

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: P596804

Luminaire Tested: **MSA-SA4C-827-U-T4W**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596804  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-827-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: 17935 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

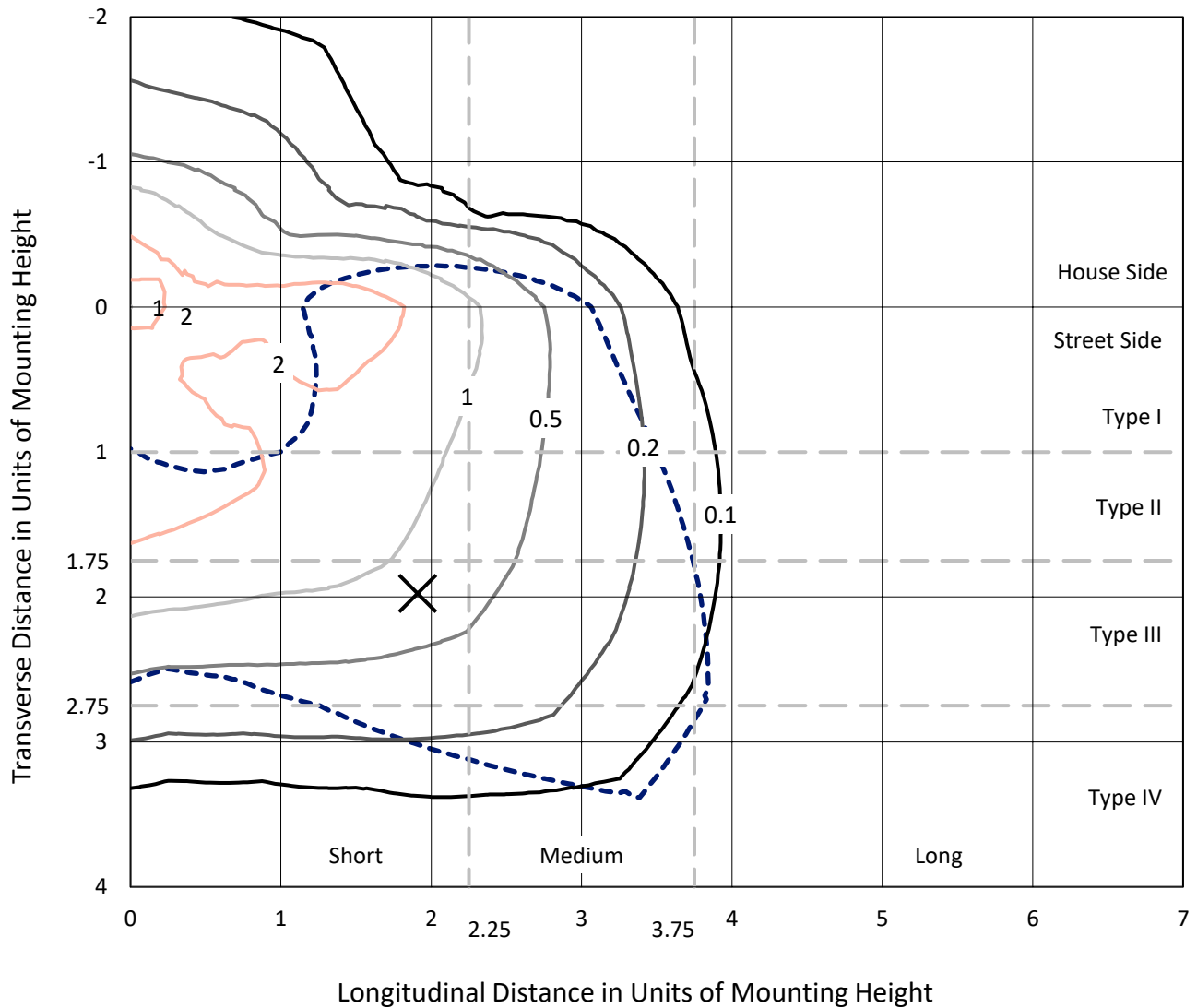
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

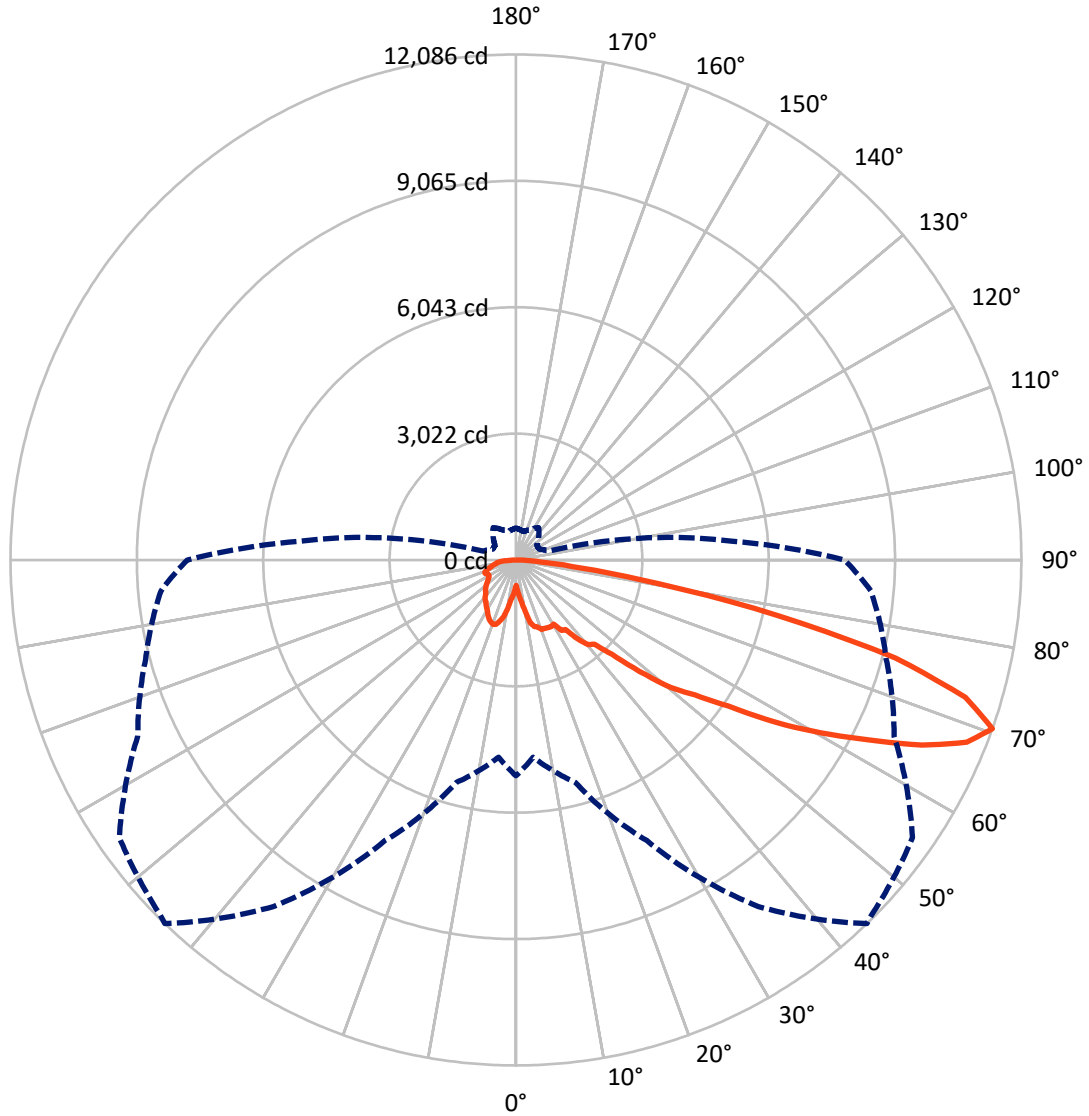
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 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	3957.2	0.0	3957.2
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	13977.8	0.0	13977.8
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	17935.0	0.0	17935.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.6	0.5
10°-20°	440.2	2.5
20°-30°	822.5	4.6
30°-40°	1320.3	7.4
40°-50°	2228.5	12.4
50°-60°	3971.2	22.1
60°-70°	5432.1	30.3
70°-80°	3194.4	17.8
80°-90°	430.1	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°	17935.0	100.0
0°-180°	17935.0	100.0

**Coefficient of Utilization**



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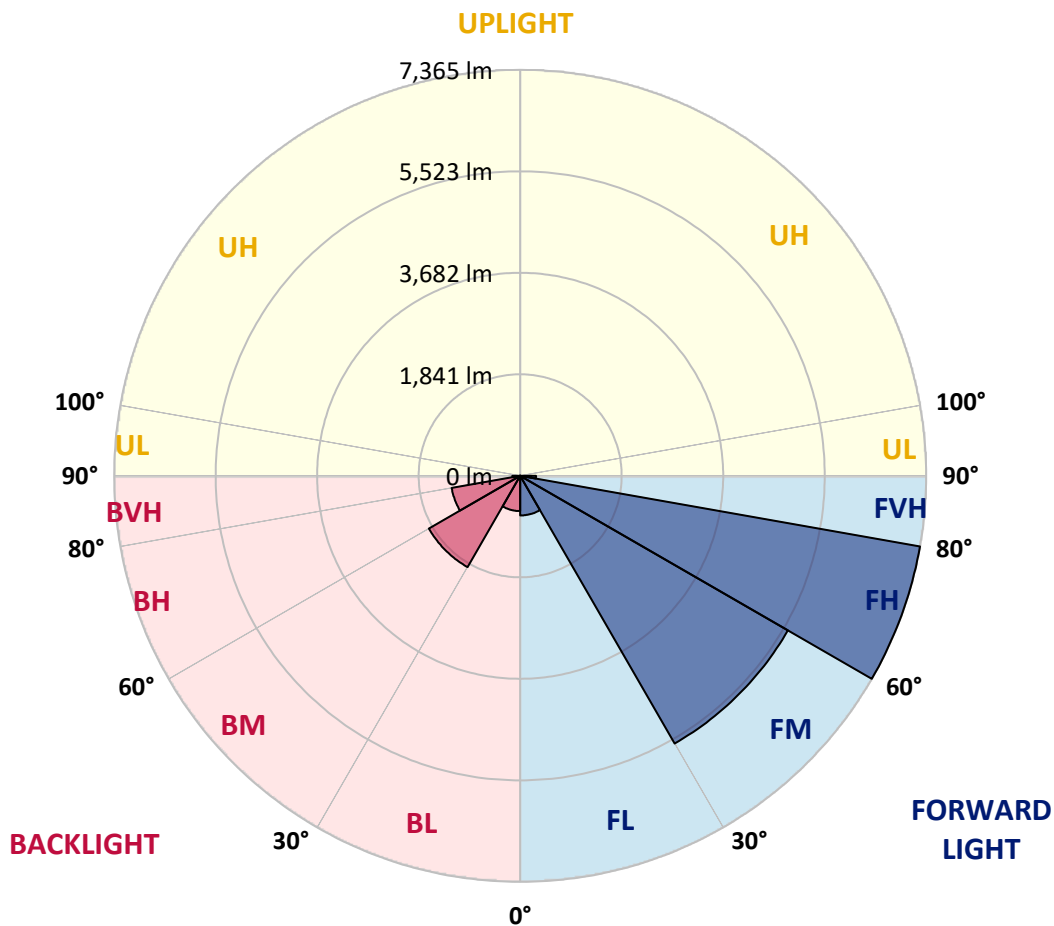
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	718.7	4.0			
FM (30°-60°)	5607.8	31.3			
FH (60°-80°)	7364.7	41.1			G3/7500
FVH (80°-90°)	286.7	1.6			G3/500
BL (0°-30°)	639.6	3.6	B2/1000		
BM (30°-60°)	1912.3	10.7	B2/2500		
BH (60°-80°)	1261.9	7.0	B3/2500		G3/2500
BVH (80°-90°)	143.4	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-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6
2.5°	739.8	725.1	689.8	701.6	716.3	722.1	720.7	719.2	696.4	688.3	728.8
5°	1005.3	972.9	947.2	936.9	903.1	876.6	860.4	903.1	896.4	907.5	935.4
7.5°	1255.3	1234.7	1176.6	1156.0	1086.9	1041.3	1036.2	1070.0	1078.8	1061.2	1109.0
10°	1416.4	1381.1	1369.3	1320.0	1272.2	1264.9	1260.5	1245.0	1223.7	1222.2	1179.6
12.5°	1541.4	1559.8	1569.3	1512.7	1514.2	1540.6	1526.7	1464.2	1428.1	1364.9	1370.0
15°	1765.7	1792.1	1716.4	1680.4	1611.2	1650.9	1645.8	1593.6	1588.4	1547.3	1499.5
17.5°	1961.3	1973.0	1846.6	1764.2	1740.7	1683.3	1698.7	1700.2	1632.6	1706.1	1663.4
20°	1977.5	2019.4	1873.8	1709.8	1780.4	1773.0	1775.2	1760.5	1671.5	1792.9	1776.7
22.5°	2056.9	1992.9	1862.0	1742.1	1760.5	1771.5	1781.8	1764.2	1759.0	1826.7	1876.0
25°	2042.2	2021.6	1889.2	1787.7	1789.9	1792.1	1797.3	1850.2	1844.3	1936.3	1962.0
27.5°	2179.7	2148.1	1897.3	1872.3	1814.9	1802.4	1767.1	1877.4	1963.5	1961.3	2103.2
30°	2441.5	2409.1	2085.6	2012.7	1909.1	1781.1	1848.8	1995.8	2063.5	2086.3	2266.5
32.5°	2850.4	2903.3	2456.2	2162.8	2034.1	2006.1	1998.8	1984.1	2151.7	2264.3	2428.2
35°	3437.2	3395.3	2893.0	2484.1	2165.7	2045.8	2062.0	2151.7	2351.0	2423.8	2575.3
37.5°	4109.3	4022.6	3452.6	2848.1	2545.2	2395.1	2341.5	2428.2	2472.4	2529.7	2839.3
40°	4792.5	4580.7	4002.0	3326.9	2773.1	2659.9	2612.8	2506.2	2609.9	2726.1	3119.5
42.5°	5452.1	5288.2	4599.8	3898.3	3157.0	2753.3	2727.5	2623.1	2944.5	3067.3	3524.0
45°	6143.4	5763.2	5212.4	4543.2	3718.1	3211.4	3173.2	2985.7	3397.5	3653.4	4094.6
47.5°	6608.2	6255.9	5773.5	5066.8	4188.0	3977.7	3904.9	3584.3	3957.8	4290.2	4976.4
50°	7047.9	6685.4	6178.7	5639.7	5038.9	4796.9	4641.8	4107.9	4655.7	5197.0	6106.6
52.5°	7677.4	7353.1	6649.4	6216.9	5952.9	5358.0	5242.6	4949.1	5472.0	6202.2	7342.1
55°	8350.3	7908.3	7270.8	7031.0	6924.4	6162.5	6068.4	5881.6	6558.9	7231.0	8543.0
57.5°	8647.4	8186.3	7834.8	7691.4	7682.6	7331.8	7223.7	7093.5	7670.1	8113.5	9673.3
60°	8883.5	8388.5	8248.1	8328.2	8619.4	8388.5	8248.1	8133.4	8574.6	8985.7	10595.4
62.5°	8840.1	8343.7	8415.7	8659.9	9403.4	9471.0	9362.9	9084.9	9471.0	9700.5	11124.2
65°	8140.0	7681.1	8101.0	8680.5	10132.1	10672.6	10666.8	9939.5	10073.3	10073.3	11068.3
67.5°	6913.4	6438.3	7125.9	8498.8	10635.9	11625.0	11626.4	10845.5	10128.5	10035.8	10203.5
70°	5162.4	4732.2	5505.1	7401.7	10116.0	12086.1	12019.1	11576.4	9977.0	9167.3	8523.1
72.5°	3083.5	2805.5	3516.6	5388.2	8629.0	11238.2	11416.1	10734.4	9133.5	7623.7	6092.7
75°	1400.2	1279.6	1652.4	3095.2	6160.3	9374.0	9567.4	9059.2	7254.6	5483.0	3521.0
77.5°	599.3	567.0	721.4	1373.0	3396.7	6410.4	6806.7	6474.3	4915.3	3186.4	1557.5
80°	385.3	364.8	443.4	660.4	1577.4	3463.7	3804.9	3680.6	2504.0	1239.1	548.6
82.5°	230.2	223.6	296.4	414.8	860.4	1524.5	1717.9	1763.5	1039.8	556.0	314.0
85°	125.8	127.2	162.5	251.5	516.2	593.5	635.4	691.3	489.8	322.1	152.2
87.5°	41.9	48.5	65.4	102.2	183.8	167.7	168.4	195.6	206.6	133.8	48.5
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°	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6	609.6
2.5°	735.4	722.1	688.3	690.5	703.0	706.0	709.6	688.3	683.9	724.4	728.0
5°	939.8	896.4	876.6	870.0	850.8	844.2	879.5	895.7	911.9	943.5	958.9
7.5°	1103.8	1055.3	1019.2	986.2	958.2	942.0	1001.6	1047.2	1075.1	1139.8	1169.3
10°	1178.8	1136.9	1123.7	1097.2	1118.5	1167.1	1178.1	1179.6	1241.3	1239.9	1252.4
12.5°	1328.1	1300.9	1257.5	1267.1	1323.0	1373.0	1359.0	1380.3	1402.4	1455.3	1431.1
15°	1464.2	1456.8	1416.4	1423.0	1434.0	1496.5	1504.6	1525.9	1559.8	1601.7	1573.0
17.5°	1631.8	1628.9	1530.3	1521.5	1547.3	1608.3	1589.2	1551.7	1663.4	1708.3	1696.5
20°	1745.8	1723.7	1597.3	1559.8	1625.2	1633.3	1611.2	1551.7	1648.7	1746.5	1773.0
22.5°	1840.7	1814.9	1684.8	1611.2	1598.0	1601.7	1601.7	1590.6	1638.4	1718.6	1717.9
25°	1917.1	1941.4	1776.0	1705.4	1634.8	1546.5	1535.5	1545.0	1572.3	1726.7	1721.5
27.5°	2109.1	2042.2	1806.8	1753.9	1609.0	1470.0	1500.2	1514.9	1523.7	1692.9	1720.8
30°	2234.1	2254.7	1917.1	1782.6	1571.5	1384.7	1395.0	1437.7	1489.2	1689.2	1697.3
32.5°	2402.5	2358.4	2089.2	1734.8	1471.5	1333.3	1314.1	1371.5	1448.0	1629.6	1651.7
35°	2559.1	2611.4	2162.0	1725.9	1401.6	1256.0	1276.6	1296.5	1375.9	1563.4	1589.2
37.5°	2926.8	2807.7	2366.5	1683.3	1343.5	1217.1	1195.0	1225.2	1292.8	1437.7	1497.2
40°	3206.3	3213.6	2410.6	1629.6	1232.5	1161.2	1114.1	1144.3	1172.9	1288.4	1314.1
42.5°	3730.6	3570.3	2518.7	1512.0	1162.6	1077.3	1050.9	1064.1	1068.5	1117.1	1159.7
45°	4397.6	4021.8	2561.3	1353.8	1070.7	1042.8	989.1	982.5	958.2	964.8	1002.3
47.5°	5320.5	4726.3	2530.5	1185.4	989.1	997.9	920.7	890.6	856.7	864.8	900.1
50°	6514.0	5626.4	2528.3	1042.8	933.2	939.1	875.8	821.4	787.6	804.5	835.4
52.5°	7853.2	6529.5	2538.5	945.0	872.2	869.2	846.4	780.2	753.0	770.7	806.0
55°	9134.2	7306.1	2615.0	883.2	808.9	814.1	822.9	767.0	736.9	753.0	789.8
57.5°	10249.1	7919.4	2586.3	817.7	750.1	773.6	797.2	748.6	725.8	749.4	786.1
60°	11028.6	8204.0	2359.9	755.2	706.7	739.1	784.7	746.4	743.5	794.2	838.3
62.5°	11313.2	8098.8	1918.6	706.0	681.0	734.6	813.3	795.0	797.9	860.4	921.4
65°	10897.7	7545.8	1431.1	674.3	661.1	756.0	879.5	823.6	783.2	834.7	890.6
67.5°	9715.9	6562.6	1045.7	647.1	638.3	789.8	940.6	820.7	745.7	797.9	843.5
70°	7860.5	5180.1	809.7	612.6	608.2	767.0	946.4	798.6	705.2	739.1	764.8
72.5°	5386.0	3546.8	670.7	579.5	556.0	679.5	898.6	749.4	656.7	676.6	697.9
75°	3009.9	1990.7	564.0	538.3	486.8	605.2	842.8	719.9	620.7	626.5	656.0
77.5°	1350.9	861.1	478.7	483.9	424.3	535.4	769.9	672.9	565.5	552.3	581.7
80°	511.1	419.9	388.3	408.9	356.7	464.0	694.2	630.2	507.4	490.5	507.4
82.5°	296.4	254.4	288.3	314.7	283.1	426.5	662.6	591.2	447.1	404.5	419.2
85°	137.5	131.6	172.8	204.4	197.8	332.4	567.0	444.9	318.4	269.2	297.8
87.5°	36.0	40.4	61.0	72.1	73.5	114.0	218.4	165.5	124.3	94.1	90.5
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)