

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: P135555

Luminaire Tested: **LD6A15D010TE ERM6A15840 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135555
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 ERM6A15840 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: 1593.0 lumens
Efficiency: N/A
Efficacy: 70.5 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

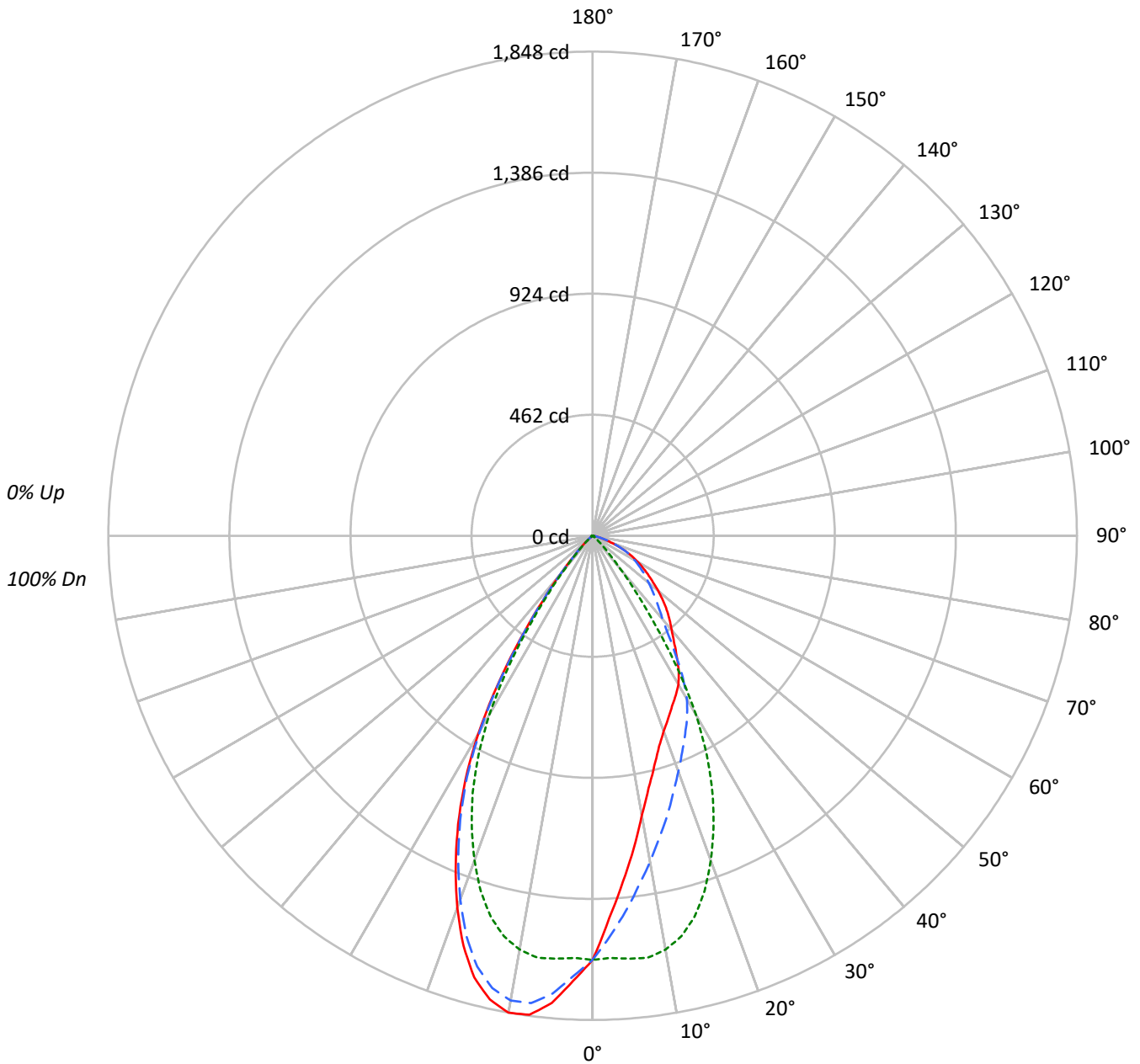
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	92	104	99	95	91	96	92	89	93	90	87	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°	105572	105572	105572
5°	86748	106120	117240
10°	71706	106254	122444
15°	61416	101597	117881
20°	55070	91506	104815
25°	51656	77917	87383
30°	49358	59423	65781
35°	44505	33681	38134
40°	39934	13720	16139
45°	36896	4752	5462
50°	33139	1665	1776
55°	29289	1001	876
60°	25874	861	718
65°	21303	679	509
70°	14211	629	420
75°	7739	555	277
80°	4133	1240	0
85°	1647	1647	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.6	9.5
10°-20°	391.9	24.6
20°-30°	463.0	29.1
30°-40°	308.6	19.4
40°-50°	133.8	8.4
50°-60°	80.3	5.0
60°-70°	48.2	3.0
70°-80°	14.8	0.9
80°-90°	1.9	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°	1005.5	63.1
0°-40°	1314.1	82.5
0°-60°	1528.2	95.9
0°-90°	1593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1593.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1618	1618	1618	1618	1618	
5°	1325	1440	1620	1754	1790	120
15°	909	1102	1504	1702	1745	256
25°	718	835	1082	1195	1214	332
35°	559	550	423	470	479	350
45°	400	338	52	59	59	308
55°	258	229	9	8	8	232
65°	138	137	4	3	3	136
75°	31	34	2	1	1	37
85°	2	3	2	0	0	4
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°	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2
2.5°	1460.4	1485.6	1496.6	1504.2	1475.8	1506.4	1496.6	1510.8	1515.2	1529.4	1542.6
5°	1324.6	1348.7	1360.7	1369.5	1347.6	1382.6	1381.5	1400.2	1415.5	1439.6	1456.0
7.5°	1203.0	1213.9	1226.0	1238.0	1228.2	1259.9	1265.4	1291.7	1314.7	1347.6	1378.3
10°	1082.4	1093.4	1105.4	1118.6	1114.2	1146.0	1158.0	1187.6	1218.3	1262.1	1295.0
12.5°	986.0	997.0	1007.9	1021.1	1018.9	1050.7	1066.0	1097.8	1135.0	1178.9	1216.1
15°	909.3	919.2	930.2	938.9	941.1	970.7	987.1	1017.8	1057.2	1102.2	1140.5
17.5°	842.5	853.5	863.3	871.0	873.2	900.6	917.0	944.4	982.7	1025.5	1062.7
20°	793.2	803.1	811.8	819.5	819.5	843.6	857.8	883.0	917.0	956.4	988.2
22.5°	753.8	762.5	770.2	776.8	776.8	797.6	809.6	830.5	860.0	892.9	919.2
25°	717.6	726.4	732.9	738.4	737.3	757.1	766.9	782.3	807.4	834.8	854.6
27.5°	686.9	695.7	701.2	708.8	704.5	720.9	728.6	741.7	761.4	781.2	792.1
30°	655.2	663.9	669.4	676.0	671.6	685.8	690.2	696.8	709.9	719.8	720.9
32.5°	611.3	619.0	624.5	627.8	622.3	633.3	633.3	634.3	638.7	639.8	631.1
35°	558.8	564.2	568.6	569.7	563.1	569.7	568.6	560.9	558.8	550.0	532.5
37.5°	509.4	516.0	518.2	518.2	509.4	512.7	508.4	496.3	487.5	472.2	448.1
40°	468.9	474.4	475.5	474.4	465.6	466.7	460.1	445.9	433.9	415.2	384.6
42.5°	434.9	439.3	440.4	439.3	430.6	430.6	424.0	408.7	394.4	373.6	341.8
45°	399.9	404.3	406.5	404.3	396.6	396.6	388.9	374.7	360.4	338.5	306.8
47.5°	363.7	367.0	369.2	368.1	360.4	360.4	353.9	339.6	327.6	307.9	277.2
50°	326.5	330.9	333.1	332.0	325.4	325.4	319.9	306.8	296.9	279.4	252.0
52.5°	290.3	295.8	296.9	294.7	290.3	289.2	285.9	273.9	266.2	254.2	227.9
55°	257.5	261.8	261.8	261.8	256.4	255.3	253.1	243.2	238.8	229.0	207.1
57.5°	227.9	231.2	230.1	229.0	226.8	224.6	222.4	214.7	212.5	206.0	187.3
60°	198.3	201.6	200.5	199.4	197.2	195.0	192.8	187.3	187.3	183.0	167.6
62.5°	169.8	172.0	170.9	169.8	169.8	167.6	166.5	162.1	163.2	161.1	147.9
65°	138.0	141.3	140.2	140.2	141.3	141.3	140.2	138.0	138.0	136.9	126.0
67.5°	105.2	108.5	107.4	108.5	111.8	112.8	112.8	111.8	111.8	109.6	99.7
70°	74.5	76.7	76.7	77.8	81.1	82.2	85.5	82.2	82.2	80.0	72.3
72.5°	49.3	50.4	51.5	53.7	54.8	55.9	58.1	58.1	57.0	53.7	48.2
75°	30.7	31.8	31.8	32.9	34.0	35.1	37.3	36.2	35.1	34.0	29.6
77.5°	18.6	18.6	19.7	19.7	20.8	21.9	21.9	21.9	20.8	19.7	17.5
80°	11.0	11.0	11.0	12.1	12.1	12.1	12.1	12.1	12.1	11.0	9.9
82.5°	5.5	5.5	5.5	6.6	6.6	6.6	6.6	6.6	6.6	5.5	5.5
85°	2.2	2.2	2.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.2
87.5°	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1	1.1	1.1
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°	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2
2.5°	1555.7	1555.7	1552.5	1572.2	1597.4	1593.0	1594.1	1612.7	1620.4	1633.5	1645.6
5°	1484.5	1496.6	1505.3	1537.1	1573.3	1579.8	1591.9	1620.4	1637.9	1659.8	1680.6
7.5°	1413.3	1438.5	1459.3	1501.0	1548.1	1565.6	1587.5	1623.7	1646.7	1676.3	1704.7
10°	1339.9	1375.0	1405.6	1456.0	1510.8	1536.0	1563.4	1603.9	1634.6	1666.4	1698.2
12.5°	1266.5	1309.2	1347.6	1403.5	1461.5	1492.2	1522.9	1565.6	1598.5	1631.3	1664.2
15°	1194.2	1240.2	1280.7	1339.9	1399.1	1430.8	1461.5	1504.2	1539.3	1570.0	1602.8
17.5°	1114.2	1165.7	1203.0	1258.8	1315.8	1347.6	1381.5	1421.0	1451.7	1478.0	1509.7
20°	1036.4	1084.6	1118.6	1170.1	1221.6	1251.2	1282.9	1318.0	1345.4	1368.4	1398.0
22.5°	960.8	1003.6	1035.3	1082.4	1121.9	1147.1	1174.5	1205.1	1229.3	1247.9	1274.2
25°	887.4	921.4	945.5	982.7	1014.5	1034.2	1057.2	1082.4	1103.3	1118.6	1142.7
27.5°	814.0	837.0	845.8	868.8	888.5	910.4	922.5	942.2	960.8	972.9	993.7
30°	729.7	737.3	729.7	736.2	741.7	751.6	765.8	788.8	797.6	805.3	826.1
32.5°	624.5	619.0	593.8	583.9	577.4	587.2	589.4	607.0	612.4	619.0	635.4
35°	513.8	494.1	453.6	428.4	413.0	414.1	404.3	422.9	426.2	432.8	444.8
37.5°	419.6	387.8	335.3	300.2	277.2	271.7	259.7	270.6	271.7	276.1	284.9
40°	350.6	305.7	246.5	204.9	179.7	168.7	156.7	161.1	161.1	164.3	169.8
42.5°	302.4	254.2	187.3	142.4	115.0	101.9	92.0	92.0	92.0	93.1	96.4
45°	266.2	212.5	145.7	99.7	74.5	61.4	51.5	51.5	50.4	50.4	52.6
47.5°	236.6	183.0	115.0	73.4	48.2	36.2	29.6	27.4	26.3	27.4	28.5
50°	212.5	160.0	95.3	55.9	34.0	24.1	18.6	16.4	15.3	15.3	15.3
52.5°	191.7	141.3	80.0	44.9	26.3	17.5	13.1	11.0	9.9	9.9	9.9
55°	174.2	124.9	69.0	37.3	21.9	15.3	11.0	8.8	7.7	7.7	7.7
57.5°	156.7	110.7	59.2	31.8	18.6	13.1	9.9	7.7	6.6	6.6	6.6
60°	139.1	96.4	51.5	26.3	15.3	11.0	8.8	6.6	5.5	5.5	5.5
62.5°	121.6	82.2	42.7	21.9	13.1	9.9	6.6	5.5	5.5	4.4	4.4
65°	100.8	66.8	35.1	18.6	11.0	7.7	6.6	4.4	4.4	4.4	4.4
67.5°	78.9	51.5	26.3	14.2	8.8	6.6	5.5	4.4	3.3	3.3	3.3
70°	55.9	36.2	19.7	11.0	7.7	5.5	4.4	3.3	3.3	3.3	2.2
72.5°	37.3	24.1	14.2	8.8	6.6	4.4	3.3	3.3	2.2	2.2	2.2
75°	24.1	15.3	9.9	6.6	4.4	4.4	3.3	2.2	2.2	2.2	1.1
77.5°	14.2	9.9	6.6	4.4	3.3	3.3	3.3	3.3	3.3	2.2	1.1
80°	7.7	5.5	4.4	3.3	2.2	3.3	3.3	3.3	3.3	2.2	1.1
82.5°	4.4	3.3	2.2	2.2	2.2	2.2	2.2	3.3	3.3	2.2	1.1
85°	2.2	2.2	1.1	1.1	1.1	2.2	2.2	2.2	2.2	1.1	1.1
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2	1.1	1.1
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°	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2	1618.2
2.5°	1655.4	1662.0	1664.2	1667.5	1686.1	1681.7	1698.2	1698.2	1711.3	1703.6	1711.3
5°	1698.2	1712.4	1719.0	1727.7	1754.0	1754.0	1773.8	1777.0	1794.6	1789.1	1796.8
7.5°	1725.6	1743.1	1751.8	1766.1	1794.6	1799.0	1817.6	1823.1	1843.9	1840.6	1845.0
10°	1720.1	1738.7	1749.7	1765.0	1794.6	1801.1	1817.6	1827.4	1847.2	1842.8	1845.0
12.5°	1686.1	1703.6	1715.7	1729.9	1760.6	1768.3	1782.5	1793.5	1812.1	1808.8	1808.8
15°	1622.6	1642.3	1652.1	1664.2	1693.8	1702.5	1713.5	1722.3	1743.1	1740.9	1737.6
17.5°	1527.3	1545.9	1553.5	1563.4	1591.9	1601.8	1610.5	1617.1	1636.8	1635.7	1630.2
20°	1411.1	1427.6	1434.1	1440.7	1465.9	1475.8	1482.3	1488.9	1505.3	1505.3	1497.7
22.5°	1284.0	1298.3	1302.7	1308.1	1330.0	1339.9	1343.2	1348.7	1364.0	1364.0	1354.1
25°	1149.3	1161.3	1163.5	1167.9	1186.5	1195.3	1196.4	1199.7	1215.0	1215.0	1205.1
27.5°	998.1	1007.9	1010.1	1012.3	1028.8	1037.5	1036.4	1048.5	1052.9	1055.1	1043.0
30°	828.3	844.7	835.9	845.8	851.3	860.0	856.8	868.8	872.1	875.4	860.0
32.5°	637.6	653.0	643.1	653.0	655.2	663.9	659.5	670.5	672.7	676.0	661.7
35°	447.0	459.1	450.3	453.6	461.2	470.0	464.5	474.4	476.6	477.7	466.7
37.5°	287.0	295.8	298.0	301.3	301.3	307.9	310.1	310.1	311.1	312.2	303.5
40°	172.0	178.6	179.7	178.6	181.9	187.3	188.4	187.3	188.4	189.5	184.1
42.5°	97.5	101.9	103.0	103.0	105.2	108.5	108.5	107.4	108.5	108.5	105.2
45°	53.7	55.9	57.0	55.9	57.0	59.2	59.2	59.2	59.2	59.2	58.1
47.5°	28.5	29.6	29.6	30.7	29.6	30.7	30.7	30.7	31.8	31.8	30.7
50°	15.3	16.4	16.4	16.4	16.4	17.5	17.5	17.5	17.5	17.5	16.4
52.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
55°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
57.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
60°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
62.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
65°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
67.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
70°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
75°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.1	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: P135555

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1618.2	1618.2	1618.2	1618.2
2.5°	1714.6	1720.1	1712.4	1700.4
5°	1802.2	1808.8	1801.1	1790.2
7.5°	1850.5	1860.3	1851.5	1843.9
10°	1852.6	1862.5	1852.6	1848.3
12.5°	1816.5	1826.3	1815.4	1813.2
15°	1747.5	1755.1	1744.2	1745.3
17.5°	1641.2	1647.8	1636.8	1640.1
20°	1507.5	1514.1	1503.1	1509.7
22.5°	1364.0	1368.4	1366.2	1365.1
25°	1213.9	1217.2	1207.3	1213.9
27.5°	1049.6	1051.8	1052.9	1051.8
30°	867.7	868.8	862.2	873.2
32.5°	668.3	667.2	665.0	674.9
35°	470.0	470.0	470.0	478.8
37.5°	305.7	304.6	305.7	312.2
40°	185.2	184.1	185.2	189.5
42.5°	105.2	105.2	106.3	108.5
45°	59.2	58.1	58.1	59.2
47.5°	31.8	31.8	30.7	31.8
50°	17.5	17.5	16.4	17.5
52.5°	9.9	9.9	9.9	9.9
55°	7.7	7.7	7.7	7.7
57.5°	6.6	6.6	6.6	6.6
60°	5.5	5.5	5.5	5.5
62.5°	4.4	4.4	4.4	4.4
65°	3.3	4.4	3.3	3.3
67.5°	3.3	3.3	3.3	3.3
70°	2.2	2.2	2.2	2.2
72.5°	2.2	2.2	2.2	2.2
75°	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1
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)