

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: **LD4C65D010 EX4C659027 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: LD4C65D010 EX4C659027 4LBSQLWWLI
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

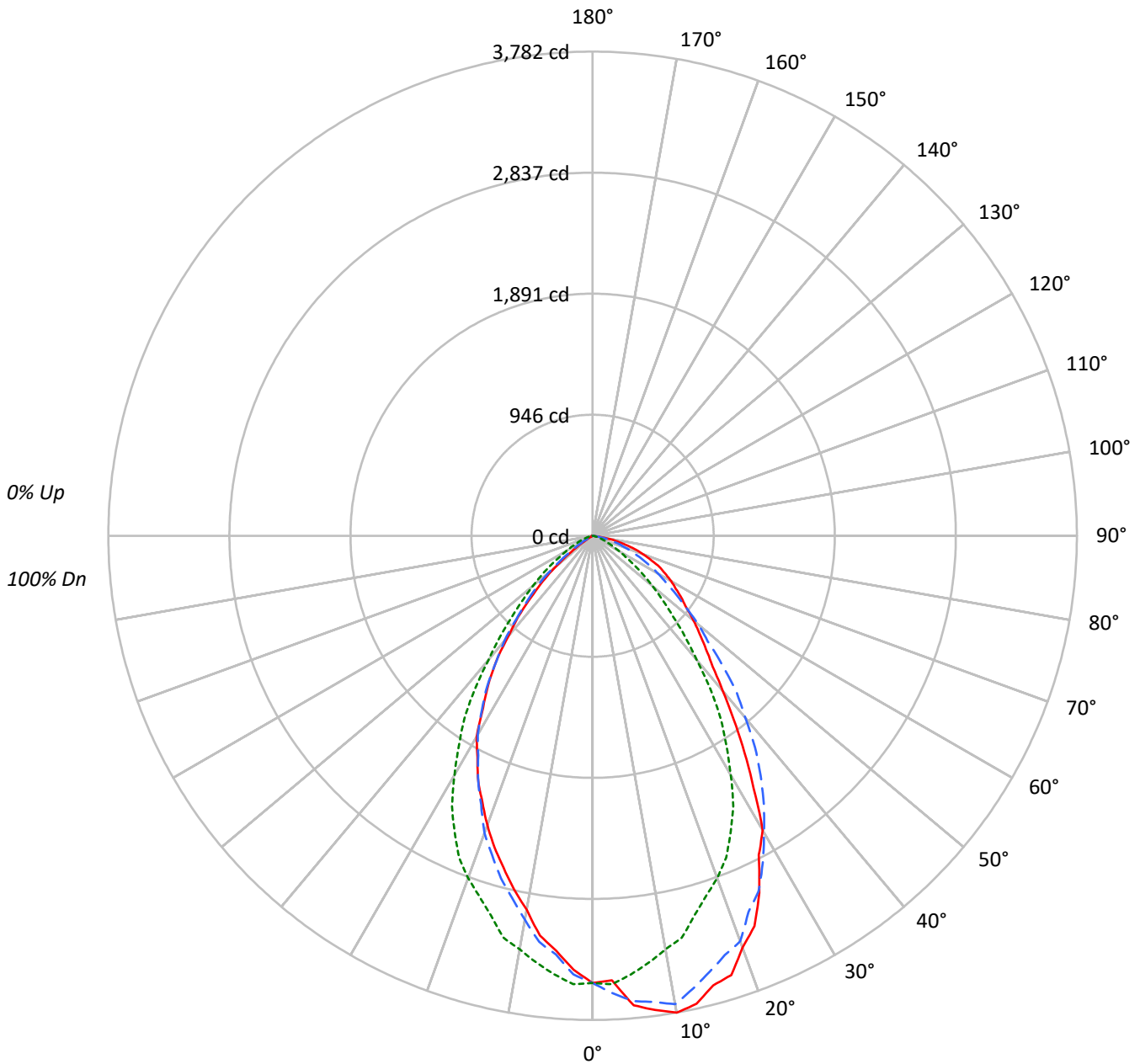
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5007.0 lumens
Efficiency: N/A
Efficacy: 69.2 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): 72.4
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	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					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72					72			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58					58			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41					41			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	337036	337036	337036
5°	356581	333064	315213
10°	370560	321317	290532
15°	363150	306670	268182
20°	351365	292015	246856
25°	327749	271546	225181
30°	295865	240324	201596
35°	243710	205734	167252
40°	198887	158794	128728
45°	170884	120600	92585
50°	154658	91807	58483
55°	142334	66229	21146
60°	136609	45253	3223
65°	131942	30617	982
70°	118150	21243	1213
75°	96855	10960	0
80°	60567	4668	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.3	6.5
10°-20°	881.7	17.6
20°-30°	1177.4	23.5
30°-40°	1117.7	22.3
40°-50°	772.6	15.4
50°-60°	426.9	8.5
60°-70°	212.0	4.2
70°-80°	83.5	1.7
80°-90°	8.0	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°	2386.4	47.7
0°-40°	3504.1	70.0
0°-60°	4703.5	93.9
0°-90°	5007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5007.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3493	3493	3493	3493	3493	
5°	3682	3648	3439	3284	3254	352
15°	3635	3527	3070	2768	2685	1028
25°	3078	3066	2551	2115	2115	1403
35°	2069	2287	1747	1437	1420	1296
45°	1252	1437	884	725	678	977
55°	846	796	394	201	126	762
65°	578	419	134	4	4	561
75°	260	159	29	0	0	277
85°	0	4	0	0	0	24
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°	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0
2.5°	3476.3	3572.6	3581.0	3572.6	3585.2	3581.0	3602.0	3581.0	3606.2	3568.5	3576.8
5°	3681.5	3643.8	3723.4	3681.5	3681.5	3677.4	3664.8	3660.5	3677.4	3623.0	3648.1
7.5°	3736.0	3790.5	3861.7	3773.8	3777.9	3777.9	3752.8	3744.4	3744.4	3643.8	3673.2
10°	3782.1	3748.5	3786.2	3752.8	3782.1	3777.9	3794.6	3740.1	3777.9	3719.3	3715.0
12.5°	3744.4	3731.7	3782.1	3727.6	3710.9	3715.0	3694.2	3681.5	3694.2	3627.1	3623.0
15°	3635.4	3648.1	3723.4	3664.8	3656.4	3648.1	3623.0	3581.0	3614.6	3522.4	3526.6
17.5°	3597.9	3576.8	3589.5	3539.1	3551.7	3543.4	3539.1	3501.5	3493.0	3434.4	3434.4
20°	3421.9	3467.9	3467.9	3434.4	3434.4	3430.3	3375.8	3409.3	3371.6	3354.8	3371.6
22.5°	3300.4	3304.6	3304.6	3275.2	3279.5	3262.8	3233.4	3212.4	3233.4	3212.4	3178.9
25°	3078.5	3086.9	3137.1	3082.6	3074.2	3091.0	3065.9	3053.2	3049.1	2998.9	3065.9
27.5°	2810.4	2894.1	2890.0	2869.0	2894.1	2860.6	2848.1	2852.2	2864.9	2860.6	2877.3
30°	2655.5	2667.9	2680.6	2663.8	2667.9	2655.5	2655.5	2659.6	2693.1	2680.6	2676.3
32.5°	2341.2	2383.1	2416.7	2416.7	2420.8	2433.5	2429.2	2517.2	2538.2	2496.3	2487.9
35°	2069.0	2098.4	2127.6	2131.9	2186.3	2190.4	2194.7	2219.8	2278.4	2291.0	2286.8
37.5°	1809.4	1838.6	1847.0	1884.7	1914.1	1943.3	1977.0	2010.4	2060.7	2102.5	2081.7
40°	1579.0	1591.5	1612.5	1629.3	1687.8	1687.8	1704.6	1771.7	1826.2	1859.6	1855.4
42.5°	1386.4	1390.5	1407.2	1436.6	1491.1	1478.5	1491.1	1537.2	1616.6	1620.9	1667.0
45°	1252.3	1248.1	1260.7	1264.8	1298.4	1315.2	1323.6	1357.0	1424.0	1432.3	1436.6
47.5°	1130.9	1126.6	1147.7	1156.0	1168.5	1185.2	1185.2	1189.5	1214.6	1235.6	1218.9
50°	1030.3	1030.3	1030.3	1038.7	1059.7	1055.4	1059.7	1076.4	1088.9	1080.5	1076.4
52.5°	921.4	938.1	950.7	955.0	959.1	959.1	963.4	955.0	950.7	938.1	913.0
55°	846.1	862.8	862.8	862.8	862.8	879.5	858.7	862.8	862.8	829.3	795.8
57.5°	770.7	787.5	799.9	783.2	799.9	783.2	774.8	770.7	762.2	728.7	678.5
60°	707.9	716.3	712.0	707.9	716.3	703.6	695.3	678.5	670.1	624.0	590.6
62.5°	636.7	640.8	645.0	636.7	628.3	624.0	607.3	582.2	565.5	527.7	498.3
65°	577.9	565.5	561.2	557.1	548.7	536.1	523.6	494.2	481.6	448.1	418.8
67.5°	490.0	485.9	494.2	481.6	460.8	460.8	448.1	423.0	393.7	372.8	343.4
70°	418.8	414.7	406.3	393.7	389.6	372.8	372.8	343.4	335.1	297.3	272.2
72.5°	343.4	343.4	330.8	318.3	305.7	297.3	293.2	272.2	259.8	238.8	217.7
75°	259.8	259.8	255.5	242.9	234.5	226.1	222.0	205.3	192.6	171.8	159.2
77.5°	184.3	184.3	167.5	159.2	163.3	154.9	146.5	142.4	138.2	125.7	109.0
80°	109.0	104.7	92.2	96.3	92.2	92.2	88.0	83.7	75.3	66.9	58.6
82.5°	29.4	33.5	33.5	33.5	37.7	29.4	29.4	29.4	33.5	33.5	21.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3
87.5°	4.3	8.4	16.7	16.7	16.7	16.7	16.7	12.6	12.6	12.6	8.4
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°	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0
2.5°	3535.0	3530.7	3535.0	3505.6	3572.6	3522.4	3514.0	3505.6	3535.0	3505.6	3463.8
5°	3610.3	3568.5	3555.8	3543.4	3581.0	3522.4	3509.9	3514.0	3493.0	3438.7	3442.8
7.5°	3635.4	3597.9	3560.1	3480.5	3514.0	3501.5	3467.9	3442.8	3409.3	3363.2	3354.8
10°	3643.8	3602.0	3547.5	3522.4	3472.2	3455.4	3442.8	3400.9	3359.1	3279.5	3258.5
12.5°	3618.7	3568.5	3501.5	3480.5	3442.8	3388.3	3359.1	3317.1	3279.5	3216.7	3170.6
15°	3509.9	3467.9	3447.1	3375.8	3359.1	3325.5	3266.9	3208.3	3153.8	3070.0	3044.9
17.5°	3384.2	3367.5	3346.5	3292.0	3287.9	3254.4	3199.9	3149.6	3078.5	2948.5	2906.7
20°	3254.4	3254.4	3187.3	3166.5	3208.3	3141.2	3099.3	3053.2	2906.7	2843.9	2768.5
22.5°	3158.1	3112.0	3074.2	3040.8	3044.9	3003.0	2944.4	2852.2	2797.7	2722.4	2634.5
25°	2969.5	2986.3	2902.6	2890.0	2902.6	2806.1	2776.9	2701.4	2621.8	2550.6	2483.7
27.5°	2852.2	2806.1	2751.8	2705.7	2705.7	2667.9	2584.3	2567.5	2445.9	2379.0	2295.1
30°	2676.3	2642.8	2596.7	2529.8	2521.4	2492.0	2425.1	2383.1	2257.6	2157.0	2110.9
32.5°	2454.3	2441.8	2404.1	2328.8	2303.7	2270.0	2186.3	2115.1	2056.5	1943.3	1889.0
35°	2295.1	2249.2	2169.6	2106.8	2085.8	2027.2	1960.1	1909.9	1847.0	1746.6	1675.4
37.5°	2056.5	2010.4	1935.0	1859.6	1859.6	1801.1	1708.8	1658.6	1570.7	1511.9	1453.4
40°	1847.0	1788.4	1713.1	1625.2	1612.5	1528.7	1491.1	1407.2	1352.8	1260.7	1252.3
42.5°	1612.5	1558.0	1491.1	1424.0	1373.8	1331.9	1235.6	1172.8	1114.2	1068.1	1055.4
45°	1398.9	1327.7	1269.1	1185.2	1135.0	1084.8	1022.0	980.1	934.0	883.8	854.4
47.5°	1214.6	1156.0	1072.2	996.9	946.6	921.4	850.2	804.2	766.5	733.0	712.0
50°	1026.2	955.0	908.9	825.0	816.7	758.1	699.5	661.8	640.8	611.6	582.2
52.5°	883.8	816.7	753.8	691.1	657.5	636.7	582.2	544.5	515.2	494.2	477.5
55°	745.5	686.9	636.7	573.8	552.8	523.6	460.8	452.4	423.0	393.7	372.8
57.5°	640.8	586.3	527.7	485.9	448.1	427.3	376.9	343.4	326.7	301.6	280.6
60°	544.5	485.9	439.8	389.6	372.8	343.4	305.7	276.5	255.5	234.5	213.6
62.5°	456.5	406.3	356.1	314.1	289.0	272.2	242.9	217.7	196.9	180.2	163.3
65°	376.9	330.8	289.0	247.1	234.5	213.6	192.6	171.8	154.9	134.1	117.3
67.5°	310.0	268.1	226.1	196.9	184.3	175.9	150.8	129.8	117.3	104.7	88.0
70°	242.9	213.6	180.2	154.9	142.4	129.8	113.1	100.6	83.7	75.3	62.8
72.5°	188.5	163.3	134.1	113.1	104.7	96.3	79.6	66.9	58.6	50.2	41.8
75°	134.1	113.1	96.3	75.3	71.2	66.9	54.5	46.1	37.7	29.4	25.1
77.5°	92.2	75.3	58.6	50.2	46.1	37.7	33.5	25.1	21.0	16.7	12.6
80°	50.2	37.7	29.4	25.1	21.0	16.7	16.7	12.6	8.4	8.4	4.3
82.5°	16.7	12.6	8.4	4.3	4.3	4.3	4.3	4.3	4.3	0.0	4.3
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°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	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°	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0
2.5°	3488.9	3442.8	3455.4	3455.4	3447.1	3447.1	3438.7	3426.0	3430.3	3405.0	3350.7
5°	3451.2	3392.6	3384.2	3392.6	3359.1	3350.7	3334.0	3359.1	3283.6	3313.0	3279.5
7.5°	3342.4	3287.9	3275.2	3304.6	3262.8	3237.5	3233.4	3266.9	3199.9	3166.5	3128.7
10°	3220.8	3199.9	3162.2	3141.2	3128.7	3132.8	3099.3	3057.5	3044.9	3036.5	3003.0
12.5°	3112.0	3065.9	3032.4	3007.3	2998.9	2998.9	2944.4	2936.1	2898.3	2890.0	2839.8
15°	2982.0	2927.7	2906.7	2873.2	2843.9	2860.6	2797.7	2781.0	2768.5	2714.1	2722.4
17.5°	2869.0	2810.4	2760.2	2739.2	2714.1	2689.0	2630.2	2642.8	2613.5	2613.5	2538.2
20°	2722.4	2659.6	2621.8	2580.0	2580.0	2546.5	2504.7	2508.8	2471.0	2433.5	2366.4
22.5°	2567.5	2500.4	2454.3	2437.6	2395.7	2387.4	2337.1	2324.5	2274.3	2278.4	2219.8
25°	2404.1	2337.1	2274.3	2278.4	2240.8	2224.1	2194.7	2136.1	2115.1	2090.0	2073.3
27.5°	2211.4	2165.3	2110.9	2106.8	2035.5	2039.6	2002.1	1985.3	1935.0	1947.6	1909.9
30°	2035.5	1968.6	1918.2	1905.7	1876.4	1868.0	1809.4	1784.2	1792.7	1759.1	1738.2
32.5°	1855.4	1754.9	1733.9	1708.8	1692.1	1671.1	1629.3	1646.0	1608.3	1616.6	1583.1
35°	1616.6	1574.8	1520.3	1520.3	1503.6	1486.8	1457.6	1474.4	1436.6	1419.9	1386.4
37.5°	1415.6	1378.0	1323.6	1340.3	1310.9	1285.8	1260.7	1264.8	1231.3	1227.2	1193.6
40°	1197.9	1176.9	1139.3	1139.3	1118.3	1118.3	1105.6	1093.2	1072.2	1047.1	1009.3
42.5°	992.6	975.8	959.1	963.4	934.0	959.1	925.6	946.6	879.5	875.4	850.2
45°	841.8	804.2	808.3	791.6	774.8	783.2	753.8	762.2	724.6	716.3	691.1
47.5°	682.8	670.1	645.0	636.7	636.7	624.0	611.6	607.3	590.6	569.6	536.1
50°	561.2	515.2	506.7	494.2	485.9	485.9	469.1	444.0	448.1	427.3	393.7
52.5°	439.8	402.0	385.3	381.2	364.4	356.1	335.1	318.3	305.7	297.3	276.5
55°	339.2	305.7	284.9	284.9	259.8	259.8	230.4	217.7	201.0	184.3	171.8
57.5°	255.5	238.8	217.7	201.0	192.6	171.8	154.9	134.1	121.4	96.3	79.6
60°	192.6	175.9	154.9	142.4	134.1	113.1	92.2	75.3	46.1	37.7	33.5
62.5°	142.4	125.7	104.7	96.3	88.0	71.2	50.2	25.1	12.6	12.6	12.6
65°	104.7	83.7	66.9	58.6	50.2	37.7	16.7	8.4	4.3	4.3	4.3
67.5°	71.2	54.5	37.7	33.5	25.1	12.6	4.3	4.3	4.3	4.3	4.3
70°	46.1	33.5	16.7	12.6	8.4	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	29.4	16.7	8.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	16.7	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	8.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	4.3	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	4.3	4.3	4.3
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: LD4C65D010 EX4C659027 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0	3493.0
2.5°	3409.3	3379.9	3396.7	3359.1	3375.8	3405.0	3384.2	3392.6
5°	3292.0	3275.2	3254.4	3199.9	3241.8	3275.2	3258.5	3254.4
7.5°	3166.5	3107.7	3137.1	3120.3	3112.0	3145.5	3107.7	3149.6
10°	3036.5	2994.7	2990.6	2961.2	2961.2	2986.3	2990.6	2965.3
12.5°	2843.9	2823.0	2823.0	2818.7	2814.5	2839.8	2843.9	2831.4
15°	2705.7	2697.3	2676.3	2672.2	2647.1	2684.7	2689.0	2684.7
17.5°	2538.2	2542.3	2521.4	2521.4	2538.2	2550.6	2517.2	2550.6
20°	2425.1	2404.1	2395.7	2358.0	2379.0	2400.0	2400.0	2404.1
22.5°	2261.7	2228.2	2240.8	2219.8	2207.2	2236.6	2236.6	2249.2
25°	2077.4	2077.4	2085.8	2073.3	2081.7	2098.4	2085.8	2115.1
27.5°	1901.5	1918.2	1918.2	1901.5	1909.9	1960.1	1981.1	1947.6
30°	1738.2	1742.3	1754.9	1746.6	1771.7	1788.4	1784.2	1809.4
32.5°	1553.9	1574.8	1583.1	1570.7	1579.0	1616.6	1595.8	1591.5
35°	1411.5	1373.8	1369.7	1373.8	1390.5	1398.9	1390.5	1419.9
37.5°	1206.2	1193.6	1176.9	1181.1	1193.6	1210.5	1218.9	1239.7
40°	1009.3	992.6	992.6	988.5	975.8	1022.0	1022.0	1022.0
42.5°	837.7	833.4	812.6	812.6	829.3	841.8	833.4	862.8
45°	686.9	670.1	657.5	657.5	670.1	670.1	682.8	678.5
47.5°	540.4	523.6	527.7	515.2	527.7	544.5	523.6	527.7
50°	406.3	406.3	397.9	406.3	402.0	406.3	397.9	389.6
52.5°	276.5	314.1	318.3	301.6	263.9	230.4	209.4	226.1
55°	159.2	142.4	142.4	138.2	129.8	125.7	113.1	125.7
57.5°	79.6	71.2	71.2	71.2	66.9	62.8	54.5	54.5
60°	33.5	29.4	29.4	25.1	21.0	16.7	12.6	16.7
62.5°	12.6	8.4	8.4	8.4	8.4	8.4	8.4	8.4
65°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
67.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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)