

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: P366882

Luminaire Tested: **MSA-SA1C-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366882
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-727-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 5258 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

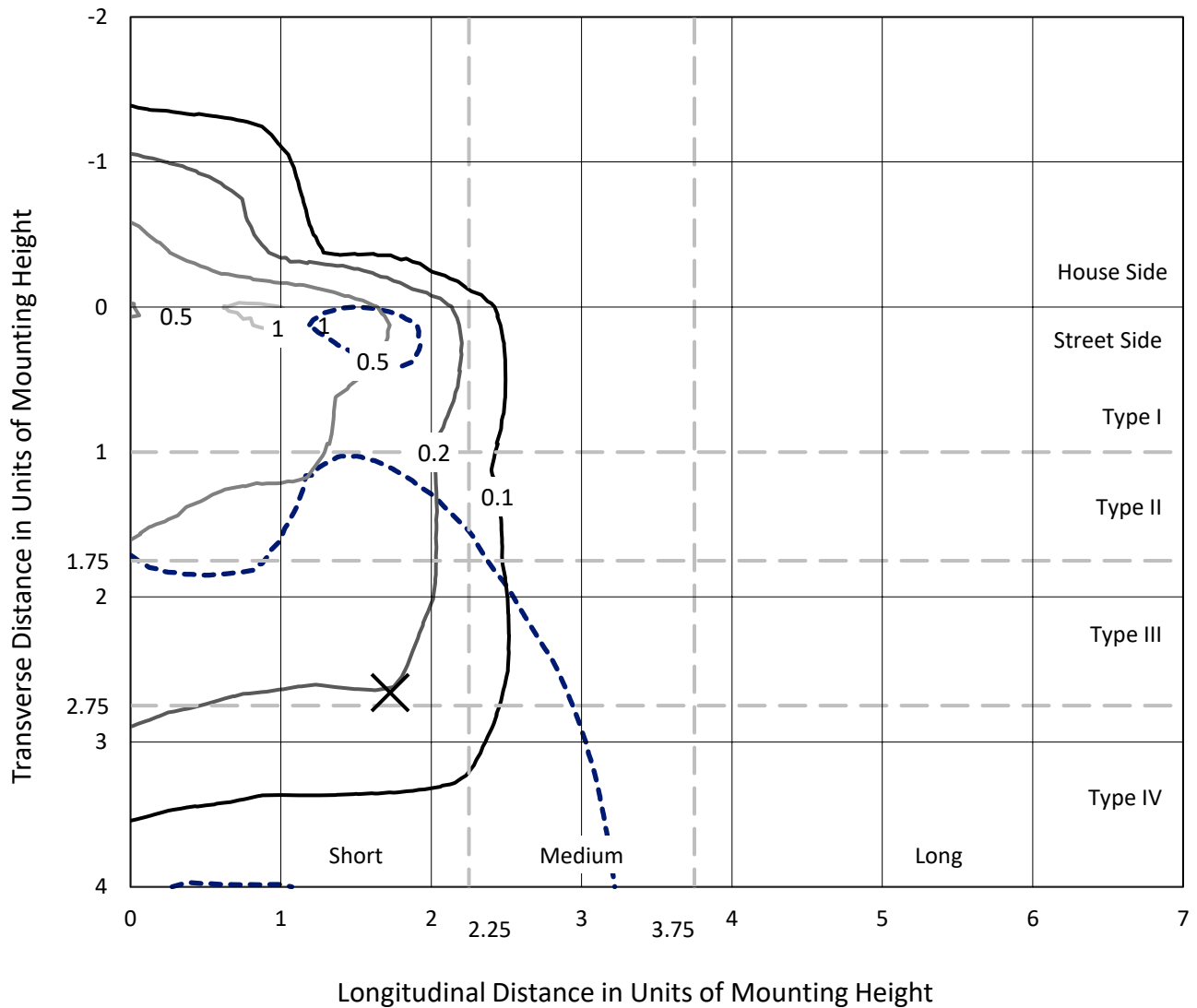
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

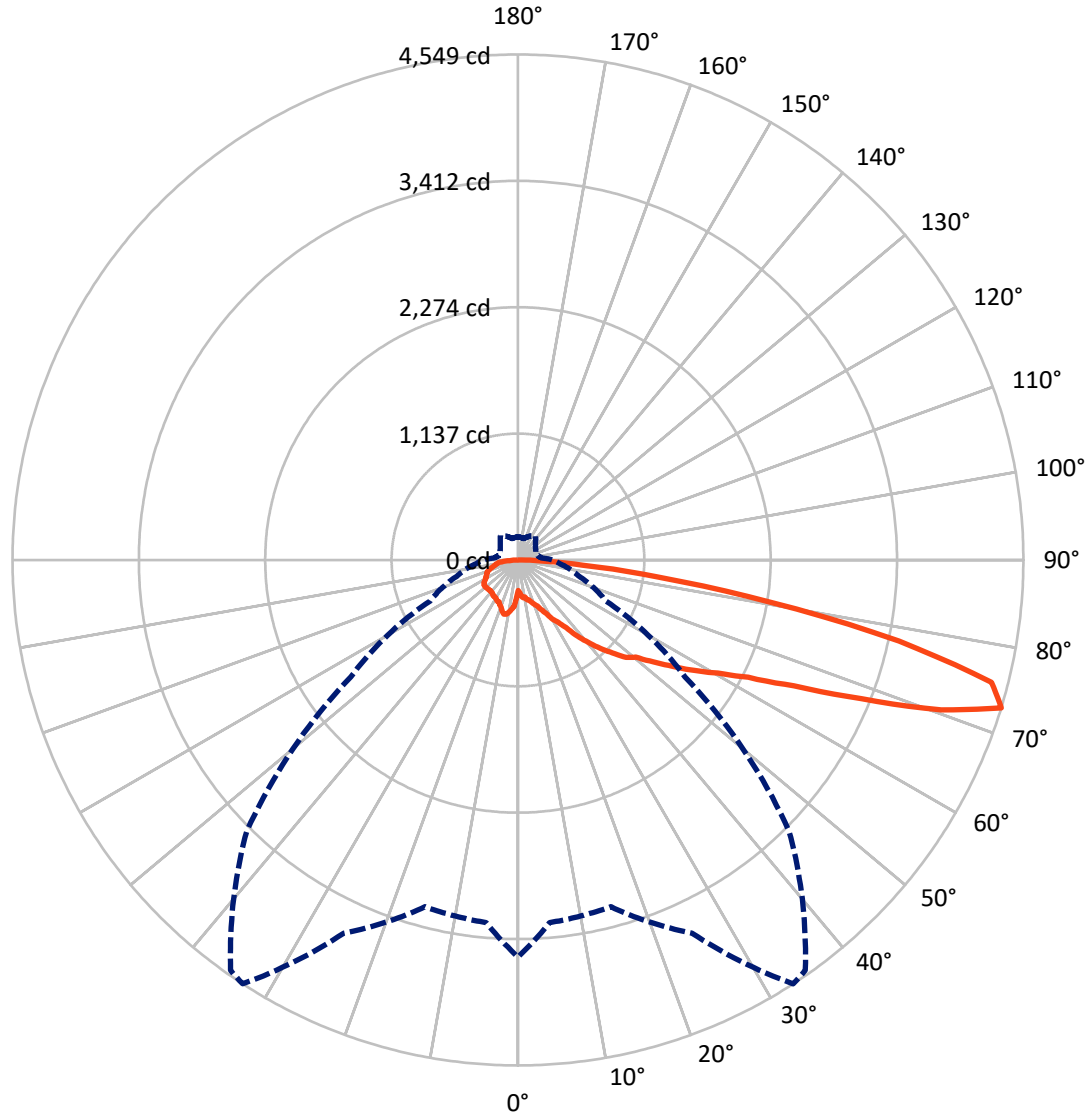
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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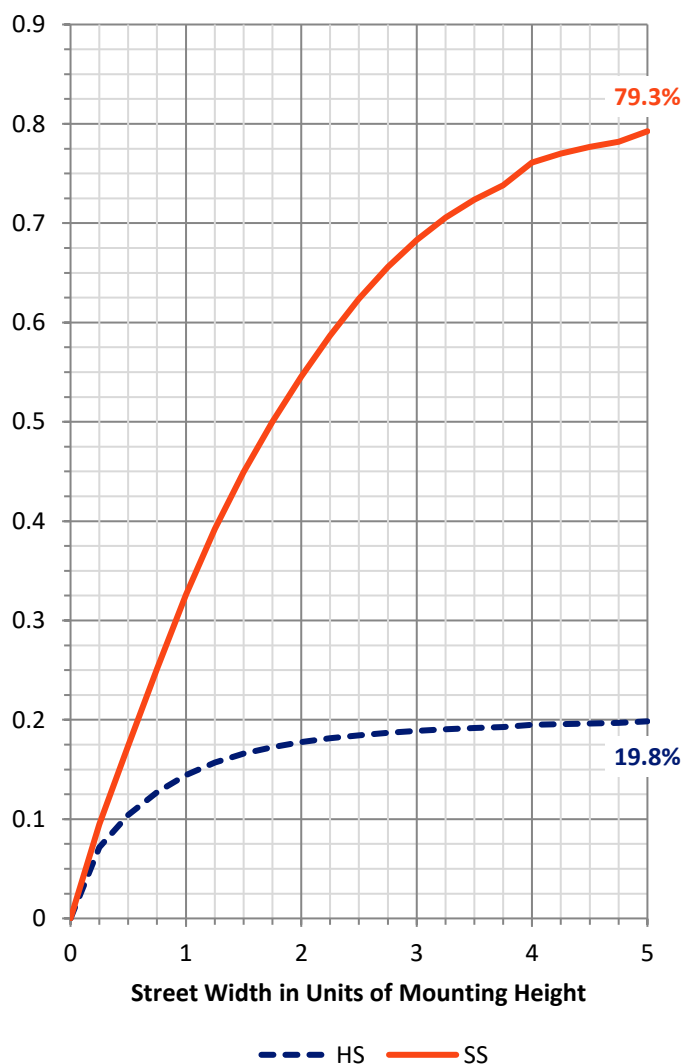
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1063.7	0.0	1063.7
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	4194.3	0.0	4194.3
	% Fixture	79.8	0.0	79.8
Total	Lumens	5258.0	0.0	5258.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	0.7
10°-20°	140.1	2.7
20°-30°	255.5	4.9
30°-40°	432.2	8.2
40°-50°	719.0	13.7
50°-60°	1055.2	20.1
60°-70°	1349.8	25.7
70°-80°	1098.2	20.9
80°-90°	170.1	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°	5258.0	100.0
0°-180°	5258.0	100.0

Coefficient of Utilization



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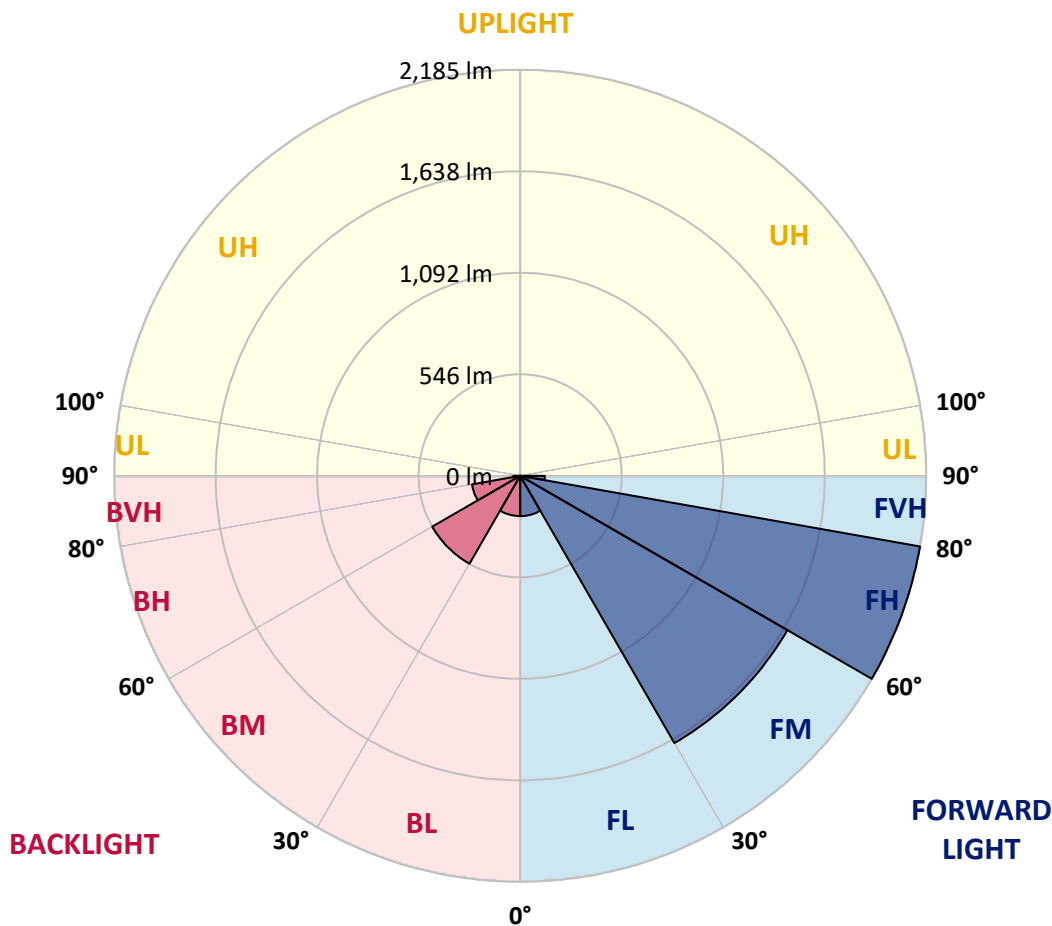
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	217.0	4.1			
FM (30°-60°)	1660.1	31.6			
FH (60°-80°)	2184.5	41.5			G2/5000
FVH (80°-90°)	132.8	2.5			G2/225
BL (0°-30°)	216.5	4.1	B1/500		
BM (30°-60°)	546.3	10.4	B1/1000		
BH (60°-80°)	263.6	5.0	B1/500		G1/500
BVH (80°-90°)	37.3	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°	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7
2.5°	312.6	302.8	286.6	286.2	295.1	297.1	303.0	303.4	305.6	302.1	327.0
5°	344.9	334.4	328.1	330.2	326.1	331.1	331.1	345.5	364.7	387.0	418.6
7.5°	352.5	344.9	337.7	343.1	344.0	339.2	343.8	377.6	412.3	434.5	485.1
10°	337.2	329.6	335.0	336.8	336.6	347.5	371.2	398.3	436.9	477.9	505.2
12.5°	334.4	339.8	342.5	345.5	366.2	369.5	405.5	433.4	472.2	508.2	579.1
15°	376.5	383.7	367.5	366.4	373.2	376.3	413.6	441.7	498.4	558.8	622.5
17.5°	436.5	439.1	410.1	395.2	400.3	402.7	419.0	454.4	489.3	600.9	680.3
20°	494.5	496.2	441.7	408.5	426.2	428.8	444.1	464.4	491.9	624.5	719.4
22.5°	555.3	544.2	484.5	442.6	452.8	453.5	462.4	473.5	512.6	620.8	766.9
25°	621.9	614.9	539.6	499.5	499.1	490.1	490.6	506.5	534.6	660.5	798.1
27.5°	710.2	711.1	601.8	580.2	546.4	540.5	511.1	540.7	572.8	660.9	865.5
30°	824.7	803.6	688.4	653.5	620.1	607.7	567.8	593.1	607.0	698.7	938.8
32.5°	917.9	911.8	778.7	725.9	671.4	685.8	641.7	619.5	644.6	763.7	1049.8
35°	1007.1	987.0	874.2	805.5	748.2	739.4	710.9	714.6	729.8	845.9	1194.9
37.5°	1140.1	1129.2	1009.5	899.5	872.7	837.2	819.1	830.6	818.6	951.2	1412.4
40°	1288.9	1225.6	1122.5	1024.5	974.4	949.3	955.6	944.7	935.5	1069.5	1607.4
42.5°	1431.3	1373.7	1197.5	1153.4	1088.0	1098.5	1063.8	1071.4	1097.4	1237.2	1787.7
45°	1586.4	1461.9	1277.1	1238.3	1191.4	1204.7	1232.4	1224.1	1266.6	1435.0	1957.7
47.5°	1663.9	1545.4	1374.8	1311.6	1310.9	1283.2	1451.8	1470.2	1403.6	1581.6	2130.2
50°	1738.5	1622.0	1447.5	1404.7	1373.7	1433.1	1662.3	1620.2	1527.5	1749.8	2320.0
52.5°	1842.3	1709.4	1530.8	1485.2	1523.6	1578.6	1830.3	1822.0	1649.0	1922.8	2484.9
55°	1921.5	1787.3	1656.2	1613.9	1687.2	1741.1	2001.3	1951.3	1753.1	2049.7	2589.4
57.5°	2060.2	1922.5	1841.4	1747.4	1879.1	1878.3	2166.2	2127.6	1864.3	2154.0	2631.5
60°	2280.7	2119.1	2034.2	1925.8	2066.9	2117.3	2354.7	2243.4	1943.1	2219.9	2555.5
62.5°	2590.2	2398.3	2260.6	2153.3	2325.4	2416.6	2587.4	2327.8	1948.1	2201.1	2356.0
65°	2973.0	2739.6	2559.3	2445.8	2729.8	2860.0	2868.8	2380.0	1901.8	2007.2	1936.3
67.5°	3346.5	3084.1	2895.8	2917.4	3332.1	3393.8	3173.7	2423.6	1653.4	1611.7	1344.5
70°	3592.3	3307.9	3182.4	3411.5	4041.4	3978.2	3420.8	2308.6	1302.0	1044.8	757.1
72.5°	3573.7	3276.0	3230.9	3705.1	4548.8	4509.3	3450.9	1836.0	872.1	571.3	377.6
75°	2911.5	2680.1	2782.6	3507.4	4402.6	4400.7	2996.2	1136.4	447.4	293.4	238.6
77.5°	1609.8	1519.9	1821.1	2655.7	3505.5	3523.4	2024.4	515.4	241.2	207.9	179.7
80°	563.9	555.6	789.2	1433.1	2306.0	2310.4	941.4	235.8	175.4	157.3	132.0
82.5°	206.1	204.4	327.2	665.7	1269.7	1266.9	357.1	146.8	130.0	111.2	87.0
85°	82.2	80.5	149.6	295.6	583.3	573.9	138.7	83.3	85.1	66.3	42.8
87.5°	22.7	23.6	50.8	92.5	178.6	165.6	34.9	28.1	34.5	27.0	13.5
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°	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7	275.7
2.5°	331.3	333.5	311.9	319.6	329.4	334.6	337.2	326.1	329.8	345.5	344.9
5°	425.1	416.4	408.1	416.6	410.9	402.9	416.0	415.3	423.8	432.3	434.3
7.5°	495.1	483.8	479.9	460.7	441.5	422.1	438.9	449.3	451.5	472.7	481.6
10°	520.4	516.1	517.6	492.3	489.9	491.9	476.4	459.6	469.8	461.1	467.7
12.5°	578.9	589.8	562.8	545.5	544.0	532.0	501.0	490.1	478.6	490.6	484.5
15°	625.8	646.1	617.1	586.8	552.5	534.0	507.6	491.0	483.4	486.0	478.6
17.5°	694.5	713.5	639.8	593.3	558.0	530.7	490.3	455.0	473.8	475.3	466.8
20°	740.1	741.4	647.4	577.2	545.3	498.0	458.7	427.7	449.3	471.4	481.0
22.5°	784.6	774.8	656.8	564.3	499.3	453.5	434.3	432.3	448.5	467.0	469.2
25°	818.0	819.5	662.2	559.5	472.2	409.9	409.9	424.0	438.2	482.3	480.1
27.5°	898.9	839.3	641.1	537.5	434.7	384.3	410.1	429.1	435.8	483.6	488.4
30°	957.8	919.0	645.4	499.7	396.8	372.3	393.5	417.3	436.0	491.2	489.5
32.5°	1056.6	952.1	655.7	446.7	368.4	367.8	386.5	411.6	434.1	482.9	485.5
35°	1165.9	1049.8	627.1	406.4	361.7	365.1	389.4	399.4	425.8	479.7	482.1
37.5°	1368.1	1100.9	609.0	375.2	357.3	367.3	376.5	392.0	418.6	463.3	479.0
40°	1486.7	1206.0	541.8	357.1	348.1	365.6	370.2	383.2	397.6	443.7	453.7
42.5°	1642.9	1239.2	484.5	337.0	343.5	358.4	372.1	375.4	385.0	412.7	431.0
45°	1773.1	1264.0	423.6	320.9	328.1	374.3	375.2	373.6	371.9	382.2	397.2
47.5°	1907.9	1330.8	367.5	303.0	322.2	387.4	376.7	362.7	355.5	356.9	370.8
50°	2056.7	1379.2	327.8	288.4	323.5	387.4	384.1	351.6	337.2	333.5	348.1
52.5°	2187.6	1384.9	297.7	276.6	318.0	374.1	389.1	344.6	320.4	311.5	325.2
55°	2258.9	1313.1	275.9	265.9	304.1	362.1	386.5	340.7	300.1	293.4	305.6
57.5°	2257.4	1194.0	257.4	251.1	288.1	345.3	371.9	319.3	287.7	283.8	295.8
60°	2176.0	1054.4	243.2	238.8	271.8	320.9	345.7	305.4	275.7	273.7	286.8
62.5°	1991.5	910.2	229.5	226.0	256.5	303.6	333.3	289.9	263.3	263.1	275.5
65°	1630.9	730.7	216.6	215.7	242.3	286.6	321.5	276.8	250.4	254.8	267.4
67.5°	1123.8	513.5	202.9	205.5	229.2	270.3	312.6	268.1	236.9	245.8	257.2
70°	616.6	317.6	187.6	192.8	212.7	251.3	298.6	253.9	219.2	233.0	240.8
72.5°	313.7	211.8	168.6	176.9	192.4	223.4	272.4	233.4	200.2	205.5	209.6
75°	210.7	159.4	147.5	156.6	167.7	196.7	241.7	214.2	182.1	181.5	186.1
77.5°	159.2	124.5	125.2	135.7	142.9	173.0	217.3	198.1	166.9	165.3	172.1
80°	116.5	94.4	100.8	111.7	118.2	155.3	201.3	180.2	146.1	140.0	145.7
82.5°	77.2	67.0	74.6	85.5	90.7	129.8	182.8	152.9	119.1	103.6	104.5
85°	36.4	35.1	44.5	49.7	56.5	80.5	136.8	105.8	75.9	62.8	65.7
87.5°	8.3	11.1	14.6	14.4	16.8	21.6	42.5	29.7	22.0	15.1	10.0
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)