

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: P880562

Luminaire Tested: **LD4C30D010 EU4309027 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: P880562
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 EU4309027 4LBDWNH
Description: 4 INCH 3000 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

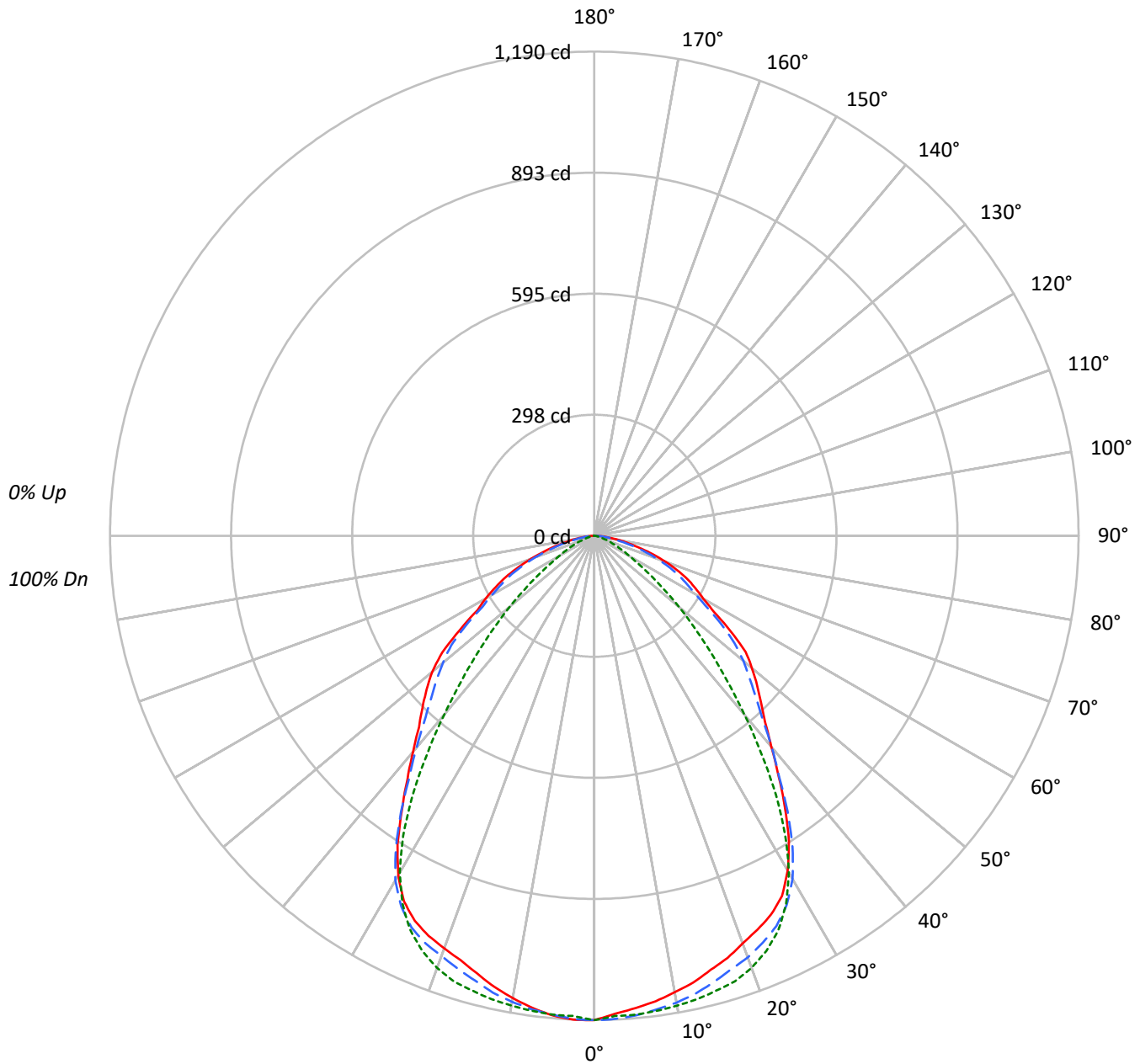
Lumens per Lamp: N/A
Luminaire Lumens: 2423.0 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	146257	146257	146257
5°	143671	145694	145915
10°	142126	146243	143948
15°	140478	147219	141636
20°	139367	147760	141040
25°	139282	145002	141518
30°	134851	135631	136681
35°	122516	116757	123611
40°	108397	91942	111027
45°	100561	70000	103741
50°	96633	51814	99424
55°	87496	35705	86297
60°	76046	24300	75604
65°	73488	17587	69738
70°	66452	11854	59196
75°	54729	7785	46945
80°	44076	5165	35021
85°	36226	2537	23117



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	4.6
10°-20°	321.3	13.3
20°-30°	485.5	20.0
30°-40°	508.1	21.0
40°-50°	411.5	17.0
50°-60°	299.3	12.4
60°-70°	184.6	7.6
70°-80°	83.4	3.4
80°-90°	16.9	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°	919.2	37.9
0°-40°	1427.3	58.9
0°-60°	2138.1	88.2
0°-90°	2423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2423.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1190	1190	1190	1190	1190	
5°	1165	1183	1181	1181	1183	110
15°	1104	1136	1158	1132	1114	312
25°	1028	1059	1070	1062	1044	471
35°	817	828	778	828	824	509
45°	579	560	403	568	597	450
55°	408	383	167	386	403	364
65°	253	227	60	224	240	247
75°	115	99	16	86	99	125
85°	26	20	2	15	16	29
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°	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5
2.5°	1175.9	1175.9	1186.9	1199.7	1188.7	1177.7	1185.0	1181.4	1194.3	1194.3	1188.7
5°	1165.0	1168.6	1177.7	1188.7	1179.6	1168.6	1177.7	1174.1	1186.9	1186.9	1183.2
7.5°	1153.9	1155.7	1166.8	1179.6	1170.4	1159.5	1166.8	1165.0	1175.9	1177.7	1174.1
10°	1139.3	1141.1	1152.1	1165.0	1155.7	1146.6	1153.9	1152.1	1166.8	1166.8	1165.0
12.5°	1124.7	1126.5	1137.5	1148.4	1139.3	1130.2	1137.5	1137.5	1152.1	1153.9	1152.1
15°	1104.5	1108.1	1117.3	1128.3	1122.8	1111.8	1119.1	1119.1	1132.0	1135.6	1135.6
17.5°	1088.0	1089.8	1099.0	1110.0	1102.7	1093.4	1100.8	1100.8	1113.6	1117.3	1117.3
20°	1066.0	1069.7	1078.8	1089.8	1084.3	1077.0	1082.5	1082.5	1097.2	1100.8	1102.7
22.5°	1047.7	1051.3	1058.6	1073.4	1064.2	1058.6	1066.0	1064.2	1080.7	1082.5	1082.5
25°	1027.5	1031.3	1040.4	1049.5	1044.0	1038.6	1044.0	1044.0	1056.8	1058.6	1058.6
27.5°	998.3	1000.1	1009.2	1018.4	1012.9	1005.6	1012.9	1011.1	1023.8	1025.7	1023.8
30°	950.6	954.3	957.9	970.8	965.3	959.7	967.1	963.5	976.3	976.3	974.4
32.5°	890.1	890.1	897.6	906.7	899.4	895.6	901.2	903.0	912.2	912.2	906.7
35°	816.9	820.6	826.0	831.5	826.0	822.4	827.9	826.0	837.1	833.3	827.9
37.5°	743.7	745.5	751.0	758.3	751.0	745.5	747.3	745.5	754.6	754.6	745.5
40°	675.9	679.6	683.2	690.5	683.2	679.6	681.4	675.9	686.9	683.2	677.7
42.5°	620.9	622.7	628.2	631.9	624.6	622.7	624.6	620.9	626.4	622.7	611.8
45°	578.8	578.8	580.7	586.1	578.8	577.0	577.0	573.3	578.8	571.4	560.5
47.5°	542.2	544.0	545.9	549.5	544.0	538.6	540.4	533.0	536.6	531.1	516.5
50°	505.6	509.2	511.1	514.7	509.2	505.6	507.4	500.0	500.0	490.9	478.1
52.5°	468.9	470.7	468.9	472.5	468.9	463.4	465.2	457.9	457.9	447.0	434.1
55°	408.5	410.3	412.2	415.8	412.2	406.6	410.3	404.8	404.8	397.4	382.8
57.5°	348.0	349.9	351.7	353.5	353.5	349.9	351.7	348.0	346.2	340.6	329.7
60°	309.5	309.5	309.5	311.4	309.5	307.7	307.7	304.0	304.0	296.7	285.8
62.5°	280.3	282.1	282.1	283.9	282.1	280.3	278.5	274.7	272.9	265.6	256.4
65°	252.8	252.8	251.0	254.6	252.8	251.0	251.0	247.3	243.7	236.3	227.1
67.5°	219.8	221.6	219.8	221.6	221.6	219.8	218.0	214.3	212.4	206.9	196.0
70°	185.0	185.0	185.0	186.9	185.0	185.0	186.9	181.4	179.6	172.1	163.0
72.5°	150.2	152.1	152.1	150.2	152.1	148.4	148.4	148.4	146.6	139.2	130.0
75°	115.3	117.3	117.3	119.1	117.3	115.3	115.3	113.5	111.7	106.2	98.9
77.5°	86.1	86.1	87.9	87.9	87.9	86.1	86.1	82.5	82.5	78.7	71.4
80°	62.3	62.3	60.5	62.3	62.3	60.5	60.5	58.6	58.6	55.0	49.5
82.5°	40.3	42.1	42.1	42.1	42.1	40.3	40.3	40.3	38.4	36.6	33.0
85°	25.7	25.7	25.7	25.7	27.5	25.7	27.5	25.7	25.7	22.0	20.2
87.5°	11.0	11.0	11.0	12.8	12.8	11.0	11.0	11.0	11.0	11.0	9.1
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°	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5
2.5°	1188.7	1190.5	1185.0	1192.3	1186.9	1188.7	1190.5	1188.7	1181.4	1181.4	1201.6
5°	1181.4	1185.0	1179.6	1188.7	1185.0	1185.0	1188.7	1186.9	1179.6	1181.4	1199.7
7.5°	1174.1	1179.6	1175.9	1185.0	1179.6	1179.6	1183.2	1183.2	1175.9	1177.7	1194.3
10°	1163.1	1170.4	1168.6	1177.7	1172.3	1172.3	1177.7	1177.7	1170.4	1172.3	1188.7
12.5°	1153.9	1161.3	1159.5	1168.6	1165.0	1166.8	1168.6	1172.3	1163.1	1166.8	1181.4
15°	1139.3	1146.6	1146.6	1155.7	1152.1	1155.7	1159.5	1165.0	1157.5	1157.5	1172.3
17.5°	1122.8	1132.0	1132.0	1139.3	1139.3	1141.1	1148.4	1153.9	1146.6	1148.4	1161.3
20°	1104.5	1115.5	1115.5	1124.7	1122.8	1126.5	1132.0	1137.5	1130.2	1130.2	1144.8
22.5°	1086.1	1095.4	1097.2	1102.7	1102.7	1104.5	1110.0	1113.6	1104.5	1104.5	1119.1
25°	1060.6	1069.7	1071.5	1075.2	1071.5	1071.5	1075.2	1078.8	1069.7	1069.7	1082.5
27.5°	1025.7	1034.9	1034.9	1033.1	1029.4	1031.3	1029.4	1031.3	1022.0	1020.2	1033.1
30°	974.4	979.9	979.9	978.1	972.6	972.6	967.1	969.0	956.1	956.1	967.1
32.5°	904.9	910.3	906.7	903.0	895.6	892.0	888.3	886.5	873.7	873.7	886.5
35°	822.4	826.0	820.6	813.3	804.1	798.5	793.1	785.8	776.6	778.5	785.8
37.5°	738.2	738.2	730.8	716.2	708.9	699.6	690.5	690.5	675.9	674.1	679.6
40°	666.7	659.4	646.6	626.4	613.6	604.5	591.6	584.3	573.3	573.3	582.5
42.5°	602.7	588.0	571.4	544.0	531.1	520.2	503.7	496.4	483.6	481.7	487.2
45°	545.9	531.1	507.4	478.1	461.6	448.8	424.9	415.8	404.8	402.9	406.6
47.5°	500.0	483.6	454.3	415.8	399.3	382.8	359.0	346.2	337.0	331.5	337.0
50°	459.7	437.7	406.6	366.3	344.4	329.7	300.4	287.6	274.7	271.1	272.9
52.5°	415.8	393.8	360.8	318.7	298.5	276.5	249.1	230.8	219.8	214.3	219.8
55°	368.1	346.2	313.3	271.1	249.1	229.0	199.6	185.0	172.1	166.7	172.1
57.5°	316.9	296.7	267.4	225.3	205.1	186.9	159.4	144.7	131.9	128.2	131.9
60°	272.9	256.4	227.1	186.9	170.3	150.2	126.4	111.7	100.7	98.9	100.7
62.5°	243.7	225.3	197.8	159.4	142.8	126.4	104.4	89.8	80.5	78.7	80.5
65°	214.3	194.2	168.5	135.5	119.1	106.2	84.3	71.4	62.3	60.5	62.3
67.5°	181.4	163.0	141.0	111.7	98.9	86.1	67.8	55.0	47.6	45.8	47.6
70°	150.2	133.7	111.7	89.8	76.9	67.8	51.3	42.1	34.8	33.0	34.8
72.5°	119.1	104.4	86.1	67.8	60.5	51.3	40.3	31.1	25.7	23.8	25.7
75°	91.6	80.5	65.9	49.5	43.9	38.4	27.5	22.0	18.4	16.4	18.4
77.5°	64.1	56.8	45.8	36.6	31.1	27.5	20.2	14.6	12.8	11.0	12.8
80°	43.9	38.4	31.1	23.8	20.2	16.4	12.8	9.1	7.3	7.3	7.3
82.5°	29.3	23.8	18.4	14.6	12.8	11.0	7.3	5.5	5.5	3.7	3.7
85°	16.4	14.6	11.0	9.1	7.3	5.5	3.7	3.7	1.8	1.8	1.8
87.5°	7.3	5.5	3.7	3.7	1.8	1.8	1.8	1.8	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°	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5
2.5°	1196.1	1190.5	1197.9	1190.5	1186.9	1190.5	1186.9	1197.9	1188.7	1181.4	1188.7
5°	1194.3	1186.9	1194.3	1188.7	1183.2	1185.0	1181.4	1192.3	1181.4	1175.9	1179.6
7.5°	1190.5	1185.0	1188.7	1183.2	1177.7	1179.6	1175.9	1185.0	1174.1	1168.6	1172.3
10°	1185.0	1179.6	1181.4	1177.7	1172.3	1172.3	1168.6	1175.9	1163.1	1155.7	1159.5
12.5°	1177.7	1170.4	1174.1	1168.6	1161.3	1161.3	1157.5	1163.1	1150.2	1142.9	1144.8
15°	1168.6	1161.3	1161.3	1155.7	1148.4	1148.4	1141.1	1146.6	1132.0	1124.7	1124.7
17.5°	1157.5	1148.4	1148.4	1142.9	1133.8	1132.0	1126.5	1132.0	1115.5	1108.1	1108.1
20°	1141.1	1133.8	1132.0	1128.3	1119.1	1117.3	1110.0	1111.8	1099.0	1093.4	1091.6
22.5°	1119.1	1111.8	1113.6	1108.1	1100.8	1099.0	1091.6	1097.2	1084.3	1078.8	1080.7
25°	1080.7	1077.0	1080.7	1078.8	1073.4	1073.4	1069.7	1073.4	1062.4	1058.6	1060.6
27.5°	1036.7	1034.9	1036.7	1036.7	1033.1	1033.1	1033.1	1038.6	1027.5	1025.7	1025.7
30°	972.6	972.6	974.4	976.3	976.3	979.9	978.1	985.4	978.1	974.4	978.1
32.5°	888.3	895.6	901.2	901.2	901.2	904.9	908.5	914.0	906.7	908.5	908.5
35°	793.1	798.5	802.3	811.4	806.0	818.7	822.4	829.7	827.9	831.5	829.7
37.5°	686.9	694.2	701.6	714.4	712.5	727.1	734.4	749.1	745.5	752.8	756.4
40°	588.0	598.9	610.0	619.1	626.4	641.1	655.7	674.1	679.6	685.0	686.9
42.5°	492.7	503.7	522.0	534.8	545.9	569.6	589.8	611.8	617.3	628.2	631.9
45°	415.8	424.9	447.0	463.4	472.5	507.4	531.1	558.6	567.8	580.7	586.1
47.5°	344.4	360.8	382.8	402.9	415.8	452.4	483.6	512.9	525.7	540.4	547.7
50°	282.1	300.4	329.7	348.0	366.3	406.6	441.5	472.5	485.4	501.8	509.2
52.5°	230.8	251.0	278.5	298.5	318.7	360.8	397.4	426.8	443.3	454.3	465.2
55°	181.4	203.3	230.8	252.8	269.2	315.1	346.2	375.4	386.5	395.6	401.1
57.5°	141.0	157.5	185.0	203.3	223.5	263.7	294.9	316.9	326.0	337.0	340.6
60°	109.9	126.4	152.1	170.3	188.7	227.1	258.3	280.3	289.4	298.5	304.0
62.5°	87.9	104.4	128.2	144.7	161.2	196.0	223.5	245.5	256.4	265.6	271.1
65°	69.6	84.3	104.4	120.9	133.7	164.8	192.3	212.4	223.5	232.6	238.1
67.5°	55.0	67.8	86.1	97.1	109.9	135.5	159.4	177.6	186.9	197.8	203.3
70°	42.1	51.3	67.8	76.9	86.1	108.0	126.4	144.7	153.9	161.2	164.8
72.5°	31.1	38.4	51.3	58.6	64.1	82.5	97.1	109.9	117.3	124.6	128.2
75°	22.0	27.5	36.6	42.1	45.8	58.6	71.4	80.5	86.1	91.6	97.1
77.5°	14.6	18.4	23.8	27.5	31.1	40.3	47.6	55.0	60.5	65.9	67.8
80°	9.1	12.8	16.4	18.4	20.2	25.7	33.0	36.6	40.3	43.9	45.8
82.5°	5.5	7.3	9.1	11.0	12.8	16.4	20.2	23.8	25.7	29.3	31.1
85°	1.8	3.7	3.7	5.5	5.5	9.1	11.0	12.8	14.6	16.4	18.4
87.5°	0.0	0.0	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
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: P880562

CATALOG NUMBER: LD4C30D010 EU4309027 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5	1190.5
2.5°	1196.1	1190.5	1186.9	1185.0	1197.9	1181.4	1188.7	1190.5
5°	1188.7	1183.2	1179.6	1177.7	1188.7	1174.1	1179.6	1183.2
7.5°	1177.7	1174.1	1168.6	1166.8	1177.7	1161.3	1168.6	1170.4
10°	1165.0	1159.5	1155.7	1153.9	1163.1	1146.6	1153.9	1153.9
12.5°	1148.4	1144.8	1137.5	1137.5	1144.8	1130.2	1135.6	1135.6
15°	1126.5	1122.8	1115.5	1115.5	1122.8	1108.1	1113.6	1113.6
17.5°	1108.1	1104.5	1099.0	1097.2	1104.5	1089.8	1095.4	1093.4
20°	1093.4	1089.8	1082.5	1082.5	1088.0	1073.4	1078.8	1078.8
22.5°	1080.7	1078.8	1071.5	1071.5	1078.8	1064.2	1067.9	1064.2
25°	1060.6	1058.6	1051.3	1053.2	1056.8	1042.2	1047.7	1044.0
27.5°	1027.5	1027.5	1020.2	1018.4	1023.8	1011.1	1014.7	1012.9
30°	976.3	978.1	969.0	969.0	970.8	959.7	965.3	963.5
32.5°	906.7	908.5	901.2	899.4	904.9	895.6	899.4	899.4
35°	829.7	831.5	826.0	826.0	831.5	826.0	826.0	824.2
37.5°	752.8	756.4	752.8	754.6	758.3	752.8	756.4	754.6
40°	690.5	694.2	688.7	692.3	696.0	690.5	696.0	692.3
42.5°	633.7	639.3	635.5	639.3	642.9	639.3	642.9	637.5
45°	591.6	595.3	593.4	595.3	598.9	597.1	598.9	597.1
47.5°	551.3	558.6	555.0	558.6	564.1	560.5	564.1	558.6
50°	514.7	520.2	518.4	522.0	523.8	522.0	525.7	520.2
52.5°	467.0	472.5	470.7	470.7	474.3	470.7	474.3	470.7
55°	404.8	406.6	406.6	408.5	406.6	404.8	406.6	402.9
57.5°	344.4	348.0	342.6	348.0	346.2	344.4	344.4	340.6
60°	305.8	311.4	307.7	311.4	309.5	309.5	309.5	307.7
62.5°	274.7	278.5	274.7	276.5	276.5	276.5	274.7	272.9
65°	239.9	245.5	241.7	243.7	241.7	239.9	241.7	239.9
67.5°	205.1	206.9	206.9	205.1	205.1	205.1	205.1	201.5
70°	166.7	168.5	166.7	170.3	168.5	166.7	168.5	164.8
72.5°	130.0	131.9	130.0	131.9	130.0	130.0	130.0	130.0
75°	97.1	98.9	98.9	98.9	98.9	98.9	95.3	98.9
77.5°	69.6	69.6	69.6	71.4	69.6	69.6	69.6	69.6
80°	47.6	47.6	47.6	49.5	47.6	49.5	47.6	49.5
82.5°	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1
85°	16.4	18.4	18.4	16.4	16.4	16.4	16.4	16.4
87.5°	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)