

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: P596669

Luminaire Tested: **MSA-SA3A-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596669
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-827-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: 6457 lumens
Efficiency: N/A
Efficacy: 67.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

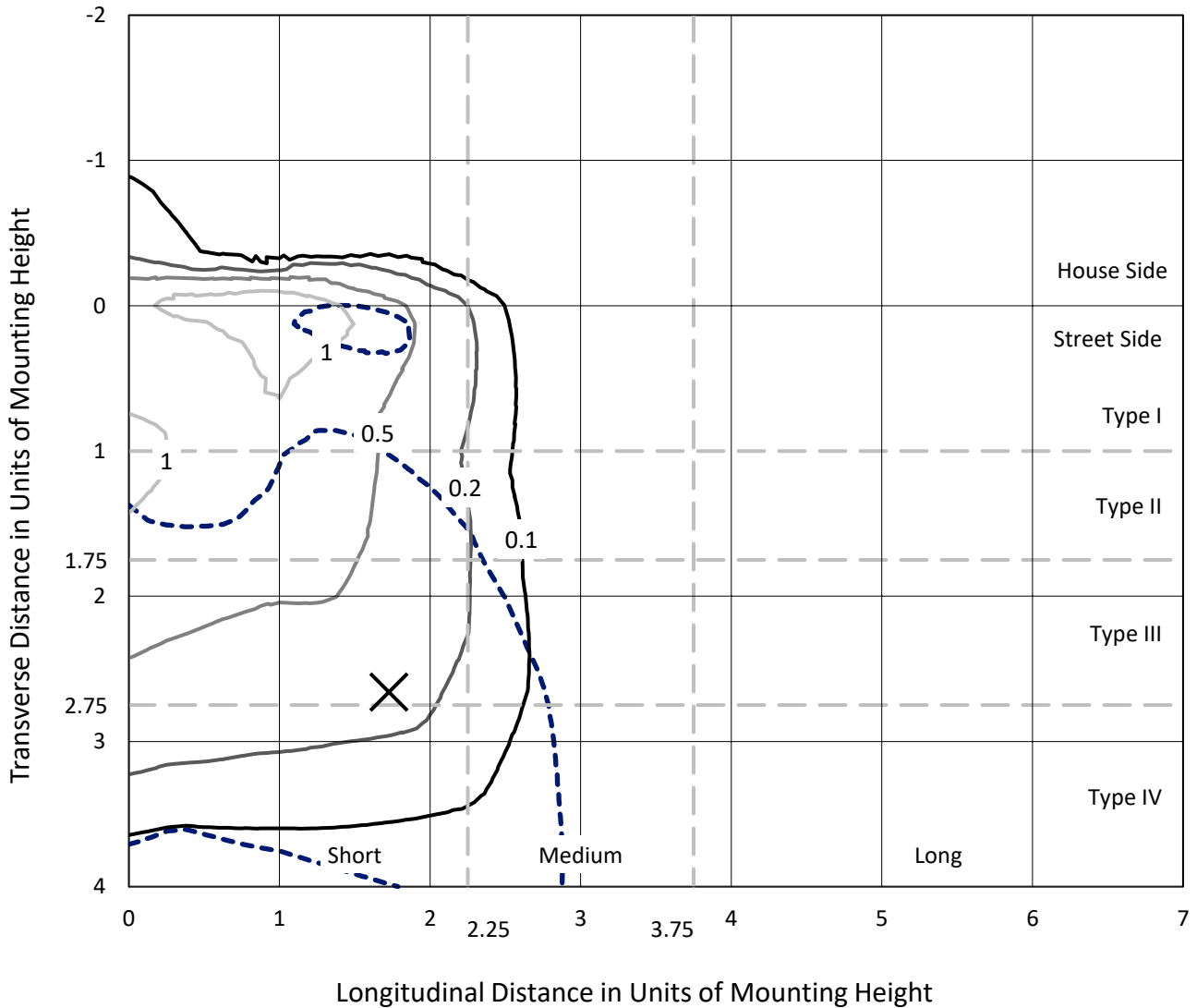
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

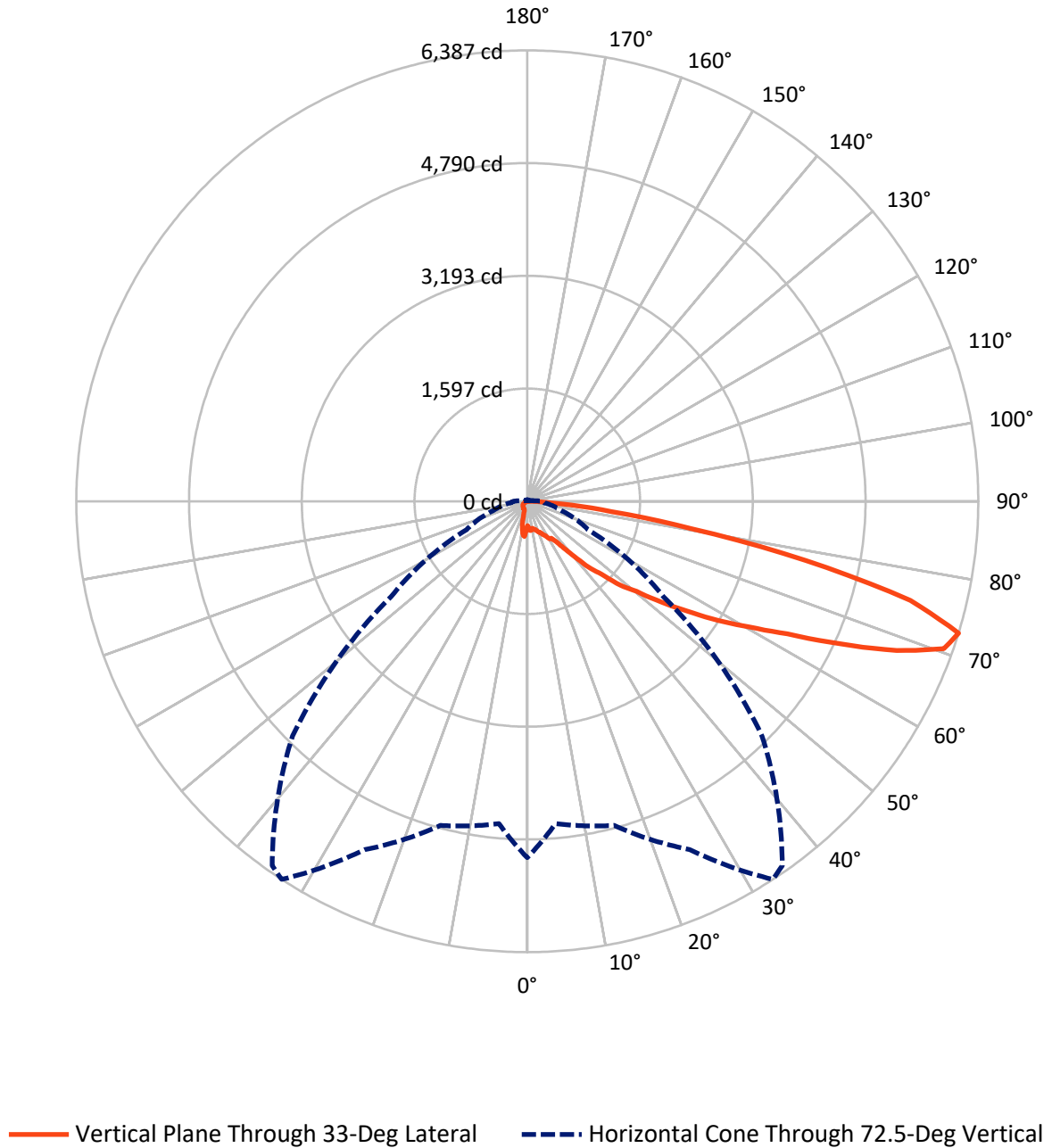
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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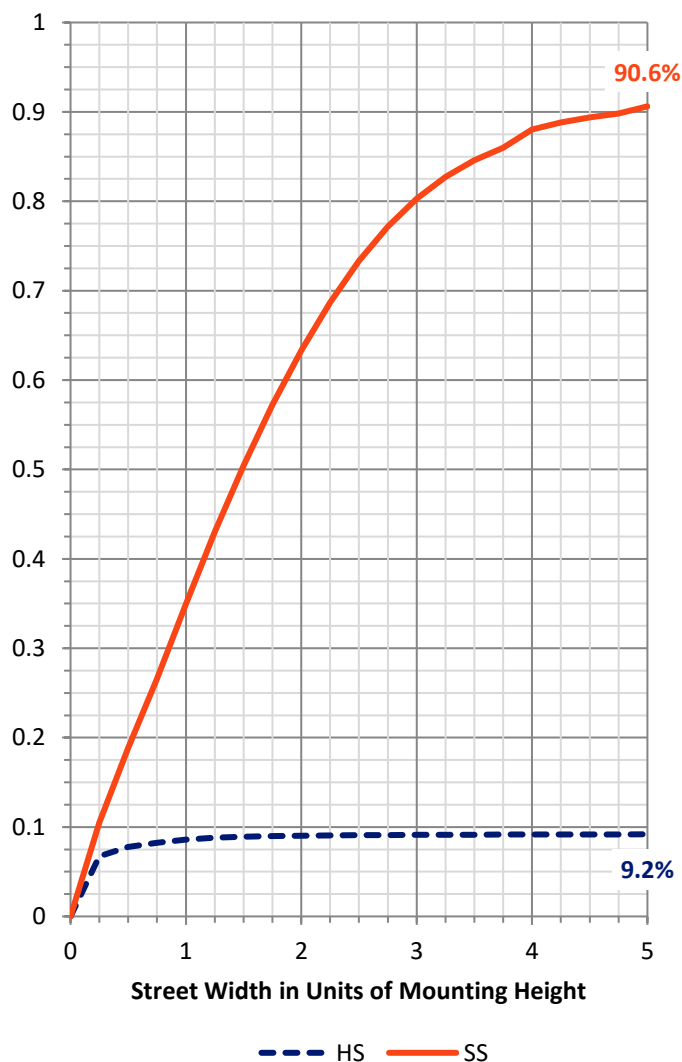
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	597.0	0.0	597.0
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	5860.0	0.0	5860.0
	% Fixture	90.8	0.0	90.8
Total	Lumens	6457.0	0.0	6457.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.5	0.7
10°-20°	132.5	2.1
20°-30°	224.6	3.5
30°-40°	411.1	6.4
40°-50°	867.7	13.4
50°-60°	1451.7	22.5
60°-70°	1943.2	30.1
70°-80°	1269.3	19.7
80°-90°	112.5	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°	6457.0	100.0
0°-180°	6457.0	100.0

Coefficient of Utilization

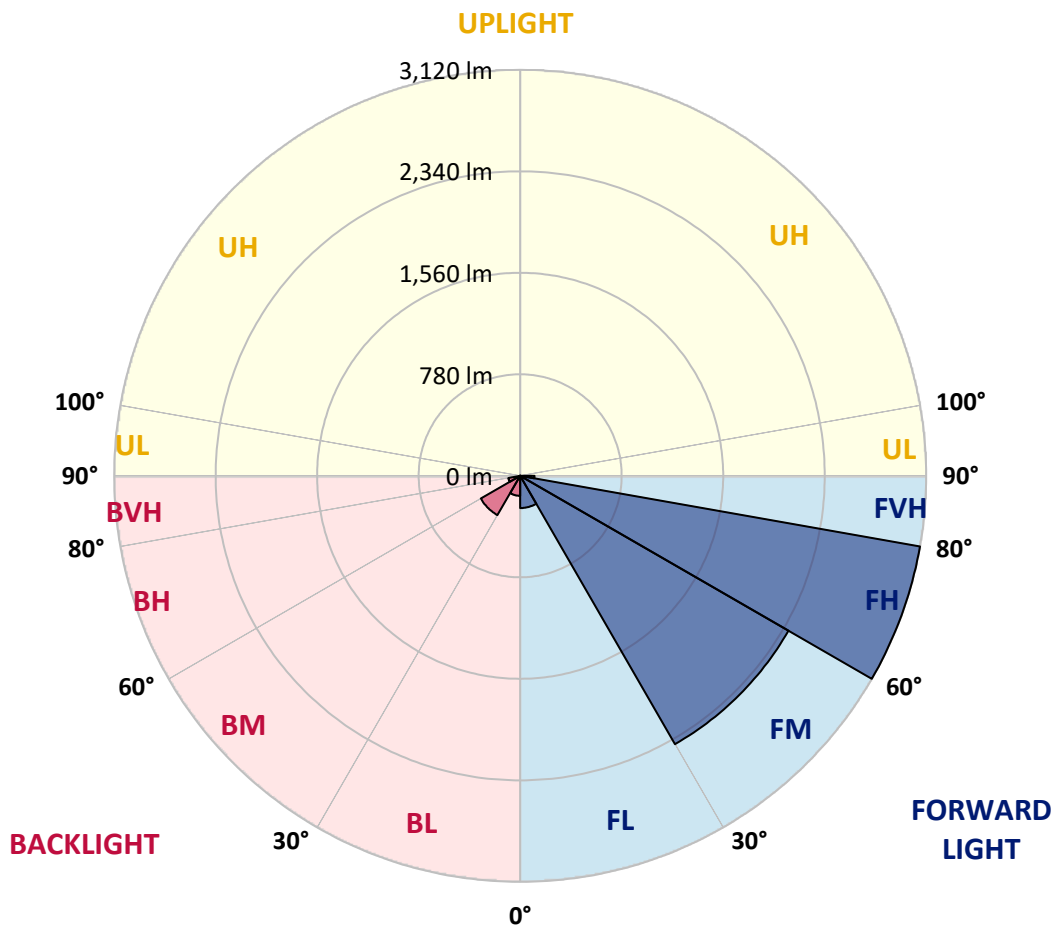


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	247.9	3.8			
FM (30°-60°)	2381.4	36.9			
FH (60°-80°)	3120.3	48.3			G2/5000
FVH (80°-90°)	110.4	1.7			G2/225
BL (0°-30°)	153.7	2.4	B1/500		
BM (30°-60°)	349.0	5.4	B1/1000		
BH (60°-80°)	92.1	1.4	B0/110		G0/110
BVH (80°-90°)	2.2	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°	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4
2.5°	409.4	393.6	370.7	372.1	376.1	379.3	387.9	384.3	377.5	377.1	409.4
5°	433.8	416.2	414.8	416.9	415.9	421.6	414.4	437.7	457.4	481.1	519.1
7.5°	421.9	413.7	403.3	414.1	413.7	410.8	415.5	462.8	510.5	540.6	603.3
10°	387.9	378.6	386.5	390.0	387.5	400.1	431.3	470.0	527.0	590.1	620.6
12.5°	378.2	383.9	386.8	386.8	410.8	417.3	465.0	501.5	569.3	619.1	707.7
15°	415.9	427.0	407.2	402.9	410.5	414.1	467.1	511.2	598.0	689.0	763.2
17.5°	475.7	475.0	444.5	427.7	439.5	448.1	477.5	529.1	580.0	743.9	851.4
20°	516.9	517.7	462.8	427.7	466.8	471.8	504.4	545.6	585.8	771.5	909.1
22.5°	570.0	551.0	490.4	456.4	482.9	487.6	523.4	556.0	615.2	768.3	983.0
25°	613.4	601.2	524.8	501.2	524.8	518.4	551.0	600.1	646.7	819.5	1026.4
27.5°	680.8	660.0	549.2	553.5	552.1	556.7	564.3	639.6	702.3	822.0	1126.7
30°	743.5	731.3	603.7	603.7	617.7	608.7	614.1	705.2	756.1	880.1	1239.7
32.5°	808.4	809.1	667.9	633.8	622.7	659.6	695.8	737.1	821.0	979.8	1412.5
35°	980.1	965.8	790.8	705.9	696.9	694.8	752.8	864.3	936.0	1109.5	1645.1
37.5°	1326.1	1276.2	1055.4	869.3	835.6	824.2	890.1	1004.5	1075.8	1300.3	2029.8
40°	1681.0	1589.6	1344.4	1134.6	1025.3	975.8	1052.5	1149.7	1276.6	1511.1	2385.8
42.5°	1992.5	1879.6	1562.0	1420.7	1278.4	1256.9	1184.8	1342.9	1563.4	1817.9	2734.6
45°	2296.2	2073.9	1755.5	1643.7	1470.9	1483.1	1458.7	1595.7	1861.3	2154.2	3044.0
47.5°	2505.2	2305.5	1992.9	1847.7	1778.5	1707.1	1900.7	2043.1	2126.6	2367.9	3311.4
50°	2730.3	2528.1	2196.9	2095.4	2004.3	2076.4	2327.7	2346.7	2339.9	2567.2	3493.5
52.5°	3021.0	2782.6	2430.9	2316.2	2367.9	2439.6	2729.6	2733.2	2529.5	2735.0	3624.7
55°	3289.9	3025.7	2742.8	2634.6	2742.5	2803.1	3124.6	3006.7	2640.0	2849.0	3689.3
57.5°	3668.8	3363.0	3157.6	2966.9	3185.6	3127.5	3472.0	3296.7	2764.0	2924.6	3665.6
60°	4147.8	3787.8	3582.1	3380.2	3614.7	3654.1	3811.2	3441.5	2812.0	2949.3	3523.3
62.5°	4635.0	4272.9	4002.2	3865.3	4131.3	4261.1	4125.2	3513.6	2754.3	2900.9	3201.0
65°	5239.4	4775.9	4459.7	4379.4	4872.3	5063.0	4496.6	3531.2	2642.8	2634.6	2573.6
67.5°	5653.5	5202.1	4912.1	5046.5	5642.0	5657.4	4830.0	3536.5	2267.5	2062.8	1689.2
70°	5751.7	5268.4	5138.7	5534.4	6256.1	6062.1	4937.5	3264.1	1681.7	1224.3	772.2
72.5°	5049.0	4583.7	4752.6	5442.3	6386.6	6297.7	4699.9	2354.9	946.8	489.7	237.0
75°	3097.0	2815.6	3565.2	4614.2	5606.1	5548.8	3666.7	1216.7	381.4	195.7	88.5
77.5°	1346.9	1250.8	1860.6	3061.5	4028.4	3977.1	2148.5	448.1	197.2	137.7	44.8
80°	445.6	432.3	704.8	1449.8	2359.6	2314.4	905.2	186.4	140.5	110.4	25.1
82.5°	105.8	105.0	245.9	667.2	1202.0	1164.4	277.8	102.9	101.8	87.1	13.3
85°	26.5	27.2	68.1	272.8	488.3	430.6	72.4	51.3	71.7	59.2	6.8
87.5°	0.0	0.0	17.6	39.1	73.8	46.2	7.9	13.6	20.1	21.2	3.6
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°	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4	343.4
2.5°	416.6	412.6	380.4	388.2	400.4	399.4	407.2	401.2	395.8	422.3	419.8
5°	529.9	508.3	498.3	512.3	504.8	487.2	501.9	499.4	495.1	504.0	510.9
7.5°	614.8	595.1	586.1	556.7	514.1	480.4	485.8	473.2	461.4	475.4	489.7
10°	642.8	632.0	630.9	573.6	533.4	484.7	427.0	377.1	363.9	346.3	354.2
12.5°	718.8	725.2	684.7	617.7	540.3	446.7	344.2	273.5	244.9	226.2	227.3
15°	781.2	803.7	745.0	624.5	475.4	340.6	229.1	165.6	147.7	143.0	141.6
17.5°	874.0	895.9	763.6	576.1	383.2	230.9	147.3	129.1	130.1	133.4	132.6
20°	942.8	939.6	747.5	490.4	282.5	151.3	123.3	120.8	126.5	135.9	133.7
22.5°	1009.2	986.9	737.4	411.2	182.8	121.5	119.0	118.7	124.0	133.0	135.5
25°	1056.5	1060.1	720.6	321.9	133.0	112.9	115.1	118.3	123.7	133.4	131.9
27.5°	1192.0	1091.6	650.3	233.7	112.2	108.3	113.6	120.1	121.9	134.1	134.4
30°	1279.8	1210.6	604.4	157.4	103.6	100.0	110.8	119.4	121.5	137.3	138.4
32.5°	1432.9	1261.9	551.4	116.9	96.4	97.5	104.3	115.8	125.8	142.7	143.4
35°	1623.3	1426.4	455.3	105.0	93.9	92.1	95.4	108.6	125.1	143.4	147.0
37.5°	1985.7	1525.0	361.0	101.8	93.9	90.7	93.9	101.8	123.0	150.6	158.1
40°	2228.4	1725.8	260.3	101.1	92.1	89.3	90.3	98.2	116.9	146.3	157.4
42.5°	2527.4	1810.4	191.8	99.3	90.3	86.0	86.8	96.8	110.8	137.3	145.5
45°	2772.2	1872.1	150.9	98.6	86.0	84.6	86.0	95.7	105.0	117.9	125.5
47.5°	2958.3	1943.8	121.2	93.9	85.0	84.6	82.8	89.6	95.4	98.6	103.6
50°	3094.5	1927.6	100.4	86.8	81.4	83.5	80.3	81.4	82.8	81.0	86.8
52.5°	3178.1	1869.5	83.5	78.2	77.1	78.9	74.9	71.7	69.2	67.8	71.3
55°	3208.5	1753.0	71.0	67.0	69.5	70.3	67.0	61.3	57.0	54.8	57.7
57.5°	3150.8	1575.6	61.7	55.6	61.3	61.3	57.0	50.9	45.9	42.3	45.2
60°	3004.5	1379.5	54.8	46.2	52.3	52.7	47.7	41.2	37.3	33.7	35.5
62.5°	2732.1	1165.8	48.0	40.2	45.2	45.5	39.4	33.3	30.5	26.5	28.0
65°	2187.2	891.6	40.9	35.5	39.1	38.0	32.6	28.3	24.7	21.2	21.9
67.5°	1419.6	550.3	35.5	32.3	33.0	31.9	27.6	24.7	20.8	17.9	18.3
70°	635.6	237.0	31.2	29.0	28.7	26.9	23.3	22.9	20.4	17.9	17.9
72.5°	196.1	89.3	26.9	26.2	24.7	22.6	20.4	21.9	20.1	17.2	16.8
75°	77.4	40.9	22.2	22.2	21.5	18.6	18.3	19.7	18.6	15.8	15.1
77.5°	40.5	25.8	18.3	19.0	18.6	14.3	16.5	17.9	17.2	13.3	11.1
80°	24.0	15.8	13.6	15.4	15.1	10.0	12.5	11.5	8.2	3.9	1.1
82.5°	13.3	7.2	6.1	9.0	9.0	3.6	6.5	5.7	3.2	0.0	0.0
85°	6.5	5.0	4.7	5.0	3.6	1.1	3.2	3.2	1.8	0.0	0.0
87.5°	3.2	2.9	2.2	1.8	1.4	0.0	1.1	1.4	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)