

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: P565328

Luminaire Tested: **MSA-SA4A-830-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565328
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-SA4A-830-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: 11139 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B3 - U0 - G3

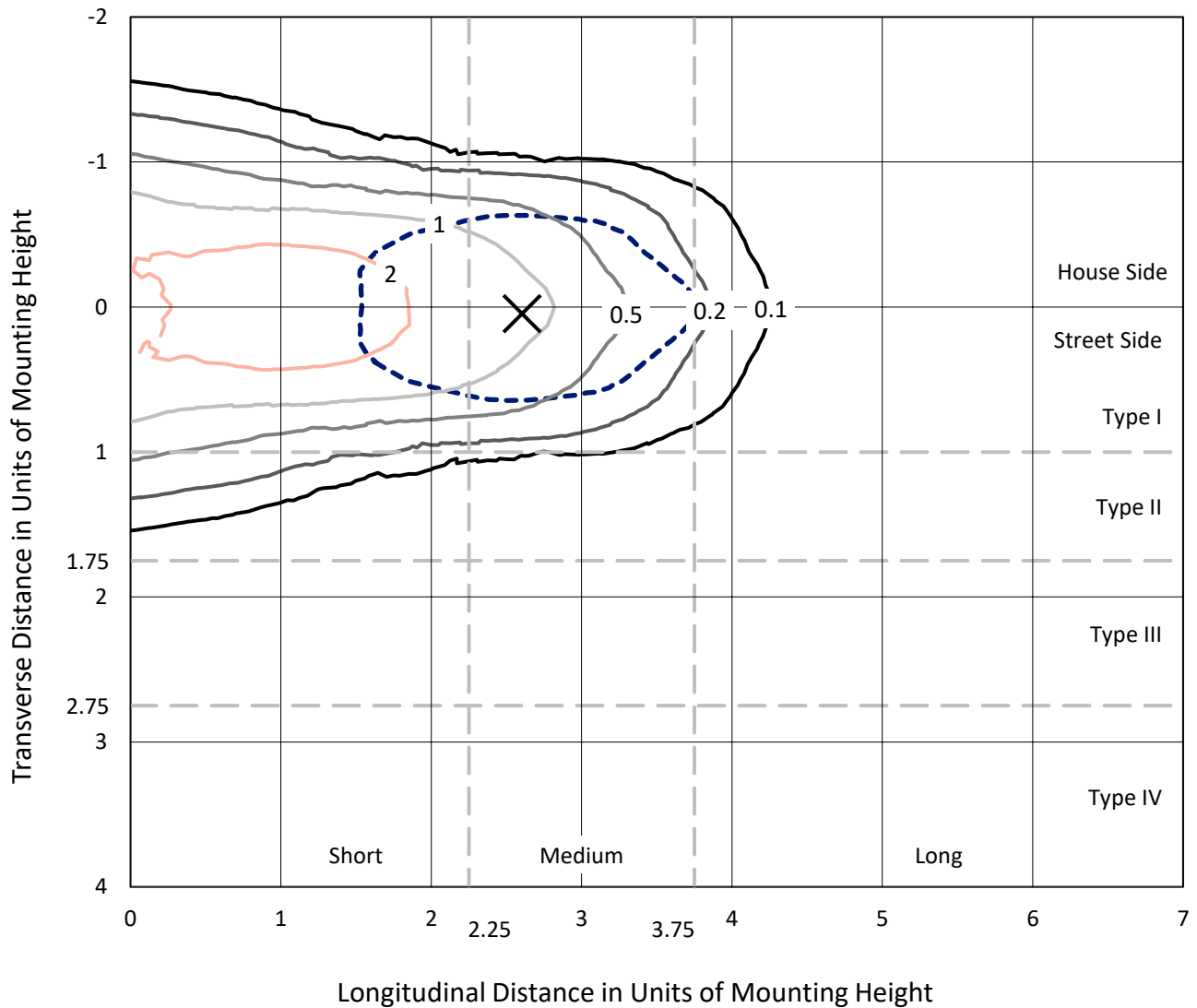
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

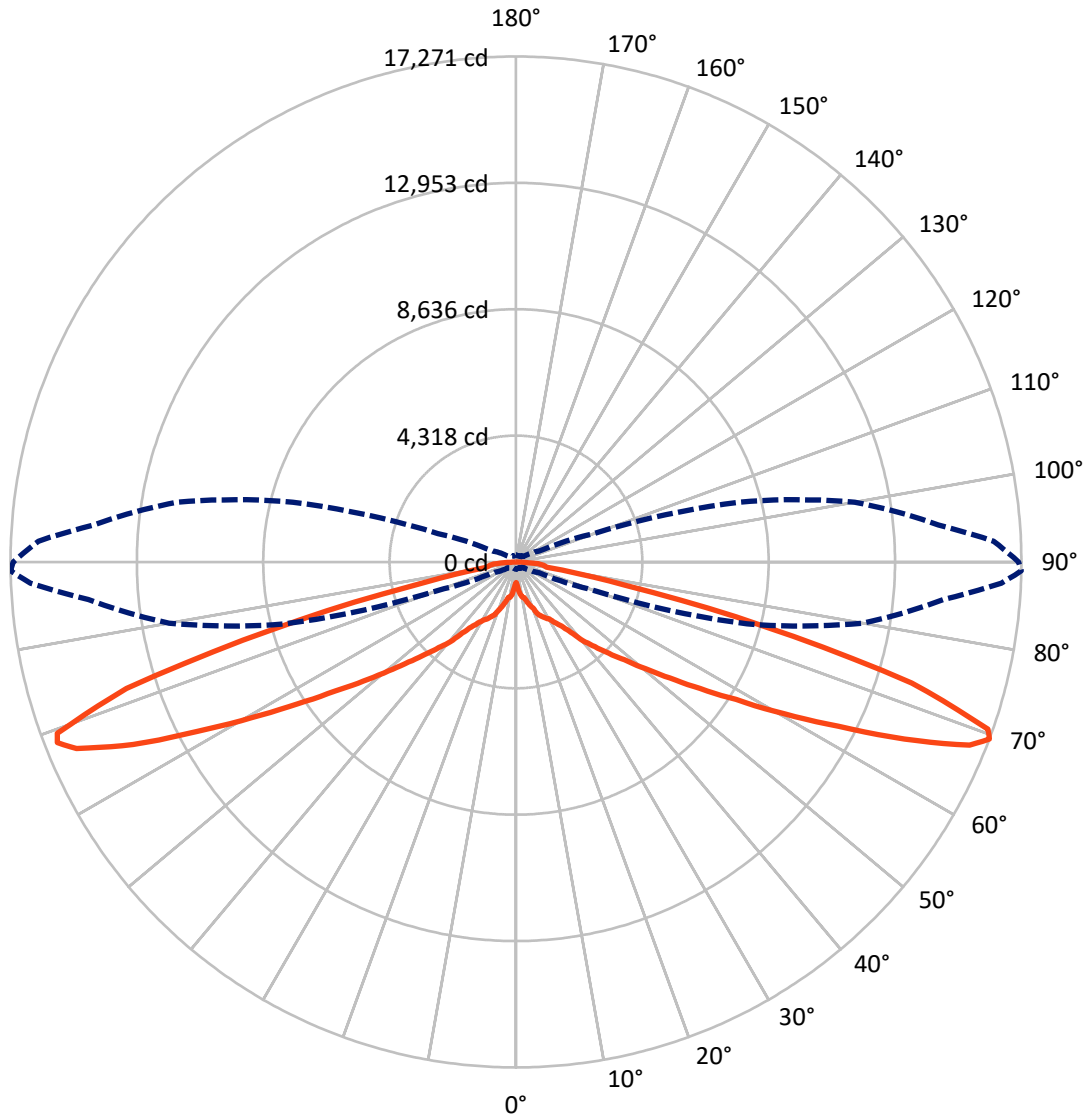
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 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	5569.4	0.0	5569.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5569.6	0.0	5569.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	11139.0	0.0	11139.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	0.8
10°-20°	408.4	3.7
20°-30°	814.9	7.3
30°-40°	1232.5	11.1
40°-50°	1789.0	16.1
50°-60°	2350.5	21.1
60°-70°	2867.2	25.7
70°-80°	1449.6	13.0
80°-90°	138.2	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°	11139.0	100.0
0°-180°	11139.0	100.0

Coefficient of Utilization



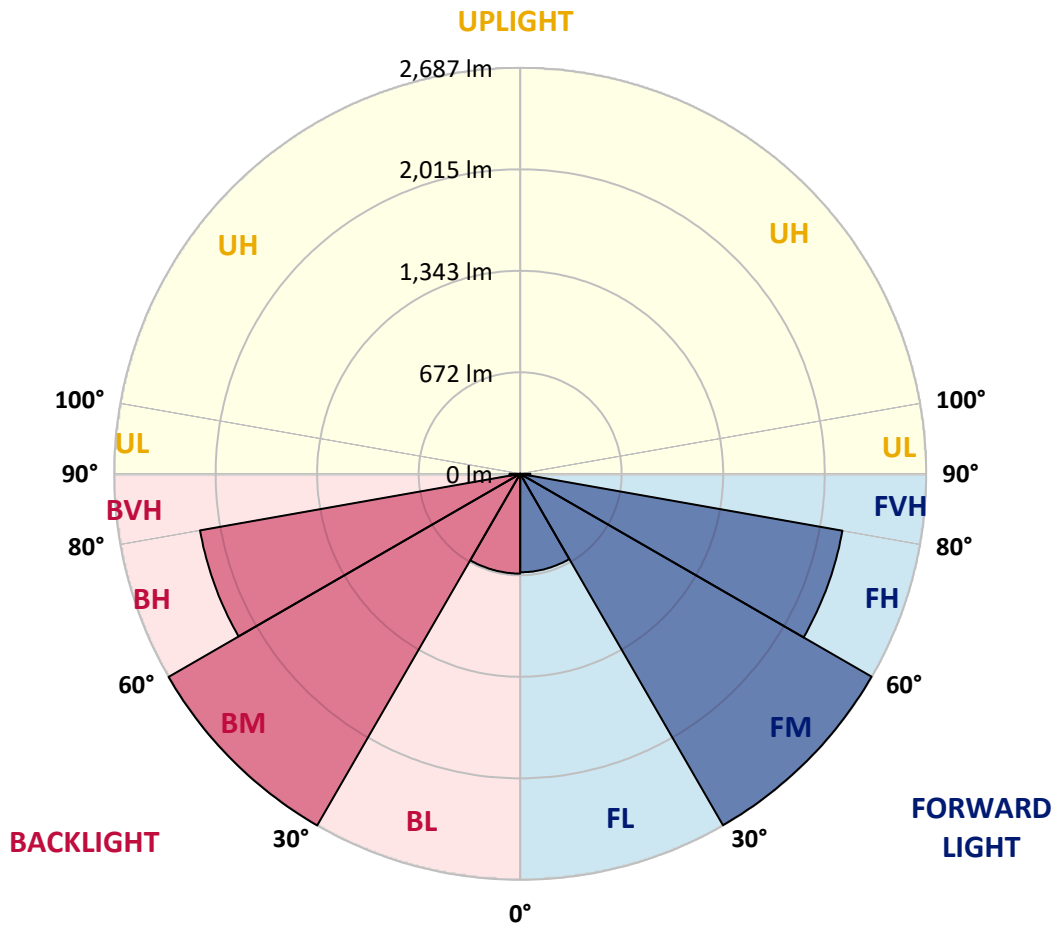
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	651.4	5.8			
FM (30°-60°)	2685.1	24.1			
FH (60°-80°)	2165.3	19.4			G2/5000
FVH (80°-90°)	67.8	0.6			G1/100
BL (0°-30°)	660.6	5.9	B2/1000		
BM (30°-60°)	2686.9	24.1	B3/5000		
BH (60°-80°)	2151.5	19.3	B3/2500		G3/2500
BVH (80°-90°)	70.4	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5
2.5°	828.0	732.5	724.2	701.4	718.0	724.2	709.7	688.9	711.8	724.2	701.4
5°	1043.8	902.7	855.0	815.5	736.7	703.5	736.7	821.8	832.1	884.0	869.5
7.5°	1149.6	1126.8	1066.6	935.9	809.3	738.7	828.0	950.4	1012.7	1062.5	1114.3
10°	1228.5	1216.0	1110.2	1016.8	964.9	969.1	971.2	1010.6	1064.5	1147.5	1176.6
12.5°	1247.2	1243.0	1259.6	1238.9	1243.0	1265.8	1243.0	1232.6	1263.8	1290.7	1261.7
15°	1367.5	1365.4	1371.7	1375.8	1458.8	1494.1	1458.8	1427.7	1404.9	1382.0	1429.8
17.5°	1450.5	1440.1	1442.2	1481.6	1575.0	1672.6	1653.9	1612.4	1560.5	1591.6	1631.1
20°	1496.2	1477.5	1489.9	1506.5	1664.3	1772.2	1784.6	1728.6	1697.5	1736.9	1770.1
22.5°	1539.7	1510.7	1467.1	1483.7	1629.0	1784.6	1844.8	1830.3	1853.1	1865.5	1859.3
25°	1487.9	1506.5	1458.8	1506.5	1653.9	1797.1	1917.4	2002.5	2004.6	1998.3	2044.0
27.5°	1456.7	1442.2	1361.3	1483.7	1606.2	1695.4	2002.5	2145.7	2189.3	2056.5	2145.7
30°	1402.8	1425.6	1315.6	1417.3	1572.9	1722.4	2100.0	2305.5	2241.1	2224.5	2245.3
32.5°	1369.6	1355.1	1303.2	1359.2	1477.5	1803.3	2162.3	2398.8	2479.8	2440.4	2436.2
35°	1315.6	1326.0	1245.1	1305.3	1471.3	1734.8	2203.8	2633.3	2757.8	2726.7	2701.8
37.5°	1323.9	1288.7	1230.6	1274.1	1431.8	1772.2	2307.5	2859.5	3056.7	3073.3	2959.1
40°	1261.7	1240.9	1153.8	1226.4	1357.1	1749.3	2332.4	3116.8	3450.9	3525.6	3361.7
42.5°	1172.4	1145.5	1095.7	1176.6	1313.6	1637.3	2367.7	3426.0	3851.4	4007.1	3857.7
45°	1043.8	1008.5	983.6	1091.5	1218.1	1608.2	2330.4	3683.4	4235.3	4449.1	4444.9
47.5°	888.2	865.3	852.9	967.0	1139.2	1535.6	2253.6	3845.2	4503.0	5050.9	4967.9
50°	711.8	695.2	693.1	813.5	1006.4	1386.2	2166.4	3926.1	4909.8	5602.8	5675.5
52.5°	570.7	558.2	556.1	653.7	842.5	1184.9	1983.8	3988.4	5297.8	6229.5	6603.1
55°	446.2	433.7	435.8	516.7	670.3	969.1	1705.8	3917.8	5638.1	6870.8	7578.4
57.5°	365.2	352.8	354.8	400.5	512.6	740.8	1359.2	3764.3	5791.7	7663.5	8715.5
60°	321.6	309.2	303.0	323.7	394.3	558.2	1010.6	3166.6	5816.6	8321.3	9950.2
62.5°	298.8	286.4	280.1	286.4	325.8	427.5	728.4	2508.8	5673.4	8883.6	11081.2
65°	278.1	267.7	259.4	265.6	286.4	340.3	531.2	1718.2	4924.3	9140.9	11902.9
67.5°	255.2	246.9	238.6	246.9	261.5	286.4	413.0	1087.4	3691.7	8806.8	12245.3
69°	242.8	230.3	226.2	232.4	246.9	263.5	356.9	867.4	2807.7	8171.9	12037.8
70°	230.3	222.0	215.8	226.2	238.6	251.1	321.6	736.7	2201.7	7356.3	11523.2
72.5°	203.4	197.1	193.0	203.4	213.7	222.0	263.5	525.0	1276.2	5009.4	9138.9
75°	178.5	172.2	170.2	178.5	186.8	190.9	222.0	361.1	753.3	2620.9	5482.5
77.5°	149.4	141.1	143.2	153.6	159.8	161.9	186.8	259.4	444.1	1187.0	2540.0
80°	110.0	110.0	118.3	126.6	126.6	126.6	149.4	188.8	269.8	545.8	1054.2
82.5°	76.8	78.9	80.9	93.4	95.5	87.2	114.1	137.0	168.1	238.6	365.2
85°	43.6	45.7	47.7	56.0	58.1	51.9	74.7	87.2	97.5	118.3	190.9
87.5°	16.6	18.7	24.9	29.1	31.1	22.8	35.3	41.5	41.5	49.8	85.1
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5	705.5
2.5°	749.1	763.6	790.6	796.8	774.0	749.1	693.1	728.4	742.9	715.9	724.2
5°	927.6	958.7	991.9	952.5	927.6	911.0	884.0	886.1	871.6	823.8	745.0
7.5°	1128.9	1093.6	1118.5	1145.5	1106.0	1108.1	1133.0	1081.1	1041.7	960.8	813.5
10°	1222.3	1222.3	1228.5	1228.5	1211.9	1211.9	1209.8	1126.8	1079.1	1043.8	1002.3
12.5°	1228.5	1226.4	1251.3	1232.6	1236.8	1240.9	1251.3	1288.7	1276.2	1230.6	1267.9
15°	1400.7	1392.4	1400.7	1398.6	1404.9	1423.5	1415.2	1406.9	1409.0	1442.2	1498.2
17.5°	1562.6	1566.7	1558.4	1572.9	1572.9	1585.4	1614.5	1585.4	1560.5	1622.8	1666.3
20°	1749.3	1734.8	1701.6	1726.5	1732.7	1734.8	1782.5	1747.3	1712.0	1734.8	1786.7
22.5°	1938.2	1936.1	1940.2	1942.3	1950.6	1919.5	1855.2	1844.8	1867.6	1836.5	1842.7
25°	2054.4	2056.5	2066.8	2068.9	2033.6	2066.8	2089.7	2021.2	2021.2	2015.0	1973.4
27.5°	2195.5	2164.4	2176.8	2193.4	2178.9	2187.2	2160.2	2060.6	2166.4	2181.0	2015.0
30°	2290.9	2276.4	2261.9	2278.5	2293.0	2330.4	2253.6	2243.2	2251.5	2328.3	2110.4
32.5°	2492.2	2513.0	2486.0	2459.0	2486.0	2477.7	2444.5	2430.0	2533.7	2432.1	2176.8
35°	2679.0	2687.3	2689.4	2685.2	2701.8	2672.8	2672.8	2726.7	2757.8	2647.9	2197.6
37.5°	3129.3	3100.2	3040.1	3011.0	3062.9	3106.5	2977.8	3042.1	3029.7	2842.9	2353.2
40°	3453.0	3519.4	3538.1	3529.8	3538.1	3413.6	3440.6	3488.3	3432.3	3123.1	2299.2
42.5°	3926.1	3967.6	3953.1	3934.4	3942.7	3919.9	3839.0	4015.4	3814.1	3436.4	2382.2
45°	4357.8	4451.2	4457.4	4393.0	4444.9	4364.0	4397.2	4459.5	4256.1	3670.9	2359.4
47.5°	4872.4	5065.4	4992.8	4992.8	5044.6	4870.3	4949.2	5032.2	4492.7	3828.6	2234.9
50°	5634.0	5737.7	5733.6	5714.9	5737.7	5644.4	5631.9	5621.5	4855.8	3978.0	2158.1
52.5°	6495.2	6636.3	6582.3	6603.1	6634.2	6457.8	6596.8	6217.1	5310.3	4034.1	1983.8
55°	7595.0	7692.5	7638.6	7532.7	7673.8	7561.8	7607.4	6866.6	5625.7	3874.3	1693.3
57.5°	8904.4	8954.2	8865.0	8854.6	8948.0	8827.6	8750.8	7597.0	5789.6	3753.9	1353.0
60°	10433.8	10589.4	10533.4	10444.1	10529.2	10423.4	9842.3	8217.5	5756.4	3191.5	1047.9
62.5°	12268.2	12425.9	12363.6	12303.4	12357.4	12081.4	10867.5	8707.2	5607.0	2529.6	765.7
65°	13783.0	14494.8	14588.2	14590.2	14328.8	13689.6	11685.1	8898.2	4818.5	1765.9	560.3
67.5°	14779.1	16258.6	16719.3	16553.3	15953.6	14494.8	12015.0	8524.6	3720.7	1116.4	419.2
69°	14664.9	16605.2	17271.3	17177.9	16335.4	14482.3	11757.7	7895.9	2842.9	888.2	354.8
70°	14137.9	16320.9	17111.5	17153.0	16092.6	13926.2	11299.1	7173.7	2299.2	757.4	325.8
72.5°	11282.5	13448.9	14144.1	14415.9	13363.8	11151.7	9265.5	5061.2	1332.2	529.2	263.5
75°	6989.0	8155.3	8732.1	8889.9	8252.8	6945.5	5623.6	2816.0	811.4	373.5	222.0
77.5°	3133.4	3471.7	3803.7	3803.7	3554.7	3170.8	2577.3	1361.3	460.7	265.6	186.8
80°	1050.0	1089.4	1060.4	1070.8	1029.3	989.8	1035.5	587.3	284.3	199.2	151.5
82.5°	713.8	896.5	952.5	952.5	894.4	705.5	398.4	269.8	174.3	143.2	116.2
85°	581.0	709.7	761.6	784.4	738.7	595.6	209.6	130.7	103.8	91.3	78.9
87.5°	195.1	182.6	172.2	168.1	176.4	184.7	103.8	56.0	47.7	43.6	41.5
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):

	135°	145°	155°	165°	175°	180°
0°	705.5	705.5	705.5	705.5	705.5	705.5
2.5°	738.7	713.8	724.2	734.6	809.3	865.3
5°	734.6	769.9	848.7	948.3	994.0	1106.0
7.5°	755.3	884.0	1031.3	1135.1	1176.6	1211.9
10°	1010.6	1033.4	1083.2	1182.8	1265.8	1280.4
12.5°	1305.3	1299.0	1263.8	1309.4	1267.9	1297.0
15°	1535.6	1467.1	1419.4	1413.2	1398.6	1398.6
17.5°	1662.2	1602.0	1535.6	1519.0	1475.4	1510.7
20°	1811.6	1707.8	1541.8	1525.2	1510.7	1477.5
22.5°	1782.5	1678.8	1506.5	1485.8	1562.6	1558.4
25°	1817.8	1678.8	1514.8	1492.0	1527.3	1527.3
27.5°	1730.7	1616.5	1498.2	1361.3	1469.2	1494.1
30°	1707.8	1579.2	1442.2	1319.8	1429.8	1406.9
32.5°	1828.2	1485.8	1350.9	1313.6	1394.5	1377.9
35°	1734.8	1469.2	1328.1	1259.6	1355.1	1338.5
37.5°	1774.2	1448.4	1288.7	1230.6	1307.3	1332.2
40°	1765.9	1350.9	1243.0	1168.3	1245.1	1257.5
42.5°	1626.9	1276.2	1166.2	1091.5	1130.9	1172.4
45°	1585.4	1230.6	1091.5	987.8	989.8	1037.6
47.5°	1508.6	1126.8	954.6	859.1	859.1	898.5
50°	1380.0	987.8	798.9	711.8	709.7	740.8
52.5°	1189.0	852.9	674.4	579.0	572.7	603.9
55°	973.2	686.9	531.2	469.0	456.5	469.0
57.5°	757.4	535.4	419.2	369.4	367.3	377.7
60°	587.3	419.2	334.1	305.0	309.2	325.8
62.5°	444.1	334.1	284.3	273.9	280.1	296.7
65°	352.8	288.4	259.4	253.2	259.4	276.0
67.5°	286.4	261.5	240.7	232.4	236.6	253.2
69°	263.5	246.9	230.3	220.0	224.1	236.6
70°	251.1	238.6	222.0	211.7	215.8	228.3
72.5°	220.0	213.7	201.3	190.9	193.0	203.4
75°	193.0	188.8	180.5	168.1	168.1	180.5
77.5°	161.9	163.9	155.6	143.2	141.1	147.3
80°	128.7	132.8	128.7	116.2	112.1	112.1
82.5°	93.4	101.7	97.5	85.1	83.0	83.0
85°	58.1	64.3	62.3	54.0	54.0	47.7
87.5°	27.0	35.3	33.2	29.1	27.0	18.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)