

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: P879408

Luminaire Tested: **LD4C35D010 EU4359027 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: P879408
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 EU4359027 4LBLDWWH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

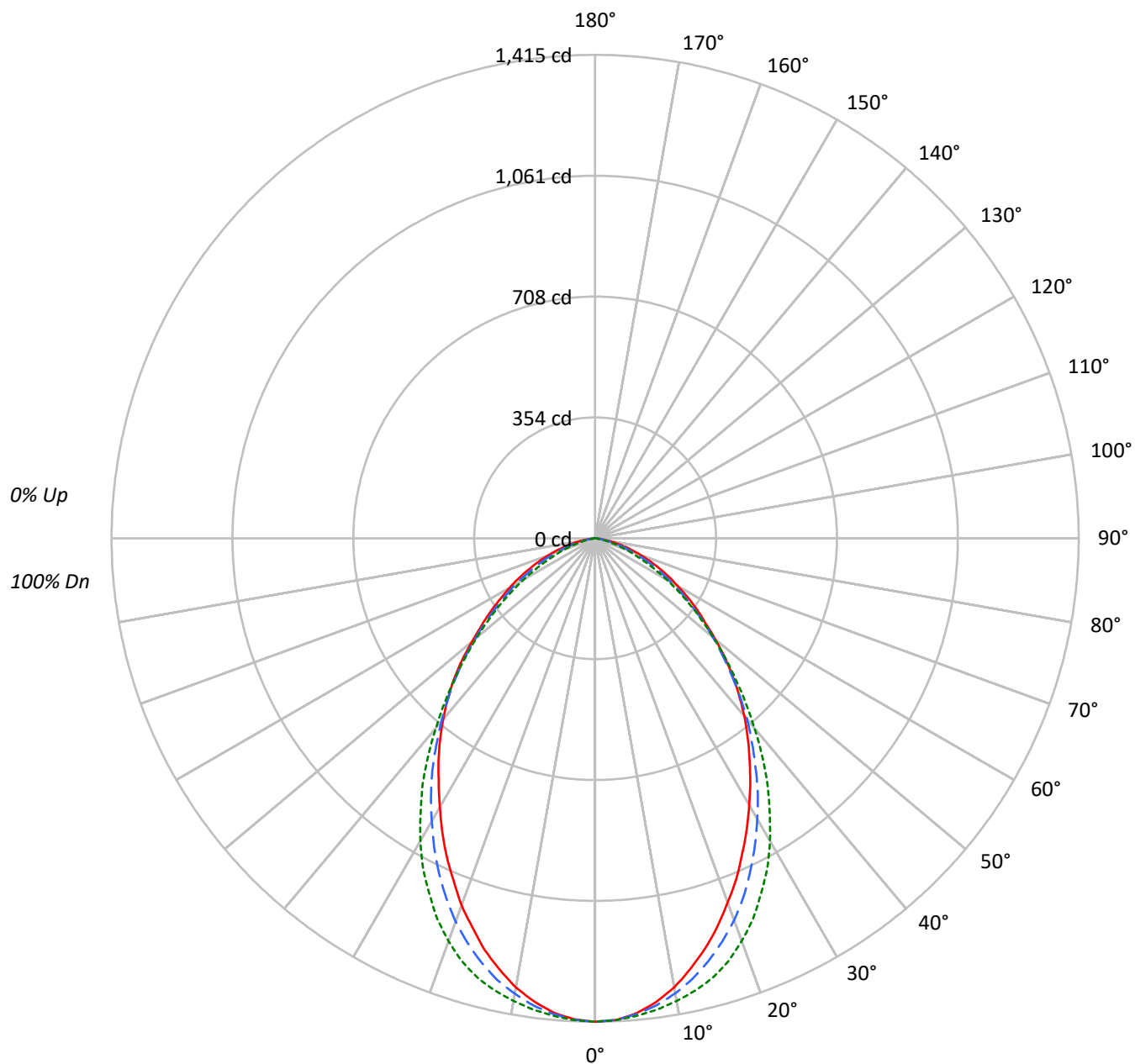
Lumens per Lamp: N/A
Luminaire Lumens: 2531.0 lumens
Efficiency: N/A
Efficacy: 62.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	173838	173838	173838
5°	172072	173034	171875
10°	166477	171529	166539
15°	158157	169337	158692
20°	148244	164011	149473
25°	138062	155602	139336
30°	127900	145150	128865
35°	118001	131949	119786
40°	108846	116255	110834
45°	98598	100752	101569
50°	87402	86313	89581
55°	77922	72674	79700
60°	68184	58994	70739
65°	59680	45610	61773
70°	50216	33406	52838
75°	39208	21692	41439
80°	25752	11391	28299
85°	8739	5075	11700



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	5.2
10°-20°	360.9	14.3
20°-30°	496.4	19.6
30°-40°	517.8	20.5
40°-50°	443.0	17.5
50°-60°	316.9	12.5
60°-70°	183.9	7.3
70°-80°	70.9	2.8
80°-90°	9.0	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°	989.4	39.1
0°-40°	1507.3	59.6
0°-60°	2267.2	89.6
0°-90°	2531.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2531.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1415	1415	1415	1415	1415	
5°	1395	1398	1403	1398	1394	131
15°	1244	1281	1331	1286	1248	349
25°	1018	1075	1148	1081	1028	469
35°	787	818	880	831	799	493
45°	568	563	580	577	585	437
55°	364	346	339	355	372	325
65°	205	181	157	188	212	205
75°	83	62	46	66	87	89
85°	6	5	4	5	8	12
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°	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0
2.5°	1411.4	1410.4	1410.9	1410.9	1410.9	1410.4	1411.4	1411.4	1410.9	1410.9	1410.9
5°	1395.3	1394.3	1394.8	1395.3	1395.3	1395.3	1395.8	1396.3	1396.8	1397.4	1397.9
7.5°	1369.3	1367.7	1369.3	1371.4	1371.4	1371.9	1372.4	1372.9	1374.5	1377.1	1378.7
10°	1334.5	1334.5	1335.0	1336.6	1339.2	1338.6	1340.2	1342.8	1345.9	1349.6	1352.2
12.5°	1290.3	1291.4	1292.9	1294.5	1297.1	1298.6	1301.2	1304.3	1309.5	1314.7	1320.5
15°	1243.5	1244.1	1244.6	1248.2	1250.8	1254.5	1256.5	1262.8	1267.5	1274.7	1281.0
17.5°	1191.1	1190.5	1192.1	1195.2	1201.5	1203.0	1205.6	1212.4	1219.1	1229.0	1237.3
20°	1133.9	1137.0	1139.1	1143.3	1146.9	1151.0	1153.1	1161.4	1169.2	1178.6	1189.5
22.5°	1079.9	1077.3	1080.9	1085.6	1088.7	1091.8	1095.4	1104.3	1112.6	1124.0	1134.9
25°	1018.5	1020.1	1022.7	1026.3	1030.5	1034.6	1038.8	1048.2	1052.8	1064.8	1074.7
27.5°	960.3	962.9	964.0	968.6	972.3	975.4	977.5	988.4	992.6	1002.9	1012.8
30°	901.6	904.2	904.2	909.4	912.0	915.1	920.3	927.6	933.8	941.1	948.4
32.5°	845.0	845.0	847.0	851.7	854.3	858.0	859.5	864.7	871.0	878.2	886.0
35°	786.8	788.3	790.4	790.4	795.1	797.2	799.2	804.4	808.6	811.7	817.9
37.5°	733.2	733.2	731.7	734.3	737.4	736.9	740.0	742.6	745.2	748.8	754.0
40°	678.7	678.7	676.6	678.2	680.2	679.7	678.7	681.3	683.4	686.0	691.1
42.5°	623.1	622.0	621.5	621.5	622.6	621.5	622.6	623.1	623.1	623.1	626.2
45°	567.5	570.1	567.0	565.9	564.4	562.8	562.3	562.8	564.9	562.3	562.8
47.5°	512.9	513.9	511.9	510.3	508.7	507.7	508.7	505.6	506.7	507.2	505.1
50°	457.3	455.2	455.2	453.7	454.2	453.7	452.6	451.6	451.6	449.0	447.4
52.5°	405.9	406.9	407.9	404.3	404.8	402.2	402.7	400.1	400.1	397.0	398.1
55°	363.8	362.2	362.2	360.6	360.1	357.5	357.0	355.4	351.8	349.7	345.6
57.5°	320.1	319.6	317.5	318.0	314.9	314.4	313.4	310.8	308.2	305.6	300.9
60°	277.5	278.0	278.0	277.0	275.4	272.8	273.3	269.7	266.1	261.4	257.2
62.5°	242.2	240.6	240.1	239.0	235.9	235.9	233.3	230.7	227.1	222.4	218.8
65°	205.3	205.8	204.2	202.7	199.5	199.0	197.0	194.9	191.2	186.6	181.4
67.5°	172.0	171.0	170.4	168.9	165.8	165.3	163.7	159.0	155.9	151.2	147.1
70°	139.8	138.7	139.3	136.7	133.6	132.0	131.5	127.8	123.2	119.5	115.4
72.5°	109.6	109.6	109.1	106.5	105.0	103.9	101.9	97.7	95.1	90.9	87.8
75°	82.6	82.1	81.1	79.5	77.4	76.4	75.4	72.8	69.1	64.4	61.8
77.5°	57.2	57.7	56.6	56.1	53.5	52.0	51.4	49.9	46.8	43.7	41.1
80°	36.4	35.9	35.3	34.3	33.8	33.3	31.7	30.7	27.5	26.0	24.4
82.5°	19.7	18.7	18.7	18.2	17.1	16.6	16.1	15.1	14.6	13.5	12.5
85°	6.2	6.8	6.2	6.2	6.2	5.7	5.7	5.7	5.2	5.2	4.7
87.5°	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0
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°	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0
2.5°	1410.9	1411.4	1411.4	1411.9	1411.9	1411.9	1411.9	1411.9	1411.9	1411.9	1411.9
5°	1399.4	1399.4	1400.5	1401.5	1401.5	1401.5	1402.0	1403.1	1403.1	1403.1	1402.6
7.5°	1380.7	1382.8	1384.9	1387.0	1387.5	1388.0	1389.1	1391.1	1391.1	1391.1	1391.1
10°	1356.3	1361.0	1363.6	1366.7	1368.3	1369.3	1372.4	1372.9	1374.5	1375.0	1374.5
12.5°	1325.1	1331.4	1337.1	1342.3	1344.4	1346.4	1349.6	1352.7	1354.2	1355.8	1355.3
15°	1290.3	1297.1	1305.9	1311.6	1315.8	1318.9	1323.6	1327.7	1330.3	1331.4	1331.4
17.5°	1248.2	1256.5	1265.9	1275.2	1277.8	1283.0	1288.2	1294.0	1297.1	1297.6	1297.1
20°	1201.5	1210.8	1218.6	1228.0	1233.7	1236.3	1243.5	1250.8	1253.9	1254.5	1253.9
22.5°	1145.9	1154.7	1165.1	1175.0	1179.6	1184.3	1192.1	1199.4	1203.5	1206.7	1203.5
25°	1084.0	1096.5	1106.4	1114.7	1121.4	1126.1	1136.0	1141.7	1148.5	1147.9	1148.5
27.5°	1023.2	1033.6	1044.5	1054.4	1058.5	1063.7	1071.5	1080.9	1086.6	1090.2	1089.7
30°	960.9	969.2	978.5	987.4	994.1	998.3	1009.7	1013.9	1021.1	1023.2	1021.7
32.5°	894.9	900.6	909.9	921.9	924.5	928.6	935.9	946.3	948.9	949.9	950.5
35°	824.7	835.6	843.4	850.7	852.8	856.4	864.7	872.5	875.1	879.8	877.7
37.5°	759.7	766.0	769.6	776.9	783.1	786.2	790.4	795.6	800.8	802.9	802.4
40°	694.8	697.9	701.0	708.8	709.3	709.3	715.6	722.8	722.8	724.9	724.9
42.5°	628.3	628.8	632.9	637.1	638.1	639.2	645.4	646.5	649.6	651.1	653.2
45°	563.8	567.0	569.5	570.1	572.7	573.2	574.7	576.3	581.0	579.9	581.0
47.5°	505.1	506.7	508.2	508.2	509.8	509.3	511.9	510.3	513.4	514.5	516.0
50°	447.4	450.0	448.5	449.5	449.0	450.5	449.5	449.5	449.5	451.6	453.1
52.5°	394.4	394.9	393.4	393.9	393.9	392.9	393.9	393.4	392.9	392.9	393.4
55°	345.6	343.5	342.5	340.4	337.8	340.9	339.3	338.3	340.4	339.3	340.4
57.5°	298.3	295.7	293.6	292.6	288.9	291.0	288.9	287.9	287.9	287.9	290.5
60°	253.6	251.0	248.4	245.3	244.8	243.7	242.7	240.1	240.6	240.1	241.1
62.5°	214.6	209.4	205.8	203.2	202.7	201.1	199.5	197.0	197.5	197.5	198.0
65°	178.8	173.0	167.9	164.2	164.2	161.6	159.0	159.0	155.9	156.9	157.5
67.5°	142.9	138.2	133.0	130.4	128.9	126.8	125.2	124.2	122.6	122.6	123.7
70°	110.7	106.0	103.4	99.3	98.7	97.2	95.1	93.5	93.0	93.0	92.5
72.5°	83.7	79.5	76.4	73.8	72.2	70.7	68.6	68.1	67.0	67.0	68.1
75°	58.2	55.6	53.0	50.4	49.4	48.8	47.3	46.2	46.2	45.7	46.2
77.5°	39.0	36.4	33.8	32.7	31.7	30.7	30.1	29.6	28.1	28.1	28.1
80°	22.3	21.3	20.3	18.7	18.7	18.2	17.1	16.6	16.1	16.1	16.1
82.5°	11.4	10.9	9.9	9.4	9.4	9.4	8.8	8.8	8.3	8.3	8.3
85°	4.7	4.2	3.6	3.6	3.6	3.6	3.6	3.6	4.2	3.6	4.2
87.5°	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0
2.5°	1411.9	1411.4	1411.4	1411.4	1411.4	1411.4	1410.9	1410.9	1410.4	1410.4	1410.4
5°	1403.1	1402.6	1402.0	1401.5	1401.0	1400.5	1400.0	1399.4	1397.9	1397.4	1396.3
7.5°	1390.6	1389.6	1388.0	1387.5	1386.5	1384.9	1382.8	1381.8	1379.7	1377.1	1376.1
10°	1374.0	1371.9	1370.3	1367.7	1367.2	1365.1	1360.0	1357.4	1353.7	1350.6	1347.0
12.5°	1353.7	1351.6	1348.0	1344.4	1342.3	1337.6	1332.9	1328.8	1324.1	1317.3	1312.1
15°	1328.8	1325.7	1318.4	1317.3	1314.2	1306.9	1300.7	1292.9	1285.6	1278.4	1272.1
17.5°	1295.5	1288.8	1285.1	1280.4	1276.8	1267.5	1260.7	1251.9	1242.0	1233.7	1224.8
20°	1251.9	1244.6	1238.4	1235.8	1231.1	1222.8	1214.4	1203.5	1193.7	1183.3	1175.5
22.5°	1199.9	1195.2	1185.9	1182.7	1177.0	1168.7	1158.8	1148.5	1139.1	1127.7	1117.3
25°	1144.3	1137.5	1130.3	1124.0	1119.9	1112.1	1099.6	1091.8	1081.4	1068.9	1061.1
27.5°	1085.1	1077.3	1066.9	1062.7	1059.1	1048.7	1038.3	1028.4	1020.1	1009.2	1002.4
30°	1016.5	1010.7	1004.0	998.8	993.6	985.3	975.9	964.5	955.7	950.5	941.1
32.5°	946.8	942.1	933.3	930.7	925.0	918.2	911.5	903.2	893.8	886.0	878.7
35°	872.5	867.8	861.6	856.9	854.8	850.2	842.9	835.6	830.9	822.1	818.5
37.5°	798.2	796.6	790.4	785.7	784.2	778.5	774.8	769.6	762.9	760.8	756.6
40°	721.8	720.8	717.1	716.6	713.5	711.9	706.7	702.6	699.5	697.9	695.3
42.5°	651.7	650.6	647.5	648.0	644.9	643.9	643.3	639.7	637.1	634.0	634.5
45°	582.5	581.5	579.4	578.4	579.9	579.4	578.4	576.8	576.8	577.3	575.8
47.5°	516.0	517.1	515.0	516.0	516.0	514.5	514.5	516.5	517.1	518.1	519.1
50°	453.1	456.3	455.2	456.8	457.3	457.8	456.3	458.9	458.3	463.0	462.0
52.5°	396.0	396.5	398.6	399.1	399.6	400.1	402.7	404.8	405.3	407.4	411.1
55°	340.9	341.4	345.6	345.6	348.2	348.7	352.3	353.4	354.9	360.6	361.7
57.5°	288.9	292.0	294.1	295.2	296.7	299.3	301.4	306.1	308.7	312.3	316.0
60°	242.2	245.8	248.4	249.4	251.5	254.6	257.2	262.4	267.1	271.3	273.9
62.5°	199.0	202.1	204.2	207.9	207.9	210.5	216.7	219.8	225.0	228.7	233.3
65°	160.6	162.7	166.3	166.3	168.4	172.5	177.7	182.4	187.6	192.8	197.5
67.5°	125.8	127.3	129.4	131.5	132.5	137.7	141.9	148.6	153.3	156.9	162.7
70°	95.1	96.1	98.7	100.8	102.4	106.0	110.7	115.4	120.0	124.2	129.9
72.5°	68.1	70.2	72.8	74.3	75.4	77.9	82.6	87.3	91.5	95.6	98.7
75°	46.8	48.3	49.4	50.9	52.5	54.6	57.7	60.8	65.5	69.6	73.3
77.5°	29.1	30.7	32.2	32.7	33.3	35.3	37.4	40.5	43.7	46.8	49.4
80°	17.1	17.7	18.2	18.7	19.7	21.3	22.3	24.4	26.5	28.6	31.2
82.5°	8.8	9.4	9.9	9.9	9.9	10.4	12.0	13.0	13.5	14.6	16.1
85°	3.6	3.6	3.6	4.2	4.2	4.7	4.7	5.2	5.2	5.7	6.2
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P879408

CATALOG NUMBER: LD4C35D010 EU4359027 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0	1415.0
2.5°	1409.8	1409.8	1409.8	1409.3	1409.8	1409.8	1409.8	1409.3
5°	1396.3	1395.3	1395.3	1394.8	1394.3	1394.3	1394.8	1393.7
7.5°	1374.0	1372.4	1371.4	1371.4	1370.9	1370.3	1370.3	1367.7
10°	1344.9	1341.8	1341.8	1340.7	1336.6	1336.0	1335.0	1335.0
12.5°	1308.5	1304.9	1302.8	1300.2	1297.6	1295.5	1295.0	1292.9
15°	1265.4	1260.7	1257.1	1256.0	1251.9	1248.7	1248.7	1247.7
17.5°	1218.6	1211.3	1208.7	1206.1	1200.4	1199.9	1198.9	1194.2
20°	1165.6	1158.8	1155.2	1152.6	1149.0	1143.8	1142.7	1143.3
22.5°	1110.0	1100.6	1097.5	1094.9	1091.3	1086.6	1086.6	1083.0
25°	1052.3	1044.0	1040.9	1037.8	1032.0	1030.0	1027.4	1027.9
27.5°	993.6	985.8	983.2	977.5	973.8	971.2	968.6	968.6
30°	932.3	928.1	924.0	923.4	916.2	913.0	910.4	908.4
32.5°	873.0	867.8	865.8	863.7	860.0	855.9	855.4	851.7
35°	814.8	809.6	807.0	805.0	800.8	799.2	797.7	798.7
37.5°	753.5	752.5	750.9	748.3	745.7	745.2	743.1	745.7
40°	693.2	692.7	690.6	691.1	691.1	690.1	691.1	691.1
42.5°	635.0	635.0	632.9	634.0	634.5	635.5	637.1	638.1
45°	578.4	577.9	578.4	579.4	578.4	581.0	583.1	584.6
47.5°	520.2	520.7	522.8	523.3	524.3	528.0	528.0	528.0
50°	464.6	467.2	466.1	469.3	468.7	470.8	468.7	468.7
52.5°	411.6	414.2	414.7	415.2	418.3	418.8	418.8	418.3
55°	364.3	367.9	366.4	369.0	370.5	371.6	373.1	372.1
57.5°	320.6	322.2	323.7	324.3	326.3	327.4	328.4	327.4
60°	277.5	280.6	283.2	283.7	284.8	285.8	286.3	287.9
62.5°	237.0	242.2	243.2	243.7	246.3	247.9	248.9	250.0
65°	201.1	204.7	207.3	208.9	211.0	211.0	212.5	212.5
67.5°	166.3	169.9	171.5	172.5	175.6	176.2	178.8	178.8
70°	134.6	137.2	138.2	139.8	142.9	145.0	146.0	147.1
72.5°	103.9	107.1	108.6	110.7	112.8	114.3	114.8	116.4
75°	75.9	80.5	81.1	83.1	84.7	86.8	87.8	87.3
77.5°	53.0	54.6	56.6	57.7	59.2	60.8	62.4	62.4
80°	32.7	34.8	35.3	35.9	37.9	39.0	40.0	40.0
82.5°	17.1	18.2	19.2	19.7	20.8	20.8	21.3	21.8
85°	6.8	7.3	7.3	7.3	7.8	8.3	8.3	8.3
87.5°	1.0	1.6	1.0	1.0	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)