

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: **LD4C80D010 EX4C809035 4LBSQLWWH**

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: LD4C80D010 EX4C809035 4LBSQLWWH
Description: 4 INCH 8000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

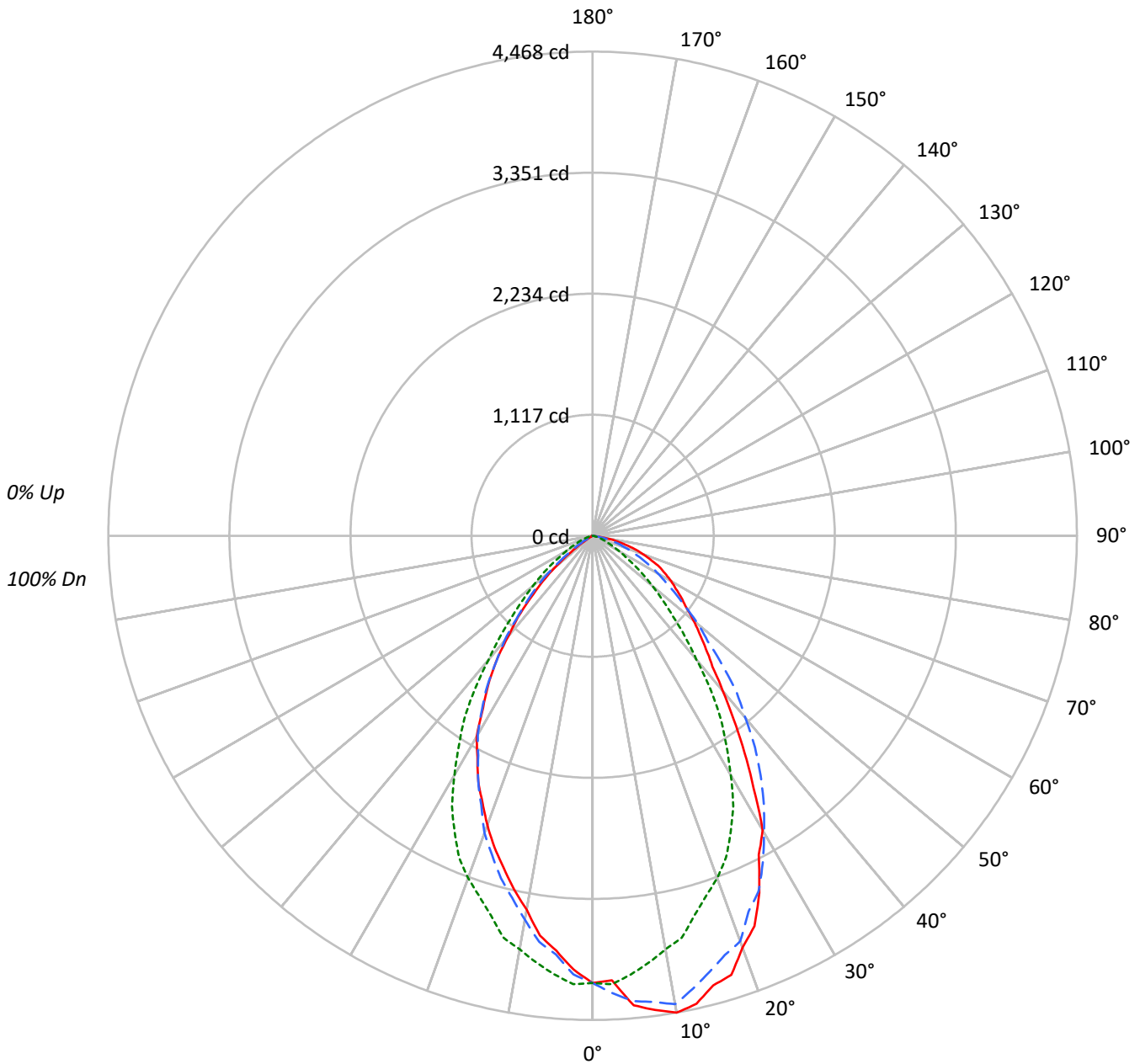
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5915.0 lumens
Efficiency: N/A
Efficacy: 66.1 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): 89.5
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	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°	398152	398152	398152
5°	421252	393464	372378
10°	437763	379584	343215
15°	429009	362281	316810
20°	415089	344968	291625
25°	387187	320796	266021
30°	349511	283899	238162
35°	287905	243039	197583
40°	234961	187588	152068
45°	201873	142474	109383
50°	182714	108455	69081
55°	168139	78224	24981
60°	161387	53455	3821
65°	155869	36165	1142
70°	139562	25108	1411
75°	114414	12936	0
80°	71513	5501	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.6	6.5
10°-20°	1041.6	17.6
20°-30°	1390.9	23.5
30°-40°	1320.4	22.3
40°-50°	912.7	15.4
50°-60°	504.3	8.5
60°-70°	250.4	4.2
70°-80°	98.7	1.7
80°-90°	9.4	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°	2819.2	47.7
0°-40°	4139.5	70.0
0°-60°	5556.5	93.9
0°-90°	5915.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5915.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4126	4126	4126	4126	4126	
5°	4349	4310	4062	3879	3845	416
15°	4295	4166	3627	3271	3172	1215
25°	3637	3622	3013	2499	2499	1658
35°	2444	2702	2063	1697	1677	1531
45°	1479	1697	1044	856	802	1154
55°	1000	940	465	238	148	900
65°	683	495	158	5	5	663
75°	307	188	35	0	0	327
85°	0	5	0	0	0	28
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°	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4
2.5°	4106.7	4220.5	4230.3	4220.5	4235.4	4230.3	4255.2	4230.3	4260.2	4215.6	4225.5
5°	4349.2	4304.6	4398.6	4349.2	4349.2	4344.3	4329.4	4324.4	4344.3	4280.0	4309.6
7.5°	4413.5	4477.9	4562.0	4458.1	4463.0	4463.0	4433.3	4423.4	4423.4	4304.6	4339.3
10°	4468.0	4428.3	4472.8	4433.3	4468.0	4463.0	4482.7	4418.4	4463.0	4393.8	4388.7
12.5°	4423.4	4408.5	4468.0	4403.6	4383.9	4388.7	4364.1	4349.2	4364.1	4284.8	4280.0
15°	4294.7	4309.6	4398.6	4329.4	4319.5	4309.6	4280.0	4230.3	4270.1	4161.1	4166.2
17.5°	4250.3	4225.5	4240.4	4180.9	4195.8	4186.0	4180.9	4136.5	4126.4	4057.2	4057.2
20°	4042.5	4096.8	4096.8	4057.2	4057.2	4052.4	3988.0	4027.6	3983.0	3963.2	3983.0
22.5°	3898.9	3903.9	3903.9	3869.2	3874.2	3854.5	3819.8	3795.0	3819.8	3795.0	3755.4
25°	3636.8	3646.7	3706.0	3641.6	3631.7	3651.5	3621.9	3606.9	3602.1	3542.8	3621.9
27.5°	3320.0	3418.9	3414.0	3389.2	3418.9	3379.3	3364.6	3369.5	3384.4	3379.3	3399.1
30°	3137.0	3151.8	3166.7	3146.9	3151.8	3137.0	3137.0	3141.9	3181.4	3166.7	3161.7
32.5°	2765.8	2815.3	2855.0	2855.0	2859.8	2874.8	2869.7	2973.6	2998.4	2949.0	2939.1
35°	2444.2	2478.9	2513.4	2518.5	2582.8	2587.7	2592.7	2622.4	2691.6	2706.5	2701.5
37.5°	2137.6	2172.1	2182.0	2226.5	2261.2	2295.7	2335.5	2375.0	2434.3	2483.8	2459.2
40°	1865.4	1880.1	1904.9	1924.7	1993.9	1993.9	2013.7	2093.0	2157.3	2196.9	2191.8
42.5°	1637.8	1642.7	1662.4	1697.1	1761.5	1746.6	1761.5	1816.0	1909.8	1914.8	1969.3
45°	1479.4	1474.4	1489.3	1494.2	1533.9	1553.7	1563.6	1603.1	1682.2	1692.1	1697.1
47.5°	1336.0	1331.0	1355.8	1365.7	1380.4	1400.2	1400.2	1405.2	1434.9	1459.7	1439.9
50°	1217.2	1217.2	1217.2	1227.1	1251.9	1246.8	1251.9	1271.6	1286.4	1276.5	1271.6
52.5°	1088.5	1108.2	1123.2	1128.2	1133.0	1133.0	1138.1	1128.2	1123.2	1108.2	1078.6
55°	999.5	1019.3	1019.3	1019.3	1019.3	1039.0	1014.4	1019.3	1019.3	979.7	940.2
57.5°	910.5	930.3	945.0	925.2	945.0	925.2	915.3	910.5	900.4	860.9	801.6
60°	836.3	846.1	841.1	836.3	846.1	831.2	821.3	801.6	791.7	737.2	697.7
62.5°	752.1	757.0	762.0	752.1	742.2	737.2	717.4	687.8	668.0	623.4	588.7
65°	682.7	668.0	663.0	658.1	648.2	633.3	618.6	583.9	568.9	529.4	494.7
67.5°	578.8	574.0	583.9	568.9	544.3	544.3	529.4	499.7	465.0	440.4	405.7
70°	494.7	489.9	480.0	465.0	460.2	440.4	440.4	405.7	395.8	351.3	321.6
72.5°	405.7	405.7	390.8	376.1	361.1	351.3	346.4	321.6	306.9	282.0	257.2
75°	306.9	306.9	301.8	286.9	277.0	267.1	262.3	242.5	227.6	203.0	188.0
77.5°	217.7	217.7	197.9	188.0	192.9	183.0	173.1	168.3	163.2	148.5	128.7
80°	128.7	123.7	108.9	113.8	108.9	108.9	103.9	98.9	89.0	79.1	69.2
82.5°	34.7	39.5	39.5	39.5	44.6	34.7	34.7	34.7	39.5	39.5	24.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0
87.5°	5.0	9.9	19.8	19.8	19.8	19.8	19.8	14.9	14.9	14.9	9.9
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°	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4
2.5°	4176.1	4171.0	4176.1	4141.4	4220.5	4161.1	4151.3	4141.4	4176.1	4141.4	4091.9
5°	4265.0	4215.6	4200.7	4186.0	4230.3	4161.1	4146.4	4151.3	4126.4	4062.3	4067.1
7.5°	4294.7	4250.3	4205.7	4111.7	4151.3	4136.5	4096.8	4067.1	4027.6	3973.1	3963.2
10°	4304.6	4255.2	4190.8	4161.1	4101.8	4082.0	4067.1	4017.7	3968.3	3874.2	3849.4
12.5°	4274.9	4215.6	4136.5	4111.7	4067.1	4002.8	3968.3	3918.6	3874.2	3800.0	3745.5
15°	4146.4	4096.8	4072.2	3988.0	3968.3	3928.5	3859.3	3790.1	3725.8	3626.7	3597.0
17.5°	3997.9	3978.1	3953.3	3889.0	3884.1	3844.6	3780.2	3720.7	3636.8	3483.3	3433.8
20°	3844.6	3844.6	3765.3	3740.7	3790.1	3710.8	3661.4	3606.9	3433.8	3359.6	3270.6
22.5°	3730.8	3676.3	3631.7	3592.2	3597.0	3547.6	3478.4	3369.5	3305.1	3216.1	3112.2
25°	3508.1	3527.8	3429.0	3414.0	3429.0	3315.0	3280.5	3191.3	3097.3	3013.2	2934.1
27.5°	3369.5	3315.0	3250.8	3196.4	3196.4	3151.8	3052.9	3033.1	2889.5	2810.4	2711.3
30°	3161.7	3122.1	3067.6	2988.6	2978.7	2944.0	2864.9	2815.3	2667.0	2548.1	2493.7
32.5°	2899.4	2884.6	2840.1	2751.1	2721.4	2681.7	2582.8	2498.7	2429.5	2295.7	2231.6
35°	2711.3	2657.1	2563.1	2488.8	2464.0	2394.8	2315.5	2256.2	2182.0	2063.3	1979.2
37.5°	2429.5	2375.0	2285.9	2196.9	2196.9	2127.7	2018.7	1959.4	1855.5	1786.1	1716.9
40°	2182.0	2112.7	2023.8	1919.9	1904.9	1805.9	1761.5	1662.4	1598.1	1489.3	1479.4
42.5°	1904.9	1840.6	1761.5	1682.2	1622.9	1573.5	1459.7	1385.4	1316.2	1261.8	1246.8
45°	1652.6	1568.4	1499.2	1400.2	1340.8	1281.5	1207.3	1157.9	1103.4	1044.1	1009.4
47.5°	1434.9	1365.7	1266.6	1177.6	1118.3	1088.5	1004.3	950.0	905.5	865.9	841.1
50°	1212.3	1128.2	1073.7	974.7	964.8	895.6	826.4	781.8	757.0	722.5	687.8
52.5°	1044.1	964.8	890.5	816.5	776.7	752.1	687.8	643.2	608.7	583.9	564.1
55°	880.7	811.4	752.1	677.9	653.1	618.6	544.3	534.4	499.7	465.0	440.4
57.5°	757.0	692.6	623.4	574.0	529.4	504.8	445.3	405.7	386.0	356.3	331.5
60°	643.2	574.0	519.5	460.2	440.4	405.7	361.1	326.6	301.8	277.0	252.4
62.5°	539.3	480.0	420.6	371.0	341.4	321.6	286.9	257.2	232.6	212.8	192.9
65°	445.3	390.8	341.4	291.9	277.0	252.4	227.6	203.0	183.0	158.4	138.6
67.5°	366.2	316.7	267.1	232.6	217.7	207.8	178.1	153.3	138.6	123.7	103.9
70°	286.9	252.4	212.8	183.0	168.3	153.3	133.6	118.8	98.9	89.0	74.2
72.5°	222.7	192.9	158.4	133.6	123.7	113.8	94.0	79.1	69.2	59.3	49.4
75°	158.4	133.6	113.8	89.0	84.1	79.1	64.4	54.5	44.6	34.7	29.7
77.5°	108.9	89.0	69.2	59.3	54.5	44.6	39.5	29.7	24.8	19.8	14.9
80°	59.3	44.6	34.7	29.7	24.8	19.8	19.8	14.9	9.9	9.9	5.0
82.5°	19.8	14.9	9.9	5.0	5.0	5.0	5.0	5.0	5.0	0.0	5.0
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°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4
2.5°	4121.6	4067.1	4082.0	4082.0	4072.2	4072.2	4062.3	4047.3	4052.4	4022.5	3958.4
5°	4077.0	4007.8	3997.9	4007.8	3968.3	3958.4	3938.6	3968.3	3879.1	3913.8	3874.2
7.5°	3948.5	3884.1	3869.2	3903.9	3854.5	3824.6	3819.8	3859.3	3780.2	3740.7	3696.1
10°	3804.8	3780.2	3735.6	3710.8	3696.1	3700.9	3661.4	3612.0	3597.0	3587.2	3547.6
12.5°	3676.3	3621.9	3582.3	3552.6	3542.8	3542.8	3478.4	3468.5	3423.9	3414.0	3354.7
15°	3522.8	3458.6	3433.8	3394.3	3359.6	3379.3	3305.1	3285.3	3270.6	3206.2	3216.1
17.5°	3389.2	3320.0	3260.7	3235.9	3206.2	3176.6	3107.2	3122.1	3087.4	3087.4	2998.4
20°	3216.1	3141.9	3097.3	3047.9	3047.9	3008.3	2958.9	2963.7	2919.2	2874.8	2795.5
22.5°	3033.1	2953.9	2899.4	2879.6	2830.2	2820.3	2761.0	2746.0	2686.7	2691.6	2622.4
25°	2840.1	2761.0	2686.7	2691.6	2647.2	2627.4	2592.7	2523.5	2498.7	2469.0	2449.3
27.5°	2612.5	2558.0	2493.7	2488.8	2404.7	2409.5	2365.1	2345.4	2285.9	2300.8	2256.2
30°	2404.7	2325.6	2266.1	2251.3	2216.7	2206.8	2137.6	2107.7	2117.8	2078.0	2053.4
32.5°	2191.8	2073.2	2048.4	2018.7	1999.0	1974.1	1924.7	1944.5	1899.9	1909.8	1870.2
35°	1909.8	1860.4	1796.0	1796.0	1776.2	1756.5	1722.0	1741.7	1697.1	1677.4	1637.8
37.5°	1672.3	1627.9	1563.6	1583.3	1548.7	1519.0	1489.3	1494.2	1454.6	1449.8	1410.0
40°	1415.1	1390.3	1345.9	1345.9	1321.1	1321.1	1306.1	1291.4	1266.6	1236.9	1192.4
42.5°	1172.6	1152.8	1133.0	1138.1	1103.4	1133.0	1093.5	1118.3	1039.0	1034.2	1004.3
45°	994.4	950.0	954.9	935.1	915.3	925.2	890.5	900.4	856.0	846.1	816.5
47.5°	806.6	791.7	762.0	752.1	752.1	737.2	722.5	717.4	697.7	672.8	633.3
50°	663.0	608.7	598.6	583.9	574.0	574.0	554.2	524.6	529.4	504.8	465.0
52.5°	519.5	474.9	455.2	450.3	430.5	420.6	395.8	376.1	361.1	351.3	326.6
55°	400.7	361.1	336.5	336.5	306.9	306.9	272.2	257.2	237.5	217.7	203.0
57.5°	301.8	282.0	257.2	237.5	227.6	203.0	183.0	158.4	143.4	113.8	94.0
60°	227.6	207.8	183.0	168.3	158.4	133.6	108.9	89.0	54.5	44.6	39.5
62.5°	168.3	148.5	123.7	113.8	103.9	84.1	59.3	29.7	14.9	14.9	14.9
65°	123.7	98.9	79.1	69.2	59.3	44.6	19.8	9.9	5.0	5.0	5.0
67.5°	84.1	64.4	44.6	39.5	29.7	14.9	5.0	5.0	5.0	5.0	5.0
70°	54.5	39.5	19.8	14.9	9.9	5.0	5.0	5.0	5.0	5.0	5.0
72.5°	34.7	19.8	9.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	19.8	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	9.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	5.0	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	5.0	5.0	5.0
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: LD4C80D010 EX4C809035 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4	4126.4
2.5°	4027.6	3992.9	4012.7	3968.3	3988.0	4022.5	3997.9	4007.8
5°	3889.0	3869.2	3844.6	3780.2	3829.7	3869.2	3849.4	3844.6
7.5°	3740.7	3671.3	3706.0	3686.2	3676.3	3715.9	3671.3	3720.7
10°	3587.2	3537.7	3532.9	3498.2	3498.2	3527.8	3532.9	3503.0
12.5°	3359.6	3335.0	3335.0	3329.9	3324.9	3354.7	3359.6	3344.8
15°	3196.4	3186.5	3161.7	3156.8	3127.2	3171.5	3176.6	3171.5
17.5°	2998.4	3003.3	2978.7	2978.7	2998.4	3013.2	2973.6	3013.2
20°	2864.9	2840.1	2830.2	2785.6	2810.4	2835.2	2835.2	2840.1
22.5°	2671.8	2632.3	2647.2	2622.4	2607.4	2642.1	2642.1	2657.1
25°	2454.1	2454.1	2464.0	2449.3	2459.2	2478.9	2464.0	2498.7
27.5°	2246.3	2266.1	2266.1	2246.3	2256.2	2315.5	2340.3	2300.8
30°	2053.4	2058.3	2073.2	2063.3	2093.0	2112.7	2107.7	2137.6
32.5°	1835.7	1860.4	1870.2	1855.5	1865.4	1909.8	1885.2	1880.1
35°	1667.5	1622.9	1618.0	1622.9	1642.7	1652.6	1642.7	1677.4
37.5°	1425.0	1410.0	1390.3	1395.3	1410.0	1430.0	1439.9	1464.5
40°	1192.4	1172.6	1172.6	1167.7	1152.8	1207.3	1207.3	1207.3
42.5°	989.6	984.6	959.9	959.9	979.7	994.4	984.6	1019.3
45°	811.4	791.7	776.7	776.7	791.7	791.7	806.6	801.6
47.5°	638.3	618.6	623.4	608.7	623.4	643.2	618.6	623.4
50°	480.0	480.0	470.1	480.0	474.9	480.0	470.1	460.2
52.5°	326.6	371.0	376.1	356.3	311.7	272.2	247.3	267.1
55°	188.0	168.3	168.3	163.2	153.3	148.5	133.6	148.5
57.5°	94.0	84.1	84.1	84.1	79.1	74.2	64.4	64.4
60°	39.5	34.7	34.7	29.7	24.8	19.8	14.9	19.8
62.5°	14.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
65°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
67.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
70°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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)