

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: P144575

Luminaire Tested: **LDRL-RW-F06-E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P144575  
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-F06-E  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(6) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE  
Light Source: (42) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14877.6 lumens  
Efficiency: N/A  
Efficacy: 95.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Short - Full Cutoff  
BUG Rating: B4 - U0 - G4

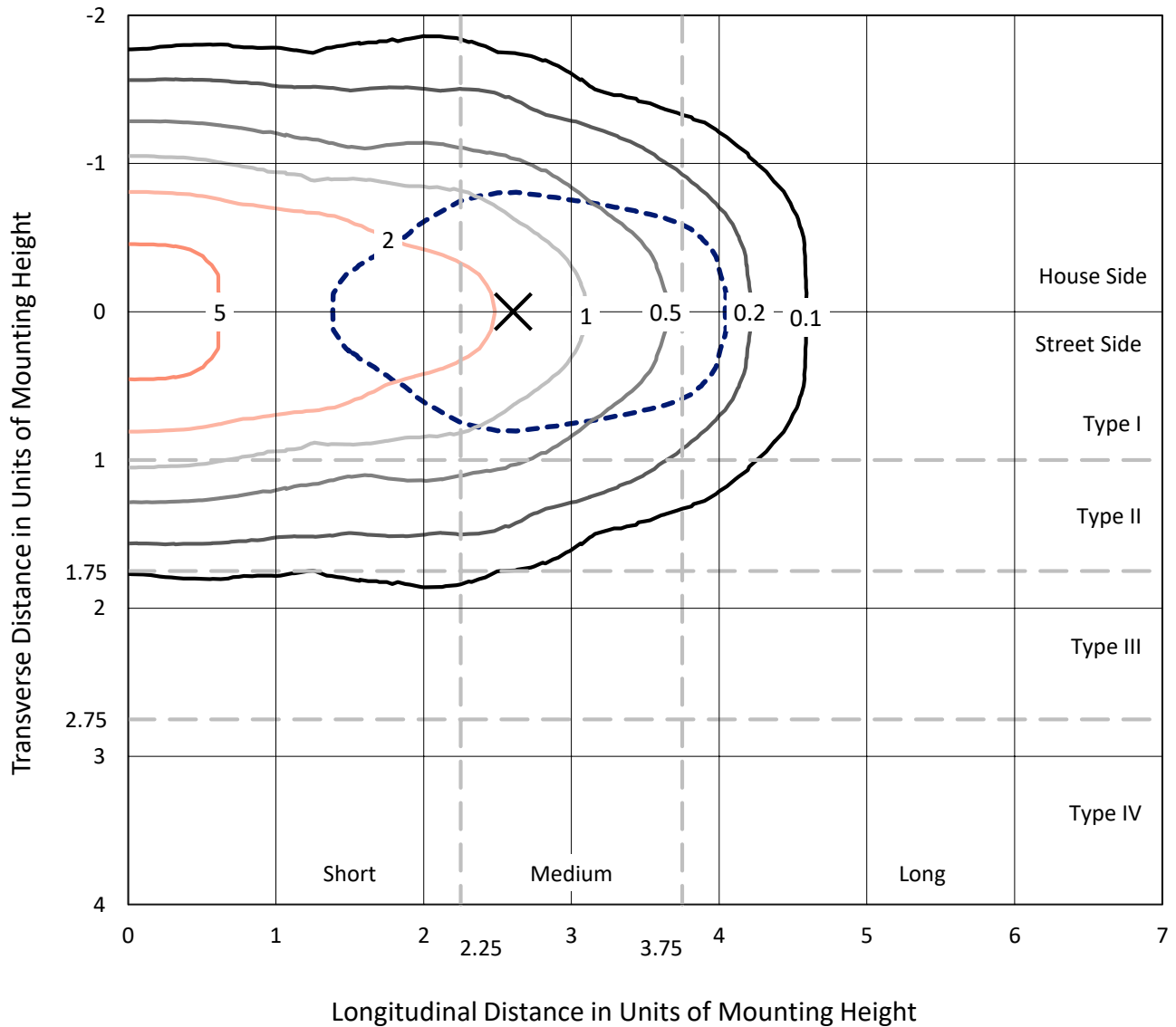
Input Watts (W): 156.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

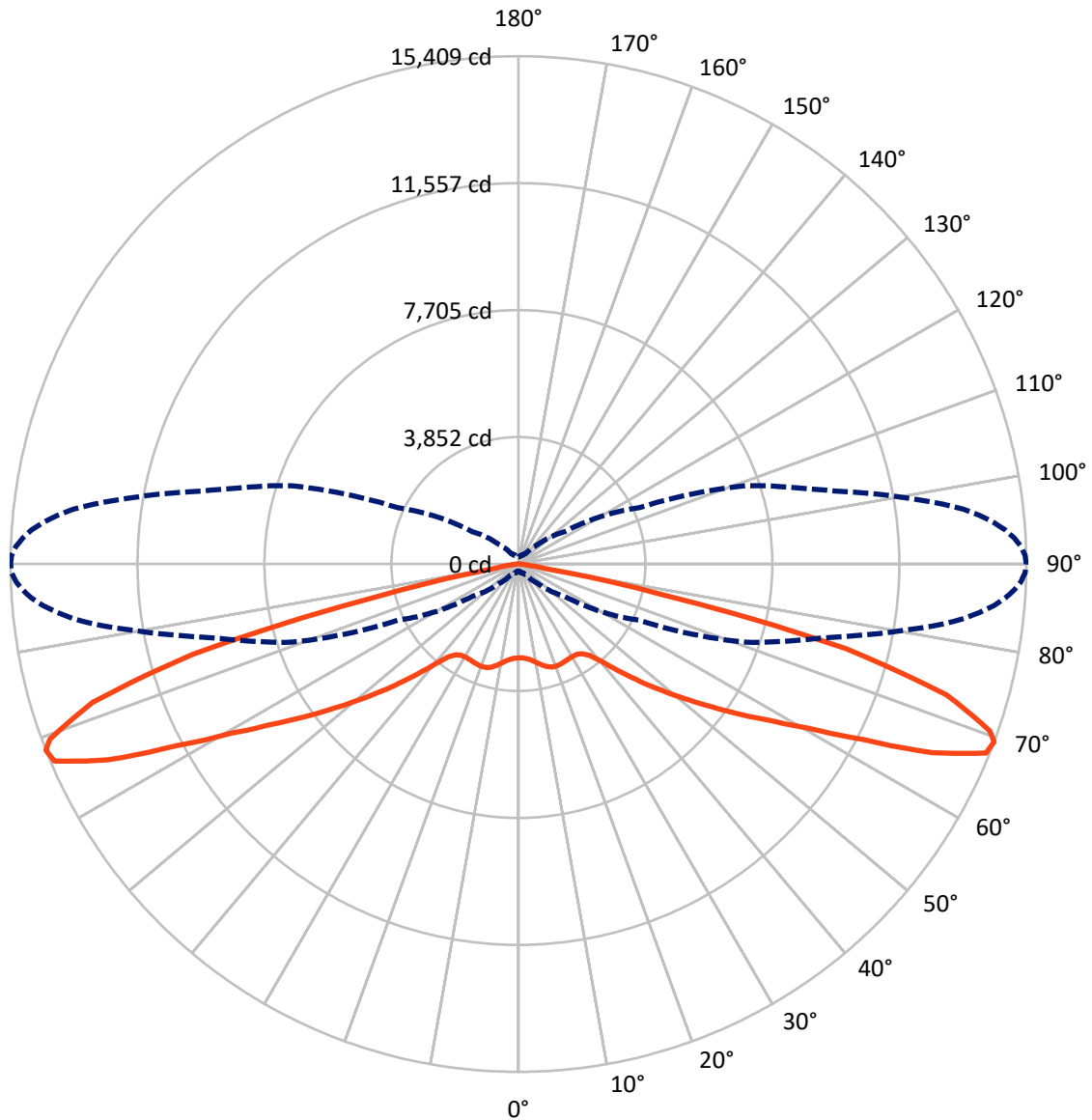
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.3 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	7438.8	0.0	7438.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7438.8	0.0	7438.8
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	14877.6	0.0	14877.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	278.8	1.9
10°-20°	877.9	5.9
20°-30°	1421.8	9.6
30°-40°	1771.2	11.9
40°-50°	2205.0	14.8
50°-60°	2705.6	18.2
60°-70°	3336.9	22.4
70°-80°	2074.4	13.9
80°-90°	206.0	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°	14877.6	100.0
0°-180°	14877.6	100.0



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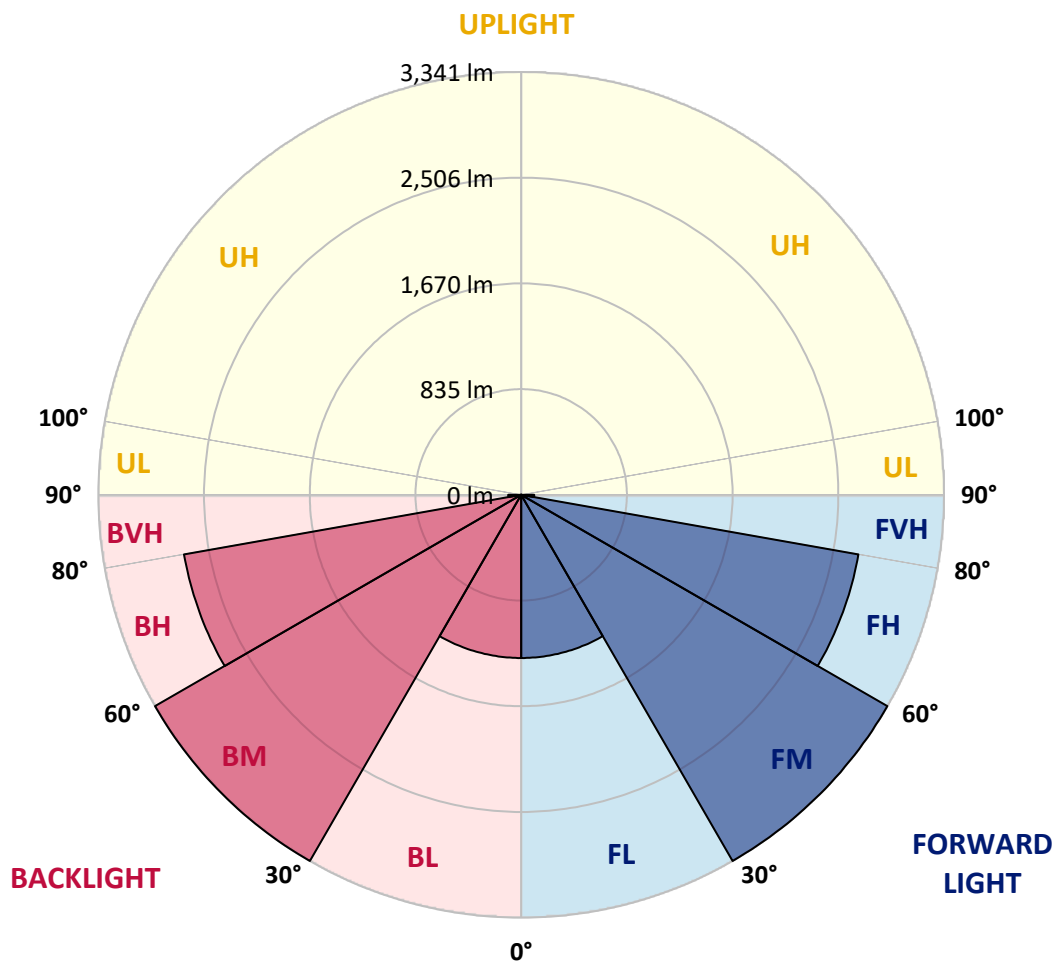
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1289.2	8.7			
FM	(30°-60°)	3340.9	22.5			
FH	(60°-80°)	2705.6	18.2			G2/5000
FVH	(80°-90°)	103.0	0.7			G2/225
BL	(0°-30°)	1289.2	8.7	B3/2500		
BM	(30°-60°)	3340.9	22.5	B3/5000		
BH	(60°-80°)	2705.6	18.2	B4/5000		G4/5000
BVH	(80°-90°)	103.0	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1
2.5°	2856.5	2853.5	2859.0	2863.9	2862.5	2863.4	2861.4	2859.0	2859.1	2859.4	2859.6
5°	2878.8	2875.8	2880.8	2885.2	2886.7	2890.1	2891.1	2889.6	2890.4	2891.0	2891.8
7.5°	2905.5	2903.0	2909.5	2915.4	2926.8	2932.8	2938.7	2944.6	2945.1	2945.6	2946.1
10°	2930.8	2929.3	2939.7	2952.5	2970.9	2984.8	3001.6	3018.0	3019.2	3020.5	3021.8
12.5°	2947.2	2947.2	2963.0	2986.2	3018.0	3046.2	3075.0	3102.6	3105.2	3107.8	3110.4
15°	2946.2	2948.1	2972.4	3015.0	3069.4	3119.5	3154.6	3184.9	3187.4	3189.8	3192.3
17.5°	2925.8	2926.4	2961.0	3028.8	3114.0	3188.3	3233.9	3250.2	3251.2	3252.0	3253.0
20°	2868.9	2872.8	2921.8	3020.4	3148.7	3251.2	3294.4	3287.4	3285.9	3284.4	3282.9
22.5°	2771.3	2776.2	2841.6	2973.9	3155.1	3291.8	3336.4	3305.2	3300.5	3295.7	3291.0
25°	2635.6	2644.0	2714.8	2884.2	3111.6	3303.8	3363.6	3313.6	3306.2	3298.8	3291.4
27.5°	2478.6	2482.5	2566.2	2744.0	3010.0	3264.2	3376.0	3331.0	3321.7	3312.4	3303.0
30°	2296.8	2307.2	2394.4	2580.1	2866.9	3172.0	3371.2	3364.6	3354.2	3343.8	3333.4
32.5°	2116.0	2124.9	2210.6	2410.7	2702.0	3043.7	3346.4	3415.7	3407.0	3398.3	3389.5
35°	1933.8	1944.6	2032.8	2247.8	2538.0	2898.1	3307.2	3488.5	3484.7	3481.0	3477.2
37.5°	1773.8	1780.6	1867.4	2090.7	2394.4	2764.8	3256.2	3586.1	3594.6	3603.1	3611.7
40°	1610.8	1617.7	1708.3	1937.2	2262.2	2651.0	3209.1	3708.9	3732.2	3755.5	3778.7
42.5°	1454.2	1460.2	1547.8	1776.2	2115.0	2552.4	3180.9	3857.6	3902.2	3946.9	3991.6
45°	1293.8	1297.8	1380.0	1602.4	1947.1	2437.4	3173.5	4024.4	4088.9	4153.4	4217.9
47.5°	1135.8	1145.2	1229.8	1440.8	1755.4	2273.0	3162.5	4209.2	4294.6	4380.2	4465.6
50°	984.7	995.1	1082.3	1282.4	1570.2	2077.9	3107.1	4418.7	4522.9	4627.1	4731.3
52.5°	830.6	841.0	928.2	1119.4	1398.2	1857.9	2952.6	4638.6	4762.6	4886.5	5010.4
55°	666.2	670.2	759.8	951.5	1226.4	1673.6	2706.4	4840.2	4990.3	5140.4	5290.5
57.5°	484.4	497.8	586.4	764.8	1051.0	1510.7	2393.4	4943.2	5130.6	5317.9	5505.2
60°	349.7	358.6	436.4	576.6	852.4	1350.7	2115.5	4868.0	5118.0	5368.1	5618.1
62.5°	276.4	286.3	346.2	434.4	659.3	1174.8	1934.2	4661.4	5012.2	5363.0	5713.7
65°	244.7	253.6	309.0	352.7	504.2	994.1	1820.3	4456.8	4930.3	5403.7	5877.1
67.5°	223.4	232.8	281.4	311.0	416.6	877.7	1766.3	4302.3	4849.0	5395.8	5942.5
69°	213.4	221.9	266.4	294.2	392.8	838.1	1708.4	4040.8	4582.8	5124.9	5667.0
70°	208.0	215.4	256.0	283.8	383.4	805.3	1622.6	3729.7	4252.8	4775.8	5298.9
72.5°	192.7	197.6	231.8	257.6	350.7	642.9	1223.9	2631.6	3075.0	3518.4	3961.8
75°	170.9	176.9	207.0	230.8	267.4	386.4	766.2	1527.6	1831.4	2135.2	2439.0
77.5°	146.6	153.6	178.3	216.0	215.4	251.6	465.1	877.2	1024.8	1172.4	1320.0
80°	125.8	131.8	154.0	213.5	180.3	199.1	346.7	654.3	713.7	773.2	832.6
82.5°	98.6	103.5	129.3	176.3	144.1	151.6	264.0	595.8	636.2	676.5	716.8
85°	61.9	63.9	94.1	121.8	102.5	91.6	169.9	458.6	488.0	517.3	546.6
87.5°	24.8	30.2	45.6	43.6	44.0	36.6	55.0	165.4	180.5	195.5	210.6
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°	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1
2.5°	2859.8	2860.0	2859.0	2857.4	2859.0	2857.4	2858.0	2859.4	2859.0	2859.0	2858.0
5°	2892.4	2893.2	2893.2	2890.2	2891.6	2892.1	2892.6	2891.6	2892.2	2893.2	2891.2
7.5°	2946.6	2947.1	2948.6	2950.1	2949.1	2949.6	2950.6	2949.6	2948.1	2951.6	2949.1
10°	3023.1	3024.4	3024.4	3028.8	3026.8	3028.4	3032.8	3032.8	3030.4	3033.8	3032.8
12.5°	3113.0	3115.6	3115.0	3114.6	3116.5	3118.0	3123.0	3124.0	3124.9	3130.4	3128.4
15°	3194.8	3197.2	3199.2	3200.2	3203.7	3204.7	3207.6	3209.6	3211.2	3213.1	3214.1
17.5°	3253.8	3254.8	3257.7	3256.2	3261.2	3260.2	3263.6	3265.1	3266.6	3269.0	3270.6
20°	3281.4	3280.0	3280.5	3279.0	3279.0	3280.0	3280.5	3282.4	3281.5	3283.9	3285.9
22.5°	3286.2	3281.4	3278.5	3275.0	3273.6	3270.5	3270.5	3271.6	3268.1	3270.6	3273.6
25°	3284.0	3276.6	3271.0	3265.1	3259.6	3254.8	3251.8	3250.8	3248.3	3248.3	3250.8
27.5°	3293.7	3284.4	3276.5	3266.6	3259.7	3252.7	3246.3	3241.4	3236.4	3235.4	3235.4
30°	3323.0	3312.6	3303.8	3291.4	3280.5	3271.6	3262.6	3255.7	3246.3	3242.3	3237.9
32.5°	3380.8	3372.1	3359.7	3348.8	3336.0	3325.0	3313.2	3302.3	3291.4	3281.4	3277.5
35°	3473.5	3469.7	3462.8	3455.3	3443.0	3429.0	3419.2	3406.2	3393.9	3379.5	3375.6
37.5°	3620.2	3628.7	3624.7	3619.2	3615.8	3611.4	3598.0	3589.6	3581.2	3569.2	3566.8
40°	3802.0	3825.3	3848.6	3864.0	3858.5	3876.8	3879.8	3881.3	3873.9	3883.8	3885.7
42.5°	4036.2	4080.9	4123.0	4153.7	4189.4	4216.2	4250.8	4265.6	4293.9	4323.1	4340.0
45°	4282.4	4346.9	4407.3	4470.2	4532.1	4600.0	4665.8	4712.5	4780.2	4830.8	4862.5
47.5°	4551.2	4636.6	4709.0	4803.0	4892.8	4973.0	5088.4	5181.0	5263.7	5342.4	5425.2
50°	4835.5	4939.8	5028.9	5143.8	5252.8	5378.6	5513.8	5631.7	5761.5	5886.8	5998.2
52.5°	5134.3	5258.2	5378.6	5496.5	5628.8	5765.4	5912.0	6082.4	6238.0	6426.8	6561.9
55°	5440.5	5590.6	5718.9	5842.2	5982.4	6134.0	6308.4	6509.9	6707.6	6914.1	7119.2
57.5°	5692.6	5879.9	6020.0	6164.2	6315.2	6465.4	6681.8	6888.4	7139.0	7392.6	7649.2
60°	5868.1	6118.2	6288.0	6470.3	6645.2	6827.4	7060.8	7321.8	7635.2	7942.4	8291.1
62.5°	6064.5	6415.3	6653.6	6896.8	7109.2	7328.2	7640.2	7940.9	8343.6	8697.2	9136.1
65°	6350.6	6824.0	7174.6	7502.6	7787.8	8086.0	8456.0	8832.0	9292.6	9781.4	10331.8
67.5°	6489.2	7036.0	7495.2	7899.8	8264.3	8644.2	9026.2	9470.9	9990.0	10578.4	11182.8
69°	6209.1	6751.2	7279.2	7688.2	8072.2	8477.8	8886.4	9335.2	9846.3	10457.1	11097.6
70°	5821.9	6345.0	6906.2	7316.3	7703.6	8124.6	8540.8	8993.9	9482.8	10111.8	10759.8
72.5°	4405.2	4848.6	5393.5	5826.9	6234.0	6659.5	7088.0	7481.2	7977.0	8582.3	9179.2
75°	2742.9	3046.7	3536.6	3971.9	4299.4	4663.9	5066.1	5438.5	5936.4	6365.3	6939.4
77.5°	1467.6	1615.2	1901.0	2213.0	2395.4	2573.1	2835.1	3037.2	3246.8	3495.0	3732.2
80°	892.1	951.5	1049.1	1116.4	1091.2	1018.4	995.1	922.2	948.6	904.0	871.8
82.5°	757.1	797.4	856.9	897.5	867.8	751.4	619.6	521.6	452.2	385.8	327.9
85°	575.9	605.2	636.0	654.3	652.8	594.9	472.5	366.0	285.3	220.9	183.8
87.5°	225.7	240.8	263.0	259.6	270.9	273.0	213.5	165.0	117.4	79.2	69.4
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):**

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1	2849.1
2.5°	2856.0	2855.5	2856.0	2857.4	2857.4	2858.4	2857.4	2858.0	2856.5	2855.0	2856.0
5°	2891.2	2890.2	2891.2	2892.2	2892.2	2891.2	2893.6	2893.6	2892.6	2891.2	2891.6
7.5°	2951.5	2952.0	2950.5	2955.5	2951.1	2951.6	2954.6	2954.0	2953.1	2953.6	2954.1
10°	3035.8	3035.2	3036.3	3039.2	3034.8	3037.8	3041.2	3042.2	3039.8	3039.8	3040.2
12.5°	3128.9	3132.9	3133.4	3135.4	3135.4	3137.8	3138.4	3138.9	3140.8	3141.3	3138.3
15°	3218.0	3221.0	3223.0	3225.0	3222.6	3226.0	3230.0	3230.0	3229.4	3231.4	3228.5
17.5°	3273.0	3275.6	3279.0	3278.5	3279.0	3282.0	3284.4	3285.4	3286.4	3286.4	3286.9
20°	3290.4	3291.8	3293.8	3295.8	3296.8	3299.8	3301.8	3303.2	3304.2	3303.2	3303.8
22.5°	3276.5	3278.5	3282.4	3284.0	3284.4	3288.9	3290.8	3292.4	3293.4	3294.4	3292.9
25°	3252.7	3254.8	3258.7	3260.2	3261.2	3265.1	3267.6	3271.0	3272.0	3272.6	3273.0
27.5°	3236.4	3237.4	3240.4	3242.3	3242.8	3247.3	3250.8	3253.2	3253.8	3254.2	3254.2
30°	3236.9	3236.9	3240.4	3240.8	3240.4	3244.3	3246.3	3247.8	3248.8	3248.8	3249.3
32.5°	3271.0	3269.0	3272.1	3267.6	3268.0	3267.6	3267.1	3268.6	3267.6	3268.0	3266.1
35°	3367.6	3362.2	3357.8	3359.8	3352.8	3342.9	3348.4	3345.8	3340.4	3340.9	3342.4
37.5°	3552.8	3547.4	3552.4	3548.0	3549.4	3535.6	3539.0	3526.6	3523.2	3527.6	3514.8
40°	3881.8	3879.3	3888.8	3884.8	3887.2	3891.2	3894.6	3882.8	3863.0	3880.8	3881.3
42.5°	4337.4	4359.8	4368.6	4381.0	4394.4	4388.5	4400.4	4403.8	4382.0	4398.4	4402.4
45°	4909.0	4932.8	4960.6	4969.0	4990.8	4993.8	5002.6	5005.2	4985.4	4987.4	4991.8
47.5°	5507.9	5551.5	5584.2	5607.0	5629.8	5634.2	5639.2	5629.8	5631.2	5635.7	5635.7
50°	6096.4	6189.4	6247.4	6292.4	6331.6	6311.3	6328.6	6330.2	6336.1	6323.6	6331.1
52.5°	6715.0	6838.3	6935.4	7011.2	7035.0	7107.3	7077.6	7100.4	7115.7	7092.9	7107.8
55°	7319.3	7495.2	7651.2	7761.1	7838.4	7911.6	7923.1	7982.0	7975.0	7997.4	7987.4
57.5°	7893.8	8139.6	8362.4	8525.3	8636.4	8748.2	8824.0	8888.4	8894.9	8958.8	8922.6
60°	8588.8	8931.0	9217.8	9460.6	9624.4	9790.9	9922.2	10027.6	10051.9	10161.4	10125.2
62.5°	9526.4	9944.0	10310.5	10595.3	10960.3	11136.2	11391.8	11551.2	11650.8	11678.0	11729.1
65°	10844.4	11388.2	11871.7	12327.4	12738.0	13022.8	13318.6	13556.2	13747.0	13731.1	13809.4
67.5°	11823.6	12443.8	13025.8	13572.1	14014.0	14380.5	14720.3	14977.4	15147.7	15256.2	15302.3
69°	11721.7	12387.4	13029.2	13612.7	14068.4	14478.0	14809.0	15062.0	15257.2	15375.1	15409.2
70°	11382.4	12066.4	12735.6	13308.1	13772.8	14222.5	14559.3	14841.1	15026.8	15155.6	15175.5
72.5°	9845.3	10586.3	11178.3	11802.8	12250.1	12705.3	12917.3	13266.5	13508.8	13587.0	13585.5
75°	7425.8	8043.9	8564.0	9025.6	9425.8	9734.4	9834.5	10083.1	10284.2	10281.8	10262.9
77.5°	3998.7	4144.3	4339.0	4404.4	4527.7	4525.6	4401.8	4441.0	4555.0	4334.0	4405.3
80°	857.9	845.0	834.2	827.7	824.2	825.7	830.2	801.9	829.6	817.2	764.8
82.5°	298.7	291.8	284.8	289.8	286.3	289.2	288.2	291.8	291.2	290.2	283.3
85°	167.9	162.0	158.5	161.0	155.6	150.6	147.1	145.6	145.1	141.7	139.7
87.5°	63.9	63.4	62.9	60.4	54.4	50.0	47.0	41.1	38.6	35.2	32.7
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)