

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: P368278

Luminaire Tested: **MSA-SA4A-760-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368278
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-760-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: 15212 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

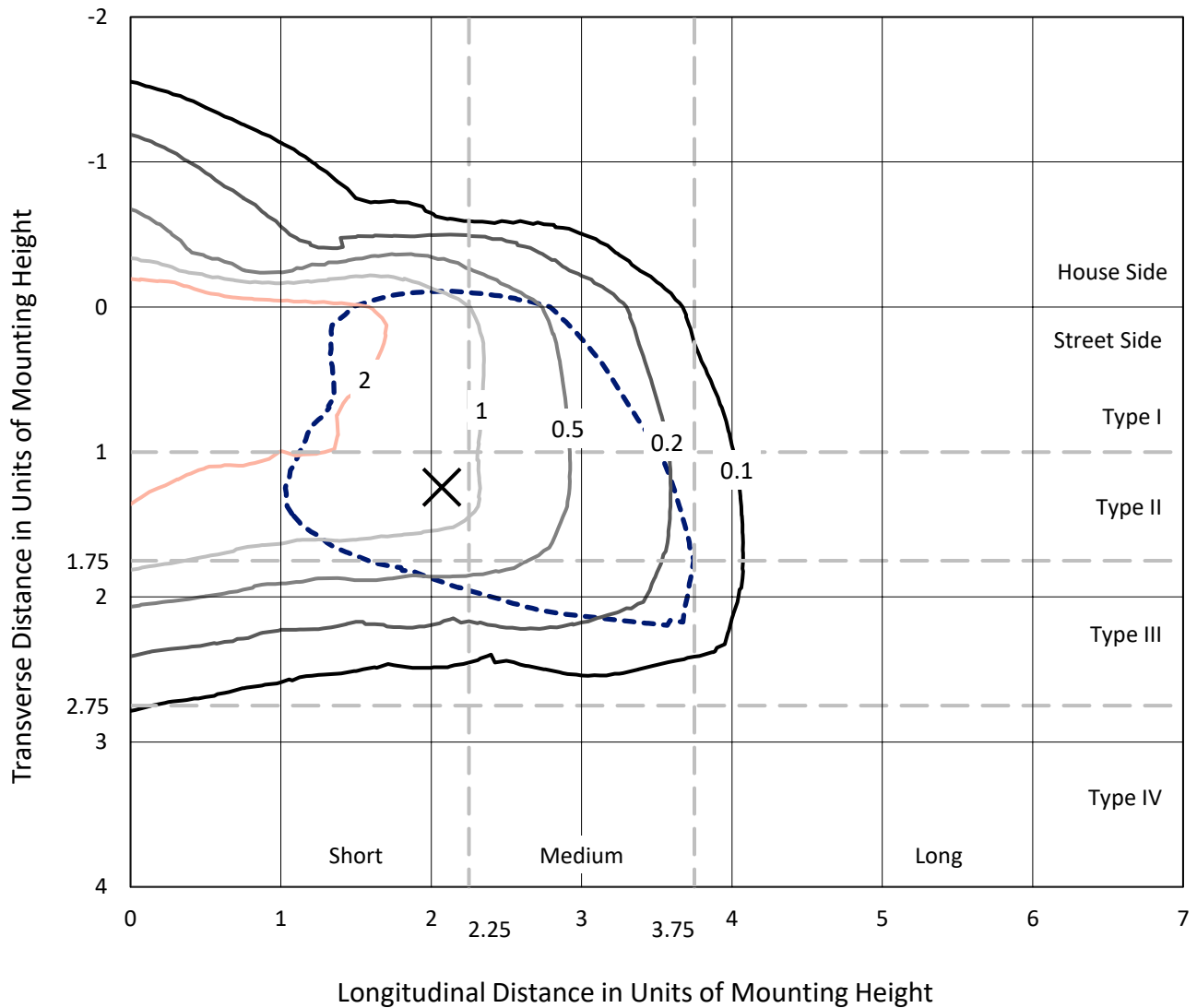
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368278
 CATALOG NUMBER: MSA-SA4A-760-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

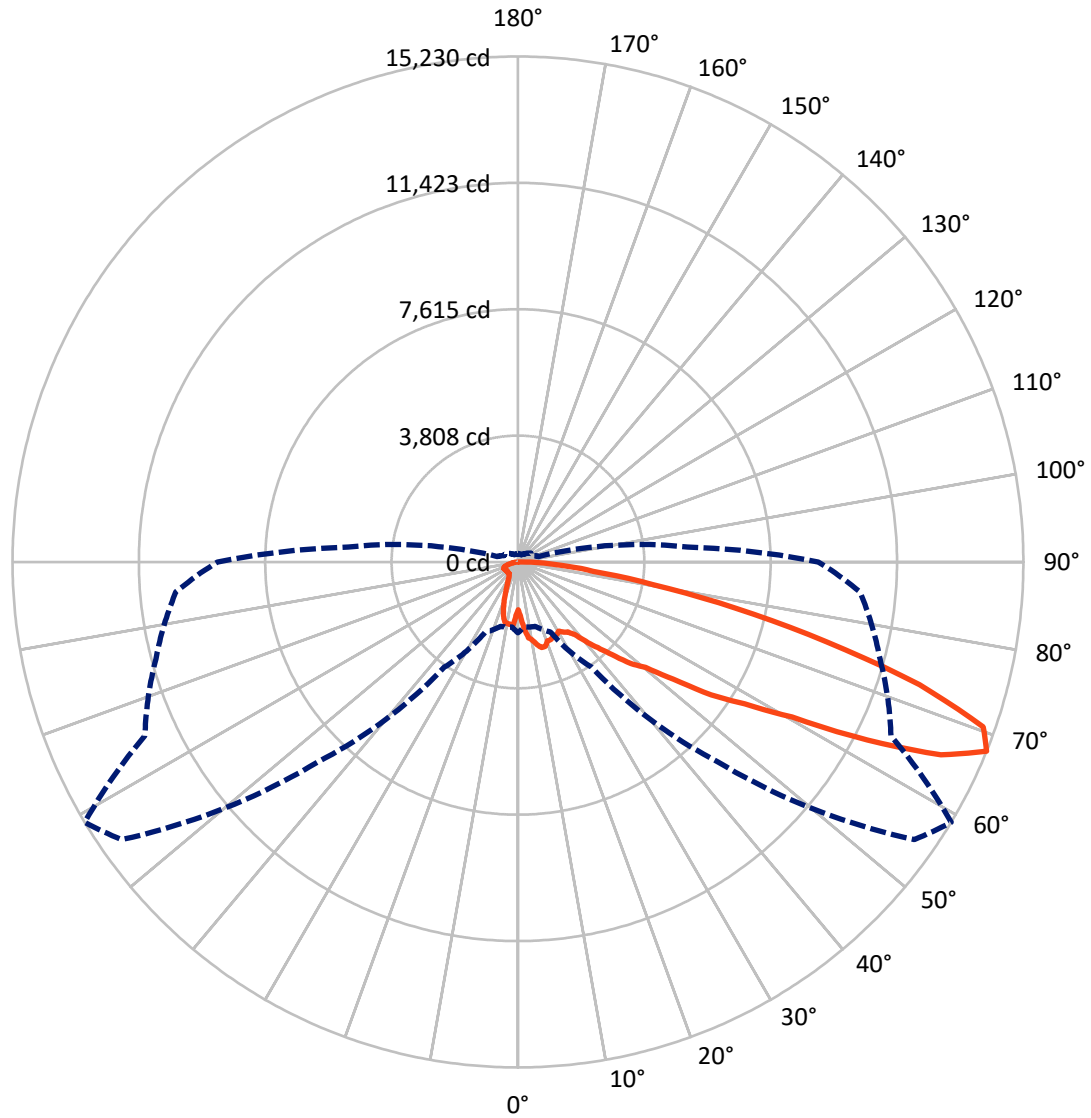
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type III - Short - N/A

REPORT NUMBER: P368278
CATALOG NUMBER: MSA-SA4A-760-U-SL3

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368278

CATALOG NUMBER: MSA-SA4A-760-U-SL3

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2289.7	0.0	2289.7
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	12922.3	0.0	12922.3
	% Fixture	84.9	0.0	84.9
Total	Lumens	15212.0	0.0	15212.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.0	1.2
10°-20°	556.3	3.7
20°-30°	794.5	5.2
30°-40°	1170.7	7.7
40°-50°	1978.0	13.0
50°-60°	3442.1	22.6
60°-70°	4386.2	28.8
70°-80°	2322.6	15.3
80°-90°	373.6	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°	15212.0	100.0
0°-180°	15212.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368278

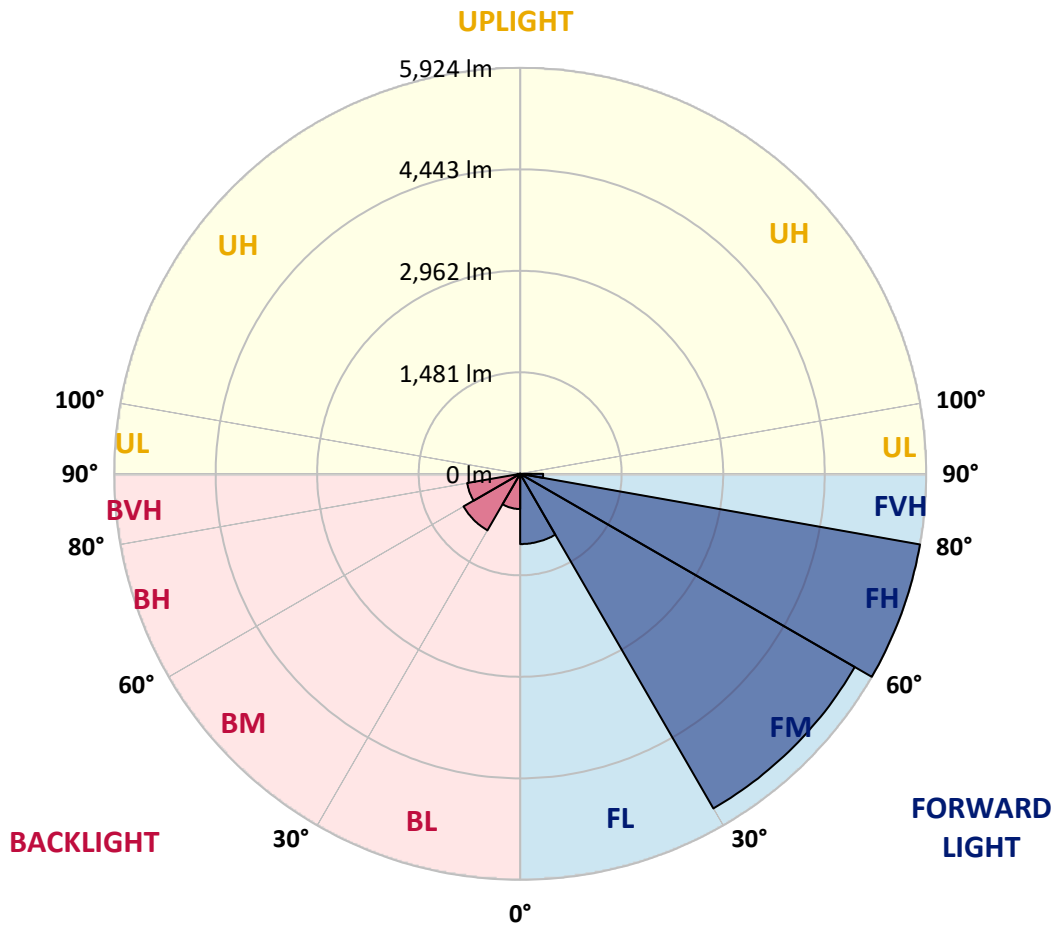
CATALOG NUMBER: MSA-SA4A-760-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1025.3	6.7			
FM (30°-60°)	5637.4	37.1			
FH (60°-80°)	5924.0	38.9			G3/7500
FVH (80°-90°)	335.6	2.2			G3/500
BL (0°-30°)	513.5	3.4	B2/1000		
BM (30°-60°)	953.4	6.3	B1/1000		
BH (60°-80°)	784.8	5.2	B2/1000		G2/1000
BVH (80°-90°)	38.0	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: P368278
 CATALOG NUMBER: MSA-SA4A-760-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5
2.5°	1797.2	1713.4	1624.5	1649.6	1700.5	1723.7	1698.6	1674.1	1642.5	1605.1	1732.8
5°	2179.5	2055.1	2037.0	2036.4	2018.3	1946.1	2039.0	2032.5	2069.9	2108.6	2207.9
7.5°	2288.4	2242.0	2191.7	2215.6	2124.7	2120.8	2265.2	2306.5	2378.7	2354.8	2488.3
10°	2232.3	2180.1	2206.6	2196.9	2205.3	2300.7	2389.0	2391.6	2468.9	2545.0	2459.3
12.5°	2133.7	2137.6	2242.7	2238.8	2374.2	2551.4	2577.9	2557.2	2683.6	2632.0	2705.5
15°	2204.0	2251.0	2224.6	2247.2	2300.7	2526.3	2599.8	2674.6	2794.5	2840.9	2767.4
17.5°	2316.2	2341.3	2222.7	2210.4	2320.7	2427.7	2610.1	2673.9	2692.6	3023.3	2919.5
20°	2268.4	2319.4	2203.3	2054.4	2237.5	2379.3	2559.2	2539.8	2630.7	3037.5	2951.1
22.5°	2403.8	2319.4	2171.8	2066.0	2130.5	2260.7	2413.5	2540.5	2648.1	2954.3	2996.9
25°	2429.6	2389.6	2251.7	2146.6	2124.7	2171.1	2389.0	2472.2	2653.9	3067.8	2972.4
27.5°	2586.9	2526.9	2245.9	2249.1	2140.2	2058.3	2311.6	2486.3	2719.7	2997.5	3032.3
30°	2782.2	2736.4	2383.8	2396.7	2245.9	2095.0	2364.5	2417.4	2757.7	3107.1	3107.8
32.5°	2928.5	3009.1	2655.2	2479.9	2426.4	2313.6	2283.3	2521.1	2713.2	3305.7	3236.7
35°	3192.2	3254.7	2864.1	2723.6	2542.4	2415.4	2503.7	2589.5	2898.3	3566.7	3428.1
37.5°	3680.2	3608.0	3252.2	3031.0	2963.4	2780.3	2829.3	2769.3	3099.4	3860.0	3803.3
40°	3962.5	3900.0	3525.5	3403.0	3134.8	3158.0	3096.8	3140.6	3368.2	4172.0	4154.0
42.5°	4241.0	4157.2	3840.7	3755.6	3488.1	3374.6	3385.6	3527.4	3782.7	4676.1	4616.2
45°	4516.3	4301.6	4163.0	4185.6	4056.6	3823.9	3840.1	3973.5	4235.2	5252.4	5114.5
47.5°	4727.1	4549.8	4441.5	4413.8	4350.0	4661.3	4522.1	4576.2	4691.6	5765.6	5713.3
50°	5126.1	4919.2	4778.0	4738.0	4954.6	5387.8	5104.2	4987.5	5233.1	6428.9	6401.8
52.5°	5764.9	5507.1	5271.8	5269.2	5582.5	5863.5	6063.4	5862.3	5952.5	7108.3	7185.7
55°	6322.5	6024.1	5812.6	5929.3	6375.4	6547.5	7226.3	7069.0	6992.9	7794.2	8015.3
57.5°	6530.7	6182.0	6044.0	6216.2	6873.7	7758.1	8475.6	8061.7	7987.6	8570.3	9033.8
60°	6073.7	5705.0	5713.3	6037.6	7176.7	8647.1	9841.5	9490.2	9055.7	9536.6	9989.2
62.5°	4771.5	4438.3	4655.5	5148.7	6922.7	9510.9	11672.3	11820.6	10276.0	10337.9	10519.1
65°	3243.1	3012.4	3208.3	3691.1	5614.7	9982.1	13416.0	14010.4	11387.4	10862.6	10747.9
67.5°	2134.4	1971.3	2009.3	2330.3	3865.2	8509.7	14582.1	15230.0	12403.3	11293.3	10344.4
70°	1652.8	1521.3	1504.6	1672.8	2292.3	5911.9	13891.1	14876.1	13022.1	10889.7	9016.4
72.5°	1297.0	1197.1	1206.1	1367.9	1775.3	3279.9	10749.2	12650.2	12090.0	9391.6	6927.2
75°	1011.4	929.6	975.3	1160.3	1641.9	2038.3	7416.5	9601.1	9347.1	6954.3	3950.9
77.5°	734.2	681.4	746.5	988.2	1543.2	1748.9	4616.8	6698.3	5988.0	3570.6	1355.7
80°	481.5	451.9	505.4	805.8	1399.5	1683.1	2853.1	4104.4	2958.8	1003.0	513.1
82.5°	283.6	270.7	315.2	545.4	1124.9	1577.4	1902.9	2280.7	1210.6	424.2	272.7
85°	148.9	139.2	186.9	313.3	775.5	1440.1	1498.1	1365.3	584.7	184.4	130.2
87.5°	49.6	48.3	79.3	121.2	293.3	764.5	799.3	648.5	241.1	53.5	28.4
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: P368278
 CATALOG NUMBER: MSA-SA4A-760-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5	1439.5
2.5°	1750.2	1724.4	1576.1	1596.7	1616.1	1606.4	1600.6	1533.6	1527.1	1622.5	1614.8
5°	2205.3	2098.3	1971.9	1966.1	1883.0	1797.9	1814.6	1787.6	1795.3	1834.6	1838.5
7.5°	2445.7	2312.3	2191.7	1995.8	1829.5	1694.7	1716.0	1709.6	1692.2	1781.1	1805.0
10°	2441.2	2322.6	2186.6	1949.4	1837.2	1727.6	1596.1	1471.7	1434.9	1391.1	1395.0
12.5°	2602.4	2497.3	2200.8	1959.0	1806.9	1618.0	1371.8	1235.8	1105.5	1103.0	1070.1
15°	2652.6	2575.3	2231.1	1903.6	1594.8	1324.1	1069.4	921.8	827.7	809.0	781.3
17.5°	2779.6	2658.4	2138.9	1724.4	1348.6	1035.3	803.9	700.7	693.0	705.9	691.7
20°	2788.0	2591.4	1972.6	1459.4	1083.6	784.5	655.6	604.0	631.7	663.3	662.0
22.5°	2780.9	2507.0	1828.8	1233.8	814.2	630.4	574.4	562.8	588.5	635.6	641.4
25°	2708.7	2479.2	1649.0	1013.4	660.7	540.2	524.7	531.8	564.1	619.5	619.5
27.5°	2784.2	2366.4	1423.3	824.5	555.7	480.9	491.9	509.9	533.8	596.9	608.5
30°	2759.7	2403.8	1241.6	664.0	489.9	439.6	464.1	482.2	509.3	575.0	580.8
32.5°	2825.4	2303.9	1088.8	558.2	446.7	423.5	429.3	453.8	489.3	540.8	551.2
35°	2926.0	2340.6	913.4	502.2	425.5	404.8	415.8	435.1	470.6	520.9	529.2
37.5°	3247.0	2338.7	792.2	471.2	421.6	401.0	406.1	419.7	460.9	506.7	526.0
40°	3453.3	2472.8	682.0	464.1	417.1	399.0	394.5	409.3	442.2	496.4	509.9
42.5°	3840.7	2554.7	634.3	461.6	416.4	388.1	383.6	401.0	433.2	483.5	504.1
45°	4250.0	2671.3	596.3	460.3	414.5	386.1	372.6	394.5	421.6	469.9	493.8
47.5°	4731.6	2918.2	575.0	455.8	410.6	388.7	368.7	379.7	410.0	458.3	482.2
50°	5362.0	3245.1	579.5	449.3	416.4	389.4	362.9	368.1	395.8	442.9	467.4
52.5°	6128.5	3751.1	608.5	451.9	420.3	386.1	360.3	357.8	381.6	422.9	447.4
55°	7052.2	4469.2	695.6	464.1	420.3	385.5	356.5	344.9	362.9	396.4	420.3
57.5°	8166.8	5300.8	865.7	469.9	417.1	381.6	348.1	327.5	338.4	366.1	388.7
60°	9124.1	5971.8	1041.1	473.8	423.5	372.6	331.3	305.6	312.6	333.9	353.9
62.5°	9612.1	6160.1	1093.9	470.6	440.9	366.8	311.4	282.3	283.0	301.0	319.1
65°	9703.6	5909.3	881.9	467.4	463.5	366.1	297.2	262.4	257.9	270.7	286.2
67.5°	9051.2	5129.3	636.2	460.3	466.1	362.3	287.5	246.2	234.6	243.7	256.6
70°	7685.3	4130.8	534.4	446.1	435.1	342.9	270.7	229.5	214.0	220.5	230.1
72.5°	5729.5	3056.2	466.1	415.8	379.0	293.3	245.0	210.8	194.7	199.2	206.3
75°	3183.2	1630.3	390.0	361.6	309.4	237.2	208.9	186.9	172.8	174.7	182.4
77.5°	1057.2	601.4	286.2	286.9	234.0	183.1	172.1	159.9	148.9	149.6	156.0
80°	479.0	332.6	205.0	206.3	163.1	132.8	132.1	128.3	121.2	119.3	123.8
82.5°	277.8	201.8	140.5	134.1	105.1	86.4	96.0	94.1	92.2	85.1	86.4
85°	136.7	108.3	73.5	69.6	58.0	43.2	51.6	53.5	51.6	43.8	43.2
87.5°	33.5	35.5	18.0	16.8	9.7	4.5	7.7	7.7	9.7	6.4	3.2
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)