

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: P565339

Luminaire Tested: **MSA-SA2D-835-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565339
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-SA2D-835-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10053 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B3 - U0 - G3

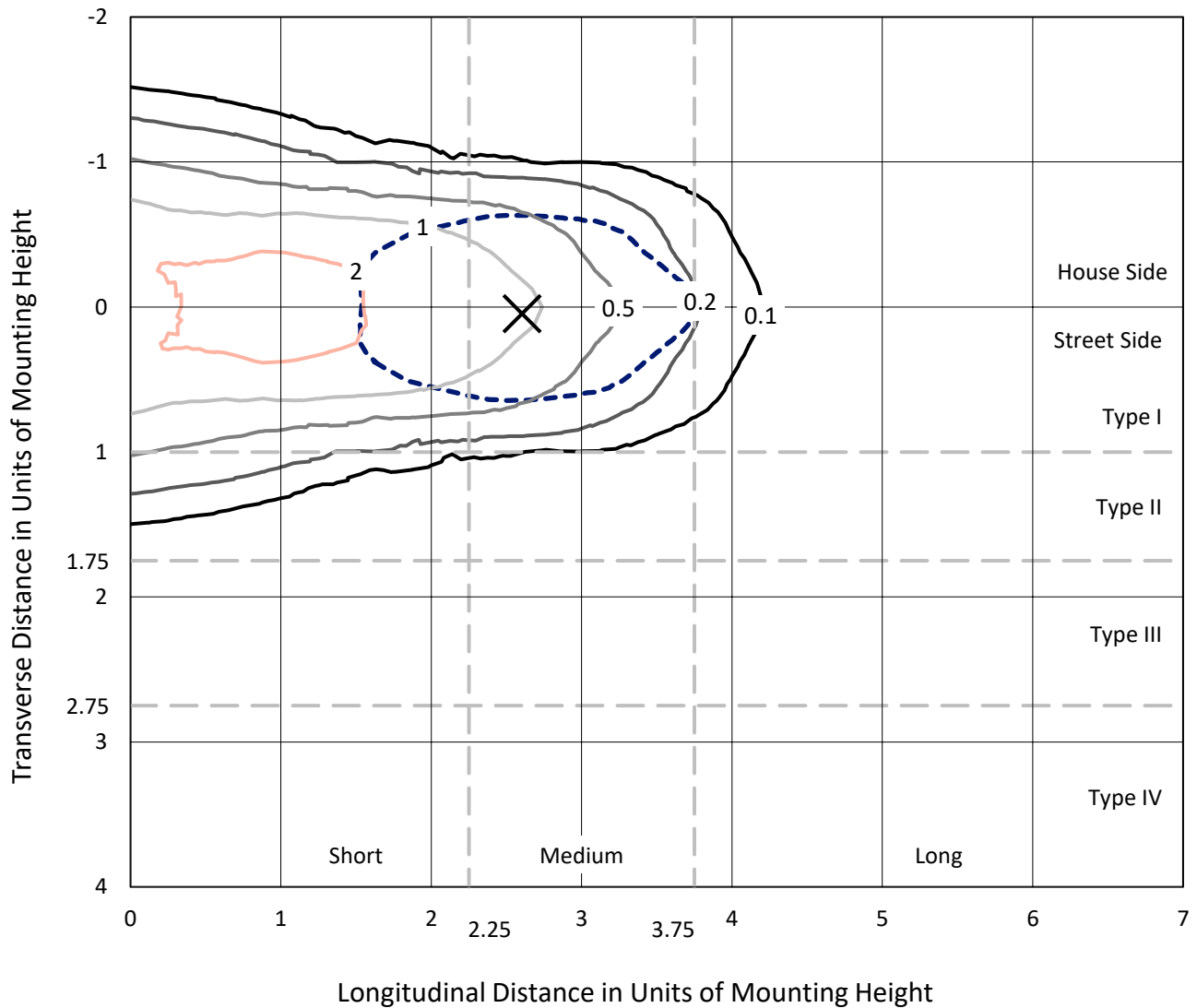
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

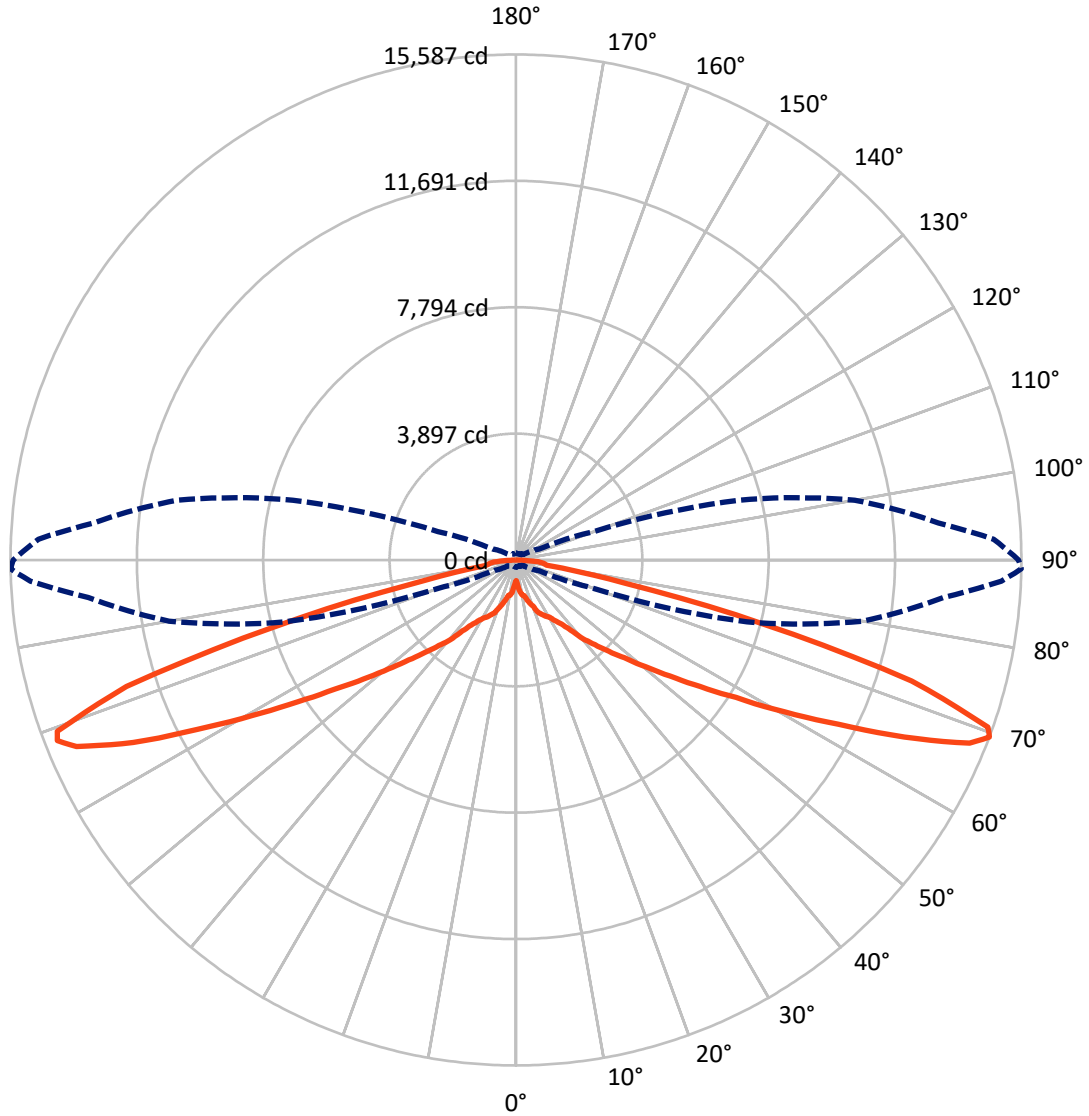
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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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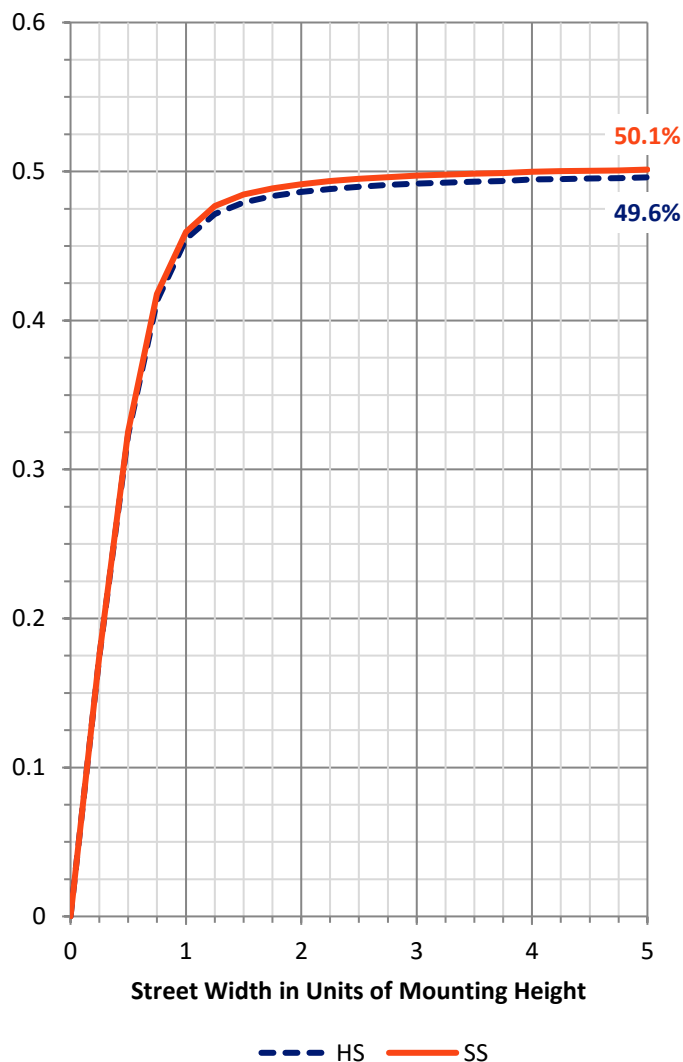
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5026.4	0.0	5026.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5026.6	0.0	5026.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	10053.0	0.0	10053.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.0	0.8
10°-20°	368.6	3.7
20°-30°	735.4	7.3
30°-40°	1112.3	11.1
40°-50°	1614.6	16.1
50°-60°	2121.3	21.1
60°-70°	2587.7	25.7
70°-80°	1308.3	13.0
80°-90°	124.7	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°	10053.0	100.0
0°-180°	10053.0	100.0

Coefficient of Utilization



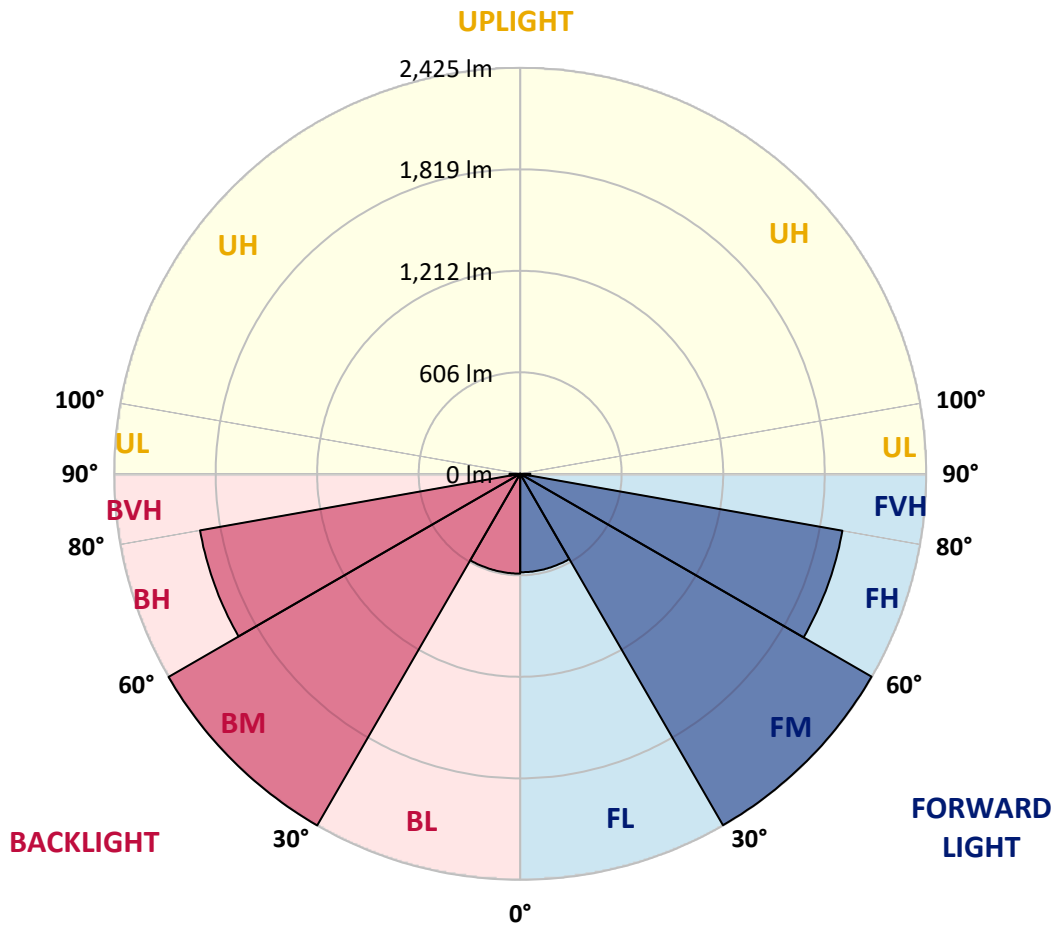
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	587.9	5.8			
FM (30°-60°)	2423.3	24.1			
FH (60°-80°)	1954.2	19.4			G2/5000
FVH (80°-90°)	61.2	0.6			G1/100
BL (0°-30°)	596.2	5.9	B2/1000		
BM (30°-60°)	2424.9	24.1	B2/2500		
BH (60°-80°)	1941.8	19.3	B3/2500		G3/2500
BVH (80°-90°)	63.5	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°	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8
2.5°	747.3	661.1	653.6	633.0	648.0	653.6	640.5	621.8	642.4	653.6	633.0
5°	942.0	814.7	771.6	736.0	664.8	634.9	664.8	741.6	751.0	797.8	784.7
7.5°	1037.5	1016.9	962.6	844.6	730.4	666.7	747.3	857.7	913.9	958.9	1005.7
10°	1108.7	1097.5	1002.0	917.7	870.9	874.6	876.5	912.1	960.8	1035.7	1061.9
12.5°	1125.6	1121.8	1136.8	1118.1	1121.8	1142.4	1121.8	1112.5	1140.5	1164.9	1138.7
15°	1234.2	1232.3	1237.9	1241.7	1316.6	1348.4	1316.6	1288.5	1267.9	1247.3	1290.4
17.5°	1309.1	1299.7	1301.6	1337.2	1421.5	1509.5	1492.6	1455.2	1408.4	1436.4	1472.0
20°	1350.3	1333.4	1344.7	1359.7	1502.0	1599.4	1610.6	1560.1	1532.0	1567.5	1597.5
22.5°	1389.6	1363.4	1324.1	1339.1	1470.2	1610.6	1664.9	1651.8	1672.4	1683.7	1678.0
25°	1342.8	1359.7	1316.6	1359.7	1492.6	1621.9	1730.5	1807.3	1809.1	1803.5	1844.7
27.5°	1314.7	1301.6	1228.6	1339.1	1449.6	1530.1	1807.3	1936.5	1975.8	1856.0	1936.5
30°	1266.0	1286.6	1187.4	1279.1	1419.6	1554.4	1895.3	2080.7	2022.6	2007.7	2026.4
32.5°	1236.1	1222.9	1176.1	1226.7	1333.4	1627.5	1951.5	2165.0	2238.0	2202.4	2198.7
35°	1187.4	1196.7	1123.7	1178.0	1327.8	1565.7	1988.9	2376.6	2489.0	2460.9	2438.4
37.5°	1194.9	1163.0	1110.6	1149.9	1292.2	1599.4	2082.6	2580.7	2758.7	2773.6	2670.6
40°	1138.7	1119.9	1041.3	1106.8	1224.8	1578.8	2105.0	2813.0	3114.5	3181.9	3034.0
42.5°	1058.1	1033.8	988.8	1061.9	1185.5	1477.7	2136.9	3092.0	3475.9	3616.4	3481.6
45°	942.0	910.2	887.7	985.1	1099.3	1451.4	2103.2	3324.2	3822.4	4015.3	4011.6
47.5°	801.6	781.0	769.7	872.7	1028.2	1385.9	2033.9	3470.3	4064.0	4558.4	4483.5
50°	642.4	627.4	625.5	734.1	908.3	1251.0	1955.2	3543.4	4431.1	5056.6	5122.1
52.5°	515.0	503.8	501.9	589.9	760.4	1069.4	1790.4	3599.5	4781.3	5622.2	5959.3
55°	402.7	391.4	393.3	466.3	604.9	874.6	1539.5	3535.9	5088.4	6200.9	6839.5
57.5°	329.6	318.4	320.3	361.5	462.6	668.6	1226.7	3397.3	5227.0	6916.3	7865.8
60°	290.3	279.0	273.4	292.2	355.8	503.8	912.1	2857.9	5249.5	7510.0	8980.1
62.5°	269.7	258.4	252.8	258.4	294.0	385.8	657.4	2264.2	5120.3	8017.5	10000.8
65°	251.0	241.6	234.1	239.7	258.4	307.1	479.4	1550.7	4444.2	8249.7	10742.5
67.5°	230.4	222.9	215.4	222.9	236.0	258.4	372.7	981.4	3331.7	7948.2	11051.5
69°	219.1	207.9	204.1	209.8	222.9	237.8	322.1	782.8	2533.9	7375.1	10864.2
70°	207.9	200.4	194.8	204.1	215.4	226.6	290.3	664.8	1987.1	6639.1	10399.7
72.5°	183.5	177.9	174.2	183.5	192.9	200.4	237.8	473.8	1151.8	4521.0	8247.9
75°	161.1	155.4	153.6	161.1	168.6	172.3	200.4	325.9	679.8	2365.4	4948.0
77.5°	134.8	127.4	129.2	138.6	144.2	146.1	168.6	234.1	400.8	1071.2	2292.3
80°	99.3	99.3	106.8	114.2	114.2	114.2	134.8	170.4	243.5	492.6	951.4
82.5°	69.3	71.2	73.0	84.3	86.1	78.7	103.0	123.6	151.7	215.4	329.6
85°	39.3	41.2	43.1	50.6	52.4	46.8	67.4	78.7	88.0	106.8	172.3
87.5°	15.0	16.9	22.5	26.2	28.1	20.6	31.8	37.5	37.5	44.9	76.8
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8	636.8
2.5°	676.1	689.2	713.5	719.2	698.6	676.1	625.5	657.4	670.5	646.1	653.6
5°	837.1	865.2	895.2	859.6	837.1	822.2	797.8	799.7	786.6	743.5	672.3
7.5°	1018.8	987.0	1009.4	1033.8	998.2	1000.1	1022.6	975.7	940.2	867.1	734.1
10°	1103.1	1103.1	1108.7	1108.7	1093.7	1093.7	1091.9	1016.9	973.9	942.0	904.6
12.5°	1108.7	1106.8	1129.3	1112.5	1116.2	1119.9	1129.3	1163.0	1151.8	1110.6	1144.3
15°	1264.1	1256.7	1264.1	1262.3	1267.9	1284.8	1277.3	1269.8	1271.6	1301.6	1352.2
17.5°	1410.2	1414.0	1406.5	1419.6	1419.6	1430.8	1457.0	1430.8	1408.4	1464.5	1503.9
20°	1578.8	1565.7	1535.7	1558.2	1563.8	1565.7	1608.7	1576.9	1545.1	1565.7	1612.5
22.5°	1749.2	1747.3	1751.1	1753.0	1760.4	1732.4	1674.3	1664.9	1685.5	1657.4	1663.1
25°	1854.1	1856.0	1865.3	1867.2	1835.4	1865.3	1885.9	1824.1	1824.1	1818.5	1781.0
27.5°	1981.4	1953.3	1964.6	1979.6	1966.5	1973.9	1949.6	1859.7	1955.2	1968.3	1818.5
30°	2067.6	2054.5	2041.4	2056.3	2069.5	2103.2	2033.9	2024.5	2032.0	2101.3	1904.7
32.5°	2249.2	2268.0	2243.6	2219.3	2243.6	2236.1	2206.2	2193.1	2286.7	2194.9	1964.6
35°	2417.8	2425.3	2427.2	2423.4	2438.4	2412.2	2412.2	2460.9	2489.0	2389.7	1983.3
37.5°	2824.2	2798.0	2743.7	2717.5	2764.3	2803.6	2687.5	2745.5	2734.3	2565.8	2123.8
40°	3116.4	3176.3	3193.1	3185.7	3193.1	3080.8	3105.1	3148.2	3097.6	2818.6	2075.1
42.5°	3543.4	3580.8	3567.7	3550.9	3558.3	3537.7	3464.7	3623.9	3442.2	3101.4	2150.0
45°	3932.9	4017.2	4022.8	3964.7	4011.6	3938.5	3968.5	4024.7	3841.1	3313.0	2129.4
47.5°	4397.4	4571.5	4506.0	4506.0	4552.8	4395.5	4466.7	4541.6	4054.6	3455.3	2017.0
50°	5084.7	5178.3	5174.6	5157.7	5178.3	5094.1	5082.8	5073.5	4382.4	3590.2	1947.7
52.5°	5861.9	5989.3	5940.6	5959.3	5987.4	5828.2	5953.7	5611.0	4792.5	3640.8	1790.4
55°	6854.5	6942.5	6893.8	6798.3	6925.7	6824.5	6865.7	6197.1	5077.2	3496.5	1528.2
57.5°	8036.2	8081.2	8000.7	7991.3	8075.6	7967.0	7897.7	6856.4	5225.2	3387.9	1221.1
60°	9416.5	9557.0	9506.4	9425.9	9502.7	9407.1	8882.8	7416.3	5195.2	2880.4	945.8
62.5°	11072.1	11214.4	11158.2	11103.9	11152.6	10903.5	9807.9	7858.3	5060.3	2283.0	691.1
65°	12439.2	13081.6	13165.9	13167.8	12931.8	12355.0	10545.8	8030.6	4348.7	1593.8	505.7
67.5°	13338.2	14673.5	15089.3	14939.4	14398.2	13081.6	10843.6	7693.5	3358.0	1007.6	378.3
69°	13235.2	14986.3	15587.4	15503.2	14742.8	13070.4	10611.4	7126.1	2565.8	801.6	320.3
70°	12759.5	14729.7	15443.2	15480.7	14523.7	12568.5	10197.5	6474.3	2075.1	683.6	294.0
72.5°	10182.5	12137.7	12765.1	13010.4	12060.9	10064.5	8362.1	4567.8	1202.3	477.6	237.8
75°	6307.6	7360.2	7880.8	8023.1	7448.2	6268.3	5075.3	2541.4	732.3	337.1	200.4
77.5°	2827.9	3133.2	3432.9	3432.9	3208.1	2861.7	2326.0	1228.6	415.8	239.7	168.6
80°	947.6	983.2	957.0	966.4	928.9	893.3	934.5	530.0	256.6	179.8	136.7
82.5°	644.2	809.1	859.6	859.6	807.2	636.8	359.6	243.5	157.3	129.2	104.9
85°	524.4	640.5	687.3	707.9	666.7	537.5	189.2	118.0	93.6	82.4	71.2
87.5°	176.0	164.8	155.4	151.7	159.2	166.7	93.6	50.6	43.1	39.3	37.5
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°	636.8	636.8	636.8	636.8	636.8	636.8
2.5°	666.7	644.2	653.6	663.0	730.4	781.0
5°	663.0	694.8	766.0	855.9	897.1	998.2
7.5°	681.7	797.8	930.8	1024.4	1061.9	1093.7
10°	912.1	932.7	977.6	1067.5	1142.4	1155.5
12.5°	1178.0	1172.4	1140.5	1181.7	1144.3	1170.5
15°	1385.9	1324.1	1281.0	1275.4	1262.3	1262.3
17.5°	1500.1	1445.8	1385.9	1370.9	1331.6	1363.4
20°	1635.0	1541.3	1391.5	1376.5	1363.4	1333.4
22.5°	1608.7	1515.1	1359.7	1340.9	1410.2	1406.5
25°	1640.6	1515.1	1367.2	1346.6	1378.4	1378.4
27.5°	1561.9	1458.9	1352.2	1228.6	1326.0	1348.4
30°	1541.3	1425.2	1301.6	1191.1	1290.4	1269.8
32.5°	1649.9	1340.9	1219.2	1185.5	1258.5	1243.5
35°	1565.7	1326.0	1198.6	1136.8	1222.9	1208.0
37.5°	1601.3	1307.2	1163.0	1110.6	1179.9	1202.3
40°	1593.8	1219.2	1121.8	1054.4	1123.7	1134.9
42.5°	1468.3	1151.8	1052.5	985.1	1020.7	1058.1
45°	1430.8	1110.6	985.1	891.5	893.3	936.4
47.5°	1361.5	1016.9	861.5	775.3	775.3	810.9
50°	1245.4	891.5	721.0	642.4	640.5	668.6
52.5°	1073.1	769.7	608.7	522.5	516.9	545.0
55°	878.3	619.9	479.4	423.3	412.0	423.3
57.5°	683.6	483.2	378.3	333.4	331.5	340.9
60°	530.0	378.3	301.5	275.3	279.0	294.0
62.5°	400.8	301.5	256.6	247.2	252.8	267.8
65°	318.4	260.3	234.1	228.5	234.1	249.1
67.5°	258.4	236.0	217.2	209.8	213.5	228.5
69°	237.8	222.9	207.9	198.5	202.3	213.5
70°	226.6	215.4	200.4	191.0	194.8	206.0
72.5°	198.5	192.9	181.7	172.3	174.2	183.5
75°	174.2	170.4	162.9	151.7	151.7	162.9
77.5°	146.1	148.0	140.5	129.2	127.4	133.0
80°	116.1	119.9	116.1	104.9	101.1	101.1
82.5°	84.3	91.8	88.0	76.8	74.9	74.9
85°	52.4	58.1	56.2	48.7	48.7	43.1
87.5°	24.3	31.8	30.0	26.2	24.3	16.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)