

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: STREETWORKS

Report Number: P522209

Luminaire Tested: **CST-CA8-230-740-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522209
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: STREETWORKS
Catalog Number: CST-CA8-230-740-U-T5R-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (8) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30351.9 lumens
Efficiency: N/A
Efficacy: 132.9 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U1 - G4

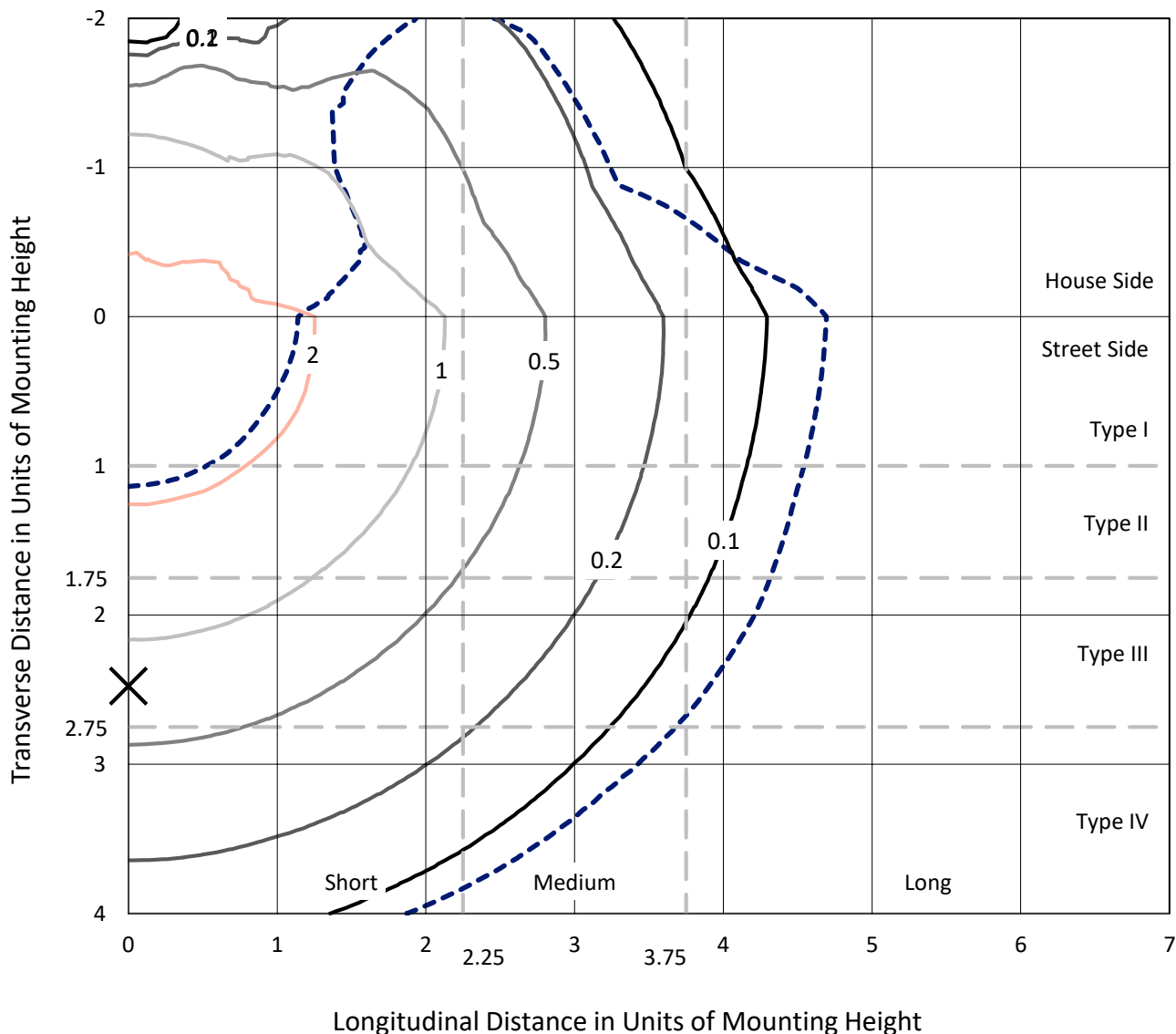
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

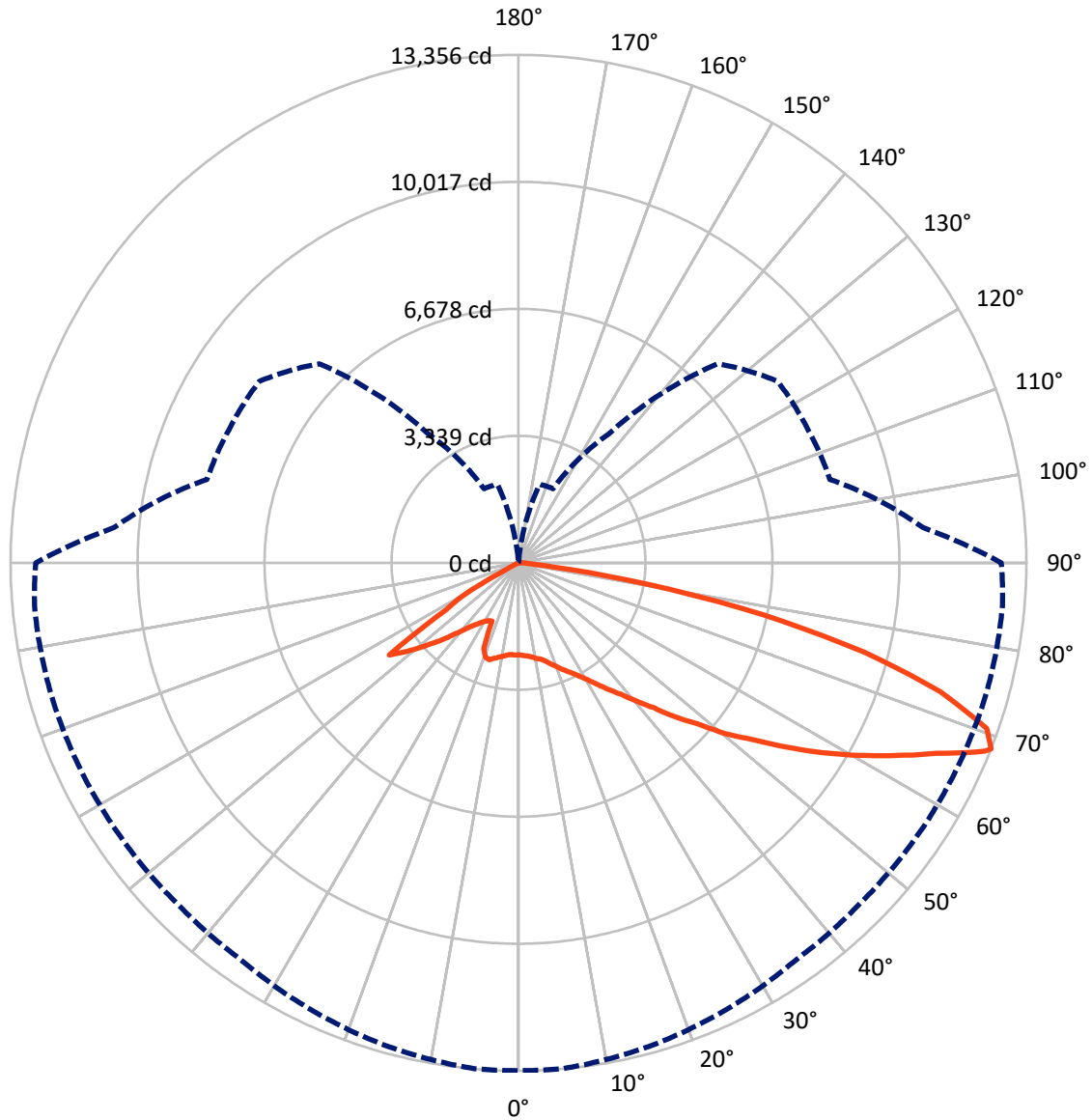
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 2.7 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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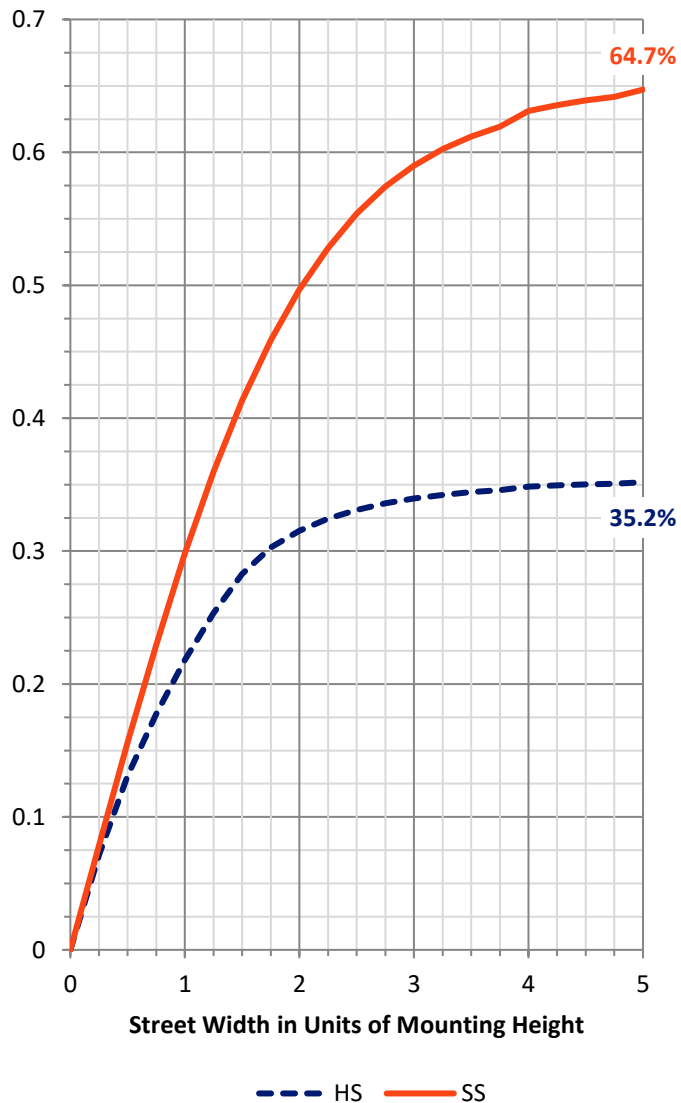
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10681.8	1.8	10683.6
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	19660.3	8.0	19668.3
	% Fixture	64.8	0.0	64.8
Total	Lumens	30342.2	9.8	30351.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.7	0.8
10°-20°	748.7	2.5
20°-30°	1336.6	4.4
30°-40°	2174.3	7.2
40°-50°	3713.1	12.2
50°-60°	6195.4	20.4
60°-70°	8619.1	28.4
70°-80°	6681.1	22.0
80°-90°	640.2	2.1
90°-100°	7.7	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°	30342.2	100.0
0°-180°	30351.9	100.0

Coefficient of Utilization



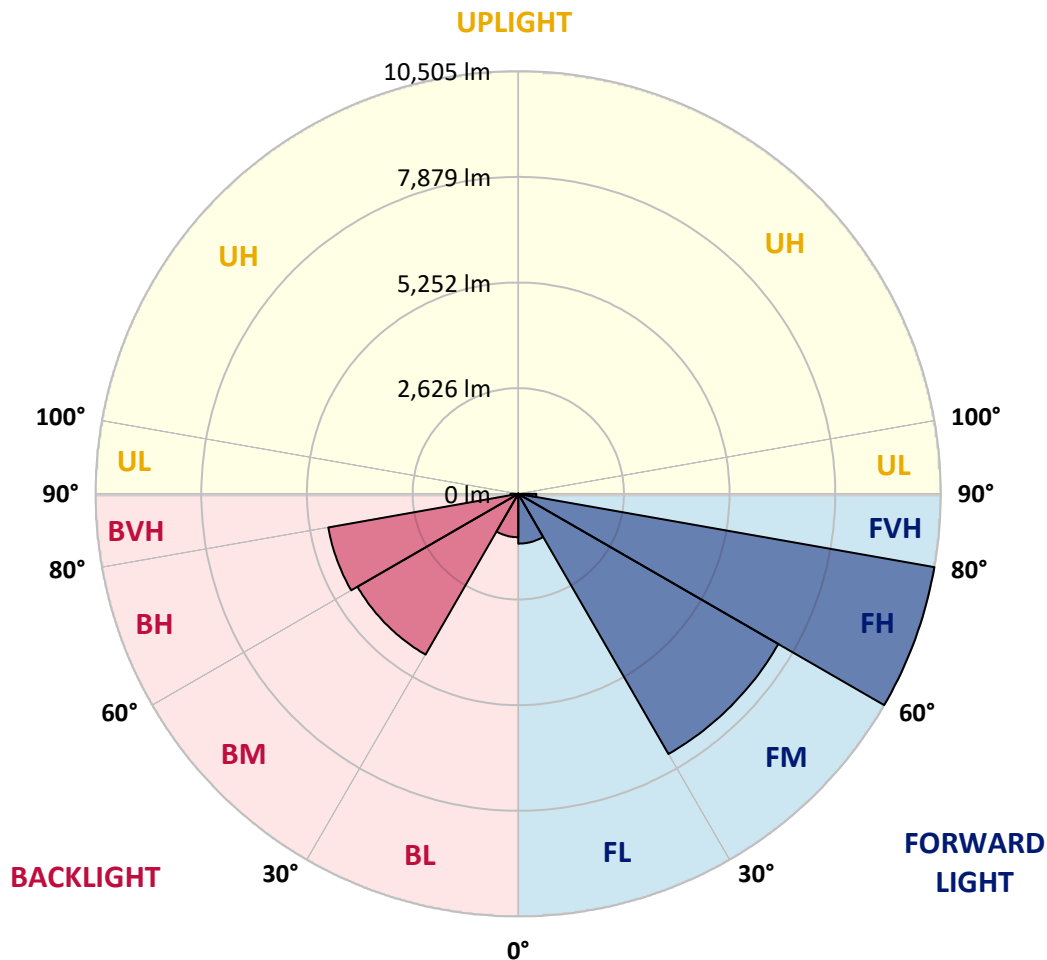
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1238.8	4.1			
FM (30°-60°)	7468.7	24.6			
FH (60°-80°)	10504.9	34.6			G4/12000
FVH (80°-90°)	447.9	1.5			G3/500
BL (0°-30°)	1080.1	3.6	B3/2500		
BM (30°-60°)	4614.1	15.2	B3/5000		
BH (60°-80°)	4795.3	15.8	B4/5000		G4/5000
BVH (80°-90°)	192.3	0.6			G2/225
UL (90°-100°)	7.7	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°	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5
2.5°	2442.9	2439.5	2437.2	2452.1	2409.8	2426.9	2415.5	2430.4	2426.9	2433.8	2434.9
5°	2460.0	2454.3	2446.3	2462.3	2437.2	2448.6	2436.1	2442.9	2421.2	2439.5	2441.8
7.5°	2498.9	2482.9	2481.7	2486.3	2469.2	2477.2	2455.5	2463.5	2452.1	2445.2	2452.1
10°	2557.1	2543.4	2528.6	2537.7	2509.2	2519.4	2496.6	2503.4	2497.7	2482.9	2496.6
12.5°	2597.1	2601.7	2591.4	2598.2	2573.1	2564.0	2556.0	2554.8	2551.4	2529.7	2526.3
15°	2686.2	2688.5	2670.2	2674.8	2669.1	2664.5	2653.1	2643.9	2625.7	2611.9	2602.8
17.5°	2802.7	2790.1	2773.0	2777.5	2793.5	2773.0	2766.1	2749.0	2722.7	2699.9	2695.3
20°	2924.9	2916.9	2900.9	2910.0	2908.9	2895.2	2898.6	2870.1	2832.4	2813.0	2798.1
22.5°	3060.8	3049.4	3037.9	3055.1	3041.4	3032.2	3028.8	3009.4	2962.6	2940.9	2937.4
25°	3196.7	3191.0	3199.0	3193.3	3173.9	3167.0	3171.6	3164.7	3109.9	3083.6	3067.6
27.5°	3366.9	3353.2	3365.7	3358.9	3338.3	3339.5	3340.6	3341.7	3280.1	3245.8	3223.0
30°	3561.0	3556.5	3572.4	3550.7	3531.3	3543.9	3554.2	3531.3	3477.6	3427.4	3419.4
32.5°	3813.4	3784.9	3803.1	3775.7	3746.0	3775.7	3794.0	3748.3	3704.9	3641.0	3652.4
35°	4093.2	4084.1	4084.1	4048.7	4032.7	4079.5	4097.8	4053.3	3985.9	3929.9	3916.2
37.5°	4390.2	4399.3	4427.9	4413.0	4398.2	4426.7	4467.8	4408.4	4321.6	4262.3	4246.3
40°	4784.2	4807.0	4826.4	4807.0	4789.9	4808.2	4855.0	4777.3	4716.8	4684.8	4650.6
42.5°	5207.9	5246.7	5234.2	5236.5	5251.3	5277.6	5324.4	5253.6	5183.9	5182.8	5132.5
45°	5781.2	5781.2	5755.0	5780.1	5777.8	5842.9	5863.5	5824.6	5766.4	5749.3	5705.9
47.5°	6316.9	6372.8	6362.6	6399.1	6370.5	6425.4	6495.0	6461.9	6394.5	6334.0	6324.9
50°	7063.8	7050.1	7036.4	7091.2	7086.6	7124.3	7188.3	7167.7	7074.1	7005.5	6993.0
52.5°	7720.5	7792.4	7775.3	7857.5	7811.9	7865.5	7942.1	7938.6	7824.4	7757.0	7737.6
55°	8549.6	8597.6	8594.2	8678.7	8615.9	8686.7	8750.6	8757.5	8633.0	8537.1	8566.8
57.5°	9413.1	9453.0	9430.2	9499.9	9438.2	9535.3	9574.1	9549.0	9475.9	9354.8	9399.4
60°	10277.6	10311.9	10338.1	10343.9	10308.5	10365.6	10402.1	10423.8	10308.5	10170.3	10223.9
62.5°	11155.9	11194.7	11171.9	11181.0	11082.8	11160.4	11206.1	11211.8	11079.4	10957.2	10994.8
65°	12081.0	12134.6	12052.4	11997.6	11876.5	11875.4	11935.9	11946.2	11852.5	11765.8	11750.9
67.5°	13226.5	13250.5	13074.6	12890.7	12686.3	12641.7	12684.0	12708.0	12761.6	12759.4	12692.0
68°	13355.5	13351.0	13172.8	12953.5	12734.2	12682.8	12703.4	12734.2	12769.6	12776.5	12695.4
70°	13062.0	13006.1	12904.4	12628.0	12411.0	12276.3	12204.3	12261.4	12165.5	12166.6	12014.7
72.5°	11602.4	11595.6	11408.3	11271.2	11078.2	10854.4	10751.6	10750.4	10759.6	10693.3	10536.9
75°	9398.2	9407.3	9189.2	9094.4	9035.0	8992.8	9014.5	9081.9	9088.7	9087.6	9032.7
77.5°	6554.4	6592.1	6533.9	6379.7	6545.3	6686.9	6959.9	7099.2	7054.7	7188.3	7272.8
80°	3435.4	3510.8	3513.1	3621.5	3755.2	3884.2	4119.5	4330.8	4175.5	4106.9	4036.1
82.5°	903.4	930.8	971.9	909.1	928.5	947.9	1130.7	1113.5	1027.9	1073.6	1142.1
85°	258.1	266.1	254.7	230.7	211.3	194.2	198.7	167.9	146.2	145.0	140.5
87.5°	181.6	195.3	172.5	148.5	133.6	124.5	119.9	101.6	82.2	72.0	57.1
90°	84.5	83.4	72.0	56.0	49.1	46.8	46.8	36.5	20.6	12.6	11.4
92.5°	35.4	36.5	29.7	24.0	20.6	16.0	12.6	8.0	4.6	2.3	1.1
95°	12.6	13.7	11.4	9.1	8.0	6.9	5.7	4.6	2.3	1.1	1.1
97.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.3	2.3	1.1	1.1
100°	0.0	0.0	0.0	1.1	2.3	2.3	2.3	2.3	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°	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5	2415.5
2.5°	2432.6	2426.9	2424.6	2396.1	2404.1	2387.0	2426.9	2415.5	2413.2	2429.2
5°	2438.3	2412.1	2428.1	2409.8	2414.4	2389.2	2421.2	2407.5	2408.7	2416.7
7.5°	2441.8	2426.9	2442.9	2410.9	2423.5	2414.4	2437.2	2423.5	2437.2	2444.1
10°	2476.0	2469.2	2457.8	2448.6	2457.8	2436.1	2464.6	2462.3	2470.3	2490.9
12.5°	2522.9	2514.9	2503.4	2487.5	2494.3	2486.3	2508.0	2510.3	2525.1	2535.4
15°	2592.5	2582.3	2576.5	2560.6	2562.8	2557.1	2569.7	2572.0	2601.7	2598.2
17.5°	2690.8	2679.3	2683.9	2669.1	2663.3	2649.6	2626.8	2618.8	2654.2	2664.5
20°	2798.1	2785.5	2791.3	2778.7	2672.5	2456.6	2601.7	2701.0	2625.7	2619.9
22.5°	2920.3	2906.6	2911.2	2891.8	2760.4	2356.1	2050.0	2024.9	2312.7	2429.2
25°	3055.1	3036.8	3034.5	3009.4	2577.7	2133.4	2099.2	2054.6	1844.5	1677.7
27.5°	3221.8	3194.4	3180.7	2801.5	2559.4	2216.8	2165.4	2006.6	1701.7	1712.0
30°	3402.3	3362.3	3105.3	2855.2	2693.0	2315.0	2246.5	1758.8	1761.1	1756.5
32.5°	3607.8	3518.8	3042.5	3019.7	2852.9	2420.1	1865.0	1844.5	1846.8	1853.6
35°	3877.4	3266.4	3253.8	3254.9	3048.2	2341.3	1975.8	1956.4	1958.7	1963.2
37.5°	3934.5	3521.0	3523.3	3497.1	3256.1	2139.1	2110.6	2109.4	2104.9	2100.3
40°	3980.2	3842.0	3808.9	3766.6	3018.5	2303.6	2294.4	2287.6	2291.0	2300.2
42.5°	4337.6	4233.7	4201.7	4151.5	3096.2	2552.6	2522.9	2514.9	2524.0	2519.4
45°	4812.7	4725.9	4663.1	3838.5	3420.5	2823.2	2799.2	2789.0	2792.4	2820.9
47.5°	5315.3	5263.9	5072.0	4146.9	3798.6	3143.0	3119.0	3103.0	3108.8	3101.9
50°	5862.3	5815.5	4695.1	4611.7	4216.6	3487.9	3452.5	3446.8	3449.1	3448.0
52.5°	6456.2	5477.4	5203.3	5116.5	4657.4	3848.8	3836.3	3805.4	3812.3	3805.4
55°	7152.9	5769.8	5763.0	5661.3	5153.1	4268.0	4253.1	4209.7	3936.8	4175.5
57.5°	7814.1	6328.3	6328.3	6230.1	5660.2	4684.8	4660.8	4628.9	2798.1	2256.8
60°	8538.2	6887.9	6871.9	6790.8	6149.0	5082.3	4130.9	4121.8	1690.3	1696.0
62.5°	9164.1	7387.0	7415.6	7340.2	6619.5	3805.4	1914.1	1875.3	166.7	257.0
65°	9865.3	7938.6	7972.9	7895.2	7128.9	4036.1	2077.5	2058.0	37.7	34.3
67.5°	10660.2	8489.1	8411.5	8325.8	7427.0	4156.0	2158.5	2141.4	10.3	6.9
68°	10667.1	8477.7	8377.2	8318.9	7398.4	4133.2	2151.7	2135.7	10.3	6.9
70°	10118.9	8050.6	7950.0	7964.9	7044.4	3952.8	2062.6	2032.9	10.3	6.9
72.5°	8877.4	7164.3	7051.2	6971.3	6247.2	3514.2	1849.0	1793.1	10.3	6.9
75°	7596.0	6071.3	5884.0	5708.1	5026.3	2875.8	1516.7	1453.9	10.3	6.9
77.5°	5986.8	4627.7	4361.6	4246.3	3776.9	2124.3	1127.2	1058.7	10.3	5.7
80°	3308.6	2655.3	2429.2	2358.4	2159.7	1248.3	646.4	605.3	9.1	5.7
82.5°	855.4	641.9	559.6	540.2	507.1	295.8	157.6	149.6	8.0	4.6
85°	122.2	90.2	99.4	117.6	113.1	76.5	54.8	46.8	6.9	3.4
87.5°	64.0	53.7	62.8	70.8	72.0	44.5	22.8	12.6	3.4	0.0
90°	10.3	10.3	11.4	12.6	12.6	5.7	4.6	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	2.3	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)