

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: P135797

Luminaire Tested: **LD6A15D010TE ERM6A15930 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135797
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23357-R2)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15930 6LM121LI
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE WALL WASH LUMINAIRE
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: 1407.3 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 0.86 / 1.02 / 0.97
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

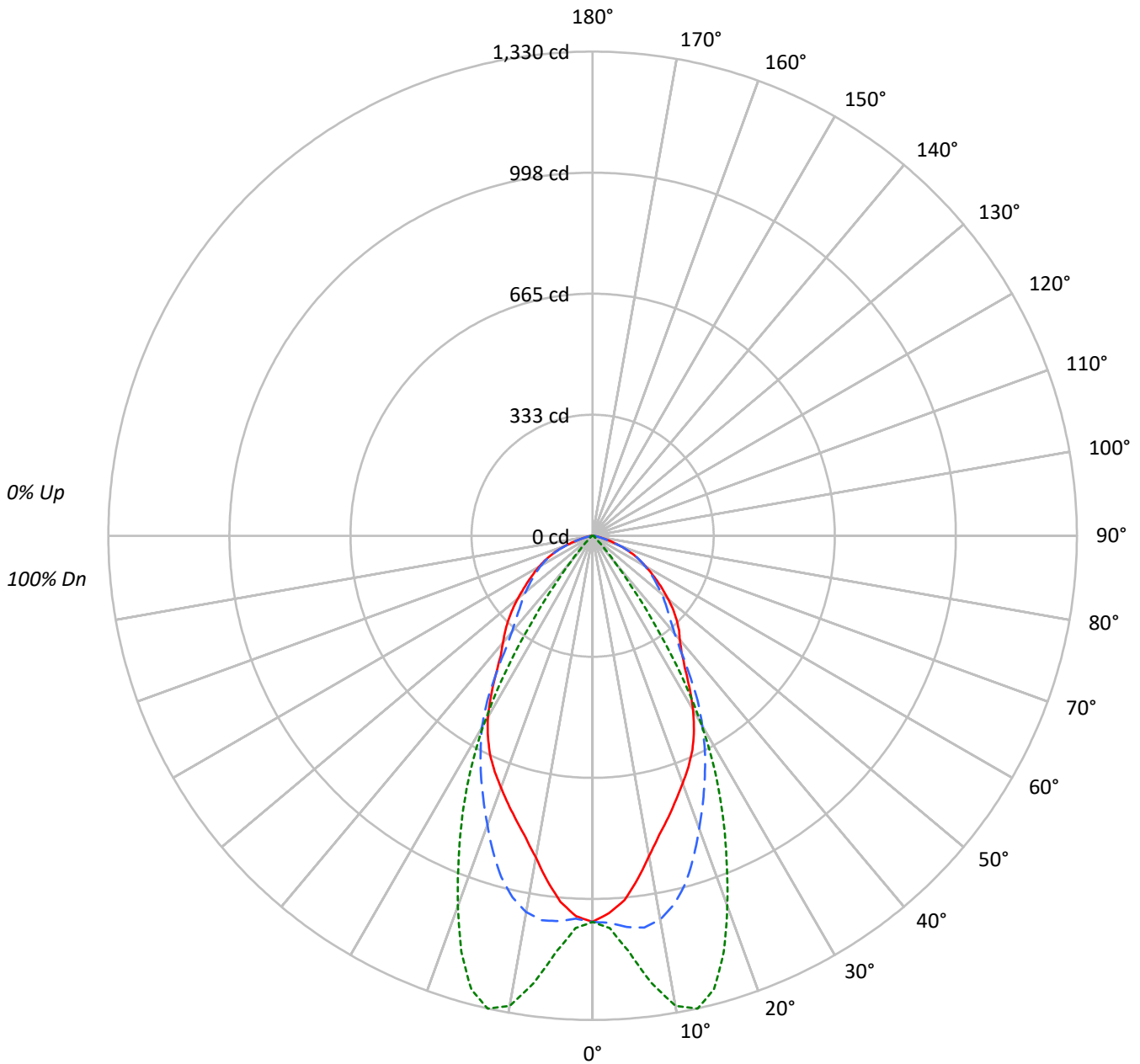
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135797

CATALOG NUMBER: LD6A15D010TE ERM6A15930 6LM121LI

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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				100
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				90
2	104	98	93	89	102	96	91	87	93	89	86	90	87	84	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72				72
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				64
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58				58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53				53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49				49
8	71	59	52	47	69	59	52	47	58	51	47	57	51	47	55	50	47	45				45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42				42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69181	69181	69181
5°	65785	75130	66105
10°	59139	86857	59457
15°	54115	87055	54628
20°	50203	75100	51071
25°	46704	60863	47884
30°	41539	45027	43354
35°	35091	23806	36780
40°	31699	7963	32601
45°	30060	2749	30161
50°	27495	1177	27201
55°	24569	876	24341
60°	21882	874	22130
65°	19343	895	19497
70°	14898	744	14707
75°	9251	479	8747
80°	4696	338	4358
85°	2171	0	2171



TEST NUMBER: P135797

CATALOG NUMBER: LD6A15D010TE ERM6A15930 6LM121LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	7.3
10°-20°	280.9	20.0
20°-30°	338.1	24.0
30°-40°	262.7	18.7
40°-50°	175.8	12.5
50°-60°	132.3	9.4
60°-70°	84.9	6.0
70°-80°	27.2	1.9
80°-90°	2.6	0.2
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°	721.8	51.3
0°-40°	984.5	70.0
0°-60°	1292.6	91.9
0°-90°	1407.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1407.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1060	1060	1060	1060	1060	
5°	1004	1079	1147	1062	1009	92
15°	801	987	1289	970	809	225
25°	649	729	846	725	665	296
35°	441	461	299	461	462	280
45°	326	291	30	284	327	250
55°	216	204	8	200	214	194
65°	125	126	6	123	126	123
75°	37	35	2	33	35	42
85°	3	3	0	3	3	4
90°	0	0	0	0	0	



TEST NUMBER: P135797

CATALOG NUMBER: LD6A15D010TE ERM6A15930 6LM121LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4
2.5°	1037.3	1046.0	1043.1	1056.7	1047.0	1046.0	1052.8	1056.7	1057.6	1064.3	1064.3
5°	1004.5	1014.2	1011.4	1028.7	1024.8	1028.7	1043.1	1053.7	1063.4	1078.8	1088.4
7.5°	950.6	962.2	964.1	981.4	983.4	993.9	1017.1	1038.3	1058.5	1085.6	1108.7
10°	892.7	904.3	907.2	926.4	932.2	946.7	976.6	1003.6	1032.5	1070.1	1104.8
12.5°	842.6	854.1	858.0	877.3	884.1	900.5	932.2	962.2	995.0	1036.4	1077.8
15°	801.2	811.8	815.6	833.0	839.7	855.1	885.0	913.9	945.8	987.2	1027.7
17.5°	760.7	771.2	774.2	789.6	794.4	807.9	834.9	859.9	886.9	923.6	960.2
20°	723.1	732.7	734.6	748.1	751.0	761.6	783.8	804.0	826.2	855.1	885.0
22.5°	687.3	697.0	698.0	709.5	710.6	719.2	737.5	752.9	768.4	791.5	812.7
25°	648.8	658.4	659.4	669.1	670.0	675.8	690.3	701.8	712.5	728.9	743.3
27.5°	602.5	612.2	615.0	621.9	622.8	626.6	639.2	646.9	657.5	668.1	673.9
30°	551.4	560.2	564.0	569.7	570.7	576.5	588.1	593.9	600.6	602.5	604.5
32.5°	494.6	504.2	508.0	512.9	515.8	521.6	532.2	535.1	536.9	536.0	525.4
35°	440.6	449.3	453.1	458.9	460.9	464.6	473.4	472.4	469.5	460.9	441.5
37.5°	400.1	406.8	410.7	414.5	415.6	417.4	422.3	418.4	410.7	396.2	371.2
40°	372.2	378.9	379.8	383.7	382.8	382.8	383.7	377.0	367.3	350.0	321.1
42.5°	350.9	356.7	356.7	360.6	357.6	355.8	355.8	348.0	335.5	317.2	288.3
45°	325.8	330.6	331.7	333.6	330.6	328.7	328.7	321.1	309.5	291.1	262.2
47.5°	299.8	304.7	304.7	307.5	304.7	302.7	302.7	296.0	285.3	268.9	241.9
50°	270.9	275.7	276.7	278.6	276.7	275.7	276.7	269.9	261.3	246.8	222.7
52.5°	243.0	247.7	247.7	249.7	247.7	247.7	248.8	243.9	236.2	224.6	203.4
55°	216.0	219.8	221.8	223.6	220.8	220.8	221.8	218.8	213.0	204.4	186.0
57.5°	190.9	194.7	195.7	197.6	195.7	196.6	197.6	194.7	191.8	185.1	170.7
60°	167.7	171.6	172.6	173.5	172.6	172.6	173.5	172.6	170.7	165.8	153.3
62.5°	146.5	149.4	150.4	152.3	150.4	149.4	151.3	150.4	149.4	146.5	137.9
65°	125.3	127.3	128.2	129.2	127.3	125.3	127.3	127.3	128.2	126.3	119.5
67.5°	102.2	104.2	104.2	104.2	101.2	100.3	102.2	102.2	104.2	103.2	98.4
70°	78.1	79.0	79.0	79.0	75.2	75.2	76.2	76.2	78.1	78.1	75.2
72.5°	55.9	55.0	55.0	54.0	53.0	51.1	51.1	52.0	54.0	54.0	52.0
75°	36.7	35.6	34.7	34.7	33.7	31.8	31.8	32.8	33.7	34.7	33.7
77.5°	22.2	21.2	21.2	20.3	20.3	19.2	19.2	19.2	20.3	20.3	20.3
80°	12.5	11.6	11.6	11.6	10.6	10.6	10.6	10.6	10.6	11.6	10.6
82.5°	6.7	5.8	5.8	5.8	5.8	5.8	4.8	5.8	5.8	5.8	5.8
85°	2.9	2.9	2.9	2.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9
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: P135797

CATALOG NUMBER: LD6A15D010TE ERM6A15930 6LM121LI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4
2.5°	1061.5	1071.1	1064.3	1085.6	1071.1	1078.8	1089.4	1078.8	1081.7	1088.4	1074.9
5°	1094.2	1111.6	1113.5	1142.4	1130.9	1144.3	1158.8	1147.2	1149.1	1154.0	1136.6
7.5°	1127.9	1158.8	1173.3	1213.8	1210.8	1233.0	1250.4	1238.8	1238.8	1239.8	1213.8
10°	1137.6	1182.9	1209.9	1260.0	1267.8	1299.5	1318.9	1311.1	1309.2	1306.3	1270.6
12.5°	1116.4	1172.3	1207.0	1263.0	1278.3	1315.9	1333.3	1330.4	1327.5	1321.7	1280.3
15°	1067.3	1125.1	1161.7	1216.6	1236.0	1274.5	1288.9	1288.9	1286.1	1280.3	1236.0
17.5°	995.0	1048.9	1082.6	1130.9	1150.1	1185.8	1195.5	1198.3	1195.5	1189.7	1149.1
20°	913.0	958.3	985.3	1024.8	1040.3	1071.1	1076.8	1081.7	1079.8	1074.9	1039.3
22.5°	833.0	868.6	888.9	923.6	929.4	955.4	957.3	961.2	960.2	958.3	929.4
25°	759.6	783.8	795.4	821.3	823.3	842.6	841.6	845.5	844.6	844.6	822.4
27.5°	682.6	697.0	700.0	716.3	712.5	726.9	728.9	726.9	727.9	728.9	712.5
30°	605.5	608.3	599.7	601.6	591.0	599.7	591.0	597.7	597.7	600.6	591.0
32.5°	517.7	509.0	485.9	474.3	456.0	456.0	451.2	451.2	451.2	456.0	454.1
35°	424.2	402.9	367.3	342.2	316.2	309.5	308.5	298.9	300.8	307.5	312.4
37.5°	344.2	312.4	265.2	229.4	198.6	185.1	180.2	172.6	175.5	183.2	194.7
40°	287.3	248.8	193.8	152.3	121.5	106.0	98.4	93.5	96.4	106.0	120.5
42.5°	251.6	209.2	150.4	107.0	78.1	63.6	55.9	52.0	55.0	63.6	81.0
45°	225.6	181.3	121.5	79.0	53.0	39.5	32.8	29.8	31.8	39.5	54.0
47.5°	205.4	160.1	101.2	60.7	37.6	26.1	20.3	17.3	19.2	26.1	37.6
50°	187.1	142.7	85.8	48.2	28.9	19.2	13.5	11.6	13.5	18.3	28.0
52.5°	170.7	127.3	73.3	39.5	22.2	15.4	10.6	8.7	9.7	14.5	22.2
55°	156.2	115.7	64.6	33.7	19.2	13.5	9.7	7.7	9.7	12.5	19.2
57.5°	142.7	104.2	56.9	28.9	16.4	11.6	8.7	7.7	8.7	11.6	16.4
60°	129.2	92.6	50.1	25.1	14.5	10.6	7.7	6.7	7.7	9.7	14.5
62.5°	115.7	82.0	43.4	21.2	12.5	8.7	6.7	5.8	6.7	8.7	12.5
65°	100.3	69.4	36.7	18.3	10.6	7.7	5.8	5.8	5.8	7.7	10.6
67.5°	82.9	56.9	28.9	14.5	8.7	6.7	4.8	4.8	4.8	6.7	8.7
70°	63.6	42.5	22.2	11.6	6.7	4.8	3.9	3.9	3.9	4.8	6.7
72.5°	44.4	29.8	15.4	8.7	4.8	3.9	2.9	2.9	2.9	3.9	4.8
75°	28.0	19.2	10.6	5.8	3.9	2.9	1.9	1.9	1.9	2.9	3.9
77.5°	16.4	11.6	6.7	3.9	1.9	1.9	0.9	0.9	0.9	1.9	1.9
80°	8.7	6.7	3.9	1.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	4.8	2.9	1.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	1.9	0.9	0.9	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: P135797

CATALOG NUMBER: LD6A15D010TE ERM6A15930 6LM121LI

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4	1060.4
2.5°	1071.1	1074.9	1074.0	1053.7	1051.8	1052.8	1039.3	1044.0	1048.9	1044.0	1045.1
5°	1123.2	1122.1	1110.6	1081.7	1070.1	1062.4	1040.3	1036.4	1033.5	1022.9	1019.0
7.5°	1191.6	1178.1	1154.0	1110.6	1086.5	1065.3	1032.5	1016.1	1004.5	986.2	975.6
10°	1238.8	1211.9	1176.2	1119.3	1082.6	1049.8	1007.5	982.4	963.1	939.0	923.6
12.5°	1245.6	1208.0	1166.5	1100.0	1057.6	1017.1	970.8	942.8	920.7	894.7	880.2
15°	1202.2	1163.6	1120.2	1053.7	1011.4	969.8	925.5	897.5	875.4	850.3	837.7
17.5°	1120.2	1084.6	1046.0	984.3	947.7	910.0	870.5	846.5	827.2	807.9	795.4
20°	1016.1	988.1	956.4	904.3	875.4	844.6	813.7	794.4	779.9	763.5	753.9
22.5°	913.0	891.8	868.6	827.2	806.0	783.8	759.6	746.2	735.6	723.1	716.3
25°	813.7	799.2	784.8	752.9	740.4	725.0	707.6	698.0	691.2	682.6	677.8
27.5°	710.6	705.7	701.8	681.6	676.8	666.2	654.6	648.8	644.0	638.3	634.4
30°	598.6	601.6	617.0	606.4	611.2	608.3	603.5	599.7	597.7	592.9	588.1
32.5°	472.4	492.6	514.8	517.7	532.2	538.9	538.0	538.9	539.9	536.0	532.2
35°	338.4	371.2	405.9	421.3	445.4	460.9	466.6	472.4	476.2	475.3	472.4
37.5°	225.6	269.9	311.4	338.4	370.2	391.4	404.0	413.6	419.3	421.3	421.3
40°	150.4	192.9	247.7	282.5	318.1	344.2	358.6	371.2	379.8	383.7	385.6
42.5°	106.0	151.3	207.3	246.8	283.4	311.4	327.8	341.3	350.0	354.8	356.7
45°	78.1	121.5	179.3	219.8	257.4	284.4	300.8	313.3	322.0	326.9	329.7
47.5°	59.8	102.2	158.1	199.6	237.2	262.2	277.7	289.2	296.9	300.8	302.7
50°	47.2	85.8	140.7	182.2	216.9	240.0	253.6	263.2	269.9	272.8	274.7
52.5°	38.6	74.2	126.3	165.8	198.6	218.8	229.4	237.2	243.0	244.9	246.8
55°	32.8	64.6	113.7	152.3	182.2	199.6	207.3	214.0	216.9	218.8	219.8
57.5°	28.9	56.9	103.2	139.8	166.8	181.3	187.1	191.8	192.9	194.7	195.7
60°	25.1	49.2	91.5	126.3	150.4	162.9	165.8	169.6	169.6	170.7	171.6
62.5°	21.2	42.5	80.0	112.8	134.0	144.6	146.5	147.5	147.5	147.5	148.5
65°	17.3	35.6	67.5	97.3	116.7	123.4	124.3	125.3	123.4	123.4	124.3
67.5°	14.5	28.0	54.0	80.0	95.4	101.2	100.3	100.3	97.3	97.3	98.4
70°	10.6	21.2	40.5	60.7	72.3	76.2	74.2	74.2	71.4	71.4	72.3
72.5°	7.7	15.4	28.0	41.4	50.1	52.0	50.1	50.1	48.2	48.2	49.2
75°	5.8	9.7	18.3	27.0	31.8	32.8	31.8	30.9	29.8	29.8	30.9
77.5°	3.9	6.7	10.6	15.4	18.3	19.2	18.3	18.3	17.3	18.3	18.3
80°	1.9	3.9	5.8	8.7	9.7	10.6	10.6	10.6	9.7	9.7	10.6
82.5°	0.9	1.9	2.9	3.9	4.8	5.8	4.8	4.8	4.8	4.8	4.8
85°	0.0	0.9	0.9	1.9	1.9	2.9	1.9	1.9	1.9	1.9	1.9
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: P135797

CATALOG NUMBER: LD6A15D010TE ERM6A15930 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1060.4	1060.4	1060.4	1060.4
2.5°	1043.1	1038.3	1031.5	1046.0
5°	1013.2	1003.6	995.9	1009.4
7.5°	966.0	952.5	941.9	955.4
10°	912.0	896.6	885.0	897.5
12.5°	864.7	849.3	839.7	849.3
15°	823.3	808.8	800.2	808.8
17.5°	782.8	770.3	762.6	772.3
20°	744.3	733.7	726.9	735.6
22.5°	708.6	698.9	693.1	701.8
25°	670.9	664.2	657.5	665.2
27.5°	629.5	621.9	618.0	622.8
30°	582.3	574.6	571.7	575.5
32.5°	526.4	518.7	515.8	518.7
35°	468.5	461.8	457.9	461.8
37.5°	419.3	413.6	410.7	413.6
40°	384.7	381.8	378.9	382.8
42.5°	357.6	354.8	352.8	355.8
45°	329.7	325.8	323.9	326.9
47.5°	301.7	297.9	296.0	297.9
50°	272.8	268.0	267.1	268.0
52.5°	243.9	240.0	238.2	239.1
55°	217.9	215.0	213.0	214.0
57.5°	194.7	190.9	189.9	190.9
60°	171.6	169.6	168.7	169.6
62.5°	148.5	147.5	148.5	148.5
65°	125.3	125.3	126.3	126.3
67.5°	100.3	102.2	103.2	103.2
70°	74.2	76.2	77.1	77.1
72.5°	50.1	52.0	53.0	54.0
75°	31.8	33.7	34.7	34.7
77.5°	19.2	20.3	20.3	21.2
80°	10.6	11.6	11.6	11.6
82.5°	5.8	5.8	5.8	6.7
85°	2.9	2.9	2.9	2.9
87.5°	0.0	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)