

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: P135559

Luminaire Tested: **LD6A15D010TE ERM6A15940 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135559
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 ERM6A15940 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1467.2 lumens
Efficiency: N/A
Efficacy: 64.9 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

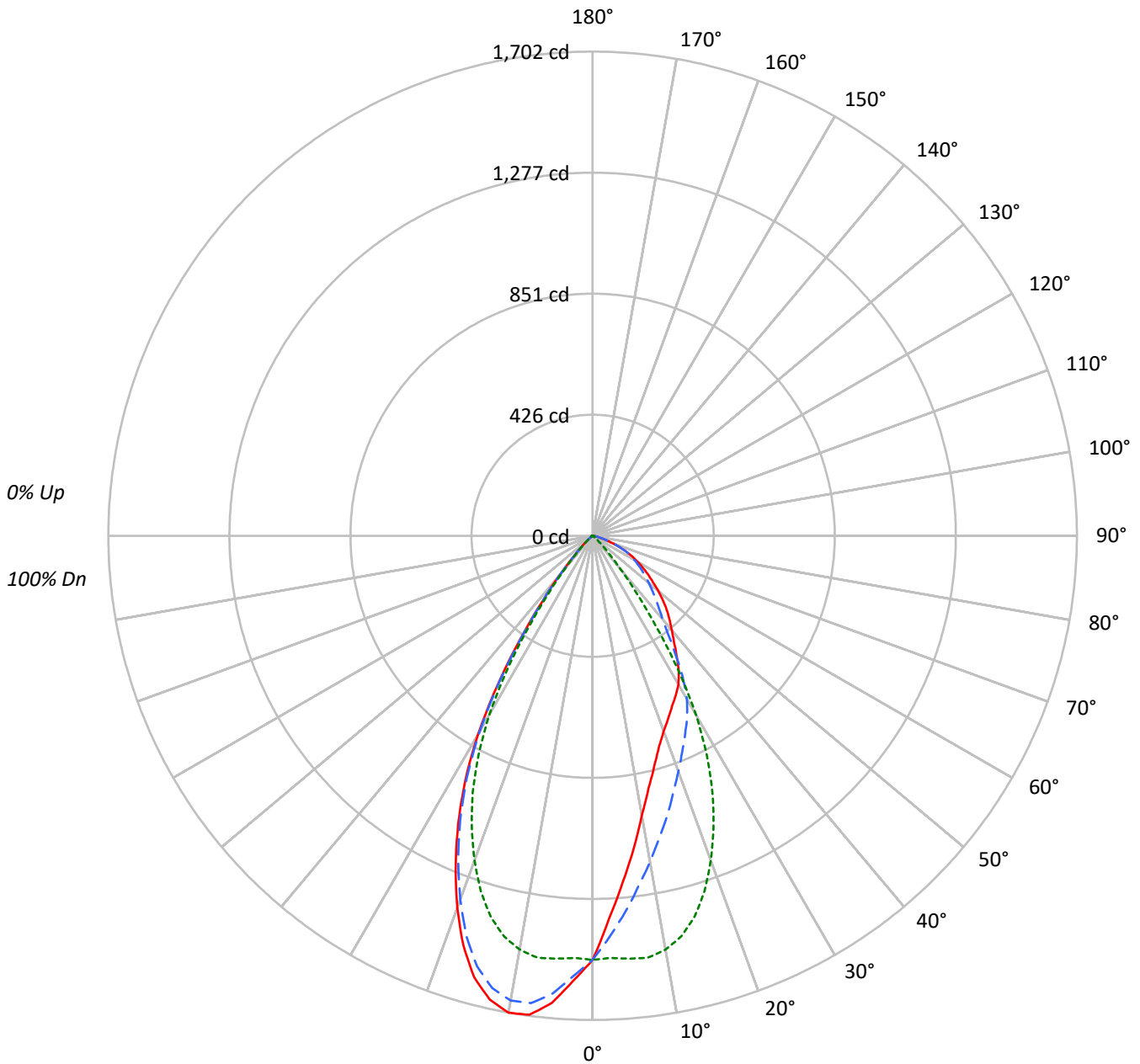
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135559

CATALOG NUMBER: LD6A15D010TE ERM6A15940 6LM111LI

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	97235	97235	97235
5°	79898	97737	107980
10°	66042	97860	112772
15°	56566	93573	108567
20°	50717	84278	96532
25°	47575	71762	80479
30°	45456	54730	60583
35°	40993	31021	35123
40°	36783	12639	14861
45°	33981	4373	5028
50°	30520	1533	1634
55°	26980	921	808
60°	23826	796	665
65°	19621	633	463
70°	13086	572	382
75°	7134	504	252
80°	3795	1127	0
85°	1497	1497	0



TEST NUMBER: P135559

CATALOG NUMBER: LD6A15D010TE ERM6A15940 6LM111LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.7	9.5
10°-20°	360.9	24.6
20°-30°	426.4	29.1
30°-40°	284.2	19.4
40°-50°	123.3	8.4
50°-60°	74.0	5.0
60°-70°	44.4	3.0
70°-80°	13.6	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°	926.1	63.1
0°-40°	1210.3	82.5
0°-60°	1407.5	95.9
0°-90°	1467.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1467.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1490	1490	1490	1490	1490	
5°	1220	1326	1492	1615	1649	110
15°	838	1015	1385	1568	1607	236
25°	661	769	997	1101	1118	305
35°	515	507	390	433	441	322
45°	368	312	47	54	54	283
55°	237	211	8	7	7	213
65°	127	126	4	3	3	125
75°	28	31	2	1	1	34
85°	2	3	2	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P135559

CATALOG NUMBER: LD6A15D010TE ERM6A15940 6LM111LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4
2.5°	1345.0	1368.2	1378.4	1385.4	1359.2	1387.4	1378.4	1391.4	1395.5	1408.6	1420.7
5°	1220.0	1242.2	1253.2	1261.3	1241.1	1273.4	1272.4	1289.6	1303.7	1325.9	1341.0
7.5°	1108.0	1118.0	1129.1	1140.2	1131.2	1160.4	1165.4	1189.7	1210.8	1241.1	1269.4
10°	996.9	1007.0	1018.1	1030.2	1026.2	1055.5	1066.5	1093.8	1122.1	1162.4	1192.7
12.5°	908.1	918.2	928.3	940.4	938.4	967.7	981.8	1011.1	1045.3	1085.8	1120.0
15°	837.5	846.6	856.7	864.7	866.8	894.0	909.1	937.4	973.7	1015.1	1050.4
17.5°	775.9	786.1	795.1	802.2	804.2	829.5	844.6	869.8	905.1	944.5	978.7
20°	730.5	739.7	747.7	754.8	754.8	777.0	790.0	813.2	844.6	880.8	910.1
22.5°	694.2	702.3	709.4	715.4	715.4	734.6	745.6	764.9	792.1	822.4	846.6
25°	660.9	669.0	675.0	680.1	679.1	697.3	706.3	720.5	743.6	768.9	787.1
27.5°	632.6	640.7	645.8	652.8	648.8	663.9	671.0	683.1	701.2	719.5	729.5
30°	603.4	611.5	616.5	622.6	618.5	631.6	635.7	641.8	653.8	662.9	663.9
32.5°	563.0	570.1	575.2	578.2	573.1	583.3	583.3	584.2	588.2	589.3	581.2
35°	514.7	519.6	523.7	524.7	518.6	524.7	523.7	516.6	514.7	506.6	490.4
37.5°	469.2	475.2	477.3	477.3	469.2	472.2	468.2	457.1	449.0	434.9	412.7
40°	431.9	436.9	437.9	436.9	428.8	429.8	423.8	410.7	399.6	382.4	354.2
42.5°	400.5	404.6	405.6	404.6	396.6	396.6	390.5	376.4	363.2	344.1	314.8
45°	368.3	372.4	374.4	372.4	365.3	365.3	358.2	345.1	331.9	311.8	282.6
47.5°	335.0	338.0	340.0	339.0	331.9	331.9	325.9	312.8	301.7	283.6	255.3
50°	300.7	304.8	306.8	305.8	299.7	299.7	294.6	282.6	273.4	257.3	232.1
52.5°	267.4	272.4	273.4	271.4	267.4	266.4	263.3	252.3	245.2	234.1	209.9
55°	237.2	241.1	241.1	241.1	236.1	235.1	233.1	224.0	219.9	210.9	190.7
57.5°	209.9	212.9	211.9	210.9	208.9	206.9	204.8	197.7	195.7	189.7	172.5
60°	182.6	185.7	184.7	183.6	181.6	179.6	177.6	172.5	172.5	168.5	154.4
62.5°	156.4	158.4	157.4	156.4	156.4	154.4	153.3	149.3	150.3	148.4	136.2
65°	127.1	130.1	129.1	129.1	130.1	130.1	129.1	127.1	127.1	126.1	116.0
67.5°	96.9	99.9	98.9	99.9	103.0	103.9	103.9	103.0	103.0	100.9	91.8
70°	68.6	70.6	70.6	71.7	74.7	75.7	78.7	75.7	75.7	73.7	66.6
72.5°	45.4	46.4	47.4	49.5	50.5	51.5	53.5	53.5	52.5	49.5	44.4
75°	28.3	29.3	29.3	30.3	31.3	32.3	34.4	33.3	32.3	31.3	27.3
77.5°	17.1	17.1	18.1	18.1	19.2	20.2	20.2	20.2	19.2	18.1	16.1
80°	10.1	10.1	10.1	11.1	11.1	11.1	11.1	11.1	11.1	10.1	9.1
82.5°	5.1	5.1	5.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1	5.1
85°	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0
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



TEST NUMBER: P135559

CATALOG NUMBER: LD6A15D010TE ERM6A15940 6LM111LI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4
2.5°	1432.8	1432.8	1429.9	1448.0	1471.2	1467.2	1468.2	1485.3	1492.4	1504.5	1515.6
5°	1367.2	1378.4	1386.4	1415.7	1449.0	1455.0	1466.1	1492.4	1508.5	1528.7	1547.8
7.5°	1301.6	1324.9	1344.0	1382.4	1425.8	1441.9	1462.1	1495.4	1516.6	1543.9	1570.0
10°	1234.0	1266.4	1294.6	1341.0	1391.4	1414.7	1439.9	1477.2	1505.5	1534.8	1564.0
12.5°	1166.4	1205.8	1241.1	1292.6	1346.0	1374.3	1402.6	1441.9	1472.2	1502.4	1532.7
15°	1099.9	1142.2	1179.5	1234.0	1288.6	1317.8	1346.0	1385.4	1417.7	1446.0	1476.2
17.5°	1026.2	1073.6	1108.0	1159.4	1211.9	1241.1	1272.4	1308.7	1337.0	1361.2	1390.4
20°	954.5	998.9	1030.2	1077.7	1125.1	1152.4	1181.6	1213.9	1239.1	1260.3	1287.6
22.5°	884.9	924.3	953.5	996.9	1033.3	1056.5	1081.7	1109.9	1132.2	1149.3	1173.5
25°	817.3	848.6	870.8	905.1	934.4	952.5	973.7	996.9	1016.1	1030.2	1052.4
27.5°	749.7	770.9	779.0	800.2	818.3	838.5	849.6	867.8	884.9	896.0	915.2
30°	672.1	679.1	672.1	678.0	683.1	692.2	705.3	726.5	734.6	741.7	760.8
32.5°	575.2	570.1	546.9	537.8	531.8	540.8	542.8	559.0	564.0	570.1	585.2
35°	473.2	455.1	417.8	394.6	380.4	381.4	372.4	389.5	392.5	398.6	409.7
37.5°	386.5	357.2	308.8	276.5	255.3	250.2	239.2	249.2	250.2	254.3	262.4
40°	322.9	281.5	227.0	188.7	165.5	155.4	144.3	148.4	148.4	151.3	156.4
42.5°	278.5	234.1	172.5	131.2	105.9	93.8	84.7	84.7	84.7	85.7	88.8
45°	245.2	195.7	134.2	91.8	68.6	56.5	47.4	47.4	46.4	46.4	48.4
47.5°	217.9	168.5	105.9	67.6	44.4	33.3	27.3	25.2	24.2	25.2	26.2
50°	195.7	147.4	87.8	51.5	31.3	22.2	17.1	15.1	14.1	14.1	14.1
52.5°	176.6	130.1	73.7	41.4	24.2	16.1	12.1	10.1	9.1	9.1	9.1
55°	160.4	115.0	63.5	34.4	20.2	14.1	10.1	8.1	7.1	7.1	7.1
57.5°	144.3	102.0	54.5	29.3	17.1	12.1	9.1	7.1	6.1	6.1	6.1
60°	128.1	88.8	47.4	24.2	14.1	10.1	8.1	6.1	5.1	5.1	5.1
62.5°	112.0	75.7	39.3	20.2	12.1	9.1	6.1	5.1	5.1	4.1	4.1
65°	92.8	61.5	32.3	17.1	10.1	7.1	6.1	4.1	4.1	4.1	4.1
67.5°	72.7	47.4	24.2	13.1	8.1	6.1	5.1	4.1	3.0	3.0	3.0
70°	51.5	33.3	18.1	10.1	7.1	5.1	4.1	3.0	3.0	3.0	2.0
72.5°	34.4	22.2	13.1	8.1	6.1	4.1	3.0	3.0	2.0	2.0	2.0
75°	22.2	14.1	9.1	6.1	4.1	4.1	3.0	2.0	2.0	2.0	1.0
77.5°	13.1	9.1	6.1	4.1	3.0	3.0	3.0	3.0	3.0	2.0	1.0
80°	7.1	5.1	4.1	3.0	2.0	3.0	3.0	3.0	3.0	2.0	1.0
82.5°	4.1	3.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	1.0
85°	2.0	2.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	1.0	1.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	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



TEST NUMBER: P135559

CATALOG NUMBER: LD6A15D010TE ERM6A15940 6LM111LI

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4
2.5°	1524.6	1530.7	1532.7	1535.8	1552.9	1548.8	1564.0	1564.0	1576.1	1569.0	1576.1
5°	1564.0	1577.1	1583.2	1591.2	1615.4	1615.4	1633.7	1636.6	1652.8	1647.8	1654.9
7.5°	1589.3	1605.4	1613.4	1626.6	1652.8	1656.9	1674.0	1679.1	1698.2	1695.2	1699.2
10°	1584.2	1601.3	1611.5	1625.6	1652.8	1658.8	1674.0	1683.0	1701.3	1697.2	1699.2
12.5°	1552.9	1569.0	1580.2	1593.2	1621.5	1628.6	1641.7	1651.8	1668.9	1665.9	1665.9
15°	1494.4	1512.6	1521.6	1532.7	1560.0	1568.0	1578.1	1586.2	1605.4	1603.4	1600.3
17.5°	1406.6	1423.8	1430.8	1439.9	1466.1	1475.3	1483.3	1489.3	1507.5	1506.5	1501.4
20°	1299.6	1314.8	1320.8	1326.9	1350.1	1359.2	1365.2	1371.3	1386.4	1386.4	1379.4
22.5°	1182.6	1195.7	1199.8	1204.8	1224.9	1234.0	1237.1	1242.2	1256.2	1256.2	1247.1
25°	1058.5	1069.6	1071.6	1075.6	1092.8	1100.9	1101.9	1104.9	1119.0	1119.0	1109.9
27.5°	919.3	928.3	930.3	932.3	947.5	955.5	954.5	965.7	969.7	971.7	960.6
30°	762.9	778.0	769.9	779.0	784.0	792.1	789.1	800.2	803.2	806.2	792.1
32.5°	587.2	601.4	592.3	601.4	603.4	611.5	607.4	617.5	619.6	622.6	609.4
35°	411.7	422.8	414.7	417.8	424.8	432.9	427.8	436.9	438.9	440.0	429.8
37.5°	264.3	272.4	274.5	277.5	277.5	283.6	285.6	285.6	286.5	287.5	279.5
40°	158.4	164.5	165.5	164.5	167.5	172.5	173.5	172.5	173.5	174.5	169.6
42.5°	89.8	93.8	94.9	94.9	96.9	99.9	99.9	98.9	99.9	99.9	96.9
45°	49.5	51.5	52.5	51.5	52.5	54.5	54.5	54.5	54.5	54.5	53.5
47.5°	26.2	27.3	27.3	28.3	27.3	28.3	28.3	28.3	29.3	29.3	28.3
50°	14.1	15.1	15.1	15.1	15.1	16.1	16.1	16.1	16.1	16.1	15.1
52.5°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
55°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
57.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
60°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
62.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
65°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
67.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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: P135559

CATALOG NUMBER: LD6A15D010TE ERM6A15940 6LM111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1490.4	1490.4	1490.4	1490.4
2.5°	1579.1	1584.2	1577.1	1566.1
5°	1659.8	1665.9	1658.8	1648.8
7.5°	1704.3	1713.3	1705.2	1698.2
10°	1706.2	1715.4	1706.2	1702.3
12.5°	1673.0	1682.0	1672.0	1670.0
15°	1609.4	1616.4	1606.4	1607.4
17.5°	1511.5	1517.6	1507.5	1510.5
20°	1388.4	1394.5	1384.4	1390.4
22.5°	1256.2	1260.3	1258.3	1257.3
25°	1118.0	1121.0	1111.9	1118.0
27.5°	966.7	968.7	969.7	968.7
30°	799.2	800.2	794.1	804.2
32.5°	615.5	614.5	612.5	621.6
35°	432.9	432.9	432.9	441.0
37.5°	281.5	280.5	281.5	287.5
40°	170.6	169.6	170.6	174.5
42.5°	96.9	96.9	97.9	99.9
45°	54.5	53.5	53.5	54.5
47.5°	29.3	29.3	28.3	29.3
50°	16.1	16.1	15.1	16.1
52.5°	9.1	9.1	9.1	9.1
55°	7.1	7.1	7.1	7.1
57.5°	6.1	6.1	6.1	6.1
60°	5.1	5.1	5.1	5.1
62.5°	4.1	4.1	4.1	4.1
65°	3.0	4.1	3.0	3.0
67.5°	3.0	3.0	3.0	3.0
70°	2.0	2.0	2.0	2.0
72.5°	2.0	2.0	2.0	2.0
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



Report Generated By E9808895 / USPTCWHP6082093





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













(END OF REPORT)