

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: P596746

Luminaire Tested: **MSA-SA4A-827-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596746
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-827-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11183 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

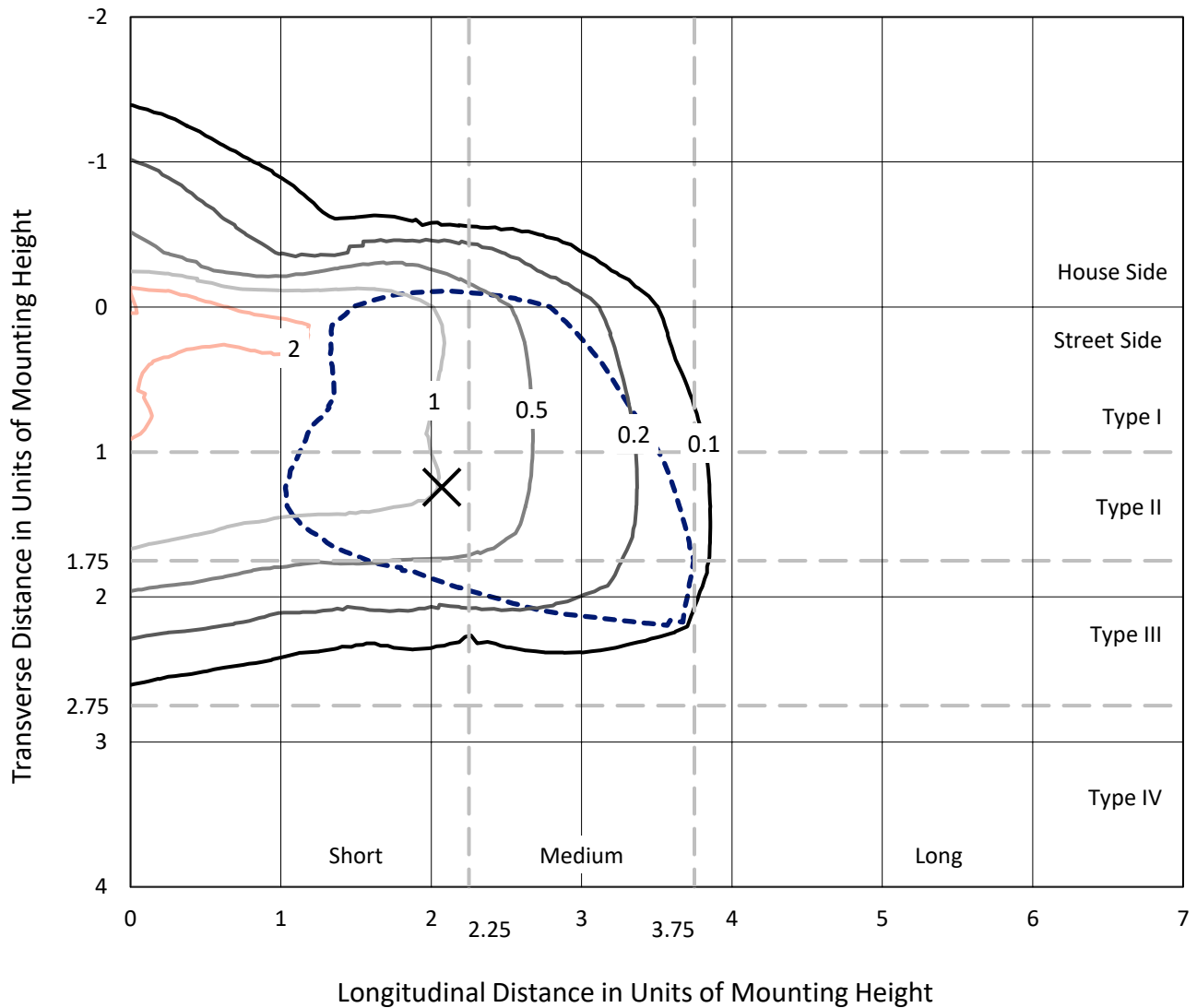
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596746
 CATALOG NUMBER: MSA-SA4A-827-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

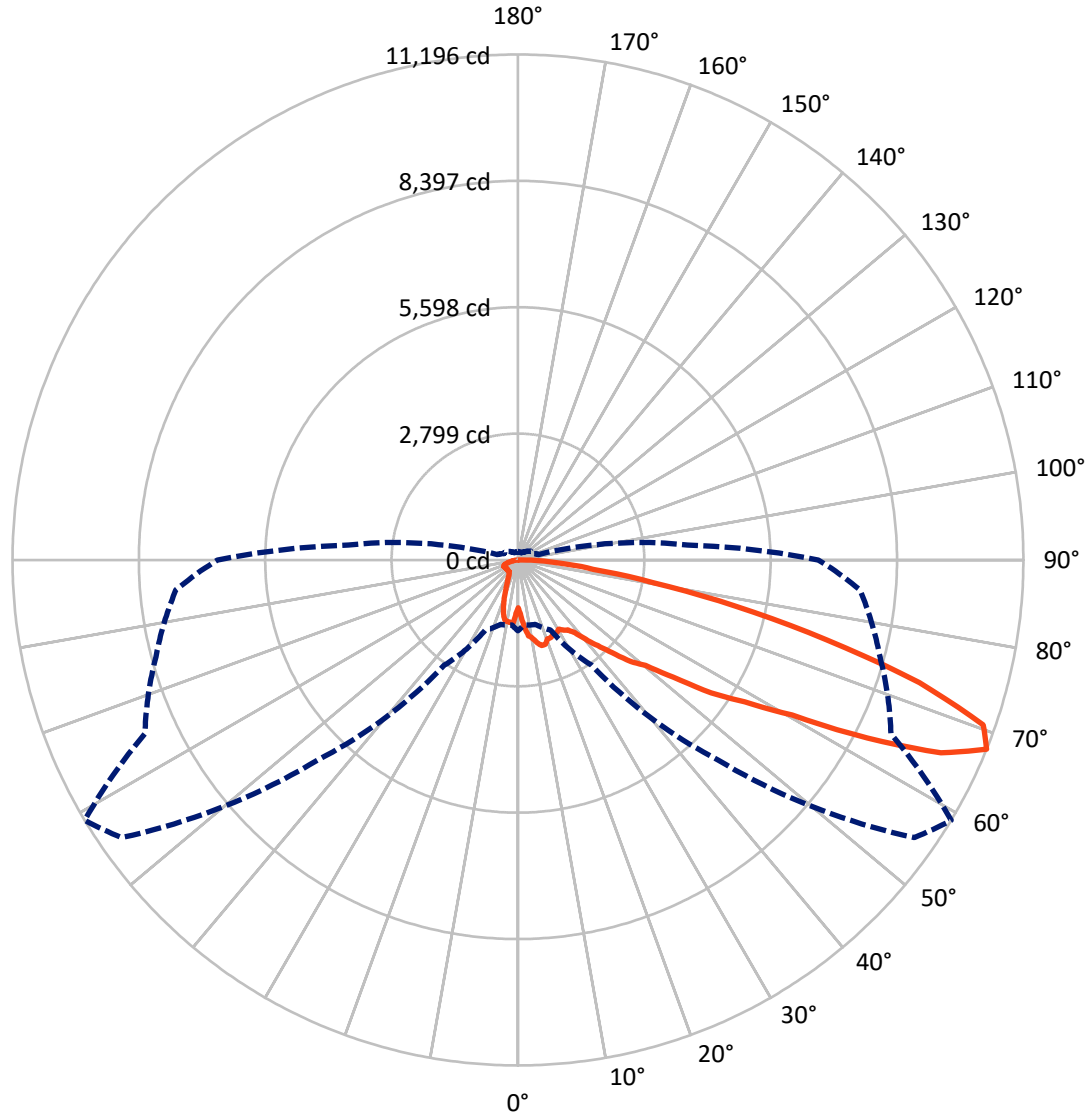
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
 Type III - Short - N/A

REPORT NUMBER: P596746
CATALOG NUMBER: MSA-SA4A-827-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P596746

CATALOG NUMBER: MSA-SA4A-827-U-SL3

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1683.3	0.0	1683.3
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	9499.7	0.0	9499.7
	% Fixture	84.9	0.0	84.9
Total	Lumens	11183.0	0.0	11183.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.2	1.2
10°-20°	409.0	3.7
20°-30°	584.1	5.2
30°-40°	860.7	7.7
40°-50°	1454.1	13.0
50°-60°	2530.4	22.6
60°-70°	3224.5	28.8
70°-80°	1707.4	15.3
80°-90°	274.7	2.5
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°	11183.0	100.0
0°-180°	11183.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596746

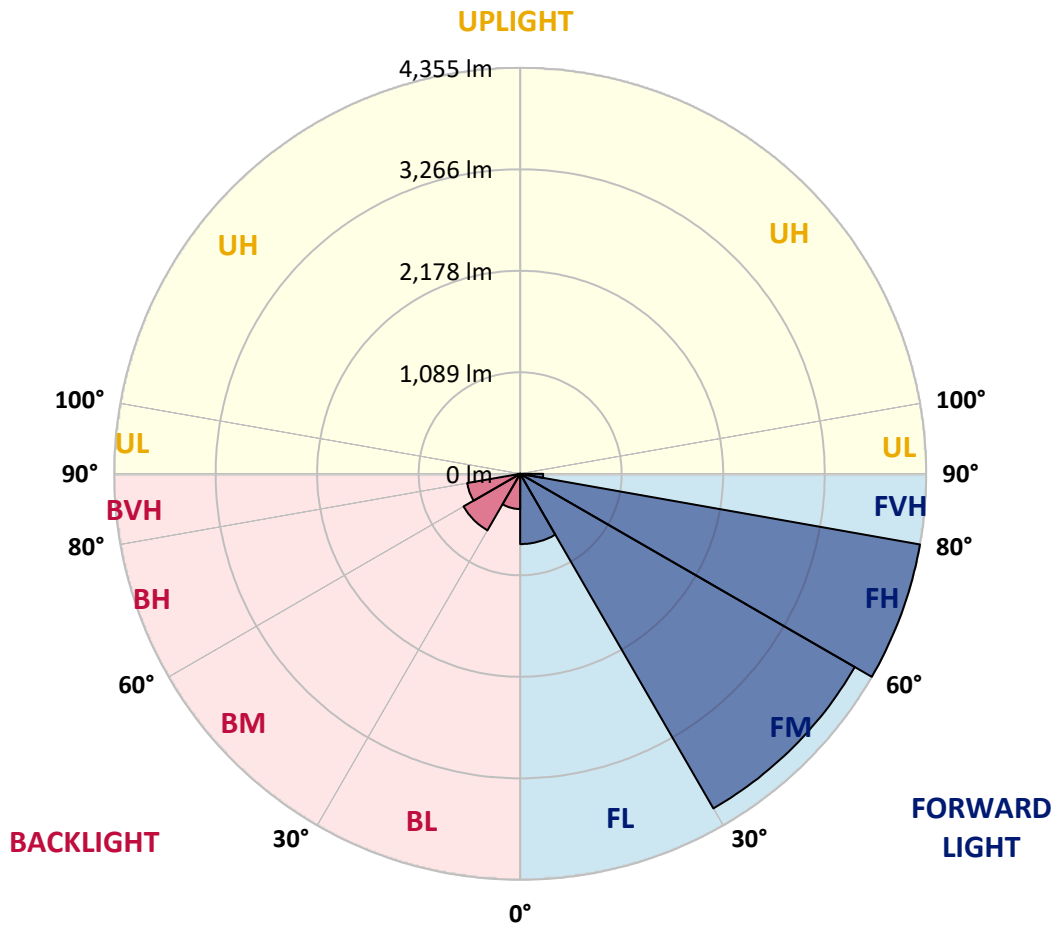
CATALOG NUMBER: MSA-SA4A-827-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	753.8	6.7			
FM (30°-60°)	4144.3	37.1			
FH (60°-80°)	4355.0	38.9			G2/5000
FVH (80°-90°)	246.7	2.2			G3/500
BL (0°-30°)	377.5	3.4	B1/500		
BM (30°-60°)	700.9	6.3	B1/1000		
BH (60°-80°)	576.9	5.2	B2/1000		G2/1000
BVH (80°-90°)	28.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





REPORT NUMBER: P596746

CATALOG NUMBER: MSA-SA4A-827-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2
2.5°	1321.2	1259.6	1194.2	1212.7	1250.1	1267.2	1248.7	1230.7	1207.5	1180.0	1273.8
5°	1602.2	1510.8	1497.5	1497.0	1483.8	1430.7	1498.9	1494.2	1521.7	1550.1	1623.1
7.5°	1682.3	1648.2	1611.2	1628.8	1562.0	1559.1	1665.3	1695.6	1748.7	1731.1	1829.2
10°	1641.1	1602.7	1622.1	1615.0	1621.2	1691.3	1756.3	1758.1	1815.0	1870.9	1807.9
12.5°	1568.6	1571.4	1648.7	1645.8	1745.4	1875.7	1895.1	1879.9	1972.8	1934.9	1988.9
15°	1620.2	1654.8	1635.4	1652.0	1691.3	1857.2	1911.2	1966.2	2054.3	2088.5	2034.4
17.5°	1702.7	1721.2	1634.0	1625.0	1706.0	1784.7	1918.8	1965.7	1979.5	2222.6	2146.3
20°	1667.6	1705.1	1619.8	1510.3	1644.9	1749.1	1881.4	1867.1	1934.0	2233.0	2169.5
22.5°	1767.2	1705.1	1596.6	1518.8	1566.2	1661.9	1774.3	1867.6	1946.8	2171.9	2203.1
25°	1786.1	1756.7	1655.3	1578.1	1562.0	1596.1	1756.3	1817.4	1951.0	2255.3	2185.1
27.5°	1901.7	1857.7	1651.0	1653.4	1573.3	1513.1	1699.4	1827.8	1999.4	2203.6	2229.2
30°	2045.3	2011.7	1752.5	1761.9	1651.0	1540.2	1738.2	1777.1	2027.3	2284.2	2284.6
32.5°	2152.9	2212.1	1952.0	1823.1	1783.7	1700.8	1678.5	1853.4	1994.6	2430.1	2379.4
35°	2346.7	2392.7	2105.5	2002.2	1869.0	1775.7	1840.6	1903.6	2130.6	2622.1	2520.2
37.5°	2705.5	2652.4	2390.8	2228.3	2178.5	2043.9	2079.9	2035.9	2278.5	2837.7	2796.0
40°	2913.0	2867.1	2591.7	2501.7	2304.5	2321.6	2276.6	2308.8	2476.1	3067.0	3053.8
42.5°	3117.8	3056.1	2823.5	2760.9	2564.2	2480.8	2488.9	2593.2	2780.8	3437.6	3393.6
45°	3320.1	3162.3	3060.4	3077.0	2982.2	2811.1	2823.0	2921.1	3113.5	3861.3	3759.9
47.5°	3475.1	3344.7	3265.1	3244.8	3197.8	3426.7	3324.4	3364.2	3449.0	4238.5	4200.1
50°	3768.4	3616.3	3512.5	3483.1	3642.4	3960.8	3752.3	3666.5	3847.1	4726.2	4706.2
52.5°	4238.0	4048.5	3875.5	3873.6	4103.9	4310.5	4457.5	4309.6	4375.9	5225.6	5282.5
55°	4648.0	4428.5	4273.1	4358.9	4686.8	4813.3	5312.4	5196.7	5140.8	5729.9	5892.4
57.5°	4801.0	4544.6	4443.2	4569.8	5053.1	5703.3	6230.8	5926.5	5872.0	6300.4	6641.2
60°	4465.0	4194.0	4200.1	4438.5	5275.9	6356.8	7234.9	6976.7	6657.3	7010.8	7343.5
62.5°	3507.8	3262.8	3422.5	3785.0	5089.2	6991.8	8580.8	8689.8	7554.4	7599.8	7733.0
65°	2384.2	2214.5	2358.6	2713.5	4127.6	7338.3	9862.7	10299.6	8371.3	7985.6	7901.2
67.5°	1569.1	1449.2	1477.1	1713.1	2841.5	6255.9	10720.0	11196.2	9118.2	8302.2	7604.6
70°	1215.1	1118.4	1106.1	1229.8	1685.2	4346.1	10212.0	10936.1	9573.1	8005.5	6628.4
72.5°	953.5	880.0	886.7	1005.6	1305.1	2411.2	7902.2	9299.7	8887.9	6904.2	5092.5
75°	743.5	683.4	717.0	853.0	1207.0	1498.5	5452.2	7058.2	6871.5	5112.4	2904.5
77.5°	539.8	500.9	548.8	726.5	1134.5	1285.7	3394.0	4924.2	4402.0	2624.9	996.6
80°	354.0	332.2	371.5	592.4	1028.8	1237.3	2097.5	3017.3	2175.2	737.4	377.2
82.5°	208.5	199.0	231.7	400.9	826.9	1159.6	1398.9	1676.6	890.0	311.8	200.5
85°	109.5	102.4	137.4	230.3	570.1	1058.7	1101.3	1003.7	429.8	135.5	95.7
87.5°	36.5	35.5	58.3	89.1	215.6	562.0	587.6	476.7	177.2	39.3	20.9
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: P596746
 CATALOG NUMBER: MSA-SA4A-827-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2
2.5°	1286.6	1267.7	1158.7	1173.8	1188.1	1180.9	1176.7	1127.4	1122.7	1192.8	1187.1
5°	1621.2	1542.5	1449.6	1445.4	1384.2	1321.7	1334.0	1314.1	1319.8	1348.7	1351.5
7.5°	1798.0	1699.9	1611.2	1467.2	1344.9	1245.9	1261.5	1256.8	1244.0	1309.4	1326.9
10°	1794.6	1707.4	1607.5	1433.1	1350.6	1270.0	1173.4	1081.9	1054.9	1022.7	1025.5
12.5°	1913.1	1835.9	1617.9	1440.2	1328.3	1189.5	1008.4	908.5	812.7	810.8	786.7
15°	1950.1	1893.2	1640.1	1399.4	1172.4	973.4	786.2	677.7	608.5	594.7	574.4
17.5°	2043.4	1954.3	1572.4	1267.7	991.4	761.1	590.9	515.1	509.4	518.9	508.5
20°	2049.6	1905.1	1450.1	1072.9	796.6	576.7	482.0	444.0	464.4	487.6	486.7
22.5°	2044.4	1843.0	1344.4	907.0	598.5	463.5	422.2	413.7	432.7	467.3	471.5
25°	1991.3	1822.6	1212.2	745.0	485.7	397.1	385.8	391.0	414.7	455.4	455.4
27.5°	2046.8	1739.7	1046.4	606.1	408.5	353.5	361.6	374.9	392.4	438.8	447.4
30°	2028.7	1767.2	912.7	488.1	360.2	323.2	341.2	354.5	374.4	422.7	427.0
32.5°	2077.1	1693.7	800.4	410.4	328.4	311.3	315.6	333.6	359.7	397.6	405.2
35°	2151.0	1720.7	671.5	369.2	312.8	297.6	305.7	319.9	345.9	382.9	389.1
37.5°	2387.0	1719.3	582.4	346.4	309.9	294.8	298.6	308.5	338.8	372.5	386.7
40°	2538.7	1817.9	501.4	341.2	306.6	293.3	290.0	300.9	325.1	364.9	374.9
42.5°	2823.5	1878.0	466.3	339.3	306.1	285.3	282.0	294.8	318.5	355.4	370.6
45°	3124.4	1963.8	438.4	338.4	304.7	283.9	273.9	290.0	309.9	345.5	363.0
47.5°	3478.4	2145.3	422.7	335.0	301.9	285.8	271.1	279.1	301.4	336.9	354.5
50°	3941.9	2385.6	426.0	330.3	306.1	286.2	266.8	270.6	291.0	325.6	343.6
52.5°	4505.3	2757.6	447.4	332.2	309.0	283.9	264.9	263.0	280.5	310.9	328.9
55°	5184.4	3285.5	511.3	341.2	309.0	283.4	262.1	253.5	266.8	291.4	309.0
57.5°	6003.8	3896.8	636.4	345.5	306.6	280.5	255.9	240.7	248.8	269.2	285.8
60°	6707.5	4390.2	765.3	348.3	311.3	273.9	243.6	224.6	229.8	245.5	260.2
62.5°	7066.2	4528.5	804.2	345.9	324.1	269.6	228.9	207.6	208.0	221.3	234.6
65°	7133.5	4344.2	648.3	343.6	340.7	269.2	218.5	192.9	189.6	199.0	210.4
67.5°	6654.0	3770.8	467.7	338.4	342.6	266.3	211.4	181.0	172.5	179.1	188.6
70°	5649.8	3036.7	392.9	327.9	319.9	252.1	199.0	168.7	157.3	162.1	169.2
72.5°	4212.0	2246.7	342.6	305.7	278.7	215.6	180.1	155.0	143.1	146.4	151.6
75°	2340.1	1198.5	286.7	265.9	227.5	174.4	153.5	137.4	127.0	128.4	134.1
77.5°	777.2	442.1	210.4	210.9	172.0	134.6	126.5	117.5	109.5	109.9	114.7
80°	352.1	244.5	150.7	151.6	119.9	97.6	97.1	94.3	89.1	87.7	91.0
82.5°	204.2	148.3	103.3	98.6	77.2	63.5	70.6	69.2	67.8	62.6	63.5
85°	100.5	79.6	54.0	51.2	42.7	31.8	37.9	39.3	37.9	32.2	31.8
87.5°	24.6	26.1	13.3	12.3	7.1	3.3	5.7	5.7	7.1	4.7	2.4
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)