

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: P368538

Luminaire Tested: **MSA-SA4C-760-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368538  
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-SA4C-760-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: 24710 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U0 - G4

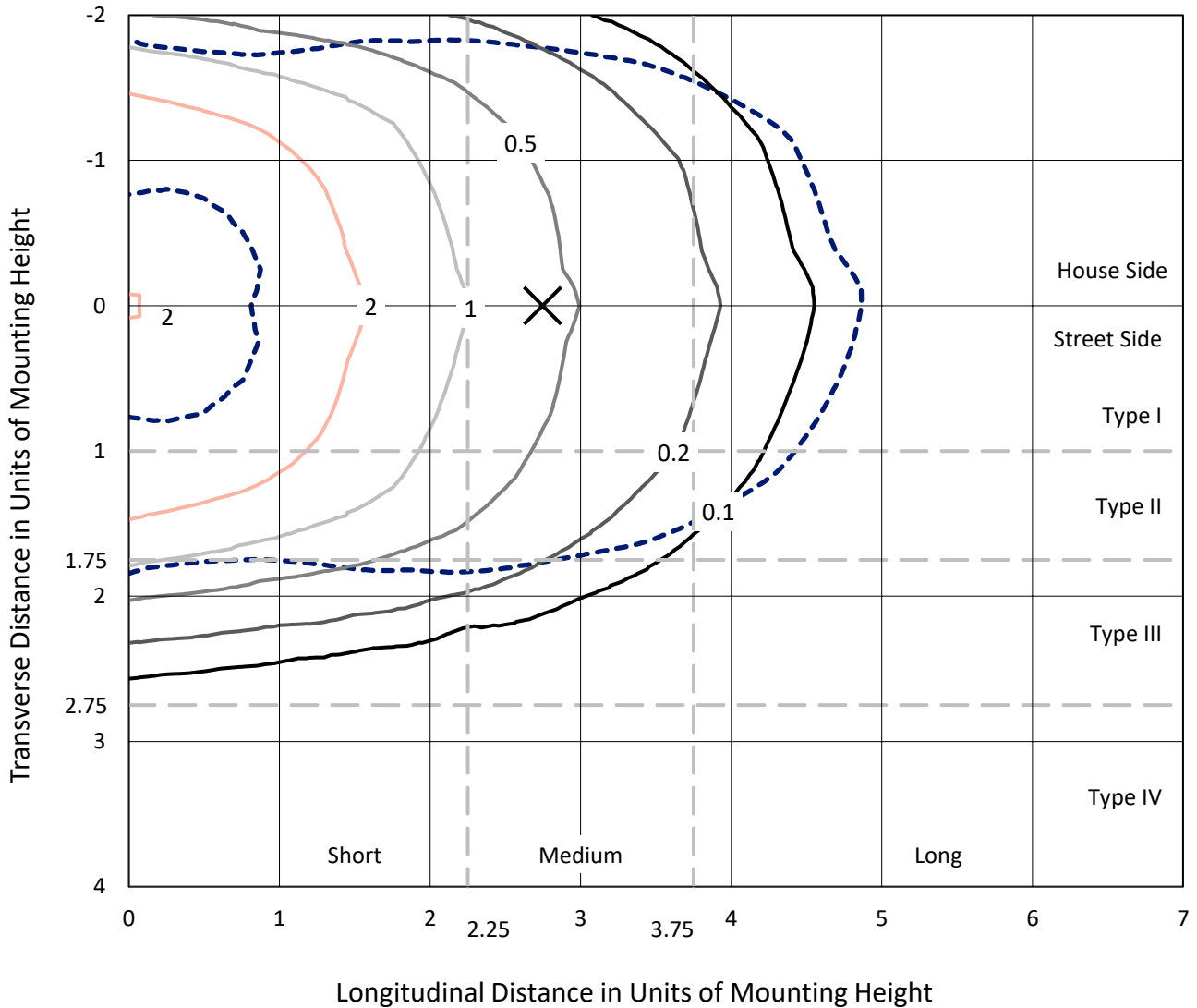
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

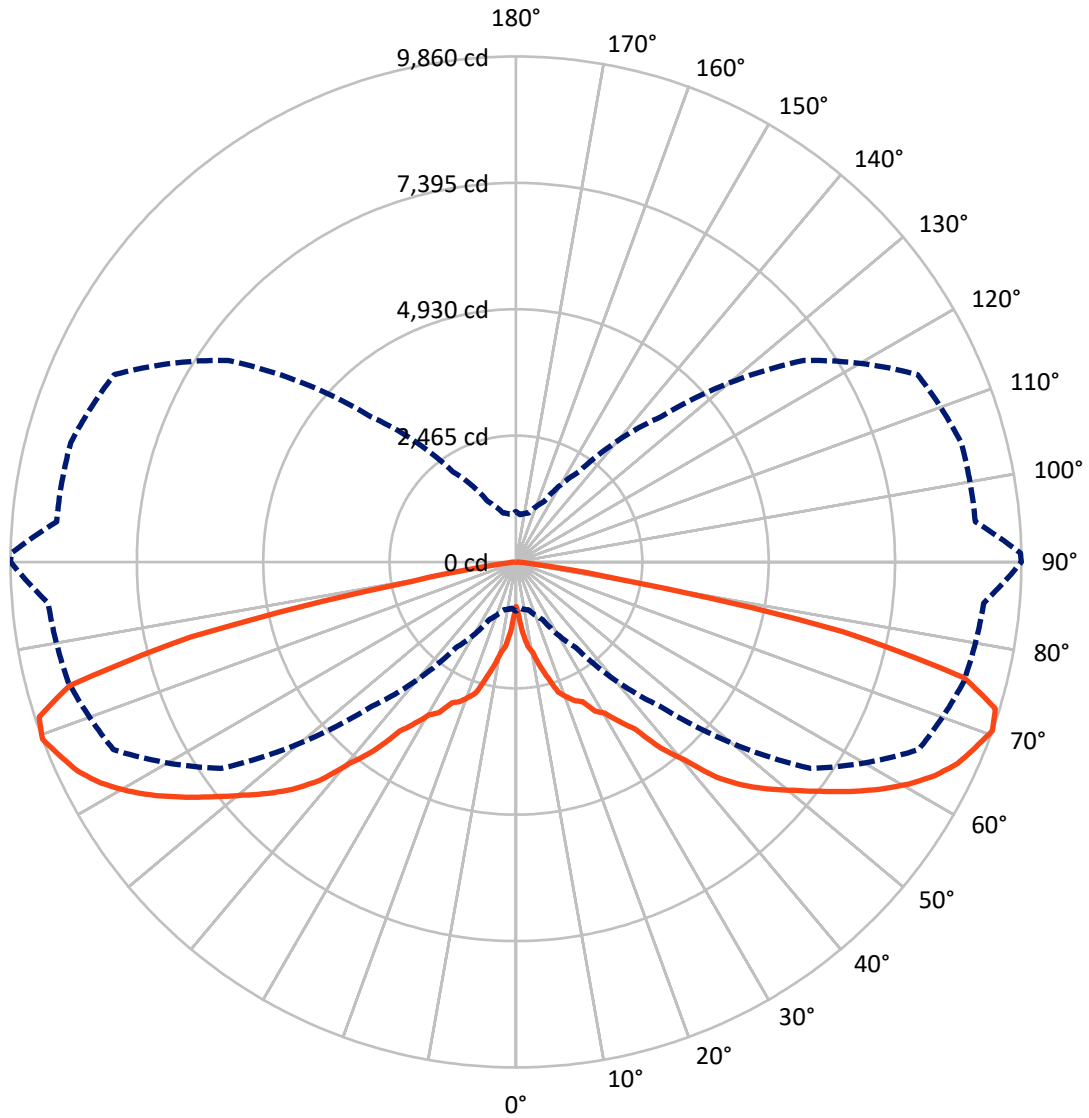
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 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	12309.2	0.0	12309.2
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	12400.8	0.0	12400.8
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	24710.0	0.0	24710.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.8	0.5
10°-20°	599.6	2.4
20°-30°	1296.4	5.2
30°-40°	2473.5	10.0
40°-50°	4493.5	18.2
50°-60°	6312.3	25.5
60°-70°	6027.0	24.4
70°-80°	3093.1	12.5
80°-90°	283.6	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°	24710.0	100.0
0°-180°	24710.0	100.0

**Coefficient of Utilization**



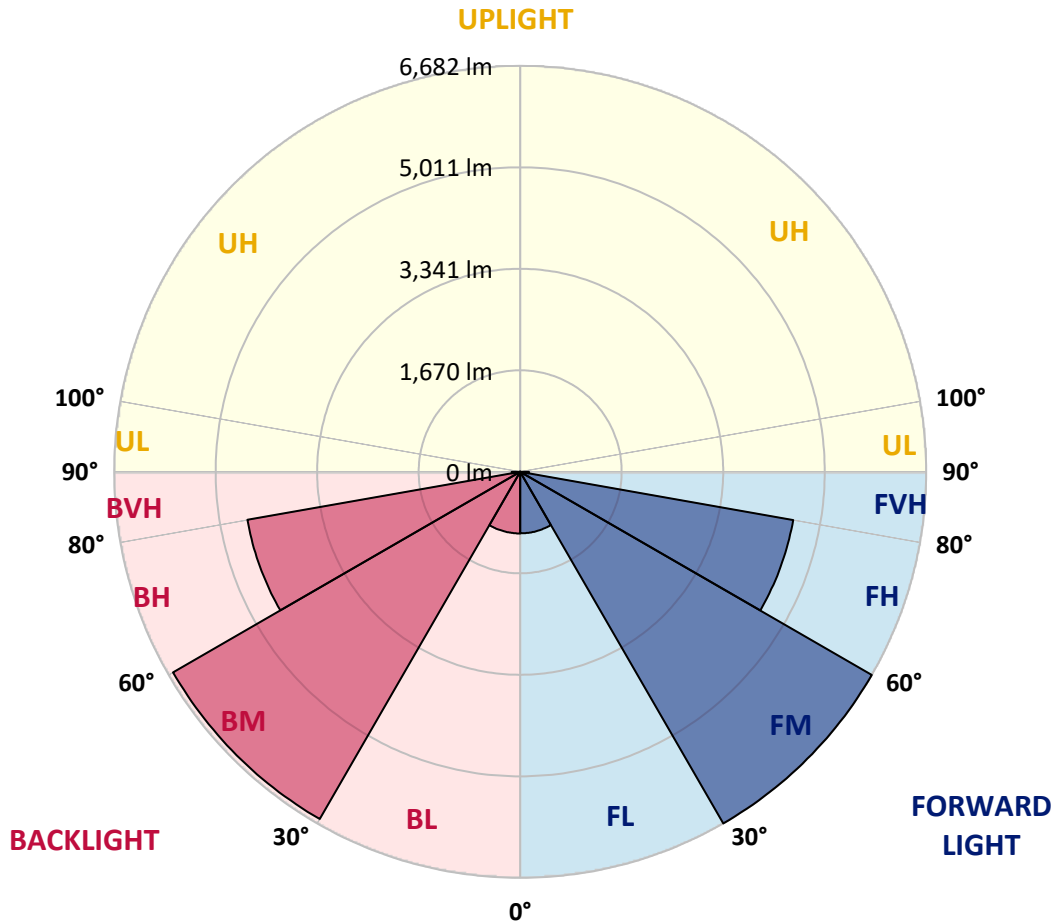
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1012.4	4.1			
FM (30°-60°)	6681.9	27.0			
FH (60°-80°)	4562.6	18.5			G2/5000
FVH (80°-90°)	143.9	0.6			G2/225
BL (0°-30°)	1014.4	4.1	B3/2500		
BM (30°-60°)	6597.5	26.7	B4/8500		
BH (60°-80°)	4557.6	18.4	B4/5000		G4/5000
BVH (80°-90°)	139.7	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°	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3
2.5°	1050.5	1011.5	962.4	991.4	1003.5	1024.5	1021.5	1011.5	968.4	1040.5	1048.5
5°	1314.9	1252.8	1229.8	1225.8	1231.8	1211.8	1276.9	1257.8	1292.9	1358.0	1373.0
7.5°	1497.2	1451.1	1402.0	1417.1	1355.0	1346.0	1430.1	1505.2	1524.2	1643.4	1651.4
10°	1583.3	1538.2	1551.3	1542.2	1535.2	1593.3	1632.4	1687.5	1766.6	1777.6	1794.6
12.5°	1656.4	1674.4	1731.5	1729.5	1823.7	1926.8	1911.8	1968.9	1981.9	2120.1	2078.0
15°	1841.7	1878.7	1874.7	1909.8	1950.8	2120.1	2121.1	2218.2	2307.4	2361.4	2347.4
17.5°	2113.1	2126.1	2072.0	2074.0	2193.2	2262.3	2339.4	2322.4	2554.7	2660.9	2667.9
20°	2275.3	2308.4	2246.3	2164.2	2375.5	2470.6	2513.7	2414.5	2662.9	2806.1	2806.1
22.5°	2558.7	2473.6	2379.5	2324.4	2510.7	2611.8	2606.8	2578.8	2711.0	2964.3	2940.3
25°	2715.0	2666.9	2619.8	2633.8	2728.0	2780.1	2849.2	2784.1	2908.2	3096.5	3017.4
27.5°	3011.4	2922.3	2690.9	2875.2	2875.2	2836.1	2982.4	3013.4	2932.3	3238.7	3297.8
30°	3346.9	3315.8	2988.4	3183.6	3123.6	3013.4	3293.8	3273.8	3137.6	3450.0	3423.0
32.5°	3664.3	3766.5	3456.0	3348.9	3439.0	3481.1	3333.9	3394.0	3420.0	3721.4	3708.4
35°	4151.1	4237.2	3825.6	3798.5	3648.3	3609.3	3721.4	3741.5	3743.5	4060.9	4002.8
37.5°	4993.3	4869.1	4462.5	4271.2	4288.3	4241.2	4263.2	4105.0	4127.0	4587.7	4616.7
40°	5609.2	5469.0	5016.3	4879.1	4542.6	4743.9	4565.7	4549.6	4505.6	5102.4	5086.4
42.5°	6289.2	6096.9	5596.2	5412.9	5055.4	4973.3	4891.1	5076.4	5064.4	5617.2	5739.4
45°	6802.9	6414.4	6153.0	6038.8	5824.5	5623.2	5545.1	5628.2	5590.2	6000.8	6214.1
47.5°	7127.4	6789.9	6489.5	6249.1	6043.8	6537.5	6142.0	6030.8	5953.7	6413.4	6618.7
50°	7385.8	6996.2	6641.7	6561.6	6723.8	7160.4	6536.5	6291.2	6385.3	6723.8	7003.2
52.5°	7455.9	7043.3	6724.8	6673.7	7112.4	7191.5	7090.3	6677.7	6652.7	7096.4	7433.8
55°	7241.6	6846.0	6694.8	6974.2	7458.9	7392.8	7547.0	7283.6	7106.4	7476.9	7901.5
57.5°	6689.8	6297.2	6261.1	6663.7	7274.6	7837.4	7913.5	7705.2	7472.9	7865.5	8366.2
60°	5783.4	5424.9	5516.0	5960.7	6882.0	7683.2	8087.8	7897.5	7825.4	8216.0	8796.8
62.5°	4372.4	4093.0	4336.3	4956.2	6165.0	7483.9	8328.1	8298.1	8194.0	8588.5	9177.4
65°	2788.1	2640.9	2889.2	3519.1	5052.4	7121.4	8443.3	8483.4	8579.5	8875.9	9471.8
67.5°	1620.4	1542.2	1693.5	2209.2	3598.2	5847.5	8229.0	8803.8	8853.9	9024.2	9665.1
70°	958.4	907.3	969.4	1240.8	2037.0	3983.8	7019.2	8663.6	9042.2	9160.4	9860.4
72.5°	731.1	683.0	656.0	734.1	1063.6	2058.0	4745.9	7343.7	8891.0	9070.2	9778.3
75°	631.9	585.9	553.8	560.8	632.9	977.4	2572.8	5252.7	7576.1	8259.0	9032.2
77.5°	542.8	501.7	478.7	476.7	485.7	536.8	1075.6	2848.2	4744.9	5936.7	6511.5
80°	434.6	402.6	397.6	397.6	384.6	380.6	534.8	1083.6	1805.6	2141.1	2053.0
82.5°	317.5	285.4	317.5	313.5	293.4	277.4	340.5	468.7	556.8	439.6	347.5
85°	214.3	185.3	209.3	213.3	194.3	144.2	204.3	234.3	240.4	150.2	124.2
87.5°	75.1	73.1	118.2	103.2	84.1	49.1	75.1	81.1	85.1	53.1	36.1
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°	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3	867.3
2.5°	1051.5	1039.5	979.4	988.4	1011.5	1022.5	1033.5	988.4	966.4	1036.5	1029.5
5°	1377.0	1332.9	1283.9	1276.9	1279.9	1236.8	1261.8	1250.8	1255.8	1300.9	1309.9
7.5°	1649.4	1596.3	1531.2	1480.2	1392.0	1321.9	1381.0	1411.1	1420.1	1500.2	1530.2
10°	1796.6	1751.6	1732.5	1636.4	1607.3	1598.3	1584.3	1536.2	1589.3	1570.3	1585.3
12.5°	2085.0	2076.0	1976.9	1913.8	1919.8	1936.8	1848.7	1800.6	1731.5	1839.7	1800.6
15°	2330.4	2369.5	2270.3	2155.1	2098.1	2127.1	2060.0	1989.9	1927.8	1960.9	1918.8
17.5°	2643.9	2642.9	2449.6	2326.4	2321.4	2319.4	2220.2	2066.0	2140.1	2117.1	2119.1
20°	2810.1	2783.1	2542.7	2400.5	2521.7	2478.6	2389.5	2191.2	2277.3	2305.4	2323.4
22.5°	2949.3	2934.3	2642.9	2538.7	2616.8	2617.8	2528.7	2424.5	2413.5	2500.6	2453.6
25°	3046.4	3106.5	2832.1	2807.1	2841.1	2807.1	2720.0	2651.9	2607.8	2738.0	2607.8
27.5°	3276.8	3191.7	2861.2	3003.4	3024.4	2853.2	2962.3	2882.2	2760.0	2921.3	2974.3
30°	3441.0	3491.1	3065.5	3279.8	3254.7	3096.5	3141.6	3138.6	2992.4	3306.8	3269.8
32.5°	3723.4	3663.3	3399.0	3381.9	3442.0	3435.0	3358.9	3396.0	3432.0	3660.3	3715.4
35°	4012.9	4076.9	3612.3	3727.4	3710.4	3602.3	3801.5	3778.5	3885.7	4354.4	4199.1
37.5°	4665.8	4360.4	4091.0	4075.9	4190.1	4207.1	4143.0	4244.2	4475.5	4836.1	5002.3
40°	5093.4	4954.2	4496.6	4514.6	4356.4	4628.8	4448.5	4774.0	4950.2	5558.1	5499.0
42.5°	5740.4	5400.9	4961.2	5021.3	4989.3	4858.1	5095.4	5262.7	5515.0	5978.7	6278.2
45°	6222.1	5756.4	5548.1	5511.0	5507.0	5735.4	5705.3	5972.7	6062.8	6411.4	6659.7
47.5°	6587.6	6192.0	5883.6	5925.6	5803.5	6455.4	6107.9	6191.0	6373.3	6701.8	6991.2
50°	7021.2	6580.6	6230.1	6334.2	6631.7	6882.0	6567.6	6425.4	6514.5	6902.1	7224.5
52.5°	7422.8	6959.2	6573.6	6660.7	7146.4	7032.3	6998.2	6638.7	6627.7	6939.1	7305.7
55°	7892.5	7369.7	7029.3	7305.7	7477.9	7336.7	7282.6	6845.0	6574.6	6747.8	7093.3
57.5°	8353.2	7776.3	7437.8	7494.9	7713.3	7573.0	7167.5	6493.5	6156.0	6190.0	6539.5
60°	8784.8	8149.9	7870.5	7815.4	7989.7	7439.9	6729.8	5849.5	5401.9	5319.8	5622.2
62.5°	9154.4	8462.3	8198.0	8047.7	8214.0	7444.9	6047.8	4816.0	4324.3	4045.9	4281.2
65°	9447.8	8721.7	8533.4	8455.3	8515.4	6992.2	4985.3	3536.2	2933.3	2624.8	2762.0
67.5°	9643.1	8866.9	8780.8	8883.0	8081.8	5823.5	3693.4	2263.3	1705.5	1537.2	1623.4
70°	9845.4	8995.1	8992.1	8644.6	6853.0	4014.9	2157.1	1304.9	992.4	927.4	981.4
72.5°	9777.3	8842.9	8888.0	7560.0	4748.9	2146.1	1138.7	738.1	672.0	695.0	743.1
75°	9054.2	8039.7	7822.4	5434.9	2693.9	997.5	656.0	558.8	554.8	589.9	636.9
77.5°	6567.6	5599.2	5024.3	3080.5	1154.7	539.8	482.7	466.7	466.7	494.7	536.8
80°	2165.2	1873.7	1952.8	1191.7	545.8	372.5	376.5	383.6	381.6	388.6	423.6
82.5°	355.5	368.5	569.8	486.7	329.5	254.4	284.4	298.4	302.4	270.4	307.4
85°	126.2	142.2	242.4	225.3	190.3	128.2	187.3	209.3	206.3	180.3	199.3
87.5°	39.1	50.1	88.1	68.1	57.1	35.1	70.1	82.1	103.2	42.1	38.1
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)