

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: P368620

Luminaire Tested: **MSA-SA4D-730-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368620
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-SA4D-730-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: 24014 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

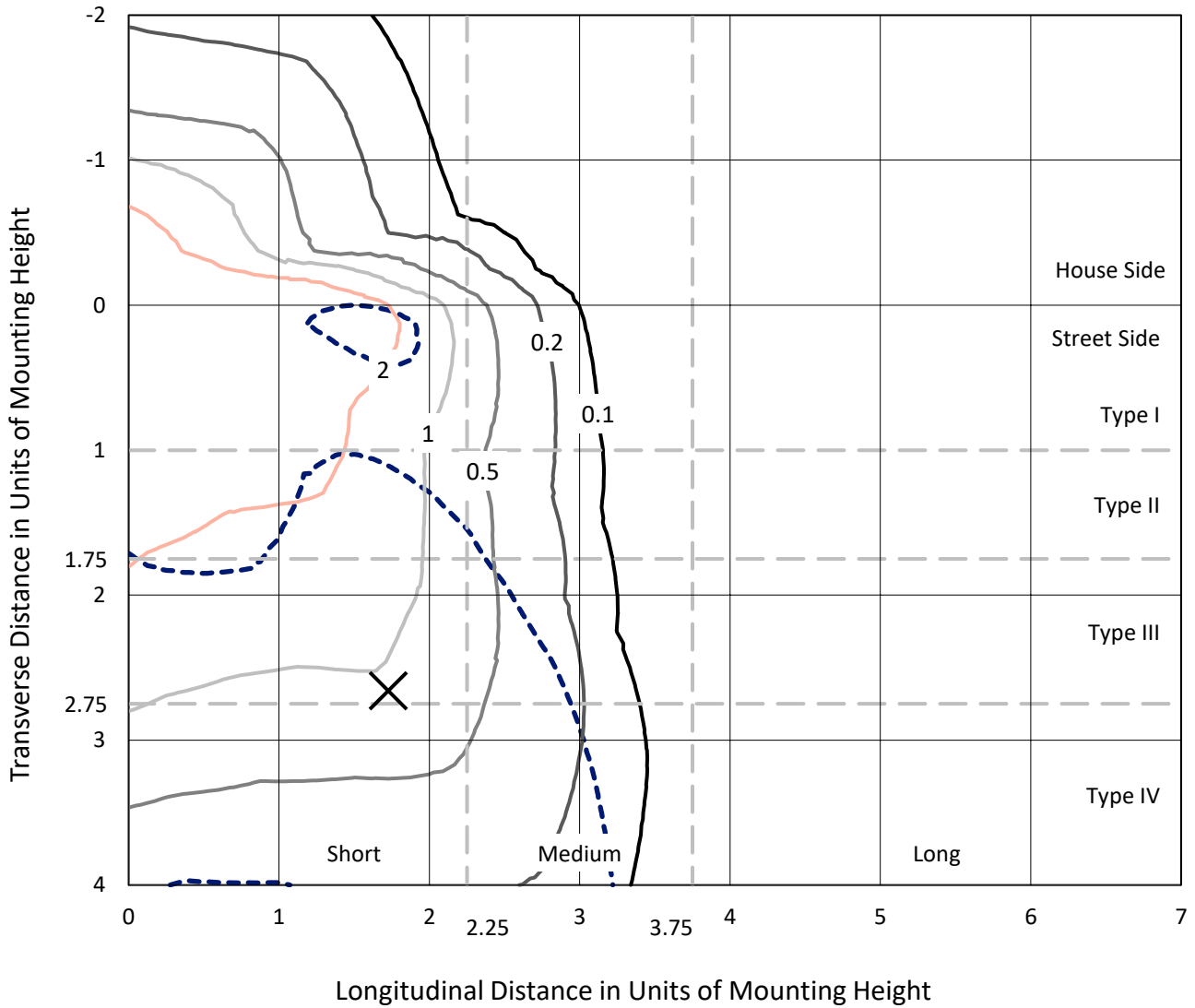
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

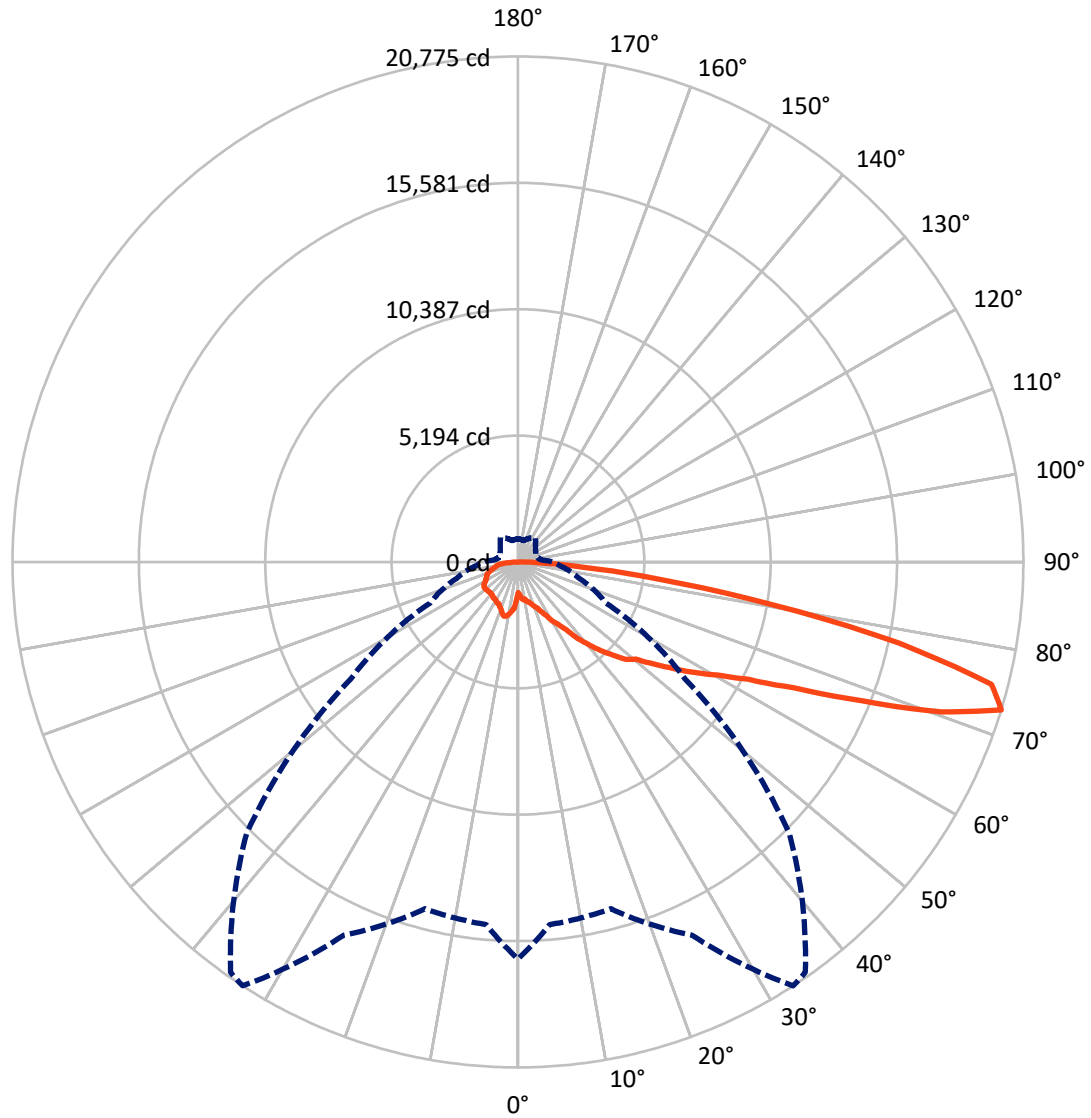
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 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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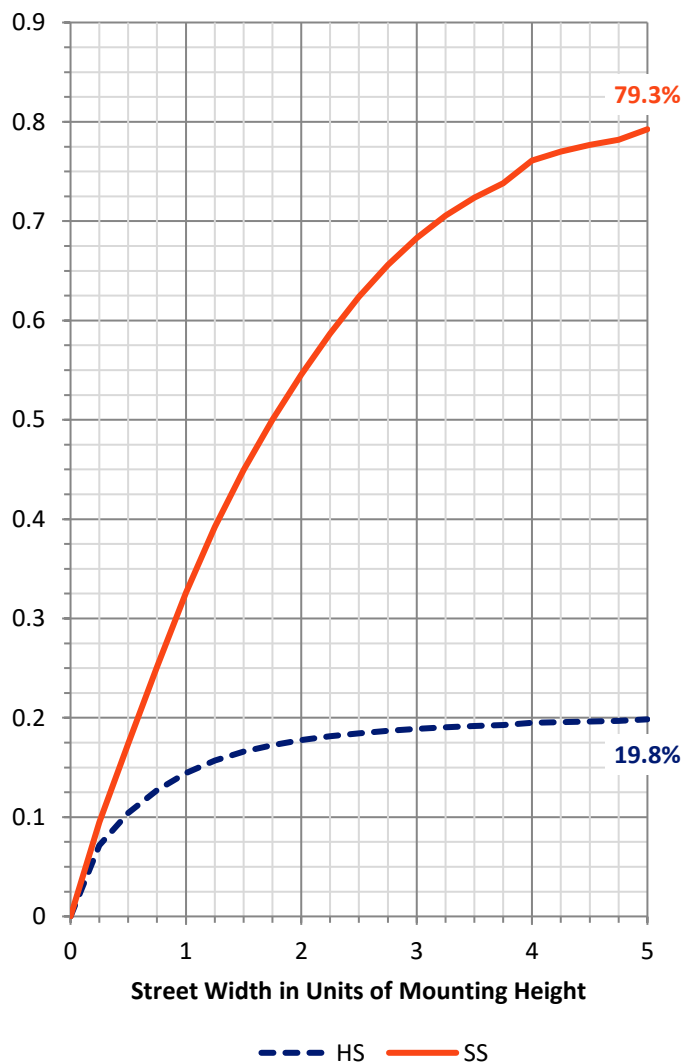
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4858.0	0.0	4858.0
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	19156.0	0.0	19156.0
	% Fixture	79.8	0.0	79.8
Total	Lumens	24014.0	0.0	24014.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.2	0.7
10°-20°	639.8	2.7
20°-30°	1166.8	4.9
30°-40°	1973.8	8.2
40°-50°	3283.8	13.7
50°-60°	4819.2	20.1
60°-70°	6164.9	25.7
70°-80°	5015.7	20.9
80°-90°	776.8	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°	24014.0	100.0
0°-180°	24014.0	100.0

Coefficient of Utilization



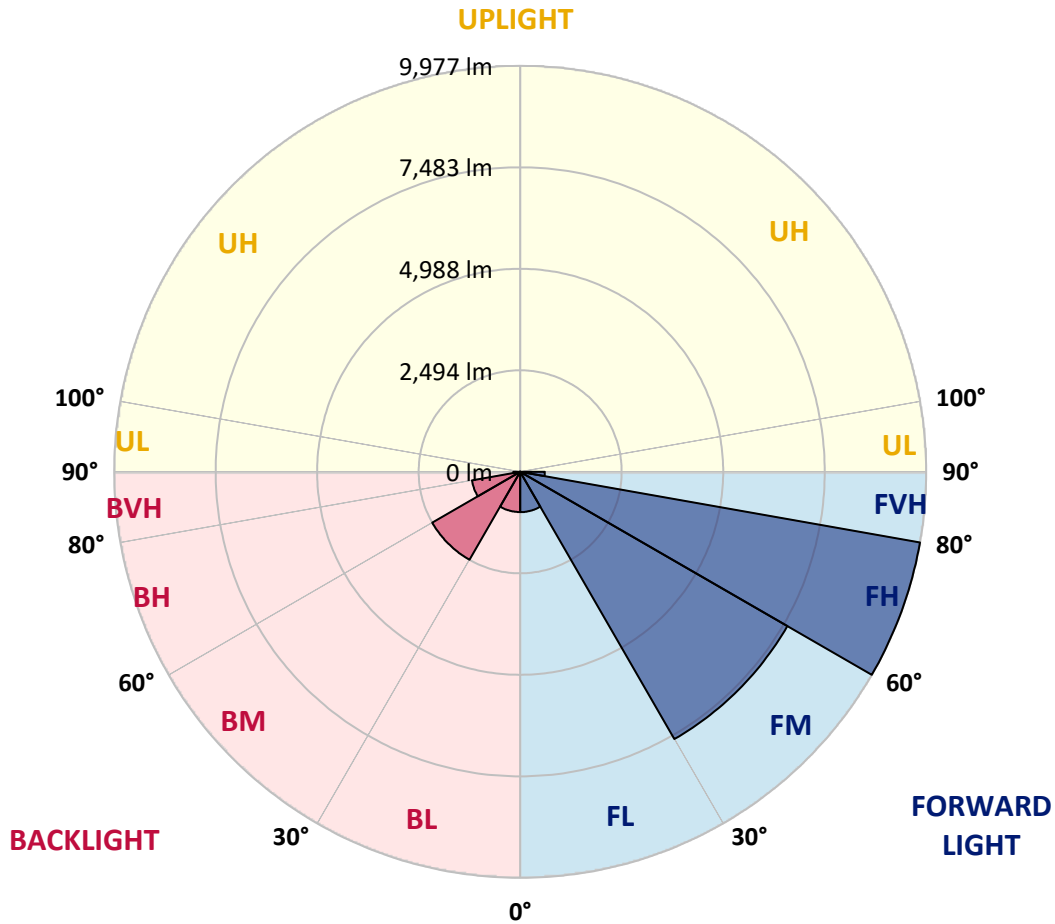
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	991.1	4.1			
FM (30°-60°)	7581.8	31.6			
FH (60°-80°)	9976.9	41.5			G4/12000
FVH (80°-90°)	606.3	2.5			G4/750
BL (0°-30°)	988.7	4.1	B2/1000		
BM (30°-60°)	2495.0	10.4	B2/2500		
BH (60°-80°)	1203.7	5.0	B3/2500		G3/2500
BVH (80°-90°)	170.5	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2
2.5°	1427.6	1382.7	1309.0	1307.0	1347.9	1356.8	1383.7	1385.7	1395.7	1379.7	1493.3
5°	1575.0	1527.2	1498.3	1508.3	1489.3	1512.2	1512.2	1578.0	1665.7	1767.3	1911.7
7.5°	1609.9	1575.0	1542.1	1567.0	1571.0	1549.1	1570.0	1724.4	1882.8	1984.4	2215.6
10°	1540.1	1505.3	1530.2	1538.1	1537.1	1587.0	1695.5	1819.1	1995.4	2182.7	2307.2
12.5°	1527.2	1552.1	1564.0	1578.0	1672.6	1687.6	1851.9	1979.5	2156.8	2321.2	2644.9
15°	1719.4	1752.3	1678.6	1673.6	1704.5	1718.5	1888.8	2017.3	2276.3	2552.3	2843.2
17.5°	1993.4	2005.4	1872.9	1805.1	1828.0	1839.0	1913.7	2075.1	2234.5	2744.5	3107.2
20°	2258.4	2266.4	2017.3	1865.9	1946.6	1958.5	2028.3	2120.9	2246.4	2852.1	3285.5
22.5°	2536.3	2485.5	2212.6	2021.3	2068.1	2071.1	2112.0	2162.8	2341.1	2835.2	3502.6
25°	2840.2	2808.3	2464.6	2281.3	2279.3	2238.5	2240.5	2313.2	2441.7	3016.5	3645.1
27.5°	3243.6	3247.6	2748.5	2649.9	2495.5	2468.6	2334.1	2469.6	2616.0	3018.5	3952.9
30°	3766.6	3670.0	3144.0	2984.6	2832.2	2775.4	2593.1	2708.7	2772.4	3190.8	4287.7
32.5°	4192.0	4164.1	3556.4	3315.4	3066.3	3132.1	2930.8	2829.2	2943.8	3487.7	4794.7
35°	4599.5	4507.8	3992.8	3679.0	3417.0	3377.1	3246.6	3263.6	3333.3	3863.3	5457.2
37.5°	5207.2	5157.3	4610.4	4108.3	3985.8	3823.4	3740.7	3793.5	3738.8	4344.4	6450.4
40°	5886.6	5597.7	5126.5	4679.2	4450.0	4335.5	4364.4	4314.6	4272.7	4884.4	7341.0
42.5°	6537.1	6274.1	5469.2	5267.9	4969.1	5016.9	4858.5	4893.3	5011.9	5650.5	8164.9
45°	7245.4	6676.6	5832.8	5655.4	5441.3	5502.0	5628.5	5590.7	5785.0	6554.0	8940.9
47.5°	7599.0	7058.1	6279.1	5990.2	5987.2	5860.7	6630.7	6714.4	6410.6	7223.5	9728.9
50°	7939.7	7407.8	6610.8	6415.5	6274.1	6545.1	7592.1	7399.8	6976.4	7991.5	10595.6
52.5°	8413.9	7807.2	6991.4	6783.1	6958.5	7209.5	8359.1	8321.3	7531.3	8781.5	11348.7
55°	8775.6	8162.9	7564.2	7370.9	7705.6	7951.7	9140.2	8912.0	8006.5	9361.3	11825.9
57.5°	9409.1	8780.5	8409.9	7980.6	8582.3	8578.3	9893.3	9717.0	8514.5	9837.5	12018.2
60°	10416.3	9678.1	9290.6	8795.5	9440.0	9670.1	10754.0	10245.9	8874.2	10138.4	11671.5
62.5°	11829.9	10953.3	10324.6	9834.5	10620.5	11036.9	11817.0	10631.5	8897.1	10052.7	10760.0
65°	13578.2	12512.3	11688.5	11170.4	12467.5	13062.2	13102.1	10869.6	8685.9	9167.1	8843.3
67.5°	15283.7	14085.3	13225.6	13324.2	15218.0	15499.9	14494.8	11068.8	7551.2	7360.9	6140.6
70°	16406.5	15107.4	14534.6	15580.6	18457.7	18168.8	15623.5	10543.8	5946.3	4771.8	3457.8
72.5°	16321.8	14962.0	14755.8	16921.5	20774.8	20594.5	15760.9	8385.0	3982.8	2609.1	1724.4
75°	13297.3	12240.3	12708.6	16018.9	20107.4	20098.4	13683.8	5190.2	2043.2	1339.9	1089.8
77.5°	7352.0	6941.5	8317.3	12128.8	16010.0	16091.7	9245.8	2354.0	1101.8	949.4	820.9
80°	2575.2	2537.3	3604.3	6545.1	10531.9	10551.8	4299.6	1076.9	800.9	718.3	602.7
82.5°	941.4	933.4	1494.3	3040.4	5798.9	5785.9	1630.8	670.4	593.7	508.1	397.5
85°	375.6	367.6	683.4	1349.9	2663.8	2621.0	633.6	380.5	388.5	302.8	195.3
87.5°	103.6	107.6	232.1	422.4	815.9	756.1	159.4	128.5	157.4	123.5	61.8
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°	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2
2.5°	1513.2	1523.2	1424.6	1459.4	1504.3	1528.2	1540.1	1489.3	1506.3	1578.0	1575.0
5°	1941.6	1901.8	1863.9	1902.7	1876.8	1840.0	1899.8	1896.8	1935.6	1974.5	1983.4
7.5°	2261.4	2209.6	2191.6	2104.0	2016.3	1927.7	2004.4	2052.2	2062.1	2158.8	2199.6
10°	2376.9	2357.0	2364.0	2248.4	2237.5	2246.4	2175.7	2099.0	2145.8	2106.0	2135.9
12.5°	2643.9	2693.7	2570.2	2491.5	2484.5	2429.7	2288.3	2238.5	2185.7	2240.5	2212.6
15°	2858.1	2950.8	2818.3	2679.8	2523.4	2438.7	2318.2	2242.5	2207.6	2219.5	2185.7
17.5°	3171.9	3258.6	2921.9	2709.7	2548.3	2423.8	2239.5	2078.1	2163.8	2170.7	2131.9
20°	3380.1	3386.1	2956.7	2636.0	2490.5	2274.3	2095.0	1953.6	2052.2	2152.8	2196.6
22.5°	3583.3	3538.5	2999.6	2577.2	2280.3	2071.1	1983.4	1974.5	2048.2	2132.9	2142.8
25°	3735.8	3742.7	3024.5	2555.3	2156.8	1871.9	1871.9	1936.6	2001.4	2202.6	2192.6
27.5°	4105.4	3833.4	2927.8	2454.6	1985.4	1755.3	1872.9	1959.5	1990.4	2208.6	2230.5
30°	4374.3	4197.0	2947.8	2282.3	1812.1	1700.5	1797.2	1905.7	1991.4	2243.4	2235.5
32.5°	4825.6	4348.4	2994.6	2040.2	1682.6	1679.6	1765.3	1879.8	1982.4	2205.6	2217.5
35°	5324.7	4794.7	2864.1	1855.9	1651.7	1667.6	1778.2	1824.0	1944.6	2190.7	2201.6
37.5°	6248.2	5027.8	2781.4	1713.5	1631.8	1677.6	1719.4	1790.2	1911.7	2115.9	2187.7
40°	6790.1	5508.0	2474.6	1630.8	1589.9	1669.6	1690.6	1750.3	1816.1	2026.3	2072.1
42.5°	7503.4	5659.4	2212.6	1539.1	1569.0	1636.8	1699.5	1714.5	1758.3	1884.8	1968.5
45°	8098.1	5773.0	1934.6	1465.4	1498.3	1709.5	1713.5	1706.5	1698.5	1745.3	1814.1
47.5°	8713.8	6077.8	1678.6	1383.7	1471.4	1769.3	1720.4	1656.7	1623.8	1629.8	1693.5
50°	9393.2	6299.0	1497.3	1317.0	1477.4	1769.3	1754.3	1605.9	1540.1	1523.2	1589.9
52.5°	9990.9	6324.9	1359.8	1263.2	1452.5	1708.5	1777.2	1574.0	1463.4	1422.6	1485.3
55°	10316.7	5997.1	1260.2	1214.4	1388.7	1653.7	1765.3	1556.1	1370.8	1339.9	1395.7
57.5°	10309.7	5453.2	1175.5	1146.6	1316.0	1577.0	1698.5	1458.4	1314.0	1296.1	1350.9
60°	9938.1	4815.6	1110.8	1090.8	1241.3	1465.4	1579.0	1394.7	1259.2	1250.2	1310.0
62.5°	9095.3	4157.2	1048.0	1032.1	1171.5	1386.7	1522.2	1324.0	1202.4	1201.4	1258.2
65°	7448.6	3337.3	989.2	985.2	1106.8	1309.0	1468.4	1264.2	1143.6	1163.6	1221.3
67.5°	5132.4	2345.1	926.5	938.4	1047.0	1234.3	1427.6	1224.3	1081.9	1122.7	1174.5
70°	2816.3	1450.5	856.7	880.6	971.3	1147.6	1363.8	1159.6	1001.2	1063.9	1099.8
72.5°	1432.5	967.3	770.1	807.9	878.7	1020.1	1244.3	1065.9	914.5	938.4	957.4
75°	962.3	728.2	673.4	715.3	766.1	898.6	1103.8	978.3	831.8	828.8	849.8
77.5°	727.2	568.8	571.8	619.6	652.5	790.0	992.2	904.6	762.1	755.1	786.0
80°	532.0	431.4	460.2	510.1	539.9	709.3	919.5	822.9	667.5	639.6	665.5
82.5°	352.7	305.8	340.7	390.5	414.4	592.7	834.8	698.3	543.9	473.2	477.2
85°	166.4	160.4	203.2	227.1	258.0	367.6	624.6	483.2	346.7	286.9	299.9
87.5°	37.9	50.8	66.7	65.7	76.7	98.6	194.3	135.5	100.6	68.7	45.8
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)