

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: **LD4C90D010 EX4C909050 4LBSQLWWLI**

Issue Date: 2/18/2022



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: LD4C90D010 EX4C909050 4LBSQLWWLI
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

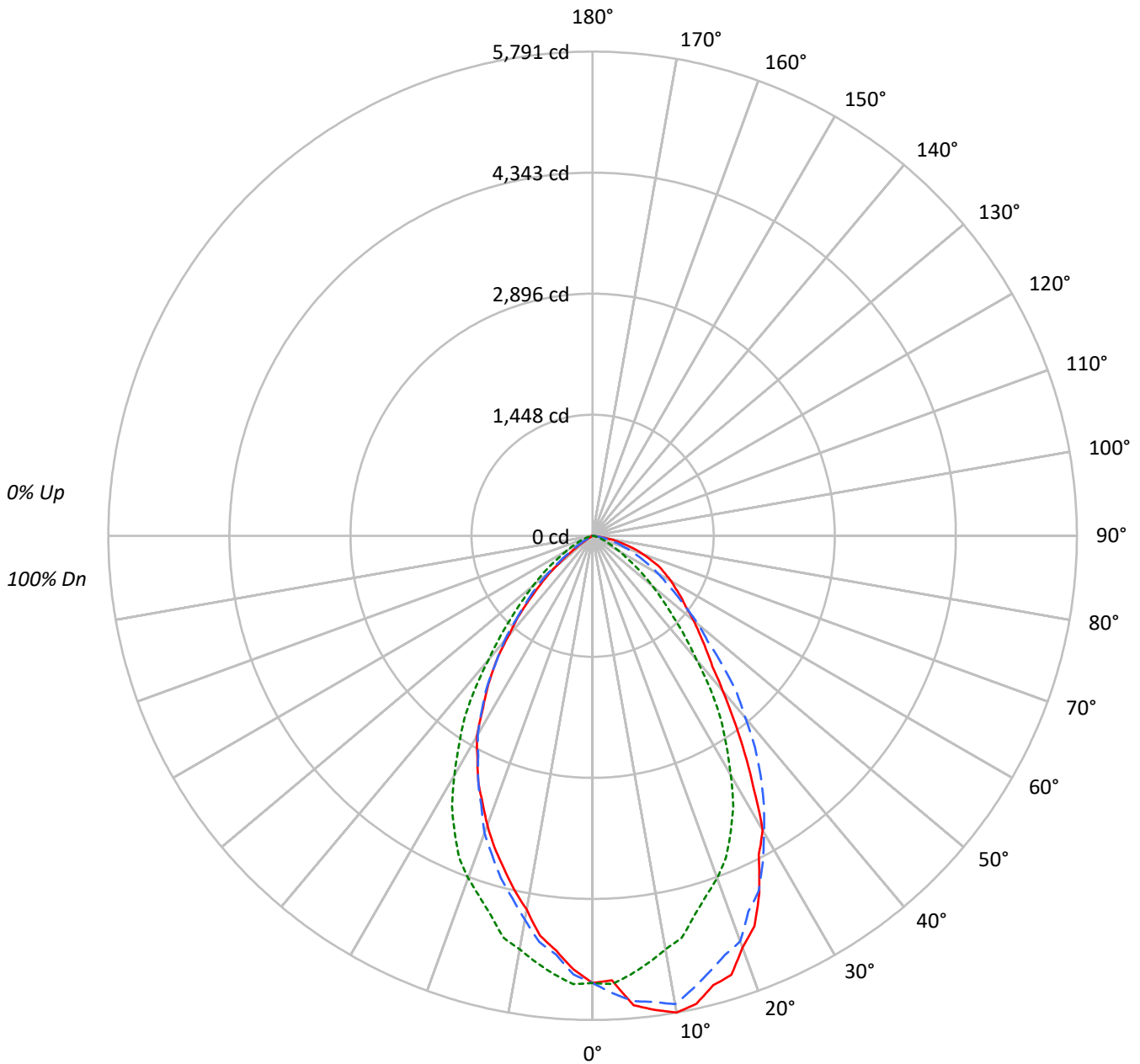
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7666.0 lumens
Efficiency: N/A
Efficacy: 78.9 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): 97.1
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								
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°	516023	516023	516023
5°	545947	509935	482612
10°	567348	491954	444817
15°	556003	469525	410599
20°	537968	447085	377949
25°	501806	415762	344772
30°	452983	367939	308655
35°	373139	314985	256066
40°	304514	243123	197085
45°	261641	184638	141750
50°	236799	140548	89526
55°	217916	101388	32366
60°	209149	69279	4940
65°	202011	46872	1484
70°	180864	32528	1834
75°	148264	16776	0
80°	92684	7112	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	501.1	6.5
10°-20°	1350.0	17.6
20°-30°	1802.7	23.5
30°-40°	1711.2	22.3
40°-50°	1182.9	15.4
50°-60°	653.6	8.5
60°-70°	324.6	4.2
70°-80°	127.9	1.7
80°-90°	12.2	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°	3653.7	47.7
0°-40°	5364.9	70.0
0°-60°	7201.4	93.9
0°-90°	7666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7666.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5348	5348	5348	5348	5348	
5°	5637	5585	5265	5027	4983	540
15°	5566	5400	4700	4239	4110	1575
25°	4713	4694	3905	3238	3238	2149
35°	3168	3501	2674	2200	2174	1985
45°	1917	2200	1353	1109	1039	1496
55°	1295	1218	603	308	192	1166
65°	885	641	205	6	6	859
75°	398	244	45	0	0	424
85°	0	6	0	0	0	37
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°	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0
2.5°	5322.4	5469.8	5482.6	5469.8	5489.2	5482.6	5514.8	5482.6	5521.3	5463.5	5476.4
5°	5636.6	5578.9	5700.7	5636.6	5636.6	5630.4	5611.0	5604.5	5630.4	5547.0	5585.4
7.5°	5720.1	5803.5	5912.5	5777.8	5784.1	5784.1	5745.7	5732.9	5732.9	5578.9	5623.8
10°	5790.6	5739.1	5796.9	5745.7	5790.6	5784.1	5809.7	5726.3	5784.1	5694.4	5687.9
12.5°	5732.9	5713.5	5790.6	5707.2	5681.6	5687.9	5656.0	5636.6	5656.0	5553.2	5547.0
15°	5566.0	5585.4	5700.7	5611.0	5598.2	5585.4	5547.0	5482.6	5534.1	5392.9	5399.5
17.5°	5508.5	5476.4	5495.7	5418.6	5437.9	5425.1	5418.6	5361.0	5348.0	5258.3	5258.3
20°	5239.2	5309.5	5309.5	5258.3	5258.3	5252.0	5168.6	5219.8	5162.1	5136.4	5162.1
22.5°	5053.0	5059.6	5059.6	5014.6	5021.1	4995.5	4950.5	4918.4	4950.5	4918.4	4867.1
25°	4713.4	4726.2	4803.1	4719.6	4706.8	4732.5	4694.0	4674.7	4668.4	4591.5	4694.0
27.5°	4302.9	4431.0	4424.7	4392.5	4431.0	4379.7	4360.6	4366.9	4386.3	4379.7	4405.4
30°	4065.7	4084.8	4104.1	4078.5	4084.8	4065.7	4065.7	4072.0	4123.2	4104.1	4097.6
32.5°	3584.6	3648.6	3700.1	3700.1	3706.4	3725.8	3719.2	3853.9	3886.1	3822.0	3809.2
35°	3167.8	3212.8	3257.5	3264.0	3347.4	3353.7	3360.2	3398.7	3488.4	3507.7	3501.2
37.5°	2770.3	2815.1	2827.9	2885.7	2930.6	2975.3	3026.8	3078.1	3155.0	3219.0	3187.1
40°	2417.6	2436.7	2468.9	2494.5	2584.2	2584.2	2609.8	2712.6	2796.0	2847.2	2840.7
42.5°	2122.7	2128.9	2154.6	2199.5	2282.9	2263.6	2282.9	2353.5	2475.1	2481.7	2552.3
45°	1917.4	1910.9	1930.2	1936.5	1988.0	2013.6	2026.4	2077.7	2180.2	2193.0	2199.5
47.5°	1731.5	1725.0	1757.1	1769.9	1789.0	1814.6	1814.6	1821.2	1859.6	1891.8	1866.2
50°	1577.5	1577.5	1577.5	1590.3	1622.5	1615.9	1622.5	1648.1	1667.2	1654.4	1648.1
52.5°	1410.7	1436.3	1455.6	1462.2	1468.5	1468.5	1475.0	1462.2	1455.6	1436.3	1397.9
55°	1295.4	1321.0	1321.0	1321.0	1321.0	1346.6	1314.7	1321.0	1321.0	1269.7	1218.5
57.5°	1180.0	1205.7	1224.8	1199.1	1224.8	1199.1	1186.3	1180.0	1167.0	1115.7	1038.8
60°	1083.8	1096.6	1090.1	1083.8	1096.6	1077.3	1064.5	1038.8	1026.0	955.4	904.2
62.5°	974.8	981.1	987.6	974.8	962.0	955.4	929.8	891.4	865.7	808.0	763.0
65°	884.8	865.7	859.2	852.9	840.1	820.8	801.7	756.7	737.4	686.1	641.1
67.5°	750.2	743.9	756.7	737.4	705.5	705.5	686.1	647.7	602.7	570.8	525.8
70°	641.1	634.9	622.1	602.7	596.4	570.8	570.8	525.8	513.0	455.2	416.8
72.5°	525.8	525.8	506.5	487.4	468.0	455.2	449.0	416.8	397.7	365.5	333.4
75°	397.7	397.7	391.2	371.8	359.0	346.2	339.9	314.3	294.9	263.0	243.7
77.5°	282.1	282.1	256.5	243.7	250.0	237.2	224.4	218.1	211.5	192.4	166.8
80°	166.8	160.3	141.2	147.5	141.2	141.2	134.7	128.1	115.3	102.5	89.7
82.5°	45.0	51.3	51.3	51.3	57.8	45.0	45.0	45.0	51.3	51.3	32.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.5	6.5
87.5°	6.5	12.8	25.6	25.6	25.6	25.6	25.6	19.3	19.3	19.3	12.8
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°	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0
2.5°	5412.3	5405.8	5412.3	5367.3	5469.8	5392.9	5380.1	5367.3	5412.3	5367.3	5303.3
5°	5527.6	5463.5	5444.2	5425.1	5482.6	5392.9	5373.9	5380.1	5348.0	5264.8	5271.1
7.5°	5566.0	5508.5	5450.7	5328.9	5380.1	5361.0	5309.5	5271.1	5219.8	5149.3	5136.4
10°	5578.9	5514.8	5431.4	5392.9	5316.1	5290.4	5271.1	5207.0	5143.0	5021.1	4989.0
12.5°	5540.4	5463.5	5361.0	5328.9	5271.1	5187.7	5143.0	5078.7	5021.1	4924.9	4854.3
15°	5373.9	5309.5	5277.6	5168.6	5143.0	5091.5	5001.8	4912.1	4828.7	4700.3	4661.9
17.5°	5181.4	5155.8	5123.6	5040.2	5033.9	4982.7	4899.3	4822.1	4713.4	4514.4	4450.3
20°	4982.7	4982.7	4879.9	4848.0	4912.1	4809.3	4745.3	4674.7	4450.3	4354.1	4238.8
22.5°	4835.2	4764.6	4706.8	4655.6	4661.9	4597.8	4508.1	4366.9	4283.5	4168.2	4033.5
25°	4546.5	4572.2	4444.0	4424.7	4444.0	4296.3	4251.6	4136.0	4014.2	3905.2	3802.6
27.5°	4366.9	4296.3	4213.2	4142.6	4142.6	4084.8	3956.7	3931.0	3744.9	3642.4	3514.0
30°	4097.6	4046.3	3975.7	3873.2	3860.4	3815.5	3713.0	3648.6	3456.5	3302.4	3231.8
32.5°	3757.7	3738.6	3680.8	3565.5	3527.0	3475.5	3347.4	3238.4	3148.7	2975.3	2892.2
35°	3514.0	3443.6	3321.8	3225.6	3193.4	3103.7	3001.0	2924.1	2827.9	2674.1	2565.1
37.5°	3148.7	3078.1	2962.5	2847.2	2847.2	2757.5	2616.3	2539.5	2404.8	2314.9	2225.2
40°	2827.9	2738.2	2622.9	2488.2	2468.9	2340.5	2282.9	2154.6	2071.2	1930.2	1917.4
42.5°	2468.9	2385.4	2282.9	2180.2	2103.3	2039.3	1891.8	1795.6	1705.9	1635.3	1615.9
45°	2141.8	2032.7	1943.0	1814.6	1737.8	1660.9	1564.7	1500.6	1430.0	1353.1	1308.2
47.5°	1859.6	1769.9	1641.6	1526.2	1449.4	1410.7	1301.6	1231.3	1173.5	1122.3	1090.1
50°	1571.2	1462.2	1391.6	1263.2	1250.4	1160.7	1071.0	1013.2	981.1	936.3	891.4
52.5°	1353.1	1250.4	1154.2	1058.2	1006.7	974.8	891.4	833.6	788.9	756.7	731.1
55°	1141.3	1051.7	974.8	878.6	846.4	801.7	705.5	692.6	647.7	602.7	570.8
57.5°	981.1	897.7	808.0	743.9	686.1	654.2	577.1	525.8	500.2	461.8	429.6
60°	833.6	743.9	673.3	596.4	570.8	525.8	468.0	423.3	391.2	359.0	327.1
62.5°	698.9	622.1	545.2	480.9	442.4	416.8	371.8	333.4	301.5	275.9	250.0
65°	577.1	506.5	442.4	378.4	359.0	327.1	294.9	263.0	237.2	205.3	179.6
67.5°	474.6	410.5	346.2	301.5	282.1	269.3	230.9	198.7	179.6	160.3	134.7
70°	371.8	327.1	275.9	237.2	218.1	198.7	173.1	154.0	128.1	115.3	96.2
72.5°	288.7	250.0	205.3	173.1	160.3	147.5	121.8	102.5	89.7	76.9	64.1
75°	205.3	173.1	147.5	115.3	109.0	102.5	83.4	70.6	57.8	45.0	38.4
77.5°	141.2	115.3	89.7	76.9	70.6	57.8	51.3	38.4	32.2	25.6	19.3
80°	76.9	57.8	45.0	38.4	32.2	25.6	25.6	19.3	12.8	12.8	6.5
82.5°	25.6	19.3	12.8	6.5	6.5	6.5	6.5	6.5	6.5	0.0	6.5
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°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	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°	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0
2.5°	5341.7	5271.1	5290.4	5290.4	5277.6	5277.6	5264.8	5245.5	5252.0	5213.3	5130.2
5°	5283.9	5194.2	5181.4	5194.2	5143.0	5130.2	5104.5	5143.0	5027.4	5072.4	5021.1
7.5°	5117.3	5033.9	5014.6	5059.6	4995.5	4956.8	4950.5	5001.8	4899.3	4848.0	4790.2
10°	4931.2	4899.3	4841.5	4809.3	4790.2	4796.5	4745.3	4681.2	4661.9	4649.0	4597.8
12.5°	4764.6	4694.0	4642.8	4604.3	4591.5	4591.5	4508.1	4495.3	4437.5	4424.7	4347.8
15°	4565.6	4482.5	4450.3	4399.1	4354.1	4379.7	4283.5	4257.9	4238.8	4155.4	4168.2
17.5°	4392.5	4302.9	4226.0	4193.8	4155.4	4116.9	4027.0	4046.3	4001.4	4001.4	3886.1
20°	4168.2	4072.0	4014.2	3950.1	3950.1	3898.9	3834.8	3841.1	3783.3	3725.8	3623.0
22.5°	3931.0	3828.3	3757.7	3732.1	3668.0	3655.2	3578.3	3559.0	3482.1	3488.4	3398.7
25°	3680.8	3578.3	3482.1	3488.4	3430.8	3405.2	3360.2	3270.5	3238.4	3199.9	3174.3
27.5°	3385.9	3315.3	3231.8	3225.6	3116.5	3122.8	3065.3	3039.7	2962.5	2981.9	2924.1
30°	3116.5	3014.0	2936.9	2917.8	2872.8	2860.0	2770.3	2731.6	2744.7	2693.2	2661.3
32.5°	2840.7	2686.9	2654.8	2616.3	2590.7	2558.5	2494.5	2520.1	2462.3	2475.1	2423.9
35°	2475.1	2411.1	2327.7	2327.7	2302.0	2276.4	2231.7	2257.3	2199.5	2173.9	2122.7
37.5°	2167.4	2109.8	2026.4	2052.1	2007.1	1968.7	1930.2	1936.5	1885.2	1879.0	1827.5
40°	1834.0	1801.8	1744.3	1744.3	1712.1	1712.1	1692.8	1673.7	1641.6	1603.1	1545.3
42.5°	1519.7	1494.1	1468.5	1475.0	1430.0	1468.5	1417.2	1449.4	1346.6	1340.3	1301.6
45°	1288.8	1231.3	1237.6	1211.9	1186.3	1199.1	1154.2	1167.0	1109.4	1096.6	1058.2
47.5°	1045.4	1026.0	987.6	974.8	974.8	955.4	936.3	929.8	904.2	872.0	820.8
50°	859.2	788.9	775.8	756.7	743.9	743.9	718.3	679.8	686.1	654.2	602.7
52.5°	673.3	615.5	589.9	583.6	558.0	545.2	513.0	487.4	468.0	455.2	423.3
55°	519.3	468.0	436.1	436.1	397.7	397.7	352.7	333.4	307.8	282.1	263.0
57.5°	391.2	365.5	333.4	307.8	294.9	263.0	237.2	205.3	185.9	147.5	121.8
60°	294.9	269.3	237.2	218.1	205.3	173.1	141.2	115.3	70.6	57.8	51.3
62.5°	218.1	192.4	160.3	147.5	134.7	109.0	76.9	38.4	19.3	19.3	19.3
65°	160.3	128.1	102.5	89.7	76.9	57.8	25.6	12.8	6.5	6.5	6.5
67.5°	109.0	83.4	57.8	51.3	38.4	19.3	6.5	6.5	6.5	6.5	6.5
70°	70.6	51.3	25.6	19.3	12.8	6.5	6.5	6.5	6.5	6.5	6.5
72.5°	45.0	25.6	12.8	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	25.6	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	12.8	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	6.5	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	6.5	6.5	6.5
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: LD4C90D010 EX4C909050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0	5348.0
2.5°	5219.8	5174.9	5200.5	5143.0	5168.6	5213.3	5181.4	5194.2
5°	5040.2	5014.6	4982.7	4899.3	4963.3	5014.6	4989.0	4982.7
7.5°	4848.0	4758.1	4803.1	4777.4	4764.6	4815.9	4758.1	4822.1
10°	4649.0	4585.0	4578.7	4533.7	4533.7	4572.2	4578.7	4540.0
12.5°	4354.1	4322.2	4322.2	4315.7	4309.1	4347.8	4354.1	4335.0
15°	4142.6	4129.8	4097.6	4091.3	4052.9	4110.4	4116.9	4110.4
17.5°	3886.1	3892.3	3860.4	3860.4	3886.1	3905.2	3853.9	3905.2
20°	3713.0	3680.8	3668.0	3610.2	3642.4	3674.5	3674.5	3680.8
22.5°	3462.7	3411.5	3430.8	3398.7	3379.3	3424.3	3424.3	3443.6
25°	3180.6	3180.6	3193.4	3174.3	3187.1	3212.8	3193.4	3238.4
27.5°	2911.3	2936.9	2936.9	2911.3	2924.1	3001.0	3033.1	2981.9
30°	2661.3	2667.6	2686.9	2674.1	2712.6	2738.2	2731.6	2770.3
32.5°	2379.2	2411.1	2423.9	2404.8	2417.6	2475.1	2443.2	2436.7
35°	2161.1	2103.3	2097.0	2103.3	2128.9	2141.8	2128.9	2173.9
37.5°	1846.8	1827.5	1801.8	1808.4	1827.5	1853.3	1866.2	1898.1
40°	1545.3	1519.7	1519.7	1513.4	1494.1	1564.7	1564.7	1564.7
42.5°	1282.5	1276.0	1244.1	1244.1	1269.7	1288.8	1276.0	1321.0
45°	1051.7	1026.0	1006.7	1006.7	1026.0	1026.0	1045.4	1038.8
47.5°	827.3	801.7	808.0	788.9	808.0	833.6	801.7	808.0
50°	622.1	622.1	609.2	622.1	615.5	622.1	609.2	596.4
52.5°	423.3	480.9	487.4	461.8	404.0	352.7	320.6	346.2
55°	243.7	218.1	218.1	211.5	198.7	192.4	173.1	192.4
57.5°	121.8	109.0	109.0	109.0	102.5	96.2	83.4	83.4
60°	51.3	45.0	45.0	38.4	32.2	25.6	19.3	25.6
62.5°	19.3	12.8	12.8	12.8	12.8	12.8	12.8	12.8
65°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
67.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
70°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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)