

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: P135556

Luminaire Tested: **LD6A15D010TE ERM6A15927 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135556
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 ERM6A15927 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 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1338.2 lumens
Efficiency: N/A
Efficacy: 59.2 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

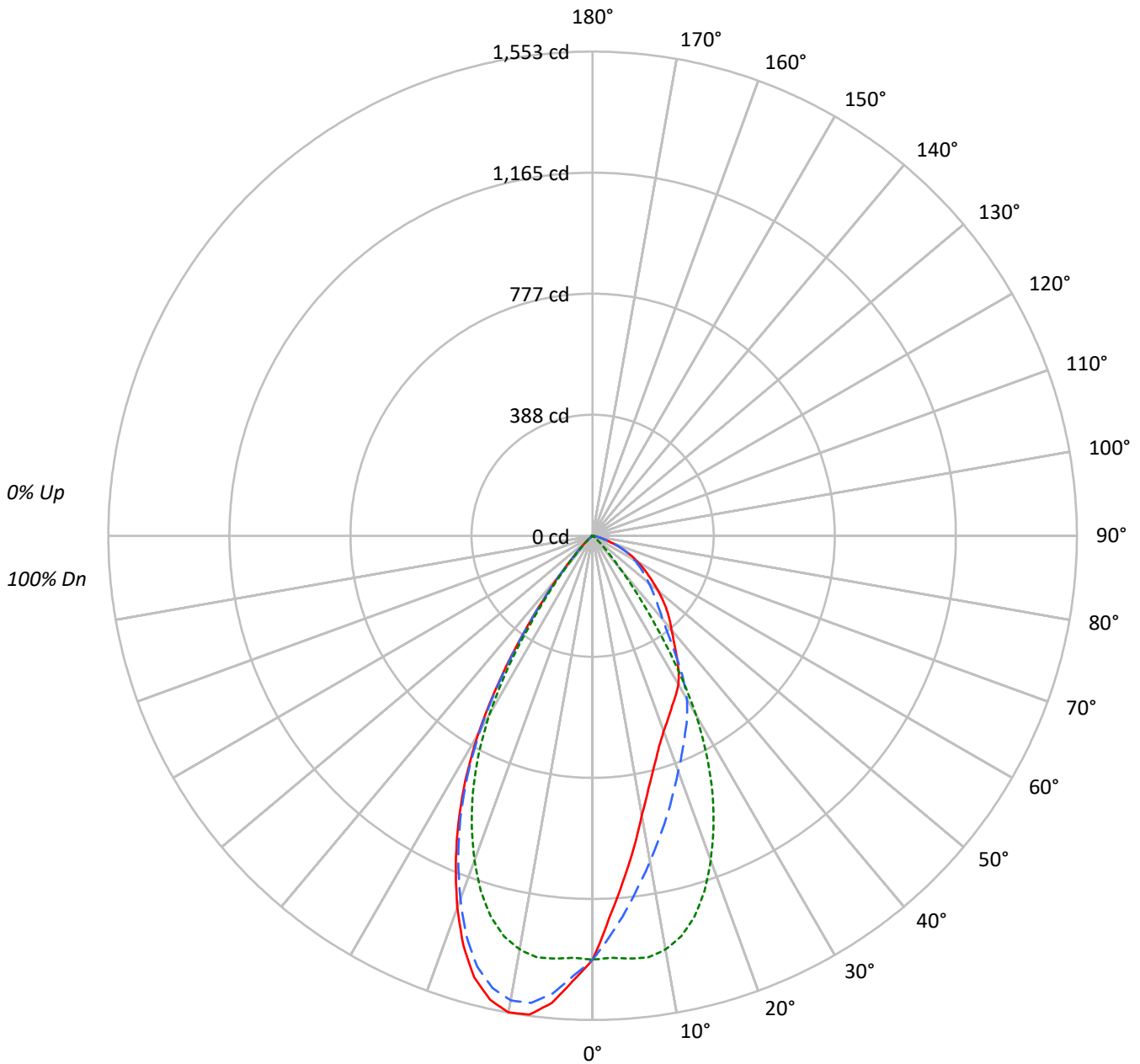
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	88688	88688	88688
5°	72877	89145	98490
10°	60238	89261	102855
15°	51595	85346	99023
20°	46260	76870	88048
25°	43393	65456	73403
30°	41463	49923	55257
35°	37377	28290	32033
40°	33547	11523	13558
45°	30992	3995	4586
50°	27840	1401	1492
55°	24603	842	728
60°	21738	718	600
65°	17907	571	432
70°	11941	534	343
75°	6503	454	227
80°	3456	1052	0
85°	1347	1347	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.6	9.5
10°-20°	329.2	24.6
20°-30°	388.9	29.1
30°-40°	259.2	19.4
40°-50°	112.4	8.4
50°-60°	67.4	5.0
60°-70°	40.5	3.0
70°-80°	12.4	0.9
80°-90°	1.5	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°	844.7	63.1
0°-40°	1103.9	82.5
0°-60°	1283.8	95.9
0°-90°	1338.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1338.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1359	1359	1359	1359	1359	
5°	1113	1209	1361	1474	1504	100
15°	764	926	1264	1430	1466	215
25°	603	701	909	1004	1020	279
35°	469	462	355	395	402	294
45°	336	284	43	50	50	258
55°	216	192	7	6	6	195
65°	116	115	4	3	3	114
75°	26	29	2	1	1	31
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°	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4
2.5°	1226.9	1248.0	1257.2	1263.6	1239.8	1265.5	1257.2	1269.1	1272.8	1284.8	1295.8
5°	1112.8	1132.9	1143.1	1150.4	1132.0	1161.5	1160.6	1176.2	1189.1	1209.4	1223.2
7.5°	1010.5	1019.7	1029.9	1040.0	1031.7	1058.4	1063.0	1085.1	1104.5	1132.0	1157.8
10°	909.3	918.5	928.6	939.7	936.0	962.7	972.9	997.6	1023.4	1060.3	1087.9
12.5°	828.3	837.6	846.8	857.8	856.0	882.6	895.5	922.2	953.5	990.4	1021.6
15°	763.9	772.2	781.4	788.7	790.6	815.5	829.3	855.1	888.1	925.9	958.1
17.5°	707.8	717.0	725.3	731.6	733.5	756.5	770.3	793.3	825.6	861.4	892.7
20°	666.3	674.6	682.0	688.4	688.4	708.7	720.7	741.8	770.3	803.5	830.2
22.5°	633.2	640.6	647.0	652.5	652.5	670.0	680.2	697.7	722.5	750.1	772.2
25°	602.8	610.2	615.7	620.3	619.4	636.0	644.2	657.1	678.3	701.3	717.9
27.5°	577.1	584.5	589.1	595.4	591.8	605.6	612.0	623.1	639.6	656.2	665.4
30°	550.4	557.8	562.4	567.9	564.2	576.2	579.9	585.4	596.3	604.6	605.6
32.5°	513.5	520.0	524.6	527.4	522.8	532.0	532.0	532.9	536.6	537.5	530.1
35°	469.3	473.9	477.6	478.6	473.0	478.6	477.6	471.2	469.3	462.1	447.3
37.5°	428.0	433.5	435.4	435.4	428.0	430.8	427.1	416.9	409.6	396.7	376.4
40°	393.9	398.5	399.4	398.5	391.1	392.1	386.5	374.6	364.4	348.8	323.1
42.5°	365.4	369.0	370.0	369.0	361.7	361.7	356.2	343.3	331.3	313.9	287.2
45°	335.9	339.6	341.4	339.6	333.1	333.1	326.8	314.8	302.8	284.4	257.7
47.5°	305.6	308.4	310.2	309.3	302.8	302.8	297.3	285.3	275.2	258.6	232.8
50°	274.3	278.0	279.8	278.9	273.4	273.4	268.7	257.7	249.4	234.7	211.6
52.5°	243.9	248.5	249.4	247.6	243.9	243.0	240.2	230.1	223.6	213.5	191.5
55°	216.3	219.9	219.9	219.9	215.3	214.4	212.6	204.3	200.6	192.4	174.0
57.5°	191.5	194.2	193.3	192.4	190.6	188.7	186.9	180.4	178.6	173.1	157.4
60°	166.6	169.4	168.5	167.5	165.7	163.8	162.0	157.4	157.4	153.7	140.8
62.5°	142.7	144.5	143.6	142.7	142.7	140.8	139.9	136.2	137.1	135.3	124.2
65°	116.0	118.7	117.8	117.8	118.7	118.7	117.8	116.0	116.0	115.0	105.8
67.5°	88.3	91.1	90.2	91.1	93.8	94.8	94.8	93.8	93.8	92.0	83.7
70°	62.6	64.5	64.5	65.4	68.1	69.0	71.7	69.0	69.0	67.1	60.8
72.5°	41.4	42.4	43.3	45.1	46.1	47.0	48.8	48.8	47.9	45.1	40.5
75°	25.8	26.7	26.7	27.6	28.6	29.5	31.3	30.4	29.5	28.6	24.9
77.5°	15.7	15.7	16.6	16.6	17.5	18.4	18.4	18.4	17.5	16.6	14.7
80°	9.2	9.2	9.2	10.1	10.1	10.1	10.1	10.1	10.1	9.2	8.3
82.5°	4.6	4.6	4.6	5.5	5.5	5.5	5.5	5.5	5.5	4.6	4.6
85°	1.8	1.8	1.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8
87.5°	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.9	0.9	0.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4
2.5°	1306.9	1306.9	1304.1	1320.7	1341.9	1338.2	1339.1	1354.8	1361.2	1372.3	1382.4
5°	1247.1	1257.2	1264.5	1291.2	1321.6	1327.2	1337.3	1361.2	1376.0	1394.3	1411.8
7.5°	1187.3	1208.4	1225.9	1260.8	1300.5	1315.2	1333.6	1364.0	1383.3	1408.1	1432.1
10°	1125.6	1155.0	1180.8	1223.2	1269.1	1290.3	1313.3	1347.4	1373.2	1399.8	1426.5
12.5°	1063.9	1099.9	1132.0	1179.0	1227.8	1253.6	1279.3	1315.2	1342.8	1370.4	1398.0
15°	1003.2	1041.8	1075.9	1125.6	1175.3	1202.0	1227.8	1263.6	1293.1	1318.9	1346.5
17.5°	936.0	979.3	1010.5	1057.5	1105.4	1132.0	1160.6	1193.7	1219.5	1241.6	1268.2
20°	870.6	911.1	939.7	983.0	1026.2	1051.0	1077.8	1107.2	1130.2	1149.5	1174.4
22.5°	807.2	843.1	869.7	909.3	942.5	963.6	986.7	1012.4	1032.6	1048.3	1070.4
25°	745.5	774.0	794.3	825.6	852.3	868.8	888.1	909.3	926.8	939.7	960.0
27.5°	683.8	703.2	710.6	729.8	746.4	764.8	774.9	791.5	807.2	817.3	834.8
30°	612.9	619.4	612.9	618.5	623.1	631.3	643.3	662.7	670.0	676.5	694.0
32.5°	524.6	520.0	498.8	490.5	485.0	493.3	495.1	509.9	514.5	520.0	533.8
35°	431.7	415.1	381.0	359.8	346.9	347.9	339.6	355.2	358.0	363.5	373.6
37.5°	352.5	325.8	281.6	252.2	232.8	228.2	218.1	227.3	228.2	231.9	239.3
40°	294.5	256.8	207.0	172.1	151.0	141.7	131.6	135.3	135.3	138.1	142.7
42.5°	254.0	213.5	157.4	119.6	96.6	85.6	77.3	77.3	77.3	78.2	81.0
45°	223.6	178.6	122.4	83.7	62.6	51.6	43.3	43.3	42.4	42.4	44.2
47.5°	198.8	153.7	96.6	61.7	40.5	30.4	24.9	23.0	22.1	23.0	23.9
50°	178.6	134.4	80.0	47.0	28.6	20.3	15.7	13.8	12.9	12.9	12.9
52.5°	161.1	118.7	67.1	37.8	22.1	14.7	11.1	9.2	8.3	8.3	8.3
55°	146.3	104.9	58.0	31.3	18.4	12.9	9.2	7.4	6.4	6.4	6.4
57.5°	131.6	92.9	49.7	26.7	15.7	11.1	8.3	6.4	5.5	5.5	5.5
60°	116.9	81.0	43.3	22.1	12.9	9.2	7.4	5.5	4.6	4.6	4.6
62.5°	102.1	69.0	35.9	18.4	11.1	8.3	5.5	4.6	4.6	3.7	3.7
65°	84.6	56.2	29.5	15.7	9.2	6.4	5.5	3.7	3.7	3.7	3.7
67.5°	66.2	43.3	22.1	12.0	7.4	5.5	4.6	3.7	2.8	2.8	2.8
70°	47.0	30.4	16.6	9.2	6.4	4.6	3.7	2.8	2.8	2.8	1.8
72.5°	31.3	20.3	12.0	7.4	5.5	3.7	2.8	2.8	1.8	1.8	1.8
75°	20.3	12.9	8.3	5.5	3.7	3.7	2.8	1.8	1.8	1.8	0.9
77.5°	12.0	8.3	5.5	3.7	2.8	2.8	2.8	2.8	2.8	1.8	0.9
80°	6.4	4.6	3.7	2.8	1.8	2.8	2.8	2.8	2.8	1.8	0.9
82.5°	3.7	2.8	1.8	1.8	1.8	1.8	1.8	2.8	2.8	1.8	0.9
85°	1.8	1.8	0.9	0.9	0.9	1.8	1.8	1.8	1.8	0.9	0.9
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	0.9	0.9
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4	1359.4
2.5°	1390.6	1396.1	1398.0	1400.7	1416.4	1412.7	1426.5	1426.5	1437.6	1431.1	1437.6
5°	1426.5	1438.5	1444.0	1451.4	1473.5	1473.5	1490.1	1492.8	1507.6	1503.0	1509.4
7.5°	1449.6	1464.3	1471.7	1483.6	1507.6	1511.3	1526.8	1531.4	1548.9	1546.2	1549.9
10°	1445.0	1460.6	1469.8	1482.7	1507.6	1513.1	1526.8	1535.1	1551.7	1548.0	1549.9
12.5°	1416.4	1431.1	1441.3	1453.2	1479.0	1485.5	1497.5	1506.7	1522.2	1519.6	1519.6
15°	1363.1	1379.7	1387.9	1398.0	1422.9	1430.2	1439.4	1446.8	1464.3	1462.5	1459.7
17.5°	1283.0	1298.6	1305.1	1313.3	1337.3	1345.6	1352.9	1358.5	1375.1	1374.1	1369.5
20°	1185.4	1199.2	1204.8	1210.3	1231.5	1239.8	1245.3	1250.8	1264.5	1264.5	1258.1
22.5°	1078.7	1090.6	1094.3	1098.9	1117.4	1125.6	1128.3	1132.9	1145.8	1145.8	1137.5
25°	965.5	975.6	977.5	981.1	996.7	1004.1	1005.0	1007.8	1020.7	1020.7	1012.4
27.5°	838.5	846.8	848.6	850.5	864.2	871.5	870.6	880.8	884.4	886.3	876.1
30°	695.8	709.6	702.3	710.6	715.2	722.5	719.8	729.8	732.6	735.3	722.5
32.5°	535.7	548.5	540.3	548.5	550.4	557.8	554.1	563.3	565.1	567.9	555.9
35°	375.5	385.6	378.3	381.0	387.5	394.8	390.2	398.5	400.4	401.3	392.1
37.5°	241.1	248.5	250.3	253.1	253.1	258.6	260.5	260.5	261.4	262.3	254.9
40°	144.5	150.0	151.0	150.0	152.8	157.4	158.3	157.4	158.3	159.2	154.6
42.5°	81.9	85.6	86.5	86.5	88.3	91.1	91.1	90.2	91.1	91.1	88.3
45°	45.1	47.0	47.9	47.0	47.9	49.7	49.7	49.7	49.7	49.7	48.8
47.5°	23.9	24.9	24.9	25.8	24.9	25.8	25.8	25.8	26.7	26.7	25.8
50°	12.9	13.8	13.8	13.8	13.8	14.7	14.7	14.7	14.7	14.7	13.8
52.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
55°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
57.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
60°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
62.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
65°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
67.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
72.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.9	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: P135556

CATALOG NUMBER: LD6A15D010TE ERM6A15927 6LM111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1359.4	1359.4	1359.4	1359.4
2.5°	1440.4	1445.0	1438.5	1428.4
5°	1514.0	1519.6	1513.1	1503.9
7.5°	1554.5	1562.8	1555.4	1548.9
10°	1556.3	1564.6	1556.3	1552.6
12.5°	1525.9	1534.2	1525.0	1523.1
15°	1468.0	1474.4	1465.2	1466.1
17.5°	1378.7	1384.3	1375.1	1377.8
20°	1266.4	1271.9	1262.7	1268.2
22.5°	1145.8	1149.5	1147.7	1146.7
25°	1019.7	1022.5	1014.2	1019.7
27.5°	881.7	883.5	884.4	883.5
30°	728.9	729.8	724.4	733.5
32.5°	561.4	560.5	558.7	567.0
35°	394.8	394.8	394.8	402.2
37.5°	256.8	255.9	256.8	262.3
40°	155.6	154.6	155.6	159.2
42.5°	88.3	88.3	89.2	91.1
45°	49.7	48.8	48.8	49.7
47.5°	26.7	26.7	25.8	26.7
50°	14.7	14.7	13.8	14.7
52.5°	8.3	8.3	8.3	8.3
55°	6.4	6.4	6.4	6.4
57.5°	5.5	5.5	5.5	5.5
60°	4.6	4.6	4.6	4.6
62.5°	3.7	3.7	3.7	3.7
65°	2.8	3.7	2.8	2.8
67.5°	2.8	2.8	2.8	2.8
70°	1.8	1.8	1.8	1.8
72.5°	1.8	1.8	1.8	1.8
75°	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9
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)