

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: P522191

Luminaire Tested: **CTN-CA6-230-740-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522191
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-CA6-230-740-U-T5R-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (6) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29175 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U1 - G4

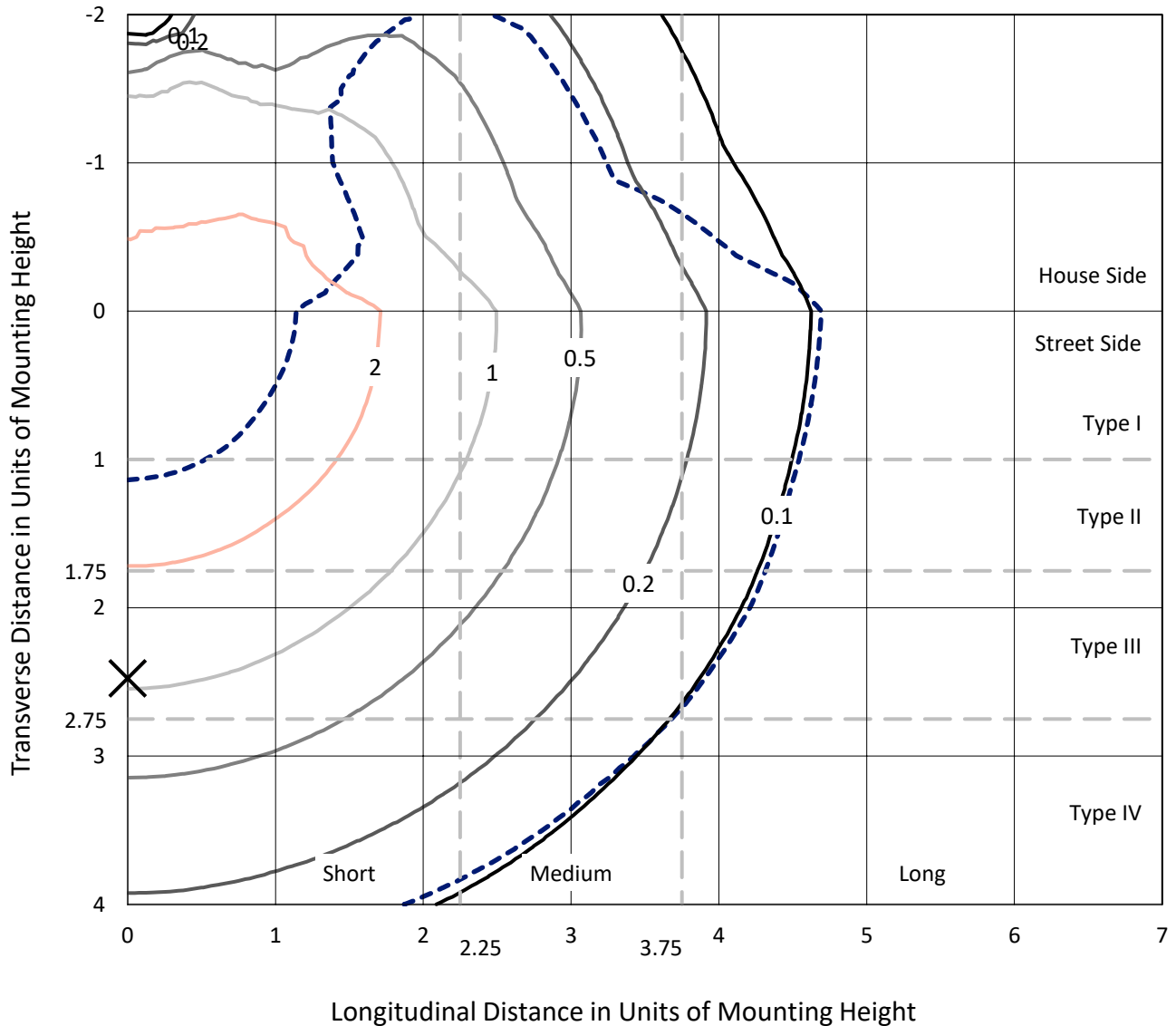
Input Watts (W): 227.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

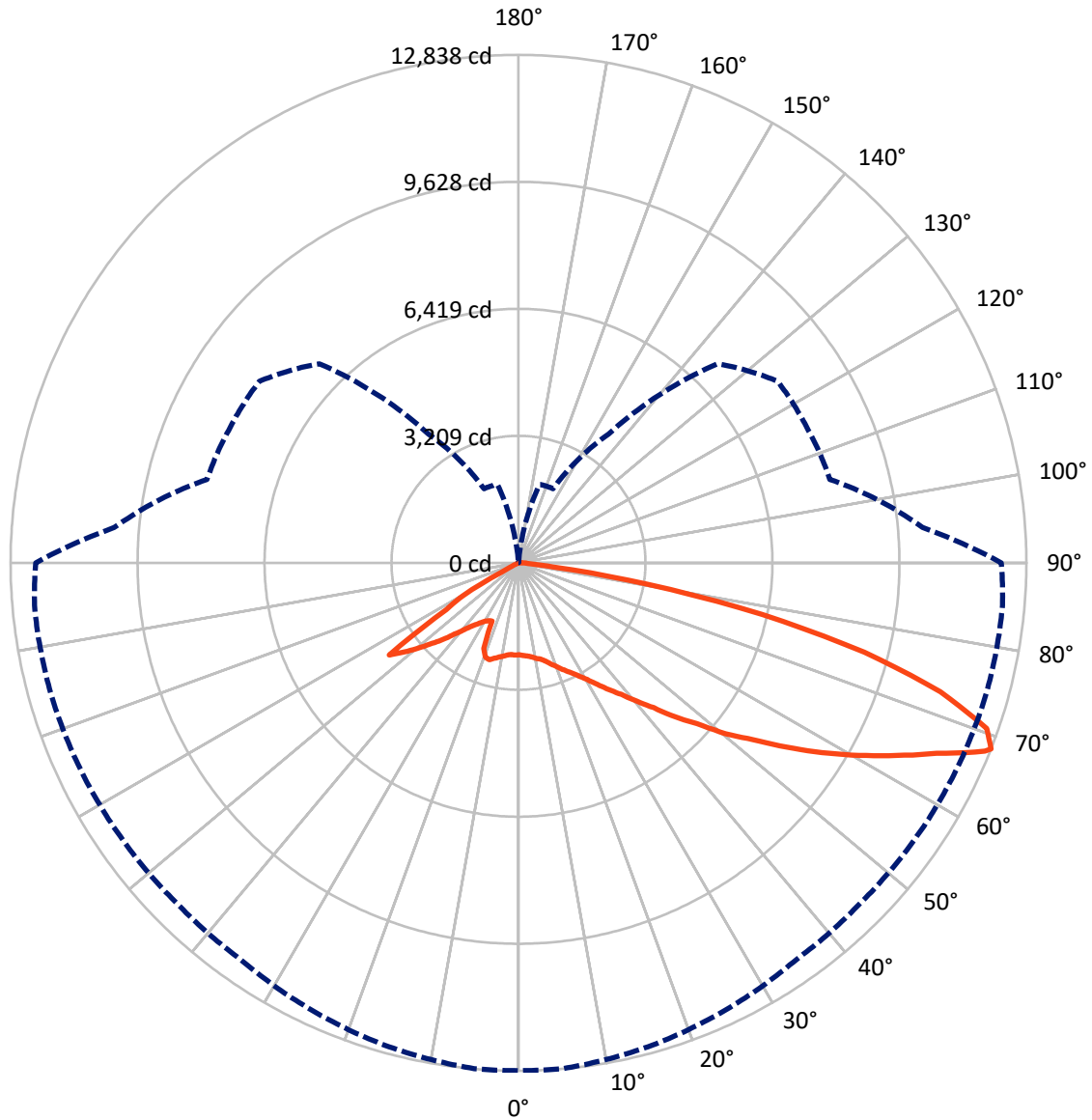
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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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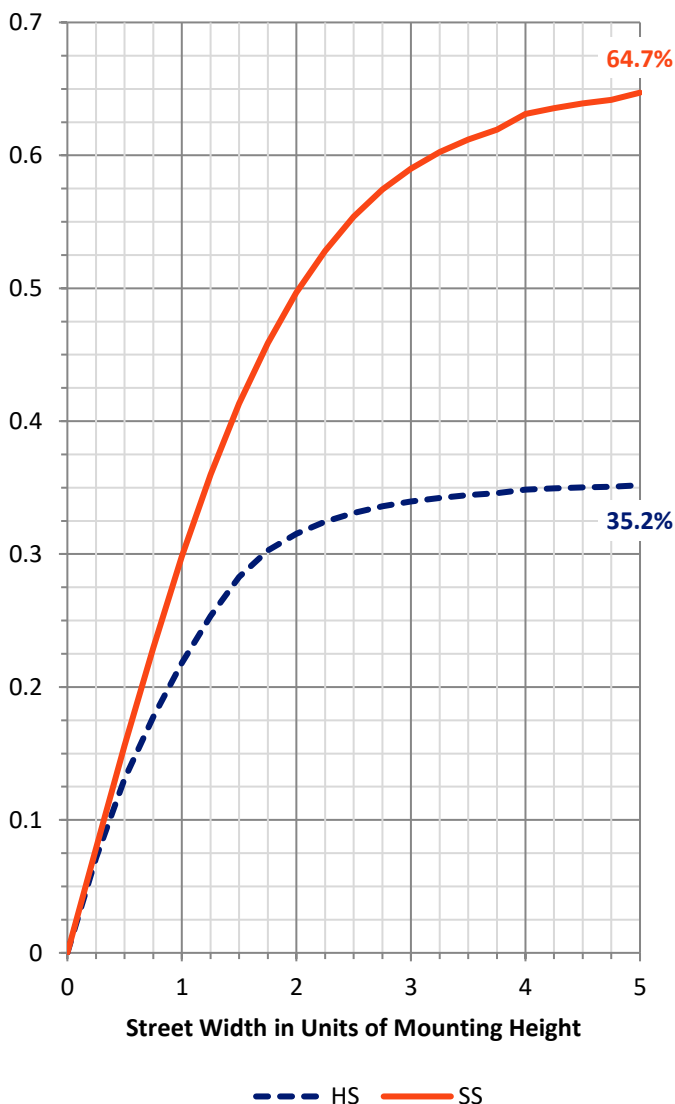
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10267.6	1.8	10269.4
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	18897.9	7.7	18905.6
	% Fixture	64.8	0.0	64.8
Total	Lumens	29165.5	9.5	29175.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.6	0.8
10°-20°	719.7	2.5
20°-30°	1284.7	4.4
30°-40°	2090.0	7.2
40°-50°	3569.1	12.2
50°-60°	5955.2	20.4
60°-70°	8284.9	28.4
70°-80°	6422.0	22.0
80°-90°	615.4	2.1
90°-100°	7.4	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°	29165.5	100.0
0°-180°	29175.0	100.0

Coefficient of Utilization



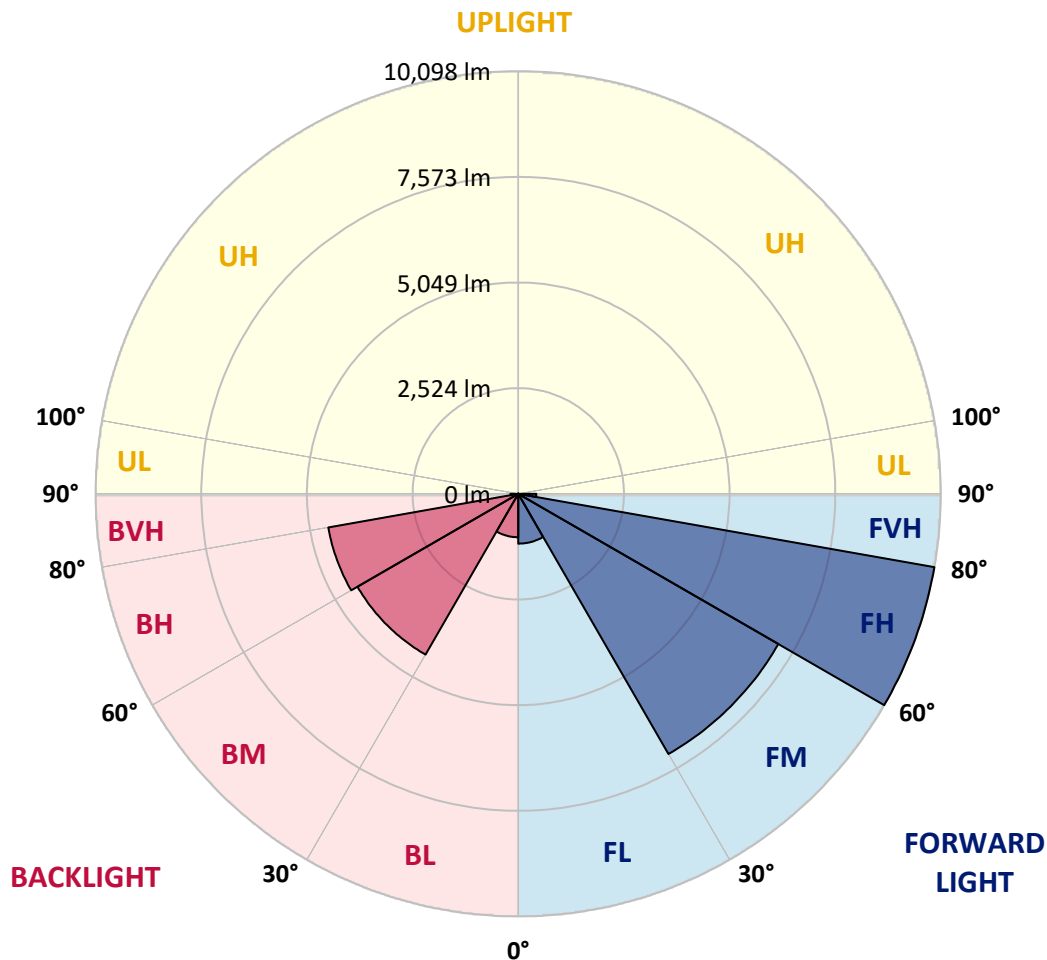
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1190.7	4.1			
FM	(30°-60°)	7179.1	24.6			
FH	(60°-80°)	10097.6	34.6			G4/12000
FVH	(80°-90°)	430.5	1.5			G3/500
BL	(0°-30°)	1038.3	3.6	B3/2500		
BM	(30°-60°)	4435.1	15.2	B3/5000		
BH	(60°-80°)	4609.3	15.8	B4/5000		G4/5000
BVH	(80°-90°)	184.9	0.6			G2/225
UL	(90°-100°)	7.4	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°	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8
2.5°	2348.2	2344.9	2342.7	2357.0	2316.3	2332.8	2321.8	2336.1	2332.8	2339.4	2340.5
5°	2364.7	2359.2	2351.5	2366.8	2342.7	2353.7	2341.6	2348.2	2327.3	2344.9	2347.1
7.5°	2402.0	2386.6	2385.5	2389.9	2373.4	2381.1	2360.3	2367.9	2357.0	2350.4	2357.0
10°	2458.0	2444.8	2430.5	2439.3	2411.9	2421.7	2399.8	2406.4	2400.9	2386.6	2399.8
12.5°	2496.4	2500.8	2490.9	2497.5	2473.3	2464.6	2456.9	2455.8	2452.5	2431.6	2428.3
15°	2582.0	2584.2	2566.6	2571.0	2565.5	2561.2	2550.2	2541.4	2523.8	2510.7	2501.9
17.5°	2694.0	2681.9	2665.4	2669.8	2685.2	2665.4	2658.9	2642.4	2617.1	2595.2	2590.8
20°	2811.5	2803.8	2788.4	2797.2	2796.1	2782.9	2786.2	2758.8	2722.5	2703.9	2689.6
22.5°	2942.1	2931.1	2920.1	2936.6	2923.4	2914.6	2911.4	2892.7	2847.7	2826.8	2823.5
25°	3072.7	3067.2	3074.9	3069.4	3050.8	3044.2	3048.6	3042.0	2989.3	2964.0	2948.7
27.5°	3236.3	3223.1	3235.2	3228.6	3208.9	3210.0	3211.1	3212.2	3152.9	3119.9	3098.0
30°	3422.9	3418.5	3433.9	3413.0	3394.4	3406.5	3416.3	3394.4	3342.8	3294.5	3286.8
32.5°	3665.5	3638.1	3655.7	3629.3	3600.8	3629.3	3646.9	3603.0	3561.3	3499.8	3510.8
35°	3934.5	3925.7	3925.7	3891.7	3876.3	3921.3	3938.9	3896.1	3831.3	3777.5	3764.3
37.5°	4219.9	4228.7	4256.2	4241.9	4227.6	4255.1	4294.6	4237.5	4154.1	4097.0	4081.6
40°	4598.7	4620.6	4639.3	4620.6	4604.2	4621.7	4666.7	4592.1	4533.9	4503.2	4470.2
42.5°	5006.0	5043.3	5031.2	5033.4	5047.7	5072.9	5117.9	5049.9	4982.9	4981.8	4933.5
45°	5557.0	5557.0	5531.8	5555.9	5553.8	5616.3	5636.1	5598.8	5542.8	5526.3	5484.6
47.5°	6071.9	6125.7	6115.8	6151.0	6123.5	6176.2	6243.2	6211.3	6146.6	6088.4	6079.6
50°	6789.9	6776.7	6763.5	6816.2	6811.8	6848.1	6909.5	6889.8	6799.7	6733.9	6721.8
52.5°	7421.1	7490.3	7473.8	7552.8	7508.9	7560.5	7634.1	7630.8	7521.0	7456.2	7437.6
55°	8218.1	8264.2	8260.9	8342.2	8281.8	8349.8	8411.3	8417.9	8298.2	8206.0	8234.6
57.5°	9048.0	9086.5	9064.5	9131.5	9072.2	9165.5	9202.8	9178.7	9108.4	8992.0	9034.9
60°	9879.1	9912.0	9937.2	9942.7	9908.7	9963.6	9998.7	10019.6	9908.7	9775.9	9827.5
62.5°	10723.3	10760.6	10738.6	10747.4	10653.0	10727.7	10771.6	10777.1	10649.7	10532.3	10568.5
65°	11612.5	11664.1	11585.0	11532.3	11416.0	11414.9	11473.1	11482.9	11392.9	11309.5	11295.2
67.5°	12713.6	12736.6	12567.6	12390.8	12194.3	12151.5	12192.1	12215.2	12266.8	12264.6	12199.8
68°	12837.6	12833.2	12662.0	12451.2	12240.4	12191.0	12210.8	12240.4	12274.5	12281.0	12203.1
70°	12555.5	12501.7	12404.0	12138.3	11929.7	11800.2	11731.0	11785.9	11693.7	11694.8	11548.8
72.5°	11152.5	11145.9	10965.9	10834.1	10648.6	10433.5	10334.7	10333.6	10342.3	10278.7	10128.3
75°	9033.8	9042.5	8832.9	8741.8	8684.7	8644.0	8664.9	8729.7	8736.3	8735.2	8682.5
77.5°	6300.3	6336.5	6280.5	6132.3	6291.5	6427.6	6690.0	6823.9	6781.1	6909.5	6990.8
80°	3302.2	3374.6	3376.8	3481.1	3609.6	3733.6	3959.8	4162.8	4013.5	3947.7	3879.6
82.5°	868.4	894.7	934.2	873.8	892.5	911.2	1086.8	1070.4	988.0	1031.9	1097.8
85°	248.1	255.8	244.8	221.8	203.1	186.6	191.0	161.4	140.5	139.4	135.0
87.5°	174.5	187.7	165.8	142.7	128.4	119.7	115.3	97.7	79.0	69.2	54.9
90°	81.2	80.1	69.2	53.8	47.2	45.0	45.0	35.1	19.8	12.1	11.0
92.5°	34.0	35.1	28.5	23.1	19.8	15.4	12.1	7.7	4.4	2.2	1.1
95°	12.1	13.2	11.0	8.8	7.7	6.6	5.5	4.4	2.2	1.1	1.1
97.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	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°	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8	2321.8
2.5°	2338.3	2332.8	2330.6	2303.2	2310.9	2294.4	2332.8	2321.8	2319.6	2335.0
5°	2343.8	2318.5	2333.9	2316.3	2320.7	2296.6	2327.3	2314.2	2315.3	2322.9
7.5°	2347.1	2332.8	2348.2	2317.4	2329.5	2320.7	2342.7	2329.5	2342.7	2349.3
10°	2380.0	2373.4	2362.5	2353.7	2362.5	2341.6	2369.0	2366.8	2374.5	2394.3
12.5°	2425.0	2417.3	2406.4	2391.0	2397.6	2389.9	2410.8	2413.0	2427.2	2437.1
15°	2492.0	2482.1	2476.6	2461.3	2463.5	2458.0	2470.0	2472.2	2500.8	2497.5
17.5°	2586.4	2575.4	2579.8	2565.5	2560.1	2546.9	2524.9	2517.2	2551.3	2561.2
20°	2689.6	2677.5	2683.0	2670.9	2568.8	2361.4	2500.8	2596.3	2523.8	2518.3
22.5°	2807.1	2793.9	2798.3	2779.6	2653.4	2264.8	1970.5	1946.4	2223.0	2335.0
25°	2936.6	2919.0	2916.8	2892.7	2477.7	2050.7	2017.7	1974.9	1772.9	1612.7
27.5°	3096.9	3070.5	3057.4	2692.9	2460.2	2130.8	2081.4	1928.8	1635.7	1645.6
30°	3270.3	3231.9	2984.9	2744.5	2588.6	2225.2	2159.4	1690.6	1692.8	1688.4
32.5°	3467.9	3382.3	2924.5	2902.6	2742.3	2326.2	1792.7	1772.9	1775.1	1781.7
35°	3727.0	3139.7	3127.6	3128.7	2930.0	2250.5	1899.2	1880.5	1882.7	1887.1
37.5°	3781.9	3384.5	3386.7	3361.5	3129.8	2056.2	2028.7	2027.6	2023.2	2018.8
40°	3825.8	3693.0	3661.1	3620.5	2901.5	2214.3	2205.5	2198.9	2202.2	2211.0
42.5°	4169.4	4069.5	4038.8	3990.5	2976.1	2453.6	2425.0	2417.3	2426.1	2421.7
45°	4626.1	4542.7	4482.3	3689.7	3287.9	2713.8	2690.7	2680.8	2684.1	2711.6
47.5°	5109.1	5059.7	4875.3	3986.1	3651.3	3021.1	2998.1	2982.7	2988.2	2981.6
50°	5635.0	5590.0	4513.0	4432.9	4053.1	3352.7	3318.6	3313.1	3315.3	3314.2
52.5°	6205.8	5265.0	5001.6	4918.1	4476.8	3699.6	3687.5	3657.9	3664.4	3657.9
55°	6875.5	5546.1	5539.5	5441.8	4953.3	4102.5	4088.2	4046.5	3784.1	4013.5
57.5°	7511.1	6082.9	6082.9	5988.5	5440.7	4503.2	4480.1	4449.4	2689.6	2169.2
60°	8207.1	6620.8	6605.4	6527.5	5910.5	4885.2	3970.7	3961.9	1624.7	1630.2
62.5°	8808.7	7100.5	7128.0	7055.5	6362.8	3657.9	1839.9	1802.6	160.3	247.0
65°	9482.8	7630.8	7663.7	7589.1	6852.4	3879.6	1996.9	1978.2	36.2	32.9
67.5°	10246.8	8159.9	8085.3	8002.9	7139.0	3994.9	2074.8	2058.4	9.9	6.6
68°	10253.4	8148.9	8052.3	7996.3	7111.5	3972.9	2068.2	2052.9	9.9	6.6
70°	9726.5	7738.4	7641.8	7656.0	6771.2	3799.5	1982.6	1954.1	9.9	6.6
72.5°	8533.2	6886.5	6777.8	6700.9	6004.9	3377.9	1777.3	1723.5	9.9	6.6
75°	7301.4	5835.9	5655.8	5486.8	4831.4	2764.3	1457.9	1397.5	9.9	6.6
77.5°	5754.6	4448.3	4192.5	4081.6	3630.4	2041.9	1083.5	1017.7	9.9	5.5
80°	3180.3	2552.4	2335.0	2266.9	2075.9	1199.9	621.4	581.8	8.8	5.5
82.5°	822.2	617.0	537.9	519.3	487.4	284.3	151.5	143.8	7.7	4.4
85°	117.5	86.7	95.5	113.1	108.7	73.6	52.7	45.0	6.6	3.3
87.5°	61.5	51.6	60.4	68.1	69.2	42.8	22.0	12.1	3.3	0.0
90°	9.9	9.9	11.0	12.1	12.1	5.5	4.4	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)