

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: P367995

Luminaire Tested: **MSA-SA3C-750-U-SLL-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367995
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-750-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13280 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - 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: 24 FT



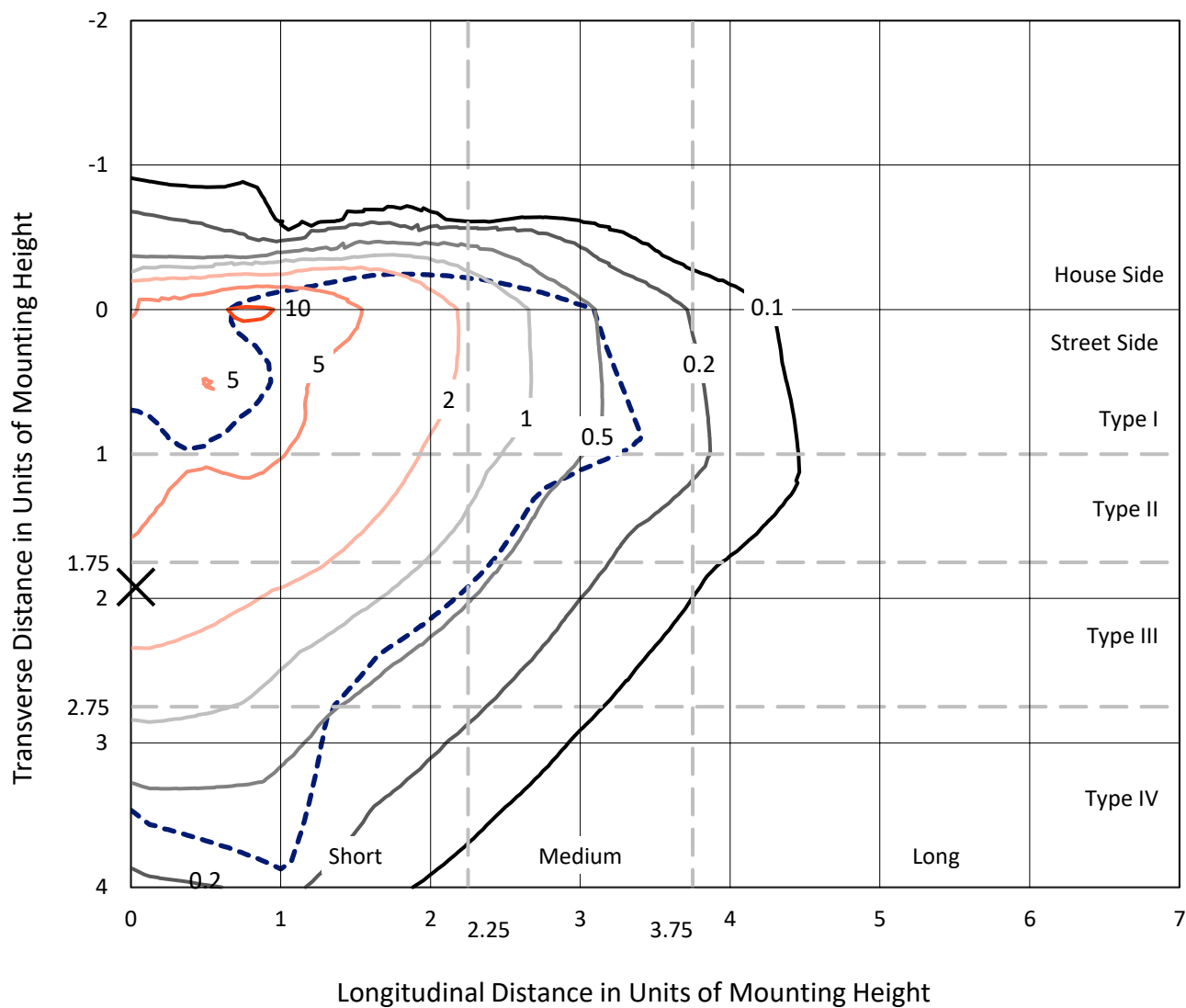
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

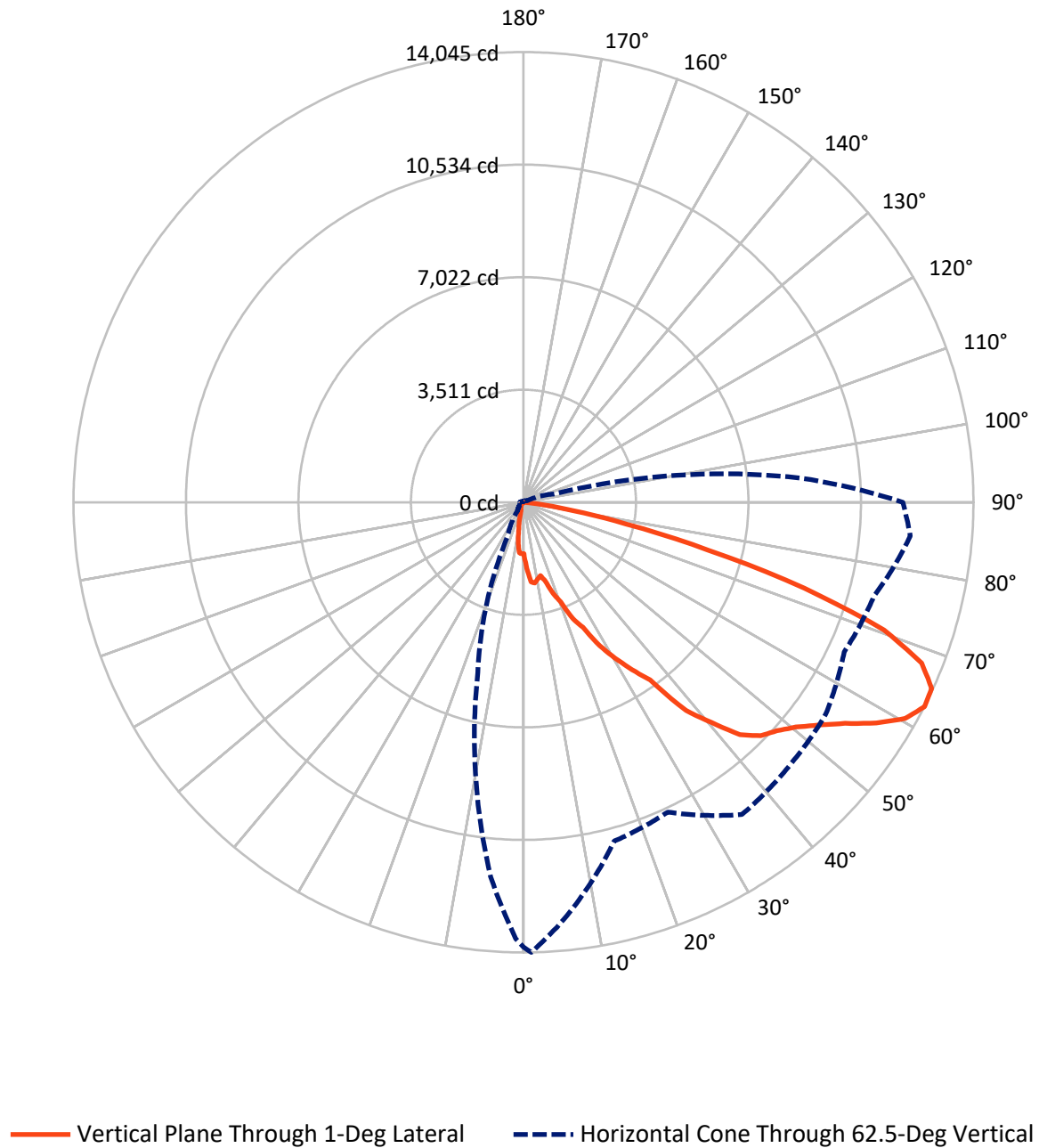
--- 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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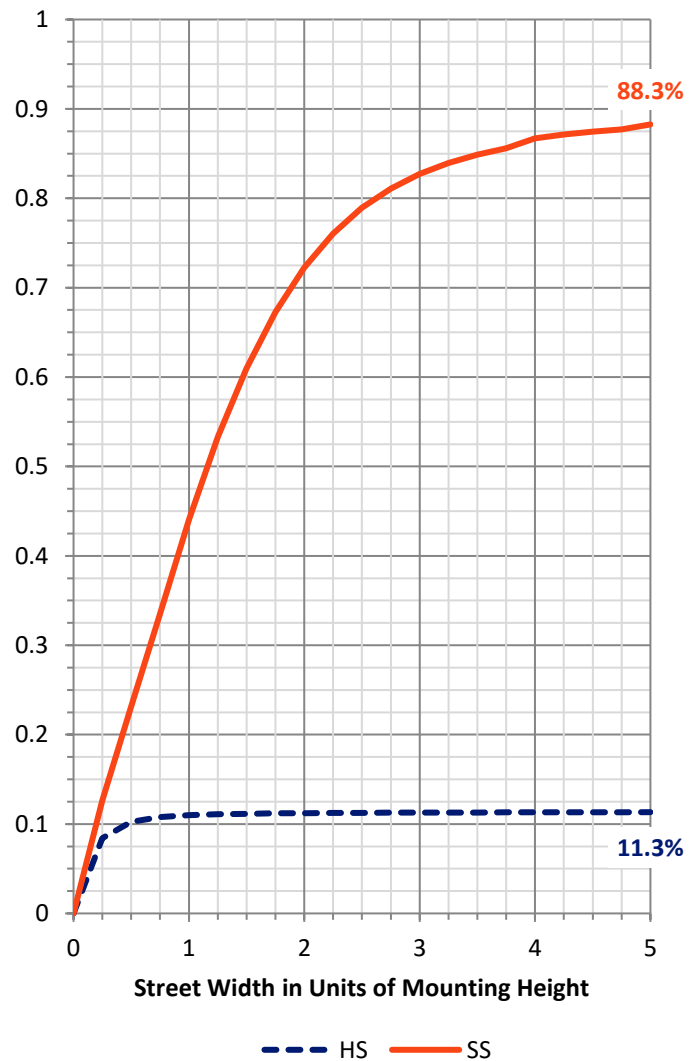
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1518.6	0.0	1518.6
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	11761.4	0.0	11761.4
	% Fixture	88.6	0.0	88.6
Total	Lumens	13280.0	0.0	13280.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.8	1.3
10°-20°	466.9	3.5
20°-30°	754.7	5.7
30°-40°	1264.2	9.5
40°-50°	2067.1	15.6
50°-60°	3059.9	23.0
60°-70°	3512.9	26.5
70°-80°	1737.1	13.1
80°-90°	238.5	1.8
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°	13280.0	100.0
0°-180°	13280.0	100.0

Coefficient of Utilization



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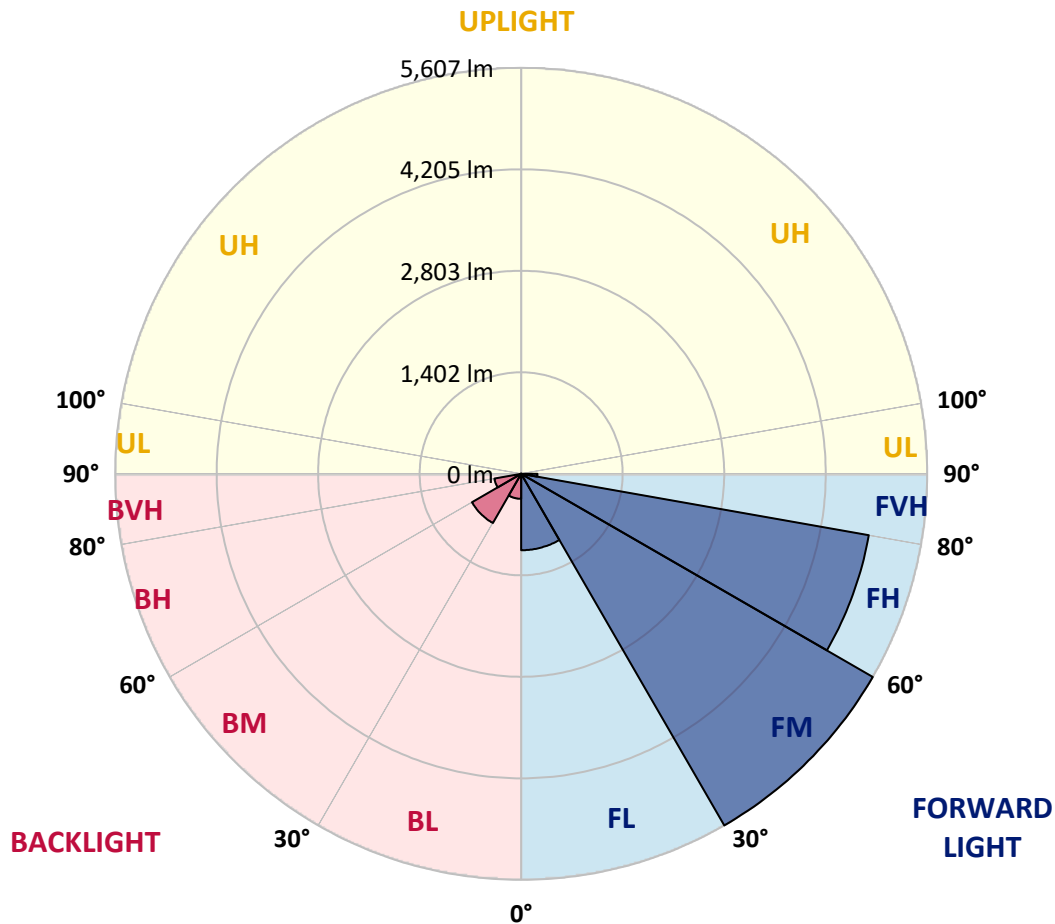
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1054.8	7.9			
FM	(30°-60°)	5606.7	42.2			
FH	(60°-80°)	4874.6	36.7			G2/5000
FVH	(80°-90°)	225.3	1.7			G3/500
BL	(0°-30°)	345.5	2.6	B1/500		
BM	(30°-60°)	784.4	5.9	B1/1000		
BH	(60°-80°)	375.5	2.8	B1/500		G1/500
BVH	(80°-90°)	13.2	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8
2.5°	2062.9	2072.8	2026.6	2020.5	1913.1	2047.0	2050.8	2066.7	1968.3	1777.6	2044.0
5°	2468.5	2495.8	2460.2	2618.4	2663.8	2761.4	2582.1	2742.5	2674.4	2693.3	2731.9
7.5°	2517.0	2545.0	2619.9	2884.8	3129.2	3067.9	3048.2	3108.8	3103.5	2963.5	3033.1
10°	2416.3	2439.8	2564.7	3046.7	3153.4	3428.9	3496.2	3357.0	3300.2	2993.7	2859.8
12.5°	2306.6	2346.0	2504.9	3083.0	3403.1	3681.6	3903.4	3705.1	3516.7	3190.5	3067.9
15°	2517.0	2538.9	2788.7	3158.7	3438.7	3630.9	3812.6	3746.7	3718.0	3483.4	3067.9
17.5°	2929.4	2980.9	3161.7	3344.1	3565.1	3680.9	3637.7	3617.3	3543.9	3912.4	3482.6
20°	3223.0	3319.1	3556.0	3634.7	3459.1	3567.4	3540.9	3522.7	3465.2	4150.8	3959.4
22.5°	3858.7	3947.3	3951.8	3979.8	3571.1	3398.6	3354.7	3360.0	3621.1	4222.0	4552.7
25°	4291.6	4321.9	4561.0	4361.2	3876.9	3450.1	3282.8	3357.7	3733.8	4733.5	5110.4
27.5°	4999.9	5071.8	5220.9	4544.3	4060.0	3417.5	3151.1	3423.6	4030.5	4903.0	5730.2
30°	5577.3	5646.2	5886.1	4794.8	4218.9	3578.7	3207.9	3556.0	4215.1	5251.9	6287.2
32.5°	6045.7	6223.6	6496.0	5181.5	4212.9	3764.1	3497.7	3512.1	4442.2	5703.7	6838.1
35°	6644.3	6810.1	7001.5	5447.9	4488.3	3823.9	3583.3	3943.5	4779.7	6175.9	7579.7
37.5°	7993.6	8244.1	7865.8	6119.2	4809.2	4364.2	3920.8	4209.1	5133.1	6658.0	8599.1
40°	8817.0	9028.1	8662.6	6462.0	5364.7	4636.7	4523.1	4670.7	5478.9	6906.9	9367.2
42.5°	9628.2	9906.7	9296.0	6978.1	5892.1	5405.5	5095.3	5214.1	5979.2	7507.8	10231.4
45°	10215.5	10388.0	9433.0	7248.2	6617.1	6281.9	6075.3	5898.2	6676.9	7893.8	10789.1
47.5°	10510.6	10648.4	9703.2	7333.8	7048.5	7208.9	7661.4	7291.4	7294.4	8173.0	11089.5
50°	10919.3	11015.4	9854.5	7435.9	7516.9	8653.5	8882.1	8094.3	7999.7	8453.0	11138.7
52.5°	11493.7	11540.6	10148.1	7705.3	8218.4	9784.9	9867.4	9548.8	8705.8	8973.7	11247.7
55°	12257.2	12174.7	10672.6	8271.4	8950.2	10613.5	10724.0	10446.3	9593.4	9493.5	11585.2
57.5°	13080.6	12986.0	11449.8	9069.0	9744.0	11247.0	11312.8	11334.7	10183.0	9953.7	12158.8
60°	13670.9	13688.3	12428.3	9983.9	10237.4	11853.1	11721.4	11521.7	10777.8	10627.9	12438.1
62.5°	13877.4	14044.7	13190.3	10942.7	10662.7	11891.0	11686.6	11517.9	11044.1	11323.4	12118.0
65°	13708.7	14000.8	13367.4	11785.0	10920.0	11416.5	11203.8	11095.6	11035.8	11607.2	11409.7
67.5°	13038.2	13403.7	12860.4	11792.6	9984.7	9720.6	9971.8	10314.6	10116.4	11371.8	10417.5
70°	11536.0	11936.4	11683.6	11100.9	8317.5	7647.8	7924.8	8443.2	8303.2	10114.1	8957.8
72.5°	8655.1	9169.7	9219.6	9583.6	6602.7	5755.9	5796.0	5781.6	6023.0	8155.6	6990.2
75°	5559.9	5960.2	6501.3	7733.3	5015.8	4202.3	3817.8	3724.0	4174.3	6372.7	5004.4
77.5°	3227.6	3275.3	3525.0	5834.6	3592.3	3027.8	2766.0	2899.9	3057.3	4447.5	3316.9
80°	1543.8	1568.0	1670.9	3002.1	2495.8	2620.7	2418.6	2569.2	2099.2	2556.3	1882.1
82.5°	489.6	494.9	512.3	1474.9	1549.8	1736.0	1112.4	1491.6	1297.8	1545.3	1253.2
85°	81.7	139.2	171.8	426.1	874.8	585.7	241.4	532.0	724.2	974.7	569.1
87.5°	0.0	0.0	0.0	7.6	71.1	33.3	5.3	30.3	111.2	217.2	25.7
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°	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8
2.5°	2121.2	2173.4	1976.7	1800.3	1845.0	1809.4	1755.7	1664.1	1452.2	1608.1	1597.5
5°	2729.6	2632.8	2366.4	2242.3	2090.9	1860.1	1832.1	1655.0	1577.1	1590.0	1578.6
7.5°	2941.5	2768.2	2532.9	2159.0	1804.1	1471.1	1369.0	1253.2	1229.7	1279.7	1312.2
10°	2775.0	2591.1	2385.3	1920.7	1647.5	1406.8	1154.8	992.9	905.1	894.5	903.6
12.5°	2851.5	2653.2	2229.4	1873.7	1588.4	1370.5	1089.0	844.5	653.8	668.2	630.4
15°	2904.4	2676.7	2192.3	1775.4	1466.6	1175.2	836.2	591.8	435.9	390.5	363.2
17.5°	3215.5	2890.1	2145.4	1661.8	1296.3	914.9	525.2	342.8	292.1	276.2	263.4
20°	3615.0	3152.7	2144.7	1542.3	1045.1	572.1	327.7	248.2	236.1	245.2	235.4
22.5°	4079.7	3502.3	2258.9	1393.2	749.9	361.0	255.0	220.2	208.1	215.7	216.4
25°	4547.4	4026.7	2352.0	1251.7	522.2	277.0	227.0	202.8	189.2	196.0	192.2
27.5°	5391.9	4461.1	2330.8	1070.8	384.4	243.7	211.1	189.9	169.5	180.1	179.4
30°	5944.3	5227.7	2413.3	817.3	305.0	213.4	196.8	173.3	151.4	163.5	162.7
32.5°	6605.0	5556.9	2502.6	627.4	253.5	202.1	177.1	154.4	141.5	149.1	147.6
35°	7347.4	6207.7	2338.4	522.2	220.2	182.4	156.6	139.2	127.9	131.7	131.7
37.5°	8658.8	6751.8	2240.0	425.3	205.1	165.0	146.8	125.6	118.8	118.8	122.6
40°	9403.5	7582.7	1946.4	336.8	209.6	152.1	137.0	115.0	105.9	105.2	109.0
42.5°	10372.1	8061.8	1762.5	272.4	189.9	148.3	125.6	104.4	93.8	93.1	96.9
45°	10946.5	8329.6	1503.7	214.2	170.3	172.5	116.5	96.1	80.2	77.2	84.0
47.5°	11309.0	8684.6	1356.9	170.3	148.3	171.8	113.5	83.2	67.4	63.6	69.6
50°	11492.9	8860.1	1328.1	146.1	128.6	153.6	130.2	69.6	57.5	52.2	57.5
52.5°	11684.4	9145.4	1338.7	134.7	113.5	123.4	123.4	59.8	50.7	44.6	48.4
55°	12071.1	9566.9	1315.2	127.9	104.4	93.8	79.5	53.0	46.2	39.4	43.1
57.5°	12546.3	9869.7	1315.2	121.8	96.9	80.2	63.6	49.2	42.4	34.1	37.1
60°	12456.3	9551.1	1250.2	115.8	90.8	74.9	57.5	45.4	39.4	31.0	33.3
62.5°	11838.0	8684.6	1012.5	106.7	85.5	71.1	52.2	43.1	37.1	27.2	29.5
65°	11111.5	7764.3	703.8	96.9	79.5	64.3	46.9	40.9	34.1	24.2	25.7
67.5°	10236.7	6667.8	390.5	87.0	73.4	56.0	43.1	40.1	32.5	21.9	23.5
70°	8718.6	5034.0	209.6	79.5	68.9	51.5	40.9	40.1	32.5	21.2	21.9
72.5°	6545.2	3170.1	122.6	72.6	62.8	47.7	38.6	40.9	31.8	20.4	20.4
75°	4453.5	1924.4	87.8	62.1	56.0	40.1	37.1	39.4	32.5	20.4	18.9
77.5°	3027.8	1352.3	71.9	56.0	50.7	35.6	37.8	39.4	32.5	16.6	12.9
80°	1890.4	697.7	54.5	44.6	43.9	31.0	37.8	34.1	21.2	3.8	0.0
82.5°	1322.1	259.6	31.8	34.1	34.1	21.9	29.5	24.2	12.1	0.0	0.0
85°	554.7	44.6	17.4	24.2	21.2	12.9	23.5	18.2	7.6	0.0	0.0
87.5°	9.8	0.0	6.8	14.4	15.1	7.6	12.1	7.6	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

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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8
2.5°	1647.5	1575.6	1424.2	1496.9	1489.3	1522.6	1525.6	1448.4	1614.9	1717.8	1733.0
5°	1580.1	1531.7	1523.4	1481.7	1471.1	1532.4	1499.1	1496.9	1577.1	1694.4	1695.1
7.5°	1313.0	1275.9	1293.3	1244.9	1120.0	1127.6	1138.9	1186.6	1255.5	1332.7	1360.7
10°	901.3	997.4	927.0	921.0	908.1	868.0	836.2	861.2	950.5	1021.6	1048.1
12.5°	643.2	658.4	701.5	685.6	707.6	673.5	660.7	738.6	825.6	898.3	950.5
15°	376.1	401.8	427.6	482.1	504.0	497.2	536.5	601.6	672.0	705.3	769.6
17.5°	264.9	267.1	272.4	331.5	370.1	385.2	408.6	457.8	486.6	501.7	528.2
20°	231.6	224.8	215.7	249.0	285.3	304.2	297.4	336.0	359.5	374.6	393.5
22.5°	209.6	198.3	193.0	204.3	232.3	249.0	252.0	274.7	310.3	320.9	326.9
25°	189.2	181.6	177.8	183.9	199.0	214.9	217.9	247.5	279.2	283.8	295.9
27.5°	175.6	161.2	162.7	167.2	174.1	193.7	199.8	216.4	262.6	267.9	271.7
30°	161.2	146.1	150.6	155.1	152.1	176.3	185.4	204.3	249.0	257.3	261.8
32.5°	146.8	135.5	134.7	139.2	144.5	157.4	177.1	199.0	239.9	251.2	262.6
35°	130.9	121.8	123.4	124.1	130.9	147.6	161.9	173.3	201.3	207.4	211.1
37.5°	119.6	112.0	110.5	118.1	124.9	137.7	143.0	148.3	185.4	199.0	199.8
40°	105.9	101.4	101.4	106.7	121.8	120.3	127.1	143.8	179.4	193.7	195.2
42.5°	96.1	90.1	91.6	96.9	107.5	99.9	113.5	137.7	177.1	191.5	190.7
45°	81.0	79.5	82.5	87.0	91.6	84.8	105.9	131.7	169.5	188.4	183.1
47.5°	67.4	67.4	71.1	75.7	73.4	75.7	96.1	123.4	165.0	182.4	178.6
50°	55.2	56.0	59.8	67.4	60.5	66.6	86.3	115.0	157.4	176.3	173.3
52.5°	46.9	47.7	49.9	55.2	52.2	60.5	79.5	106.7	149.8	165.7	164.2
55°	40.9	42.4	42.4	45.4	46.9	56.8	71.9	98.4	138.5	155.9	152.9
57.5°	36.3	37.8	37.1	39.4	40.9	49.9	64.3	89.3	127.1	141.5	137.0
60°	32.5	34.1	33.3	36.3	35.6	43.1	56.0	79.5	115.0	126.4	122.6
62.5°	28.8	30.3	30.3	31.8	32.5	36.3	48.4	70.4	102.9	112.0	109.0
65°	25.7	27.2	28.0	27.2	28.8	31.0	40.9	63.6	89.3	98.4	93.8
67.5°	23.5	25.0	26.5	23.5	25.0	25.7	34.8	56.8	78.7	86.3	82.5
70°	22.7	23.5	23.5	20.4	19.7	20.4	30.3	48.4	68.9	76.4	71.1
72.5°	21.2	21.9	21.2	16.6	14.4	15.9	25.7	40.9	58.3	64.3	59.8
75°	19.7	20.4	19.7	13.6	9.1	11.4	21.2	35.6	49.9	53.0	50.7
77.5°	16.6	18.2	18.2	9.8	3.0	6.8	15.9	28.8	41.6	41.6	42.4
80°	1.5	4.5	7.6	5.3	0.0	0.8	5.3	15.1	26.5	25.7	28.0
82.5°	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	9.1	6.8	7.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	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

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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8	1599.8
2.5°	1697.4	1674.0	1703.5	1793.5	1757.2	1764.0	1739.8	1888.9	2057.6	2062.9
5°	1696.7	1675.5	1719.4	1715.6	1819.2	1932.0	2041.0	2217.3	2467.0	2468.5
7.5°	1347.8	1473.4	1506.0	1496.1	1629.3	1784.4	1952.4	2290.0	2495.0	2517.0
10°	1215.4	1269.8	1336.4	1360.7	1415.9	1563.5	1753.4	2135.6	2365.6	2416.3
12.5°	1053.4	1227.5	1316.0	1487.8	1519.6	1540.8	1840.4	2172.7	2312.7	2306.6
15°	872.5	1023.9	1163.9	1373.5	1459.8	1682.3	1918.4	2353.5	2436.8	2517.0
17.5°	617.5	731.8	946.7	1166.9	1430.3	1672.4	2133.3	2676.7	2834.1	2929.4
20°	413.2	468.4	662.9	954.3	1288.0	1528.7	2221.1	2968.8	3140.6	3223.0
22.5°	335.2	361.7	462.4	699.2	1100.3	1521.8	2256.7	3287.4	3749.0	3858.7
25°	295.1	313.3	367.0	517.6	913.4	1491.6	2453.4	3646.1	4203.0	4291.6
27.5°	258.1	285.3	325.4	426.8	783.2	1470.4	2553.3	4248.4	4912.9	4999.9
30°	246.7	280.0	318.6	389.0	692.4	1388.7	2712.2	4791.8	5422.2	5577.3
32.5°	266.4	277.7	296.6	356.4	622.1	1302.4	2991.5	5441.1	5843.7	6045.7
35°	211.1	231.6	264.9	326.9	592.5	1297.8	3149.6	5858.8	6519.5	6644.3
37.5°	206.6	225.5	268.6	318.6	628.1	1332.7	3384.2	6714.7	7737.9	7993.6
40°	200.5	224.8	265.6	314.8	628.1	1366.7	3534.1	7399.6	8557.4	8817.0
42.5°	198.3	229.3	264.9	330.7	608.4	1385.6	3760.3	8082.9	9423.2	9628.2
45°	196.8	233.8	267.1	349.6	603.9	1447.7	3888.2	8415.2	9980.1	10215.5
47.5°	193.0	233.8	298.2	338.3	578.9	1441.6	4054.0	8907.8	10312.4	10510.6
50°	189.9	235.4	337.5	317.1	582.7	1404.5	4278.7	9370.2	10777.8	10919.3
52.5°	183.1	240.6	331.5	287.6	571.4	1400.8	4614.0	10027.8	11390.0	11493.7
55°	168.0	233.8	299.7	251.2	531.2	1357.6	5058.2	10883.0	12239.1	12257.2
57.5°	154.4	217.2	250.5	230.8	445.0	1362.9	5441.1	11670.0	12995.8	13080.6
60°	140.8	225.5	194.5	214.9	368.5	1266.1	5626.5	11971.2	13546.7	13670.9
62.5°	127.9	208.1	165.7	197.5	328.4	1176.0	5497.9	11729.0	13617.1	13877.4
65°	113.5	144.5	140.0	177.1	332.2	1049.6	5068.0	11019.9	13350.0	13708.7
67.5°	97.6	113.5	123.4	152.9	355.7	941.4	4330.9	9881.8	12631.8	13038.2
70°	85.5	102.2	107.5	133.9	370.1	870.3	3417.5	8302.4	11160.7	11536.0
72.5°	71.1	94.6	96.1	117.3	356.4	799.9	2435.3	5960.2	8474.9	8655.1
75°	61.3	78.7	87.0	98.4	299.7	597.1	1341.7	3689.2	5358.6	5559.9
77.5°	55.2	59.8	65.8	68.1	127.1	311.0	461.6	2274.8	3000.6	3227.6
80°	42.4	46.9	45.4	46.9	69.6	107.5	175.6	1066.3	1417.4	1543.8
82.5°	13.6	22.7	25.0	21.2	45.4	53.0	50.7	368.5	460.9	489.6
85°	3.0	8.3	3.8	0.0	15.1	27.2	3.8	56.0	110.5	81.7
87.5°	0.0	0.0	0.0	0.0	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

(END OF REPORT)