

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: P565322

Luminaire Tested: **MSA-SA2C-830-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565322  
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-SA2C-830-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8863 lumens  
Efficiency: N/A  
Efficacy: 78.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3

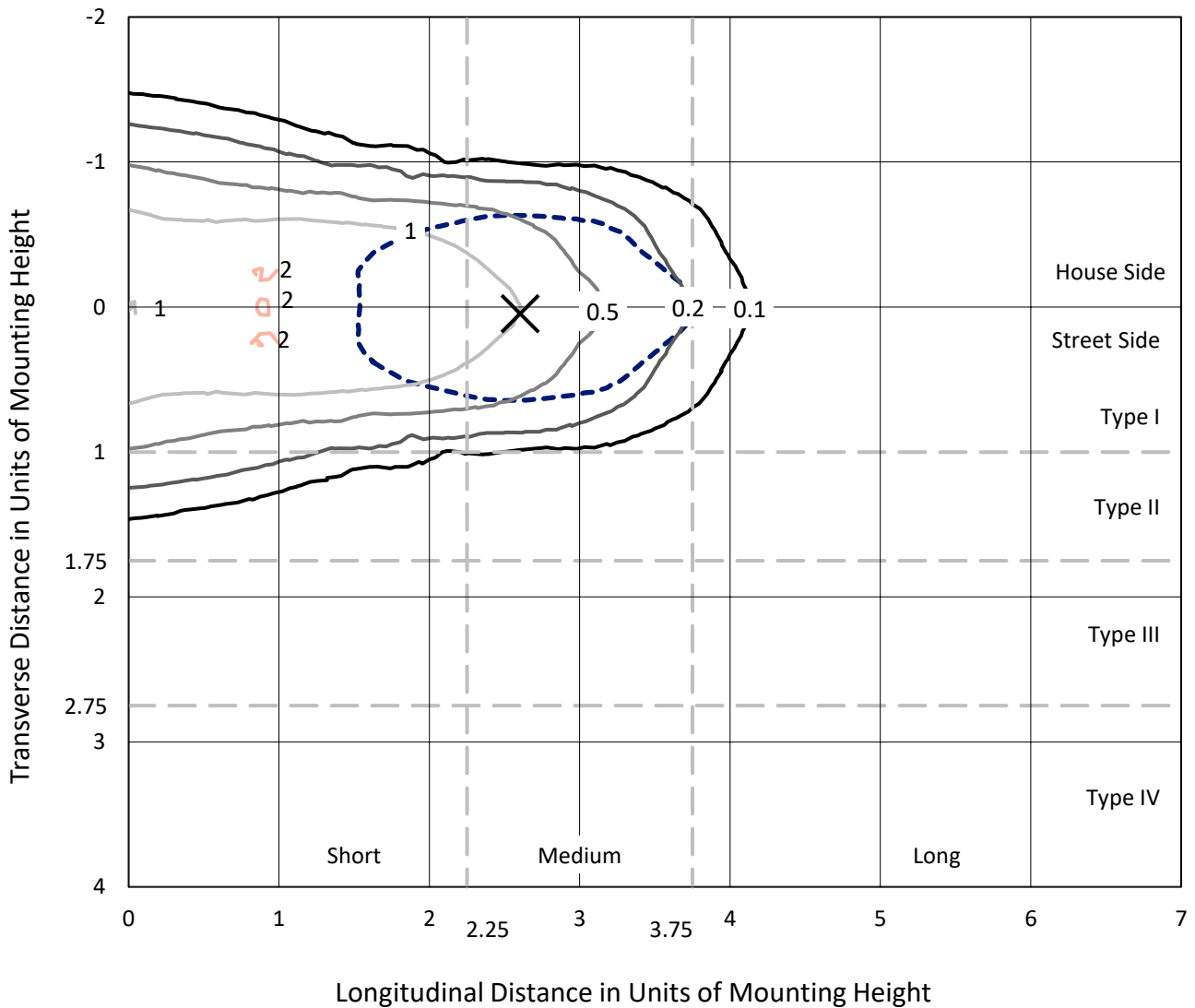
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

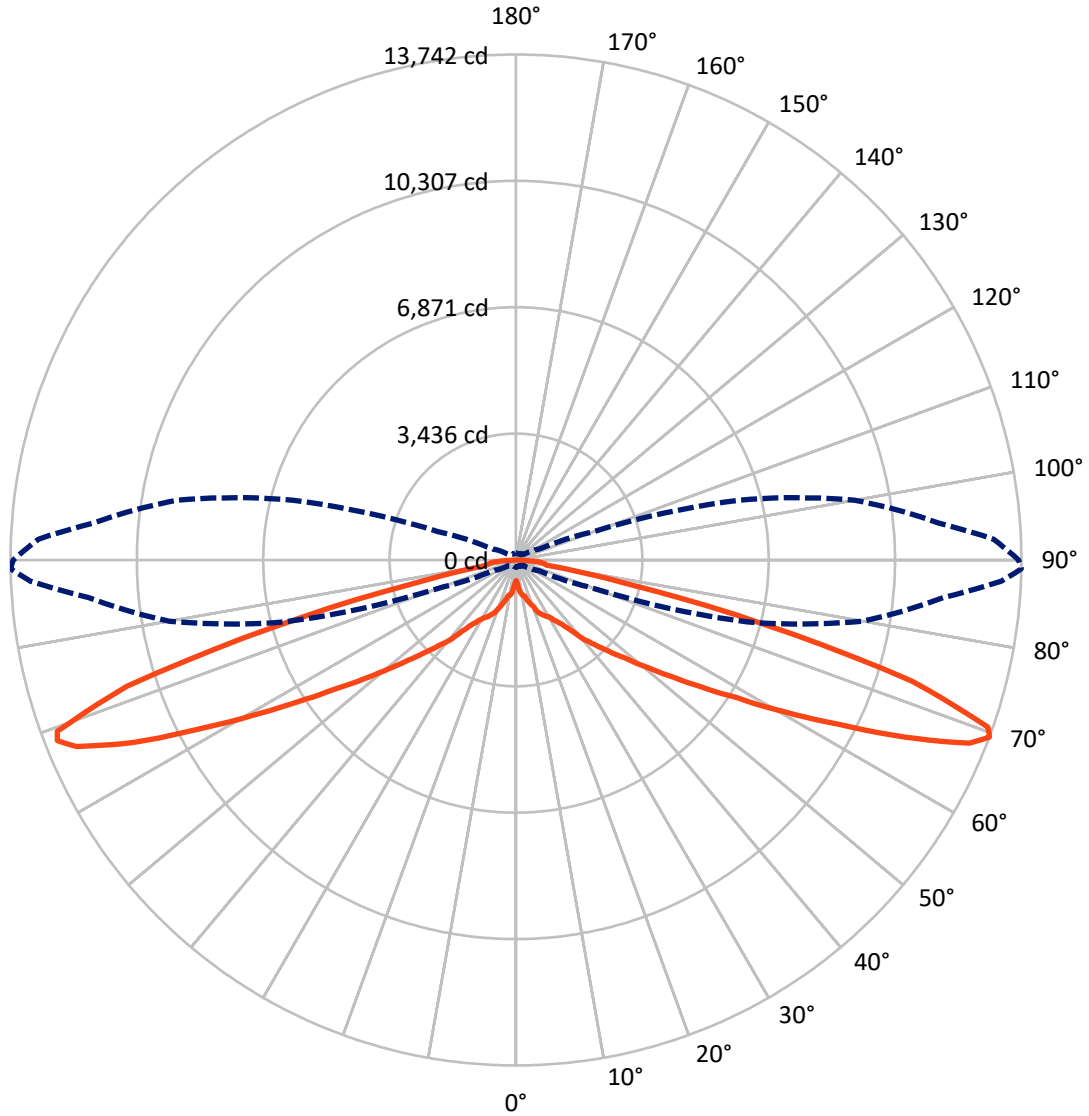
× Max cd  
 - - - 1/2 Max cd



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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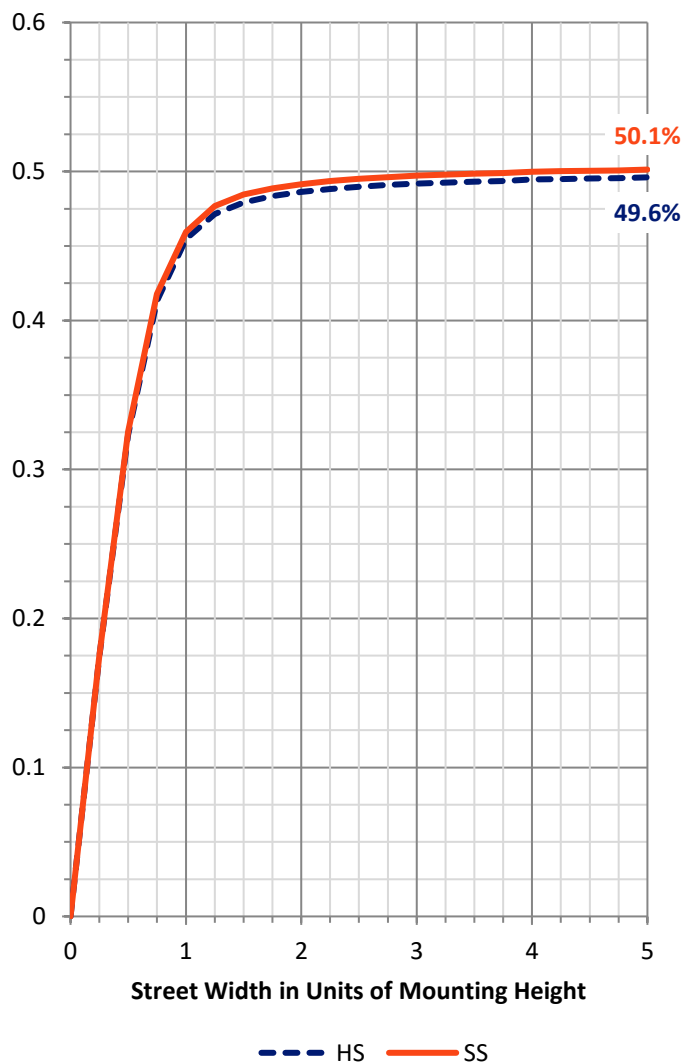
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4431.4	0.0	4431.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4431.6	0.0	4431.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8863.0	0.0	8863.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.5	0.8
10°-20°	325.0	3.7
20°-30°	648.4	7.3
30°-40°	980.6	11.1
40°-50°	1423.5	16.1
50°-60°	1870.2	21.1
60°-70°	2281.4	25.7
70°-80°	1153.4	13.0
80°-90°	109.9	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°	8863.0	100.0
0°-180°	8863.0	100.0

**Coefficient of Utilization**



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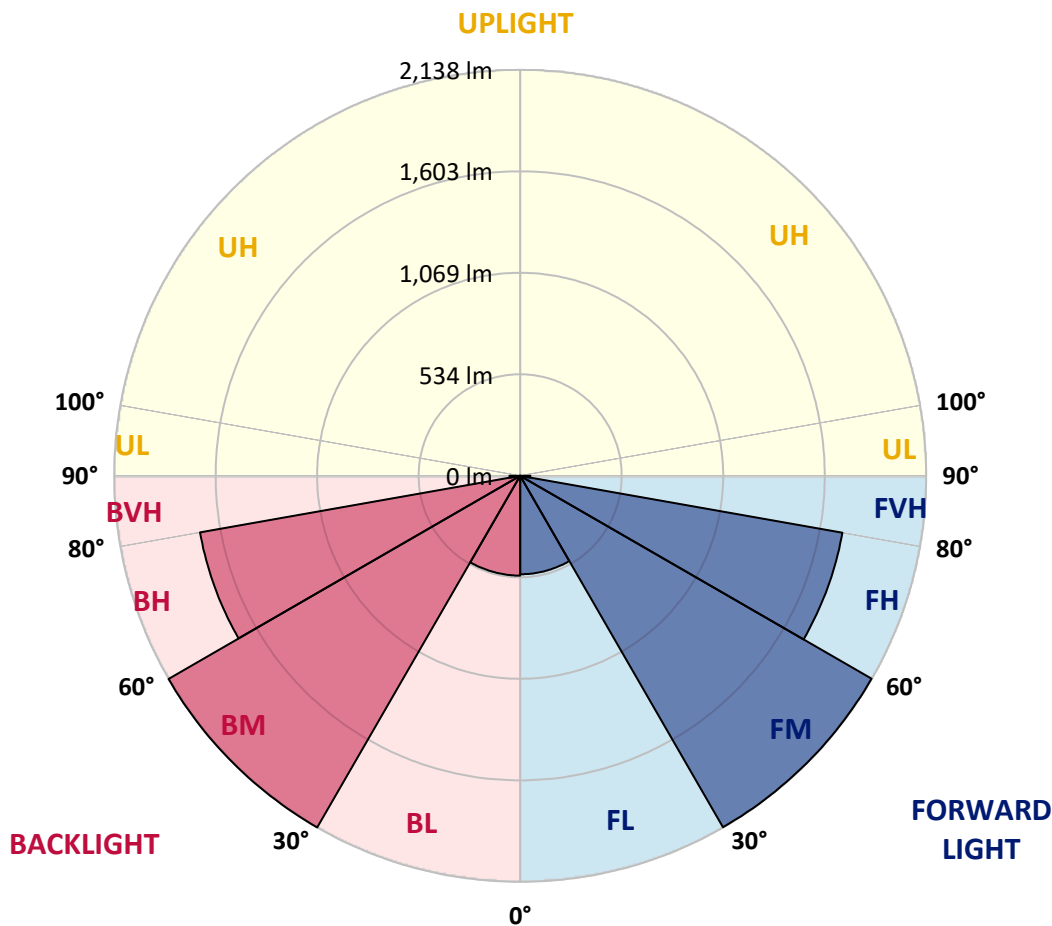
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	518.3	5.8			
FM (30°-60°)	2136.5	24.1			
FH (60°-80°)	1722.9	19.4			G1/1800
FVH (80°-90°)	53.9	0.6			G1/100
BL (0°-30°)	525.6	5.9	B2/1000		
BM (30°-60°)	2137.9	24.1	B2/2500		
BH (60°-80°)	1711.9	19.3	B3/2500		G3/2500
BVH (80°-90°)	56.0	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°	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4
2.5°	658.8	582.8	576.2	558.1	571.3	576.2	564.7	548.2	566.3	576.2	558.1
5°	830.5	718.2	680.3	648.9	586.1	559.7	586.1	653.8	662.1	703.4	691.8
7.5°	914.7	896.6	848.7	744.7	643.9	587.8	658.8	756.2	805.7	845.4	886.7
10°	977.5	967.6	883.4	809.1	767.8	771.1	772.7	804.1	847.0	913.1	936.2
12.5°	992.3	989.0	1002.2	985.7	989.0	1007.2	989.0	980.8	1005.5	1027.0	1003.9
15°	1088.1	1086.4	1091.4	1094.7	1160.7	1188.8	1160.7	1136.0	1117.8	1099.6	1137.6
17.5°	1154.1	1145.9	1147.5	1178.9	1253.2	1330.8	1315.9	1282.9	1241.6	1266.4	1297.8
20°	1190.5	1175.6	1185.5	1198.7	1324.2	1410.1	1420.0	1375.4	1350.6	1382.0	1408.4
22.5°	1225.1	1202.0	1167.3	1180.6	1296.1	1420.0	1467.8	1456.3	1474.5	1484.4	1479.4
25°	1183.9	1198.7	1160.7	1198.7	1315.9	1429.9	1525.6	1593.3	1595.0	1590.0	1626.4
27.5°	1159.1	1147.5	1083.1	1180.6	1278.0	1349.0	1593.3	1707.3	1741.9	1636.3	1707.3
30°	1116.2	1134.3	1046.8	1127.7	1251.6	1370.4	1670.9	1834.4	1783.2	1770.0	1786.5
32.5°	1089.7	1078.2	1036.9	1081.5	1175.6	1434.8	1720.5	1908.7	1973.1	1941.7	1938.4
35°	1046.8	1055.1	990.7	1038.6	1170.6	1380.3	1753.5	2095.3	2194.3	2169.6	2149.8
37.5°	1053.4	1025.3	979.1	1013.8	1139.3	1410.1	1836.1	2275.2	2432.1	2445.3	2354.5
40°	1003.9	987.4	918.0	975.8	1079.8	1391.9	1855.9	2480.0	2745.8	2805.3	2674.8
42.5°	932.9	911.4	871.8	936.2	1045.2	1302.7	1883.9	2726.0	3064.5	3188.3	3069.4
45°	830.5	802.4	782.6	868.5	969.2	1279.6	1854.2	2930.7	3369.9	3540.0	3536.7
47.5°	706.7	688.5	678.6	769.4	906.5	1221.8	1793.1	3059.5	3582.9	4018.8	3952.8
50°	566.3	553.1	551.5	647.2	800.8	1103.0	1723.8	3123.9	3906.6	4458.0	4515.8
52.5°	454.1	444.2	442.5	520.1	670.4	942.8	1578.5	3173.5	4215.3	4956.7	5253.9
55°	355.0	345.1	346.7	411.1	533.3	771.1	1357.2	3117.3	4486.1	5466.9	6029.9
57.5°	290.6	280.7	282.3	318.7	407.8	589.5	1081.5	2995.1	4608.3	6097.6	6934.7
60°	255.9	246.0	241.1	257.6	313.7	444.2	804.1	2519.6	4628.1	6621.0	7917.1
62.5°	237.8	227.9	222.9	227.9	259.2	340.1	579.5	1996.2	4514.2	7068.5	8817.0
65°	221.3	213.0	206.4	211.3	227.9	270.8	422.7	1367.1	3918.1	7273.2	9470.8
67.5°	203.1	196.5	189.9	196.5	208.0	227.9	328.6	865.2	2937.3	7007.4	9743.3
69°	193.2	183.3	180.0	184.9	196.5	209.7	284.0	690.2	2234.0	6502.1	9578.2
70°	183.3	176.7	171.7	180.0	189.9	199.8	255.9	586.1	1751.8	5853.2	9168.7
72.5°	161.8	156.9	153.6	161.8	170.1	176.7	209.7	417.7	1015.4	3985.8	7271.6
75°	142.0	137.0	135.4	142.0	148.6	151.9	176.7	287.3	599.4	2085.4	4362.3
77.5°	118.9	112.3	113.9	122.2	127.1	128.8	148.6	206.4	353.3	944.4	2021.0
80°	87.5	87.5	94.1	100.7	100.7	100.7	118.9	150.3	214.6	434.2	838.8
82.5°	61.1	62.7	64.4	74.3	76.0	69.3	90.8	109.0	133.7	189.9	290.6
85°	34.7	36.3	38.0	44.6	46.2	41.3	59.4	69.3	77.6	94.1	151.9
87.5°	13.2	14.9	19.8	23.1	24.8	18.2	28.1	33.0	33.0	39.6	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°	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4
2.5°	596.1	607.6	629.1	634.0	615.9	596.1	551.5	579.5	591.1	569.6	576.2
5°	738.1	762.8	789.2	757.9	738.1	724.8	703.4	705.0	693.5	655.5	592.8
7.5°	898.2	870.1	890.0	911.4	880.0	881.7	901.5	860.2	828.9	764.5	647.2
10°	972.5	972.5	977.5	977.5	964.3	964.3	962.6	896.6	858.6	830.5	797.5
12.5°	977.5	975.8	995.6	980.8	984.1	987.4	995.6	1025.3	1015.4	979.1	1008.8
15°	1114.5	1107.9	1114.5	1112.9	1117.8	1132.7	1126.1	1119.5	1121.1	1147.5	1192.1
17.5°	1243.3	1246.6	1240.0	1251.6	1251.6	1261.5	1284.6	1261.5	1241.6	1291.2	1325.9
20°	1391.9	1380.3	1353.9	1373.7	1378.7	1380.3	1418.3	1390.2	1362.2	1380.3	1421.6
22.5°	1542.1	1540.5	1543.8	1545.5	1552.1	1527.3	1476.1	1467.8	1486.0	1461.2	1466.2
25°	1634.6	1636.3	1644.5	1646.2	1618.1	1644.5	1662.7	1608.2	1608.2	1603.2	1570.2
27.5°	1746.9	1722.1	1732.0	1745.2	1733.7	1740.3	1718.8	1639.6	1723.8	1735.3	1603.2
30°	1822.8	1811.3	1799.7	1812.9	1824.5	1854.2	1793.1	1784.9	1791.5	1852.6	1679.2
32.5°	1983.0	1999.5	1978.0	1956.6	1978.0	1971.4	1945.0	1933.5	2016.0	1935.1	1732.0
35°	2131.6	2138.2	2139.9	2136.6	2149.8	2126.6	2126.6	2169.6	2194.3	2106.8	1748.5
37.5°	2489.9	2466.8	2418.9	2395.8	2437.1	2471.7	2369.4	2420.5	2410.6	2262.0	1872.4
40°	2747.5	2800.3	2815.2	2808.6	2815.2	2716.1	2737.6	2775.5	2731.0	2484.9	1829.4
42.5°	3123.9	3156.9	3145.4	3130.5	3137.1	3119.0	3054.6	3194.9	3034.8	2734.3	1895.5
45°	3467.4	3541.7	3546.6	3495.4	3536.7	3472.3	3498.7	3548.3	3386.5	2920.8	1877.3
47.5°	3876.8	4030.4	3972.6	3972.6	4013.9	3875.2	3937.9	4004.0	3574.7	3046.3	1778.3
50°	4482.8	4565.4	4562.1	4547.2	4565.4	4491.1	4481.2	4472.9	3863.6	3165.2	1717.2
52.5°	5168.0	5280.3	5237.4	5253.9	5278.6	5138.3	5248.9	4946.8	4225.2	3209.8	1578.5
55°	6043.1	6120.7	6077.8	5993.6	6105.9	6016.7	6053.0	5463.6	4476.2	3082.6	1347.3
57.5°	7085.0	7124.6	7053.6	7045.3	7119.6	7023.9	6962.8	6044.8	4606.6	2986.9	1076.5
60°	8301.9	8425.7	8381.1	8310.1	8377.8	8293.6	7831.3	6538.5	4580.2	2539.4	833.8
62.5°	9761.4	9886.9	9837.4	9789.5	9832.4	9612.8	8646.9	6928.1	4461.3	2012.7	609.3
65°	10966.8	11533.1	11607.4	11609.1	11401.0	10892.5	9297.5	7080.0	3833.9	1405.1	445.8
67.5°	11759.3	12936.6	13303.1	13171.0	12693.8	11533.1	9560.0	6782.8	2960.5	888.3	333.5
69°	11668.5	13212.3	13742.3	13668.0	12997.6	11523.2	9355.3	6282.5	2262.0	706.7	282.3
70°	11249.1	12986.1	13615.2	13648.2	12804.5	11080.7	8990.4	5707.9	1829.4	602.7	259.2
72.5°	8977.2	10700.9	11254.1	11470.4	10633.2	8873.1	7372.3	4027.1	1060.0	421.0	209.7
75°	5561.0	6488.9	6947.9	7073.4	6566.5	5526.3	4474.5	2240.6	645.6	297.2	176.7
77.5°	2493.2	2762.3	3026.5	3026.5	2828.4	2522.9	2050.7	1083.1	366.5	211.3	148.6
80°	835.5	866.8	843.7	852.0	819.0	787.6	823.9	467.3	226.2	158.5	120.5
82.5°	568.0	713.3	757.9	757.9	711.6	561.4	317.0	214.6	138.7	113.9	92.5
85°	462.3	564.7	606.0	624.1	587.8	473.9	166.8	104.0	82.6	72.6	62.7
87.5°	155.2	145.3	137.0	133.7	140.3	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°	561.4	561.4	561.4	561.4	561.4	561.4
2.5°	587.8	568.0	576.2	584.5	643.9	688.5
5°	584.5	612.6	675.3	754.6	790.9	880.0
7.5°	601.0	703.4	820.6	903.2	936.2	964.3
10°	804.1	822.3	861.9	941.1	1007.2	1018.7
12.5°	1038.6	1033.6	1005.5	1041.9	1008.8	1032.0
15°	1221.8	1167.3	1129.4	1124.4	1112.9	1112.9
17.5°	1322.6	1274.7	1221.8	1208.6	1173.9	1202.0
20°	1441.4	1358.9	1226.8	1213.6	1202.0	1175.6
22.5°	1418.3	1335.8	1198.7	1182.2	1243.3	1240.0
25°	1446.4	1335.8	1205.3	1187.2	1215.2	1215.2
27.5°	1377.0	1286.2	1192.1	1083.1	1169.0	1188.8
30°	1358.9	1256.5	1147.5	1050.1	1137.6	1119.5
32.5°	1454.6	1182.2	1074.9	1045.2	1109.6	1096.3
35°	1380.3	1169.0	1056.7	1002.2	1078.2	1065.0
37.5°	1411.7	1152.5	1025.3	979.1	1040.2	1060.0
40°	1405.1	1074.9	989.0	929.6	990.7	1000.6
42.5°	1294.5	1015.4	927.9	868.5	899.9	932.9
45°	1261.5	979.1	868.5	785.9	787.6	825.6
47.5°	1200.4	896.6	759.5	683.6	683.6	714.9
50°	1098.0	785.9	635.7	566.3	564.7	589.5
52.5°	946.1	678.6	536.6	460.7	455.7	480.5
55°	774.4	546.5	422.7	373.2	363.2	373.2
57.5°	602.7	426.0	333.5	293.9	292.2	300.5
60°	467.3	333.5	265.8	242.7	246.0	259.2
62.5°	353.3	265.8	226.2	217.9	222.9	236.1
65°	280.7	229.5	206.4	201.4	206.4	219.6
67.5°	227.9	208.0	191.5	184.9	188.2	201.4
69°	209.7	196.5	183.3	175.0	178.3	188.2
70°	199.8	189.9	176.7	168.4	171.7	181.6
72.5°	175.0	170.1	160.2	151.9	153.6	161.8
75°	153.6	150.3	143.6	133.7	133.7	143.6
77.5°	128.8	130.4	123.8	113.9	112.3	117.2
80°	102.4	105.7	102.4	92.5	89.2	89.2
82.5°	74.3	80.9	77.6	67.7	66.0	66.0
85°	46.2	51.2	49.5	42.9	42.9	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)