

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: P367258

Luminaire Tested: **MSA-SA2A-830-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367258
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-830-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6404 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

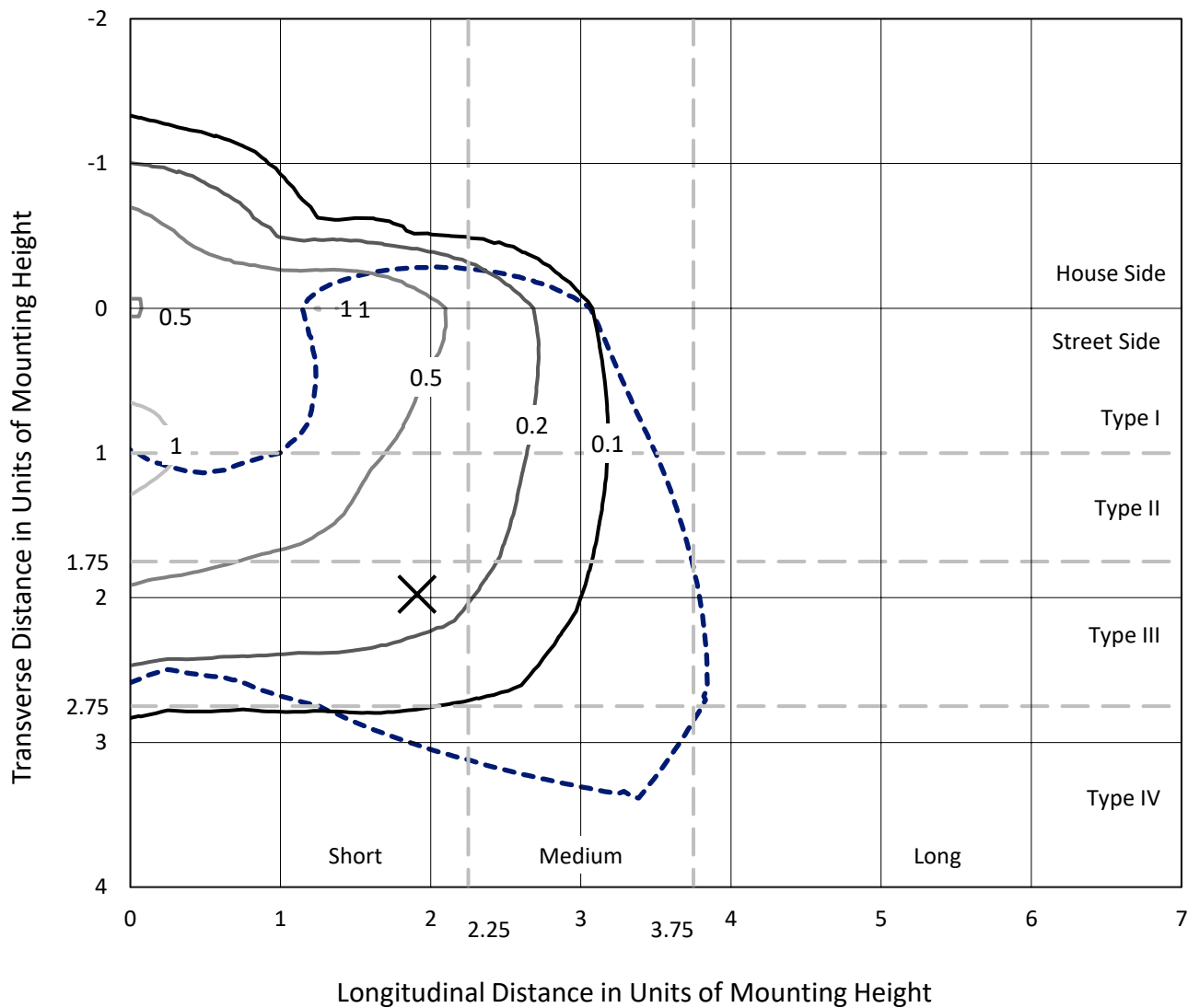
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

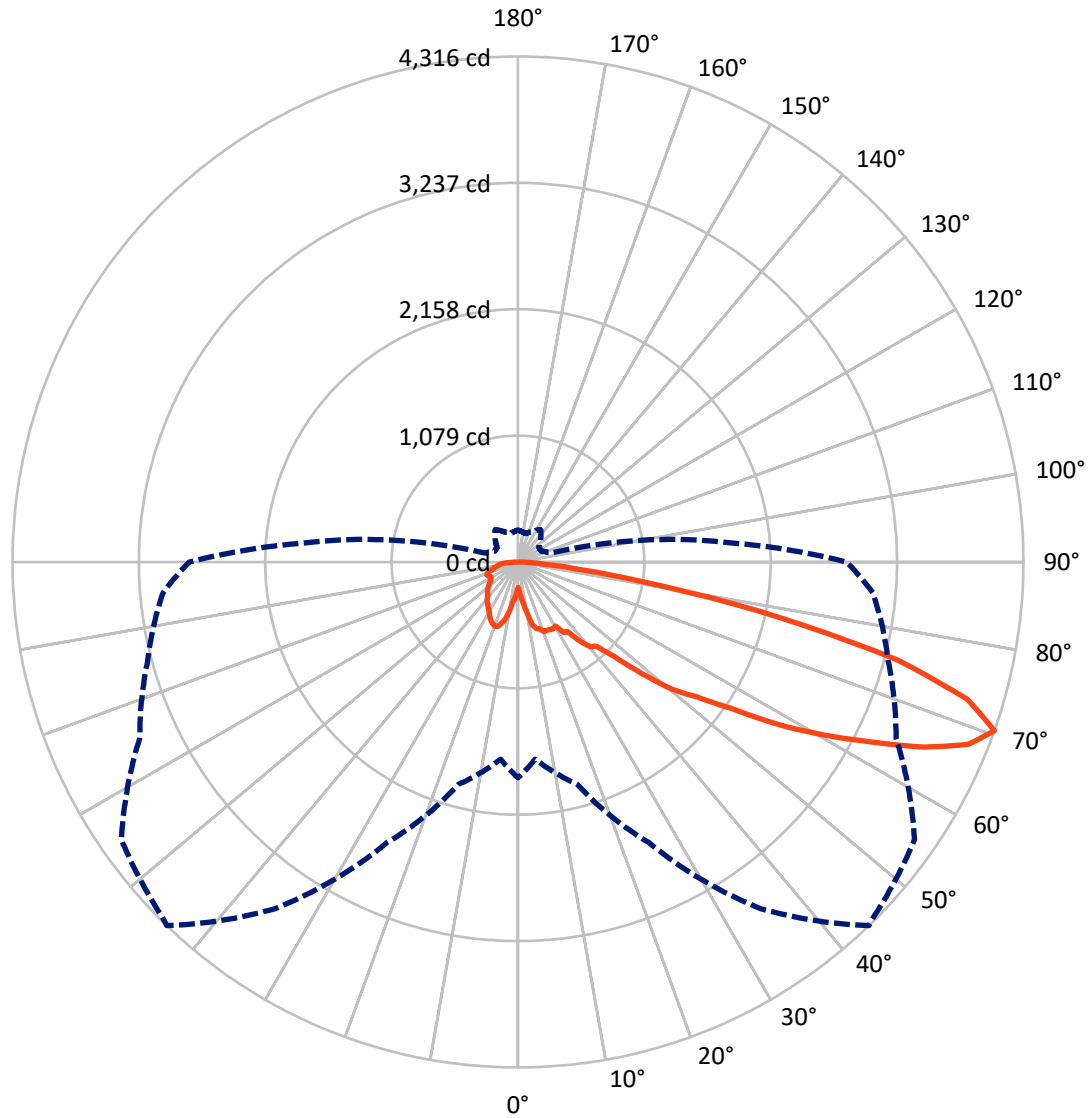
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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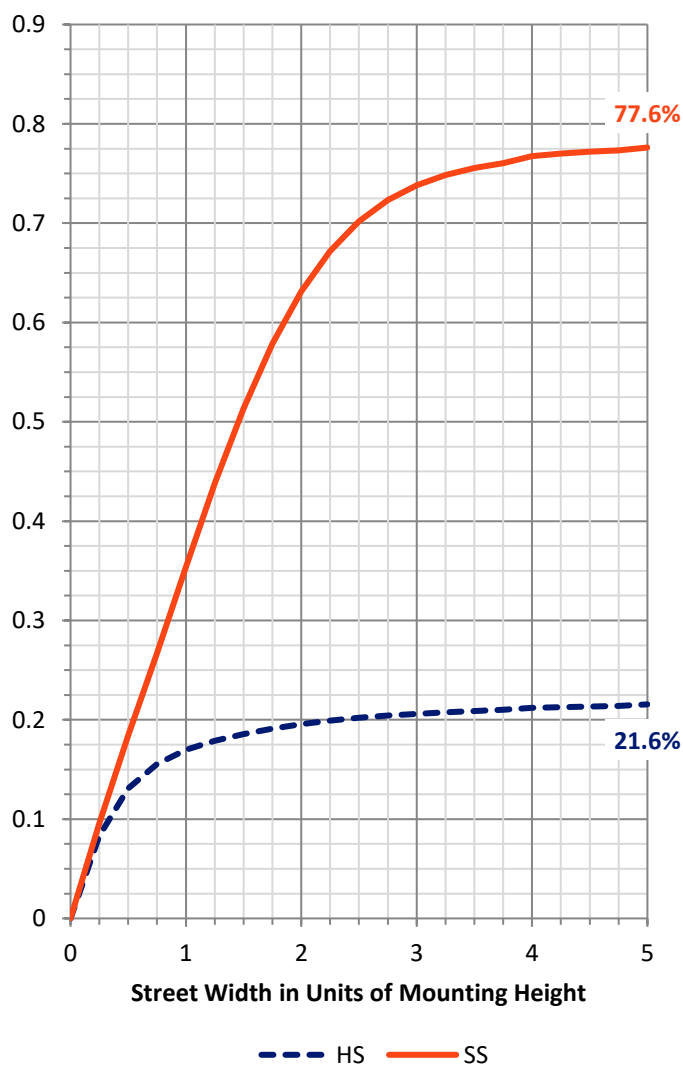
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1413.0	0.0	1413.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4991.0	0.0	4991.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	6404.0	0.0	6404.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.1	0.5
10°-20°	157.2	2.5
20°-30°	293.7	4.6
30°-40°	471.4	7.4
40°-50°	795.7	12.4
50°-60°	1418.0	22.1
60°-70°	1939.6	30.3
70°-80°	1140.6	17.8
80°-90°	153.6	2.4
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°	6404.0	100.0
0°-180°	6404.0	100.0

Coefficient of Utilization



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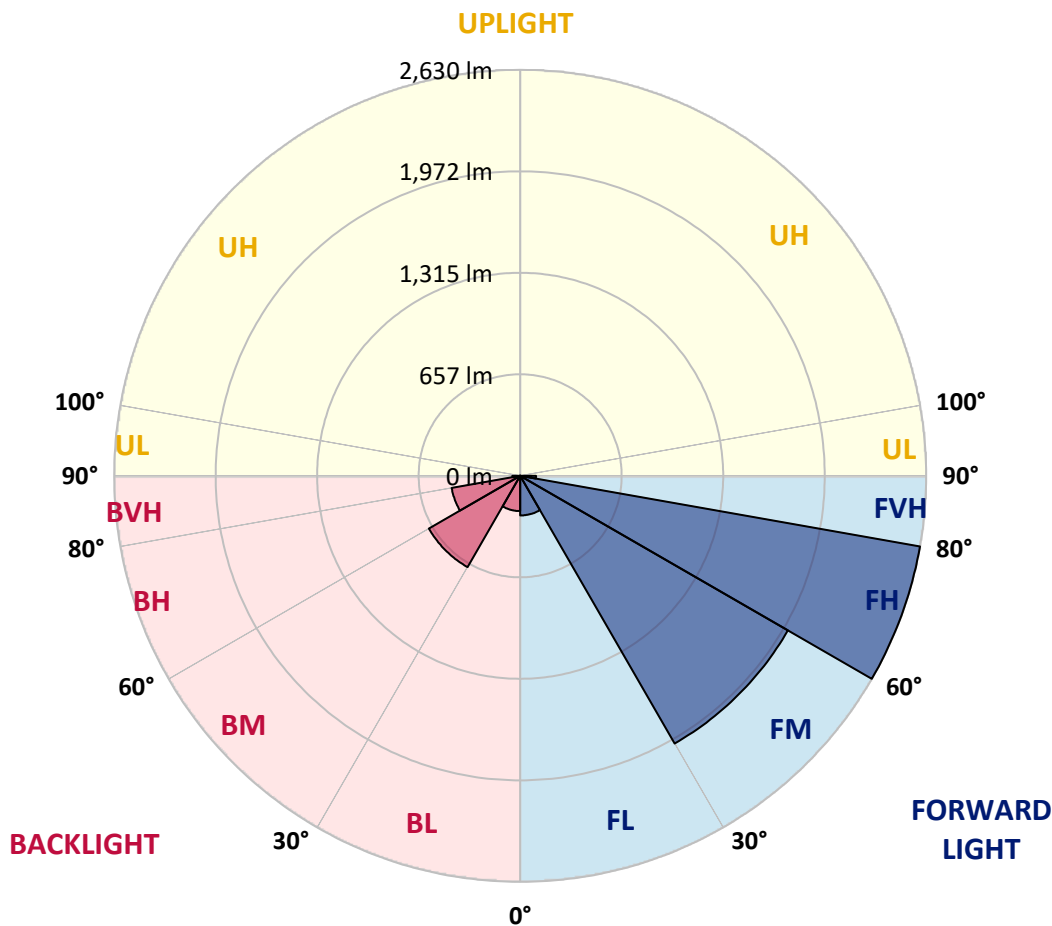
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	256.6	4.0			
FM (30°-60°)	2002.4	31.3			
FH (60°-80°)	2629.7	41.1			G2/5000
FVH (80°-90°)	102.4	1.6			G2/225
BL (0°-30°)	228.4	3.6	B1/500		
BM (30°-60°)	682.8	10.7	B1/1000		
BH (60°-80°)	450.6	7.0	B1/500		G1/500
BVH (80°-90°)	51.2	0.8			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°	35°	44°	45°	55°	65°	75°	85°
0°	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7
2.5°	264.2	258.9	246.3	250.5	255.8	257.9	257.3	256.8	248.7	245.8	260.2
5°	358.9	347.4	338.2	334.5	322.5	313.0	307.2	322.5	320.1	324.0	334.0
7.5°	448.2	440.9	420.1	412.8	388.1	371.8	370.0	382.1	385.2	378.9	396.0
10°	505.7	493.1	488.9	471.3	454.3	451.6	450.1	444.6	436.9	436.4	421.2
12.5°	550.4	556.9	560.3	540.1	540.7	550.1	545.1	522.8	509.9	487.4	489.2
15°	630.5	639.9	612.9	600.0	575.3	589.5	587.7	569.0	567.2	552.5	535.4
17.5°	700.3	704.5	659.3	629.9	621.5	601.1	606.6	607.1	582.9	609.2	594.0
20°	706.1	721.0	669.1	610.5	635.7	633.1	633.9	628.6	596.8	640.2	634.4
22.5°	734.4	711.6	664.9	622.1	628.6	632.6	636.2	629.9	628.1	652.3	669.8
25°	729.2	721.8	674.6	638.3	639.1	639.9	641.8	660.7	658.6	691.4	700.6
27.5°	778.3	767.0	677.5	668.5	648.1	643.6	631.0	670.4	701.1	700.3	751.0
30°	871.8	860.2	744.7	718.7	681.7	636.0	660.1	712.6	736.8	744.9	809.3
32.5°	1017.8	1036.7	877.0	772.3	726.3	716.3	713.7	708.4	768.3	808.5	867.0
35°	1227.3	1212.3	1033.0	887.0	773.3	730.5	736.3	768.3	839.5	865.5	919.6
37.5°	1467.3	1436.3	1232.8	1017.0	908.8	855.2	836.1	867.0	882.8	903.3	1013.8
40°	1711.2	1635.6	1429.0	1187.9	990.2	949.8	933.0	894.9	931.9	973.4	1113.9
42.5°	1946.8	1888.2	1642.4	1391.9	1127.3	983.1	973.9	936.6	1051.4	1095.2	1258.3
45°	2193.6	2057.9	1861.2	1622.2	1327.6	1146.7	1133.0	1066.1	1213.1	1304.5	1462.1
47.5°	2359.6	2233.8	2061.5	1809.2	1495.4	1420.3	1394.3	1279.8	1413.2	1531.9	1776.9
50°	2516.6	2387.1	2206.2	2013.7	1799.2	1712.8	1657.4	1466.8	1662.4	1855.7	2180.5
52.5°	2741.4	2625.6	2374.3	2219.9	2125.6	1913.2	1871.9	1767.2	1953.9	2214.6	2621.6
55°	2981.6	2823.8	2596.1	2510.5	2472.5	2200.4	2166.8	2100.1	2342.0	2582.0	3050.4
57.5°	3087.7	2923.1	2797.5	2746.3	2743.2	2617.9	2579.3	2532.9	2738.7	2897.1	3454.0
60°	3172.0	2995.3	2945.1	2973.7	3077.7	2995.3	2945.1	2904.2	3061.7	3208.5	3783.3
62.5°	3156.5	2979.3	3005.0	3092.2	3357.6	3381.8	3343.2	3243.9	3381.8	3463.7	3972.1
65°	2906.5	2742.7	2892.6	3099.5	3617.9	3810.9	3808.8	3549.1	3596.8	3596.8	3952.1
67.5°	2468.5	2298.9	2544.4	3034.7	3797.7	4150.9	4151.4	3872.6	3616.5	3583.5	3643.3
70°	1843.3	1689.7	1965.7	2642.9	3612.1	4315.5	4291.6	4133.6	3562.4	3273.3	3043.3
72.5°	1101.0	1001.8	1255.7	1923.9	3081.1	4012.8	4076.3	3832.9	3261.3	2722.2	2175.5
75°	500.0	456.9	590.0	1105.2	2199.6	3347.1	3416.2	3234.7	2590.4	1957.8	1257.2
77.5°	214.0	202.5	257.6	490.2	1212.9	2288.9	2430.5	2311.8	1755.1	1137.8	556.1
80°	137.6	130.2	158.3	235.8	563.2	1236.8	1358.6	1314.2	894.1	442.5	195.9
82.5°	82.2	79.8	105.8	148.1	307.2	544.3	613.4	629.7	371.3	198.5	112.1
85°	44.9	45.4	58.0	89.8	184.3	211.9	226.9	246.8	174.9	115.0	54.4
87.5°	15.0	17.3	23.4	36.5	65.6	59.9	60.1	69.8	73.8	47.8	17.3
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°	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7	217.7
2.5°	262.6	257.9	245.8	246.6	251.0	252.1	253.4	245.8	244.2	258.6	260.0
5°	335.6	320.1	313.0	310.6	303.8	301.4	314.0	319.8	325.6	336.9	342.4
7.5°	394.1	376.8	363.9	352.1	342.1	336.4	357.6	373.9	383.9	407.0	417.5
10°	420.9	406.0	401.2	391.8	399.4	416.7	420.7	421.2	443.2	442.7	447.2
12.5°	474.2	464.5	449.0	452.4	472.4	490.2	485.3	492.9	500.7	519.6	511.0
15°	522.8	520.2	505.7	508.1	512.0	534.4	537.2	544.9	556.9	571.9	561.7
17.5°	582.7	581.6	546.4	543.3	552.5	574.3	567.4	554.0	594.0	610.0	605.8
20°	623.4	615.5	570.3	556.9	580.3	583.2	575.3	554.0	588.7	623.6	633.1
22.5°	657.2	648.1	601.6	575.3	570.6	571.9	571.9	568.0	585.0	613.7	613.4
25°	684.6	693.2	634.1	608.9	583.7	552.2	548.3	551.7	561.4	616.5	614.7
27.5°	753.1	729.2	645.2	626.3	574.5	524.9	535.7	540.9	544.1	604.5	614.4
30°	797.7	805.1	684.6	636.5	561.1	494.4	498.1	513.3	531.7	603.2	606.0
32.5°	857.9	842.1	746.0	619.4	525.4	476.1	469.2	489.7	517.0	581.9	589.8
35°	913.8	932.4	772.0	616.3	500.5	448.5	455.8	462.9	491.3	558.2	567.4
37.5°	1045.1	1002.5	845.0	601.1	479.7	434.6	426.7	437.5	461.6	513.3	534.6
40°	1144.9	1147.5	860.7	581.9	440.1	414.6	397.8	408.6	418.8	460.0	469.2
42.5°	1332.1	1274.8	899.3	539.9	415.1	384.7	375.2	380.0	381.5	398.9	414.1
45°	1570.2	1436.1	914.6	483.4	382.3	372.3	353.2	350.8	342.1	344.5	357.9
47.5°	1899.8	1687.6	903.5	423.3	353.2	356.3	328.8	318.0	305.9	308.8	321.4
50°	2326.0	2009.0	902.8	372.3	333.2	335.3	312.7	293.3	281.2	287.3	298.3
52.5°	2804.1	2331.5	906.4	337.4	311.4	310.4	302.2	278.6	268.9	275.2	287.8
55°	3261.5	2608.8	933.7	315.4	288.8	290.7	293.8	273.9	263.1	268.9	282.0
57.5°	3659.6	2827.7	923.5	292.0	267.8	276.2	284.6	267.3	259.2	267.6	280.7
60°	3937.9	2929.4	842.6	269.7	252.3	263.9	280.2	266.5	265.5	283.6	299.3
62.5°	4039.6	2891.8	685.1	252.1	243.2	262.3	290.4	283.9	284.9	307.2	329.0
65°	3891.2	2694.4	511.0	240.8	236.1	269.9	314.0	294.1	279.6	298.0	318.0
67.5°	3469.2	2343.3	373.4	231.1	227.9	282.0	335.8	293.0	266.3	284.9	301.2
70°	2806.7	1849.6	289.1	218.7	217.2	273.9	337.9	285.2	251.8	263.9	273.1
72.5°	1923.1	1266.4	239.5	206.9	198.5	242.6	320.9	267.6	234.5	241.6	249.2
75°	1074.7	710.8	201.4	192.2	173.8	216.1	300.9	257.1	221.6	223.7	234.2
77.5°	482.4	307.5	170.9	172.8	151.5	191.2	274.9	240.3	201.9	197.2	207.7
80°	182.5	149.9	138.6	146.0	127.4	165.7	247.9	225.0	181.2	175.1	181.2
82.5°	105.8	90.9	102.9	112.4	101.1	152.3	236.6	211.1	159.6	144.4	149.7
85°	49.1	47.0	61.7	73.0	70.6	118.7	202.5	158.9	113.7	96.1	106.3
87.5°	12.9	14.4	21.8	25.7	26.3	40.7	78.0	59.1	44.4	33.6	32.3
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)