

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P880568

Luminaire Tested: **LD4C35D010 EU4359030 4LBDWNH**

Issue Date: 10/4/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P880568
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C35D010 EU4359030 4LBDWNH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

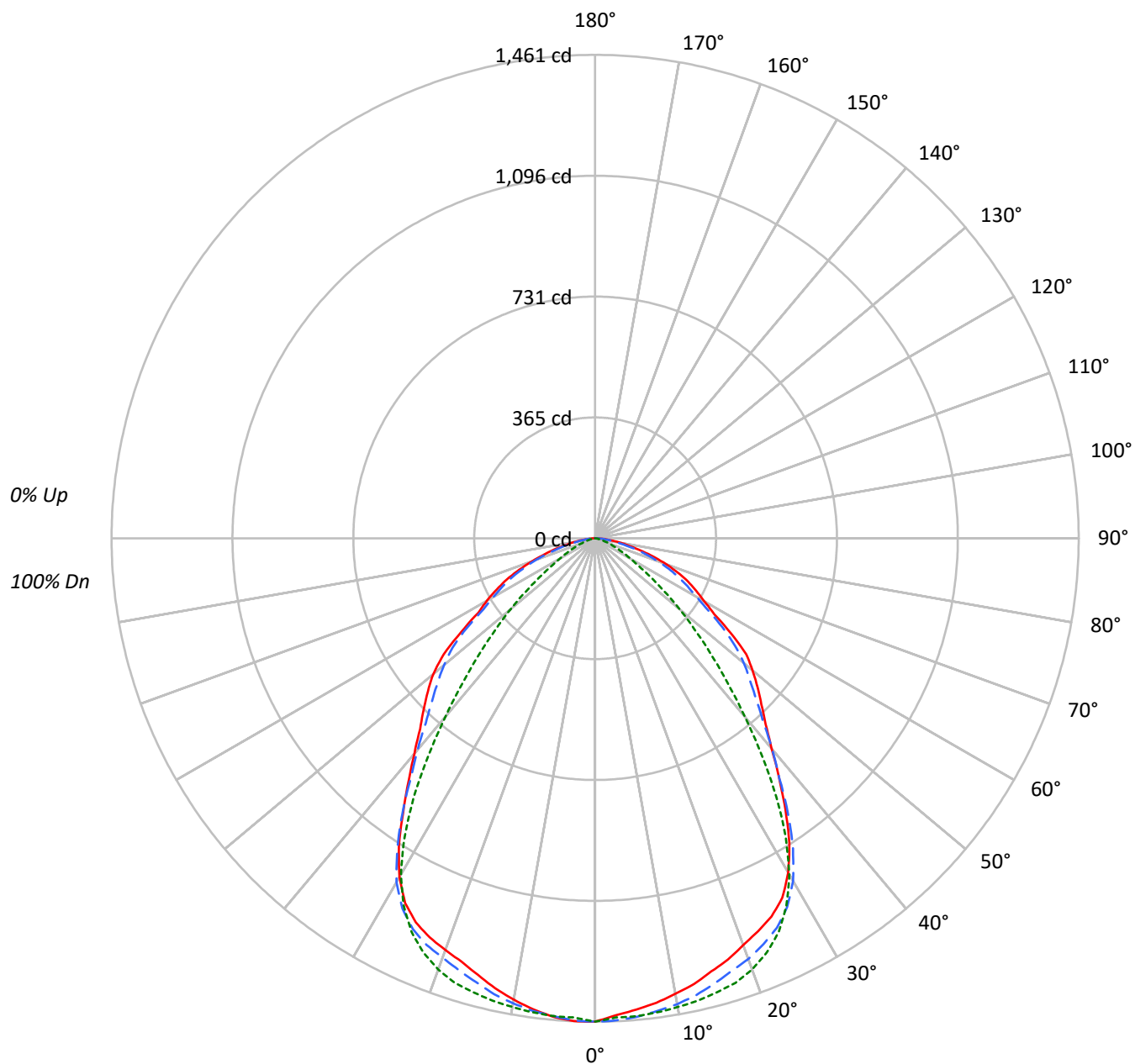
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66		
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58		
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51		
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46		
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41		
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37		
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34		
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	179464	179464	179464
5°	176278	178769	179040
10°	174386	179439	176632
15°	172364	180644	173789
20°	170992	181294	173058
25°	170906	177914	173644
30°	165464	166429	167706
35°	150321	143257	151671
40°	132998	112807	136238
45°	123374	85898	127300
50°	118556	63588	121996
55°	107351	43823	105895
60°	93319	29829	92779
65°	90174	21570	85581
70°	81502	14548	72630
75°	67166	9588	57625
80°	54052	6367	42944
85°	44402	3101	28474



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.9	4.6
10°-20°	394.3	13.3
20°-30°	595.7	20.0
30°-40°	623.4	21.0
40°-50°	504.9	17.0
50°-60°	367.2	12.4
60°-70°	226.5	7.6
70°-80°	102.3	3.4
80°-90°	20.8	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°	1127.9	37.9
0°-40°	1751.2	58.9
0°-60°	2623.4	88.2
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1461	1461	1461	1461	1461	
5°	1429	1452	1450	1450	1452	136
15°	1355	1393	1420	1389	1366	383
25°	1261	1299	1312	1304	1281	578
35°	1002	1016	955	1016	1011	625
45°	710	688	494	697	733	552
55°	501	470	205	474	494	447
65°	310	279	74	274	294	304
75°	142	121	20	106	121	154
85°	32	25	2	18	20	36
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°	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8
2.5°	1442.8	1442.8	1456.4	1472.0	1458.6	1445.0	1454.0	1449.6	1465.4	1465.4	1458.6
5°	1429.4	1433.8	1445.0	1458.6	1447.4	1433.8	1445.0	1440.6	1456.4	1456.4	1451.8
7.5°	1415.9	1418.1	1431.6	1447.4	1436.1	1422.6	1431.6	1429.4	1442.8	1445.0	1440.6
10°	1397.9	1400.1	1413.7	1429.4	1418.1	1406.9	1415.9	1413.7	1431.6	1431.6	1429.4
12.5°	1379.9	1382.1	1395.7	1409.1	1397.9	1386.7	1395.7	1395.7	1413.7	1415.9	1413.7
15°	1355.2	1359.6	1371.0	1384.4	1377.7	1364.2	1373.2	1373.2	1388.9	1393.3	1393.3
17.5°	1335.0	1337.2	1348.4	1362.0	1353.0	1341.7	1350.6	1350.6	1366.4	1371.0	1371.0
20°	1307.9	1312.5	1323.7	1337.2	1330.5	1321.5	1328.2	1328.2	1346.2	1350.6	1353.0
22.5°	1285.5	1290.0	1298.9	1317.0	1305.7	1298.9	1307.9	1305.7	1326.0	1328.2	1328.2
25°	1260.8	1265.4	1276.6	1287.7	1281.0	1274.3	1281.0	1281.0	1296.7	1298.9	1298.9
27.5°	1224.9	1227.1	1238.3	1249.6	1242.8	1233.8	1242.8	1240.6	1256.2	1258.6	1256.2
30°	1166.4	1171.0	1175.4	1191.1	1184.4	1177.6	1186.6	1182.2	1197.9	1197.9	1195.6
32.5°	1092.2	1092.2	1101.3	1112.5	1103.5	1098.9	1105.7	1107.9	1119.3	1119.3	1112.5
35°	1002.3	1006.9	1013.5	1020.3	1013.5	1009.1	1015.9	1013.5	1027.1	1022.5	1015.9
37.5°	912.5	914.7	921.5	930.5	921.5	914.7	916.9	914.7	925.9	925.9	914.7
40°	829.3	833.8	838.3	847.3	838.3	833.8	836.1	829.3	842.8	838.3	831.5
42.5°	761.8	764.1	770.8	775.4	766.4	764.1	766.4	761.8	768.6	764.1	750.6
45°	710.1	710.1	712.5	719.1	710.1	707.9	707.9	703.4	710.1	701.2	687.8
47.5°	665.2	667.4	669.8	674.2	667.4	660.8	663.0	654.0	658.5	651.7	633.7
50°	620.3	624.7	627.1	631.5	624.7	620.3	622.5	613.5	613.5	602.3	586.6
52.5°	575.4	577.6	575.4	579.8	575.4	568.6	570.8	561.8	561.8	548.4	532.7
55°	501.2	503.4	505.7	510.2	505.7	499.0	503.4	496.7	496.7	487.6	469.7
57.5°	426.9	429.3	431.5	433.7	433.7	429.3	431.5	426.9	424.7	418.0	404.6
60°	379.8	379.8	379.8	382.0	379.8	377.6	377.6	373.0	373.0	364.1	350.7
62.5°	343.9	346.1	346.1	348.3	346.1	343.9	341.7	337.1	334.9	325.9	314.6
65°	310.2	310.2	307.9	312.4	310.2	307.9	307.9	303.4	299.0	290.0	278.6
67.5°	269.7	271.9	269.7	271.9	271.9	269.7	267.4	262.9	260.7	253.9	240.5
70°	226.9	226.9	226.9	229.3	226.9	226.9	229.3	222.5	220.3	211.2	200.0
72.5°	184.2	186.6	186.6	184.2	186.6	182.0	182.0	182.0	179.8	170.8	159.5
75°	141.5	143.9	143.9	146.1	143.9	141.5	141.5	139.3	137.1	130.3	121.4
77.5°	105.6	105.6	107.8	107.8	107.8	105.6	105.6	101.2	101.2	96.6	87.6
80°	76.4	76.4	74.2	76.4	76.4	74.2	74.2	71.9	71.9	67.4	60.7
82.5°	49.5	51.7	51.7	51.7	51.7	49.5	49.5	49.5	47.1	44.9	40.5
85°	31.5	31.5	31.5	31.5	33.7	31.5	33.7	31.5	31.5	27.0	24.7
87.5°	13.5	13.5	13.5	15.8	15.8	13.5	13.5	13.5	13.5	13.5	11.2
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°	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8
2.5°	1458.6	1460.8	1454.0	1463.0	1456.4	1458.6	1460.8	1458.6	1449.6	1449.6	1474.3
5°	1449.6	1454.0	1447.4	1458.6	1454.0	1454.0	1458.6	1456.4	1447.4	1449.6	1472.0
7.5°	1440.6	1447.4	1442.8	1454.0	1447.4	1447.4	1451.8	1451.8	1442.8	1445.0	1465.4
10°	1427.1	1436.1	1433.8	1445.0	1438.4	1438.4	1445.0	1445.0	1436.1	1438.4	1458.6
12.5°	1415.9	1424.9	1422.6	1433.8	1429.4	1431.6	1433.8	1438.4	1427.1	1431.6	1449.6
15°	1397.9	1406.9	1406.9	1418.1	1413.7	1418.1	1422.6	1429.4	1420.3	1420.3	1438.4
17.5°	1377.7	1388.9	1388.9	1397.9	1397.9	1400.1	1409.1	1415.9	1406.9	1409.1	1424.9
20°	1355.2	1368.7	1368.7	1379.9	1377.7	1382.1	1388.9	1395.7	1386.7	1386.7	1404.7
22.5°	1332.7	1344.0	1346.2	1353.0	1353.0	1355.2	1362.0	1366.4	1355.2	1355.2	1373.2
25°	1301.3	1312.5	1314.7	1319.3	1314.7	1314.7	1319.3	1323.7	1312.5	1312.5	1328.2
27.5°	1258.6	1269.8	1269.8	1267.6	1263.0	1265.4	1263.0	1265.4	1254.0	1251.8	1267.6
30°	1195.6	1202.3	1202.3	1200.1	1193.3	1193.3	1186.6	1188.9	1173.2	1173.2	1186.6
32.5°	1110.3	1116.9	1112.5	1107.9	1098.9	1094.5	1090.0	1087.7	1072.0	1072.0	1087.7
35°	1009.1	1013.5	1006.9	997.9	986.6	979.8	973.2	964.2	952.9	955.2	964.2
37.5°	905.7	905.7	896.7	878.8	869.8	858.5	847.3	847.3	829.3	827.1	833.8
40°	818.1	809.1	793.4	768.6	752.9	741.7	725.9	716.9	703.4	703.4	714.7
42.5°	739.4	721.5	701.2	667.4	651.7	638.3	618.1	609.1	593.4	591.0	597.8
45°	669.8	651.7	622.5	586.6	566.4	550.6	521.3	510.2	496.7	494.4	499.0
47.5°	613.5	593.4	557.4	510.2	490.0	469.7	440.5	424.7	413.5	406.8	413.5
50°	564.1	537.1	499.0	449.5	422.5	404.6	368.6	352.9	337.1	332.7	334.9
52.5°	510.2	483.2	442.7	391.0	366.3	339.3	305.6	283.2	269.7	262.9	269.7
55°	451.7	424.7	384.4	332.7	305.6	281.0	244.9	226.9	211.2	204.6	211.2
57.5°	388.8	364.1	328.1	276.4	251.7	229.3	195.6	177.6	161.8	157.3	161.8
60°	334.9	314.6	278.6	229.3	209.0	184.2	155.1	137.1	123.6	121.4	123.6
62.5°	299.0	276.4	242.7	195.6	175.3	155.1	128.1	110.2	98.8	96.6	98.8
65°	262.9	238.3	206.8	166.3	146.1	130.3	103.4	87.6	76.4	74.2	76.4
67.5°	222.5	200.0	173.0	137.1	121.4	105.6	83.2	67.4	58.5	56.3	58.5
70°	184.2	164.1	137.1	110.2	94.4	83.2	62.9	51.7	42.7	40.5	42.7
72.5°	146.1	128.1	105.6	83.2	74.2	62.9	49.5	38.1	31.5	29.2	31.5
75°	112.4	98.8	80.9	60.7	53.9	47.1	33.7	27.0	22.5	20.2	22.5
77.5°	78.6	69.7	56.3	44.9	38.1	33.7	24.7	18.0	15.8	13.5	15.8
80°	53.9	47.1	38.1	29.2	24.7	20.2	15.8	11.2	9.0	9.0	9.0
82.5°	35.9	29.2	22.5	18.0	15.8	13.5	9.0	6.8	6.8	4.6	4.6
85°	20.2	18.0	13.5	11.2	9.0	6.8	4.6	4.6	2.2	2.2	2.2
87.5°	9.0	6.8	4.6	4.6	2.2	2.2	2.2	2.2	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°	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8
2.5°	1467.6	1460.8	1469.8	1460.8	1456.4	1460.8	1456.4	1469.8	1458.6	1449.6	1458.6
5°	1465.4	1456.4	1465.4	1458.6	1451.8	1454.0	1449.6	1463.0	1449.6	1442.8	1447.4
7.5°	1460.8	1454.0	1458.6	1451.8	1445.0	1447.4	1442.8	1454.0	1440.6	1433.8	1438.4
10°	1454.0	1447.4	1449.6	1445.0	1438.4	1438.4	1433.8	1442.8	1427.1	1418.1	1422.6
12.5°	1445.0	1436.1	1440.6	1433.8	1424.9	1424.9	1420.3	1427.1	1411.3	1402.3	1404.7
15°	1433.8	1424.9	1424.9	1418.1	1409.1	1409.1	1400.1	1406.9	1388.9	1379.9	1379.9
17.5°	1420.3	1409.1	1409.1	1402.3	1391.1	1388.9	1382.1	1388.9	1368.7	1359.6	1359.6
20°	1400.1	1391.1	1388.9	1384.4	1373.2	1371.0	1362.0	1364.2	1348.4	1341.7	1339.4
22.5°	1373.2	1364.2	1366.4	1359.6	1350.6	1348.4	1339.4	1346.2	1330.5	1323.7	1326.0
25°	1326.0	1321.5	1326.0	1323.7	1317.0	1317.0	1312.5	1317.0	1303.5	1298.9	1301.3
27.5°	1272.0	1269.8	1272.0	1272.0	1267.6	1267.6	1267.6	1274.3	1260.8	1258.6	1258.6
30°	1193.3	1193.3	1195.6	1197.9	1197.9	1202.3	1200.1	1209.1	1200.1	1195.6	1200.1
32.5°	1090.0	1098.9	1105.7	1105.7	1105.7	1110.3	1114.7	1121.5	1112.5	1114.7	1114.7
35°	973.2	979.8	984.4	995.6	988.9	1004.5	1009.1	1018.1	1015.9	1020.3	1018.1
37.5°	842.8	851.8	860.8	876.6	874.2	892.2	901.2	919.1	914.7	923.7	928.1
40°	721.5	734.9	748.4	759.6	768.6	786.6	804.5	827.1	833.8	840.5	842.8
42.5°	604.6	618.1	640.5	656.2	669.8	699.0	723.7	750.6	757.4	770.8	775.4
45°	510.2	521.3	548.4	568.6	579.8	622.5	651.7	685.4	696.7	712.5	719.1
47.5°	422.5	442.7	469.7	494.4	510.2	555.1	593.4	629.3	645.0	663.0	672.0
50°	346.1	368.6	404.6	426.9	449.5	499.0	541.7	579.8	595.6	615.7	624.7
52.5°	283.2	307.9	341.7	366.3	391.0	442.7	487.6	523.7	543.9	557.4	570.8
55°	222.5	249.5	283.2	310.2	330.3	386.6	424.7	460.7	474.2	485.4	492.2
57.5°	173.0	193.2	226.9	249.5	274.2	323.6	361.8	388.8	400.0	413.5	418.0
60°	134.9	155.1	186.6	209.0	231.5	278.6	316.9	343.9	355.1	366.3	373.0
62.5°	107.8	128.1	157.3	177.6	197.8	240.5	274.2	301.2	314.6	325.9	332.7
65°	85.4	103.4	128.1	148.3	164.1	202.2	235.9	260.7	274.2	285.4	292.2
67.5°	67.4	83.2	105.6	119.1	134.9	166.3	195.6	218.0	229.3	242.7	249.5
70°	51.7	62.9	83.2	94.4	105.6	132.5	155.1	177.6	188.8	197.8	202.2
72.5°	38.1	47.1	62.9	71.9	78.6	101.2	119.1	134.9	143.9	152.9	157.3
75°	27.0	33.7	44.9	51.7	56.3	71.9	87.6	98.8	105.6	112.4	119.1
77.5°	18.0	22.5	29.2	33.7	38.1	49.5	58.5	67.4	74.2	80.9	83.2
80°	11.2	15.8	20.2	22.5	24.7	31.5	40.5	44.9	49.5	53.9	56.3
82.5°	6.8	9.0	11.2	13.5	15.8	20.2	24.7	29.2	31.5	35.9	38.1
85°	2.2	4.6	4.6	6.8	6.8	11.2	13.5	15.8	18.0	20.2	22.5
87.5°	0.0	0.0	2.2	2.2	2.2	2.2	4.6	4.6	4.6	4.6	4.6
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: P880568

CATALOG NUMBER: LD4C35D010 EU4359030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8	1460.8
2.5°	1467.6	1460.8	1456.4	1454.0	1469.8	1449.6	1458.6	1460.8
5°	1458.6	1451.8	1447.4	1445.0	1458.6	1440.6	1447.4	1451.8
7.5°	1445.0	1440.6	1433.8	1431.6	1445.0	1424.9	1433.8	1436.1
10°	1429.4	1422.6	1418.1	1415.9	1427.1	1406.9	1415.9	1415.9
12.5°	1409.1	1404.7	1395.7	1395.7	1404.7	1386.7	1393.3	1393.3
15°	1382.1	1377.7	1368.7	1368.7	1377.7	1359.6	1366.4	1366.4
17.5°	1359.6	1355.2	1348.4	1346.2	1355.2	1337.2	1344.0	1341.7
20°	1341.7	1337.2	1328.2	1328.2	1335.0	1317.0	1323.7	1323.7
22.5°	1326.0	1323.7	1314.7	1314.7	1323.7	1305.7	1310.3	1305.7
25°	1301.3	1298.9	1290.0	1292.3	1296.7	1278.8	1285.5	1281.0
27.5°	1260.8	1260.8	1251.8	1249.6	1256.2	1240.6	1245.0	1242.8
30°	1197.9	1200.1	1188.9	1188.9	1191.1	1177.6	1184.4	1182.2
32.5°	1112.5	1114.7	1105.7	1103.5	1110.3	1098.9	1103.5	1103.5
35°	1018.1	1020.3	1013.5	1013.5	1020.3	1013.5	1013.5	1011.3
37.5°	923.7	928.1	923.7	925.9	930.5	923.7	928.1	925.9
40°	847.3	851.8	845.0	849.5	854.0	847.3	854.0	849.5
42.5°	777.6	784.4	779.8	784.4	788.8	784.4	788.8	782.2
45°	725.9	730.5	728.1	730.5	734.9	732.7	734.9	732.7
47.5°	676.4	685.4	681.0	685.4	692.2	687.8	692.2	685.4
50°	631.5	638.3	636.1	640.5	642.7	640.5	645.0	638.3
52.5°	573.0	579.8	577.6	577.6	582.0	577.6	582.0	577.6
55°	496.7	499.0	499.0	501.2	499.0	496.7	499.0	494.4
57.5°	422.5	426.9	420.3	426.9	424.7	422.5	422.5	418.0
60°	375.3	382.0	377.6	382.0	379.8	379.8	379.8	377.6
62.5°	337.1	341.7	337.1	339.3	339.3	339.3	337.1	334.9
65°	294.4	301.2	296.6	299.0	296.6	294.4	296.6	294.4
67.5°	251.7	253.9	253.9	251.7	251.7	251.7	251.7	247.3
70°	204.6	206.8	204.6	209.0	206.8	204.6	206.8	202.2
72.5°	159.5	161.8	159.5	161.8	159.5	159.5	159.5	159.5
75°	119.1	121.4	121.4	121.4	121.4	121.4	116.9	121.4
77.5°	85.4	85.4	85.4	87.6	85.4	85.4	85.4	85.4
80°	58.5	58.5	58.5	60.7	58.5	60.7	58.5	60.7
82.5°	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
85°	20.2	22.5	22.5	20.2	20.2	20.2	20.2	20.2
87.5°	4.6	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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)