

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: P597021

Luminaire Tested: **MSA-SA3A-835-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597021
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-SA3A-835-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 7242 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

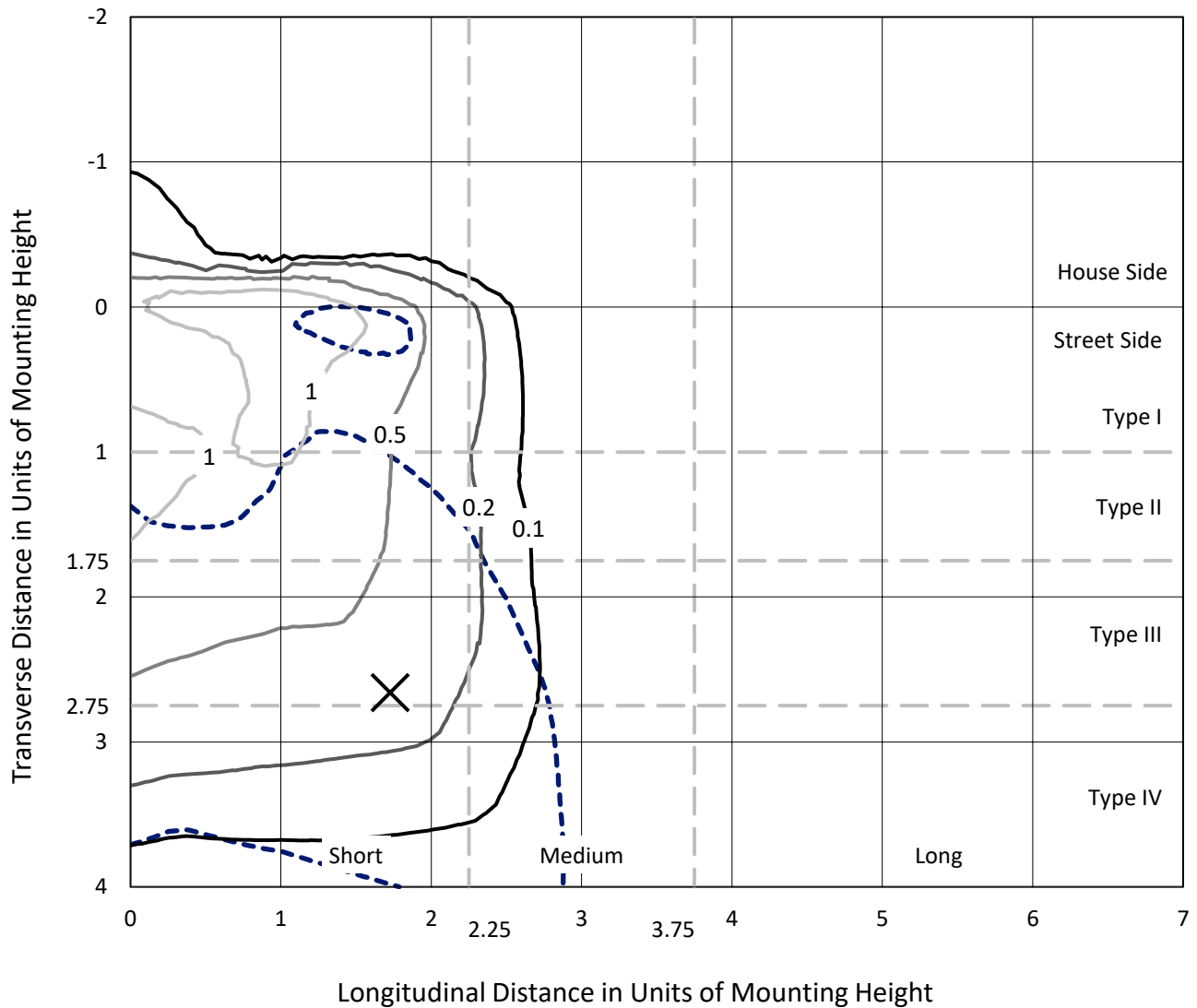
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

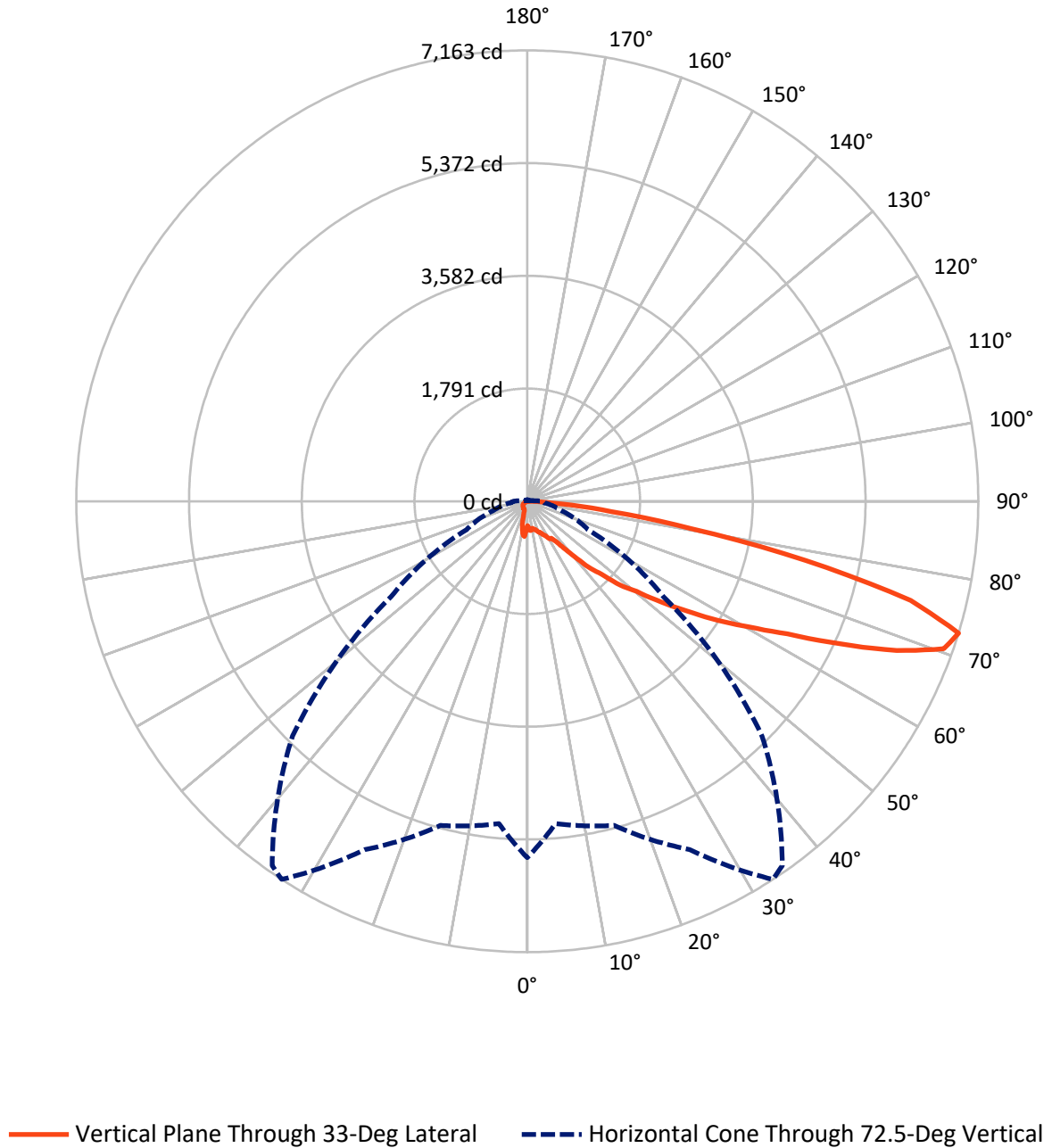
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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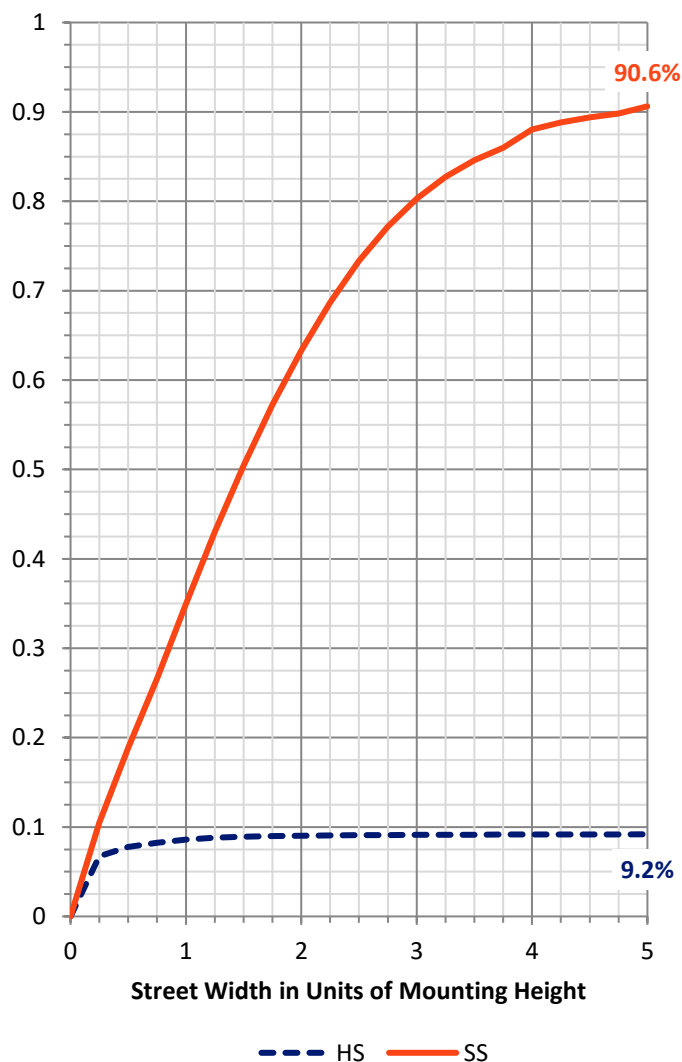
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	669.6	0.0	669.6
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	6572.4	0.0	6572.4
	% Fixture	90.8	0.0	90.8
Total	Lumens	7242.0	0.0	7242.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.9	0.7
10°-20°	148.6	2.1
20°-30°	251.9	3.5
30°-40°	461.1	6.4
40°-50°	973.2	13.4
50°-60°	1628.2	22.5
60°-70°	2179.4	30.1
70°-80°	1423.6	19.7
80°-90°	126.2	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°	7242.0	100.0
0°-180°	7242.0	100.0

Coefficient of Utilization



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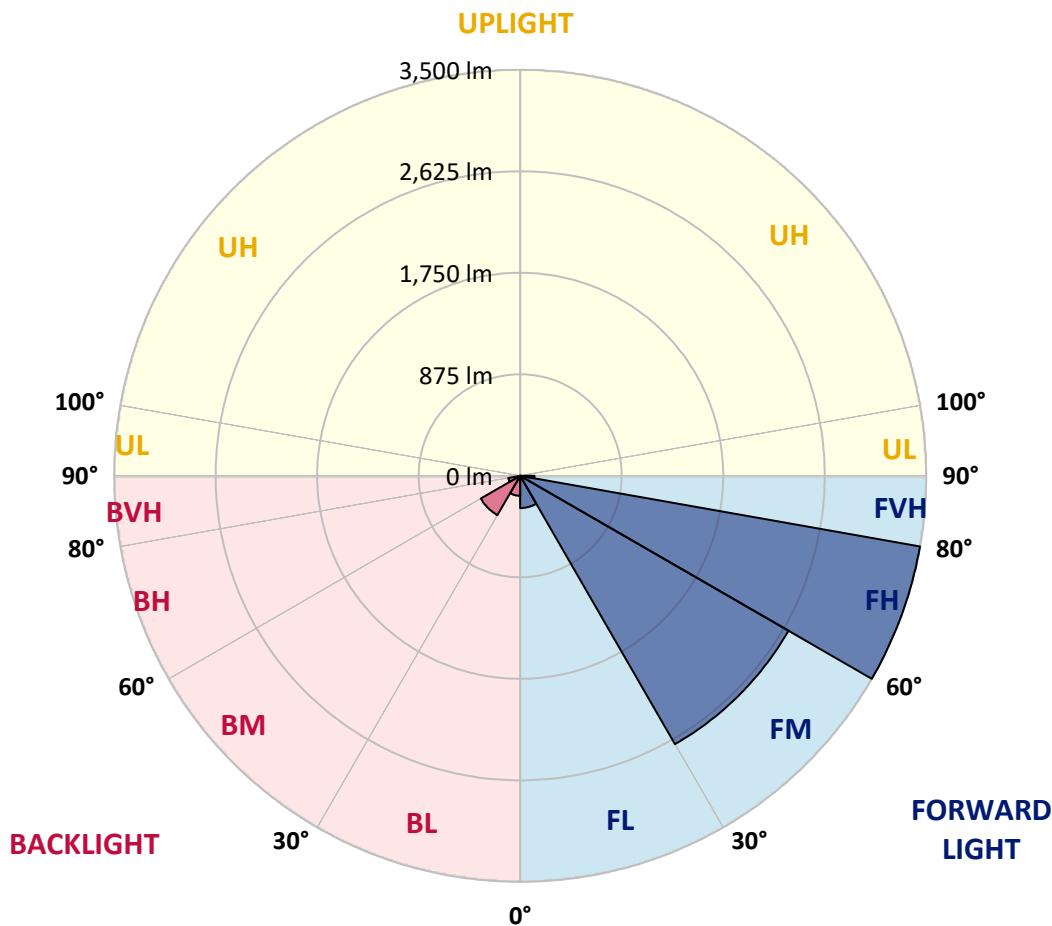
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	278.0	3.8			
FM (30°-60°)	2671.0	36.9			
FH (60°-80°)	3499.6	48.3			G2/5000
FVH (80°-90°)	123.8	1.7			G2/225
BL (0°-30°)	172.4	2.4	B1/500		
BM (30°-60°)	391.5	5.4	B1/1000		
BH (60°-80°)	103.4	1.4	B0/110		G0/110
BVH (80°-90°)	2.4	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°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2
2.5°	459.2	441.5	415.7	417.4	421.8	425.4	435.0	431.0	423.4	423.0	459.2
5°	486.5	466.8	465.2	467.6	466.4	472.8	464.8	490.9	513.1	539.6	582.2
7.5°	473.2	464.0	452.3	464.4	464.0	460.8	466.0	519.1	572.6	606.3	676.7
10°	435.0	424.6	433.4	437.5	434.6	448.7	483.7	527.1	591.1	661.8	696.0
12.5°	424.2	430.6	433.8	433.8	460.8	468.0	521.5	562.5	638.5	694.4	793.7
15°	466.4	478.9	456.8	451.9	460.4	464.4	523.9	573.4	670.7	772.8	856.0
17.5°	533.6	532.8	498.6	479.7	492.9	502.6	535.6	593.5	650.6	834.3	954.9
20°	579.8	580.6	519.1	479.7	523.5	529.1	565.7	612.0	657.0	865.3	1019.7
22.5°	639.3	618.0	550.0	511.8	541.6	546.8	587.0	623.6	690.0	861.7	1102.5
25°	688.0	674.3	588.6	562.1	588.6	581.4	618.0	673.1	725.3	919.1	1151.1
27.5°	763.5	740.2	616.0	620.8	619.2	624.4	632.9	717.3	787.7	922.0	1263.7
30°	833.9	820.2	677.1	677.1	692.8	682.7	688.8	790.9	848.0	987.1	1390.4
32.5°	906.7	907.5	749.1	710.9	698.4	739.8	780.4	826.7	920.8	1098.9	1584.2
35°	1099.3	1083.2	887.0	791.7	781.6	779.2	844.4	969.4	1049.8	1244.4	1845.1
37.5°	1487.3	1431.4	1183.7	975.0	937.2	924.4	998.4	1126.6	1206.6	1458.3	2276.6
40°	1885.3	1782.8	1507.8	1272.6	1149.9	1094.5	1180.5	1289.5	1431.8	1694.8	2675.8
42.5°	2234.7	2108.1	1751.9	1593.4	1433.8	1409.7	1328.9	1506.2	1753.5	2038.9	3067.0
45°	2575.3	2326.0	1969.0	1843.5	1649.7	1663.4	1636.1	1789.6	2087.6	2416.1	3414.0
47.5°	2809.7	2585.8	2235.1	2072.3	1994.7	1914.7	2131.8	2291.4	2385.1	2655.7	3714.0
50°	3062.2	2835.5	2463.9	2350.1	2248.0	2328.8	2610.7	2632.0	2624.4	2879.3	3918.2
52.5°	3388.3	3120.9	2726.5	2597.8	2655.7	2736.1	3061.4	3065.4	2837.1	3067.4	4065.4
55°	3689.9	3393.5	3076.3	2954.9	3075.9	3143.8	3504.5	3372.2	2960.9	3195.3	4137.8
57.5°	4114.9	3771.9	3541.5	3327.6	3572.9	3507.7	3894.1	3697.5	3100.0	3280.1	4111.2
60°	4652.0	4248.4	4017.6	3791.2	4054.1	4098.4	4274.5	3859.9	3153.9	3307.9	3951.6
62.5°	5198.5	4792.4	4488.8	4335.2	4633.5	4779.1	4626.7	3940.8	3089.2	3253.6	3590.2
65°	5876.4	5356.5	5001.8	4911.8	5464.6	5678.5	5043.3	3960.5	2964.1	2954.9	2886.5
67.5°	6340.8	5834.5	5509.3	5660.0	6327.9	6345.2	5417.2	3966.5	2543.1	2313.6	1894.6
70°	6450.9	5908.9	5763.4	6207.3	7016.7	6799.1	5537.8	3660.9	1886.1	1373.1	866.1
72.5°	5662.9	5141.0	5330.3	6103.9	7163.0	7063.3	5271.2	2641.2	1061.9	549.2	265.8
75°	3473.5	3157.9	3998.7	5175.1	6287.7	6223.4	4112.4	1364.7	427.8	219.5	99.3
77.5°	1510.6	1402.8	2086.8	3433.7	4518.1	4460.6	2409.7	502.6	221.1	154.4	50.3
80°	499.8	484.9	790.5	1626.0	2646.5	2595.8	1015.2	209.1	157.6	123.8	28.1
82.5°	118.6	117.8	275.8	748.3	1348.2	1305.9	311.6	115.4	114.2	97.7	14.9
85°	29.8	30.6	76.4	306.0	547.6	482.9	81.2	57.5	80.4	66.3	7.6
87.5°	0.0	0.0	19.7	43.8	82.8	51.9	8.8	15.3	22.5	23.7	4.0
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°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2
2.5°	467.2	462.8	426.6	435.4	449.1	447.9	456.8	449.9	443.9	473.6	470.8
5°	594.3	570.1	558.9	574.6	566.1	546.4	562.9	560.1	555.3	565.3	573.0
7.5°	689.6	667.4	657.4	624.4	576.6	538.8	544.8	530.7	517.5	533.2	549.2
10°	720.9	708.9	707.7	643.3	598.3	543.6	478.9	423.0	408.1	388.4	397.3
12.5°	806.2	813.4	768.0	692.8	605.9	501.0	386.0	306.8	274.6	253.7	254.9
15°	876.1	901.5	835.5	700.4	533.2	382.0	256.9	185.8	165.7	160.4	158.8
17.5°	980.3	1004.8	856.4	646.1	429.8	258.9	165.3	144.7	146.0	149.6	148.8
20°	1057.5	1053.8	838.3	550.0	316.8	169.7	138.3	135.5	141.9	152.4	150.0
22.5°	1131.8	1106.9	827.1	461.2	205.1	136.3	133.5	133.1	139.1	149.2	152.0
25°	1184.9	1188.9	808.2	361.1	149.2	126.7	129.1	132.7	138.7	149.6	148.0
27.5°	1336.9	1224.3	729.4	262.2	125.9	121.4	127.5	134.7	136.7	150.4	150.8
30°	1435.4	1357.8	677.9	176.5	116.2	112.2	124.2	133.9	136.3	154.0	155.2
32.5°	1607.1	1415.3	618.4	131.1	108.2	109.4	117.0	129.9	141.1	160.0	160.8
35°	1820.6	1599.9	510.6	117.8	105.3	103.3	107.0	121.8	140.3	160.8	164.9
37.5°	2227.1	1710.4	404.9	114.2	105.3	101.7	105.3	114.2	137.9	168.9	177.3
40°	2499.3	1935.6	291.9	113.4	103.3	100.1	101.3	110.2	131.1	164.0	176.5
42.5°	2834.6	2030.5	215.1	111.4	101.3	96.5	97.3	108.6	124.2	154.0	163.2
45°	3109.3	2099.6	169.3	110.6	96.5	94.9	96.5	107.4	117.8	132.3	140.7
47.5°	3317.9	2180.1	135.9	105.3	95.3	94.9	92.9	100.5	107.0	110.6	116.2
50°	3470.7	2162.0	112.6	97.3	91.3	93.7	90.1	91.3	92.9	90.9	97.3
52.5°	3564.4	2096.8	93.7	87.7	86.4	88.5	84.0	80.4	77.6	76.0	80.0
55°	3598.6	1966.2	79.6	75.2	78.0	78.8	75.2	68.8	63.9	61.5	64.7
57.5°	3533.9	1767.1	69.2	62.3	68.8	68.8	63.9	57.1	51.5	47.4	50.7
60°	3369.8	1547.2	61.5	51.9	58.7	59.1	53.5	46.2	41.8	37.8	39.8
62.5°	3064.2	1307.6	53.9	45.0	50.7	51.1	44.2	37.4	34.2	29.8	31.4
65°	2453.1	1000.0	45.8	39.8	43.8	42.6	36.6	31.8	27.7	23.7	24.5
67.5°	1592.2	617.2	39.8	36.2	37.0	35.8	31.0	27.7	23.3	20.1	20.5
70°	712.9	265.8	35.0	32.6	32.2	30.2	26.1	25.7	22.9	20.1	20.1
72.5°	219.9	100.1	30.2	29.4	27.7	25.3	22.9	24.5	22.5	19.3	18.9
75°	86.8	45.8	24.9	24.9	24.1	20.9	20.5	22.1	20.9	17.7	16.9
77.5°	45.4	28.9	20.5	21.3	20.9	16.1	18.5	20.1	19.3	14.9	12.5
80°	26.9	17.7	15.3	17.3	16.9	11.3	14.1	12.9	9.2	4.4	1.2
82.5°	14.9	8.0	6.8	10.1	10.1	4.0	7.2	6.4	3.6	0.0	0.0
85°	7.2	5.6	5.2	5.6	4.0	1.2	3.6	3.6	2.0	0.0	0.0
87.5°	3.6	3.2	2.4	2.0	1.6	0.0	1.2	1.6	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)