

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: P366824

Luminaire Tested: **MSA-SA1B-760-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366824
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-760-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5031 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

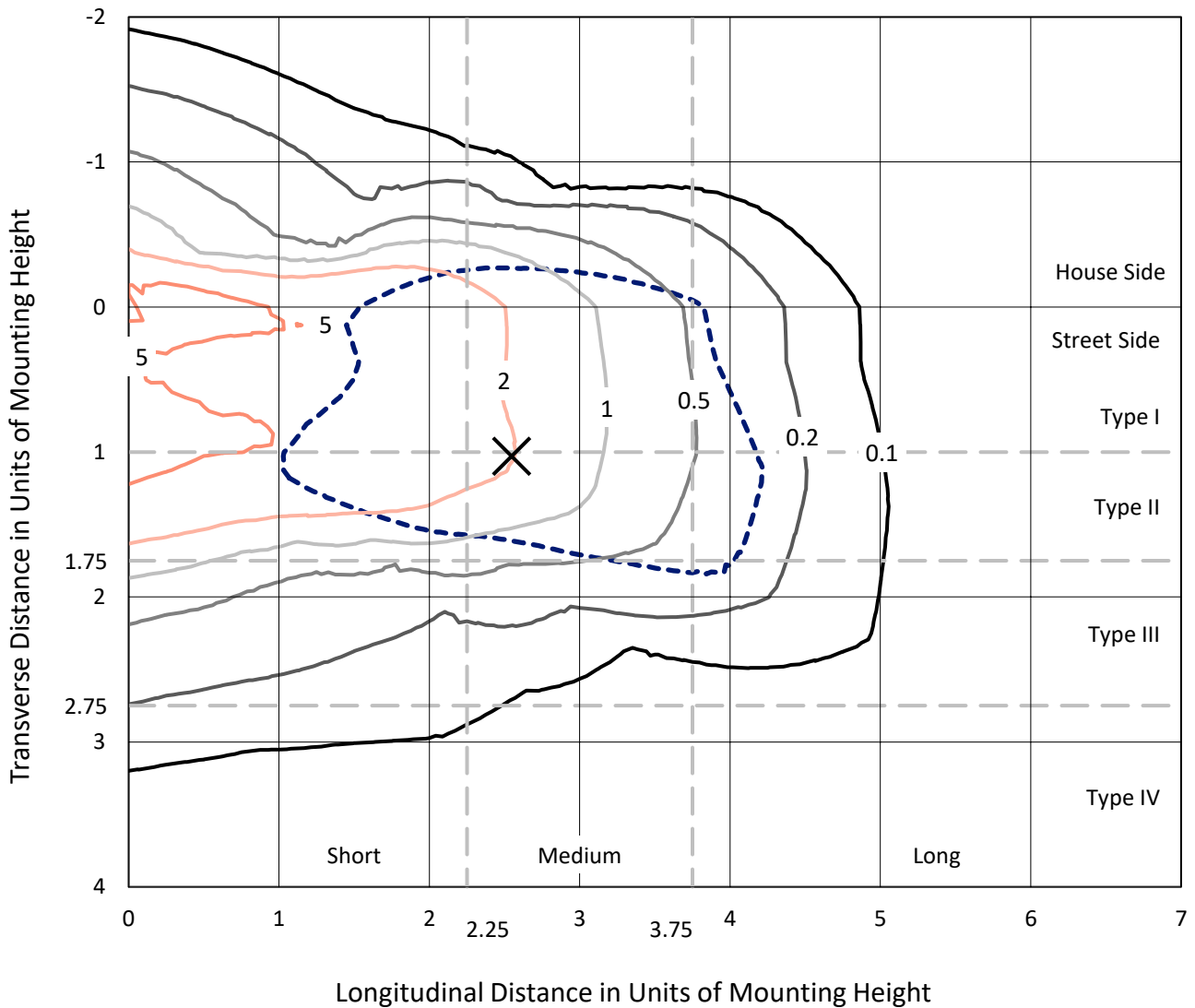
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

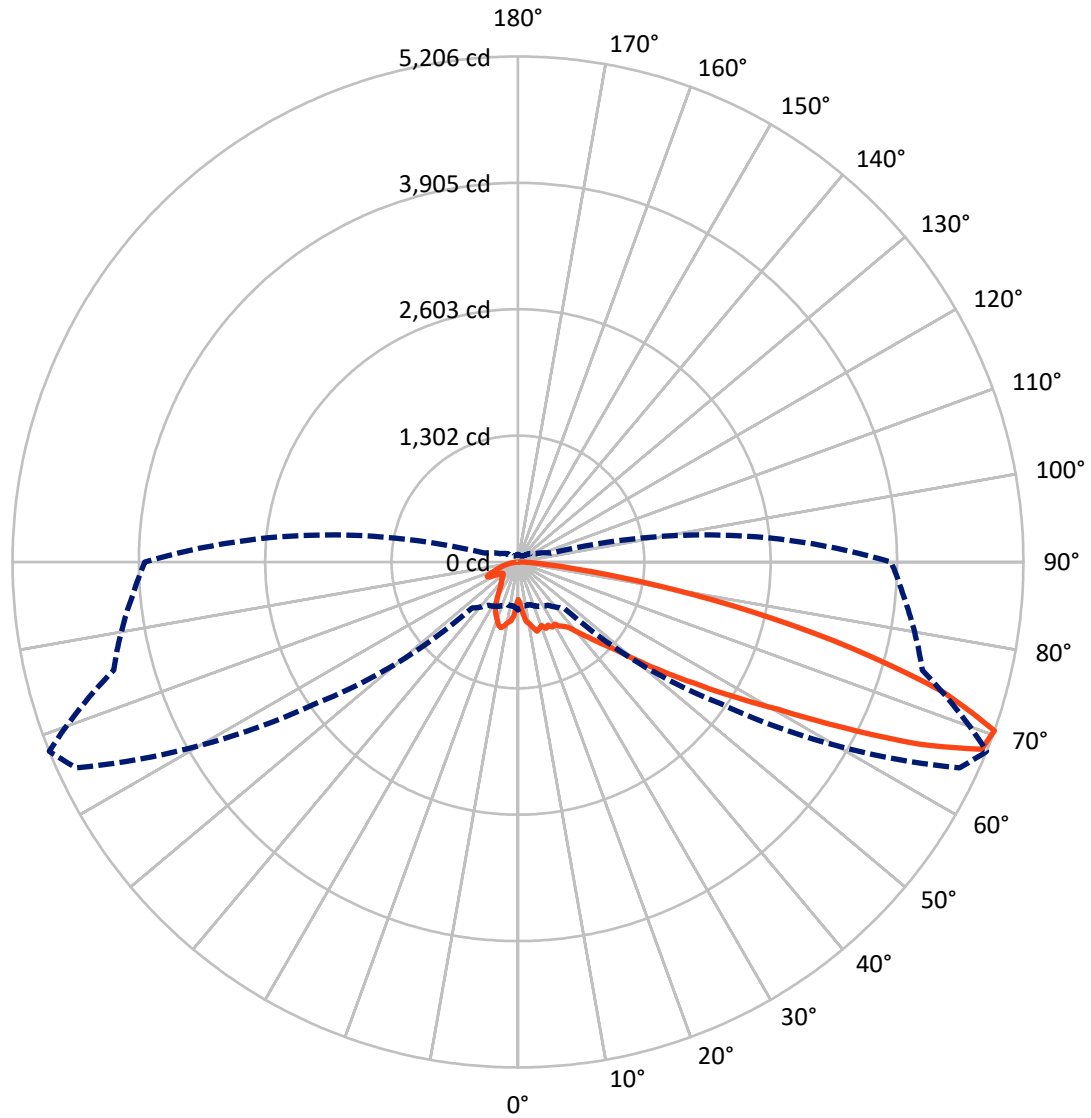
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.6 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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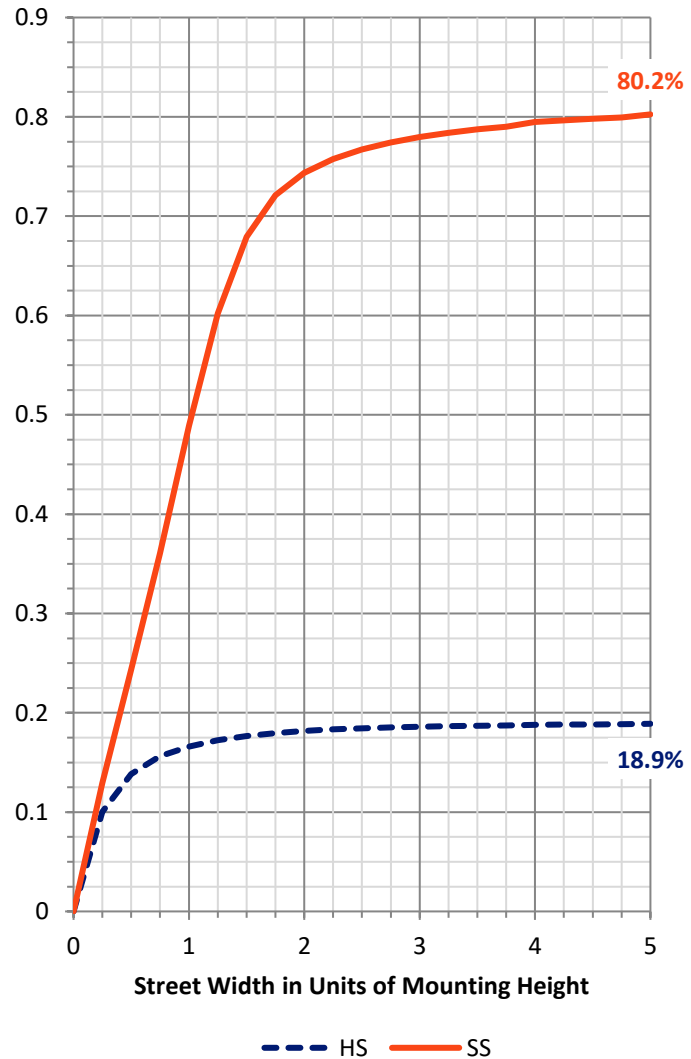
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	960.5	0.0	960.5
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	4070.5	0.0	4070.5
	% Fixture	80.9	0.0	80.9
Total	Lumens	5031.0	0.0	5031.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	1.0
10°-20°	167.9	3.3
20°-30°	255.4	5.1
30°-40°	390.2	7.8
40°-50°	670.8	13.3
50°-60°	1110.4	22.1
60°-70°	1369.0	27.2
70°-80°	879.4	17.5
80°-90°	136.4	2.7
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°	5031.0	100.0
0°-180°	5031.0	100.0

Coefficient of Utilization



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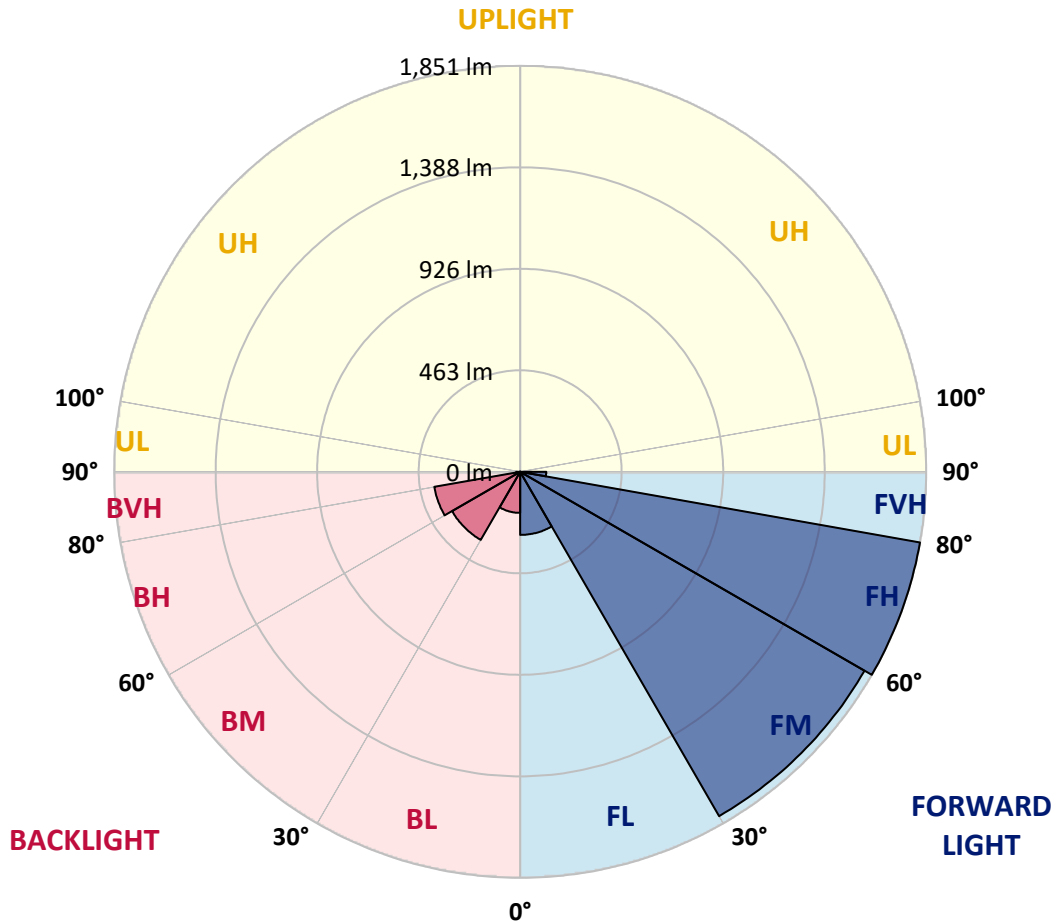
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	287.7	5.7			
FM (30°-60°)	1812.9	36.0			
FH (60°-80°)	1851.0	36.8			G2/5000
FVH (80°-90°)	118.9	2.4			G2/225
BL (0°-30°)	187.2	3.7	B1/500		
BM (30°-60°)	358.5	7.1	B1/1000		
BH (60°-80°)	397.3	7.9	B1/500		G1/500
BVH (80°-90°)	17.5	0.3			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7
2.5°	443.2	425.3	407.2	416.1	430.2	442.6	440.1	441.5	424.5	422.2	467.0
5°	522.2	491.4	490.8	491.2	492.5	478.2	513.1	531.2	535.2	553.8	597.8
7.5°	549.6	537.1	524.5	530.8	514.8	516.3	559.2	606.4	617.6	631.0	691.3
10°	543.9	532.1	535.9	536.9	539.9	563.7	591.3	636.5	646.0	688.9	704.5
12.5°	544.7	542.6	560.3	560.9	592.5	635.3	646.2	687.9	691.7	723.3	788.3
15°	573.6	588.1	578.2	583.5	589.6	640.7	656.5	716.3	739.1	779.7	828.6
17.5°	629.8	634.0	604.3	596.5	616.5	632.1	668.1	694.0	717.8	831.3	898.7
20°	642.8	654.2	618.8	578.6	620.9	642.6	667.7	679.5	698.0	838.9	934.5
22.5°	698.8	675.3	632.5	597.6	611.5	632.5	650.6	695.1	743.7	817.2	970.3
25°	730.6	717.0	678.8	641.4	629.6	630.2	665.2	705.0	721.8	849.0	977.4
27.5°	807.5	785.6	699.9	692.7	648.3	613.8	667.5	729.4	758.9	824.1	1012.4
30°	903.7	887.1	774.6	765.2	697.4	637.2	697.0	747.5	743.3	840.3	1036.6
32.5°	981.6	1009.4	895.9	821.2	773.0	715.3	687.7	744.3	786.2	878.0	1077.6
35°	1092.8	1118.9	990.5	939.9	835.3	751.5	752.3	787.7	813.6	922.0	1123.5
37.5°	1285.3	1262.3	1158.9	1079.1	1012.2	887.1	849.6	837.2	858.0	975.9	1213.5
40°	1424.0	1404.6	1282.9	1237.5	1107.1	1034.5	931.7	919.9	956.8	1031.5	1286.9
42.5°	1588.5	1553.9	1440.6	1403.2	1266.9	1136.0	1032.4	1039.1	1057.0	1136.4	1386.3
45°	1755.9	1672.1	1607.8	1604.9	1513.9	1333.1	1193.9	1188.4	1189.0	1290.7	1497.9
47.5°	1888.7	1813.3	1739.9	1704.9	1659.0	1673.9	1428.4	1364.2	1344.8	1446.1	1665.3
50°	1978.6	1891.9	1808.7	1800.5	1923.0	2003.7	1648.7	1580.0	1592.0	1668.5	1888.5
52.5°	1980.5	1877.6	1790.8	1848.3	2137.0	2252.4	2028.1	1836.3	1874.6	1926.6	2179.7
55°	1842.8	1736.1	1679.6	1810.6	2220.6	2547.3	2561.2	2246.9	2202.7	2221.8	2527.8
57.5°	1552.5	1444.6	1411.8	1568.7	2062.0	2831.8	3205.1	2737.5	2607.8	2527.8	2884.5
60°	1168.6	1075.3	1054.9	1154.9	1709.5	2748.2	3726.5	3348.1	3083.9	2869.5	3242.2
62.5°	876.3	809.4	778.6	793.0	1182.9	2476.4	4068.8	4119.6	3745.4	3242.6	3591.7
65°	712.1	658.0	630.6	612.1	735.7	1914.8	4006.9	4769.0	4518.2	3634.5	3863.8
67.5°	594.8	546.8	534.2	552.3	581.6	1110.9	3522.7	5132.2	5149.2	4021.1	4022.7
70°	493.8	458.2	453.5	504.9	543.5	670.4	2544.4	5018.0	5206.3	4311.0	3985.5
72.5°	381.5	362.4	361.7	442.4	539.9	571.5	1515.2	4335.0	4587.9	4218.3	3620.8
75°	264.7	251.4	261.5	363.6	527.5	579.7	864.8	3376.5	3565.8	3589.6	2900.5
77.5°	182.1	171.0	181.9	263.0	471.0	593.6	604.9	2441.4	2462.5	2407.1	1661.3
80°	126.8	119.0	127.4	186.1	366.6	587.5	515.0	1537.1	1410.3	1074.3	531.9
82.5°	78.5	76.2	85.5	132.7	258.1	534.4	488.1	793.2	605.6	296.5	189.9
85°	41.3	37.9	49.7	86.5	161.5	419.4	457.3	362.0	233.7	105.3	76.2
87.5°	12.2	10.9	19.2	35.0	68.4	188.0	261.7	153.5	87.2	31.0	23.8
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°	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7	385.7
2.5°	470.2	467.9	436.7	440.7	447.4	449.1	448.9	437.5	425.5	459.0	458.0
5°	598.8	578.0	562.4	559.0	539.9	520.7	527.5	525.1	522.2	537.3	539.2
7.5°	691.5	662.6	644.5	598.0	553.8	515.4	527.7	531.5	523.9	551.2	559.5
10°	715.9	693.2	673.6	613.8	589.4	567.0	534.0	496.3	491.2	475.4	477.3
12.5°	778.9	775.7	709.0	656.3	624.5	580.1	508.7	463.0	423.9	425.8	414.4
15°	828.6	830.2	750.0	676.3	591.0	523.2	439.2	382.4	342.2	334.2	325.9
17.5°	895.3	891.9	753.4	652.3	544.3	444.9	341.9	285.5	278.8	283.4	276.3
20°	924.4	894.7	731.9	592.7	471.2	337.9	258.4	228.5	241.5	260.0	260.5
22.5°	950.5	899.7	720.7	544.7	374.0	245.7	207.4	201.9	217.3	242.4	244.5
25°	949.4	923.1	700.7	496.3	289.9	191.8	180.2	184.2	202.6	228.7	230.1
27.5°	997.2	905.2	648.7	432.7	218.3	164.2	167.2	174.6	183.2	208.0	212.9
30°	996.8	938.5	622.6	355.4	175.4	150.5	158.1	164.4	171.6	194.3	197.1
32.5°	1020.4	916.8	606.8	276.5	157.3	147.2	149.1	155.4	165.7	181.1	183.0
35°	1048.8	941.4	556.3	219.6	150.5	144.2	145.7	149.3	158.8	172.9	174.8
37.5°	1140.0	946.0	536.3	185.1	150.1	143.0	142.8	144.7	155.4	168.2	173.9
40°	1175.6	988.4	478.0	172.9	148.7	143.0	140.0	141.1	149.9	166.3	170.8
42.5°	1260.8	1002.5	434.8	168.7	148.7	140.4	135.8	137.5	147.8	162.3	169.3
45°	1348.6	1022.5	383.4	167.8	148.4	140.2	131.4	135.2	143.6	155.8	163.4
47.5°	1473.7	1094.5	332.1	165.3	146.8	141.3	130.3	130.1	137.5	148.0	155.2
50°	1677.7	1206.9	292.3	162.1	147.0	140.4	128.2	125.3	130.1	139.4	146.3
52.5°	1961.8	1398.5	276.7	160.4	145.3	137.1	124.7	120.0	122.8	130.1	136.9
55°	2291.5	1657.3	292.0	160.4	141.9	131.8	119.6	114.1	115.6	120.7	127.2
57.5°	2676.8	1978.8	366.4	158.1	137.7	125.5	113.5	107.2	107.6	112.0	117.9
60°	3079.2	2338.1	532.9	156.2	134.8	118.5	106.3	99.8	99.2	103.4	108.6
62.5°	3482.2	2669.5	708.1	160.7	133.9	112.6	98.8	92.2	92.0	95.8	100.2
65°	3802.7	2896.0	751.7	178.6	139.4	105.9	91.0	84.9	84.4	87.6	92.4
67.5°	3960.0	2928.9	571.0	200.9	151.0	99.6	83.4	77.7	77.3	80.6	84.9
70°	3843.5	2704.4	352.5	203.2	150.3	92.2	75.6	70.7	69.9	73.5	76.6
72.5°	3412.7	2365.6	267.8	179.8	130.1	81.7	67.8	63.6	62.3	65.5	68.4
75°	2739.2	1878.2	214.6	145.1	102.5	68.9	60.0	56.0	54.5	57.5	60.0
77.5°	1595.6	1056.6	156.9	113.3	77.5	56.2	51.2	47.6	45.9	49.1	51.0
80°	518.8	352.1	98.5	81.3	56.6	44.0	41.5	39.0	37.3	39.4	40.0
82.5°	186.3	131.0	54.5	49.9	37.7	31.6	31.4	29.9	27.8	28.6	28.6
85°	82.5	59.8	32.4	26.7	22.5	16.8	19.8	18.7	16.6	16.2	15.6
87.5°	23.2	19.8	11.8	9.1	7.4	2.7	6.3	5.7	4.6	4.2	2.9
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)