

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: P565269

Luminaire Tested: **MSA-SA1A-727-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565269  
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-SA1A-727-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

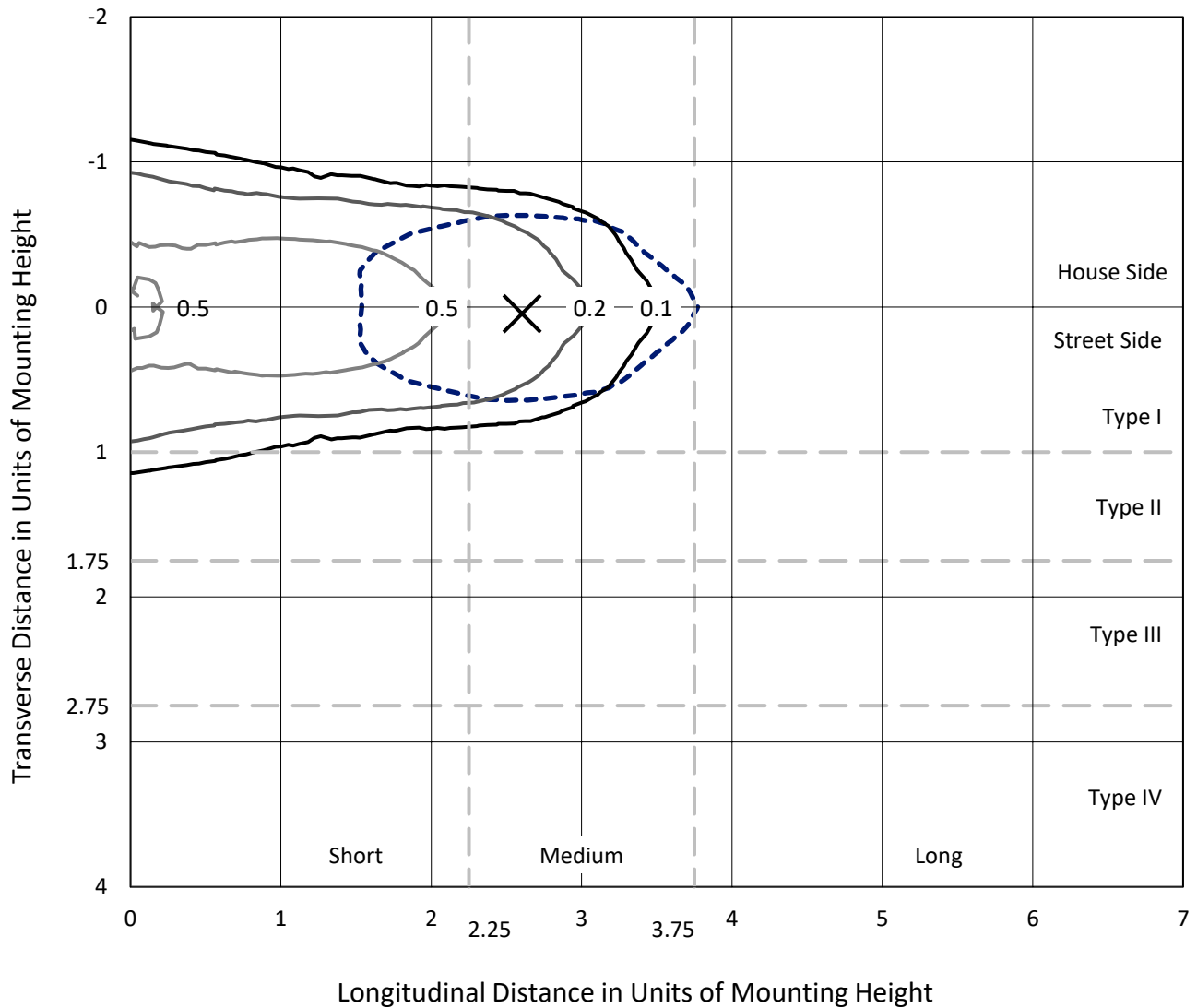
Lumens per Lamp: N/A  
Luminaire Lumens: 3056 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

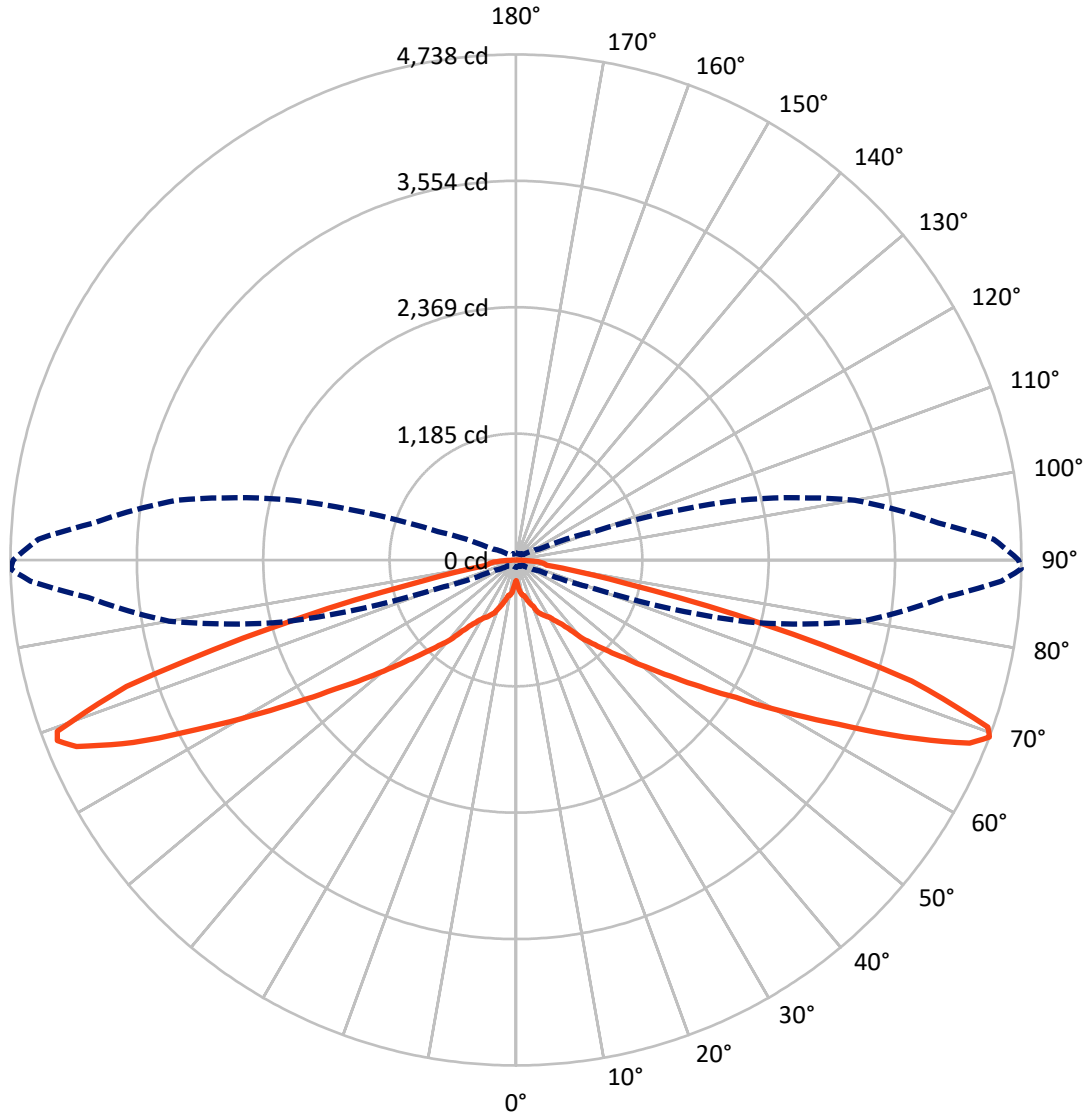
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 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	1528.0	0.0	1528.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	1528.0	0.0	1528.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	3056.0	0.0	3056.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.3	0.8
10°-20°	112.1	3.7
20°-30°	223.6	7.3
30°-40°	338.1	11.1
40°-50°	490.8	16.1
50°-60°	644.9	21.1
60°-70°	786.6	25.7
70°-80°	397.7	13.0
80°-90°	37.9	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°	3056.0	100.0
0°-180°	3056.0	100.0

**Coefficient of Utilization**



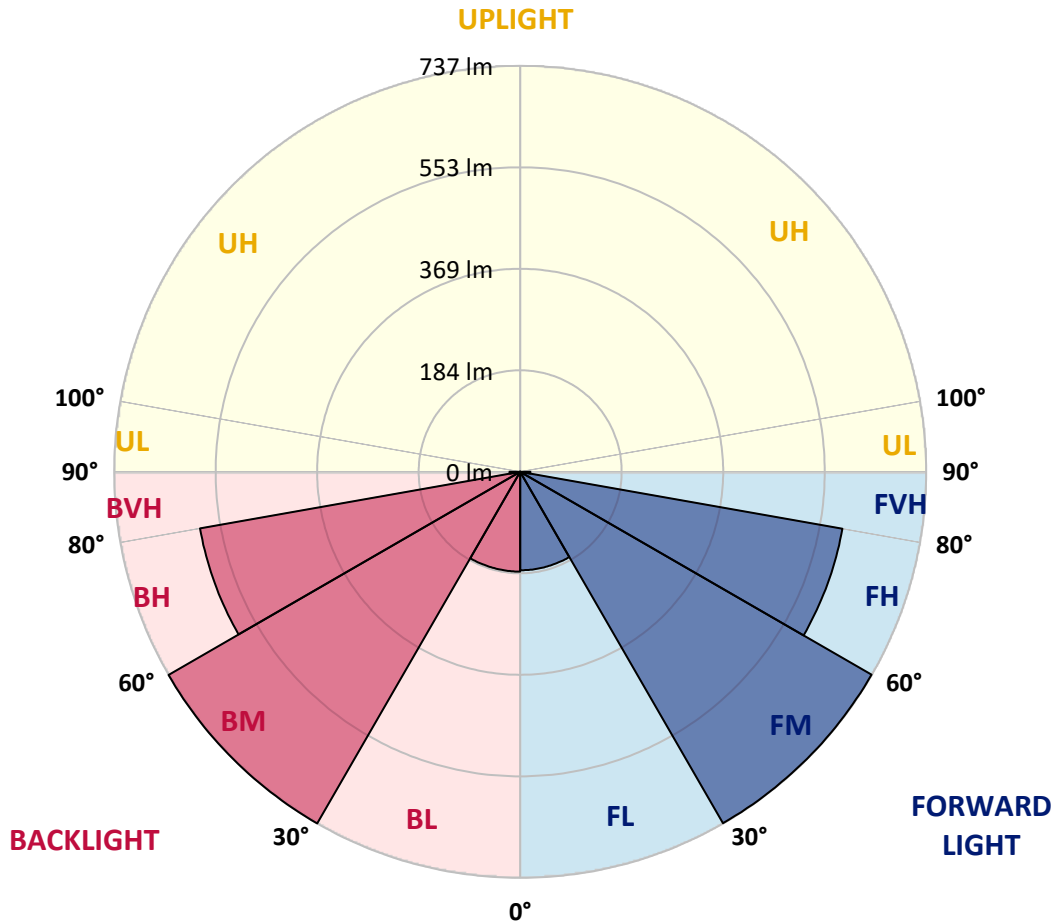
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	178.7	5.8			
FM (30°-60°)	736.7	24.1			
FH (60°-80°)	594.1	19.4			G0/660
FVH (80°-90°)	18.6	0.6			G1/100
BL (0°-30°)	181.2	5.9	B1/500		
BM (30°-60°)	737.2	24.1	B1/1000		
BH (60°-80°)	590.3	19.3	B2/1000		G2/1000
BVH (80°-90°)	19.3	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type I Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6
2.5°	227.2	201.0	198.7	192.4	197.0	198.7	194.7	189.0	195.3	198.7	192.4
5°	286.4	247.7	234.6	223.7	202.1	193.0	202.1	225.4	228.3	242.5	238.5
7.5°	315.4	309.1	292.6	256.8	222.0	202.7	227.2	260.7	277.8	291.5	305.7
10°	337.0	333.6	304.6	279.0	264.7	265.9	266.4	277.3	292.1	314.8	322.8
12.5°	342.2	341.0	345.6	339.9	341.0	347.3	341.0	338.2	346.7	354.1	346.1
15°	375.2	374.6	376.3	377.5	400.2	409.9	400.2	391.7	385.4	379.2	392.3
17.5°	398.0	395.1	395.7	406.5	432.1	458.9	453.7	442.4	428.1	436.7	447.5
20°	410.5	405.4	408.8	413.3	456.6	486.2	489.6	474.2	465.7	476.5	485.6
22.5°	422.4	414.5	402.5	407.1	446.9	489.6	506.1	502.1	508.4	511.8	510.1
25°	408.2	413.3	400.2	413.3	453.7	493.0	526.0	549.4	550.0	548.2	560.8
27.5°	399.7	395.7	373.5	407.1	440.6	465.1	549.4	588.7	600.6	564.2	588.7
30°	384.9	391.1	360.9	388.8	431.5	472.5	576.1	632.5	614.9	610.3	616.0
32.5°	375.7	371.8	357.5	372.9	405.4	494.7	593.2	658.1	680.3	669.5	668.4
35°	360.9	363.8	341.6	358.1	403.6	475.9	604.6	722.5	756.6	748.1	741.2
37.5°	363.2	353.5	337.6	349.6	392.8	486.2	633.1	784.5	838.6	843.2	811.8
40°	346.1	340.5	316.5	336.5	372.3	479.9	639.9	855.1	946.8	967.3	922.3
42.5°	321.7	314.3	300.6	322.8	360.4	449.2	649.6	939.9	1056.6	1099.3	1058.4
45°	286.4	276.7	269.9	299.5	334.2	441.2	639.3	1010.5	1162.0	1220.6	1219.5
47.5°	243.7	237.4	234.0	265.3	312.6	421.3	618.3	1054.9	1235.4	1385.7	1362.9
50°	195.3	190.7	190.2	223.2	276.1	380.3	594.4	1077.1	1347.0	1537.1	1557.1
52.5°	156.6	153.1	152.6	179.3	231.1	325.1	544.3	1094.2	1453.5	1709.1	1811.6
55°	122.4	119.0	119.6	141.8	183.9	265.9	468.0	1074.9	1546.8	1885.0	2079.1
57.5°	100.2	96.8	97.4	109.9	140.6	203.2	372.9	1032.7	1589.0	2102.5	2391.1
60°	88.2	84.8	83.1	88.8	108.2	153.1	277.3	868.8	1595.8	2283.0	2729.9
62.5°	82.0	78.6	76.9	78.6	89.4	117.3	199.8	688.3	1556.5	2437.2	3040.1
65°	76.3	73.4	71.2	72.9	78.6	93.4	145.7	471.4	1351.0	2507.8	3265.6
67.5°	70.0	67.7	65.5	67.7	71.7	78.6	113.3	298.3	1012.8	2416.2	3359.5
69°	66.6	63.2	62.1	63.8	67.7	72.3	97.9	238.0	770.3	2242.0	3302.6
70°	63.2	60.9	59.2	62.1	65.5	68.9	88.2	202.1	604.0	2018.2	3161.4
72.5°	55.8	54.1	52.9	55.8	58.6	60.9	72.3	144.0	350.1	1374.3	2507.3
75°	49.0	47.3	46.7	49.0	51.2	52.4	60.9	99.1	206.7	719.0	1504.1
77.5°	41.0	38.7	39.3	42.1	43.8	44.4	51.2	71.2	121.8	325.6	696.8
80°	30.2	30.2	32.5	34.7	34.7	34.7	41.0	51.8	74.0	149.7	289.2
82.5°	21.1	21.6	22.2	25.6	26.2	23.9	31.3	37.6	46.1	65.5	100.2
85°	12.0	12.5	13.1	15.4	15.9	14.2	20.5	23.9	26.8	32.5	52.4
87.5°	4.6	5.1	6.8	8.0	8.5	6.3	9.7	11.4	11.4	13.7	23.3
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):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6
2.5°	205.5	209.5	216.9	218.6	212.4	205.5	190.2	199.8	203.8	196.4	198.7
5°	254.5	263.0	272.1	261.3	254.5	249.9	242.5	243.1	239.1	226.0	204.4
7.5°	309.7	300.0	306.9	314.3	303.4	304.0	310.8	296.6	285.8	263.6	223.2
10°	335.3	335.3	337.0	337.0	332.5	332.5	331.9	309.1	296.0	286.4	275.0
12.5°	337.0	336.5	343.3	338.2	339.3	340.5	343.3	353.5	350.1	337.6	347.9
15°	384.3	382.0	384.3	383.7	385.4	390.5	388.3	386.0	386.6	395.7	411.0
17.5°	428.7	429.8	427.6	431.5	431.5	435.0	442.9	435.0	428.1	445.2	457.2
20°	479.9	475.9	466.8	473.7	475.4	475.9	489.0	479.4	469.7	475.9	490.2
22.5°	531.7	531.2	532.3	532.9	535.2	526.6	509.0	506.1	512.4	503.8	505.6
25°	563.6	564.2	567.0	567.6	557.9	567.0	573.3	554.5	554.5	552.8	541.4
27.5°	602.3	593.8	597.2	601.8	597.8	600.1	592.7	565.3	594.4	598.3	552.8
30°	628.5	624.5	620.6	625.1	629.1	639.3	618.3	615.4	617.7	638.8	579.0
32.5°	683.7	689.4	682.0	674.6	682.0	679.8	670.7	666.7	695.1	667.2	597.2
35°	735.0	737.3	737.8	736.7	741.2	733.3	733.3	748.1	756.6	726.4	602.9
37.5°	858.5	850.6	834.0	826.1	840.3	852.3	817.0	834.6	831.2	780.0	645.6
40°	947.3	965.6	970.7	968.4	970.7	936.5	943.9	957.0	941.6	856.8	630.8
42.5°	1077.1	1088.5	1084.5	1079.4	1081.7	1075.4	1053.2	1101.6	1046.4	942.8	653.6
45°	1195.6	1221.2	1222.9	1205.2	1219.5	1197.3	1206.4	1223.5	1167.7	1007.1	647.3
47.5°	1336.8	1389.7	1369.8	1369.8	1384.0	1336.2	1357.8	1380.6	1232.6	1050.4	613.2
50°	1545.7	1574.2	1573.0	1567.9	1574.2	1548.5	1545.1	1542.3	1332.2	1091.4	592.1
52.5°	1782.0	1820.7	1805.9	1811.6	1820.1	1771.7	1809.9	1705.7	1456.9	1106.7	544.3
55°	2083.7	2110.4	2095.6	2066.6	2105.3	2074.6	2087.1	1883.9	1543.4	1062.9	464.6
57.5°	2442.9	2456.6	2432.1	2429.3	2454.9	2421.9	2400.8	2084.3	1588.4	1029.9	371.2
60°	2862.5	2905.2	2889.8	2865.4	2888.7	2859.7	2700.3	2254.5	1579.3	875.6	287.5
62.5°	3365.8	3409.1	3392.0	3375.5	3390.3	3314.5	2981.5	2388.8	1538.3	694.0	210.1
65°	3781.4	3976.7	4002.3	4002.9	3931.1	3755.8	3205.8	2441.2	1321.9	484.5	153.7
67.5°	4054.7	4460.6	4587.0	4541.4	4376.9	3976.7	3296.3	2338.7	1020.8	306.3	115.0
69°	4023.3	4555.7	4738.4	4712.8	4481.6	3973.2	3225.7	2166.2	780.0	243.7	97.4
70°	3878.7	4477.7	4694.6	4706.0	4415.0	3820.7	3099.9	1968.1	630.8	207.8	89.4
72.5°	3095.4	3689.7	3880.4	3955.0	3666.4	3059.5	2542.0	1388.6	365.5	145.2	72.3
75°	1917.5	2237.4	2395.7	2438.9	2264.2	1905.5	1542.8	772.6	222.6	102.5	60.9
77.5°	859.7	952.5	1043.6	1043.6	975.2	869.9	707.1	373.5	126.4	72.9	51.2
80°	288.1	298.9	290.9	293.8	282.4	271.6	284.1	161.1	78.0	54.7	41.6
82.5°	195.8	245.9	261.3	261.3	245.4	193.6	109.3	74.0	47.8	39.3	31.9
85°	159.4	194.7	208.9	215.2	202.7	163.4	57.5	35.9	28.5	25.0	21.6
87.5°	53.5	50.1	47.3	46.1	48.4	50.7	28.5	15.4	13.1	12.0	11.4
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):**

	135°	145°	155°	165°	175°	180°
0°	193.6	193.6	193.6	193.6	193.6	193.6
2.5°	202.7	195.8	198.7	201.5	222.0	237.4
5°	201.5	211.2	232.8	260.2	272.7	303.4
7.5°	207.2	242.5	282.9	311.4	322.8	332.5
10°	277.3	283.5	297.2	324.5	347.3	351.3
12.5°	358.1	356.4	346.7	359.2	347.9	355.8
15°	421.3	402.5	389.4	387.7	383.7	383.7
17.5°	456.0	439.5	421.3	416.7	404.8	414.5
20°	497.0	468.5	423.0	418.4	414.5	405.4
22.5°	489.0	460.6	413.3	407.6	428.7	427.6
25°	498.7	460.6	415.6	409.3	419.0	419.0
27.5°	474.8	443.5	411.0	373.5	403.1	409.9
30°	468.5	433.2	395.7	362.1	392.3	386.0
32.5°	501.6	407.6	370.6	360.4	382.6	378.0
35°	475.9	403.1	364.4	345.6	371.8	367.2
37.5°	486.8	397.4	353.5	337.6	358.7	365.5
40°	484.5	370.6	341.0	320.5	341.6	345.0
42.5°	446.3	350.1	320.0	299.5	310.3	321.7
45°	435.0	337.6	299.5	271.0	271.6	284.7
47.5°	413.9	309.1	261.9	235.7	235.7	246.5
50°	378.6	271.0	219.2	195.3	194.7	203.2
52.5°	326.2	234.0	185.0	158.8	157.1	165.7
55°	267.0	188.4	145.7	128.7	125.2	128.7
57.5°	207.8	146.9	115.0	101.3	100.8	103.6
60°	161.1	115.0	91.7	83.7	84.8	89.4
62.5°	121.8	91.7	78.0	75.1	76.9	81.4
65°	96.8	79.1	71.2	69.5	71.2	75.7
67.5°	78.6	71.7	66.0	63.8	64.9	69.5
69°	72.3	67.7	63.2	60.3	61.5	64.9
70°	68.9	65.5	60.9	58.1	59.2	62.6
72.5°	60.3	58.6	55.2	52.4	52.9	55.8
75°	52.9	51.8	49.5	46.1	46.1	49.5
77.5°	44.4	45.0	42.7	39.3	38.7	40.4
80°	35.3	36.4	35.3	31.9	30.7	30.7
82.5°	25.6	27.9	26.8	23.3	22.8	22.8
85°	15.9	17.6	17.1	14.8	14.8	13.1
87.5°	7.4	9.7	9.1	8.0	7.4	5.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)