

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: P144564

Luminaire Tested: **LDRL-RW-F05-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144564
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-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (35) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11323.7 lumens
Efficiency: N/A
Efficacy: 84.9 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

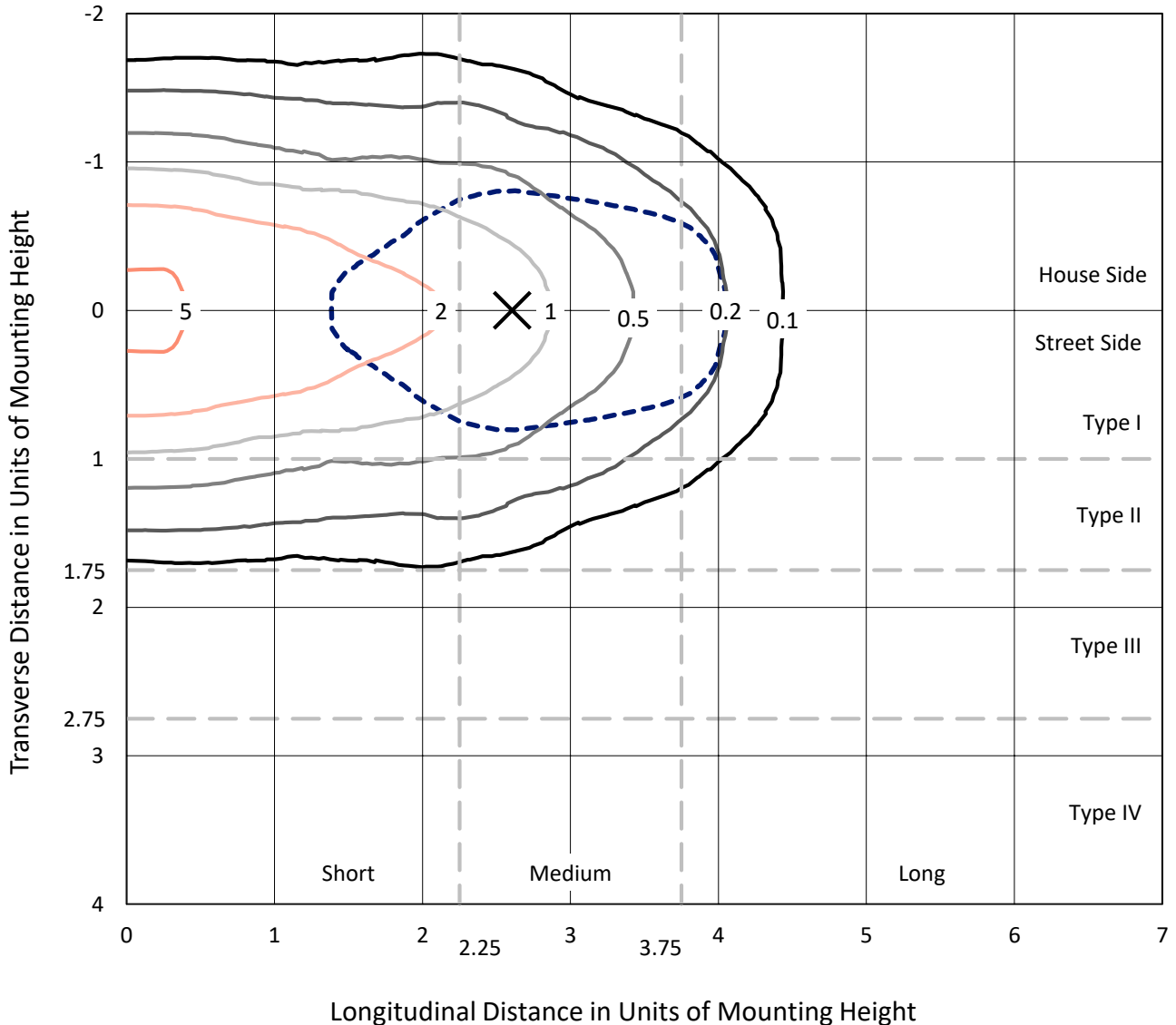
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

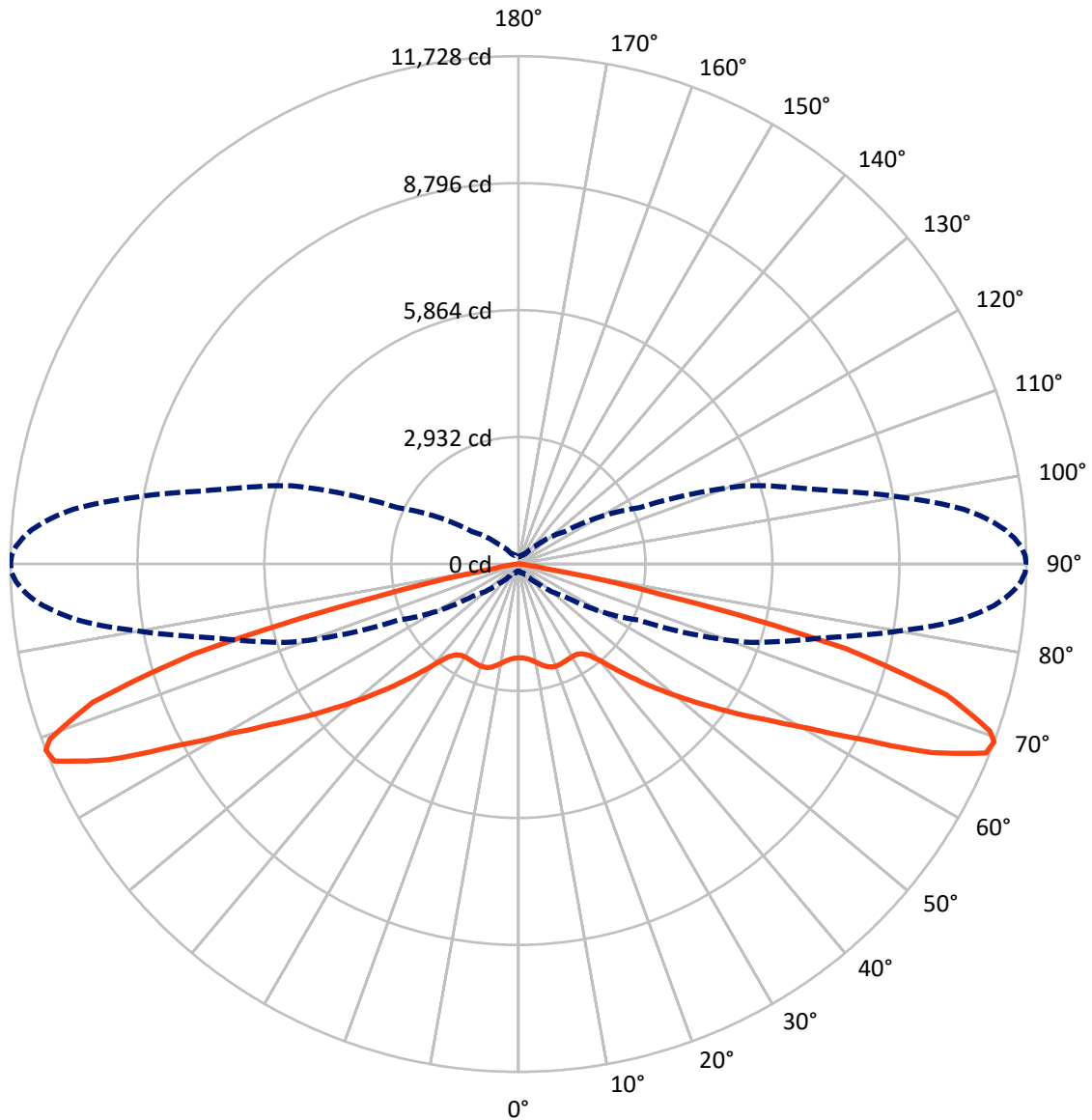
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.5 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	5661.9	0.0	5661.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5661.9	0.0	5661.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	11323.7	0.0	11323.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.2	1.9
10°-20°	668.2	5.9
20°-30°	1082.2	9.6
30°-40°	1348.1	11.9
40°-50°	1678.3	14.8
50°-60°	2059.3	18.2
60°-70°	2539.8	22.4
70°-80°	1578.9	13.9
80°-90°	156.8	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°	11323.7	100.0
0°-180°	11323.7	100.0



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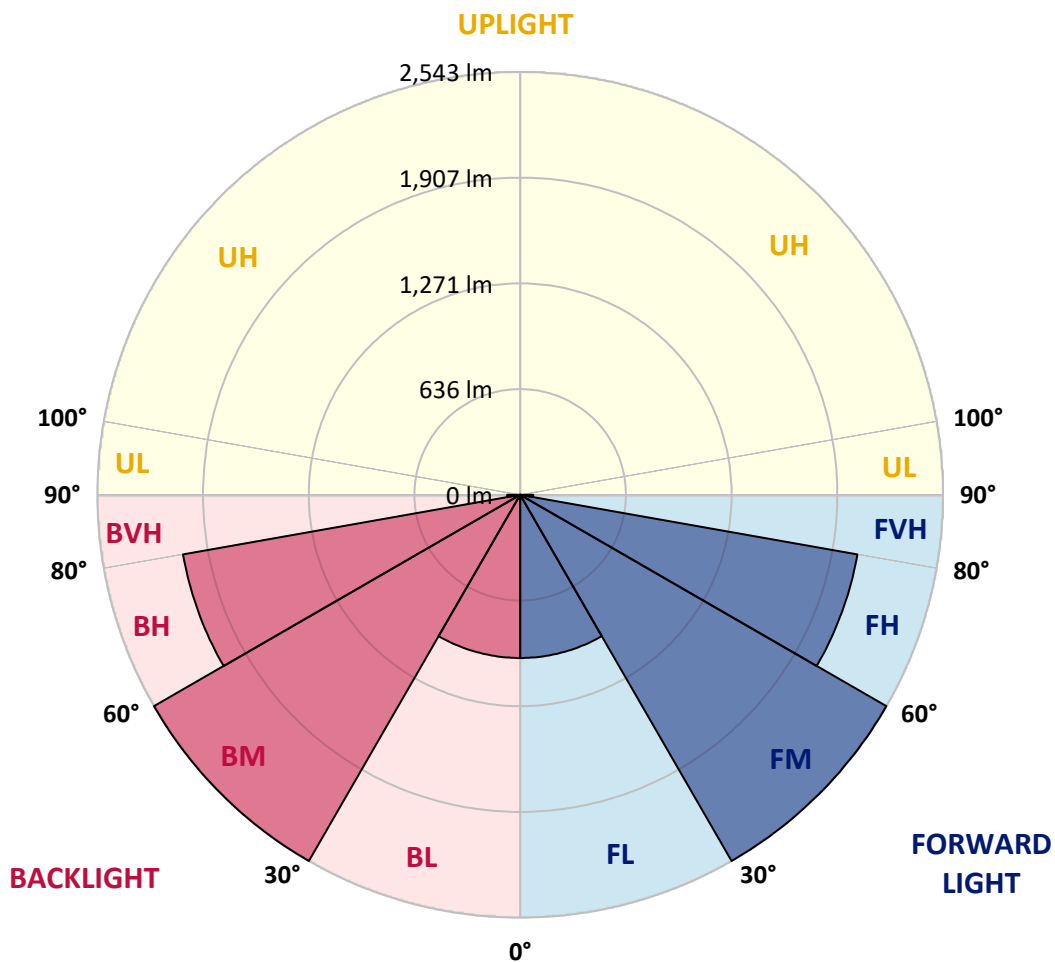
CATALOG NUMBER: LDRL-RW-F05-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	981.3	8.7			
FM	(30°-60°)	2542.9	22.5			
FH	(60°-80°)	2059.3	18.2			G2/5000
FVH	(80°-90°)	78.4	0.7			G1/100
BL	(0°-30°)	981.3	8.7	B2/1000		
BM	(30°-60°)	2542.9	22.5	B3/5000		
BH	(60°-80°)	2059.3	18.2	B3/2500		G3/2500
BVH	(80°-90°)	78.4	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°	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5
2.5°	2174.1	2171.9	2176.0	2179.8	2178.6	2179.4	2177.9	2176.0	2176.2	2176.3	2176.5
5°	2191.2	2188.8	2192.6	2196.0	2197.1	2199.8	2200.5	2199.4	2199.9	2200.4	2201.0
7.5°	2211.4	2209.6	2214.4	2219.0	2227.7	2232.2	2236.7	2241.2	2241.6	2242.0	2242.4
10°	2230.6	2229.6	2237.4	2247.2	2261.2	2271.8	2284.6	2297.0	2298.0	2299.0	2300.0
12.5°	2243.2	2243.1	2255.2	2272.9	2297.0	2318.6	2340.4	2361.5	2363.5	2365.4	2367.4
15°	2242.4	2243.9	2262.4	2294.8	2336.2	2374.4	2401.1	2424.1	2426.0	2427.9	2429.7
17.5°	2227.0	2227.2	2253.7	2305.4	2370.2	2426.8	2461.4	2473.8	2474.5	2475.2	2475.9
20°	2183.6	2186.6	2223.9	2299.0	2396.6	2474.6	2507.4	2502.1	2501.0	2499.9	2498.7
22.5°	2109.3	2113.0	2162.8	2263.5	2401.4	2505.5	2539.4	2515.7	2512.1	2508.5	2504.8
25°	2006.0	2012.4	2066.3	2195.2	2368.3	2514.6	2560.2	2522.1	2516.4	2510.8	2505.1
27.5°	1886.5	1889.5	1953.2	2088.6	2291.0	2484.4	2569.6	2535.3	2528.2	2521.1	2514.0
30°	1748.2	1756.0	1822.4	1963.8	2182.0	2414.3	2565.9	2561.0	2553.0	2545.1	2537.2
32.5°	1610.6	1617.3	1682.5	1834.8	2056.5	2316.6	2547.0	2599.8	2593.1	2586.5	2579.8
35°	1471.8	1480.1	1547.2	1710.8	1931.7	2205.8	2517.2	2655.2	2652.3	2649.5	2646.6
37.5°	1350.0	1355.3	1421.3	1591.3	1822.4	2104.4	2478.4	2729.4	2735.9	2742.4	2748.9
40°	1226.0	1231.2	1300.2	1474.4	1721.8	2017.7	2442.6	2823.0	2840.7	2858.4	2876.1
42.5°	1106.9	1111.4	1178.2	1351.9	1609.8	1942.7	2421.0	2936.0	2970.1	3004.1	3038.1
45°	984.7	987.8	1050.3	1219.6	1481.9	1855.2	2415.4	3063.1	3112.2	3161.3	3210.3
47.5°	864.4	871.6	936.1	1096.6	1336.1	1730.0	2407.1	3203.8	3268.8	3333.9	3399.0
50°	749.4	757.4	823.8	976.0	1195.1	1581.5	2364.9	3363.2	3442.5	3521.8	3601.2
52.5°	632.2	640.2	706.5	852.0	1064.2	1414.1	2247.3	3530.6	3624.9	3719.2	3813.6
55°	507.1	510.0	578.3	724.2	933.4	1273.9	2059.9	3684.0	3798.2	3912.5	4026.7
57.5°	368.7	378.9	446.4	582.0	800.0	1149.8	1821.6	3762.4	3905.0	4047.6	4190.2
60°	266.2	273.0	332.2	438.8	648.8	1028.0	1610.2	3705.2	3895.4	4085.8	4276.0
62.5°	210.4	217.9	263.5	330.6	501.8	894.2	1472.2	3548.0	3814.9	4081.9	4348.9
65°	186.2	193.0	235.2	268.4	383.8	756.6	1385.4	3392.2	3752.5	4112.9	4473.2
67.5°	170.0	177.2	214.2	236.8	317.0	668.0	1344.4	3274.6	3690.7	4106.9	4523.0
69°	162.5	168.9	202.8	224.0	299.0	637.9	1300.2	3075.6	3488.1	3900.7	4313.3
70°	158.4	164.0	194.9	216.0	291.8	613.0	1235.0	2838.8	3236.9	3635.0	4033.1
72.5°	146.6	150.4	176.4	196.0	267.0	489.4	931.6	2003.0	2340.5	2678.0	3015.5
75°	130.0	134.6	157.6	175.6	203.6	294.0	583.2	1162.7	1393.9	1625.2	1856.4
77.5°	111.6	116.8	135.7	164.4	164.0	191.5	354.0	667.7	780.0	892.4	1004.7
80°	95.8	100.3	117.2	162.4	137.2	151.6	263.9	498.0	543.2	588.5	633.7
82.5°	75.1	78.8	98.4	134.2	109.7	115.4	201.0	453.5	484.2	514.9	545.6
85°	47.1	48.7	71.6	92.8	78.1	69.8	129.3	349.1	371.4	393.7	416.1
87.5°	18.8	23.0	34.7	33.2	33.6	27.9	41.8	125.9	137.4	148.8	160.3
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5
2.5°	2176.6	2176.8	2176.0	2174.9	2176.0	2174.9	2175.2	2176.4	2176.0	2176.0	2175.2
5°	2201.5	2202.0	2202.0	2199.8	2200.9	2201.3	2201.6	2200.9	2201.2	2202.0	2200.6
7.5°	2242.8	2243.2	2244.3	2245.4	2244.6	2245.0	2245.8	2245.0	2243.8	2246.5	2244.6
10°	2301.0	2302.0	2302.0	2305.3	2303.8	2305.0	2308.4	2308.4	2306.4	2309.1	2308.4
12.5°	2369.3	2371.3	2370.9	2370.6	2372.1	2373.2	2377.0	2377.7	2378.4	2382.6	2381.1
15°	2431.6	2433.5	2435.0	2435.8	2438.4	2439.2	2441.4	2443.0	2444.1	2445.6	2446.4
17.5°	2476.6	2477.2	2479.5	2478.4	2482.2	2481.4	2484.0	2485.2	2486.3	2488.2	2489.3
20°	2497.6	2496.5	2496.8	2495.8	2495.7	2496.5	2496.8	2498.4	2497.6	2499.5	2501.0
22.5°	2501.2	2497.6	2495.4	2492.7	2491.6	2489.4	2489.3	2490.0	2487.4	2489.3	2491.6
25°	2499.5	2493.8	2489.7	2485.1	2481.0	2477.2	2475.0	2474.2	2472.4	2472.4	2474.2
27.5°	2506.9	2499.8	2493.8	2486.2	2481.0	2475.8	2470.8	2467.1	2463.3	2462.6	2462.5
30°	2529.3	2521.4	2514.6	2505.1	2496.9	2490.0	2483.3	2478.0	2470.8	2467.8	2464.4
32.5°	2573.2	2566.6	2557.2	2548.8	2539.0	2530.8	2521.8	2513.4	2505.1	2497.6	2494.6
35°	2643.7	2640.8	2635.6	2630.0	2620.5	2610.0	2602.4	2592.6	2583.1	2572.2	2569.2
37.5°	2755.4	2761.9	2758.9	2754.8	2752.1	2748.6	2738.5	2732.1	2725.7	2716.6	2714.8
40°	2893.8	2911.6	2929.2	2941.0	2936.8	2950.8	2953.0	2954.2	2948.5	2956.0	2957.6
42.5°	3072.1	3106.1	3138.1	3161.5	3188.6	3209.0	3235.4	3246.7	3268.2	3290.4	3303.2
45°	3259.4	3308.5	3354.6	3402.4	3449.6	3501.2	3551.4	3586.8	3638.4	3676.8	3701.0
47.5°	3464.0	3529.1	3584.1	3655.8	3724.0	3785.0	3872.9	3943.4	4006.4	4066.3	4129.2
50°	3680.5	3759.8	3827.6	3915.1	3998.0	4093.8	4196.8	4286.4	4385.2	4480.6	4565.4
52.5°	3907.9	4002.2	4093.8	4183.6	4284.2	4388.2	4499.8	4629.6	4747.9	4891.5	4994.5
55°	4140.9	4255.2	4352.8	4446.6	4553.4	4668.8	4801.4	4954.8	5105.3	5262.5	5418.6
57.5°	4332.7	4475.3	4582.0	4691.7	4806.7	4921.0	5085.7	5242.9	5433.6	5626.7	5822.0
60°	4466.4	4656.6	4786.0	4924.8	5057.8	5196.5	5374.1	5572.8	5811.4	6045.2	6310.6
62.5°	4615.9	4882.8	5064.2	5249.3	5411.0	5577.6	5815.2	6044.0	6350.5	6619.7	6953.7
65°	4833.5	5193.8	5460.8	5710.4	5927.5	6154.5	6436.0	6722.2	7072.8	7445.0	7863.8
67.5°	4939.1	5355.2	5704.8	6012.8	6290.2	6579.4	6870.0	7208.6	7603.6	8051.5	8511.4
69°	4725.9	5138.5	5540.4	5851.8	6143.9	6452.7	6763.7	7105.2	7494.3	7959.2	8446.6
70°	4431.2	4829.4	5256.5	5568.6	5863.5	6183.9	6500.6	6845.6	7217.6	7696.4	8189.5
72.5°	3353.0	3690.4	4105.1	4435.0	4744.9	5068.8	5394.8	5694.2	6071.6	6532.2	6986.5
75°	2087.7	2318.9	2691.8	3023.1	3272.4	3549.8	3855.9	4139.4	4518.3	4844.8	5281.7
77.5°	1117.0	1229.4	1446.9	1684.4	1823.2	1958.5	2157.9	2311.8	2471.2	2660.0	2840.7
80°	679.0	724.2	798.5	849.8	830.5	775.1	757.4	702.0	722.0	688.0	663.5
82.5°	576.3	607.0	652.2	683.2	660.5	571.9	471.6	397.0	344.2	293.6	249.6
85°	438.4	460.7	484.0	498.0	496.9	452.8	359.6	278.6	217.2	168.2	139.8
87.5°	171.7	183.2	200.1	197.6	206.2	207.7	162.5	125.6	89.4	60.3	52.8
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°	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5	2168.5
2.5°	2173.8	2173.4	2173.8	2174.9	2174.9	2175.6	2174.9	2175.2	2174.2	2173.0	2173.8
5°	2200.6	2199.8	2200.5	2201.3	2201.3	2200.6	2202.4	2202.4	2201.6	2200.5	2200.9
7.5°	2246.5	2246.9	2245.8	2249.6	2246.2	2246.6	2248.8	2248.4	2247.7	2248.0	2248.4
10°	2310.6	2310.2	2311.0	2313.3	2309.9	2312.1	2314.8	2315.6	2313.6	2313.6	2314.0
12.5°	2381.5	2384.5	2384.9	2386.4	2386.4	2388.2	2388.6	2389.0	2390.6	2391.0	2388.7
15°	2449.4	2451.6	2453.1	2454.6	2452.8	2455.4	2458.4	2458.4	2458.0	2459.5	2457.3
17.5°	2491.2	2493.0	2495.7	2495.4	2495.7	2498.0	2499.8	2500.6	2501.4	2501.4	2501.8
20°	2504.4	2505.5	2507.0	2508.6	2509.3	2511.6	2513.0	2514.2	2515.0	2514.2	2514.6
22.5°	2493.8	2495.4	2498.4	2499.5	2499.9	2503.2	2504.8	2505.9	2506.6	2507.4	2506.3
25°	2475.8	2477.2	2480.2	2481.4	2482.2	2485.2	2487.0	2489.7	2490.4	2490.8	2491.2
27.5°	2463.3	2464.0	2466.3	2467.8	2468.2	2471.6	2474.2	2476.1	2476.5	2476.8	2476.9
30°	2463.6	2463.6	2466.3	2466.7	2466.3	2469.3	2470.8	2472.0	2472.7	2472.7	2473.1
32.5°	2489.6	2488.2	2490.4	2487.0	2487.4	2487.0	2486.7	2487.8	2487.0	2487.4	2485.9
35°	2563.2	2559.0	2555.6	2557.2	2551.9	2544.4	2548.5	2546.6	2542.4	2542.8	2544.0
37.5°	2704.2	2700.0	2703.9	2700.4	2701.6	2691.0	2693.6	2684.2	2681.6	2685.0	2675.2
40°	2954.5	2952.6	2959.8	2956.8	2958.6	2961.7	2964.3	2955.2	2940.2	2953.8	2954.1
42.5°	3301.4	3318.3	3325.1	3334.6	3344.7	3340.2	3349.2	3351.9	3335.2	3347.8	3350.7
45°	3736.4	3754.5	3775.6	3782.0	3798.6	3800.8	3807.7	3809.6	3794.4	3796.0	3799.4
47.5°	4192.2	4225.4	4250.2	4267.6	4285.0	4288.4	4292.1	4285.0	4286.0	4289.5	4289.5
50°	4640.1	4711.0	4755.1	4789.4	4819.2	4803.6	4816.9	4818.0	4822.6	4813.2	4818.8
52.5°	5111.0	5204.8	5278.7	5336.4	5354.5	5409.5	5386.9	5404.2	5415.9	5398.6	5409.9
55°	5570.9	5704.7	5823.5	5907.2	5966.0	6021.8	6030.4	6075.3	6070.0	6087.0	6079.4
57.5°	6008.2	6195.2	6364.8	6488.9	6573.3	6658.6	6716.2	6765.2	6770.1	6818.8	6791.2
60°	6537.2	6797.6	7015.9	7200.6	7325.4	7452.1	7552.0	7632.3	7650.8	7734.1	7706.6
62.5°	7250.8	7568.6	7847.6	8064.4	8342.2	8476.0	8670.6	8792.0	8867.7	8888.4	8927.3
65°	8254.0	8667.9	9035.8	9382.7	9695.2	9912.0	10137.0	10318.0	10463.2	10451.1	10510.7
67.5°	8999.3	9471.3	9914.3	10330.1	10666.4	10945.4	11204.0	11399.6	11529.3	11611.9	11646.9
69°	8921.6	9428.3	9916.9	10361.0	10707.8	11019.6	11271.4	11464.0	11612.6	11702.4	11728.4
70°	8663.4	9184.0	9693.4	10129.2	10482.8	10825.1	11081.4	11296.0	11437.3	11535.4	11550.4
72.5°	7493.6	8057.6	8508.0	8983.4	9323.9	9670.4	9831.7	10097.4	10281.8	10341.4	10340.3
75°	5652.0	6122.5	6518.3	6869.6	7174.2	7409.2	7485.2	7674.6	7827.6	7825.7	7811.4
77.5°	3043.5	3154.3	3302.4	3352.2	3446.1	3444.6	3350.4	3380.2	3466.8	3298.7	3353.0
80°	653.0	643.2	634.8	630.0	627.3	628.4	631.8	610.3	631.4	622.0	582.1
82.5°	227.3	222.0	216.8	220.6	217.9	220.2	219.4	222.0	221.6	221.0	215.6
85°	127.8	123.3	120.6	122.5	118.4	114.6	112.0	110.8	110.4	107.8	106.3
87.5°	48.6	48.2	47.8	46.0	41.5	38.1	35.8	31.3	29.4	26.8	24.9
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)