

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: P252259

Luminaire Tested: **LE_6B20D010 EC6B10208030 6LBSW1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P252259
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-7)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LE_6B20D010 EC6B10208030 6LBSW1H
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2355.1 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.18 / 1.16
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

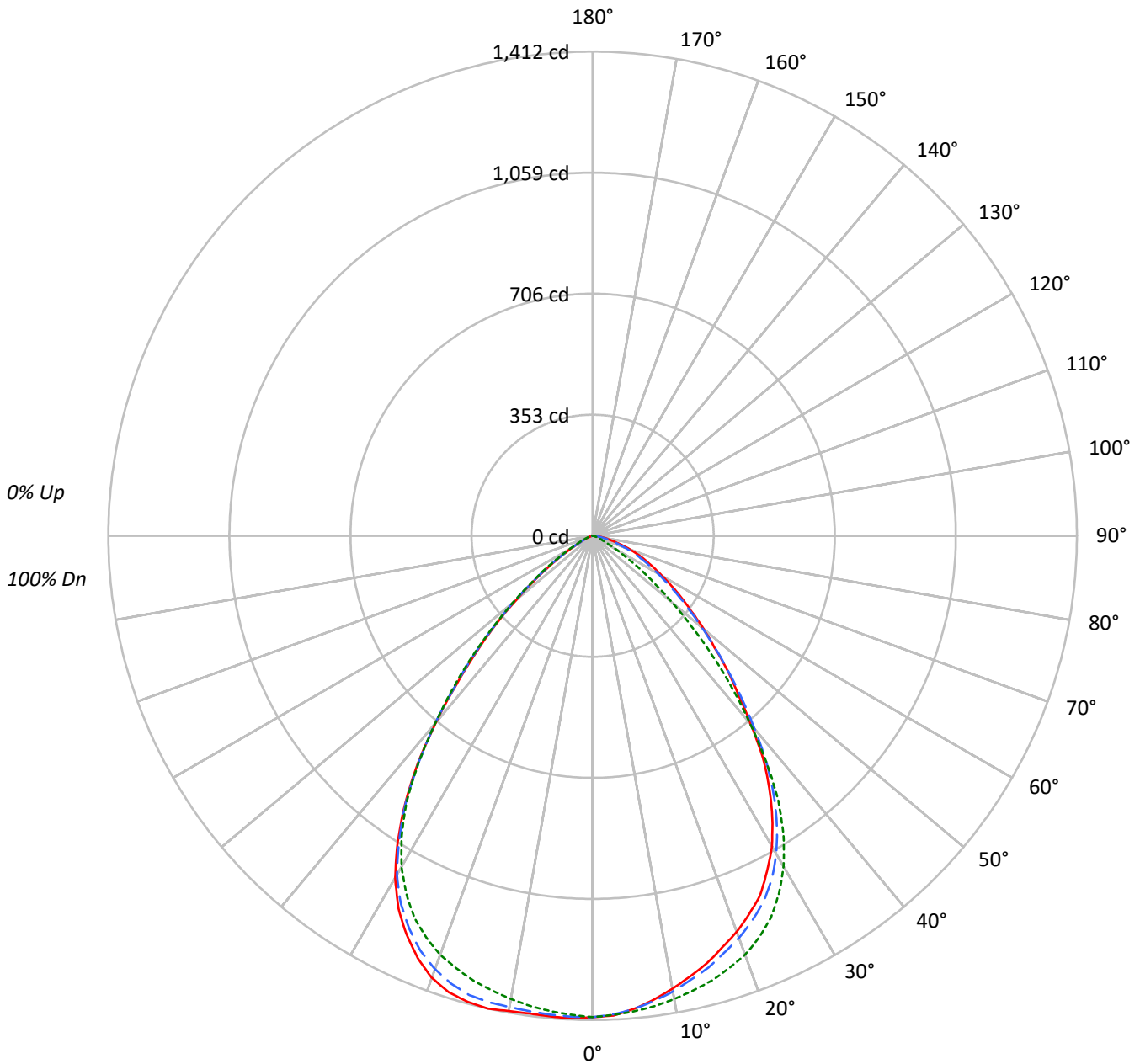
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52																			
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47																			
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43																			
9	65	54	47	42	64	53	46	42	52	46	42	51	46	41	50	45	41	40																			
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	37																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	91585	91585	91585
5°	90710	91155	92151
10°	88837	90858	93216
15°	87136	90695	95038
20°	85333	90270	95220
25°	83229	88477	92386
30°	78799	83914	86716
35°	71560	75200	75885
40°	61072	60791	60502
45°	51308	45523	44112
50°	42842	30804	29251
55°	36057	18893	17164
60°	30533	9943	8625
65°	26429	5233	4183
70°	21974	3243	2270
75°	16233	2143	1286
80°	12736	1277	676
85°	10180	1347	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.3	5.6
10°-20°	378.8	16.1
20°-30°	559.3	23.8
30°-40°	576.5	24.5
40°-50°	398.2	16.9
50°-60°	196.3	8.3
60°-70°	79.5	3.4
70°-80°	28.4	1.2
80°-90°	5.9	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°	1070.4	45.5
0°-40°	1646.9	69.9
0°-60°	2241.3	95.2
0°-90°	2355.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2355.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1404	1404	1404	1404	1404	
5°	1385	1385	1392	1402	1407	131
15°	1290	1304	1343	1387	1407	363
25°	1156	1178	1229	1265	1283	529
35°	898	920	944	949	953	557
45°	556	560	493	486	478	430
55°	317	305	166	156	151	286
65°	171	154	34	27	27	170
75°	64	54	8	5	5	72
85°	14	10	2	0	0	17
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°	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8
2.5°	1400.4	1395.2	1398.6	1391.9	1400.4	1391.9	1393.5	1395.2	1393.5	1395.2	1397.0
5°	1385.1	1380.0	1385.1	1376.6	1385.1	1380.0	1380.0	1381.6	1381.6	1383.4	1385.1
7.5°	1364.8	1359.6	1364.8	1356.2	1366.4	1361.4	1361.4	1364.8	1363.0	1364.8	1368.1
10°	1341.0	1334.2	1339.2	1334.2	1344.4	1337.6	1341.0	1341.0	1341.0	1346.1	1349.5
12.5°	1315.6	1308.8	1315.6	1307.1	1317.2	1312.1	1313.9	1319.0	1320.6	1324.0	1325.8
15°	1290.1	1281.6	1285.0	1280.0	1290.1	1285.0	1286.8	1293.5	1293.5	1298.6	1303.8
17.5°	1257.9	1251.1	1257.9	1251.1	1259.6	1256.2	1259.6	1264.8	1264.8	1269.8	1274.9
20°	1229.1	1222.4	1227.4	1222.4	1232.5	1227.4	1229.1	1235.9	1237.6	1242.6	1247.8
22.5°	1193.5	1188.4	1191.8	1186.8	1196.9	1193.5	1195.2	1202.0	1203.6	1207.1	1215.5
25°	1156.2	1146.0	1151.1	1147.8	1157.9	1152.9	1156.2	1163.0	1166.4	1171.5	1178.2
27.5°	1102.0	1096.9	1100.2	1100.2	1108.8	1103.6	1105.4	1112.1	1117.2	1122.2	1130.8
30°	1046.0	1037.5	1040.9	1042.6	1049.4	1046.0	1049.4	1056.1	1057.9	1064.6	1071.5
32.5°	974.8	971.4	978.2	974.8	978.2	978.2	979.9	985.0	988.4	991.8	1000.2
35°	898.5	891.8	898.5	895.1	903.6	898.5	903.6	908.8	908.8	915.5	920.5
37.5°	815.5	807.0	810.4	810.4	813.8	812.0	812.0	820.5	822.2	827.4	832.4
40°	717.1	713.8	720.5	718.9	720.5	720.5	722.2	727.2	730.6	732.4	734.1
42.5°	629.0	630.6	632.4	632.4	632.4	632.4	632.4	639.1	637.5	642.5	644.2
45°	556.1	549.2	552.6	551.0	556.1	551.0	556.1	561.1	557.8	562.9	559.5
47.5°	481.5	481.5	481.5	479.8	483.1	481.5	484.9	486.5	486.5	486.5	484.9
50°	422.1	417.0	418.8	418.8	420.5	418.8	422.1	423.9	423.9	420.5	413.6
52.5°	364.5	362.8	362.8	366.2	366.2	364.5	364.5	364.5	364.5	359.4	356.0
55°	317.0	313.6	315.4	315.4	315.4	315.4	317.0	315.4	315.4	310.2	305.1
57.5°	274.6	271.2	271.2	271.2	273.0	271.2	271.2	271.2	269.5	264.5	257.8
60°	234.0	232.2	234.0	234.0	235.6	234.0	234.0	234.0	230.6	225.5	218.8
62.5°	200.0	200.0	200.0	201.8	201.8	200.0	200.0	198.4	196.6	189.9	183.1
65°	171.2	169.5	171.2	171.2	172.9	172.9	171.2	169.5	167.9	161.0	154.2
67.5°	142.4	140.8	142.4	142.4	144.1	142.4	142.4	142.4	137.4	133.9	127.1
70°	115.2	113.6	113.6	113.6	115.2	111.9	113.6	113.6	110.2	105.1	98.4
72.5°	88.1	88.1	88.1	88.1	88.1	88.1	86.5	86.5	83.1	78.0	74.6
75°	64.4	64.4	66.1	66.1	64.4	64.4	64.4	62.8	61.0	57.6	54.2
77.5°	47.5	47.5	47.5	47.5	45.8	45.8	45.8	44.1	42.4	40.8	37.2
80°	33.9	33.9	33.9	32.2	33.9	32.2	32.2	32.2	28.9	27.1	25.4
82.5°	23.8	22.0	22.0	22.0	22.0	22.0	22.0	20.4	20.4	18.6	17.0
85°	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	11.9	10.1	10.1
87.5°	6.8	8.5	8.5	8.5	8.5	8.5	8.5	6.8	6.8	6.8	5.1
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°	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8
2.5°	1397.0	1397.0	1400.4	1395.2	1403.8	1398.6	1397.0	1405.4	1400.4	1398.6	1402.0
5°	1385.1	1386.8	1388.5	1385.1	1393.5	1388.5	1388.5	1397.0	1393.5	1391.9	1397.0
7.5°	1369.9	1371.5	1374.9	1373.2	1380.0	1376.6	1378.2	1386.8	1383.4	1383.4	1388.5
10°	1351.1	1354.5	1358.0	1358.0	1366.4	1363.0	1363.0	1373.2	1369.9	1371.5	1378.2
12.5°	1329.1	1334.2	1339.2	1341.0	1349.5	1344.4	1346.1	1358.0	1356.2	1358.0	1364.8
15°	1305.4	1312.1	1317.2	1317.2	1327.4	1322.4	1327.4	1339.2	1335.9	1342.8	1351.1
17.5°	1278.2	1285.0	1291.9	1293.5	1303.8	1300.2	1307.1	1319.0	1319.0	1322.4	1332.5
20°	1252.9	1261.4	1264.8	1269.8	1280.0	1278.2	1281.6	1295.2	1295.2	1300.2	1310.5
22.5°	1218.9	1227.4	1234.2	1239.2	1247.8	1247.8	1252.9	1264.8	1264.8	1268.1	1278.2
25°	1181.6	1191.8	1196.9	1202.0	1210.5	1208.8	1213.9	1224.0	1225.8	1229.1	1239.2
27.5°	1134.1	1142.6	1149.4	1152.9	1164.6	1157.9	1163.0	1174.9	1173.1	1176.5	1185.0
30°	1074.9	1083.2	1090.1	1090.1	1100.2	1100.2	1105.4	1110.4	1110.4	1113.9	1120.6
32.5°	1005.4	1015.5	1015.5	1020.6	1027.4	1020.6	1027.4	1034.1	1030.8	1035.9	1040.9
35°	925.6	930.8	932.4	932.4	937.5	935.9	934.1	939.2	935.9	944.2	949.4
37.5°	829.0	835.8	832.4	835.8	834.1	829.0	829.0	837.5	830.8	832.4	837.5
40°	735.8	735.8	734.1	725.6	727.2	722.2	720.5	722.2	715.4	713.8	720.5
42.5°	639.1	637.5	632.4	620.5	622.1	613.8	606.9	606.9	603.5	601.9	603.5
45°	552.6	547.6	539.1	525.5	522.1	515.4	501.9	498.4	493.4	493.4	495.0
47.5°	473.0	466.2	452.6	437.4	428.9	420.5	406.9	401.8	393.4	389.9	393.4
50°	406.9	395.0	378.0	356.0	347.5	337.4	323.8	315.4	306.9	303.5	301.8
52.5°	345.9	328.9	312.0	284.9	278.0	267.9	249.2	240.8	232.2	225.5	225.5
55°	293.2	278.0	254.2	228.9	218.8	208.5	189.9	178.0	169.5	166.1	162.8
57.5°	245.9	228.9	206.9	179.8	169.5	159.4	140.8	128.9	120.4	115.2	111.9
60°	206.9	188.1	166.1	142.4	130.5	120.4	101.8	89.9	81.4	76.2	72.9
62.5°	169.5	154.2	132.2	110.2	100.0	89.9	74.6	62.8	54.2	50.9	45.8
65°	142.4	127.1	106.8	88.1	79.6	69.5	56.0	45.8	39.0	33.9	30.5
67.5°	115.2	103.4	86.5	69.5	61.0	54.2	42.4	33.9	27.1	23.8	22.0
70°	91.5	79.6	66.1	52.5	47.5	40.8	32.2	23.8	20.4	17.0	15.2
72.5°	67.9	59.4	49.1	39.0	33.9	30.5	22.0	18.6	13.6	11.9	10.1
75°	49.1	42.4	35.6	27.1	23.8	22.0	17.0	11.9	10.1	8.5	6.8
77.5°	33.9	30.5	23.8	18.6	17.0	15.2	11.9	8.5	6.8	5.1	5.1
80°	22.0	18.6	15.2	11.9	11.9	10.1	6.8	5.1	5.1	3.4	3.4
82.5°	13.6	11.9	10.1	8.5	6.8	6.8	5.1	3.4	3.4	1.8	1.8
85°	8.5	6.8	5.1	5.1	3.4	3.4	3.4	1.8	1.8	1.8	1.8
87.5°	3.4	3.4	3.4	1.8	1.8	1.8	1.8	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8
2.5°	1402.0	1402.0	1405.4	1400.4	1403.8	1403.8	1407.1	1400.4	1403.8	1405.4	1408.8
5°	1395.2	1397.0	1400.4	1398.6	1400.4	1400.4	1403.8	1395.2	1402.0	1402.0	1407.1
7.5°	1388.5	1388.5	1391.9	1390.1	1393.5	1395.2	1398.6	1391.9	1398.6	1398.6	1403.8
10°	1380.0	1380.0	1385.1	1383.4	1388.5	1390.1	1395.2	1388.5	1395.2	1397.0	1402.0
12.5°	1368.1	1369.9	1374.9	1374.9	1380.0	1383.4	1388.5	1385.1	1393.5	1395.2	1402.0
15°	1354.5	1358.0	1364.8	1363.0	1368.1	1373.2	1380.0	1374.9	1386.8	1390.1	1397.0
17.5°	1337.6	1341.0	1346.1	1346.1	1351.1	1354.5	1363.0	1359.6	1369.9	1371.5	1380.0
20°	1312.1	1317.2	1324.0	1322.4	1327.4	1330.9	1337.6	1334.2	1344.4	1347.8	1356.2
22.5°	1281.6	1285.0	1290.1	1290.1	1295.2	1298.6	1305.4	1300.2	1310.5	1312.1	1319.0
25°	1241.0	1244.4	1247.8	1249.5	1254.5	1256.2	1259.6	1256.2	1264.8	1266.4	1274.9
27.5°	1188.4	1190.1	1195.2	1195.2	1198.6	1200.2	1205.4	1198.6	1210.5	1210.5	1215.5
30°	1125.8	1124.0	1130.8	1127.4	1130.8	1130.8	1135.9	1132.5	1141.0	1137.5	1142.6
32.5°	1042.6	1046.0	1046.0	1042.6	1049.4	1047.8	1047.8	1044.4	1049.4	1051.1	1054.5
35°	946.0	951.1	951.1	952.8	954.5	949.4	951.1	940.9	949.4	951.1	952.8
37.5°	840.9	835.8	839.1	834.1	842.6	832.4	832.4	825.6	832.4	832.4	834.1
40°	720.5	718.9	722.2	718.9	717.1	715.4	712.0	707.0	713.8	710.4	715.4
42.5°	606.9	605.2	605.2	601.9	600.1	600.1	596.8	593.4	591.6	591.6	600.1
45°	490.0	493.4	490.0	488.2	491.6	488.2	490.0	483.1	486.5	483.1	486.5
47.5°	391.6	393.4	389.9	386.5	391.6	386.5	386.5	381.5	388.2	388.2	384.9
50°	303.5	301.8	298.4	301.8	300.1	300.1	300.1	295.0	298.4	293.2	296.6
52.5°	223.8	222.1	222.1	220.4	222.1	220.4	220.4	218.8	218.8	217.0	218.8
55°	162.8	161.0	157.6	157.6	157.6	159.4	157.6	156.0	156.0	154.2	156.0
57.5°	110.2	106.8	106.8	106.8	106.8	105.1	105.1	103.4	105.1	103.4	105.1
60°	71.2	71.2	67.9	67.9	67.9	67.9	67.9	66.1	67.9	67.9	67.9
62.5°	44.1	44.1	42.4	40.8	42.4	40.8	40.8	40.8	42.4	40.8	42.4
65°	28.9	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
67.5°	20.4	18.6	18.6	18.6	18.6	18.6	18.6	17.0	18.6	18.6	18.6
70°	13.6	13.6	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
72.5°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
75°	6.8	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
77.5°	5.1	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
80°	3.4	3.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
85°	1.8	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	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



TEST NUMBER: P252259

CATALOG NUMBER: LE_6B20D010 EC6B10208030 6LBSW1H

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8	1403.8
2.5°	1403.8	1405.4	1402.0	1403.8	1400.4	1403.8	1405.4	1408.8
5°	1400.4	1402.0	1398.6	1402.0	1398.6	1402.0	1403.8	1407.1
7.5°	1397.0	1400.4	1397.0	1400.4	1397.0	1400.4	1402.0	1405.4
10°	1397.0	1402.0	1398.6	1403.8	1398.6	1402.0	1405.4	1407.1
12.5°	1397.0	1402.0	1400.4	1403.8	1402.0	1405.4	1408.8	1412.2
15°	1393.5	1398.6	1395.2	1400.4	1398.6	1400.4	1407.1	1407.1
17.5°	1374.9	1380.0	1380.0	1383.4	1383.4	1388.5	1391.9	1395.2
20°	1351.1	1356.2	1354.5	1359.6	1359.6	1364.8	1368.1	1371.5
22.5°	1315.6	1322.4	1320.6	1325.8	1324.0	1327.4	1334.2	1332.5
25°	1269.8	1278.2	1276.6	1280.0	1278.2	1278.2	1281.6	1283.4
27.5°	1213.9	1218.9	1217.2	1220.6	1217.2	1220.6	1224.0	1225.8
30°	1141.0	1144.4	1142.6	1144.4	1142.6	1146.0	1147.8	1151.1
32.5°	1052.8	1057.9	1052.8	1056.1	1054.5	1054.5	1061.2	1057.9
35°	947.6	949.4	951.1	951.1	947.6	949.4	952.8	952.8
37.5°	830.8	839.1	829.0	834.1	832.4	832.4	832.4	837.5
40°	708.6	710.4	707.0	707.0	707.0	705.2	712.0	710.4
42.5°	593.4	595.0	593.4	588.2	590.0	590.0	595.0	588.2
45°	481.5	484.9	483.1	483.1	479.8	479.8	481.5	478.1
47.5°	381.5	384.9	379.8	381.5	378.0	381.5	379.8	383.1
50°	289.9	293.2	291.6	293.2	293.2	289.9	295.0	288.2
52.5°	217.0	218.8	217.0	215.2	213.6	213.6	217.0	215.2
55°	154.2	152.6	152.6	152.6	154.2	154.2	152.6	150.9
57.5°	103.4	103.4	101.8	101.8	103.4	100.0	101.8	100.0
60°	66.1	66.1	66.1	66.1	64.4	66.1	66.1	66.1
62.5°	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8
65°	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
67.5°	17.0	18.6	18.6	18.6	17.0	17.0	17.0	17.0
70°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
72.5°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
75°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
77.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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













(END OF REPORT)