

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: P136307

Luminaire Tested: **LD6A20D010TE ERW6A20840 6LW111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136307
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 ERW6A20840 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: 2544.0 lumens
Efficiency: N/A
Efficacy: 77.6 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

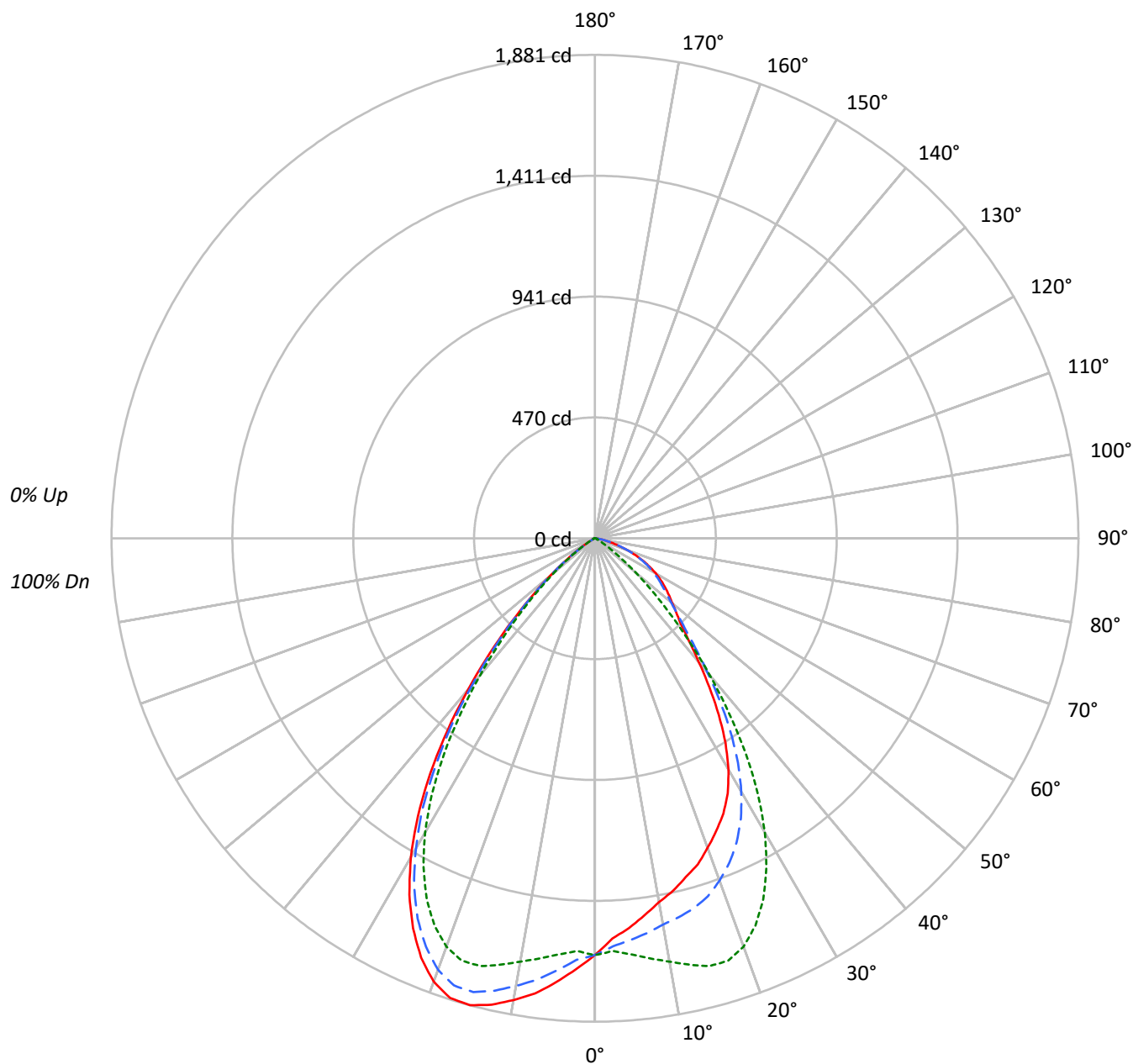
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	105807	105807	105807
5°	99695	106447	113559
10°	95210	110798	120868
15°	92181	116388	127026
20°	88972	117374	127427
25°	85086	111534	120525
30°	78271	99538	107862
35°	66893	81452	88947
40°	53493	59045	65365
45°	43586	37413	41916
50°	39868	20573	23334
55°	37888	8440	9884
60°	35661	3066	3066
65°	31847	1683	1405
70°	25542	1373	1030
75°	16889	907	907
80°	8829	676	676
85°	4042	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.5	6.2
10°-20°	469.1	18.4
20°-30°	674.9	26.5
30°-40°	620.0	24.4
40°-50°	356.0	14.0
50°-60°	157.3	6.2
60°-70°	77.3	3.0
70°-80°	29.6	1.2
80°-90°	3.3	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°	1300.5	51.1
0°-40°	1920.5	75.5
0°-60°	2433.7	95.7
0°-90°	2544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2544.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1622	1622	1622	1622	1622	
5°	1522	1569	1625	1687	1734	143
15°	1365	1490	1723	1828	1881	385
25°	1182	1305	1549	1633	1674	540
35°	840	920	1023	1081	1117	521
45°	472	492	406	444	454	375
55°	333	317	74	82	87	298
65°	206	199	11	7	9	202
75°	67	71	4	4	4	75
85°	5	5	0	0	0	9
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°	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8
2.5°	1558.5	1567.5	1558.5	1571.1	1578.4	1582.0	1578.4	1569.3	1582.0	1589.2	1587.4
5°	1522.3	1529.5	1522.3	1534.9	1544.0	1553.0	1549.4	1544.0	1558.5	1569.3	1571.1
7.5°	1478.8	1487.9	1482.4	1495.1	1506.0	1516.8	1516.8	1515.0	1533.1	1549.4	1554.8
10°	1437.2	1444.4	1440.8	1453.5	1466.1	1478.8	1482.4	1484.2	1504.2	1525.9	1538.6
12.5°	1404.6	1408.2	1404.6	1419.1	1431.8	1446.2	1453.5	1457.1	1482.4	1509.6	1525.9
15°	1364.8	1373.8	1370.2	1384.7	1399.2	1415.5	1424.5	1431.8	1458.9	1489.7	1513.2
17.5°	1330.4	1334.0	1330.4	1346.7	1359.4	1377.5	1388.3	1397.4	1426.3	1460.7	1486.1
20°	1281.5	1288.8	1287.0	1301.4	1315.9	1332.2	1343.1	1352.1	1382.9	1417.3	1446.2
22.5°	1232.7	1239.9	1239.9	1254.4	1265.2	1283.3	1292.4	1301.4	1330.4	1366.6	1391.9
25°	1182.0	1187.4	1185.6	1198.3	1210.9	1229.0	1236.3	1245.3	1272.5	1305.1	1328.6
27.5°	1118.6	1122.2	1125.9	1136.7	1145.8	1162.1	1167.5	1176.5	1198.3	1229.0	1250.8
30°	1039.0	1042.6	1048.0	1057.1	1064.3	1080.6	1084.2	1091.5	1113.2	1138.5	1158.4
32.5°	944.9	946.7	955.7	963.0	972.0	982.9	991.9	993.7	1010.0	1035.4	1049.8
35°	839.9	841.7	850.7	856.2	865.2	876.1	883.3	885.1	899.6	919.5	928.6
37.5°	731.3	742.1	740.3	745.7	754.8	763.8	771.1	771.1	781.9	798.2	801.9
40°	628.1	633.5	639.0	642.6	649.8	657.1	662.5	662.5	669.7	680.6	680.6
42.5°	539.4	548.4	548.4	552.1	557.5	564.7	568.4	566.5	570.2	575.6	572.0
45°	472.4	476.0	477.9	483.3	485.1	492.3	494.1	490.5	492.3	492.3	481.5
47.5°	429.0	429.0	429.0	432.6	434.4	439.8	439.8	434.4	432.6	430.8	416.3
50°	392.8	392.8	394.6	398.2	400.0	401.8	401.8	394.6	392.8	385.5	365.6
52.5°	362.0	363.8	363.8	367.4	369.3	371.1	369.3	362.0	356.6	349.3	325.8
55°	333.1	334.9	336.7	340.3	340.3	340.3	338.5	331.2	325.8	316.8	293.2
57.5°	304.1	305.9	305.9	309.5	311.3	311.3	309.5	302.3	296.8	289.6	264.3
60°	273.3	273.3	275.1	278.7	278.7	280.6	278.7	273.3	267.9	258.8	237.1
62.5°	238.9	240.7	242.5	246.2	248.0	248.0	248.0	242.5	238.9	231.7	210.0
65°	206.3	206.3	208.2	211.8	211.8	217.2	213.6	210.0	206.3	199.1	181.0
67.5°	168.3	170.1	170.1	173.8	175.6	177.4	177.4	173.8	172.0	166.5	150.2
70°	133.9	133.9	135.8	137.6	139.4	141.2	141.2	139.4	137.6	132.1	119.5
72.5°	97.7	99.6	99.6	101.4	105.0	106.8	106.8	106.8	103.2	99.6	90.5
75°	67.0	68.8	68.8	70.6	72.4	74.2	74.2	74.2	72.4	70.6	63.4
77.5°	41.6	41.6	43.4	43.4	45.3	47.1	48.9	48.9	47.1	45.3	41.6
80°	23.5	23.5	25.3	25.3	25.3	27.2	29.0	29.0	29.0	27.2	23.5
82.5°	12.7	12.7	12.7	12.7	12.7	14.5	14.5	14.5	14.5	14.5	12.7
85°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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°	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8
2.5°	1587.4	1600.1	1609.1	1594.7	1607.3	1620.0	1634.5	1607.3	1632.7	1618.2	1623.6
5°	1578.4	1592.9	1605.5	1596.5	1612.8	1629.1	1649.0	1625.4	1654.4	1643.5	1652.6
7.5°	1565.7	1585.6	1603.7	1600.1	1621.8	1643.5	1668.9	1649.0	1679.7	1674.3	1685.2
10°	1554.8	1582.0	1605.5	1605.5	1634.5	1659.8	1687.0	1672.5	1708.7	1703.3	1717.7
12.5°	1547.6	1582.0	1612.8	1618.2	1652.6	1681.5	1714.1	1699.6	1739.5	1734.0	1750.3
15°	1540.4	1580.2	1616.4	1627.2	1665.3	1699.6	1734.0	1723.2	1764.8	1759.4	1775.7
17.5°	1516.8	1563.9	1603.7	1618.2	1659.8	1696.0	1732.2	1723.2	1764.8	1759.4	1775.7
20°	1477.0	1524.1	1567.5	1583.8	1625.4	1663.4	1697.8	1690.6	1732.2	1726.8	1741.3
22.5°	1426.3	1471.6	1513.2	1529.5	1569.3	1603.7	1638.1	1630.9	1670.7	1661.6	1677.9
25°	1355.7	1402.8	1442.6	1455.3	1491.5	1525.9	1556.7	1549.4	1587.4	1576.6	1592.9
27.5°	1283.3	1317.7	1350.3	1361.2	1393.7	1422.7	1451.7	1444.4	1480.6	1468.0	1484.2
30°	1185.6	1212.7	1241.7	1247.1	1277.9	1301.4	1326.8	1321.3	1352.1	1341.3	1355.7
32.5°	1071.6	1095.1	1115.0	1116.8	1142.1	1162.1	1183.8	1180.2	1207.3	1198.3	1209.1
35°	946.7	961.1	973.8	972.0	991.9	1006.4	1026.3	1022.7	1048.0	1039.0	1049.8
37.5°	814.5	821.8	825.4	818.1	832.6	843.5	858.0	856.2	877.9	870.6	881.5
40°	686.0	686.0	680.6	667.9	677.0	682.4	693.3	693.3	709.5	702.3	711.4
42.5°	568.4	561.1	548.4	530.3	532.2	539.4	539.4	539.4	552.1	544.8	561.1
45°	472.4	456.1	436.2	412.7	405.5	409.1	405.5	405.5	414.5	409.1	421.7
47.5°	398.2	378.3	343.9	315.0	302.3	300.5	295.0	295.0	300.5	300.5	305.9
50°	342.1	313.1	271.5	237.1	219.0	213.6	206.3	202.7	208.2	206.3	210.0
52.5°	296.8	260.6	211.8	172.0	153.9	141.2	135.8	128.5	130.3	130.3	132.1
55°	258.8	217.2	164.7	123.1	103.2	88.7	81.5	74.2	74.2	72.4	74.2
57.5°	229.9	186.4	133.9	92.3	70.6	56.1	48.9	41.6	39.8	39.8	39.8
60°	204.5	162.9	110.4	72.4	50.7	36.2	29.0	23.5	21.7	19.9	19.9
62.5°	179.2	141.2	94.1	59.7	38.0	27.2	19.9	14.5	12.7	10.9	10.9
65°	153.9	121.3	81.5	50.7	32.6	21.7	14.5	10.9	9.1	7.2	7.2
67.5°	126.7	99.6	68.8	41.6	27.2	18.1	12.7	9.1	7.2	5.4	5.4
70°	101.4	79.6	54.3	34.4	21.7	14.5	9.1	7.2	5.4	5.4	5.4
72.5°	76.0	59.7	41.6	25.3	16.3	10.9	7.2	5.4	3.6	3.6	3.6
75°	54.3	43.4	29.0	18.1	10.9	7.2	5.4	3.6	3.6	3.6	3.6
77.5°	34.4	27.2	18.1	10.9	7.2	3.6	3.6	1.8	1.8	1.8	1.8
80°	19.9	16.3	10.9	7.2	3.6	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	10.9	7.2	5.4	3.6	1.8	1.8	1.8	0.0	0.0	0.0	0.0
85°	3.6	3.6	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0
87.5°	1.8	1.8	1.8	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°	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8	1621.8
2.5°	1638.1	1634.5	1647.2	1652.6	1649.0	1641.7	1665.3	1670.7	1654.4	1661.6	1661.6
5°	1670.7	1670.7	1687.0	1694.2	1694.2	1687.0	1714.1	1723.2	1706.9	1714.1	1715.9
7.5°	1706.9	1706.9	1726.8	1735.8	1737.7	1732.2	1759.4	1766.6	1755.8	1763.0	1764.8
10°	1739.5	1739.5	1763.0	1772.0	1773.9	1768.4	1795.6	1804.6	1792.0	1799.2	1801.0
12.5°	1773.9	1775.7	1799.2	1808.2	1808.2	1802.8	1830.0	1839.0	1824.5	1833.6	1831.8
15°	1799.2	1801.0	1824.5	1833.6	1835.4	1828.2	1853.5	1864.4	1849.9	1855.3	1855.3
17.5°	1797.4	1799.2	1820.9	1830.0	1830.0	1824.5	1846.3	1858.9	1844.5	1849.9	1848.1
20°	1761.2	1763.0	1786.5	1793.8	1793.8	1786.5	1806.4	1819.1	1804.6	1808.2	1806.4
22.5°	1696.0	1697.8	1719.6	1726.8	1728.6	1719.6	1739.5	1753.9	1737.7	1739.5	1737.7
25°	1611.0	1611.0	1634.5	1634.5	1643.5	1632.7	1647.2	1667.1	1650.8	1650.8	1645.3
27.5°	1500.5	1500.5	1524.1	1524.1	1534.9	1524.1	1547.6	1556.7	1542.2	1540.4	1540.4
30°	1372.0	1372.0	1393.7	1393.7	1402.8	1393.7	1417.3	1426.3	1411.8	1410.0	1411.8
32.5°	1225.4	1225.4	1247.1	1245.3	1256.2	1248.9	1270.7	1277.9	1267.0	1261.6	1265.2
35°	1064.3	1073.4	1086.0	1084.2	1095.1	1080.6	1107.8	1113.2	1104.1	1105.9	1100.5
37.5°	894.2	903.2	912.3	912.3	921.3	917.7	934.0	939.4	932.2	934.0	928.6
40°	724.0	733.1	740.3	740.3	749.4	738.5	760.2	765.7	758.4	751.2	754.8
42.5°	562.9	572.0	579.2	577.4	586.5	584.6	597.3	600.9	595.5	593.7	590.1
45°	423.6	425.4	438.0	443.5	443.5	443.5	452.5	454.3	448.9	448.9	447.1
47.5°	305.9	309.5	318.6	322.2	324.0	322.2	325.8	333.1	327.6	327.6	329.4
50°	211.8	213.6	220.8	224.4	224.4	224.4	226.3	231.7	228.1	228.1	224.4
52.5°	135.8	135.8	141.2	143.0	143.0	143.0	144.8	148.4	144.8	146.6	148.4
55°	76.0	76.0	79.6	81.5	81.5	81.5	83.3	85.1	83.3	85.1	85.1
57.5°	39.8	39.8	41.6	41.6	43.4	43.4	43.4	45.3	45.3	45.3	45.3
60°	19.9	19.9	19.9	21.7	21.7	21.7	21.7	23.5	23.5	23.5	23.5
62.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	12.7	12.7	12.7	12.7
65°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
67.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	7.2	7.2	7.2
70°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
72.5°	3.6	3.6	3.6	3.6	3.6	3.6	5.4	5.4	5.4	3.6	3.6
75°	1.8	3.6	3.6	1.8	1.8	3.6	3.6	3.6	3.6	3.6	3.6
77.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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: P136307

CATALOG NUMBER: LD6A20D010TE ERW6A20840 6LW111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1621.8	1621.8	1621.8	1621.8
2.5°	1647.2	1649.0	1679.7	1677.9
5°	1701.5	1703.3	1734.0	1734.0
7.5°	1750.3	1752.1	1784.7	1786.5
10°	1786.5	1790.1	1820.9	1824.5
12.5°	1820.9	1820.9	1851.7	1858.9
15°	1842.6	1842.6	1871.6	1880.7
17.5°	1835.4	1835.4	1864.4	1875.2
20°	1795.6	1793.8	1820.9	1835.4
22.5°	1726.8	1728.6	1750.3	1766.6
25°	1639.9	1636.3	1659.8	1674.3
27.5°	1531.3	1533.1	1547.6	1563.9
30°	1401.0	1404.6	1415.5	1431.8
32.5°	1254.4	1259.8	1267.0	1283.3
35°	1093.3	1098.7	1102.3	1116.8
37.5°	919.5	926.8	928.6	943.0
40°	747.6	754.8	754.8	767.5
42.5°	586.5	591.9	590.1	600.9
45°	443.5	447.1	445.3	454.3
47.5°	324.0	327.6	324.0	331.2
50°	224.4	228.1	224.4	229.9
52.5°	144.8	146.6	143.0	148.4
55°	83.3	85.1	83.3	86.9
57.5°	47.1	45.3	43.4	47.1
60°	23.5	23.5	23.5	23.5
62.5°	12.7	12.7	12.7	12.7
65°	7.2	7.2	7.2	9.1
67.5°	7.2	7.2	7.2	7.2
70°	5.4	5.4	5.4	5.4
72.5°	3.6	3.6	3.6	3.6
75°	3.6	3.6	3.6	3.6
77.5°	1.8	1.8	1.8	1.8
80°	0.0	0.0	0.0	1.8
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)