

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: P366630

Luminaire Tested: **MSA-SA1A-730-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-730-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3585 lumens
Efficiency: N/A
Efficacy: 105.4 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

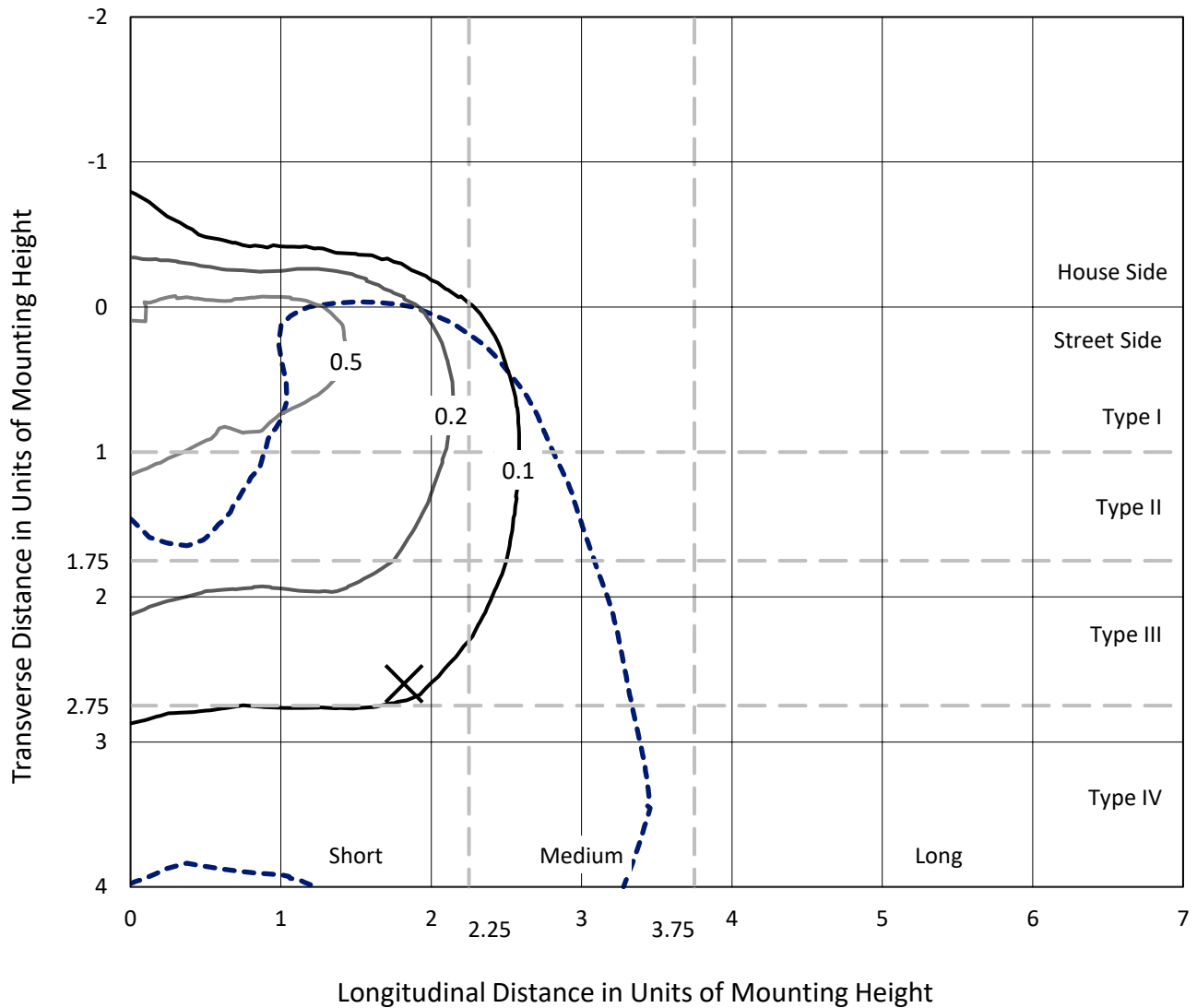
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

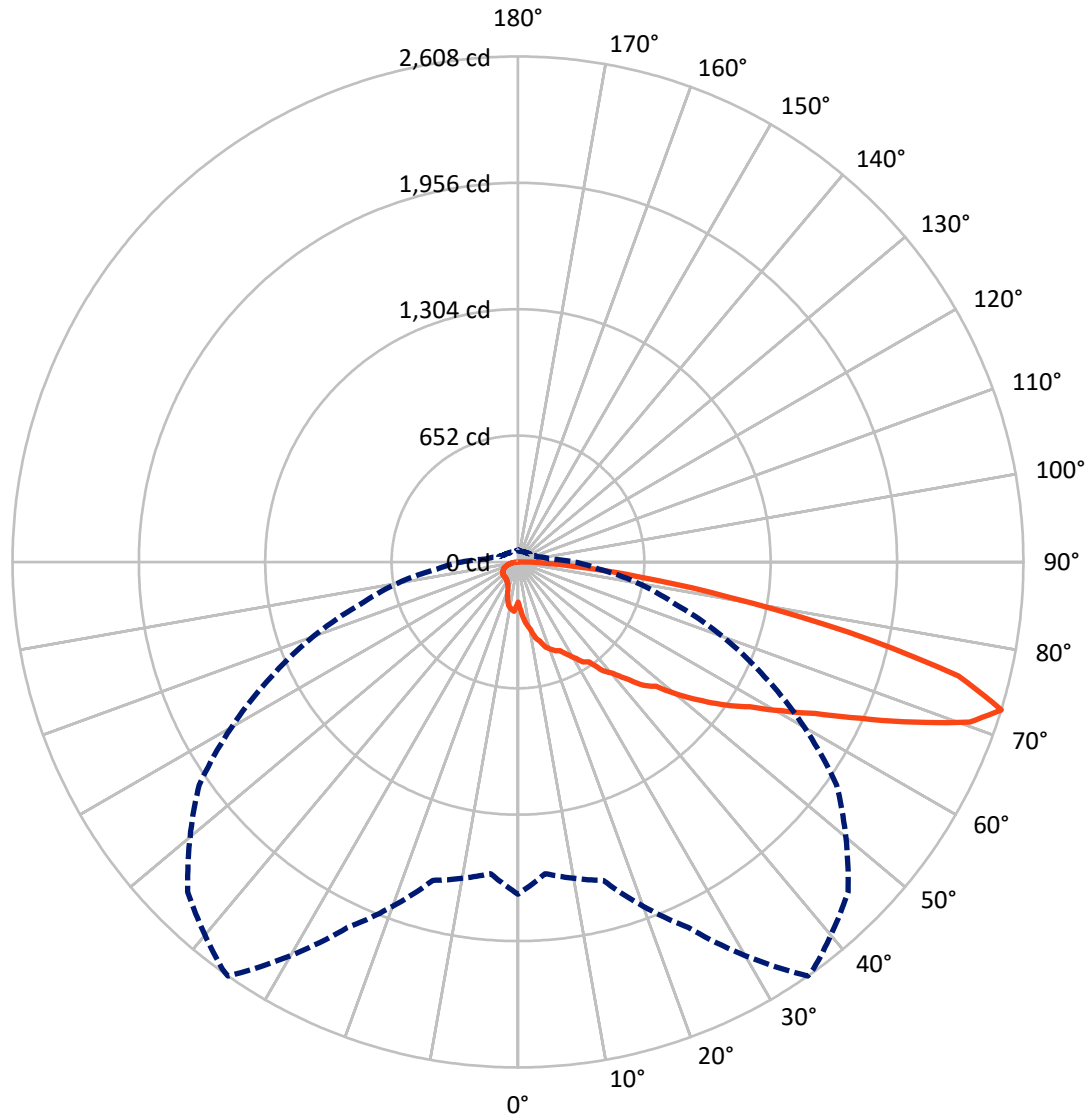
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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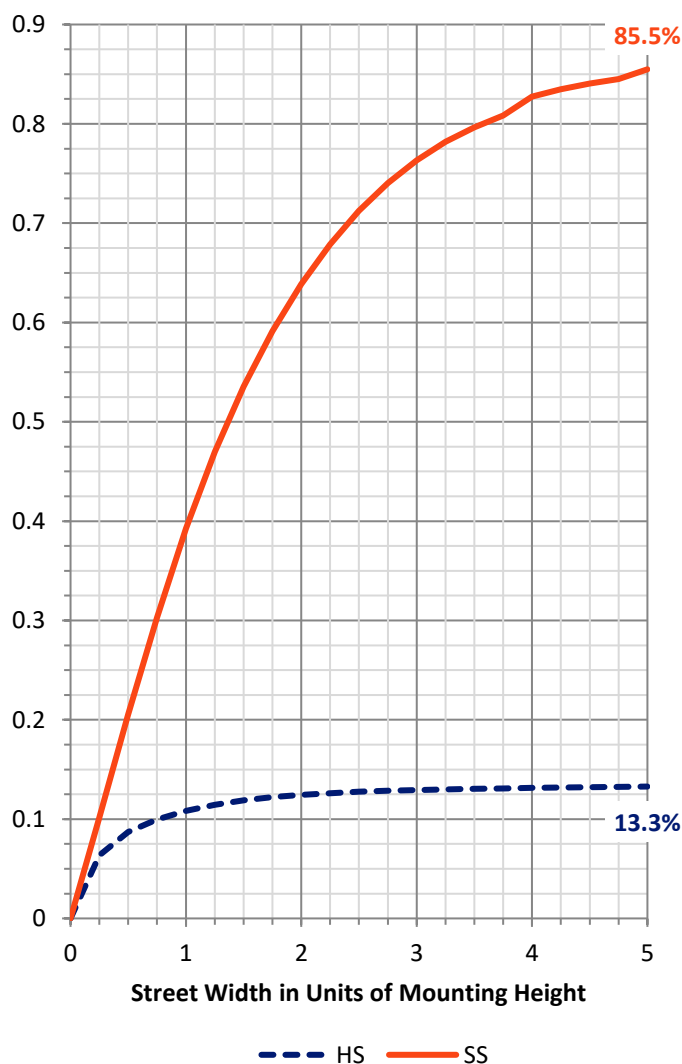
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	481.1	0.0	481.1
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	3103.9	0.0	3103.9
	% Fixture	86.6	0.0	86.6
Total	Lumens	3585.0	0.0	3585.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.5	0.8
10°-20°	97.0	2.7
20°-30°	168.5	4.7
30°-40°	281.7	7.9
40°-50°	488.9	13.6
50°-60°	739.1	20.6
60°-70°	957.4	26.7
70°-80°	706.5	19.7
80°-90°	118.4	3.3
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°	3585.0	100.0
0°-180°	3585.0	100.0

Coefficient of Utilization

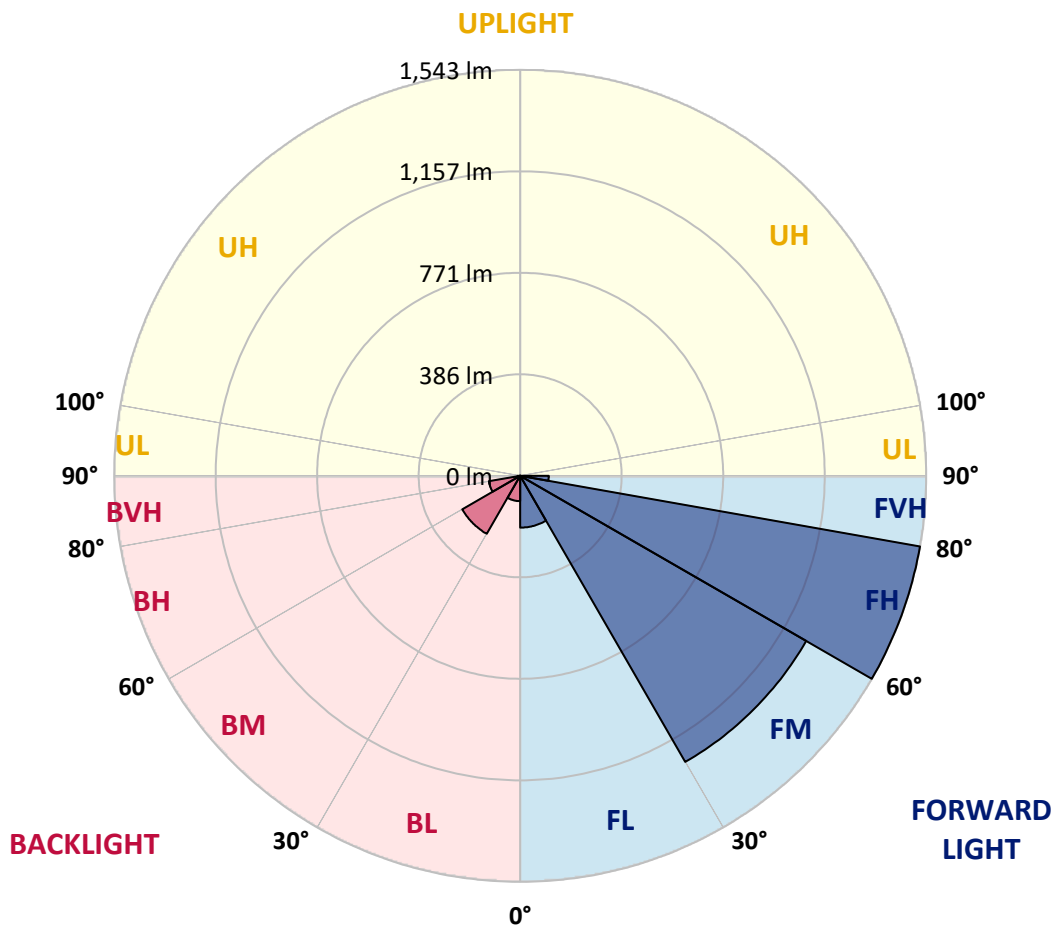


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	196.9	5.5			
FM (30°-60°)	1255.3	35.0			
FH (60°-80°)	1543.0	43.0			G1/1800
FVH (80°-90°)	108.7	3.0			G2/225
BL (0°-30°)	96.2	2.7	B0/110		
BM (30°-60°)	254.3	7.1	B1/1000		
BH (60°-80°)	121.0	3.4	B1/500		G1/500
BVH (80°-90°)	9.7	0.3			G0/10
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°	35°	36°	45°	55°	65°	75°	85°
0°	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2
2.5°	258.4	246.0	235.3	234.9	244.8	248.6	247.1	243.7	239.8	231.4	249.7
5°	323.8	306.0	302.7	298.7	289.7	292.1	277.4	288.6	292.1	300.2	312.5
7.5°	362.3	351.9	343.8	340.5	324.8	323.0	312.1	328.1	334.8	333.7	351.9
10°	377.5	368.0	368.6	357.6	352.5	354.7	355.9	356.2	360.3	363.7	354.5
12.5°	385.3	389.0	402.4	394.9	401.4	404.0	416.8	403.6	404.1	386.8	396.3
15°	424.6	433.8	426.0	425.7	423.7	428.0	439.0	430.1	437.0	431.5	419.3
17.5°	472.0	474.8	459.8	453.7	461.6	460.3	457.5	458.9	441.7	473.6	458.6
20°	486.6	497.4	477.7	453.7	480.0	483.5	482.9	476.9	447.6	493.5	478.9
22.5°	528.8	514.1	498.5	483.2	496.7	498.7	495.3	481.1	471.3	488.7	500.2
25°	547.9	544.4	524.5	522.7	507.8	500.8	506.6	502.5	492.9	523.9	511.2
27.5°	591.7	587.6	541.8	560.6	539.1	537.2	506.5	520.2	529.9	527.6	546.6
30°	641.3	646.0	579.2	598.0	573.0	569.7	538.8	556.2	562.8	564.9	588.6
32.5°	696.4	709.4	643.0	627.5	614.2	616.5	590.3	558.5	584.0	634.1	644.3
35°	756.0	761.4	691.8	668.5	633.8	631.3	631.8	635.8	661.6	718.7	726.7
37.5°	866.4	841.6	780.5	721.6	710.0	687.2	702.6	714.9	740.7	828.3	861.6
40°	934.3	915.9	822.9	788.8	756.6	758.8	787.7	787.6	848.6	938.9	989.8
42.5°	997.2	977.1	889.5	855.2	824.7	832.2	840.5	855.0	972.1	1117.6	1140.9
45°	1047.8	1003.9	940.9	933.2	908.1	898.2	933.2	956.5	1119.7	1262.2	1275.7
47.5°	1082.3	1046.1	984.5	977.7	959.2	983.6	1079.2	1094.2	1234.2	1407.4	1406.3
50°	1134.6	1085.2	1029.5	1025.9	1078.1	1091.1	1207.7	1206.2	1345.6	1528.0	1502.7
52.5°	1194.9	1132.6	1072.2	1110.0	1189.5	1195.9	1297.1	1338.2	1467.2	1644.3	1578.3
55°	1264.2	1194.6	1136.1	1186.6	1305.0	1286.1	1388.4	1489.0	1619.5	1766.8	1632.9
57.5°	1350.0	1265.6	1218.3	1295.1	1410.5	1427.3	1519.3	1645.8	1742.0	1843.0	1672.7
60°	1440.6	1341.5	1298.2	1371.3	1558.1	1577.4	1667.4	1776.2	1879.5	1914.8	1665.2
62.5°	1527.1	1419.8	1380.6	1470.9	1721.8	1769.6	1836.0	1905.3	1993.8	1932.2	1574.5
65°	1623.3	1515.9	1491.3	1626.7	1943.9	1991.3	2078.1	2057.3	2032.9	1870.4	1424.4
67.5°	1725.2	1616.1	1620.7	1807.4	2205.7	2213.8	2347.1	2208.7	1986.9	1706.7	1172.4
70°	1780.0	1668.3	1715.6	2000.0	2472.1	2460.4	2487.7	2249.4	1799.1	1349.1	808.1
72.5°	1713.6	1614.0	1700.6	2081.1	2607.6	2595.1	2408.7	2007.8	1406.6	839.0	418.9
75°	1450.9	1354.8	1487.3	1855.1	2347.5	2359.1	2049.9	1493.1	805.3	337.4	174.0
77.5°	985.9	936.3	1049.8	1382.8	1743.7	1784.0	1520.9	873.1	338.2	139.7	105.3
80°	521.0	497.4	581.3	796.6	1104.1	1134.1	894.4	434.9	173.2	90.4	75.1
82.5°	283.1	273.1	318.1	409.6	627.4	653.5	463.8	288.9	116.7	56.6	45.9
85°	190.2	186.4	216.2	220.0	296.7	305.3	243.0	222.5	70.1	27.7	30.3
87.5°	95.2	91.3	113.8	100.5	113.2	113.4	111.4	142.0	17.7	9.2	5.5
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°	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2
2.5°	250.0	244.7	226.2	226.0	228.8	226.9	228.3	220.8	217.6	232.3	231.5
5°	310.8	294.7	279.2	273.9	267.6	254.0	254.8	254.9	252.6	261.3	262.0
7.5°	346.4	327.1	312.9	284.4	262.1	244.7	247.0	249.6	247.0	258.6	262.9
10°	351.6	336.3	319.3	287.7	272.8	257.1	241.1	227.1	225.4	220.0	221.7
12.5°	382.5	369.8	334.3	299.6	282.3	258.1	229.1	213.0	199.5	201.8	197.5
15°	407.9	398.9	356.4	310.9	269.6	239.6	208.7	186.7	174.6	173.2	168.9
17.5°	442.4	429.5	358.4	303.1	253.2	217.3	182.4	157.4	152.2	150.1	148.0
20°	458.9	435.8	351.2	278.6	234.1	190.7	156.4	135.0	133.4	137.3	136.5
22.5°	473.3	441.0	344.7	263.8	204.3	163.7	138.6	124.6	122.9	127.8	128.7
25°	481.7	455.8	337.7	248.6	185.8	143.7	125.3	117.4	117.7	124.1	123.3
27.5°	519.6	461.0	319.9	230.7	164.5	128.8	118.9	114.8	113.1	122.0	122.7
30°	543.5	495.0	316.0	211.8	148.7	118.0	113.1	111.4	111.1	121.8	122.6
32.5°	587.9	506.3	317.8	191.1	134.5	114.6	108.8	108.6	111.7	122.0	123.2
35°	649.4	554.1	308.9	179.3	126.7	109.4	105.4	106.6	111.9	123.0	124.7
37.5°	769.3	599.0	311.7	168.3	124.1	107.7	104.5	105.3	113.7	125.8	130.4
40°	864.4	680.6	307.4	162.8	120.6	107.4	102.5	105.6	113.5	127.3	131.4
42.5°	1002.1	745.6	307.9	157.3	120.4	106.2	102.2	105.9	113.2	125.9	131.6
45°	1120.2	803.9	314.4	154.1	118.9	108.2	101.8	106.3	111.2	121.0	127.3
47.5°	1217.1	869.0	321.2	151.0	118.3	110.0	101.3	103.1	107.9	115.5	121.2
50°	1296.0	914.7	329.7	150.4	118.3	109.1	100.1	99.9	103.9	110.0	115.4
52.5°	1357.5	947.0	335.6	151.2	118.3	105.6	98.5	97.3	99.8	104.2	109.6
55°	1402.1	956.9	330.8	153.2	118.1	102.4	95.8	94.7	95.9	99.0	104.0
57.5°	1420.0	930.8	302.5	149.6	118.1	100.1	92.4	91.2	92.4	94.7	99.8
60°	1375.1	846.6	261.7	140.6	115.8	97.0	88.6	87.8	89.7	91.7	96.6
62.5°	1262.7	734.8	218.0	129.9	111.1	94.4	84.9	85.1	88.0	90.7	95.6
65°	1087.9	599.5	181.8	119.0	105.1	90.3	81.1	82.2	86.3	90.0	94.9
67.5°	856.1	444.2	153.0	108.5	96.7	83.5	76.8	77.1	80.0	83.5	88.3
70°	572.3	282.6	125.8	96.1	85.7	74.8	70.2	69.2	68.4	71.5	75.6
72.5°	290.3	166.9	103.3	82.2	73.8	65.3	61.8	59.1	56.9	58.8	62.0
75°	152.1	116.7	83.4	68.2	60.9	55.5	52.9	49.3	47.7	48.8	51.1
77.5°	107.6	91.3	67.5	54.0	49.6	44.1	44.5	40.7	39.5	40.1	42.5
80°	82.6	72.4	51.9	40.9	38.3	32.9	34.4	32.1	30.6	30.3	32.1
82.5°	56.3	54.5	36.9	28.6	26.8	23.0	25.1	24.2	22.2	21.0	21.9
85°	37.9	36.1	22.5	16.5	15.8	11.9	15.3	14.7	13.0	11.2	11.3
87.5°	6.6	12.1	6.4	4.1	3.8	1.4	3.5	3.4	3.1	1.5	1.2
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)