

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: P368380

Luminaire Tested: **MSA-SA4B-740-U-T4W**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368380  
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-740-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: 19700 lumens  
Efficiency: N/A  
Efficacy: 115.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G4

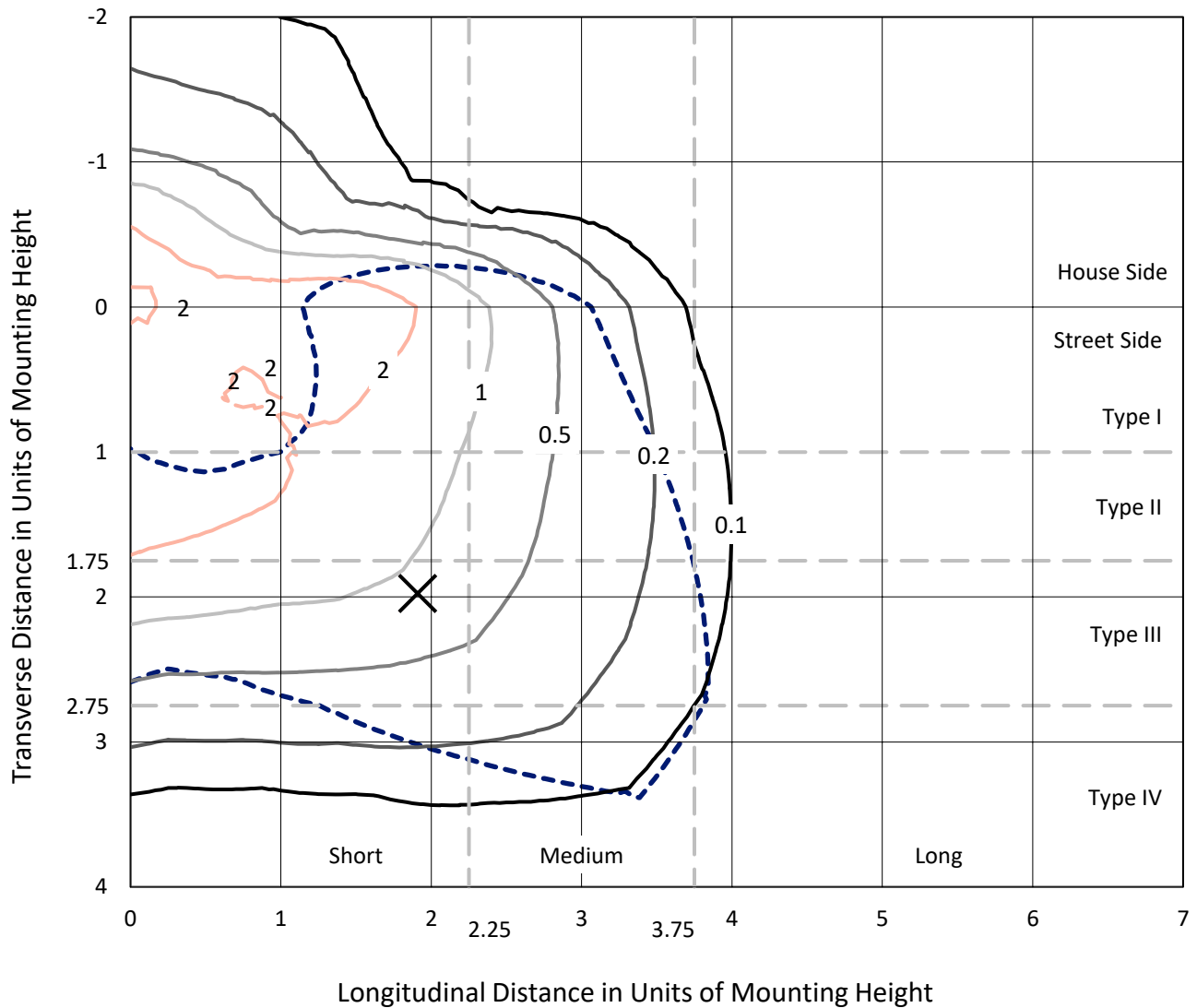
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

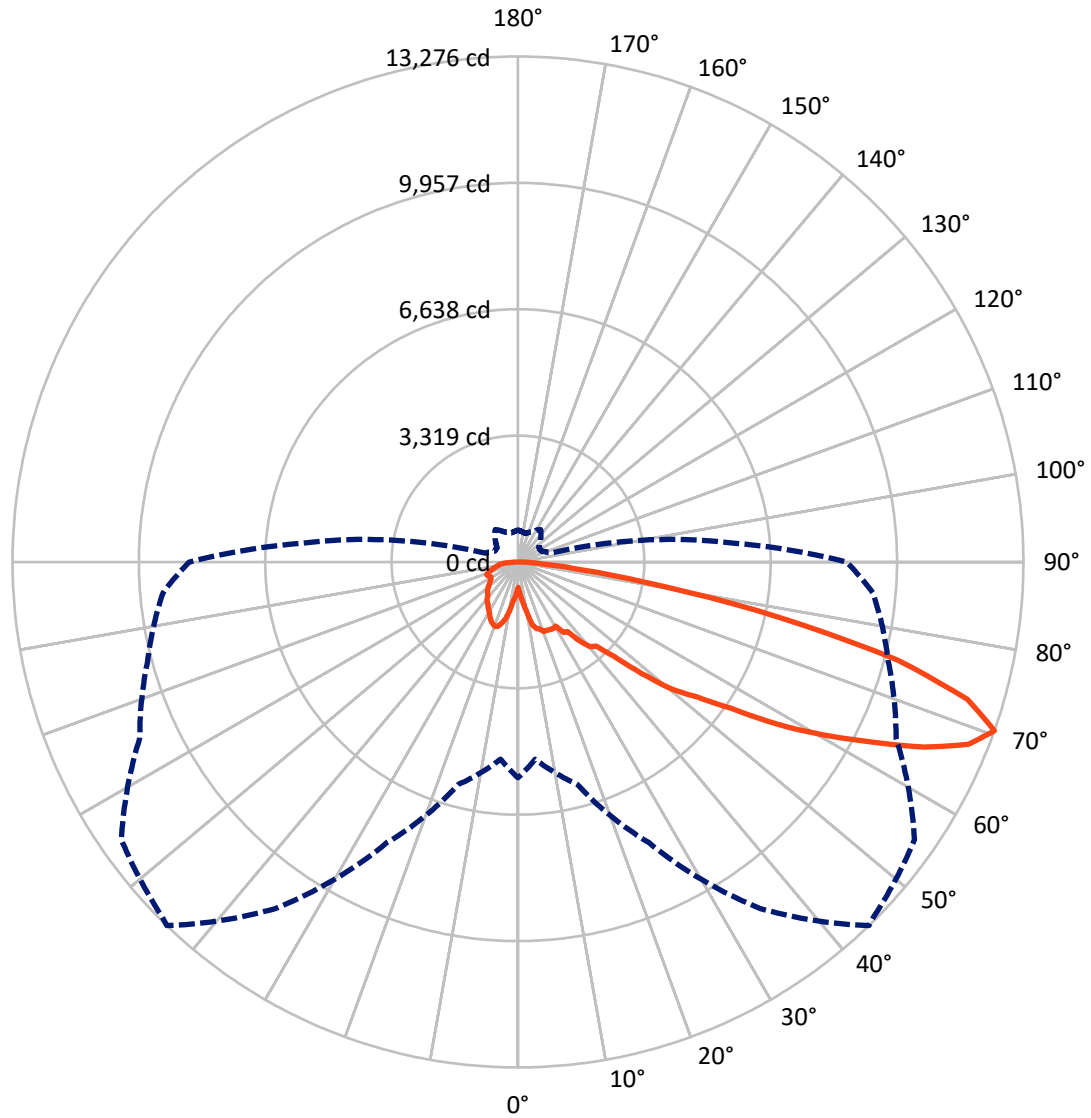
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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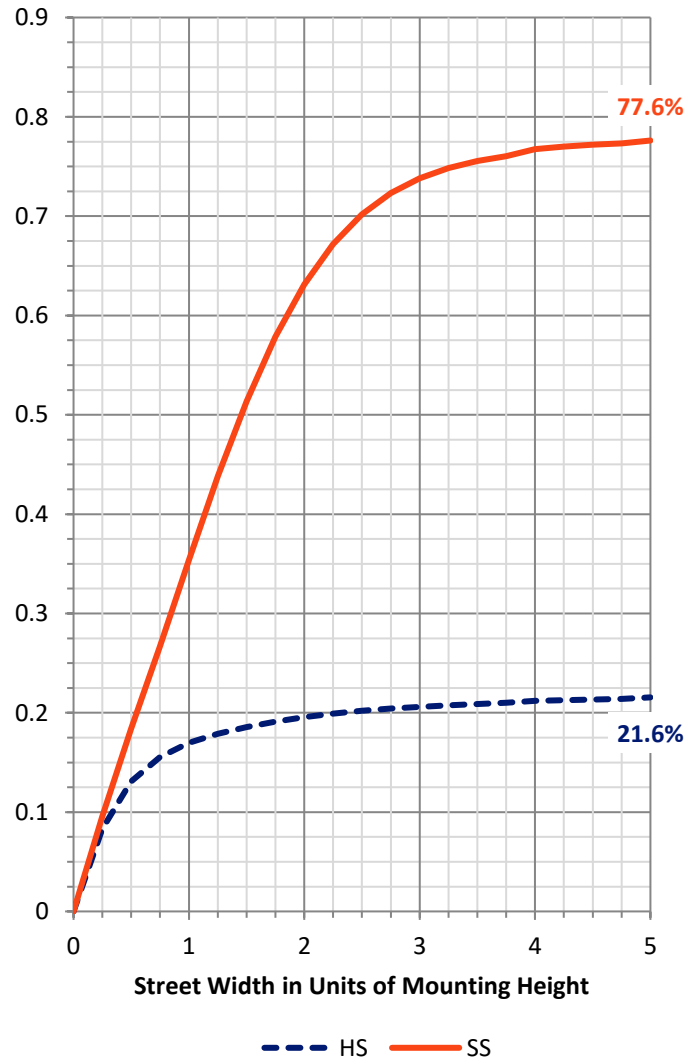
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4346.6	0.0	4346.6
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	15353.4	0.0	15353.4
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	19700.0	0.0	19700.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.0	0.5
10°-20°	483.5	2.5
20°-30°	903.5	4.6
30°-40°	1450.2	7.4
40°-50°	2447.9	12.4
50°-60°	4362.1	22.1
60°-70°	5966.7	30.3
70°-80°	3508.7	17.8
80°-90°	472.4	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°	19700.0	100.0
0°-180°	19700.0	100.0



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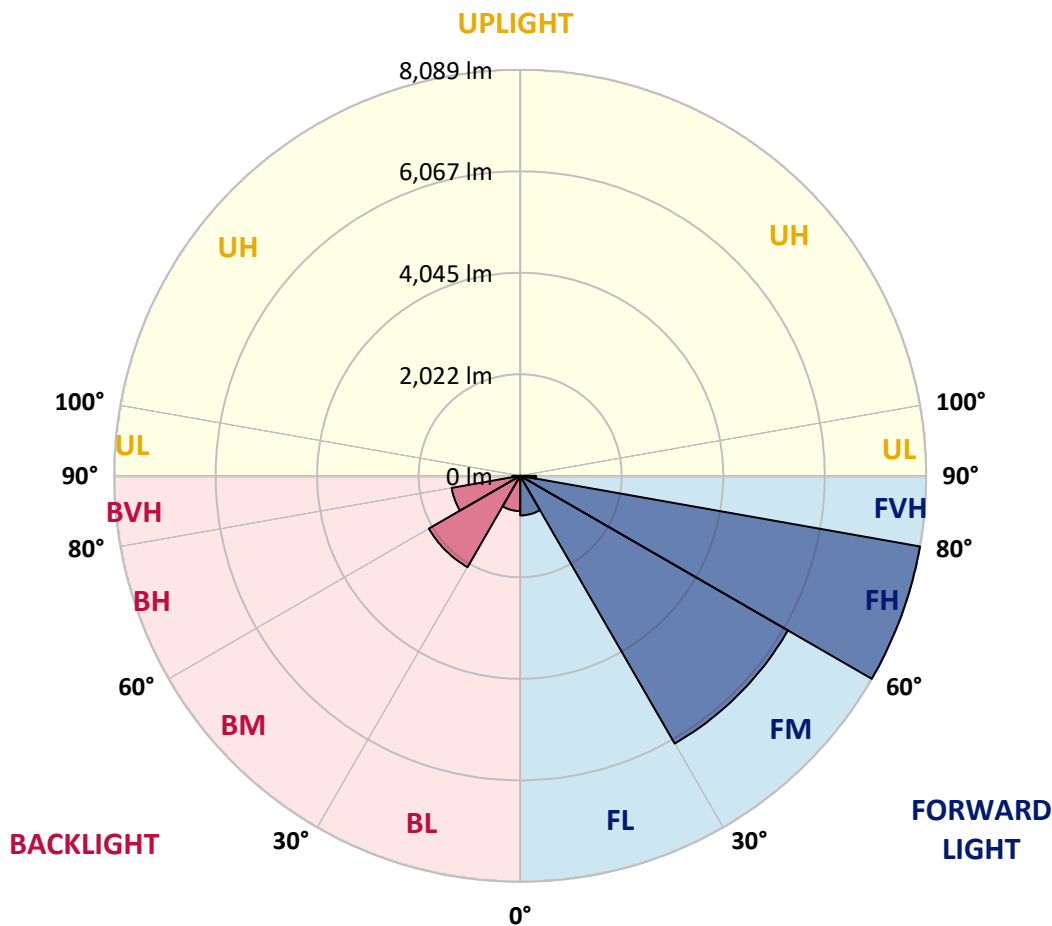
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	789.5	4.0			
FM (30°-60°)	6159.6	31.3			
FH (60°-80°)	8089.4	41.1			G4/12000
FVH (80°-90°)	314.9	1.6			G3/500
BL (0°-30°)	702.5	3.6	B2/1000		
BM (30°-60°)	2100.5	10.7	B2/2500		
BH (60°-80°)	1386.0	7.0	B3/2500		G3/2500
BVH (80°-90°)	157.6	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-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6
2.5°	812.6	796.4	757.7	770.6	786.8	793.2	791.6	790.0	764.9	756.1	800.5
5°	1104.2	1068.7	1040.4	1029.1	991.9	962.8	945.1	991.9	984.7	996.8	1027.5
7.5°	1378.8	1356.2	1292.4	1269.8	1193.9	1143.8	1138.1	1175.3	1185.0	1165.6	1218.1
10°	1555.7	1517.0	1504.0	1449.9	1397.4	1389.3	1384.5	1367.5	1344.1	1342.5	1295.6
12.5°	1693.1	1713.2	1723.7	1661.6	1663.2	1692.2	1676.9	1608.2	1568.7	1499.2	1504.8
15°	1939.4	1968.5	1885.3	1845.7	1769.8	1813.4	1807.8	1750.4	1744.8	1699.5	1647.0
17.5°	2154.3	2167.2	2028.3	1937.8	1912.0	1849.0	1865.9	1867.5	1793.2	1874.0	1827.1
20°	2172.1	2218.1	2058.2	1878.0	1955.6	1947.5	1949.9	1933.8	1836.0	1969.3	1951.5
22.5°	2259.3	2189.0	2045.2	1913.6	1933.8	1945.9	1957.2	1937.8	1932.2	2006.5	2060.6
25°	2243.1	2220.5	2075.1	1963.7	1966.1	1968.5	1974.2	2032.3	2025.8	2126.8	2155.1
27.5°	2394.2	2359.5	2084.0	2056.5	1993.5	1979.8	1941.0	2062.2	2156.7	2154.3	2310.2
30°	2681.7	2646.2	2290.8	2210.8	2096.9	1956.4	2030.7	2192.2	2266.6	2291.6	2489.5
32.5°	3130.9	3189.0	2697.9	2375.6	2234.3	2203.6	2195.5	2179.3	2363.5	2487.1	2667.2
35°	3775.4	3729.4	3177.7	2728.6	2378.8	2247.2	2264.9	2363.5	2582.4	2662.4	2828.8
37.5°	4513.7	4418.4	3792.4	3128.4	2795.6	2630.9	2571.9	2667.2	2715.7	2778.7	3118.7
40°	5264.1	5031.5	4395.8	3654.3	3046.0	2921.7	2870.0	2752.8	2866.7	2994.3	3426.5
42.5°	5988.7	5808.6	5052.5	4281.9	3467.7	3024.2	2996.0	2881.3	3234.3	3369.1	3870.8
45°	6748.0	6330.4	5725.4	4990.3	4084.0	3527.5	3485.5	3279.5	3731.8	4012.9	4497.6
47.5°	7258.5	6871.6	6341.7	5565.4	4600.2	4369.1	4289.2	3937.0	4347.3	4712.4	5466.1
50°	7741.5	7343.3	6786.8	6194.7	5534.7	5269.0	5098.6	4512.1	5113.9	5708.4	6707.6
52.5°	8433.0	8076.7	7303.7	6828.8	6538.8	5885.3	5758.5	5436.2	6010.5	6812.6	8064.6
55°	9172.1	8686.6	7986.3	7722.9	7605.8	6769.0	6665.6	6460.4	7204.4	7942.7	9383.7
57.5°	9498.4	8991.9	8605.8	8448.3	8438.6	8053.3	7934.6	7791.6	8424.9	8912.0	10625.2
60°	9757.7	9214.1	9059.8	9147.8	9467.7	9214.1	9059.8	8933.8	9418.4	9870.0	11638.1
62.5°	9710.0	9164.8	9243.9	9512.1	10328.8	10403.1	10284.3	9979.0	10403.1	10655.1	12218.9
65°	8941.0	8437.0	8898.2	9534.7	11129.2	11722.9	11716.5	10917.6	11064.6	11064.6	12157.5
67.5°	7593.7	7071.9	7827.1	9335.2	11682.6	12769.0	12770.6	11912.8	11125.2	11023.4	11207.6
70°	5670.4	5197.9	6046.9	8130.1	11111.5	13275.5	13201.9	12715.7	10958.8	10069.5	9361.9
72.5°	3386.9	3081.6	3862.7	5918.4	9478.2	12344.1	12539.6	11790.8	10032.3	8374.0	6692.3
75°	1538.0	1405.5	1815.0	3399.8	6766.6	10296.5	10508.9	9950.7	7968.5	6022.6	3867.5
77.5°	658.3	622.8	792.4	1508.1	3731.0	7041.2	7476.6	7111.5	5399.0	3500.0	1710.8
80°	423.3	400.6	487.1	725.4	1732.6	3804.5	4179.3	4042.8	2750.4	1361.1	602.6
82.5°	252.8	245.6	325.5	455.6	945.1	1674.5	1886.9	1937.0	1142.2	610.7	344.9
85°	138.1	139.7	178.5	276.3	567.0	651.9	697.9	759.3	538.0	353.8	167.2
87.5°	46.0	53.3	71.9	112.3	201.9	184.2	185.0	214.9	227.0	147.0	53.3
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°	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6	669.6
2.5°	807.8	793.2	756.1	758.5	772.2	775.4	779.5	756.1	751.2	795.6	799.7
5°	1032.3	984.7	962.8	955.6	934.6	927.3	966.1	983.8	1001.6	1036.3	1053.3
7.5°	1212.4	1159.1	1119.5	1083.2	1052.5	1034.7	1100.2	1150.2	1180.9	1252.0	1284.3
10°	1294.8	1248.8	1234.2	1205.2	1228.6	1281.9	1294.0	1295.6	1363.5	1361.9	1375.6
12.5°	1458.8	1428.9	1381.3	1391.8	1453.2	1508.1	1492.7	1516.2	1540.4	1598.5	1571.9
15°	1608.2	1600.2	1555.7	1563.0	1575.1	1643.8	1652.7	1676.1	1713.2	1759.3	1727.8
17.5°	1792.4	1789.2	1680.9	1671.2	1699.5	1766.6	1745.6	1704.4	1827.1	1876.4	1863.5
20°	1917.6	1893.4	1754.4	1713.2	1785.1	1794.0	1769.8	1704.4	1811.0	1918.4	1947.5
22.5°	2021.8	1993.5	1850.6	1769.8	1755.3	1759.3	1759.3	1747.2	1799.7	1887.7	1886.9
25°	2105.8	2132.5	1950.7	1873.2	1795.6	1698.7	1686.6	1697.1	1727.0	1896.6	1891.0
27.5°	2316.6	2243.1	1984.7	1926.5	1767.4	1614.7	1647.8	1664.0	1673.7	1859.5	1890.1
30°	2454.0	2476.6	2105.8	1958.0	1726.2	1521.0	1532.3	1579.2	1635.7	1855.4	1864.3
32.5°	2638.9	2590.5	2294.8	1905.5	1616.3	1464.5	1443.5	1506.5	1590.5	1790.0	1814.2
35°	2811.0	2868.3	2374.8	1895.8	1539.6	1379.6	1402.3	1424.1	1511.3	1717.3	1745.6
37.5°	3214.9	3084.0	2599.4	1849.0	1475.8	1336.8	1312.6	1345.7	1420.0	1579.2	1644.6
40°	3521.8	3529.9	2647.8	1790.0	1353.8	1275.4	1223.7	1256.9	1288.4	1415.2	1443.5
42.5°	4097.7	3921.7	2766.6	1660.7	1277.1	1183.4	1154.3	1168.8	1173.7	1227.0	1273.8
45°	4830.4	4417.6	2813.4	1487.1	1176.1	1145.4	1086.4	1079.2	1052.5	1059.8	1101.0
47.5°	5844.1	5191.4	2779.5	1302.1	1086.4	1096.1	1011.3	978.2	941.0	949.9	988.7
50°	7155.1	6180.1	2777.1	1145.4	1025.0	1031.5	962.0	902.3	865.1	883.7	917.6
52.5°	8626.0	7172.1	2788.4	1038.0	958.0	954.8	929.7	857.0	827.1	846.5	885.3
55°	10033.1	8025.0	2872.4	970.1	888.5	894.2	903.9	842.5	809.4	827.1	867.5
57.5°	11257.7	8698.7	2840.9	898.2	823.9	849.8	875.6	822.3	797.3	823.1	863.5
60°	12113.9	9011.3	2592.1	829.6	776.3	811.8	861.9	819.9	816.6	872.4	920.8
62.5°	12426.5	8895.8	2107.4	775.4	748.0	806.9	893.4	873.2	876.4	945.1	1012.1
65°	11970.1	8288.4	1571.9	740.7	726.2	830.4	966.1	904.7	860.3	916.8	978.2
67.5°	10672.1	7208.4	1148.6	710.8	701.1	867.5	1033.1	901.5	819.1	876.4	926.5
70°	8634.1	5689.8	889.3	672.9	668.0	842.5	1039.6	877.2	774.6	811.8	840.1
72.5°	5916.0	3895.8	736.7	636.5	610.7	746.4	987.1	823.1	721.3	743.1	766.6
75°	3306.1	2186.6	619.5	591.3	534.7	664.8	925.7	790.8	681.7	688.2	720.5
77.5°	1483.8	945.9	525.8	531.5	466.1	588.0	845.7	739.1	621.2	606.6	638.9
80°	561.4	461.2	426.5	449.1	391.8	509.7	762.5	692.2	557.4	538.8	557.4
82.5°	325.5	279.5	316.6	345.7	311.0	468.5	727.8	649.4	491.1	444.3	460.4
85°	151.1	144.6	189.8	224.6	217.3	365.1	622.8	488.7	349.8	295.6	327.1
87.5°	39.6	44.4	67.0	79.2	80.8	125.2	239.9	181.7	136.5	103.4	99.4
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)