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: P368396

Luminaire Tested: **MSA-SA4B-750-U-T2**

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:	P368396
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2019
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	INVUE
Catalog Number:	MSA-SA4B-750-U-T2
Description:	MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	19378 lumens
Efficiency:	N/A
Efficacy:	113.3 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Medium
BUG Rating:	B3 - U0 - G3

Input Watts (W):	171
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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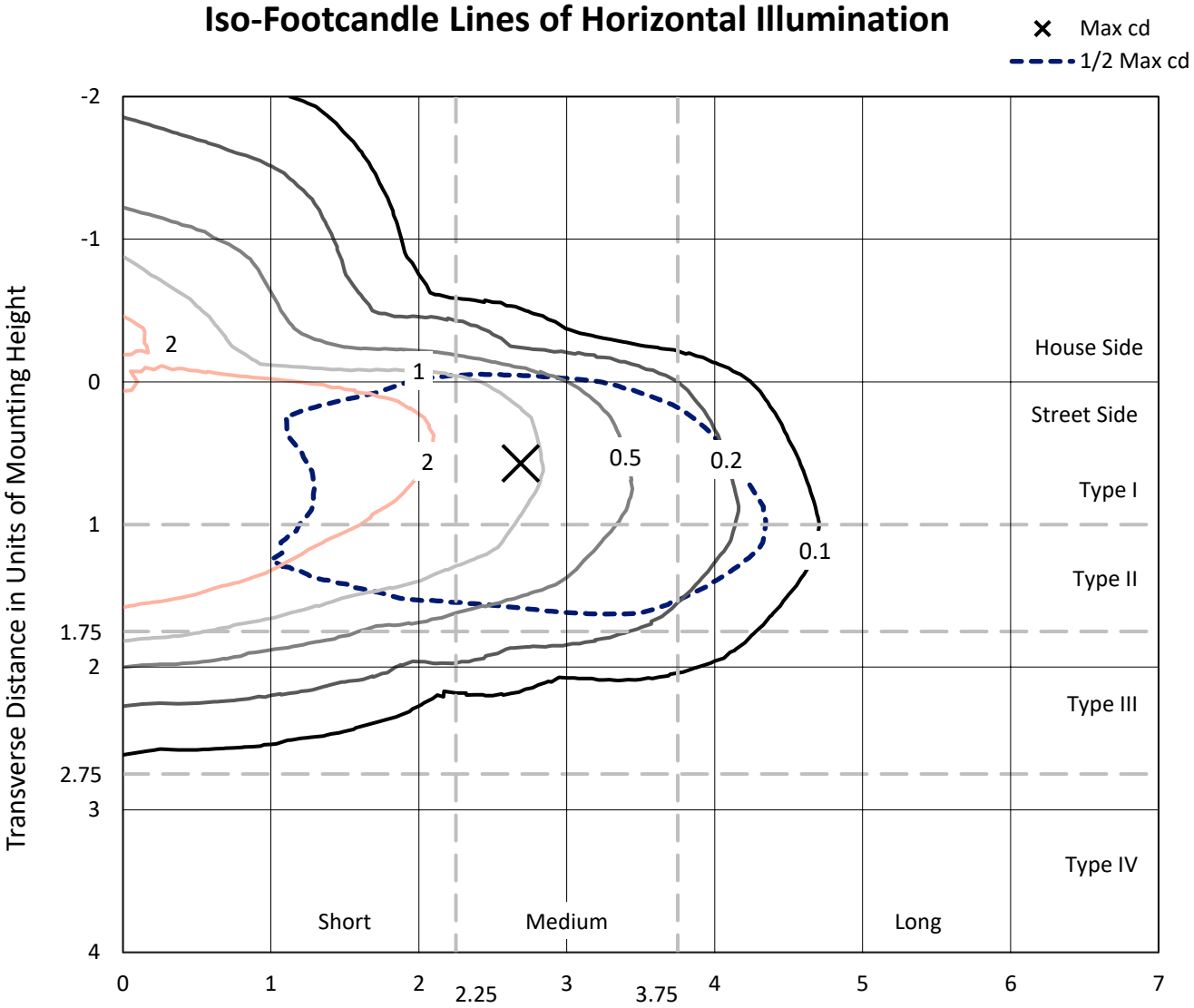
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
Type II - Medium - N/A

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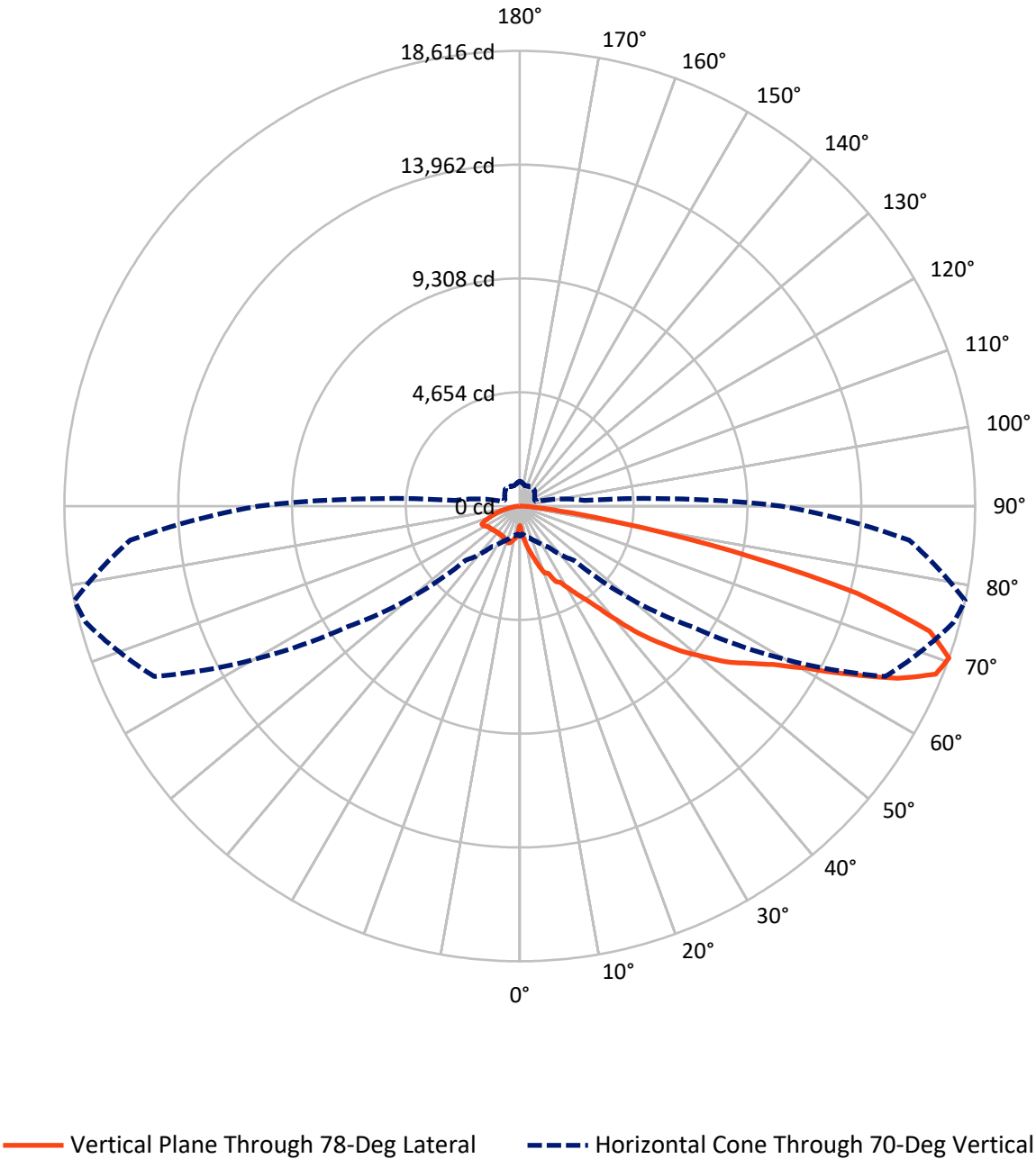
Luminous Intensity Polar Plot



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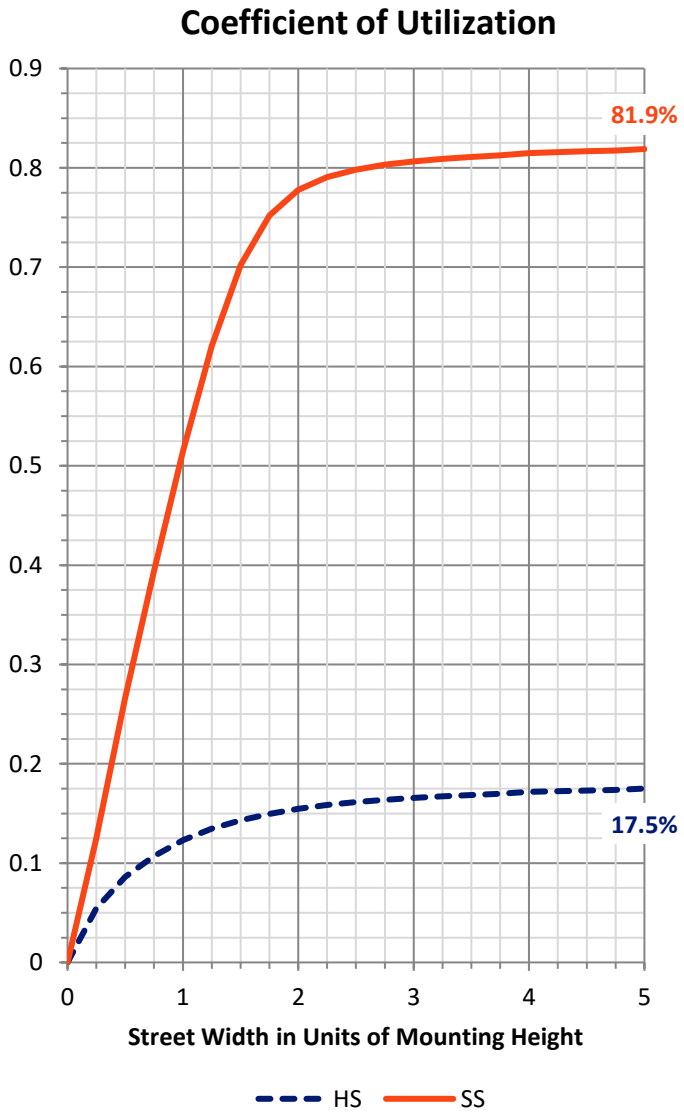
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3458.7	0.0	3458.7
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	15919.3	0.0	15919.3
	% Fixture	82.2	0.0	82.2
Total	Lumens	19378.0	0.0	19378.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	0.6
10°-20°	537.9	2.8
20°-30°	1035.4	5.3
30°-40°	1744.1	9.0
40°-50°	3017.7	15.6
50°-60°	4556.3	23.5
60°-70°	5046.7	26.0
70°-80°	2909.6	15.0
80°-90°	408.1	2.1
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°	19378.0	100.0
0°-180°	19378.0	100.0



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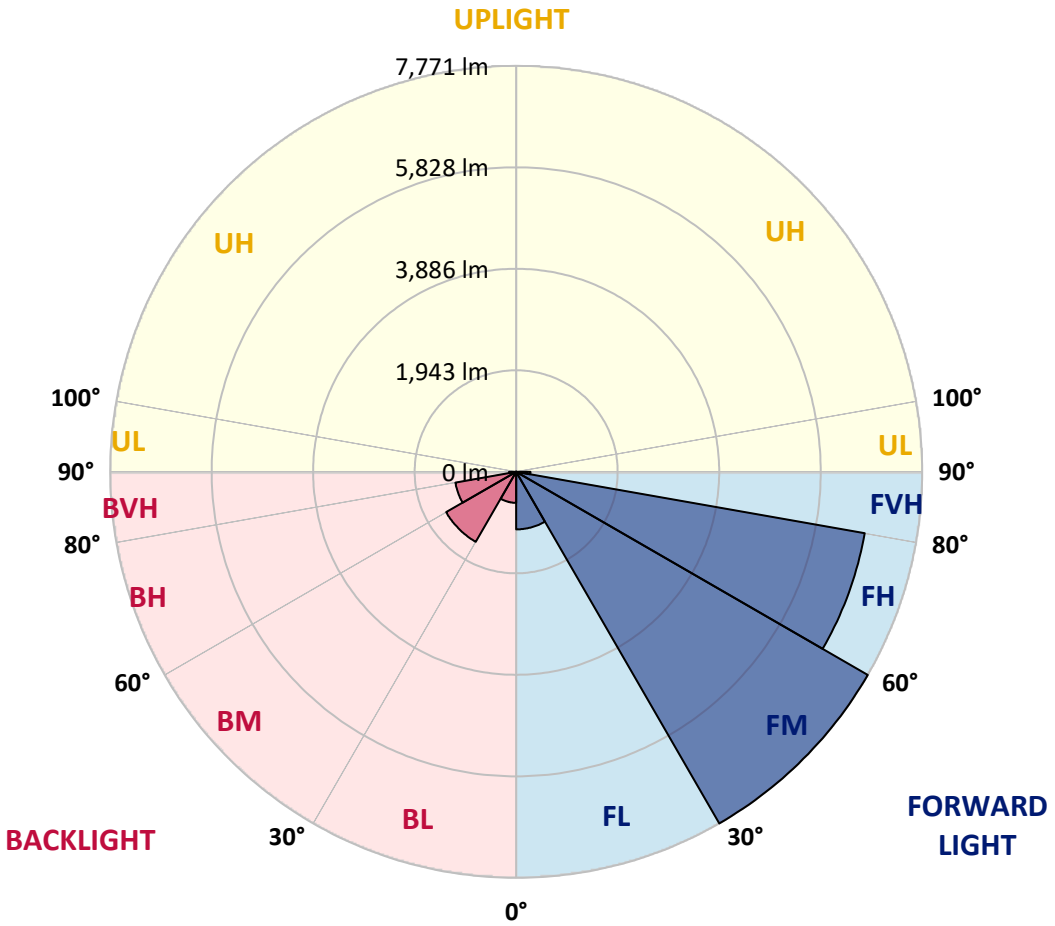
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1101.6	5.7			
FM	(30°-60°)	7771.2	40.1			
FH	(60°-80°)	6774.3	35.0			G3/7500
FVH	(80°-90°)	272.2	1.4			G3/500
BL	(0°-30°)	593.9	3.1	B2/1000		
BM	(30°-60°)	1547.0	8.0	B2/2500		
BH	(60°-80°)	1182.0	6.1	B3/2500		G3/2500
BVH	(80°-90°)	135.9	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3
Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	*790.0*	790.0
2.5°	1017.0	980.7	925.8	948.4	975.8	979.1	970.2	920.1	903.1	*941.1*	952.4
5°	1425.0	1363.6	1326.4	1314.3	1273.1	1187.5	1248.9	1217.4	1223.9	*1205.3*	1241.6
7.5°	1768.3	1727.1	1672.2	1656.8	1562.3	1495.3	1537.3	1523.6	1457.3	*1431.5*	1472.7
10°	1942.8	1897.6	1900.0	1866.9	1841.8	1848.3	1827.3	1766.7	1717.4	*1682.7*	1583.3
12.5°	2047.8	2059.1	2119.7	2102.8	2197.3	2274.8	2215.9	2126.2	1970.3	*1938.8*	1840.2
15°	2297.4	2339.5	2282.9	2308.8	2349.1	2497.8	2473.6	2454.2	2289.4	*2228.0*	2046.2
17.5°	2554.3	2562.4	2476.8	2463.0	2560.0	2635.1	2729.6	2620.6	2640.8	*2598.0*	2303.9
20°	2609.3	2665.0	2542.2	2457.4	2656.9	2805.6	2922.7	2807.2	2913.8	*2925.1*	2516.4
22.5°	2810.4	2743.4	2581.8	2498.6	2673.1	2855.7	3046.3	3110.9	3077.0	*2981.7*	2721.6
25°	2950.2	2914.6	2749.8	2657.7	2724.0	2892.0	3226.4	3395.3	3425.2	*3412.2*	2917.0
27.5°	3209.5	3227.2	2888.0	2913.8	2821.7	2837.1	3334.7	3772.5	3585.9	*3534.2*	3159.4
30°	3619.0	3539.9	3159.4	3180.4	3027.7	3001.9	3563.3	4098.1	3930.9	*3868.7*	3358.9
32.5°	4046.4	4053.7	3591.6	3412.2	3330.7	3304.8	3518.1	4268.5	4367.1	*4286.3*	3660.2
35°	4649.0	4607.0	4060.1	3824.2	3529.4	3484.1	3840.4	4762.9	4943.9	*4717.7*	4018.1
37.5°	5566.7	5439.9	4803.3	4258.0	4039.9	3988.2	4300.8	5206.4	5613.6	*5332.4*	4603.0
40°	6303.4	6045.7	5467.3	4803.3	4434.1	4498.0	4628.0	5744.4	6308.3	*6149.9*	5144.2
42.5°	6890.7	6662.1	5937.5	5470.6	4968.9	4889.7	5031.9	6410.9	7253.4	*7098.3*	5819.5
45°	7453.8	6988.5	6465.8	6045.7	5563.5	5659.6	5638.6	7091.1	8412.7	*7935.2*	6416.5
47.5°	8009.6	7572.5	7025.6	6461.0	5975.5	6574.1	6350.3	7596.8	9194.6	*8840.8*	7045.0
50°	8723.7	8243.0	7620.2	7052.3	6761.5	7199.3	6823.7	8024.9	10070.3	*9655.1*	7638.0
52.5°	9197.9	8730.1	8184.0	7778.5	7751.9	7583.0	7486.9	8567.0	10837.7	*10585.7*	8266.4
55°	9142.1	8691.4	8444.2	8488.6	8818.2	8248.7	8170.3	9369.1	11638.3	*11346.7*	8945.0
57.5°	8443.4	7951.4	8003.9	8267.3	9152.6	9417.6	9284.3	10226.2	12352.4	*12219.9*	9784.3
60°	6577.3	6324.4	6751.8	7233.2	8705.1	9760.1	10697.2	11271.5	13231.3	*13443.0*	11102.7
62.5°	4272.6	3934.9	4610.2	5427.8	7369.8	9533.9	12135.9	13253.9	14670.9	*15151.5*	13106.1
65°	2213.4	2159.3	2631.9	3383.2	5130.5	8129.1	12643.2	15333.3	16420.6	*16980.4*	15019.8
67.5°	1609.2	1509.0	1727.9	2169.8	3131.9	5543.3	11681.9	16923.9	17825.4	*18338.4*	16132.2
70°	*1225.5*	*1151.1*	*1318.4*	*1592.2*	*2045.4*	*3131.1*	*8623.5*	*16490.1*	*18367.4*	*18616.3*	*15984.4*
72.5°	917.7	853.9	1000.1	1255.4	1576.1	1762.7	5097.4	13558.5	17442.5	*17527.3*	14346.1
75°	732.7	683.4	746.4	991.2	1284.4	1199.6	2707.8	9823.1	14171.6	*14244.3*	10958.1
77.5°	601.0	559.0	584.9	743.2	999.3	902.3	1343.4	6248.5	8997.5	*8886.0*	6165.3
80°	490.3	454.0	466.1	537.2	761.0	673.7	754.5	3259.6	4292.0	*4119.1*	2564.0
82.5°	377.3	346.6	370.8	395.0	550.9	483.9	440.3	1483.2	1757.8	*1637.5*	940.3
85°	252.8	224.6	322.3	296.5	360.3	297.3	240.7	590.5	655.1	*610.7*	330.4
87.5°	69.5	65.4	108.2	147.8	147.8	112.3	88.1	143.0	182.6	*159.9*	77.6
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0
2.5°	957.3	939.5	892.6	888.6	899.9	901.5	894.3	877.3	868.4	916.9	909.6
5°	1232.7	1169.7	1131.8	1097.0	1048.6	1013.8	1022.7	1046.9	1055.0	1091.4	1095.4
7.5°	1446.8	1363.6	1280.4	1168.9	1095.4	1048.6	1084.1	1109.9	1130.1	1181.8	1202.8
10°	1539.7	1449.2	1331.3	1214.2	1194.0	1202.0	1181.8	1188.3	1219.8	1222.2	1232.7
12.5°	1712.6	1610.0	1397.5	1291.7	1286.1	1303.0	1295.7	1325.6	1347.4	1406.4	1381.4
15°	1878.2	1747.3	1447.6	1339.4	1315.9	1349.9	1389.5	1439.5	1486.4	1542.1	1513.9
17.5°	2079.3	1882.2	1450.0	1317.6	1321.6	1394.3	1435.5	1463.0	1602.7	1679.5	1640.7
20°	2206.2	1896.0	1395.9	1263.4	1321.6	1387.0	1444.4	1474.3	1631.0	1746.5	1773.2
22.5°	2320.9	1900.8	1353.9	1234.4	1271.5	1357.9	1444.4	1510.6	1610.8	1721.5	1725.5
25°	2383.9	1896.8	1299.8	1236.8	1270.7	1313.5	1390.3	1450.8	1525.2	1679.5	1683.5
27.5°	2545.4	1844.3	1246.5	1246.5	1264.2	1265.9	1363.6	1399.1	1409.6	1550.2	1575.3
30°	2592.3	1855.6	1240.0	1244.9	1253.7	1237.6	1280.4	1303.8	1319.2	1440.3	1444.4
32.5°	2667.4	1765.1	1259.4	1230.3	1219.0	1216.6	1227.1	1248.1	1254.5	1328.9	1342.6
35°	2758.7	1728.7	1265.9	1226.3	1203.7	1191.5	1223.0	1197.2	1217.4	1304.6	1314.3
37.5°	3056.0	1678.7	1299.0	1226.3	1197.2	1183.5	1168.1	1180.2	1252.1	1336.1	1387.8
40°	3245.8	1694.0	1290.9	1238.4	1175.4	1162.5	1136.6	1181.0	1292.5	1441.2	1479.9
42.5°	3578.7	1702.9	1300.6	1232.7	1182.7	1132.6	1149.5	1198.0	1315.1	1400.0	1459.7
45°	3922.8	1730.4	1294.1	1215.8	1166.5	1189.9	1166.5	1210.1	1265.9	1268.3	1313.5
47.5°	4260.5	1841.0	1280.4	1181.0	1162.5	1223.9	1164.1	1171.3	1175.4	1189.9	1243.2
50°	4657.1	1959.0	1261.0	1132.6	1168.1	1225.5	1173.0	1137.4	1133.4	1181.0	1240.8
52.5°	5107.9	2092.3	1236.0	1085.7	1135.0	1210.1	1203.7	1139.8	1105.1	1151.1	1210.9
55°	5638.6	2244.1	1206.9	1038.9	1098.6	1211.7	1220.6	1122.9	1105.9	1156.0	1219.8
57.5°	6343.8	2463.9	1150.3	971.0	1054.2	1186.7	1177.0	1103.5	1087.3	1140.6	1206.9
60°	7547.5	2886.3	1069.6	904.0	1006.5	1125.3	1141.5	1068.7	1052.6	1111.6	1181.0
62.5°	9159.1	3394.5	971.8	838.5	948.4	1059.1	1097.0	1018.7	1017.0	1092.2	1164.9
65°	10659.2	3682.9	870.8	778.7	888.6	997.7	1046.9	971.8	975.0	1069.6	1142.3
67.5°	11282.8	3343.6	780.4	725.4	819.9	927.4	1005.7	935.5	925.0	1038.9	1105.9
70°	*10697.2*	*2656.1*	*702.0*	*668.9*	*742.4*	*851.4*	*948.4*	*887.0*	*862.8*	*966.2*	*1018.7*
72.5°	9465.3	2214.2	628.5	602.6	674.5	771.5	870.8	821.6	790.0	869.2	916.1
75°	7398.8	1816.8	544.5	537.2	597.0	698.8	790.0	756.1	715.7	765.8	812.7
77.5°	4212.8	1149.5	457.2	462.1	504.9	612.3	693.1	666.5	625.3	646.3	700.4
80°	1685.9	580.0	367.6	370.8	407.1	503.3	574.4	564.7	521.9	538.8	576.0
82.5°	630.1	318.3	271.4	273.0	309.4	398.3	490.3	485.5	445.1	433.0	454.0
85°	250.4	157.5	166.4	173.7	208.4	286.8	393.4	349.0	301.3	264.2	277.1
87.5°	59.8	50.1	58.2	61.4	67.9	89.7	143.8	115.5	118.7	95.3	71.1
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)