

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: P366664

Luminaire Tested: **MSA-SA1A-740-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366664
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-740-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4097 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

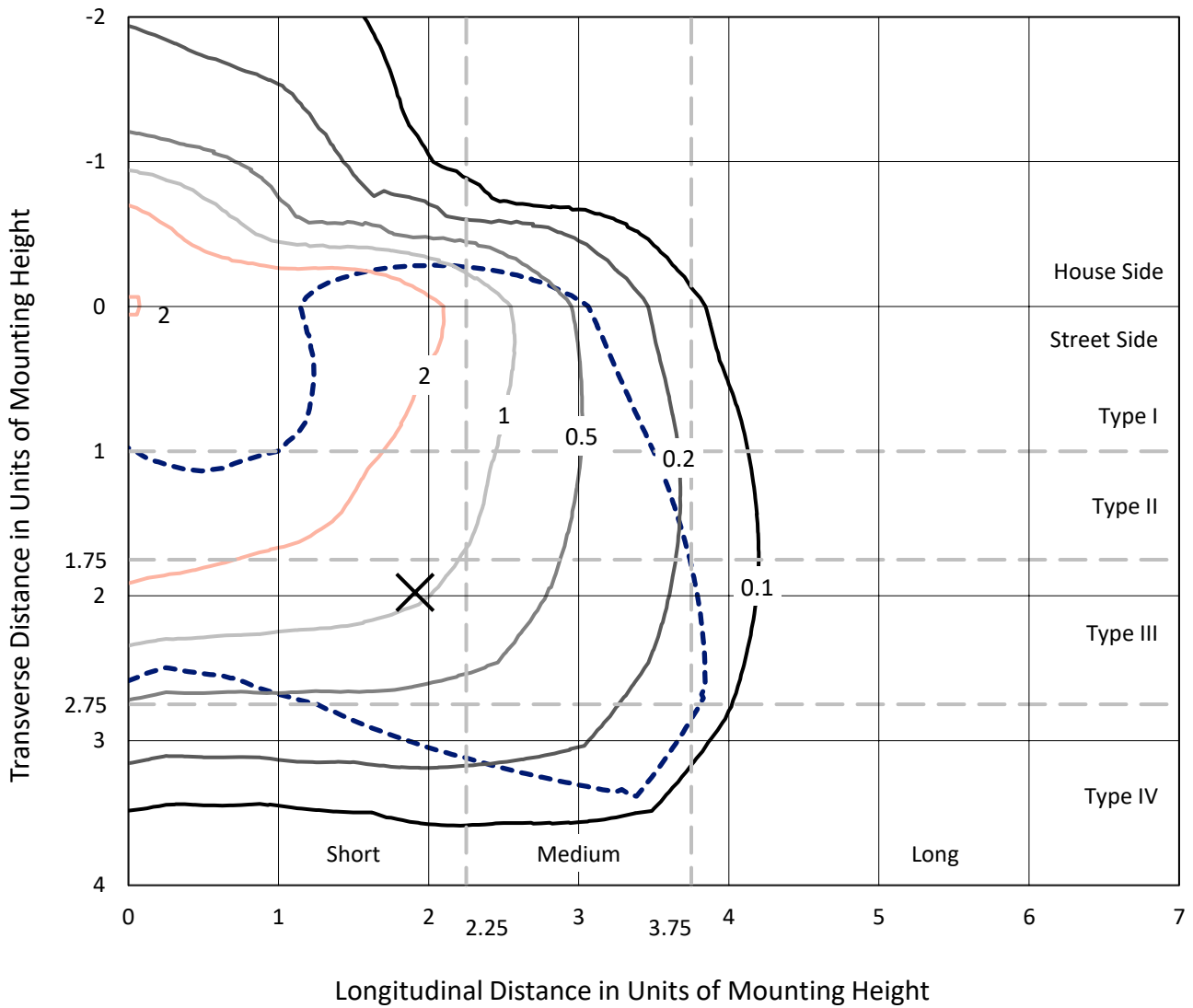
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

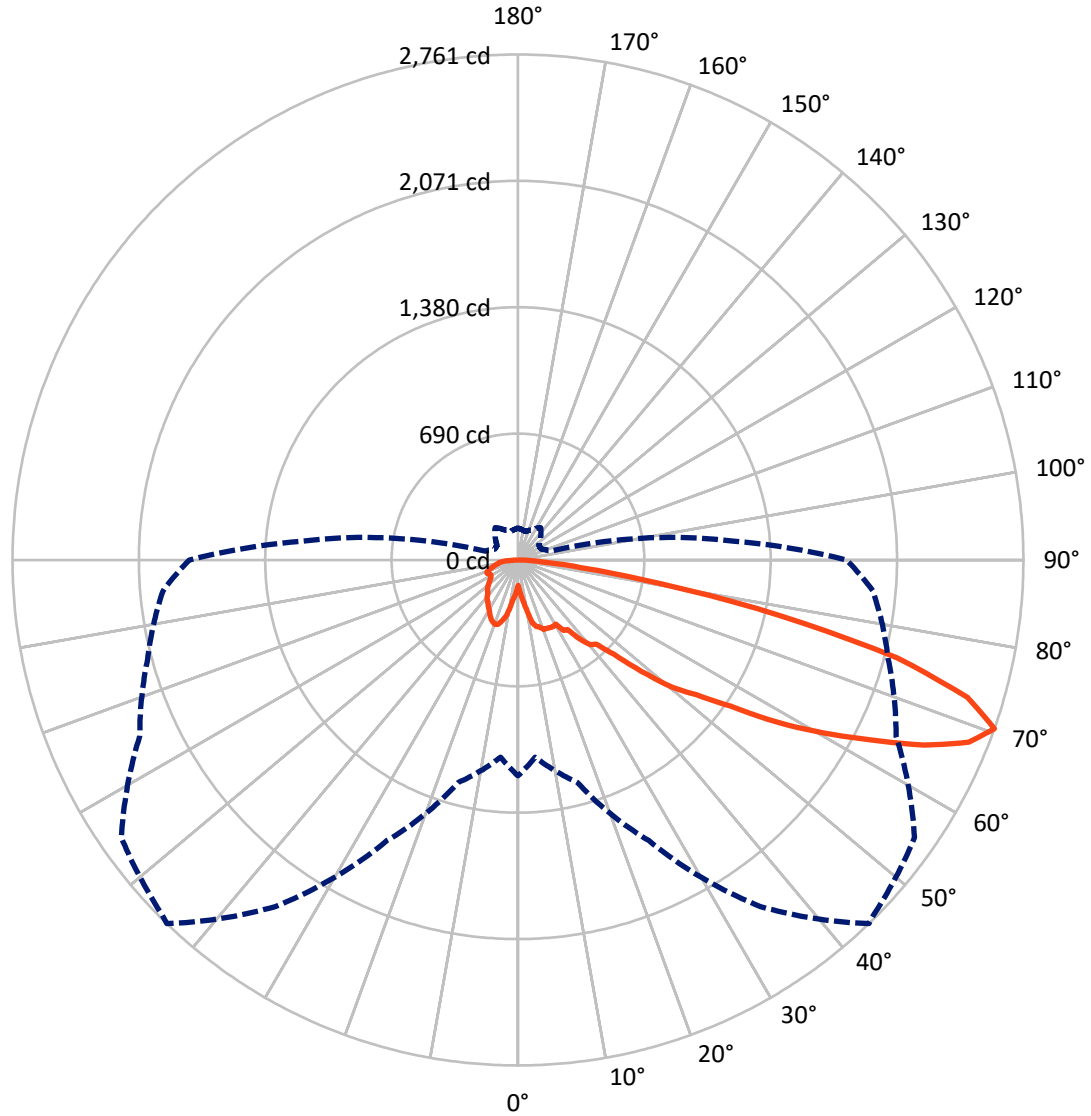
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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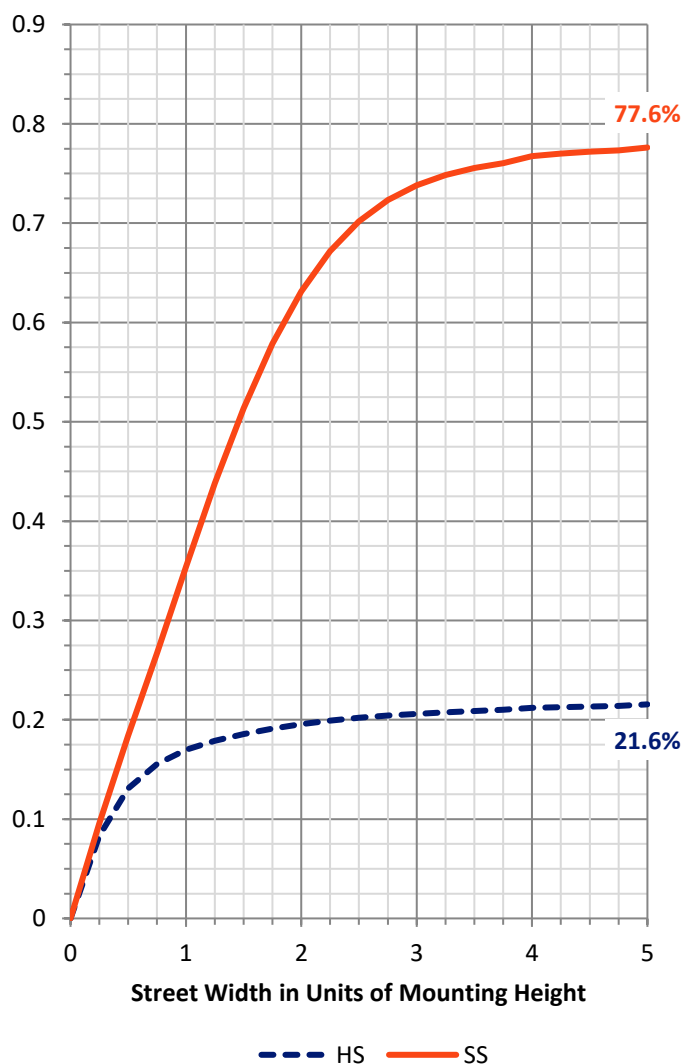
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	904.0	0.0	904.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3193.0	0.0	3193.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	4097.0	0.0	4097.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.8	0.5
10°-20°	100.6	2.5
20°-30°	187.9	4.6
30°-40°	301.6	7.4
40°-50°	509.1	12.4
50°-60°	907.2	22.1
60°-70°	1240.9	30.3
70°-80°	729.7	17.8
80°-90°	98.3	2.4
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°	4097.0	100.0
0°-180°	4097.0	100.0

Coefficient of Utilization

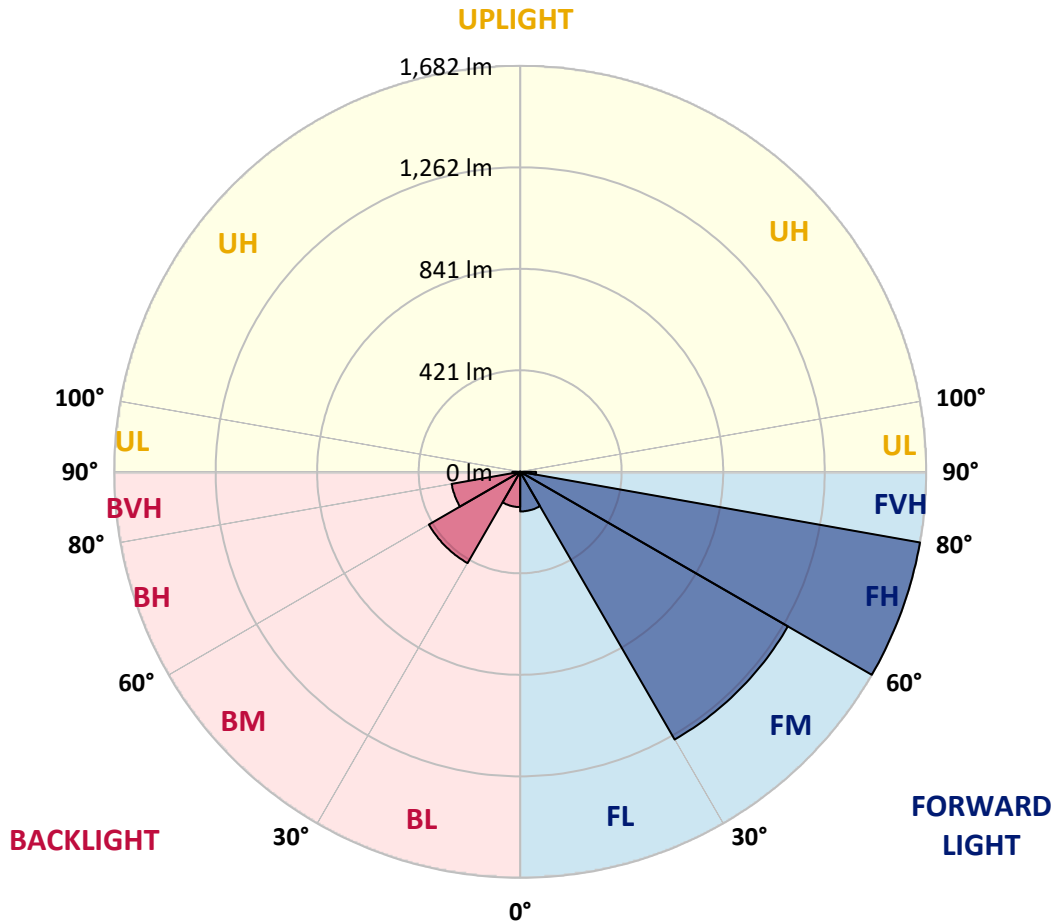


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	164.2	4.0			
FM (30°-60°)	1281.0	31.3			
FH (60°-80°)	1682.3	41.1			G1/1800
FVH (80°-90°)	65.5	1.6			G1/100
BL (0°-30°)	146.1	3.6	B1/500		
BM (30°-60°)	436.8	10.7	B1/1000		
BH (60°-80°)	288.3	7.0	B1/500		G1/500
BVH (80°-90°)	32.8	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
2.5°	169.0	165.6	157.6	160.3	163.6	165.0	164.6	164.3	159.1	157.2	166.5
5°	229.6	222.2	216.4	214.0	206.3	200.2	196.5	206.3	204.8	207.3	213.7
7.5°	286.8	282.1	268.8	264.1	248.3	237.9	236.7	244.4	246.4	242.4	253.3
10°	323.5	315.5	312.8	301.5	290.6	288.9	287.9	284.4	279.5	279.2	269.5
12.5°	352.1	356.3	358.5	345.6	345.9	351.9	348.7	334.5	326.2	311.8	313.0
15°	403.3	409.4	392.1	383.9	368.1	377.1	376.0	364.0	362.9	353.4	342.5
17.5°	448.0	450.7	421.8	403.0	397.6	384.5	388.1	388.4	372.9	389.7	380.0
20°	451.7	461.3	428.0	390.6	406.7	405.0	405.5	402.2	381.8	409.6	405.9
22.5°	469.9	455.2	425.3	398.0	402.2	404.7	407.0	403.0	401.8	417.3	428.5
25°	466.5	461.8	431.6	408.4	408.9	409.4	410.6	422.7	421.3	442.3	448.2
27.5°	497.9	490.7	433.4	427.7	414.6	411.7	403.7	428.9	448.5	448.0	480.4
30°	557.7	550.3	476.4	459.8	436.1	406.9	422.3	455.9	471.4	476.6	517.7
32.5°	651.1	663.2	561.1	494.1	464.7	458.3	456.6	453.2	491.5	517.2	554.7
35°	785.2	775.6	660.9	567.5	494.7	467.3	471.0	491.5	537.1	553.7	588.3
37.5°	938.7	918.9	788.7	650.6	581.4	547.1	534.9	554.7	564.8	577.9	648.6
40°	1094.8	1046.4	914.2	760.0	633.5	607.6	596.9	572.5	596.2	622.7	712.6
42.5°	1245.5	1208.0	1050.8	890.5	721.2	628.9	623.1	599.2	672.6	700.7	805.0
45°	1403.4	1316.5	1190.7	1037.8	849.3	733.6	724.9	682.0	776.1	834.6	935.4
47.5°	1509.5	1429.1	1318.9	1157.4	956.7	908.6	892.0	818.8	904.1	980.0	1136.8
50°	1610.0	1527.2	1411.4	1288.3	1151.1	1095.8	1060.3	938.4	1063.5	1187.2	1395.0
52.5°	1753.8	1679.7	1519.0	1420.2	1359.9	1224.0	1197.6	1130.6	1250.0	1416.8	1677.2
55°	1907.5	1806.5	1660.9	1606.1	1581.8	1407.7	1386.2	1343.6	1498.3	1651.8	1951.5
57.5°	1975.4	1870.0	1789.7	1757.0	1755.0	1674.8	1650.2	1620.4	1752.1	1853.4	2209.7
60°	2029.3	1916.2	1884.2	1902.5	1969.0	1916.2	1884.2	1858.0	1958.7	2052.7	2420.4
62.5°	2019.4	1906.0	1922.5	1978.2	2148.1	2163.5	2138.8	2075.3	2163.5	2215.9	2541.2
65°	1859.5	1754.6	1850.6	1982.9	2314.5	2438.0	2436.7	2270.5	2301.1	2301.1	2528.4
67.5°	1579.3	1470.7	1627.8	1941.4	2429.6	2655.6	2655.9	2477.5	2313.7	2292.5	2330.8
70°	1179.3	1081.0	1257.6	1690.8	2310.8	2760.9	2745.6	2644.5	2279.1	2094.1	1947.0
72.5°	704.4	640.9	803.3	1230.9	1971.2	2567.2	2607.9	2452.1	2086.4	1741.5	1391.8
75°	319.9	292.3	377.5	707.1	1407.2	2141.3	2185.5	2069.4	1657.2	1252.5	804.3
77.5°	136.9	129.5	164.8	313.6	775.9	1464.4	1554.9	1479.0	1122.8	727.9	355.8
80°	88.0	83.3	101.3	150.9	360.3	791.2	869.2	840.8	572.0	283.1	125.3
82.5°	52.6	51.1	67.7	94.7	196.5	348.2	392.4	402.8	237.5	127.0	71.7
85°	28.7	29.1	37.1	57.5	117.9	135.6	145.1	157.9	111.9	73.6	34.8
87.5°	9.6	11.1	15.0	23.4	42.0	38.3	38.5	44.7	47.2	30.6	11.1
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°	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
2.5°	168.0	165.0	157.2	157.7	160.6	161.3	162.1	157.2	156.2	165.5	166.3
5°	214.7	204.8	200.2	198.7	194.4	192.9	200.9	204.6	208.3	215.5	219.1
7.5°	252.2	241.1	232.8	225.3	218.9	215.2	228.8	239.2	245.6	260.4	267.1
10°	269.3	259.7	256.7	250.6	255.5	266.6	269.1	269.5	283.6	283.2	286.1
12.5°	303.4	297.2	287.3	289.4	302.2	313.6	310.4	315.3	320.4	332.4	326.9
15°	334.5	332.8	323.5	325.1	327.6	341.9	343.7	348.6	356.3	365.9	359.3
17.5°	372.8	372.1	349.6	347.6	353.4	367.4	363.0	354.5	380.0	390.2	387.5
20°	398.8	393.8	364.9	356.3	371.3	373.1	368.1	354.5	376.6	399.0	405.0
22.5°	420.5	414.6	384.9	368.1	365.0	365.9	365.9	363.4	374.3	392.6	392.4
25°	437.9	443.5	405.7	389.6	373.4	353.3	350.8	352.9	359.2	394.4	393.3
27.5°	481.8	466.5	412.7	400.7	367.6	335.8	342.7	346.1	348.1	386.7	393.1
30°	510.3	515.1	437.9	407.2	359.0	316.3	318.7	328.4	340.2	385.9	387.7
32.5°	548.8	538.7	477.3	396.3	336.1	304.6	300.2	313.3	330.8	372.3	377.3
35°	584.6	596.5	493.9	394.3	320.2	286.9	291.6	296.2	314.3	357.1	363.0
37.5°	668.6	641.4	540.6	384.5	306.9	278.0	273.0	279.9	295.3	328.4	342.0
40°	732.4	734.1	550.7	372.3	281.5	265.3	254.5	261.4	267.9	294.3	300.2
42.5°	852.2	815.6	575.4	345.4	265.6	246.1	240.1	243.1	244.1	255.2	264.9
45°	1004.6	918.7	585.1	309.3	244.6	238.2	225.9	224.4	218.9	220.4	229.0
47.5°	1215.4	1079.7	578.0	270.8	225.9	228.0	210.3	203.4	195.7	197.6	205.6
50°	1488.0	1285.3	577.5	238.2	213.2	214.5	200.1	187.6	179.9	183.8	190.8
52.5°	1793.9	1491.6	579.9	215.9	199.2	198.6	193.4	178.2	172.0	176.1	184.1
55°	2086.6	1669.0	597.4	201.8	184.8	186.0	188.0	175.2	168.3	172.0	180.4
57.5°	2341.3	1809.1	590.8	186.8	171.3	176.7	182.1	171.0	165.8	171.2	179.6
60°	2519.3	1874.1	539.1	172.5	161.4	168.8	179.2	170.5	169.8	181.4	191.5
62.5°	2584.3	1850.1	438.3	161.3	155.6	167.8	185.8	181.6	182.3	196.5	210.5
65°	2489.4	1723.7	326.9	154.0	151.0	172.7	200.9	188.1	178.9	190.7	203.4
67.5°	2219.5	1499.1	238.9	147.8	145.8	180.4	214.9	187.5	170.3	182.3	192.7
70°	1795.6	1183.3	185.0	139.9	138.9	175.2	216.2	182.4	161.1	168.8	174.7
72.5°	1230.3	810.2	153.2	132.4	127.0	155.2	205.3	171.2	150.0	154.5	159.4
75°	687.6	454.7	128.8	123.0	111.2	138.3	192.5	164.5	141.8	143.1	149.8
77.5°	308.6	196.7	109.4	110.5	96.9	122.3	175.9	153.7	129.2	126.2	132.9
80°	116.8	95.9	88.7	93.4	81.5	106.0	158.6	144.0	115.9	112.0	115.9
82.5°	67.7	58.1	65.9	71.9	64.7	97.4	151.4	135.1	102.1	92.4	95.8
85°	31.4	30.1	39.5	46.7	45.2	75.9	129.5	101.6	72.7	61.5	68.0
87.5°	8.2	9.2	13.9	16.5	16.8	26.0	49.9	37.8	28.4	21.5	20.7
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)