

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: P251703

Luminaire Tested: **LD4B30D010 EU4B30508050 4LBLWW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P251703
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-11)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B30D010 EU4B30508050 4LBLWW1LI
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2444.0 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.03 / 1.12
Luminous Opening: Circular (Dia: 0.38' x H: 0')
CIE Type: Direct

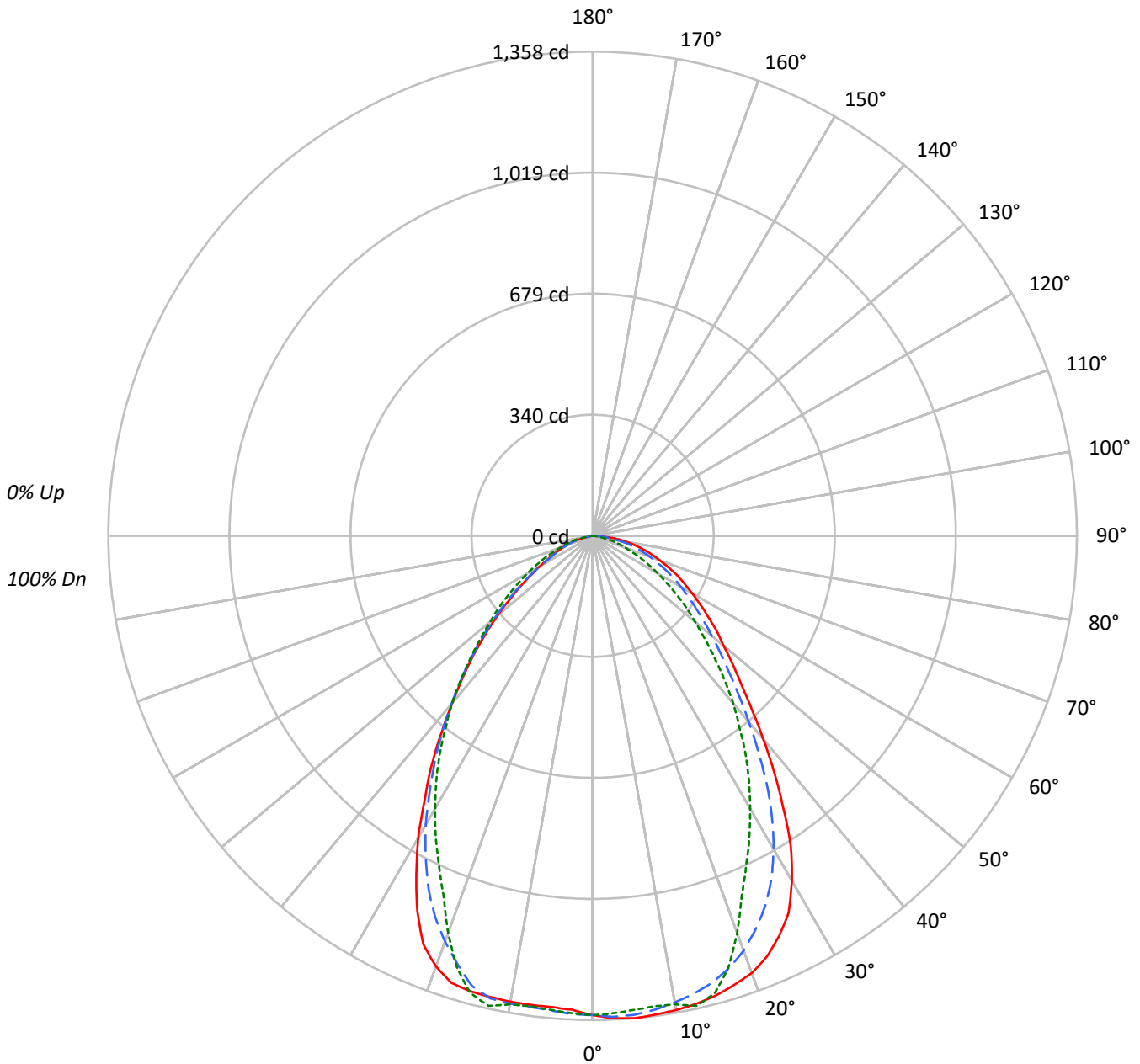
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	91	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	62	60			60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53			53
6	76	65	57	51	75	64	56	51	62	55	50	60	54	50	59	54	50	48			48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43			43
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	39			39
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36			36
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35	33			33

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	131032	131032	131032
5°	132883	130574	129801
10°	133648	132084	131302
15°	134666	133869	133475
20°	135355	122889	133312
25°	133137	109598	125082
30°	125792	99391	110037
35°	110944	88898	93823
40°	94806	78000	77758
45°	81249	66570	64944
50°	72640	56796	52899
55°	66997	48578	41867
60°	62627	41108	33038
65°	60004	34107	27281
70°	56733	27526	23024
75°	54939	22254	16342
80°	53093	12179	4434
85°	46294	6597	2236



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.7	5.2
10°-20°	367.5	15.0
20°-30°	509.7	20.9
30°-40°	503.1	20.6
40°-50°	394.6	16.1
50°-60°	273.3	11.2
60°-70°	167.5	6.9
70°-80°	83.7	3.4
80°-90°	16.8	0.7
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°	1004.9	41.1
0°-40°	1508.1	61.7
0°-60°	2176.0	89.0
0°-90°	2444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2444.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1344	1344	1344	1344	1344	
5°	1358	1348	1335	1337	1327	129
15°	1335	1297	1327	1307	1323	377
25°	1238	1145	1019	1090	1163	567
35°	932	852	747	771	789	582
45°	590	540	483	477	471	461
55°	394	353	286	254	246	355
65°	260	225	148	110	118	257
75°	146	122	59	45	43	155
85°	41	24	6	2	2	47
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°	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5
2.5°	1354.4	1350.5	1348.5	1354.4	1352.4	1356.4	1354.4	1352.4	1348.5	1350.5	1350.5
5°	1358.3	1352.4	1350.5	1354.4	1354.4	1358.3	1356.4	1352.4	1348.5	1350.5	1348.5
7.5°	1354.4	1350.5	1350.5	1352.4	1350.5	1354.4	1350.5	1346.5	1342.6	1344.5	1340.6
10°	1350.5	1344.5	1344.5	1344.5	1344.5	1348.5	1344.5	1338.6	1332.7	1332.7	1328.8
12.5°	1344.5	1338.6	1338.6	1340.6	1336.7	1340.6	1336.7	1326.8	1320.9	1318.9	1315.0
15°	1334.7	1328.8	1328.8	1328.8	1324.8	1326.8	1320.9	1311.0	1303.1	1303.1	1297.2
17.5°	1320.9	1315.0	1313.0	1313.0	1307.1	1309.1	1303.1	1293.3	1281.5	1277.5	1271.6
20°	1305.1	1297.2	1293.3	1293.3	1287.4	1289.3	1281.5	1269.6	1253.9	1247.9	1238.1
22.5°	1277.5	1273.6	1267.7	1265.7	1259.8	1257.8	1249.9	1234.1	1220.3	1210.5	1194.7
25°	1238.1	1236.1	1230.2	1228.2	1220.3	1216.4	1208.5	1190.8	1177.0	1161.2	1145.4
27.5°	1190.8	1182.9	1178.9	1173.0	1165.1	1163.2	1153.3	1137.5	1115.9	1106.0	1086.3
30°	1117.8	1113.9	1109.9	1104.0	1096.1	1092.2	1086.3	1068.5	1050.8	1033.0	1015.3
32.5°	1035.0	1027.1	1021.2	1023.2	1013.3	1009.4	999.5	983.8	968.0	956.2	936.4
35°	932.5	930.5	928.6	924.6	916.7	914.8	906.9	895.0	877.3	863.5	851.7
37.5°	835.9	830.0	826.0	826.0	818.2	818.2	812.2	798.4	788.6	778.7	763.0
40°	745.2	735.4	735.4	735.4	727.5	729.4	725.5	711.7	701.8	690.0	680.2
42.5°	660.4	656.5	654.5	650.6	646.6	646.6	642.7	634.8	625.0	617.1	607.2
45°	589.5	587.5	585.5	583.6	579.6	577.6	575.7	563.8	557.9	550.0	540.2
47.5°	532.3	528.4	526.4	524.4	520.5	518.5	514.6	506.7	500.8	492.9	485.0
50°	479.1	477.1	475.1	475.1	471.2	469.2	465.3	459.4	449.5	445.6	435.7
52.5°	437.7	433.7	429.8	429.8	425.8	425.8	419.9	414.0	404.2	400.2	392.3
55°	394.3	392.3	390.4	390.4	386.4	384.4	382.5	374.6	366.7	360.8	352.9
57.5°	356.8	354.9	352.9	352.9	348.9	347.0	345.0	339.1	331.2	327.3	317.4
60°	321.3	321.3	319.4	317.4	315.4	313.5	311.5	305.6	299.7	293.7	285.9
62.5°	289.8	287.8	285.9	283.9	283.9	281.9	279.9	272.1	268.1	262.2	254.3
65°	260.2	256.3	256.3	254.3	254.3	252.3	250.4	242.5	238.5	232.6	224.7
67.5°	228.7	226.7	224.7	224.7	222.8	222.8	220.8	214.9	209.0	205.0	197.1
70°	199.1	199.1	197.1	197.1	195.2	193.2	193.2	189.3	183.3	177.4	169.5
72.5°	173.5	171.5	169.5	169.5	167.6	167.6	165.6	161.7	157.7	153.8	143.9
75°	145.9	143.9	143.9	143.9	141.9	141.9	140.0	136.0	132.1	128.1	122.2
77.5°	120.3	120.3	118.3	118.3	116.3	116.3	116.3	112.4	108.4	104.5	96.6
80°	94.6	94.6	94.6	92.7	90.7	90.7	90.7	86.7	82.8	78.9	72.9
82.5°	69.0	67.0	67.0	65.1	63.1	63.1	63.1	59.1	57.2	51.3	47.3
85°	41.4	39.4	39.4	37.5	35.5	35.5	35.5	33.5	29.6	27.6	23.7
87.5°	15.8	15.8	15.8	15.8	15.8	13.8	13.8	11.8	11.8	9.9	9.9
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°	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5
2.5°	1350.5	1348.5	1348.5	1346.5	1348.5	1344.5	1344.5	1344.5	1344.5	1340.6	1340.6
5°	1346.5	1346.5	1344.5	1342.6	1344.5	1340.6	1342.6	1340.6	1340.6	1334.7	1334.7
7.5°	1338.6	1336.7	1332.7	1330.7	1332.7	1330.7	1330.7	1330.7	1334.7	1330.7	1330.7
10°	1324.8	1322.9	1318.9	1316.9	1316.9	1315.0	1318.9	1322.9	1330.7	1334.7	1342.6
12.5°	1311.0	1307.1	1305.1	1305.1	1307.1	1307.1	1315.0	1324.8	1344.5	1350.5	1358.3
15°	1293.3	1291.3	1291.3	1297.2	1305.1	1311.0	1326.8	1332.7	1334.7	1326.8	1322.9
17.5°	1269.6	1269.6	1271.6	1277.5	1283.4	1283.4	1285.4	1281.5	1277.5	1267.7	1255.8
20°	1230.2	1228.2	1224.3	1224.3	1224.3	1216.4	1220.3	1206.5	1196.7	1184.9	1167.1
22.5°	1180.9	1171.1	1157.3	1147.4	1141.5	1137.5	1127.7	1111.9	1100.1	1092.2	1084.3
25°	1127.7	1111.9	1092.2	1076.4	1066.6	1064.6	1050.8	1037.0	1029.1	1019.2	1015.3
27.5°	1066.6	1048.8	1025.2	1009.4	1001.5	995.6	983.8	970.0	960.1	952.2	946.3
30°	995.6	977.8	958.1	938.4	930.5	920.7	908.8	899.0	889.1	883.2	879.3
32.5°	916.7	899.0	879.3	865.5	855.6	847.7	837.9	828.0	820.1	816.2	812.2
35°	835.9	818.2	802.4	788.6	780.7	774.8	766.9	755.1	749.2	747.2	743.2
37.5°	749.2	737.3	723.5	711.7	705.8	697.9	694.0	684.1	684.1	676.2	676.2
40°	668.3	660.4	646.6	636.8	632.8	626.9	621.0	617.1	615.1	613.1	611.2
42.5°	597.4	585.5	577.6	569.8	563.8	559.9	559.9	554.0	552.0	546.1	544.1
45°	532.3	526.4	512.6	506.7	504.7	498.8	496.8	492.9	487.0	483.0	481.0
47.5°	475.1	469.2	461.3	453.4	449.5	445.6	441.6	435.7	431.8	425.8	423.9
50°	427.8	418.0	410.1	404.2	398.2	396.3	392.3	384.4	380.5	374.6	374.6
52.5°	384.4	376.6	366.7	360.8	354.9	350.9	345.0	339.1	333.2	331.2	325.3
55°	347.0	337.1	327.3	319.4	313.5	307.5	305.6	297.7	289.8	285.9	281.9
57.5°	311.5	301.6	289.8	279.9	276.0	272.1	266.1	258.3	252.3	246.4	242.5
60°	276.0	268.1	256.3	246.4	242.5	236.6	230.7	222.8	216.9	210.9	207.0
62.5°	246.4	234.6	224.7	214.9	209.0	205.0	197.1	191.2	183.3	177.4	171.5
65°	216.9	205.0	195.2	185.3	181.4	175.5	169.5	161.7	153.8	147.9	140.0
67.5°	187.3	177.4	167.6	157.7	153.8	149.8	141.9	134.1	126.2	120.3	112.4
70°	161.7	151.8	141.9	134.1	130.1	126.2	118.3	110.4	104.5	96.6	90.7
72.5°	138.0	130.1	120.3	112.4	108.4	104.5	96.6	90.7	82.8	78.9	72.9
75°	114.3	106.5	98.6	90.7	86.7	82.8	76.9	71.0	65.1	59.1	55.2
77.5°	90.7	82.8	74.9	69.0	65.1	63.1	57.2	51.3	45.3	41.4	35.5
80°	67.0	59.1	53.2	47.3	43.4	41.4	35.5	31.5	27.6	21.7	19.7
82.5°	41.4	35.5	31.5	27.6	25.6	23.7	19.7	15.8	13.8	11.8	9.9
85°	21.7	19.7	15.8	13.8	11.8	11.8	9.9	7.9	5.9	5.9	3.9
87.5°	7.9	5.9	5.9	3.9	3.9	3.9	3.9	2.0	2.0	2.0	2.0
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°	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5
2.5°	1336.7	1338.6	1340.6	1342.6	1340.6	1340.6	1344.5	1336.7	1342.6	1342.6	1334.7
5°	1332.7	1336.7	1334.7	1338.6	1334.7	1334.7	1336.7	1332.7	1336.7	1336.7	1330.7
7.5°	1328.8	1332.7	1332.7	1334.7	1332.7	1332.7	1334.7	1328.8	1332.7	1332.7	1326.8
10°	1346.5	1350.5	1348.5	1346.5	1340.6	1336.7	1338.6	1328.8	1332.7	1332.7	1326.8
12.5°	1352.4	1350.5	1342.6	1338.6	1334.7	1330.7	1332.7	1324.8	1328.8	1328.8	1324.8
15°	1313.0	1309.1	1303.1	1305.1	1301.2	1299.2	1303.1	1299.2	1307.1	1311.0	1307.1
17.5°	1246.0	1244.0	1240.1	1240.1	1240.1	1242.0	1247.9	1247.9	1259.8	1267.7	1271.6
20°	1159.2	1157.3	1159.2	1163.2	1165.1	1173.0	1186.8	1194.7	1210.5	1224.3	1234.1
22.5°	1080.4	1084.3	1090.2	1098.1	1100.1	1109.9	1127.7	1135.6	1155.3	1171.1	1180.9
25°	1013.3	1019.2	1023.2	1029.1	1031.1	1042.9	1058.7	1068.5	1090.2	1102.1	1113.9
27.5°	946.3	954.2	956.2	964.0	964.0	975.9	989.7	999.5	1013.3	1025.2	1035.0
30°	881.2	883.2	889.1	891.1	895.0	906.9	914.8	920.7	936.4	942.4	948.3
32.5°	810.3	818.2	822.1	824.1	822.1	832.0	839.8	843.8	849.7	857.6	861.5
35°	743.2	747.2	749.2	753.1	755.1	757.0	761.0	763.0	770.8	772.8	774.8
37.5°	676.2	682.1	680.2	682.1	682.1	684.1	688.0	686.1	692.0	694.0	692.0
40°	609.2	609.2	613.1	611.2	613.1	611.2	615.1	615.1	615.1	617.1	615.1
42.5°	542.2	544.1	542.2	546.1	542.2	544.1	544.1	542.2	544.1	542.2	542.2
45°	481.0	481.0	481.0	481.0	477.1	477.1	481.0	479.1	477.1	475.1	473.2
47.5°	421.9	423.9	419.9	421.9	419.9	418.0	416.0	416.0	414.0	410.1	408.1
50°	372.6	368.7	366.7	368.7	366.7	364.7	362.7	358.8	356.8	352.9	350.9
52.5°	323.3	319.4	315.4	315.4	313.5	309.5	307.5	303.6	301.6	297.7	297.7
55°	279.9	276.0	272.1	270.1	266.1	262.2	260.2	256.3	254.3	250.4	246.4
57.5°	238.5	232.6	228.7	226.7	224.7	218.8	216.9	212.9	209.0	205.0	203.1
60°	201.1	195.2	189.3	187.3	185.3	179.4	177.4	171.5	169.5	165.6	163.6
62.5°	165.6	161.7	153.8	151.8	147.9	143.9	138.0	136.0	134.1	136.0	136.0
65°	134.1	128.1	122.2	120.3	116.3	112.4	110.4	108.4	110.4	110.4	112.4
67.5°	106.5	100.5	94.6	94.6	92.7	88.7	88.7	88.7	90.7	90.7	92.7
70°	84.8	80.8	76.9	74.9	74.9	72.9	74.9	74.9	76.9	76.9	76.9
72.5°	67.0	65.1	63.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1	63.1
75°	51.3	49.3	47.3	47.3	45.3	45.3	45.3	45.3	45.3	45.3	43.4
77.5°	33.5	31.5	29.6	29.6	27.6	25.6	25.6	23.7	23.7	23.7	23.7
80°	17.7	15.8	13.8	11.8	11.8	9.9	9.9	9.9	9.9	7.9	7.9
82.5°	7.9	5.9	5.9	5.9	5.9	3.9	3.9	3.9	3.9	3.9	3.9
85°	3.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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: P251703

CATALOG NUMBER: LD4B30D010 EU4B30508050 4LBLWW1LI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5	1344.5
2.5°	1338.6	1334.7	1338.6	1340.6	1336.7	1334.7	1338.6	1330.7
5°	1336.7	1330.7	1332.7	1334.7	1330.7	1328.8	1332.7	1326.8
7.5°	1332.7	1330.7	1332.7	1334.7	1328.8	1328.8	1332.7	1326.8
10°	1332.7	1328.8	1330.7	1334.7	1330.7	1330.7	1334.7	1326.8
12.5°	1330.7	1324.8	1330.7	1332.7	1328.8	1328.8	1332.7	1324.8
15°	1316.9	1316.9	1318.9	1322.9	1320.9	1322.9	1328.8	1322.9
17.5°	1287.4	1291.3	1299.2	1305.1	1309.1	1313.0	1318.9	1315.0
20°	1251.9	1257.8	1267.7	1273.6	1281.5	1283.4	1293.3	1285.4
22.5°	1196.7	1208.5	1216.4	1222.3	1228.2	1234.1	1242.0	1240.1
25°	1129.7	1137.5	1143.5	1149.4	1157.3	1161.2	1165.1	1163.2
27.5°	1048.8	1052.8	1060.6	1064.6	1068.5	1072.5	1080.4	1070.5
30°	960.1	962.1	966.0	971.9	971.9	975.9	979.8	977.8
32.5°	869.4	869.4	873.4	877.3	875.3	877.3	885.2	875.3
35°	780.7	778.7	784.6	786.6	786.6	784.6	790.6	788.6
37.5°	694.0	695.9	697.9	699.9	695.9	699.9	699.9	695.9
40°	615.1	613.1	617.1	619.0	617.1	619.0	619.0	611.2
42.5°	544.1	540.2	542.2	544.1	542.2	544.1	542.2	538.2
45°	475.1	473.2	473.2	475.1	471.2	471.2	471.2	471.2
47.5°	410.1	408.1	410.1	410.1	406.1	406.1	408.1	406.1
50°	350.9	348.9	348.9	348.9	347.0	347.0	348.9	348.9
52.5°	297.7	293.7	293.7	293.7	293.7	293.7	295.7	291.8
55°	244.5	244.5	244.5	244.5	246.4	246.4	246.4	246.4
57.5°	201.1	203.1	203.1	205.0	203.1	205.0	205.0	203.1
60°	167.6	165.6	167.6	167.6	169.5	169.5	169.5	169.5
62.5°	138.0	138.0	138.0	140.0	140.0	140.0	141.9	140.0
65°	114.3	114.3	116.3	116.3	116.3	118.3	118.3	118.3
67.5°	94.6	94.6	94.6	94.6	96.6	96.6	98.6	96.6
70°	78.9	78.9	78.9	78.9	78.9	80.8	80.8	80.8
72.5°	63.1	63.1	63.1	63.1	65.1	65.1	65.1	65.1
75°	43.4	43.4	43.4	45.3	43.4	43.4	43.4	43.4
77.5°	21.7	21.7	21.7	21.7	21.7	19.7	19.7	19.7
80°	7.9	7.9	7.9	7.9	7.9	7.9	5.9	7.9
82.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.0
85°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)