

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: P565281

Luminaire Tested: **MSA-SA4A-727-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565281  
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-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: 11723 lumens  
Efficiency: N/A  
Efficacy: 90.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3

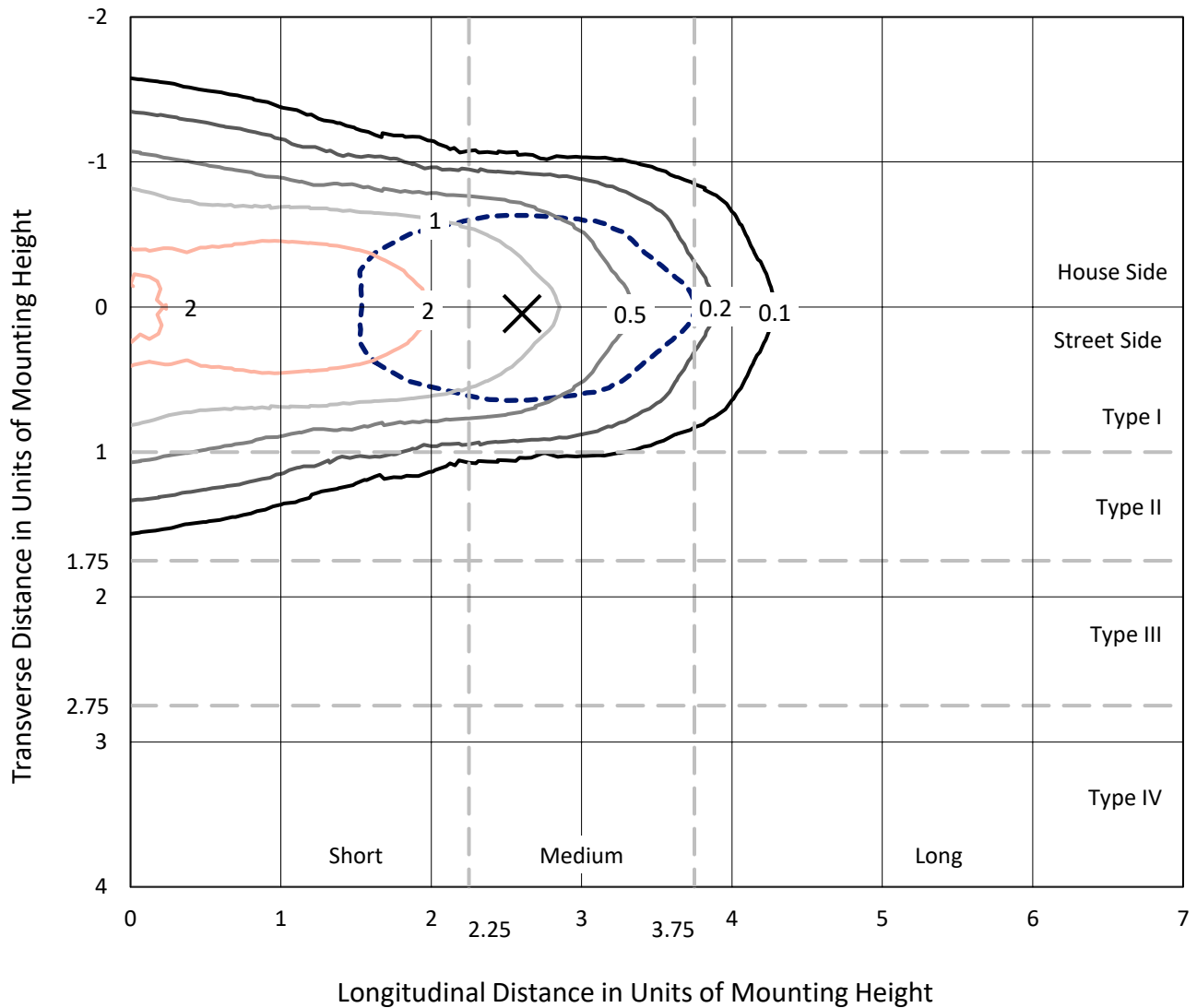
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

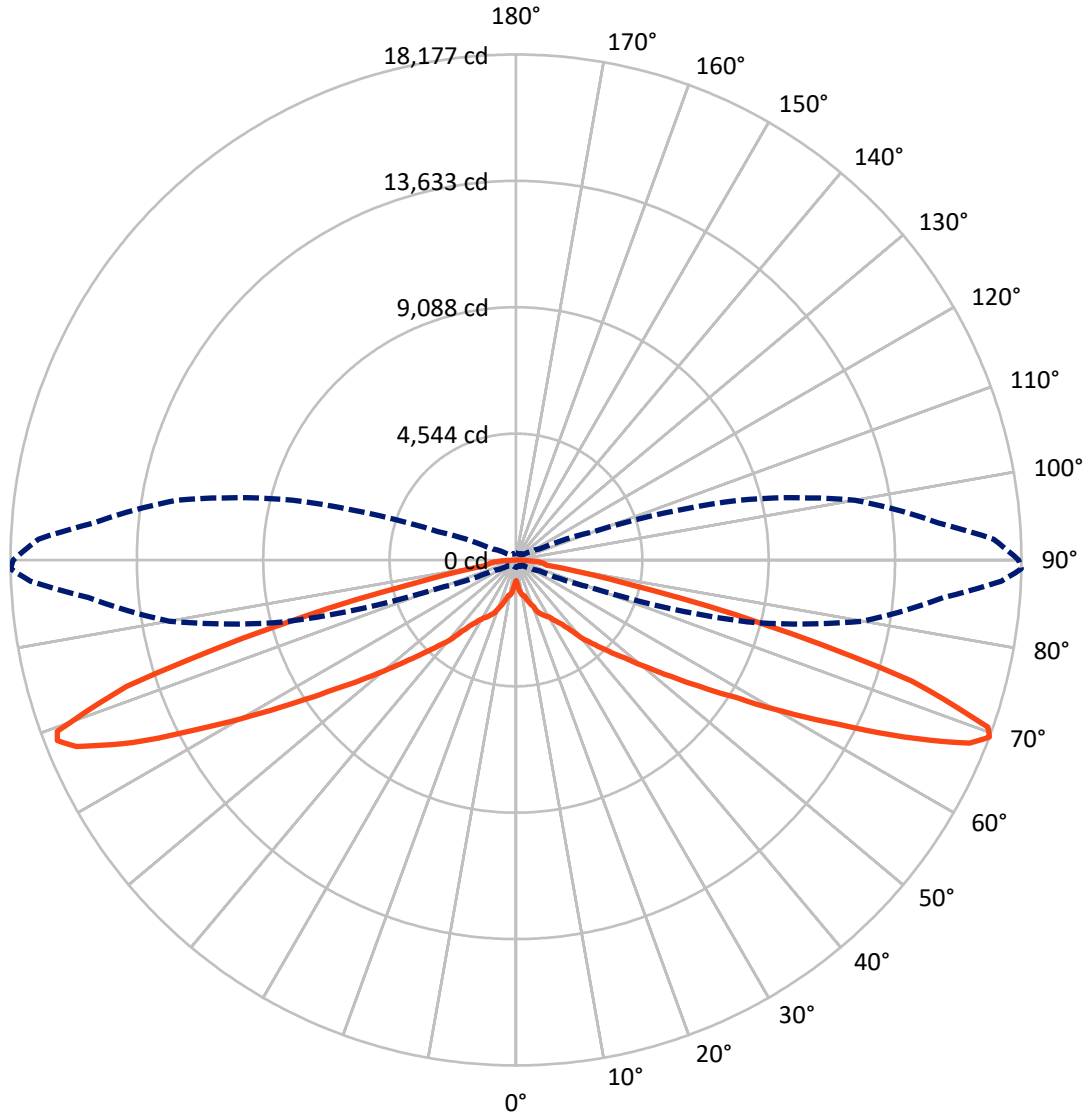
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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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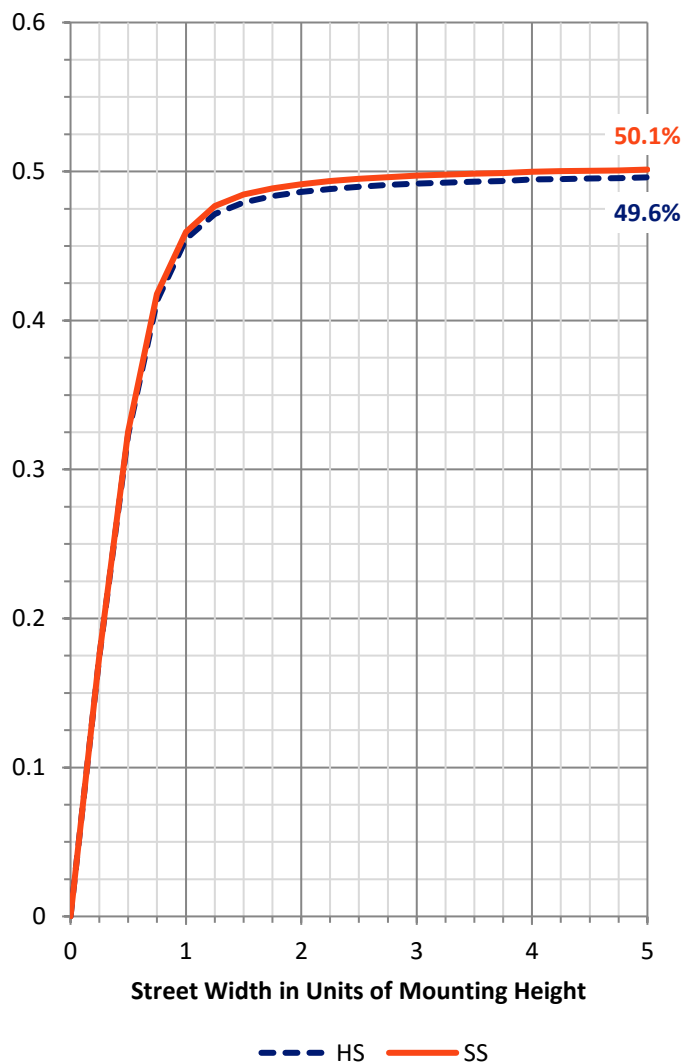
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5861.4	0.0	5861.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5861.6	0.0	5861.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	11723.0	0.0	11723.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.3	0.8
10°-20°	429.9	3.7
20°-30°	857.6	7.3
30°-40°	1297.1	11.1
40°-50°	1882.8	16.1
50°-60°	2473.7	21.1
60°-70°	3017.6	25.7
70°-80°	1525.6	13.0
80°-90°	145.4	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°	11723.0	100.0
0°-180°	11723.0	100.0

**Coefficient of Utilization**

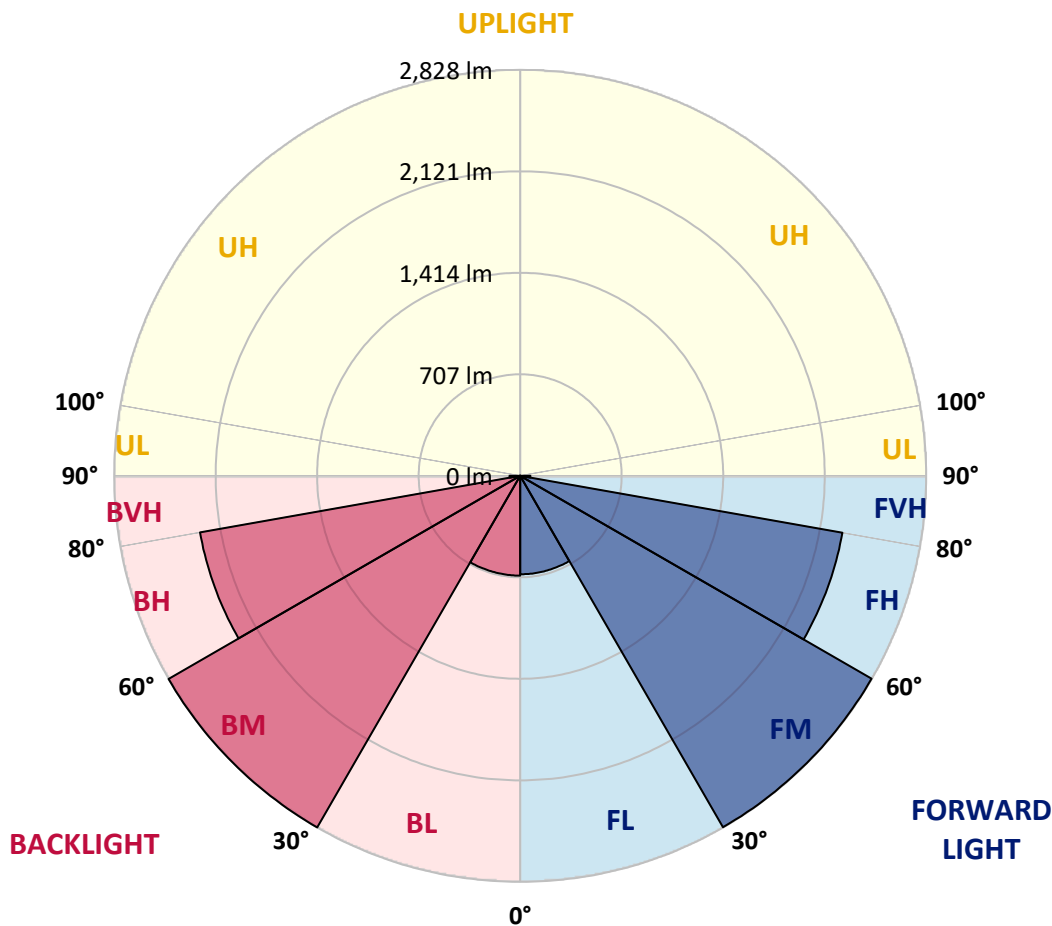


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	685.6	5.8			
FM (30°-60°)	2825.9	24.1			
FH (60°-80°)	2278.9	19.4			G2/5000
FVH (80°-90°)	71.3	0.6			G1/100
BL (0°-30°)	695.2	5.9	B2/1000		
BM (30°-60°)	2827.8	24.1	B3/5000		
BH (60°-80°)	2264.3	19.3	B3/2500		G3/2500
BVH (80°-90°)	74.1	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°	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5
2.5°	871.4	770.9	762.2	738.2	755.6	762.2	746.9	725.1	749.1	762.2	738.2
5°	1098.5	950.0	899.8	858.3	775.3	740.4	775.3	864.8	875.8	930.4	915.1
7.5°	1209.9	1185.9	1122.5	985.0	851.7	777.5	871.4	1000.2	1065.8	1118.2	1172.8
10°	1292.9	1279.8	1168.4	1070.1	1015.5	1019.9	1022.1	1063.6	1120.4	1207.7	1238.3
12.5°	1312.5	1308.2	1325.6	1303.8	1308.2	1332.2	1308.2	1297.3	1330.0	1358.4	1327.8
15°	1439.2	1437.0	1443.6	1447.9	1535.3	1572.4	1535.3	1502.5	1478.5	1454.5	1504.7
17.5°	1526.6	1515.6	1517.8	1559.3	1657.6	1760.2	1740.6	1696.9	1642.3	1675.1	1716.6
20°	1574.6	1555.0	1568.1	1585.5	1751.5	1865.1	1878.2	1819.2	1786.5	1827.9	1862.9
22.5°	1620.5	1589.9	1544.0	1561.5	1714.4	1878.2	1941.5	1926.2	1950.2	1963.3	1956.8
25°	1565.9	1585.5	1535.3	1585.5	1740.6	1891.3	2017.9	2107.5	2109.7	2103.1	2151.2
27.5°	1533.1	1517.8	1432.7	1561.5	1690.4	1784.3	2107.5	2258.2	2304.0	2164.3	2258.2
30°	1476.3	1500.4	1384.6	1491.6	1655.4	1812.7	2210.1	2426.3	2358.6	2341.2	2363.0
32.5°	1441.4	1426.1	1371.5	1430.5	1555.0	1897.8	2275.6	2524.6	2609.8	2568.3	2563.9
35°	1384.6	1395.5	1310.4	1373.7	1548.4	1825.8	2319.3	2771.4	2902.4	2869.7	2843.5
37.5°	1393.3	1356.2	1295.1	1340.9	1506.9	1865.1	2428.5	3009.4	3216.9	3234.4	3114.3
40°	1327.8	1306.0	1214.3	1290.7	1428.3	1841.0	2454.7	3280.3	3631.9	3710.5	3538.0
42.5°	1233.9	1205.5	1153.1	1238.3	1382.4	1723.1	2491.9	3605.7	4053.4	4217.2	4059.9
45°	1098.5	1061.4	1035.2	1148.7	1282.0	1692.5	2452.5	3876.5	4457.4	4682.3	4678.0
47.5°	934.7	910.7	897.6	1017.7	1199.0	1616.1	2371.7	4046.8	4739.1	5315.7	5228.3
50°	749.1	731.6	729.4	856.1	1059.2	1458.9	2280.0	4132.0	5167.2	5896.6	5973.0
52.5°	600.6	587.5	585.3	687.9	886.7	1247.0	2087.8	4197.5	5575.6	6556.1	6949.2
55°	469.5	456.4	458.6	543.8	705.4	1019.9	1795.2	4123.3	5933.7	7231.0	7975.7
57.5°	384.4	371.3	373.5	421.5	539.4	779.7	1430.5	3961.6	6095.3	8065.2	9172.5
60°	338.5	325.4	318.9	340.7	414.9	587.5	1063.6	3332.7	6121.5	8757.5	10471.9
62.5°	314.5	301.4	294.8	301.4	342.9	449.9	766.6	2640.4	5970.9	9349.4	11662.2
65°	292.6	281.7	273.0	279.5	301.4	358.2	559.1	1808.3	5182.5	9620.2	12527.0
67.5°	268.6	259.9	251.2	259.9	275.2	301.4	434.6	1144.4	3885.2	9268.6	12887.3
69°	255.5	242.4	238.0	244.6	259.9	277.4	375.6	912.9	2954.9	8600.3	12668.9
70°	242.4	233.7	227.1	238.0	251.2	264.3	338.5	775.3	2317.1	7742.0	12127.3
72.5°	214.0	207.5	203.1	214.0	224.9	233.7	277.4	552.5	1343.1	5272.0	9618.0
75°	187.8	181.3	179.1	187.8	196.6	200.9	233.7	380.0	792.8	2758.3	5769.9
77.5°	157.2	148.5	150.7	161.6	168.2	170.3	196.6	273.0	467.4	1249.2	2673.1
80°	115.7	115.7	124.5	133.2	133.2	133.2	157.2	198.7	283.9	574.4	1109.4
82.5°	80.8	83.0	85.2	98.3	100.5	91.7	120.1	144.1	176.9	251.2	384.4
85°	45.9	48.0	50.2	59.0	61.1	54.6	78.6	91.7	102.6	124.5	200.9
87.5°	17.5	19.7	26.2	30.6	32.8	24.0	37.1	43.7	43.7	52.4	89.5
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):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5	742.5
2.5°	788.4	803.7	832.1	838.6	814.6	788.4	729.4	766.6	781.8	753.5	762.2
5°	976.2	1009.0	1043.9	1002.4	976.2	958.7	930.4	932.5	917.2	867.0	784.0
7.5°	1188.1	1150.9	1177.1	1205.5	1164.0	1166.2	1192.4	1137.8	1096.3	1011.2	856.1
10°	1286.3	1286.3	1292.9	1292.9	1275.4	1275.4	1273.2	1185.9	1135.6	1098.5	1054.8
12.5°	1292.9	1290.7	1316.9	1297.3	1301.6	1306.0	1316.9	1356.2	1343.1	1295.1	1334.4
15°	1474.1	1465.4	1474.1	1472.0	1478.5	1498.2	1489.4	1480.7	1482.9	1517.8	1576.8
17.5°	1644.5	1648.9	1640.1	1655.4	1655.4	1668.5	1699.1	1668.5	1642.3	1707.8	1753.7
20°	1841.0	1825.8	1790.8	1817.0	1823.6	1825.8	1876.0	1838.9	1801.7	1825.8	1880.4
22.5°	2039.8	2037.6	2042.0	2044.2	2052.9	2020.1	1952.4	1941.5	1965.5	1932.8	1939.3
25°	2162.1	2164.3	2175.2	2177.4	2140.2	2175.2	2199.2	2127.1	2127.1	2120.6	2076.9
27.5°	2310.6	2277.8	2290.9	2308.4	2293.1	2301.9	2273.5	2168.6	2280.0	2295.3	2120.6
30°	2411.1	2395.8	2380.5	2397.9	2413.2	2452.5	2371.7	2360.8	2369.6	2450.4	2221.1
32.5°	2622.9	2644.7	2616.3	2588.0	2616.3	2607.6	2572.7	2557.4	2666.6	2559.6	2290.9
35°	2819.4	2828.2	2830.4	2826.0	2843.5	2812.9	2812.9	2869.7	2902.4	2786.7	2312.8
37.5°	3293.4	3262.8	3199.5	3168.9	3223.5	3269.3	3133.9	3201.6	3188.5	2992.0	2476.6
40°	3634.1	3703.9	3723.6	3714.9	3723.6	3592.6	3620.9	3671.2	3612.2	3286.8	2419.8
42.5°	4132.0	4175.7	4160.4	4140.7	4149.5	4125.4	4040.3	4225.9	4014.1	3616.6	2507.1
45°	4586.2	4684.5	4691.1	4623.4	4678.0	4592.8	4627.7	4693.3	4479.2	3863.4	2483.1
47.5°	5127.9	5331.0	5254.5	5254.5	5309.1	5125.7	5208.7	5296.0	4728.2	4029.3	2352.1
50°	5929.4	6038.6	6034.2	6014.5	6038.6	5940.3	5927.2	5916.3	5110.4	4186.6	2271.3
52.5°	6835.7	6984.2	6927.4	6949.2	6982.0	6796.4	6942.7	6543.0	5588.7	4245.6	2087.8
55°	7993.2	8095.8	8039.0	7927.6	8076.2	7958.2	8006.3	7226.6	5920.6	4077.4	1782.1
57.5°	9371.2	9423.6	9329.7	9318.8	9417.1	9290.4	9209.6	7995.3	6093.2	3950.7	1423.9
60°	10980.8	11144.6	11085.6	10991.7	11081.2	10969.9	10358.4	8648.3	6058.2	3358.9	1102.9
62.5°	12911.4	13077.3	13011.8	12948.5	13005.3	12714.8	11437.2	9163.7	5901.0	2662.2	805.9
65°	14505.6	15254.7	15353.0	15355.2	15080.0	14407.4	12297.7	9364.7	5071.1	1858.5	589.7
67.5°	15553.9	17111.1	17595.9	17421.2	16790.0	15254.7	12644.9	8971.6	3915.8	1175.0	441.2
69°	15433.8	17475.8	18176.8	18078.5	17191.9	15241.6	12374.1	8309.8	2992.0	934.7	373.5
70°	14879.1	17176.6	18008.6	18052.3	16936.3	14656.3	11891.5	7549.8	2419.8	797.1	342.9
72.5°	11874.0	14154.0	14885.6	15171.7	14064.5	11736.4	9751.2	5326.6	1402.1	556.9	277.4
75°	7355.5	8582.8	9190.0	9355.9	8685.5	7309.6	5918.4	2963.6	853.9	393.1	233.7
77.5°	3297.7	3653.7	4003.1	4003.1	3741.1	3337.0	2712.4	1432.7	484.8	279.5	196.6
80°	1105.1	1146.6	1116.0	1126.9	1083.2	1041.7	1089.8	618.1	299.2	209.7	159.4
82.5°	751.3	943.5	1002.4	1002.4	941.3	742.5	419.3	283.9	183.4	150.7	122.3
85°	611.5	746.9	801.5	825.5	777.5	626.8	220.6	137.6	109.2	96.1	83.0
87.5°	205.3	192.2	181.3	176.9	185.6	194.4	109.2	59.0	50.2	45.9	43.7
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°	742.5	742.5	742.5	742.5	742.5	742.5
2.5°	777.5	751.3	762.2	773.1	851.7	910.7
5°	773.1	810.2	893.2	998.1	1046.1	1164.0
7.5°	794.9	930.4	1085.4	1194.6	1238.3	1275.4
10°	1063.6	1087.6	1140.0	1244.8	1332.2	1347.5
12.5°	1373.7	1367.1	1330.0	1378.1	1334.4	1365.0
15°	1616.1	1544.0	1493.8	1487.3	1472.0	1472.0
17.5°	1749.3	1686.0	1616.1	1598.6	1552.8	1589.9
20°	1906.6	1797.4	1622.7	1605.2	1589.9	1555.0
22.5°	1876.0	1766.8	1585.5	1563.7	1644.5	1640.1
25°	1913.1	1766.8	1594.3	1570.2	1607.4	1607.4
27.5°	1821.4	1701.3	1576.8	1432.7	1546.2	1572.4
30°	1797.4	1662.0	1517.8	1389.0	1504.7	1480.7
32.5°	1924.0	1563.7	1421.7	1382.4	1467.6	1450.1
35°	1825.8	1546.2	1397.7	1325.6	1426.1	1408.6
37.5°	1867.3	1524.4	1356.2	1295.1	1375.9	1402.1
40°	1858.5	1421.7	1308.2	1229.5	1310.4	1323.5
42.5°	1712.2	1343.1	1227.4	1148.7	1190.2	1233.9
45°	1668.5	1295.1	1148.7	1039.5	1041.7	1092.0
47.5°	1587.7	1185.9	1004.6	904.1	904.1	945.6
50°	1452.3	1039.5	840.8	749.1	746.9	779.7
52.5°	1251.4	897.6	709.8	609.3	602.8	635.5
55°	1024.3	722.9	559.1	493.6	480.5	493.6
57.5°	797.1	563.5	441.2	388.7	386.6	397.5
60°	618.1	441.2	351.6	321.0	325.4	342.9
62.5°	467.4	351.6	299.2	288.3	294.8	312.3
65°	371.3	303.6	273.0	266.4	273.0	290.5
67.5°	301.4	275.2	253.3	244.6	249.0	266.4
69°	277.4	259.9	242.4	231.5	235.9	249.0
70°	264.3	251.2	233.7	222.8	227.1	240.2
72.5°	231.5	224.9	211.8	200.9	203.1	214.0
75°	203.1	198.7	190.0	176.9	176.9	190.0
77.5°	170.3	172.5	163.8	150.7	148.5	155.1
80°	135.4	139.8	135.4	122.3	117.9	117.9
82.5°	98.3	107.0	102.6	89.5	87.4	87.4
85°	61.1	67.7	65.5	56.8	56.8	50.2
87.5°	28.4	37.1	34.9	30.6	28.4	19.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)