

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: P880567

Luminaire Tested: **LD4C35D010 EU4359027 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: P880567
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 EU4359027 4LBDWNH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

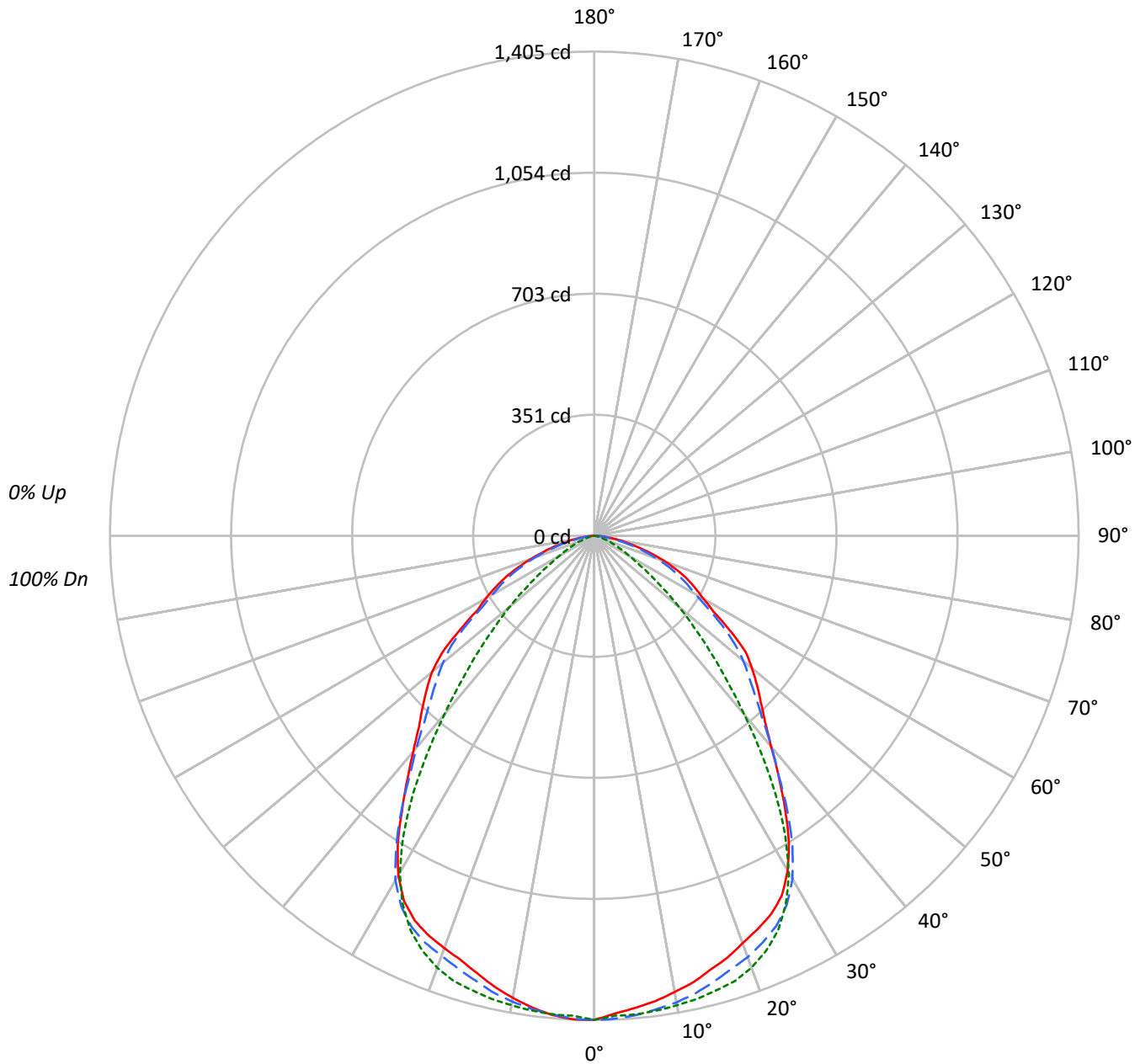
Lumens per Lamp: N/A
Luminaire Lumens: 2859.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	172585	172585	172585
5°	169519	171912	172171
10°	167700	172552	169858
15°	165750	173712	167124
20°	164442	174339	166416
25°	164345	171096	166989
30°	159123	160045	161265
35°	144562	137768	145852
40°	127898	108477	131009
45°	118648	82596	122418
50°	114007	61141	117313
55°	103217	42131	101825
60°	89757	28674	89216
65°	86715	20756	82296
70°	78377	13973	69864
75°	64603	9209	55394
80°	52000	6084	41246
85°	42710	2960	27346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.6	4.6
10°-20°	379.2	13.3
20°-30°	572.8	20.0
30°-40°	599.5	21.0
40°-50°	485.5	17.0
50°-60°	353.2	12.4
60°-70°	217.8	7.6
70°-80°	98.4	3.4
80°-90°	20.0	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°	1084.6	37.9
0°-40°	1684.1	58.9
0°-60°	2522.8	88.2
0°-90°	2859.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2859.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1405	1405	1405	1405	1405	
5°	1375	1396	1394	1394	1396	130
15°	1303	1340	1366	1336	1314	368
25°	1212	1249	1262	1254	1232	556
35°	964	977	919	977	972	601
45°	683	661	475	670	705	531
55°	482	452	197	456	475	430
65°	298	268	71	264	283	292
75°	136	117	19	102	117	148
85°	30	24	2	17	19	35
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°	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8
2.5°	1387.5	1387.5	1400.5	1415.5	1402.7	1389.6	1398.3	1394.0	1409.2	1409.2	1402.7
5°	1374.6	1378.9	1389.6	1402.7	1391.9	1378.9	1389.6	1385.4	1400.5	1400.5	1396.1
7.5°	1361.6	1363.7	1376.7	1391.9	1381.0	1368.1	1376.7	1374.6	1387.5	1389.6	1385.4
10°	1344.3	1346.4	1359.5	1374.6	1363.7	1352.9	1361.6	1359.5	1376.7	1376.7	1374.6
12.5°	1327.0	1329.1	1342.2	1355.1	1344.3	1333.5	1342.2	1342.2	1359.5	1361.6	1359.5
15°	1303.2	1307.5	1318.4	1331.3	1324.9	1311.9	1320.5	1320.5	1335.7	1339.9	1339.9
17.5°	1283.8	1286.0	1296.7	1309.7	1301.1	1290.2	1298.8	1298.8	1314.0	1318.4	1318.4
20°	1257.8	1262.2	1272.9	1286.0	1279.4	1270.8	1277.3	1277.3	1294.6	1298.8	1301.1
22.5°	1236.2	1240.5	1249.1	1266.5	1255.6	1249.1	1257.8	1255.6	1275.2	1277.3	1277.3
25°	1212.4	1216.8	1227.6	1238.4	1231.9	1225.5	1231.9	1231.9	1247.0	1249.1	1249.1
27.5°	1177.9	1180.0	1190.8	1201.7	1195.2	1186.5	1195.2	1193.0	1208.1	1210.3	1208.1
30°	1121.7	1126.1	1130.3	1145.5	1138.9	1132.4	1141.1	1136.8	1152.0	1152.0	1149.7
32.5°	1050.3	1050.3	1059.1	1069.8	1061.2	1056.8	1063.3	1065.4	1076.3	1076.3	1069.8
35°	963.9	968.3	974.7	981.2	974.7	970.4	976.9	974.7	987.7	983.3	976.9
37.5°	877.5	879.6	886.1	894.8	886.1	879.6	881.8	879.6	890.4	890.4	879.6
40°	797.5	801.9	806.1	814.8	806.1	801.9	804.0	797.5	810.5	806.1	799.6
42.5°	732.6	734.8	741.3	745.7	737.0	734.8	737.0	732.6	739.1	734.8	721.9
45°	682.9	682.9	685.2	691.6	682.9	680.8	680.8	676.4	682.9	674.3	661.4
47.5°	639.7	641.8	644.1	648.4	641.8	635.5	637.6	629.0	633.2	626.7	609.4
50°	596.5	600.8	603.0	607.3	600.8	596.5	598.6	590.0	590.0	579.2	564.1
52.5°	553.3	555.5	553.3	557.6	553.3	546.8	548.9	540.3	540.3	527.4	512.3
55°	481.9	484.1	486.3	490.6	486.3	479.8	484.1	477.7	477.7	468.9	451.6
57.5°	410.6	412.8	415.0	417.1	417.1	412.8	415.0	410.6	408.4	401.9	389.0
60°	365.3	365.3	365.3	367.4	365.3	363.1	363.1	358.7	358.7	350.1	337.2
62.5°	330.7	332.8	332.8	334.9	332.8	330.7	328.6	324.2	322.1	313.4	302.5
65°	298.3	298.3	296.1	300.4	298.3	296.1	296.1	291.7	287.5	278.9	268.0
67.5°	259.3	261.4	259.3	261.4	261.4	259.3	257.2	252.8	250.7	244.2	231.3
70°	218.2	218.2	218.2	220.5	218.2	218.2	220.5	214.0	211.9	203.1	192.3
72.5°	177.2	179.4	179.4	177.2	179.4	175.0	175.0	175.0	172.9	164.3	153.4
75°	136.1	138.4	138.4	140.5	138.4	136.1	136.1	134.0	131.9	125.3	116.7
77.5°	101.5	101.5	103.7	103.7	103.7	101.5	101.5	97.3	97.3	92.9	84.3
80°	73.5	73.5	71.4	73.5	73.5	71.4	71.4	69.1	69.1	64.9	58.3
82.5°	47.6	49.7	49.7	49.7	49.7	47.6	47.6	47.6	45.3	43.2	38.9
85°	30.3	30.3	30.3	30.3	32.4	30.3	32.4	30.3	30.3	25.9	23.8
87.5°	13.0	13.0	13.0	15.2	15.2	13.0	13.0	13.0	13.0	13.0	10.8
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°	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8
2.5°	1402.7	1404.8	1398.3	1406.9	1400.5	1402.7	1404.8	1402.7	1394.0	1394.0	1417.8
5°	1394.0	1398.3	1391.9	1402.7	1398.3	1398.3	1402.7	1400.5	1391.9	1394.0	1415.5
7.5°	1385.4	1391.9	1387.5	1398.3	1391.9	1391.9	1396.1	1396.1	1387.5	1389.6	1409.2
10°	1372.3	1381.0	1378.9	1389.6	1383.2	1383.2	1389.6	1389.6	1381.0	1383.2	1402.7
12.5°	1361.6	1370.2	1368.1	1378.9	1374.6	1376.7	1378.9	1383.2	1372.3	1376.7	1394.0
15°	1344.3	1352.9	1352.9	1363.7	1359.5	1363.7	1368.1	1374.6	1365.8	1365.8	1383.2
17.5°	1324.9	1335.7	1335.7	1344.3	1344.3	1346.4	1355.1	1361.6	1352.9	1355.1	1370.2
20°	1303.2	1316.3	1316.3	1327.0	1324.9	1329.1	1335.7	1342.2	1333.5	1333.5	1350.8
22.5°	1281.6	1292.5	1294.6	1301.1	1301.1	1303.2	1309.7	1314.0	1303.2	1303.2	1320.5
25°	1251.4	1262.2	1264.3	1268.7	1264.3	1264.3	1268.7	1272.9	1262.2	1262.2	1277.3
27.5°	1210.3	1221.1	1221.1	1219.0	1214.6	1216.8	1214.6	1216.8	1205.9	1203.8	1219.0
30°	1149.7	1156.2	1156.2	1154.1	1147.6	1147.6	1141.1	1143.3	1128.2	1128.2	1141.1
32.5°	1067.7	1074.1	1069.8	1065.4	1056.8	1052.6	1048.2	1046.0	1030.9	1030.9	1046.0
35°	970.4	974.7	968.3	959.6	948.7	942.2	935.9	927.2	916.3	918.6	927.2
37.5°	871.0	871.0	862.4	845.1	836.4	825.5	814.8	814.8	797.5	795.4	801.9
40°	786.7	778.1	762.9	739.1	724.0	713.2	698.1	689.4	676.4	676.4	687.3
42.5°	711.1	693.8	674.3	641.8	626.7	613.8	594.4	585.8	570.6	568.3	574.9
45°	644.1	626.7	598.6	564.1	544.7	529.5	501.4	490.6	477.7	475.4	479.8
47.5°	590.0	570.6	536.0	490.6	471.2	451.6	423.6	408.4	397.7	391.2	397.7
50°	542.4	516.5	479.8	432.2	406.3	389.0	354.5	339.3	324.2	319.9	322.1
52.5°	490.6	464.7	425.7	376.0	352.2	326.3	293.9	272.3	259.3	252.8	259.3
55°	434.4	408.4	369.6	319.9	293.9	270.2	235.5	218.2	203.1	196.7	203.1
57.5°	373.9	350.1	315.5	265.8	242.0	220.5	188.1	170.8	155.6	151.3	155.6
60°	322.1	302.5	268.0	220.5	201.0	177.2	149.1	131.9	118.8	116.7	118.8
62.5°	287.5	265.8	233.4	188.1	168.5	149.1	123.2	105.9	95.0	92.9	95.0
65°	252.8	229.1	198.8	159.9	140.5	125.3	99.4	84.3	73.5	71.4	73.5
67.5°	214.0	192.3	166.4	131.9	116.7	101.5	80.0	64.9	56.2	54.1	56.2
70°	177.2	157.8	131.9	105.9	90.8	80.0	60.5	49.7	41.1	38.9	41.1
72.5°	140.5	123.2	101.5	80.0	71.4	60.5	47.6	36.7	30.3	28.0	30.3
75°	108.1	95.0	77.8	58.3	51.8	45.3	32.4	25.9	21.7	19.4	21.7
77.5°	75.6	67.0	54.1	43.2	36.7	32.4	23.8	17.3	15.2	13.0	15.2
80°	51.8	45.3	36.7	28.0	23.8	19.4	15.2	10.8	8.6	8.6	8.6
82.5°	34.6	28.0	21.7	17.3	15.2	13.0	8.6	6.5	6.5	4.4	4.4
85°	19.4	17.3	13.0	10.8	8.6	6.5	4.4	4.4	2.1	2.1	2.1
87.5°	8.6	6.5	4.4	4.4	2.1	2.1	2.1	2.1	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°	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8
2.5°	1411.3	1404.8	1413.4	1404.8	1400.5	1404.8	1400.5	1413.4	1402.7	1394.0	1402.7
5°	1409.2	1400.5	1409.2	1402.7	1396.1	1398.3	1394.0	1406.9	1394.0	1387.5	1391.9
7.5°	1404.8	1398.3	1402.7	1396.1	1389.6	1391.9	1387.5	1398.3	1385.4	1378.9	1383.2
10°	1398.3	1391.9	1394.0	1389.6	1383.2	1383.2	1378.9	1387.5	1372.3	1363.7	1368.1
12.5°	1389.6	1381.0	1385.4	1378.9	1370.2	1370.2	1365.8	1372.3	1357.2	1348.6	1350.8
15°	1378.9	1370.2	1370.2	1363.7	1355.1	1355.1	1346.4	1352.9	1335.7	1327.0	1327.0
17.5°	1365.8	1355.1	1355.1	1348.6	1337.8	1335.7	1329.1	1335.7	1316.3	1307.5	1307.5
20°	1346.4	1337.8	1335.7	1331.3	1320.5	1318.4	1309.7	1311.9	1296.7	1290.2	1288.1
22.5°	1320.5	1311.9	1314.0	1307.5	1298.8	1296.7	1288.1	1294.6	1279.4	1272.9	1275.2
25°	1275.2	1270.8	1275.2	1272.9	1266.5	1266.5	1262.2	1266.5	1253.5	1249.1	1251.4
27.5°	1223.2	1221.1	1223.2	1223.2	1219.0	1219.0	1219.0	1225.5	1212.4	1210.3	1210.3
30°	1147.6	1147.6	1149.7	1152.0	1152.0	1156.2	1154.1	1162.7	1154.1	1149.7	1154.1
32.5°	1048.2	1056.8	1063.3	1063.3	1063.3	1067.7	1072.0	1078.5	1069.8	1072.0	1072.0
35°	935.9	942.2	946.6	957.4	951.0	966.0	970.4	979.1	976.9	981.2	979.1
37.5°	810.5	819.2	827.8	842.9	840.7	858.0	866.6	883.9	879.6	888.3	892.5
40°	693.8	706.7	719.7	730.5	739.1	756.4	773.7	795.4	801.9	808.3	810.5
42.5°	581.4	594.4	615.9	631.1	644.1	672.2	695.9	721.9	728.4	741.3	745.7
45°	490.6	501.4	527.4	546.8	557.6	598.6	626.7	659.1	670.0	685.2	691.6
47.5°	406.3	425.7	451.6	475.4	490.6	533.8	570.6	605.2	620.3	637.6	646.2
50°	332.8	354.5	389.0	410.6	432.2	479.8	520.9	557.6	572.7	592.1	600.8
52.5°	272.3	296.1	328.6	352.2	376.0	425.7	468.9	503.6	523.0	536.0	548.9
55°	214.0	239.9	272.3	298.3	317.7	371.8	408.4	443.0	456.0	466.8	473.3
57.5°	166.4	185.8	218.2	239.9	263.7	311.2	348.0	373.9	384.7	397.7	401.9
60°	129.7	149.1	179.4	201.0	222.6	268.0	304.8	330.7	341.5	352.2	358.7
62.5°	103.7	123.2	151.3	170.8	190.2	231.3	263.7	289.6	302.5	313.4	319.9
65°	82.1	99.4	123.2	142.6	157.8	194.5	226.9	250.7	263.7	274.5	281.0
67.5°	64.9	80.0	101.5	114.6	129.7	159.9	188.1	209.6	220.5	233.4	239.9
70°	49.7	60.5	80.0	90.8	101.5	127.5	149.1	170.8	181.6	190.2	194.5
72.5°	36.7	45.3	60.5	69.1	75.6	97.3	114.6	129.7	138.4	147.0	151.3
75°	25.9	32.4	43.2	49.7	54.1	69.1	84.3	95.0	101.5	108.1	114.6
77.5°	17.3	21.7	28.0	32.4	36.7	47.6	56.2	64.9	71.4	77.8	80.0
80°	10.8	15.2	19.4	21.7	23.8	30.3	38.9	43.2	47.6	51.8	54.1
82.5°	6.5	8.6	10.8	13.0	15.2	19.4	23.8	28.0	30.3	34.6	36.7
85°	2.1	4.4	4.4	6.5	6.5	10.8	13.0	15.2	17.3	19.4	21.7
87.5°	0.0	0.0	2.1	2.1	2.1	2.1	4.4	4.4	4.4	4.4	4.4
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: P880567

CATALOG NUMBER: LD4C35D010 EU4359027 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8	1404.8
2.5°	1411.3	1404.8	1400.5	1398.3	1413.4	1394.0	1402.7	1404.8
5°	1402.7	1396.1	1391.9	1389.6	1402.7	1385.4	1391.9	1396.1
7.5°	1389.6	1385.4	1378.9	1376.7	1389.6	1370.2	1378.9	1381.0
10°	1374.6	1368.1	1363.7	1361.6	1372.3	1352.9	1361.6	1361.6
12.5°	1355.1	1350.8	1342.2	1342.2	1350.8	1333.5	1339.9	1339.9
15°	1329.1	1324.9	1316.3	1316.3	1324.9	1307.5	1314.0	1314.0
17.5°	1307.5	1303.2	1296.7	1294.6	1303.2	1286.0	1292.5	1290.2
20°	1290.2	1286.0	1277.3	1277.3	1283.8	1266.5	1272.9	1272.9
22.5°	1275.2	1272.9	1264.3	1264.3	1272.9	1255.6	1260.0	1255.6
25°	1251.4	1249.1	1240.5	1242.8	1247.0	1229.7	1236.2	1231.9
27.5°	1212.4	1212.4	1203.8	1201.7	1208.1	1193.0	1197.3	1195.2
30°	1152.0	1154.1	1143.3	1143.3	1145.5	1132.4	1138.9	1136.8
32.5°	1069.8	1072.0	1063.3	1061.2	1067.7	1056.8	1061.2	1061.2
35°	979.1	981.2	974.7	974.7	981.2	974.7	974.7	972.5
37.5°	888.3	892.5	888.3	890.4	894.8	888.3	892.5	890.4
40°	814.8	819.2	812.6	816.9	821.3	814.8	821.3	816.9
42.5°	747.8	754.3	749.9	754.3	758.5	754.3	758.5	752.2
45°	698.1	702.5	700.2	702.5	706.7	704.6	706.7	704.6
47.5°	650.5	659.1	654.9	659.1	665.6	661.4	665.6	659.1
50°	607.3	613.8	611.7	615.9	618.1	615.9	620.3	613.8
52.5°	551.1	557.6	555.5	555.5	559.7	555.5	559.7	555.5
55°	477.7	479.8	479.8	481.9	479.8	477.7	479.8	475.4
57.5°	406.3	410.6	404.2	410.6	408.4	406.3	406.3	401.9
60°	360.9	367.4	363.1	367.4	365.3	365.3	365.3	363.1
62.5°	324.2	328.6	324.2	326.3	326.3	326.3	324.2	322.1
65°	283.1	289.6	285.2	287.5	285.2	283.1	285.2	283.1
67.5°	242.0	244.2	244.2	242.0	242.0	242.0	242.0	237.8
70°	196.7	198.8	196.7	201.0	198.8	196.7	198.8	194.5
72.5°	153.4	155.6	153.4	155.6	153.4	153.4	153.4	153.4
75°	114.6	116.7	116.7	116.7	116.7	116.7	112.4	116.7
77.5°	82.1	82.1	82.1	84.3	82.1	82.1	82.1	82.1
80°	56.2	56.2	56.2	58.3	56.2	58.3	56.2	58.3
82.5°	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7
85°	19.4	21.7	21.7	19.4	19.4	19.4	19.4	19.4
87.5°	4.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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)