

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: P135554

Luminaire Tested: **LD6A15D010TE ERM6A15835 6LM111LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135554  
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 ERM6A15835 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**

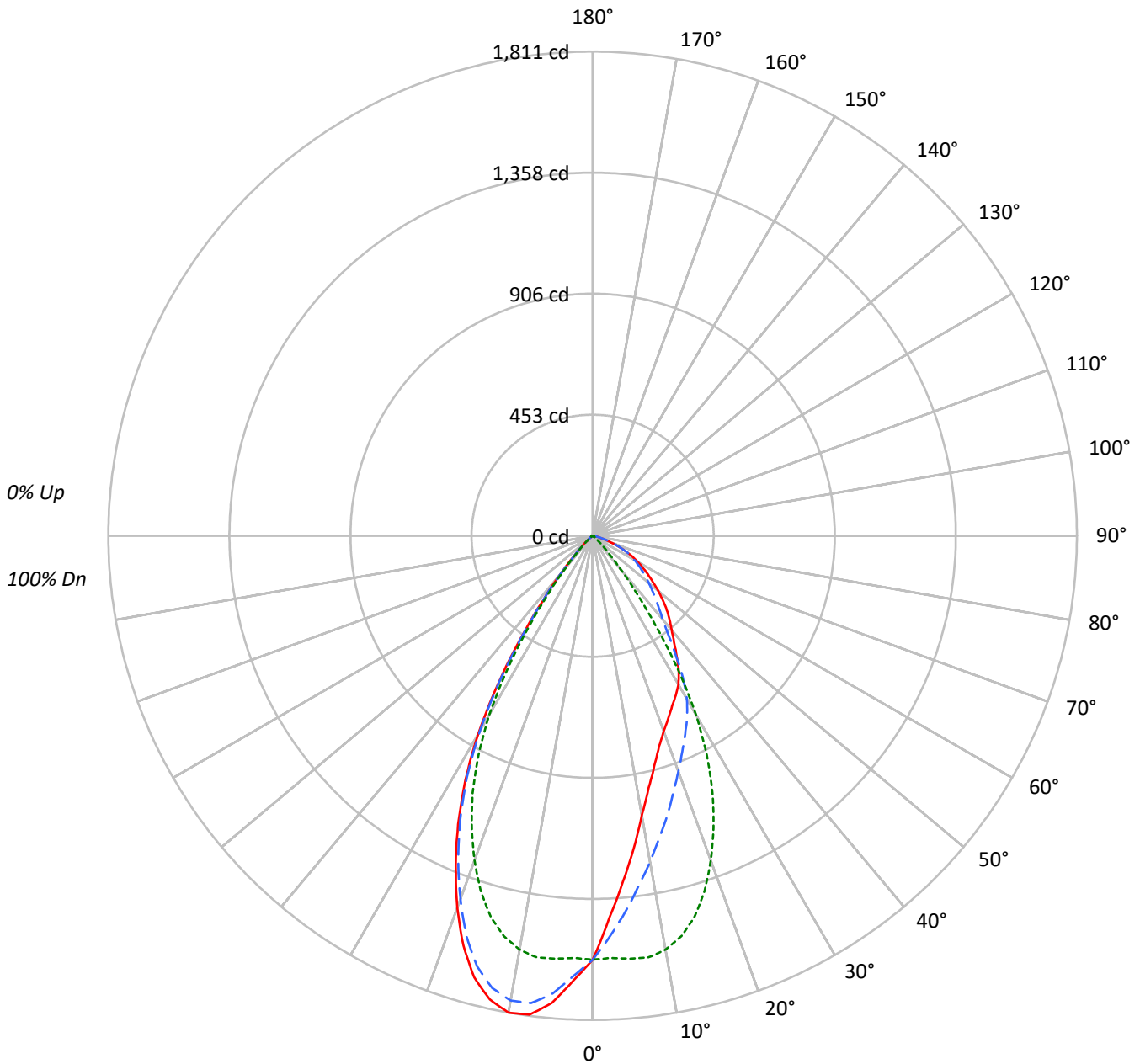
Lumens per Lamp: N/A  
Luminaire Lumens: 1561.0 lumens  
Efficiency: N/A  
Efficacy: 69.1 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.93 / 0.89  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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																			
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92																			
2	106	101	96	93	104	99	95	91	96	92	89	93	90	88	90	88	86	84																			
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77																			
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71																			
5	89	80	74	69	88	79	73	69	77	72	68	75	71	67	74	70	67	65																			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60																			
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56																			
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52																			
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49																			
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	103452	103452	103452
5°	85006	103985	114882
10°	70268	104121	119980
15°	60187	99557	115510
20°	53966	89666	102711
25°	50620	76355	85626
30°	48364	58233	64455
35°	43605	33005	37369
40°	39134	13439	15815
45°	36158	4659	5351
50°	32469	1634	1746
55°	28698	978	853
60°	25353	835	705
65°	20887	664	494
70°	13925	610	401
75°	7587	529	277
80°	4020	1202	0
85°	1572	1572	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.6	9.5
10°-20°	384.0	24.6
20°-30°	453.7	29.1
30°-40°	302.4	19.4
40°-50°	131.1	8.4
50°-60°	78.7	5.0
60°-70°	47.2	3.0
70°-80°	14.5	0.9
80°-90°	1.8	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°	985.3	63.1
0°-40°	1287.7	82.5
0°-60°	1497.5	95.9
0°-90°	1561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1561.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1586	1586	1586	1586	1586	
5°	1298	1411	1588	1719	1754	117
15°	891	1080	1474	1668	1710	251
25°	703	818	1061	1171	1190	325
35°	548	539	414	461	469	343
45°	392	332	50	58	58	301
55°	252	224	9	8	8	227
65°	135	134	4	3	3	133
75°	30	33	2	1	1	36
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°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1431.1	1455.8	1466.5	1474.0	1446.1	1476.2	1466.5	1480.5	1484.8	1498.7	1511.6
5°	1298.0	1321.6	1333.4	1342.0	1320.5	1354.9	1353.8	1372.0	1387.1	1410.7	1426.8
7.5°	1178.8	1189.5	1201.3	1213.1	1203.5	1234.6	1240.0	1265.8	1288.3	1320.5	1350.6
10°	1060.7	1071.4	1083.2	1096.1	1091.8	1123.0	1134.8	1163.8	1193.8	1236.8	1269.0
12.5°	966.2	977.0	987.7	1000.6	998.4	1029.6	1044.6	1075.7	1112.2	1155.2	1191.7
15°	891.1	900.7	911.5	920.1	922.2	951.2	967.3	997.4	1036.0	1080.0	1117.6
17.5°	825.6	836.3	846.0	853.5	855.6	882.5	898.6	925.4	963.0	1004.9	1041.4
20°	777.3	786.9	795.5	803.0	803.0	826.7	840.6	865.3	898.6	937.2	968.4
22.5°	738.6	747.2	754.7	761.2	761.2	781.6	793.4	813.8	842.8	875.0	900.7
25°	703.2	711.8	718.2	723.6	722.5	741.8	751.5	766.5	791.2	818.1	837.4
27.5°	673.1	681.7	687.1	694.6	690.3	706.4	713.9	726.8	746.1	765.5	776.2
30°	642.0	650.6	656.0	662.4	658.1	672.1	676.4	682.8	695.7	705.3	706.4
32.5°	599.1	606.6	611.9	615.2	609.8	620.5	620.5	621.6	625.9	627.0	618.4
35°	547.5	552.9	557.2	558.3	551.8	558.3	557.2	549.7	547.5	538.9	521.8
37.5°	499.2	505.7	507.8	507.8	499.2	502.4	498.1	486.3	477.7	462.7	439.1
40°	459.5	464.9	465.9	464.9	456.3	457.3	450.9	436.9	425.1	406.9	376.8
42.5°	426.2	430.5	431.6	430.5	421.9	421.9	415.5	400.4	386.5	366.1	335.0
45°	391.9	396.2	398.3	396.2	388.6	388.6	381.1	367.2	353.2	331.7	300.6
47.5°	356.4	359.6	361.8	360.7	353.2	353.2	346.8	332.8	321.0	301.7	271.6
50°	319.9	324.2	326.4	325.3	318.9	318.9	313.5	300.6	290.9	273.8	246.9
52.5°	284.5	289.9	290.9	288.8	284.5	283.4	280.2	268.4	260.9	249.1	223.3
55°	252.3	256.6	256.6	256.6	251.2	250.1	248.0	238.3	234.0	224.4	202.9
57.5°	223.3	226.5	225.5	224.4	222.2	220.1	217.9	210.4	208.3	201.8	183.6
60°	194.3	197.5	196.5	195.4	193.2	191.1	189.0	183.6	183.6	179.3	164.3
62.5°	166.4	168.6	167.5	166.4	166.4	164.3	163.2	158.9	160.0	157.8	144.9
65°	135.3	138.5	137.4	137.4	138.5	138.5	137.4	135.3	135.3	134.2	123.5
67.5°	103.1	106.3	105.2	106.3	109.5	110.6	110.6	109.5	109.5	107.4	97.7
70°	73.0	75.2	75.2	76.2	79.4	80.5	83.7	80.5	80.5	78.4	70.9
72.5°	48.3	49.4	50.5	52.6	53.7	54.8	56.9	56.9	55.8	52.6	47.2
75°	30.1	31.1	31.1	32.2	33.3	34.4	36.5	35.4	34.4	33.3	29.0
77.5°	18.3	18.3	19.3	19.3	20.4	21.5	21.5	21.5	20.4	19.3	17.2
80°	10.7	10.7	10.7	11.8	11.8	11.8	11.8	11.8	11.8	10.7	9.7
82.5°	5.4	5.4	5.4	6.4	6.4	6.4	6.4	6.4	6.4	5.4	5.4
85°	2.1	2.1	2.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.1
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°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1524.5	1524.5	1521.3	1540.6	1565.3	1561.0	1562.1	1580.3	1587.8	1600.7	1612.5
5°	1454.7	1466.5	1475.1	1506.2	1541.7	1548.1	1559.9	1587.8	1605.0	1626.5	1646.9
7.5°	1384.9	1409.6	1430.0	1470.8	1517.0	1534.1	1555.6	1591.0	1613.6	1642.6	1670.5
10°	1313.0	1347.3	1377.4	1426.8	1480.5	1505.2	1532.0	1571.7	1601.8	1632.9	1664.1
12.5°	1241.1	1282.9	1320.5	1375.3	1432.2	1462.2	1492.3	1534.1	1566.4	1598.6	1630.8
15°	1170.2	1215.3	1255.0	1313.0	1371.0	1402.1	1432.2	1474.0	1508.4	1538.4	1570.6
17.5°	1091.8	1142.3	1178.8	1233.5	1289.4	1320.5	1353.8	1392.4	1422.5	1448.3	1479.4
20°	1015.6	1062.8	1096.1	1146.6	1197.0	1226.0	1257.2	1291.5	1318.4	1340.9	1369.9
22.5°	941.5	983.4	1014.5	1060.7	1099.3	1124.0	1150.9	1180.9	1204.6	1222.8	1248.6
25°	869.6	902.9	926.5	963.0	994.1	1013.5	1036.0	1060.7	1081.1	1096.1	1119.7
27.5°	797.7	820.2	828.8	851.4	870.7	892.1	904.0	923.3	941.5	953.3	973.7
30°	715.0	722.5	715.0	721.4	726.8	736.5	750.4	773.0	781.6	789.1	809.5
32.5°	611.9	606.6	581.9	572.2	565.8	575.4	577.6	594.8	600.1	606.6	622.7
35°	503.5	484.2	444.5	419.8	404.7	405.8	396.2	414.4	417.6	424.1	435.9
37.5°	411.2	380.0	328.5	294.2	271.6	266.2	254.4	265.2	266.2	270.5	279.1
40°	343.5	299.5	241.6	200.8	176.1	165.3	153.5	157.8	157.8	161.0	166.4
42.5°	296.3	249.1	183.6	139.6	112.7	99.8	90.2	90.2	90.2	91.3	94.5
45°	260.9	208.3	142.8	97.7	73.0	60.1	50.5	50.5	49.4	49.4	51.5
47.5°	231.9	179.3	112.7	71.9	47.2	35.4	29.0	26.8	25.8	26.8	27.9
50°	208.3	156.7	93.4	54.8	33.3	23.6	18.3	16.1	15.0	15.0	15.0
52.5°	187.9	138.5	78.4	44.0	25.8	17.2	12.9	10.7	9.7	9.7	9.7
55°	170.7	122.4	67.6	36.5	21.5	15.0	10.7	8.6	7.5	7.5	7.5
57.5°	153.5	108.4	58.0	31.1	18.3	12.9	9.7	7.5	6.4	6.4	6.4
60°	136.3	94.5	50.5	25.8	15.0	10.7	8.6	6.4	5.4	5.4	5.4
62.5°	119.2	80.5	41.9	21.5	12.9	9.7	6.4	5.4	5.4	4.3	4.3
65°	98.8	65.5	34.4	18.3	10.7	7.5	6.4	4.3	4.3	4.3	4.3
67.5°	77.3	50.5	25.8	14.0	8.6	6.4	5.4	4.3	3.2	3.2	3.2
70°	54.8	35.4	19.3	10.7	7.5	5.4	4.3	3.2	3.2	3.2	2.1
72.5°	36.5	23.6	14.0	8.6	6.4	4.3	3.2	3.2	2.1	2.1	2.1
75°	23.6	15.0	9.7	6.4	4.3	4.3	3.2	2.1	2.1	2.1	1.1
77.5°	14.0	9.7	6.4	4.3	3.2	3.2	3.2	3.2	3.2	2.1	1.1
80°	7.5	5.4	4.3	3.2	2.1	3.2	3.2	3.2	3.2	2.1	1.1
82.5°	4.3	3.2	2.1	2.1	2.1	2.1	2.1	3.2	3.2	2.1	1.1
85°	2.1	2.1	1.1	1.1	1.1	2.1	2.1	2.1	2.1	1.1	1.1
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.1	2.1	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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7	1585.7
2.5°	1622.2	1628.6	1630.8	1634.0	1652.2	1647.9	1664.1	1664.1	1676.9	1669.4	1676.9
5°	1664.1	1678.0	1684.4	1693.0	1718.8	1718.8	1738.1	1741.3	1758.5	1753.2	1760.7
7.5°	1690.9	1708.1	1716.7	1730.6	1758.5	1762.8	1781.1	1786.4	1806.8	1803.6	1807.9
10°	1685.5	1703.8	1714.5	1729.5	1758.5	1765.0	1781.1	1790.7	1810.1	1805.8	1807.9
12.5°	1652.2	1669.4	1681.2	1695.2	1725.2	1732.8	1746.7	1757.5	1775.7	1772.5	1772.5
15°	1590.0	1609.3	1619.0	1630.8	1659.8	1668.3	1679.1	1687.7	1708.1	1705.9	1702.7
17.5°	1496.6	1514.8	1522.3	1532.0	1559.9	1569.6	1578.2	1584.6	1603.9	1602.9	1597.5
20°	1382.8	1398.9	1405.3	1411.8	1436.5	1446.1	1452.6	1459.0	1475.1	1475.1	1467.6
22.5°	1258.2	1272.2	1276.5	1281.9	1303.3	1313.0	1316.2	1321.6	1336.6	1336.6	1326.9
25°	1126.2	1138.0	1140.1	1144.4	1162.7	1171.3	1172.4	1175.6	1190.6	1190.6	1180.9
27.5°	978.0	987.7	989.8	992.0	1008.1	1016.7	1015.6	1027.4	1031.7	1033.9	1022.0
30°	811.6	827.7	819.1	828.8	834.2	842.8	839.5	851.4	854.6	857.8	842.8
32.5°	624.8	639.9	630.2	639.9	642.0	650.6	646.3	657.0	659.2	662.4	648.4
35°	438.0	449.8	441.2	444.5	452.0	460.6	455.2	464.9	467.0	468.1	457.3
37.5°	281.3	289.9	292.0	295.2	295.2	301.7	303.8	303.8	304.9	306.0	297.4
40°	168.6	175.0	176.1	175.0	178.2	183.6	184.7	183.6	184.7	185.7	180.4
42.5°	95.5	99.8	100.9	100.9	103.1	106.3	106.3	105.2	106.3	106.3	103.1
45°	52.6	54.8	55.8	54.8	55.8	58.0	58.0	58.0	58.0	58.0	56.9
47.5°	27.9	29.0	29.0	30.1	29.0	30.1	30.1	30.1	31.1	31.1	30.1
50°	15.0	16.1	16.1	16.1	16.1	17.2	17.2	17.2	17.2	17.2	16.1
52.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
55°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
57.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
60°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
62.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
65°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
67.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
70°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
72.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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: P135554

CATALOG NUMBER: LD6A15D010TE ERM6A15835 6LM111LI

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1585.7	1585.7	1585.7	1585.7
2.5°	1680.2	1685.5	1678.0	1666.2
5°	1766.0	1772.5	1765.0	1754.2
7.5°	1813.3	1822.9	1814.4	1806.8
10°	1815.4	1825.1	1815.4	1811.1
12.5°	1780.0	1789.7	1778.9	1776.8
15°	1712.4	1719.9	1709.1	1710.2
17.5°	1608.2	1614.7	1603.9	1607.2
20°	1477.2	1483.7	1473.0	1479.4
22.5°	1336.6	1340.9	1338.8	1337.7
25°	1189.5	1192.7	1183.1	1189.5
27.5°	1028.5	1030.6	1031.7	1030.6
30°	850.3	851.4	844.9	855.6
32.5°	654.9	653.8	651.7	661.3
35°	460.6	460.6	460.6	469.2
37.5°	299.5	298.5	299.5	306.0
40°	181.4	180.4	181.4	185.7
42.5°	103.1	103.1	104.1	106.3
45°	58.0	56.9	56.9	58.0
47.5°	31.1	31.1	30.1	31.1
50°	17.2	17.2	16.1	17.2
52.5°	9.7	9.7	9.7	9.7
55°	7.5	7.5	7.5	7.5
57.5°	6.4	6.4	6.4	6.4
60°	5.4	5.4	5.4	5.4
62.5°	4.3	4.3	4.3	4.3
65°	3.2	4.3	3.2	3.2
67.5°	3.2	3.2	3.2	3.2
70°	2.1	2.1	2.1	2.1
72.5°	2.1	2.1	2.1	2.1
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)