

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: P596794

Luminaire Tested: **MSA-SA4C-827-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596794
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-SA4C-827-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 15152 lumens
Efficiency: N/A
Efficacy: 67.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

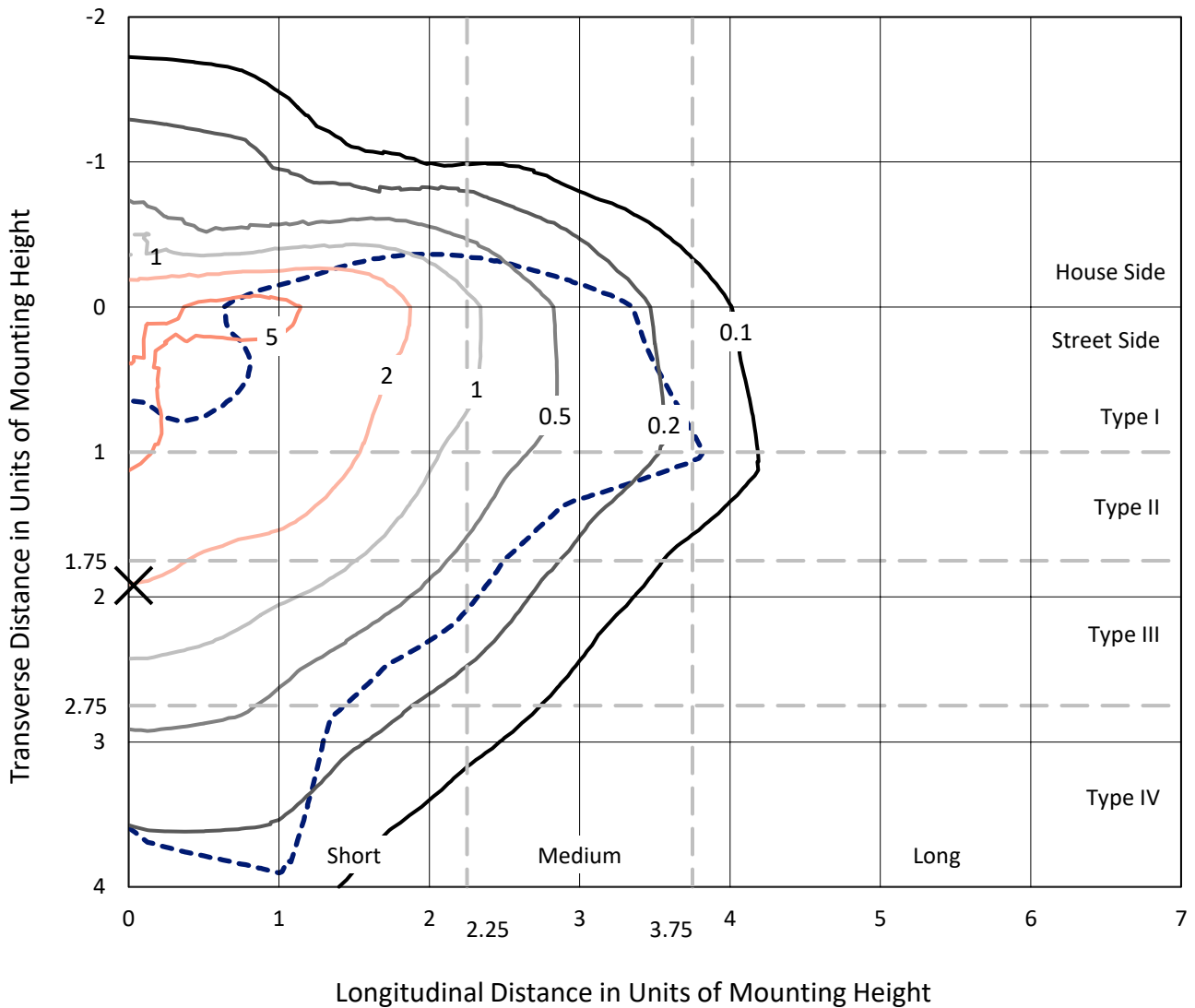
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

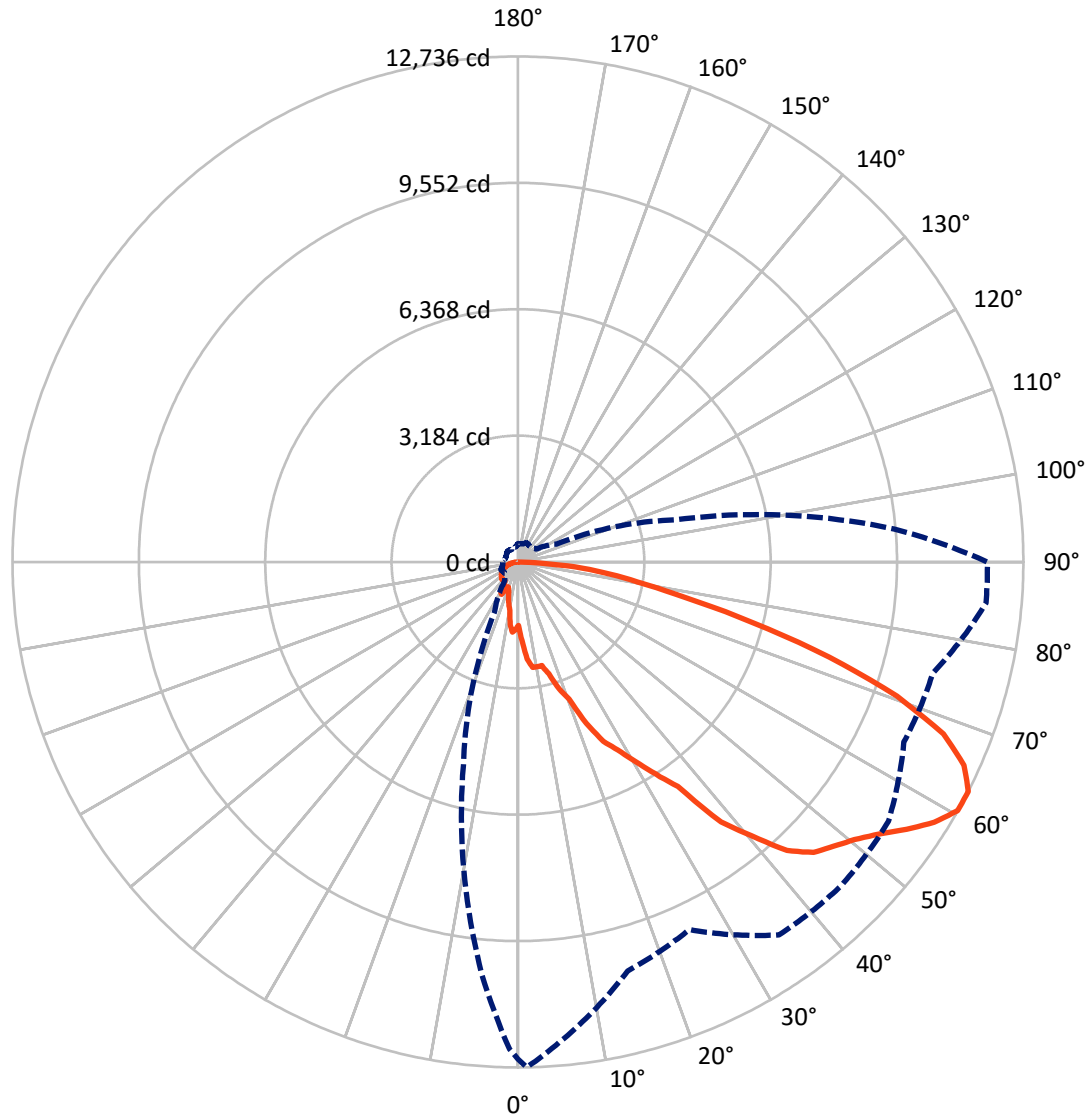
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.5 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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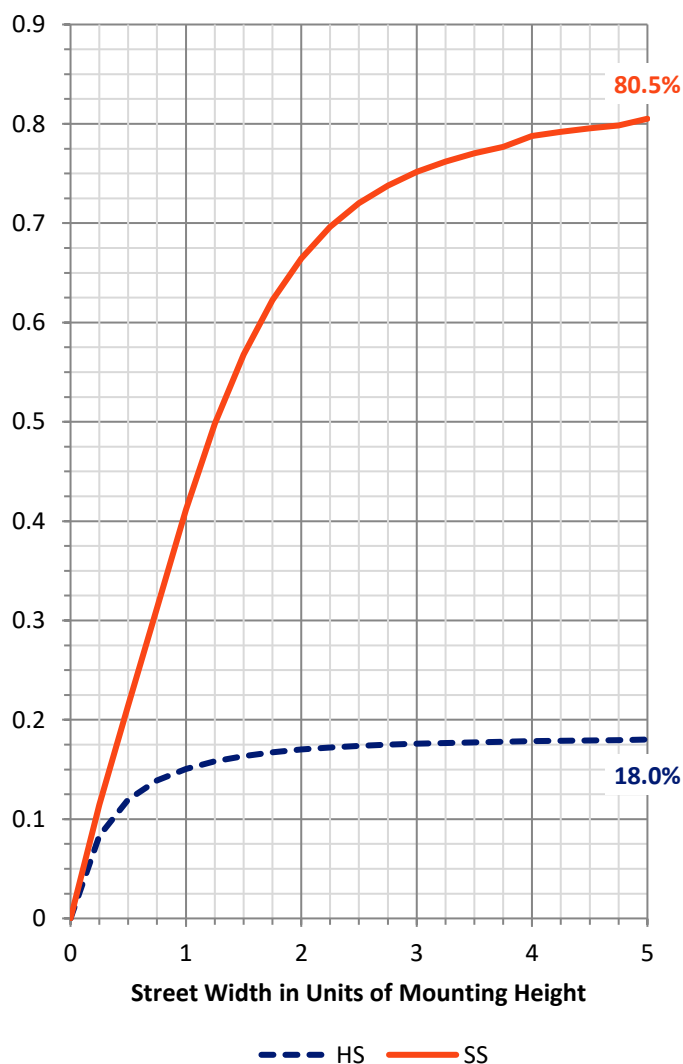
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2759.1	0.0	2759.1
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	12392.9	0.0	12392.9
	% Fixture	81.8	0.0	81.8
Total	Lumens	15152.0	0.0	15152.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.2	1.2
10°-20°	532.2	3.5
20°-30°	939.7	6.2
30°-40°	1463.6	9.7
40°-50°	2410.1	15.9
50°-60°	3439.8	22.7
60°-70°	3647.6	24.1
70°-80°	2014.8	13.3
80°-90°	521.1	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°	15152.0	100.0
0°-180°	15152.0	100.0

Coefficient of Utilization



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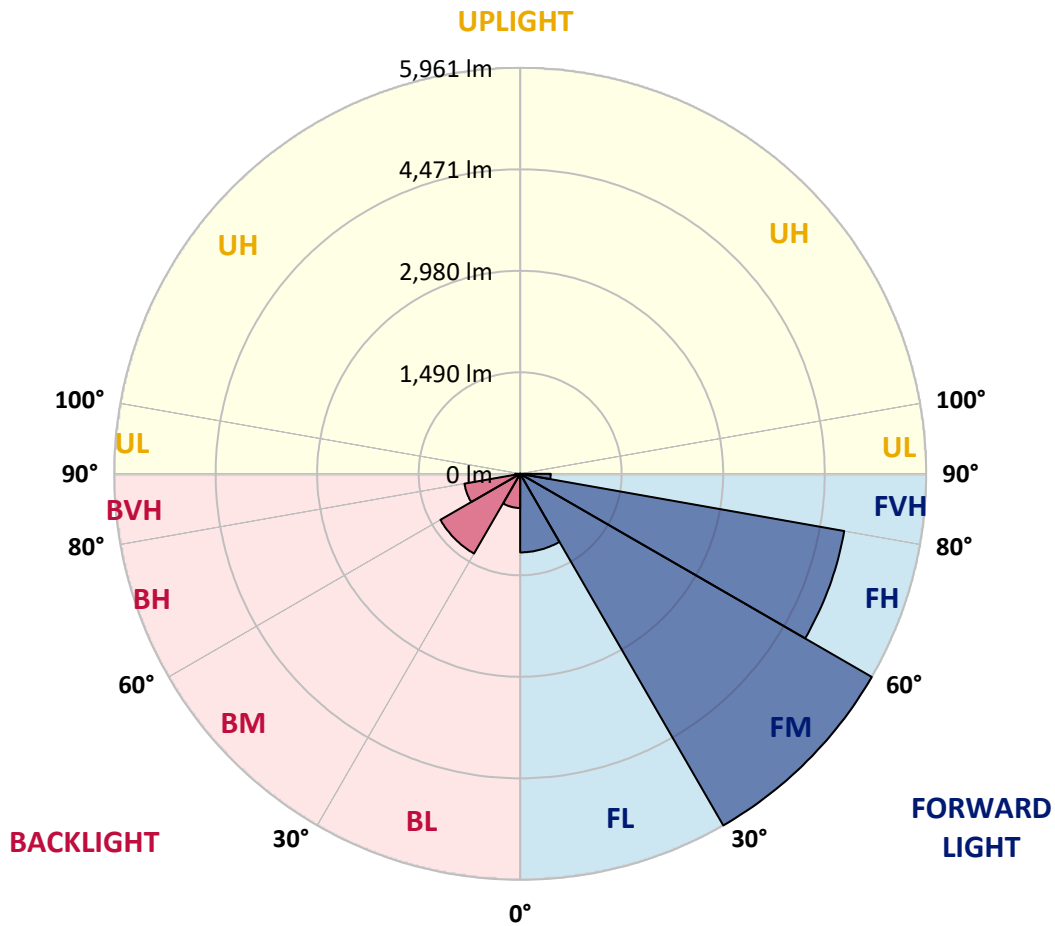
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1153.3	7.6			
FM (30°-60°)	5960.9	39.3			
FH (60°-80°)	4831.1	31.9			G2/5000
FVH (80°-90°)	447.6	3.0			G3/500
BL (0°-30°)	501.8	3.3	B2/1000		
BM (30°-60°)	1352.6	8.9	B2/2500		
BH (60°-80°)	831.2	5.5	B2/1000		G2/1000
BVH (80°-90°)	73.5	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°	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8
2.5°	1964.7	1981.6	1947.0	1908.1	1747.0	1902.2	1855.8	1941.9	1913.9	1727.2	2069.1
5°	2427.9	2458.8	2425.0	2541.9	2549.2	2579.4	2300.7	2474.2	2413.9	2398.5	2571.3
7.5°	2651.4	2683.0	2769.1	2977.1	3139.6	2992.6	2830.1	2794.1	2747.0	2624.2	2728.6
10°	2665.4	2683.0	2798.5	3239.6	3318.3	3422.7	3317.6	3069.8	2967.6	2700.7	2621.3
12.5°	2623.5	2678.6	2827.9	3365.4	3599.2	3713.2	3738.9	3463.2	3212.4	2908.0	2867.6
15°	2905.1	2924.9	3138.9	3455.1	3616.1	3712.4	3796.2	3626.4	3547.7	3306.6	2982.3
17.5°	3308.8	3363.9	3538.9	3655.8	3764.6	3783.0	3713.9	3647.7	3522.7	3844.8	3499.9
20°	3582.3	3688.9	3903.6	3925.7	3697.0	3737.4	3727.9	3732.3	3661.0	4256.5	4066.8
22.5°	4305.8	4421.2	4450.6	4322.7	3891.8	3707.3	3744.0	3850.7	4131.5	4641.8	4856.5
25°	4960.9	5005.8	5274.2	4944.8	4258.0	3855.8	3795.5	4071.2	4529.3	5290.3	5443.3
27.5°	5302.8	5360.9	5539.6	4822.7	4303.6	3664.6	3523.5	3943.3	4410.2	4985.2	5656.5
30°	5740.3	5833.0	6076.4	4944.8	4441.1	3789.6	3477.1	3878.6	4394.8	5185.2	6108.0
32.5°	6191.1	6371.2	6552.1	5374.9	4422.0	3980.8	3773.5	3805.8	4534.5	5604.3	6575.6
35°	6788.1	6946.9	7102.8	5623.4	4807.3	4140.4	3934.5	4277.1	4893.3	6090.3	7227.8
37.5°	8064.5	8316.0	7905.0	6330.8	5226.4	4859.5	4488.1	4691.1	5272.7	6495.5	8293.2
40°	8877.8	9066.7	8669.7	6812.4	5964.6	5344.0	5283.0	5299.9	5795.5	6842.5	9010.1
42.5°	9685.8	9941.7	9310.1	7473.4	6857.2	6344.7	6030.0	6008.7	6380.8	7466.0	9825.5
45°	10288.8	10439.5	9530.0	8030.7	7814.6	7434.4	7198.4	6824.1	7149.9	7897.6	10329.9
47.5°	10575.5	10698.3	9883.6	8355.0	8435.1	8455.0	8880.7	8242.5	7821.9	8189.5	10594.6
50°	10933.6	10991.7	10091.7	8640.3	9024.8	9896.9	9999.1	8917.5	8476.3	8507.9	10751.3
52.5°	11361.5	11385.8	10395.4	8969.7	9621.1	10845.4	10687.3	10061.6	9099.1	9089.5	11046.1
55°	11899.8	11885.1	10776.3	9413.1	10046.9	11409.3	11289.5	10833.6	9777.8	9571.1	11504.9
57.5°	12378.4	12369.6	11281.4	9821.1	10404.9	11699.0	11734.3	11613.7	10239.5	9916.0	12002.0
60°	12613.0	12725.5	11856.4	10267.4	10427.7	11829.9	11843.2	11651.2	10755.7	10358.6	12134.3
62.5°	12521.8	12735.8	12138.7	10668.9	10218.2	11472.6	11527.7	11395.4	10732.1	10823.3	11838.7
65°	12107.1	12354.2	11893.9	10882.9	10089.5	10874.1	10888.0	10553.5	10396.1	11131.4	11146.1
67.5°	11329.2	11560.8	11114.5	10541.7	9208.6	9260.8	9572.6	9599.8	9370.4	10899.1	10173.3
70°	9967.5	10130.7	9851.3	9699.1	7696.9	7391.0	7729.3	7874.1	7978.5	10060.1	9005.7
72.5°	7891.0	8206.5	8250.6	8349.8	6196.9	5687.4	5938.1	5723.4	6403.6	8562.3	7357.9
75°	5838.1	6104.3	6390.3	6944.0	4884.5	4258.0	4227.1	4117.6	4752.8	6885.9	5457.2
77.5°	4125.7	4295.5	4515.4	5547.0	3686.0	3279.3	3298.5	3187.4	3432.3	5204.3	3769.8
80°	2957.3	3046.3	3148.5	3654.3	2719.1	2829.4	2832.3	2727.2	2552.2	3534.5	2516.1
82.5°	2107.3	2176.4	2293.3	2410.2	2027.2	2319.1	2316.9	2310.2	2023.5	2388.9	1574.2
85°	1173.5	1266.2	1469.1	1888.2	1463.9	1658.1	1458.1	1605.9	1485.3	1590.4	797.0
87.5°	82.4	73.5	328.7	1094.1	683.1	499.3	261.8	518.4	664.7	830.9	111.0
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°	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8
2.5°	2139.7	2165.4	2064.7	1913.2	1954.4	1909.5	1852.9	1764.7	1583.1	1695.6	1696.3
5°	2569.8	2472.0	2393.3	2319.1	2194.1	2005.1	1980.1	1828.6	1743.3	1788.2	1781.6
7.5°	2704.4	2565.4	2447.0	2181.6	1950.0	1656.6	1568.4	1478.6	1441.1	1550.0	1593.4
10°	2556.6	2411.7	2295.5	1972.8	1815.4	1632.3	1389.7	1265.4	1191.9	1220.6	1237.5
12.5°	2675.7	2527.9	2162.5	1982.3	1722.8	1611.0	1398.5	1216.2	1107.3	1133.8	1102.2
15°	2790.4	2591.1	2225.7	1866.9	1656.6	1494.8	1322.8	1134.5	1006.6	961.0	936.7
17.5°	3209.5	2878.6	2218.3	1802.2	1561.0	1375.0	1167.6	961.7	876.5	829.4	789.0
20°	3720.5	3259.5	2258.0	1735.3	1459.5	1225.0	999.2	808.1	748.5	717.6	706.6
22.5°	4328.6	3747.7	2485.2	1725.7	1363.9	1115.4	906.6	787.5	720.6	686.8	672.8
25°	4811.7	4252.9	2652.9	1790.4	1358.8	1025.0	850.7	875.0	844.1	854.4	772.8
27.5°	5280.8	4390.4	2558.8	1761.7	1222.0	864.7	837.5	888.2	914.7	922.8	919.8
30°	5677.1	4971.2	2579.4	1600.0	1032.3	704.4	641.2	666.2	739.0	854.4	876.5
32.5°	6257.2	5249.2	2755.1	1502.2	922.8	630.1	559.5	550.0	566.9	608.8	644.8
35°	6935.9	5888.9	2804.4	1476.4	847.0	597.0	547.8	525.7	534.5	566.2	573.5
37.5°	8201.3	6355.0	2986.7	1444.8	819.1	577.2	539.0	530.9	550.0	575.7	590.4
40°	8899.1	7193.2	2995.5	1417.6	783.1	569.1	544.8	541.2	552.9	588.2	597.0
42.5°	9829.2	7671.2	3133.8	1386.0	770.6	580.1	556.6	555.1	565.4	586.0	602.2
45°	10396.1	7991.0	3141.1	1367.6	767.6	628.7	572.0	566.9	564.7	577.2	591.9
47.5°	10761.6	8452.0	3230.8	1347.0	785.3	641.2	590.4	568.4	561.0	566.2	577.2
50°	11107.9	8820.4	3400.7	1344.1	803.7	628.7	622.8	567.6	552.9	550.7	558.8
52.5°	11532.9	9426.3	3610.2	1372.0	799.2	610.3	647.0	564.7	538.2	533.1	541.2
55°	12151.2	10075.5	3833.0	1348.5	753.7	575.0	623.5	562.5	522.8	513.2	520.6
57.5°	12552.0	10447.6	4082.3	1328.7	684.5	548.5	602.2	564.0	524.3	502.9	507.3
60°	12418.9	10247.6	4180.1	1207.3	619.1	527.9	551.5	552.2	511.0	491.2	494.8
62.5°	11830.7	9523.3	4088.9	1066.2	570.6	498.5	499.3	530.1	472.8	458.8	464.7
65°	11008.6	8622.6	3719.8	974.2	547.8	467.6	455.9	465.4	421.3	411.0	422.8
67.5°	9999.8	7512.4	3170.5	877.2	539.7	425.7	411.8	408.1	380.1	368.4	380.1
70°	8734.4	6290.3	2534.5	808.8	508.8	380.1	369.1	365.4	341.9	333.1	343.4
72.5°	7020.5	4911.7	1955.8	756.6	475.0	338.2	328.7	324.3	304.4	291.9	304.4
75°	4993.3	3753.6	1452.9	676.5	427.2	295.6	284.6	278.7	260.3	248.5	259.6
77.5°	3548.5	2817.6	1014.7	559.5	352.2	250.0	243.4	233.8	217.6	203.7	214.7
80°	2623.5	2013.2	654.4	431.6	269.1	200.0	196.3	189.7	174.3	157.3	165.4
82.5°	1727.2	1451.4	375.0	292.6	195.6	144.1	147.1	142.6	127.9	110.3	114.7
85°	773.5	859.5	199.3	161.0	127.2	86.8	94.9	91.9	80.9	64.0	65.4
87.5°	74.3	144.9	61.0	58.8	47.1	27.2	33.8	28.7	24.3	15.4	11.8
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°	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8
2.5°	1722.0	1618.4	1514.7	1577.9	1579.4	1596.3	1598.5	1536.0	1586.0	1624.2	1663.9
5°	1749.2	1681.6	1685.3	1624.2	1591.1	1633.8	1625.0	1608.1	1638.2	1680.1	1730.8
7.5°	1552.2	1508.1	1500.7	1441.9	1299.2	1267.6	1294.1	1305.1	1345.6	1410.3	1464.7
10°	1211.7	1299.2	1200.7	1177.9	1140.4	1066.9	1024.2	1019.1	1105.1	1157.3	1202.9
12.5°	1091.9	1069.8	1058.1	995.6	995.6	917.6	892.6	915.4	1047.8	1085.3	1144.1
15°	930.1	914.0	859.5	828.7	814.0	782.3	808.8	830.9	954.4	957.3	1019.1
17.5°	772.0	762.5	711.0	705.1	690.4	676.5	700.7	753.7	820.6	808.8	837.5
20°	690.4	657.3	610.3	627.2	611.8	600.7	590.4	665.4	712.5	727.9	744.8
22.5°	669.8	609.5	581.6	566.2	566.9	549.3	551.5	614.0	685.3	694.8	684.5
25°	765.4	658.1	567.6	522.8	505.9	500.0	516.9	572.0	658.1	678.7	686.8
27.5°	895.6	714.7	584.5	508.1	474.3	477.2	501.5	539.7	641.2	677.9	687.5
30°	859.5	672.0	585.3	497.0	455.1	470.6	479.4	516.2	627.9	683.1	730.9
32.5°	663.2	604.4	589.0	505.9	489.0	464.7	477.2	512.5	589.0	623.5	625.7
35°	561.8	516.9	506.6	486.0	462.5	452.2	466.2	497.0	547.0	568.4	565.4
37.5°	557.3	508.1	467.6	458.8	449.3	446.3	454.4	483.1	533.8	571.3	563.2
40°	564.7	503.7	462.5	447.1	450.7	437.5	445.6	480.9	536.0	571.3	564.0
42.5°	555.9	498.5	455.9	444.1	447.8	429.4	439.0	475.7	530.1	572.0	558.1
45°	538.2	486.8	452.2	432.3	449.3	422.1	433.8	462.5	512.5	558.1	541.9
47.5°	520.6	472.8	436.8	424.3	441.2	414.7	419.8	444.8	494.8	539.7	525.7
50°	501.5	455.1	424.3	420.6	432.3	413.2	405.1	425.7	473.5	518.4	506.6
52.5°	480.9	440.4	415.4	414.0	425.0	403.7	391.9	408.1	450.7	495.6	486.0
55°	461.0	424.3	404.4	408.1	420.6	395.6	380.9	391.2	426.5	470.6	457.3
57.5°	441.2	405.9	389.7	400.0	409.6	385.3	366.9	372.8	401.5	444.8	429.4
60°	423.5	389.7	373.5	386.0	394.8	369.8	348.5	352.2	377.9	416.9	402.9
62.5°	400.7	372.1	350.7	366.9	373.5	349.3	326.5	330.9	351.5	388.2	377.9
65°	368.4	350.0	330.1	341.2	350.0	325.0	303.7	308.8	324.3	358.8	351.5
67.5°	340.4	322.8	309.6	318.4	319.8	300.7	281.6	284.6	297.1	329.4	321.3
70°	309.6	292.6	282.3	289.0	288.2	272.1	257.3	258.1	268.4	297.8	286.8
72.5°	275.7	259.6	254.4	258.1	255.1	240.4	226.5	231.6	238.2	260.3	251.5
75°	239.7	225.0	222.1	225.7	221.3	207.3	194.8	200.0	205.9	224.3	213.2
77.5°	202.2	189.0	189.7	190.4	184.6	175.0	162.5	167.6	171.3	183.8	172.8
80°	161.0	150.7	153.7	153.7	147.1	140.4	128.7	130.1	132.4	136.8	128.7
82.5°	117.6	117.6	117.6	118.4	104.4	106.6	96.3	95.6	93.4	92.6	87.5
85°	69.9	72.8	74.3	76.5	56.6	66.2	57.4	55.1	50.7	46.3	44.9
87.5°	15.4	19.9	19.9	19.1	0.0	7.4	3.7	5.9	1.5	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°	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8	1597.8
2.5°	1618.4	1574.2	1656.6	1730.1	1718.3	1761.0	1661.7	1808.8	1964.7	1964.7
5°	1717.6	1680.1	1701.4	1744.1	1776.4	1925.0	2048.5	2171.3	2425.0	2427.9
7.5°	1448.5	1529.4	1548.5	1536.0	1675.0	1866.1	2069.8	2419.8	2634.5	2651.4
10°	1354.4	1391.1	1449.2	1481.6	1538.2	1726.4	1979.4	2394.8	2622.7	2665.4
12.5°	1227.2	1363.2	1451.4	1632.3	1677.2	1714.7	2116.9	2476.4	2633.8	2623.5
15°	1088.2	1191.2	1318.4	1518.4	1632.3	1919.1	2198.5	2738.2	2827.2	2905.1
17.5°	867.6	943.4	1112.5	1340.4	1622.8	1886.7	2400.0	3061.7	3227.9	3308.8
20°	714.0	714.7	883.8	1186.0	1493.4	1751.4	2476.4	3330.1	3541.1	3582.3
22.5°	675.0	641.2	730.1	975.7	1350.7	1831.6	2630.8	3761.7	4202.1	4305.8
25°	653.7	612.5	668.4	861.0	1248.5	1873.5	2941.9	4355.1	4920.5	4960.9
27.5°	662.5	681.6	699.3	767.6	1119.1	1794.8	2869.8	4620.5	5226.4	5302.8
30°	722.0	752.9	712.5	736.0	1012.5	1680.8	2998.5	5051.4	5611.7	5740.3
32.5°	600.7	589.0	585.3	636.8	905.9	1577.9	3268.3	5658.0	6029.3	6191.1
35°	541.9	523.5	530.9	589.7	853.7	1563.2	3419.8	6160.2	6688.8	6788.1
37.5°	539.7	518.4	527.9	572.0	872.0	1589.7	3662.4	6966.0	7852.1	8064.5
40°	534.5	522.8	527.9	561.0	852.9	1604.4	3802.1	7643.2	8662.3	8877.8
42.5°	533.8	527.9	533.1	569.8	833.1	1611.0	3995.5	8255.0	9516.0	9685.8
45°	531.6	537.5	537.5	577.2	824.2	1655.1	4109.5	8555.0	10079.2	10288.8
47.5°	521.3	539.0	567.6	575.0	788.2	1634.5	4270.5	9010.1	10378.5	10575.5
50°	508.1	536.8	605.9	560.3	782.3	1584.5	4458.7	9371.1	10762.3	10933.6
52.5°	490.4	533.1	597.0	531.6	772.0	1575.7	4722.7	9840.3	11210.1	11361.5
55°	465.4	519.8	569.8	502.9	747.0	1547.8	5126.4	10421.9	11796.1	11899.8
57.5°	442.6	500.0	530.1	486.8	687.5	1553.6	5407.2	10896.1	12288.0	12378.4
60°	422.1	497.8	473.5	469.8	626.5	1475.0	5498.4	10891.0	12471.1	12613.0
62.5°	400.0	469.8	433.8	447.1	572.8	1394.1	5305.0	10424.1	12273.3	12521.8
65°	371.3	402.9	400.7	430.9	574.3	1262.5	4861.7	9600.5	11779.9	12107.1
67.5°	337.5	356.6	369.1	404.4	592.6	1160.3	4148.4	8610.1	10940.2	11329.2
70°	302.9	322.1	336.0	369.8	609.5	1113.2	3302.1	7219.0	9572.6	9967.5
72.5°	267.6	287.5	298.5	327.9	586.8	1012.5	2444.1	5616.8	7683.7	7891.0
75°	230.9	250.0	258.8	286.0	509.5	837.5	1687.5	4254.3	5627.8	5838.1
77.5°	193.4	214.0	216.9	239.0	389.0	640.4	1081.6	3263.2	3985.2	4125.7
80°	154.4	175.0	175.0	186.8	273.5	440.4	647.8	2461.7	2902.1	2957.3
82.5°	111.0	133.1	131.6	132.4	189.0	272.8	375.0	1844.8	2097.0	2107.3
85°	65.4	80.9	80.1	73.5	111.8	147.1	202.9	1145.6	1170.6	1173.5
87.5°	12.5	19.1	16.9	7.4	30.9	43.4	58.8	212.5	84.6	82.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)