

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: P367982

Luminaire Tested: **MSA-SA3C-740-U-T4FT**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367982  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3C-740-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18248 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

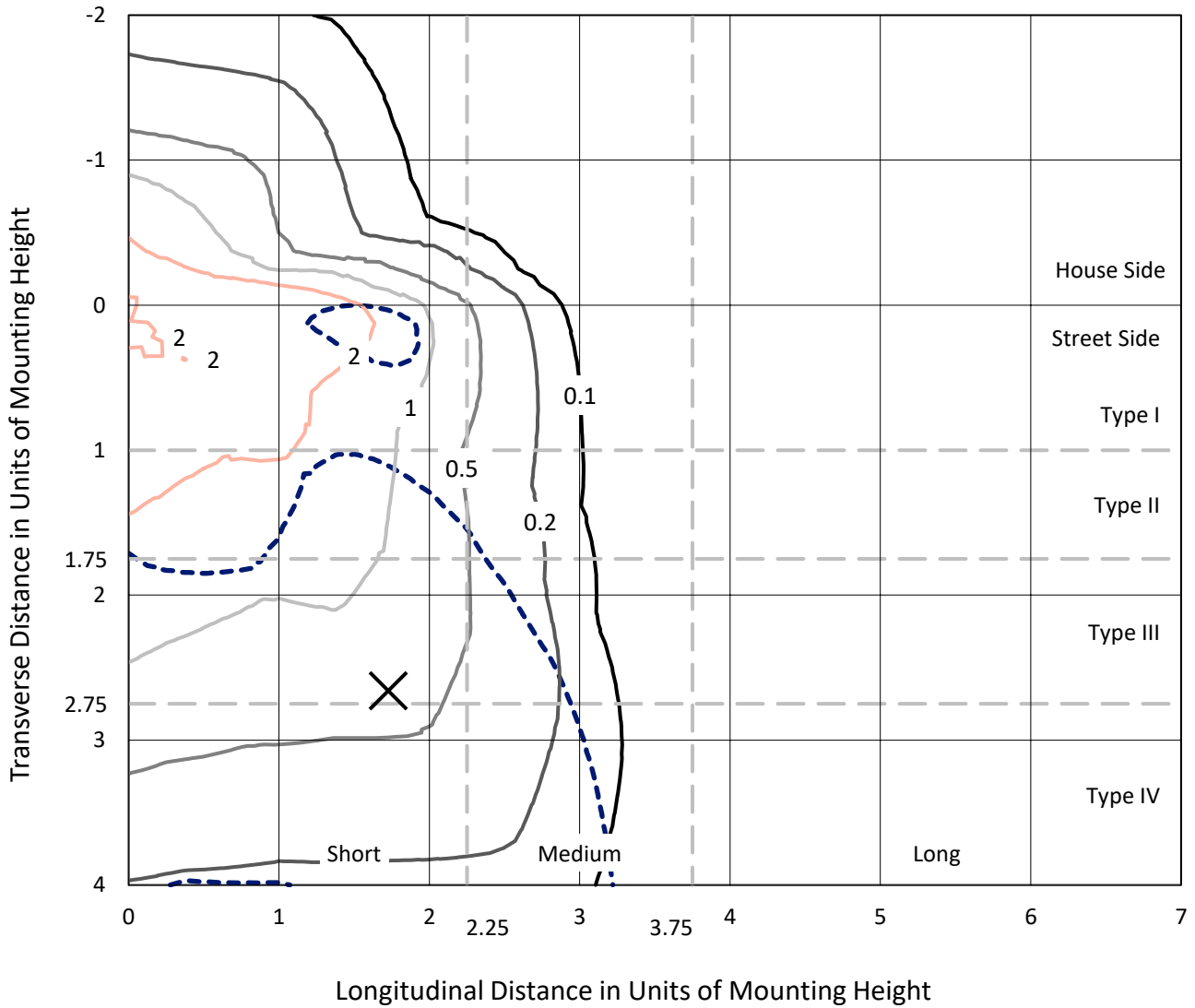
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

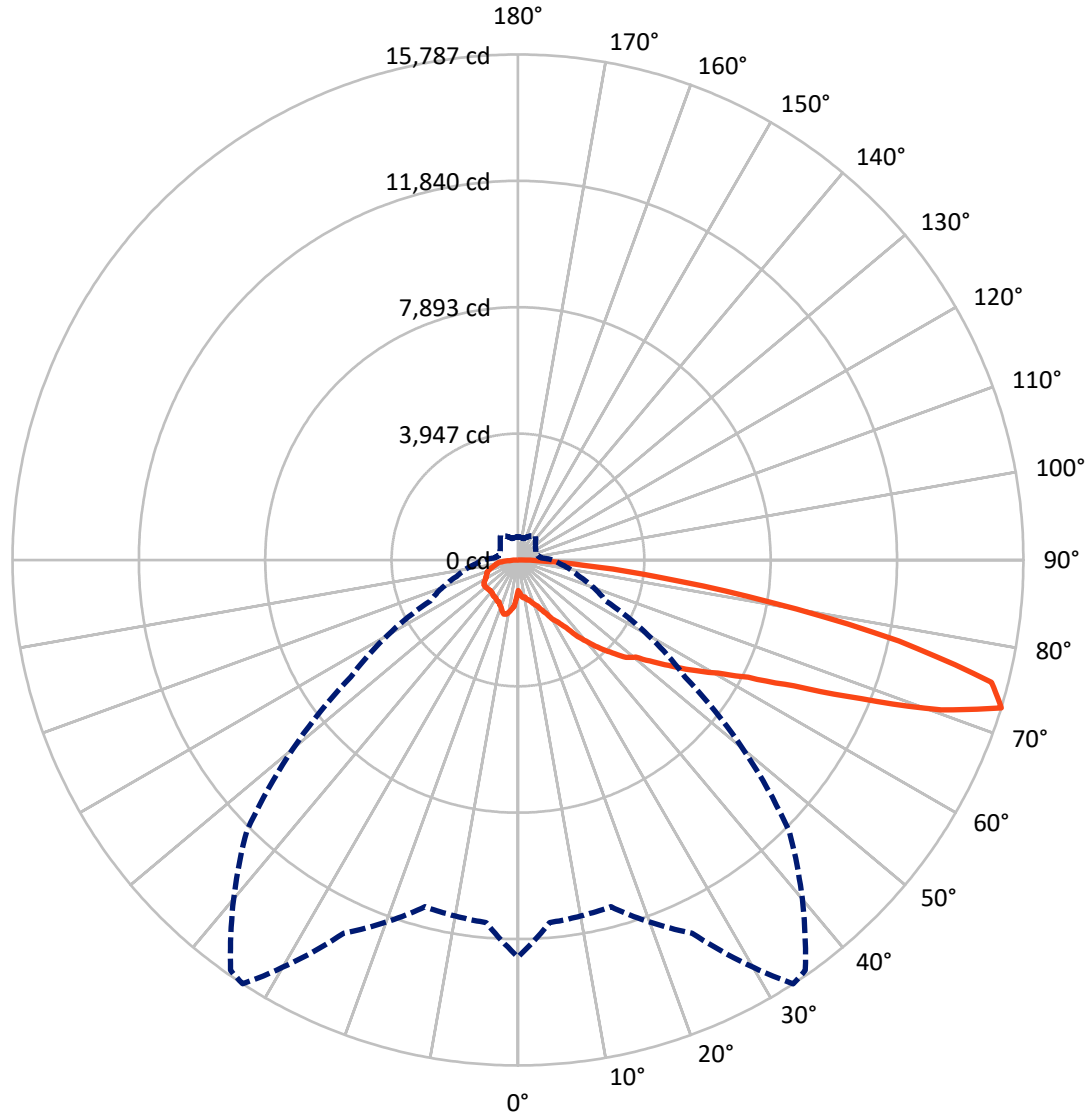
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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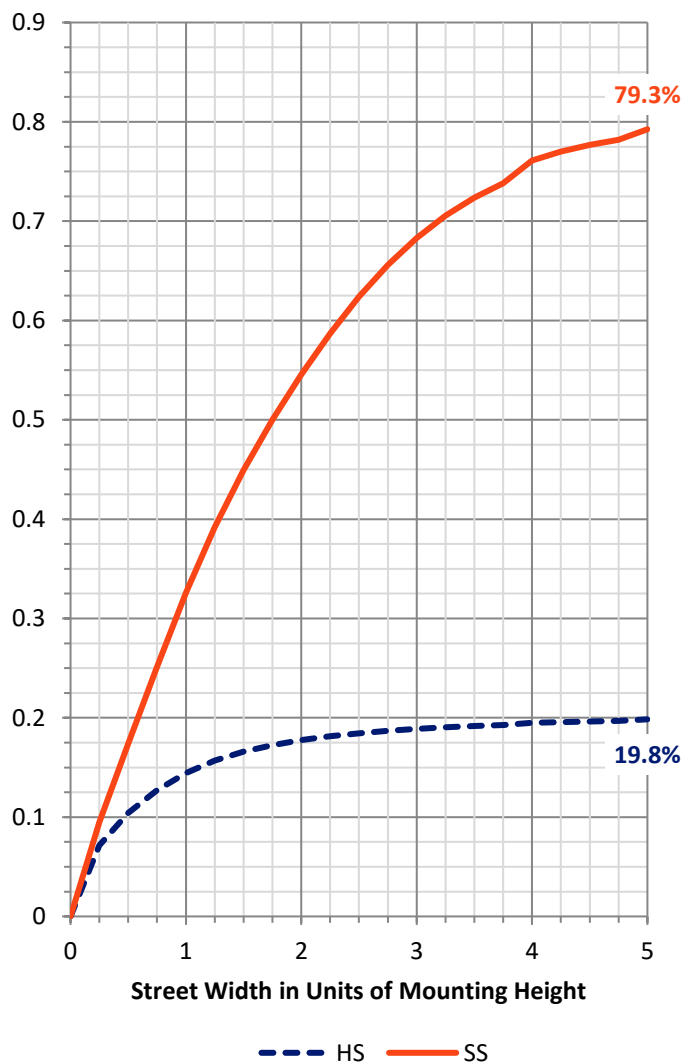
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3691.5	0.0	3691.5
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	14556.5	0.0	14556.5
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	18248.0	0.0	18248.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.6	0.7
10°-20°	486.2	2.7
20°-30°	886.6	4.9
30°-40°	1499.9	8.2
40°-50°	2495.3	13.7
50°-60°	3662.1	20.1
60°-70°	4684.6	25.7
70°-80°	3811.4	20.9
80°-90°	590.3	3.2
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°	18248.0	100.0
0°-180°	18248.0	100.0

**Coefficient of Utilization**



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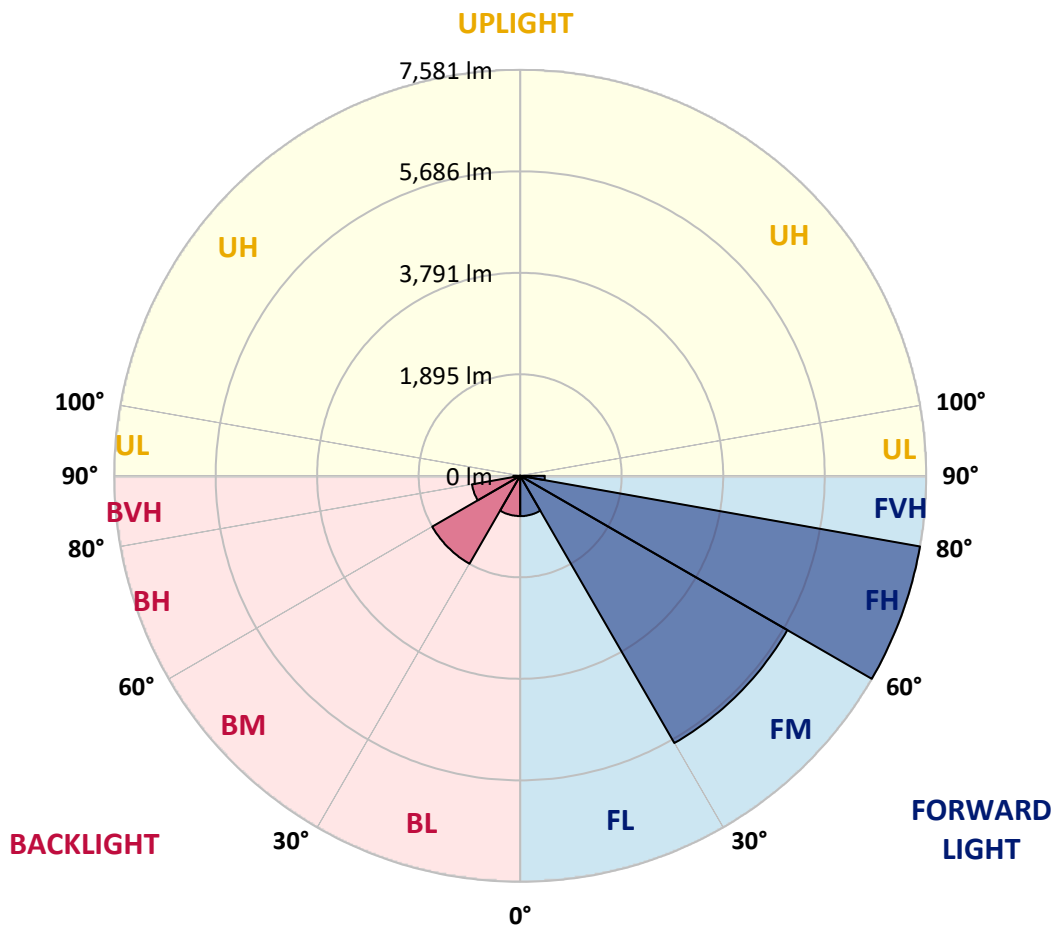
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	753.1	4.1			
FM (30°-60°)	5761.3	31.6			
FH (60°-80°)	7581.3	41.5			G4/12000
FVH (80°-90°)	460.7	2.5			G3/500
BL (0°-30°)	751.3	4.1	B2/1000		
BM (30°-60°)	1896.0	10.4	B2/2500		
BH (60°-80°)	914.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	129.6	0.7			G2/225
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°	33°	35°	45°	55°	65°	75°	85°
0°	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9
2.5°	1084.8	1050.7	994.7	993.2	1024.2	1031.0	1051.5	1053.0	1060.6	1048.5	1134.8
5°	1196.8	1160.5	1138.5	1146.1	1131.7	1149.1	1149.1	1199.1	1265.7	1342.9	1452.7
7.5°	1223.3	1196.8	1171.8	1190.8	1193.8	1177.1	1193.0	1310.4	1430.7	1508.0	1683.6
10°	1170.3	1143.8	1162.8	1168.8	1168.1	1205.9	1288.4	1382.3	1516.3	1658.6	1753.2
12.5°	1160.5	1179.4	1188.5	1199.1	1271.0	1282.4	1407.3	1504.2	1638.9	1763.8	2009.8
15°	1306.6	1331.6	1275.6	1271.8	1295.2	1305.8	1435.3	1532.9	1729.8	1939.4	2160.5
17.5°	1514.8	1523.9	1423.2	1371.7	1389.1	1397.4	1454.2	1576.8	1698.0	2085.5	2361.1
20°	1716.1	1722.2	1532.9	1417.9	1479.2	1488.3	1541.3	1611.7	1707.0	2167.3	2496.6
22.5°	1927.3	1888.7	1681.3	1536.0	1571.5	1573.8	1604.9	1643.5	1779.0	2154.4	2661.6
25°	2158.2	2134.0	1872.8	1733.5	1732.0	1701.0	1702.5	1757.8	1855.4	2292.2	2769.9
27.5°	2464.8	2467.8	2088.6	2013.6	1896.3	1875.9	1773.7	1876.6	1987.9	2293.7	3003.8
30°	2862.2	2788.8	2389.1	2268.0	2152.2	2109.0	1970.5	2058.3	2106.7	2424.7	3258.1
32.5°	3185.5	3164.3	2702.5	2519.3	2330.1	2380.0	2227.1	2149.9	2236.9	2650.3	3643.5
35°	3495.1	3425.4	3034.1	2795.6	2596.5	2566.2	2467.1	2479.9	2532.9	2935.7	4146.9
37.5°	3956.9	3919.0	3503.4	3121.9	3028.8	2905.4	2842.6	2882.7	2841.0	3301.3	4901.6
40°	4473.1	4253.6	3895.5	3555.7	3381.5	3294.5	3316.4	3278.6	3246.8	3711.6	5578.4
42.5°	4967.5	4767.6	4156.0	4003.0	3775.9	3812.3	3691.9	3718.4	3808.5	4293.7	6204.4
45°	5505.7	5073.4	4432.3	4297.5	4134.8	4180.9	4277.1	4248.3	4395.9	4980.3	6794.1
47.5°	5774.4	5363.4	4771.4	4551.9	4549.6	4453.5	5038.6	5102.2	4871.3	5489.0	7392.9
50°	6033.3	5629.1	5023.5	4875.1	4767.6	4973.5	5769.1	5623.0	5301.3	6072.7	8051.5
52.5°	6393.7	5932.6	5312.7	5154.4	5287.7	5478.4	6352.0	6323.3	5723.0	6673.0	8623.8
55°	6668.5	6202.9	5747.9	5601.1	5855.4	6042.4	6945.5	6772.2	6084.0	7113.6	8986.4
57.5°	7149.9	6672.2	6390.6	6064.4	6521.6	6518.6	7517.8	7383.8	6470.1	7475.4	9132.5
60°	7915.2	7354.3	7059.8	6683.6	7173.4	7348.2	8171.9	7785.8	6743.4	7704.0	8869.1
62.5°	8989.4	8323.3	7845.6	7473.2	8070.4	8386.9	8979.6	8078.8	6760.8	7638.9	8176.4
65°	10318.0	9508.0	8881.9	8488.3	9473.9	9925.8	9956.1	8259.7	6600.3	6966.0	6719.9
67.5°	11614.0	10703.3	10050.0	10124.9	11564.0	11778.2	11014.4	8411.1	5738.1	5593.5	4666.2
70°	12467.1	11480.0	11044.7	11839.6	14025.8	13806.3	11872.1	8012.1	4518.6	3626.1	2627.6
72.5°	12402.8	11369.5	11212.8	12858.5	15786.6	15649.6	11976.6	6371.7	3026.5	1982.6	1310.4
75°	10104.5	9301.3	9657.1	12172.6	15279.4	15272.6	10398.2	3944.0	1552.6	1018.2	828.2
77.5°	5586.7	5274.8	6320.2	9216.5	12165.8	12227.9	7025.8	1788.8	837.2	721.4	623.8
80°	1956.9	1928.1	2738.8	4973.5	8003.1	8018.2	3267.2	818.3	608.6	545.8	458.0
82.5°	715.4	709.3	1135.5	2310.4	4406.5	4396.7	1239.2	509.5	451.2	386.1	302.0
85°	285.4	279.3	519.3	1025.7	2024.2	1991.7	481.5	289.2	295.2	230.1	148.4
87.5°	78.7	81.8	176.4	321.0	620.0	574.6	121.1	97.7	119.6	93.9	46.9
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°	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9
2.5°	1149.9	1157.5	1082.5	1109.0	1143.1	1161.2	1170.3	1131.7	1144.6	1199.1	1196.8
5°	1475.4	1445.1	1416.4	1445.9	1426.2	1398.2	1443.6	1441.3	1470.9	1500.4	1507.2
7.5°	1718.4	1679.0	1665.4	1598.8	1532.2	1464.8	1523.1	1559.4	1567.0	1640.4	1671.5
10°	1806.2	1791.1	1796.4	1708.6	1700.2	1707.0	1653.3	1595.0	1630.6	1600.3	1623.0
12.5°	2009.1	2046.9	1953.1	1893.3	1888.0	1846.3	1738.8	1701.0	1660.9	1702.5	1681.3
15°	2171.8	2242.2	2141.6	2036.3	1917.5	1853.1	1761.6	1704.0	1677.5	1686.6	1660.9
17.5°	2410.3	2476.2	2220.3	2059.1	1936.4	1841.8	1701.7	1579.1	1644.2	1649.5	1620.0
20°	2568.5	2573.1	2246.8	2003.0	1892.5	1728.2	1592.0	1484.5	1559.4	1635.9	1669.2
22.5°	2722.9	2688.9	2279.3	1958.4	1732.8	1573.8	1507.2	1500.4	1556.4	1620.7	1628.3
25°	2838.8	2844.1	2298.3	1941.7	1638.9	1422.4	1422.4	1471.6	1520.8	1673.7	1666.2
27.5°	3119.6	2913.0	2224.8	1865.3	1508.7	1333.8	1423.2	1489.0	1512.5	1678.3	1694.9
30°	3324.0	3189.3	2240.0	1734.3	1377.0	1292.2	1365.6	1448.2	1513.3	1704.8	1698.7
32.5°	3666.9	3304.3	2275.6	1550.3	1278.6	1276.3	1341.4	1428.5	1506.4	1676.0	1685.1
35°	4046.2	3643.5	2176.4	1410.3	1255.1	1267.2	1351.3	1386.1	1477.7	1664.7	1673.0
37.5°	4747.9	3820.6	2113.6	1302.0	1240.0	1274.8	1306.6	1360.3	1452.7	1607.9	1662.4
40°	5159.7	4185.5	1880.4	1239.2	1208.2	1268.7	1284.6	1330.1	1380.0	1539.7	1574.6
42.5°	5701.8	4300.5	1681.3	1169.6	1192.3	1243.8	1291.5	1302.8	1336.1	1432.3	1495.8
45°	6153.7	4386.8	1470.1	1113.6	1138.5	1299.0	1302.0	1296.7	1290.7	1326.3	1378.5
47.5°	6621.5	4618.5	1275.6	1051.5	1118.1	1344.4	1307.3	1258.9	1233.9	1238.5	1286.9
50°	7137.8	4786.5	1137.8	1000.8	1122.6	1344.4	1333.1	1220.3	1170.3	1157.5	1208.2
52.5°	7592.0	4806.2	1033.3	959.9	1103.7	1298.3	1350.5	1196.1	1112.0	1081.0	1128.7
55°	7839.5	4557.2	957.6	922.8	1055.3	1256.6	1341.4	1182.4	1041.6	1018.2	1060.6
57.5°	7834.2	4143.8	893.3	871.3	1000.0	1198.3	1290.7	1108.3	998.5	984.9	1026.5
60°	7551.9	3659.4	844.1	828.9	943.2	1113.6	1199.9	1059.8	956.9	950.0	995.5
62.5°	6911.5	3159.0	796.4	784.3	890.2	1053.8	1156.7	1006.1	913.7	912.9	956.1
65°	5660.1	2536.0	751.7	748.7	841.0	994.7	1115.8	960.6	869.0	884.2	928.1
67.5°	3900.1	1782.0	704.0	713.1	795.6	937.9	1084.8	930.4	822.1	853.1	892.5
70°	2140.1	1102.2	651.0	669.2	738.1	872.1	1036.3	881.2	760.8	808.5	835.7
72.5°	1088.6	735.1	585.2	613.9	667.7	775.2	945.5	810.0	694.9	713.1	727.5
75°	731.3	553.4	511.7	543.5	582.1	682.8	838.8	743.4	632.1	629.8	645.7
77.5°	552.6	432.2	434.5	470.9	495.8	600.3	754.0	687.4	579.1	573.8	597.3
80°	404.2	327.8	349.7	387.6	410.3	539.0	698.7	625.3	507.2	486.0	505.7
82.5°	268.0	232.4	258.9	296.7	314.9	450.4	634.4	530.7	413.3	359.6	362.6
85°	126.4	121.9	154.4	172.6	196.1	279.3	474.6	367.1	263.4	218.0	227.9
87.5°	28.8	38.6	50.7	50.0	58.3	74.9	147.6	103.0	76.5	52.2	34.8
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)