

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: P135827

Luminaire Tested: **LD6A20D010TE ERM6A20840 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135827
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 ERM6A20840 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: 2522.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

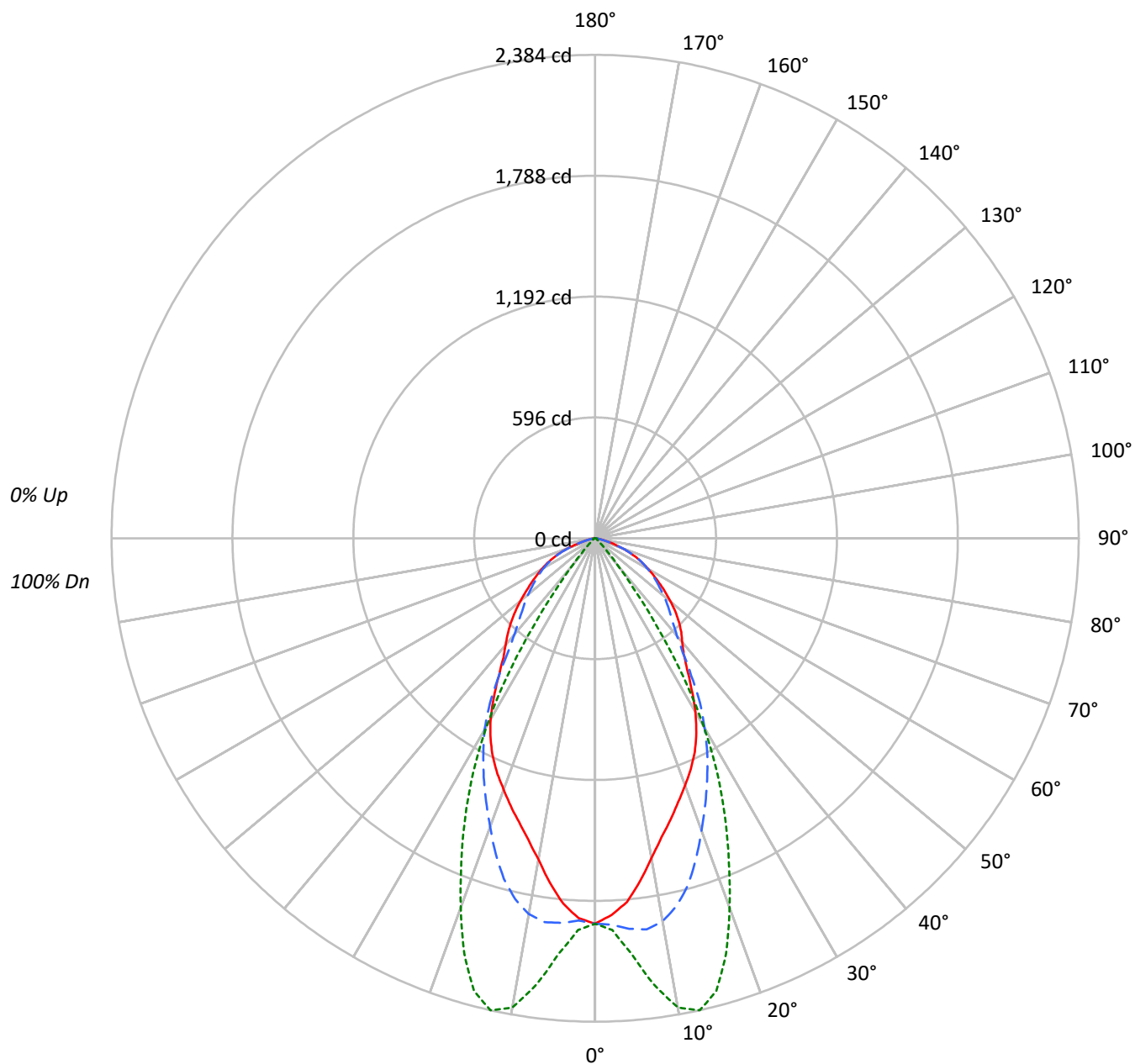
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	123990	123990	123990
5°	117901	134647	118465
10°	105989	155661	106558
15°	96970	156015	97902
20°	89964	134585	91519
25°	83697	109072	85813
30°	74444	80697	77699
35°	62887	42657	65913
40°	56797	14274	58415
45°	53882	4945	54039
50°	49277	2101	48749
55°	44019	1570	43632
60°	39223	1579	39679
65°	34672	1605	34934
70°	26686	1316	26362
75°	16561	882	15679
80°	8453	639	7777
85°	3892	0	3892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.4	7.3
10°-20°	503.3	20.0
20°-30°	605.8	24.0
30°-40°	470.8	18.7
40°-50°	315.1	12.5
50°-60°	237.1	9.4
60°-70°	152.2	6.0
70°-80°	48.7	1.9
80°-90°	4.6	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°	1293.6	51.3
0°-40°	1764.4	70.0
0°-60°	2316.5	91.9
0°-90°	2522.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2522.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1900	1900	1900	1900	1900	
5°	1800	1933	2056	1904	1809	165
15°	1436	1769	2310	1738	1450	404
25°	1163	1306	1515	1299	1192	530
35°	790	826	536	826	828	502
45°	584	522	54	510	586	448
55°	387	366	14	358	384	348
65°	225	226	10	221	226	220
75°	66	62	4	59	62	75
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°	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5
2.5°	1859.0	1874.6	1869.4	1893.6	1876.3	1874.6	1886.7	1893.6	1895.3	1907.4	1907.4
5°	1800.3	1817.5	1812.4	1843.5	1836.6	1843.5	1869.4	1888.4	1905.7	1933.3	1950.6
7.5°	1703.5	1724.3	1727.7	1758.8	1762.3	1781.3	1822.7	1860.7	1897.0	1945.4	1986.9
10°	1599.9	1620.6	1625.8	1660.3	1670.7	1696.6	1750.2	1798.5	1850.4	1917.8	1980.0
12.5°	1510.0	1530.7	1537.7	1572.2	1584.3	1613.7	1670.7	1724.3	1783.0	1857.3	1931.6
15°	1435.7	1454.7	1461.6	1492.7	1504.8	1532.5	1586.0	1637.9	1694.9	1769.2	1841.7
17.5°	1363.2	1382.2	1387.3	1415.0	1423.6	1447.8	1496.2	1541.1	1589.5	1655.1	1720.8
20°	1295.8	1313.1	1316.5	1340.7	1345.9	1364.9	1404.6	1440.9	1480.6	1532.5	1586.0
22.5°	1231.9	1249.1	1250.9	1271.6	1273.3	1288.9	1321.7	1349.3	1377.0	1418.4	1456.5
25°	1162.7	1180.0	1181.8	1199.0	1200.8	1211.1	1237.0	1257.8	1276.8	1306.1	1332.1
27.5°	1079.8	1097.1	1102.3	1114.4	1116.1	1123.0	1145.5	1159.3	1178.3	1197.3	1207.7
30°	988.2	1003.8	1010.7	1021.1	1022.8	1033.2	1053.9	1064.3	1076.4	1079.8	1083.3
32.5°	886.3	903.6	910.5	919.1	924.3	934.7	953.7	958.9	962.3	960.6	941.6
35°	789.6	805.1	812.0	822.4	825.8	832.8	848.3	846.6	841.4	825.8	791.3
37.5°	717.0	729.1	736.0	742.9	744.6	748.1	756.7	749.8	736.0	710.1	665.2
40°	666.9	679.0	680.7	687.6	685.9	685.9	687.6	675.5	658.3	627.2	575.3
42.5°	628.9	639.3	639.3	646.2	641.0	637.5	637.5	623.7	601.2	568.4	516.6
45°	584.0	592.6	594.3	597.8	592.6	589.1	589.1	575.3	554.6	521.8	469.9
47.5°	537.3	546.0	546.0	551.1	546.0	542.5	542.5	530.4	511.4	482.0	433.7
50°	485.5	494.1	495.9	499.3	495.9	494.1	495.9	483.8	468.2	442.3	399.1
52.5°	435.4	444.0	444.0	447.5	444.0	444.0	445.7	437.1	423.3	402.6	364.5
55°	387.0	393.9	397.4	400.8	395.6	395.6	397.4	392.2	381.8	366.3	333.4
57.5°	342.1	349.0	350.7	354.2	350.7	352.5	354.2	349.0	343.8	331.7	305.8
60°	300.6	307.5	309.3	311.0	309.3	309.3	311.0	309.3	305.8	297.2	274.7
62.5°	262.6	267.8	269.5	273.0	269.5	267.8	271.3	269.5	267.8	262.6	247.1
65°	224.6	228.1	229.8	231.5	228.1	224.6	228.1	228.1	229.8	226.3	214.2
67.5°	183.1	186.6	186.6	186.6	181.4	179.7	183.1	183.1	186.6	184.9	176.2
70°	139.9	141.7	141.7	141.7	134.8	134.8	136.5	136.5	139.9	139.9	134.8
72.5°	100.2	98.5	98.5	96.8	95.0	91.6	91.6	93.3	96.8	96.8	93.3
75°	65.7	63.9	62.2	62.2	60.5	57.0	57.0	58.7	60.5	62.2	60.5
77.5°	39.7	38.0	38.0	36.3	36.3	34.6	34.6	34.6	36.3	36.3	36.3
80°	22.5	20.7	20.7	20.7	19.0	19.0	19.0	19.0	19.0	20.7	19.0
82.5°	12.1	10.4	10.4	10.4	10.4	10.4	8.6	10.4	10.4	10.4	10.4
85°	5.2	5.2	5.2	5.2	3.5	3.5	3.5	3.5	3.5	5.2	5.2
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5
2.5°	1902.2	1919.5	1907.4	1945.4	1919.5	1933.3	1952.3	1933.3	1938.5	1950.6	1926.4
5°	1960.9	1992.0	1995.5	2047.3	2026.6	2050.8	2076.7	2056.0	2059.4	2068.1	2037.0
7.5°	2021.4	2076.7	2102.6	2175.2	2170.0	2209.7	2240.8	2220.1	2220.1	2221.8	2175.2
10°	2038.7	2119.9	2168.3	2258.1	2271.9	2328.9	2363.5	2349.7	2346.2	2341.0	2277.1
12.5°	2000.7	2100.9	2163.1	2263.3	2290.9	2358.3	2389.4	2384.2	2379.1	2368.7	2294.4
15°	1912.6	2016.2	2081.9	2180.4	2214.9	2284.0	2309.9	2309.9	2304.8	2294.4	2214.9
17.5°	1783.0	1879.7	1940.2	2026.6	2061.2	2125.1	2142.4	2147.5	2142.4	2132.0	2059.4
20°	1636.1	1717.3	1765.7	1836.6	1864.2	1919.5	1929.8	1938.5	1935.0	1926.4	1862.5
22.5°	1492.7	1556.7	1592.9	1655.1	1665.5	1712.2	1715.6	1722.5	1720.8	1717.3	1665.5
25°	1361.4	1404.6	1425.4	1472.0	1475.5	1510.0	1508.3	1515.2	1513.5	1513.5	1473.7
27.5°	1223.2	1249.1	1254.3	1283.7	1276.8	1302.7	1306.1	1302.7	1304.4	1306.1	1276.8
30°	1085.0	1090.2	1074.6	1078.1	1059.1	1074.6	1059.1	1071.2	1071.2	1076.4	1059.1
32.5°	927.8	912.2	870.8	850.0	817.2	817.2	808.6	808.6	808.6	817.2	813.8
35°	760.2	722.2	658.3	613.3	566.7	554.6	552.9	535.6	539.0	551.1	559.8
37.5°	616.8	559.8	475.1	411.2	355.9	331.7	323.1	309.3	314.4	328.3	349.0
40°	514.9	445.7	347.3	273.0	217.7	190.0	176.2	167.6	172.8	190.0	216.0
42.5°	450.9	374.9	269.5	191.8	139.9	114.0	100.2	93.3	98.5	114.0	145.1
45°	404.3	324.8	217.7	141.7	95.0	70.8	58.7	53.6	57.0	70.8	96.8
47.5°	368.0	286.8	181.4	108.8	67.4	46.6	36.3	31.1	34.6	46.6	67.4
50°	335.2	255.7	153.8	86.4	51.8	34.6	24.2	20.7	24.2	32.8	50.1
52.5°	305.8	228.1	131.3	70.8	39.7	27.6	19.0	15.5	17.3	25.9	39.7
55°	279.9	207.3	115.8	60.5	34.6	24.2	17.3	13.8	17.3	22.5	34.6
57.5°	255.7	186.6	101.9	51.8	29.4	20.7	15.5	13.8	15.5	20.7	29.4
60°	231.5	165.9	89.8	44.9	25.9	19.0	13.8	12.1	13.8	17.3	25.9
62.5°	207.3	146.9	77.7	38.0	22.5	15.5	12.1	10.4	12.1	15.5	22.5
65°	179.7	124.4	65.7	32.8	19.0	13.8	10.4	10.4	10.4	13.8	19.0
67.5°	148.6	101.9	51.8	25.9	15.5	12.1	8.6	8.6	8.6	12.1	15.5
70°	114.0	76.0	39.7	20.7	12.1	8.6	6.9	6.9	6.9	8.6	12.1
72.5°	79.5	53.6	27.6	15.5	8.6	6.9	5.2	5.2	5.2	6.9	8.6
75°	50.1	34.6	19.0	10.4	6.9	5.2	3.5	3.5	3.5	5.2	6.9
77.5°	29.4	20.7	12.1	6.9	3.5	3.5	1.7	1.7	1.7	3.5	3.5
80°	15.5	12.1	6.9	3.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	8.6	5.2	3.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	3.5	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°	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5	1900.5
2.5°	1919.5	1926.4	1924.7	1888.4	1884.9	1886.7	1862.5	1871.1	1879.7	1871.1	1872.8
5°	2012.8	2011.1	1990.3	1938.5	1917.8	1903.9	1864.2	1857.3	1852.1	1833.1	1826.2
7.5°	2135.4	2111.3	2068.1	1990.3	1947.1	1909.1	1850.4	1821.0	1800.3	1767.4	1748.4
10°	2220.1	2171.7	2107.8	2005.9	1940.2	1881.5	1805.5	1760.5	1726.0	1682.8	1655.1
12.5°	2232.2	2164.8	2090.5	1971.3	1895.3	1822.7	1739.8	1689.7	1650.0	1603.3	1577.4
15°	2154.5	2085.3	2007.6	1888.4	1812.4	1738.1	1658.6	1608.5	1568.8	1523.8	1501.4
17.5°	2007.6	1943.7	1874.6	1764.0	1698.3	1631.0	1560.1	1516.9	1482.4	1447.8	1425.4
20°	1821.0	1770.9	1713.9	1620.6	1568.8	1513.5	1458.2	1423.6	1397.7	1368.3	1351.1
22.5°	1636.1	1598.1	1556.7	1482.4	1444.4	1404.6	1361.4	1337.2	1318.2	1295.8	1283.7
25°	1458.2	1432.3	1406.4	1349.3	1326.9	1299.2	1268.1	1250.9	1238.8	1223.2	1214.6
27.5°	1273.3	1264.7	1257.8	1221.5	1212.9	1193.8	1173.1	1162.7	1154.1	1143.7	1136.8
30°	1072.9	1078.1	1105.7	1086.7	1095.4	1090.2	1081.5	1074.6	1071.2	1062.5	1053.9
32.5°	846.6	882.9	922.6	927.8	953.7	965.8	964.1	965.8	967.5	960.6	953.7
35°	606.4	665.2	727.4	755.0	798.2	825.8	836.2	846.6	853.5	851.8	846.6
37.5°	404.3	483.8	558.0	606.4	663.4	701.4	723.9	741.2	751.6	755.0	755.0
40°	269.5	345.5	444.0	506.2	570.1	616.8	642.7	665.2	680.7	687.6	691.1
42.5°	190.0	271.3	371.5	442.3	507.9	558.0	587.4	611.6	627.2	635.8	639.3
45°	139.9	217.7	321.4	393.9	461.3	509.7	539.0	561.5	577.1	585.7	590.9
47.5°	107.1	183.1	283.3	357.6	425.0	469.9	497.6	518.3	532.1	539.0	542.5
50°	84.7	153.8	252.2	326.5	388.7	430.2	454.4	471.7	483.8	488.9	492.4
52.5°	69.1	133.0	226.3	297.2	355.9	392.2	411.2	425.0	435.4	438.8	442.3
55°	58.7	115.8	203.9	273.0	326.5	357.6	371.5	383.6	388.7	392.2	393.9
57.5°	51.8	101.9	184.9	250.5	298.9	324.8	335.2	343.8	345.5	349.0	350.7
60°	44.9	88.1	164.1	226.3	269.5	292.0	297.2	304.1	304.1	305.8	307.5
62.5°	38.0	76.0	143.4	202.1	240.2	259.2	262.6	264.3	264.3	264.3	266.1
65°	31.1	63.9	120.9	174.5	209.1	221.1	222.9	224.6	221.1	221.1	222.9
67.5°	25.9	50.1	96.8	143.4	171.0	181.4	179.7	179.7	174.5	174.5	176.2
70°	19.0	38.0	72.6	108.8	129.6	136.5	133.0	133.0	127.9	127.9	129.6
72.5°	13.8	27.6	50.1	74.3	89.8	93.3	89.8	89.8	86.4	86.4	88.1
75°	10.4	17.3	32.8	48.4	57.0	58.7	57.0	55.3	53.6	53.6	55.3
77.5°	6.9	12.1	19.0	27.6	32.8	34.6	32.8	32.8	31.1	32.8	32.8
80°	3.5	6.9	10.4	15.5	17.3	19.0	19.0	19.0	17.3	17.3	19.0
82.5°	1.7	3.5	5.2	6.9	8.6	10.4	8.6	8.6	8.6	8.6	8.6
85°	0.0	1.7	1.7	3.5	3.5	5.2	3.5	3.5	3.5	3.5	3.5
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: P135827

CATALOG NUMBER: LD6A20D010TE ERM6A20840 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1900.5	1900.5	1900.5	1900.5
2.5°	1869.4	1860.7	1848.6	1874.6
5°	1815.8	1798.5	1784.7	1808.9
7.5°	1731.2	1707.0	1688.0	1712.2
10°	1634.4	1606.8	1586.0	1608.5
12.5°	1549.8	1522.1	1504.8	1522.1
15°	1475.5	1449.5	1434.0	1449.5
17.5°	1402.9	1380.4	1366.6	1383.9
20°	1333.8	1314.8	1302.7	1318.2
22.5°	1269.9	1252.6	1242.2	1257.8
25°	1202.5	1190.4	1178.3	1192.1
27.5°	1128.2	1114.4	1107.5	1116.1
30°	1043.5	1029.7	1024.5	1031.4
32.5°	943.3	929.5	924.3	929.5
35°	839.7	827.6	820.7	827.6
37.5°	751.6	741.2	736.0	741.2
40°	689.4	684.2	679.0	685.9
42.5°	641.0	635.8	632.3	637.5
45°	590.9	584.0	580.5	585.7
47.5°	540.8	533.9	530.4	533.9
50°	488.9	480.3	478.6	480.3
52.5°	437.1	430.2	426.7	428.5
55°	390.5	385.3	381.8	383.6
57.5°	349.0	342.1	340.4	342.1
60°	307.5	304.1	302.3	304.1
62.5°	266.1	264.3	266.1	266.1
65°	224.6	224.6	226.3	226.3
67.5°	179.7	183.1	184.9	184.9
70°	133.0	136.5	138.2	138.2
72.5°	89.8	93.3	95.0	96.8
75°	57.0	60.5	62.2	62.2
77.5°	34.6	36.3	36.3	38.0
80°	19.0	20.7	20.7	20.7
82.5°	10.4	10.4	10.4	12.1
85°	5.2	5.2	5.2	5.2
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)