

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: P368340

Luminaire Tested: **MSA-SA4B-730-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368340
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-SA4B-730-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: 18171 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

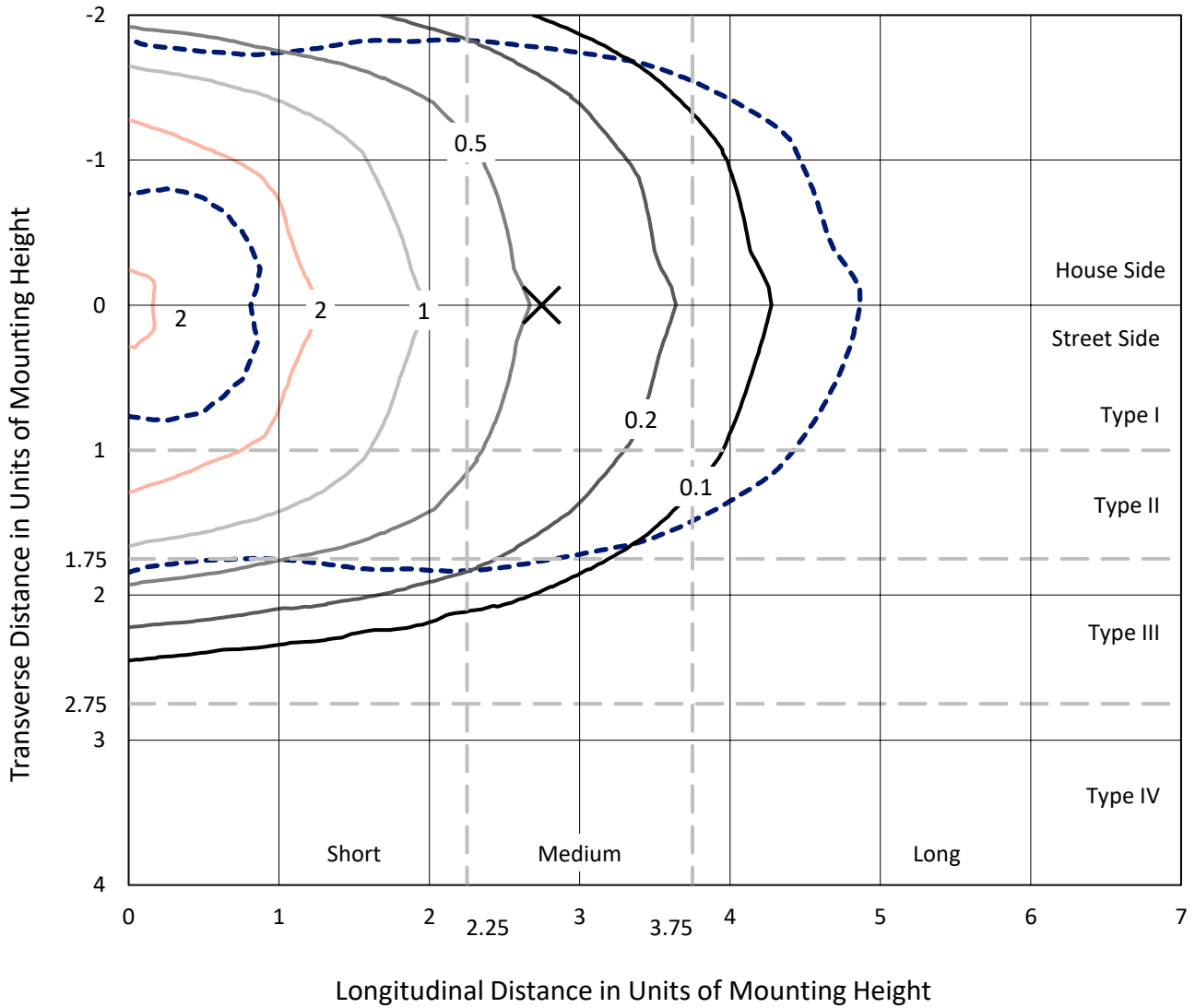
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

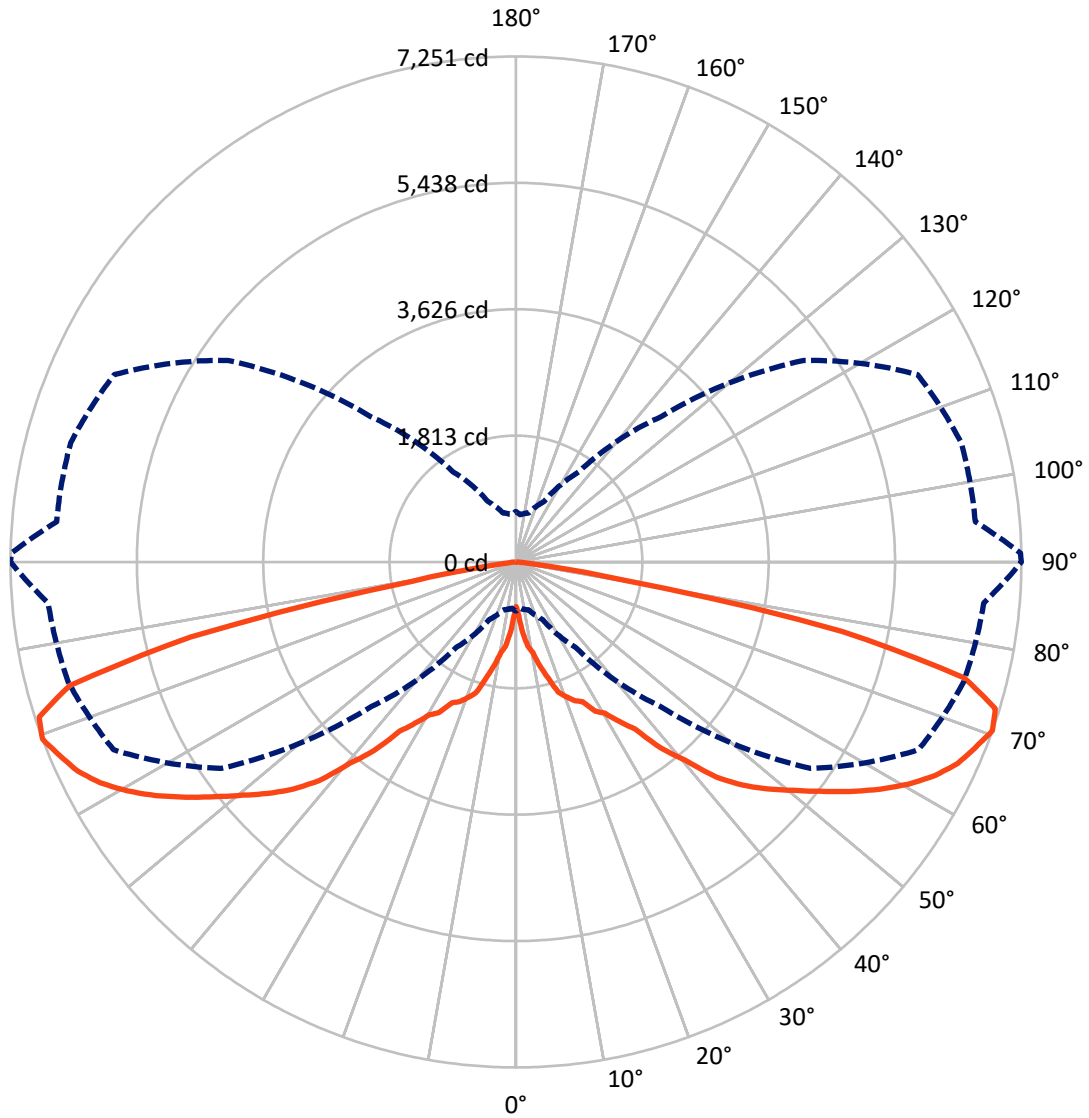
✕ Max cd
 - - - 1/2 Max cd



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
House Side	Lumens	9051.8	0.0	9051.8
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	9119.2	0.0	9119.2
	% Fixture	50.2	0.0	50.2
Total	Lumens	18171.0	0.0	18171.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.2	0.5
10°-20°	440.9	2.4
20°-30°	953.4	5.2
30°-40°	1818.9	10.0
40°-50°	3304.4	18.2
50°-60°	4641.9	25.5
60°-70°	4432.1	24.4
70°-80°	2274.6	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°	18171.0	100.0
0°-180°	18171.0	100.0

Coefficient of Utilization



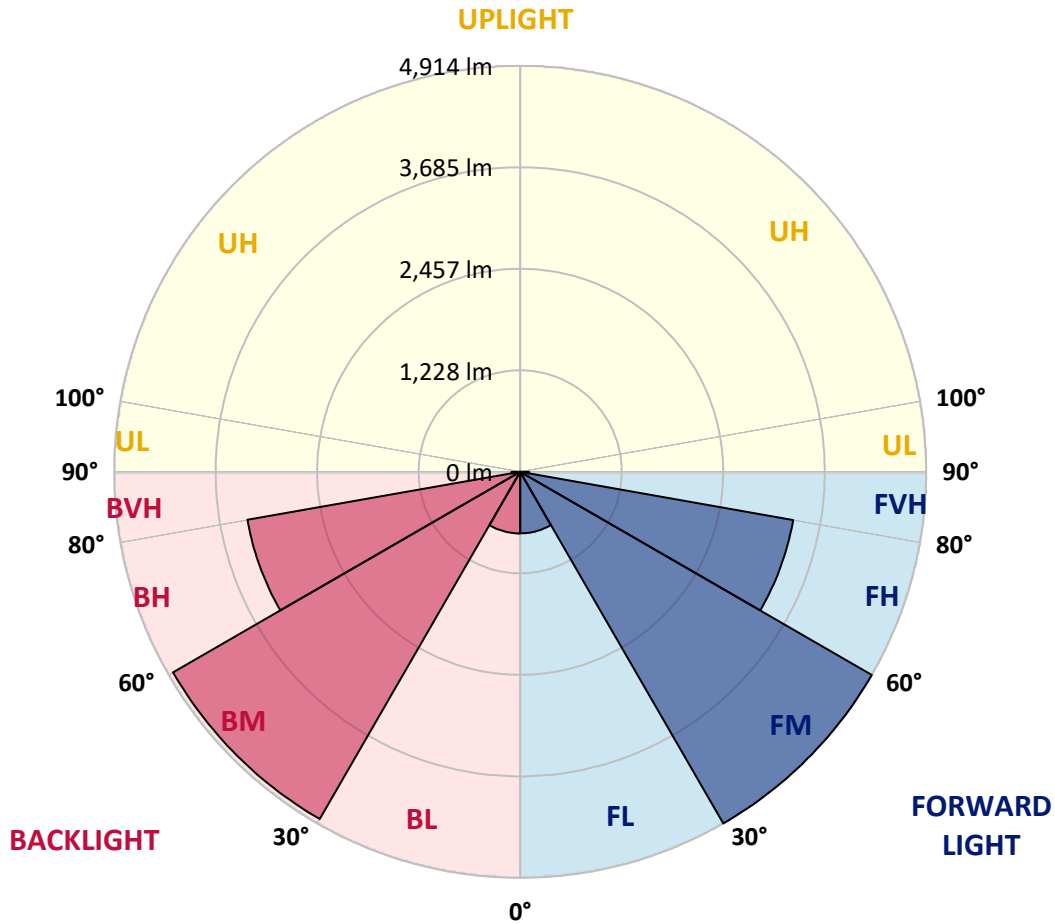
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	744.5	4.1			
FM (30°-60°)	4913.6	27.0			
FH (60°-80°)	3355.2	18.5			G2/5000
FVH (80°-90°)	105.8	0.6			G2/225
BL (0°-30°)	746.0	4.1	B2/1000		
BM (30°-60°)	4851.6	26.7	B3/5000		
BH (60°-80°)	3351.5	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°	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8
2.5°	772.5	743.8	707.7	729.1	737.9	753.4	751.2	743.8	712.1	765.2	771.1
5°	967.0	921.3	904.4	901.4	905.8	891.1	939.0	925.0	950.7	998.6	1009.7
7.5°	1101.0	1067.1	1031.0	1042.1	996.4	989.8	1051.6	1106.9	1120.9	1208.5	1214.4
10°	1164.3	1131.2	1140.8	1134.1	1129.0	1171.7	1200.4	1240.9	1299.1	1307.2	1319.7
12.5°	1218.1	1231.3	1273.3	1271.8	1341.1	1416.9	1405.9	1447.8	1457.4	1559.1	1528.1
15°	1354.3	1381.6	1378.6	1404.4	1434.6	1559.1	1559.8	1631.2	1696.8	1736.5	1726.2
17.5°	1553.9	1563.5	1523.7	1525.2	1612.8	1663.6	1720.3	1707.8	1878.7	1956.7	1961.9
20°	1673.2	1697.5	1651.8	1591.5	1746.8	1816.8	1848.5	1775.6	1958.2	2063.5	2063.5
22.5°	1881.6	1819.0	1749.8	1709.3	1846.3	1920.6	1917.0	1896.3	1993.6	2179.9	2162.2
25°	1996.5	1961.2	1926.5	1936.8	2006.1	2044.4	2095.2	2047.3	2138.6	2277.1	2218.9
27.5°	2214.5	2148.9	1978.8	2114.3	2114.3	2085.6	2193.1	2216.0	2156.3	2381.7	2425.1
30°	2461.2	2438.4	2197.6	2341.2	2297.0	2216.0	2422.2	2407.4	2307.3	2537.1	2517.2
32.5°	2694.7	2769.8	2541.5	2462.7	2529.0	2559.9	2451.6	2495.8	2515.0	2736.6	2727.1
35°	3052.6	3115.9	2813.2	2793.3	2682.9	2654.1	2736.6	2751.4	2752.8	2986.3	2943.6
37.5°	3671.9	3580.6	3281.6	3140.9	3153.5	3118.8	3135.0	3018.7	3034.9	3373.7	3395.0
40°	4124.8	4021.7	3688.9	3588.0	3340.5	3488.5	3357.5	3345.7	3313.3	3752.2	3740.4
42.5°	4624.9	4483.5	4115.3	3980.5	3717.6	3657.2	3596.8	3733.0	3724.2	4130.7	4220.6
45°	5002.7	4716.9	4524.7	4440.8	4283.2	4135.1	4077.7	4138.8	4110.8	4412.8	4569.6
47.5°	5241.3	4993.1	4772.2	4595.4	4444.4	4807.5	4516.6	4434.9	4378.2	4716.2	4867.2
50°	5431.3	5144.8	4884.1	4825.2	4944.5	5265.6	4806.8	4626.3	4695.6	4944.5	5150.0
52.5°	5482.8	5179.4	4945.2	4907.7	5230.2	5288.4	5214.0	4910.6	4892.2	5218.4	5466.6
55°	5325.2	5034.3	4923.1	5128.6	5485.0	5436.4	5549.8	5356.2	5225.8	5498.3	5810.5
57.5°	4919.4	4630.8	4604.3	4900.3	5349.5	5763.4	5819.4	5666.2	5495.3	5784.0	6152.3
60°	4253.0	3989.3	4056.3	4383.3	5060.8	5650.0	5947.5	5807.6	5754.6	6041.8	6468.9
62.5°	3215.3	3009.8	3188.8	3644.7	4533.6	5503.4	6124.3	6102.2	6025.6	6315.7	6748.8
65°	2050.3	1942.0	2124.6	2587.9	3715.4	5236.9	6209.0	6238.4	6309.1	6527.1	6965.3
67.5°	1191.6	1134.1	1245.3	1624.6	2646.0	4300.1	6051.4	6474.1	6510.9	6636.1	7107.4
70°	704.8	667.2	712.9	912.5	1497.9	2929.6	5161.7	6371.0	6649.4	6736.3	7251.0
72.5°	537.6	502.3	482.4	539.8	782.1	1513.4	3490.0	5400.3	6538.2	6670.0	7190.6
75°	464.7	430.8	407.3	412.4	465.4	718.8	1891.9	3862.7	5571.2	6073.5	6642.0
77.5°	399.2	369.0	352.0	350.5	357.2	394.7	790.9	2094.4	3489.3	4365.6	4788.4
80°	319.6	296.1	292.4	292.4	282.8	279.8	393.3	796.8	1327.8	1574.5	1509.7
82.5°	233.5	209.9	233.5	230.5	215.8	204.0	250.4	344.7	409.5	323.3	255.5
85°	157.6	136.2	153.9	156.9	142.9	106.0	150.2	172.3	176.7	110.5	91.3
87.5°	55.2	53.8	86.9	75.9	61.9	36.1	55.2	59.7	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°	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8
2.5°	773.3	764.4	720.2	726.9	743.8	751.9	760.0	726.9	710.7	762.2	757.1
5°	1012.6	980.2	944.1	939.0	941.2	909.5	927.9	919.8	923.5	956.6	963.3
7.5°	1212.9	1173.9	1126.0	1088.5	1023.7	972.1	1015.6	1037.7	1044.3	1103.2	1125.3
10°	1321.2	1288.0	1274.0	1203.4	1182.0	1175.4	1165.1	1129.7	1168.7	1154.7	1165.8
12.5°	1533.3	1526.6	1453.7	1407.3	1411.8	1424.3	1359.5	1324.1	1273.3	1352.8	1324.1
15°	1713.7	1742.4	1669.5	1584.8	1542.9	1564.2	1514.9	1463.3	1417.7	1442.0	1411.0
17.5°	1944.2	1943.5	1801.3	1710.8	1707.1	1705.6	1632.7	1519.3	1573.8	1556.8	1558.3
20°	2066.5	2046.6	1869.8	1765.3	1854.4	1822.7	1757.2	1611.3	1674.7	1695.3	1708.6
22.5°	2168.8	2157.8	1943.5	1866.9	1924.3	1925.1	1859.5	1782.9	1774.8	1838.9	1804.3
25°	2240.3	2284.5	2082.7	2064.3	2089.3	2064.3	2000.2	1950.1	1917.7	2013.4	1917.7
27.5°	2409.6	2347.0	2104.0	2208.6	2224.1	2098.1	2178.4	2119.5	2029.6	2148.2	2187.2
30°	2530.4	2567.2	2254.3	2411.9	2393.4	2277.1	2310.2	2308.0	2200.5	2431.7	2404.5
32.5°	2738.1	2693.9	2499.5	2487.0	2531.2	2526.0	2470.0	2497.3	2523.8	2691.7	2732.2
35°	2950.9	2998.1	2656.4	2741.0	2728.5	2649.0	2795.5	2778.6	2857.4	3202.1	3087.9
37.5°	3431.1	3206.5	3008.4	2997.3	3081.3	3093.8	3046.7	3121.1	3291.2	3556.3	3678.5
40°	3745.6	3643.2	3306.6	3319.9	3203.5	3403.8	3271.3	3510.6	3640.2	4087.3	4043.8
42.5°	4221.3	3971.6	3648.3	3692.5	3669.0	3572.5	3747.0	3870.0	4055.6	4396.6	4616.8
45°	4575.5	4233.1	4079.9	4052.7	4049.7	4217.6	4195.5	4392.2	4458.4	4714.7	4897.4
47.5°	4844.3	4553.4	4326.6	4357.5	4267.7	4747.1	4491.6	4552.7	4686.7	4928.3	5141.1
50°	5163.2	4839.2	4581.4	4658.0	4876.7	5060.8	4829.6	4725.0	4790.6	5075.6	5312.7
52.5°	5458.5	5117.6	4834.0	4898.1	5255.3	5171.3	5146.3	4881.9	4873.8	5102.8	5372.4
55°	5803.9	5419.5	5169.1	5372.4	5499.0	5395.2	5355.4	5033.6	4834.8	4962.2	5216.2
57.5°	6142.7	5718.5	5469.6	5511.6	5672.1	5569.0	5270.7	4775.1	4526.9	4552.0	4809.0
60°	6460.1	5993.2	5787.7	5747.2	5875.4	5471.0	4948.9	4301.6	3972.4	3912.0	4134.4
62.5°	6731.8	6223.0	6028.5	5918.1	6040.3	5474.7	4447.4	3541.6	3180.0	2975.2	3148.3
65°	6947.6	6413.7	6275.2	6217.8	6262.0	5141.9	3666.0	2600.4	2157.0	1930.2	2031.1
67.5°	7091.2	6520.5	6457.1	6532.3	5943.1	4282.4	2716.0	1664.4	1254.2	1130.4	1193.8
70°	7240.0	6614.7	6612.5	6357.0	5039.5	2952.4	1586.3	959.6	729.8	681.9	721.7
72.5°	7189.9	6502.8	6535.9	5559.4	3492.2	1578.2	837.3	542.8	494.2	511.1	546.4
75°	6658.2	5912.2	5752.4	3996.7	1981.0	733.5	482.4	410.9	408.0	433.8	468.4
77.5°	4829.6	4117.5	3694.7	2265.3	849.1	396.9	355.0	343.2	343.2	363.8	394.7
80°	1592.2	1377.9	1436.1	876.4	401.4	274.0	276.9	282.1	280.6	285.7	311.5
82.5°	261.4	271.0	419.0	357.9	242.3	187.1	209.2	219.5	222.4	198.8	226.1
85°	92.8	104.6	178.2	165.7	139.9	94.3	137.7	153.9	151.7	132.6	146.6
87.5°	28.7	36.8	64.8	50.1	42.0	25.8	51.6	60.4	75.9	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)