

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: P367122

Luminaire Tested: **MSA-SA1D-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367122
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-SA1D-830-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5441 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

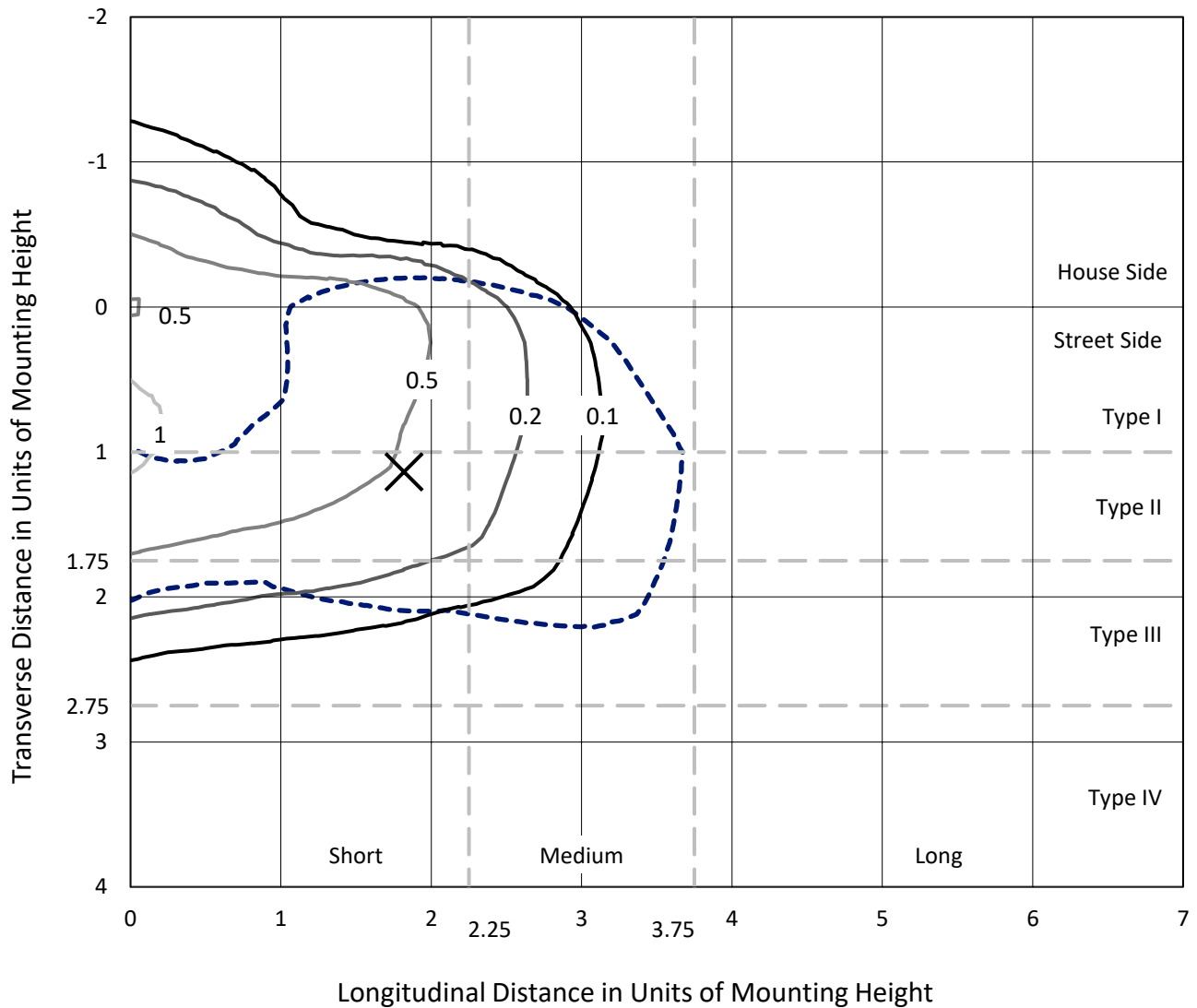
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

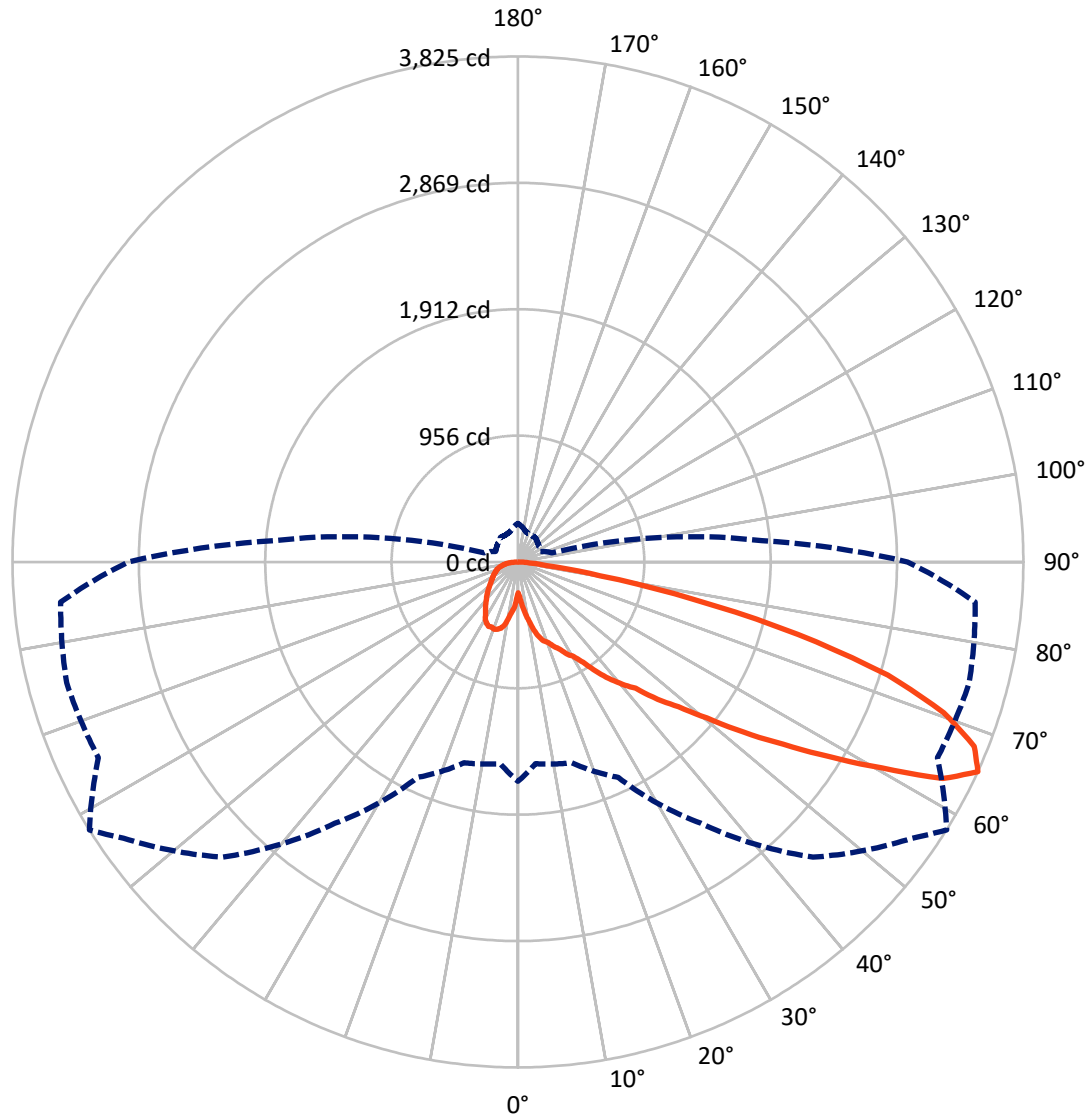
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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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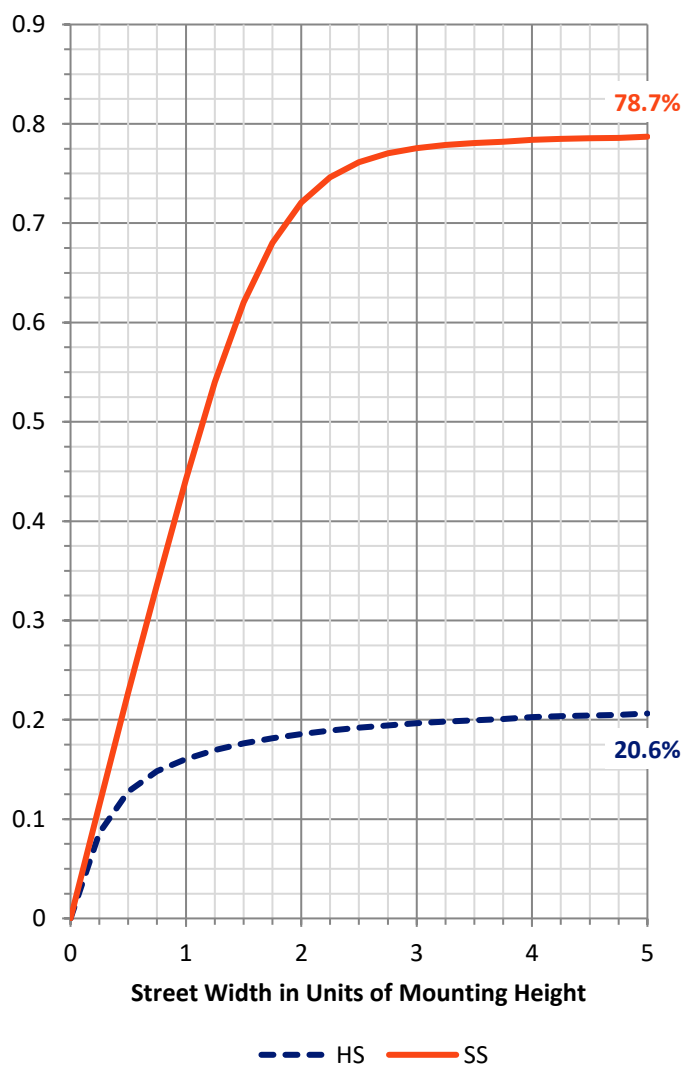
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1146.0	0.0	1146.0
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	4295.0	0.0	4295.0
	% Fixture	78.9	0.0	78.9
Total	Lumens	5441.0	0.0	5441.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.6	0.7
10°-20°	155.3	2.9
20°-30°	298.0	5.5
30°-40°	491.9	9.0
40°-50°	817.6	15.0
50°-60°	1350.3	24.8
60°-70°	1514.8	27.8
70°-80°	688.7	12.7
80°-90°	88.8	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°	5441.0	100.0
0°-180°	5441.0	100.0

Coefficient of Utilization



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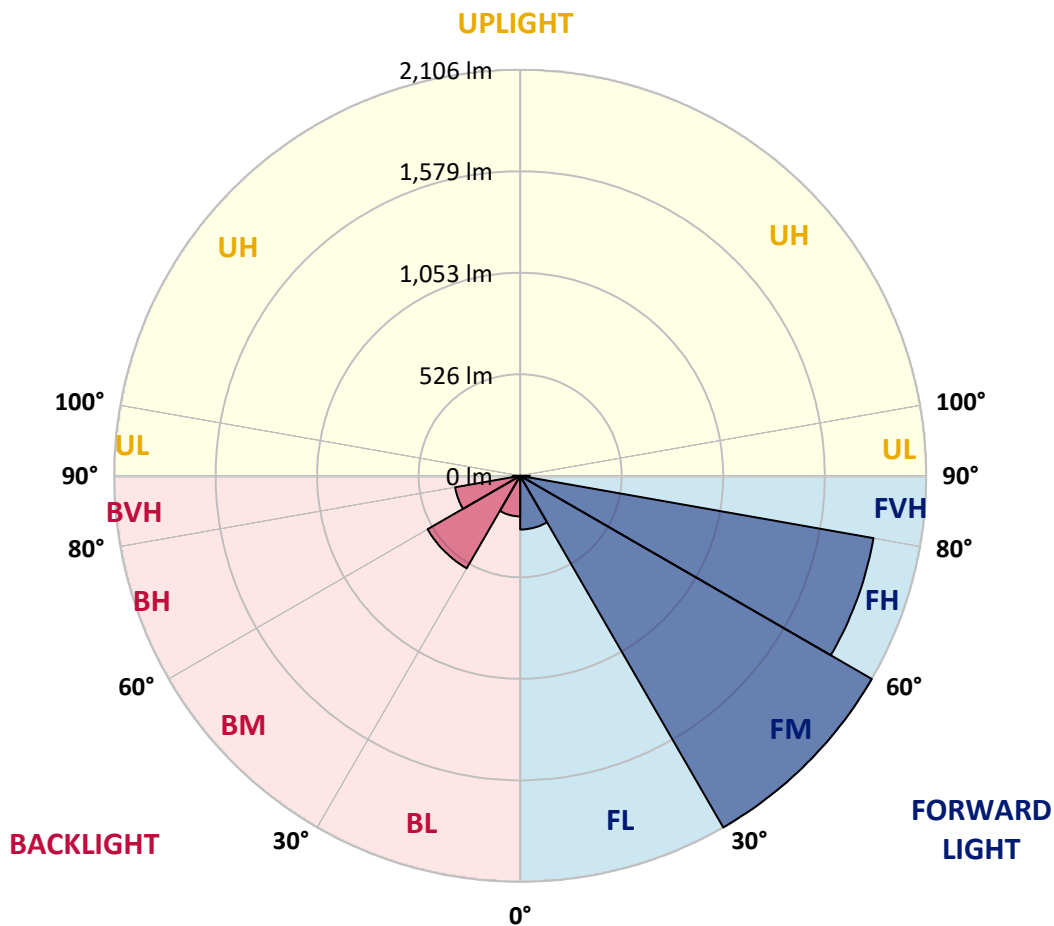
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	278.4	5.1			
FM	(30°-60°)	2105.6	38.7			
FH	(60°-80°)	1860.9	34.2			G2/5000
FVH	(80°-90°)	50.0	0.9			G1/100
BL	(0°-30°)	210.4	3.9	B1/500		
BM	(30°-60°)	554.3	10.2	B1/1000		
BH	(60°-80°)	342.6	6.3	B1/500		G1/500
BVH	(80°-90°)	38.8	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°	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6
2.5°	278.9	270.5	256.5	259.9	268.1	272.6	269.9	266.2	261.5	260.6	281.4
5°	361.2	345.1	338.5	335.8	325.8	319.9	330.1	328.8	334.2	344.2	364.6
7.5°	421.2	409.9	399.0	397.9	378.6	371.8	385.4	392.7	402.4	402.6	430.3
10°	453.4	443.7	443.4	433.2	431.6	444.6	444.8	450.2	451.4	462.9	457.5
12.5°	488.3	487.6	500.1	499.9	514.4	535.7	525.0	525.0	528.2	514.1	531.3
15°	571.5	578.7	555.4	559.2	559.2	580.1	579.4	583.5	593.2	589.6	581.9
17.5°	658.0	662.5	636.7	612.7	614.5	610.0	626.3	627.9	618.6	660.7	651.4
20°	713.8	731.4	677.0	646.9	652.8	658.0	658.7	648.9	644.2	709.0	696.3
22.5°	782.6	767.7	717.8	684.5	693.4	686.3	685.0	692.5	699.0	723.5	744.1
25°	828.6	827.5	767.7	731.2	721.5	719.4	733.2	730.3	745.9	790.3	777.4
27.5°	895.5	916.3	810.3	819.3	776.5	731.4	775.8	789.2	817.3	810.1	838.8
30°	1025.1	1009.4	898.6	896.2	847.7	809.8	840.6	829.3	879.8	878.3	899.6
32.5°	1130.9	1141.8	1002.4	976.4	940.3	894.8	874.4	905.9	933.1	977.7	989.7
35°	1242.8	1240.3	1108.7	1056.1	996.5	977.7	1002.9	1016.0	1073.8	1114.8	1086.3
37.5°	1416.9	1397.1	1246.5	1147.0	1102.3	1095.6	1138.6	1119.6	1182.1	1191.9	1207.9
40°	1578.6	1519.3	1372.4	1258.5	1187.5	1212.9	1214.3	1216.8	1250.3	1276.8	1356.4
42.5°	1732.5	1690.8	1500.5	1414.8	1310.4	1285.7	1301.1	1306.3	1391.0	1445.2	1555.3
45°	1942.8	1831.1	1684.5	1596.5	1479.6	1448.1	1437.2	1482.1	1563.9	1687.2	1781.7
47.5°	2120.6	2019.8	1880.0	1764.2	1633.5	1723.4	1661.8	1636.6	1746.5	1899.3	2049.7
50°	2268.1	2157.1	2020.0	1953.2	1932.3	2012.6	1852.6	1855.5	1956.1	2171.6	2344.0
52.5°	2382.3	2263.8	2142.4	2108.4	2224.9	2271.1	2155.5	2138.1	2211.5	2466.2	2673.3
55°	2489.1	2363.3	2269.5	2338.8	2535.1	2540.3	2532.1	2435.4	2523.7	2781.8	3014.1
57.5°	2516.5	2381.0	2318.7	2418.1	2683.5	2889.9	2971.0	2781.1	2871.1	3068.9	3305.9
60°	2375.3	2259.3	2234.4	2369.4	2763.7	3065.5	3277.4	3163.8	3130.1	3299.3	3510.3
62.5°	2086.2	1951.6	1971.8	2159.4	2679.2	3135.1	3519.4	3608.0	3403.6	3482.7	3599.6
65°	1660.4	1532.0	1572.7	1798.4	2413.8	3158.2	3643.1	3824.8	3502.4	3534.5	3473.1
67.5°	1171.0	1054.3	1105.7	1397.6	2008.0	2862.3	3664.4	3723.7	3397.2	3386.6	3127.8
70°	663.4	590.3	646.0	889.4	1417.3	2280.2	3497.4	3419.2	3208.7	3057.8	2617.1
72.5°	304.3	279.2	305.9	452.7	815.9	1517.2	2855.2	2926.2	2764.8	2576.1	1991.0
75°	161.8	152.9	164.3	226.1	381.8	825.5	2028.6	2188.2	2102.3	1953.9	1298.8
77.5°	120.3	113.5	119.0	146.6	203.9	322.9	1152.7	1353.9	1386.5	1249.9	721.2
80°	92.2	86.8	92.2	110.8	141.2	153.4	492.8	631.0	718.7	580.7	286.6
82.5°	68.4	64.8	73.2	83.2	99.2	95.8	174.9	217.8	280.7	191.9	111.7
85°	54.4	49.8	53.0	56.4	63.4	52.6	80.0	89.5	94.7	79.3	41.2
87.5°	21.3	19.7	38.5	30.4	25.8	15.9	24.0	27.2	27.9	26.7	12.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6
2.5°	283.7	281.4	268.1	272.4	279.4	280.7	283.7	275.5	271.5	286.4	287.1
5°	366.4	354.2	347.8	348.5	344.0	336.9	347.6	354.6	357.3	368.4	372.5
7.5°	430.5	415.8	405.1	392.9	375.7	364.6	383.2	396.8	404.0	427.1	436.2
10°	459.1	447.3	445.0	429.6	429.2	428.9	428.0	423.3	438.9	436.6	443.0
12.5°	518.0	515.5	494.0	487.8	488.5	487.8	468.8	467.9	468.1	489.0	481.5
15°	572.8	573.3	553.6	531.3	511.4	505.3	497.8	494.4	499.4	511.2	503.9
17.5°	640.6	642.8	586.4	551.3	525.0	524.3	506.4	485.4	515.7	523.0	515.0
20°	684.3	674.8	605.4	546.5	539.1	518.7	496.5	467.5	493.7	511.4	516.4
22.5°	725.8	709.2	623.1	554.9	519.1	494.9	473.3	454.5	462.9	482.6	479.5
25°	753.9	749.3	647.6	575.1	518.4	464.5	435.5	423.5	427.8	458.4	455.4
27.5°	820.9	772.0	643.3	580.3	496.7	423.0	408.5	395.6	391.3	424.4	433.5
30°	865.8	845.6	672.1	572.1	469.3	389.1	367.8	365.0	366.4	404.0	406.5
32.5°	941.9	889.6	719.2	540.9	429.4	363.9	339.4	340.6	346.7	374.1	379.8
35°	1021.2	990.0	725.5	518.4	397.0	337.2	327.2	319.3	322.7	346.7	347.8
37.5°	1168.5	1060.4	764.5	483.8	373.2	327.0	307.9	300.9	302.7	316.3	326.1
40°	1298.1	1202.0	746.4	450.2	343.7	313.4	289.6	284.4	278.9	292.3	298.4
42.5°	1505.9	1303.1	740.3	413.3	329.9	295.0	278.7	264.9	259.7	271.0	282.1
45°	1713.7	1410.3	707.0	375.9	310.4	293.7	262.8	249.7	251.1	261.3	272.6
47.5°	1945.3	1554.2	650.5	339.7	289.1	287.1	247.0	241.3	245.4	256.7	268.1
50°	2219.0	1706.9	603.9	307.0	273.9	267.4	244.9	238.1	242.0	255.4	266.5
52.5°	2518.3	1874.3	569.9	276.9	256.7	251.7	247.7	241.1	245.6	257.2	268.7
55°	2815.8	2027.3	546.8	256.3	242.0	245.2	253.3	248.6	250.8	259.4	271.0
57.5°	3036.5	2107.9	500.3	234.3	230.0	241.3	254.0	246.1	247.4	259.4	271.9
60°	3164.7	2123.4	423.9	216.4	220.5	233.6	247.0	236.8	235.9	255.6	271.2
62.5°	3150.7	2033.8	336.3	200.1	209.6	222.1	236.3	226.6	229.1	256.0	272.6
65°	2949.5	1851.0	267.4	186.3	196.5	209.4	227.5	223.6	235.7	274.2	292.1
67.5°	2596.0	1583.8	214.8	173.3	184.2	200.8	233.6	243.8	249.0	292.8	311.1
70°	2103.9	1230.6	179.0	162.0	174.5	204.8	251.3	249.2	244.9	283.9	298.4
72.5°	1519.9	843.6	157.5	150.9	162.5	192.6	251.7	240.9	235.4	259.2	269.6
75°	951.0	503.3	137.5	136.9	144.1	172.7	240.4	230.7	215.9	227.7	241.3
77.5°	543.1	257.6	115.8	121.9	126.2	149.8	215.3	206.4	193.3	198.3	211.6
80°	207.3	124.6	97.7	108.3	107.2	126.9	182.4	180.4	165.4	167.0	175.2
82.5°	97.7	69.8	81.1	93.1	87.0	101.1	148.2	147.5	134.4	121.7	128.2
85°	36.3	37.2	59.4	70.9	60.5	65.3	107.2	104.2	91.5	77.3	85.4
87.5°	8.2	13.4	29.2	36.9	21.1	20.2	43.3	37.6	36.3	21.5	22.7
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)