

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: P366888

Luminaire Tested: **MSA-SA1C-730-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366888  
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-SA1C-730-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5866 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3

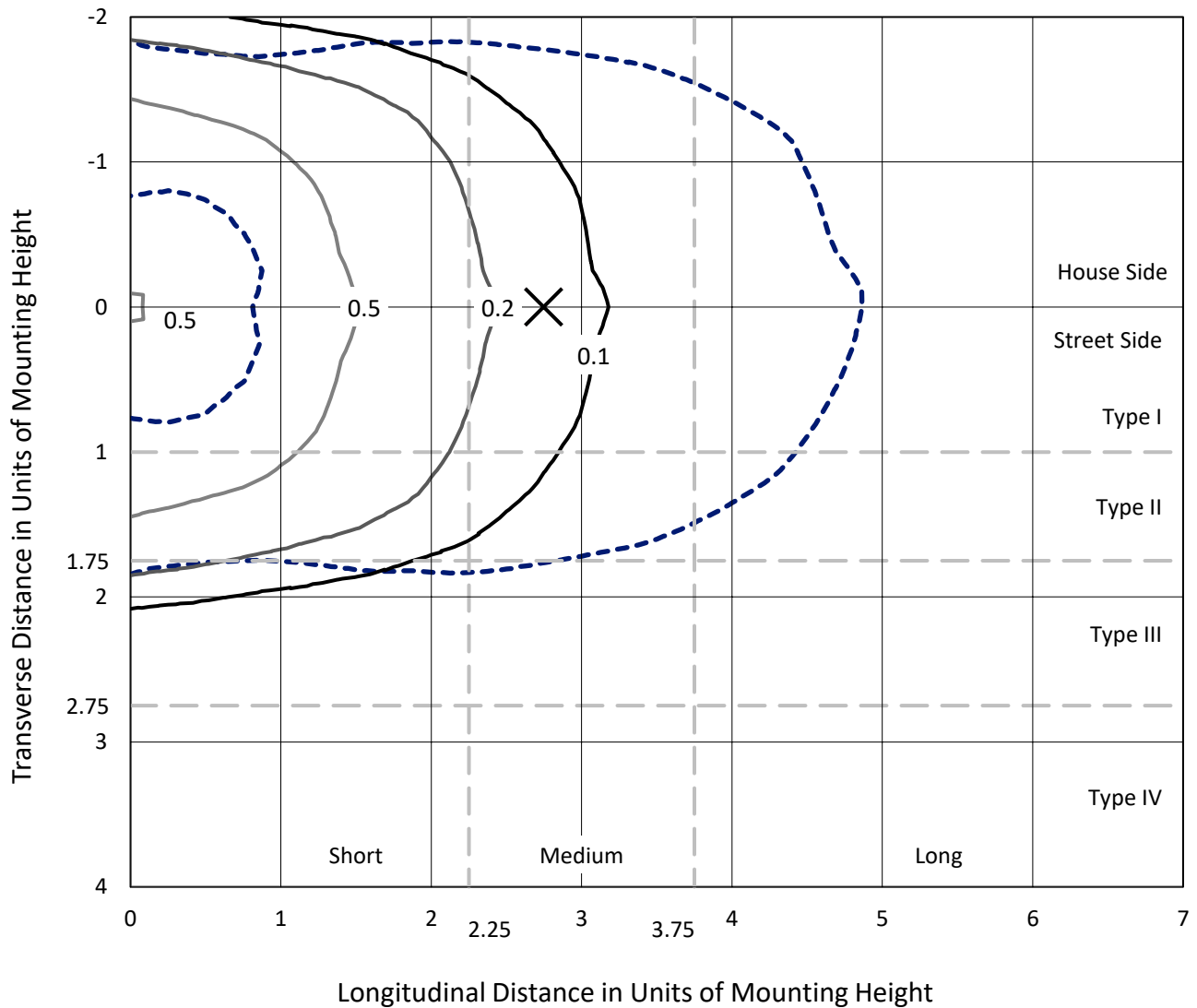
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

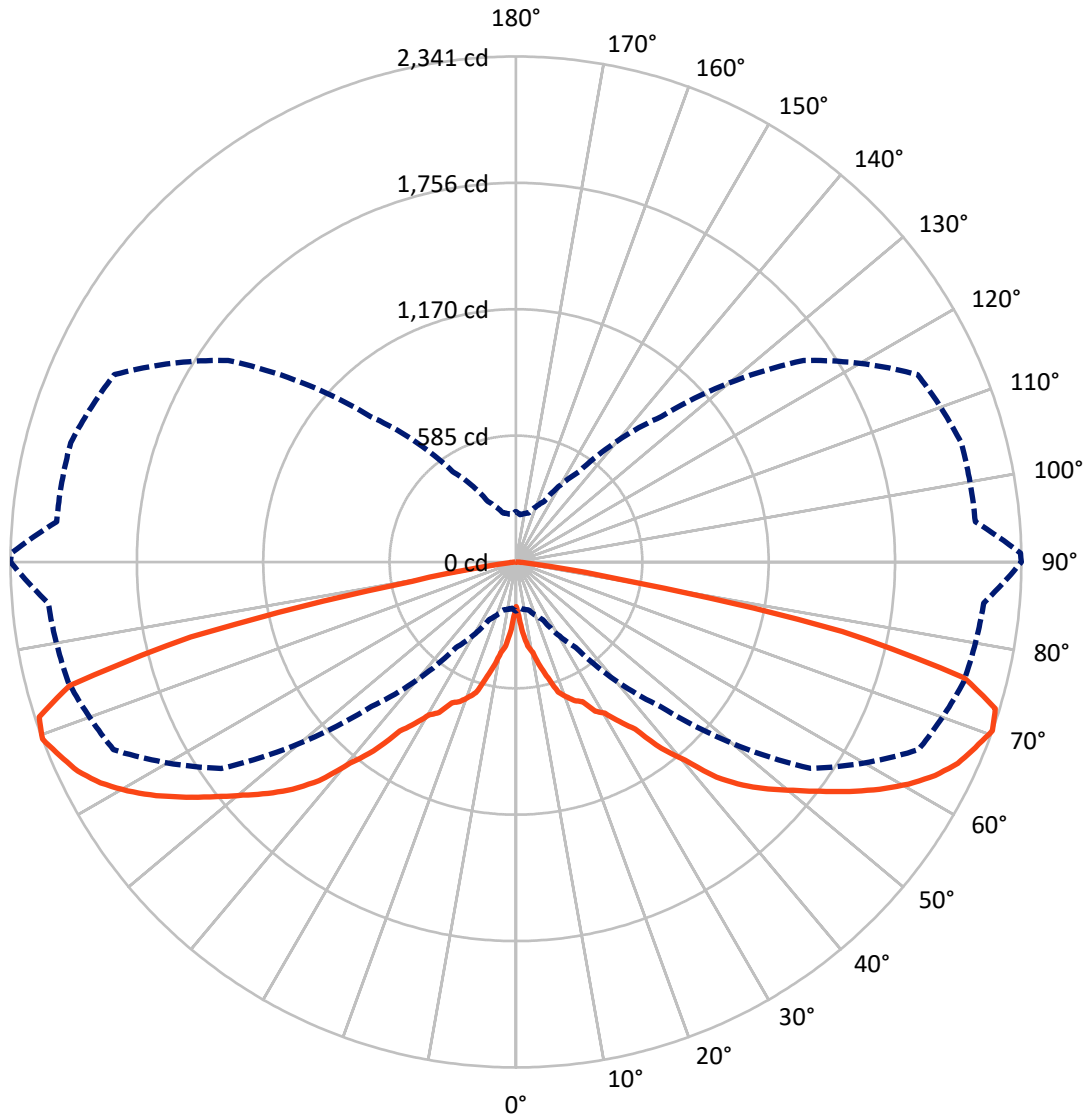
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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

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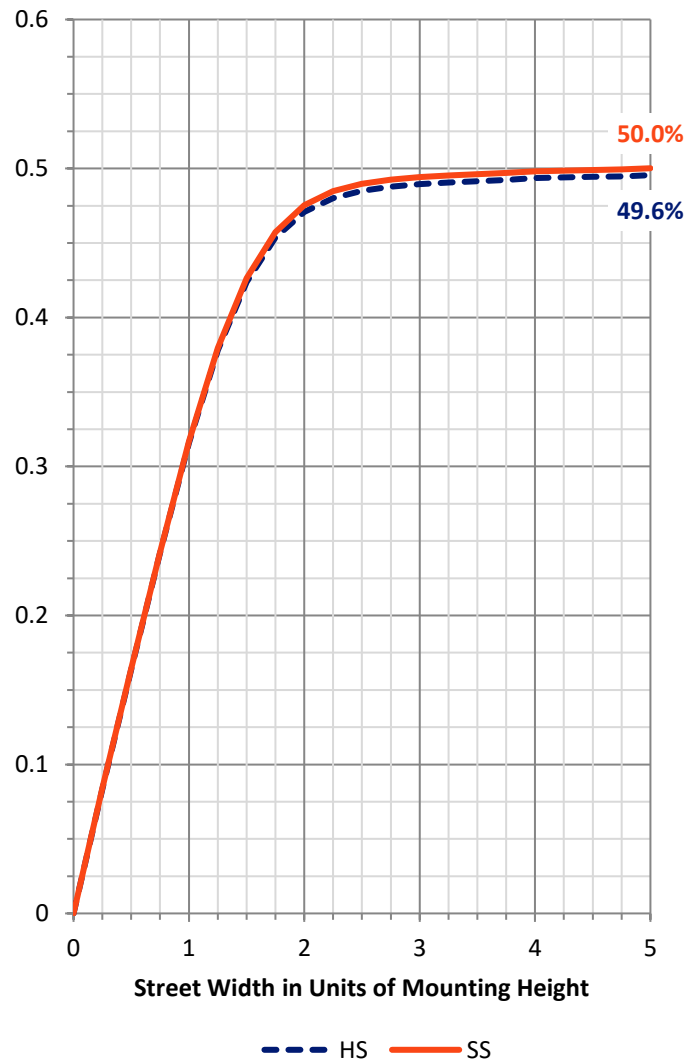
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2922.1	0.0	2922.1
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	2943.9	0.0	2943.9
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	5866.0	0.0	5866.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.1	0.5
10°-20°	142.3	2.4
20°-30°	307.8	5.2
30°-40°	587.2	10.0
40°-50°	1066.7	18.2
50°-60°	1498.5	25.5
60°-70°	1430.8	24.4
70°-80°	734.3	12.5
80°-90°	67.3	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°	5866.0	100.0
0°-180°	5866.0	100.0

**Coefficient of Utilization**



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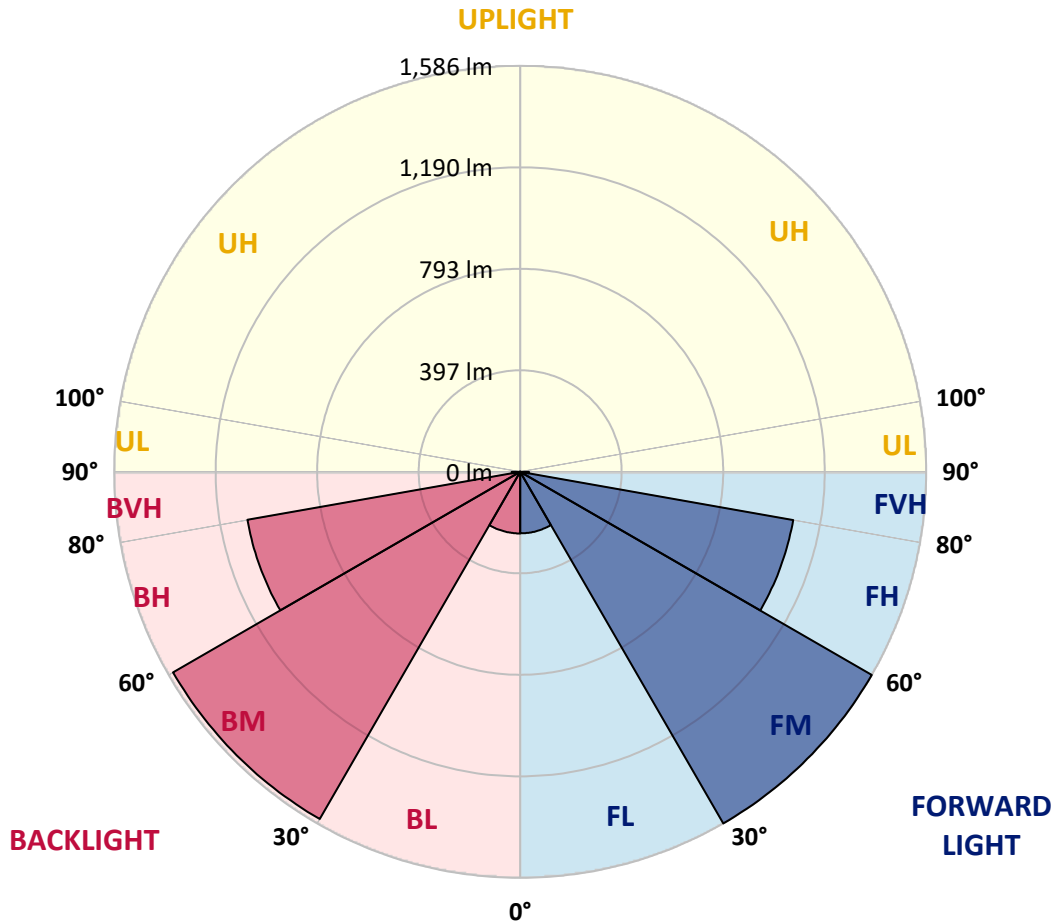
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	240.4	4.1			
FM (30°-60°)	1586.2	27.0			
FH (60°-80°)	1083.1	18.5			G1/1800
FVH (80°-90°)	34.2	0.6			G1/100
BL (0°-30°)	240.8	4.1	B1/500		
BM (30°-60°)	1566.2	26.7	B2/2500		
BH (60°-80°)	1081.9	18.4	B3/2500		G3/2500
BVH (80°-90°)	33.2	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9
2.5°	249.4	240.1	228.5	235.4	238.2	243.2	242.5	240.1	229.9	247.0	248.9
5°	312.2	297.4	291.9	291.0	292.4	287.7	303.1	298.6	306.9	322.4	325.9
7.5°	355.4	344.5	332.8	336.4	321.7	319.5	339.5	357.3	361.8	390.1	392.0
10°	375.9	365.2	368.3	366.1	364.5	378.2	387.5	400.6	419.4	422.0	426.0
12.5°	393.2	397.5	411.1	410.6	432.9	457.4	453.8	467.4	470.5	503.3	493.3
15°	437.2	446.0	445.1	453.4	463.1	503.3	503.5	526.6	547.8	560.6	557.3
17.5°	501.6	504.7	491.9	492.4	520.7	537.1	555.4	551.3	606.5	631.7	633.3
20°	540.1	548.0	533.3	513.8	563.9	586.5	596.7	573.2	632.2	666.1	666.1
22.5°	607.4	587.2	564.9	551.8	596.0	620.0	618.8	612.2	643.6	703.7	698.0
25°	644.5	633.1	621.9	625.3	647.6	660.0	676.4	660.9	690.4	735.1	716.3
27.5°	714.9	693.7	638.8	682.6	682.6	673.3	708.0	715.4	696.1	768.9	782.9
30°	794.5	787.2	709.4	755.8	741.5	715.4	781.9	777.2	744.8	819.0	812.6
32.5°	869.9	894.1	820.4	795.0	816.4	826.4	791.4	805.7	811.9	883.4	880.4
35°	985.4	1005.9	908.2	901.7	866.1	856.8	883.4	888.2	888.7	964.0	950.2
37.5°	1185.4	1155.9	1059.4	1014.0	1018.0	1006.8	1012.1	974.5	979.7	1089.1	1096.0
40°	1331.6	1298.3	1190.8	1158.3	1078.4	1126.2	1083.9	1080.1	1069.6	1211.3	1207.5
42.5°	1493.0	1447.4	1328.5	1285.0	1200.1	1180.6	1161.1	1205.1	1202.3	1333.5	1362.5
45°	1615.0	1522.7	1460.7	1433.6	1382.7	1334.9	1316.4	1336.1	1327.1	1424.5	1475.2
47.5°	1692.0	1611.9	1540.6	1483.5	1434.8	1552.0	1458.1	1431.7	1413.4	1522.5	1571.2
50°	1753.3	1660.9	1576.7	1557.7	1596.2	1699.8	1551.7	1493.5	1515.8	1596.2	1662.5
52.5°	1770.0	1672.0	1596.4	1584.3	1688.4	1707.2	1683.2	1585.3	1579.3	1684.6	1764.7
55°	1719.1	1625.2	1589.3	1655.6	1770.7	1755.0	1791.6	1729.1	1687.0	1775.0	1875.8
57.5°	1588.1	1494.9	1486.4	1581.9	1726.9	1860.6	1878.6	1829.2	1774.0	1867.2	1986.1
60°	1373.0	1287.8	1309.5	1415.0	1633.8	1823.9	1920.0	1874.8	1857.7	1950.4	2088.3
62.5°	1038.0	971.6	1029.4	1176.6	1463.5	1776.6	1977.1	1969.9	1945.2	2038.9	2178.7
65°	661.9	626.9	685.9	835.4	1199.4	1690.6	2004.4	2013.9	2036.7	2107.1	2248.6
67.5°	384.7	366.1	402.0	524.5	854.2	1388.2	1953.5	2090.0	2101.9	2142.3	2294.4
70°	227.5	215.4	230.1	294.6	483.6	945.7	1666.3	2056.7	2146.6	2174.6	2340.8
72.5°	173.6	162.1	155.7	174.3	252.5	488.6	1126.7	1743.4	2110.7	2153.2	2321.3
75°	150.0	139.1	131.5	133.1	150.3	232.0	610.8	1246.9	1798.5	1960.6	2144.2
77.5°	128.9	119.1	113.6	113.2	115.3	127.4	255.3	676.1	1126.4	1409.3	1545.8
80°	103.2	95.6	94.4	94.4	91.3	90.3	127.0	257.2	428.6	508.3	487.4
82.5°	75.4	67.8	75.4	74.4	69.7	65.9	80.8	111.3	132.2	104.4	82.5
85°	50.9	44.0	49.7	50.6	46.1	34.2	48.5	55.6	57.1	35.7	29.5
87.5°	17.8	17.4	28.1	24.5	20.0	11.6	17.8	19.3	20.2	12.6	8.6
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):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9
2.5°	249.6	246.8	232.5	234.6	240.1	242.7	245.3	234.6	229.4	246.1	244.4
5°	326.9	316.4	304.8	303.1	303.8	293.6	299.6	296.9	298.1	308.8	311.0
7.5°	391.6	379.0	363.5	351.4	330.5	313.8	327.8	335.0	337.1	356.1	363.3
10°	426.5	415.8	411.3	388.5	381.6	379.4	376.1	364.7	377.3	372.8	376.3
12.5°	495.0	492.8	469.3	454.3	455.7	459.8	438.9	427.5	411.1	436.7	427.5
15°	553.2	562.5	539.0	511.6	498.1	505.0	489.0	472.4	457.7	465.5	455.5
17.5°	627.6	627.4	581.5	552.3	551.1	550.6	527.1	490.5	508.1	502.6	503.1
20°	667.1	660.7	603.6	569.9	598.6	588.4	567.2	520.2	540.6	547.3	551.6
22.5°	700.1	696.6	627.4	602.7	621.2	621.5	600.3	575.6	573.0	593.6	582.5
25°	723.2	737.5	672.3	666.4	674.5	666.4	645.7	629.5	619.1	650.0	619.1
27.5°	777.9	757.7	679.2	713.0	718.0	677.3	703.2	684.2	655.2	693.5	706.1
30°	816.9	828.8	727.7	778.6	772.7	735.1	745.8	745.1	710.4	785.0	776.2
32.5°	883.9	869.7	806.9	802.8	817.1	815.5	797.4	806.2	814.7	868.9	882.0
35°	952.6	967.8	857.5	884.9	880.8	855.2	902.5	897.0	922.4	1033.7	996.8
37.5°	1107.6	1035.1	971.2	967.6	994.7	998.7	983.5	1007.5	1062.5	1148.0	1187.5
40°	1209.1	1176.1	1067.5	1071.7	1034.2	1098.8	1056.0	1133.3	1175.2	1319.5	1305.4
42.5°	1362.7	1282.1	1177.8	1192.0	1184.4	1153.3	1209.6	1249.3	1309.2	1419.3	1490.4
45°	1477.1	1366.5	1317.1	1308.3	1307.3	1361.5	1354.4	1417.9	1439.3	1522.0	1581.0
47.5°	1563.9	1469.9	1396.7	1406.7	1377.7	1532.5	1450.0	1469.7	1513.0	1591.0	1659.7
50°	1666.8	1562.2	1479.0	1503.7	1574.3	1633.8	1559.1	1525.3	1546.5	1638.5	1715.1
52.5°	1762.1	1652.1	1560.5	1581.2	1696.5	1669.4	1661.3	1576.0	1573.4	1647.3	1734.3
55°	1873.6	1749.5	1668.7	1734.3	1775.2	1741.7	1728.8	1625.0	1560.8	1601.9	1683.9
57.5°	1983.0	1846.1	1765.7	1779.3	1831.1	1797.8	1701.5	1541.5	1461.4	1469.5	1552.4
60°	2085.5	1934.7	1868.4	1855.3	1896.7	1766.2	1597.6	1388.6	1282.4	1262.9	1334.7
62.5°	2173.2	2008.9	1946.1	1910.5	1949.9	1767.4	1435.7	1143.3	1026.6	960.5	1016.3
65°	2242.8	2070.5	2025.8	2007.2	2021.5	1659.9	1183.5	839.5	696.3	623.1	655.7
67.5°	2289.2	2105.0	2084.5	2108.8	1918.6	1382.5	876.8	537.3	404.9	364.9	385.4
70°	2337.2	2135.4	2134.7	2052.2	1626.9	953.1	512.1	309.8	235.6	220.1	233.0
72.5°	2321.1	2099.2	2109.9	1794.7	1127.4	509.5	270.3	175.2	159.5	165.0	176.4
75°	2149.4	1908.6	1857.0	1290.2	639.5	236.8	155.7	132.7	131.7	140.0	151.2
77.5°	1559.1	1329.2	1192.7	731.3	274.1	128.1	114.6	110.8	110.8	117.4	127.4
80°	514.0	444.8	463.6	282.9	129.6	88.4	89.4	91.1	90.6	92.2	100.6
82.5°	84.4	87.5	135.3	115.5	78.2	60.4	67.5	70.8	71.8	64.2	73.0
85°	30.0	33.8	57.5	53.5	45.2	30.4	44.5	49.7	49.0	42.8	47.3
87.5°	9.3	11.9	20.9	16.2	13.6	8.3	16.6	19.5	24.5	10.0	9.0
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)