

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: P596988

Luminaire Tested: **MSA-SA2D-835-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596988
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-835-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10910 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

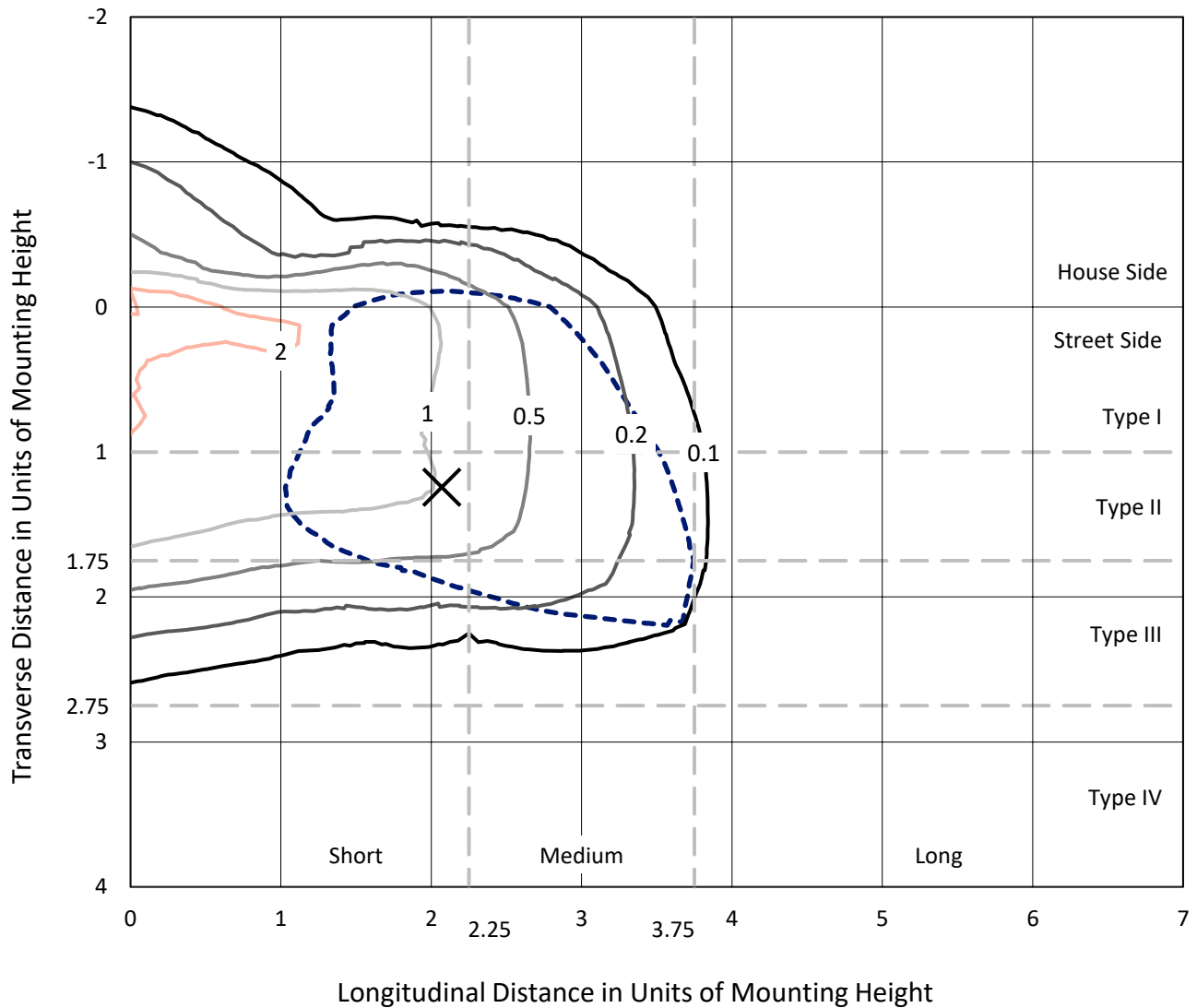
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

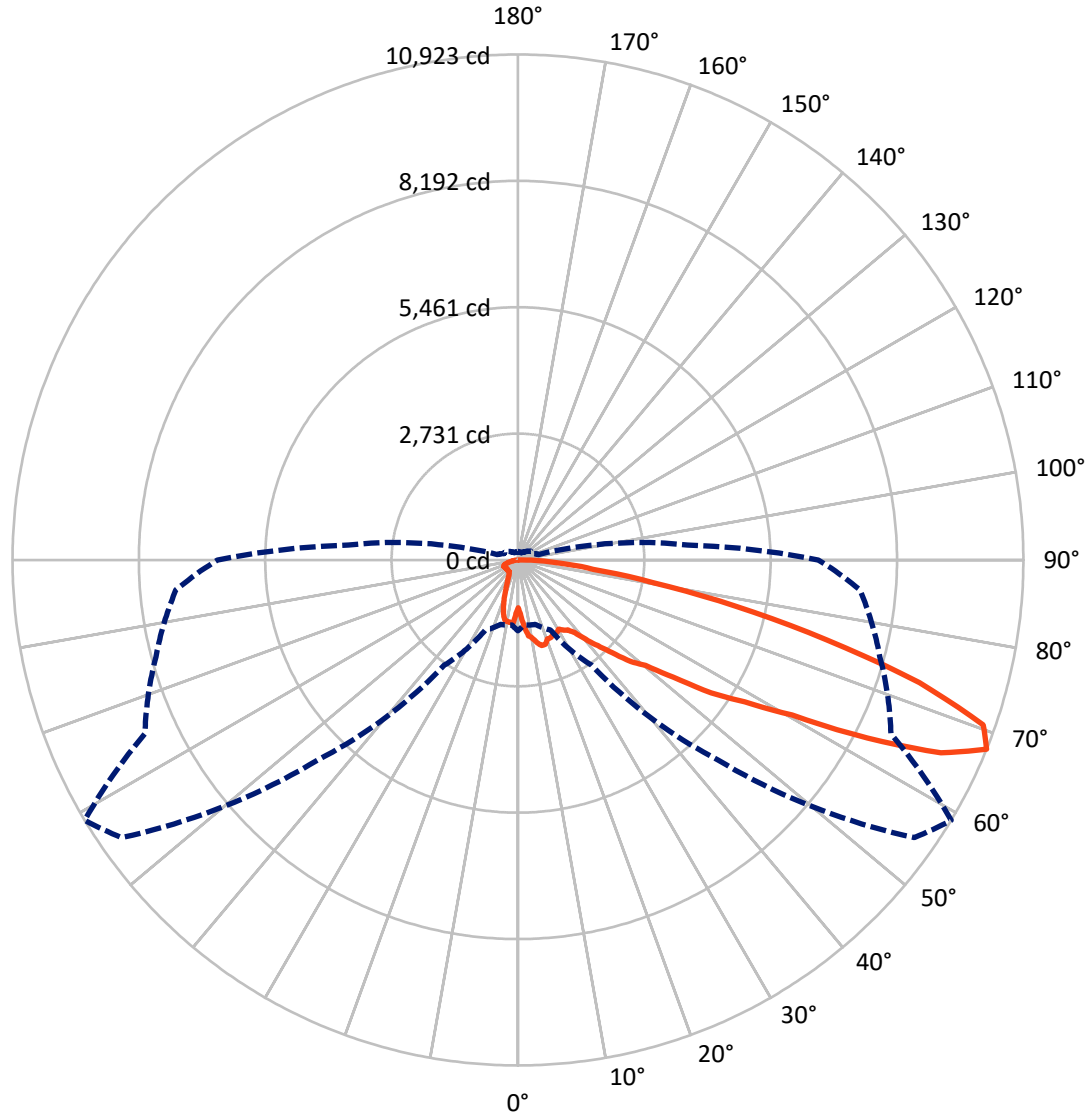
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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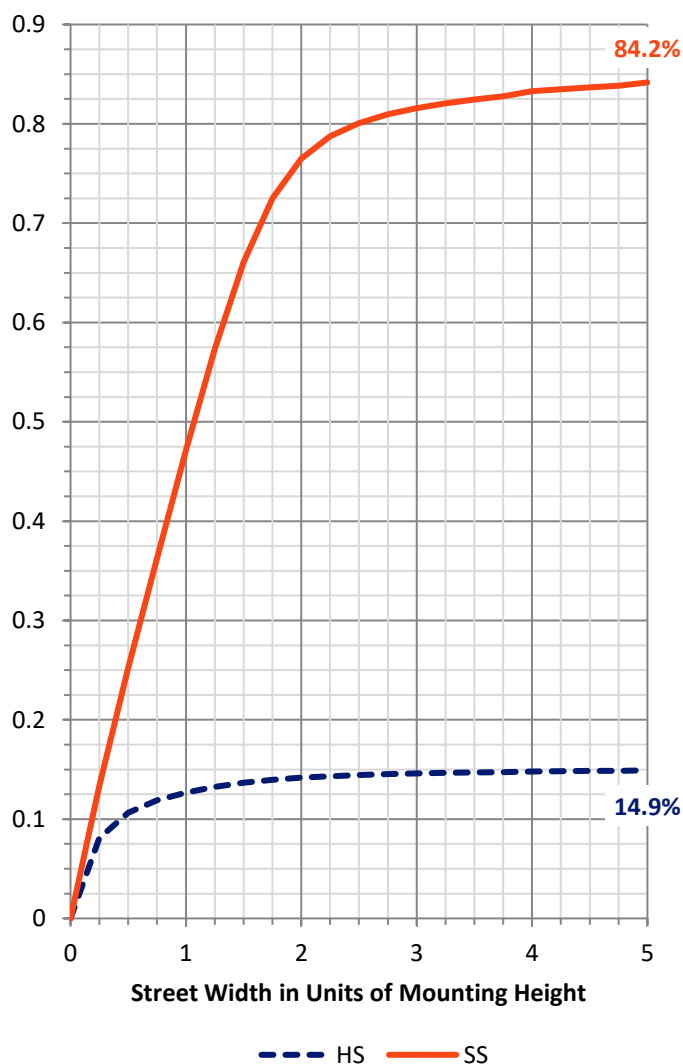
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1642.2	0.0	1642.2
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	9267.8	0.0	9267.8
	% Fixture	84.9	0.0	84.9
Total	Lumens	10910.0	0.0	10910.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	1.2
10°-20°	399.0	3.7
20°-30°	569.8	5.2
30°-40°	839.6	7.7
40°-50°	1418.6	13.0
50°-60°	2468.6	22.6
60°-70°	3145.8	28.8
70°-80°	1665.7	15.3
80°-90°	268.0	2.5
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°	10910.0	100.0
0°-180°	10910.0	100.0

Coefficient of Utilization



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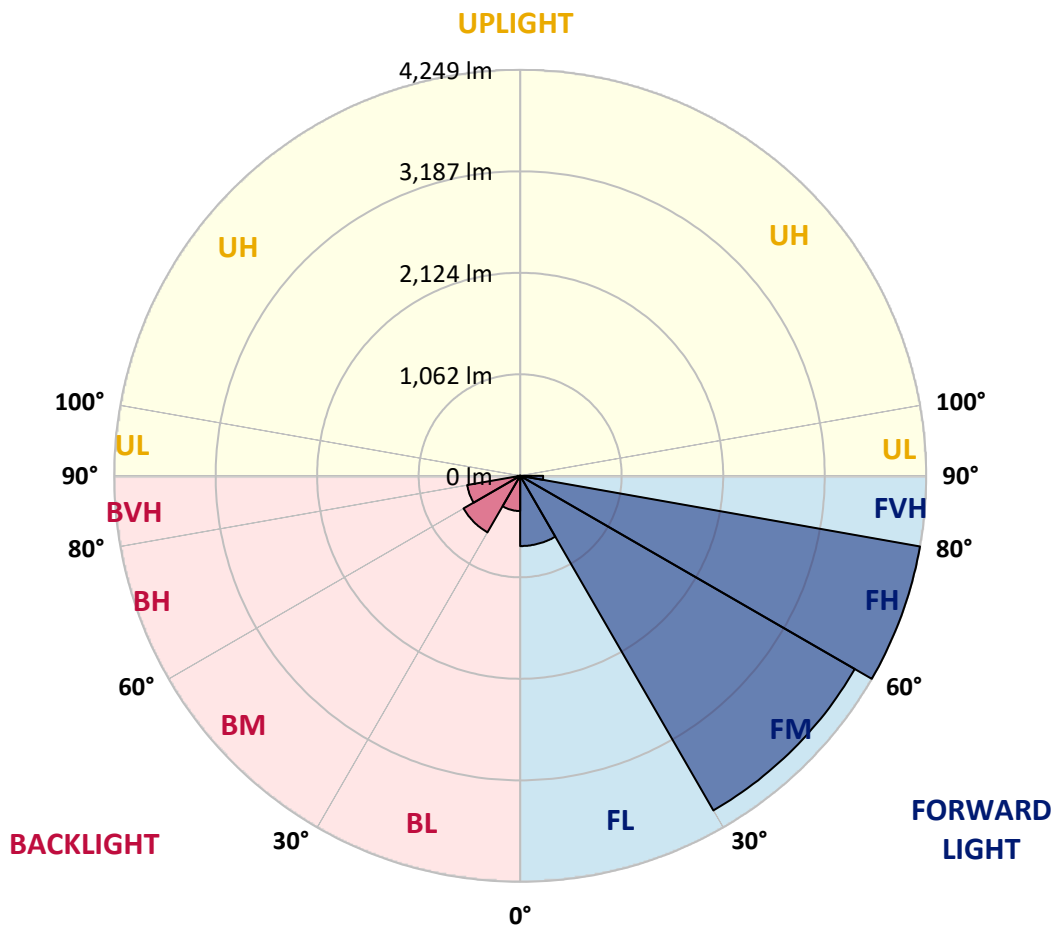
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	735.4	6.7			
FM (30°-60°)	4043.1	37.1			
FH (60°-80°)	4248.7	38.9			G2/5000
FVH (80°-90°)	240.7	2.2			G3/500
BL (0°-30°)	368.3	3.4	B1/500		
BM (30°-60°)	683.8	6.3	B1/1000		
BH (60°-80°)	562.8	5.2	B2/1000		G2/1000
BVH (80°-90°)	27.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4
2.5°	1289.0	1228.9	1165.1	1183.1	1219.6	1236.3	1218.2	1200.7	1178.0	1151.2	1242.7
5°	1563.1	1473.9	1460.9	1460.5	1447.5	1395.8	1462.3	1457.7	1484.5	1512.3	1583.5
7.5°	1641.3	1608.0	1571.9	1589.0	1523.8	1521.1	1624.6	1654.2	1706.0	1688.9	1784.6
10°	1601.0	1563.6	1582.5	1575.6	1581.6	1650.0	1713.4	1715.2	1770.7	1825.3	1763.8
12.5°	1530.3	1533.1	1608.4	1605.7	1702.7	1829.9	1848.8	1834.0	1924.7	1887.7	1940.4
15°	1580.7	1614.4	1595.5	1611.7	1650.0	1811.9	1864.6	1918.2	2004.2	2037.5	1984.8
17.5°	1661.1	1679.2	1594.1	1585.3	1664.4	1741.1	1872.0	1917.7	1931.1	2168.3	2093.9
20°	1626.9	1663.4	1580.2	1473.4	1604.7	1706.4	1835.4	1821.6	1886.8	2178.5	2116.5
22.5°	1724.0	1663.4	1557.6	1481.8	1528.0	1621.4	1730.9	1822.0	1899.2	2118.8	2149.4
25°	1742.5	1713.8	1614.9	1539.5	1523.8	1557.1	1713.4	1773.0	1903.4	2200.2	2131.8
27.5°	1855.3	1812.3	1610.7	1613.1	1534.9	1476.2	1657.9	1783.2	1950.6	2149.8	2174.8
30°	1995.4	1962.6	1709.7	1718.9	1610.7	1502.6	1695.8	1733.7	1977.8	2228.4	2228.9
32.5°	2100.3	2158.1	1904.3	1778.6	1740.2	1659.3	1637.6	1808.2	1945.9	2370.8	2321.3
35°	2289.4	2334.3	2054.1	1953.3	1823.4	1732.3	1795.7	1857.2	2078.6	2558.0	2458.6
37.5°	2639.4	2587.6	2332.4	2173.9	2125.3	1994.0	2029.1	1986.2	2222.9	2768.4	2727.7
40°	2841.9	2797.1	2528.5	2440.6	2248.3	2264.9	2221.0	2252.5	2415.7	2992.2	2979.2
42.5°	3041.6	2981.5	2754.5	2693.5	2501.6	2420.3	2428.1	2529.8	2712.9	3353.7	3310.7
45°	3239.1	3085.1	2985.7	3001.9	2909.4	2742.5	2754.1	2849.8	3037.5	3767.0	3668.1
47.5°	3390.2	3263.1	3185.4	3165.5	3119.8	3343.1	3243.2	3282.1	3364.8	4135.0	4097.6
50°	3676.4	3528.0	3426.8	3398.1	3553.4	3864.1	3660.7	3577.0	3753.2	4610.8	4591.4
52.5°	4134.6	3949.6	3780.9	3779.1	4003.7	4205.3	4348.6	4204.4	4269.1	5098.1	5153.5
55°	4534.5	4320.4	4168.8	4252.5	4572.4	4695.8	5182.7	5069.9	5015.3	5590.0	5748.6
57.5°	4683.8	4433.7	4334.8	4458.2	4929.8	5564.1	6078.7	5781.8	5728.7	6146.6	6479.0
60°	4356.0	4091.6	4097.6	4330.1	5147.1	6201.6	7058.3	6806.4	6494.8	6839.6	7164.2
62.5°	3422.1	3183.1	3338.9	3692.6	4964.9	6821.2	8371.3	8477.7	7369.9	7414.3	7544.2
65°	2326.0	2160.4	2301.0	2647.3	4026.9	7159.1	9621.9	10048.2	8167.0	7790.7	7708.4
67.5°	1530.8	1413.8	1441.1	1671.3	2772.1	6103.2	10458.3	10922.9	8895.6	8099.5	7418.9
70°	1185.4	1091.1	1079.1	1199.7	1644.0	4240.0	9962.7	10669.1	9339.4	7810.1	6466.6
72.5°	930.2	858.5	865.0	981.1	1273.2	2352.3	7709.3	9072.7	8670.9	6735.6	4968.2
75°	725.4	666.7	699.5	832.2	1177.5	1461.9	5319.1	6885.9	6703.7	4987.6	2833.6
77.5°	526.6	488.7	535.4	708.7	1106.8	1254.3	3311.2	4804.0	4294.5	2560.8	972.3
80°	345.4	324.1	362.5	577.9	1003.7	1207.1	2046.3	2943.6	2122.1	719.4	368.0
82.5°	203.4	194.2	226.1	391.1	806.8	1131.3	1364.8	1635.7	868.2	304.2	195.6
85°	106.8	99.9	134.1	224.7	556.2	1032.8	1074.4	979.2	419.3	132.2	93.4
87.5°	35.6	34.7	56.9	86.9	210.4	548.3	573.3	465.1	172.9	38.4	20.3
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4	1032.4
2.5°	1255.2	1236.7	1130.4	1145.2	1159.1	1152.1	1148.0	1099.9	1095.2	1163.7	1158.1
5°	1581.6	1504.9	1414.3	1410.1	1350.5	1289.4	1301.4	1282.0	1287.6	1315.8	1318.6
7.5°	1754.1	1658.4	1571.9	1431.4	1312.1	1215.5	1230.7	1226.1	1213.6	1277.4	1294.5
10°	1750.8	1665.8	1568.2	1398.1	1317.6	1239.0	1144.7	1055.5	1029.1	997.7	1000.5
12.5°	1866.4	1791.1	1578.4	1405.0	1295.9	1160.4	983.8	886.3	792.9	791.0	767.5
15°	1902.5	1847.0	1600.1	1365.2	1143.8	949.6	767.0	661.1	593.6	580.2	560.3
17.5°	1993.5	1906.6	1534.0	1236.7	967.2	742.5	576.5	502.5	497.0	506.2	496.1
20°	1999.6	1858.5	1414.7	1046.7	777.2	562.7	470.2	433.2	453.1	475.7	474.8
22.5°	1994.5	1798.0	1311.6	884.9	583.9	452.2	411.9	403.6	422.1	455.9	460.0
25°	1942.7	1778.1	1182.6	726.8	473.9	387.4	376.3	381.4	404.5	444.3	444.3
27.5°	1996.8	1697.2	1020.8	591.3	398.5	344.9	352.8	365.7	382.8	428.1	436.4
30°	1979.2	1724.0	890.4	476.2	351.4	315.3	332.9	345.8	365.2	412.4	416.6
32.5°	2026.4	1652.4	780.9	400.4	320.4	303.7	307.9	325.5	350.9	387.9	395.3
35°	2098.5	1678.7	655.1	360.2	305.1	290.3	298.2	312.1	337.5	373.6	379.6
37.5°	2328.7	1677.3	568.2	338.0	302.4	287.6	291.3	301.0	330.6	363.4	377.3
40°	2476.7	1773.5	489.1	332.9	299.1	286.2	282.9	293.6	317.2	356.0	365.7
42.5°	2754.5	1832.2	454.9	331.0	298.7	278.3	275.1	287.6	310.7	346.7	361.5
45°	3048.1	1915.9	427.7	330.1	297.3	276.9	267.2	282.9	302.4	337.0	354.1
47.5°	3393.5	2092.9	412.4	326.9	294.5	278.8	264.5	272.3	294.0	328.7	345.8
50°	3845.6	2327.3	415.6	322.2	298.7	279.2	260.3	264.0	283.9	317.6	335.2
52.5°	4395.3	2690.3	436.4	324.1	301.4	276.9	258.4	256.6	273.7	303.3	320.9
55°	5057.8	3205.3	498.8	332.9	301.4	276.5	255.7	247.3	260.3	284.3	301.4
57.5°	5857.2	3801.7	620.9	337.0	299.1	273.7	249.7	234.9	242.7	262.6	278.8
60°	6543.8	4283.0	746.7	339.8	303.7	267.2	237.6	219.1	224.2	239.5	253.8
62.5°	6893.7	4418.0	784.6	337.5	316.2	263.1	223.3	202.5	203.0	215.9	228.9
65°	6959.4	4238.1	632.5	335.2	332.4	262.6	213.1	188.2	184.9	194.2	205.3
67.5°	6491.5	3678.7	456.3	330.1	334.3	259.8	206.2	176.6	168.3	174.8	184.0
70°	5511.8	2962.6	383.3	319.9	312.1	246.0	194.2	164.6	153.5	158.1	165.1
72.5°	4109.2	2191.9	334.3	298.2	271.8	210.4	175.7	151.2	139.6	142.9	147.9
75°	2283.0	1169.2	279.7	259.4	221.9	170.1	149.8	134.1	123.9	125.3	130.8
77.5°	758.2	431.4	205.3	205.7	167.8	131.3	123.4	114.7	106.8	107.3	111.9
80°	343.5	238.6	147.0	147.9	117.0	95.2	94.8	92.0	86.9	85.5	88.8
82.5°	199.3	144.7	100.8	96.2	75.4	62.0	68.9	67.5	66.1	61.0	62.0
85°	98.0	77.7	52.7	49.9	41.6	31.0	37.0	38.4	37.0	31.4	31.0
87.5°	24.0	25.4	12.9	12.0	6.9	3.2	5.5	5.5	6.9	4.6	2.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)