

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: P367020

Luminaire Tested: **MSA-SA1D-730-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367020
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-SA1D-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: 6414 lumens
Efficiency: N/A
Efficacy: 95.7 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

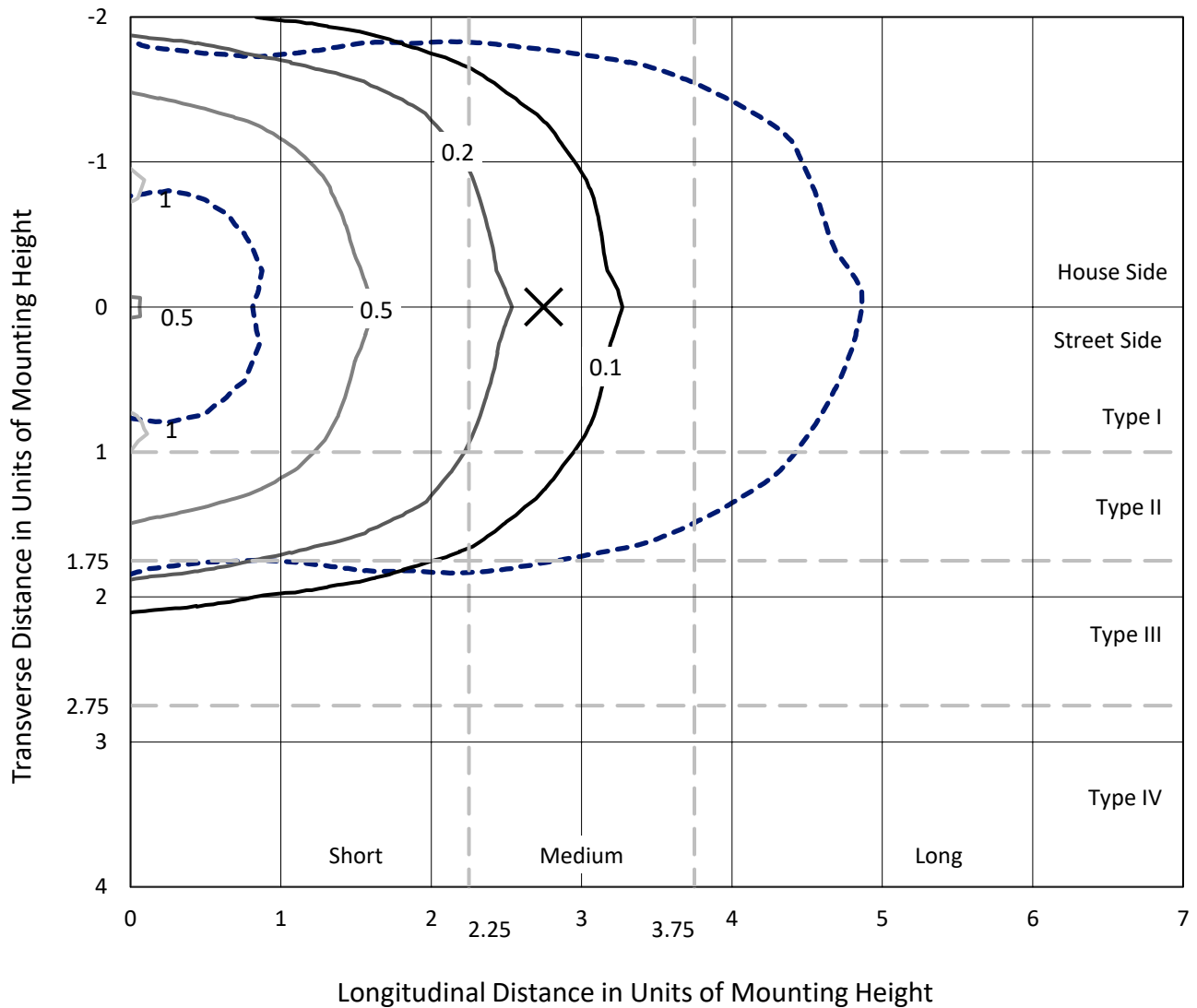
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

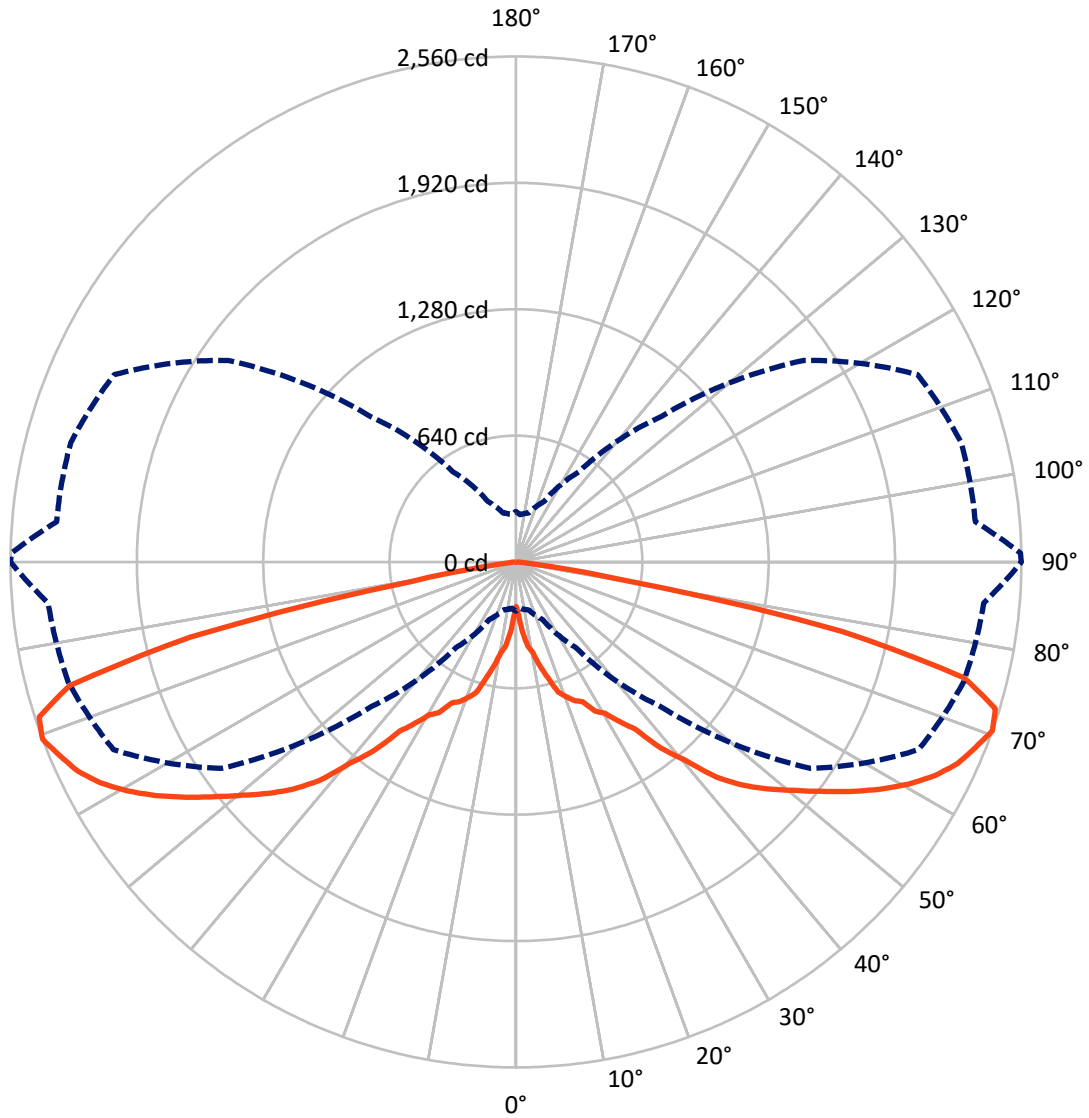
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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
House Side	Lumens	3195.1	0.0	3195.1
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	3218.9	0.0	3218.9
	% Fixture	50.2	0.0	50.2
Total	Lumens	6414.0	0.0	6414.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.0	0.5
10°-20°	155.6	2.4
20°-30°	336.5	5.2
30°-40°	642.1	10.0
40°-50°	1166.4	18.2
50°-60°	1638.5	25.5
60°-70°	1564.4	24.4
70°-80°	802.9	12.5
80°-90°	73.6	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°	6414.0	100.0
0°-180°	6414.0	100.0

Coefficient of Utilization



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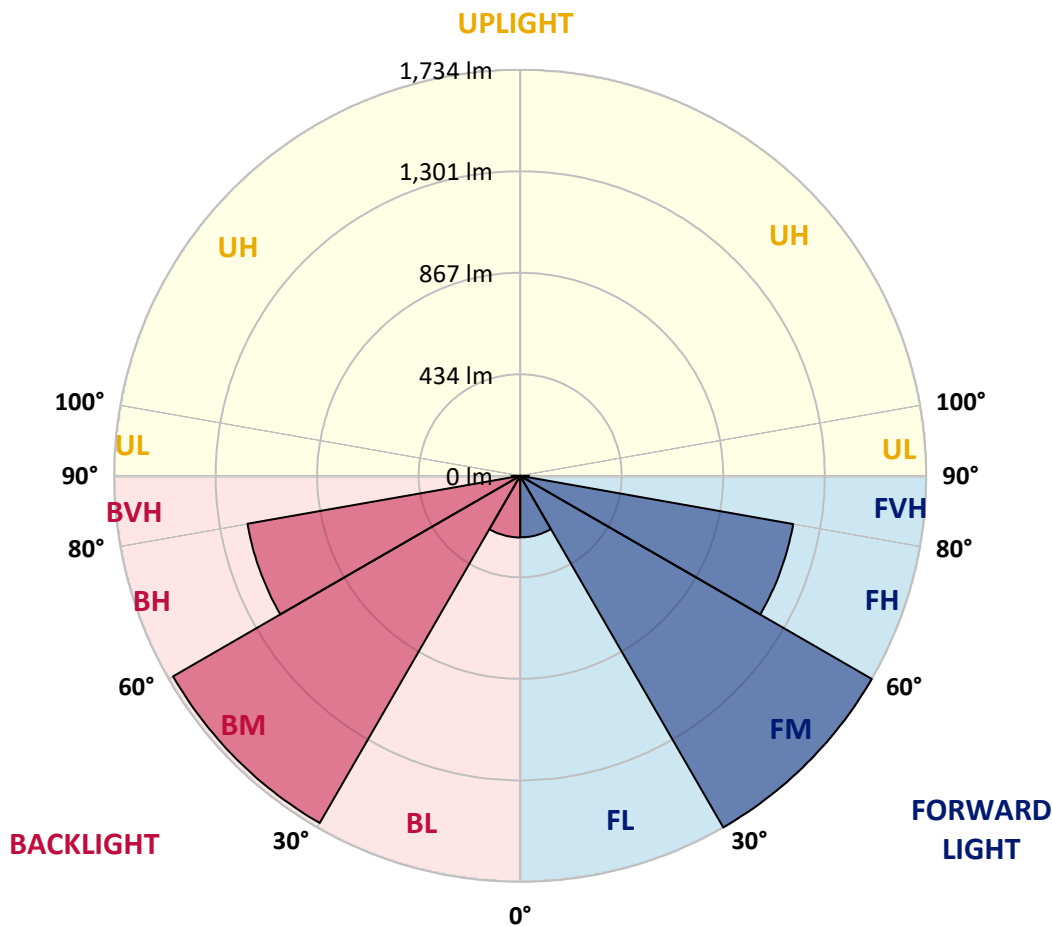
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	262.8	4.1			
FM (30°-60°)	1734.4	27.0			
FH (60°-80°)	1184.3	18.5			G1/1800
FVH (80°-90°)	37.4	0.6			G1/100
BL (0°-30°)	263.3	4.1	B1/500		
BM (30°-60°)	1712.5	26.7	B2/2500		
BH (60°-80°)	1183.0	18.4	B3/2500		G3/2500
BVH (80°-90°)	36.3	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°	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1
2.5°	272.7	262.5	249.8	257.4	260.5	265.9	265.1	262.5	251.4	270.1	272.2
5°	341.3	325.2	319.2	318.2	319.7	314.5	331.4	326.5	335.6	352.5	356.4
7.5°	388.6	376.7	363.9	367.8	351.7	349.4	371.2	390.7	395.6	426.6	428.7
10°	411.0	399.3	402.7	400.3	398.5	413.6	423.7	438.0	458.6	461.4	465.8
12.5°	430.0	434.6	449.5	448.9	473.4	500.1	496.2	511.1	514.4	550.3	539.4
15°	478.0	487.7	486.6	495.7	506.4	550.3	550.6	575.8	598.9	613.0	609.3
17.5°	548.5	551.9	537.8	538.4	569.3	587.2	607.2	602.8	663.1	690.7	692.5
20°	590.6	599.2	583.1	561.8	616.6	641.3	652.5	626.7	691.2	728.4	728.4
22.5°	664.2	642.1	617.6	603.3	651.7	678.0	676.7	669.4	703.7	769.5	763.2
25°	704.7	692.2	680.0	683.7	708.1	721.6	739.6	722.7	754.9	803.8	783.2
27.5°	781.7	758.5	698.5	746.3	746.3	736.2	774.1	782.2	761.1	840.7	856.0
30°	868.8	860.7	775.7	826.4	810.8	782.2	855.0	849.8	814.4	895.5	888.5
32.5°	951.2	977.7	897.1	869.3	892.7	903.6	865.4	881.0	887.7	966.0	962.6
35°	1077.5	1099.8	993.0	986.0	947.0	936.9	966.0	971.2	971.7	1054.1	1039.0
37.5°	1296.1	1263.9	1158.3	1108.7	1113.1	1100.9	1106.6	1065.5	1071.3	1190.8	1198.4
40°	1456.0	1419.6	1302.1	1266.5	1179.1	1231.4	1185.1	1181.0	1169.5	1324.4	1320.3
42.5°	1632.5	1582.6	1452.6	1405.0	1312.2	1290.9	1269.6	1317.7	1314.6	1458.1	1489.8
45°	1765.8	1665.0	1597.1	1567.5	1511.9	1459.6	1439.3	1460.9	1451.0	1557.6	1613.0
47.5°	1850.1	1762.5	1684.5	1622.1	1568.8	1697.0	1594.3	1565.4	1545.4	1664.7	1718.0
50°	1917.1	1816.0	1724.0	1703.2	1745.3	1858.6	1696.7	1633.0	1657.4	1745.3	1817.8
52.5°	1935.3	1828.2	1745.6	1732.3	1846.2	1866.7	1840.4	1733.3	1726.8	1842.0	1929.6
55°	1879.7	1777.0	1737.8	1810.3	1936.1	1919.0	1959.0	1890.6	1844.6	1940.8	2051.0
57.5°	1736.5	1634.6	1625.2	1729.7	1888.3	2034.4	2054.1	2000.1	1939.7	2041.6	2171.6
60°	1501.2	1408.2	1431.8	1547.2	1786.4	1994.3	2099.4	2050.0	2031.3	2132.6	2283.4
62.5°	1134.9	1062.4	1125.6	1286.5	1600.3	1942.6	2161.7	2153.9	2126.9	2229.3	2382.2
65°	723.7	685.5	750.0	913.5	1311.4	1848.5	2191.6	2202.0	2227.0	2303.9	2458.6
67.5°	420.6	400.3	439.6	573.5	934.0	1517.8	2136.0	2285.2	2298.2	2342.4	2508.8
70°	248.8	235.5	251.6	322.1	528.7	1034.1	1822.0	2248.8	2347.1	2377.8	2559.5
72.5°	189.8	177.3	170.3	190.5	276.1	534.2	1231.9	1906.2	2307.8	2354.4	2538.2
75°	164.0	152.1	143.8	145.6	164.3	253.7	667.8	1363.4	1966.5	2143.8	2344.5
77.5°	140.9	130.2	124.3	123.7	126.1	139.3	279.2	739.3	1231.6	1541.0	1690.2
80°	112.8	104.5	103.2	103.2	99.8	98.8	138.8	281.3	468.7	555.8	532.9
82.5°	82.4	74.1	82.4	81.4	76.2	72.0	88.4	121.7	144.5	114.1	90.2
85°	55.6	48.1	54.3	55.4	50.4	37.4	53.0	60.8	62.4	39.0	32.2
87.5°	19.5	19.0	30.7	26.8	21.8	12.7	19.5	21.1	22.1	13.8	9.4
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°	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1	225.1
2.5°	272.9	269.8	254.2	256.6	262.5	265.4	268.3	256.6	250.9	269.0	267.2
5°	357.4	346.0	333.3	331.4	332.2	321.0	327.5	324.7	326.0	337.7	340.0
7.5°	428.1	414.4	397.5	384.2	361.3	343.1	358.5	366.3	368.6	389.4	397.2
10°	466.4	454.7	449.7	424.8	417.2	414.9	411.2	398.8	412.5	407.6	411.5
12.5°	541.2	538.9	513.1	496.8	498.3	502.7	479.9	467.4	449.5	477.5	467.4
15°	604.9	615.0	589.3	559.4	544.6	552.1	534.7	516.5	500.4	509.0	498.1
17.5°	686.3	686.0	635.8	603.9	602.6	602.0	576.3	536.3	555.5	549.5	550.1
20°	729.4	722.4	660.0	623.1	654.6	643.4	620.2	568.8	591.1	598.4	603.1
22.5°	765.6	761.7	686.0	659.0	679.2	679.5	656.4	629.3	626.5	649.1	636.9
25°	790.8	806.4	735.1	728.6	737.5	728.6	706.0	688.3	676.9	710.7	676.9
27.5°	850.6	828.5	742.7	779.6	785.0	740.6	768.9	748.1	716.4	758.3	772.1
30°	893.2	906.2	795.7	851.3	844.8	803.8	815.5	814.7	776.7	858.4	848.7
32.5°	966.5	950.9	882.3	877.9	893.4	891.6	871.9	881.5	890.8	950.1	964.4
35°	1041.6	1058.3	937.6	967.5	963.1	935.0	986.8	980.8	1008.6	1130.3	1090.0
37.5°	1211.1	1131.8	1061.9	1058.0	1087.6	1092.1	1075.4	1101.7	1161.7	1255.3	1298.5
40°	1322.1	1286.0	1167.2	1171.9	1130.8	1201.5	1154.7	1239.2	1284.9	1442.7	1427.4
42.5°	1490.0	1401.9	1287.8	1303.4	1295.1	1261.0	1322.6	1366.0	1431.5	1551.9	1629.6
45°	1615.1	1494.2	1440.1	1430.5	1429.5	1488.7	1480.9	1550.3	1573.7	1664.2	1728.7
47.5°	1710.0	1607.3	1527.2	1538.1	1506.4	1675.6	1585.4	1607.0	1654.3	1739.6	1814.7
50°	1822.5	1708.1	1617.2	1644.2	1721.4	1786.4	1704.8	1667.8	1691.0	1791.6	1875.3
52.5°	1926.8	1806.4	1706.3	1728.9	1855.0	1825.4	1816.5	1723.2	1720.4	1801.2	1896.3
55°	2048.7	1913.0	1824.6	1896.3	1941.0	1904.4	1890.4	1776.8	1706.6	1751.5	1841.2
57.5°	2168.2	2018.5	1930.7	1945.5	2002.1	1965.7	1860.5	1685.5	1597.9	1606.8	1697.5
60°	2280.3	2115.5	2042.9	2028.7	2073.9	1931.2	1746.9	1518.4	1402.2	1380.9	1459.4
62.5°	2376.2	2196.6	2128.0	2089.0	2132.1	1932.5	1569.8	1250.1	1122.5	1050.2	1111.3
65°	2452.4	2263.9	2215.0	2194.8	2210.4	1815.0	1294.0	917.9	761.4	681.3	716.9
67.5°	2503.1	2301.6	2279.2	2305.8	2097.8	1511.6	958.7	587.5	442.7	399.0	421.4
70°	2555.6	2334.9	2334.1	2243.9	1778.8	1042.1	559.9	338.7	257.6	240.7	254.8
72.5°	2537.9	2295.4	2307.1	1962.4	1232.7	557.1	295.6	191.6	174.4	180.4	192.9
75°	2350.2	2086.9	2030.5	1410.7	699.3	258.9	170.3	145.1	144.0	153.1	165.3
77.5°	1704.8	1453.4	1304.2	799.6	299.7	140.1	125.3	121.1	121.1	128.4	139.3
80°	562.0	486.4	506.9	309.3	141.7	96.7	97.7	99.6	99.0	100.9	110.0
82.5°	92.3	95.7	147.9	126.3	85.5	66.0	73.8	77.5	78.5	70.2	79.8
85°	32.8	36.9	62.9	58.5	49.4	33.3	48.6	54.3	53.5	46.8	51.7
87.5°	10.1	13.0	22.9	17.7	14.8	9.1	18.2	21.3	26.8	10.9	9.9
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)