

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: P565316

Luminaire Tested: **MSA-SA1A-830-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565316  
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-830-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: 2903 lumens  
Efficiency: N/A  
Efficacy: 85.4 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

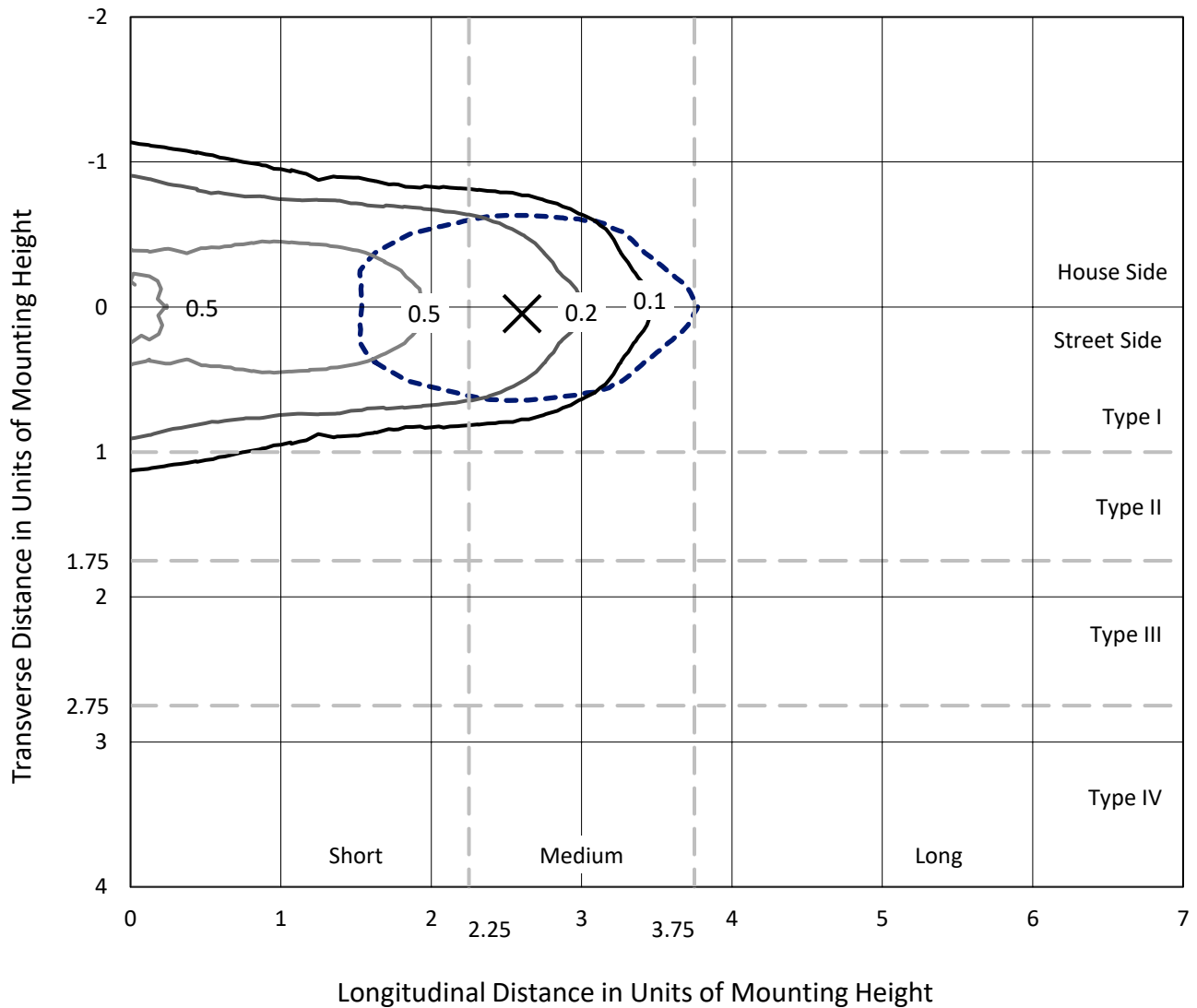
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

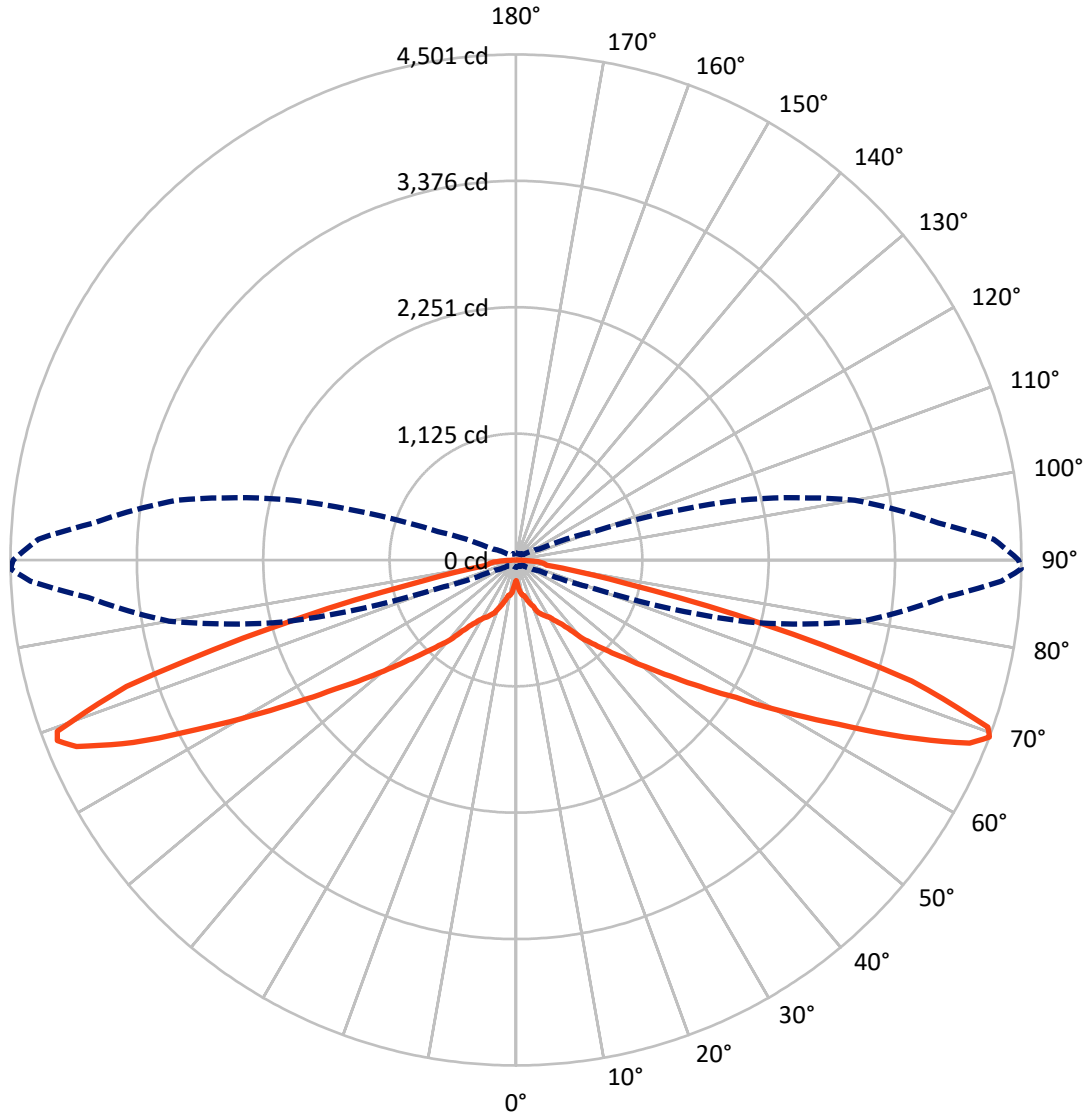
✕ Max cd  
 - - - 1/2 Max cd



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	1451.5	0.0	1451.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	1451.5	0.0	1451.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	2903.0	0.0	2903.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.1	0.8
10°-20°	106.4	3.7
20°-30°	212.4	7.3
30°-40°	321.2	11.1
40°-50°	466.3	16.1
50°-60°	612.6	21.1
60°-70°	747.2	25.7
70°-80°	377.8	13.0
80°-90°	36.0	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°	2903.0	100.0
0°-180°	2903.0	100.0

**Coefficient of Utilization**



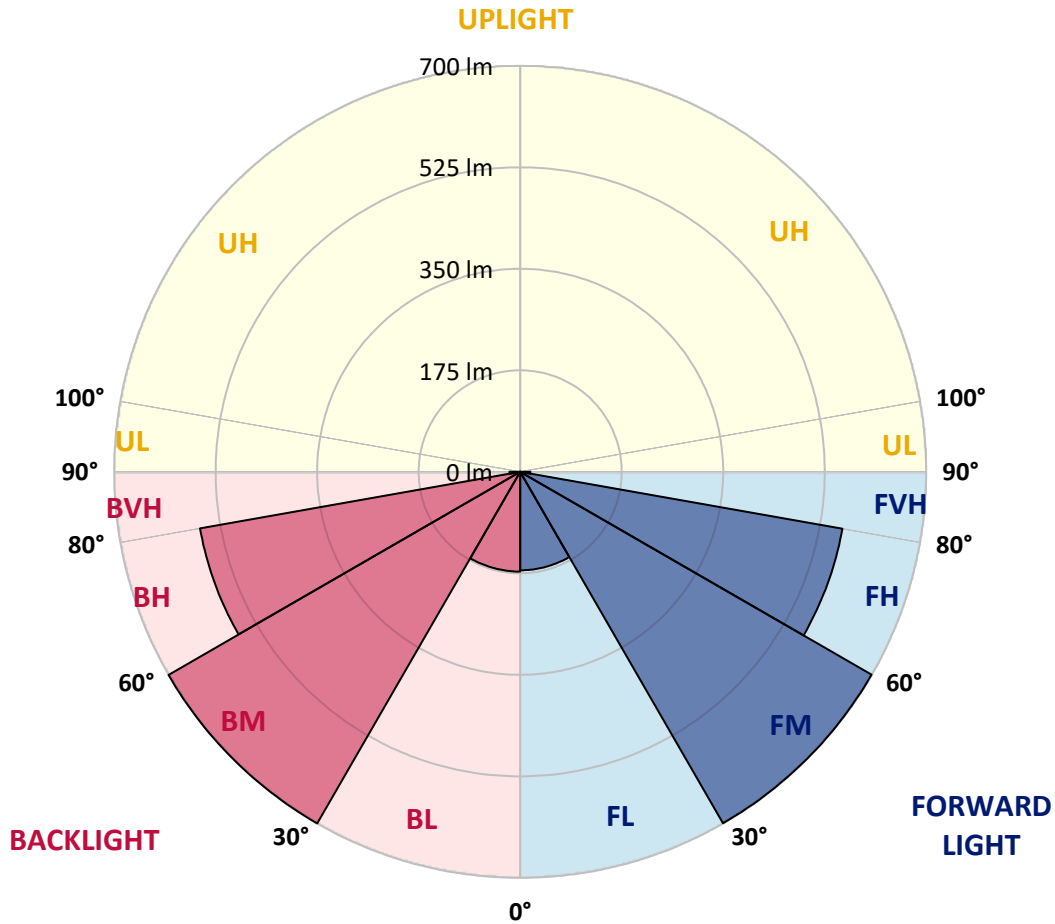
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	169.8	5.8			
FM (30°-60°)	699.8	24.1			
FH (60°-80°)	564.3	19.4			G0/660
FVH (80°-90°)	17.7	0.6			G1/100
BL (0°-30°)	172.2	5.9	B1/500		
BM (30°-60°)	700.2	24.1	B1/1000		
BH (60°-80°)	560.7	19.3	B2/1000		G2/1000
BVH (80°-90°)	18.3	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°	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9
2.5°	215.8	190.9	188.7	182.8	187.1	188.7	185.0	179.5	185.5	188.7	182.8
5°	272.0	235.3	222.8	212.5	192.0	183.3	192.0	214.2	216.9	230.4	226.6
7.5°	299.6	293.7	278.0	243.9	210.9	192.5	215.8	247.7	263.9	276.9	290.4
10°	320.2	316.9	289.3	265.0	251.5	252.6	253.1	263.4	277.4	299.1	306.6
12.5°	325.0	323.9	328.3	322.9	323.9	329.9	323.9	321.2	329.4	336.4	328.8
15°	356.4	355.9	357.5	358.6	380.2	389.4	380.2	372.1	366.1	360.2	372.6
17.5°	378.0	375.3	375.9	386.1	410.5	435.9	431.0	420.2	406.7	414.8	425.1
20°	389.9	385.1	388.3	392.6	433.7	461.9	465.1	450.5	442.4	452.7	461.3
22.5°	401.3	393.7	382.4	386.7	424.5	465.1	480.8	477.0	482.9	486.2	484.6
25°	387.8	392.6	380.2	392.6	431.0	468.3	499.7	521.9	522.4	520.8	532.7
27.5°	379.6	375.9	354.8	386.7	418.6	441.8	521.9	559.2	570.6	535.9	559.2
30°	365.6	371.5	342.9	369.4	409.9	448.9	547.3	600.8	584.1	579.8	585.2
32.5°	356.9	353.1	339.6	354.2	385.1	470.0	563.5	625.2	646.3	636.0	634.9
35°	342.9	345.6	324.5	340.2	383.4	452.1	574.3	686.3	718.7	710.6	704.1
37.5°	345.0	335.8	320.7	332.1	373.2	461.9	601.4	745.2	796.6	800.9	771.2
40°	328.8	323.4	300.7	319.6	353.7	455.9	607.9	812.3	899.4	918.8	876.1
42.5°	305.6	298.5	285.5	306.6	342.3	426.7	617.1	892.9	1003.7	1044.3	1005.4
45°	272.0	262.8	256.3	284.5	317.5	419.1	607.3	959.9	1103.8	1159.5	1158.4
47.5°	231.5	225.5	222.3	252.0	296.9	400.2	587.3	1002.1	1173.6	1316.3	1294.7
50°	185.5	181.2	180.6	212.0	262.3	361.3	564.6	1023.2	1279.6	1460.2	1479.1
52.5°	148.7	145.5	144.9	170.4	219.6	308.8	517.0	1039.4	1380.7	1623.5	1720.9
55°	116.3	113.0	113.6	134.7	174.7	252.6	444.5	1021.1	1469.4	1790.6	1975.0
57.5°	95.2	91.9	92.5	104.4	133.6	193.1	354.2	981.0	1509.4	1997.2	2271.4
60°	83.8	80.6	79.0	84.4	102.8	145.5	263.4	825.3	1515.9	2168.7	2593.2
62.5°	77.9	74.6	73.0	74.6	84.9	111.4	189.8	653.8	1478.6	2315.2	2887.9
65°	72.5	69.8	67.6	69.2	74.6	88.7	138.4	447.8	1283.3	2382.3	3102.1
67.5°	66.5	64.4	62.2	64.4	68.1	74.6	107.6	283.4	962.1	2295.2	3191.3
69°	63.3	60.0	58.9	60.6	64.4	68.7	93.0	226.1	731.7	2129.7	3137.2
70°	60.0	57.9	56.2	58.9	62.2	65.4	83.8	192.0	573.8	1917.2	3003.1
72.5°	53.0	51.4	50.3	53.0	55.7	57.9	68.7	136.8	332.6	1305.5	2381.7
75°	46.5	44.9	44.3	46.5	48.7	49.8	57.9	94.1	196.3	683.0	1428.8
77.5°	38.9	36.8	37.3	40.0	41.6	42.2	48.7	67.6	115.7	309.3	662.0
80°	28.7	28.7	30.8	33.0	33.0	33.0	38.9	49.2	70.3	142.2	274.7
82.5°	20.0	20.6	21.1	24.3	24.9	22.7	29.7	35.7	43.8	62.2	95.2
85°	11.4	11.9	12.4	14.6	15.1	13.5	19.5	22.7	25.4	30.8	49.8
87.5°	4.3	4.9	6.5	7.6	8.1	5.9	9.2	10.8	10.8	13.0	22.2
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°	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9
2.5°	195.2	199.0	206.0	207.7	201.7	195.2	180.6	189.8	193.6	186.6	188.7
5°	241.7	249.9	258.5	248.2	241.7	237.4	230.4	230.9	227.1	214.7	194.2
7.5°	294.2	285.0	291.5	298.5	288.3	288.8	295.3	281.8	271.5	250.4	212.0
10°	318.5	318.5	320.2	320.2	315.8	315.8	315.3	293.7	281.2	272.0	261.2
12.5°	320.2	319.6	326.1	321.2	322.3	323.4	326.1	335.8	332.6	320.7	330.4
15°	365.0	362.9	365.0	364.5	366.1	371.0	368.8	366.7	367.2	375.9	390.5
17.5°	407.2	408.3	406.1	409.9	409.9	413.2	420.8	413.2	406.7	422.9	434.3
20°	455.9	452.1	443.5	450.0	451.6	452.1	464.6	455.4	446.2	452.1	465.6
22.5°	505.1	504.6	505.7	506.2	508.4	500.3	483.5	480.8	486.7	478.6	480.2
25°	535.4	535.9	538.6	539.2	530.0	538.6	544.6	526.8	526.8	525.1	514.3
27.5°	572.2	564.1	567.3	571.6	567.9	570.0	563.0	537.0	564.6	568.4	525.1
30°	597.1	593.3	589.5	593.8	597.6	607.3	587.3	584.6	586.8	606.8	550.0
32.5°	649.5	654.9	647.9	640.9	647.9	645.7	637.1	633.3	660.3	633.8	567.3
35°	698.2	700.4	700.9	699.8	704.1	696.6	696.6	710.6	718.7	690.1	572.7
37.5°	815.5	808.0	792.3	784.7	798.2	809.6	776.1	792.8	789.6	740.9	613.3
40°	899.9	917.2	922.1	919.9	922.1	889.6	896.7	909.1	894.5	813.9	599.2
42.5°	1023.2	1034.0	1030.2	1025.4	1027.5	1021.6	1000.5	1046.5	994.0	895.6	620.9
45°	1135.7	1160.0	1161.7	1144.9	1158.4	1137.3	1146.0	1162.2	1109.2	956.7	614.9
47.5°	1269.8	1320.1	1301.2	1301.2	1314.7	1269.3	1289.8	1311.5	1170.9	997.8	582.5
50°	1468.3	1495.3	1494.3	1489.4	1495.3	1471.0	1467.8	1465.1	1265.5	1036.7	562.4
52.5°	1692.7	1729.5	1715.5	1720.9	1729.0	1683.0	1719.2	1620.3	1383.9	1051.3	517.0
55°	1979.4	2004.8	1990.7	1963.1	1999.9	1970.7	1982.6	1789.5	1466.1	1009.7	441.3
57.5°	2320.6	2333.6	2310.3	2307.6	2332.0	2300.6	2280.6	1979.9	1508.9	978.3	352.6
60°	2719.2	2759.8	2745.2	2721.9	2744.1	2716.5	2565.1	2141.6	1500.2	831.8	273.1
62.5°	3197.3	3238.4	3222.2	3206.5	3220.5	3148.6	2832.2	2269.2	1461.3	659.2	199.6
65°	3592.1	3777.6	3801.9	3802.4	3734.3	3567.7	3045.3	2319.0	1255.8	460.2	146.0
67.5°	3851.7	4237.3	4357.3	4314.1	4157.8	3777.6	3131.3	2221.7	969.7	291.0	109.2
69°	3821.9	4327.6	4501.2	4476.8	4257.3	3774.3	3064.2	2057.8	740.9	231.5	92.5
70°	3684.5	4253.5	4459.5	4470.3	4194.0	3629.4	2944.7	1869.6	599.2	197.4	84.9
72.5°	2940.4	3505.0	3686.2	3757.0	3482.8	2906.3	2414.7	1319.0	347.2	137.9	68.7
75°	1821.5	2125.4	2275.7	2316.8	2150.8	1810.1	1465.6	733.9	211.5	97.3	57.9
77.5°	816.6	904.8	991.3	991.3	926.4	826.4	671.7	354.8	120.1	69.2	48.7
80°	273.7	283.9	276.4	279.1	268.2	258.0	269.9	153.0	74.1	51.9	39.5
82.5°	186.0	233.6	248.2	248.2	233.1	183.9	103.8	70.3	45.4	37.3	30.3
85°	151.4	185.0	198.5	204.4	192.5	155.2	54.6	34.1	27.0	23.8	20.6
87.5°	50.8	47.6	44.9	43.8	46.0	48.1	27.0	14.6	12.4	11.4	10.8
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°	183.9	183.9	183.9	183.9	183.9	183.9
2.5°	192.5	186.0	188.7	191.4	210.9	225.5
5°	191.4	200.6	221.2	247.2	259.0	288.3
7.5°	196.9	230.4	268.8	295.8	306.6	315.8
10°	263.4	269.3	282.3	308.3	329.9	333.7
12.5°	340.2	338.5	329.4	341.3	330.4	338.0
15°	400.2	382.4	369.9	368.3	364.5	364.5
17.5°	433.2	417.5	400.2	395.9	384.5	393.7
20°	472.1	445.1	401.8	397.5	393.7	385.1
22.5°	464.6	437.5	392.6	387.2	407.2	406.1
25°	473.8	437.5	394.8	388.8	398.0	398.0
27.5°	451.0	421.3	390.5	354.8	382.9	389.4
30°	445.1	411.6	375.9	344.0	372.6	366.7
32.5°	476.5	387.2	352.1	342.3	363.4	359.1
35°	452.1	382.9	346.1	328.3	353.1	348.8
37.5°	462.4	377.5	335.8	320.7	340.7	347.2
40°	460.2	352.1	323.9	304.5	324.5	327.7
42.5°	424.0	332.6	303.9	284.5	294.7	305.6
45°	413.2	320.7	284.5	257.4	258.0	270.4
47.5°	393.2	293.7	248.8	223.9	223.9	234.2
50°	359.6	257.4	208.2	185.5	185.0	193.1
52.5°	309.9	222.3	175.8	150.9	149.3	157.4
55°	253.6	179.0	138.4	122.2	119.0	122.2
57.5°	197.4	139.5	109.2	96.3	95.7	98.4
60°	153.0	109.2	87.1	79.5	80.6	84.9
62.5°	115.7	87.1	74.1	71.4	73.0	77.3
65°	91.9	75.2	67.6	66.0	67.6	71.9
67.5°	74.6	68.1	62.7	60.6	61.7	66.0
69°	68.7	64.4	60.0	57.3	58.4	61.7
70°	65.4	62.2	57.9	55.2	56.2	59.5
72.5°	57.3	55.7	52.5	49.8	50.3	53.0
75°	50.3	49.2	47.1	43.8	43.8	47.1
77.5°	42.2	42.7	40.6	37.3	36.8	38.4
80°	33.5	34.6	33.5	30.3	29.2	29.2
82.5°	24.3	26.5	25.4	22.2	21.6	21.6
85°	15.1	16.8	16.2	14.1	14.1	12.4
87.5°	7.0	9.2	8.7	7.6	7.0	4.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)