

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P135558

Luminaire Tested: **LD6A15D010TE ERM6A15935 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135558
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23399)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15935 6LM111LI
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1437.6 lumens
Efficiency: N/A
Efficacy: 63.6 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.93 / 0.89
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

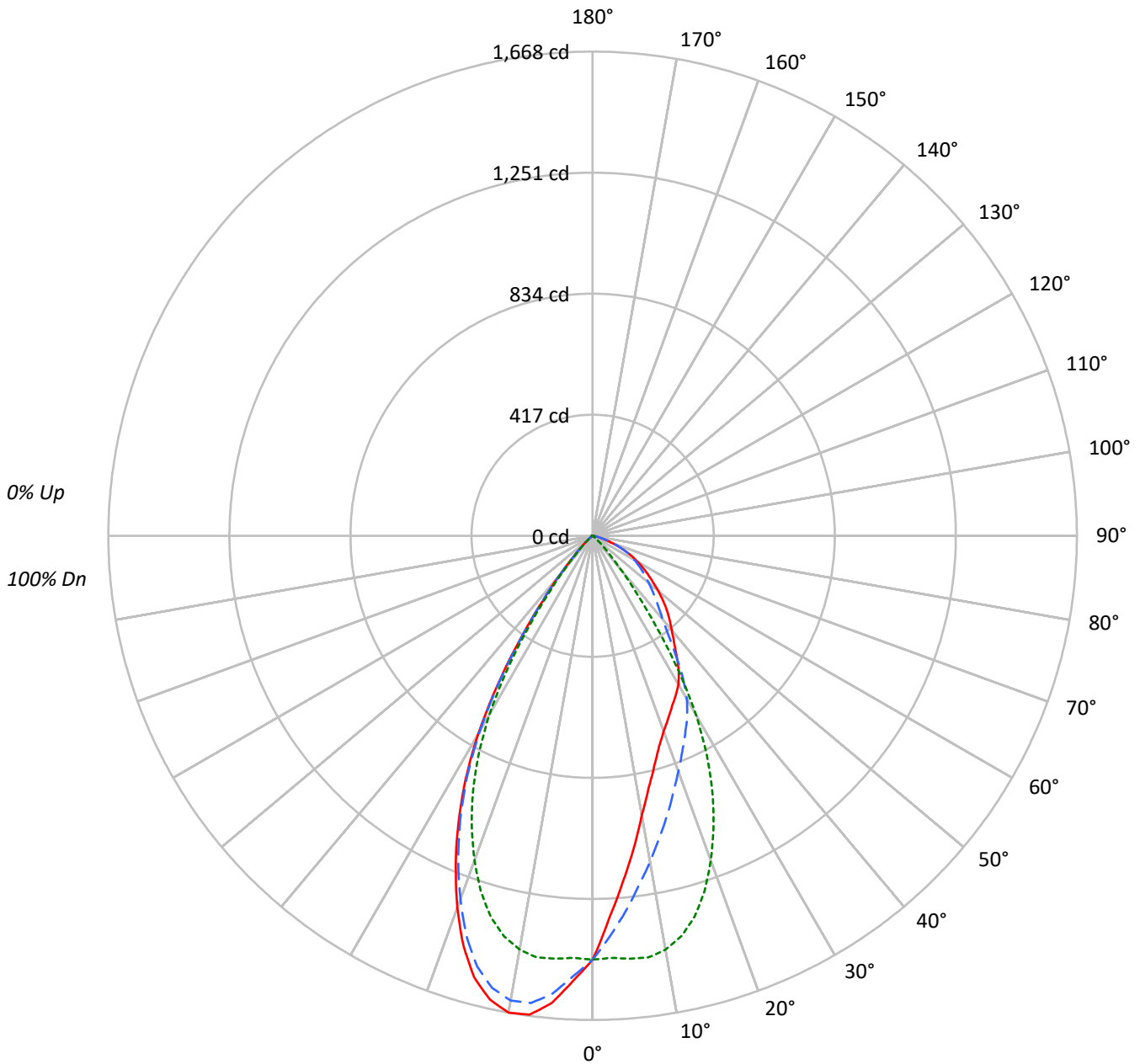
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				92				
2	106	101	96	93	104	99	95	91	96	92	89	93	90	88	90	88	86	84				84				
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77				77				
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71				71				
5	89	80	74	69	88	79	73	69	77	72	68	75	71	67	74	70	67	65				65				
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60				
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56				56				
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52				52				
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49				49				
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46				46				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	95277	95277	95277
5°	78293	95772	105805
10°	64717	95893	110500
15°	55432	91695	106386
20°	49703	82584	94595
25°	46618	70322	78860
30°	44545	53630	59363
35°	40157	30400	34414
40°	36042	12375	14563
45°	33298	4290	4927
50°	29901	1502	1604
55°	26434	899	785
60°	23356	770	652
65°	19235	617	448
70°	12818	553	362
75°	6982	479	252
80°	3719	1090	0
85°	1422	1422	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.0	9.5
10°-20°	353.7	24.6
20°-30°	417.9	29.1
30°-40°	278.5	19.4
40°-50°	120.8	8.4
50°-60°	72.5	5.0
60°-70°	43.5	3.0
70°-80°	13.3	0.9
80°-90°	1.7	0.1
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°	907.5	63.1
0°-40°	1186.0	82.5
0°-60°	1379.2	95.9
0°-90°	1437.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1437.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1460	1460	1460	1460	1460	
5°	1196	1299	1462	1583	1616	108
15°	821	995	1358	1536	1575	231
25°	648	754	977	1079	1096	299
35°	504	496	382	424	432	316
45°	361	306	46	53	53	278
55°	232	207	8	7	7	209
65°	125	124	4	3	3	122
75°	28	31	2	1	1	34
85°	2	3	2	0	0	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4
2.5°	1318.0	1340.8	1350.6	1357.6	1331.9	1359.6	1350.6	1363.5	1367.5	1380.3	1392.2
5°	1195.5	1217.2	1228.1	1236.0	1216.2	1247.9	1246.8	1263.6	1277.5	1299.3	1314.1
7.5°	1085.7	1095.5	1106.4	1117.3	1108.4	1137.1	1142.0	1165.8	1186.5	1216.2	1243.9
10°	976.9	986.8	997.6	1009.5	1005.5	1034.3	1045.2	1071.9	1099.5	1139.1	1168.7
12.5°	889.9	899.8	909.7	921.6	919.5	948.3	962.1	990.7	1024.3	1063.9	1097.6
15°	820.7	829.5	839.5	847.4	849.3	876.1	890.9	918.6	954.2	994.7	1029.3
17.5°	760.4	770.2	779.2	786.1	788.0	812.8	827.6	852.3	886.9	925.5	959.1
20°	715.9	724.7	732.7	739.6	739.6	761.4	774.2	796.9	827.6	863.2	891.9
22.5°	680.3	688.2	695.1	701.1	701.1	719.9	730.7	749.5	776.2	805.9	829.5
25°	647.6	655.6	661.5	666.4	665.4	683.2	692.1	705.9	728.7	753.5	771.2
27.5°	619.9	627.8	632.8	639.7	635.8	650.6	657.5	669.4	687.2	705.0	714.9
30°	591.3	599.2	604.2	610.1	606.1	619.0	623.0	628.9	640.7	649.6	650.6
32.5°	551.8	558.7	563.6	566.6	561.6	571.5	571.5	572.5	576.5	577.5	569.5
35°	504.2	509.2	513.2	514.2	508.2	514.2	513.2	506.3	504.2	496.3	480.6
37.5°	459.8	465.7	467.7	467.7	459.8	462.7	458.8	447.9	440.0	426.1	404.4
40°	423.2	428.2	429.1	428.2	420.3	421.2	415.3	402.4	391.5	374.8	347.0
42.5°	392.5	396.5	397.5	396.5	388.6	388.6	382.7	368.8	356.0	337.2	308.5
45°	360.9	364.9	366.8	364.9	357.9	357.9	351.0	338.2	325.3	305.5	276.9
47.5°	328.2	331.2	333.2	332.2	325.3	325.3	319.4	306.5	295.6	277.9	250.1
50°	294.6	298.6	300.6	299.6	293.7	293.7	288.7	276.9	267.9	252.2	227.4
52.5°	262.0	267.0	267.9	266.0	262.0	261.0	258.1	247.2	240.3	229.4	205.7
55°	232.4	236.3	236.3	236.3	231.4	230.3	228.4	219.5	215.5	206.7	186.9
57.5°	205.7	208.6	207.7	206.7	204.6	202.7	200.7	193.8	191.8	185.9	169.1
60°	179.0	181.9	181.0	180.0	177.9	176.0	174.1	169.1	169.1	165.1	151.3
62.5°	153.3	155.3	154.3	153.3	153.3	151.3	150.3	146.3	147.4	145.3	133.5
65°	124.6	127.6	126.5	126.5	127.6	127.6	126.5	124.6	124.6	123.6	113.7
67.5°	95.0	97.9	96.9	97.9	100.8	101.9	101.9	100.8	100.8	98.9	90.0
70°	67.2	69.3	69.3	70.2	73.1	74.1	77.1	74.1	74.1	72.2	65.3
72.5°	44.5	45.5	46.5	48.4	49.5	50.5	52.4	52.4	51.4	48.4	43.5
75°	27.7	28.6	28.6	29.7	30.7	31.7	33.6	32.6	31.7	30.7	26.7
77.5°	16.9	16.9	17.8	17.8	18.8	19.8	19.8	19.8	18.8	17.8	15.8
80°	9.9	9.9	9.9	10.9	10.9	10.9	10.9	10.9	10.9	9.9	8.9
82.5°	5.0	5.0	5.0	5.9	5.9	5.9	5.9	5.9	5.9	5.0	5.0
85°	1.9	1.9	1.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	1.9
87.5°	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4
2.5°	1404.1	1404.1	1401.1	1418.9	1441.6	1437.7	1438.7	1455.5	1462.4	1474.2	1485.1
5°	1339.8	1350.6	1358.6	1387.2	1419.9	1425.8	1436.7	1462.4	1478.2	1498.0	1516.8
7.5°	1275.5	1298.2	1317.0	1354.6	1397.2	1412.9	1432.7	1465.3	1486.1	1512.8	1538.5
10°	1209.3	1240.9	1268.6	1314.1	1363.5	1386.3	1411.0	1447.5	1475.3	1503.9	1532.6
12.5°	1143.1	1181.6	1216.2	1266.7	1319.1	1346.7	1374.4	1412.9	1442.7	1472.3	1502.0
15°	1077.8	1119.3	1155.9	1209.3	1262.7	1291.3	1319.1	1357.6	1389.2	1416.9	1446.5
17.5°	1005.5	1052.1	1085.7	1136.1	1187.5	1216.2	1246.8	1282.4	1310.1	1333.9	1362.5
20°	935.4	978.8	1009.5	1056.0	1102.4	1129.1	1157.9	1189.5	1214.2	1235.0	1261.7
22.5°	867.1	905.7	934.4	976.9	1012.5	1035.2	1060.0	1087.6	1109.4	1126.2	1150.0
25°	800.9	831.6	853.3	886.9	915.6	933.4	954.2	976.9	995.7	1009.5	1031.2
27.5°	734.7	755.4	763.3	784.1	801.9	821.6	832.6	850.4	867.1	878.0	896.8
30°	658.5	665.4	658.5	664.4	669.4	678.3	691.1	711.9	719.9	726.8	745.5
32.5°	563.6	558.7	535.9	527.0	521.1	529.9	532.0	547.8	552.7	558.7	573.5
35°	463.7	445.9	409.4	386.6	372.7	373.7	364.9	381.7	384.6	390.6	401.5
37.5°	378.7	350.0	302.5	271.0	250.1	245.2	234.3	244.2	245.2	249.1	257.1
40°	316.4	275.8	222.5	184.9	162.2	152.2	141.4	145.3	145.3	148.3	153.3
42.5°	272.9	229.4	169.1	128.6	103.8	91.9	83.1	83.1	83.1	84.1	87.0
45°	240.3	191.8	131.5	90.0	67.2	55.4	46.5	46.5	45.5	45.5	47.4
47.5°	213.6	165.1	103.8	66.2	43.5	32.6	26.7	24.7	23.8	24.7	25.7
50°	191.8	144.3	86.0	50.5	30.7	21.7	16.9	14.8	13.8	13.8	13.8
52.5°	173.1	127.6	72.2	40.5	23.8	15.8	11.9	9.9	8.9	8.9	8.9
55°	157.2	112.7	62.3	33.6	19.8	13.8	9.9	7.9	6.9	6.9	6.9
57.5°	141.4	99.8	53.4	28.6	16.9	11.9	8.9	6.9	5.9	5.9	5.9
60°	125.5	87.0	46.5	23.8	13.8	9.9	7.9	5.9	5.0	5.0	5.0
62.5°	109.8	74.1	38.6	19.8	11.9	8.9	5.9	5.0	5.0	4.0	4.0
65°	91.0	60.3	31.7	16.9	9.9	6.9	5.9	4.0	4.0	4.0	4.0
67.5°	71.2	46.5	23.8	12.9	7.9	5.9	5.0	4.0	2.9	2.9	2.9
70°	50.5	32.6	17.8	9.9	6.9	5.0	4.0	2.9	2.9	2.9	1.9
72.5°	33.6	21.7	12.9	7.9	5.9	4.0	2.9	2.9	1.9	1.9	1.9
75°	21.7	13.8	8.9	5.9	4.0	4.0	2.9	1.9	1.9	1.9	1.0
77.5°	12.9	8.9	5.9	4.0	2.9	2.9	2.9	2.9	2.9	1.9	1.0
80°	6.9	5.0	4.0	2.9	1.9	2.9	2.9	2.9	2.9	1.9	1.0
82.5°	4.0	2.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	1.9	1.0
85°	1.9	1.9	1.0	1.0	1.0	1.9	1.9	1.9	1.9	1.0	1.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	1.0	1.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4
2.5°	1494.0	1499.9	1502.0	1504.9	1521.7	1517.7	1532.6	1532.6	1544.4	1537.5	1544.4
5°	1532.6	1545.4	1551.3	1559.3	1583.0	1583.0	1600.8	1603.7	1619.6	1614.7	1621.6
7.5°	1557.3	1573.2	1581.1	1593.9	1619.6	1623.5	1640.4	1645.3	1664.1	1661.1	1665.1
10°	1552.3	1569.2	1579.1	1592.9	1619.6	1625.6	1640.4	1649.2	1667.1	1663.1	1665.1
12.5°	1521.7	1537.5	1548.4	1561.3	1588.9	1595.9	1608.7	1618.7	1635.4	1632.5	1632.5
15°	1464.4	1482.2	1491.1	1502.0	1528.7	1536.5	1546.5	1554.4	1573.2	1571.1	1568.2
17.5°	1378.4	1395.1	1402.0	1411.0	1436.7	1445.6	1453.5	1459.4	1477.2	1476.3	1471.3
20°	1273.6	1288.4	1294.3	1300.3	1323.0	1331.9	1337.8	1343.7	1358.6	1358.6	1351.7
22.5°	1158.8	1171.7	1175.7	1180.6	1200.3	1209.3	1212.2	1217.2	1231.0	1231.0	1222.1
25°	1037.2	1048.1	1050.0	1054.0	1070.8	1078.8	1079.8	1082.7	1096.5	1096.5	1087.6
27.5°	900.7	909.7	911.6	913.6	928.5	936.4	935.4	946.2	950.2	952.2	941.3
30°	747.5	762.3	754.4	763.3	768.3	776.2	773.2	784.1	787.1	790.0	776.2
32.5°	575.4	589.3	580.4	589.3	591.3	599.2	595.2	605.1	607.1	610.1	597.2
35°	403.4	414.3	406.3	409.4	416.3	424.2	419.2	428.2	430.1	431.1	421.2
37.5°	259.1	267.0	268.9	271.9	271.9	277.9	279.8	279.8	280.8	281.8	273.9
40°	155.3	161.2	162.2	161.2	164.1	169.1	170.1	169.1	170.1	171.0	166.1
42.5°	88.0	91.9	92.9	92.9	95.0	97.9	97.9	96.9	97.9	97.9	95.0
45°	48.4	50.5	51.4	50.5	51.4	53.4	53.4	53.4	53.4	53.4	52.4
47.5°	25.7	26.7	26.7	27.7	26.7	27.7	27.7	27.7	28.6	28.6	27.7
50°	13.8	14.8	14.8	14.8	14.8	15.8	15.8	15.8	15.8	15.8	14.8
52.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
55°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
57.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
60°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
62.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
65°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
67.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.0	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	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



TEST NUMBER: P135558

CATALOG NUMBER: LD6A15D010TE ERM6A15935 6LM111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1460.4	1460.4	1460.4	1460.4
2.5°	1547.5	1552.3	1545.4	1534.6
5°	1626.5	1632.5	1625.6	1615.6
7.5°	1670.0	1678.9	1671.1	1664.1
10°	1672.0	1680.9	1672.0	1668.0
12.5°	1639.4	1648.3	1638.4	1636.4
15°	1577.1	1584.0	1574.1	1575.1
17.5°	1481.2	1487.1	1477.2	1480.2
20°	1360.5	1366.5	1356.6	1362.5
22.5°	1231.0	1235.0	1233.0	1232.0
25°	1095.5	1098.5	1089.6	1095.5
27.5°	947.2	949.2	950.2	949.2
30°	783.1	784.1	778.2	788.0
32.5°	603.2	602.1	600.2	609.1
35°	424.2	424.2	424.2	432.1
37.5°	275.8	274.9	275.8	281.8
40°	167.1	166.1	167.1	171.0
42.5°	95.0	95.0	95.9	97.9
45°	53.4	52.4	52.4	53.4
47.5°	28.6	28.6	27.7	28.6
50°	15.8	15.8	14.8	15.8
52.5°	8.9	8.9	8.9	8.9
55°	6.9	6.9	6.9	6.9
57.5°	5.9	5.9	5.9	5.9
60°	5.0	5.0	5.0	5.0
62.5°	4.0	4.0	4.0	4.0
65°	2.9	4.0	2.9	2.9
67.5°	2.9	2.9	2.9	2.9
70°	1.9	1.9	1.9	1.9
72.5°	1.9	1.9	1.9	1.9
75°	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)