

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: P212738

Luminaire Tested: **LD4B30D010 EU4B30509030 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212738
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29201)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B30D010 EU4B30509030 4LBSWLI1
Description: PORTFOLIO 4 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: 2262.0 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

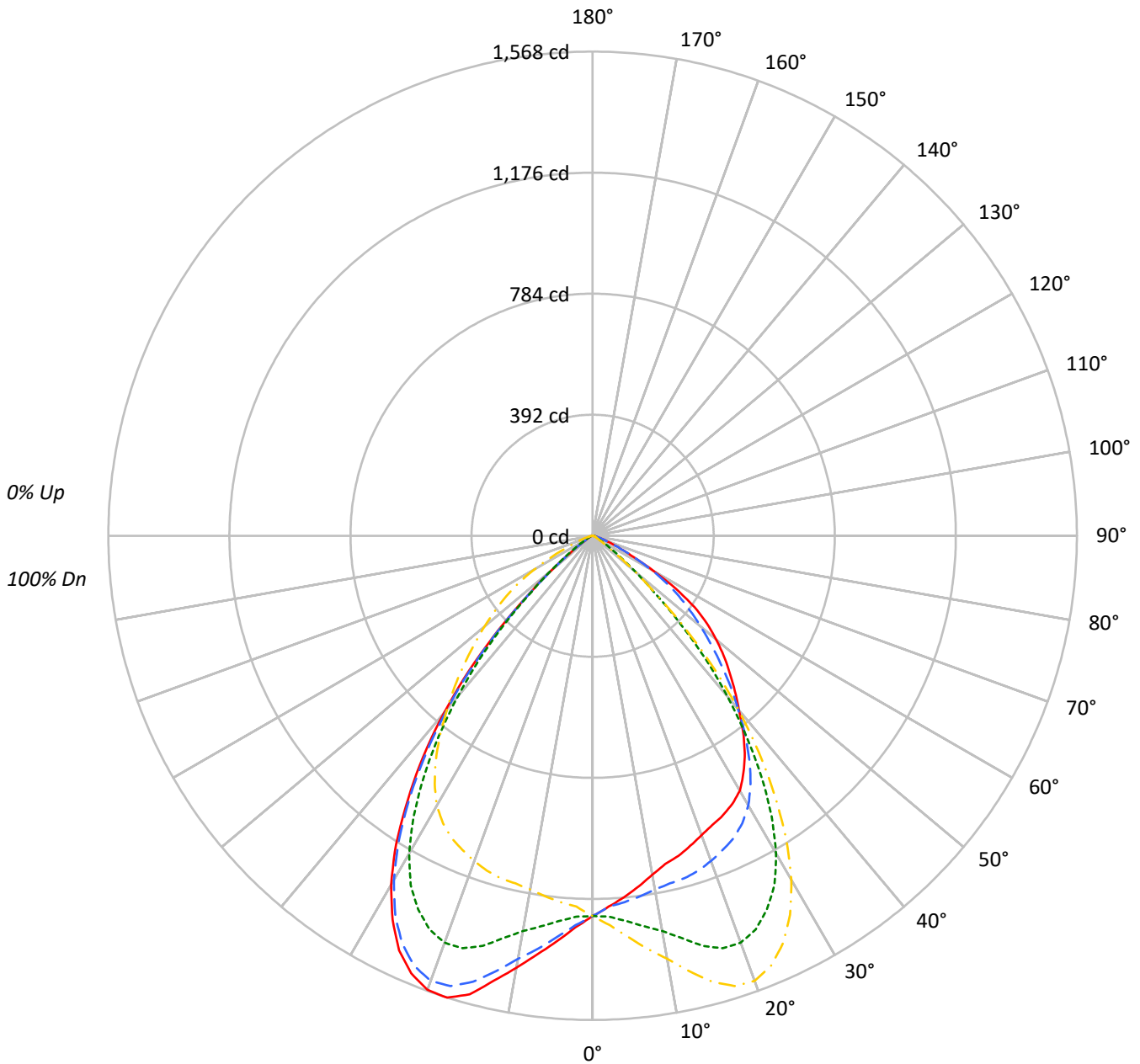
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	106	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				82
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				66
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60				60
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				54
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49				49
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45				45
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	52	46	43	41				41
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38				38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	151888	151888	151888	151888
5°	145423	155093	163141	155093
10°	139564	162785	177865	162785
15°	137095	175532	196296	175532
20°	135370	184055	205411	184055
25°	135934	181757	201682	181757
30°	135776	169132	185811	169132
35°	129331	143545	157007	143545
40°	118653	109217	120488	109217
45°	109529	69513	74921	69513
50°	100206	33715	32775	33715
55°	86750	14688	10494	14688
60°	56172	7228	4810	7228
65°	29449	4757	3794	4757
70°	15832	3534	2921	3534
75°	8531	3098	2335	3098
80°	5754	2344	1137	2344
85°	4670	2264	0	2264



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	5.3
10°-20°	375.5	16.6
20°-30°	583.9	25.8
30°-40°	589.7	26.1
40°-50°	373.4	16.5
50°-60°	156.7	6.9
60°-70°	49.7	2.2
70°-80°	11.4	0.5
80°-90°	1.6	0.1
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°	1079.5	47.7
0°-40°	1669.2	73.8
0°-60°	2199.3	97.2
0°-90°	2262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2262.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1231	1231	1231	1231	1231	
5°	1174	1253	1318	1253	1174	110
15°	1074	1375	1537	1375	1074	303
25°	999	1336	1482	1336	999	460
35°	859	953	1043	953	859	533
45°	628	398	430	398	628	485
55°	403	68	49	68	403	348
65°	101	16	13	16	101	111
75°	18	6	5	6	18	22
85°	3	2	0	2	3	3
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°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1202.1	1190.8	1200.5	1203.8	1203.8	1202.1	1205.4	1202.1	1197.3	1216.8	1202.1
5°	1174.5	1166.4	1174.5	1177.7	1179.4	1181.0	1184.3	1184.3	1182.6	1200.5	1190.8
7.5°	1145.2	1140.3	1146.8	1151.7	1158.2	1156.6	1161.5	1163.1	1166.4	1187.5	1177.7
10°	1114.3	1109.4	1117.6	1120.8	1128.9	1130.6	1133.8	1138.7	1145.2	1166.4	1163.1
12.5°	1088.3	1086.6	1091.5	1098.0	1106.2	1107.8	1111.0	1119.2	1128.9	1151.7	1153.3
15°	1073.6	1072.0	1076.9	1083.4	1089.9	1093.2	1096.4	1107.8	1117.6	1142.0	1148.5
17.5°	1052.5	1052.5	1057.4	1063.9	1072.0	1075.3	1080.1	1091.5	1104.5	1128.9	1137.1
20°	1031.3	1033.0	1036.2	1042.7	1050.9	1054.1	1059.0	1070.4	1085.0	1109.4	1120.8
22.5°	1013.4	1018.3	1020.0	1024.8	1033.0	1037.8	1039.5	1052.5	1065.5	1086.6	1101.3
25°	998.8	1005.3	1005.3	1008.6	1018.3	1020.0	1021.6	1034.6	1046.0	1065.5	1080.1
27.5°	979.3	985.8	985.8	990.7	997.2	1000.4	1000.4	1011.8	1023.2	1037.8	1049.2
30°	953.3	958.1	958.1	959.8	966.3	969.5	967.9	979.3	987.4	997.2	1008.6
32.5°	909.3	917.5	914.2	919.1	922.3	925.6	922.3	932.1	938.6	948.4	951.6
35°	858.9	865.4	860.5	863.8	870.3	870.3	868.7	875.2	878.4	883.3	884.9
37.5°	800.3	805.2	802.0	803.6	806.9	808.5	805.2	811.7	811.7	813.4	810.1
40°	736.9	745.0	740.2	740.2	743.4	745.0	740.2	743.4	746.7	738.5	732.0
42.5°	681.6	689.7	684.8	684.8	684.8	686.5	680.0	681.6	681.6	670.2	660.4
45°	627.9	634.4	629.5	624.7	626.3	627.9	621.4	619.8	614.9	601.9	587.2
47.5°	575.9	582.4	575.9	572.6	572.6	572.6	564.5	559.6	553.1	535.2	517.3
50°	522.2	528.7	523.8	520.6	517.3	517.3	510.8	504.3	494.5	476.6	457.1
52.5°	466.9	471.7	466.9	463.6	460.4	460.4	452.2	447.3	436.0	418.1	396.9
55°	403.4	406.7	401.8	398.5	396.9	396.9	390.4	385.5	375.8	361.1	341.6
57.5°	318.8	325.3	317.2	320.5	320.5	318.8	314.0	312.3	309.1	296.1	281.4
60°	227.7	227.7	226.1	232.6	231.0	234.2	231.0	232.6	234.2	224.5	214.7
62.5°	149.7	154.5	151.3	154.5	157.8	157.8	156.2	159.4	162.7	157.8	152.9
65°	100.9	100.9	100.9	102.5	102.5	104.1	102.5	104.1	105.7	104.1	100.9
67.5°	66.7	68.3	66.7	68.3	66.7	68.3	68.3	68.3	69.9	68.3	66.7
70°	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	45.5	43.9	42.3
72.5°	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
75°	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9
77.5°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
80°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	6.5	8.1	6.5	6.5
82.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
85°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	1.6	3.3	1.6	1.6
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1210.3	1205.4	1229.8	1208.7	1220.0	1218.4	1220.0	1229.8	1229.8	1234.7	1233.1
5°	1203.8	1198.9	1226.5	1210.3	1223.3	1223.3	1228.2	1242.8	1242.8	1252.6	1254.2
7.5°	1194.0	1195.6	1224.9	1215.2	1229.8	1231.4	1239.6	1257.5	1262.3	1275.3	1281.9
10°	1182.6	1189.1	1220.0	1216.8	1236.3	1237.9	1254.2	1275.3	1281.9	1299.7	1311.1
12.5°	1177.7	1189.1	1224.9	1228.2	1247.7	1255.8	1273.7	1301.4	1312.8	1333.9	1350.2
15°	1176.1	1192.4	1231.4	1242.8	1265.6	1277.0	1301.4	1333.9	1346.9	1374.6	1394.1
17.5°	1168.0	1189.1	1231.4	1249.3	1273.7	1285.1	1316.0	1353.4	1369.7	1400.6	1423.4
20°	1153.3	1176.1	1218.4	1241.2	1267.2	1283.5	1314.4	1353.4	1369.7	1402.2	1428.3
22.5°	1133.8	1156.6	1197.3	1223.3	1246.1	1264.0	1296.5	1333.9	1348.6	1379.5	1405.5
25°	1109.4	1132.2	1166.4	1192.4	1213.5	1229.8	1257.5	1296.5	1306.3	1335.5	1363.2
27.5°	1075.3	1096.4	1122.4	1146.8	1166.4	1179.4	1203.8	1237.9	1246.1	1275.3	1298.1
30°	1029.7	1042.7	1065.5	1081.8	1096.4	1109.4	1127.3	1158.2	1161.5	1187.5	1208.7
32.5°	967.9	974.4	990.7	998.8	1011.8	1016.7	1031.3	1057.4	1054.1	1078.5	1096.4
35°	893.1	896.3	896.3	906.1	909.3	911.0	922.3	937.0	932.1	953.3	966.3
37.5°	811.7	810.1	800.3	800.3	802.0	797.1	802.0	808.5	802.0	818.2	829.6
40°	728.8	719.0	701.1	691.4	686.5	684.8	675.1	683.2	667.0	678.3	686.5
42.5°	649.1	632.8	605.1	585.6	577.5	569.4	553.1	553.1	531.9	540.1	541.7
45°	567.7	540.1	502.7	484.8	463.6	450.6	429.5	408.3	393.7	398.5	393.7
47.5°	492.9	460.4	416.4	385.5	361.1	343.2	314.0	289.6	274.9	268.4	261.9
50°	427.8	395.3	344.9	305.8	281.4	260.3	231.0	203.3	185.4	175.7	170.8
52.5°	369.3	335.1	286.3	245.6	219.6	200.1	167.6	139.9	120.4	109.0	102.5
55°	314.0	283.0	237.5	200.1	175.7	156.2	123.6	97.6	79.7	68.3	60.2
57.5°	258.6	231.0	193.6	157.8	136.6	118.8	91.1	68.3	53.7	43.9	37.4
60°	198.5	177.3	146.4	118.8	100.9	86.2	65.1	47.2	37.4	29.3	26.0
62.5°	139.9	126.9	104.1	84.6	73.2	61.8	45.5	34.2	26.0	21.1	19.5
65°	94.3	84.6	71.6	56.9	48.8	42.3	32.5	24.4	19.5	16.3	14.6
67.5°	61.8	56.9	47.2	39.0	34.2	29.3	22.8	17.9	14.6	13.0	11.4
70°	40.7	37.4	30.9	26.0	24.4	21.1	16.3	13.0	11.4	9.8	9.8
72.5°	26.0	22.8	21.1	17.9	16.3	14.6	11.4	9.8	8.1	8.1	8.1
75°	16.3	14.6	13.0	11.4	11.4	9.8	8.1	8.1	6.5	6.5	6.5
77.5°	9.8	9.8	8.1	8.1	6.5	6.5	6.5	4.9	4.9	4.9	4.9
80°	6.5	6.5	4.9	4.9	4.9	4.9	3.3	3.3	3.3	3.3	3.3
82.5°	3.3	3.3	3.3	3.3	3.3	3.3	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1241.2	1244.4	1241.2	1250.9	1234.7	1252.6	1246.1	1249.3	1262.3	1257.5	1262.3
5°	1265.6	1272.1	1272.1	1283.5	1268.8	1290.0	1283.5	1290.0	1303.0	1303.0	1309.5
7.5°	1296.5	1304.6	1307.9	1319.3	1304.6	1330.7	1324.1	1332.3	1348.6	1348.6	1353.4
10°	1329.0	1338.8	1345.3	1358.3	1342.0	1371.3	1364.8	1376.2	1390.8	1392.5	1400.6
12.5°	1369.7	1382.7	1390.8	1402.2	1390.8	1420.1	1413.6	1425.0	1444.5	1446.2	1455.9
15°	1415.2	1431.5	1441.3	1454.3	1441.3	1473.8	1467.3	1480.3	1495.0	1501.5	1511.2
17.5°	1444.5	1464.0	1472.2	1486.8	1473.8	1506.3	1498.2	1516.1	1529.1	1532.4	1543.8
20°	1449.4	1467.3	1478.7	1490.1	1478.7	1511.2	1503.1	1517.7	1534.0	1537.2	1545.4
22.5°	1428.3	1442.9	1455.9	1465.7	1455.9	1488.4	1477.1	1493.3	1508.0	1511.2	1517.7
25°	1379.5	1397.4	1410.4	1418.5	1408.7	1439.6	1429.9	1444.5	1457.5	1464.0	1465.7
27.5°	1311.1	1327.4	1340.4	1345.3	1338.8	1368.1	1355.1	1373.0	1384.3	1387.6	1392.5
30°	1218.4	1233.1	1246.1	1249.3	1244.4	1265.6	1259.1	1275.3	1286.7	1290.0	1293.2
32.5°	1104.5	1119.2	1127.3	1130.6	1125.7	1146.8	1140.3	1153.3	1166.4	1166.4	1166.4
35°	976.0	989.0	993.9	1003.7	992.3	1013.4	1006.9	1018.3	1029.7	1029.7	1031.3
37.5°	837.8	847.5	850.8	860.5	849.1	868.7	863.8	873.5	883.3	881.7	884.9
40°	689.7	699.5	702.7	710.9	701.1	717.4	714.1	723.9	732.0	732.0	732.0
42.5°	546.6	553.1	553.1	561.2	551.5	566.1	566.1	572.6	580.7	579.1	579.1
45°	396.9	395.3	398.5	396.9	396.9	409.9	409.9	413.2	419.7	416.4	418.1
47.5°	263.5	265.2	258.6	263.5	257.0	268.4	268.4	268.4	273.3	270.0	273.3
50°	167.6	162.7	159.4	159.4	157.8	165.9	162.7	164.3	167.6	164.3	167.6
52.5°	94.3	92.7	89.5	91.1	87.8	89.5	89.5	89.5	91.1	89.5	92.7
55°	55.3	50.4	48.8	48.8	47.2	48.8	47.2	47.2	47.2	45.5	47.2
57.5°	32.5	30.9	29.3	29.3	27.7	27.7	27.7	27.7	27.7	27.7	27.7
60°	22.8	21.1	21.1	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
62.5°	17.9	16.3	16.3	16.3	14.6	14.6	14.6	14.6	14.6	16.3	14.6
65°	13.0	13.0	13.0	13.0	13.0	13.0	11.4	13.0	13.0	13.0	13.0
67.5°	11.4	11.4	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
70°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
72.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
80°	3.3	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	0.0	1.6	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: P212738

CATALOG NUMBER: LD4B30D010 EU4B30509030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1267.2	1260.7	1246.1	1255.8	1257.5	1250.9	1259.1	1268.8	1259.1	1250.9	1257.5
5°	1314.4	1309.5	1296.5	1304.6	1306.3	1304.6	1309.5	1317.6	1309.5	1304.6	1306.3
7.5°	1361.6	1358.3	1343.7	1353.4	1356.7	1353.4	1358.3	1366.4	1358.3	1353.4	1356.7
10°	1407.1	1405.5	1390.8	1403.9	1405.5	1402.2	1407.1	1420.1	1407.1	1402.2	1405.5
12.5°	1459.2	1462.4	1446.2	1460.8	1462.4	1459.2	1465.7	1475.4	1465.7	1459.2	1462.4
15°	1519.4	1517.7	1504.7	1516.1	1519.4	1516.1	1524.2	1537.2	1524.2	1516.1	1519.4
17.5°	1548.6	1548.6	1538.9	1550.3	1551.9	1551.9	1558.4	1568.2	1558.4	1551.9	1551.9
20°	1550.3	1551.9	1540.5	1553.5	1553.5	1553.5	1560.0	1564.9	1560.0	1553.5	1553.5
22.5°	1524.2	1525.9	1514.5	1525.9	1525.9	1527.5	1530.7	1534.0	1530.7	1527.5	1525.9
25°	1473.8	1475.4	1465.7	1475.4	1473.8	1473.8	1477.1	1481.9	1477.1	1473.8	1473.8
27.5°	1399.0	1400.6	1387.6	1399.0	1397.4	1395.7	1400.6	1402.2	1400.6	1395.7	1397.4
30°	1299.7	1301.4	1290.0	1299.7	1298.1	1296.5	1303.0	1304.6	1303.0	1296.5	1298.1
32.5°	1181.0	1177.7	1169.6	1177.7	1176.1	1176.1	1179.4	1184.3	1179.4	1176.1	1176.1
35°	1037.8	1037.8	1033.0	1039.5	1034.6	1041.1	1041.1	1042.7	1041.1	1041.1	1034.6
37.5°	891.4	891.4	888.2	891.4	889.8	896.3	896.3	901.2	896.3	896.3	889.8
40°	738.5	738.5	735.3	738.5	743.4	743.4	741.8	748.3	741.8	743.4	743.4
42.5°	584.0	584.0	582.4	590.5	590.5	590.5	585.6	592.1	585.6	590.5	590.5
45°	424.6	421.3	419.7	419.7	421.3	427.8	421.3	429.5	421.3	427.8	421.3
47.5°	270.0	271.7	273.3	278.2	274.9	273.3	273.3	278.2	273.3	273.3	274.9
50°	165.9	167.6	167.6	170.8	165.9	169.2	167.6	170.8	167.6	169.2	165.9
52.5°	91.1	91.1	91.1	94.3	91.1	92.7	91.1	94.3	91.1	92.7	91.1
55°	47.2	47.2	47.2	48.8	47.2	47.2	47.2	48.8	47.2	47.2	47.2
57.5°	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
60°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
62.5°	16.3	14.6	14.6	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
65°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
67.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
70°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
72.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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: P212738

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1255.8	1246.1	1260.7	1267.2	1262.3	1257.5	1262.3	1249.3	1246.1	1252.6	1234.7
5°	1304.6	1296.5	1309.5	1314.4	1309.5	1303.0	1303.0	1290.0	1283.5	1290.0	1268.8
7.5°	1353.4	1343.7	1358.3	1361.6	1353.4	1348.6	1348.6	1332.3	1324.1	1330.7	1304.6
10°	1403.9	1390.8	1405.5	1407.1	1400.6	1392.5	1390.8	1376.2	1364.8	1371.3	1342.0
12.5°	1460.8	1446.2	1462.4	1459.2	1455.9	1446.2	1444.5	1425.0	1413.6	1420.1	1390.8
15°	1516.1	1504.7	1517.7	1519.4	1511.2	1501.5	1495.0	1480.3	1467.3	1473.8	1441.3
17.5°	1550.3	1538.9	1548.6	1548.6	1543.8	1532.4	1529.1	1516.1	1498.2	1506.3	1473.8
20°	1553.5	1540.5	1551.9	1550.3	1545.4	1537.2	1534.0	1517.7	1503.1	1511.2	1478.7
22.5°	1525.9	1514.5	1525.9	1524.2	1517.7	1511.2	1508.0	1493.3	1477.1	1488.4	1455.9
25°	1475.4	1465.7	1475.4	1473.8	1465.7	1464.0	1457.5	1444.5	1429.9	1439.6	1408.7
27.5°	1399.0	1387.6	1400.6	1399.0	1392.5	1387.6	1384.3	1373.0	1355.1	1368.1	1338.8
30°	1299.7	1290.0	1301.4	1299.7	1293.2	1290.0	1286.7	1275.3	1259.1	1265.6	1244.4
32.5°	1177.7	1169.6	1177.7	1181.0	1166.4	1166.4	1166.4	1153.3	1140.3	1146.8	1125.7
35°	1039.5	1033.0	1037.8	1037.8	1031.3	1029.7	1029.7	1018.3	1006.9	1013.4	992.3
37.5°	891.4	888.2	891.4	891.4	884.9	881.7	883.3	873.5	863.8	868.7	849.1
40°	738.5	735.3	738.5	738.5	732.0	732.0	732.0	723.9	714.1	717.4	701.1
42.5°	590.5	582.4	584.0	584.0	579.1	579.1	580.7	572.6	566.1	566.1	551.5
45°	419.7	419.7	421.3	424.6	418.1	416.4	419.7	413.2	409.9	409.9	396.9
47.5°	278.2	273.3	271.7	270.0	273.3	270.0	273.3	268.4	268.4	268.4	257.0
50°	170.8	167.6	167.6	165.9	167.6	164.3	167.6	164.3	162.7	165.9	157.8
52.5°	94.3	91.1	91.1	91.1	92.7	89.5	91.1	89.5	89.5	89.5	87.8
55°	48.8	47.2	47.2	47.2	47.2	45.5	47.2	47.2	47.2	48.8	47.2
57.5°	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
60°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
62.5°	16.3	14.6	14.6	16.3	14.6	16.3	14.6	14.6	14.6	14.6	14.6
65°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	11.4	13.0	13.0
67.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
70°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
72.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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: P212738

CATALOG NUMBER: LD4B30D010 EU4B30509030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1250.9	1241.2	1244.4	1241.2	1233.1	1234.7	1229.8	1229.8	1220.0	1218.4	1220.0
5°	1283.5	1272.1	1272.1	1265.6	1254.2	1252.6	1242.8	1242.8	1228.2	1223.3	1223.3
7.5°	1319.3	1307.9	1304.6	1296.5	1281.9	1275.3	1262.3	1257.5	1239.6	1231.4	1229.8
10°	1358.3	1345.3	1338.8	1329.0	1311.1	1299.7	1281.9	1275.3	1254.2	1237.9	1236.3
12.5°	1402.2	1390.8	1382.7	1369.7	1350.2	1333.9	1312.8	1301.4	1273.7	1255.8	1247.7
15°	1454.3	1441.3	1431.5	1415.2	1394.1	1374.6	1346.9	1333.9	1301.4	1277.0	1265.6
17.5°	1486.8	1472.2	1464.0	1444.5	1423.4	1400.6	1369.7	1353.4	1316.0	1285.1	1273.7
20°	1490.1	1478.7	1467.3	1449.4	1428.3	1402.2	1369.7	1353.4	1314.4	1283.5	1267.2
22.5°	1465.7	1455.9	1442.9	1428.3	1405.5	1379.5	1348.6	1333.9	1296.5	1264.0	1246.1
25°	1418.5	1410.4	1397.4	1379.5	1363.2	1335.5	1306.3	1296.5	1257.5	1229.8	1213.5
27.5°	1345.3	1340.4	1327.4	1311.1	1298.1	1275.3	1246.1	1237.9	1203.8	1179.4	1166.4
30°	1249.3	1246.1	1233.1	1218.4	1208.7	1187.5	1161.5	1158.2	1127.3	1109.4	1096.4
32.5°	1130.6	1127.3	1119.2	1104.5	1096.4	1078.5	1054.1	1057.4	1031.3	1016.7	1011.8
35°	1003.7	993.9	989.0	976.0	966.3	953.3	932.1	937.0	922.3	911.0	909.3
37.5°	860.5	850.8	847.5	837.8	829.6	818.2	802.0	808.5	802.0	797.1	802.0
40°	710.9	702.7	699.5	689.7	686.5	678.3	667.0	683.2	675.1	684.8	686.5
42.5°	561.2	553.1	553.1	546.6	541.7	540.1	531.9	553.1	553.1	569.4	577.5
45°	396.9	398.5	395.3	396.9	393.7	398.5	393.7	408.3	429.5	450.6	463.6
47.5°	263.5	258.6	265.2	263.5	261.9	268.4	274.9	289.6	314.0	343.2	361.1
50°	159.4	159.4	162.7	167.6	170.8	175.7	185.4	203.3	231.0	260.3	281.4
52.5°	91.1	89.5	92.7	94.3	102.5	109.0	120.4	139.9	167.6	200.1	219.6
55°	48.8	48.8	50.4	55.3	60.2	68.3	79.7	97.6	123.6	156.2	175.7
57.5°	29.3	29.3	30.9	32.5	37.4	43.9	53.7	68.3	91.1	118.8	136.6
60°	19.5	21.1	21.1	22.8	26.0	29.3	37.4	47.2	65.1	86.2	100.9
62.5°	16.3	16.3	16.3	17.9	19.5	21.1	26.0	34.2	45.5	61.8	73.2
65°	13.0	13.0	13.0	13.0	14.6	16.3	19.5	24.4	32.5	42.3	48.8
67.5°	9.8	9.8	11.4	11.4	11.4	13.0	14.6	17.9	22.8	29.3	34.2
70°	8.1	8.1	8.1	8.1	9.8	9.8	11.4	13.0	16.3	21.1	24.4
72.5°	6.5	6.5	6.5	6.5	8.1	8.1	8.1	9.8	11.4	14.6	16.3
75°	4.9	4.9	4.9	4.9	6.5	6.5	6.5	8.1	8.1	9.8	11.4
77.5°	3.3	3.3	3.3	3.3	4.9	4.9	4.9	4.9	6.5	6.5	6.5
80°	1.6	1.6	1.6	3.3	3.3	3.3	3.3	3.3	3.3	4.9	4.9
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.3	3.3
85°	0.0	0.0	1.6	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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: P212738

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CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1208.7	1229.8	1205.4	1210.3	1202.1	1216.8	1197.3	1202.1	1205.4	1202.1	1203.8
5°	1210.3	1226.5	1198.9	1203.8	1190.8	1200.5	1182.6	1184.3	1184.3	1181.0	1179.4
7.5°	1215.2	1224.9	1195.6	1194.0	1177.7	1187.5	1166.4	1163.1	1161.5	1156.6	1158.2
10°	1216.8	1220.0	1189.1	1182.6	1163.1	1166.4	1145.2	1138.7	1133.8	1130.6	1128.9
12.5°	1228.2	1224.9	1189.1	1177.7	1153.3	1151.7	1128.9	1119.2	1111.0	1107.8	1106.2
15°	1242.8	1231.4	1192.4	1176.1	1148.5	1142.0	1117.6	1107.8	1096.4	1093.2	1089.9
17.5°	1249.3	1231.4	1189.1	1168.0	1137.1	1128.9	1104.5	1091.5	1080.1	1075.3	1072.0
20°	1241.2	1218.4	1176.1	1153.3	1120.8	1109.4	1085.0	1070.4	1059.0	1054.1	1050.9
22.5°	1223.3	1197.3	1156.6	1133.8	1101.3	1086.6	1065.5	1052.5	1039.5	1037.8	1033.0
25°	1192.4	1166.4	1132.2	1109.4	1080.1	1065.5	1046.0	1034.6	1021.6	1020.0	1018.3
27.5°	1146.8	1122.4	1096.4	1075.3	1049.2	1037.8	1023.2	1011.8	1000.4	1000.4	997.2
30°	1081.8	1065.5	1042.7	1029.7	1008.6	997.2	987.4	979.3	967.9	969.5	966.3
32.5°	998.8	990.7	974.4	967.9	951.6	948.4	938.6	932.1	922.3	925.6	922.3
35°	906.1	896.3	896.3	893.1	884.9	883.3	878.4	875.2	868.7	870.3	870.3
37.5°	800.3	800.3	810.1	811.7	810.1	813.4	811.7	811.7	805.2	808.5	806.9
40°	691.4	701.1	719.0	728.8	732.0	738.5	746.7	743.4	740.2	745.0	743.4
42.5°	585.6	605.1	632.8	649.1	660.4	670.2	681.6	681.6	680.0	686.5	684.8
45°	484.8	502.7	540.1	567.7	587.2	601.9	614.9	619.8	621.4	627.9	626.3
47.5°	385.5	416.4	460.4	492.9	517.3	535.2	553.1	559.6	564.5	572.6	572.6
50°	305.8	344.9	395.3	427.8	457.1	476.6	494.5	504.3	510.8	517.3	517.3
52.5°	245.6	286.3	335.1	369.3	396.9	418.1	436.0	447.3	452.2	460.4	460.4
55°	200.1	237.5	283.0	314.0	341.6	361.1	375.8	385.5	390.4	396.9	396.9
57.5°	157.8	193.6	231.0	258.6	281.4	296.1	309.1	312.3	314.0	318.8	320.5
60°	118.8	146.4	177.3	198.5	214.7	224.5	234.2	232.6	231.0	234.2	231.0
62.5°	84.6	104.1	126.9	139.9	152.9	157.8	162.7	159.4	156.2	157.8	157.8
65°	56.9	71.6	84.6	94.3	100.9	104.1	105.7	104.1	102.5	104.1	102.5
67.5°	39.0	47.2	56.9	61.8	66.7	68.3	69.9	68.3	68.3	68.3	66.7
70°	26.0	30.9	37.4	40.7	42.3	43.9	45.5	43.9	43.9	43.9	43.9
72.5°	17.9	21.1	22.8	26.0	27.7	27.7	27.7	27.7	27.7	27.7	27.7
75°	11.4	13.0	14.6	16.3	17.9	17.9	17.9	17.9	17.9	17.9	17.9
77.5°	8.1	8.1	9.8	9.8	11.4	11.4	11.4	11.4	11.4	11.4	11.4
80°	4.9	4.9	6.5	6.5	6.5	6.5	8.1	6.5	8.1	8.1	8.1
82.5°	3.3	3.3	3.3	3.3	4.9	4.9	4.9	4.9	4.9	4.9	4.9
85°	1.6	1.6	1.6	1.6	1.6	1.6	3.3	1.6	3.3	3.3	3.3
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: P212738

CATALOG NUMBER: LD4B30D010 EU4B30509030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1231.4	1231.4	1231.4	1231.4
2.5°	1203.8	1200.5	1190.8	1202.1
5°	1177.7	1174.5	1166.4	1174.5
7.5°	1151.7	1146.8	1140.3	1145.2
10°	1120.8	1117.6	1109.4	1114.3
12.5°	1098.0	1091.5	1086.6	1088.3
15°	1083.4	1076.9	1072.0	1073.6
17.5°	1063.9	1057.4	1052.5	1052.5
20°	1042.7	1036.2	1033.0	1031.3
22.5°	1024.8	1020.0	1018.3	1013.4
25°	1008.6	1005.3	1005.3	998.8
27.5°	990.7	985.8	985.8	979.3
30°	959.8	958.1	958.1	953.3
32.5°	919.1	914.2	917.5	909.3
35°	863.8	860.5	865.4	858.9
37.5°	803.6	802.0	805.2	800.3
40°	740.2	740.2	745.0	736.9
42.5°	684.8	684.8	689.7	681.6
45°	624.7	629.5	634.4	627.9
47.5°	572.6	575.9	582.4	575.9
50°	520.6	523.8	528.7	522.2
52.5°	463.6	466.9	471.7	466.9
55°	398.5	401.8	406.7	403.4
57.5°	320.5	317.2	325.3	318.8
60°	232.6	226.1	227.7	227.7
62.5°	154.5	151.3	154.5	149.7
65°	102.5	100.9	100.9	100.9
67.5°	68.3	66.7	68.3	66.7
70°	43.9	43.9	43.9	43.9
72.5°	27.7	27.7	27.7	27.7
75°	17.9	17.9	17.9	17.9
77.5°	11.4	11.4	11.4	11.4
80°	8.1	8.1	8.1	8.1
82.5°	4.9	4.9	4.9	4.9
85°	3.3	3.3	3.3	3.3
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°





















(END OF REPORT)