

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: P252161

Luminaire Tested: **LE_6B20D010 EC6B10209030 6LBSW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P252161
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 EC6B10209030 6LBSW1LI
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2770.0 lumens
Efficiency: N/A
Efficacy: 133.2 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

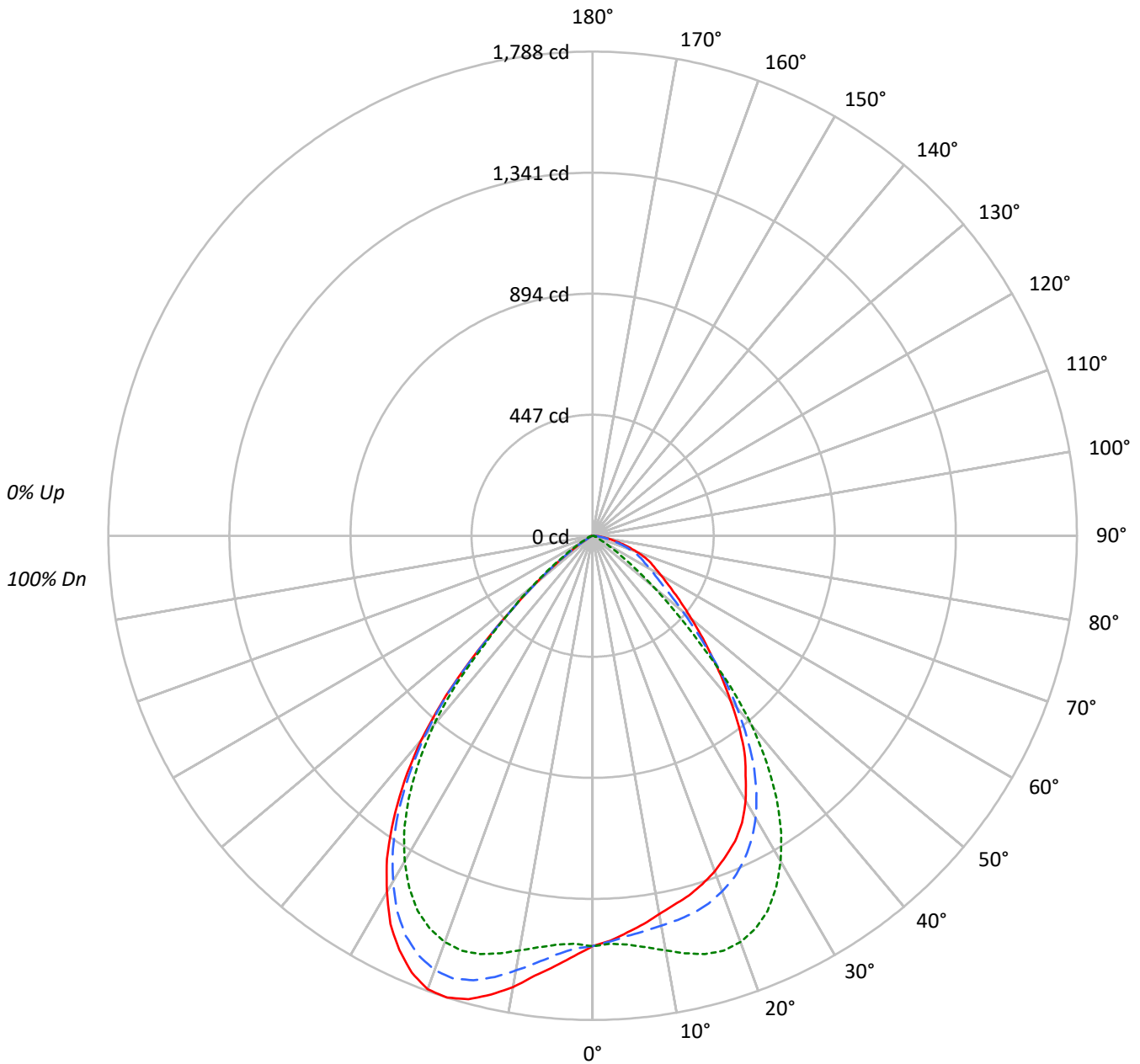
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	98866	98866	98866
5°	96303	99243	104463
10°	93965	102981	112097
15°	92864	108027	119678
20°	91533	110841	123720
25°	89585	110029	121496
30°	85127	104555	114371
35°	77884	94267	102112
40°	67366	77850	83786
45°	56816	51059	54805
50°	48231	29556	27800
55°	41858	14172	10703
60°	37813	6628	2636
65°	36679	3798	895
70°	32885	3033	839
75°	27022	2218	378
80°	20138	1090	0
85°	17292	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	5.3
10°-20°	446.1	16.1
20°-30°	681.6	24.6
30°-40°	712.9	25.7
40°-50°	462.5	16.7
50°-60°	183.6	6.6
60°-70°	87.1	3.1
70°-80°	41.4	1.5
80°-90°	8.5	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°	1274.1	46.0
0°-40°	1987.0	71.7
0°-60°	2633.0	95.1
0°-90°	2770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2770.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1515	1515	1515	1515	1515	
5°	1470	1484	1515	1553	1595	139
15°	1375	1442	1599	1699	1772	387
25°	1244	1323	1528	1631	1688	570
35°	978	1037	1184	1253	1282	605
45°	616	610	553	587	594	479
55°	368	313	125	97	94	333
65°	238	197	25	6	6	232
75°	107	87	9	3	2	116
85°	23	14	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°	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4
2.5°	1496.6	1499.5	1483.5	1479.2	1490.8	1495.1	1496.6	1492.2	1493.6	1499.5	1499.5
5°	1470.5	1473.4	1458.9	1454.5	1466.1	1469.0	1473.4	1472.0	1476.2	1485.0	1483.5
7.5°	1445.9	1450.2	1434.2	1428.5	1443.0	1450.2	1453.1	1453.1	1458.9	1470.5	1472.0
10°	1418.4	1424.1	1409.6	1406.8	1422.8	1429.9	1431.4	1434.2	1443.0	1458.9	1461.8
12.5°	1395.1	1401.0	1390.9	1386.5	1403.9	1411.1	1414.0	1419.8	1429.9	1450.2	1453.1
15°	1374.9	1379.2	1367.6	1364.8	1382.1	1390.9	1392.2	1401.0	1414.0	1437.1	1441.5
17.5°	1348.8	1351.8	1343.0	1340.1	1357.5	1366.1	1367.6	1377.8	1393.8	1416.9	1424.1
20°	1318.4	1321.2	1312.6	1309.6	1327.1	1337.2	1338.6	1347.4	1366.1	1390.9	1398.0
22.5°	1282.1	1288.0	1277.8	1274.9	1292.2	1301.0	1305.4	1312.6	1331.4	1356.0	1366.1
25°	1244.5	1244.5	1237.2	1235.8	1251.8	1261.9	1260.4	1270.6	1289.4	1314.0	1322.8
27.5°	1195.2	1193.8	1186.5	1185.1	1202.5	1211.1	1208.2	1218.4	1235.8	1260.4	1269.1
30°	1130.0	1132.9	1122.8	1119.9	1134.4	1148.9	1147.4	1157.6	1175.0	1198.1	1203.9
32.5°	1051.8	1054.8	1053.2	1048.9	1062.0	1069.2	1073.5	1080.8	1095.2	1119.9	1125.8
35°	977.9	973.6	967.8	967.8	980.9	992.4	988.0	996.8	1011.2	1035.9	1037.4
37.5°	886.6	885.2	882.2	879.4	893.9	896.8	898.2	904.0	917.1	937.4	934.5
40°	791.0	792.5	791.0	785.2	793.9	805.5	804.1	807.0	818.5	833.0	828.8
42.5°	701.2	701.2	701.2	695.4	705.5	711.4	714.2	712.8	715.8	728.8	722.9
45°	615.8	617.1	615.8	614.2	615.8	618.6	615.8	614.2	614.2	618.6	609.9
47.5°	541.9	541.9	537.5	533.1	537.5	539.0	534.6	530.2	528.8	527.4	512.9
50°	475.2	473.8	472.2	465.0	469.4	470.9	465.0	462.1	456.4	449.1	431.8
52.5°	417.2	415.8	414.4	407.1	410.0	411.5	405.6	399.9	392.6	386.9	365.1
55°	368.0	366.5	366.5	362.2	359.2	362.2	356.4	352.0	341.9	334.6	312.9
57.5°	326.0	326.0	323.1	318.8	320.1	320.1	314.4	308.6	299.9	291.2	273.9
60°	289.8	289.8	289.8	285.4	285.4	285.4	282.5	276.8	269.5	260.8	243.4
62.5°	260.8	260.8	259.4	255.0	256.4	256.4	253.5	247.8	240.5	234.8	217.4
65°	237.6	237.6	237.6	233.2	233.2	234.8	231.8	226.0	220.2	213.0	197.0
67.5°	208.6	207.1	207.1	204.2	205.8	207.1	204.2	199.9	192.6	188.4	173.9
70°	172.4	173.9	175.2	171.0	172.4	172.4	171.0	166.6	162.2	157.9	144.9
72.5°	140.5	140.5	139.1	137.6	137.6	139.1	136.1	131.9	129.0	126.0	115.9
75°	107.2	105.8	107.2	104.2	104.2	104.2	101.4	100.0	98.5	94.1	86.9
77.5°	78.2	76.8	76.8	73.9	75.4	75.4	73.9	71.0	68.1	66.6	60.9
80°	53.6	53.6	53.6	52.1	52.1	50.8	50.8	49.2	46.4	44.9	42.0
82.5°	36.2	36.2	36.2	34.8	34.8	34.8	33.4	31.9	30.4	29.0	26.1
85°	23.1	23.1	23.1	21.8	21.8	21.8	20.2	20.2	18.9	17.4	14.5
87.5°	13.0	13.0	13.0	11.6	11.6	11.6	11.6	11.6	10.1	8.8	7.2
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°	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4
2.5°	1509.6	1489.4	1502.4	1502.4	1498.0	1509.6	1516.9	1522.6	1521.2	1508.1	1506.8
5°	1498.0	1480.6	1495.1	1496.6	1492.2	1508.1	1518.2	1525.5	1527.0	1515.4	1516.9
7.5°	1489.4	1474.9	1493.6	1499.5	1498.0	1512.5	1524.1	1535.8	1541.5	1532.8	1534.2
10°	1485.0	1473.4	1493.6	1502.4	1503.9	1519.8	1537.1	1553.1	1560.4	1554.5	1558.9
12.5°	1479.2	1472.0	1495.1	1508.1	1514.0	1529.9	1551.6	1570.5	1582.0	1579.1	1587.9
15°	1473.4	1467.6	1495.1	1514.0	1521.2	1535.8	1560.4	1587.9	1600.9	1599.4	1611.0
17.5°	1458.9	1457.5	1486.4	1506.8	1516.9	1534.2	1557.4	1590.8	1603.8	1606.6	1621.1
20°	1435.8	1435.8	1467.6	1489.4	1500.9	1516.9	1545.9	1577.8	1593.6	1596.5	1612.5
22.5°	1403.9	1406.8	1437.1	1458.9	1476.2	1487.9	1518.2	1551.6	1566.1	1570.5	1587.9
25°	1361.9	1364.8	1393.8	1415.5	1434.2	1447.4	1476.2	1506.8	1524.1	1528.5	1541.5
27.5°	1306.8	1312.6	1340.1	1361.9	1377.8	1386.5	1416.9	1448.8	1461.8	1466.1	1479.2
30°	1243.0	1244.5	1272.0	1290.9	1306.8	1314.0	1340.1	1373.4	1383.6	1387.9	1406.8
32.5°	1164.8	1163.4	1189.4	1206.9	1219.9	1228.5	1256.1	1277.8	1288.0	1295.2	1305.4
35°	1070.6	1069.2	1088.0	1108.2	1118.5	1121.4	1148.9	1172.0	1177.9	1183.6	1196.6
37.5°	964.9	964.9	980.9	991.0	1002.5	1006.9	1019.9	1046.0	1056.1	1054.8	1064.9
40°	853.4	847.5	859.1	869.2	872.1	873.6	886.6	906.9	914.1	914.1	921.4
42.5°	736.0	727.2	728.8	734.5	737.4	727.2	736.0	749.0	744.6	750.5	751.9
45°	611.4	598.4	592.5	579.5	582.4	572.2	566.5	569.4	567.9	553.4	556.4
47.5°	510.0	486.8	476.6	457.8	453.5	441.9	434.6	421.6	410.0	410.0	402.8
50°	424.5	401.2	381.0	359.2	352.0	341.9	326.0	308.6	299.9	291.2	284.0
52.5°	356.4	331.8	307.1	284.0	273.9	260.8	239.0	221.6	205.8	197.0	188.4
55°	301.4	273.9	247.8	223.1	210.1	197.0	175.2	155.0	136.1	124.6	117.4
57.5°	259.4	233.2	205.8	179.6	168.0	153.6	130.4	108.6	91.2	78.2	71.0
60°	228.9	202.9	178.2	150.6	139.1	124.6	100.0	79.6	62.2	50.8	42.0
62.5°	202.9	179.6	153.6	129.0	117.4	102.9	79.6	59.4	43.5	31.9	24.6
65°	184.0	160.9	139.1	114.5	104.2	89.9	68.1	49.2	34.8	24.6	17.4
67.5°	162.2	142.0	120.2	100.0	89.9	78.2	58.0	42.0	29.0	20.2	14.5
70°	136.1	120.2	101.4	82.6	75.4	65.2	47.8	34.8	23.1	15.9	11.6
72.5°	108.6	95.6	81.1	66.6	60.9	50.8	39.1	27.5	17.4	11.6	8.8
75°	82.6	72.5	60.9	50.8	44.9	39.1	29.0	20.2	13.0	8.8	5.8
77.5°	56.5	52.1	43.5	34.8	31.9	27.5	18.9	13.0	8.8	5.8	2.9
80°	39.1	34.8	29.0	23.1	20.2	17.4	11.6	8.8	4.4	2.9	1.5
82.5°	24.6	20.2	17.4	14.5	13.0	10.1	7.2	4.4	2.9	1.5	1.5
85°	13.0	11.6	10.1	7.2	7.2	5.8	4.4	2.9	1.5	0.0	0.0
87.5°	7.2	5.8	4.4	2.9	2.9	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°	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4
2.5°	1524.1	1524.1	1522.6	1540.0	1519.8	1540.0	1529.9	1540.0	1525.5	1524.1	1525.5
5°	1535.8	1540.0	1541.5	1557.4	1538.6	1563.2	1554.5	1563.2	1553.1	1556.0	1560.4
7.5°	1558.9	1566.1	1564.6	1585.0	1566.1	1593.6	1587.9	1600.9	1590.8	1593.6	1599.4
10°	1585.0	1593.6	1595.1	1615.4	1598.0	1631.2	1624.1	1638.5	1629.9	1634.2	1641.5
12.5°	1615.4	1625.5	1627.0	1650.1	1631.2	1666.1	1661.8	1676.2	1669.0	1673.4	1682.0
15°	1638.5	1653.0	1656.0	1679.1	1658.9	1695.0	1692.1	1711.0	1699.4	1706.6	1713.9
17.5°	1650.1	1663.1	1669.0	1690.8	1673.4	1709.5	1706.6	1722.6	1713.9	1721.1	1729.9
20°	1642.9	1658.9	1663.1	1684.9	1667.5	1703.8	1699.4	1715.4	1706.6	1712.5	1721.1
22.5°	1616.9	1632.8	1638.5	1658.9	1642.9	1676.2	1674.8	1689.2	1677.6	1684.9	1692.1
25°	1570.5	1587.9	1590.8	1609.6	1592.2	1627.0	1624.1	1640.0	1631.2	1635.6	1645.8
27.5°	1503.9	1524.1	1528.5	1544.4	1531.4	1560.4	1560.4	1573.4	1563.2	1563.2	1573.4
30°	1424.1	1444.4	1447.4	1460.4	1448.8	1474.9	1476.2	1489.4	1473.4	1482.1	1483.5
32.5°	1327.1	1340.1	1348.8	1360.4	1343.0	1376.4	1372.0	1382.1	1373.4	1373.4	1380.6
35°	1209.8	1225.6	1230.0	1244.5	1230.0	1256.1	1256.1	1261.9	1253.1	1253.1	1264.8
37.5°	1082.2	1093.9	1095.2	1109.8	1098.1	1119.9	1118.5	1122.8	1114.1	1119.9	1119.9
40°	933.0	941.8	944.6	951.9	950.4	966.4	964.9	967.8	963.4	964.9	967.8
42.5°	759.1	770.8	776.5	782.4	773.6	795.4	791.0	795.4	793.9	795.4	799.8
45°	559.2	567.9	572.2	573.8	570.9	583.9	594.0	585.2	586.8	583.9	589.6
47.5°	404.2	405.6	402.8	411.5	404.2	410.0	412.9	414.4	405.6	404.2	410.0
50°	276.8	284.0	273.9	278.1	276.8	282.5	279.6	281.0	272.4	276.8	273.9
52.5°	184.0	182.5	179.6	181.1	178.2	178.2	178.2	181.1	175.2	172.4	169.5
55°	111.5	108.6	102.9	101.4	101.4	102.9	100.0	97.1	97.1	95.6	95.6
57.5°	65.2	60.9	58.0	56.5	53.6	52.1	50.8	50.8	47.8	47.8	47.8
60°	36.2	31.9	29.0	26.1	26.1	24.6	23.1	21.8	21.8	21.8	20.2
62.5°	18.9	15.9	13.0	11.6	11.6	10.1	8.8	8.8	8.8	8.8	7.2
65°	13.0	10.1	8.8	7.2	7.2	5.8	5.8	5.8	5.8	5.8	5.8
67.5°	10.1	8.8	7.2	5.8	5.8	5.8	4.4	4.4	4.4	4.4	4.4
70°	8.8	5.8	5.8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	5.8	5.8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
75°	4.4	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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: P252161

CATALOG NUMBER: LE_6B20D010 EC6B10209030 6LBSW1LI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4	1515.4
2.5°	1538.6	1537.1	1538.6	1541.5	1535.8	1553.1	1544.4	1553.1
5°	1571.9	1573.4	1574.8	1579.1	1571.9	1593.6	1582.0	1595.1
7.5°	1615.4	1616.9	1618.2	1622.6	1618.2	1640.0	1627.0	1638.5
10°	1660.2	1663.1	1663.1	1670.4	1666.1	1686.4	1677.6	1692.1
12.5°	1702.2	1705.2	1708.1	1712.5	1709.5	1731.2	1724.0	1735.6
15°	1735.6	1741.4	1742.9	1748.6	1745.8	1769.0	1760.2	1771.9
17.5°	1751.5	1757.4	1757.4	1764.6	1761.8	1786.4	1774.8	1787.8
20°	1742.9	1747.2	1748.6	1755.9	1753.0	1777.6	1766.0	1782.0
22.5°	1715.4	1716.8	1718.2	1725.5	1724.0	1745.8	1735.6	1745.8
25°	1664.6	1669.0	1667.5	1673.4	1673.4	1690.8	1679.1	1687.8
27.5°	1592.2	1596.5	1596.5	1603.8	1598.0	1615.4	1603.8	1616.9
30°	1503.9	1508.1	1505.2	1511.0	1505.2	1522.6	1514.0	1518.2
32.5°	1398.0	1398.0	1399.5	1401.0	1398.0	1414.0	1405.2	1414.0
35°	1272.0	1274.9	1276.4	1277.8	1274.9	1286.5	1276.4	1282.1
37.5°	1130.0	1137.2	1135.9	1137.2	1132.9	1147.4	1138.8	1141.6
40°	977.9	977.9	976.5	979.4	975.0	986.6	980.9	983.8
42.5°	801.1	805.5	799.8	807.0	795.4	811.2	805.5	801.1
45°	601.2	595.5	594.0	595.5	591.1	592.5	596.9	594.0
47.5°	410.0	410.0	407.1	402.8	408.5	410.0	404.2	404.2
50°	275.2	275.2	272.4	270.9	273.9	272.4	269.5	273.9
52.5°	175.2	169.5	169.5	172.4	169.5	166.6	171.0	168.0
55°	95.6	92.8	92.8	95.6	92.8	92.8	91.2	94.1
57.5°	46.4	47.8	46.4	46.4	46.4	46.4	44.9	46.4
60°	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
62.5°	8.8	8.8	7.2	7.2	7.2	7.2	7.2	7.2
65°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
67.5°	4.4	4.4	4.4	4.4	4.4	5.8	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	5.8	5.8	5.8	5.8	5.8	5.8
75°	2.9	2.9	2.9	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)