

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: P522220

Luminaire Tested: **CTN-CA8-330-727-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522220
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-CA8-330-727-U-T5R-HSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (8) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27413 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G4

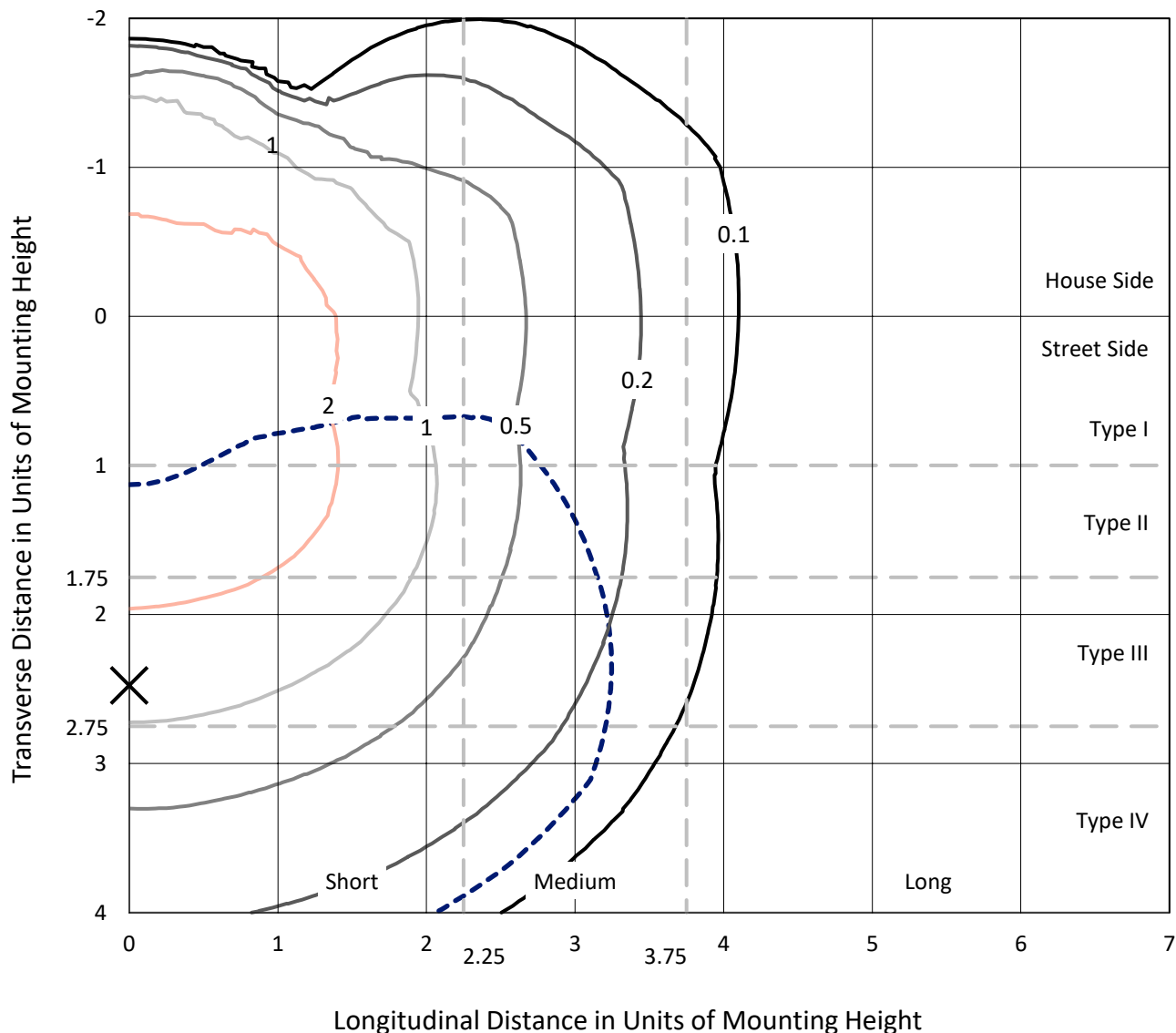
Input Watts (W): 331.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

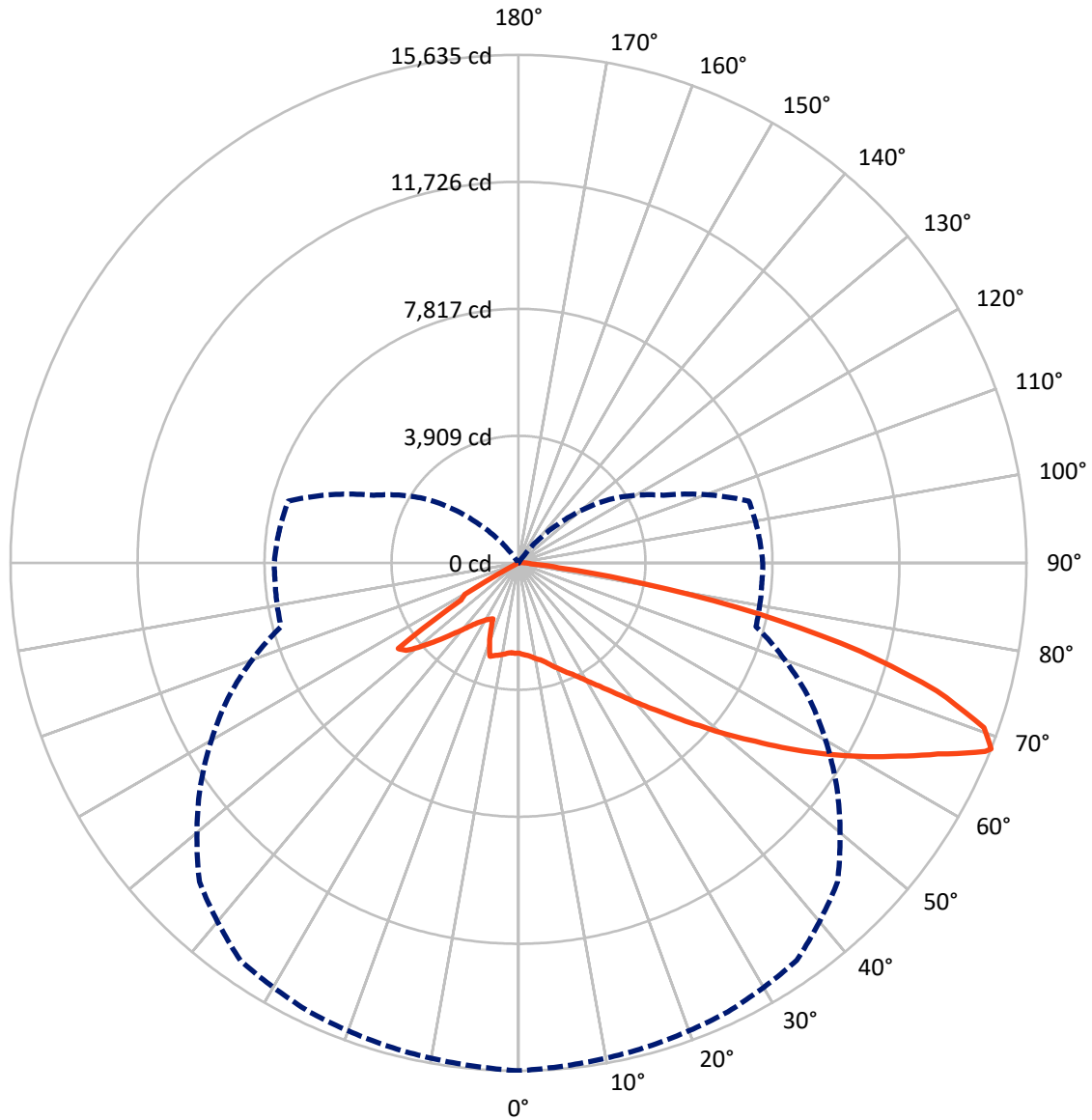
× Max cd
 - - - 1/2 Max cd



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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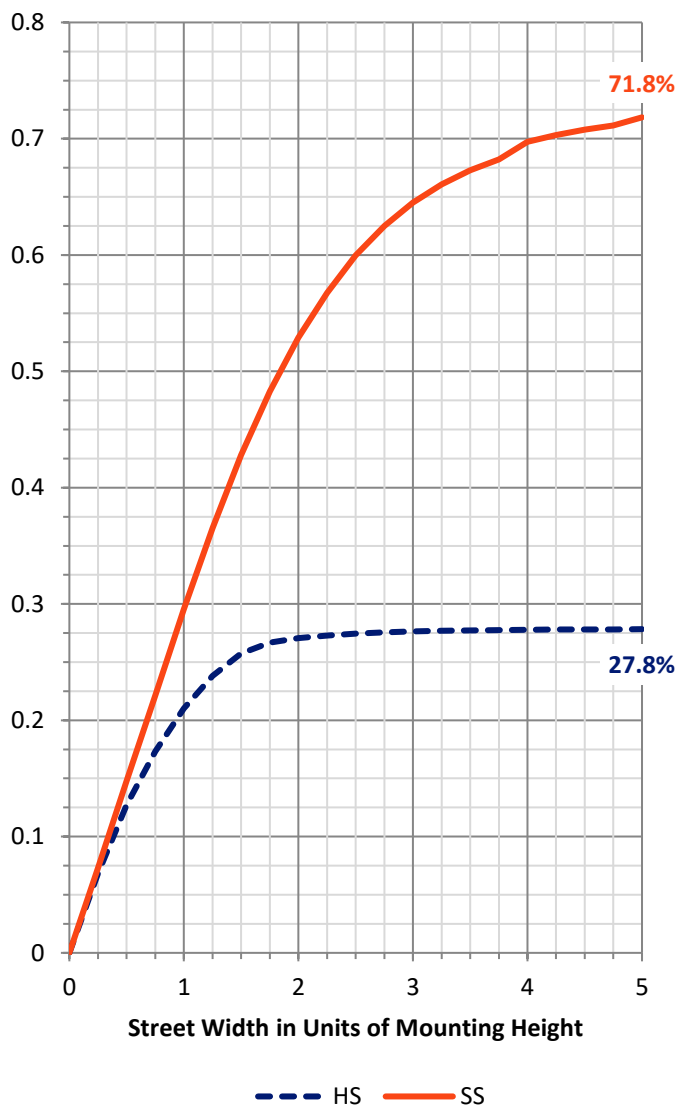
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7656.5	0.2	7656.7
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	19740.6	15.7	19756.3
	% Fixture	72.0	0.1	72.1
Total	Lumens	27397.1	15.9	27413.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.6	1.0
10°-20°	854.1	3.1
20°-30°	1446.0	5.3
30°-40°	2290.8	8.4
40°-50°	3745.3	13.7
50°-60°	5736.9	20.9
60°-70°	7053.9	25.7
70°-80°	5450.5	19.9
80°-90°	549.9	2.0
90°-100°	15.6	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°	27397.1	99.9
0°-180°	27413.0	100.0

Coefficient of Utilization

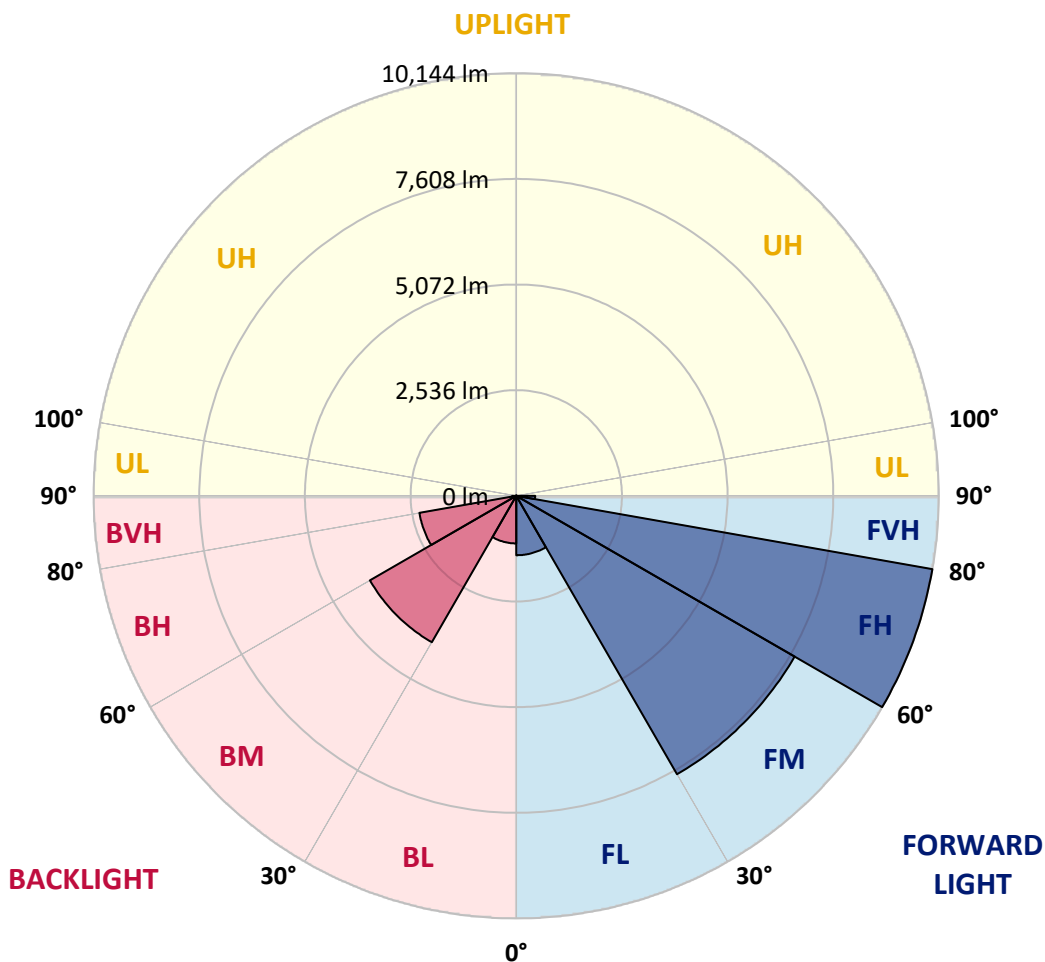


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1426.9	5.2			
FM (30°-60°)	7716.3	28.1			
FH (60°-80°)	10144.0	37.0			G4/12000
FVH (80°-90°)	453.5	1.7			G3/500
BL (0°-30°)	1142.8	4.2	B3/2500		
BM (30°-60°)	4056.8	14.8	B3/5000		
BH (60°-80°)	2360.5	8.6	B3/2500		G3/2500
BVH (80°-90°)	96.4	0.4			G1/100
UL (90°-100°)	15.6	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°	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2
2.5°	2827.4	2822.1	2816.8	2828.7	2782.5	2802.3	2786.5	2801.0	2790.4	2802.3	2798.4
5°	2864.4	2859.1	2843.3	2856.5	2826.1	2834.0	2814.2	2819.5	2783.8	2805.0	2803.6
7.5°	2925.1	2910.6	2900.0	2900.0	2873.6	2872.3	2840.6	2841.9	2814.2	2811.6	2816.8
10°	3007.0	2996.4	2967.4	2970.0	2933.1	2927.8	2888.2	2886.8	2864.4	2851.2	2863.1
12.5°	3067.8	3078.3	3051.9	3051.9	3014.9	2988.5	2960.8	2942.3	2925.1	2905.3	2896.1
15°	3178.7	3189.3	3153.6	3152.3	3137.8	3106.1	3075.7	3036.1	3005.7	2996.4	2981.9
17.5°	3322.6	3316.0	3285.7	3287.0	3289.6	3238.1	3207.7	3156.2	3112.7	3081.0	3073.0
20°	3469.2	3469.2	3436.2	3446.8	3433.6	3386.0	3366.2	3294.9	3234.2	3199.8	3172.1
22.5°	3633.0	3626.4	3603.9	3626.4	3600.0	3552.4	3519.4	3448.1	3370.2	3176.1	3096.8
25°	3788.8	3784.8	3794.1	3800.7	3767.7	3708.3	3685.8	3610.5	3394.0	3139.1	2979.3
27.5°	3985.6	3972.4	3993.5	4006.7	3973.7	3922.2	3874.7	3790.1	3331.9	3131.2	3114.0
30°	4237.8	4208.8	4239.1	4245.7	4211.4	4179.7	4108.4	3685.8	3353.0	3294.9	3289.6
32.5°	4507.2	4472.9	4512.5	4517.8	4472.9	4446.5	4266.9	3631.7	3560.3	3493.0	3499.6
35°	4826.8	4826.8	4846.6	4849.3	4816.2	4771.3	4087.3	3895.8	3832.4	3770.3	3769.0
37.5°	5216.4	5204.5	5257.3	5289.0	5253.4	5125.3	4348.7	4258.9	4161.2	4082.0	3918.2
40°	5686.5	5707.6	5722.2	5753.9	5719.5	5431.6	4730.4	4628.7	4552.1	4286.7	3873.3
42.5°	6193.6	6198.9	6230.6	6270.2	6270.2	5966.5	5176.8	5089.6	4990.6	4191.6	4005.4
45°	6799.8	6787.9	6848.6	6912.0	6894.9	6580.6	5695.8	5631.1	5167.5	4467.6	4468.9
47.5°	7487.8	7473.3	7560.5	7643.7	7557.8	7262.0	6266.3	6216.1	4987.9	4935.1	4924.5
50°	8282.8	8247.2	8347.5	8458.5	8388.5	8022.7	6959.6	5995.5	5488.4	5446.2	5439.6
52.5°	9132.0	9104.2	9165.0	9353.8	9261.4	8819.0	7615.9	6185.7	6068.2	6020.6	6008.7
55°	10090.7	10036.6	10167.3	10311.3	10204.3	9699.8	8263.0	6817.0	6695.5	6613.6	6494.7
57.5°	11098.4	11020.4	11087.8	11268.7	11165.7	10601.8	9097.6	7466.7	7322.7	6060.2	5578.2
60°	12102.0	12066.4	12092.8	12252.6	12125.8	11478.7	9879.4	8117.7	6197.6	5994.2	6018.0
62.5°	13111.0	13033.0	13056.8	13220.6	13058.1	12313.3	10620.3	8709.4	6522.5	6451.1	6476.2
65°	14192.5	14100.1	14121.2	14168.8	13968.0	13062.1	11275.3	9268.0	7011.1	6935.8	6963.5
67.5°	15496.0	15411.4	15296.6	15155.2	14877.9	13857.1	11926.4	9855.7	7560.5	7518.2	7527.4
68°	15634.6	15552.7	15414.1	15246.4	14934.7	13890.1	11954.1	9872.8	7568.4	7515.6	7518.2
70°	15202.8	15251.6	15094.5	14813.2	14553.1	13406.8	11501.1	9492.5	7231.6	7153.7	7133.9
72.5°	13463.6	13570.5	13353.9	13306.4	12986.8	11943.5	10064.3	8236.6	6290.0	6315.1	6243.8
75°	10869.9	11027.0	10764.2	10778.8	10596.5	9962.6	8434.7	6857.9	5164.9	5279.8	5300.9
77.5°	7559.1	7785.0	7670.1	7785.0	7695.2	7466.7	6527.7	5281.1	3940.7	4072.7	4124.2
80°	3942.0	4210.1	4362.0	4409.5	4438.5	4429.3	3975.0	3169.4	2278.0	2326.9	2324.3
82.5°	1246.6	1181.9	1220.2	1209.7	1176.7	1189.9	1072.3	838.6	581.1	640.5	612.8
85°	376.4	379.0	368.4	365.8	338.1	297.1	243.0	140.0	68.7	80.6	75.3
87.5°	277.3	280.0	258.8	245.6	229.8	199.4	154.5	87.2	33.0	31.7	25.1
90°	153.2	147.9	137.3	126.8	120.2	103.0	77.9	33.0	11.9	9.2	7.9
92.5°	83.2	79.2	74.0	70.0	60.7	48.9	31.7	10.6	5.3	1.3	0.0
95°	38.3	35.7	34.3	30.4	26.4	18.5	10.6	6.6	4.0	1.3	0.0
97.5°	17.2	15.8	14.5	11.9	9.2	5.3	5.3	4.0	2.6	1.3	0.0
100°	4.0	4.0	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°	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2	2777.2
2.5°	2794.4	2786.5	2782.5	2757.4	2765.3	2742.9	2786.5	2775.9	2769.3	2787.8
5°	2797.0	2769.3	2786.5	2771.9	2777.2	2745.5	2779.9	2765.3	2764.0	2771.9
7.5°	2803.6	2785.2	2802.3	2773.3	2786.5	2773.3	2798.4	2783.8	2795.7	2803.6
10°	2839.3	2828.7	2820.8	2814.2	2823.5	2797.0	2828.7	2830.1	2834.0	2857.8
12.5°	2889.5	2878.9	2865.7	2848.5	2857.8	2847.2	2871.0	2877.6	2892.1	2904.0
15°	2959.5	2939.7	2934.4	2918.5	2927.8	2922.5	2927.8	2923.8	2951.5	2947.6
17.5°	3055.9	3033.4	2958.2	2881.6	2832.7	2847.2	2908.0	2987.2	3007.0	3009.7
20°	3091.5	2933.1	2925.1	2838.0	2798.4	2795.7	2670.3	2482.7	2539.5	2672.9
22.5°	3049.3	2832.7	2810.2	2793.1	2624.0	2346.7	2320.3	2292.6	2286.0	2305.8
25°	2954.2	2929.1	2909.3	2684.8	2418.0	2419.3	2381.0	2198.8	1914.9	1891.1
27.5°	3099.5	3065.1	2873.6	2527.6	2522.4	2519.7	2462.9	1995.4	1934.7	1949.2
30°	3264.5	3207.7	2707.2	2662.3	2661.0	2637.2	2208.0	2012.6	2012.6	2015.2
32.5°	3454.7	3102.1	2802.3	2823.5	2822.1	2709.9	2132.8	2119.6	2114.3	2127.5
35°	3600.0	3017.6	3007.0	3045.3	3018.9	2299.2	2266.2	2254.3	2249.0	2242.4
37.5°	3555.1	3260.6	3260.6	3284.3	3071.7	2448.4	2432.6	2432.6	2422.0	2416.7
40°	3623.7	3563.0	3532.6	3541.9	2231.8	2629.3	2641.2	2638.6	2637.2	2646.5
42.5°	3985.6	3931.4	3903.7	3576.2	2498.6	2613.5	2904.0	2902.7	2906.6	2902.7
45°	4446.5	4396.3	4323.7	3346.4	2836.7	2291.2	3201.1	3215.7	3217.0	3215.7
47.5°	4929.8	4898.1	4154.6	3704.3	3203.8	2459.0	3059.8	3573.6	3566.9	3574.9
50°	5440.9	5298.3	4133.5	4128.2	3594.7	2736.3	2737.6	3886.5	3953.9	3975.0
52.5°	6010.1	4803.0	4581.2	4179.7	3990.9	3021.5	2992.5	3444.1	4363.3	4384.4
55°	5582.2	5073.8	5069.8	3720.1	4152.0	3296.2	3300.2	3268.5	4001.4	4548.2
57.5°	5554.5	5566.3	5557.1	4150.7	3029.5	3090.2	3596.0	3568.3	2591.0	2099.8
60°	6033.8	6051.0	5398.6	4482.1	3275.1	1900.3	2214.7	1881.9	1907.0	1926.8
62.5°	6492.1	6497.4	4391.0	2938.3	1623.0	76.6	37.0	30.4	29.1	29.1
65°	6999.2	6999.2	4706.6	3205.1	1567.6	29.1	5.3	4.0	14.5	14.5
67.5°	7489.1	7380.9	4937.7	3403.2	1595.3	4.0	0.0	0.0	0.0	0.0
68°	7461.4	7342.6	4916.6	3397.9	1591.3	2.6	0.0	0.0	0.0	0.0
70°	7046.7	6931.8	4664.4	3243.4	1531.9	2.6	0.0	0.0	0.0	0.0
72.5°	6220.0	6114.4	4130.8	2859.1	1381.4	1.3	0.0	0.0	0.0	0.0
75°	5265.2	5250.7	3568.3	2412.7	1184.6	1.3	0.0	0.0	0.0	0.0
77.5°	4236.5	4170.5	2789.1	1891.1	954.8	0.0	0.0	0.0	0.0	0.0
80°	2359.9	2457.6	1632.3	1111.9	600.9	0.0	0.0	0.0	0.0	0.0
82.5°	637.9	596.9	356.6	241.7	114.9	0.0	0.0	0.0	0.0	0.0
85°	81.9	89.8	40.9	33.0	7.9	0.0	0.0	0.0	0.0	0.0
87.5°	42.3	50.2	13.2	10.6	2.6	0.0	0.0	0.0	0.0	0.0
90°	7.9	9.2	4.0	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)