

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: P368358

Luminaire Tested: **MSA-SA4B-730-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368358
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-730-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17941 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

Input Watts (W): 171
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

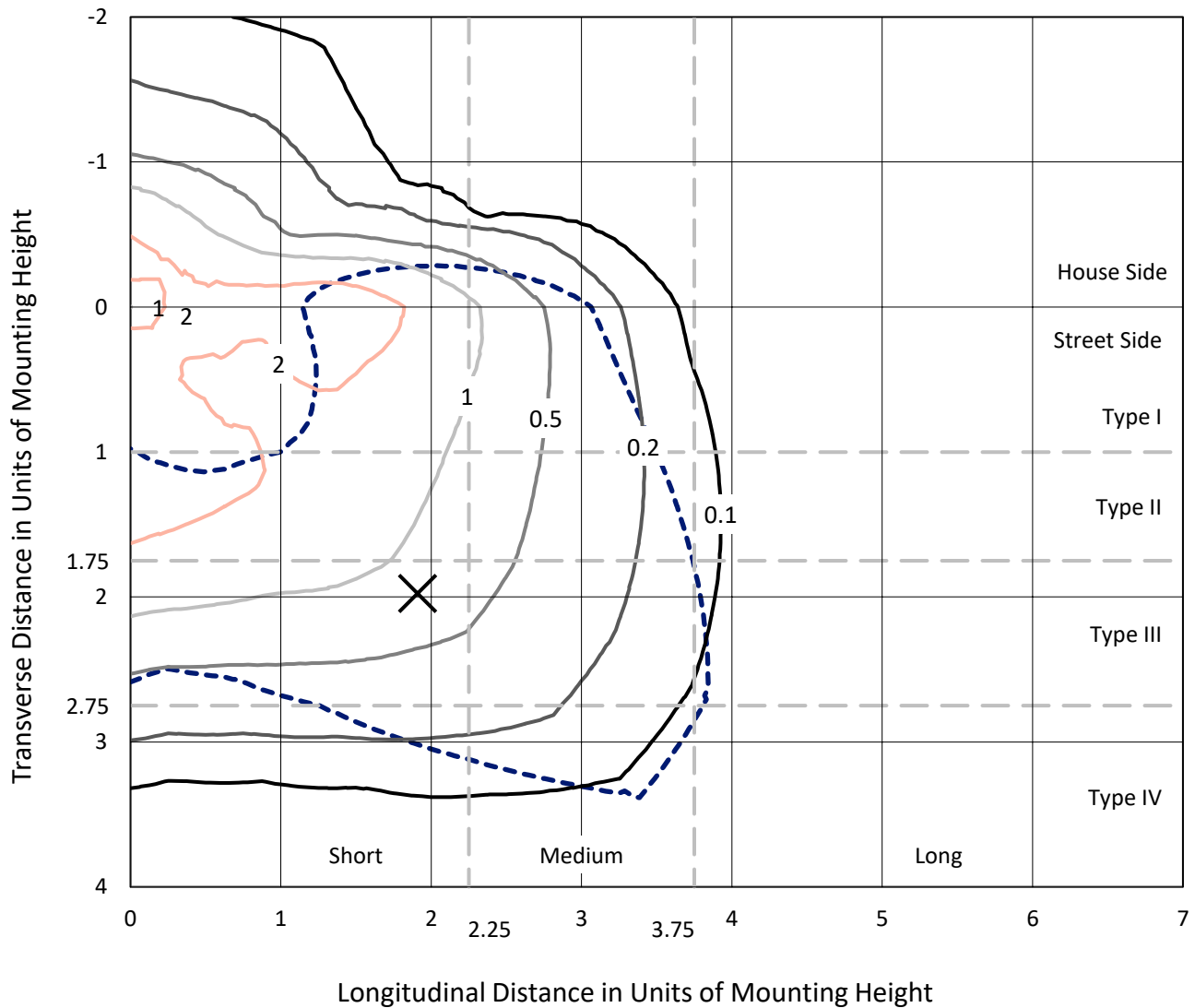


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Iso-Footcandle Lines of Horizontal Illumination

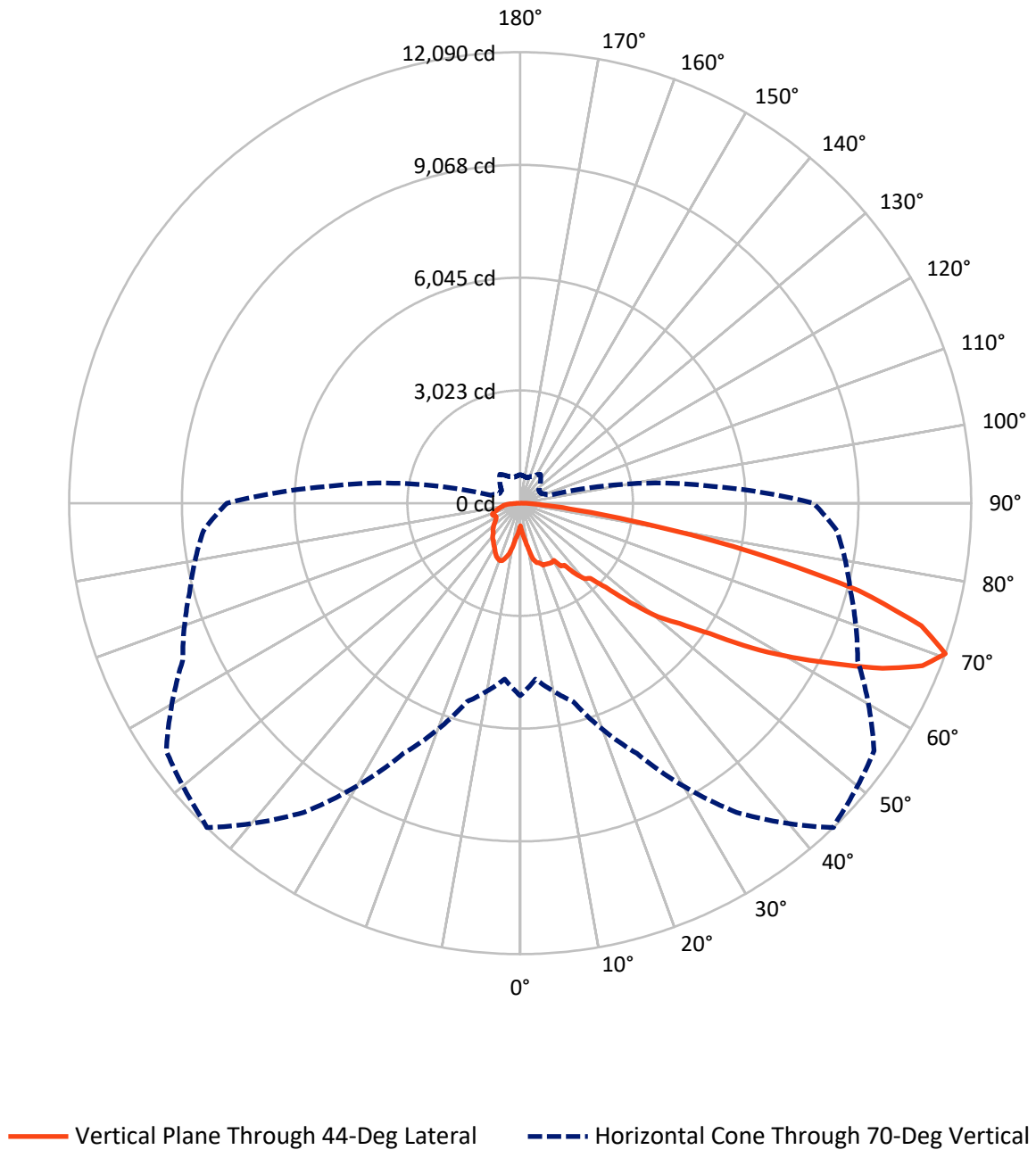
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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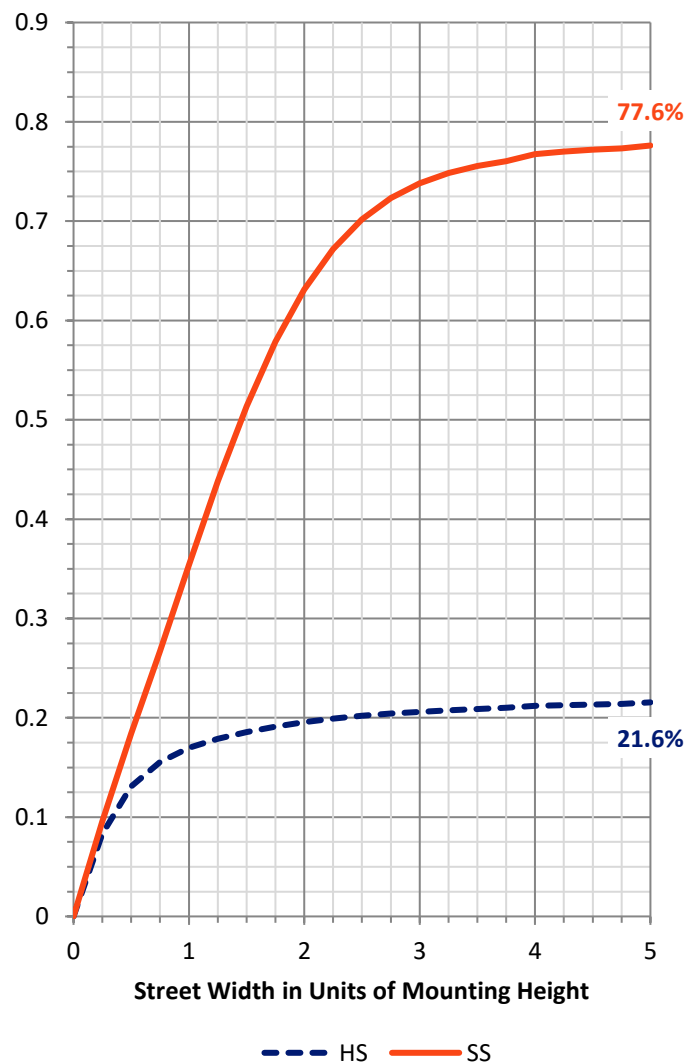
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3958.5	0.0	3958.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	13982.5	0.0	13982.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	17941.0	0.0	17941.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	0.5
10°-20°	440.3	2.5
20°-30°	822.8	4.6
30°-40°	1320.7	7.4
40°-50°	2229.3	12.4
50°-60°	3972.6	22.1
60°-70°	5434.0	30.3
70°-80°	3195.5	17.8
80°-90°	430.3	2.4
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°	17941.0	100.0
0°-180°	17941.0	100.0

Coefficient of Utilization



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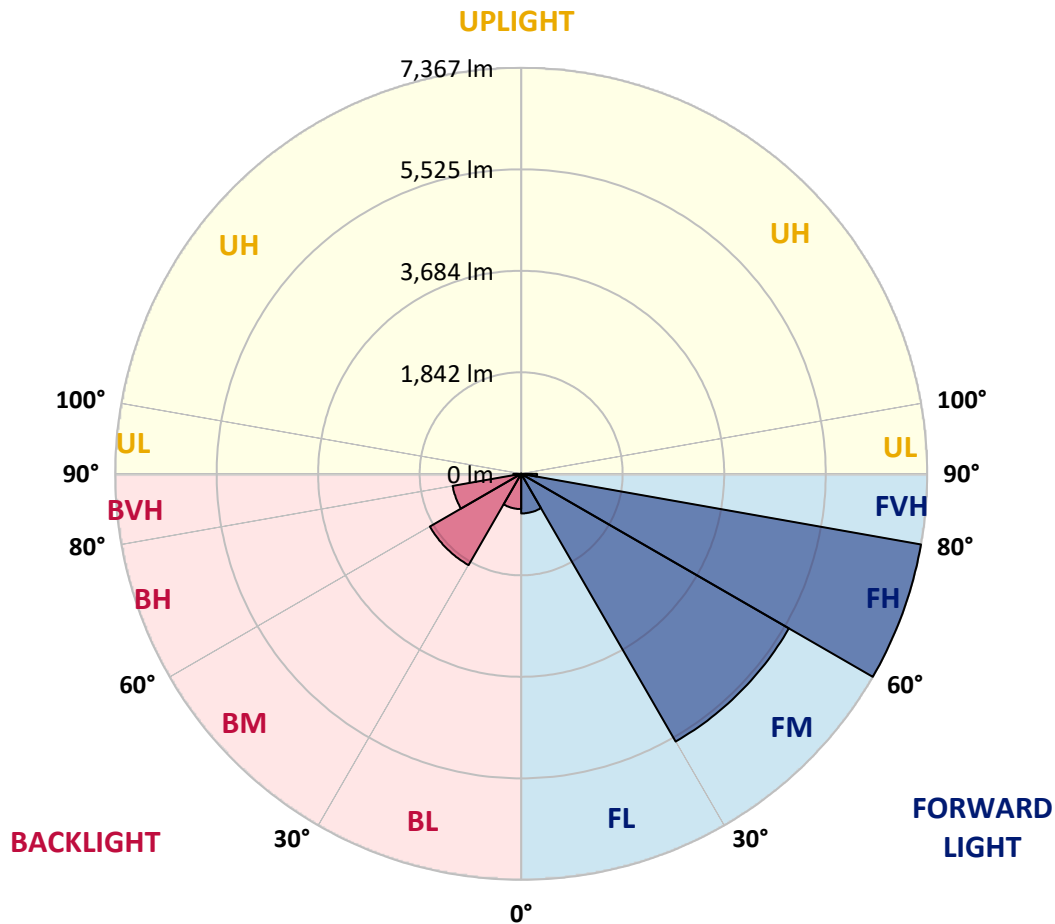
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	719.0	4.0			
FM	(30°-60°)	5609.7	31.3			
FH	(60°-80°)	7367.1	41.1			G3/7500
FVH	(80°-90°)	286.8	1.6			G3/500
BL	(0°-30°)	639.8	3.6	B2/1000		
BM	(30°-60°)	1912.9	10.7	B2/2500		
BH	(60°-80°)	1262.3	7.0	B3/2500		G3/2500
BVH	(80°-90°)	143.5	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8
2.5°	740.0	725.3	690.0	701.8	716.5	722.4	720.9	719.4	696.6	688.6	729.0
5°	1005.6	973.2	947.5	937.2	903.4	876.9	860.7	903.4	896.7	907.8	935.7
7.5°	1255.7	1235.1	1177.0	1156.4	1087.3	1041.7	1036.5	1070.3	1079.2	1061.5	1109.3
10°	1416.8	1381.5	1369.7	1320.5	1272.6	1265.3	1260.9	1245.4	1224.1	1222.6	1180.0
12.5°	1541.9	1560.3	1569.8	1513.2	1514.7	1541.1	1527.2	1464.6	1428.6	1365.3	1370.5
15°	1766.3	1792.7	1717.0	1680.9	1611.8	1651.5	1646.3	1594.1	1589.0	1547.8	1500.0
17.5°	1961.9	1973.7	1847.2	1764.8	1741.2	1683.9	1699.3	1700.8	1633.1	1706.7	1664.0
20°	1978.1	2020.0	1874.4	1710.3	1781.0	1773.6	1775.8	1761.1	1672.1	1793.5	1777.3
22.5°	2057.6	1993.6	1862.6	1742.7	1761.1	1772.1	1782.4	1764.8	1759.6	1827.3	1876.6
25°	2042.8	2022.3	1889.8	1788.3	1790.5	1792.7	1797.9	1850.8	1845.0	1936.9	1962.7
27.5°	2180.4	2148.8	1897.9	1872.9	1815.5	1803.0	1767.7	1878.1	1964.1	1961.9	2103.9
30°	2442.3	2409.9	2086.3	2013.4	1909.7	1781.7	1849.4	1996.5	2064.2	2087.0	2267.2
32.5°	2851.3	2904.3	2457.0	2163.5	2034.8	2006.8	1999.4	1984.7	2152.5	2265.0	2429.1
35°	3438.3	3396.4	2894.0	2485.0	2166.4	2046.5	2062.7	2152.5	2351.8	2424.6	2576.2
37.5°	4110.7	4023.9	3453.8	2849.1	2546.0	2396.0	2342.2	2429.1	2473.2	2530.6	2840.3
40°	4794.1	4582.2	4003.3	3328.0	2774.1	2660.8	2613.7	2507.0	2610.8	2727.0	3120.5
42.5°	5454.0	5289.9	4601.4	3899.6	3158.1	2754.2	2728.5	2624.0	2945.5	3068.3	3525.1
45°	6145.5	5765.1	5214.2	4544.7	3719.4	3212.5	3174.2	2986.7	3398.6	3654.6	4096.0
47.5°	6610.4	6258.0	5775.4	5068.5	4189.4	3979.0	3906.2	3585.5	3959.2	4291.7	4978.0
50°	7050.3	6687.6	6180.8	5641.6	5040.5	4798.5	4643.3	4109.2	4657.3	5198.7	6108.7
52.5°	7680.0	7355.6	6651.6	6219.0	5954.9	5359.8	5244.3	4950.8	5473.8	6204.3	7344.5
55°	8353.1	7911.0	7273.2	7033.4	6926.7	6164.6	6070.4	5883.6	6561.1	7233.5	8545.8
57.5°	8650.3	8189.0	7837.4	7694.0	7685.1	7334.2	7226.1	7095.9	7672.6	8116.2	9676.5
60°	8886.4	8391.3	8250.8	8331.0	8622.3	8391.3	8250.8	8136.1	8577.5	8988.7	10599.0
62.5°	8843.0	8346.5	8418.6	8662.8	9406.5	9474.2	9366.1	9088.0	9474.2	9703.7	11127.9
65°	8142.7	7683.7	8103.7	8683.4	10135.5	10676.2	10670.3	9942.8	10076.7	10076.7	11072.0
67.5°	6915.7	6440.5	7128.3	8501.7	10639.4	11628.9	11630.3	10849.1	10131.8	10039.2	10206.9
70°	5164.1	4733.8	5506.9	7404.1	10119.3	12090.1	12023.2	11580.3	9980.3	9170.4	8526.0
72.5°	3084.5	2806.4	3517.8	5390.0	8631.9	11241.9	11419.9	10738.0	9136.5	7626.3	6094.7
75°	1400.6	1280.0	1653.0	3096.3	6162.4	9377.1	9570.6	9062.2	7257.0	5484.9	3522.2
77.5°	599.5	567.2	721.7	1373.4	3397.9	6412.5	6809.0	6476.5	4917.0	3187.5	1558.1
80°	385.5	364.9	443.6	660.6	1577.9	3464.8	3806.2	3681.8	2504.8	1239.5	548.8
82.5°	230.3	223.6	296.5	414.9	860.7	1525.0	1718.4	1764.0	1040.2	556.1	314.1
85°	125.8	127.3	162.6	251.6	516.4	593.7	635.6	691.5	489.9	322.2	152.3
87.5°	41.9	48.6	65.5	102.3	183.9	167.7	168.5	195.7	206.7	133.9	48.6
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°	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8	609.8
2.5°	735.6	722.4	688.6	690.8	703.3	706.2	709.9	688.6	684.1	724.6	728.3
5°	940.1	896.7	876.9	870.3	851.1	844.5	879.8	896.0	912.2	943.8	959.3
7.5°	1104.2	1055.6	1019.6	986.5	958.5	942.3	1001.9	1047.5	1075.5	1140.2	1169.7
10°	1179.2	1137.3	1124.0	1097.6	1118.9	1167.4	1178.5	1180.0	1241.7	1240.3	1252.8
12.5°	1328.5	1301.3	1257.9	1267.5	1323.4	1373.4	1359.4	1380.8	1402.8	1455.8	1431.5
15°	1464.6	1457.3	1416.8	1423.4	1434.5	1497.0	1505.1	1526.4	1560.3	1602.2	1573.5
17.5°	1632.4	1629.4	1530.8	1522.0	1547.8	1608.8	1589.7	1552.2	1664.0	1708.9	1697.1
20°	1746.4	1724.3	1597.8	1560.3	1625.7	1633.8	1611.8	1552.2	1649.3	1747.1	1773.6
22.5°	1841.3	1815.5	1685.3	1611.8	1598.5	1602.2	1602.2	1591.2	1639.0	1719.2	1718.4
25°	1917.8	1942.1	1776.5	1705.9	1635.3	1547.0	1536.0	1545.6	1572.8	1727.3	1722.1
27.5°	2109.8	2042.8	1807.4	1754.5	1609.6	1470.5	1500.7	1515.4	1524.2	1693.4	1721.4
30°	2234.8	2255.4	1917.8	1783.2	1572.0	1385.2	1395.5	1438.2	1489.7	1689.7	1697.8
32.5°	2403.3	2359.2	2089.9	1735.4	1472.0	1333.7	1314.6	1372.0	1448.5	1630.2	1652.2
35°	2560.0	2612.2	2162.8	1726.5	1402.1	1256.5	1277.1	1296.9	1376.4	1564.0	1589.7
37.5°	2927.8	2808.6	2367.3	1683.9	1344.0	1217.5	1195.4	1225.6	1293.2	1438.2	1497.7
40°	3207.4	3214.7	2411.4	1630.2	1232.9	1161.6	1114.5	1144.6	1173.3	1288.8	1314.6
42.5°	3731.9	3571.5	2519.5	1512.5	1163.0	1077.7	1051.2	1064.5	1068.9	1117.4	1160.1
45°	4399.1	4023.2	2562.2	1354.3	1071.1	1043.1	989.4	982.8	958.5	965.1	1002.7
47.5°	5322.3	4727.9	2531.3	1185.8	989.4	998.3	921.0	890.8	857.0	865.1	900.4
50°	6516.2	5628.3	2529.1	1043.1	933.5	939.4	876.1	821.7	787.9	804.8	835.7
52.5°	7855.8	6531.7	2539.4	945.3	872.5	869.5	846.7	780.5	753.3	770.9	806.3
55°	9137.3	7308.5	2615.9	883.5	809.2	814.3	823.2	767.3	737.1	753.3	790.1
57.5°	10252.5	7922.0	2587.2	818.0	750.3	773.9	797.4	748.9	726.1	749.6	786.4
60°	11032.3	8206.7	2360.6	755.5	706.9	739.3	784.9	746.7	743.7	794.5	838.6
62.5°	11317.0	8101.5	1919.3	706.2	681.2	734.9	813.6	795.2	798.2	860.7	921.7
65°	10901.3	7548.3	1431.5	674.6	661.3	756.2	879.8	823.9	783.4	834.9	890.8
67.5°	9719.2	6564.8	1046.1	647.4	638.5	790.1	940.9	821.0	745.9	798.2	843.8
70°	7863.2	5181.8	809.9	612.8	608.4	767.3	946.8	798.9	705.5	739.3	765.1
72.5°	5387.8	3547.9	670.9	579.7	556.1	679.7	898.9	749.6	656.9	676.8	698.1
75°	3010.9	1991.4	564.2	538.5	487.0	605.4	843.0	720.2	620.9	626.8	656.2
77.5°	1351.4	861.4	478.9	484.0	424.5	535.5	770.2	673.1	565.7	552.5	581.9
80°	511.3	420.0	388.4	409.0	356.8	464.2	694.4	630.4	507.6	490.7	507.6
82.5°	296.5	254.5	288.4	314.9	283.2	426.7	662.8	591.4	447.3	404.6	419.3
85°	137.6	131.7	172.9	204.5	197.9	332.5	567.2	445.1	318.5	269.2	297.9
87.5°	36.0	40.5	61.1	72.1	73.6	114.0	218.5	165.5	124.3	94.2	90.5
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)