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: P368266

Luminaire Tested: **MSA-SA4A-750-U-T3**

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:	P368266
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2019
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	INVUE
Catalog Number:	MSA-SA4A-750-U-T3
Description:	MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	15481 lumens
Efficiency:	N/A
Efficacy:	120.0 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B2 - 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:	24 FT

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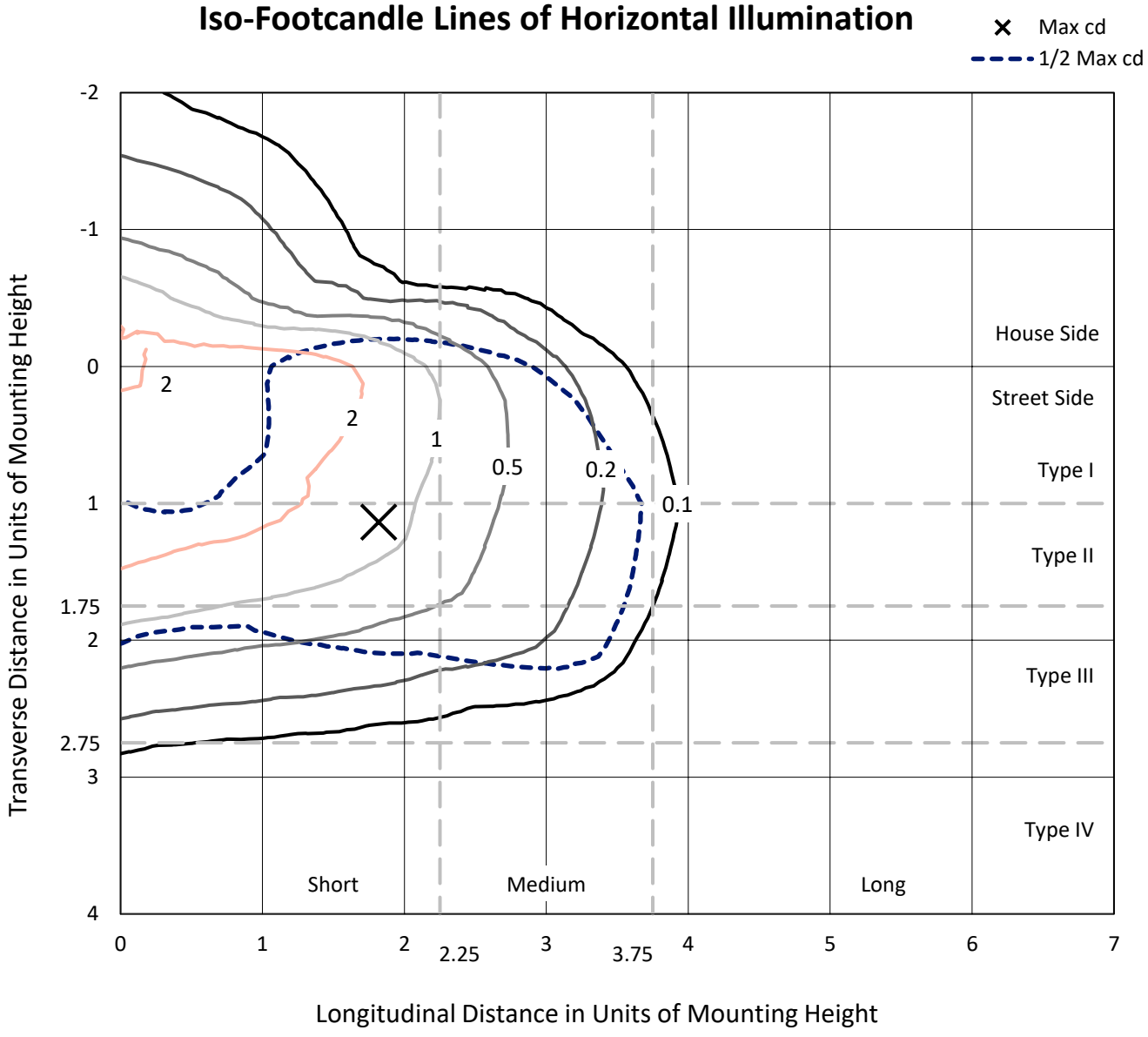
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
Type III - Short - N/A

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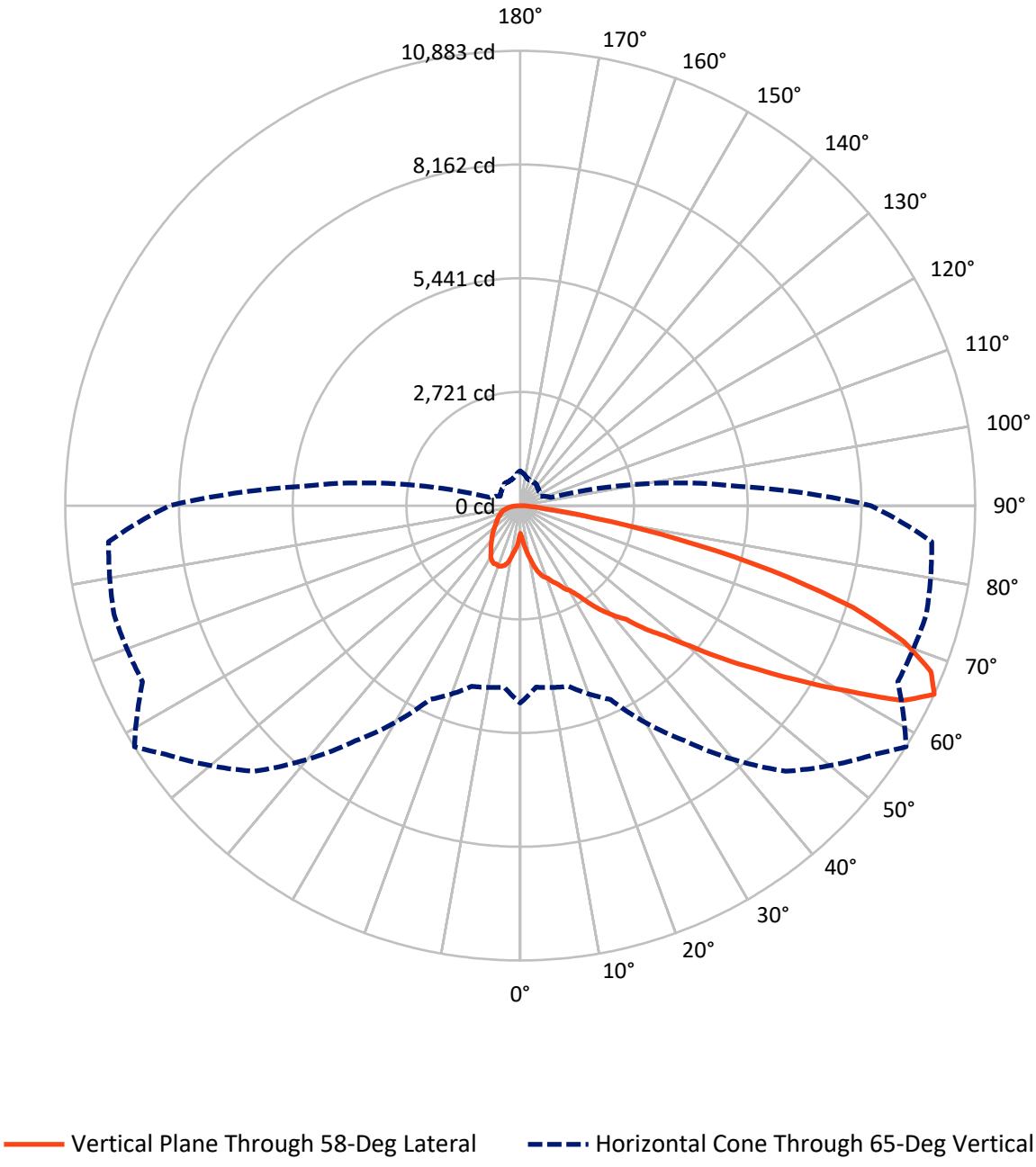
Luminous Intensity Polar Plot



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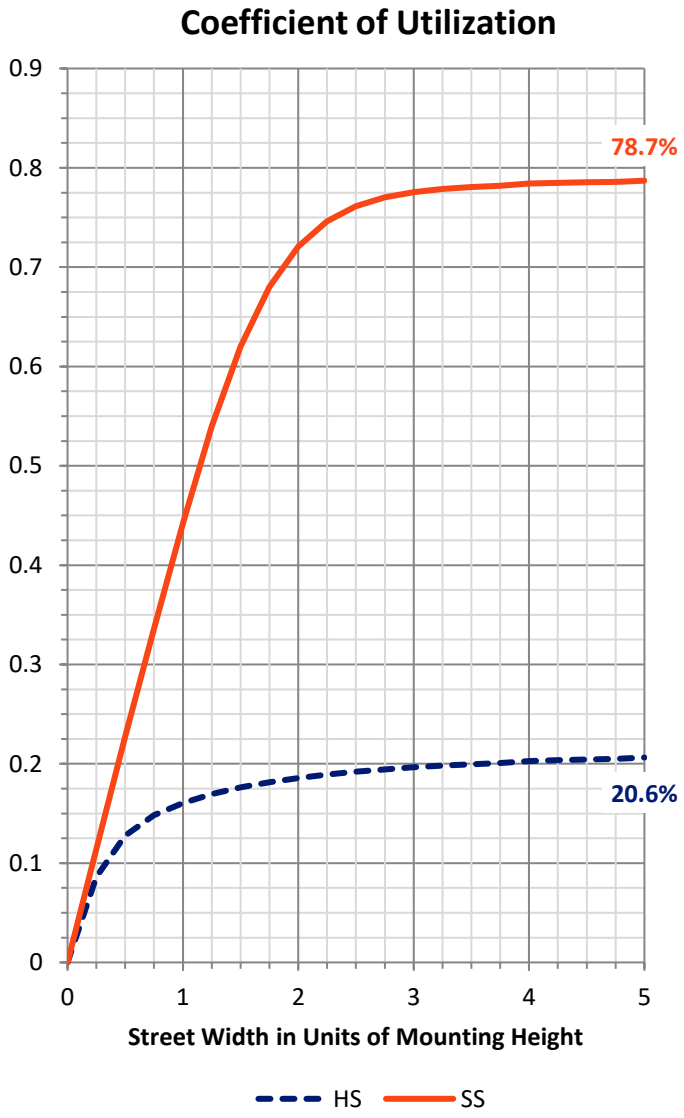
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3260.8	0.0	3260.8
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	12220.2	0.0	12220.2
	% Fixture	78.9	0.0	78.9
Total	Lumens	15481.0	0.0	15481.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	0.7
10°-20°	441.8	2.9
20°-30°	847.8	5.5
30°-40°	1399.6	9.0
40°-50°	2326.3	15.0
50°-60°	3841.9	24.8
60°-70°	4309.9	27.8
70°-80°	1959.6	12.7
80°-90°	252.7	1.6
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°	15481.0	100.0
0°-180°	15481.0	100.0



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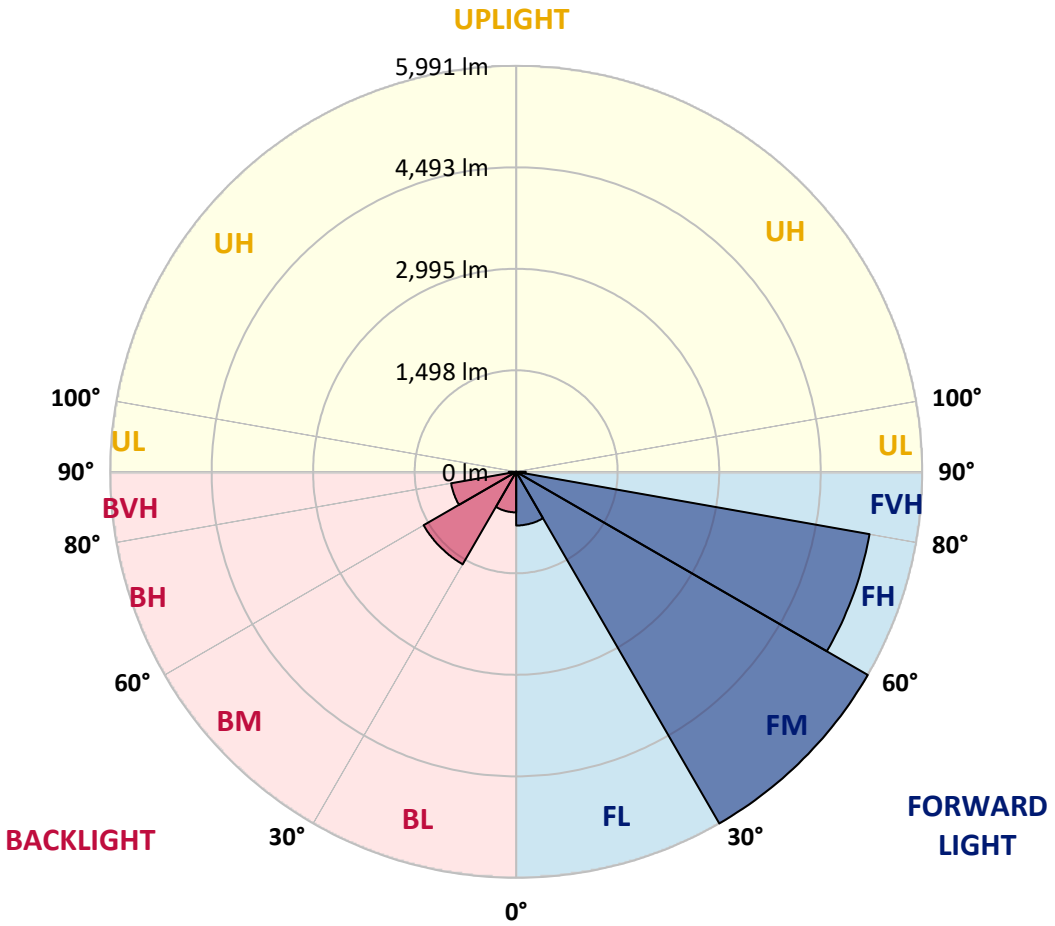
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	792.2	5.1			
FM	(30°-60°)	5990.9	38.7			
FH	(60°-80°)	5294.8	34.2			G3/7500
FVH	(80°-90°)	142.3	0.9			G2/225
BL	(0°-30°)	598.6	3.9	B2/1000		
BM	(30°-60°)	1577.0	10.2	B2/2500		
BH	(60°-80°)	974.7	6.3	B2/1000		G2/1000
BVH	(80°-90°)	110.4	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3
Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	664.7	664.7	664.7	664.7	664.7	664.7	664.7	*664.7*	664.7	664.7	664.7
2.5°	793.6	769.8	729.8	739.5	762.7	775.6	767.8	*757.5*	744.0	741.4	800.7
5°	1027.6	981.9	963.2	955.4	927.1	910.3	939.3	*935.5*	950.9	979.3	1037.3
7.5°	1198.5	1166.3	1135.3	1132.1	1077.3	1057.9	1096.6	*1117.3*	1145.0	1145.6	1224.3
10°	1290.0	1262.3	1261.7	1232.7	1228.1	1264.9	1265.5	*1281.0*	1284.2	1317.1	1301.6
12.5°	1389.3	1387.4	1422.8	1422.2	1463.5	1524.1	1493.8	*1493.8*	1502.8	1462.8	1511.8
15°	1625.9	1646.6	1580.2	1591.1	1591.1	1650.4	1648.5	*1660.1*	1687.8	1677.5	1655.6
17.5°	1872.2	1885.1	1811.6	1743.3	1748.4	1735.5	1781.9	*1786.5*	1760.0	1879.9	1853.5
20°	2030.8	2081.1	1926.4	1840.6	1857.4	1872.2	1874.1	*1846.4*	1832.9	2017.3	1981.2
22.5°	2226.8	2184.2	2042.4	1947.6	1972.8	1952.8	1948.9	*1970.2*	1988.9	2058.5	2117.2
25°	2357.7	2354.4	2184.2	2080.4	2052.7	2046.9	2086.2	*2077.9*	2122.3	2248.7	2212.0
27.5°	2547.8	2607.2	2305.4	2331.2	2209.4	2081.1	2207.4	*2245.5*	2325.4	2304.8	2386.7
30°	2916.6	2872.1	2556.9	2549.8	2411.8	2304.2	2391.8	*2359.6*	2503.4	2498.8	2559.5
32.5°	3217.7	3248.6	2852.1	2778.0	2675.5	2545.9	2487.9	*2577.5*	2654.9	2781.9	2816.0
35°	3536.2	3529.1	3154.5	3004.9	2835.4	2781.9	2853.4	*2890.8*	3055.2	3171.9	3090.7
37.5°	4031.3	3975.2	3546.5	3263.5	3136.5	3117.1	3239.6	*3185.5*	3363.4	3391.1	3436.9
40°	4491.6	4322.7	3904.9	3580.7	3378.9	3451.1	3454.9	*3462.0*	3557.4	3632.9	3859.2
42.5°	4929.4	4810.7	4269.2	4025.5	3728.3	3658.0	3701.9	*3716.7*	3957.8	4111.9	4425.2
45°	5527.6	5209.8	4792.7	4542.5	4209.9	4120.3	4089.3	*4217.0*	4449.7	4800.4	5069.3
47.5°	6033.7	5746.8	5349.1	5019.6	4647.6	4903.6	4728.2	*4656.7*	4969.3	5403.9	5831.9
50°	6453.4	6137.5	5747.5	5557.3	5498.0	5726.2	5271.1	*5279.4*	5565.7	6178.8	6669.4
52.5°	6778.4	6441.2	6095.6	5998.9	6330.3	6461.8	6133.0	*6083.4*	6292.3	7016.9	7606.1
55°	7082.0	6724.2	6457.3	6654.6	7212.9	7227.7	7204.5	*6929.2*	7180.6	7915.0	8575.8
57.5°	7160.0	6774.5	6597.2	6880.2	7635.2	8222.5	8453.3	*7913.0*	8169.0	8731.8	9406.1
60°	6758.4	6428.3	6357.4	6741.6	7863.4	8722.1	9324.9	*9001.9*	8905.9	9387.4	9987.7
62.5°	5935.7	5552.8	5610.2	6144.0	7622.9	8920.0	10013.4	*10265.5*	9684.0	9909.0	10241.7
65°	*4724.3*	*4358.8*	*4474.8*	*5117.0*	*6868.0*	*8985.8*	*10365.5*	*10882.5*	*9965.1*	*10056.6*	*9881.9*
67.5°	3331.8	2999.8	3146.1	3976.5	5713.3	8143.8	10426.1	*10595.0*	9666.0	9635.7	8899.4
70°	1887.7	1679.4	1838.0	2530.4	4032.6	6487.6	9950.9	*9728.5*	9129.6	8700.2	7446.3
72.5°	865.8	794.3	870.3	1288.1	2321.6	4316.9	8123.8	*8325.6*	7866.6	7329.6	5665.0
75°	460.3	435.2	467.4	643.4	1086.3	2348.6	5772.0	*6225.8*	5981.5	5559.2	3695.4
77.5°	342.3	323.0	338.5	417.1	580.2	918.7	3279.6	*3852.1*	3944.9	3556.2	2052.1
80°	262.4	246.9	262.4	315.3	401.6	436.5	1402.2	*1795.5*	2045.0	1652.4	815.5
82.5°	194.7	184.4	208.2	236.6	282.4	272.7	497.7	*619.6*	798.8	546.1	317.8
85°	154.7	141.8	150.9	160.5	180.5	149.6	227.6	*254.7*	269.5	225.6	117.3
87.5°	60.6	56.1	109.6	86.4	73.5	45.1	68.3	*77.4*	79.3	76.1	34.2
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°	664.7	664.7	664.7	664.7	664.7	664.7	664.7	664.7	664.7	664.7	664.7
2.5°	807.2	800.7	762.7	774.9	794.9	798.8	807.2	784.0	772.3	814.9	816.8
5°	1042.5	1007.7	989.6	991.5	978.7	958.7	989.0	1009.0	1016.7	1048.3	1059.9
7.5°	1224.9	1183.0	1152.7	1117.9	1068.9	1037.3	1090.2	1128.9	1149.5	1215.3	1241.0
10°	1306.2	1272.6	1266.2	1222.3	1221.1	1220.4	1217.8	1204.3	1248.8	1242.3	1260.4
12.5°	1473.8	1466.7	1405.4	1388.0	1390.0	1388.0	1333.9	1331.3	1331.9	1391.3	1370.0
15°	1629.8	1631.1	1575.0	1511.8	1455.1	1437.7	1416.4	1406.7	1420.9	1454.4	1433.8
17.5°	1822.6	1829.0	1668.5	1568.6	1493.8	1491.8	1440.9	1380.9	1467.3	1488.0	1465.4
20°	1947.0	1919.9	1722.6	1555.0	1533.7	1475.7	1412.5	1330.0	1404.8	1455.1	1469.3
22.5°	2065.0	2017.9	1772.9	1578.9	1477.0	1408.0	1346.8	1293.3	1317.1	1373.2	1364.2
25°	2144.9	2132.0	1842.5	1636.2	1475.1	1321.6	1239.1	1204.9	1217.2	1304.2	1295.8
27.5°	2335.7	2196.5	1830.3	1651.1	1413.2	1203.7	1162.4	1125.6	1113.4	1207.5	1233.3
30°	2463.4	2406.0	1912.2	1627.9	1335.2	1106.9	1046.3	1038.6	1042.5	1149.5	1156.6
32.5°	2680.0	2531.1	2046.3	1538.9	1221.7	1035.4	965.8	969.0	986.4	1064.4	1080.5
35°	2905.7	2816.7	2064.3	1475.1	1129.5	959.3	930.9	908.4	918.0	986.4	989.6
37.5°	3324.7	3017.2	2175.2	1376.4	1061.8	930.3	876.1	856.2	861.3	900.0	927.7
40°	3693.5	3420.1	2123.6	1281.0	978.0	891.6	823.9	809.1	793.6	831.7	849.1
42.5°	4284.7	3707.7	2106.2	1175.9	938.7	839.4	793.0	753.7	738.8	771.1	802.6
45°	4875.9	4012.6	2011.5	1069.6	883.2	835.5	747.8	710.5	714.3	743.3	775.6
47.5°	5534.7	4422.0	1850.9	966.4	822.6	816.8	702.7	686.6	698.2	730.4	762.7
50°	6313.5	4856.5	1718.1	873.6	779.4	760.7	696.9	677.6	688.5	726.6	758.2
52.5°	7165.2	5332.9	1621.4	787.8	730.4	716.3	704.7	686.0	698.9	731.7	764.6
55°	8011.7	5768.1	1555.7	729.2	688.5	697.6	720.8	707.2	713.7	738.2	771.1
57.5°	8639.6	5997.6	1423.5	666.6	654.4	686.6	722.7	700.1	704.0	738.2	773.6
60°	9004.5	6041.5	1206.2	615.7	627.3	664.7	702.7	673.7	671.1	727.2	771.7
62.5°	8964.5	5786.8	956.7	569.3	596.3	631.8	672.4	644.7	651.8	728.5	775.6
65°	*8392.0*	*5266.5*	*760.7*	*529.9*	*559.0*	*595.7*	*647.3*	*636.3*	*670.5*	*780.1*	*831.0*
67.5°	7386.3	4506.4	611.2	493.2	524.1	571.2	664.7	693.7	708.5	832.9	885.2
70°	5986.0	3501.4	509.3	461.0	496.4	582.8	715.0	709.2	696.9	807.8	849.1
72.5°	4324.6	2400.2	448.1	429.4	462.2	548.0	716.3	685.3	669.8	737.5	767.2
75°	2705.8	1431.9	391.3	389.4	410.0	491.3	684.0	656.3	614.4	647.9	686.6
77.5°	1545.3	733.0	329.4	346.8	359.1	426.1	612.5	587.3	549.9	564.1	602.1
80°	589.9	354.6	277.9	308.2	304.9	361.0	519.0	513.2	470.6	475.1	498.4
82.5°	277.9	198.6	230.8	265.0	247.6	287.5	421.6	419.7	382.3	346.2	364.9
85°	103.2	105.7	168.9	201.8	172.1	185.7	304.9	296.6	260.5	219.8	243.1
87.5°	23.2	38.0	83.2	105.1	60.0	57.4	123.1	107.0	103.2	61.2	64.5
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)