

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: P880566

Luminaire Tested: **LD4C30D010 EU4309050 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: P880566
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: LD4C30D010 EU4309050 4LBDWNH
Description: 4 INCH 3000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

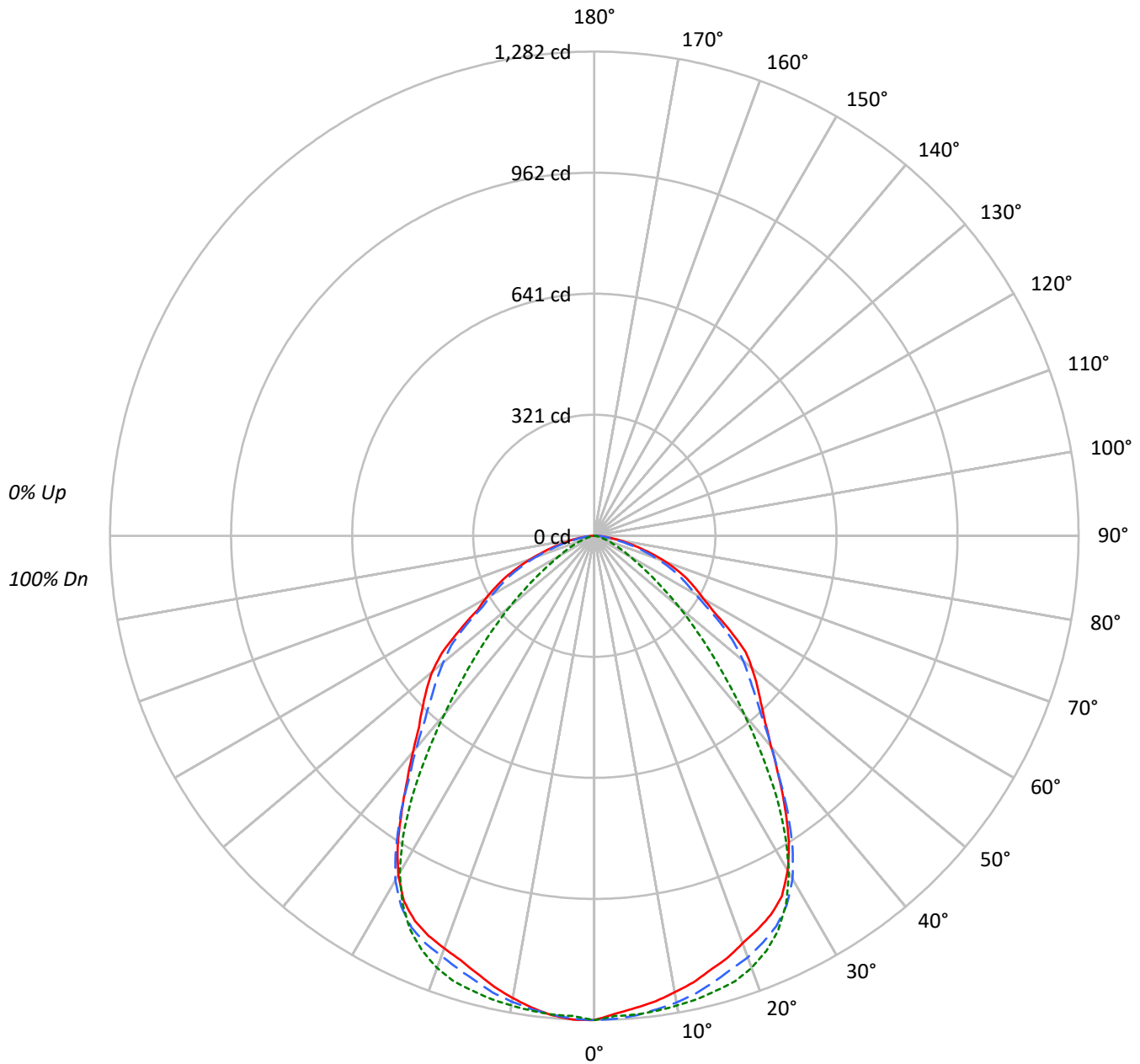
Lumens per Lamp: N/A
Luminaire Lumens: 2610.0 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 31.6
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°	157547	157547	157547
5°	154758	156941	157175
10°	153092	157533	155063
15°	151315	158590	152574
20°	150113	159160	151931
25°	150045	156185	152444
30°	145264	146101	147221
35°	131964	125770	133149
40°	116752	99031	119591
45°	108310	75404	111750
50°	104087	55828	107088
55°	94243	38468	92958
60°	81919	26168	81452
65°	79157	18953	75145
70°	71553	12788	63758
75°	59001	8402	50552
80°	47472	5589	37709
85°	39046	2678	24950



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.1	4.6
10°-20°	346.1	13.3
20°-30°	522.9	20.0
30°-40°	547.3	21.0
40°-50°	443.2	17.0
50°-60°	322.4	12.4
60°-70°	198.8	7.6
70°-80°	89.8	3.4
80°-90°	18.3	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°	990.1	37.9
0°-40°	1537.4	58.9
0°-60°	2303.1	88.2
0°-90°	2610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2610.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1282	1282	1282	1282	1282	
5°	1255	1274	1273	1273	1274	119
15°	1190	1223	1247	1219	1200	336
25°	1107	1140	1152	1144	1125	507
35°	880	892	839	892	888	548
45°	623	604	434	612	643	485
55°	440	412	180	416	434	393
65°	272	245	65	241	258	266
75°	124	106	18	93	106	135
85°	28	22	2	16	18	32
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°	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4
2.5°	1266.7	1266.7	1278.5	1292.3	1280.5	1268.6	1276.5	1272.6	1286.4	1286.4	1280.5
5°	1254.9	1258.8	1268.6	1280.5	1270.7	1258.8	1268.6	1264.7	1278.5	1278.5	1274.5
7.5°	1243.0	1244.9	1256.8	1270.7	1260.7	1248.9	1256.8	1254.9	1266.7	1268.6	1264.7
10°	1227.2	1229.2	1241.1	1254.9	1244.9	1235.1	1243.0	1241.1	1256.8	1256.8	1254.9
12.5°	1211.4	1213.4	1225.3	1237.0	1227.2	1217.4	1225.3	1225.3	1241.1	1243.0	1241.1
15°	1189.7	1193.6	1203.6	1215.3	1209.5	1197.6	1205.5	1205.5	1219.3	1223.2	1223.2
17.5°	1172.0	1174.0	1183.8	1195.7	1187.8	1177.8	1185.7	1185.7	1199.6	1203.6	1203.6
20°	1148.2	1152.2	1162.1	1174.0	1168.0	1160.1	1166.1	1166.1	1181.8	1185.7	1187.8
22.5°	1128.6	1132.5	1140.3	1156.2	1146.3	1140.3	1148.2	1146.3	1164.1	1166.1	1166.1
25°	1106.9	1110.9	1120.7	1130.5	1124.6	1118.7	1124.6	1124.6	1138.4	1140.3	1140.3
27.5°	1075.3	1077.2	1087.1	1097.0	1091.1	1083.2	1091.1	1089.1	1102.8	1104.9	1102.8
30°	1024.0	1028.0	1031.9	1045.7	1039.8	1033.8	1041.7	1037.8	1051.6	1051.6	1049.6
32.5°	958.8	958.8	966.8	976.7	968.8	964.8	970.7	972.7	982.6	982.6	976.7
35°	879.9	884.0	889.8	895.7	889.8	885.9	891.8	889.8	901.7	897.7	891.8
37.5°	801.1	803.0	809.0	816.9	809.0	803.0	805.0	803.0	812.8	812.8	803.0
40°	728.0	732.0	735.9	743.8	735.9	732.0	734.0	728.0	739.9	735.9	730.0
42.5°	668.8	670.8	676.7	680.7	672.8	670.8	672.8	668.8	674.8	670.8	659.0
45°	623.4	623.4	625.5	631.3	623.4	621.5	621.5	617.5	623.4	615.6	603.8
47.5°	584.0	585.9	588.0	591.9	585.9	580.1	582.1	574.2	578.1	572.1	556.3
50°	544.6	548.5	550.5	554.4	548.5	544.6	546.5	538.6	538.6	528.8	515.0
52.5°	505.1	507.1	505.1	509.0	505.1	499.2	501.1	493.2	493.2	481.5	467.6
55°	440.0	441.9	444.0	447.9	444.0	438.0	441.9	436.1	436.1	428.1	412.3
57.5°	374.8	376.9	378.8	380.8	380.8	376.9	378.8	374.8	372.9	366.9	355.2
60°	333.4	333.4	333.4	335.4	333.4	331.5	331.5	327.5	327.5	319.6	307.8
62.5°	301.9	303.8	303.8	305.8	303.8	301.9	299.9	295.9	294.0	286.1	276.2
65°	272.3	272.3	270.3	274.2	272.3	270.3	270.3	266.3	262.5	254.6	244.6
67.5°	236.7	238.7	236.7	238.7	238.7	236.7	234.8	230.8	228.8	222.9	211.1
70°	199.2	199.2	199.2	201.3	199.2	199.2	201.3	195.4	193.4	185.4	175.6
72.5°	161.7	163.8	163.8	161.7	163.8	159.8	159.8	159.8	157.9	150.0	140.0
75°	124.3	126.3	126.3	128.3	126.3	124.3	124.3	122.3	120.4	114.4	106.5
77.5°	92.7	92.7	94.6	94.6	94.6	92.7	92.7	88.8	88.8	84.8	76.9
80°	67.1	67.1	65.2	67.1	67.1	65.2	65.2	63.1	63.1	59.2	53.3
82.5°	43.4	45.4	45.4	45.4	45.4	43.4	43.4	43.4	41.4	39.4	35.6
85°	27.7	27.7	27.7	27.7	29.6	27.7	29.6	27.7	27.7	23.7	21.7
87.5°	11.9	11.9	11.9	13.8	13.8	11.9	11.9	11.9	11.9	11.9	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°	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4
2.5°	1280.5	1282.4	1276.5	1284.4	1278.5	1280.5	1282.4	1280.5	1272.6	1272.6	1294.3
5°	1272.6	1276.5	1270.7	1280.5	1276.5	1276.5	1280.5	1278.5	1270.7	1272.6	1292.3
7.5°	1264.7	1270.7	1266.7	1276.5	1270.7	1270.7	1274.5	1274.5	1266.7	1268.6	1286.4
10°	1252.8	1260.7	1258.8	1268.6	1262.8	1262.8	1268.6	1268.6	1260.7	1262.8	1280.5
12.5°	1243.0	1250.9	1248.9	1258.8	1254.9	1256.8	1258.8	1262.8	1252.8	1256.8	1272.6
15°	1227.2	1235.1	1235.1	1244.9	1241.1	1244.9	1248.9	1254.9	1246.9	1246.9	1262.8
17.5°	1209.5	1219.3	1219.3	1227.2	1227.2	1229.2	1237.0	1243.0	1235.1	1237.0	1250.9
20°	1189.7	1201.6	1201.6	1211.4	1209.5	1213.4	1219.3	1225.3	1217.4	1217.4	1233.2
22.5°	1169.9	1179.9	1181.8	1187.8	1187.8	1189.7	1195.7	1199.6	1189.7	1189.7	1205.5
25°	1142.4	1152.2	1154.2	1158.2	1154.2	1154.2	1158.2	1162.1	1152.2	1152.2	1166.1
27.5°	1104.9	1114.7	1114.7	1112.8	1108.8	1110.9	1108.8	1110.9	1100.9	1099.0	1112.8
30°	1049.6	1055.5	1055.5	1053.6	1047.6	1047.6	1041.7	1043.8	1029.9	1029.9	1041.7
32.5°	974.7	980.5	976.7	972.7	964.8	960.9	956.9	954.9	941.1	941.1	954.9
35°	885.9	889.8	884.0	876.1	866.1	860.2	854.3	846.5	836.5	838.6	846.5
37.5°	795.1	795.1	787.2	771.5	763.6	753.6	743.8	743.8	728.0	726.1	732.0
40°	718.2	710.3	696.5	674.8	660.9	651.1	637.3	629.4	617.5	617.5	627.4
42.5°	649.2	633.4	615.6	585.9	572.1	560.3	542.6	534.7	520.9	518.8	524.8
45°	588.0	572.1	546.5	515.0	497.2	483.4	457.7	447.9	436.1	434.0	438.0
47.5°	538.6	520.9	489.4	447.9	430.1	412.3	386.7	372.9	363.0	357.1	363.0
50°	495.2	471.5	438.0	394.6	370.9	355.2	323.6	309.8	295.9	292.1	294.0
52.5°	447.9	424.2	388.6	343.3	321.5	297.9	268.3	248.6	236.7	230.8	236.7
55°	396.5	372.9	337.4	292.1	268.3	246.7	215.0	199.2	185.4	179.6	185.4
57.5°	341.3	319.6	288.1	242.7	221.0	201.3	171.7	155.9	142.1	138.1	142.1
60°	294.0	276.2	244.6	201.3	183.5	161.7	136.1	120.4	108.5	106.5	108.5
62.5°	262.5	242.7	213.1	171.7	153.9	136.1	112.5	96.7	86.8	84.8	86.8
65°	230.8	209.2	181.5	146.0	128.3	114.4	90.8	76.9	67.1	65.2	67.1
67.5°	195.4	175.6	151.9	120.4	106.5	92.7	73.0	59.2	51.3	49.4	51.3
70°	161.7	144.0	120.4	96.7	82.9	73.0	55.2	45.4	37.5	35.6	37.5
72.5°	128.3	112.5	92.7	73.0	65.2	55.2	43.4	33.5	27.7	25.6	27.7
75°	98.6	86.8	71.0	53.3	47.3	41.4	29.6	23.7	19.8	17.7	19.8
77.5°	69.0	61.2	49.4	39.4	33.5	29.6	21.7	15.8	13.8	11.9	13.8
80°	47.3	41.4	33.5	25.6	21.7	17.7	13.8	9.8	7.9	7.9	7.9
82.5°	31.5	25.6	19.8	15.8	13.8	11.9	7.9	5.9	5.9	4.0	4.0
85°	17.7	15.8	11.9	9.8	7.9	5.9	4.0	4.0	1.9	1.9	1.9
87.5°	7.9	5.9	4.0	4.0	1.9	1.9	1.9	1.9	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°	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4
2.5°	1288.4	1282.4	1290.3	1282.4	1278.5	1282.4	1278.5	1290.3	1280.5	1272.6	1280.5
5°	1286.4	1278.5	1286.4	1280.5	1274.5	1276.5	1272.6	1284.4	1272.6	1266.7	1270.7
7.5°	1282.4	1276.5	1280.5	1274.5	1268.6	1270.7	1266.7	1276.5	1264.7	1258.8	1262.8
10°	1276.5	1270.7	1272.6	1268.6	1262.8	1262.8	1258.8	1266.7	1252.8	1244.9	1248.9
12.5°	1268.6	1260.7	1264.7	1258.8	1250.9	1250.9	1246.9	1252.8	1239.0	1231.1	1233.2
15°	1258.8	1250.9	1250.9	1244.9	1237.0	1237.0	1229.2	1235.1	1219.3	1211.4	1211.4
17.5°	1246.9	1237.0	1237.0	1231.1	1221.3	1219.3	1213.4	1219.3	1201.6	1193.6	1193.6
20°	1229.2	1221.3	1219.3	1215.3	1205.5	1203.6	1195.7	1197.6	1183.8	1177.8	1175.9
22.5°	1205.5	1197.6	1199.6	1193.6	1185.7	1183.8	1175.9	1181.8	1168.0	1162.1	1164.1
25°	1164.1	1160.1	1164.1	1162.1	1156.2	1156.2	1152.2	1156.2	1144.3	1140.3	1142.4
27.5°	1116.7	1114.7	1116.7	1116.7	1112.8	1112.8	1112.8	1118.7	1106.9	1104.9	1104.9
30°	1047.6	1047.6	1049.6	1051.6	1051.6	1055.5	1053.6	1061.5	1053.6	1049.6	1053.6
32.5°	956.9	964.8	970.7	970.7	970.7	974.7	978.6	984.5	976.7	978.6	978.6
35°	854.3	860.2	864.2	874.0	868.2	881.9	885.9	893.8	891.8	895.7	893.8
37.5°	739.9	747.8	755.7	769.5	767.5	783.2	791.1	806.9	803.0	810.9	814.8
40°	633.4	645.2	657.0	666.9	674.8	690.5	706.3	726.1	732.0	737.9	739.9
42.5°	530.7	542.6	562.3	576.1	588.0	613.6	635.3	659.0	664.9	676.7	680.7
45°	447.9	457.7	481.5	499.2	509.0	546.5	572.1	601.7	611.7	625.5	631.3
47.5°	370.9	388.6	412.3	434.0	447.9	487.3	520.9	552.5	566.3	582.1	589.9
50°	303.8	323.6	355.2	374.8	394.6	438.0	475.5	509.0	522.8	540.6	548.5
52.5°	248.6	270.3	299.9	321.5	343.3	388.6	428.1	459.8	477.5	489.4	501.1
55°	195.4	219.0	248.6	272.3	290.0	339.4	372.9	404.4	416.3	426.1	432.1
57.5°	151.9	169.6	199.2	219.0	240.7	284.1	317.7	341.3	351.2	363.0	366.9
60°	118.4	136.1	163.8	183.5	203.2	244.6	278.2	301.9	311.7	321.5	327.5
62.5°	94.6	112.5	138.1	155.9	173.6	211.1	240.7	264.4	276.2	286.1	292.1
65°	75.0	90.8	112.5	130.2	144.0	177.5	207.1	228.8	240.7	250.6	256.5
67.5°	59.2	73.0	92.7	104.6	118.4	146.0	171.7	191.4	201.3	213.1	219.0
70°	45.4	55.2	73.0	82.9	92.7	116.4	136.1	155.9	165.7	173.6	177.5
72.5°	33.5	41.4	55.2	63.1	69.0	88.8	104.6	118.4	126.3	134.2	138.1
75°	23.7	29.6	39.4	45.4	49.4	63.1	76.9	86.8	92.7	98.6	104.6
77.5°	15.8	19.8	25.6	29.6	33.5	43.4	51.3	59.2	65.2	71.0	73.0
80°	9.8	13.8	17.7	19.8	21.7	27.7	35.6	39.4	43.4	47.3	49.4
82.5°	5.9	7.9	9.8	11.9	13.8	17.7	21.7	25.6	27.7	31.5	33.5
85°	1.9	4.0	4.0	5.9	5.9	9.8	11.9	13.8	15.8	17.7	19.8
87.5°	0.0	0.0	1.9	1.9	1.9	1.9	4.0	4.0	4.0	4.0	4.0
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: P880566

CATALOG NUMBER: LD4C30D010 EU4309050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4	1282.4
2.5°	1288.4	1282.4	1278.5	1276.5	1290.3	1272.6	1280.5	1282.4
5°	1280.5	1274.5	1270.7	1268.6	1280.5	1264.7	1270.7	1274.5
7.5°	1268.6	1264.7	1258.8	1256.8	1268.6	1250.9	1258.8	1260.7
10°	1254.9	1248.9	1244.9	1243.0	1252.8	1235.1	1243.0	1243.0
12.5°	1237.0	1233.2	1225.3	1225.3	1233.2	1217.4	1223.2	1223.2
15°	1213.4	1209.5	1201.6	1201.6	1209.5	1193.6	1199.6	1199.6
17.5°	1193.6	1189.7	1183.8	1181.8	1189.7	1174.0	1179.9	1177.8
20°	1177.8	1174.0	1166.1	1166.1	1172.0	1156.2	1162.1	1162.1
22.5°	1164.1	1162.1	1154.2	1154.2	1162.1	1146.3	1150.3	1146.3
25°	1142.4	1140.3	1132.5	1134.5	1138.4	1122.6	1128.6	1124.6
27.5°	1106.9	1106.9	1099.0	1097.0	1102.8	1089.1	1093.0	1091.1
30°	1051.6	1053.6	1043.8	1043.8	1045.7	1033.8	1039.8	1037.8
32.5°	976.7	978.6	970.7	968.8	974.7	964.8	968.8	968.8
35°	893.8	895.7	889.8	889.8	895.7	889.8	889.8	887.8
37.5°	810.9	814.8	810.9	812.8	816.9	810.9	814.8	812.8
40°	743.8	747.8	741.9	745.7	749.8	743.8	749.8	745.7
42.5°	682.7	688.6	684.6	688.6	692.5	688.6	692.5	686.7
45°	637.3	641.3	639.2	641.3	645.2	643.2	645.2	643.2
47.5°	593.8	601.7	597.8	601.7	607.7	603.8	607.7	601.7
50°	554.4	560.3	558.4	562.3	564.2	562.3	566.3	560.3
52.5°	503.1	509.0	507.1	507.1	511.0	507.1	511.0	507.1
55°	436.1	438.0	438.0	440.0	438.0	436.1	438.0	434.0
57.5°	370.9	374.8	369.0	374.8	372.9	370.9	370.9	366.9
60°	329.4	335.4	331.5	335.4	333.4	333.4	333.4	331.5
62.5°	295.9	299.9	295.9	297.9	297.9	297.9	295.9	294.0
65°	258.5	264.4	260.4	262.5	260.4	258.5	260.4	258.5
67.5°	221.0	222.9	222.9	221.0	221.0	221.0	221.0	217.1
70°	179.6	181.5	179.6	183.5	181.5	179.6	181.5	177.5
72.5°	140.0	142.1	140.0	142.1	140.0	140.0	140.0	140.0
75°	104.6	106.5	106.5	106.5	106.5	106.5	102.7	106.5
77.5°	75.0	75.0	75.0	76.9	75.0	75.0	75.0	75.0
80°	51.3	51.3	51.3	53.3	51.3	53.3	51.3	53.3
82.5°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
85°	17.7	19.8	19.8	17.7	17.7	17.7	17.7	17.7
87.5°	4.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)