

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: P135521

Luminaire Tested: **LD6A10D010TE ERM6A10830 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135521
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: LD6A10D010TE ERM6A10830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1174.0 lumens
Efficiency: N/A
Efficacy: 83.9 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

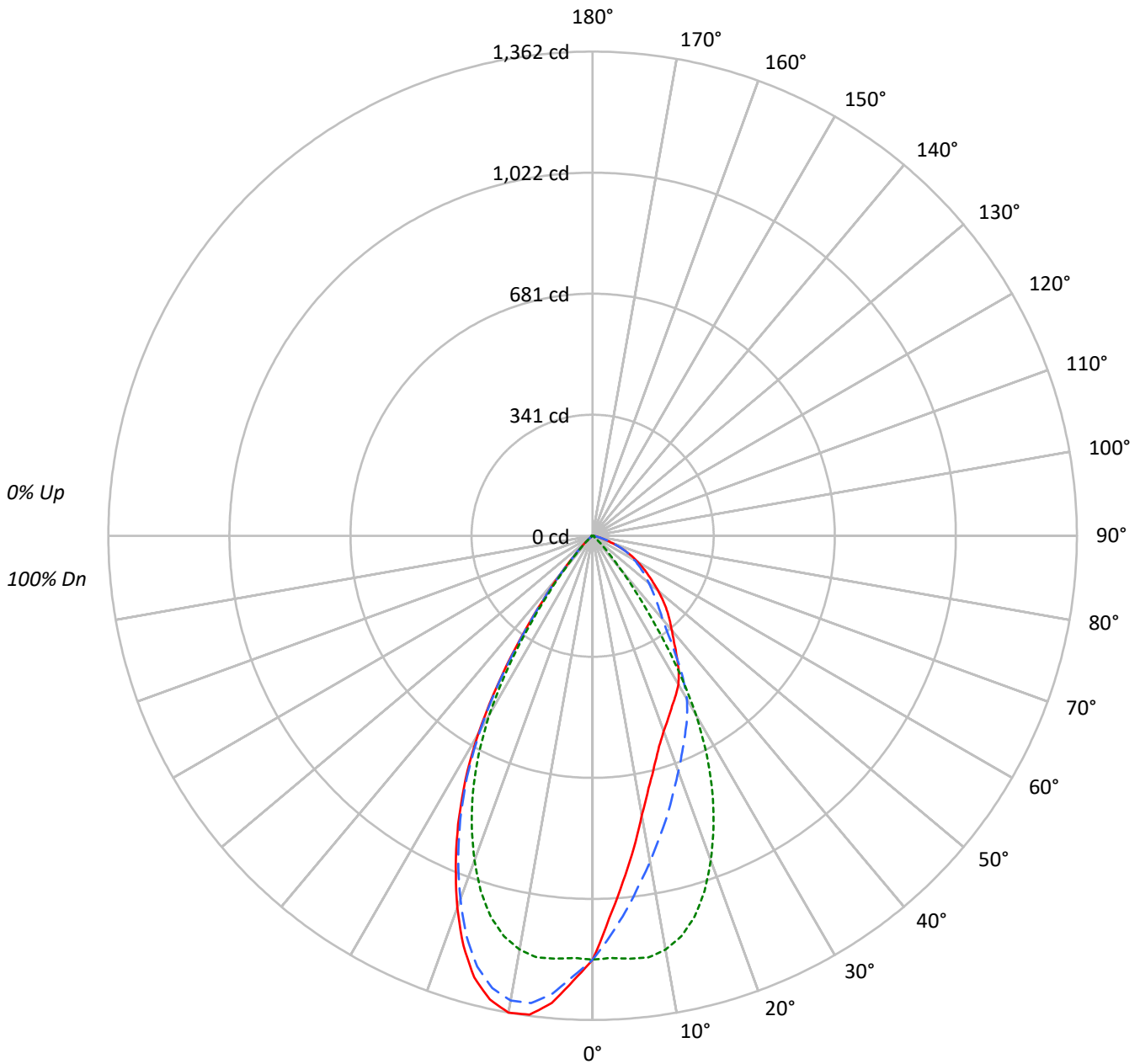
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

Luminous Intensity Polar Plot





TEST NUMBER: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

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				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°	77806	77806	77806
5°	63931	78208	86401
10°	52845	78311	90235
15°	45267	74877	86873
20°	40587	67435	77245
25°	38073	57422	64398
30°	36371	43791	48477
35°	32797	24825	28098
40°	29433	10109	11898
45°	27190	3497	4023
50°	24420	1228	1309
55°	21577	739	648
60°	19063	626	522
65°	15700	494	370
70°	10472	458	305
75°	5697	403	202
80°	3043	902	0
85°	1198	1198	0



TEST NUMBER: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.0	9.5
10°-20°	288.8	24.6
20°-30°	341.2	29.1
30°-40°	227.4	19.4
40°-50°	98.6	8.4
50°-60°	59.2	5.0
60°-70°	35.5	3.0
70°-80°	10.9	0.9
80°-90°	1.4	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°	741.1	63.1
0°-40°	968.5	82.5
0°-60°	1126.3	95.9
0°-90°	1174.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1174.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1193	1193	1193	1193	1193	
5°	976	1061	1194	1293	1319	88
15°	670	812	1109	1255	1286	189
25°	529	615	798	881	895	244
35°	412	405	312	346	353	258
45°	295	250	38	44	44	227
55°	190	169	6	6	6	171
65°	102	101	3	2	2	100
75°	23	25	2	1	1	27
85°	2	2	2	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6
2.5°	1076.3	1094.9	1102.9	1108.6	1087.6	1110.2	1102.9	1113.4	1116.7	1127.2	1136.8
5°	976.2	993.9	1002.8	1009.3	993.1	1019.0	1018.2	1031.9	1043.2	1061.0	1073.1
7.5°	886.5	894.6	903.5	912.4	905.1	928.5	932.6	951.9	968.9	993.1	1015.7
10°	797.7	805.8	814.7	824.4	821.1	844.6	853.4	875.2	897.9	930.1	954.4
12.5°	726.7	734.8	742.8	752.5	750.9	774.3	785.6	809.0	836.5	868.8	896.2
15°	670.2	677.4	685.5	692.0	693.6	715.4	727.5	750.1	779.2	812.3	840.5
17.5°	620.9	629.0	636.2	641.9	643.5	663.7	675.8	696.0	724.3	755.7	783.2
20°	584.6	591.8	598.3	604.0	604.0	621.7	632.2	650.8	675.8	704.9	728.3
22.5°	555.5	562.0	567.6	572.5	572.5	587.8	596.7	612.0	633.8	658.0	677.4
25°	528.9	535.3	540.2	544.2	543.4	557.9	565.2	576.5	595.1	615.3	629.8
27.5°	506.3	512.7	516.7	522.4	519.2	531.3	536.9	546.6	561.2	575.7	583.8
30°	482.8	489.3	493.3	498.2	494.9	505.4	508.7	513.5	523.2	530.5	531.3
32.5°	450.5	456.2	460.2	462.7	458.6	466.7	466.7	467.5	470.7	471.5	465.1
35°	411.8	415.8	419.1	419.9	415.0	419.9	419.1	413.4	411.8	405.3	392.4
37.5°	375.5	380.3	381.9	381.9	375.5	377.9	374.6	365.8	359.3	348.0	330.2
40°	345.6	349.6	350.4	349.6	343.2	344.0	339.1	328.6	319.7	306.0	283.4
42.5°	320.5	323.8	324.6	323.8	317.3	317.3	312.5	301.2	290.7	275.3	251.9
45°	294.7	297.9	299.6	297.9	292.3	292.3	286.6	276.1	265.6	249.5	226.1
47.5°	268.1	270.5	272.1	271.3	265.6	265.6	260.8	250.3	241.4	226.9	204.3
50°	240.6	243.8	245.5	244.6	239.8	239.8	235.8	226.1	218.8	205.9	185.7
52.5°	214.0	218.0	218.8	217.2	214.0	213.2	210.7	201.9	196.2	187.3	167.9
55°	189.7	193.0	193.0	193.0	188.9	188.1	186.5	179.2	176.0	168.8	152.6
57.5°	167.9	170.4	169.6	168.8	167.1	165.5	163.9	158.3	156.6	151.8	138.1
60°	146.1	148.6	147.8	147.0	145.3	143.7	142.1	138.1	138.1	134.8	123.5
62.5°	125.2	126.8	126.0	125.2	125.2	123.5	122.7	119.5	120.3	118.7	109.0
65°	101.7	104.2	103.3	103.3	104.2	104.2	103.3	101.7	101.7	100.9	92.9
67.5°	77.5	79.9	79.1	79.9	82.4	83.2	83.2	82.4	82.4	80.7	73.5
70°	54.9	56.5	56.5	57.3	59.7	60.6	63.0	60.6	60.6	58.9	53.3
72.5°	36.3	37.1	37.9	39.6	40.4	41.2	42.8	42.8	42.0	39.6	35.5
75°	22.6	23.4	23.4	24.2	25.0	25.8	27.5	26.6	25.8	25.0	21.8
77.5°	13.7	13.7	14.5	14.5	15.3	16.1	16.1	16.1	15.3	14.5	12.9
80°	8.1	8.1	8.1	8.9	8.9	8.9	8.9	8.9	8.9	8.1	7.3
82.5°	4.0	4.0	4.0	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0
85°	1.6	1.6	1.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.6
87.5°	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8
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: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6
2.5°	1146.5	1146.5	1144.1	1158.6	1177.2	1174.0	1174.8	1188.5	1194.2	1203.9	1212.7
5°	1094.1	1102.9	1109.4	1132.8	1159.5	1164.3	1173.2	1194.2	1207.1	1223.2	1238.6
7.5°	1041.6	1060.1	1075.5	1106.2	1140.9	1153.8	1170.0	1196.6	1213.6	1235.4	1256.3
10°	987.5	1013.3	1035.9	1073.1	1113.4	1132.0	1152.2	1182.1	1204.7	1228.1	1251.5
12.5°	933.4	964.9	993.1	1034.3	1077.1	1099.7	1122.3	1153.8	1178.0	1202.3	1226.5
15°	880.1	914.0	943.9	987.5	1031.1	1054.5	1077.1	1108.6	1134.4	1157.0	1181.3
17.5°	821.1	859.1	886.5	927.7	969.7	993.1	1018.2	1047.2	1069.8	1089.2	1112.6
20°	763.8	799.3	824.4	862.3	900.3	922.1	945.5	971.3	991.5	1008.5	1030.3
22.5°	708.1	739.6	763.0	797.7	826.8	845.4	865.6	888.2	905.9	919.7	939.0
25°	654.0	679.0	696.8	724.3	747.7	762.2	779.2	797.7	813.1	824.4	842.1
27.5°	599.9	616.9	623.3	640.3	654.8	671.0	679.8	694.4	708.1	717.0	732.3
30°	537.7	543.4	537.7	542.6	546.6	553.9	564.4	581.3	587.8	593.5	608.8
32.5°	460.2	456.2	437.6	430.4	425.5	432.8	434.4	447.3	451.3	456.2	468.3
35°	378.7	364.1	334.3	315.7	304.4	305.2	297.9	311.7	314.1	318.9	327.8
37.5°	309.2	285.8	247.1	221.2	204.3	200.2	191.4	199.4	200.2	203.5	209.9
40°	258.4	225.3	181.7	151.0	132.4	124.3	115.5	118.7	118.7	121.1	125.2
42.5°	222.8	187.3	138.1	105.0	84.8	75.1	67.8	67.8	67.8	68.6	71.1
45°	196.2	156.6	107.4	73.5	54.9	45.2	37.9	37.9	37.1	37.1	38.8
47.5°	174.4	134.8	84.8	54.1	35.5	26.6	21.8	20.2	19.4	20.2	21.0
50°	156.6	117.9	70.2	41.2	25.0	17.8	13.7	12.1	11.3	11.3	11.3
52.5°	141.3	104.2	58.9	33.1	19.4	12.9	9.7	8.1	7.3	7.3	7.3
55°	128.4	92.0	50.9	27.5	16.1	11.3	8.1	6.5	5.7	5.7	5.7
57.5°	115.5	81.5	43.6	23.4	13.7	9.7	7.3	5.7	4.8	4.8	4.8
60°	102.5	71.1	37.9	19.4	11.3	8.1	6.5	4.8	4.0	4.0	4.0
62.5°	89.6	60.6	31.5	16.1	9.7	7.3	4.8	4.0	4.0	3.2	3.2
65°	74.3	49.3	25.8	13.7	8.1	5.7	4.8	3.2	3.2	3.2	3.2
67.5°	58.1	37.9	19.4	10.5	6.5	4.8	4.0	3.2	2.4	2.4	2.4
70°	41.2	26.6	14.5	8.1	5.7	4.0	3.2	2.4	2.4	2.4	1.6
72.5°	27.5	17.8	10.5	6.5	4.8	3.2	2.4	2.4	1.6	1.6	1.6
75°	17.8	11.3	7.3	4.8	3.2	3.2	2.4	1.6	1.6	1.6	0.8
77.5°	10.5	7.3	4.8	3.2	2.4	2.4	2.4	2.4	2.4	1.6	0.8
80°	5.7	4.0	3.2	2.4	1.6	2.4	2.4	2.4	2.4	1.6	0.8
82.5°	3.2	2.4	1.6	1.6	1.6	1.6	1.6	2.4	2.4	1.6	0.8
85°	1.6	1.6	0.8	0.8	0.8	1.6	1.6	1.6	1.6	0.8	0.8
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	0.8	0.8
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: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6	1192.6
2.5°	1220.0	1224.9	1226.5	1228.9	1242.6	1239.4	1251.5	1251.5	1261.2	1255.5	1261.2
5°	1251.5	1262.0	1266.8	1273.3	1292.7	1292.7	1307.2	1309.6	1322.6	1318.5	1324.2
7.5°	1271.7	1284.6	1291.1	1301.6	1322.6	1325.8	1339.5	1343.5	1358.9	1356.5	1359.7
10°	1267.7	1281.4	1289.5	1300.8	1322.6	1327.4	1339.5	1346.8	1361.3	1358.1	1359.7
12.5°	1242.6	1255.5	1264.4	1274.9	1297.5	1303.2	1313.7	1321.7	1335.5	1333.1	1333.1
15°	1195.8	1210.3	1217.6	1226.5	1248.3	1254.7	1262.8	1269.3	1284.6	1283.0	1280.6
17.5°	1125.5	1139.3	1144.9	1152.2	1173.2	1180.4	1186.9	1191.8	1206.3	1205.5	1201.4
20°	1040.0	1052.1	1056.9	1061.8	1080.3	1087.6	1092.4	1097.3	1109.4	1109.4	1103.7
22.5°	946.3	956.8	960.0	964.1	980.2	987.5	989.9	993.9	1005.2	1005.2	998.0
25°	847.0	855.9	857.5	860.7	874.4	880.9	881.7	884.1	895.4	895.4	888.2
27.5°	735.6	742.8	744.4	746.1	758.2	764.6	763.8	772.7	775.9	777.5	768.7
30°	610.4	622.5	616.1	623.3	627.4	633.8	631.4	640.3	642.7	645.1	633.8
32.5°	469.9	481.2	474.0	481.2	482.8	489.3	486.1	494.1	495.8	498.2	487.7
35°	329.4	338.3	331.9	334.3	339.9	346.4	342.3	349.6	351.2	352.0	344.0
37.5°	211.5	218.0	219.6	222.0	222.0	226.9	228.5	228.5	229.3	230.1	223.7
40°	126.8	131.6	132.4	131.6	134.0	138.1	138.9	138.1	138.9	139.7	135.6
42.5°	71.9	75.1	75.9	75.9	77.5	79.9	79.9	79.1	79.9	79.9	77.5
45°	39.6	41.2	42.0	41.2	42.0	43.6	43.6	43.6	43.6	43.6	42.8
47.5°	21.0	21.8	21.8	22.6	21.8	22.6	22.6	22.6	23.4	23.4	22.6
50°	11.3	12.1	12.1	12.1	12.1	12.9	12.9	12.9	12.9	12.9	12.1
52.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
55°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
57.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
60°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
62.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
65°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
67.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.8	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: P135521

CATALOG NUMBER: LD6A10D010TE ERM6A10830 6LM111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1192.6	1192.6	1192.6	1192.6
2.5°	1263.6	1267.7	1262.0	1253.1
5°	1328.2	1333.1	1327.4	1319.3
7.5°	1363.7	1371.0	1364.5	1358.9
10°	1365.3	1372.6	1365.3	1362.1
12.5°	1338.7	1346.0	1337.9	1336.3
15°	1287.8	1293.5	1285.4	1286.2
17.5°	1209.5	1214.4	1206.3	1208.7
20°	1111.0	1115.9	1107.8	1112.6
22.5°	1005.2	1008.5	1006.9	1006.0
25°	894.6	897.0	889.8	894.6
27.5°	773.5	775.1	775.9	775.1
30°	639.5	640.3	635.4	643.5
32.5°	492.5	491.7	490.1	497.4
35°	346.4	346.4	346.4	352.8
37.5°	225.3	224.5	225.3	230.1
40°	136.5	135.6	136.5	139.7
42.5°	77.5	77.5	78.3	79.9
45°	43.6	42.8	42.8	43.6
47.5°	23.4	23.4	22.6	23.4
50°	12.9	12.9	12.1	12.9
52.5°	7.3	7.3	7.3	7.3
55°	5.7	5.7	5.7	5.7
57.5°	4.8	4.8	4.8	4.8
60°	4.0	4.0	4.0	4.0
62.5°	3.2	3.2	3.2	3.2
65°	2.4	3.2	2.4	2.4
67.5°	2.4	2.4	2.4	2.4
70°	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6
75°	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8
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



Report Generated By E9808895 / USPTCWHP6082093





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













(END OF REPORT)