

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: P565284

Luminaire Tested: **MSA-SA4D-727-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565284
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-727-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: 17485 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

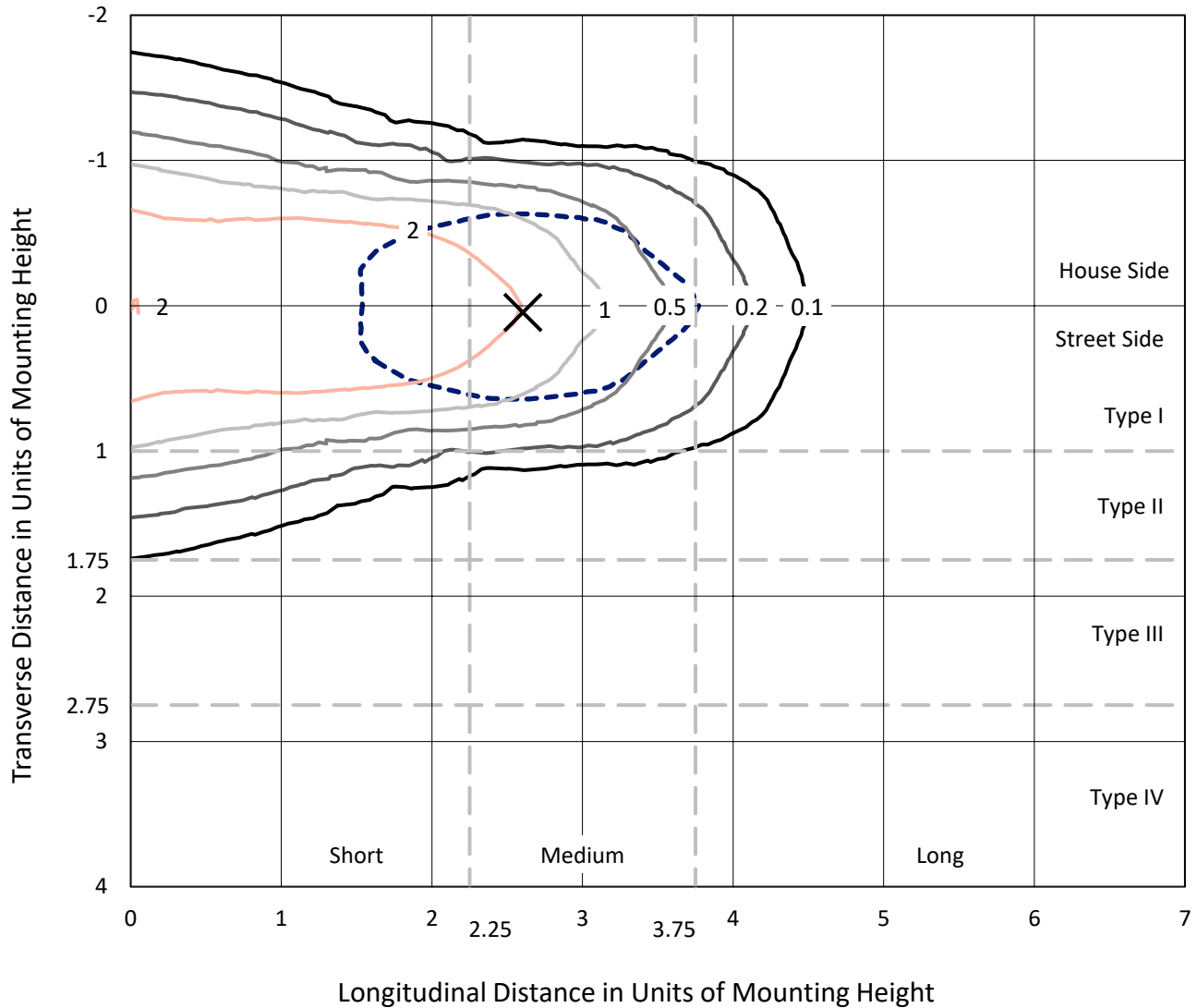
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

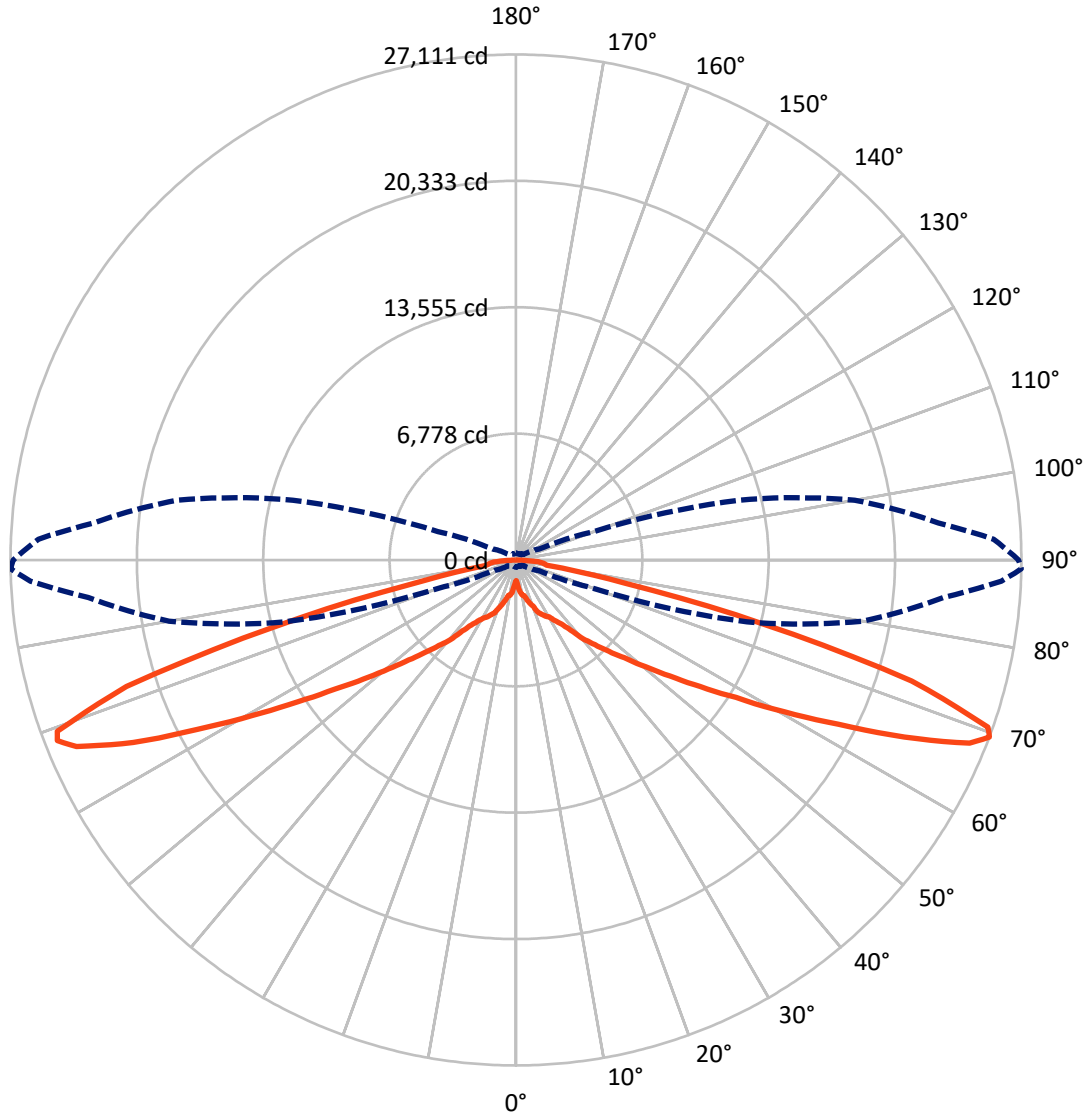
✕ Max cd
 - - - 1/2 Max cd



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	8742.3	0.0	8742.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8742.7	0.0	8742.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	17485.0	0.0	17485.0
	% 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°	1934.6	11.1
40°-50°	2808.3	16.1
50°-60°	3689.6	21.1
60°-70°	4500.7	25.7
70°-80°	2275.4	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°	17485.0	100.0
0°-180°	17485.0	100.0

Coefficient of Utilization



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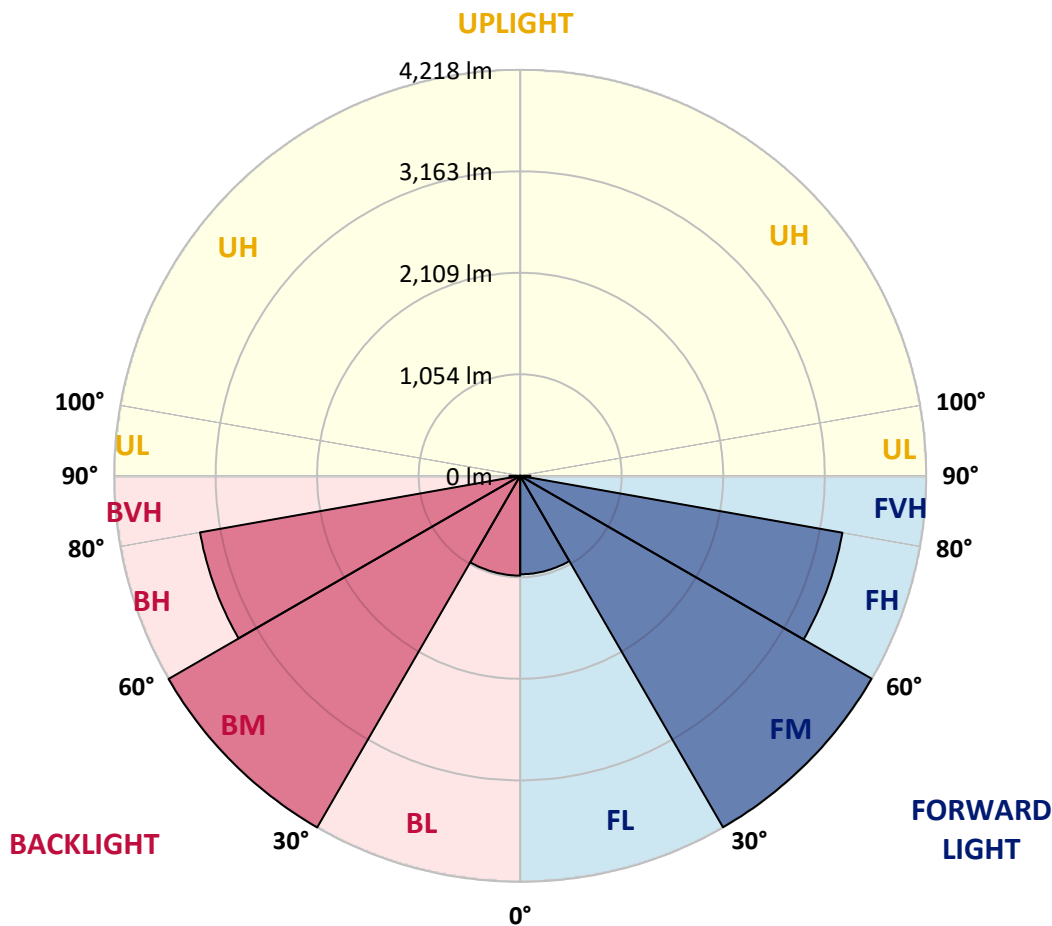
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1022.5	5.8			
FM (30°-60°)	4214.8	24.1			
FH (60°-80°)	3398.9	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°)	4217.6	24.1	B3/5000		
BH (60°-80°)	3377.3	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°	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5
2.5°	1299.7	1149.8	1136.8	1101.0	1127.0	1136.8	1114.0	1081.4	1117.3	1136.8	1101.0
5°	1638.4	1416.9	1342.0	1280.1	1156.4	1104.2	1156.4	1289.9	1306.2	1387.6	1364.8
7.5°	1804.6	1768.7	1674.3	1469.1	1270.4	1159.6	1299.7	1491.9	1589.6	1667.8	1749.2
10°	1928.4	1908.8	1742.7	1596.1	1514.7	1521.2	1524.4	1586.3	1671.0	1801.3	1846.9
12.5°	1957.7	1951.2	1977.2	1944.6	1951.2	1987.0	1951.2	1934.9	1983.7	2026.1	1980.5
15°	2146.6	2143.3	2153.1	2159.6	2289.9	2345.3	2289.9	2241.1	2205.2	2169.4	2244.3
17.5°	2276.9	2260.6	2263.9	2325.7	2472.3	2625.4	2596.1	2531.0	2449.5	2498.4	2560.3
20°	2348.6	2319.2	2338.8	2364.8	2612.4	2781.8	2801.3	2713.4	2664.5	2726.4	2778.5
22.5°	2417.0	2371.4	2302.9	2329.0	2557.0	2801.3	2895.8	2873.0	2908.8	2928.4	2918.6
25°	2335.5	2364.8	2289.9	2364.8	2596.1	2820.9	3009.8	3143.3	3146.6	3136.8	3208.5
27.5°	2286.7	2263.9	2136.8	2329.0	2521.2	2661.3	3143.3	3368.1	3436.5	3228.0	3368.1
30°	2202.0	2237.8	2065.2	2224.8	2469.1	2703.6	3296.4	3618.9	3517.9	3491.9	3524.5
32.5°	2149.9	2127.1	2045.6	2133.6	2319.2	2830.6	3394.2	3765.5	3892.5	3830.6	3824.1
35°	2065.2	2081.4	1954.4	2048.9	2309.5	2723.1	3459.3	4133.6	4329.0	4280.2	4241.1
37.5°	2078.2	2022.8	1931.6	2000.0	2247.6	2781.8	3622.2	4488.6	4798.1	4824.1	4645.0
40°	1980.5	1947.9	1811.1	1925.1	2130.3	2745.9	3661.3	4892.5	5417.0	5534.2	5276.9
42.5°	1840.4	1798.1	1719.9	1846.9	2061.9	2570.1	3716.6	5377.9	6045.6	6289.9	6055.4
45°	1638.4	1583.1	1544.0	1713.4	1912.1	2524.4	3658.0	5781.8	6648.3	6983.8	6977.2
47.5°	1394.1	1358.3	1338.8	1517.9	1788.3	2410.4	3537.5	6035.9	7068.5	7928.4	7798.1
50°	1117.3	1091.2	1088.0	1276.9	1579.8	2175.9	3400.7	6162.9	7706.9	8794.8	8908.9
52.5°	895.8	876.2	873.0	1026.1	1322.5	1859.9	3114.0	6260.6	8316.0	9778.6	10364.9
55°	700.3	680.8	684.0	811.1	1052.1	1521.2	2677.5	6149.9	8850.2	10785.1	11895.8
57.5°	573.3	553.7	557.0	628.7	804.6	1162.9	2133.6	5908.8	9091.3	12029.4	13680.9
60°	504.9	485.3	475.6	508.1	618.9	876.2	1586.3	4970.7	9130.4	13062.0	15619.0
62.5°	469.1	449.5	439.7	449.5	511.4	671.0	1143.3	3938.1	8905.6	13944.7	17394.3
65°	436.5	420.2	407.2	416.9	449.5	534.2	833.9	2697.1	7729.7	14348.6	18684.2
67.5°	400.7	387.6	374.6	387.6	410.4	449.5	648.2	1706.9	5794.8	13824.2	19221.6
69°	381.1	361.6	355.1	364.8	387.6	413.7	560.3	1361.6	4407.2	12827.4	18895.9
70°	361.6	348.5	338.8	355.1	374.6	394.1	504.9	1156.4	3456.0	11547.3	18088.1
72.5°	319.2	309.4	302.9	319.2	335.5	348.5	413.7	824.1	2003.3	7863.2	14345.4
75°	280.1	270.4	267.1	280.1	293.2	299.7	348.5	566.8	1182.4	4114.0	8605.9
77.5°	234.5	221.5	224.8	241.0	250.8	254.1	293.2	407.2	697.1	1863.2	3987.0
80°	172.6	172.6	185.7	198.7	198.7	198.7	234.5	296.4	423.5	856.7	1654.7
82.5°	120.5	123.8	127.0	146.6	149.8	136.8	179.2	215.0	263.8	374.6	573.3
85°	68.4	71.7	74.9	87.9	91.2	81.4	117.3	136.8	153.1	185.7	299.7
87.5°	26.1	29.3	39.1	45.6	48.9	35.8	55.4	65.1	65.1	78.2	133.6
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°	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5
2.5°	1175.9	1198.7	1241.1	1250.8	1215.0	1175.9	1088.0	1143.3	1166.1	1123.8	1136.8
5°	1456.0	1504.9	1557.0	1495.1	1456.0	1430.0	1387.6	1390.9	1368.1	1293.2	1169.4
7.5°	1772.0	1716.6	1755.7	1798.1	1736.2	1739.4	1778.5	1697.1	1635.2	1508.2	1276.9
10°	1918.6	1918.6	1928.4	1928.4	1902.3	1902.3	1899.0	1768.7	1693.8	1638.4	1573.3
12.5°	1928.4	1925.1	1964.2	1934.9	1941.4	1947.9	1964.2	2022.8	2003.3	1931.6	1990.2
15°	2198.7	2185.7	2198.7	2195.5	2205.2	2234.5	2221.5	2208.5	2211.7	2263.9	2351.8
17.5°	2452.8	2459.3	2446.3	2469.1	2469.1	2488.6	2534.2	2488.6	2449.5	2547.2	2615.7
20°	2745.9	2723.1	2671.0	2710.1	2719.9	2723.1	2798.1	2742.7	2687.3	2723.1	2804.6
22.5°	3042.4	3039.1	3045.6	3048.9	3061.9	3013.1	2912.1	2895.8	2931.6	2882.8	2892.5
25°	3224.8	3228.0	3244.3	3247.6	3192.2	3244.3	3280.2	3172.7	3172.7	3162.9	3097.7
27.5°	3446.3	3397.4	3417.0	3443.0	3420.2	3433.2	3390.9	3234.5	3400.7	3423.5	3162.9
30°	3596.1	3573.3	3550.5	3576.6	3599.4	3658.0	3537.5	3521.2	3534.2	3654.7	3312.7
32.5°	3912.1	3944.7	3902.3	3860.0	3902.3	3889.3	3837.2	3814.4	3977.2	3817.6	3417.0
35°	4205.2	4218.3	4221.5	4215.0	4241.1	4195.5	4195.5	4280.2	4329.0	4156.4	3449.5
37.5°	4912.1	4866.5	4772.0	4726.4	4807.9	4876.3	4674.3	4775.3	4755.7	4462.6	3693.8
40°	5420.2	5524.5	5553.8	5540.8	5553.8	5358.3	5400.7	5475.6	5387.7	4902.3	3609.1
42.5°	6162.9	6228.1	6205.3	6175.9	6189.0	6153.1	6026.1	6303.0	5987.0	5394.2	3739.4
45°	6840.4	6987.0	6996.8	6895.8	6977.2	6850.2	6902.3	7000.0	6680.8	5762.3	3703.6
47.5°	7648.3	7951.2	7837.2	7837.2	7918.6	7645.0	7768.8	7899.1	7052.2	6009.8	3508.2
50°	8843.7	9006.6	9000.1	8970.7	9006.6	8860.0	8840.5	8824.2	7622.2	6244.3	3387.6
52.5°	10195.5	10417.0	10332.3	10364.9	10413.8	10136.9	10355.1	9759.0	8335.6	6332.3	3114.0
55°	11921.9	12075.0	11990.3	11824.2	12045.7	11869.8	11941.5	10778.6	8830.7	6081.5	2658.0
57.5°	13977.3	14055.5	13915.4	13899.1	14045.7	13856.8	13736.3	11925.2	9088.0	5892.5	2123.8
60°	16378.0	16622.3	16534.3	16394.2	16527.8	16361.7	15449.6	12899.1	9035.9	5009.8	1645.0
62.5°	19257.5	19505.0	19407.3	19312.8	19397.5	18964.3	17058.7	13667.8	8801.4	3970.7	1202.0
65°	21635.3	22752.6	22899.2	22902.4	22492.0	21488.7	18342.1	13967.5	7563.6	2772.0	879.5
67.5°	23198.9	25521.3	26244.5	25983.9	25042.5	22752.6	18860.1	13381.2	5840.4	1752.5	658.0
69°	23019.7	26065.3	27110.9	26964.4	25641.9	22733.1	18456.2	12394.2	4462.6	1394.1	557.0
70°	22192.3	25619.1	26860.1	26925.3	25260.8	21860.1	17736.3	11260.7	3609.1	1188.9	511.4
72.5°	17710.2	21110.9	22202.1	22628.8	20977.3	17505.0	14544.1	7944.7	2091.2	830.6	413.7
75°	10970.8	12801.4	13706.9	13954.5	12954.5	10902.4	8827.4	4420.2	1273.6	586.3	348.5
77.5°	4918.6	5449.5	5970.7	5970.7	5579.8	4977.2	4045.6	2136.8	723.1	416.9	293.2
80°	1648.2	1710.1	1664.5	1680.8	1615.6	1553.8	1625.4	921.8	446.3	312.7	237.8
82.5°	1120.5	1407.2	1495.1	1495.1	1403.9	1107.5	625.4	423.5	273.6	224.8	182.4
85°	912.1	1114.0	1195.4	1231.3	1159.6	934.9	329.0	205.2	162.9	143.3	123.8
87.5°	306.2	286.6	270.4	263.8	276.9	289.9	162.9	87.9	74.9	68.4	65.1
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°	1107.5	1107.5	1107.5	1107.5	1107.5	1107.5
2.5°	1159.6	1120.5	1136.8	1153.1	1270.4	1358.3
5°	1153.1	1208.5	1332.3	1488.6	1560.3	1736.2
7.5°	1185.7	1387.6	1618.9	1781.8	1846.9	1902.3
10°	1586.3	1622.2	1700.3	1856.7	1987.0	2009.8
12.5°	2048.9	2039.1	1983.7	2055.4	1990.2	2035.8
15°	2410.4	2302.9	2228.0	2218.3	2195.5	2195.5
17.5°	2609.1	2514.7	2410.4	2384.4	2316.0	2371.4
20°	2843.7	2680.8	2420.2	2394.2	2371.4	2319.2
22.5°	2798.1	2635.2	2364.8	2332.3	2452.8	2446.3
25°	2853.4	2635.2	2377.9	2342.0	2397.4	2397.4
27.5°	2716.6	2537.5	2351.8	2136.8	2306.2	2345.3
30°	2680.8	2478.8	2263.9	2071.7	2244.3	2208.5
32.5°	2869.7	2332.3	2120.5	2061.9	2188.9	2162.9
35°	2723.1	2306.2	2084.7	1977.2	2127.1	2101.0
37.5°	2785.0	2273.6	2022.8	1931.6	2052.1	2091.2
40°	2772.0	2120.5	1951.2	1833.9	1954.4	1974.0
42.5°	2553.8	2003.3	1830.6	1713.4	1775.3	1840.4
45°	2488.6	1931.6	1713.4	1550.5	1553.8	1628.7
47.5°	2368.1	1768.7	1498.4	1348.5	1348.5	1410.4
50°	2166.1	1550.5	1254.1	1117.3	1114.0	1162.9
52.5°	1866.5	1338.8	1058.6	908.8	899.0	947.9
55°	1527.7	1078.2	833.9	736.2	716.6	736.2
57.5°	1188.9	840.4	658.0	579.8	576.6	592.8
60°	921.8	658.0	524.4	478.8	485.3	511.4
62.5°	697.1	524.4	446.3	430.0	439.7	465.8
65°	553.7	452.8	407.2	397.4	407.2	433.2
67.5°	449.5	410.4	377.9	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	332.2	338.8	358.3
72.5°	345.3	335.5	316.0	299.7	302.9	319.2
75°	302.9	296.4	283.4	263.8	263.8	283.4
77.5°	254.1	257.3	244.3	224.8	221.5	231.3
80°	202.0	208.5	202.0	182.4	175.9	175.9
82.5°	146.6	159.6	153.1	133.6	130.3	130.3
85°	91.2	101.0	97.7	84.7	84.7	74.9
87.5°	42.3	55.4	52.1	45.6	42.3	29.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)