

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: P857314

Luminaire Tested: **LX4C20D010 EX4C209030 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P857314
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C20D010 EX4C209030 4LBSWNH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

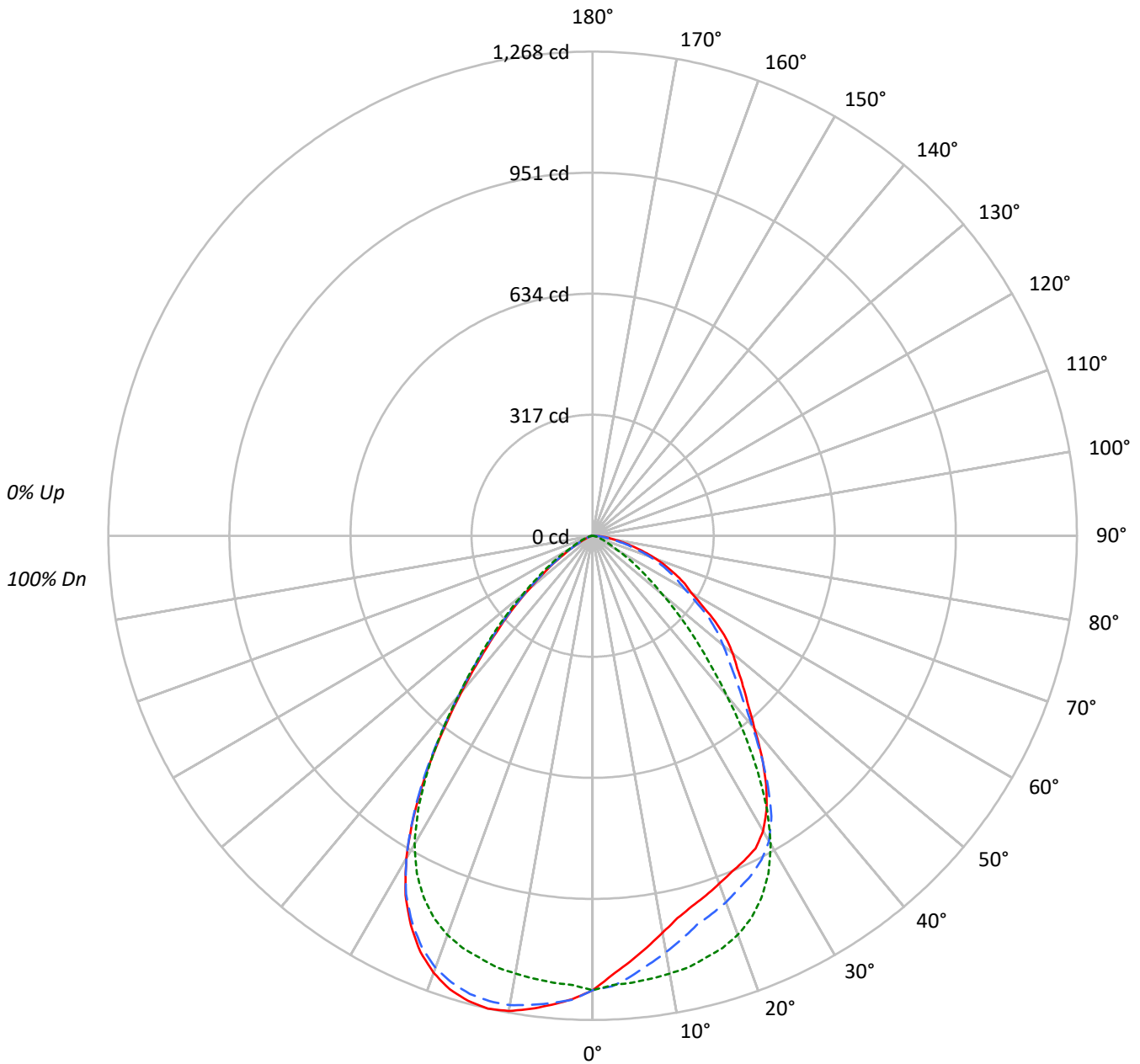
Lumens per Lamp: N/A
Luminaire Lumens: 2086.2 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 32.6
Input Voltage (V):
Input Current (A_{in}): 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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89			89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79			79
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70			70
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62			62
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56			56
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50			50
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46			46
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42			42
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38			38
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35			35

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	146208	146208	146208
5°	138060	144880	152057
10°	131622	145207	157657
15°	127760	145502	160332
20°	126711	145368	159200
25°	127231	141776	152579
30°	126623	132269	138369
35°	118691	112932	114102
40°	105767	87548	85592
45°	96722	65275	61278
50°	91454	45717	41341
55°	84090	30886	25938
60°	73466	18084	14325
65°	69535	11599	8023
70°	63363	8262	4957
75°	52451	5838	3607
80°	41246	3254	2193
85°	36649	2114	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	5.4
10°-20°	322.6	15.5
20°-30°	478.2	22.9
30°-40°	478.9	23.0
40°-50°	334.7	16.0
50°-60°	199.2	9.5
60°-70°	103.9	5.0
70°-80°	46.2	2.2
80°-90°	10.1	0.5
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°	913.2	43.8
0°-40°	1392.1	66.7
0°-60°	1925.9	92.3
0°-90°	2086.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2086.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1190	1190	1190	1190	1190	
5°	1120	1158	1175	1228	1233	105
15°	1004	1055	1144	1242	1261	284
25°	939	982	1046	1118	1126	432
35°	791	801	753	767	761	491
45°	557	529	376	363	353	432
55°	393	368	144	126	121	348
65°	239	219	40	29	28	237
75°	110	97	12	8	8	119
85°	26	20	2	2	0	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°	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1
2.5°	1151.8	1165.5	1151.8	1156.4	1174.8	1157.9	1167.1	1167.1	1162.5	1173.2	1180.9
5°	1119.5	1133.4	1119.5	1125.6	1145.6	1128.8	1139.5	1136.4	1137.9	1147.2	1157.9
7.5°	1087.3	1098.1	1085.8	1093.5	1111.9	1098.1	1107.2	1107.2	1108.8	1122.6	1131.8
10°	1055.1	1064.3	1055.1	1061.2	1081.2	1069.1	1075.1	1076.6	1081.2	1093.5	1107.2
12.5°	1025.9	1033.7	1024.4	1033.7	1050.5	1038.3	1045.9	1047.4	1052.1	1065.9	1081.2
15°	1004.5	1012.3	1003.1	1010.6	1025.9	1016.8	1022.9	1025.9	1029.0	1041.3	1055.1
17.5°	987.7	993.9	986.1	995.3	1007.5	997.0	1006.1	1006.1	1010.6	1022.9	1038.3
20°	969.2	975.4	969.2	976.9	990.9	981.6	989.1	989.1	993.9	1007.5	1021.5
22.5°	952.5	955.6	952.5	958.6	972.2	964.7	969.2	970.8	975.4	987.7	1000.0
25°	938.6	944.7	941.6	947.7	957.0	949.4	953.8	955.6	960.0	970.8	981.6
27.5°	923.2	926.3	923.2	930.9	938.6	932.4	937.1	935.4	938.6	947.7	957.0
30°	892.6	895.7	895.7	900.2	906.4	903.4	908.0	903.4	906.4	914.2	923.2
32.5°	848.1	849.7	851.2	855.8	860.4	855.8	858.9	858.9	858.9	865.0	871.1
35°	791.4	794.4	792.9	796.0	800.6	799.1	799.1	797.5	794.4	797.5	800.6
37.5°	727.0	722.4	722.4	727.0	730.0	723.9	727.0	723.9	723.9	725.5	725.5
40°	659.5	654.9	659.5	661.0	662.5	659.5	657.9	654.9	650.3	651.8	648.8
42.5°	602.7	599.6	601.2	601.2	602.7	599.6	601.2	595.1	590.5	587.3	582.8
45°	556.7	552.1	556.7	553.7	553.7	552.1	550.6	547.5	541.4	536.8	529.0
47.5°	513.8	513.8	515.3	515.3	515.3	512.3	512.3	506.1	500.0	493.9	483.1
50°	478.5	475.4	481.5	481.5	477.0	475.4	477.0	469.2	464.7	457.0	446.2
52.5°	440.1	440.1	441.7	441.7	440.1	437.1	438.6	432.4	427.8	420.2	409.4
55°	392.6	389.6	394.1	394.1	392.6	391.0	392.6	388.0	383.5	377.4	368.0
57.5°	339.0	337.3	340.5	342.1	339.0	339.0	340.5	336.0	334.3	328.1	318.9
60°	299.0	297.6	300.7	302.2	299.0	299.0	299.0	292.9	289.8	283.7	277.5
62.5°	271.4	270.0	273.0	271.4	270.0	268.3	270.0	263.9	260.8	254.6	248.5
65°	239.2	240.9	242.4	242.4	240.9	239.2	239.2	236.2	233.1	227.0	219.3
67.5°	208.5	208.5	210.2	211.6	210.2	210.2	210.2	205.5	202.5	197.8	188.7
70°	176.4	174.9	179.4	179.4	176.4	177.9	176.4	174.9	171.8	165.7	158.0
72.5°	142.6	142.6	144.2	144.2	142.6	142.6	142.6	141.1	136.5	133.5	125.8
75°	110.5	110.5	112.0	113.5	110.5	110.5	112.0	108.9	105.9	101.2	96.6
77.5°	82.8	81.3	82.8	82.8	81.3	81.3	81.3	79.7	78.2	73.6	69.1
80°	58.3	56.8	58.3	58.3	58.3	56.8	56.8	55.2	55.2	52.2	47.5
82.5°	39.9	38.3	39.9	39.9	39.9	38.3	38.3	38.3	36.8	35.3	32.2
85°	26.0	24.5	24.5	26.0	24.5	24.5	24.5	24.5	23.0	21.5	19.9
87.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	10.8	10.8	10.8	9.2
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°	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1
2.5°	1174.8	1171.7	1180.9	1177.8	1179.3	1171.7	1183.9	1177.8	1185.5	1177.8	1193.2
5°	1154.8	1151.8	1165.5	1164.0	1165.5	1159.4	1173.2	1171.7	1180.9	1174.8	1191.6
7.5°	1133.4	1130.3	1145.6	1147.2	1150.2	1144.0	1162.5	1162.5	1171.7	1170.2	1188.6
10°	1108.8	1110.4	1125.6	1128.8	1134.9	1131.8	1148.7	1153.3	1165.5	1164.0	1187.1
12.5°	1085.8	1085.8	1105.7	1111.9	1116.5	1115.0	1134.9	1141.0	1154.8	1157.9	1179.3
15°	1062.9	1064.3	1082.7	1092.0	1098.1	1096.5	1118.0	1125.6	1142.5	1144.0	1170.2
17.5°	1044.4	1042.8	1062.9	1070.5	1079.7	1078.1	1101.1	1110.4	1127.2	1131.8	1156.4
20°	1029.0	1027.5	1045.9	1055.1	1061.2	1059.8	1082.7	1093.5	1108.8	1111.9	1136.4
22.5°	1010.6	1007.5	1025.9	1033.7	1039.8	1038.3	1058.2	1065.9	1081.2	1084.2	1107.2
25°	989.1	986.1	1003.1	1007.5	1012.3	1009.2	1025.9	1030.5	1042.8	1045.9	1069.1
27.5°	964.7	957.0	970.8	970.8	973.8	969.2	981.6	986.1	997.0	997.0	1018.4
30°	926.3	915.7	923.2	921.8	923.2	917.2	924.8	926.3	934.1	932.4	947.7
32.5°	872.6	857.4	862.0	857.4	852.7	843.6	852.7	849.7	855.8	849.7	863.5
35°	799.1	783.8	782.2	776.0	771.4	763.8	763.8	756.1	757.6	753.0	762.3
37.5°	719.3	699.3	696.3	684.1	676.3	667.2	667.2	661.0	653.3	650.3	657.9
40°	641.0	619.6	611.9	592.0	584.3	575.1	569.0	561.3	558.2	545.9	552.1
42.5°	573.6	550.6	533.7	512.3	504.5	490.7	481.5	472.3	467.7	454.0	460.1
45°	516.8	489.2	470.8	443.2	432.4	417.2	403.3	392.6	381.9	375.7	372.6
47.5°	469.2	440.1	415.6	384.9	368.0	354.3	336.0	325.1	311.4	303.7	299.0
50°	429.4	397.2	369.5	334.3	317.6	302.2	280.5	263.9	251.6	239.2	236.2
52.5°	394.1	360.4	329.8	289.8	270.0	251.6	228.6	210.2	199.4	185.6	184.1
55°	352.7	323.7	289.8	248.5	228.6	210.2	185.6	167.2	153.4	144.2	141.1
57.5°	308.3	280.5	248.5	207.1	187.2	167.2	144.2	127.4	115.0	107.4	105.9
60°	266.9	240.9	210.2	168.8	148.8	131.9	107.4	90.5	79.7	73.6	70.6
62.5°	236.2	211.6	182.6	144.2	125.8	108.9	85.9	70.6	61.3	55.2	52.2
65°	207.1	182.6	156.4	121.1	105.9	90.5	69.1	55.2	46.0	39.9	36.8
67.5°	176.4	154.9	130.4	101.2	85.9	73.6	55.2	42.9	35.3	30.7	27.6
70°	145.8	125.8	105.9	81.3	70.6	58.3	42.9	33.8	26.0	23.0	19.9
72.5°	115.0	99.7	82.8	62.9	53.7	46.0	33.8	24.5	19.9	16.9	13.8
75°	85.9	75.2	61.3	47.5	39.9	33.8	24.5	18.4	15.4	12.3	10.8
77.5°	61.3	52.2	42.9	32.2	29.2	24.5	16.9	13.8	10.8	7.6	6.1
80°	41.4	36.8	29.2	23.0	18.4	16.9	12.3	9.2	6.1	4.6	4.6
82.5°	27.6	23.0	18.4	13.8	12.3	10.8	7.6	6.1	4.6	3.1	3.1
85°	16.9	13.8	10.8	7.6	7.6	6.1	4.6	3.1	1.5	1.5	1.5
87.5°	7.6	6.1	4.6	3.1	3.1	1.5	1.5	1.5	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°	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1
2.5°	1205.5	1196.2	1190.1	1197.8	1200.8	1196.2	1200.8	1208.5	1216.2	1217.7	1196.2
5°	1207.0	1197.8	1194.7	1203.9	1205.5	1203.9	1208.5	1219.2	1228.5	1231.5	1210.1
7.5°	1207.0	1200.8	1199.3	1210.1	1211.6	1210.1	1217.7	1230.0	1239.2	1245.4	1223.9
10°	1203.9	1200.8	1202.3	1211.6	1214.6	1214.6	1225.4	1239.2	1248.4	1254.5	1233.0
12.5°	1199.3	1199.3	1199.3	1210.1	1213.1	1214.6	1223.9	1242.2	1248.4	1257.6	1236.1
15°	1191.6	1191.6	1191.6	1202.3	1207.0	1207.0	1217.7	1234.6	1242.2	1251.5	1230.0
17.5°	1177.8	1177.8	1179.3	1188.6	1193.2	1193.2	1203.9	1222.3	1226.9	1237.6	1216.2
20°	1157.9	1157.9	1159.4	1168.7	1173.2	1170.2	1183.9	1199.3	1203.9	1213.1	1191.6
22.5°	1128.8	1128.8	1128.8	1137.9	1141.0	1139.5	1153.3	1167.1	1167.1	1179.3	1156.4
25°	1085.8	1088.8	1085.8	1095.0	1098.1	1096.5	1108.8	1121.1	1118.0	1131.8	1108.8
27.5°	1033.7	1032.2	1032.2	1039.8	1039.8	1038.3	1047.4	1061.2	1058.2	1067.3	1045.9
30°	961.7	966.1	958.6	969.2	964.7	961.7	967.8	980.0	975.4	983.0	966.1
32.5°	878.8	872.6	872.6	872.6	875.6	868.1	874.2	880.4	875.6	883.4	865.0
35°	769.9	771.4	766.9	768.4	769.9	760.8	766.9	773.0	766.9	771.4	754.6
37.5°	661.0	662.5	651.8	657.9	651.8	648.8	654.9	657.9	651.8	656.4	638.0
40°	552.1	549.0	547.5	547.5	549.0	541.4	545.9	550.6	545.9	549.0	532.2
42.5°	457.0	455.6	452.6	454.0	449.3	447.8	449.3	454.0	449.3	452.6	440.1
45°	374.1	371.1	366.5	368.0	368.0	360.4	365.0	368.0	363.4	365.0	354.3
47.5°	297.6	292.9	292.9	291.4	291.4	288.4	292.9	291.4	286.7	289.8	279.2
50°	231.6	228.6	228.6	228.6	228.6	223.9	225.5	228.6	223.9	223.9	217.7
52.5°	181.0	176.4	173.3	173.3	173.3	171.8	171.8	173.3	168.8	168.8	167.2
55°	136.5	135.0	130.4	130.4	130.4	125.8	127.4	127.4	125.8	125.8	121.1
57.5°	101.2	96.6	93.6	93.6	90.5	90.5	89.0	90.5	87.5	87.5	84.3
60°	67.5	64.4	62.9	61.3	61.3	59.8	61.3	59.8	59.8	58.3	56.8
62.5°	49.1	46.0	42.9	42.9	42.9	41.4	41.4	41.4	41.4	41.4	39.9
65°	35.3	32.2	32.2	30.7	30.7	29.2	29.2	29.2	29.2	29.2	27.6
67.5°	24.5	23.0	21.5	21.5	21.5	21.5	21.5	21.5	19.9	19.9	19.9
70°	18.4	16.9	15.4	15.4	15.4	15.4	15.4	13.8	15.4	15.4	13.8
72.5°	12.3	12.3	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
75°	9.2	9.2	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
77.5°	6.1	6.1	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
80°	4.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	3.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P857314

CATALOG NUMBER: LX4C20D010 EX4C209030 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1	1190.1
2.5°	1219.2	1217.7	1214.6	1219.2	1207.0	1202.3	1200.8	1214.6
5°	1236.1	1233.0	1233.0	1237.6	1223.9	1220.7	1217.7	1233.0
7.5°	1251.5	1248.4	1248.4	1253.0	1240.7	1237.6	1234.6	1249.9
10°	1260.6	1260.6	1260.6	1263.8	1253.0	1249.9	1248.4	1263.8
12.5°	1265.3	1265.3	1263.8	1269.9	1256.0	1256.0	1253.0	1268.3
15°	1259.1	1259.1	1259.1	1263.8	1251.5	1248.4	1248.4	1260.6
17.5°	1243.8	1243.8	1242.2	1246.9	1233.0	1233.0	1231.5	1245.4
20°	1220.7	1220.7	1217.7	1223.9	1210.1	1205.5	1203.9	1217.7
22.5°	1183.9	1182.4	1180.9	1183.9	1171.7	1168.7	1167.1	1179.3
25°	1136.4	1134.9	1131.8	1134.9	1121.1	1116.5	1116.5	1125.6
27.5°	1069.1	1069.1	1064.3	1069.1	1053.6	1052.1	1050.5	1061.2
30°	986.1	980.0	976.9	983.0	967.8	967.8	964.7	975.4
32.5°	883.4	877.3	875.6	878.8	865.0	860.4	866.6	872.6
35°	765.3	766.9	760.8	760.8	748.5	750.0	751.5	760.8
37.5°	651.8	648.8	647.2	648.8	639.5	636.5	633.4	642.6
40°	545.9	538.3	536.8	536.8	529.0	527.5	529.0	533.7
42.5°	446.2	444.7	438.6	441.7	433.9	437.1	435.6	435.6
45°	360.4	361.9	355.7	360.4	354.3	349.6	349.6	352.7
47.5°	285.3	285.3	283.7	283.7	279.2	280.5	277.5	282.3
50°	220.7	220.7	217.7	219.3	216.3	216.3	214.6	216.3
52.5°	168.8	167.2	167.2	165.7	162.5	164.2	165.7	162.5
55°	122.7	124.2	121.1	122.7	119.6	121.1	119.6	121.1
57.5°	84.3	85.9	82.8	85.9	82.8	84.3	82.8	82.8
60°	58.3	58.3	56.8	58.3	56.8	56.8	55.2	58.3
62.5°	39.9	39.9	39.9	39.9	39.9	38.3	39.9	39.9
65°	29.2	27.6	27.6	27.6	27.6	27.6	27.6	27.6
67.5°	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
70°	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
72.5°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
75°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
80°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	1.5	1.5	1.5	0.0	1.5	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)