

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: P135824

Luminaire Tested: **LD6A20D010TE ERM6A20827 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135824
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 ERM6A20827 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 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2302.0 lumens
Efficiency: N/A
Efficacy: 70.2 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

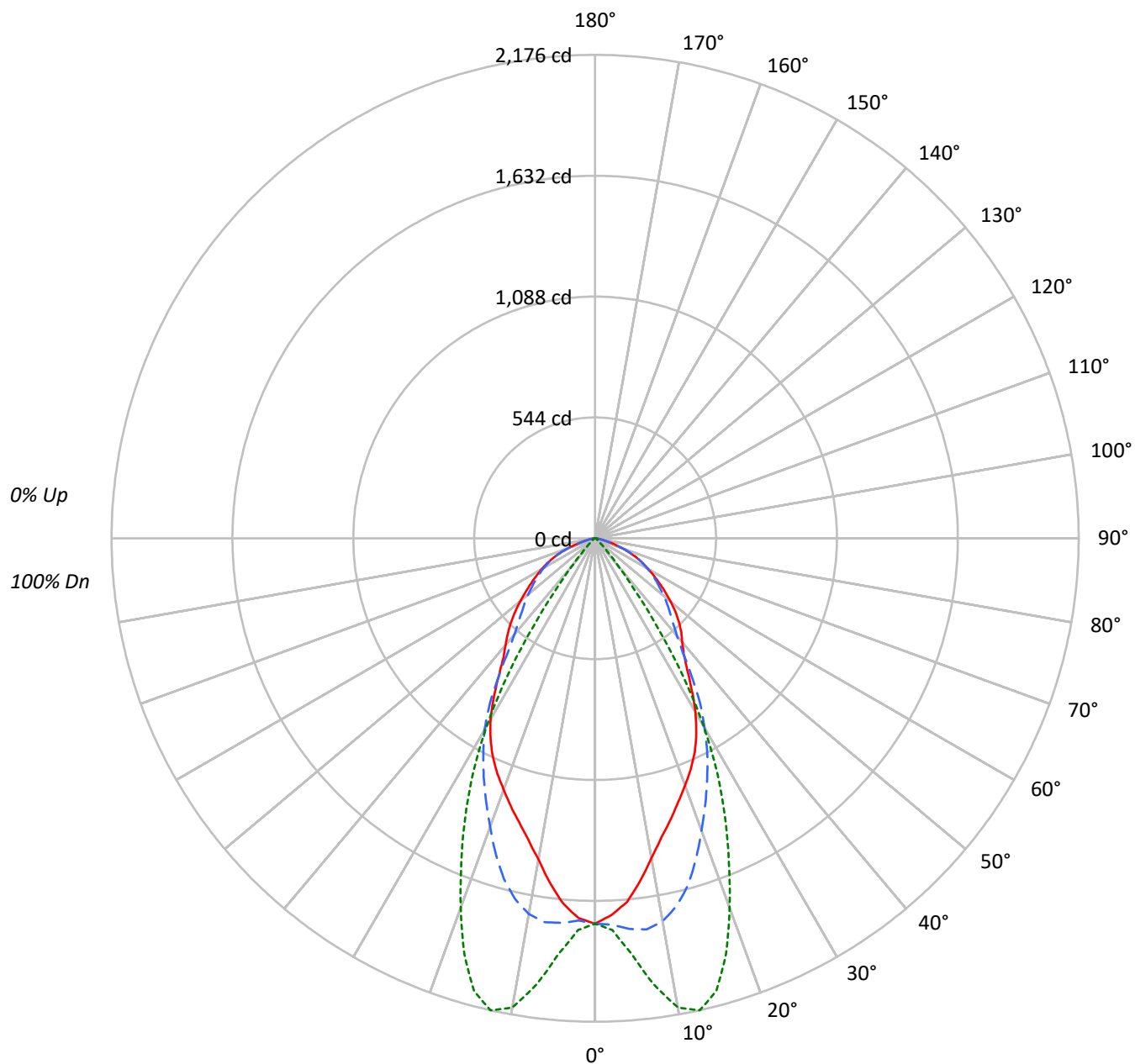
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
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°	113173	113173	113173
5°	107613	122898	108130
10°	96741	142080	97264
15°	88514	142406	89365
20°	82112	122845	83535
25°	76398	99555	78327
30°	67951	73653	70926
35°	57400	38938	60163
40°	51840	13030	53322
45°	49177	4512	49324
50°	44973	1918	44496
55°	40174	1433	39822
60°	35804	1435	36222
65°	31646	1467	31893
70°	24359	1202	24073
75°	15099	807	14318
80°	7702	601	7101
85°	3518	0	3518



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.3	7.3
10°-20°	459.4	20.0
20°-30°	553.0	24.0
30°-40°	429.7	18.7
40°-50°	287.6	12.5
50°-60°	216.4	9.4
60°-70°	138.9	6.0
70°-80°	44.5	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°	1180.7	51.3
0°-40°	1610.5	70.0
0°-60°	2114.4	91.9
0°-90°	2302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2302.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1735	1735	1735	1735	1735	
5°	1643	1765	1877	1738	1651	151
15°	1310	1615	2108	1586	1323	368
25°	1061	1192	1383	1186	1088	484
35°	721	754	489	754	755	458
45°	533	476	49	465	535	409
55°	353	334	13	326	350	317
65°	205	207	10	202	207	201
75°	60	57	3	54	57	69
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°	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7
2.5°	1696.8	1711.0	1706.3	1728.4	1712.6	1711.0	1722.1	1728.4	1730.0	1741.0	1741.0
5°	1643.2	1659.0	1654.3	1682.7	1676.3	1682.7	1706.3	1723.7	1739.4	1764.7	1780.4
7.5°	1554.9	1573.8	1577.0	1605.4	1608.5	1625.9	1663.7	1698.4	1731.5	1775.7	1813.5
10°	1460.3	1479.2	1484.0	1515.5	1525.0	1548.6	1597.5	1641.7	1689.0	1750.5	1807.2
12.5°	1378.3	1397.2	1403.5	1435.1	1446.1	1472.9	1525.0	1573.8	1627.5	1695.3	1763.1
15°	1310.5	1327.8	1334.1	1362.5	1373.6	1398.8	1447.7	1495.0	1547.0	1614.8	1681.1
17.5°	1244.2	1261.6	1266.3	1291.6	1299.4	1321.5	1365.7	1406.7	1450.8	1510.8	1570.7
20°	1182.7	1198.5	1201.7	1223.7	1228.5	1245.8	1282.1	1315.2	1351.5	1398.8	1447.7
22.5°	1124.4	1140.2	1141.7	1160.7	1162.2	1176.4	1206.4	1231.6	1256.9	1294.7	1329.4
25°	1061.3	1077.1	1078.7	1094.4	1096.0	1105.5	1129.1	1148.1	1165.4	1192.2	1215.9
27.5°	985.6	1001.4	1006.1	1017.2	1018.7	1025.0	1045.5	1058.2	1075.5	1092.9	1102.3
30°	902.0	916.2	922.5	932.0	933.6	943.0	962.0	971.4	982.5	985.6	988.8
32.5°	809.0	824.8	831.1	839.0	843.7	853.2	870.5	875.2	878.4	876.8	859.5
35°	720.7	734.9	741.2	750.6	753.8	760.1	774.3	772.7	768.0	753.8	722.3
37.5°	654.5	665.5	671.8	678.1	679.7	682.8	690.7	684.4	671.8	648.1	607.1
40°	608.7	619.8	621.3	627.6	626.1	626.1	627.6	616.6	600.8	572.4	525.1
42.5°	574.0	583.5	583.5	589.8	585.1	581.9	581.9	569.3	548.8	518.8	471.5
45°	533.0	540.9	542.5	545.6	540.9	537.8	537.8	525.1	506.2	476.3	428.9
47.5°	490.4	498.3	498.3	503.1	498.3	495.2	495.2	484.1	466.8	440.0	395.8
50°	443.1	451.0	452.6	455.8	452.6	451.0	452.6	441.6	427.4	403.7	364.3
52.5°	397.4	405.3	405.3	408.4	405.3	405.3	406.9	399.0	386.4	367.4	332.7
55°	353.2	359.6	362.7	365.9	361.1	361.1	362.7	358.0	348.5	334.3	304.4
57.5°	312.2	318.6	320.1	323.3	320.1	321.7	323.3	318.6	313.8	302.8	279.1
60°	274.4	280.7	282.3	283.9	282.3	282.3	283.9	282.3	279.1	271.2	250.7
62.5°	239.7	244.4	246.0	249.2	246.0	244.4	247.6	246.0	244.4	239.7	225.5
65°	205.0	208.2	209.7	211.3	208.2	205.0	208.2	208.2	209.7	206.6	195.5
67.5°	167.2	170.3	170.3	170.3	165.6	164.0	167.2	167.2	170.3	168.7	160.9
70°	127.7	129.3	129.3	129.3	123.0	123.0	124.6	124.6	127.7	127.7	123.0
72.5°	91.5	89.9	89.9	88.3	86.7	83.6	83.6	85.2	88.3	88.3	85.2
75°	59.9	58.3	56.8	56.8	55.2	52.0	52.0	53.6	55.2	56.8	55.2
77.5°	36.3	34.7	34.7	33.1	33.1	31.5	31.5	31.5	33.1	33.1	33.1
80°	20.5	18.9	18.9	18.9	17.3	17.3	17.3	17.3	17.3	18.9	17.3
82.5°	11.0	9.5	9.5	9.5	9.5	9.5	7.9	9.5	9.5	9.5	9.5
85°	4.7	4.7	4.7	4.7	3.2	3.2	3.2	3.2	3.2	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°	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7
2.5°	1736.3	1752.0	1741.0	1775.7	1752.0	1764.7	1782.0	1764.7	1769.4	1780.4	1758.3
5°	1789.9	1818.3	1821.4	1868.7	1849.8	1871.9	1895.5	1876.6	1879.8	1887.7	1859.3
7.5°	1845.1	1895.5	1919.2	1985.4	1980.7	2017.0	2045.4	2026.4	2026.4	2028.0	1985.4
10°	1860.9	1935.0	1979.1	2061.1	2073.7	2125.8	2157.3	2144.7	2141.6	2136.8	2078.5
12.5°	1826.2	1917.6	1974.4	2065.9	2091.1	2152.6	2181.0	2176.3	2171.5	2162.1	2094.2
15°	1745.7	1840.4	1900.3	1990.2	2021.7	2084.8	2108.4	2108.4	2103.7	2094.2	2021.7
17.5°	1627.5	1715.8	1771.0	1849.8	1881.4	1939.7	1955.5	1960.2	1955.5	1946.0	1879.8
20°	1493.4	1567.5	1611.7	1676.3	1701.6	1752.0	1761.5	1769.4	1766.2	1758.3	1700.0
22.5°	1362.5	1420.9	1454.0	1510.8	1520.2	1562.8	1566.0	1572.3	1570.7	1567.5	1520.2
25°	1242.7	1282.1	1301.0	1343.6	1346.8	1378.3	1376.7	1383.0	1381.4	1381.4	1345.2
27.5°	1116.5	1140.2	1144.9	1171.7	1165.4	1189.1	1192.2	1189.1	1190.6	1192.2	1165.4
30°	990.4	995.1	980.9	984.0	966.7	980.9	966.7	977.7	977.7	982.5	966.7
32.5°	846.8	832.7	794.8	775.9	745.9	745.9	738.0	738.0	738.0	745.9	742.8
35°	693.9	659.2	600.8	559.8	517.3	506.2	504.6	488.9	492.0	503.1	510.9
37.5°	563.0	510.9	433.7	375.3	324.9	302.8	294.9	282.3	287.0	299.6	318.6
40°	469.9	406.9	317.0	249.2	198.7	173.5	160.9	153.0	157.7	173.5	197.1
42.5°	411.6	342.2	246.0	175.0	127.7	104.1	91.5	85.2	89.9	104.1	132.5
45°	369.0	296.5	198.7	129.3	86.7	64.7	53.6	48.9	52.0	64.7	88.3
47.5°	335.9	261.8	165.6	99.4	61.5	42.6	33.1	28.4	31.5	42.6	61.5
50°	305.9	233.4	140.4	78.8	47.3	31.5	22.1	18.9	22.1	30.0	45.7
52.5°	279.1	208.2	119.9	64.7	36.3	25.2	17.3	14.2	15.8	23.7	36.3
55°	255.5	189.2	105.7	55.2	31.5	22.1	15.8	12.6	15.8	20.5	31.5
57.5°	233.4	170.3	93.0	47.3	26.8	18.9	14.2	12.6	14.2	18.9	26.8
60°	211.3	151.4	82.0	41.0	23.7	17.3	12.6	11.0	12.6	15.8	23.7
62.5°	189.2	134.0	71.0	34.7	20.5	14.2	11.0	9.5	11.0	14.2	20.5
65°	164.0	113.5	59.9	30.0	17.3	12.6	9.5	9.5	9.5	12.6	17.3
67.5°	135.6	93.0	47.3	23.7	14.2	11.0	7.9	7.9	7.9	11.0	14.2
70°	104.1	69.4	36.3	18.9	11.0	7.9	6.3	6.3	6.3	7.9	11.0
72.5°	72.5	48.9	25.2	14.2	7.9	6.3	4.7	4.7	4.7	6.3	7.9
75°	45.7	31.5	17.3	9.5	6.3	4.7	3.2	3.2	3.2	4.7	6.3
77.5°	26.8	18.9	11.0	6.3	3.2	3.2	1.6	1.6	1.6	3.2	3.2
80°	14.2	11.0	6.3	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	7.9	4.7	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°	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7	1734.7
2.5°	1752.0	1758.3	1756.8	1723.7	1720.5	1722.1	1700.0	1707.9	1715.8	1707.9	1709.5
5°	1837.2	1835.6	1816.7	1769.4	1750.5	1737.8	1701.6	1695.3	1690.5	1673.2	1666.9
7.5°	1949.2	1927.1	1887.7	1816.7	1777.3	1742.6	1689.0	1662.2	1643.2	1613.3	1595.9
10°	2026.4	1982.3	1923.9	1830.9	1771.0	1717.3	1648.0	1607.0	1575.4	1536.0	1510.8
12.5°	2037.5	1976.0	1908.2	1799.4	1730.0	1663.7	1588.0	1542.3	1506.0	1463.5	1439.8
15°	1966.5	1903.4	1832.5	1723.7	1654.3	1586.5	1513.9	1468.2	1431.9	1390.9	1370.4
17.5°	1832.5	1774.1	1711.0	1610.1	1550.2	1488.7	1424.0	1384.6	1353.1	1321.5	1301.0
20°	1662.2	1616.4	1564.4	1479.2	1431.9	1381.4	1331.0	1299.4	1275.8	1249.0	1233.2
22.5°	1493.4	1458.7	1420.9	1353.1	1318.4	1282.1	1242.7	1220.6	1203.2	1182.7	1171.7
25°	1331.0	1307.3	1283.7	1231.6	1211.1	1185.9	1157.5	1141.7	1130.7	1116.5	1108.6
27.5°	1162.2	1154.4	1148.1	1114.9	1107.1	1089.7	1070.8	1061.3	1053.4	1044.0	1037.7
30°	979.3	984.0	1009.3	991.9	999.8	995.1	987.2	980.9	977.7	969.9	962.0
32.5°	772.7	805.8	842.1	846.8	870.5	881.5	880.0	881.5	883.1	876.8	870.5
35°	553.5	607.1	663.9	689.1	728.6	753.8	763.3	772.7	779.0	777.5	772.7
37.5°	369.0	441.6	509.4	553.5	605.6	640.3	660.8	676.5	686.0	689.1	689.1
40°	246.0	315.4	405.3	462.1	520.4	563.0	586.6	607.1	621.3	627.6	630.8
42.5°	173.5	247.6	339.1	403.7	463.6	509.4	536.2	558.3	572.4	580.3	583.5
45°	127.7	198.7	293.3	359.6	421.1	465.2	492.0	512.5	526.7	534.6	539.3
47.5°	97.8	167.2	258.6	326.4	387.9	428.9	454.2	473.1	485.7	492.0	495.2
50°	77.3	140.4	230.2	298.1	354.8	392.7	414.7	430.5	441.6	446.3	449.4
52.5°	63.1	121.4	206.6	271.2	324.9	358.0	375.3	387.9	397.4	400.6	403.7
55°	53.6	105.7	186.1	249.2	298.1	326.4	339.1	350.1	354.8	358.0	359.6
57.5°	47.3	93.0	168.7	228.7	272.8	296.5	305.9	313.8	315.4	318.6	320.1
60°	41.0	80.4	149.8	206.6	246.0	266.5	271.2	277.6	277.6	279.1	280.7
62.5°	34.7	69.4	130.9	184.5	219.2	236.5	239.7	241.3	241.3	241.3	242.9
65°	28.4	58.3	110.4	159.3	190.8	201.9	203.4	205.0	201.9	201.9	203.4
67.5°	23.7	45.7	88.3	130.9	156.1	165.6	164.0	164.0	159.3	159.3	160.9
70°	17.3	34.7	66.2	99.4	118.3	124.6	121.4	121.4	116.7	116.7	118.3
72.5°	12.6	25.2	45.7	67.8	82.0	85.2	82.0	82.0	78.8	78.8	80.4
75°	9.5	15.8	30.0	44.2	52.0	53.6	52.0	50.5	48.9	48.9	50.5
77.5°	6.3	11.0	17.3	25.2	30.0	31.5	30.0	30.0	28.4	30.0	30.0
80°	3.2	6.3	9.5	14.2	15.8	17.3	17.3	17.3	15.8	15.8	17.3
82.5°	1.6	3.2	4.7	6.3	7.9	9.5	7.9	7.9	7.9	7.9	7.9
85°	0.0	1.6	1.6	3.2	3.2	4.7	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: P135824

CATALOG NUMBER: LD6A20D010TE ERM6A20827 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1734.7	1734.7	1734.7	1734.7
2.5°	1706.3	1698.4	1687.4	1711.0
5°	1657.4	1641.7	1629.0	1651.1
7.5°	1580.1	1558.1	1540.7	1562.8
10°	1491.8	1466.6	1447.7	1468.2
12.5°	1414.6	1389.3	1373.6	1389.3
15°	1346.8	1323.1	1308.9	1323.1
17.5°	1280.5	1260.0	1247.4	1263.2
20°	1217.4	1200.1	1189.1	1203.2
22.5°	1159.1	1143.3	1133.9	1148.1
25°	1097.6	1086.5	1075.5	1088.1
27.5°	1029.8	1017.2	1010.9	1018.7
30°	952.5	939.9	935.2	941.5
32.5°	861.0	848.4	843.7	848.4
35°	766.4	755.4	749.1	755.4
37.5°	686.0	676.5	671.8	676.5
40°	629.2	624.5	619.8	626.1
42.5°	585.1	580.3	577.2	581.9
45°	539.3	533.0	529.9	534.6
47.5°	493.6	487.3	484.1	487.3
50°	446.3	438.4	436.8	438.4
52.5°	399.0	392.7	389.5	391.1
55°	356.4	351.7	348.5	350.1
57.5°	318.6	312.2	310.7	312.2
60°	280.7	277.6	276.0	277.6
62.5°	242.9	241.3	242.9	242.9
65°	205.0	205.0	206.6	206.6
67.5°	164.0	167.2	168.7	168.7
70°	121.4	124.6	126.2	126.2
72.5°	82.0	85.2	86.7	88.3
75°	52.0	55.2	56.8	56.8
77.5°	31.5	33.1	33.1	34.7
80°	17.3	18.9	18.9	18.9
82.5°	9.5	9.5	9.5	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)