

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 EX4C209030 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 EX4C209030 4LBSQLWWLI
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

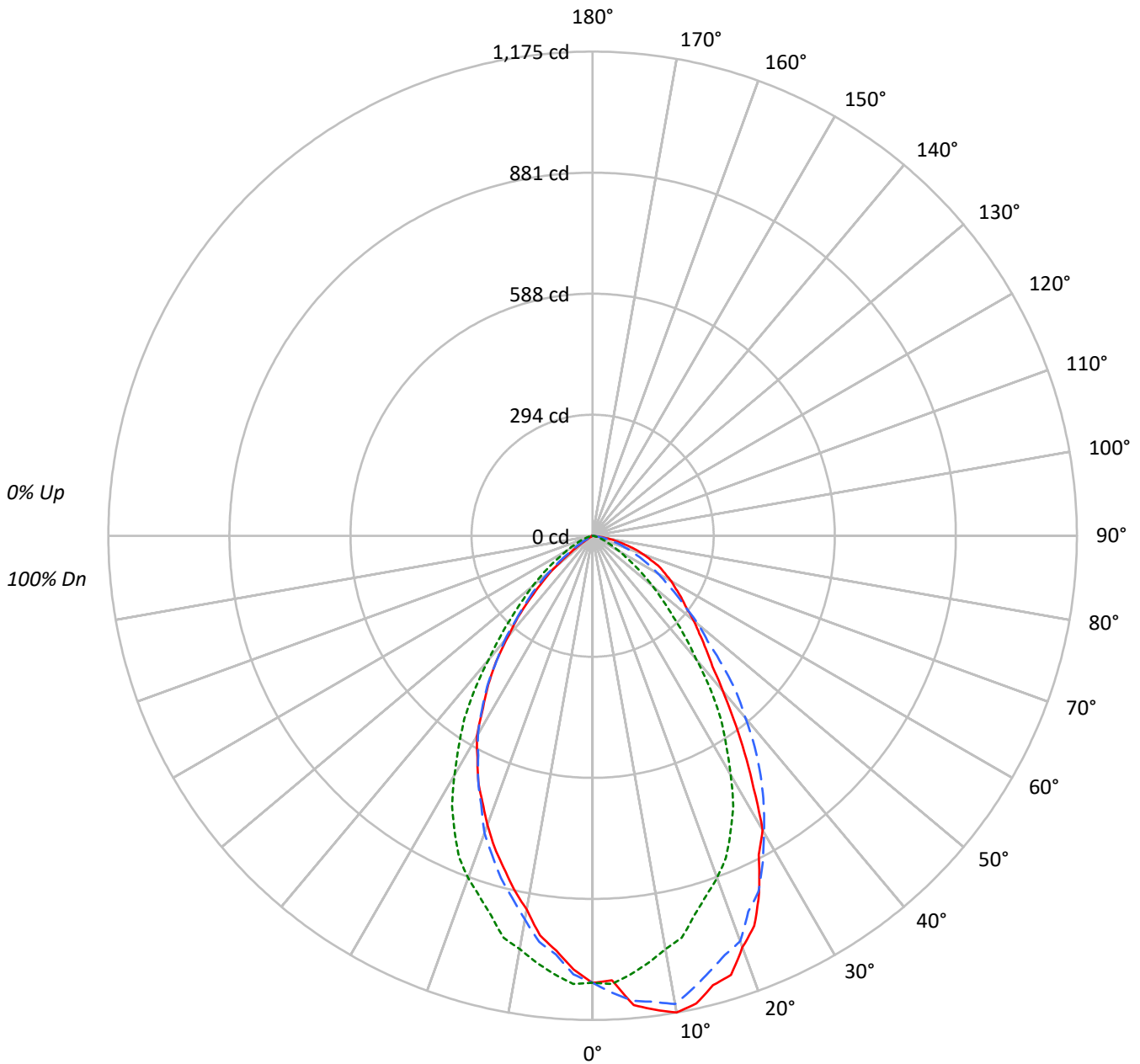
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1555.0 lumens
Efficiency: N/A
Efficacy: 71.3 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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72					72			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58					58			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41					41			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	104671	104671	104671
5°	110747	103434	97894
10°	115084	99790	90227
15°	112779	95238	83290
20°	109119	90688	76662
25°	101790	84330	69936
30°	91885	74637	62605
35°	75693	63890	51946
40°	61769	49312	39979
45°	53068	37457	28751
50°	48035	28506	18163
55°	44209	20574	6561
60°	42417	14049	1003
65°	40982	9498	297
70°	36703	6601	367
75°	30085	3393	0
80°	18781	1445	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	6.5
10°-20°	273.8	17.6
20°-30°	365.7	23.5
30°-40°	347.1	22.3
40°-50°	239.9	15.4
50°-60°	132.6	8.5
60°-70°	65.8	4.2
70°-80°	25.9	1.7
80°-90°	2.5	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°	741.1	47.7
0°-40°	1088.2	70.0
0°-60°	1460.8	93.9
0°-90°	1555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1555.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1085	1085	1085	1085	1085	
5°	1143	1133	1068	1020	1011	109
15°	1129	1095	953	860	834	319
25°	956	952	792	657	657	436
35°	643	710	542	446	441	403
45°	389	446	274	225	211	303
55°	263	247	122	62	39	237
65°	180	130	42	1	1	174
75°	81	49	9	0	0	86
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°	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8
2.5°	1079.6	1109.5	1112.1	1109.5	1113.4	1112.1	1118.6	1112.1	1120.0	1108.2	1110.8
5°	1143.4	1131.6	1156.4	1143.4	1143.4	1142.1	1138.2	1136.8	1142.1	1125.2	1133.0
7.5°	1160.3	1177.2	1199.3	1172.0	1173.3	1173.3	1165.5	1162.9	1162.9	1131.6	1140.8
10°	1174.6	1164.1	1175.9	1165.5	1174.6	1173.3	1178.5	1161.6	1173.3	1155.1	1153.8
12.5°	1162.9	1159.0	1174.6	1157.7	1152.5	1153.8	1147.3	1143.4	1147.3	1126.4	1125.2
15°	1129.0	1133.0	1156.4	1138.2	1135.6	1133.0	1125.2	1112.1	1122.6	1093.9	1095.3
17.5°	1117.4	1110.8	1114.8	1099.1	1103.0	1100.4	1099.1	1087.5	1084.8	1066.6	1066.6
20°	1062.7	1077.0	1077.0	1066.6	1066.6	1065.3	1048.4	1058.8	1047.1	1041.9	1047.1
22.5°	1025.0	1026.3	1026.3	1017.2	1018.5	1013.3	1004.2	997.7	1004.2	997.7	987.3
25°	956.1	958.7	974.3	957.4	954.8	959.9	952.2	948.2	947.0	931.4	952.2
27.5°	872.8	898.8	897.5	891.0	898.8	888.4	884.5	885.8	889.7	888.4	893.6
30°	824.7	828.6	832.5	827.3	828.6	824.7	824.7	826.0	836.4	832.5	831.2
32.5°	727.1	740.1	750.6	750.6	751.8	755.7	754.4	781.7	788.3	775.3	772.7
35°	642.6	651.7	660.8	662.1	679.0	680.3	681.6	689.4	707.6	711.5	710.2
37.5°	561.9	571.0	573.6	585.3	594.5	603.5	614.0	624.4	640.0	653.0	646.5
40°	490.4	494.3	500.8	506.0	524.2	524.2	529.4	550.2	567.1	577.5	576.2
42.5°	430.6	431.8	437.0	446.2	463.1	459.2	463.1	477.4	502.1	503.4	517.7
45°	388.9	387.6	391.5	392.8	403.3	408.5	411.1	421.4	442.2	444.8	446.2
47.5°	351.2	349.9	356.4	359.0	362.9	368.1	368.1	369.4	377.2	383.7	378.5
50°	320.0	320.0	320.0	322.6	329.1	327.8	329.1	334.3	338.2	335.6	334.3
52.5°	286.1	291.3	295.3	296.6	297.9	297.9	299.2	296.6	295.3	291.3	283.5
55°	262.8	268.0	268.0	268.0	268.0	273.2	266.7	268.0	268.0	257.6	247.2
57.5°	239.4	244.6	248.4	243.2	248.4	243.2	240.6	239.4	236.7	226.3	210.7
60°	219.8	222.4	221.1	219.8	222.4	218.5	215.9	210.7	208.1	193.8	183.4
62.5°	197.7	199.0	200.3	197.7	195.1	193.8	188.6	180.8	175.6	163.9	154.8
65°	179.5	175.6	174.3	173.0	170.4	166.5	162.6	153.5	149.6	139.2	130.1
67.5°	152.2	150.9	153.5	149.6	143.1	143.1	139.2	131.4	122.3	115.8	106.7
70°	130.1	128.8	126.2	122.3	121.0	115.8	115.8	106.7	104.1	92.3	84.5
72.5°	106.7	106.7	102.7	98.9	94.9	92.3	91.1	84.5	80.7	74.1	67.6
75°	80.7	80.7	79.3	75.4	72.8	70.2	69.0	63.8	59.8	53.4	49.4
77.5°	57.2	57.2	52.0	49.4	50.7	48.1	45.5	44.2	42.9	39.0	33.8
80°	33.8	32.5	28.6	29.9	28.6	28.6	27.3	26.0	23.4	20.8	18.2
82.5°	9.1	10.4	10.4	10.4	11.7	9.1	9.1	9.1	10.4	10.4	6.5
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	2.6	5.2	5.2	5.2	5.2	5.2	3.9	3.9	3.9	2.6
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°	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8
2.5°	1097.8	1096.5	1097.8	1088.7	1109.5	1093.9	1091.3	1088.7	1097.8	1088.7	1075.7
5°	1121.2	1108.2	1104.3	1100.4	1112.1	1093.9	1090.1	1091.3	1084.8	1067.9	1069.2
7.5°	1129.0	1117.4	1105.6	1080.9	1091.3	1087.5	1077.0	1069.2	1058.8	1044.5	1041.9
10°	1131.6	1118.6	1101.7	1093.9	1078.3	1073.1	1069.2	1056.2	1043.2	1018.5	1012.0
12.5°	1123.8	1108.2	1087.5	1080.9	1069.2	1052.3	1043.2	1030.2	1018.5	999.0	984.7
15°	1090.1	1077.0	1070.5	1048.4	1043.2	1032.8	1014.6	996.4	979.5	953.4	945.6
17.5°	1051.0	1045.8	1039.3	1022.4	1021.1	1010.7	993.8	978.1	956.1	915.7	902.7
20°	1010.7	1010.7	989.9	983.4	996.4	975.5	962.5	948.2	902.7	883.2	859.8
22.5°	980.8	966.5	954.8	944.4	945.6	932.6	914.4	885.8	868.9	845.5	818.2
25°	922.2	927.4	901.4	897.5	901.4	871.5	862.4	839.0	814.3	792.1	771.3
27.5°	885.8	871.5	854.6	840.3	840.3	828.6	802.6	797.4	759.6	738.8	712.8
30°	831.2	820.8	806.5	785.7	783.1	773.9	753.2	740.1	701.1	669.9	655.6
32.5°	762.2	758.3	746.6	723.2	715.4	705.0	679.0	656.9	638.7	603.5	586.7
35°	712.8	698.5	673.8	654.3	647.8	629.6	608.7	593.1	573.6	542.4	520.3
37.5°	638.7	624.4	600.9	577.5	577.5	559.3	530.7	515.1	487.8	469.6	451.4
40°	573.6	555.4	532.0	504.7	500.8	474.8	463.1	437.0	420.1	391.5	388.9
42.5°	500.8	483.9	463.1	442.2	426.6	413.6	383.7	364.2	346.0	331.7	327.8
45°	434.4	412.3	394.1	368.1	352.5	336.9	317.4	304.4	290.1	274.5	265.4
47.5°	377.2	359.0	333.0	309.6	294.0	286.1	264.0	249.8	238.0	227.6	221.1
50°	318.7	296.6	282.3	256.2	253.6	235.4	217.2	205.5	199.0	189.9	180.8
52.5°	274.5	253.6	234.1	214.6	204.2	197.7	180.8	169.1	160.0	153.5	148.3
55°	231.5	213.3	197.7	178.2	171.7	162.6	143.1	140.5	131.4	122.3	115.8
57.5°	199.0	182.1	163.9	150.9	139.2	132.7	117.1	106.7	101.5	93.7	87.1
60°	169.1	150.9	136.6	121.0	115.8	106.7	94.9	85.9	79.3	72.8	66.4
62.5°	141.8	126.2	110.6	97.5	89.7	84.5	75.4	67.6	61.2	56.0	50.7
65°	117.1	102.7	89.7	76.7	72.8	66.4	59.8	53.4	48.1	41.6	36.4
67.5°	96.3	83.3	70.2	61.2	57.2	54.6	46.8	40.3	36.4	32.5	27.3
70°	75.4	66.4	56.0	48.1	44.2	40.3	35.1	31.2	26.0	23.4	19.5
72.5°	58.6	50.7	41.6	35.1	32.5	29.9	24.7	20.8	18.2	15.6	13.0
75°	41.6	35.1	29.9	23.4	22.1	20.8	16.9	14.3	11.7	9.1	7.8
77.5°	28.6	23.4	18.2	15.6	14.3	11.7	10.4	7.8	6.5	5.2	3.9
80°	15.6	11.7	9.1	7.8	6.5	5.2	5.2	3.9	2.6	2.6	1.3
82.5°	5.2	3.9	2.6	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°	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8
2.5°	1083.5	1069.2	1073.1	1073.1	1070.5	1070.5	1067.9	1064.0	1065.3	1057.5	1040.6
5°	1071.8	1053.6	1051.0	1053.6	1043.2	1040.6	1035.4	1043.2	1019.8	1028.9	1018.5
7.5°	1038.0	1021.1	1017.2	1026.3	1013.3	1005.5	1004.2	1014.6	993.8	983.4	971.7
10°	1000.3	993.8	982.1	975.5	971.7	972.9	962.5	949.6	945.6	943.0	932.6
12.5°	966.5	952.2	941.8	934.0	931.4	931.4	914.4	911.8	900.1	897.5	881.9
15°	926.1	909.2	902.7	892.3	883.2	888.4	868.9	863.7	859.8	842.9	845.5
17.5°	891.0	872.8	857.2	850.7	842.9	835.1	816.9	820.8	811.7	811.7	788.3
20°	845.5	826.0	814.3	801.3	801.3	790.9	777.9	779.1	767.4	755.7	734.9
22.5°	797.4	776.5	762.2	757.0	744.0	741.4	725.8	721.9	706.3	707.6	689.4
25°	746.6	725.8	706.3	707.6	695.9	690.7	681.6	663.4	656.9	649.1	643.9
27.5°	686.8	672.5	655.6	654.3	632.2	633.4	621.8	616.6	600.9	604.9	593.1
30°	632.2	611.4	595.7	591.9	582.7	580.1	561.9	554.1	556.7	546.3	539.8
32.5°	576.2	545.0	538.5	530.7	525.5	519.0	506.0	511.2	499.5	502.1	491.7
35°	502.1	489.1	472.2	472.2	467.0	461.8	452.7	457.9	446.2	441.0	430.6
37.5°	439.6	428.0	411.1	416.2	407.1	399.3	391.5	392.8	382.4	381.1	370.7
40°	372.0	365.5	353.8	353.8	347.3	347.3	343.4	339.5	333.0	325.2	313.5
42.5°	308.3	303.1	297.9	299.2	290.1	297.9	287.5	294.0	273.2	271.9	264.0
45°	261.4	249.8	251.0	245.8	240.6	243.2	234.1	236.7	225.0	222.4	214.6
47.5°	212.0	208.1	200.3	197.7	197.7	193.8	189.9	188.6	183.4	176.9	166.5
50°	174.3	160.0	157.4	153.5	150.9	150.9	145.7	137.9	139.2	132.7	122.3
52.5°	136.6	124.9	119.7	118.4	113.2	110.6	104.1	98.9	94.9	92.3	85.9
55°	105.3	94.9	88.5	88.5	80.7	80.7	71.5	67.6	62.4	57.2	53.4
57.5°	79.3	74.1	67.6	62.4	59.8	53.4	48.1	41.6	37.7	29.9	24.7
60°	59.8	54.6	48.1	44.2	41.6	35.1	28.6	23.4	14.3	11.7	10.4
62.5°	44.2	39.0	32.5	29.9	27.3	22.1	15.6	7.8	3.9	3.9	3.9
65°	32.5	26.0	20.8	18.2	15.6	11.7	5.2	2.6	1.3	1.3	1.3
67.5°	22.1	16.9	11.7	10.4	7.8	3.9	1.3	1.3	1.3	1.3	1.3
70°	14.3	10.4	5.2	3.9	2.6	1.3	1.3	1.3	1.3	1.3	1.3
72.5°	9.1	5.2	2.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	5.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.6	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 EX4C209030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8	1084.8
2.5°	1058.8	1049.7	1054.9	1043.2	1048.4	1057.5	1051.0	1053.6
5°	1022.4	1017.2	1010.7	993.8	1006.8	1017.2	1012.0	1010.7
7.5°	983.4	965.1	974.3	969.1	966.5	976.9	965.1	978.1
10°	943.0	930.0	928.8	919.6	919.6	927.4	928.8	920.9
12.5°	883.2	876.7	876.7	875.4	874.1	881.9	883.2	879.3
15°	840.3	837.7	831.2	829.9	822.1	833.8	835.1	833.8
17.5°	788.3	789.5	783.1	783.1	788.3	792.1	781.7	792.1
20°	753.2	746.6	744.0	732.3	738.8	745.4	745.4	746.6
22.5°	702.4	692.0	695.9	689.4	685.5	694.6	694.6	698.5
25°	645.2	645.2	647.8	643.9	646.5	651.7	647.8	656.9
27.5°	590.5	595.7	595.7	590.5	593.1	608.7	615.3	604.9
30°	539.8	541.1	545.0	542.4	550.2	555.4	554.1	561.9
32.5°	482.6	489.1	491.7	487.8	490.4	502.1	495.6	494.3
35°	438.4	426.6	425.4	426.6	431.8	434.4	431.8	441.0
37.5°	374.6	370.7	365.5	366.8	370.7	375.9	378.5	385.0
40°	313.5	308.3	308.3	307.0	303.1	317.4	317.4	317.4
42.5°	260.2	258.8	252.4	252.4	257.6	261.4	258.8	268.0
45°	213.3	208.1	204.2	204.2	208.1	208.1	212.0	210.7
47.5°	167.8	162.6	163.9	160.0	163.9	169.1	162.6	163.9
50°	126.2	126.2	123.6	126.2	124.9	126.2	123.6	121.0
52.5°	85.9	97.5	98.9	93.7	81.9	71.5	65.0	70.2
55°	49.4	44.2	44.2	42.9	40.3	39.0	35.1	39.0
57.5°	24.7	22.1	22.1	22.1	20.8	19.5	16.9	16.9
60°	10.4	9.1	9.1	7.8	6.5	5.2	3.9	5.2
62.5°	3.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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)