

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: P367819

Luminaire Tested: **MSA-SA3B-730-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367819  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-730-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS  
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9766 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

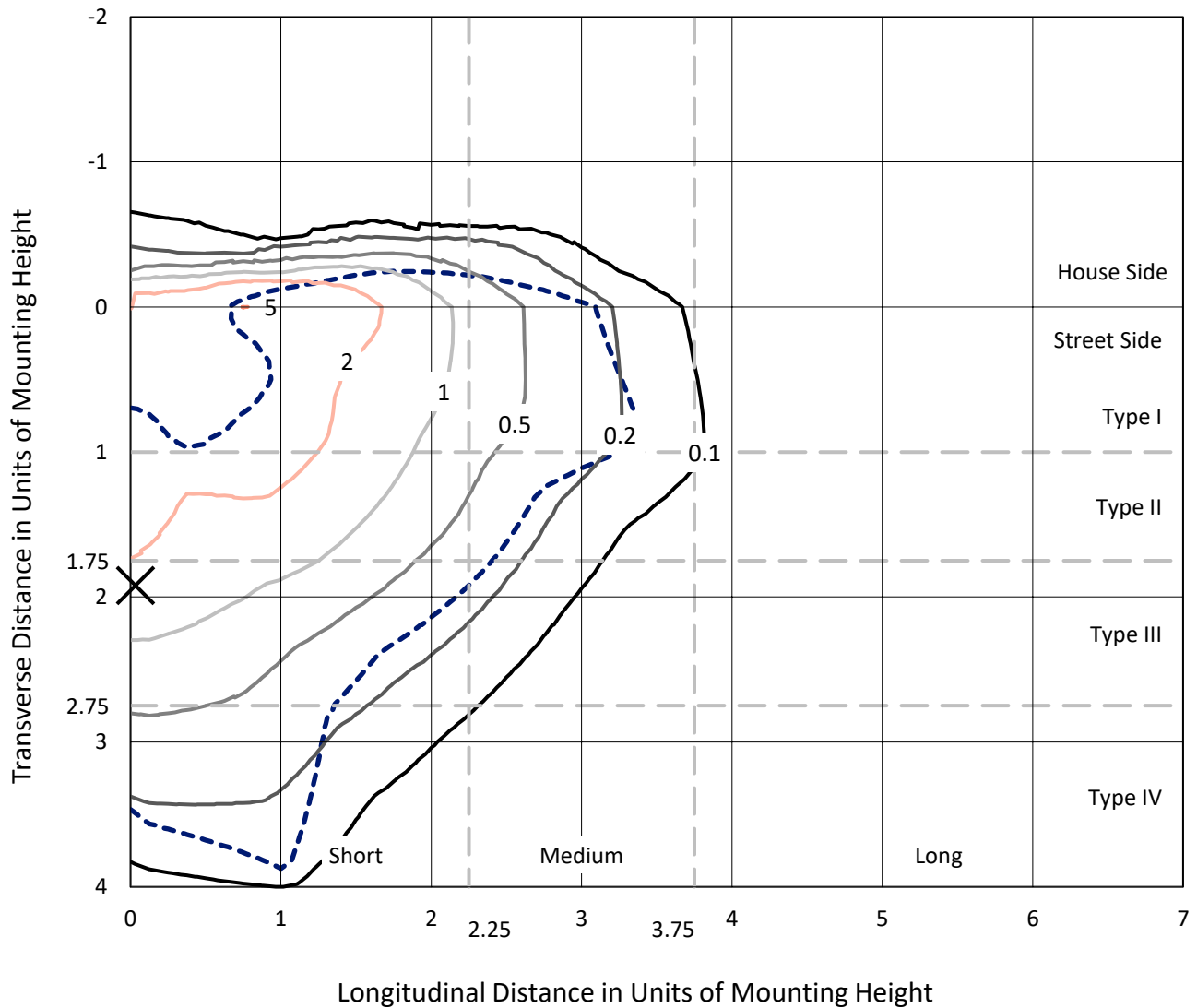
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

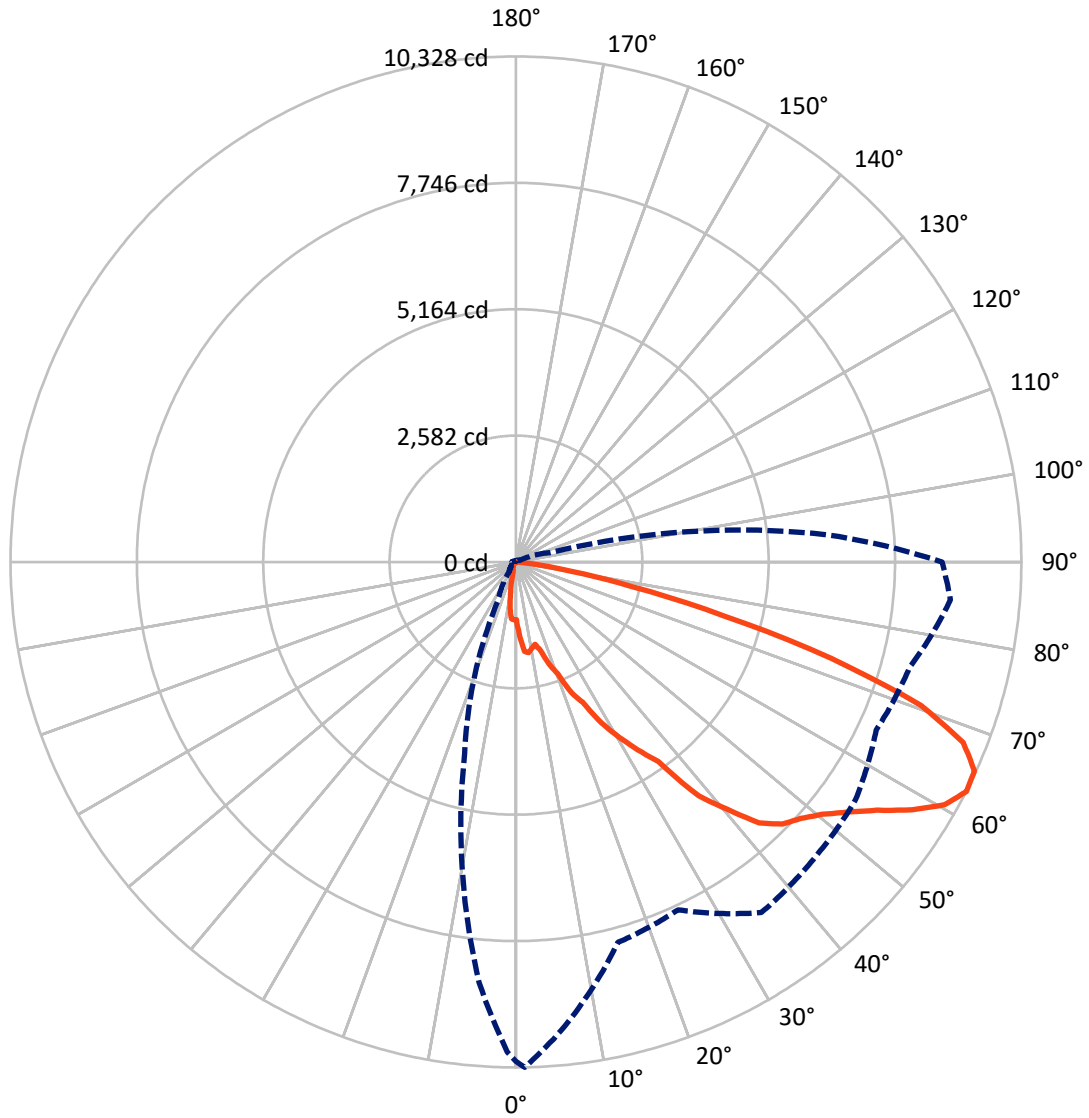
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1116.8	0.0	1116.8
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	8649.2	0.0	8649.2
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	9766.0	0.0	9766.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.5	1.3
10°-20°	343.3	3.5
20°-30°	555.0	5.7
30°-40°	929.7	9.5
40°-50°	1520.1	15.6
50°-60°	2250.2	23.0
60°-70°	2583.4	26.5
70°-80°	1277.5	13.1
80°-90°	175.4	1.8
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°	9766.0	100.0
0°-180°	9766.0	100.0

**Coefficient of Utilization**

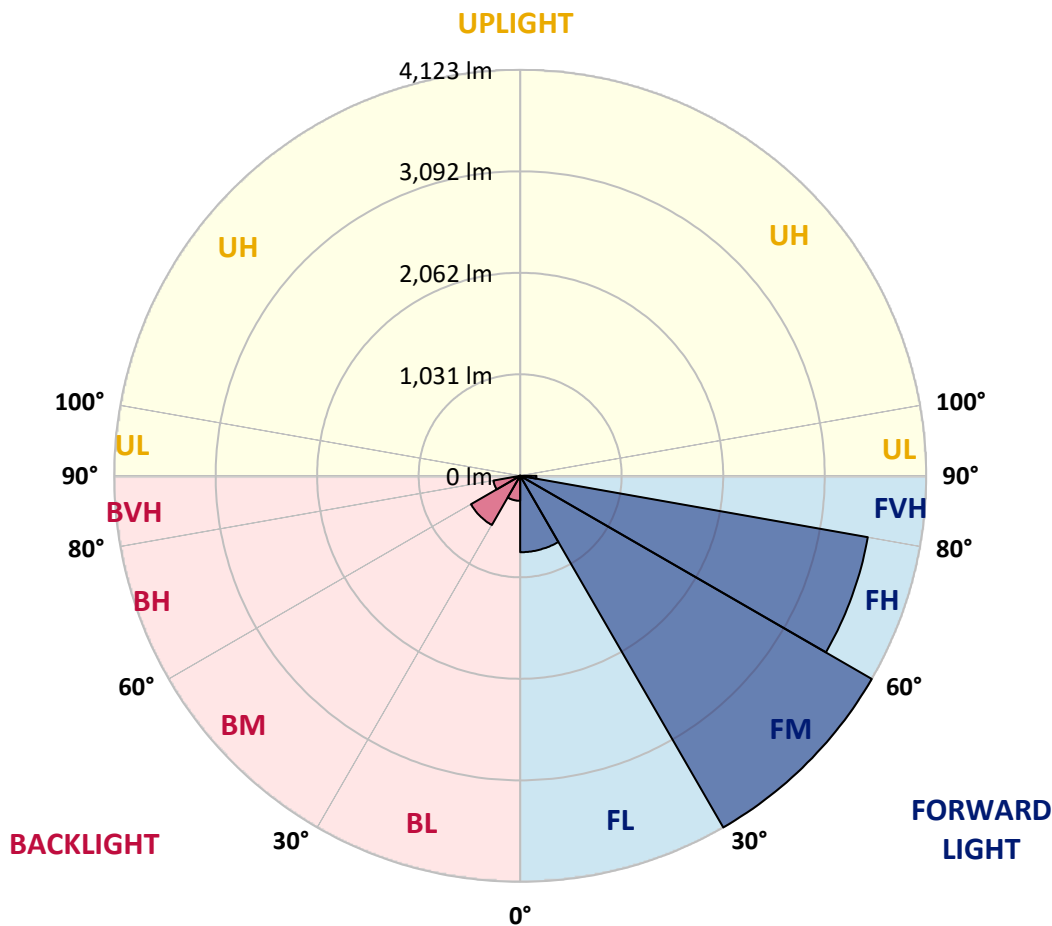


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	775.7	7.9			
FM (30°-60°)	4123.1	42.2			
FH (60°-80°)	3584.7	36.7			G2/5000
FVH (80°-90°)	165.6	1.7			G2/225
BL (0°-30°)	254.1	2.6	B1/500		
BM (30°-60°)	576.8	5.9	B1/1000		
BH (60°-80°)	276.1	2.8	B1/500		G1/500
BVH (80°-90°)	9.7	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1517.1	1524.3	1490.3	1485.9	1406.9	1505.4	1508.2	1519.8	1447.5	1307.3	1503.1
5°	1815.3	1835.4	1809.2	1925.5	1958.9	2030.7	1898.8	2016.8	1966.7	1980.6	2009.0
7.5°	1851.0	1871.6	1926.7	2121.4	2301.2	2256.1	2241.6	2286.2	2282.3	2179.3	2230.5
10°	1777.0	1794.2	1886.0	2240.5	2319.0	2521.6	2571.1	2468.7	2427.0	2201.6	2103.1
12.5°	1696.3	1725.2	1842.1	2267.2	2502.6	2707.4	2870.5	2724.7	2586.1	2346.3	2256.1
15°	1851.0	1867.1	2050.8	2322.9	2528.8	2670.2	2803.7	2755.3	2734.2	2561.6	2256.1
17.5°	2154.3	2192.1	2325.1	2459.2	2621.7	2706.9	2675.2	2660.1	2606.2	2877.2	2561.1
20°	2370.2	2440.9	2615.1	2672.9	2543.8	2623.4	2603.9	2590.6	2548.3	3052.5	2911.7
22.5°	2837.7	2902.8	2906.1	2926.7	2626.2	2499.3	2467.0	2470.9	2662.9	3104.8	3348.0
25°	3156.0	3178.3	3354.1	3207.2	2851.0	2537.1	2414.2	2469.3	2745.8	3481.0	3758.1
27.5°	3676.9	3729.8	3839.4	3341.9	2985.7	2513.2	2317.3	2517.7	2964.0	3605.7	4213.9
30°	4101.5	4152.2	4328.6	3526.1	3102.6	2631.8	2359.1	2615.1	3099.8	3862.2	4623.5
32.5°	4446.0	4576.8	4777.1	3810.5	3098.1	2768.1	2572.2	2582.8	3266.7	4194.4	5028.7
35°	4886.2	5008.1	5148.9	4006.3	3300.7	2812.1	2635.1	2900.0	3514.9	4541.7	5574.0
37.5°	5878.5	6062.7	5784.4	4500.0	3536.6	3209.4	2883.3	3095.3	3774.8	4896.2	6323.7
40°	6483.9	6639.2	6370.4	4752.1	3945.1	3409.8	3326.3	3434.8	4029.2	5079.3	6888.5
42.5°	7080.5	7285.3	6836.2	5131.6	4333.0	3975.2	3747.0	3834.4	4397.0	5521.2	7524.1
45°	7512.4	7639.3	6937.0	5330.3	4866.2	4619.6	4467.7	4337.5	4910.1	5805.0	7934.2
47.5°	7729.4	7830.7	7135.6	5393.2	5183.4	5301.4	5634.2	5362.0	5364.2	6010.4	8155.2
50°	8029.9	8100.6	7246.9	5468.3	5527.9	6363.7	6531.8	5952.5	5882.9	6216.3	8191.3
52.5°	8452.3	8486.8	7462.9	5666.4	6043.7	7195.7	7256.4	7022.1	6402.1	6599.1	8271.5
55°	9013.9	8953.2	7848.5	6082.7	6581.9	7805.1	7886.4	7682.1	7054.9	6981.5	8519.7
57.5°	9619.3	9549.8	8420.1	6669.3	7165.7	8270.9	8319.3	8335.5	7488.5	7319.8	8941.5
60°	10053.4	10066.2	9139.6	7342.1	7528.5	8716.7	8619.8	8472.9	7925.9	7815.7	9146.9
62.5°	10205.4	10328.3	9700.0	8047.2	7841.3	8744.5	8594.3	8470.1	8121.8	8327.1	8911.5
65°	10081.3	10296.1	9830.3	8666.6	8030.5	8395.6	8239.2	8159.6	8115.6	8535.8	8390.6
67.5°	9588.2	9857.0	9457.4	8672.2	7342.6	7148.4	7333.2	7585.3	7439.5	8362.7	7661.0
70°	8483.5	8777.9	8592.0	8163.5	6116.6	5624.1	5827.8	6209.0	6106.1	7437.8	6587.5
72.5°	6364.9	6743.3	6780.0	7047.7	4855.6	4232.8	4262.3	4251.8	4429.3	5997.6	5140.5
75°	4088.7	4383.1	4781.0	5687.0	3688.6	3090.3	2807.6	2738.6	3069.7	4686.4	3680.2
77.5°	2373.5	2408.6	2592.2	4290.7	2641.8	2226.6	2034.1	2132.6	2248.3	3270.6	2439.2
80°	1135.3	1153.1	1228.8	2207.7	1835.4	1927.2	1778.6	1889.4	1543.8	1879.9	1384.1
82.5°	360.1	364.0	376.8	1084.6	1139.7	1276.6	818.1	1096.9	954.4	1136.4	921.6
85°	60.1	102.4	126.3	313.3	643.3	430.7	177.5	391.2	532.6	716.8	418.5
87.5°	0.0	0.0	0.0	5.6	52.3	24.5	3.9	22.3	81.8	159.7	18.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1559.9	1598.3	1453.6	1323.9	1356.8	1330.6	1291.1	1223.8	1068.0	1182.6	1174.8
5°	2007.3	1936.1	1740.2	1649.0	1537.6	1367.9	1347.3	1217.1	1159.8	1169.2	1160.9
7.5°	2163.2	2035.7	1862.7	1587.7	1326.7	1081.9	1006.7	921.6	904.3	941.1	965.0
10°	2040.7	1905.5	1754.1	1412.4	1211.5	1034.6	849.2	730.1	665.6	657.8	664.5
12.5°	2096.9	1951.1	1639.5	1377.9	1168.1	1007.8	800.8	621.1	480.8	491.4	463.6
15°	2135.9	1968.4	1612.2	1305.6	1078.5	864.3	614.9	435.2	320.6	287.2	267.1
17.5°	2364.6	2125.3	1577.7	1222.1	953.3	672.8	386.2	252.1	214.8	203.1	193.7
20°	2658.5	2318.4	1577.2	1134.2	768.5	420.7	241.0	182.5	173.6	180.3	173.1
22.5°	3000.2	2575.5	1661.2	1024.5	551.5	265.5	187.5	161.9	153.0	158.6	159.2
25°	3344.1	2961.2	1729.6	920.5	384.0	203.7	167.0	149.1	139.1	144.1	141.4
27.5°	3965.2	3280.7	1714.1	787.5	282.7	179.2	155.3	139.7	124.7	132.5	131.9
30°	4371.4	3844.4	1774.7	601.0	224.3	156.9	144.7	127.4	111.3	120.2	119.7
32.5°	4857.3	4086.5	1840.4	461.4	186.4	148.6	130.2	113.5	104.1	109.6	108.5
35°	5403.2	4565.1	1719.6	384.0	161.9	134.1	115.2	102.4	94.1	96.8	96.8
37.5°	6367.6	4965.2	1647.3	312.8	150.8	121.3	108.0	92.4	87.4	87.4	90.2
40°	6915.2	5576.3	1431.4	247.6	154.2	111.9	100.7	84.6	77.9	77.4	80.1
42.5°	7627.6	5928.5	1296.1	200.3	139.7	109.1	92.4	76.8	69.0	68.5	71.2
45°	8050.0	6125.6	1105.8	157.5	125.2	126.9	85.7	70.7	59.0	56.8	61.8
47.5°	8316.5	6386.6	997.8	125.2	109.1	126.3	83.5	61.2	49.5	46.7	51.2
50°	8451.8	6515.7	976.7	107.4	94.6	113.0	95.7	51.2	42.3	38.4	42.3
52.5°	8592.6	6725.5	984.5	99.1	83.5	90.7	90.7	44.0	37.3	32.8	35.6
55°	8877.0	7035.5	967.2	94.1	76.8	69.0	58.4	39.0	33.9	28.9	31.7
57.5°	9226.5	7258.1	967.2	89.6	71.2	59.0	46.7	36.2	31.2	25.0	27.3
60°	9160.2	7023.8	919.4	85.1	66.8	55.1	42.3	33.4	28.9	22.8	24.5
62.5°	8705.6	6386.6	744.6	78.5	62.9	52.3	38.4	31.7	27.3	20.0	21.7
65°	8171.3	5709.8	517.6	71.2	58.4	47.3	34.5	30.1	25.0	17.8	18.9
67.5°	7528.0	4903.4	287.2	64.0	54.0	41.2	31.7	29.5	23.9	16.1	17.3
70°	6411.6	3701.9	154.2	58.4	50.6	37.8	30.1	29.5	23.9	15.6	16.1
72.5°	4813.3	2331.2	90.2	53.4	46.2	35.1	28.4	30.1	23.4	15.0	15.0
75°	3275.1	1415.2	64.6	45.6	41.2	29.5	27.3	28.9	23.9	15.0	13.9
77.5°	2226.6	994.5	52.9	41.2	37.3	26.2	27.8	28.9	23.9	12.2	9.5
80°	1390.2	513.1	40.1	32.8	32.3	22.8	27.8	25.0	15.6	2.8	0.0
82.5°	972.2	190.9	23.4	25.0	25.0	16.1	21.7	17.8	8.9	0.0	0.0
85°	407.9	32.8	12.8	17.8	15.6	9.5	17.3	13.4	5.6	0.0	0.0
87.5°	7.2	0.0	5.0	10.6	11.1	5.6	8.9	5.6	0.0	0.0	0.0
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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1211.5	1158.7	1047.4	1100.8	1095.2	1119.7	1121.9	1065.2	1187.6	1263.3	1274.4
5°	1162.0	1126.4	1120.3	1089.7	1081.9	1126.9	1102.5	1100.8	1159.8	1246.0	1246.6
7.5°	965.6	938.3	951.1	915.5	823.6	829.2	837.6	872.6	923.3	980.0	1000.6
10°	662.8	733.5	681.7	677.3	667.8	638.3	614.9	633.3	699.0	751.3	770.8
12.5°	473.0	484.2	515.9	504.2	520.3	495.3	485.8	543.2	607.2	660.6	699.0
15°	276.6	295.5	314.4	354.5	370.6	365.6	394.6	442.4	494.2	518.7	566.0
17.5°	194.8	196.4	200.3	243.8	272.1	283.3	300.5	336.7	357.8	369.0	388.4
20°	170.3	165.3	158.6	183.1	209.8	223.7	218.7	247.1	264.3	275.5	289.4
22.5°	154.2	145.8	141.9	150.3	170.8	183.1	185.3	202.0	228.2	236.0	240.4
25°	139.1	133.6	130.8	135.2	146.4	158.1	160.3	182.0	205.4	208.7	217.6
27.5°	129.1	118.5	119.7	123.0	128.0	142.5	146.9	159.2	193.1	197.0	199.8
30°	118.5	107.4	110.7	114.1	111.9	129.7	136.3	150.3	183.1	189.2	192.6
32.5°	108.0	99.6	99.1	102.4	106.3	115.8	130.2	146.4	176.4	184.8	193.1
35°	96.3	89.6	90.7	91.3	96.3	108.5	119.1	127.4	148.0	152.5	155.3
37.5°	87.9	82.4	81.3	86.8	91.8	101.3	105.2	109.1	136.3	146.4	146.9
40°	77.9	74.6	74.6	78.5	89.6	88.5	93.5	105.7	131.9	142.5	143.6
42.5°	70.7	66.2	67.3	71.2	79.0	73.5	83.5	101.3	130.2	140.8	140.2
45°	59.5	58.4	60.7	64.0	67.3	62.3	77.9	96.8	124.7	138.6	134.7
47.5°	49.5	49.5	52.3	55.7	54.0	55.7	70.7	90.7	121.3	134.1	131.3
50°	40.6	41.2	44.0	49.5	44.5	49.0	63.4	84.6	115.8	129.7	127.4
52.5°	34.5	35.1	36.7	40.6	38.4	44.5	58.4	78.5	110.2	121.9	120.8
55°	30.1	31.2	31.2	33.4	34.5	41.7	52.9	72.3	101.8	114.6	112.4
57.5°	26.7	27.8	27.3	28.9	30.1	36.7	47.3	65.7	93.5	104.1	100.7
60°	23.9	25.0	24.5	26.7	26.2	31.7	41.2	58.4	84.6	92.9	90.2
62.5°	21.1	22.3	22.3	23.4	23.9	26.7	35.6	51.8	75.7	82.4	80.1
65°	18.9	20.0	20.6	20.0	21.1	22.8	30.1	46.7	65.7	72.3	69.0
67.5°	17.3	18.4	19.5	17.3	18.4	18.9	25.6	41.7	57.9	63.4	60.7
70°	16.7	17.3	17.3	15.0	14.5	15.0	22.3	35.6	50.6	56.2	52.3
72.5°	15.6	16.1	15.6	12.2	10.6	11.7	18.9	30.1	42.9	47.3	44.0
75°	14.5	15.0	14.5	10.0	6.7	8.3	15.6	26.2	36.7	39.0	37.3
77.5°	12.2	13.4	13.4	7.2	2.2	5.0	11.7	21.1	30.6	30.6	31.2
80°	1.1	3.3	5.6	3.9	0.0	0.6	3.9	11.1	19.5	18.9	20.6
82.5°	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	6.7	5.0	5.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1248.3	1231.0	1252.7	1318.9	1292.2	1297.2	1279.4	1389.1	1513.2	1517.1
5°	1247.7	1232.1	1264.4	1261.6	1337.9	1420.8	1500.9	1630.6	1814.2	1815.3
7.5°	991.2	1083.5	1107.5	1100.2	1198.2	1312.3	1435.8	1684.0	1834.8	1851.0
10°	893.8	933.8	982.8	1000.6	1041.2	1149.8	1289.4	1570.5	1739.7	1777.0
12.5°	774.7	902.7	967.8	1094.1	1117.5	1133.1	1353.4	1597.8	1700.7	1696.3
15°	641.7	753.0	855.9	1010.1	1073.5	1237.1	1410.8	1730.8	1792.0	1851.0
17.5°	454.1	538.1	696.2	858.1	1051.8	1229.9	1568.8	1968.4	2084.1	2154.3
20°	303.9	344.5	487.5	701.8	947.2	1124.2	1633.4	2183.2	2309.5	2370.2
22.5°	246.5	266.0	340.0	514.2	809.2	1119.2	1659.5	2417.5	2757.0	2837.7
25°	217.0	230.4	269.9	380.7	671.7	1096.9	1804.2	2681.3	3090.9	3156.0
27.5°	189.8	209.8	239.3	313.9	576.0	1081.3	1877.7	3124.3	3612.9	3676.9
30°	181.4	205.9	234.3	286.0	509.2	1021.2	1994.5	3523.8	3987.4	4101.5
32.5°	195.9	204.2	218.2	262.1	457.5	957.8	2199.9	4001.3	4297.4	4446.0
35°	155.3	170.3	194.8	240.4	435.8	954.4	2316.2	4308.5	4794.4	4886.2
37.5°	151.9	165.8	197.6	234.3	461.9	980.0	2488.7	4938.0	5690.4	5878.5
40°	147.5	165.3	195.3	231.5	461.9	1005.1	2598.9	5441.6	6293.1	6483.9
42.5°	145.8	168.6	194.8	243.2	447.4	1019.0	2765.3	5944.1	6929.7	7080.5
45°	144.7	172.0	196.4	257.1	444.1	1064.6	2859.4	6188.4	7339.3	7512.4
47.5°	141.9	172.0	219.3	248.8	425.7	1060.2	2981.2	6550.7	7583.6	7729.4
50°	139.7	173.1	248.2	233.2	428.5	1032.9	3146.5	6890.8	7925.9	8029.9
52.5°	134.7	177.0	243.8	211.5	420.2	1030.1	3393.1	7374.4	8376.1	8452.3
55°	123.5	172.0	220.4	184.8	390.7	998.4	3719.7	8003.2	9000.5	9013.9
57.5°	113.5	159.7	184.2	169.7	327.2	1002.3	4001.3	8582.0	9557.0	9619.3
60°	103.5	165.8	143.0	158.1	271.0	931.0	4137.7	8803.5	9962.2	10053.4
62.5°	94.1	153.0	121.9	145.3	241.5	864.8	4043.1	8625.4	10013.9	10205.4
65°	83.5	106.3	103.0	130.2	244.3	771.9	3727.0	8104.0	9817.5	10081.3
67.5°	71.8	83.5	90.7	112.4	261.6	692.3	3184.9	7267.0	9289.3	9588.2
70°	62.9	75.1	79.0	98.5	272.1	640.0	2513.2	6105.5	8207.5	8483.5
72.5°	52.3	69.6	70.7	86.3	262.1	588.2	1790.9	4383.1	6232.4	6364.9
75°	45.1	57.9	64.0	72.3	220.4	439.1	986.7	2713.0	3940.7	4088.7
77.5°	40.6	44.0	48.4	50.1	93.5	228.7	339.5	1672.9	2206.6	2373.5
80°	31.2	34.5	33.4	34.5	51.2	79.0	129.1	784.1	1042.4	1135.3
82.5°	10.0	16.7	18.4	15.6	33.4	39.0	37.3	271.0	338.9	360.1
85°	2.2	6.1	2.8	0.0	11.1	20.0	2.8	41.2	81.3	60.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)