

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: McGRAW-EDISON

Report Number: P522130

Luminaire Tested: **CTN-CA10-310-727-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522130
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-7)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-727-U-T5R-HSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (10) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27136 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G4

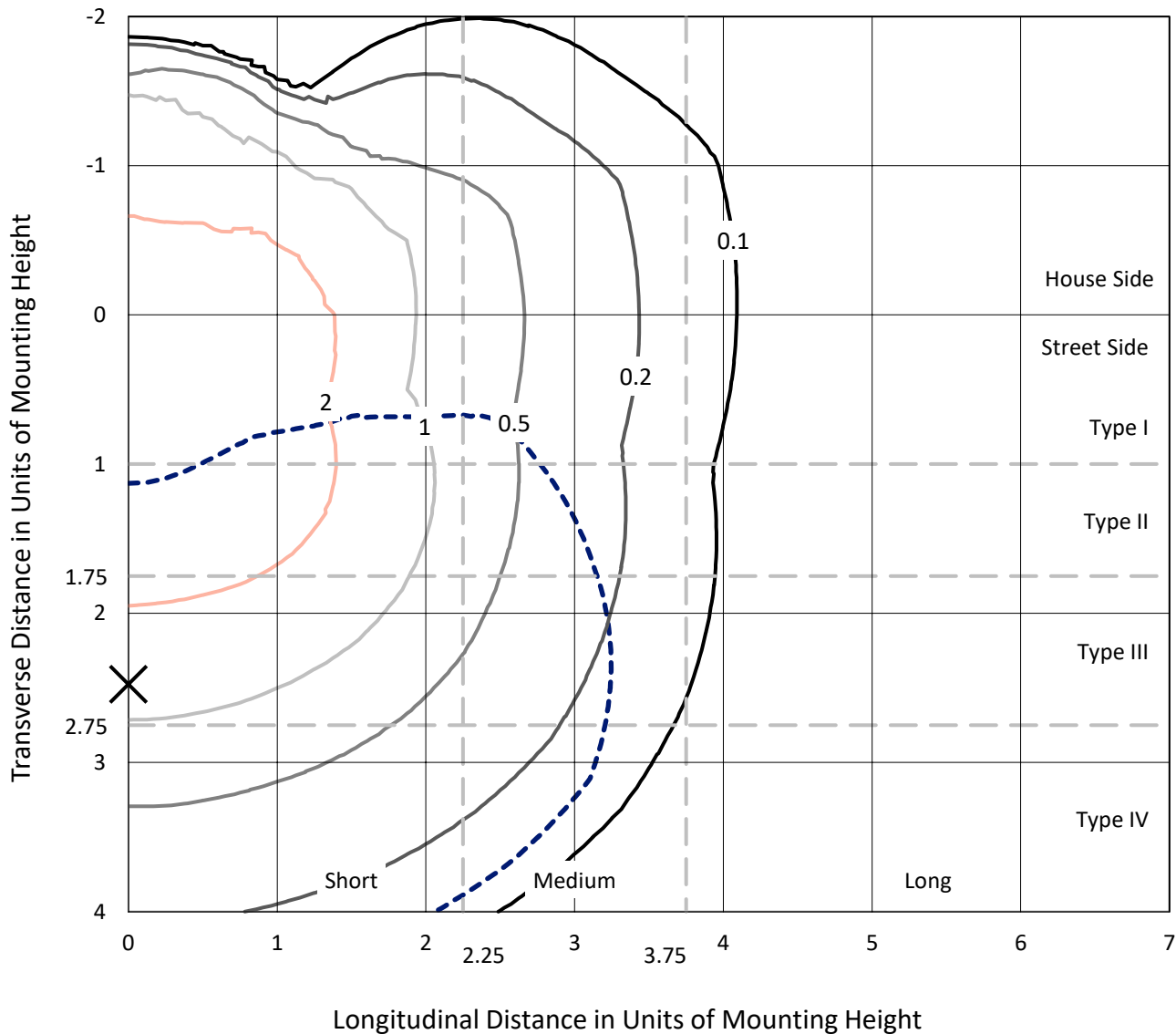
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

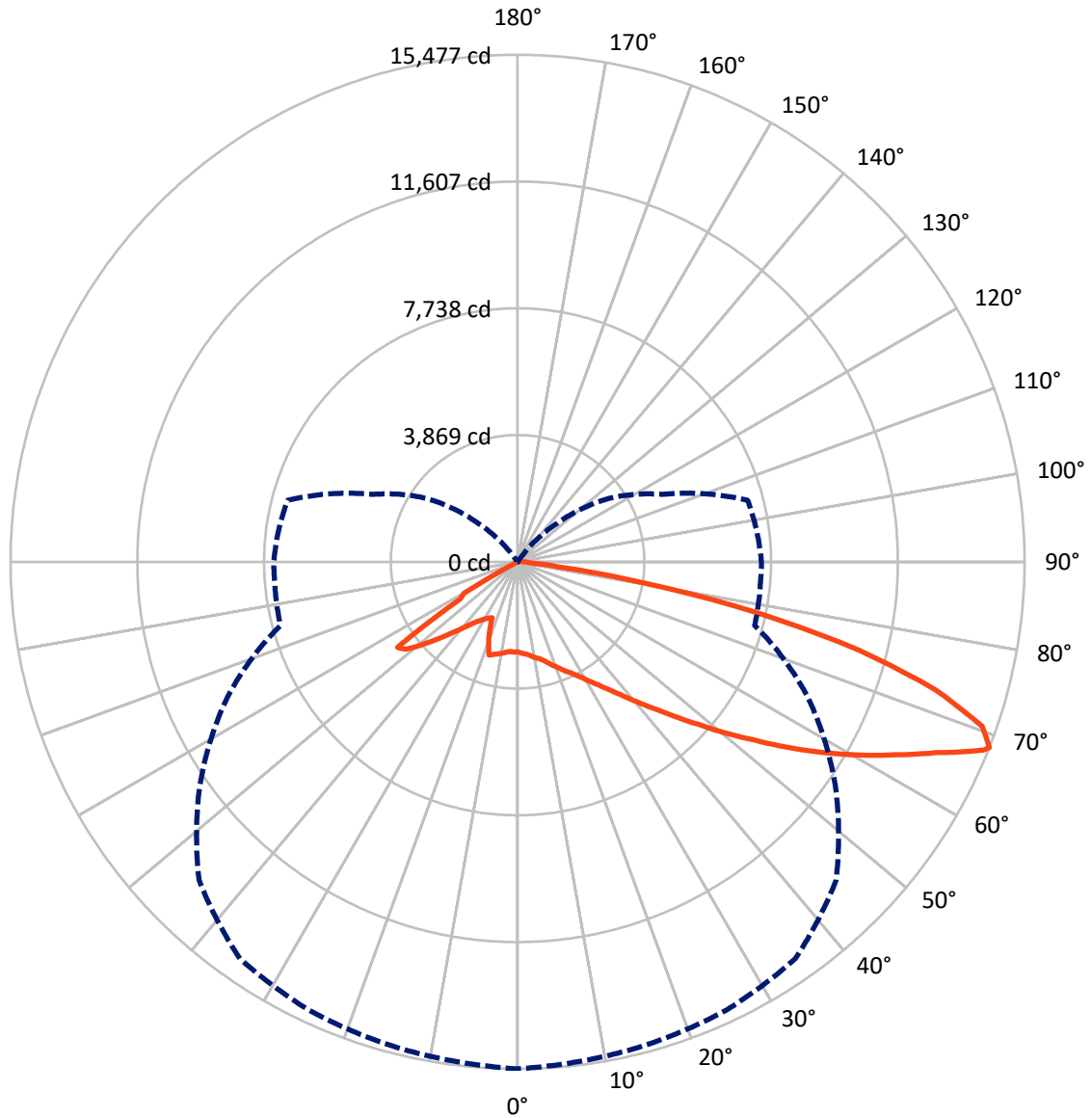
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical



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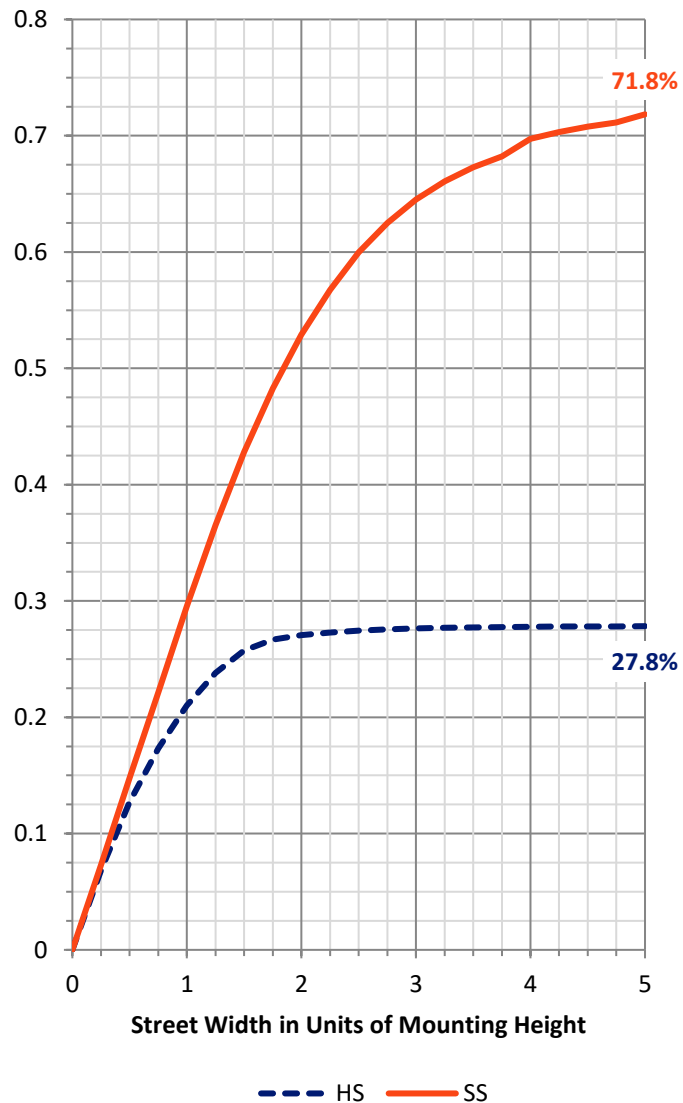
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7579.1	0.2	7579.3
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	19541.2	15.5	19556.7
	% Fixture	72.0	0.1	72.1
Total	Lumens	27120.3	15.7	27136.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.8	1.0
10°-20°	845.5	3.1
20°-30°	1431.4	5.3
30°-40°	2267.7	8.4
40°-50°	3707.5	13.7
50°-60°	5678.9	20.9
60°-70°	6982.7	25.7
70°-80°	5395.5	19.9
80°-90°	544.4	2.0
90°-100°	15.5	0.1
100°-110°	0.2	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°	27120.3	99.9
0°-180°	27136.0	100.0

Coefficient of Utilization

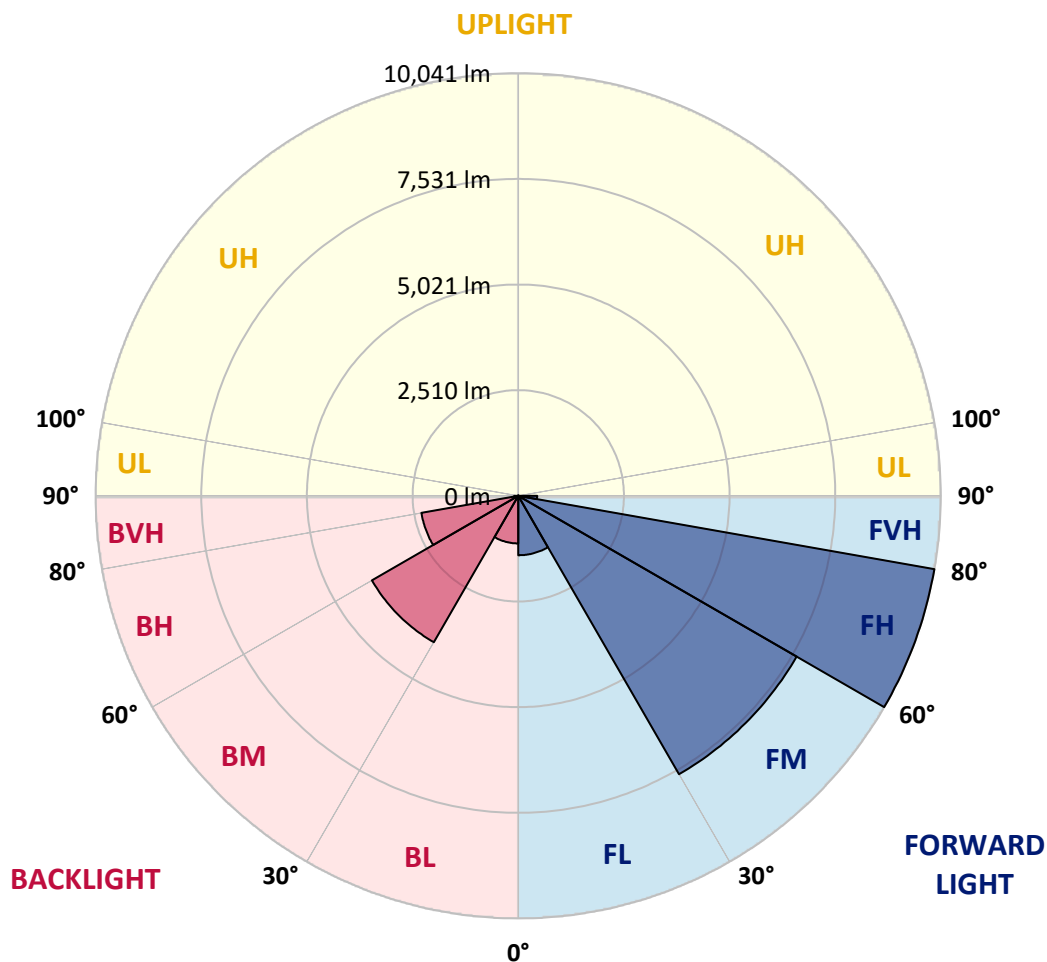


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1412.4	5.2			
FM (30°-60°)	7638.3	28.1			
FH (60°-80°)	10041.5	37.0			G4/12000
FVH (80°-90°)	449.0	1.7			G3/500
BL (0°-30°)	1131.3	4.2	B3/2500		
BM (30°-60°)	4015.8	14.8	B3/5000		
BH (60°-80°)	2336.7	8.6	B3/2500		G3/2500
BVH (80°-90°)	95.4	0.4			G1/100
UL (90°-100°)	15.5	0.1		U2/50	
UH (100°-180°)	0.2	0.0		U1/10	

BUG Rating: B3-U2-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2
2.5°	2798.8	2793.6	2788.4	2800.1	2754.4	2774.0	2758.3	2772.7	2762.2	2774.0	2770.1
5°	2835.4	2830.2	2814.5	2827.6	2797.5	2805.4	2785.8	2791.0	2755.7	2776.6	2775.3
7.5°	2895.6	2881.2	2870.7	2870.7	2844.6	2843.3	2811.9	2813.2	2785.8	2783.2	2788.4
10°	2976.6	2966.2	2937.4	2940.0	2903.4	2898.2	2859.0	2857.7	2835.4	2822.4	2834.1
12.5°	3036.8	3047.2	3021.1	3021.1	2984.5	2958.3	2930.9	2912.6	2895.6	2876.0	2866.8
15°	3146.6	3157.0	3121.7	3120.4	3106.0	3074.7	3044.6	3005.4	2975.3	2966.2	2951.8
17.5°	3289.1	3282.5	3252.5	3253.8	3256.4	3205.4	3175.3	3124.3	3081.2	3049.8	3042.0
20°	3434.2	3434.2	3401.5	3411.9	3398.9	3351.8	3332.2	3261.6	3201.5	3167.5	3140.0
22.5°	3596.3	3589.7	3567.5	3589.7	3563.6	3516.5	3483.8	3413.3	3336.1	3144.0	3065.5
25°	3750.5	3746.6	3755.8	3762.3	3729.6	3670.8	3648.6	3574.0	3359.7	3107.4	2949.2
27.5°	3945.3	3932.2	3953.2	3966.2	3933.5	3882.6	3835.5	3751.8	3298.2	3099.5	3082.5
30°	4195.0	4166.2	4196.3	4202.8	4168.8	4137.5	4066.9	3648.6	3319.1	3261.6	3256.4
32.5°	4461.7	4427.7	4466.9	4472.1	4427.7	4401.5	4223.8	3595.0	3524.4	3457.7	3464.2
35°	4778.0	4778.0	4797.6	4800.3	4767.6	4723.1	4046.0	3856.4	3793.7	3732.2	3730.9
37.5°	5163.7	5151.9	5204.2	5235.6	5200.3	5073.5	4304.8	4215.9	4119.2	4040.7	3878.6
40°	5629.1	5650.0	5664.4	5695.7	5661.7	5376.8	4682.6	4581.9	4506.1	4243.4	3834.2
42.5°	6131.0	6136.3	6167.6	6206.9	6206.9	5906.2	5124.5	5038.2	4940.1	4149.2	3964.9
45°	6731.1	6719.3	6779.4	6842.2	6825.2	6514.1	5638.2	5574.2	5115.3	4422.5	4423.8
47.5°	7412.2	7397.8	7484.1	7566.4	7481.4	7188.6	6202.9	6153.3	4937.5	4885.2	4874.8
50°	8199.1	8163.8	8263.2	8373.0	8303.7	7941.6	6889.3	5935.0	5433.0	5391.1	5384.6
52.5°	9039.7	9012.2	9072.4	9259.3	9167.8	8729.9	7539.0	6123.2	6006.9	5959.8	5948.0
55°	9988.8	9935.2	10064.6	10207.1	10101.2	9601.8	8179.5	6748.1	6627.8	6546.8	6429.1
57.5°	10986.2	10909.1	10975.7	11154.8	11052.9	10494.7	9005.7	7391.2	7248.8	5999.0	5521.9
60°	11979.7	11944.4	11970.6	12128.8	12003.3	11362.7	9779.6	8035.7	6135.0	5933.6	5957.2
62.5°	12978.5	12901.3	12924.9	13087.0	12926.2	12188.9	10513.0	8621.4	6456.6	6386.0	6410.8
65°	14049.1	13957.6	13978.5	14025.6	13826.9	12930.1	11161.4	9174.3	6940.2	6865.7	6893.2
67.5°	15339.4	15255.7	15142.0	15002.1	14727.6	13717.1	11805.9	9756.1	7484.1	7442.2	7451.4
68°	15476.6	15395.6	15258.3	15092.3	14783.8	13749.8	11833.3	9773.1	7491.9	7439.6	7442.2
70°	15049.2	15097.5	14942.0	14663.5	14406.0	13271.3	11384.9	9396.6	7158.6	7081.4	7061.8
72.5°	13327.5	13433.4	13219.0	13171.9	12855.6	11822.9	9962.6	8153.4	6226.5	6251.3	6180.7
75°	10760.1	10915.6	10655.5	10669.8	10489.4	9862.0	8349.5	6788.6	5112.7	5226.4	5247.3
77.5°	7482.8	7706.3	7592.6	7706.3	7617.4	7391.2	6461.8	5227.7	3900.9	4031.6	4082.6
80°	3902.2	4167.5	4317.9	4364.9	4393.7	4384.5	3934.9	3137.4	2255.0	2303.4	2300.8
82.5°	1234.1	1170.0	1207.9	1197.4	1164.8	1177.8	1061.5	830.1	575.2	634.0	606.6
85°	372.6	375.2	364.7	362.1	334.7	294.1	240.5	138.6	68.0	79.7	74.5
87.5°	274.5	277.1	256.2	243.2	227.5	197.4	152.9	86.3	32.7	31.4	24.8
90°	151.6	146.4	136.0	125.5	119.0	102.0	77.1	32.7	11.8	9.2	7.8
92.5°	82.4	78.4	73.2	69.3	60.1	48.4	31.4	10.5	5.2	1.3	0.0
95°	37.9	35.3	34.0	30.1	26.1	18.3	10.5	6.5	3.9	1.3	0.0
97.5°	17.0	15.7	14.4	11.8	9.2	5.2	5.2	3.9	2.6	1.3	0.0
100°	3.9	3.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.3	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2	2749.2
2.5°	2766.2	2758.3	2754.4	2729.6	2737.4	2715.2	2758.3	2747.9	2741.3	2759.6
5°	2768.8	2741.3	2758.3	2743.9	2749.2	2717.8	2751.8	2737.4	2736.1	2743.9
7.5°	2775.3	2757.0	2774.0	2745.2	2758.3	2745.2	2770.1	2755.7	2767.5	2775.3
10°	2810.6	2800.1	2792.3	2785.8	2794.9	2768.8	2800.1	2801.5	2805.4	2828.9
12.5°	2860.3	2849.8	2836.8	2819.8	2828.9	2818.5	2842.0	2848.5	2862.9	2874.7
15°	2929.6	2910.0	2904.7	2889.0	2898.2	2893.0	2898.2	2894.3	2921.7	2917.8
17.5°	3025.0	3002.8	2928.3	2852.4	2804.1	2818.5	2878.6	2957.0	2976.6	2979.2
20°	3060.3	2903.4	2895.6	2809.3	2770.1	2767.5	2643.3	2457.6	2513.9	2645.9
22.5°	3018.5	2804.1	2781.8	2764.9	2597.5	2323.0	2296.9	2269.4	2262.9	2282.5
25°	2924.3	2899.5	2879.9	2657.7	2393.6	2394.9	2357.0	2176.6	1895.5	1872.0
27.5°	3068.1	3034.1	2844.6	2502.1	2496.9	2494.3	2438.0	1975.3	1915.1	1929.5
30°	3231.5	3175.3	2679.9	2635.4	2634.1	2610.6	2185.7	1992.3	1992.3	1994.9
32.5°	3419.8	3070.8	2774.0	2794.9	2793.6	2682.5	2111.2	2098.2	2092.9	2106.0
35°	3563.6	2987.1	2976.6	3014.5	2988.4	2275.9	2243.3	2231.5	2226.3	2219.7
37.5°	3519.1	3227.6	3227.6	3251.2	3040.7	2423.7	2408.0	2408.0	2397.5	2392.3
40°	3587.1	3527.0	3496.9	3506.1	2209.3	2602.8	2614.5	2611.9	2610.6	2619.7
42.5°	3945.3	3891.7	3864.3	3540.1	2473.3	2587.1	2874.7	2873.4	2877.3	2873.4
45°	4401.5	4351.9	4280.0	3312.6	2808.0	2268.1	3168.8	3183.2	3184.5	3183.2
47.5°	4880.0	4848.6	4112.6	3666.9	3171.4	2434.1	3028.9	3537.4	3530.9	3538.8
50°	5385.9	5244.7	4091.7	4086.5	3558.4	2708.6	2709.9	3847.3	3913.9	3934.9
52.5°	5949.3	4754.5	4534.9	4137.5	3950.5	2991.0	2962.2	3409.3	4319.2	4340.1
55°	5525.8	5022.5	5018.6	3682.5	4110.0	3262.9	3266.8	3235.5	3961.0	4502.2
57.5°	5498.3	5510.1	5500.9	4108.7	2998.9	3059.0	3559.7	3532.2	2564.8	2078.5
60°	5972.9	5989.9	5344.1	4436.8	3242.0	1881.1	2192.3	1862.8	1887.7	1907.3
62.5°	6426.5	6431.7	4346.6	2908.7	1606.6	75.8	36.6	30.1	28.8	28.8
65°	6928.5	6928.5	4659.1	3172.7	1551.7	28.8	5.2	3.9	14.4	14.4
67.5°	7413.5	7306.3	4887.8	3368.8	1579.2	3.9	0.0	0.0	0.0	0.0
68°	7386.0	7268.4	4866.9	3363.6	1575.2	2.6	0.0	0.0	0.0	0.0
70°	6975.5	6861.8	4617.2	3210.6	1516.4	2.6	0.0	0.0	0.0	0.0
72.5°	6157.2	6052.6	4089.1	2830.2	1367.4	1.3	0.0	0.0	0.0	0.0
75°	5212.0	5197.7	3532.2	2388.4	1172.6	1.3	0.0	0.0	0.0	0.0
77.5°	4193.7	4128.3	2760.9	1872.0	945.1	0.0	0.0	0.0	0.0	0.0
80°	2336.1	2432.8	1615.8	1100.7	594.8	0.0	0.0	0.0	0.0	0.0
82.5°	631.4	590.9	353.0	239.2	113.7	0.0	0.0	0.0	0.0	0.0
85°	81.1	88.9	40.5	32.7	7.8	0.0	0.0	0.0	0.0	0.0
87.5°	41.8	49.7	13.1	10.5	2.6	0.0	0.0	0.0	0.0	0.0
90°	7.8	9.2	3.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)