

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: P135795

Luminaire Tested: **LD6A15D010TE ERM6A15840 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135795
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 ERM6A15840 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1600.0 lumens
Efficiency: N/A
Efficacy: 70.8 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

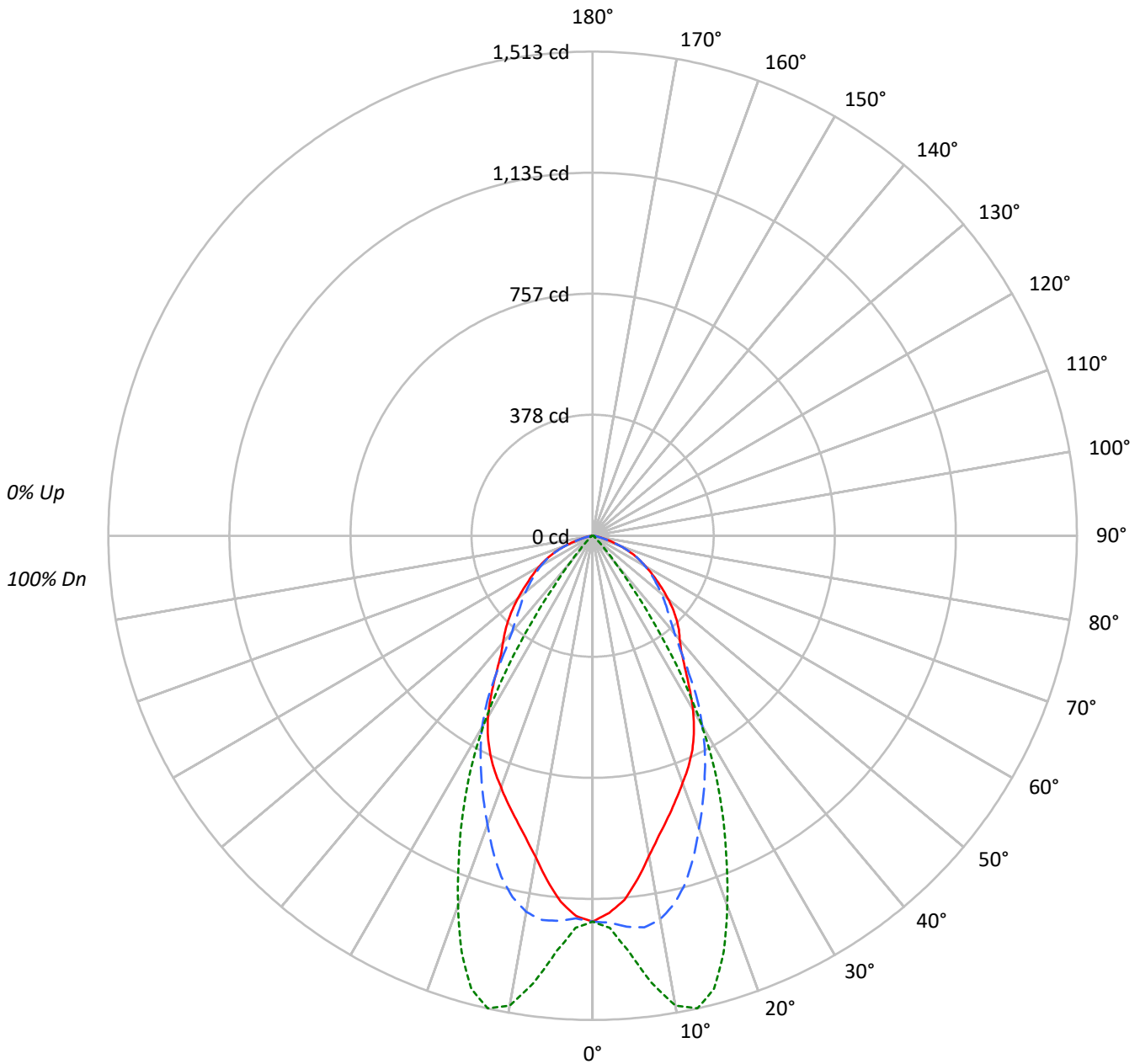
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

Luminous Intensity Polar Plot





TEST NUMBER: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	78661	78661	78661
5°	74796	85418	75156
10°	67241	98755	67605
15°	61517	98983	62112
20°	57076	85382	58062
25°	53103	69199	54442
30°	47234	51197	49298
35°	39894	27063	41813
40°	36034	9053	37056
45°	34184	3137	34285
50°	31261	1340	30926
55°	27924	1001	27674
60°	24883	1005	25170
65°	21998	1019	22168
70°	16939	839	16729
75°	10511	555	9957
80°	5335	413	4959
85°	2470	0	2470



TEST NUMBER: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.0	7.3
10°-20°	319.3	20.0
20°-30°	384.3	24.0
30°-40°	298.7	18.7
40°-50°	199.9	12.5
50°-60°	150.4	9.4
60°-70°	96.5	6.0
70°-80°	30.9	1.9
80°-90°	2.9	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°	820.7	51.3
0°-40°	1119.3	70.0
0°-60°	1469.6	91.9
0°-90°	1600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1600.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1206	1206	1206	1206	1206	
5°	1142	1226	1304	1208	1148	105
15°	911	1122	1466	1103	920	256
25°	738	829	961	824	756	336
35°	501	524	340	524	525	318
45°	370	331	34	323	372	285
55°	246	232	9	227	243	221
65°	142	144	7	140	144	140
75°	42	40	2	37	40	48
85°	3	3	0	3	3	5
90°	0	0	0	0	0	



TEST NUMBER: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7
2.5°	1179.4	1189.3	1186.0	1201.3	1190.4	1189.3	1196.9	1201.3	1202.4	1210.1	1210.1
5°	1142.1	1153.1	1149.8	1169.5	1165.1	1169.5	1186.0	1198.0	1209.0	1226.5	1237.5
7.5°	1080.7	1093.9	1096.1	1115.8	1118.0	1130.1	1156.4	1180.5	1203.5	1234.2	1260.5
10°	1015.0	1028.1	1031.4	1053.3	1059.9	1076.4	1110.3	1141.0	1173.9	1216.7	1256.1
12.5°	958.0	971.1	975.5	997.4	1005.1	1023.7	1059.9	1093.9	1131.2	1178.3	1225.4
15°	910.8	922.9	927.3	947.0	954.7	972.2	1006.2	1039.1	1075.3	1122.4	1168.4
17.5°	864.8	876.9	880.2	897.7	903.2	918.5	949.2	977.7	1008.4	1050.1	1091.7
20°	822.1	833.0	835.2	850.6	853.9	865.9	891.1	914.1	939.3	972.2	1006.2
22.5°	781.5	792.5	793.6	806.7	807.8	817.7	838.5	856.0	873.6	899.9	924.0
25°	737.7	748.6	749.7	760.7	761.8	768.4	784.8	798.0	810.0	828.6	845.1
27.5°	685.1	696.0	699.3	707.0	708.1	712.5	726.7	735.5	747.5	759.6	766.2
30°	627.0	636.8	641.2	647.8	648.9	655.5	668.6	675.2	682.9	685.1	687.2
32.5°	562.3	573.3	577.6	583.1	586.4	593.0	605.0	608.3	610.5	609.4	597.4
35°	500.9	510.8	515.2	521.7	523.9	528.3	538.2	537.1	533.8	523.9	502.0
37.5°	454.9	462.5	466.9	471.3	472.4	474.6	480.1	475.7	466.9	450.5	422.0
40°	423.1	430.8	431.9	436.2	435.1	435.1	436.2	428.6	417.6	397.9	365.0
42.5°	399.0	405.6	405.6	409.9	406.6	404.5	404.5	395.7	381.4	360.6	327.7
45°	370.5	376.0	377.1	379.2	376.0	373.8	373.8	365.0	351.8	331.0	298.1
47.5°	340.9	346.4	346.4	349.7	346.4	344.2	344.2	336.5	324.4	305.8	275.1
50°	308.0	313.5	314.6	316.8	314.6	313.5	314.6	306.9	297.0	280.6	253.2
52.5°	276.2	281.7	281.7	283.9	281.7	281.7	282.8	277.3	268.5	255.4	231.3
55°	245.5	249.9	252.1	254.3	251.0	251.0	252.1	248.8	242.2	232.4	211.5
57.5°	217.0	221.4	222.5	224.7	222.5	223.6	224.7	221.4	218.1	210.4	194.0
60°	190.7	195.1	196.2	197.3	196.2	196.2	197.3	196.2	194.0	188.5	174.3
62.5°	166.6	169.9	171.0	173.2	171.0	169.9	172.1	171.0	169.9	166.6	156.7
65°	142.5	144.7	145.8	146.9	144.7	142.5	144.7	144.7	145.8	143.6	135.9
67.5°	116.2	118.4	118.4	118.4	115.1	114.0	116.2	116.2	118.4	117.3	111.8
70°	88.8	89.9	89.9	89.9	85.5	85.5	86.6	86.6	88.8	88.8	85.5
72.5°	63.6	62.5	62.5	61.4	60.3	58.1	58.1	59.2	61.4	61.4	59.2
75°	41.7	40.6	39.5	39.5	38.4	36.2	36.2	37.3	38.4	39.5	38.4
77.5°	25.2	24.1	24.1	23.0	23.0	21.9	21.9	21.9	23.0	23.0	23.0
80°	14.2	13.2	13.2	13.2	12.1	12.1	12.1	12.1	12.1	13.2	12.1
82.5°	7.7	6.6	6.6	6.6	6.6	6.6	5.5	6.6	6.6	6.6	6.6
85°	3.3	3.3	3.3	3.3	2.2	2.2	2.2	2.2	2.2	3.3	3.3
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: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7
2.5°	1206.8	1217.8	1210.1	1234.2	1217.8	1226.5	1238.6	1226.5	1229.8	1237.5	1222.1
5°	1244.1	1263.8	1266.0	1298.9	1285.7	1301.1	1317.5	1304.3	1306.5	1312.0	1292.3
7.5°	1282.4	1317.5	1333.9	1380.0	1376.7	1401.9	1421.6	1408.5	1408.5	1409.6	1380.0
10°	1293.4	1344.9	1375.6	1432.6	1441.4	1477.5	1499.4	1490.7	1488.5	1485.2	1444.6
12.5°	1269.3	1332.8	1372.3	1435.9	1453.4	1496.2	1515.9	1512.6	1509.3	1502.7	1455.6
15°	1213.4	1279.1	1320.8	1383.3	1405.2	1449.0	1465.5	1465.5	1462.2	1455.6	1405.2
17.5°	1131.2	1192.5	1230.9	1285.7	1307.6	1348.2	1359.1	1362.4	1359.1	1352.6	1306.5
20°	1038.0	1089.5	1120.2	1165.1	1182.7	1217.8	1224.3	1229.8	1227.6	1222.1	1181.6
22.5°	947.0	987.6	1010.6	1050.1	1056.6	1086.2	1088.4	1092.8	1091.7	1089.5	1056.6
25°	863.7	891.1	904.3	933.9	936.1	958.0	956.9	961.3	960.2	960.2	935.0
27.5°	776.0	792.5	795.8	814.4	810.0	826.4	828.6	826.4	827.5	828.6	810.0
30°	688.3	691.6	681.8	684.0	671.9	681.8	671.9	679.6	679.6	682.9	671.9
32.5°	588.6	578.7	552.4	539.3	518.4	518.4	513.0	513.0	513.0	518.4	516.3
35°	482.3	458.2	417.6	389.1	359.5	351.8	350.7	339.8	342.0	349.7	355.1
37.5°	391.3	355.1	301.4	260.9	225.8	210.4	205.0	196.2	199.5	208.3	221.4
40°	326.6	282.8	220.3	173.2	138.1	120.6	111.8	106.3	109.6	120.6	137.0
42.5°	286.1	237.9	171.0	121.7	88.8	72.3	63.6	59.2	62.5	72.3	92.1
45°	256.5	206.1	138.1	89.9	60.3	44.9	37.3	34.0	36.2	44.9	61.4
47.5°	233.5	182.0	115.1	69.1	42.7	29.6	23.0	19.7	21.9	29.6	42.7
50°	212.6	162.2	97.6	54.8	32.9	21.9	15.3	13.2	15.3	20.8	31.8
52.5°	194.0	144.7	83.3	44.9	25.2	17.5	12.1	9.9	11.0	16.4	25.2
55°	177.6	131.5	73.4	38.4	21.9	15.3	11.0	8.8	11.0	14.2	21.9
57.5°	162.2	118.4	64.7	32.9	18.6	13.2	9.9	8.8	9.9	13.2	18.6
60°	146.9	105.2	57.0	28.5	16.4	12.1	8.8	7.7	8.8	11.0	16.4
62.5°	131.5	93.2	49.3	24.1	14.2	9.9	7.7	6.6	7.7	9.9	14.2
65°	114.0	78.9	41.7	20.8	12.1	8.8	6.6	6.6	6.6	8.8	12.1
67.5°	94.3	64.7	32.9	16.4	9.9	7.7	5.5	5.5	5.5	7.7	9.9
70°	72.3	48.2	25.2	13.2	7.7	5.5	4.4	4.4	4.4	5.5	7.7
72.5°	50.4	34.0	17.5	9.9	5.5	4.4	3.3	3.3	3.3	4.4	5.5
75°	31.8	21.9	12.1	6.6	4.4	3.3	2.2	2.2	2.2	3.3	4.4
77.5°	18.6	13.2	7.7	4.4	2.2	2.2	1.1	1.1	1.1	2.2	2.2
80°	9.9	7.7	4.4	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	5.5	3.3	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	2.2	1.1	1.1	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: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7	1205.7
2.5°	1217.8	1222.1	1221.0	1198.0	1195.8	1196.9	1181.6	1187.1	1192.5	1187.1	1188.2
5°	1276.9	1275.8	1262.7	1229.8	1216.7	1207.9	1182.7	1178.3	1175.0	1162.9	1158.6
7.5°	1354.8	1339.4	1312.0	1262.7	1235.3	1211.2	1173.9	1155.3	1142.1	1121.3	1109.2
10°	1408.5	1377.8	1337.2	1272.6	1230.9	1193.6	1145.4	1116.9	1095.0	1067.6	1050.1
12.5°	1416.1	1373.4	1326.3	1250.6	1202.4	1156.4	1103.8	1072.0	1046.8	1017.2	1000.7
15°	1366.8	1323.0	1273.7	1198.0	1149.8	1102.7	1052.2	1020.5	995.2	966.7	952.5
17.5°	1273.7	1233.1	1189.3	1119.1	1077.5	1034.7	989.8	962.4	940.4	918.5	904.3
20°	1155.3	1123.5	1087.3	1028.1	995.2	960.2	925.1	903.2	886.7	868.1	857.1
22.5°	1038.0	1013.9	987.6	940.4	916.3	891.1	863.7	848.4	836.3	822.1	814.4
25°	925.1	908.7	892.2	856.0	841.8	824.3	804.5	793.6	785.9	776.0	770.5
27.5°	807.8	802.3	798.0	774.9	769.5	757.4	744.2	737.7	732.2	725.6	721.2
30°	680.7	684.0	701.5	689.4	694.9	691.6	686.2	681.8	679.6	674.1	668.6
32.5°	537.1	560.1	585.3	588.6	605.0	612.7	611.6	612.7	613.8	609.4	605.0
35°	384.7	422.0	461.5	479.0	506.4	523.9	530.5	537.1	541.5	540.4	537.1
37.5°	256.5	306.9	354.0	384.7	420.9	445.0	459.3	470.2	476.8	479.0	479.0
40°	171.0	219.2	281.7	321.2	361.7	391.3	407.7	422.0	431.9	436.2	438.4
42.5°	120.6	172.1	235.7	280.6	322.2	354.0	372.7	388.0	397.9	403.4	405.6
45°	88.8	138.1	203.9	249.9	292.7	323.3	342.0	356.2	366.1	371.6	374.9
47.5°	68.0	116.2	179.8	226.9	269.6	298.1	315.7	328.8	337.6	342.0	344.2
50°	53.7	97.6	160.0	207.2	246.6	272.9	288.3	299.2	306.9	310.2	312.4
52.5°	43.8	84.4	143.6	188.5	225.8	248.8	260.9	269.6	276.2	278.4	280.6
55°	37.3	73.4	129.3	173.2	207.2	226.9	235.7	243.3	246.6	248.8	249.9
57.5°	32.9	64.7	117.3	158.9	189.6	206.1	212.6	218.1	219.2	221.4	222.5
60°	28.5	55.9	104.1	143.6	171.0	185.2	188.5	192.9	192.9	194.0	195.1
62.5°	24.1	48.2	91.0	128.2	152.4	164.4	166.6	167.7	167.7	167.7	168.8
65°	19.7	40.6	76.7	110.7	132.6	140.3	141.4	142.5	140.3	140.3	141.4
67.5°	16.4	31.8	61.4	91.0	108.5	115.1	114.0	114.0	110.7	110.7	111.8
70°	12.1	24.1	46.0	69.1	82.2	86.6	84.4	84.4	81.1	81.1	82.2
72.5°	8.8	17.5	31.8	47.1	57.0	59.2	57.0	57.0	54.8	54.8	55.9
75°	6.6	11.0	20.8	30.7	36.2	37.3	36.2	35.1	34.0	34.0	35.1
77.5°	4.4	7.7	12.1	17.5	20.8	21.9	20.8	20.8	19.7	20.8	20.8
80°	2.2	4.4	6.6	9.9	11.0	12.1	12.1	12.1	11.0	11.0	12.1
82.5°	1.1	2.2	3.3	4.4	5.5	6.6	5.5	5.5	5.5	5.5	5.5
85°	0.0	1.1	1.1	2.2	2.2	3.3	2.2	2.2	2.2	2.2	2.2
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: P135795

CATALOG NUMBER: LD6A15D010TE ERM6A15840 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1205.7	1205.7	1205.7	1205.7
2.5°	1186.0	1180.5	1172.8	1189.3
5°	1152.0	1141.0	1132.3	1147.6
7.5°	1098.3	1082.9	1070.9	1086.2
10°	1036.9	1019.4	1006.2	1020.5
12.5°	983.2	965.7	954.7	965.7
15°	936.1	919.6	909.8	919.6
17.5°	890.0	875.8	867.0	878.0
20°	846.2	834.1	826.4	836.3
22.5°	805.6	794.7	788.1	798.0
25°	762.9	755.2	747.5	756.3
27.5°	715.7	707.0	702.6	708.1
30°	662.0	653.3	650.0	654.4
32.5°	598.5	589.7	586.4	589.7
35°	532.7	525.0	520.6	525.0
37.5°	476.8	470.2	466.9	470.2
40°	437.3	434.1	430.8	435.1
42.5°	406.6	403.4	401.2	404.5
45°	374.9	370.5	368.3	371.6
47.5°	343.1	338.7	336.5	338.7
50°	310.2	304.7	303.6	304.7
52.5°	277.3	272.9	270.7	271.8
55°	247.7	244.4	242.2	243.3
57.5°	221.4	217.0	215.9	217.0
60°	195.1	192.9	191.8	192.9
62.5°	168.8	167.7	168.8	168.8
65°	142.5	142.5	143.6	143.6
67.5°	114.0	116.2	117.3	117.3
70°	84.4	86.6	87.7	87.7
72.5°	57.0	59.2	60.3	61.4
75°	36.2	38.4	39.5	39.5
77.5°	21.9	23.0	23.0	24.1
80°	12.1	13.2	13.2	13.2
82.5°	6.6	6.6	6.6	7.7
85°	3.3	3.3	3.3	3.3
87.5°	0.0	1.1	1.1	1.1
90°	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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













(END OF REPORT)