

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: LUMARK

Report Number: P144565

Luminaire Tested: **LDRL-RW-F05-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144565
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-F05-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (35) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12398 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

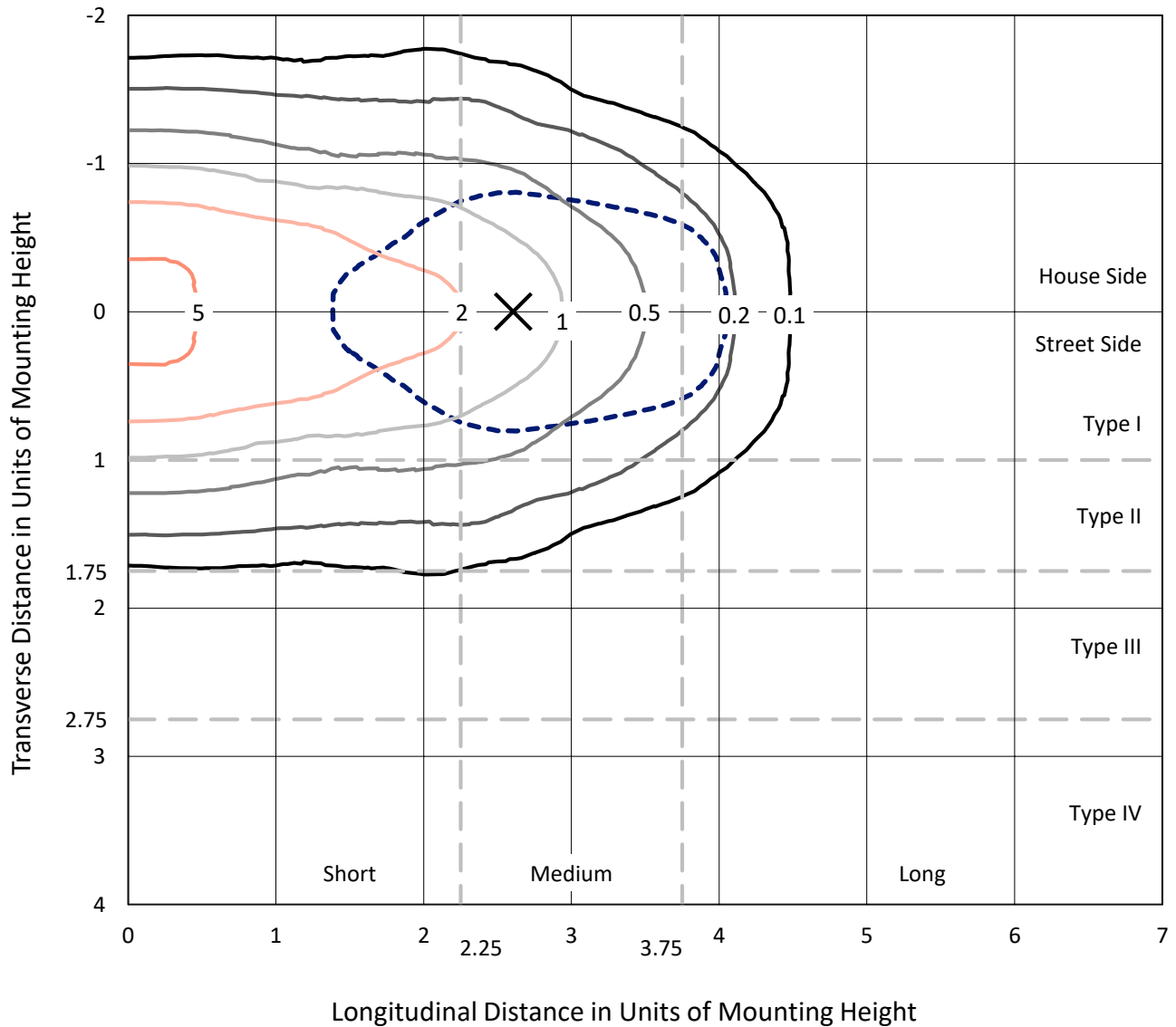
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

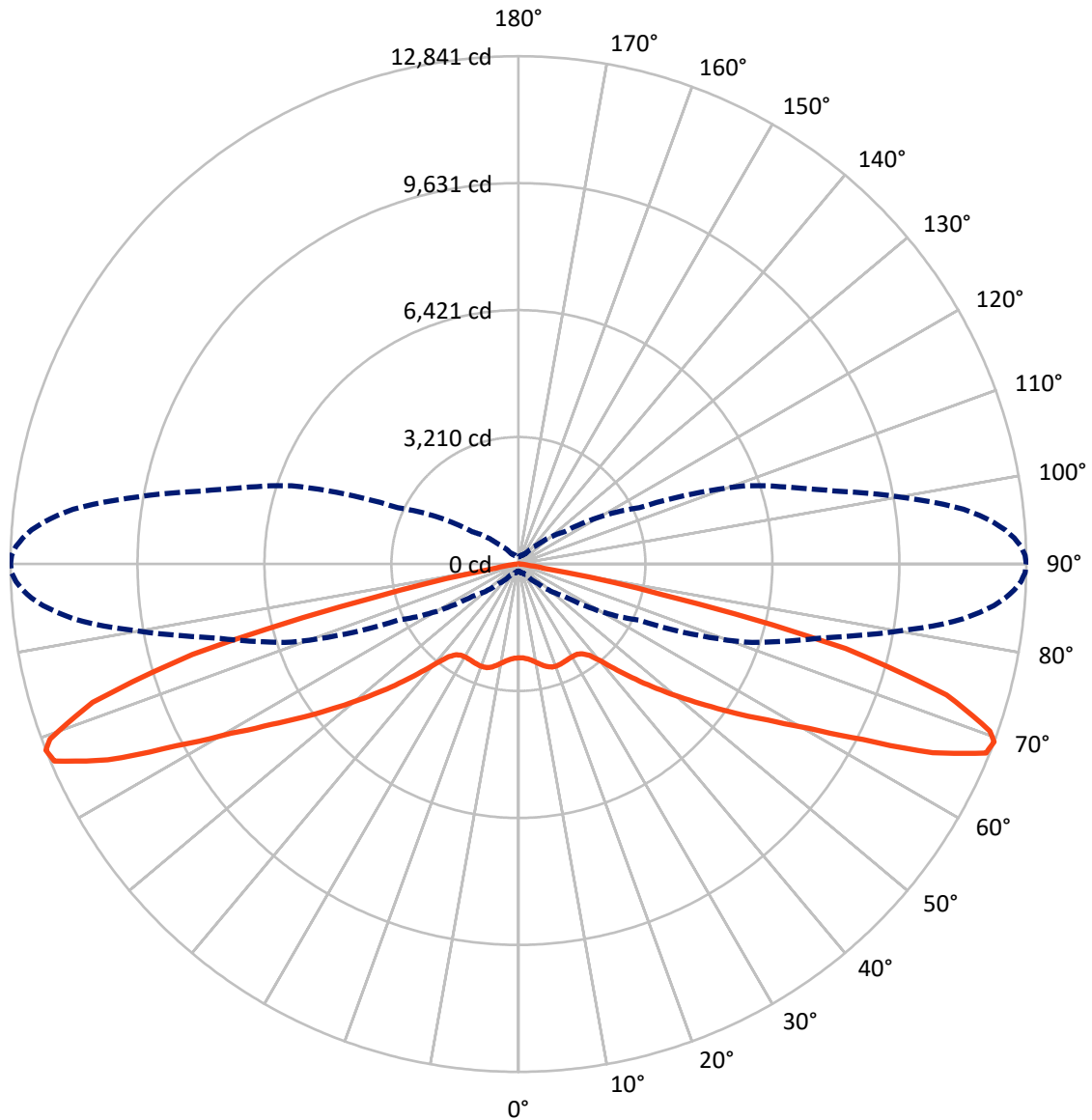
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.1 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6199.0	0.0	6199.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6199.0	0.0	6199.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	12398.0	0.0	12398.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.3	1.9
10°-20°	731.6	5.9
20°-30°	1184.8	9.6
30°-40°	1476.0	11.9
40°-50°	1837.5	14.8
50°-60°	2254.7	18.2
60°-70°	2780.7	22.4
70°-80°	1728.7	13.9
80°-90°	171.7	1.4
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°-90°	12398.0	100.0
0°-180°	12398.0	100.0



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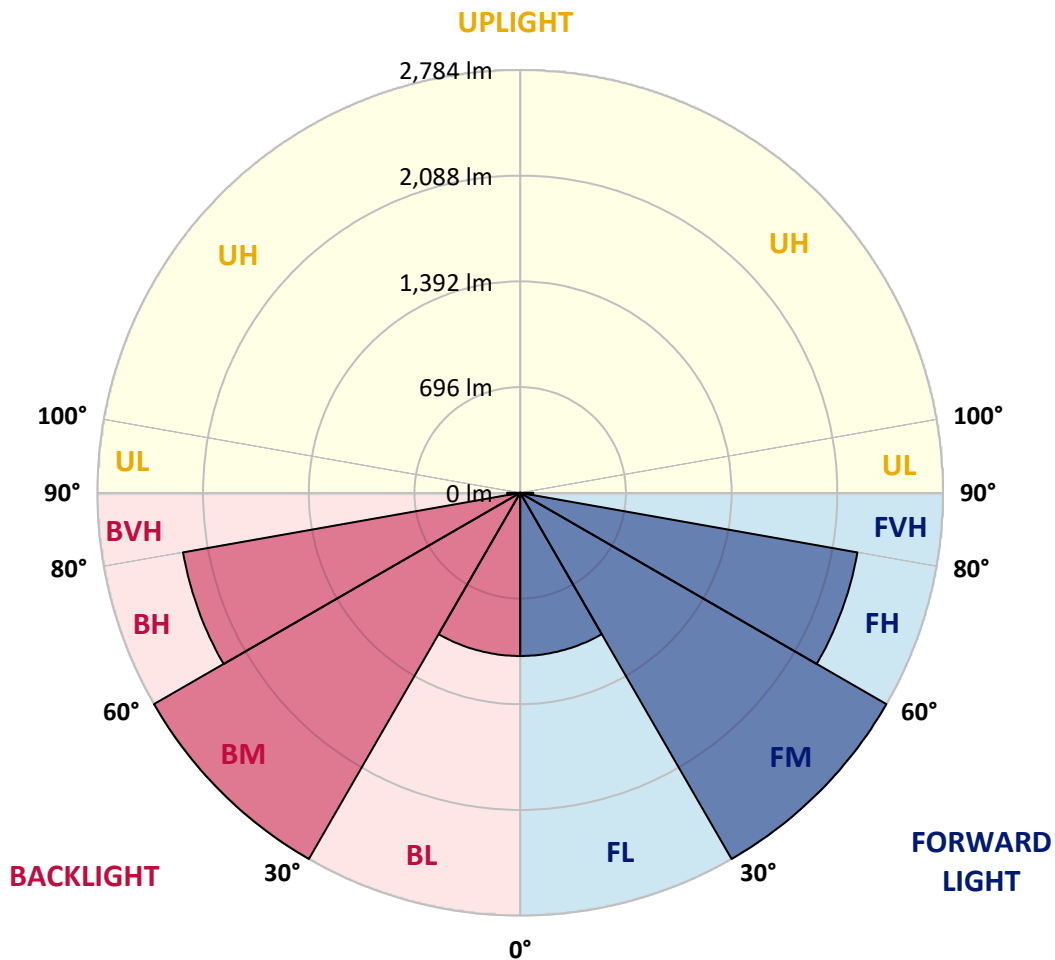
CATALOG NUMBER: LDRL-RW-F05-E

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1074.4	8.7			
FM	(30°-60°)	2784.1	22.5			
FH	(60°-80°)	2254.7	18.2			G2/5000
FVH	(80°-90°)	85.9	0.7			G1/100
BL	(0°-30°)	1074.4	8.7	B3/2500		
BM	(30°-60°)	2784.1	22.5	B3/5000		
BH	(60°-80°)	2254.7	18.2	B3/2500		G3/2500
BVH	(80°-90°)	85.9	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2
2.5°	2380.4	2377.9	2382.4	2386.6	2385.4	2386.2	2384.5	2382.5	2382.7	2382.8	2383.0
5°	2399.0	2396.5	2400.6	2404.4	2405.6	2408.4	2409.3	2408.0	2408.6	2409.2	2409.8
7.5°	2421.2	2419.2	2424.6	2429.6	2439.0	2444.0	2448.9	2453.9	2454.3	2454.7	2455.1
10°	2442.3	2441.0	2449.8	2460.5	2475.8	2487.3	2501.4	2515.0	2516.0	2517.1	2518.2
12.5°	2456.0	2456.0	2469.2	2488.6	2515.0	2538.5	2562.4	2585.6	2587.7	2589.8	2592.0
15°	2455.1	2456.8	2477.0	2512.5	2557.9	2599.6	2628.8	2654.0	2656.1	2658.2	2660.3
17.5°	2438.2	2438.6	2467.5	2524.0	2595.0	2657.0	2695.0	2708.6	2709.3	2710.0	2710.8
20°	2390.7	2394.0	2434.8	2517.0	2623.9	2709.4	2745.3	2739.5	2738.3	2737.0	2735.8
22.5°	2309.4	2313.6	2368.0	2478.2	2629.3	2743.2	2780.4	2754.4	2750.4	2746.4	2742.5
25°	2196.3	2203.3	2262.4	2403.5	2593.0	2753.1	2803.1	2761.4	2755.2	2749.0	2742.8
27.5°	2065.4	2068.8	2138.6	2286.8	2508.4	2720.1	2813.4	2775.8	2768.0	2760.3	2752.5
30°	1914.0	1922.6	1995.2	2150.1	2389.1	2643.4	2809.3	2803.9	2795.2	2786.6	2777.9
32.5°	1763.3	1770.8	1842.2	2009.0	2251.6	2536.4	2788.6	2846.4	2839.1	2831.9	2824.6
35°	1611.4	1620.5	1694.0	1873.2	2115.0	2415.0	2756.0	2907.0	2903.9	2900.8	2897.7
37.5°	1478.1	1483.9	1556.1	1742.2	1995.3	2304.0	2713.5	2988.4	2995.5	3002.6	3009.7
40°	1342.3	1348.1	1423.6	1614.4	1885.1	2209.1	2674.2	3090.8	3110.2	3129.6	3149.0
42.5°	1211.9	1216.8	1289.9	1480.2	1762.5	2127.0	2650.8	3214.6	3251.8	3289.1	3326.3
45°	1078.2	1081.4	1150.0	1335.3	1622.6	2031.2	2644.6	3353.7	3407.4	3461.2	3514.9
47.5°	946.5	954.3	1024.9	1200.7	1462.8	1894.2	2635.5	3507.6	3578.9	3650.1	3721.4
50°	820.6	829.2	901.9	1068.6	1308.4	1731.5	2589.2	3682.2	3769.1	3856.0	3942.8
52.5°	692.2	700.9	773.6	932.8	1165.2	1548.3	2460.4	3865.5	3968.8	4072.1	4175.3
55°	555.2	558.4	633.2	792.9	1022.0	1394.7	2255.4	4033.5	4158.6	4283.6	4408.7
57.5°	403.6	414.8	488.7	637.3	875.9	1258.9	1994.5	4119.4	4275.5	4431.6	4587.7
60°	291.4	298.8	363.6	480.4	710.4	1125.6	1762.9	4056.6	4265.0	4473.4	4681.7
62.5°	230.3	238.6	288.5	362.0	549.4	979.1	1611.8	3884.5	4176.8	4469.1	4761.4
65°	204.0	211.4	257.6	293.9	420.2	828.4	1516.9	3714.0	4108.5	4503.0	4897.6
67.5°	186.2	194.0	234.4	259.2	347.2	731.4	1471.9	3585.2	4040.9	4496.5	4952.1
69°	177.9	184.9	222.0	245.2	327.4	698.4	1423.6	3367.3	3819.0	4270.8	4722.5
70°	173.4	179.6	213.4	236.5	319.5	671.2	1352.2	3108.1	3544.0	3979.9	4415.7
72.5°	160.6	164.7	193.2	214.6	292.2	535.8	1019.9	2193.0	2562.5	2932.0	3301.5
75°	142.4	147.4	172.6	192.4	222.9	322.0	638.6	1273.0	1526.2	1779.4	2032.5
77.5°	122.2	128.0	148.6	180.0	179.6	209.7	387.6	731.0	854.0	977.0	1100.0
80°	104.8	109.8	128.4	177.9	150.2	166.0	288.9	545.2	594.8	644.3	693.8
82.5°	82.2	86.3	107.8	147.0	120.2	126.3	220.0	496.6	530.2	563.8	597.4
85°	51.6	53.2	78.4	101.6	85.4	76.4	141.6	382.2	406.6	431.1	455.5
87.5°	20.6	25.2	38.0	36.3	36.8	30.6	45.8	137.9	150.4	163.0	175.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2
2.5°	2383.1	2383.3	2382.4	2381.2	2382.4	2381.2	2381.6	2382.8	2382.4	2382.5	2381.6
5°	2410.4	2411.0	2411.0	2408.4	2409.7	2410.2	2410.6	2409.7	2410.1	2411.0	2409.3
7.5°	2455.5	2456.0	2457.1	2458.4	2457.6	2458.0	2458.8	2458.0	2456.8	2459.6	2457.6
10°	2519.2	2520.3	2520.4	2524.0	2522.4	2523.6	2527.4	2527.4	2525.3	2528.2	2527.4
12.5°	2594.1	2596.2	2595.9	2595.4	2597.1	2598.4	2602.4	2603.3	2604.1	2608.6	2607.0
15°	2662.3	2664.4	2666.0	2666.9	2669.8	2670.6	2673.0	2674.7	2676.0	2677.6	2678.4
17.5°	2711.5	2712.2	2714.7	2713.5	2717.6	2716.8	2719.6	2721.0	2722.2	2724.2	2725.5
20°	2734.5	2733.3	2733.7	2732.5	2732.5	2733.3	2733.8	2735.4	2734.6	2736.6	2738.2
22.5°	2738.5	2734.6	2732.0	2729.2	2728.0	2725.4	2725.5	2726.3	2723.4	2725.5	2728.0
25°	2736.6	2730.4	2725.9	2720.9	2716.4	2712.2	2709.8	2709.0	2706.9	2706.8	2709.0
27.5°	2744.8	2737.0	2730.4	2722.2	2716.4	2710.6	2705.2	2701.1	2697.0	2696.2	2696.1
30°	2769.2	2760.6	2753.1	2742.9	2733.8	2726.3	2718.9	2713.1	2705.2	2702.0	2698.2
32.5°	2817.4	2810.1	2799.8	2790.7	2780.0	2770.9	2761.0	2751.9	2742.8	2734.6	2731.2
35°	2894.5	2891.4	2885.6	2879.4	2869.1	2857.6	2849.3	2838.6	2828.2	2816.2	2813.0
37.5°	3016.8	3023.8	3020.6	3016.0	3013.2	3009.4	2998.3	2991.3	2984.3	2974.4	2972.3
40°	3168.4	3187.8	3207.1	3220.0	3215.4	3230.6	3233.1	3234.4	3228.2	3236.4	3238.1
42.5°	3363.5	3400.8	3435.8	3461.4	3491.2	3513.4	3542.4	3554.7	3578.2	3602.6	3616.6
45°	3568.7	3622.4	3672.8	3725.2	3776.8	3833.3	3888.2	3927.0	3983.6	4025.6	4052.1
47.5°	3792.6	3863.8	3924.2	4002.6	4077.2	4144.2	4240.3	4317.5	4386.4	4452.0	4521.0
50°	4029.6	4116.5	4190.8	4286.6	4377.4	4482.2	4594.9	4693.1	4801.3	4905.7	4998.6
52.5°	4278.6	4381.9	4482.2	4580.4	4690.6	4804.6	4926.8	5068.8	5198.4	5355.6	5468.2
55°	4533.8	4658.8	4765.8	4868.5	4985.4	5111.6	5257.0	5424.9	5589.6	5761.8	5932.6
57.5°	4743.8	4899.9	5016.8	5136.8	5262.7	5387.8	5568.2	5740.3	5949.2	6160.5	6374.3
60°	4890.1	5098.4	5240.0	5392.0	5537.6	5689.5	5883.9	6101.5	6362.7	6618.6	6909.2
62.5°	5053.7	5346.0	5544.6	5747.3	5924.4	6106.8	6366.8	6617.4	6953.0	7247.7	7613.4
65°	5292.1	5686.6	5978.9	6252.1	6489.8	6738.4	7046.6	7360.0	7743.8	8151.2	8609.8
67.5°	5407.7	5863.3	6245.9	6583.2	6887.0	7203.6	7521.8	7892.4	8325.0	8815.3	9319.0
69°	5174.2	5626.0	6066.0	6406.9	6726.8	7064.8	7405.4	7779.4	8205.3	8714.2	9248.0
70°	4851.6	5287.5	5755.2	6096.9	6419.7	6770.6	7117.2	7495.0	7902.4	8426.6	8966.4
72.5°	3671.0	4040.6	4494.6	4855.8	5195.0	5549.6	5906.6	6234.4	6647.6	7152.0	7649.3
75°	2285.7	2538.9	2947.1	3310.0	3582.8	3886.6	4221.7	4532.2	4947.0	5304.4	5782.8
77.5°	1223.0	1346.0	1584.2	1844.2	1996.1	2144.3	2362.6	2531.0	2705.6	2912.4	3110.2
80°	743.4	792.9	874.2	930.4	909.3	848.6	829.2	768.6	790.4	753.3	726.4
82.5°	631.0	664.6	714.0	748.0	723.2	626.2	516.4	434.6	376.8	321.5	273.2
85°	480.0	504.4	530.0	545.2	544.0	495.7	393.8	305.0	237.8	184.1	153.1
87.5°	188.1	200.6	219.2	216.3	225.8	227.4	177.9	137.4	97.8	66.0	57.8
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2
2.5°	2380.0	2379.6	2380.0	2381.2	2381.2	2382.0	2381.2	2381.6	2380.4	2379.2	2380.0
5°	2409.3	2408.5	2409.3	2410.2	2410.2	2409.3	2411.4	2411.4	2410.6	2409.3	2409.7
7.5°	2459.6	2460.1	2458.8	2463.0	2459.2	2459.6	2462.1	2461.7	2460.9	2461.3	2461.7
10°	2529.8	2529.4	2530.2	2532.7	2529.0	2531.5	2534.4	2535.2	2533.2	2533.1	2533.5
12.5°	2607.4	2610.8	2611.1	2612.8	2612.8	2614.8	2615.2	2615.7	2617.3	2617.8	2615.3
15°	2681.7	2684.2	2685.8	2687.5	2685.4	2688.3	2691.6	2691.6	2691.2	2692.9	2690.4
17.5°	2727.6	2729.6	2732.5	2732.0	2732.5	2735.0	2737.0	2737.8	2738.6	2738.6	2739.1
20°	2742.0	2743.2	2744.9	2746.5	2747.4	2749.8	2751.5	2752.8	2753.6	2752.7	2753.1
22.5°	2730.4	2732.0	2735.4	2736.6	2737.0	2740.8	2742.4	2743.6	2744.4	2745.3	2744.0
25°	2710.6	2712.2	2715.6	2716.8	2717.6	2720.9	2723.0	2725.9	2726.7	2727.1	2727.5
27.5°	2697.0	2697.8	2700.3	2702.0	2702.4	2706.0	2709.0	2711.0	2711.4	2711.8	2711.8
30°	2697.4	2697.4	2700.3	2700.7	2700.3	2703.6	2705.2	2706.5	2707.3	2707.3	2707.7
32.5°	2725.9	2724.2	2726.7	2723.0	2723.4	2723.0	2722.6	2723.8	2723.0	2723.4	2721.8
35°	2806.4	2801.8	2798.1	2799.8	2794.0	2785.8	2790.3	2788.2	2783.6	2784.0	2785.3
37.5°	2960.8	2956.2	2960.4	2956.6	2957.8	2946.3	2949.2	2938.9	2936.0	2939.6	2929.0
40°	3234.8	3232.8	3240.6	3237.3	3239.4	3242.6	3245.6	3235.6	3219.1	3234.0	3234.4
42.5°	3614.6	3633.1	3640.6	3650.9	3662.0	3657.1	3667.0	3669.8	3651.7	3665.3	3668.6
45°	4090.9	4110.7	4133.8	4140.8	4159.0	4161.5	4168.9	4171.0	4154.4	4156.1	4159.8
47.5°	4589.9	4626.2	4653.5	4672.5	4691.5	4695.2	4699.3	4691.5	4692.7	4696.4	4696.4
50°	5080.2	5157.9	5206.2	5243.7	5276.4	5259.4	5273.9	5275.1	5280.0	5269.8	5275.9
52.5°	5595.8	5698.6	5779.5	5842.6	5862.5	5922.7	5898.0	5917.0	5929.8	5910.8	5923.1
55°	6099.4	6245.9	6376.0	6467.6	6532.0	6593.1	6602.6	6651.7	6645.8	6664.4	6656.2
57.5°	6578.2	6783.0	6968.6	7104.5	7197.0	7290.2	7353.4	7407.0	7412.4	7465.6	7435.5
60°	7157.3	7442.6	7681.5	7883.8	8020.4	8159.0	8268.4	8356.4	8376.6	8467.8	8437.7
62.5°	7938.7	8286.7	8592.0	8829.4	9133.6	9280.2	9493.1	9626.0	9709.0	9731.7	9774.2
65°	9037.0	9490.2	9893.1	10272.8	10615.0	10852.3	11098.8	11296.8	11455.8	11442.6	11507.8
67.5°	9853.0	10369.8	10854.8	11310.1	11678.3	11983.8	12266.8	12481.1	12623.1	12713.5	12751.9
69°	9768.0	10322.8	10857.8	11344.0	11723.7	12065.1	12340.8	12551.7	12714.3	12812.6	12841.0
70°	9485.2	10055.4	10613.0	11090.1	11477.2	11852.1	12132.8	12367.6	12522.4	12629.8	12646.2
72.5°	8204.5	8822.0	9315.2	9835.7	10208.4	10587.8	10764.4	11055.4	11257.3	11322.5	11321.2
75°	6188.1	6703.2	7136.6	7521.4	7854.8	8112.1	8195.4	8402.6	8570.2	8568.1	8552.4
77.5°	3332.2	3453.6	3615.8	3670.3	3773.0	3771.4	3668.2	3700.8	3795.8	3611.6	3671.1
80°	714.9	704.2	695.1	689.8	686.8	688.1	691.8	668.2	691.4	681.1	637.3
82.5°	248.9	243.1	237.4	241.4	238.6	241.0	240.2	243.2	242.7	241.9	236.1
85°	139.9	135.0	132.1	134.1	129.6	125.5	122.6	121.4	121.0	118.0	116.4
87.5°	53.2	52.8	52.4	50.3	45.4	41.7	39.2	34.2	32.2	29.3	27.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)