

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: P565323

Luminaire Tested: **MSA-SA2D-830-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565323
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-830-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: 9690 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B3 - U0 - G3

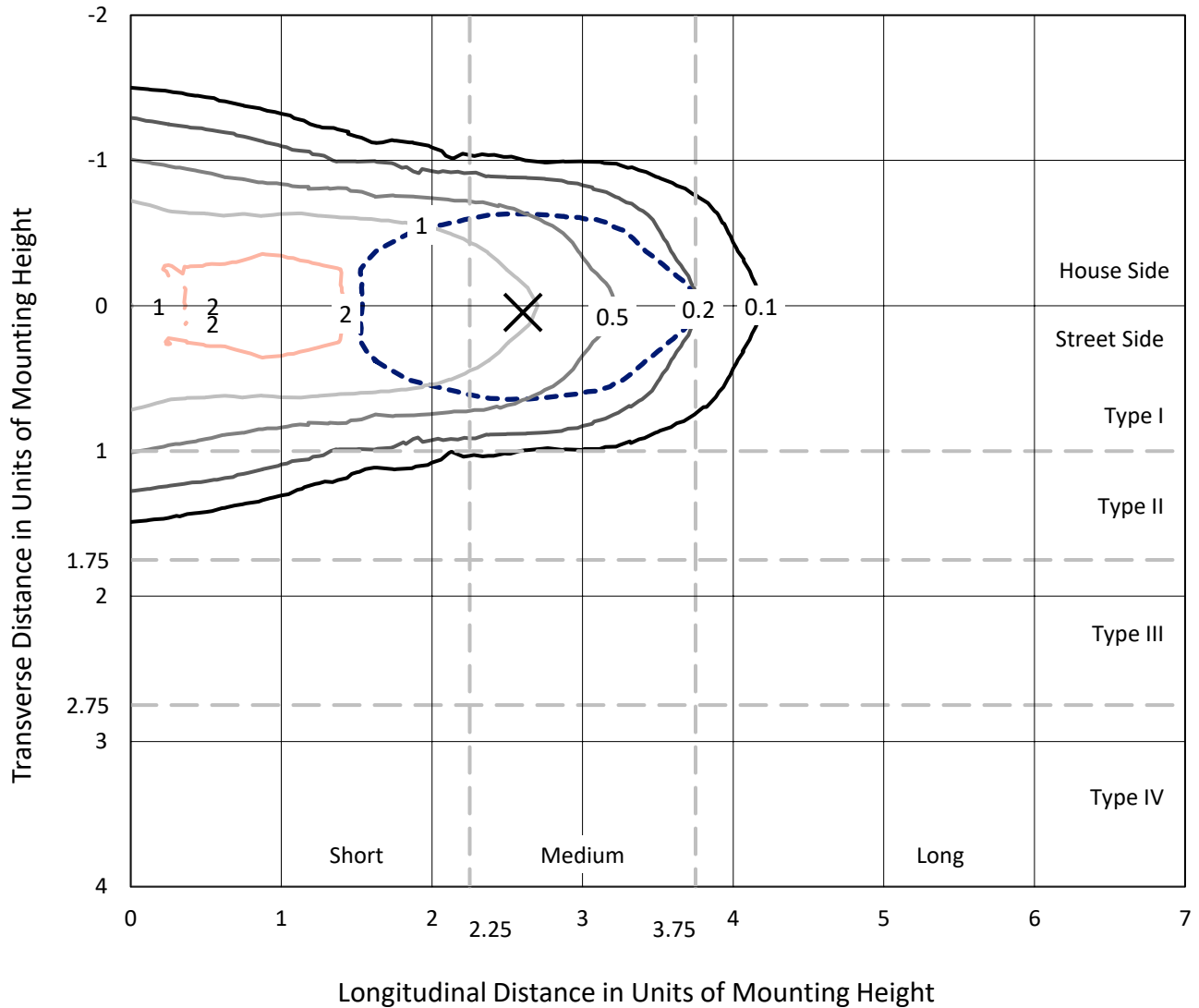
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

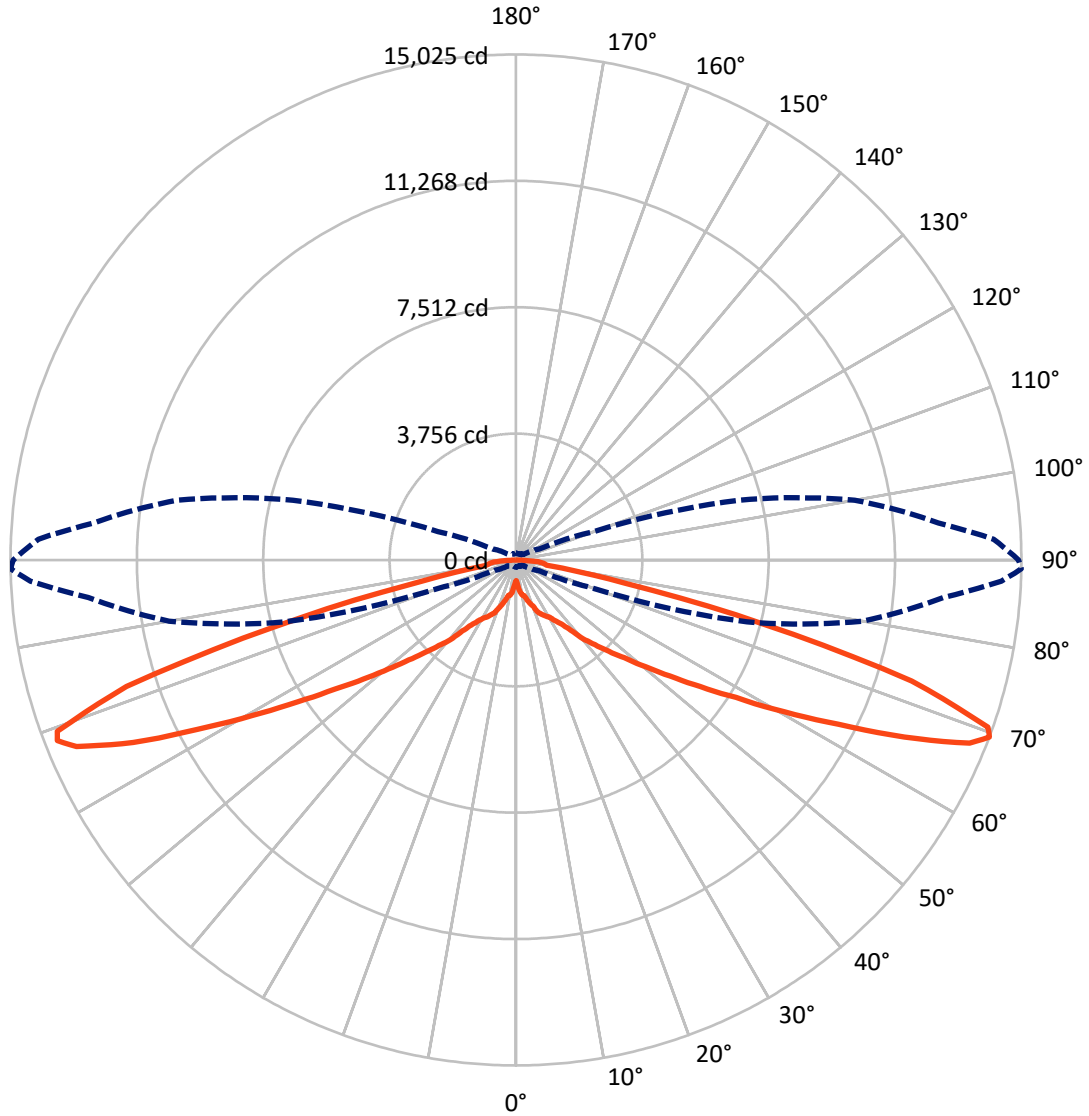
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 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	4844.9	0.0	4844.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4845.1	0.0	4845.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	9690.0	0.0	9690.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.1	0.8
10°-20°	355.3	3.7
20°-30°	708.9	7.3
30°-40°	1072.2	11.1
40°-50°	1556.3	16.1
50°-60°	2044.7	21.1
60°-70°	2494.3	25.7
70°-80°	1261.0	13.0
80°-90°	120.2	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°	9690.0	100.0
0°-180°	9690.0	100.0

Coefficient of Utilization

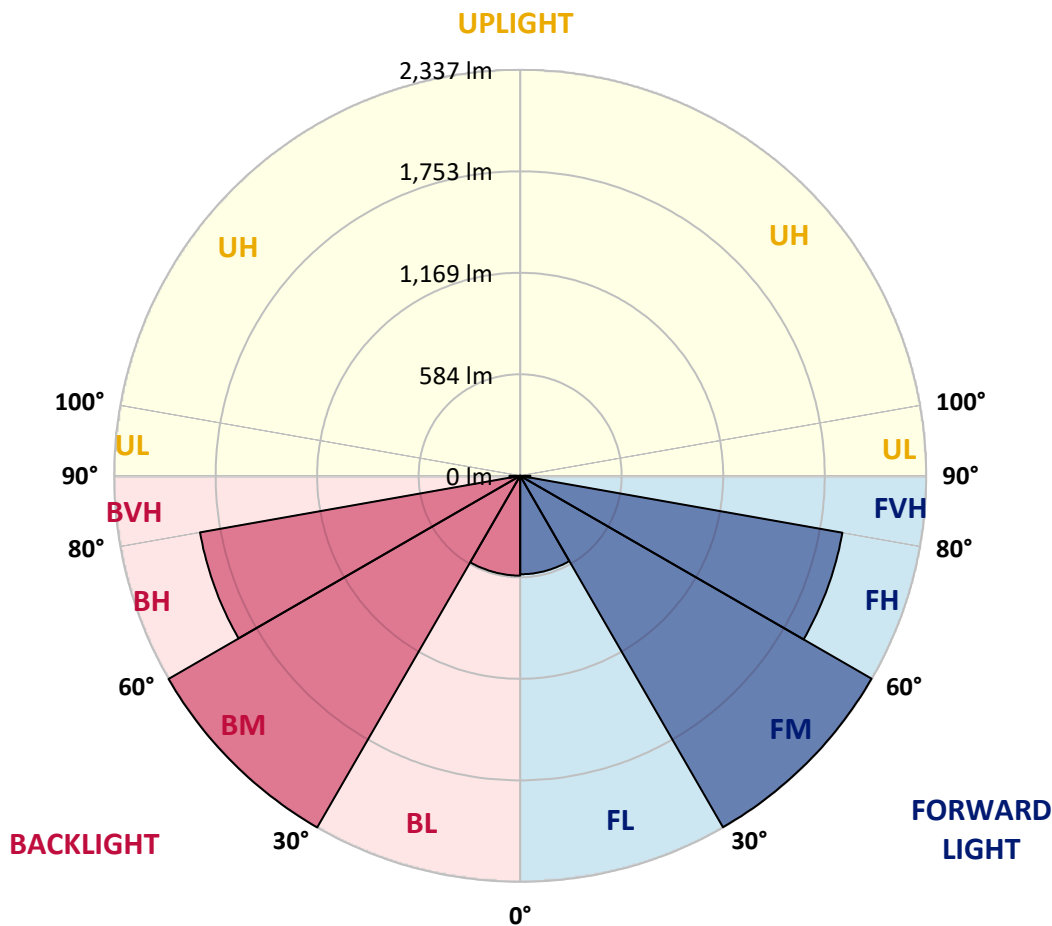


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	566.7	5.8			
FM (30°-60°)	2335.8	24.1			
FH (60°-80°)	1883.7	19.4			G2/5000
FVH (80°-90°)	58.9	0.6			G1/100
BL (0°-30°)	574.6	5.9	B2/1000		
BM (30°-60°)	2337.4	24.1	B2/2500		
BH (60°-80°)	1871.6	19.3	B3/2500		G3/2500
BVH (80°-90°)	61.2	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°	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8
2.5°	720.3	637.2	630.0	610.2	624.6	630.0	617.4	599.3	619.2	630.0	610.2
5°	908.0	785.3	743.7	709.4	640.8	612.0	640.8	714.9	723.9	769.0	756.4
7.5°	1000.1	980.2	927.9	814.1	704.0	642.6	720.3	826.8	880.9	924.3	969.4
10°	1068.7	1057.8	965.8	884.5	839.4	843.0	844.8	879.1	926.1	998.3	1023.5
12.5°	1084.9	1081.3	1095.7	1077.7	1081.3	1101.2	1081.3	1072.3	1099.4	1122.8	1097.6
15°	1189.6	1187.8	1193.2	1196.8	1269.0	1299.7	1269.0	1242.0	1222.1	1202.3	1243.8
17.5°	1261.8	1252.8	1254.6	1288.9	1370.1	1455.0	1438.7	1402.6	1357.5	1384.6	1418.9
20°	1301.5	1285.3	1296.1	1310.6	1447.8	1541.6	1552.5	1503.7	1476.6	1510.9	1539.8
22.5°	1339.5	1314.2	1276.3	1290.7	1417.1	1552.5	1604.8	1592.2	1612.0	1622.9	1617.4
25°	1294.3	1310.6	1269.0	1310.6	1438.7	1563.3	1668.0	1742.0	1743.8	1738.4	1778.1
27.5°	1267.2	1254.6	1184.2	1290.7	1397.2	1474.8	1742.0	1866.6	1904.5	1788.9	1866.6
30°	1220.3	1240.2	1144.5	1232.9	1368.3	1498.3	1826.9	2005.6	1949.6	1935.2	1953.2
32.5°	1191.4	1178.8	1133.7	1182.4	1285.3	1568.7	1881.0	2086.8	2157.2	2122.9	2119.3
35°	1144.5	1153.5	1083.1	1135.5	1279.9	1509.1	1917.1	2290.8	2399.1	2372.0	2350.4
37.5°	1151.7	1121.0	1070.5	1108.4	1245.6	1541.6	2007.4	2487.6	2659.0	2673.5	2574.2
40°	1097.6	1079.5	1003.7	1066.9	1180.6	1521.8	2029.0	2711.4	3002.0	3067.0	2924.4
42.5°	1019.9	996.5	953.1	1023.5	1142.7	1424.3	2059.7	2980.4	3350.4	3485.8	3355.8
45°	908.0	877.3	855.7	949.5	1059.6	1399.0	2027.2	3204.2	3684.4	3870.3	3866.7
47.5°	772.6	752.8	741.9	841.2	991.0	1335.8	1960.4	3345.0	3917.3	4393.8	4321.6
50°	619.2	604.7	602.9	707.6	875.5	1205.9	1884.6	3415.4	4271.1	4874.0	4937.2
52.5°	496.4	485.6	483.8	568.6	732.9	1030.8	1725.8	3469.6	4608.6	5419.2	5744.1
55°	388.1	377.3	379.1	449.5	583.1	843.0	1483.9	3408.2	4904.7	5977.0	6592.6
57.5°	317.7	306.9	308.7	348.4	445.9	644.5	1182.4	3274.6	5038.3	6666.6	7581.8
60°	279.8	269.0	263.6	281.6	343.0	485.6	879.1	2754.7	5059.9	7238.8	8655.9
62.5°	259.9	249.1	243.7	249.1	283.4	371.9	633.6	2182.5	4935.4	7728.0	9639.7
65°	241.9	232.9	225.6	231.1	249.1	296.1	462.1	1494.7	4283.7	7951.9	10354.6
67.5°	222.0	214.8	207.6	214.8	227.5	249.1	359.2	945.9	3211.4	7661.2	10652.4
69°	211.2	200.4	196.8	202.2	214.8	229.3	310.5	754.6	2442.4	7108.8	10471.9
70°	200.4	193.2	187.7	196.8	207.6	218.4	279.8	640.8	1915.3	6399.4	10024.2
72.5°	176.9	171.5	167.9	176.9	185.9	193.2	229.3	456.7	1110.2	4357.7	7950.1
75°	155.2	149.8	148.0	155.2	162.5	166.1	193.2	314.1	655.3	2280.0	4769.3
77.5°	130.0	122.8	124.6	133.6	139.0	140.8	162.5	225.6	386.3	1032.6	2209.6
80°	95.7	95.7	102.9	110.1	110.1	110.1	130.0	164.3	234.7	474.8	917.0
82.5°	66.8	68.6	70.4	81.2	83.0	75.8	99.3	119.1	146.2	207.6	317.7
85°	37.9	39.7	41.5	48.7	50.5	45.1	65.0	75.8	84.8	102.9	166.1
87.5°	14.4	16.2	21.7	25.3	27.1	19.9	30.7	36.1	36.1	43.3	74.0
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°	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8	613.8
2.5°	651.7	664.3	687.8	693.2	673.3	651.7	602.9	633.6	646.3	622.8	630.0
5°	806.9	834.0	862.9	828.6	806.9	792.5	769.0	770.8	758.2	716.7	648.1
7.5°	982.0	951.3	973.0	996.5	962.2	964.0	985.6	940.5	906.2	835.8	707.6
10°	1063.3	1063.3	1068.7	1068.7	1054.2	1054.2	1052.4	980.2	938.7	908.0	871.9
12.5°	1068.7	1066.9	1088.5	1072.3	1075.9	1079.5	1088.5	1121.0	1110.2	1070.5	1103.0
15°	1218.5	1211.3	1218.5	1216.7	1222.1	1238.4	1231.1	1223.9	1225.7	1254.6	1303.3
17.5°	1359.3	1362.9	1355.7	1368.3	1368.3	1379.2	1404.4	1379.2	1357.5	1411.7	1449.6
20°	1521.8	1509.1	1480.3	1501.9	1507.3	1509.1	1550.7	1520.0	1489.3	1509.1	1554.3
22.5°	1686.0	1684.2	1687.9	1689.7	1696.9	1669.8	1613.8	1604.8	1624.7	1597.6	1603.0
25°	1787.1	1788.9	1798.0	1799.8	1769.1	1798.0	1817.8	1758.3	1758.3	1752.8	1716.7
27.5°	1909.9	1882.8	1893.6	1908.1	1895.4	1902.7	1879.2	1792.6	1884.6	1897.3	1752.8
30°	1992.9	1980.3	1967.7	1982.1	1994.7	2027.2	1960.4	1951.4	1958.6	2025.4	1835.9
32.5°	2168.0	2186.1	2162.6	2139.1	2162.6	2155.4	2126.5	2113.9	2204.1	2115.7	1893.6
35°	2330.5	2337.7	2339.5	2335.9	2350.4	2325.1	2325.1	2372.0	2399.1	2303.4	1911.7
37.5°	2722.2	2697.0	2644.6	2619.3	2664.5	2702.4	2590.4	2646.4	2635.6	2473.1	2047.1
40°	3003.8	3061.6	3077.8	3070.6	3077.8	2969.5	2993.0	3034.5	2985.8	2716.8	2000.1
42.5°	3415.4	3451.5	3438.9	3422.6	3429.9	3410.0	3339.6	3493.0	3317.9	2989.4	2072.4
45°	3790.9	3872.1	3877.5	3821.6	3866.7	3796.3	3825.2	3879.4	3702.4	3193.4	2052.5
47.5°	4238.6	4406.5	4343.3	4343.3	4388.4	4236.8	4305.4	4377.6	3908.2	3330.6	1944.2
50°	4901.1	4991.3	4987.7	4971.5	4991.3	4910.1	4899.3	4890.3	4224.1	3460.5	1877.4
52.5°	5650.2	5773.0	5726.1	5744.1	5771.2	5617.7	5738.7	5408.3	4619.5	3509.3	1725.8
55°	6607.0	6691.8	6644.9	6552.8	6675.6	6578.1	6617.8	5973.4	4893.9	3370.3	1473.0
57.5°	7746.1	7789.4	7711.8	7702.7	7784.0	7679.3	7612.5	6608.8	5036.5	3265.6	1177.0
60°	9076.5	9211.9	9163.1	9085.5	9159.5	9067.5	8562.0	7148.5	5007.6	2776.4	911.6
62.5°	10672.3	10809.5	10755.3	10703.0	10749.9	10509.8	9453.8	7574.6	4877.6	2200.5	666.1
65°	11990.1	12609.2	12690.5	12692.3	12464.8	11908.8	10165.0	7740.7	4191.6	1536.2	487.4
67.5°	12856.6	14143.7	14544.4	14400.0	13878.3	12609.2	10452.0	7415.7	3236.7	971.2	364.6
69°	12757.3	14445.1	15024.6	14943.4	14210.5	12598.4	10228.2	6868.7	2473.1	772.6	308.7
70°	12298.8	14197.8	14885.6	14921.7	13999.2	12114.6	9829.3	6240.5	2000.1	658.9	283.4
72.5°	9814.8	11699.4	12304.2	12540.7	11625.4	9701.1	8060.2	4402.9	1158.9	460.3	229.3
75°	6079.9	7094.4	7596.2	7733.4	7179.2	6042.0	4892.1	2449.6	705.8	324.9	193.2
77.5°	2725.8	3020.1	3308.9	3308.9	3092.3	2758.3	2242.0	1184.2	400.8	231.1	162.5
80°	913.4	947.7	922.5	931.5	895.4	861.1	900.8	510.9	247.3	173.3	131.8
82.5°	621.0	779.8	828.6	828.6	778.0	613.8	346.6	234.7	151.6	124.6	101.1
85°	505.5	617.4	662.5	682.4	642.6	518.1	182.3	113.7	90.3	79.4	68.6
87.5°	169.7	158.9	149.8	146.2	153.4	160.7	90.3	48.7	41.5	37.9	36.1
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):

	135°	145°	155°	165°	175°	180°
0°	613.8	613.8	613.8	613.8	613.8	613.8
2.5°	642.6	621.0	630.0	639.0	704.0	752.8
5°	639.0	669.7	738.3	825.0	864.7	962.2
7.5°	657.1	769.0	897.2	987.4	1023.5	1054.2
10°	879.1	899.0	942.3	1029.0	1101.2	1113.8
12.5°	1135.5	1130.0	1099.4	1139.1	1103.0	1128.2
15°	1335.8	1276.3	1234.7	1229.3	1216.7	1216.7
17.5°	1446.0	1393.6	1335.8	1321.4	1283.5	1314.2
20°	1575.9	1485.7	1341.3	1326.8	1314.2	1285.3
22.5°	1550.7	1460.4	1310.6	1292.5	1359.3	1355.7
25°	1581.3	1460.4	1317.8	1297.9	1328.6	1328.6
27.5°	1505.5	1406.2	1303.3	1184.2	1278.1	1299.7
30°	1485.7	1373.7	1254.6	1148.1	1243.8	1223.9
32.5°	1590.4	1292.5	1175.2	1142.7	1213.1	1198.6
35°	1509.1	1278.1	1155.3	1095.7	1178.8	1164.3
37.5°	1543.4	1260.0	1121.0	1070.5	1137.3	1158.9
40°	1536.2	1175.2	1081.3	1016.3	1083.1	1093.9
42.5°	1415.3	1110.2	1014.5	949.5	983.8	1019.9
45°	1379.2	1070.5	949.5	859.3	861.1	902.6
47.5°	1312.4	980.2	830.4	747.3	747.3	781.6
50°	1200.5	859.3	695.0	619.2	617.4	644.5
52.5°	1034.4	741.9	586.7	503.6	498.2	525.3
55°	846.6	597.5	462.1	408.0	397.1	408.0
57.5°	658.9	465.7	364.6	321.3	319.5	328.5
60°	510.9	364.6	290.6	265.4	269.0	283.4
62.5°	386.3	290.6	247.3	238.3	243.7	258.1
65°	306.9	250.9	225.6	220.2	225.6	240.1
67.5°	249.1	227.5	209.4	202.2	205.8	220.2
69°	229.3	214.8	200.4	191.4	195.0	205.8
70°	218.4	207.6	193.2	184.1	187.7	198.6
72.5°	191.4	185.9	175.1	166.1	167.9	176.9
75°	167.9	164.3	157.1	146.2	146.2	157.1
77.5°	140.8	142.6	135.4	124.6	122.8	128.2
80°	111.9	115.5	111.9	101.1	97.5	97.5
82.5°	81.2	88.5	84.8	74.0	72.2	72.2
85°	50.5	56.0	54.2	46.9	46.9	41.5
87.5°	23.5	30.7	28.9	25.3	23.5	16.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)