

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: P596868

Luminaire Tested: **MSA-SA1B-835-U-T4FT**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596868
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-835-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4185 lumens
Efficiency: N/A
Efficacy: 95.1 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

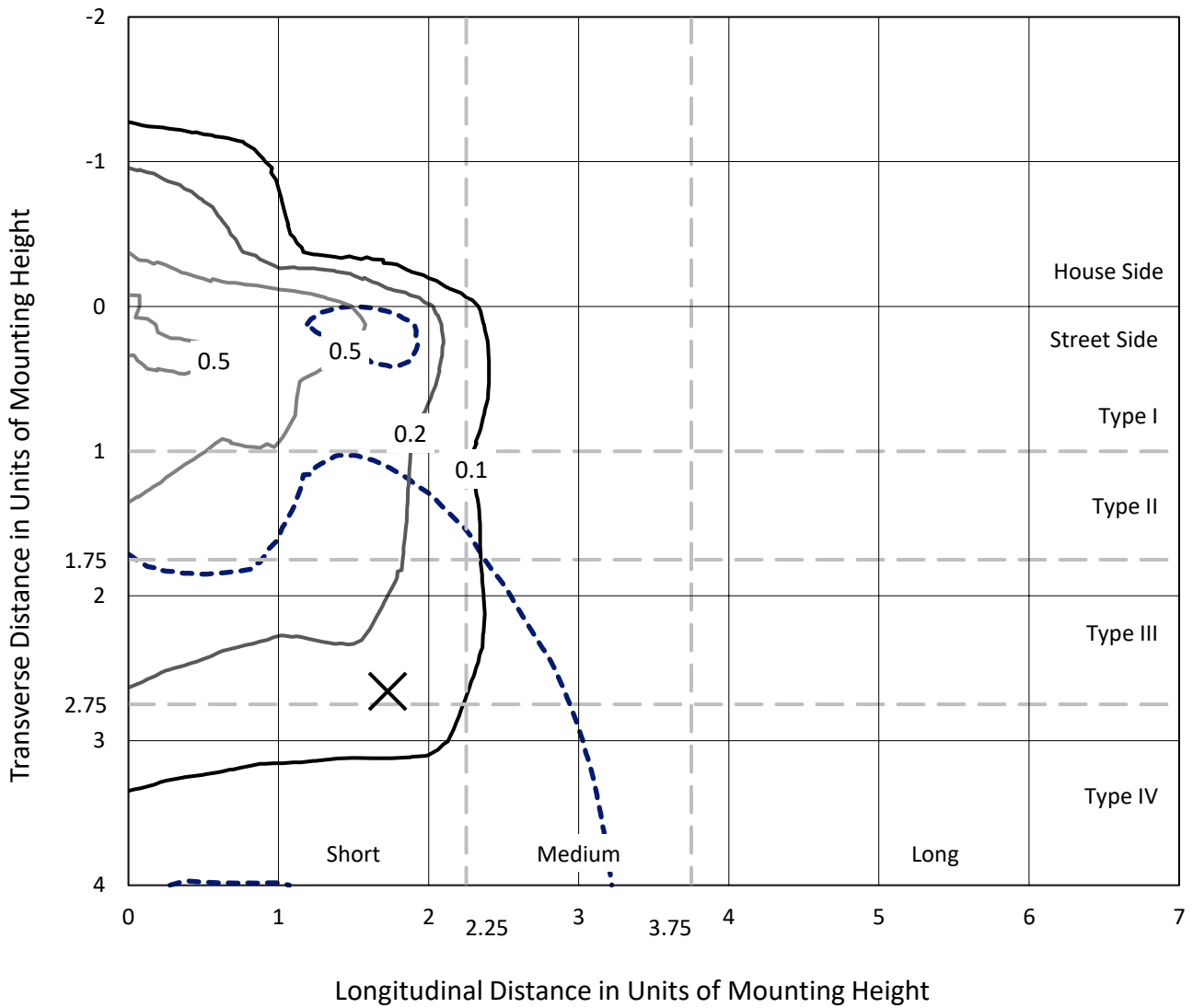
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

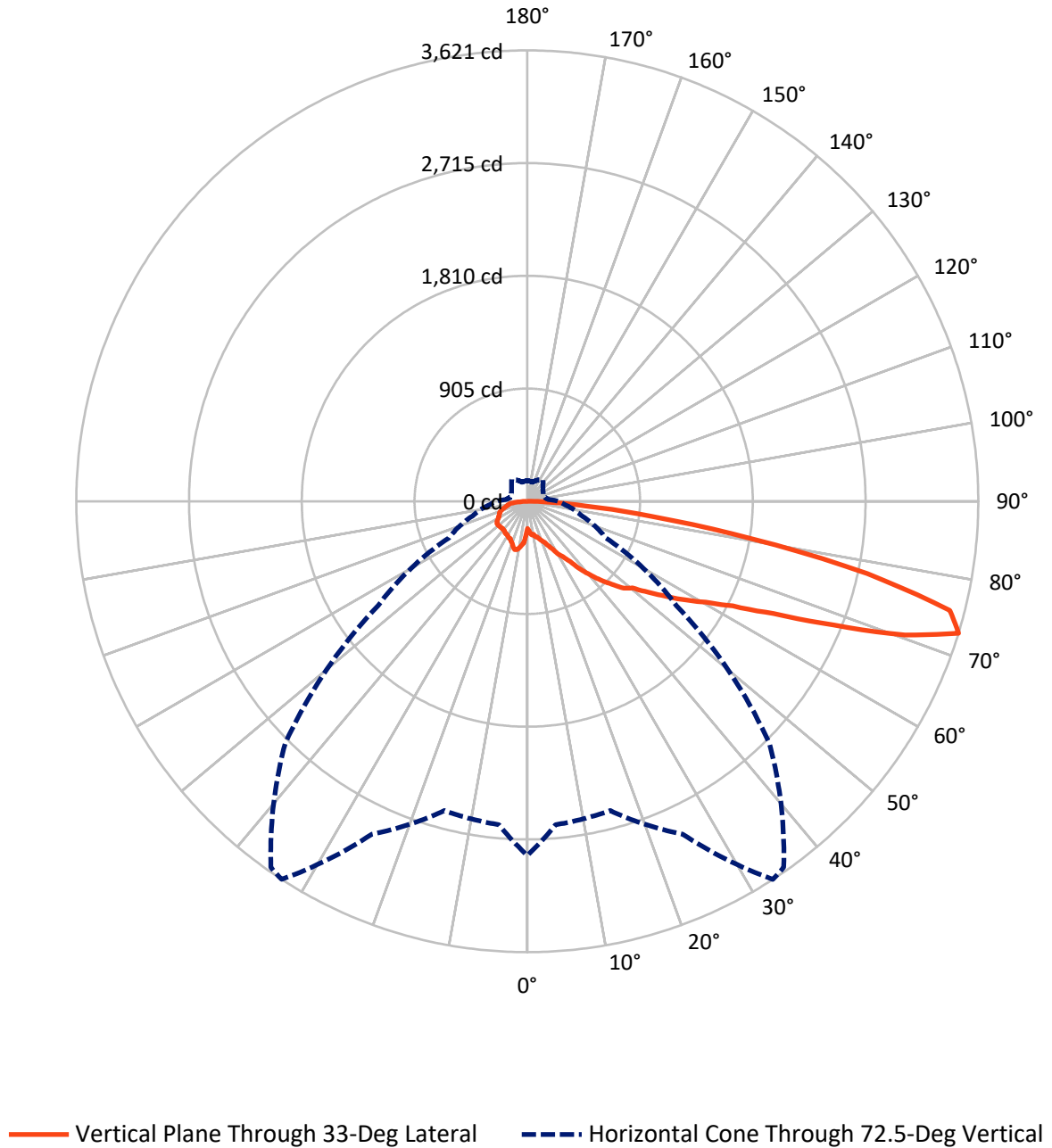
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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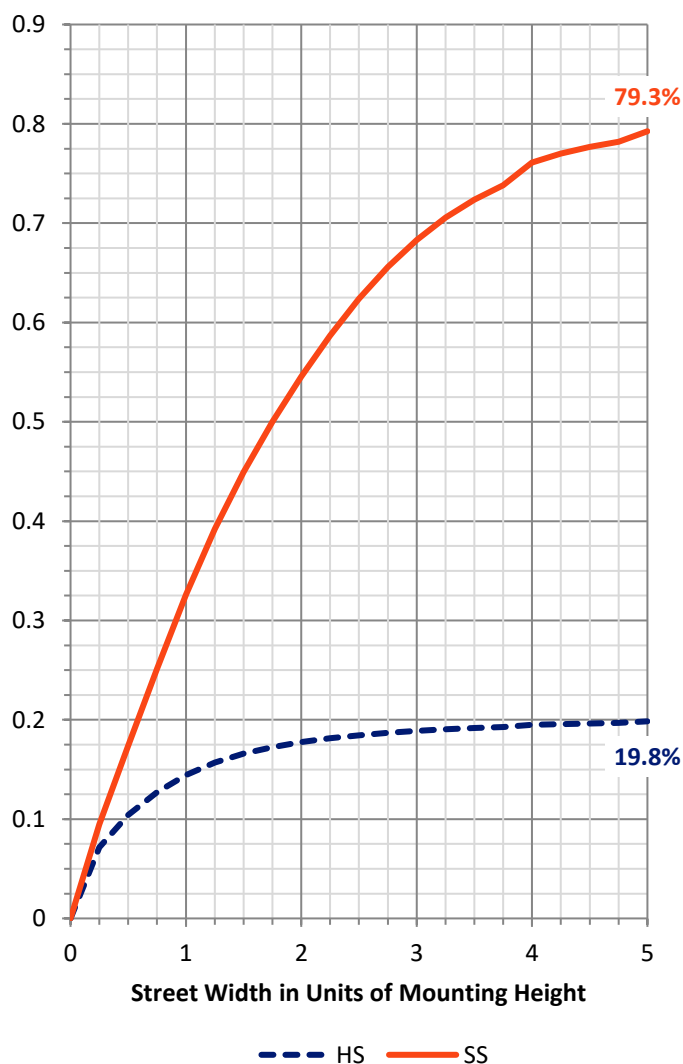
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	846.6	0.0	846.6
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	3338.4	0.0	3338.4
	% Fixture	79.8	0.0	79.8
Total	Lumens	4185.0	0.0	4185.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	0.7
10°-20°	111.5	2.7
20°-30°	203.3	4.9
30°-40°	344.0	8.2
40°-50°	572.3	13.7
50°-60°	839.9	20.1
60°-70°	1074.4	25.7
70°-80°	874.1	20.9
80°-90°	135.4	3.2
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°	4185.0	100.0
0°-180°	4185.0	100.0

Coefficient of Utilization



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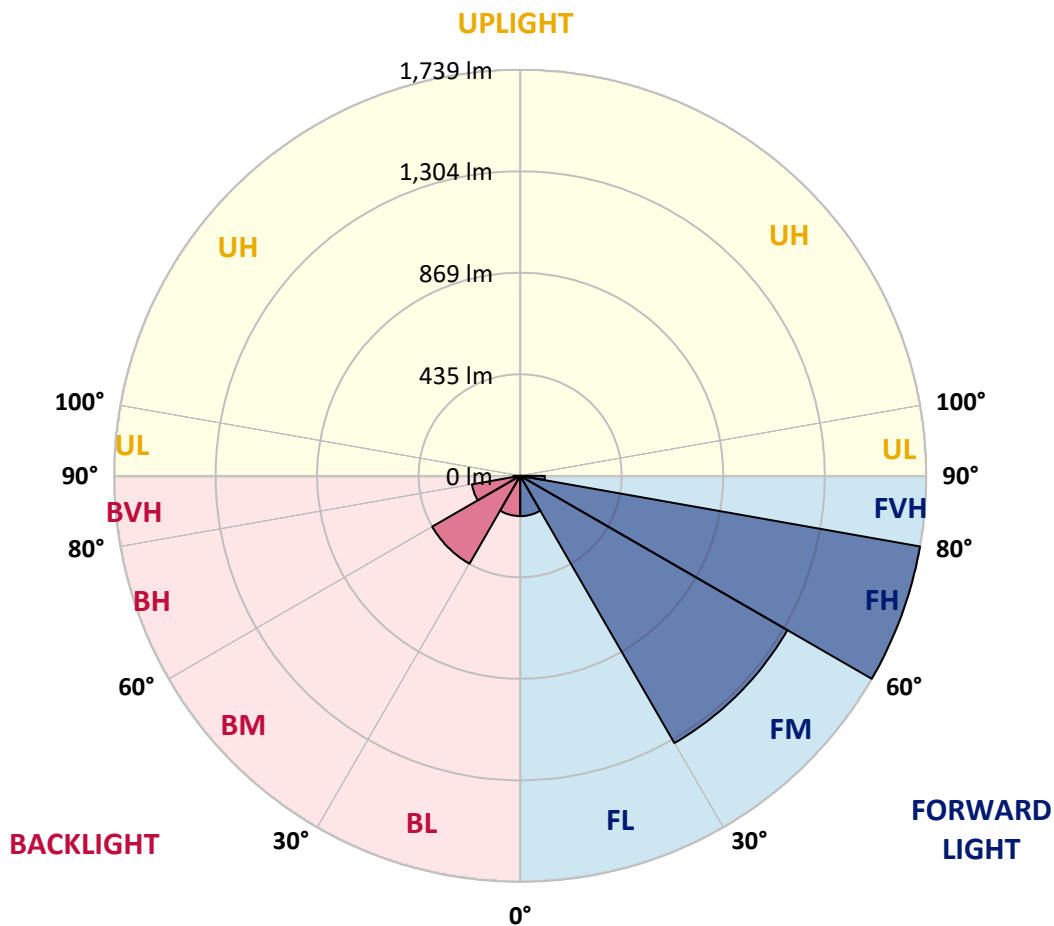
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	172.7	4.1			
FM (30°-60°)	1321.3	31.6			
FH (60°-80°)	1738.7	41.5			G1/1800
FVH (80°-90°)	105.7	2.5			G2/225
BL (0°-30°)	172.3	4.1	B1/500		
BM (30°-60°)	434.8	10.4	B1/1000		
BH (60°-80°)	209.8	5.0	B1/500		G1/500
BVH (80°-90°)	29.7	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4
2.5°	248.8	241.0	228.1	227.8	234.9	236.5	241.1	241.5	243.2	240.5	260.2
5°	274.5	266.1	261.1	262.8	259.5	263.5	263.5	275.0	290.3	308.0	333.2
7.5°	280.6	274.5	268.8	273.1	273.8	270.0	273.6	300.5	328.1	345.8	386.1
10°	268.4	262.3	266.7	268.1	267.9	276.6	295.5	317.0	347.7	380.4	402.1
12.5°	266.1	270.5	272.6	275.0	291.5	294.1	322.7	345.0	375.9	404.5	460.9
15°	299.7	305.4	292.5	291.7	297.0	299.5	329.2	351.6	396.7	444.8	495.5
17.5°	347.4	349.5	326.4	314.6	318.6	320.5	333.5	361.6	389.4	478.3	541.5
20°	393.6	395.0	351.6	325.2	339.2	341.3	353.5	369.6	391.5	497.1	572.6
22.5°	442.0	433.2	385.6	352.3	360.4	360.9	368.1	376.9	408.0	494.1	610.4
25°	495.0	489.4	429.5	397.6	397.2	390.1	390.5	403.1	425.5	525.7	635.2
27.5°	565.3	566.0	479.0	461.8	434.9	430.2	406.8	430.4	455.9	526.0	688.9
30°	656.4	639.6	547.9	520.1	493.6	483.7	451.9	472.1	483.2	556.1	747.2
32.5°	730.6	725.7	619.8	577.8	534.4	545.8	510.8	493.1	513.0	607.8	835.6
35°	801.6	785.6	695.8	641.1	595.5	588.5	565.8	568.8	580.9	673.3	951.0
37.5°	907.5	898.8	803.5	716.0	694.6	666.3	651.9	661.1	651.6	757.1	1124.1
40°	1025.9	975.5	893.4	815.5	775.5	755.6	760.6	751.9	744.6	851.2	1279.3
42.5°	1139.2	1093.4	953.1	918.1	866.0	874.3	846.7	852.8	873.4	984.7	1422.9
45°	1262.7	1163.5	1016.5	985.6	948.3	958.9	980.9	974.3	1008.2	1142.2	1558.2
47.5°	1324.3	1230.0	1094.3	1043.9	1043.4	1021.4	1155.6	1170.1	1117.2	1258.9	1695.5
50°	1383.7	1291.0	1152.1	1118.1	1093.4	1140.6	1323.1	1289.6	1215.8	1392.7	1846.5
52.5°	1466.3	1360.6	1218.4	1182.1	1212.7	1256.4	1456.8	1450.2	1312.5	1530.4	1977.8
55°	1529.3	1422.6	1318.2	1284.6	1342.9	1385.8	1592.9	1553.1	1395.3	1631.4	2060.9
57.5°	1639.8	1530.2	1465.6	1390.8	1495.7	1495.0	1724.1	1693.4	1483.9	1714.4	2094.5
60°	1815.3	1686.6	1619.1	1532.8	1645.1	1685.2	1874.1	1785.6	1546.5	1766.8	2034.0
62.5°	2061.6	1908.9	1799.3	1713.9	1850.9	1923.4	2059.4	1852.8	1550.5	1751.9	1875.2
65°	2366.3	2180.6	2037.0	1946.7	2172.7	2276.4	2283.3	1894.3	1513.7	1597.6	1541.2
67.5°	2663.5	2454.7	2304.9	2322.1	2652.1	2701.2	2526.0	1929.0	1316.0	1282.8	1070.1
70°	2859.2	2632.8	2533.0	2715.3	3216.7	3166.3	2722.8	1837.5	1036.3	831.6	602.6
72.5°	2844.5	2607.5	2571.5	2949.0	3620.5	3589.1	2746.7	1461.3	694.1	454.7	300.5
75°	2317.4	2133.2	2214.8	2791.7	3504.2	3502.6	2384.7	904.5	356.1	233.5	189.9
77.5°	1281.3	1209.7	1449.5	2113.7	2790.1	2804.3	1611.3	410.2	192.0	165.5	143.1
80°	448.8	442.2	628.1	1140.6	1835.4	1838.9	749.3	187.7	139.6	125.2	105.0
82.5°	164.1	162.7	260.4	529.9	1010.6	1008.3	284.2	116.8	103.5	88.5	69.3
85°	65.5	64.1	119.1	235.2	464.2	456.8	110.4	66.3	67.7	52.8	34.0
87.5°	18.1	18.8	40.5	73.6	142.2	131.8	27.8	22.4	27.4	21.5	10.8
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°	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4
2.5°	263.7	265.5	248.3	254.3	262.2	266.3	268.4	259.5	262.5	275.0	274.5
5°	338.4	331.4	324.8	331.6	327.1	320.7	331.1	330.6	337.3	344.1	345.7
7.5°	394.1	385.1	381.9	366.7	351.4	335.9	349.3	357.6	359.4	376.2	383.3
10°	414.2	410.8	412.0	391.8	389.9	391.5	379.2	365.8	374.0	367.0	372.2
12.5°	460.8	469.4	447.9	434.2	433.0	423.4	398.8	390.1	380.9	390.5	385.6
15°	498.1	514.2	491.1	467.0	439.8	425.0	404.0	390.8	384.7	386.8	380.9
17.5°	552.8	567.9	509.2	472.2	444.1	422.4	390.3	362.2	377.1	378.3	371.5
20°	589.1	590.1	515.3	459.4	434.0	396.4	365.1	340.5	357.6	375.2	382.8
22.5°	624.5	616.7	522.7	449.1	397.4	360.9	345.7	344.1	356.9	371.7	373.4
25°	651.0	652.3	527.1	445.3	375.9	326.2	326.2	337.5	348.8	383.9	382.1
27.5°	715.5	668.1	510.2	427.8	346.0	305.9	326.4	341.5	346.9	384.9	388.7
30°	762.3	731.4	513.7	397.7	315.8	296.4	313.2	332.1	347.0	391.0	389.6
32.5°	841.0	757.8	521.9	355.6	293.2	292.7	307.6	327.6	345.5	384.4	386.5
35°	928.0	835.6	499.1	323.4	287.8	290.6	309.9	317.9	338.9	381.8	383.7
37.5°	1088.9	876.2	484.7	298.6	284.4	292.4	299.7	312.0	333.2	368.8	381.3
40°	1183.3	959.9	431.3	284.2	277.1	291.0	294.6	305.0	316.5	353.1	361.1
42.5°	1307.6	986.3	385.6	268.2	273.4	285.2	296.2	298.8	306.4	328.5	343.1
45°	1411.3	1006.1	337.2	255.4	261.1	297.9	298.6	297.4	296.0	304.2	316.1
47.5°	1518.6	1059.2	292.5	241.1	256.4	308.3	299.8	288.7	283.0	284.0	295.1
50°	1637.0	1097.7	260.9	229.5	257.5	308.3	305.7	279.9	268.4	265.5	277.1
52.5°	1741.2	1102.3	237.0	220.1	253.1	297.7	309.7	274.3	255.0	247.9	258.9
55°	1797.9	1045.1	219.6	211.6	242.0	288.2	307.6	271.2	238.9	233.5	243.2
57.5°	1796.7	950.4	204.9	199.8	229.3	274.8	296.0	254.2	229.0	225.9	235.4
60°	1731.9	839.2	193.6	190.1	216.3	255.4	275.2	243.1	219.4	217.9	228.3
62.5°	1585.1	724.5	182.6	179.9	204.2	241.7	265.3	230.7	209.5	209.4	219.3
65°	1298.1	581.6	172.4	171.7	192.9	228.1	255.9	220.3	199.3	202.8	212.8
67.5°	894.4	408.7	161.5	163.5	182.5	215.1	248.8	213.4	188.5	195.7	204.7
70°	490.8	252.8	149.3	153.5	169.3	200.0	237.7	202.1	174.5	185.4	191.7
72.5°	249.7	168.6	134.2	140.8	153.1	177.8	216.8	185.8	159.4	163.5	166.8
75°	167.7	126.9	117.4	124.7	133.5	156.6	192.4	170.5	145.0	144.4	148.1
77.5°	126.7	99.1	99.7	108.0	113.7	137.7	172.9	157.6	132.8	131.6	137.0
80°	92.7	75.2	80.2	88.9	94.1	123.6	160.2	143.4	116.3	111.5	116.0
82.5°	61.5	53.3	59.4	68.1	72.2	103.3	145.5	121.7	94.8	82.5	83.2
85°	29.0	28.0	35.4	39.6	45.0	64.1	108.9	84.2	60.4	50.0	52.3
87.5°	6.6	8.9	11.6	11.5	13.4	17.2	33.9	23.6	17.5	12.0	8.0
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)