Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P366685

Luminaire Tested: **MSA-SA1A-750-U-T4W-HSS**

Issue Date: 12/2/2019

Report Generated By 670245982

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P366685
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2019
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	INVUE
Catalog Number:	MSA-SA1A-750-U-T4W-HSS
Description:	MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3047 lumens
Efficiency:	N/A
Efficacy:	89.6 lumens/watt
Luminous Opening:	Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B0 - U0 - G1

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:	24 FT

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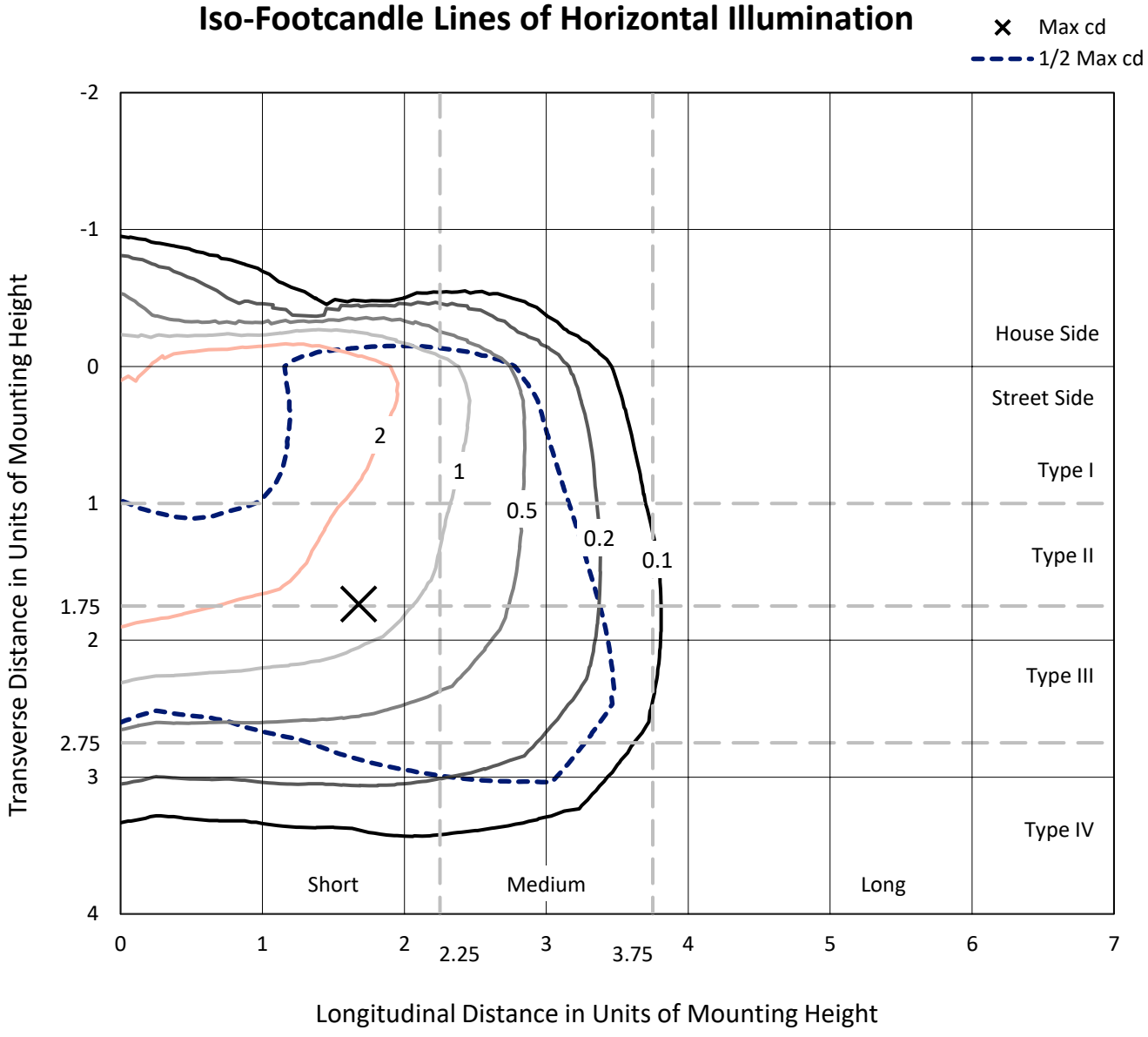
Iso-Footcandle Lines of Horizontal Illumination



Based on 10 foot mounting height. Maximum calculated value = 4.4 fc
Type IV - Short - N/A

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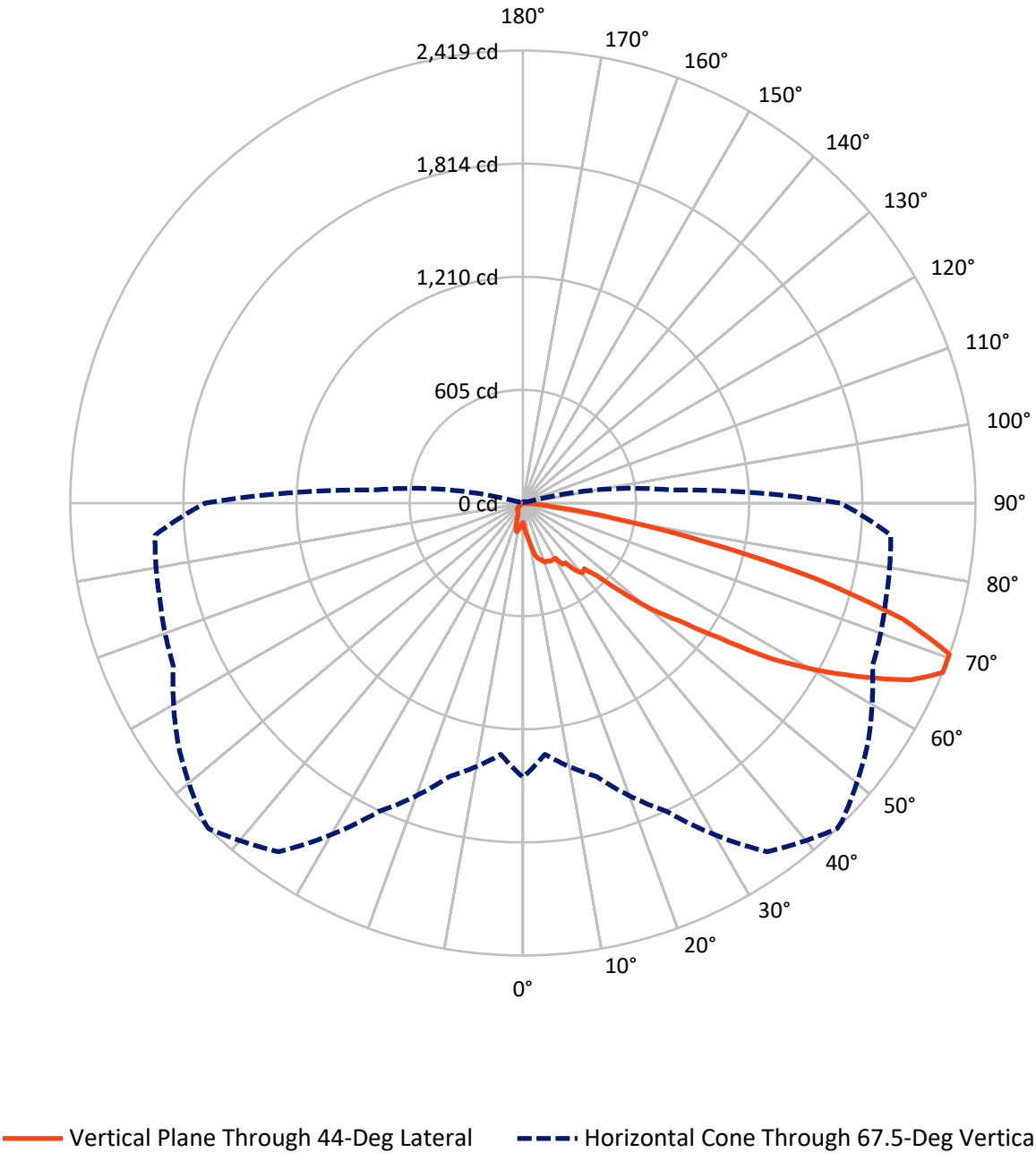
Luminous Intensity Polar Plot



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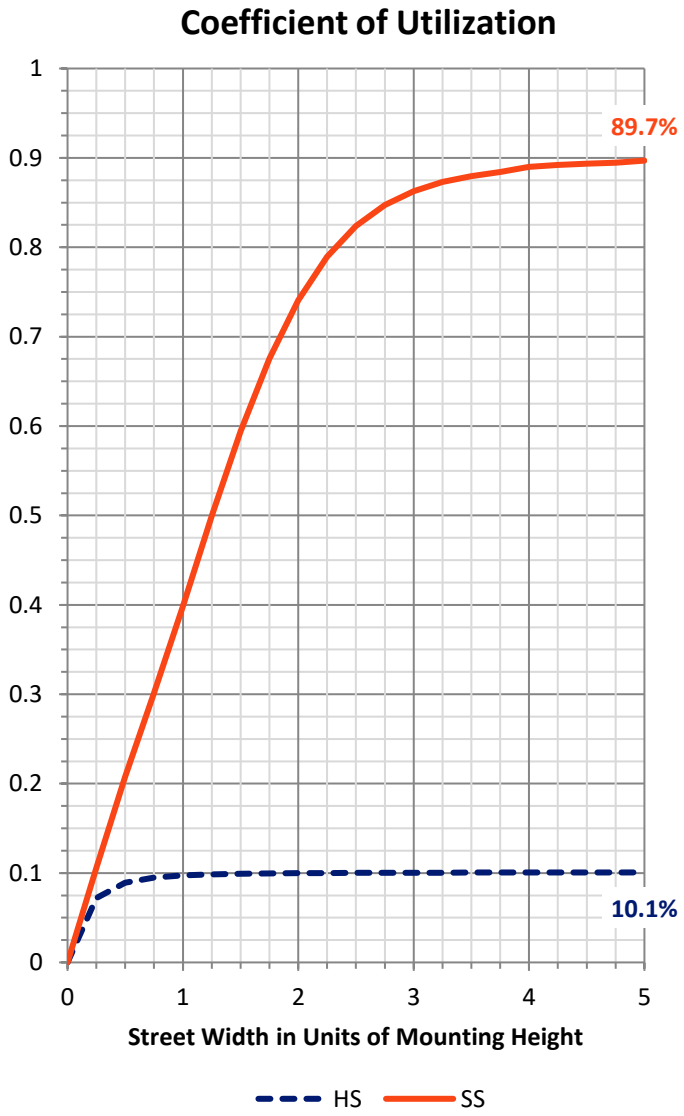
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	309.5	0.0	309.5
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	2737.5	0.0	2737.5
	% Fixture	89.8	0.0	89.8
Total	Lumens	3047.0	0.0	3047.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.2	0.5
10°-20°	63.7	2.1
20°-30°	112.8	3.7
30°-40°	183.4	6.0
40°-50°	367.1	12.0
50°-60°	753.0	24.7
60°-70°	1034.4	33.9
70°-80°	486.2	16.0
80°-90°	31.1	1.0
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°	3047.0	100.0
0°-180°	3047.0	100.0



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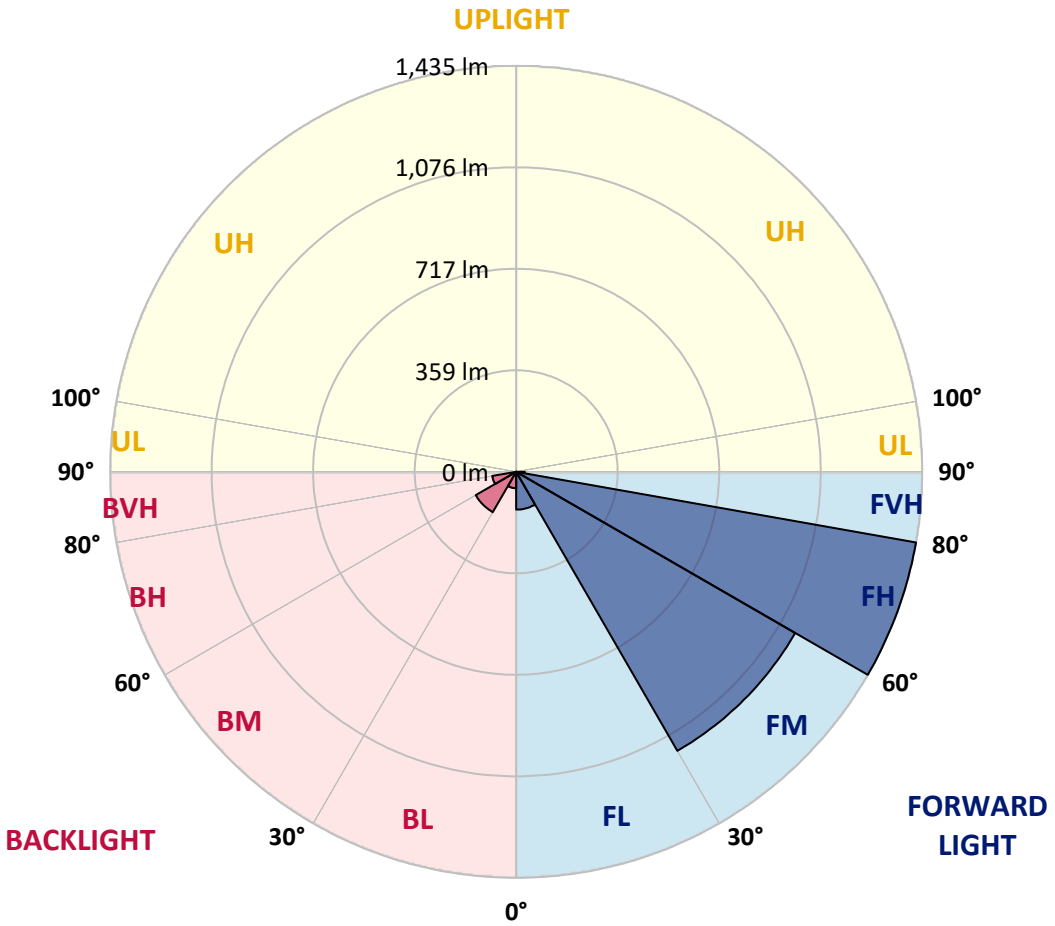
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	133.6	4.4			
FM	(30°-60°)	1138.6	37.4			
FH	(60°-80°)	1434.7	47.1			G1/1800
FVH	(80°-90°)	30.5	1.0			G1/100
BL	(0°-30°)	58.1	1.9	B0/110		
BM	(30°-60°)	164.9	5.4	B0/220		
BH	(60°-80°)	85.9	2.8	B0/110		G0/110
BVH	(80°-90°)	0.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	102.7	102.7	102.7	102.7	102.7	*102.7*	102.7	102.7	102.7	102.7	102.7
2.5°	130.6	126.4	120.3	121.6	122.3	*124.2*	124.3	122.0	115.3	113.4	121.6
5°	183.0	172.7	170.9	167.0	159.3	*155.1*	154.1	158.3	152.9	151.2	153.4
7.5°	233.7	225.0	215.4	210.2	194.1	*184.1*	183.6	185.3	186.3	180.5	183.5
10°	267.5	257.9	255.9	243.6	229.7	*227.3*	226.3	219.9	214.7	210.4	195.7
12.5°	298.1	297.9	301.6	284.0	281.8	*284.1*	283.3	260.4	255.2	236.9	232.7
15°	338.7	348.8	332.8	318.1	299.2	*307.3*	305.1	290.5	287.0	274.5	256.6
17.5°	380.9	383.6	356.9	334.2	329.3	*318.7*	320.9	315.7	297.9	307.8	290.0
20°	381.9	387.8	359.2	321.8	336.7	*336.2*	336.4	331.3	307.8	331.0	314.7
22.5°	396.0	381.6	355.0	331.2	333.9	*336.4*	339.1	332.8	327.8	333.5	336.5
25°	390.3	384.6	359.1	343.3	340.7	*342.8*	343.4	351.3	348.1	361.9	354.4
27.5°	405.1	396.9	351.2	354.0	345.1	*342.8*	338.7	365.1	374.5	363.6	383.8
30°	430.5	429.3	364.8	369.0	362.1	*341.4*	352.2	386.6	398.4	391.7	416.2
32.5°	470.1	474.1	404.6	377.4	380.9	*390.1*	386.1	386.6	416.4	431.3	450.8
35°	526.4	524.2	443.4	409.3	390.8	*392.3*	398.0	425.4	463.9	462.9	483.6
37.5°	637.0	613.1	512.1	441.9	447.4	*455.0*	450.8	487.6	491.3	492.6	542.0
40°	799.9	768.2	620.5	510.6	457.2	*490.6*	488.6	497.7	522.4	531.6	603.7
42.5°	1014.7	972.0	811.2	637.0	504.2	*481.2*	493.6	510.8	593.8	620.2	699.1
45°	1251.9	1165.5	1001.4	817.1	622.2	*550.8*	560.2	592.1	707.2	750.9	838.1
47.5°	1405.6	1329.7	1189.7	976.7	745.2	*707.7*	708.5	715.4	840.4	921.4	1038.4
50°	1539.2	1458.4	1328.5	1143.5	962.7	*891.8*	875.7	844.0	1010.1	1120.9	1250.6
52.5°	1727.7	1633.3	1467.3	1339.3	1210.9	*1043.9*	1038.2	1048.9	1210.2	1326.7	1468.1
55°	1897.8	1783.0	1624.6	1543.9	1493.9	*1267.4*	1272.2	1290.2	1467.1	1528.8	1661.7
57.5°	1972.9	1848.5	1767.1	1730.8	1704.0	*1572.7*	1556.2	1545.4	1669.8	1693.3	1864.5
60°	2022.1	1903.8	1866.9	1875.3	1956.2	*1816.8*	1801.8	1739.3	1837.5	1856.8	2046.3
62.5°	1991.0	1883.2	1891.1	1961.1	2140.9	*2049.2*	2006.0	1901.5	1974.6	1990.2	2176.9
65°	1795.3	1682.9	1784.4	1953.9	2281.7	*2279.5*	2259.5	2051.2	2050.5	2070.5	2186.9
67.5°	*1466.5*	*1348.5*	*1512.7*	*1818.5*	*2275.8*	*2419.1*	*2409.7*	*2249.8*	*2061.4*	*2008.0*	*1973.5*
70°	1019.5	917.2	1103.4	1501.8	2073.0	*2418.1*	2403.0	2383.2	1975.1	1728.4	1530.1
72.5°	529.8	473.5	646.9	1034.8	1652.5	*2124.6*	2174.5	2141.9	1686.4	1255.8	901.1
75°	179.9	161.5	266.8	549.3	1098.5	*1622.4*	1680.9	1647.8	1145.4	673.8	356.4
77.5°	69.7	64.9	95.6	223.0	551.1	*988.6*	1052.1	1018.4	614.3	246.8	83.8
80°	39.7	38.3	52.8	100.5	243.0	*491.8*	536.5	486.6	221.4	83.2	21.8
82.5°	16.8	17.3	29.4	54.3	122.1	*173.6*	193.6	176.6	92.7	57.0	8.1
85°	3.7	4.5	13.9	30.2	51.2	*49.6*	51.9	57.6	57.0	41.8	3.5
87.5°	0.0	0.0	4.4	8.2	12.3	*8.1*	6.4	11.3	17.5	16.8	1.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	102.7	102.7	102.7	102.7	102.7	102.7	102.7	102.7	102.7	102.7	102.7
2.5°	123.2	121.5	110.9	110.2	110.9	109.0	108.9	105.0	105.3	114.1	114.8
5°	153.4	145.0	135.9	133.1	130.4	124.3	127.7	127.7	127.7	133.2	134.9
7.5°	180.8	169.5	156.8	146.0	135.6	128.0	133.2	136.9	139.1	146.3	149.7
10°	193.2	182.1	170.7	155.4	147.4	144.5	138.4	135.3	139.1	137.6	139.5
12.5°	219.8	209.7	190.0	174.2	168.2	158.4	140.6	128.2	120.0	118.6	118.3
15°	245.6	239.4	213.0	191.9	170.9	148.4	117.9	101.5	92.7	91.2	91.4
17.5°	278.4	269.5	230.7	200.3	164.7	124.2	91.1	77.0	76.3	80.0	80.3
20°	300.2	285.6	239.6	193.4	144.2	93.9	71.2	67.9	73.3	80.0	79.3
22.5°	321.1	305.3	251.4	187.3	111.7	71.2	65.5	65.9	70.4	77.6	79.5
25°	334.9	329.1	265.8	173.2	85.2	61.7	62.7	65.2	69.1	75.9	75.9
27.5°	376.4	349.6	264.1	145.8	65.5	57.5	59.8	63.0	65.0	73.3	74.1
30°	401.6	392.8	272.9	117.9	57.5	52.1	56.6	59.5	60.8	70.2	70.6
32.5°	432.5	413.2	283.4	87.0	53.4	51.7	50.7	52.9	56.8	65.0	65.5
35°	470.1	464.4	268.3	68.4	52.1	48.4	46.4	47.5	50.1	55.6	56.8
37.5°	546.9	513.0	259.3	58.6	52.1	47.2	45.0	42.0	42.3	46.2	48.4
40°	611.6	601.2	233.9	57.0	49.7	45.5	40.2	36.5	33.9	35.1	36.0
42.5°	730.4	682.2	201.1	56.1	47.5	41.2	34.1	30.2	26.4	26.7	28.1
45°	874.5	770.5	171.9	55.3	46.0	36.8	28.7	24.2	20.2	20.3	21.7
47.5°	1067.1	899.4	136.4	52.8	43.3	32.8	23.2	18.5	16.1	16.6	17.8
50°	1285.8	1012.5	107.9	48.9	40.2	28.9	18.8	15.0	14.1	14.6	16.0
52.5°	1481.3	1095.8	89.0	45.4	35.6	23.5	15.8	13.3	12.9	13.3	14.3
55°	1655.0	1144.2	74.4	41.3	30.6	19.0	14.3	12.3	12.1	11.9	12.6
57.5°	1818.0	1158.2	58.1	34.9	24.9	16.5	13.3	11.4	11.1	10.6	11.1
60°	1936.8	1134.3	42.7	28.1	20.3	15.0	12.4	10.2	9.7	8.9	9.2
62.5°	1994.0	1068.9	32.3	22.5	17.3	13.6	11.1	8.9	8.2	7.2	7.4
65°	1939.6	961.2	25.4	19.0	14.8	11.4	9.4	7.6	6.7	5.7	5.7
67.5°	*1698.5*	*797.4*	*21.5*	*16.5*	*12.4*	*9.7*	*7.7*	*6.9*	*5.5*	*4.7*	*4.5*
70°	1246.7	573.6	18.5	14.4	10.8	8.4	6.6	6.2	5.4	4.5	4.2
72.5°	703.7	324.6	15.8	12.8	9.1	7.1	5.5	5.7	5.2	4.2	3.9
75°	268.5	109.4	13.1	10.6	7.4	5.4	4.7	4.7	4.7	3.5	3.0
77.5°	66.5	27.9	10.4	8.6	5.9	3.5	3.9	4.0	4.0	3.0	2.2
80°	18.3	9.4	6.2	6.2	4.2	2.0	2.7	2.7	2.2	1.0	0.0
82.5°	6.7	3.5	2.2	2.7	1.8	0.7	1.0	0.7	0.5	0.0	0.0
85°	2.9	1.8	1.3	1.5	0.8	0.0	0.2	0.3	0.0	0.0	0.0
87.5°	1.2	0.8	0.7	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)