

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: P565330

Luminaire Tested: **MSA-SA4C-830-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565330
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-830-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: 17288 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

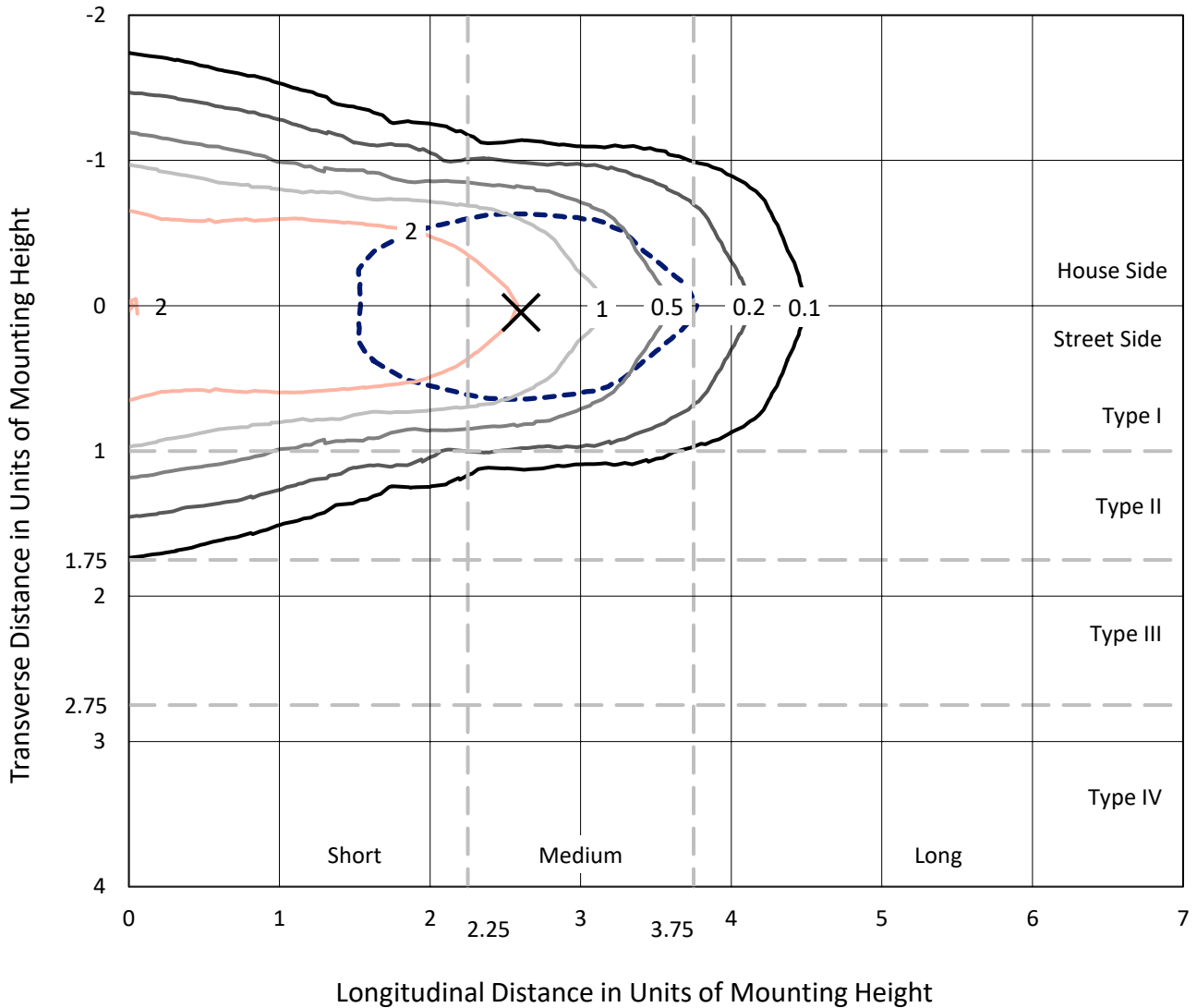
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

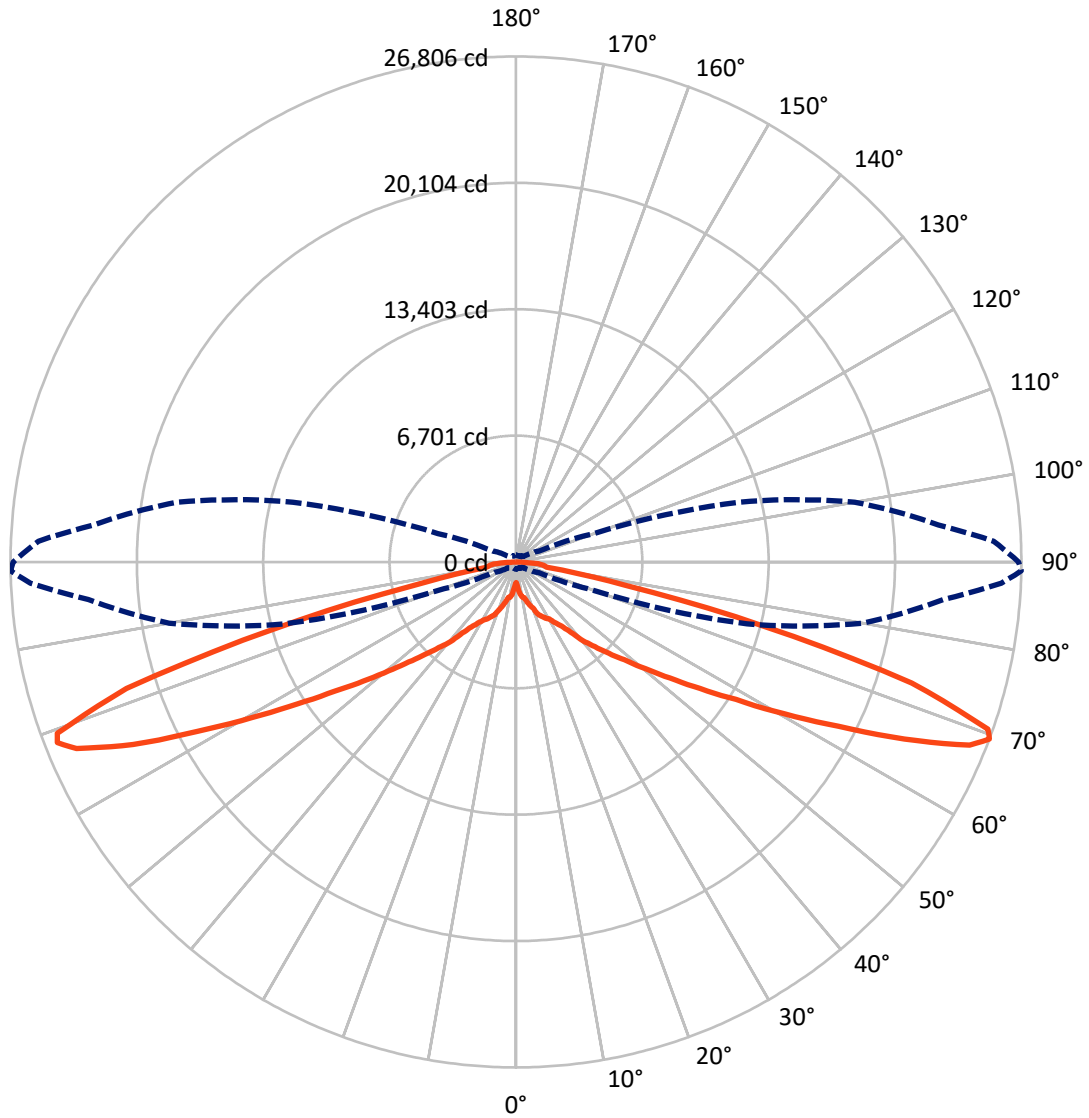
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 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
House Side	Lumens	8643.8	0.0	8643.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8644.2	0.0	8644.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	17288.0	0.0	17288.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.6	0.8
10°-20°	633.9	3.7
20°-30°	1264.7	7.3
30°-40°	1912.8	11.1
40°-50°	2776.6	16.1
50°-60°	3648.0	21.1
60°-70°	4450.0	25.7
70°-80°	2249.8	13.0
80°-90°	214.4	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°	17288.0	100.0
0°-180°	17288.0	100.0

Coefficient of Utilization

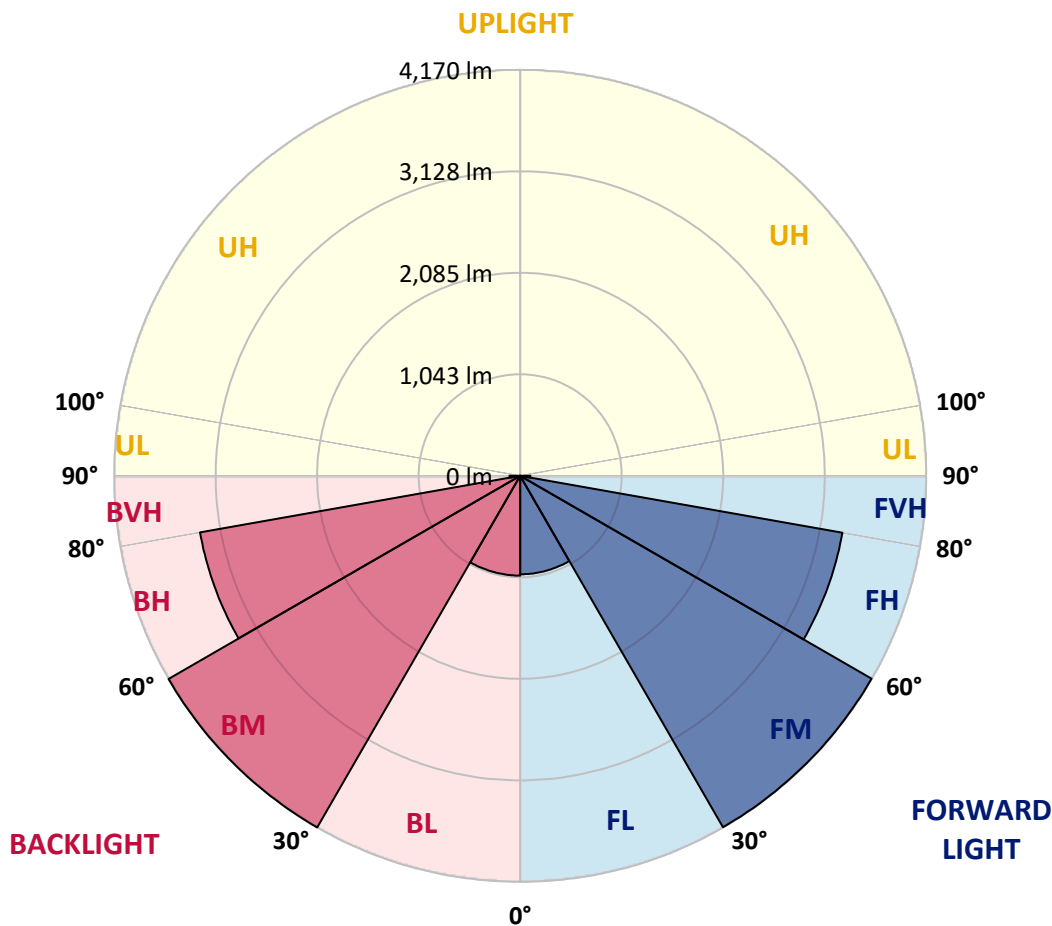


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1011.0	5.8			
FM (30°-60°)	4167.3	24.1			
FH (60°-80°)	3360.6	19.4			G2/5000
FVH (80°-90°)	105.2	0.6			G2/225
BL (0°-30°)	1025.2	5.9	B3/2500		
BM (30°-60°)	4170.1	24.1	B3/5000		
BH (60°-80°)	3339.2	19.3	B4/5000		G4/5000
BVH (80°-90°)	109.3	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°	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0
2.5°	1285.0	1136.9	1124.0	1088.6	1114.3	1124.0	1101.5	1069.3	1104.7	1124.0	1088.6
5°	1620.0	1401.0	1326.9	1265.7	1143.3	1091.8	1143.3	1275.4	1291.5	1372.0	1349.5
7.5°	1784.2	1748.8	1655.4	1452.5	1256.1	1146.6	1285.0	1475.1	1571.7	1649.0	1729.5
10°	1906.6	1887.3	1723.0	1578.1	1497.6	1504.0	1507.3	1568.5	1652.2	1781.0	1826.1
12.5°	1935.6	1929.2	1954.9	1922.7	1929.2	1964.6	1929.2	1913.1	1961.4	2003.2	1958.2
15°	2122.4	2119.2	2128.9	2135.3	2264.1	2318.9	2264.1	2215.8	2180.4	2145.0	2219.0
17.5°	2251.2	2235.1	2238.4	2299.5	2444.5	2595.8	2566.9	2502.4	2421.9	2470.2	2531.4
20°	2322.1	2293.1	2312.4	2338.2	2583.0	2750.4	2769.8	2682.8	2634.5	2695.7	2747.2
22.5°	2389.7	2344.6	2277.0	2302.8	2528.2	2769.8	2863.2	2840.6	2876.0	2895.4	2885.7
25°	2309.2	2338.2	2264.1	2338.2	2566.9	2789.1	2975.9	3107.9	3111.1	3101.5	3172.3
27.5°	2260.9	2238.4	2112.7	2302.8	2492.8	2631.3	3107.9	3330.2	3397.8	3191.7	3330.2
30°	2177.2	2212.6	2041.9	2199.7	2441.3	2673.1	3259.3	3578.1	3478.3	3452.5	3484.7
32.5°	2125.6	2103.1	2022.6	2109.5	2293.1	2798.7	3355.9	3723.1	3848.7	3787.5	3781.0
35°	2041.9	2058.0	1932.4	2025.8	2283.4	2692.5	3420.3	4087.0	4280.2	4231.9	4193.3
37.5°	2054.8	2000.0	1909.8	1977.5	2222.2	2750.4	3581.4	4438.1	4744.0	4769.8	4592.6
40°	1958.2	1925.9	1790.7	1903.4	2106.3	2715.0	3620.0	4837.4	5355.9	5471.9	5217.5
42.5°	1819.7	1777.8	1700.5	1826.1	2038.7	2541.1	3674.8	5317.3	5977.5	6219.1	5987.2
45°	1620.0	1565.2	1526.6	1694.1	1890.5	2496.0	3616.8	5716.7	6573.3	6905.1	6898.6
47.5°	1378.4	1343.0	1323.7	1500.8	1768.1	2383.3	3497.6	5967.9	6988.8	7839.1	7710.2
50°	1104.7	1078.9	1075.7	1262.5	1562.0	2151.4	3362.4	6093.5	7620.1	8695.8	8808.5
52.5°	885.7	866.4	863.1	1014.5	1307.6	1839.0	3078.9	6190.1	8222.3	9668.4	10248.1
55°	692.4	673.1	676.3	801.9	1040.3	1504.0	2647.4	6080.6	8750.5	10663.6	11761.8
57.5°	566.8	547.5	550.7	621.6	795.5	1149.8	2109.5	5842.3	8988.8	11893.9	13526.7
60°	499.2	479.9	470.2	502.4	611.9	866.4	1568.5	4914.7	9027.5	12914.8	15443.0
62.5°	463.8	444.4	434.8	444.4	505.6	663.5	1130.4	3893.8	8805.3	13787.6	17198.3
65°	431.6	415.5	402.6	412.2	444.4	528.2	824.5	2666.7	7642.6	14187.0	18473.7
67.5°	396.1	383.3	370.4	383.3	405.8	444.4	640.9	1687.6	5729.5	13668.4	19005.1
69°	376.8	357.5	351.1	360.7	383.3	409.0	554.0	1346.2	4357.5	12682.9	18683.0
70°	357.5	344.6	334.9	351.1	370.4	389.7	499.2	1143.3	3417.1	11417.2	17884.3
72.5°	315.6	306.0	299.5	315.6	331.7	344.6	409.0	814.8	1980.7	7774.7	14183.7
75°	277.0	267.3	264.1	277.0	289.9	296.3	344.6	560.4	1169.1	4067.7	8509.0
77.5°	231.9	219.0	222.2	238.3	248.0	251.2	289.9	402.6	689.2	1842.2	3942.1
80°	170.7	170.7	183.6	196.5	196.5	196.5	231.9	293.1	418.7	847.0	1636.1
82.5°	119.2	122.4	125.6	144.9	148.1	135.3	177.1	212.6	260.9	370.4	566.8
85°	67.6	70.9	74.1	87.0	90.2	80.5	115.9	135.3	151.4	183.6	296.3
87.5°	25.8	29.0	38.6	45.1	48.3	35.4	54.8	64.4	64.4	77.3	132.0
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°	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0
2.5°	1162.7	1185.2	1227.1	1236.7	1201.3	1162.7	1075.7	1130.4	1153.0	1111.1	1124.0
5°	1439.6	1487.9	1539.5	1478.3	1439.6	1413.9	1372.0	1375.2	1352.7	1278.6	1156.2
7.5°	1752.0	1697.3	1735.9	1777.8	1716.6	1719.8	1758.5	1678.0	1616.8	1491.2	1262.5
10°	1897.0	1897.0	1906.6	1906.6	1880.9	1880.9	1877.6	1748.8	1674.7	1620.0	1555.6
12.5°	1906.6	1903.4	1942.1	1913.1	1919.5	1925.9	1942.1	2000.0	1980.7	1909.8	1967.8
15°	2173.9	2161.1	2173.9	2170.7	2180.4	2209.4	2196.5	2183.6	2186.8	2238.4	2325.3
17.5°	2425.2	2431.6	2418.7	2441.3	2441.3	2460.6	2505.7	2460.6	2421.9	2518.5	2586.2
20°	2715.0	2692.5	2640.9	2679.6	2689.2	2692.5	2766.5	2711.8	2657.0	2692.5	2773.0
22.5°	3008.1	3004.9	3011.3	3014.5	3027.4	2979.1	2879.3	2863.2	2898.6	2850.3	2859.9
25°	3188.4	3191.7	3207.8	3211.0	3156.2	3207.8	3243.2	3136.9	3136.9	3127.3	3062.8
27.5°	3407.4	3359.1	3378.5	3404.2	3381.7	3394.6	3352.7	3198.1	3362.4	3384.9	3127.3
30°	3555.6	3533.1	3510.5	3536.3	3558.8	3616.8	3497.6	3481.5	3494.4	3613.6	3275.4
32.5°	3868.0	3900.2	3858.3	3816.5	3858.3	3845.5	3793.9	3771.4	3932.4	3774.6	3378.5
35°	4157.9	4170.7	4174.0	4167.5	4193.3	4148.2	4148.2	4231.9	4280.2	4109.6	3410.7
37.5°	4856.7	4811.7	4718.3	4673.2	4753.7	4821.3	4621.6	4721.5	4702.2	4412.3	3652.2
40°	5359.2	5462.2	5491.2	5478.3	5491.2	5298.0	5339.8	5413.9	5327.0	4847.1	3568.5
42.5°	6093.5	6157.9	6135.3	6106.4	6119.2	6083.8	5958.2	6232.0	5919.6	5333.4	3697.3
45°	6763.4	6908.3	6918.0	6818.1	6898.6	6773.0	6824.6	6921.2	6605.6	5697.3	3661.9
47.5°	7562.1	7861.6	7748.9	7748.9	7829.4	7558.9	7681.3	7810.1	6972.7	5942.1	3468.6
50°	8744.1	8905.1	8898.7	8869.7	8905.1	8760.2	8740.8	8724.7	7536.3	6174.0	3349.5
52.5°	10080.6	10299.6	10215.9	10248.1	10296.4	10022.7	10238.5	9649.1	8241.6	6260.9	3078.9
55°	11787.6	11939.0	11855.2	11691.0	11910.0	11736.1	11806.9	10657.1	8731.2	6013.0	2628.1
57.5°	13819.8	13897.1	13758.6	13742.5	13887.4	13700.7	13581.5	11790.8	8985.6	5826.2	2099.9
60°	16193.4	16435.0	16348.0	16209.5	16341.6	16177.3	15275.5	12753.8	8934.1	4953.4	1626.4
62.5°	19040.5	19285.3	19188.6	19095.2	19179.0	18750.6	16866.6	13513.9	8702.2	3926.0	1188.4
65°	21391.6	22496.3	22641.2	22644.4	22238.6	21246.6	18135.5	13810.2	7478.4	2740.8	869.6
67.5°	22937.5	25233.8	25948.8	25691.1	24760.4	22496.3	18647.6	13230.4	5774.6	1732.7	650.6
69°	22760.3	25771.7	26805.5	26660.6	25353.0	22476.9	18248.2	12254.6	4412.3	1378.4	550.7
70°	21942.3	25330.4	26557.5	26621.9	24976.2	21613.8	17536.4	11133.8	3568.5	1175.5	505.6
72.5°	17510.7	20873.0	21952.0	22373.9	20741.0	17307.8	14380.2	7855.2	2067.7	821.3	409.0
75°	10847.2	12657.2	13552.5	13797.3	12808.5	10779.5	8728.0	4370.4	1259.3	579.7	344.6
77.5°	4863.2	5388.1	5903.5	5903.5	5517.0	4921.2	4000.0	2112.7	715.0	412.2	289.9
80°	1629.6	1690.8	1645.8	1661.9	1597.4	1536.3	1607.1	911.4	441.2	309.2	235.1
82.5°	1107.9	1391.3	1478.3	1478.3	1388.1	1095.0	618.4	418.7	270.5	222.2	180.4
85°	901.8	1101.5	1182.0	1217.4	1146.6	924.3	325.3	202.9	161.0	141.7	122.4
87.5°	302.7	283.4	267.3	260.9	273.8	286.6	161.0	87.0	74.1	67.6	64.4
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°	1095.0	1095.0	1095.0	1095.0	1095.0	1095.0
2.5°	1146.6	1107.9	1124.0	1140.1	1256.1	1343.0
5°	1140.1	1194.9	1317.2	1471.8	1542.7	1716.6
7.5°	1172.3	1372.0	1600.7	1761.7	1826.1	1880.9
10°	1568.5	1603.9	1681.2	1835.8	1964.6	1987.1
12.5°	2025.8	2016.1	1961.4	2032.2	1967.8	2012.9
15°	2383.3	2277.0	2202.9	2193.3	2170.7	2170.7
17.5°	2579.7	2486.3	2383.3	2357.5	2289.9	2344.6
20°	2811.6	2650.6	2392.9	2367.2	2344.6	2293.1
22.5°	2766.5	2605.5	2338.2	2306.0	2425.2	2418.7
25°	2821.3	2605.5	2351.1	2315.6	2370.4	2370.4
27.5°	2686.0	2508.9	2325.3	2112.7	2280.2	2318.9
30°	2650.6	2450.9	2238.4	2048.3	2219.0	2183.6
32.5°	2837.4	2306.0	2096.6	2038.7	2164.3	2138.5
35°	2692.5	2280.2	2061.2	1954.9	2103.1	2077.3
37.5°	2753.7	2248.0	2000.0	1909.8	2029.0	2067.7
40°	2740.8	2096.6	1929.2	1813.2	1932.4	1951.7
42.5°	2525.0	1980.7	1810.0	1694.1	1755.3	1819.7
45°	2460.6	1909.8	1694.1	1533.0	1536.3	1610.3
47.5°	2341.4	1748.8	1481.5	1333.3	1333.3	1394.5
50°	2141.7	1533.0	1240.0	1104.7	1101.5	1149.8
52.5°	1845.4	1323.7	1046.7	898.6	888.9	937.2
55°	1510.5	1066.0	824.5	727.9	708.5	727.9
57.5°	1175.5	830.9	650.6	573.3	570.1	586.2
60°	911.4	650.6	518.5	473.4	479.9	505.6
62.5°	689.2	518.5	441.2	425.1	434.8	460.6
65°	547.5	447.7	402.6	392.9	402.6	428.3
67.5°	444.4	405.8	373.6	360.7	367.2	392.9
69°	409.0	383.3	357.5	341.4	347.8	367.2
70°	389.7	370.4	344.6	328.5	334.9	354.3
72.5°	341.4	331.7	312.4	296.3	299.5	315.6
75°	299.5	293.1	280.2	260.9	260.9	280.2
77.5°	251.2	254.4	241.5	222.2	219.0	228.7
80°	199.7	206.1	199.7	180.4	173.9	173.9
82.5°	144.9	157.8	151.4	132.0	128.8	128.8
85°	90.2	99.8	96.6	83.7	83.7	74.1
87.5°	41.9	54.8	51.5	45.1	41.9	29.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)