

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: P565393

Luminaire Tested: **MSA-SA4B-760-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565393  
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-760-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

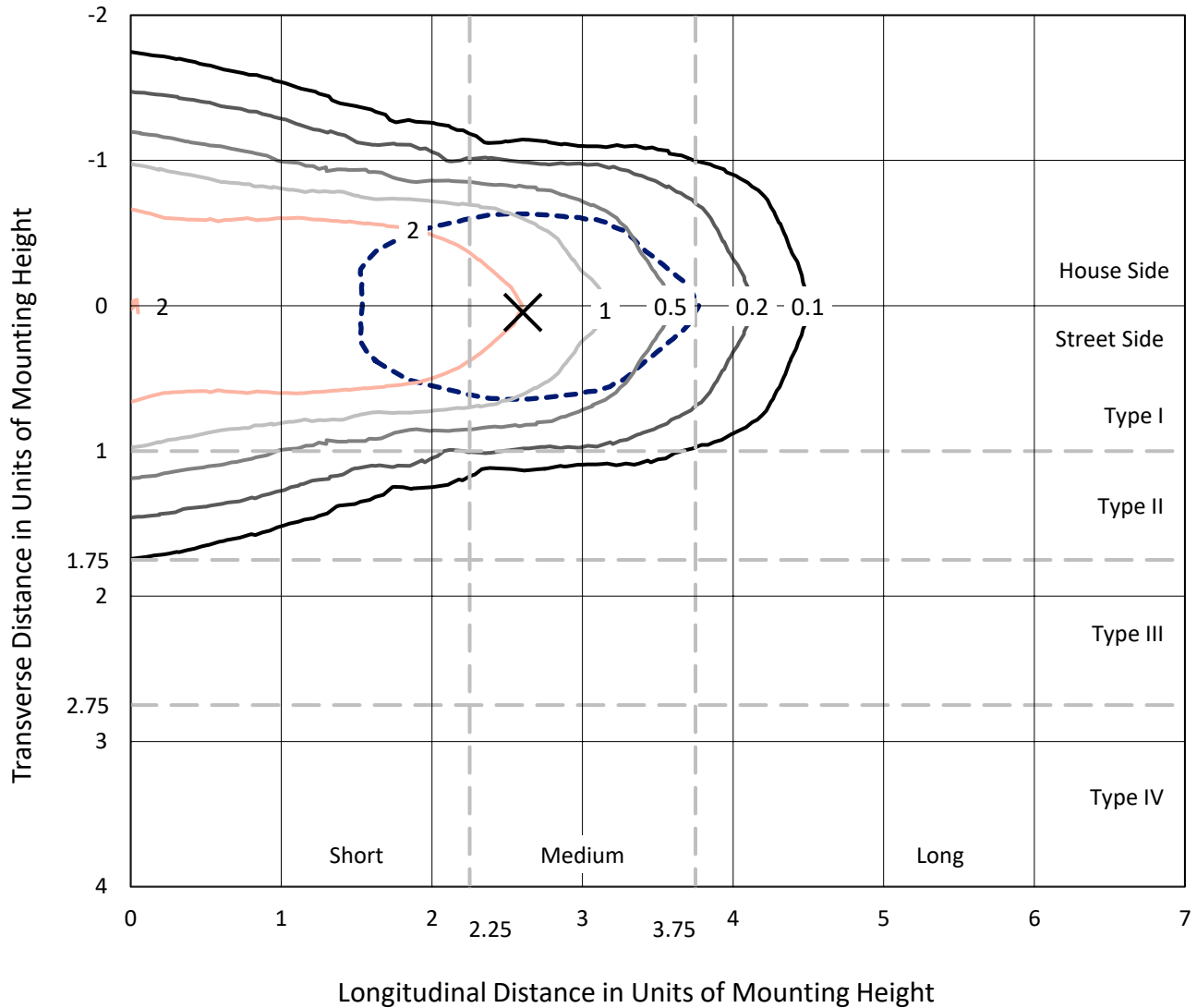
Lumens per Lamp: N/A  
Luminaire Lumens: 17566 lumens  
Efficiency: N/A  
Efficacy: 102.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B4 - U0 - G4  
  
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

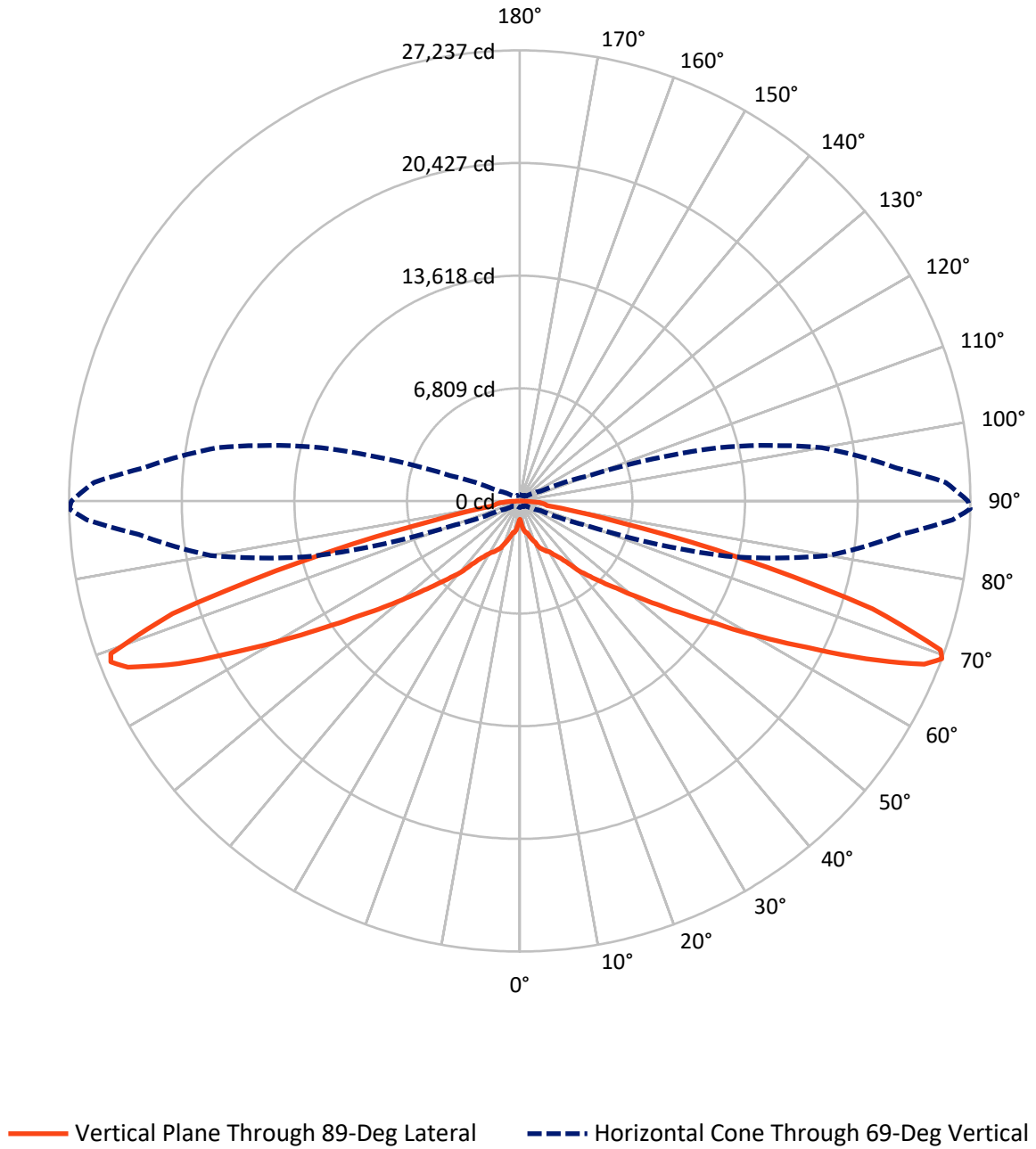
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc  
 Type I - Medium - N/A

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8782.8	0.0	8782.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8783.2	0.0	8783.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	17566.0	0.0	17566.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.8	0.8
10°-20°	644.1	3.7
20°-30°	1285.1	7.3
30°-40°	1943.6	11.1
40°-50°	2821.3	16.1
50°-60°	3706.6	21.1
60°-70°	4521.6	25.7
70°-80°	2286.0	13.0
80°-90°	217.9	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°	17566.0	100.0
0°-180°	17566.0	100.0

**Coefficient of Utilization**

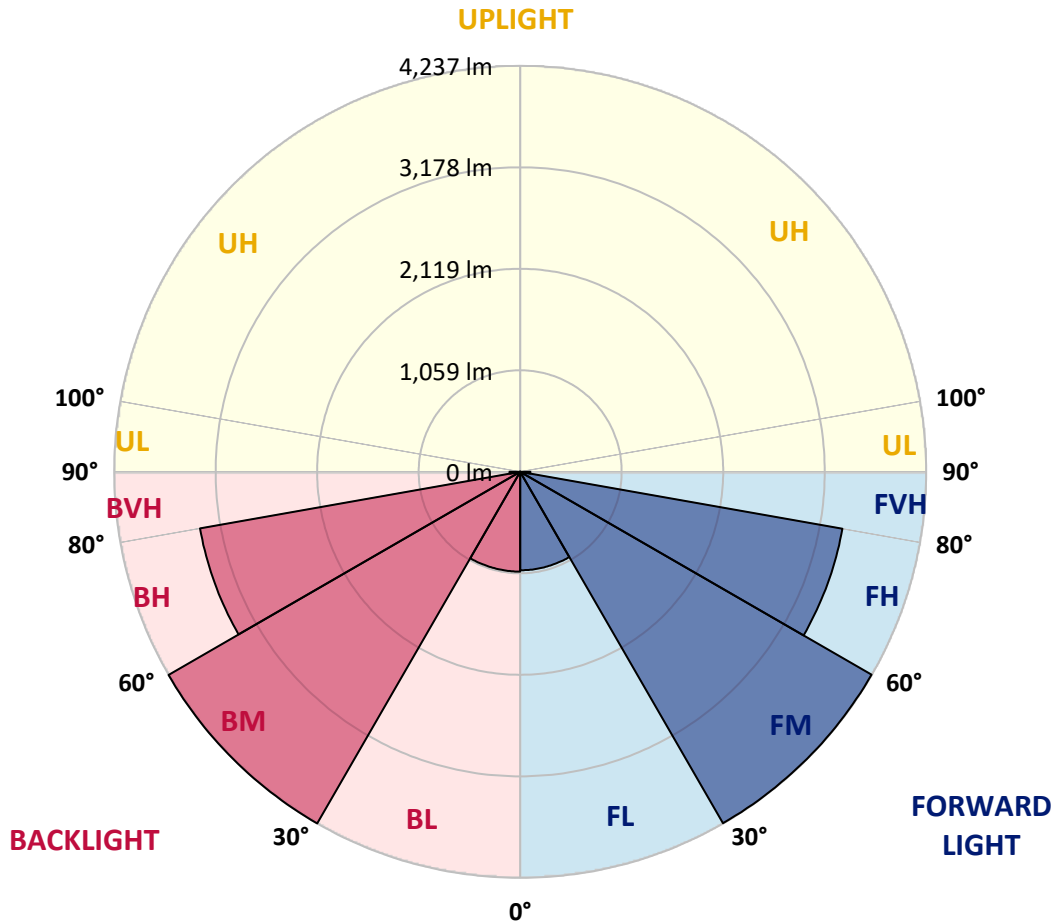


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1027.3	5.8			
FM (30°-60°)	4234.4	24.1			
FH (60°-80°)	3414.7	19.4			G2/5000
FVH (80°-90°)	106.9	0.6			G2/225
BL (0°-30°)	1041.7	5.9	B3/2500		
BM (30°-60°)	4237.2	24.1	B3/5000		
BH (60°-80°)	3392.9	19.3	B4/5000		G4/5000
BVH (80°-90°)	111.0	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°	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6
2.5°	1305.7	1155.2	1142.1	1106.1	1132.3	1142.1	1119.2	1086.5	1122.4	1142.1	1106.1
5°	1646.0	1423.5	1348.2	1286.1	1161.7	1109.4	1161.7	1295.9	1312.2	1394.1	1371.2
7.5°	1812.9	1776.9	1682.0	1475.9	1276.3	1165.0	1305.7	1498.8	1597.0	1675.5	1757.3
10°	1937.3	1917.7	1750.8	1603.5	1521.7	1528.2	1531.5	1593.7	1678.8	1809.7	1855.5
12.5°	1966.7	1960.2	1986.4	1953.6	1960.2	1996.2	1960.2	1943.8	1992.9	2035.5	1989.6
15°	2156.5	2153.3	2163.1	2169.6	2300.5	2356.2	2300.5	2251.4	2215.4	2179.4	2254.7
17.5°	2287.4	2271.1	2274.3	2336.5	2483.8	2637.6	2608.1	2542.7	2460.9	2510.0	2572.1
20°	2359.4	2330.0	2349.6	2375.8	2624.5	2794.7	2814.3	2725.9	2676.9	2739.0	2791.4
22.5°	2428.2	2382.3	2313.6	2339.8	2568.9	2814.3	2909.2	2886.3	2922.3	2941.9	2932.1
25°	2346.3	2375.8	2300.5	2375.8	2608.1	2833.9	3023.7	3157.9	3161.2	3151.4	3223.4
27.5°	2297.3	2274.3	2146.7	2339.8	2532.9	2673.6	3157.9	3383.7	3452.4	3243.0	3383.7
30°	2212.2	2248.2	2074.7	2235.1	2480.5	2716.1	3311.7	3635.7	3534.2	3508.1	3540.8
32.5°	2159.8	2136.9	2055.1	2143.4	2330.0	2843.8	3409.9	3782.9	3910.6	3848.4	3841.8
35°	2074.7	2091.1	1963.5	2058.4	2320.2	2735.8	3475.3	4152.7	4349.1	4300.0	4260.7
37.5°	2087.8	2032.2	1940.6	2009.3	2258.0	2794.7	3639.0	4509.4	4820.3	4846.5	4666.5
40°	1989.6	1956.9	1819.5	1934.0	2140.2	2758.7	3678.2	4915.2	5442.1	5559.9	5301.4
42.5°	1848.9	1806.4	1727.8	1855.5	2071.5	2582.0	3733.9	5402.8	6073.7	6319.1	6083.5
45°	1646.0	1590.4	1551.1	1721.3	1920.9	2536.1	3675.0	5808.6	6679.1	7016.1	7009.6
47.5°	1400.6	1364.6	1345.0	1525.0	1796.6	2421.6	3553.9	6063.8	7101.2	7965.1	7834.2
50°	1122.4	1096.3	1093.0	1282.8	1587.1	2186.0	3416.4	6191.5	7742.6	8835.6	8950.1
52.5°	899.9	880.3	877.0	1030.8	1328.6	1868.6	3128.5	6289.6	8354.5	9823.9	10412.9
55°	703.6	683.9	687.2	814.8	1057.0	1528.2	2689.9	6178.4	8891.2	10835.1	11951.0
57.5°	575.9	556.3	559.6	631.6	808.3	1168.3	2143.4	5936.2	9133.4	12085.1	13744.3
60°	507.2	487.6	477.8	510.5	621.8	880.3	1593.7	4993.7	9172.7	13122.5	15691.4
62.5°	471.2	451.6	441.8	451.6	513.8	674.1	1148.6	3956.4	8946.9	14009.3	17474.8
65°	438.5	422.1	409.1	418.9	451.6	536.7	837.7	2709.6	7765.5	14415.1	18770.7
67.5°	402.5	389.4	376.3	389.4	412.3	451.6	651.2	1714.8	5821.7	13888.2	19310.7
69°	382.9	363.2	356.7	366.5	389.4	415.6	562.9	1367.9	4427.6	12886.9	18983.4
70°	363.2	350.2	340.3	356.7	376.3	396.0	507.2	1161.7	3472.1	11600.8	18171.9
72.5°	320.7	310.9	304.3	320.7	337.1	350.2	415.6	827.9	2012.6	7899.7	14411.8
75°	281.4	271.6	268.3	281.4	294.5	301.1	350.2	569.4	1187.9	4133.1	8645.8
77.5°	235.6	222.5	225.8	242.2	252.0	255.3	294.5	409.1	700.3	1871.8	4005.5
80°	173.4	173.4	186.5	199.6	199.6	199.6	235.6	297.8	425.4	860.7	1662.4
82.5°	121.1	124.4	127.6	147.3	150.5	137.4	180.0	216.0	265.1	376.3	575.9
85°	68.7	72.0	75.3	88.4	91.6	81.8	117.8	137.4	153.8	186.5	301.1
87.5°	26.2	29.5	39.3	45.8	49.1	36.0	55.6	65.4	65.4	78.5	134.2
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°	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6
2.5°	1181.4	1204.3	1246.8	1256.6	1220.6	1181.4	1093.0	1148.6	1171.5	1129.0	1142.1
5°	1462.8	1511.9	1564.2	1502.1	1462.8	1436.6	1394.1	1397.3	1374.4	1299.2	1174.8
7.5°	1780.2	1724.6	1763.8	1806.4	1744.2	1747.5	1786.8	1704.9	1642.8	1515.1	1282.8
10°	1927.5	1927.5	1937.3	1937.3	1911.1	1911.1	1907.8	1776.9	1701.7	1646.0	1580.6
12.5°	1937.3	1934.0	1973.3	1943.8	1950.4	1956.9	1973.3	2032.2	2012.6	1940.6	1999.5
15°	2208.9	2195.8	2208.9	2205.6	2215.4	2244.9	2231.8	2218.7	2222.0	2274.3	2362.7
17.5°	2464.1	2470.7	2457.6	2480.5	2480.5	2500.1	2546.0	2500.1	2460.9	2559.0	2627.8
20°	2758.7	2735.8	2683.4	2722.7	2732.5	2735.8	2811.0	2755.4	2699.8	2735.8	2817.6
22.5°	3056.5	3053.2	3059.7	3063.0	3076.1	3027.0	2925.6	2909.2	2945.2	2896.1	2905.9
25°	3239.7	3243.0	3259.4	3262.6	3207.0	3259.4	3295.3	3187.4	3187.4	3177.5	3112.1
27.5°	3462.2	3413.2	3432.8	3459.0	3436.1	3449.2	3406.6	3249.5	3416.4	3439.3	3177.5
30°	3612.8	3589.9	3567.0	3593.1	3616.0	3675.0	3553.9	3537.5	3550.6	3671.7	3328.1
32.5°	3930.2	3962.9	3920.4	3877.8	3920.4	3907.3	3854.9	3832.0	3995.7	3835.3	3432.8
35°	4224.7	4237.8	4241.1	4234.5	4260.7	4214.9	4214.9	4300.0	4349.1	4175.6	3465.5
37.5°	4934.8	4889.0	4794.1	4748.3	4830.1	4898.8	4696.0	4797.4	4777.8	4483.2	3710.9
40°	5445.3	5550.1	5579.5	5566.4	5579.5	5383.2	5425.7	5501.0	5412.6	4925.0	3625.9
42.5°	6191.5	6256.9	6234.0	6204.5	6217.6	6181.6	6054.0	6332.2	6014.7	5419.2	3756.8
45°	6872.1	7019.4	7029.2	6927.8	7009.6	6881.9	6934.3	7032.5	6711.8	5788.9	3720.8
47.5°	7683.7	7988.0	7873.5	7873.5	7955.3	7680.4	7804.8	7935.7	7084.8	6037.7	3524.4
50°	8884.7	9048.3	9041.8	9012.3	9048.3	8901.0	8881.4	8865.0	7657.5	6273.3	3403.3
52.5°	10242.7	10465.3	10380.2	10412.9	10462.0	10183.8	10403.1	9804.2	8374.2	6361.6	3128.5
55°	11977.1	12130.9	12045.9	11879.0	12101.5	11924.8	11996.8	10828.5	8871.6	6109.6	2670.3
57.5°	14042.0	14120.6	13979.9	13963.5	14110.8	13921.0	13799.9	11980.4	9130.1	5919.8	2133.6
60°	16453.8	16699.3	16610.9	16470.2	16604.4	16437.5	15521.2	12958.9	9077.8	5033.0	1652.6
62.5°	19346.7	19595.4	19497.2	19402.3	19487.4	19052.2	17137.8	13731.2	8842.1	3989.1	1207.5
65°	21735.6	22858.0	23005.3	23008.5	22596.2	21588.3	18427.1	14032.2	7598.6	2784.8	883.6
67.5°	23306.3	25639.6	26366.1	26104.3	25158.5	22858.0	18947.4	13443.2	5867.5	1760.6	661.0
69°	23126.3	26186.1	27236.5	27089.3	25760.7	22838.4	18541.7	12451.6	4483.2	1400.6	559.6
70°	22295.1	25737.8	26984.6	27050.0	25377.8	21961.4	17818.4	11312.8	3625.9	1194.4	513.8
72.5°	17792.3	21208.7	22305.0	22733.6	21074.5	17586.1	14611.5	7981.5	2100.9	834.5	415.6
75°	11021.6	12860.7	13770.4	14019.1	13014.5	10952.9	8868.3	4440.7	1279.5	589.0	350.2
77.5°	4941.4	5474.8	5998.4	5998.4	5605.7	5000.3	4064.4	2146.7	726.5	418.9	294.5
80°	1655.9	1718.0	1672.2	1688.6	1623.1	1561.0	1632.9	926.1	448.3	314.2	238.9
82.5°	1125.7	1413.7	1502.1	1502.1	1410.4	1112.6	628.3	425.4	274.9	225.8	183.3
85°	916.3	1119.2	1201.0	1237.0	1165.0	939.2	330.5	206.2	163.6	144.0	124.4
87.5°	307.6	288.0	271.6	265.1	278.2	291.2	163.6	88.4	75.3	68.7	65.4
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°	1112.6	1112.6	1112.6	1112.6	1112.6	1112.6
2.5°	1165.0	1125.7	1142.1	1158.4	1276.3	1364.6
5°	1158.4	1214.1	1338.4	1495.5	1567.5	1744.2
7.5°	1191.2	1394.1	1626.4	1790.0	1855.5	1911.1
10°	1593.7	1629.7	1708.2	1865.3	1996.2	2019.1
12.5°	2058.4	2048.5	1992.9	2064.9	1999.5	2045.3
15°	2421.6	2313.6	2238.3	2228.5	2205.6	2205.6
17.5°	2621.2	2526.3	2421.6	2395.4	2326.7	2382.3
20°	2856.8	2693.2	2431.4	2405.2	2382.3	2330.0
22.5°	2811.0	2647.4	2375.8	2343.1	2464.1	2457.6
25°	2866.7	2647.4	2388.9	2352.9	2408.5	2408.5
27.5°	2729.2	2549.2	2362.7	2146.7	2316.9	2356.2
30°	2693.2	2490.3	2274.3	2081.3	2254.7	2218.7
32.5°	2883.0	2343.1	2130.4	2071.5	2199.1	2172.9
35°	2735.8	2316.9	2094.4	1986.4	2136.9	2110.7
37.5°	2797.9	2284.2	2032.2	1940.6	2061.6	2100.9
40°	2784.8	2130.4	1960.2	1842.4	1963.5	1983.1
42.5°	2565.6	2012.6	1839.1	1721.3	1783.5	1848.9
45°	2500.1	1940.6	1721.3	1557.7	1561.0	1636.2
47.5°	2379.1	1776.9	1505.3	1354.8	1354.8	1417.0
50°	2176.2	1557.7	1259.9	1122.4	1119.2	1168.3
52.5°	1875.1	1345.0	1063.5	913.0	903.2	952.3
55°	1534.8	1083.2	837.7	739.6	719.9	739.6
57.5°	1194.4	844.3	661.0	582.5	579.2	595.6
60°	926.1	661.0	526.9	481.0	487.6	513.8
62.5°	700.3	526.9	448.3	432.0	441.8	468.0
65°	556.3	454.9	409.1	399.2	409.1	435.2
67.5°	451.6	412.3	379.6	366.5	373.1	399.2
69°	415.6	389.4	363.2	346.9	353.4	373.1
70°	396.0	376.3	350.2	333.8	340.3	360.0
72.5°	346.9	337.1	317.4	301.1	304.3	320.7
75°	304.3	297.8	284.7	265.1	265.1	284.7
77.5°	255.3	258.5	245.4	225.8	222.5	232.3
80°	202.9	209.4	202.9	183.3	176.7	176.7
82.5°	147.3	160.3	153.8	134.2	130.9	130.9
85°	91.6	101.4	98.2	85.1	85.1	75.3
87.5°	42.5	55.6	52.4	45.8	42.5	29.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)