

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: P251701

Luminaire Tested: **LD4B30D010 EU4B30508035 4LBLWW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P251701
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 EU4B30508035 4LBLWW1LI
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2420.0 lumens
Efficiency: N/A
Efficacy: 86.4 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

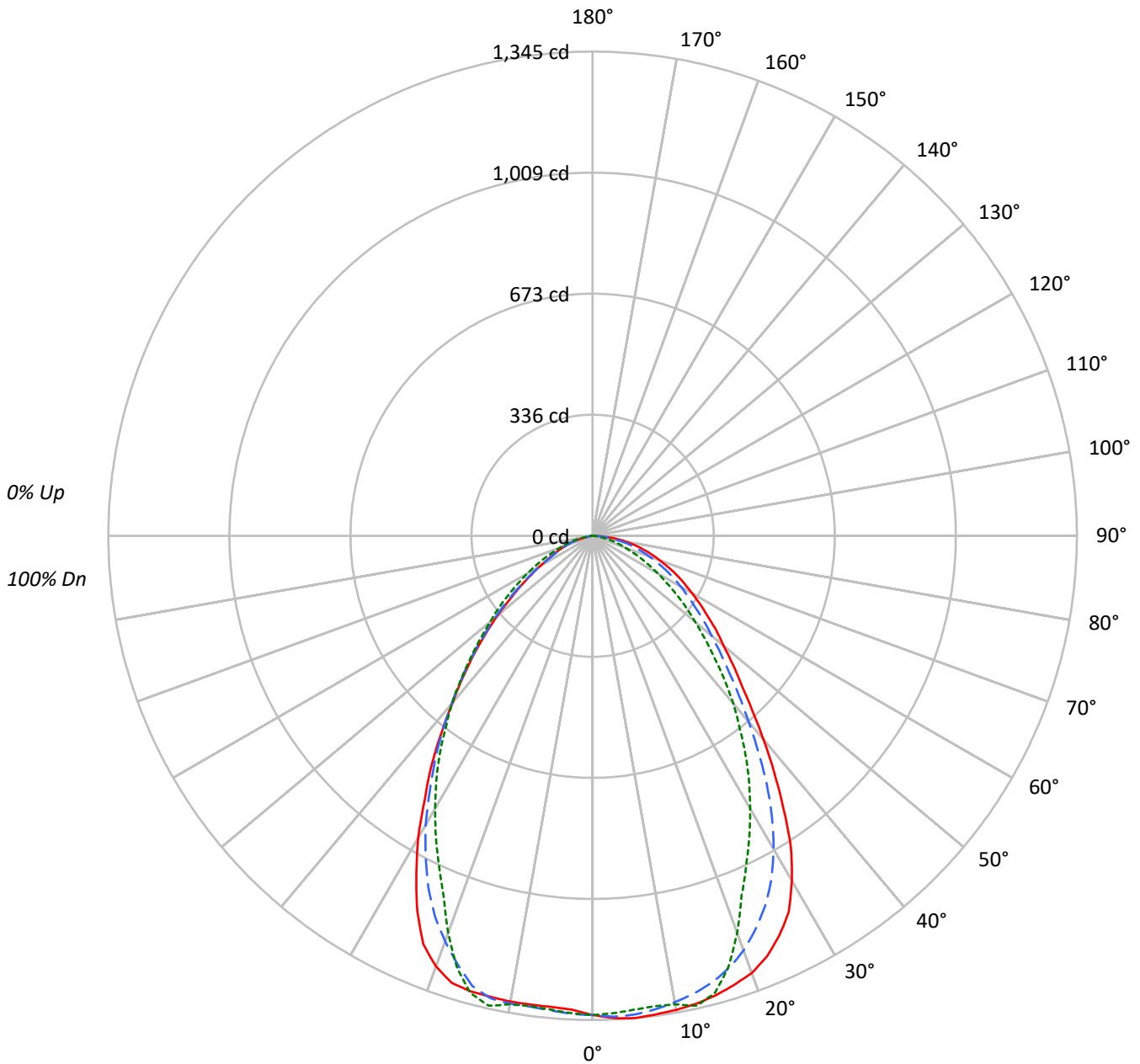
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
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°	129746	129746	129746
5°	131582	129293	128530
10°	132331	130788	130016
15°	133344	132557	132164
20°	134028	121676	132006
25°	131825	108522	123846
30°	124554	98412	108956
35°	109849	88017	92895
40°	93877	77237	76995
45°	80449	65922	64310
50°	71928	56235	52384
55°	66334	48102	41459
60°	62022	40718	32726
65°	59427	33761	27004
70°	56192	27270	22796
75°	54411	22066	16154
80°	52588	12067	4378
85°	45846	6597	2236



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.5	5.2
10°-20°	363.9	15.0
20°-30°	504.7	20.9
30°-40°	498.2	20.6
40°-50°	390.8	16.1
50°-60°	270.7	11.2
60°-70°	165.9	6.9
70°-80°	82.9	3.4
80°-90°	16.6	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°	995.1	41.1
0°-40°	1493.3	61.7
0°-60°	2154.7	89.0
0°-90°	2420.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2420.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1331	1331	1331	1331	1331	
5°	1345	1335	1322	1324	1314	128
15°	1322	1284	1314	1294	1310	373
25°	1226	1134	1009	1080	1152	561
35°	923	843	740	763	781	576
45°	584	535	478	472	467	456
55°	390	349	283	252	244	352
65°	258	222	146	109	117	255
75°	144	121	59	45	43	153
85°	41	23	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°	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3
2.5°	1341.1	1337.2	1335.2	1341.1	1339.1	1343.0	1341.1	1339.1	1335.2	1337.2	1337.2
5°	1345.0	1339.1	1337.2	1341.1	1341.1	1345.0	1343.0	1339.1	1335.2	1337.2	1335.2
7.5°	1341.1	1337.2	1337.2	1339.1	1337.2	1341.1	1337.2	1333.3	1329.4	1331.3	1327.4
10°	1337.2	1331.3	1331.3	1331.3	1331.3	1335.2	1331.3	1325.5	1319.6	1319.6	1315.7
12.5°	1331.3	1325.5	1325.5	1327.4	1323.5	1327.4	1323.5	1313.8	1307.9	1306.0	1302.1
15°	1321.6	1315.7	1315.7	1315.7	1311.8	1313.8	1307.9	1298.2	1290.3	1290.3	1284.5
17.5°	1307.9	1302.1	1300.1	1300.1	1294.2	1296.2	1290.3	1280.6	1268.9	1265.0	1259.1
20°	1292.3	1284.5	1280.6	1280.6	1274.7	1276.7	1268.9	1257.2	1241.5	1235.7	1225.9
22.5°	1265.0	1261.1	1255.2	1253.3	1247.4	1245.4	1237.6	1222.0	1208.4	1198.6	1183.0
25°	1225.9	1224.0	1218.1	1216.2	1208.4	1204.5	1196.6	1179.1	1165.4	1149.8	1134.2
27.5°	1179.1	1171.3	1167.4	1161.5	1153.7	1151.7	1142.0	1126.4	1104.9	1095.1	1075.6
30°	1106.8	1102.9	1099.0	1093.2	1085.4	1081.5	1075.6	1058.0	1040.5	1022.9	1005.3
32.5°	1024.9	1017.0	1011.2	1013.1	1003.4	999.5	989.7	974.1	958.5	946.8	927.3
35°	923.3	921.4	919.4	915.5	907.7	905.8	898.0	886.3	868.7	855.0	843.3
37.5°	827.7	821.8	817.9	817.9	810.1	810.1	804.3	790.6	780.8	771.1	755.5
40°	737.9	728.1	728.1	728.1	720.3	722.3	718.4	704.7	695.0	683.2	673.5
42.5°	654.0	650.1	648.1	644.2	640.3	640.3	636.4	628.6	618.8	611.0	601.2
45°	583.7	581.7	579.8	577.8	573.9	572.0	570.0	558.3	552.4	544.6	534.9
47.5°	527.1	523.2	521.2	519.3	515.4	513.4	509.5	501.7	495.8	488.0	480.2
50°	474.4	472.4	470.5	470.5	466.6	464.6	460.7	454.8	445.1	441.2	431.4
52.5°	433.4	429.5	425.6	425.6	421.7	421.7	415.8	409.9	400.2	396.3	388.5
55°	390.4	388.5	386.5	386.5	382.6	380.7	378.7	370.9	363.1	357.2	349.4
57.5°	353.3	351.4	349.4	349.4	345.5	343.6	341.6	335.8	328.0	324.0	314.3
60°	318.2	318.2	316.2	314.3	312.3	310.4	308.4	302.6	296.7	290.9	283.1
62.5°	287.0	285.0	283.1	281.1	281.1	279.2	277.2	269.4	265.5	259.6	251.8
65°	257.7	253.8	253.8	251.8	251.8	249.9	247.9	240.1	236.2	230.3	222.5
67.5°	226.4	224.5	222.5	222.5	220.6	220.6	218.6	212.8	206.9	203.0	195.2
70°	197.2	197.2	195.2	195.2	193.3	191.3	191.3	187.4	181.5	175.7	167.9
72.5°	171.8	169.8	167.9	167.9	165.9	165.9	164.0	160.1	156.2	152.3	142.5
75°	144.5	142.5	142.5	142.5	140.6	140.6	138.6	134.7	130.8	126.9	121.0
77.5°	119.1	119.1	117.1	117.1	115.2	115.2	115.2	111.3	107.4	103.5	95.7
80°	93.7	93.7	93.7	91.7	89.8	89.8	89.8	85.9	82.0	78.1	72.2
82.5°	68.3	66.4	66.4	64.4	62.5	62.5	62.5	58.6	56.6	50.8	46.9
85°	41.0	39.0	39.0	37.1	35.1	35.1	35.1	33.2	29.3	27.3	23.4
87.5°	15.6	15.6	15.6	15.6	15.6	13.7	13.7	11.7	11.7	9.8	9.8
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°	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3
2.5°	1337.2	1335.2	1335.2	1333.3	1335.2	1331.3	1331.3	1331.3	1331.3	1327.4	1327.4
5°	1333.3	1333.3	1331.3	1329.4	1331.3	1327.4	1329.4	1327.4	1327.4	1321.6	1321.6
7.5°	1325.5	1323.5	1319.6	1317.7	1319.6	1317.7	1317.7	1317.7	1321.6	1317.7	1317.7
10°	1311.8	1309.9	1306.0	1304.0	1304.0	1302.1	1306.0	1309.9	1317.7	1321.6	1329.4
12.5°	1298.2	1294.2	1292.3	1292.3	1294.2	1294.2	1302.1	1311.8	1331.3	1337.2	1345.0
15°	1280.6	1278.6	1278.6	1284.5	1292.3	1298.2	1313.8	1319.6	1321.6	1313.8	1309.9
17.5°	1257.2	1257.2	1259.1	1265.0	1270.8	1270.8	1272.8	1268.9	1265.0	1255.2	1243.5
20°	1218.1	1216.2	1212.3	1212.3	1212.3	1204.5	1208.4	1194.7	1184.9	1173.2	1155.6
22.5°	1169.3	1159.6	1145.9	1136.1	1130.3	1126.4	1116.6	1101.0	1089.3	1081.5	1073.7
25°	1116.6	1101.0	1081.5	1065.9	1056.1	1054.1	1040.5	1026.8	1019.0	1009.2	1005.3
27.5°	1056.1	1038.5	1015.1	999.5	991.7	985.8	974.1	960.4	950.7	942.9	937.0
30°	985.8	968.2	948.7	929.2	921.4	911.6	899.9	890.2	880.4	874.5	870.6
32.5°	907.7	890.2	870.6	857.0	847.2	839.4	829.6	819.9	812.1	808.2	804.3
35°	827.7	810.1	794.5	780.8	773.0	767.2	759.4	747.7	741.8	739.8	735.9
37.5°	741.8	730.1	716.4	704.7	698.9	691.0	687.1	677.4	677.4	669.6	669.6
40°	661.8	654.0	640.3	630.5	626.6	620.8	614.9	611.0	609.1	607.1	605.2
42.5°	591.5	579.8	572.0	564.2	558.3	554.4	554.4	548.5	546.6	540.7	538.8
45°	527.1	521.2	507.5	501.7	499.7	493.9	491.9	488.0	482.2	478.3	476.3
47.5°	470.5	464.6	456.8	449.0	445.1	441.2	437.3	431.4	427.5	421.7	419.7
50°	423.6	413.8	406.0	400.2	394.3	392.4	388.5	380.7	376.8	370.9	370.9
52.5°	380.7	372.9	363.1	357.2	351.4	347.5	341.6	335.8	329.9	328.0	322.1
55°	343.6	333.8	324.0	316.2	310.4	304.5	302.6	294.8	287.0	283.1	279.2
57.5°	308.4	298.7	287.0	277.2	273.3	269.4	263.5	255.7	249.9	244.0	240.1
60°	273.3	265.5	253.8	244.0	240.1	234.3	228.4	220.6	214.7	208.9	205.0
62.5°	244.0	232.3	222.5	212.8	206.9	203.0	195.2	189.4	181.5	175.7	169.8
65°	214.7	203.0	193.3	183.5	179.6	173.7	167.9	160.1	152.3	146.4	138.6
67.5°	185.5	175.7	165.9	156.2	152.3	148.4	140.6	132.7	124.9	119.1	111.3
70°	160.1	150.3	140.6	132.7	128.8	124.9	117.1	109.3	103.5	95.7	89.8
72.5°	136.6	128.8	119.1	111.3	107.4	103.5	95.7	89.8	82.0	78.1	72.2
75°	113.2	105.4	97.6	89.8	85.9	82.0	76.1	70.3	64.4	58.6	54.7
77.5°	89.8	82.0	74.2	68.3	64.4	62.5	56.6	50.8	44.9	41.0	35.1
80°	66.4	58.6	52.7	46.9	42.9	41.0	35.1	31.2	27.3	21.5	19.5
82.5°	41.0	35.1	31.2	27.3	25.4	23.4	19.5	15.6	13.7	11.7	9.8
85°	21.5	19.5	15.6	13.7	11.7	11.7	9.8	7.8	5.9	5.9	3.9
87.5°	7.8	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°	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3
2.5°	1323.5	1325.5	1327.4	1329.4	1327.4	1327.4	1331.3	1323.5	1329.4	1329.4	1321.6
5°	1319.6	1323.5	1321.6	1325.5	1321.6	1321.6	1323.5	1319.6	1323.5	1323.5	1317.7
7.5°	1315.7	1319.6	1319.6	1321.6	1319.6	1319.6	1321.6	1315.7	1319.6	1319.6	1313.8
10°	1333.3	1337.2	1335.2	1333.3	1327.4	1323.5	1325.5	1315.7	1319.6	1319.6	1313.8
12.5°	1339.1	1337.2	1329.4	1325.5	1321.6	1317.7	1319.6	1311.8	1315.7	1315.7	1311.8
15°	1300.1	1296.2	1290.3	1292.3	1288.4	1286.4	1290.3	1286.4	1294.2	1298.2	1294.2
17.5°	1233.7	1231.8	1227.9	1227.9	1227.9	1229.8	1235.7	1235.7	1247.4	1255.2	1259.1
20°	1147.8	1145.9	1147.8	1151.7	1153.7	1161.5	1175.2	1183.0	1198.6	1212.3	1222.0
22.5°	1069.8	1073.7	1079.5	1087.3	1089.3	1099.0	1116.6	1124.4	1143.9	1159.6	1169.3
25°	1003.4	1009.2	1013.1	1019.0	1021.0	1032.7	1048.3	1058.0	1079.5	1091.2	1102.9
27.5°	937.0	944.8	946.8	954.6	954.6	966.3	980.0	989.7	1003.4	1015.1	1024.9
30°	872.6	874.5	880.4	882.4	886.3	898.0	905.8	911.6	927.3	933.1	939.0
32.5°	802.3	810.1	814.0	816.0	814.0	823.8	831.6	835.5	841.4	849.2	853.1
35°	735.9	739.8	741.8	745.7	747.7	749.6	753.5	755.5	763.3	765.2	767.2
37.5°	669.6	675.4	673.5	675.4	675.4	677.4	681.3	679.3	685.2	687.1	685.2
40°	603.2	603.2	607.1	605.2	607.1	605.2	609.1	609.1	609.1	611.0	609.1
42.5°	536.8	538.8	536.8	540.7	536.8	538.8	538.8	536.8	538.8	536.8	536.8
45°	476.3	476.3	476.3	476.3	472.4	472.4	476.3	474.4	472.4	470.5	468.5
47.5°	417.8	419.7	415.8	417.8	415.8	413.8	411.9	411.9	409.9	406.0	404.1
50°	368.9	365.0	363.1	365.0	363.1	361.1	359.2	355.3	353.3	349.4	347.5
52.5°	320.1	316.2	312.3	312.3	310.4	306.5	304.5	300.6	298.7	294.8	294.8
55°	277.2	273.3	269.4	267.4	263.5	259.6	257.7	253.8	251.8	247.9	244.0
57.5°	236.2	230.3	226.4	224.5	222.5	216.7	214.7	210.8	206.9	203.0	201.1
60°	199.1	193.3	187.4	185.5	183.5	177.6	175.7	169.8	167.9	164.0	162.0
62.5°	164.0	160.1	152.3	150.3	146.4	142.5	136.6	134.7	132.7	134.7	134.7
65°	132.7	126.9	121.0	119.1	115.2	111.3	109.3	107.4	109.3	109.3	111.3
67.5°	105.4	99.6	93.7	93.7	91.7	87.8	87.8	87.8	89.8	89.8	91.7
70°	83.9	80.0	76.1	74.2	74.2	72.2	74.2	74.2	76.1	76.1	76.1
72.5°	66.4	64.4	62.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	62.5
75°	50.8	48.8	46.9	46.9	44.9	44.9	44.9	44.9	44.9	44.9	42.9
77.5°	33.2	31.2	29.3	29.3	27.3	25.4	25.4	23.4	23.4	23.4	23.4
80°	17.6	15.6	13.7	11.7	11.7	9.8	9.8	9.8	9.8	7.8	7.8
82.5°	7.8	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: P251701

CATALOG NUMBER: LD4B30D010 EU4B30508035 4LBLWW1LI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3	1331.3
2.5°	1325.5	1321.6	1325.5	1327.4	1323.5	1321.6	1325.5	1317.7
5°	1323.5	1317.7	1319.6	1321.6	1317.7	1315.7	1319.6	1313.8
7.5°	1319.6	1317.7	1319.6	1321.6	1315.7	1315.7	1319.6	1313.8
10°	1319.6	1315.7	1317.7	1321.6	1317.7	1317.7	1321.6	1313.8
12.5°	1317.7	1311.8	1317.7	1319.6	1315.7	1315.7	1319.6	1311.8
15°	1304.0	1304.0	1306.0	1309.9	1307.9	1309.9	1315.7	1309.9
17.5°	1274.7	1278.6	1286.4	1292.3	1296.2	1300.1	1306.0	1302.1
20°	1239.6	1245.4	1255.2	1261.1	1268.9	1270.8	1280.6	1272.8
22.5°	1184.9	1196.6	1204.5	1210.3	1216.2	1222.0	1229.8	1227.9
25°	1118.6	1126.4	1132.2	1138.1	1145.9	1149.8	1153.7	1151.7
27.5°	1038.5	1042.4	1050.2	1054.1	1058.0	1061.9	1069.8	1060.0
30°	950.7	952.6	956.5	962.4	962.4	966.3	970.2	968.2
32.5°	860.9	860.9	864.8	868.7	866.7	868.7	876.5	866.7
35°	773.0	771.1	776.9	778.9	778.9	776.9	782.8	780.8
37.5°	687.1	689.1	691.0	693.0	689.1	693.0	693.0	689.1
40°	609.1	607.1	611.0	613.0	611.0	613.0	613.0	605.2
42.5°	538.8	534.9	536.8	538.8	536.8	538.8	536.8	532.9
45°	470.5	468.5	468.5	470.5	466.6	466.6	466.6	466.6
47.5°	406.0	404.1	406.0	406.0	402.1	402.1	404.1	402.1
50°	347.5	345.5	345.5	345.5	343.6	343.6	345.5	345.5
52.5°	294.8	290.9	290.9	290.9	290.9	290.9	292.8	288.9
55°	242.1	242.1	242.1	242.1	244.0	244.0	244.0	244.0
57.5°	199.1	201.1	201.1	203.0	201.1	203.0	203.0	201.1
60°	165.9	164.0	165.9	165.9	167.9	167.9	167.9	167.9
62.5°	136.6	136.6	136.6	138.6	138.6	138.6	140.6	138.6
65°	113.2	113.2	115.2	115.2	115.2	117.1	117.1	117.1
67.5°	93.7	93.7	93.7	93.7	95.7	95.7	97.6	95.7
70°	78.1	78.1	78.1	78.1	78.1	80.0	80.0	80.0
72.5°	62.5	62.5	62.5	62.5	64.4	64.4	64.4	64.4
75°	42.9	42.9	42.9	44.9	42.9	42.9	42.9	42.9
77.5°	21.5	21.5	21.5	21.5	21.5	19.5	19.5	19.5
80°	7.8	7.8	7.8	7.8	7.8	7.8	5.9	7.8
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)