

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: P565319

Luminaire Tested: **MSA-SA1D-830-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565319
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-SA1D-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: 4927 lumens
Efficiency: N/A
Efficacy: 73.5 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

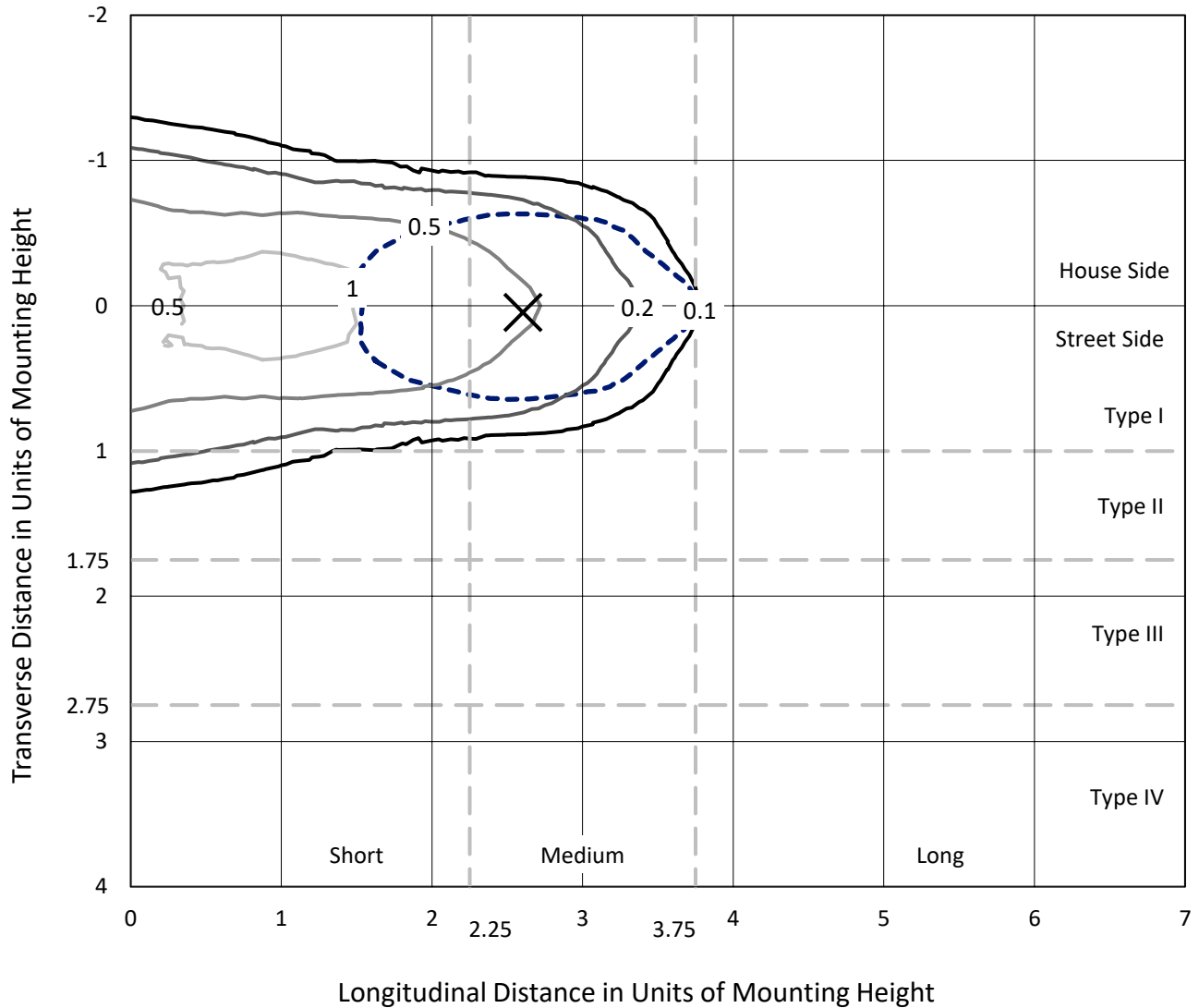
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

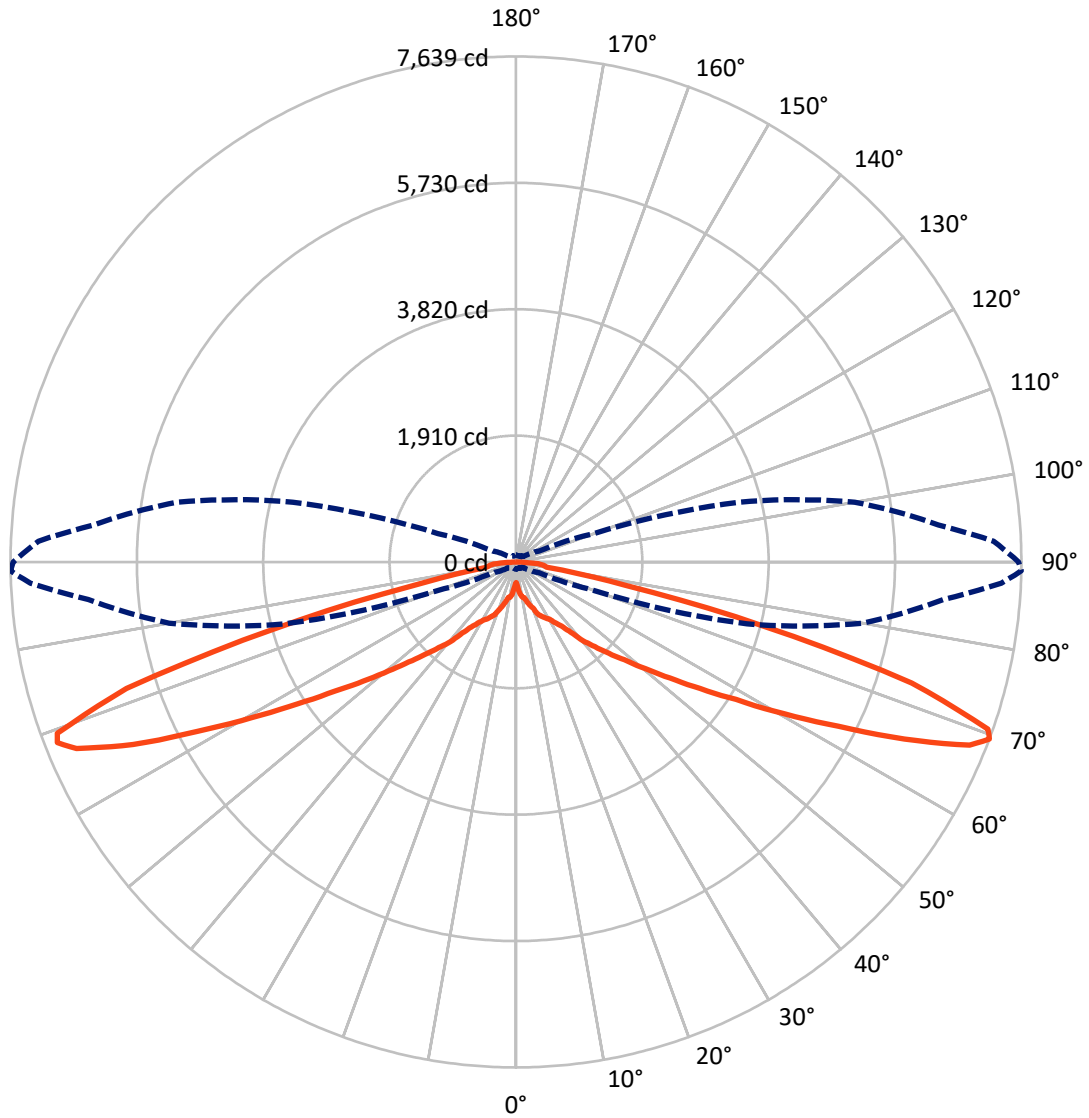
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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
House Side	Lumens	2463.4	0.0	2463.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2463.6	0.0	2463.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	4927.0	0.0	4927.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.2	0.8
10°-20°	180.7	3.7
20°-30°	360.4	7.3
30°-40°	545.2	11.1
40°-50°	791.3	16.1
50°-60°	1039.7	21.1
60°-70°	1268.2	25.7
70°-80°	641.2	13.0
80°-90°	61.1	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°	4927.0	100.0
0°-180°	4927.0	100.0

Coefficient of Utilization

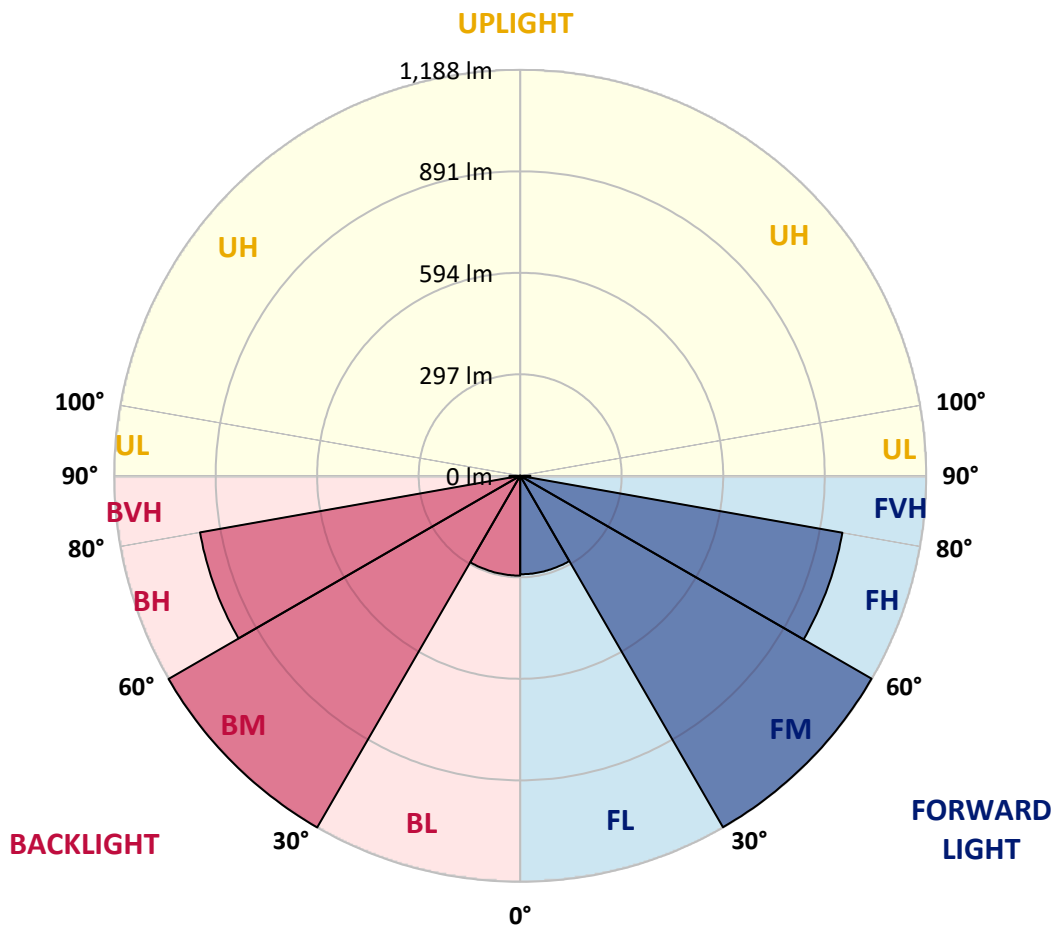


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	288.1	5.8			
FM (30°-60°)	1187.7	24.1			
FH (60°-80°)	957.8	19.4			G1/1800
FVH (80°-90°)	30.0	0.6			G1/100
BL (0°-30°)	292.2	5.9	B1/500		
BM (30°-60°)	1188.5	24.1	B2/2500		
BH (60°-80°)	951.7	19.3	B2/1000		G2/1000
BVH (80°-90°)	31.1	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1
2.5°	366.2	324.0	320.3	310.2	317.6	320.3	313.9	304.7	314.8	320.3	310.2
5°	461.7	399.3	378.2	360.7	325.8	311.2	325.8	363.5	368.1	391.0	384.6
7.5°	508.5	498.4	471.8	414.0	358.0	326.8	366.2	420.4	447.9	469.9	492.9
10°	543.4	537.9	491.1	449.8	426.8	428.6	429.6	447.0	470.9	507.6	520.4
12.5°	551.6	549.8	557.1	548.0	549.8	559.9	549.8	545.2	559.0	570.9	558.1
15°	604.9	604.0	606.7	608.5	645.3	660.9	645.3	631.5	621.4	611.3	632.4
17.5°	641.6	637.0	637.9	655.4	696.7	739.8	731.5	713.2	690.2	704.0	721.4
20°	661.8	653.5	659.0	666.4	736.1	783.9	789.4	764.6	750.8	768.3	782.9
22.5°	681.1	668.2	648.9	656.3	720.5	789.4	816.0	809.6	819.7	825.2	822.4
25°	658.1	666.4	645.3	666.4	731.5	794.9	848.1	885.7	886.7	883.9	904.1
27.5°	644.3	637.9	602.1	656.3	710.4	749.9	885.7	949.1	968.4	909.6	949.1
30°	620.5	630.6	581.9	626.9	695.7	761.8	928.9	1019.8	991.3	984.0	993.1
32.5°	605.8	599.4	576.4	601.2	653.5	797.6	956.4	1061.1	1096.9	1079.4	1077.6
35°	581.9	586.5	550.7	577.3	650.8	767.3	974.8	1164.8	1219.9	1206.1	1195.1
37.5°	585.6	570.0	544.3	563.6	633.3	783.9	1020.7	1264.8	1352.0	1359.4	1308.9
40°	558.1	548.9	510.3	542.5	600.3	773.8	1031.7	1378.6	1526.4	1559.5	1487.0
42.5°	518.6	506.7	484.6	520.4	581.0	724.2	1047.3	1515.4	1703.6	1772.4	1706.3
45°	461.7	446.1	435.1	482.8	538.8	711.3	1030.8	1629.2	1873.4	1967.9	1966.1
47.5°	392.8	382.8	377.2	427.7	503.9	679.2	996.8	1700.8	1991.8	2234.1	2197.4
50°	314.8	307.5	306.6	359.8	445.2	613.1	958.3	1736.6	2171.7	2478.3	2510.4
52.5°	252.4	246.9	246.0	289.1	372.7	524.1	877.5	1764.1	2343.3	2755.4	2920.7
55°	197.3	191.8	192.8	228.5	296.5	428.6	754.5	1732.9	2493.9	3039.1	3352.1
57.5°	161.5	156.0	157.0	177.1	226.7	327.7	601.2	1665.0	2561.8	3389.7	3855.1
60°	142.3	136.8	134.0	143.2	174.4	246.9	447.0	1400.7	2572.8	3680.7	4401.2
62.5°	132.2	126.7	123.9	126.7	144.1	189.1	322.2	1109.7	2509.5	3929.4	4901.4
65°	123.0	118.4	114.7	117.5	126.7	150.5	235.0	760.0	2178.1	4043.2	5264.9
67.5°	112.9	109.2	105.6	109.2	115.7	126.7	182.7	481.0	1632.9	3895.4	5416.4
69°	107.4	101.9	100.0	102.8	109.2	116.6	157.9	383.7	1241.9	3614.6	5324.6
70°	101.9	98.2	95.5	100.0	105.6	111.1	142.3	325.8	973.9	3253.9	5096.9
72.5°	90.0	87.2	85.4	90.0	94.5	98.2	116.6	232.2	564.5	2215.7	4042.3
75°	78.9	76.2	75.3	78.9	82.6	84.4	98.2	159.7	333.2	1159.3	2425.0
77.5°	66.1	62.4	63.3	67.9	70.7	71.6	82.6	114.7	196.4	525.0	1123.5
80°	48.6	48.6	52.3	56.0	56.0	56.0	66.1	83.5	119.3	241.4	466.3
82.5°	34.0	34.9	35.8	41.3	42.2	38.6	50.5	60.6	74.3	105.6	161.5
85°	19.3	20.2	21.1	24.8	25.7	22.9	33.0	38.6	43.1	52.3	84.4
87.5°	7.3	8.3	11.0	12.9	13.8	10.1	15.6	18.4	18.4	22.0	37.6
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°	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1
2.5°	331.4	337.8	349.7	352.5	342.4	331.4	306.6	322.2	328.6	316.7	320.3
5°	410.3	424.1	438.7	421.3	410.3	402.9	391.0	391.9	385.5	364.4	329.5
7.5°	499.3	483.7	494.7	506.7	489.2	490.1	501.2	478.2	460.8	425.0	359.8
10°	540.6	540.6	543.4	543.4	536.0	536.0	535.1	498.4	477.3	461.7	443.3
12.5°	543.4	542.5	553.5	545.2	547.1	548.9	553.5	570.0	564.5	544.3	560.8
15°	619.6	615.9	619.6	618.6	621.4	629.7	626.0	622.3	623.2	637.9	662.7
17.5°	691.2	693.0	689.3	695.7	695.7	701.3	714.1	701.3	690.2	717.8	737.1
20°	773.8	767.3	752.7	763.7	766.4	767.3	788.5	772.8	757.2	767.3	790.3
22.5°	857.3	856.4	858.2	859.1	862.8	849.0	820.6	816.0	826.1	812.3	815.1
25°	908.7	909.6	914.2	915.1	899.5	914.2	924.3	894.0	894.0	891.3	872.9
27.5°	971.1	957.3	962.8	970.2	963.8	967.4	955.5	911.4	958.3	964.7	891.3
30°	1013.3	1006.9	1000.5	1007.8	1014.2	1030.8	996.8	992.2	995.9	1029.9	933.5
32.5°	1102.4	1111.5	1099.6	1087.7	1099.6	1095.9	1081.3	1074.8	1120.7	1075.7	962.8
35°	1185.0	1188.6	1189.6	1187.7	1195.1	1182.2	1182.2	1206.1	1219.9	1171.2	972.0
37.5°	1384.1	1371.3	1344.7	1331.8	1354.8	1374.1	1317.1	1345.6	1340.1	1257.5	1040.9
40°	1527.3	1556.7	1565.0	1561.3	1565.0	1509.9	1521.8	1542.9	1518.2	1381.4	1017.0
42.5°	1736.6	1755.0	1748.5	1740.3	1744.0	1733.9	1698.1	1776.1	1687.0	1520.0	1053.7
45°	1927.5	1968.8	1971.6	1943.1	1966.1	1930.3	1945.0	1972.5	1882.6	1623.7	1043.6
47.5°	2155.2	2240.5	2208.4	2208.4	2231.3	2154.2	2189.1	2225.8	1987.2	1693.5	988.5
50°	2492.0	2537.9	2536.1	2527.8	2537.9	2496.6	2491.1	2486.5	2147.8	1759.6	954.6
52.5°	2872.9	2935.4	2911.5	2920.7	2934.4	2856.4	2917.9	2749.9	2348.8	1784.3	877.5
55°	3359.4	3402.5	3378.7	3331.9	3394.3	3344.7	3364.9	3037.2	2488.3	1713.7	749.0
57.5°	3938.6	3960.6	3921.1	3916.6	3957.9	3904.6	3870.7	3360.3	2560.9	1660.4	598.5
60°	4615.1	4683.9	4659.1	4619.6	4657.3	4610.5	4353.5	3634.8	2546.2	1411.7	463.5
62.5°	5426.5	5496.2	5468.7	5442.1	5465.9	5343.8	4806.9	3851.4	2480.1	1118.9	338.7
65°	6096.5	6411.3	6452.6	6453.5	6337.9	6055.2	5168.5	3935.8	2131.3	781.1	247.8
67.5°	6537.1	7191.5	7395.3	7321.9	7056.6	6411.3	5314.5	3770.6	1645.7	493.8	185.4
69°	6486.6	7344.8	7639.4	7598.1	7225.5	6405.8	5200.7	3492.5	1257.5	392.8	157.0
70°	6253.5	7219.1	7568.8	7587.1	7118.1	6159.8	4997.8	3173.1	1017.0	335.0	144.1
72.5°	4990.5	5948.7	6256.2	6376.4	5911.1	4932.6	4098.3	2238.7	589.3	234.1	116.6
75°	3091.4	3607.2	3862.4	3932.2	3650.4	3072.1	2487.4	1245.6	358.9	165.2	98.2
77.5°	1386.0	1535.6	1682.5	1682.5	1572.3	1402.5	1140.0	602.1	203.8	117.5	82.6
80°	464.4	481.9	469.0	473.6	455.3	437.8	458.0	259.8	125.7	88.1	67.0
82.5°	315.7	396.5	421.3	421.3	395.6	312.1	176.2	119.3	77.1	63.3	51.4
85°	257.0	313.9	336.9	347.0	326.8	263.4	92.7	57.8	45.9	40.4	34.9
87.5°	86.3	80.8	76.2	74.3	78.0	81.7	45.9	24.8	21.1	19.3	18.4
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°	312.1	312.1	312.1	312.1	312.1	312.1
2.5°	326.8	315.7	320.3	324.9	358.0	382.8
5°	324.9	340.5	375.4	419.5	439.7	489.2
7.5°	334.1	391.0	456.2	502.1	520.4	536.0
10°	447.0	457.1	479.1	523.2	559.9	566.3
12.5°	577.3	574.6	559.0	579.2	560.8	573.7
15°	679.2	648.9	627.8	625.1	618.6	618.6
17.5°	735.2	708.6	679.2	671.9	652.6	668.2
20°	801.3	755.4	682.0	674.6	668.2	653.5
22.5°	788.5	742.6	666.4	657.2	691.2	689.3
25°	804.1	742.6	670.0	659.9	675.6	675.6
27.5°	765.5	715.0	662.7	602.1	649.9	660.9
30°	755.4	698.5	637.9	583.8	632.4	622.3
32.5°	808.6	657.2	597.5	581.0	616.8	609.5
35°	767.3	649.9	587.4	557.1	599.4	592.0
37.5°	784.8	640.7	570.0	544.3	578.3	589.3
40°	781.1	597.5	549.8	516.8	550.7	556.2
42.5°	719.6	564.5	515.8	482.8	500.2	518.6
45°	701.3	544.3	482.8	436.9	437.8	458.9
47.5°	667.3	498.4	422.2	380.0	380.0	397.4
50°	610.4	436.9	353.4	314.8	313.9	327.7
52.5°	525.9	377.2	298.3	256.1	253.3	267.1
55°	430.5	303.8	235.0	207.4	201.9	207.4
57.5°	335.0	236.8	185.4	163.4	162.5	167.1
60°	259.8	185.4	147.8	134.9	136.8	144.1
62.5°	196.4	147.8	125.7	121.2	123.9	131.3
65°	156.0	127.6	114.7	112.0	114.7	122.1
67.5°	126.7	115.7	106.5	102.8	104.6	112.0
69°	116.6	109.2	101.9	97.3	99.1	104.6
70°	111.1	105.6	98.2	93.6	95.5	101.0
72.5°	97.3	94.5	89.0	84.4	85.4	90.0
75°	85.4	83.5	79.9	74.3	74.3	79.9
77.5°	71.6	72.5	68.8	63.3	62.4	65.2
80°	56.9	58.7	56.9	51.4	49.6	49.6
82.5°	41.3	45.0	43.1	37.6	36.7	36.7
85°	25.7	28.5	27.5	23.9	23.9	21.1
87.5°	11.9	15.6	14.7	12.9	11.9	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)