

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: P565272

Luminaire Tested: **MSA-SA1D-727-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565272
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-SA1D-727-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5185 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B3 - U0 - G3

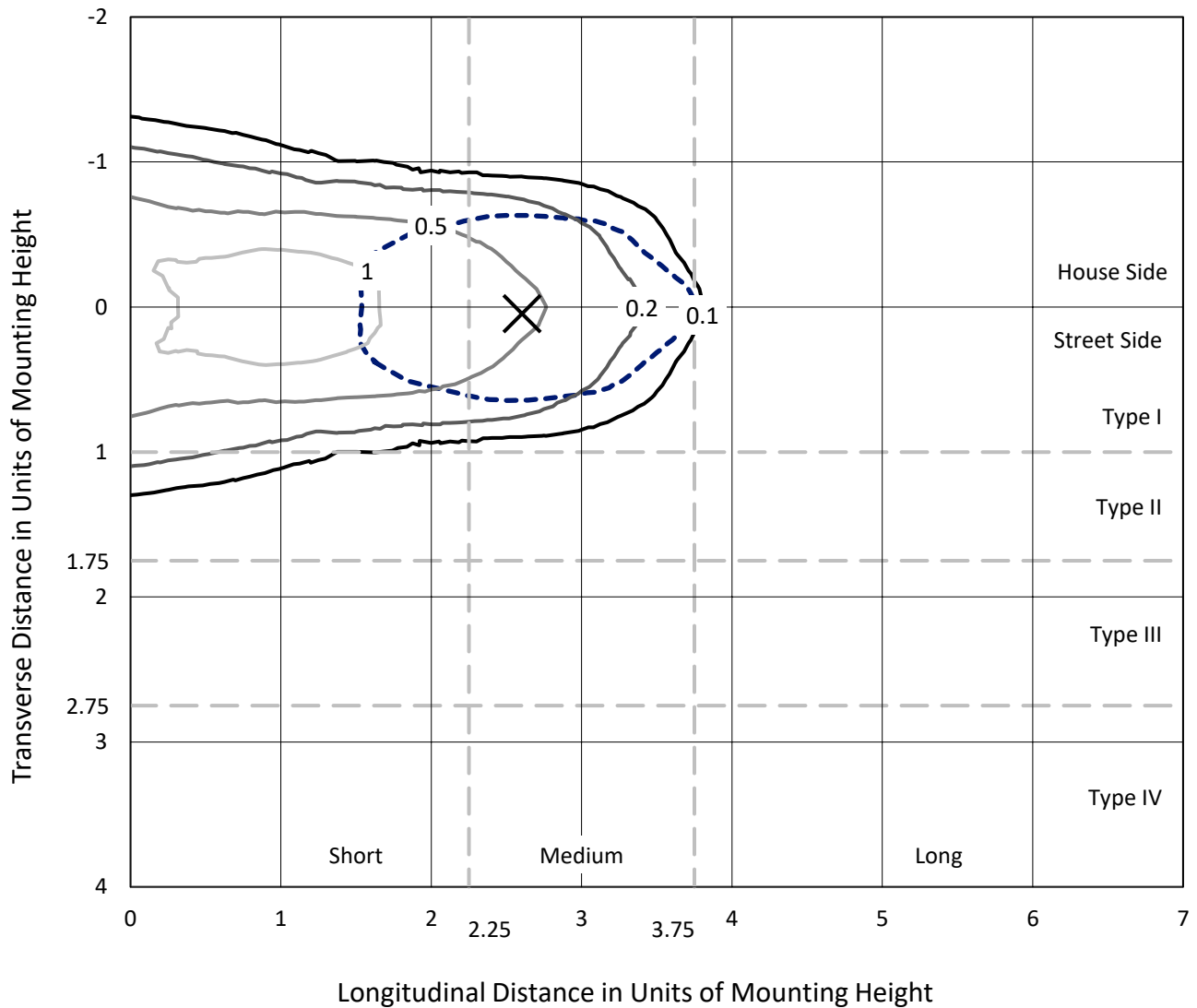
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

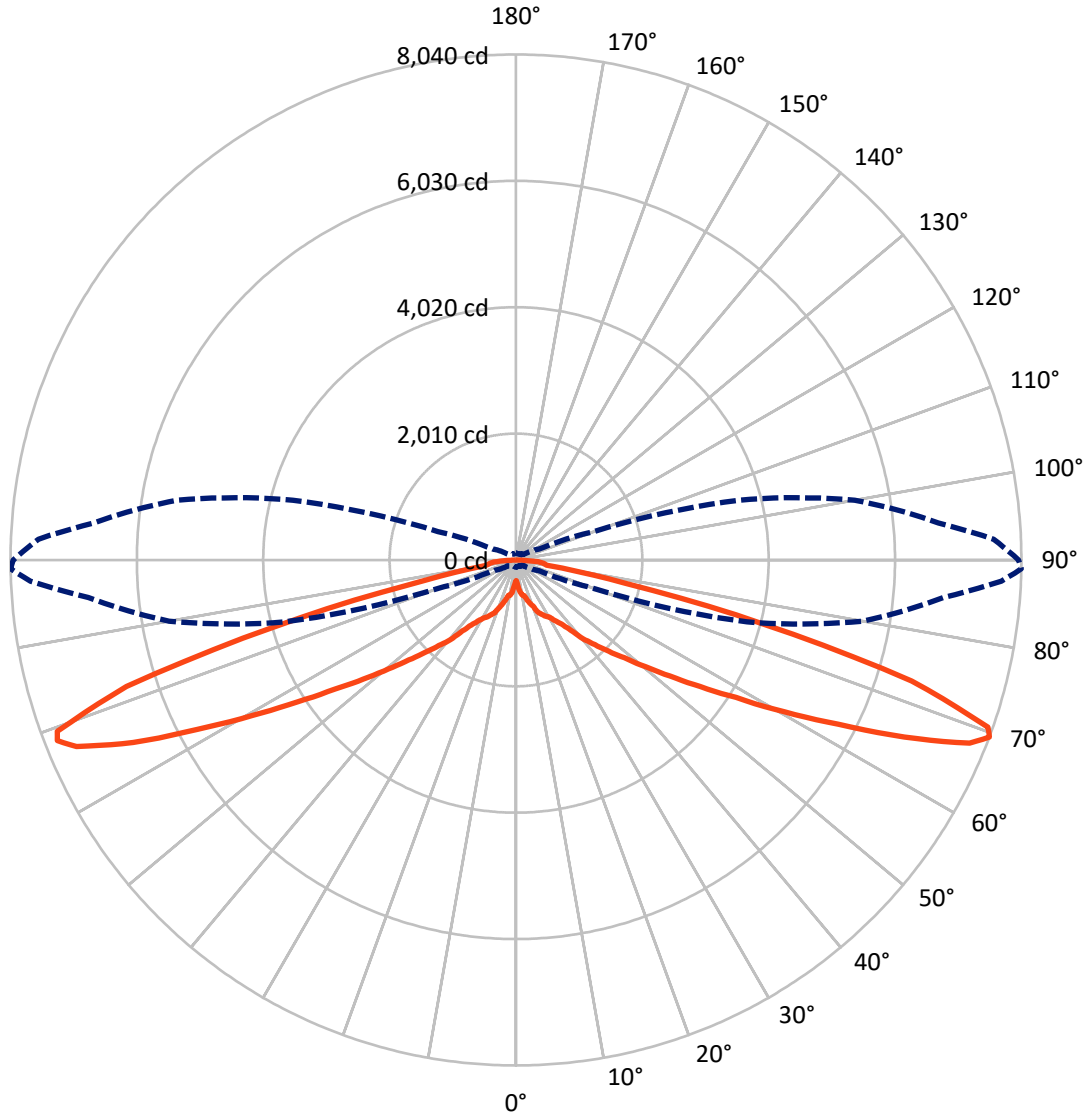
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 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	2592.4	0.0	2592.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2592.5	0.0	2592.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	5185.0	0.0	5185.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	0.8
10°-20°	190.1	3.7
20°-30°	379.3	7.3
30°-40°	573.7	11.1
40°-50°	832.8	16.1
50°-60°	1094.1	21.1
60°-70°	1334.6	25.7
70°-80°	674.8	13.0
80°-90°	64.3	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°	5185.0	100.0
0°-180°	5185.0	100.0

Coefficient of Utilization



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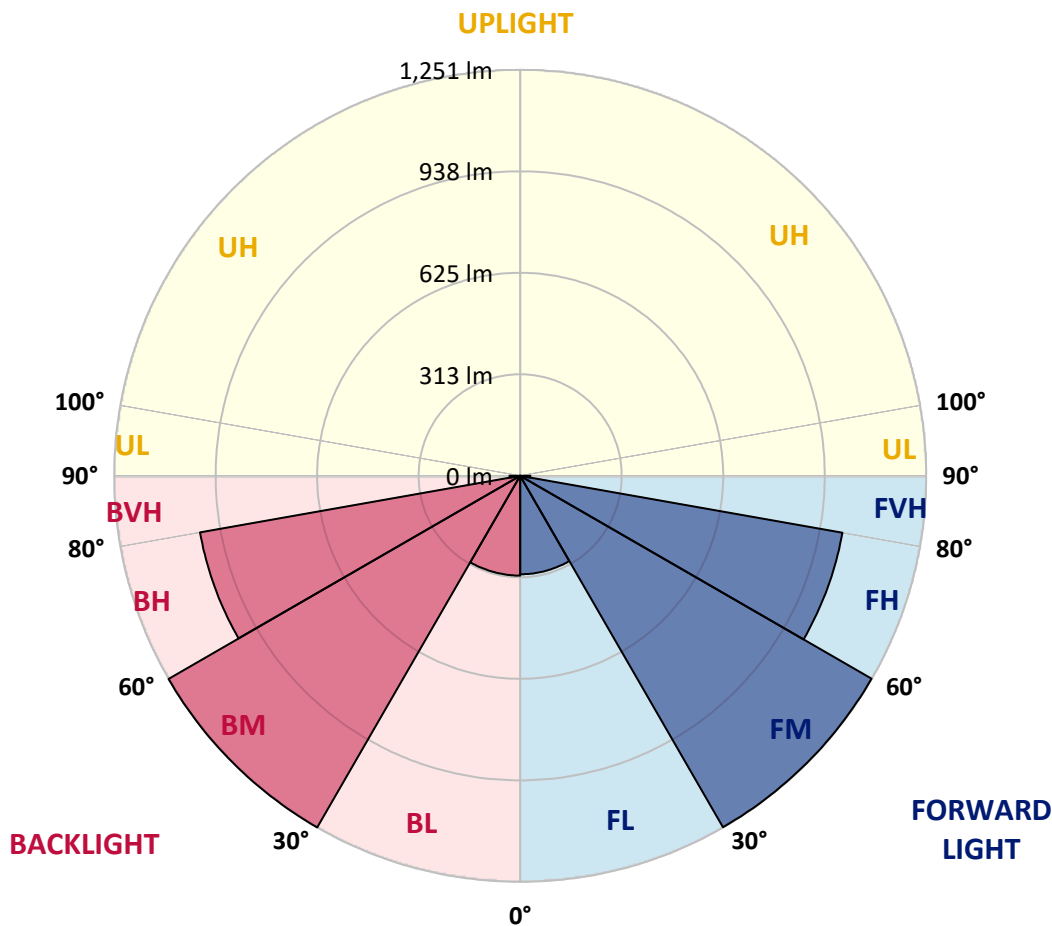
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	303.2	5.8			
FM (30°-60°)	1249.9	24.1			
FH (60°-80°)	1007.9	19.4			G1/1800
FVH (80°-90°)	31.5	0.6			G1/100
BL (0°-30°)	307.5	5.9	B1/500		
BM (30°-60°)	1250.7	24.1	B2/2500		
BH (60°-80°)	1001.5	19.3	B3/2500		G3/2500
BVH (80°-90°)	32.8	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°	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4
2.5°	385.4	341.0	337.1	326.5	334.2	337.1	330.3	320.7	331.3	337.1	326.5
5°	485.9	420.2	398.0	379.6	342.9	327.5	342.9	382.5	387.3	411.5	404.7
7.5°	535.1	524.5	496.5	435.6	376.7	343.9	385.4	442.4	471.4	494.6	518.7
10°	571.8	566.0	516.8	473.3	449.2	451.1	452.1	470.4	495.5	534.2	547.7
12.5°	580.5	578.6	586.3	576.7	578.6	589.2	578.6	573.8	588.3	600.8	587.3
15°	636.6	635.6	638.5	640.4	679.1	695.5	679.1	664.6	653.9	643.3	665.5
17.5°	675.2	670.4	671.3	689.7	733.1	778.5	769.8	750.5	726.4	740.9	759.2
20°	696.4	687.7	693.5	701.3	774.7	824.9	830.7	804.6	790.1	808.5	823.9
22.5°	716.7	703.2	682.9	690.6	758.3	830.7	858.7	852.0	862.6	868.4	865.5
25°	692.6	701.3	679.1	701.3	769.8	836.5	892.5	932.1	933.1	930.2	951.4
27.5°	678.1	671.3	633.7	690.6	747.6	789.2	932.1	998.8	1019.1	957.2	998.8
30°	653.0	663.6	612.4	659.7	732.2	801.7	977.5	1073.2	1043.2	1035.5	1045.1
32.5°	637.5	630.8	606.6	632.7	687.7	839.4	1006.5	1116.6	1154.3	1135.9	1134.0
35°	612.4	617.2	579.6	607.6	684.8	807.5	1025.8	1225.8	1283.7	1269.2	1257.6
37.5°	616.3	599.8	572.8	593.1	666.5	824.9	1074.1	1331.1	1422.8	1430.5	1377.4
40°	587.3	577.6	537.1	570.9	631.7	814.3	1085.7	1450.8	1606.3	1641.1	1564.8
42.5°	545.8	533.2	510.0	547.7	611.4	762.1	1102.1	1594.8	1792.8	1865.2	1795.7
45°	485.9	469.4	457.9	508.1	567.0	748.6	1084.7	1714.5	1971.5	2071.0	2069.0
47.5°	413.4	402.8	397.0	450.1	530.3	714.8	1049.0	1789.9	2096.1	2351.1	2312.4
50°	331.3	323.6	322.6	378.6	468.5	645.2	1008.4	1827.5	2285.4	2608.0	2641.8
52.5°	265.6	259.8	258.9	304.3	392.2	551.5	923.4	1856.5	2466.0	2899.7	3073.6
55°	207.7	201.9	202.8	240.5	312.0	451.1	794.0	1823.7	2624.4	3198.2	3527.6
57.5°	170.0	164.2	165.2	186.4	238.6	344.8	632.7	1752.2	2695.9	3567.2	4056.9
60°	149.7	143.9	141.0	150.7	183.5	259.8	470.4	1474.0	2707.5	3873.4	4631.7
62.5°	139.1	133.3	130.4	133.3	151.7	199.0	339.0	1167.8	2640.9	4135.2	5158.1
65°	129.4	124.6	120.7	123.6	133.3	158.4	247.3	799.8	2292.2	4254.9	5540.6
67.5°	118.8	114.9	111.1	114.9	121.7	133.3	192.2	506.1	1718.4	4099.4	5700.0
69°	113.0	107.2	105.3	108.2	114.9	122.7	166.1	403.8	1306.9	3803.9	5603.4
70°	107.2	103.4	100.5	105.3	111.1	116.9	149.7	342.9	1024.9	3424.2	5363.8
72.5°	94.7	91.8	89.8	94.7	99.5	103.4	122.7	244.4	594.0	2331.8	4254.0
75°	83.1	80.2	79.2	83.1	86.9	88.9	103.4	168.1	350.6	1220.0	2552.0
77.5°	69.5	65.7	66.6	71.5	74.4	75.3	86.9	120.7	206.7	552.5	1182.3
80°	51.2	51.2	55.1	58.9	58.9	58.9	69.5	87.9	125.6	254.0	490.7
82.5°	35.7	36.7	37.7	43.5	44.4	40.6	53.1	63.8	78.2	111.1	170.0
85°	20.3	21.3	22.2	26.1	27.0	24.1	34.8	40.6	45.4	55.1	88.9
87.5°	7.7	8.7	11.6	13.5	14.5	10.6	16.4	19.3	19.3	23.2	39.6
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4	328.4
2.5°	348.7	355.5	368.0	370.9	360.3	348.7	322.6	339.0	345.8	333.2	337.1
5°	431.8	446.3	461.7	443.4	431.8	424.0	411.5	412.5	405.7	383.5	346.8
7.5°	525.5	509.0	520.6	533.2	514.8	515.8	527.4	503.3	484.9	447.2	378.6
10°	568.9	568.9	571.8	571.8	564.1	564.1	563.1	524.5	502.3	485.9	466.5
12.5°	571.8	570.9	582.5	573.8	575.7	577.6	582.5	599.8	594.0	572.8	590.2
15°	652.0	648.1	652.0	651.0	653.9	662.6	658.8	654.9	655.9	671.3	697.4
17.5°	727.3	729.3	725.4	732.2	732.2	738.0	751.5	738.0	726.4	755.4	775.6
20°	814.3	807.5	792.1	803.7	806.6	807.5	829.7	813.3	796.9	807.5	831.7
22.5°	902.2	901.2	903.1	904.1	908.0	893.5	863.5	858.7	869.3	854.9	857.7
25°	956.3	957.2	962.1	963.0	946.6	962.1	972.7	940.8	940.8	937.9	918.6
27.5°	1022.0	1007.5	1013.3	1021.0	1014.2	1018.1	1005.5	959.2	1008.4	1015.2	937.9
30°	1066.4	1059.6	1052.9	1060.6	1067.4	1084.7	1049.0	1044.2	1048.0	1083.8	982.4
32.5°	1160.1	1169.7	1157.2	1144.6	1157.2	1153.3	1137.9	1131.1	1179.4	1132.1	1013.3
35°	1247.0	1250.9	1251.9	1249.9	1257.6	1244.1	1244.1	1269.2	1283.7	1232.5	1022.9
37.5°	1456.6	1443.1	1415.1	1401.6	1425.7	1446.0	1386.1	1416.1	1410.3	1323.3	1095.4
40°	1607.3	1638.2	1646.9	1643.1	1646.9	1589.0	1601.5	1623.7	1597.7	1453.7	1070.3
42.5°	1827.5	1846.9	1840.1	1831.4	1835.3	1824.7	1787.0	1869.1	1775.4	1599.6	1108.9
45°	2028.5	2071.9	2074.8	2044.9	2069.0	2031.4	2046.8	2075.8	1981.1	1708.7	1098.3
47.5°	2268.0	2357.8	2324.0	2324.0	2348.2	2267.0	2303.8	2342.4	2091.2	1782.1	1040.3
50°	2622.5	2670.8	2668.9	2660.2	2670.8	2627.3	2621.5	2616.7	2260.3	1851.7	1004.6
52.5°	3023.4	3089.1	3063.9	3073.6	3088.1	3006.0	3070.7	2893.9	2471.8	1877.8	923.4
55°	3535.3	3580.7	3555.6	3506.3	3572.0	3519.9	3541.1	3196.3	2618.6	1803.4	788.2
57.5°	4144.8	4168.0	4126.5	4121.6	4165.1	4109.1	4073.3	3536.3	2695.0	1747.4	629.8
60°	4856.7	4929.2	4903.1	4861.5	4901.2	4851.9	4581.4	3825.1	2679.5	1485.6	487.8
62.5°	5710.6	5784.0	5755.0	5727.0	5752.1	5623.7	5058.6	4053.1	2610.0	1177.5	356.4
65°	6415.7	6747.1	6790.5	6791.5	6669.8	6372.3	5439.2	4141.9	2242.9	822.0	260.8
67.5°	6879.4	7568.1	7782.5	7705.3	7426.1	6747.1	5592.8	3968.1	1731.9	519.7	195.1
69°	6826.3	7729.4	8039.5	7996.0	7603.8	6741.3	5473.0	3675.4	1323.3	413.4	165.2
70°	6580.9	7597.1	7965.1	7984.4	7490.8	6482.4	5259.5	3339.2	1070.3	352.6	151.7
72.5°	5251.8	6260.2	6583.8	6710.3	6220.6	5190.9	4312.9	2355.9	620.1	246.3	122.7
75°	3253.3	3796.1	4064.7	4138.1	3841.5	3233.0	2617.7	1310.8	377.7	173.9	103.4
77.5°	1458.6	1616.0	1770.6	1770.6	1654.6	1475.9	1199.7	633.7	214.4	123.6	86.9
80°	488.8	507.1	493.6	498.4	479.1	460.8	482.0	273.4	132.3	92.7	70.5
82.5°	332.3	417.3	443.4	443.4	416.3	328.4	185.5	125.6	81.1	66.6	54.1
85°	270.5	330.3	354.5	365.1	343.9	277.2	97.6	60.9	48.3	42.5	36.7
87.5°	90.8	85.0	80.2	78.2	82.1	86.0	48.3	26.1	22.2	20.3	19.3
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°	328.4	328.4	328.4	328.4	328.4	328.4
2.5°	343.9	332.3	337.1	341.9	376.7	402.8
5°	341.9	358.4	395.1	441.4	462.7	514.8
7.5°	351.6	411.5	480.1	528.4	547.7	564.1
10°	470.4	481.0	504.2	550.6	589.2	596.0
12.5°	607.6	604.7	588.3	609.5	590.2	603.7
15°	714.8	682.9	660.7	657.8	651.0	651.0
17.5°	773.7	745.7	714.8	707.1	686.8	703.2
20°	843.3	795.0	717.7	710.0	703.2	687.7
22.5°	829.7	781.4	701.3	691.6	727.3	725.4
25°	846.2	781.4	705.1	694.5	710.9	710.9
27.5°	805.6	752.5	697.4	633.7	683.9	695.5
30°	795.0	735.1	671.3	614.3	665.5	654.9
32.5°	851.0	691.6	628.8	611.4	649.1	641.4
35°	807.5	683.9	618.2	586.3	630.8	623.0
37.5°	825.9	674.2	599.8	572.8	608.5	620.1
40°	822.0	628.8	578.6	543.8	579.6	585.4
42.5°	757.3	594.0	542.9	508.1	526.4	545.8
45°	738.0	572.8	508.1	459.8	460.8	483.0
47.5°	702.2	524.5	444.3	399.9	399.9	418.2
50°	642.3	459.8	371.9	331.3	330.3	344.8
52.5°	553.5	397.0	313.9	269.5	266.6	281.1
55°	453.0	319.7	247.3	218.3	212.5	218.3
57.5°	352.6	249.2	195.1	171.9	171.0	175.8
60°	273.4	195.1	155.5	142.0	143.9	151.7
62.5°	206.7	155.5	132.3	127.5	130.4	138.1
65°	164.2	134.3	120.7	117.8	120.7	128.5
67.5°	133.3	121.7	112.0	108.2	110.1	117.8
69°	122.7	114.9	107.2	102.4	104.3	110.1
70°	116.9	111.1	103.4	98.5	100.5	106.3
72.5°	102.4	99.5	93.7	88.9	89.8	94.7
75°	89.8	87.9	84.0	78.2	78.2	84.0
77.5°	75.3	76.3	72.4	66.6	65.7	68.6
80°	59.9	61.8	59.9	54.1	52.2	52.2
82.5°	43.5	47.3	45.4	39.6	38.6	38.6
85°	27.0	29.9	29.0	25.1	25.1	22.2
87.5°	12.6	16.4	15.5	13.5	12.6	8.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)