

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: P368016

Luminaire Tested: **MSA-SA3C-760-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368016
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-760-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17733 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

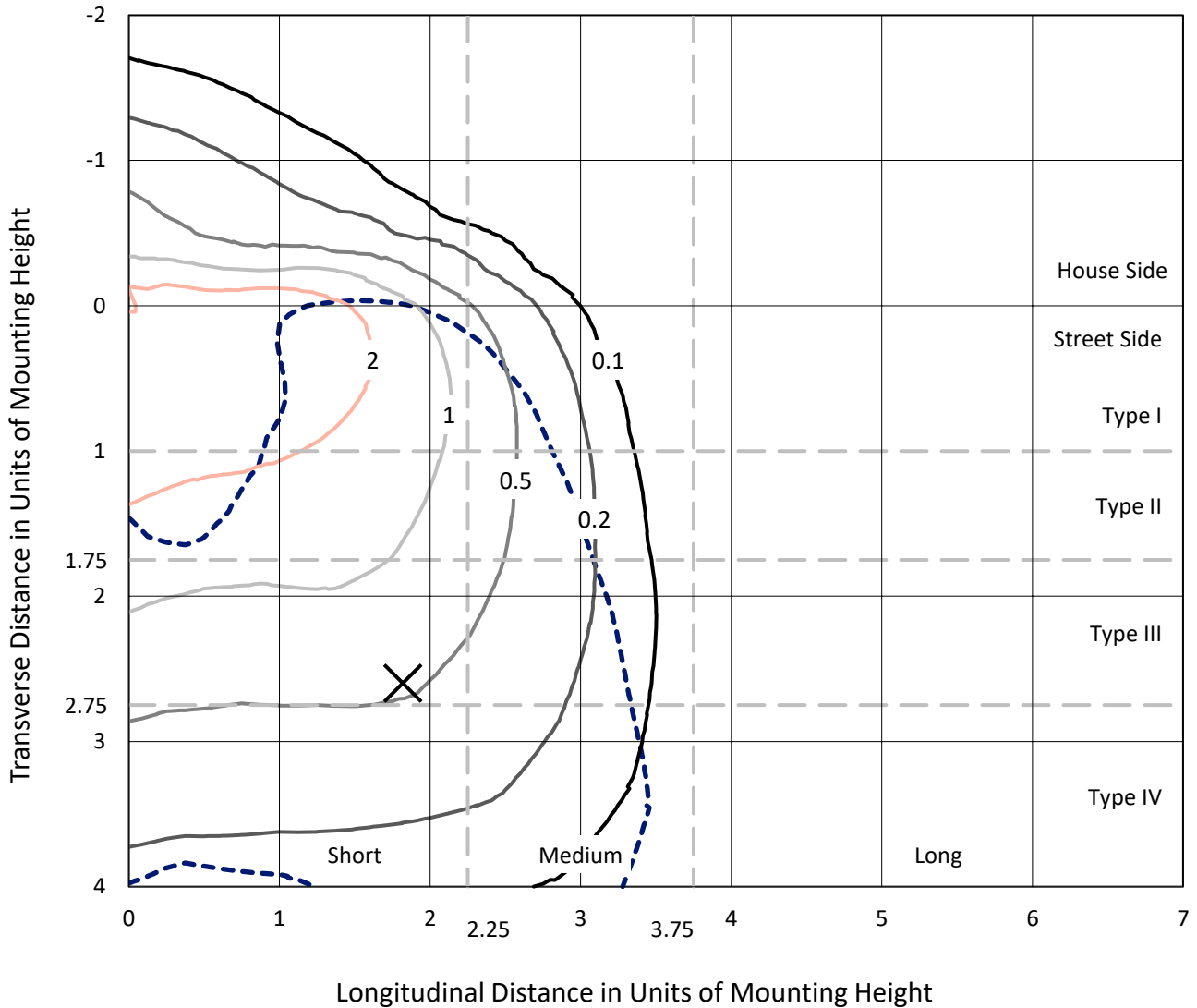
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

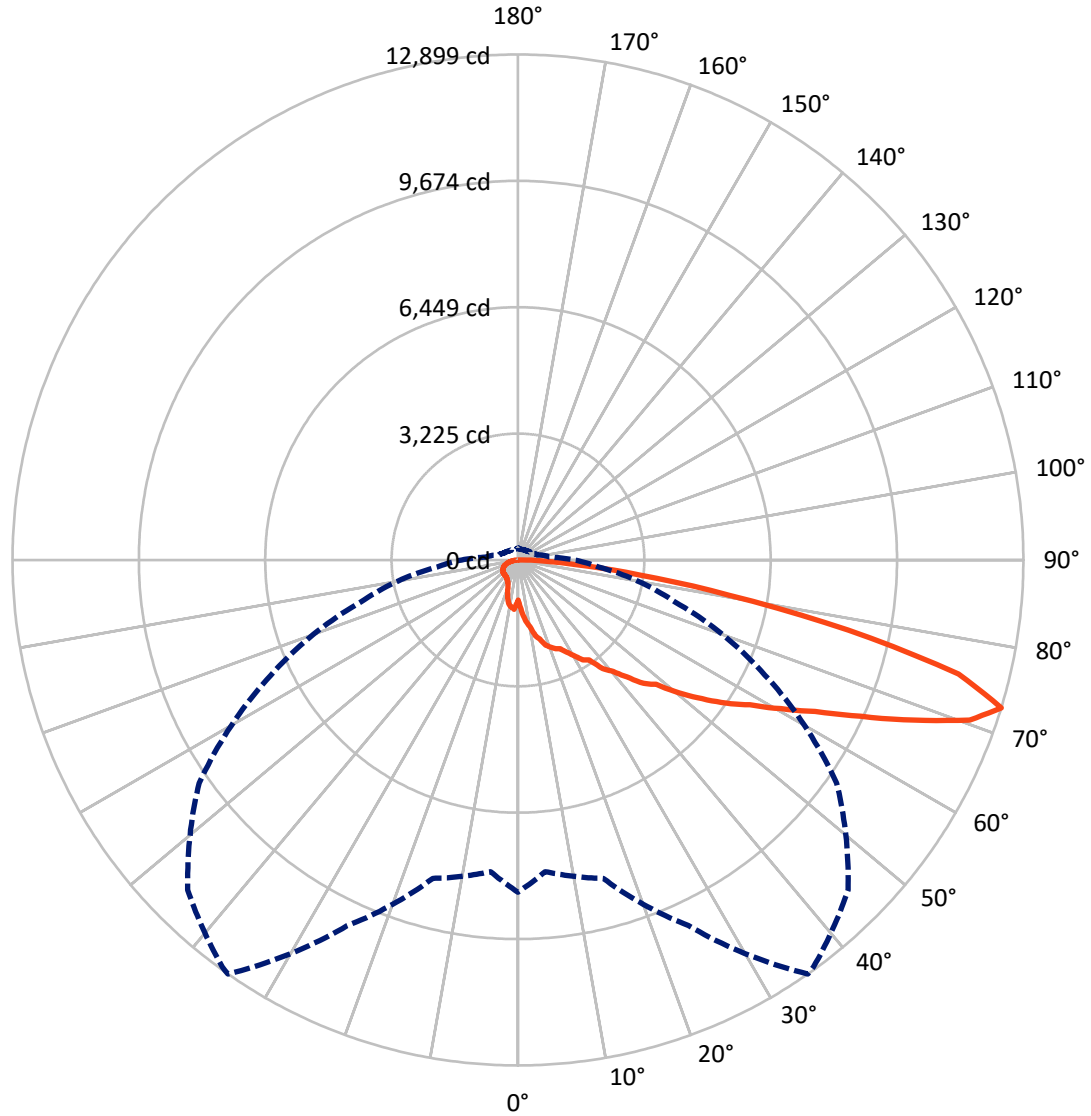
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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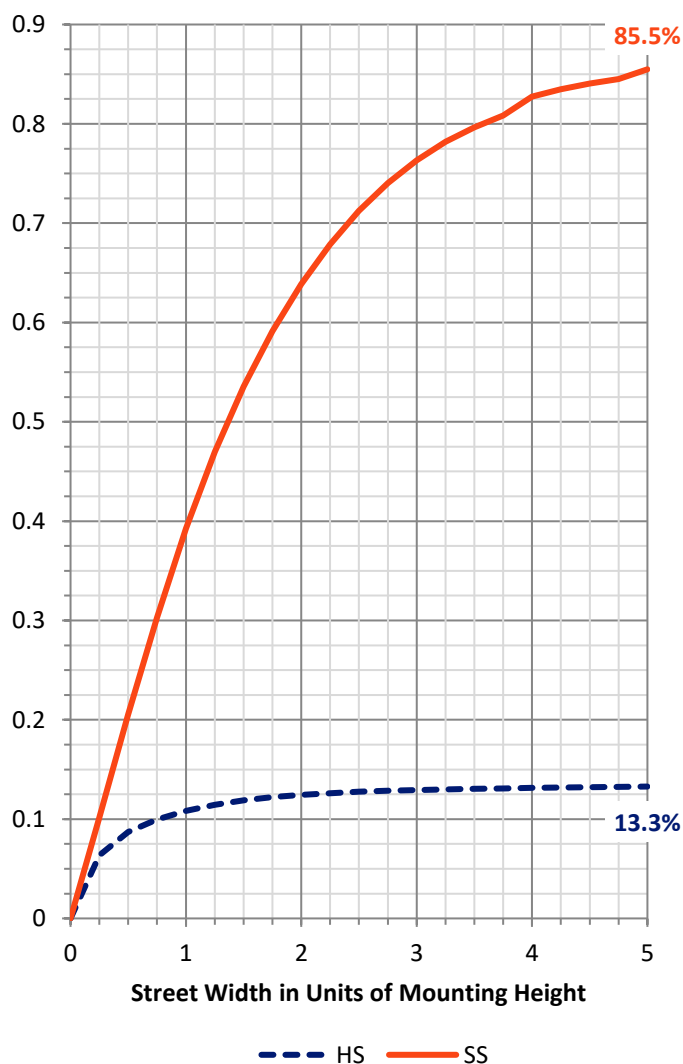
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2379.7	0.0	2379.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	15353.3	0.0	15353.3
	% Fixture	86.6	0.0	86.6
Total	Lumens	17733.0	0.0	17733.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.2	0.8
10°-20°	479.8	2.7
20°-30°	833.6	4.7
30°-40°	1393.3	7.9
40°-50°	2418.2	13.6
50°-60°	3655.7	20.6
60°-70°	4735.9	26.7
70°-80°	3494.6	19.7
80°-90°	585.7	3.3
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°	17733.0	100.0
0°-180°	17733.0	100.0

Coefficient of Utilization



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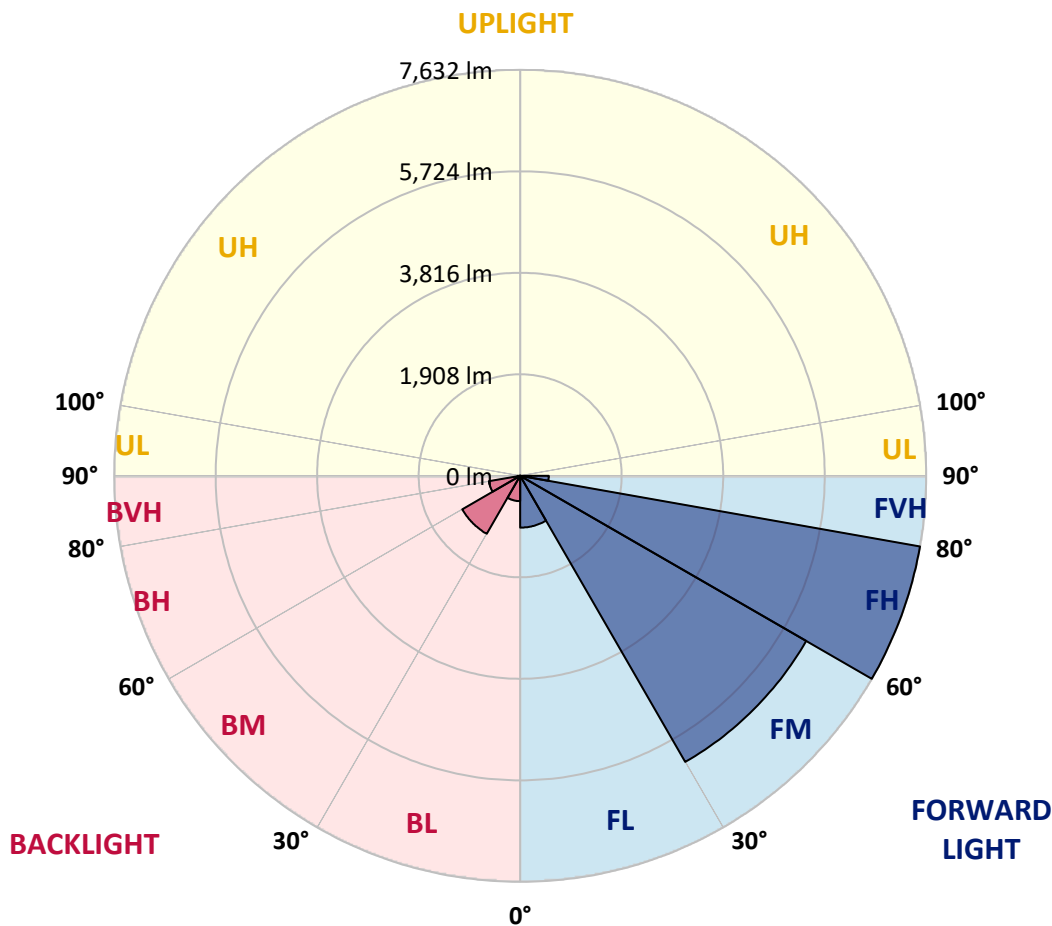
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	973.9	5.5			
FM (30°-60°)	6209.5	35.0			
FH (60°-80°)	7632.1	43.0			G4/12000
FVH (80°-90°)	537.8	3.0			G4/750
BL (0°-30°)	475.7	2.7	B1/500		
BM (30°-60°)	1257.7	7.1	B2/2500		
BH (60°-80°)	598.4	3.4	B2/1000		G2/1000
BVH (80°-90°)	47.9	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8
2.5°	1278.3	1217.0	1164.1	1161.8	1211.0	1229.9	1222.3	1205.7	1186.0	1144.4	1235.2
5°	1601.5	1513.7	1497.1	1477.4	1432.7	1444.9	1372.2	1427.5	1444.9	1485.0	1545.5
7.5°	1792.3	1740.8	1700.7	1684.0	1606.8	1597.7	1544.0	1622.7	1656.0	1650.7	1740.8
10°	1867.2	1820.3	1823.3	1768.8	1743.8	1754.4	1760.5	1762.0	1782.4	1799.1	1753.7
12.5°	1905.8	1924.0	1990.6	1953.5	1985.3	1998.1	2061.7	1996.6	1998.9	1913.4	1960.3
15°	2100.3	2145.7	2107.1	2105.6	2095.8	2117.0	2171.5	2127.6	2161.6	2134.4	2073.8
17.5°	2334.9	2348.6	2274.4	2244.1	2283.5	2276.7	2263.0	2269.8	2185.1	2342.5	2268.3
20°	2406.8	2460.6	2362.9	2244.1	2374.3	2391.7	2388.7	2359.2	2213.8	2440.9	2369.0
22.5°	2615.7	2543.1	2465.9	2390.2	2456.8	2466.6	2450.0	2379.6	2331.1	2417.4	2474.2
25°	2710.3	2692.9	2594.5	2585.5	2512.0	2477.2	2506.0	2485.6	2437.9	2591.5	2528.7
27.5°	2926.8	2906.4	2680.1	2773.2	2666.4	2657.4	2505.2	2573.3	2621.0	2609.7	2703.5
30°	3172.0	3195.5	2864.7	2957.8	2834.5	2817.8	2664.9	2751.2	2783.8	2794.4	2911.7
32.5°	3444.5	3508.8	3180.4	3103.9	3038.1	3049.4	2920.0	2762.6	2889.0	3136.5	3187.2
35°	3739.7	3766.2	3421.8	3306.8	3134.9	3122.8	3125.1	3144.8	3272.7	3555.0	3594.4
37.5°	4285.4	4162.8	3860.8	3569.4	3511.9	3399.1	3475.5	3536.1	3664.0	4096.9	4261.9
40°	4621.4	4530.6	4070.4	3901.6	3742.7	3753.3	3896.4	3895.6	4197.6	4644.1	4896.2
42.5°	4932.5	4833.4	4399.7	4230.1	4079.5	4116.6	4157.5	4229.4	4808.4	5528.2	5643.2
45°	5183.0	4965.8	4654.0	4616.1	4492.0	4442.8	4616.1	4731.2	5538.8	6243.4	6310.0
47.5°	5353.3	5174.7	4869.7	4836.4	4744.8	4865.1	5338.2	5412.4	6104.9	6961.7	6956.4
50°	5612.2	5367.7	5092.2	5074.8	5332.9	5397.2	5974.0	5966.4	6655.9	7558.1	7433.2
52.5°	5910.4	5602.3	5303.4	5490.3	5883.9	5915.7	6416.0	6619.6	7257.6	8133.3	7807.1
55°	6253.2	5908.9	5619.7	5869.5	6455.3	6361.5	6867.8	7365.1	8010.7	8739.5	8077.3
57.5°	6677.8	6260.0	6026.2	6406.1	6976.8	7060.1	7514.9	8140.9	8616.9	9116.5	8274.1
60°	7125.9	6635.5	6421.3	6783.0	7707.2	7802.5	8247.6	8785.7	9296.6	9471.4	8237.0
62.5°	7553.5	7023.0	6829.2	7275.8	8517.0	8753.2	9081.6	9424.5	9862.0	9557.7	7788.2
65°	8029.6	7498.3	7376.4	8046.3	9615.2	9849.9	10279.0	10176.1	10055.7	9251.9	7045.7
67.5°	8533.7	7994.0	8016.7	8940.1	10910.2	10950.3	11609.6	10925.4	9827.9	8442.1	5799.1
70°	8804.6	8252.1	8486.0	9893.0	12227.9	12170.4	12305.1	11126.7	8899.2	6673.3	3997.0
72.5°	8476.2	7983.4	8411.8	10294.1	12898.5	12836.5	11914.6	9931.6	6957.9	4149.9	2072.3
75°	7176.6	6701.3	7356.7	9176.3	11611.9	11669.4	10139.7	7385.5	3983.4	1668.9	860.6
77.5°	4876.5	4631.3	5192.9	6839.8	8625.3	8824.3	7523.3	4318.7	1672.7	691.0	520.7
80°	2577.1	2460.6	2875.3	3940.2	5461.6	5609.9	4423.9	2151.0	856.8	447.3	371.6
82.5°	1400.2	1351.0	1573.5	2026.1	3103.2	3232.6	2294.1	1429.0	577.5	280.0	227.1
85°	940.8	921.9	1069.5	1088.4	1467.6	1509.9	1201.9	1100.5	346.6	137.0	149.9
87.5°	470.8	451.8	563.1	497.3	560.1	560.8	551.0	702.4	87.8	45.4	27.2
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°	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8	1024.8
2.5°	1236.7	1210.2	1118.6	1117.9	1131.5	1122.4	1129.2	1092.2	1076.3	1148.9	1145.1
5°	1537.2	1457.7	1381.3	1354.8	1323.8	1256.4	1260.2	1260.9	1249.6	1292.7	1295.8
7.5°	1713.5	1618.2	1547.8	1407.0	1296.5	1210.2	1221.6	1234.4	1221.6	1279.1	1300.3
10°	1739.3	1663.6	1579.6	1422.9	1349.5	1271.5	1192.8	1123.2	1114.9	1088.4	1096.7
12.5°	1892.2	1829.3	1653.8	1481.9	1396.4	1276.8	1133.0	1053.6	987.0	998.3	977.1
15°	2017.8	1973.2	1762.7	1538.0	1333.6	1185.3	1032.4	923.4	863.6	856.8	835.6
17.5°	2188.1	2124.5	1772.6	1499.4	1252.6	1074.8	902.2	778.8	753.1	742.5	731.9
20°	2269.8	2155.6	1737.0	1378.3	1158.0	943.1	773.5	667.6	660.0	678.9	675.1
22.5°	2341.0	2181.3	1705.2	1304.8	1010.4	809.8	685.7	616.1	607.8	632.0	636.5
25°	2382.6	2254.7	1670.4	1229.9	918.8	710.7	619.9	580.5	582.0	613.8	610.0
27.5°	2570.3	2280.4	1582.6	1141.4	813.6	637.3	588.1	567.7	559.3	603.2	607.0
30°	2688.4	2448.5	1562.9	1047.5	735.7	583.5	559.3	551.0	549.5	602.5	606.3
32.5°	2907.9	2504.5	1572.0	945.3	665.3	566.9	538.1	537.4	552.5	603.2	609.3
35°	3212.1	2740.6	1528.1	887.0	626.7	541.2	521.5	527.5	553.3	608.5	616.8
37.5°	3805.5	2963.1	1541.7	832.6	613.8	532.8	516.9	520.7	562.4	622.1	644.9
40°	4275.5	3366.5	1520.5	805.3	596.4	531.3	507.1	522.2	561.6	629.7	650.1
42.5°	4956.7	3688.2	1522.8	778.1	595.7	525.3	505.6	523.8	560.1	622.9	650.9
45°	5541.0	3976.6	1555.4	762.2	588.1	535.1	503.3	526.0	550.2	598.7	629.7
47.5°	6020.1	4298.2	1588.7	747.0	585.1	544.2	501.0	510.1	533.6	571.4	599.4
50°	6410.7	4524.6	1631.0	744.0	585.1	539.6	495.0	494.2	513.9	544.2	570.7
52.5°	6714.9	4684.2	1659.8	747.8	585.1	522.2	487.4	481.4	493.5	515.4	541.9
55°	6935.2	4733.4	1636.3	757.6	584.3	506.3	473.8	468.5	474.6	489.7	514.7
57.5°	7023.7	4604.0	1496.3	740.2	584.3	495.0	457.1	451.1	457.1	468.5	493.5
60°	6802.0	4187.7	1294.2	695.6	572.9	479.9	438.2	434.4	443.5	453.4	477.6
62.5°	6245.7	3634.5	1078.5	642.6	549.5	467.0	420.1	420.8	435.2	448.8	473.0
65°	5381.3	2965.4	899.2	588.8	520.0	446.6	401.1	406.4	426.9	445.0	469.3
67.5°	4234.7	2197.2	756.9	536.6	478.3	413.2	379.9	381.5	395.8	413.2	436.7
70°	2830.7	1397.9	622.1	475.3	423.8	370.1	347.4	342.1	338.3	353.5	373.9
72.5°	1435.8	825.7	510.9	406.4	364.8	323.2	305.8	292.2	281.6	290.6	306.5
75°	752.3	577.5	412.5	337.6	301.2	274.7	261.9	243.7	236.1	241.4	252.8
77.5°	532.1	451.8	333.8	267.2	245.2	218.0	220.2	201.3	195.3	198.3	210.4
80°	408.7	358.0	256.6	202.1	189.2	162.7	170.3	158.9	151.4	149.9	158.9
82.5°	278.5	269.4	182.4	141.5	132.5	113.5	124.1	119.6	109.7	103.7	108.2
85°	187.7	178.6	111.3	81.7	78.0	59.0	75.7	72.7	64.3	55.3	56.0
87.5°	32.5	59.8	31.8	20.4	18.9	6.8	17.4	16.7	15.1	7.6	6.1
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)