

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: INVUE

Report Number: P565315

Luminaire Tested: **MSA-SA4D-730-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565315
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2108-334-1)
Test Lab: INNOVATIONS CENTER
Issue Date: 8/19/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-730-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21661 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

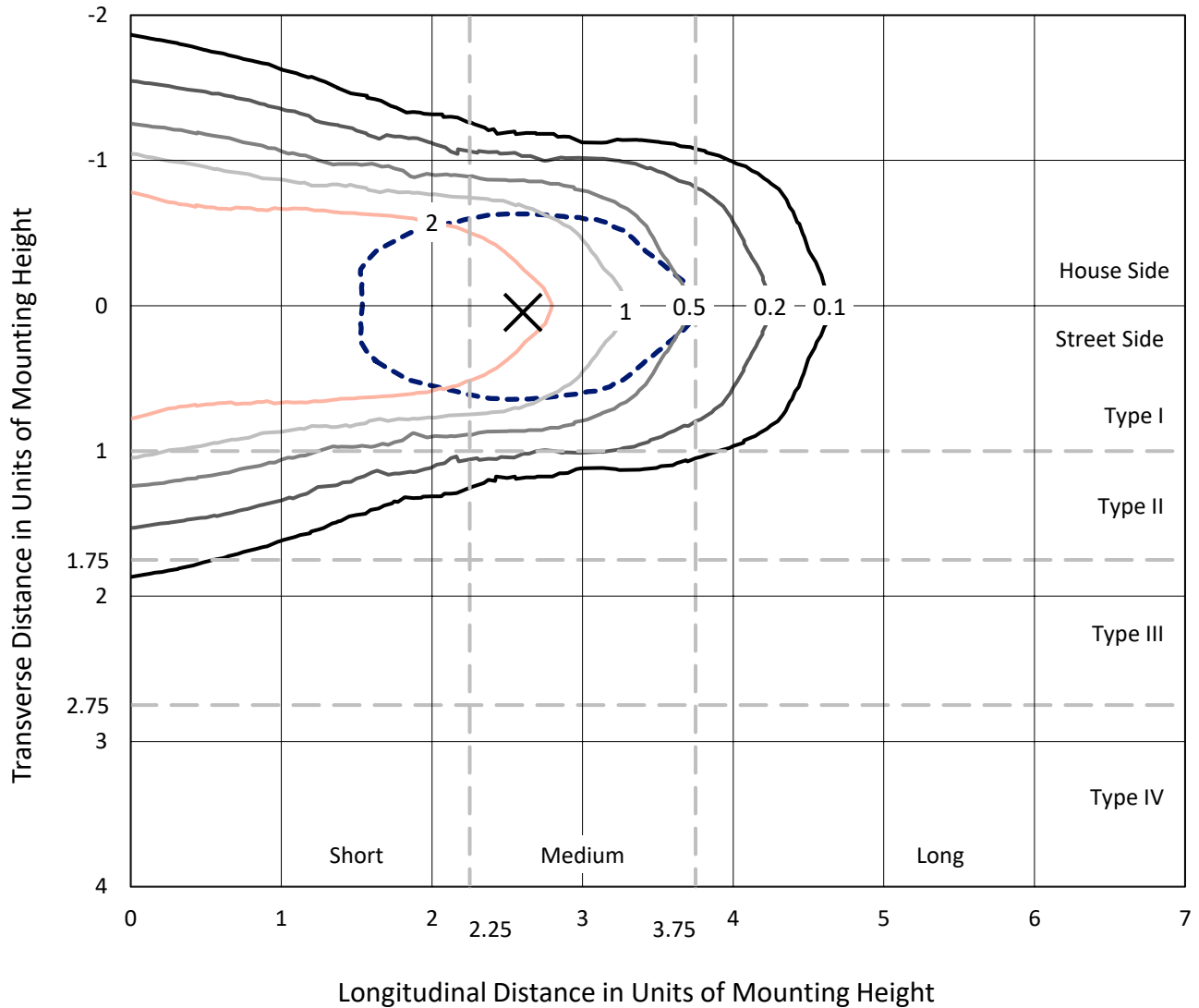
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

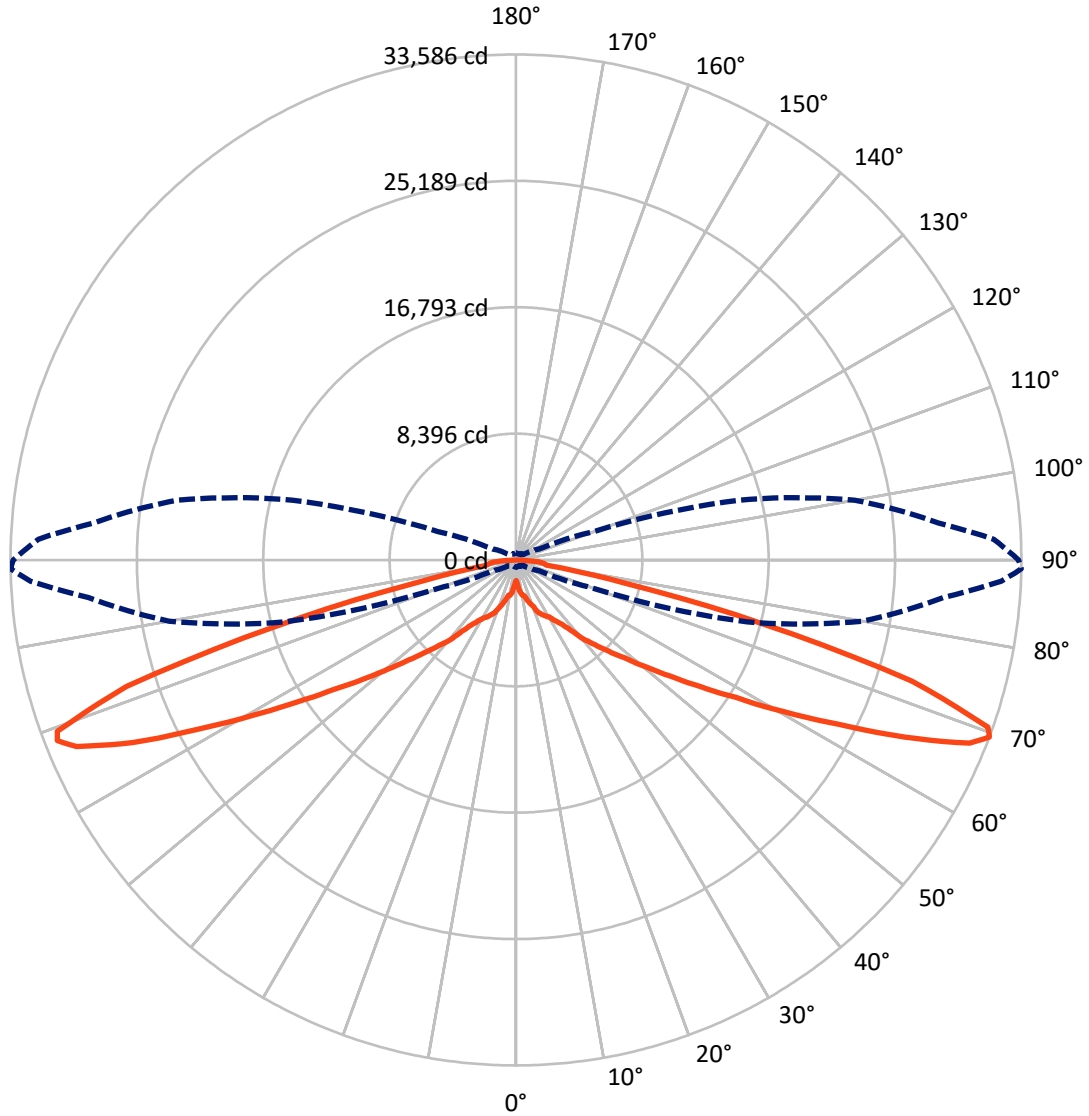
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc
 Type I - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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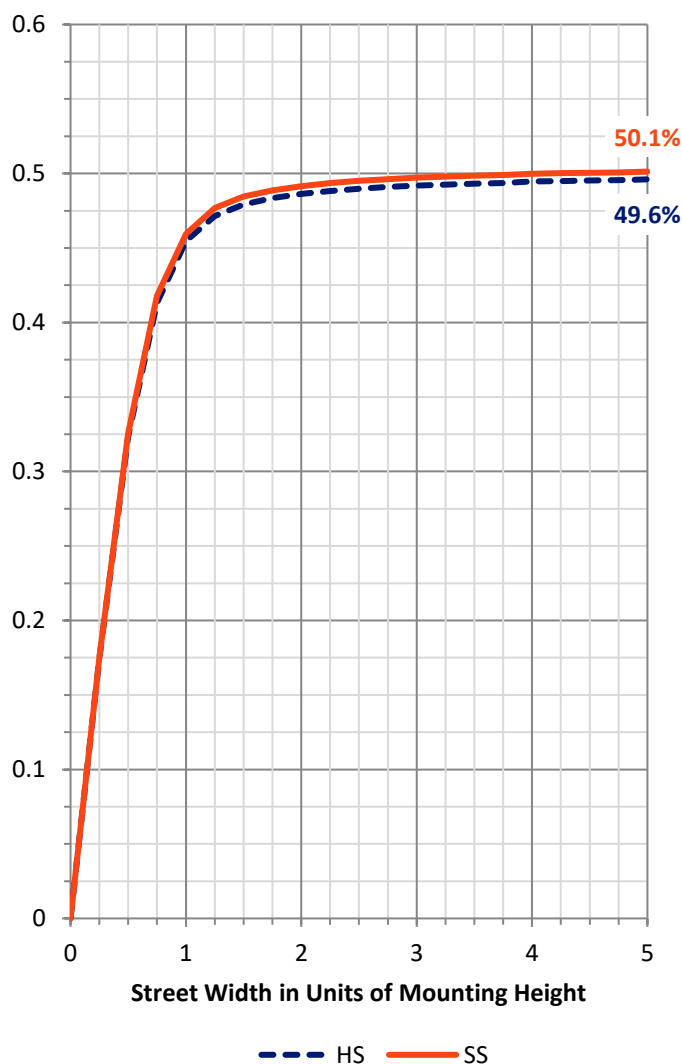
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10830.3	0.0	10830.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10830.7	0.0	10830.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	21661.0	0.0	21661.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.4	0.8
10°-20°	794.3	3.7
20°-30°	1584.6	7.3
30°-40°	2396.7	11.1
40°-50°	3479.0	16.1
50°-60°	4570.7	21.1
60°-70°	5575.7	25.7
70°-80°	2818.9	13.0
80°-90°	268.7	1.2
90°-100°	0.0	0.0
100°-110°	0.0	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°	21661.0	100.0
0°-180°	21661.0	100.0

Coefficient of Utilization

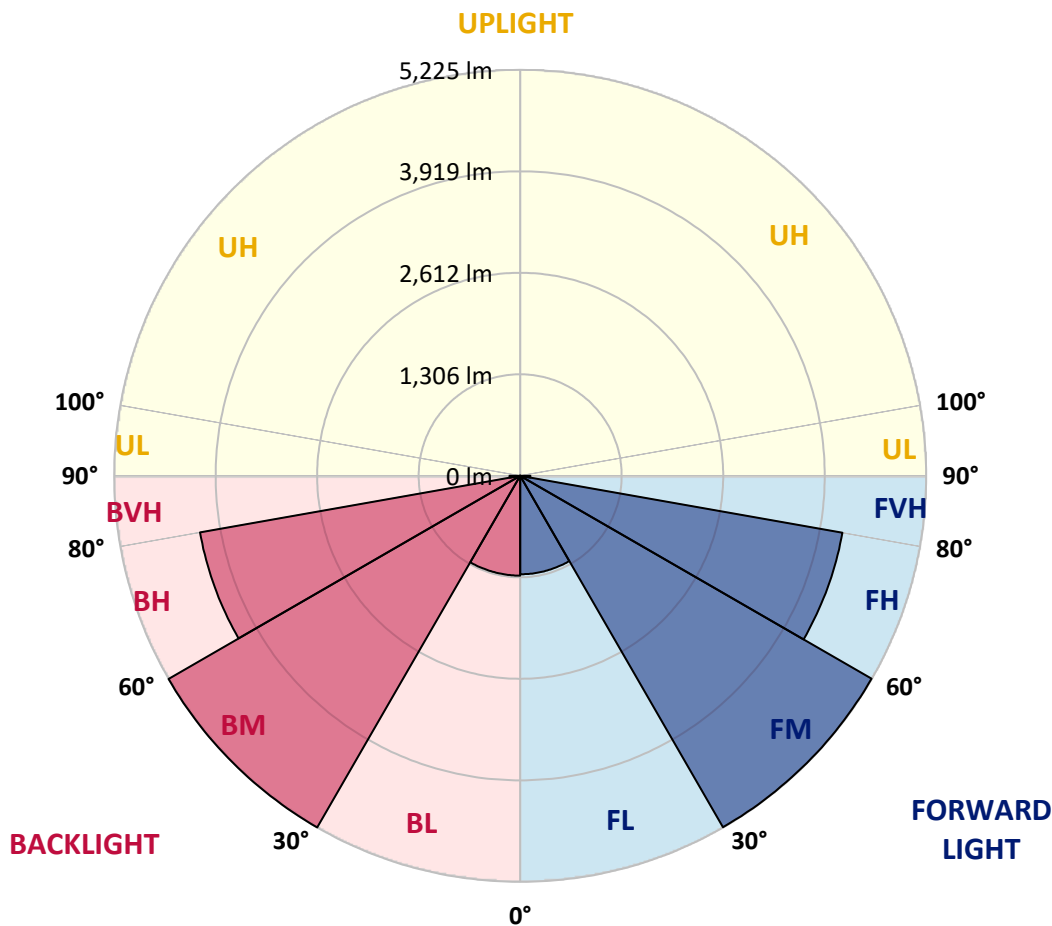


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1266.7	5.8			
FM (30°-60°)	5221.5	24.1			
FH (60°-80°)	4210.7	19.4			G2/5000
FVH (80°-90°)	131.8	0.6			G2/225
BL (0°-30°)	1284.6	5.9	B3/2500		
BM (30°-60°)	5224.9	24.1	B4/8500		
BH (60°-80°)	4183.9	19.3	B4/5000		G4/5000
BVH (80°-90°)	136.9	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0
2.5°	1610.1	1424.5	1408.3	1363.9	1396.2	1408.3	1380.1	1339.7	1384.1	1408.3	1363.9
5°	2029.8	1755.4	1662.5	1585.9	1432.5	1368.0	1432.5	1598.0	1618.2	1719.0	1690.8
7.5°	2235.6	2191.2	2074.2	1819.9	1573.8	1436.6	1610.1	1848.2	1969.2	2066.1	2167.0
10°	2388.9	2364.7	2158.9	1977.3	1876.4	1884.5	1888.5	1965.2	2070.1	2231.5	2288.0
12.5°	2425.2	2417.2	2449.4	2409.1	2417.2	2461.5	2417.2	2397.0	2457.5	2510.0	2453.5
15°	2659.3	2655.2	2667.3	2675.4	2836.8	2905.4	2836.8	2776.3	2731.9	2687.5	2780.3
17.5°	2820.7	2800.5	2804.5	2881.2	3062.8	3252.5	3216.1	3135.4	3034.6	3095.1	3171.8
20°	2909.5	2873.1	2897.4	2929.6	3236.3	3446.2	3470.4	3361.4	3300.9	3377.6	3442.1
22.5°	2994.2	2937.7	2853.0	2885.3	3167.7	3470.4	3587.4	3559.1	3603.5	3627.7	3615.6
25°	2893.3	2929.6	2836.8	2929.6	3216.1	3494.6	3728.6	3894.1	3898.1	3886.0	3974.8
27.5°	2832.8	2804.5	2647.2	2885.3	3123.3	3296.9	3894.1	4172.5	4257.3	3999.0	4172.5
30°	2727.9	2772.3	2558.4	2756.1	3058.8	3349.3	4083.7	4483.2	4358.1	4325.9	4366.2
32.5°	2663.3	2635.1	2534.2	2643.1	2873.1	3506.7	4204.8	4664.8	4822.2	4745.5	4737.5
35°	2558.4	2578.6	2421.2	2538.2	2861.0	3373.5	4285.5	5120.8	5362.9	5302.4	5254.0
37.5°	2574.5	2505.9	2392.9	2477.7	2784.4	3446.2	4487.3	5560.7	5944.0	5976.3	5754.4
40°	2453.5	2413.1	2243.6	2384.9	2639.1	3401.8	4535.7	6061.0	6710.7	6856.0	6537.2
42.5°	2280.0	2227.5	2130.6	2288.0	2554.4	3183.9	4604.3	6662.3	7489.5	7792.2	7501.7
45°	2029.8	1961.2	1912.7	2122.6	2368.7	3127.4	4531.7	7162.7	8236.1	8651.7	8643.6
47.5°	1727.1	1682.7	1658.5	1880.5	2215.4	2986.1	4382.4	7477.4	8756.6	9822.0	9660.5
50°	1384.1	1351.8	1347.8	1581.8	1957.1	2695.6	4212.9	7634.8	9547.6	10895.4	11036.6
52.5°	1109.7	1085.5	1081.5	1271.1	1638.3	2304.2	3857.8	7755.9	10302.2	12114.0	12840.4
55°	867.6	843.4	847.4	1004.8	1303.4	1884.5	3317.0	7618.7	10964.0	13360.9	14737.0
57.5°	710.2	686.0	690.0	778.8	996.7	1440.6	2643.1	7320.1	11262.6	14902.4	16948.3
60°	625.5	601.3	589.2	629.5	766.7	1085.5	1965.2	6157.9	11311.0	16181.6	19349.3
62.5°	581.1	556.9	544.8	556.9	633.5	831.3	1416.4	4878.7	11032.6	17275.2	21548.6
65°	540.7	520.6	504.4	516.5	556.9	661.8	1033.0	3341.2	9575.8	17775.6	23146.6
67.5°	496.3	480.2	464.1	480.2	508.4	556.9	803.0	2114.5	7178.8	17125.9	23812.4
69°	472.1	447.9	439.8	452.0	480.2	512.5	694.1	1686.8	5459.8	15891.1	23408.9
70°	447.9	431.8	419.7	439.8	464.1	488.3	625.5	1432.5	4281.5	14305.2	22408.1
72.5°	395.5	383.4	375.3	395.5	415.6	431.8	512.5	1020.9	2481.7	9741.3	17771.5
75°	347.0	334.9	330.9	347.0	363.2	371.2	431.8	702.1	1464.8	5096.6	10661.3
77.5°	290.5	274.4	278.4	298.6	310.7	314.8	363.2	504.4	863.6	2308.2	4939.2
80°	213.9	213.9	230.0	246.2	246.2	246.2	290.5	367.2	524.6	1061.3	2049.9
82.5°	149.3	153.3	157.4	181.6	185.6	169.5	221.9	266.3	326.9	464.1	710.2
85°	84.7	88.8	92.8	109.0	113.0	100.9	145.3	169.5	189.7	230.0	371.2
87.5°	32.3	36.3	48.4	56.5	60.5	44.4	68.6	80.7	80.7	96.8	165.4
90°	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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0
2.5°	1456.7	1485.0	1537.5	1549.6	1505.2	1456.7	1347.8	1416.4	1444.6	1392.2	1408.3
5°	1803.8	1864.3	1928.9	1852.2	1803.8	1771.5	1719.0	1723.1	1694.8	1602.0	1448.7
7.5°	2195.2	2126.6	2175.0	2227.5	2150.8	2154.9	2203.3	2102.4	2025.7	1868.4	1581.8
10°	2376.8	2376.8	2388.9	2388.9	2356.6	2356.6	2352.6	2191.2	2098.4	2029.8	1949.1
12.5°	2388.9	2384.9	2433.3	2397.0	2405.0	2413.1	2433.3	2505.9	2481.7	2392.9	2465.6
15°	2723.8	2707.7	2723.8	2719.8	2731.9	2768.2	2752.1	2735.9	2740.0	2804.5	2913.5
17.5°	3038.6	3046.7	3030.5	3058.8	3058.8	3083.0	3139.5	3083.0	3034.6	3155.6	3240.4
20°	3401.8	3373.5	3309.0	3357.4	3369.5	3373.5	3466.3	3397.7	3329.1	3373.5	3474.4
22.5°	3769.0	3764.9	3773.0	3777.1	3793.2	3732.7	3607.6	3587.4	3631.8	3571.3	3583.4
25°	3995.0	3999.0	4019.2	4023.2	3954.6	4019.2	4063.6	3930.4	3930.4	3918.3	3837.6
27.5°	4269.4	4208.8	4233.0	4265.3	4237.1	4253.2	4200.8	4007.1	4212.9	4241.1	3918.3
30°	4455.0	4426.7	4398.5	4430.8	4459.0	4531.7	4382.4	4362.2	4378.3	4527.6	4103.9
32.5°	4846.4	4886.8	4834.3	4781.8	4834.3	4818.2	4753.6	4725.4	4927.1	4729.4	4233.0
35°	5209.6	5225.7	5229.8	5221.7	5254.0	5197.5	5197.5	5302.4	5362.9	5149.1	4273.4
37.5°	6085.3	6028.8	5911.7	5855.2	5956.1	6040.9	5790.7	5915.8	5891.6	5528.4	4576.0
40°	6714.8	6843.9	6880.2	6864.1	6880.2	6638.1	6690.6	6783.4	6674.4	6073.1	4471.1
42.5°	7634.8	7715.5	7687.3	7651.0	7667.1	7622.7	7465.3	7808.3	7416.9	6682.5	4632.5
45°	8474.2	8655.8	8667.9	8542.8	8643.6	8486.3	8550.8	8671.9	8276.4	7138.5	4588.2
47.5°	9474.9	9850.2	9709.0	9709.0	9809.9	9470.9	9624.2	9785.6	8736.5	7445.2	4346.0
50°	10955.9	11157.6	11149.6	11113.3	11157.6	10976.1	10951.8	10931.7	9442.6	7735.7	4196.7
52.5°	12630.5	12904.9	12800.0	12840.4	12900.9	12557.9	12828.3	12089.8	10326.4	7844.7	3857.8
55°	14769.3	14958.9	14854.0	14648.2	14922.6	14704.7	14793.5	13352.9	10939.7	7533.9	3292.8
57.5°	17315.5	17412.4	17238.9	17218.7	17400.3	17166.2	17016.9	14773.3	11258.5	7299.9	2631.0
60°	20289.6	20592.2	20483.3	20309.7	20475.2	20269.4	19139.5	15979.8	11194.0	6206.3	2037.8
62.5°	23856.8	24163.5	24042.4	23925.4	24030.3	23493.6	21132.9	16932.2	10903.4	4919.0	1489.0
65°	26802.6	28186.7	28368.3	28372.3	27863.9	26621.0	22722.9	17303.4	9370.0	3434.1	1089.5
67.5°	28739.5	31616.7	32512.5	32189.7	31023.5	28186.7	23364.5	16577.1	7235.3	2171.0	815.1
69°	28517.6	32290.6	33585.9	33404.3	31766.0	28162.5	22864.1	15354.4	5528.4	1727.1	690.0
70°	27492.6	31737.8	33275.2	33355.9	31293.9	27081.0	21972.3	13950.1	4471.1	1472.9	633.5
72.5°	21940.0	26152.9	27504.7	28033.3	25987.4	21685.8	18017.7	9842.1	2590.7	1029.0	512.5
75°	13590.9	15858.8	16980.6	17287.3	16048.4	13506.2	10935.7	5475.9	1577.8	726.4	431.8
77.5°	6093.3	6751.1	7396.7	7396.7	6912.5	6166.0	5011.9	2647.2	895.8	516.5	363.2
80°	2041.9	2118.5	2062.0	2082.2	2001.5	1924.8	2013.6	1142.0	552.8	387.4	294.6
82.5°	1388.1	1743.3	1852.2	1852.2	1739.2	1372.0	774.8	524.6	339.0	278.4	226.0
85°	1129.9	1380.1	1481.0	1525.3	1436.6	1158.1	407.6	254.2	201.8	177.6	153.3
87.5°	379.3	355.1	334.9	326.9	343.0	359.1	201.8	109.0	92.8	84.7	80.7
90°	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):

	135°	145°	155°	165°	175°	180°
0°	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0
2.5°	1436.6	1388.1	1408.3	1428.5	1573.8	1682.7
5°	1428.5	1497.1	1650.4	1844.1	1932.9	2150.8
7.5°	1468.9	1719.0	2005.6	2207.3	2288.0	2356.6
10°	1965.2	2009.6	2106.4	2300.1	2461.5	2489.8
12.5°	2538.2	2526.1	2457.5	2546.3	2465.6	2522.1
15°	2986.1	2853.0	2760.2	2748.0	2719.8	2719.8
17.5°	3232.3	3115.3	2986.1	2953.9	2869.1	2937.7
20°	3522.8	3321.1	2998.2	2966.0	2937.7	2873.1
22.5°	3466.3	3264.6	2929.6	2889.3	3038.6	3030.5
25°	3534.9	3264.6	2945.8	2901.4	2970.0	2970.0
27.5°	3365.5	3143.5	2913.5	2647.2	2857.0	2905.4
30°	3321.1	3070.9	2804.5	2566.5	2780.3	2735.9
32.5°	3555.1	2889.3	2627.0	2554.4	2711.7	2679.4
35°	3373.5	2857.0	2582.6	2449.4	2635.1	2602.8
37.5°	3450.2	2816.7	2505.9	2392.9	2542.2	2590.7
40°	3434.1	2627.0	2417.2	2271.9	2421.2	2445.4
42.5°	3163.7	2481.7	2267.8	2122.6	2199.2	2280.0
45°	3083.0	2392.9	2122.6	1920.8	1924.8	2017.7
47.5°	2933.7	2191.2	1856.2	1670.6	1670.6	1747.3
50°	2683.5	1920.8	1553.6	1384.1	1380.1	1440.6
52.5°	2312.2	1658.5	1311.5	1125.9	1113.7	1174.3
55°	1892.6	1335.7	1033.0	912.0	887.8	912.0
57.5°	1472.9	1041.1	815.1	718.3	714.3	734.4
60°	1142.0	815.1	649.7	593.2	601.3	633.5
62.5°	863.6	649.7	552.8	532.7	544.8	577.1
65°	686.0	560.9	504.4	492.3	504.4	536.7
67.5°	556.9	508.4	468.1	452.0	460.0	492.3
69°	512.5	480.2	447.9	427.7	435.8	460.0
70°	488.3	464.1	431.8	411.6	419.7	443.9
72.5°	427.7	415.6	391.4	371.2	375.3	395.5
75°	375.3	367.2	351.1	326.9	326.9	351.1
77.5°	314.8	318.8	302.6	278.4	274.4	286.5
80°	250.2	258.3	250.2	226.0	217.9	217.9
82.5°	181.6	197.7	189.7	165.4	161.4	161.4
85°	113.0	125.1	121.1	104.9	104.9	92.8
87.5°	52.5	68.6	64.6	56.5	52.5	36.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)