

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: P368550

Luminaire Tested: **MSA-SA4C-760-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-760-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23999 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

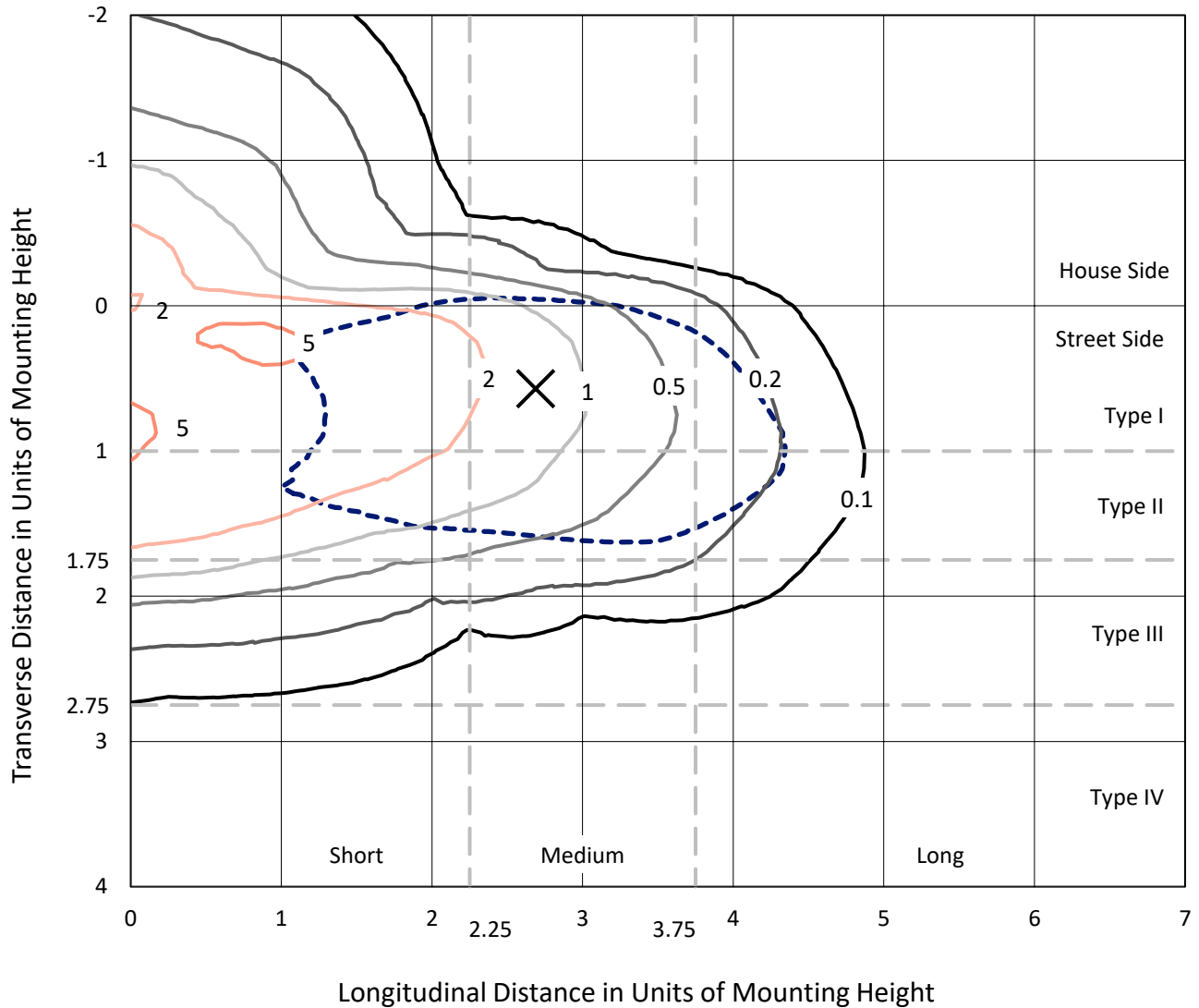
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

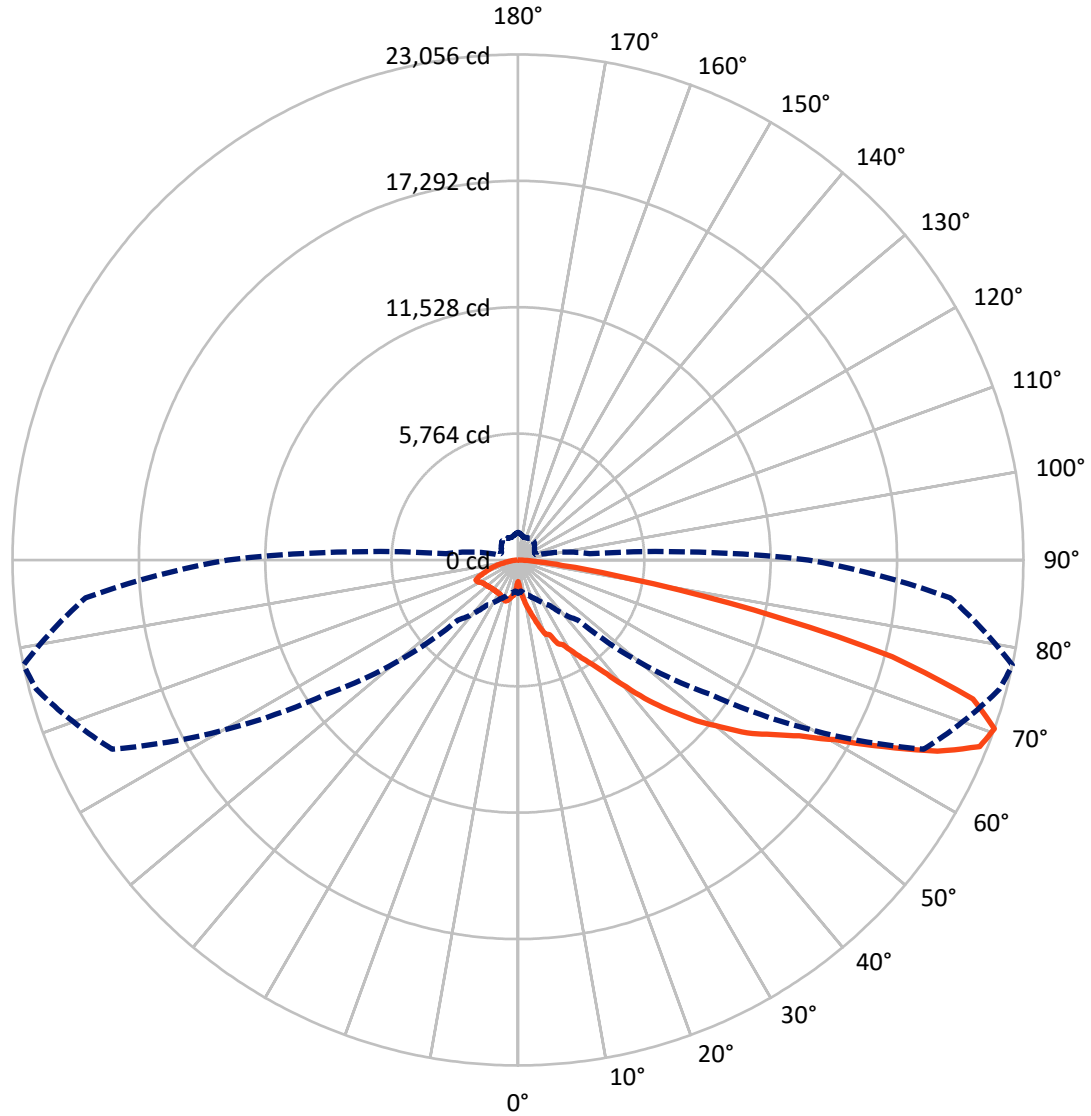
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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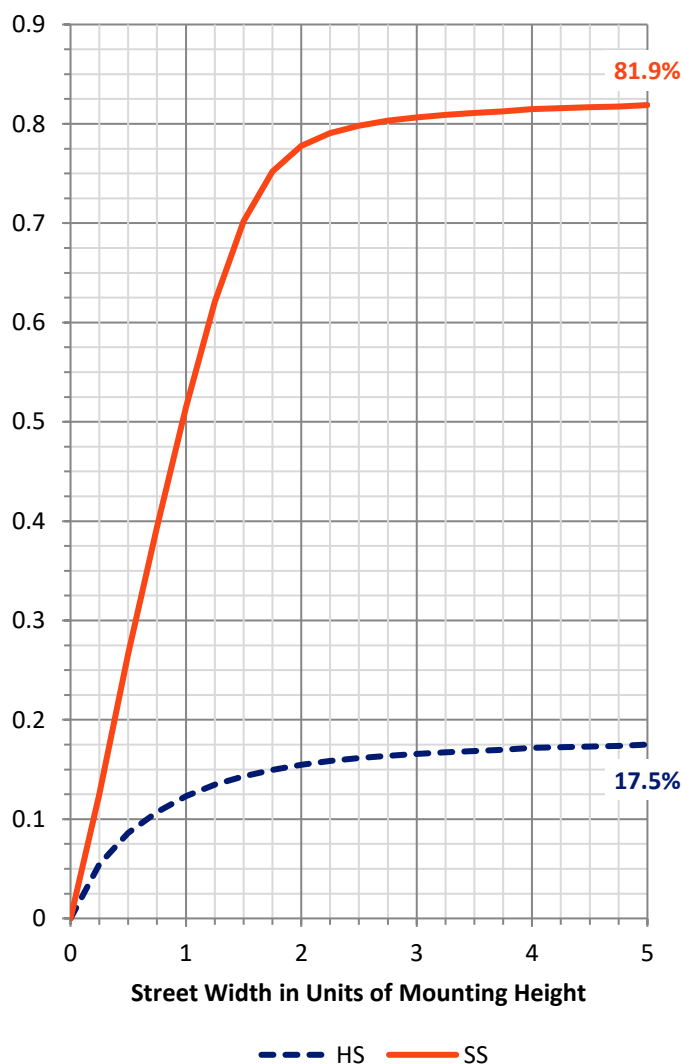
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4283.5	0.0	4283.5
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	19715.5	0.0	19715.5
	% Fixture	82.2	0.0	82.2
Total	Lumens	23999.0	0.0	23999.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.2	0.6
10°-20°	666.2	2.8
20°-30°	1282.4	5.3
30°-40°	2160.0	9.0
40°-50°	3737.3	15.6
50°-60°	5642.9	23.5
60°-70°	6250.2	26.0
70°-80°	3603.5	15.0
80°-90°	505.4	2.1
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°	23999.0	100.0
0°-180°	23999.0	100.0

Coefficient of Utilization

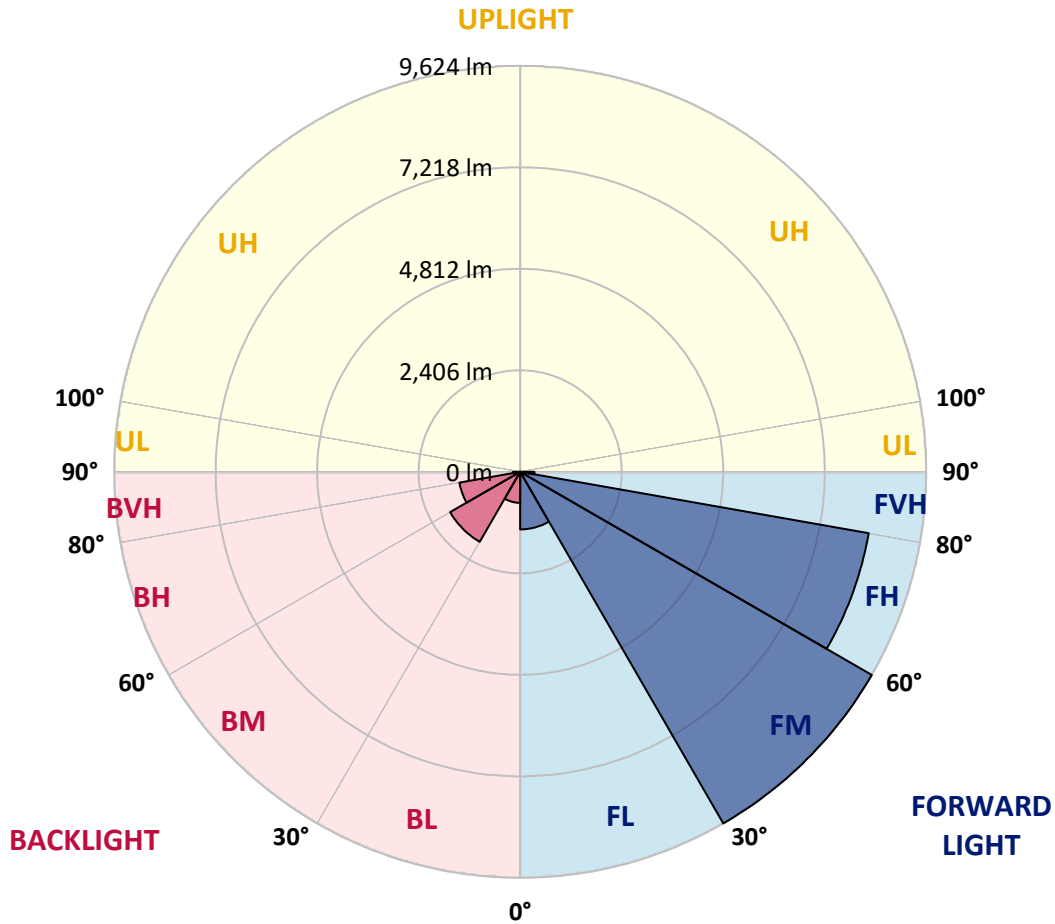


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1364.3	5.7			
FM (30°-60°)	9624.3	40.1			
FH (60°-80°)	8389.8	35.0			G4/12000
FVH (80°-90°)	337.1	1.4			G3/500
BL (0°-30°)	735.5	3.1	B2/1000		
BM (30°-60°)	1915.9	8.0	B2/2500		
BH (60°-80°)	1463.9	6.1	B3/2500		G3/2500
BVH (80°-90°)	168.2	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5
2.5°	1259.6	1214.6	1146.5	1174.5	1208.6	1212.6	1201.6	1139.5	1118.5	1165.5	1179.5
5°	1764.8	1688.8	1642.8	1627.7	1576.7	1470.7	1546.7	1507.7	1515.7	1492.7	1537.7
7.5°	2190.0	2139.0	2071.0	2051.9	1934.9	1851.9	1903.9	1886.9	1804.8	1772.8	1823.8
10°	2406.1	2350.1	2353.1	2312.1	2281.0	2289.1	2263.0	2188.0	2127.0	2084.0	1960.9
12.5°	2536.2	2550.2	2625.2	2604.2	2721.3	2817.3	2744.3	2633.2	2440.1	2401.1	2279.0
15°	2845.3	2897.3	2827.3	2859.3	2909.3	3093.4	3063.4	3039.4	2835.3	2759.3	2534.2
17.5°	3163.5	3173.5	3067.4	3050.4	3170.5	3263.5	3380.6	3245.5	3270.5	3217.5	2853.3
20°	3231.5	3300.5	3148.4	3043.4	3290.5	3474.6	3619.7	3476.6	3608.7	3622.7	3116.4
22.5°	3480.6	3397.6	3197.5	3094.4	3310.5	3536.6	3772.7	3852.8	3810.8	3692.7	3370.6
25°	3653.7	3609.7	3405.6	3291.5	3373.6	3581.6	3995.8	4204.9	4242.0	4225.9	3612.7
27.5°	3974.8	3996.8	3576.6	3608.7	3494.6	3513.6	4129.9	4672.1	4441.0	4377.0	3912.8
30°	4482.1	4384.0	3912.8	3938.8	3749.7	3717.7	4413.0	5075.3	4868.2	4791.2	4159.9
32.5°	5011.3	5020.3	4448.0	4225.9	4124.9	4092.9	4357.0	5286.4	5408.5	5308.4	4533.1
35°	5757.6	5705.6	5028.3	4736.2	4371.0	4315.0	4756.2	5898.7	6122.8	5842.7	4976.3
37.5°	6894.2	6737.1	5948.7	5273.4	5003.3	4939.3	5326.5	6448.0	6952.2	6604.0	5700.6
40°	7806.6	7487.4	6771.1	5948.7	5491.5	5570.6	5731.6	7114.3	7812.6	7616.5	6370.9
42.5°	8533.9	8250.8	7353.4	6775.1	6153.8	6055.8	6231.9	7939.7	8983.1	8791.0	7207.3
45°	9231.2	8655.0	8007.7	7487.4	6890.2	7009.2	6983.2	8782.0	10418.8	9827.5	7946.7
47.5°	9919.6	9378.3	8701.0	8001.7	7400.4	8141.7	7864.6	9408.3	11387.2	10949.0	8725.0
50°	10804.0	10208.7	9437.3	8734.0	8373.9	8916.1	8450.9	9938.6	12471.7	11957.5	9459.4
52.5°	11391.2	10812.0	10135.7	9633.4	9600.4	9391.3	9272.3	10609.9	13422.2	13110.0	10237.7
55°	11322.2	10764.0	10457.8	10512.8	10921.0	10215.7	10118.7	11603.3	14413.6	14052.5	11078.1
57.5°	10456.8	9847.5	9912.6	10238.7	11335.2	11663.4	11498.3	12664.8	15298.0	15134.0	12117.6
60°	8145.7	7832.6	8361.8	8958.1	10781.0	12087.6	13248.1	13959.4	16386.5	16648.7	13750.3
62.5°	5291.4	4873.2	5709.6	6722.1	9127.2	11807.4	15029.9	16414.6	18169.4	18764.6	16231.5
65°	2741.3	2674.2	3259.5	4189.9	6353.9	10067.6	15658.2	18989.7	20336.4	21029.7	18601.6
67.5°	1992.9	1868.9	2140.0	2687.2	3878.8	6865.2	14467.7	20959.6	22076.2	22711.4	19979.2
70°	1517.7	1425.7	1632.8	1971.9	2533.2	3877.8	10679.9	20422.4	22747.5	23055.6	19796.1
72.5°	1136.5	1057.5	1238.6	1554.7	1951.9	2183.0	6312.9	16791.7	21601.9	21707.0	17767.2
75°	907.4	846.4	924.4	1227.6	1590.7	1485.7	3353.5	12165.6	17551.1	17641.1	13571.2
77.5°	744.3	692.3	724.3	920.4	1237.6	1117.5	1663.8	7738.6	11143.1	11005.1	7635.5
80°	607.3	562.3	577.3	665.3	942.4	834.4	934.4	4036.9	5315.4	5101.3	3175.5
82.5°	467.2	429.2	459.2	489.2	682.3	599.3	545.3	1836.8	2177.0	2027.9	1164.5
85°	313.1	278.1	399.2	367.2	446.2	368.2	298.1	731.3	811.4	756.3	409.2
87.5°	86.0	81.0	134.1	183.1	183.1	139.1	109.1	177.1	226.1	198.1	96.0
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°	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5
2.5°	1185.5	1163.5	1105.5	1100.5	1114.5	1116.5	1107.5	1086.5	1075.5	1135.5	1126.5
5°	1526.7	1448.7	1401.6	1358.6	1298.6	1255.6	1266.6	1296.6	1306.6	1351.6	1356.6
7.5°	1791.8	1688.8	1585.7	1447.7	1356.6	1298.6	1342.6	1374.6	1399.6	1463.7	1489.7
10°	1906.9	1794.8	1648.8	1503.7	1478.7	1488.7	1463.7	1471.7	1510.7	1513.7	1526.7
12.5°	2121.0	1993.9	1730.8	1599.7	1592.7	1613.7	1604.7	1641.8	1668.8	1741.8	1710.8
15°	2326.1	2164.0	1792.8	1658.8	1629.7	1671.8	1720.8	1782.8	1840.8	1909.9	1874.9
17.5°	2575.2	2331.1	1795.8	1631.8	1636.8	1726.8	1777.8	1811.8	1984.9	2080.0	2031.9
20°	2732.3	2348.1	1728.8	1564.7	1636.8	1717.8	1788.8	1825.8	2019.9	2163.0	2196.0
22.5°	2874.3	2354.1	1676.8	1528.7	1574.7	1681.8	1788.8	1870.9	1994.9	2132.0	2137.0
25°	2952.4	2349.1	1609.7	1531.7	1573.7	1626.7	1721.8	1796.8	1888.9	2080.0	2085.0
27.5°	3152.5	2284.1	1543.7	1543.7	1565.7	1567.7	1688.8	1732.8	1745.8	1919.9	1950.9
30°	3210.5	2298.1	1535.7	1541.7	1552.7	1532.7	1585.7	1614.7	1633.8	1783.8	1788.8
32.5°	3303.5	2186.0	1559.7	1523.7	1509.7	1506.7	1519.7	1545.7	1553.7	1645.8	1662.8
35°	3416.6	2141.0	1567.7	1518.7	1490.7	1475.7	1514.7	1482.7	1507.7	1615.7	1627.7
37.5°	3784.7	2079.0	1608.7	1518.7	1482.7	1465.7	1446.7	1461.7	1550.7	1654.8	1718.8
40°	4019.8	2098.0	1598.7	1533.7	1455.7	1439.7	1407.6	1462.7	1600.7	1784.8	1832.8
42.5°	4432.0	2109.0	1610.7	1526.7	1464.7	1402.6	1423.7	1483.7	1628.7	1733.8	1807.8
45°	4858.2	2143.0	1602.7	1505.7	1444.7	1473.7	1444.7	1498.7	1567.7	1570.7	1626.7
47.5°	5276.4	2280.0	1585.7	1462.7	1439.7	1515.7	1441.7	1450.7	1455.7	1473.7	1539.7
50°	5767.7	2426.1	1561.7	1402.6	1446.7	1517.7	1452.7	1408.6	1403.6	1462.7	1536.7
52.5°	6325.9	2591.2	1530.7	1344.6	1405.6	1498.7	1490.7	1411.6	1368.6	1425.7	1499.7
55°	6983.2	2779.3	1494.7	1286.6	1360.6	1500.7	1511.7	1390.6	1369.6	1431.7	1510.7
57.5°	7856.6	3051.4	1424.7	1202.6	1305.6	1469.7	1457.7	1366.6	1346.6	1412.6	1494.7
60°	9347.3	3574.6	1324.6	1119.5	1246.6	1393.6	1413.7	1323.6	1303.6	1376.6	1462.7
62.5°	11343.2	4203.9	1203.6	1038.5	1174.5	1311.6	1358.6	1261.6	1259.6	1352.6	1442.7
65°	13201.1	4561.1	1078.5	964.4	1100.5	1235.6	1296.6	1203.6	1207.6	1324.6	1414.7
67.5°	13973.4	4140.9	966.4	898.4	1015.5	1148.5	1245.6	1158.5	1145.5	1286.6	1369.6
70°	13248.1	3289.5	869.4	828.4	919.4	1054.5	1174.5	1098.5	1068.5	1196.6	1261.6
72.5°	11722.4	2742.3	778.4	746.3	835.4	955.4	1078.5	1017.5	978.5	1076.5	1134.5
75°	9163.2	2250.0	674.3	665.3	739.3	865.4	978.5	936.4	886.4	948.4	1006.5
77.5°	5217.4	1423.7	566.3	572.3	625.3	758.3	858.4	825.4	774.4	800.4	867.4
80°	2088.0	718.3	455.2	459.2	504.2	623.3	711.3	699.3	646.3	667.3	713.3
82.5°	780.4	394.2	336.2	338.2	383.2	493.2	607.3	601.3	551.3	536.2	562.3
85°	310.1	195.1	206.1	215.1	258.1	355.2	487.2	432.2	373.2	327.2	343.2
87.5°	74.0	62.0	72.0	76.0	84.0	111.1	178.1	143.1	147.1	118.1	88.0
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)