

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: P144560

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144560
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
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (105) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15018.3 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B4 - U0 - G4

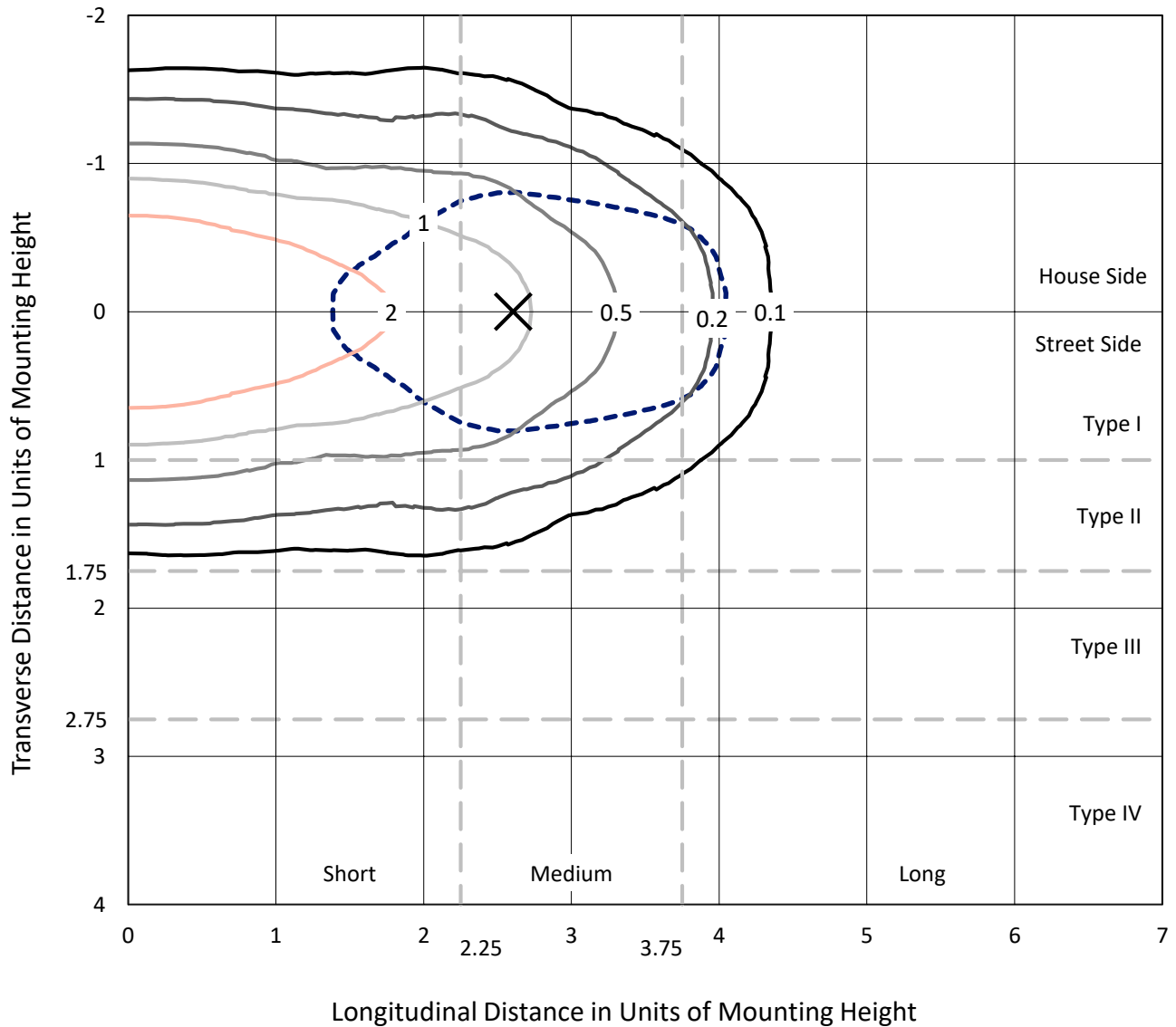
Input Watts (W): 127.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

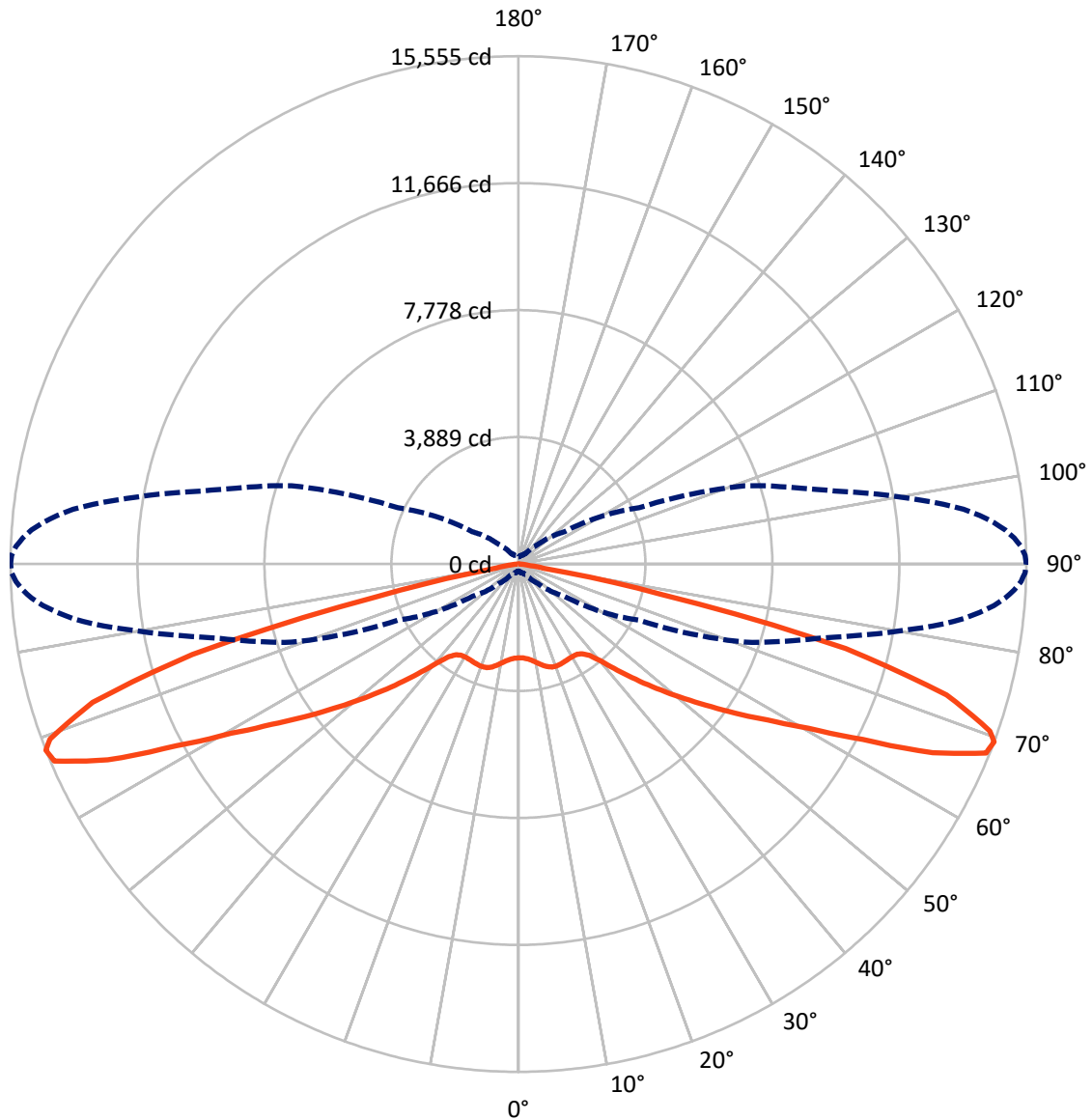
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 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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CATALOG NUMBER: LDRL-RW-E05-E

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7509.2	0.0	7509.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7509.2	0.0	7509.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	15018.3	0.0	15018.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.4	1.9
10°-20°	886.2	5.9
20°-30°	1435.2	9.6
30°-40°	1788.0	11.9
40°-50°	2225.9	14.8
50°-60°	2731.2	18.2
60°-70°	3368.4	22.4
70°-80°	2094.0	13.9
80°-90°	208.0	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°	15018.3	100.0
0°-180°	15018.3	100.0



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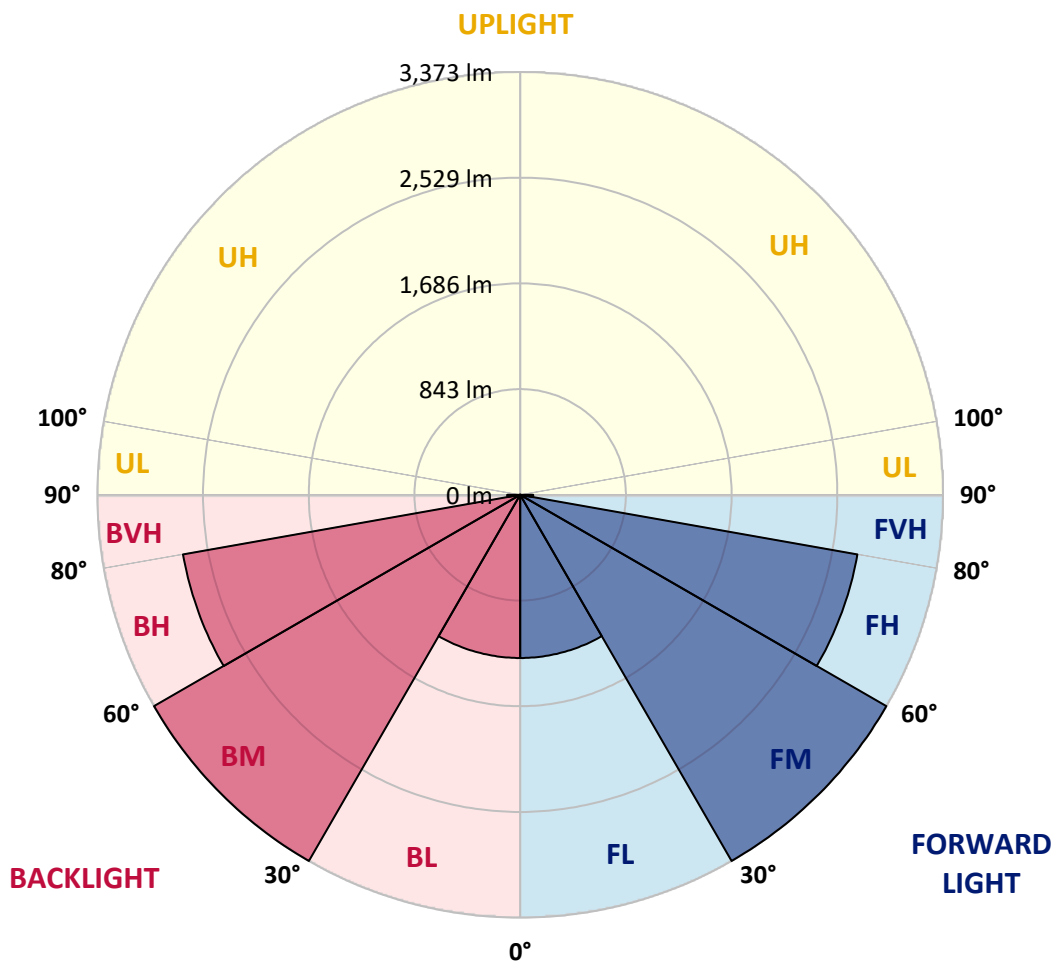
CATALOG NUMBER: LDRL-RW-E05-E

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1301.4	8.7			
FM	(30°-60°)	3372.5	22.5			
FH	(60°-80°)	2731.2	18.2			G2/5000
FVH	(80°-90°)	104.0	0.7			G2/225
BL	(0°-30°)	1301.4	8.7	B3/2500		
BM	(30°-60°)	3372.5	22.5	B3/5000		
BH	(60°-80°)	2731.2	18.2	B4/5000		G4/5000
BVH	(80°-90°)	104.0	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°	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0
2.5°	2883.5	2880.5	2886.0	2891.0	2889.5	2890.5	2888.5	2886.0	2886.2	2886.4	2886.6
5°	2906.0	2903.0	2908.0	2912.5	2914.0	2917.5	2918.5	2917.0	2917.7	2918.4	2919.1
7.5°	2933.0	2930.5	2937.0	2943.0	2954.5	2960.5	2966.5	2972.5	2973.0	2973.5	2974.0
10°	2958.5	2957.0	2967.5	2980.5	2999.0	3013.0	3030.0	3046.5	3047.8	3049.1	3050.4
12.5°	2975.0	2975.0	2991.0	3014.5	3046.5	3075.0	3104.0	3132.0	3134.6	3137.2	3139.8
15°	2974.0	2976.0	3000.5	3043.5	3098.5	3149.0	3184.5	3215.0	3217.5	3220.0	3222.5
17.5°	2953.5	2954.0	2989.0	3057.5	3143.5	3218.5	3264.5	3281.0	3281.9	3282.8	3283.7
20°	2896.0	2900.0	2949.5	3049.0	3178.5	3282.0	3325.5	3318.5	3317.0	3315.5	3314.0
22.5°	2797.5	2802.5	2868.5	3002.0	3185.0	3323.0	3368.0	3336.5	3331.7	3326.9	3322.1
25°	2660.5	2669.0	2740.5	2911.5	3141.0	3335.0	3395.5	3345.0	3337.5	3330.0	3322.5
27.5°	2502.0	2506.0	2590.5	2770.0	3038.5	3295.0	3408.0	3362.5	3353.1	3343.7	3334.3
30°	2318.5	2329.0	2417.0	2604.5	2894.0	3202.0	3403.0	3396.5	3386.0	3375.5	3365.0
32.5°	2136.0	2145.0	2231.5	2433.5	2727.5	3072.5	3378.0	3448.0	3439.2	3430.4	3421.6
35°	1952.0	1963.0	2052.0	2269.0	2562.0	2925.5	3338.5	3521.5	3517.7	3513.9	3510.1
37.5°	1790.5	1797.5	1885.0	2110.5	2417.0	2791.0	3287.0	3620.0	3628.6	3637.2	3645.8
40°	1626.0	1633.0	1724.5	1955.5	2283.5	2676.0	3239.5	3744.0	3767.5	3791.0	3814.5
42.5°	1468.0	1474.0	1562.5	1793.0	2135.0	2576.5	3211.0	3894.0	3939.1	3984.2	4029.3
45°	1306.0	1310.0	1393.0	1617.5	1965.5	2460.5	3203.5	4062.5	4127.6	4192.7	4257.8
47.5°	1146.5	1156.0	1241.5	1454.5	1772.0	2294.5	3192.5	4249.0	4335.3	4421.6	4507.9
50°	994.0	1004.5	1092.5	1294.5	1585.0	2097.5	3136.5	4460.5	4565.7	4670.9	4776.1
52.5°	838.5	849.0	937.0	1130.0	1411.5	1875.5	2980.5	4682.5	4807.6	4932.7	5057.8
55°	672.5	676.5	767.0	960.5	1238.0	1689.5	2732.0	4886.0	5037.5	5189.0	5340.5
57.5°	489.0	502.5	592.0	772.0	1061.0	1525.0	2416.0	4990.0	5179.1	5368.2	5557.3
60°	353.0	362.0	440.5	582.0	860.5	1363.5	2135.5	4914.0	5166.4	5418.8	5671.2
62.5°	279.0	289.0	349.5	438.5	665.5	1186.0	1952.5	4705.5	5059.6	5413.7	5767.8
65°	247.0	256.0	312.0	356.0	509.0	1003.5	1837.5	4499.0	4976.9	5454.8	5932.7
67.5°	225.5	235.0	284.0	314.0	420.5	886.0	1783.0	4343.0	4894.9	5446.8	5998.7
69°	215.5	224.0	269.0	297.0	396.5	846.0	1724.5	4079.0	4626.2	5173.4	5720.6
70°	210.0	217.5	258.5	286.5	387.0	813.0	1638.0	3765.0	4293.0	4821.0	5349.0
72.5°	194.5	199.5	234.0	260.0	354.0	649.0	1235.5	2656.5	3104.1	3551.7	3999.3
75°	172.5	178.5	209.0	233.0	270.0	390.0	773.5	1542.0	1848.7	2155.4	2462.1
77.5°	148.0	155.0	180.0	218.0	217.5	254.0	469.5	885.5	1034.5	1183.5	1332.5
80°	127.0	133.0	155.5	215.5	182.0	201.0	350.0	660.5	720.5	780.5	840.5
82.5°	99.5	104.5	130.5	178.0	145.5	153.0	266.5	601.5	642.2	682.9	723.6
85°	62.5	64.5	95.0	123.0	103.5	92.5	171.5	463.0	492.6	522.2	551.8
87.5°	25.0	30.5	46.0	44.0	44.5	37.0	55.5	167.0	182.2	197.4	212.6
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°	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0
2.5°	2886.8	2887.0	2886.0	2884.5	2886.0	2884.5	2885.0	2886.5	2886.0	2886.0	2885.0
5°	2919.8	2920.5	2920.5	2917.5	2919.0	2919.5	2920.0	2919.0	2919.5	2920.5	2918.5
7.5°	2974.5	2975.0	2976.5	2978.0	2977.0	2977.5	2978.5	2977.5	2976.0	2979.5	2977.0
10°	3051.7	3053.0	3053.0	3057.5	3055.5	3057.0	3061.5	3061.5	3059.0	3062.5	3061.5
12.5°	3142.4	3145.0	3144.5	3144.0	3146.0	3147.5	3152.5	3153.5	3154.5	3160.0	3158.0
15°	3225.0	3227.5	3229.5	3230.5	3234.0	3235.0	3238.0	3240.0	3241.5	3243.5	3244.5
17.5°	3284.6	3285.5	3288.5	3287.0	3292.0	3291.0	3294.5	3296.0	3297.5	3300.0	3301.5
20°	3312.5	3311.0	3311.5	3310.0	3310.0	3311.0	3311.5	3313.5	3312.5	3315.0	3317.0
22.5°	3317.3	3312.5	3309.5	3306.0	3304.5	3301.5	3301.5	3302.5	3299.0	3301.5	3304.5
25°	3315.0	3307.5	3302.0	3296.0	3290.5	3285.5	3282.5	3281.5	3279.0	3279.0	3281.5
27.5°	3324.9	3315.5	3307.5	3297.5	3290.5	3283.5	3277.0	3272.0	3267.0	3266.0	3266.0
30°	3354.5	3344.0	3335.0	3322.5	3311.5	3302.5	3293.5	3286.5	3277.0	3273.0	3268.5
32.5°	3412.8	3404.0	3391.5	3380.5	3367.5	3356.5	3344.5	3333.5	3322.5	3312.5	3308.5
35°	3506.3	3502.5	3495.5	3488.0	3475.5	3461.5	3451.5	3438.5	3426.0	3411.5	3407.5
37.5°	3654.4	3663.0	3659.0	3653.5	3650.0	3645.5	3632.0	3623.5	3615.0	3603.0	3600.5
40°	3838.0	3861.5	3885.0	3900.5	3895.0	3913.5	3916.5	3918.0	3910.5	3920.5	3922.5
42.5°	4074.4	4119.5	4162.0	4193.0	4229.0	4256.0	4291.0	4306.0	4334.5	4364.0	4381.0
45°	4322.9	4388.0	4449.0	4512.5	4575.0	4643.5	4710.0	4757.0	4825.5	4876.5	4908.5
47.5°	4594.2	4680.5	4753.5	4848.5	4939.0	5020.0	5136.5	5230.0	5313.5	5393.0	5476.5
50°	4881.3	4986.5	5076.5	5192.5	5302.5	5429.5	5566.0	5685.0	5816.0	5942.5	6055.0
52.5°	5182.9	5308.0	5429.5	5548.5	5682.0	5820.0	5968.0	6140.0	6297.0	6487.5	6624.0
55°	5492.0	5643.5	5773.0	5897.5	6039.0	6192.0	6368.0	6571.5	6771.0	6979.5	7186.5
57.5°	5746.4	5935.5	6077.0	6222.5	6375.0	6526.5	6745.0	6953.5	7206.5	7462.5	7721.5
60°	5923.6	6176.0	6347.5	6531.5	6708.0	6892.0	7127.5	7391.0	7707.5	8017.5	8369.5
62.5°	6121.9	6476.0	6716.5	6962.0	7176.5	7397.5	7712.5	8016.0	8422.5	8779.5	9222.5
65°	6410.6	6888.5	7242.5	7573.5	7861.5	8162.5	8536.0	8915.5	9380.5	9874.0	10429.5
67.5°	6550.6	7102.5	7566.0	7974.5	8342.5	8726.0	9111.5	9560.5	10084.5	10678.5	11288.5
69°	6267.8	6815.0	7348.0	7761.0	8148.5	8558.0	8970.5	9423.5	9939.5	10556.0	11202.5
70°	5877.0	6405.0	6971.5	7385.5	7776.5	8201.5	8621.5	9079.0	9572.5	10207.5	10861.5
72.5°	4446.9	4894.5	5444.5	5882.0	6293.0	6722.5	7155.0	7552.0	8052.5	8663.5	9266.0
75°	2768.8	3075.5	3570.0	4009.5	4340.0	4708.0	5114.0	5490.0	5992.5	6425.5	7005.0
77.5°	1481.5	1630.5	1919.0	2234.0	2418.0	2597.5	2862.0	3066.0	3277.5	3528.0	3767.5
80°	900.5	960.5	1059.0	1127.0	1101.5	1028.0	1004.5	931.0	957.5	912.5	880.0
82.5°	764.3	805.0	865.0	906.0	876.0	758.5	625.5	526.5	456.5	389.5	331.0
85°	581.4	611.0	642.0	660.5	659.0	600.5	477.0	369.5	288.0	223.0	185.5
87.5°	227.8	243.0	265.5	262.0	273.5	275.5	215.5	166.5	118.5	80.0	70.0
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0	2876.0
2.5°	2883.0	2882.5	2883.0	2884.5	2884.5	2885.5	2884.5	2885.0	2883.5	2882.0	2883.0
5°	2918.5	2917.5	2918.5	2919.5	2919.5	2918.5	2921.0	2921.0	2920.0	2918.5	2919.0
7.5°	2979.5	2980.0	2978.5	2983.5	2979.0	2979.5	2982.5	2982.0	2981.0	2981.5	2982.0
10°	3064.5	3064.0	3065.0	3068.0	3063.5	3066.5	3070.0	3071.0	3068.5	3068.5	3069.0
12.5°	3158.5	3162.5	3163.0	3165.0	3165.0	3167.5	3168.0	3168.5	3170.5	3171.0	3168.0
15°	3248.5	3251.5	3253.5	3255.5	3253.0	3256.5	3260.5	3260.5	3260.0	3262.0	3259.0
17.5°	3304.0	3306.5	3310.0	3309.5	3310.0	3313.0	3315.5	3316.5	3317.5	3317.5	3318.0
20°	3321.5	3323.0	3325.0	3327.0	3328.0	3331.0	3333.0	3334.5	3335.5	3334.5	3335.0
22.5°	3307.5	3309.5	3313.5	3315.0	3315.5	3320.0	3322.0	3323.5	3324.5	3325.5	3324.0
25°	3283.5	3285.5	3289.5	3291.0	3292.0	3296.0	3298.5	3302.0	3303.0	3303.5	3304.0
27.5°	3267.0	3268.0	3271.0	3273.0	3273.5	3278.0	3281.5	3284.0	3284.5	3285.0	3285.0
30°	3267.5	3267.5	3271.0	3271.5	3271.0	3275.0	3277.0	3278.5	3279.5	3279.5	3280.0
32.5°	3302.0	3300.0	3303.0	3298.5	3299.0	3298.5	3298.0	3299.5	3298.5	3299.0	3297.0
35°	3399.5	3394.0	3389.5	3391.5	3384.5	3374.5	3380.0	3377.5	3372.0	3372.5	3374.0
37.5°	3586.5	3581.0	3586.0	3581.5	3583.0	3569.0	3572.5	3560.0	3556.5	3561.0	3548.0
40°	3918.5	3916.0	3925.5	3921.5	3924.0	3928.0	3931.5	3919.5	3899.5	3917.5	3918.0
42.5°	4378.5	4401.0	4410.0	4422.5	4436.0	4430.0	4442.0	4445.5	4423.5	4440.0	4444.0
45°	4955.5	4979.5	5007.5	5016.0	5038.0	5041.0	5050.0	5052.5	5032.5	5034.5	5039.0
47.5°	5560.0	5604.0	5637.0	5660.0	5683.0	5687.5	5692.5	5683.0	5684.5	5689.0	5689.0
50°	6154.0	6248.0	6306.5	6352.0	6391.5	6371.0	6388.5	6390.0	6396.0	6383.5	6391.0
52.5°	6778.5	6903.0	7001.0	7077.5	7101.5	7174.5	7144.5	7167.5	7183.0	7160.0	7175.0
55°	7388.5	7566.0	7723.5	7834.5	7912.5	7986.5	7998.0	8057.5	8050.5	8073.0	8063.0
57.5°	7968.5	8216.5	8441.5	8606.0	8718.0	8831.0	8907.5	8972.5	8979.0	9043.5	9007.0
60°	8670.0	9015.5	9305.0	9550.0	9715.5	9883.5	10016.0	10122.5	10147.0	10257.5	10221.0
62.5°	9616.5	10038.0	10408.0	10695.5	11064.0	11241.5	11499.5	11660.5	11761.0	11788.5	11840.0
65°	10947.0	11496.0	11984.0	12444.0	12858.5	13146.0	13444.5	13684.5	13877.0	13861.0	13940.0
67.5°	11935.5	12561.5	13149.0	13700.5	14146.5	14516.5	14859.5	15119.0	15291.0	15400.5	15447.0
69°	11832.5	12504.5	13152.5	13741.5	14201.5	14615.0	14949.0	15204.5	15401.5	15520.5	15555.0
70°	11490.0	12180.5	12856.0	13434.0	13903.0	14357.0	14697.0	14981.5	15169.0	15299.0	15319.0
72.5°	9938.5	10686.5	11284.0	11914.5	12366.0	12825.5	13039.5	13392.0	13636.5	13715.5	13714.0
75°	7496.0	8120.0	8645.0	9111.0	9515.0	9826.5	9927.5	10178.5	10381.5	10379.0	10360.0
77.5°	4036.5	4183.5	4380.0	4446.0	4570.5	4568.5	4443.5	4483.0	4598.0	4375.0	4447.0
80°	866.0	853.0	842.0	835.5	832.0	833.5	838.0	809.5	837.5	825.0	772.0
82.5°	301.5	294.5	287.5	292.5	289.0	292.0	291.0	294.5	294.0	293.0	286.0
85°	169.5	163.5	160.0	162.5	157.0	152.0	148.5	147.0	146.5	143.0	141.0
87.5°	64.5	64.0	63.5	61.0	55.0	50.5	47.5	41.5	39.0	35.5	33.0
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)