

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 EX4C909040 4LBSQLWWH**

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 EX4C909040 4LBSQLWWH
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

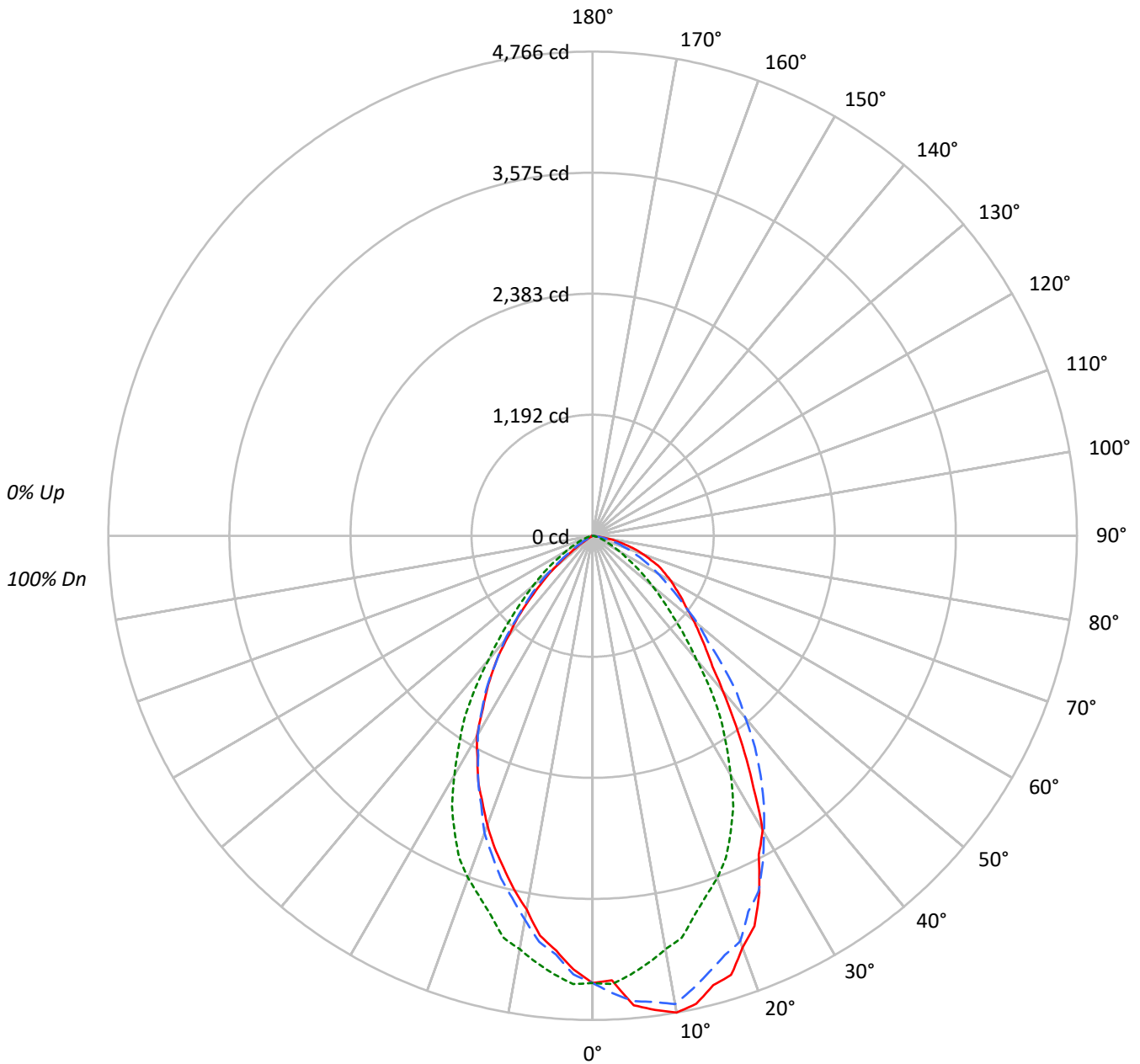
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6309.0 lumens
Efficiency: N/A
Efficacy: 65.0 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°	424677	424677	424677
5°	449312	419674	397183
10°	466921	404872	366083
15°	457588	386415	337917
20°	442741	367948	311042
25°	412973	342164	283736
30°	372797	302817	254017
35°	307082	259235	210740
40°	250617	200083	162195
45°	215327	151957	116670
50°	194873	115675	73674
55°	179343	83439	26647
60°	172136	57025	4072
65°	166257	38562	1233
70°	148872	26773	1523
75°	122019	13794	0
80°	76292	5834	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	412.4	6.5
10°-20°	1111.0	17.6
20°-30°	1483.6	23.5
30°-40°	1408.3	22.3
40°-50°	973.5	15.4
50°-60°	537.9	8.5
60°-70°	267.1	4.2
70°-80°	105.2	1.7
80°-90°	10.0	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°	3006.9	47.7
0°-40°	4415.3	70.0
0°-60°	5926.6	93.9
0°-90°	6309.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6309.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4401	4401	4401	4401	4401	
5°	4639	4597	4333	4138	4101	444
15°	4581	4444	3868	3488	3383	1296
25°	3879	3863	3214	2665	2665	1768
35°	2607	2881	2201	1810	1789	1633
45°	1578	1810	1114	913	855	1231
55°	1066	1003	496	253	158	960
65°	728	528	169	5	5	707
75°	327	201	37	0	0	349
85°	0	5	0	0	0	30
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909040 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3
2.5°	4380.2	4501.6	4512.1	4501.6	4517.5	4512.1	4538.6	4512.1	4544.0	4496.4	4507.0
5°	4638.9	4591.3	4691.6	4638.9	4638.9	4633.7	4617.8	4612.4	4633.7	4565.1	4596.7
7.5°	4707.5	4776.2	4865.9	4755.1	4760.2	4760.2	4728.6	4718.1	4718.1	4591.3	4628.3
10°	4765.6	4723.2	4770.8	4728.6	4765.6	4760.2	4781.3	4712.7	4760.2	4686.4	4681.0
12.5°	4718.1	4702.1	4765.6	4697.0	4675.9	4681.0	4654.8	4638.9	4654.8	4570.2	4565.1
15°	4580.8	4596.7	4691.6	4617.8	4607.2	4596.7	4565.1	4512.1	4554.5	4438.3	4443.7
17.5°	4533.4	4507.0	4522.9	4459.4	4475.3	4464.8	4459.4	4412.1	4401.3	4327.5	4327.5
20°	4311.8	4369.7	4369.7	4327.5	4327.5	4322.3	4253.7	4295.9	4248.3	4227.2	4248.3
22.5°	4158.6	4163.9	4163.9	4126.9	4132.3	4111.2	4074.2	4047.7	4074.2	4047.7	4005.6
25°	3879.0	3889.6	3952.8	3884.2	3873.7	3894.7	3863.1	3847.2	3842.0	3778.7	3863.1
27.5°	3541.2	3646.6	3641.5	3615.0	3646.6	3604.4	3588.7	3593.9	3609.8	3604.4	3625.5
30°	3346.0	3361.7	3377.6	3356.5	3361.7	3346.0	3346.0	3351.2	3393.3	3377.6	3372.3
32.5°	2950.1	3002.8	3045.2	3045.2	3050.3	3066.3	3060.9	3171.7	3198.2	3145.4	3134.9
35°	2607.0	2644.0	2680.9	2686.2	2754.9	2760.0	2765.4	2797.1	2870.9	2886.8	2881.4
37.5°	2279.9	2316.7	2327.3	2374.8	2411.9	2448.7	2491.0	2533.2	2596.5	2649.2	2623.0
40°	1989.7	2005.4	2031.8	2052.9	2126.7	2126.7	2147.8	2232.4	2301.0	2343.2	2337.8
42.5°	1746.9	1752.1	1773.2	1810.2	1878.8	1862.9	1878.8	1936.9	2037.0	2042.4	2100.5
45°	1578.0	1572.6	1588.5	1593.7	1636.1	1657.2	1667.7	1709.9	1794.3	1804.8	1810.2
47.5°	1425.0	1419.6	1446.1	1456.6	1472.3	1493.4	1493.4	1498.8	1530.4	1556.9	1535.8
50°	1298.2	1298.2	1298.2	1308.8	1335.3	1329.9	1335.3	1356.3	1372.1	1361.5	1356.3
52.5°	1161.0	1182.0	1198.0	1203.3	1208.5	1208.5	1213.9	1203.3	1198.0	1182.0	1150.4
55°	1066.1	1087.1	1087.1	1087.1	1087.1	1108.2	1082.0	1087.1	1087.1	1045.0	1002.8
57.5°	971.2	992.2	1008.0	986.9	1008.0	986.9	976.3	971.2	960.4	918.2	855.0
60°	892.0	902.5	897.1	892.0	902.5	886.6	876.0	855.0	844.4	786.3	744.1
62.5°	802.2	807.4	812.8	802.2	791.7	786.3	765.2	733.6	712.5	664.9	627.9
65°	728.2	712.5	707.1	702.0	691.4	675.5	659.8	622.8	606.8	564.7	527.7
67.5°	617.4	612.2	622.8	606.8	580.6	580.6	564.7	533.0	496.0	469.8	432.7
70°	527.7	522.5	511.9	496.0	490.8	469.8	469.8	432.7	422.2	374.6	343.0
72.5°	432.7	432.7	416.8	401.1	385.2	374.6	369.5	343.0	327.3	300.8	274.4
75°	327.3	327.3	321.9	306.0	295.5	284.9	279.7	258.7	242.7	216.5	200.6
77.5°	232.2	232.2	211.1	200.6	205.7	195.2	184.6	179.5	174.1	158.4	137.3
80°	137.3	131.9	116.2	121.4	116.2	116.2	110.8	105.4	94.9	84.4	73.8
82.5°	37.0	42.2	42.2	42.2	47.6	37.0	37.0	37.0	42.2	42.2	26.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	5.4	5.4
87.5°	5.4	10.5	21.1	21.1	21.1	21.1	21.1	15.9	15.9	15.9	10.5
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°	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3
2.5°	4454.2	4448.9	4454.2	4417.2	4501.6	4438.3	4427.8	4417.2	4454.2	4417.2	4364.5
5°	4549.1	4496.4	4480.5	4464.8	4512.1	4438.3	4422.6	4427.8	4401.3	4332.9	4338.0
7.5°	4580.8	4533.4	4485.9	4385.6	4427.8	4412.1	4369.7	4338.0	4295.9	4237.8	4227.2
10°	4591.3	4538.6	4469.9	4438.3	4375.0	4354.0	4338.0	4285.3	4232.6	4132.3	4105.8
12.5°	4559.7	4496.4	4412.1	4385.6	4338.0	4269.4	4232.6	4179.7	4132.3	4053.1	3995.0
15°	4422.6	4369.7	4343.4	4253.7	4232.6	4190.2	4116.4	4042.6	3973.9	3868.3	3836.6
17.5°	4264.2	4243.1	4216.7	4148.0	4142.9	4100.7	4032.0	3968.6	3879.0	3715.3	3662.5
20°	4100.7	4100.7	4016.1	3989.9	4042.6	3958.0	3905.3	3847.2	3662.5	3583.4	3488.5
22.5°	3979.3	3921.2	3873.7	3831.5	3836.6	3783.9	3710.1	3593.9	3525.3	3430.4	3319.5
25°	3741.7	3762.8	3657.4	3641.5	3657.4	3535.8	3499.0	3403.9	3303.6	3213.9	3129.5
27.5°	3593.9	3535.8	3467.4	3409.3	3409.3	3361.7	3256.3	3235.2	3082.0	2997.6	2892.0
30°	3372.3	3330.1	3272.0	3187.6	3177.1	3140.1	3055.7	3002.8	2844.6	2717.9	2659.8
32.5°	3092.5	3076.8	3029.2	2934.3	2902.7	2860.3	2754.9	2665.1	2591.3	2448.7	2380.2
35°	2892.0	2834.1	2733.8	2654.6	2628.1	2554.3	2469.7	2406.5	2327.3	2200.8	2111.0
37.5°	2591.3	2533.2	2438.1	2343.2	2343.2	2269.4	2153.2	2089.9	1979.1	1905.1	1831.3
40°	2327.3	2253.5	2158.6	2047.8	2031.8	1926.2	1878.8	1773.2	1704.5	1588.5	1578.0
42.5°	2031.8	1963.2	1878.8	1794.3	1731.0	1678.3	1556.9	1477.7	1403.9	1345.8	1329.9
45°	1762.6	1672.9	1599.1	1493.4	1430.2	1366.9	1287.7	1235.0	1176.9	1113.6	1076.6
47.5°	1530.4	1456.6	1351.0	1256.1	1192.8	1161.0	1071.2	1013.3	965.8	923.6	897.1
50°	1293.1	1203.3	1145.2	1039.6	1029.0	955.2	881.4	833.9	807.4	770.6	733.6
52.5°	1113.6	1029.0	949.9	870.9	828.5	802.2	733.6	686.0	649.2	622.8	601.7
55°	939.3	865.5	802.2	723.0	696.6	659.8	580.6	570.0	533.0	496.0	469.8
57.5°	807.4	738.8	664.9	612.2	564.7	538.4	474.9	432.7	411.7	380.0	353.6
60°	686.0	612.2	554.1	490.8	469.8	432.7	385.2	348.4	321.9	295.5	269.2
62.5°	575.2	511.9	448.7	395.7	364.1	343.0	306.0	274.4	248.1	227.0	205.7
65°	474.9	416.8	364.1	311.4	295.5	269.2	242.7	216.5	195.2	168.9	147.8
67.5°	390.6	337.8	284.9	248.1	232.2	221.6	190.0	163.5	147.8	131.9	110.8
70°	306.0	269.2	227.0	195.2	179.5	163.5	142.5	126.7	105.4	94.9	79.2
72.5°	237.6	205.7	168.9	142.5	131.9	121.4	100.3	84.4	73.8	63.3	52.7
75°	168.9	142.5	121.4	94.9	89.7	84.4	68.6	58.1	47.6	37.0	31.6
77.5°	116.2	94.9	73.8	63.3	58.1	47.6	42.2	31.6	26.5	21.1	15.9
80°	63.3	47.6	37.0	31.6	26.5	21.1	21.1	15.9	10.5	10.5	5.4
82.5°	21.1	15.9	10.5	5.4	5.4	5.4	5.4	5.4	5.4	0.0	5.4
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°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	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°	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3
2.5°	4396.1	4338.0	4354.0	4354.0	4343.4	4343.4	4332.9	4316.9	4322.3	4290.5	4222.0
5°	4348.6	4274.8	4264.2	4274.8	4232.6	4222.0	4201.0	4232.6	4137.5	4174.5	4132.3
7.5°	4211.5	4142.9	4126.9	4163.9	4111.2	4079.4	4074.2	4116.4	4032.0	3989.9	3942.3
10°	4058.3	4032.0	3984.5	3958.0	3942.3	3947.5	3905.3	3852.6	3836.6	3826.1	3783.9
12.5°	3921.2	3863.1	3820.9	3789.3	3778.7	3778.7	3710.1	3699.6	3652.0	3641.5	3578.2
15°	3757.5	3689.0	3662.5	3620.4	3583.4	3604.4	3525.3	3504.2	3488.5	3419.8	3430.4
17.5°	3615.0	3541.2	3477.9	3451.4	3419.8	3388.2	3314.2	3330.1	3293.1	3293.1	3198.2
20°	3430.4	3351.2	3303.6	3250.9	3250.9	3208.7	3156.0	3161.2	3113.6	3066.3	2981.7
22.5°	3235.2	3150.6	3092.5	3071.4	3018.7	3008.2	2944.9	2929.0	2865.7	2870.9	2797.1
25°	3029.2	2944.9	2865.7	2870.9	2823.5	2802.4	2765.4	2691.6	2665.1	2633.5	2612.4
27.5°	2786.5	2728.4	2659.8	2654.6	2564.9	2570.0	2522.7	2501.6	2438.1	2454.0	2406.5
30°	2564.9	2480.5	2417.0	2401.3	2364.3	2353.8	2279.9	2248.1	2258.9	2216.5	2190.2
32.5°	2337.8	2211.3	2184.8	2153.2	2132.1	2105.6	2052.9	2074.0	2026.5	2037.0	1994.8
35°	2037.0	1984.3	1915.6	1915.6	1894.5	1873.5	1836.7	1857.7	1810.2	1789.1	1746.9
37.5°	1783.7	1736.4	1667.7	1688.8	1651.8	1620.2	1588.5	1593.7	1551.5	1546.4	1504.0
40°	1509.3	1482.9	1435.5	1435.5	1409.1	1409.1	1393.1	1377.4	1351.0	1319.3	1271.8
42.5°	1250.7	1229.6	1208.5	1213.9	1176.9	1208.5	1166.3	1192.8	1108.2	1103.1	1071.2
45°	1060.7	1013.3	1018.5	997.4	976.3	986.9	949.9	960.4	913.1	902.5	870.9
47.5°	860.3	844.4	812.8	802.2	802.2	786.3	770.6	765.2	744.1	717.7	675.5
50°	707.1	649.2	638.5	622.8	612.2	612.2	591.1	559.5	564.7	538.4	496.0
52.5°	554.1	506.6	485.5	480.3	459.2	448.7	422.2	401.1	385.2	374.6	348.4
55°	427.4	385.2	358.9	358.9	327.3	327.3	290.3	274.4	253.3	232.2	216.5
57.5°	321.9	300.8	274.4	253.3	242.7	216.5	195.2	168.9	153.0	121.4	100.3
60°	242.7	221.6	195.2	179.5	168.9	142.5	116.2	94.9	58.1	47.6	42.2
62.5°	179.5	158.4	131.9	121.4	110.8	89.7	63.3	31.6	15.9	15.9	15.9
65°	131.9	105.4	84.4	73.8	63.3	47.6	21.1	10.5	5.4	5.4	5.4
67.5°	89.7	68.6	47.6	42.2	31.6	15.9	5.4	5.4	5.4	5.4	5.4
70°	58.1	42.2	21.1	15.9	10.5	5.4	5.4	5.4	5.4	5.4	5.4
72.5°	37.0	21.1	10.5	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	21.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	10.5	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	5.4	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	5.4	5.4	5.4
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: LD4C90D010 EX4C909040 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3	4401.3
2.5°	4295.9	4258.8	4279.9	4232.6	4253.7	4290.5	4264.2	4274.8
5°	4148.0	4126.9	4100.7	4032.0	4084.8	4126.9	4105.8	4100.7
7.5°	3989.9	3915.8	3952.8	3931.8	3921.2	3963.4	3915.8	3968.6
10°	3826.1	3773.4	3768.2	3731.2	3731.2	3762.8	3768.2	3736.4
12.5°	3583.4	3557.1	3557.1	3551.7	3546.3	3578.2	3583.4	3567.6
15°	3409.3	3398.7	3372.3	3367.1	3335.5	3382.8	3388.2	3382.8
17.5°	3198.2	3203.3	3177.1	3177.1	3198.2	3213.9	3171.7	3213.9
20°	3055.7	3029.2	3018.7	2971.1	2997.6	3024.1	3024.1	3029.2
22.5°	2849.8	2807.6	2823.5	2797.1	2781.1	2818.1	2818.1	2834.1
25°	2617.6	2617.6	2628.1	2612.4	2623.0	2644.0	2628.1	2665.1
27.5°	2395.9	2417.0	2417.0	2395.9	2406.5	2469.7	2496.2	2454.0
30°	2190.2	2195.4	2211.3	2200.8	2232.4	2253.5	2248.1	2279.9
32.5°	1958.0	1984.3	1994.8	1979.1	1989.7	2037.0	2010.7	2005.4
35°	1778.6	1731.0	1725.8	1731.0	1752.1	1762.6	1752.1	1789.1
37.5°	1519.9	1504.0	1482.9	1488.3	1504.0	1525.3	1535.8	1562.1
40°	1271.8	1250.7	1250.7	1245.5	1229.6	1287.7	1287.7	1287.7
42.5°	1055.5	1050.1	1023.9	1023.9	1045.0	1060.7	1050.1	1087.1
45°	865.5	844.4	828.5	828.5	844.4	844.4	860.3	855.0
47.5°	680.9	659.8	664.9	649.2	664.9	686.0	659.8	664.9
50°	511.9	511.9	501.4	511.9	506.6	511.9	501.4	490.8
52.5°	348.4	395.7	401.1	380.0	332.5	290.3	263.8	284.9
55°	200.6	179.5	179.5	174.1	163.5	158.4	142.5	158.4
57.5°	100.3	89.7	89.7	89.7	84.4	79.2	68.6	68.6
60°	42.2	37.0	37.0	31.6	26.5	21.1	15.9	21.1
62.5°	15.9	10.5	10.5	10.5	10.5	10.5	10.5	10.5
65°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
67.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
70°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
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)