

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: P367292

Luminaire Tested: **MSA-SA2B-730-U-SLL**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367292  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-730-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**

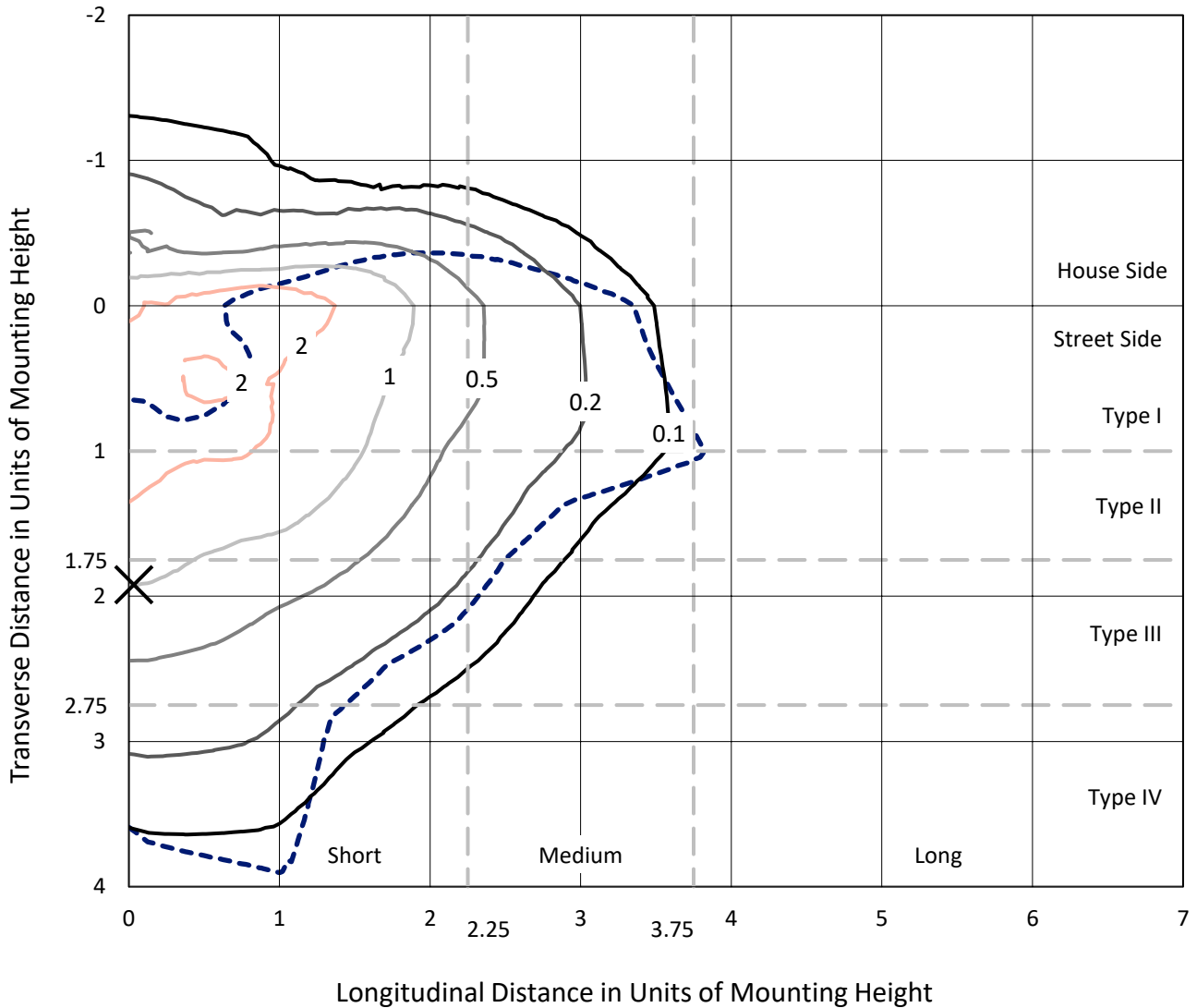
Lumens per Lamp: N/A  
Luminaire Lumens: 7771 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

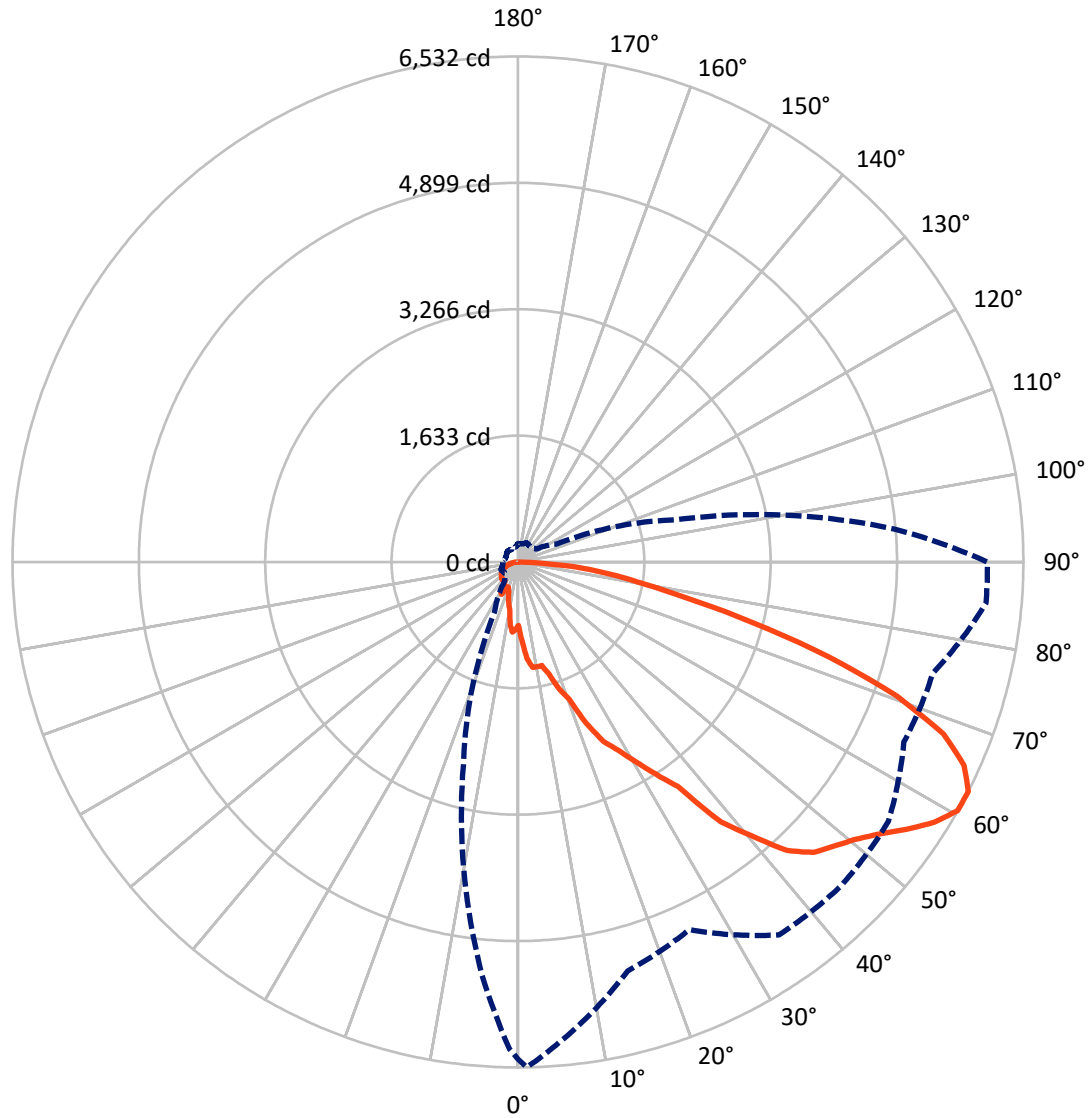
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 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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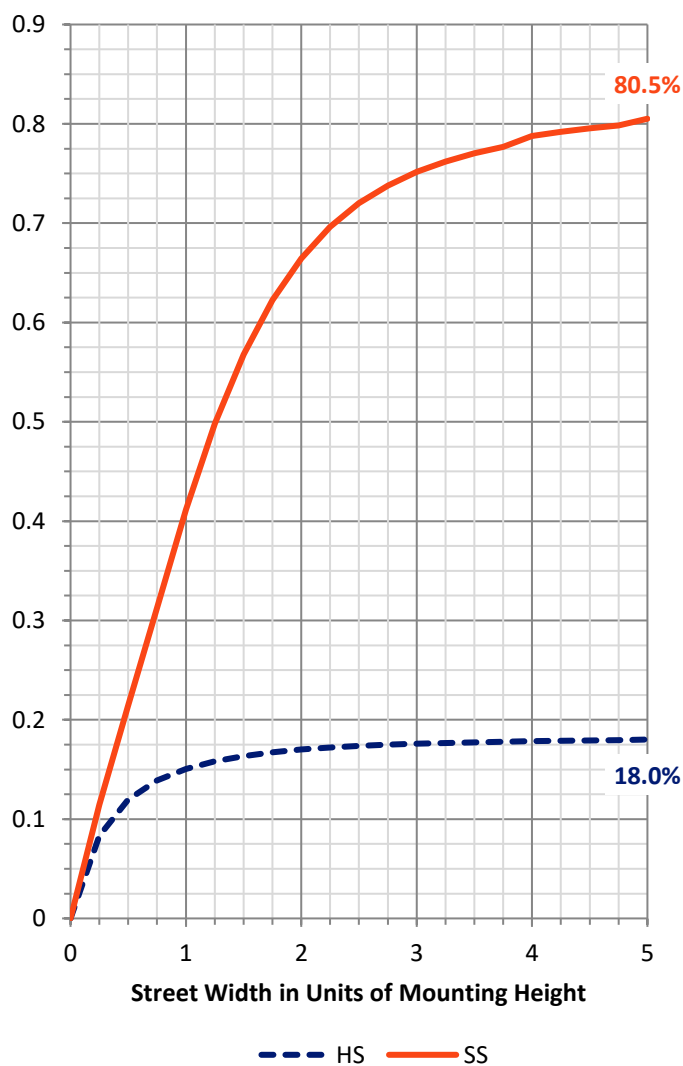
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1415.0	0.0	1415.0
	% Fixture	18.2	0.0	18.2
<b>Street Side</b>	Lumens	6356.0	0.0	6356.0
	% Fixture	81.8	0.0	81.8
<b>Total</b>	Lumens	7771.0	0.0	7771.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.9	1.2
10°-20°	273.0	3.5
20°-30°	481.9	6.2
30°-40°	750.7	9.7
40°-50°	1236.1	15.9
50°-60°	1764.2	22.7
60°-70°	1870.7	24.1
70°-80°	1033.3	13.3
80°-90°	267.3	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°	7771.0	100.0
0°-180°	7771.0	100.0

**Coefficient of Utilization**



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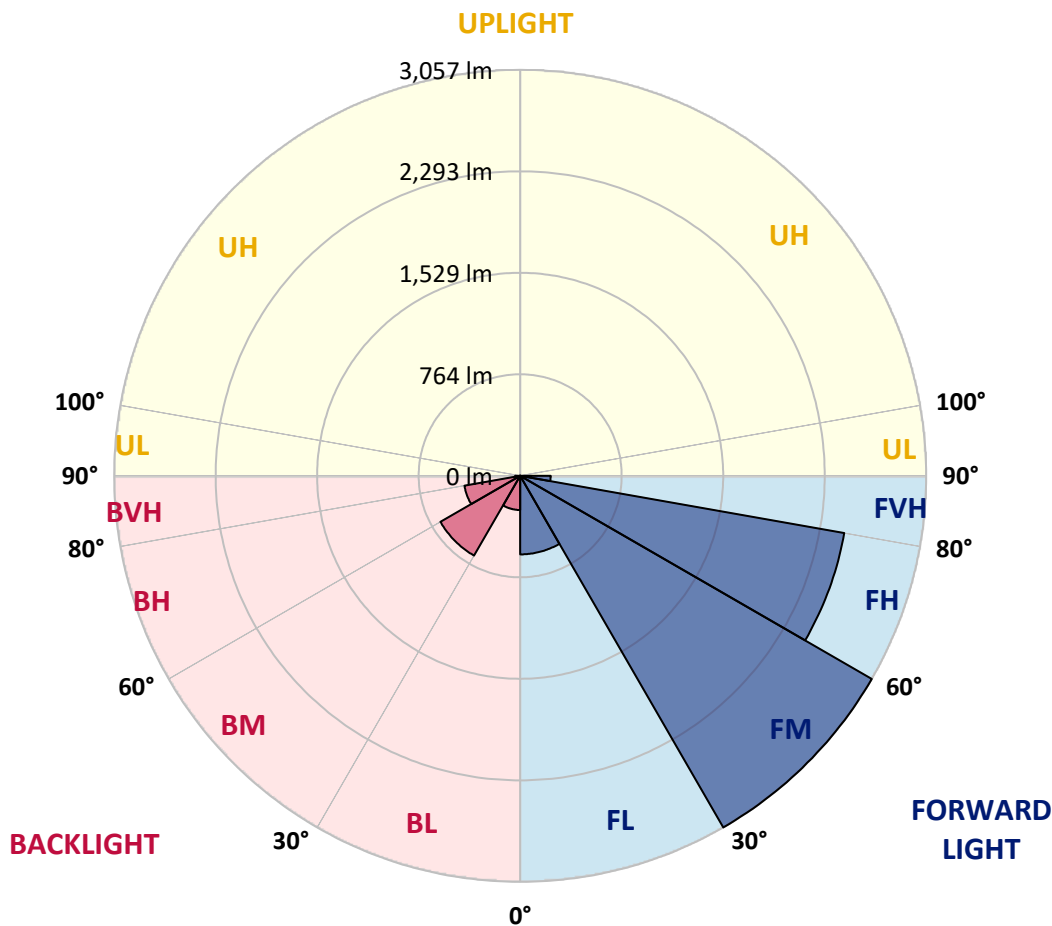
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	591.5	7.6			
FM (30°-60°)	3057.2	39.3			
FH (60°-80°)	2477.7	31.9			G2/5000
FVH (80°-90°)	229.6	3.0			G3/500
BL (0°-30°)	257.4	3.3	B1/500		
BM (30°-60°)	693.7	8.9	B1/1000		
BH (60°-80°)	426.3	5.5	B1/500		G1/500
BVH (80°-90°)	37.7	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-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4
2.5°	1007.6	1016.3	998.6	978.6	896.0	975.6	951.8	995.9	981.6	885.8	1061.2
5°	1245.2	1261.0	1243.7	1303.6	1307.4	1322.9	1180.0	1269.0	1238.0	1230.1	1318.7
7.5°	1359.8	1376.0	1420.2	1526.9	1610.2	1534.8	1451.5	1433.0	1408.9	1345.9	1399.4
10°	1367.0	1376.0	1435.3	1661.5	1701.9	1755.4	1701.5	1574.4	1522.0	1385.1	1344.4
12.5°	1345.5	1373.8	1450.3	1726.0	1845.9	1904.4	1917.6	1776.2	1647.6	1491.4	1470.7
15°	1489.9	1500.1	1609.9	1772.0	1854.6	1904.0	1947.0	1859.9	1819.5	1695.8	1529.5
17.5°	1697.0	1725.2	1815.0	1875.0	1930.8	1940.2	1904.7	1870.8	1806.7	1971.9	1795.0
20°	1837.2	1891.9	2002.0	2013.4	1896.1	1916.8	1911.9	1914.2	1877.6	2183.0	2085.8
22.5°	2208.3	2267.5	2282.6	2217.0	1996.0	1901.4	1920.2	1974.9	2118.9	2380.6	2490.8
25°	2544.3	2567.3	2705.0	2536.0	2183.8	1977.5	1946.6	2088.0	2323.0	2713.3	2791.7
27.5°	2719.7	2749.5	2841.1	2473.4	2207.2	1879.5	1807.1	2022.4	2261.9	2556.8	2901.1
30°	2944.0	2991.6	3116.4	2536.0	2277.7	1943.6	1783.3	1989.2	2253.9	2659.3	3132.6
32.5°	3175.2	3267.6	3360.4	2756.6	2267.9	2041.6	1935.3	1951.9	2325.6	2874.3	3372.4
35°	3481.4	3562.9	3642.8	2884.1	2465.5	2123.5	2017.9	2193.6	2509.6	3123.5	3706.9
37.5°	4136.1	4265.0	4054.2	3246.9	2680.4	2492.3	2301.8	2405.9	2704.2	3331.3	4253.3
40°	4553.1	4650.1	4446.4	3493.9	3059.1	2740.8	2709.5	2718.2	2972.3	3509.3	4621.0
42.5°	4967.6	5098.8	4774.9	3832.9	3516.9	3254.0	3092.6	3081.7	3272.5	3829.1	5039.2
45°	5276.8	5354.1	4887.6	4118.7	4007.8	3812.9	3691.8	3499.9	3666.9	4050.5	5297.9
47.5°	5423.9	5486.8	5069.0	4285.0	4326.1	4336.3	4554.6	4227.3	4011.6	4200.2	5433.7
50°	5607.5	5637.3	5175.7	4431.3	4628.6	5075.8	5128.2	4573.5	4347.2	4363.5	5514.0
52.5°	5827.0	5839.4	5331.5	4600.3	4934.4	5562.3	5481.2	5160.3	4666.6	4661.7	5665.2
55°	6103.0	6095.5	5526.8	4827.7	5152.7	5851.5	5790.0	5556.2	5014.7	4908.7	5900.5
57.5°	6348.5	6344.0	5785.9	5037.0	5336.4	6000.1	6018.2	5956.3	5251.5	5085.6	6155.4
60°	6468.8	6526.5	6080.8	5265.9	5348.1	6067.2	6074.0	5975.6	5516.3	5312.6	6223.3
62.5°	6422.1	6531.8	6225.6	5471.8	5240.6	5883.9	5912.2	5844.3	5504.2	5551.0	6071.7
65°	6209.4	6336.1	6100.0	5581.5	5174.6	5577.0	5584.1	5412.6	5331.9	5709.0	5716.5
67.5°	5810.4	5929.2	5700.3	5406.5	4722.8	4749.6	4909.5	4923.5	4805.8	5589.8	5217.6
70°	5112.0	5195.7	5052.4	4974.4	3947.5	3790.6	3964.1	4038.4	4091.9	5159.5	4618.8
72.5°	4047.1	4208.8	4231.5	4282.4	3178.2	2916.9	3045.5	2935.4	3284.2	4391.4	3773.7
75°	2994.2	3130.7	3277.4	3561.4	2505.1	2183.8	2168.0	2111.8	2437.6	3531.6	2798.9
77.5°	2115.9	2203.0	2315.8	2844.9	1890.4	1681.9	1691.7	1634.7	1760.3	2669.1	1933.4
80°	1516.7	1562.3	1614.8	1874.2	1394.5	1451.1	1452.6	1398.7	1308.9	1812.7	1290.4
82.5°	1080.8	1116.2	1176.2	1236.1	1039.7	1189.4	1188.3	1184.9	1037.8	1225.2	807.4
85°	601.9	649.4	753.5	968.4	750.8	850.4	747.8	823.6	761.7	815.7	408.8
87.5°	42.2	37.7	168.6	561.1	350.3	256.1	134.2	265.9	340.9	426.1	56.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4
2.5°	1097.4	1110.6	1058.9	981.2	1002.3	979.3	950.3	905.0	811.9	869.6	870.0
5°	1318.0	1267.8	1227.5	1189.4	1125.3	1028.4	1015.5	937.9	894.1	917.1	913.7
7.5°	1387.0	1315.7	1255.0	1118.9	1000.1	849.6	804.4	758.4	739.1	794.9	817.2
10°	1311.2	1236.9	1177.3	1011.8	931.1	837.2	712.7	649.0	611.3	626.0	634.7
12.5°	1372.3	1296.5	1109.1	1016.7	883.6	826.2	717.2	623.7	567.9	581.5	565.3
15°	1431.1	1328.9	1141.5	957.5	849.6	766.6	678.4	581.9	516.3	492.9	480.4
17.5°	1646.1	1476.4	1137.7	924.3	800.6	705.2	598.8	493.3	449.5	425.4	404.6
20°	1908.1	1671.7	1158.1	890.0	748.5	628.3	512.5	414.4	383.9	368.1	362.4
22.5°	2220.0	1922.1	1274.6	885.1	699.5	572.1	465.0	403.9	369.6	352.2	345.0
25°	2467.8	2181.2	1360.6	918.2	696.9	525.7	436.3	448.8	432.9	438.2	396.3
27.5°	2708.4	2251.7	1312.3	903.5	626.7	443.5	429.5	455.5	469.1	473.3	471.8
30°	2911.6	2549.6	1322.9	820.6	529.5	361.3	328.8	341.7	379.0	438.2	449.5
32.5°	3209.1	2692.1	1413.0	770.4	473.3	323.2	287.0	282.1	290.7	312.2	330.7
35°	3557.2	3020.2	1438.3	757.2	434.4	306.2	280.9	269.6	274.2	290.4	294.1
37.5°	4206.2	3259.3	1531.8	741.0	420.1	296.0	276.4	272.3	282.1	295.3	302.8
40°	4564.1	3689.2	1536.3	727.1	401.6	291.9	279.4	277.5	283.6	301.7	306.2
42.5°	5041.1	3934.3	1607.2	710.8	395.2	297.5	285.5	284.7	290.0	300.6	308.8
45°	5331.9	4098.4	1611.0	701.4	393.7	322.4	293.4	290.7	289.6	296.0	303.6
47.5°	5519.3	4334.8	1657.0	690.9	402.7	328.8	302.8	291.5	287.7	290.4	296.0
50°	5696.9	4523.7	1744.1	689.3	412.2	322.4	319.4	291.1	283.6	282.4	286.6
52.5°	5914.9	4834.5	1851.6	703.7	409.9	313.0	331.9	289.6	276.0	273.4	277.5
55°	6232.0	5167.4	1965.8	691.6	386.5	294.9	319.8	288.5	268.1	263.2	267.0
57.5°	6437.5	5358.3	2093.7	681.4	351.1	281.3	308.8	289.2	268.9	257.9	260.2
60°	6369.3	5255.7	2143.8	619.2	317.5	270.8	282.8	283.2	262.1	251.9	253.8
62.5°	6067.6	4884.2	2097.1	546.8	292.6	255.7	256.1	271.9	242.5	235.3	238.3
65°	5646.0	4422.3	1907.8	499.7	280.9	239.8	233.8	238.7	216.1	210.8	216.8
67.5°	5128.6	3852.9	1626.1	449.9	276.8	218.3	211.2	209.3	195.0	188.9	195.0
70°	4479.6	3226.1	1299.9	414.8	261.0	195.0	189.3	187.4	175.4	170.8	176.1
72.5°	3600.6	2519.0	1003.1	388.0	243.6	173.5	168.6	166.3	156.1	149.7	156.1
75°	2560.9	1925.1	745.2	346.9	219.1	151.6	145.9	142.9	133.5	127.5	133.1
77.5°	1819.9	1445.1	520.4	287.0	180.6	128.2	124.8	119.9	111.6	104.5	110.1
80°	1345.5	1032.5	335.6	221.4	138.0	102.6	100.7	97.3	89.4	80.7	84.8
82.5°	885.8	744.4	192.3	150.1	100.3	73.9	75.4	73.2	65.6	56.6	58.8
85°	396.7	440.8	102.2	82.6	65.2	44.5	48.6	47.1	41.5	32.8	33.6
87.5°	38.1	74.3	31.3	30.2	24.1	14.0	17.3	14.7	12.4	7.9	6.0
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°	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4
2.5°	883.2	830.0	776.8	809.3	810.0	818.7	819.8	787.8	813.4	833.0	853.4
5°	897.1	862.4	864.3	833.0	816.1	837.9	833.4	824.7	840.2	861.7	887.7
7.5°	796.1	773.4	769.7	739.5	666.3	650.1	663.7	669.4	690.1	723.3	751.2
10°	621.5	666.3	615.8	604.1	584.9	547.2	525.3	522.7	566.8	593.6	616.9
12.5°	560.0	548.7	542.7	510.6	510.6	470.6	457.8	469.5	537.4	556.6	586.8
15°	477.0	468.7	440.8	425.0	417.5	401.2	414.8	426.1	489.5	491.0	522.7
17.5°	396.0	391.1	364.7	361.6	354.1	346.9	359.4	386.5	420.8	414.8	429.5
20°	354.1	337.1	313.0	321.7	313.7	308.1	302.8	341.3	365.4	373.3	382.0
22.5°	343.5	312.6	298.3	290.4	290.7	281.7	282.8	314.9	351.5	356.4	351.1
25°	392.6	337.5	291.1	268.1	259.4	256.4	265.1	293.4	337.5	348.1	352.2
27.5°	459.3	366.5	299.8	260.6	243.2	244.7	257.2	276.8	328.8	347.7	352.6
30°	440.8	344.7	300.2	254.9	233.4	241.3	245.9	264.7	322.0	350.3	374.8
32.5°	340.1	310.0	302.1	259.4	250.8	238.3	244.7	262.8	302.1	319.8	320.9
35°	288.1	265.1	259.8	249.3	237.2	231.9	239.1	254.9	280.6	291.5	290.0
37.5°	285.8	260.6	239.8	235.3	230.4	228.9	233.0	247.8	273.8	293.0	288.9
40°	289.6	258.3	237.2	229.3	231.2	224.4	228.5	246.6	274.9	293.0	289.2
42.5°	285.1	255.7	233.8	227.8	229.7	220.2	225.1	244.0	271.9	293.4	286.2
45°	276.0	249.6	231.9	221.7	230.4	216.5	222.5	237.2	262.8	286.2	277.9
47.5°	267.0	242.5	224.0	217.6	226.3	212.7	215.3	228.1	253.8	276.8	269.6
50°	257.2	233.4	217.6	215.7	221.7	211.9	207.8	218.3	242.9	265.9	259.8
52.5°	246.6	225.9	213.1	212.3	218.0	207.0	201.0	209.3	231.2	254.2	249.3
55°	236.4	217.6	207.4	209.3	215.7	202.9	195.3	200.6	218.7	241.3	234.6
57.5°	226.3	208.2	199.9	205.1	210.0	197.6	188.2	191.2	205.9	228.1	220.2
60°	217.2	199.9	191.6	198.0	202.5	189.7	178.7	180.6	193.8	213.8	206.7
62.5°	205.5	190.8	179.9	188.2	191.6	179.1	167.4	169.7	180.3	199.1	193.8
65°	188.9	179.5	169.3	175.0	179.5	166.7	155.7	158.4	166.3	184.0	180.3
67.5°	174.6	165.5	158.8	163.3	164.0	154.2	144.4	145.9	152.3	168.9	164.8
70°	158.8	150.1	144.8	148.2	147.8	139.5	132.0	132.4	137.6	152.7	147.1
72.5°	141.4	133.1	130.5	132.4	130.9	123.3	116.1	118.8	122.2	133.5	129.0
75°	122.9	115.4	113.9	115.8	113.5	106.3	99.9	102.6	105.6	115.0	109.4
77.5°	103.7	96.9	97.3	97.7	94.7	89.8	83.3	86.0	87.9	94.3	88.6
80°	82.6	77.3	78.8	78.8	75.4	72.0	66.0	66.7	67.9	70.1	66.0
82.5°	60.3	60.3	60.3	60.7	53.5	54.7	49.4	49.0	47.9	47.5	44.9
85°	35.8	37.3	38.1	39.2	29.0	33.9	29.4	28.3	26.0	23.8	23.0
87.5°	7.9	10.2	10.2	9.8	0.0	3.8	1.9	3.0	0.8	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°	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4	819.4
2.5°	830.0	807.4	849.6	887.3	881.3	903.2	852.3	927.7	1007.6	1007.6
5°	880.9	861.7	872.6	894.5	911.1	987.3	1050.6	1113.6	1243.7	1245.2
7.5°	742.9	784.4	794.2	787.8	859.0	957.1	1061.5	1241.0	1351.2	1359.8
10°	694.6	713.5	743.3	759.9	788.9	885.4	1015.2	1228.2	1345.1	1367.0
12.5°	629.4	699.1	744.4	837.2	860.2	879.4	1085.7	1270.1	1350.8	1345.5
15°	558.1	610.9	676.1	778.7	837.2	984.2	1127.5	1404.3	1450.0	1489.9
17.5°	445.0	483.8	570.6	687.5	832.3	967.6	1230.9	1570.3	1655.5	1697.0
20°	366.2	366.5	453.3	608.3	765.9	898.3	1270.1	1707.9	1816.1	1837.2
22.5°	346.2	328.8	374.5	500.4	692.7	939.4	1349.3	1929.3	2155.1	2208.3
25°	335.2	314.1	342.8	441.6	640.3	960.9	1508.8	2233.6	2523.6	2544.3
27.5°	339.8	349.6	358.6	393.7	574.0	920.5	1471.8	2369.7	2680.4	2719.7
30°	370.3	386.2	365.4	377.5	519.3	862.1	1537.8	2590.7	2878.0	2944.0
32.5°	308.1	302.1	300.2	326.6	464.6	809.3	1676.2	2901.8	3092.2	3175.2
35°	277.9	268.5	272.3	302.4	437.8	801.7	1753.9	3159.4	3430.5	3481.4
37.5°	276.8	265.9	270.8	293.4	447.2	815.3	1878.3	3572.7	4027.1	4136.1
40°	274.2	268.1	270.8	287.7	437.4	822.8	1950.0	3920.0	4442.6	4553.1
42.5°	273.8	270.8	273.4	292.3	427.3	826.2	2049.2	4233.7	4880.5	4967.6
45°	272.6	275.7	275.7	296.0	422.7	848.9	2107.6	4387.6	5169.3	5276.8
47.5°	267.4	276.4	291.1	294.9	404.3	838.3	2190.2	4621.0	5322.8	5423.9
50°	260.6	275.3	310.7	287.4	401.2	812.7	2286.8	4806.2	5519.7	5607.5
52.5°	251.5	273.4	306.2	272.6	396.0	808.1	2422.1	5046.8	5749.3	5827.0
55°	238.7	266.6	292.3	257.9	383.1	793.8	2629.2	5345.1	6049.9	6103.0
57.5°	227.0	256.4	271.9	249.6	352.6	796.8	2773.2	5588.3	6302.1	6348.5
60°	216.5	255.3	242.9	241.0	321.3	756.5	2820.0	5585.6	6396.0	6468.8
62.5°	205.1	241.0	222.5	229.3	293.8	715.0	2720.8	5346.2	6294.6	6422.1
65°	190.4	206.7	205.5	221.0	294.5	647.5	2493.4	4923.8	6041.6	6209.4
67.5°	173.1	182.9	189.3	207.4	303.9	595.1	2127.6	4415.9	5610.9	5810.4
70°	155.4	165.2	172.3	189.7	312.6	570.9	1693.6	3702.4	4909.5	5112.0
72.5°	137.3	147.4	153.1	168.2	300.9	519.3	1253.5	2880.7	3940.7	4047.1
75°	118.4	128.2	132.7	146.7	261.3	429.5	865.5	2181.9	2886.3	2994.2
77.5°	99.2	109.7	111.2	122.6	199.5	328.5	554.7	1673.6	2043.9	2115.9
80°	79.2	89.8	89.8	95.8	140.3	225.9	332.2	1262.5	1488.4	1516.7
82.5°	56.9	68.3	67.5	67.9	96.9	139.9	192.3	946.2	1075.5	1080.8
85°	33.6	41.5	41.1	37.7	57.3	75.4	104.1	587.5	600.3	601.9
87.5°	6.4	9.8	8.7	3.8	15.8	22.2	30.2	109.0	43.4	42.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)