

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: P565294

Luminaire Tested: **MSA-SA3B-827-U-T1**

Issue Date: 8/19/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P565294  
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-SA3B-827-U-T1  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9770 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type I - Medium  
BUG Rating: B3 - U0 - G3

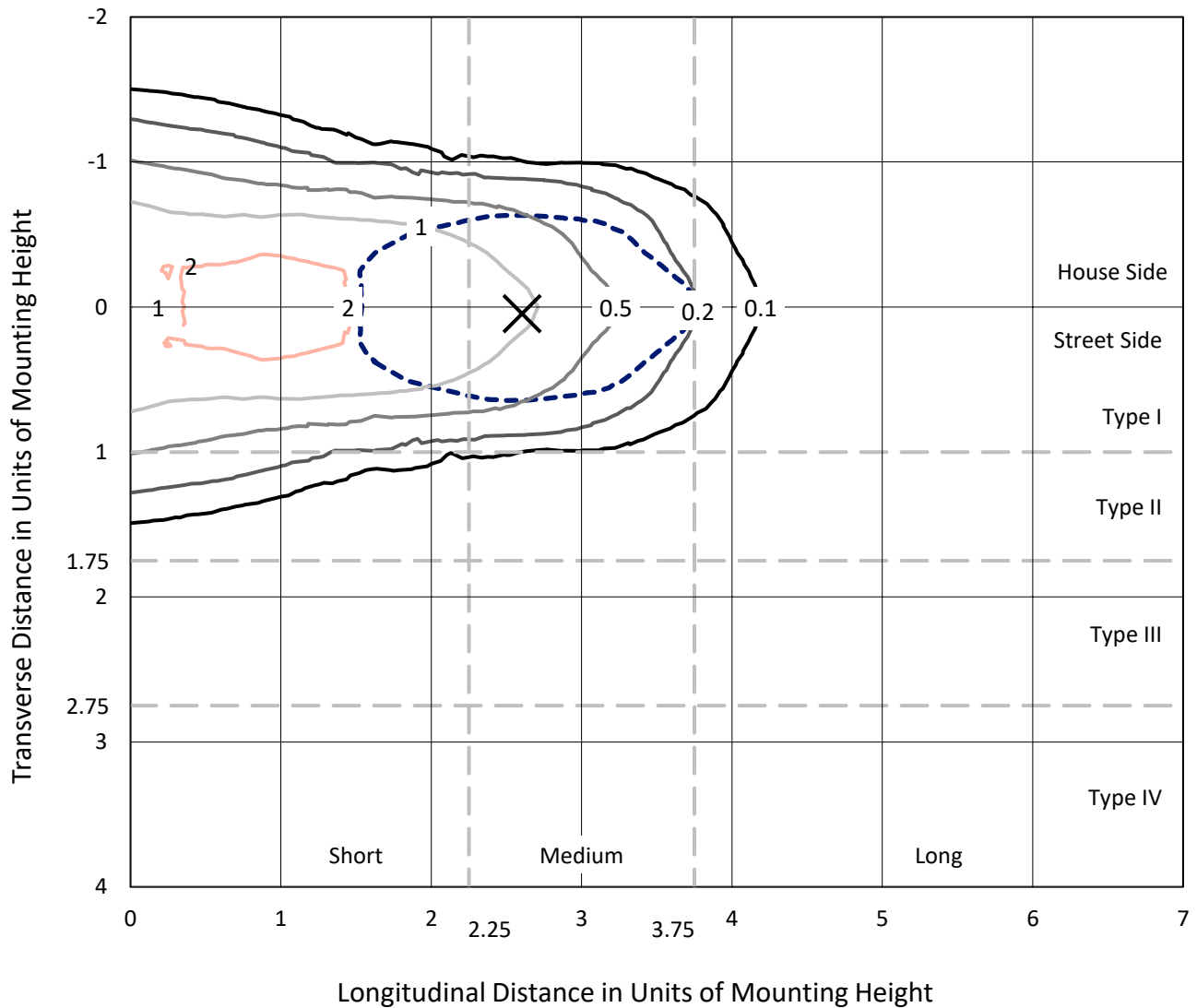
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

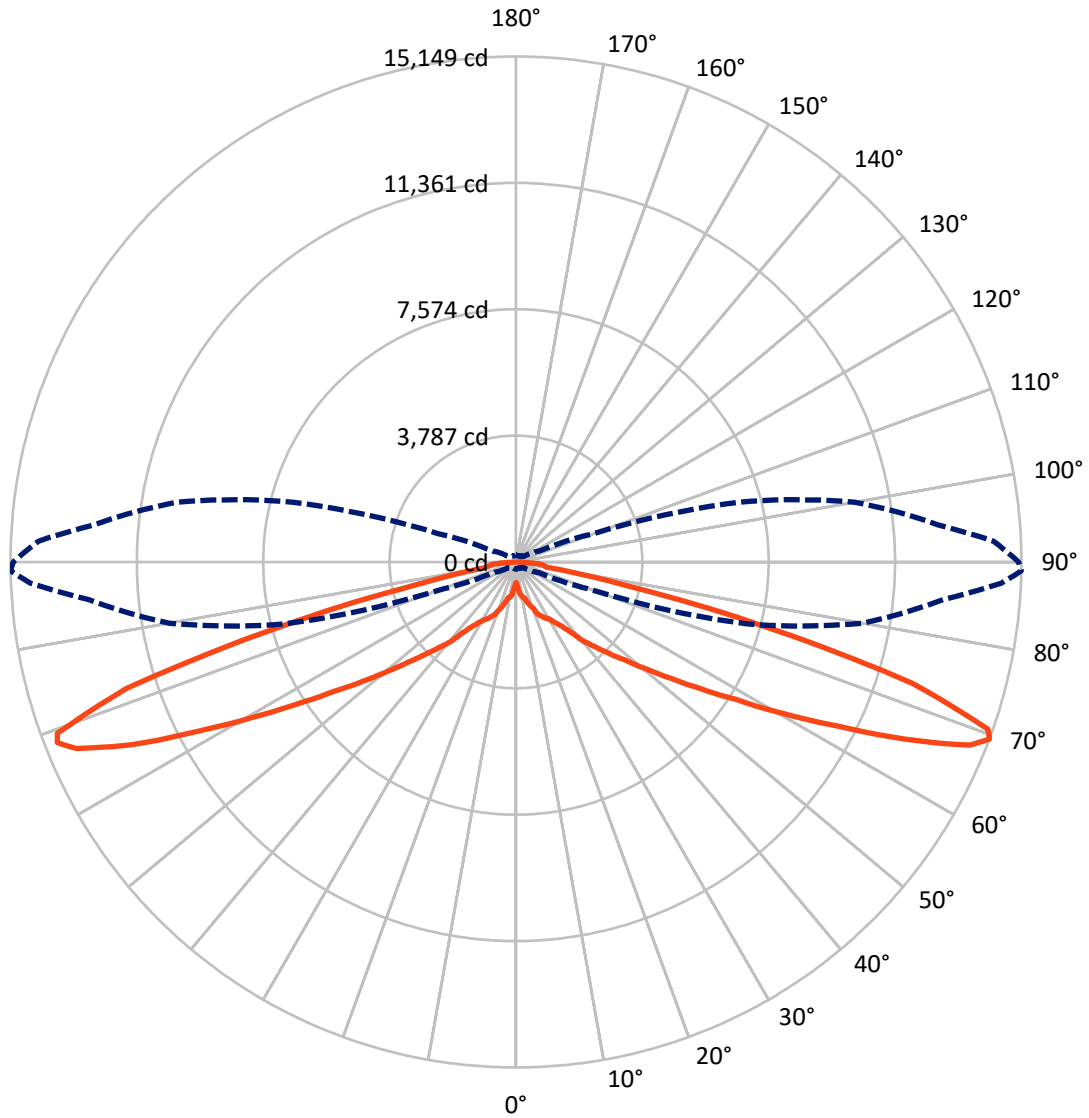
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 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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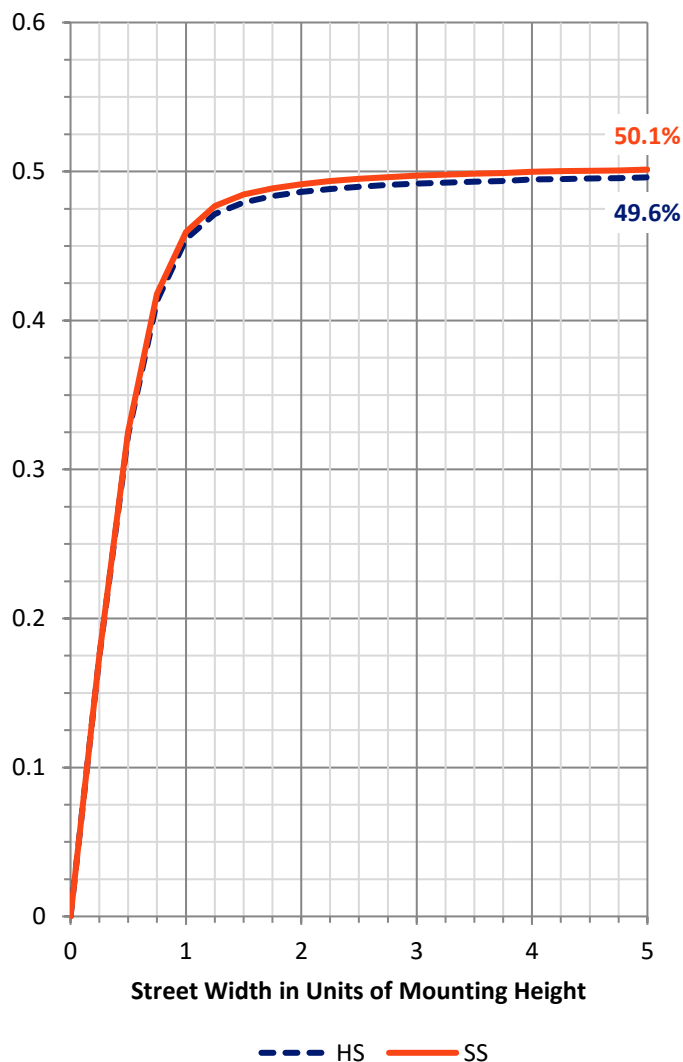
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4884.9	0.0	4884.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4885.1	0.0	4885.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	9770.0	0.0	9770.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.8	0.8
10°-20°	358.2	3.7
20°-30°	714.7	7.3
30°-40°	1081.0	11.1
40°-50°	1569.2	16.1
50°-60°	2061.6	21.1
60°-70°	2514.9	25.7
70°-80°	1271.4	13.0
80°-90°	121.2	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°	9770.0	100.0
0°-180°	9770.0	100.0

**Coefficient of Utilization**



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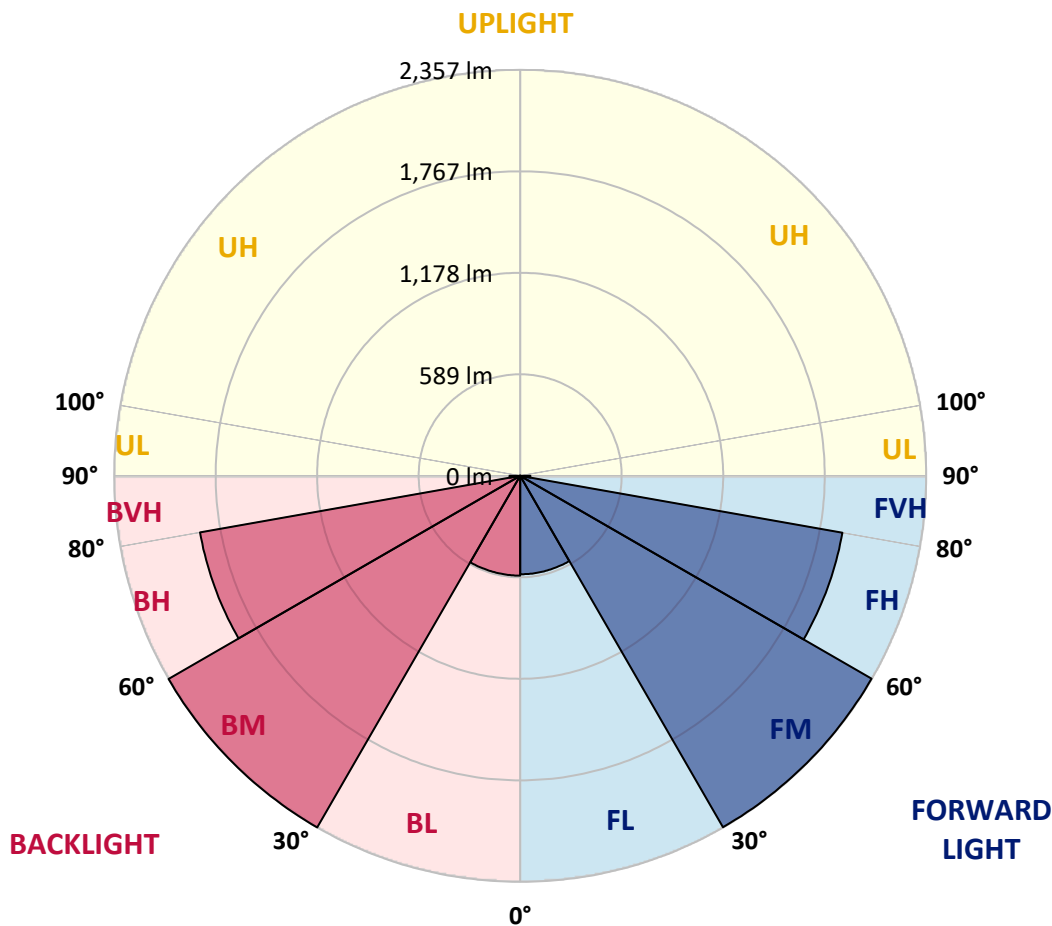
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	571.4	5.8			
FM (30°-60°)	2355.1	24.1			
FH (60°-80°)	1899.2	19.4			G2/5000
FVH (80°-90°)	59.4	0.6			G1/100
BL (0°-30°)	579.4	5.9	B2/1000		
BM (30°-60°)	2356.7	24.1	B2/2500		
BH (60°-80°)	1887.1	19.3	B3/2500		G3/2500
BVH (80°-90°)	61.8	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type I Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8
2.5°	726.2	642.5	635.2	615.2	629.8	635.2	622.5	604.3	624.3	635.2	615.2
5°	915.5	791.7	749.9	715.3	646.1	617.0	646.1	720.8	729.9	775.4	762.6
7.5°	1008.3	988.3	935.5	820.9	709.8	648.0	726.2	833.6	888.2	931.9	977.4
10°	1077.5	1066.6	973.7	891.8	846.3	850.0	851.8	886.4	933.7	1006.5	1032.0
12.5°	1093.9	1090.2	1104.8	1086.6	1090.2	1110.3	1090.2	1081.1	1108.4	1132.1	1106.6
15°	1199.4	1197.6	1203.1	1206.7	1279.5	1310.5	1279.5	1252.2	1232.2	1212.2	1254.0
17.5°	1272.2	1263.1	1265.0	1299.5	1381.5	1467.0	1450.6	1414.2	1368.7	1396.0	1430.6
20°	1312.3	1295.9	1306.8	1321.4	1459.7	1554.4	1565.3	1516.1	1488.8	1523.4	1552.5
22.5°	1350.5	1325.0	1286.8	1301.4	1428.8	1565.3	1618.1	1605.3	1625.3	1636.3	1630.8
25°	1305.0	1321.4	1279.5	1321.4	1450.6	1576.2	1681.8	1756.4	1758.2	1752.7	1792.8
27.5°	1277.7	1265.0	1194.0	1301.4	1408.8	1487.0	1756.4	1882.0	1920.2	1803.7	1882.0
30°	1230.4	1250.4	1153.9	1243.1	1379.6	1510.7	1841.9	2022.1	1965.7	1951.1	1969.3
32.5°	1201.3	1188.5	1143.0	1192.2	1295.9	1581.7	1896.5	2104.0	2175.0	2140.4	2136.8
35°	1153.9	1163.0	1092.1	1144.8	1290.4	1521.6	1932.9	2309.7	2418.9	2391.6	2369.8
37.5°	1161.2	1130.3	1079.3	1117.5	1255.9	1554.4	2023.9	2508.1	2681.0	2695.6	2595.5
40°	1106.6	1088.4	1012.0	1075.7	1190.3	1534.3	2045.8	2733.8	3026.8	3092.3	2948.6
42.5°	1028.4	1004.7	961.0	1032.0	1152.1	1436.1	2076.7	3005.0	3378.1	3514.6	3383.6
45°	915.5	884.6	862.7	957.4	1068.4	1410.6	2044.0	3230.7	3714.8	3902.3	3898.6
47.5°	779.0	759.0	748.1	848.2	999.2	1346.9	1976.6	3372.6	3949.6	4430.1	4357.3
50°	624.3	609.7	607.9	713.5	882.7	1215.8	1900.2	3443.6	4306.3	4914.3	4978.0
52.5°	500.5	489.6	487.8	573.3	739.0	1039.3	1740.0	3498.2	4646.7	5463.9	5791.5
55°	391.3	380.4	382.2	453.2	587.9	850.0	1496.1	3436.3	4945.2	6026.3	6647.0
57.5°	320.3	309.4	311.2	351.3	449.6	649.8	1192.2	3301.6	5079.9	6721.6	7644.4
60°	282.1	271.2	265.7	283.9	345.8	489.6	886.4	2777.5	5101.7	7298.6	8727.3
62.5°	262.1	251.2	245.7	251.2	285.8	374.9	638.9	2200.5	4976.1	7791.8	9719.3
65°	243.9	234.8	227.5	233.0	251.2	298.5	465.9	1507.0	4319.1	8017.5	10440.1
67.5°	223.9	216.6	209.3	216.6	229.3	251.2	362.2	953.7	3237.9	7724.5	10740.4
69°	213.0	202.0	198.4	203.9	216.6	231.2	313.1	760.8	2462.6	7167.5	10558.4
70°	202.0	194.7	189.3	198.4	209.3	220.2	282.1	646.1	1931.1	6452.2	10107.0
72.5°	178.4	172.9	169.3	178.4	187.5	194.7	231.2	460.5	1119.4	4393.7	8015.7
75°	156.5	151.1	149.2	156.5	163.8	167.4	194.7	316.7	660.7	2298.8	4808.7
77.5°	131.0	123.8	125.6	134.7	140.1	142.0	163.8	227.5	389.5	1041.1	2227.8
80°	96.5	96.5	103.7	111.0	111.0	111.0	131.0	165.6	236.6	478.7	924.6
82.5°	67.3	69.2	71.0	81.9	83.7	76.4	100.1	120.1	147.4	209.3	320.3
85°	38.2	40.0	41.9	49.1	51.0	45.5	65.5	76.4	85.5	103.7	167.4
87.5°	14.6	16.4	21.8	25.5	27.3	20.0	30.9	36.4	36.4	43.7	74.6
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°	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8	618.8
2.5°	657.1	669.8	693.5	698.9	678.9	657.1	607.9	638.9	651.6	627.9	635.2
5°	813.6	840.9	870.0	835.4	813.6	799.0	775.4	777.2	764.4	722.6	653.4
7.5°	990.1	959.2	981.0	1004.7	970.1	971.9	993.8	948.3	913.7	842.7	713.5
10°	1072.0	1072.0	1077.5	1077.5	1062.9	1062.9	1061.1	988.3	946.4	915.5	879.1
12.5°	1077.5	1075.7	1097.5	1081.1	1084.8	1088.4	1097.5	1130.3	1119.4	1079.3	1112.1
15°	1228.6	1221.3	1228.6	1226.7	1232.2	1248.6	1241.3	1234.0	1235.8	1265.0	1314.1
17.5°	1370.5	1374.2	1366.9	1379.6	1379.6	1390.6	1416.0	1390.6	1368.7	1423.3	1461.5
20°	1534.3	1521.6	1492.5	1514.3	1519.8	1521.6	1563.5	1532.5	1501.6	1521.6	1567.1
22.5°	1700.0	1698.1	1701.8	1703.6	1710.9	1683.6	1627.2	1618.1	1638.1	1610.8	1616.2
25°	1801.9	1803.7	1812.8	1814.6	1783.7	1812.8	1832.8	1772.8	1772.8	1767.3	1730.9
27.5°	1925.7	1898.4	1909.3	1923.8	1911.1	1918.4	1894.7	1807.4	1900.2	1912.9	1767.3
30°	2009.4	1996.6	1983.9	1998.5	2011.2	2044.0	1976.6	1967.5	1974.8	2042.1	1851.0
32.5°	2185.9	2204.1	2180.5	2156.8	2180.5	2173.2	2144.1	2131.3	2222.3	2133.1	1909.3
35°	2349.7	2357.0	2358.8	2355.2	2369.8	2344.3	2344.3	2391.6	2418.9	2322.4	1927.5
37.5°	2744.7	2719.2	2666.4	2641.0	2686.5	2724.7	2611.8	2668.3	2657.3	2493.5	2064.0
40°	3028.6	3086.9	3103.3	3096.0	3103.3	2994.1	3017.7	3059.6	3010.4	2739.2	2016.7
42.5°	3443.6	3480.0	3467.3	3450.9	3458.2	3438.2	3367.2	3521.9	3345.3	3014.1	2089.5
45°	3822.2	3904.1	3909.6	3853.1	3898.6	3827.7	3856.8	3911.4	3733.0	3219.7	2069.4
47.5°	4273.6	4442.8	4379.1	4379.1	4424.6	4271.8	4340.9	4413.7	3940.5	3358.1	1960.2
50°	4941.6	5032.6	5028.9	5012.5	5032.6	4950.7	4939.7	4930.6	4259.0	3489.1	1892.9
52.5°	5696.9	5820.7	5773.3	5791.5	5818.8	5664.1	5786.1	5453.0	4657.6	3538.3	1740.0
55°	6661.5	6747.1	6699.8	6606.9	6730.7	6632.4	6672.5	6022.7	4934.3	3398.1	1485.2
57.5°	7810.0	7853.7	7775.4	7766.3	7848.2	7742.7	7675.3	6663.4	5078.1	3292.5	1186.7
60°	9151.4	9287.9	9238.8	9160.5	9235.2	9142.3	8632.7	7207.6	5048.9	2799.3	919.1
62.5°	10760.4	10898.7	10844.1	10791.3	10838.7	10596.6	9531.8	7637.1	4917.9	2218.7	671.6
65°	12089.1	12713.3	12795.3	12797.1	12567.7	12007.2	10248.9	7804.6	4226.3	1548.9	491.4
67.5°	12962.7	14260.4	14664.5	14518.9	13992.9	12713.3	10538.3	7476.9	3263.4	979.2	367.7
69°	12862.6	14564.4	15148.6	15066.7	14327.8	12702.4	10312.6	6925.5	2493.5	779.0	311.2
70°	12400.3	14315.0	15008.5	15044.9	14114.8	12214.6	9910.4	6292.1	2016.7	664.3	285.8
72.5°	9895.8	11796.0	12405.8	12644.2	11721.4	9781.2	8126.7	4439.2	1168.5	464.1	231.2
75°	6130.1	7153.0	7659.0	7797.3	7238.5	6091.9	4932.5	2469.9	711.7	327.6	194.7
77.5°	2748.3	3045.0	3336.2	3336.2	3117.8	2781.1	2260.6	1194.0	404.1	233.0	163.8
80°	921.0	955.5	930.1	939.2	902.8	868.2	908.2	515.1	249.4	174.7	132.9
82.5°	626.1	786.3	835.4	835.4	784.5	618.8	349.5	236.6	152.9	125.6	101.9
85°	509.6	622.5	668.0	688.0	648.0	522.4	183.8	114.7	91.0	80.1	69.2
87.5°	171.1	160.2	151.1	147.4	154.7	162.0	91.0	49.1	41.9	38.2	36.4
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°	618.8	618.8	618.8	618.8	618.8	618.8
2.5°	648.0	626.1	635.2	644.3	709.8	759.0
5°	644.3	675.3	744.4	831.8	871.8	970.1
7.5°	662.5	775.4	904.6	995.6	1032.0	1062.9
10°	886.4	906.4	950.1	1037.5	1110.3	1123.0
12.5°	1144.8	1139.4	1108.4	1148.5	1112.1	1137.6
15°	1346.9	1286.8	1244.9	1239.5	1226.7	1226.7
17.5°	1457.9	1405.1	1346.9	1332.3	1294.1	1325.0
20°	1588.9	1497.9	1352.3	1337.8	1325.0	1295.9
22.5°	1563.5	1472.5	1321.4	1303.2	1370.5	1366.9
25°	1594.4	1472.5	1328.7	1308.6	1339.6	1339.6
27.5°	1518.0	1417.9	1314.1	1194.0	1288.6	1310.5
30°	1497.9	1385.1	1265.0	1157.6	1254.0	1234.0
32.5°	1603.5	1303.2	1184.9	1152.1	1223.1	1208.5
35°	1521.6	1288.6	1164.9	1104.8	1188.5	1174.0
37.5°	1556.2	1270.4	1130.3	1079.3	1146.7	1168.5
40°	1548.9	1184.9	1090.2	1024.7	1092.1	1103.0
42.5°	1427.0	1119.4	1022.9	957.4	992.0	1028.4
45°	1390.6	1079.3	957.4	866.4	868.2	910.0
47.5°	1323.2	988.3	837.2	753.5	753.5	788.1
50°	1210.4	866.4	700.7	624.3	622.5	649.8
52.5°	1042.9	748.1	591.5	507.8	502.3	529.6
55°	853.6	602.5	465.9	411.3	400.4	411.3
57.5°	664.3	469.6	367.7	324.0	322.2	331.3
60°	515.1	367.7	293.0	267.6	271.2	285.8
62.5°	389.5	293.0	249.4	240.3	245.7	260.3
65°	309.4	253.0	227.5	222.1	227.5	242.1
67.5°	251.2	229.3	211.1	203.9	207.5	222.1
69°	231.2	216.6	202.0	192.9	196.6	207.5
70°	220.2	209.3	194.7	185.6	189.3	200.2
72.5°	192.9	187.5	176.5	167.4	169.3	178.4
75°	169.3	165.6	158.3	147.4	147.4	158.3
77.5°	142.0	143.8	136.5	125.6	123.8	129.2
80°	112.8	116.5	112.8	101.9	98.3	98.3
82.5°	81.9	89.2	85.5	74.6	72.8	72.8
85°	51.0	56.4	54.6	47.3	47.3	41.9
87.5°	23.7	30.9	29.1	25.5	23.7	16.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)