

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: P596556

Luminaire Tested: **MSA-SA1D-827-U-T2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5028 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

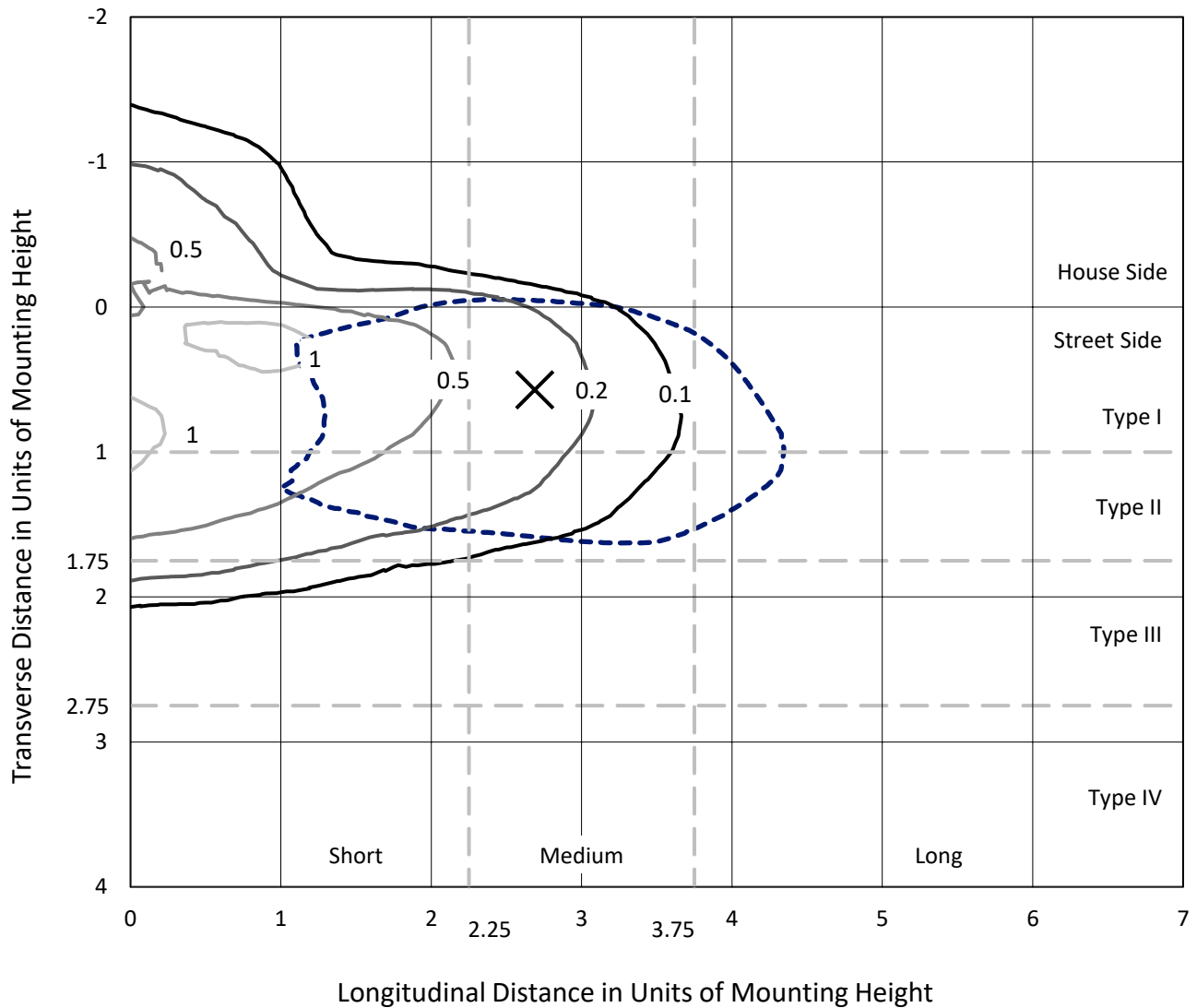
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

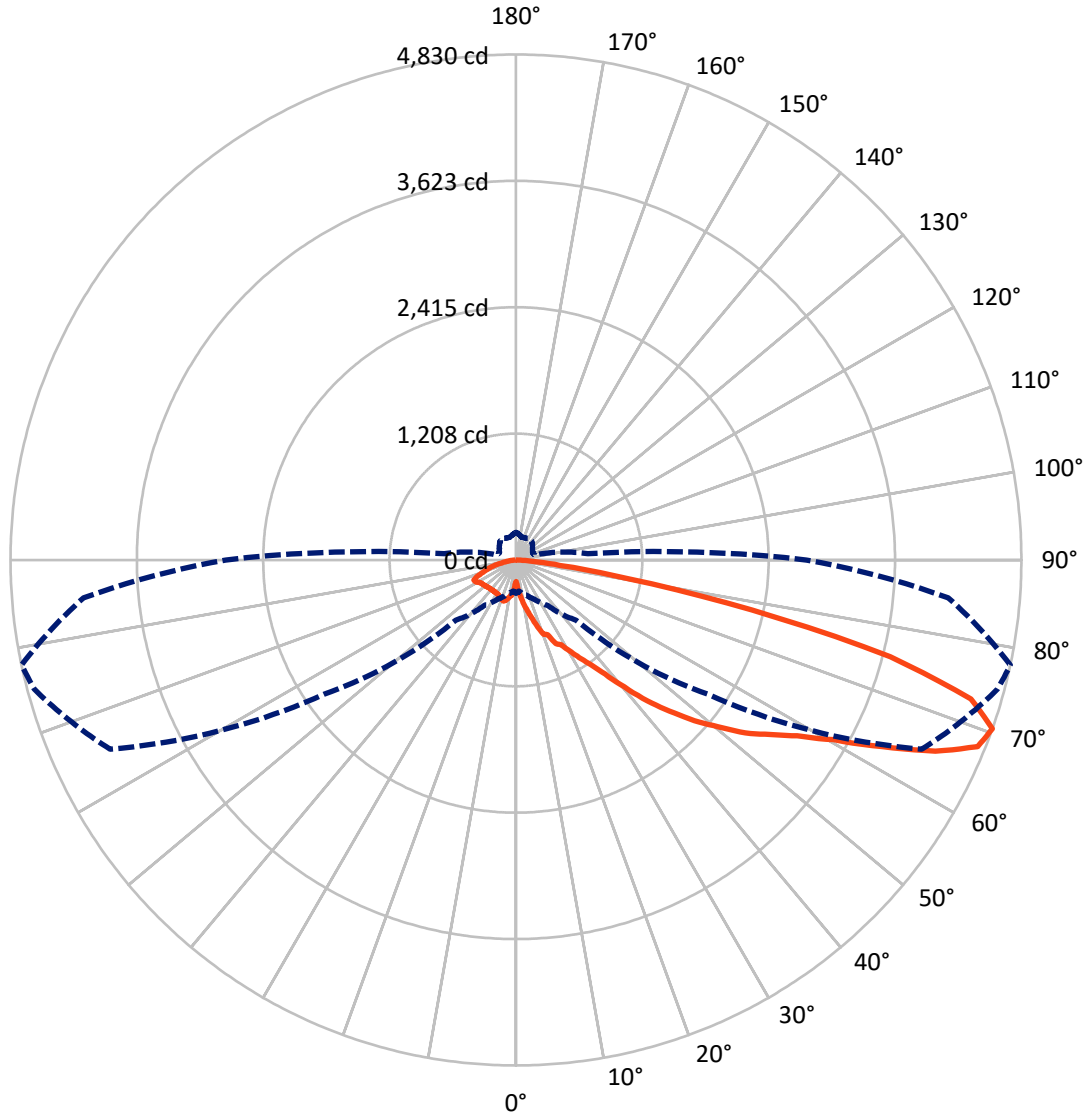
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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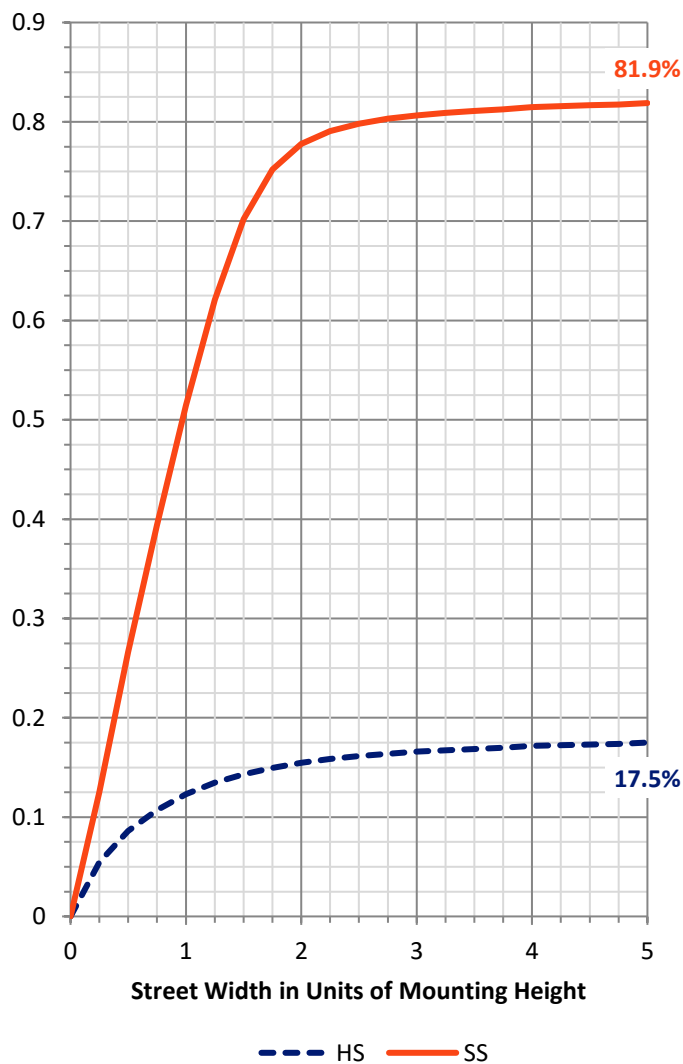
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	897.4	0.0	897.4
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	4130.6	0.0	4130.6
	% Fixture	82.2	0.0	82.2
Total	Lumens	5028.0	0.0	5028.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.6
10°-20°	139.6	2.8
20°-30°	268.7	5.3
30°-40°	452.5	9.0
40°-50°	783.0	15.6
50°-60°	1182.2	23.5
60°-70°	1309.5	26.0
70°-80°	755.0	15.0
80°-90°	105.9	2.1
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°	5028.0	100.0
0°-180°	5028.0	100.0

Coefficient of Utilization



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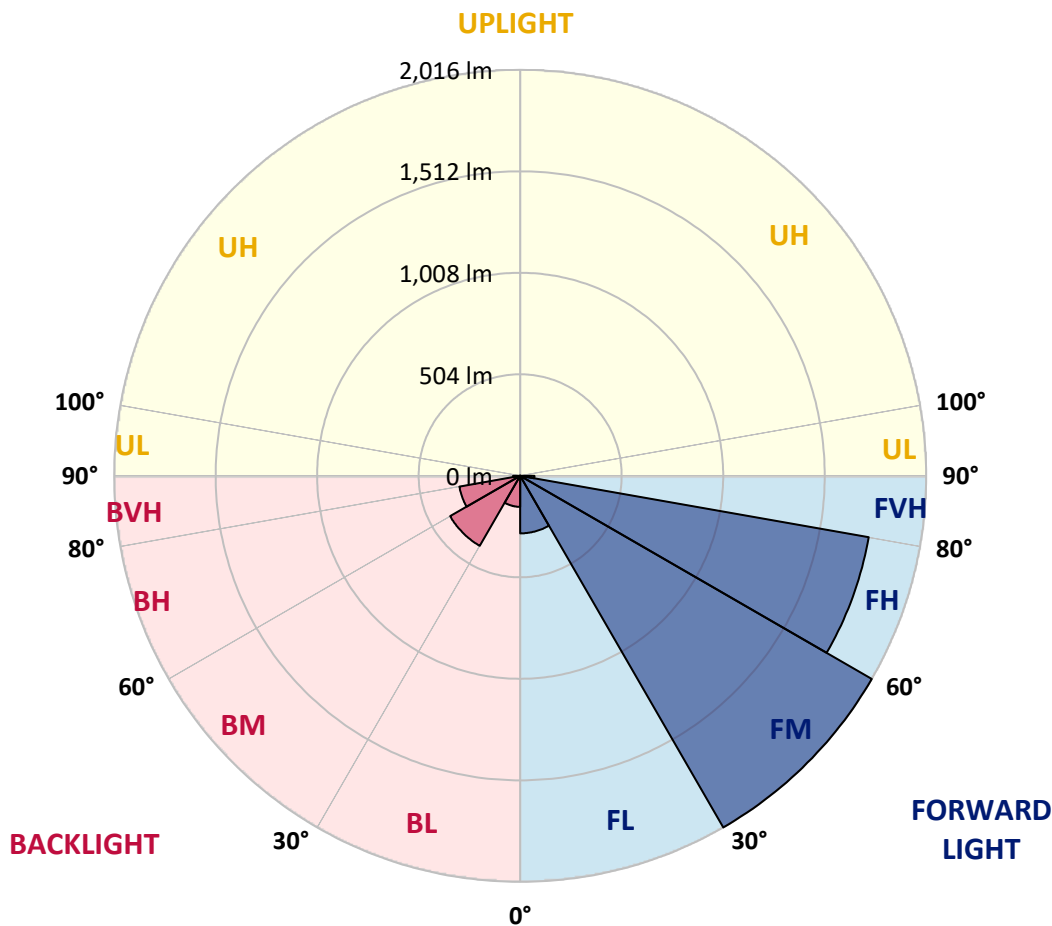
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	285.8	5.7			
FM (30°-60°)	2016.4	40.1			
FH (60°-80°)	1757.7	35.0			G1/1800
FVH (80°-90°)	70.6	1.4			G1/100
BL (0°-30°)	154.1	3.1	B1/500		
BM (30°-60°)	401.4	8.0	B1/1000		
BH (60°-80°)	306.7	6.1	B1/500		G1/500
BVH (80°-90°)	35.2	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-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0
2.5°	263.9	254.5	240.2	246.1	253.2	254.0	251.7	238.7	234.3	244.2	247.1
5°	369.7	353.8	344.2	341.0	330.3	308.1	324.0	315.9	317.6	312.7	322.2
7.5°	458.8	448.1	433.9	429.9	405.4	388.0	398.9	395.3	378.1	371.4	382.1
10°	504.1	492.4	493.0	484.4	477.9	479.6	474.1	458.4	445.6	436.6	410.8
12.5°	531.3	534.3	550.0	545.6	570.1	590.2	574.9	551.7	511.2	503.1	477.5
15°	596.1	607.0	592.3	599.1	609.5	648.1	641.8	636.8	594.0	578.1	530.9
17.5°	662.8	664.9	642.6	639.1	664.2	683.7	708.3	680.0	685.2	674.1	597.8
20°	677.0	691.5	659.6	637.6	689.4	728.0	758.4	728.4	756.0	759.0	652.9
22.5°	729.2	711.8	669.9	648.3	693.6	741.0	790.4	807.2	798.4	773.7	706.2
25°	765.5	756.3	713.5	689.6	706.8	750.4	837.2	881.0	888.7	885.4	756.9
27.5°	832.8	837.4	749.3	756.0	732.2	736.1	865.3	978.9	930.4	917.0	819.8
30°	939.0	918.5	819.8	825.2	785.6	778.9	924.6	1063.3	1019.9	1003.8	871.5
32.5°	1049.9	1051.8	931.9	885.4	864.2	857.5	912.8	1107.6	1133.1	1112.2	949.7
35°	1206.3	1195.4	1053.5	992.3	915.8	904.0	996.5	1235.8	1282.8	1224.1	1042.6
37.5°	1444.4	1411.5	1246.3	1104.8	1048.2	1034.8	1115.9	1350.9	1456.5	1383.6	1194.3
40°	1635.5	1568.7	1418.6	1246.3	1150.5	1167.1	1200.8	1490.5	1636.8	1595.7	1334.8
42.5°	1787.9	1728.6	1540.6	1419.4	1289.3	1268.7	1305.6	1663.4	1882.0	1841.8	1510.0
45°	1934.0	1813.3	1677.7	1568.7	1443.6	1468.5	1463.0	1839.9	2182.8	2059.0	1664.9
47.5°	2078.2	1964.8	1822.9	1676.4	1550.4	1705.8	1647.7	1971.1	2385.7	2293.9	1828.0
50°	2263.5	2138.8	1977.2	1829.9	1754.4	1868.0	1770.5	2082.2	2612.9	2505.2	1981.8
52.5°	2386.6	2265.2	2123.5	2018.3	2011.4	1967.6	1942.6	2222.9	2812.1	2746.7	2144.9
55°	2372.1	2255.1	2191.0	2202.5	2288.1	2140.3	2119.9	2431.0	3019.8	2944.1	2321.0
57.5°	2190.8	2063.1	2076.8	2145.1	2374.8	2443.6	2409.0	2653.4	3205.1	3170.7	2538.7
60°	1706.6	1641.0	1751.9	1876.8	2258.7	2532.4	2775.6	2924.6	3433.1	3488.0	2880.8
62.5°	1108.6	1021.0	1196.2	1408.3	1912.2	2473.8	3148.9	3439.0	3806.6	3931.4	3400.6
65°	574.3	560.3	682.9	877.8	1331.2	2109.3	3280.5	3978.5	4260.6	4405.9	3897.2
67.5°	417.5	391.5	448.3	563.0	812.6	1438.3	3031.1	4391.2	4625.1	4758.2	4185.8
70°	318.0	298.7	342.1	413.1	530.7	812.4	2237.5	4278.7	4765.8	4830.4	4147.5
72.5°	238.1	221.6	259.5	325.7	408.9	457.4	1322.6	3518.0	4525.8	4547.8	3722.4
75°	190.1	177.3	193.7	257.2	333.3	311.3	702.6	2548.8	3677.1	3696.0	2843.3
77.5°	155.9	145.0	151.8	192.8	259.3	234.1	348.6	1621.3	2334.6	2305.7	1599.7
80°	127.2	117.8	120.9	139.4	197.4	174.8	195.8	845.8	1113.6	1068.8	665.3
82.5°	97.9	89.9	96.2	102.5	143.0	125.6	114.2	384.8	456.1	424.9	244.0
85°	65.6	58.3	83.6	76.9	93.5	77.1	62.5	153.2	170.0	158.5	85.7
87.5°	18.0	17.0	28.1	38.4	38.4	29.1	22.8	37.1	47.4	41.5	20.1
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°	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0
2.5°	248.4	243.8	231.6	230.6	233.5	233.9	232.0	227.6	225.3	237.9	236.0
5°	319.9	303.5	293.7	284.6	272.1	263.1	265.4	271.6	273.7	283.2	284.2
7.5°	375.4	353.8	332.2	303.3	284.2	272.1	281.3	288.0	293.2	306.7	312.1
10°	399.5	376.0	345.4	315.0	309.8	311.9	306.7	308.3	316.5	317.1	319.9
12.5°	444.4	417.7	362.6	335.2	333.7	338.1	336.2	344.0	349.6	364.9	358.4
15°	487.3	453.4	375.6	347.5	341.4	350.3	360.5	373.5	385.7	400.1	392.8
17.5°	539.5	488.4	376.2	341.9	342.9	361.8	372.5	379.6	415.9	435.8	425.7
20°	572.4	491.9	362.2	327.8	342.9	359.9	374.8	382.5	423.2	453.2	460.1
22.5°	602.2	493.2	351.3	320.3	329.9	352.3	374.8	392.0	418.0	446.7	447.7
25°	618.5	492.2	337.3	320.9	329.7	340.8	360.7	376.5	395.7	435.8	436.8
27.5°	660.5	478.5	323.4	323.4	328.0	328.5	353.8	363.0	365.8	402.2	408.7
30°	672.6	481.5	321.7	323.0	325.3	321.1	332.2	338.3	342.3	373.7	374.8
32.5°	692.1	458.0	326.8	319.2	316.3	315.7	318.4	323.8	325.5	344.8	348.4
35°	715.8	448.6	328.5	318.2	312.3	309.2	317.3	310.6	315.9	338.5	341.0
37.5°	792.9	435.6	337.0	318.2	310.6	307.1	303.1	306.2	324.9	346.7	360.1
40°	842.2	439.5	334.9	321.3	305.0	301.6	294.9	306.4	335.4	373.9	384.0
42.5°	928.6	441.8	337.5	319.9	306.9	293.9	298.3	310.8	341.2	363.2	378.8
45°	1017.8	449.0	335.8	315.5	302.7	308.7	302.7	314.0	328.5	329.1	340.8
47.5°	1105.5	477.7	332.2	306.4	301.6	317.6	302.0	303.9	305.0	308.7	322.6
50°	1208.4	508.3	327.2	293.9	303.1	318.0	304.3	295.1	294.1	306.4	322.0
52.5°	1325.3	542.9	320.7	281.7	294.5	314.0	312.3	295.8	286.7	298.7	314.2
55°	1463.0	582.3	313.2	269.6	285.1	314.4	316.7	291.4	286.9	299.9	316.5
57.5°	1646.0	639.3	298.5	251.9	273.5	307.9	305.4	286.3	282.1	296.0	313.2
60°	1958.3	748.9	277.5	234.5	261.2	292.0	296.2	277.3	273.1	288.4	306.4
62.5°	2376.5	880.8	252.2	217.6	246.1	274.8	284.6	264.3	263.9	283.4	302.3
65°	2765.7	955.6	226.0	202.1	230.6	258.9	271.6	252.2	253.0	277.5	296.4
67.5°	2927.6	867.6	202.5	188.2	212.7	240.6	261.0	242.7	240.0	269.6	286.9
70°	2775.6	689.2	182.1	173.6	192.6	220.9	246.1	230.1	223.9	250.7	264.3
72.5°	2455.9	574.5	163.1	156.4	175.0	200.2	226.0	213.2	205.0	225.5	237.7
75°	1919.8	471.4	141.3	139.4	154.9	181.3	205.0	196.2	185.7	198.7	210.9
77.5°	1093.1	298.3	118.6	119.9	131.0	158.9	179.8	172.9	162.2	167.7	181.7
80°	437.4	150.5	95.4	96.2	105.6	130.6	149.0	146.5	135.4	139.8	149.4
82.5°	163.5	82.6	70.4	70.8	80.3	103.3	127.2	126.0	115.5	112.3	117.8
85°	65.0	40.9	43.2	45.1	54.1	74.4	102.1	90.5	78.2	68.5	71.9
87.5°	15.5	13.0	15.1	15.9	17.6	23.3	37.3	30.0	30.8	24.7	18.4
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)