

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: P596948

Luminaire Tested: **MSA-SA2B-835-U-SLL**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596948  
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-SA2B-835-U-SLL  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7035 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

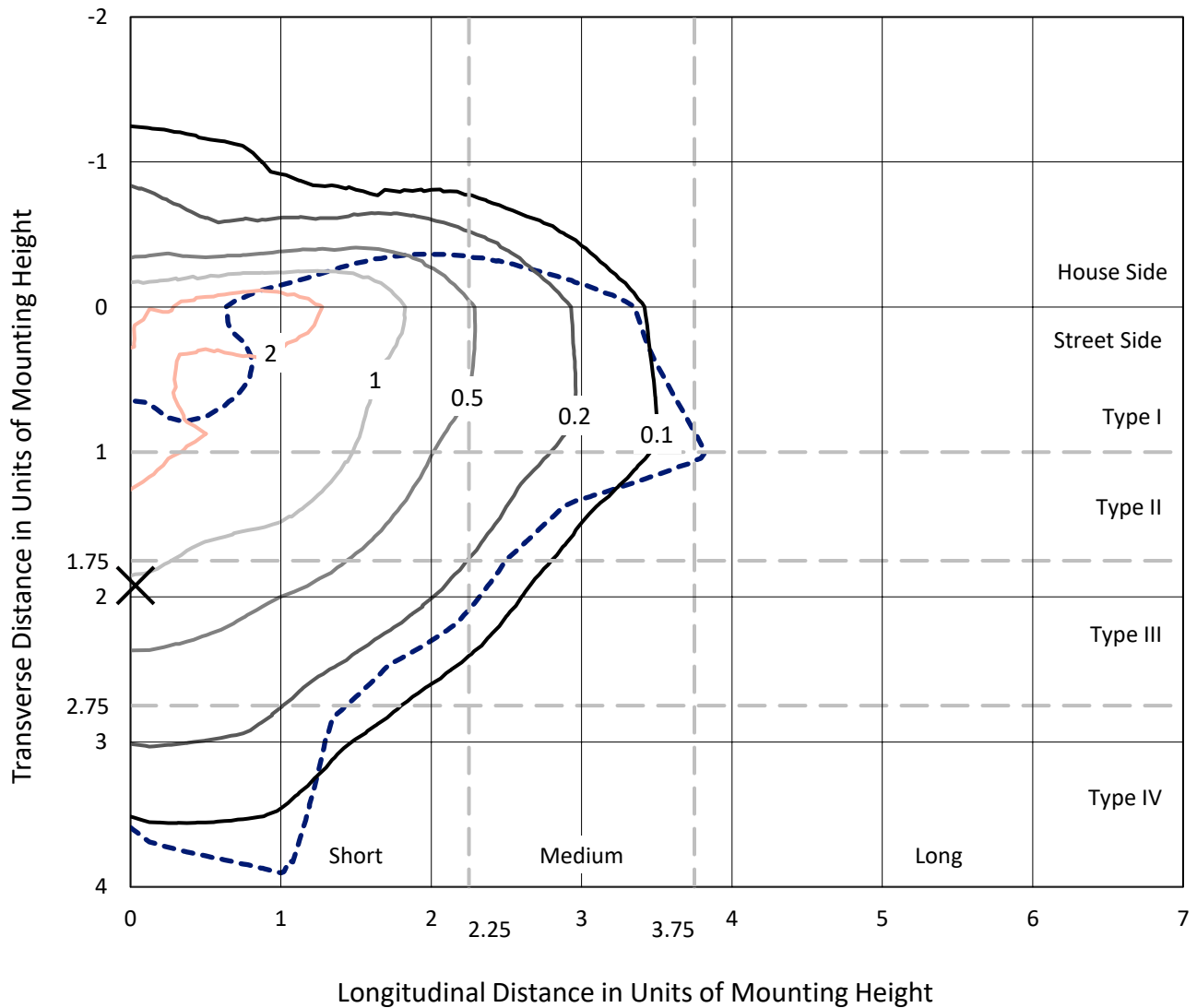
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

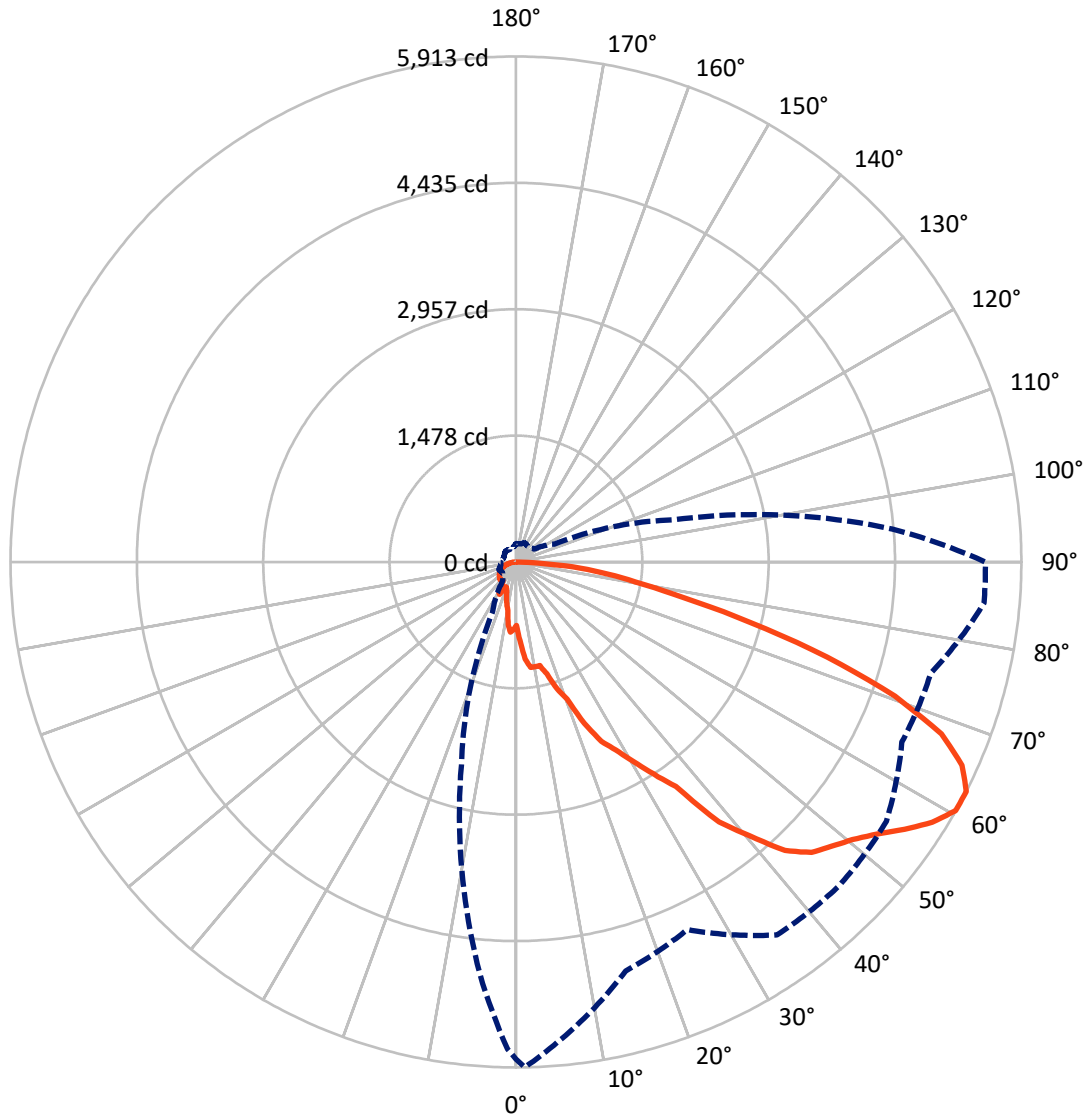
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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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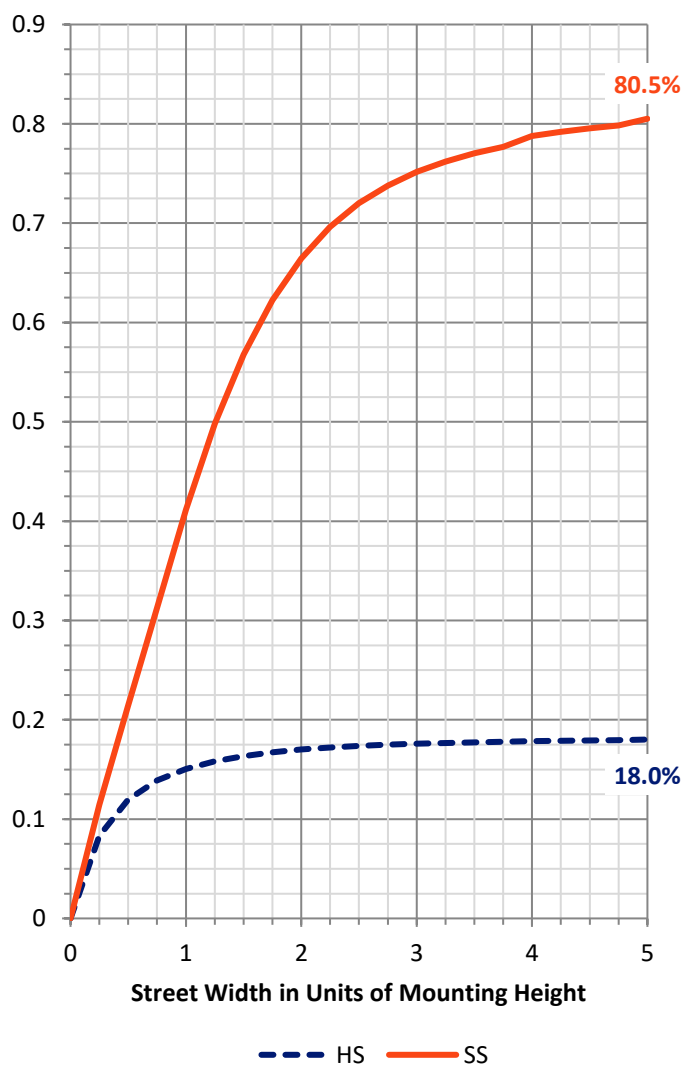
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1281.0	0.0	1281.0
	% Fixture	18.2	0.0	18.2
<b>Street Side</b>	Lumens	5754.0	0.0	5754.0
	% Fixture	81.8	0.0	81.8
<b>Total</b>	Lumens	7035.0	0.0	7035.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	1.2
10°-20°	247.1	3.5
20°-30°	436.3	6.2
30°-40°	679.6	9.7
40°-50°	1119.0	15.9
50°-60°	1597.1	22.7
60°-70°	1693.5	24.1
70°-80°	935.4	13.3
80°-90°	241.9	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°	7035.0	100.0
0°-180°	7035.0	100.0

**Coefficient of Utilization**



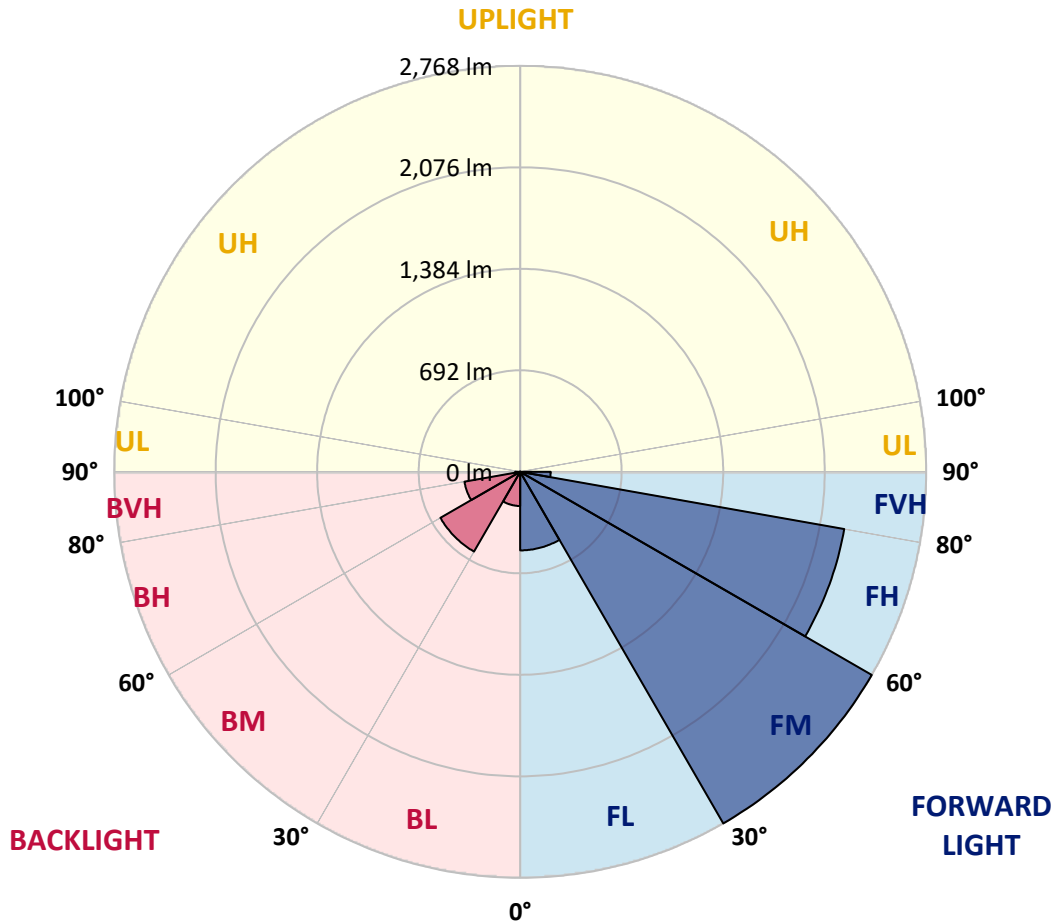
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	535.5	7.6			
FM (30°-60°)	2767.6	39.3			
FH (60°-80°)	2243.0	31.9			G2/5000
FVH (80°-90°)	207.8	3.0			G2/225
BL (0°-30°)	233.0	3.3	B1/500		
BM (30°-60°)	628.0	8.9	B1/1000		
BH (60°-80°)	385.9	5.5	B1/500		G1/500
BVH (80°-90°)	34.1	0.5			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°	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8
2.5°	912.2	920.0	904.0	885.9	811.1	883.2	861.7	901.6	888.6	801.9	960.7
5°	1127.3	1141.6	1125.9	1180.2	1183.6	1197.6	1068.2	1148.8	1120.8	1113.6	1193.8
7.5°	1231.0	1245.7	1285.7	1382.3	1457.7	1389.4	1314.0	1297.3	1275.4	1218.4	1266.9
10°	1237.5	1245.7	1299.3	1504.2	1540.7	1589.2	1540.3	1425.3	1377.8	1253.9	1217.0
12.5°	1218.1	1243.7	1313.0	1562.5	1671.1	1724.0	1736.0	1607.9	1491.5	1350.2	1331.4
15°	1348.8	1358.0	1457.4	1604.2	1678.9	1723.7	1762.6	1683.7	1647.2	1535.2	1384.7
17.5°	1536.2	1561.8	1643.1	1697.4	1747.9	1756.4	1724.3	1693.6	1635.6	1785.1	1625.0
20°	1663.2	1712.7	1812.4	1822.7	1716.5	1735.3	1730.8	1732.9	1699.8	1976.3	1888.2
22.5°	1999.2	2052.8	2066.4	2007.0	1807.0	1721.3	1738.3	1787.8	1918.3	2155.2	2254.9
25°	2303.3	2324.2	2448.8	2295.8	1977.0	1790.2	1762.2	1890.3	2102.9	2456.3	2527.3
27.5°	2462.1	2489.1	2572.0	2239.2	1998.1	1701.5	1635.9	1830.9	2047.6	2314.6	2626.3
30°	2665.2	2708.2	2821.2	2295.8	2062.0	1759.5	1614.4	1800.8	2040.5	2407.5	2835.9
32.5°	2874.5	2958.1	3042.1	2495.5	2053.1	1848.3	1752.0	1767.0	2105.3	2602.1	3053.0
35°	3151.7	3225.4	3297.8	2610.9	2232.0	1922.3	1826.8	1985.8	2271.9	2827.7	3355.8
37.5°	3744.3	3861.1	3670.3	2939.3	2426.6	2256.2	2083.8	2178.0	2448.1	3015.8	3850.5
40°	4121.9	4209.6	4025.3	3162.9	2769.3	2481.2	2452.9	2460.7	2690.8	3176.9	4183.4
42.5°	4497.1	4615.9	4322.6	3469.9	3183.8	2945.8	2799.7	2789.8	2962.6	3466.4	4562.0
45°	4777.0	4847.0	4424.7	3728.6	3628.3	3451.8	3342.2	3168.4	3319.6	3666.8	4796.1
47.5°	4910.2	4967.2	4588.9	3879.2	3916.4	3925.6	4123.3	3826.9	3631.7	3802.4	4919.0
50°	5076.4	5103.4	4685.5	4011.6	4190.2	4595.1	4642.5	4140.3	3935.5	3950.2	4991.8
52.5°	5275.1	5286.4	4826.5	4164.6	4467.0	5035.5	4962.1	4671.5	4224.7	4220.2	5128.7
55°	5525.0	5518.2	5003.4	4370.4	4664.7	5297.3	5241.7	5030.0	4539.8	4443.8	5341.7
57.5°	5747.2	5743.2	5237.9	4559.9	4831.0	5431.8	5448.2	5392.2	4754.2	4603.9	5572.5
60°	5856.2	5908.4	5504.9	4767.1	4841.5	5492.6	5498.7	5409.6	4993.8	4809.5	5633.9
62.5°	5813.8	5913.2	5636.0	4953.5	4744.3	5326.7	5352.3	5290.8	4982.9	5025.2	5496.7
65°	5621.3	5736.0	5522.3	5052.9	4684.5	5048.8	5055.3	4899.9	4826.9	5168.3	5175.1
67.5°	5260.1	5367.6	5160.4	4894.5	4275.5	4299.8	4444.5	4457.1	4350.6	5060.4	4723.4
70°	4627.8	4703.6	4573.9	4503.2	3573.6	3431.6	3588.7	3655.9	3704.4	4670.9	4181.3
72.5°	3663.8	3810.2	3830.7	3876.8	2877.2	2640.6	2757.0	2657.4	2973.1	3975.5	3416.3
75°	2710.6	2834.2	2967.0	3224.1	2267.8	1977.0	1962.6	1911.8	2206.7	3197.1	2533.8
77.5°	1915.5	1994.4	2096.5	2575.4	1711.4	1522.6	1531.5	1479.9	1593.6	2416.3	1750.3
80°	1373.1	1414.4	1461.8	1696.7	1262.4	1313.7	1315.0	1266.2	1185.0	1641.0	1168.2
82.5°	978.4	1010.5	1064.8	1119.1	941.2	1076.7	1075.7	1072.6	939.5	1109.2	730.9
85°	544.9	587.9	682.1	876.7	679.7	769.8	677.0	745.6	689.6	738.4	370.1
87.5°	38.2	34.1	152.6	508.0	317.1	231.8	121.5	240.7	308.6	385.8	51.5
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°	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8
2.5°	993.4	1005.4	958.6	888.3	907.4	886.6	860.3	819.3	735.0	787.2	787.6
5°	1193.1	1147.7	1111.2	1076.7	1018.7	931.0	919.4	849.0	809.4	830.3	827.2
7.5°	1255.6	1191.1	1136.1	1012.9	905.4	769.1	728.2	686.5	669.1	719.6	739.8
10°	1187.0	1119.7	1065.8	915.9	842.9	757.9	645.2	587.5	553.4	566.7	574.6
12.5°	1242.3	1173.7	1004.0	920.4	799.9	748.0	649.3	564.7	514.1	526.4	511.7
15°	1295.6	1203.0	1033.4	866.8	769.1	694.0	614.2	526.8	467.4	446.2	434.9
17.5°	1490.2	1336.5	1030.0	836.7	724.8	638.4	542.1	446.5	406.9	385.1	366.3
20°	1727.4	1513.4	1048.4	805.7	677.7	568.8	463.9	375.2	347.5	333.2	328.1
22.5°	2009.7	1740.0	1153.9	801.2	633.3	517.9	420.9	365.6	334.6	318.9	312.4
25°	2234.0	1974.6	1231.7	831.3	630.9	475.9	395.0	406.3	391.9	396.7	358.8
27.5°	2451.8	2038.4	1188.0	818.0	567.4	401.5	388.8	412.4	424.7	428.4	427.1
30°	2635.8	2308.1	1197.6	742.9	479.3	327.0	297.7	309.3	343.1	396.7	406.9
32.5°	2905.2	2437.2	1279.2	697.5	428.4	292.6	259.8	255.4	263.2	282.7	299.4
35°	3220.3	2734.2	1302.0	685.5	393.3	277.2	254.3	244.1	248.2	262.9	266.3
37.5°	3807.8	2950.6	1386.7	670.8	380.3	268.0	250.2	246.5	255.4	267.3	274.1
40°	4131.8	3339.8	1390.8	658.2	363.6	264.2	253.0	251.3	256.7	273.1	277.2
42.5°	4563.7	3561.7	1455.0	643.5	357.8	269.4	258.4	257.7	262.5	272.1	279.6
45°	4826.9	3710.2	1458.4	635.0	356.4	291.9	265.6	263.2	262.2	268.0	274.8
47.5°	4996.5	3924.2	1500.1	625.4	364.6	297.7	274.1	263.9	260.5	262.9	268.0
50°	5157.3	4095.3	1578.9	624.1	373.1	291.9	289.2	263.6	256.7	255.7	259.5
52.5°	5354.7	4376.6	1676.2	637.0	371.1	283.4	300.4	262.2	249.9	247.5	251.3
55°	5641.8	4678.0	1779.6	626.1	349.9	267.0	289.5	261.2	242.7	238.3	241.7
57.5°	5827.8	4850.8	1895.4	616.9	317.8	254.7	279.6	261.8	243.4	233.5	235.6
60°	5766.0	4757.9	1940.8	560.6	287.4	245.1	256.0	256.4	237.3	228.0	229.8
62.5°	5492.9	4421.6	1898.5	495.0	264.9	231.5	231.8	246.1	219.5	213.0	215.8
65°	5111.2	4003.4	1727.1	452.3	254.3	217.1	211.7	216.1	195.6	190.8	196.3
67.5°	4642.9	3487.9	1472.1	407.3	250.6	197.7	191.2	189.5	176.5	171.0	176.5
70°	4055.3	2920.6	1176.8	375.5	236.2	176.5	171.4	169.7	158.7	154.6	159.4
72.5°	3259.6	2280.5	908.1	351.3	220.5	157.0	152.6	150.6	141.3	135.5	141.3
75°	2318.4	1742.8	674.6	314.1	198.3	137.2	132.1	129.4	120.9	115.4	120.5
77.5°	1647.5	1308.2	471.1	259.8	163.5	116.1	113.0	108.6	101.1	94.6	99.7
80°	1218.1	934.7	303.8	200.4	124.9	92.9	91.2	88.1	80.9	73.1	76.8
82.5°	801.9	673.9	174.1	135.9	90.8	66.9	68.3	66.2	59.4	51.2	53.3
85°	359.1	399.1	92.5	74.8	59.1	40.3	44.0	42.7	37.6	29.7	30.4
87.5°	34.5	67.3	28.3	27.3	21.8	12.6	15.7	13.3	11.3	7.2	5.5
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°	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8
2.5°	799.5	751.4	703.3	732.6	733.3	741.2	742.2	713.2	736.4	754.1	772.6
5°	812.2	780.8	782.5	754.1	738.8	758.6	754.5	746.6	760.6	780.1	803.6
7.5°	720.7	700.2	696.8	669.5	603.2	588.6	600.8	606.0	624.7	654.8	680.0
10°	562.6	603.2	557.5	546.9	529.5	495.4	475.6	473.2	513.1	537.3	558.5
12.5°	507.0	496.7	491.3	462.2	462.2	426.1	414.4	425.0	486.5	503.9	531.2
15°	431.9	424.3	399.1	384.7	377.9	363.2	375.5	385.8	443.1	444.5	473.2
17.5°	358.5	354.0	330.1	327.4	320.6	314.1	325.3	349.9	381.0	375.5	388.8
20°	320.6	305.2	283.4	291.2	284.0	278.9	274.1	309.0	330.8	338.0	345.8
22.5°	311.0	283.0	270.0	262.9	263.2	255.0	256.0	285.1	318.2	322.6	317.8
25°	355.4	305.5	263.6	242.7	234.9	232.1	240.0	265.6	305.5	315.1	318.9
27.5°	415.8	331.8	271.4	235.9	220.2	221.6	232.8	250.6	297.7	314.8	319.2
30°	399.1	312.0	271.7	230.8	211.3	218.5	222.6	239.7	291.5	317.1	339.3
32.5°	307.9	280.6	273.5	234.9	227.0	215.8	221.6	237.9	273.5	289.5	290.5
35°	260.8	240.0	235.2	225.7	214.7	210.0	216.4	230.8	254.0	263.9	262.5
37.5°	258.8	235.9	217.1	213.0	208.6	207.2	211.0	224.3	247.8	265.3	261.5
40°	262.2	233.9	214.7	207.6	209.3	203.1	206.9	223.3	248.9	265.3	261.8
42.5°	258.1	231.5	211.7	206.2	207.9	199.4	203.8	220.9	246.1	265.6	259.1
45°	249.9	226.0	210.0	200.7	208.6	196.0	201.4	214.7	237.9	259.1	251.6
47.5°	241.7	219.5	202.8	197.0	204.8	192.5	194.9	206.5	229.8	250.6	244.1
50°	232.8	211.3	197.0	195.3	200.7	191.9	188.1	197.7	219.9	240.7	235.2
52.5°	223.3	204.5	192.9	192.2	197.3	187.4	182.0	189.5	209.3	230.1	225.7
55°	214.0	197.0	187.8	189.5	195.3	183.7	176.8	181.6	198.0	218.5	212.3
57.5°	204.8	188.4	180.9	185.7	190.2	178.9	170.4	173.1	186.4	206.5	199.4
60°	196.6	180.9	173.4	179.2	183.3	171.7	161.8	163.5	175.5	193.6	187.1
62.5°	186.1	172.7	162.8	170.4	173.4	162.2	151.6	153.6	163.2	180.3	175.5
65°	171.0	162.5	153.3	158.4	162.5	150.9	141.0	143.4	150.6	166.6	163.2
67.5°	158.1	149.9	143.7	147.8	148.5	139.6	130.8	132.1	137.9	152.9	149.2
70°	143.7	135.9	131.1	134.2	133.8	126.3	119.5	119.8	124.6	138.3	133.1
72.5°	128.0	120.5	118.1	119.8	118.5	111.6	105.1	107.5	110.6	120.9	116.8
75°	111.3	104.5	103.1	104.8	102.8	96.3	90.5	92.9	95.6	104.1	99.0
77.5°	93.9	87.7	88.1	88.4	85.7	81.3	75.4	77.8	79.5	85.3	80.2
80°	74.8	70.0	71.3	71.3	68.3	65.2	59.7	60.4	61.4	63.5	59.7
82.5°	54.6	54.6	54.6	55.0	48.5	49.5	44.7	44.4	43.4	43.0	40.6
85°	32.4	33.8	34.5	35.5	26.3	30.7	26.6	25.6	23.6	21.5	20.8
87.5°	7.2	9.2	9.2	8.9	0.0	3.4	1.7	2.7	0.7	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°	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8	741.8
2.5°	751.4	730.9	769.1	803.3	797.8	817.6	771.5	839.8	912.2	912.2
5°	797.5	780.1	790.0	809.8	824.8	893.8	951.1	1008.1	1125.9	1127.3
7.5°	672.5	710.1	719.0	713.2	777.7	866.4	961.0	1123.5	1223.2	1231.0
10°	628.8	645.9	672.9	687.9	714.2	801.6	919.0	1111.9	1217.7	1237.5
12.5°	569.8	632.9	673.9	757.9	778.7	796.1	982.9	1149.8	1222.8	1218.1
15°	505.3	553.0	612.1	705.0	757.9	891.0	1020.7	1271.3	1312.6	1348.8
17.5°	402.8	438.0	516.5	622.3	753.4	876.0	1114.3	1421.5	1498.7	1536.2
20°	331.5	331.8	410.3	550.7	693.4	813.2	1149.8	1546.1	1644.1	1663.2
22.5°	313.4	297.7	339.0	453.0	627.1	850.4	1221.5	1746.5	1951.0	1999.2
25°	303.5	284.4	310.3	399.8	579.7	869.9	1365.9	2022.0	2284.6	2303.3
27.5°	307.6	316.5	324.7	356.4	519.6	833.3	1332.4	2145.3	2426.6	2462.1
30°	335.2	349.6	330.8	341.7	470.1	780.4	1392.2	2345.3	2605.5	2665.2
32.5°	278.9	273.5	271.7	295.6	420.6	732.6	1517.5	2627.0	2799.4	2874.5
35°	251.6	243.1	246.5	273.8	396.4	725.8	1587.8	2860.1	3105.6	3151.7
37.5°	250.6	240.7	245.1	265.6	404.9	738.1	1700.4	3234.3	3645.7	3744.3
40°	248.2	242.7	245.1	260.5	396.0	744.9	1765.3	3548.7	4021.9	4121.9
42.5°	247.8	245.1	247.5	264.6	386.8	748.0	1855.1	3832.8	4418.2	4497.1
45°	246.8	249.6	249.6	268.0	382.7	768.5	1908.0	3972.0	4679.7	4777.0
47.5°	242.0	250.2	263.6	267.0	366.0	758.9	1982.8	4183.4	4818.7	4910.2
50°	235.9	249.2	281.3	260.1	363.2	735.7	2070.2	4351.0	4996.9	5076.4
52.5°	227.7	247.5	277.2	246.8	358.5	731.6	2192.7	4568.8	5204.8	5275.1
55°	216.1	241.4	264.6	233.5	346.8	718.6	2380.1	4838.8	5476.9	5525.0
57.5°	205.5	232.1	246.1	226.0	319.2	721.4	2510.6	5059.0	5705.3	5747.2
60°	196.0	231.1	219.9	218.1	290.9	684.8	2552.9	5056.6	5790.3	5856.2
62.5°	185.7	218.1	201.4	207.6	265.9	647.3	2463.1	4839.8	5698.4	5813.8
65°	172.4	187.1	186.1	200.1	266.6	586.2	2257.2	4457.5	5469.4	5621.3
67.5°	156.7	165.6	171.4	187.8	275.2	538.7	1926.1	3997.6	5079.5	5260.1
70°	140.7	149.5	156.0	171.7	283.0	516.9	1533.2	3351.7	4444.5	4627.8
72.5°	124.3	133.5	138.6	152.3	272.4	470.1	1134.8	2607.9	3567.5	3663.8
75°	107.2	116.1	120.2	132.8	236.6	388.8	783.5	1975.3	2613.0	2710.6
77.5°	89.8	99.3	100.7	111.0	180.6	297.3	502.2	1515.1	1850.3	1915.5
80°	71.7	81.3	81.3	86.7	127.0	204.5	300.8	1143.0	1347.5	1373.1
82.5°	51.5	61.8	61.1	61.4	87.7	126.7	174.1	856.5	973.6	978.4
85°	30.4	37.6	37.2	34.1	51.9	68.3	94.2	531.9	543.5	544.9
87.5°	5.8	8.9	7.9	3.4	14.3	20.1	27.3	98.7	39.3	38.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)