

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: P135830

Luminaire Tested: **LD6A20D010TE ERM6A20935 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135830
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: LD6A20D010TE ERM6A20935 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 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2279.2 lumens
Efficiency: N/A
Efficacy: 69.5 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

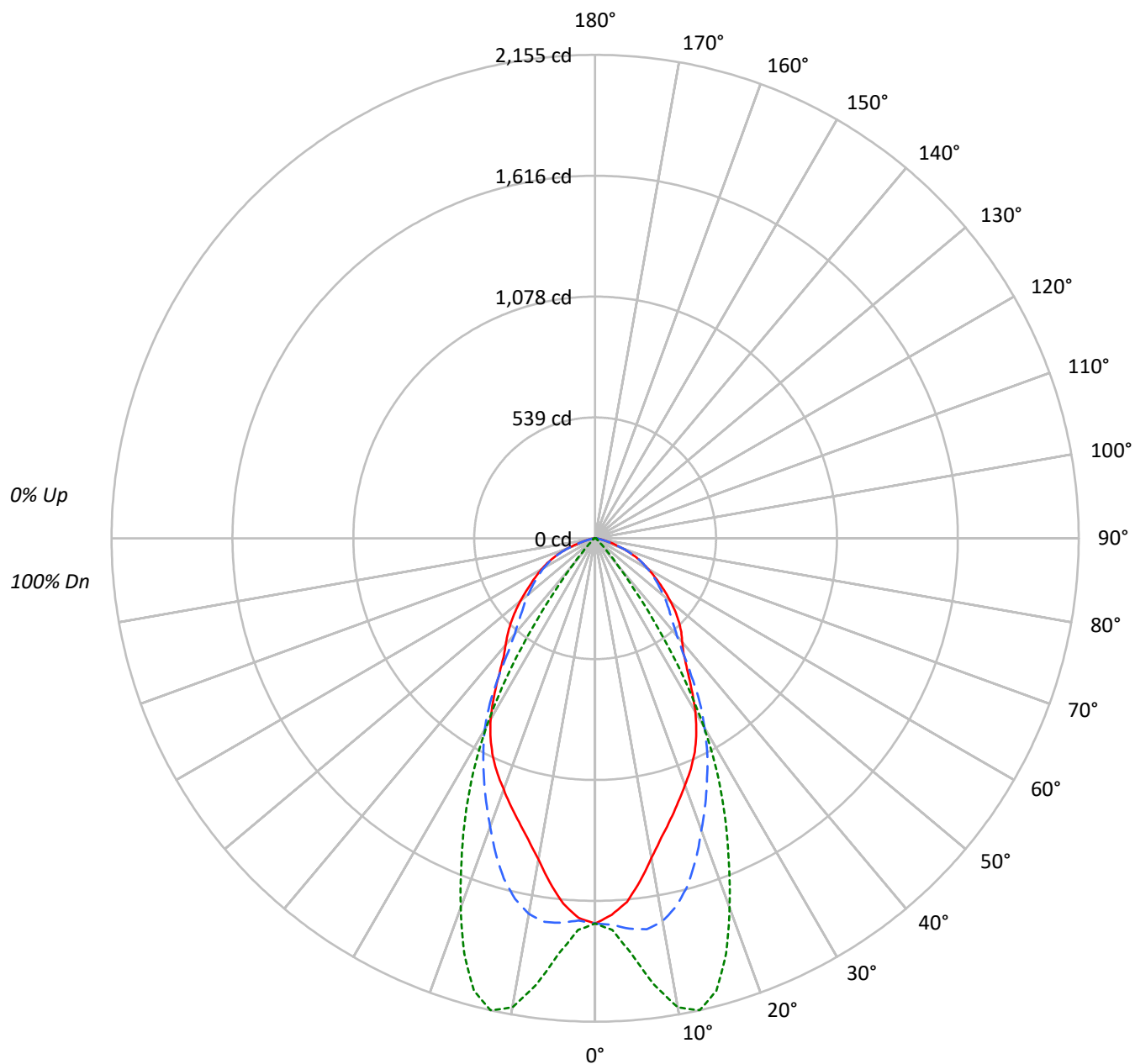
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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	89	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°	112051	112051	112051
5°	106552	121680	107056
10°	95780	140676	96297
15°	87636	140994	88480
20°	81300	121630	82709
25°	75642	98576	77557
30°	67280	72923	70218
35°	56826	38548	59566
40°	51329	12903	52794
45°	48697	4466	48835
50°	44537	1898	44060
55°	39776	1410	39424
60°	35452	1435	35856
65°	31322	1451	31569
70°	24130	1202	23825
75°	14973	781	14166
80°	7627	601	7026
85°	3518	0	3518



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.7	7.3
10°-20°	454.9	20.0
20°-30°	547.5	24.0
30°-40°	425.5	18.7
40°-50°	284.7	12.5
50°-60°	214.2	9.4
60°-70°	137.5	6.0
70°-80°	44.0	1.9
80°-90°	4.2	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°	1169.0	51.3
0°-40°	1594.5	70.0
0°-60°	2093.5	91.9
0°-90°	2279.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2279.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1718	1718	1718	1718	1718	
5°	1627	1747	1858	1721	1635	149
15°	1298	1599	2088	1571	1310	365
25°	1051	1180	1369	1174	1077	479
35°	714	746	484	746	748	453
45°	528	472	48	461	529	405
55°	350	331	12	323	347	314
65°	203	204	9	200	204	199
75°	59	56	3	53	56	68
85°	5	5	0	5	5	7
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°	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5
2.5°	1680.1	1694.1	1689.4	1711.2	1695.7	1694.1	1705.1	1711.2	1712.8	1723.8	1723.8
5°	1627.0	1642.5	1637.8	1666.0	1659.7	1666.0	1689.4	1706.5	1722.2	1747.2	1762.8
7.5°	1539.5	1558.3	1561.4	1589.4	1592.6	1609.8	1647.2	1681.6	1714.4	1758.1	1795.6
10°	1445.8	1464.6	1469.2	1500.5	1509.9	1533.3	1581.7	1625.4	1672.2	1733.1	1789.3
12.5°	1364.7	1383.4	1389.6	1420.8	1431.8	1458.3	1509.9	1558.3	1611.3	1678.5	1745.6
15°	1297.5	1314.7	1320.9	1349.0	1360.0	1384.9	1433.3	1480.2	1531.7	1598.8	1664.4
17.5°	1231.9	1249.1	1253.7	1278.7	1286.6	1308.4	1352.1	1392.8	1436.5	1495.8	1555.1
20°	1171.0	1186.6	1189.7	1211.6	1216.3	1233.5	1269.4	1302.1	1338.1	1384.9	1433.3
22.5°	1113.2	1128.9	1130.5	1149.2	1150.7	1164.8	1194.5	1219.4	1244.4	1281.9	1316.2
25°	1050.8	1066.4	1068.0	1083.6	1085.2	1094.5	1117.9	1136.6	1153.9	1180.4	1203.9
27.5°	975.8	991.4	996.1	1007.1	1008.7	1014.8	1035.2	1047.7	1064.8	1082.1	1091.4
30°	893.1	907.2	913.4	922.7	924.3	933.7	952.4	961.8	972.7	975.8	979.0
32.5°	800.9	816.6	822.9	830.6	835.3	844.7	861.9	866.6	869.7	868.2	850.9
35°	713.5	727.6	733.8	743.2	746.4	752.5	766.6	765.1	760.4	746.4	715.1
37.5°	648.0	658.9	665.1	671.4	673.0	676.1	683.8	677.7	665.1	641.7	601.1
40°	602.7	613.6	615.2	621.4	619.9	619.9	621.4	610.5	594.9	566.8	519.9
42.5°	568.3	577.7	577.7	584.0	579.3	576.2	576.2	563.6	543.3	513.6	466.8
45°	527.8	535.6	537.1	540.2	535.6	532.5	532.5	519.9	501.2	471.5	424.7
47.5°	485.6	493.4	493.4	498.1	493.4	490.2	490.2	479.3	462.2	435.6	391.9
50°	438.8	446.5	448.1	451.2	448.1	446.5	448.1	437.2	423.1	399.7	360.7
52.5°	393.5	401.3	401.3	404.4	401.3	401.3	402.8	395.0	382.5	363.8	329.4
55°	349.7	356.0	359.1	362.3	357.6	357.6	359.1	354.4	345.1	331.0	301.3
57.5°	309.1	315.4	317.0	320.1	317.0	318.6	320.1	315.4	310.7	299.7	276.3
60°	271.7	277.9	279.5	281.0	279.5	279.5	281.0	279.5	276.3	268.6	248.3
62.5°	237.3	242.0	243.6	246.7	243.6	242.0	245.2	243.6	242.0	237.3	223.3
65°	202.9	206.1	207.6	209.2	206.1	202.9	206.1	206.1	207.6	204.5	193.6
67.5°	165.5	168.6	168.6	168.6	163.9	162.4	165.5	165.5	168.6	167.1	159.2
70°	126.5	128.1	128.1	128.1	121.8	121.8	123.4	123.4	126.5	126.5	121.8
72.5°	90.5	89.0	89.0	87.4	85.8	82.8	82.8	84.3	87.4	87.4	84.3
75°	59.4	57.8	56.2	56.2	54.7	51.5	51.5	53.1	54.7	56.2	54.7
77.5°	35.9	34.4	34.4	32.8	32.8	31.3	31.3	31.3	32.8	32.8	32.8
80°	20.3	18.7	18.7	18.7	17.1	17.1	17.1	17.1	17.1	18.7	17.1
82.5°	11.0	9.4	9.4	9.4	9.4	9.4	7.8	9.4	9.4	9.4	9.4
85°	4.7	4.7	4.7	4.7	3.1	3.1	3.1	3.1	3.1	4.7	4.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5
2.5°	1719.1	1734.7	1723.8	1758.1	1734.7	1747.2	1764.3	1747.2	1751.9	1762.8	1740.9
5°	1772.2	1800.3	1803.3	1850.2	1831.5	1853.3	1876.7	1858.0	1861.1	1869.0	1840.9
7.5°	1826.8	1876.7	1900.1	1965.8	1961.1	1997.0	2025.1	2006.4	2006.4	2007.9	1965.8
10°	1842.4	1915.8	1959.5	2040.7	2053.2	2104.7	2135.9	2123.5	2120.3	2115.6	2057.9
12.5°	1808.0	1898.6	1954.8	2045.4	2070.4	2131.3	2159.3	2154.7	2150.0	2140.6	2073.5
15°	1728.5	1822.1	1881.4	1970.4	2001.7	2064.1	2087.5	2087.5	2082.9	2073.5	2001.7
17.5°	1611.3	1698.8	1753.4	1831.5	1862.7	1920.4	1936.1	1940.8	1936.1	1926.7	1861.1
20°	1478.6	1552.0	1595.7	1659.7	1684.7	1734.7	1744.1	1751.9	1748.8	1740.9	1683.1
22.5°	1349.0	1406.8	1439.6	1495.8	1505.2	1547.3	1550.4	1556.7	1555.1	1552.0	1505.2
25°	1230.3	1269.4	1288.1	1330.3	1333.4	1364.7	1363.1	1369.4	1367.8	1367.8	1331.8
27.5°	1105.5	1128.9	1133.5	1160.1	1153.9	1177.3	1180.4	1177.3	1178.9	1180.4	1153.9
30°	980.5	985.2	971.1	974.3	957.1	971.1	957.1	968.0	968.0	972.7	957.1
32.5°	838.5	824.4	786.9	768.2	738.5	738.5	730.7	730.7	730.7	738.5	735.4
35°	687.0	652.7	594.9	554.3	512.2	501.2	499.6	484.0	487.2	498.1	505.9
37.5°	557.4	505.9	429.4	371.6	321.7	299.7	292.0	279.5	284.2	296.7	315.4
40°	465.2	402.8	313.8	246.7	196.8	171.8	159.2	151.5	156.1	171.8	195.2
42.5°	407.5	338.8	243.6	173.3	126.5	103.1	90.5	84.3	89.0	103.1	131.2
45°	365.4	293.6	196.8	128.1	85.8	64.0	53.1	48.4	51.5	64.0	87.4
47.5°	332.6	259.2	163.9	98.4	60.9	42.1	32.8	28.1	31.3	42.1	60.9
50°	302.9	231.1	138.9	78.1	46.8	31.3	21.9	18.7	21.9	29.7	45.3
52.5°	276.3	206.1	118.7	64.0	35.9	25.0	17.1	14.0	15.6	23.4	35.9
55°	252.9	187.4	104.6	54.7	31.3	21.9	15.6	12.4	15.6	20.3	31.3
57.5°	231.1	168.6	92.1	46.8	26.6	18.7	14.0	12.4	14.0	18.7	26.6
60°	209.2	149.9	81.2	40.6	23.4	17.1	12.4	11.0	12.4	15.6	23.4
62.5°	187.4	132.7	70.3	34.4	20.3	14.0	11.0	9.4	11.0	14.0	20.3
65°	162.4	112.4	59.4	29.7	17.1	12.4	9.4	9.4	9.4	12.4	17.1
67.5°	134.2	92.1	46.8	23.4	14.0	11.0	7.8	7.8	7.8	11.0	14.0
70°	103.1	68.7	35.9	18.7	11.0	7.8	6.3	6.3	6.3	7.8	11.0
72.5°	71.8	48.4	25.0	14.0	7.8	6.3	4.7	4.7	4.7	6.3	7.8
75°	45.3	31.3	17.1	9.4	6.3	4.7	3.1	3.1	3.1	4.7	6.3
77.5°	26.6	18.7	11.0	6.3	3.1	3.1	1.6	1.6	1.6	3.1	3.1
80°	14.0	11.0	6.3	3.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	7.8	4.7	3.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	3.1	1.6	1.6	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5	1717.5
2.5°	1734.7	1740.9	1739.4	1706.5	1703.5	1705.1	1683.1	1690.9	1698.8	1690.9	1692.5
5°	1819.0	1817.4	1798.7	1751.9	1733.1	1720.6	1684.7	1678.5	1673.8	1656.6	1650.4
7.5°	1929.8	1908.0	1869.0	1798.7	1759.6	1725.3	1672.2	1645.7	1627.0	1597.3	1580.1
10°	2006.4	1962.7	1904.9	1812.7	1753.4	1700.4	1631.7	1591.0	1559.8	1520.7	1495.8
12.5°	2017.2	1956.4	1889.3	1781.5	1712.8	1647.2	1572.3	1527.0	1491.1	1448.9	1425.5
15°	1947.0	1884.6	1814.3	1706.5	1637.8	1570.7	1498.9	1453.6	1417.8	1377.1	1356.8
17.5°	1814.3	1756.5	1694.1	1594.1	1534.9	1473.9	1409.9	1370.9	1339.7	1308.4	1288.1
20°	1645.7	1600.4	1548.9	1464.6	1417.8	1367.8	1317.8	1286.6	1263.1	1236.6	1221.0
22.5°	1478.6	1444.2	1406.8	1339.7	1305.3	1269.4	1230.3	1208.5	1191.3	1171.0	1160.1
25°	1317.8	1294.4	1271.0	1219.4	1199.2	1174.2	1146.0	1130.5	1119.5	1105.5	1097.6
27.5°	1150.7	1142.9	1136.6	1103.9	1096.1	1078.9	1060.2	1050.8	1043.0	1033.7	1027.4
30°	969.6	974.3	999.3	982.1	990.0	985.2	977.4	971.1	968.0	960.3	952.4
32.5°	765.1	797.9	833.8	838.5	861.9	872.8	871.2	872.8	874.3	868.2	861.9
35°	548.0	601.1	657.3	682.3	721.4	746.4	755.7	765.1	771.3	769.8	765.1
37.5°	365.4	437.2	504.3	548.0	599.6	633.9	654.3	669.8	679.2	682.3	682.3
40°	243.6	312.3	401.3	457.5	515.2	557.4	580.9	601.1	615.2	621.4	624.6
42.5°	171.8	245.2	335.7	399.7	459.1	504.3	530.9	552.7	566.8	574.6	577.7
45°	126.5	196.8	290.4	356.0	416.9	460.6	487.2	507.5	521.5	529.3	534.0
47.5°	96.8	165.5	256.0	323.2	384.1	424.7	449.7	468.4	480.9	487.2	490.2
50°	76.5	138.9	227.9	295.1	351.3	388.8	410.7	426.2	437.2	441.8	445.0
52.5°	62.4	120.2	204.5	268.6	321.7	354.4	371.6	384.1	393.5	396.6	399.7
55°	53.1	104.6	184.2	246.7	295.1	323.2	335.7	346.6	351.3	354.4	356.0
57.5°	46.8	92.1	167.1	226.4	270.1	293.6	302.9	310.7	312.3	315.4	317.0
60°	40.6	79.7	148.3	204.5	243.6	263.9	268.6	274.8	274.8	276.3	277.9
62.5°	34.4	68.7	129.6	182.6	217.0	234.2	237.3	238.9	238.9	238.9	240.5
65°	28.1	57.8	109.3	157.7	188.9	199.9	201.5	202.9	199.9	199.9	201.5
67.5°	23.4	45.3	87.4	129.6	154.6	163.9	162.4	162.4	157.7	157.7	159.2
70°	17.1	34.4	65.6	98.4	117.1	123.4	120.2	120.2	115.5	115.5	117.1
72.5°	12.4	25.0	45.3	67.1	81.2	84.3	81.2	81.2	78.1	78.1	79.7
75°	9.4	15.6	29.7	43.7	51.5	53.1	51.5	50.0	48.4	48.4	50.0
77.5°	6.3	11.0	17.1	25.0	29.7	31.3	29.7	29.7	28.1	29.7	29.7
80°	3.1	6.3	9.4	14.0	15.6	17.1	17.1	17.1	15.6	15.6	17.1
82.5°	1.6	3.1	4.7	6.3	7.8	9.4	7.8	7.8	7.8	7.8	7.8
85°	0.0	1.6	1.6	3.1	3.1	4.7	3.1	3.1	3.1	3.1	3.1
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: P135830

CATALOG NUMBER: LD6A20D010TE ERM6A20935 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1717.5	1717.5	1717.5	1717.5
2.5°	1689.4	1681.6	1670.7	1694.1
5°	1641.0	1625.4	1612.9	1634.7
7.5°	1564.4	1542.6	1525.4	1547.3
10°	1477.0	1452.1	1433.3	1453.6
12.5°	1400.5	1375.5	1360.0	1375.5
15°	1333.4	1310.0	1296.0	1310.0
17.5°	1267.8	1247.6	1235.0	1250.7
20°	1205.3	1188.2	1177.3	1191.3
22.5°	1147.6	1132.0	1122.6	1136.6
25°	1086.7	1075.8	1064.8	1077.4
27.5°	1019.5	1007.1	1000.8	1008.7
30°	943.0	930.6	925.9	932.1
32.5°	852.5	840.0	835.3	840.0
35°	758.8	747.9	741.7	747.9
37.5°	679.2	669.8	665.1	669.8
40°	623.0	618.3	613.6	619.9
42.5°	579.3	574.6	571.5	576.2
45°	534.0	527.8	524.6	529.3
47.5°	488.8	482.5	479.3	482.5
50°	441.8	434.1	432.5	434.1
52.5°	395.0	388.8	385.7	387.2
55°	352.8	348.1	345.1	346.6
57.5°	315.4	309.1	307.6	309.1
60°	277.9	274.8	273.3	274.8
62.5°	240.5	238.9	240.5	240.5
65°	202.9	202.9	204.5	204.5
67.5°	162.4	165.5	167.1	167.1
70°	120.2	123.4	124.9	124.9
72.5°	81.2	84.3	85.8	87.4
75°	51.5	54.7	56.2	56.2
77.5°	31.3	32.8	32.8	34.4
80°	17.1	18.7	18.7	18.7
82.5°	9.4	9.4	9.4	11.0
85°	4.7	4.7	4.7	4.7
87.5°	0.0	1.6	1.6	1.6
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)