

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: P596550

Luminaire Tested: **MSA-SA1D-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-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: 4910 lumens
Efficiency: N/A
Efficacy: 73.3 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

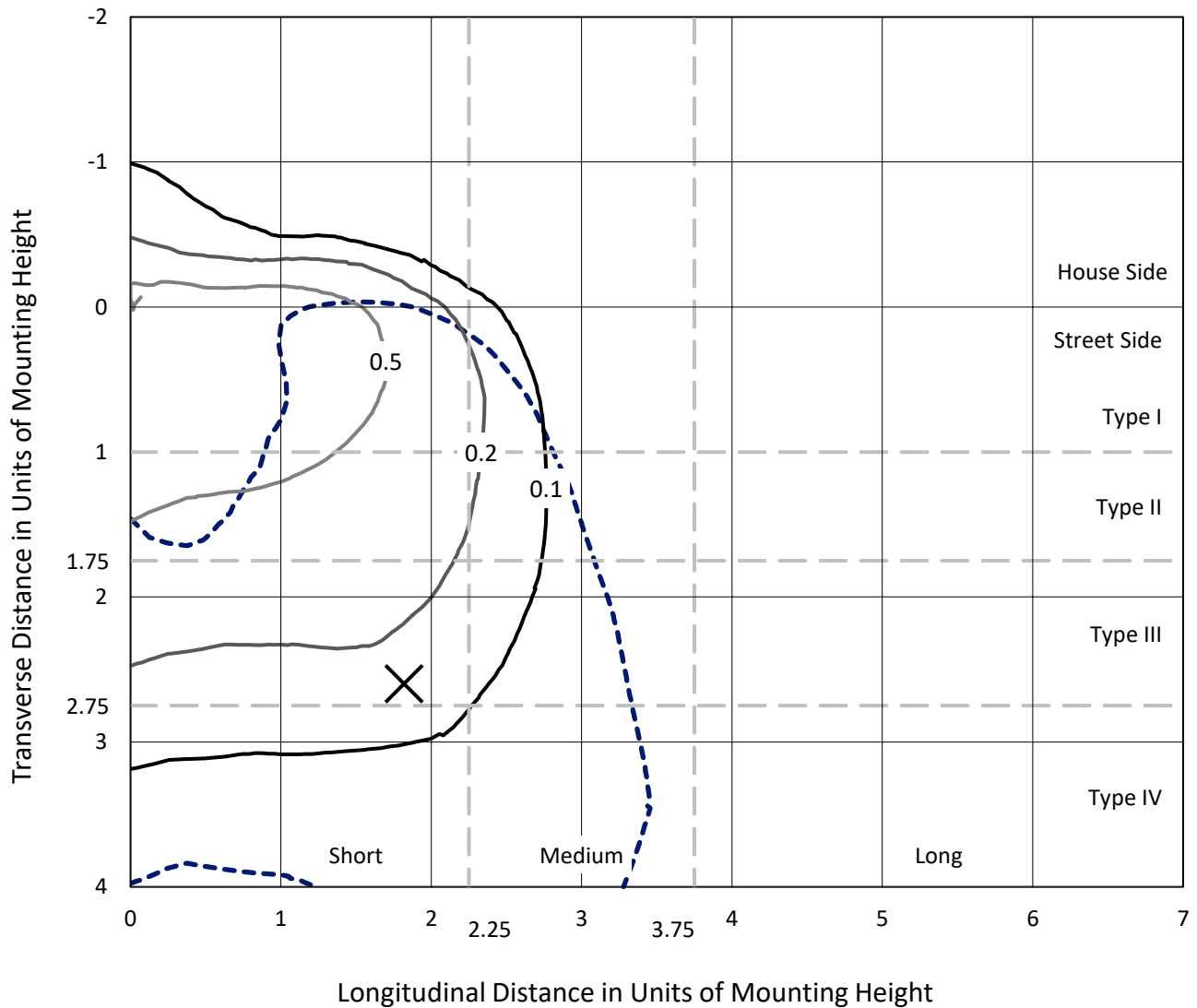
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

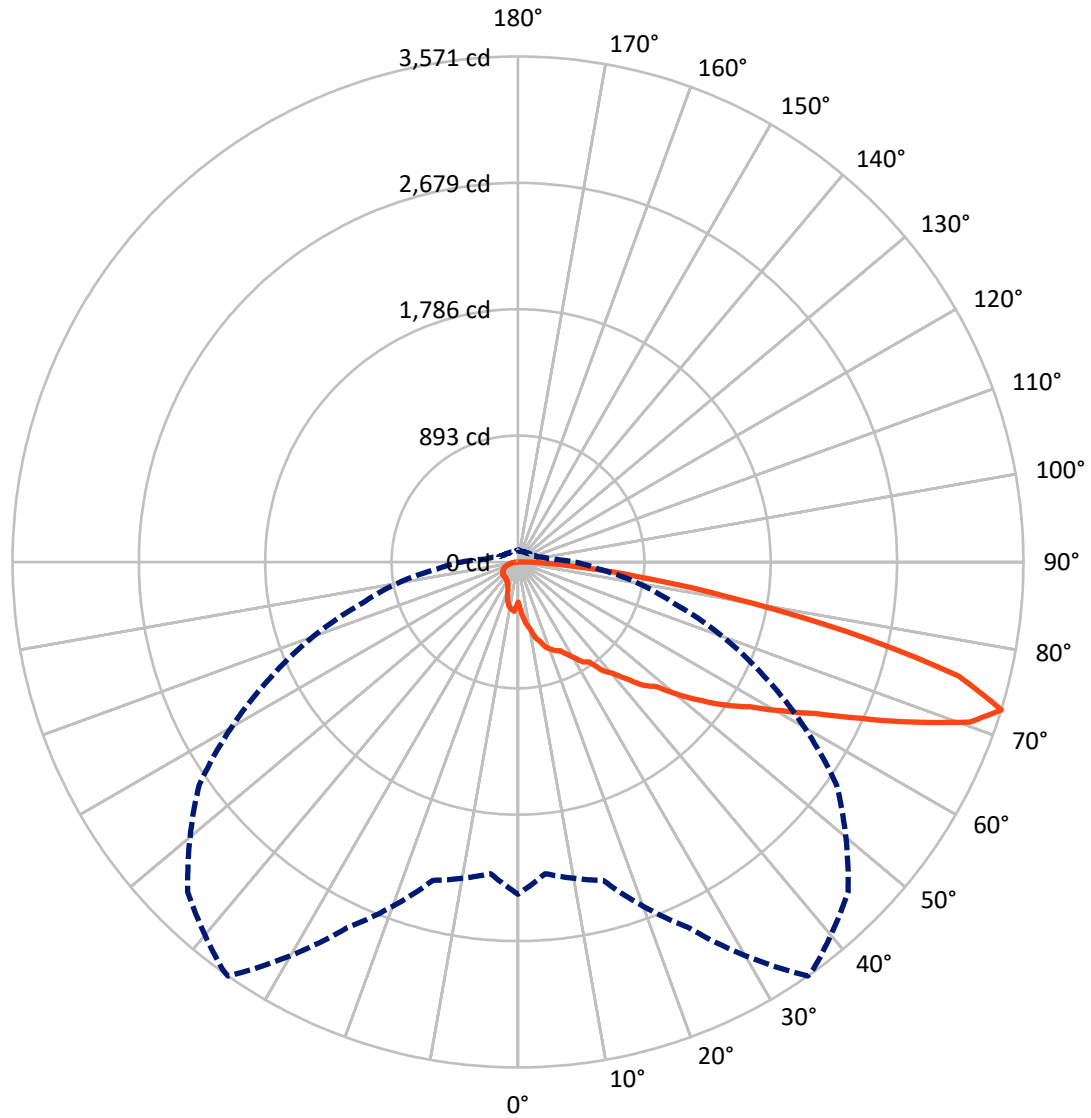
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 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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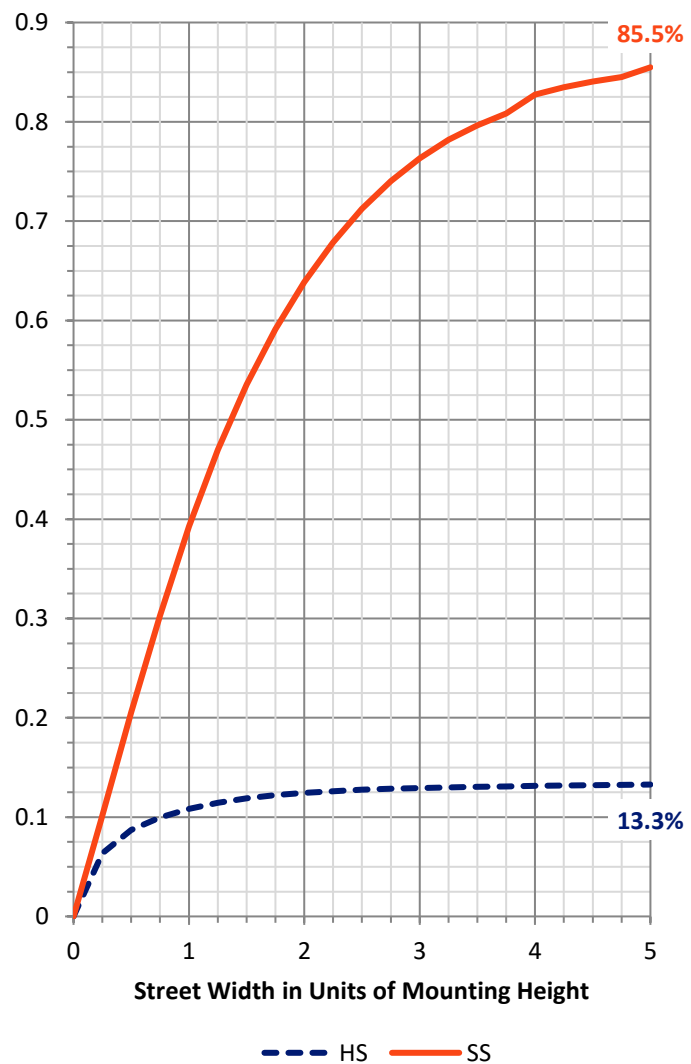
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	658.9	0.0	658.9
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	4251.1	0.0	4251.1
	% Fixture	86.6	0.0	86.6
Total	Lumens	4910.0	0.0	4910.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	0.8
10°-20°	132.8	2.7
20°-30°	230.8	4.7
30°-40°	385.8	7.9
40°-50°	669.6	13.6
50°-60°	1012.2	20.6
60°-70°	1311.3	26.7
70°-80°	967.6	19.7
80°-90°	162.2	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°	4910.0	100.0
0°-180°	4910.0	100.0

Coefficient of Utilization

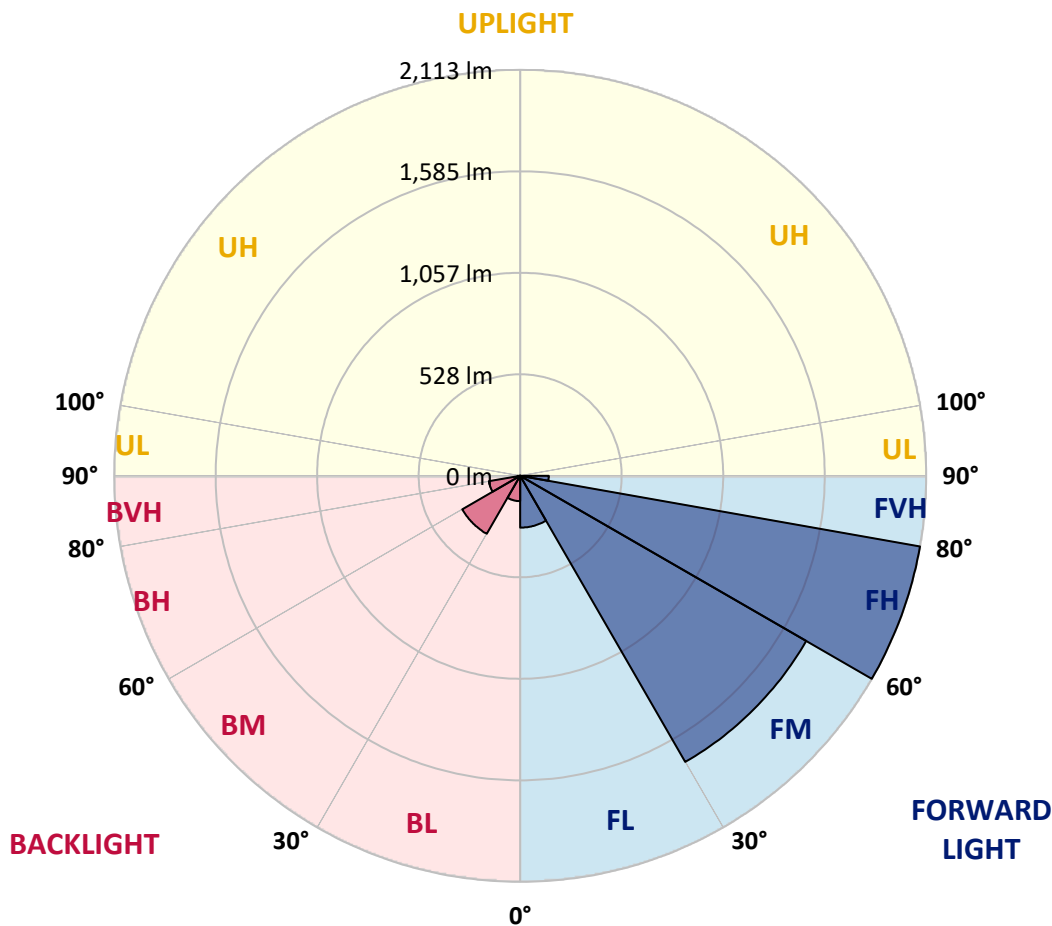


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	269.7	5.5			
FM (30°-60°)	1719.3	35.0			
FH (60°-80°)	2113.2	43.0			G2/5000
FVH (80°-90°)	148.9	3.0			G2/225
BL (0°-30°)	131.7	2.7	B1/500		
BM (30°-60°)	348.2	7.1	B1/1000		
BH (60°-80°)	165.7	3.4	B1/500		G1/500
BVH (80°-90°)	13.3	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8
2.5°	354.0	337.0	322.3	321.7	335.3	340.5	338.4	333.8	328.4	316.9	342.0
5°	443.4	419.1	414.5	409.1	396.7	400.1	379.9	395.2	400.1	411.2	427.9
7.5°	496.2	482.0	470.9	466.3	444.9	442.4	427.5	449.3	458.5	457.1	482.0
10°	517.0	504.0	504.8	489.8	482.8	485.8	487.4	487.9	493.5	498.1	485.6
12.5°	527.7	532.7	551.2	540.9	549.7	553.3	570.9	552.8	553.5	529.8	542.8
15°	581.5	594.1	583.4	583.0	580.3	586.2	601.2	589.1	598.5	591.0	574.2
17.5°	646.5	650.3	629.7	621.4	632.3	630.4	626.6	628.5	605.0	648.6	628.1
20°	666.4	681.3	654.3	621.4	657.4	662.2	661.4	653.2	613.0	675.8	655.9
22.5°	724.3	704.1	682.8	661.8	680.2	683.0	678.4	658.9	645.5	669.4	685.1
25°	750.5	745.6	718.4	715.9	695.5	685.9	693.9	688.2	675.0	717.6	700.2
27.5°	810.4	804.7	742.1	767.8	738.3	735.8	693.7	712.5	725.7	722.6	748.6
30°	878.3	884.8	793.2	819.0	784.8	780.2	737.9	761.8	770.8	773.7	806.2
32.5°	953.7	971.5	880.6	859.4	841.2	844.3	808.5	764.9	799.9	868.4	882.5
35°	1035.5	1042.8	947.4	915.6	868.0	864.7	865.3	870.7	906.2	984.3	995.2
37.5°	1186.6	1152.6	1069.0	988.3	972.4	941.2	962.3	979.1	1014.5	1134.4	1180.1
40°	1279.6	1254.5	1127.0	1080.3	1036.3	1039.2	1078.8	1078.6	1162.2	1285.9	1355.7
42.5°	1365.7	1338.3	1218.2	1171.3	1129.6	1139.8	1151.1	1171.0	1331.4	1530.7	1562.5
45°	1435.1	1375.0	1288.6	1278.1	1243.8	1230.1	1278.1	1310.0	1533.6	1728.7	1747.1
47.5°	1482.3	1432.8	1348.3	1339.1	1313.8	1347.1	1478.1	1498.6	1690.4	1927.6	1926.1
50°	1553.9	1486.2	1410.0	1405.1	1476.6	1494.4	1654.1	1652.0	1842.9	2092.7	2058.1
52.5°	1636.5	1551.2	1468.4	1520.2	1629.2	1638.0	1776.5	1832.9	2009.5	2252.0	2161.7
55°	1731.4	1636.1	1556.0	1625.2	1787.4	1761.4	1901.6	2039.3	2218.0	2419.8	2236.5
57.5°	1849.0	1733.3	1668.6	1773.8	1931.8	1954.8	2080.8	2254.1	2385.9	2524.2	2291.0
60°	1973.1	1837.3	1777.9	1878.1	2134.0	2160.4	2283.6	2432.6	2574.1	2622.5	2280.7
62.5°	2091.5	1944.6	1890.9	2014.5	2358.2	2423.6	2514.6	2609.5	2730.6	2646.4	2156.4
65°	2223.3	2076.2	2042.4	2227.9	2662.3	2727.3	2846.1	2817.6	2784.3	2561.7	1950.8
67.5°	2362.8	2213.4	2219.7	2475.4	3020.9	3032.0	3214.5	3025.1	2721.2	2337.5	1605.7
70°	2437.9	2284.9	2349.6	2739.2	3385.7	3369.8	3407.1	3080.8	2464.1	1847.7	1106.7
72.5°	2346.9	2210.5	2329.1	2850.3	3571.4	3554.2	3299.0	2749.9	1926.5	1149.0	573.8
75°	1987.1	1855.5	2037.0	2540.8	3215.1	3231.1	2807.5	2044.9	1102.9	462.1	238.3
77.5°	1350.2	1282.3	1437.8	1893.8	2388.2	2443.3	2083.1	1195.8	463.1	191.3	144.2
80°	713.6	681.3	796.1	1091.0	1512.2	1553.3	1224.9	595.6	237.2	123.9	102.9
82.5°	387.7	374.1	435.7	561.0	859.2	895.1	635.2	395.7	159.9	77.5	62.9
85°	260.5	255.3	296.1	301.4	406.3	418.1	332.8	304.7	96.0	37.9	41.5
87.5°	130.3	125.1	155.9	137.7	155.1	155.3	152.6	194.5	24.3	12.6	7.5
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°	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8	283.8
2.5°	342.4	335.1	309.7	309.5	313.3	310.8	312.7	302.4	298.0	318.1	317.1
5°	425.6	403.6	382.5	375.1	366.5	347.9	348.9	349.1	346.0	357.9	358.8
7.5°	474.5	448.0	428.6	389.6	359.0	335.1	338.2	341.8	338.2	354.2	360.0
10°	481.6	460.6	437.4	394.0	373.7	352.1	330.3	311.0	308.7	301.4	303.7
12.5°	523.9	506.5	457.9	410.3	386.6	353.5	313.7	291.7	273.3	276.4	270.5
15°	558.7	546.3	488.1	425.8	369.3	328.2	285.8	255.7	239.1	237.2	231.4
17.5°	605.9	588.2	490.8	415.1	346.8	297.6	249.8	215.6	208.5	205.6	202.6
20°	628.5	596.8	481.0	381.6	320.6	261.1	214.2	184.8	182.7	188.0	186.9
22.5°	648.2	604.0	472.1	361.3	279.8	224.2	189.9	170.6	168.3	175.0	176.2
25°	659.7	624.3	462.5	340.5	254.4	196.8	171.6	160.7	161.2	170.0	168.9
27.5°	711.7	631.4	438.2	316.0	225.3	176.5	162.8	157.2	154.9	167.0	168.1
30°	744.4	677.9	432.8	290.0	203.7	161.6	154.9	152.6	152.1	166.8	167.9
32.5°	805.1	693.5	435.3	261.7	184.2	157.0	149.0	148.8	153.0	167.0	168.7
35°	889.4	758.8	423.1	245.6	173.5	149.8	144.4	146.1	153.2	168.5	170.8
37.5°	1053.7	820.4	426.9	230.5	170.0	147.5	143.1	144.2	155.7	172.3	178.5
40°	1183.8	932.1	421.0	223.0	165.1	147.1	140.4	144.6	155.5	174.4	180.0
42.5°	1372.4	1021.2	421.6	215.4	164.9	145.4	140.0	145.0	155.1	172.5	180.2
45°	1534.2	1101.1	430.7	211.0	162.8	148.2	139.4	145.6	152.4	165.8	174.4
47.5°	1666.9	1190.1	439.9	206.8	162.0	150.7	138.7	141.2	147.7	158.2	166.0
50°	1775.0	1252.8	451.6	206.0	162.0	149.4	137.1	136.8	142.3	150.7	158.0
52.5°	1859.3	1297.0	459.6	207.1	162.0	144.6	135.0	133.3	136.6	142.7	150.0
55°	1920.2	1310.6	453.1	209.8	161.8	140.2	131.2	129.7	131.4	135.6	142.5
57.5°	1944.8	1274.8	414.3	205.0	161.8	137.1	126.6	124.9	126.6	129.7	136.6
60°	1883.4	1159.5	358.4	192.6	158.6	132.9	121.3	120.3	122.8	125.5	132.2
62.5°	1729.3	1006.3	298.6	177.9	152.1	129.3	116.3	116.3	120.5	124.3	131.0
65°	1490.0	821.1	249.0	163.0	144.0	123.6	111.1	112.5	118.2	123.2	129.9
67.5°	1172.5	608.4	209.6	148.6	132.4	114.4	105.2	105.6	109.6	114.4	120.9
70°	783.8	387.1	172.3	131.6	117.4	102.5	96.2	94.7	93.7	97.9	103.5
72.5°	397.5	228.6	141.5	112.5	101.0	89.5	84.7	80.9	78.0	80.5	84.9
75°	208.3	159.9	114.2	93.5	83.4	76.1	72.5	67.5	65.4	66.9	70.0
77.5°	147.3	125.1	92.4	74.0	67.9	60.4	61.0	55.7	54.1	54.9	58.3
80°	113.2	99.1	71.0	56.0	52.4	45.1	47.2	44.0	41.9	41.5	44.0
82.5°	77.1	74.6	50.5	39.2	36.7	31.4	34.4	33.1	30.4	28.7	30.0
85°	52.0	49.5	30.8	22.6	21.6	16.3	21.0	20.1	17.8	15.3	15.5
87.5°	9.0	16.6	8.8	5.7	5.2	1.9	4.8	4.6	4.2	2.1	1.7
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)