

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: P565285

Luminaire Tested: **MSA-SA1A-827-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565285
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-SA1A-827-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: 2686 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B2 - U0 - G2

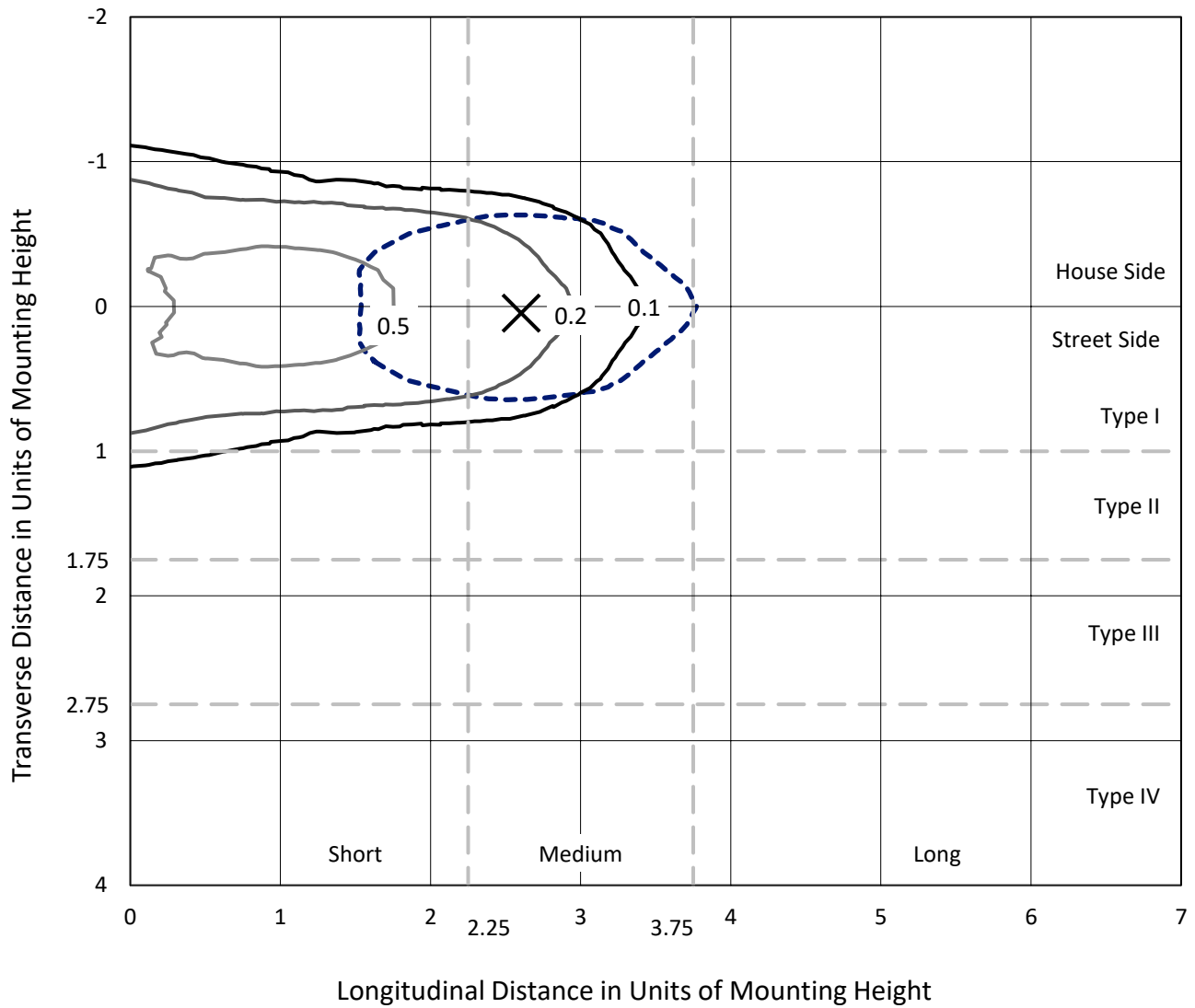
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

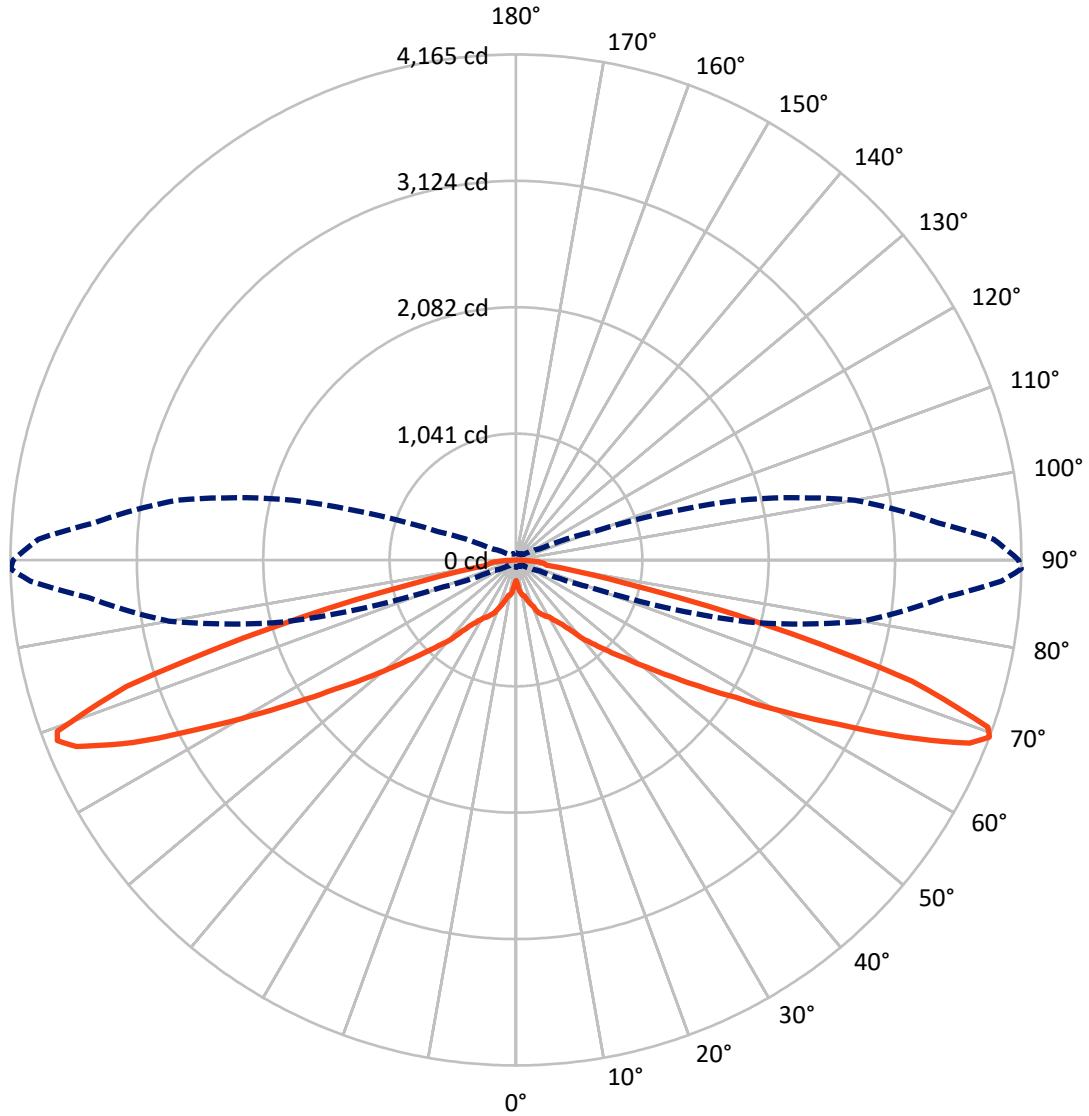
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 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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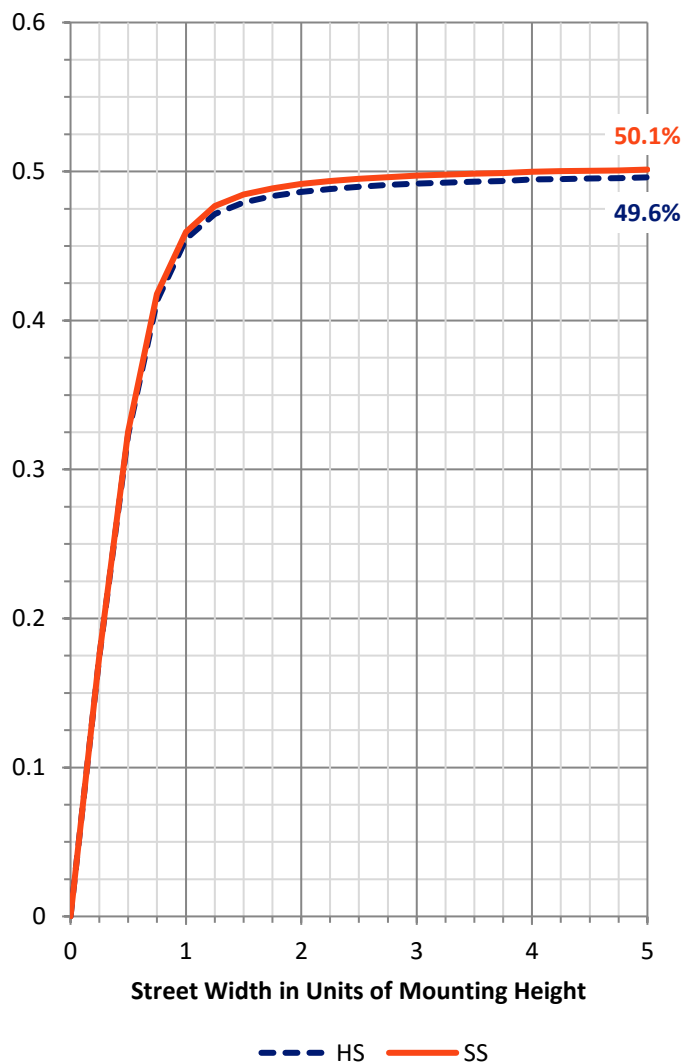
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1343.0	0.0	1343.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	1343.0	0.0	1343.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	2686.0	0.0	2686.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.4	0.8
10°-20°	98.5	3.7
20°-30°	196.5	7.3
30°-40°	297.2	11.1
40°-50°	431.4	16.1
50°-60°	566.8	21.1
60°-70°	691.4	25.7
70°-80°	349.5	13.0
80°-90°	33.3	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°	2686.0	100.0
0°-180°	2686.0	100.0

Coefficient of Utilization



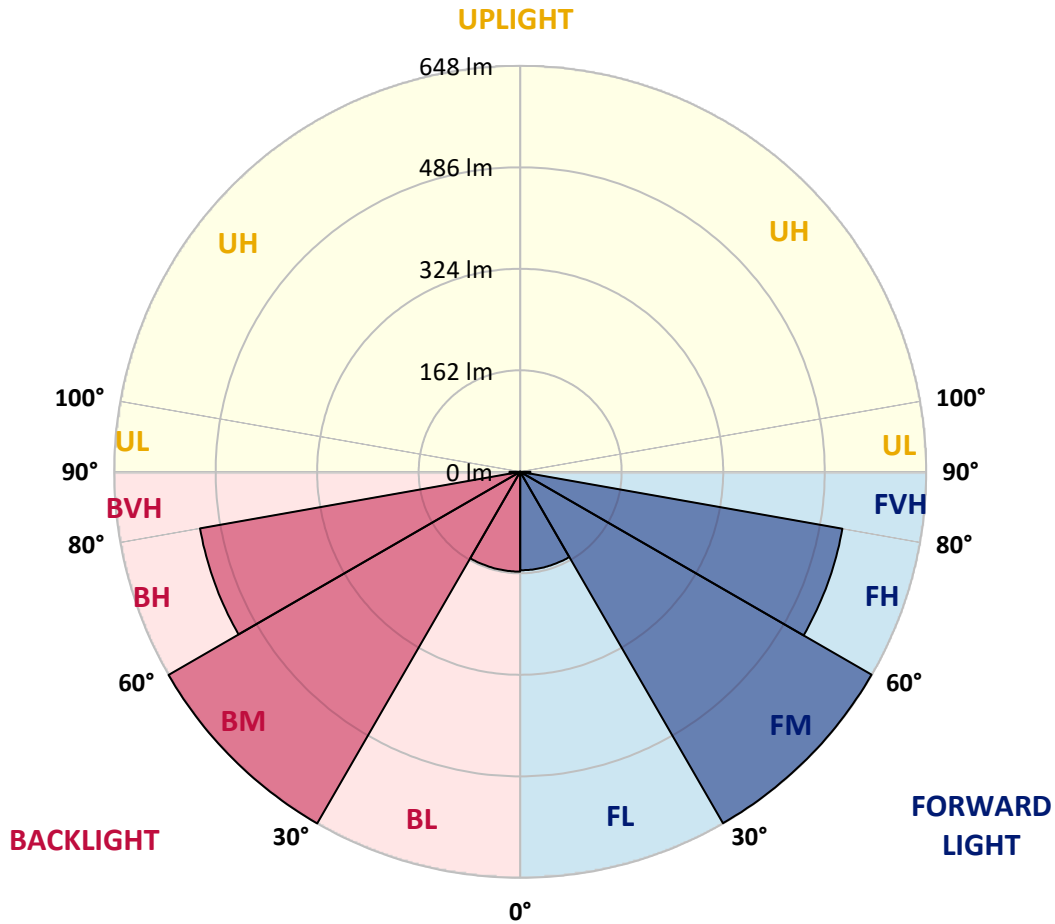
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	157.1	5.8			
FM (30°-60°)	647.5	24.1			
FH (60°-80°)	522.1	19.4			G0/660
FVH (80°-90°)	16.3	0.6			G1/100
BL (0°-30°)	159.3	5.9	B1/500		
BM (30°-60°)	647.9	24.1	B1/1000		
BH (60°-80°)	518.8	19.3	B2/1000		G2/1000
BVH (80°-90°)	17.0	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1
2.5°	199.7	176.6	174.6	169.1	173.1	174.6	171.1	166.1	171.6	174.6	169.1
5°	251.7	217.7	206.2	196.7	177.6	169.6	177.6	198.2	200.7	213.2	209.7
7.5°	277.2	271.7	257.2	225.7	195.2	178.1	199.7	229.2	244.2	256.2	268.7
10°	296.2	293.2	267.7	245.2	232.7	233.7	234.2	243.7	256.7	276.7	283.7
12.5°	300.7	299.7	303.7	298.7	299.7	305.2	299.7	297.2	304.7	311.2	304.2
15°	329.8	329.3	330.8	331.8	351.8	360.3	351.8	344.3	338.8	333.3	344.8
17.5°	349.8	347.3	347.8	357.3	379.8	403.3	398.8	388.8	376.3	383.8	393.3
20°	360.8	356.3	359.3	363.3	401.3	427.3	430.3	416.8	409.3	418.8	426.8
22.5°	371.3	364.3	353.8	357.8	392.8	430.3	444.8	441.3	446.8	449.8	448.3
25°	358.8	363.3	351.8	363.3	398.8	433.3	462.4	482.9	483.4	481.9	492.9
27.5°	351.3	347.8	328.3	357.8	387.3	408.8	482.9	517.4	527.9	495.9	517.4
30°	338.3	343.8	317.2	341.8	379.3	415.3	506.4	555.9	540.4	536.4	541.4
32.5°	330.3	326.8	314.2	327.8	356.3	434.8	521.4	578.4	598.0	588.5	587.5
35°	317.2	319.7	300.2	314.7	354.8	418.3	531.4	635.0	665.0	657.5	651.5
37.5°	319.2	310.7	296.7	307.2	345.3	427.3	556.4	689.5	737.1	741.1	713.6
40°	304.2	299.2	278.2	295.7	327.3	421.8	562.4	751.6	832.1	850.2	810.6
42.5°	282.7	276.2	264.2	283.7	316.7	394.8	570.9	826.1	928.7	966.2	930.2
45°	251.7	243.2	237.2	263.2	293.7	387.8	561.9	888.2	1021.3	1072.8	1071.8
47.5°	214.2	208.7	205.7	233.2	274.7	370.3	543.4	927.2	1085.8	1217.9	1197.9
50°	171.6	167.6	167.1	196.2	242.7	334.3	522.4	946.7	1183.9	1351.0	1368.6
52.5°	137.6	134.6	134.1	157.6	203.2	285.7	478.4	961.7	1277.5	1502.2	1592.2
55°	107.6	104.6	105.1	124.6	161.6	233.7	411.3	944.7	1359.5	1656.8	1827.4
57.5°	88.1	85.1	85.6	96.6	123.6	178.6	327.8	907.7	1396.6	1847.9	2101.6
60°	77.6	74.6	73.1	78.1	95.1	134.6	243.7	763.6	1402.6	2006.5	2399.3
62.5°	72.1	69.1	67.6	69.1	78.6	103.1	175.6	605.0	1368.1	2142.2	2672.1
65°	67.1	64.5	62.5	64.0	69.1	82.1	128.1	414.3	1187.4	2204.2	2870.2
67.5°	61.5	59.5	57.5	59.5	63.0	69.1	99.6	262.2	890.2	2123.6	2952.8
69°	58.5	55.5	54.5	56.0	59.5	63.5	86.1	209.2	677.0	1970.5	2902.7
70°	55.5	53.5	52.0	54.5	57.5	60.5	77.6	177.6	530.9	1773.9	2778.6
72.5°	49.0	47.5	46.5	49.0	51.5	53.5	63.5	126.6	307.7	1207.9	2203.7
75°	43.0	41.5	41.0	43.0	45.0	46.0	53.5	87.1	181.6	632.0	1322.0
77.5°	36.0	34.0	34.5	37.0	38.5	39.0	45.0	62.5	107.1	286.2	612.5
80°	26.5	26.5	28.5	30.5	30.5	30.5	36.0	45.5	65.1	131.6	254.2
82.5°	18.5	19.0	19.5	22.5	23.0	21.0	27.5	33.0	40.5	57.5	88.1
85°	10.5	11.0	11.5	13.5	14.0	12.5	18.0	21.0	23.5	28.5	46.0
87.5°	4.0	4.5	6.0	7.0	7.5	5.5	8.5	10.0	10.0	12.0	20.5
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1	170.1
2.5°	180.6	184.1	190.6	192.1	186.6	180.6	167.1	175.6	179.1	172.6	174.6
5°	223.7	231.2	239.2	229.7	223.7	219.7	213.2	213.7	210.2	198.7	179.6
7.5°	272.2	263.7	269.7	276.2	266.7	267.2	273.2	260.7	251.2	231.7	196.2
10°	294.7	294.7	296.2	296.2	292.2	292.2	291.7	271.7	260.2	251.7	241.7
12.5°	296.2	295.7	301.7	297.2	298.2	299.2	301.7	310.7	307.7	296.7	305.7
15°	337.8	335.8	337.8	337.3	338.8	343.3	341.3	339.3	339.8	347.8	361.3
17.5°	376.8	377.8	375.8	379.3	379.3	382.3	389.3	382.3	376.3	391.3	401.8
20°	421.8	418.3	410.3	416.3	417.8	418.3	429.8	421.3	412.8	418.3	430.8
22.5°	467.4	466.9	467.9	468.4	470.4	462.9	447.3	444.8	450.3	442.8	444.3
25°	495.4	495.9	498.4	498.9	490.4	498.4	503.9	487.4	487.4	485.9	475.9
27.5°	529.4	521.9	524.9	528.9	525.4	527.4	520.9	496.9	522.4	525.9	485.9
30°	552.4	548.9	545.4	549.4	552.9	561.9	543.4	540.9	542.9	561.4	508.9
32.5°	601.0	606.0	599.5	593.0	599.5	597.5	589.5	586.0	611.0	586.5	524.9
35°	646.0	648.0	648.5	647.5	651.5	644.5	644.5	657.5	665.0	638.5	529.9
37.5°	754.6	747.6	733.1	726.1	738.6	749.1	718.1	733.6	730.6	685.5	567.4
40°	832.6	848.7	853.2	851.2	853.2	823.1	829.6	841.1	827.6	753.1	554.4
42.5°	946.7	956.7	953.2	948.7	950.7	945.2	925.7	968.2	919.7	828.6	574.4
45°	1050.8	1073.3	1074.8	1059.3	1071.8	1052.3	1060.3	1075.3	1026.3	885.2	568.9
47.5°	1174.9	1221.4	1203.9	1203.9	1216.4	1174.4	1193.4	1213.4	1083.3	923.2	538.9
50°	1358.5	1383.6	1382.6	1378.1	1383.6	1361.0	1358.0	1355.5	1170.9	959.2	520.4
52.5°	1566.2	1600.2	1587.2	1592.2	1599.7	1557.2	1590.7	1499.2	1280.5	972.8	478.4
55°	1831.4	1854.9	1841.9	1816.4	1850.4	1823.4	1834.4	1655.8	1356.5	934.2	408.3
57.5°	2147.2	2159.2	2137.6	2135.1	2157.7	2128.6	2110.1	1831.9	1396.1	905.2	326.3
60°	2515.9	2553.5	2540.0	2518.4	2539.0	2513.4	2373.3	1981.5	1388.1	769.6	252.7
62.5°	2958.3	2996.3	2981.3	2966.8	2979.8	2913.2	2620.5	2099.6	1352.0	610.0	184.6
65°	3323.6	3495.2	3517.7	3518.2	3455.2	3301.0	2817.7	2145.7	1161.9	425.8	135.1
67.5°	3563.7	3920.5	4031.6	3991.6	3847.0	3495.2	2897.2	2055.6	897.2	269.2	101.1
69°	3536.2	4004.1	4164.7	4142.2	3939.0	3492.2	2835.2	1904.0	685.5	214.2	85.6
70°	3409.1	3935.5	4126.2	4136.2	3880.5	3358.1	2724.6	1729.8	554.4	182.6	78.6
72.5°	2720.6	3243.0	3410.6	3476.2	3222.5	2689.1	2234.2	1220.4	321.2	127.6	63.5
75°	1685.3	1966.5	2105.6	2143.7	1990.0	1674.8	1356.0	679.0	195.7	90.1	53.5
77.5°	755.6	837.1	917.2	917.2	857.2	764.6	621.5	328.3	111.1	64.0	45.0
80°	253.2	262.7	255.7	258.2	248.2	238.7	249.7	141.6	68.6	48.0	36.5
82.5°	172.1	216.2	229.7	229.7	215.7	170.1	96.1	65.1	42.0	34.5	28.0
85°	140.1	171.1	183.6	189.1	178.1	143.6	50.5	31.5	25.0	22.0	19.0
87.5°	47.0	44.0	41.5	40.5	42.5	44.5	25.0	13.5	11.5	10.5	10.0
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):

	135°	145°	155°	165°	175°	180°
0°	170.1	170.1	170.1	170.1	170.1	170.1
2.5°	178.1	172.1	174.6	177.1	195.2	208.7
5°	177.1	185.6	204.7	228.7	239.7	266.7
7.5°	182.1	213.2	248.7	273.7	283.7	292.2
10°	243.7	249.2	261.2	285.2	305.2	308.7
12.5°	314.7	313.2	304.7	315.7	305.7	312.7
15°	370.3	353.8	342.3	340.8	337.3	337.3
17.5°	400.8	386.3	370.3	366.3	355.8	364.3
20°	436.8	411.8	371.8	367.8	364.3	356.3
22.5°	429.8	404.8	363.3	358.3	376.8	375.8
25°	438.3	404.8	365.3	359.8	368.3	368.3
27.5°	417.3	389.8	361.3	328.3	354.3	360.3
30°	411.8	380.8	347.8	318.2	344.8	339.3
32.5°	440.8	358.3	325.8	316.7	336.3	332.3
35°	418.3	354.3	320.2	303.7	326.8	322.7
37.5°	427.8	349.3	310.7	296.7	315.2	321.2
40°	425.8	325.8	299.7	281.7	300.2	303.2
42.5°	392.3	307.7	281.2	263.2	272.7	282.7
45°	382.3	296.7	263.2	238.2	238.7	250.2
47.5°	363.8	271.7	230.2	207.2	207.2	216.7
50°	332.8	238.2	192.6	171.6	171.1	178.6
52.5°	286.7	205.7	162.6	139.6	138.1	145.6
55°	234.7	165.6	128.1	113.1	110.1	113.1
57.5°	182.6	129.1	101.1	89.1	88.6	91.1
60°	141.6	101.1	80.6	73.6	74.6	78.6
62.5°	107.1	80.6	68.6	66.1	67.6	71.6
65°	85.1	69.6	62.5	61.0	62.5	66.6
67.5°	69.1	63.0	58.0	56.0	57.0	61.0
69°	63.5	59.5	55.5	53.0	54.0	57.0
70°	60.5	57.5	53.5	51.0	52.0	55.0
72.5°	53.0	51.5	48.5	46.0	46.5	49.0
75°	46.5	45.5	43.5	40.5	40.5	43.5
77.5°	39.0	39.5	37.5	34.5	34.0	35.5
80°	31.0	32.0	31.0	28.0	27.0	27.0
82.5°	22.5	24.5	23.5	20.5	20.0	20.0
85°	14.0	15.5	15.0	13.0	13.0	11.5
87.5°	6.5	8.5	8.0	7.0	6.5	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)