

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: P522206

Luminaire Tested: **CTN-CA8-230-730-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522206
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-CA8-230-730-U-T5R-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (8) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29802.9 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U1 - G4

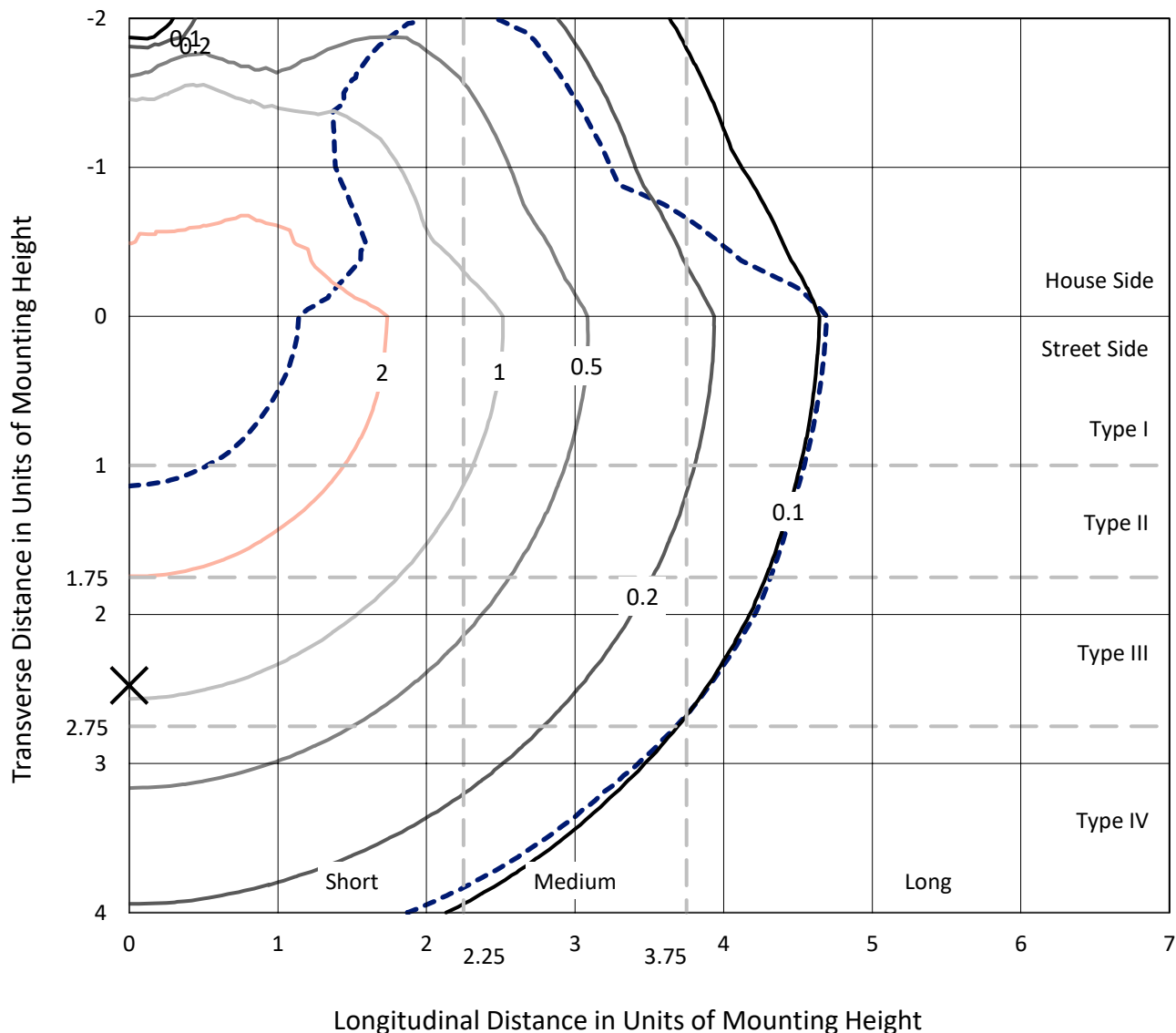
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

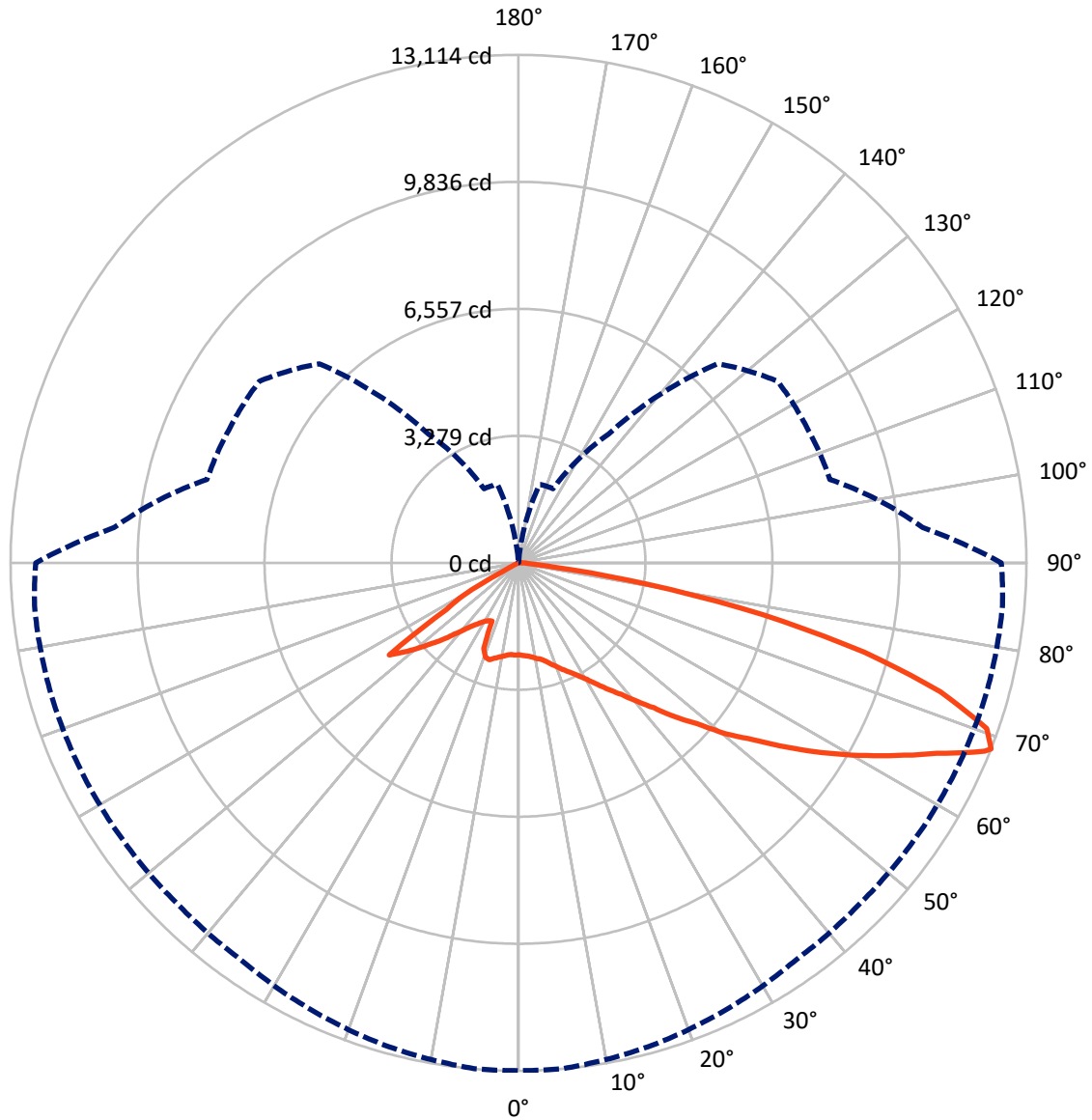
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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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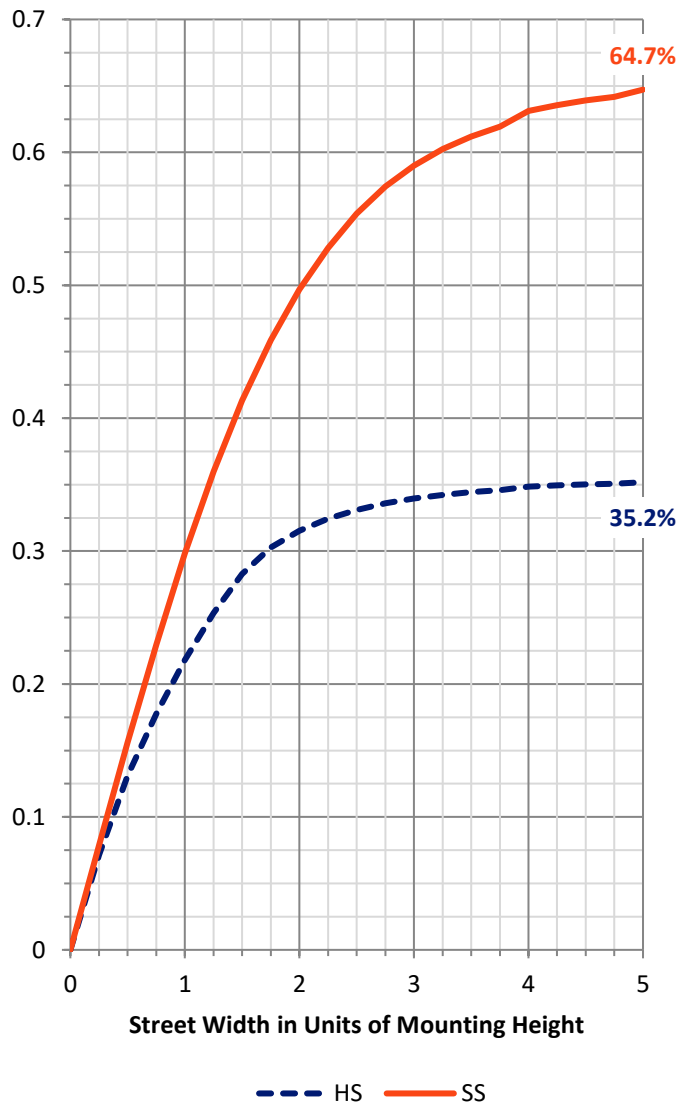
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10488.6	1.8	10490.4
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	19304.7	7.8	19312.6
	% Fixture	64.8	0.0	64.8
Total	Lumens	29793.3	9.6	29802.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.5	0.8
10°-20°	735.2	2.5
20°-30°	1312.4	4.4
30°-40°	2135.0	7.2
40°-50°	3645.9	12.2
50°-60°	6083.4	20.4
60°-70°	8463.2	28.4
70°-80°	6560.3	22.0
80°-90°	628.6	2.1
90°-100°	7.6	0.0
100°-110°	0.6	0.0
110°-120°	0.3	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.1	0.0
0°-90°	29793.3	100.0
0°-180°	29802.9	100.0

Coefficient of Utilization

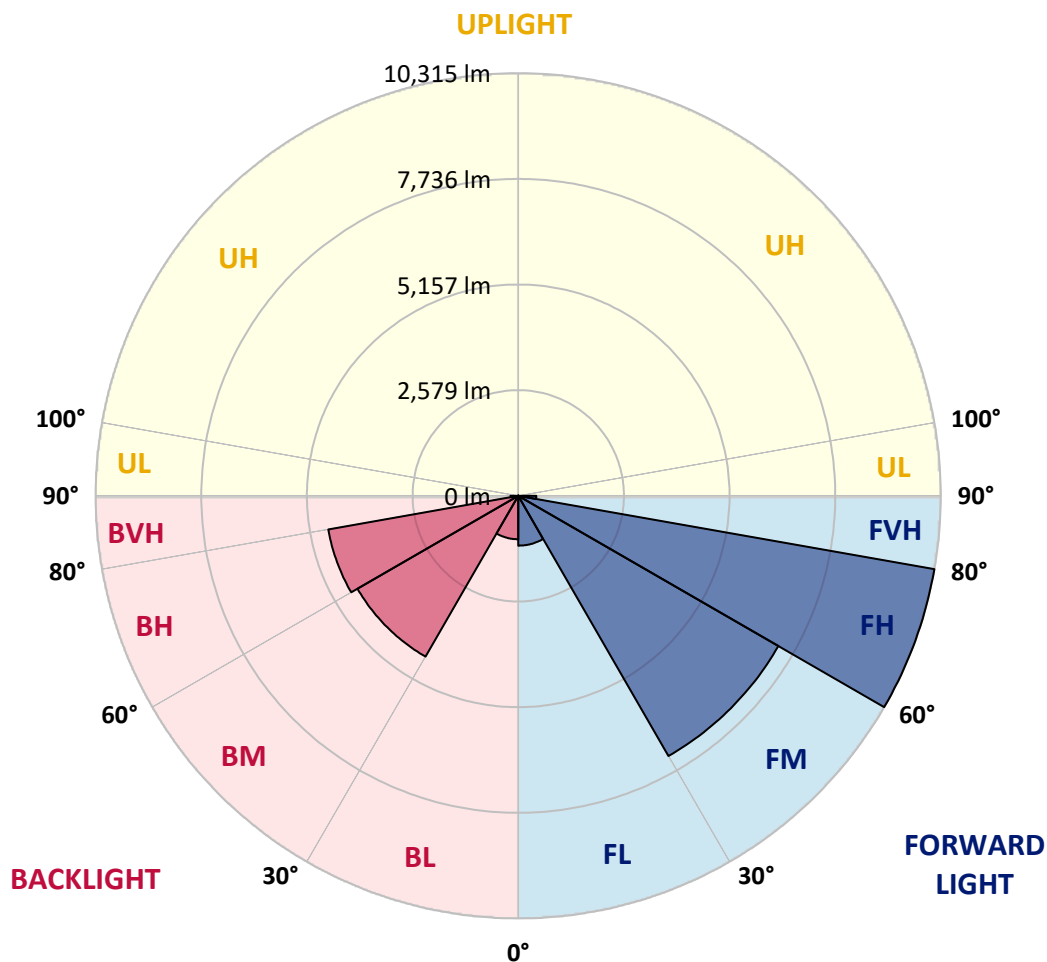


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1216.4	4.1			
FM (30°-60°)	7333.6	24.6			
FH (60°-80°)	10314.9	34.6			G4/12000
FVH (80°-90°)	439.8	1.5			G3/500
BL (0°-30°)	1060.6	3.6	B3/2500		
BM (30°-60°)	4530.6	15.2	B3/5000		
BH (60°-80°)	4708.5	15.8	B4/5000		G4/5000
BVH (80°-90°)	188.8	0.6			G2/225
UL (90°-100°)	7.6	0.0		U1/10	
UH (100°-180°)	2.0	0.0		U1/10	

BUG Rating: B4-U1-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8
2.5°	2398.7	2395.4	2393.1	2407.7	2366.2	2383.0	2371.8	2386.4	2383.0	2389.8	2390.9
5°	2415.6	2409.9	2402.1	2417.8	2393.1	2404.3	2392.0	2398.7	2377.4	2395.4	2397.6
7.5°	2453.7	2438.0	2436.9	2441.3	2424.5	2432.4	2411.1	2418.9	2407.7	2401.0	2407.7
10°	2510.9	2497.4	2482.8	2491.8	2463.8	2473.9	2451.4	2458.2	2452.6	2438.0	2451.4
12.5°	2550.1	2554.6	2544.5	2551.2	2526.6	2517.6	2509.8	2508.6	2505.3	2484.0	2480.6
15°	2637.6	2639.8	2621.9	2626.4	2620.8	2616.3	2605.1	2596.1	2578.2	2564.7	2555.7
17.5°	2752.0	2739.6	2722.8	2727.3	2743.0	2722.8	2716.1	2699.3	2673.5	2651.1	2646.6
20°	2872.0	2864.1	2848.4	2857.4	2856.3	2842.8	2846.2	2818.1	2781.1	2762.1	2747.5
22.5°	3005.4	2994.2	2983.0	2999.8	2986.4	2977.4	2974.0	2955.0	2909.0	2887.7	2884.3
25°	3138.9	3133.3	3141.1	3135.5	3116.4	3109.7	3114.2	3107.5	3053.6	3027.9	3012.2
27.5°	3306.0	3292.5	3304.8	3298.1	3277.9	3279.1	3280.2	3281.3	3220.7	3187.1	3164.7
30°	3496.6	3492.1	3507.8	3486.5	3467.5	3479.8	3489.9	3467.5	3414.7	3365.4	3357.6
32.5°	3744.4	3716.4	3734.3	3707.4	3678.3	3707.4	3725.4	3680.5	3637.9	3575.1	3586.3
35°	4019.2	4010.2	4010.2	3975.5	3959.8	4005.7	4023.7	3979.9	3913.8	3858.8	3845.4
37.5°	4310.8	4319.7	4347.8	4333.2	4318.6	4346.6	4387.0	4328.7	4243.5	4185.2	4169.5
40°	4697.7	4720.1	4739.1	4720.1	4703.3	4721.2	4767.2	4690.9	4631.5	4600.1	4566.4
42.5°	5113.7	5151.8	5139.5	5141.7	5156.3	5182.1	5228.1	5158.6	5090.2	5089.0	5039.7
45°	5676.7	5676.7	5650.9	5675.5	5673.3	5737.2	5757.4	5719.3	5662.1	5645.3	5602.6
47.5°	6202.6	6257.6	6247.5	6283.4	6255.3	6309.1	6377.6	6345.0	6278.9	6219.4	6210.5
50°	6936.0	6922.6	6909.1	6962.9	6958.5	6995.5	7058.3	7038.1	6946.1	6878.8	6866.5
52.5°	7580.8	7651.5	7634.7	7715.4	7670.6	7723.3	7798.4	7795.0	7682.9	7616.7	7597.7
55°	8395.0	8442.1	8438.7	8521.7	8460.0	8529.6	8592.4	8599.1	8476.9	8382.7	8411.8
57.5°	9242.8	9282.0	9259.6	9328.0	9267.5	9362.8	9400.9	9376.2	9304.5	9185.6	9229.3
60°	10091.7	10125.4	10151.2	10156.8	10122.0	10178.1	10214.0	10235.3	10122.0	9986.3	10039.0
62.5°	10954.1	10992.2	10969.8	10978.8	10882.3	10958.6	11003.4	11009.0	10879.0	10759.0	10796.0
65°	11862.4	11915.2	11834.4	11780.6	11661.7	11660.6	11720.0	11730.1	11638.2	11552.9	11538.4
67.5°	12987.2	13010.8	12838.1	12657.5	12456.8	12413.1	12454.6	12478.1	12530.8	12528.6	12462.4
68°	13114.0	13109.5	12934.5	12719.2	12503.9	12453.4	12473.6	12503.9	12538.7	12545.4	12465.8
70°	12825.8	12770.8	12671.0	12399.6	12186.5	12054.2	11983.6	12039.6	11945.4	11946.6	11797.4
72.5°	11392.6	11385.8	11201.9	11067.4	10877.8	10658.0	10557.1	10556.0	10565.0	10499.9	10346.3
75°	9228.2	9237.2	9023.0	8929.9	8871.6	8830.1	8851.4	8917.6	8924.3	8923.2	8869.4
77.5°	6435.9	6472.9	6415.7	6264.3	6426.9	6566.0	6834.0	6970.8	6927.1	7058.3	7141.2
80°	3373.3	3447.3	3449.5	3556.0	3687.3	3814.0	4045.0	4252.4	4099.9	4032.6	3963.1
82.5°	887.0	914.0	954.3	892.7	911.7	930.8	1110.2	1093.4	1009.3	1054.1	1121.4
85°	253.4	261.3	250.1	226.5	207.5	190.6	195.1	164.8	143.5	142.4	137.9
87.5°	178.3	191.8	169.3	145.8	131.2	122.2	117.7	99.8	80.7	70.6	56.1
90°	83.0	81.9	70.6	54.9	48.2	46.0	46.0	35.9	20.2	12.3	11.2
92.5°	34.8	35.9	29.2	23.5	20.2	15.7	12.3	7.8	4.5	2.2	1.1
95°	12.3	13.5	11.2	9.0	7.8	6.7	5.6	4.5	2.2	1.1	1.1
97.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.2	2.2	1.1	1.1
100°	0.0	0.0	0.0	1.1	2.2	2.2	2.2	2.2	1.1	1.1	1.1
102.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
105°	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1



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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	1.1	1.1	1.1	1.1
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
165°	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1
167.5°	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1
170°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
172.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
175°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
177.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8
2.5°	2388.6	2383.0	2380.8	2352.8	2360.6	2343.8	2383.0	2371.8	2369.6	2385.3
5°	2394.2	2368.5	2384.2	2366.2	2370.7	2346.0	2377.4	2364.0	2365.1	2372.9
7.5°	2397.6	2383.0	2398.7	2367.3	2379.7	2370.7	2393.1	2379.7	2393.1	2399.9
10°	2431.3	2424.5	2413.3	2404.3	2413.3	2392.0	2420.0	2417.8	2425.6	2445.8
12.5°	2477.2	2469.4	2458.2	2442.5	2449.2	2441.3	2462.7	2464.9	2479.5	2489.6
15°	2545.6	2535.5	2529.9	2514.2	2516.5	2510.9	2523.2	2525.5	2554.6	2551.2
17.5°	2642.1	2630.9	2635.4	2620.8	2615.2	2601.7	2579.3	2571.4	2606.2	2616.3
20°	2747.5	2735.2	2740.8	2728.4	2624.1	2412.2	2554.6	2652.2	2578.2	2572.6
22.5°	2867.5	2854.0	2858.5	2839.5	2710.5	2313.5	2013.0	1988.3	2270.9	2385.3
25°	2999.8	2981.9	2979.6	2955.0	2531.1	2094.8	2061.2	2017.4	1811.1	1647.4
27.5°	3163.5	3136.6	3123.2	2750.9	2513.1	2176.7	2126.2	1970.3	1670.9	1681.0
30°	3340.7	3301.5	3049.2	2803.6	2644.3	2273.1	2205.8	1727.0	1729.2	1724.8
32.5°	3542.6	3455.1	2987.5	2965.1	2801.3	2376.3	1831.3	1811.1	1813.3	1820.1
35°	3807.2	3207.3	3194.9	3196.1	2993.1	2298.9	1940.1	1921.0	1923.2	1927.7
37.5°	3863.3	3457.4	3459.6	3433.8	3197.2	2100.4	2072.4	2071.3	2066.8	2062.3
40°	3908.2	3772.5	3740.0	3698.5	2963.9	2261.9	2252.9	2246.2	2249.6	2258.6
42.5°	4259.2	4157.1	4125.7	4076.4	3040.2	2506.4	2477.2	2469.4	2478.4	2473.9
45°	4725.7	4640.5	4578.8	3769.1	3358.7	2772.2	2748.6	2738.5	2741.9	2769.9
47.5°	5219.1	5168.7	4980.3	4071.9	3729.9	3086.2	3062.6	3046.9	3052.5	3045.8
50°	5756.3	5710.3	4610.2	4528.3	4140.3	3424.8	3390.1	3384.5	3386.7	3385.6
52.5°	6339.4	5378.4	5109.2	5024.0	4573.2	3779.2	3766.9	3736.6	3743.3	3736.6
55°	7023.5	5665.4	5658.7	5558.9	5059.9	4190.8	4176.2	4133.6	3865.6	4099.9
57.5°	7672.8	6213.8	6213.8	6117.4	5557.8	4600.1	4576.5	4545.1	2747.5	2215.9
60°	8383.8	6763.3	6747.6	6668.0	6037.8	4990.3	4056.2	4047.2	1659.7	1665.3
62.5°	8998.3	7253.4	7281.4	7207.4	6499.8	3736.6	1879.5	1841.4	163.7	252.3
65°	9686.9	7795.0	7828.7	7752.4	6999.9	3963.1	2039.9	2020.8	37.0	33.6
67.5°	10467.4	8335.6	8259.3	8175.2	7292.6	4080.9	2119.5	2102.7	10.1	6.7
68°	10474.1	8324.3	8225.7	8168.5	7264.6	4058.4	2112.8	2097.1	10.1	6.7
70°	9935.8	7904.9	7806.2	7820.8	6917.0	3881.3	2025.3	1996.1	10.1	6.7
72.5°	8716.8	7034.7	6923.7	6845.2	6134.2	3450.6	1815.6	1760.6	10.1	6.7
75°	7458.6	5961.5	5777.6	5604.9	4935.4	2823.8	1489.3	1427.6	10.1	6.7
77.5°	5878.5	4544.0	4282.7	4169.5	3708.6	2085.9	1106.8	1039.6	10.1	5.6
80°	3248.8	2607.3	2385.3	2315.7	2120.6	1225.7	634.7	594.4	9.0	5.6
82.5°	839.9	630.2	549.5	530.4	497.9	290.4	154.8	146.9	7.8	4.5
85°	120.0	88.6	97.6	115.5	111.0	75.1	53.8	46.0	6.7	3.4
87.5°	62.8	52.7	61.7	69.5	70.6	43.7	22.4	12.3	3.4	0.0
90°	10.1	10.1	11.2	12.3	12.3	5.6	4.5	0.0	0.0	0.0
92.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.1	2.2	1.1	1.1	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°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.1	1.1	1.1	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)