

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: P135675

Luminaire Tested: **LD6A15D010TE ERM6A15840 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135675
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23372)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15840 6LM111H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SEMI-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: 1493.0 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 0.96 / 0.92
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

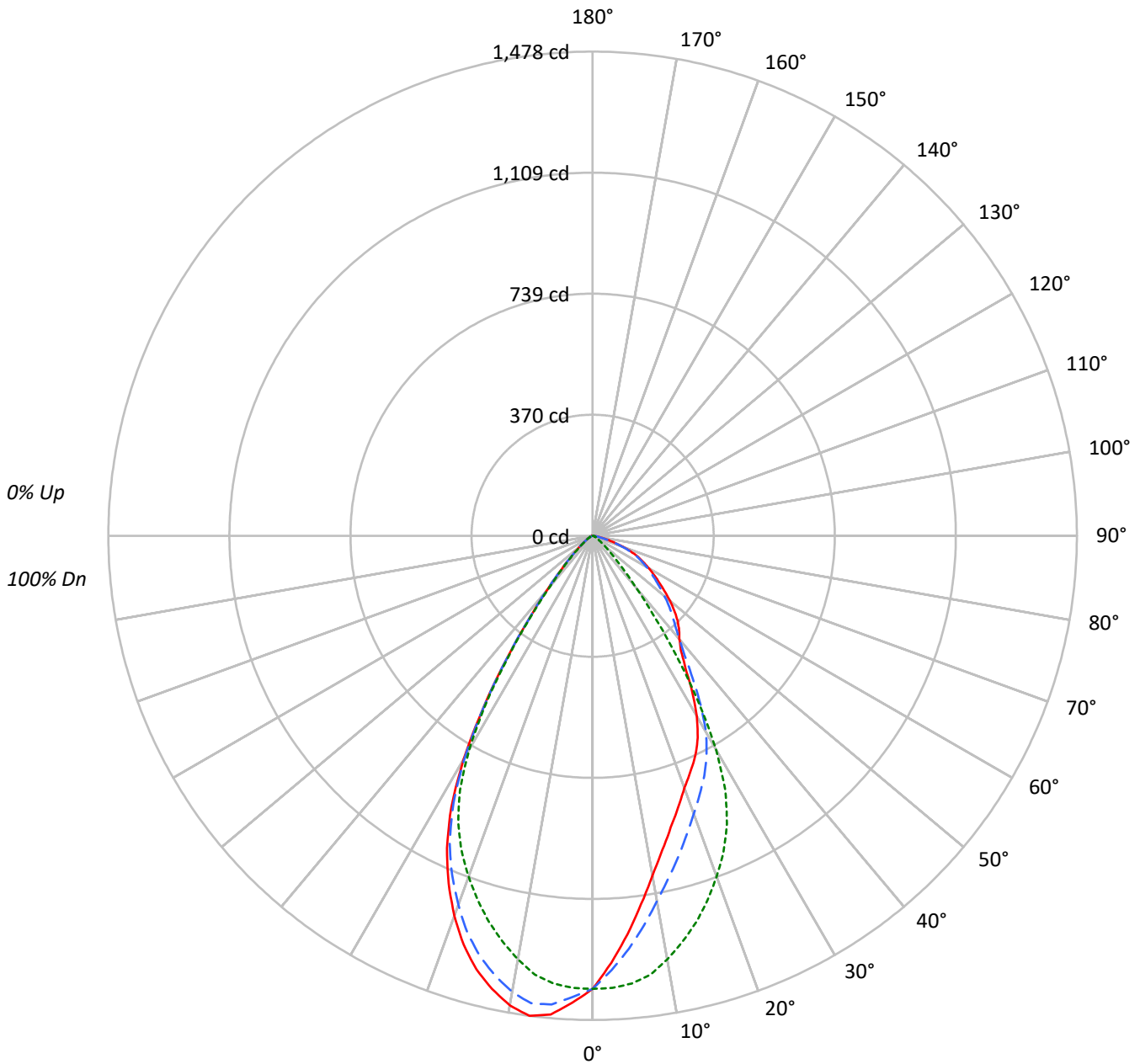
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135675

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111H

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			
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91			
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83			
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75			
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68			
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63			
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58			
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53			
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50			
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46			
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	90241	90241	90241
5°	79950	89852	96067
10°	69685	86949	96429
15°	62247	82455	92560
20°	56840	76829	85653
25°	53377	69818	75721
30°	47859	56703	59250
35°	39328	35099	35999
40°	35071	17263	18217
45°	33833	8608	9199
50°	31180	4567	4902
55°	28174	2741	2923
60°	25809	1892	1892
65°	23588	1497	1235
70°	19018	1221	916
75°	11746	807	403
80°	6650	601	0
85°	3593	0	0



TEST NUMBER: P135675

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.8	8.5
10°-20°	329.4	22.1
20°-30°	419.2	28.1
30°-40°	300.4	20.1
40°-50°	149.8	10.0
50°-60°	90.7	6.1
60°-70°	55.4	3.7
70°-80°	19.1	1.3
80°-90°	2.0	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°	875.5	58.6
0°-40°	1175.9	78.8
0°-60°	1416.4	94.9
0°-90°	1493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1493.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1383	1383	1383	1383	1383	
5°	1221	1266	1372	1436	1467	111
15°	922	1013	1221	1329	1370	259
25°	742	807	970	1033	1052	338
35°	494	532	441	452	452	315
45°	367	343	93	103	100	281
55°	248	233	24	26	26	223
65°	153	148	10	8	8	149
75°	47	42	3	2	2	54
85°	5	3	0	0	0	7
90°	0	0	0	0	0	



TEST NUMBER: P135675

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2
2.5°	1304.4	1306.0	1309.3	1306.0	1307.6	1315.7	1312.5	1314.1	1318.9	1326.9	1322.1
5°	1220.8	1222.4	1230.4	1225.6	1228.8	1238.5	1238.5	1244.9	1254.6	1265.8	1265.8
7.5°	1133.9	1137.2	1145.2	1142.0	1146.8	1159.7	1161.3	1170.9	1183.8	1199.9	1207.9
10°	1051.9	1055.1	1063.2	1061.6	1068.0	1080.9	1087.3	1096.9	1113.0	1132.3	1142.0
12.5°	982.7	986.0	992.4	992.4	1000.4	1013.3	1019.7	1032.6	1048.7	1069.6	1082.5
15°	921.6	926.4	932.9	932.9	940.9	953.8	961.8	973.1	990.8	1013.3	1027.8
17.5°	868.5	870.2	876.6	876.6	884.6	897.5	905.5	916.8	934.5	955.4	971.5
20°	818.7	820.3	826.7	828.3	834.8	846.0	854.1	865.3	881.4	902.3	916.8
22.5°	780.1	783.3	788.1	789.7	793.0	804.2	813.9	821.9	836.4	854.1	868.5
25°	741.5	743.1	747.9	749.5	754.3	762.4	768.8	776.9	789.7	807.4	818.7
27.5°	694.8	699.7	701.3	702.9	707.7	714.1	720.6	727.0	738.3	752.7	762.4
30°	635.3	636.9	641.8	645.0	649.8	656.2	664.3	670.7	680.4	691.6	698.1
32.5°	566.2	567.8	572.6	575.8	583.9	590.3	596.7	601.5	608.0	614.4	614.4
35°	493.8	498.6	500.2	505.0	513.1	519.5	524.3	526.0	529.2	532.4	521.1
37.5°	442.3	445.5	448.7	452.0	458.4	463.2	466.4	466.4	464.8	461.6	447.1
40°	411.8	413.4	416.6	418.2	424.6	427.8	427.8	424.6	418.2	410.1	387.6
42.5°	390.8	392.5	394.1	395.7	398.9	400.5	398.9	392.5	384.4	373.2	347.4
45°	366.7	368.3	369.9	369.9	373.2	373.2	371.5	365.1	355.5	342.6	315.3
47.5°	337.8	339.4	341.0	342.6	344.2	344.2	342.6	336.2	326.5	315.3	286.3
50°	307.2	308.8	310.4	310.4	313.6	313.6	312.0	305.6	297.6	286.3	260.6
52.5°	276.6	278.3	278.3	281.5	281.5	281.5	279.9	273.4	267.0	259.0	234.8
55°	247.7	249.3	249.3	252.5	254.1	252.5	250.9	246.1	239.7	233.2	213.9
57.5°	222.0	223.6	223.6	225.2	226.8	225.2	223.6	220.4	217.1	210.7	194.6
60°	197.8	199.4	199.4	201.1	201.1	199.4	199.4	196.2	193.0	189.8	175.3
62.5°	175.3	175.3	175.3	176.9	176.9	175.3	175.3	172.1	170.5	168.9	157.6
65°	152.8	152.8	152.8	152.8	152.8	149.6	149.6	148.0	146.4	148.0	138.3
67.5°	127.1	127.1	125.5	125.5	125.5	122.2	122.2	122.2	120.6	122.2	114.2
70°	99.7	99.7	98.1	98.1	96.5	93.3	93.3	93.3	91.7	93.3	88.5
72.5°	70.8	72.4	69.2	69.2	67.6	64.3	65.9	64.3	65.9	65.9	62.7
75°	46.6	48.3	45.0	45.0	43.4	41.8	41.8	41.8	43.4	41.8	40.2
77.5°	29.0	30.6	29.0	29.0	27.3	25.7	25.7	25.7	25.7	25.7	24.1
80°	17.7	17.7	17.7	16.1	16.1	14.5	14.5	14.5	14.5	14.5	12.9
82.5°	9.7	9.7	9.7	9.7	9.7	8.0	8.0	8.0	8.0	8.0	6.4
85°	4.8	4.8	4.8	4.8	4.8	3.2	3.2	3.2	3.2	3.2	3.2
87.5°	1.6	1.6	1.6	1.6	1.6	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: P135675

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111H

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2
2.5°	1336.6	1343.0	1338.2	1357.5	1354.3	1368.8	1367.2	1381.6	1380.0	1381.6	1384.8
5°	1285.1	1298.0	1299.6	1323.7	1325.3	1347.9	1352.7	1372.0	1375.2	1381.6	1389.7
7.5°	1228.8	1248.1	1254.6	1281.9	1291.6	1315.7	1325.3	1351.1	1357.5	1368.8	1378.4
10°	1167.7	1190.2	1199.9	1232.0	1244.9	1272.3	1285.1	1312.5	1322.1	1335.0	1346.2
12.5°	1109.8	1133.9	1146.8	1180.6	1198.3	1225.6	1240.1	1269.0	1278.7	1294.8	1306.0
15°	1055.1	1080.9	1095.3	1129.1	1146.8	1177.4	1191.8	1220.8	1232.0	1248.1	1259.4
17.5°	998.8	1024.6	1040.6	1072.8	1095.3	1121.1	1137.2	1166.1	1177.4	1191.8	1203.1
20°	944.1	969.9	984.4	1016.5	1037.4	1063.2	1077.6	1106.6	1114.6	1129.1	1138.8
22.5°	892.7	916.8	929.7	963.4	981.1	1003.7	1018.1	1043.9	1053.5	1064.8	1071.2
25°	841.2	862.1	871.8	900.7	915.2	936.1	947.4	969.9	979.5	989.2	997.2
27.5°	783.3	794.6	797.8	820.3	831.6	850.9	855.7	876.6	884.6	891.1	897.5
30°	710.9	712.5	702.9	714.1	719.0	733.4	733.4	752.7	759.2	764.0	770.4
32.5°	619.2	609.6	587.1	583.9	580.6	588.7	585.5	601.5	608.0	611.2	616.0
35°	517.9	497.0	460.0	445.5	435.9	434.3	429.4	440.7	445.5	448.7	452.0
37.5°	429.4	398.9	352.2	326.5	310.4	304.0	297.6	304.0	307.2	310.4	313.6
40°	365.1	326.5	271.8	239.7	217.1	207.5	199.4	202.7	205.9	209.1	210.7
42.5°	318.5	275.0	215.5	176.9	154.4	143.1	135.1	136.7	138.3	139.9	143.1
45°	283.1	236.4	175.3	133.5	111.0	99.7	93.3	93.3	94.9	96.5	98.1
47.5°	254.1	204.3	143.1	102.9	82.0	70.8	64.3	64.3	65.9	65.9	67.6
50°	226.8	176.9	117.4	80.4	61.1	51.5	46.6	45.0	46.6	46.6	48.3
52.5°	204.3	156.0	98.1	64.3	46.6	38.6	33.8	33.8	33.8	33.8	33.8
55°	183.4	136.7	82.0	51.5	37.0	30.6	25.7	24.1	24.1	24.1	24.1
57.5°	167.3	122.2	70.8	43.4	30.6	24.1	20.9	19.3	19.3	19.3	19.3
60°	151.2	107.8	61.1	35.4	24.1	20.9	17.7	14.5	14.5	14.5	14.5
62.5°	135.1	93.3	51.5	30.6	20.9	16.1	14.5	11.3	11.3	11.3	11.3
65°	117.4	80.4	43.4	24.1	16.1	12.9	11.3	9.7	9.7	8.0	8.0
67.5°	96.5	64.3	35.4	20.9	14.5	11.3	9.7	8.0	6.4	6.4	6.4
70°	74.0	48.3	27.3	16.1	11.3	9.7	6.4	6.4	4.8	4.8	4.8
72.5°	53.1	33.8	19.3	12.9	8.0	6.4	6.4	4.8	4.8	4.8	3.2
75°	33.8	22.5	12.9	8.0	6.4	4.8	4.8	3.2	3.2	3.2	3.2
77.5°	20.9	14.5	9.7	6.4	4.8	3.2	3.2	3.2	1.6	1.6	1.6
80°	11.3	8.0	4.8	3.2	3.2	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	6.4	4.8	3.2	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0
85°	3.2	1.6	1.6	1.6	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: P135675

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111H

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2	1383.2
2.5°	1394.5	1402.5	1397.7	1400.9	1415.4	1409.0	1420.2	1420.2	1433.1	1433.1	1423.5
5°	1404.2	1413.8	1415.4	1420.2	1439.5	1436.3	1449.2	1452.4	1466.9	1470.1	1462.1
7.5°	1397.7	1409.0	1413.8	1421.8	1441.1	1439.5	1454.0	1460.4	1473.3	1478.1	1471.7
10°	1367.2	1380.0	1386.5	1394.5	1415.4	1413.8	1429.9	1437.9	1449.2	1454.0	1449.2
12.5°	1326.9	1341.4	1347.9	1355.9	1376.8	1375.2	1391.3	1399.3	1409.0	1415.4	1410.6
15°	1281.9	1291.6	1302.8	1310.9	1330.2	1328.6	1344.6	1352.7	1360.7	1368.8	1363.9
17.5°	1224.0	1233.7	1244.9	1251.4	1270.7	1270.7	1283.5	1290.0	1301.2	1307.6	1301.2
20°	1158.1	1169.3	1177.4	1182.2	1199.9	1198.3	1211.1	1217.6	1227.2	1232.0	1227.2
22.5°	1088.9	1098.6	1105.0	1108.2	1122.7	1121.1	1130.7	1137.2	1145.2	1150.0	1145.2
25°	1010.1	1016.5	1021.3	1023.0	1035.8	1032.6	1045.5	1045.5	1051.9	1056.7	1051.9
27.5°	908.8	913.6	916.8	915.2	924.8	920.0	931.3	923.2	936.1	939.3	934.5
30°	778.5	781.7	784.9	778.5	784.9	778.5	788.1	776.9	788.1	793.0	788.1
32.5°	624.1	624.1	627.3	619.2	622.5	616.0	620.9	617.6	620.9	625.7	620.9
35°	458.4	458.4	461.6	456.8	458.4	452.0	455.2	452.0	453.6	456.8	455.2
37.5°	318.5	316.9	321.7	318.5	320.1	316.9	318.5	315.3	316.9	318.5	316.9
40°	215.5	215.5	218.7	217.1	218.7	217.1	218.7	217.1	217.1	217.1	215.5
42.5°	144.8	146.4	148.0	148.0	149.6	148.0	149.6	148.0	148.0	148.0	146.4
45°	99.7	99.7	101.3	101.3	102.9	102.9	102.9	101.3	101.3	101.3	101.3
47.5°	69.2	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	69.2
50°	48.3	49.9	49.9	49.9	49.9	49.9	49.9	48.3	48.3	48.3	48.3
52.5°	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	33.8	33.8
55°	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7
57.5°	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
60°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
62.5°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
65°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
67.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
70°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
72.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
75°	3.2	3.2	3.2	3.2	3.2	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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: P135675

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1383.2	1383.2	1383.2	1383.2
2.5°	1418.6	1431.5	1426.7	1426.7
5°	1457.2	1471.7	1468.5	1466.9
7.5°	1468.5	1481.4	1478.1	1478.1
10°	1446.0	1458.8	1455.6	1455.6
12.5°	1409.0	1420.2	1418.6	1417.0
15°	1362.3	1373.6	1372.0	1370.4
17.5°	1299.6	1312.5	1310.9	1309.3
20°	1224.0	1235.3	1235.3	1233.7
22.5°	1142.0	1150.0	1151.6	1148.4
25°	1048.7	1055.1	1055.1	1051.9
27.5°	931.3	936.1	936.1	934.5
30°	786.5	788.1	789.7	786.5
32.5°	617.6	617.6	620.9	617.6
35°	450.4	450.4	453.6	452.0
37.5°	313.6	313.6	315.3	313.6
40°	213.9	213.9	215.5	213.9
42.5°	146.4	144.8	146.4	146.4
45°	99.7	99.7	101.3	99.7
47.5°	69.2	69.2	69.2	69.2
50°	48.3	48.3	48.3	48.3
52.5°	33.8	33.8	33.8	33.8
55°	24.1	25.7	25.7	25.7
57.5°	17.7	19.3	19.3	19.3
60°	14.5	14.5	14.5	14.5
62.5°	11.3	11.3	11.3	11.3
65°	8.0	8.0	8.0	8.0
67.5°	6.4	6.4	6.4	6.4
70°	4.8	4.8	4.8	4.8
72.5°	3.2	3.2	3.2	3.2
75°	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.6
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)