

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: P879412

Luminaire Tested: **LD4C35D010 EU4359035 4LBDWWH**

Issue Date: 10/1/2024

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: P879412
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C35D010 EU4359035 4LBDWWH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

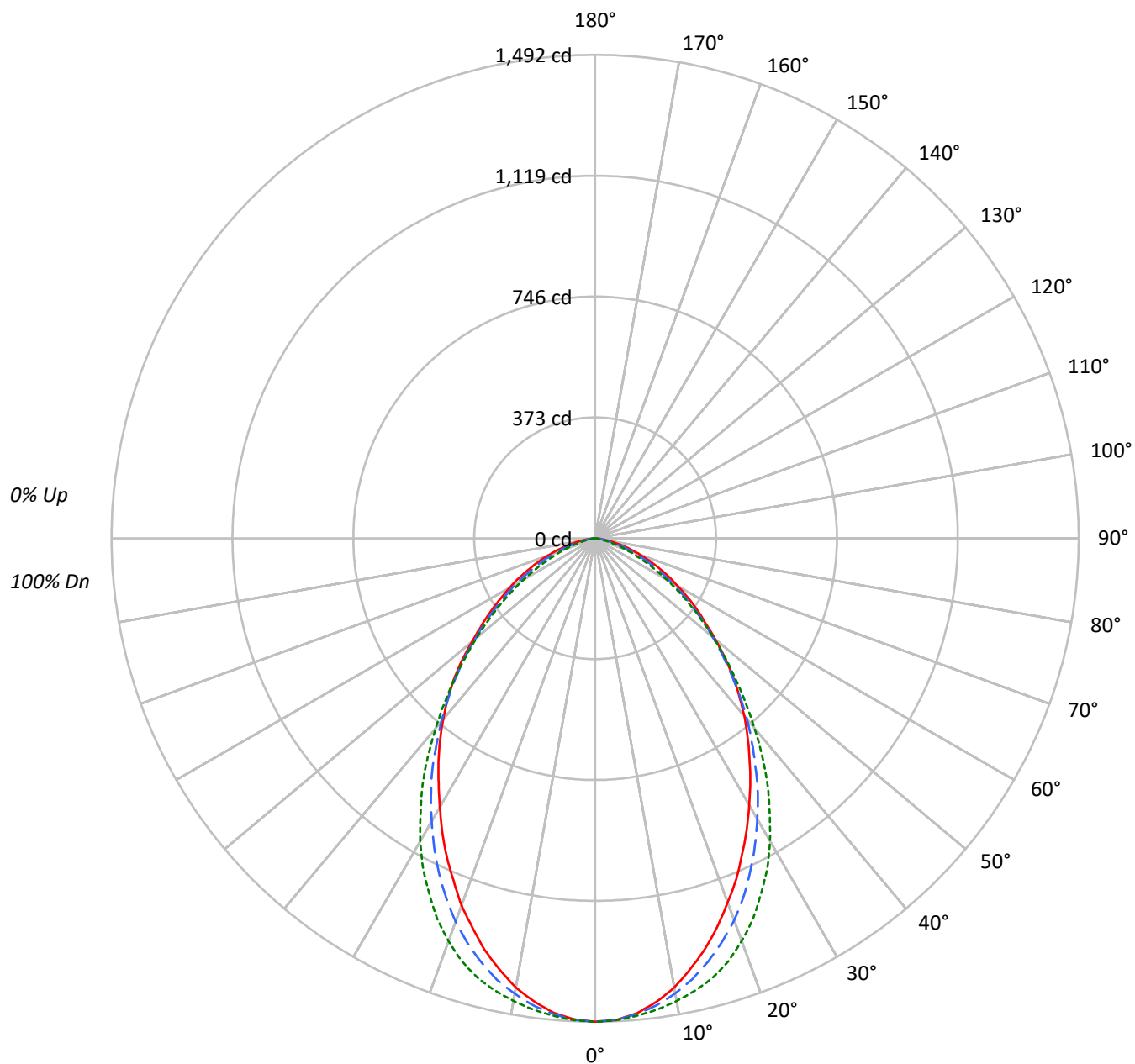
Lumens per Lamp: N/A
Luminaire Lumens: 2669.0 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88		
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77		
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67		
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59		
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52		
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42		
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35		
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	183322	183322	183322
5°	181457	182468	181247
10°	175559	180886	175621
15°	166793	178571	167340
20°	156323	172953	157618
25°	145598	164088	146927
30°	134880	153066	135887
35°	124435	139148	126325
40°	114780	122606	116880
45°	103967	106260	107111
50°	92161	91014	94474
55°	82163	76637	84048
60°	71894	62213	74597
65°	62936	48110	65145
70°	52946	35237	55712
75°	41344	22879	43717
80°	27167	12027	29856
85°	9303	5356	12404



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.3	5.2
10°-20°	380.6	14.3
20°-30°	523.5	19.6
30°-40°	546.1	20.5
40°-50°	467.2	17.5
50°-60°	334.2	12.5
60°-70°	193.9	7.3
70°-80°	74.8	2.8
80°-90°	9.5	0.4
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°	1043.4	39.1
0°-40°	1589.4	59.6
0°-60°	2390.8	89.6
0°-90°	2669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2669.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1492	1492	1492	1492	1492	
5°	1471	1474	1480	1474	1470	138
15°	1311	1351	1404	1356	1316	368
25°	1074	1133	1210	1140	1084	494
35°	830	862	928	876	842	520
45°	598	594	612	608	616	461
55°	384	364	358	374	392	343
65°	216	191	166	198	224	216
75°	87	65	48	69	92	94
85°	7	5	4	6	9	13
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°	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2
2.5°	1488.4	1487.3	1487.8	1487.8	1487.8	1487.3	1488.4	1488.4	1487.8	1487.8	1487.8
5°	1471.4	1470.3	1470.8	1471.4	1471.4	1471.4	1471.9	1472.5	1473.0	1473.6	1474.1
7.5°	1444.0	1442.3	1444.0	1446.2	1446.2	1446.7	1447.3	1447.8	1449.4	1452.2	1453.8
10°	1407.3	1407.3	1407.8	1409.4	1412.2	1411.6	1413.3	1416.0	1419.3	1423.1	1425.9
12.5°	1360.7	1361.8	1363.4	1365.1	1367.8	1369.4	1372.2	1375.5	1380.9	1386.4	1392.5
15°	1311.4	1311.9	1312.4	1316.3	1319.0	1322.9	1325.1	1331.6	1336.6	1344.2	1350.8
17.5°	1256.0	1255.5	1257.1	1260.4	1267.0	1268.6	1271.3	1278.5	1285.6	1296.0	1304.8
20°	1195.7	1199.0	1201.2	1205.6	1209.4	1213.8	1216.0	1224.8	1233.0	1242.9	1254.4
22.5°	1138.7	1136.0	1139.8	1144.8	1148.0	1151.3	1155.2	1164.5	1173.3	1185.3	1196.8
25°	1074.1	1075.7	1078.5	1082.3	1086.7	1091.1	1095.4	1105.3	1110.2	1122.8	1133.3
27.5°	1012.7	1015.4	1016.5	1021.5	1025.3	1028.6	1030.8	1042.3	1046.7	1057.6	1068.0
30°	950.8	953.5	953.5	959.0	961.7	965.0	970.5	978.2	984.7	992.4	1000.1
32.5°	891.0	891.0	893.2	898.2	900.9	904.7	906.4	911.9	918.4	926.1	934.3
35°	829.7	831.3	833.5	833.5	838.4	840.6	842.8	848.3	852.7	856.0	862.5
37.5°	773.2	773.2	771.6	774.3	777.6	777.1	780.3	783.1	785.8	789.7	795.1
40°	715.7	715.7	713.5	715.1	717.3	716.8	715.7	718.4	720.6	723.4	728.8
42.5°	657.0	656.0	655.4	655.4	656.5	655.4	656.5	657.0	657.0	657.0	660.3
45°	598.4	601.2	597.9	596.8	595.1	593.5	592.9	593.5	595.7	592.9	593.5
47.5°	540.9	542.0	539.8	538.1	536.5	535.4	536.5	533.2	534.3	534.8	532.7
50°	482.2	480.0	480.0	478.4	478.9	478.4	477.3	476.2	476.2	473.5	471.8
52.5°	428.0	429.1	430.2	426.3	426.9	424.1	424.7	422.0	422.0	418.7	419.8
55°	383.6	382.0	382.0	380.3	379.8	377.0	376.5	374.8	371.0	368.8	364.4
57.5°	337.6	337.0	334.8	335.4	332.1	331.5	330.4	327.7	325.0	322.2	317.3
60°	292.6	293.2	293.2	292.1	290.4	287.7	288.2	284.4	280.6	275.6	271.3
62.5°	255.4	253.7	253.2	252.1	248.8	248.8	246.0	243.3	239.5	234.5	230.7
65°	216.5	217.0	215.4	213.7	210.4	209.9	207.7	205.5	201.7	196.7	191.3
67.5°	181.4	180.3	179.7	178.1	174.8	174.3	172.6	167.7	164.4	159.5	155.1
70°	147.4	146.3	146.9	144.1	140.8	139.2	138.6	134.8	129.9	126.0	121.7
72.5°	115.6	115.6	115.1	112.3	110.7	109.6	107.4	103.0	100.3	95.9	92.6
75°	87.1	86.6	85.5	83.8	81.7	80.6	79.5	76.7	72.9	68.0	65.2
77.5°	60.3	60.8	59.7	59.2	56.4	54.8	54.3	52.6	49.3	46.0	43.3
80°	38.4	37.8	37.3	36.2	35.6	35.1	33.4	32.3	29.0	27.4	25.8
82.5°	20.8	19.7	19.7	19.2	18.1	17.5	17.0	15.9	15.3	14.2	13.2
85°	6.6	7.1	6.6	6.6	6.6	6.0	6.0	6.0	5.5	5.5	4.9
87.5°	0.5	1.1	0.5	0.5	1.1	0.5	0.5	1.1	0.5	0.5	1.1
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°	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2
2.5°	1487.8	1488.4	1488.4	1488.9	1488.9	1488.9	1488.9	1488.9	1488.9	1488.9	1488.9
5°	1475.8	1475.8	1476.8	1477.9	1477.9	1477.9	1478.5	1479.6	1479.6	1479.6	1479.0
7.5°	1456.0	1458.2	1460.4	1462.6	1463.1	1463.7	1464.8	1467.0	1467.0	1467.0	1467.0
10°	1430.3	1435.2	1437.9	1441.2	1442.9	1444.0	1447.3	1447.8	1449.4	1450.0	1449.4
12.5°	1397.4	1404.0	1410.0	1415.5	1417.7	1419.9	1423.1	1426.4	1428.1	1429.7	1429.2
15°	1360.7	1367.8	1377.1	1383.1	1387.5	1390.8	1395.7	1400.1	1402.9	1404.0	1404.0
17.5°	1316.3	1325.1	1334.9	1344.8	1347.5	1353.0	1358.5	1364.5	1367.8	1368.3	1367.8
20°	1267.0	1276.8	1285.0	1294.9	1300.9	1303.7	1311.4	1319.0	1322.3	1322.9	1322.3
22.5°	1208.3	1217.6	1228.6	1239.0	1243.9	1248.9	1257.1	1264.8	1269.2	1272.4	1269.2
25°	1143.1	1156.3	1166.7	1175.4	1182.6	1187.5	1197.9	1203.9	1211.1	1210.5	1211.1
27.5°	1079.0	1090.0	1101.5	1111.9	1116.3	1121.7	1130.0	1139.8	1145.9	1149.7	1149.1
30°	1013.2	1022.0	1031.9	1041.2	1048.3	1052.7	1064.8	1069.1	1076.8	1079.0	1077.4
32.5°	943.6	949.7	959.5	972.1	974.9	979.3	986.9	997.9	1000.6	1001.7	1002.3
35°	869.7	881.2	889.4	897.1	899.3	903.1	911.9	920.1	922.8	927.8	925.6
37.5°	801.2	807.7	811.6	819.3	825.8	829.1	833.5	839.0	844.5	846.7	846.1
40°	732.7	736.0	739.2	747.5	748.0	748.0	754.6	762.3	762.3	764.5	764.5
42.5°	662.5	663.1	667.5	671.8	672.9	674.0	680.6	681.7	685.0	686.6	688.8
45°	594.6	597.9	600.6	601.2	603.9	604.4	606.1	607.7	612.7	611.6	612.7
47.5°	532.7	534.3	535.9	535.9	537.6	537.0	539.8	538.1	541.4	542.5	544.2
50°	471.8	474.6	472.9	474.0	473.5	475.1	474.0	474.0	474.0	476.2	477.9
52.5°	415.9	416.5	414.8	415.4	415.4	414.3	415.4	414.8	414.3	414.3	414.8
55°	364.4	362.2	361.1	358.9	356.2	359.5	357.8	356.7	358.9	357.8	358.9
57.5°	314.5	311.8	309.6	308.5	304.7	306.9	304.7	303.6	303.6	303.6	306.3
60°	267.4	264.7	261.9	258.7	258.1	257.0	255.9	253.2	253.7	253.2	254.3
62.5°	226.3	220.8	217.0	214.3	213.7	212.1	210.4	207.7	208.2	208.2	208.8
65°	188.5	182.5	177.0	173.2	173.2	170.4	167.7	167.7	164.4	165.5	166.0
67.5°	150.7	145.8	140.3	137.5	135.9	133.7	132.1	131.0	129.3	129.3	130.4
70°	116.7	111.8	109.1	104.7	104.1	102.5	100.3	98.6	98.1	98.1	97.5
72.5°	88.2	83.8	80.6	77.8	76.2	74.5	72.3	71.8	70.7	70.7	71.8
75°	61.4	58.6	55.9	53.2	52.1	51.5	49.9	48.8	48.8	48.2	48.8
77.5°	41.1	38.4	35.6	34.5	33.4	32.3	31.8	31.2	29.6	29.6	29.6
80°	23.6	22.5	21.4	19.7	19.7	19.2	18.1	17.5	17.0	17.0	17.0
82.5°	12.1	11.5	10.4	9.9	9.9	9.9	9.3	9.3	8.8	8.8	8.8
85°	4.9	4.4	3.8	3.8	3.8	3.8	3.8	3.8	4.4	3.8	4.4
87.5°	0.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2
2.5°	1488.9	1488.4	1488.4	1488.4	1488.4	1488.4	1487.8	1487.8	1487.3	1487.3	1487.3
5°	1479.6	1479.0	1478.5	1477.9	1477.4	1476.8	1476.3	1475.8	1474.1	1473.6	1472.5
7.5°	1466.4	1465.3	1463.7	1463.1	1462.1	1460.4	1458.2	1457.1	1454.9	1452.2	1451.1
10°	1448.9	1446.7	1445.1	1442.3	1441.8	1439.6	1434.1	1431.4	1427.5	1424.2	1420.4
12.5°	1427.5	1425.3	1421.5	1417.7	1415.5	1410.5	1405.6	1401.2	1396.3	1389.2	1383.7
15°	1401.2	1397.9	1390.3	1389.2	1385.9	1378.2	1371.6	1363.4	1355.7	1348.1	1341.5
17.5°	1366.2	1359.0	1355.2	1350.3	1346.4	1336.6	1329.4	1320.1	1309.7	1300.9	1291.6
20°	1320.1	1312.4	1305.9	1303.1	1298.2	1289.4	1280.7	1269.2	1258.7	1247.8	1239.6
22.5°	1265.3	1260.4	1250.5	1247.2	1241.2	1232.4	1222.0	1211.1	1201.2	1189.1	1178.2
25°	1206.7	1199.6	1191.9	1185.3	1180.9	1172.7	1159.6	1151.3	1140.4	1127.2	1119.0
27.5°	1144.2	1136.0	1125.0	1120.6	1116.8	1105.9	1094.9	1084.5	1075.7	1064.2	1057.1
30°	1071.9	1065.9	1058.7	1053.2	1047.8	1039.0	1029.1	1017.1	1007.8	1002.3	992.4
32.5°	998.4	993.5	984.2	981.5	975.4	968.3	961.2	952.4	942.6	934.3	926.7
35°	920.1	915.2	908.6	903.6	901.5	896.5	888.8	881.2	876.2	866.9	863.1
37.5°	841.7	840.1	833.5	828.6	826.9	820.9	817.1	811.6	804.5	802.3	797.9
40°	761.2	760.1	756.2	755.7	752.4	750.8	745.3	740.9	737.6	736.0	733.2
42.5°	687.2	686.1	682.8	683.3	680.1	679.0	678.4	674.6	671.8	668.6	669.1
45°	614.3	613.2	611.0	609.9	611.6	611.0	609.9	608.3	608.3	608.8	607.2
47.5°	544.2	545.3	543.1	544.2	544.2	542.5	542.5	544.7	545.3	546.4	547.4
50°	477.9	481.1	480.0	481.7	482.2	482.8	481.1	483.9	483.3	488.3	487.2
52.5°	417.6	418.1	420.3	420.9	421.4	422.0	424.7	426.9	427.4	429.6	433.5
55°	359.5	360.0	364.4	364.4	367.2	367.7	371.5	372.6	374.3	380.3	381.4
57.5°	304.7	308.0	310.2	311.3	312.9	315.6	317.8	322.8	325.5	329.3	333.2
60°	255.4	259.2	261.9	263.0	265.2	268.5	271.3	276.7	281.7	286.1	288.8
62.5°	209.9	213.2	215.4	219.2	219.2	221.9	228.5	231.8	237.3	241.1	246.0
65°	169.3	171.5	175.4	175.4	177.6	181.9	187.4	192.3	197.8	203.3	208.2
67.5°	132.6	134.3	136.5	138.6	139.7	145.2	149.6	156.7	161.7	165.5	171.5
70°	100.3	101.4	104.1	106.3	108.0	111.8	116.7	121.7	126.6	131.0	137.0
72.5°	71.8	74.0	76.7	78.4	79.5	82.2	87.1	92.1	96.4	100.8	104.1
75°	49.3	51.0	52.1	53.7	55.3	57.5	60.8	64.1	69.0	73.4	77.3
77.5°	30.7	32.3	34.0	34.5	35.1	37.3	39.5	42.7	46.0	49.3	52.1
80°	18.1	18.6	19.2	19.7	20.8	22.5	23.6	25.8	27.9	30.1	32.9
82.5°	9.3	9.9	10.4	10.4	10.4	11.0	12.6	13.7	14.2	15.3	17.0
85°	3.8	3.8	3.8	4.4	4.4	4.9	4.9	5.5	5.5	6.0	6.6
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P879412

CATALOG NUMBER: LD4C35D010 EU4359035 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2	1492.2
2.5°	1486.7	1486.7	1486.7	1486.2	1486.7	1486.7	1486.7	1486.2
5°	1472.5	1471.4	1471.4	1470.8	1470.3	1470.3	1470.8	1469.7
7.5°	1448.9	1447.3	1446.2	1446.2	1445.6	1445.1	1445.1	1442.3
10°	1418.2	1414.9	1414.9	1413.8	1409.4	1408.9	1407.8	1407.8
12.5°	1379.9	1376.0	1373.8	1371.1	1368.3	1366.2	1365.6	1363.4
15°	1334.4	1329.4	1325.6	1324.5	1320.1	1316.8	1316.8	1315.7
17.5°	1285.0	1277.4	1274.6	1271.9	1265.9	1265.3	1264.2	1259.3
20°	1229.2	1222.0	1218.2	1215.5	1211.6	1206.1	1205.0	1205.6
22.5°	1170.5	1160.7	1157.4	1154.6	1150.8	1145.9	1145.9	1142.0
25°	1109.7	1100.9	1097.6	1094.3	1088.3	1086.1	1083.4	1083.9
27.5°	1047.8	1039.5	1036.8	1030.8	1026.9	1024.2	1021.5	1021.5
30°	983.1	978.7	974.3	973.8	966.1	962.8	960.1	957.9
32.5°	920.6	915.2	913.0	910.8	906.9	902.5	902.0	898.2
35°	859.3	853.8	851.0	848.8	844.5	842.8	841.2	842.3
37.5°	794.6	793.5	791.9	789.1	786.4	785.8	783.6	786.4
40°	731.0	730.5	728.3	728.8	728.8	727.7	728.8	728.8
42.5°	669.7	669.7	667.5	668.6	669.1	670.2	671.8	672.9
45°	609.9	609.4	609.9	611.0	609.9	612.7	614.9	616.5
47.5°	548.5	549.1	551.3	551.8	552.9	556.8	556.8	556.8
50°	489.9	492.6	491.6	494.8	494.3	496.5	494.3	494.3
52.5°	434.0	436.8	437.3	437.8	441.1	441.7	441.7	441.1
55°	384.1	388.0	386.3	389.1	390.7	391.8	393.5	392.4
57.5°	338.1	339.8	341.4	341.9	344.1	345.2	346.3	345.2
60°	292.6	295.9	298.7	299.2	300.3	301.4	301.9	303.6
62.5°	249.9	255.4	256.5	257.0	259.7	261.4	262.5	263.6
65°	212.1	215.9	218.7	220.3	222.5	222.5	224.1	224.1
67.5°	175.4	179.2	180.8	181.9	185.2	185.8	188.5	188.5
70°	141.9	144.7	145.8	147.4	150.7	152.9	154.0	155.1
72.5°	109.6	112.9	114.5	116.7	118.9	120.6	121.1	122.8
75°	80.0	84.9	85.5	87.7	89.3	91.5	92.6	92.1
77.5°	55.9	57.5	59.7	60.8	62.5	64.1	65.8	65.8
80°	34.5	36.7	37.3	37.8	40.0	41.1	42.2	42.2
82.5°	18.1	19.2	20.3	20.8	21.9	21.9	22.5	23.0
85°	7.1	7.7	7.7	7.7	8.2	8.8	8.8	8.8
87.5°	1.1	1.6	1.1	1.1	1.6	1.6	1.6	1.6
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)