

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: P596802

Luminaire Tested: **MSA-SA4C-827-U-T4FT**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596802
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-827-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 17729 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

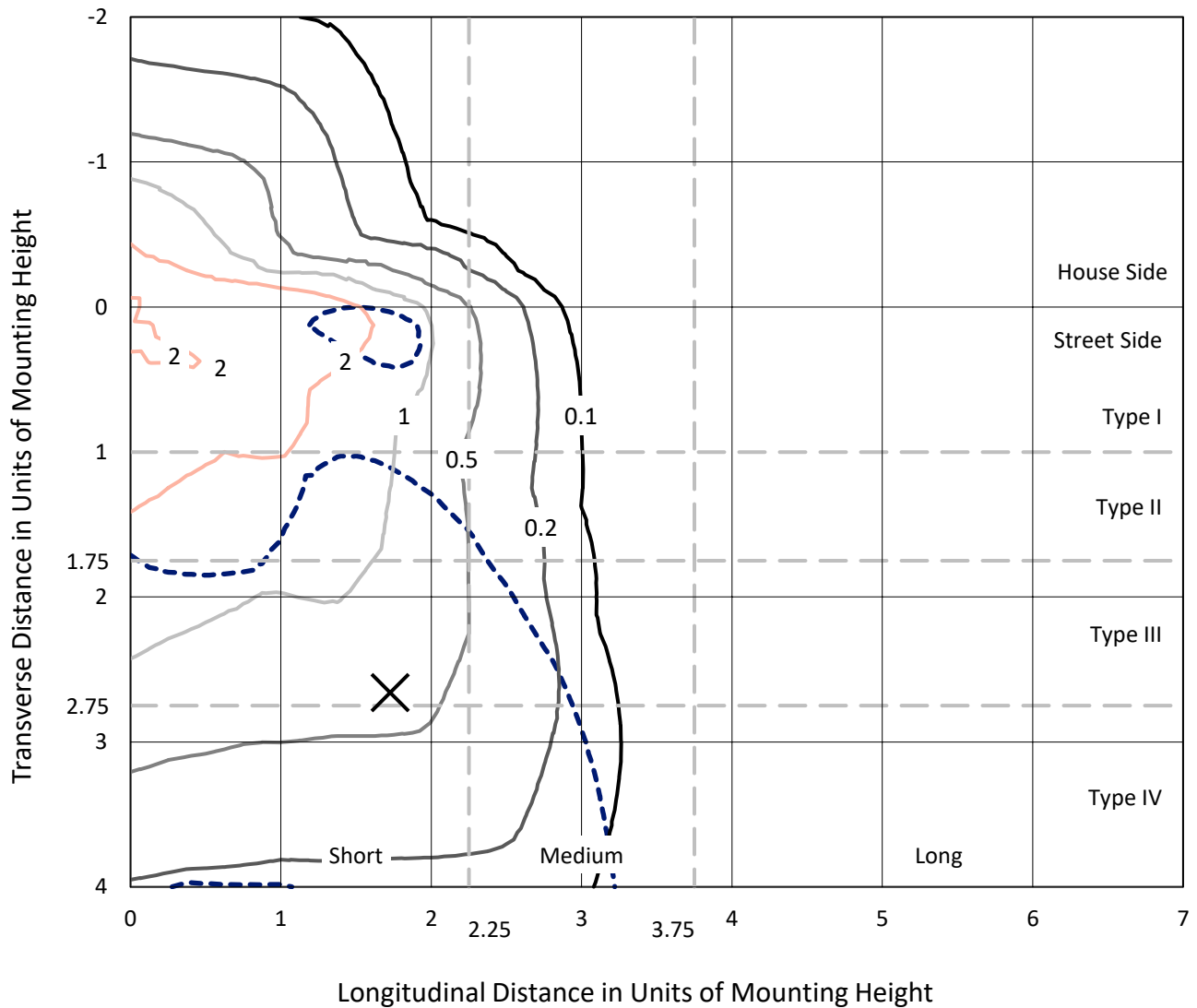
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

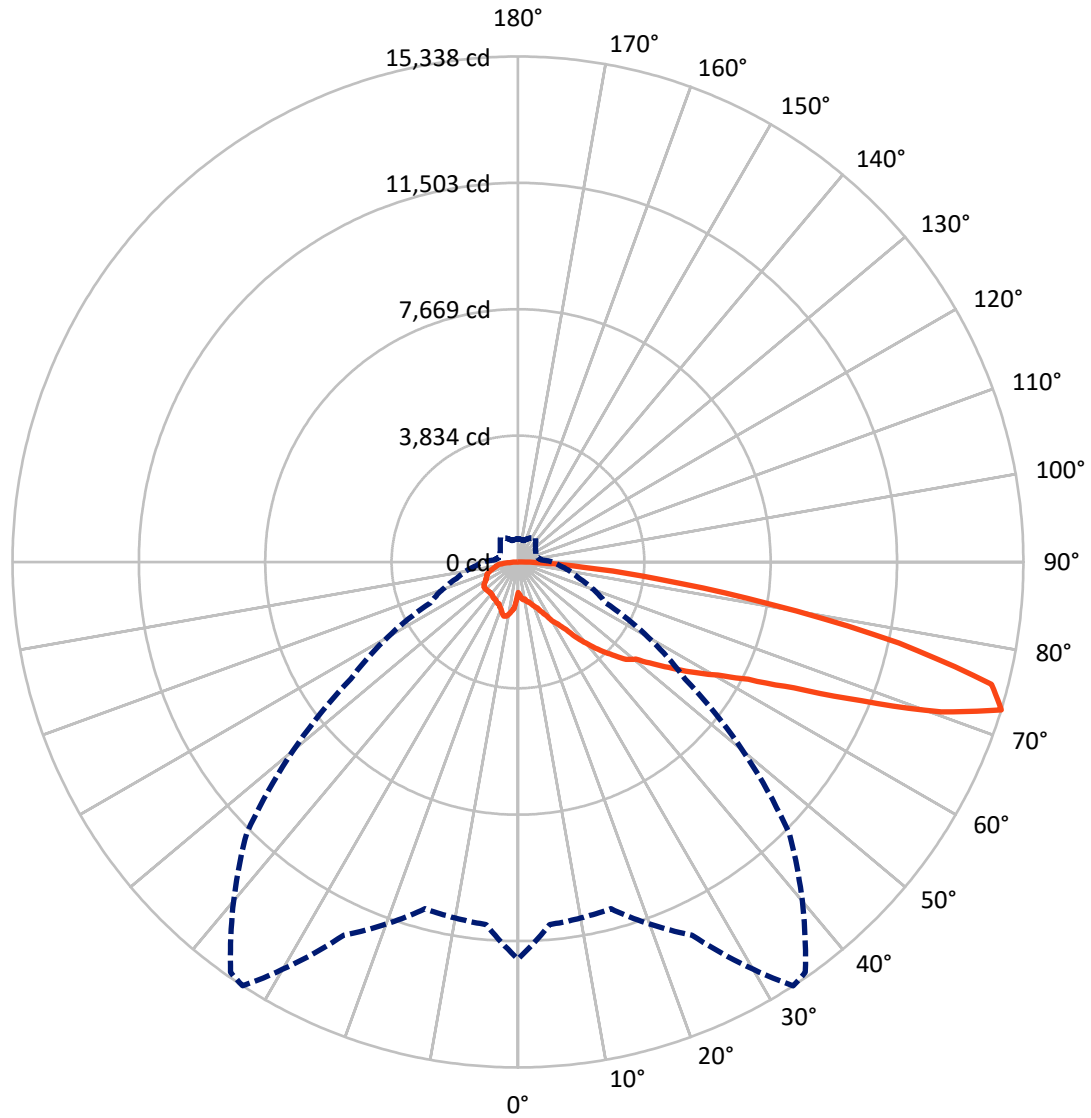
× Max cd
 - - - 1/2 Max cd



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

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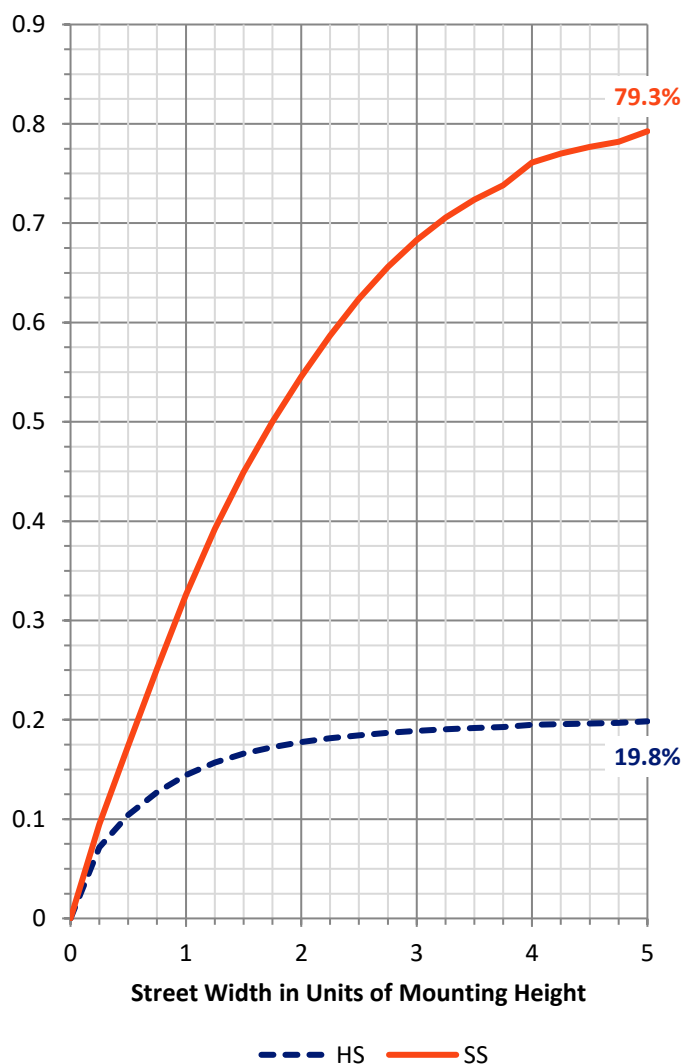
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3586.5	0.0	3586.5
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	14142.5	0.0	14142.5
	% Fixture	79.8	0.0	79.8
Total	Lumens	17729.0	0.0	17729.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.8	0.7
10°-20°	472.4	2.7
20°-30°	861.4	4.9
30°-40°	1457.2	8.2
40°-50°	2424.3	13.7
50°-60°	3557.9	20.1
60°-70°	4551.4	25.7
70°-80°	3703.0	20.9
80°-90°	573.5	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°	17729.0	100.0
0°-180°	17729.0	100.0

Coefficient of Utilization



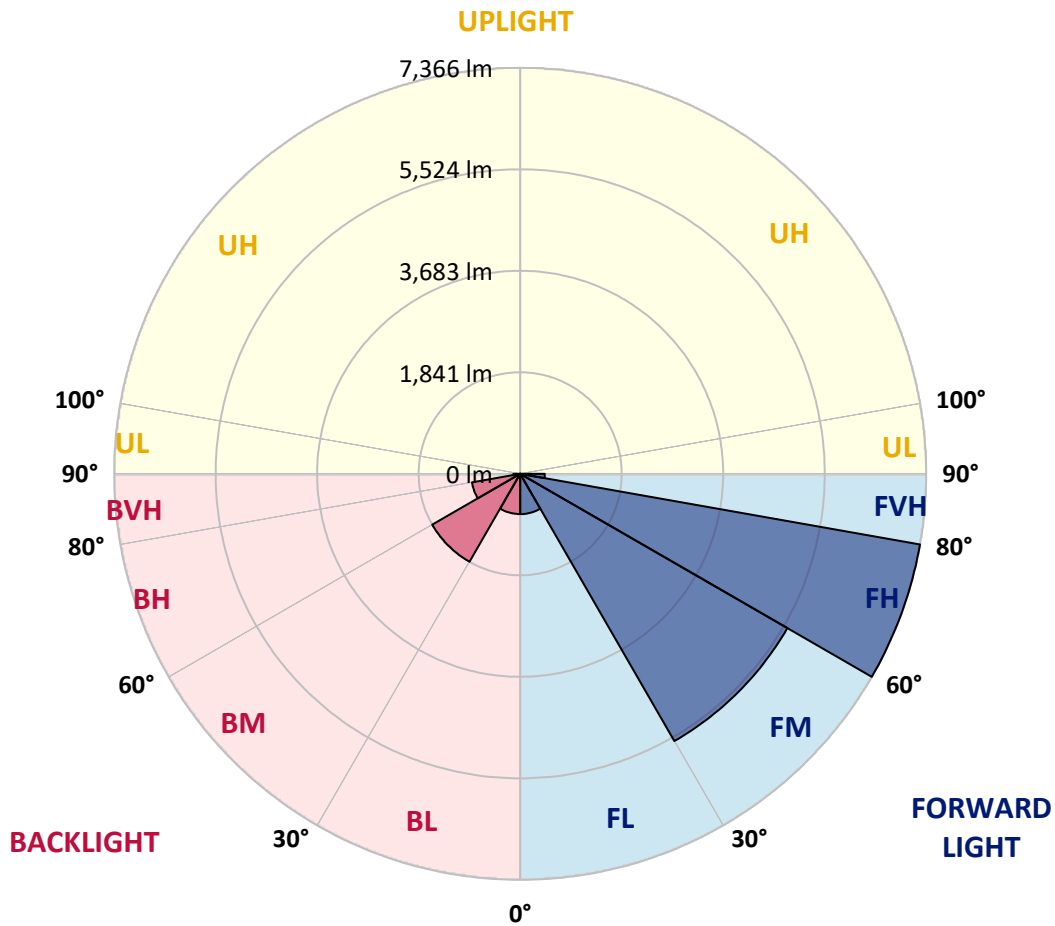
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	731.7	4.1			
FM (30°-60°)	5597.5	31.6			
FH (60°-80°)	7365.7	41.5			G3/7500
FVH (80°-90°)	447.6	2.5			G3/500
BL (0°-30°)	729.9	4.1	B2/1000		
BM (30°-60°)	1842.0	10.4	B2/2500		
BH (60°-80°)	888.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	125.9	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6
2.5°	1053.9	1020.8	966.4	964.9	995.1	1001.7	1021.6	1023.0	1030.4	1018.6	1102.5
5°	1162.8	1127.5	1106.2	1113.5	1099.5	1116.5	1116.5	1165.0	1229.7	1304.7	1411.4
7.5°	1188.5	1162.8	1138.5	1156.9	1159.8	1143.7	1159.1	1273.1	1390.0	1465.1	1635.7
10°	1137.0	1111.3	1129.7	1135.6	1134.8	1171.6	1251.8	1343.0	1473.2	1611.4	1703.4
12.5°	1127.5	1145.9	1154.7	1165.0	1234.9	1245.9	1367.2	1461.4	1592.3	1713.7	1952.7
15°	1269.4	1293.7	1239.3	1235.6	1258.4	1268.7	1394.5	1489.3	1680.6	1884.3	2099.0
17.5°	1471.7	1480.5	1382.7	1332.7	1349.6	1357.7	1412.8	1532.0	1649.7	2026.2	2293.9
20°	1667.3	1673.2	1489.3	1377.5	1437.1	1445.9	1497.4	1565.8	1658.5	2105.7	2425.6
22.5°	1872.5	1835.0	1633.5	1492.3	1526.8	1529.1	1559.2	1596.7	1728.4	2093.2	2585.9
25°	2096.8	2073.3	1819.6	1684.2	1682.8	1652.6	1654.1	1707.8	1802.6	2227.0	2691.1
27.5°	2394.7	2397.6	2029.2	1956.4	1842.4	1822.5	1723.2	1823.2	1931.4	2228.5	2918.4
30°	2780.8	2709.5	2321.2	2203.5	2091.0	2049.0	1914.4	1999.8	2046.8	2355.7	3165.5
32.5°	3094.9	3074.3	2625.6	2447.7	2263.8	2312.3	2163.8	2088.7	2173.3	2574.9	3539.8
35°	3395.7	3328.0	2947.8	2716.1	2522.7	2493.3	2396.9	2409.4	2460.9	2852.2	4028.9
37.5°	3844.3	3807.6	3403.8	3033.1	2942.6	2822.8	2761.7	2800.7	2760.2	3207.4	4762.2
40°	4345.9	4132.6	3784.8	3454.5	3285.4	3200.8	3222.1	3185.3	3154.5	3606.0	5419.7
42.5°	4826.2	4632.0	4037.8	3889.2	3668.5	3703.8	3586.9	3612.7	3700.2	4171.6	6027.9
45°	5349.1	4929.1	4306.2	4175.3	4017.2	4062.0	4155.4	4127.5	4270.9	4838.7	6600.9
47.5°	5610.2	5210.8	4635.7	4422.4	4420.2	4326.8	4895.3	4957.1	4732.8	5332.9	7182.6
50°	5861.7	5469.0	4880.6	4736.5	4632.0	4832.1	5605.1	5463.1	5150.5	5900.0	7822.5
52.5°	6211.8	5763.9	5161.6	5007.8	5137.3	5322.6	6171.4	6143.4	5560.2	6483.2	8378.5
55°	6478.8	6026.5	5584.5	5441.8	5688.9	5870.6	6748.0	6579.6	5911.0	6911.3	8730.8
57.5°	6946.6	6482.5	6208.9	5891.9	6336.1	6333.2	7304.0	7173.8	6286.1	7262.8	8872.8
60°	7690.1	7145.1	6859.0	6493.5	6969.4	7139.3	7939.4	7564.4	6551.6	7484.9	8616.8
62.5°	8733.8	8086.5	7622.5	7260.6	7840.9	8148.3	8724.2	7849.0	6568.5	7421.7	7943.9
65°	10024.5	9237.6	8629.3	8246.9	9204.5	9643.5	9673.0	8024.8	6412.6	6767.8	6528.8
67.5°	11283.6	10398.9	9764.2	9837.0	11235.1	11443.2	10701.2	8171.9	5574.9	5434.4	4533.5
70°	12112.5	11153.5	10730.6	11502.8	13626.9	13413.6	11534.4	7784.3	4390.0	3522.9	2552.8
72.5°	12050.0	11046.1	10893.8	12492.8	15337.6	15204.5	11635.9	6190.5	2940.4	1926.2	1273.1
75°	9817.1	9036.8	9382.4	11826.4	14844.8	14838.2	10102.5	3831.8	1508.5	989.2	804.6
77.5°	5427.8	5124.8	6140.5	8954.4	11819.8	11880.1	6825.9	1737.9	813.4	700.9	606.0
80°	1901.2	1873.3	2660.9	4832.1	7775.4	7790.1	3174.3	795.0	591.3	530.3	445.0
82.5°	695.0	689.1	1103.2	2244.7	4281.2	4271.6	1204.0	495.0	438.3	375.1	293.5
85°	277.3	271.4	504.5	996.6	1966.7	1935.0	467.8	281.0	286.8	223.6	144.2
87.5°	76.5	79.4	171.4	311.8	602.4	558.2	117.7	94.9	116.2	91.2	45.6
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°	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6	929.6
2.5°	1117.2	1124.5	1051.7	1077.5	1110.6	1128.2	1137.0	1099.5	1112.0	1165.0	1162.8
5°	1433.4	1404.0	1376.1	1404.8	1385.6	1358.4	1402.5	1400.3	1429.0	1457.7	1464.3
7.5°	1669.5	1631.3	1618.0	1553.3	1488.6	1423.1	1479.8	1515.1	1522.4	1593.8	1623.9
10°	1754.8	1740.1	1745.3	1660.0	1651.9	1658.5	1606.3	1549.6	1584.2	1554.8	1576.9
12.5°	1951.9	1988.7	1897.5	1839.4	1834.3	1793.8	1689.4	1652.6	1613.6	1654.1	1633.5
15°	2110.1	2178.5	2080.7	1978.4	1863.0	1800.4	1711.4	1655.6	1629.8	1638.6	1613.6
17.5°	2341.8	2405.7	2157.1	2000.5	1881.3	1789.4	1653.3	1534.2	1597.5	1602.6	1573.9
20°	2495.5	2499.9	2182.9	1946.1	1838.7	1679.1	1546.7	1442.3	1515.1	1589.4	1621.7
22.5°	2645.5	2612.4	2214.5	1902.7	1683.5	1529.1	1464.3	1457.7	1512.1	1574.7	1582.0
25°	2758.0	2763.2	2232.9	1886.5	1592.3	1382.0	1382.0	1429.8	1477.6	1626.1	1618.8
27.5°	3030.9	2830.1	2161.6	1812.2	1465.8	1295.9	1382.7	1446.7	1469.5	1630.5	1646.7
30°	3229.5	3098.6	2176.3	1685.0	1337.8	1255.5	1326.8	1407.0	1470.2	1656.3	1650.4
32.5°	3562.6	3210.3	2210.8	1506.3	1242.2	1240.0	1303.3	1387.8	1463.6	1628.3	1637.2
35°	3931.1	3539.8	2114.5	1370.2	1219.4	1231.2	1312.8	1346.7	1435.6	1617.3	1625.4
37.5°	4612.9	3711.9	2053.4	1265.0	1204.7	1238.5	1269.4	1321.6	1411.4	1562.1	1615.1
40°	5013.0	4066.4	1826.9	1204.0	1173.8	1232.7	1248.1	1292.2	1340.8	1496.0	1529.8
42.5°	5539.6	4178.2	1633.5	1136.3	1158.4	1208.4	1254.7	1265.8	1298.1	1391.5	1453.3
45°	5978.7	4262.1	1428.3	1081.9	1106.2	1262.1	1265.0	1259.9	1254.0	1288.6	1339.3
47.5°	6433.2	4487.1	1239.3	1021.6	1086.3	1306.2	1270.2	1223.1	1198.8	1203.2	1250.3
50°	6934.8	4650.4	1105.4	972.3	1090.7	1306.2	1295.2	1185.6	1137.0	1124.5	1173.8
52.5°	7376.1	4669.5	1003.9	932.6	1072.3	1261.3	1312.1	1162.0	1080.4	1050.3	1096.6
55°	7616.6	4427.6	930.4	896.5	1025.3	1220.9	1303.3	1148.8	1012.0	989.2	1030.4
57.5°	7611.4	4026.0	867.9	846.5	971.6	1164.3	1254.0	1076.7	970.1	956.9	997.3
60°	7337.1	3555.3	820.1	805.3	916.4	1081.9	1165.7	1029.7	929.6	923.0	967.1
62.5°	6714.9	3069.1	773.7	762.0	864.9	1023.8	1123.8	977.4	887.7	887.0	928.9
65°	5499.1	2463.8	730.3	727.4	817.1	966.4	1084.1	933.3	844.3	859.0	901.7
67.5°	3789.2	1731.3	684.0	692.8	773.0	911.3	1053.9	903.9	798.7	828.9	867.1
70°	2079.2	1070.9	632.5	650.2	717.1	847.3	1006.9	856.1	739.2	785.5	812.0
72.5°	1057.6	714.1	568.5	596.5	648.7	753.1	918.6	787.0	675.2	692.8	706.8
75°	710.5	537.6	497.2	528.1	565.6	663.4	814.9	722.2	614.1	611.9	627.4
77.5°	536.9	420.0	422.2	457.5	481.7	583.2	732.5	667.8	562.6	557.5	580.3
80°	392.7	318.5	339.8	376.6	398.6	523.7	678.8	607.5	492.8	472.2	491.3
82.5°	260.4	225.8	251.5	288.3	306.0	437.6	616.3	515.6	401.6	349.4	352.3
85°	122.8	118.4	150.0	167.7	190.5	271.4	461.1	356.7	255.9	211.8	221.4
87.5°	27.9	37.5	49.3	48.5	56.6	72.8	143.4	100.0	74.3	50.7	33.8
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)