

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: P565293

Luminaire Tested: **MSA-SA3A-827-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565293  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2108-334-1)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 8/19/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-827-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7797 lumens  
Efficiency: N/A  
Efficacy: 81.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3

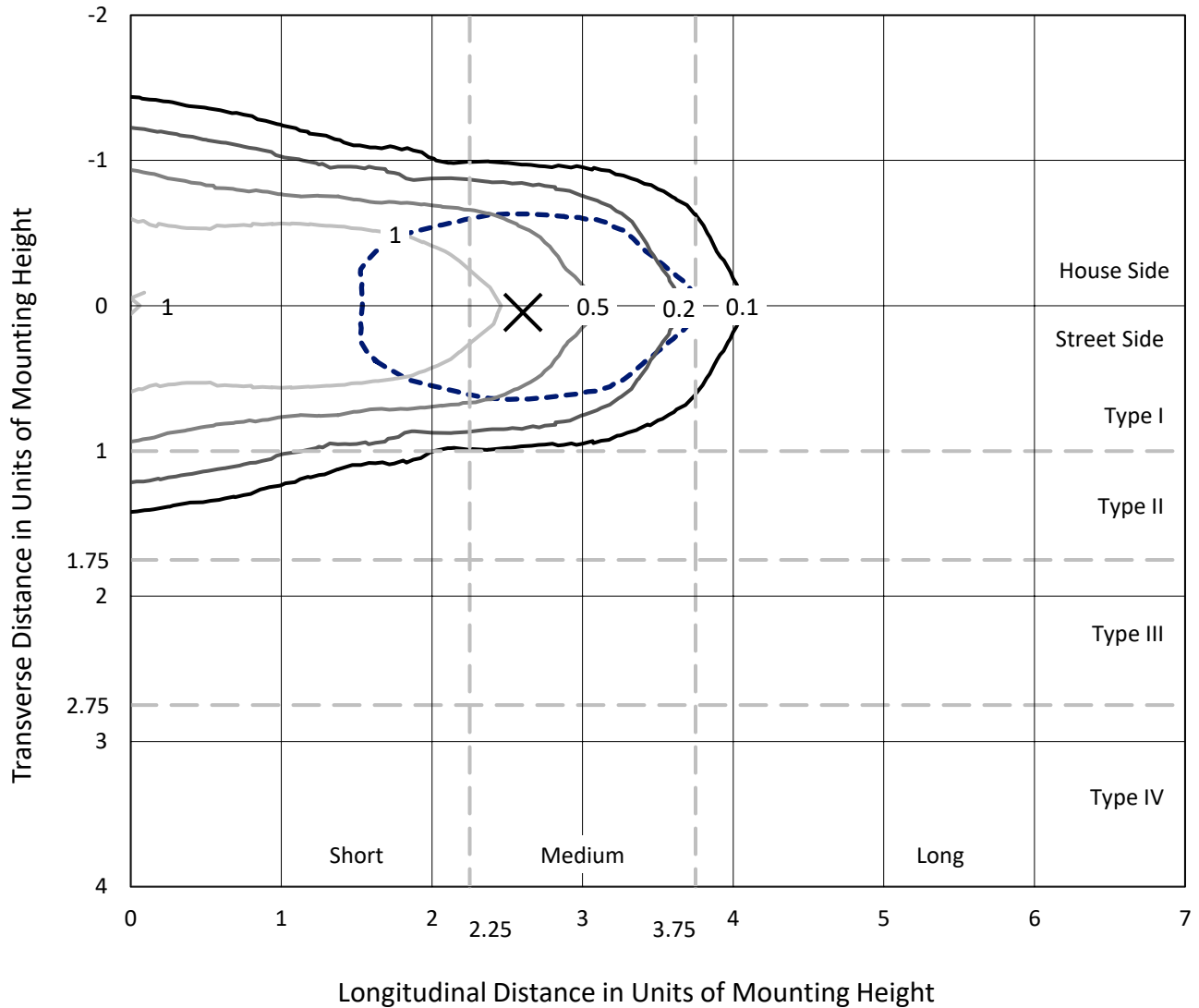
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

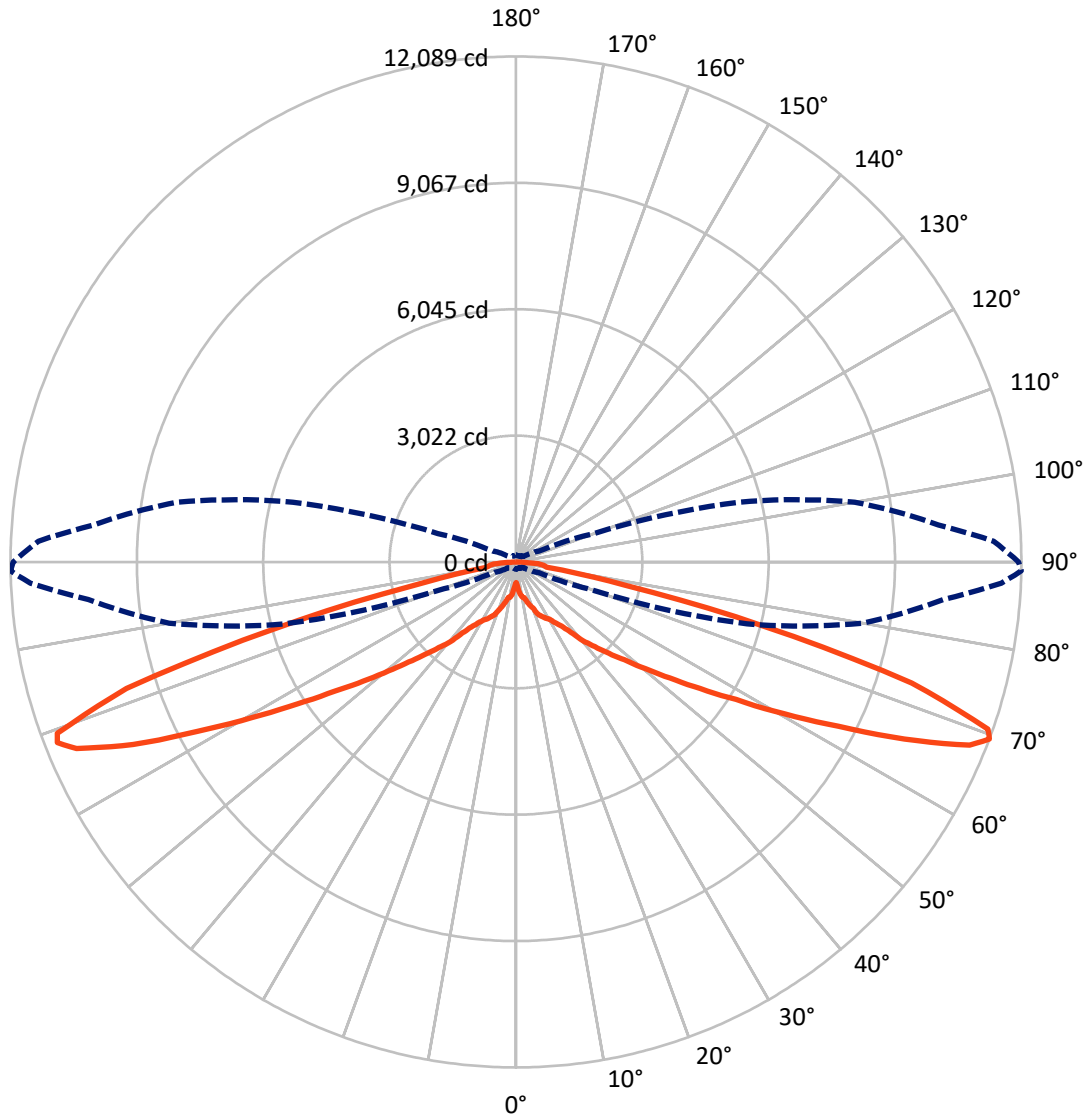
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc  
 Type I - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3898.4	0.0	3898.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3898.6	0.0	3898.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	7797.0	0.0	7797.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.1	0.8
10°-20°	285.9	3.7
20°-30°	570.4	7.3
30°-40°	862.7	11.1
40°-50°	1252.3	16.1
50°-60°	1645.3	21.1
60°-70°	2007.0	25.7
70°-80°	1014.7	13.0
80°-90°	96.7	1.2
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°	7797.0	100.0
0°-180°	7797.0	100.0

**Coefficient of Utilization**



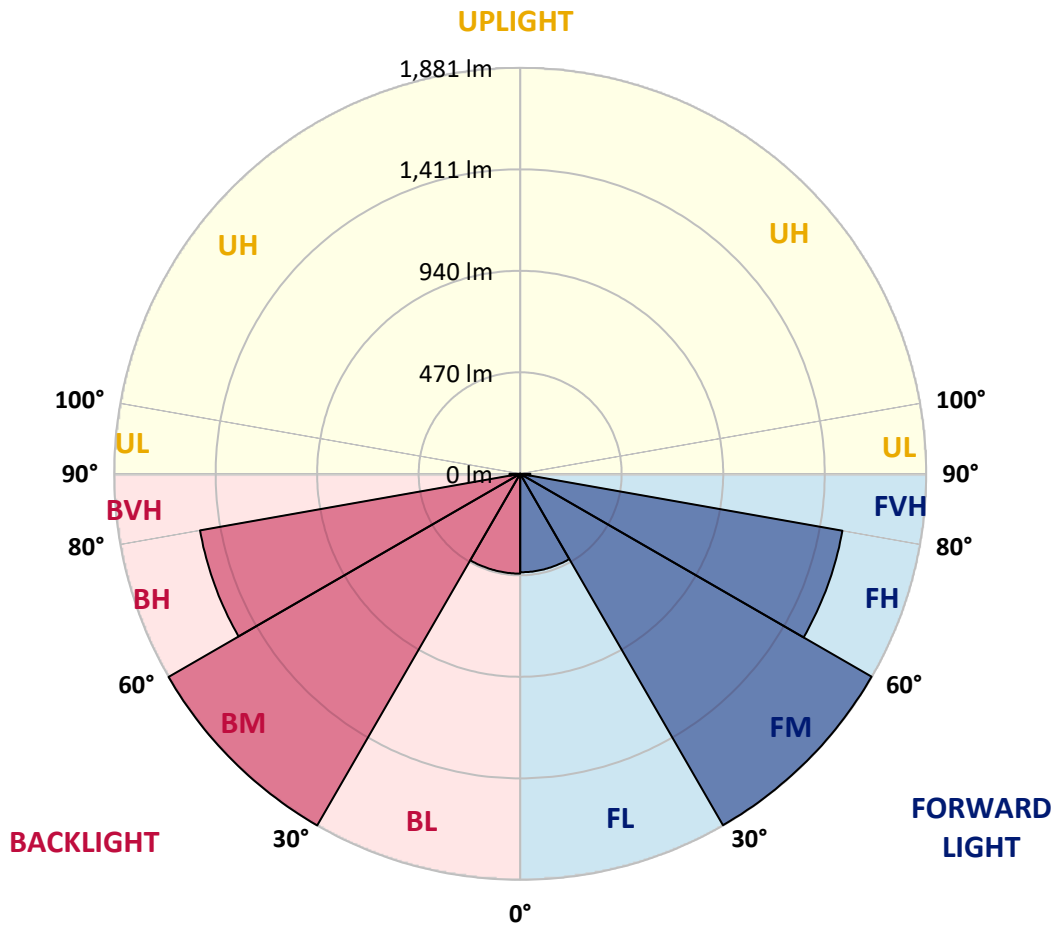
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	456.0	5.8			
FM (30°-60°)	1879.5	24.1			
FH (60°-80°)	1515.7	19.4			G1/1800
FVH (80°-90°)	47.4	0.6			G1/100
BL (0°-30°)	462.4	5.9	B1/500		
BM (30°-60°)	1880.7	24.1	B2/2500		
BH (60°-80°)	1506.0	19.3	B3/2500		G3/2500
BVH (80°-90°)	49.3	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type I Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9
2.5°	579.6	512.7	506.9	491.0	502.6	506.9	496.8	482.2	498.2	506.9	491.0
5°	730.6	631.9	598.4	570.8	515.6	492.4	515.6	575.2	582.5	618.8	608.6
7.5°	804.7	788.7	746.6	655.1	566.5	517.1	579.6	665.3	708.8	743.7	780.0
10°	859.9	851.2	777.1	711.7	675.4	678.3	679.8	707.4	745.2	803.3	823.6
12.5°	873.0	870.1	881.7	867.2	870.1	886.0	870.1	862.8	884.6	903.5	883.1
15°	957.2	955.8	960.1	963.0	1021.1	1045.8	1021.1	999.3	983.4	967.4	1000.8
17.5°	1015.3	1008.1	1009.5	1037.1	1102.5	1170.7	1157.7	1128.6	1092.3	1114.1	1141.7
20°	1047.3	1034.2	1042.9	1054.5	1164.9	1240.5	1249.2	1210.0	1188.2	1215.8	1239.0
22.5°	1077.8	1057.4	1026.9	1038.6	1140.2	1249.2	1291.3	1281.1	1297.1	1305.8	1301.5
25°	1041.5	1054.5	1021.1	1054.5	1157.7	1257.9	1342.1	1401.7	1403.1	1398.8	1430.7
27.5°	1019.7	1009.5	952.9	1038.6	1124.3	1186.7	1401.7	1501.9	1532.4	1439.5	1501.9
30°	981.9	997.9	920.9	992.1	1101.0	1205.6	1470.0	1613.8	1568.7	1557.1	1571.6
32.5°	958.7	948.5	912.2	951.4	1034.2	1262.3	1513.5	1679.1	1735.8	1708.2	1705.3
35°	920.9	928.2	871.5	913.6	1029.8	1214.3	1542.6	1843.3	1930.4	1908.6	1891.2
37.5°	926.7	902.0	861.4	891.9	1002.2	1240.5	1615.2	2001.6	2139.6	2151.2	2071.3
40°	883.1	868.6	807.6	858.4	950.0	1224.5	1632.6	2181.7	2415.6	2467.9	2353.1
42.5°	820.7	801.8	766.9	823.6	919.5	1146.0	1657.3	2398.1	2695.9	2804.8	2700.3
45°	730.6	705.9	688.5	764.0	852.6	1125.7	1631.2	2578.2	2964.6	3114.2	3111.3
47.5°	621.7	605.7	597.0	676.9	797.4	1074.9	1577.5	2691.5	3152.0	3535.5	3477.4
50°	498.2	486.6	485.1	569.4	704.5	970.3	1516.4	2748.2	3436.7	3921.8	3972.7
52.5°	399.4	390.7	389.3	457.5	589.7	829.4	1388.6	2791.8	3708.3	4360.5	4622.0
55°	312.3	303.6	305.0	361.7	469.2	678.3	1194.0	2742.4	3946.5	4809.3	5304.7
57.5°	255.6	246.9	248.4	280.3	358.8	518.6	951.4	2634.9	4054.0	5364.2	6100.6
60°	225.1	216.4	212.1	226.6	276.0	390.7	707.4	2216.6	4071.5	5824.7	6964.9
62.5°	209.2	200.4	196.1	200.4	228.0	299.2	509.8	1756.1	3971.2	6218.3	7756.5
65°	194.6	187.4	181.6	185.9	200.4	238.2	371.8	1202.7	3446.9	6398.4	8331.7
67.5°	178.7	172.9	167.0	172.9	183.0	200.4	289.1	761.1	2584.1	6164.6	8571.4
69°	169.9	161.2	158.3	162.7	172.9	184.5	249.8	607.2	1965.3	5720.1	8426.2
70°	161.2	155.4	151.1	158.3	167.0	175.8	225.1	515.6	1541.1	5149.2	8065.9
72.5°	142.3	138.0	135.1	142.3	149.6	155.4	184.5	367.5	893.3	3506.4	6397.0
75°	124.9	120.6	119.1	124.9	130.7	133.6	155.4	252.7	527.3	1834.6	3837.6
77.5°	104.6	98.8	100.2	107.5	111.8	113.3	130.7	181.6	310.8	830.8	1777.9
80°	77.0	77.0	82.8	88.6	88.6	88.6	104.6	132.2	188.8	382.0	737.9
82.5°	53.7	55.2	56.6	65.4	66.8	61.0	79.9	95.9	117.7	167.0	255.6
85°	30.5	32.0	33.4	39.2	40.7	36.3	52.3	61.0	68.3	82.8	133.6
87.5°	11.6	13.1	17.4	20.3	21.8	16.0	24.7	29.1	29.1	34.9	59.6
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):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9	493.9
2.5°	524.4	534.5	553.4	557.8	541.8	524.4	485.1	509.8	520.0	501.1	506.9
5°	649.3	671.1	694.3	666.7	649.3	637.7	618.8	620.2	610.1	576.7	521.5
7.5°	790.2	765.5	782.9	801.8	774.2	775.7	793.1	756.8	729.2	672.5	569.4
10°	855.5	855.5	859.9	859.9	848.3	848.3	846.8	788.7	755.3	730.6	701.6
12.5°	859.9	858.4	875.9	862.8	865.7	868.6	875.9	902.0	893.3	861.4	887.5
15°	980.5	974.7	980.5	979.0	983.4	996.4	990.6	984.8	986.3	1009.5	1048.7
17.5°	1093.8	1096.7	1090.9	1101.0	1101.0	1109.7	1130.1	1109.7	1092.3	1135.9	1166.4
20°	1224.5	1214.3	1191.1	1208.5	1212.9	1214.3	1247.7	1223.0	1198.3	1214.3	1250.6
22.5°	1356.7	1355.2	1358.1	1359.6	1365.4	1343.6	1298.6	1291.3	1307.3	1285.5	1289.9
25°	1438.0	1439.5	1446.7	1448.2	1423.5	1446.7	1462.7	1414.8	1414.8	1410.4	1381.4
27.5°	1536.8	1515.0	1523.7	1535.3	1525.2	1531.0	1512.1	1442.4	1516.4	1526.6	1410.4
30°	1603.6	1593.4	1583.3	1594.9	1605.1	1631.2	1577.5	1570.2	1576.0	1629.7	1477.2
32.5°	1744.5	1759.0	1740.1	1721.3	1740.1	1734.3	1711.1	1700.9	1773.5	1702.4	1523.7
35°	1875.2	1881.0	1882.5	1879.6	1891.2	1870.9	1870.9	1908.6	1930.4	1853.4	1538.2
37.5°	2190.4	2170.1	2128.0	2107.6	2143.9	2174.4	2084.4	2129.4	2120.7	1990.0	1647.2
40°	2417.0	2463.5	2476.6	2470.8	2476.6	2389.4	2408.3	2441.7	2402.5	2186.1	1609.4
42.5°	2748.2	2777.2	2767.1	2754.0	2759.8	2743.8	2687.2	2810.7	2669.8	2405.4	1667.5
45°	3050.3	3115.7	3120.0	3075.0	3111.3	3054.7	3077.9	3121.5	2979.1	2569.5	1651.5
47.5°	3410.6	3545.6	3494.8	3494.8	3531.1	3409.1	3464.3	3522.4	3144.7	2679.9	1564.4
50°	3943.6	4016.3	4013.4	4000.3	4016.3	3950.9	3942.2	3934.9	3398.9	2784.5	1510.6
52.5°	4546.4	4645.2	4607.4	4622.0	4643.8	4520.3	4617.6	4351.8	3717.0	2823.7	1388.6
55°	5316.3	5384.5	5346.8	5272.7	5371.5	5293.0	5325.0	4806.4	3937.8	2711.9	1185.3
57.5°	6232.8	6267.7	6205.2	6198.0	6263.3	6179.1	6125.3	5317.7	4052.6	2627.6	947.1
60°	7303.3	7412.3	7373.1	7310.6	7370.2	7296.1	6889.4	5752.0	4029.3	2234.0	733.5
62.5°	8587.4	8697.8	8654.2	8612.1	8649.8	8456.7	7606.9	6094.8	3924.7	1770.6	536.0
65°	9647.7	10146.0	10211.3	10212.8	10029.8	9582.4	8179.2	6228.5	3372.8	1236.1	392.2
67.5°	10345.0	11380.6	11703.1	11586.9	11167.1	10146.0	8410.2	5967.0	2604.4	781.5	293.4
69°	10265.1	11623.2	12089.4	12024.1	11434.4	10137.2	8230.1	5526.9	1990.0	621.7	248.4
70°	9896.1	11424.2	11977.6	12006.7	11264.4	9748.0	7909.1	5021.4	1609.4	530.2	228.0
72.5°	7897.4	9413.9	9900.5	10090.8	9354.3	7805.9	6485.6	3542.7	932.5	370.4	184.5
75°	4892.1	5708.5	6112.3	6222.7	5776.7	4861.6	3936.4	1971.1	567.9	261.5	155.4
77.5°	2193.3	2430.1	2662.5	2662.5	2488.2	2219.5	1804.0	952.9	322.5	185.9	130.7
80°	735.0	762.6	742.2	749.5	720.5	692.9	724.8	411.1	199.0	139.4	106.0
82.5°	499.7	627.5	666.7	666.7	626.0	493.9	278.9	188.8	122.0	100.2	81.3
85°	406.7	496.8	533.1	549.1	517.1	416.9	146.7	91.5	72.6	63.9	55.2
87.5°	136.5	127.8	120.6	117.7	123.5	129.3	72.6	39.2	33.4	30.5	29.1
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):**

	135°	145°	155°	165°	175°	180°
0°	493.9	493.9	493.9	493.9	493.9	493.9
2.5°	517.1	499.7	506.9	514.2	566.5	605.7
5°	514.2	538.9	594.1	663.8	695.8	774.2
7.5°	528.7	618.8	721.9	794.5	823.6	848.3
10°	707.4	723.4	758.2	827.9	886.0	896.2
12.5°	913.6	909.3	884.6	916.5	887.5	907.8
15°	1074.9	1026.9	993.5	989.2	979.0	979.0
17.5°	1163.5	1121.4	1074.9	1063.3	1032.8	1057.4
20°	1268.1	1195.4	1079.2	1067.6	1057.4	1034.2
22.5°	1247.7	1175.1	1054.5	1040.0	1093.8	1090.9
25°	1272.4	1175.1	1060.4	1044.4	1069.1	1069.1
27.5°	1211.4	1131.5	1048.7	952.9	1028.4	1045.8
30°	1195.4	1105.4	1009.5	923.8	1000.8	984.8
32.5°	1279.7	1040.0	945.6	919.5	976.1	964.5
35°	1214.3	1028.4	929.6	881.7	948.5	936.9
37.5°	1241.9	1013.9	902.0	861.4	915.1	932.5
40°	1236.1	945.6	870.1	817.8	871.5	880.2
42.5°	1138.8	893.3	816.3	764.0	791.6	820.7
45°	1109.7	861.4	764.0	691.4	692.9	726.3
47.5°	1056.0	788.7	668.2	601.3	601.3	628.9
50°	965.9	691.4	559.2	498.2	496.8	518.6
52.5°	832.3	597.0	472.1	405.3	400.9	422.7
55°	681.2	480.8	371.8	328.3	319.6	328.3
57.5°	530.2	374.8	293.4	258.6	257.1	264.4
60°	411.1	293.4	233.9	213.5	216.4	228.0
62.5°	310.8	233.9	199.0	191.7	196.1	207.7
65°	246.9	201.9	181.6	177.2	181.6	193.2
67.5°	200.4	183.0	168.5	162.7	165.6	177.2
69°	184.5	172.9	161.2	154.0	156.9	165.6
70°	175.8	167.0	155.4	148.2	151.1	159.8
72.5°	154.0	149.6	140.9	133.6	135.1	142.3
75°	135.1	132.2	126.4	117.7	117.7	126.4
77.5°	113.3	114.8	108.9	100.2	98.8	103.1
80°	90.1	93.0	90.1	81.3	78.4	78.4
82.5°	65.4	71.2	68.3	59.6	58.1	58.1
85°	40.7	45.0	43.6	37.8	37.8	33.4
87.5°	18.9	24.7	23.2	20.3	18.9	13.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)