

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: P135826

Luminaire Tested: **LD6A20D010TE ERM6A20835 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135826
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 ERM6A20835 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: 2472.0 lumens
Efficiency: N/A
Efficacy: 75.4 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

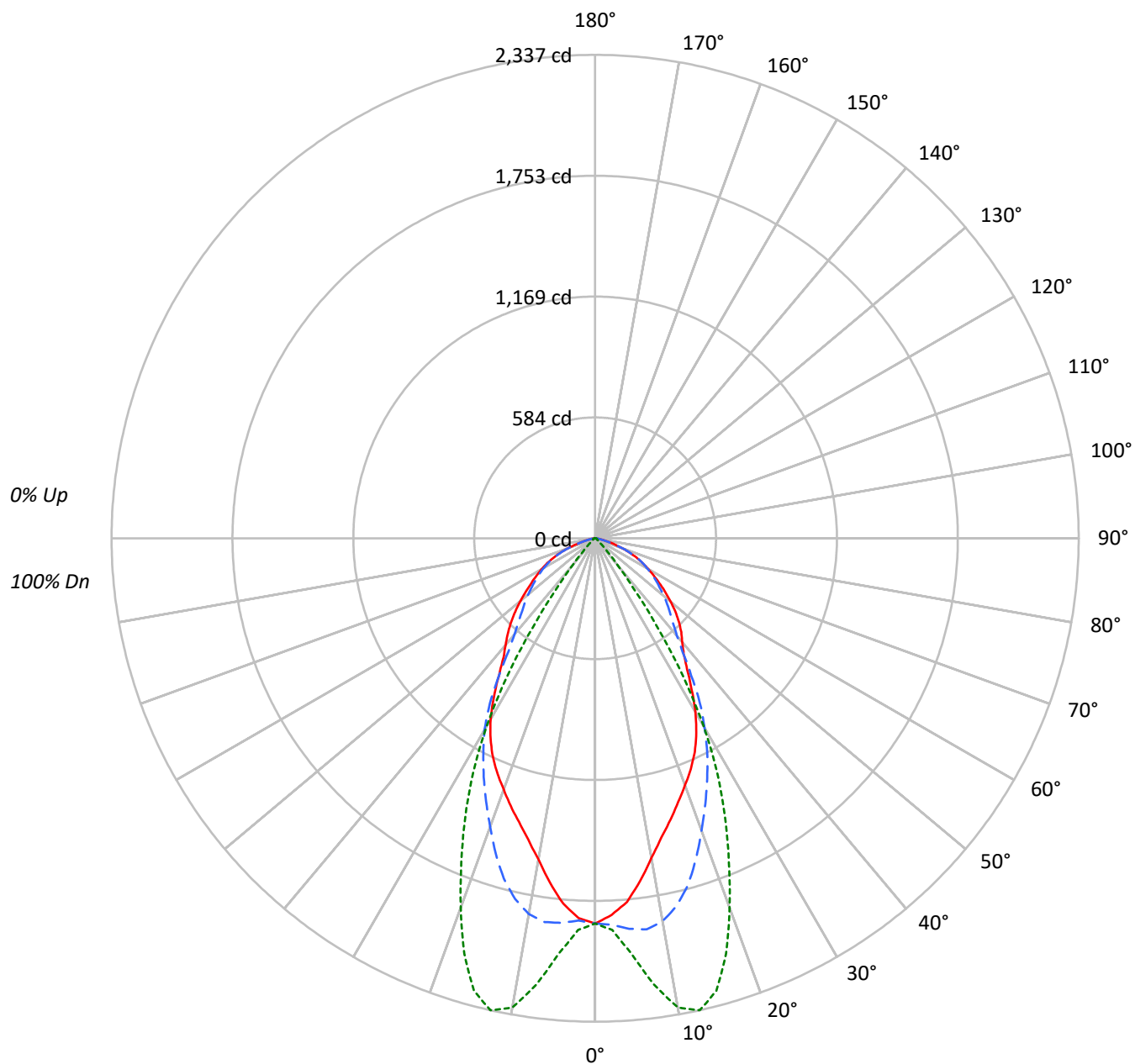
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	97		98	96	95		95
2	104	98	93	89	102	96	91	87	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	74	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	68	62	83	74	67	62	72	66	61		70	65	61		68
6	80	69	62	56	78	68	61	56	66	60	56		65	59	55		63
7	75	64	57	52	74	63	56	51	62	56	51		60	55	51		59
8	71	59	52	47	69	59	52	47	58	51	47		57	51	47		55
9	67	56	49	44	66	55	48	44	54	48	44		53	47	43		52
10	63	52	45	41	62	52	45	41	51	45	41		50	44	40		49

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	121530	121530	121530
5°	115563	131975	116113
10°	103882	152574	104445
15°	95052	152922	95964
20°	88180	131919	89707
25°	82041	106912	84115
30°	72975	79093	76162
35°	61637	41813	64607
40°	55673	13993	57257
45°	52812	4844	52969
50°	48302	2060	47785
55°	43143	1536	42756
60°	38453	1553	38883
65°	33977	1575	34240
70°	26171	1297	25847
75°	16233	857	15376
80°	8266	639	7627
85°	3818	0	3818



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.8	7.3
10°-20°	493.4	20.0
20°-30°	593.8	24.0
30°-40°	461.5	18.7
40°-50°	308.8	12.5
50°-60°	232.4	9.4
60°-70°	149.1	6.0
70°-80°	47.8	1.9
80°-90°	4.5	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°	1267.9	51.3
0°-40°	1729.4	70.0
0°-60°	2270.6	91.9
0°-90°	2472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2472.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1863	1863	1863	1863	1863	
5°	1765	1895	2015	1866	1773	162
15°	1407	1734	2264	1704	1421	396
25°	1140	1280	1485	1274	1168	520
35°	774	810	525	810	811	492
45°	572	511	52	500	574	440
55°	379	359	14	350	376	341
65°	220	222	10	217	222	216
75°	64	61	3	58	61	74
85°	5	5	0	5	5	8
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°	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8
2.5°	1822.2	1837.4	1832.3	1856.0	1839.1	1837.4	1849.3	1856.0	1857.7	1869.6	1869.6
5°	1764.6	1781.5	1776.4	1806.9	1800.1	1806.9	1832.3	1850.9	1867.9	1895.0	1911.9
7.5°	1669.7	1690.1	1693.5	1723.9	1727.3	1746.0	1786.6	1823.9	1859.4	1906.8	1947.5
10°	1568.1	1588.5	1593.5	1627.4	1637.6	1663.0	1715.5	1762.9	1813.7	1879.7	1940.7
12.5°	1480.1	1500.4	1507.2	1541.0	1552.9	1581.7	1637.6	1690.1	1747.6	1820.5	1893.3
15°	1407.3	1425.9	1432.7	1463.1	1475.0	1502.1	1554.6	1605.4	1661.3	1734.1	1805.2
17.5°	1336.1	1354.8	1359.8	1386.9	1395.4	1419.1	1466.5	1510.6	1558.0	1622.3	1686.7
20°	1270.1	1287.0	1290.4	1314.1	1319.2	1337.8	1376.8	1412.3	1451.3	1502.1	1554.6
22.5°	1207.4	1224.4	1226.1	1246.4	1248.1	1263.3	1295.5	1322.6	1349.7	1390.3	1427.6
25°	1139.7	1156.6	1158.3	1175.3	1177.0	1187.1	1212.5	1232.8	1251.5	1280.3	1305.7
27.5°	1058.4	1075.3	1080.4	1092.3	1094.0	1100.7	1122.8	1136.3	1154.9	1173.6	1183.7
30°	968.7	983.9	990.7	1000.8	1002.5	1012.7	1033.0	1043.2	1055.0	1058.4	1061.8
32.5°	868.7	885.7	892.5	900.9	906.0	916.2	934.8	939.9	943.3	941.6	922.9
35°	773.9	789.1	795.9	806.1	809.5	816.2	831.5	829.8	824.7	809.5	775.6
37.5°	702.8	714.6	721.4	728.2	729.9	733.3	741.7	735.0	721.4	696.0	652.0
40°	653.7	665.5	667.2	674.0	672.3	672.3	674.0	662.1	645.2	614.7	563.9
42.5°	616.4	626.6	626.6	633.4	628.3	624.9	624.9	611.3	589.3	557.1	506.3
45°	572.4	580.9	582.5	585.9	580.9	577.5	577.5	563.9	543.6	511.4	460.6
47.5°	526.7	535.1	535.1	540.2	535.1	531.7	531.7	519.9	501.3	472.5	425.1
50°	475.9	484.3	486.0	489.4	486.0	484.3	486.0	474.2	458.9	433.5	391.2
52.5°	426.8	435.2	435.2	438.6	435.2	435.2	436.9	428.4	414.9	394.6	357.3
55°	379.3	386.1	389.5	392.9	387.8	387.8	389.5	384.4	374.3	359.0	326.8
57.5°	335.3	342.1	343.8	347.2	343.8	345.5	347.2	342.1	337.0	325.1	299.7
60°	294.7	301.4	303.1	304.8	303.1	303.1	304.8	303.1	299.7	291.3	269.3
62.5°	257.4	262.5	264.2	267.6	264.2	262.5	265.9	264.2	262.5	257.4	242.2
65°	220.1	223.5	225.2	226.9	223.5	220.1	223.5	223.5	225.2	221.8	210.0
67.5°	179.5	182.9	182.9	182.9	177.8	176.1	179.5	179.5	182.9	181.2	172.7
70°	137.2	138.9	138.9	138.9	132.1	132.1	133.8	133.8	137.2	137.2	132.1
72.5°	98.2	96.5	96.5	94.8	93.1	89.8	89.8	91.4	94.8	94.8	91.4
75°	64.4	62.7	61.0	61.0	59.3	55.9	55.9	57.6	59.3	61.0	59.3
77.5°	38.9	37.3	37.3	35.6	35.6	33.9	33.9	33.9	35.6	35.6	35.6
80°	22.0	20.3	20.3	20.3	18.6	18.6	18.6	18.6	18.6	20.3	18.6
82.5°	11.9	10.2	10.2	10.2	10.2	10.2	8.5	10.2	10.2	10.2	10.2
85°	5.1	5.1	5.1	5.1	3.4	3.4	3.4	3.4	3.4	5.1	5.1
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8
2.5°	1864.5	1881.4	1869.6	1906.8	1881.4	1895.0	1913.6	1895.0	1900.1	1911.9	1888.2
5°	1922.1	1952.6	1955.9	2006.7	1986.4	2010.1	2035.5	2015.2	2018.6	2027.1	1996.6
7.5°	1981.3	2035.5	2060.9	2132.1	2127.0	2165.9	2196.4	2176.1	2176.1	2177.8	2132.1
10°	1998.3	2077.9	2125.3	2213.3	2226.9	2282.8	2316.6	2303.1	2299.7	2294.6	2232.0
12.5°	1961.0	2059.2	2120.2	2218.4	2245.5	2311.6	2342.0	2337.0	2331.9	2321.7	2248.9
15°	1874.7	1976.3	2040.6	2137.1	2171.0	2238.7	2264.1	2264.1	2259.1	2248.9	2171.0
17.5°	1747.6	1842.5	1901.7	1986.4	2020.3	2082.9	2099.9	2105.0	2099.9	2089.7	2018.6
20°	1603.7	1683.3	1730.7	1800.1	1827.2	1881.4	1891.6	1900.1	1896.7	1888.2	1825.5
22.5°	1463.1	1525.8	1561.4	1622.3	1632.5	1678.2	1681.6	1688.4	1686.7	1683.3	1632.5
25°	1334.4	1376.8	1397.1	1442.8	1446.2	1480.1	1478.4	1485.2	1483.5	1483.5	1444.5
27.5°	1199.0	1224.4	1229.4	1258.2	1251.5	1276.9	1280.3	1276.9	1278.6	1280.3	1251.5
30°	1063.5	1068.6	1053.3	1056.7	1038.1	1053.3	1038.1	1049.9	1049.9	1055.0	1038.1
32.5°	909.4	894.1	853.5	833.2	801.0	801.0	792.5	792.5	792.5	801.0	797.6
35°	745.1	707.9	645.2	601.2	555.5	543.6	541.9	525.0	528.4	540.2	548.7
37.5°	604.6	548.7	465.7	403.0	348.9	325.1	316.7	303.1	308.2	321.8	342.1
40°	504.6	436.9	340.4	267.6	213.4	186.3	172.7	164.3	169.3	186.3	211.7
42.5°	442.0	367.5	264.2	188.0	137.2	111.8	98.2	91.4	96.5	111.8	142.3
45°	396.3	318.4	213.4	138.9	93.1	69.4	57.6	52.5	55.9	69.4	94.8
47.5°	360.7	281.1	177.8	106.7	66.0	45.7	35.6	30.5	33.9	45.7	66.0
50°	328.5	250.6	150.7	84.7	50.8	33.9	23.7	20.3	23.7	32.2	49.1
52.5°	299.7	223.5	128.7	69.4	38.9	27.1	18.6	15.2	16.9	25.4	38.9
55°	274.3	203.2	113.5	59.3	33.9	23.7	16.9	13.5	16.9	22.0	33.9
57.5°	250.6	182.9	99.9	50.8	28.8	20.3	15.2	13.5	15.2	20.3	28.8
60°	226.9	162.6	88.1	44.0	25.4	18.6	13.5	11.9	13.5	16.9	25.4
62.5°	203.2	143.9	76.2	37.3	22.0	15.2	11.9	10.2	11.9	15.2	22.0
65°	176.1	121.9	64.4	32.2	18.6	13.5	10.2	10.2	10.2	13.5	18.6
67.5°	145.6	99.9	50.8	25.4	15.2	11.9	8.5	8.5	8.5	11.9	15.2
70°	111.8	74.5	38.9	20.3	11.9	8.5	6.8	6.8	6.8	8.5	11.9
72.5°	77.9	52.5	27.1	15.2	8.5	6.8	5.1	5.1	5.1	6.8	8.5
75°	49.1	33.9	18.6	10.2	6.8	5.1	3.4	3.4	3.4	5.1	6.8
77.5°	28.8	20.3	11.9	6.8	3.4	3.4	1.7	1.7	1.7	3.4	3.4
80°	15.2	11.9	6.8	3.4	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	8.5	5.1	3.4	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	3.4	1.7	1.7	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°	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8	1862.8
2.5°	1881.4	1888.2	1886.5	1850.9	1847.6	1849.3	1825.5	1834.0	1842.5	1834.0	1835.7
5°	1972.9	1971.2	1950.9	1900.1	1879.7	1866.2	1827.2	1820.5	1815.4	1796.8	1790.0
7.5°	2093.1	2069.4	2027.1	1950.9	1908.5	1871.3	1813.7	1784.9	1764.6	1732.4	1713.8
10°	2176.1	2128.7	2066.0	1966.1	1901.7	1844.2	1769.7	1725.6	1691.8	1649.4	1622.3
12.5°	2187.9	2121.9	2049.1	1932.2	1857.7	1786.6	1705.3	1656.2	1617.2	1571.5	1546.1
15°	2111.7	2044.0	1967.8	1850.9	1776.4	1703.6	1625.7	1576.6	1537.7	1493.6	1471.6
17.5°	1967.8	1905.1	1837.4	1729.0	1664.7	1598.6	1529.2	1486.9	1453.0	1419.1	1397.1
20°	1784.9	1735.8	1679.9	1588.5	1537.7	1483.5	1429.3	1395.4	1370.0	1341.2	1324.3
22.5°	1603.7	1566.4	1525.8	1453.0	1415.7	1376.8	1334.4	1310.7	1292.1	1270.1	1258.2
25°	1429.3	1403.9	1378.5	1322.6	1300.6	1273.5	1243.0	1226.1	1214.2	1199.0	1190.5
27.5°	1248.1	1239.6	1232.8	1197.3	1188.8	1170.2	1149.9	1139.7	1131.2	1121.1	1114.3
30°	1051.6	1056.7	1083.8	1065.2	1073.7	1068.6	1060.1	1053.3	1049.9	1041.5	1033.0
32.5°	829.8	865.4	904.3	909.4	934.8	946.6	944.9	946.6	948.3	941.6	934.8
35°	594.4	652.0	712.9	740.0	782.4	809.5	819.6	829.8	836.6	834.9	829.8
37.5°	396.3	474.2	547.0	594.4	650.3	687.5	709.6	726.5	736.7	740.0	740.0
40°	264.2	338.7	435.2	496.2	558.8	604.6	630.0	652.0	667.2	674.0	677.4
42.5°	186.3	265.9	364.1	433.5	497.9	547.0	575.8	599.5	614.7	623.2	626.6
45°	137.2	213.4	315.0	386.1	452.2	499.6	528.4	550.4	565.6	574.1	579.2
47.5°	105.0	179.5	277.7	350.5	416.6	460.6	487.7	508.0	521.6	528.4	531.7
50°	83.0	150.7	247.2	320.1	381.0	421.7	445.4	462.3	474.2	479.2	482.6
52.5°	67.7	130.4	221.8	291.3	348.9	384.4	403.0	416.6	426.8	430.1	433.5
55°	57.6	113.5	199.8	267.6	320.1	350.5	364.1	375.9	381.0	384.4	386.1
57.5°	50.8	99.9	181.2	245.6	293.0	318.4	328.5	337.0	338.7	342.1	343.8
60°	44.0	86.4	160.9	221.8	264.2	286.2	291.3	298.0	298.0	299.7	301.4
62.5°	37.3	74.5	140.6	198.1	235.4	254.0	257.4	259.1	259.1	259.1	260.8
65°	30.5	62.7	118.5	171.0	204.9	216.8	218.5	220.1	216.8	216.8	218.5
67.5°	25.4	49.1	94.8	140.6	167.7	177.8	176.1	176.1	171.0	171.0	172.7
70°	18.6	37.3	71.1	106.7	127.0	133.8	130.4	130.4	125.3	125.3	127.0
72.5°	13.5	27.1	49.1	72.8	88.1	91.4	88.1	88.1	84.7	84.7	86.4
75°	10.2	16.9	32.2	47.4	55.9	57.6	55.9	54.2	52.5	52.5	54.2
77.5°	6.8	11.9	18.6	27.1	32.2	33.9	32.2	32.2	30.5	32.2	32.2
80°	3.4	6.8	10.2	15.2	16.9	18.6	18.6	18.6	16.9	16.9	18.6
82.5°	1.7	3.4	5.1	6.8	8.5	10.2	8.5	8.5	8.5	8.5	8.5
85°	0.0	1.7	1.7	3.4	3.4	5.1	3.4	3.4	3.4	3.4	3.4
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: P135826

CATALOG NUMBER: LD6A20D010TE ERM6A20835 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1862.8	1862.8	1862.8	1862.8
2.5°	1832.3	1823.9	1812.0	1837.4
5°	1779.8	1762.9	1749.3	1773.0
7.5°	1696.8	1673.1	1654.5	1678.2
10°	1602.0	1574.9	1554.6	1576.6
12.5°	1519.0	1491.9	1475.0	1491.9
15°	1446.2	1420.8	1405.6	1420.8
17.5°	1375.1	1353.1	1339.5	1356.5
20°	1307.3	1288.7	1276.9	1292.1
22.5°	1244.7	1227.8	1217.6	1232.8
25°	1178.6	1166.8	1154.9	1168.5
27.5°	1105.8	1092.3	1085.5	1094.0
30°	1022.8	1009.3	1004.2	1011.0
32.5°	924.6	911.1	906.0	911.1
35°	823.0	811.2	804.4	811.2
37.5°	736.7	726.5	721.4	726.5
40°	675.7	670.6	665.5	672.3
42.5°	628.3	623.2	619.8	624.9
45°	579.2	572.4	569.0	574.1
47.5°	530.1	523.3	519.9	523.3
50°	479.2	470.8	469.1	470.8
52.5°	428.4	421.7	418.3	420.0
55°	382.7	377.6	374.3	375.9
57.5°	342.1	335.3	333.6	335.3
60°	301.4	298.0	296.4	298.0
62.5°	260.8	259.1	260.8	260.8
65°	220.1	220.1	221.8	221.8
67.5°	176.1	179.5	181.2	181.2
70°	130.4	133.8	135.5	135.5
72.5°	88.1	91.4	93.1	94.8
75°	55.9	59.3	61.0	61.0
77.5°	33.9	35.6	35.6	37.3
80°	18.6	20.3	20.3	20.3
82.5°	10.2	10.2	10.2	11.9
85°	5.1	5.1	5.1	5.1
87.5°	0.0	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)