

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: P367254

Luminaire Tested: **MSA-SA2A-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367254
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-830-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6307 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

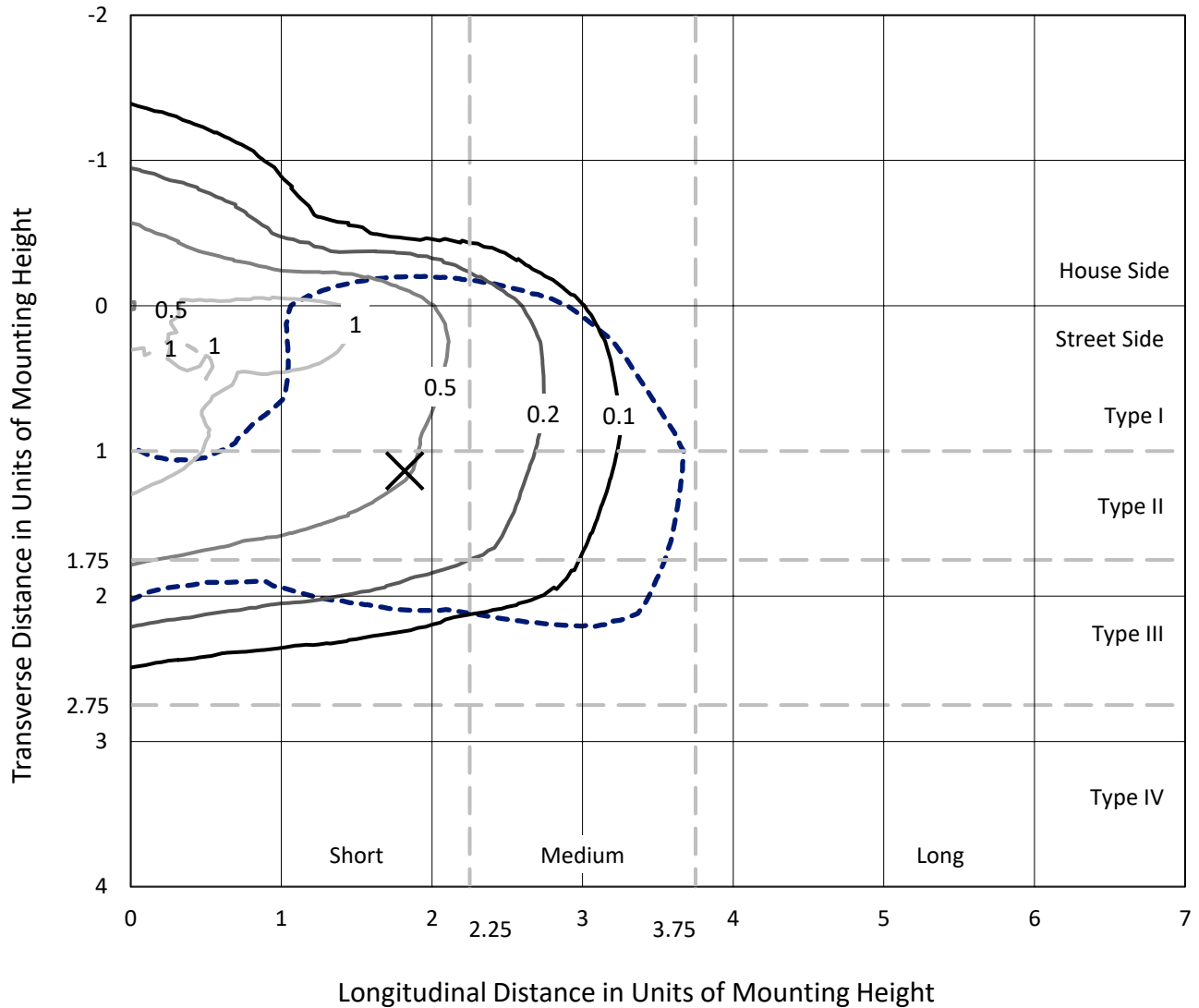
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

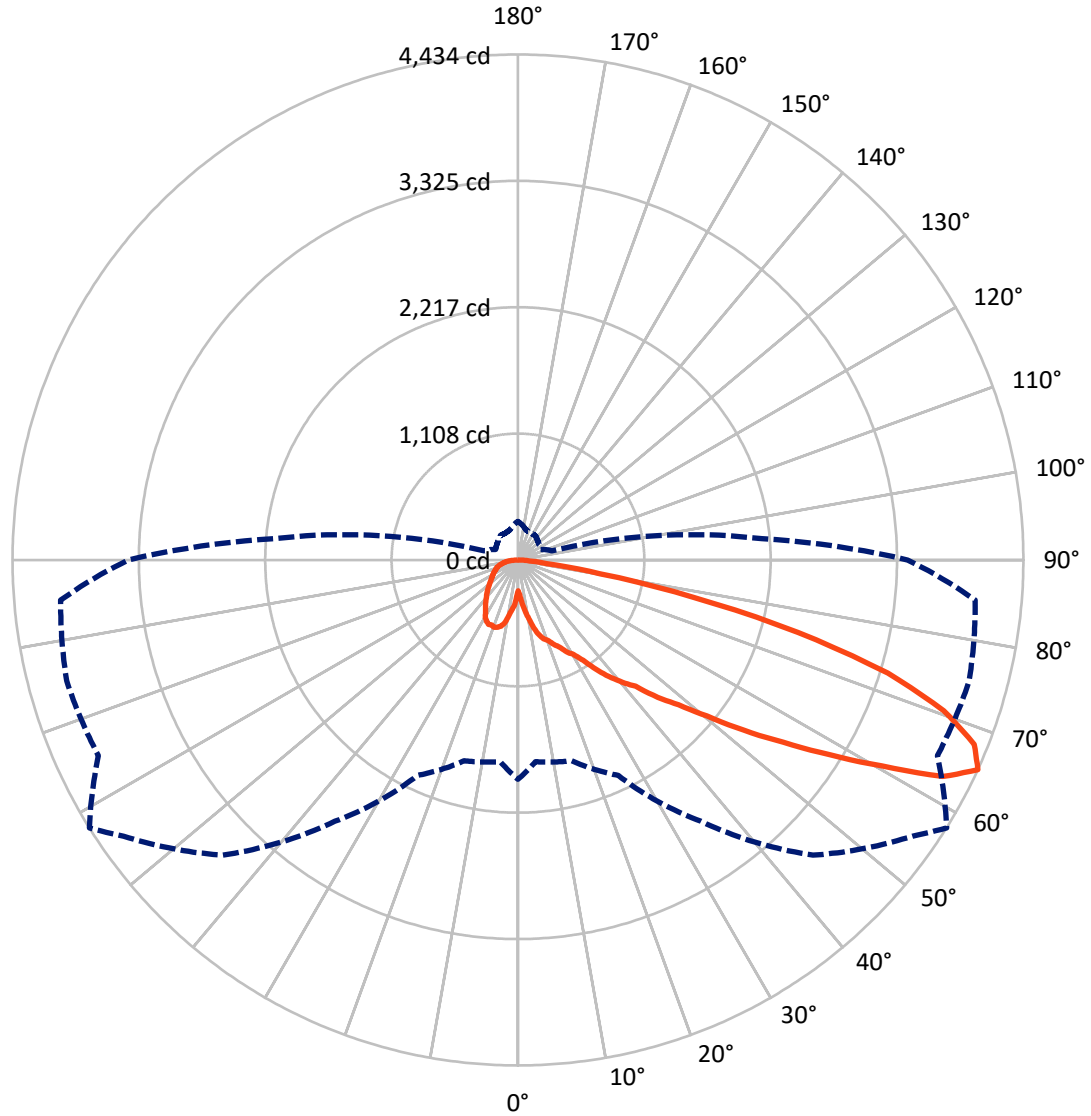
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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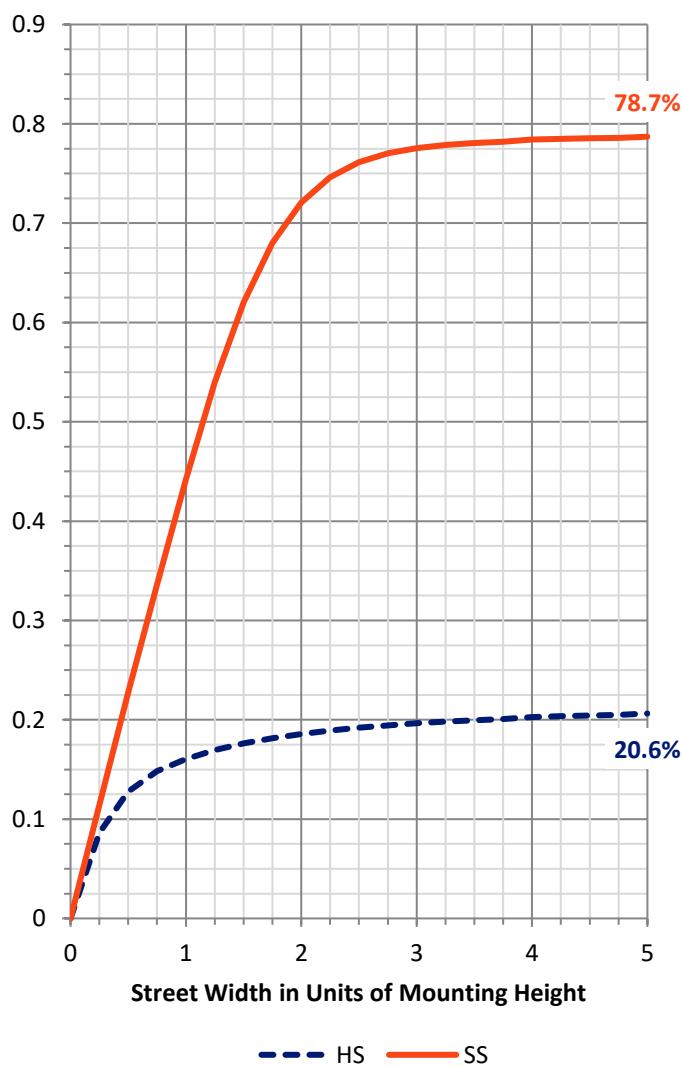
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1328.4	0.0	1328.4
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	4978.6	0.0	4978.6
	% Fixture	78.9	0.0	78.9
Total	Lumens	6307.0	0.0	6307.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	0.7
10°-20°	180.0	2.9
20°-30°	345.4	5.5
30°-40°	570.2	9.0
40°-50°	947.8	15.0
50°-60°	1565.2	24.8
60°-70°	1755.9	27.8
70°-80°	798.4	12.7
80°-90°	103.0	1.6
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°	6307.0	100.0
0°-180°	6307.0	100.0

Coefficient of Utilization



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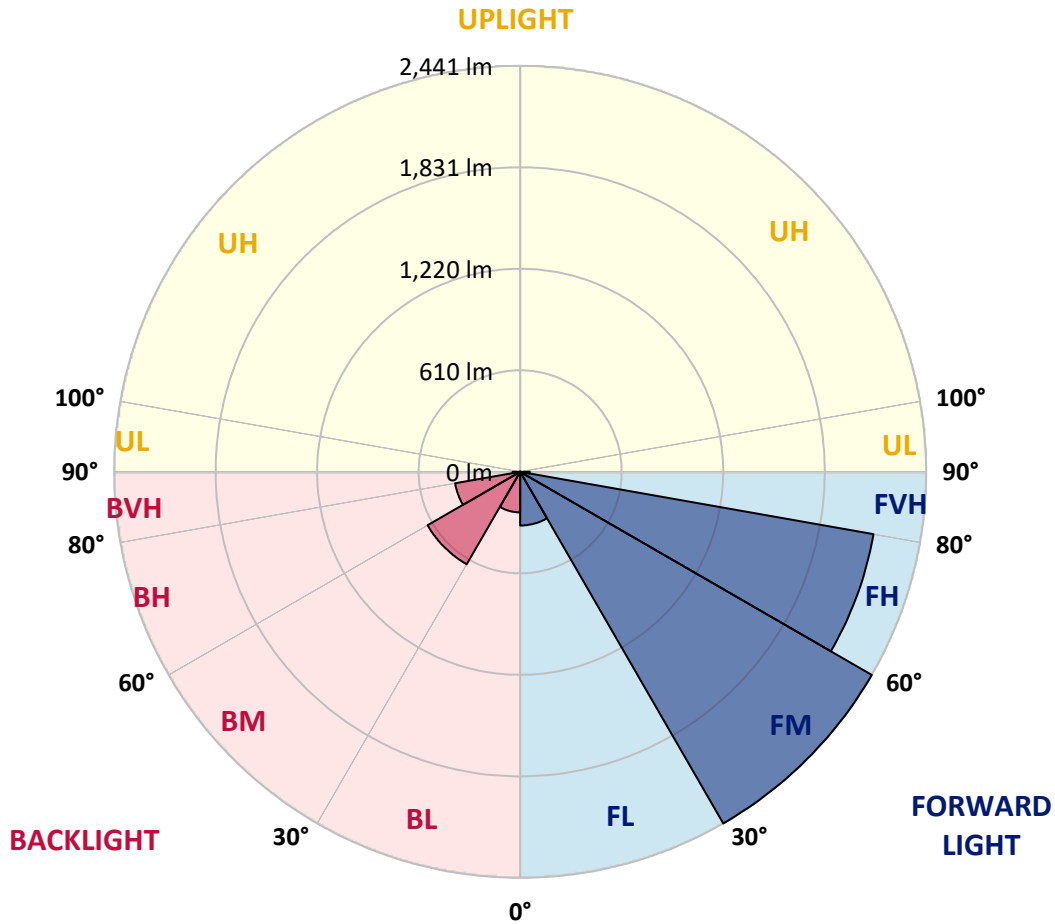
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	322.7	5.1			
FM (30°-60°)	2440.7	38.7			
FH (60°-80°)	2157.1	34.2			G2/5000
FVH (80°-90°)	58.0	0.9			G1/100
BL (0°-30°)	243.9	3.9	B1/500		
BM (30°-60°)	642.5	10.2	B1/1000		
BH (60°-80°)	397.1	6.3	B1/500		G1/500
BVH (80°-90°)	45.0	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8
2.5°	323.3	313.6	297.3	301.3	310.7	316.0	312.8	308.6	303.1	302.0	326.2
5°	418.7	400.0	392.4	389.2	377.7	370.9	382.7	381.1	387.4	399.0	422.6
7.5°	488.3	475.1	462.5	461.2	438.9	431.0	446.8	455.2	466.5	466.7	498.8
10°	525.6	514.3	514.0	502.2	500.4	515.3	515.6	521.9	523.2	536.6	530.3
12.5°	566.0	565.2	579.7	579.4	596.2	620.9	608.6	608.6	612.2	596.0	615.9
15°	662.4	670.8	643.8	648.2	648.2	672.4	671.6	676.3	687.6	683.4	674.5
17.5°	762.7	768.0	738.1	710.2	712.3	707.1	726.0	727.8	717.0	765.9	755.1
20°	827.4	847.8	784.8	749.9	756.7	762.7	763.5	752.2	746.7	821.8	807.1
22.5°	907.2	889.9	832.1	793.5	803.7	795.6	794.0	802.7	810.3	838.6	862.5
25°	960.5	959.2	889.9	847.6	836.3	833.9	849.9	846.5	864.6	916.1	901.2
27.5°	1038.0	1062.2	939.2	949.7	900.1	847.8	899.3	914.8	947.4	939.0	972.3
30°	1188.2	1170.1	1041.7	1038.8	982.6	938.7	974.4	961.3	1019.9	1018.0	1042.7
32.5°	1310.9	1323.5	1162.0	1131.8	1090.0	1037.2	1013.6	1050.1	1081.6	1133.3	1147.3
35°	1440.6	1437.8	1285.2	1224.2	1155.1	1133.3	1162.5	1177.7	1244.7	1292.2	1259.2
37.5°	1642.4	1619.5	1444.8	1329.5	1277.8	1269.9	1319.8	1297.8	1370.3	1381.5	1400.2
40°	1829.9	1761.1	1590.9	1458.8	1376.6	1406.0	1407.6	1410.4	1449.3	1480.0	1572.2
42.5°	2008.2	1959.9	1739.3	1640.0	1518.9	1490.3	1508.1	1514.2	1612.4	1675.2	1802.8
45°	2252.0	2122.5	1952.6	1850.6	1715.1	1678.6	1666.0	1718.0	1812.8	1955.7	2065.2
47.5°	2458.2	2341.3	2179.2	2045.0	1893.5	1997.7	1926.3	1897.1	2024.5	2201.5	2375.9
50°	2629.1	2500.4	2341.5	2264.1	2239.9	2332.9	2147.4	2150.9	2267.5	2517.3	2717.1
52.5°	2761.5	2624.2	2483.4	2444.0	2579.0	2632.6	2498.6	2478.4	2563.5	2858.7	3098.8
55°	2885.2	2739.5	2630.7	2711.1	2938.5	2944.6	2935.1	2823.0	2925.4	3224.6	3493.8
57.5°	2917.0	2759.9	2687.7	2803.0	3110.6	3349.9	3443.9	3223.8	3328.1	3557.4	3832.1
60°	2753.4	2618.9	2590.0	2746.5	3203.6	3553.4	3799.0	3667.4	3628.3	3824.5	4069.0
62.5°	2418.2	2262.2	2285.6	2503.1	3105.6	3634.0	4079.5	4182.2	3945.3	4037.0	4172.5
65°	1924.7	1775.8	1823.1	2084.7	2798.0	3660.8	4222.9	4433.6	4059.8	4097.1	4025.9
67.5°	1357.4	1222.1	1281.7	1620.0	2327.6	3317.8	4247.6	4316.4	3937.9	3925.6	3625.6
70°	769.0	684.2	748.8	1030.9	1642.9	2643.1	4054.0	3963.4	3719.4	3544.5	3033.6
72.5°	352.7	323.6	354.6	524.8	945.8	1758.7	3309.7	3391.9	3204.9	2986.1	2307.9
75°	187.5	177.3	190.4	262.1	442.6	956.8	2351.5	2536.4	2436.9	2264.8	1505.5
77.5°	139.5	131.6	137.9	169.9	236.4	374.3	1336.1	1569.3	1607.2	1448.8	836.0
80°	106.9	100.6	106.9	128.4	163.6	177.8	571.3	731.5	833.1	673.2	332.3
82.5°	79.3	75.1	84.8	96.4	115.0	111.1	202.8	252.4	325.4	222.5	129.5
85°	63.0	57.8	61.5	65.4	73.5	60.9	92.7	103.7	109.8	91.9	47.8
87.5°	24.7	22.9	44.7	35.2	29.9	18.4	27.8	31.5	32.3	31.0	13.9
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°	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8	270.8
2.5°	328.8	326.2	310.7	315.7	323.8	325.4	328.8	319.4	314.7	332.0	332.8
5°	424.7	410.5	403.2	404.0	398.7	390.6	402.9	411.0	414.2	427.1	431.8
7.5°	499.0	482.0	469.6	455.4	435.5	422.6	444.1	459.9	468.3	495.1	505.6
10°	532.1	518.5	515.8	498.0	497.5	497.2	496.1	490.6	508.8	506.1	513.5
12.5°	600.4	597.5	572.6	565.5	566.3	565.5	543.4	542.4	542.6	566.8	558.1
15°	664.0	664.5	641.7	615.9	592.8	585.7	577.0	573.1	578.9	592.5	584.1
17.5°	742.5	745.1	679.7	639.0	608.6	607.8	587.0	562.6	597.8	606.2	597.0
20°	793.2	782.2	701.8	633.5	624.8	601.2	575.5	541.9	572.3	592.8	598.6
22.5°	841.3	822.1	722.3	643.2	601.7	573.6	548.7	526.9	536.6	559.4	555.8
25°	873.8	868.6	750.7	666.6	600.9	538.4	504.8	490.9	495.9	531.3	527.9
27.5°	951.6	894.9	745.7	672.7	575.7	490.4	473.6	458.6	453.6	491.9	502.5
30°	1003.6	980.2	779.0	663.2	544.0	451.0	426.3	423.1	424.7	468.3	471.2
32.5°	1091.8	1031.2	833.7	626.9	497.7	421.8	393.5	394.8	401.9	433.6	440.2
35°	1183.8	1147.5	841.0	600.9	460.2	390.8	379.3	370.1	374.0	401.9	403.2
37.5°	1354.5	1229.2	886.2	560.8	432.6	379.0	356.9	348.8	350.9	366.7	378.0
40°	1504.7	1393.4	865.2	521.9	398.4	363.2	335.7	329.6	323.3	338.8	345.9
42.5°	1745.6	1510.5	858.1	479.1	382.4	342.0	323.1	307.0	301.0	314.1	327.0
45°	1986.4	1634.7	819.5	435.7	359.8	340.4	304.7	289.4	291.0	302.8	316.0
47.5°	2254.9	1801.5	754.1	393.7	335.1	332.8	286.3	279.7	284.5	297.6	310.7
50°	2572.1	1978.6	700.0	355.9	317.5	309.9	283.9	276.0	280.5	296.0	308.9
52.5°	2919.1	2172.7	660.6	321.0	297.6	291.8	287.1	279.5	284.7	298.1	311.5
55°	3264.0	2349.9	633.8	297.1	280.5	284.2	293.6	288.1	290.8	300.7	314.1
57.5°	3519.8	2443.4	579.9	271.6	266.6	279.7	294.4	285.2	286.8	300.7	315.2
60°	3668.5	2461.3	491.4	250.8	255.6	270.8	286.3	274.5	273.4	296.3	314.4
62.5°	3652.2	2357.6	389.8	231.9	243.0	257.4	273.9	262.7	265.5	296.8	316.0
65°	3418.9	2145.6	309.9	215.9	227.7	242.7	263.7	259.2	273.2	317.8	338.6
67.5°	3009.2	1835.9	249.0	200.9	213.5	232.7	270.8	282.6	288.7	339.3	360.6
70°	2438.7	1426.5	207.5	187.8	202.2	237.4	291.3	288.9	283.9	329.1	345.9
72.5°	1761.9	977.9	182.5	174.9	188.3	223.3	291.8	279.2	272.9	300.5	312.6
75°	1102.3	583.3	159.4	158.6	167.0	200.1	278.7	267.4	250.3	264.0	279.7
77.5°	629.6	298.6	134.2	141.3	146.3	173.6	249.5	239.3	224.0	229.8	245.3
80°	240.3	144.5	113.2	125.5	124.2	147.1	211.4	209.1	191.7	193.6	203.0
82.5°	113.2	80.9	94.0	107.9	100.9	117.1	171.8	171.0	155.8	141.0	148.7
85°	42.0	43.1	68.8	82.2	70.1	75.6	124.2	120.8	106.1	89.6	99.0
87.5°	9.5	15.5	33.9	42.8	24.4	23.4	50.2	43.6	42.0	25.0	26.3
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)