

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: P565329

Luminaire Tested: **MSA-SA4B-830-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565329
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-SA4B-830-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13959 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

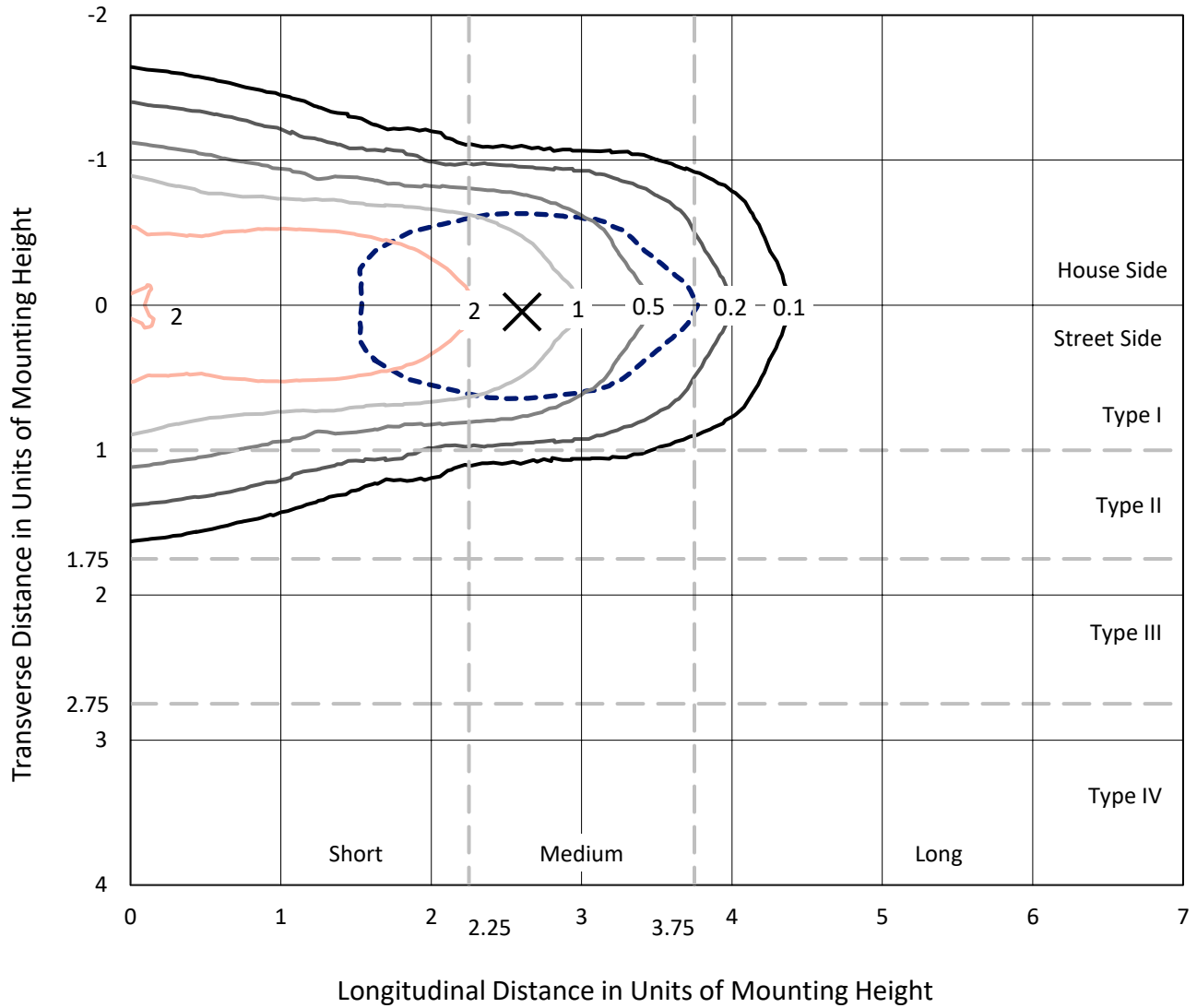
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

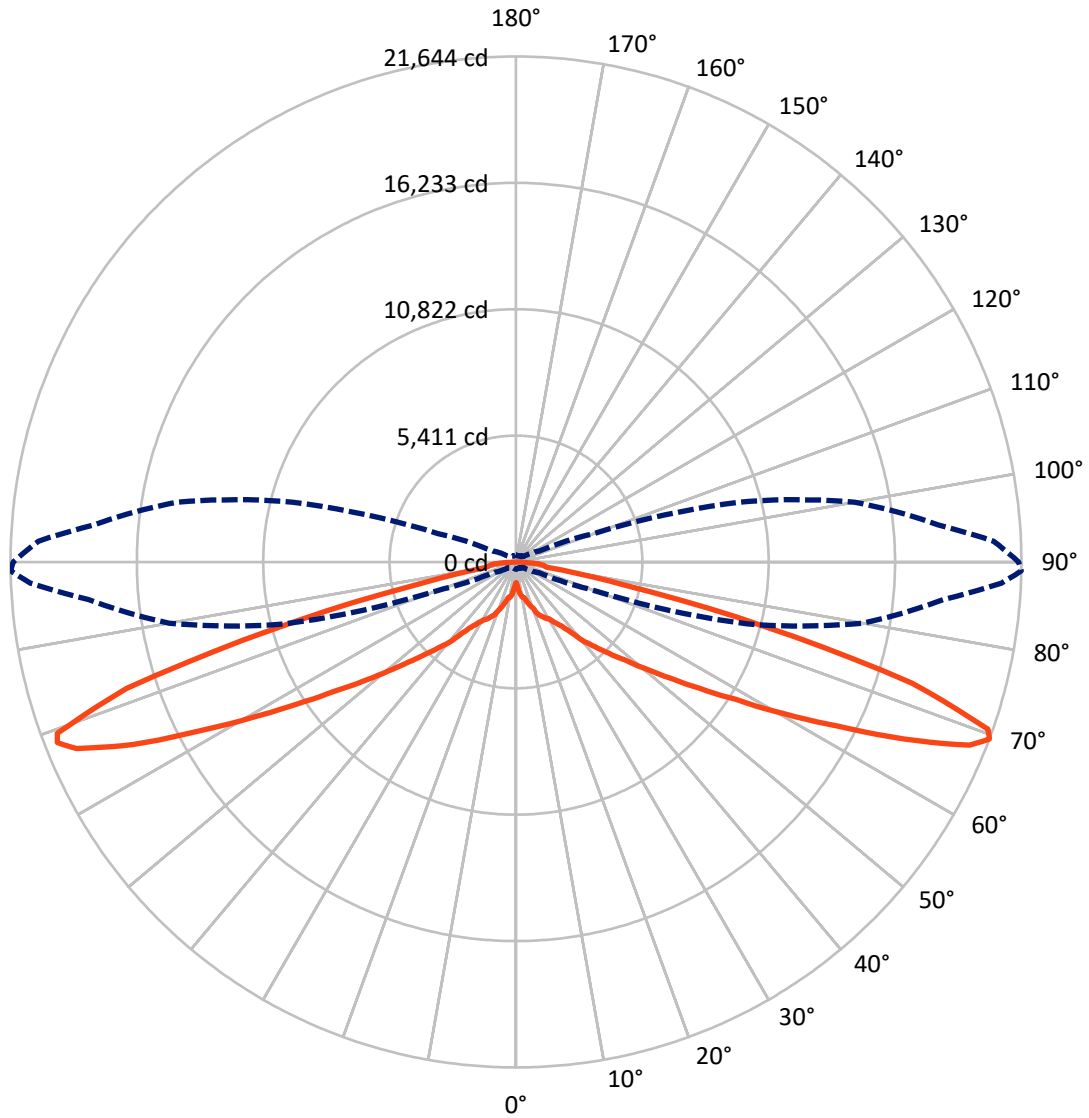
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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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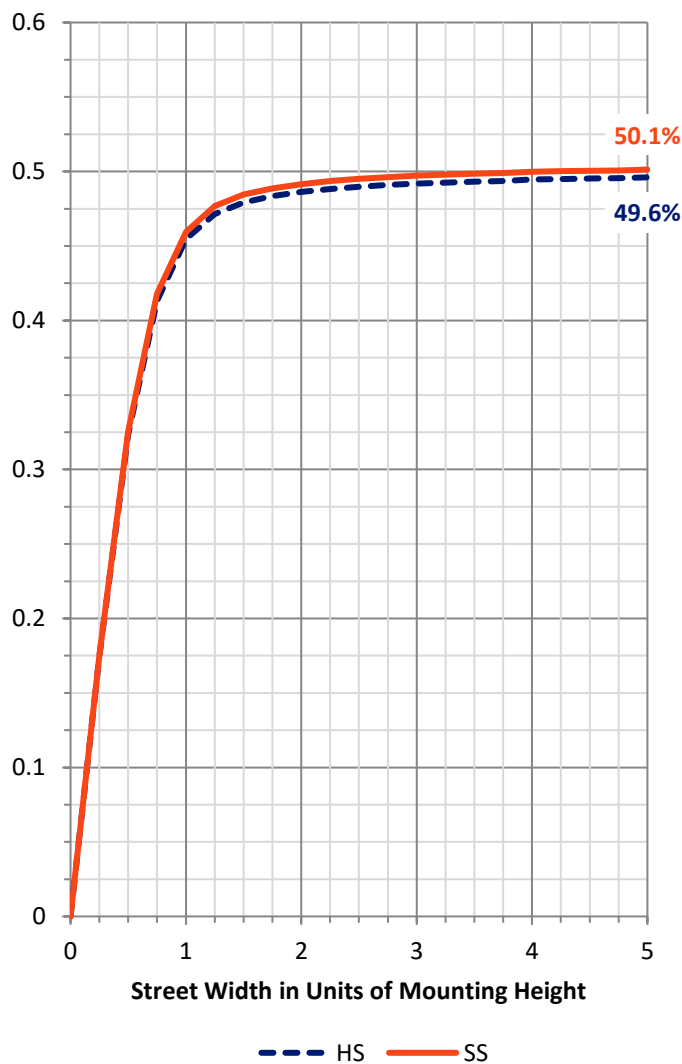
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6979.4	0.0	6979.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6979.6	0.0	6979.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	13959.0	0.0	13959.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	0.8
10°-20°	511.8	3.7
20°-30°	1021.2	7.3
30°-40°	1544.5	11.1
40°-50°	2242.0	16.1
50°-60°	2945.5	21.1
60°-70°	3593.2	25.7
70°-80°	1816.6	13.0
80°-90°	173.1	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°	13959.0	100.0
0°-180°	13959.0	100.0

Coefficient of Utilization



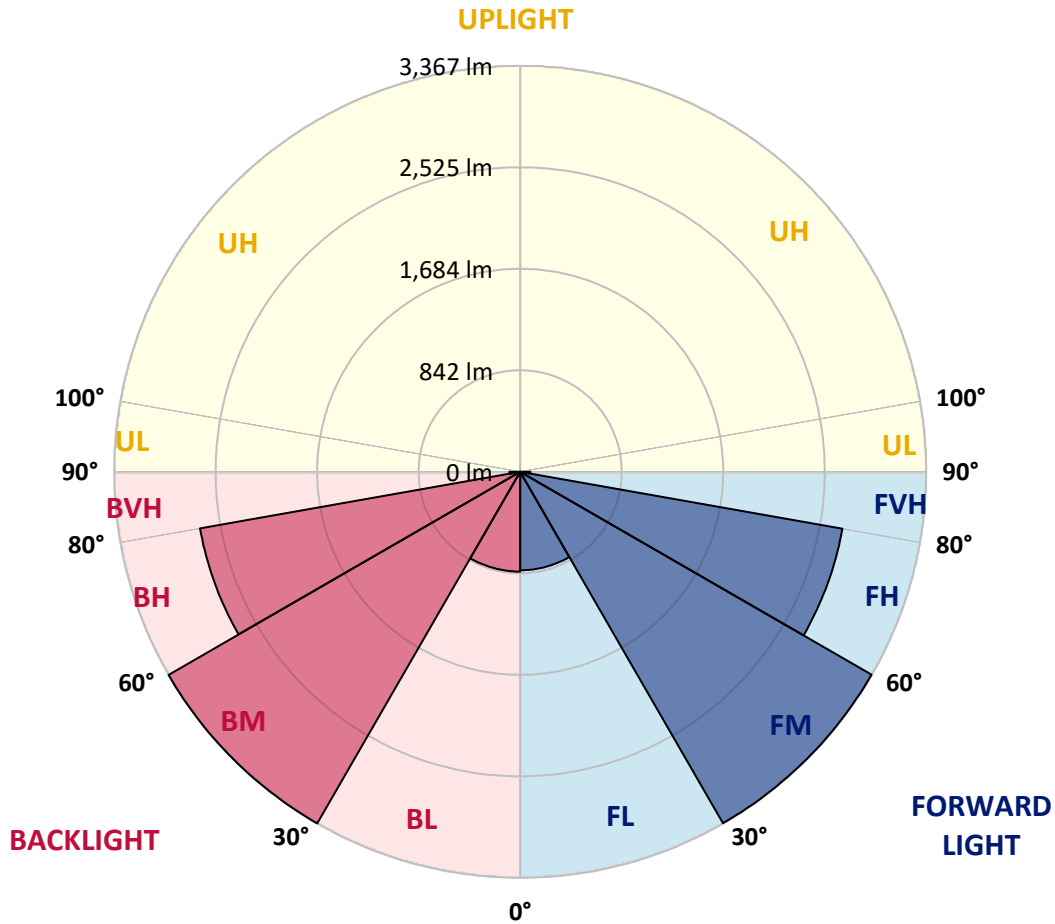
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	816.3	5.8			
FM (30°-60°)	3364.9	24.1			
FH (60°-80°)	2713.5	19.4			G2/5000
FVH (80°-90°)	84.9	0.6			G1/100
BL (0°-30°)	827.8	5.9	B2/1000		
BM (30°-60°)	3367.1	24.1	B3/5000		
BH (60°-80°)	2696.2	19.3	B4/5000		G4/5000
BVH (80°-90°)	88.2	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°	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2
2.5°	1037.6	918.0	907.6	879.0	899.8	907.6	889.4	863.4	892.0	907.6	879.0
5°	1308.0	1131.2	1071.4	1022.0	923.2	881.6	923.2	1029.8	1042.8	1107.8	1089.6
7.5°	1440.7	1412.1	1336.6	1172.8	1014.2	925.8	1037.6	1191.0	1269.0	1331.4	1396.5
10°	1539.5	1523.9	1391.3	1274.2	1209.2	1214.4	1217.0	1266.4	1334.0	1438.1	1474.5
12.5°	1562.9	1557.7	1578.5	1552.5	1557.7	1586.3	1557.7	1544.7	1583.7	1617.5	1581.1
15°	1713.7	1711.1	1718.9	1724.1	1828.1	1872.3	1828.1	1789.1	1760.5	1731.9	1791.7
17.5°	1817.7	1804.7	1807.3	1856.7	1973.8	2096.0	2072.6	2020.6	1955.6	1994.6	2044.0
20°	1874.9	1851.5	1867.1	1887.9	2085.6	2220.8	2236.4	2166.2	2127.2	2176.6	2218.2
22.5°	1929.6	1893.1	1838.5	1859.3	2041.4	2236.4	2311.8	2293.6	2322.2	2337.8	2330.0
25°	1864.5	1887.9	1828.1	1887.9	2072.6	2252.0	2402.8	2509.5	2512.1	2504.3	2561.5
27.5°	1825.5	1807.3	1705.9	1859.3	2012.8	2124.6	2509.5	2688.9	2743.5	2577.1	2688.9
30°	1757.9	1786.5	1648.7	1776.1	1971.2	2158.4	2631.7	2889.1	2808.5	2787.7	2813.7
32.5°	1716.3	1698.1	1633.1	1703.3	1851.5	2259.8	2709.7	3006.2	3107.6	3058.2	3053.0
35°	1648.7	1661.7	1560.3	1635.7	1843.7	2174.0	2761.7	3300.0	3456.0	3417.0	3385.8
37.5°	1659.1	1614.9	1542.1	1596.7	1794.3	2220.8	2891.7	3583.5	3830.5	3851.3	3708.3
40°	1581.1	1555.1	1445.9	1536.9	1700.7	2192.2	2922.9	3905.9	4324.6	4418.2	4212.8
42.5°	1469.3	1435.5	1373.1	1474.5	1646.1	2051.8	2967.1	4293.4	4826.5	5021.5	4834.3
45°	1308.0	1263.8	1232.6	1367.9	1526.5	2015.4	2920.3	4615.8	5307.6	5575.4	5570.2
47.5°	1113.0	1084.4	1068.8	1211.8	1427.7	1924.4	2824.1	4818.7	5643.0	6329.6	6225.5
50°	892.0	871.2	868.6	1019.4	1261.2	1737.1	2714.9	4920.1	6152.7	7021.3	7112.3
52.5°	715.1	699.5	696.9	819.2	1055.8	1484.9	2486.1	4998.1	6639.0	7806.6	8274.7
55°	559.1	543.5	546.1	647.5	840.0	1214.4	2137.6	4909.7	7065.5	8610.2	9496.9
57.5°	457.7	442.1	444.7	501.9	642.3	928.4	1703.3	4717.3	7257.9	9603.6	10922.0
60°	403.1	387.5	379.7	405.7	494.1	699.5	1266.4	3968.3	7289.1	10427.9	12469.3
62.5°	374.5	358.9	351.1	358.9	408.3	535.7	912.8	3144.0	7109.7	11132.6	13886.6
65°	348.5	335.5	325.1	332.9	358.9	426.5	665.7	2153.2	6170.9	11455.1	14916.3
67.5°	319.9	309.5	299.1	309.5	327.7	358.9	517.5	1362.7	4626.3	11036.4	15345.4
69°	304.3	288.7	283.5	291.3	309.5	330.3	447.3	1087.0	3518.4	10240.7	15085.4
70°	288.7	278.3	270.4	283.5	299.1	314.7	403.1	923.2	2759.1	9218.7	14440.5
72.5°	254.8	247.0	241.8	254.8	267.8	278.3	330.3	657.9	1599.3	6277.6	11452.5
75°	223.6	215.8	213.2	223.6	234.0	239.2	278.3	452.5	944.0	3284.4	6870.5
77.5°	187.2	176.8	179.4	192.4	200.2	202.8	234.0	325.1	556.5	1487.5	3183.0
80°	137.8	137.8	148.2	158.6	158.6	158.6	187.2	236.6	338.1	683.9	1321.0
82.5°	96.2	98.8	101.4	117.0	119.6	109.2	143.0	171.6	210.6	299.1	457.7
85°	54.6	57.2	59.8	70.2	72.8	65.0	93.6	109.2	122.2	148.2	239.2
87.5°	20.8	23.4	31.2	36.4	39.0	28.6	44.2	52.0	52.0	62.4	106.6
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°	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2	884.2
2.5°	938.8	957.0	990.8	998.6	970.0	938.8	868.6	912.8	931.0	897.2	907.6
5°	1162.4	1201.4	1243.0	1193.6	1162.4	1141.6	1107.8	1110.4	1092.2	1032.4	933.6
7.5°	1414.7	1370.5	1401.7	1435.5	1386.1	1388.7	1419.9	1354.8	1305.4	1204.0	1019.4
10°	1531.7	1531.7	1539.5	1539.5	1518.7	1518.7	1516.1	1412.1	1352.2	1308.0	1256.0
12.5°	1539.5	1536.9	1568.1	1544.7	1549.9	1555.1	1568.1	1614.9	1599.3	1542.1	1588.9
15°	1755.3	1744.9	1755.3	1752.7	1760.5	1783.9	1773.5	1763.1	1765.7	1807.3	1877.5
17.5°	1958.2	1963.4	1953.0	1971.2	1971.2	1986.8	2023.2	1986.8	1955.6	2033.6	2088.2
20°	2192.2	2174.0	2132.4	2163.6	2171.4	2174.0	2233.8	2189.6	2145.4	2174.0	2239.0
22.5°	2428.8	2426.2	2431.4	2434.0	2444.4	2405.4	2324.8	2311.8	2340.4	2301.4	2309.2
25°	2574.5	2577.1	2590.1	2592.7	2548.5	2590.1	2618.7	2532.9	2532.9	2525.1	2473.1
27.5°	2751.3	2712.3	2727.9	2748.7	2730.5	2740.9	2707.1	2582.3	2714.9	2733.1	2525.1
30°	2870.9	2852.7	2834.5	2855.3	2873.5	2920.3	2824.1	2811.1	2821.5	2917.7	2644.7
32.5°	3123.2	3149.2	3115.4	3081.6	3115.4	3105.0	3063.4	3045.2	3175.2	3047.8	2727.9
35°	3357.2	3367.6	3370.2	3365.0	3385.8	3349.4	3349.4	3417.0	3456.0	3318.2	2753.9
37.5°	3921.5	3885.1	3809.7	3773.3	3838.3	3892.9	3731.7	3812.3	3796.7	3562.7	2948.9
40°	4327.2	4410.4	4433.8	4423.4	4433.8	4277.8	4311.6	4371.4	4301.2	3913.7	2881.3
42.5°	4920.1	4972.1	4953.9	4930.5	4940.9	4912.3	4810.9	5031.9	4779.7	4306.4	2985.3
45°	5461.0	5578.0	5585.8	5505.2	5570.2	5468.8	5510.4	5588.4	5333.6	4600.2	2956.7
47.5°	6105.9	6347.8	6256.8	6256.8	6321.8	6103.3	6202.1	6306.2	5630.0	4797.9	2800.7
50°	7060.3	7190.3	7185.1	7161.7	7190.3	7073.3	7057.7	7044.7	6085.1	4985.1	2704.5
52.5°	8139.5	8316.3	8248.7	8274.7	8313.7	8092.7	8266.9	7791.0	6654.6	5055.3	2486.1
55°	9517.8	9640.0	9572.4	9439.7	9616.6	9476.1	9533.4	8605.0	7049.9	4855.1	2122.0
57.5°	11158.7	11221.1	11109.2	11096.2	11213.3	11062.4	10966.2	9520.4	7255.3	4704.3	1695.5
60°	13075.2	13270.2	13200.0	13088.2	13194.8	13062.2	12334.1	10297.9	7213.7	3999.5	1313.2
62.5°	15374.0	15571.7	15493.7	15418.2	15485.8	15140.0	13618.7	10911.6	7026.5	3170.0	959.6
65°	17272.4	18164.3	18281.4	18284.0	17956.3	17155.4	14643.3	11150.9	6038.3	2213.0	702.1
67.5°	18520.6	20374.7	20952.1	20744.0	19992.5	18164.3	15056.8	10682.8	4662.7	1399.1	525.3
69°	18377.6	20809.0	21643.8	21526.8	20471.0	18148.7	14734.3	9894.8	3562.7	1113.0	444.7
70°	17717.1	20452.8	21443.5	21495.6	20166.7	17451.8	14159.6	8989.9	2881.3	949.2	408.3
72.5°	14138.8	16853.7	17724.9	18065.5	16747.1	13975.0	11611.1	6342.6	1669.5	663.1	330.3
75°	8758.4	10219.9	10942.8	11140.5	10342.1	8703.8	7047.3	3528.8	1016.8	468.1	278.3
77.5°	3926.7	4350.6	4766.7	4766.7	4454.6	3973.5	3229.8	1705.9	577.3	332.9	234.0
80°	1315.8	1365.3	1328.8	1341.8	1289.8	1240.4	1297.6	735.9	356.3	249.6	189.8
82.5°	894.6	1123.4	1193.6	1193.6	1120.8	884.2	499.3	338.1	218.4	179.4	145.6
85°	728.1	889.4	954.4	983.0	925.8	746.3	262.6	163.8	130.0	114.4	98.8
87.5°	244.4	228.8	215.8	210.6	221.0	231.4	130.0	70.2	59.8	54.6	52.0
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):

	135°	145°	155°	165°	175°	180°
0°	884.2	884.2	884.2	884.2	884.2	884.2
2.5°	925.8	894.6	907.6	920.6	1014.2	1084.4
5°	920.6	964.8	1063.6	1188.4	1245.6	1386.1
7.5°	946.6	1107.8	1292.4	1422.5	1474.5	1518.7
10°	1266.4	1295.0	1357.4	1482.3	1586.3	1604.5
12.5°	1635.7	1627.9	1583.7	1640.9	1588.9	1625.3
15°	1924.4	1838.5	1778.7	1770.9	1752.7	1752.7
17.5°	2083.0	2007.6	1924.4	1903.6	1848.9	1893.1
20°	2270.2	2140.2	1932.2	1911.4	1893.1	1851.5
22.5°	2233.8	2103.8	1887.9	1861.9	1958.2	1953.0
25°	2278.0	2103.8	1898.3	1869.7	1914.0	1914.0
27.5°	2168.8	2025.8	1877.5	1705.9	1841.1	1872.3
30°	2140.2	1979.0	1807.3	1653.9	1791.7	1763.1
32.5°	2291.0	1861.9	1692.9	1646.1	1747.5	1726.7
35°	2174.0	1841.1	1664.3	1578.5	1698.1	1677.3
37.5°	2223.4	1815.1	1614.9	1542.1	1638.3	1669.5
40°	2213.0	1692.9	1557.7	1464.1	1560.3	1575.9
42.5°	2038.8	1599.3	1461.5	1367.9	1417.3	1469.3
45°	1986.8	1542.1	1367.9	1237.8	1240.4	1300.2
47.5°	1890.5	1412.1	1196.2	1076.6	1076.6	1126.0
50°	1729.3	1237.8	1001.2	892.0	889.4	928.4
52.5°	1490.1	1068.8	845.2	725.5	717.7	756.7
55°	1219.6	860.8	665.7	587.7	572.1	587.7
57.5°	949.2	670.9	525.3	462.9	460.3	473.3
60°	735.9	525.3	418.7	382.3	387.5	408.3
62.5°	556.5	418.7	356.3	343.3	351.1	371.9
65°	442.1	361.5	325.1	317.3	325.1	345.9
67.5°	358.9	327.7	301.7	291.3	296.5	317.3
69°	330.3	309.5	288.7	275.7	280.9	296.5
70°	314.7	299.1	278.3	265.2	270.4	286.1
72.5°	275.7	267.8	252.2	239.2	241.8	254.8
75°	241.8	236.6	226.2	210.6	210.6	226.2
77.5°	202.8	205.4	195.0	179.4	176.8	184.6
80°	161.2	166.4	161.2	145.6	140.4	140.4
82.5°	117.0	127.4	122.2	106.6	104.0	104.0
85°	72.8	80.6	78.0	67.6	67.6	59.8
87.5°	33.8	44.2	41.6	36.4	33.8	23.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)