

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: P135915

Luminaire Tested: **LD6A15D010TE ERM6A15840 6LM121H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135915  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23373)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD6A15D010TE ERM6A15840 6LM121H  
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE 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: 1582.0 lumens  
Efficiency: N/A  
Efficacy: 70.0 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 1.06 / 1.01  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

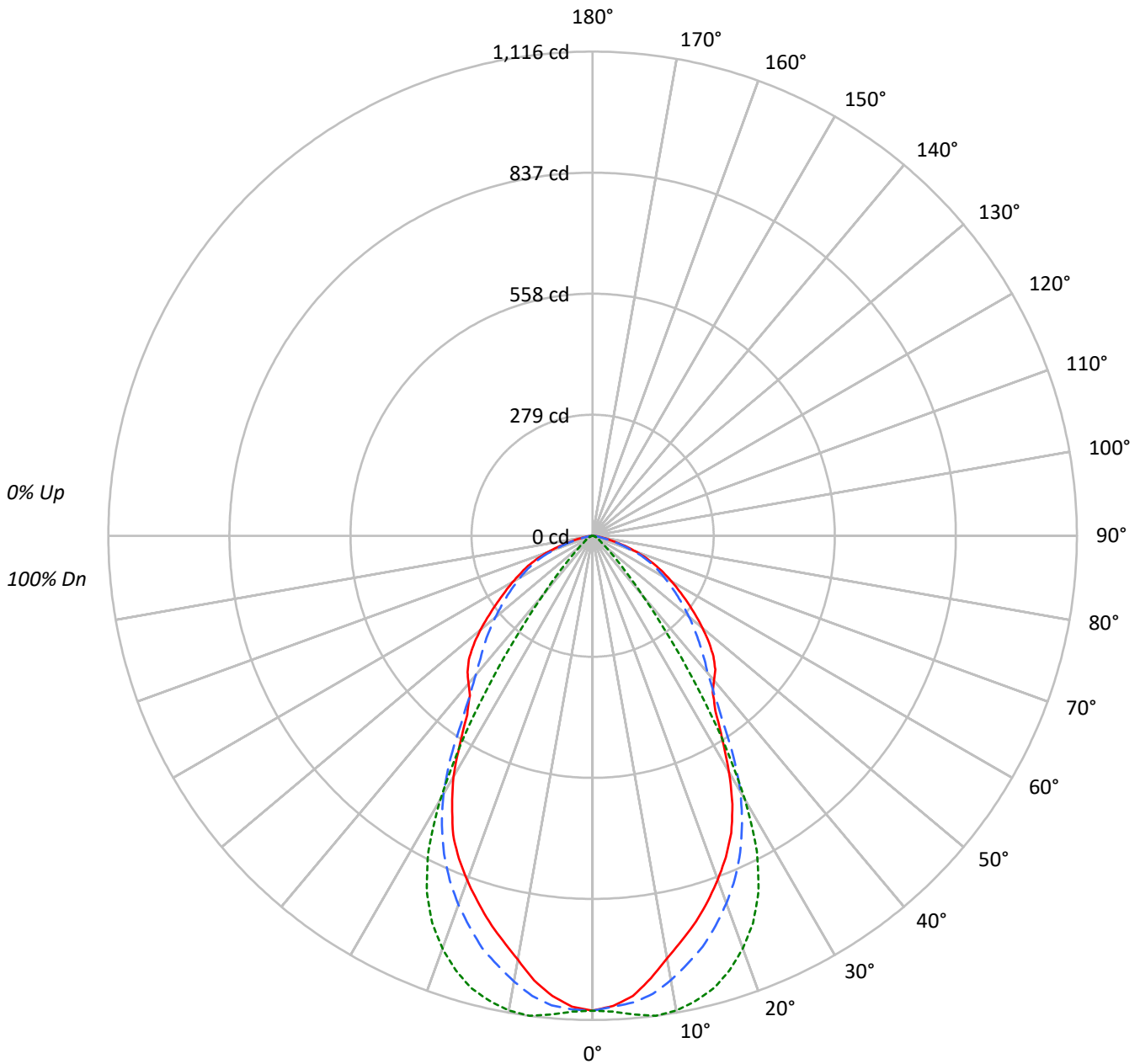
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

### Luminous Intensity Polar Plot





TEST NUMBER: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

**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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89			89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79			79
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70			70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62			62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56			56
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51			51
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	47			47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43			43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39			39
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36			36

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	71406	71406	71406
5°	69734	72550	69734
10°	65498	73607	65717
15°	62199	72925	62199
20°	58541	70254	58659
25°	54392	65103	54752
30°	47332	52937	48326
35°	39241	32001	40165
40°	37030	14930	37882
45°	36306	7021	37219
50°	33565	3694	34235
55°	30279	2445	30461
60°	27401	1944	27610
65°	24499	1528	25271
70°	20181	1259	20811
75°	13335	832	13335
80°	7439	639	7439
85°	4940	0	3743



TEST NUMBER: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.1	6.5
10°-20°	277.0	17.5
20°-30°	370.2	23.4
30°-40°	306.1	19.4
40°-50°	219.7	13.9
50°-60°	161.4	10.2
60°-70°	104.2	6.6
70°-80°	36.9	2.3
80°-90°	4.3	0.3
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°	749.3	47.4
0°-40°	1055.4	66.7
0°-60°	1436.5	90.8
0°-90°	1582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1582.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1094	1094	1094	1094	1094	
5°	1065	1080	1108	1086	1065	99
15°	921	980	1080	984	921	258
25°	756	805	904	810	761	343
35°	493	522	402	527	504	317
45°	394	347	76	352	403	301
55°	266	236	22	240	268	239
65°	159	147	10	149	164	156
75°	53	43	3	43	53	60
85°	7	3	0	3	5	8
90°	0	0	0	0	0	



TEST NUMBER: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5
2.5°	1084.6	1076.4	1083.0	1076.4	1078.0	1084.6	1086.3	1089.6	1091.2	1086.3	1086.3
5°	1064.8	1056.5	1064.8	1058.2	1061.5	1069.7	1071.4	1078.0	1081.3	1079.7	1083.0
7.5°	1028.4	1021.8	1030.1	1025.1	1030.1	1041.6	1046.6	1054.9	1061.5	1064.8	1069.7
10°	988.7	982.1	990.4	985.4	993.7	1006.9	1011.9	1021.8	1031.7	1040.0	1048.2
12.5°	954.0	947.4	952.4	950.7	959.0	970.5	978.8	990.4	1002.0	1010.2	1021.8
15°	920.9	914.3	920.9	917.6	924.2	937.5	945.7	957.3	970.5	980.5	993.7
17.5°	882.9	876.3	881.3	879.6	886.2	897.8	906.1	917.6	930.9	942.4	955.7
20°	843.2	836.6	841.6	838.3	844.9	858.1	864.7	877.9	889.5	901.1	912.7
22.5°	801.9	795.3	801.9	796.9	806.9	815.1	821.7	835.0	844.9	856.5	866.4
25°	755.6	749.0	753.9	750.6	757.3	767.2	772.1	785.4	793.6	805.2	815.1
27.5°	697.7	689.5	699.4	692.8	701.0	709.3	714.3	725.8	735.8	745.7	753.9
30°	628.3	621.7	631.6	626.6	636.6	643.2	649.8	661.4	669.6	681.2	682.8
32.5°	555.5	552.2	560.5	557.2	567.1	573.7	578.7	590.3	596.9	603.5	598.5
35°	492.7	489.4	497.7	496.0	504.3	509.2	514.2	520.8	520.8	522.5	509.2
37.5°	454.7	453.0	459.6	458.0	464.6	469.6	469.6	471.2	467.9	459.6	439.8
40°	434.8	433.2	438.1	436.5	441.5	443.1	441.5	438.1	428.2	411.7	385.2
42.5°	418.3	415.0	418.3	416.7	420.0	421.6	416.7	411.7	398.5	378.6	347.2
45°	393.5	390.2	395.2	391.9	395.2	395.2	390.2	383.6	368.7	347.2	314.1
47.5°	363.7	360.4	365.4	362.1	365.4	365.4	360.4	353.8	338.9	317.5	284.4
50°	330.7	327.4	330.7	329.0	332.3	334.0	327.4	322.4	309.2	289.3	256.3
52.5°	297.6	294.3	297.6	297.6	299.3	299.3	294.3	291.0	279.4	261.2	231.5
55°	266.2	262.9	267.8	266.2	267.8	267.8	262.9	259.6	251.3	236.4	208.3
57.5°	236.4	234.8	238.1	236.4	236.4	236.4	233.1	231.5	224.9	211.6	188.5
60°	210.0	206.7	208.3	208.3	208.3	210.0	206.7	205.0	200.1	190.1	168.6
62.5°	183.5	181.9	183.5	181.9	181.9	183.5	181.9	180.2	176.9	168.6	150.5
65°	158.7	155.4	158.7	157.1	157.1	157.1	155.4	155.4	152.1	147.2	130.6
67.5°	132.3	130.6	132.3	130.6	129.0	129.0	127.3	127.3	125.7	122.4	107.5
70°	105.8	102.5	104.2	100.9	102.5	99.2	99.2	97.5	95.9	94.2	82.7
72.5°	77.7	76.1	76.1	72.7	72.7	71.1	69.4	69.4	67.8	67.8	59.5
75°	52.9	52.9	51.3	47.9	49.6	46.3	46.3	46.3	44.6	43.0	38.0
77.5°	34.7	33.1	33.1	31.4	31.4	28.1	29.8	28.1	28.1	26.5	23.1
80°	19.8	19.8	19.8	18.2	18.2	16.5	16.5	16.5	14.9	14.9	13.2
82.5°	11.6	11.6	11.6	9.9	9.9	9.9	9.9	8.3	8.3	8.3	6.6
85°	6.6	5.0	5.0	5.0	5.0	5.0	5.0	3.3	3.3	3.3	3.3
87.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	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: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5
2.5°	1092.9	1091.2	1089.6	1096.2	1097.9	1092.9	1092.9	1097.9	1101.2	1092.9	1091.2
5°	1091.2	1092.9	1092.9	1101.2	1106.1	1102.8	1102.8	1107.8	1111.1	1101.2	1097.9
7.5°	1083.0	1087.9	1091.2	1102.8	1111.1	1109.4	1111.1	1116.0	1117.7	1107.8	1102.8
10°	1064.8	1071.4	1078.0	1092.9	1102.8	1104.5	1106.1	1111.1	1114.4	1101.2	1094.5
12.5°	1040.0	1049.9	1059.8	1076.4	1087.9	1089.6	1094.5	1097.9	1099.5	1087.9	1079.7
15°	1011.9	1025.1	1035.0	1053.2	1066.4	1069.7	1074.7	1079.7	1079.7	1066.4	1058.2
17.5°	977.2	988.7	1002.0	1020.1	1035.0	1038.3	1044.9	1049.9	1049.9	1036.7	1025.1
20°	934.2	947.4	959.0	978.8	995.3	1000.3	1006.9	1011.9	1011.9	1000.3	985.4
22.5°	889.5	902.8	914.3	932.5	949.0	954.0	959.0	965.6	963.9	954.0	940.8
25°	836.6	848.2	856.5	874.6	887.9	892.8	899.4	904.4	902.8	892.8	881.3
27.5°	772.1	780.4	782.1	793.6	805.2	810.2	815.1	820.1	818.4	810.2	800.2
30°	697.7	696.1	687.8	687.8	692.8	696.1	699.4	702.7	701.0	696.1	689.5
32.5°	603.5	591.9	570.4	558.8	553.9	553.9	553.9	557.2	555.5	553.9	553.9
35°	502.6	477.8	444.8	420.0	406.7	401.8	398.5	401.8	400.1	401.8	408.4
37.5°	420.0	383.6	338.9	305.9	284.4	274.5	267.8	269.5	269.5	274.5	286.0
40°	358.8	312.5	262.9	221.6	196.8	183.5	175.3	175.3	176.9	183.5	198.4
42.5°	312.5	261.2	206.7	167.0	137.2	124.0	115.7	114.1	115.7	124.0	138.9
45°	276.1	221.6	167.0	124.0	99.2	84.3	77.7	76.1	77.7	86.0	99.2
47.5°	244.7	190.1	138.9	95.9	71.1	59.5	52.9	51.3	54.6	61.2	72.7
50°	218.2	165.3	114.1	76.1	54.6	43.0	38.0	36.4	38.0	44.6	54.6
52.5°	193.4	143.8	95.9	59.5	41.3	33.1	28.1	26.5	28.1	33.1	43.0
55°	173.6	127.3	82.7	49.6	33.1	26.5	23.1	21.5	23.1	26.5	34.7
57.5°	155.4	112.4	71.1	41.3	28.1	21.5	18.2	18.2	18.2	21.5	28.1
60°	138.9	99.2	61.2	34.7	23.1	18.2	14.9	14.9	14.9	18.2	23.1
62.5°	124.0	87.6	52.9	29.8	19.8	14.9	13.2	13.2	13.2	14.9	19.8
65°	105.8	74.4	44.6	24.8	16.5	13.2	11.6	9.9	11.6	13.2	16.5
67.5°	87.6	61.2	36.4	19.8	13.2	9.9	8.3	8.3	8.3	9.9	13.2
70°	67.8	47.9	28.1	14.9	9.9	8.3	6.6	6.6	6.6	8.3	9.9
72.5°	46.3	33.1	19.8	11.6	8.3	6.6	5.0	5.0	5.0	6.6	8.3
75°	29.8	21.5	13.2	8.3	5.0	5.0	3.3	3.3	3.3	5.0	5.0
77.5°	18.2	13.2	8.3	5.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
80°	9.9	8.3	5.0	3.3	3.3	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	5.0	5.0	3.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	1.7	1.7	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: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5	1094.5
2.5°	1091.2	1094.5	1096.2	1089.6	1091.2	1092.9	1083.0	1084.6	1079.7	1089.6	1084.6
5°	1096.2	1097.9	1099.5	1089.6	1087.9	1086.3	1074.7	1073.0	1066.4	1074.7	1069.7
7.5°	1097.9	1094.5	1094.5	1079.7	1074.7	1069.7	1054.9	1049.9	1041.6	1044.9	1038.3
10°	1089.6	1083.0	1078.0	1059.8	1051.6	1043.3	1025.1	1018.5	1006.9	1008.6	1000.3
12.5°	1071.4	1063.1	1054.9	1035.0	1025.1	1013.5	995.3	985.4	973.8	973.8	963.9
15°	1048.2	1038.3	1028.4	1008.6	995.3	983.8	962.3	952.4	940.8	939.1	930.9
17.5°	1015.2	1003.6	993.7	970.5	957.3	944.1	924.2	912.7	901.1	901.1	891.2
20°	975.5	962.3	950.7	929.2	916.0	904.4	881.3	871.3	861.4	859.8	851.5
22.5°	929.2	916.0	906.1	886.2	871.3	859.8	839.9	831.7	821.7	820.1	810.2
25°	871.3	859.8	849.8	833.3	820.1	810.2	792.0	782.1	775.4	775.4	767.2
27.5°	793.6	783.7	782.1	768.8	758.9	752.3	737.4	730.8	722.5	722.5	712.6
30°	689.5	691.1	697.7	694.4	691.1	687.8	674.6	672.9	663.0	661.4	649.8
32.5°	562.2	573.7	591.9	601.8	606.8	610.1	606.8	603.5	595.2	593.6	580.3
35°	426.6	449.7	479.5	499.3	515.9	527.4	532.4	532.4	529.1	527.4	515.9
37.5°	309.2	343.9	383.6	416.7	443.1	464.6	474.5	481.1	481.1	481.1	476.2
40°	226.5	267.8	314.1	357.1	390.2	418.3	433.2	444.8	448.1	453.0	449.7
42.5°	168.6	213.3	262.9	312.5	350.5	381.9	401.8	415.0	423.3	428.2	428.2
45°	129.0	173.6	224.9	277.8	317.5	352.2	372.0	386.9	395.2	401.8	401.8
47.5°	99.2	142.2	193.4	246.4	287.7	322.4	342.3	355.5	363.7	370.4	370.4
50°	77.7	117.4	167.0	218.2	259.6	292.6	310.8	324.1	330.7	335.6	337.3
52.5°	62.8	99.2	147.2	196.8	234.8	264.5	279.4	291.0	297.6	300.9	302.6
55°	51.3	86.0	130.6	175.3	211.6	239.7	253.0	261.2	266.2	269.5	269.5
57.5°	43.0	74.4	115.7	158.7	193.4	214.9	226.5	233.1	236.4	239.7	239.7
60°	36.4	64.5	102.5	142.2	173.6	193.4	201.7	206.7	210.0	211.6	211.6
62.5°	31.4	54.6	89.3	125.7	153.8	172.0	178.6	181.9	183.5	183.5	185.2
65°	26.5	46.3	76.1	109.1	132.3	148.8	153.8	155.4	155.4	157.1	158.7
67.5°	19.8	36.4	61.2	89.3	109.1	122.4	127.3	127.3	127.3	127.3	129.0
70°	16.5	28.1	46.3	67.8	84.3	94.2	97.5	97.5	97.5	97.5	99.2
72.5°	11.6	19.8	33.1	47.9	61.2	67.8	67.8	69.4	67.8	67.8	71.1
75°	8.3	13.2	21.5	31.4	38.0	43.0	44.6	44.6	44.6	44.6	46.3
77.5°	5.0	8.3	13.2	18.2	24.8	26.5	28.1	28.1	28.1	28.1	29.8
80°	3.3	5.0	8.3	11.6	13.2	14.9	16.5	16.5	16.5	16.5	16.5
82.5°	1.7	3.3	5.0	5.0	6.6	8.3	8.3	8.3	8.3	8.3	9.9
85°	0.0	1.7	1.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	5.0
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: P135915

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121H

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1094.5	1094.5	1094.5	1094.5
2.5°	1074.7	1086.3	1078.0	1086.3
5°	1058.2	1068.1	1058.2	1064.8
7.5°	1025.1	1033.4	1023.4	1033.4
10°	985.4	993.7	983.8	992.0
12.5°	949.0	955.7	945.7	955.7
15°	916.0	922.6	912.7	920.9
17.5°	877.9	882.9	874.6	882.9
20°	838.3	843.2	836.6	844.9
22.5°	798.6	805.2	796.9	805.2
25°	753.9	758.9	750.6	760.6
27.5°	701.0	704.3	696.1	701.0
30°	636.6	638.2	631.6	641.5
32.5°	568.8	568.8	558.8	568.8
35°	505.9	504.3	497.7	504.3
37.5°	466.3	466.3	461.3	464.6
40°	443.1	444.8	438.1	444.8
42.5°	423.3	426.6	421.6	426.6
45°	398.5	401.8	396.8	403.4
47.5°	367.1	370.4	367.1	372.0
50°	332.3	335.6	332.3	337.3
52.5°	297.6	300.9	297.6	300.9
55°	266.2	267.8	264.5	267.8
57.5°	236.4	238.1	234.8	238.1
60°	208.3	211.6	208.3	211.6
62.5°	183.5	185.2	185.2	186.8
65°	157.1	163.7	162.0	163.7
67.5°	130.6	135.6	135.6	137.2
70°	100.9	104.2	107.5	109.1
72.5°	71.1	76.1	77.7	79.4
75°	46.3	51.3	51.3	52.9
77.5°	29.8	33.1	33.1	33.1
80°	18.2	19.8	18.2	19.8
82.5°	9.9	9.9	9.9	11.6
85°	5.0	5.0	5.0	5.0
87.5°	1.7	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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















(END OF REPORT)