

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: P367951

Luminaire Tested: **MSA-SA3C-730-U-SLL-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367951
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-730-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: 12095 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

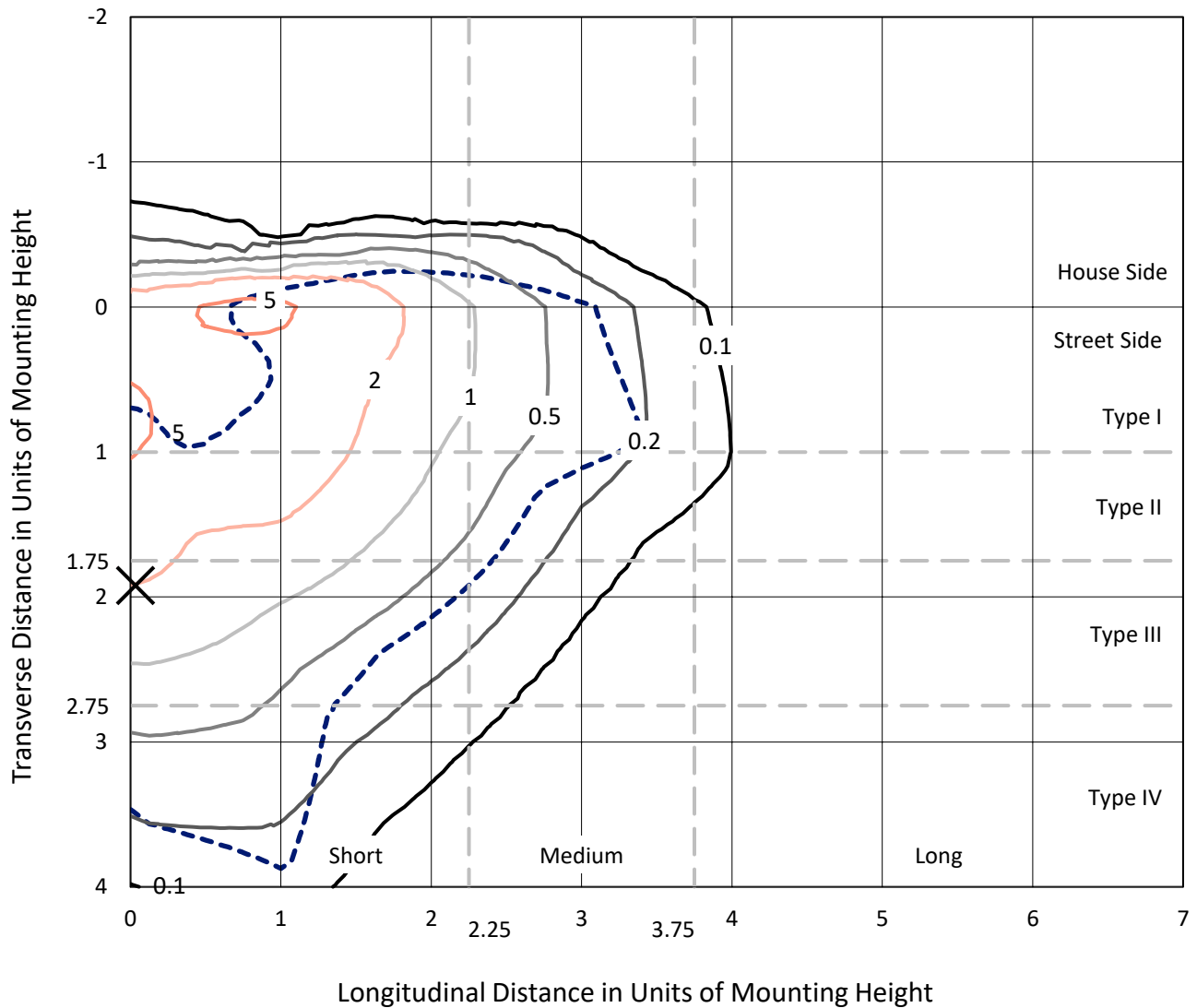
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

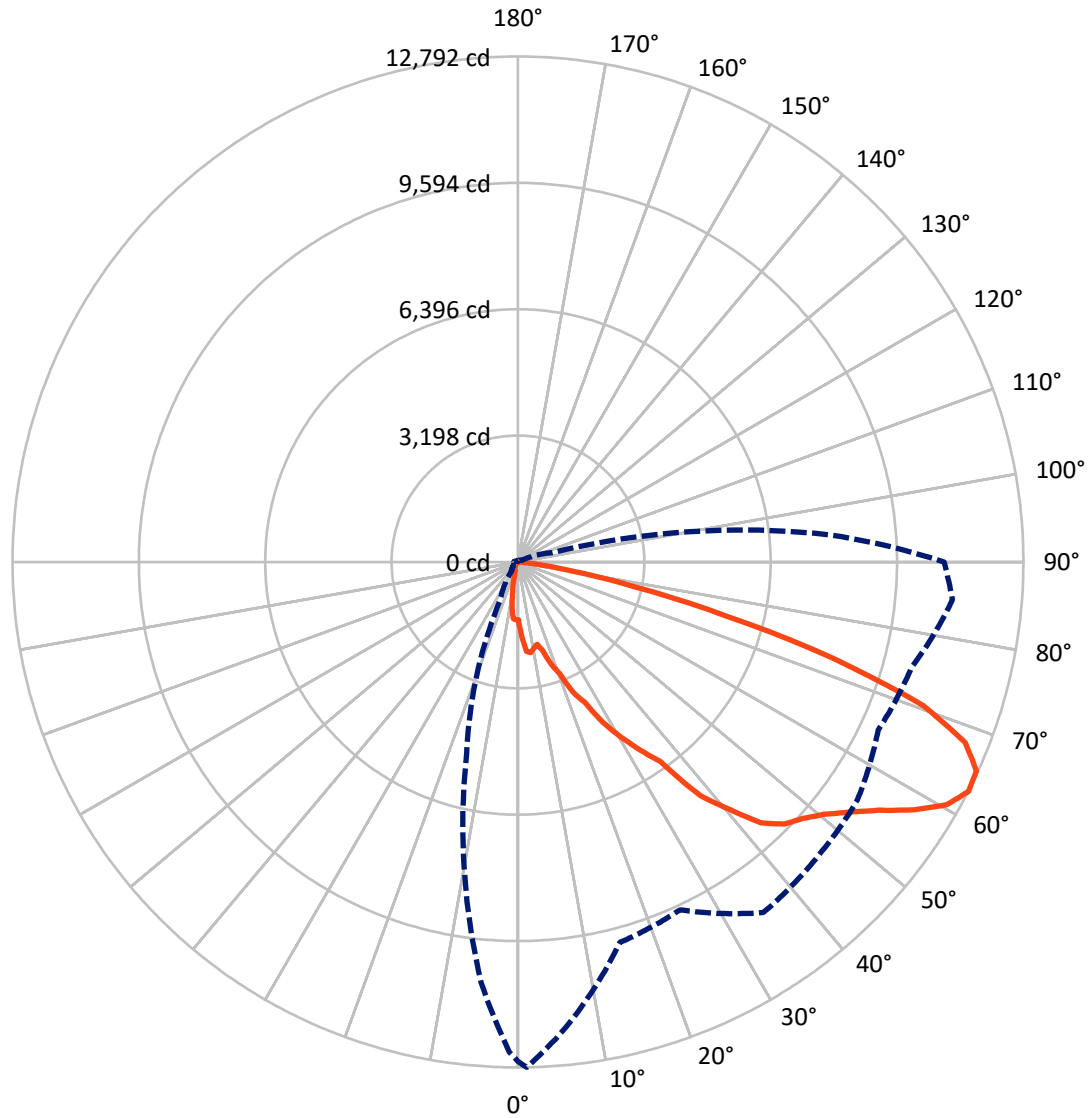
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.2 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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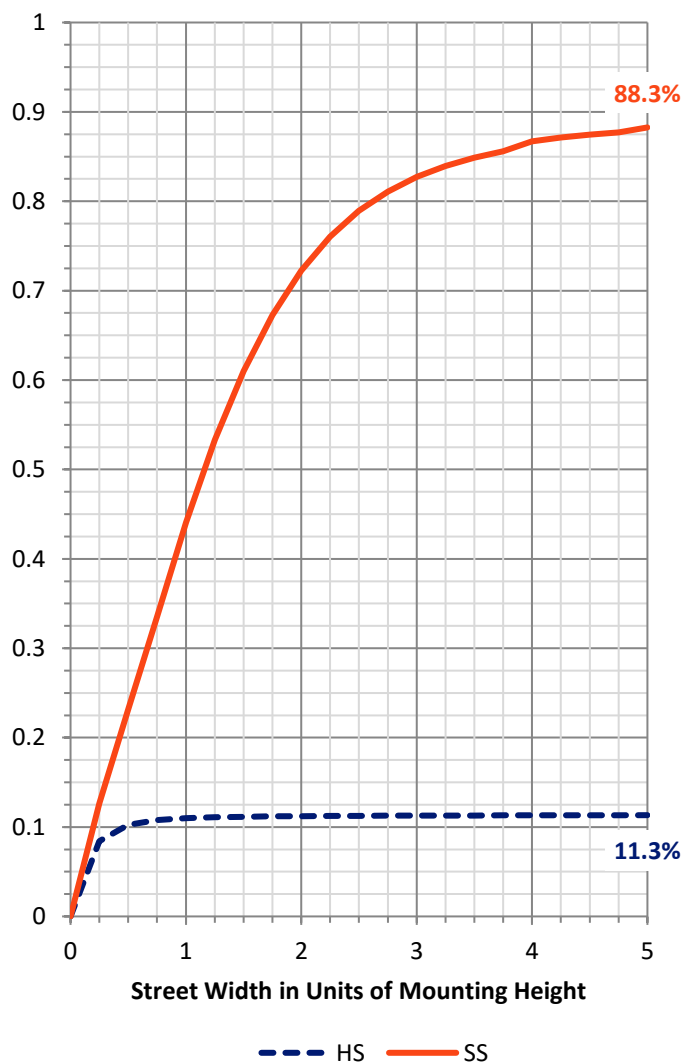
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1383.1	0.0	1383.1
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	10711.9	0.0	10711.9
	% Fixture	88.6	0.0	88.6
Total	Lumens	12095.0	0.0	12095.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.8	1.3
10°-20°	425.2	3.5
20°-30°	687.4	5.7
30°-40°	1151.4	9.5
40°-50°	1882.6	15.6
50°-60°	2786.8	23.0
60°-70°	3199.5	26.5
70°-80°	1582.1	13.1
80°-90°	217.2	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°	12095.0	100.0
0°-180°	12095.0	100.0

Coefficient of Utilization

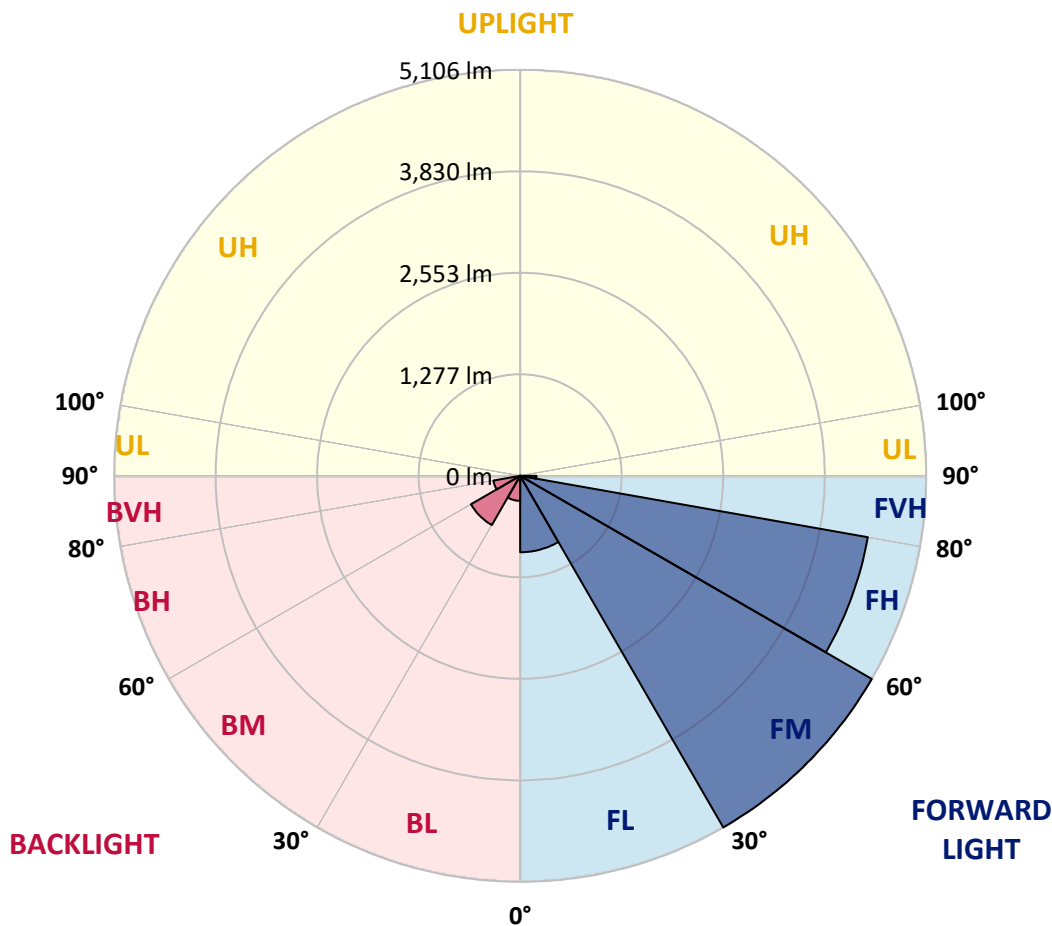


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	960.7	7.9			
FM (30°-60°)	5106.4	42.2			
FH (60°-80°)	4439.6	36.7			G2/5000
FVH (80°-90°)	205.2	1.7			G2/225
BL (0°-30°)	314.7	2.6	B1/500		
BM (30°-60°)	714.4	5.9	B1/1000		
BH (60°-80°)	342.0	2.8	B1/500		G1/500
BVH (80°-90°)	12.0	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1878.8	1887.8	1845.8	1840.2	1742.4	1864.4	1867.8	1882.3	1792.7	1619.0	1861.6
5°	2248.3	2273.1	2240.7	2384.7	2426.1	2515.0	2351.7	2497.8	2435.7	2453.0	2488.1
7.5°	2292.4	2317.9	2386.1	2627.4	2850.0	2794.1	2776.2	2831.4	2826.5	2699.0	2762.4
10°	2200.7	2222.1	2335.8	2774.8	2872.0	3122.9	3184.3	3057.4	3005.7	2726.6	2604.6
12.5°	2100.8	2136.6	2281.4	2807.9	3099.5	3353.1	3555.1	3374.5	3202.9	2905.8	2794.1
15°	2292.4	2312.4	2539.8	2876.9	3131.9	3306.9	3472.4	3412.4	3386.2	3172.5	2794.1
17.5°	2668.0	2714.9	2879.6	3045.7	3247.0	3352.4	3313.1	3294.5	3227.7	3563.3	3171.8
20°	2935.4	3023.0	3238.7	3310.4	3150.5	3249.0	3224.9	3208.4	3156.0	3780.4	3606.1
22.5°	3514.4	3595.0	3599.2	3624.7	3252.5	3095.3	3055.4	3060.2	3298.0	3845.2	4146.4
25°	3908.6	3936.2	4154.0	3972.0	3530.9	3142.2	2989.9	3058.1	3400.7	4311.1	4654.4
27.5°	4553.8	4619.2	4755.0	4138.8	3697.7	3112.6	2870.0	3118.1	3670.9	4465.5	5218.9
30°	5079.6	5142.4	5360.8	4367.0	3842.5	3259.4	2921.7	3238.7	3839.0	4783.3	5726.1
32.5°	5506.3	5668.2	5916.4	4719.2	3837.0	3428.2	3185.6	3198.7	4045.8	5194.7	6227.9
35°	6051.5	6202.4	6376.8	4961.8	4087.8	3482.7	3263.5	3591.6	4353.2	5624.8	6903.3
37.5°	7280.4	7508.5	7163.9	5573.1	4380.1	3974.8	3570.9	3833.5	4675.1	6063.9	7831.7
40°	8030.2	8222.5	7889.6	5885.4	4886.0	4222.9	4119.5	4253.9	4990.0	6290.6	8531.3
42.5°	8769.1	9022.7	8466.5	6355.4	5366.4	4923.2	4640.6	4748.8	5445.6	6837.9	9318.4
45°	9303.9	9461.1	8591.3	6601.5	6026.6	5721.3	5533.2	5371.9	6081.1	7189.4	9826.4
47.5°	9572.7	9698.2	8837.3	6679.3	6419.5	6565.6	6977.8	6640.8	6643.5	7443.7	10100.0
50°	9944.9	10032.5	8975.2	6772.4	6846.1	7881.4	8089.5	7372.0	7285.9	7698.7	10144.8
52.5°	10468.1	10510.8	9242.6	7017.8	7485.1	8911.8	8986.9	8696.7	7928.9	8172.9	10244.1
55°	11163.5	11088.4	9720.2	7533.3	8151.5	9666.5	9767.1	9514.2	8737.4	8646.4	10551.5
57.5°	11913.4	11827.2	10428.1	8259.8	8874.6	10243.4	10303.3	10323.3	9274.3	9065.5	11073.9
60°	12451.0	12466.8	11319.3	9093.0	9323.9	10795.4	10675.5	10493.6	9816.0	9679.6	11328.2
62.5°	12639.1	12791.5	12013.3	9966.3	9711.3	10829.9	10643.8	10490.1	10058.7	10313.0	11036.7
65°	12485.4	12751.5	12174.6	10733.4	9945.6	10397.8	10204.1	10105.5	10051.1	10571.4	10391.6
67.5°	11874.8	12207.7	11712.8	10740.3	9093.7	8853.2	9082.0	9394.2	9213.7	10357.1	9488.0
70°	10506.7	10871.3	10641.1	10110.3	7575.3	6965.4	7217.6	7689.8	7562.3	9211.6	8158.4
72.5°	7882.7	8351.4	8396.9	8728.4	6013.5	5242.3	5278.8	5265.7	5485.6	7427.9	6366.4
75°	5063.8	5428.4	5921.2	7043.3	4568.2	3827.3	3477.2	3391.7	3801.8	5804.0	4557.9
77.5°	2939.6	2983.0	3210.4	5314.0	3271.8	2757.6	2519.1	2641.1	2784.5	4050.6	3020.9
80°	1406.0	1428.1	1521.8	2734.2	2273.1	2386.8	2202.8	2339.9	1911.9	2328.2	1714.1
82.5°	445.9	450.8	466.6	1343.3	1411.5	1581.1	1013.2	1358.5	1182.0	1407.4	1141.4
85°	74.4	126.8	156.5	388.0	796.8	533.5	219.9	484.5	659.6	887.7	518.3
87.5°	0.0	0.0	0.0	6.9	64.8	30.3	4.8	27.6	101.3	197.8	23.4
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°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1931.9	1979.5	1800.3	1639.7	1680.3	1648.0	1599.0	1515.6	1322.6	1464.6	1455.0
5°	2486.1	2397.8	2155.2	2042.2	1904.3	1694.1	1668.6	1507.4	1436.4	1448.1	1437.7
7.5°	2679.0	2521.2	2306.9	1966.4	1643.1	1339.9	1246.8	1141.4	1120.0	1165.5	1195.1
10°	2527.4	2359.9	2172.5	1749.3	1500.5	1281.3	1051.8	904.3	824.3	814.7	822.9
12.5°	2597.0	2416.4	2030.5	1706.5	1446.7	1248.2	991.8	769.2	595.5	608.6	574.1
15°	2645.3	2437.8	1996.7	1616.9	1335.7	1070.4	761.6	539.0	397.0	355.6	330.8
17.5°	2928.5	2632.2	1954.0	1513.6	1180.7	833.3	478.3	312.2	266.0	251.6	239.9
20°	3292.5	2871.3	1953.3	1404.7	951.8	521.1	298.4	226.1	215.0	223.3	214.4
22.5°	3715.7	3189.8	2057.4	1268.9	683.0	328.8	232.3	200.6	189.5	196.4	197.1
25°	4141.6	3667.4	2142.1	1140.0	475.6	252.3	206.8	184.7	172.3	178.5	175.1
27.5°	4910.8	4063.0	2122.8	975.3	350.1	221.9	192.3	173.0	154.4	164.0	163.3
30°	5413.9	4761.2	2198.0	744.4	277.8	194.4	179.2	157.8	137.8	148.9	148.2
32.5°	6015.6	5061.0	2279.3	571.4	230.9	184.0	161.3	140.6	128.9	135.8	134.4
35°	6691.8	5653.8	2129.7	475.6	200.6	166.1	142.7	126.8	116.5	119.9	119.9
37.5°	7886.2	6149.3	2040.1	387.3	186.8	150.3	133.7	114.4	108.2	108.2	111.7
40°	8564.4	6906.1	1772.7	306.7	190.9	138.5	124.8	104.8	96.5	95.8	99.2
42.5°	9446.6	7342.4	1605.2	248.1	173.0	135.1	114.4	95.1	85.5	84.8	88.2
45°	9969.7	7586.4	1369.5	195.1	155.1	157.1	106.1	87.5	73.1	70.3	76.5
47.5°	10299.9	7909.6	1235.8	155.1	135.1	156.5	103.4	75.8	61.3	57.9	63.4
50°	10467.4	8069.5	1209.6	133.0	117.2	139.9	118.5	63.4	52.4	47.6	52.4
52.5°	10641.7	8329.4	1219.3	122.7	103.4	112.3	112.3	54.4	46.2	40.7	44.1
55°	10993.9	8713.3	1197.9	116.5	95.1	85.5	72.4	48.2	42.0	35.8	39.3
57.5°	11426.8	8989.0	1197.9	111.0	88.2	73.1	57.9	44.8	38.6	31.0	33.8
60°	11344.8	8698.8	1138.6	105.5	82.7	68.2	52.4	41.4	35.8	28.3	30.3
62.5°	10781.7	7909.6	922.2	97.2	77.9	64.8	47.6	39.3	33.8	24.8	26.9
65°	10120.0	7071.5	641.0	88.2	72.4	58.6	42.7	37.2	31.0	22.1	23.4
67.5°	9323.2	6072.8	355.6	79.3	66.9	51.0	39.3	36.5	29.6	20.0	21.4
70°	7940.6	4584.8	190.9	72.4	62.7	46.9	37.2	36.5	29.6	19.3	20.0
72.5°	5961.2	2887.2	111.7	66.2	57.2	43.4	35.2	37.2	28.9	18.6	18.6
75°	4056.1	1752.7	80.0	56.5	51.0	36.5	33.8	35.8	29.6	18.6	17.2
77.5°	2757.6	1231.7	65.5	51.0	46.2	32.4	34.5	35.8	29.6	15.2	11.7
80°	1721.7	635.5	49.6	40.7	40.0	28.3	34.5	31.0	19.3	3.4	0.0
82.5°	1204.1	236.4	28.9	31.0	31.0	20.0	26.9	22.1	11.0	0.0	0.0
85°	505.2	40.7	15.9	22.1	19.3	11.7	21.4	16.5	6.9	0.0	0.0
87.5°	9.0	0.0	6.2	13.1	13.8	6.9	11.0	6.9	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°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1500.5	1435.0	1297.1	1363.3	1356.4	1386.7	1389.5	1319.2	1470.8	1564.6	1578.3
5°	1439.1	1395.0	1387.4	1349.5	1339.9	1395.7	1365.4	1363.3	1436.4	1543.2	1543.9
7.5°	1195.8	1162.0	1177.9	1133.8	1020.1	1027.0	1037.3	1080.7	1143.4	1213.7	1239.2
10°	820.9	908.4	844.3	838.8	827.1	790.5	761.6	784.3	865.7	930.5	954.6
12.5°	585.8	599.6	638.9	624.4	644.4	613.4	601.7	672.7	752.0	818.1	865.7
15°	342.5	366.0	389.4	439.0	459.0	452.8	488.7	547.9	612.0	642.4	700.9
17.5°	241.2	243.3	248.1	301.9	337.0	350.8	372.2	417.0	443.2	457.0	481.1
20°	210.9	204.7	196.4	226.8	259.8	277.1	270.9	306.0	327.4	341.2	358.4
22.5°	190.9	180.6	175.8	186.1	211.6	226.8	229.5	250.2	282.6	292.2	297.7
25°	172.3	165.4	162.0	167.5	181.3	195.7	198.5	225.4	254.3	258.5	269.5
27.5°	159.9	146.8	148.2	152.3	158.5	176.4	182.0	197.1	239.2	244.0	247.4
30°	146.8	133.0	137.2	141.3	138.5	160.6	168.9	186.1	226.8	234.3	238.5
32.5°	133.7	123.4	122.7	126.8	131.6	143.4	161.3	181.3	218.5	228.8	239.2
35°	119.2	111.0	112.3	113.0	119.2	134.4	147.5	157.8	183.3	188.8	192.3
37.5°	108.9	102.0	100.6	107.5	113.7	125.4	130.3	135.1	168.9	181.3	182.0
40°	96.5	92.4	92.4	97.2	111.0	109.6	115.8	131.0	163.3	176.4	177.8
42.5°	87.5	82.0	83.4	88.2	97.9	91.0	103.4	125.4	161.3	174.4	173.7
45°	73.7	72.4	75.1	79.3	83.4	77.2	96.5	119.9	154.4	171.6	166.8
47.5°	61.3	61.3	64.8	68.9	66.9	68.9	87.5	112.3	150.3	166.1	162.7
50°	50.3	51.0	54.4	61.3	55.1	60.7	78.6	104.8	143.4	160.6	157.8
52.5°	42.7	43.4	45.5	50.3	47.6	55.1	72.4	97.2	136.5	150.9	149.6
55°	37.2	38.6	38.6	41.4	42.7	51.7	65.5	89.6	126.1	142.0	139.2
57.5°	33.1	34.5	33.8	35.8	37.2	45.5	58.6	81.3	115.8	128.9	124.8
60°	29.6	31.0	30.3	33.1	32.4	39.3	51.0	72.4	104.8	115.1	111.7
62.5°	26.2	27.6	27.6	28.9	29.6	33.1	44.1	64.1	93.7	102.0	99.2
65°	23.4	24.8	25.5	24.8	26.2	28.3	37.2	57.9	81.3	89.6	85.5
67.5°	21.4	22.7	24.1	21.4	22.7	23.4	31.7	51.7	71.7	78.6	75.1
70°	20.7	21.4	21.4	18.6	17.9	18.6	27.6	44.1	62.7	69.6	64.8
72.5°	19.3	20.0	19.3	15.2	13.1	14.5	23.4	37.2	53.1	58.6	54.4
75°	17.9	18.6	17.9	12.4	8.3	10.3	19.3	32.4	45.5	48.2	46.2
77.5°	15.2	16.5	16.5	9.0	2.8	6.2	14.5	26.2	37.9	37.9	38.6
80°	1.4	4.1	6.9	4.8	0.0	0.7	4.8	13.8	24.1	23.4	25.5
82.5°	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	8.3	6.2	6.9
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°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1545.9	1524.6	1551.5	1633.5	1600.4	1606.6	1584.5	1720.3	1874.0	1878.8
5°	1545.3	1526.0	1565.9	1562.5	1656.9	1759.6	1858.9	2019.4	2246.9	2248.3
7.5°	1227.5	1341.9	1371.6	1362.6	1483.9	1625.2	1778.2	2085.6	2272.4	2292.4
10°	1106.9	1156.5	1217.2	1239.2	1289.6	1424.0	1597.0	1945.0	2154.5	2200.7
12.5°	959.4	1117.9	1198.6	1355.0	1384.0	1403.3	1676.2	1978.8	2106.3	2100.8
15°	794.7	932.5	1060.0	1251.0	1329.5	1532.2	1747.2	2143.5	2219.3	2292.4
17.5°	562.4	666.5	862.2	1062.8	1302.6	1523.2	1942.9	2437.8	2581.2	2668.0
20°	376.3	426.6	603.8	869.1	1173.1	1392.2	2022.9	2703.9	2860.3	2935.4
22.5°	305.3	329.5	421.1	636.9	1002.1	1386.0	2055.3	2994.0	3414.5	3514.4
25°	268.8	285.3	334.3	471.4	831.9	1358.5	2234.5	3320.7	3828.0	3908.6
27.5°	235.0	259.8	296.4	388.7	713.4	1339.2	2325.5	3869.3	4474.5	4553.8
30°	224.7	255.0	290.2	354.3	630.6	1264.7	2470.2	4364.2	4938.3	5079.6
32.5°	242.6	252.9	270.2	324.6	566.5	1186.2	2724.5	4955.6	5322.3	5506.3
35°	192.3	210.9	241.2	297.7	539.7	1182.0	2868.6	5336.0	5937.7	6051.5
37.5°	188.2	205.4	244.7	290.2	572.1	1213.7	3082.2	6115.6	7047.4	7280.4
40°	182.6	204.7	241.9	286.7	572.1	1244.8	3218.7	6739.3	7793.8	8030.2
42.5°	180.6	208.8	241.2	301.2	554.1	1262.0	3424.8	7361.7	8582.3	8769.1
45°	179.2	213.0	243.3	318.4	550.0	1318.5	3541.3	7664.3	9089.6	9303.9
47.5°	175.8	213.0	271.6	308.1	527.3	1313.0	3692.2	8113.0	9392.2	9572.7
50°	173.0	214.4	307.4	288.8	530.7	1279.2	3896.9	8534.1	9816.0	9944.9
52.5°	166.8	219.2	301.9	261.9	520.4	1275.8	4202.2	9133.0	10373.6	10468.1
55°	153.0	213.0	272.9	228.8	483.8	1236.5	4606.8	9911.8	11147.0	11163.5
57.5°	140.6	197.8	228.1	210.2	405.3	1241.3	4955.6	10628.6	11836.2	11913.4
60°	128.2	205.4	177.1	195.7	335.7	1153.1	5124.4	10903.0	12337.9	12451.0
62.5°	116.5	189.5	150.9	179.9	299.1	1071.1	5007.3	10682.4	12402.0	12639.1
65°	103.4	131.6	127.5	161.3	302.6	956.0	4615.8	10036.6	12158.7	12485.4
67.5°	88.9	103.4	112.3	139.2	323.9	857.4	3944.5	9000.0	11504.7	11874.8
70°	77.9	93.0	97.9	122.0	337.0	792.6	3112.6	7561.6	10164.8	10506.7
72.5°	64.8	86.2	87.5	106.8	324.6	728.5	2217.9	5428.4	7718.7	7882.7
75°	55.8	71.7	79.3	89.6	272.9	543.8	1222.0	3360.0	4880.5	5063.8
77.5°	50.3	54.4	60.0	62.0	115.8	283.3	420.4	2071.8	2732.8	2939.6
80°	38.6	42.7	41.4	42.7	63.4	97.9	159.9	971.1	1290.9	1406.0
82.5°	12.4	20.7	22.7	19.3	41.4	48.2	46.2	335.7	419.7	445.9
85°	2.8	7.6	3.4	0.0	13.8	24.8	3.4	51.0	100.6	74.4
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)