

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: P367748

Luminaire Tested: **MSA-SA3A-760-U-SL2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367748  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-760-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11653 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3

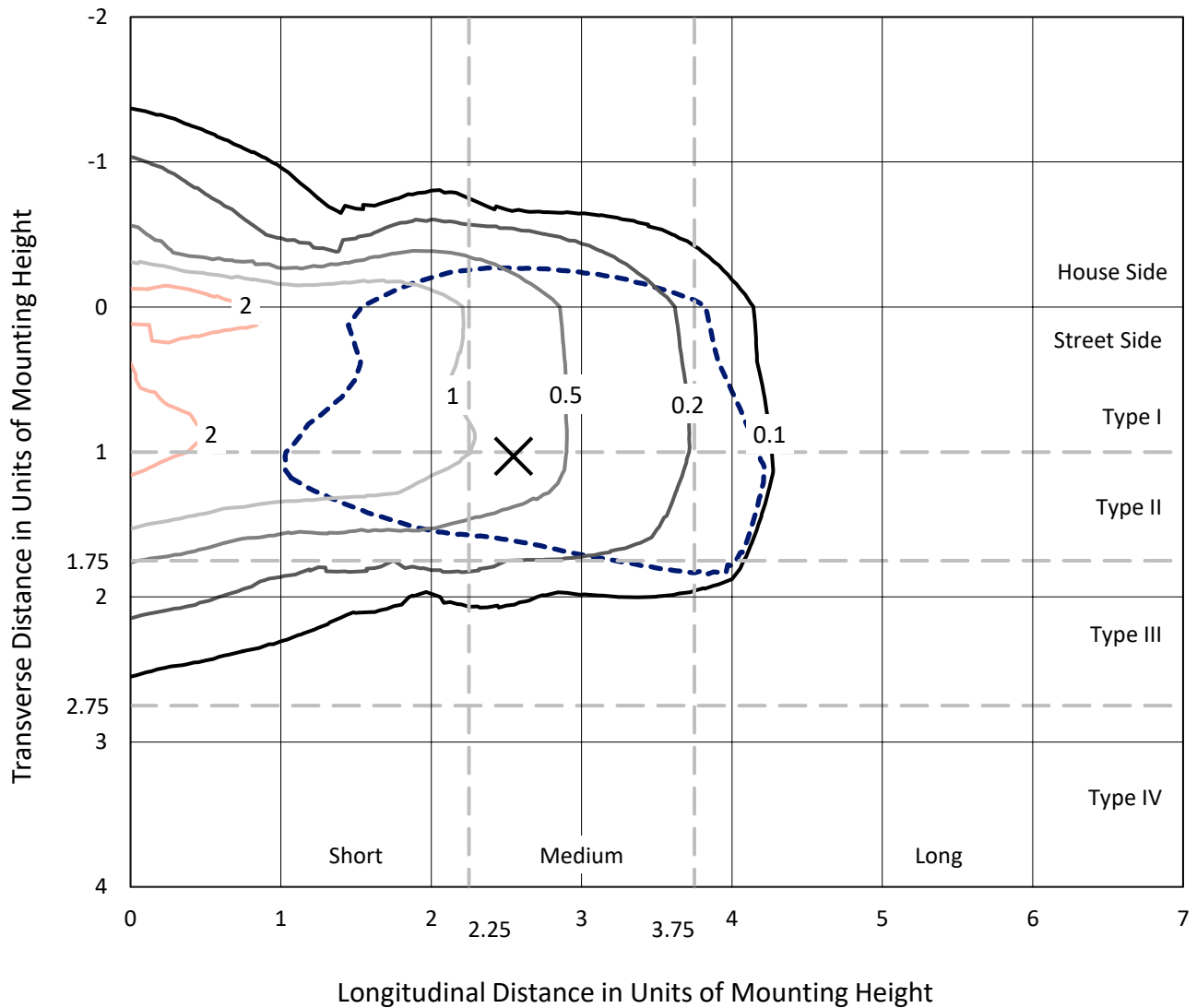
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

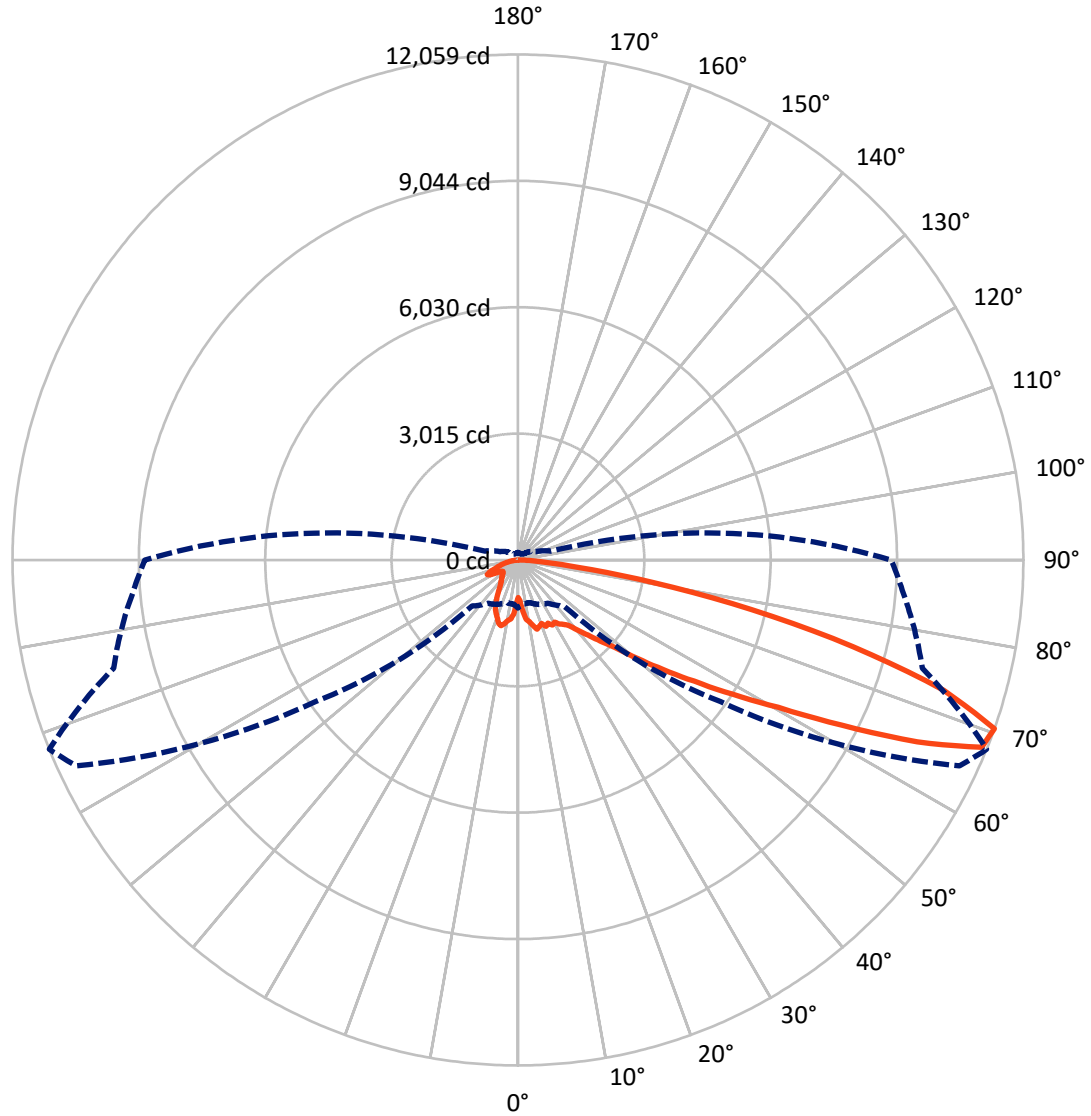
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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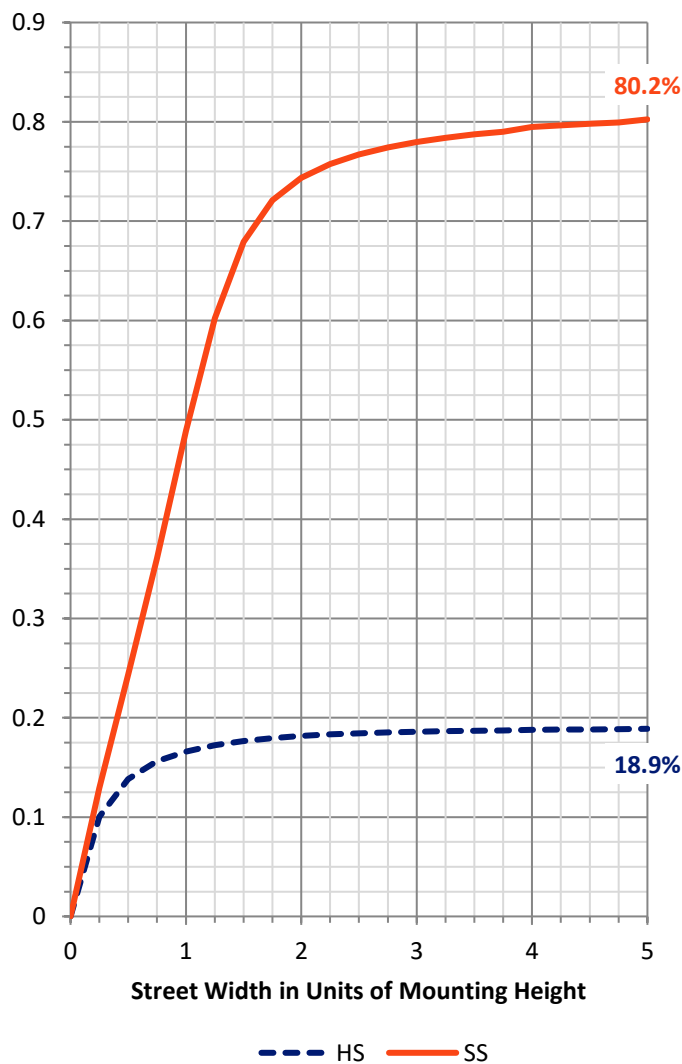
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2224.8	0.0	2224.8
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	9428.2	0.0	9428.2
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	11653.0	0.0	11653.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.3	1.0
10°-20°	388.9	3.3
20°-30°	591.6	5.1
30°-40°	903.7	7.8
40°-50°	1553.8	13.3
50°-60°	2571.9	22.1
60°-70°	3170.8	27.2
70°-80°	2036.9	17.5
80°-90°	315.9	2.7
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°	11653.0	100.0
0°-180°	11653.0	100.0

**Coefficient of Utilization**



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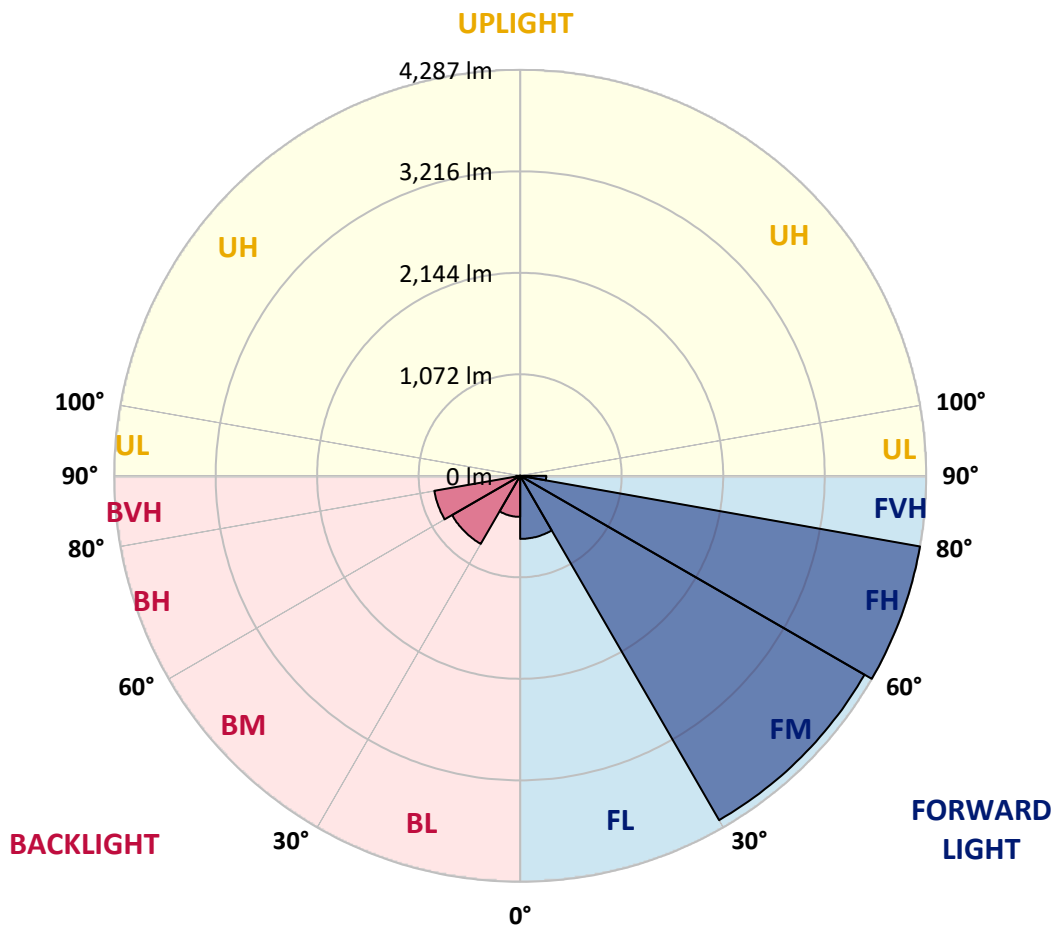
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	666.3	5.7			
FM (30°-60°)	4199.0	36.0			
FH (60°-80°)	4287.4	36.8			G2/5000
FVH (80°-90°)	275.4	2.4			G3/500
BL (0°-30°)	433.5	3.7	B1/500		
BM (30°-60°)	830.4	7.1	B1/1000		
BH (60°-80°)	920.3	7.9	B2/1000		G2/1000
BVH (80°-90°)	40.6	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-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5
2.5°	1026.6	985.2	943.2	963.7	996.4	1025.2	1019.3	1022.7	983.2	977.8	1081.7
5°	1209.5	1138.3	1136.8	1137.8	1140.7	1107.6	1188.5	1230.5	1239.7	1282.7	1384.6
7.5°	1272.9	1244.1	1214.9	1229.5	1192.4	1195.9	1295.3	1404.6	1430.4	1461.7	1601.1
10°	1259.7	1232.4	1241.2	1243.6	1250.5	1305.6	1369.5	1474.3	1496.3	1595.8	1631.9
12.5°	1261.7	1256.8	1297.8	1299.2	1372.4	1471.4	1496.8	1593.3	1602.1	1675.3	1826.0
15°	1328.5	1362.2	1339.2	1351.4	1365.6	1484.1	1520.7	1659.2	1711.8	1806.0	1919.1
17.5°	1458.7	1468.5	1399.7	1381.7	1428.0	1464.1	1547.5	1607.5	1662.6	1925.5	2081.5
20°	1489.0	1515.3	1433.4	1340.2	1438.2	1488.5	1546.5	1573.8	1616.7	1943.0	2164.4
22.5°	1618.7	1564.1	1465.1	1384.1	1416.3	1465.1	1507.0	1609.9	1722.6	1892.8	2247.3
25°	1692.3	1660.6	1572.4	1485.6	1458.2	1459.7	1540.7	1632.8	1671.9	1966.4	2263.9
27.5°	1870.4	1819.6	1621.1	1604.6	1501.6	1421.7	1546.0	1689.4	1757.7	1908.9	2344.9
30°	2093.2	2054.7	1794.3	1772.3	1615.3	1475.8	1614.3	1731.4	1721.6	1946.4	2401.0
32.5°	2273.7	2338.1	2075.2	1902.1	1790.4	1656.7	1592.8	1724.0	1821.1	2033.7	2496.1
35°	2531.2	2591.7	2294.2	2177.1	1934.7	1740.6	1742.6	1824.5	1884.5	2135.7	2602.4
37.5°	2977.0	2923.8	2684.3	2499.5	2344.4	2054.7	1967.9	1939.1	1987.4	2260.5	2810.6
40°	3298.4	3253.5	2971.6	2866.2	2564.4	2396.1	2158.1	2130.8	2216.1	2389.3	2980.9
42.5°	3679.3	3599.3	3336.9	3250.1	2934.5	2631.2	2391.2	2406.8	2448.3	2632.1	3211.1
45°	4067.0	3872.9	3724.1	3717.3	3506.6	3087.7	2765.3	2752.6	2754.1	2989.6	3469.5
47.5°	4374.7	4200.1	4029.9	3949.0	3842.6	3877.3	3308.6	3159.8	3115.0	3349.6	3857.3
50°	4583.0	4382.0	4189.4	4170.4	4454.2	4641.0	3818.7	3659.7	3687.5	3864.6	4374.2
52.5°	4587.4	4348.9	4147.9	4281.1	4949.7	5217.0	4697.6	4253.3	4342.0	4462.5	5048.7
55°	4268.4	4021.1	3890.4	4193.8	5143.3	5900.3	5932.5	5204.3	5101.9	5146.3	5854.9
57.5°	3595.9	3346.1	3270.1	3633.4	4776.1	6559.2	7423.9	6340.7	6040.2	5854.9	6681.1
60°	2706.8	2490.7	2443.4	2675.1	3959.7	6365.5	8631.4	7755.0	7142.9	6646.5	7509.7
62.5°	2029.8	1874.7	1803.5	1836.7	2739.9	5735.9	9424.4	9542.0	8675.3	7510.7	8319.3
65°	1649.4	1524.1	1460.7	1417.8	1704.0	4435.2	9281.0	11046.0	10465.2	8418.3	8949.4
67.5°	1377.8	1266.6	1237.3	1279.3	1347.0	2573.1	8159.3	11887.3	11926.8	9313.7	9317.6
70°	1143.7	1061.2	1050.5	1169.5	1258.8	1552.9	5893.4	11623.0	12059.0	9985.3	9231.3
72.5°	883.7	839.3	837.9	1024.7	1250.5	1323.6	3509.5	10040.9	10626.6	9770.7	8386.6
75°	613.0	582.3	605.7	842.3	1221.7	1342.7	2003.0	7820.8	8259.3	8314.4	6718.1
77.5°	421.9	396.0	421.4	609.1	1091.0	1374.8	1401.2	5654.9	5703.7	5575.5	3848.0
80°	293.6	275.6	295.1	431.1	849.1	1360.7	1192.9	3560.3	3266.7	2488.3	1231.9
82.5°	181.9	176.5	198.0	307.3	597.9	1237.8	1130.5	1837.2	1402.6	686.7	439.9
85°	95.6	87.8	115.1	200.4	374.1	971.5	1059.3	838.4	541.4	243.9	176.5
87.5°	28.3	25.4	44.4	81.0	158.5	435.5	606.2	355.5	201.9	71.7	55.1
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°	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5	893.5
2.5°	1089.0	1083.7	1011.5	1020.8	1036.4	1040.3	1039.8	1013.5	985.7	1063.2	1060.8
5°	1387.0	1338.8	1302.7	1294.9	1250.5	1206.1	1221.7	1216.3	1209.5	1244.6	1249.0
7.5°	1601.6	1534.8	1492.9	1385.1	1282.7	1193.9	1222.2	1231.0	1213.4	1276.8	1295.8
10°	1658.2	1605.5	1560.2	1421.7	1365.1	1313.4	1236.8	1149.5	1137.8	1101.2	1105.6
12.5°	1804.0	1796.7	1642.1	1520.2	1446.5	1343.6	1178.3	1072.5	981.8	986.1	959.8
15°	1919.1	1923.0	1737.2	1566.5	1369.0	1211.9	1017.4	885.7	792.5	774.0	755.0
17.5°	2073.7	2065.9	1745.0	1510.9	1260.7	1030.5	792.0	661.3	645.7	656.5	639.9
20°	2141.0	2072.3	1695.3	1372.9	1091.5	782.8	598.4	529.2	559.4	602.3	603.3
22.5°	2201.5	2084.0	1669.4	1261.7	866.2	569.2	480.4	467.7	503.3	561.3	566.2
25°	2199.1	2138.1	1623.1	1149.5	671.6	444.3	417.5	426.7	469.2	529.6	533.1
27.5°	2309.8	2096.6	1502.6	1002.2	505.8	380.4	387.2	404.3	424.3	481.9	493.1
30°	2308.8	2173.7	1442.1	823.2	406.3	348.7	366.3	380.9	397.5	450.2	456.5
32.5°	2363.4	2123.5	1405.6	640.4	364.3	340.9	345.3	359.9	383.8	419.4	423.8
35°	2429.3	2180.5	1288.5	508.7	348.7	334.1	337.5	345.8	367.7	400.4	404.8
37.5°	2640.4	2191.3	1242.2	428.7	347.7	331.2	330.7	335.1	359.9	389.7	402.8
40°	2722.9	2289.3	1107.1	400.4	344.3	331.2	324.3	326.8	347.2	385.3	395.5
42.5°	2920.4	2322.0	1007.1	390.7	344.3	325.3	314.6	318.5	342.4	376.0	392.1
45°	3123.8	2368.3	888.1	388.7	343.8	324.8	304.3	313.1	332.6	360.9	378.5
47.5°	3413.5	2535.1	769.1	382.8	339.9	327.3	301.9	301.4	318.5	342.9	359.4
50°	3886.0	2795.5	676.9	375.5	340.4	325.3	297.0	290.2	301.4	322.9	339.0
52.5°	4544.0	3239.3	640.8	371.6	336.5	317.5	288.7	278.0	284.3	301.4	317.0
55°	5307.7	3838.7	676.4	371.6	328.7	305.3	277.0	264.3	267.8	279.5	294.6
57.5°	6200.2	4583.5	848.6	366.3	319.0	290.7	262.9	248.2	249.2	259.5	273.1
60°	7132.2	5415.5	1234.4	361.9	312.1	274.6	246.3	231.2	229.7	239.5	251.7
62.5°	8065.7	6183.1	1640.2	372.1	310.2	260.9	228.7	213.6	213.1	221.9	232.1
65°	8808.0	6707.9	1741.1	413.6	322.9	245.3	210.7	196.5	195.6	202.9	214.1
67.5°	9172.3	6784.0	1322.7	465.3	349.7	230.7	193.1	180.0	179.0	186.8	196.5
70°	8902.6	6264.1	816.4	470.6	348.2	213.6	175.1	163.9	161.9	170.2	177.5
72.5°	7904.7	5479.4	620.4	416.5	301.4	189.2	157.0	147.3	144.4	151.7	158.5
75°	6344.6	4350.3	497.0	336.0	237.5	159.5	139.0	129.7	126.3	133.1	139.0
77.5°	3695.8	2447.3	363.3	262.4	179.5	130.2	118.5	110.2	106.3	113.6	118.0
80°	1201.7	815.4	228.2	188.3	131.2	101.9	96.1	90.2	86.3	91.2	92.7
82.5°	431.6	303.4	126.3	115.6	87.3	73.2	72.7	69.3	64.4	66.3	66.3
85°	191.2	138.5	75.1	61.9	52.2	39.0	45.8	43.4	38.5	37.6	36.1
87.5°	53.6	45.8	27.3	21.0	17.1	6.3	14.6	13.2	10.7	9.8	6.8
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)