

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: P565317

Luminaire Tested: **MSA-SA1B-830-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565317  
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-SA1B-830-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

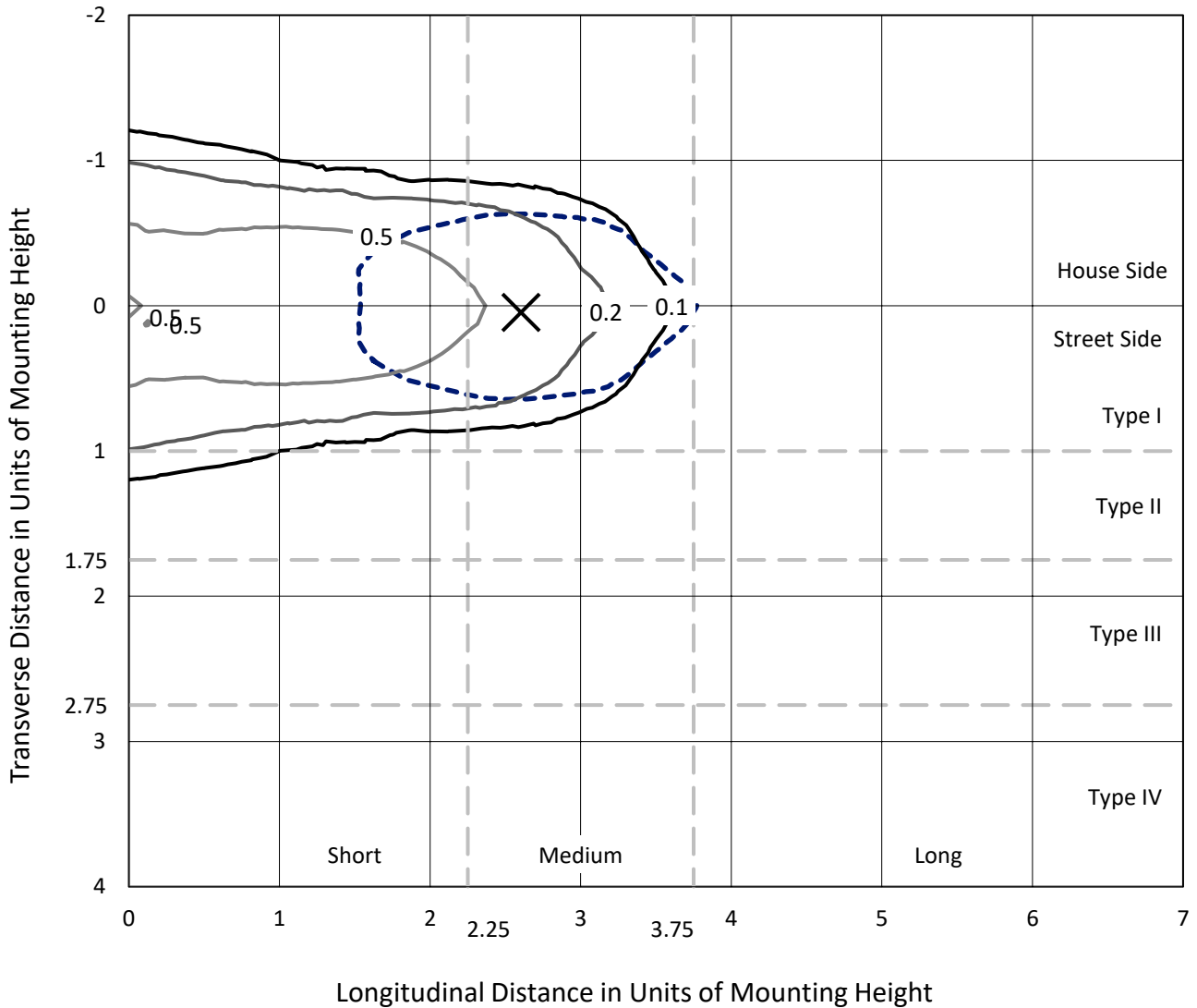
Lumens per Lamp: N/A  
Luminaire Lumens: 3639 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

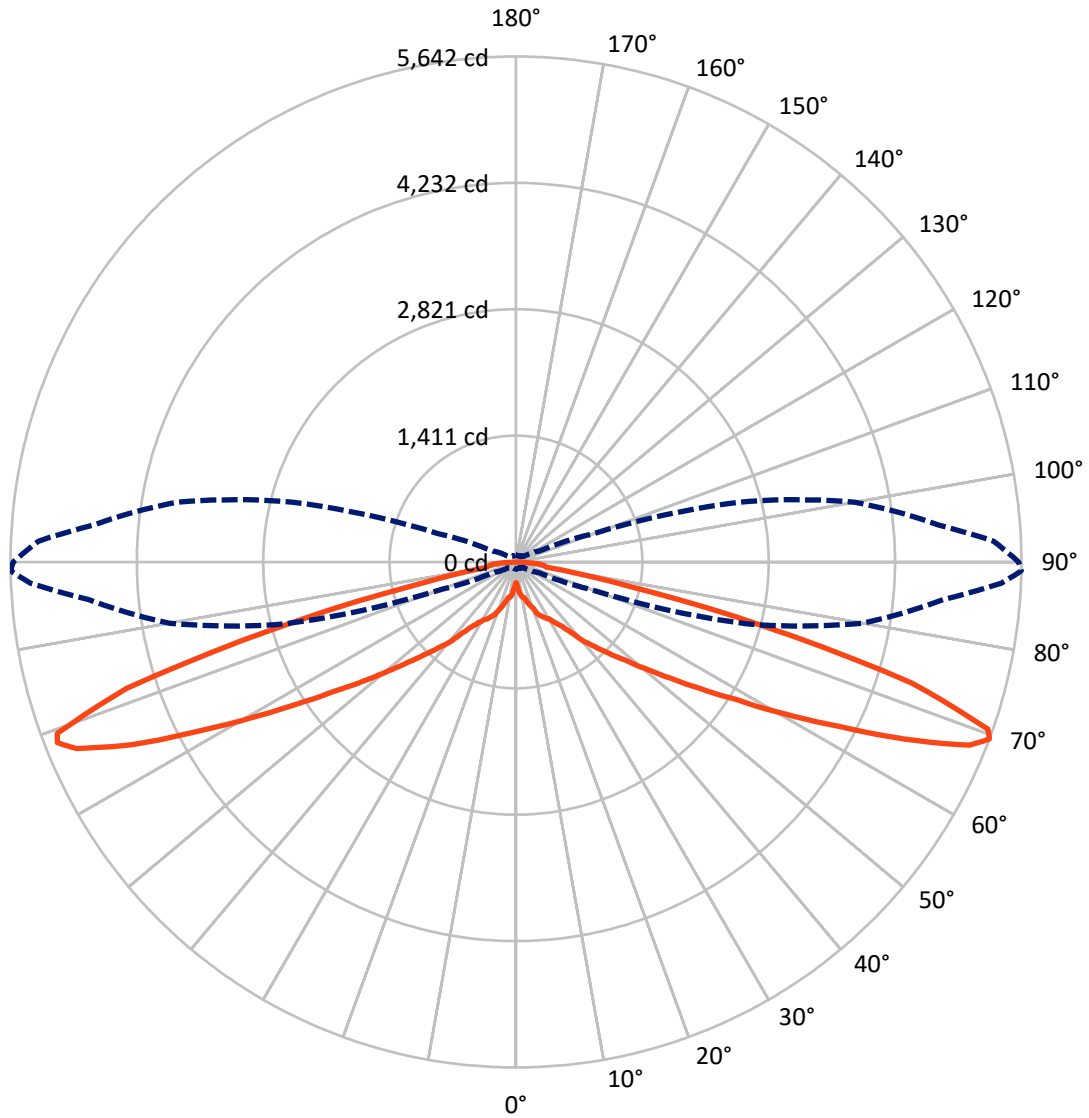
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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	1819.5	0.0	1819.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	1819.5	0.0	1819.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	3639.0	0.0	3639.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.0	0.8
10°-20°	133.4	3.7
20°-30°	266.2	7.3
30°-40°	402.6	11.1
40°-50°	584.5	16.1
50°-60°	767.9	21.1
60°-70°	936.7	25.7
70°-80°	473.6	13.0
80°-90°	45.1	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°	3639.0	100.0
0°-180°	3639.0	100.0

**Coefficient of Utilization**

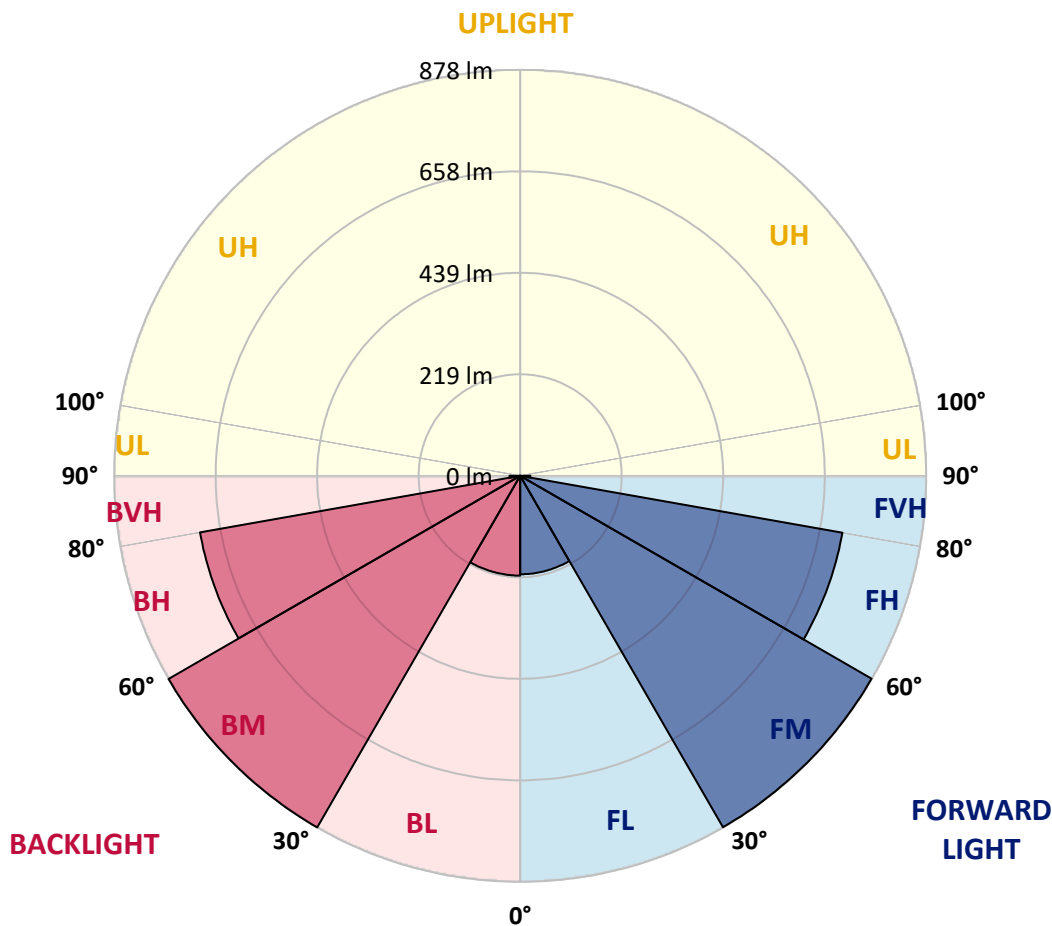


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	212.8	5.8			
FM (30°-60°)	877.2	24.1			
FH (60°-80°)	707.4	19.4			G1/1800
FVH (80°-90°)	22.1	0.6			G1/100
BL (0°-30°)	215.8	5.9	B1/500		
BM (30°-60°)	877.8	24.1	B1/1000		
BH (60°-80°)	702.9	19.3	B2/1000		G2/1000
BVH (80°-90°)	23.0	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°	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5
2.5°	270.5	239.3	236.6	229.1	234.6	236.6	231.9	225.1	232.5	236.6	229.1
5°	341.0	294.9	279.3	266.4	240.7	229.8	240.7	268.5	271.8	288.8	284.1
7.5°	375.6	368.1	348.5	305.7	264.4	241.3	270.5	310.5	330.8	347.1	364.0
10°	401.3	397.3	362.7	332.2	315.2	316.6	317.3	330.1	347.8	374.9	384.4
12.5°	407.4	406.1	411.5	404.7	406.1	413.5	406.1	402.7	412.9	421.7	412.2
15°	446.8	446.1	448.1	449.5	476.6	488.1	476.6	466.4	459.0	451.5	467.1
17.5°	473.9	470.5	471.2	484.0	514.5	546.4	540.3	526.7	509.8	520.0	532.8
20°	488.8	482.7	486.7	492.2	543.7	578.9	583.0	564.7	554.5	567.4	578.3
22.5°	503.0	493.5	479.3	484.7	532.2	583.0	602.7	597.9	605.4	609.5	607.4
25°	486.1	492.2	476.6	492.2	540.3	587.1	626.4	654.2	654.9	652.8	667.8
27.5°	475.9	471.2	444.7	484.7	524.7	553.9	654.2	701.0	715.2	671.8	701.0
30°	458.3	465.7	429.8	463.0	513.9	562.7	686.1	753.2	732.2	726.7	733.5
32.5°	447.4	442.7	425.7	444.0	482.7	589.1	706.4	783.7	810.1	797.2	795.9
35°	429.8	433.2	406.8	426.4	480.6	566.7	720.0	860.3	901.0	890.8	882.7
37.5°	432.5	421.0	402.0	416.2	467.8	578.9	753.9	934.2	998.6	1004.0	966.7
40°	412.2	405.4	376.9	400.7	443.4	571.5	762.0	1018.2	1127.4	1151.8	1098.2
42.5°	383.0	374.2	357.9	384.4	429.1	534.9	773.5	1119.3	1258.2	1309.1	1260.3
45°	341.0	329.5	321.3	356.6	397.9	525.4	761.3	1203.3	1383.6	1453.5	1452.1
47.5°	290.2	282.7	278.6	315.9	372.2	501.7	736.2	1256.2	1471.1	1650.1	1623.0
50°	232.5	227.1	226.4	265.7	328.8	452.9	707.8	1282.6	1604.0	1830.4	1854.1
52.5°	186.4	182.4	181.7	213.5	275.2	387.1	648.1	1303.0	1730.7	2035.1	2157.2
55°	145.8	141.7	142.4	168.8	219.0	316.6	557.3	1279.9	1841.9	2244.6	2475.8
57.5°	119.3	115.2	115.9	130.8	167.4	242.0	444.0	1229.8	1892.1	2503.6	2847.3
60°	105.1	101.0	99.0	105.8	128.8	182.4	330.1	1034.5	1900.2	2718.5	3250.6
62.5°	97.6	93.6	91.5	93.6	106.4	139.7	238.0	819.6	1853.4	2902.2	3620.1
65°	90.8	87.5	84.7	86.8	93.6	111.2	173.5	561.3	1608.7	2986.3	3888.6
67.5°	83.4	80.7	78.0	80.7	85.4	93.6	134.9	355.2	1206.0	2877.1	4000.4
69°	79.3	75.2	73.9	75.9	80.7	86.1	116.6	283.4	917.2	2669.7	3932.6
70°	75.2	72.5	70.5	73.9	78.0	82.0	105.1	240.7	719.3	2403.2	3764.5
72.5°	66.4	64.4	63.0	66.4	69.8	72.5	86.1	171.5	416.9	1636.5	2985.6
75°	58.3	56.3	55.6	58.3	61.0	62.4	72.5	118.0	246.1	856.2	1791.1
77.5°	48.8	46.1	46.8	50.2	52.2	52.9	61.0	84.7	145.1	387.8	829.8
80°	35.9	35.9	38.6	41.4	41.4	41.4	48.8	61.7	88.1	178.3	344.4
82.5°	25.1	25.8	26.4	30.5	31.2	28.5	37.3	44.7	54.9	78.0	119.3
85°	14.2	14.9	15.6	18.3	19.0	16.9	24.4	28.5	31.9	38.6	62.4
87.5°	5.4	6.1	8.1	9.5	10.2	7.5	11.5	13.6	13.6	16.3	27.8
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):**

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5	230.5
2.5°	244.7	249.5	258.3	260.3	252.9	244.7	226.4	238.0	242.7	233.9	236.6
5°	303.0	313.2	324.0	311.2	303.0	297.6	288.8	289.5	284.7	269.1	243.4
7.5°	368.8	357.3	365.4	374.2	361.3	362.0	370.1	353.2	340.3	313.9	265.7
10°	399.3	399.3	401.3	401.3	395.9	395.9	395.2	368.1	352.5	341.0	327.4
12.5°	401.3	400.7	408.8	402.7	404.0	405.4	408.8	421.0	416.9	402.0	414.2
15°	457.6	454.9	457.6	456.9	459.0	465.1	462.3	459.6	460.3	471.2	489.5
17.5°	510.5	511.8	509.1	513.9	513.9	517.9	527.4	517.9	509.8	530.1	544.4
20°	571.5	566.7	555.9	564.0	566.1	566.7	582.3	570.8	559.3	566.7	583.7
22.5°	633.2	632.5	633.9	634.5	637.2	627.1	606.1	602.7	610.1	600.0	602.0
25°	671.1	671.8	675.2	675.9	664.4	675.2	682.7	660.3	660.3	658.3	644.7
27.5°	717.2	707.1	711.1	716.6	711.8	714.5	705.7	673.2	707.8	712.5	658.3
30°	748.4	743.7	738.9	744.4	749.1	761.3	736.2	732.8	735.5	760.6	689.4
32.5°	814.2	821.0	812.2	803.3	812.2	809.4	798.6	793.8	827.7	794.5	711.1
35°	875.2	877.9	878.6	877.2	882.7	873.2	873.2	890.8	901.0	865.0	717.9
37.5°	1022.3	1012.8	993.2	983.7	1000.6	1014.9	972.8	993.8	989.8	928.8	768.8
40°	1128.1	1149.8	1155.9	1153.1	1155.9	1115.2	1124.0	1139.6	1121.3	1020.3	751.1
42.5°	1282.6	1296.2	1291.4	1285.3	1288.1	1280.6	1254.2	1311.8	1246.0	1122.6	778.3
45°	1423.6	1454.1	1456.2	1435.2	1452.1	1425.7	1436.5	1456.9	1390.4	1199.2	770.8
47.5°	1591.8	1654.8	1631.1	1631.1	1648.0	1591.1	1616.8	1644.0	1467.7	1250.8	730.1
50°	1840.6	1874.5	1873.1	1867.0	1874.5	1844.0	1839.9	1836.5	1586.3	1299.6	705.0
52.5°	2121.9	2168.0	2150.4	2157.2	2167.3	2109.7	2155.1	2031.1	1734.8	1317.9	648.1
55°	2481.2	2513.1	2495.4	2460.9	2507.0	2470.4	2485.3	2243.3	1837.9	1265.7	553.2
57.5°	2909.0	2925.2	2896.1	2892.7	2923.2	2883.9	2858.8	2481.9	1891.4	1226.4	442.0
60°	3408.6	3459.4	3441.1	3412.0	3439.8	3405.2	3215.4	2684.6	1880.6	1042.6	342.4
62.5°	4007.9	4059.4	4039.1	4019.4	4037.0	3946.9	3550.3	2844.6	1831.8	826.4	250.2
65°	4502.8	4735.3	4765.8	4766.5	4681.1	4472.3	3817.4	2906.9	1574.1	576.9	183.0
67.5°	4828.2	5311.5	5462.0	5407.8	5211.9	4735.3	3925.2	2784.9	1215.5	364.7	136.9
69°	4790.9	5424.7	5642.4	5611.9	5336.6	4731.2	3841.1	2579.5	928.8	290.2	115.9
70°	4618.7	5331.9	5590.2	5603.7	5257.3	4549.5	3691.3	2343.6	751.1	247.4	106.4
72.5°	3685.9	4393.6	4620.7	4709.5	4365.8	3643.2	3026.9	1653.5	435.2	172.9	86.1
75°	2283.2	2664.2	2852.7	2904.2	2696.1	2269.0	1837.2	919.9	265.1	122.0	72.5
77.5°	1023.7	1134.2	1242.6	1242.6	1161.3	1035.9	842.0	444.7	150.5	86.8	61.0
80°	343.0	355.9	346.4	349.8	336.3	323.4	338.3	191.9	92.9	65.1	49.5
82.5°	233.2	292.9	311.2	311.2	292.2	230.5	130.2	88.1	56.9	46.8	38.0
85°	189.8	231.9	248.8	256.3	241.3	194.6	68.5	42.7	33.9	29.8	25.8
87.5°	63.7	59.7	56.3	54.9	57.6	60.3	33.9	18.3	15.6	14.2	13.6
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):**

	135°	145°	155°	165°	175°	180°
0°	230.5	230.5	230.5	230.5	230.5	230.5
2.5°	241.3	233.2	236.6	240.0	264.4	282.7
5°	240.0	251.5	277.3	309.8	324.7	361.3
7.5°	246.8	288.8	336.9	370.8	384.4	395.9
10°	330.1	337.6	353.9	386.4	413.5	418.3
12.5°	426.4	424.4	412.9	427.8	414.2	423.7
15°	501.7	479.3	463.7	461.7	456.9	456.9
17.5°	543.0	523.4	501.7	496.2	482.0	493.5
20°	591.8	557.9	503.7	498.3	493.5	482.7
22.5°	582.3	548.4	492.2	485.4	510.5	509.1
25°	593.9	548.4	494.9	487.4	499.0	499.0
27.5°	565.4	528.1	489.5	444.7	480.0	488.1
30°	557.9	515.9	471.2	431.2	467.1	459.6
32.5°	597.3	485.4	441.3	429.1	455.6	450.1
35°	566.7	480.0	433.9	411.5	442.7	437.3
37.5°	579.6	473.2	421.0	402.0	427.1	435.2
40°	576.9	441.3	406.1	381.7	406.8	410.8
42.5°	531.5	416.9	381.0	356.6	369.5	383.0
45°	517.9	402.0	356.6	322.7	323.4	339.0
47.5°	492.9	368.1	311.8	280.7	280.7	293.5
50°	450.8	322.7	261.0	232.5	231.9	242.0
52.5°	388.5	278.6	220.3	189.1	187.1	197.3
55°	317.9	224.4	173.5	153.2	149.1	153.2
57.5°	247.4	174.9	136.9	120.7	120.0	123.4
60°	191.9	136.9	109.1	99.7	101.0	106.4
62.5°	145.1	109.1	92.9	89.5	91.5	96.9
65°	115.2	94.2	84.7	82.7	84.7	90.2
67.5°	93.6	85.4	78.6	75.9	77.3	82.7
69°	86.1	80.7	75.2	71.9	73.2	77.3
70°	82.0	78.0	72.5	69.1	70.5	74.6
72.5°	71.9	69.8	65.8	62.4	63.0	66.4
75°	63.0	61.7	59.0	54.9	54.9	59.0
77.5°	52.9	53.6	50.8	46.8	46.1	48.1
80°	42.0	43.4	42.0	38.0	36.6	36.6
82.5°	30.5	33.2	31.9	27.8	27.1	27.1
85°	19.0	21.0	20.3	17.6	17.6	15.6
87.5°	8.8	11.5	10.8	9.5	8.8	6.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)