

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: P522204

Luminaire Tested: **CTN-CA8-230-730-U-T5R-HSS-HM-EX120**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-6)
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-EX120
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: 27115 lumens
Efficiency: N/A
Efficacy: 118.7 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U2 - G4

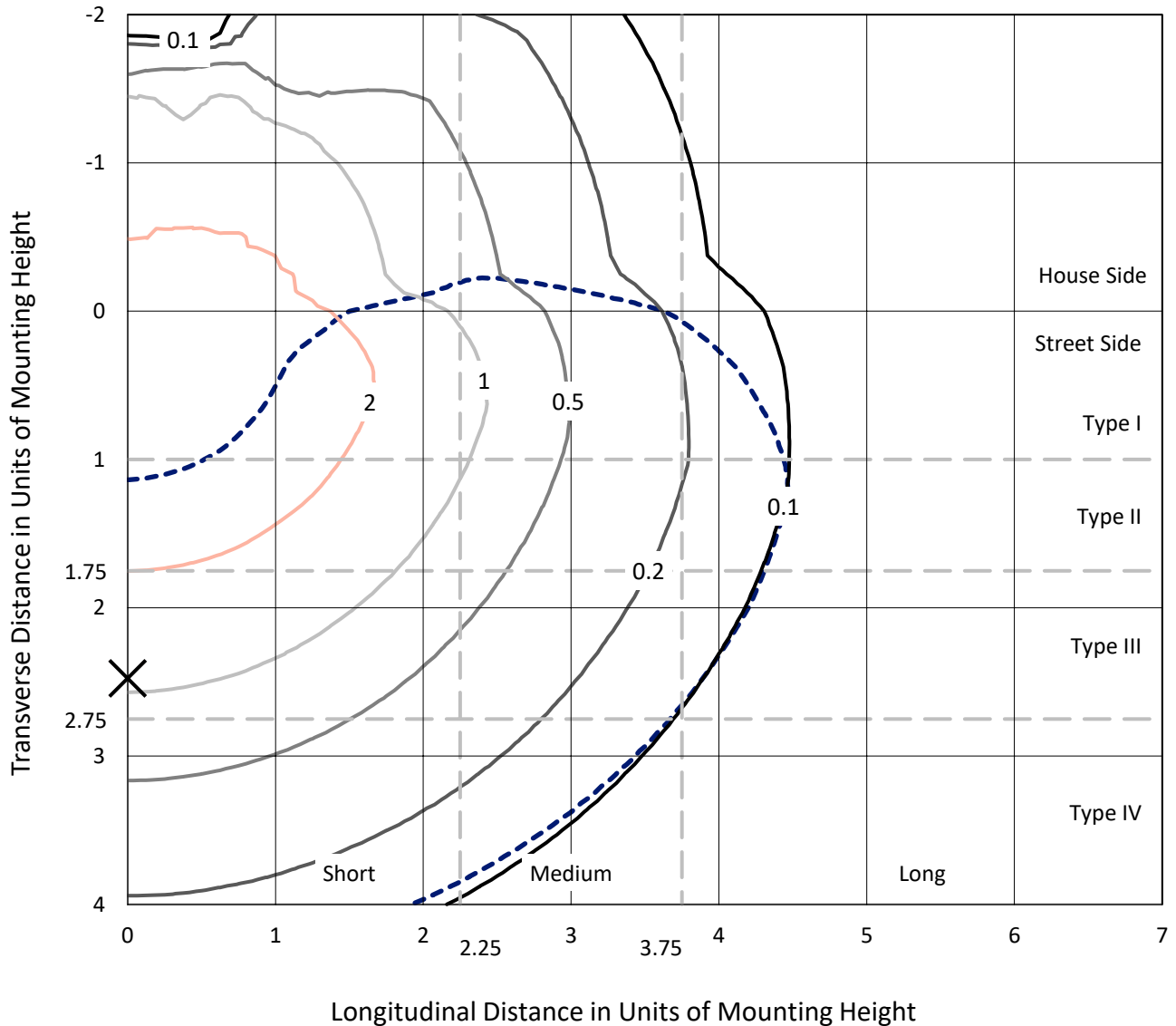
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

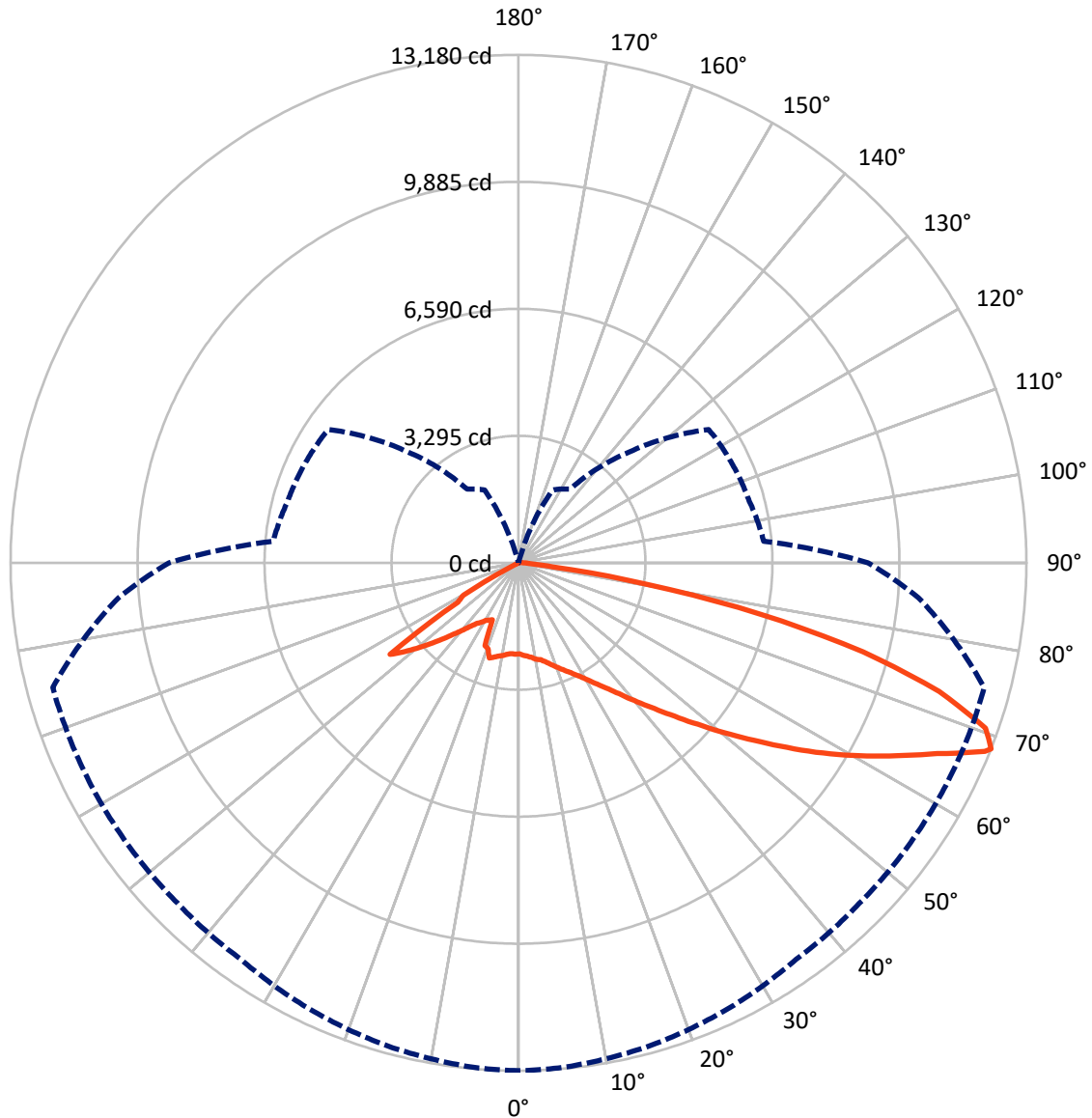
× Max cd
 - - - 1/2 Max cd



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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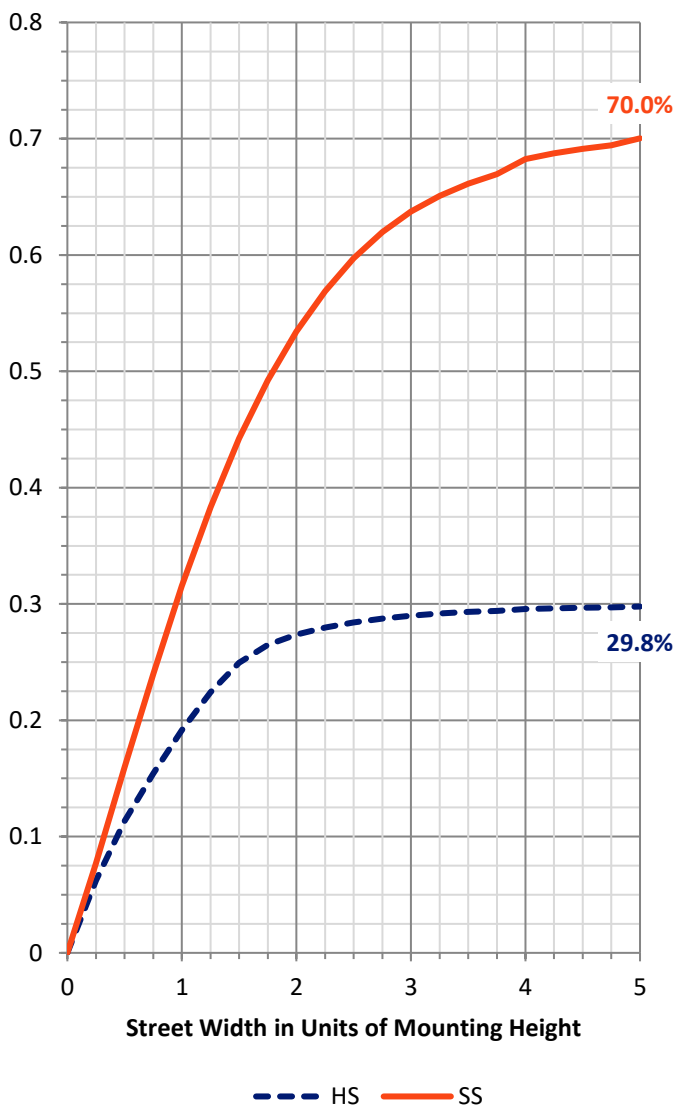
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8082.7	1.2	8083.9
	% Fixture	29.8	0.0	29.8
Street Side	Lumens	19020.0	11.1	19031.1
	% Fixture	70.1	0.0	70.2
Total	Lumens	27102.6	12.3	27115.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.4	0.8
10°-20°	730.2	2.7
20°-30°	1250.8	4.6
30°-40°	2029.0	7.5
40°-50°	3421.9	12.6
50°-60°	5577.8	20.6
60°-70°	7480.7	27.6
70°-80°	5810.6	21.4
80°-90°	572.2	2.1
90°-100°	10.9	0.0
100°-110°	0.6	0.0
110°-120°	0.2	0.0
120°-130°	0.1	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	27102.6	100.0
0°-180°	27115.0	100.0

Coefficient of Utilization

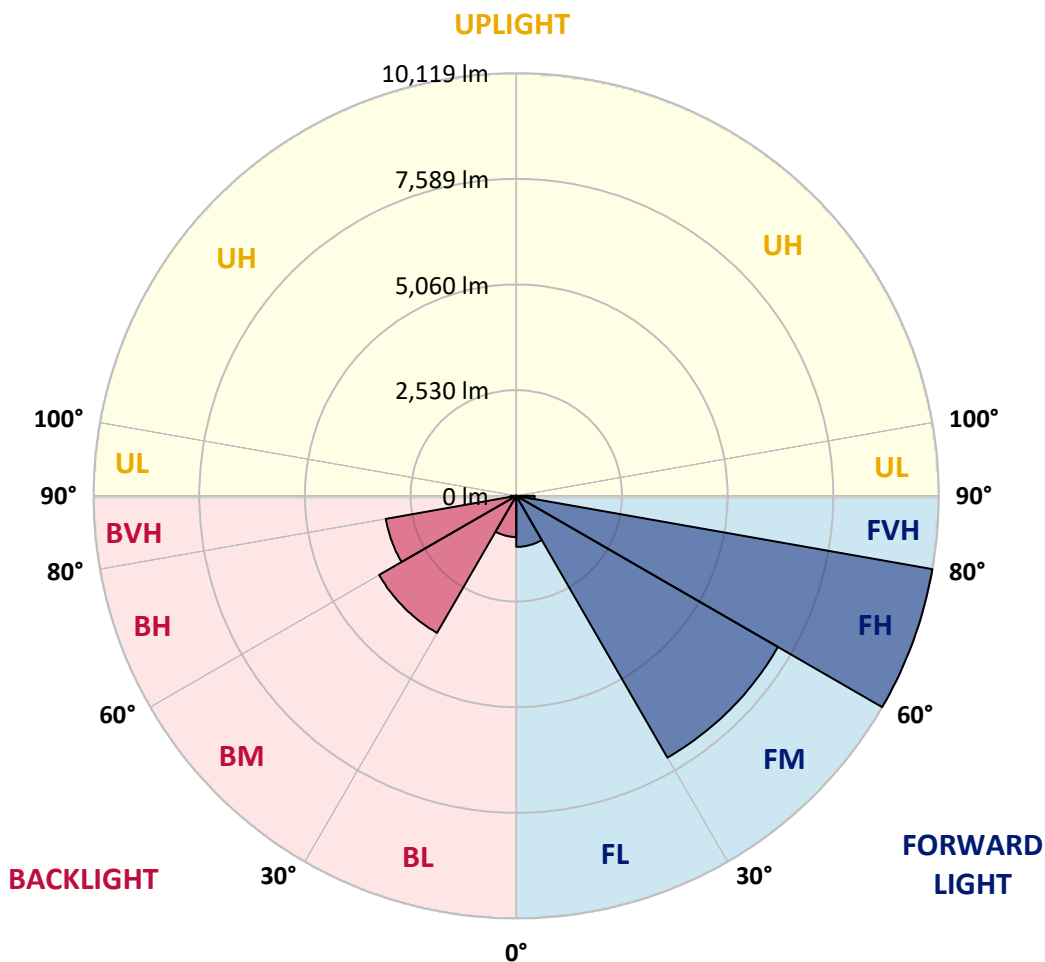


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1223.0	4.5			
FM	(30°-60°)	7237.9	26.7			
FH	(60°-80°)	10119.0	37.3			G4/12000
FVH	(80°-90°)	440.0	1.6			G3/500
BL	(0°-30°)	987.4	3.6	B2/1000		
BM	(30°-60°)	3790.8	14.0	B3/5000		
BH	(60°-80°)	3172.3	11.7	B4/5000		G4/5000
BVH	(80°-90°)	132.3	0.5			G2/225
UL	(90°-100°)	10.9	0.0		U2/50	
UH	(100°-180°)	1.5	0.0		U1/10	

BUG Rating: B4-U2-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9
2.5°	2403.2	2396.4	2395.3	2408.8	2366.2	2387.5	2368.4	2384.1	2374.0	2381.9	2383.0
5°	2435.7	2423.4	2415.5	2431.2	2404.3	2414.4	2393.1	2399.8	2371.8	2387.5	2389.7
7.5°	2482.8	2462.6	2460.4	2464.9	2441.3	2449.2	2414.4	2422.2	2402.1	2393.1	2400.9
10°	2546.7	2527.7	2513.1	2523.2	2491.8	2496.3	2459.2	2460.4	2445.8	2429.0	2442.4
12.5°	2582.6	2584.8	2578.1	2586.0	2560.2	2545.6	2519.8	2510.8	2496.3	2476.1	2469.3
15°	2672.3	2667.8	2654.4	2666.7	2663.3	2649.9	2618.5	2598.3	2566.9	2555.7	2544.5
17.5°	2782.2	2767.6	2756.4	2772.1	2788.9	2760.9	2730.6	2702.6	2661.1	2638.7	2625.2
20°	2897.7	2887.6	2876.4	2901.1	2906.7	2885.4	2863.0	2821.5	2773.2	2744.1	2716.0
22.5°	3026.7	3006.5	3009.9	3042.4	3032.3	3022.2	2993.0	2959.4	2901.1	2864.1	2783.3
25°	3160.1	3148.9	3164.6	3179.2	3171.3	3150.0	3135.5	3110.8	3045.7	3000.9	2883.1
27.5°	3326.1	3308.2	3328.3	3333.9	3327.2	3321.6	3301.4	3282.4	3211.7	3161.2	3014.3
30°	3521.2	3499.9	3532.4	3524.6	3517.9	3522.3	3510.0	3468.5	3405.7	3337.3	3190.4
32.5°	3753.4	3725.3	3762.3	3745.5	3729.8	3761.2	3732.0	3692.8	3618.8	3539.2	3395.6
35°	4022.5	4023.6	4042.7	4014.6	4009.0	4042.7	4023.6	3975.4	3907.0	3824.0	3619.9
37.5°	4348.8	4339.8	4388.1	4374.6	4354.4	4399.3	4404.9	4344.3	4221.0	4139.1	3898.0
40°	4745.8	4743.6	4759.3	4761.5	4755.9	4777.2	4787.3	4706.5	4626.9	4503.6	3678.2
42.5°	5169.7	5178.7	5206.7	5186.5	5213.4	5241.5	5244.8	5177.5	5063.2	4320.8	3907.0
45°	5678.8	5706.8	5725.9	5721.4	5733.8	5774.1	5777.5	5741.6	5629.5	4680.8	4321.9
47.5°	6263.1	6290.0	6295.6	6331.5	6320.3	6377.4	6369.6	6370.7	6250.7	5182.0	4773.8
50°	6934.8	6947.1	6993.1	7013.3	6985.2	7062.6	7042.4	7067.1	6919.1	5756.2	5259.4
52.5°	7648.0	7669.3	7688.4	7764.6	7728.7	7796.0	7769.1	7826.3	7654.7	6340.4	5798.8
55°	8458.8	8462.1	8494.7	8572.0	8524.9	8605.7	8566.4	8587.7	8450.9	6986.4	6360.6
57.5°	9317.8	9306.6	9318.9	9380.6	9338.0	9398.5	9382.8	9403.0	9275.2	7665.9	6771.1
60°	10167.8	10151.0	10168.9	10210.4	10152.1	10256.4	10200.3	10219.4	10081.5	8360.1	7356.4
62.5°	11022.3	11010.0	10989.8	11031.3	10946.1	10999.9	11023.4	10992.0	10870.9	8988.1	7865.6
65°	11939.6	11927.3	11853.3	11879.1	11726.6	11700.8	11709.7	11719.8	11639.1	9610.5	8424.0
67.5°	13054.3	13036.4	12897.3	12722.4	12502.6	12454.4	12458.8	12485.8	12497.0	10411.1	9077.8
68°	13179.9	13147.4	12992.6	12789.7	12559.8	12503.7	12498.1	12503.7	12509.3	10417.9	9071.1
70°	12859.2	12846.8	12729.1	12483.5	12248.0	12113.4	11996.8	11992.3	11938.5	9885.2	8569.8
72.5°	11411.4	11395.7	11255.6	11081.7	10936.0	10725.1	10573.8	10582.7	10494.1	8736.9	7501.1
75°	9234.8	9233.7	9065.5	8919.7	8921.9	8906.2	8855.8	8944.3	8852.4	7410.3	6397.6
77.5°	6435.8	6458.2	6447.0	6361.7	6481.7	6647.7	6828.2	6998.7	6946.0	5853.7	5101.3
80°	3362.0	3424.8	3646.8	3656.9	3741.0	3902.5	4025.9	4140.2	4148.1	3321.6	2947.1
82.5°	893.8	912.8	988.0	966.7	959.9	992.4	1019.4	1022.7	1025.0	865.7	808.5
85°	278.1	286.0	277.0	264.7	245.6	224.3	218.7	178.3	141.3	116.6	102.0
87.5°	197.4	210.8	190.6	179.4	159.2	151.4	135.7	106.5	83.0	58.3	39.2
90°	102.0	104.3	93.1	79.6	74.0	69.5	59.4	42.6	21.3	11.2	10.1
92.5°	51.6	52.7	46.0	39.2	33.6	29.2	22.4	12.3	6.7	3.4	1.1
95°	20.2	21.3	19.1	16.8	13.5	10.1	9.0	6.7	4.5	2.2	1.1
97.5°	6.7	6.7	6.7	5.6	5.6	5.6	5.6	4.5	3.4	2.2	1.1
100°	0.0	0.0	0.0	1.1	2.2	3.4	3.4	3.4	2.2	1.1	1.1
102.5°	0.0	0.0	0.0	0.0	0.0	1.1	2.2	2.2	2.2	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	0.0	1.1	1.1	1.1
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
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	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	1.1	1.1	1.1
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	1.1	1.1	1.1	1.1
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1
165°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
170°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
175°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	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°	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9
2.5°	2377.4	2370.7	2374.0	2346.0	2352.7	2334.8	2372.9	2362.8	2358.3	2374.0
5°	2383.0	2358.3	2378.5	2359.4	2362.8	2337.0	2368.4	2356.1	2355.0	2363.9
7.5°	2385.2	2372.9	2392.0	2360.6	2370.7	2360.6	2384.1	2371.8	2383.0	2390.8
10°	2416.6	2409.9	2407.7	2396.4	2404.3	2381.9	2411.0	2411.0	2416.6	2437.9
12.5°	2462.6	2453.6	2448.0	2427.8	2435.7	2429.0	2452.5	2457.0	2467.1	2476.1
15°	2525.4	2509.7	2504.1	2486.2	2491.8	2490.6	2507.5	2508.6	2531.0	2529.9
17.5°	2606.2	2583.7	2590.5	2577.0	2578.1	2569.1	2560.2	2560.2	2580.4	2584.8
20°	2702.6	2574.8	2406.5	2312.3	2295.5	2307.9	2356.1	2435.7	2335.9	2363.9
22.5°	2528.8	2413.3	2405.4	2384.1	2370.7	2070.1	1992.7	1968.1	2097.0	2319.1
25°	2551.2	2501.9	2487.3	2460.4	2063.4	2060.0	2037.6	2000.6	1635.0	1627.2
27.5°	2670.1	2621.9	2598.3	2155.3	2146.4	2145.3	2111.6	1740.4	1656.3	1667.5
30°	2809.1	2753.1	2331.4	2264.1	2256.3	2238.3	2045.4	1719.1	1718.0	1719.1
32.5°	2969.5	2783.3	2398.7	2395.3	2399.8	2344.9	1812.2	1805.5	1804.3	1815.6
35°	3189.3	2582.6	2566.9	2583.7	2560.2	2027.5	1921.0	1917.6	1918.7	1913.1
37.5°	3043.5	2784.5	2781.1	2781.1	2726.1	2074.6	2053.3	2069.0	2066.8	2058.9
40°	3105.2	3028.9	3008.7	3002.0	2304.5	2238.3	2226.0	2246.2	2249.5	2255.2
42.5°	3404.6	3335.1	3325.0	3245.4	2507.5	2486.2	2448.0	2469.3	2467.1	2473.8
45°	3772.4	3725.3	3681.6	2813.6	2781.1	2754.2	2714.9	2739.6	2746.3	2741.8
47.5°	4200.8	4149.2	3833.0	3094.0	3092.8	3071.5	3027.8	3048.0	3044.6	3044.6
50°	4631.4	4575.3	3482.0	3450.6	3439.4	3405.7	3369.8	3373.2	3374.3	3385.5
52.5°	5112.5	4086.4	3854.3	3791.5	3800.4	3778.0	3743.3	2833.8	3726.4	3736.5
55°	4778.3	4277.0	4263.6	4180.6	4201.9	4172.8	4150.3	2795.7	3706.3	4095.4
57.5°	4724.5	4688.6	4677.4	4592.2	4619.1	4342.1	4549.5	3059.2	2563.5	1872.8
60°	5136.0	5097.9	5091.2	5016.1	5013.8	3450.6	4135.8	2098.2	1639.5	1650.7
62.5°	5535.3	5473.6	5490.4	5401.8	3808.3	2102.6	1853.7	47.1	75.1	79.6
65°	5980.5	5877.3	5894.1	5812.3	3928.3	2217.0	2004.0	24.7	21.3	20.2
67.5°	6408.8	6228.3	6141.9	6055.6	4079.7	2334.8	2088.1	6.7	0.0	0.0
68°	6387.5	6196.9	6108.3	6026.4	4064.0	2331.4	2083.6	6.7	0.0	0.0
70°	6027.6	5856.0	5771.9	5709.1	3880.1	2251.8	1999.5	6.7	0.0	0.0
72.5°	5269.5	5174.2	5120.3	5065.4	3447.2	2014.0	1793.1	6.7	0.0	0.0
75°	4477.8	4450.9	4417.2	4296.1	2873.0	1648.5	1473.5	6.7	0.0	0.0
77.5°	3548.1	3547.0	3465.1	3322.7	2163.2	1210.0	1086.6	5.6	0.0	0.0
80°	1918.7	2091.4	2028.6	1955.7	1226.8	658.3	626.9	4.5	0.0	0.0
82.5°	539.4	510.2	490.1	458.7	257.9	143.5	140.2	4.5	0.0	0.0
85°	75.1	83.0	92.0	104.3	59.4	38.1	33.6	2.2	0.0	0.0
87.5°	42.6	48.2	59.4	61.7	22.4	17.9	5.6	0.0	0.0	0.0
90°	9.0	10.1	11.2	11.2	4.5	4.5	0.0	0.0	0.0	0.0
92.5°	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.1	1.1	1.1	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°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.1	1.1	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)