

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: P136311

Luminaire Tested: **LD6A20D010TE ERW6A20940 6LW111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136311
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 ERW6A20940 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2345.6 lumens
Efficiency: N/A
Efficacy: 71.5 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

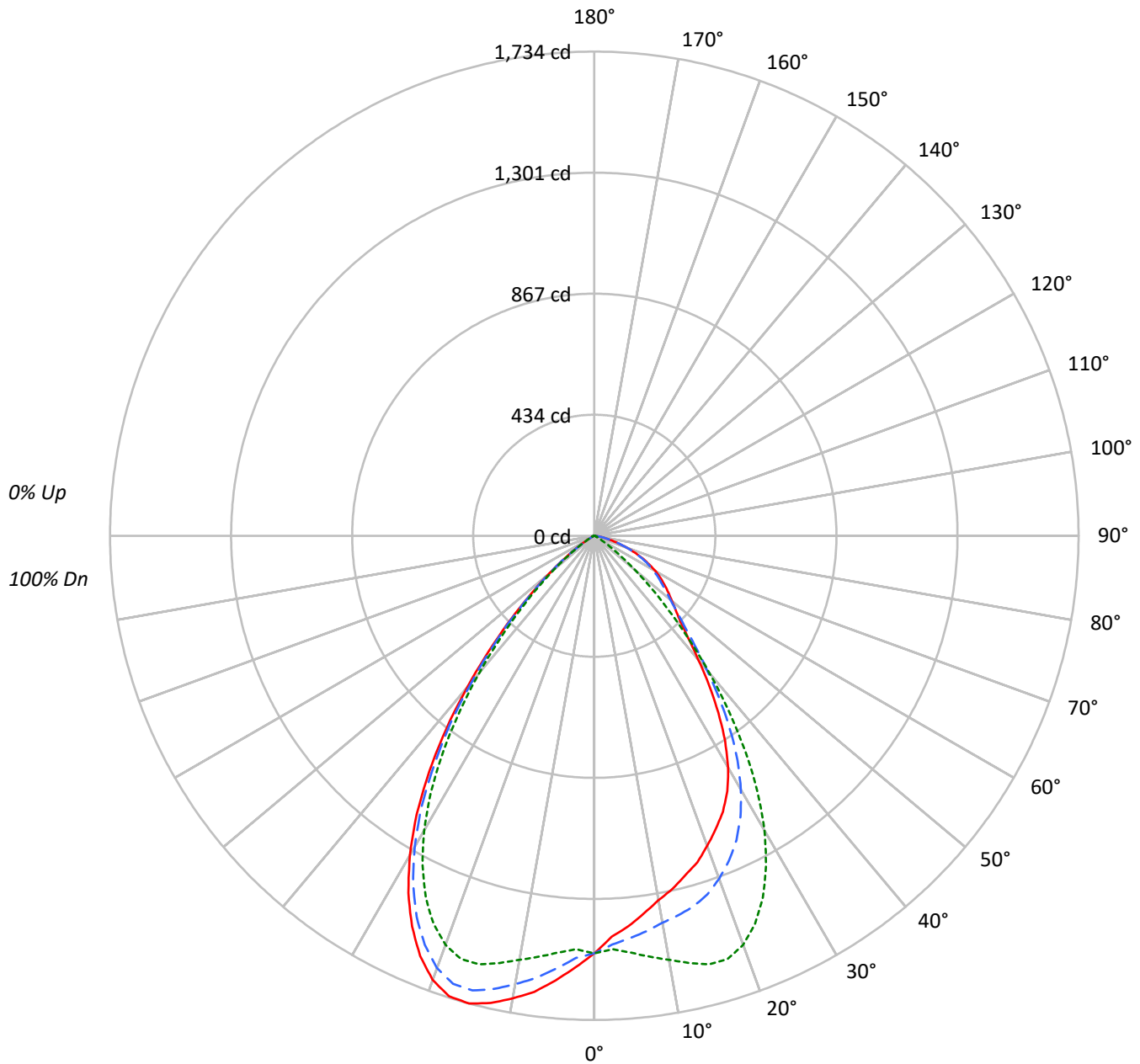
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	97554	97554	97554
5°	91922	98143	104699
10°	87784	102153	111441
15°	84988	107311	117118
20°	82029	108217	117485
25°	78449	102831	111123
30°	72169	91771	99448
35°	61676	75096	82010
40°	49319	54438	60263
45°	40190	34498	38649
50°	36762	18970	21517
55°	34931	7780	9111
60°	32881	2831	2831
65°	29362	1544	1297
70°	23558	1259	954
75°	15578	832	832
80°	8153	639	639
85°	3743	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.3	6.2
10°-20°	432.5	18.4
20°-30°	622.3	26.5
30°-40°	571.6	24.4
40°-50°	328.2	14.0
50°-60°	145.0	6.2
60°-70°	71.2	3.0
70°-80°	27.3	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°	1199.1	51.1
0°-40°	1770.7	75.5
0°-60°	2243.9	95.7
0°-90°	2345.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2345.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1495	1495	1495	1495	1495	
5°	1404	1447	1499	1555	1599	132
15°	1258	1374	1589	1686	1734	355
25°	1090	1203	1428	1505	1544	498
35°	774	848	943	996	1030	480
45°	436	454	374	409	419	346
55°	307	292	68	75	80	275
65°	190	184	10	7	8	186
75°	62	65	3	3	3	69
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°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3
2.5°	1436.9	1445.2	1436.9	1448.6	1455.3	1458.6	1455.3	1446.9	1458.6	1465.2	1463.6
5°	1403.6	1410.2	1403.6	1415.2	1423.6	1431.9	1428.5	1423.6	1436.9	1446.9	1448.6
7.5°	1363.5	1371.8	1366.8	1378.5	1388.5	1398.5	1398.5	1396.8	1413.5	1428.5	1433.5
10°	1325.1	1331.7	1328.4	1340.1	1351.7	1363.5	1366.8	1368.4	1386.9	1406.9	1418.6
12.5°	1295.0	1298.4	1295.0	1308.4	1320.1	1333.4	1340.1	1343.4	1366.8	1391.9	1406.9
15°	1258.3	1266.6	1263.3	1276.7	1290.1	1305.1	1313.4	1320.1	1345.1	1373.5	1395.2
17.5°	1226.6	1229.9	1226.6	1241.7	1253.4	1270.1	1280.0	1288.4	1315.0	1346.8	1370.2
20°	1181.5	1188.3	1186.6	1199.9	1213.3	1228.3	1238.3	1246.6	1275.0	1306.8	1333.4
22.5°	1136.5	1143.2	1143.2	1156.6	1166.5	1183.2	1191.6	1199.9	1226.6	1260.0	1283.3
25°	1089.8	1094.8	1093.1	1104.8	1116.4	1133.1	1139.9	1148.2	1173.2	1203.3	1225.0
27.5°	1031.3	1034.7	1038.1	1048.0	1056.4	1071.5	1076.4	1084.7	1104.8	1133.1	1153.2
30°	958.0	961.3	966.3	974.6	981.3	996.3	999.6	1006.4	1026.4	1049.7	1068.0
32.5°	871.2	872.9	881.2	887.9	896.2	906.2	914.5	916.2	931.2	954.6	967.9
35°	774.4	776.0	784.3	789.4	797.7	807.8	814.4	816.1	829.4	847.8	856.2
37.5°	674.3	684.2	682.6	687.5	695.9	704.2	711.0	711.0	720.9	735.9	739.4
40°	579.1	584.1	589.2	592.5	599.1	605.8	610.8	610.8	617.5	627.5	627.5
42.5°	497.3	505.6	505.6	509.0	514.0	520.7	524.1	522.3	525.7	530.7	527.4
45°	435.6	438.9	440.6	445.6	447.3	453.9	455.6	452.2	453.9	453.9	443.9
47.5°	395.5	395.5	395.5	398.9	400.5	405.5	405.5	400.5	398.9	397.2	383.8
50°	362.2	362.2	363.8	367.1	368.8	370.5	370.5	363.8	362.2	355.4	337.1
52.5°	333.8	335.4	335.4	338.7	340.5	342.2	340.5	333.8	328.8	322.1	300.4
55°	307.1	308.8	310.4	313.8	313.8	313.8	312.1	305.4	300.4	292.1	270.3
57.5°	280.4	282.0	282.0	285.4	287.0	287.0	285.4	278.7	273.6	267.0	243.7
60°	252.0	252.0	253.6	257.0	257.0	258.7	257.0	252.0	247.0	238.6	218.6
62.5°	220.3	221.9	223.6	227.0	228.7	228.7	228.7	223.6	220.3	213.6	193.6
65°	190.2	190.2	192.0	195.3	195.3	200.3	196.9	193.6	190.2	183.6	166.9
67.5°	155.2	156.8	156.8	160.2	161.9	163.6	163.6	160.2	158.6	153.5	138.5
70°	123.5	123.5	125.2	126.9	128.5	130.2	130.2	128.5	126.9	121.8	110.2
72.5°	90.1	91.8	91.8	93.5	96.8	98.5	98.5	98.5	95.2	91.8	83.4
75°	61.8	63.4	63.4	65.1	66.8	68.4	68.4	68.4	66.8	65.1	58.5
77.5°	38.4	38.4	40.0	40.0	41.8	43.4	45.1	45.1	43.4	41.8	38.4
80°	21.7	21.7	23.3	23.3	23.3	25.1	26.7	26.7	26.7	25.1	21.7
82.5°	11.7	11.7	11.7	11.7	11.7	13.4	13.4	13.4	13.4	13.4	11.7
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°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3
2.5°	1463.6	1475.3	1483.6	1470.3	1481.9	1493.6	1507.0	1481.9	1505.3	1492.0	1497.0
5°	1455.3	1468.7	1480.3	1472.0	1487.0	1502.0	1520.4	1498.6	1525.4	1515.3	1523.7
7.5°	1443.6	1461.9	1478.6	1475.3	1495.3	1515.3	1538.7	1520.4	1548.7	1543.7	1553.8
10°	1433.5	1458.6	1480.3	1480.3	1507.0	1530.3	1555.4	1542.0	1575.4	1570.4	1583.7
12.5°	1426.9	1458.6	1487.0	1492.0	1523.7	1550.3	1580.4	1567.0	1603.8	1598.7	1613.8
15°	1420.2	1456.9	1490.3	1500.3	1535.4	1567.0	1598.7	1588.8	1627.1	1622.2	1637.2
17.5°	1398.5	1441.9	1478.6	1492.0	1530.3	1563.7	1597.1	1588.8	1627.1	1622.2	1637.2
20°	1361.8	1405.2	1445.2	1460.3	1498.6	1533.7	1565.4	1558.7	1597.1	1592.1	1605.5
22.5°	1315.0	1356.8	1395.2	1410.2	1446.9	1478.6	1510.3	1503.7	1540.4	1532.0	1547.0
25°	1250.0	1293.4	1330.1	1341.8	1375.2	1406.9	1435.3	1428.5	1463.6	1453.6	1468.7
27.5°	1183.2	1214.9	1245.0	1255.0	1285.0	1311.7	1338.5	1331.7	1365.1	1353.5	1368.4
30°	1093.1	1118.1	1144.8	1149.8	1178.2	1199.9	1223.3	1218.2	1246.6	1236.7	1250.0
32.5°	988.0	1009.7	1028.0	1029.7	1053.0	1071.5	1091.5	1088.1	1113.1	1104.8	1114.8
35°	872.9	886.1	897.8	896.2	914.5	927.9	946.2	942.9	966.3	958.0	967.9
37.5°	751.0	757.7	761.0	754.3	767.7	777.7	791.1	789.4	809.4	802.7	812.7
40°	632.5	632.5	627.5	615.8	624.2	629.2	639.2	639.2	654.2	647.5	655.9
42.5°	524.1	517.3	505.6	488.9	490.7	497.3	497.3	497.3	509.0	502.3	517.3
45°	435.6	420.5	402.2	380.5	373.9	377.2	373.9	373.9	382.2	377.2	388.8
47.5°	367.1	348.8	317.1	290.4	278.7	277.1	272.0	272.0	277.1	277.1	282.0
50°	315.4	288.7	250.3	218.6	201.9	196.9	190.2	186.9	192.0	190.2	193.6
52.5°	273.6	240.3	195.3	158.6	141.9	130.2	125.2	118.5	120.1	120.1	121.8
55°	238.6	200.3	151.9	113.5	95.2	81.8	75.1	68.4	68.4	66.8	68.4
57.5°	212.0	171.9	123.5	85.1	65.1	51.7	45.1	38.4	36.7	36.7	36.7
60°	188.5	150.2	101.8	66.8	46.7	33.4	26.7	21.7	20.0	18.3	18.3
62.5°	165.2	130.2	86.8	55.0	35.0	25.1	18.3	13.4	11.7	10.0	10.0
65°	141.9	111.8	75.1	46.7	30.1	20.0	13.4	10.0	8.4	6.6	6.6
67.5°	116.8	91.8	63.4	38.4	25.1	16.7	11.7	8.4	6.6	5.0	5.0
70°	93.5	73.4	50.1	31.7	20.0	13.4	8.4	6.6	5.0	5.0	5.0
72.5°	70.1	55.0	38.4	23.3	15.0	10.0	6.6	5.0	3.3	3.3	3.3
75°	50.1	40.0	26.7	16.7	10.0	6.6	5.0	3.3	3.3	3.3	3.3
77.5°	31.7	25.1	16.7	10.0	6.6	3.3	3.3	1.7	1.7	1.7	1.7
80°	18.3	15.0	10.0	6.6	3.3	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	10.0	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°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3
2.5°	1510.3	1507.0	1518.7	1523.7	1520.4	1513.6	1535.4	1540.4	1525.4	1532.0	1532.0
5°	1540.4	1540.4	1555.4	1562.1	1562.1	1555.4	1580.4	1588.8	1573.8	1580.4	1582.1
7.5°	1573.8	1573.8	1592.1	1600.4	1602.2	1597.1	1622.2	1628.8	1618.8	1625.5	1627.1
10°	1603.8	1603.8	1625.5	1633.8	1635.5	1630.5	1655.5	1663.8	1652.2	1658.9	1660.5
12.5°	1635.5	1637.2	1658.9	1667.2	1667.2	1662.2	1687.3	1695.6	1682.2	1690.6	1688.9
15°	1658.9	1660.5	1682.2	1690.6	1692.2	1685.6	1708.9	1719.0	1705.6	1710.6	1710.6
17.5°	1657.2	1658.9	1678.9	1687.3	1687.3	1682.2	1702.3	1713.9	1700.6	1705.6	1703.9
20°	1623.8	1625.5	1647.2	1653.9	1653.9	1647.2	1665.5	1677.2	1663.8	1667.2	1665.5
22.5°	1563.7	1565.4	1585.5	1592.1	1593.8	1585.5	1603.8	1617.1	1602.2	1603.8	1602.2
25°	1485.3	1485.3	1507.0	1507.0	1515.3	1505.3	1518.7	1537.1	1522.0	1522.0	1517.0
27.5°	1383.5	1383.5	1405.2	1405.2	1415.2	1405.2	1426.9	1435.3	1421.9	1420.2	1420.2
30°	1265.0	1265.0	1285.0	1285.0	1293.4	1285.0	1306.8	1315.0	1301.7	1300.0	1301.7
32.5°	1129.8	1129.8	1149.8	1148.2	1158.2	1151.5	1171.6	1178.2	1168.2	1163.2	1166.5
35°	981.3	989.7	1001.3	999.6	1009.7	996.3	1021.4	1026.4	1018.0	1019.6	1014.7
37.5°	824.5	832.8	841.1	841.1	849.4	846.1	861.1	866.1	859.5	861.1	856.2
40°	667.5	675.9	682.6	682.6	690.9	680.9	700.9	706.0	699.2	692.6	695.9
42.5°	519.0	527.4	534.0	532.4	540.8	539.0	550.7	554.0	549.1	547.4	544.1
45°	390.6	392.2	403.8	408.9	408.9	408.9	417.2	418.9	413.9	413.9	412.2
47.5°	282.0	285.4	293.7	297.1	298.7	297.1	300.4	307.1	302.0	302.0	303.7
50°	195.3	196.9	203.6	206.9	206.9	206.9	208.6	213.6	210.3	210.3	206.9
52.5°	125.2	125.2	130.2	131.8	131.8	131.8	133.5	136.8	133.5	135.2	136.8
55°	70.1	70.1	73.4	75.1	75.1	75.1	76.8	78.5	76.8	78.5	78.5
57.5°	36.7	36.7	38.4	38.4	40.0	40.0	40.0	41.8	41.8	41.8	41.8
60°	18.3	18.3	18.3	20.0	20.0	20.0	20.0	21.7	21.7	21.7	21.7
62.5°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.7	11.7	11.7	11.7
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: P136311

CATALOG NUMBER: LD6A20D010TE ERW6A20940 6LW111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1495.3	1495.3	1495.3	1495.3
2.5°	1518.7	1520.4	1548.7	1547.0
5°	1568.8	1570.4	1598.7	1598.7
7.5°	1613.8	1615.4	1645.5	1647.2
10°	1647.2	1650.5	1678.9	1682.2
12.5°	1678.9	1678.9	1707.3	1713.9
15°	1698.9	1698.9	1725.6	1734.0
17.5°	1692.2	1692.2	1719.0	1728.9
20°	1655.5	1653.9	1678.9	1692.2
22.5°	1592.1	1593.8	1613.8	1628.8
25°	1512.0	1508.7	1530.3	1543.7
27.5°	1411.9	1413.5	1426.9	1441.9
30°	1291.7	1295.0	1305.1	1320.1
32.5°	1156.6	1161.5	1168.2	1183.2
35°	1008.0	1013.0	1016.3	1029.7
37.5°	847.8	854.5	856.2	869.4
40°	689.3	695.9	695.9	707.6
42.5°	540.8	545.7	544.1	554.0
45°	408.9	412.2	410.6	418.9
47.5°	298.7	302.0	298.7	305.4
50°	206.9	210.3	206.9	212.0
52.5°	133.5	135.2	131.8	136.8
55°	76.8	78.5	76.8	80.1
57.5°	43.4	41.8	40.0	43.4
60°	21.7	21.7	21.7	21.7
62.5°	11.7	11.7	11.7	11.7
65°	6.6	6.6	6.6	8.4
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)