

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: P565327

Luminaire Tested: **MSA-SA3D-830-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565327
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-SA3D-830-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: 14301 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

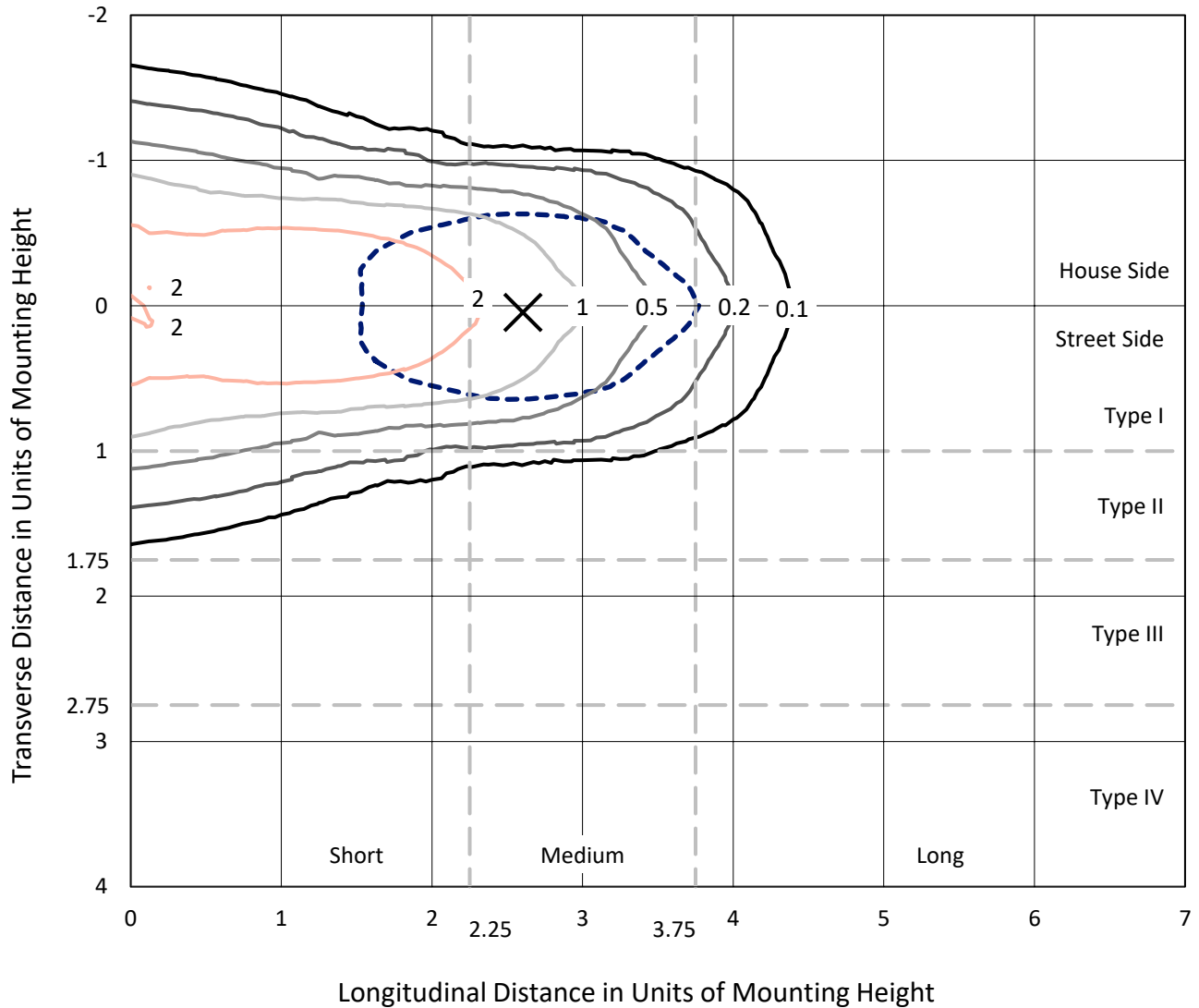
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

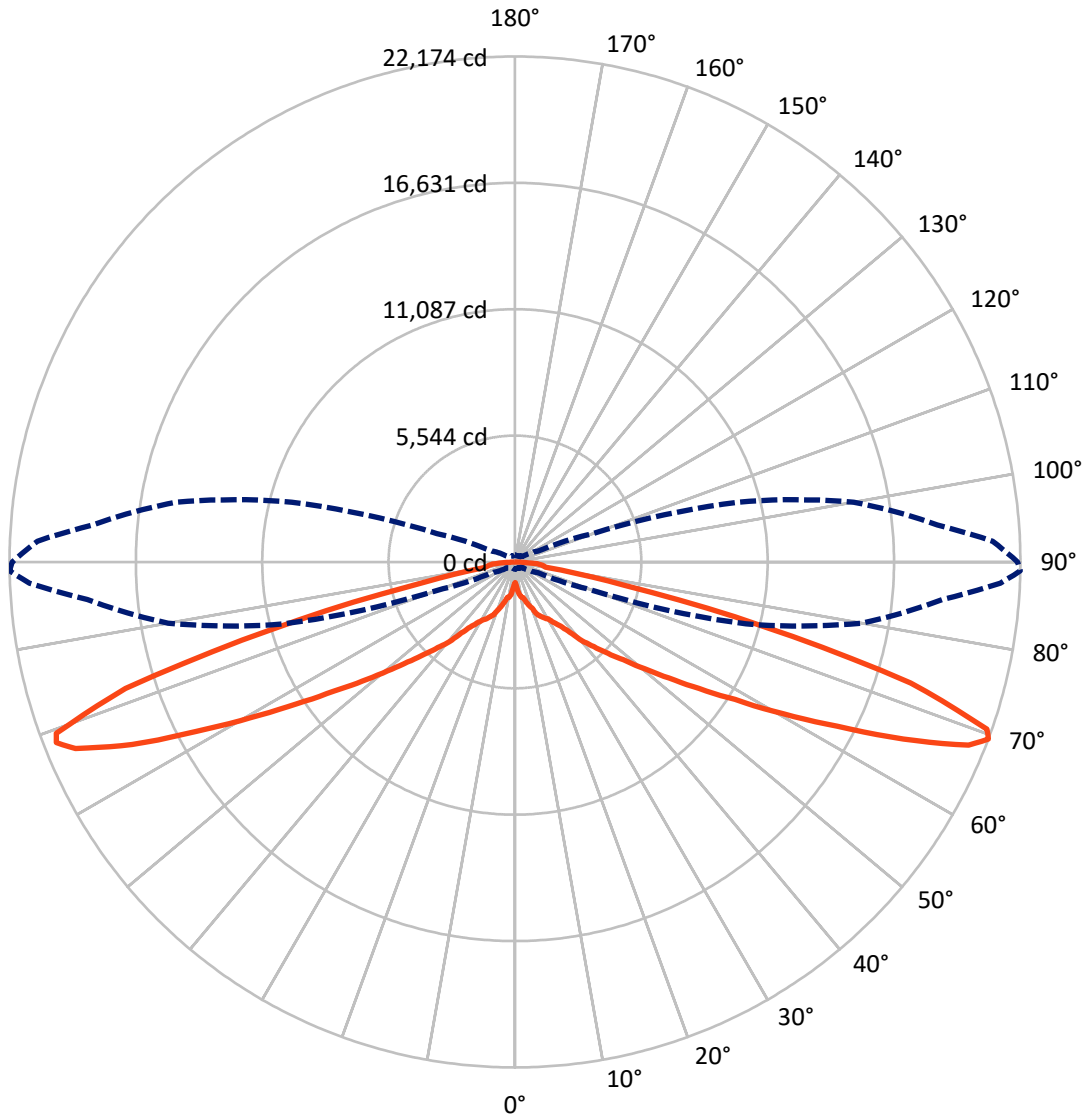
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 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	7150.4	0.0	7150.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7150.6	0.0	7150.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	14301.0	0.0	14301.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.8	0.8
10°-20°	524.4	3.7
20°-30°	1046.2	7.3
30°-40°	1582.3	11.1
40°-50°	2296.9	16.1
50°-60°	3017.7	21.1
60°-70°	3681.2	25.7
70°-80°	1861.1	13.0
80°-90°	177.4	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°	14301.0	100.0
0°-180°	14301.0	100.0

Coefficient of Utilization

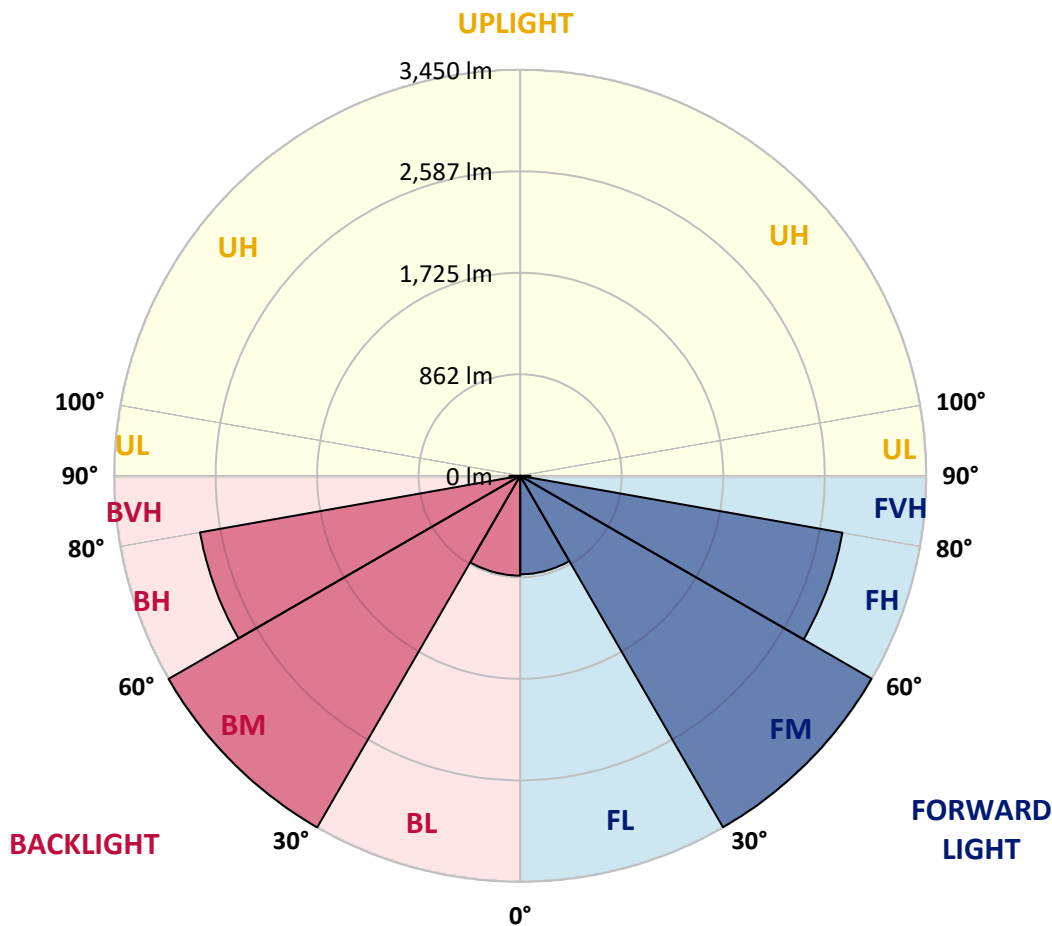


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	836.3	5.8			
FM (30°-60°)	3447.3	24.1			
FH (60°-80°)	2780.0	19.4			G2/5000
FVH (80°-90°)	87.0	0.6			G1/100
BL (0°-30°)	848.1	5.9	B2/1000		
BM (30°-60°)	3449.6	24.1	B3/5000		
BH (60°-80°)	2762.3	19.3	B4/5000		G4/5000
BVH (80°-90°)	90.4	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8
2.5°	1063.0	940.5	929.8	900.5	921.8	929.8	911.2	884.5	913.8	929.8	900.5
5°	1340.1	1158.9	1097.6	1047.0	945.8	903.2	945.8	1055.0	1068.3	1134.9	1116.3
7.5°	1476.0	1446.7	1369.4	1201.6	1039.0	948.5	1063.0	1220.2	1300.1	1364.1	1430.7
10°	1577.2	1561.2	1425.3	1305.5	1238.8	1244.2	1246.8	1297.5	1366.7	1473.3	1510.6
12.5°	1601.2	1595.9	1617.2	1590.5	1595.9	1625.2	1595.9	1582.5	1622.5	1657.1	1619.8
15°	1755.7	1753.0	1761.0	1766.4	1872.9	1918.2	1872.9	1833.0	1803.7	1774.4	1835.6
17.5°	1862.3	1848.9	1851.6	1902.2	2022.1	2147.3	2123.4	2070.1	2003.5	2043.4	2094.1
20°	1920.9	1896.9	1912.9	1934.2	2136.7	2275.2	2291.2	2219.3	2179.3	2229.9	2272.6
22.5°	1976.8	1939.5	1883.6	1904.9	2091.4	2291.2	2368.5	2349.8	2379.1	2395.1	2387.1
25°	1910.2	1934.2	1872.9	1934.2	2123.4	2307.2	2461.7	2570.9	2573.6	2565.6	2624.2
27.5°	1870.3	1851.6	1747.7	1904.9	2062.1	2176.6	2570.9	2754.8	2810.7	2640.2	2754.8
30°	1801.0	1830.3	1689.1	1819.6	2019.5	2211.3	2696.2	2959.9	2877.3	2856.0	2882.7
32.5°	1758.4	1739.7	1673.1	1745.0	1896.9	2315.2	2776.1	3079.8	3183.7	3133.1	3127.8
35°	1689.1	1702.4	1598.5	1675.8	1888.9	2227.3	2829.4	3380.9	3540.7	3500.7	3468.8
37.5°	1699.8	1654.5	1579.9	1635.8	1838.3	2275.2	2962.6	3671.3	3924.4	3945.7	3799.1
40°	1619.8	1593.2	1481.3	1574.5	1742.4	2245.9	2994.6	4001.6	4430.5	4526.5	4316.0
42.5°	1505.3	1470.6	1406.7	1510.6	1686.4	2102.0	3039.8	4398.6	4944.7	5144.6	4952.7
45°	1340.1	1294.8	1262.8	1401.4	1563.9	2064.7	2991.9	4728.9	5437.6	5712.0	5706.7
47.5°	1140.3	1111.0	1095.0	1241.5	1462.6	1971.5	2893.3	4936.7	5781.3	6484.6	6378.1
50°	913.8	892.5	889.8	1044.4	1292.1	1779.7	2781.4	5040.6	6303.5	7193.3	7286.6
52.5°	732.7	716.7	714.0	839.2	1081.7	1521.3	2547.0	5120.6	6801.7	7997.9	8477.5
55°	572.8	556.8	559.5	663.4	860.5	1244.2	2190.0	5030.0	7238.6	8821.1	9729.6
57.5°	468.9	452.9	455.6	514.2	658.1	951.1	1745.0	4832.8	7435.8	9838.9	11189.6
60°	412.9	397.0	389.0	415.6	506.2	716.7	1297.5	4065.6	7467.7	10683.4	12774.8
62.5°	383.6	367.7	359.7	367.7	418.3	548.8	935.1	3221.0	7283.9	11405.4	14226.8
65°	357.0	343.7	333.0	341.0	367.7	436.9	682.0	2206.0	6322.1	11735.8	15281.8
67.5°	327.7	317.0	306.4	317.0	335.7	367.7	530.2	1396.0	4739.6	11306.8	15721.4
69°	311.7	295.7	290.4	298.4	317.0	338.4	458.2	1113.6	3604.7	10491.6	15455.0
70°	295.7	285.1	277.1	290.4	306.4	322.4	412.9	945.8	2826.7	9444.6	14794.3
72.5°	261.1	253.1	247.8	261.1	274.4	285.1	338.4	674.0	1638.5	6431.4	11733.1
75°	229.1	221.1	218.5	229.1	239.8	245.1	285.1	463.6	967.1	3364.9	7038.8
77.5°	191.8	181.2	183.8	197.2	205.1	207.8	239.8	333.0	570.1	1523.9	3261.0
80°	141.2	141.2	151.9	162.5	162.5	162.5	191.8	242.4	346.3	700.7	1353.4
82.5°	98.6	101.2	103.9	119.9	122.6	111.9	146.5	175.8	215.8	306.4	468.9
85°	55.9	58.6	61.3	71.9	74.6	66.6	95.9	111.9	125.2	151.9	245.1
87.5°	21.3	24.0	32.0	37.3	40.0	29.3	45.3	53.3	53.3	63.9	109.2
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°	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8	905.8
2.5°	961.8	980.4	1015.1	1023.0	993.7	961.8	889.8	935.1	953.8	919.1	929.8
5°	1190.9	1230.9	1273.5	1222.9	1190.9	1169.6	1134.9	1137.6	1119.0	1057.7	956.4
7.5°	1449.3	1404.0	1436.0	1470.6	1420.0	1422.7	1454.6	1388.0	1337.4	1233.5	1044.4
10°	1569.2	1569.2	1577.2	1577.2	1555.9	1555.9	1553.2	1446.7	1385.4	1340.1	1286.8
12.5°	1577.2	1574.5	1606.5	1582.5	1587.9	1593.2	1606.5	1654.5	1638.5	1579.9	1627.8
15°	1798.3	1787.7	1798.3	1795.7	1803.7	1827.6	1817.0	1806.3	1809.0	1851.6	1923.5
17.5°	2006.1	2011.5	2000.8	2019.5	2019.5	2035.4	2072.7	2035.4	2003.5	2083.4	2139.3
20°	2245.9	2227.3	2184.6	2216.6	2224.6	2227.3	2288.5	2243.2	2198.0	2227.3	2293.9
22.5°	2488.4	2485.7	2491.0	2493.7	2504.3	2464.4	2381.8	2368.5	2397.8	2357.8	2365.8
25°	2637.5	2640.2	2653.5	2656.2	2610.9	2653.5	2682.8	2594.9	2594.9	2586.9	2533.6
27.5°	2818.7	2778.8	2794.7	2816.1	2797.4	2808.1	2773.4	2645.5	2781.4	2800.1	2586.9
30°	2941.3	2922.6	2904.0	2925.3	2943.9	2991.9	2893.3	2880.0	2890.6	2989.2	2709.5
32.5°	3199.7	3226.3	3191.7	3157.1	3191.7	3181.0	3138.4	3119.8	3253.0	3122.4	2794.7
35°	3439.5	3450.1	3452.8	3447.5	3468.8	3431.5	3431.5	3500.7	3540.7	3399.5	2821.4
37.5°	4017.6	3980.3	3903.0	3865.7	3932.3	3988.3	3823.1	3905.7	3889.7	3649.9	3021.2
40°	4433.2	4518.5	4542.4	4531.8	4542.4	4382.6	4417.2	4478.5	4406.6	4009.6	2951.9
42.5°	5040.6	5093.9	5075.3	5051.3	5062.0	5032.7	4928.8	5155.2	4896.8	4411.9	3058.5
45°	5594.8	5714.7	5722.7	5640.1	5706.7	5602.8	5645.4	5725.3	5464.3	4713.0	3029.2
47.5°	6255.5	6503.3	6410.0	6410.0	6476.6	6252.9	6354.1	6460.7	5768.0	4915.4	2869.3
50°	7233.3	7366.5	7361.2	7337.2	7366.5	7246.6	7230.6	7217.3	6234.2	5107.3	2770.8
52.5°	8338.9	8520.1	8450.8	8477.5	8517.4	8291.0	8469.5	7981.9	6817.7	5179.2	2547.0
55°	9750.9	9876.2	9806.9	9671.0	9852.2	9708.3	9766.9	8815.8	7222.6	4974.0	2174.0
57.5°	11432.0	11496.0	11381.4	11368.1	11488.0	11333.5	11234.9	9753.6	7433.1	4819.5	1737.1
60°	13395.6	13595.4	13523.4	13408.9	13518.1	13382.2	12636.3	10550.2	7390.5	4097.5	1345.4
62.5°	15750.7	15953.2	15873.3	15796.0	15865.3	15510.9	13952.4	11178.9	7198.6	3247.6	983.1
65°	17695.6	18609.4	18729.3	18731.9	18396.2	17575.7	15002.1	11424.1	6186.3	2267.2	719.3
67.5°	18974.4	20873.9	21465.4	21252.3	20482.3	18609.4	15425.7	10944.5	4776.9	1433.3	538.2
69°	18827.8	21318.9	22174.1	22054.2	20972.5	18593.4	15095.3	10137.2	3649.9	1140.3	455.6
70°	18151.1	20953.9	21968.9	22022.2	20660.8	17879.4	14506.5	9210.1	2951.9	972.4	418.3
72.5°	14485.2	17266.6	18159.1	18508.1	17157.4	14317.4	11895.6	6498.0	1710.4	679.4	338.4
75°	8973.0	10470.3	11210.9	11413.4	10595.5	8917.0	7220.0	3615.3	1041.7	479.6	285.1
77.5°	4022.9	4457.2	4883.5	4883.5	4563.8	4070.9	3308.9	1747.7	591.5	341.0	239.8
80°	1348.1	1398.7	1361.4	1374.7	1321.4	1270.8	1329.4	754.0	365.0	255.8	194.5
82.5°	916.5	1150.9	1222.9	1222.9	1148.3	905.8	511.5	346.3	223.8	183.8	149.2
85°	746.0	911.2	977.8	1007.1	948.5	764.6	269.1	167.8	133.2	117.2	101.2
87.5°	250.4	234.4	221.1	215.8	226.5	237.1	133.2	71.9	61.3	55.9	53.3
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°	905.8	905.8	905.8	905.8	905.8	905.8
2.5°	948.5	916.5	929.8	943.1	1039.0	1111.0
5°	943.1	988.4	1089.7	1217.5	1276.1	1420.0
7.5°	969.8	1134.9	1324.1	1457.3	1510.6	1555.9
10°	1297.5	1326.8	1390.7	1518.6	1625.2	1643.8
12.5°	1675.8	1667.8	1622.5	1681.1	1627.8	1665.1
15°	1971.5	1883.6	1822.3	1814.3	1795.7	1795.7
17.5°	2134.0	2056.8	1971.5	1950.2	1894.2	1939.5
20°	2325.8	2192.6	1979.5	1958.2	1939.5	1896.9
22.5°	2288.5	2155.3	1934.2	1907.6	2006.1	2000.8
25°	2333.8	2155.3	1944.9	1915.6	1960.8	1960.8
27.5°	2221.9	2075.4	1923.5	1747.7	1886.2	1918.2
30°	2192.6	2027.4	1851.6	1694.4	1835.6	1806.3
32.5°	2347.2	1907.6	1734.4	1686.4	1790.3	1769.0
35°	2227.3	1886.2	1705.1	1617.2	1739.7	1718.4
37.5°	2277.9	1859.6	1654.5	1579.9	1678.4	1710.4
40°	2267.2	1734.4	1595.9	1499.9	1598.5	1614.5
42.5°	2088.7	1638.5	1497.3	1401.4	1452.0	1505.3
45°	2035.4	1579.9	1401.4	1268.2	1270.8	1332.1
47.5°	1936.9	1446.7	1225.5	1103.0	1103.0	1153.6
50°	1771.7	1268.2	1025.7	913.8	911.2	951.1
52.5°	1526.6	1095.0	865.9	743.3	735.3	775.3
55°	1249.5	881.8	682.0	602.1	586.1	602.1
57.5°	972.4	687.4	538.2	474.2	471.6	484.9
60°	754.0	538.2	428.9	391.6	397.0	418.3
62.5°	570.1	428.9	365.0	351.7	359.7	381.0
65°	452.9	370.3	333.0	325.0	333.0	354.3
67.5°	367.7	335.7	309.0	298.4	303.7	325.0
69°	338.4	317.0	295.7	282.4	287.7	303.7
70°	322.4	306.4	285.1	271.7	277.1	293.1
72.5°	282.4	274.4	258.4	245.1	247.8	261.1
75°	247.8	242.4	231.8	215.8	215.8	231.8
77.5°	207.8	210.5	199.8	183.8	181.2	189.2
80°	165.2	170.5	165.2	149.2	143.9	143.9
82.5°	119.9	130.5	125.2	109.2	106.6	106.6
85°	74.6	82.6	79.9	69.3	69.3	61.3
87.5°	34.6	45.3	42.6	37.3	34.6	24.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)