

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: P565297

Luminaire Tested: **MSA-SA4A-827-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565297
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-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: 10304 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B3 - U0 - G3

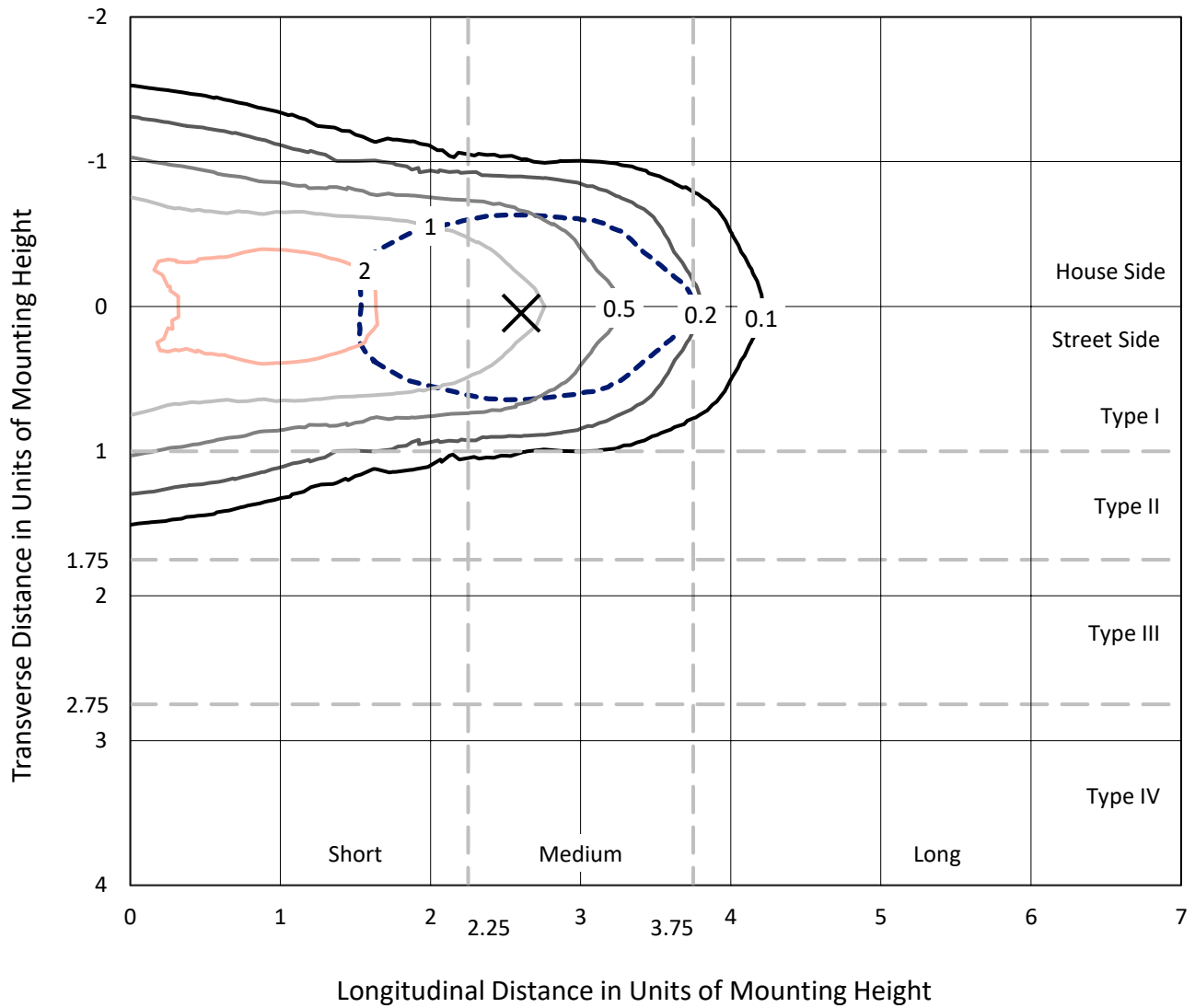
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

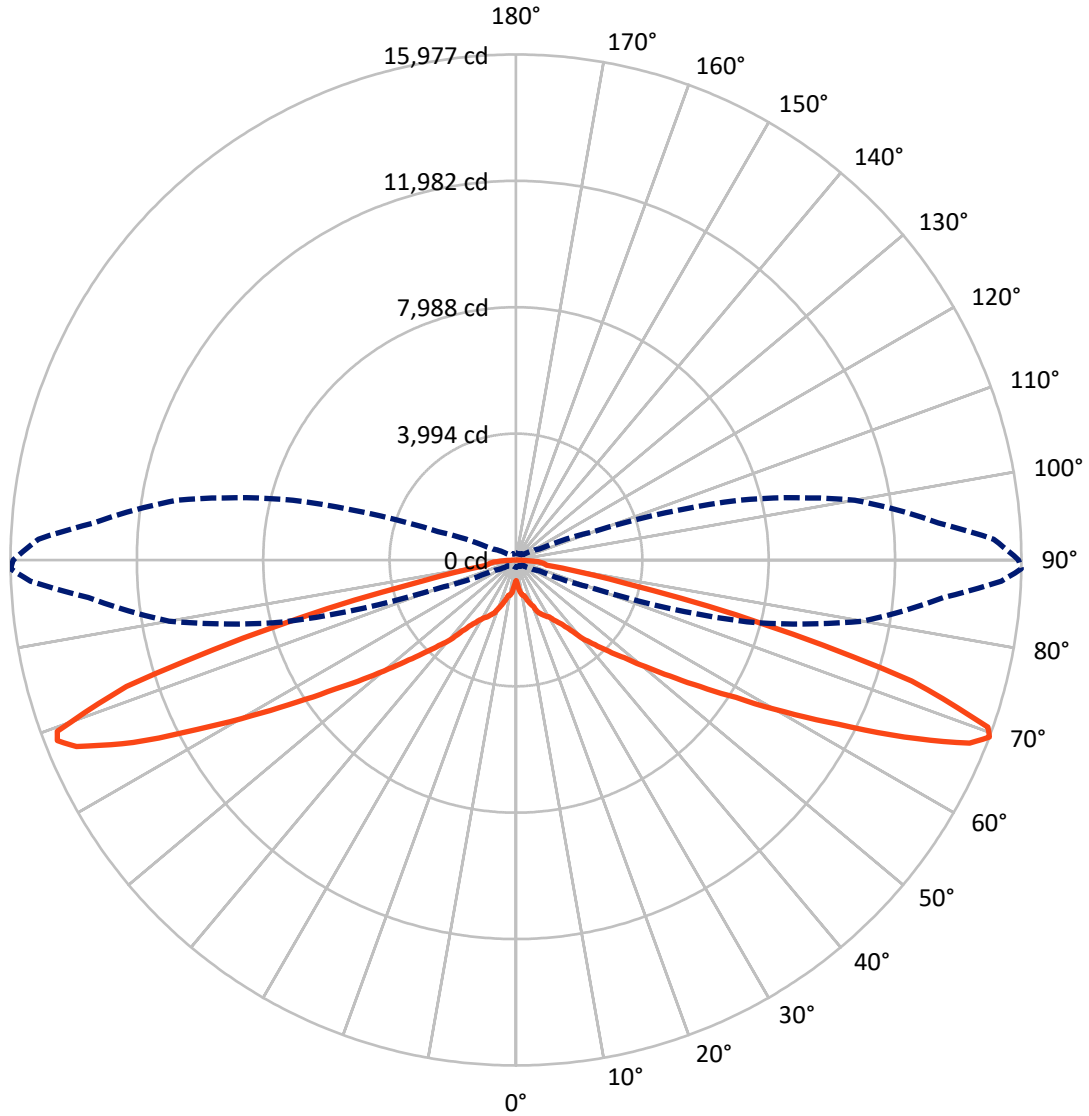
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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	5151.9	0.0	5151.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5152.1	0.0	5152.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	10304.0	0.0	10304.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.0	0.8
10°-20°	377.8	3.7
20°-30°	753.8	7.3
30°-40°	1140.1	11.1
40°-50°	1654.9	16.1
50°-60°	2174.3	21.1
60°-70°	2652.3	25.7
70°-80°	1340.9	13.0
80°-90°	127.8	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°	10304.0	100.0
0°-180°	10304.0	100.0

Coefficient of Utilization



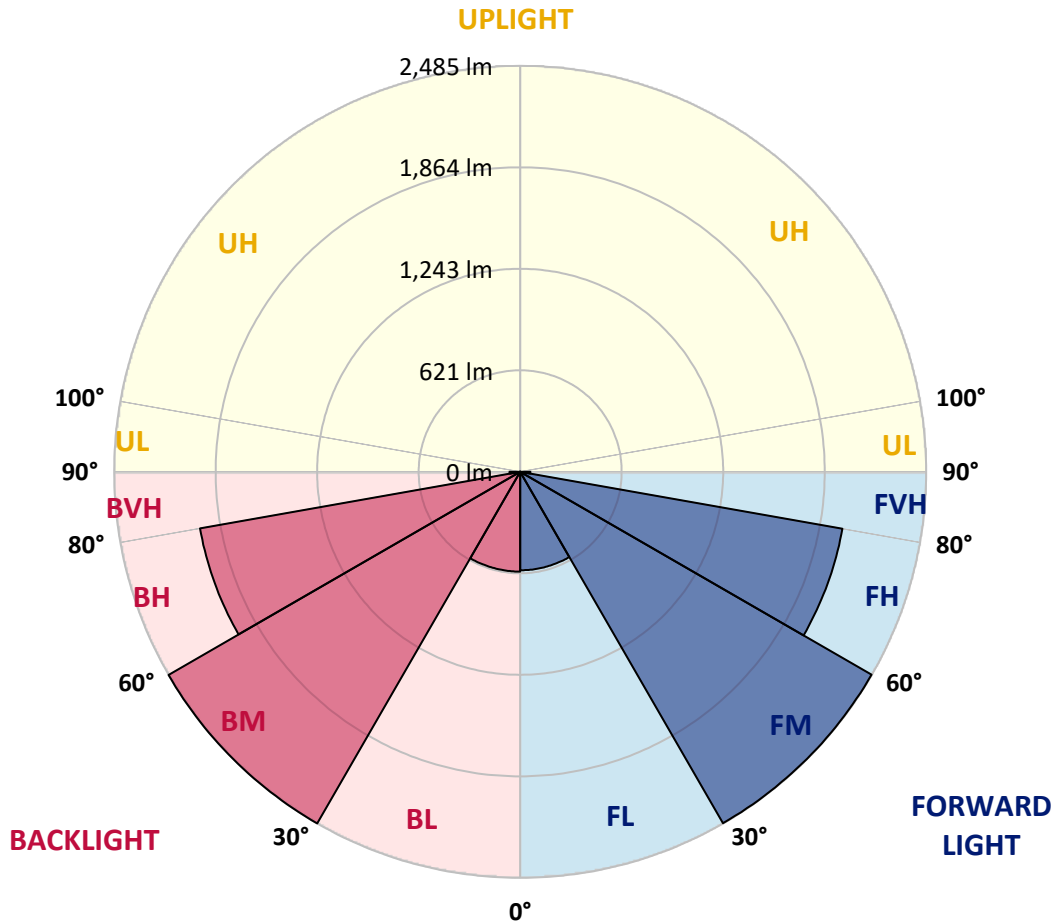
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	602.6	5.8			
FM (30°-60°)	2483.8	24.1			
FH (60°-80°)	2003.0	19.4			G2/5000
FVH (80°-90°)	62.7	0.6			G1/100
BL (0°-30°)	611.1	5.9	B2/1000		
BM (30°-60°)	2485.5	24.1	B2/2500		
BH (60°-80°)	1990.2	19.3	B3/2500		G3/2500
BVH (80°-90°)	65.1	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°	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7
2.5°	765.9	677.6	669.9	648.8	664.2	669.9	656.5	637.3	658.4	669.9	648.8
5°	965.5	835.0	790.9	754.4	681.4	650.7	681.4	760.2	769.7	817.7	804.3
7.5°	1063.4	1042.3	986.7	865.7	748.6	683.4	765.9	879.2	936.8	982.8	1030.8
10°	1136.4	1124.9	1027.0	940.6	892.6	896.4	898.4	934.8	984.7	1061.5	1088.4
12.5°	1153.7	1149.8	1165.2	1146.0	1149.8	1170.9	1149.8	1140.2	1169.0	1194.0	1167.1
15°	1265.0	1263.1	1268.8	1272.7	1349.5	1382.1	1349.5	1320.7	1299.6	1278.4	1322.6
17.5°	1341.8	1332.2	1334.1	1370.6	1457.0	1547.2	1529.9	1491.5	1443.5	1472.3	1508.8
20°	1384.0	1366.7	1378.3	1393.6	1539.5	1639.3	1650.8	1599.0	1570.2	1606.7	1637.4
22.5°	1424.3	1397.4	1357.1	1372.5	1506.9	1650.8	1706.5	1693.1	1714.2	1725.7	1719.9
25°	1376.3	1393.6	1349.5	1393.6	1529.9	1662.4	1773.7	1852.4	1854.3	1848.5	1890.8
27.5°	1347.5	1334.1	1259.2	1372.5	1485.8	1568.3	1852.4	1984.8	2025.2	1902.3	1984.8
30°	1297.6	1318.7	1217.0	1311.1	1455.0	1593.2	1942.6	2132.6	2073.1	2057.8	2077.0
32.5°	1266.9	1253.5	1205.5	1257.3	1366.7	1668.1	2000.2	2219.0	2293.9	2257.4	2253.6
35°	1217.0	1226.6	1151.7	1207.4	1361.0	1604.8	2038.6	2435.9	2551.1	2522.3	2499.3
37.5°	1224.7	1192.1	1138.3	1178.6	1324.5	1639.3	2134.6	2645.2	2827.5	2842.9	2737.3
40°	1167.1	1147.9	1067.3	1134.5	1255.4	1618.2	2157.6	2883.2	3192.3	3261.4	3109.7
42.5°	1084.6	1059.6	1013.5	1088.4	1215.1	1514.5	2190.2	3169.2	3562.7	3706.7	3568.5
45°	965.5	932.9	909.9	1009.7	1126.8	1487.7	2155.7	3407.2	3917.9	4115.6	4111.7
47.5°	821.6	800.5	788.9	894.5	1053.8	1420.5	2084.7	3557.0	4165.5	4672.2	4595.5
50°	658.4	643.1	641.1	752.5	931.0	1282.3	2004.0	3631.8	4541.7	5182.8	5250.0
52.5°	527.9	516.4	514.4	604.7	779.3	1096.1	1835.1	3689.4	4900.7	5762.6	6108.1
55°	412.7	401.2	403.1	478.0	620.0	896.4	1577.9	3624.2	5215.5	6355.7	7010.3
57.5°	337.8	326.3	328.2	370.5	474.1	685.3	1257.3	3482.1	5357.5	7089.0	8062.2
60°	297.5	286.0	280.3	299.5	364.7	516.4	934.8	2929.3	5380.6	7697.5	9204.4
62.5°	276.4	264.9	259.1	264.9	301.4	395.4	673.8	2320.8	5248.1	8217.7	10250.5
65°	257.2	247.6	239.9	245.7	264.9	314.8	491.4	1589.4	4555.1	8455.7	11010.7
67.5°	236.1	228.4	220.8	228.4	241.9	264.9	382.0	1005.9	3414.9	8146.7	11327.4
69°	224.6	213.1	209.2	215.0	228.4	243.8	330.2	802.4	2597.2	7559.3	11135.4
70°	213.1	205.4	199.6	209.2	220.8	232.3	297.5	681.4	2036.7	6804.9	10659.4
72.5°	188.1	182.4	178.5	188.1	197.7	205.4	243.8	485.7	1180.5	4633.9	8453.8
75°	165.1	159.3	157.4	165.1	172.8	176.6	205.4	334.0	696.8	2424.4	5071.5
77.5°	138.2	130.5	132.5	142.0	147.8	149.7	172.8	239.9	410.8	1098.0	2349.6
80°	101.7	101.7	109.4	117.1	117.1	117.1	138.2	174.7	249.5	504.8	975.1
82.5°	71.0	72.9	74.9	86.4	88.3	80.6	105.6	126.7	155.5	220.8	337.8
85°	40.3	42.2	44.2	51.8	53.7	48.0	69.1	80.6	90.2	109.4	176.6
87.5°	15.4	17.3	23.0	26.9	28.8	21.1	32.6	38.4	38.4	46.1	78.7
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7	652.7
2.5°	693.0	706.4	731.4	737.1	716.0	693.0	641.1	673.8	687.2	662.3	669.9
5°	858.0	886.8	917.6	881.1	858.0	842.7	817.7	819.7	806.2	762.1	689.1
7.5°	1044.2	1011.6	1034.7	1059.6	1023.1	1025.1	1048.1	1000.1	963.6	888.8	752.5
10°	1130.6	1130.6	1136.4	1136.4	1121.0	1121.0	1119.1	1042.3	998.2	965.5	927.2
12.5°	1136.4	1134.5	1157.5	1140.2	1144.1	1147.9	1157.5	1192.1	1180.5	1138.3	1172.9
15°	1295.7	1288.0	1295.7	1293.8	1299.6	1316.8	1309.1	1301.5	1303.4	1334.1	1385.9
17.5°	1445.4	1449.3	1441.6	1455.0	1455.0	1466.6	1493.4	1466.6	1443.5	1501.1	1541.4
20°	1618.2	1604.8	1574.1	1597.1	1602.8	1604.8	1648.9	1616.3	1583.6	1604.8	1652.8
22.5°	1792.9	1791.0	1794.8	1796.7	1804.4	1775.6	1716.1	1706.5	1727.6	1698.8	1704.6
25°	1900.4	1902.3	1911.9	1913.8	1881.2	1911.9	1933.0	1869.7	1869.7	1863.9	1825.5
27.5°	2030.9	2002.1	2013.6	2029.0	2015.6	2023.2	1998.3	1906.1	2004.0	2017.5	1863.9
30°	2119.2	2105.8	2092.3	2107.7	2121.1	2155.7	2084.7	2075.1	2082.7	2153.8	1952.2
32.5°	2305.4	2324.6	2299.6	2274.7	2299.6	2292.0	2261.3	2247.8	2343.8	2249.7	2013.6
35°	2478.2	2485.8	2487.8	2483.9	2499.3	2472.4	2472.4	2522.3	2551.1	2449.4	2032.8
37.5°	2894.7	2867.8	2812.2	2785.3	2833.3	2873.6	2754.6	2814.1	2802.6	2629.8	2176.8
40°	3194.2	3255.6	3272.9	3265.2	3272.9	3157.7	3182.7	3226.8	3175.0	2889.0	2126.9
42.5°	3631.8	3670.2	3656.8	3639.5	3647.2	3626.1	3551.2	3714.4	3528.2	3178.8	2203.7
45°	4031.1	4117.5	4123.2	4063.7	4111.7	4036.9	4067.6	4125.2	3937.0	3395.7	2182.6
47.5°	4507.2	4685.7	4618.5	4618.5	4666.5	4505.2	4578.2	4655.0	4155.9	3541.6	2067.4
50°	5211.6	5307.6	5303.8	5286.5	5307.6	5221.2	5209.7	5200.1	4491.8	3679.8	1996.4
52.5°	6008.3	6138.8	6088.9	6108.1	6136.9	5973.7	6102.3	5751.0	4912.2	3731.7	1835.1
55°	7025.6	7115.9	7066.0	6968.1	7098.6	6994.9	7037.2	6351.9	5204.0	3583.8	1566.4
57.5°	8236.9	8283.0	8200.4	8190.8	8277.2	8165.9	8094.8	7027.6	5355.6	3472.5	1251.6
60°	9651.6	9795.6	9743.8	9661.2	9739.9	9642.0	9104.5	7601.5	5324.9	2952.3	969.4
62.5°	11348.5	11494.4	11436.8	11381.2	11431.1	11175.8	10052.8	8054.5	5186.7	2340.0	708.3
65°	12749.8	13408.2	13494.6	13496.5	13254.7	12663.4	10809.1	8231.1	4457.3	1633.6	518.3
67.5°	13671.2	15039.9	15466.0	15312.4	14757.7	13408.2	11114.3	7885.6	3441.8	1032.7	387.8
69°	13565.6	15360.4	15976.6	15890.2	15110.9	13396.7	10876.3	7304.0	2629.8	821.6	328.2
70°	13078.1	15097.4	15828.8	15867.2	14886.3	12882.3	10452.1	6636.0	2126.9	700.6	301.4
72.5°	10436.7	12440.8	13083.8	13335.3	12362.1	10315.8	8570.9	4681.8	1232.4	489.5	243.8
75°	6465.1	7543.9	8077.6	8223.5	7634.1	6424.8	5202.0	2604.9	750.6	345.5	205.4
77.5°	2898.6	3211.4	3518.6	3518.6	3288.2	2933.1	2384.1	1259.2	426.1	245.7	172.8
80°	971.3	1007.8	980.9	990.5	952.1	915.6	957.9	543.2	263.0	184.3	140.1
82.5°	660.3	829.3	881.1	881.1	827.3	652.7	368.6	249.5	161.2	132.5	107.5
85°	537.5	656.5	704.5	725.6	683.4	550.9	193.9	120.9	96.0	84.5	72.9
87.5°	180.4	168.9	159.3	155.5	163.2	170.8	96.0	51.8	44.2	40.3	38.4
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°	652.7	652.7	652.7	652.7	652.7	652.7
2.5°	683.4	660.3	669.9	679.5	748.6	800.5
5°	679.5	712.2	785.1	877.2	919.5	1023.1
7.5°	698.7	817.7	954.0	1050.0	1088.4	1121.0
10°	934.8	955.9	1002.0	1094.2	1170.9	1184.4
12.5°	1207.4	1201.7	1169.0	1211.3	1172.9	1199.7
15°	1420.5	1357.1	1313.0	1307.2	1293.8	1293.8
17.5°	1537.6	1481.9	1420.5	1405.1	1364.8	1397.4
20°	1675.8	1579.8	1426.2	1410.9	1397.4	1366.7
22.5°	1648.9	1552.9	1393.6	1374.4	1445.4	1441.6
25°	1681.5	1552.9	1401.3	1380.2	1412.8	1412.8
27.5°	1600.9	1495.3	1385.9	1259.2	1359.1	1382.1
30°	1579.8	1460.8	1334.1	1220.8	1322.6	1301.5
32.5°	1691.1	1374.4	1249.6	1215.1	1290.0	1274.6
35°	1604.8	1359.1	1228.5	1165.2	1253.5	1238.1
37.5°	1641.2	1339.9	1192.1	1138.3	1209.3	1232.4
40°	1633.6	1249.6	1149.8	1080.7	1151.7	1163.3
42.5°	1504.9	1180.5	1078.8	1009.7	1046.2	1084.6
45°	1466.6	1138.3	1009.7	913.7	915.6	959.8
47.5°	1395.5	1042.3	883.0	794.7	794.7	831.2
50°	1276.5	913.7	739.0	658.4	656.5	685.3
52.5°	1099.9	788.9	623.9	535.6	529.8	558.6
55°	900.3	635.4	491.4	433.8	422.3	433.8
57.5°	700.6	495.3	387.8	341.7	339.8	349.4
60°	543.2	387.8	309.1	282.2	286.0	301.4
62.5°	410.8	309.1	263.0	253.4	259.1	274.5
65°	326.3	266.8	239.9	234.2	239.9	255.3
67.5°	264.9	241.9	222.7	215.0	218.8	234.2
69°	243.8	228.4	213.1	203.5	207.3	218.8
70°	232.3	220.8	205.4	195.8	199.6	211.2
72.5°	203.5	197.7	186.2	176.6	178.5	188.1
75°	178.5	174.7	167.0	155.5	155.5	167.0
77.5°	149.7	151.6	144.0	132.5	130.5	136.3
80°	119.0	122.9	119.0	107.5	103.7	103.7
82.5°	86.4	94.1	90.2	78.7	76.8	76.8
85°	53.7	59.5	57.6	49.9	49.9	44.2
87.5°	25.0	32.6	30.7	26.9	25.0	17.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)