

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: P565346

Luminaire Tested: **MSA-SA4C-835-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565346  
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-SA4C-835-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: 17935 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B4 - U0 - G4

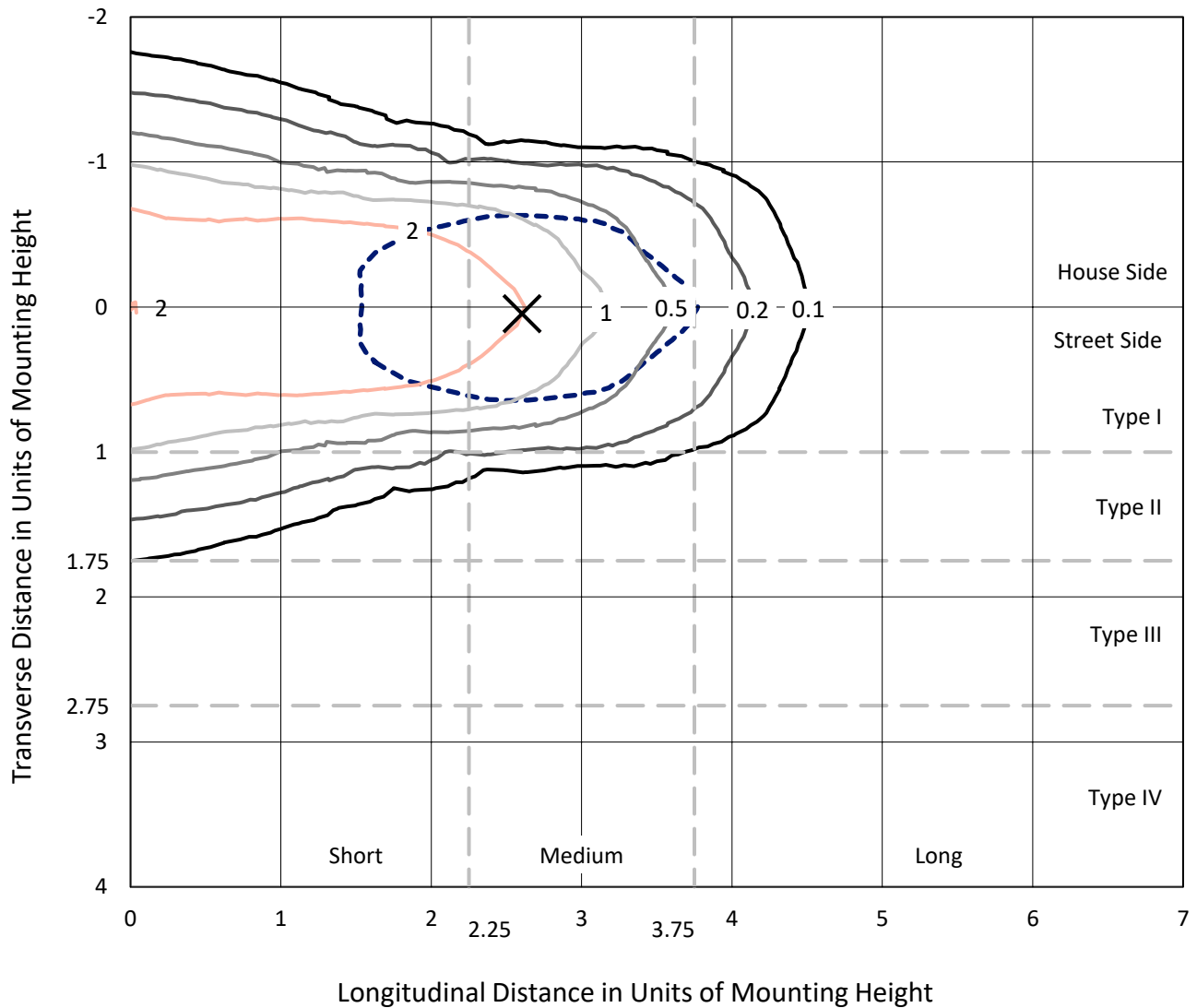
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

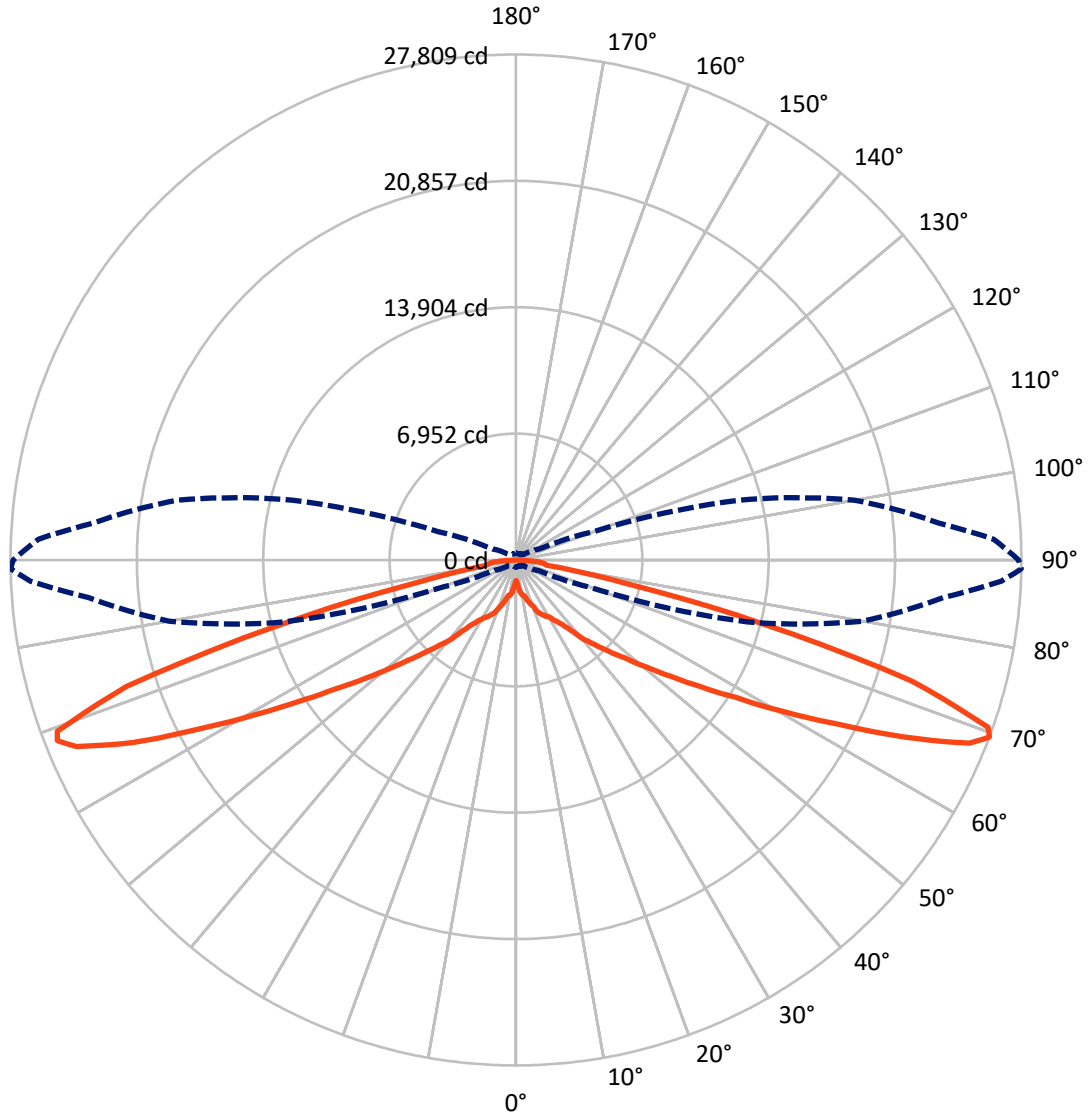
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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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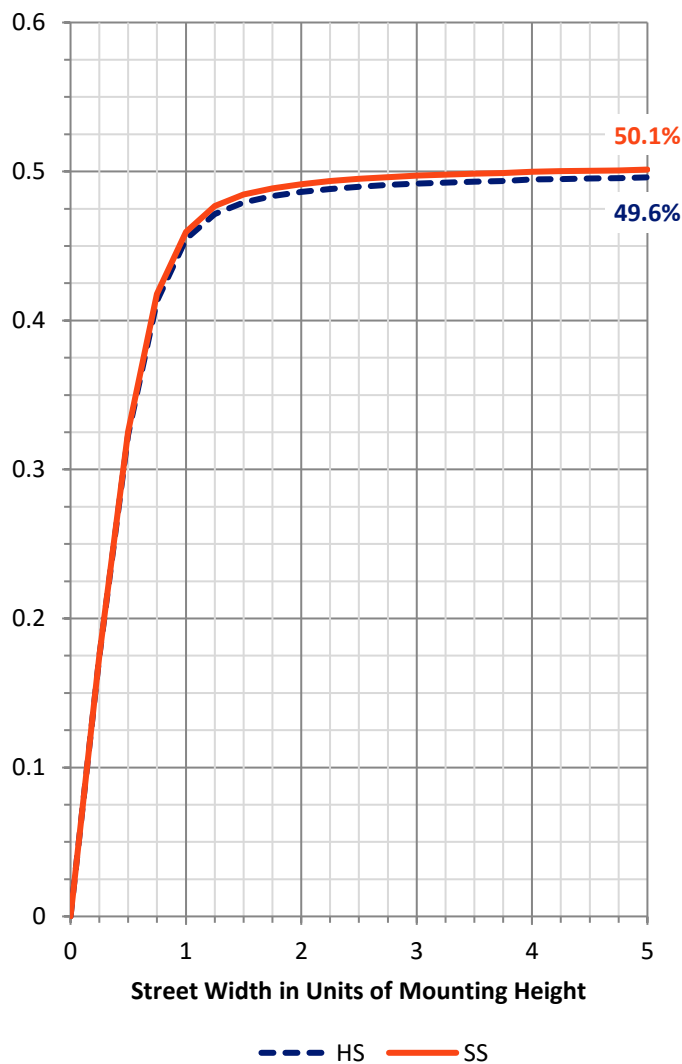
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8967.3	0.0	8967.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8967.7	0.0	8967.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	17935.0	0.0	17935.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.8	0.8
10°-20°	657.6	3.7
20°-30°	1312.1	7.3
30°-40°	1984.4	11.1
40°-50°	2880.5	16.1
50°-60°	3784.5	21.1
60°-70°	4616.6	25.7
70°-80°	2334.0	13.0
80°-90°	222.5	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°	17935.0	100.0
0°-180°	17935.0	100.0

**Coefficient of Utilization**



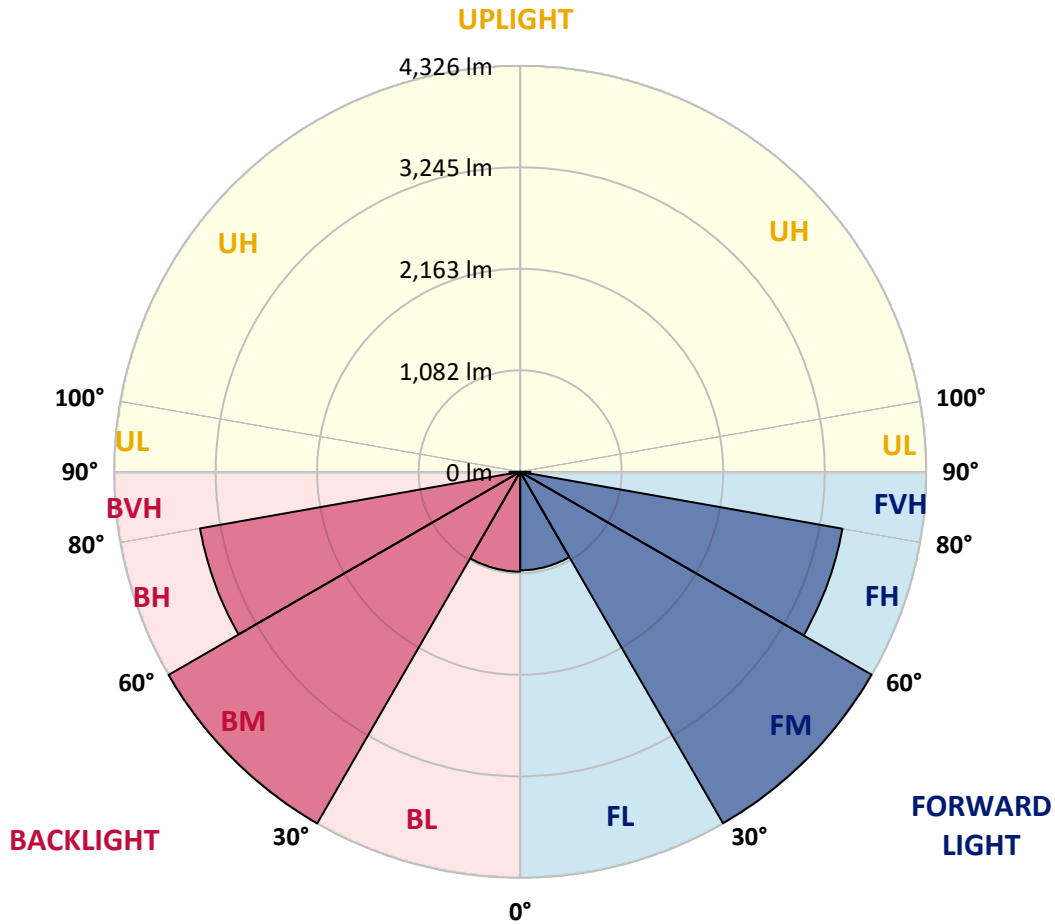
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1048.8	5.8			
FM (30°-60°)	4323.3	24.1			
FH (60°-80°)	3486.4	19.4			G2/5000
FVH (80°-90°)	109.1	0.6			G2/225
BL (0°-30°)	1063.6	5.9	B3/2500		
BM (30°-60°)	4326.2	24.1	B3/5000		
BH (60°-80°)	3464.2	19.3	B4/5000		G4/5000
BVH (80°-90°)	113.4	0.6			G2/225
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°	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0
2.5°	1333.1	1179.4	1166.1	1129.3	1156.0	1166.1	1142.7	1109.3	1146.0	1166.1	1129.3
5°	1680.6	1453.4	1376.6	1313.1	1186.1	1132.7	1186.1	1323.1	1339.8	1423.3	1400.0
7.5°	1851.0	1814.3	1717.4	1506.9	1303.1	1189.5	1333.1	1530.3	1630.5	1710.7	1794.2
10°	1978.0	1957.9	1787.5	1637.2	1553.7	1560.3	1563.7	1627.2	1714.0	1847.7	1894.5
12.5°	2008.1	2001.4	2028.1	1994.7	2001.4	2038.1	2001.4	1984.7	2034.8	2078.2	2031.4
15°	2201.8	2198.5	2208.5	2215.2	2348.9	2405.7	2348.9	2298.7	2262.0	2225.2	2302.1
17.5°	2335.5	2318.8	2322.1	2385.6	2536.0	2693.0	2662.9	2596.1	2512.6	2562.7	2626.2
20°	2409.0	2378.9	2399.0	2425.7	2679.6	2853.4	2873.4	2783.2	2733.1	2796.6	2850.0
22.5°	2479.2	2432.4	2362.2	2388.9	2622.8	2873.4	2970.3	2946.9	2983.7	3003.7	2993.7
25°	2395.6	2425.7	2348.9	2425.7	2662.9	2893.5	3087.3	3224.2	3227.6	3217.6	3291.1
27.5°	2345.5	2322.1	2191.8	2388.9	2586.1	2729.7	3224.2	3454.8	3524.9	3311.1	3454.8
30°	2258.6	2295.4	2118.3	2282.0	2532.6	2773.2	3381.3	3712.1	3608.5	3581.7	3615.2
32.5°	2205.2	2181.8	2098.3	2188.5	2378.9	2903.5	3481.5	3862.4	3992.7	3929.2	3922.5
35°	2118.3	2135.0	2004.7	2101.6	2368.9	2793.2	3548.3	4240.0	4440.4	4390.3	4350.2
37.5°	2131.7	2074.9	1981.3	2051.5	2305.4	2853.4	3715.4	4604.2	4921.6	4948.3	4764.5
40°	2031.4	1998.0	1857.7	1974.6	2185.1	2816.6	3755.5	5018.5	5556.4	5676.7	5412.7
42.5°	1887.8	1844.3	1764.1	1894.5	2115.0	2636.2	3812.3	5516.3	6201.2	6451.8	6211.3
45°	1680.6	1623.8	1583.7	1757.5	1961.3	2589.4	3752.1	5930.6	6819.4	7163.5	7156.8
47.5°	1430.0	1393.3	1373.2	1557.0	1834.3	2472.5	3628.5	6191.2	7250.4	8132.4	7998.8
50°	1146.0	1119.3	1116.0	1309.7	1620.5	2231.9	3488.2	6321.5	7905.2	9021.2	9138.1
52.5°	918.8	898.8	895.4	1052.5	1356.5	1907.8	3194.2	6421.8	8530.0	10030.2	10631.6
55°	718.4	698.3	701.6	832.0	1079.2	1560.3	2746.5	6308.2	9078.0	11062.7	12202.0
57.5°	588.0	568.0	571.3	644.8	825.3	1192.8	2188.5	6060.9	9325.2	12339.0	14033.0
60°	517.9	497.8	487.8	521.2	634.8	898.8	1627.2	5098.6	9365.3	13398.1	16021.0
62.5°	481.1	461.1	451.1	461.1	524.6	688.3	1172.8	4039.5	9134.8	14303.6	17841.9
65°	447.7	431.0	417.6	427.7	461.1	548.0	855.3	2766.5	7928.6	14717.9	19165.0
67.5°	411.0	397.6	384.2	397.6	421.0	461.1	664.9	1750.8	5944.0	14180.0	19716.3
69°	390.9	370.9	364.2	374.2	397.6	424.3	574.7	1396.6	4520.6	13157.6	19382.2
70°	370.9	357.5	347.5	364.2	384.2	404.3	517.9	1186.1	3545.0	11844.5	18553.6
72.5°	327.4	317.4	310.7	327.4	344.1	357.5	424.3	845.3	2054.8	8065.6	14714.6
75°	287.3	277.3	274.0	287.3	300.7	307.4	357.5	581.4	1212.8	4219.9	8827.4
77.5°	240.6	227.2	230.5	247.2	257.3	260.6	300.7	417.6	715.0	1911.2	4089.6
80°	177.1	177.1	190.4	203.8	203.8	203.8	240.6	304.0	434.4	878.7	1697.3
82.5°	123.6	127.0	130.3	150.4	153.7	140.3	183.8	220.5	270.6	384.2	588.0
85°	70.2	73.5	76.8	90.2	93.6	83.5	120.3	140.3	157.0	190.4	307.4
87.5°	26.7	30.1	40.1	46.8	50.1	36.8	56.8	66.8	66.8	80.2	137.0
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):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0
2.5°	1206.2	1229.6	1273.0	1283.0	1246.3	1206.2	1116.0	1172.8	1196.1	1152.7	1166.1
5°	1493.5	1543.6	1597.1	1533.6	1493.5	1466.8	1423.3	1426.7	1403.3	1326.4	1199.5
7.5°	1817.6	1760.8	1800.9	1844.3	1780.9	1784.2	1824.3	1740.8	1677.3	1547.0	1309.7
10°	1968.0	1968.0	1978.0	1978.0	1951.3	1951.3	1947.9	1814.3	1737.4	1680.6	1613.8
12.5°	1978.0	1974.6	2014.7	1984.7	1991.3	1998.0	2014.7	2074.9	2054.8	1981.3	2041.5
15°	2255.3	2241.9	2255.3	2252.0	2262.0	2292.1	2278.7	2265.3	2268.7	2322.1	2412.3
17.5°	2515.9	2522.6	2509.2	2532.6	2532.6	2552.7	2599.4	2552.7	2512.6	2612.8	2683.0
20°	2816.6	2793.2	2739.8	2779.9	2789.9	2793.2	2870.1	2813.3	2756.5	2793.2	2876.8
22.5°	3120.7	3117.3	3124.0	3127.3	3140.7	3090.6	2987.0	2970.3	3007.1	2956.9	2967.0
25°	3307.8	3311.1	3327.8	3331.2	3274.4	3327.8	3364.6	3254.3	3254.3	3244.3	3177.5
27.5°	3535.0	3484.9	3504.9	3531.6	3508.2	3521.6	3478.2	3317.8	3488.2	3511.6	3244.3
30°	3688.7	3665.3	3641.9	3668.6	3692.0	3752.1	3628.5	3611.8	3625.2	3748.8	3398.0
32.5°	4012.8	4046.2	4002.7	3959.3	4002.7	3989.4	3935.9	3912.5	4079.6	3915.9	3504.9
35°	4313.5	4326.8	4330.2	4323.5	4350.2	4303.4	4303.4	4390.3	4440.4	4263.4	3538.3
37.5°	5038.5	4991.7	4894.8	4848.1	4931.6	5001.8	4794.6	4898.2	4878.1	4577.4	3788.9
40°	5559.7	5666.6	5696.7	5683.4	5696.7	5496.2	5539.7	5616.5	5526.3	5028.5	3702.0
42.5°	6321.5	6388.3	6365.0	6334.9	6348.2	6311.5	6181.2	6465.2	6141.1	5533.0	3835.7
45°	7016.5	7166.8	7176.9	7073.3	7156.8	7026.5	7080.0	7180.2	6852.8	5910.6	3798.9
47.5°	7845.1	8155.8	8038.9	8038.9	8122.4	7841.8	7968.7	8102.4	7233.7	6164.5	3598.5
50°	9071.3	9238.4	9231.7	9201.6	9238.4	9088.0	9068.0	9051.3	7818.4	6405.0	3474.8
52.5°	10457.9	10685.1	10598.2	10631.6	10681.8	10397.8	10621.6	10010.2	8550.1	6495.3	3194.2
55°	12228.7	12385.8	12298.9	12128.5	12355.7	12175.3	12248.8	11056.0	9057.9	6238.0	2726.4
57.5°	14337.0	14417.2	14273.5	14256.8	14407.2	14213.4	14089.8	12232.1	9321.9	6044.2	2178.5
60°	16799.5	17050.1	16959.8	16816.2	16953.2	16782.8	15847.2	13231.1	9268.4	5138.7	1687.3
62.5°	19753.1	20007.0	19906.8	19809.9	19896.7	19452.4	17497.8	14019.6	9027.9	4072.9	1232.9
65°	22192.1	23338.2	23488.5	23491.9	23070.9	22041.8	18814.2	14327.0	7758.2	2843.3	902.1
67.5°	23795.9	26178.2	26919.9	26652.6	25687.0	23338.2	19345.5	13725.6	5990.7	1797.6	674.9
69°	23612.1	26736.2	27808.7	27658.3	26301.8	23318.1	18931.1	12713.2	4577.4	1430.0	571.3
70°	22763.5	26278.4	27551.4	27618.2	25910.9	22422.7	18192.7	11550.5	3702.0	1219.5	524.6
72.5°	18166.0	21654.2	22773.5	23211.2	21517.2	17955.5	14918.4	8149.1	2145.0	852.0	424.3
75°	11253.1	13130.9	14059.7	14313.6	13287.9	11182.9	9054.6	4534.0	1306.4	601.4	357.5
77.5°	5045.2	5589.8	6124.4	6124.4	5723.4	5105.3	4149.8	2191.8	741.7	427.7	300.7
80°	1690.6	1754.1	1707.3	1724.1	1657.2	1593.7	1667.3	945.6	457.7	320.8	243.9
82.5°	1149.4	1443.4	1533.6	1533.6	1440.1	1136.0	641.5	434.4	280.7	230.5	187.1
85°	935.5	1142.7	1226.2	1263.0	1189.5	958.9	337.5	210.5	167.1	147.0	127.0
87.5°	314.1	294.0	277.3	270.6	284.0	297.4	167.1	90.2	76.8	70.2	66.8
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°	1136.0	1136.0	1136.0	1136.0	1136.0	1136.0
2.5°	1189.5	1149.4	1166.1	1182.8	1303.1	1393.3
5°	1182.8	1239.6	1366.5	1526.9	1600.4	1780.9
7.5°	1216.2	1423.3	1660.6	1827.6	1894.5	1951.3
10°	1627.2	1663.9	1744.1	1904.5	2038.1	2061.5
12.5°	2101.6	2091.6	2034.8	2108.3	2041.5	2088.2
15°	2472.5	2362.2	2285.4	2275.3	2252.0	2252.0
17.5°	2676.3	2579.4	2472.5	2445.7	2375.6	2432.4
20°	2916.9	2749.8	2482.5	2455.8	2432.4	2378.9
22.5°	2870.1	2703.0	2425.7	2392.3	2515.9	2509.2
25°	2926.9	2703.0	2439.1	2402.3	2459.1	2459.1
27.5°	2786.5	2602.8	2412.3	2191.8	2365.6	2405.7
30°	2749.8	2542.6	2322.1	2125.0	2302.1	2265.3
32.5°	2943.6	2392.3	2175.1	2115.0	2245.3	2218.5
35°	2793.2	2365.6	2138.4	2028.1	2181.8	2155.1
37.5°	2856.7	2332.1	2074.9	1981.3	2104.9	2145.0
40°	2843.3	2175.1	2001.4	1881.1	2004.7	2024.8
42.5°	2619.5	2054.8	1877.7	1757.5	1820.9	1887.8
45°	2552.7	1981.3	1757.5	1590.4	1593.7	1670.6
47.5°	2429.0	1814.3	1536.9	1383.3	1383.3	1446.7
50°	2221.9	1590.4	1286.4	1146.0	1142.7	1192.8
52.5°	1914.5	1373.2	1085.9	932.2	922.2	972.3
55°	1567.0	1105.9	855.3	755.1	735.1	755.1
57.5°	1219.5	862.0	674.9	594.7	591.4	608.1
60°	945.6	674.9	537.9	491.2	497.8	524.6
62.5°	715.0	537.9	457.7	441.0	451.1	477.8
65°	568.0	464.4	417.6	407.6	417.6	444.4
67.5°	461.1	421.0	387.6	374.2	380.9	407.6
69°	424.3	397.6	370.9	354.2	360.8	380.9
70°	404.3	384.2	357.5	340.8	347.5	367.5
72.5°	354.2	344.1	324.1	307.4	310.7	327.4
75°	310.7	304.0	290.7	270.6	270.6	290.7
77.5°	260.6	264.0	250.6	230.5	227.2	237.2
80°	207.2	213.8	207.2	187.1	180.4	180.4
82.5°	150.4	163.7	157.0	137.0	133.6	133.6
85°	93.6	103.6	100.2	86.9	86.9	76.8
87.5°	43.4	56.8	53.5	46.8	43.4	30.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)