

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: P212740

Luminaire Tested: **LD4B30D010 EU4B30509040 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212740
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 EU4B30509040 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2298.3 lumens
Efficiency: N/A
Efficacy: 82.1 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

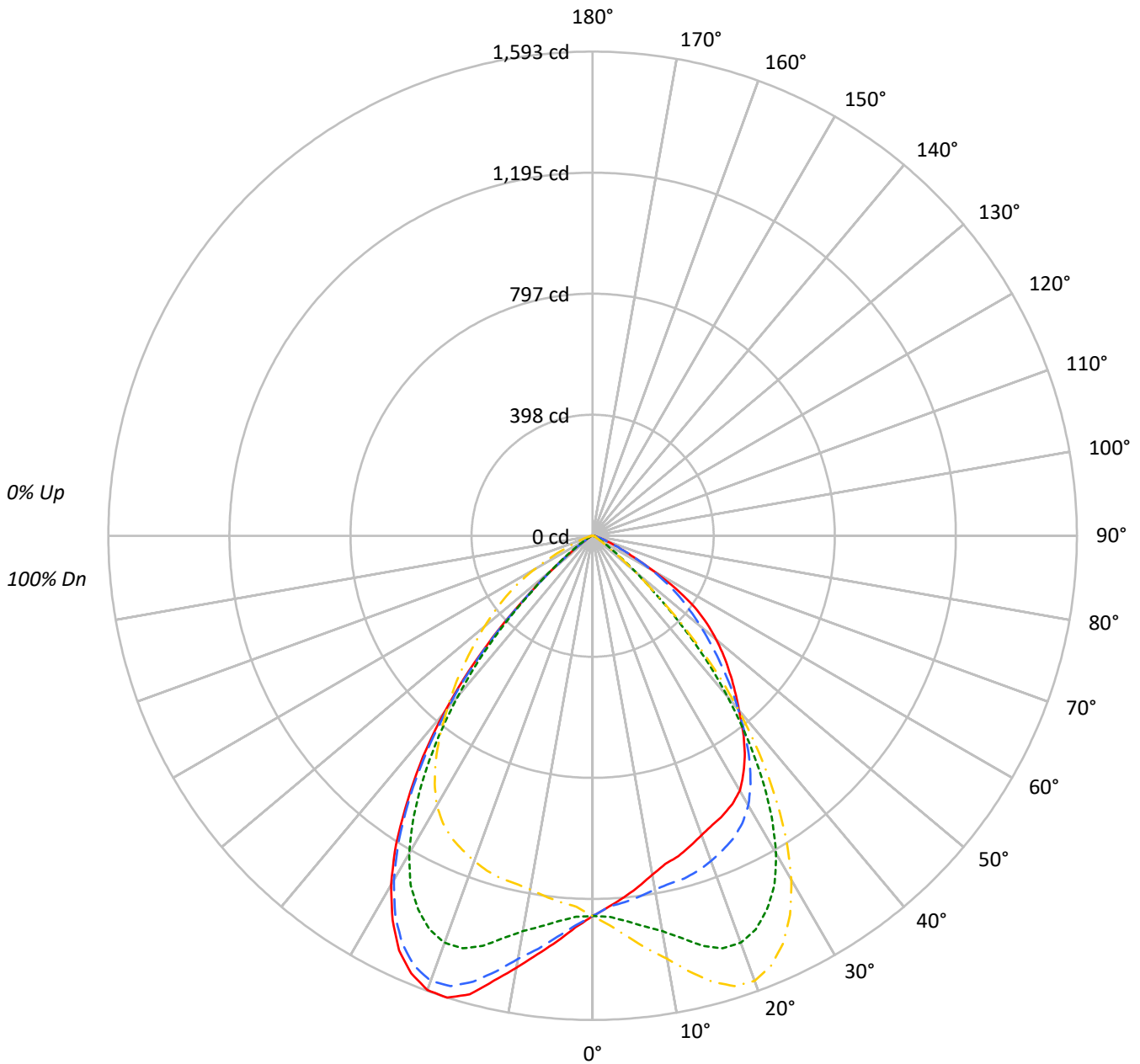
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
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								
1	112	109	106	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91								
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82								
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73								
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66								
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60								
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54								
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49								
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	52	46	43	41								
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	154330	154330	154330	154330
5°	147751	157582	165766	157582
10°	141806	165403	180721	165403
15°	139304	178341	199450	178341
20°	137549	187009	208706	187009
25°	138111	184683	204921	184683
30°	137941	171838	188787	171838
35°	131409	145834	159521	145834
40°	120553	110972	122421	110972
45°	111291	70630	76107	70630
50°	101818	34253	33293	34253
55°	88148	14924	10666	14924
60°	57084	7351	4884	7351
65°	29916	4816	3853	4816
70°	16084	3570	2993	3570
75°	8674	3145	2383	3145
80°	5896	2344	1208	2344
85°	4670	2406	0	2406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.0	5.3
10°-20°	381.6	16.6
20°-30°	593.2	25.8
30°-40°	599.2	26.1
40°-50°	379.4	16.5
50°-60°	159.2	6.9
60°-70°	50.5	2.2
70°-80°	11.6	0.5
80°-90°	1.7	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°	1096.8	47.7
0°-40°	1696.0	73.8
0°-60°	2234.6	97.2
0°-90°	2298.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1251	1251	1251	1251	1251	
5°	1193	1273	1339	1273	1193	112
15°	1091	1397	1562	1397	1091	308
25°	1015	1357	1506	1357	1015	467
35°	873	968	1059	968	873	542
45°	638	405	436	405	638	492
55°	410	69	50	69	410	354
65°	102	16	13	16	102	113
75°	18	7	5	7	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°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1221.4	1209.9	1219.8	1223.1	1223.1	1221.4	1224.7	1221.4	1216.5	1236.3	1221.4
5°	1193.3	1185.1	1193.3	1196.6	1198.3	1199.9	1203.2	1203.2	1201.6	1219.8	1209.9
7.5°	1163.6	1158.6	1165.2	1170.2	1176.8	1175.1	1180.1	1181.8	1185.1	1206.5	1196.6
10°	1132.2	1127.2	1135.5	1138.8	1147.0	1148.7	1152.0	1157.0	1163.6	1185.1	1181.8
12.5°	1105.7	1104.1	1109.0	1115.6	1123.9	1125.6	1128.9	1137.1	1147.0	1170.2	1171.8
15°	1090.9	1089.2	1094.2	1100.8	1107.4	1110.7	1114.0	1125.6	1135.5	1160.3	1166.9
17.5°	1069.4	1069.4	1074.3	1080.9	1089.2	1092.5	1097.5	1109.0	1122.3	1147.0	1155.3
20°	1047.9	1049.5	1052.8	1059.4	1067.7	1071.0	1076.0	1087.5	1102.4	1127.2	1138.8
22.5°	1029.7	1034.7	1036.3	1041.3	1049.5	1054.5	1056.1	1069.4	1082.6	1104.1	1118.9
25°	1014.8	1021.4	1021.4	1024.7	1034.7	1036.3	1038.0	1051.2	1062.8	1082.6	1097.5
27.5°	995.0	1001.6	1001.6	1006.6	1013.2	1016.5	1016.5	1028.0	1039.6	1054.5	1066.1
30°	968.5	973.5	973.5	975.2	981.8	985.1	983.4	995.0	1003.3	1013.2	1024.7
32.5°	923.9	932.2	928.9	933.8	937.1	940.4	937.1	947.1	953.7	963.6	966.9
35°	872.7	879.3	874.3	877.6	884.3	884.3	882.6	889.2	892.5	897.5	899.1
37.5°	813.2	818.1	814.8	816.5	819.8	821.4	818.1	824.7	824.7	826.4	823.1
40°	748.7	757.0	752.0	752.0	755.3	757.0	752.0	755.3	758.6	750.4	743.8
42.5°	692.5	700.8	695.8	695.8	695.8	697.5	690.9	692.5	692.5	681.0	671.0
45°	638.0	644.6	639.6	634.7	636.3	638.0	631.4	629.7	624.8	611.5	596.7
47.5°	585.1	591.7	585.1	581.8	581.8	581.8	573.5	568.6	562.0	543.8	525.6
50°	530.6	537.2	532.2	528.9	525.6	525.6	519.0	512.4	502.5	484.3	464.4
52.5°	474.4	479.3	474.4	471.0	467.7	467.7	459.5	454.5	443.0	424.8	403.3
55°	409.9	413.2	408.2	404.9	403.3	403.3	396.7	391.7	381.8	366.9	347.1
57.5°	323.9	330.6	322.3	325.6	325.6	323.9	319.0	317.3	314.0	300.8	285.9
60°	231.4	231.4	229.7	236.4	234.7	238.0	234.7	236.4	238.0	228.1	218.2
62.5°	152.1	157.0	153.7	157.0	160.3	160.3	158.7	162.0	165.3	160.3	155.4
65°	102.5	102.5	102.5	104.1	104.1	105.8	104.1	105.8	107.4	105.8	102.5
67.5°	67.8	69.4	67.8	69.4	67.8	69.4	69.4	69.4	71.1	69.4	67.8
70°	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	46.3	44.6	43.0
72.5°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
75°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
77.5°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
80°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	6.6	8.3	6.6	6.6
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
85°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	1.7	3.3	1.7	1.7
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°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1229.7	1224.7	1249.5	1228.0	1239.6	1238.0	1239.6	1249.5	1249.5	1254.5	1252.8
5°	1223.1	1218.1	1246.2	1229.7	1242.9	1242.9	1247.9	1262.7	1262.7	1272.7	1274.3
7.5°	1213.2	1214.8	1244.6	1234.6	1249.5	1251.2	1259.4	1277.6	1282.6	1295.8	1302.4
10°	1201.6	1208.2	1239.6	1236.3	1256.1	1257.8	1274.3	1295.8	1302.4	1320.6	1332.2
12.5°	1196.6	1208.2	1244.6	1247.9	1267.7	1276.0	1294.1	1322.2	1333.8	1355.3	1371.8
15°	1195.0	1211.5	1251.2	1262.7	1285.9	1297.5	1322.2	1355.3	1368.5	1396.6	1416.5
17.5°	1186.7	1208.2	1251.2	1269.4	1294.1	1305.7	1337.1	1375.1	1391.7	1423.1	1446.2
20°	1171.8	1195.0	1238.0	1261.1	1287.5	1304.1	1335.5	1375.1	1391.7	1424.7	1451.2
22.5°	1152.0	1175.1	1216.5	1242.9	1266.0	1284.2	1317.3	1355.3	1370.2	1401.6	1428.0
25°	1127.2	1150.4	1185.1	1211.5	1233.0	1249.5	1277.6	1317.3	1327.2	1357.0	1385.0
27.5°	1092.5	1114.0	1140.4	1165.2	1185.1	1198.3	1223.1	1257.8	1266.0	1295.8	1318.9
30°	1046.2	1059.4	1082.6	1099.1	1114.0	1127.2	1145.4	1176.8	1180.1	1206.5	1228.0
32.5°	983.4	990.0	1006.6	1014.8	1028.0	1033.0	1047.9	1074.3	1071.0	1095.8	1114.0
35°	907.4	910.7	910.7	920.6	923.9	925.6	937.1	952.0	947.1	968.5	981.8
37.5°	824.7	823.1	813.2	813.2	814.8	809.9	814.8	821.4	814.8	831.4	842.9
40°	740.5	730.5	712.4	702.4	697.5	695.8	685.9	694.2	677.6	689.2	697.5
42.5°	659.5	642.9	614.8	595.0	586.7	578.5	562.0	562.0	540.5	548.7	550.4
45°	576.8	548.7	510.7	492.5	471.0	457.8	436.3	414.9	400.0	404.9	400.0
47.5°	500.8	467.7	423.1	391.7	366.9	348.7	319.0	294.2	279.3	272.7	266.1
50°	434.7	401.6	350.4	310.7	285.9	264.4	234.7	206.6	188.4	178.5	173.5
52.5°	375.2	340.5	290.9	249.6	223.1	203.3	170.2	142.1	122.3	110.7	104.1
55°	319.0	287.6	241.3	203.3	178.5	158.7	125.6	99.2	81.0	69.4	61.2
57.5°	262.8	234.7	196.7	160.3	138.8	120.7	92.6	69.4	54.5	44.6	38.0
60°	201.6	180.2	148.8	120.7	102.5	87.6	66.1	47.9	38.0	29.8	26.4
62.5°	142.1	128.9	105.8	85.9	74.4	62.8	46.3	34.7	26.4	21.5	19.8
65°	95.9	85.9	72.7	57.8	49.6	43.0	33.1	24.8	19.8	16.5	14.9
67.5°	62.8	57.8	47.9	39.7	34.7	29.8	23.1	18.2	14.9	13.2	11.6
70°	41.3	38.0	31.4	26.4	24.8	21.5	16.5	13.2	11.6	9.9	9.9
72.5°	26.4	23.1	21.5	18.2	16.5	14.9	11.6	9.9	8.3	8.3	8.3
75°	16.5	14.9	13.2	11.6	11.6	9.9	8.3	8.3	6.6	6.6	6.6
77.5°	9.9	9.9	8.3	8.3	6.6	6.6	6.6	5.0	5.0	5.0	5.0
80°	6.6	6.6	5.0	5.0	5.0	5.0	3.3	3.3	3.3	3.3	3.3
82.5°	3.3	3.3	3.3	3.3	3.3	3.3	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1261.1	1264.4	1261.1	1271.0	1254.5	1272.7	1266.0	1269.4	1282.6	1277.6	1282.6
5°	1285.9	1292.5	1292.5	1304.1	1289.2	1310.7	1304.1	1310.7	1323.9	1323.9	1330.5
7.5°	1317.3	1325.5	1328.9	1340.4	1325.5	1352.0	1345.4	1353.6	1370.2	1370.2	1375.1
10°	1350.3	1360.3	1366.9	1380.1	1363.6	1393.3	1386.7	1398.3	1413.1	1414.8	1423.1
12.5°	1391.7	1404.9	1413.1	1424.7	1413.1	1442.9	1436.3	1447.9	1467.7	1469.3	1479.3
15°	1437.9	1454.5	1464.4	1477.6	1464.4	1497.4	1490.8	1504.1	1518.9	1525.5	1535.5
17.5°	1467.7	1487.5	1495.8	1510.7	1497.4	1530.5	1522.2	1540.4	1553.6	1556.9	1568.5
20°	1472.6	1490.8	1502.4	1514.0	1502.4	1535.5	1527.2	1542.1	1558.6	1561.9	1570.2
22.5°	1451.2	1466.0	1479.3	1489.2	1479.3	1512.3	1500.7	1517.3	1532.1	1535.5	1542.1
25°	1401.6	1419.8	1433.0	1441.2	1431.3	1462.7	1452.8	1467.7	1480.9	1487.5	1489.2
27.5°	1332.2	1348.7	1361.9	1366.9	1360.3	1390.0	1376.8	1395.0	1406.5	1409.8	1414.8
30°	1238.0	1252.8	1266.0	1269.4	1264.4	1285.9	1279.3	1295.8	1307.4	1310.7	1314.0
32.5°	1122.3	1137.1	1145.4	1148.7	1143.7	1165.2	1158.6	1171.8	1185.1	1185.1	1185.1
35°	991.7	1004.9	1009.9	1019.8	1008.2	1029.7	1023.1	1034.7	1046.2	1046.2	1047.9
37.5°	851.2	861.1	864.4	874.3	862.8	882.6	877.6	887.6	897.5	895.8	899.1
40°	700.8	710.7	714.0	722.3	712.4	728.9	725.6	735.5	743.8	743.8	743.8
42.5°	555.3	562.0	562.0	570.2	560.3	575.2	575.2	581.8	590.1	588.4	588.4
45°	403.3	401.6	404.9	403.3	403.3	416.5	416.5	419.8	426.4	423.1	424.8
47.5°	267.8	269.4	262.8	267.8	261.1	272.7	272.7	272.7	277.7	274.4	277.7
50°	170.2	165.3	162.0	162.0	160.3	168.6	165.3	166.9	170.2	166.9	170.2
52.5°	95.9	94.2	90.9	92.6	89.3	90.9	90.9	90.9	92.6	90.9	94.2
55°	56.2	51.2	49.6	49.6	47.9	49.6	47.9	47.9	47.9	46.3	47.9
57.5°	33.1	31.4	29.8	29.8	28.1	28.1	28.1	28.1	28.1	28.1	28.1
60°	23.1	21.5	21.5	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
62.5°	18.2	16.5	16.5	16.5	14.9	14.9	14.9	14.9	14.9	16.5	14.9
65°	13.2	13.2	13.2	13.2	13.2	13.2	11.6	13.2	13.2	13.2	13.2
67.5°	11.6	11.6	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
70°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
72.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
75°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	0.0	1.7	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: P212740

CATALOG NUMBER: LD4B30D010 EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1287.5	1280.9	1266.0	1276.0	1277.6	1271.0	1279.3	1289.2	1279.3	1271.0	1277.6
5°	1335.5	1330.5	1317.3	1325.5	1327.2	1325.5	1330.5	1338.8	1330.5	1325.5	1327.2
7.5°	1383.4	1380.1	1365.2	1375.1	1378.4	1375.1	1380.1	1388.4	1380.1	1375.1	1378.4
10°	1429.7	1428.0	1413.1	1426.4	1428.0	1424.7	1429.7	1442.9	1429.7	1424.7	1428.0
12.5°	1482.6	1485.9	1469.3	1484.2	1485.9	1482.6	1489.2	1499.1	1489.2	1482.6	1485.9
15°	1543.7	1542.1	1528.8	1540.4	1543.7	1540.4	1548.7	1561.9	1548.7	1540.4	1543.7
17.5°	1573.5	1573.5	1563.6	1575.1	1576.8	1576.8	1583.4	1593.3	1583.4	1576.8	1576.8
20°	1575.1	1576.8	1565.2	1578.4	1578.4	1578.4	1585.0	1590.0	1585.0	1578.4	1578.4
22.5°	1548.7	1550.3	1538.8	1550.3	1550.3	1552.0	1555.3	1558.6	1555.3	1552.0	1550.3
25°	1497.4	1499.1	1489.2	1499.1	1497.4	1497.4	1500.7	1505.7	1500.7	1497.4	1497.4
27.5°	1421.4	1423.1	1409.8	1421.4	1419.8	1418.1	1423.1	1424.7	1423.1	1418.1	1419.8
30°	1320.6	1322.2	1310.7	1320.6	1318.9	1317.3	1323.9	1325.5	1323.9	1317.3	1318.9
32.5°	1199.9	1196.6	1188.4	1196.6	1195.0	1195.0	1198.3	1203.2	1198.3	1195.0	1195.0
35°	1054.5	1054.5	1049.5	1056.1	1051.2	1057.8	1057.8	1059.4	1057.8	1057.8	1051.2
37.5°	905.7	905.7	902.4	905.7	904.1	910.7	910.7	915.7	910.7	910.7	904.1
40°	750.4	750.4	747.1	750.4	755.3	755.3	753.7	760.3	753.7	755.3	755.3
42.5°	593.4	593.4	591.7	600.0	600.0	600.0	595.0	601.6	595.0	600.0	600.0
45°	431.4	428.1	426.4	426.4	428.1	434.7	428.1	436.3	428.1	434.7	428.1
47.5°	274.4	276.0	277.7	282.6	279.3	277.7	277.7	282.6	277.7	277.7	279.3
50°	168.6	170.2	170.2	173.5	168.6	171.9	170.2	173.5	170.2	171.9	168.6
52.5°	92.6	92.6	92.6	95.9	92.6	94.2	92.6	95.9	92.6	94.2	92.6
55°	47.9	47.9	47.9	49.6	47.9	47.9	47.9	49.6	47.9	47.9	47.9
57.5°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
60°	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
62.5°	16.5	14.9	14.9	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
65°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
67.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
70°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
72.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
75°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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: P212740

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1276.0	1266.0	1280.9	1287.5	1282.6	1277.6	1282.6	1269.4	1266.0	1272.7	1254.5
5°	1325.5	1317.3	1330.5	1335.5	1330.5	1323.9	1323.9	1310.7	1304.1	1310.7	1289.2
7.5°	1375.1	1365.2	1380.1	1383.4	1375.1	1370.2	1370.2	1353.6	1345.4	1352.0	1325.5
10°	1426.4	1413.1	1428.0	1429.7	1423.1	1414.8	1413.1	1398.3	1386.7	1393.3	1363.6
12.5°	1484.2	1469.3	1485.9	1482.6	1479.3	1469.3	1467.7	1447.9	1436.3	1442.9	1413.1
15°	1540.4	1528.8	1542.1	1543.7	1535.5	1525.5	1518.9	1504.1	1490.8	1497.4	1464.4
17.5°	1575.1	1563.6	1573.5	1573.5	1568.5	1556.9	1553.6	1540.4	1522.2	1530.5	1497.4
20°	1578.4	1565.2	1576.8	1575.1	1570.2	1561.9	1558.6	1542.1	1527.2	1535.5	1502.4
22.5°	1550.3	1538.8	1550.3	1548.7	1542.1	1535.5	1532.1	1517.3	1500.7	1512.3	1479.3
25°	1499.1	1489.2	1499.1	1497.4	1489.2	1487.5	1480.9	1467.7	1452.8	1462.7	1431.3
27.5°	1421.4	1409.8	1423.1	1421.4	1414.8	1409.8	1406.5	1395.0	1376.8	1390.0	1360.3
30°	1320.6	1310.7	1322.2	1320.6	1314.0	1310.7	1307.4	1295.8	1279.3	1285.9	1264.4
32.5°	1196.6	1188.4	1196.6	1199.9	1185.1	1185.1	1185.1	1171.8	1158.6	1165.2	1143.7
35°	1056.1	1049.5	1054.5	1054.5	1047.9	1046.2	1046.2	1034.7	1023.1	1029.7	1008.2
37.5°	905.7	902.4	905.7	905.7	899.1	895.8	897.5	887.6	877.6	882.6	862.8
40°	750.4	747.1	750.4	750.4	743.8	743.8	743.8	735.5	725.6	728.9	712.4
42.5°	600.0	591.7	593.4	593.4	588.4	588.4	590.1	581.8	575.2	575.2	560.3
45°	426.4	426.4	428.1	431.4	424.8	423.1	426.4	419.8	416.5	416.5	403.3
47.5°	282.6	277.7	276.0	274.4	277.7	274.4	277.7	272.7	272.7	272.7	261.1
50°	173.5	170.2	170.2	168.6	170.2	166.9	170.2	166.9	165.3	168.6	160.3
52.5°	95.9	92.6	92.6	92.6	94.2	90.9	92.6	90.9	90.9	90.9	89.3
55°	49.6	47.9	47.9	47.9	47.9	46.3	47.9	47.9	47.9	49.6	47.9
57.5°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
60°	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
62.5°	16.5	14.9	14.9	16.5	14.9	16.5	14.9	14.9	14.9	14.9	14.9
65°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	11.6	13.2	13.2
67.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
70°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
72.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
75°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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: P212740

CATALOG NUMBER: LD4B30D010 EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1271.0	1261.1	1264.4	1261.1	1252.8	1254.5	1249.5	1249.5	1239.6	1238.0	1239.6
5°	1304.1	1292.5	1292.5	1285.9	1274.3	1272.7	1262.7	1262.7	1247.9	1242.9	1242.9
7.5°	1340.4	1328.9	1325.5	1317.3	1302.4	1295.8	1282.6	1277.6	1259.4	1251.2	1249.5
10°	1380.1	1366.9	1360.3	1350.3	1332.2	1320.6	1302.4	1295.8	1274.3	1257.8	1256.1
12.5°	1424.7	1413.1	1404.9	1391.7	1371.8	1355.3	1333.8	1322.2	1294.1	1276.0	1267.7
15°	1477.6	1464.4	1454.5	1437.9	1416.5	1396.6	1368.5	1355.3	1322.2	1297.5	1285.9
17.5°	1510.7	1495.8	1487.5	1467.7	1446.2	1423.1	1391.7	1375.1	1337.1	1305.7	1294.1
20°	1514.0	1502.4	1490.8	1472.6	1451.2	1424.7	1391.7	1375.1	1335.5	1304.1	1287.5
22.5°	1489.2	1479.3	1466.0	1451.2	1428.0	1401.6	1370.2	1355.3	1317.3	1284.2	1266.0
25°	1441.2	1433.0	1419.8	1401.6	1385.0	1357.0	1327.2	1317.3	1277.6	1249.5	1233.0
27.5°	1366.9	1361.9	1348.7	1332.2	1318.9	1295.8	1266.0	1257.8	1223.1	1198.3	1185.1
30°	1269.4	1266.0	1252.8	1238.0	1228.0	1206.5	1180.1	1176.8	1145.4	1127.2	1114.0
32.5°	1148.7	1145.4	1137.1	1122.3	1114.0	1095.8	1071.0	1074.3	1047.9	1033.0	1028.0
35°	1019.8	1009.9	1004.9	991.7	981.8	968.5	947.1	952.0	937.1	925.6	923.9
37.5°	874.3	864.4	861.1	851.2	842.9	831.4	814.8	821.4	814.8	809.9	814.8
40°	722.3	714.0	710.7	700.8	697.5	689.2	677.6	694.2	685.9	695.8	697.5
42.5°	570.2	562.0	562.0	555.3	550.4	548.7	540.5	562.0	562.0	578.5	586.7
45°	403.3	404.9	401.6	403.3	400.0	404.9	400.0	414.9	436.3	457.8	471.0
47.5°	267.8	262.8	269.4	267.8	266.1	272.7	279.3	294.2	319.0	348.7	366.9
50°	162.0	162.0	165.3	170.2	173.5	178.5	188.4	206.6	234.7	264.4	285.9
52.5°	92.6	90.9	94.2	95.9	104.1	110.7	122.3	142.1	170.2	203.3	223.1
55°	49.6	49.6	51.2	56.2	61.2	69.4	81.0	99.2	125.6	158.7	178.5
57.5°	29.8	29.8	31.4	33.1	38.0	44.6	54.5	69.4	92.6	120.7	138.8
60°	19.8	21.5	21.5	23.1	26.4	29.8	38.0	47.9	66.1	87.6	102.5
62.5°	16.5	16.5	16.5	18.2	19.8	21.5	26.4	34.7	46.3	62.8	74.4
65°	13.2	13.2	13.2	13.2	14.9	16.5	19.8	24.8	33.1	43.0	49.6
67.5°	9.9	9.9	11.6	11.6	11.6	13.2	14.9	18.2	23.1	29.8	34.7
70°	8.3	8.3	8.3	8.3	9.9	9.9	11.6	13.2	16.5	21.5	24.8
72.5°	6.6	6.6	6.6	6.6	8.3	8.3	8.3	9.9	11.6	14.9	16.5
75°	5.0	5.0	5.0	5.0	6.6	6.6	6.6	8.3	8.3	9.9	11.6
77.5°	3.3	3.3	3.3	3.3	5.0	5.0	5.0	5.0	6.6	6.6	6.6
80°	1.7	1.7	1.7	3.3	3.3	3.3	3.3	3.3	3.3	5.0	5.0
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	3.3
85°	0.0	0.0	1.7	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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: P212740

CATALOG NUMBER: LD4B30D010 EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1228.0	1249.5	1224.7	1229.7	1221.4	1236.3	1216.5	1221.4	1224.7	1221.4	1223.1
5°	1229.7	1246.2	1218.1	1223.1	1209.9	1219.8	1201.6	1203.2	1203.2	1199.9	1198.3
7.5°	1234.6	1244.6	1214.8	1213.2	1196.6	1206.5	1185.1	1181.8	1180.1	1175.1	1176.8
10°	1236.3	1239.6	1208.2	1201.6	1181.8	1185.1	1163.6	1157.0	1152.0	1148.7	1147.0
12.5°	1247.9	1244.6	1208.2	1196.6	1171.8	1170.2	1147.0	1137.1	1128.9	1125.6	1123.9
15°	1262.7	1251.2	1211.5	1195.0	1166.9	1160.3	1135.5	1125.6	1114.0	1110.7	1107.4
17.5°	1269.4	1251.2	1208.2	1186.7	1155.3	1147.0	1122.3	1109.0	1097.5	1092.5	1089.2
20°	1261.1	1238.0	1195.0	1171.8	1138.8	1127.2	1102.4	1087.5	1076.0	1071.0	1067.7
22.5°	1242.9	1216.5	1175.1	1152.0	1118.9	1104.1	1082.6	1069.4	1056.1	1054.5	1049.5
25°	1211.5	1185.1	1150.4	1127.2	1097.5	1082.6	1062.8	1051.2	1038.0	1036.3	1034.7
27.5°	1165.2	1140.4	1114.0	1092.5	1066.1	1054.5	1039.6	1028.0	1016.5	1016.5	1013.2
30°	1099.1	1082.6	1059.4	1046.2	1024.7	1013.2	1003.3	995.0	983.4	985.1	981.8
32.5°	1014.8	1006.6	990.0	983.4	966.9	963.6	953.7	947.1	937.1	940.4	937.1
35°	920.6	910.7	910.7	907.4	899.1	897.5	892.5	889.2	882.6	884.3	884.3
37.5°	813.2	813.2	823.1	824.7	823.1	826.4	824.7	824.7	818.1	821.4	819.8
40°	702.4	712.4	730.5	740.5	743.8	750.4	758.6	755.3	752.0	757.0	755.3
42.5°	595.0	614.8	642.9	659.5	671.0	681.0	692.5	692.5	690.9	697.5	695.8
45°	492.5	510.7	548.7	576.8	596.7	611.5	624.8	629.7	631.4	638.0	636.3
47.5°	391.7	423.1	467.7	500.8	525.6	543.8	562.0	568.6	573.5	581.8	581.8
50°	310.7	350.4	401.6	434.7	464.4	484.3	502.5	512.4	519.0	525.6	525.6
52.5°	249.6	290.9	340.5	375.2	403.3	424.8	443.0	454.5	459.5	467.7	467.7
55°	203.3	241.3	287.6	319.0	347.1	366.9	381.8	391.7	396.7	403.3	403.3
57.5°	160.3	196.7	234.7	262.8	285.9	300.8	314.0	317.3	319.0	323.9	325.6
60°	120.7	148.8	180.2	201.6	218.2	228.1	238.0	236.4	234.7	238.0	234.7
62.5°	85.9	105.8	128.9	142.1	155.4	160.3	165.3	162.0	158.7	160.3	160.3
65°	57.8	72.7	85.9	95.9	102.5	105.8	107.4	105.8	104.1	105.8	104.1
67.5°	39.7	47.9	57.8	62.8	67.8	69.4	71.1	69.4	69.4	69.4	67.8
70°	26.4	31.4	38.0	41.3	43.0	44.6	46.3	44.6	44.6	44.6	44.6
72.5°	18.2	21.5	23.1	26.4	28.1	28.1	28.1	28.1	28.1	28.1	28.1
75°	11.6	13.2	14.9	16.5	18.2	18.2	18.2	18.2	18.2	18.2	18.2
77.5°	8.3	8.3	9.9	9.9	11.6	11.6	11.6	11.6	11.6	11.6	11.6
80°	5.0	5.0	6.6	6.6	6.6	6.6	8.3	6.6	8.3	8.3	8.3
82.5°	3.3	3.3	3.3	3.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0
85°	1.7	1.7	1.7	1.7	1.7	1.7	3.3	1.7	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: P212740

CATALOG NUMBER: LD4B30D010 EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1251.2	1251.2	1251.2	1251.2
2.5°	1223.1	1219.8	1209.9	1221.4
5°	1196.6	1193.3	1185.1	1193.3
7.5°	1170.2	1165.2	1158.6	1163.6
10°	1138.8	1135.5	1127.2	1132.2
12.5°	1115.6	1109.0	1104.1	1105.7
15°	1100.8	1094.2	1089.2	1090.9
17.5°	1080.9	1074.3	1069.4	1069.4
20°	1059.4	1052.8	1049.5	1047.9
22.5°	1041.3	1036.3	1034.7	1029.7
25°	1024.7	1021.4	1021.4	1014.8
27.5°	1006.6	1001.6	1001.6	995.0
30°	975.2	973.5	973.5	968.5
32.5°	933.8	928.9	932.2	923.9
35°	877.6	874.3	879.3	872.7
37.5°	816.5	814.8	818.1	813.2
40°	752.0	752.0	757.0	748.7
42.5°	695.8	695.8	700.8	692.5
45°	634.7	639.6	644.6	638.0
47.5°	581.8	585.1	591.7	585.1
50°	528.9	532.2	537.2	530.6
52.5°	471.0	474.4	479.3	474.4
55°	404.9	408.2	413.2	409.9
57.5°	325.6	322.3	330.6	323.9
60°	236.4	229.7	231.4	231.4
62.5°	157.0	153.7	157.0	152.1
65°	104.1	102.5	102.5	102.5
67.5°	69.4	67.8	69.4	67.8
70°	44.6	44.6	44.6	44.6
72.5°	28.1	28.1	28.1	28.1
75°	18.2	18.2	18.2	18.2
77.5°	11.6	11.6	11.6	11.6
80°	8.3	8.3	8.3	8.3
82.5°	5.0	5.0	5.0	5.0
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



Report Generated By E9808895 / USPTCWHP6082093





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





















(END OF REPORT)