

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: P596786

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

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596786  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-827-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18165 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U0 - G4

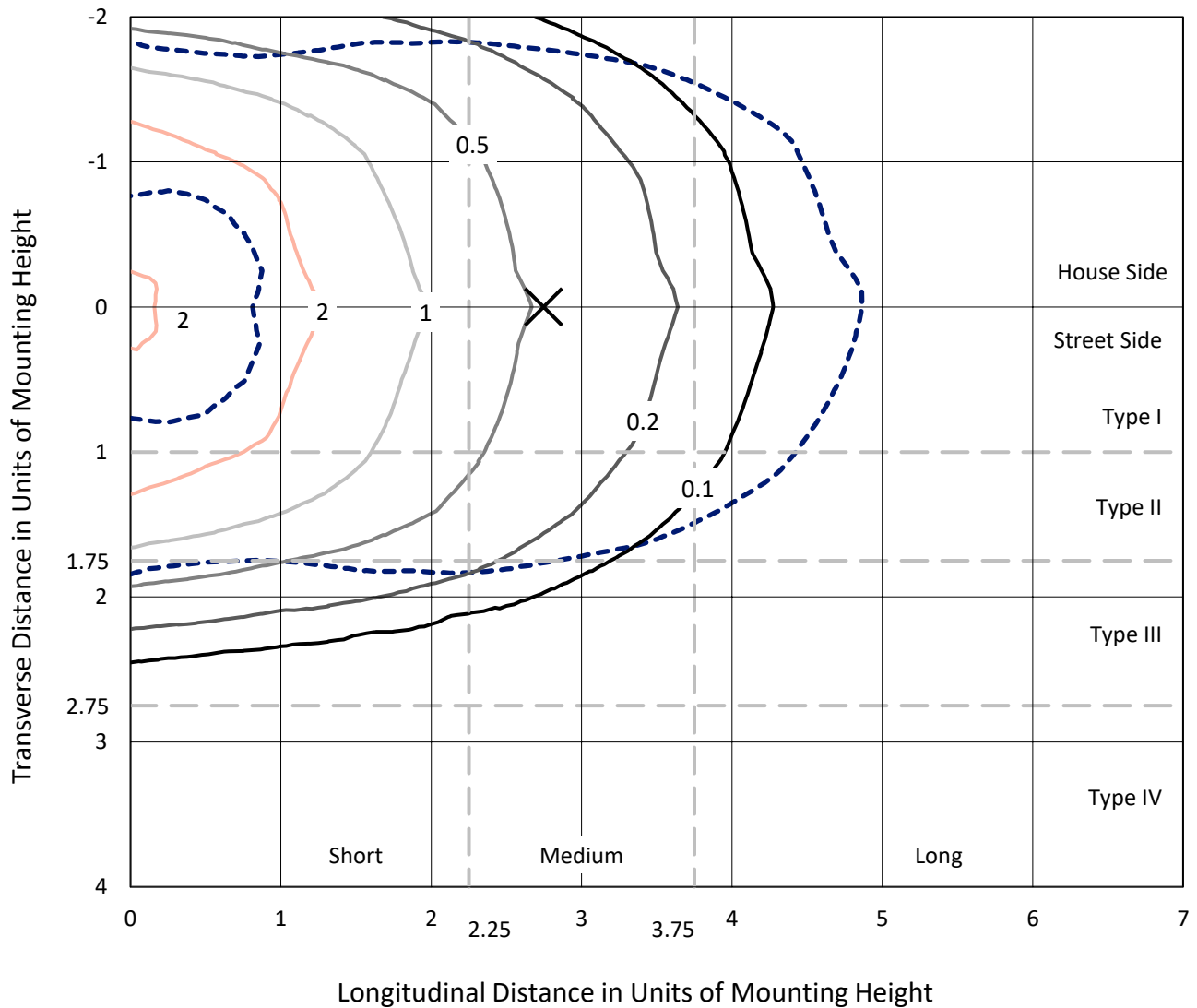
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

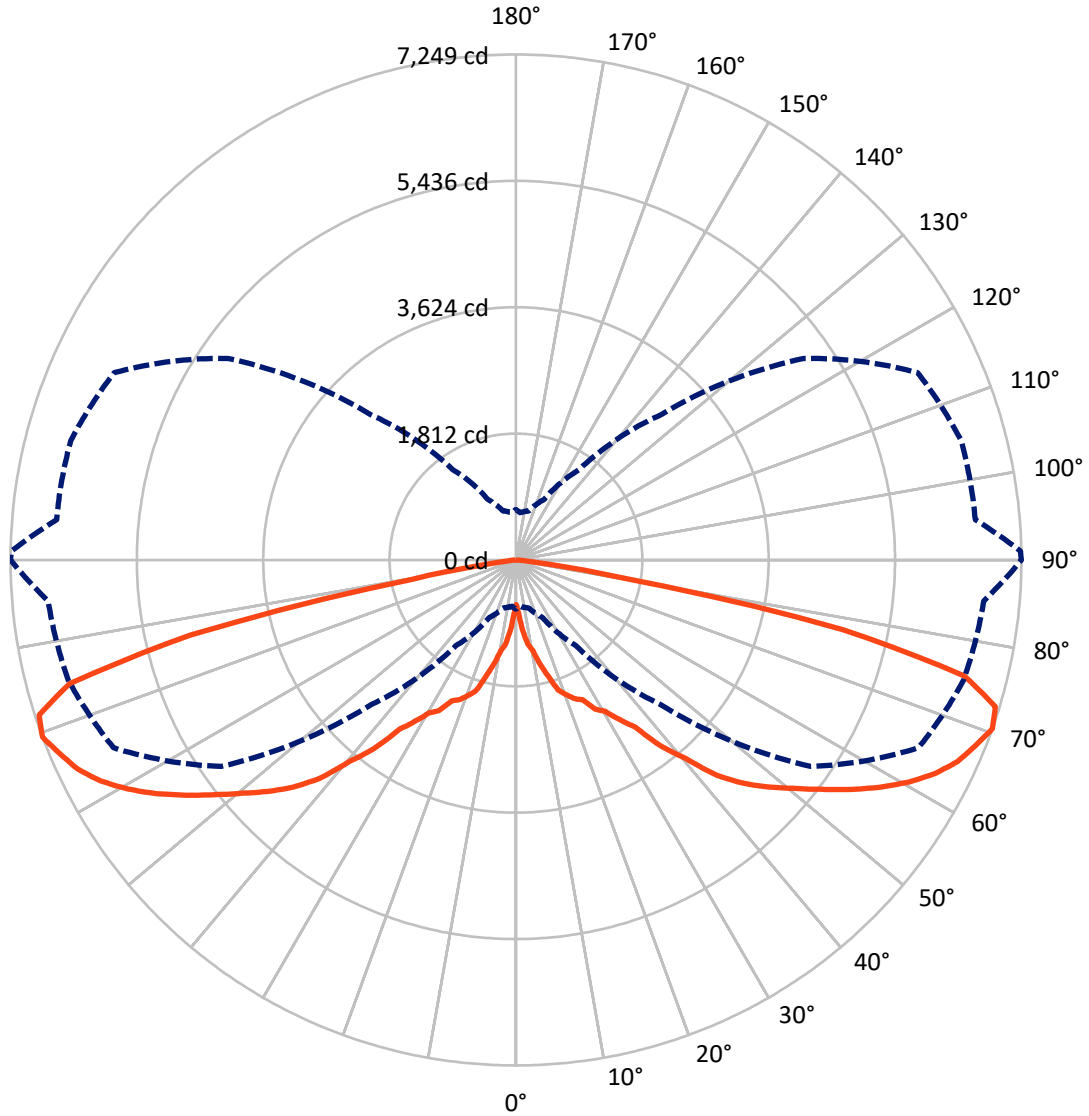
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	9048.9	0.0	9048.9
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	9116.1	0.0	9116.1
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	18165.0	0.0	18165.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.2	0.5
10°-20°	440.8	2.4
20°-30°	953.1	5.2
30°-40°	1818.3	10.0
40°-50°	3303.3	18.2
50°-60°	4640.4	25.5
60°-70°	4430.7	24.4
70°-80°	2273.8	12.5
80°-90°	208.5	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°	18165.0	100.0
0°-180°	18165.0	100.0

**Coefficient of Utilization**



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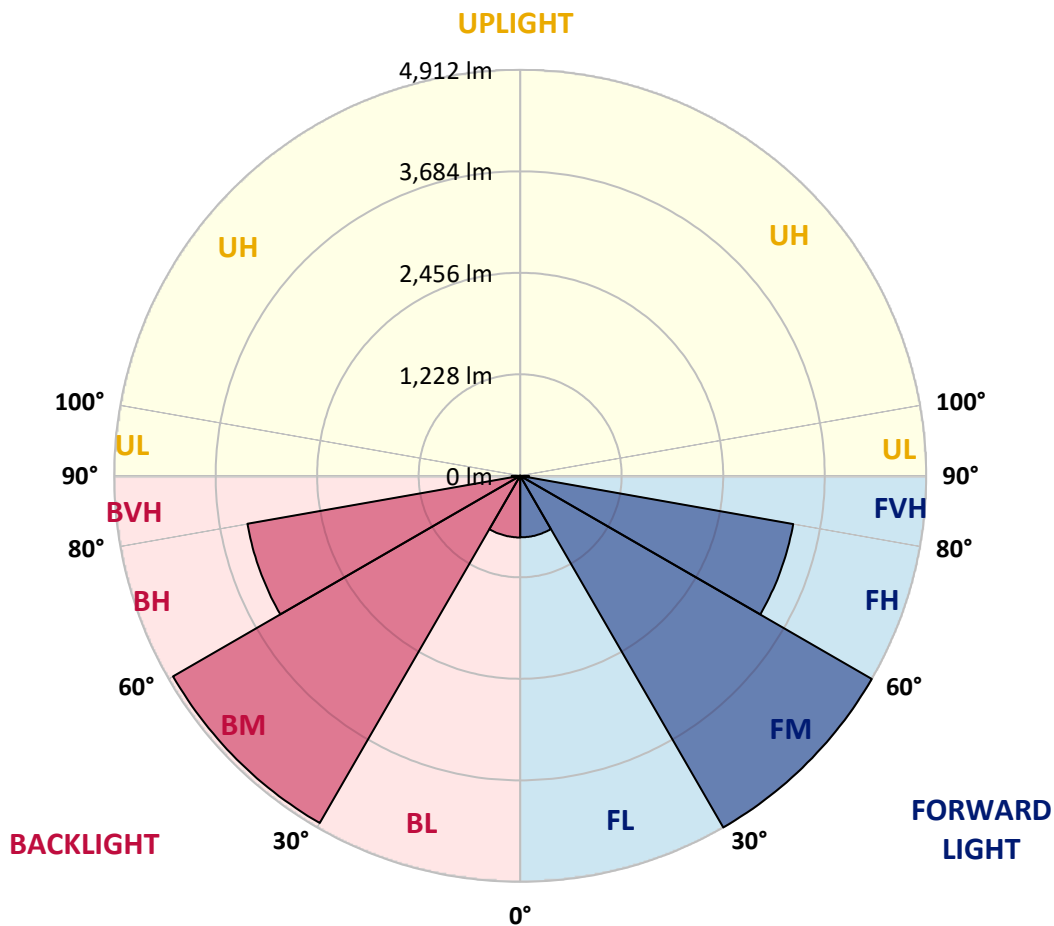
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	744.3	4.1			
FM (30°-60°)	4912.0	27.0			
FH (60°-80°)	3354.1	18.5			G2/5000
FVH (80°-90°)	105.8	0.6			G2/225
BL (0°-30°)	745.7	4.1	B2/1000		
BM (30°-60°)	4850.0	26.7	B3/5000		
BH (60°-80°)	3350.4	18.4	B4/5000		G4/5000
BVH (80°-90°)	102.7	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6
2.5°	772.3	743.6	707.5	728.8	737.7	753.1	750.9	743.6	711.9	764.9	770.8
5°	966.6	921.0	904.1	901.1	905.5	890.8	938.7	924.7	950.4	998.3	1009.3
7.5°	1100.6	1066.8	1030.7	1041.7	996.1	989.5	1051.3	1106.5	1120.5	1208.1	1214.0
10°	1163.9	1130.8	1140.4	1133.8	1128.6	1171.3	1200.0	1240.5	1298.7	1306.8	1319.3
12.5°	1217.7	1230.9	1272.9	1271.4	1340.6	1416.5	1405.4	1447.4	1456.9	1558.5	1527.6
15°	1353.9	1381.1	1378.2	1403.9	1434.1	1558.5	1559.3	1630.7	1696.2	1736.0	1725.7
17.5°	1553.4	1563.0	1523.2	1524.7	1612.3	1663.1	1719.8	1707.3	1878.0	1956.1	1961.2
20°	1672.6	1696.9	1651.3	1590.9	1746.3	1816.2	1847.9	1775.0	1957.6	2062.8	2062.8
22.5°	1881.0	1818.4	1749.2	1708.7	1845.7	1920.0	1916.3	1895.7	1992.9	2179.2	2161.5
25°	1995.8	1960.5	1925.9	1936.2	2005.4	2043.7	2094.5	2046.6	2137.9	2276.3	2218.2
27.5°	2213.8	2148.2	1978.2	2113.6	2113.6	2084.9	2192.4	2215.2	2155.6	2380.9	2424.3
30°	2460.4	2437.6	2196.8	2340.4	2296.2	2215.2	2421.4	2406.6	2306.5	2536.2	2516.3
32.5°	2693.8	2768.9	2540.6	2461.9	2528.1	2559.0	2450.8	2495.0	2514.1	2735.7	2726.2
35°	3051.6	3114.9	2812.3	2792.4	2682.0	2653.3	2735.7	2750.4	2751.9	2985.3	2942.6
37.5°	3670.7	3579.4	3280.5	3139.9	3152.4	3117.8	3134.0	3017.7	3033.9	3372.5	3393.9
40°	4123.5	4020.4	3687.6	3586.8	3339.4	3487.4	3356.3	3344.6	3312.2	3750.9	3739.2
42.5°	4623.3	4482.0	4113.9	3979.2	3716.3	3656.0	3595.6	3731.8	3723.0	4129.4	4219.2
45°	5001.0	4715.4	4523.2	4439.3	4281.7	4133.8	4076.3	4137.5	4109.5	4411.3	4568.1
47.5°	5239.5	4991.4	4770.6	4593.9	4443.0	4805.9	4515.1	4433.4	4376.7	4714.6	4865.6
50°	5429.5	5143.1	4882.5	4823.6	4942.9	5263.8	4805.2	4624.8	4694.0	4942.9	5148.3
52.5°	5481.0	5177.7	4943.6	4906.0	5228.5	5286.7	5212.3	4909.0	4890.6	5216.7	5464.8
55°	5323.5	5032.7	4921.5	5126.9	5483.2	5434.6	5548.0	5354.4	5224.1	5496.5	5808.6
57.5°	4917.8	4629.2	4602.7	4898.7	5347.8	5761.5	5817.5	5664.3	5493.5	5782.1	6150.2
60°	4251.6	3988.0	4055.0	4381.9	5059.2	5648.1	5945.6	5805.7	5752.7	6039.8	6466.8
62.5°	3214.3	3008.9	3187.8	3643.5	4532.1	5501.6	6122.3	6100.2	6023.6	6313.7	6746.5
65°	2049.6	1941.4	2123.9	2587.0	3714.1	5235.1	6206.9	6236.4	6307.0	6525.0	6963.0
67.5°	1191.2	1133.8	1244.9	1624.1	2645.2	4298.7	6049.4	6471.9	6508.8	6633.9	7105.1
70°	704.5	667.0	712.6	912.2	1497.4	2928.6	5160.0	6368.9	6647.2	6734.0	7248.6
72.5°	537.4	502.1	482.2	539.6	781.8	1512.9	3488.9	5398.6	6536.0	6667.8	7188.3
75°	464.5	430.7	407.1	412.3	465.3	718.5	1891.3	3861.4	5569.4	6071.5	6639.8
77.5°	399.0	368.8	351.9	350.4	357.1	394.6	790.7	2093.8	3488.1	4364.2	4786.8
80°	319.5	296.0	292.3	292.3	282.7	279.8	393.1	796.6	1327.4	1574.0	1509.2
82.5°	233.4	209.8	233.4	230.4	215.7	203.9	250.3	344.5	409.3	323.2	255.5
85°	157.5	136.2	153.9	156.8	142.8	106.0	150.2	172.3	176.7	110.4	91.3
87.5°	55.2	53.7	86.9	75.8	61.8	36.1	55.2	59.6	62.6	39.0	26.5
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):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6	637.6
2.5°	773.0	764.2	720.0	726.6	743.6	751.7	759.8	726.6	710.4	762.0	756.8
5°	1012.3	979.9	943.8	938.7	940.9	909.2	927.6	919.5	923.2	956.3	963.0
7.5°	1212.5	1173.5	1125.7	1088.1	1023.3	971.8	1015.2	1037.3	1043.9	1102.8	1124.9
10°	1320.7	1287.6	1273.6	1203.0	1181.6	1175.0	1164.7	1129.3	1168.4	1154.4	1165.4
12.5°	1532.8	1526.1	1453.3	1406.9	1411.3	1423.8	1359.0	1323.7	1272.9	1352.4	1323.7
15°	1713.1	1741.9	1669.0	1584.3	1542.3	1563.7	1514.4	1462.8	1417.2	1441.5	1410.6
17.5°	1943.6	1942.8	1800.7	1710.2	1706.5	1705.0	1632.2	1518.8	1573.3	1556.3	1557.8
20°	2065.8	2045.9	1869.2	1764.7	1853.8	1822.1	1756.6	1610.8	1674.1	1694.7	1708.0
22.5°	2168.1	2157.1	1942.8	1866.3	1923.7	1924.4	1858.9	1782.3	1774.2	1838.3	1803.7
25°	2239.5	2283.7	2082.0	2063.6	2088.6	2063.6	1999.5	1949.5	1917.1	2012.8	1917.1
27.5°	2408.9	2346.3	2103.3	2207.9	2223.3	2097.4	2177.7	2118.8	2029.0	2147.5	2186.5
30°	2529.6	2566.4	2253.5	2411.1	2392.7	2276.3	2309.5	2307.3	2199.8	2430.9	2403.7
32.5°	2737.2	2693.0	2498.7	2486.2	2530.3	2525.2	2469.2	2496.5	2523.0	2690.8	2731.3
35°	2950.0	2997.1	2655.5	2740.1	2727.6	2648.1	2794.6	2777.7	2856.5	3201.0	3086.9
37.5°	3430.0	3205.4	3007.4	2996.3	3080.3	3092.8	3045.7	3120.0	3290.1	3555.1	3677.3
40°	3744.3	3642.0	3305.5	3318.8	3202.5	3402.7	3270.2	3509.5	3639.0	4085.9	4042.5
42.5°	4219.9	3970.3	3647.1	3691.3	3667.8	3571.3	3745.8	3868.7	4054.3	4395.1	4615.2
45°	4574.0	4231.7	4078.6	4051.3	4048.4	4216.2	4194.1	4390.7	4457.0	4713.2	4895.7
47.5°	4842.7	4551.9	4325.2	4356.1	4266.3	4745.6	4490.1	4551.2	4685.2	4926.7	5139.4
50°	5161.5	4837.6	4579.9	4656.5	4875.1	5059.2	4828.0	4723.5	4789.0	5073.9	5311.0
52.5°	5456.7	5115.9	4832.4	4896.5	5253.5	5169.6	5144.6	4880.3	4872.2	5101.1	5370.6
55°	5802.0	5417.7	5167.4	5370.6	5497.2	5393.4	5353.7	5031.9	4833.2	4960.5	5214.5
57.5°	6140.7	5716.6	5467.8	5509.7	5670.2	5567.2	5269.0	4773.5	4525.4	4550.5	4807.4
60°	6458.0	5991.2	5785.8	5745.3	5873.4	5469.2	4947.3	4300.2	3971.1	3910.7	4133.0
62.5°	6729.6	6220.9	6026.5	5916.1	6038.3	5472.9	4445.9	3540.4	3178.9	2974.3	3147.3
65°	6945.3	6411.6	6273.2	6215.7	6259.9	5140.2	3664.8	2599.5	2156.3	1929.6	2030.4
67.5°	7088.9	6518.3	6455.0	6530.1	5941.1	4281.0	2715.1	1663.8	1253.8	1130.1	1193.4
70°	7237.6	6612.6	6610.4	6354.9	5037.8	2951.4	1585.8	959.3	729.6	681.7	721.5
72.5°	7187.5	6500.7	6533.8	5557.6	3491.1	1577.7	837.1	542.6	494.0	510.9	546.3
75°	6656.0	5910.2	5750.5	3995.4	1980.4	733.3	482.2	410.8	407.9	433.6	468.2
77.5°	4828.0	4116.1	3693.5	2264.6	848.8	396.8	354.8	343.1	343.1	363.7	394.6
80°	1591.7	1377.4	1435.6	876.1	401.2	273.9	276.8	282.0	280.5	285.6	311.4
82.5°	261.4	270.9	418.9	357.8	242.2	187.0	209.1	219.4	222.3	198.8	226.0
85°	92.8	104.5	178.2	165.6	139.9	94.2	137.7	153.9	151.7	132.5	146.5
87.5°	28.7	36.8	64.8	50.1	42.0	25.8	51.5	60.4	75.8	30.9	28.0
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)