

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: HALO

Report Number: P407866

Luminaire Tested: **ALP10A40-DL**

Issue Date: 08/27/2020

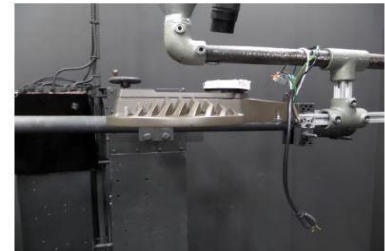
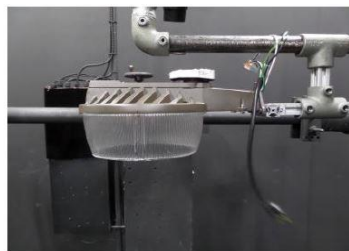
Test Information

Test Method: LM-79-08
Report Number: P407866
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-19)
Test Lab: INNOVATIONS CENTER(G1)
Issue Date: 08/27/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ALP10A40-DL
Description: HALO OUTDOOR BARN LIGHT PREMIUM 10000LM W/ DROP LENS
Light Source: (108) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10515 lumens
Efficiency: N/A
Efficacy: 135.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.67' x H: 0.25')
IES Classification: Type V - Short - Cutoff
BUG Rating: B3 - U3 - G2

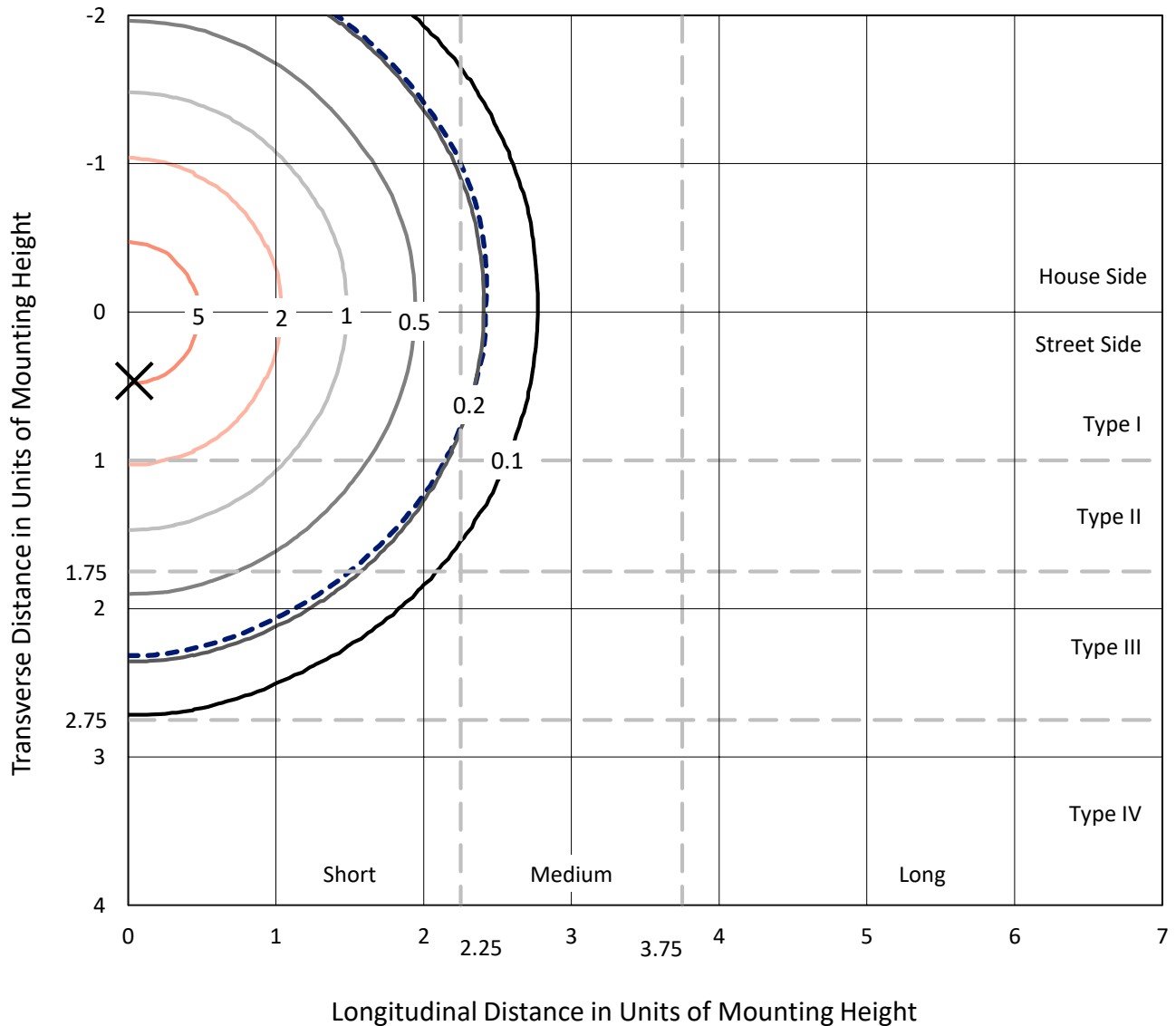
Input Watts (W): 77.8
Input Voltage (V): 120.0
Input Current (A_{in}): 0.659
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

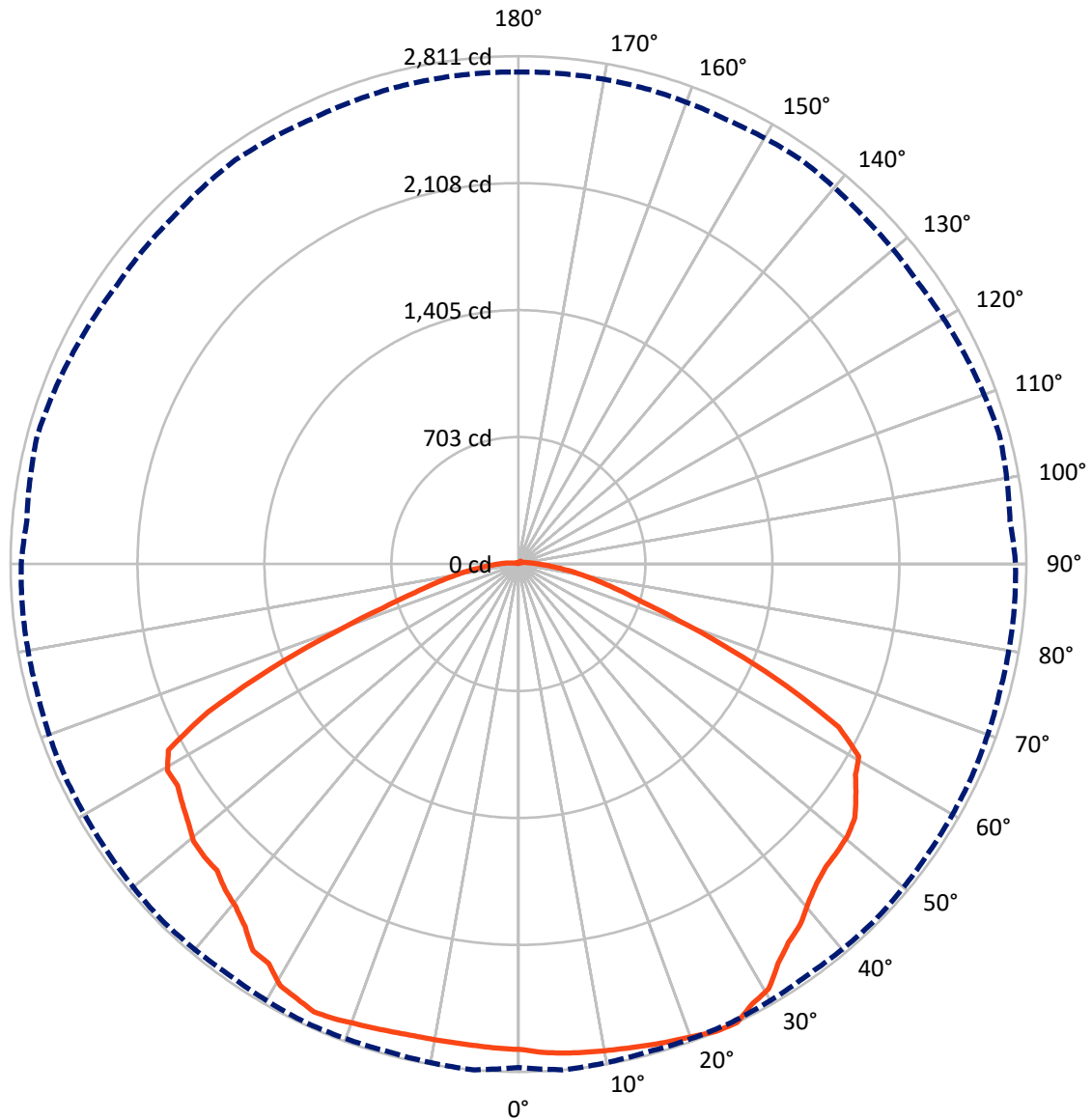
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.7 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 25-Deg Vertical

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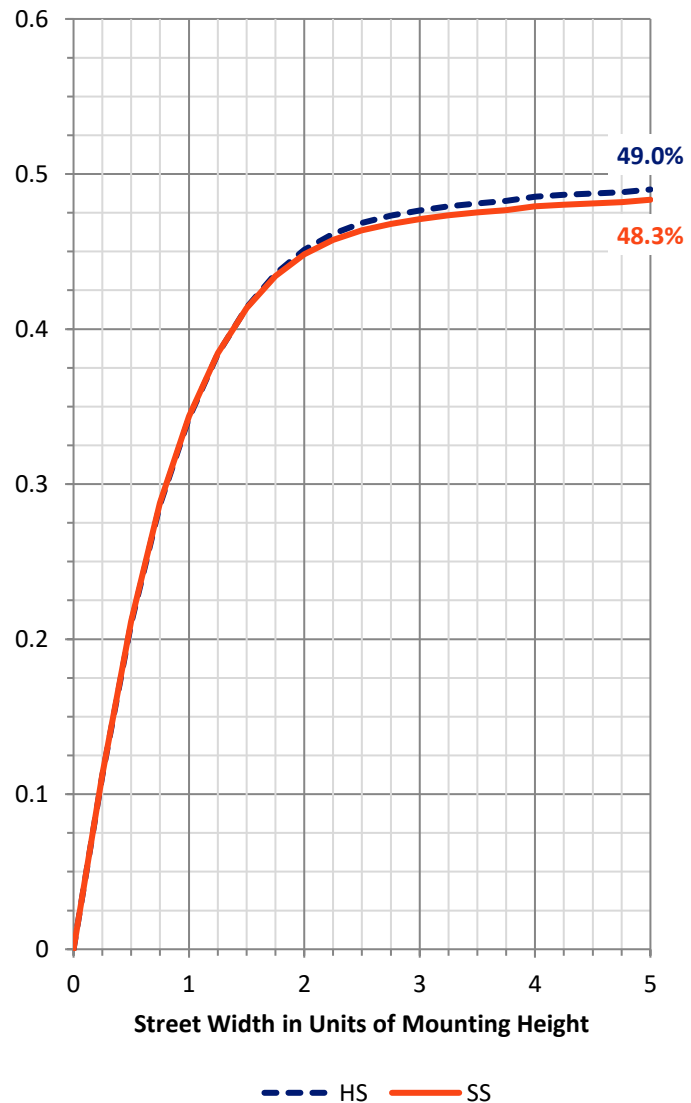
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5220.3	81.3	5301.6
	% Fixture	49.6	0.8	50.4
Street Side	Lumens	5127.2	86.2	5213.5
	% Fixture	48.8	0.8	49.6
Total	Lumens	10347.5	167.5	10515.0
	% Fixture	98.4	1.6	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.9	2.4
10°-20°	769.0	7.3
20°-30°	1264.5	12.0
30°-40°	1617.2	15.4
40°-50°	1854.7	17.6
50°-60°	2031.3	19.3
60°-70°	1680.6	16.0
70°-80°	646.9	6.2
80°-90°	226.3	2.2
90°-100°	73.7	0.7
100°-110°	34.4	0.3
110°-120°	17.2	0.2
120°-130°	14.5	0.1
130°-140°	13.5	0.1
140°-150°	10.0	0.1
150°-160°	3.7	0.0
160°-170°	0.5	0.0
170°-180°	0.1	0.0
0°-90°	10347.5	98.4
0°-180°	10515.0	100.0



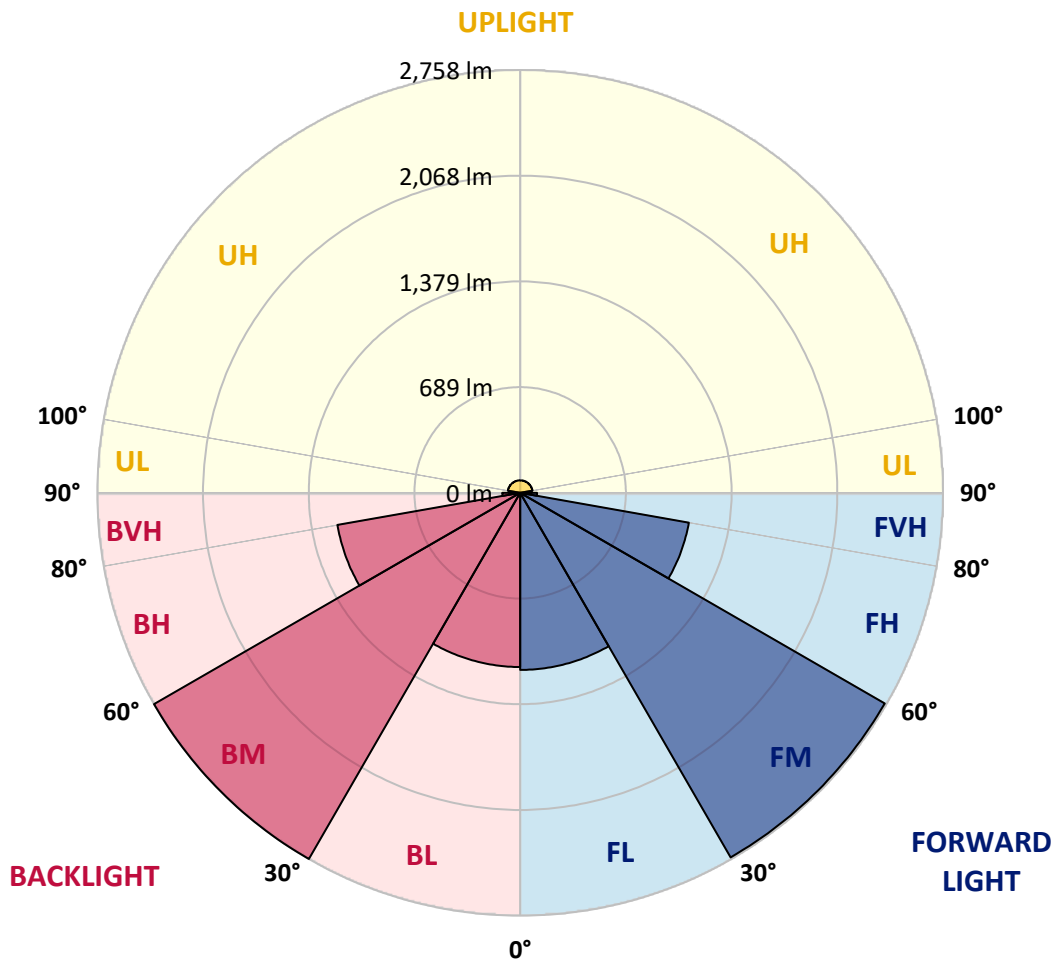
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1154.8	11.0			
FM	(30°-60°)	2745.6	26.1			
FH	(60°-80°)	1117.1	10.6			G1/1800
FVH	(80°-90°)	109.8	1.0			G2/225
BL	(0°-30°)	1135.7	10.8	B3/2500		
BM	(30°-60°)	2757.6	26.2	B3/5000		
BH	(60°-80°)	1210.4	11.5	B3/2500		G1/1800
BVH	(80°-90°)	116.5	1.1			G2/225
UL	(90°-100°)	73.7	0.7		U3/500	
UH	(100°-180°)	81.3	0.8		U3/500	

BUG Rating: B3-U3-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	4°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0
2.5°	2703.3	2708.4	2707.4	2688.0	2706.4	2683.9	2708.4	2693.1	2692.1	2685.9	2691.1
5°	2711.5	2717.6	2718.6	2699.2	2715.6	2693.1	2715.6	2699.2	2698.2	2690.0	2692.1
7.5°	2717.6	2726.8	2727.8	2707.4	2722.7	2700.2	2721.7	2705.4	2702.3	2692.1	2693.1
10°	2724.8	2732.9	2737.0	2715.6	2731.9	2710.5	2729.9	2711.5	2708.4	2698.2	2698.2
12.5°	2733.9	2745.2	2747.2	2727.8	2741.1	2720.7	2738.0	2719.6	2715.6	2704.3	2703.3
15°	2747.2	2757.4	2760.5	2741.1	2753.3	2732.9	2747.2	2726.8	2725.8	2713.5	2712.5
17.5°	2760.5	2769.7	2773.8	2753.3	2763.6	2744.2	2758.5	2738.0	2733.9	2721.7	2721.7
20°	2771.7	2785.0	2788.1	2767.6	2775.8	2758.5	2768.7	2751.3	2747.2	2733.9	2732.9
22.5°	2789.1	2802.4	2808.5	2790.1	2793.2	2775.8	2785.0	2765.6	2763.6	2748.2	2746.2
25°	2786.0	2804.4	2810.5	2793.2	2797.3	2780.9	2789.1	2775.8	2770.7	2756.4	2755.4
27.5°	2735.0	2751.3	2756.4	2741.1	2746.2	2735.0	2738.0	2729.9	2721.7	2724.8	2721.7
30°	2702.3	2721.7	2728.8	2724.8	2731.9	2733.9	2727.8	2728.8	2712.5	2708.4	2703.3
32.5°	2640.0	2634.9	2637.9	2631.8	2639.0	2625.7	2641.0	2621.6	2634.9	2613.4	2633.9
35°	2546.0	2564.4	2572.6	2567.5	2568.5	2570.5	2568.5	2567.5	2580.8	2591.0	2586.9
37.5°	2520.5	2530.7	2532.8	2519.5	2550.1	2536.8	2535.8	2521.5	2543.0	2531.7	2543.0
40°	2450.0	2452.1	2468.4	2462.3	2496.0	2474.5	2455.1	2470.5	2471.5	2479.6	2484.8
42.5°	2404.1	2411.2	2418.4	2402.0	2441.9	2426.5	2420.4	2399.0	2420.4	2431.6	2432.7
45°	2352.0	2380.6	2387.7	2349.9	2405.1	2391.8	2375.5	2362.2	2374.5	2396.9	2387.7
47.5°	2341.8	2359.1	2375.5	2362.2	2373.4	2372.4	2390.8	2347.9	2346.9	2394.9	2338.7
50°	2355.1	2353.0	2362.2	2343.8	2335.7	2330.5	2361.2	2308.1	2339.7	2347.9	2336.7
52.5°	2279.5	2311.1	2331.6	2314.2	2294.8	2311.1	2296.8	2284.6	2301.9	2315.2	2301.9
55°	2260.1	2263.1	2266.2	2268.2	2256.0	2262.1	2241.7	2231.5	2262.1	2259.1	2284.6
57.5°	2194.7	2191.7	2199.8	2183.5	2176.3	2174.3	2157.9	2145.7	2194.7	2213.1	2249.9
60°	2151.8	2154.9	2164.1	2151.8	2136.5	2140.6	2128.3	2133.4	2173.3	2204.9	2233.5
62.5°	1966.0	1971.1	1989.4	1967.0	1947.6	1952.7	1943.5	1963.9	2027.2	2066.0	2111.0
65°	1647.3	1651.4	1632.0	1623.8	1607.5	1615.7	1624.8	1655.5	1713.7	1750.5	1796.4
67.5°	1256.2	1267.4	1270.5	1250.0	1227.6	1236.8	1258.2	1296.0	1328.7	1354.2	1401.2
70°	935.5	943.7	943.7	926.3	892.6	912.0	935.5	960.0	998.8	1010.0	1036.6
72.5°	705.7	708.8	713.9	700.6	686.3	687.3	705.7	719.0	748.6	749.6	751.7
75°	559.7	559.7	566.8	560.7	547.4	550.5	553.5	566.8	571.9	571.9	579.1
77.5°	444.3	446.3	449.4	445.3	436.1	438.1	440.2	444.3	440.2	435.1	440.2
80°	349.3	346.2	350.3	350.3	339.1	347.2	346.2	344.2	338.0	337.0	343.2
82.5°	257.4	258.4	260.4	262.5	257.4	261.5	262.5	261.5	253.3	254.3	255.3
85°	194.0	190.0	192.0	187.9	187.9	188.9	187.9	188.9	185.9	184.9	183.8
87.5°	142.0	138.9	138.9	139.9	136.9	139.9	137.9	137.9	136.9	131.7	132.8
90°	105.2	104.2	105.2	105.2	102.1	102.1	100.1	101.1	100.1	97.0	99.1
92.5°	81.7	80.7	81.7	80.7	78.6	78.6	76.6	77.6	75.6	75.6	76.6
95°	64.3	63.3	64.3	64.3	61.3	61.3	61.3	60.3	60.3	60.3	61.3
97.5°	53.1	52.1	53.1	53.1	52.1	51.1	52.1	51.1	50.0	50.0	51.1
100°	43.9	43.9	44.9	44.9	43.9	43.9	43.9	43.9	43.9	42.9	43.9
102.5°	37.8	37.8	37.8	38.8	37.8	38.8	38.8	38.8	38.8	37.8	37.8
105°	32.7	32.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7
107.5°	28.6	28.6	28.6	29.6	28.6	29.6	29.6	29.6	29.6	29.6	29.6
110°	23.5	23.5	23.5	24.5	24.5	24.5	24.5	24.5	23.5	23.5	23.5



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CANDELA DISTRIBUTION (continued):

	0°	4°	5°	15°	25°	35°	45°	55°	65°	75°	85°
112.5°	19.4	19.4	19.4	20.4	21.5	21.5	21.5	20.4	20.4	19.4	18.4
115°	17.4	17.4	17.4	19.4	19.4	20.4	20.4	19.4	18.4	17.4	16.3
117.5°	16.3	16.3	16.3	18.4	18.4	19.4	19.4	19.4	18.4	16.3	15.3
120°	17.4	16.3	16.3	17.4	18.4	18.4	18.4	18.4	17.4	16.3	15.3
122.5°	18.4	17.4	17.4	18.4	18.4	18.4	18.4	18.4	17.4	16.3	16.3
125°	18.4	18.4	18.4	18.4	18.4	18.4	17.4	17.4	17.4	17.4	17.4
127.5°	19.4	18.4	18.4	18.4	18.4	18.4	17.4	17.4	17.4	17.4	18.4
130°	20.4	19.4	19.4	19.4	18.4	18.4	17.4	17.4	17.4	17.4	18.4
132.5°	19.4	19.4	19.4	19.4	19.4	18.4	17.4	17.4	17.4	17.4	18.4
135°	20.4	19.4	19.4	19.4	19.4	18.4	18.4	18.4	18.4	18.4	18.4
137.5°	20.4	19.4	19.4	19.4	19.4	19.4	18.4	18.4	18.4	18.4	18.4
140°	19.4	19.4	19.4	19.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
142.5°	18.4	18.4	18.4	18.4	18.4	18.4	17.4	18.4	18.4	18.4	18.4
145°	17.4	16.3	16.3	17.4	16.3	17.4	17.4	17.4	17.4	17.4	17.4
147.5°	15.3	14.3	14.3	15.3	14.3	15.3	15.3	15.3	15.3	15.3	16.3
150°	12.3	12.3	12.3	12.3	12.3	13.3	13.3	13.3	13.3	13.3	14.3
152.5°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	11.2	11.2	11.2	11.2
155°	7.2	7.2	7.2	7.2	7.2	8.2	8.2	8.2	8.2	8.2	8.2
157.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	6.1	5.1	6.1	6.1
160°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	4.1	4.1	4.1	4.1
162.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0	2687.0
2.5°	2682.9	2664.5	2695.1	2679.8	2661.4	2675.7	2698.2	2682.9	2681.9	2682.9	2674.7
5°	2684.9	2666.5	2695.1	2677.8	2658.4	2671.6	2694.1	2678.8	2675.7	2676.8	2668.6
7.5°	2685.9	2668.6	2694.1	2676.8	2657.4	2668.6	2693.1	2674.7	2672.7	2672.7	2665.5
10°	2690.0	2671.6	2698.2	2678.8	2658.4	2667.6	2692.1	2673.7	2671.6	2672.7	2666.5
12.5°	2698.2	2678.8	2704.3	2683.9	2661.4	2671.6	2694.1	2676.8	2674.7	2673.7	2668.6
15°	2706.4	2685.9	2714.5	2689.0	2667.6	2675.7	2697.2	2680.8	2678.8	2678.8	2673.7
17.5°	2715.6	2696.2	2719.6	2697.2	2675.7	2682.9	2704.3	2685.9	2688.0	2688.0	2682.9
20°	2728.8	2707.4	2732.9	2707.4	2685.9	2691.1	2712.5	2696.2	2701.3	2699.2	2701.3
22.5°	2743.1	2722.7	2745.2	2719.6	2698.2	2702.3	2722.7	2709.4	2715.6	2714.5	2712.5
25°	2751.3	2730.9	2756.4	2728.8	2705.4	2709.4	2729.9	2715.6	2723.7	2724.8	2722.7
27.5°	2718.6	2703.3	2728.8	2706.4	2681.9	2684.9	2708.4	2694.1	2704.3	2699.2	2705.4
30°	2705.4	2683.9	2706.4	2687.0	2661.4	2662.5	2687.0	2669.6	2678.8	2678.8	2680.8
32.5°	2612.4	2603.2	2632.8	2609.4	2593.0	2598.1	2621.6	2611.4	2614.5	2606.3	2619.6
35°	2605.3	2593.0	2601.2	2599.1	2579.7	2571.6	2586.9	2573.6	2593.0	2595.1	2564.4
37.5°	2523.6	2524.6	2550.1	2521.5	2495.0	2509.3	2521.5	2513.4	2522.5	2513.4	2527.6
40°	2479.6	2477.6	2501.1	2476.6	2448.0	2457.2	2467.4	2454.1	2479.6	2458.2	2465.4
42.5°	2438.8	2434.7	2456.2	2432.7	2415.3	2413.3	2412.2	2405.1	2429.6	2425.5	2428.6
45°	2421.4	2382.6	2441.9	2386.7	2364.2	2386.7	2367.3	2359.1	2412.2	2378.5	2405.1
47.5°	2417.4	2374.5	2395.9	2364.2	2342.8	2349.9	2363.2	2371.4	2370.4	2376.5	2363.2
50°	2359.1	2353.0	2376.5	2346.9	2324.4	2331.6	2375.5	2366.3	2362.2	2363.2	2374.5
52.5°	2347.9	2328.5	2337.7	2309.1	2279.5	2286.6	2320.3	2327.5	2324.4	2319.3	2322.4
55°	2300.9	2283.6	2305.0	2292.8	2243.7	2246.8	2268.2	2272.3	2286.6	2283.6	2291.7
57.5°	2241.7	2250.9	2282.5	2245.8	2199.8	2193.7	2226.4	2233.5	2249.9	2249.9	2270.3
60°	2255.0	2245.8	2263.1	2235.6	2182.5	2179.4	2222.3	2227.4	2251.9	2253.9	2261.1
62.5°	2128.3	2139.6	2156.9	2143.7	2089.5	2102.8	2142.6	2157.9	2195.7	2193.7	2209.0
65°	1802.5	1814.8	1852.6	1829.1	1798.5	1803.6	1848.5	1863.8	1900.6	1902.6	1912.8
67.5°	1387.9	1416.5	1450.2	1454.3	1432.8	1429.8	1428.8	1455.3	1494.1	1499.2	1540.1
70°	1040.7	1045.8	1073.4	1064.2	1072.3	1042.7	1055.0	1063.1	1091.7	1097.9	1087.7
72.5°	761.9	767.0	771.1	777.2	778.2	770.0	774.1	758.8	786.4	790.5	788.4
75°	578.0	584.2	580.1	581.1	589.3	589.3	590.3	596.4	601.5	594.4	595.4
77.5°	442.2	446.3	444.3	444.3	459.6	462.6	464.7	474.9	475.9	470.8	470.8
80°	346.2	346.2	345.2	349.3	353.4	362.6	371.7	373.8	374.8	369.7	373.8
82.5°	258.4	261.5	258.4	264.5	268.6	279.8	277.8	284.9	282.9	283.9	289.0
85°	184.9	184.9	188.9	192.0	196.1	203.2	206.3	211.4	211.4	207.3	211.4
87.5°	134.8	134.8	137.9	140.9	146.0	149.1	151.2	155.2	155.2	153.2	152.2
90°	97.0	99.1	102.1	104.2	108.3	110.3	111.3	113.4	115.4	114.4	114.4
92.5°	76.6	78.6	79.7	80.7	83.7	85.8	86.8	89.9	88.9	89.9	89.9
95°	62.3	63.3	62.3	63.3	64.3	65.4	65.4	64.3	64.3	65.4	65.4
97.5°	51.1	52.1	52.1	52.1	53.1	53.1	52.1	52.1	48.0	48.0	49.0
100°	43.9	44.9	44.9	44.9	46.0	46.0	43.9	42.9	36.8	37.8	38.8
102.5°	38.8	38.8	38.8	38.8	38.8	38.8	36.8	33.7	27.6	28.6	29.6
105°	33.7	34.7	33.7	34.7	34.7	33.7	30.6	26.6	22.5	23.5	23.5
107.5°	29.6	29.6	29.6	29.6	29.6	28.6	25.5	22.5	18.4	20.4	21.5
110°	23.5	23.5	23.5	23.5	23.5	22.5	20.4	18.4	15.3	16.3	17.4



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	18.4	18.4	18.4	18.4	18.4	17.4	16.3	14.3	12.3	12.3	13.3
115°	15.3	15.3	15.3	15.3	15.3	15.3	14.3	12.3	9.2	9.2	9.2
117.5°	15.3	15.3	15.3	15.3	16.3	15.3	14.3	12.3	8.2	8.2	8.2
120°	15.3	15.3	16.3	17.4	17.4	16.3	15.3	12.3	9.2	7.2	7.2
122.5°	16.3	16.3	16.3	16.3	16.3	16.3	15.3	13.3	10.2	7.2	7.2
125°	17.4	17.4	17.4	16.3	16.3	16.3	14.3	14.3	10.2	7.2	7.2
127.5°	18.4	18.4	17.4	17.4	17.4	16.3	15.3	14.3	11.2	8.2	7.2
130°	18.4	18.4	17.4	17.4	17.4	17.4	16.3	15.3	11.2	8.2	6.1
132.5°	17.4	18.4	17.4	17.4	17.4	18.4	18.4	15.3	12.3	7.2	6.1
135°	17.4	18.4	18.4	18.4	18.4	19.4	18.4	17.4	13.3	8.2	7.2
137.5°	18.4	18.4	18.4	18.4	19.4	18.4	18.4	17.4	13.3	9.2	9.2
140°	18.4	19.4	18.4	18.4	19.4	19.4	18.4	16.3	12.3	10.2	10.2
142.5°	18.4	18.4	18.4	18.4	18.4	18.4	17.4	15.3	12.3	9.2	8.2
145°	17.4	17.4	18.4	17.4	17.4	17.4	16.3	14.3	11.2	9.2	8.2
147.5°	16.3	16.3	16.3	16.3	16.3	15.3	14.3	12.3	9.2	7.2	8.2
150°	13.3	14.3	14.3	14.3	14.3	13.3	12.3	10.2	8.2	6.1	6.1
152.5°	11.2	11.2	11.2	11.2	11.2	11.2	10.2	8.2	6.1	5.1	5.1
155°	8.2	9.2	9.2	9.2	9.2	8.2	7.2	6.1	4.1	3.1	3.1
157.5°	6.1	6.1	6.1	6.1	6.1	5.1	5.1	4.1	3.1	2.0	2.0
160°	4.1	4.1	4.1	4.1	4.1	4.1	3.1	2.0	2.0	1.0	1.0
162.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

(END OF REPORT)