

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: P565282

Luminaire Tested: **MSA-SA4B-727-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565282
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-SA4B-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: 14691 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

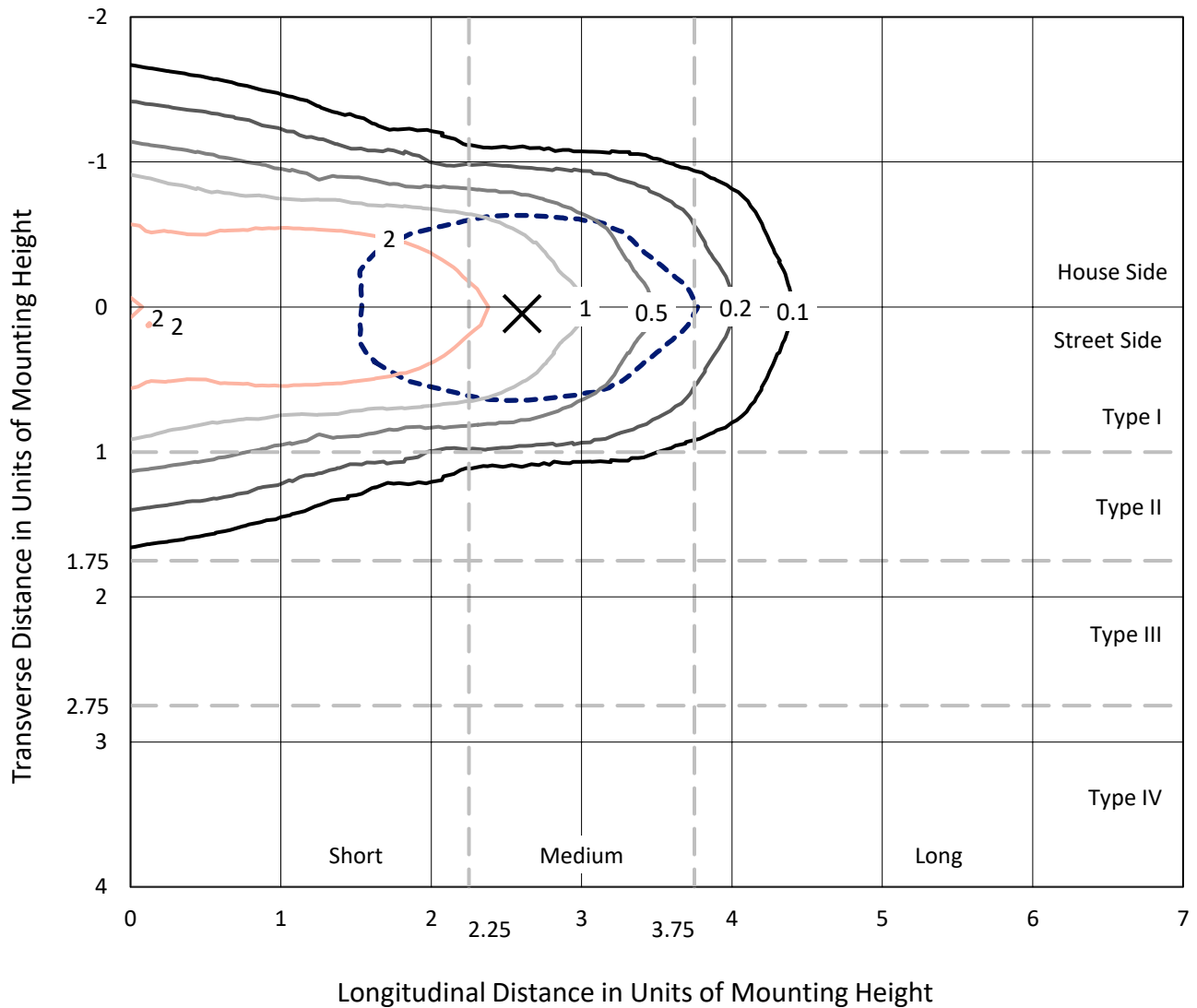
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

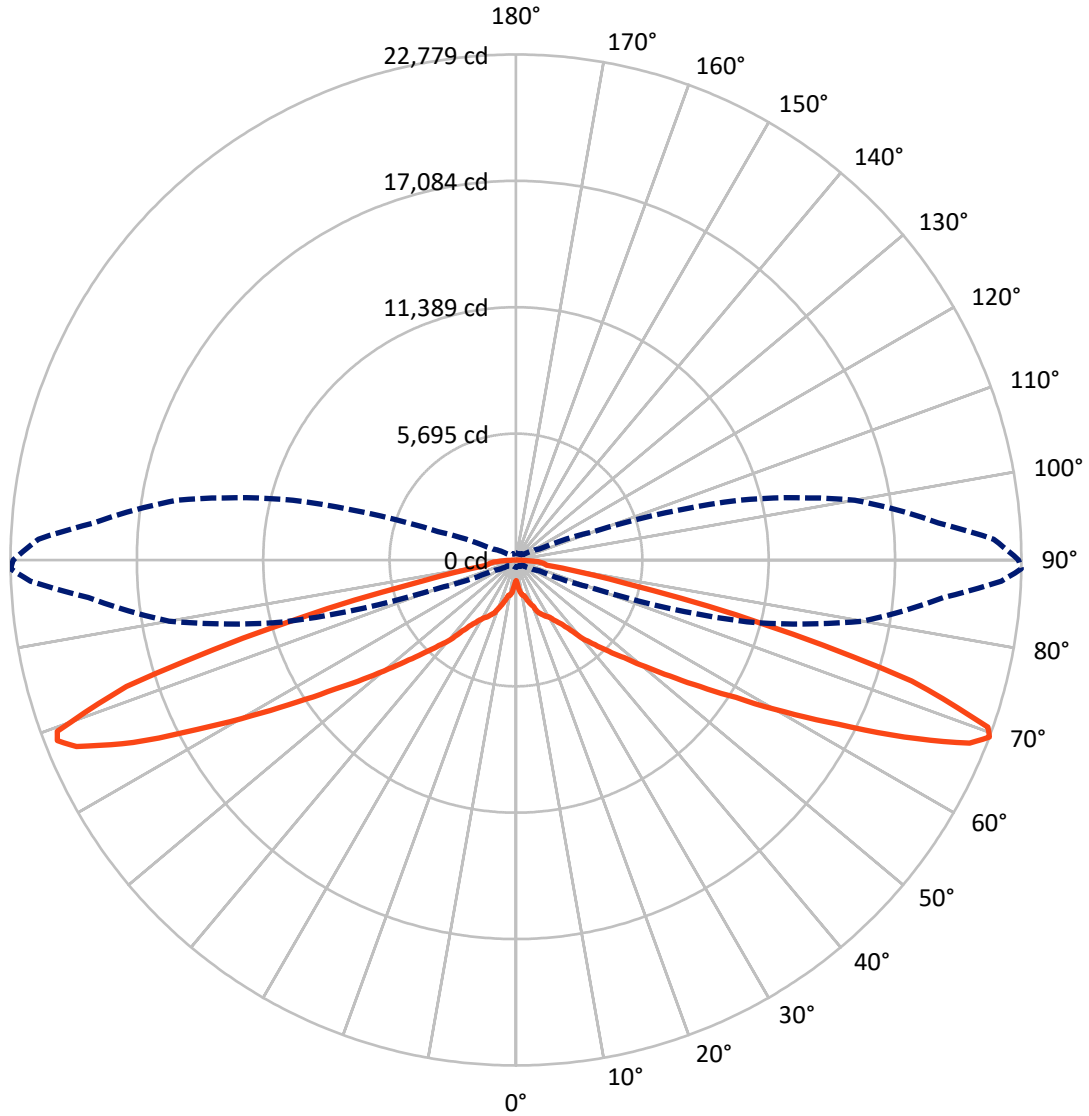
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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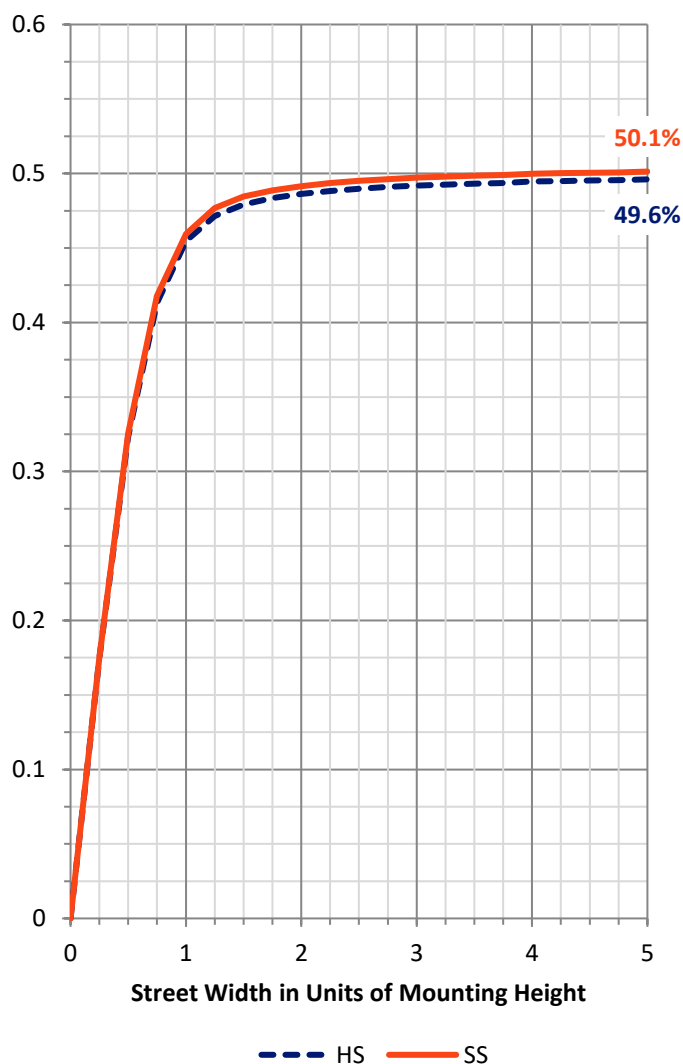
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7345.4	0.0	7345.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7345.6	0.0	7345.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	14691.0	0.0	14691.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.9	0.8
10°-20°	538.7	3.7
20°-30°	1074.7	7.3
30°-40°	1625.5	11.1
40°-50°	2359.5	16.1
50°-60°	3100.0	21.1
60°-70°	3781.6	25.7
70°-80°	1911.8	13.0
80°-90°	182.2	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°	14691.0	100.0
0°-180°	14691.0	100.0

Coefficient of Utilization

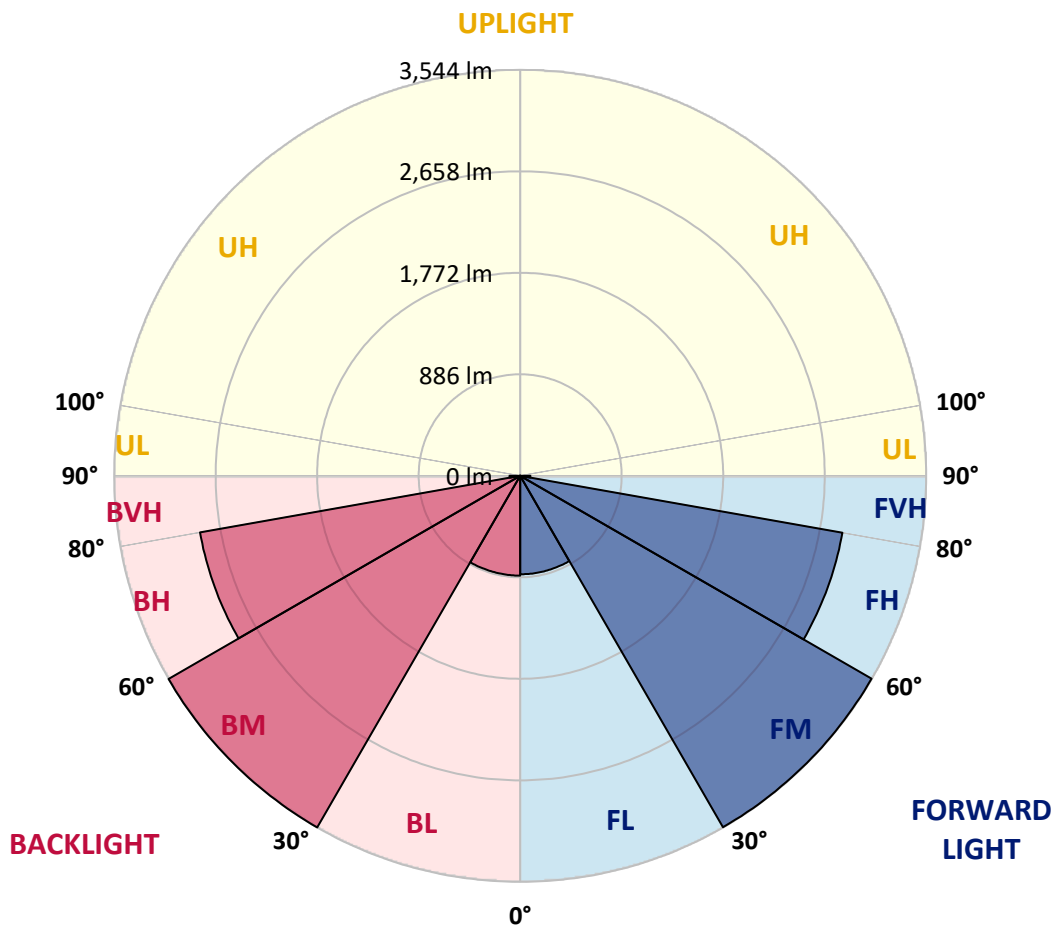


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	859.1	5.8			
FM (30°-60°)	3541.3	24.1			
FH (60°-80°)	2855.8	19.4			G2/5000
FVH (80°-90°)	89.4	0.6			G1/100
BL (0°-30°)	871.2	5.9	B2/1000		
BM (30°-60°)	3543.7	24.1	B3/5000		
BH (60°-80°)	2837.6	19.3	B4/5000		G4/5000
BVH (80°-90°)	92.9	0.6			G1/100
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°	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5
2.5°	1092.0	966.1	955.2	925.1	946.9	955.2	936.0	908.6	938.7	955.2	925.1
5°	1376.6	1190.5	1127.6	1075.6	971.6	927.8	971.6	1083.8	1097.5	1165.9	1146.7
7.5°	1516.2	1486.1	1406.7	1234.3	1067.4	974.3	1092.0	1253.5	1335.6	1401.3	1469.7
10°	1620.2	1603.8	1464.2	1341.1	1272.6	1278.1	1280.8	1332.8	1404.0	1513.5	1551.8
12.5°	1644.8	1639.4	1661.3	1633.9	1639.4	1669.5	1639.4	1625.7	1666.7	1702.3	1664.0
15°	1803.6	1800.8	1809.1	1814.5	1924.0	1970.5	1924.0	1882.9	1852.8	1822.7	1885.7
17.5°	1913.1	1899.4	1902.1	1954.1	2077.3	2205.9	2181.3	2126.5	2058.1	2099.2	2151.2
20°	1973.3	1948.6	1965.1	1987.0	2195.0	2337.3	2353.7	2279.8	2238.7	2290.7	2334.5
22.5°	2030.7	1992.4	1935.0	1956.8	2148.4	2353.7	2433.1	2413.9	2444.0	2460.4	2452.2
25°	1962.3	1987.0	1924.0	1987.0	2181.3	2370.1	2528.8	2641.1	2643.8	2635.6	2695.8
27.5°	1921.3	1902.1	1795.4	1956.8	2118.3	2236.0	2641.1	2829.9	2887.4	2712.2	2829.9
30°	1850.1	1880.2	1735.2	1869.3	2074.5	2271.6	2769.7	3040.6	2955.8	2933.9	2961.3
32.5°	1806.3	1787.2	1718.7	1792.6	1948.6	2378.3	2851.8	3163.8	3270.5	3218.5	3213.1
35°	1735.2	1748.8	1642.1	1721.5	1940.4	2288.0	2906.5	3473.1	3637.3	3596.2	3563.4
37.5°	1746.1	1699.6	1622.9	1680.4	1888.4	2337.3	3043.4	3771.4	4031.4	4053.3	3902.7
40°	1664.0	1636.6	1521.7	1617.5	1789.9	2307.2	3076.2	4110.7	4551.4	4649.9	4433.7
42.5°	1546.3	1510.7	1445.1	1551.8	1732.4	2159.4	3122.7	4518.5	5079.6	5284.8	5087.8
45°	1376.6	1330.1	1297.3	1439.6	1606.5	2121.1	3073.5	4857.9	5585.9	5867.8	5862.3
47.5°	1171.4	1141.3	1124.8	1275.4	1502.5	2025.3	2972.2	5071.4	5939.0	6661.5	6552.0
50°	938.7	916.8	914.1	1072.8	1327.4	1828.2	2857.3	5178.1	6475.4	7389.5	7485.3
52.5°	752.6	736.2	733.5	862.1	1111.2	1562.7	2616.4	5260.2	6987.2	8216.0	8708.6
55°	588.4	572.0	574.7	681.5	884.0	1278.1	2249.7	5167.2	7436.0	9061.7	9995.0
57.5°	481.7	465.3	468.0	528.2	676.0	977.1	1792.6	4964.6	7638.5	10107.2	11494.8
60°	424.2	407.8	399.6	426.9	520.0	736.2	1332.8	4176.4	7671.4	10974.8	13123.2
62.5°	394.1	377.7	369.5	377.7	429.7	563.8	960.6	3308.8	7482.5	11716.4	14614.8
65°	366.7	353.1	342.1	350.3	377.7	448.8	700.6	2266.1	6494.5	12055.8	15698.5
67.5°	336.6	325.7	314.7	325.7	344.8	377.7	544.6	1434.1	4868.8	11615.2	16150.1
69°	320.2	303.8	298.3	306.5	325.7	347.6	470.7	1144.0	3703.0	10777.7	15876.4
70°	303.8	292.8	284.6	298.3	314.7	331.2	424.2	971.6	2903.8	9702.1	15197.7
72.5°	268.2	260.0	254.5	268.2	281.9	292.8	347.6	692.4	1683.2	6606.7	12053.1
75°	235.4	227.2	224.4	235.4	246.3	251.8	292.8	476.2	993.5	3456.6	7230.7
77.5°	197.1	186.1	188.8	202.5	210.7	213.5	246.3	342.1	585.7	1565.5	3349.9
80°	145.1	145.1	156.0	166.9	166.9	166.9	197.1	249.1	355.8	719.8	1390.3
82.5°	101.3	104.0	106.7	123.2	125.9	114.9	150.5	180.6	221.7	314.7	481.7
85°	57.5	60.2	62.9	73.9	76.6	68.4	98.5	114.9	128.6	156.0	251.8
87.5°	21.9	24.6	32.8	38.3	41.1	30.1	46.5	54.7	54.7	65.7	112.2
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5	930.5
2.5°	988.0	1007.2	1042.7	1050.9	1020.8	988.0	914.1	960.6	979.8	944.2	955.2
5°	1223.4	1264.4	1308.2	1256.2	1223.4	1201.5	1165.9	1168.6	1149.5	1086.5	982.5
7.5°	1488.8	1442.3	1475.2	1510.7	1458.7	1461.5	1494.3	1425.9	1373.9	1267.2	1072.8
10°	1612.0	1612.0	1620.2	1620.2	1598.3	1598.3	1595.6	1486.1	1423.2	1376.6	1321.9
12.5°	1620.2	1617.5	1650.3	1625.7	1631.2	1636.6	1650.3	1699.6	1683.2	1622.9	1672.2
15°	1847.4	1836.4	1847.4	1844.6	1852.8	1877.5	1866.5	1855.6	1858.3	1902.1	1976.0
17.5°	2060.8	2066.3	2055.4	2074.5	2074.5	2091.0	2129.3	2091.0	2058.1	2140.2	2197.7
20°	2307.2	2288.0	2244.2	2277.1	2285.3	2288.0	2351.0	2304.4	2257.9	2288.0	2356.4
22.5°	2556.2	2553.5	2559.0	2561.7	2572.6	2531.6	2446.7	2433.1	2463.2	2422.1	2430.3
25°	2709.5	2712.2	2725.9	2728.6	2682.1	2725.9	2756.0	2665.7	2665.7	2657.5	2602.7
27.5°	2895.6	2854.5	2871.0	2892.8	2873.7	2884.6	2849.1	2717.7	2857.3	2876.4	2657.5
30°	3021.5	3002.3	2983.2	3005.1	3024.2	3073.5	2972.2	2958.5	2969.5	3070.7	2783.4
32.5°	3287.0	3314.3	3278.7	3243.2	3278.7	3267.8	3224.0	3204.8	3341.7	3207.6	2871.0
35°	3533.3	3544.2	3547.0	3541.5	3563.4	3525.1	3525.1	3596.2	3637.3	3492.2	2898.3
37.5°	4127.2	4088.8	4009.5	3971.2	4039.6	4097.1	3927.4	4012.2	3995.8	3749.5	3103.6
40°	4554.1	4641.7	4666.3	4655.4	4666.3	4502.1	4537.7	4600.6	4526.7	4119.0	3032.4
42.5°	5178.1	5232.8	5213.7	5189.1	5200.0	5169.9	5063.2	5295.8	5030.3	4532.2	3141.9
45°	5747.4	5870.5	5878.7	5793.9	5862.3	5755.6	5799.4	5881.5	5613.3	4841.5	3111.8
47.5°	6426.1	6680.6	6584.9	6584.9	6653.3	6423.4	6527.4	6636.9	5925.3	5049.5	2947.6
50°	7430.5	7567.4	7561.9	7537.3	7567.4	7444.2	7427.8	7414.1	6404.2	5246.5	2846.3
52.5°	8566.3	8752.4	8681.3	8708.6	8749.7	8517.1	8700.4	8199.6	7003.6	5320.4	2616.4
55°	10016.9	10145.5	10074.3	9934.8	10120.9	9973.1	10033.3	9056.2	7419.6	5109.7	2233.3
57.5°	11743.8	11809.5	11691.8	11678.1	11801.3	11642.5	11541.3	10019.6	7635.8	4951.0	1784.4
60°	13760.9	13966.1	13892.2	13774.5	13886.8	13747.2	12980.9	10837.9	7592.0	4209.3	1382.1
62.5°	16180.2	16388.2	16306.1	16226.8	16297.9	15933.9	14332.9	11483.8	7395.0	3336.2	1009.9
65°	18178.1	19116.9	19240.0	19242.8	18897.9	18055.0	15411.2	11735.6	6355.0	2329.1	738.9
67.5°	19491.8	21443.2	22050.8	21831.8	21040.9	19116.9	15846.3	11243.0	4907.2	1472.4	552.8
69°	19341.3	21900.2	22778.8	22655.6	21544.5	19100.4	15507.0	10413.7	3749.5	1171.4	468.0
70°	18646.1	21525.3	22568.0	22622.8	21224.2	18367.0	14902.1	9461.3	3032.4	998.9	429.7
72.5°	14880.2	17737.5	18654.3	19012.9	17625.3	14707.8	12220.0	6675.2	1757.1	697.9	347.6
75°	9217.7	10755.8	11516.6	11724.6	10884.4	9160.2	7416.9	3713.9	1070.1	492.6	292.8
77.5°	4132.6	4578.7	5016.6	5016.6	4688.2	4181.9	3399.2	1795.4	607.6	350.3	246.3
80°	1384.8	1436.8	1398.5	1412.2	1357.5	1305.5	1365.7	774.5	374.9	262.7	199.8
82.5°	941.5	1182.3	1256.2	1256.2	1179.6	930.5	525.5	355.8	229.9	188.8	153.3
85°	766.3	936.0	1004.4	1034.5	974.3	785.5	276.4	172.4	136.8	120.4	104.0
87.5°	257.3	240.8	227.2	221.7	232.6	243.6	136.8	73.9	62.9	57.5	54.7
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°	930.5	930.5	930.5	930.5	930.5	930.5
2.5°	974.3	941.5	955.2	968.8	1067.4	1141.3
5°	968.8	1015.4	1119.4	1250.7	1310.9	1458.7
7.5°	996.2	1165.9	1360.2	1497.1	1551.8	1598.3
10°	1332.8	1362.9	1428.6	1560.0	1669.5	1688.6
12.5°	1721.5	1713.3	1666.7	1726.9	1672.2	1710.5
15°	2025.3	1935.0	1872.0	1863.8	1844.6	1844.6
17.5°	2192.2	2112.8	2025.3	2003.4	1945.9	1992.4
20°	2389.3	2252.4	2033.5	2011.6	1992.4	1948.6
22.5°	2351.0	2214.1	1987.0	1959.6	2060.8	2055.4
25°	2397.5	2214.1	1997.9	1967.8	2014.3	2014.3
27.5°	2282.5	2132.0	1976.0	1795.4	1937.7	1970.5
30°	2252.4	2082.7	1902.1	1740.6	1885.7	1855.6
32.5°	2411.2	1959.6	1781.7	1732.4	1839.2	1817.3
35°	2288.0	1937.7	1751.6	1661.3	1787.2	1765.3
37.5°	2340.0	1910.3	1699.6	1622.9	1724.2	1757.1
40°	2329.1	1781.7	1639.4	1540.8	1642.1	1658.5
42.5°	2145.7	1683.2	1538.1	1439.6	1491.6	1546.3
45°	2091.0	1622.9	1439.6	1302.7	1305.5	1368.4
47.5°	1989.7	1486.1	1258.9	1133.1	1133.1	1185.1
50°	1820.0	1302.7	1053.7	938.7	936.0	977.1
52.5°	1568.2	1124.8	889.5	763.6	755.4	796.4
55°	1283.6	905.9	700.6	618.5	602.1	618.5
57.5°	998.9	706.1	552.8	487.2	484.4	498.1
60°	774.5	552.8	440.6	402.3	407.8	429.7
62.5°	585.7	440.6	374.9	361.3	369.5	391.4
65°	465.3	380.4	342.1	333.9	342.1	364.0
67.5°	377.7	344.8	317.5	306.5	312.0	333.9
69°	347.6	325.7	303.8	290.1	295.6	312.0
70°	331.2	314.7	292.8	279.2	284.6	301.1
72.5°	290.1	281.9	265.5	251.8	254.5	268.2
75°	254.5	249.1	238.1	221.7	221.7	238.1
77.5°	213.5	216.2	205.3	188.8	186.1	194.3
80°	169.7	175.2	169.7	153.3	147.8	147.8
82.5°	123.2	134.1	128.6	112.2	109.5	109.5
85°	76.6	84.8	82.1	71.2	71.2	62.9
87.5°	35.6	46.5	43.8	38.3	35.6	24.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)