

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: P136304

Luminaire Tested: **LD6A20D010TE ERW6A20827 6LW111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23359-R2)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A20D010TE ERW6A20827 6LW111LI
Description: PORTFOLIO 6 INCH 60 DEGREE CUTOFF RECESSED SINGLE 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: 2321.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.1
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

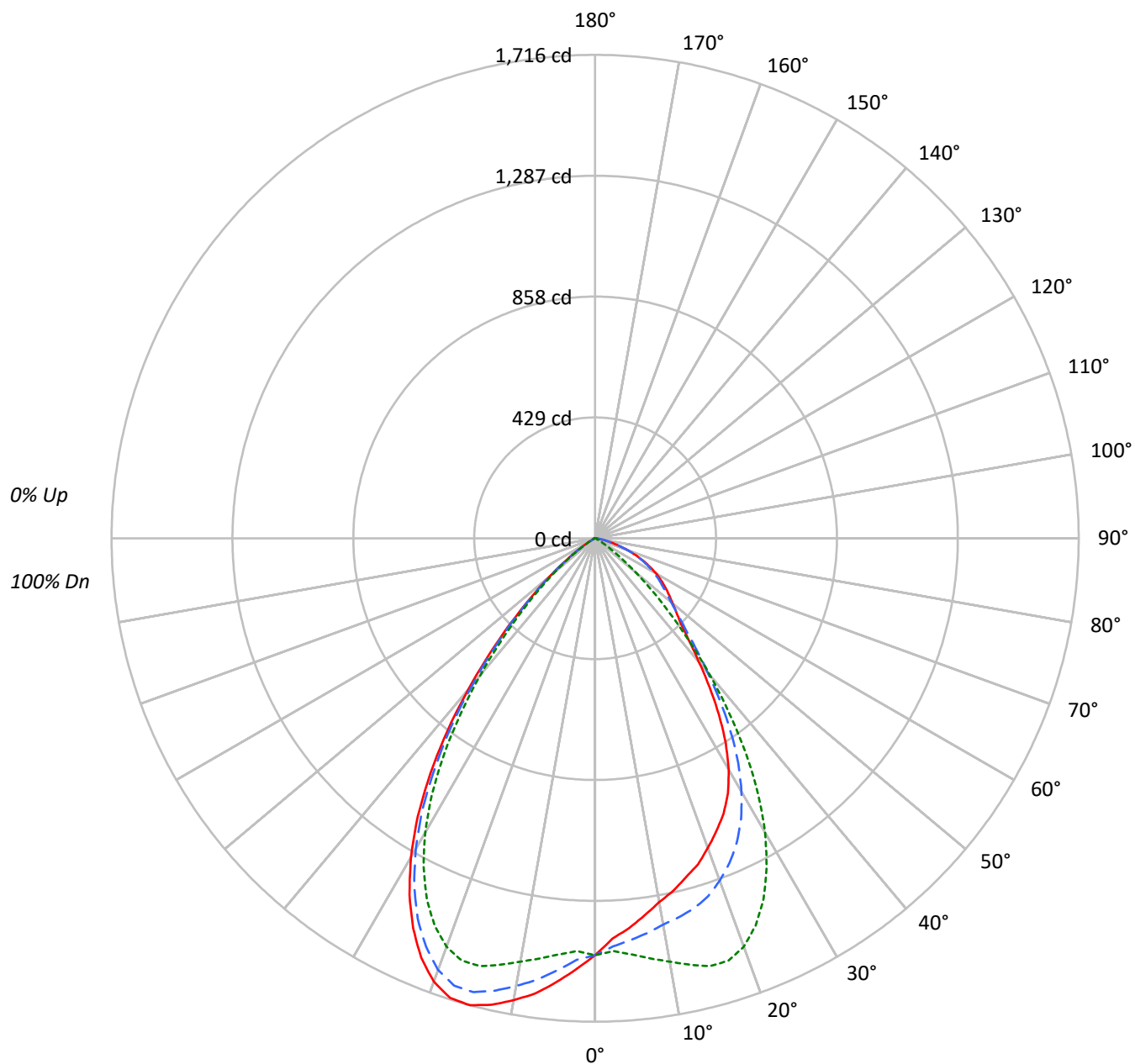
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	112	109	106	103	110	107	104	102		103	100	98		99	97	95		95	94	93
2	105	99	94	90	103	97	93	89		94	90	87		91	88	85		88	86	83
3	98	91	85	80	96	89	84	79		86	82	78		84	80	77		82	78	75
4	92	83	76	71	90	82	76	71		80	74	70		77	73	69		75	71	68
5	86	76	69	64	84	75	69	64		73	68	63		72	67	63		70	66	62
6	81	70	63	58	79	70	63	58		68	62	57		66	61	57		65	60	57
7	76	65	58	53	75	64	58	53		63	57	53		62	56	52		60	56	52
8	72	60	53	49	70	60	53	48		59	53	48		58	52	48		56	51	48
9	68	56	49	45	66	56	49	45		55	49	44		54	48	44		53	48	44
10	64	53	46	41	63	52	46	41		51	45	41		50	45	41		50	45	41

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	96530	96530	96530
5°	90952	97121	103605
10°	86863	101086	110275
15°	84103	106183	115889
20°	81175	107085	116257
25°	77629	101758	109957
30°	71409	90814	98408
35°	61023	74308	81149
40°	48800	53867	59633
45°	39766	34129	38244
50°	36376	18777	21284
55°	34567	7700	9020
60°	32542	2805	2805
65°	29068	1528	1281
70°	23310	1259	954
75°	15402	832	832
80°	8078	639	639
85°	3743	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.8	6.2
10°-20°	428.0	18.4
20°-30°	615.7	26.5
30°-40°	565.6	24.4
40°-50°	324.8	14.0
50°-60°	143.5	6.2
60°-70°	70.5	3.0
70°-80°	27.1	1.2
80°-90°	3.1	0.1
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°	1186.5	51.1
0°-40°	1752.1	75.5
0°-60°	2220.4	95.7
0°-90°	2321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2321.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1480	1480	1480	1480	1480	
5°	1389	1432	1483	1539	1582	130
15°	1245	1359	1572	1668	1716	351
25°	1078	1191	1414	1490	1528	493
35°	766	839	933	986	1019	475
45°	431	449	370	405	414	342
55°	304	289	68	74	79	272
65°	188	182	10	7	8	184
75°	61	64	3	3	3	68
85°	5	5	0	0	0	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°	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6
2.5°	1421.9	1430.1	1421.9	1433.4	1440.0	1443.3	1440.0	1431.8	1443.3	1449.9	1448.3
5°	1388.8	1395.4	1388.8	1400.4	1408.6	1416.9	1413.6	1408.6	1421.9	1431.8	1433.4
7.5°	1349.2	1357.4	1352.5	1364.1	1374.0	1383.9	1383.9	1382.2	1398.7	1413.6	1418.5
10°	1311.2	1317.8	1314.5	1326.1	1337.6	1349.2	1352.5	1354.1	1372.3	1392.1	1403.7
12.5°	1281.5	1284.8	1281.5	1294.7	1306.3	1319.5	1326.1	1329.4	1352.5	1377.3	1392.1
15°	1245.2	1253.4	1250.1	1263.3	1276.5	1291.4	1299.6	1306.3	1331.0	1359.1	1380.6
17.5°	1213.8	1217.1	1213.8	1228.6	1240.2	1256.7	1266.6	1274.9	1301.3	1332.7	1355.8
20°	1169.2	1175.8	1174.1	1187.4	1200.6	1215.4	1225.3	1233.6	1261.7	1293.0	1319.5
22.5°	1124.6	1131.2	1131.2	1144.4	1154.3	1170.8	1179.1	1187.4	1213.8	1246.8	1269.9
25°	1078.4	1083.3	1081.7	1093.2	1104.8	1121.3	1127.9	1136.2	1160.9	1190.7	1212.1
27.5°	1020.6	1023.9	1027.2	1037.1	1045.3	1060.2	1065.1	1073.4	1093.2	1121.3	1141.1
30°	947.9	951.2	956.2	964.4	971.0	985.9	989.2	995.8	1015.6	1038.7	1056.9
32.5°	862.0	863.7	871.9	878.5	886.8	896.7	905.0	906.6	921.5	944.6	957.8
35°	766.2	767.9	776.2	781.1	789.4	799.3	805.9	807.5	820.7	838.9	847.2
37.5°	667.2	677.1	675.4	680.4	688.6	696.9	703.5	703.5	713.4	728.3	731.6
40°	573.0	578.0	582.9	586.2	592.9	599.5	604.4	604.4	611.0	620.9	620.9
42.5°	492.1	500.4	500.4	503.7	508.6	515.2	518.5	516.9	520.2	525.1	521.8
45°	431.0	434.3	436.0	440.9	442.6	449.2	450.8	447.5	449.2	449.2	439.3
47.5°	391.4	391.4	391.4	394.7	396.3	401.3	401.3	396.3	394.7	393.0	379.8
50°	358.4	358.4	360.0	363.3	365.0	366.6	366.6	360.0	358.4	351.7	333.6
52.5°	330.3	331.9	331.9	335.2	336.9	338.5	336.9	330.3	325.3	318.7	297.3
55°	303.9	305.5	307.2	310.5	310.5	310.5	308.8	302.2	297.3	289.0	267.5
57.5°	277.4	279.1	279.1	282.4	284.0	284.0	282.4	275.8	270.8	264.2	241.1
60°	249.4	249.4	251.0	254.3	254.3	256.0	254.3	249.4	244.4	236.1	216.3
62.5°	218.0	219.6	221.3	224.6	226.2	226.2	226.2	221.3	218.0	211.4	191.6
65°	188.3	188.3	189.9	193.2	193.2	198.2	194.9	191.6	188.3	181.7	165.1
67.5°	153.6	155.2	155.2	158.5	160.2	161.8	161.8	158.5	156.9	151.9	137.1
70°	122.2	122.2	123.9	125.5	127.2	128.8	128.8	127.2	125.5	120.6	109.0
72.5°	89.2	90.8	90.8	92.5	95.8	97.4	97.4	97.4	94.1	90.8	82.6
75°	61.1	62.8	62.8	64.4	66.1	67.7	67.7	67.7	66.1	64.4	57.8
77.5°	38.0	38.0	39.6	39.6	41.3	42.9	44.6	44.6	42.9	41.3	38.0
80°	21.5	21.5	23.1	23.1	23.1	24.8	26.4	26.4	26.4	24.8	21.5
82.5°	11.6	11.6	11.6	11.6	11.6	13.2	13.2	13.2	13.2	13.2	11.6
85°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
87.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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°	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6
2.5°	1448.3	1459.8	1468.1	1454.9	1466.4	1478.0	1491.2	1466.4	1489.6	1476.3	1481.3
5°	1440.0	1453.2	1464.8	1456.5	1471.4	1486.3	1504.4	1483.0	1509.4	1499.5	1507.7
7.5°	1428.5	1446.6	1463.1	1459.8	1479.6	1499.5	1522.6	1504.4	1532.5	1527.5	1537.4
10°	1418.5	1443.3	1464.8	1464.8	1491.2	1514.3	1539.1	1525.9	1558.9	1554.0	1567.2
12.5°	1411.9	1443.3	1471.4	1476.3	1507.7	1534.1	1563.9	1550.7	1587.0	1582.0	1596.9
15°	1405.3	1441.7	1474.7	1484.6	1519.3	1550.7	1582.0	1572.1	1610.1	1605.2	1620.0
17.5°	1383.9	1426.8	1463.1	1476.3	1514.3	1547.4	1580.4	1572.1	1610.1	1605.2	1620.0
20°	1347.5	1390.5	1430.1	1445.0	1483.0	1517.6	1549.0	1542.4	1580.4	1575.4	1588.6
22.5°	1301.3	1342.6	1380.6	1395.4	1431.8	1463.1	1494.5	1487.9	1524.2	1516.0	1530.8
25°	1236.9	1279.8	1316.2	1327.7	1360.7	1392.1	1420.2	1413.6	1448.3	1438.4	1453.2
27.5°	1170.8	1202.2	1231.9	1241.8	1271.6	1298.0	1324.4	1317.8	1350.8	1339.3	1354.1
30°	1081.7	1106.4	1132.9	1137.8	1165.9	1187.4	1210.5	1205.5	1233.6	1223.7	1236.9
32.5°	977.6	999.1	1017.3	1018.9	1042.0	1060.2	1080.0	1076.7	1101.5	1093.2	1103.1
35°	863.7	876.9	888.5	886.8	905.0	918.2	936.3	933.0	956.2	947.9	957.8
37.5°	743.1	749.7	753.0	746.4	759.6	769.6	782.8	781.1	800.9	794.3	804.2
40°	625.9	625.9	620.9	609.4	617.6	622.6	632.5	632.5	647.3	640.7	649.0
42.5°	518.5	511.9	500.4	483.9	485.5	492.1	492.1	492.1	503.7	497.1	511.9
45°	431.0	416.2	398.0	376.5	369.9	373.2	369.9	369.9	378.2	373.2	384.8
47.5°	363.3	345.1	313.8	287.3	275.8	274.1	269.2	269.2	274.1	274.1	279.1
50°	312.1	285.7	247.7	216.3	199.8	194.9	188.3	185.0	189.9	188.3	191.6
52.5°	270.8	237.8	193.2	156.9	140.4	128.8	123.9	117.2	118.9	118.9	120.6
55°	236.1	198.2	150.3	112.3	94.1	80.9	74.3	67.7	67.7	66.1	67.7
57.5°	209.7	170.1	122.2	84.2	64.4	51.2	44.6	38.0	36.3	36.3	36.3
60°	186.6	148.6	100.7	66.1	46.2	33.0	26.4	21.5	19.8	18.2	18.2
62.5°	163.5	128.8	85.9	54.5	34.7	24.8	18.2	13.2	11.6	9.9	9.9
65°	140.4	110.6	74.3	46.2	29.7	19.8	13.2	9.9	8.3	6.6	6.6
67.5°	115.6	90.8	62.8	38.0	24.8	16.5	11.6	8.3	6.6	5.0	5.0
70°	92.5	72.7	49.5	31.4	19.8	13.2	8.3	6.6	5.0	5.0	5.0
72.5°	69.4	54.5	38.0	23.1	14.9	9.9	6.6	5.0	3.3	3.3	3.3
75°	49.5	39.6	26.4	16.5	9.9	6.6	5.0	3.3	3.3	3.3	3.3
77.5°	31.4	24.8	16.5	9.9	6.6	3.3	3.3	1.7	1.7	1.7	1.7
80°	18.2	14.9	9.9	6.6	3.3	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	9.9	6.6	5.0	3.3	1.7	1.7	1.7	0.0	0.0	0.0	0.0
85°	3.3	3.3	1.7	1.7	1.7	1.7	0.0	0.0	0.0	0.0	0.0
87.5°	1.7	1.7	1.7	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°	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6	1479.6
2.5°	1494.5	1491.2	1502.8	1507.7	1504.4	1497.8	1519.3	1524.2	1509.4	1516.0	1516.0
5°	1524.2	1524.2	1539.1	1545.7	1545.7	1539.1	1563.9	1572.1	1557.3	1563.9	1565.5
7.5°	1557.3	1557.3	1575.4	1583.7	1585.3	1580.4	1605.2	1611.8	1601.9	1608.5	1610.1
10°	1587.0	1587.0	1608.5	1616.7	1618.4	1613.4	1638.2	1646.4	1634.9	1641.5	1643.1
12.5°	1618.4	1620.0	1641.5	1649.7	1649.7	1644.8	1669.6	1677.8	1664.6	1672.9	1671.2
15°	1641.5	1643.1	1664.6	1672.9	1674.5	1667.9	1691.0	1700.9	1687.7	1692.7	1692.7
17.5°	1639.8	1641.5	1661.3	1669.6	1669.6	1664.6	1684.4	1696.0	1682.8	1687.7	1686.1
20°	1606.8	1608.5	1629.9	1636.5	1636.5	1629.9	1648.1	1659.7	1646.4	1649.7	1648.1
22.5°	1547.4	1549.0	1568.8	1575.4	1577.1	1568.8	1587.0	1600.2	1585.3	1587.0	1585.3
25°	1469.7	1469.7	1491.2	1491.2	1499.5	1489.6	1502.8	1520.9	1506.1	1506.1	1501.1
27.5°	1369.0	1369.0	1390.5	1390.5	1400.4	1390.5	1411.9	1420.2	1407.0	1405.3	1405.3
30°	1251.8	1251.8	1271.6	1271.6	1279.8	1271.6	1293.0	1301.3	1288.1	1286.4	1288.1
32.5°	1118.0	1118.0	1137.8	1136.2	1146.1	1139.5	1159.3	1165.9	1156.0	1151.0	1154.3
35°	971.0	979.3	990.8	989.2	999.1	985.9	1010.7	1015.6	1007.4	1009.0	1004.0
37.5°	815.8	824.0	832.3	832.3	840.6	837.3	852.1	857.1	850.5	852.1	847.2
40°	660.6	668.8	675.4	675.4	683.7	673.8	693.6	698.5	691.9	685.3	688.6
42.5°	513.6	521.8	528.4	526.8	535.1	533.4	545.0	548.3	543.3	541.7	538.4
45°	386.4	388.1	399.6	404.6	404.6	404.6	412.8	414.5	409.5	409.5	407.9
47.5°	279.1	282.4	290.6	293.9	295.6	293.9	297.3	303.9	298.9	298.9	300.6
50°	193.2	194.9	201.5	204.8	204.8	204.8	206.4	211.4	208.1	208.1	204.8
52.5°	123.9	123.9	128.8	130.5	130.5	130.5	132.1	135.4	132.1	133.8	135.4
55°	69.4	69.4	72.7	74.3	74.3	74.3	76.0	77.6	76.0	77.6	77.6
57.5°	36.3	36.3	38.0	38.0	39.6	39.6	39.6	41.3	41.3	41.3	41.3
60°	18.2	18.2	18.2	19.8	19.8	19.8	19.8	21.5	21.5	21.5	21.5
62.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	11.6	11.6	11.6	11.6
65°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
67.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.6	6.6	6.6
70°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
72.5°	3.3	3.3	3.3	3.3	3.3	3.3	5.0	5.0	5.0	3.3	3.3
75°	1.7	3.3	3.3	1.7	1.7	3.3	3.3	3.3	3.3	3.3	3.3
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	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



TEST NUMBER: P136304

CATALOG NUMBER: LD6A20D010TE ERW6A20827 6LW111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1479.6	1479.6	1479.6	1479.6
2.5°	1502.8	1504.4	1532.5	1530.8
5°	1552.3	1554.0	1582.0	1582.0
7.5°	1596.9	1598.6	1628.3	1629.9
10°	1629.9	1633.2	1661.3	1664.6
12.5°	1661.3	1661.3	1689.4	1696.0
15°	1681.1	1681.1	1707.5	1715.8
17.5°	1674.5	1674.5	1700.9	1710.8
20°	1638.2	1636.5	1661.3	1674.5
22.5°	1575.4	1577.1	1596.9	1611.8
25°	1496.2	1492.9	1514.3	1527.5
27.5°	1397.1	1398.7	1411.9	1426.8
30°	1278.2	1281.5	1291.4	1306.3
32.5°	1144.4	1149.4	1156.0	1170.8
35°	997.4	1002.4	1005.7	1018.9
37.5°	838.9	845.5	847.2	860.4
40°	682.0	688.6	688.6	700.2
42.5°	535.1	540.0	538.4	548.3
45°	404.6	407.9	406.2	414.5
47.5°	295.6	298.9	295.6	302.2
50°	204.8	208.1	204.8	209.7
52.5°	132.1	133.8	130.5	135.4
55°	76.0	77.6	76.0	79.3
57.5°	42.9	41.3	39.6	42.9
60°	21.5	21.5	21.5	21.5
62.5°	11.6	11.6	11.6	11.6
65°	6.6	6.6	6.6	8.3
67.5°	6.6	6.6	6.6	6.6
70°	5.0	5.0	5.0	5.0
72.5°	3.3	3.3	3.3	3.3
75°	3.3	3.3	3.3	3.3
77.5°	1.7	1.7	1.7	1.7
80°	0.0	0.0	0.0	1.7
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)