

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: P144561

Luminaire Tested: **LDRL-RW-E05-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144561
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-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (105) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15410.4 lumens
Efficiency: N/A
Efficacy: 121.1 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 (A_{in}): 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

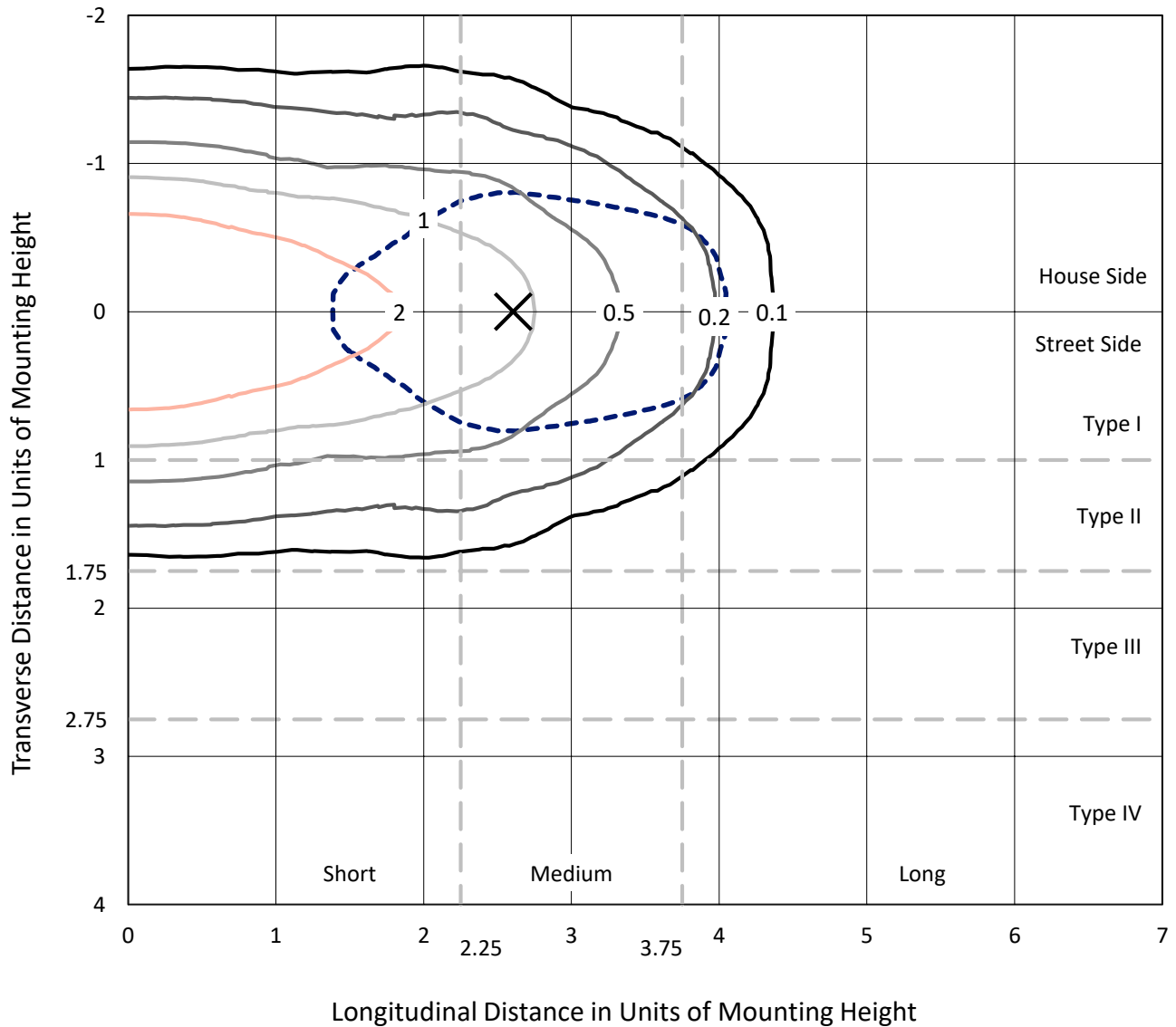


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Iso-Footcandle Lines of Horizontal Illumination

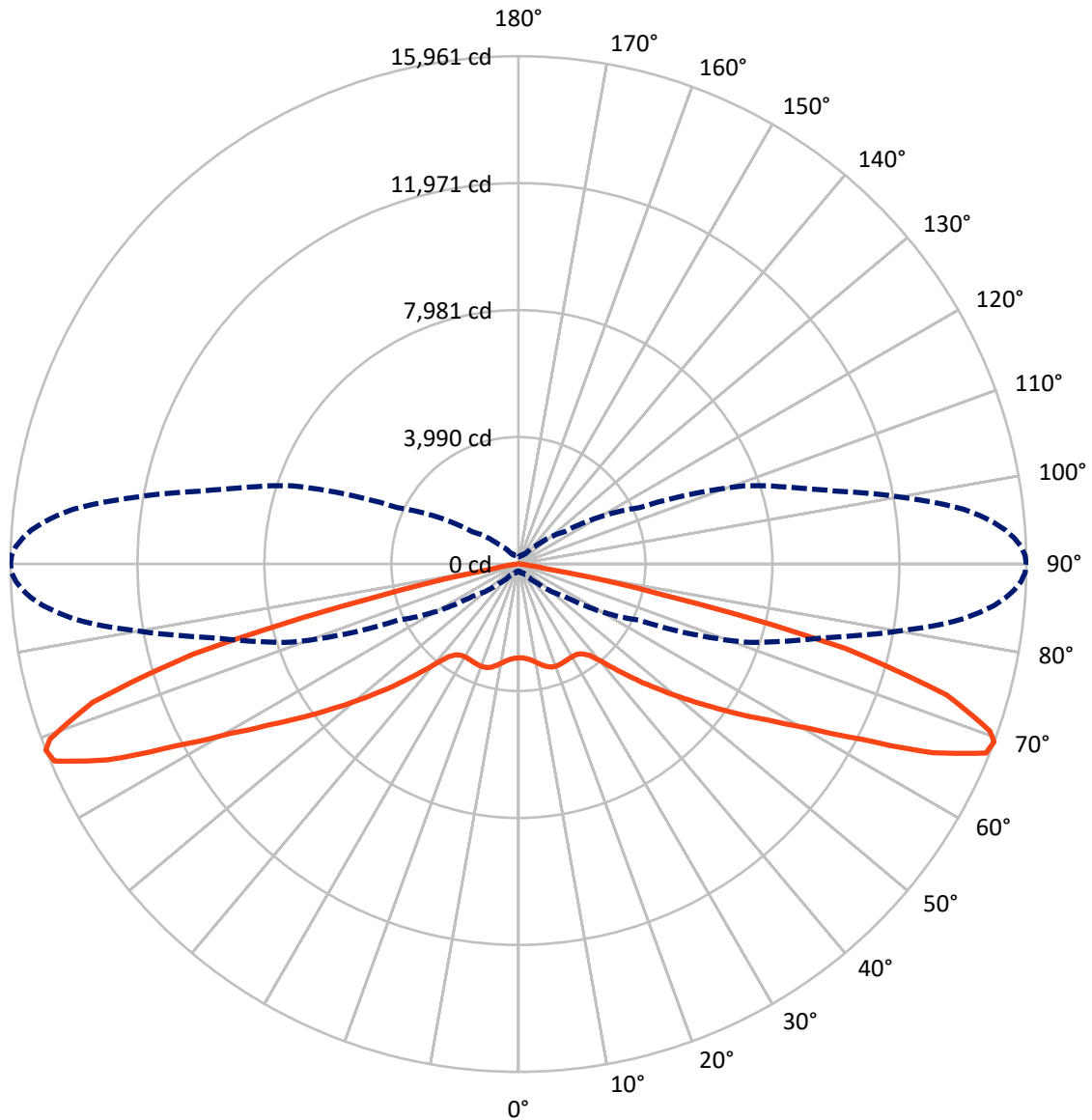
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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-7050

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7705.2	0.0	7705.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7705.2	0.0	7705.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	15410.4	0.0	15410.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.7	1.9
10°-20°	909.3	5.9
20°-30°	1472.7	9.6
30°-40°	1834.7	11.9
40°-50°	2284.0	14.8
50°-60°	2802.5	18.2
60°-70°	3456.4	22.4
70°-80°	2148.7	13.9
80°-90°	213.4	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°	15410.4	100.0
0°-180°	15410.4	100.0



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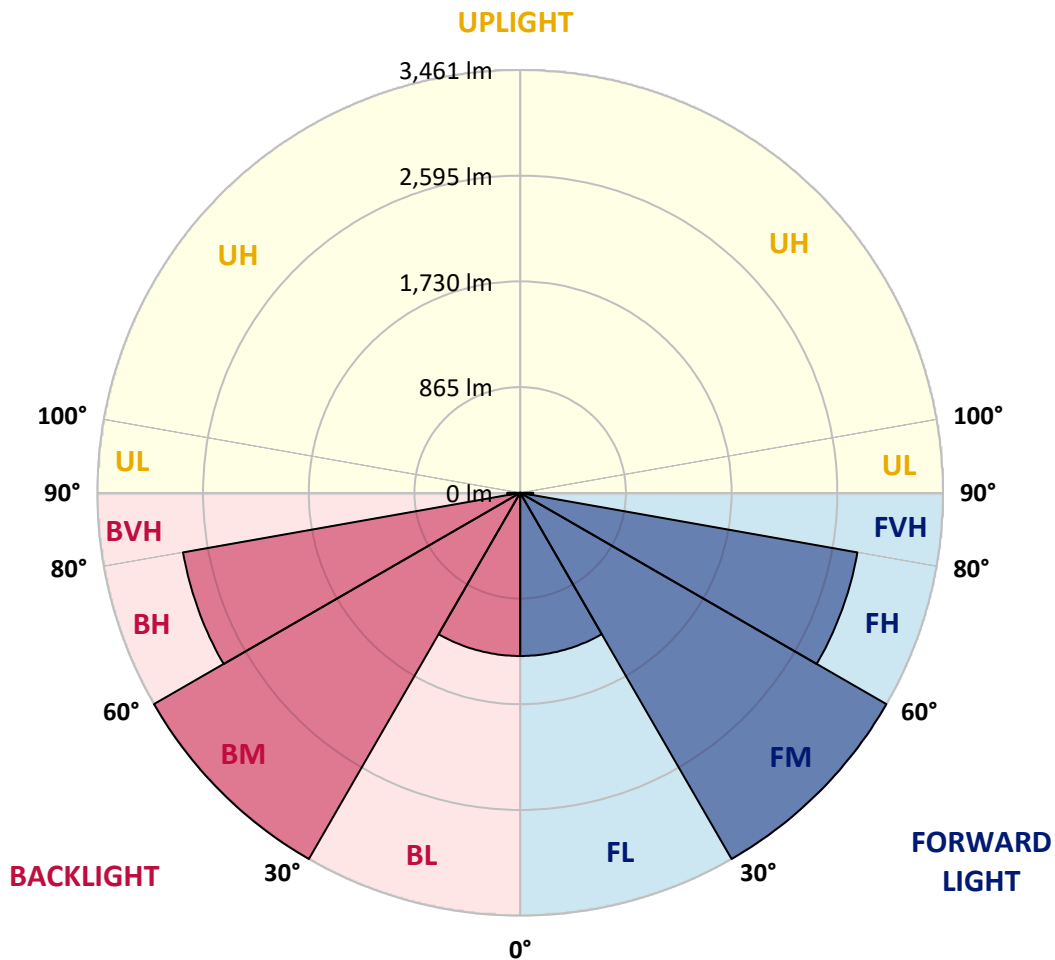
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1335.4	8.7			
FM	(30°-60°)	3460.6	22.5			
FH	(60°-80°)	2802.5	18.2			G2/5000
FVH	(80°-90°)	106.7	0.7			G2/225
BL	(0°-30°)	1335.4	8.7	B3/2500		
BM	(30°-60°)	3460.6	22.5	B3/5000		
BH	(60°-80°)	2802.5	18.2	B4/5000		G4/5000
BVH	(80°-90°)	106.7	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°	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1
2.5°	2958.8	2955.7	2961.4	2966.5	2965.0	2966.0	2963.9	2961.4	2961.6	2961.8	2962.0
5°	2981.8	2978.8	2983.9	2988.6	2990.0	2993.7	2994.7	2993.2	2993.9	2994.6	2995.3
7.5°	3009.6	3007.0	3013.6	3019.8	3031.6	3037.8	3044.0	3050.1	3050.6	3051.1	3051.6
10°	3035.8	3034.2	3045.0	3058.3	3077.3	3091.6	3109.1	3126.0	3127.4	3128.7	3130.0
12.5°	3052.6	3052.7	3069.0	3093.2	3126.0	3155.3	3185.0	3213.8	3216.4	3219.1	3221.8
15°	3051.6	3053.7	3078.9	3123.0	3179.4	3231.2	3267.6	3299.0	3301.5	3304.1	3306.6
17.5°	3030.6	3031.1	3067.0	3137.3	3225.6	3302.5	3349.7	3366.6	3367.6	3368.5	3369.4
20°	2971.6	2975.7	3026.5	3128.6	3261.5	3367.7	3412.3	3405.2	3403.6	3402.1	3400.5
22.5°	2870.6	2875.6	2943.4	3080.4	3268.1	3409.8	3455.9	3423.6	3418.7	3413.8	3408.8
25°	2730.0	2738.6	2812.0	2987.5	3223.0	3422.0	3484.2	3432.4	3424.6	3417.0	3409.2
27.5°	2567.3	2571.4	2658.1	2842.3	3117.9	3381.0	3497.0	3450.2	3440.6	3431.0	3421.3
30°	2379.0	2389.8	2480.1	2672.5	2969.6	3285.6	3491.8	3485.2	3474.4	3463.6	3452.9
32.5°	2191.8	2201.0	2289.8	2497.0	2798.7	3152.7	3466.2	3538.0	3529.0	3519.9	3510.9
35°	2003.0	2014.2	2105.6	2328.2	2628.9	3001.8	3425.6	3613.4	3609.5	3605.6	3601.7
37.5°	1837.2	1844.4	1934.2	2165.6	2480.1	2863.9	3372.8	3714.5	3723.3	3732.1	3741.0
40°	1668.4	1675.6	1769.6	2006.6	2343.1	2745.8	3324.1	3841.8	3865.9	3890.0	3914.1
42.5°	1506.4	1512.4	1603.3	1839.8	2190.8	2643.8	3294.8	3995.6	4041.9	4088.2	4134.5
45°	1340.1	1344.2	1429.4	1659.8	2016.8	2524.8	3287.1	4168.5	4235.4	4302.2	4369.0
47.5°	1176.4	1186.2	1273.9	1492.4	1818.3	2354.4	3275.8	4359.9	4448.5	4537.0	4625.6
50°	1020.0	1030.7	1121.1	1328.3	1626.4	2152.3	3218.4	4577.0	4684.9	4792.8	4900.8
52.5°	860.4	871.2	961.5	1159.5	1448.4	1924.5	3058.3	4804.8	4933.1	5061.5	5189.9
55°	690.0	694.2	787.0	985.6	1270.4	1733.6	2803.3	5013.6	5169.0	5324.5	5479.9
57.5°	501.8	515.6	607.4	792.2	1088.7	1564.8	2479.0	5120.3	5314.3	5508.4	5702.4
60°	362.2	371.4	452.0	597.2	883.0	1399.1	2191.2	5042.2	5301.2	5560.2	5819.2
62.5°	286.3	296.5	358.6	450.0	682.9	1216.9	2003.5	4828.4	5191.7	5555.0	5918.4
65°	253.4	262.6	320.2	365.3	522.3	1029.7	1885.4	4616.4	5106.8	5597.2	6087.6
67.5°	231.4	241.1	291.5	322.2	431.5	909.2	1829.6	4456.4	5022.7	5589.0	6155.3
69°	221.1	229.8	276.0	304.8	406.8	868.1	1769.6	4185.5	4747.0	5308.5	5870.0
70°	215.5	223.2	265.2	294.0	397.1	834.2	1680.8	3863.2	4405.0	4946.8	5488.6
72.5°	199.6	204.7	240.1	266.8	363.2	665.9	1267.8	2725.9	3185.1	3644.4	4103.7
75°	177.0	183.1	214.4	239.1	277.0	400.2	793.7	1582.2	1897.0	2211.7	2526.4
77.5°	151.9	159.0	184.7	223.7	223.2	260.6	481.8	908.6	1061.5	1214.4	1367.3
80°	130.3	136.5	159.6	221.1	186.8	206.2	359.1	677.8	739.3	800.9	862.5
82.5°	102.1	107.2	133.9	182.6	149.3	157.0	273.4	617.2	659.0	700.7	742.5
85°	64.1	66.2	97.5	126.2	106.2	94.9	176.0	475.0	505.4	535.8	566.2
87.5°	25.6	31.3	47.2	45.2	45.6	38.0	56.9	171.4	186.9	202.5	218.1
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1
2.5°	2962.2	2962.4	2961.4	2959.8	2961.4	2959.8	2960.3	2961.9	2961.4	2961.4	2960.3
5°	2996.0	2996.8	2996.8	2993.7	2995.2	2995.8	2996.2	2995.2	2995.7	2996.8	2994.7
7.5°	3052.1	3052.6	3054.2	3055.8	3054.7	3055.2	3056.2	3055.2	3053.7	3057.3	3054.7
10°	3131.4	3132.7	3132.7	3137.4	3135.2	3136.8	3141.4	3141.5	3138.9	3142.4	3141.4
12.5°	3224.4	3227.1	3226.6	3226.0	3228.1	3229.7	3234.8	3235.8	3236.8	3242.5	3240.4
15°	3309.2	3311.8	3313.8	3314.8	3318.4	3319.4	3322.6	3324.6	3326.2	3328.2	3329.2
17.5°	3370.3	3371.2	3374.4	3372.8	3377.9	3377.0	3380.6	3382.0	3383.6	3386.2	3387.7
20°	3399.0	3397.4	3398.0	3396.4	3396.4	3397.4	3398.0	3400.0	3399.0	3401.5	3403.6
22.5°	3403.9	3399.0	3395.9	3392.3	3390.8	3387.7	3387.7	3388.8	3385.1	3387.7	3390.8
25°	3401.6	3393.8	3388.2	3382.0	3376.4	3371.2	3368.2	3367.2	3364.6	3364.6	3367.2
27.5°	3411.7	3402.0	3393.8	3383.6	3376.4	3369.2	3362.6	3357.4	3352.2	3351.2	3351.2
30°	3442.1	3431.3	3422.0	3409.2	3398.0	3388.7	3379.5	3372.3	3362.6	3358.4	3353.8
32.5°	3501.9	3492.8	3480.0	3468.8	3455.4	3444.1	3431.8	3420.5	3409.2	3399.0	3394.8
35°	3597.8	3593.9	3586.8	3579.0	3566.2	3551.9	3541.6	3528.3	3515.4	3500.6	3496.4
37.5°	3749.8	3758.6	3754.5	3748.9	3745.3	3740.7	3726.8	3718.1	3709.4	3697.0	3694.5
40°	3938.2	3962.3	3986.4	4002.3	3996.6	4015.6	4018.8	4020.3	4012.6	4022.8	4024.9
42.5°	4180.8	4227.0	4270.6	4302.4	4339.4	4367.1	4403.0	4418.4	4447.6	4478.0	4495.4
45°	4435.8	4502.6	4565.1	4630.3	4694.4	4764.7	4833.0	4881.2	4951.5	5003.8	5036.6
47.5°	4714.1	4802.7	4877.6	4975.0	5067.9	5151.0	5270.6	5366.5	5452.2	5533.8	5619.4
50°	5008.7	5116.6	5209.0	5328.0	5441.0	5571.2	5711.3	5833.4	5967.8	6097.6	6213.1
52.5°	5318.2	5446.6	5571.2	5693.4	5830.3	5972.0	6123.8	6300.3	6461.4	6656.8	6797.0
55°	5635.4	5790.8	5923.7	6051.4	6196.7	6353.6	6534.2	6743.0	6947.8	7161.8	7374.1
57.5°	5896.4	6090.4	6235.6	6384.9	6541.4	6696.9	6921.0	7135.0	7394.6	7657.4	7923.0
60°	6078.2	6337.2	6513.2	6702.0	6883.1	7072.0	7313.6	7584.0	7908.7	8226.8	8588.0
62.5°	6281.7	6645.0	6891.8	7143.8	7363.8	7590.6	7913.8	8225.3	8642.4	9008.7	9463.2
65°	6577.9	7068.3	7431.6	7771.2	8066.8	8375.6	8758.8	9148.2	9625.4	10131.8	10701.8
67.5°	6721.6	7287.9	7763.5	8182.7	8560.3	8953.8	9349.4	9810.0	10347.8	10957.2	11583.2
69°	6431.5	6993.0	7539.8	7963.6	8361.2	8781.4	9204.7	9669.6	10199.0	10831.6	11495.0
70°	6030.4	6572.2	7153.5	7578.3	7979.5	8415.6	8846.6	9316.0	9822.4	10474.0	11145.0
72.5°	4563.0	5022.3	5586.7	6035.6	6457.2	6898.0	7341.8	7749.2	8262.7	8889.6	9507.9
75°	2841.1	3155.8	3663.2	4114.2	4453.3	4830.9	5247.5	5633.4	6148.9	6593.2	7187.9
77.5°	1520.2	1673.0	1969.1	2292.3	2481.1	2665.3	2936.8	3146.0	3363.0	3620.1	3865.8
80°	924.0	985.6	1086.6	1156.4	1130.2	1054.8	1030.7	955.3	982.5	936.3	903.0
82.5°	784.2	826.0	887.6	929.6	898.8	778.3	641.8	540.2	468.4	399.6	339.6
85°	596.6	627.0	658.8	677.8	676.2	616.2	489.4	379.2	295.5	228.8	190.3
87.5°	233.7	249.3	272.4	268.8	280.6	282.7	221.1	170.8	121.6	82.1	71.8
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°	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1	2951.1
2.5°	2958.2	2957.8	2958.2	2959.8	2959.8	2960.8	2959.8	2960.3	2958.8	2957.2	2958.3
5°	2994.7	2993.7	2994.7	2995.7	2995.7	2994.7	2997.2	2997.2	2996.2	2994.7	2995.2
7.5°	3057.2	3057.8	3056.3	3061.4	3056.8	3057.3	3060.4	3059.8	3058.8	3059.4	3059.8
10°	3144.5	3144.0	3145.0	3148.1	3143.4	3146.6	3150.1	3151.1	3148.6	3148.6	3149.1
12.5°	3241.0	3245.0	3245.6	3247.6	3247.6	3250.2	3250.7	3251.2	3253.3	3253.8	3250.7
15°	3333.3	3336.4	3338.4	3340.5	3338.0	3341.5	3345.6	3345.6	3345.1	3347.2	3344.1
17.5°	3390.2	3392.8	3396.4	3395.9	3396.4	3399.4	3402.0	3403.1	3404.1	3404.1	3404.6
20°	3408.2	3409.8	3411.8	3413.8	3414.9	3418.0	3420.0	3421.6	3422.6	3421.6	3422.1
22.5°	3393.8	3395.8	3400.0	3401.6	3402.0	3406.7	3408.8	3410.2	3411.3	3412.3	3410.8
25°	3369.2	3371.2	3375.4	3376.9	3377.9	3382.0	3384.6	3388.2	3389.2	3389.8	3390.3
27.5°	3352.3	3353.3	3356.4	3358.4	3359.0	3363.6	3367.2	3369.8	3370.2	3370.8	3370.8
30°	3352.8	3352.8	3356.4	3356.9	3356.4	3360.5	3362.6	3364.1	3365.1	3365.1	3365.6
32.5°	3388.2	3386.1	3389.2	3384.6	3385.2	3384.6	3384.1	3385.6	3384.6	3385.2	3383.1
35°	3488.2	3482.6	3478.0	3480.0	3472.8	3462.6	3468.2	3465.6	3460.0	3460.6	3462.1
37.5°	3680.2	3674.5	3679.6	3675.0	3676.5	3662.2	3665.8	3653.0	3649.4	3654.0	3640.6
40°	4020.8	4018.2	4028.0	4023.8	4026.4	4030.6	4034.1	4021.8	4001.3	4019.8	4020.3
42.5°	4492.8	4515.9	4525.1	4538.0	4551.8	4545.6	4558.0	4561.6	4539.0	4555.9	4560.0
45°	5084.8	5109.5	5138.2	5147.0	5169.5	5172.6	5181.8	5184.4	5163.9	5165.9	5170.5
47.5°	5705.2	5750.3	5784.2	5807.8	5831.4	5836.0	5841.1	5831.4	5832.9	5837.5	5837.5
50°	6314.7	6411.1	6471.1	6517.8	6558.4	6537.3	6555.3	6556.8	6563.0	6550.1	6557.8
52.5°	6955.4	7083.2	7183.8	7262.2	7286.9	7361.8	7331.0	7354.6	7370.5	7347.0	7362.3
55°	7581.4	7763.5	7925.1	8039.0	8119.1	8195.0	8206.8	8267.8	8260.7	8283.8	8273.5
57.5°	8176.5	8431.0	8661.8	8830.6	8945.6	9061.5	9140.0	9206.7	9213.4	9279.6	9242.1
60°	8896.3	9250.8	9547.9	9799.3	9969.1	10141.5	10277.4	10386.8	10411.8	10525.3	10487.8
62.5°	9867.6	10300.0	10679.7	10974.7	11352.8	11535.0	11799.7	11964.9	12068.0	12096.2	12149.1
65°	11232.8	11796.2	12296.8	12768.8	13194.2	13489.2	13795.4	14041.8	14239.3	14222.8	14303.9
67.5°	12247.1	12889.4	13492.2	14058.2	14515.8	14895.4	15247.4	15513.7	15690.2	15802.6	15850.3
69°	12141.4	12831.0	13495.8	14100.2	14572.2	14996.6	15339.2	15601.4	15803.6	15925.6	15961.1
70°	11790.0	12498.5	13191.6	13784.7	14266.0	14731.8	15080.6	15372.6	15565.0	15698.4	15718.9
72.5°	10198.0	10965.5	11578.6	12225.6	12688.8	13160.4	13379.9	13741.6	13992.4	14073.6	14072.0
75°	7691.7	8332.0	8870.7	9348.8	9763.4	10083.0	10186.6	10444.2	10652.5	10650.0	10630.5
77.5°	4141.8	4292.7	4494.4	4562.1	4689.8	4687.8	4559.5	4600.0	4718.0	4489.2	4563.1
80°	888.6	875.2	864.0	857.3	853.8	855.2	859.8	830.6	859.4	846.5	792.2
82.5°	309.4	302.2	295.0	300.2	296.6	299.6	298.6	302.2	301.6	300.6	293.5
85°	173.9	167.8	164.2	166.8	161.1	156.0	152.4	150.8	150.3	146.8	144.7
87.5°	66.2	65.6	65.2	62.6	56.4	51.8	48.8	42.6	40.0	36.4	33.9
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)