

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: P522205

Luminaire Tested: **CTN-CA8-230-730-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522205
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-CA8-230-730-U-T5R-HSS-HM-EX180
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: 23278 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G4

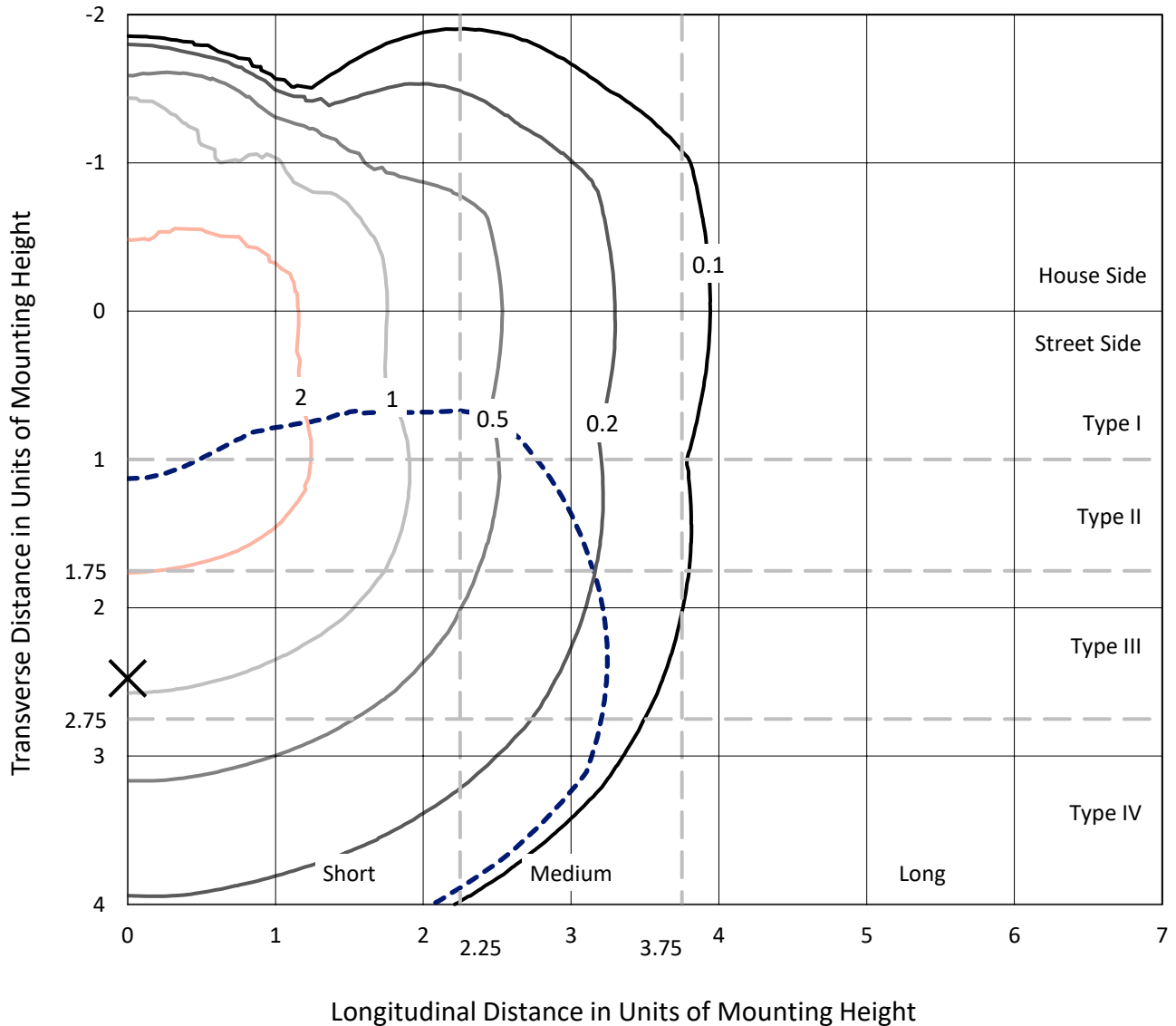
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

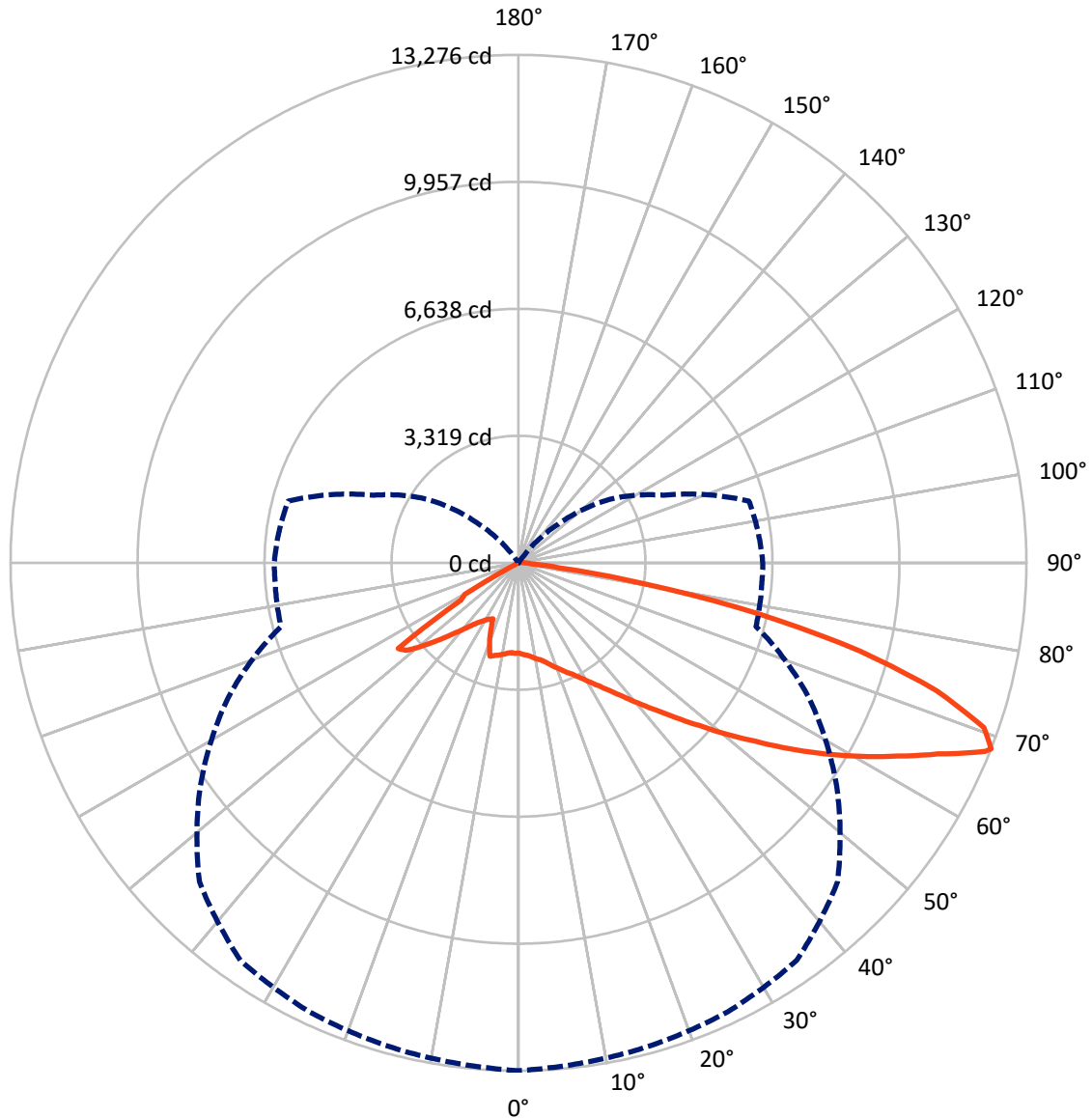
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 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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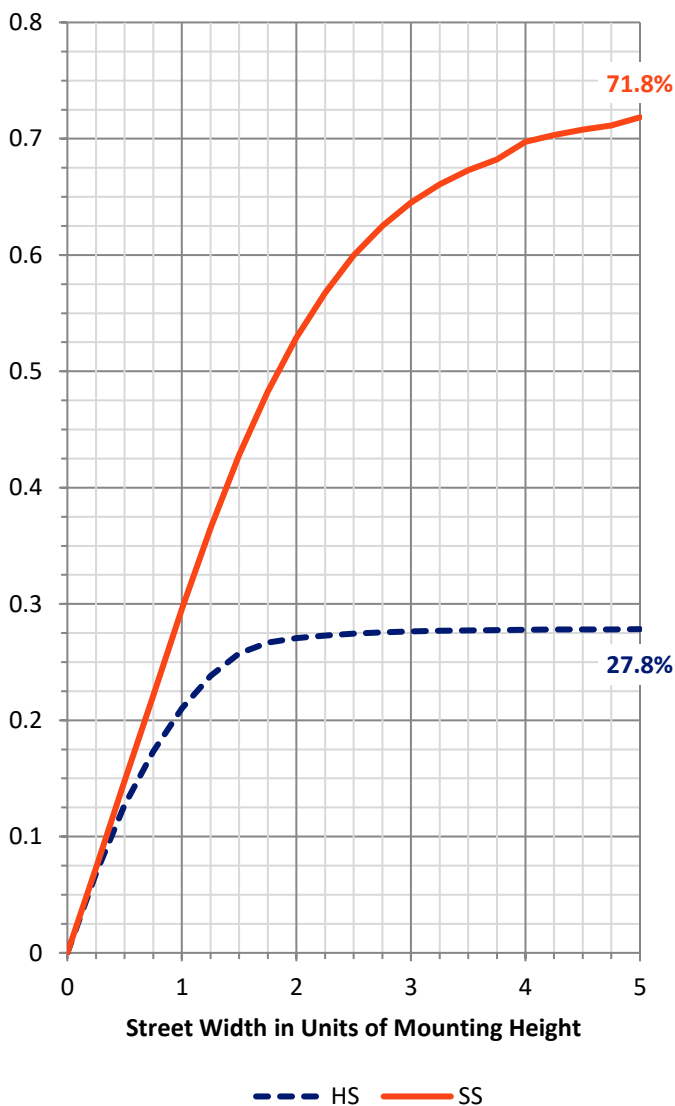
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6501.6	0.1	6501.7
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	16762.9	13.3	16776.3
	% Fixture	72.0	0.1	72.1
Total	Lumens	23264.5	13.5	23278.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.9	1.0
10°-20°	725.3	3.1
20°-30°	1227.9	5.3
30°-40°	1945.3	8.4
40°-50°	3180.4	13.7
50°-60°	4871.5	20.9
60°-70°	5989.9	25.7
70°-80°	4628.4	19.9
80°-90°	467.0	2.0
90°-100°	13.3	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°	23264.5	99.9
0°-180°	23278.0	100.0

Coefficient of Utilization

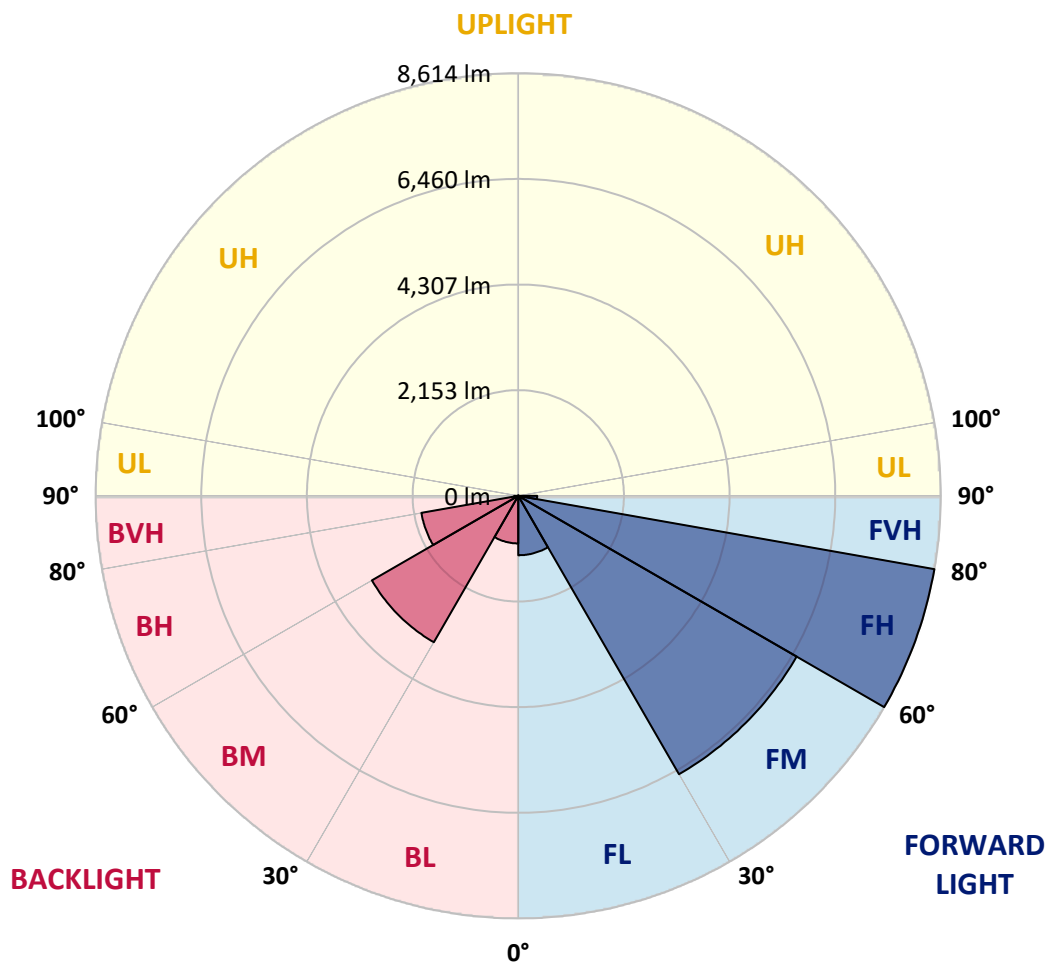


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1211.6	5.2			
FM (30°-60°)	6552.4	28.1			
FH (60°-80°)	8613.8	37.0			G4/12000
FVH (80°-90°)	385.1	1.7			G3/500
BL (0°-30°)	970.4	4.2	B2/1000		
BM (30°-60°)	3444.8	14.8	B3/5000		
BH (60°-80°)	2004.5	8.6	B3/2500		G3/2500
BVH (80°-90°)	81.9	0.4			G1/100
UL (90°-100°)	13.3	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°	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3
2.5°	2400.9	2396.4	2392.0	2402.0	2362.8	2379.6	2366.2	2378.5	2369.5	2379.6	2376.3
5°	2432.3	2427.8	2414.4	2425.6	2399.8	2406.5	2389.7	2394.2	2363.9	2381.9	2380.7
7.5°	2483.9	2471.6	2462.6	2462.6	2440.2	2439.1	2412.1	2413.3	2389.7	2387.5	2392.0
10°	2553.4	2544.5	2519.8	2522.0	2490.6	2486.1	2452.5	2451.4	2432.3	2421.1	2431.2
12.5°	2605.0	2614.0	2591.6	2591.6	2560.2	2537.7	2514.2	2498.5	2483.9	2467.1	2459.2
15°	2699.2	2708.2	2677.9	2676.8	2664.5	2637.5	2611.7	2578.1	2552.3	2544.5	2532.1
17.5°	2821.4	2815.8	2790.0	2791.2	2793.4	2749.7	2723.9	2680.2	2643.1	2616.2	2609.5
20°	2945.9	2945.9	2917.9	2926.9	2915.6	2875.3	2858.5	2797.9	2746.3	2717.2	2693.6
22.5°	3085.0	3079.4	3060.3	3079.4	3056.9	3016.6	2988.5	2928.0	2861.8	2697.0	2629.7
25°	3217.3	3213.9	3221.8	3227.4	3199.4	3148.9	3129.8	3065.9	2882.0	2665.6	2529.9
27.5°	3384.4	3373.2	3391.1	3402.3	3374.3	3330.6	3290.2	3218.4	2829.3	2658.8	2644.3
30°	3598.6	3573.9	3599.7	3605.3	3576.2	3549.2	3488.7	3129.8	2847.2	2797.9	2793.4
32.5°	3827.3	3798.2	3831.8	3836.3	3798.2	3775.8	3623.3	3083.9	3023.3	2966.1	2971.7
35°	4098.7	4098.7	4115.5	4117.8	4089.8	4051.6	3470.7	3308.1	3254.3	3201.6	3200.5
37.5°	4429.5	4419.4	4464.3	4491.2	4460.9	4352.2	3692.8	3616.5	3533.5	3466.3	3327.2
40°	4828.8	4846.7	4859.0	4886.0	4856.8	4612.3	4016.9	3930.5	3865.5	3640.1	3289.1
42.5°	5259.4	5263.9	5290.8	5324.4	5324.4	5066.5	4395.9	4321.9	4237.8	3559.3	3401.2
45°	5774.1	5764.0	5815.6	5869.4	5854.8	5587.9	4836.6	4781.7	4388.0	3793.7	3794.8
47.5°	6358.4	6346.0	6420.0	6490.7	6417.8	6166.6	5321.1	5278.4	4235.5	4190.7	4181.7
50°	7033.4	7003.2	7088.4	7182.6	7123.1	6812.5	5909.8	5091.2	4660.5	4624.7	4619.1
52.5°	7754.5	7730.9	7782.5	7942.9	7864.4	7488.7	6467.1	5252.6	5152.8	5112.5	5102.4
55°	8568.6	8522.7	8633.7	8755.9	8665.1	8236.7	7016.6	5788.7	5685.5	5616.0	5515.1
57.5°	9424.3	9358.1	9415.3	9568.9	9481.5	9002.6	7725.3	6340.4	6218.2	5146.1	4736.8
60°	10276.5	10246.3	10268.7	10404.4	10296.7	9747.2	8389.2	6893.3	5262.7	5090.0	5110.2
62.5°	11133.3	11067.1	11087.3	11226.4	11088.4	10456.0	9018.3	7395.6	5538.6	5478.1	5499.4
65°	12051.7	11973.2	11991.2	12031.5	11861.1	11091.8	9574.5	7870.0	5953.5	5889.6	5913.2
67.5°	13158.5	13086.8	12989.2	12869.2	12633.7	11766.9	10127.4	8369.0	6420.0	6384.1	6392.0
68°	13276.3	13206.8	13089.0	12946.6	12681.9	11794.9	10150.9	8383.6	6426.8	6381.9	6384.1
70°	12909.6	12951.1	12817.6	12578.8	12357.9	11384.5	9766.3	8060.6	6140.8	6074.6	6057.8
72.5°	11432.7	11523.5	11339.6	11299.3	11027.9	10142.0	8546.2	6994.2	5341.2	5362.5	5302.0
75°	9230.3	9363.7	9140.6	9152.9	8998.1	8459.9	7162.4	5823.4	4385.8	4483.4	4501.3
77.5°	6418.9	6610.7	6513.1	6610.7	6534.4	6340.4	5543.1	4484.5	3346.3	3458.4	3502.1
80°	3347.4	3575.0	3704.0	3744.4	3769.0	3761.2	3375.4	2691.4	1934.4	1975.9	1973.7
82.5°	1058.6	1003.7	1036.2	1027.2	999.2	1010.4	910.6	712.1	493.4	543.9	520.3
85°	319.6	321.8	312.9	310.6	287.1	252.3	206.3	118.9	58.3	68.4	63.9
87.5°	235.5	237.7	219.8	208.6	195.1	169.3	131.2	74.0	28.0	26.9	21.3
90°	130.1	125.6	116.6	107.7	102.0	87.5	66.2	28.0	10.1	7.8	6.7
92.5°	70.6	67.3	62.8	59.4	51.6	41.5	26.9	9.0	4.5	1.1	0.0
95°	32.5	30.3	29.2	25.8	22.4	15.7	9.0	5.6	3.4	1.1	0.0
97.5°	14.6	13.5	12.3	10.1	7.8	4.5	4.5	3.4	2.2	1.1	0.0
100°	3.4	3.4	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°	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3	2358.3
2.5°	2372.9	2366.2	2362.8	2341.5	2348.2	2329.2	2366.2	2357.2	2351.6	2367.3
5°	2375.1	2351.6	2366.2	2353.8	2358.3	2331.4	2360.6	2348.2	2347.1	2353.8
7.5°	2380.7	2365.0	2379.6	2354.9	2366.2	2354.9	2376.3	2363.9	2374.0	2380.7
10°	2411.0	2402.0	2395.3	2389.7	2397.6	2375.1	2402.0	2403.2	2406.5	2426.7
12.5°	2453.6	2444.7	2433.4	2418.9	2426.7	2417.7	2437.9	2443.5	2455.9	2466.0
15°	2513.1	2496.2	2491.8	2478.3	2486.1	2481.7	2486.1	2482.8	2506.3	2503.0
17.5°	2594.9	2575.9	2511.9	2446.9	2405.4	2417.7	2469.3	2536.6	2553.4	2555.7
20°	2625.2	2490.6	2483.9	2409.9	2376.3	2374.0	2267.5	2108.2	2156.5	2269.7
22.5°	2589.3	2405.4	2386.3	2371.8	2228.2	1992.7	1970.3	1946.8	1941.1	1958.0
25°	2508.6	2487.3	2470.4	2279.8	2053.3	2054.4	2021.9	1867.1	1626.0	1605.8
27.5°	2631.9	2602.8	2440.2	2146.4	2141.9	2139.6	2091.4	1694.4	1642.9	1655.2
30°	2772.1	2723.9	2298.9	2260.7	2259.6	2239.4	1875.0	1709.0	1709.0	1711.3
32.5°	2933.6	2634.2	2379.6	2397.6	2396.4	2301.1	1811.1	1799.9	1795.4	1806.6
35°	3056.9	2562.4	2553.4	2586.0	2563.5	1952.4	1924.3	1914.2	1909.7	1904.1
37.5°	3018.8	2768.7	2768.7	2788.9	2608.4	2079.1	2065.6	2065.6	2056.7	2052.2
40°	3077.1	3025.5	2999.8	3007.6	1895.2	2232.7	2242.8	2240.6	2239.4	2247.3
42.5°	3384.4	3338.4	3314.9	3036.8	2121.7	2219.3	2466.0	2464.8	2468.2	2464.8
45°	3775.8	3733.1	3671.5	2841.6	2408.8	1945.6	2718.3	2730.6	2731.7	2730.6
47.5°	4186.2	4159.3	3527.9	3145.5	2720.5	2088.1	2598.3	3034.5	3028.9	3035.6
50°	4620.2	4499.1	3510.0	3505.5	3052.5	2323.5	2324.7	3300.3	3357.5	3375.4
52.5°	5103.5	4078.5	3890.1	3549.2	3388.9	2565.8	2541.1	2924.6	3705.1	3723.1
55°	4740.2	4308.4	4305.1	3159.0	3525.7	2799.0	2802.4	2775.5	3397.8	3862.1
57.5°	4716.6	4726.7	4718.9	3524.6	2572.5	2624.1	3053.6	3030.0	2200.2	1783.0
60°	5123.7	5138.3	4584.3	3806.0	2781.1	1613.7	1880.6	1598.0	1619.3	1636.1
62.5°	5512.8	5517.3	3728.7	2495.1	1378.2	65.0	31.4	25.8	24.7	24.7
65°	5943.4	5943.4	3996.7	2721.6	1331.1	24.7	4.5	3.4	12.3	12.3
67.5°	6359.5	6267.5	4192.9	2889.9	1354.7	3.4	0.0	0.0	0.0	0.0
68°	6335.9	6235.0	4175.0	2885.4	1351.3	2.2	0.0	0.0	0.0	0.0
70°	5983.8	5886.2	3960.8	2754.2	1300.8	2.2	0.0	0.0	0.0	0.0
72.5°	5281.8	5192.1	3507.7	2427.8	1173.0	1.1	0.0	0.0	0.0	0.0
75°	4471.0	4458.7	3030.0	2048.8	1005.9	1.1	0.0	0.0	0.0	0.0
77.5°	3597.5	3541.4	2368.4	1605.8	810.8	0.0	0.0	0.0	0.0	0.0
80°	2003.9	2086.9	1386.1	944.2	510.2	0.0	0.0	0.0	0.0	0.0
82.5°	541.6	506.9	302.8	205.2	97.6	0.0	0.0	0.0	0.0	0.0
85°	69.5	76.3	34.8	28.0	6.7	0.0	0.0	0.0	0.0	0.0
87.5°	35.9	42.6	11.2	9.0	2.2	0.0	0.0	0.0	0.0	0.0
90°	6.7	7.8	3.4	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)