

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: P522190

Luminaire Tested: **CTN-CA6-230-740-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522190
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-CA6-230-740-U-T5R-HSS-HM-EX180
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: 22788 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G4

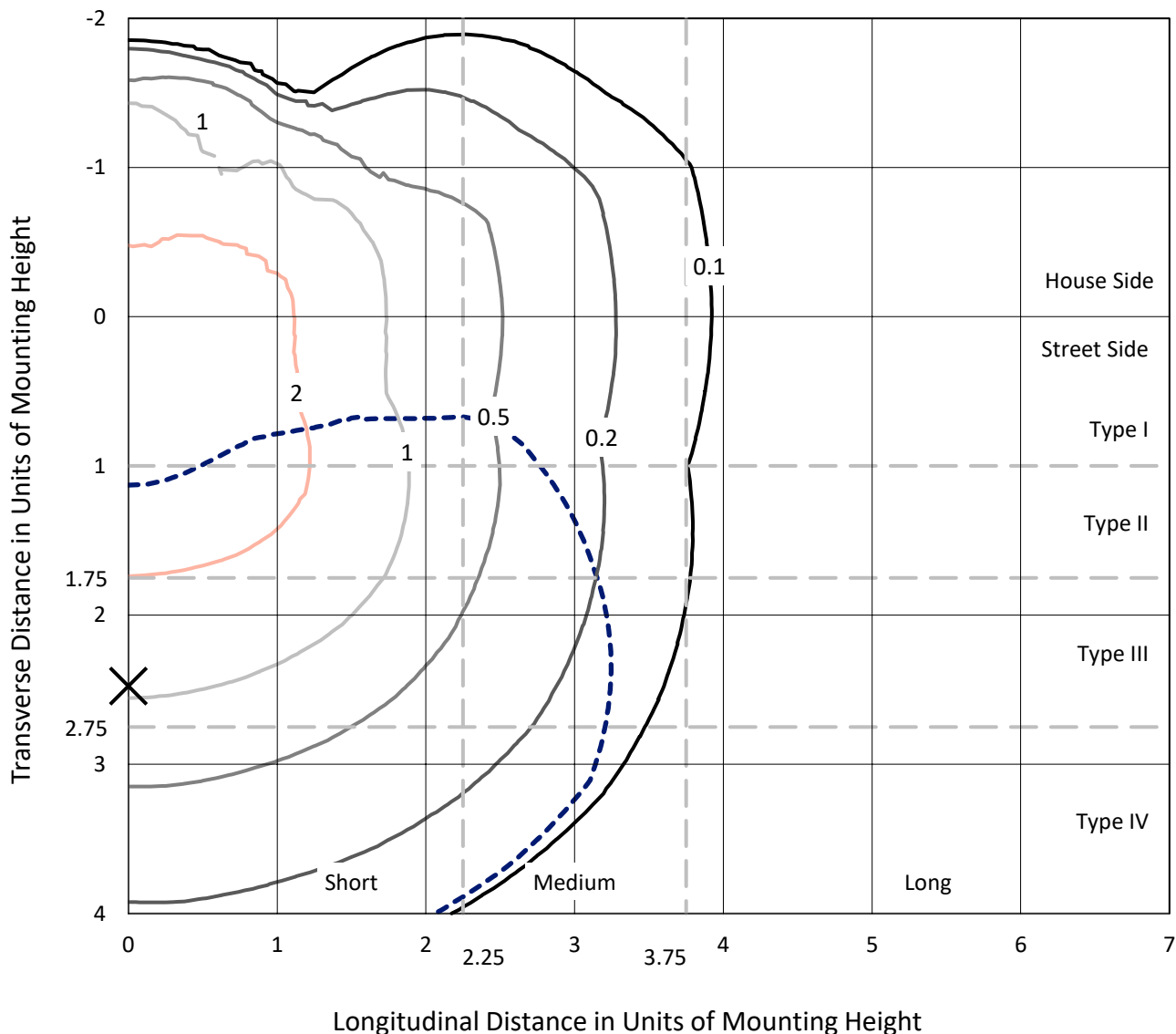
Input Watts (W): 227.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

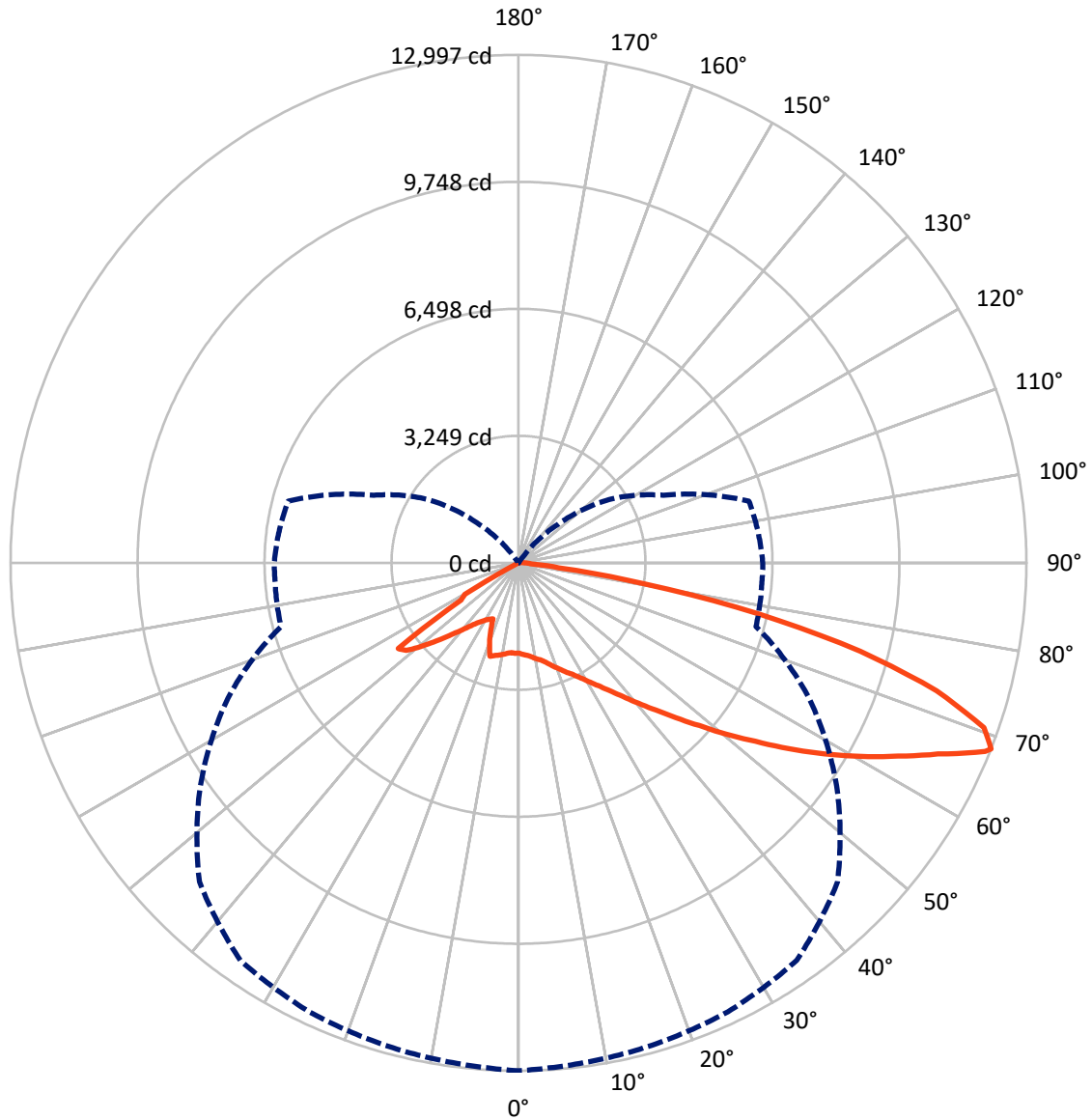
× Max cd
 - - - 1/2 Max cd



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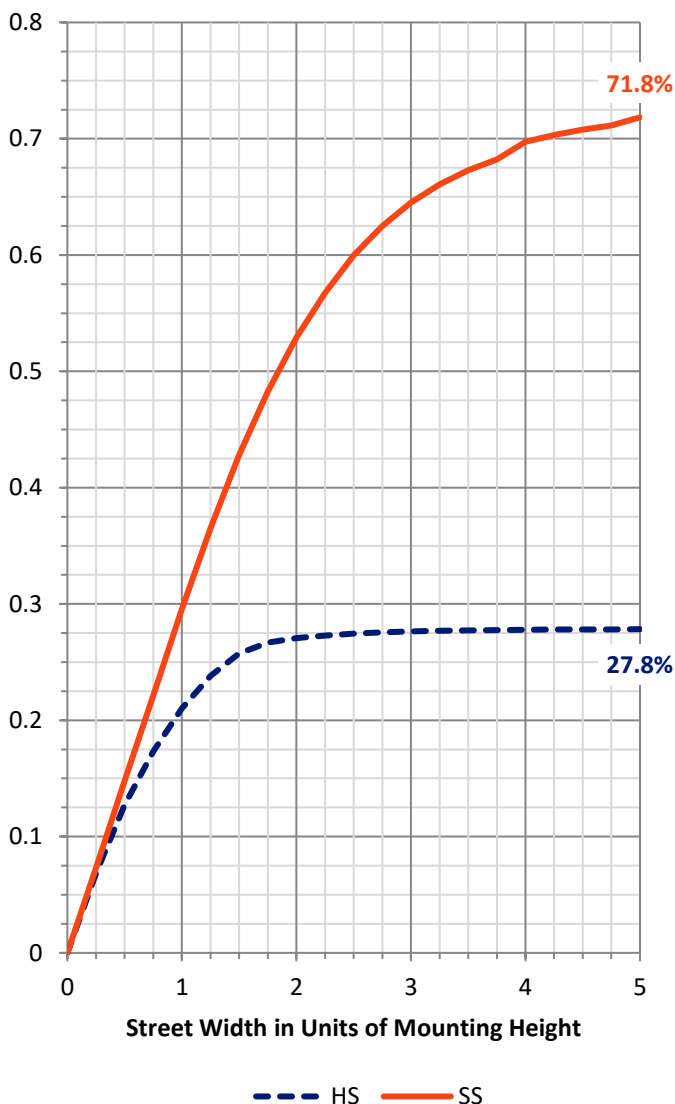
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6364.7	0.1	6364.9
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	16410.1	13.1	16423.1
	% Fixture	72.0	0.1	72.1
Total	Lumens	22774.8	13.2	22788.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.1	1.0
10°-20°	710.0	3.1
20°-30°	1202.0	5.3
30°-40°	1904.3	8.4
40°-50°	3113.4	13.7
50°-60°	4769.0	20.9
60°-70°	5863.8	25.7
70°-80°	4530.9	19.9
80°-90°	457.2	2.0
90°-100°	13.0	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°	22774.8	99.9
0°-180°	22788.0	100.0

Coefficient of Utilization

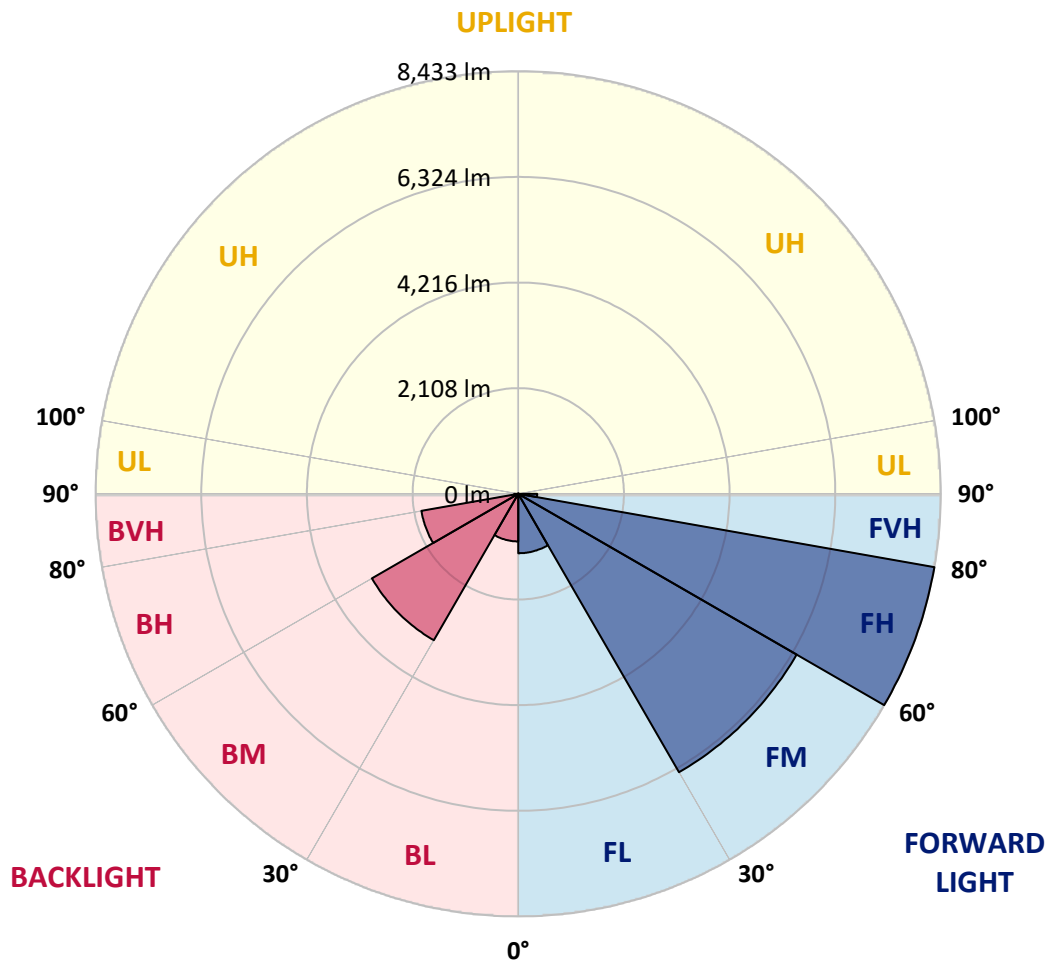


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1186.1	5.2			
FM	(30°-60°)	6414.4	28.1			
FH	(60°-80°)	8432.5	37.0			G4/12000
FVH	(80°-90°)	377.0	1.7			G3/500
BL	(0°-30°)	950.0	4.2	B2/1000		
BM	(30°-60°)	3372.3	14.8	B3/5000		
BH	(60°-80°)	1962.3	8.6	B3/2500		G3/2500
BVH	(80°-90°)	80.1	0.4			G1/100
UL	(90°-100°)	13.0	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°	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7
2.5°	2350.4	2346.0	2341.6	2351.5	2313.1	2329.5	2316.4	2328.4	2319.6	2329.5	2326.2
5°	2381.1	2376.7	2363.6	2374.5	2349.3	2355.9	2339.4	2343.8	2314.2	2331.7	2330.6
7.5°	2431.6	2419.5	2410.8	2410.8	2388.8	2387.7	2361.4	2362.5	2339.4	2337.2	2341.6
10°	2499.7	2490.9	2466.8	2468.9	2438.2	2433.8	2400.9	2399.8	2381.1	2370.1	2380.0
12.5°	2550.2	2559.0	2537.0	2537.0	2506.3	2484.3	2461.3	2445.9	2431.6	2415.2	2407.5
15°	2642.4	2651.2	2621.5	2620.4	2608.4	2582.0	2556.8	2523.8	2498.6	2490.9	2478.8
17.5°	2762.1	2756.6	2731.3	2732.4	2734.6	2691.8	2666.5	2623.7	2587.5	2561.2	2554.6
20°	2883.9	2883.9	2856.5	2865.3	2854.3	2814.8	2798.3	2739.0	2688.5	2660.0	2636.9
22.5°	3020.0	3014.6	2995.9	3014.6	2992.6	2953.1	2925.6	2866.3	2801.6	2640.2	2574.3
25°	3149.6	3146.3	3154.0	3159.5	3132.0	3082.6	3064.0	3001.4	2821.3	2609.5	2476.6
27.5°	3313.2	3302.2	3319.7	3330.7	3303.3	3260.5	3220.9	3150.7	2769.7	2602.9	2588.6
30°	3522.8	3498.7	3523.9	3529.4	3500.9	3474.5	3415.2	3064.0	2787.3	2739.0	2734.6
32.5°	3746.8	3718.2	3751.2	3755.6	3718.2	3696.3	3547.0	3018.9	2959.7	2903.7	2909.2
35°	4012.4	4012.4	4028.9	4031.1	4003.7	3966.3	3397.7	3238.5	3185.8	3134.2	3133.1
37.5°	4336.3	4326.4	4370.3	4396.7	4367.0	4260.6	3615.0	3540.4	3459.2	3393.3	3257.2
40°	4727.1	4744.7	4756.8	4783.1	4754.6	4515.2	3932.3	3847.8	3784.1	3563.4	3219.8
42.5°	5148.7	5153.1	5179.4	5212.3	5212.3	4959.8	4303.4	4230.9	4148.6	3484.4	3329.6
45°	5652.6	5642.7	5693.2	5745.9	5731.6	5470.3	4734.8	4681.0	4295.7	3713.8	3714.9
47.5°	6224.5	6212.4	6284.9	6354.0	6282.7	6036.8	5209.0	5167.3	4146.4	4102.5	4093.7
50°	6885.4	6855.7	6939.2	7031.4	6973.2	6669.1	5785.4	4984.0	4562.4	4527.3	4521.8
52.5°	7591.3	7568.2	7618.7	7775.7	7698.9	7331.1	6331.0	5142.1	5044.4	5004.9	4995.0
55°	8388.3	8343.3	8451.9	8571.6	8482.7	8063.3	6868.9	5666.8	5565.8	5497.8	5399.0
57.5°	9225.9	9161.1	9217.1	9367.5	9281.9	8813.1	7562.7	6206.9	6087.3	5037.8	4637.1
60°	10060.2	10030.6	10052.5	10185.4	10080.0	9542.1	8212.6	6748.2	5152.0	4982.9	5002.7
62.5°	10898.9	10834.2	10853.9	10990.0	10855.0	10235.9	8828.5	7240.0	5422.0	5362.7	5383.6
65°	11798.0	11721.2	11738.7	11778.3	11611.4	10858.3	9373.0	7704.3	5828.2	5765.6	5788.7
67.5°	12881.6	12811.3	12715.8	12598.3	12367.8	11519.2	9914.2	8192.9	6284.9	6249.8	6257.4
68°	12996.8	12928.8	12813.5	12674.1	12415.0	11546.6	9937.3	8207.1	6291.5	6247.6	6249.8
70°	12637.8	12678.5	12547.8	12314.0	12097.7	11144.8	9560.7	7891.0	6011.5	5946.8	5930.3
72.5°	11192.0	11281.0	11100.9	11061.4	10795.7	9928.5	8366.3	6847.0	5228.8	5249.7	5190.4
75°	9036.0	9166.6	8948.1	8960.2	8808.7	8281.8	7011.6	5700.9	4293.5	4389.0	4406.6
77.5°	6283.8	6471.5	6376.0	6471.5	6396.9	6206.9	5426.4	4390.1	3275.8	3385.6	3428.4
80°	3276.9	3499.8	3626.0	3665.5	3689.7	3682.0	3304.4	2634.7	1893.7	1934.3	1932.1
82.5°	1036.3	982.5	1014.4	1005.6	978.1	989.1	891.4	697.1	483.0	532.4	509.4
85°	312.9	315.1	306.3	304.1	281.0	247.0	202.0	116.4	57.1	67.0	62.6
87.5°	230.5	232.7	215.2	204.2	191.0	165.8	128.4	72.5	27.4	26.3	20.9
90°	127.3	123.0	114.2	105.4	99.9	85.6	64.8	27.4	9.9	7.7	6.6
92.5°	69.2	65.9	61.5	58.2	50.5	40.6	26.3	8.8	4.4	1.1	0.0
95°	31.8	29.6	28.5	25.2	22.0	15.4	8.8	5.5	3.3	1.1	0.0
97.5°	14.3	13.2	12.1	9.9	7.7	4.4	4.4	3.3	2.2	1.1	0.0
100°	3.3	3.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.1	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	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°	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7	2308.7
2.5°	2322.9	2316.4	2313.1	2292.2	2298.8	2280.1	2316.4	2307.6	2302.1	2317.4
5°	2325.1	2302.1	2316.4	2304.3	2308.7	2282.3	2310.9	2298.8	2297.7	2304.3
7.5°	2330.6	2315.3	2329.5	2305.4	2316.4	2305.4	2326.2	2314.2	2324.0	2330.6
10°	2360.3	2351.5	2344.9	2339.4	2347.1	2325.1	2351.5	2352.6	2355.9	2375.6
12.5°	2402.0	2393.2	2382.2	2367.9	2375.6	2366.9	2386.6	2392.1	2404.2	2414.1
15°	2460.2	2443.7	2439.3	2426.1	2433.8	2429.4	2433.8	2430.5	2453.6	2450.3
17.5°	2540.3	2521.6	2459.1	2395.4	2354.8	2366.9	2417.3	2483.2	2499.7	2501.9
20°	2569.9	2438.2	2431.6	2359.2	2326.2	2324.0	2219.7	2063.9	2111.1	2221.9
22.5°	2534.8	2354.8	2336.1	2321.8	2181.3	1950.8	1928.8	1905.8	1900.3	1916.8
25°	2455.8	2434.9	2418.4	2231.8	2010.1	2011.2	1979.3	1827.8	1591.8	1572.0
27.5°	2576.5	2548.0	2388.8	2101.2	2096.8	2094.6	2047.4	1658.8	1608.3	1620.3
30°	2713.8	2666.5	2250.5	2213.2	2212.1	2192.3	1835.5	1673.0	1673.0	1675.2
32.5°	2871.8	2578.7	2329.5	2347.1	2346.0	2252.7	1772.9	1762.0	1757.6	1768.6
35°	2992.6	2508.5	2499.7	2531.5	2509.6	1911.3	1883.8	1873.9	1869.5	1864.1
37.5°	2955.3	2710.5	2710.5	2730.2	2553.5	2035.3	2022.1	2022.1	2013.4	2009.0
40°	3012.4	2961.9	2936.6	2944.3	1855.3	2185.7	2195.6	2193.4	2192.3	2200.0
42.5°	3313.2	3268.1	3245.1	2972.8	2077.0	2172.5	2414.1	2413.0	2416.3	2413.0
45°	3696.3	3654.6	3594.2	2781.8	2358.1	1904.7	2661.1	2673.1	2674.2	2673.1
47.5°	4098.1	4071.7	3453.7	3079.3	2663.3	2044.1	2543.6	2970.6	2965.1	2971.7
50°	4522.9	4404.4	3436.1	3431.7	2988.2	2274.6	2275.7	3230.8	3286.8	3304.4
52.5°	4996.1	3992.7	3808.3	3474.5	3317.5	2511.8	2487.6	2863.1	3627.1	3644.7
55°	4640.4	4217.7	4214.4	3092.5	3451.5	2740.1	2743.4	2717.0	3326.3	3780.8
57.5°	4617.3	4627.2	4619.5	3450.4	2518.3	2568.8	2989.3	2966.2	2153.9	1745.5
60°	5015.8	5030.1	4487.8	3725.9	2722.5	1579.7	1841.0	1564.4	1585.2	1601.7
62.5°	5396.8	5401.2	3650.2	2442.6	1349.2	63.7	30.7	25.2	24.2	24.2
65°	5818.3	5818.3	3912.5	2664.4	1303.1	24.2	4.4	3.3	12.1	12.1
67.5°	6225.6	6135.6	4104.7	2829.0	1326.1	3.3	0.0	0.0	0.0	0.0
68°	6202.6	6103.8	4087.1	2824.6	1322.8	2.2	0.0	0.0	0.0	0.0
70°	5857.8	5762.3	3877.4	2696.2	1273.4	2.2	0.0	0.0	0.0	0.0
72.5°	5170.6	5082.8	3433.9	2376.7	1148.3	1.1	0.0	0.0	0.0	0.0
75°	4376.9	4364.8	2966.2	2005.7	984.7	1.1	0.0	0.0	0.0	0.0
77.5°	3521.7	3466.8	2318.5	1572.0	793.7	0.0	0.0	0.0	0.0	0.0
80°	1961.8	2043.0	1356.9	924.3	499.5	0.0	0.0	0.0	0.0	0.0
82.5°	530.2	496.2	296.4	200.9	95.5	0.0	0.0	0.0	0.0	0.0
85°	68.1	74.7	34.0	27.4	6.6	0.0	0.0	0.0	0.0	0.0
87.5°	35.1	41.7	11.0	8.8	2.2	0.0	0.0	0.0	0.0	0.0
90°	6.6	7.7	3.3	1.1	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)