

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: P596933

Luminaire Tested: **MSA-SA2A-835-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596933
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-SA2A-835-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 4907 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

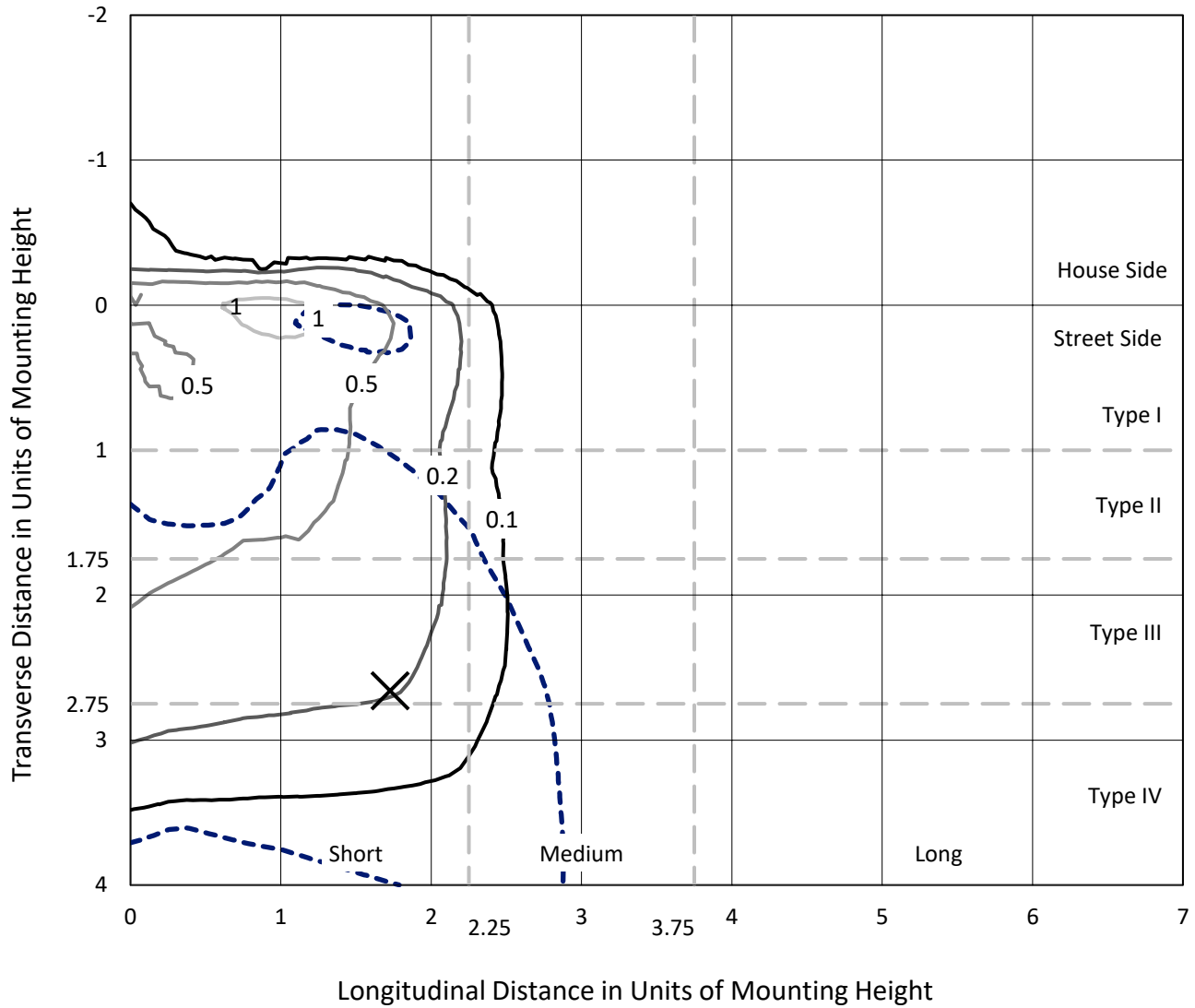
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

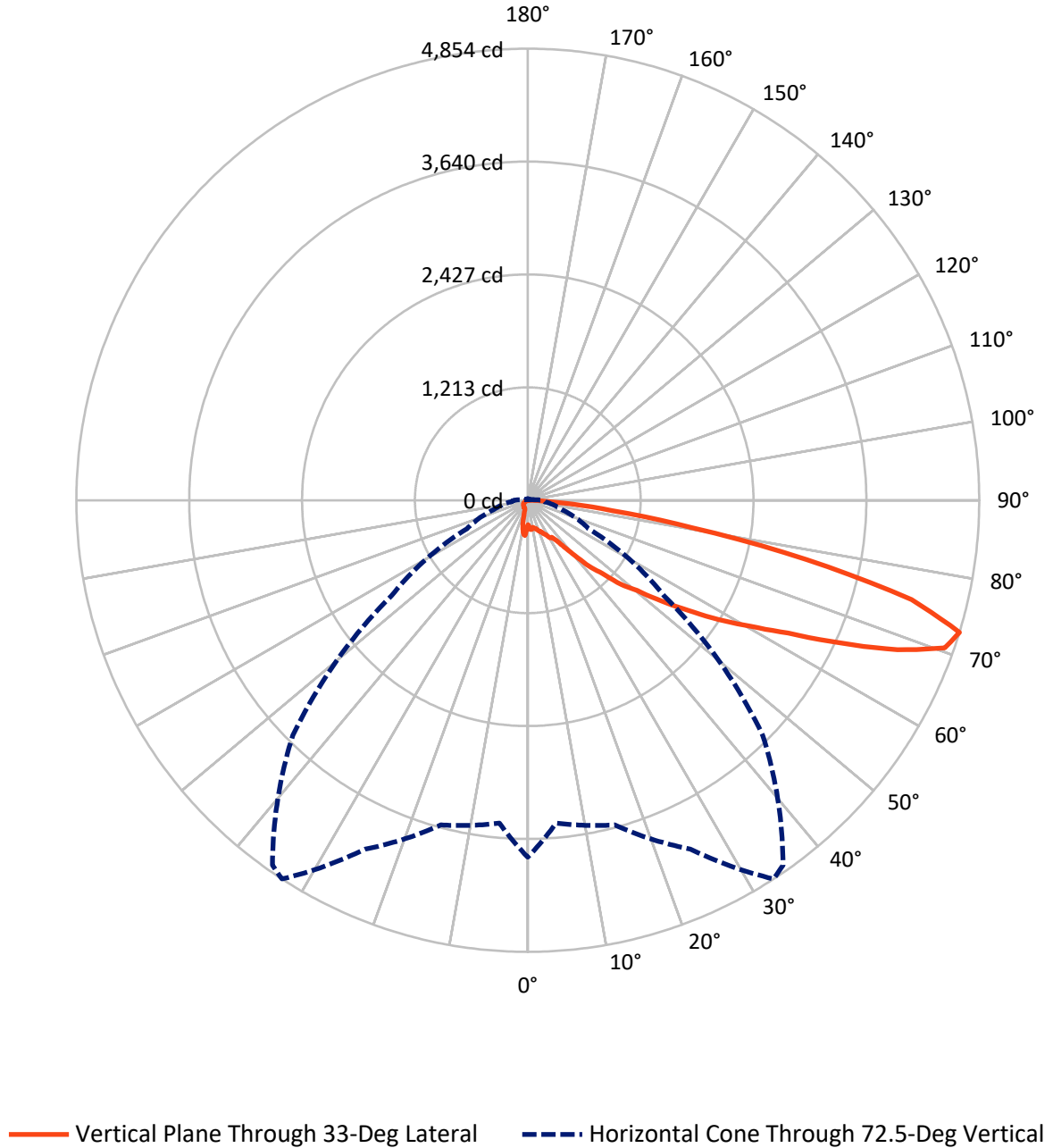
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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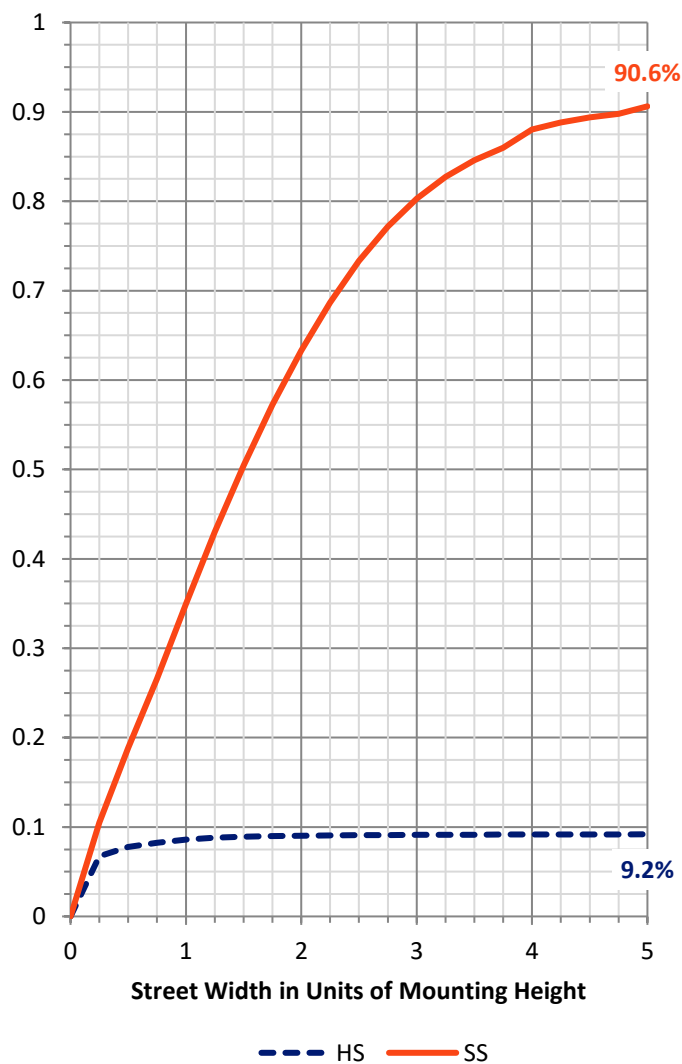
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	453.7	0.0	453.7
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	4453.3	0.0	4453.3
	% Fixture	90.8	0.0	90.8
Total	Lumens	4907.0	0.0	4907.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.8	0.7
10°-20°	100.7	2.1
20°-30°	170.7	3.5
30°-40°	312.4	6.4
40°-50°	659.4	13.4
50°-60°	1103.2	22.5
60°-70°	1476.7	30.1
70°-80°	964.6	19.7
80°-90°	85.5	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°	4907.0	100.0
0°-180°	4907.0	100.0

Coefficient of Utilization



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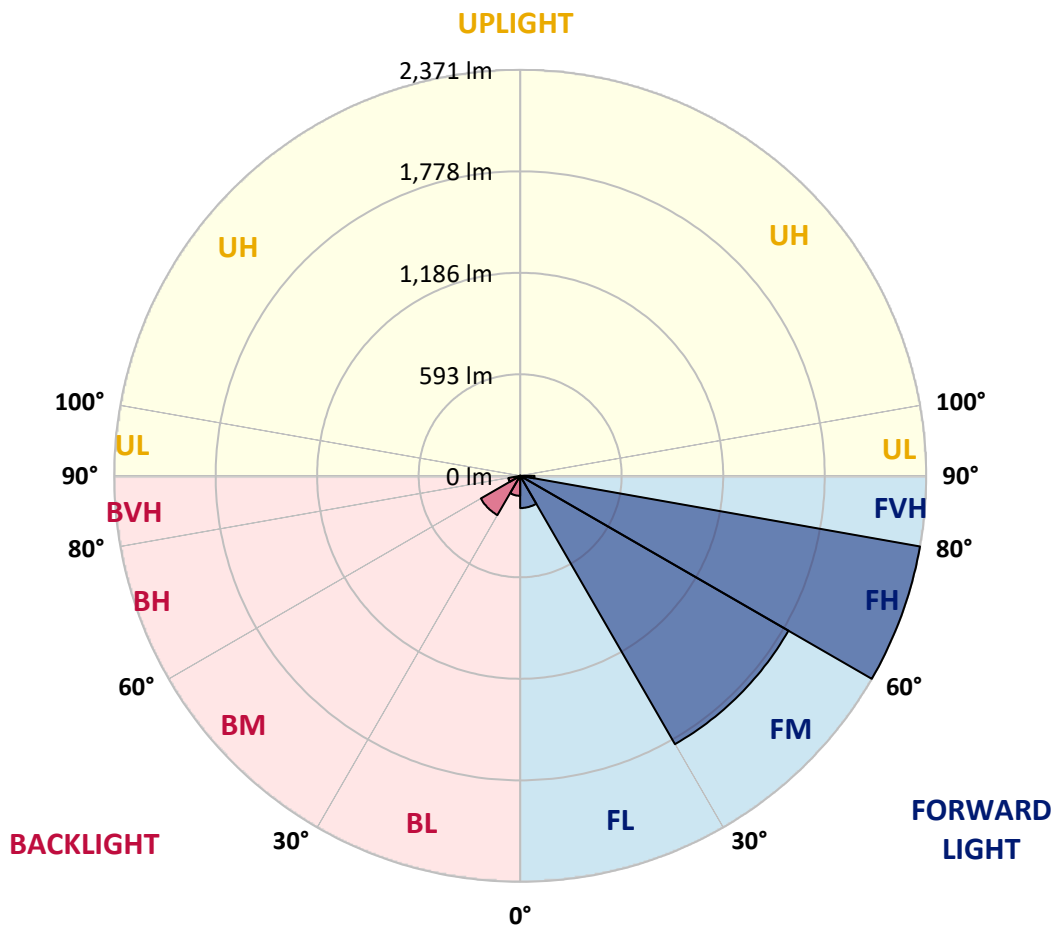
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	188.4	3.8			
FM (30°-60°)	1809.8	36.9			
FH (60°-80°)	2371.3	48.3			G2/5000
FVH (80°-90°)	83.9	1.7			G1/100
BL (0°-30°)	116.8	2.4	B1/500		
BM (30°-60°)	265.3	5.4	B1/1000		
BH (60°-80°)	70.0	1.4	B0/110		G0/110
BVH (80°-90°)	1.7	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°	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0
2.5°	311.1	299.1	281.7	282.8	285.8	288.2	294.8	292.1	286.9	286.6	311.1
5°	329.6	316.3	315.2	316.8	316.0	320.4	314.9	332.6	347.6	365.6	394.5
7.5°	320.7	314.4	306.5	314.7	314.4	312.2	315.8	351.7	388.0	410.8	458.5
10°	294.8	287.7	293.7	296.4	294.5	304.0	327.7	357.2	400.5	448.4	471.6
12.5°	287.4	291.8	294.0	294.0	312.2	317.1	353.4	381.1	432.6	470.5	537.8
15°	316.0	324.5	309.5	306.2	311.9	314.7	355.0	388.5	454.4	523.6	580.0
17.5°	361.5	361.0	337.8	325.0	334.0	340.5	362.9	402.1	440.8	565.3	647.0
20°	392.9	393.4	351.7	325.0	354.7	358.5	383.3	414.7	445.2	586.3	690.9
22.5°	433.2	418.7	372.7	346.8	367.0	370.5	397.8	422.6	467.5	583.8	747.0
25°	466.1	456.9	398.8	380.9	398.8	393.9	418.7	456.1	491.5	622.8	780.0
27.5°	517.4	501.6	417.4	420.6	419.6	423.1	428.8	486.0	533.7	624.7	856.3
30°	565.0	555.8	458.8	458.8	469.4	462.6	466.7	535.9	574.6	668.8	942.1
32.5°	614.3	614.9	507.6	481.7	473.2	501.3	528.8	560.1	623.9	744.6	1073.4
35°	744.8	733.9	601.0	536.4	529.6	528.0	572.1	656.8	711.3	843.2	1250.2
37.5°	1007.7	969.9	802.1	660.7	635.1	626.3	676.5	763.4	817.6	988.1	1542.5
40°	1277.5	1208.0	1021.6	862.3	779.2	741.6	799.9	873.7	970.2	1148.3	1813.1
42.5°	1514.2	1428.4	1187.0	1079.7	971.5	955.2	900.4	1020.6	1188.1	1381.5	2078.2
45°	1745.0	1576.1	1334.1	1249.1	1117.8	1127.1	1108.5	1212.6	1414.5	1637.1	2313.3
47.5°	1903.8	1752.0	1514.5	1404.1	1351.6	1297.3	1444.5	1552.6	1616.1	1799.5	2516.5
50°	2074.9	1921.2	1669.5	1592.4	1523.2	1578.0	1768.9	1783.4	1778.2	1950.9	2654.9
52.5°	2295.8	2114.7	1847.4	1760.2	1799.5	1853.9	2074.3	2077.1	1922.3	2078.4	2754.6
55°	2500.2	2299.4	2084.4	2002.1	2084.1	2130.2	2374.6	2284.9	2006.2	2165.1	2803.7
57.5°	2788.1	2555.7	2399.6	2254.7	2420.9	2376.7	2638.6	2505.3	2100.5	2222.5	2785.7
60°	3152.1	2878.6	2722.2	2568.8	2747.0	2777.0	2896.3	2615.4	2137.0	2241.3	2677.5
62.5°	3522.3	3247.2	3041.5	2937.4	3139.6	3238.2	3134.9	2670.2	2093.1	2204.6	2432.6
65°	3981.7	3629.4	3389.1	3328.1	3702.7	3847.6	3417.2	2683.5	2008.4	2002.1	1955.8
67.5°	4296.3	3953.3	3732.9	3835.1	4287.6	4299.3	3670.6	2687.6	1723.2	1567.6	1283.7
70°	4371.0	4003.7	3905.1	4205.9	4754.3	4606.9	3752.3	2480.5	1278.0	930.4	586.8
72.5°	3837.0	3483.4	3611.7	4135.9	4853.5	4785.9	3571.7	1789.6	719.5	372.2	180.1
75°	2353.6	2139.7	2709.4	3506.5	4260.4	4216.8	2786.5	924.7	289.9	148.8	67.3
77.5°	1023.5	950.5	1414.0	2326.6	3061.4	3022.4	1632.7	340.5	149.8	104.6	34.1
80°	338.6	328.6	535.6	1101.7	1793.2	1758.9	687.9	141.7	106.8	83.9	19.1
82.5°	80.4	79.8	186.9	507.0	913.5	884.9	211.1	78.2	77.4	66.2	10.1
85°	20.2	20.7	51.8	207.3	371.1	327.2	55.0	39.0	54.5	45.0	5.2
87.5°	0.0	0.0	13.3	29.7	56.1	35.1	6.0	10.4	15.3	16.1	2.7
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°	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0
2.5°	316.6	313.6	289.1	295.1	304.3	303.5	309.5	304.9	300.8	320.9	319.0
5°	402.7	386.3	378.7	389.3	383.6	370.2	381.4	379.5	376.2	383.0	388.2
7.5°	467.2	452.2	445.4	423.1	390.7	365.1	369.2	359.6	350.6	361.3	372.2
10°	488.5	480.3	479.5	435.9	405.4	368.3	324.5	286.6	276.5	263.2	269.2
12.5°	546.2	551.1	520.4	469.4	410.6	339.5	261.5	207.9	186.1	171.9	172.7
15°	593.6	610.8	566.1	474.6	361.3	258.8	174.1	125.9	112.2	108.7	107.6
17.5°	664.2	680.8	580.3	437.8	291.2	175.4	112.0	98.1	98.9	101.3	100.8
20°	716.5	714.1	568.0	372.7	214.7	115.0	93.7	91.8	96.2	103.3	101.6
22.5°	766.9	750.0	560.4	312.5	138.9	92.4	90.4	90.2	94.3	101.1	103.0
25°	802.9	805.6	547.6	244.6	101.1	85.8	87.5	89.9	94.0	101.3	100.3
27.5°	905.9	829.6	494.2	177.6	85.3	82.3	86.4	91.3	92.6	101.9	102.2
30°	972.6	920.0	459.3	119.6	78.7	76.0	84.2	90.7	92.4	104.3	105.2
32.5°	1088.9	959.0	419.0	88.8	73.3	74.1	79.3	88.0	95.6	108.4	109.0
35°	1233.6	1084.0	346.0	79.8	71.4	70.0	72.5	82.5	95.1	109.0	111.7
37.5°	1509.0	1159.0	274.3	77.4	71.4	68.9	71.4	77.4	93.4	114.4	120.1
40°	1693.5	1311.5	197.8	76.8	70.0	67.8	68.7	74.6	88.8	111.2	119.6
42.5°	1920.7	1375.8	145.8	75.5	68.7	65.4	65.9	73.6	84.2	104.3	110.6
45°	2106.8	1422.7	114.7	74.9	65.4	64.3	65.4	72.7	79.8	89.6	95.4
47.5°	2248.2	1477.2	92.1	71.4	64.6	64.3	62.9	68.1	72.5	74.9	78.7
50°	2351.7	1464.9	76.3	65.9	61.8	63.5	61.0	61.8	62.9	61.6	65.9
52.5°	2415.2	1420.8	63.5	59.4	58.6	59.9	56.9	54.5	52.6	51.5	54.2
55°	2438.3	1332.2	53.9	50.9	52.9	53.4	50.9	46.6	43.3	41.7	43.9
57.5°	2394.5	1197.4	46.9	42.2	46.6	46.6	43.3	38.7	34.9	32.1	34.3
60°	2283.3	1048.3	41.7	35.1	39.8	40.0	36.2	31.3	28.3	25.6	27.0
62.5°	2076.2	886.0	36.5	30.5	34.3	34.6	30.0	25.3	23.2	20.2	21.3
65°	1662.1	677.6	31.1	27.0	29.7	28.9	24.8	21.5	18.8	16.1	16.6
67.5°	1078.9	418.2	27.0	24.5	25.1	24.2	21.0	18.8	15.8	13.6	13.9
70°	483.0	180.1	23.7	22.1	21.8	20.4	17.7	17.4	15.5	13.6	13.6
72.5°	149.0	67.8	20.4	19.9	18.8	17.2	15.5	16.6	15.3	13.1	12.8
75°	58.8	31.1	16.9	16.9	16.3	14.2	13.9	15.0	14.2	12.0	11.4
77.5°	30.8	19.6	13.9	14.4	14.2	10.9	12.5	13.6	13.1	10.1	8.4
80°	18.3	12.0	10.4	11.7	11.4	7.6	9.5	8.7	6.3	3.0	0.8
82.5°	10.1	5.4	4.6	6.8	6.8	2.7	4.9	4.4	2.5	0.0	0.0
85°	4.9	3.8	3.5	3.8	2.7	0.8	2.5	2.5	1.4	0.0	0.0
87.5°	2.5	2.2	1.6	1.4	1.1	0.0	0.8	1.1	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)