

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 EX4C209035 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 EX4C209035 4LBSQLWWLI
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

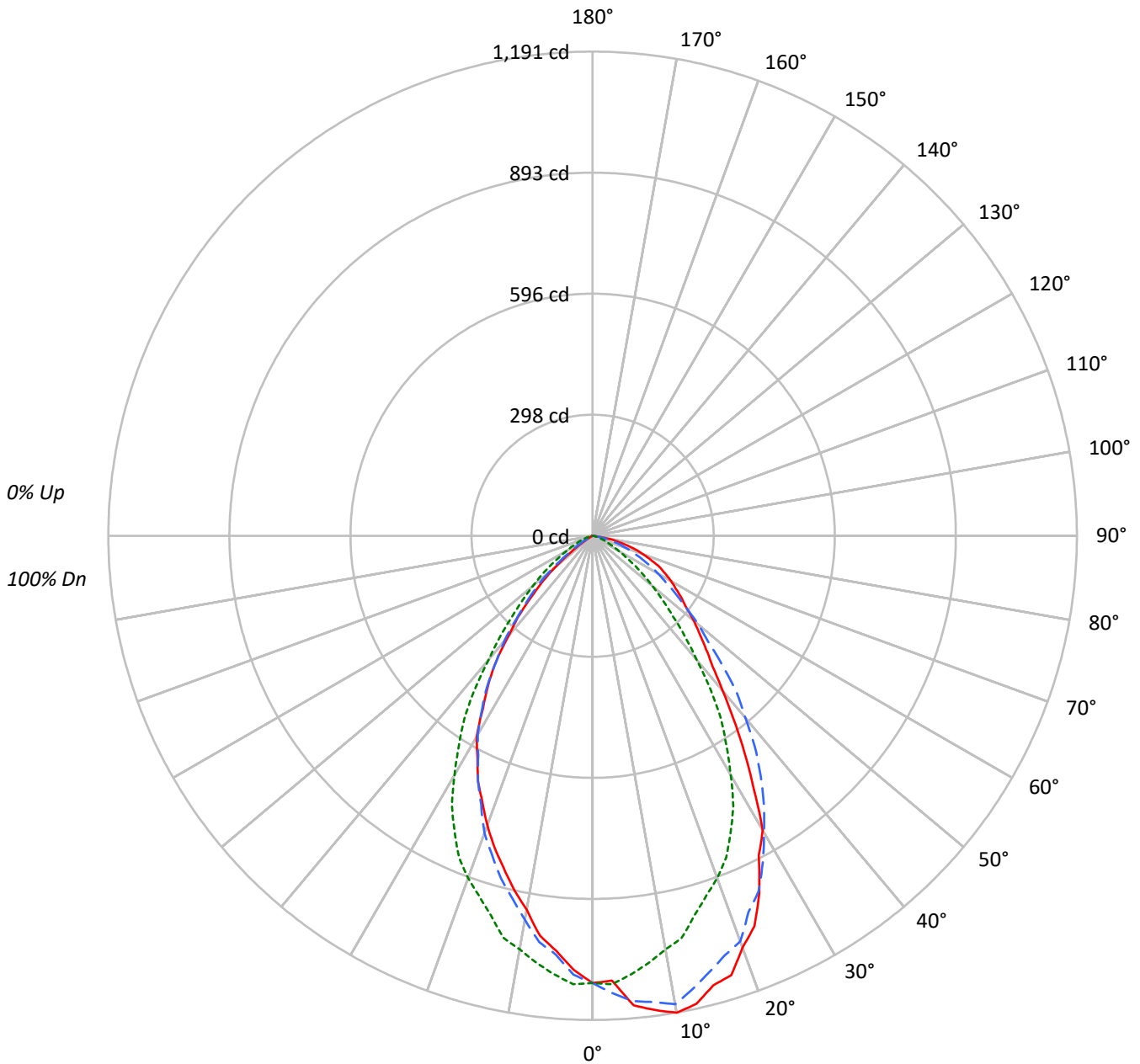
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1577.0 lumens
Efficiency: N/A
Efficacy: 72.3 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

TEST NUMBER: P#
CATALOG NUMBER: LD4C20D010 EX4C209035 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209035 4LBSQLWWLI

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	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°	106157	106157	106157
5°	112306	104897	99279
10°	116711	101201	91501
15°	114377	96586	84469
20°	110670	91972	77750
25°	103227	85522	70926
30°	93188	75696	63496
35°	76765	64797	52676
40°	62639	50018	40546
45°	53818	37989	29161
50°	48711	28911	18419
55°	44831	20860	6662
60°	43034	14261	1023
65°	41553	9635	297
70°	37211	6686	367
75°	30495	3467	0
80°	19059	1445	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209035 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	6.5
10°-20°	277.7	17.6
20°-30°	370.8	23.5
30°-40°	352.0	22.3
40°-50°	243.3	15.4
50°-60°	134.4	8.5
60°-70°	66.8	4.2
70°-80°	26.3	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°	751.6	47.7
0°-40°	1103.6	70.0
0°-60°	1481.4	93.9
0°-90°	1577.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1577.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1100	1100	1100	1100	1100	
5°	1160	1149	1083	1034	1025	111
15°	1145	1111	967	872	846	324
25°	970	966	803	666	666	442
35°	652	720	550	452	447	408
45°	394	452	278	228	214	308
55°	266	251	124	63	40	240
65°	182	132	42	1	1	177
75°	82	50	9	0	0	87
85°	0	1	0	0	0	8
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209035 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2
2.5°	1094.9	1125.2	1127.9	1125.2	1129.2	1127.9	1134.5	1127.9	1135.8	1123.9	1126.6
5°	1159.5	1147.6	1172.7	1159.5	1159.5	1158.2	1154.3	1152.9	1158.2	1141.1	1149.0
7.5°	1176.7	1193.9	1216.3	1188.6	1189.9	1189.9	1182.0	1179.3	1179.3	1147.6	1156.9
10°	1191.2	1180.6	1192.5	1182.0	1191.2	1189.9	1195.1	1178.0	1189.9	1171.4	1170.1
12.5°	1179.3	1175.3	1191.2	1174.1	1168.8	1170.1	1163.5	1159.5	1163.5	1142.4	1141.1
15°	1145.0	1149.0	1172.7	1154.3	1151.6	1149.0	1141.1	1127.9	1138.4	1109.4	1110.7
17.5°	1133.2	1126.6	1130.5	1114.7	1118.7	1116.0	1114.7	1102.8	1100.2	1081.7	1081.7
20°	1077.8	1092.2	1092.2	1081.7	1081.7	1080.4	1063.3	1073.8	1061.9	1056.6	1061.9
22.5°	1039.5	1040.8	1040.8	1031.6	1032.9	1027.6	1018.4	1011.8	1018.4	1011.8	1001.2
25°	969.6	972.2	988.1	970.9	968.3	973.5	965.6	961.6	960.4	944.5	965.6
27.5°	885.2	911.5	910.2	903.6	911.5	901.0	897.0	898.3	902.3	901.0	906.2
30°	836.4	840.3	844.3	839.0	840.3	836.4	836.4	837.7	848.2	844.3	842.9
32.5°	737.4	750.6	761.2	761.2	762.5	766.4	765.1	792.8	799.4	786.2	783.6
35°	651.7	660.9	670.1	671.5	688.6	689.9	691.2	699.2	717.6	721.6	720.2
37.5°	569.9	579.1	581.7	593.6	602.9	612.1	622.7	633.2	649.0	662.2	655.6
40°	497.3	501.3	507.9	513.1	531.6	531.6	536.9	558.0	575.2	585.7	584.4
42.5°	436.7	438.0	443.2	452.5	469.6	465.7	469.6	484.2	509.2	510.5	525.0
45°	394.4	393.1	397.1	398.4	409.0	414.2	416.9	427.4	448.5	451.1	452.5
47.5°	356.2	354.8	361.5	364.1	368.0	373.3	373.3	374.6	382.5	389.2	383.9
50°	324.5	324.5	324.5	327.1	333.8	332.4	333.8	339.0	343.0	340.3	339.0
52.5°	290.2	295.5	299.4	300.8	302.1	302.1	303.4	300.8	299.4	295.5	287.6
55°	266.5	271.7	271.7	271.7	271.7	277.0	270.5	271.7	271.7	261.2	250.7
57.5°	242.7	248.0	251.9	246.7	251.9	246.7	244.0	242.7	240.1	229.5	213.7
60°	223.0	225.6	224.2	223.0	225.6	221.6	219.0	213.7	211.1	196.5	186.0
62.5°	200.5	201.8	203.2	200.5	197.9	196.5	191.3	183.4	178.1	166.2	157.0
65°	182.0	178.1	176.8	175.5	172.8	168.8	164.9	155.7	151.7	141.1	131.9
67.5°	154.3	153.0	155.7	151.7	145.1	145.1	141.1	133.2	124.0	117.4	108.2
70°	131.9	130.6	128.0	124.0	122.7	117.4	117.4	108.2	105.5	93.6	85.7
72.5°	108.2	108.2	104.2	100.3	96.3	93.6	92.4	85.7	81.8	75.2	68.6
75°	81.8	81.8	80.5	76.5	73.9	71.2	69.9	64.7	60.7	54.1	50.1
77.5°	58.0	58.0	52.8	50.1	51.4	48.8	46.2	44.9	43.5	39.6	34.3
80°	34.3	33.0	29.0	30.3	29.0	29.0	27.7	26.4	23.7	21.1	18.5
82.5°	9.3	10.5	10.5	10.5	11.9	9.3	9.3	9.3	10.5	10.5	6.6
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	5.3	5.3	5.3	5.3	5.3	4.0	4.0	4.0	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2
2.5°	1113.4	1112.0	1113.4	1104.1	1125.2	1109.4	1106.8	1104.1	1113.4	1104.1	1091.0
5°	1137.1	1123.9	1119.9	1116.0	1127.9	1109.4	1105.5	1106.8	1100.2	1083.0	1084.3
7.5°	1145.0	1133.2	1121.3	1096.2	1106.8	1102.8	1092.2	1084.3	1073.8	1059.3	1056.6
10°	1147.6	1134.5	1117.3	1109.4	1093.6	1088.3	1084.3	1071.2	1058.0	1032.9	1026.3
12.5°	1139.7	1123.9	1102.8	1096.2	1084.3	1067.2	1058.0	1044.7	1032.9	1013.1	998.6
15°	1105.5	1092.2	1085.7	1063.3	1058.0	1047.4	1028.9	1010.5	993.3	966.9	959.0
17.5°	1065.9	1060.6	1054.0	1036.8	1035.5	1025.0	1007.8	992.0	969.6	928.7	915.5
20°	1025.0	1025.0	1003.9	997.3	1010.5	989.3	976.2	961.6	915.5	895.7	872.0
22.5°	994.7	980.1	968.3	957.7	959.0	945.8	927.4	898.3	881.2	857.5	829.8
25°	935.3	940.6	914.2	910.2	914.2	883.8	874.6	850.8	825.8	803.3	782.3
27.5°	898.3	883.8	866.7	852.2	852.2	840.3	813.9	808.7	770.4	749.3	722.9
30°	842.9	832.4	817.9	796.8	794.1	784.9	763.8	750.6	711.0	679.4	664.8
32.5°	773.0	769.1	757.2	733.5	725.6	715.0	688.6	666.2	647.7	612.1	595.0
35°	722.9	708.4	683.3	663.5	656.9	638.5	617.3	601.5	581.7	550.1	527.7
37.5°	647.7	633.2	609.4	585.7	585.7	567.3	538.2	522.4	494.7	476.2	457.7
40°	581.7	563.3	539.6	511.9	507.9	481.5	469.6	443.2	426.1	397.1	394.4
42.5°	507.9	490.7	469.6	448.5	432.7	419.5	389.2	369.4	350.9	336.4	332.4
45°	440.6	418.2	399.7	373.3	357.5	341.7	321.9	308.7	294.2	278.4	269.1
47.5°	382.5	364.1	337.7	314.0	298.2	290.2	267.8	253.3	241.4	230.9	224.2
50°	323.2	300.8	286.3	259.9	257.2	238.8	220.3	208.4	201.8	192.6	183.4
52.5°	278.4	257.2	237.4	217.7	207.1	200.5	183.4	171.5	162.3	155.7	150.4
55°	234.8	216.3	200.5	180.7	174.1	164.9	145.1	142.5	133.2	124.0	117.4
57.5°	201.8	184.7	166.2	153.0	141.1	134.6	118.7	108.2	102.9	95.0	88.4
60°	171.5	153.0	138.5	122.7	117.4	108.2	96.3	87.1	80.5	73.9	67.3
62.5°	143.8	128.0	112.1	98.9	91.0	85.7	76.5	68.6	62.0	56.7	51.4
65°	118.7	104.2	91.0	77.8	73.9	67.3	60.7	54.1	48.8	42.2	37.0
67.5°	97.6	84.4	71.2	62.0	58.0	55.4	47.5	40.9	37.0	33.0	27.7
70°	76.5	67.3	56.7	48.8	44.9	40.9	35.6	31.7	26.4	23.7	19.8
72.5°	59.4	51.4	42.2	35.6	33.0	30.3	25.1	21.1	18.5	15.8	13.2
75°	42.2	35.6	30.3	23.7	22.4	21.1	17.2	14.5	11.9	9.3	7.9
77.5°	29.0	23.7	18.5	15.8	14.5	11.9	10.5	7.9	6.6	5.3	4.0
80°	15.8	11.9	9.3	7.9	6.6	5.3	5.3	4.0	2.6	2.6	1.3
82.5°	5.3	4.0	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2
2.5°	1098.9	1084.3	1088.3	1088.3	1085.7	1085.7	1083.0	1079.1	1080.4	1072.4	1055.3
5°	1087.0	1068.5	1065.9	1068.5	1058.0	1055.3	1050.1	1058.0	1034.2	1043.5	1032.9
7.5°	1052.7	1035.5	1031.6	1040.8	1027.6	1019.7	1018.4	1028.9	1007.8	997.3	985.4
10°	1014.4	1007.8	996.0	989.3	985.4	986.7	976.2	963.0	959.0	956.4	945.8
12.5°	980.1	965.6	955.1	947.2	944.5	944.5	927.4	924.7	912.9	910.2	894.4
15°	939.2	922.1	915.5	904.9	895.7	901.0	881.2	875.9	872.0	854.8	857.5
17.5°	903.6	885.2	869.3	862.7	854.8	846.9	828.4	832.4	823.1	823.1	799.4
20°	857.5	837.7	825.8	812.6	812.6	802.1	788.9	790.2	778.3	766.4	745.3
22.5°	808.7	787.5	773.0	767.7	754.6	751.9	736.1	732.1	716.3	717.6	699.2
25°	757.2	736.1	716.3	717.6	705.8	700.5	691.2	672.8	666.2	658.3	653.0
27.5°	696.5	682.0	664.8	663.5	641.1	642.4	630.6	625.3	609.4	613.4	601.5
30°	641.1	620.0	604.2	600.2	591.0	588.3	569.9	561.9	564.6	554.0	547.5
32.5°	584.4	552.7	546.1	538.2	532.9	526.3	513.1	518.4	506.5	509.2	498.6
35°	509.2	496.0	478.8	478.8	473.6	468.3	459.1	464.4	452.5	447.2	436.7
37.5°	445.9	434.0	416.9	422.1	412.9	405.0	397.1	398.4	387.8	386.5	375.9
40°	377.3	370.7	358.8	358.8	352.2	352.2	348.2	344.3	337.7	329.8	317.9
42.5°	312.6	307.4	302.1	303.4	294.2	302.1	291.5	298.2	277.0	275.7	267.8
45°	265.1	253.3	254.6	249.3	244.0	246.7	237.4	240.1	228.2	225.6	217.7
47.5°	215.0	211.1	203.2	200.5	200.5	196.5	192.6	191.3	186.0	179.4	168.8
50°	176.8	162.3	159.6	155.7	153.0	153.0	147.8	139.9	141.1	134.6	124.0
52.5°	138.5	126.6	121.3	120.1	114.8	112.1	105.5	100.3	96.3	93.6	87.1
55°	106.8	96.3	89.7	89.7	81.8	81.8	72.6	68.6	63.3	58.0	54.1
57.5°	80.5	75.2	68.6	63.3	60.7	54.1	48.8	42.2	38.2	30.3	25.1
60°	60.7	55.4	48.8	44.9	42.2	35.6	29.0	23.7	14.5	11.9	10.5
62.5°	44.9	39.6	33.0	30.3	27.7	22.4	15.8	7.9	4.0	4.0	4.0
65°	33.0	26.4	21.1	18.5	15.8	11.9	5.3	2.6	1.3	1.3	1.3
67.5°	22.4	17.2	11.9	10.5	7.9	4.0	1.3	1.3	1.3	1.3	1.3
70°	14.5	10.5	5.3	4.0	2.6	1.3	1.3	1.3	1.3	1.3	1.3
72.5°	9.3	5.3	2.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	5.3	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 EX4C209035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2	1100.2
2.5°	1073.8	1064.5	1069.8	1058.0	1063.3	1072.4	1065.9	1068.5
5°	1036.8	1031.6	1025.0	1007.8	1021.0	1031.6	1026.3	1025.0
7.5°	997.3	978.8	988.1	982.8	980.1	990.7	978.8	992.0
10°	956.4	943.2	941.9	932.7	932.7	940.6	941.9	933.9
12.5°	895.7	889.1	889.1	887.8	886.4	894.4	895.7	891.8
15°	852.2	849.5	842.9	841.6	833.7	845.6	846.9	845.6
17.5°	799.4	800.7	794.1	794.1	799.4	803.3	792.8	803.3
20°	763.8	757.2	754.6	742.7	749.3	755.9	755.9	757.2
22.5°	712.3	701.8	705.8	699.2	695.2	704.4	704.4	708.4
25°	654.3	654.3	656.9	653.0	655.6	660.9	656.9	666.2
27.5°	598.9	604.2	604.2	598.9	601.5	617.3	624.0	613.4
30°	547.5	548.8	552.7	550.1	558.0	563.3	561.9	569.9
32.5°	489.4	496.0	498.6	494.7	497.3	509.2	502.6	501.3
35°	444.6	432.7	431.4	432.7	438.0	440.6	438.0	447.2
37.5°	379.9	375.9	370.7	372.0	375.9	381.3	383.9	390.5
40°	317.9	312.6	312.6	311.3	307.4	321.9	321.9	321.9
42.5°	263.8	262.5	255.9	255.9	261.2	265.1	262.5	271.7
45°	216.3	211.1	207.1	207.1	211.1	211.1	215.0	213.7
47.5°	170.2	164.9	166.2	162.3	166.2	171.5	164.9	166.2
50°	128.0	128.0	125.3	128.0	126.6	128.0	125.3	122.7
52.5°	87.1	98.9	100.3	95.0	83.1	72.6	65.9	71.2
55°	50.1	44.9	44.9	43.5	40.9	39.6	35.6	39.6
57.5°	25.1	22.4	22.4	22.4	21.1	19.8	17.2	17.2
60°	10.5	9.3	9.3	7.9	6.6	5.3	4.0	5.3
62.5°	4.0	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)