

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: P596706

Luminaire Tested: **MSA-SA3C-827-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596706
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-827-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11465 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

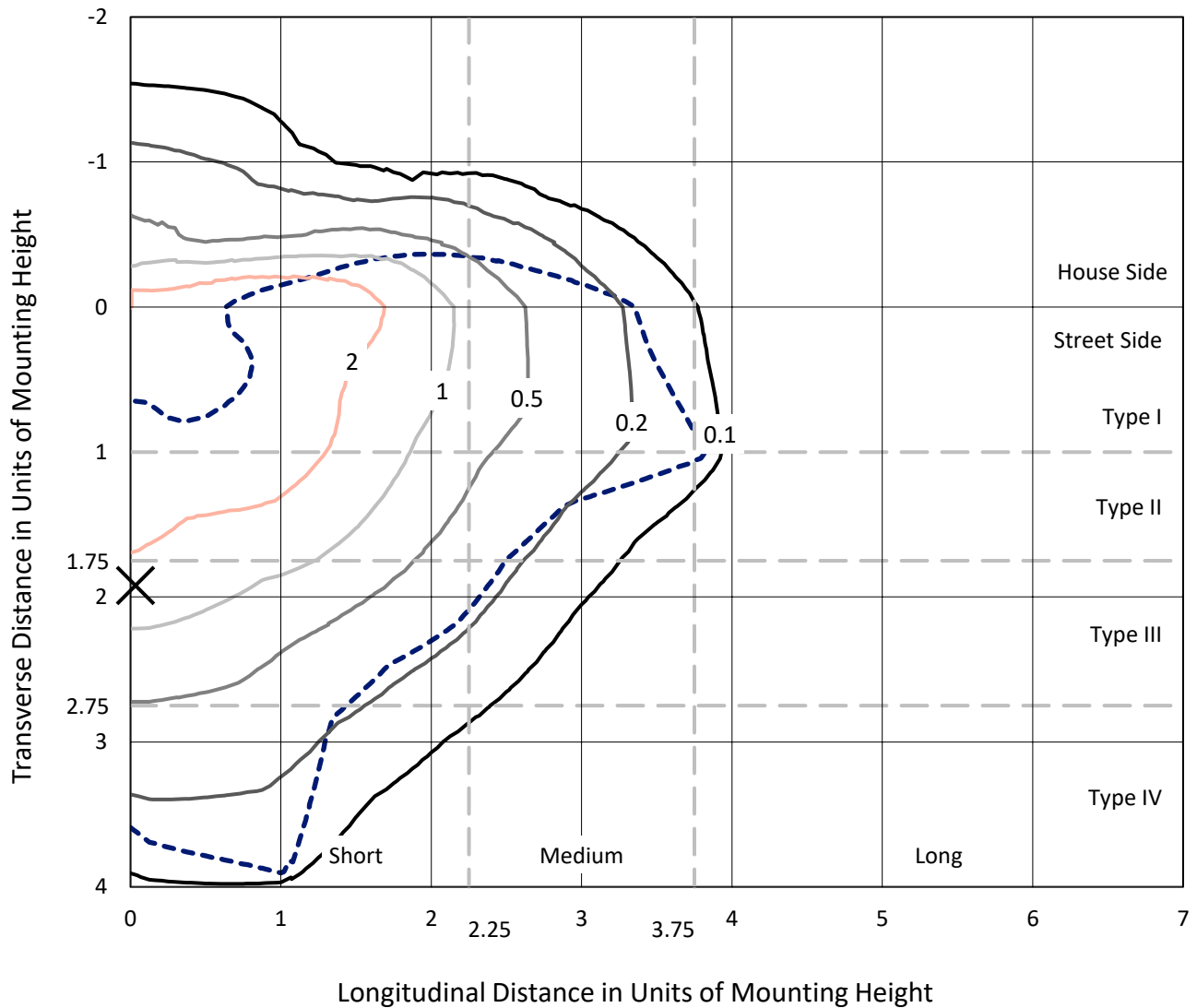
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

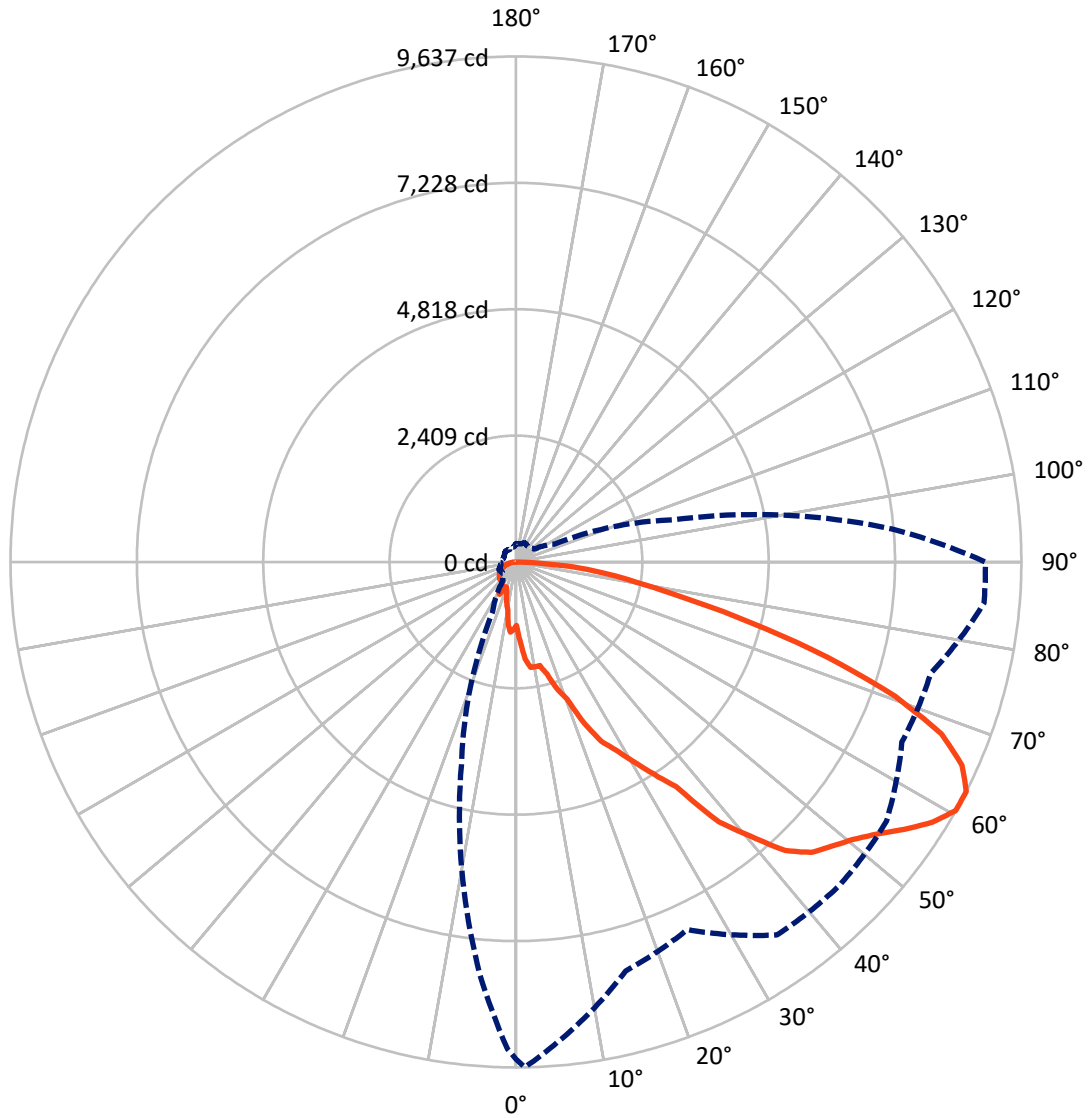
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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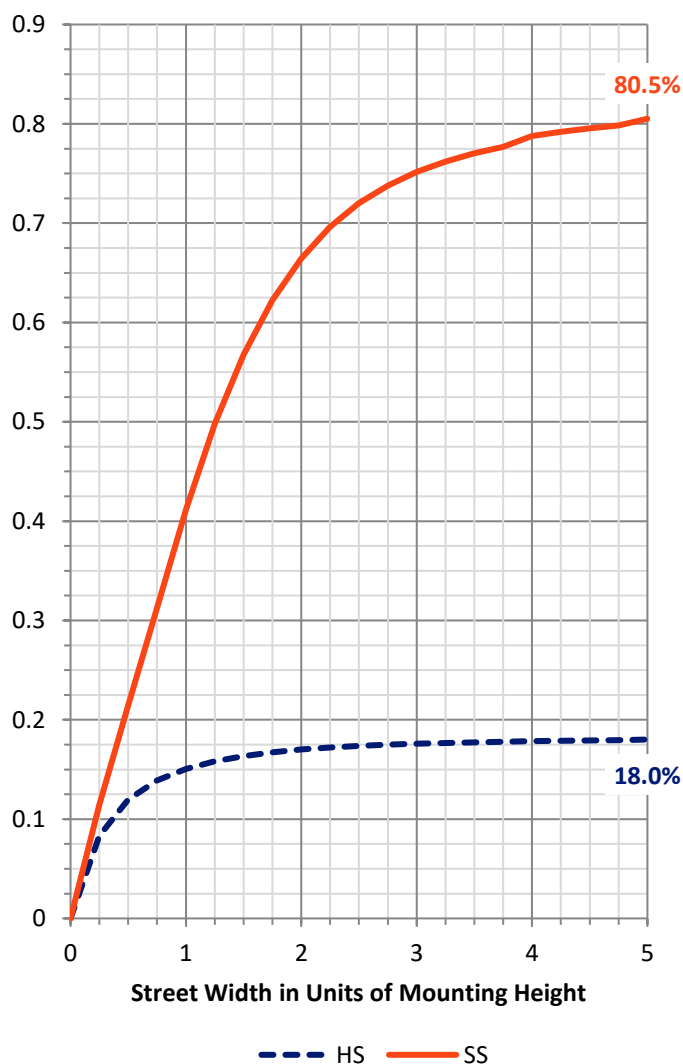
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2087.7	0.0	2087.7
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	9377.3	0.0	9377.3
	% Fixture	81.8	0.0	81.8
Total	Lumens	11465.0	0.0	11465.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.6	1.2
10°-20°	402.7	3.5
20°-30°	711.0	6.2
30°-40°	1107.5	9.7
40°-50°	1823.6	15.9
50°-60°	2602.8	22.7
60°-70°	2760.0	24.1
70°-80°	1524.5	13.3
80°-90°	394.3	3.4
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°	11465.0	100.0
0°-180°	11465.0	100.0

Coefficient of Utilization

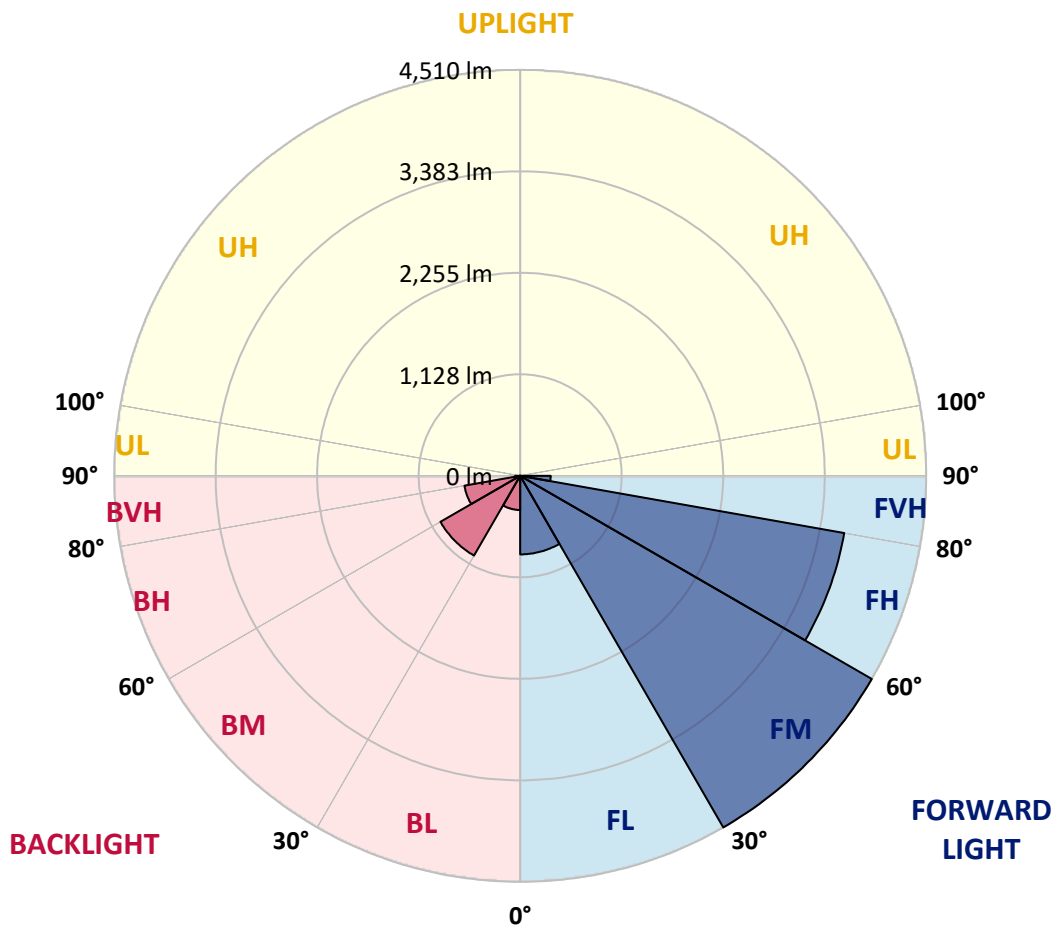


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	872.7	7.6			
FM (30°-60°)	4510.4	39.3			
FH (60°-80°)	3655.5	31.9			G2/5000
FVH (80°-90°)	338.7	3.0			G3/500
BL (0°-30°)	379.7	3.3	B1/500		
BM (30°-60°)	1023.4	8.9	B2/2500		
BH (60°-80°)	629.0	5.5	B2/1000		G2/1000
BVH (80°-90°)	55.6	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0
2.5°	1486.6	1499.4	1473.2	1443.8	1321.9	1439.3	1404.3	1469.3	1448.2	1306.9	1565.6
5°	1837.1	1860.5	1834.9	1923.3	1928.9	1951.7	1740.9	1872.2	1826.5	1814.8	1945.6
7.5°	2006.2	2030.2	2095.3	2252.7	2375.7	2264.4	2141.4	2114.2	2078.6	1985.7	2064.7
10°	2016.8	2030.2	2117.5	2451.3	2510.9	2589.9	2510.3	2322.8	2245.5	2043.5	1983.4
12.5°	1985.1	2026.8	2139.8	2546.5	2723.4	2809.6	2829.1	2620.5	2430.7	2200.4	2169.8
15°	2198.2	2213.2	2375.1	2614.3	2736.2	2809.1	2872.5	2744.0	2684.4	2502.0	2256.6
17.5°	2503.6	2545.4	2677.8	2766.2	2848.6	2862.5	2810.2	2760.1	2665.5	2909.2	2648.3
20°	2710.6	2791.3	2953.7	2970.4	2797.4	2828.0	2820.8	2824.1	2770.1	3220.8	3077.2
22.5°	3258.1	3345.4	3367.7	3270.8	2944.8	2805.2	2833.0	2913.7	3126.2	3512.3	3674.8
25°	3753.8	3787.7	3990.8	3741.5	3221.9	2917.6	2871.9	3080.6	3427.2	4003.0	4118.7
27.5°	4012.5	4056.4	4191.6	3649.2	3256.4	2772.9	2666.1	2983.8	3337.1	3772.1	4280.1
30°	4343.5	4413.6	4597.8	3741.5	3360.4	2867.5	2631.0	2934.8	3325.4	3923.5	4621.7
32.5°	4684.6	4820.9	4957.7	4067.0	3346.0	3012.1	2855.2	2879.7	3431.1	4240.6	4975.5
35°	5136.3	5256.5	5374.4	4255.0	3637.5	3132.9	2977.1	3236.4	3702.6	4608.3	5469.0
37.5°	6102.2	6292.4	5981.4	4790.3	3954.6	3677.0	3396.0	3549.6	3989.7	4914.9	6275.2
40°	6717.5	6860.5	6560.1	5154.7	4513.2	4043.6	3997.5	4010.3	4385.2	5177.5	6817.6
42.5°	7328.9	7522.6	7044.6	5654.9	5188.6	4800.8	4562.7	4546.6	4828.1	5649.3	7434.7
45°	7785.2	7899.2	7211.0	6076.6	5913.0	5625.4	5446.8	5163.6	5410.1	5975.9	7816.3
47.5°	8002.1	8095.1	7478.6	6321.9	6382.6	6397.6	6719.7	6236.8	5918.6	6196.8	8016.6
50°	8273.1	8317.0	7636.1	6537.8	6828.8	7488.6	7566.0	6747.5	6413.7	6437.7	8135.1
52.5°	8596.9	8615.3	7865.8	6787.0	7280.0	8206.3	8086.7	7613.2	6885.0	6877.7	8358.2
55°	9004.1	8993.0	8154.0	7122.5	7602.1	8633.1	8542.4	8197.4	7398.5	7242.2	8705.4
57.5°	9366.3	9359.7	8536.2	7431.3	7873.1	8852.3	8879.0	8787.7	7747.9	7503.1	9081.5
60°	9543.8	9628.9	8971.3	7769.0	7890.3	8951.3	8961.3	8816.1	8138.5	7838.0	9181.6
62.5°	9474.8	9636.7	9185.0	8072.8	7731.8	8680.9	8722.6	8622.5	8120.6	8189.6	8958.0
65°	9161.0	9348.0	8999.7	8234.7	7634.4	8228.0	8238.6	7985.5	7866.4	8422.8	8433.9
67.5°	8572.4	8747.7	8410.0	7976.5	6967.9	7007.4	7243.3	7263.9	7090.3	8246.9	7697.8
70°	7542.0	7665.5	7454.1	7339.0	5824.0	5592.5	5848.5	5958.1	6037.1	7612.1	6814.3
72.5°	5970.9	6209.5	6242.9	6318.0	4689.0	4303.5	4493.2	4330.7	4845.3	6478.8	5567.5
75°	4417.5	4618.9	4835.3	5254.3	3695.9	3221.9	3198.5	3115.6	3596.3	5210.3	4129.3
77.5°	3121.7	3250.3	3416.6	4197.2	2789.0	2481.4	2495.8	2411.8	2597.1	3937.9	2852.5
80°	2237.7	2305.0	2382.3	2765.1	2057.4	2140.9	2143.1	2063.5	1931.1	2674.4	1903.9
82.5°	1594.5	1646.8	1735.3	1823.8	1533.9	1754.8	1753.1	1748.1	1531.1	1807.6	1191.2
85°	888.0	958.1	1111.6	1428.7	1107.7	1254.6	1103.3	1215.1	1123.8	1203.4	603.1
87.5°	62.3	55.6	248.7	827.9	516.9	377.8	198.1	392.2	503.0	628.7	84.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0
2.5°	1619.0	1638.5	1562.3	1447.7	1478.8	1444.9	1402.0	1335.3	1197.8	1283.0	1283.5
5°	1944.5	1870.5	1811.0	1754.8	1660.2	1517.2	1498.3	1383.7	1319.1	1353.1	1348.1
7.5°	2046.3	1941.1	1851.6	1650.7	1475.5	1253.5	1186.7	1118.8	1090.5	1172.8	1205.6
10°	1934.5	1824.9	1737.0	1492.7	1373.7	1235.1	1051.5	957.5	901.9	923.6	936.4
12.5°	2024.6	1912.8	1636.3	1499.9	1303.6	1219.0	1058.2	920.2	837.9	857.9	834.0
15°	2111.4	1960.6	1684.1	1412.6	1253.5	1131.1	1000.9	858.5	761.7	727.2	708.8
17.5°	2428.5	2178.2	1678.5	1363.6	1181.2	1040.4	883.5	727.7	663.2	627.6	597.0
20°	2815.2	2466.3	1708.6	1313.0	1104.4	926.9	756.1	611.4	566.4	543.0	534.7
22.5°	3275.3	2835.8	1880.5	1305.8	1032.0	844.0	686.0	595.9	545.2	519.6	509.1
25°	3640.8	3218.0	2007.4	1354.7	1028.2	775.6	643.7	662.1	638.7	646.5	584.7
27.5°	3995.8	3322.0	1936.1	1333.0	924.7	654.3	633.7	672.1	692.1	698.2	696.0
30°	4295.7	3761.6	1951.7	1210.6	781.1	533.0	485.1	504.1	559.1	646.5	663.2
32.5°	4734.6	3971.9	2084.7	1136.6	698.2	476.8	423.4	416.2	429.0	460.7	487.9
35°	5248.2	4455.9	2122.0	1117.2	640.9	451.8	414.5	397.8	404.5	428.4	434.0
37.5°	6205.7	4808.6	2259.9	1093.2	619.8	436.7	407.8	401.7	416.2	435.6	446.8
40°	6733.6	5442.9	2266.6	1072.7	592.5	430.6	412.3	409.5	418.4	445.1	451.8
42.5°	7437.4	5804.5	2371.2	1048.7	583.1	439.0	421.2	420.1	427.8	443.4	455.7
45°	7866.4	6046.5	2376.8	1034.8	580.8	475.7	432.8	429.0	427.3	436.7	447.9
47.5°	8142.9	6395.4	2444.7	1019.3	594.2	485.1	446.8	430.1	424.5	428.4	436.7
50°	8404.9	6674.1	2573.2	1017.0	608.1	475.7	471.2	429.5	418.4	416.7	422.8
52.5°	8726.5	7132.5	2731.7	1038.2	604.8	461.8	489.6	427.3	407.3	403.4	409.5
55°	9194.4	7623.8	2900.3	1020.4	570.3	435.1	471.8	425.6	395.6	388.3	393.9
57.5°	9497.6	7905.3	3088.9	1005.3	518.0	415.0	455.7	426.7	396.7	380.6	383.9
60°	9396.9	7754.0	3162.9	913.5	468.5	399.5	417.3	417.8	386.7	371.6	374.4
62.5°	8951.9	7206.0	3093.9	806.7	431.7	377.2	377.8	401.1	357.7	347.2	351.6
65°	8329.8	6524.4	2814.6	737.2	414.5	353.8	344.9	352.2	318.8	311.0	319.9
67.5°	7566.5	5684.3	2399.0	663.7	408.4	322.1	311.6	308.8	287.6	278.7	287.6
70°	6609.0	4759.7	1917.8	612.0	385.0	287.6	279.3	276.5	258.7	252.0	259.8
72.5°	5312.1	3716.5	1479.9	572.5	359.4	255.9	248.7	245.4	230.3	220.9	230.3
75°	3778.2	2840.2	1099.4	511.9	323.2	223.7	215.3	210.9	197.0	188.1	196.4
77.5°	2685.0	2132.0	767.8	423.4	266.5	189.2	184.2	176.9	164.7	154.1	162.5
80°	1985.1	1523.3	495.2	326.6	203.6	151.3	148.5	143.5	131.9	119.1	125.2
82.5°	1306.9	1098.3	283.7	221.4	148.0	109.0	111.3	107.9	96.8	83.5	86.8
85°	585.3	650.4	150.8	121.8	96.3	65.7	71.8	69.5	61.2	48.4	49.5
87.5°	56.2	109.6	46.2	44.5	35.6	20.6	25.6	21.7	18.4	11.7	8.9
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0
2.5°	1303.0	1224.6	1146.1	1194.0	1195.1	1207.9	1209.5	1162.2	1200.1	1229.0	1259.0
5°	1323.6	1272.4	1275.2	1229.0	1204.0	1236.2	1229.6	1216.8	1239.6	1271.3	1309.7
7.5°	1174.5	1141.1	1135.5	1091.0	983.1	959.2	979.2	987.5	1018.1	1067.1	1108.3
10°	916.9	983.1	908.5	891.3	862.9	807.3	775.0	771.1	836.2	875.7	910.2
12.5°	826.2	809.5	800.6	753.3	753.3	694.3	675.4	692.7	792.8	821.2	865.7
15°	703.8	691.6	650.4	627.0	615.9	592.0	612.0	628.7	722.2	724.4	771.1
17.5°	584.2	576.9	538.0	533.6	522.4	511.9	530.2	570.3	620.9	612.0	633.7
20°	522.4	497.4	461.8	474.6	462.9	454.5	446.8	503.5	539.1	550.8	563.6
22.5°	506.8	461.2	440.1	428.4	429.0	415.6	417.3	464.6	518.5	525.8	518.0
25°	579.2	497.9	429.5	395.6	382.8	378.3	391.1	432.8	497.9	513.5	519.6
27.5°	677.6	540.8	442.3	384.4	358.9	361.1	379.4	408.4	485.1	513.0	520.2
30°	650.4	508.5	442.9	376.1	344.4	356.1	362.7	390.6	475.1	516.9	553.0
32.5°	501.8	457.3	445.6	382.8	370.0	351.6	361.1	387.8	445.6	471.8	473.5
35°	425.1	391.1	383.3	367.8	350.0	342.2	352.7	376.1	413.9	430.1	427.8
37.5°	421.7	384.4	353.8	347.2	339.9	337.7	343.8	365.5	403.9	432.3	426.2
40°	427.3	381.1	350.0	338.3	341.0	331.0	337.2	363.9	405.6	432.3	426.7
42.5°	420.6	377.2	344.9	336.0	338.8	324.9	332.1	360.0	401.1	432.8	422.3
45°	407.3	368.3	342.2	327.1	339.9	319.4	328.3	350.0	387.8	422.3	410.0
47.5°	393.9	357.7	330.5	321.0	333.8	313.8	317.7	336.6	374.4	408.4	397.8
50°	379.4	344.4	321.0	318.2	327.1	312.7	306.6	322.1	358.3	392.2	383.3
52.5°	363.9	333.3	314.3	313.2	321.6	305.4	296.5	308.8	341.0	375.0	367.8
55°	348.8	321.0	306.0	308.8	318.2	299.3	288.2	296.0	322.7	356.1	346.1
57.5°	333.8	307.1	294.9	302.7	309.9	291.5	277.6	282.1	303.8	336.6	324.9
60°	320.5	294.9	282.6	292.1	298.8	279.8	263.7	266.5	286.0	315.5	304.9
62.5°	303.2	281.5	265.4	277.6	282.6	264.3	247.0	250.4	265.9	293.8	286.0
65°	278.7	264.8	249.8	258.2	264.8	245.9	229.8	233.7	245.4	271.5	265.9
67.5°	257.6	244.2	234.2	240.9	242.0	227.6	213.1	215.3	224.8	249.2	243.1
70°	234.2	221.4	213.6	218.6	218.1	205.9	194.7	195.3	203.1	225.3	217.0
72.5°	208.6	196.4	192.5	195.3	193.1	181.9	171.4	175.3	180.3	197.0	190.3
75°	181.4	170.2	168.0	170.8	167.5	156.9	147.4	151.3	155.8	169.7	161.3
77.5°	153.0	143.0	143.5	144.1	139.6	132.4	123.0	126.9	129.6	139.1	130.7
80°	121.8	114.1	116.3	116.3	111.3	106.3	97.4	98.5	100.1	103.5	97.4
82.5°	89.0	89.0	89.0	89.6	79.0	80.7	72.9	72.3	70.7	70.1	66.2
85°	52.9	55.1	56.2	57.9	42.8	50.1	43.4	41.7	38.4	35.1	33.9
87.5°	11.7	15.0	15.0	14.5	0.0	5.6	2.8	4.5	1.1	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



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0	1209.0
2.5°	1224.6	1191.2	1253.5	1309.1	1300.2	1332.5	1257.4	1368.6	1486.6	1486.6
5°	1299.7	1271.3	1287.4	1319.7	1344.2	1456.6	1550.0	1642.9	1834.9	1837.1
7.5°	1096.0	1157.2	1171.7	1162.2	1267.4	1412.0	1566.2	1831.0	1993.4	2006.2
10°	1024.8	1052.6	1096.6	1121.1	1163.9	1306.3	1497.7	1812.1	1984.5	2016.8
12.5°	928.6	1031.5	1098.3	1235.1	1269.1	1297.4	1601.8	1873.8	1992.9	1985.1
15°	823.4	901.3	997.6	1148.9	1235.1	1452.1	1663.5	2071.9	2139.2	2198.2
17.5°	656.5	713.8	841.8	1014.2	1227.9	1427.6	1816.0	2316.7	2442.4	2503.6
20°	540.2	540.8	668.7	897.4	1130.0	1325.3	1873.8	2519.8	2679.4	2710.6
22.5°	510.7	485.1	552.5	738.3	1022.0	1385.9	1990.7	2846.3	3179.6	3258.1
25°	494.6	463.4	505.7	651.5	944.7	1417.6	2226.0	3295.3	3723.2	3753.8
27.5°	501.3	515.7	529.1	580.8	846.8	1358.1	2171.5	3496.2	3954.6	4012.5
30°	546.3	569.7	539.1	556.9	766.1	1271.8	2268.8	3822.2	4246.1	4343.5
32.5°	454.5	445.6	442.9	481.8	685.4	1194.0	2473.0	4281.2	4562.2	4684.6
35°	410.0	396.1	401.7	446.2	645.9	1182.8	2587.6	4661.2	5061.2	5136.3
37.5°	408.4	392.2	399.5	432.8	659.8	1202.9	2771.2	5271.0	5941.4	6102.2
40°	404.5	395.6	399.5	424.5	645.4	1214.0	2876.9	5783.4	6554.5	6717.5
42.5°	403.9	399.5	403.4	431.2	630.4	1219.0	3023.3	6246.3	7200.4	7328.9
45°	402.2	406.7	406.7	436.7	623.7	1252.4	3109.5	6473.3	7626.6	7785.2
47.5°	394.5	407.8	429.5	435.1	596.4	1236.8	3231.3	6817.6	7853.0	8002.1
50°	384.4	406.1	458.4	423.9	592.0	1199.0	3373.8	7090.8	8143.5	8273.1
52.5°	371.1	403.4	451.8	402.2	584.2	1192.3	3573.5	7445.8	8482.3	8596.9
55°	352.2	393.3	431.2	380.6	565.3	1171.1	3878.9	7885.9	8925.7	9004.1
57.5°	334.9	378.3	401.1	368.3	520.2	1175.6	4091.5	8244.7	9297.9	9366.3
60°	319.4	376.7	358.3	355.5	474.0	1116.1	4160.5	8240.8	9436.4	9543.8
62.5°	302.7	355.5	328.3	338.3	433.4	1054.9	4014.1	7887.5	9286.8	9474.8
65°	281.0	304.9	303.2	326.0	434.5	955.3	3678.7	7264.4	8913.5	9161.0
67.5°	255.4	269.8	279.3	306.0	448.4	877.9	3139.0	6515.0	8278.1	8572.4
70°	229.2	243.7	254.3	279.8	461.2	842.3	2498.6	5462.4	7243.3	7542.0
72.5°	202.5	217.5	225.9	248.1	444.0	766.1	1849.3	4250.0	5814.0	5970.9
75°	174.7	189.2	195.8	216.4	385.6	633.7	1276.8	3219.1	4258.4	4417.5
77.5°	146.3	161.9	164.1	180.8	294.3	484.6	818.4	2469.1	3015.5	3121.7
80°	116.8	132.4	132.4	141.3	207.0	333.3	490.2	1862.7	2196.0	2237.7
82.5°	84.0	100.7	99.6	100.1	143.0	206.4	283.7	1395.9	1586.7	1594.5
85°	49.5	61.2	60.6	55.6	84.6	111.3	153.6	866.8	885.7	888.0
87.5°	9.5	14.5	12.8	5.6	23.4	32.8	44.5	160.8	64.0	62.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)