

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: P144558

Luminaire Tested: **LDRL-RW-E05-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P144558  
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-E05-E-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE  
Light Source: (105) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12675.3 lumens  
Efficiency: N/A  
Efficacy: 99.6 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

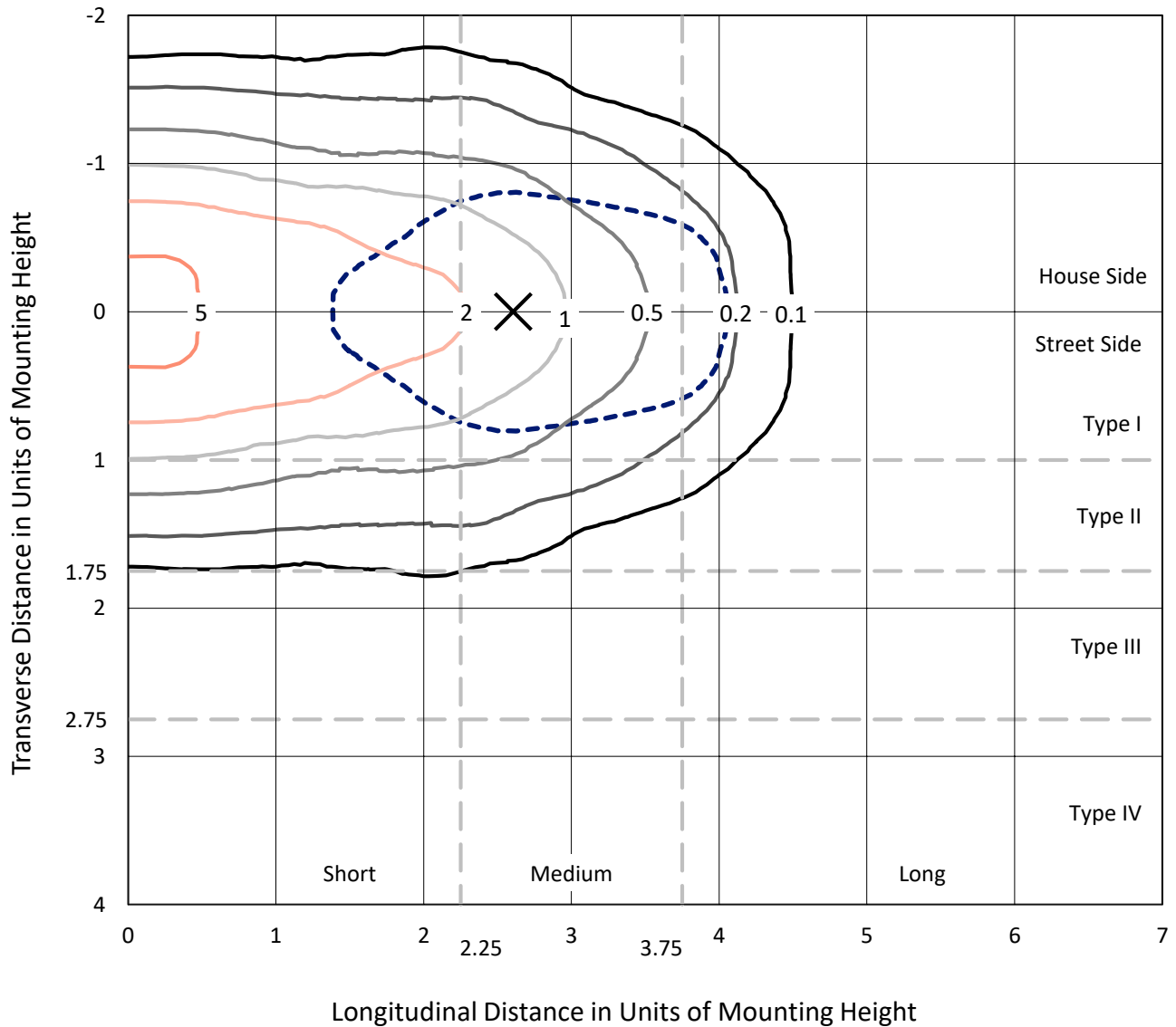
Input Watts (W): 127.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

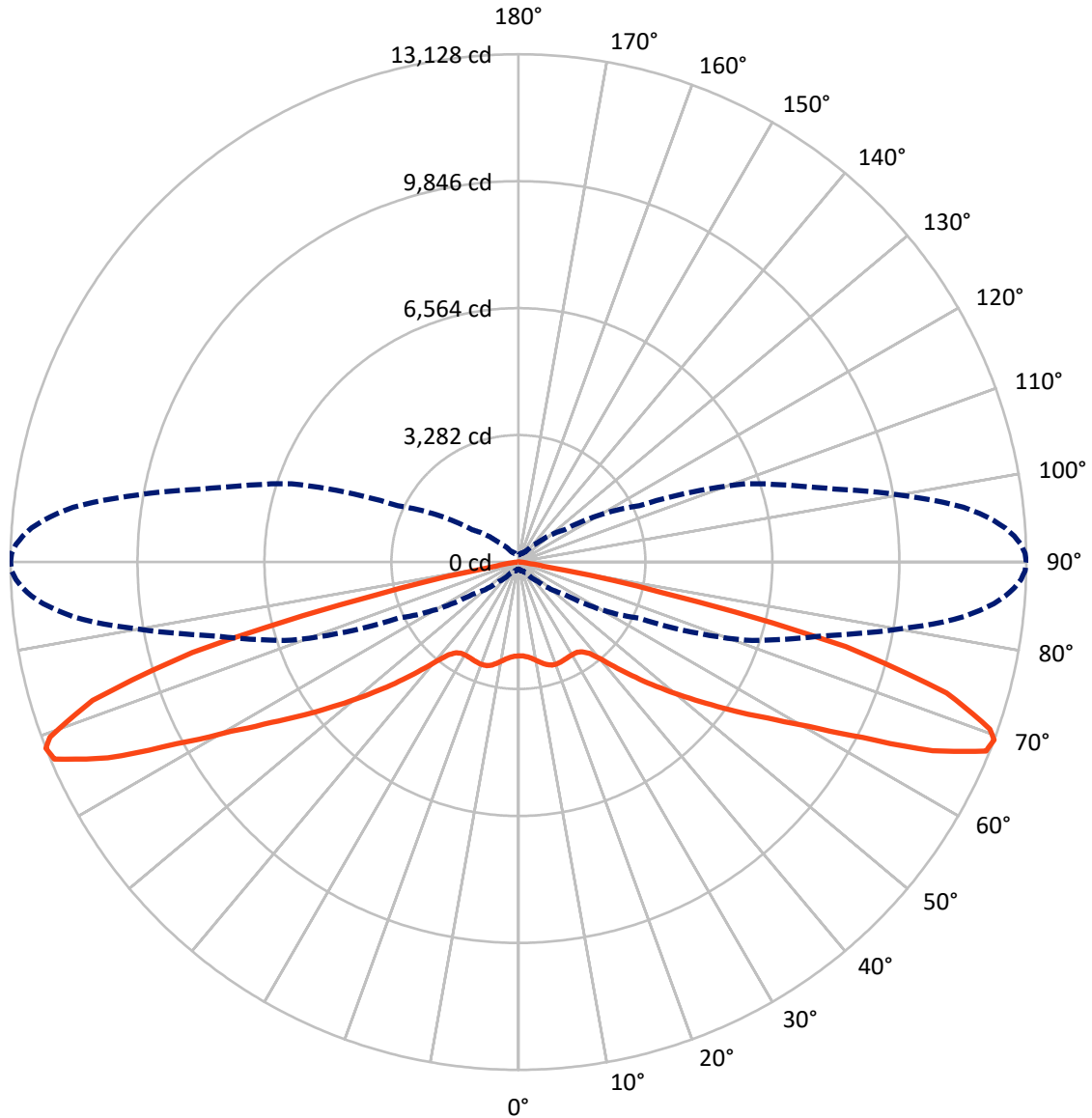
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.2 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
<b>House Side</b>	Lumens	6337.7	0.0	6337.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	6337.7	0.0	6337.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	12675.3	0.0	12675.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	237.5	1.9
10°-20°	747.9	5.9
20°-30°	1211.3	9.6
30°-40°	1509.0	11.9
40°-50°	1878.6	14.8
50°-60°	2305.1	18.2
60°-70°	2842.9	22.4
70°-80°	1767.3	13.9
80°-90°	175.5	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°	12675.3	100.0
0°-180°	12675.3	100.0



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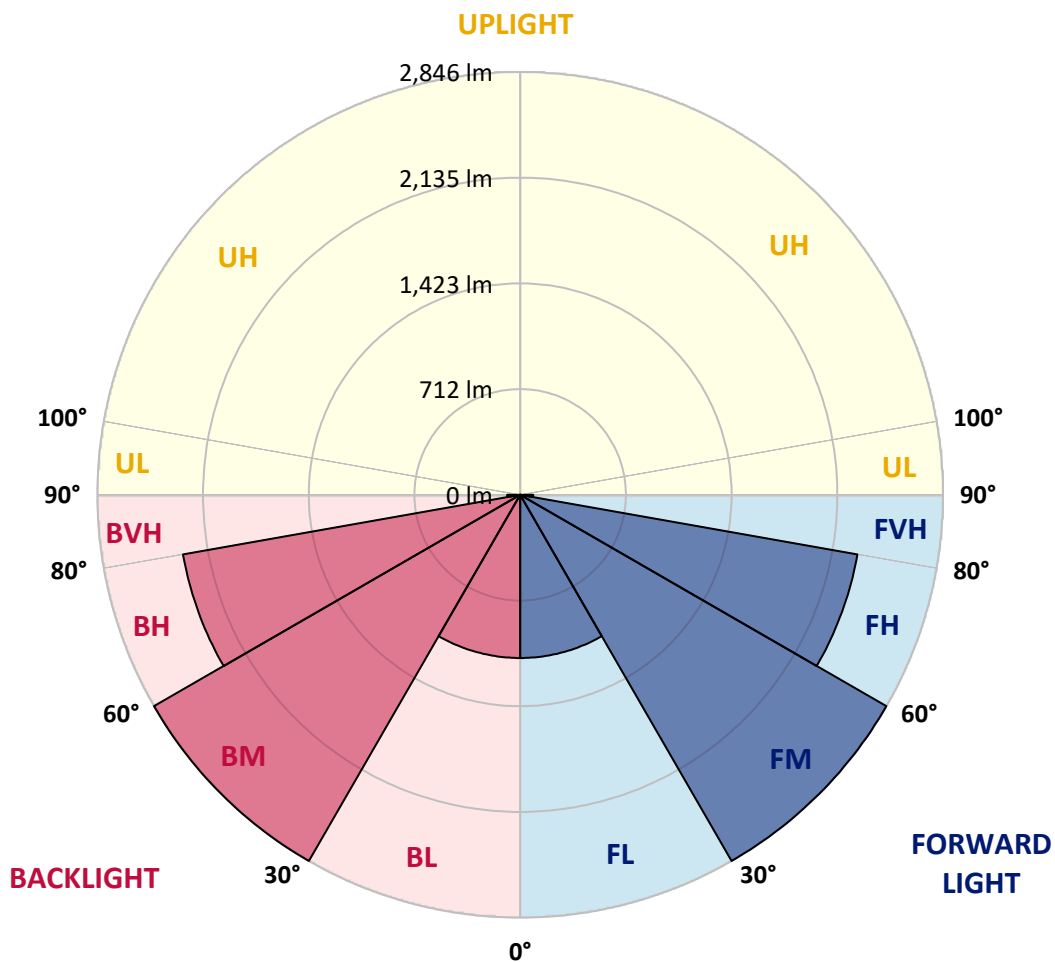
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1098.4	8.7			
FM	(30°-60°)	2846.4	22.5			
FH	(60°-80°)	2305.1	18.2			G2/5000
FVH	(80°-90°)	87.8	0.7			G1/100
BL	(0°-30°)	1098.4	8.7	B3/2500		
BM	(30°-60°)	2846.4	22.5	B3/5000		
BH	(60°-80°)	2305.1	18.2	B3/2500		G3/2500
BVH	(80°-90°)	87.8	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°	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3
2.5°	2433.6	2431.1	2435.8	2440.0	2438.8	2439.6	2437.9	2435.8	2435.9	2436.1	2436.3
5°	2452.6	2450.1	2454.4	2458.1	2459.4	2462.4	2463.2	2461.9	2462.5	2463.1	2463.7
7.5°	2475.4	2473.3	2478.8	2483.9	2493.6	2498.6	2503.7	2508.8	2509.2	2509.6	2510.0
10°	2496.9	2495.6	2504.6	2515.5	2531.2	2543.0	2557.3	2571.2	2572.3	2573.4	2574.5
12.5°	2510.9	2510.9	2524.4	2544.2	2571.2	2595.2	2619.8	2643.4	2645.6	2647.8	2650.0
15°	2510.0	2511.8	2532.4	2568.7	2615.1	2657.8	2687.7	2713.4	2715.6	2717.6	2719.8
17.5°	2492.7	2493.1	2522.7	2580.5	2653.1	2716.4	2755.2	2769.2	2769.9	2770.7	2771.4
20°	2444.2	2447.6	2489.4	2573.3	2682.6	2770.0	2806.7	2800.8	2799.5	2798.3	2797.0
22.5°	2361.0	2365.3	2421.0	2533.6	2688.1	2804.6	2842.6	2816.0	2811.9	2807.9	2803.8
25°	2245.4	2252.6	2313.0	2457.2	2651.0	2814.7	2865.8	2823.1	2816.8	2810.5	2804.2
27.5°	2111.7	2115.0	2186.4	2337.9	2564.4	2781.0	2876.3	2838.0	2830.0	2822.1	2814.1
30°	1956.8	1965.6	2040.0	2198.2	2442.5	2702.4	2872.1	2866.6	2857.7	2848.9	2840.0
32.5°	1802.8	1810.4	1883.4	2053.9	2302.0	2593.2	2851.0	2910.1	2902.7	2895.2	2887.8
35°	1647.5	1656.8	1731.8	1915.0	2162.3	2469.1	2817.6	2972.1	2968.9	2965.7	2962.5
37.5°	1511.1	1517.1	1590.9	1781.2	2039.9	2355.6	2774.2	3055.2	3062.5	3069.8	3077.0
40°	1372.3	1378.2	1455.4	1650.4	1927.2	2258.5	2734.1	3159.9	3179.7	3199.6	3219.4
42.5°	1239.0	1244.0	1318.8	1513.2	1801.9	2174.6	2710.0	3286.5	3324.6	3362.6	3400.7
45°	1102.2	1105.6	1175.6	1365.2	1658.8	2076.6	2703.8	3428.7	3483.6	3538.6	3593.6
47.5°	967.6	975.6	1047.8	1227.6	1495.6	1936.5	2694.4	3586.2	3659.0	3731.8	3804.6
50°	838.9	847.8	922.1	1092.6	1337.8	1770.3	2647.1	3764.6	3853.4	3942.2	4031.0
52.5°	707.7	716.6	790.8	953.7	1191.3	1582.9	2515.5	3952.0	4057.6	4163.2	4268.7
55°	567.6	571.0	647.4	810.7	1044.8	1425.9	2305.8	4123.8	4251.6	4379.5	4507.3
57.5°	412.7	424.1	499.6	651.6	895.4	1287.1	2039.1	4211.5	4371.1	4530.7	4690.3
60°	298.0	305.5	371.8	491.2	726.2	1150.8	1802.4	4147.4	4360.4	4573.4	4786.5
62.5°	235.4	243.9	295.0	370.1	561.7	1001.0	1647.9	3971.4	4270.3	4569.1	4868.0
65°	208.5	216.0	263.3	300.4	429.6	847.0	1550.8	3797.1	4200.5	4603.8	5007.2
67.5°	190.3	198.4	239.7	265.0	354.9	747.8	1504.8	3665.4	4131.2	4597.0	5062.8
69°	181.9	189.0	227.0	250.6	334.6	714.0	1455.4	3442.6	3904.5	4366.3	4828.1
70°	177.2	183.6	218.2	241.8	326.6	686.2	1382.4	3177.6	3623.3	4068.9	4514.5
72.5°	164.2	168.4	197.5	219.4	298.8	547.8	1042.8	2242.0	2619.8	2997.6	3375.4
75°	145.6	150.6	176.4	196.6	227.9	329.2	652.8	1301.4	1560.3	1819.1	2078.0
77.5°	124.9	130.8	151.9	184.0	183.6	214.4	396.2	747.4	873.1	998.9	1124.6
80°	107.2	112.3	131.2	181.9	153.6	169.6	295.4	557.4	608.1	658.7	709.4
82.5°	84.0	88.2	110.2	150.2	122.8	129.1	225.0	507.6	542.0	576.4	610.7
85°	52.8	54.4	80.2	103.8	87.4	78.1	144.8	390.8	415.8	440.8	465.7
87.5°	21.1	25.7	38.8	37.2	37.6	31.2	46.8	141.0	153.8	166.6	179.4
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3
2.5°	2436.4	2436.6	2435.8	2434.5	2435.8	2434.5	2434.9	2436.2	2435.8	2435.8	2434.9
5°	2464.3	2464.9	2464.9	2462.4	2463.6	2464.0	2464.4	2463.6	2464.0	2464.9	2463.2
7.5°	2510.5	2510.9	2512.1	2513.4	2512.6	2513.0	2513.8	2513.0	2511.7	2514.6	2512.6
10°	2575.6	2576.7	2576.8	2580.5	2578.8	2580.1	2583.8	2583.9	2581.8	2584.7	2583.9
12.5°	2652.2	2654.4	2654.0	2653.5	2655.2	2656.4	2660.7	2661.6	2662.4	2667.0	2665.4
15°	2721.9	2724.0	2725.6	2726.5	2729.4	2730.3	2732.8	2734.5	2735.8	2737.5	2738.4
17.5°	2772.2	2773.0	2775.4	2774.2	2778.4	2777.5	2780.5	2781.8	2783.0	2785.1	2786.4
20°	2795.7	2794.5	2794.9	2793.6	2793.6	2794.5	2794.9	2796.6	2795.7	2797.8	2799.5
22.5°	2799.8	2795.7	2793.2	2790.2	2789.0	2786.4	2786.4	2787.2	2784.4	2786.4	2789.0
25°	2797.8	2791.5	2786.9	2781.8	2777.2	2772.9	2770.4	2769.6	2767.4	2767.5	2769.6
27.5°	2806.2	2798.2	2791.5	2783.0	2777.2	2771.2	2765.8	2761.5	2757.4	2756.4	2756.5
30°	2831.2	2822.3	2814.7	2804.2	2794.8	2787.3	2779.7	2773.8	2765.8	2762.4	2758.6
32.5°	2880.3	2872.9	2862.4	2853.1	2842.1	2832.8	2822.8	2813.4	2804.2	2795.7	2792.4
35°	2959.3	2956.1	2950.1	2943.8	2933.3	2921.4	2913.0	2902.0	2891.5	2879.3	2875.9
37.5°	3084.3	3091.6	3088.1	3083.5	3080.6	3076.8	3065.4	3058.2	3051.0	3040.9	3038.8
40°	3239.2	3259.0	3278.9	3292.0	3287.3	3303.0	3305.5	3306.8	3300.4	3308.9	3310.6
42.5°	3438.8	3476.8	3512.7	3538.8	3569.2	3592.0	3621.6	3634.2	3658.2	3683.2	3697.6
45°	3648.5	3703.4	3754.9	3808.5	3861.2	3919.0	3975.2	4014.9	4072.7	4115.7	4142.7
47.5°	3877.5	3950.3	4011.9	4092.1	4168.4	4236.8	4335.2	4414.0	4484.5	4551.6	4622.1
50°	4119.8	4208.6	4284.5	4382.5	4475.3	4582.5	4697.6	4798.1	4908.6	5015.4	5110.4
52.5°	4374.3	4479.9	4582.5	4682.9	4795.6	4912.0	5037.0	5182.2	5314.6	5475.4	5590.6
55°	4635.2	4763.0	4872.4	4977.4	5096.9	5226.0	5374.5	5546.2	5714.7	5890.6	6065.3
57.5°	4849.9	5009.5	5129.0	5251.8	5380.5	5508.3	5692.7	5868.7	6082.2	6298.3	6516.9
60°	4999.5	5212.5	5357.2	5512.6	5661.5	5816.8	6015.6	6238.0	6505.0	6766.7	7063.8
62.5°	5166.8	5465.7	5668.6	5875.8	6056.9	6243.4	6509.2	6765.4	7108.6	7409.8	7783.7
65°	5410.5	5813.8	6112.6	6392.0	6635.0	6889.1	7204.3	7524.6	7917.0	8333.6	8802.4
67.5°	5528.6	5994.5	6385.6	6730.4	7041.0	7364.7	7690.0	8069.0	8511.2	9012.6	9527.4
69°	5290.0	5751.8	6201.6	6550.2	6877.2	7222.9	7571.0	7953.4	8388.8	8909.2	9454.8
70°	4960.2	5405.8	5883.8	6233.3	6563.3	6922.0	7276.4	7662.6	8079.1	8615.0	9167.0
72.5°	3753.1	4130.9	4595.1	4964.4	5311.2	5673.8	6038.8	6373.8	6796.2	7312.0	7820.4
75°	2336.8	2595.7	3013.0	3384.0	3662.9	3973.6	4316.2	4633.5	5057.6	5423.0	5912.2
77.5°	1250.4	1376.2	1619.6	1885.5	2040.8	2192.2	2415.5	2587.6	2766.2	2977.6	3179.7
80°	760.0	810.7	893.8	951.2	929.6	867.6	847.8	785.8	808.1	770.2	742.7
82.5°	645.1	679.4	730.0	764.7	739.4	640.2	528.0	444.4	385.2	328.7	279.4
85°	490.7	515.7	541.8	557.4	556.2	506.8	402.5	311.8	243.0	188.2	156.6
87.5°	192.3	205.1	224.1	221.1	230.8	232.5	181.8	140.6	100.0	67.5	59.1
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°	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3	2427.3
2.5°	2433.2	2432.8	2433.2	2434.5	2434.5	2435.4	2434.5	2435.0	2433.6	2432.4	2433.2
5°	2463.2	2462.3	2463.2	2464.0	2464.0	2463.2	2465.3	2465.3	2464.4	2463.2	2463.6
7.5°	2514.6	2515.1	2513.8	2518.0	2514.2	2514.6	2517.2	2516.8	2515.9	2516.4	2516.8
10°	2586.4	2586.0	2586.9	2589.4	2585.6	2588.1	2591.0	2591.9	2589.8	2589.8	2590.2
12.5°	2665.8	2669.1	2669.6	2671.2	2671.2	2673.4	2673.8	2674.2	2675.9	2676.3	2673.8
15°	2741.8	2744.2	2745.9	2747.6	2745.5	2748.4	2751.9	2751.8	2751.4	2753.1	2750.6
17.5°	2788.6	2790.6	2793.6	2793.2	2793.6	2796.1	2798.2	2799.1	2800.0	2800.0	2800.4
20°	2803.3	2804.6	2806.2	2808.0	2808.8	2811.4	2813.0	2814.2	2815.1	2814.3	2814.7
22.5°	2791.5	2793.2	2796.6	2797.8	2798.2	2802.0	2803.8	2805.0	2805.9	2806.7	2805.4
25°	2771.2	2773.0	2776.3	2777.6	2778.4	2781.8	2783.9	2786.8	2787.7	2788.2	2788.5
27.5°	2757.4	2758.2	2760.7	2762.4	2762.8	2766.6	2769.6	2771.6	2772.1	2772.5	2772.5
30°	2757.8	2757.8	2760.7	2761.1	2760.6	2764.1	2765.8	2767.0	2767.9	2767.9	2768.3
32.5°	2786.9	2785.2	2787.7	2783.9	2784.4	2783.9	2783.5	2784.8	2783.9	2784.3	2782.6
35°	2869.2	2864.5	2860.7	2862.4	2856.5	2848.0	2852.6	2850.6	2846.0	2846.4	2847.6
37.5°	3027.0	3022.4	3026.6	3022.8	3024.0	3012.2	3015.2	3004.6	3001.6	3005.4	2994.5
40°	3307.2	3305.1	3313.1	3309.7	3311.8	3315.2	3318.2	3308.0	3291.2	3306.4	3306.8
42.5°	3695.4	3714.4	3722.0	3732.6	3744.0	3738.8	3749.0	3752.0	3733.4	3747.3	3750.7
45°	4182.4	4202.6	4226.3	4233.5	4252.0	4254.6	4262.2	4264.2	4247.4	4249.0	4252.9
47.5°	4692.6	4729.8	4757.6	4777.0	4796.4	4800.2	4804.4	4796.4	4797.6	4801.4	4801.5
50°	5193.9	5273.3	5322.6	5361.0	5394.4	5377.1	5391.8	5393.1	5398.2	5387.6	5393.9
52.5°	5721.0	5826.0	5908.8	5973.4	5993.6	6055.2	6029.9	6049.3	6062.3	6043.0	6055.6
55°	6235.8	6385.6	6518.6	6612.2	6678.1	6740.6	6750.2	6800.5	6794.6	6813.6	6805.1
57.5°	6725.4	6934.6	7124.6	7263.4	7357.9	7453.3	7517.8	7572.7	7578.2	7632.6	7601.8
60°	7317.4	7609.0	7853.4	8060.1	8199.8	8341.6	8453.4	8543.3	8564.0	8657.2	8626.4
62.5°	8116.2	8472.0	8784.2	9026.9	9337.9	9487.8	9705.4	9841.4	9926.2	9949.4	9992.9
65°	9239.2	9702.5	10114.4	10502.7	10852.4	11095.1	11347.0	11549.6	11712.0	11698.6	11765.2
67.5°	10073.5	10601.8	11097.6	11563.1	11939.6	12251.8	12541.3	12760.3	12905.4	12997.9	13037.1
69°	9986.5	10553.6	11100.6	11597.7	11986.0	12335.0	12616.8	12832.5	12998.8	13099.2	13128.3
70°	9697.4	10280.2	10850.3	11338.2	11734.0	12117.2	12404.2	12644.2	12802.5	12912.2	12929.1
72.5°	8388.0	9019.3	9523.6	10055.7	10436.8	10824.6	11005.2	11302.8	11509.1	11575.8	11574.5
75°	6326.6	6853.2	7296.3	7689.6	8030.6	8293.4	8378.8	8590.6	8761.9	8759.8	8743.7
77.5°	3406.8	3530.8	3696.7	3752.4	3857.5	3855.8	3750.3	3783.6	3880.7	3692.4	3753.2
80°	730.9	719.9	710.6	705.2	702.2	703.4	707.3	683.2	706.8	696.3	651.6
82.5°	254.4	248.6	242.6	246.9	243.9	246.4	245.6	248.6	248.2	247.3	241.4
85°	143.1	138.0	135.0	137.2	132.5	128.2	125.4	124.1	123.6	120.6	119.0
87.5°	54.4	54.0	53.6	51.5	46.4	42.6	40.1	35.0	32.9	30.0	27.9
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)