

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: P367240

Luminaire Tested: **MSA-SA2A-830-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367240  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-830-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6486 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3

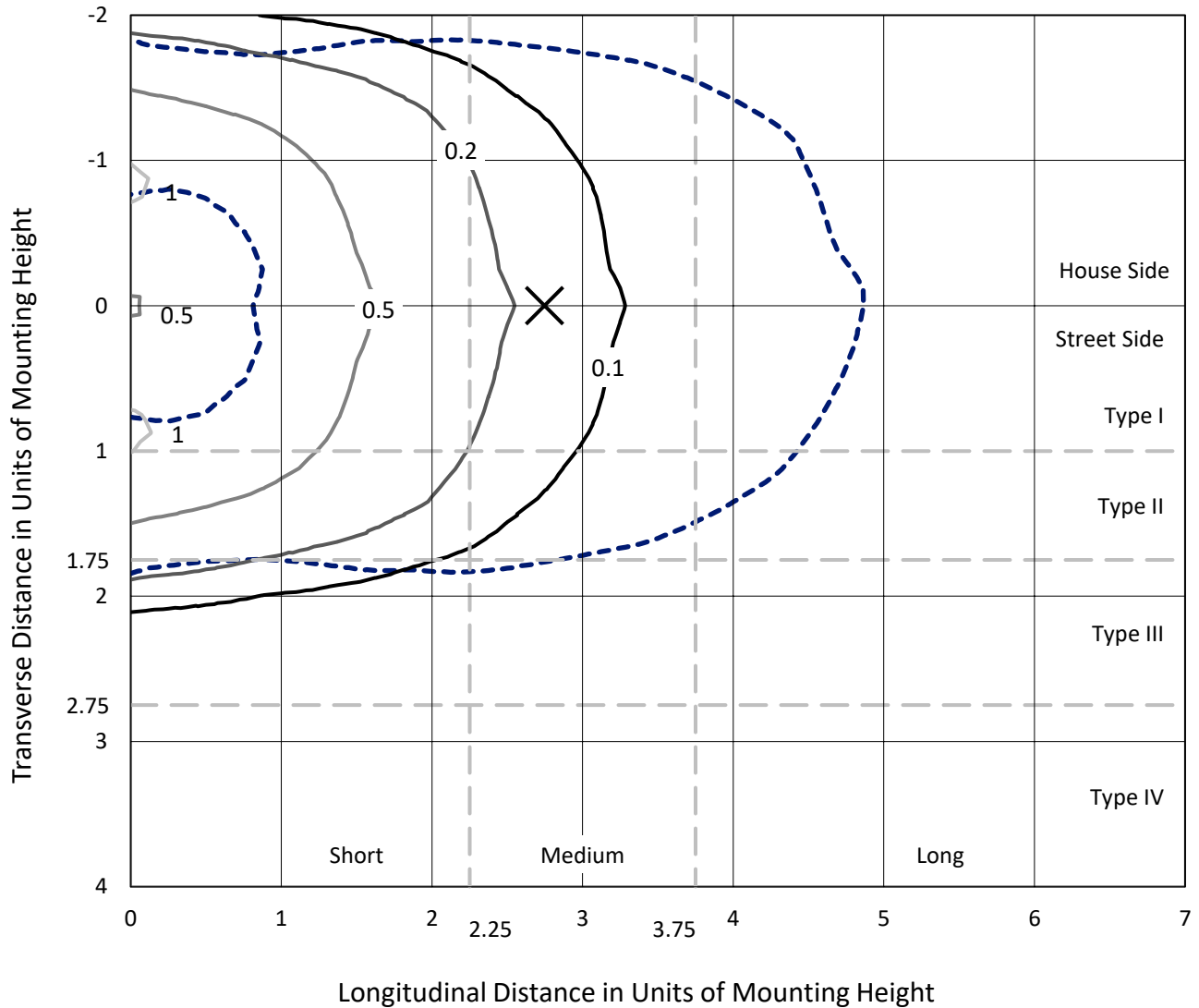
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P367240  
 CATALOG NUMBER: MSA-SA2A-830-U-RW

### Iso-Footcandle Lines of Horizontal Illumination

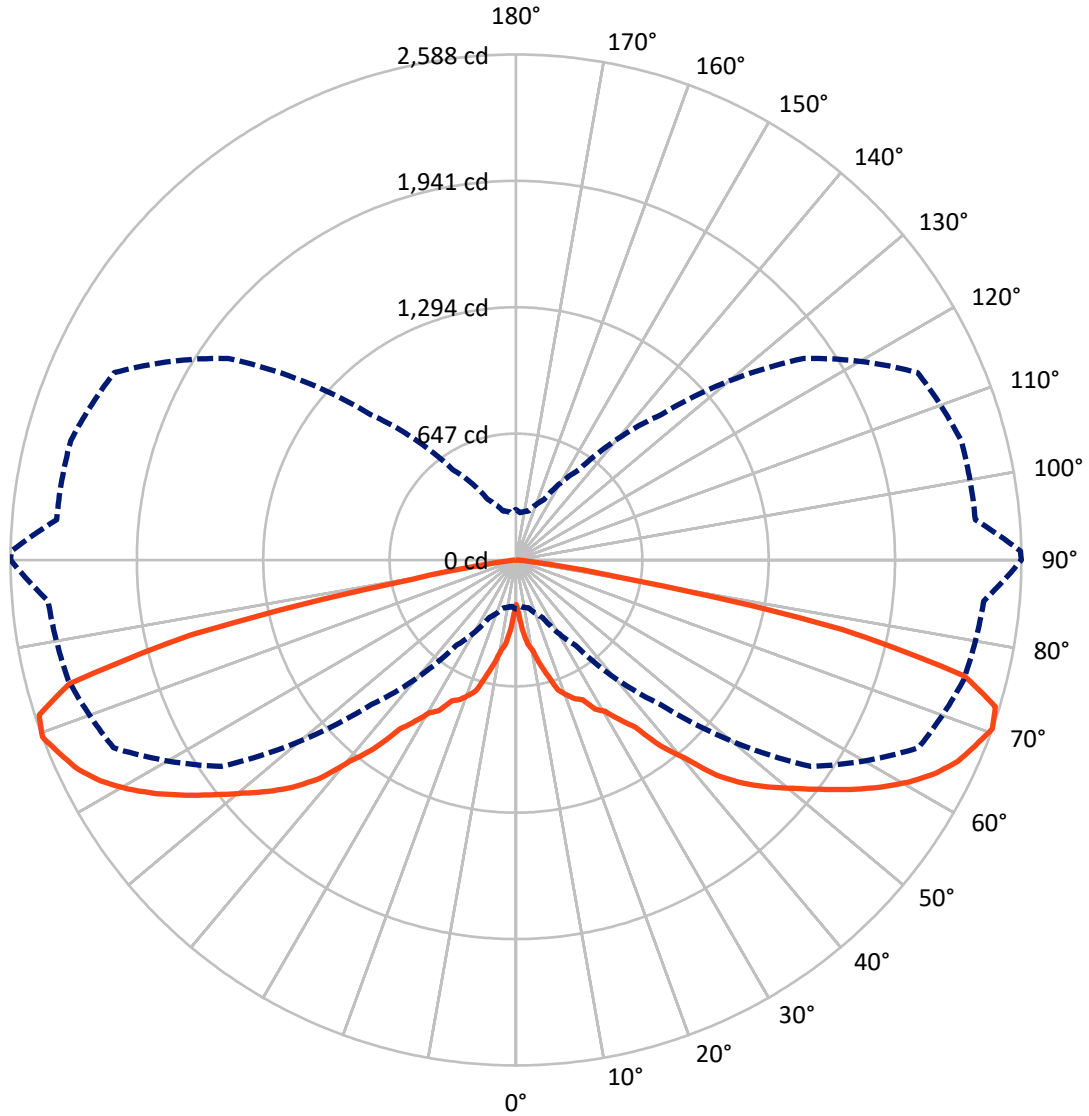
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc  
 Type III - Short - N/A

REPORT NUMBER: P367240  
CATALOG NUMBER: MSA-SA2A-830-U-RW

### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P367240

CATALOG NUMBER: MSA-SA2A-830-U-RW

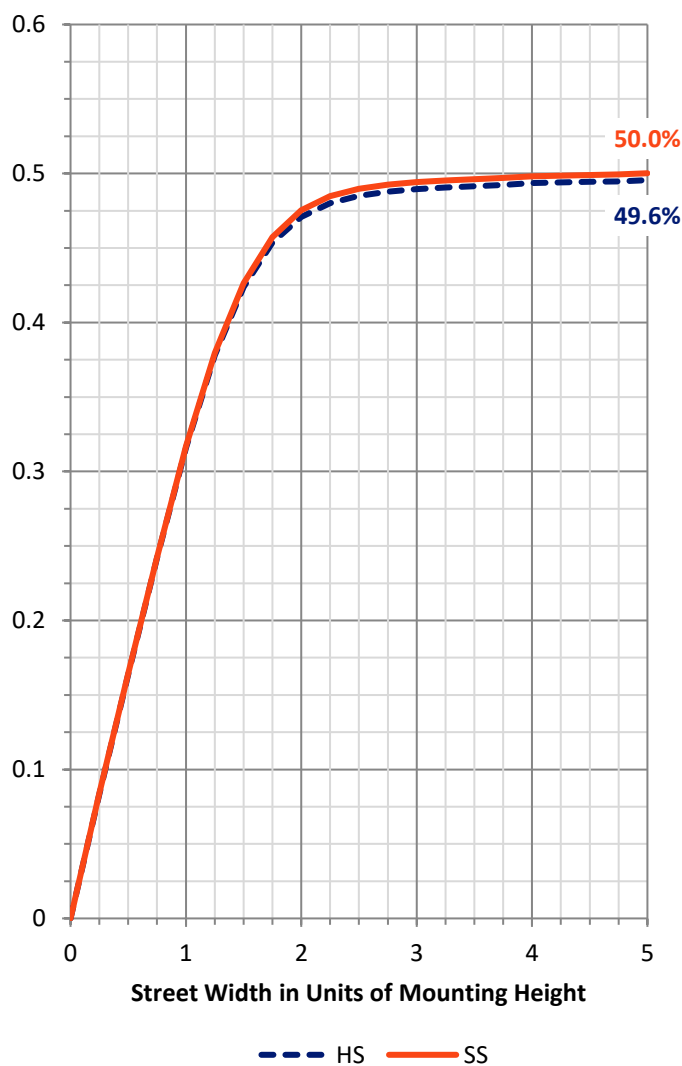
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3231.0	0.0	3231.0
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	3255.0	0.0	3255.0
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	6486.0	0.0	6486.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.3	0.5
10°-20°	157.4	2.4
20°-30°	340.3	5.2
30°-40°	649.3	10.0
40°-50°	1179.5	18.2
50°-60°	1656.9	25.5
60°-70°	1582.0	24.4
70°-80°	811.9	12.5
80°-90°	74.4	1.1
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°	6486.0	100.0
0°-180°	6486.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P367240

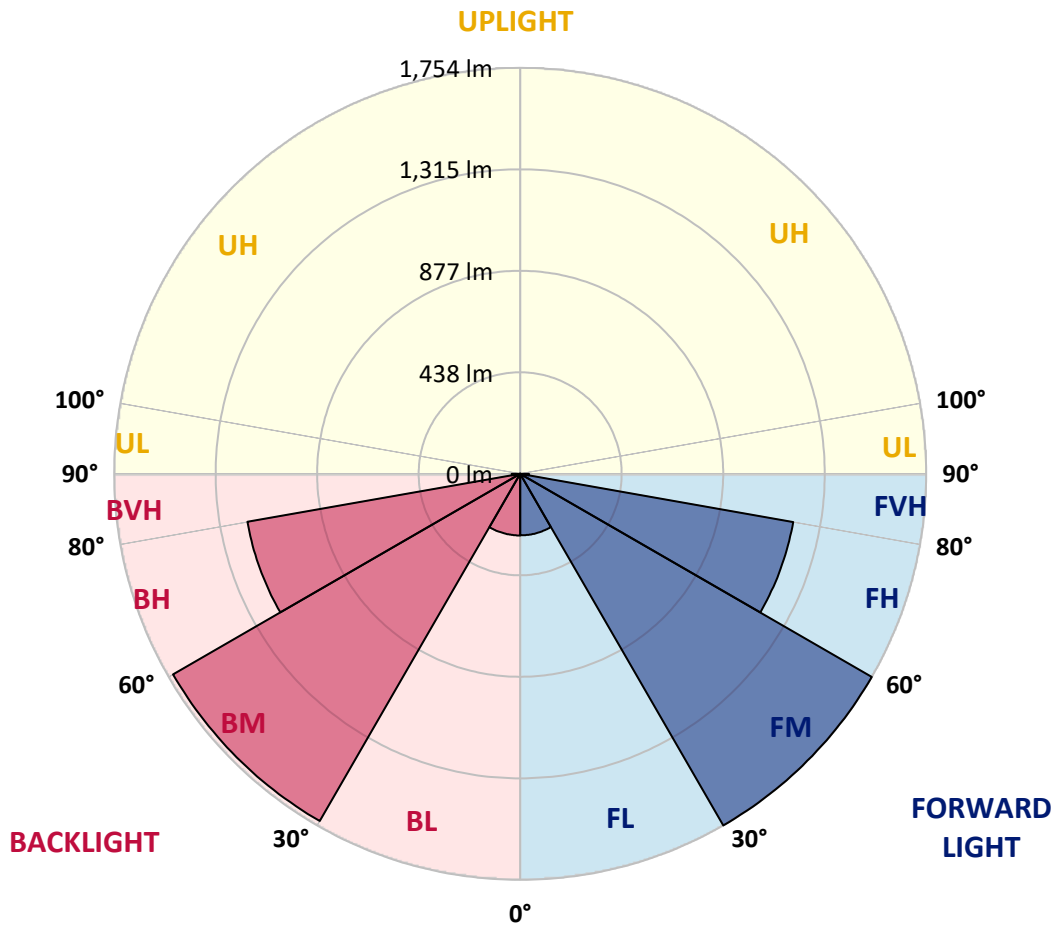
CATALOG NUMBER: MSA-SA2A-830-U-RW

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	265.8	4.1			
FM (30°-60°)	1753.9	27.0			
FH (60°-80°)	1197.6	18.5			G1/1800
FVH (80°-90°)	37.8	0.6			G1/100
BL (0°-30°)	266.3	4.1	B1/500		
BM (30°-60°)	1731.8	26.7	B2/2500		
BH (60°-80°)	1196.3	18.4	B3/2500		G3/2500
BVH (80°-90°)	36.7	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type III Short





REPORT NUMBER: P367240

CATALOG NUMBER: MSA-SA2A-830-U-RW

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6
2.5°	275.7	265.5	252.6	260.2	263.4	268.9	268.1	265.5	254.2	273.1	275.2
5°	345.1	328.8	322.8	321.8	323.3	318.1	335.2	330.2	339.4	356.4	360.4
7.5°	393.0	380.9	368.0	372.0	355.7	353.3	375.4	395.1	400.1	431.4	433.5
10°	415.6	403.8	407.2	404.8	403.0	418.2	428.5	442.9	463.7	466.6	471.1
12.5°	434.8	439.5	454.5	454.0	478.7	505.8	501.8	516.8	520.2	556.5	545.5
15°	483.4	493.1	492.1	501.3	512.1	556.5	556.8	582.3	605.6	619.8	616.2
17.5°	554.7	558.1	543.9	544.4	575.7	593.8	614.1	609.6	670.6	698.4	700.3
20°	597.2	605.9	589.6	568.1	623.5	648.5	659.8	633.8	699.0	736.6	736.6
22.5°	671.6	649.3	624.6	610.1	659.0	685.6	684.2	676.9	711.6	778.1	771.8
25°	712.6	700.0	687.7	691.3	716.1	729.7	747.9	730.8	763.4	812.8	792.0
27.5°	790.4	767.0	706.3	754.7	754.7	744.4	782.8	791.0	769.7	850.1	865.6
30°	878.5	870.4	784.4	835.7	819.9	791.0	864.6	859.3	823.6	905.6	898.5
32.5°	961.8	988.6	907.2	879.0	902.7	913.7	875.1	890.9	897.7	976.8	973.4
35°	1089.6	1112.2	1004.2	997.1	957.6	947.4	976.8	982.1	982.6	1065.9	1050.7
37.5°	1310.7	1278.1	1171.3	1121.1	1125.6	1113.2	1119.0	1077.5	1083.3	1204.2	1211.8
40°	1472.3	1435.5	1316.7	1280.7	1192.4	1245.2	1198.4	1194.2	1182.6	1339.3	1335.1
42.5°	1650.8	1600.3	1468.9	1420.8	1327.0	1305.4	1283.8	1332.5	1329.3	1474.4	1506.5
45°	1785.7	1683.7	1615.1	1585.1	1528.8	1476.0	1455.5	1477.3	1467.3	1575.1	1631.1
47.5°	1870.8	1782.2	1703.4	1640.3	1586.4	1716.0	1612.2	1583.0	1562.8	1683.4	1737.3
50°	1938.7	1836.4	1743.3	1722.3	1764.9	1879.5	1715.7	1651.3	1676.0	1764.9	1838.2
52.5°	1957.1	1848.8	1765.2	1751.8	1866.9	1887.7	1861.1	1752.8	1746.2	1862.7	1951.3
55°	1900.8	1797.0	1757.3	1830.6	1957.8	1940.5	1981.0	1911.8	1865.3	1962.6	2074.0
57.5°	1756.0	1652.9	1643.5	1749.1	1909.5	2057.2	2077.2	2022.5	1961.5	2064.6	2196.0
60°	1518.1	1424.0	1447.9	1564.6	1806.4	2016.7	2122.9	2073.0	2054.1	2156.6	2309.0
62.5°	1147.7	1074.3	1138.2	1300.9	1618.2	1964.4	2186.0	2178.1	2150.8	2254.4	2408.9
65°	731.8	693.2	758.4	923.7	1326.2	1869.3	2216.2	2226.8	2252.0	2329.8	2486.2
67.5°	425.3	404.8	444.5	579.9	944.5	1534.9	2160.0	2310.9	2324.0	2368.7	2536.9
70°	251.6	238.2	254.5	325.7	534.7	1045.7	1842.4	2274.1	2373.4	2404.5	2588.2
72.5°	191.9	179.3	172.2	192.7	279.2	540.2	1245.7	1927.6	2333.7	2380.8	2566.6
75°	165.9	153.8	145.4	147.2	166.1	256.6	675.3	1378.7	1988.6	2167.9	2370.8
77.5°	142.5	131.7	125.7	125.1	127.5	140.9	282.3	747.6	1245.5	1558.3	1709.2
80°	114.1	105.7	104.4	104.4	100.9	99.9	140.4	284.4	474.0	562.0	538.9
82.5°	83.3	74.9	83.3	82.3	77.0	72.8	89.4	123.0	146.2	115.4	91.2
85°	56.3	48.6	54.9	56.0	51.0	37.9	53.6	61.5	63.1	39.4	32.6
87.5°	19.7	19.2	31.0	27.1	22.1	12.9	19.7	21.3	22.3	13.9	9.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367240

CATALOG NUMBER: MSA-SA2A-830-U-RW

**CANDELA DISTRIBUTION (continued):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6	227.6
2.5°	276.0	272.9	257.1	259.5	265.5	268.4	271.3	259.5	253.7	272.1	270.2
5°	361.4	349.9	337.0	335.2	335.9	324.6	331.2	328.3	329.6	341.5	343.8
7.5°	432.9	419.0	401.9	388.5	365.4	347.0	362.5	370.4	372.7	393.8	401.7
10°	471.6	459.8	454.8	429.5	421.9	419.5	415.9	403.2	417.2	412.2	416.1
12.5°	547.3	544.9	518.9	502.3	503.9	508.4	485.3	472.6	454.5	482.9	472.6
15°	611.7	621.9	595.9	565.7	550.7	558.3	540.7	522.3	506.0	514.7	503.7
17.5°	694.0	693.7	643.0	610.6	609.3	608.8	582.8	542.3	561.7	555.7	556.2
20°	737.6	730.5	667.4	630.1	661.9	650.6	627.2	575.2	597.8	605.1	609.9
22.5°	774.1	770.2	693.7	666.4	686.9	687.1	663.7	636.4	633.5	656.4	644.0
25°	799.6	815.4	743.4	736.8	745.8	736.8	714.0	696.1	684.5	718.7	684.5
27.5°	860.1	837.8	751.0	788.3	793.9	748.9	777.6	756.5	724.5	766.8	780.7
30°	903.2	916.4	804.6	860.9	854.3	812.8	824.6	823.8	785.5	868.0	858.3
32.5°	977.3	961.6	892.2	887.7	903.5	901.6	881.7	891.4	900.8	960.8	975.2
35°	1053.3	1070.1	948.2	978.4	973.9	945.5	997.8	991.8	1019.9	1143.0	1102.2
37.5°	1224.7	1144.5	1073.8	1069.9	1099.8	1104.3	1087.5	1114.0	1174.8	1269.4	1313.0
40°	1336.9	1300.4	1180.3	1185.0	1143.5	1215.0	1167.7	1253.1	1299.4	1458.9	1443.4
42.5°	1506.8	1417.6	1302.2	1318.0	1309.6	1275.2	1337.5	1381.4	1447.6	1569.3	1647.9
45°	1633.2	1511.0	1456.3	1446.6	1445.5	1505.4	1497.6	1567.7	1591.4	1682.9	1748.1
47.5°	1729.1	1625.3	1544.4	1555.4	1523.3	1694.4	1603.2	1625.1	1672.9	1759.1	1835.1
50°	1843.0	1727.3	1635.3	1662.6	1740.7	1806.4	1723.9	1686.6	1710.0	1811.7	1896.3
52.5°	1948.4	1826.7	1725.5	1748.3	1875.8	1845.9	1836.9	1742.6	1739.7	1821.4	1917.6
55°	2071.7	1934.4	1845.1	1917.6	1962.8	1925.8	1911.6	1796.7	1725.7	1771.2	1861.9
57.5°	2192.6	2041.2	1952.3	1967.3	2024.6	1987.8	1881.3	1704.4	1615.9	1624.8	1716.5
60°	2305.9	2139.2	2065.9	2051.4	2097.2	1952.8	1766.5	1535.4	1417.9	1396.4	1475.7
62.5°	2402.9	2221.2	2151.8	2112.4	2156.0	1954.2	1587.5	1264.1	1135.1	1062.0	1123.8
65°	2479.9	2289.3	2239.9	2219.4	2235.2	1835.3	1308.6	928.2	769.9	689.0	725.0
67.5°	2531.2	2327.4	2304.8	2331.6	2121.3	1528.6	969.5	594.1	447.7	403.5	426.1
70°	2584.3	2361.1	2360.3	2269.1	1798.8	1053.8	566.2	342.5	260.5	243.4	257.6
72.5°	2566.4	2321.1	2333.0	1984.4	1246.5	563.3	298.9	193.7	176.4	182.4	195.0
75°	2376.6	2110.3	2053.3	1426.6	707.1	261.8	172.2	146.7	145.6	154.8	167.2
77.5°	1723.9	1469.7	1318.8	808.6	303.1	141.7	126.7	122.5	122.5	129.9	140.9
80°	568.3	491.8	512.6	312.8	143.3	97.8	98.8	100.7	100.2	102.0	111.2
82.5°	93.3	96.7	149.6	127.8	86.5	66.8	74.7	78.3	79.4	71.0	80.7
85°	33.1	37.3	63.6	59.1	49.9	33.6	49.2	54.9	54.2	47.3	52.3
87.5°	10.3	13.1	23.1	17.9	15.0	9.2	18.4	21.6	27.1	11.0	10.0
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)