°	197.1	8.5
60°-70°	97.9	4.2
70°-80°	38.6	1.7
80°-90°	3.7	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°	1102.0	47.7
0°-40°	1618.1	70.0
0°-60°	2172.0	93.9
0°-90°	2312.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2312.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1613	1613	1613	1613	1613	
5°	1700	1685	1588	1516	1503	163
15°	1679	1628	1418	1278	1240	475
25°	1422	1416	1178	977	977	648
35°	956	1056	806	663	656	599
45°	578	663	408	335	313	451
55°	391	368	182	93	58	352
65°	267	193	62	2	2	259
75°	120	74	14	0	0	128
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°	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0
2.5°	1605.2	1649.7	1653.6	1649.7	1655.6	1653.6	1663.3	1653.6	1665.3	1647.9	1651.7
5°	1700.0	1682.7	1719.4	1700.0	1700.0	1698.1	1692.3	1690.4	1698.1	1673.0	1684.6
7.5°	1725.2	1750.3	1783.3	1742.7	1744.5	1744.5	1732.9	1729.0	1729.0	1682.7	1696.2
10°	1746.5	1731.0	1748.4	1732.9	1746.5	1744.5	1752.2	1727.1	1744.5	1717.4	1715.5
12.5°	1729.0	1723.2	1746.5	1721.3	1713.6	1715.5	1705.8	1700.0	1705.8	1674.9	1673.0
15°	1678.8	1684.6	1719.4	1692.3	1688.5	1684.6	1673.0	1653.6	1669.1	1626.5	1628.5
17.5°	1661.4	1651.7	1657.5	1634.2	1640.1	1636.3	1634.2	1616.9	1613.0	1585.9	1585.9
20°	1580.1	1601.4	1601.4	1585.9	1585.9	1584.0	1558.9	1574.3	1556.9	1549.2	1556.9
22.5°	1524.0	1526.0	1526.0	1512.4	1514.4	1506.7	1493.1	1483.4	1493.1	1483.4	1467.9
25°	1421.5	1425.4	1448.6	1423.5	1419.6	1427.3	1415.7	1409.9	1408.0	1384.8	1415.7
27.5°	1297.7	1336.4	1334.5	1324.8	1336.4	1320.9	1315.1	1317.1	1322.9	1320.9	1328.7
30°	1226.2	1232.0	1237.8	1230.1	1232.0	1226.2	1226.2	1228.2	1243.6	1237.8	1235.9
32.5°	1081.1	1100.4	1116.0	1116.0	1117.9	1123.7	1121.8	1162.4	1172.0	1152.7	1148.8
35°	955.5	969.0	982.5	984.4	1009.6	1011.5	1013.4	1025.0	1052.1	1057.9	1056.0
37.5°	835.5	849.1	852.9	870.3	883.8	897.4	912.9	928.4	951.6	970.9	961.3
40°	729.1	734.9	744.6	752.3	779.4	779.4	787.1	818.1	843.3	858.7	856.8
42.5°	640.2	642.1	649.8	663.4	688.5	682.7	688.5	709.8	746.5	748.5	769.8
45°	578.3	576.3	582.1	584.1	599.5	607.3	611.1	626.6	657.5	661.4	663.4
47.5°	522.2	520.3	530.0	533.8	539.6	547.4	547.4	549.3	560.9	570.5	562.8
50°	475.7	475.7	475.7	479.6	489.4	487.3	489.4	497.1	502.8	498.9	497.1
52.5°	425.5	433.2	439.0	441.0	442.9	442.9	444.8	441.0	439.0	433.2	421.6
55°	390.7	398.4	398.4	398.4	398.4	406.2	396.5	398.4	398.4	383.0	367.5
57.5°	355.9	363.6	369.3	361.6	369.3	361.6	357.7	355.9	352.0	336.5	313.3
60°	326.9	330.8	328.8	326.9	330.8	324.9	321.0	313.3	309.4	288.2	272.7
62.5°	294.0	295.9	297.8	294.0	290.1	288.2	280.4	268.8	261.1	243.7	230.1
65°	266.9	261.1	259.2	257.2	253.4	247.6	241.8	228.3	222.4	206.9	193.4
67.5°	226.2	224.4	228.3	222.4	212.8	212.8	206.9	195.3	181.8	172.1	158.6
70°	193.4	191.4	187.6	181.8	179.8	172.1	172.1	158.6	154.7	137.3	125.7
72.5°	158.6	158.6	152.8	147.0	141.2	137.3	135.4	125.7	119.9	110.3	100.5
75°	119.9	119.9	118.0	112.1	108.2	104.4	102.5	94.8	89.0	79.3	73.5
77.5°	85.1	85.1	77.4	73.5	75.4	71.5	67.6	65.8	63.8	58.1	50.4
80°	50.4	48.3	42.6	44.5	42.6	42.6	40.6	38.7	34.8	30.9	27.1
82.5°	13.5	15.5	15.5	15.5	17.4	13.5	13.5	13.5	15.5	15.5	9.7
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	3.9	7.7	7.7	7.7	7.7	7.7	5.8	5.8	5.8	3.9
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°	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0
2.5°	1632.4	1630.4	1632.4	1618.8	1649.7	1626.5	1622.6	1618.8	1632.4	1618.8	1599.4
5°	1667.2	1647.9	1642.0	1636.3	1653.6	1626.5	1620.8	1622.6	1613.0	1587.8	1589.8
7.5°	1678.8	1661.4	1644.0	1607.2	1622.6	1616.9	1601.4	1589.8	1574.3	1553.1	1549.2
10°	1682.7	1663.3	1638.1	1626.5	1603.3	1595.6	1589.8	1570.5	1551.1	1514.4	1504.6
12.5°	1671.1	1647.9	1616.9	1607.2	1589.8	1564.7	1551.1	1531.7	1514.4	1485.4	1464.1
15°	1620.8	1601.4	1591.7	1558.9	1551.1	1535.6	1508.5	1481.6	1456.3	1417.7	1406.1
17.5°	1562.7	1555.0	1545.3	1520.1	1518.3	1502.8	1477.7	1454.4	1421.5	1361.5	1342.2
20°	1502.8	1502.8	1471.8	1462.2	1481.6	1450.5	1431.2	1409.9	1342.2	1313.2	1278.4
22.5°	1458.4	1437.0	1419.6	1404.1	1406.1	1386.7	1359.7	1317.1	1291.9	1257.2	1216.6
25°	1371.3	1379.0	1340.4	1334.5	1340.4	1295.8	1282.3	1247.5	1210.7	1177.8	1146.9
27.5°	1317.1	1295.8	1270.7	1249.4	1249.4	1232.0	1193.4	1185.6	1129.5	1098.6	1059.8
30°	1235.9	1220.4	1199.1	1168.2	1164.3	1150.8	1119.8	1100.4	1042.5	996.0	974.8
32.5°	1133.4	1127.6	1110.2	1075.4	1063.8	1048.2	1009.6	976.7	949.7	897.4	872.2
35°	1059.8	1038.7	1001.8	972.9	963.2	936.1	905.1	881.9	852.9	806.5	773.7
37.5°	949.7	928.4	893.5	858.7	858.7	831.7	789.1	766.0	725.3	698.2	671.1
40°	852.9	825.9	791.1	750.5	744.6	705.9	688.5	649.8	624.7	582.1	578.3
42.5°	744.6	719.5	688.5	657.5	634.3	615.0	570.5	541.6	514.5	493.2	487.3
45°	645.9	613.1	586.0	547.4	524.2	501.0	471.9	452.6	431.3	408.1	394.6
47.5°	560.9	533.8	495.1	460.3	437.1	425.5	392.5	371.4	353.9	338.5	328.8
50°	473.9	441.0	419.7	380.9	377.1	350.0	323.1	305.6	295.9	282.4	268.8
52.5°	408.1	377.1	348.1	319.2	303.6	294.0	268.8	251.5	237.9	228.3	220.5
55°	344.2	317.2	294.0	265.0	255.3	241.8	212.8	208.9	195.3	181.8	172.1
57.5°	295.9	270.8	243.7	224.4	206.9	197.3	174.0	158.6	150.9	139.3	129.6
60°	251.5	224.4	203.0	179.8	172.1	158.6	141.2	127.7	118.0	108.2	98.7
62.5°	210.8	187.6	164.4	145.1	133.5	125.7	112.1	100.5	90.9	83.2	75.4
65°	174.0	152.8	133.5	114.1	108.2	98.7	89.0	79.3	71.5	61.9	54.2
67.5°	143.1	123.8	104.4	90.9	85.1	81.3	69.7	59.9	54.2	48.3	40.6
70°	112.1	98.7	83.2	71.5	65.8	59.9	52.2	46.5	38.7	34.8	29.0
72.5°	87.1	75.4	61.9	52.2	48.3	44.5	36.7	30.9	27.1	23.2	19.3
75°	61.9	52.2	44.5	34.8	32.9	30.9	25.1	21.3	17.4	13.5	11.6
77.5°	42.6	34.8	27.1	23.2	21.3	17.4	15.5	11.6	9.7	7.7	5.8
80°	23.2	17.4	13.5	11.6	9.7	7.7	7.7	5.8	3.9	3.9	1.9
82.5°	7.7	5.8	3.9	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°	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0
2.5°	1611.0	1589.8	1595.6	1595.6	1591.7	1591.7	1587.8	1582.1	1584.0	1572.4	1547.3
5°	1593.6	1566.6	1562.7	1566.6	1551.1	1547.3	1539.5	1551.1	1516.2	1529.9	1514.4
7.5°	1543.4	1518.3	1512.4	1526.0	1506.7	1495.0	1493.1	1508.5	1477.7	1462.2	1444.7
10°	1487.2	1477.7	1460.2	1450.5	1444.7	1446.7	1431.2	1411.9	1406.1	1402.2	1386.7
12.5°	1437.0	1415.7	1400.3	1388.7	1384.8	1384.8	1359.7	1355.8	1338.3	1334.5	1311.3
15°	1377.0	1352.0	1342.2	1326.7	1313.2	1320.9	1291.9	1284.2	1278.4	1253.3	1257.2
17.5°	1324.8	1297.7	1274.6	1264.9	1253.3	1241.7	1214.5	1220.4	1206.8	1206.8	1172.0
20°	1257.2	1228.2	1210.7	1191.3	1191.3	1175.9	1156.6	1158.5	1141.1	1123.7	1092.7
22.5°	1185.6	1154.6	1133.4	1125.6	1106.3	1102.4	1079.2	1073.3	1050.2	1052.1	1025.0
25°	1110.2	1079.2	1050.2	1052.1	1034.8	1027.1	1013.4	986.4	976.7	965.1	957.4
27.5°	1021.2	999.9	974.8	972.9	940.0	941.8	924.5	916.8	893.5	899.3	881.9
30°	940.0	909.1	885.8	880.0	866.5	862.6	835.5	823.8	827.8	812.2	802.7
32.5°	856.8	810.4	800.6	789.1	781.4	771.6	752.3	760.1	742.7	746.5	731.1
35°	746.5	727.2	702.1	702.1	694.3	686.6	673.1	680.8	663.4	655.7	640.2
37.5°	653.7	636.4	611.1	618.9	605.3	593.7	582.1	584.1	568.6	566.7	551.1
40°	553.2	543.5	526.1	526.1	516.4	516.4	510.5	504.8	495.1	483.5	466.1
42.5°	458.4	450.6	442.9	444.8	431.3	442.9	427.4	437.1	406.2	404.2	392.5
45°	388.7	371.4	373.2	365.5	357.7	361.6	348.1	352.0	334.7	330.8	319.2
47.5°	315.3	309.4	297.8	294.0	294.0	288.2	282.4	280.4	272.7	263.0	247.6
50°	259.2	237.9	234.0	228.3	224.4	224.4	216.7	205.1	206.9	197.3	181.8
52.5°	203.0	185.6	177.9	176.0	168.2	164.4	154.7	147.0	141.2	137.3	127.7
55°	156.6	141.2	131.5	131.5	119.9	119.9	106.4	100.5	92.9	85.1	79.3
57.5°	118.0	110.3	100.5	92.9	89.0	79.3	71.5	61.9	56.0	44.5	36.7
60°	89.0	81.3	71.5	65.8	61.9	52.2	42.6	34.8	21.3	17.4	15.5
62.5°	65.8	58.1	48.3	44.5	40.6	32.9	23.2	11.6	5.8	5.8	5.8
65°	48.3	38.7	30.9	27.1	23.2	17.4	7.7	3.9	1.9	1.9	1.9
67.5°	32.9	25.1	17.4	15.5	11.6	5.8	1.9	1.9	1.9	1.9	1.9
70°	21.3	15.5	7.7	5.8	3.9	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	13.5	7.7	3.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.9	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: P563827

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0	1613.0
2.5°	1574.3	1560.8	1568.5	1551.1	1558.9	1572.4	1562.7	1566.6
5°	1520.1	1512.4	1502.8	1477.7	1497.0	1512.4	1504.6	1502.8
7.5°	1462.2	1435.1	1448.6	1440.9	1437.0	1452.5	1435.1	1454.4
10°	1402.2	1382.9	1381.0	1367.4	1367.4	1379.0	1381.0	1369.3
12.5°	1313.2	1303.5	1303.5	1301.6	1299.7	1311.3	1313.2	1307.4
15°	1249.4	1245.6	1235.9	1234.0	1222.4	1239.8	1241.7	1239.8
17.5°	1172.0	1174.0	1164.3	1164.3	1172.0	1177.8	1162.4	1177.8
20°	1119.8	1110.2	1106.3	1088.8	1098.6	1108.2	1108.2	1110.2
22.5°	1044.4	1028.9	1034.8	1025.0	1019.2	1032.8	1032.8	1038.7
25°	959.3	959.3	963.2	957.4	961.3	969.0	963.2	976.7
27.5°	878.0	885.8	885.8	878.0	881.9	905.1	914.8	899.3
30°	802.7	804.5	810.4	806.5	818.1	825.9	823.8	835.5
32.5°	717.5	727.2	731.1	725.3	729.1	746.5	736.9	734.9
35°	651.8	634.3	632.5	634.3	642.1	645.9	642.1	655.7
37.5°	557.0	551.1	543.5	545.4	551.1	559.0	562.8	572.5
40°	466.1	458.4	458.4	456.4	450.6	471.9	471.9	471.9
42.5°	386.8	384.8	375.2	375.2	383.0	388.7	384.8	398.4
45°	317.2	309.4	303.6	303.6	309.4	309.4	315.3	313.3
47.5°	249.5	241.8	243.7	237.9	243.7	251.5	241.8	243.7
50°	187.6	187.6	183.7	187.6	185.6	187.6	183.7	179.8
52.5°	127.7	145.1	147.0	139.3	121.9	106.4	96.7	104.4
55°	73.5	65.8	65.8	63.8	59.9	58.1	52.2	58.1
57.5°	36.7	32.9	32.9	32.9	30.9	29.0	25.1	25.1
60°	15.5	13.5	13.5	11.6	9.7	7.7	5.8	7.7
62.5°	5.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9
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)