

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: P565320

Luminaire Tested: **MSA-SA2A-830-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565320  
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-SA2A-830-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5711 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3

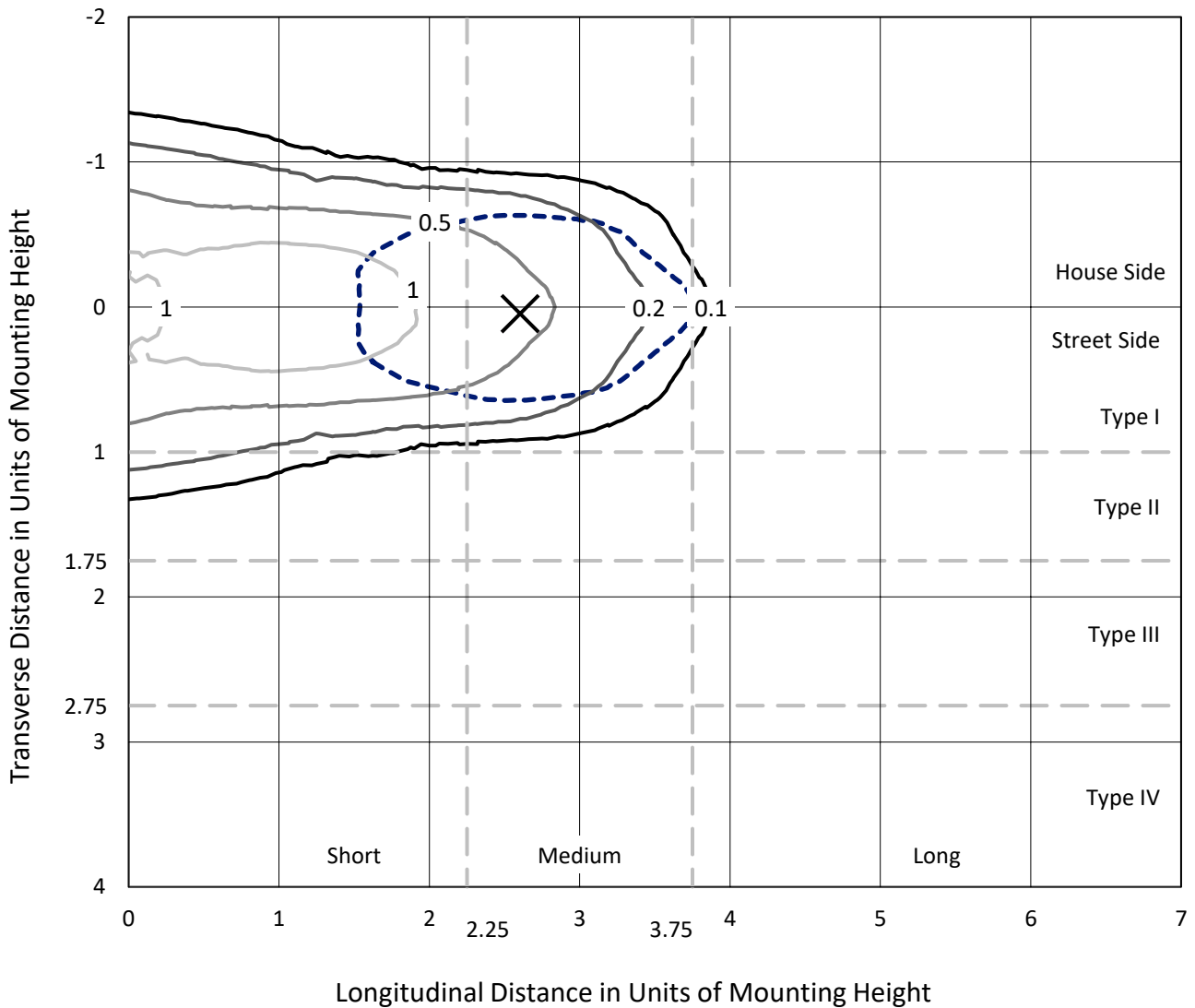
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

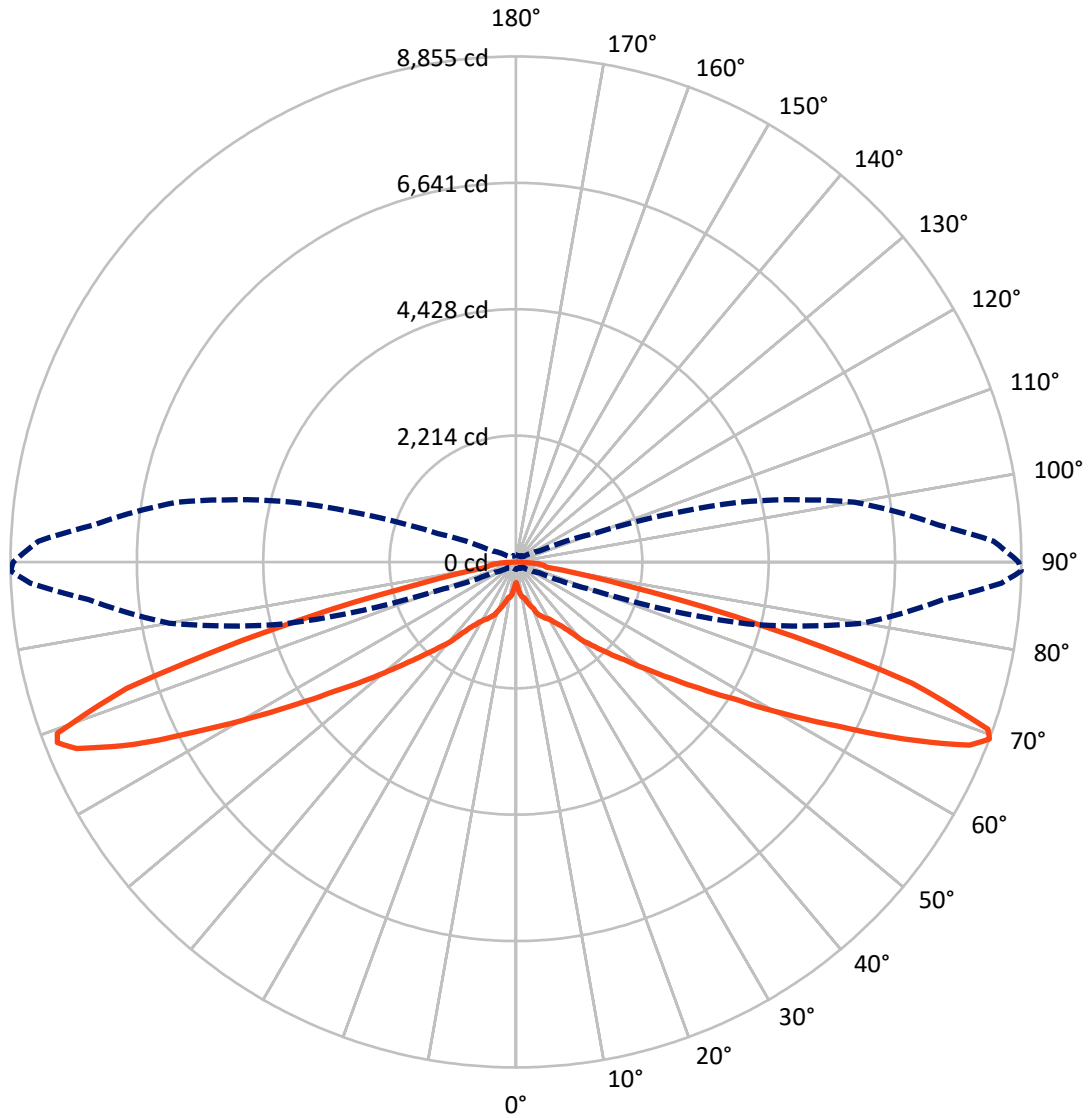
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 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	2855.4	0.0	2855.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2855.6	0.0	2855.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	5711.0	0.0	5711.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.5	0.8
10°-20°	209.4	3.7
20°-30°	417.8	7.3
30°-40°	631.9	11.1
40°-50°	917.2	16.1
50°-60°	1205.1	21.1
60°-70°	1470.0	25.7
70°-80°	743.2	13.0
80°-90°	70.8	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°	5711.0	100.0
0°-180°	5711.0	100.0

**Coefficient of Utilization**



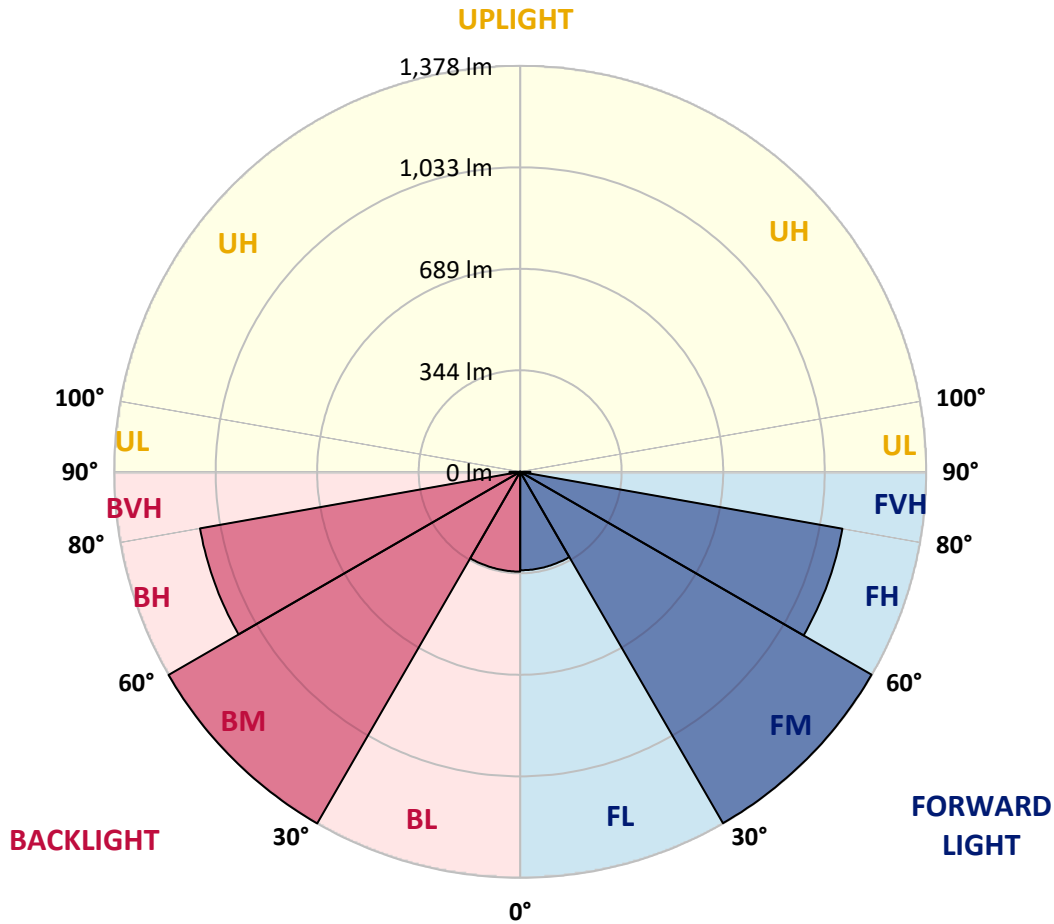
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	334.0	5.8			
FM (30°-60°)	1376.7	24.1			
FH (60°-80°)	1110.2	19.4			G1/1800
FVH (80°-90°)	34.7	0.6			G1/100
BL (0°-30°)	338.7	5.9	B1/500		
BM (30°-60°)	1377.6	24.1	B2/2500		
BH (60°-80°)	1103.1	19.3	B3/2500		G3/2500
BVH (80°-90°)	36.1	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°	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7
2.5°	424.5	375.6	371.3	359.6	368.1	371.3	363.9	353.2	364.9	371.3	359.6
5°	535.2	462.8	438.3	418.1	377.7	360.7	377.7	421.3	426.6	453.2	445.8
7.5°	589.4	577.7	546.9	479.8	414.9	378.8	424.5	487.3	519.2	544.7	571.3
10°	629.8	623.5	569.2	521.3	494.7	496.9	497.9	518.1	545.8	588.4	603.2
12.5°	639.4	637.3	645.8	635.2	637.3	649.0	637.3	632.0	647.9	661.8	646.9
15°	701.1	700.1	703.3	705.4	747.9	766.0	747.9	732.0	720.3	708.6	733.0
17.5°	743.7	738.4	739.4	759.6	807.5	857.5	847.9	826.7	800.1	816.0	836.2
20°	767.1	757.5	763.9	772.4	853.3	908.6	915.0	886.2	870.3	890.5	907.5
22.5°	789.4	774.5	752.2	760.7	835.2	915.0	945.8	938.4	950.1	956.5	953.3
25°	762.8	772.4	747.9	772.4	847.9	921.4	983.1	1026.7	1027.8	1024.6	1048.0
27.5°	746.9	739.4	697.9	760.7	823.5	869.2	1026.7	1100.1	1122.4	1054.3	1100.1
30°	719.2	730.9	674.5	726.7	806.5	883.1	1076.7	1182.0	1149.0	1140.5	1151.2
32.5°	702.2	694.7	668.1	696.9	757.5	924.6	1108.6	1229.9	1271.4	1251.2	1249.0
35°	674.5	679.8	638.4	669.2	754.3	889.4	1129.9	1350.1	1414.0	1398.0	1385.2
37.5°	678.8	660.7	630.9	653.3	734.1	908.6	1183.1	1466.1	1567.2	1575.7	1517.2
40°	646.9	636.2	591.5	628.8	695.8	896.9	1195.9	1598.0	1769.3	1807.6	1723.6
42.5°	601.1	587.3	561.8	603.2	673.5	839.4	1213.9	1756.5	1974.6	2054.4	1977.8
45°	535.2	517.1	504.3	559.6	624.5	824.5	1194.8	1888.5	2171.5	2281.1	2278.9
47.5°	455.4	443.7	437.3	495.8	584.1	787.3	1155.4	1971.5	2308.7	2589.6	2547.0
50°	364.9	356.4	355.4	417.1	516.0	710.7	1110.7	2012.9	2517.2	2872.6	2909.8
52.5°	292.6	286.2	285.1	335.1	432.0	607.5	1017.1	2044.9	2716.2	3193.9	3385.4
55°	228.7	222.4	223.4	264.9	343.6	496.9	874.5	2008.7	2890.7	3522.7	3885.5
57.5°	187.3	180.9	181.9	205.3	262.8	379.8	696.9	1930.0	2969.4	3929.1	4468.5
60°	164.9	158.5	155.3	166.0	202.1	286.2	518.1	1623.6	2982.2	4266.3	5101.5
62.5°	153.2	146.8	143.6	146.8	167.0	219.2	373.4	1286.3	2908.8	4554.7	5681.4
65°	142.6	137.2	133.0	136.2	146.8	174.5	272.4	880.9	2524.7	4686.6	6102.7
67.5°	130.9	126.6	122.4	126.6	134.1	146.8	211.7	557.5	1892.7	4515.3	6278.2
69°	124.5	118.1	116.0	119.2	126.6	135.1	183.0	444.7	1439.5	4189.7	6171.8
70°	118.1	113.8	110.6	116.0	122.4	128.7	164.9	377.7	1128.8	3771.6	5908.0
72.5°	104.3	101.1	98.9	104.3	109.6	113.8	135.1	269.2	654.3	2568.3	4685.5
75°	91.5	88.3	87.2	91.5	95.8	97.9	113.8	185.1	386.2	1343.7	2810.9
77.5°	76.6	72.3	73.4	78.7	81.9	83.0	95.8	133.0	227.7	608.6	1302.2
80°	56.4	56.4	60.6	64.9	64.9	64.9	76.6	96.8	138.3	279.8	540.5
82.5°	39.4	40.4	41.5	47.9	48.9	44.7	58.5	70.2	86.2	122.4	187.3
85°	22.3	23.4	24.5	28.7	29.8	26.6	38.3	44.7	50.0	60.6	97.9
87.5°	8.5	9.6	12.8	14.9	16.0	11.7	18.1	21.3	21.3	25.5	43.6
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°	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7	361.7
2.5°	384.1	391.5	405.4	408.5	396.8	384.1	355.4	373.4	380.9	367.1	371.3
5°	475.6	491.5	508.6	488.3	475.6	467.1	453.2	454.3	446.8	422.4	381.9
7.5°	578.8	560.7	573.5	587.3	567.1	568.1	580.9	554.3	534.1	492.6	417.1
10°	626.7	626.7	629.8	629.8	621.3	621.3	620.3	577.7	553.2	535.2	513.9
12.5°	629.8	628.8	641.5	632.0	634.1	636.2	641.5	660.7	654.3	630.9	650.1
15°	718.1	713.9	718.1	717.1	720.3	729.9	725.6	721.3	722.4	739.4	768.2
17.5°	801.1	803.3	799.0	806.5	806.5	812.8	827.7	812.8	800.1	832.0	854.3
20°	896.9	889.4	872.4	885.2	888.4	889.4	913.9	895.8	877.7	889.4	916.0
22.5°	993.7	992.6	994.8	995.8	1000.1	984.1	951.1	945.8	957.5	941.6	944.8
25°	1053.3	1054.3	1059.7	1060.7	1042.6	1059.7	1071.4	1036.3	1036.3	1033.1	1011.8
27.5°	1125.6	1109.7	1116.1	1124.6	1117.1	1121.4	1107.5	1056.5	1110.7	1118.2	1033.1
30°	1174.6	1167.1	1159.7	1168.2	1175.6	1194.8	1155.4	1150.1	1154.4	1193.7	1082.0
32.5°	1277.8	1288.4	1274.6	1260.8	1274.6	1270.3	1253.3	1245.9	1299.1	1246.9	1116.1
35°	1373.5	1377.8	1378.8	1376.7	1385.2	1370.3	1370.3	1398.0	1414.0	1357.6	1126.7
37.5°	1604.4	1589.5	1558.7	1543.8	1570.4	1592.7	1526.7	1559.7	1553.3	1457.6	1206.5
40°	1770.4	1804.4	1814.0	1809.7	1814.0	1750.2	1764.0	1788.5	1759.7	1601.2	1178.8
42.5°	2012.9	2034.2	2026.8	2017.2	2021.5	2009.8	1968.3	2058.7	1955.5	1761.9	1221.4
45°	2234.2	2282.1	2285.3	2252.3	2278.9	2237.4	2254.5	2286.4	2182.1	1882.1	1209.7
47.5°	2498.1	2597.0	2559.8	2559.8	2586.4	2497.0	2537.5	2580.0	2303.4	1962.9	1145.8
50°	2888.6	2941.8	2939.6	2930.1	2941.8	2893.9	2887.5	2882.2	2489.6	2039.5	1106.5
52.5°	3330.1	3402.4	3374.8	3385.4	3401.4	3310.9	3382.2	3187.5	2722.6	2068.3	1017.1
55°	3894.0	3944.0	3916.3	3862.0	3934.4	3876.9	3900.4	3520.5	2884.3	1986.3	868.2
57.5°	4565.3	4590.8	4545.1	4539.8	4587.6	4525.9	4486.6	3895.0	2968.4	1924.6	693.7
60°	5349.4	5429.2	5400.5	5354.7	5398.4	5344.1	5046.2	4213.1	2951.3	1636.3	537.3
62.5°	6289.9	6370.8	6338.9	6308.0	6335.7	6194.2	5571.8	4464.2	2874.7	1296.9	392.6
65°	7066.6	7431.5	7479.4	7480.5	7346.4	7018.7	5991.0	4562.1	2470.4	905.4	287.3
67.5°	7577.3	8335.9	8572.0	8486.9	8179.5	7431.5	6160.1	4370.6	1907.6	572.4	214.9
69°	7518.8	8513.5	8855.1	8807.2	8375.2	7425.1	6028.2	4048.2	1457.6	455.4	181.9
70°	7248.5	8367.8	8773.1	8794.4	8250.7	7140.0	5793.1	3678.0	1178.8	388.3	167.0
72.5°	5784.6	6895.3	7251.7	7391.1	6851.7	5717.5	4750.4	2594.9	683.0	271.3	135.1
75°	3583.3	4181.2	4477.0	4557.9	4231.2	3561.0	2883.2	1443.7	416.0	191.5	113.8
77.5°	1606.5	1779.9	1950.2	1950.2	1822.5	1625.7	1321.4	697.9	236.2	136.2	95.8
80°	538.3	558.6	543.7	549.0	527.7	507.5	530.9	301.1	145.8	102.1	77.7
82.5°	366.0	459.6	488.3	488.3	458.6	361.7	204.3	138.3	89.4	73.4	59.6
85°	297.9	363.9	390.5	402.2	378.8	305.3	107.5	67.0	53.2	46.8	40.4
87.5°	100.0	93.6	88.3	86.2	90.4	94.7	53.2	28.7	24.5	22.3	21.3
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°	361.7	361.7	361.7	361.7	361.7	361.7
2.5°	378.8	366.0	371.3	376.6	414.9	443.7
5°	376.6	394.7	435.1	486.2	509.6	567.1
7.5°	387.3	453.2	528.8	582.0	603.2	621.3
10°	518.1	529.8	555.4	606.4	649.0	656.4
12.5°	669.2	666.0	647.9	671.3	650.1	665.0
15°	787.3	752.2	727.7	724.5	717.1	717.1
17.5°	852.2	821.4	787.3	778.8	756.5	774.5
20°	928.8	875.6	790.5	782.0	774.5	757.5
22.5°	913.9	860.7	772.4	761.8	801.1	799.0
25°	932.0	860.7	776.7	765.0	783.0	783.0
27.5°	887.3	828.8	768.2	697.9	753.3	766.0
30°	875.6	809.6	739.4	676.7	733.0	721.3
32.5°	937.3	761.8	692.6	673.5	715.0	706.4
35°	889.4	753.3	680.9	645.8	694.7	686.2
37.5°	909.7	742.6	660.7	630.9	670.3	683.0
40°	905.4	692.6	637.3	599.0	638.4	644.7
42.5°	834.1	654.3	597.9	559.6	579.8	601.1
45°	812.8	630.9	559.6	506.4	507.5	532.0
47.5°	773.5	577.7	489.4	440.5	440.5	460.7
50°	707.5	506.4	409.6	364.9	363.9	379.8
52.5°	609.6	437.3	345.8	296.8	293.6	309.6
55°	499.0	352.2	272.4	240.4	234.1	240.4
57.5°	388.3	274.5	214.9	189.4	188.3	193.6
60°	301.1	214.9	171.3	156.4	158.5	167.0
62.5°	227.7	171.3	145.8	140.4	143.6	152.1
65°	180.9	147.9	133.0	129.8	133.0	141.5
67.5°	146.8	134.1	123.4	119.2	121.3	129.8
69°	135.1	126.6	118.1	112.8	114.9	121.3
70°	128.7	122.4	113.8	108.5	110.6	117.0
72.5°	112.8	109.6	103.2	97.9	98.9	104.3
75°	98.9	96.8	92.6	86.2	86.2	92.6
77.5°	83.0	84.1	79.8	73.4	72.3	75.5
80°	66.0	68.1	66.0	59.6	57.5	57.5
82.5°	47.9	52.1	50.0	43.6	42.6	42.6
85°	29.8	33.0	31.9	27.7	27.7	24.5
87.5°	13.8	18.1	17.0	14.9	13.8	9.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)