

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: **LD4C70D010 EX4C709040 4LBSQLWWLI**

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: LD4C70D010 EX4C709040 4LBSQLWWLI
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

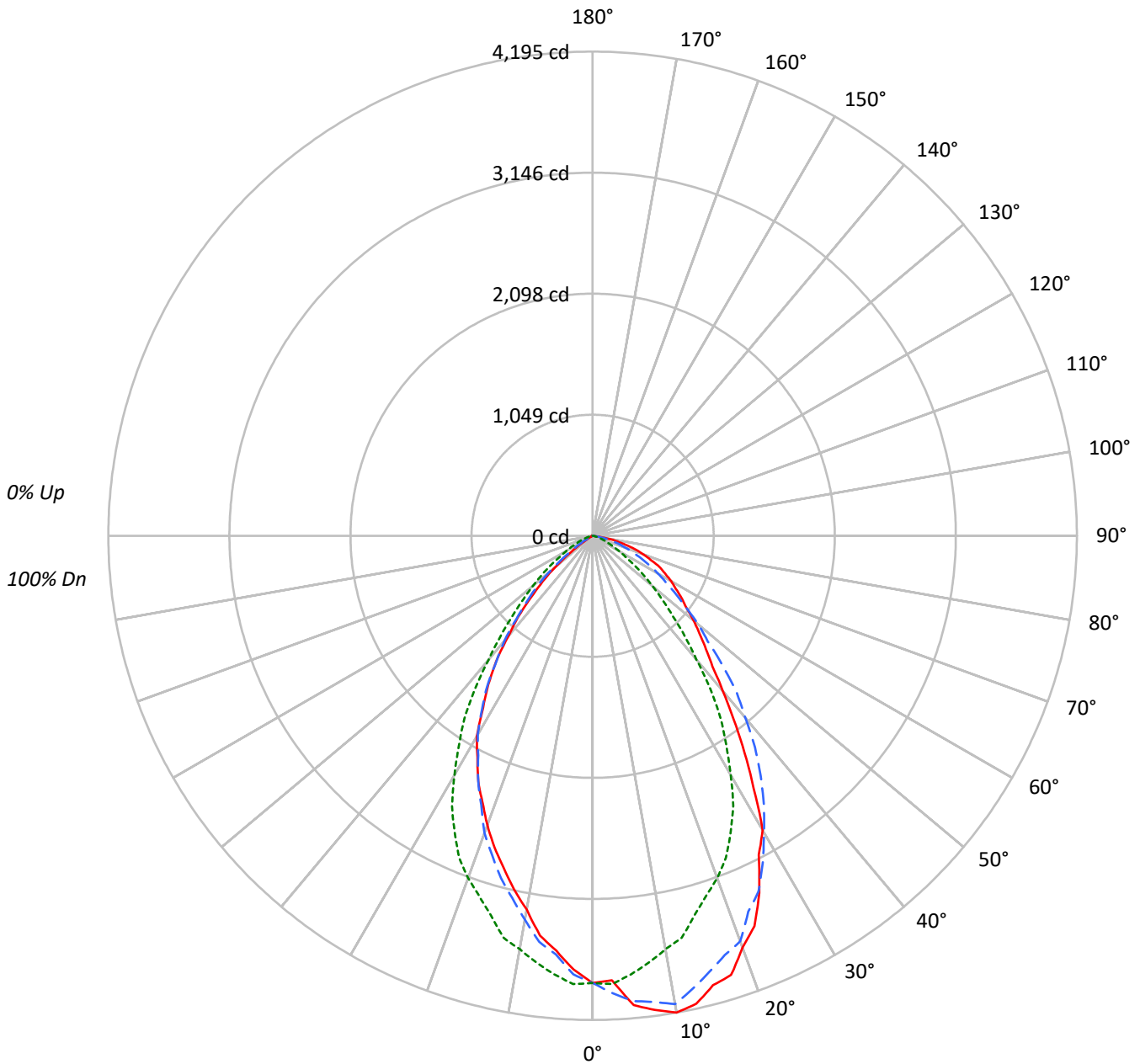
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5553.0 lumens
Efficiency: N/A
Efficacy: 71.2 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): 78
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	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°	373788	373788	373788
5°	395469	369385	349588
10°	410976	356354	322208
15°	402757	340105	297420
20°	389686	323857	273779
25°	363488	301165	249743
30°	328131	266529	223578
35°	270284	228162	185486
40°	220576	176114	142760
45°	189524	133754	102683
50°	171531	101820	64848
55°	157844	73446	23450
60°	151507	50194	3589
65°	146325	33950	1073
70°	131014	23557	1326
75°	107405	12153	0
80°	67123	5168	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.0	6.5
10°-20°	977.9	17.6
20°-30°	1305.8	23.5
30°-40°	1239.6	22.3
40°-50°	856.8	15.4
50°-60°	473.4	8.5
60°-70°	235.1	4.2
70°-80°	92.6	1.7
80°-90°	8.8	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°	2646.6	47.7
0°-40°	3886.2	70.0
0°-60°	5216.5	93.9
0°-90°	5553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5553.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3874	3874	3874	3874	3874	
5°	4083	4046	3814	3642	3609	391
15°	4032	3911	3405	3070	2977	1141
25°	3414	3400	2829	2346	2346	1556
35°	2295	2536	1937	1593	1575	1438
45°	1389	1593	980	804	752	1083
55°	938	883	437	223	139	845
65°	641	464	149	5	5	622
75°	288	176	33	0	0	307
85°	0	5	0	0	0	27
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°	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9
2.5°	3855.3	3962.2	3971.4	3962.2	3976.2	3971.4	3994.7	3971.4	3999.5	3957.6	3966.9
5°	4083.0	4041.1	4129.4	4083.0	4083.0	4078.5	4064.4	4059.7	4078.5	4018.0	4045.9
7.5°	4143.4	4203.8	4282.8	4185.3	4189.8	4189.8	4162.0	4152.7	4152.7	4041.1	4073.7
10°	4194.6	4157.2	4199.1	4162.0	4194.6	4189.8	4208.4	4148.0	4189.8	4124.9	4120.1
12.5°	4152.7	4138.7	4194.6	4134.1	4115.6	4120.1	4097.0	4083.0	4097.0	4022.6	4018.0
15°	4031.9	4045.9	4129.4	4064.4	4055.2	4045.9	4018.0	3971.4	4008.8	3906.5	3911.2
17.5°	3990.2	3966.9	3980.9	3925.0	3939.1	3929.8	3925.0	3883.4	3873.9	3808.9	3808.9
20°	3795.1	3846.1	3846.1	3808.9	3808.9	3804.4	3744.0	3781.1	3739.2	3720.7	3739.2
22.5°	3660.3	3665.0	3665.0	3632.4	3637.1	3618.6	3586.0	3562.7	3586.0	3562.7	3525.6
25°	3414.2	3423.5	3479.2	3418.8	3409.5	3428.0	3400.2	3386.2	3381.6	3325.9	3400.2
27.5°	3116.8	3209.7	3205.1	3181.8	3209.7	3172.5	3158.7	3163.3	3177.3	3172.5	3191.1
30°	2945.1	2958.9	2972.9	2954.3	2958.9	2945.1	2945.1	2949.6	2986.7	2972.9	2968.2
32.5°	2596.6	2643.0	2680.3	2680.3	2684.8	2698.8	2694.1	2791.6	2814.9	2768.5	2759.2
35°	2294.6	2327.2	2359.6	2364.3	2424.8	2429.3	2434.0	2461.9	2526.9	2540.9	2536.1
37.5°	2006.7	2039.1	2048.4	2090.3	2122.8	2155.2	2192.5	2229.7	2285.4	2331.8	2308.7
40°	1751.2	1765.1	1788.4	1806.9	1871.9	1871.9	1890.5	1964.9	2025.3	2062.4	2057.7
42.5°	1537.6	1542.1	1560.7	1593.3	1653.7	1639.7	1653.7	1704.8	1792.9	1797.6	1848.8
45°	1388.9	1384.2	1398.2	1402.7	1440.0	1458.6	1467.9	1505.0	1579.3	1588.5	1593.3
47.5°	1254.2	1249.5	1272.8	1282.1	1295.9	1314.5	1314.5	1319.2	1347.0	1370.3	1351.8
50°	1142.7	1142.7	1142.7	1152.0	1175.3	1170.5	1175.3	1193.8	1207.6	1198.4	1193.8
52.5°	1021.8	1040.4	1054.4	1059.1	1063.7	1063.7	1068.4	1059.1	1054.4	1040.4	1012.6
55°	938.3	956.9	956.9	956.9	956.9	975.4	952.3	956.9	956.9	919.7	882.6
57.5°	854.8	873.3	887.2	868.6	887.2	868.6	859.3	854.8	845.3	808.2	752.5
60°	785.1	794.4	789.6	785.1	794.4	780.3	771.1	752.5	743.2	692.1	655.0
62.5°	706.1	710.6	715.4	706.1	696.8	692.1	673.5	645.7	627.1	585.3	552.7
65°	640.9	627.1	622.4	617.8	608.6	594.5	580.7	548.1	534.1	497.0	464.4
67.5°	543.4	538.9	548.1	534.1	511.0	511.0	497.0	469.2	436.6	413.5	380.9
70°	464.4	459.9	450.6	436.6	432.0	413.5	413.5	380.9	371.6	329.8	301.9
72.5°	380.9	380.9	366.9	353.0	339.0	329.8	325.2	301.9	288.1	264.8	241.5
75°	288.1	288.1	283.3	269.3	260.1	250.8	246.2	227.7	213.6	190.5	176.5
77.5°	204.4	204.4	185.8	176.5	181.1	171.8	162.5	158.0	153.2	139.4	120.8
80°	120.8	116.1	102.3	106.8	102.3	102.3	97.5	92.8	83.5	74.2	65.0
82.5°	32.6	37.1	37.1	37.1	41.9	32.6	32.6	32.6	37.1	37.1	23.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.7	4.7
87.5°	4.7	9.3	18.6	18.6	18.6	18.6	18.6	14.0	14.0	14.0	9.3
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°	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9
2.5°	3920.5	3915.8	3920.5	3887.9	3962.2	3906.5	3897.2	3887.9	3920.5	3887.9	3841.5
5°	4004.0	3957.6	3943.6	3929.8	3971.4	3906.5	3892.6	3897.2	3873.9	3813.7	3818.2
7.5°	4031.9	3990.2	3948.3	3860.1	3897.2	3883.4	3846.1	3818.2	3781.1	3730.0	3720.7
10°	4041.1	3994.7	3934.3	3906.5	3850.8	3832.2	3818.2	3771.8	3725.4	3637.1	3613.8
12.5°	4013.3	3957.6	3883.4	3860.1	3818.2	3757.8	3725.4	3678.8	3637.1	3567.4	3516.3
15°	3892.6	3846.1	3822.9	3744.0	3725.4	3688.1	3623.1	3558.2	3497.7	3404.7	3376.9
17.5°	3753.2	3734.7	3711.4	3651.0	3646.4	3609.3	3548.9	3493.0	3414.2	3270.1	3223.7
20°	3609.3	3609.3	3534.9	3511.8	3558.2	3483.7	3437.3	3386.2	3223.7	3154.0	3070.4
22.5°	3502.5	3451.3	3409.5	3372.4	3376.9	3330.5	3265.5	3163.3	3102.8	3019.3	2921.8
25°	3293.4	3311.9	3219.1	3205.1	3219.1	3112.1	3079.7	2996.0	2907.7	2828.8	2754.5
27.5°	3163.3	3112.1	3051.9	3000.7	3000.7	2958.9	2866.1	2847.5	2712.7	2638.4	2545.4
30°	2968.2	2931.0	2879.9	2805.7	2796.4	2763.8	2689.5	2643.0	2503.7	2392.2	2341.0
32.5°	2721.9	2708.1	2666.3	2582.7	2554.9	2517.6	2424.8	2345.8	2280.8	2155.2	2095.0
35°	2545.4	2494.5	2406.2	2336.5	2313.2	2248.2	2173.8	2118.1	2048.4	1937.0	1858.1
37.5°	2280.8	2229.7	2146.0	2062.4	2062.4	1997.5	1895.2	1839.5	1742.0	1676.8	1611.8
40°	2048.4	1983.4	1899.9	1802.4	1788.4	1695.4	1653.7	1560.7	1500.3	1398.2	1388.9
42.5°	1788.4	1727.9	1653.7	1579.3	1523.6	1477.2	1370.3	1300.6	1235.7	1184.5	1170.5
45°	1551.4	1472.4	1407.5	1314.5	1258.8	1203.1	1133.4	1087.0	1035.9	980.2	947.6
47.5°	1347.0	1282.1	1189.1	1105.6	1049.9	1021.8	942.9	891.9	850.0	812.9	789.6
50°	1138.1	1059.1	1008.0	915.0	905.7	840.8	775.8	733.9	710.6	678.3	645.7
52.5°	980.2	905.7	836.0	766.5	729.2	706.1	645.7	603.8	571.4	548.1	529.6
55°	826.8	761.8	706.1	636.4	613.1	580.7	511.0	501.7	469.2	436.6	413.5
57.5°	710.6	650.2	585.3	538.9	497.0	473.9	418.0	380.9	362.3	334.5	311.2
60°	603.8	538.9	487.7	432.0	413.5	380.9	339.0	306.6	283.3	260.1	236.9
62.5°	506.3	450.6	394.9	348.3	320.5	301.9	269.3	241.5	218.4	199.8	181.1
65°	418.0	366.9	320.5	274.1	260.1	236.9	213.6	190.5	171.8	148.7	130.1
67.5°	343.8	297.4	250.8	218.4	204.4	195.1	167.2	143.9	130.1	116.1	97.5
70°	269.3	236.9	199.8	171.8	158.0	143.9	125.4	111.6	92.8	83.5	69.7
72.5°	209.1	181.1	148.7	125.4	116.1	106.8	88.3	74.2	65.0	55.7	46.4
75°	148.7	125.4	106.8	83.5	79.0	74.2	60.4	51.1	41.9	32.6	27.8
77.5°	102.3	83.5	65.0	55.7	51.1	41.9	37.1	27.8	23.3	18.6	14.0
80°	55.7	41.9	32.6	27.8	23.3	18.6	18.6	14.0	9.3	9.3	4.7
82.5°	18.6	14.0	9.3	4.7	4.7	4.7	4.7	4.7	4.7	0.0	4.7
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°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	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°	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9
2.5°	3869.4	3818.2	3832.2	3832.2	3822.9	3822.9	3813.7	3799.7	3804.4	3776.4	3716.1
5°	3827.5	3762.5	3753.2	3762.5	3725.4	3716.1	3697.6	3725.4	3641.7	3674.3	3637.1
7.5°	3706.8	3646.4	3632.4	3665.0	3618.6	3590.6	3586.0	3623.1	3548.9	3511.8	3469.9
10°	3572.0	3548.9	3507.0	3483.7	3469.9	3474.4	3437.3	3390.9	3376.9	3367.6	3330.5
12.5°	3451.3	3400.2	3363.1	3335.2	3325.9	3325.9	3265.5	3256.2	3214.4	3205.1	3149.4
15°	3307.2	3247.0	3223.7	3186.5	3154.0	3172.5	3102.8	3084.3	3070.4	3010.0	3019.3
17.5°	3181.8	3116.8	3061.2	3037.9	3010.0	2982.2	2917.0	2931.0	2898.5	2898.5	2814.9
20°	3019.3	2949.6	2907.7	2861.3	2861.3	2824.2	2777.8	2782.4	2740.5	2698.8	2624.4
22.5°	2847.5	2773.1	2721.9	2703.4	2657.0	2647.7	2592.0	2578.0	2522.3	2526.9	2461.9
25°	2666.3	2592.0	2522.3	2526.9	2485.2	2466.6	2434.0	2369.1	2345.8	2317.9	2299.4
27.5°	2452.6	2401.5	2341.0	2336.5	2257.5	2262.1	2220.4	2201.8	2146.0	2160.0	2118.1
30°	2257.5	2183.3	2127.4	2113.6	2081.0	2071.7	2006.7	1978.7	1988.2	1950.9	1927.8
32.5°	2057.7	1946.3	1923.0	1895.2	1876.6	1853.3	1806.9	1825.5	1783.6	1792.9	1755.8
35°	1792.9	1746.5	1686.1	1686.1	1667.5	1649.0	1616.6	1635.1	1593.3	1574.7	1537.6
37.5°	1570.0	1528.3	1467.9	1486.4	1453.9	1426.0	1398.2	1402.7	1365.6	1361.1	1323.8
40°	1328.5	1305.2	1263.5	1263.5	1240.2	1240.2	1226.2	1212.4	1189.1	1161.2	1119.4
42.5°	1100.8	1082.3	1063.7	1068.4	1035.9	1063.7	1026.6	1049.9	975.4	970.9	942.9
45°	933.6	891.9	896.5	877.9	859.3	868.6	836.0	845.3	803.6	794.4	766.5
47.5°	757.2	743.2	715.4	706.1	706.1	692.1	678.3	673.5	655.0	631.7	594.5
50°	622.4	571.4	562.0	548.1	538.9	538.9	520.3	492.4	497.0	473.9	436.6
52.5°	487.7	445.9	427.3	422.7	404.2	394.9	371.6	353.0	339.0	329.8	306.6
55°	376.2	339.0	315.9	315.9	288.1	288.1	255.5	241.5	222.9	204.4	190.5
57.5°	283.3	264.8	241.5	222.9	213.6	190.5	171.8	148.7	134.7	106.8	88.3
60°	213.6	195.1	171.8	158.0	148.7	125.4	102.3	83.5	51.1	41.9	37.1
62.5°	158.0	139.4	116.1	106.8	97.5	79.0	55.7	27.8	14.0	14.0	14.0
65°	116.1	92.8	74.2	65.0	55.7	41.9	18.6	9.3	4.7	4.7	4.7
67.5°	79.0	60.4	41.9	37.1	27.8	14.0	4.7	4.7	4.7	4.7	4.7
70°	51.1	37.1	18.6	14.0	9.3	4.7	4.7	4.7	4.7	4.7	4.7
72.5°	32.6	18.6	9.3	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	18.6	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	9.3	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	4.7	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	4.7	4.7	4.7
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: LD4C70D010 EX4C709040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9	3873.9
2.5°	3781.1	3748.5	3767.1	3725.4	3744.0	3776.4	3753.2	3762.5
5°	3651.0	3632.4	3609.3	3548.9	3595.3	3632.4	3613.8	3609.3
7.5°	3511.8	3446.6	3479.2	3460.6	3451.3	3488.5	3446.6	3493.0
10°	3367.6	3321.2	3316.7	3284.1	3284.1	3311.9	3316.7	3288.6
12.5°	3154.0	3130.9	3130.9	3126.1	3121.4	3149.4	3154.0	3140.1
15°	3000.7	2991.5	2968.2	2963.6	2935.8	2977.4	2982.2	2977.4
17.5°	2814.9	2819.5	2796.4	2796.4	2814.9	2828.8	2791.6	2828.8
20°	2689.5	2666.3	2657.0	2615.1	2638.4	2661.7	2661.7	2666.3
22.5°	2508.3	2471.2	2485.2	2461.9	2447.9	2480.4	2480.4	2494.5
25°	2303.9	2303.9	2313.2	2299.4	2308.7	2327.2	2313.2	2345.8
27.5°	2108.8	2127.4	2127.4	2108.8	2118.1	2173.8	2197.1	2160.0
30°	1927.8	1932.3	1946.3	1937.0	1964.9	1983.4	1978.7	2006.7
32.5°	1723.4	1746.5	1755.8	1742.0	1751.2	1792.9	1769.8	1765.1
35°	1565.4	1523.6	1519.0	1523.6	1542.1	1551.4	1542.1	1574.7
37.5°	1337.8	1323.8	1305.2	1309.9	1323.8	1342.5	1351.8	1374.9
40°	1119.4	1100.8	1100.8	1096.3	1082.3	1133.4	1133.4	1133.4
42.5°	929.0	924.3	901.2	901.2	919.7	933.6	924.3	956.9
45°	761.8	743.2	729.2	729.2	743.2	743.2	757.2	752.5
47.5°	599.3	580.7	585.3	571.4	585.3	603.8	580.7	585.3
50°	450.6	450.6	441.3	450.6	445.9	450.6	441.3	432.0
52.5°	306.6	348.3	353.0	334.5	292.6	255.5	232.2	250.8
55°	176.5	158.0	158.0	153.2	143.9	139.4	125.4	139.4
57.5°	88.3	79.0	79.0	79.0	74.2	69.7	60.4	60.4
60°	37.1	32.6	32.6	27.8	23.3	18.6	14.0	18.6
62.5°	14.0	9.3	9.3	9.3	9.3	9.3	9.3	9.3
65°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
67.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
70°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
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)