

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: P522131

Luminaire Tested: **CTN-CA10-310-727-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522131
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)
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-EX90
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: 34741 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B5 - U1 - G5

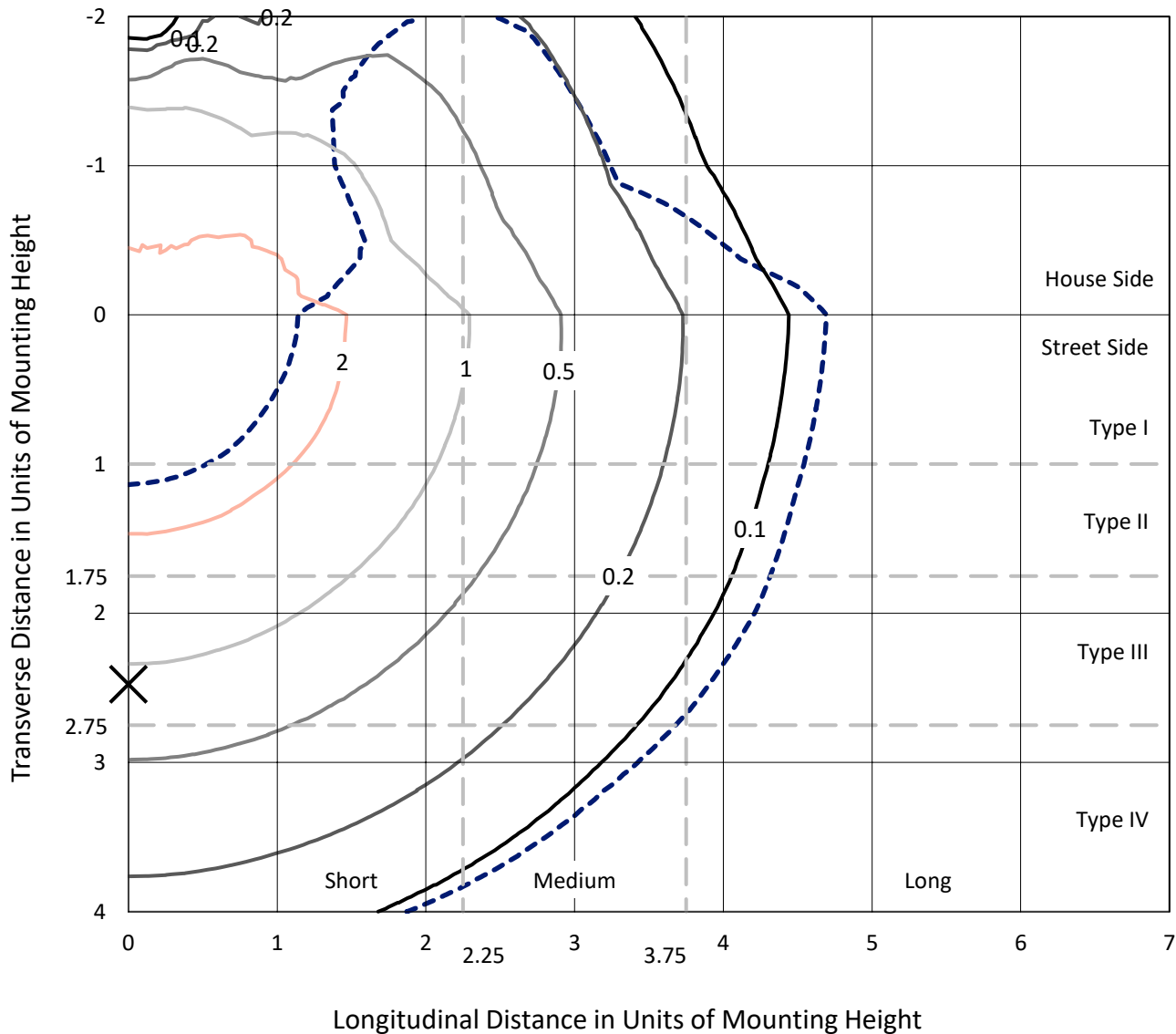
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

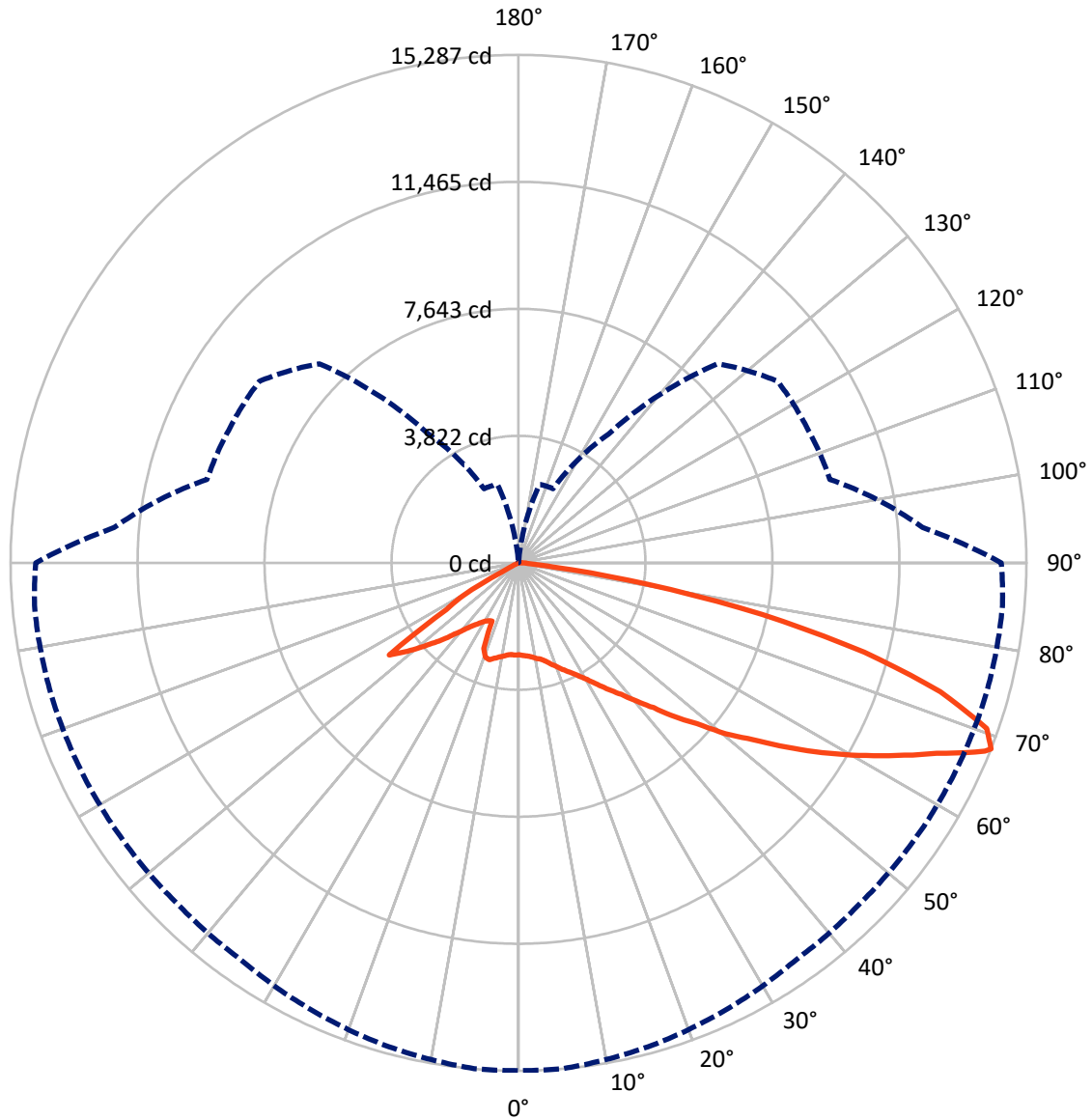
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.1 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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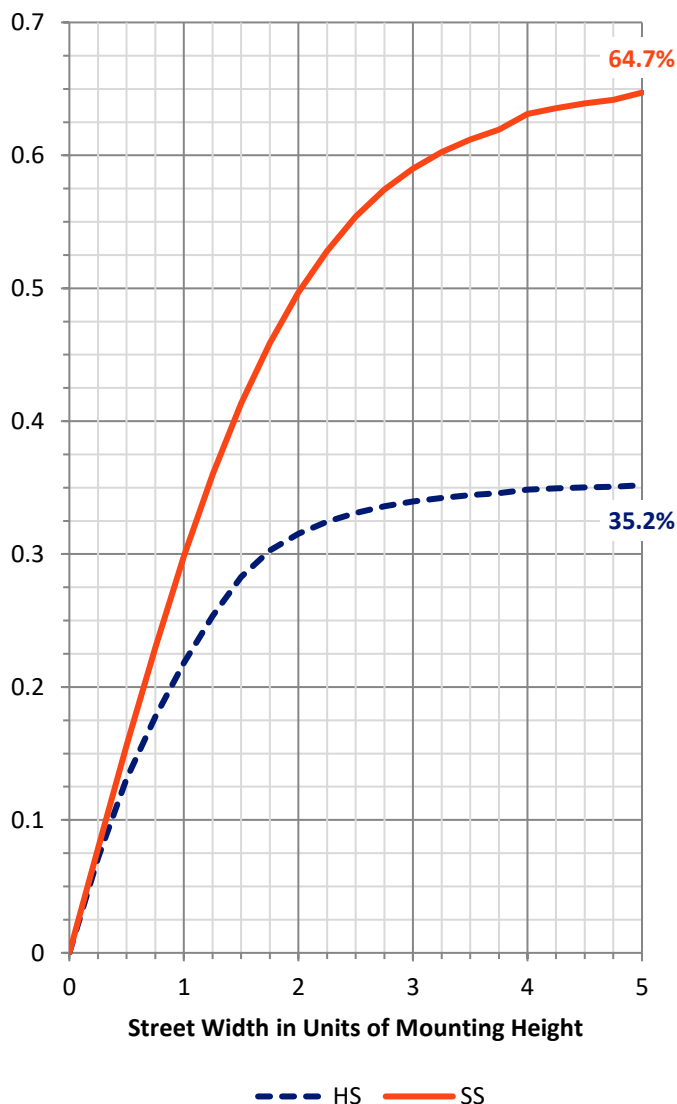
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12226.5	2.1	12228.6
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	22503.3	9.2	22512.4
	% Fixture	64.8	0.0	64.8
Total	Lumens	34729.7	11.2	34741.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.5	0.8
10°-20°	857.0	2.5
20°-30°	1529.8	4.4
30°-40°	2488.7	7.2
40°-50°	4250.0	12.2
50°-60°	7091.3	20.4
60°-70°	9865.4	28.4
70°-80°	7647.2	22.0
80°-90°	732.8	2.1
90°-100°	8.9	0.0
100°-110°	0.7	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	34729.7	100.0
0°-180°	34741.0	100.0

Coefficient of Utilization



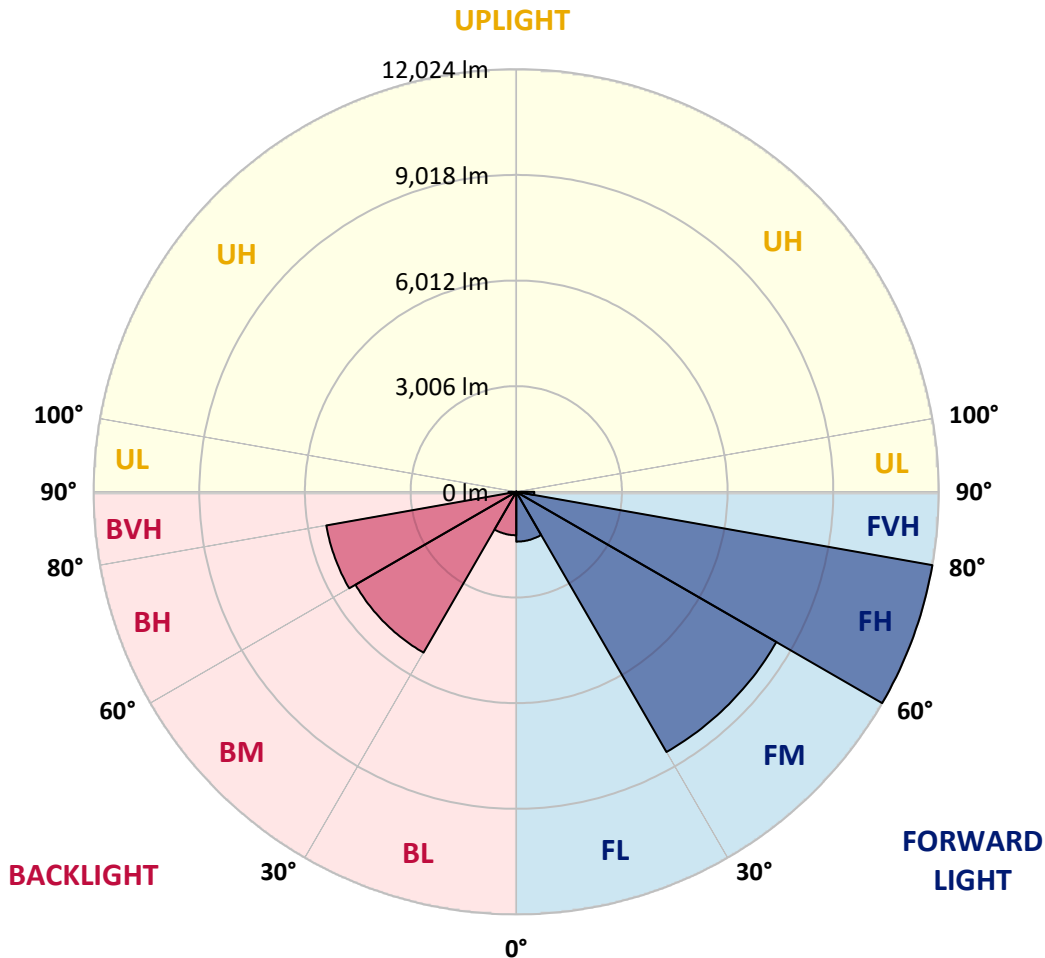
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1417.9	4.1			
FM (30°-60°)	8548.7	24.6			
FH (60°-80°)	12024.0	34.6			G5
FVH (80°-90°)	512.7	1.5			G4/750
BL (0°-30°)	1236.3	3.6	B3/2500		
BM (30°-60°)	5281.3	15.2	B4/8500		
BH (60°-80°)	5488.7	15.8	B5		G5
BVH (80°-90°)	220.1	0.6			G2/225
UL (90°-100°)	8.9	0.0		U1/10	
UH (100°-180°)	2.4	0.0		U1/10	

BUG Rating: B5-U1-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8
2.5°	2796.2	2792.3	2789.6	2806.6	2758.3	2777.9	2764.8	2781.8	2777.9	2785.7	2787.0
5°	2815.8	2809.2	2800.1	2818.4	2789.6	2802.7	2788.3	2796.2	2771.3	2792.3	2794.9
7.5°	2860.2	2841.9	2840.6	2845.8	2826.2	2835.4	2810.6	2819.7	2806.6	2798.8	2806.6
10°	2926.9	2911.2	2894.2	2904.7	2872.0	2883.8	2857.6	2865.5	2858.9	2841.9	2857.6
12.5°	2972.6	2977.9	2966.1	2974.0	2945.2	2934.7	2925.6	2924.3	2920.4	2895.5	2891.6
15°	3074.6	3077.2	3056.3	3061.5	3055.0	3049.8	3036.7	3026.2	3005.3	2989.6	2979.2
17.5°	3208.0	3193.6	3174.0	3179.2	3197.5	3174.0	3166.1	3146.5	3116.4	3090.3	3085.1
20°	3347.8	3338.7	3320.4	3330.8	3329.5	3313.8	3317.8	3285.1	3241.9	3219.7	3202.7
22.5°	3503.4	3490.3	3477.2	3496.8	3481.2	3470.7	3466.8	3444.6	3391.0	3366.1	3362.2
25°	3658.9	3652.4	3661.6	3655.0	3632.8	3625.0	3630.2	3622.3	3559.6	3529.5	3511.2
27.5°	3853.7	3838.0	3852.4	3844.6	3821.0	3822.4	3823.7	3825.0	3754.4	3715.2	3689.0
30°	4076.0	4070.7	4089.0	4064.2	4042.0	4056.3	4068.1	4042.0	3980.5	3923.0	3913.9
32.5°	4364.9	4332.2	4353.1	4321.7	4287.7	4321.7	4342.6	4290.3	4240.7	4167.5	4180.5
35°	4685.1	4674.7	4674.7	4634.1	4615.8	4669.4	4690.4	4639.4	4562.2	4498.2	4482.5
37.5°	5025.0	5035.5	5068.1	5051.1	5034.2	5066.8	5113.9	5045.9	4946.6	4878.6	4860.3
40°	5476.0	5502.1	5524.4	5502.1	5482.5	5503.5	5557.0	5468.2	5398.9	5362.3	5323.1
42.5°	5961.0	6005.4	5991.1	5993.7	6010.7	6040.7	6094.3	6013.3	5933.5	5932.2	5874.7
45°	6617.2	6617.2	6587.1	6615.9	6613.3	6687.8	6711.3	6666.9	6600.2	6580.6	6530.9
47.5°	7230.3	7294.4	7282.6	7324.4	7291.7	7354.5	7434.2	7396.3	7319.2	7249.9	7239.5
50°	8085.2	8069.6	8053.9	8116.6	8111.4	8154.5	8227.7	8204.2	8097.0	8018.6	8004.2
52.5°	8836.9	8919.3	8899.6	8993.8	8941.5	9002.9	9090.5	9086.6	8955.9	8878.7	8856.5
55°	9785.9	9840.9	9836.9	9933.7	9861.8	9942.8	10016.0	10023.9	9881.4	9771.6	9805.6
57.5°	10774.2	10820.0	10793.8	10873.6	10803.0	10914.1	10958.5	10929.8	10846.1	10707.5	10758.5
60°	11763.8	11803.0	11833.1	11839.6	11799.1	11864.4	11906.3	11931.1	11799.1	11640.9	11702.4
62.5°	12769.1	12813.5	12787.4	12797.8	12685.4	12774.3	12826.6	12833.1	12681.5	12541.6	12584.7
65°	13827.9	13889.4	13795.2	13732.5	13593.9	13592.6	13661.9	13673.7	13566.5	13467.1	13450.1
67.5°	15139.1	15166.5	14965.2	14754.7	14520.7	14469.8	14518.1	14545.6	14607.0	14604.4	14527.3
68°	15286.8	15281.6	15077.6	14826.6	14575.7	14516.8	14540.4	14575.7	14616.2	14624.0	14531.2
70°	14950.8	14886.8	14770.4	14454.1	14205.7	14051.5	13969.1	14034.5	13924.6	13926.0	13752.1
72.5°	13280.2	13272.3	13058.0	12901.1	12680.2	12423.9	12306.3	12305.0	12315.4	12239.6	12060.5
75°	10757.2	10767.7	10518.0	10409.5	10341.5	10293.2	10318.0	10395.1	10403.0	10401.7	10338.9
77.5°	7502.2	7545.4	7478.7	7302.2	7491.8	7653.9	7966.3	8125.8	8074.8	8227.7	8324.5
80°	3932.2	4018.4	4021.0	4145.2	4298.2	4445.9	4715.2	4957.0	4779.2	4700.8	4619.8
82.5°	1034.0	1065.4	1112.5	1040.6	1062.8	1085.0	1294.2	1274.6	1176.5	1228.8	1307.2
85°	295.4	304.6	291.5	264.1	241.8	222.2	227.5	192.2	167.3	166.0	160.8
87.5°	207.9	223.5	197.4	169.9	152.9	142.5	137.3	116.3	94.1	82.4	65.4
90°	96.7	95.4	82.4	64.1	56.2	53.6	53.6	41.8	23.5	14.4	13.1
92.5°	40.5	41.8	34.0	27.5	23.5	18.3	14.4	9.2	5.2	2.6	1.3
95°	14.4	15.7	13.1	10.5	9.2	7.8	6.5	5.2	2.6	1.3	1.3
97.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.6	2.6	1.3	1.3
100°	0.0	0.0	0.0	1.3	2.6	2.6	2.6	2.6	1.3	1.3	1.3
102.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
105°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3



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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	1.3	1.3	1.3	1.3
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
165°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3
167.5°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3
170°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
172.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
175°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
177.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8	2764.8
2.5°	2784.4	2777.9	2775.3	2742.6	2751.7	2732.1	2777.9	2764.8	2762.2	2780.5
5°	2790.9	2760.9	2779.2	2758.3	2763.5	2734.7	2771.3	2755.6	2757.0	2766.1
7.5°	2794.9	2777.9	2796.2	2759.6	2773.9	2763.5	2789.6	2773.9	2789.6	2797.5
10°	2834.1	2826.2	2813.2	2802.7	2813.2	2788.3	2821.0	2818.4	2827.5	2851.1
12.5°	2887.7	2878.5	2865.5	2847.2	2855.0	2845.8	2870.7	2873.3	2890.3	2902.1
15°	2967.4	2955.7	2949.1	2930.8	2933.4	2926.9	2941.3	2943.9	2977.9	2974.0
17.5°	3079.8	3066.8	3072.0	3055.0	3048.5	3032.8	3006.6	2997.5	3038.0	3049.8
20°	3202.7	3188.3	3194.9	3180.5	3058.9	2811.9	2977.9	3091.6	3005.3	2998.8
22.5°	3342.6	3326.9	3332.1	3309.9	3159.6	2696.8	2346.5	2317.7	2647.1	2780.5
25°	3496.8	3475.9	3473.3	3444.6	2950.4	2441.9	2402.7	2351.7	2111.2	1920.3
27.5°	3687.7	3656.3	3640.6	3206.6	2929.5	2537.3	2478.5	2296.8	1947.8	1959.5
30°	3894.2	3848.5	3554.4	3268.1	3082.5	2649.8	2571.3	2013.1	2015.8	2010.5
32.5°	4129.6	4027.6	3482.5	3456.3	3265.5	2770.0	2134.7	2111.2	2113.8	2121.6
35°	4438.1	3738.7	3724.3	3725.6	3489.0	2679.8	2261.5	2239.3	2241.9	2247.1
37.5°	4503.4	4030.2	4032.8	4002.7	3726.9	2448.4	2415.8	2414.5	2409.2	2404.0
40°	4555.7	4397.5	4359.6	4311.3	3455.0	2636.7	2626.2	2618.4	2622.3	2632.8
42.5°	4964.9	4845.9	4809.3	4751.8	3543.9	2921.7	2887.7	2878.5	2889.0	2883.8
45°	5508.7	5409.3	5337.4	4393.6	3915.2	3231.5	3204.0	3192.3	3196.2	3228.9
47.5°	6083.9	6025.0	5805.4	4746.6	4347.9	3597.5	3570.1	3551.8	3558.3	3550.4
50°	6710.0	6656.4	5374.0	5278.6	4826.3	3992.3	3951.8	3945.2	3947.8	3946.5
52.5°	7389.8	6269.5	5955.8	5856.4	5330.9	4405.4	4391.0	4355.7	4363.5	4355.7
55°	8187.2	6604.1	6596.3	6480.0	5898.2	4885.1	4868.1	4818.5	4506.0	4779.2
57.5°	8944.1	7243.4	7243.4	7131.0	6478.6	5362.3	5334.8	5298.2	3202.7	2583.1
60°	9772.9	7883.9	7865.6	7772.8	7038.1	5817.2	4728.3	4717.8	1934.7	1941.2
62.5°	10489.2	8455.2	8487.9	8401.6	7576.7	4355.7	2190.9	2146.5	190.9	294.1
65°	11291.9	9086.6	9125.8	9036.9	8159.8	4619.8	2377.9	2355.6	43.1	39.2
67.5°	12201.7	9716.7	9627.8	9529.7	8500.9	4757.0	2470.7	2451.1	11.8	7.8
68°	12209.6	9703.6	9588.6	9521.9	8468.3	4730.9	2462.8	2444.5	11.8	7.8
70°	11582.1	9214.7	9099.7	9116.6	8063.0	4524.3	2360.9	2326.9	11.8	7.8
72.5°	10161.1	8200.3	8070.9	7979.4	7150.6	4022.4	2116.4	2052.4	11.8	7.8
75°	8694.4	6949.3	6734.9	6533.6	5753.1	3291.6	1736.0	1664.1	11.8	7.8
77.5°	6852.5	5296.9	4992.3	4860.3	4323.0	2431.5	1290.2	1211.8	11.8	6.5
80°	3787.1	3039.3	2780.5	2699.4	2472.0	1428.8	739.9	692.8	10.5	6.5
82.5°	979.1	734.7	640.5	618.3	580.4	338.6	180.4	171.2	9.2	5.2
85°	139.9	103.3	113.7	134.6	129.4	87.6	62.7	53.6	7.8	3.9
87.5°	73.2	61.4	71.9	81.0	82.4	51.0	26.1	14.4	3.9	0.0
90°	11.8	11.8	13.1	14.4	14.4	6.5	5.2	0.0	0.0	0.0
92.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.3	2.6	1.3	1.3	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°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.3	1.3	1.3	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)