

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: P597176

Luminaire Tested: **MSA-SA4D-835-U-T4FT**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597176
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-SA4D-835-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: 21738 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

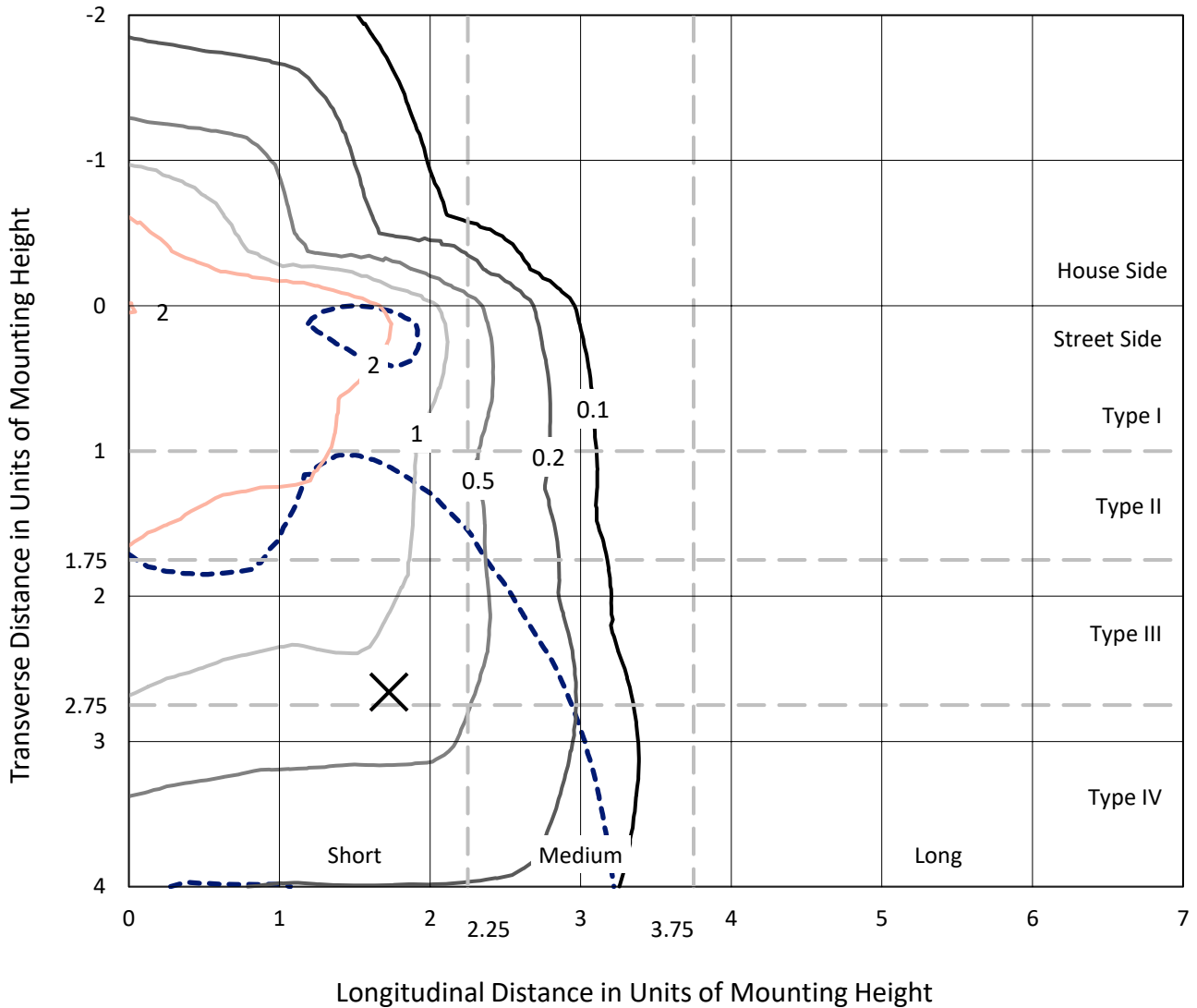
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

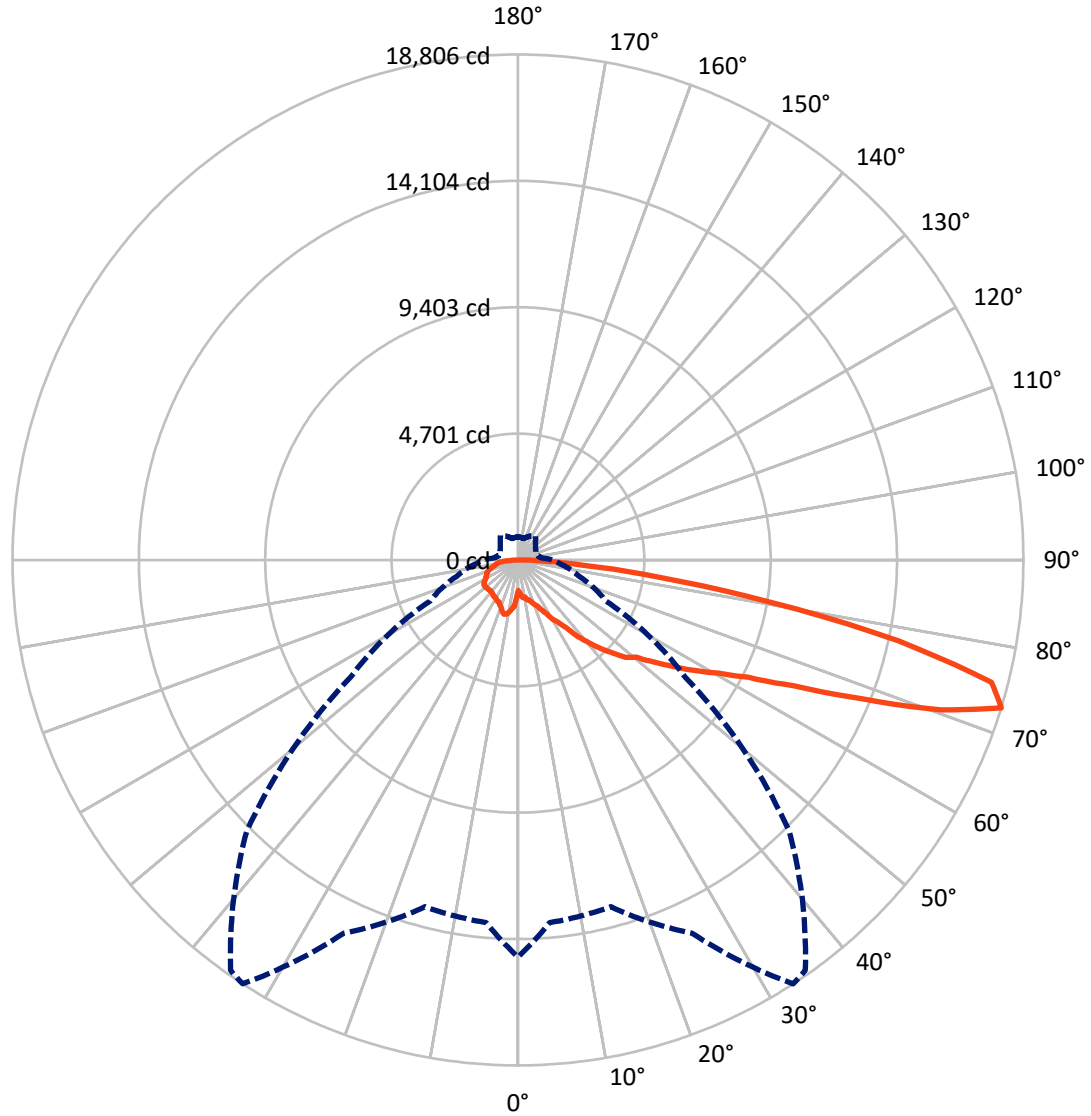
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 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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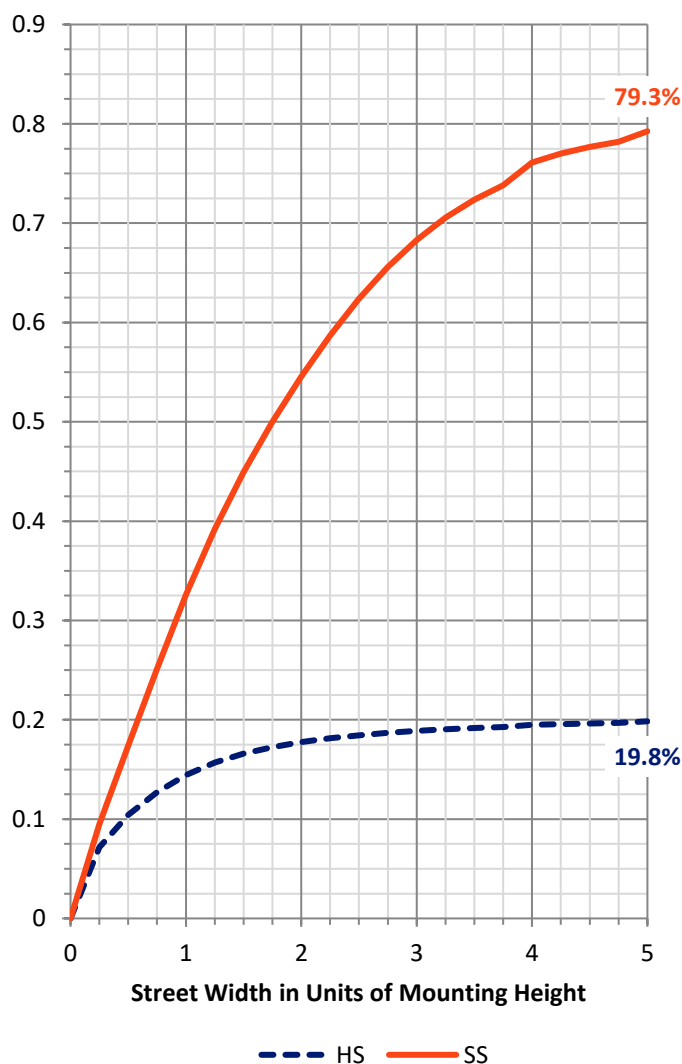
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4397.6	0.0	4397.6
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	17340.4	0.0	17340.4
	% Fixture	79.8	0.0	79.8
Total	Lumens	21738.0	0.0	21738.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	0.7
10°-20°	579.2	2.7
20°-30°	1056.2	4.9
30°-40°	1786.8	8.2
40°-50°	2972.5	13.7
50°-60°	4362.4	20.1
60°-70°	5580.6	25.7
70°-80°	4540.3	20.9
80°-90°	703.2	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°	21738.0	100.0
0°-180°	21738.0	100.0

Coefficient of Utilization

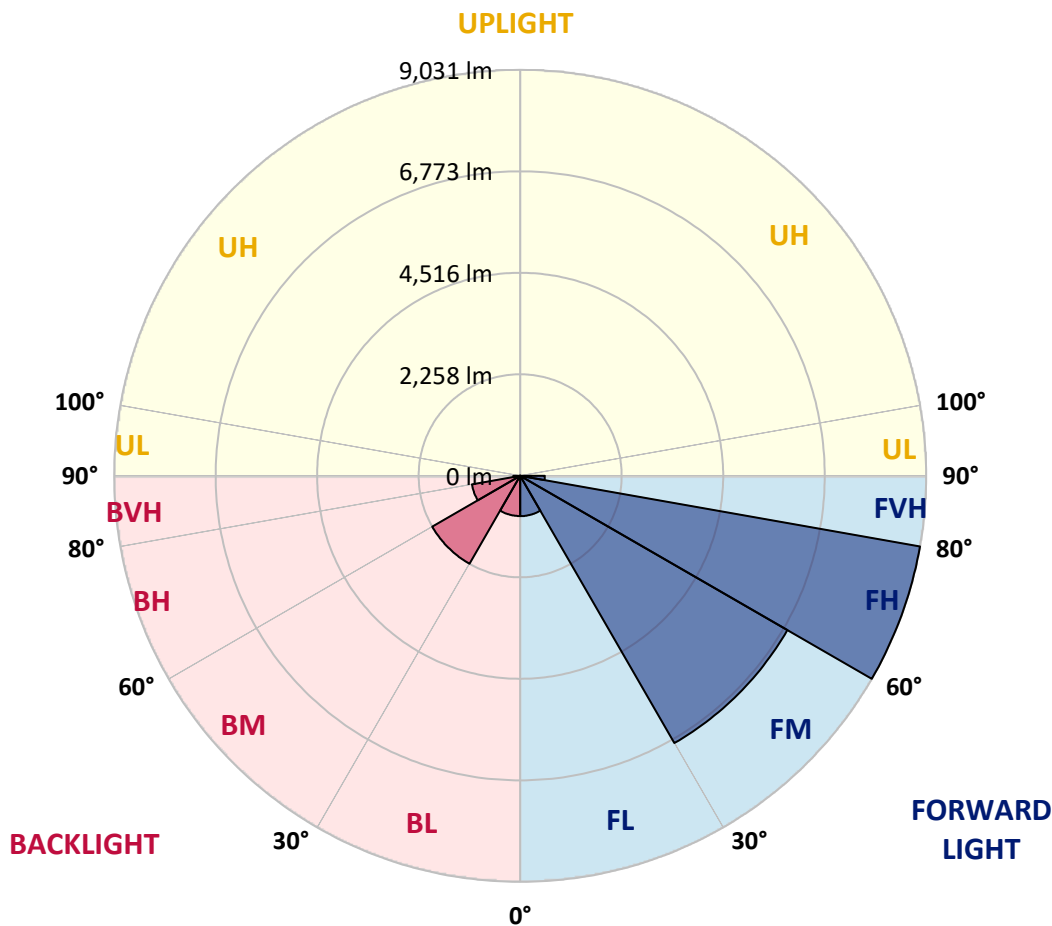


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	897.1	4.1			
FM (30°-60°)	6863.2	31.6			
FH (60°-80°)	9031.3	41.5			G4/12000
FVH (80°-90°)	548.8	2.5			G4/750
BL (0°-30°)	895.0	4.1	B2/1000		
BM (30°-60°)	2258.6	10.4	B2/2500		
BH (60°-80°)	1089.6	5.0	B3/2500		G3/2500
BVH (80°-90°)	154.4	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°	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9
2.5°	1292.3	1251.7	1184.9	1183.1	1220.1	1228.2	1252.6	1254.4	1263.4	1249.0	1351.8
5°	1425.7	1382.4	1356.3	1365.3	1348.2	1368.9	1368.9	1428.4	1507.8	1599.8	1730.5
7.5°	1457.3	1425.7	1396.0	1418.5	1422.1	1402.3	1421.2	1561.0	1704.4	1796.4	2005.6
10°	1394.2	1362.6	1385.1	1392.4	1391.5	1436.5	1534.8	1646.7	1806.3	1975.8	2088.5
12.5°	1382.4	1405.0	1415.8	1428.4	1514.1	1527.6	1676.4	1791.8	1952.4	2101.2	2394.2
15°	1556.5	1586.2	1519.5	1515.0	1543.0	1555.6	1709.8	1826.1	2060.6	2310.4	2573.7
17.5°	1804.5	1815.3	1695.4	1634.0	1654.8	1664.7	1732.3	1878.4	2022.7	2484.4	2812.7
20°	2044.3	2051.6	1826.1	1689.0	1762.1	1772.9	1836.0	1919.9	2033.5	2581.8	2974.1
22.5°	2295.9	2250.0	2002.9	1829.7	1872.1	1874.8	1911.8	1957.8	2119.2	2566.5	3170.7
25°	2571.0	2542.1	2231.0	2065.1	2063.3	2026.3	2028.1	2093.9	2210.3	2730.6	3299.6
27.5°	2936.2	2939.8	2488.0	2398.7	2259.0	2234.6	2112.9	2235.5	2368.1	2732.4	3578.3
30°	3409.6	3322.2	2846.0	2701.7	2563.8	2512.4	2347.3	2452.0	2509.7	2888.4	3881.3
32.5°	3794.7	3769.5	3219.4	3001.1	2775.7	2835.2	2653.1	2561.1	2664.8	3157.1	4340.3
35°	4163.5	4080.6	3614.4	3330.3	3093.1	3057.1	2938.9	2954.2	3017.4	3497.1	4940.0
37.5°	4713.6	4668.5	4173.5	3719.0	3608.0	3461.1	3386.2	3434.0	3384.4	3932.7	5839.1
40°	5328.6	5067.1	4640.6	4235.7	4028.3	3924.6	3950.7	3905.6	3867.8	4421.5	6645.3
42.5°	5917.5	5679.4	4950.8	4768.6	4498.1	4541.4	4398.0	4429.6	4536.9	5114.9	7391.0
45°	6558.7	6043.8	5280.0	5119.4	4925.5	4980.6	5095.1	5060.8	5236.7	5932.8	8093.5
47.5°	6878.8	6389.1	5684.0	5422.4	5419.7	5305.2	6002.3	6078.0	5803.0	6538.8	8806.8
50°	7187.2	6705.7	5984.2	5807.5	5679.4	5924.7	6872.5	6698.5	6315.2	7234.1	9591.4
52.5°	7616.5	7067.3	6328.7	6140.3	6299.0	6526.2	7566.9	7532.6	6817.5	7949.2	10273.1
55°	7943.8	7389.2	6847.3	6672.3	6975.3	7198.0	8273.9	8067.4	7247.6	8474.1	10705.1
57.5°	8517.4	7948.3	7612.9	7224.2	7768.9	7765.3	8955.6	8796.0	7707.6	8905.1	10879.1
60°	9429.1	8760.8	8410.0	7961.9	8545.3	8753.6	9734.8	9274.9	8033.1	9177.5	10565.3
62.5°	10708.7	9915.1	9346.1	8902.4	9613.9	9990.9	10697.0	9623.8	8053.8	9099.9	9740.2
65°	12291.3	11326.4	10580.6	10111.7	11285.8	11824.2	11860.3	9839.4	7862.7	8298.2	8005.1
67.5°	13835.2	12750.3	11972.1	12061.4	13775.7	14030.9	13121.0	10019.7	6835.5	6663.3	5558.6
70°	14851.5	13675.6	13157.0	14103.9	16708.3	16446.8	14142.7	9544.5	5382.8	4319.5	3130.1
72.5°	14774.8	13543.9	13357.2	15317.7	18805.8	18642.6	14267.1	7590.3	3605.3	2361.8	1561.0
75°	12037.0	11080.2	11504.1	14500.7	18201.6	18193.5	12386.9	4698.3	1849.6	1212.9	986.6
77.5°	6655.2	6283.6	7529.0	10979.2	14492.6	14566.5	8369.5	2130.9	997.4	859.4	743.1
80°	2331.1	2296.8	3262.7	5924.7	9533.7	9551.7	3892.1	974.8	725.0	650.2	545.6
82.5°	852.2	845.0	1352.7	2752.2	5249.3	5237.6	1476.2	606.9	537.5	459.9	359.8
85°	340.0	332.8	618.6	1221.9	2411.4	2372.6	573.5	344.5	351.7	274.1	176.7
87.5°	93.8	97.4	210.1	382.4	738.6	684.5	144.3	116.3	142.5	111.8	55.9
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°	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9	1139.9
2.5°	1369.8	1378.8	1289.6	1321.1	1361.7	1383.3	1394.2	1348.2	1363.5	1428.4	1425.7
5°	1757.6	1721.5	1687.2	1722.4	1699.0	1665.6	1719.7	1717.0	1752.2	1787.3	1795.5
7.5°	2047.1	2000.2	1983.9	1904.6	1825.2	1745.0	1814.4	1857.7	1866.7	1954.2	1991.1
10°	2151.7	2133.6	2139.9	2035.3	2025.4	2033.5	1969.5	1900.1	1942.4	1906.4	1933.4
12.5°	2393.3	2438.4	2326.6	2255.4	2249.1	2199.5	2071.4	2026.3	1978.5	2028.1	2002.9
15°	2587.2	2671.1	2551.1	2425.8	2284.2	2207.6	2098.5	2029.9	1998.4	2009.2	1978.5
17.5°	2871.3	2949.7	2644.9	2452.9	2306.8	2194.0	2027.2	1881.1	1958.7	1965.0	1929.8
20°	3059.8	3065.2	2676.5	2386.1	2254.5	2058.8	1896.5	1768.4	1857.7	1948.8	1988.4
22.5°	3243.7	3203.1	2715.3	2332.9	2064.2	1874.8	1795.5	1787.3	1854.1	1930.7	1939.7
25°	3381.7	3388.0	2737.8	2313.1	1952.4	1694.5	1694.5	1753.1	1811.7	1993.8	1984.8
27.5°	3716.3	3470.1	2650.3	2222.0	1797.3	1588.9	1695.4	1773.8	1801.8	1999.3	2019.1
30°	3959.7	3799.2	2668.4	2066.0	1640.3	1539.3	1626.8	1725.1	1802.7	2030.8	2023.6
32.5°	4368.2	3936.3	2710.8	1846.9	1523.1	1520.4	1598.0	1701.7	1794.6	1996.6	2007.4
35°	4820.0	4340.3	2592.6	1680.0	1495.2	1509.6	1609.7	1651.2	1760.3	1983.0	1992.9
37.5°	5656.0	4551.3	2517.8	1551.1	1477.1	1518.6	1556.5	1620.5	1730.5	1915.4	1980.3
40°	6146.6	4986.0	2240.0	1476.2	1439.2	1511.4	1530.3	1584.4	1644.0	1834.2	1875.7
42.5°	6792.2	5123.0	2002.9	1393.3	1420.3	1481.6	1538.4	1552.0	1591.7	1706.2	1781.9
45°	7330.6	5225.8	1751.3	1326.5	1356.3	1547.5	1551.1	1544.8	1537.5	1579.9	1642.2
47.5°	7887.9	5501.8	1519.5	1252.6	1331.9	1601.6	1557.4	1499.7	1469.9	1475.3	1533.0
50°	8502.9	5702.0	1355.4	1192.2	1337.3	1601.6	1588.0	1453.7	1394.2	1378.8	1439.2
52.5°	9044.0	5725.4	1230.9	1143.5	1314.8	1546.6	1608.8	1424.8	1324.7	1287.7	1344.6
55°	9338.9	5428.7	1140.8	1099.3	1257.1	1497.0	1598.0	1408.6	1240.9	1212.9	1263.4
57.5°	9332.6	4936.4	1064.1	1038.0	1191.3	1427.5	1537.5	1320.2	1189.5	1173.2	1222.8
60°	8996.2	4359.2	1005.5	987.5	1123.6	1326.5	1429.3	1262.5	1139.9	1131.7	1185.8
62.5°	8233.3	3763.1	948.7	934.2	1060.5	1255.3	1377.9	1198.5	1088.5	1087.6	1139.0
65°	6742.6	3021.0	895.5	891.9	1001.9	1184.9	1329.2	1144.4	1035.2	1053.3	1105.6
67.5°	4646.0	2122.8	838.7	849.5	947.8	1117.3	1292.3	1108.3	979.3	1016.3	1063.2
70°	2549.3	1313.0	775.5	797.2	879.2	1038.9	1234.5	1049.7	906.3	963.1	995.6
72.5°	1296.8	875.6	697.1	731.3	795.4	923.4	1126.3	964.9	827.8	849.5	866.6
75°	871.1	659.2	609.6	647.5	693.5	813.4	999.2	885.6	753.0	750.3	769.2
77.5°	658.3	514.9	517.6	560.9	590.7	715.1	898.2	818.8	689.9	683.6	711.5
80°	481.6	390.5	416.6	461.7	488.8	642.1	832.3	744.9	604.2	578.9	602.4
82.5°	319.2	276.8	308.4	353.5	375.1	536.6	755.7	632.2	492.4	428.3	432.0
85°	150.6	145.2	184.0	205.6	233.6	332.8	565.4	437.4	313.8	259.7	271.4
87.5°	34.3	46.0	60.4	59.5	69.4	89.3	175.8	122.6	91.1	62.2	41.5
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)