

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: P596911

Luminaire Tested: **MSA-SA1D-835-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596911
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-835-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4233 lumens
Efficiency: N/A
Efficacy: 63.2 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

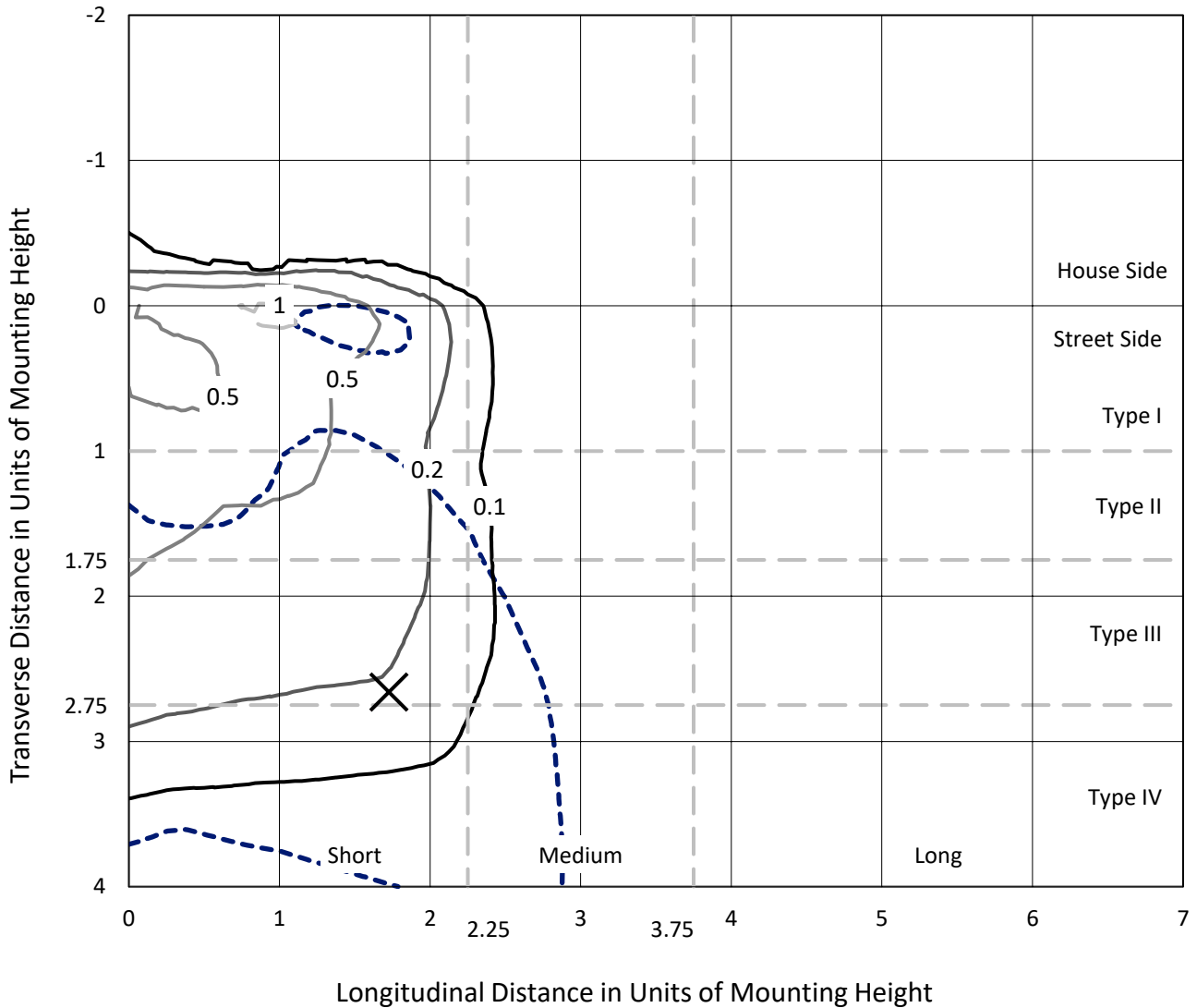
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

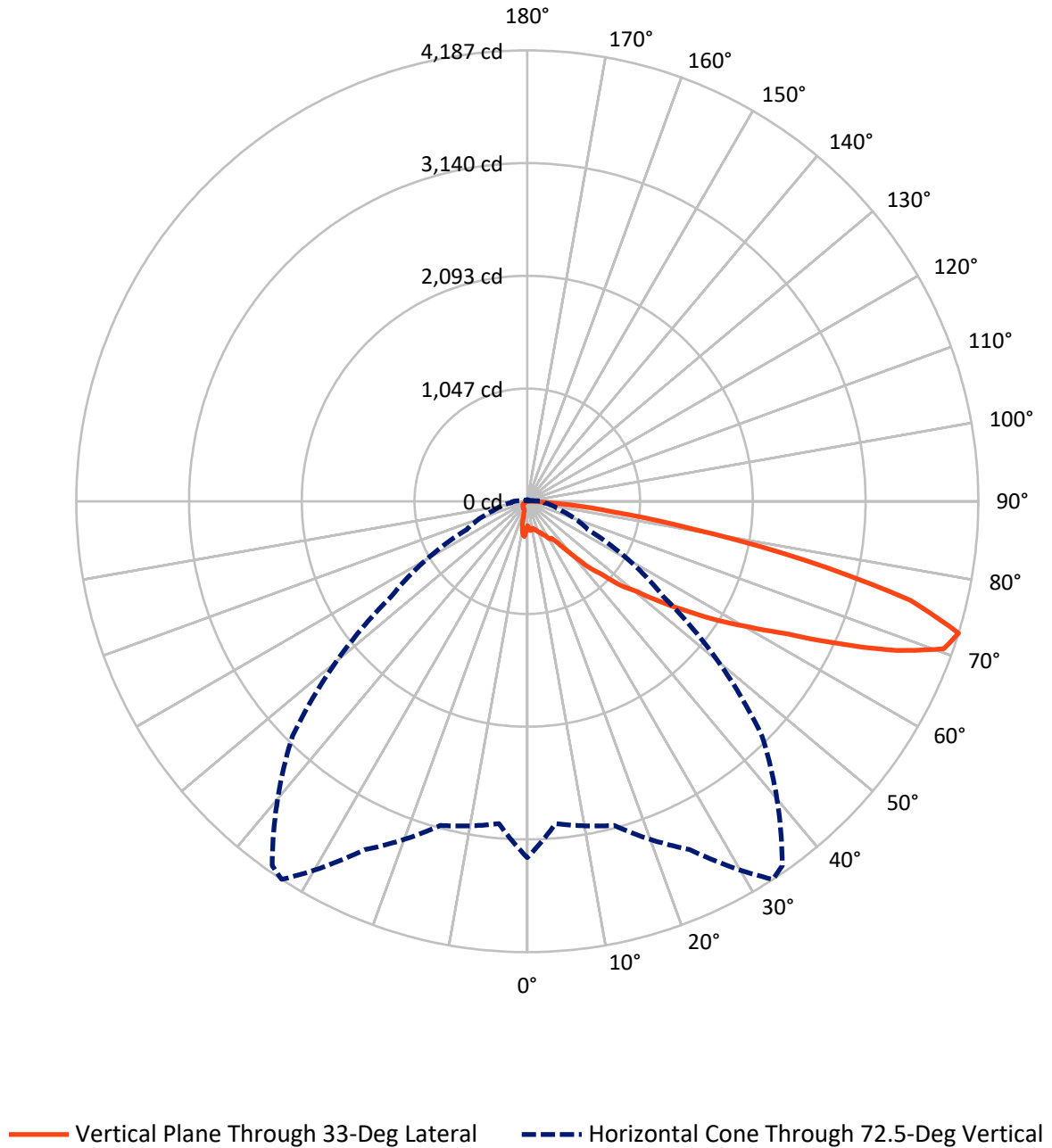
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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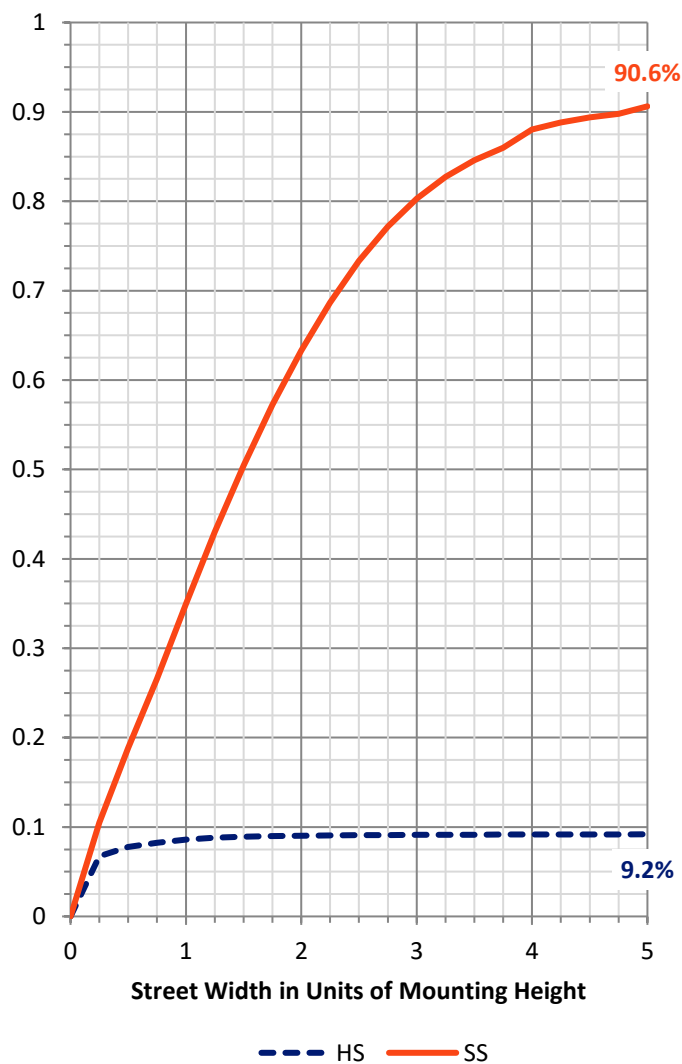
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	391.4	0.0	391.4
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3841.6	0.0	3841.6
	% Fixture	90.8	0.0	90.8
Total	Lumens	4233.0	0.0	4233.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.1	0.7
10°-20°	86.8	2.1
20°-30°	147.3	3.5
30°-40°	269.5	6.4
40°-50°	568.8	13.4
50°-60°	951.7	22.5
60°-70°	1273.9	30.1
70°-80°	832.1	19.7
80°-90°	73.8	1.7
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°	4233.0	100.0
0°-180°	4233.0	100.0

Coefficient of Utilization

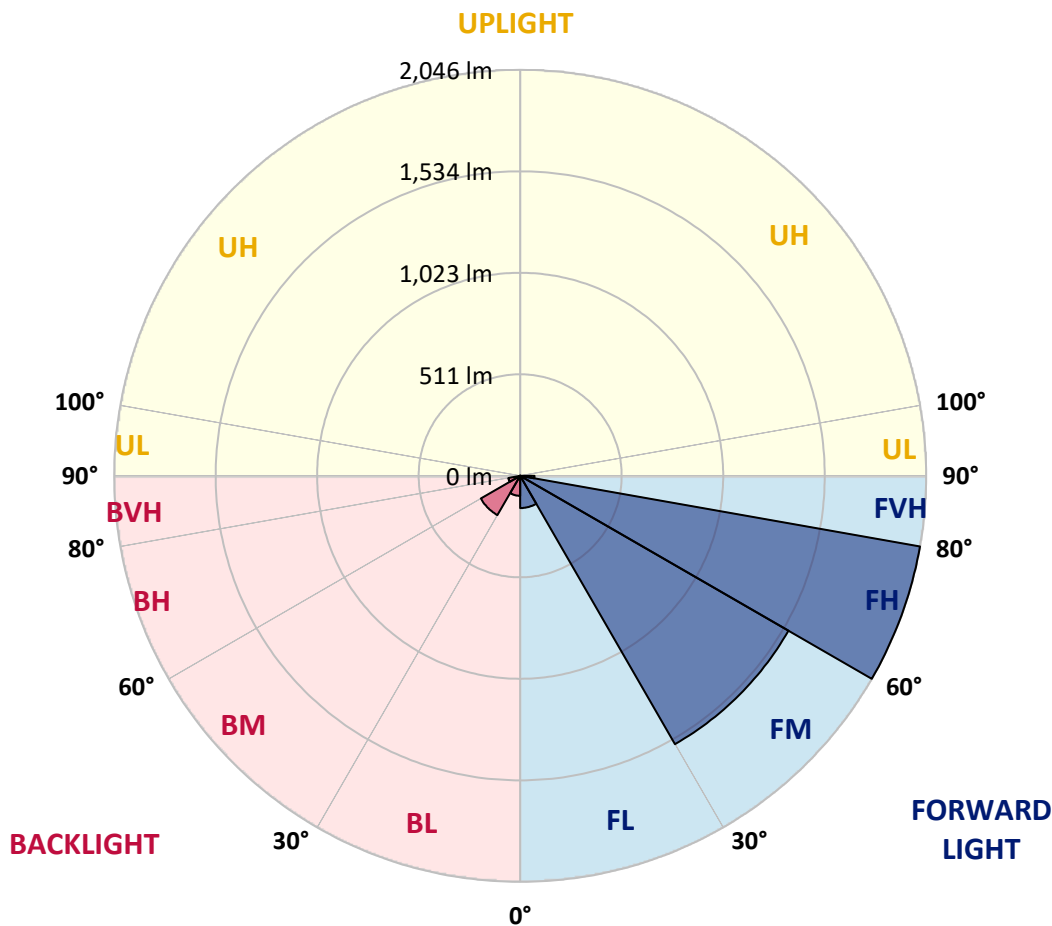


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	162.5	3.8			
FM (30°-60°)	1561.2	36.9			
FH (60°-80°)	2045.6	48.3			G2/5000
FVH (80°-90°)	72.3	1.7			G1/100
BL (0°-30°)	100.7	2.4	B0/110		
BM (30°-60°)	228.8	5.4	B1/1000		
BH (60°-80°)	60.4	1.4	B0/110		G0/110
BVH (80°-90°)	1.4	0.0			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°	33°	35°	45°	55°	65°	75°	85°
0°	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1
2.5°	268.4	258.0	243.0	243.9	246.5	248.6	254.3	251.9	247.5	247.2	268.4
5°	284.4	272.9	271.9	273.3	272.6	276.4	271.7	287.0	299.9	315.4	340.3
7.5°	276.6	271.2	264.4	271.4	271.2	269.3	272.4	303.4	334.7	354.4	395.5
10°	254.3	248.2	253.3	255.7	254.1	262.3	282.7	308.1	345.5	386.8	406.8
12.5°	247.9	251.7	253.6	253.6	269.3	273.6	304.8	328.8	373.2	405.9	463.9
15°	272.6	279.9	267.0	264.2	269.1	271.4	306.2	335.1	392.0	451.7	500.4
17.5°	311.9	311.4	291.4	280.4	288.1	293.8	313.0	346.9	380.3	487.7	558.2
20°	338.9	339.4	303.4	280.4	306.0	309.3	330.7	357.7	384.0	505.8	596.0
22.5°	373.7	361.2	321.5	299.2	316.6	319.6	343.1	364.5	403.3	503.6	644.4
25°	402.1	394.1	344.1	328.6	344.1	339.8	361.2	393.4	424.0	537.2	672.9
27.5°	446.3	432.7	360.0	362.9	361.9	365.0	369.9	419.3	460.4	538.9	738.7
30°	487.4	479.4	395.8	395.8	404.9	399.1	402.6	462.3	495.7	577.0	812.7
32.5°	530.0	530.4	437.8	415.5	408.2	432.4	456.2	483.2	538.2	642.3	926.0
35°	642.5	633.1	518.4	462.7	456.9	455.5	493.5	566.6	613.6	727.4	1078.5
37.5°	869.3	836.7	691.9	569.9	547.8	540.3	583.5	658.5	705.3	852.4	1330.7
40°	1102.0	1042.1	881.3	743.8	672.1	639.7	690.0	753.7	836.9	990.6	1564.0
42.5°	1306.2	1232.2	1024.0	931.4	838.1	824.0	776.7	880.4	1024.9	1191.8	1792.7
45°	1505.3	1359.6	1150.9	1077.6	964.3	972.3	956.3	1046.1	1220.2	1412.2	1995.5
47.5°	1642.3	1511.4	1306.5	1211.3	1165.9	1119.2	1246.1	1339.4	1394.1	1552.3	2170.9
50°	1789.9	1657.3	1440.2	1373.7	1314.0	1361.2	1526.0	1538.4	1534.0	1683.0	2290.2
52.5°	1980.5	1824.2	1593.7	1518.4	1552.3	1599.3	1789.4	1791.8	1658.3	1792.9	2376.3
55°	2156.8	1983.5	1798.1	1727.1	1797.9	1837.6	2048.4	1971.1	1730.7	1867.7	2418.6
57.5°	2405.2	2204.7	2070.0	1945.0	2088.4	2050.3	2276.1	2161.2	1812.0	1917.3	2403.1
60°	2719.1	2483.2	2348.3	2216.0	2369.7	2395.5	2498.5	2256.2	1843.5	1933.5	2309.7
62.5°	3038.5	2801.2	2623.7	2534.0	2708.3	2793.4	2704.3	2303.4	1805.6	1901.8	2098.5
65°	3434.8	3130.9	2923.6	2871.0	3194.1	3319.1	2947.8	2314.9	1732.5	1727.1	1687.2
67.5°	3706.2	3410.3	3220.2	3308.3	3698.7	3708.8	3166.4	2318.4	1486.5	1352.3	1107.4
70°	3770.6	3453.8	3368.7	3628.2	4101.3	3974.1	3236.9	2139.8	1102.5	802.6	506.2
72.5°	3310.0	3004.9	3115.6	3567.8	4186.8	4128.5	3081.1	1543.8	620.7	321.0	155.3
75°	2030.3	1845.8	2337.2	3024.9	3675.2	3637.6	2403.8	797.6	250.1	128.3	58.0
77.5°	883.0	820.0	1219.7	2007.0	2640.9	2607.3	1408.5	293.8	129.3	90.2	29.4
80°	292.1	283.4	462.0	950.4	1546.9	1517.3	593.4	122.2	92.1	72.4	16.5
82.5°	69.3	68.9	161.2	437.4	788.0	763.3	182.1	67.4	66.7	57.1	8.7
85°	17.4	17.9	44.7	178.8	320.1	282.3	47.5	33.6	47.0	38.8	4.5
87.5°	0.0	0.0	11.5	25.6	48.4	30.3	5.2	8.9	13.2	13.9	2.4
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°	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1
2.5°	273.1	270.5	249.4	254.5	262.5	261.8	267.0	263.0	259.5	276.9	275.2
5°	347.4	333.3	326.7	335.8	330.9	319.4	329.0	327.4	324.6	330.4	334.9
7.5°	403.1	390.1	384.3	365.0	337.0	314.9	318.4	310.2	302.5	311.6	321.0
10°	421.4	414.3	413.6	376.0	349.7	317.7	279.9	247.2	238.5	227.0	232.2
12.5°	471.2	475.4	448.9	404.9	354.2	292.8	225.6	179.3	160.5	148.3	149.0
15°	512.1	526.9	488.4	409.4	311.6	223.3	150.2	108.6	96.8	93.8	92.8
17.5°	573.0	587.3	500.6	377.7	251.2	151.4	96.6	84.6	85.3	87.4	87.0
20°	618.1	616.0	490.0	321.5	185.2	99.2	80.8	79.2	83.0	89.1	87.7
22.5°	661.6	647.0	483.4	269.6	119.9	79.7	78.0	77.8	81.3	87.2	88.8
25°	692.6	694.9	472.4	211.0	87.2	74.0	75.4	77.6	81.1	87.4	86.5
27.5°	781.4	715.6	426.3	153.2	73.6	71.0	74.5	78.7	79.9	87.9	88.1
30°	839.0	793.7	396.2	103.2	67.9	65.6	72.6	78.3	79.7	90.0	90.7
32.5°	939.4	827.3	361.5	76.6	63.2	63.9	68.4	75.9	82.5	93.5	94.0
35°	1064.2	935.1	298.5	68.9	61.6	60.4	62.5	71.2	82.0	94.0	96.4
37.5°	1301.8	999.8	236.7	66.7	61.6	59.5	61.6	66.7	80.6	98.7	103.6
40°	1460.9	1131.4	170.6	66.3	60.4	58.5	59.2	64.4	76.6	95.9	103.2
42.5°	1656.9	1186.8	125.7	65.1	59.2	56.4	56.9	63.5	72.6	90.0	95.4
45°	1817.4	1227.3	98.9	64.6	56.4	55.5	56.4	62.7	68.9	77.3	82.3
47.5°	1939.4	1274.3	79.4	61.6	55.7	55.5	54.3	58.8	62.5	64.6	67.9
50°	2028.7	1263.7	65.8	56.9	53.3	54.8	52.6	53.3	54.3	53.1	56.9
52.5°	2083.4	1225.6	54.8	51.2	50.5	51.7	49.1	47.0	45.4	44.4	46.8
55°	2103.4	1149.2	46.5	43.9	45.6	46.1	43.9	40.2	37.4	36.0	37.8
57.5°	2065.6	1032.9	40.4	36.4	40.2	40.2	37.4	33.4	30.1	27.7	29.6
60°	1969.7	904.3	36.0	30.3	34.3	34.5	31.3	27.0	24.4	22.1	23.3
62.5°	1791.1	764.3	31.5	26.3	29.6	29.8	25.9	21.9	20.0	17.4	18.3
65°	1433.8	584.5	26.8	23.3	25.6	24.9	21.4	18.6	16.2	13.9	14.3
67.5°	930.7	360.8	23.3	21.2	21.6	20.9	18.1	16.2	13.6	11.8	12.0
70°	416.7	155.3	20.4	19.0	18.8	17.6	15.3	15.0	13.4	11.8	11.8
72.5°	128.6	58.5	17.6	17.2	16.2	14.8	13.4	14.3	13.2	11.3	11.0
75°	50.8	26.8	14.6	14.6	14.1	12.2	12.0	12.9	12.2	10.3	9.9
77.5°	26.6	16.9	12.0	12.5	12.2	9.4	10.8	11.8	11.3	8.7	7.3
80°	15.7	10.3	8.9	10.1	9.9	6.6	8.2	7.5	5.4	2.6	0.7
82.5°	8.7	4.7	4.0	5.9	5.9	2.4	4.2	3.8	2.1	0.0	0.0
85°	4.2	3.3	3.1	3.3	2.4	0.7	2.1	2.1	1.2	0.0	0.0
87.5°	2.1	1.9	1.4	1.2	0.9	0.0	0.7	0.9	0.0	0.0	0.0
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)