

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: P252161

Luminaire Tested: **LD6B20D010 EU6B10209030 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: io LED  
Catalog Number: LD6B20D010 EU6B10209030 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: 2216.0 lumens  
Efficiency: N/A  
Efficacy: 106.5 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

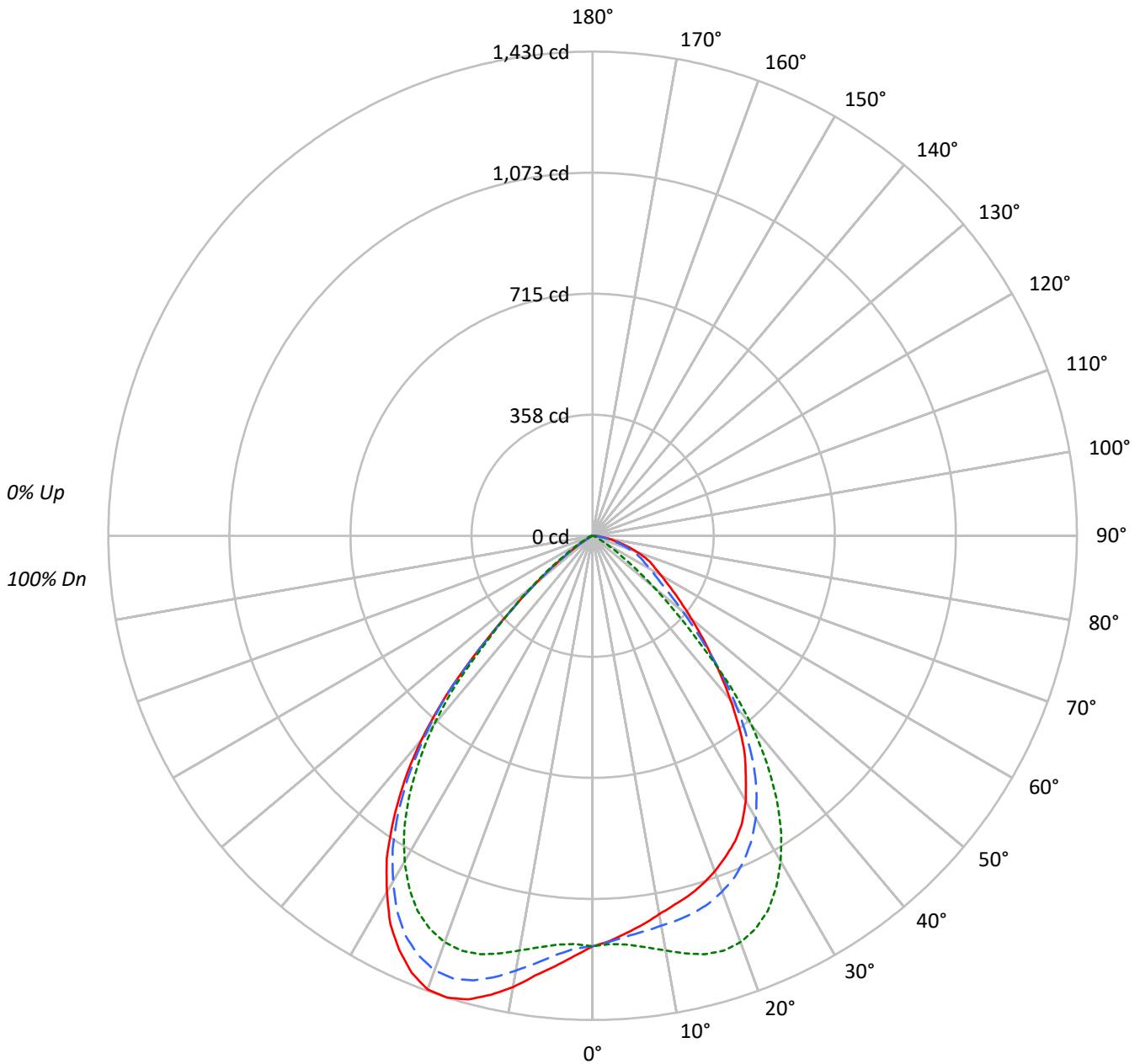
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	79091	79091	79091
5°	77042	79393	83572
10°	75171	82385	89679
15°	74290	86420	95741
20°	73225	88673	98976
25°	71668	88023	97194
30°	68101	83643	91500
35°	62306	75415	81691
40°	53893	62282	67025
45°	45449	40845	43844
50°	38589	23649	22238
55°	33486	11340	8565
60°	30246	5298	2114
65°	29346	3041	710
70°	26305	2423	668
75°	21628	1764	302
80°	16118	864	0
85°	13848	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.1	5.3
10°-20°	356.9	16.1
20°-30°	545.3	24.6
30°-40°	570.3	25.7
40°-50°	370.0	16.7
50°-60°	146.9	6.6
60°-70°	69.7	3.1
70°-80°	33.1	1.5
80°-90°	6.8	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°	1019.3	46.0
0°-40°	1589.6	71.7
0°-60°	2106.4	95.1
0°-90°	2216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2216.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1212	1212	1212	1212	1212	
5°	1176	1187	1212	1242	1276	111
15°	1100	1153	1280	1360	1418	310
25°	996	1058	1223	1305	1350	456
35°	782	830	947	1002	1026	484
45°	493	488	443	469	475	383
55°	294	250	100	78	75	267
65°	190	158	20	5	5	186
75°	86	70	7	2	1	93
85°	18	12	0	0	0	22
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°	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3
2.5°	1197.3	1199.6	1186.8	1183.4	1192.6	1196.1	1197.3	1193.8	1194.9	1199.6	1199.6
5°	1176.4	1178.7	1167.1	1163.6	1172.9	1175.2	1178.7	1177.6	1181.0	1188.0	1186.8
7.5°	1156.7	1160.2	1147.4	1142.8	1154.4	1160.2	1162.5	1162.5	1167.1	1176.4	1177.6
10°	1134.7	1139.3	1127.7	1125.4	1138.2	1143.9	1145.1	1147.4	1154.4	1167.1	1169.4
12.5°	1116.1	1120.8	1112.7	1109.2	1123.1	1128.9	1131.2	1135.8	1143.9	1160.2	1162.5
15°	1099.9	1103.4	1094.1	1091.8	1105.7	1112.7	1113.8	1120.8	1131.2	1149.7	1153.2
17.5°	1079.0	1081.4	1074.4	1072.1	1086.0	1092.9	1094.1	1102.2	1115.0	1133.5	1139.3
20°	1054.7	1057.0	1050.1	1047.7	1061.7	1069.8	1070.9	1077.9	1092.9	1112.7	1118.4
22.5°	1025.7	1030.4	1022.2	1019.9	1033.8	1040.8	1044.3	1050.1	1065.1	1084.8	1092.9
25°	995.6	995.6	989.8	988.6	1001.4	1009.5	1008.3	1016.5	1031.5	1051.2	1058.2
27.5°	956.2	955.0	949.2	948.1	962.0	968.9	966.6	974.7	988.6	1008.3	1015.3
30°	904.0	906.3	898.2	895.9	907.5	919.1	917.9	926.1	940.0	958.5	963.1
32.5°	841.4	843.8	842.6	839.1	849.6	855.4	858.8	864.6	876.2	895.9	900.6
35°	782.3	778.9	774.2	774.2	784.7	793.9	790.4	797.4	809.0	828.7	829.9
37.5°	709.3	708.2	705.8	703.5	715.1	717.4	718.6	723.2	733.7	749.9	747.6
40°	632.8	634.0	632.8	628.2	635.1	644.4	643.3	645.6	654.8	666.4	663.0
42.5°	561.0	561.0	561.0	556.3	564.4	569.1	571.4	570.2	572.6	583.0	578.3
45°	492.6	493.7	492.6	491.4	492.6	494.9	492.6	491.4	491.4	494.9	487.9
47.5°	433.5	433.5	430.0	426.5	430.0	431.2	427.7	424.2	423.0	421.9	410.3
50°	380.2	379.0	377.8	372.0	375.5	376.7	372.0	369.7	365.1	359.3	345.4
52.5°	333.8	332.6	331.5	325.7	328.0	329.2	324.5	319.9	314.1	309.5	292.1
55°	294.4	293.2	293.2	289.8	287.4	289.8	285.1	281.6	273.5	267.7	250.3
57.5°	260.8	260.8	258.5	255.0	256.1	256.1	251.5	246.9	239.9	233.0	219.1
60°	231.8	231.8	231.8	228.3	228.3	228.3	226.0	221.4	215.6	208.6	194.7
62.5°	208.6	208.6	207.5	204.0	205.1	205.1	202.8	198.2	192.4	187.8	173.9
65°	190.1	190.1	190.1	186.6	186.6	187.8	185.4	180.8	176.2	170.4	157.6
67.5°	166.9	165.7	165.7	163.4	164.6	165.7	163.4	159.9	154.1	150.7	139.1
70°	137.9	139.1	140.2	136.8	137.9	137.9	136.8	133.3	129.8	126.3	115.9
72.5°	112.4	112.4	111.3	110.1	110.1	111.3	108.9	105.5	103.2	100.8	92.7
75°	85.8	84.6	85.8	83.4	83.4	83.4	81.1	80.0	78.8	75.3	69.5
77.5°	62.6	61.4	61.4	59.1	60.3	60.3	59.1	56.8	54.5	53.3	48.7
80°	42.9	42.9	42.9	41.7	41.7	40.6	40.6	39.4	37.1	35.9	33.6
82.5°	29.0	29.0	29.0	27.8	27.8	27.8	26.7	25.5	24.3	23.2	20.9
85°	18.5	18.5	18.5	17.4	17.4	17.4	16.2	16.2	15.1	13.9	11.6
87.5°	10.4	10.4	10.4	9.3	9.3	9.3	9.3	9.3	8.1	7.0	5.8
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3
2.5°	1207.7	1191.5	1201.9	1201.9	1198.4	1207.7	1213.5	1218.1	1217.0	1206.5	1205.4
5°	1198.4	1184.5	1196.1	1197.3	1193.8	1206.5	1214.6	1220.4	1221.6	1212.3	1213.5
7.5°	1191.5	1179.9	1194.9	1199.6	1198.4	1210.0	1219.3	1228.6	1233.2	1226.2	1227.4
10°	1188.0	1178.7	1194.9	1201.9	1203.1	1215.8	1229.7	1242.5	1248.3	1243.6	1247.1
12.5°	1183.4	1177.6	1196.1	1206.5	1211.2	1223.9	1241.3	1256.4	1265.6	1263.3	1270.3
15°	1178.7	1174.1	1196.1	1211.2	1217.0	1228.6	1248.3	1270.3	1280.7	1279.5	1288.8
17.5°	1167.1	1166.0	1189.1	1205.4	1213.5	1227.4	1245.9	1272.6	1283.0	1285.3	1296.9
20°	1148.6	1148.6	1174.1	1191.5	1200.7	1213.5	1236.7	1262.2	1274.9	1277.2	1290.0
22.5°	1123.1	1125.4	1149.7	1167.1	1181.0	1190.3	1214.6	1241.3	1252.9	1256.4	1270.3
25°	1089.5	1091.8	1115.0	1132.4	1147.4	1157.9	1181.0	1205.4	1219.3	1222.8	1233.2
27.5°	1045.4	1050.1	1072.1	1089.5	1102.2	1109.2	1133.5	1159.0	1169.4	1172.9	1183.4
30°	994.4	995.6	1017.6	1032.7	1045.4	1051.2	1072.1	1098.7	1106.9	1110.3	1125.4
32.5°	931.8	930.7	951.5	965.5	975.9	982.8	1004.9	1022.2	1030.4	1036.2	1044.3
35°	856.5	855.4	870.4	886.6	894.8	897.1	919.1	937.6	942.3	946.9	957.3
37.5°	771.9	771.9	784.7	792.8	802.0	805.5	815.9	836.8	844.9	843.8	851.9
40°	682.7	678.0	687.3	695.4	697.7	698.9	709.3	725.5	731.3	731.3	737.1
42.5°	588.8	581.8	583.0	587.6	589.9	581.8	588.8	599.2	595.7	600.4	601.5
45°	489.1	478.7	474.0	463.6	465.9	457.8	453.2	455.5	454.3	442.7	445.1
47.5°	408.0	389.4	381.3	366.2	362.8	353.5	347.7	337.3	328.0	328.0	322.2
50°	339.6	321.0	304.8	287.4	281.6	273.5	260.8	246.9	239.9	233.0	227.2
52.5°	285.1	265.4	245.7	227.2	219.1	208.6	191.2	177.3	164.6	157.6	150.7
55°	241.1	219.1	198.2	178.5	168.1	157.6	140.2	124.0	108.9	99.7	93.9
57.5°	207.5	186.6	164.6	143.7	134.4	122.9	104.3	86.9	73.0	62.6	56.8
60°	183.1	162.3	142.6	120.5	111.3	99.7	80.0	63.7	49.8	40.6	33.6
62.5°	162.3	143.7	122.9	103.2	93.9	82.3	63.7	47.5	34.8	25.5	19.7
65°	147.2	128.7	111.3	91.6	83.4	71.9	54.5	39.4	27.8	19.7	13.9
67.5°	129.8	113.6	96.2	80.0	71.9	62.6	46.4	33.6	23.2	16.2	11.6
70°	108.9	96.2	81.1	66.1	60.3	52.2	38.2	27.8	18.5	12.7	9.3
72.5°	86.9	76.5	64.9	53.3	48.7	40.6	31.3	22.0	13.9	9.3	7.0
75°	66.1	58.0	48.7	40.6	35.9	31.3	23.2	16.2	10.4	7.0	4.6
77.5°	45.2	41.7	34.8	27.8	25.5	22.0	15.1	10.4	7.0	4.6	2.3
80°	31.3	27.8	23.2	18.5	16.2	13.9	9.3	7.0	3.5	2.3	1.2
82.5°	19.7	16.2	13.9	11.6	10.4	8.1	5.8	3.5	2.3	1.2	1.2
85°	10.4	9.3	8.1	5.8	5.8	4.6	3.5	2.3	1.2	0.0	0.0
87.5°	5.8	4.6	3.5	2.3	2.3	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°	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3
2.5°	1219.3	1219.3	1218.1	1232.0	1215.8	1232.0	1223.9	1232.0	1220.4	1219.3	1220.4
5°	1228.6	1232.0	1233.2	1245.9	1230.9	1250.6	1243.6	1250.6	1242.5	1244.8	1248.3
7.5°	1247.1	1252.9	1251.7	1268.0	1252.9	1274.9	1270.3	1280.7	1272.6	1274.9	1279.5
10°	1268.0	1274.9	1276.1	1292.3	1278.4	1305.0	1299.3	1310.8	1303.9	1307.4	1313.2
12.5°	1292.3	1300.4	1301.6	1320.1	1305.0	1332.9	1329.4	1341.0	1335.2	1338.7	1345.6
15°	1310.8	1322.4	1324.8	1343.3	1327.1	1356.0	1353.7	1368.8	1359.5	1365.3	1371.1
17.5°	1320.1	1330.5	1335.2	1352.6	1338.7	1367.6	1365.3	1378.1	1371.1	1376.9	1383.9
20°	1314.3	1327.1	1330.5	1347.9	1334.0	1363.0	1359.5	1372.3	1365.3	1370.0	1376.9
22.5°	1293.5	1306.2	1310.8	1327.1	1314.3	1341.0	1339.8	1351.4	1342.1	1347.9	1353.7
25°	1256.4	1270.3	1272.6	1287.7	1273.8	1301.6	1299.3	1312.0	1305.0	1308.5	1316.6
27.5°	1203.1	1219.3	1222.8	1235.5	1225.1	1248.3	1248.3	1258.7	1250.6	1250.6	1258.7
30°	1139.3	1155.5	1157.9	1168.3	1159.0	1179.9	1181.0	1191.5	1178.7	1185.7	1186.8
32.5°	1061.7	1072.1	1079.0	1088.3	1074.4	1101.1	1097.6	1105.7	1098.7	1098.7	1104.5
35°	967.8	980.5	984.0	995.6	984.0	1004.9	1004.9	1009.5	1002.5	1002.5	1011.8
37.5°	865.8	875.1	876.2	887.8	878.5	895.9	894.8	898.2	891.3	895.9	895.9
40°	746.4	753.4	755.7	761.5	760.3	773.1	771.9	774.2	770.7	771.9	774.2
42.5°	607.3	616.6	621.2	625.9	618.9	636.3	632.8	636.3	635.1	636.3	639.8
45°	447.4	454.3	457.8	459.0	456.7	467.1	475.2	468.2	469.4	467.1	471.7
47.5°	323.4	324.5	322.2	329.2	323.4	328.0	330.3	331.5	324.5	323.4	328.0
50°	221.4	227.2	219.1	222.5	221.4	226.0	223.7	224.8	217.9	221.4	219.1
52.5°	147.2	146.0	143.7	144.9	142.6	142.6	142.6	144.9	140.2	137.9	135.6
55°	89.2	86.9	82.3	81.1	81.1	82.3	80.0	77.7	77.7	76.5	76.5
57.5°	52.2	48.7	46.4	45.2	42.9	41.7	40.6	40.6	38.2	38.2	38.2
60°	29.0	25.5	23.2	20.9	20.9	19.7	18.5	17.4	17.4	17.4	16.2
62.5°	15.1	12.7	10.4	9.3	9.3	8.1	7.0	7.0	7.0	7.0	5.8
65°	10.4	8.1	7.0	5.8	5.8	4.6	4.6	4.6	4.6	4.6	4.6
67.5°	8.1	7.0	5.8	4.6	4.6	4.6	3.5	3.5	3.5	3.5	3.5
70°	7.0	4.6	4.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	4.6	4.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
75°	3.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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: P252161

CATALOG NUMBER: LD6B20D010 EU6B10209030 6LBSW1LI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3
2.5°	1230.9	1229.7	1230.9	1233.2	1228.6	1242.5	1235.5	1242.5
5°	1257.5	1258.7	1259.8	1263.3	1257.5	1274.9	1265.6	1276.1
7.5°	1292.3	1293.5	1294.6	1298.1	1294.6	1312.0	1301.6	1310.8
10°	1328.2	1330.5	1330.5	1336.3	1332.9	1349.1	1342.1	1353.7
12.5°	1361.8	1364.2	1366.5	1370.0	1367.6	1385.0	1379.2	1388.5
15°	1388.5	1393.1	1394.3	1398.9	1396.6	1415.2	1408.2	1417.5
17.5°	1401.2	1405.9	1405.9	1411.7	1409.4	1429.1	1419.8	1430.2
20°	1394.3	1397.8	1398.9	1404.7	1402.4	1422.1	1412.8	1425.6
22.5°	1372.3	1373.4	1374.6	1380.4	1379.2	1396.6	1388.5	1396.6
25°	1331.7	1335.2	1334.0	1338.7	1338.7	1352.6	1343.3	1350.2
27.5°	1273.8	1277.2	1277.2	1283.0	1278.4	1292.3	1283.0	1293.5
30°	1203.1	1206.5	1204.2	1208.8	1204.2	1218.1	1211.2	1214.6
32.5°	1118.4	1118.4	1119.6	1120.8	1118.4	1131.2	1124.2	1131.2
35°	1017.6	1019.9	1021.1	1022.2	1019.9	1029.2	1021.1	1025.7
37.5°	904.0	909.8	908.7	909.8	906.3	917.9	911.0	913.3
40°	782.3	782.3	781.2	783.5	780.0	789.3	784.7	787.0
42.5°	640.9	644.4	639.8	645.6	636.3	649.0	644.4	640.9
45°	481.0	476.4	475.2	476.4	472.9	474.0	477.5	475.2
47.5°	328.0	328.0	325.7	322.2	326.8	328.0	323.4	323.4
50°	220.2	220.2	217.9	216.7	219.1	217.9	215.6	219.1
52.5°	140.2	135.6	135.6	137.9	135.6	133.3	136.8	134.4
55°	76.5	74.2	74.2	76.5	74.2	74.2	73.0	75.3
57.5°	37.1	38.2	37.1	37.1	37.1	37.1	35.9	37.1
60°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
62.5°	7.0	7.0	5.8	5.8	5.8	5.8	5.8	5.8
65°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
67.5°	3.5	3.5	3.5	3.5	3.5	4.6	3.5	3.5
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	3.5	3.5	4.6	4.6	4.6	4.6	4.6	4.6
75°	2.3	2.3	2.3	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



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















(END OF REPORT)