

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: P#

Luminaire Tested: **LD4C20D010 EX4C209027 4LBSQLWWLI**

Issue Date: 2/18/2022

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: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20D010 EX4C209027 4LBSQLWWLI
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

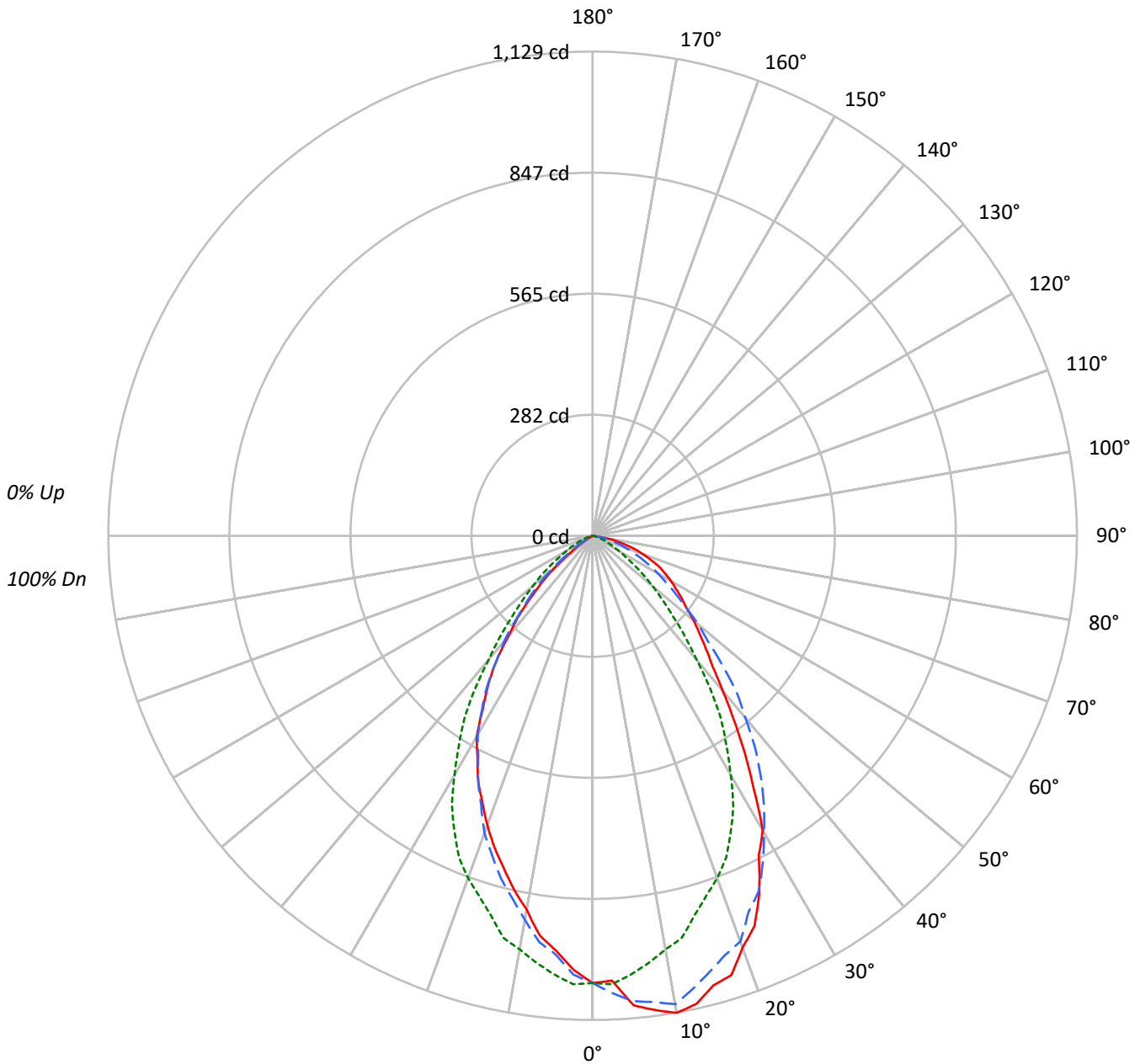
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1495.0 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	100628	100628	100628
5°	106466	99444	94116
10°	110646	95939	86749
15°	108433	91562	80074
20°	104910	87187	73705
25°	97861	81083	67232
30°	88342	71752	60198
35°	72771	61428	49932
40°	59389	47410	38430
45°	51021	36011	27646
50°	46174	27410	17458
55°	42493	19766	6308
60°	40796	13508	965
65°	39407	9132	297
70°	35264	6348	367
75°	28930	3281	0
80°	18059	1389	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.7	6.5
10°-20°	263.3	17.6
20°-30°	351.5	23.5
30°-40°	333.7	22.3
40°-50°	230.7	15.4
50°-60°	127.5	8.5
60°-70°	63.3	4.2
70°-80°	24.9	1.7
80°-90°	2.4	0.2
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°	712.5	47.7
0°-40°	1046.3	70.0
0°-60°	1404.4	93.9
0°-90°	1495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1495.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1043	1043	1043	1043	1043	
5°	1099	1089	1027	980	972	105
15°	1086	1053	917	827	802	307
25°	919	915	762	632	632	419
35°	618	683	522	429	424	387
45°	374	429	264	216	203	292
55°	253	238	118	60	38	227
65°	173	125	40	1	1	168
75°	78	48	9	0	0	83
85°	0	1	0	0	0	7
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°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1037.9	1066.7	1069.2	1066.7	1070.5	1069.2	1075.5	1069.2	1076.8	1065.5	1068.0
5°	1099.2	1088.0	1111.7	1099.2	1099.2	1098.0	1094.2	1093.0	1098.0	1081.7	1089.2
7.5°	1115.5	1131.8	1153.0	1126.8	1128.0	1128.0	1120.5	1118.0	1118.0	1088.0	1096.7
10°	1129.3	1119.2	1130.5	1120.5	1129.3	1128.0	1133.0	1116.7	1128.0	1110.5	1109.2
12.5°	1118.0	1114.2	1129.3	1113.0	1108.0	1109.2	1103.0	1099.2	1103.0	1083.0	1081.7
15°	1085.5	1089.2	1111.7	1094.2	1091.7	1089.2	1081.7	1069.2	1079.3	1051.7	1053.0
17.5°	1074.3	1068.0	1071.8	1056.7	1060.5	1058.0	1056.7	1045.5	1042.9	1025.5	1025.5
20°	1021.7	1035.5	1035.5	1025.5	1025.5	1024.2	1008.0	1018.0	1006.7	1001.7	1006.7
22.5°	985.4	986.7	986.7	977.9	979.2	974.2	965.4	959.2	965.4	959.2	949.2
25°	919.2	921.7	936.7	920.4	917.9	922.9	915.4	911.6	910.4	895.4	915.4
27.5°	839.1	864.1	862.9	856.6	864.1	854.1	850.4	851.6	855.4	854.1	859.1
30°	792.9	796.6	800.4	795.4	796.6	792.9	792.9	794.1	804.1	800.4	799.1
32.5°	699.1	711.5	721.6	721.6	722.8	726.6	725.3	751.6	757.8	745.4	742.9
35°	617.8	626.5	635.3	636.5	652.8	654.0	655.3	662.8	680.3	684.1	682.8
37.5°	540.3	549.0	551.5	562.8	571.5	580.2	590.3	600.3	615.3	627.8	621.5
40°	471.5	475.2	481.5	486.5	504.0	504.0	509.0	529.0	545.3	555.3	554.0
42.5°	414.0	415.2	420.2	428.9	445.2	441.4	445.2	459.0	482.7	484.0	497.7
45°	373.9	372.7	376.4	377.6	387.7	392.7	395.2	405.2	425.2	427.7	428.9
47.5°	337.7	336.4	342.7	345.2	348.9	353.9	353.9	355.2	362.7	368.9	363.9
50°	307.6	307.6	307.6	310.1	316.4	315.1	316.4	321.4	325.1	322.6	321.4
52.5°	275.1	280.1	283.9	285.1	286.4	286.4	287.6	285.1	283.9	280.1	272.6
55°	252.6	257.6	257.6	257.6	257.6	262.6	256.4	257.6	257.6	247.6	237.6
57.5°	230.1	235.1	238.8	233.9	238.8	233.9	231.4	230.1	227.6	217.6	202.6
60°	211.4	213.9	212.6	211.4	213.9	210.1	207.6	202.6	200.1	186.3	176.3
62.5°	190.1	191.3	192.6	190.1	187.6	186.3	181.3	173.8	168.8	157.6	148.8
65°	172.6	168.8	167.6	166.3	163.8	160.1	156.3	147.6	143.8	133.8	125.0
67.5°	146.3	145.1	147.6	143.8	137.6	137.6	133.8	126.3	117.5	111.3	102.5
70°	125.0	123.8	121.3	117.5	116.3	111.3	111.3	102.5	100.0	88.8	81.3
72.5°	102.5	102.5	98.8	95.0	91.3	88.8	87.6	81.3	77.6	71.3	65.0
75°	77.6	77.6	76.3	72.5	70.0	67.5	66.3	61.3	57.5	51.3	47.5
77.5°	55.0	55.0	50.0	47.5	48.7	46.3	43.8	42.5	41.3	37.5	32.5
80°	32.5	31.3	27.5	28.8	27.5	27.5	26.3	25.0	22.5	20.0	17.5
82.5°	8.8	10.0	10.0	10.0	11.3	8.8	8.8	8.8	10.0	10.0	6.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
87.5°	1.3	2.5	5.0	5.0	5.0	5.0	5.0	3.8	3.8	3.8	2.5
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°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1055.5	1054.2	1055.5	1046.7	1066.7	1051.7	1049.2	1046.7	1055.5	1046.7	1034.2
5°	1078.0	1065.5	1061.7	1058.0	1069.2	1051.7	1048.0	1049.2	1042.9	1026.7	1028.0
7.5°	1085.5	1074.3	1063.0	1039.2	1049.2	1045.5	1035.5	1028.0	1018.0	1004.2	1001.7
10°	1088.0	1075.5	1059.2	1051.7	1036.7	1031.7	1028.0	1015.5	1003.0	979.2	972.9
12.5°	1080.5	1065.5	1045.5	1039.2	1028.0	1011.7	1003.0	990.4	979.2	960.4	946.7
15°	1048.0	1035.5	1029.2	1008.0	1003.0	992.9	975.4	957.9	941.7	916.6	909.1
17.5°	1010.5	1005.5	999.2	982.9	981.7	971.7	955.4	940.4	919.2	880.4	867.9
20°	971.7	971.7	951.7	945.4	957.9	937.9	925.4	911.6	867.9	849.1	826.6
22.5°	942.9	929.2	917.9	907.9	909.1	896.6	879.2	851.6	835.4	812.9	786.6
25°	886.7	891.7	866.7	862.9	866.7	837.9	829.1	806.6	782.8	761.6	741.6
27.5°	851.6	837.9	821.6	807.9	807.9	796.6	771.6	766.6	730.3	710.3	685.3
30°	799.1	789.1	775.3	755.3	752.8	744.1	724.1	711.5	674.1	644.0	630.3
32.5°	732.8	729.1	717.8	695.3	687.8	677.8	652.8	631.5	614.0	580.2	564.0
35°	685.3	671.6	647.8	629.0	622.8	605.3	585.2	570.2	551.5	521.5	500.2
37.5°	614.0	600.3	577.7	555.3	555.3	537.8	510.2	495.2	469.0	451.4	433.9
40°	551.5	534.0	511.5	485.2	481.5	456.4	445.2	420.2	403.9	376.4	373.9
42.5°	481.5	465.2	445.2	425.2	410.2	397.7	368.9	350.2	332.7	318.9	315.1
45°	417.7	396.4	378.9	353.9	338.9	323.9	305.1	292.6	278.9	263.9	255.1
47.5°	362.7	345.2	320.1	297.6	282.6	275.1	253.8	240.1	228.9	218.9	212.6
50°	306.4	285.1	271.4	246.3	243.8	226.4	208.9	197.6	191.3	182.6	173.8
52.5°	263.9	243.8	225.1	206.4	196.3	190.1	173.8	162.6	153.8	147.6	142.6
55°	222.6	205.1	190.1	171.3	165.1	156.3	137.6	135.1	126.3	117.5	111.3
57.5°	191.3	175.1	157.6	145.1	133.8	127.6	112.5	102.5	97.5	90.1	83.8
60°	162.6	145.1	131.3	116.3	111.3	102.5	91.3	82.6	76.3	70.0	63.8
62.5°	136.3	121.3	106.3	93.8	86.3	81.3	72.5	65.0	58.8	53.8	48.7
65°	112.5	98.8	86.3	73.8	70.0	63.8	57.5	51.3	46.3	40.0	35.0
67.5°	92.6	80.1	67.5	58.8	55.0	52.5	45.0	38.8	35.0	31.3	26.3
70°	72.5	63.8	53.8	46.3	42.5	38.8	33.8	30.0	25.0	22.5	18.8
72.5°	56.3	48.7	40.0	33.8	31.3	28.8	23.8	20.0	17.5	15.0	12.5
75°	40.0	33.8	28.8	22.5	21.3	20.0	16.3	13.8	11.3	8.8	7.5
77.5°	27.5	22.5	17.5	15.0	13.8	11.3	10.0	7.5	6.3	5.0	3.8
80°	15.0	11.3	8.8	7.5	6.3	5.0	5.0	3.8	2.5	2.5	1.3
82.5°	5.0	3.8	2.5	1.3	1.3	1.3	1.3	1.3	1.3	0.0	1.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	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°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1041.7	1028.0	1031.7	1031.7	1029.2	1029.2	1026.7	1023.0	1024.2	1016.7	1000.5
5°	1030.5	1013.0	1010.5	1013.0	1003.0	1000.5	995.5	1003.0	980.4	989.2	979.2
7.5°	998.0	981.7	977.9	986.7	974.2	966.7	965.4	975.4	955.4	945.4	934.2
10°	961.7	955.4	944.2	937.9	934.2	935.4	925.4	912.9	909.1	906.6	896.6
12.5°	929.2	915.4	905.4	897.9	895.4	895.4	879.2	876.7	865.4	862.9	847.9
15°	890.4	874.2	867.9	857.9	849.1	854.1	835.4	830.4	826.6	810.4	812.9
17.5°	856.6	839.1	824.1	817.9	810.4	802.9	785.3	789.1	780.3	780.3	757.8
20°	812.9	794.1	782.8	770.3	770.3	760.3	747.9	749.1	737.8	726.6	706.5
22.5°	766.6	746.6	732.8	727.8	715.3	712.8	697.8	694.1	679.1	680.3	662.8
25°	717.8	697.8	679.1	680.3	669.1	664.1	655.3	637.8	631.5	624.0	619.0
27.5°	660.3	646.5	630.3	629.0	607.8	609.0	597.8	592.8	577.7	581.5	570.2
30°	607.8	587.8	572.7	569.0	560.3	557.8	540.3	532.7	535.3	525.2	519.0
32.5°	554.0	524.0	517.7	510.2	505.2	499.0	486.5	491.5	480.2	482.7	472.7
35°	482.7	470.2	453.9	453.9	448.9	443.9	435.2	440.2	428.9	423.9	414.0
37.5°	422.7	411.5	395.2	400.2	391.4	383.9	376.4	377.6	367.7	366.4	356.4
40°	357.7	351.4	340.2	340.2	333.9	333.9	330.1	326.4	320.1	312.6	301.4
42.5°	296.4	291.4	286.4	287.6	278.9	286.4	276.4	282.6	262.6	261.4	253.8
45°	251.3	240.1	241.3	236.3	231.4	233.9	225.1	227.6	216.4	213.9	206.4
47.5°	203.9	200.1	192.6	190.1	190.1	186.3	182.6	181.3	176.3	170.1	160.1
50°	167.6	153.8	151.3	147.6	145.1	145.1	140.1	132.6	133.8	127.6	117.5
52.5°	131.3	120.0	115.0	113.8	108.8	106.3	100.0	95.0	91.3	88.8	82.6
55°	101.3	91.3	85.1	85.1	77.6	77.6	68.8	65.0	60.0	55.0	51.3
57.5°	76.3	71.3	65.0	60.0	57.5	51.3	46.3	40.0	36.3	28.8	23.8
60°	57.5	52.5	46.3	42.5	40.0	33.8	27.5	22.5	13.8	11.3	10.0
62.5°	42.5	37.5	31.3	28.8	26.3	21.3	15.0	7.5	3.8	3.8	3.8
65°	31.3	25.0	20.0	17.5	15.0	11.3	5.0	2.5	1.3	1.3	1.3
67.5°	21.3	16.3	11.3	10.0	7.5	3.8	1.3	1.3	1.3	1.3	1.3
70°	13.8	10.0	5.0	3.8	2.5	1.3	1.3	1.3	1.3	1.3	1.3
72.5°	8.8	5.0	2.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	5.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
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: P#

CATALOG NUMBER: LD4C20D010 EX4C209027 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1018.0	1009.2	1014.2	1003.0	1008.0	1016.7	1010.5	1013.0
5°	982.9	977.9	971.7	955.4	967.9	977.9	972.9	971.7
7.5°	945.4	927.9	936.7	931.7	929.2	939.2	927.9	940.4
10°	906.6	894.1	892.9	884.2	884.2	891.7	892.9	885.4
12.5°	849.1	842.9	842.9	841.6	840.4	847.9	849.1	845.4
15°	807.9	805.4	799.1	797.9	790.4	801.6	802.9	801.6
17.5°	757.8	759.1	752.8	752.8	757.8	761.6	751.6	761.6
20°	724.1	717.8	715.3	704.1	710.3	716.6	716.6	717.8
22.5°	675.3	665.3	669.1	662.8	659.0	667.8	667.8	671.6
25°	620.3	620.3	622.8	619.0	621.5	626.5	622.8	631.5
27.5°	567.7	572.7	572.7	567.7	570.2	585.2	591.5	581.5
30°	519.0	520.2	524.0	521.5	529.0	534.0	532.7	540.3
32.5°	464.0	470.2	472.7	469.0	471.5	482.7	476.5	475.2
35°	421.5	410.2	409.0	410.2	415.2	417.7	415.2	423.9
37.5°	360.2	356.4	351.4	352.7	356.4	361.4	363.9	370.2
40°	301.4	296.4	296.4	295.1	291.4	305.1	305.1	305.1
42.5°	250.1	248.8	242.6	242.6	247.6	251.3	248.8	257.6
45°	205.1	200.1	196.3	196.3	200.1	200.1	203.9	202.6
47.5°	161.3	156.3	157.6	153.8	157.6	162.6	156.3	157.6
50°	121.3	121.3	118.8	121.3	120.0	121.3	118.8	116.3
52.5°	82.6	93.8	95.0	90.1	78.8	68.8	62.5	67.5
55°	47.5	42.5	42.5	41.3	38.8	37.5	33.8	37.5
57.5°	23.8	21.3	21.3	21.3	20.0	18.8	16.3	16.3
60°	10.0	8.8	8.8	7.5	6.3	5.0	3.8	5.0
62.5°	3.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5
65°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
67.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
70°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)