

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 EX4C209050 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 EX4C209050 4LBSQLWWLI  
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

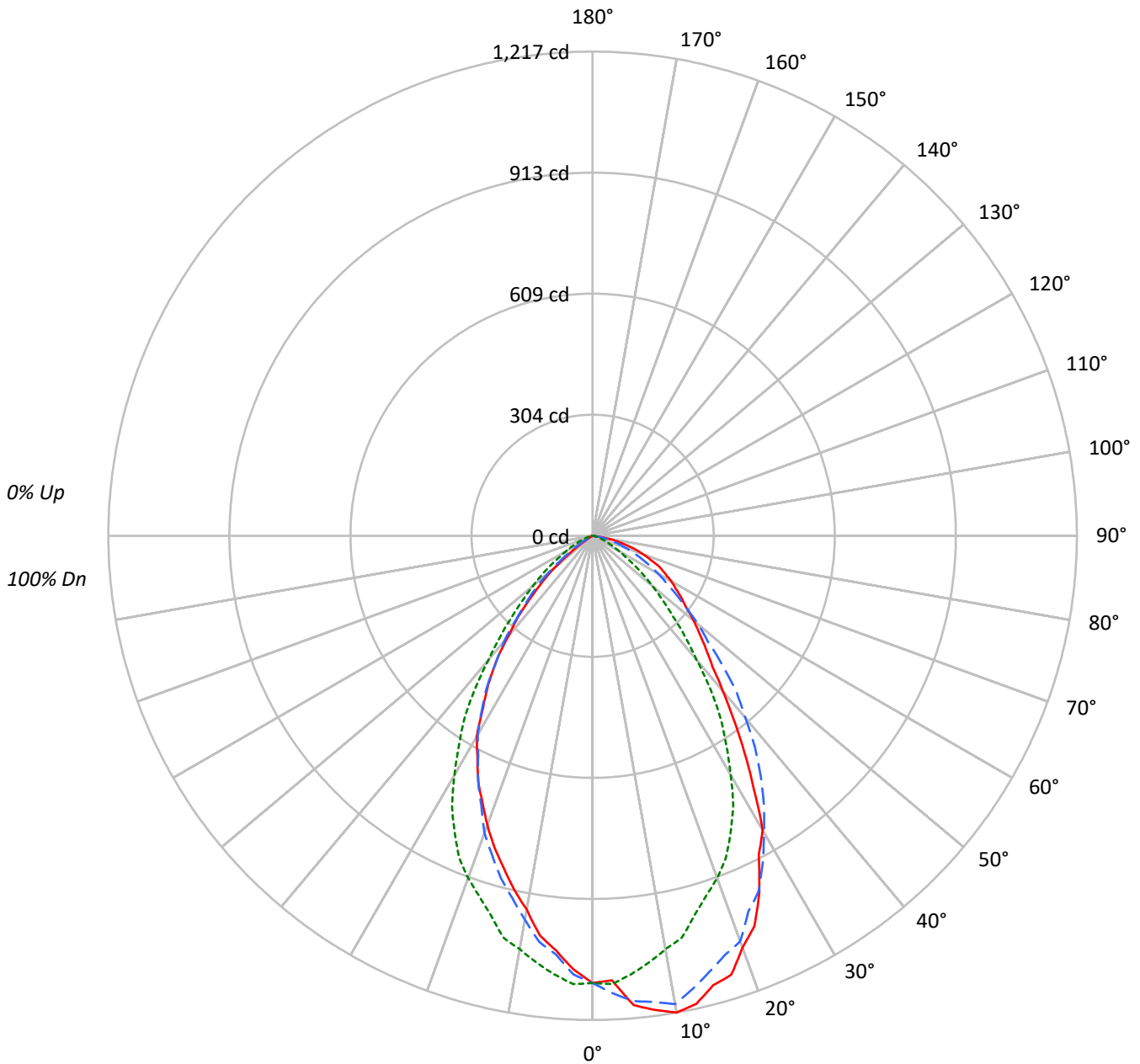
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1611.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 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°	108444	108444	108444
5°	114728	107163	101419
10°	119229	103386	93480
15°	116844	98674	86287
20°	113052	93953	79424
25°	105452	87375	72449
30°	95194	77323	64866
35°	78414	66199	53807
40°	63999	51088	41415
45°	54978	38808	29788
50°	49761	29542	18809
55°	45790	21314	6796
60°	43960	14551	1042
65°	42443	9840	320
70°	38001	6827	395
75°	31166	3542	0
80°	19504	1500	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.3	6.5
10°-20°	283.7	17.6
20°-30°	378.8	23.5
30°-40°	359.6	22.3
40°-50°	248.6	15.4
50°-60°	137.4	8.5
60°-70°	68.2	4.2
70°-80°	26.9	1.7
80°-90°	2.6	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°	767.8	47.7
0°-40°	1127.4	70.0
0°-60°	1513.4	93.9
0°-90°	1611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1611.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1124	1124	1124	1124	1124	
5°	1184	1174	1106	1056	1047	113
15°	1170	1135	988	891	864	331
25°	990	986	821	680	680	452
35°	666	736	562	462	457	417
45°	403	462	284	233	218	314
55°	272	256	127	65	40	245
65°	186	135	43	1	1	180
75°	84	51	10	0	0	89
85°	0	1	0	0	0	8
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°	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9
2.5°	1118.5	1149.5	1152.2	1149.5	1153.5	1152.2	1158.9	1152.2	1160.3	1148.2	1150.8
5°	1184.5	1172.4	1198.0	1184.5	1184.5	1183.2	1179.1	1177.8	1183.2	1165.7	1173.8
7.5°	1202.1	1219.6	1242.5	1214.2	1215.5	1215.5	1207.4	1204.8	1204.8	1172.4	1181.8
10°	1216.9	1206.1	1218.2	1207.4	1216.9	1215.5	1220.9	1203.4	1215.5	1196.7	1195.3
12.5°	1204.8	1200.7	1216.9	1199.4	1194.0	1195.3	1188.6	1184.5	1188.6	1167.0	1165.7
15°	1169.7	1173.8	1198.0	1179.1	1176.5	1173.8	1165.7	1152.2	1163.0	1133.3	1134.7
17.5°	1157.6	1150.8	1154.9	1138.7	1142.8	1140.1	1138.7	1126.6	1123.9	1105.0	1105.0
20°	1101.0	1115.8	1115.8	1105.0	1105.0	1103.7	1086.2	1096.9	1084.8	1079.4	1084.8
22.5°	1061.9	1063.3	1063.3	1053.8	1055.2	1049.8	1040.3	1033.6	1040.3	1033.6	1022.8
25°	990.5	993.2	1009.4	991.8	989.1	994.5	986.4	982.4	981.1	964.9	986.4
27.5°	904.2	931.2	929.8	923.1	931.2	920.4	916.4	917.7	921.8	920.4	925.8
30°	854.4	858.4	862.5	857.1	858.4	854.4	854.4	855.7	866.5	862.5	861.1
32.5°	753.3	766.8	777.6	777.6	778.9	783.0	781.6	809.9	816.6	803.2	800.5
35°	665.7	675.2	684.6	685.9	703.5	704.8	706.1	714.2	733.1	737.1	735.8
37.5°	582.2	591.6	594.3	606.4	615.9	625.3	636.1	646.9	663.0	676.5	669.8
40°	508.1	512.1	518.8	524.2	543.1	543.1	548.4	570.0	587.6	598.3	597.0
42.5°	446.1	447.4	452.8	462.2	479.8	475.7	479.8	494.6	520.1	521.5	536.4
45°	402.9	401.6	405.6	407.0	417.8	423.2	425.9	436.6	458.2	460.9	462.2
47.5°	363.9	362.5	369.3	371.9	376.0	381.3	381.3	382.7	390.8	397.6	392.2
50°	331.5	331.5	331.5	334.2	341.0	339.6	341.0	346.3	350.4	347.7	346.3
52.5°	296.5	301.8	305.9	307.3	308.6	308.6	310.0	307.3	305.9	301.8	293.8
55°	272.2	277.6	277.6	277.6	277.6	283.0	276.3	277.6	277.6	266.8	256.1
57.5°	248.0	253.4	257.4	252.0	257.4	252.0	249.3	248.0	245.2	234.5	218.3
60°	227.8	230.5	229.1	227.8	230.5	226.4	223.7	218.3	215.6	200.8	190.0
62.5°	204.8	206.2	207.5	204.8	202.2	200.8	195.4	187.3	181.9	169.8	160.3
65°	185.9	181.9	180.6	179.2	176.6	172.5	168.5	159.0	155.0	144.2	134.7
67.5°	157.6	156.3	159.0	155.0	148.3	148.3	144.2	136.1	126.7	120.0	110.5
70°	134.7	133.4	130.7	126.7	125.3	120.0	120.0	110.5	107.8	95.7	87.6
72.5°	110.5	110.5	106.4	102.4	98.4	95.7	94.3	87.6	83.6	76.8	70.1
75°	83.6	83.6	82.2	78.1	75.4	72.8	71.4	66.0	62.0	55.3	51.2
77.5°	59.3	59.3	53.9	51.2	52.5	49.8	47.1	45.8	44.5	40.4	35.1
80°	35.1	33.7	29.7	31.0	29.7	29.7	28.3	26.9	24.2	21.5	18.8
82.5°	9.5	10.8	10.8	10.8	12.1	9.5	9.5	9.5	10.8	10.8	6.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4
87.5°	1.4	2.7	5.4	5.4	5.4	5.4	5.4	4.1	4.1	4.1	2.7
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°	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9
2.5°	1137.4	1136.0	1137.4	1127.9	1149.5	1133.3	1130.6	1127.9	1137.4	1127.9	1114.5
5°	1161.6	1148.2	1144.1	1140.1	1152.2	1133.3	1129.3	1130.6	1123.9	1106.4	1107.7
7.5°	1169.7	1157.6	1145.5	1119.9	1130.6	1126.6	1115.8	1107.7	1096.9	1082.1	1079.4
10°	1172.4	1158.9	1141.4	1133.3	1117.2	1111.8	1107.7	1094.3	1080.8	1055.2	1048.4
12.5°	1164.3	1148.2	1126.6	1119.9	1107.7	1090.2	1080.8	1067.3	1055.2	1035.0	1020.1
15°	1129.3	1115.8	1109.1	1086.2	1080.8	1070.0	1051.1	1032.3	1014.7	987.8	979.7
17.5°	1088.9	1083.5	1076.7	1059.2	1057.9	1047.1	1029.6	1013.4	990.5	948.7	935.2
20°	1047.1	1047.1	1025.5	1018.8	1032.3	1010.7	997.2	982.4	935.2	915.0	890.8
22.5°	1016.1	1001.3	989.1	978.4	979.7	966.2	947.4	917.7	900.2	875.9	847.6
25°	955.5	960.8	933.9	929.8	933.9	902.9	893.5	869.2	843.6	820.7	799.1
27.5°	917.7	902.9	885.4	870.6	870.6	858.4	831.5	826.1	787.0	765.4	738.5
30°	861.1	850.3	835.5	814.0	811.3	801.8	780.3	766.8	726.4	694.0	679.2
32.5°	789.7	785.7	773.5	749.3	741.2	730.4	703.5	680.5	661.7	625.3	607.8
35°	738.5	723.7	698.1	677.8	671.1	652.2	630.6	614.5	594.3	562.0	539.0
37.5°	661.7	646.9	622.6	598.3	598.3	579.5	549.8	533.7	505.4	486.5	467.6
40°	594.3	575.4	551.2	522.9	518.8	491.8	479.8	452.8	435.3	405.6	402.9
42.5°	518.8	501.3	479.8	458.2	442.0	428.5	397.6	377.3	358.5	343.6	339.6
45°	450.1	427.2	408.3	381.3	365.2	349.0	328.8	315.4	300.5	284.4	274.9
47.5°	390.8	371.9	345.0	320.7	304.6	296.5	273.5	258.8	246.6	235.8	229.1
50°	330.2	307.3	292.4	265.5	262.8	243.9	225.1	212.9	206.2	196.8	187.3
52.5°	284.4	262.8	242.5	222.4	211.6	204.8	187.3	175.2	165.8	159.0	153.6
55°	239.9	221.0	204.8	184.6	177.9	168.5	148.3	145.6	136.1	126.7	120.0
57.5°	206.2	188.6	169.8	156.3	144.2	137.5	121.3	110.5	105.1	97.0	90.3
60°	175.2	156.3	141.5	125.3	120.0	110.5	98.4	89.0	82.2	75.4	68.7
62.5°	146.9	130.7	114.6	101.1	93.0	87.6	78.1	70.1	63.4	58.0	52.5
65°	121.3	106.4	93.0	79.5	75.4	68.7	62.0	55.3	49.8	43.1	37.7
67.5°	99.7	86.3	72.8	63.4	59.3	56.6	48.5	41.8	37.7	33.7	28.3
70°	78.1	68.7	58.0	49.8	45.8	41.8	36.4	32.4	26.9	24.2	20.2
72.5°	60.7	52.5	43.1	36.4	33.7	31.0	25.6	21.5	18.8	16.2	13.5
75°	43.1	36.4	31.0	24.2	22.9	21.5	17.5	14.8	12.1	9.5	8.1
77.5°	29.7	24.2	18.8	16.2	14.8	12.1	10.8	8.1	6.8	5.4	4.1
80°	16.2	12.1	9.5	8.1	6.8	5.4	5.4	4.1	2.7	2.7	1.4
82.5°	5.4	4.1	2.7	1.4	1.4	1.4	1.4	1.4	1.4	0.0	1.4
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°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	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°	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9
2.5°	1122.6	1107.7	1111.8	1111.8	1109.1	1109.1	1106.4	1102.3	1103.7	1095.6	1078.1
5°	1110.4	1091.6	1088.9	1091.6	1080.8	1078.1	1072.7	1080.8	1056.5	1066.0	1055.2
7.5°	1075.4	1057.9	1053.8	1063.3	1049.8	1041.7	1040.3	1051.1	1029.6	1018.8	1006.7
10°	1036.3	1029.6	1017.4	1010.7	1006.7	1008.0	997.2	983.7	979.7	977.0	966.2
12.5°	1001.3	986.4	975.7	967.6	964.9	964.9	947.4	944.7	932.5	929.8	913.7
15°	959.5	942.0	935.2	924.5	915.0	920.4	900.2	894.8	890.8	873.2	875.9
17.5°	923.1	904.2	888.1	881.3	873.2	865.2	846.3	850.3	840.9	840.9	816.6
20°	875.9	855.7	843.6	830.1	830.1	819.3	805.9	807.2	795.1	783.0	761.4
22.5°	826.1	804.5	789.7	784.3	770.8	768.1	752.0	747.9	731.8	733.1	714.2
25°	773.5	752.0	731.8	733.1	721.0	715.6	706.1	687.3	680.5	672.5	667.1
27.5°	711.5	696.7	679.2	677.8	654.9	656.3	644.2	638.8	622.6	626.6	614.5
30°	654.9	633.4	617.2	613.2	603.7	601.0	582.2	574.1	576.8	566.0	559.3
32.5°	597.0	564.7	557.9	549.8	544.4	537.7	524.2	529.6	517.5	520.1	509.4
35°	520.1	506.7	489.2	489.2	483.8	478.4	469.0	474.4	462.2	456.8	446.1
37.5°	455.5	443.4	425.9	431.2	421.8	413.7	405.6	407.0	396.2	394.9	384.0
40°	385.4	378.7	366.6	366.6	359.8	359.8	355.7	351.7	345.0	336.9	324.7
42.5°	319.4	314.0	308.6	310.0	300.5	308.6	297.8	304.6	283.0	281.7	273.5
45°	270.8	258.8	260.1	254.7	249.3	252.0	242.5	245.2	233.1	230.5	222.4
47.5°	219.7	215.6	207.5	204.8	204.8	200.8	196.8	195.4	190.0	183.3	172.5
50°	180.6	165.8	163.0	159.0	156.3	156.3	150.9	142.9	144.2	137.5	126.7
52.5°	141.5	129.4	124.0	122.6	117.3	114.6	107.8	102.4	98.4	95.7	89.0
55°	109.1	98.4	91.7	91.7	83.6	83.6	74.1	70.1	64.7	59.3	55.3
57.5°	82.2	76.8	70.1	64.7	62.0	55.3	49.8	43.1	39.1	31.0	25.6
60°	62.0	56.6	49.8	45.8	43.1	36.4	29.7	24.2	14.8	12.1	10.8
62.5°	45.8	40.4	33.7	31.0	28.3	22.9	16.2	8.1	4.1	4.1	4.1
65°	33.7	26.9	21.5	18.8	16.2	12.1	5.4	2.7	1.4	1.4	1.4
67.5°	22.9	17.5	12.1	10.8	8.1	4.1	1.4	1.4	1.4	1.4	1.4
70°	14.8	10.8	5.4	4.1	2.7	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	9.5	5.4	2.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	5.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.4	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	1.4	1.4	1.4
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: P#

CATALOG NUMBER: LD4C20D010 EX4C209050 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9	1123.9
2.5°	1096.9	1087.5	1092.9	1080.8	1086.2	1095.6	1088.9	1091.6
5°	1059.2	1053.8	1047.1	1029.6	1043.0	1053.8	1048.4	1047.1
7.5°	1018.8	999.9	1009.4	1004.0	1001.3	1012.0	999.9	1013.4
10°	977.0	963.5	962.2	952.8	952.8	960.8	962.2	954.1
12.5°	915.0	908.3	908.3	906.9	905.6	913.7	915.0	911.0
15°	870.6	867.9	861.1	859.8	851.7	863.8	865.2	863.8
17.5°	816.6	818.0	811.3	811.3	816.6	820.7	809.9	820.7
20°	780.3	773.5	770.8	758.7	765.4	772.2	772.2	773.5
22.5°	727.7	716.9	721.0	714.2	710.2	719.6	719.6	723.7
25°	668.4	668.4	671.1	667.1	669.8	675.2	671.1	680.5
27.5°	611.8	617.2	617.2	611.8	614.5	630.6	637.4	626.6
30°	559.3	560.6	564.7	562.0	570.0	575.4	574.1	582.2
32.5°	500.0	506.7	509.4	505.4	508.1	520.1	513.4	512.1
35°	454.2	442.0	440.7	442.0	447.4	450.1	447.4	456.8
37.5°	388.1	384.0	378.7	380.0	384.0	389.5	392.2	398.9
40°	324.7	319.4	319.4	318.0	314.0	328.8	328.8	328.8
42.5°	269.5	268.2	261.4	261.4	266.8	270.8	268.2	277.6
45°	221.0	215.6	211.6	211.6	215.6	215.6	219.7	218.3
47.5°	173.9	168.5	169.8	165.8	169.8	175.2	168.5	169.8
50°	130.7	130.7	128.0	130.7	129.4	130.7	128.0	125.3
52.5°	89.0	101.1	102.4	97.0	84.9	74.1	67.4	72.8
55°	51.2	45.8	45.8	44.5	41.8	40.4	36.4	40.4
57.5°	25.6	22.9	22.9	22.9	21.5	20.2	17.5	17.5
60°	10.8	9.5	9.5	8.1	6.8	5.4	4.1	5.4
62.5°	4.1	2.7	2.7	2.7	2.7	2.7	2.7	2.7
65°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
67.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
70°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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)