

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: P565299

Luminaire Tested: **MSA-SA4C-827-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565299
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-827-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: 15992 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

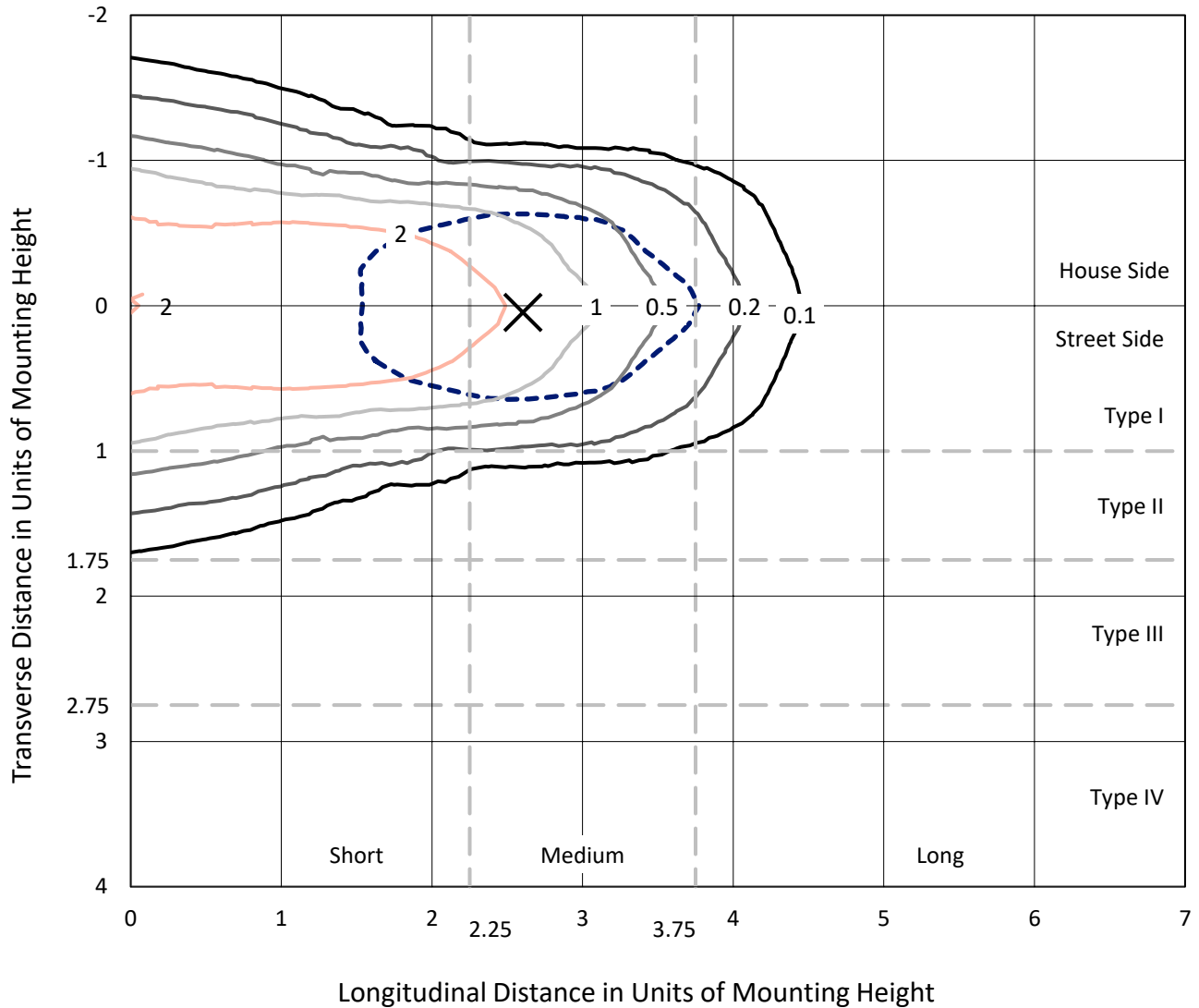
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

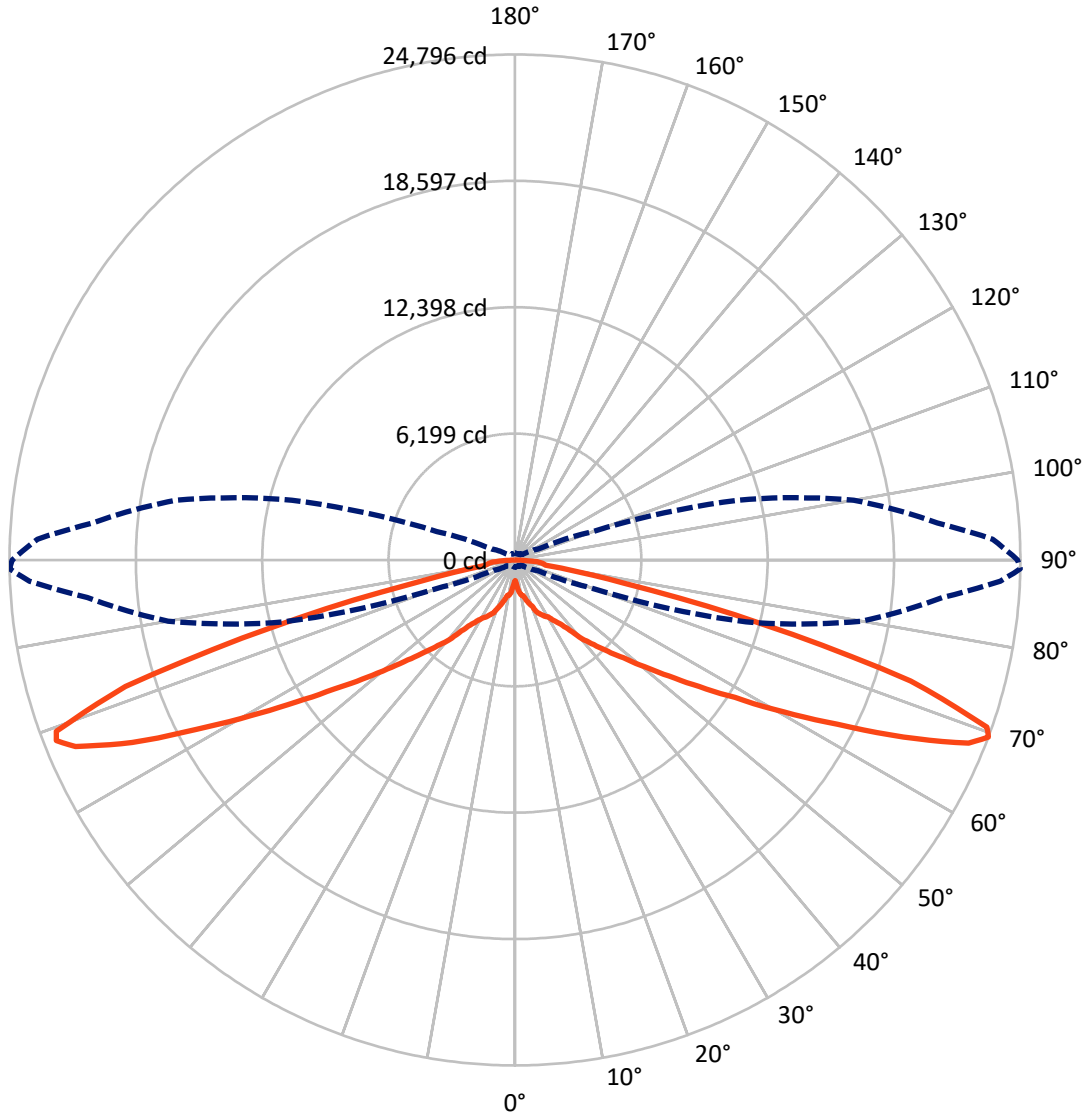
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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
House Side	Lumens	7995.9	0.0	7995.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7996.2	0.0	7996.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	15992.0	0.0	15992.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	0.8
10°-20°	586.4	3.7
20°-30°	1169.9	7.3
30°-40°	1769.4	11.1
40°-50°	2568.5	16.1
50°-60°	3374.5	21.1
60°-70°	4116.4	25.7
70°-80°	2081.2	13.0
80°-90°	198.4	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°	15992.0	100.0
0°-180°	15992.0	100.0

Coefficient of Utilization

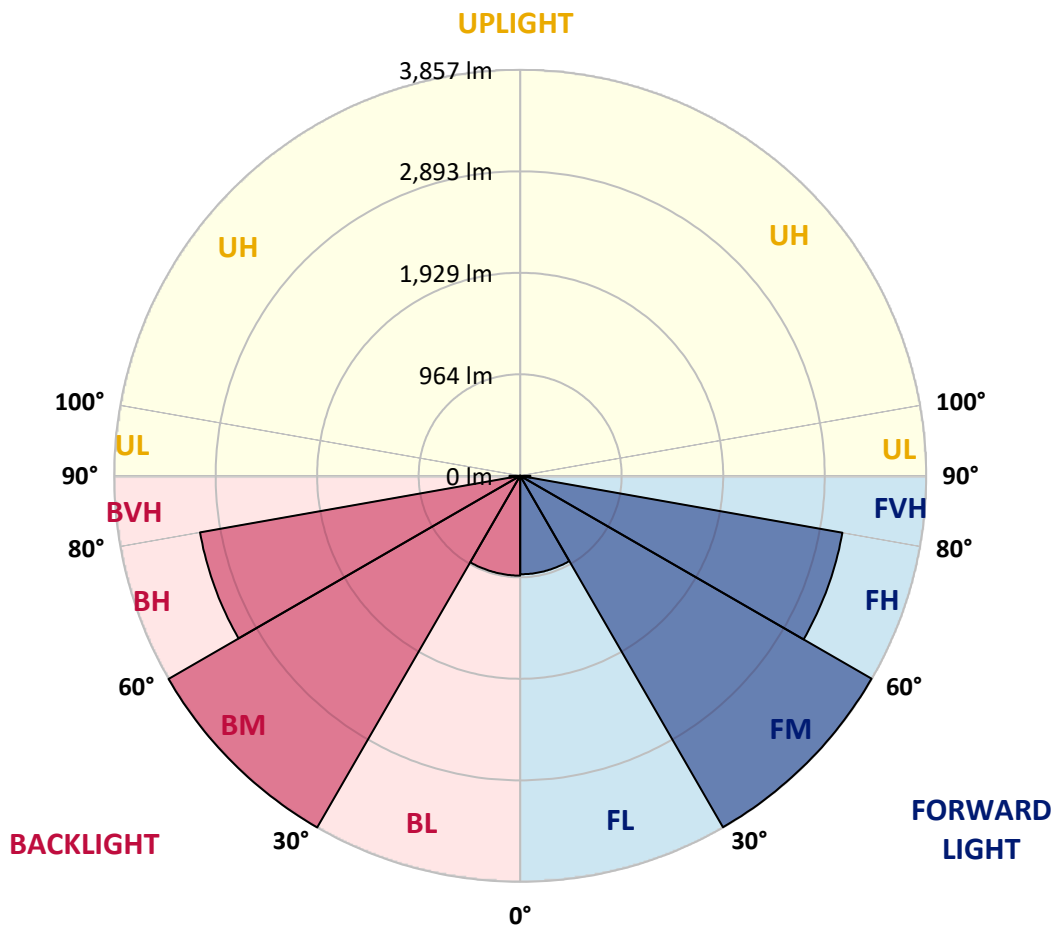


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	935.2	5.8			
FM (30°-60°)	3854.9	24.1			
FH (60°-80°)	3108.7	19.4			G2/5000
FVH (80°-90°)	97.3	0.6			G1/100
BL (0°-30°)	948.4	5.9	B2/1000		
BM (30°-60°)	3857.5	24.1	B3/5000		
BH (60°-80°)	3088.9	19.3	B4/5000		G4/5000
BVH (80°-90°)	101.1	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°	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9
2.5°	1188.7	1051.7	1039.7	1007.0	1030.8	1039.7	1018.9	989.1	1021.9	1039.7	1007.0
5°	1498.5	1296.0	1227.4	1170.8	1057.6	1010.0	1057.6	1179.8	1194.7	1269.1	1248.3
7.5°	1650.5	1617.7	1531.3	1343.6	1161.9	1060.6	1188.7	1364.5	1453.9	1525.4	1599.8
10°	1763.7	1745.8	1593.9	1459.8	1385.3	1391.3	1394.3	1450.9	1528.3	1647.5	1689.2
12.5°	1790.5	1784.5	1808.4	1778.6	1784.5	1817.3	1784.5	1769.7	1814.3	1853.1	1811.4
15°	1963.3	1960.3	1969.3	1975.2	2094.4	2145.0	2094.4	2049.7	2016.9	1984.2	2052.7
17.5°	2082.5	2067.6	2070.6	2127.2	2261.2	2401.2	2374.4	2314.8	2240.4	2285.1	2341.7
20°	2148.0	2121.2	2139.1	2162.9	2389.3	2544.2	2562.1	2481.7	2437.0	2493.6	2541.3
22.5°	2210.6	2168.9	2106.3	2130.1	2338.7	2562.1	2648.5	2627.7	2660.4	2678.3	2669.4
25°	2136.1	2162.9	2094.4	2162.9	2374.4	2580.0	2752.8	2874.9	2877.9	2869.0	2934.5
27.5°	2091.4	2070.6	1954.4	2130.1	2305.9	2434.0	2874.9	3080.5	3143.1	2952.4	3080.5
30°	2013.9	2046.7	1888.8	2034.8	2258.2	2472.7	3015.0	3309.9	3217.6	3193.7	3223.5
32.5°	1966.3	1945.4	1870.9	1951.4	2121.2	2588.9	3104.3	3444.0	3560.2	3503.6	3497.6
35°	1888.8	1903.7	1787.5	1873.9	2112.3	2490.6	3163.9	3780.6	3959.4	3914.7	3878.9
37.5°	1900.7	1850.1	1766.7	1829.2	2055.7	2544.2	3312.9	4105.4	4388.4	4412.2	4248.4
40°	1811.4	1781.6	1656.4	1760.7	1948.4	2511.5	3348.6	4474.8	4954.4	5061.7	4826.3
42.5°	1683.3	1644.5	1573.0	1689.2	1885.8	2350.6	3399.3	4918.7	5529.4	5752.9	5538.4
45°	1498.5	1447.9	1412.1	1567.1	1748.8	2308.9	3345.7	5288.1	6080.6	6387.4	6381.5
47.5°	1275.1	1242.3	1224.5	1388.3	1635.6	2204.6	3235.4	5520.5	6464.9	7251.4	7132.2
50°	1021.9	998.0	995.1	1167.9	1444.9	1990.1	3110.3	5636.7	7048.8	8043.9	8148.2
52.5°	819.3	801.4	798.4	938.5	1209.6	1701.1	2848.1	5726.1	7605.9	8943.6	9479.9
55°	640.5	622.7	625.6	741.8	962.3	1391.3	2448.9	5624.8	8094.5	9864.2	10880.1
57.5°	524.3	506.5	509.4	575.0	735.9	1063.6	1951.4	5404.3	8315.0	11002.2	12512.7
60°	461.8	443.9	435.0	464.8	566.1	801.4	1450.9	4546.3	8350.7	11946.6	14285.3
62.5°	429.0	411.1	402.2	411.1	467.7	613.7	1045.7	3601.9	8145.2	12754.0	15909.0
65°	399.2	384.3	372.4	381.3	411.1	488.6	762.7	2466.8	7069.7	13123.4	17088.8
67.5°	366.4	354.5	342.6	354.5	375.4	411.1	592.9	1561.1	5300.0	12643.8	17580.3
69°	348.6	330.7	324.7	333.7	354.5	378.4	512.4	1245.3	4030.9	11732.1	17282.4
70°	330.7	318.8	309.8	324.7	342.6	360.5	461.8	1057.6	3160.9	10561.3	16543.6
72.5°	292.0	283.0	277.1	292.0	306.9	318.8	378.4	753.7	1832.2	7191.8	13120.5
75°	256.2	247.3	244.3	256.2	268.1	274.1	318.8	518.4	1081.5	3762.7	7871.1
77.5°	214.5	202.6	205.6	220.5	229.4	232.4	268.1	372.4	637.6	1704.1	3646.6
80°	157.9	157.9	169.8	181.7	181.7	181.7	214.5	271.1	387.3	783.5	1513.4
82.5°	110.2	113.2	116.2	134.1	137.0	125.1	163.9	196.6	241.3	342.6	524.3
85°	62.6	65.5	68.5	80.4	83.4	74.5	107.3	125.1	140.0	169.8	274.1
87.5°	23.8	26.8	35.8	41.7	44.7	32.8	50.6	59.6	59.6	71.5	122.1
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°	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9
2.5°	1075.5	1096.4	1135.1	1144.0	1111.2	1075.5	995.1	1045.7	1066.6	1027.8	1039.7
5°	1331.7	1376.4	1424.1	1367.5	1331.7	1307.9	1269.1	1272.1	1251.3	1182.7	1069.5
7.5°	1620.7	1570.0	1605.8	1644.5	1587.9	1590.9	1626.7	1552.2	1495.6	1379.4	1167.9
10°	1754.8	1754.8	1763.7	1763.7	1739.9	1739.9	1736.9	1617.7	1549.2	1498.5	1439.0
12.5°	1763.7	1760.7	1796.5	1769.7	1775.6	1781.6	1796.5	1850.1	1832.2	1766.7	1820.3
15°	2011.0	1999.1	2011.0	2008.0	2016.9	2043.7	2031.8	2019.9	2022.9	2070.6	2151.0
17.5°	2243.3	2249.3	2237.4	2258.2	2258.2	2276.1	2317.8	2276.1	2240.4	2329.7	2392.3
20°	2511.5	2490.6	2443.0	2478.7	2487.6	2490.6	2559.1	2508.5	2457.9	2490.6	2565.1
22.5°	2782.6	2779.6	2785.6	2788.5	2800.5	2755.8	2663.4	2648.5	2681.3	2636.6	2645.5
25°	2949.4	2952.4	2967.3	2970.3	2919.6	2967.3	3000.1	2901.8	2901.8	2892.8	2833.2
27.5°	3152.0	3107.3	3125.2	3149.0	3128.2	3140.1	3101.4	2958.4	3110.3	3131.2	2892.8
30°	3289.1	3268.2	3247.3	3271.2	3292.0	3345.7	3235.4	3220.5	3232.4	3342.7	3029.9
32.5°	3578.0	3607.8	3569.1	3530.4	3569.1	3557.2	3509.5	3488.7	3637.6	3491.6	3125.2
35°	3846.2	3858.1	3861.1	3855.1	3878.9	3837.2	3837.2	3914.7	3959.4	3801.5	3155.0
37.5°	4492.7	4450.9	4364.5	4322.8	4397.3	4459.9	4275.2	4367.5	4349.7	4081.5	3378.4
40°	4957.4	5052.7	5079.6	5067.6	5079.6	4900.8	4939.5	5008.1	4927.6	4483.7	3301.0
42.5°	5636.7	5696.3	5675.4	5648.6	5660.5	5627.7	5511.5	5764.8	5475.8	4933.6	3420.1
45°	6256.4	6390.4	6399.4	6307.0	6381.5	6265.3	6313.0	6402.3	6110.4	5270.2	3387.4
47.5°	6995.2	7272.3	7168.0	7168.0	7242.5	6992.2	7105.4	7224.6	6450.0	5496.7	3208.6
50°	8088.6	8237.5	8231.6	8204.8	8237.5	8103.5	8085.6	8070.7	6971.4	5711.2	3098.4
52.5°	9324.9	9527.5	9450.1	9479.9	9524.5	9271.3	9470.9	8925.7	7623.8	5791.6	2848.1
55°	10903.9	11043.9	10966.5	10814.5	11017.1	10856.3	10921.8	9858.2	8076.7	5562.2	2431.0
57.5°	12783.8	12855.3	12727.2	12712.3	12846.4	12673.6	12563.3	10906.9	8312.0	5389.4	1942.4
60°	14979.5	15202.9	15122.5	14994.4	15116.5	14964.6	14130.4	11797.7	8264.3	4582.0	1504.5
62.5°	17613.1	17839.5	17750.2	17663.8	17741.2	17345.0	15602.1	12500.8	8049.8	3631.7	1099.3
65°	19787.9	20809.8	20943.9	20946.9	20571.5	19653.9	16776.0	12774.9	6917.7	2535.3	804.4
67.5°	21218.0	23342.1	24003.5	23765.2	22904.2	20809.8	17249.7	12238.6	5341.7	1602.8	601.8
69°	21054.1	23839.7	24796.0	24661.9	23452.4	20791.9	16880.2	11335.9	4081.5	1275.1	509.4
70°	20297.4	23431.5	24566.6	24626.2	23103.8	19993.5	16221.8	10299.1	3301.0	1087.4	467.7
72.5°	16198.0	19308.3	20306.3	20696.6	19186.1	16010.3	13302.2	7266.3	1912.7	759.7	378.4
75°	10034.0	11708.3	12536.5	12763.0	11848.3	9971.4	8073.7	4042.8	1164.9	536.3	318.8
77.5°	4498.6	4984.2	5460.9	5460.9	5103.4	4552.2	3700.2	1954.4	661.4	381.3	268.1
80°	1507.5	1564.1	1522.4	1537.3	1477.7	1421.1	1486.6	843.1	408.2	286.0	217.5
82.5°	1024.8	1287.0	1367.5	1367.5	1284.0	1012.9	572.0	387.3	250.3	205.6	166.8
85°	834.2	1018.9	1093.4	1126.1	1060.6	855.0	300.9	187.7	149.0	131.1	113.2
87.5°	280.0	262.2	247.3	241.3	253.2	265.2	149.0	80.4	68.5	62.6	59.6
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°	1012.9	1012.9	1012.9	1012.9	1012.9	1012.9
2.5°	1060.6	1024.8	1039.7	1054.6	1161.9	1242.3
5°	1054.6	1105.3	1218.5	1361.5	1427.0	1587.9
7.5°	1084.4	1269.1	1480.7	1629.6	1689.2	1739.9
10°	1450.9	1483.6	1555.1	1698.2	1817.3	1838.2
12.5°	1873.9	1865.0	1814.3	1879.9	1820.3	1862.0
15°	2204.6	2106.3	2037.8	2028.8	2008.0	2008.0
17.5°	2386.4	2300.0	2204.6	2180.8	2118.2	2168.9
20°	2600.9	2451.9	2213.6	2189.7	2168.9	2121.2
22.5°	2559.1	2410.2	2162.9	2133.1	2243.3	2237.4
25°	2609.8	2410.2	2174.8	2142.1	2192.7	2192.7
27.5°	2484.7	2320.8	2151.0	1954.4	2109.3	2145.0
30°	2451.9	2267.2	2070.6	1894.8	2052.7	2019.9
32.5°	2624.7	2133.1	1939.5	1885.8	2002.0	1978.2
35°	2490.6	2109.3	1906.7	1808.4	1945.4	1921.6
37.5°	2547.2	2079.5	1850.1	1766.7	1876.9	1912.7
40°	2535.3	1939.5	1784.5	1677.3	1787.5	1805.4
42.5°	2335.7	1832.2	1674.3	1567.1	1623.7	1683.3
45°	2276.1	1766.7	1567.1	1418.1	1421.1	1489.6
47.5°	2165.9	1617.7	1370.4	1233.4	1233.4	1290.0
50°	1981.2	1418.1	1147.0	1021.9	1018.9	1063.6
52.5°	1707.1	1224.5	968.2	831.2	822.3	867.0
55°	1397.3	986.1	762.7	673.3	655.4	673.3
57.5°	1087.4	768.6	601.8	530.3	527.3	542.2
60°	843.1	601.8	479.7	437.9	443.9	467.7
62.5°	637.6	479.7	408.2	393.3	402.2	426.0
65°	506.5	414.1	372.4	363.5	372.4	396.2
67.5°	411.1	375.4	345.6	333.7	339.6	363.5
69°	378.4	354.5	330.7	315.8	321.8	339.6
70°	360.5	342.6	318.8	303.9	309.8	327.7
72.5°	315.8	306.9	289.0	274.1	277.1	292.0
75°	277.1	271.1	259.2	241.3	241.3	259.2
77.5°	232.4	235.4	223.4	205.6	202.6	211.5
80°	184.7	190.7	184.7	166.8	160.9	160.9
82.5°	134.1	146.0	140.0	122.1	119.2	119.2
85°	83.4	92.4	89.4	77.5	77.5	68.5
87.5°	38.7	50.6	47.7	41.7	38.7	26.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)