

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: P596934

Luminaire Tested: **MSA-SA2A-835-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596934  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-835-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6568 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

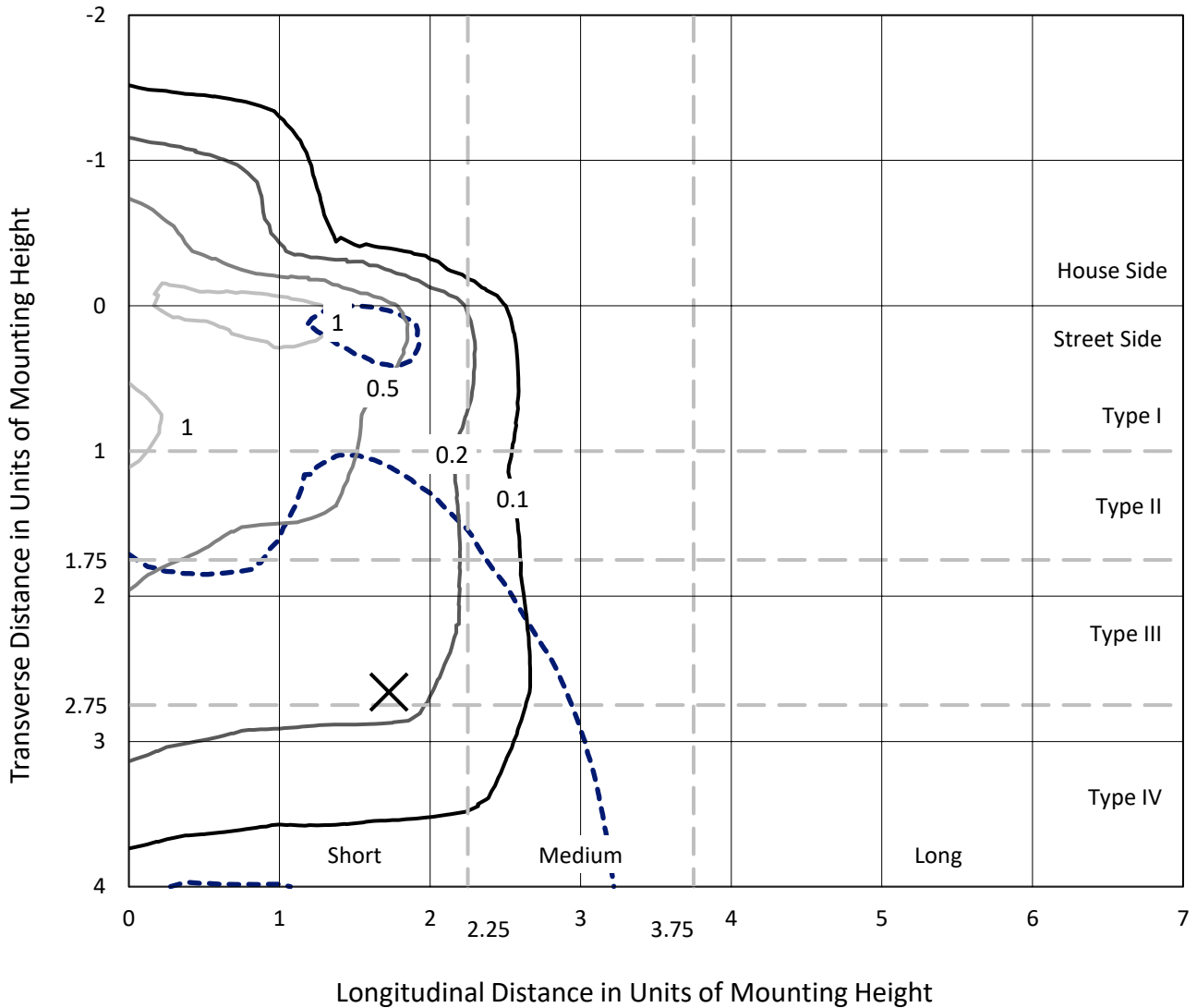
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

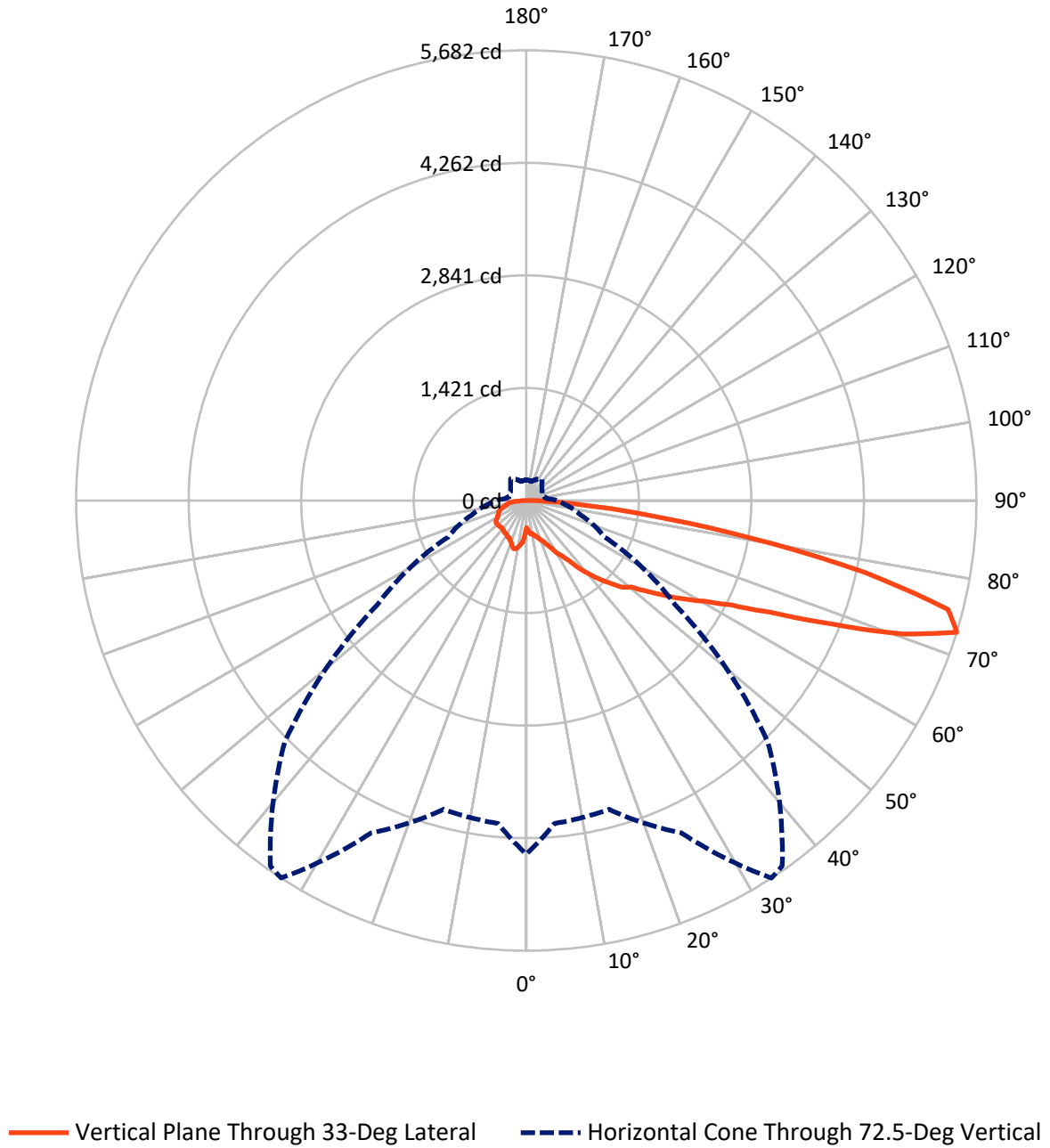
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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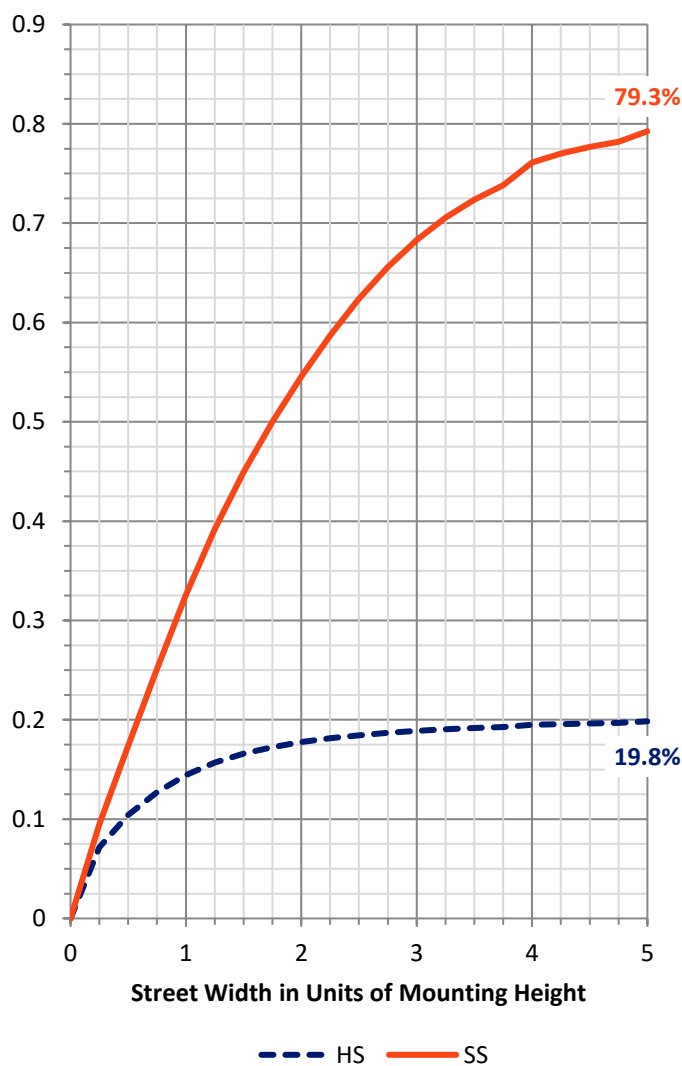
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1328.7	0.0	1328.7
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	5239.3	0.0	5239.3
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	6568.0	0.0	6568.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.4	0.7
10°-20°	175.0	2.7
20°-30°	319.1	4.9
30°-40°	539.9	8.2
40°-50°	898.1	13.7
50°-60°	1318.1	20.1
60°-70°	1686.1	25.7
70°-80°	1371.8	20.9
80°-90°	212.5	3.2
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°	6568.0	100.0
0°-180°	6568.0	100.0

**Coefficient of Utilization**



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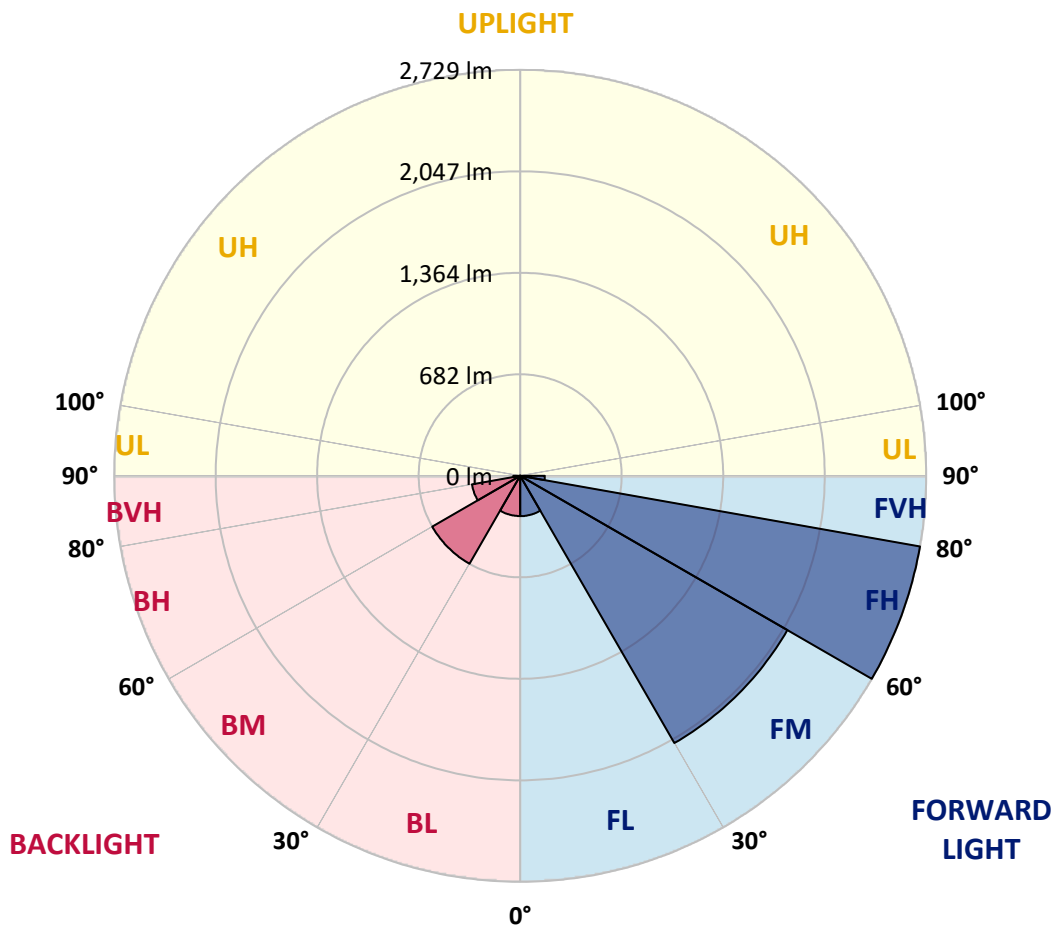
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	271.1	4.1			
FM (30°-60°)	2073.7	31.6			
FH (60°-80°)	2728.8	41.5			G2/5000
FVH (80°-90°)	165.8	2.5			G2/225
BL (0°-30°)	270.4	4.1	B1/500		
BM (30°-60°)	682.4	10.4	B1/1000		
BH (60°-80°)	329.2	5.0	B1/500		G1/500
BVH (80°-90°)	46.6	0.7			G1/100
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°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4
2.5°	390.4	378.2	358.0	357.5	368.7	371.1	378.5	379.0	381.7	377.4	408.4
5°	430.8	417.7	409.8	412.5	407.3	413.6	413.6	431.6	455.6	483.4	522.9
7.5°	440.3	430.8	421.8	428.6	429.7	423.7	429.4	471.6	515.0	542.8	606.0
10°	421.2	411.7	418.5	420.7	420.4	434.0	463.7	497.5	545.8	597.0	631.0
12.5°	417.7	424.5	427.8	431.6	457.5	461.6	506.5	541.4	589.9	634.9	723.4
15°	470.3	479.3	459.1	457.7	466.2	470.0	516.6	551.7	622.6	698.1	777.6
17.5°	545.2	548.5	512.2	493.7	500.0	503.0	523.4	567.6	611.1	750.7	849.8
20°	617.7	619.9	551.7	510.3	532.4	535.7	554.7	580.1	614.4	780.1	898.6
22.5°	693.7	679.8	605.2	552.8	565.6	566.5	577.6	591.5	640.3	775.4	958.0
25°	776.8	768.1	674.1	624.0	623.4	612.2	612.8	632.7	667.8	825.0	997.0
27.5°	887.2	888.2	751.7	724.8	682.5	675.2	638.4	675.4	715.5	825.6	1081.2
30°	1030.2	1003.8	859.9	816.3	774.6	759.1	709.2	740.8	758.3	872.7	1172.7
32.5°	1146.5	1138.9	972.7	906.8	838.7	856.6	801.6	773.8	805.1	953.9	1311.4
35°	1258.0	1232.9	1092.1	1006.2	934.6	923.7	888.0	892.6	911.7	1056.6	1492.6
37.5°	1424.2	1410.6	1261.0	1123.7	1090.1	1045.7	1023.1	1037.6	1022.6	1188.2	1764.2
40°	1610.0	1531.0	1402.1	1279.8	1217.1	1185.8	1193.7	1180.1	1168.6	1335.9	2007.8
42.5°	1787.9	1716.0	1495.9	1440.8	1359.1	1372.2	1328.8	1338.4	1370.8	1545.4	2233.2
45°	1981.7	1826.1	1595.3	1546.8	1488.2	1504.8	1539.4	1529.1	1582.2	1792.6	2445.4
47.5°	2078.4	1930.4	1717.4	1638.4	1637.5	1602.9	1813.6	1836.4	1753.3	1975.7	2660.9
50°	2171.6	2026.1	1808.1	1754.7	1716.0	1790.1	2076.5	2023.9	1908.1	2185.7	2898.0
52.5°	2301.3	2135.3	1912.2	1855.2	1903.2	1971.9	2286.3	2275.9	2059.9	2401.8	3104.0
55°	2400.2	2232.6	2068.9	2016.0	2107.5	2174.8	2499.9	2437.5	2189.8	2560.4	3234.5
57.5°	2573.5	2401.5	2300.2	2182.7	2347.3	2346.2	2705.9	2657.7	2328.8	2690.6	3287.1
60°	2848.9	2647.0	2541.0	2405.6	2581.9	2644.9	2941.3	2802.3	2427.2	2772.9	3192.2
62.5°	3235.6	2995.8	2823.9	2689.8	2904.8	3018.7	3232.0	2907.8	2433.4	2749.5	2942.9
65°	3713.7	3422.2	3196.9	3055.2	3409.9	3572.6	3583.5	2972.9	2375.7	2507.3	2418.7
67.5°	4180.2	3852.4	3617.3	3644.3	4162.2	4239.3	3964.4	3027.4	2065.3	2013.3	1679.5
70°	4487.3	4132.0	3975.3	4261.4	5048.3	4969.3	4273.1	2883.8	1626.4	1305.1	945.7
72.5°	4464.1	4092.2	4035.8	4628.2	5682.1	5632.7	4310.7	2293.4	1089.3	713.6	471.6
75°	3636.9	3347.8	3475.9	4381.3	5499.5	5497.1	3742.6	1419.6	558.8	366.5	298.1
77.5°	2010.8	1898.6	2274.8	3317.3	4378.8	4401.2	2528.8	643.8	301.4	259.7	224.5
80°	704.3	694.0	985.8	1790.1	2880.5	2886.0	1176.0	294.5	219.1	196.4	164.8
82.5°	257.5	255.3	408.7	831.6	1586.0	1582.5	446.0	183.4	162.4	139.0	108.7
85°	102.7	100.5	186.9	369.2	728.6	716.9	173.3	104.1	106.3	82.8	53.4
87.5°	28.3	29.4	63.5	115.5	223.2	206.8	43.6	35.1	43.1	33.8	16.9
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°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4
2.5°	413.9	416.6	389.6	399.2	411.4	418.0	421.2	407.3	412.0	431.6	430.8
5°	531.0	520.1	509.8	520.4	513.3	503.2	519.6	518.8	529.4	540.0	542.5
7.5°	618.5	604.3	599.4	575.5	551.5	527.2	548.2	561.3	564.0	590.4	601.6
10°	650.1	644.7	646.6	615.0	612.0	614.4	595.1	574.1	586.9	576.0	584.2
12.5°	723.1	736.8	703.0	681.4	679.5	664.6	625.9	612.2	597.8	612.8	605.2
15°	781.7	807.1	770.8	732.9	690.2	667.0	634.0	613.3	603.8	607.1	597.8
17.5°	867.5	891.2	799.2	741.1	697.0	662.9	612.5	568.4	591.8	593.7	583.1
20°	924.5	926.1	808.7	721.0	681.2	622.0	573.0	534.3	561.3	588.8	600.8
22.5°	980.1	967.8	820.4	704.9	623.7	566.5	542.5	540.0	560.2	583.4	586.1
25°	1021.8	1023.7	827.2	698.9	589.9	512.0	512.0	529.7	547.4	602.4	599.7
27.5°	1122.8	1048.5	800.8	671.4	543.0	480.1	512.2	535.9	544.4	604.1	610.1
30°	1196.4	1147.9	806.2	624.2	495.6	465.1	491.5	521.2	544.7	613.6	611.4
32.5°	1319.8	1189.3	819.0	558.0	460.2	459.4	482.8	514.1	542.2	603.2	606.5
35°	1456.3	1311.4	783.3	507.6	451.8	456.1	486.4	498.9	531.9	599.2	602.2
37.5°	1708.9	1375.1	760.7	468.6	446.3	458.8	470.3	489.6	522.9	578.7	598.3
40°	1857.1	1506.5	676.8	446.0	434.9	456.7	462.4	478.7	496.7	554.2	566.7
42.5°	2052.2	1547.9	605.2	421.0	429.1	447.7	464.8	468.9	480.9	515.5	538.4
45°	2214.9	1579.0	529.1	400.8	409.8	467.6	468.6	466.7	464.6	477.4	496.2
47.5°	2383.3	1662.3	459.1	378.5	402.4	483.9	470.6	453.1	444.1	445.8	463.2
50°	2569.1	1722.8	409.5	360.2	404.1	483.9	479.8	439.2	421.2	416.6	434.9
52.5°	2732.6	1729.9	371.9	345.5	397.3	467.3	486.1	430.5	400.3	389.1	406.3
55°	2821.7	1640.3	344.7	332.1	379.8	452.3	482.8	425.6	374.9	366.5	381.7
57.5°	2819.8	1491.5	321.5	313.6	359.9	431.3	464.6	398.9	359.4	354.5	369.5
60°	2718.1	1317.1	303.8	298.4	339.5	400.8	431.9	381.5	344.4	341.9	358.3
62.5°	2487.6	1137.0	286.6	282.3	320.4	379.3	416.3	362.1	328.9	328.6	344.1
65°	2037.2	912.8	270.6	269.5	302.7	358.0	401.6	345.8	312.8	318.2	334.0
67.5°	1403.8	641.4	253.4	256.7	286.4	337.6	390.4	334.9	295.9	307.1	321.2
70°	770.3	396.7	234.3	240.9	265.7	313.9	373.0	317.2	273.8	291.0	300.8
72.5°	391.8	264.6	210.6	221.0	240.3	279.0	340.3	291.5	250.1	256.7	261.8
75°	263.2	199.2	184.2	195.6	209.5	245.8	301.9	267.6	227.5	226.7	232.4
77.5°	198.9	155.6	156.4	169.5	178.5	216.1	271.4	247.4	208.4	206.5	215.0
80°	145.5	118.0	125.9	139.5	147.7	194.0	251.5	225.1	182.6	174.9	182.0
82.5°	96.5	83.6	93.2	106.8	113.3	162.1	228.3	191.0	148.8	129.4	130.5
85°	45.5	43.9	55.6	62.1	70.6	100.5	170.8	132.1	94.8	78.5	82.0
87.5°	10.4	13.9	18.3	18.0	21.0	27.0	53.1	37.1	27.5	18.8	12.5
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)