

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: P565299

Luminaire Tested: **MSA-SA4D-827-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565299
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-827-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: 17484.1 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

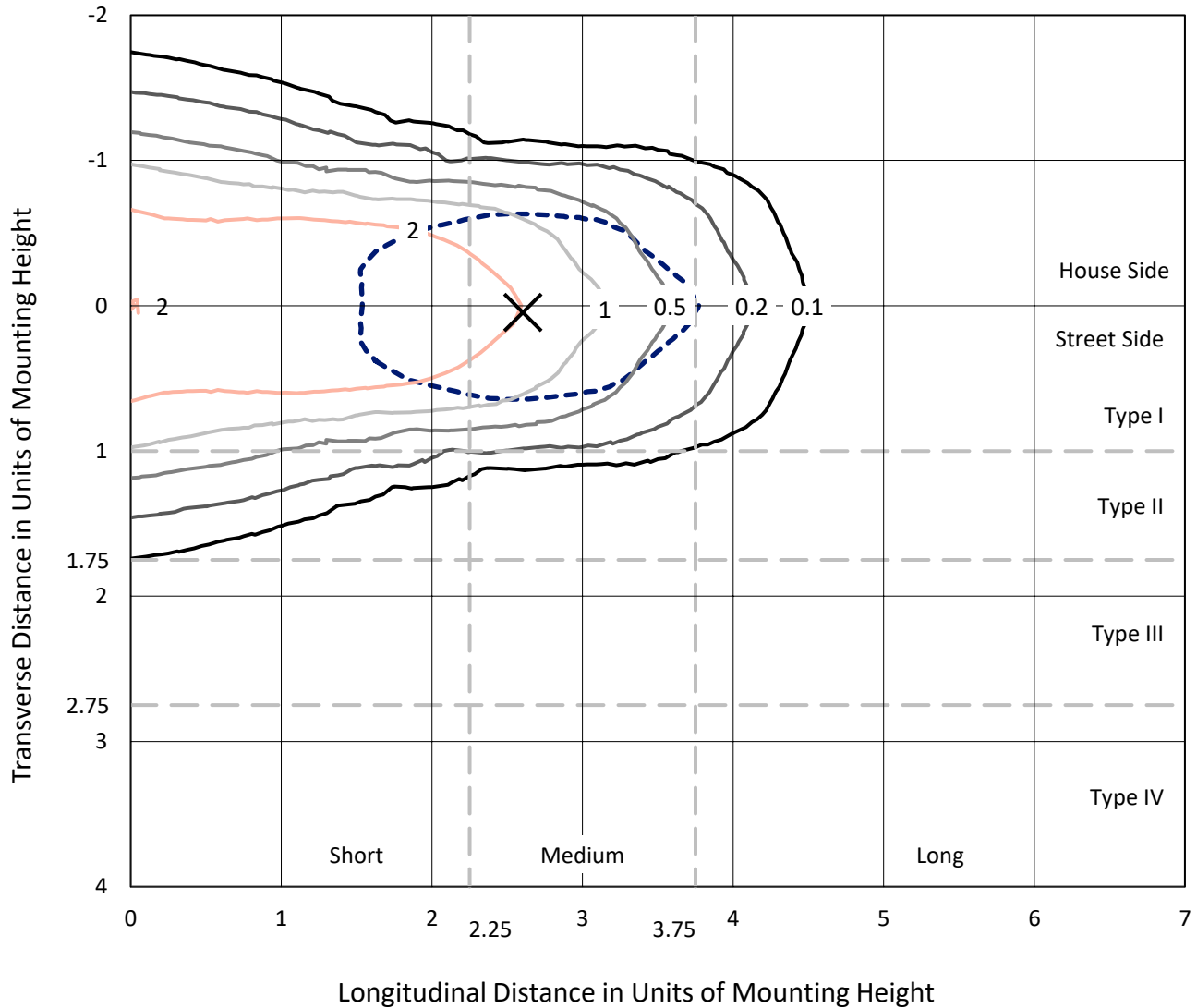
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

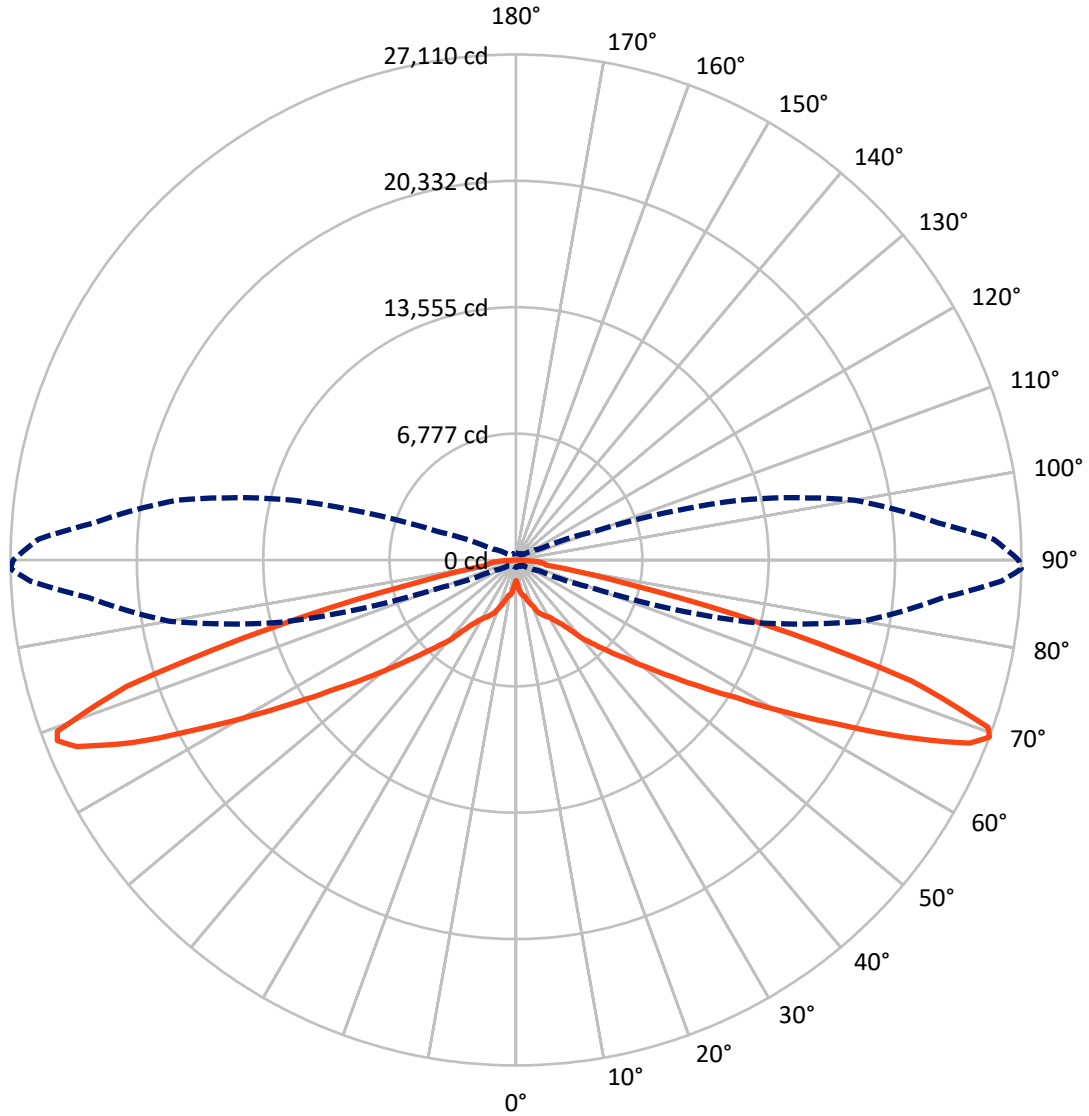
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 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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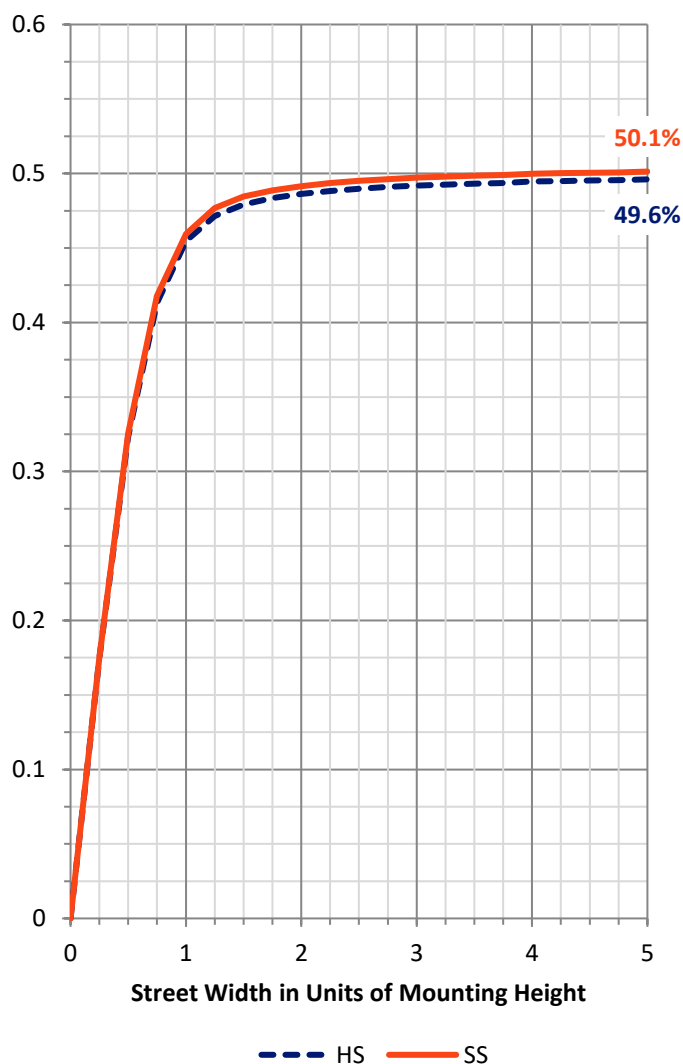
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8741.9	0.0	8741.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8742.2	0.0	8742.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	17484.1	0.0	17484.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.2	0.8
10°-20°	641.1	3.7
20°-30°	1279.1	7.3
30°-40°	1934.5	11.1
40°-50°	2808.1	16.1
50°-60°	3689.4	21.1
60°-70°	4500.5	25.7
70°-80°	2275.3	13.0
80°-90°	216.9	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°	17484.1	100.0
0°-180°	17484.1	100.0

Coefficient of Utilization

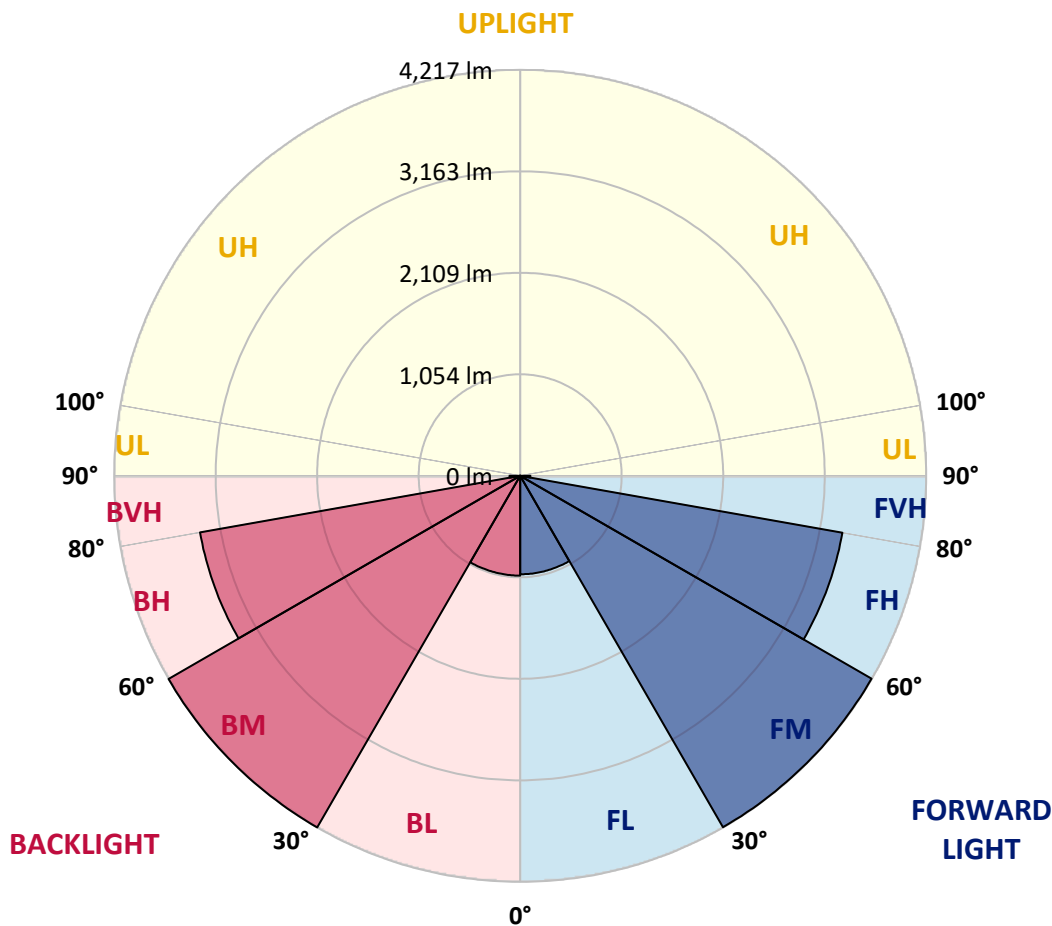


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1022.5	5.8			
FM (30°-60°)	4214.6	24.1			
FH (60°-80°)	3398.8	19.4			G2/5000
FVH (80°-90°)	106.4	0.6			G2/225
BL (0°-30°)	1036.9	5.9	B3/2500		
BM (30°-60°)	4217.4	24.1	B3/5000		
BH (60°-80°)	3377.1	19.3	B4/5000		G4/5000
BVH (80°-90°)	110.5	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°	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4
2.5°	1299.6	1149.8	1136.7	1101.0	1127.0	1136.7	1114.0	1081.4	1117.2	1136.7	1101.0
5°	1638.3	1416.9	1341.9	1280.0	1156.3	1104.2	1156.3	1289.9	1306.2	1387.5	1364.8
7.5°	1804.5	1768.6	1674.2	1469.0	1270.3	1159.6	1299.6	1491.8	1589.6	1667.7	1749.1
10°	1928.3	1908.7	1742.6	1596.0	1514.6	1521.1	1524.4	1586.3	1670.9	1801.2	1846.8
12.5°	1957.6	1951.0	1977.1	1944.5	1951.0	1986.9	1951.0	1934.8	1983.6	2026.0	1980.4
15°	2146.5	2143.2	2153.0	2159.5	2289.8	2345.1	2289.8	2240.9	2205.1	2169.3	2244.2
17.5°	2276.8	2260.5	2263.8	2325.7	2472.2	2625.2	2595.9	2530.8	2449.4	2498.3	2560.2
20°	2348.4	2319.1	2338.7	2364.7	2612.2	2781.6	2801.2	2713.2	2664.4	2726.3	2778.4
22.5°	2416.9	2371.3	2302.8	2328.8	2556.9	2801.2	2895.6	2872.9	2908.6	2928.2	2918.5
25°	2335.4	2364.7	2289.8	2364.7	2595.9	2820.7	3009.6	3143.1	3146.4	3136.7	3208.3
27.5°	2286.5	2263.8	2136.8	2328.8	2521.0	2661.1	3143.1	3367.9	3436.4	3227.9	3367.9
30°	2201.8	2237.7	2065.0	2224.7	2468.9	2703.4	3296.3	3618.7	3517.8	3491.7	3524.3
32.5°	2149.8	2126.9	2045.5	2133.5	2319.1	2830.5	3393.9	3765.3	3892.4	3830.5	3823.9
35°	2065.0	2081.3	1954.3	2048.7	2309.4	2723.0	3459.1	4133.3	4328.8	4280.0	4240.8
37.5°	2078.0	2022.7	1931.5	1999.9	2247.5	2781.6	3622.0	4488.4	4797.8	4823.9	4644.8
40°	1980.4	1947.8	1810.9	1925.0	2130.2	2745.8	3661.0	4892.3	5416.7	5534.0	5276.6
42.5°	1840.4	1797.9	1719.8	1846.8	2061.7	2569.9	3716.5	5377.6	6045.3	6289.7	6055.1
45°	1638.3	1583.0	1543.9	1713.3	1912.0	2524.3	3657.9	5781.5	6647.9	6983.4	6976.9
47.5°	1394.1	1358.2	1338.7	1517.8	1788.2	2410.3	3537.3	6035.6	7068.1	7928.0	7797.7
50°	1117.2	1091.1	1087.9	1276.9	1579.7	2175.8	3400.5	6162.6	7706.5	8794.4	8908.4
52.5°	895.7	876.2	872.9	1026.1	1322.5	1859.8	3113.8	6260.4	8315.5	9778.1	10364.4
55°	700.3	680.8	684.0	811.0	1052.1	1521.1	2677.4	6149.6	8849.7	10784.6	11895.2
57.5°	573.2	553.8	556.9	628.6	804.6	1162.8	2133.5	5908.5	9090.8	12028.7	13680.2
60°	504.9	485.3	475.6	508.2	618.9	876.2	1586.3	4970.5	9129.8	13061.2	15618.2
62.5°	469.0	449.5	439.7	449.5	511.3	671.0	1143.3	3938.0	8905.2	13944.0	17393.3
65°	436.4	420.2	407.1	416.9	449.5	534.2	833.9	2697.0	7729.3	14347.8	18683.2
67.5°	400.6	387.6	374.6	387.6	410.4	449.5	648.2	1706.8	5794.5	13823.5	19220.6
69°	381.1	361.6	355.0	364.8	387.6	413.7	560.2	1361.5	4407.0	12826.7	18894.9
70°	361.6	348.5	338.7	355.0	374.6	394.1	504.9	1156.3	3455.8	11546.7	18087.2
72.5°	319.2	309.4	303.0	319.2	335.5	348.5	413.7	824.0	2003.1	7862.8	14344.7
75°	280.1	270.4	267.1	280.1	293.1	299.7	348.5	566.8	1182.4	4113.8	8605.5
77.5°	234.5	221.5	224.8	241.1	250.8	254.1	293.1	407.1	697.1	1863.1	3986.8
80°	172.6	172.6	185.6	198.7	198.7	198.7	234.5	296.4	423.4	856.6	1654.6
82.5°	120.5	123.8	127.0	146.6	149.8	136.8	179.2	214.9	263.8	374.6	573.2
85°	68.4	71.6	74.9	87.9	91.2	81.5	117.3	136.8	153.1	185.6	299.7
87.5°	26.0	29.3	39.1	45.6	48.9	35.9	55.3	65.2	65.2	78.2	133.5
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°	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4
2.5°	1175.8	1198.7	1241.0	1250.7	1214.9	1175.8	1087.9	1143.3	1166.1	1123.7	1136.7
5°	1456.0	1504.8	1557.0	1495.1	1456.0	1429.9	1387.5	1390.8	1368.0	1293.0	1169.3
7.5°	1771.9	1716.5	1755.6	1797.9	1736.1	1739.3	1778.5	1697.0	1635.1	1508.1	1276.9
10°	1918.5	1918.5	1928.3	1928.3	1902.2	1902.2	1899.0	1768.6	1693.7	1638.3	1573.3
12.5°	1928.3	1925.0	1964.1	1934.8	1941.3	1947.8	1964.1	2022.7	2003.1	1931.5	1990.1
15°	2198.6	2185.6	2198.6	2195.4	2205.1	2234.4	2221.4	2208.4	2211.6	2263.8	2351.7
17.5°	2452.6	2459.2	2446.2	2468.9	2468.9	2488.5	2534.1	2488.5	2449.4	2547.1	2615.5
20°	2745.8	2723.0	2670.9	2710.0	2719.7	2723.0	2797.9	2742.5	2687.2	2723.0	2804.4
22.5°	3042.2	3038.9	3045.5	3048.7	3061.8	3012.9	2911.9	2895.6	2931.5	2882.6	2892.3
25°	3224.6	3227.9	3244.2	3247.4	3192.0	3244.2	3280.0	3172.5	3172.5	3162.7	3097.5
27.5°	3446.1	3397.2	3416.8	3442.8	3420.1	3433.1	3390.8	3234.4	3400.5	3423.3	3162.7
30°	3596.0	3573.1	3550.3	3576.4	3599.2	3657.9	3537.3	3521.0	3534.0	3654.6	3312.6
32.5°	3911.8	3944.4	3902.1	3859.8	3902.1	3889.1	3836.9	3814.2	3977.0	3817.4	3416.8
35°	4205.1	4218.1	4221.4	4214.8	4240.8	4195.2	4195.2	4280.0	4328.8	4156.2	3449.4
37.5°	4911.9	4866.2	4771.7	4726.1	4807.6	4876.0	4674.1	4775.0	4755.5	4462.3	3693.6
40°	5419.9	5524.1	5553.5	5540.4	5553.5	5358.1	5400.4	5475.4	5387.4	4902.0	3609.0
42.5°	6162.6	6227.8	6204.9	6175.6	6188.6	6152.8	6025.7	6302.7	5986.7	5393.9	3739.2
45°	6840.1	6986.6	6996.5	6895.5	6976.9	6849.9	6902.0	6999.7	6680.5	5761.9	3703.5
47.5°	7647.9	7950.8	7836.8	7836.8	7918.2	7644.6	7768.4	7898.7	7051.8	6009.6	3508.0
50°	8843.3	9006.1	8999.6	8970.3	9006.1	8859.6	8840.0	8823.7	7621.8	6244.1	3387.5
52.5°	10194.9	10416.4	10331.8	10364.4	10413.2	10136.3	10354.6	9758.5	8335.1	6332.0	3113.8
55°	11921.3	12074.3	11989.7	11823.5	12045.0	11869.2	11940.8	10778.0	8830.3	6081.2	2657.8
57.5°	13976.6	14054.7	13914.7	13898.4	14045.0	13856.1	13735.5	11924.5	9087.5	5892.2	2123.6
60°	16377.1	16621.4	16533.5	16393.4	16526.9	16360.8	15448.8	12898.5	9035.4	5009.5	1644.9
62.5°	19256.4	19504.0	19406.3	19311.9	19396.5	18963.3	17057.8	13667.2	8800.9	3970.5	1201.9
65°	21634.2	22751.4	22898.0	22901.3	22490.9	21487.7	18341.2	13966.8	7563.1	2771.8	879.5
67.5°	23197.7	25520.0	26243.1	25982.6	25041.2	22751.4	18859.1	13380.5	5840.1	1752.3	657.9
69°	23018.5	26064.0	27109.5	26962.9	25640.6	22731.8	18455.2	12393.6	4462.3	1394.1	556.9
70°	22191.2	25617.7	26858.7	26923.9	25259.4	21858.9	17735.3	11260.0	3609.0	1188.9	511.3
72.5°	17709.3	21109.8	22200.9	22627.6	20976.2	17504.1	14543.3	7944.3	2091.2	830.6	413.7
75°	10970.2	12800.7	13706.2	13953.8	12953.8	10901.8	8827.0	4420.0	1273.6	586.3	348.5
77.5°	4918.3	5449.2	5970.4	5970.4	5579.6	4976.9	4045.4	2136.8	723.1	416.9	293.1
80°	1648.2	1710.0	1664.4	1680.7	1615.6	1553.7	1625.3	921.8	446.3	312.7	237.8
82.5°	1120.4	1407.1	1495.1	1495.1	1403.8	1107.4	625.4	423.4	273.7	224.8	182.4
85°	912.0	1114.0	1195.4	1231.2	1159.6	934.8	329.0	205.2	162.9	143.3	123.8
87.5°	306.1	286.7	270.4	263.8	276.8	289.9	162.9	87.9	74.9	68.4	65.2
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°	1107.4	1107.4	1107.4	1107.4	1107.4	1107.4
2.5°	1159.6	1120.4	1136.7	1153.0	1270.3	1358.2
5°	1153.0	1208.4	1332.2	1488.5	1560.1	1736.1
7.5°	1185.6	1387.5	1618.9	1781.6	1846.8	1902.2
10°	1586.3	1622.0	1700.2	1856.6	1986.9	2009.7
12.5°	2048.7	2039.0	1983.6	2055.3	1990.1	2035.7
15°	2410.3	2302.8	2227.9	2218.1	2195.4	2195.4
17.5°	2609.1	2514.6	2410.3	2384.3	2315.8	2371.3
20°	2843.6	2680.7	2420.1	2394.0	2371.3	2319.1
22.5°	2797.9	2635.1	2364.7	2332.1	2452.6	2446.2
25°	2853.3	2635.1	2377.7	2342.0	2397.3	2397.3
27.5°	2716.5	2537.3	2351.7	2136.8	2306.1	2345.1
30°	2680.7	2478.7	2263.8	2071.6	2244.2	2208.4
32.5°	2869.6	2332.1	2120.5	2061.7	2188.8	2162.8
35°	2723.0	2306.1	2084.6	1977.1	2126.9	2100.9
37.5°	2784.9	2273.5	2022.7	1931.5	2052.0	2091.2
40°	2771.8	2120.5	1951.0	1833.8	1954.3	1973.8
42.5°	2553.6	2003.1	1830.5	1713.3	1775.2	1840.4
45°	2488.5	1931.5	1713.3	1550.4	1553.7	1628.6
47.5°	2368.0	1768.6	1498.3	1348.5	1348.5	1410.4
50°	2166.1	1550.4	1254.0	1117.2	1114.0	1162.8
52.5°	1866.4	1338.7	1058.5	908.8	899.0	947.9
55°	1527.7	1078.1	833.9	736.1	716.6	736.1
57.5°	1188.9	840.3	657.9	579.8	576.5	592.8
60°	921.8	657.9	524.5	478.8	485.3	511.3
62.5°	697.1	524.5	446.3	430.0	439.7	465.7
65°	553.8	452.7	407.1	397.4	407.1	433.2
67.5°	449.5	410.4	377.8	364.8	371.3	397.4
69°	413.7	387.6	361.6	345.3	351.8	371.3
70°	394.1	374.6	348.5	332.3	338.7	358.3
72.5°	345.3	335.5	316.0	299.7	303.0	319.2
75°	303.0	296.4	283.4	263.8	263.8	283.4
77.5°	254.1	257.4	244.2	224.8	221.5	231.2
80°	201.9	208.5	201.9	182.4	175.9	175.9
82.5°	146.6	159.6	153.1	133.5	130.3	130.3
85°	91.2	101.0	97.7	84.7	84.7	74.9
87.5°	42.3	55.3	52.2	45.6	42.3	29.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)