

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: P252166

Luminaire Tested: **LD6B20D010 EU6B10209730 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: io LED  
Catalog Number: LD6B20D010 EU6B10209730 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: 1937.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 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

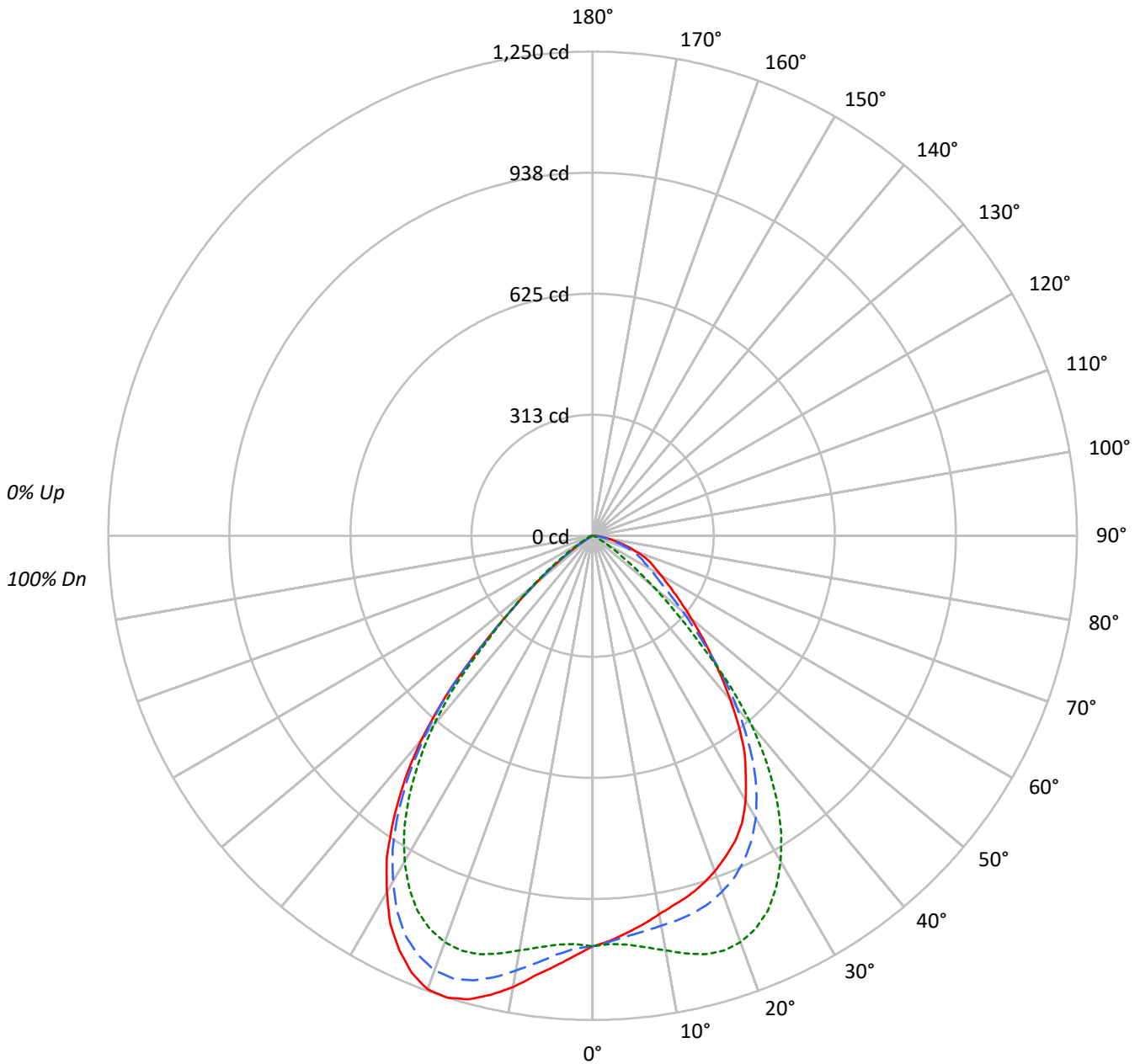
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	69135	69135	69135
5°	67343	69400	73047
10°	65704	72011	78390
15°	64935	75546	83685
20°	64005	77509	86514
25°	62641	76938	84957
30°	59528	73111	79981
35°	54461	65921	71409
40°	47105	54446	58585
45°	39729	35706	38327
50°	33727	20665	19437
55°	29266	9907	7496
60°	26436	4632	1853
65°	25641	2655	633
70°	23005	2117	572
75°	18905	1538	252
80°	14089	751	0
85°	12127	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.4	5.3
10°-20°	311.9	16.1
20°-30°	476.6	24.6
30°-40°	498.5	25.7
40°-50°	323.4	16.7
50°-60°	128.4	6.6
60°-70°	60.9	3.1
70°-80°	29.0	1.5
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°	890.9	46.0
0°-40°	1389.4	71.7
0°-60°	1841.2	95.1
0°-90°	1937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1937.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1060	1060	1060	1060	1060	
5°	1028	1037	1060	1086	1115	97
15°	961	1008	1118	1188	1239	271
25°	870	925	1069	1141	1180	398
35°	684	725	828	876	897	423
45°	431	426	387	410	415	335
55°	257	219	87	68	66	233
65°	166	138	17	4	4	162
75°	75	61	6	2	1	81
85°	16	10	0	0	0	19
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°	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7
2.5°	1046.5	1048.5	1037.4	1034.4	1042.5	1045.5	1046.5	1043.5	1044.5	1048.5	1048.5
5°	1028.3	1030.3	1020.2	1017.1	1025.2	1027.3	1030.3	1029.3	1032.3	1038.4	1037.4
7.5°	1011.1	1014.1	1003.0	998.9	1009.0	1014.1	1016.1	1016.1	1020.2	1028.3	1029.3
10°	991.8	995.9	985.7	983.7	994.9	999.9	1000.9	1003.0	1009.0	1020.2	1022.2
12.5°	975.6	979.7	972.6	969.5	981.7	986.7	988.8	992.8	999.9	1014.1	1016.1
15°	961.4	964.5	956.4	954.3	966.5	972.6	973.6	979.7	988.8	1005.0	1008.0
17.5°	943.2	945.2	939.1	937.1	949.3	955.3	956.4	963.4	974.6	990.8	995.9
20°	921.9	923.9	917.9	915.8	928.0	935.1	936.1	942.2	955.3	972.6	977.6
22.5°	896.6	900.6	893.5	891.5	903.7	909.8	912.8	917.9	931.0	948.3	955.3
25°	870.2	870.2	865.2	864.2	875.3	882.4	881.4	888.5	901.6	918.9	925.0
27.5°	835.8	834.8	829.7	828.7	840.9	846.9	844.9	852.0	864.2	881.4	887.5
30°	790.2	792.2	785.1	783.1	793.2	803.4	802.4	809.5	821.6	837.8	841.9
32.5°	735.5	737.5	736.5	733.5	742.6	747.7	750.7	755.8	765.9	783.1	787.2
35°	683.8	680.8	676.7	676.7	685.9	694.0	690.9	697.0	707.1	724.4	725.4
37.5°	620.0	619.0	617.0	614.9	625.1	627.1	628.1	632.2	641.3	655.5	653.4
40°	553.1	554.2	553.1	549.1	555.2	563.3	562.3	564.3	572.4	582.5	579.5
42.5°	490.3	490.3	490.3	486.3	493.4	497.4	499.5	498.4	500.5	509.6	505.5
45°	430.6	431.6	430.6	429.6	430.6	432.6	430.6	429.6	429.6	432.6	426.5
47.5°	378.9	378.9	375.9	372.8	375.9	376.9	373.8	370.8	369.8	368.8	358.6
50°	332.3	331.3	330.3	325.2	328.2	329.3	325.2	323.2	319.1	314.1	301.9
52.5°	291.8	290.8	289.7	284.7	286.7	287.7	283.7	279.6	274.5	270.5	255.3
55°	257.3	256.3	256.3	253.3	251.2	253.3	249.2	246.2	239.1	234.0	218.8
57.5°	227.9	227.9	225.9	222.9	223.9	223.9	219.8	215.8	209.7	203.6	191.5
60°	202.6	202.6	202.6	199.6	199.6	199.6	197.6	193.5	188.4	182.4	170.2
62.5°	182.4	182.4	181.3	178.3	179.3	179.3	177.3	173.2	168.2	164.1	152.0
65°	166.1	166.1	166.1	163.1	163.1	164.1	162.1	158.0	154.0	148.9	137.8
67.5°	145.9	144.9	144.9	142.8	143.9	144.9	142.8	139.8	134.7	131.7	121.6
70°	120.6	121.6	122.6	119.5	120.6	120.6	119.5	116.5	113.5	110.4	101.3
72.5°	98.3	98.3	97.3	96.2	96.2	97.3	95.2	92.2	90.2	88.1	81.0
75°	75.0	74.0	75.0	72.9	72.9	72.9	70.9	69.9	68.9	65.9	60.8
77.5°	54.7	53.7	53.7	51.7	52.7	52.7	51.7	49.6	47.6	46.6	42.5
80°	37.5	37.5	37.5	36.5	36.5	35.5	35.5	34.4	32.4	31.4	29.4
82.5°	25.3	25.3	25.3	24.3	24.3	24.3	23.3	22.3	21.3	20.3	18.2
85°	16.2	16.2	16.2	15.2	15.2	15.2	14.2	14.2	13.2	12.2	10.1
87.5°	9.1	9.1	9.1	8.1	8.1	8.1	8.1	8.1	7.1	6.1	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°	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7
2.5°	1055.6	1041.5	1050.6	1050.6	1047.5	1055.6	1060.7	1064.8	1063.7	1054.6	1053.6
5°	1047.5	1035.4	1045.5	1046.5	1043.5	1054.6	1061.7	1066.8	1067.8	1059.7	1060.7
7.5°	1041.5	1031.3	1044.5	1048.5	1047.5	1057.7	1065.8	1073.9	1077.9	1071.8	1072.9
10°	1038.4	1030.3	1044.5	1050.6	1051.6	1062.7	1074.9	1086.0	1091.1	1087.0	1090.1
12.5°	1034.4	1029.3	1045.5	1054.6	1058.7	1069.8	1085.0	1098.2	1106.3	1104.3	1110.3
15°	1030.3	1026.3	1045.5	1058.7	1063.7	1073.9	1091.1	1110.3	1119.5	1118.5	1126.6
17.5°	1020.2	1019.2	1039.4	1053.6	1060.7	1072.9	1089.1	1112.4	1121.5	1123.5	1133.6
20°	1004.0	1004.0	1026.3	1041.5	1049.6	1060.7	1081.0	1103.3	1114.4	1116.4	1127.6
22.5°	981.7	983.7	1005.0	1020.2	1032.3	1040.4	1061.7	1085.0	1095.1	1098.2	1110.3
25°	952.3	954.3	974.6	989.8	1003.0	1012.1	1032.3	1053.6	1065.8	1068.8	1077.9
27.5°	913.8	917.9	937.1	952.3	963.4	969.5	990.8	1013.1	1022.2	1025.2	1034.4
30°	869.2	870.2	889.5	902.7	913.8	918.9	937.1	960.4	967.5	970.5	983.7
32.5°	814.5	813.5	831.7	843.9	853.0	859.1	878.3	893.5	900.6	905.7	912.8
35°	748.7	747.7	760.8	775.0	782.1	784.1	803.4	819.6	823.6	827.7	836.8
37.5°	674.7	674.7	685.9	693.0	701.1	704.1	713.2	731.5	738.5	737.5	744.6
40°	596.7	592.7	600.8	607.9	609.9	610.9	620.0	634.2	639.3	639.3	644.3
42.5°	514.6	508.6	509.6	513.6	515.7	508.6	514.6	523.8	520.7	524.8	525.8
45°	427.5	418.4	414.4	405.2	407.3	400.2	396.1	398.1	397.1	387.0	389.0
47.5°	356.6	340.4	333.3	320.1	317.1	309.0	303.9	294.8	286.7	286.7	281.6
50°	296.8	280.6	266.4	251.2	246.2	239.1	227.9	215.8	209.7	203.6	198.6
52.5°	249.2	232.0	214.8	198.6	191.5	182.4	167.2	155.0	143.9	137.8	131.7
55°	210.7	191.5	173.2	156.0	146.9	137.8	122.6	108.4	95.2	87.1	82.1
57.5°	181.3	163.1	143.9	125.6	117.5	107.4	91.2	76.0	63.8	54.7	49.6
60°	160.1	141.8	124.6	105.4	97.3	87.1	69.9	55.7	43.6	35.5	29.4
62.5°	141.8	125.6	107.4	90.2	82.1	71.9	55.7	41.5	30.4	22.3	17.2
65°	128.7	112.5	97.3	80.0	72.9	62.8	47.6	34.4	24.3	17.2	12.2
67.5°	113.5	99.3	84.1	69.9	62.8	54.7	40.5	29.4	20.3	14.2	10.1
70°	95.2	84.1	70.9	57.7	52.7	45.6	33.4	24.3	16.2	11.1	8.1
72.5°	76.0	66.9	56.7	46.6	42.5	35.5	27.4	19.2	12.2	8.1	6.1
75°	57.7	50.7	42.5	35.5	31.4	27.4	20.3	14.2	9.1	6.1	4.1
77.5°	39.5	36.5	30.4	24.3	22.3	19.2	13.2	9.1	6.1	4.1	2.0
80°	27.4	24.3	20.3	16.2	14.2	12.2	8.1	6.1	3.0	2.0	1.0
82.5°	17.2	14.2	12.2	10.1	9.1	7.1	5.1	3.0	2.0	1.0	1.0
85°	9.1	8.1	7.1	5.1	5.1	4.1	3.0	2.0	1.0	0.0	0.0
87.5°	5.1	4.1	3.0	2.0	2.0	1.0	1.0	1.0	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°	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7
2.5°	1065.8	1065.8	1064.8	1076.9	1062.7	1076.9	1069.8	1076.9	1066.8	1065.8	1066.8
5°	1073.9	1076.9	1077.9	1089.1	1075.9	1093.1	1087.0	1093.1	1086.0	1088.1	1091.1
7.5°	1090.1	1095.1	1094.1	1108.3	1095.1	1114.4	1110.3	1119.5	1112.4	1114.4	1118.5
10°	1108.3	1114.4	1115.4	1129.6	1117.4	1140.7	1135.7	1145.8	1139.7	1142.8	1147.8
12.5°	1129.6	1136.7	1137.7	1153.9	1140.7	1165.1	1162.0	1172.1	1167.1	1170.1	1176.2
15°	1145.8	1155.9	1158.0	1174.2	1160.0	1185.3	1183.3	1196.5	1188.4	1193.4	1198.5
17.5°	1153.9	1163.0	1167.1	1182.3	1170.1	1195.4	1193.4	1204.6	1198.5	1203.6	1209.6
20°	1148.8	1160.0	1163.0	1178.2	1166.1	1191.4	1188.4	1199.5	1193.4	1197.5	1203.6
22.5°	1130.6	1141.8	1145.8	1160.0	1148.8	1172.1	1171.1	1181.3	1173.2	1178.2	1183.3
25°	1098.2	1110.3	1112.4	1125.5	1113.4	1137.7	1135.7	1146.8	1140.7	1143.8	1150.9
27.5°	1051.6	1065.8	1068.8	1080.0	1070.8	1091.1	1091.1	1100.2	1093.1	1093.1	1100.2
30°	995.9	1010.1	1012.1	1021.2	1013.1	1031.3	1032.3	1041.5	1030.3	1036.4	1037.4
32.5°	928.0	937.1	943.2	951.3	939.1	962.4	959.4	966.5	960.4	960.4	965.5
35°	845.9	857.1	860.1	870.2	860.1	878.3	878.3	882.4	876.3	876.3	884.4
37.5°	756.8	764.9	765.9	776.0	767.9	783.1	782.1	785.1	779.1	783.1	783.1
40°	652.4	658.5	660.5	665.6	664.6	675.7	674.7	676.7	673.7	674.7	676.7
42.5°	530.9	539.0	543.0	547.1	541.0	556.2	553.1	556.2	555.2	556.2	559.2
45°	391.1	397.1	400.2	401.2	399.2	408.3	415.4	409.3	410.3	408.3	412.3
47.5°	282.7	283.7	281.6	287.7	282.7	286.7	288.7	289.7	283.7	282.7	286.7
50°	193.5	198.6	191.5	194.5	193.5	197.6	195.5	196.5	190.5	193.5	191.5
52.5°	128.7	127.6	125.6	126.6	124.6	124.6	124.6	126.6	122.6	120.6	118.5
55°	78.0	76.0	71.9	70.9	70.9	71.9	69.9	67.9	67.9	66.9	66.9
57.5°	45.6	42.5	40.5	39.5	37.5	36.5	35.5	35.5	33.4	33.4	33.4
60°	25.3	22.3	20.3	18.2	18.2	17.2	16.2	15.2	15.2	15.2	14.2
62.5°	13.2	11.1	9.1	8.1	8.1	7.1	6.1	6.1	6.1	6.1	5.1
65°	9.1	7.1	6.1	5.1	5.1	4.1	4.1	4.1	4.1	4.1	4.1
67.5°	7.1	6.1	5.1	4.1	4.1	4.1	3.0	3.0	3.0	3.0	3.0
70°	6.1	4.1	4.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	4.1	4.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
75°	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
80°	1.0	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: LD6B20D010 EU6B10209730 6LBSW1LI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7	1059.7
2.5°	1075.9	1074.9	1075.9	1077.9	1073.9	1086.0	1080.0	1086.0
5°	1099.2	1100.2	1101.2	1104.3	1099.2	1114.4	1106.3	1115.4
7.5°	1129.6	1130.6	1131.6	1134.7	1131.6	1146.8	1137.7	1145.8
10°	1161.0	1163.0	1163.0	1168.1	1165.1	1179.2	1173.2	1183.3
12.5°	1190.4	1192.4	1194.4	1197.5	1195.4	1210.6	1205.6	1213.7
15°	1213.7	1217.7	1218.7	1222.8	1220.8	1237.0	1230.9	1239.0
17.5°	1224.8	1228.9	1228.9	1233.9	1231.9	1249.1	1241.0	1250.2
20°	1218.7	1221.8	1222.8	1227.9	1225.8	1243.1	1235.0	1246.1
22.5°	1199.5	1200.5	1201.5	1206.6	1205.6	1220.8	1213.7	1220.8
25°	1164.0	1167.1	1166.1	1170.1	1170.1	1182.3	1174.2	1180.2
27.5°	1113.4	1116.4	1116.4	1121.5	1117.4	1129.6	1121.5	1130.6
30°	1051.6	1054.6	1052.6	1056.7	1052.6	1064.8	1058.7	1061.7
32.5°	977.6	977.6	978.6	979.7	977.6	988.8	982.7	988.8
35°	889.5	891.5	892.5	893.5	891.5	899.6	892.5	896.6
37.5°	790.2	795.3	794.3	795.3	792.2	802.4	796.3	798.3
40°	683.8	683.8	682.8	684.8	681.8	689.9	685.9	687.9
42.5°	560.2	563.3	559.2	564.3	556.2	567.3	563.3	560.2
45°	420.4	416.4	415.4	416.4	413.3	414.4	417.4	415.4
47.5°	286.7	286.7	284.7	281.6	285.7	286.7	282.7	282.7
50°	192.5	192.5	190.5	189.4	191.5	190.5	188.4	191.5
52.5°	122.6	118.5	118.5	120.6	118.5	116.5	119.5	117.5
55°	66.9	64.8	64.8	66.9	64.8	64.8	63.8	65.9
57.5°	32.4	33.4	32.4	32.4	32.4	32.4	31.4	32.4
60°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
62.5°	6.1	6.1	5.1	5.1	5.1	5.1	5.1	5.1
65°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
67.5°	3.0	3.0	3.0	3.0	3.0	4.1	3.0	3.0
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	3.0	3.0	4.1	4.1	4.1	4.1	4.1	4.1
75°	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
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)