

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: PORTFOLIO

Report Number: P252162

Luminaire Tested: **LE_6B20D010 EC6B10209035 6LBSW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P252162
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-1)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LE_6B20D010 EC6B10209035 6LBSW1LI
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2810.0 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.29 / 1.21
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

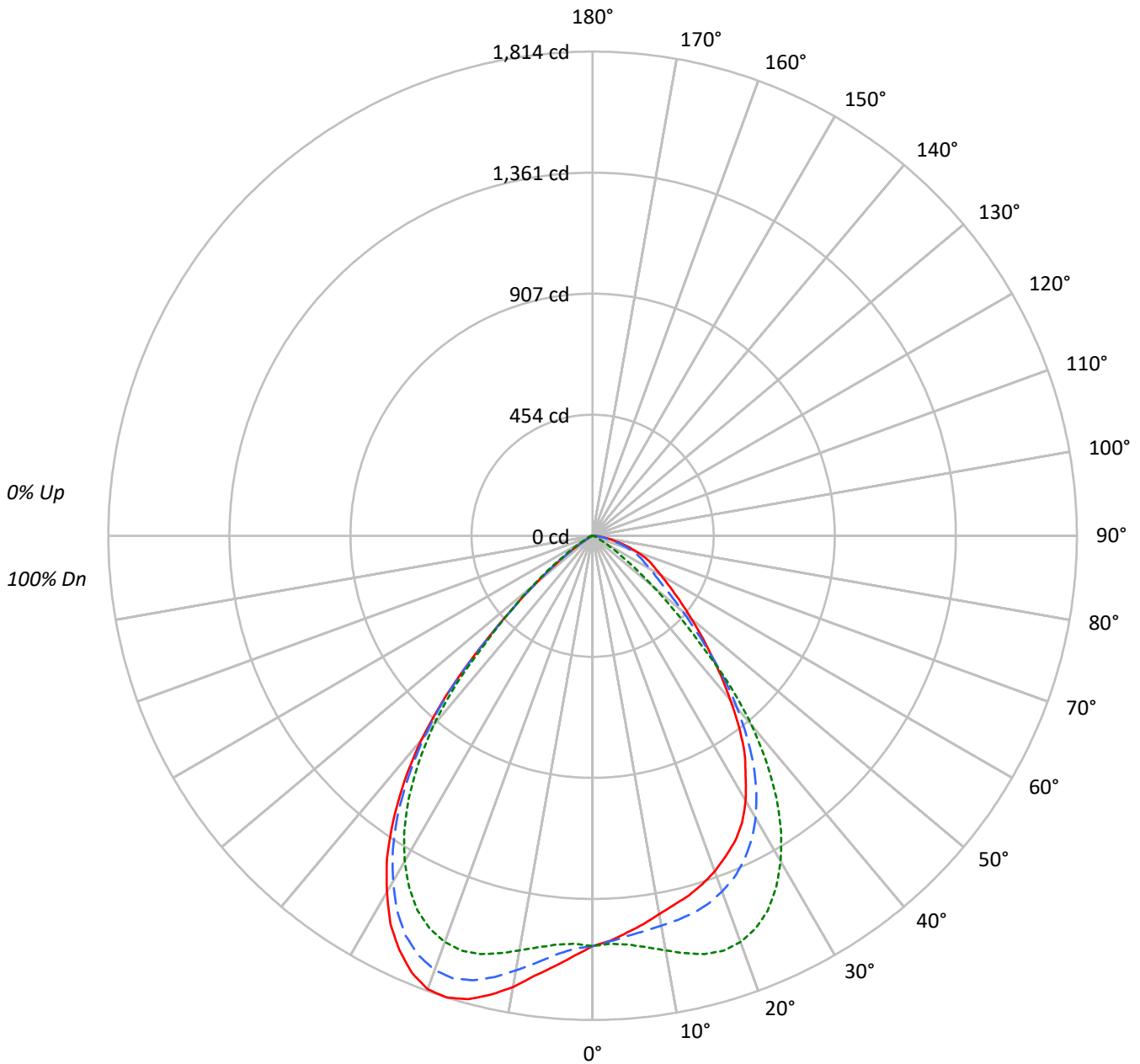
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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																			
1	112	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	80																			
3	98	89	83	78	95	88	82	78	85	80	76	83	78	75	80	77	74	72																			
4	91	82	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	65																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	50	48																			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44																			
9	66	54	47	42	64	54	47	42	53	46	42	52	46	42	51	45	42	40																			
10	62	50	43	39	61	50	43	39	49	43	39	48	43	39	47	42	38	37																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	100288	100288	100288
5°	97698	100671	105969
10°	95323	104472	113720
15°	94208	109587	121400
20°	92853	112445	125511
25°	90881	111613	123246
30°	86362	106069	116028
35°	79007	95637	103585
40°	68345	78983	84987
45°	57628	51797	55598
50°	48921	29982	28196
55°	42449	14377	10863
60°	38348	6720	2688
65°	37204	3859	911
70°	33362	3071	839
75°	27425	2243	378
80°	20438	1127	0
85°	17591	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	5.3
10°-20°	452.5	16.1
20°-30°	691.4	24.6
30°-40°	723.2	25.7
40°-50°	469.1	16.7
50°-60°	186.3	6.6
60°-70°	88.4	3.1
70°-80°	42.0	1.5
80°-90°	8.6	0.3
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°	1292.5	46.0
0°-40°	2015.6	71.7
0°-60°	2671.0	95.1
0°-90°	2810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2810.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1537	1537	1537	1537	1537	
5°	1492	1505	1537	1576	1618	141
15°	1395	1462	1622	1724	1797	393
25°	1262	1342	1550	1655	1712	578
35°	992	1052	1201	1271	1301	614
45°	625	619	561	595	603	486
55°	373	318	126	98	96	338
65°	241	200	25	6	6	235
75°	109	88	9	3	2	117
85°	24	15	0	0	0	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2
2.5°	1518.1	1521.1	1505.0	1500.5	1512.2	1516.8	1518.1	1513.8	1515.2	1521.1	1521.1
5°	1491.8	1494.6	1480.0	1475.6	1487.4	1490.2	1494.6	1493.2	1497.6	1506.4	1505.0
7.5°	1466.8	1471.1	1455.0	1449.1	1463.8	1471.1	1474.1	1474.1	1480.0	1491.8	1493.2
10°	1438.9	1444.8	1430.0	1427.1	1443.2	1450.6	1452.0	1455.0	1463.8	1480.0	1482.9
12.5°	1415.2	1421.1	1410.9	1406.5	1424.1	1431.5	1434.4	1440.2	1450.6	1471.1	1474.1
15°	1394.8	1399.1	1387.4	1384.5	1402.1	1410.9	1412.4	1421.1	1434.4	1457.9	1462.4
17.5°	1368.2	1371.2	1362.4	1359.5	1377.1	1385.9	1387.4	1397.6	1413.9	1437.4	1444.8
20°	1337.4	1340.4	1331.5	1328.6	1346.2	1356.5	1358.0	1366.8	1385.9	1410.9	1418.2
22.5°	1300.6	1306.5	1296.2	1293.4	1311.0	1319.8	1324.1	1331.5	1350.6	1375.6	1385.9
25°	1262.5	1262.5	1255.1	1253.6	1269.8	1280.1	1278.6	1288.9	1308.0	1333.0	1341.9
27.5°	1212.5	1211.0	1203.6	1202.2	1219.9	1228.6	1225.8	1236.0	1253.6	1278.6	1287.5
30°	1146.4	1149.2	1139.0	1136.1	1150.8	1165.5	1164.0	1174.2	1191.9	1215.4	1221.2
32.5°	1067.0	1069.9	1068.5	1064.0	1077.2	1084.6	1089.0	1096.4	1111.1	1136.1	1142.0
35°	992.0	987.6	981.8	981.8	995.0	1006.8	1002.4	1011.1	1025.9	1050.9	1052.2
37.5°	899.5	898.0	895.0	892.1	906.8	909.8	911.2	917.1	930.2	950.9	948.0
40°	802.5	803.9	802.5	796.6	805.4	817.1	815.6	818.6	830.4	845.1	840.6
42.5°	711.4	711.4	711.4	705.5	715.8	721.6	724.5	723.1	726.0	739.2	733.4
45°	624.6	626.1	624.6	623.1	624.6	627.5	624.6	623.1	623.1	627.5	618.8
47.5°	549.6	549.6	545.2	540.9	545.2	546.8	542.4	537.9	536.4	535.0	520.2
50°	482.0	480.6	479.1	471.8	476.1	477.6	471.8	468.9	463.0	455.6	438.0
52.5°	423.2	421.8	420.4	413.0	415.9	417.4	411.5	405.6	398.2	392.4	370.4
55°	373.2	371.9	371.9	367.4	364.5	367.4	361.5	357.1	346.9	339.5	317.5
57.5°	330.6	330.6	327.8	323.4	324.8	324.8	318.9	313.0	304.2	295.4	277.8
60°	293.9	293.9	293.9	289.5	289.5	289.5	286.6	280.8	273.4	264.5	246.9
62.5°	264.5	264.5	263.1	258.6	260.1	260.1	257.2	251.4	244.0	238.1	220.5
65°	241.0	241.0	241.0	236.6	236.6	238.1	235.1	229.2	223.4	216.0	199.9
67.5°	211.6	210.1	210.1	207.2	208.8	210.1	207.2	202.9	195.5	191.0	176.4
70°	174.9	176.4	177.9	173.4	174.9	174.9	173.4	169.0	164.6	160.2	147.0
72.5°	142.5	142.5	141.1	139.6	139.6	141.1	138.1	133.8	130.8	127.9	117.6
75°	108.8	107.2	108.8	105.9	105.9	105.9	102.9	101.4	100.0	95.5	88.1
77.5°	79.4	77.9	77.9	75.0	76.4	76.4	75.0	72.0	69.1	67.6	61.8
80°	54.4	54.4	54.4	52.9	52.9	51.5	51.5	50.0	47.0	45.5	42.6
82.5°	36.8	36.8	36.8	35.2	35.2	35.2	33.8	32.4	30.9	29.4	26.5
85°	23.5	23.5	23.5	22.0	22.0	22.0	20.6	20.6	19.1	17.6	14.8
87.5°	13.2	13.2	13.2	11.8	11.8	11.8	11.8	11.8	10.2	8.9	7.4
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2
2.5°	1531.4	1510.9	1524.1	1524.1	1519.6	1531.4	1538.8	1544.6	1543.1	1530.0	1528.5
5°	1519.6	1502.0	1516.8	1518.1	1513.8	1530.0	1540.2	1547.6	1549.0	1537.2	1538.8
7.5°	1510.9	1496.1	1515.2	1521.1	1519.6	1534.4	1546.1	1557.9	1563.8	1554.9	1556.4
10°	1506.4	1494.6	1515.2	1524.1	1525.5	1541.8	1559.4	1575.5	1582.9	1577.0	1581.4
12.5°	1500.5	1493.2	1516.8	1530.0	1535.9	1552.0	1574.0	1593.1	1604.9	1602.0	1610.8
15°	1494.6	1488.8	1516.8	1535.9	1543.1	1557.9	1582.9	1610.8	1624.0	1622.5	1634.2
17.5°	1480.0	1478.5	1507.9	1528.5	1538.8	1556.4	1579.9	1613.8	1627.0	1629.9	1644.6
20°	1456.5	1456.5	1488.8	1510.9	1522.6	1538.8	1568.1	1600.5	1616.6	1619.6	1635.8
22.5°	1424.1	1427.1	1457.9	1480.0	1497.6	1509.4	1540.2	1574.0	1588.8	1593.1	1610.8
25°	1381.5	1384.5	1413.9	1435.9	1455.0	1468.2	1497.6	1528.5	1546.1	1550.5	1563.8
27.5°	1325.6	1331.5	1359.5	1381.5	1397.6	1406.5	1437.4	1469.6	1482.9	1487.4	1500.5
30°	1261.0	1262.5	1290.4	1309.5	1325.6	1333.0	1359.5	1393.2	1403.5	1408.0	1427.1
32.5°	1181.6	1180.1	1206.6	1224.2	1237.5	1246.2	1274.2	1296.2	1306.5	1313.9	1324.1
35°	1086.1	1084.6	1103.8	1124.2	1134.6	1137.5	1165.5	1189.0	1194.9	1200.8	1214.0
37.5°	978.8	978.8	995.0	1005.2	1017.0	1021.4	1034.6	1061.1	1071.4	1069.9	1080.2
40°	865.6	859.8	871.5	881.8	884.8	886.2	899.5	920.0	927.4	927.4	934.8
42.5°	746.6	737.8	739.2	745.1	748.1	737.8	746.6	759.9	755.4	761.2	762.8
45°	620.2	607.0	601.1	587.9	590.9	580.5	574.6	577.6	576.1	561.4	564.4
47.5°	517.4	493.9	483.5	464.4	460.0	448.2	440.9	427.6	415.9	415.9	408.6
50°	430.6	407.1	386.5	364.5	357.1	346.9	330.6	313.0	304.2	295.4	288.0
52.5°	361.5	336.5	311.6	288.0	277.8	264.5	242.5	224.9	208.8	199.9	191.0
55°	305.8	277.8	251.4	226.4	213.1	199.9	177.9	157.2	138.1	126.4	119.0
57.5°	263.1	236.6	208.8	182.2	170.5	155.8	132.2	110.2	92.6	79.4	72.0
60°	232.2	205.8	180.8	152.9	141.1	126.4	101.4	80.9	63.2	51.5	42.6
62.5°	205.8	182.2	155.8	130.8	119.0	104.4	80.9	60.2	44.1	32.4	25.0
65°	186.6	163.1	141.1	116.1	105.9	91.1	69.1	50.0	35.2	25.0	17.6
67.5°	164.6	144.0	122.0	101.4	91.1	79.4	58.8	42.6	29.4	20.6	14.8
70°	138.1	122.0	102.9	83.8	76.4	66.1	48.5	35.2	23.5	16.1	11.8
72.5°	110.2	97.0	82.2	67.6	61.8	51.5	39.6	27.9	17.6	11.8	8.9
75°	83.8	73.5	61.8	51.5	45.5	39.6	29.4	20.6	13.2	8.9	5.9
77.5°	57.4	52.9	44.1	35.2	32.4	27.9	19.1	13.2	8.9	5.9	3.0
80°	39.6	35.2	29.4	23.5	20.6	17.6	11.8	8.9	4.4	3.0	1.5
82.5°	25.0	20.6	17.6	14.8	13.2	10.2	7.4	4.4	3.0	1.5	1.5
85°	13.2	11.8	10.2	7.4	7.4	5.9	4.4	3.0	1.5	0.0	0.0
87.5°	7.4	5.9	4.4	3.0	3.0	1.5	1.5	1.5	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2
2.5°	1546.1	1546.1	1544.6	1562.2	1541.8	1562.2	1552.0	1562.2	1547.6	1546.1	1547.6
5°	1557.9	1562.2	1563.8	1579.9	1560.8	1585.8	1577.0	1585.8	1575.5	1578.5	1582.9
7.5°	1581.4	1588.8	1587.2	1607.9	1588.8	1616.6	1610.8	1624.0	1613.8	1616.6	1622.5
10°	1607.9	1616.6	1618.1	1638.8	1621.1	1654.9	1647.5	1662.2	1653.4	1657.8	1665.1
12.5°	1638.8	1649.0	1650.5	1674.0	1654.9	1690.1	1685.8	1700.4	1693.1	1697.5	1706.2
15°	1662.2	1676.9	1679.9	1703.4	1682.8	1719.5	1716.6	1735.8	1724.0	1731.2	1738.6
17.5°	1674.0	1687.2	1693.1	1715.1	1697.5	1734.2	1731.2	1747.5	1738.6	1746.0	1754.8
20°	1666.6	1682.8	1687.2	1709.2	1691.6	1728.4	1724.0	1740.1	1731.2	1737.1	1746.0
22.5°	1640.1	1656.4	1662.2	1682.8	1666.6	1700.4	1699.0	1713.6	1701.9	1709.2	1716.6
25°	1593.1	1610.8	1613.8	1632.9	1615.1	1650.5	1647.5	1663.6	1654.9	1659.2	1669.6
27.5°	1525.5	1546.1	1550.5	1566.6	1553.5	1582.9	1582.9	1596.1	1585.8	1585.8	1596.1
30°	1444.8	1465.2	1468.2	1481.5	1469.6	1496.1	1497.6	1510.9	1494.6	1503.5	1505.0
32.5°	1346.2	1359.5	1368.2	1380.0	1362.4	1396.2	1391.8	1402.1	1393.2	1393.2	1400.6
35°	1227.2	1243.4	1247.8	1262.5	1247.8	1274.2	1274.2	1280.1	1271.2	1271.2	1283.0
37.5°	1097.9	1109.6	1111.1	1125.8	1114.0	1136.1	1134.6	1139.0	1130.2	1136.1	1136.1
40°	946.5	955.2	958.2	965.6	964.1	980.2	978.8	981.8	977.4	978.8	981.8
42.5°	770.1	781.9	787.8	793.6	784.8	806.9	802.5	806.9	805.4	806.9	811.2
45°	567.2	576.1	580.5	582.0	579.0	592.2	602.6	593.8	595.2	592.2	598.1
47.5°	410.0	411.5	408.6	417.4	410.0	415.9	418.9	420.4	411.5	410.0	415.9
50°	280.8	288.0	277.8	282.1	280.8	286.6	283.6	285.1	276.2	280.8	277.8
52.5°	186.6	185.1	182.2	183.8	180.8	180.8	180.8	183.8	177.9	174.9	172.0
55°	113.1	110.2	104.4	102.9	102.9	104.4	101.4	98.5	98.5	97.0	97.0
57.5°	66.1	61.8	58.8	57.4	54.4	52.9	51.5	51.5	48.5	48.5	48.5
60°	36.8	32.4	29.4	26.5	26.5	25.0	23.5	22.0	22.0	22.0	20.6
62.5°	19.1	16.1	13.2	11.8	11.8	10.2	8.9	8.9	8.9	8.9	7.4
65°	13.2	10.2	8.9	7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
67.5°	10.2	8.9	7.4	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4
70°	8.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
75°	4.4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
80°	1.5	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: P252162

CATALOG NUMBER: LE_6B20D010 EC6B10209035 6LBSW1LI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2
2.5°	1560.8	1559.4	1560.8	1563.8	1557.9	1575.5	1566.6	1575.5
5°	1594.6	1596.1	1597.5	1602.0	1594.6	1616.6	1604.9	1618.1
7.5°	1638.8	1640.1	1641.6	1646.0	1641.6	1663.6	1650.5	1662.2
10°	1684.2	1687.2	1687.2	1694.5	1690.1	1710.8	1701.9	1716.6
12.5°	1726.9	1729.9	1732.8	1737.1	1734.2	1756.2	1748.9	1760.6
15°	1760.6	1766.6	1768.0	1773.9	1771.0	1794.5	1785.6	1797.4
17.5°	1776.9	1782.8	1782.8	1790.1	1787.1	1812.1	1800.4	1813.6
20°	1768.0	1772.5	1773.9	1781.2	1778.4	1803.2	1791.5	1807.8
22.5°	1740.1	1741.6	1743.0	1750.4	1748.9	1771.0	1760.6	1771.0
25°	1688.6	1693.1	1691.6	1697.5	1697.5	1715.1	1703.4	1712.1
27.5°	1615.1	1619.6	1619.6	1627.0	1621.1	1638.8	1627.0	1640.1
30°	1525.5	1530.0	1527.0	1532.9	1527.0	1544.6	1535.9	1540.2
32.5°	1418.2	1418.2	1419.8	1421.1	1418.2	1434.4	1425.6	1434.4
35°	1290.4	1293.4	1294.8	1296.2	1293.4	1305.1	1294.8	1300.6
37.5°	1146.4	1153.8	1152.2	1153.8	1149.2	1164.0	1155.1	1158.1
40°	992.0	992.0	990.6	993.5	989.1	1000.9	995.0	997.9
42.5°	812.8	817.1	811.2	818.6	806.9	823.0	817.1	812.8
45°	609.9	604.0	602.6	604.0	599.6	601.1	605.5	602.6
47.5°	415.9	415.9	413.0	408.6	414.5	415.9	410.0	410.0
50°	279.2	279.2	276.2	274.9	277.8	276.2	273.4	277.8
52.5°	177.9	172.0	172.0	174.9	172.0	169.0	173.4	170.5
55°	97.0	94.0	94.0	97.0	94.0	94.0	92.6	95.5
57.5°	47.0	48.5	47.0	47.0	47.0	47.0	45.5	47.0
60°	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
62.5°	8.9	8.9	7.4	7.4	7.4	7.4	7.4	7.4
65°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
67.5°	4.4	4.4	4.4	4.4	4.4	5.9	4.4	4.4
70°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	4.4	4.4	5.9	5.9	5.9	5.9	5.9	5.9
75°	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	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
85°	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
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)