

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: P136305

Luminaire Tested: **LD6A20D010TE ERW6A20830 6LW111LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136305  
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 ERW6A20830 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 3000K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2430.0 lumens  
Efficiency: N/A  
Efficacy: 74.1 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

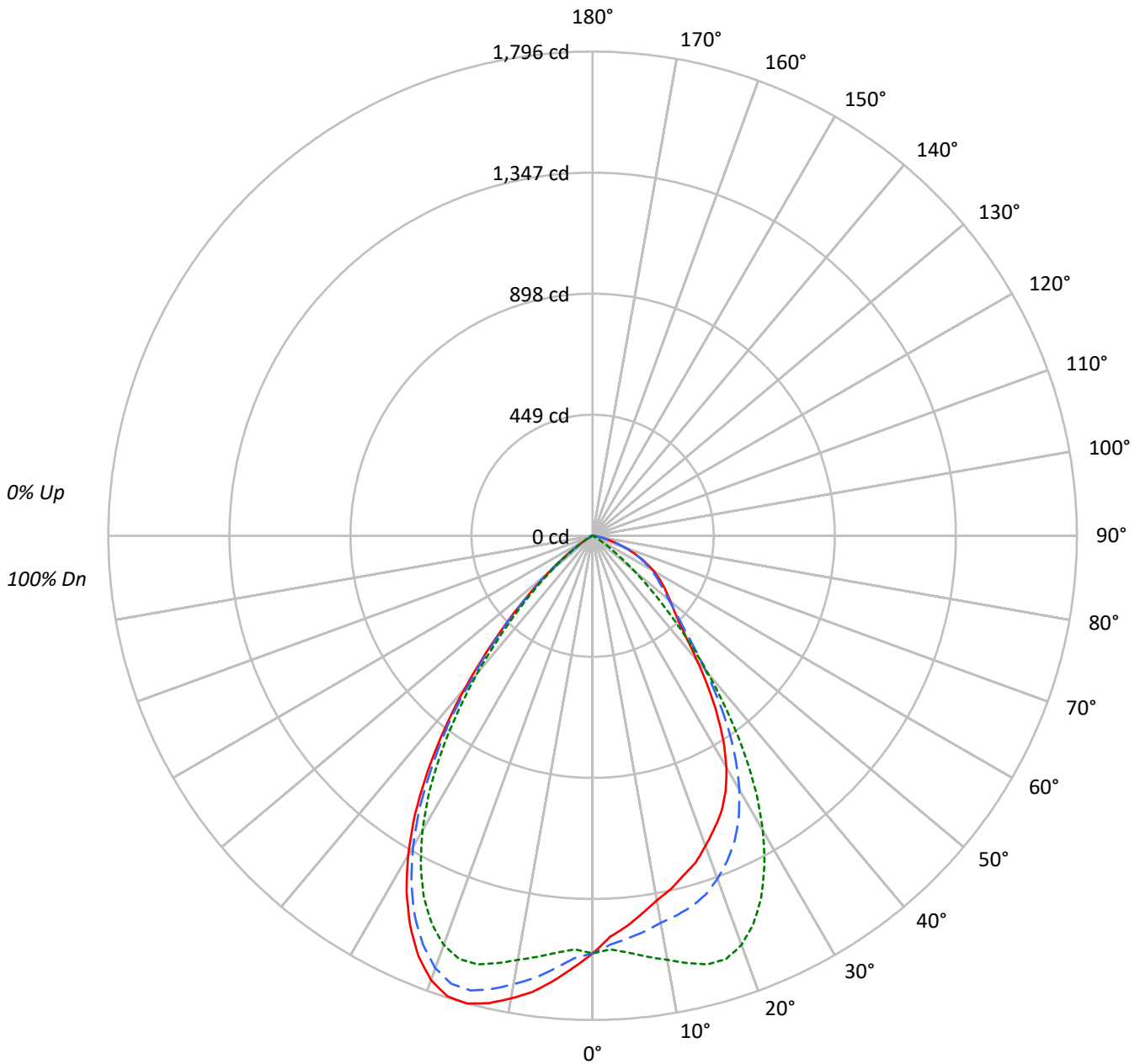
Input Watts (W): 32.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			100
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91			91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82			82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74			74
4	92	83	76	71	90	82	76	71	80	74	70	77	73	69	75	71	68	66			66
5	86	76	69	64	84	75	69	64	73	68	63	72	67	63	70	66	62	60			60
6	81	70	63	58	79	70	63	58	68	62	57	66	61	57	65	60	57	55			55
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	60	56	52	50			50
8	72	60	53	49	70	60	53	48	59	53	48	58	52	48	56	51	48	46			46
9	68	56	49	45	66	56	49	45	55	49	44	54	48	44	53	48	44	43			43
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39			39

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	101064	101064	101064
5°	95222	101680	108471
10°	90944	105830	115455
15°	88048	111174	121333
20°	84986	112112	121721
25°	81271	106538	115126
30°	74761	95078	103026
35°	63890	77804	84964
40°	51091	56397	62435
45°	41639	35734	40043
50°	38081	19650	22289
55°	36182	8064	9441
60°	34069	2936	2936
65°	30427	1605	1328
70°	24397	1316	992
75°	16133	882	882
80°	8453	639	639
85°	3892	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.5	6.2
10°-20°	448.1	18.4
20°-30°	644.7	26.5
30°-40°	592.2	24.4
40°-50°	340.0	14.0
50°-60°	150.2	6.2
60°-70°	73.8	3.0
70°-80°	28.3	1.2
80°-90°	3.2	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°	1242.2	51.1
0°-40°	1834.4	75.5
0°-60°	2324.7	95.7
0°-90°	2430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2430.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1549	1549	1549	1549	1549	
5°	1454	1499	1553	1611	1656	136
15°	1304	1423	1646	1746	1796	367
25°	1129	1247	1480	1560	1599	516
35°	802	878	977	1032	1067	498
45°	451	470	387	424	434	359
55°	318	303	71	78	83	284
65°	197	190	10	7	9	193
75°	64	67	4	4	4	72
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°	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1
2.5°	1488.6	1497.3	1488.6	1500.7	1507.6	1511.1	1507.6	1499.0	1511.1	1518.0	1516.3
5°	1454.0	1461.0	1454.0	1466.1	1474.8	1483.4	1480.0	1474.8	1488.6	1499.0	1500.7
7.5°	1412.6	1421.2	1416.0	1428.1	1438.5	1448.9	1448.9	1447.1	1464.4	1480.0	1485.2
10°	1372.8	1379.7	1376.2	1388.3	1400.4	1412.6	1416.0	1417.7	1436.8	1457.5	1469.6
12.5°	1341.7	1345.1	1341.7	1355.5	1367.6	1381.4	1388.3	1391.8	1416.0	1441.9	1457.5
15°	1303.6	1312.3	1308.8	1322.6	1336.5	1352.0	1360.7	1367.6	1393.5	1422.9	1445.4
17.5°	1270.8	1274.2	1270.8	1286.3	1298.4	1315.7	1326.1	1334.7	1362.4	1395.3	1419.5
20°	1224.1	1231.0	1229.3	1243.1	1256.9	1272.5	1282.9	1291.5	1320.9	1353.8	1381.4
22.5°	1177.4	1184.3	1184.3	1198.2	1208.5	1225.8	1234.5	1243.1	1270.8	1305.4	1329.6
25°	1129.0	1134.2	1132.5	1144.6	1156.7	1174.0	1180.9	1189.5	1215.5	1246.6	1269.0
27.5°	1068.5	1071.9	1075.4	1085.8	1094.4	1110.0	1115.2	1123.8	1144.6	1174.0	1194.7
30°	992.4	995.9	1001.1	1009.7	1016.6	1032.2	1035.6	1042.6	1063.3	1087.5	1106.5
32.5°	902.5	904.2	912.9	919.8	928.4	938.8	947.5	949.2	964.8	989.0	1002.8
35°	802.2	804.0	812.6	817.8	826.4	836.8	843.7	845.5	859.3	878.3	887.0
37.5°	698.5	708.9	707.1	712.3	721.0	729.6	736.5	736.5	746.9	762.5	765.9
40°	599.9	605.1	610.3	613.8	620.7	627.6	632.8	632.8	639.7	650.1	650.1
42.5°	515.2	523.9	523.9	527.3	532.5	539.4	542.9	541.2	544.6	549.8	546.3
45°	451.3	454.7	456.4	461.6	463.4	470.3	472.0	468.5	470.3	470.3	459.9
47.5°	409.8	409.8	409.8	413.2	414.9	420.1	420.1	414.9	413.2	411.5	397.7
50°	375.2	375.2	376.9	380.4	382.1	383.8	383.8	376.9	375.2	368.3	349.2
52.5°	345.8	347.5	347.5	351.0	352.7	354.4	352.7	345.8	340.6	333.7	311.2
55°	318.1	319.9	321.6	325.0	325.0	325.0	323.3	316.4	311.2	302.6	280.1
57.5°	290.5	292.2	292.2	295.7	297.4	297.4	295.7	288.7	283.5	276.6	252.4
60°	261.1	261.1	262.8	266.3	266.3	268.0	266.3	261.1	255.9	247.2	226.5
62.5°	228.2	230.0	231.7	235.1	236.9	236.9	236.9	231.7	228.2	221.3	200.6
65°	197.1	197.1	198.8	202.3	202.3	207.5	204.0	200.6	197.1	190.2	172.9
67.5°	160.8	162.5	162.5	166.0	167.7	169.4	169.4	166.0	164.3	159.1	143.5
70°	127.9	127.9	129.7	131.4	133.1	134.9	134.9	133.1	131.4	126.2	114.1
72.5°	93.4	95.1	95.1	96.8	100.3	102.0	102.0	102.0	98.6	95.1	86.4
75°	64.0	65.7	65.7	67.4	69.2	70.9	70.9	70.9	69.2	67.4	60.5
77.5°	39.8	39.8	41.5	41.5	43.2	45.0	46.7	46.7	45.0	43.2	39.8
80°	22.5	22.5	24.2	24.2	24.2	25.9	27.7	27.7	27.7	25.9	22.5
82.5°	12.1	12.1	12.1	12.1	12.1	13.8	13.8	13.8	13.8	13.8	12.1
85°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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°	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1
2.5°	1516.3	1528.4	1537.0	1523.2	1535.3	1547.4	1561.2	1535.3	1559.5	1545.7	1550.9
5°	1507.6	1521.5	1533.6	1524.9	1540.5	1556.1	1575.1	1552.6	1580.3	1569.9	1578.5
7.5°	1495.5	1514.6	1531.8	1528.4	1549.1	1569.9	1594.1	1575.1	1604.5	1599.3	1609.7
10°	1485.2	1511.1	1533.6	1533.6	1561.2	1585.4	1611.4	1597.5	1632.1	1626.9	1640.8
12.5°	1478.3	1511.1	1540.5	1545.7	1578.5	1606.2	1637.3	1623.5	1661.5	1656.3	1671.9
15°	1471.3	1509.4	1544.0	1554.3	1590.6	1623.5	1656.3	1646.0	1685.7	1680.5	1696.1
17.5°	1448.9	1493.8	1531.8	1545.7	1585.4	1620.0	1654.6	1646.0	1685.7	1680.5	1696.1
20°	1410.8	1455.8	1497.3	1512.8	1552.6	1588.9	1621.8	1614.8	1654.6	1649.4	1663.2
22.5°	1362.4	1405.6	1445.4	1461.0	1499.0	1531.8	1564.7	1557.8	1595.8	1587.2	1602.7
25°	1295.0	1339.9	1378.0	1390.1	1424.7	1457.5	1486.9	1480.0	1516.3	1505.9	1521.5
27.5°	1225.8	1258.7	1289.8	1300.2	1331.3	1359.0	1386.6	1379.7	1414.3	1402.2	1417.7
30°	1132.5	1158.4	1186.1	1191.2	1220.6	1243.1	1267.3	1262.1	1291.5	1281.2	1295.0
32.5°	1023.5	1046.0	1065.0	1066.8	1091.0	1110.0	1130.7	1127.3	1153.2	1144.6	1154.9
35°	904.2	918.1	930.2	928.4	947.5	961.3	980.3	976.9	1001.1	992.4	1002.8
37.5°	778.0	784.9	788.4	781.5	795.3	805.7	819.5	817.8	838.5	831.6	842.0
40°	655.3	655.3	650.1	638.0	646.6	651.8	662.2	662.2	677.7	670.8	679.5
42.5°	542.9	536.0	523.9	506.6	508.3	515.2	515.2	515.2	527.3	520.4	536.0
45°	451.3	435.7	416.7	394.2	387.3	390.7	387.3	387.3	395.9	390.7	402.8
47.5°	380.4	361.4	328.5	300.8	288.7	287.0	281.8	281.8	287.0	287.0	292.2
50°	326.8	299.1	259.3	226.5	209.2	204.0	197.1	193.6	198.8	197.1	200.6
52.5°	283.5	249.0	202.3	164.3	147.0	134.9	129.7	122.8	124.5	124.5	126.2
55°	247.2	207.5	157.3	117.6	98.6	84.7	77.8	70.9	70.9	69.2	70.9
57.5°	219.6	178.1	127.9	88.2	67.4	53.6	46.7	39.8	38.0	38.0	38.0
60°	195.4	155.6	105.5	69.2	48.4	34.6	27.7	22.5	20.7	19.0	19.0
62.5°	171.2	134.9	89.9	57.1	36.3	25.9	19.0	13.8	12.1	10.4	10.4
65°	147.0	115.8	77.8	48.4	31.1	20.7	13.8	10.4	8.6	6.9	6.9
67.5°	121.0	95.1	65.7	39.8	25.9	17.3	12.1	8.6	6.9	5.2	5.2
70°	96.8	76.1	51.9	32.9	20.7	13.8	8.6	6.9	5.2	5.2	5.2
72.5°	72.6	57.1	39.8	24.2	15.6	10.4	6.9	5.2	3.5	3.5	3.5
75°	51.9	41.5	27.7	17.3	10.4	6.9	5.2	3.5	3.5	3.5	3.5
77.5°	32.9	25.9	17.3	10.4	6.9	3.5	3.5	1.7	1.7	1.7	1.7
80°	19.0	15.6	10.4	6.9	3.5	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	10.4	6.9	5.2	3.5	1.7	1.7	1.7	0.0	0.0	0.0	0.0
85°	3.5	3.5	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°	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1	1549.1
2.5°	1564.7	1561.2	1573.3	1578.5	1575.1	1568.2	1590.6	1595.8	1580.3	1587.2	1587.2
5°	1595.8	1595.8	1611.4	1618.3	1618.3	1611.4	1637.3	1646.0	1630.4	1637.3	1639.0
7.5°	1630.4	1630.4	1649.4	1658.1	1659.8	1654.6	1680.5	1687.5	1677.1	1684.0	1685.7
10°	1661.5	1661.5	1684.0	1692.6	1694.4	1689.2	1715.1	1723.8	1711.7	1718.6	1720.3
12.5°	1694.4	1696.1	1718.6	1727.2	1727.2	1722.0	1748.0	1756.6	1742.8	1751.4	1749.7
15°	1718.6	1720.3	1742.8	1751.4	1753.2	1746.2	1770.4	1780.8	1767.0	1772.2	1772.2
17.5°	1716.8	1718.6	1739.3	1748.0	1748.0	1742.8	1763.5	1775.6	1761.8	1767.0	1765.3
20°	1682.3	1684.0	1706.5	1713.4	1713.4	1706.5	1725.5	1737.6	1723.8	1727.2	1725.5
22.5°	1620.0	1621.8	1642.5	1649.4	1651.1	1642.5	1661.5	1675.4	1659.8	1661.5	1659.8
25°	1538.8	1538.8	1561.2	1561.2	1569.9	1559.5	1573.3	1592.4	1576.8	1576.8	1571.6
27.5°	1433.3	1433.3	1455.8	1455.8	1466.1	1455.8	1478.3	1486.9	1473.1	1471.3	1471.3
30°	1310.5	1310.5	1331.3	1331.3	1339.9	1331.3	1353.8	1362.4	1348.6	1346.9	1348.6
32.5°	1170.5	1170.5	1191.2	1189.5	1199.9	1193.0	1213.7	1220.6	1210.3	1205.1	1208.5
35°	1016.6	1025.3	1037.4	1035.6	1046.0	1032.2	1058.1	1063.3	1054.7	1056.4	1051.2
37.5°	854.1	862.7	871.4	871.4	880.0	876.6	892.1	897.3	890.4	892.1	887.0
40°	691.6	700.2	707.1	707.1	715.8	705.4	726.2	731.3	724.4	717.5	721.0
42.5°	537.7	546.3	553.3	551.5	560.2	558.5	570.6	574.0	568.8	567.1	563.6
45°	404.6	406.3	418.4	423.6	423.6	423.6	432.2	434.0	428.8	428.8	427.1
47.5°	292.2	295.7	304.3	307.8	309.5	307.8	311.2	318.1	312.9	312.9	314.7
50°	202.3	204.0	210.9	214.4	214.4	214.4	216.1	221.3	217.8	217.8	214.4
52.5°	129.7	129.7	134.9	136.6	136.6	136.6	138.3	141.8	138.3	140.0	141.8
55°	72.6	72.6	76.1	77.8	77.8	77.8	79.5	81.3	79.5	81.3	81.3
57.5°	38.0	38.0	39.8	39.8	41.5	41.5	41.5	43.2	43.2	43.2	43.2
60°	19.0	19.0	19.0	20.7	20.7	20.7	20.7	22.5	22.5	22.5	22.5
62.5°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	12.1	12.1	12.1	12.1
65°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
67.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	6.9	6.9	6.9
70°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
72.5°	3.5	3.5	3.5	3.5	3.5	3.5	5.2	5.2	5.2	3.5	3.5
75°	1.7	3.5	3.5	1.7	1.7	3.5	3.5	3.5	3.5	3.5	3.5
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: P136305

CATALOG NUMBER: LD6A20D010TE ERW6A20830 6LW111LI

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1549.1	1549.1	1549.1	1549.1
2.5°	1573.3	1575.1	1604.5	1602.7
5°	1625.2	1626.9	1656.3	1656.3
7.5°	1671.9	1673.6	1704.7	1706.5
10°	1706.5	1709.9	1739.3	1742.8
12.5°	1739.3	1739.3	1768.7	1775.6
15°	1760.1	1760.1	1787.7	1796.4
17.5°	1753.2	1753.2	1780.8	1791.2
20°	1715.1	1713.4	1739.3	1753.2
22.5°	1649.4	1651.1	1671.9	1687.5
25°	1566.4	1563.0	1585.4	1599.3
27.5°	1462.7	1464.4	1478.3	1493.8
30°	1338.2	1341.7	1352.0	1367.6
32.5°	1198.2	1203.3	1210.3	1225.8
35°	1044.3	1049.5	1052.9	1066.8
37.5°	878.3	885.2	887.0	900.8
40°	714.1	721.0	721.0	733.1
42.5°	560.2	565.4	563.6	574.0
45°	423.6	427.1	425.3	434.0
47.5°	309.5	312.9	309.5	316.4
50°	214.4	217.8	214.4	219.6
52.5°	138.3	140.0	136.6	141.8
55°	79.5	81.3	79.5	83.0
57.5°	45.0	43.2	41.5	45.0
60°	22.5	22.5	22.5	22.5
62.5°	12.1	12.1	12.1	12.1
65°	6.9	6.9	6.9	8.6
67.5°	6.9	6.9	6.9	6.9
70°	5.2	5.2	5.2	5.2
72.5°	3.5	3.5	3.5	3.5
75°	3.5	3.5	3.5	3.5
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)