

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 EX4C809040 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 EX4C809040 4LBSQLWWH
Description: 4 INCH 8000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

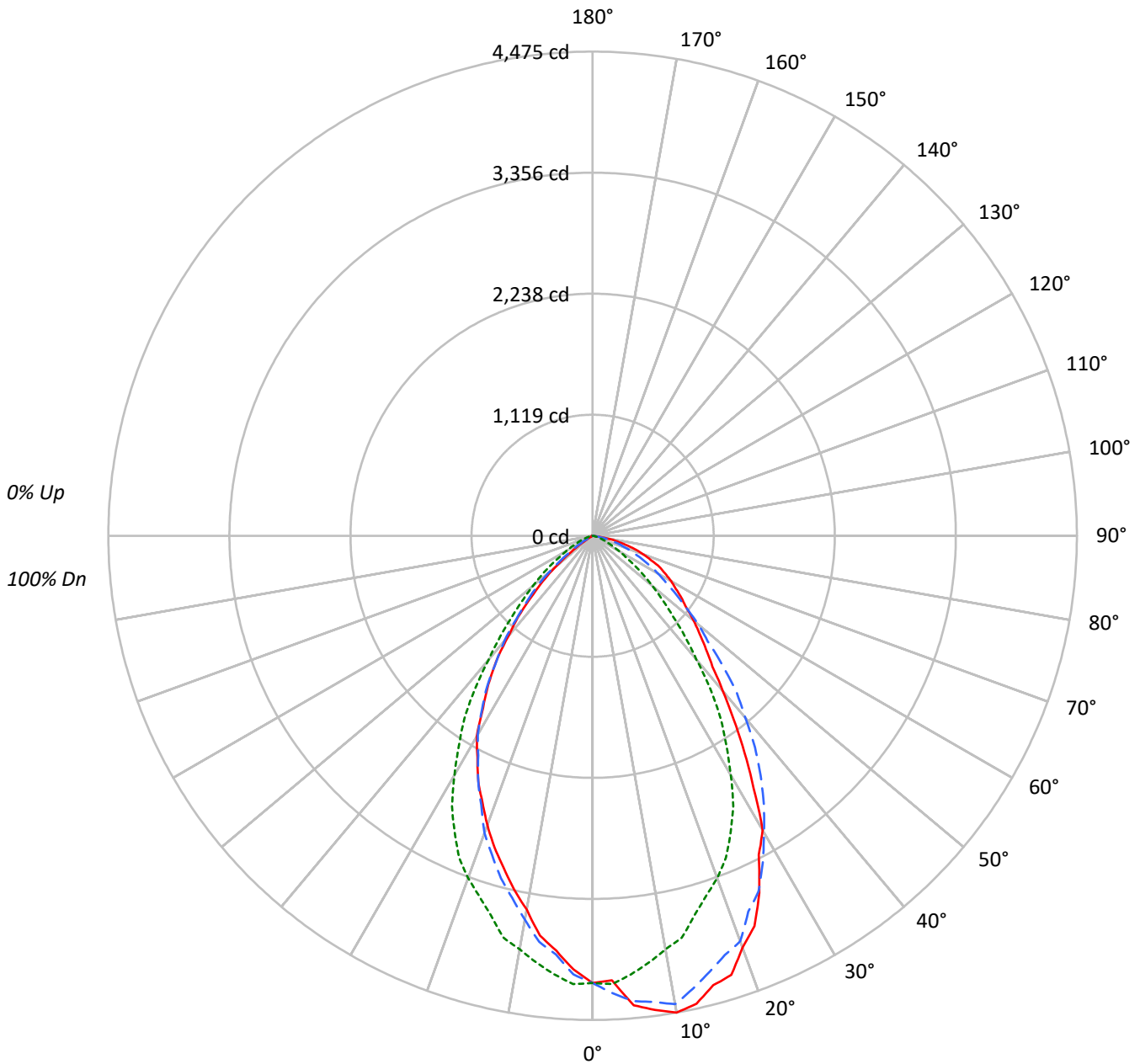
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5924.0 lumens
Efficiency: N/A
Efficacy: 66.2 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°	398760	398760	398760
5°	421892	394065	372940
10°	438429	380162	343744
15°	429658	362830	317299
20°	415726	345492	292067
25°	387773	321286	266425
30°	350046	284333	238519
35°	288341	243415	197877
40°	235313	187878	152295
45°	202187	142692	109547
50°	182984	108620	69186
55°	168391	78342	25015
60°	161619	53532	3821
65°	156120	36210	1142
70°	139788	25136	1411
75°	114563	12974	0
80°	71624	5501	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	387.2	6.5
10°-20°	1043.2	17.6
20°-30°	1393.0	23.5
30°-40°	1322.4	22.3
40°-50°	914.1	15.4
50°-60°	505.1	8.5
60°-70°	250.8	4.2
70°-80°	98.8	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°	2823.4	47.7
0°-40°	4145.8	70.0
0°-60°	5565.0	93.9
0°-90°	5924.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5924.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4133	4133	4133	4133	4133	
5°	4356	4316	4068	3885	3850	417
15°	4301	4172	3632	3276	3176	1217
25°	3642	3627	3018	2502	2502	1660
35°	2448	2706	2066	1700	1680	1534
45°	1482	1700	1046	857	803	1156
55°	1001	942	466	238	149	901
65°	684	496	159	5	5	664
75°	307	188	35	0	0	328
85°	0	5	0	0	0	28
90°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7
2.5°	4112.9	4226.9	4236.8	4226.9	4241.8	4236.8	4261.6	4236.8	4266.7	4222.0	4231.9
5°	4355.8	4311.1	4405.3	4355.8	4355.8	4350.9	4336.0	4330.9	4350.9	4286.5	4316.2
7.5°	4420.2	4484.7	4569.0	4464.9	4469.7	4469.7	4440.0	4430.1	4430.1	4311.1	4345.9
10°	4474.8	4435.0	4479.7	4440.0	4474.8	4469.7	4489.6	4425.1	4469.7	4400.4	4395.4
12.5°	4430.1	4415.2	4474.8	4410.3	4390.5	4395.4	4370.7	4355.8	4370.7	4291.3	4286.5
15°	4301.2	4316.2	4405.3	4336.0	4326.1	4316.2	4286.5	4236.8	4276.6	4167.5	4172.5
17.5°	4256.8	4231.9	4246.9	4187.3	4202.2	4192.3	4187.3	4142.8	4132.7	4063.4	4063.4
20°	4048.7	4103.0	4103.0	4063.4	4063.4	4058.6	3994.1	4033.7	3989.1	3969.2	3989.1
22.5°	3904.8	3909.8	3909.8	3875.1	3880.1	3860.3	3825.6	3800.7	3825.6	3800.7	3761.1
25°	3642.3	3652.2	3711.6	3647.2	3637.3	3657.1	3627.4	3612.4	3607.6	3548.2	3627.4
27.5°	3325.1	3424.1	3419.2	3394.4	3424.1	3384.5	3369.7	3374.6	3389.5	3384.5	3404.3
30°	3141.8	3156.6	3171.5	3151.7	3156.6	3141.8	3141.8	3146.7	3186.3	3171.5	3166.5
32.5°	2770.0	2819.5	2859.3	2859.3	2864.2	2879.1	2874.1	2978.2	3003.0	2953.5	2943.6
35°	2447.9	2482.7	2517.3	2522.3	2586.8	2591.6	2596.7	2626.4	2695.7	2710.6	2705.6
37.5°	2140.8	2175.4	2185.3	2229.9	2264.7	2299.2	2339.0	2378.6	2438.0	2487.6	2462.9
40°	1868.2	1883.0	1907.8	1927.6	1997.0	1997.0	2016.8	2096.2	2160.6	2200.2	2195.2
42.5°	1640.3	1645.2	1665.0	1699.7	1764.2	1749.2	1764.2	1818.7	1912.7	1917.7	1972.3
45°	1481.7	1476.7	1491.6	1496.5	1536.3	1556.1	1566.0	1605.6	1684.8	1694.7	1699.7
47.5°	1338.0	1333.0	1357.8	1367.7	1382.5	1402.3	1402.3	1407.3	1437.0	1461.9	1442.1
50°	1219.0	1219.0	1219.0	1228.9	1253.8	1248.7	1253.8	1273.6	1288.3	1278.4	1273.6
52.5°	1090.1	1109.9	1124.9	1129.9	1134.8	1134.8	1139.8	1129.9	1124.9	1109.9	1080.2
55°	1001.0	1020.8	1020.8	1020.8	1020.8	1040.6	1015.9	1020.8	1020.8	981.2	941.6
57.5°	911.9	931.7	946.4	926.6	946.4	926.6	916.7	911.9	901.8	862.2	802.8
60°	837.5	847.4	842.4	837.5	847.4	832.5	822.6	802.8	792.9	738.3	698.7
62.5°	753.3	758.1	763.2	753.3	743.4	738.3	718.5	688.8	669.0	624.4	589.6
65°	683.8	669.0	664.0	659.1	649.2	634.3	619.5	584.8	569.8	530.2	495.5
67.5°	579.7	574.9	584.8	569.8	545.2	545.2	530.2	500.5	465.7	441.1	406.3
70°	495.5	490.6	480.7	465.7	460.9	441.1	441.1	406.3	396.4	351.8	322.1
72.5°	406.3	406.3	391.4	376.6	361.7	351.8	346.9	322.1	307.3	282.5	257.6
75°	307.3	307.3	302.3	287.3	277.4	267.5	262.7	242.9	227.9	203.3	188.3
77.5°	218.0	218.0	198.2	188.3	193.2	183.3	173.4	168.5	163.5	148.7	128.9
80°	128.9	123.9	109.1	114.0	109.1	109.1	104.1	99.0	89.1	79.2	69.3
82.5°	34.8	39.6	39.6	39.6	44.7	34.8	34.8	34.8	39.6	39.6	24.9
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°	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7
2.5°	4182.4	4177.4	4182.4	4147.7	4226.9	4167.5	4157.6	4147.7	4182.4	4147.7	4098.2
5°	4271.5	4222.0	4207.1	4192.3	4236.8	4167.5	4152.7	4157.6	4132.7	4068.5	4073.3
7.5°	4301.2	4256.8	4212.1	4118.0	4157.6	4142.8	4103.0	4073.3	4033.7	3979.2	3969.2
10°	4311.1	4261.6	4197.2	4167.5	4108.1	4088.3	4073.3	4023.8	3974.3	3880.1	3855.3
12.5°	4281.4	4222.0	4142.8	4118.0	4073.3	4008.9	3974.3	3924.6	3880.1	3805.8	3751.2
15°	4152.7	4103.0	4078.4	3994.1	3974.3	3934.5	3865.2	3795.9	3731.4	3632.2	3602.5
17.5°	4004.0	3984.2	3959.3	3894.9	3890.0	3850.4	3786.0	3726.4	3642.3	3488.6	3439.0
20°	3850.4	3850.4	3771.0	3746.4	3795.9	3716.5	3667.0	3612.4	3439.0	3364.7	3275.6
22.5°	3736.5	3681.9	3637.3	3597.7	3602.5	3553.0	3483.7	3374.6	3310.1	3221.0	3117.0
25°	3513.4	3533.2	3434.2	3419.2	3434.2	3320.0	3285.5	3196.2	3102.0	3017.8	2938.5
27.5°	3374.6	3320.0	3255.8	3201.2	3201.2	3156.6	3057.6	3037.8	2893.9	2814.7	2715.5
30°	3166.5	3126.9	3072.3	2993.1	2983.2	2948.4	2869.2	2819.5	2671.0	2552.0	2497.5
32.5°	2903.8	2889.0	2844.4	2755.3	2725.6	2685.8	2586.8	2502.5	2433.2	2299.2	2235.0
35°	2715.5	2661.1	2567.0	2492.6	2467.7	2398.4	2319.0	2259.6	2185.3	2066.5	1982.2
37.5°	2433.2	2378.6	2289.3	2200.2	2200.2	2130.9	2021.8	1962.4	1858.3	1788.8	1719.5
40°	2185.3	2116.0	2026.9	1922.8	1907.8	1808.6	1764.2	1665.0	1600.5	1491.6	1481.7
42.5°	1907.8	1843.4	1764.2	1684.8	1625.4	1575.9	1461.9	1387.5	1318.2	1263.7	1248.7
45°	1655.1	1570.8	1501.5	1402.3	1342.9	1283.5	1209.1	1159.6	1105.1	1045.7	1010.9
47.5°	1437.0	1367.7	1268.5	1179.4	1120.0	1090.1	1005.9	951.5	906.8	867.2	842.4
50°	1214.2	1129.9	1075.4	976.2	966.2	896.9	827.6	783.0	758.1	723.6	688.8
52.5°	1045.7	966.2	891.9	817.7	777.9	753.3	688.8	644.2	609.6	584.8	565.0
55°	882.0	812.7	753.3	678.9	654.1	619.5	545.2	535.3	500.5	465.7	441.1
57.5°	758.1	693.7	624.4	574.9	530.2	505.5	445.9	406.3	386.5	356.8	332.0
60°	644.2	574.9	520.3	460.9	441.1	406.3	361.7	327.1	302.3	277.4	252.8
62.5°	540.1	480.7	421.3	371.6	341.9	322.1	287.3	257.6	233.0	213.2	193.2
65°	445.9	391.4	341.9	292.4	277.4	252.8	227.9	203.3	183.3	158.6	138.8
67.5°	366.7	317.2	267.5	233.0	218.0	208.1	178.4	153.6	138.8	123.9	104.1
70°	287.3	252.8	213.2	183.3	168.5	153.6	133.8	119.0	99.0	89.1	74.4
72.5°	223.1	193.2	158.6	133.8	123.9	114.0	94.2	79.2	69.3	59.4	49.5
75°	158.6	133.8	114.0	89.1	84.3	79.2	64.5	54.6	44.7	34.8	29.7
77.5°	109.1	89.1	69.3	59.4	54.6	44.7	39.6	29.7	24.9	19.8	14.9
80°	59.4	44.7	34.8	29.7	24.9	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C80D010 EX4C809040 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7
2.5°	4127.9	4073.3	4088.3	4088.3	4078.4	4078.4	4068.5	4053.5	4058.6	4028.7	3964.4
5°	4083.2	4013.9	4004.0	4013.9	3974.3	3964.4	3944.6	3974.3	3885.0	3919.7	3880.1
7.5°	3954.5	3890.0	3875.1	3909.8	3860.3	3830.4	3825.6	3865.2	3786.0	3746.4	3701.7
10°	3810.6	3786.0	3741.3	3716.5	3701.7	3706.6	3667.0	3617.5	3602.5	3592.6	3553.0
12.5°	3681.9	3627.4	3587.8	3558.1	3548.2	3548.2	3483.7	3473.8	3429.1	3419.2	3359.8
15°	3528.2	3463.9	3439.0	3399.4	3364.7	3384.5	3310.1	3290.3	3275.6	3211.1	3221.0
17.5°	3394.4	3325.1	3265.7	3240.8	3211.1	3181.4	3111.9	3126.9	3092.1	3092.1	3003.0
20°	3221.0	3146.7	3102.0	3052.5	3052.5	3012.9	2963.4	2968.2	2923.6	2879.1	2799.7
22.5°	3037.8	2958.3	2903.8	2884.0	2834.5	2824.6	2765.2	2750.2	2690.8	2695.7	2626.4
25°	2844.4	2765.2	2690.8	2695.7	2651.2	2631.4	2596.7	2527.4	2502.5	2472.8	2453.0
27.5°	2616.5	2561.9	2497.5	2492.6	2408.3	2413.2	2368.7	2348.9	2289.3	2304.3	2259.6
30°	2408.3	2329.1	2269.5	2254.8	2220.0	2210.1	2140.8	2110.9	2121.0	2081.2	2056.6
32.5°	2195.2	2076.4	2051.5	2021.8	2002.0	1977.2	1927.6	1947.4	1902.8	1912.7	1873.1
35°	1912.7	1863.2	1798.7	1798.7	1778.9	1759.1	1724.6	1744.4	1699.7	1679.9	1640.3
37.5°	1674.9	1630.4	1566.0	1585.8	1551.0	1521.3	1491.6	1496.5	1456.8	1452.0	1412.2
40°	1417.2	1392.4	1347.9	1347.9	1323.1	1323.1	1308.1	1293.4	1268.5	1238.8	1194.2
42.5°	1174.4	1154.6	1134.8	1139.8	1105.1	1134.8	1095.2	1120.0	1040.6	1035.8	1005.9
45°	996.0	951.5	956.3	936.5	916.7	926.6	891.9	901.8	857.3	847.4	817.7
47.5°	807.8	792.9	763.2	753.3	753.3	738.3	723.6	718.5	698.7	673.9	634.3
50°	664.0	609.6	599.5	584.8	574.9	574.9	555.1	525.4	530.2	505.5	465.7
52.5°	520.3	475.6	455.8	451.0	431.2	421.3	396.4	376.6	361.7	351.8	327.1
55°	401.3	361.7	337.0	337.0	307.3	307.3	272.6	257.6	237.8	218.0	203.3
57.5°	302.3	282.5	257.6	237.8	227.9	203.3	183.3	158.6	143.7	114.0	94.2
60°	227.9	208.1	183.3	168.5	158.6	133.8	109.1	89.1	54.6	44.7	39.6
62.5°	168.5	148.7	123.9	114.0	104.1	84.3	59.4	29.7	14.9	14.9	14.9
65°	123.9	99.0	79.2	69.3	59.4	44.7	19.8	9.9	5.0	5.0	5.0
67.5°	84.3	64.5	44.7	39.6	29.7	14.9	5.0	5.0	5.0	5.0	5.0
70°	54.6	39.6	19.8	14.9	9.9	5.0	5.0	5.0	5.0	5.0	5.0
72.5°	34.8	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 EX4C809040 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7	4132.7
2.5°	4033.7	3999.0	4018.8	3974.3	3994.1	4028.7	4004.0	4013.9
5°	3894.9	3875.1	3850.4	3786.0	3835.5	3875.1	3855.3	3850.4
7.5°	3746.4	3676.9	3711.6	3691.8	3681.9	3721.5	3676.9	3726.4
10°	3592.6	3543.1	3538.3	3503.5	3503.5	3533.2	3538.3	3508.4
12.5°	3364.7	3340.0	3340.0	3335.0	3329.9	3359.8	3364.7	3349.9
15°	3201.2	3191.3	3166.5	3161.6	3131.9	3176.4	3181.4	3176.4
17.5°	3003.0	3007.9	2983.2	2983.2	3003.0	3017.8	2978.2	3017.8
20°	2869.2	2844.4	2834.5	2789.8	2814.7	2839.5	2839.5	2844.4
22.5°	2675.9	2636.3	2651.2	2626.4	2611.4	2646.2	2646.2	2661.1
25°	2457.8	2457.8	2467.7	2453.0	2462.9	2482.7	2467.7	2502.5
27.5°	2249.7	2269.5	2269.5	2249.7	2259.6	2319.0	2343.9	2304.3
30°	2056.6	2061.4	2076.4	2066.5	2096.2	2116.0	2110.9	2140.8
32.5°	1838.5	1863.2	1873.1	1858.3	1868.2	1912.7	1888.0	1883.0
35°	1670.0	1625.4	1620.5	1625.4	1645.2	1655.1	1645.2	1679.9
37.5°	1427.1	1412.2	1392.4	1397.4	1412.2	1432.2	1442.1	1466.7
40°	1194.2	1174.4	1174.4	1169.5	1154.6	1209.1	1209.1	1209.1
42.5°	991.1	986.1	961.4	961.4	981.2	996.0	986.1	1020.8
45°	812.7	792.9	777.9	777.9	792.9	792.9	807.8	802.8
47.5°	639.3	619.5	624.4	609.6	624.4	644.2	619.5	624.4
50°	480.7	480.7	470.8	480.7	475.6	480.7	470.8	460.9
52.5°	327.1	371.6	376.6	356.8	312.2	272.6	247.7	267.5
55°	188.3	168.5	168.5	163.5	153.6	148.7	133.8	148.7
57.5°	94.2	84.3	84.3	84.3	79.2	74.4	64.5	64.5
60°	39.6	34.8	34.8	29.7	24.9	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)