

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: P252166

Luminaire Tested: **LE\_6B20D010 EC6B10209730 6LBSW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252166  
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 EC6B10209730 6LBSW1LI  
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 97CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2421.3 lumens  
Efficiency: N/A  
Efficacy: 116.4 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

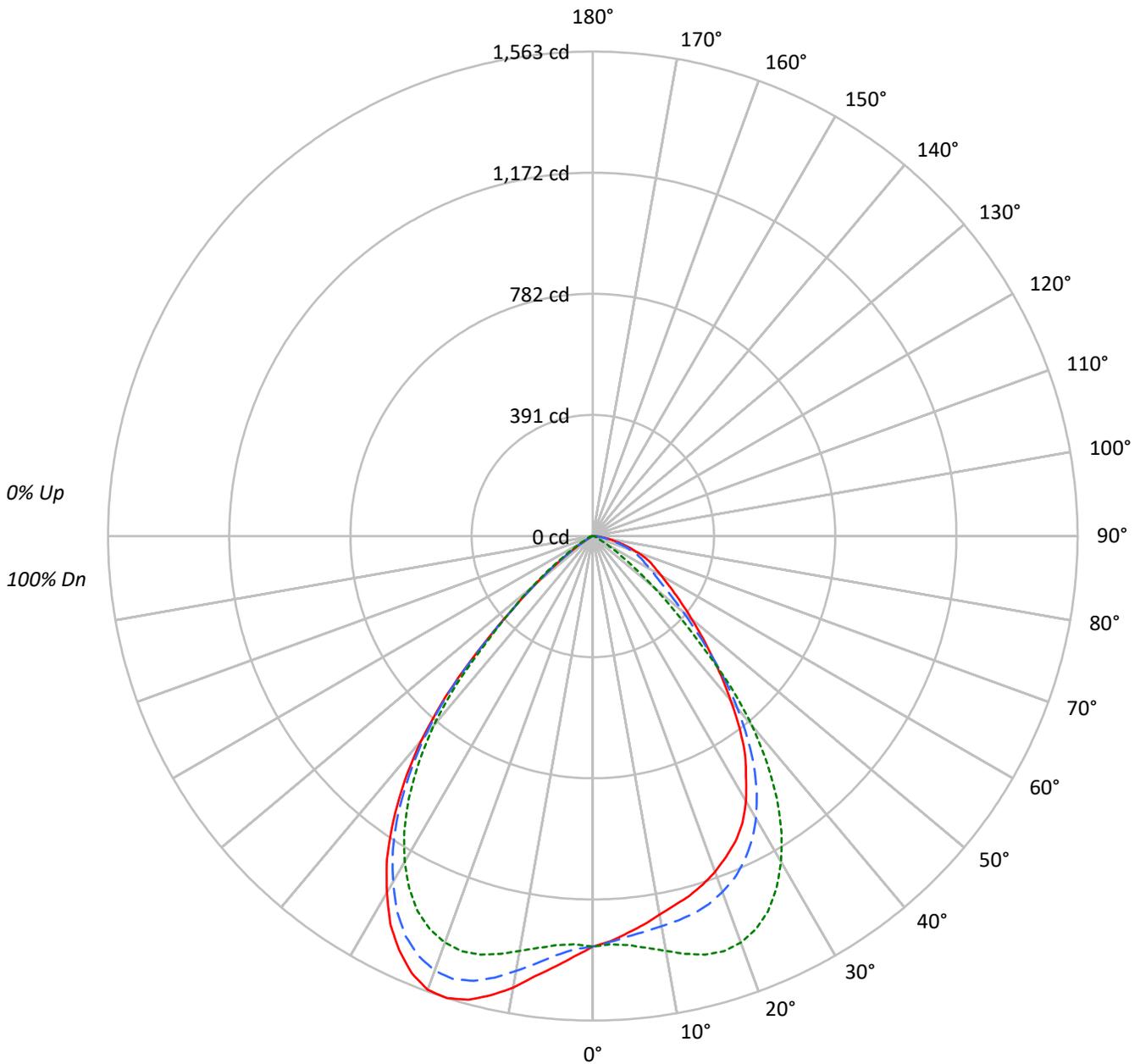
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	86418	86418	86418
5°	84181	86748	91306
10°	82133	90017	97986
15°	81172	94431	104609
20°	80008	96886	108140
25°	78305	96172	106192
30°	74414	91387	99975
35°	68080	82400	89265
40°	58883	68056	73234
45°	49657	44637	47904
50°	42162	25831	24298
55°	36580	12387	9372
60°	33038	5793	2323
65°	32048	3319	787
70°	28765	2651	725
75°	23644	1916	302
80°	17621	939	0
85°	15121	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.9	5.3
10°-20°	389.9	16.1
20°-30°	595.8	24.6
30°-40°	623.1	25.7
40°-50°	404.2	16.7
50°-60°	160.5	6.6
60°-70°	76.1	3.1
70°-80°	36.2	1.5
80°-90°	7.4	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°	1113.7	46.0
0°-40°	1736.8	71.7
0°-60°	2301.5	95.1
0°-90°	2421.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2421.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1325	1325	1325	1325	1325	
5°	1285	1297	1325	1358	1394	121
15°	1202	1260	1398	1486	1549	339
25°	1088	1156	1336	1426	1475	498
35°	855	907	1035	1095	1121	529
45°	538	533	484	513	519	419
55°	322	274	109	85	82	291
65°	208	172	22	5	5	203
75°	94	76	8	2	1	101
85°	20	13	0	0	0	24
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°	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6
2.5°	1308.1	1310.6	1296.8	1293.0	1303.1	1306.9	1308.1	1304.4	1305.6	1310.6	1310.6
5°	1285.4	1287.9	1275.2	1271.4	1281.5	1284.1	1287.9	1286.6	1290.4	1298.0	1296.8
7.5°	1263.9	1267.6	1253.8	1248.6	1261.2	1267.6	1270.1	1270.1	1275.2	1285.4	1286.6
10°	1239.8	1244.9	1232.1	1229.6	1243.6	1249.9	1251.1	1253.8	1261.2	1275.2	1277.8
12.5°	1219.5	1224.6	1215.8	1211.9	1227.1	1233.4	1236.0	1241.0	1249.9	1267.6	1270.1
15°	1201.8	1205.6	1195.5	1192.9	1208.1	1215.8	1217.0	1224.6	1236.0	1256.2	1260.0
17.5°	1179.0	1181.5	1173.9	1171.4	1186.6	1194.1	1195.5	1204.2	1218.2	1238.5	1244.9
20°	1152.4	1154.9	1147.4	1144.8	1160.0	1168.9	1170.1	1177.8	1194.1	1215.8	1222.0
22.5°	1120.8	1125.8	1116.9	1114.4	1129.6	1137.2	1141.0	1147.4	1163.8	1185.4	1194.1
25°	1087.8	1087.8	1081.5	1080.2	1094.1	1103.0	1101.8	1110.6	1127.0	1148.6	1156.2
27.5°	1044.8	1043.5	1037.1	1035.9	1051.1	1058.6	1056.1	1065.0	1080.2	1101.8	1109.4
30°	987.8	990.2	981.4	978.9	991.5	1004.2	1003.0	1011.9	1027.0	1047.2	1052.4
32.5°	919.4	921.9	920.6	916.9	928.2	934.6	938.4	944.8	957.4	978.9	984.0
35°	854.8	851.0	845.9	845.9	857.4	867.5	863.6	871.2	883.9	905.5	906.8
37.5°	775.0	773.8	771.2	768.6	781.4	783.9	785.1	790.2	801.6	819.4	816.8
40°	691.4	692.8	691.4	686.4	694.0	704.1	702.9	705.4	715.5	728.1	724.4
42.5°	612.9	612.9	612.9	607.9	616.8	621.8	624.4	623.0	625.6	637.0	631.9
45°	538.2	539.5	538.2	537.0	538.2	540.8	538.2	537.0	537.0	540.8	533.1
47.5°	473.6	473.6	469.9	466.0	469.9	471.1	467.2	463.5	462.2	461.0	448.2
50°	415.4	414.1	412.9	406.5	410.2	411.6	406.5	404.0	398.9	392.6	377.4
52.5°	364.8	363.5	362.1	355.9	358.4	359.6	354.6	349.5	343.1	338.1	319.1
55°	321.6	320.4	320.4	316.6	314.0	316.6	311.5	307.8	298.9	292.5	273.5
57.5°	284.9	284.9	282.4	278.6	279.9	279.9	274.8	269.8	262.1	254.5	239.4
60°	253.2	253.2	253.2	249.5	249.5	249.5	247.0	241.9	235.5	228.0	212.8
62.5°	228.0	228.0	226.6	222.9	224.1	224.1	221.6	216.5	210.2	205.1	190.0
65°	207.6	207.6	207.6	203.9	203.9	205.1	202.6	197.5	192.5	186.1	172.2
67.5°	182.4	181.1	181.1	178.5	179.9	181.1	178.5	174.8	168.4	164.6	152.0
70°	150.8	152.0	153.2	149.4	150.8	150.8	149.4	145.6	141.9	138.0	126.6
72.5°	122.9	122.9	121.6	120.2	120.2	121.6	119.0	115.2	112.8	110.1	101.2
75°	93.8	92.5	93.8	91.1	91.1	91.1	88.6	87.4	86.1	82.4	76.0
77.5°	68.4	67.1	67.1	64.6	65.9	65.9	64.6	62.0	59.5	58.2	53.1
80°	46.9	46.9	46.9	45.6	45.6	44.4	44.4	43.0	40.5	39.2	36.8
82.5°	31.6	31.6	31.6	30.4	30.4	30.4	29.1	27.9	26.6	25.4	22.8
85°	20.2	20.2	20.2	19.0	19.0	19.0	17.8	17.8	16.5	15.2	12.6
87.5°	11.4	11.4	11.4	10.1	10.1	10.1	10.1	10.1	8.9	7.6	6.4
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°	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6
2.5°	1319.5	1301.9	1313.2	1313.2	1309.4	1319.5	1325.9	1331.0	1329.6	1318.2	1317.0
5°	1309.4	1294.2	1306.9	1308.1	1304.4	1318.2	1327.1	1333.5	1334.8	1324.6	1325.9
7.5°	1301.9	1289.1	1305.6	1310.6	1309.4	1322.1	1332.2	1342.4	1347.4	1339.8	1341.1
10°	1298.0	1287.9	1305.6	1313.2	1314.5	1328.4	1343.6	1357.5	1363.9	1358.8	1362.6
12.5°	1293.0	1286.6	1306.9	1318.2	1323.4	1337.2	1356.2	1372.8	1382.9	1380.4	1387.9
15°	1287.9	1282.9	1306.9	1323.4	1329.6	1342.4	1363.9	1387.9	1399.4	1398.1	1408.2
17.5°	1275.2	1274.0	1299.2	1317.0	1325.9	1341.1	1361.4	1390.5	1401.9	1404.4	1417.0
20°	1255.0	1255.0	1282.9	1301.9	1312.0	1325.9	1351.2	1379.1	1393.0	1395.5	1409.5
22.5°	1227.1	1229.6	1256.2	1275.2	1290.4	1300.5	1327.1	1356.2	1368.9	1372.8	1387.9
25°	1190.4	1192.9	1218.2	1237.2	1253.8	1265.1	1290.4	1317.0	1332.2	1336.0	1347.4
27.5°	1142.2	1147.4	1171.4	1190.4	1204.2	1211.9	1238.5	1266.4	1277.8	1281.5	1293.0
30°	1086.5	1087.8	1111.9	1128.4	1142.2	1148.6	1171.4	1200.5	1209.4	1213.1	1229.6
32.5°	1018.1	1016.9	1039.6	1054.9	1066.2	1073.9	1097.9	1116.9	1125.8	1132.1	1141.0
35°	935.9	934.6	951.0	968.8	977.6	980.1	1004.2	1024.5	1029.5	1034.6	1046.0
37.5°	843.4	843.4	857.4	866.2	876.4	880.1	891.5	914.4	923.1	921.9	930.8
40°	745.9	740.9	751.0	759.9	762.4	763.6	775.0	792.8	799.1	799.1	805.4
42.5°	643.2	635.8	637.0	642.0	644.6	635.8	643.2	654.8	650.9	656.0	657.2
45°	534.4	523.0	518.0	506.5	509.1	500.2	495.1	497.6	496.4	483.8	486.2
47.5°	445.8	425.5	416.6	400.1	396.4	386.2	379.9	368.5	358.4	358.4	352.0
50°	371.0	350.8	333.0	314.0	307.8	298.9	284.9	269.8	262.1	254.5	248.2
52.5°	311.5	290.0	268.5	248.2	239.4	228.0	209.0	193.8	179.9	172.2	164.6
55°	263.4	239.4	216.5	195.0	183.6	172.2	153.2	135.5	119.0	108.9	102.6
57.5°	226.6	203.9	179.9	157.0	146.9	134.2	114.0	95.0	79.8	68.4	62.0
60°	200.1	177.2	155.8	131.8	121.6	108.9	87.4	69.6	54.5	44.4	36.8
62.5°	177.2	157.0	134.2	112.8	102.6	89.9	69.6	51.9	38.0	27.9	21.5
65°	160.9	140.6	121.6	100.0	91.1	78.5	59.5	43.0	30.4	21.5	15.2
67.5°	141.9	124.1	105.1	87.4	78.5	68.4	50.6	36.8	25.4	17.8	12.6
70°	119.0	105.1	88.6	72.1	65.9	57.0	41.8	30.4	20.2	13.9	10.1
72.5°	95.0	83.6	70.9	58.2	53.1	44.4	34.2	24.0	15.2	10.1	7.6
75°	72.1	63.4	53.1	44.4	39.2	34.2	25.4	17.8	11.4	7.6	5.1
77.5°	49.4	45.6	38.0	30.4	27.9	24.0	16.5	11.4	7.6	5.1	2.5
80°	34.2	30.4	25.4	20.2	17.8	15.2	10.1	7.6	3.8	2.5	1.2
82.5°	21.5	17.8	15.2	12.6	11.4	8.9	6.4	3.8	2.5	1.2	1.2
85°	11.4	10.1	8.9	6.4	6.4	5.1	3.8	2.5	1.2	0.0	0.0
87.5°	6.4	5.1	3.8	2.5	2.5	1.2	1.2	1.2	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°	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6
2.5°	1332.2	1332.2	1331.0	1346.1	1328.4	1346.1	1337.2	1346.1	1333.5	1332.2	1333.5
5°	1342.4	1346.1	1347.4	1361.4	1344.9	1366.4	1358.8	1366.4	1357.5	1360.1	1363.9
7.5°	1362.6	1368.9	1367.6	1385.4	1368.9	1393.0	1387.9	1399.4	1390.5	1393.0	1398.1
10°	1385.4	1393.0	1394.2	1412.0	1396.8	1425.9	1419.6	1432.2	1424.6	1428.5	1434.8
12.5°	1412.0	1420.9	1422.1	1442.4	1425.9	1456.4	1452.5	1465.1	1458.9	1462.6	1470.2
15°	1432.2	1444.9	1447.5	1467.8	1450.0	1481.6	1479.1	1495.6	1485.5	1491.8	1498.1
17.5°	1442.4	1453.8	1458.9	1477.9	1462.6	1494.2	1491.8	1505.8	1498.1	1504.5	1512.0
20°	1436.0	1450.0	1453.8	1472.8	1457.6	1489.2	1485.5	1499.4	1491.8	1496.9	1504.5
22.5°	1413.2	1427.2	1432.2	1450.0	1436.0	1465.1	1463.9	1476.6	1466.5	1472.8	1479.1
25°	1372.8	1387.9	1390.5	1406.9	1391.8	1422.1	1419.6	1433.5	1425.9	1429.8	1438.6
27.5°	1314.5	1332.2	1336.0	1350.0	1338.5	1363.9	1363.9	1375.2	1366.4	1366.4	1375.2
30°	1244.9	1262.6	1265.1	1276.5	1266.4	1289.1	1290.4	1301.9	1287.9	1295.5	1296.8
32.5°	1160.0	1171.4	1179.0	1189.1	1173.9	1203.0	1199.2	1208.1	1200.5	1200.5	1206.9
35°	1057.4	1071.4	1075.1	1087.8	1075.1	1097.9	1097.9	1103.0	1095.4	1095.4	1105.5
37.5°	946.0	956.1	957.4	970.0	959.9	978.9	977.6	981.4	973.9	978.9	978.9
40°	815.5	823.1	825.6	832.0	830.8	844.6	843.4	845.9	842.1	843.4	845.9
42.5°	663.6	673.8	678.8	683.9	676.2	695.2	691.4	695.2	694.0	695.2	699.0
45°	488.9	496.4	500.2	501.5	499.0	510.4	519.2	511.6	512.9	510.4	515.4
47.5°	353.4	354.6	352.0	359.6	353.4	358.4	360.9	362.1	354.6	353.4	358.4
50°	241.9	248.2	239.4	243.1	241.9	247.0	244.4	245.6	238.1	241.9	239.4
52.5°	160.9	159.5	157.0	158.2	155.8	155.8	155.8	158.2	153.2	150.8	148.1
55°	97.5	95.0	89.9	88.6	88.6	89.9	87.4	84.9	84.9	83.6	83.6
57.5°	57.0	53.1	50.6	49.4	46.9	45.6	44.4	44.4	41.8	41.8	41.8
60°	31.6	27.9	25.4	22.8	22.8	21.5	20.2	19.0	19.0	19.0	17.8
62.5°	16.5	13.9	11.4	10.1	10.1	8.9	7.6	7.6	7.6	7.6	6.4
65°	11.4	8.9	7.6	6.4	6.4	5.1	5.1	5.1	5.1	5.1	5.1
67.5°	8.9	7.6	6.4	5.1	5.1	5.1	3.8	3.8	3.8	3.8	3.8
70°	7.6	5.1	5.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	5.1	5.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
75°	3.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
80°	1.2	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: P252166

CATALOG NUMBER: LE\_6B20D010 EC6B10209730 6LBSW1LI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6	1324.6
2.5°	1344.9	1343.6	1344.9	1347.4	1342.4	1357.5	1350.0	1357.5
5°	1374.0	1375.2	1376.5	1380.4	1374.0	1393.0	1382.9	1394.2
7.5°	1412.0	1413.2	1414.5	1418.4	1414.5	1433.5	1422.1	1432.2
10°	1451.2	1453.8	1453.8	1460.1	1456.4	1474.0	1466.5	1479.1
12.5°	1488.0	1490.5	1493.0	1496.9	1494.2	1513.2	1507.0	1517.1
15°	1517.1	1522.1	1523.4	1528.5	1526.0	1546.2	1538.6	1548.8
17.5°	1531.0	1536.1	1536.1	1542.4	1539.9	1561.4	1551.2	1562.8
20°	1523.4	1527.2	1528.5	1534.9	1532.2	1553.9	1543.8	1557.6
22.5°	1499.4	1500.6	1501.9	1508.2	1507.0	1526.0	1517.1	1526.0
25°	1455.0	1458.9	1457.6	1462.6	1462.6	1477.9	1467.8	1475.2
27.5°	1391.8	1395.5	1395.5	1401.9	1396.8	1412.0	1401.9	1413.2
30°	1314.5	1318.2	1315.8	1320.9	1315.8	1331.0	1323.4	1327.1
32.5°	1222.0	1222.0	1223.2	1224.6	1222.0	1236.0	1228.4	1236.0
35°	1111.9	1114.4	1115.6	1116.9	1114.4	1124.5	1115.6	1120.8
37.5°	987.8	994.1	992.9	994.1	990.2	1003.0	995.4	997.9
40°	854.8	854.8	853.5	856.0	852.2	862.4	857.4	859.9
42.5°	700.2	704.1	699.0	705.4	695.2	709.1	704.1	700.2
45°	525.5	520.5	519.2	520.5	516.6	518.0	521.8	519.2
47.5°	358.4	358.4	355.9	352.0	357.1	358.4	353.4	353.4
50°	240.6	240.6	238.1	236.8	239.4	238.1	235.5	239.4
52.5°	153.2	148.1	148.1	150.8	148.1	145.6	149.4	146.9
55°	83.6	81.0	81.0	83.6	81.0	81.0	79.8	82.4
57.5°	40.5	41.8	40.5	40.5	40.5	40.5	39.2	40.5
60°	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
62.5°	7.6	7.6	6.4	6.4	6.4	6.4	6.4	6.4
65°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
67.5°	3.8	3.8	3.8	3.8	3.8	5.1	3.8	3.8
70°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	3.8	3.8	5.1	5.1	5.1	5.1	5.1	5.1
75°	2.5	2.5	2.5	1.2	1.2	1.2	1.2	1.2
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)