

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: P135673

Luminaire Tested: **LD6A15D010TE ERM6A15830 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135673
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 ERM6A15830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1426.0 lumens
Efficiency: N/A
Efficacy: 63.1 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

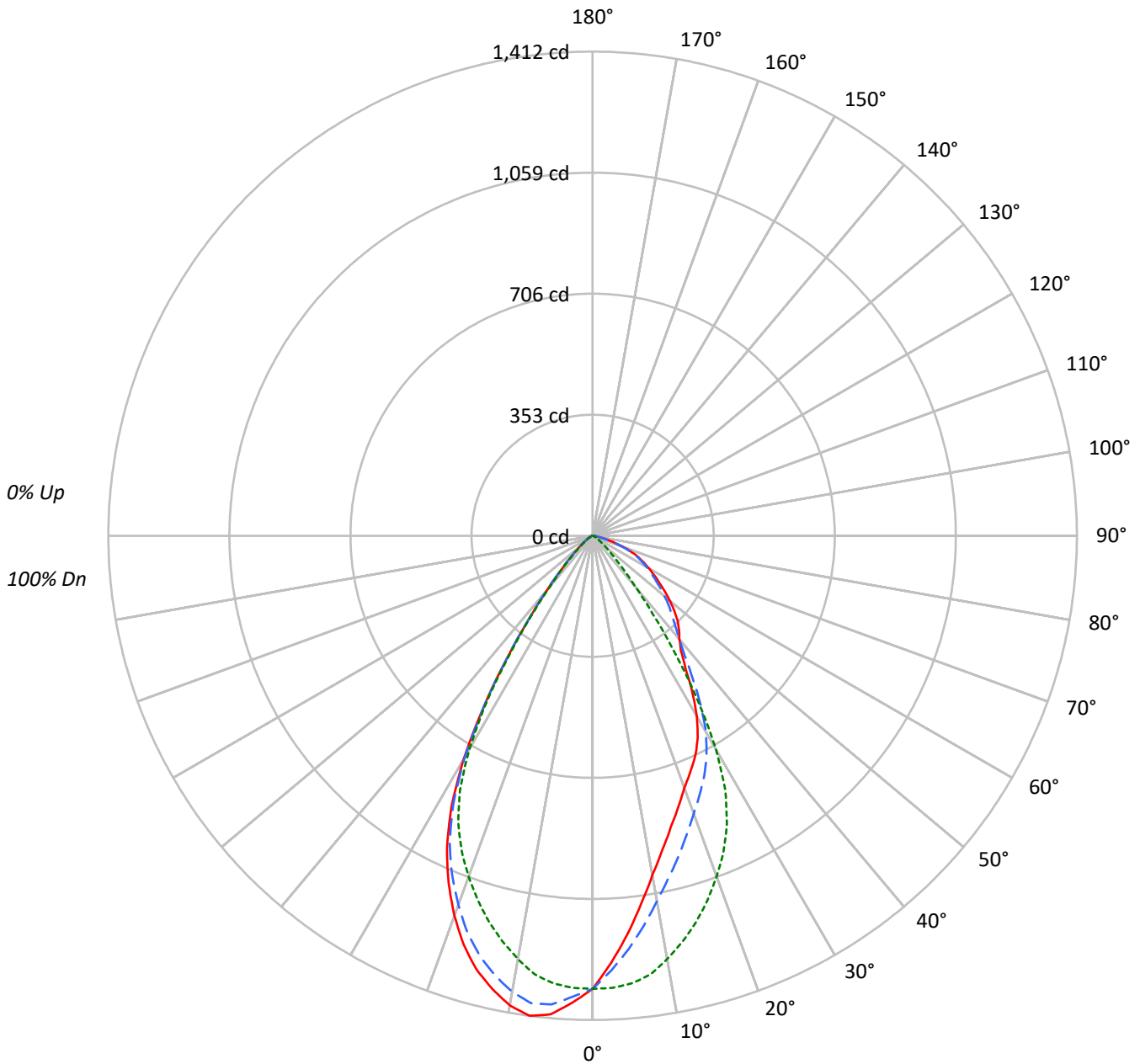
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	86196	86196	86196
5°	76361	85818	91758
10°	66558	83047	92103
15°	59457	78754	88406
20°	54285	73378	81807
25°	50980	66687	72323
30°	45712	54165	56590
35°	37560	33522	34382
40°	33496	16488	17399
45°	32320	8221	8784
50°	29779	4364	4679
55°	26912	2616	2798
60°	24661	1801	1801
65°	22523	1420	1189
70°	18159	1164	877
75°	11242	781	378
80°	6349	564	0
85°	3443	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	8.5
10°-20°	314.6	22.1
20°-30°	400.4	28.1
30°-40°	286.9	20.1
40°-50°	143.1	10.0
50°-60°	86.6	6.1
60°-70°	53.0	3.7
70°-80°	18.3	1.3
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°	836.2	58.6
0°-40°	1123.1	78.8
0°-60°	1352.8	94.9
0°-90°	1426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1426.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1321	1321	1321	1321	1321	
5°	1166	1209	1310	1372	1401	106
15°	880	968	1166	1269	1309	248
25°	708	771	926	986	1005	323
35°	472	508	421	432	432	301
45°	350	327	89	98	95	268
55°	237	223	23	25	25	213
65°	146	141	9	8	8	143
75°	45	40	3	2	2	52
85°	5	3	0	0	0	6
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°	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2
2.5°	1245.9	1247.4	1250.5	1247.4	1249.0	1256.6	1253.6	1255.1	1259.7	1267.4	1262.8
5°	1166.0	1167.5	1175.2	1170.6	1173.7	1182.9	1182.9	1189.1	1198.3	1209.0	1209.0
7.5°	1083.0	1086.1	1093.8	1090.7	1095.3	1107.6	1109.2	1118.4	1130.7	1146.0	1153.7
10°	1004.7	1007.8	1015.5	1013.9	1020.1	1032.4	1038.5	1047.7	1063.1	1081.5	1090.7
12.5°	938.6	941.7	947.9	947.9	955.5	967.8	974.0	986.3	1001.6	1021.6	1033.9
15°	880.3	884.9	891.0	891.0	898.7	911.0	918.7	929.4	946.3	967.8	981.7
17.5°	829.6	831.1	837.3	837.3	844.9	857.2	864.9	875.7	892.6	912.5	927.9
20°	781.9	783.5	789.6	791.2	797.3	808.1	815.7	826.5	841.9	861.8	875.7
22.5°	745.1	748.1	752.8	754.3	757.4	768.1	777.3	785.0	798.8	815.7	829.6
25°	708.2	709.7	714.4	715.9	720.5	728.2	734.3	742.0	754.3	771.2	781.9
27.5°	663.7	668.3	669.8	671.3	675.9	682.1	688.2	694.4	705.1	719.0	728.2
30°	606.8	608.4	613.0	616.0	620.6	626.8	634.5	640.6	649.8	660.6	666.7
32.5°	540.8	542.3	546.9	550.0	557.7	563.8	569.9	574.6	580.7	586.8	586.8
35°	471.6	476.2	477.8	482.4	490.1	496.2	500.8	502.4	505.4	508.5	497.7
37.5°	422.5	425.5	428.6	431.7	437.8	442.4	445.5	445.5	444.0	440.9	427.1
40°	393.3	394.8	397.9	399.4	405.6	408.6	408.6	405.6	399.4	391.7	370.2
42.5°	373.3	374.8	376.4	377.9	381.0	382.5	381.0	374.8	367.2	356.4	331.8
45°	350.3	351.8	353.3	353.3	356.4	356.4	354.9	348.7	339.5	327.2	301.1
47.5°	322.6	324.1	325.7	327.2	328.8	328.8	327.2	321.1	311.9	301.1	273.5
50°	293.4	295.0	296.5	296.5	299.6	299.6	298.0	291.9	284.2	273.5	248.9
52.5°	264.2	265.8	265.8	268.8	268.8	268.8	267.3	261.2	255.0	247.3	224.3
55°	236.6	238.1	238.1	241.2	242.7	241.2	239.7	235.0	228.9	222.8	204.3
57.5°	212.0	213.5	213.5	215.1	216.6	215.1	213.5	210.5	207.4	201.2	185.9
60°	189.0	190.5	190.5	192.0	192.0	190.5	190.5	187.4	184.3	181.3	167.5
62.5°	167.5	167.5	167.5	169.0	169.0	167.5	167.5	164.4	162.8	161.3	150.6
65°	145.9	145.9	145.9	145.9	145.9	142.9	142.9	141.3	139.8	141.3	132.1
67.5°	121.4	121.4	119.8	119.8	119.8	116.8	116.8	116.8	115.2	116.8	109.1
70°	95.2	95.2	93.7	93.7	92.2	89.1	89.1	89.1	87.6	89.1	84.5
72.5°	67.6	69.1	66.1	66.1	64.5	61.4	63.0	61.4	63.0	63.0	59.9
75°	44.6	46.1	43.0	43.0	41.5	39.9	39.9	39.9	41.5	39.9	38.4
77.5°	27.7	29.2	27.7	27.7	26.1	24.6	24.6	24.6	24.6	24.6	23.0
80°	16.9	16.9	16.9	15.4	15.4	13.8	13.8	13.8	13.8	13.8	12.3
82.5°	9.2	9.2	9.2	9.2	9.2	7.7	7.7	7.7	7.7	7.7	6.1
85°	4.6	4.6	4.6	4.6	4.6	3.1	3.1	3.1	3.1	3.1	3.1
87.5°	1.5	1.5	1.5	1.5	1.5	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2
2.5°	1276.6	1282.8	1278.2	1296.6	1293.5	1307.3	1305.8	1319.6	1318.1	1319.6	1322.7
5°	1227.5	1239.7	1241.3	1264.3	1265.9	1287.4	1292.0	1310.4	1313.5	1319.6	1327.3
7.5°	1173.7	1192.1	1198.3	1224.4	1233.6	1256.6	1265.9	1290.4	1296.6	1307.3	1316.6
10°	1115.3	1136.8	1146.0	1176.8	1189.1	1215.2	1227.5	1253.6	1262.8	1275.1	1285.8
12.5°	1060.0	1083.0	1095.3	1127.6	1144.5	1170.6	1184.4	1212.1	1221.3	1236.7	1247.4
15°	1007.8	1032.4	1046.2	1078.4	1095.3	1124.5	1138.4	1166.0	1176.8	1192.1	1202.9
17.5°	954.0	978.6	993.9	1024.7	1046.2	1070.8	1086.1	1113.8	1124.5	1138.4	1149.1
20°	901.8	926.4	940.2	970.9	990.9	1015.5	1029.3	1056.9	1064.6	1078.4	1087.7
22.5°	852.6	875.7	887.9	920.2	937.1	958.6	972.4	997.0	1006.2	1017.0	1023.1
25°	803.5	823.4	832.6	860.3	874.1	894.1	904.8	926.4	935.6	944.8	952.5
27.5°	748.1	758.9	762.0	783.5	794.2	812.7	817.3	837.3	844.9	851.1	857.2
30°	679.0	680.6	671.3	682.1	686.7	700.5	700.5	719.0	725.1	729.7	735.9
32.5°	591.5	582.2	560.7	557.7	554.6	562.3	559.2	574.6	580.7	583.8	588.4
35°	494.7	474.7	439.4	425.5	416.3	414.8	410.2	420.9	425.5	428.6	431.7
37.5°	410.2	381.0	336.4	311.9	296.5	290.3	284.2	290.3	293.4	296.5	299.6
40°	348.7	311.9	259.6	228.9	207.4	198.2	190.5	193.6	196.6	199.7	201.2
42.5°	304.2	262.7	205.9	169.0	147.5	136.7	129.0	130.6	132.1	133.7	136.7
45°	270.4	225.8	167.5	127.5	106.0	95.2	89.1	89.1	90.6	92.2	93.7
47.5°	242.7	195.1	136.7	98.3	78.3	67.6	61.4	61.4	63.0	63.0	64.5
50°	216.6	169.0	112.1	76.8	58.4	49.2	44.6	43.0	44.6	44.6	46.1
52.5°	195.1	149.0	93.7	61.4	44.6	36.9	32.3	32.3	32.3	32.3	32.3
55°	175.1	130.6	78.3	49.2	35.3	29.2	24.6	23.0	23.0	23.0	23.0
57.5°	159.8	116.8	67.6	41.5	29.2	23.0	20.0	18.4	18.4	18.4	18.4
60°	144.4	102.9	58.4	33.8	23.0	20.0	16.9	13.8	13.8	13.8	13.8
62.5°	129.0	89.1	49.2	29.2	20.0	15.4	13.8	10.8	10.8	10.8	10.8
65°	112.1	76.8	41.5	23.0	15.4	12.3	10.8	9.2	9.2	7.7	7.7
67.5°	92.2	61.4	33.8	20.0	13.8	10.8	9.2	7.7	6.1	6.1	6.1
70°	70.7	46.1	26.1	15.4	10.8	9.2	6.1	6.1	4.6	4.6	4.6
72.5°	50.7	32.3	18.4	12.3	7.7	6.1	6.1	4.6	4.6	4.6	3.1
75°	32.3	21.5	12.3	7.7	6.1	4.6	4.6	3.1	3.1	3.1	3.1
77.5°	20.0	13.8	9.2	6.1	4.6	3.1	3.1	3.1	1.5	1.5	1.5
80°	10.8	7.7	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	6.1	4.6	3.1	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0
85°	3.1	1.5	1.5	1.5	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2	1321.2
2.5°	1331.9	1339.6	1335.0	1338.1	1351.9	1345.7	1356.5	1356.5	1368.8	1368.8	1359.6
5°	1341.1	1350.4	1351.9	1356.5	1374.9	1371.9	1384.2	1387.2	1401.1	1404.1	1396.4
7.5°	1335.0	1345.7	1350.4	1358.0	1376.5	1374.9	1388.8	1394.9	1407.2	1411.8	1405.7
10°	1305.8	1318.1	1324.2	1331.9	1351.9	1350.4	1365.7	1373.4	1384.2	1388.8	1384.2
12.5°	1267.4	1281.2	1287.4	1295.1	1315.0	1313.5	1328.8	1336.5	1345.7	1351.9	1347.3
15°	1224.4	1233.6	1244.4	1252.0	1270.5	1268.9	1284.3	1292.0	1299.7	1307.3	1302.7
17.5°	1169.1	1178.3	1189.1	1195.2	1213.6	1213.6	1225.9	1232.1	1242.8	1249.0	1242.8
20°	1106.1	1116.8	1124.5	1129.1	1146.0	1144.5	1156.8	1162.9	1172.2	1176.8	1172.2
22.5°	1040.0	1049.3	1055.4	1058.5	1072.3	1070.8	1080.0	1086.1	1093.8	1098.4	1093.8
25°	964.8	970.9	975.5	977.0	989.3	986.3	998.6	998.6	1004.7	1009.3	1004.7
27.5°	868.0	872.6	875.7	874.1	883.3	878.7	889.5	881.8	894.1	897.2	892.6
30°	743.5	746.6	749.7	743.5	749.7	743.5	752.8	742.0	752.8	757.4	752.8
32.5°	596.1	596.1	599.1	591.5	594.5	588.4	593.0	589.9	593.0	597.6	593.0
35°	437.8	437.8	440.9	436.3	437.8	431.7	434.8	431.7	433.2	436.3	434.8
37.5°	304.2	302.6	307.2	304.2	305.7	302.6	304.2	301.1	302.6	304.2	302.6
40°	205.9	205.9	208.9	207.4	208.9	207.4	208.9	207.4	207.4	207.4	205.9
42.5°	138.3	139.8	141.3	141.3	142.9	141.3	142.9	141.3	141.3	141.3	139.8
45°	95.2	95.2	96.8	96.8	98.3	98.3	98.3	96.8	96.8	96.8	96.8
47.5°	66.1	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	66.1
50°	46.1	47.6	47.6	47.6	47.6	47.6	47.6	46.1	46.1	46.1	46.1
52.5°	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8	32.3	32.3
55°	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
57.5°	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
60°	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
62.5°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
65°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
67.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
70°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
72.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
75°	3.1	3.1	3.1	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.0	1.5	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: P135673

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1321.2	1321.2	1321.2	1321.2
2.5°	1355.0	1367.3	1362.6	1362.6
5°	1391.8	1405.7	1402.6	1401.1
7.5°	1402.6	1414.9	1411.8	1411.8
10°	1381.1	1393.4	1390.3	1390.3
12.5°	1345.7	1356.5	1355.0	1353.4
15°	1301.2	1311.9	1310.4	1308.9
17.5°	1241.3	1253.6	1252.0	1250.5
20°	1169.1	1179.8	1179.8	1178.3
22.5°	1090.7	1098.4	1099.9	1096.9
25°	1001.6	1007.8	1007.8	1004.7
27.5°	889.5	894.1	894.1	892.6
30°	751.2	752.8	754.3	751.2
32.5°	589.9	589.9	593.0	589.9
35°	430.1	430.1	433.2	431.7
37.5°	299.6	299.6	301.1	299.6
40°	204.3	204.3	205.9	204.3
42.5°	139.8	138.3	139.8	139.8
45°	95.2	95.2	96.8	95.2
47.5°	66.1	66.1	66.1	66.1
50°	46.1	46.1	46.1	46.1
52.5°	32.3	32.3	32.3	32.3
55°	23.0	24.6	24.6	24.6
57.5°	16.9	18.4	18.4	18.4
60°	13.8	13.8	13.8	13.8
62.5°	10.8	10.8	10.8	10.8
65°	7.7	7.7	7.7	7.7
67.5°	6.1	6.1	6.1	6.1
70°	4.6	4.6	4.6	4.6
72.5°	3.1	3.1	3.1	3.1
75°	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5
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)