

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: P565277

Luminaire Tested: **MSA-SA3A-727-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565277  
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-SA3A-727-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

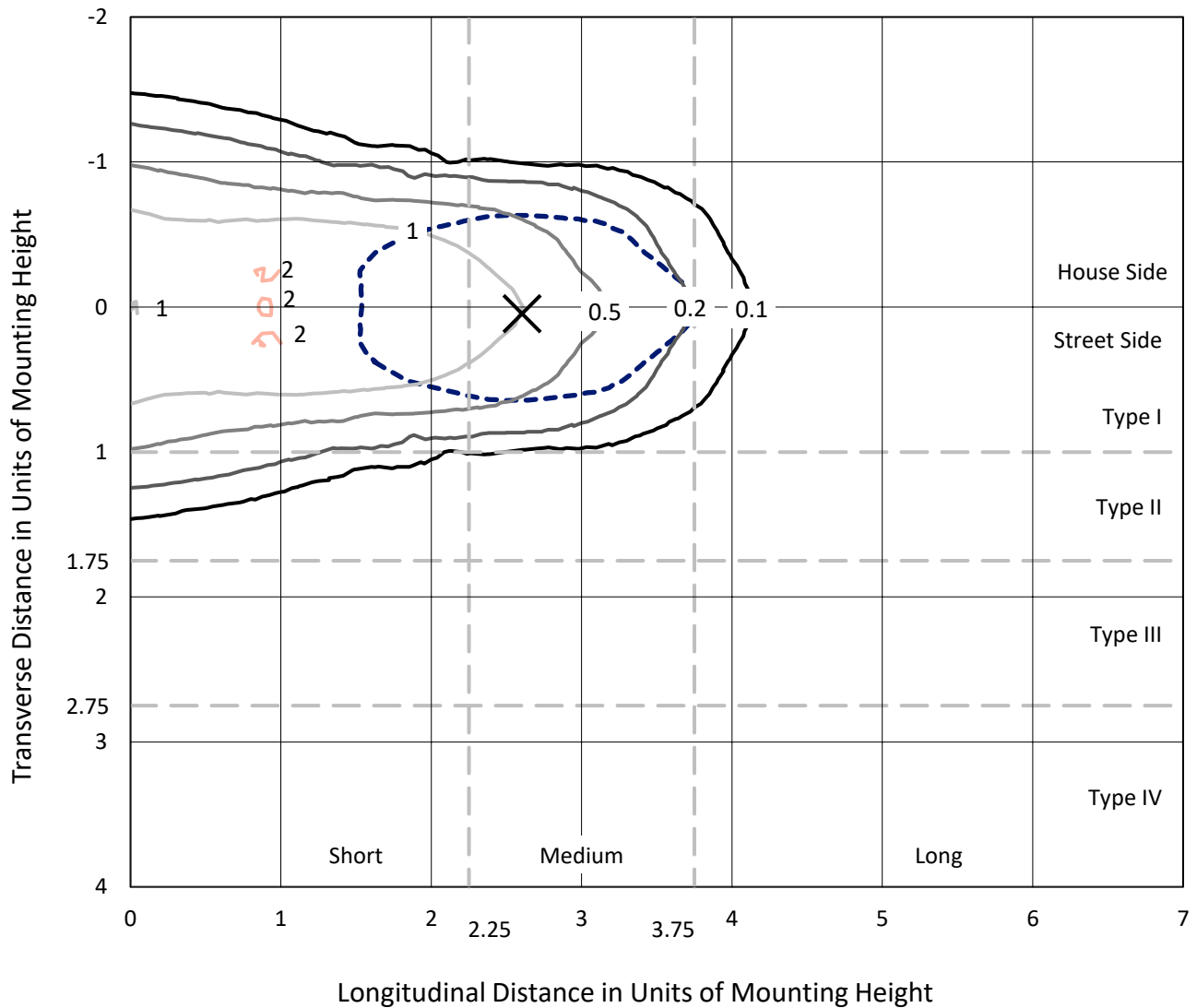
Lumens per Lamp: N/A  
Luminaire Lumens: 8869 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

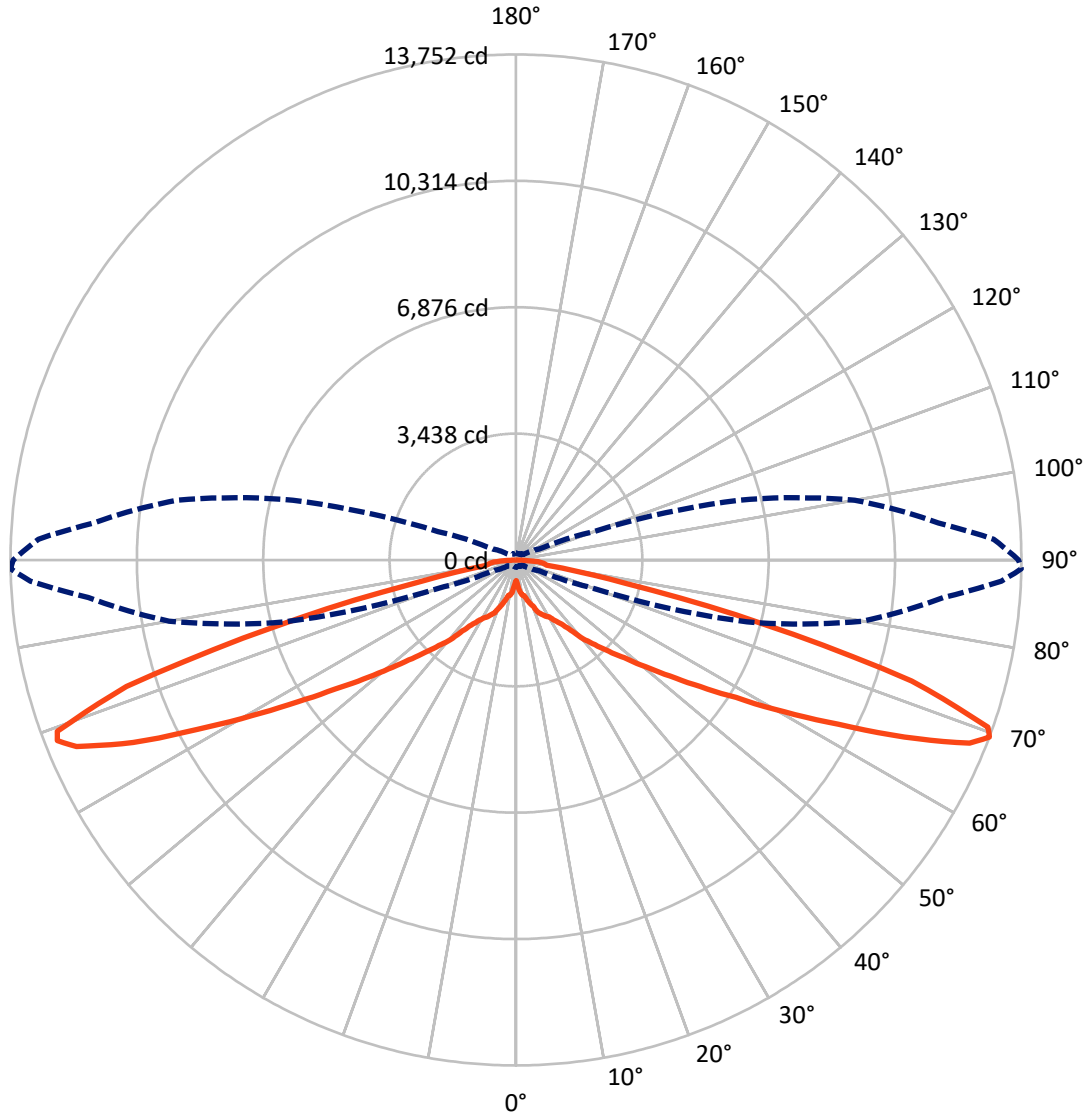
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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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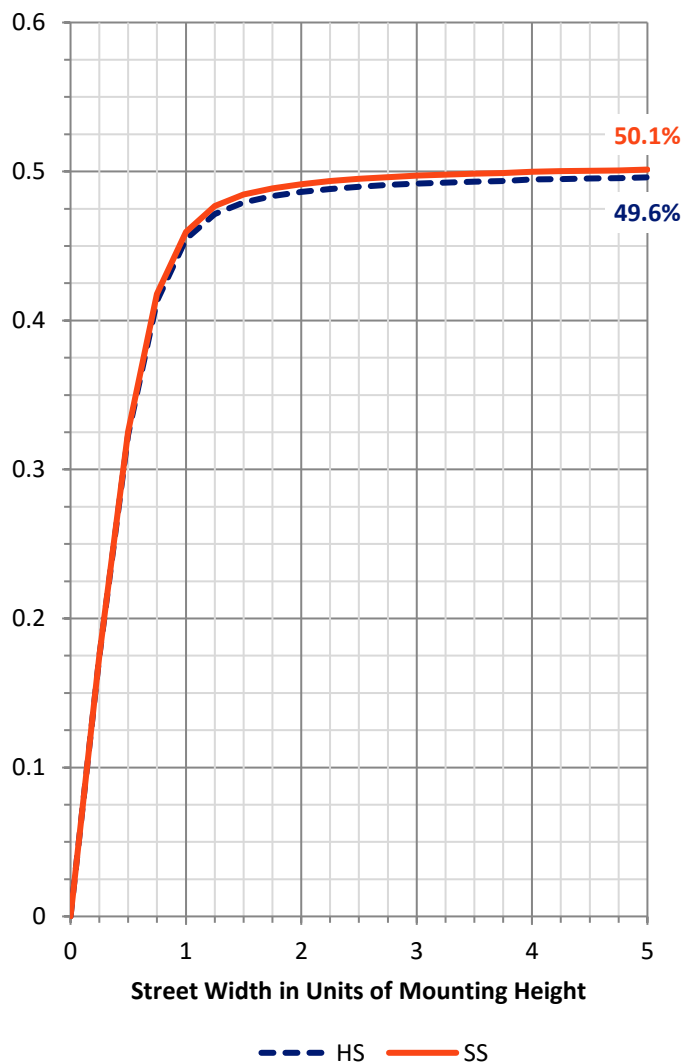
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4434.4	0.0	4434.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4434.6	0.0	4434.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8869.0	0.0	8869.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.6	0.8
10°-20°	325.2	3.7
20°-30°	648.8	7.3
30°-40°	981.3	11.1
40°-50°	1424.5	16.1
50°-60°	1871.5	21.1
60°-70°	2282.9	25.7
70°-80°	1154.2	13.0
80°-90°	110.0	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°	8869.0	100.0
0°-180°	8869.0	100.0

**Coefficient of Utilization**



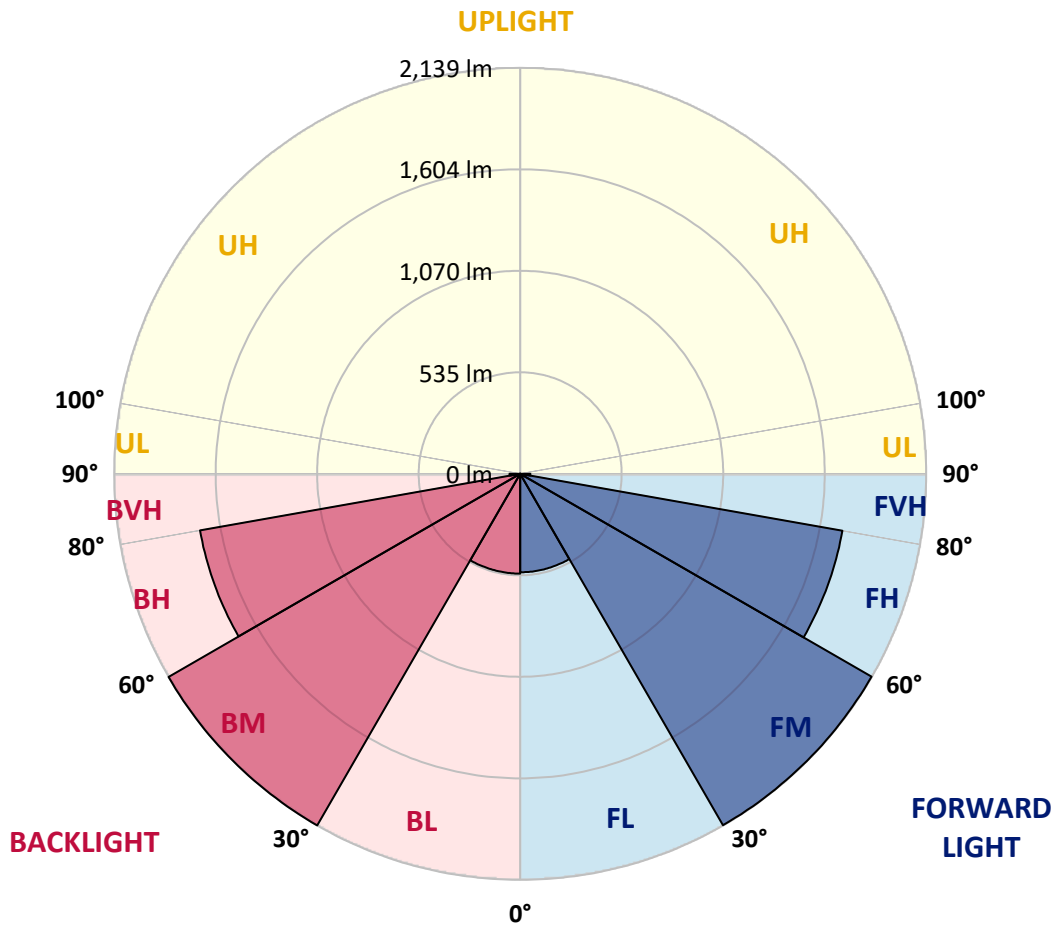
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	518.7	5.8			
FM (30°-60°)	2137.9	24.1			
FH (60°-80°)	1724.1	19.4			G1/1800
FVH (80°-90°)	54.0	0.6			G1/100
BL (0°-30°)	526.0	5.9	B2/1000		
BM (30°-60°)	2139.3	24.1	B2/2500		
BH (60°-80°)	1713.1	19.3	B3/2500		G3/2500
BVH (80°-90°)	56.1	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°	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8
2.5°	659.2	583.2	576.6	558.5	571.7	576.6	565.1	548.5	566.7	576.6	558.5
5°	831.1	718.7	680.7	649.3	586.5	560.1	586.5	654.3	662.5	703.9	692.3
7.5°	915.3	897.2	849.3	745.2	644.4	588.2	659.2	756.7	806.3	845.9	887.3
10°	978.1	968.2	883.9	809.6	768.3	771.6	773.2	804.6	847.6	913.7	936.8
12.5°	993.0	989.7	1002.9	986.4	989.7	1007.9	989.7	981.4	1006.2	1027.7	1004.6
15°	1088.8	1087.2	1092.1	1095.4	1161.5	1189.6	1161.5	1136.7	1118.6	1100.4	1138.4
17.5°	1154.9	1146.7	1148.3	1179.7	1254.1	1331.7	1316.8	1283.8	1242.5	1267.3	1298.7
20°	1191.3	1176.4	1186.3	1199.5	1325.1	1411.0	1420.9	1376.3	1351.5	1382.9	1409.4
22.5°	1226.0	1202.8	1168.1	1181.4	1297.0	1420.9	1468.8	1457.3	1475.5	1485.4	1480.4
25°	1184.7	1199.5	1161.5	1199.5	1316.8	1430.8	1526.7	1594.4	1596.1	1591.1	1627.5
27.5°	1159.9	1148.3	1083.9	1181.4	1278.8	1349.9	1594.4	1708.4	1743.1	1637.4	1708.4
30°	1116.9	1135.1	1047.5	1128.5	1252.4	1371.4	1672.1	1835.6	1784.4	1771.2	1787.7
32.5°	1090.5	1078.9	1037.6	1082.2	1176.4	1435.8	1721.6	1910.0	1974.4	1943.0	1939.7
35°	1047.5	1055.8	991.3	1039.3	1171.4	1381.3	1754.7	2096.7	2195.8	2171.0	2151.2
37.5°	1054.1	1026.0	979.8	1014.5	1140.0	1411.0	1837.3	2276.8	2433.8	2447.0	2356.1
40°	1004.6	988.0	918.6	976.5	1080.6	1392.8	1857.1	2481.7	2747.7	2807.2	2676.6
42.5°	933.5	912.0	872.4	936.8	1045.9	1303.6	1885.2	2727.9	3066.6	3190.5	3071.5
45°	831.1	803.0	783.2	869.1	969.9	1280.5	1855.5	2932.7	3372.2	3542.4	3539.1
47.5°	707.2	689.0	679.1	769.9	907.1	1222.7	1794.3	3061.6	3585.4	4021.6	3955.5
50°	566.7	553.5	551.8	647.7	801.3	1103.7	1724.9	3126.0	3909.2	4461.1	4518.9
52.5°	454.4	444.5	442.8	520.5	670.8	943.4	1579.5	3175.6	4218.2	4960.0	5257.4
55°	355.2	345.3	347.0	411.4	533.7	771.6	1358.1	3119.4	4489.1	5470.6	6034.0
57.5°	290.8	280.9	282.5	318.9	408.1	589.9	1082.2	2997.2	4611.4	6101.7	6939.4
60°	256.1	246.2	241.2	257.7	313.9	444.5	804.6	2521.3	4631.2	6625.5	7922.5
62.5°	237.9	228.0	223.1	228.0	259.4	340.4	579.9	1997.6	4517.2	7073.2	8823.0
65°	221.4	213.1	206.5	211.5	228.0	271.0	423.0	1368.1	3920.8	7278.1	9477.3
67.5°	203.2	196.6	190.0	196.6	208.2	228.0	328.8	865.8	2939.3	7012.1	9749.9
69°	193.3	183.4	180.1	185.1	196.6	209.8	284.2	690.6	2235.5	6506.5	9584.7
70°	183.4	176.8	171.8	180.1	190.0	199.9	256.1	586.5	1753.0	5857.2	9174.9
72.5°	161.9	157.0	153.7	161.9	170.2	176.8	209.8	418.0	1016.1	3988.5	7276.5
75°	142.1	137.1	135.5	142.1	148.7	152.0	176.8	287.5	599.8	2086.8	4365.2
77.5°	119.0	112.4	114.0	122.3	127.2	128.9	148.7	206.5	353.6	945.1	2022.3
80°	87.6	87.6	94.2	100.8	100.8	100.8	119.0	150.4	214.8	434.5	839.3
82.5°	61.1	62.8	64.4	74.4	76.0	69.4	90.9	109.0	133.8	190.0	290.8
85°	34.7	36.3	38.0	44.6	46.3	41.3	59.5	69.4	77.7	94.2	152.0
87.5°	13.2	14.9	19.8	23.1	24.8	18.2	28.1	33.0	33.0	39.7	67.7
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):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8	561.8
2.5°	596.5	608.0	629.5	634.5	616.3	596.5	551.8	579.9	591.5	570.0	576.6
5°	738.6	763.3	789.8	758.4	738.6	725.3	703.9	705.5	693.9	655.9	593.2
7.5°	898.8	870.7	890.6	912.0	880.6	882.3	902.1	860.8	829.4	765.0	647.7
10°	973.2	973.2	978.1	978.1	964.9	964.9	963.3	897.2	859.2	831.1	798.0
12.5°	978.1	976.5	996.3	981.4	984.7	988.0	996.3	1026.0	1016.1	979.8	1009.5
15°	1115.3	1108.7	1115.3	1113.6	1118.6	1133.4	1126.8	1120.2	1121.9	1148.3	1192.9
17.5°	1244.1	1247.4	1240.8	1252.4	1252.4	1262.3	1285.4	1262.3	1242.5	1292.1	1326.8
20°	1392.8	1381.3	1354.8	1374.7	1379.6	1381.3	1419.3	1391.2	1363.1	1381.3	1422.6
22.5°	1543.2	1541.5	1544.8	1546.5	1553.1	1528.3	1477.1	1468.8	1487.0	1462.2	1467.2
25°	1635.7	1637.4	1645.6	1647.3	1619.2	1645.6	1663.8	1609.3	1609.3	1604.3	1571.3
27.5°	1748.1	1723.3	1733.2	1746.4	1734.9	1741.5	1720.0	1640.7	1724.9	1736.5	1604.3
30°	1824.1	1812.5	1800.9	1814.2	1825.7	1855.5	1794.3	1786.1	1792.7	1853.8	1680.3
32.5°	1984.3	2000.9	1979.4	1957.9	1979.4	1972.8	1946.3	1934.8	2017.4	1936.4	1733.2
35°	2133.0	2139.7	2141.3	2138.0	2151.2	2128.1	2128.1	2171.0	2195.8	2108.3	1749.7
37.5°	2491.6	2468.4	2420.5	2397.4	2438.7	2473.4	2371.0	2422.2	2412.3	2263.6	1873.6
40°	2749.3	2802.2	2817.1	2810.5	2817.1	2717.9	2739.4	2777.4	2732.8	2486.6	1830.7
42.5°	3126.0	3159.1	3147.5	3132.7	3139.3	3121.1	3056.6	3197.1	3036.8	2736.1	1896.8
45°	3469.7	3544.1	3549.0	3497.8	3539.1	3474.7	3501.1	3550.7	3388.7	2922.8	1878.6
47.5°	3879.5	4033.1	3975.3	3975.3	4016.6	3877.8	3940.6	4006.7	3577.1	3048.4	1779.5
50°	4485.8	4568.4	4565.1	4550.3	4568.4	4494.1	4484.2	4475.9	3866.2	3167.3	1718.3
52.5°	5171.5	5283.9	5240.9	5257.4	5282.2	5141.8	5252.5	4950.1	4228.1	3212.0	1579.5
55°	6047.2	6124.9	6081.9	5997.6	6110.0	6020.8	6057.1	5467.3	4479.2	3084.7	1348.2
57.5°	7089.8	7129.4	7058.4	7050.1	7124.5	7028.6	6967.5	6048.9	4609.8	2988.9	1077.3
60°	8307.5	8431.4	8386.8	8315.7	8383.5	8299.2	7836.6	6542.9	4583.3	2541.1	834.4
62.5°	9768.1	9893.6	9844.1	9796.1	9839.1	9619.4	8652.8	6932.8	4464.4	2014.1	609.7
65°	10974.2	11540.9	11615.3	11616.9	11408.7	10899.8	9303.8	7084.8	3836.5	1406.1	446.1
67.5°	11767.3	12945.3	13312.1	13179.9	12702.4	11540.9	9566.5	6787.4	2962.5	888.9	333.8
69°	11676.4	13221.2	13751.6	13677.3	13006.4	11531.0	9361.6	6286.8	2263.6	707.2	282.5
70°	11256.7	12994.9	13624.4	13657.4	12813.1	11088.2	8996.5	5711.8	1830.7	603.1	259.4
72.5°	8983.2	10708.2	11261.7	11478.1	10640.4	8879.1	7377.3	4029.8	1060.7	421.3	209.8
75°	5564.8	6493.3	6952.6	7078.2	6571.0	5530.1	4477.6	2242.1	646.0	297.4	176.8
77.5°	2494.9	2764.2	3028.6	3028.6	2830.3	2524.6	2052.1	1083.9	366.8	211.5	148.7
80°	836.0	867.4	844.3	852.6	819.5	788.1	824.5	467.6	226.4	158.6	120.6
82.5°	568.4	713.8	758.4	758.4	712.1	561.8	317.2	214.8	138.8	114.0	92.5
85°	462.6	565.1	606.4	624.5	588.2	474.2	166.9	104.1	82.6	72.7	62.8
87.5°	155.3	145.4	137.1	133.8	140.4	147.0	82.6	44.6	38.0	34.7	33.0
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°	561.8	561.8	561.8	561.8	561.8	561.8
2.5°	588.2	568.4	576.6	584.9	644.4	689.0
5°	584.9	613.0	675.8	755.1	791.4	880.6
7.5°	601.4	703.9	821.2	903.8	936.8	964.9
10°	804.6	822.8	862.5	941.8	1007.9	1019.4
12.5°	1039.3	1034.3	1006.2	1042.6	1009.5	1032.7
15°	1222.7	1168.1	1130.1	1125.2	1113.6	1113.6
17.5°	1323.4	1275.5	1222.7	1209.4	1174.7	1202.8
20°	1442.4	1359.8	1227.6	1214.4	1202.8	1176.4
22.5°	1419.3	1336.7	1199.5	1183.0	1244.1	1240.8
25°	1447.4	1336.7	1206.1	1188.0	1216.1	1216.1
27.5°	1378.0	1287.1	1192.9	1083.9	1169.8	1189.6
30°	1359.8	1257.4	1148.3	1050.8	1138.4	1120.2
32.5°	1455.6	1183.0	1075.6	1045.9	1110.3	1097.1
35°	1381.3	1169.8	1057.4	1002.9	1078.9	1065.7
37.5°	1412.7	1153.3	1026.0	979.8	1040.9	1060.7
40°	1406.1	1075.6	989.7	930.2	991.3	1001.3
42.5°	1295.4	1016.1	928.6	869.1	900.5	933.5
45°	1262.3	979.8	869.1	786.5	788.1	826.1
47.5°	1201.2	897.2	760.0	684.0	684.0	715.4
50°	1098.7	786.5	636.1	566.7	565.1	589.9
52.5°	946.7	679.1	537.0	461.0	456.0	480.8
55°	774.9	546.9	423.0	373.4	363.5	373.4
57.5°	603.1	426.3	333.8	294.1	292.4	300.7
60°	467.6	333.8	266.0	242.9	246.2	259.4
62.5°	353.6	266.0	226.4	218.1	223.1	236.3
65°	280.9	229.7	206.5	201.6	206.5	219.7
67.5°	228.0	208.2	191.7	185.1	188.4	201.6
69°	209.8	196.6	183.4	175.1	178.4	188.4
70°	199.9	190.0	176.8	168.5	171.8	181.7
72.5°	175.1	170.2	160.3	152.0	153.7	161.9
75°	153.7	150.4	143.7	133.8	133.8	143.7
77.5°	128.9	130.5	123.9	114.0	112.4	117.3
80°	102.4	105.7	102.4	92.5	89.2	89.2
82.5°	74.4	81.0	77.7	67.7	66.1	66.1
85°	46.3	51.2	49.6	43.0	43.0	38.0
87.5°	21.5	28.1	26.4	23.1	21.5	14.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)