

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: P366970

Luminaire Tested: **MSA-SA1C-760-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366970
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-760-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: 6287 lumens
Efficiency: N/A
Efficacy: 106.6 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

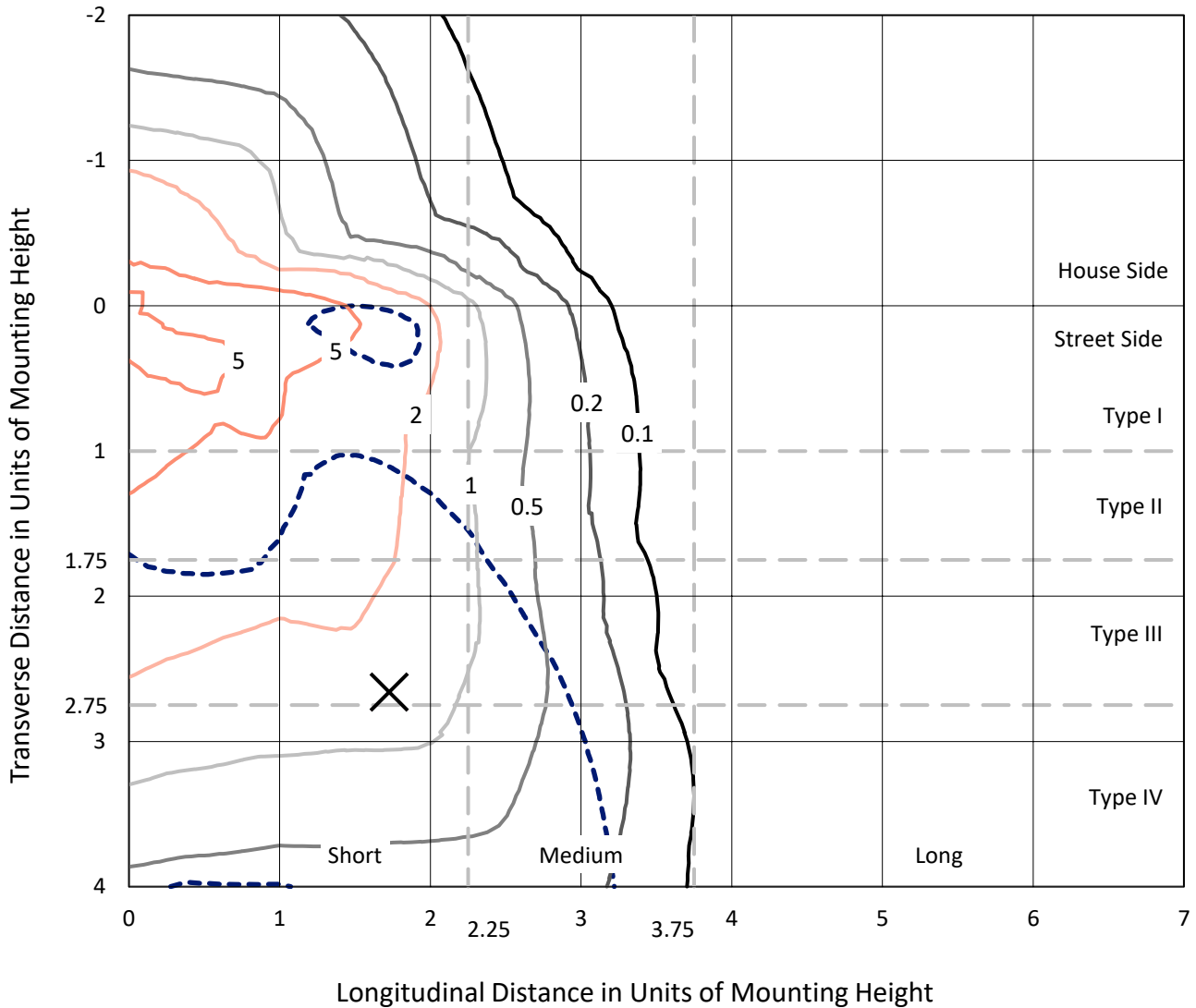
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

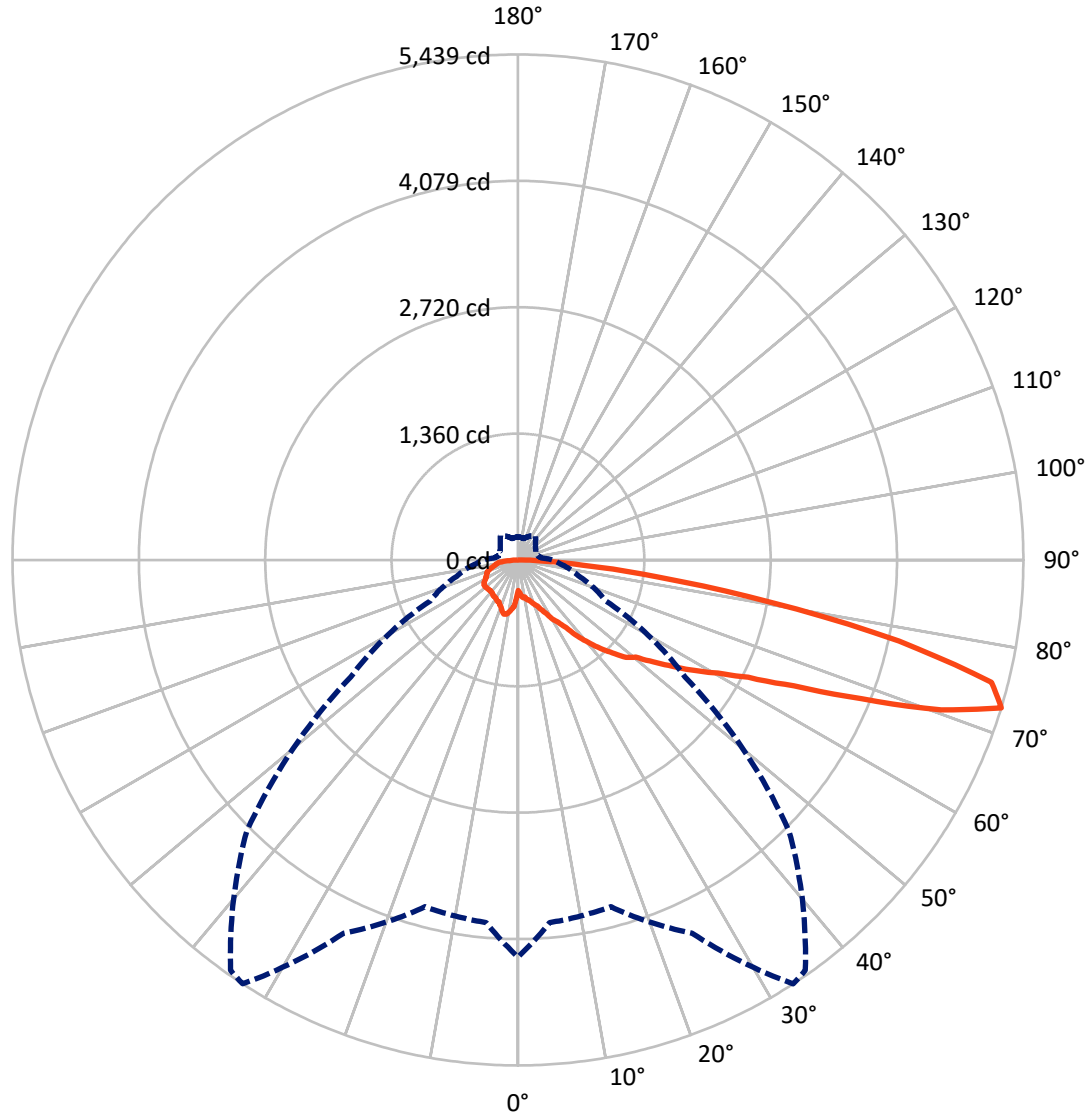
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.1 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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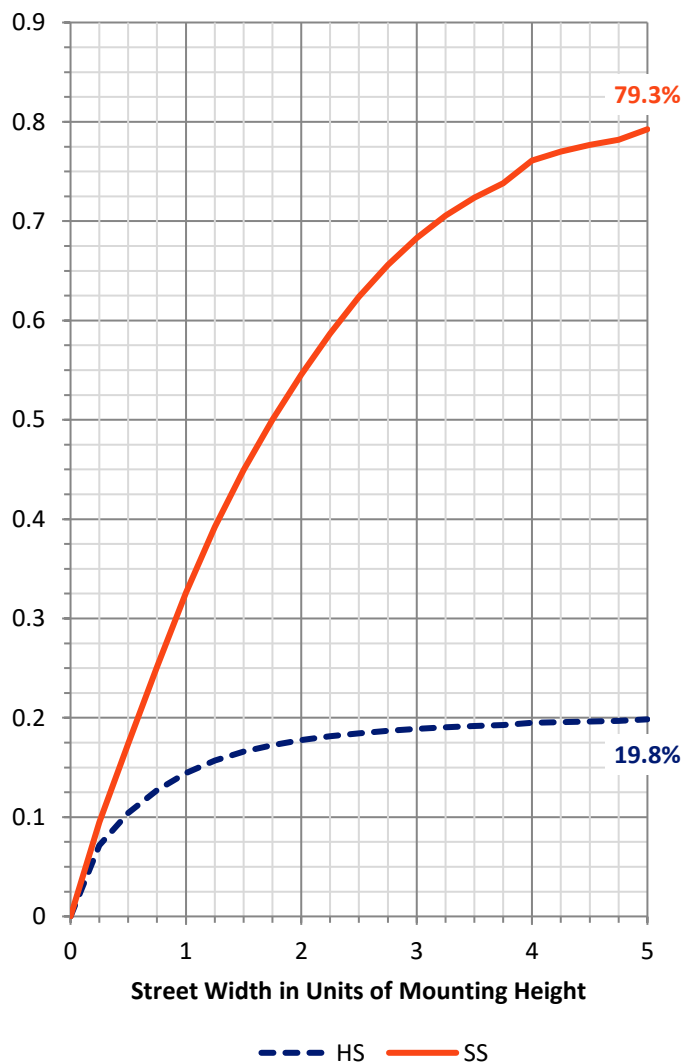
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1271.8	0.0	1271.8
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	5015.1	0.0	5015.1
	% Fixture	79.8	0.0	79.8
Total	Lumens	6287.0	0.0	6287.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	0.7
10°-20°	167.5	2.7
20°-30°	305.5	4.9
30°-40°	516.8	8.2
40°-50°	859.7	13.7
50°-60°	1261.7	20.1
60°-70°	1614.0	25.7
70°-80°	1313.1	20.9
80°-90°	203.4	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°	6287.0	100.0
0°-180°	6287.0	100.0

Coefficient of Utilization



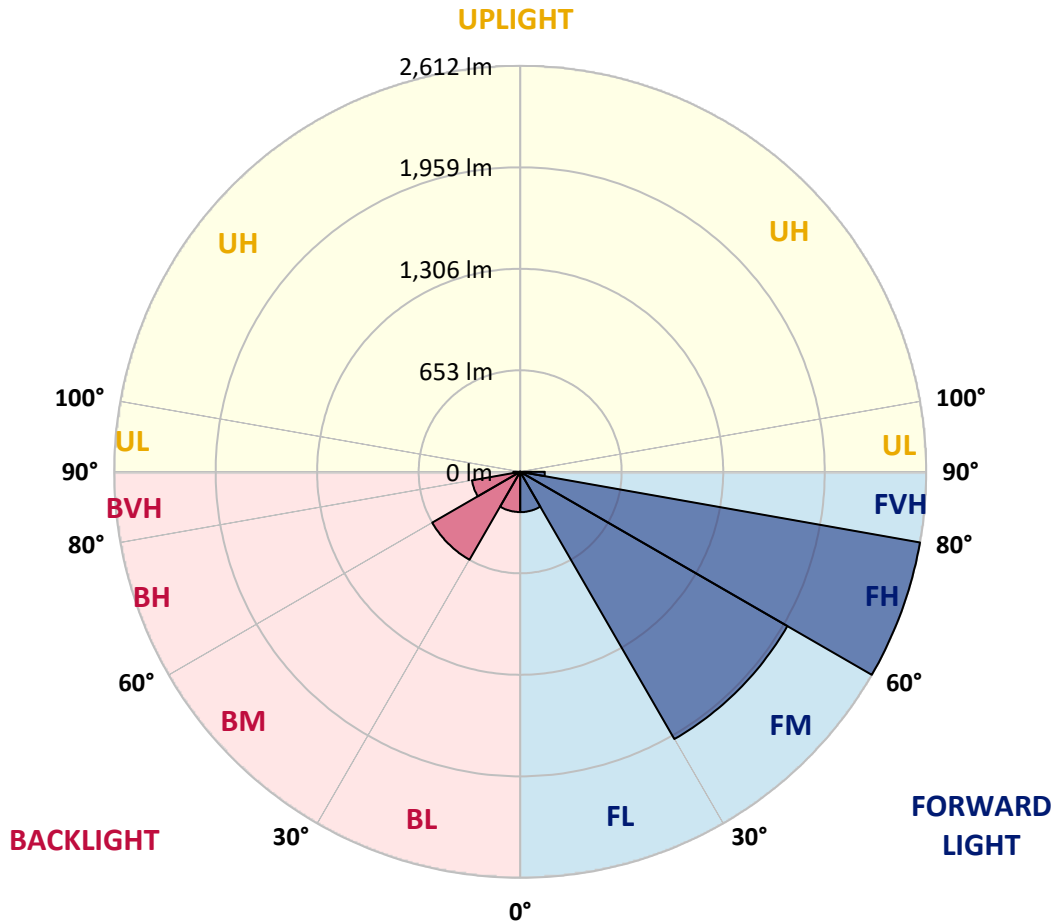
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	259.5	4.1			
FM (30°-60°)	1985.0	31.6			
FH (60°-80°)	2612.0	41.5			G2/5000
FVH (80°-90°)	158.7	2.5			G2/225
BL (0°-30°)	258.8	4.1	B1/500		
BM (30°-60°)	653.2	10.4	B1/1000		
BH (60°-80°)	315.1	5.0	B1/500		G1/500
BVH (80°-90°)	44.6	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°	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7
2.5°	373.7	362.0	342.7	342.2	352.9	355.2	362.3	362.8	365.4	361.2	391.0
5°	412.3	399.8	392.3	394.9	389.9	395.9	395.9	413.1	436.1	462.7	500.5
7.5°	421.5	412.3	403.7	410.3	411.3	405.6	411.0	451.5	492.9	519.5	580.0
10°	403.2	394.1	400.6	402.7	402.4	415.5	443.9	476.2	522.4	571.4	604.0
12.5°	399.8	406.3	409.5	413.1	437.9	441.8	484.8	518.2	564.7	607.7	692.5
15°	450.2	458.8	439.5	438.2	446.2	449.9	494.5	528.1	596.0	668.2	744.4
17.5°	521.9	525.0	490.3	472.6	478.6	481.5	501.0	543.3	585.0	718.5	813.5
20°	591.3	593.3	528.1	488.5	509.6	512.8	531.0	555.3	588.1	746.7	860.2
22.5°	664.0	650.7	579.3	529.2	541.4	542.2	552.9	566.2	612.9	742.3	917.0
25°	743.6	735.2	645.2	597.3	596.7	586.0	586.6	605.6	639.2	789.7	954.3
27.5°	849.2	850.2	719.6	693.8	653.3	646.3	611.1	646.6	684.9	790.3	1034.9
30°	986.1	960.8	823.1	781.4	741.5	726.6	678.9	709.1	725.8	835.4	1122.5
32.5°	1097.5	1090.2	931.1	868.0	802.8	820.0	767.3	740.7	770.7	913.1	1255.3
35°	1204.2	1180.2	1045.3	963.2	894.6	884.2	850.0	854.4	872.7	1011.4	1428.7
37.5°	1363.3	1350.2	1207.0	1075.6	1043.5	1001.0	979.3	993.2	978.8	1137.4	1688.8
40°	1541.1	1465.5	1342.1	1225.0	1165.0	1135.1	1142.6	1129.6	1118.6	1278.8	1921.9
42.5°	1711.4	1642.6	1431.9	1379.2	1300.9	1313.4	1272.0	1281.1	1312.1	1479.3	2137.6
45°	1896.9	1748.0	1527.1	1480.6	1424.6	1440.5	1473.6	1463.7	1514.5	1715.9	2340.8
47.5°	1989.5	1847.8	1643.9	1568.3	1567.5	1534.4	1736.0	1757.9	1678.3	1891.1	2547.1
50°	2078.7	1939.4	1730.7	1679.6	1642.6	1713.5	1987.6	1937.3	1826.5	2092.2	2774.0
52.5°	2202.8	2044.0	1830.4	1775.9	1821.8	1887.5	2188.5	2178.6	1971.7	2299.1	2971.2
55°	2297.5	2137.1	1980.3	1929.7	2017.4	2081.8	2392.9	2333.2	2096.1	2450.8	3096.1
57.5°	2463.4	2298.8	2201.8	2089.4	2246.9	2245.8	2590.1	2544.0	2229.2	2575.5	3146.4
60°	2727.0	2533.8	2432.3	2302.7	2471.5	2531.7	2815.5	2682.4	2323.3	2654.3	3055.7
62.5°	3097.1	2867.6	2703.1	2574.7	2780.5	2889.5	3093.7	2783.4	2329.3	2631.8	2817.0
65°	3554.9	3275.8	3060.1	2924.5	3264.1	3419.8	3430.2	2845.7	2274.0	2400.0	2315.2
67.5°	4001.4	3687.6	3462.5	3488.4	3984.2	4058.0	3794.8	2897.9	1977.0	1927.1	1607.6
70°	4295.3	3955.2	3805.2	4079.1	4832.3	4756.7	4090.3	2760.4	1556.8	1249.3	905.3
72.5°	4273.1	3917.1	3863.1	4430.1	5439.0	5391.8	4126.3	2195.3	1042.7	683.1	451.5
75°	3481.3	3204.6	3327.2	4193.8	5264.2	5261.9	3582.5	1358.8	534.9	350.8	285.3
77.5°	1924.8	1817.3	2177.5	3175.4	4191.5	4212.9	2420.6	616.3	288.5	248.6	214.9
80°	674.2	664.3	943.6	1713.5	2757.3	2762.5	1125.7	281.9	209.7	188.0	157.8
82.5°	246.5	244.4	391.2	796.0	1518.2	1514.8	426.9	175.5	155.4	133.0	104.1
85°	98.3	96.2	178.9	353.4	697.4	686.2	165.9	99.6	101.7	79.3	51.1
87.5°	27.1	28.2	60.8	110.6	213.6	198.0	41.7	33.6	41.2	32.3	16.2
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°	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7
2.5°	396.2	398.8	373.0	382.1	393.8	400.1	403.2	389.9	394.3	413.1	412.3
5°	508.3	497.9	488.0	498.2	491.4	481.7	497.4	496.6	506.8	516.9	519.3
7.5°	592.0	578.5	573.8	550.8	527.9	504.7	524.8	537.3	539.9	565.2	575.9
10°	622.3	617.1	618.9	588.7	585.8	588.1	569.6	549.5	561.8	551.4	559.2
12.5°	692.2	705.2	672.9	652.3	650.5	636.1	599.1	586.0	572.2	586.6	579.3
15°	748.3	772.5	737.8	701.6	660.6	638.5	606.9	587.1	578.0	581.1	572.2
17.5°	830.4	853.1	765.0	709.4	667.2	634.6	586.3	544.1	566.5	568.3	558.1
20°	884.9	886.5	774.1	690.1	652.0	595.4	548.5	511.5	537.3	563.6	575.1
22.5°	938.1	926.4	785.3	674.7	597.0	542.2	519.3	516.9	536.2	558.4	561.0
25°	978.0	979.9	791.8	669.0	564.7	490.1	490.1	507.0	524.0	576.7	574.0
27.5°	1074.8	1003.6	766.5	642.6	519.8	459.5	490.3	513.0	521.1	578.2	584.0
30°	1145.2	1098.8	771.7	597.5	474.4	445.2	470.5	498.9	521.4	587.3	585.3
32.5°	1263.4	1138.4	784.0	534.1	440.5	439.7	462.2	492.2	519.0	577.4	580.6
35°	1394.0	1255.3	749.8	485.9	432.4	436.6	465.5	477.5	509.1	573.5	576.4
37.5°	1635.8	1316.3	728.2	448.6	427.2	439.2	450.2	468.7	500.5	554.0	572.7
40°	1777.7	1442.0	647.9	426.9	416.3	437.1	442.6	458.2	475.5	530.5	542.5
42.5°	1964.4	1481.7	579.3	403.0	410.8	428.5	444.9	448.9	460.3	493.5	515.4
45°	2120.1	1511.4	506.5	383.7	392.3	447.6	448.6	446.8	444.7	456.9	474.9
47.5°	2281.3	1591.2	439.5	362.3	385.2	463.2	450.4	433.7	425.1	426.7	443.4
50°	2459.2	1649.1	392.0	344.8	386.8	463.2	459.3	420.4	403.2	398.8	416.3
52.5°	2615.7	1655.9	356.0	330.7	380.3	447.3	465.3	412.1	383.1	372.4	388.9
55°	2701.0	1570.1	329.9	317.9	363.6	432.9	462.2	407.4	358.9	350.8	365.4
57.5°	2699.1	1427.7	307.8	300.2	344.5	412.9	444.7	381.8	344.0	339.3	353.7
60°	2601.9	1260.8	290.8	285.6	325.0	383.7	413.4	365.1	329.7	327.3	343.0
62.5°	2381.2	1088.4	274.4	270.2	306.7	363.0	398.5	346.6	314.8	314.5	329.4
65°	1950.1	873.7	259.0	257.9	289.8	342.7	384.4	331.0	299.4	304.6	319.8
67.5°	1343.7	614.0	242.6	245.7	274.1	323.1	373.7	320.5	283.2	293.9	307.5
70°	737.3	379.7	224.3	230.6	254.3	300.5	357.1	303.6	262.1	278.5	287.9
72.5°	375.0	253.2	201.6	211.5	230.0	267.1	325.8	279.1	239.4	245.7	250.6
75°	251.9	190.7	176.3	187.3	200.6	235.3	289.0	256.1	217.8	217.0	222.5
77.5°	190.4	148.9	149.7	162.2	170.8	206.8	259.8	236.8	199.5	197.7	205.8
80°	139.3	112.9	120.5	133.5	141.4	185.7	240.7	215.4	174.7	167.4	174.2
82.5°	92.3	80.1	89.2	102.2	108.5	155.2	218.6	182.8	142.4	123.9	124.9
85°	43.6	42.0	53.2	59.5	67.6	96.2	163.5	126.5	90.8	75.1	78.5
87.5°	9.9	13.3	17.5	17.2	20.1	25.8	50.9	35.5	26.3	18.0	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

(END OF REPORT)