

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: P135831

Luminaire Tested: **LD6A20D010TE ERM6A20940 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135831
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 ERM6A20940 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: 2325.3 lumens
Efficiency: N/A
Efficacy: 70.9 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

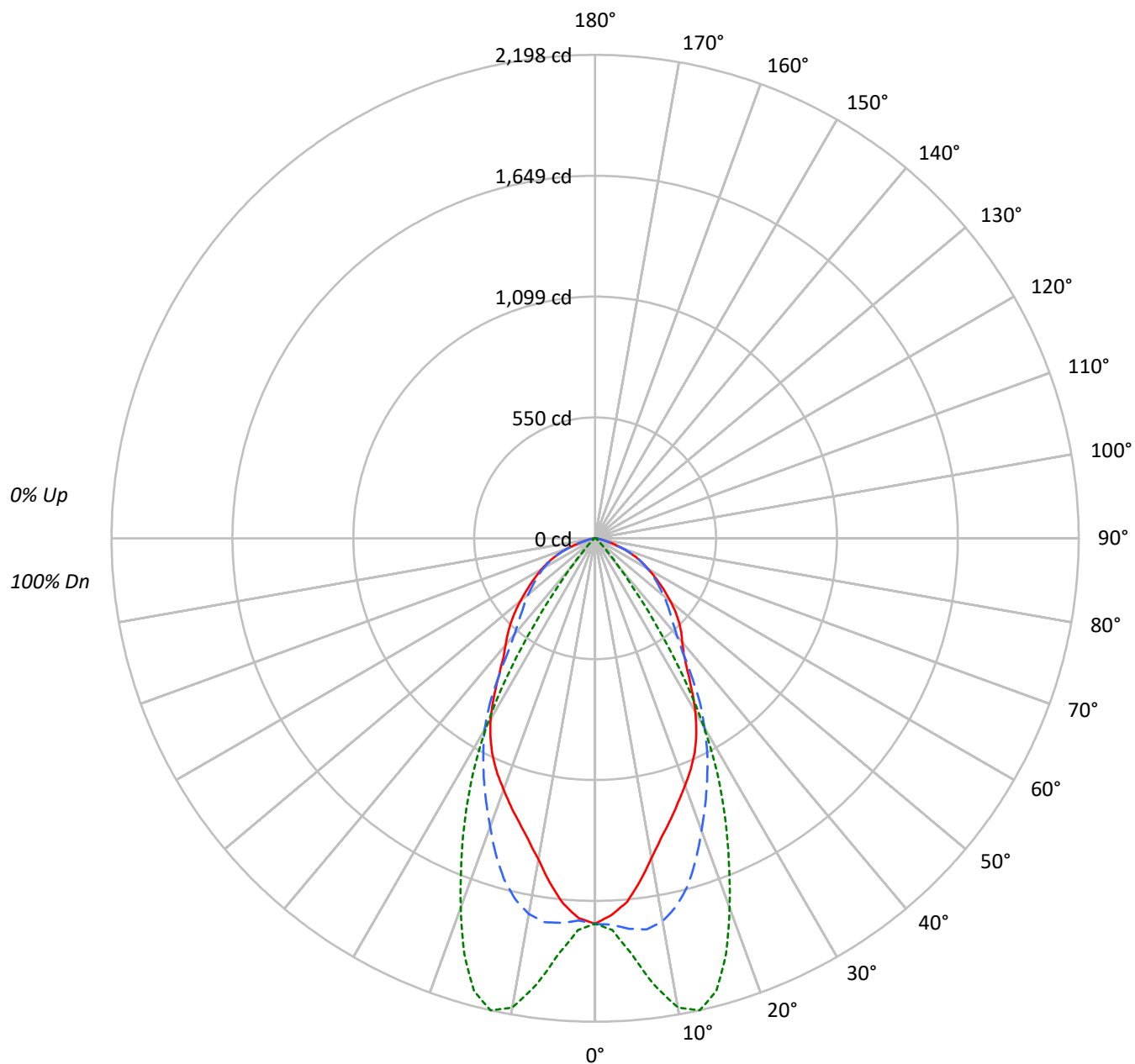
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	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°	114321	114321	114321
5°	108707	124143	109224
10°	97721	143518	98244
15°	89405	143844	90263
20°	82945	124088	84382
25°	77168	100563	79119
30°	68636	74399	71642
35°	57981	39328	60768
40°	52368	13158	53859
45°	49675	4558	49823
50°	45430	1939	44943
55°	40584	1445	40231
60°	36169	1461	36587
65°	31971	1482	32202
70°	24607	1221	24302
75°	15275	807	14444
80°	7777	601	7176
85°	3593	0	3593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.0	7.3
10°-20°	464.1	20.0
20°-30°	558.6	24.0
30°-40°	434.1	18.7
40°-50°	290.5	12.5
50°-60°	218.6	9.4
60°-70°	140.3	6.0
70°-80°	44.9	1.9
80°-90°	4.3	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°	1192.7	51.3
0°-40°	1626.8	70.0
0°-60°	2135.8	91.9
0°-90°	2325.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2325.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1752	1752	1752	1752	1752	
5°	1660	1782	1896	1755	1668	152
15°	1324	1631	2130	1602	1336	372
25°	1072	1204	1397	1198	1099	489
35°	728	761	494	761	763	463
45°	538	481	49	470	540	413
55°	357	338	13	330	354	321
65°	207	209	10	204	209	203
75°	61	57	3	54	57	70
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°	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3
2.5°	1714.0	1728.4	1723.6	1745.9	1729.9	1728.4	1739.5	1745.9	1747.5	1758.6	1758.6
5°	1659.9	1675.7	1671.0	1699.7	1693.3	1699.7	1723.6	1741.1	1757.1	1782.5	1798.5
7.5°	1570.6	1589.8	1592.9	1621.6	1624.8	1642.4	1680.5	1715.6	1749.0	1793.7	1831.9
10°	1475.1	1494.2	1499.0	1530.8	1540.4	1564.3	1613.7	1658.2	1706.1	1768.2	1825.6
12.5°	1392.2	1411.3	1417.8	1449.6	1460.7	1487.8	1540.4	1589.8	1643.9	1712.4	1780.9
15°	1323.7	1341.2	1347.6	1376.3	1387.4	1413.0	1462.3	1510.1	1562.7	1631.2	1698.0
17.5°	1256.9	1274.4	1279.1	1304.6	1312.6	1334.9	1379.5	1420.9	1465.5	1526.0	1586.6
20°	1194.7	1210.7	1213.8	1236.1	1240.9	1258.4	1295.0	1328.5	1365.1	1413.0	1462.3
22.5°	1135.8	1151.7	1153.3	1172.4	1174.0	1188.4	1218.6	1244.1	1269.6	1307.8	1342.9
25°	1072.0	1088.0	1089.6	1105.5	1107.1	1116.6	1140.5	1159.7	1177.2	1204.2	1228.2
27.5°	995.6	1011.5	1016.3	1027.5	1029.0	1035.4	1056.2	1068.9	1086.4	1103.9	1113.5
30°	911.1	925.5	931.9	941.5	943.0	952.6	971.7	981.3	992.4	995.6	998.8
32.5°	817.2	833.1	839.5	847.4	852.2	861.8	879.3	884.1	887.2	885.7	868.2
35°	728.0	742.3	748.7	758.3	761.4	767.8	782.1	780.6	775.8	761.4	729.6
37.5°	661.1	672.2	678.6	685.0	686.5	689.7	697.7	691.3	678.6	654.7	613.3
40°	614.9	626.0	627.6	634.0	632.4	632.4	634.0	622.8	607.0	578.3	530.4
42.5°	579.8	589.4	589.4	595.8	591.0	587.8	587.8	575.1	554.3	524.1	476.3
45°	538.4	546.4	547.9	551.2	546.4	543.2	543.2	530.4	511.3	481.1	433.2
47.5°	495.4	503.4	503.4	508.1	503.4	500.2	500.2	489.0	471.5	444.4	399.9
50°	447.6	455.6	457.2	460.4	457.2	455.6	457.2	446.1	431.7	407.8	368.0
52.5°	401.4	409.4	409.4	412.6	409.4	409.4	410.9	403.0	390.3	371.2	336.1
55°	356.8	363.2	366.4	369.5	364.7	364.7	366.4	361.6	352.0	337.7	307.4
57.5°	315.4	321.8	323.3	326.6	323.3	325.0	326.6	321.8	317.0	305.8	281.9
60°	277.2	283.5	285.2	286.7	285.2	285.2	286.7	285.2	281.9	274.0	253.3
62.5°	242.1	246.9	248.5	251.7	248.5	246.9	250.1	248.5	246.9	242.1	227.8
65°	207.1	210.3	211.9	213.4	210.3	207.1	210.3	210.3	211.9	208.6	197.5
67.5°	168.8	172.0	172.0	172.0	167.3	165.7	168.8	168.8	172.0	170.5	162.5
70°	129.0	130.6	130.6	130.6	124.3	124.3	125.9	125.9	129.0	129.0	124.3
72.5°	92.4	90.8	90.8	89.2	87.6	84.5	84.5	86.0	89.2	89.2	86.0
75°	60.6	58.9	57.3	57.3	55.8	52.6	52.6	54.1	55.8	57.3	55.8
77.5°	36.6	35.0	35.0	33.5	33.5	31.9	31.9	31.9	33.5	33.5	33.5
80°	20.7	19.1	19.1	19.1	17.5	17.5	17.5	17.5	17.5	19.1	17.5
82.5°	11.2	9.6	9.6	9.6	9.6	9.6	7.9	9.6	9.6	9.6	9.6
85°	4.8	4.8	4.8	4.8	3.2	3.2	3.2	3.2	3.2	4.8	4.8
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°	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3
2.5°	1753.8	1769.8	1758.6	1793.7	1769.8	1782.5	1800.0	1782.5	1787.3	1798.5	1776.1
5°	1807.9	1836.6	1839.9	1887.6	1868.5	1890.8	1914.7	1895.6	1898.8	1906.8	1878.1
7.5°	1863.7	1914.7	1938.6	2005.5	2000.7	2037.3	2066.0	2046.9	2046.9	2048.5	2005.5
10°	1879.7	1954.5	1999.2	2082.0	2094.7	2147.2	2179.1	2166.4	2163.2	2158.4	2099.5
12.5°	1844.6	1937.0	1994.4	2086.8	2112.2	2174.4	2203.0	2198.2	2193.5	2183.9	2115.4
15°	1763.4	1858.9	1919.5	2010.3	2042.1	2105.8	2129.7	2129.7	2125.0	2115.4	2042.1
17.5°	1643.9	1733.1	1788.9	1868.5	1900.4	1959.3	1975.3	1980.0	1975.3	1965.7	1898.8
20°	1508.5	1583.4	1628.0	1693.3	1718.8	1769.8	1779.3	1787.3	1784.1	1776.1	1717.2
22.5°	1376.3	1435.3	1468.7	1526.0	1535.6	1578.6	1581.8	1588.1	1586.6	1583.4	1535.6
25°	1255.2	1295.0	1314.2	1357.2	1360.4	1392.2	1390.7	1397.0	1395.4	1395.4	1358.8
27.5°	1127.8	1151.7	1156.5	1183.6	1177.2	1201.1	1204.2	1201.1	1202.7	1204.2	1177.2
30°	1000.4	1005.2	990.8	994.0	976.5	990.8	976.5	987.6	987.6	992.4	976.5
32.5°	855.4	841.0	802.9	783.7	753.5	753.5	745.5	745.5	745.5	753.5	750.3
35°	700.9	665.9	607.0	565.5	522.5	511.3	509.8	493.8	497.0	508.1	516.1
37.5°	568.7	516.1	438.0	379.1	328.1	305.8	297.9	285.2	289.9	302.7	321.8
40°	474.7	410.9	320.2	251.7	200.7	175.2	162.5	154.5	159.3	175.2	199.2
42.5°	415.7	345.7	248.5	176.8	129.0	105.1	92.4	86.0	90.8	105.1	133.8
45°	372.8	299.5	200.7	130.6	87.6	65.3	54.1	49.4	52.6	65.3	89.2
47.5°	339.3	264.4	167.3	100.3	62.1	43.0	33.5	28.7	31.9	43.0	62.1
50°	309.1	235.8	141.8	79.7	47.8	31.9	22.3	19.1	22.3	30.2	46.2
52.5°	281.9	210.3	121.1	65.3	36.6	25.4	17.5	14.3	16.0	23.9	36.6
55°	258.1	191.1	106.8	55.8	31.9	22.3	16.0	12.7	16.0	20.7	31.9
57.5°	235.8	172.0	94.0	47.8	27.1	19.1	14.3	12.7	14.3	19.1	27.1
60°	213.4	153.0	82.8	41.4	23.9	17.5	12.7	11.2	12.7	16.0	23.9
62.5°	191.1	135.4	71.6	35.0	20.7	14.3	11.2	9.6	11.2	14.3	20.7
65°	165.7	114.7	60.6	30.2	17.5	12.7	9.6	9.6	9.6	12.7	17.5
67.5°	137.0	94.0	47.8	23.9	14.3	11.2	7.9	7.9	7.9	11.2	14.3
70°	105.1	70.1	36.6	19.1	11.2	7.9	6.4	6.4	6.4	7.9	11.2
72.5°	73.3	49.4	25.4	14.3	7.9	6.4	4.8	4.8	4.8	6.4	7.9
75°	46.2	31.9	17.5	9.6	6.4	4.8	3.2	3.2	3.2	4.8	6.4
77.5°	27.1	19.1	11.2	6.4	3.2	3.2	1.6	1.6	1.6	3.2	3.2
80°	14.3	11.2	6.4	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	7.9	4.8	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	3.2	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°	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3	1752.3
2.5°	1769.8	1776.1	1774.6	1741.1	1737.9	1739.5	1717.2	1725.2	1733.1	1725.2	1726.7
5°	1855.8	1854.2	1835.1	1787.3	1768.2	1755.4	1718.8	1712.4	1707.6	1690.1	1683.8
7.5°	1968.8	1946.6	1906.8	1835.1	1795.2	1760.2	1706.1	1679.0	1659.9	1629.5	1612.0
10°	2046.9	2002.3	1943.4	1849.4	1788.9	1734.7	1664.7	1623.2	1591.4	1551.5	1526.0
12.5°	2058.1	1995.9	1927.4	1817.5	1747.5	1680.5	1604.1	1557.9	1521.3	1478.2	1454.4
15°	1986.4	1922.6	1851.0	1741.1	1671.0	1602.5	1529.2	1483.0	1446.4	1404.9	1384.3
17.5°	1851.0	1792.1	1728.4	1626.4	1565.8	1503.8	1438.4	1398.6	1366.8	1334.9	1314.2
20°	1679.0	1632.8	1580.2	1494.2	1446.4	1395.4	1344.5	1312.6	1288.7	1261.6	1245.7
22.5°	1508.5	1473.4	1435.3	1366.8	1331.7	1295.0	1255.2	1232.9	1215.4	1194.7	1183.6
25°	1344.5	1320.6	1296.7	1244.1	1223.4	1197.9	1169.2	1153.3	1142.2	1127.8	1119.9
27.5°	1174.0	1166.1	1159.7	1126.2	1118.3	1100.7	1081.6	1072.0	1064.1	1054.5	1048.1
30°	989.2	994.0	1019.5	1001.9	1010.0	1005.2	997.1	990.8	987.6	979.6	971.7
32.5°	780.6	814.0	850.6	855.4	879.3	890.5	888.9	890.5	892.0	885.7	879.3
35°	559.1	613.3	670.7	696.1	735.9	761.4	771.0	780.6	786.9	785.4	780.6
37.5°	372.8	446.1	514.5	559.1	611.7	646.7	667.4	683.4	693.0	696.1	696.1
40°	248.5	318.6	409.4	466.7	525.6	568.7	592.6	613.3	627.6	634.0	637.2
42.5°	175.2	250.1	342.5	407.8	468.3	514.5	541.6	563.9	578.3	586.2	589.4
45°	129.0	200.7	296.3	363.2	425.3	469.9	497.0	517.7	532.1	540.0	544.8
47.5°	98.7	168.8	261.2	329.7	391.8	433.2	458.8	477.9	490.6	497.0	500.2
50°	78.1	141.8	232.5	301.0	358.4	396.6	419.0	434.9	446.1	450.8	454.0
52.5°	63.7	122.6	208.6	274.0	328.1	361.6	379.1	391.8	401.4	404.6	407.8
55°	54.1	106.8	188.0	251.7	301.0	329.7	342.5	353.7	358.4	361.6	363.2
57.5°	47.8	94.0	170.5	231.0	275.6	299.5	309.1	317.0	318.6	321.8	323.3
60°	41.4	81.2	151.3	208.6	248.5	269.2	274.0	280.4	280.4	281.9	283.5
62.5°	35.0	70.1	132.2	186.3	221.5	239.0	242.1	243.7	243.7	243.7	245.3
65°	28.7	58.9	111.5	160.9	192.8	203.9	205.5	207.1	203.9	203.9	205.5
67.5°	23.9	46.2	89.2	132.2	157.7	167.3	165.7	165.7	160.9	160.9	162.5
70°	17.5	35.0	66.9	100.3	119.5	125.9	122.6	122.6	117.9	117.9	119.5
72.5°	12.7	25.4	46.2	68.5	82.8	86.0	82.8	82.8	79.7	79.7	81.2
75°	9.6	16.0	30.2	44.6	52.6	54.1	52.6	51.0	49.4	49.4	51.0
77.5°	6.4	11.2	17.5	25.4	30.2	31.9	30.2	30.2	28.7	30.2	30.2
80°	3.2	6.4	9.6	14.3	16.0	17.5	17.5	17.5	16.0	16.0	17.5
82.5°	1.6	3.2	4.8	6.4	7.9	9.6	7.9	7.9	7.9	7.9	7.9
85°	0.0	1.6	1.6	3.2	3.2	4.8	3.2	3.2	3.2	3.2	3.2
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: P135831

CATALOG NUMBER: LD6A20D010TE ERM6A20940 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1752.3	1752.3	1752.3	1752.3
2.5°	1723.6	1715.6	1704.4	1728.4
5°	1674.2	1658.2	1645.5	1667.8
7.5°	1596.2	1573.9	1556.3	1578.6
10°	1506.9	1481.5	1462.3	1483.0
12.5°	1428.9	1403.4	1387.4	1403.4
15°	1360.4	1336.4	1322.1	1336.4
17.5°	1293.5	1272.7	1260.0	1276.0
20°	1229.8	1212.2	1201.1	1215.4
22.5°	1170.8	1154.9	1145.3	1159.7
25°	1108.7	1097.5	1086.4	1099.1
27.5°	1040.2	1027.5	1021.1	1029.0
30°	962.1	949.4	944.6	951.0
32.5°	869.7	857.0	852.2	857.0
35°	774.2	763.0	756.7	763.0
37.5°	693.0	683.4	678.6	683.4
40°	635.6	630.8	626.0	632.4
42.5°	591.0	586.2	583.0	587.8
45°	544.8	538.4	535.2	540.0
47.5°	498.6	492.3	489.0	492.3
50°	450.8	442.8	441.3	442.8
52.5°	403.0	396.6	393.4	395.1
55°	360.0	355.2	352.0	353.7
57.5°	321.8	315.4	313.8	315.4
60°	283.5	280.4	278.7	280.4
62.5°	245.3	243.7	245.3	245.3
65°	207.1	207.1	208.6	208.6
67.5°	165.7	168.8	170.5	170.5
70°	122.6	125.9	127.4	127.4
72.5°	82.8	86.0	87.6	89.2
75°	52.6	55.8	57.3	57.3
77.5°	31.9	33.5	33.5	35.0
80°	17.5	19.1	19.1	19.1
82.5°	9.6	9.6	9.6	11.2
85°	4.8	4.8	4.8	4.8
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)