

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: P367884

Luminaire Tested: **MSA-SA3B-760-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-760-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14319 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

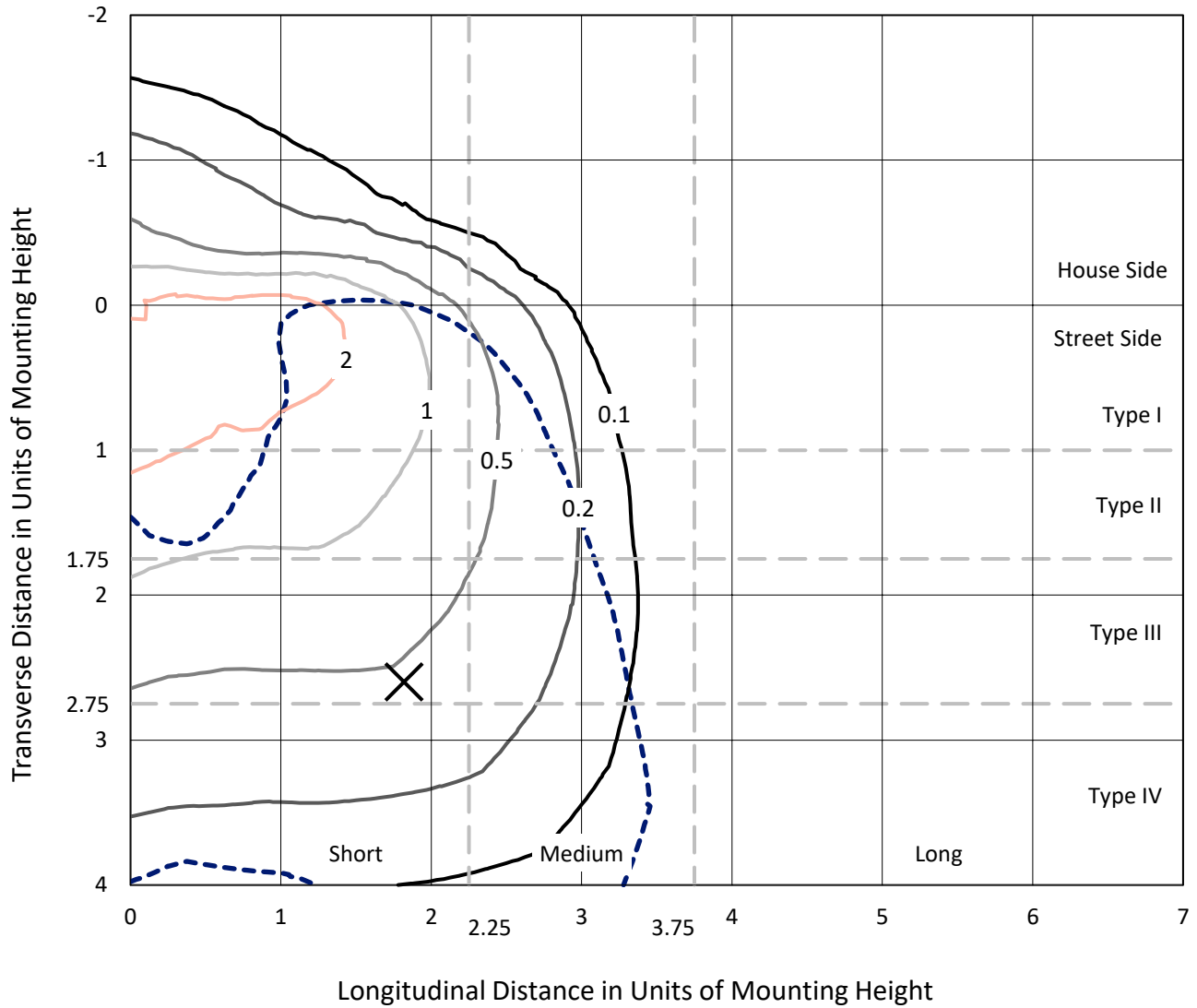
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

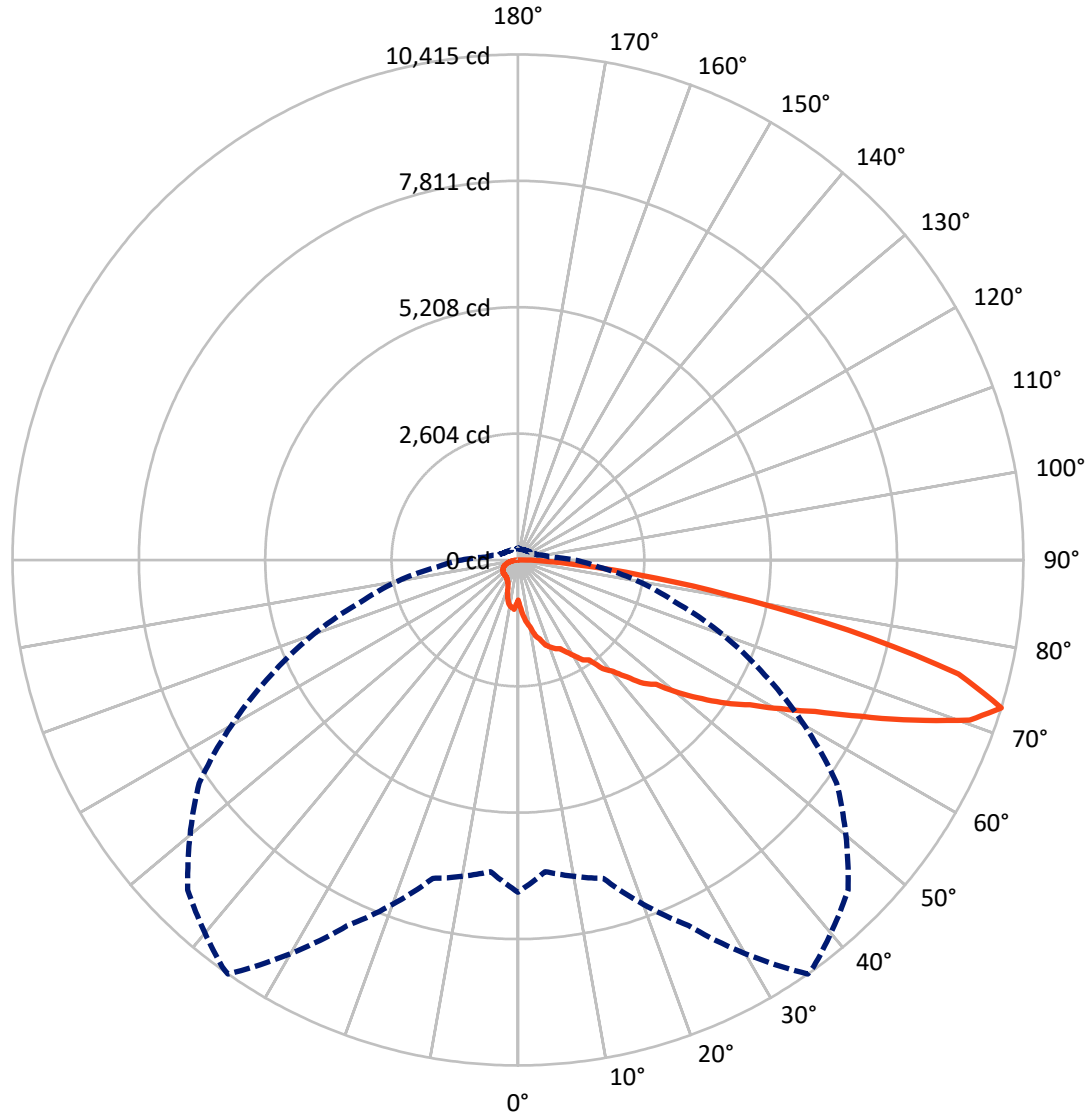
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1921.6	0.0	1921.6
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	12397.4	0.0	12397.4
	% Fixture	86.6	0.0	86.6
Total	Lumens	14319.0	0.0	14319.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	0.8
10°-20°	387.4	2.7
20°-30°	673.1	4.7
30°-40°	1125.0	7.9
40°-50°	1952.7	13.6
50°-60°	2951.9	20.6
60°-70°	3824.2	26.7
70°-80°	2821.8	19.7
80°-90°	472.9	3.3
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°	14319.0	100.0
0°-180°	14319.0	100.0

Coefficient of Utilization



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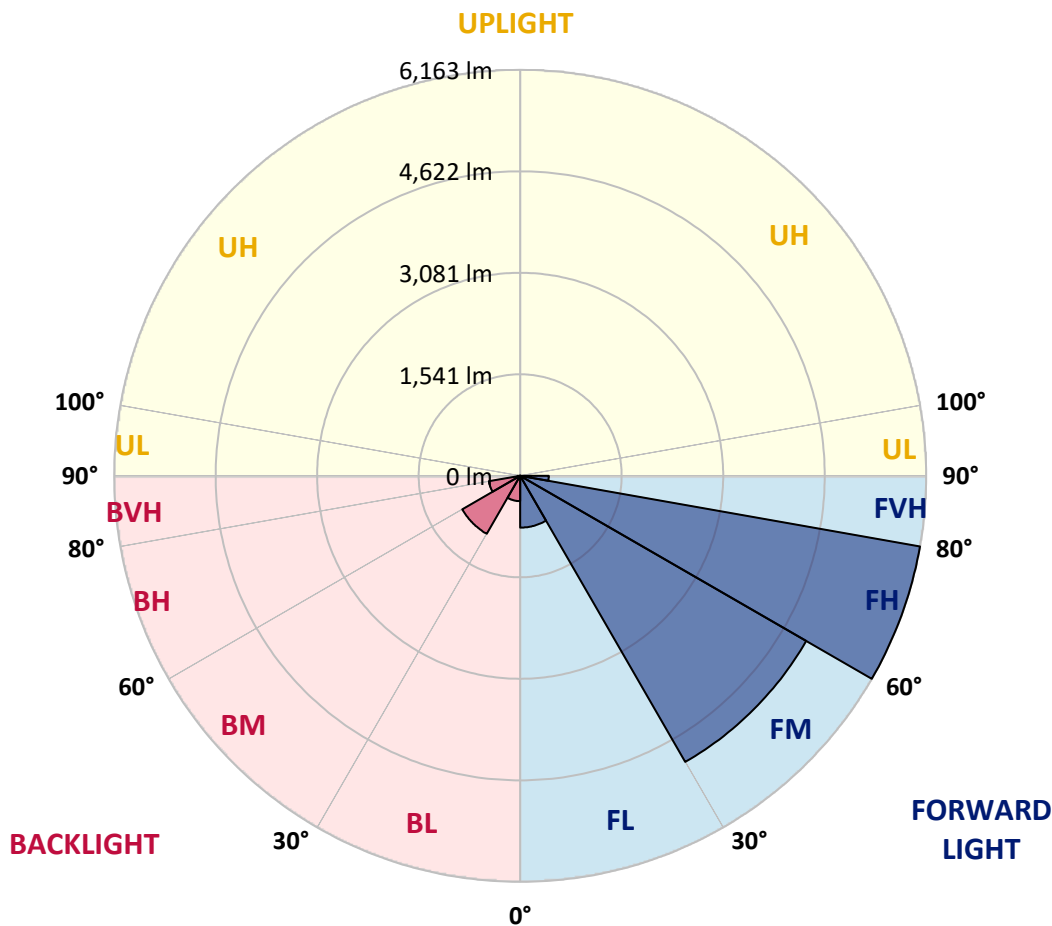
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	786.4	5.5			
FM (30°-60°)	5014.0	35.0			
FH (60°-80°)	6162.8	43.0			G3/7500
FVH (80°-90°)	434.2	3.0			G3/500
BL (0°-30°)	384.1	2.7	B1/500		
BM (30°-60°)	1015.6	7.1	B2/2500		
BH (60°-80°)	483.2	3.4	B1/500		G1/500
BVH (80°-90°)	38.7	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5
2.5°	1032.2	982.7	940.0	938.1	977.8	993.1	987.0	973.6	957.7	924.1	997.4
5°	1293.2	1222.3	1208.9	1193.0	1156.9	1166.7	1108.0	1152.6	1166.7	1199.1	1248.0
7.5°	1447.2	1405.7	1373.3	1359.8	1297.5	1290.1	1246.8	1310.3	1337.2	1332.9	1405.7
10°	1507.7	1469.8	1472.3	1428.3	1408.1	1416.7	1421.5	1422.8	1439.3	1452.7	1416.0
12.5°	1538.9	1553.6	1607.3	1577.4	1603.1	1613.4	1664.8	1612.2	1614.1	1545.0	1582.9
15°	1695.9	1732.6	1701.5	1700.2	1692.3	1709.4	1753.4	1718.0	1745.5	1723.5	1674.6
17.5°	1885.4	1896.4	1836.5	1812.1	1843.8	1838.3	1827.3	1832.8	1764.4	1891.5	1831.6
20°	1943.5	1986.9	1908.0	1812.1	1917.2	1931.2	1928.8	1905.0	1787.6	1971.0	1912.9
22.5°	2112.1	2053.5	1991.1	1930.0	1983.8	1991.7	1978.3	1921.5	1882.4	1952.0	1997.9
25°	2188.5	2174.5	2095.0	2087.7	2028.4	2000.3	2023.5	2007.0	1968.5	2092.6	2041.9
27.5°	2363.3	2346.8	2164.1	2239.3	2153.1	2145.8	2022.9	2077.9	2116.4	2107.3	2183.0
30°	2561.3	2580.3	2313.2	2388.4	2288.8	2275.3	2151.9	2221.5	2247.8	2256.4	2351.1
32.5°	2781.4	2833.3	2568.1	2506.3	2453.2	2462.3	2357.8	2230.7	2332.8	2532.6	2573.6
35°	3019.7	3041.1	2763.0	2670.1	2531.4	2521.6	2523.5	2539.3	2642.6	2870.6	2902.4
37.5°	3460.3	3361.3	3117.5	2882.2	2835.8	2744.7	2806.4	2855.3	2958.6	3308.2	3441.4
40°	3731.7	3658.4	3286.8	3150.5	3022.2	3030.7	3146.2	3145.6	3389.5	3750.0	3953.5
42.5°	3982.9	3902.8	3552.6	3415.7	3294.1	3324.1	3357.1	3415.1	3882.7	4463.9	4556.8
45°	4185.2	4009.8	3758.0	3727.4	3627.2	3587.5	3727.4	3820.3	4472.4	5041.4	5095.2
47.5°	4322.7	4178.5	3932.2	3905.3	3831.3	3928.5	4310.5	4370.4	4929.6	5621.4	5617.1
50°	4531.7	4334.3	4111.8	4097.8	4306.2	4358.1	4823.8	4817.7	5374.5	6103.0	6002.1
52.5°	4772.5	4523.8	4282.3	4433.3	4751.1	4776.8	5180.7	5345.1	5860.3	6567.5	6304.0
55°	5049.3	4771.3	4537.8	4739.5	5212.5	5136.7	5545.6	5947.1	6468.4	7057.0	6522.2
57.5°	5392.2	5054.8	4866.0	5172.8	5633.6	5700.8	6068.1	6573.6	6958.0	7361.3	6681.1
60°	5754.0	5358.0	5185.0	5477.2	6223.4	6300.4	6659.7	7094.3	7506.8	7648.0	6651.2
62.5°	6099.3	5670.9	5514.4	5875.0	6877.3	7068.0	7333.2	7610.1	7963.3	7717.6	6288.8
65°	6483.7	6054.7	5956.3	6497.2	7764.1	7953.5	8300.1	8217.0	8119.8	7470.7	5689.2
67.5°	6890.8	6455.0	6473.3	7218.9	8809.8	8842.2	9374.5	8822.0	7935.8	6816.8	4682.7
70°	7109.5	6663.4	6852.2	7988.4	9873.8	9827.3	9936.1	8984.6	7185.9	5388.5	3227.5
72.5°	6844.3	6446.4	6792.4	8312.3	10415.3	10365.2	9620.8	8019.6	5618.3	3351.0	1673.3
75°	5795.0	5411.1	5940.4	7409.6	9376.3	9422.8	8187.6	5963.6	3216.5	1347.6	694.9
77.5°	3937.7	3739.6	4193.1	5523.0	6964.7	7125.4	6074.9	3487.2	1350.6	558.0	420.5
80°	2081.0	1986.9	2321.8	3181.7	4410.1	4529.9	3572.2	1736.9	691.8	361.2	300.1
82.5°	1130.6	1090.9	1270.6	1636.1	2505.7	2610.2	1852.4	1153.9	466.3	226.1	183.3
85°	759.7	744.4	863.6	878.8	1185.0	1219.3	970.5	888.6	279.9	110.6	121.0
87.5°	380.1	364.9	454.7	401.5	452.3	452.9	444.9	567.2	70.9	36.7	22.0
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°	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5	827.5
2.5°	998.6	977.2	903.3	902.7	913.7	906.3	911.8	881.9	869.1	927.7	924.7
5°	1241.3	1177.1	1115.4	1094.0	1068.9	1014.5	1017.6	1018.2	1009.0	1043.8	1046.3
7.5°	1383.7	1306.6	1249.8	1136.1	1046.9	977.2	986.4	996.8	986.4	1032.8	1050.0
10°	1404.4	1343.3	1275.5	1149.0	1089.7	1026.7	963.2	907.0	900.2	878.8	885.6
12.5°	1527.9	1477.2	1335.4	1196.6	1127.6	1031.0	914.9	850.7	796.9	806.1	789.0
15°	1629.3	1593.3	1423.4	1241.9	1076.9	957.1	833.6	745.6	697.3	691.8	674.7
17.5°	1766.8	1715.5	1431.3	1210.7	1011.5	867.8	728.5	628.9	608.1	599.5	591.0
20°	1832.8	1740.6	1402.6	1112.9	935.1	761.5	624.6	539.0	532.9	548.2	545.1
22.5°	1890.3	1761.3	1376.9	1053.6	815.9	653.9	553.7	497.5	490.8	510.3	514.0
25°	1923.9	1820.6	1348.8	993.1	741.9	573.9	500.5	468.8	470.0	495.6	492.6
27.5°	2075.5	1841.4	1277.9	921.6	657.0	514.6	474.9	458.4	451.6	487.1	490.1
30°	2170.8	1977.1	1262.0	845.8	594.0	471.2	451.6	444.9	443.7	486.5	489.5
32.5°	2348.0	2022.3	1269.4	763.3	537.2	457.8	434.5	433.9	446.1	487.1	492.0
35°	2593.7	2213.0	1233.9	716.3	506.0	437.0	421.1	426.0	446.8	491.4	498.1
37.5°	3072.9	2392.7	1244.9	672.3	495.6	430.3	417.4	420.5	454.1	502.4	520.7
40°	3452.4	2718.4	1227.8	650.3	481.6	429.0	409.5	421.7	453.5	508.5	525.0
42.5°	4002.4	2978.1	1229.6	628.3	481.0	424.1	408.3	422.9	452.3	503.0	525.6
45°	4474.3	3211.0	1255.9	615.4	474.9	432.1	406.4	424.8	444.3	483.4	508.5
47.5°	4861.1	3470.7	1282.8	603.2	472.4	439.4	404.6	411.9	430.9	461.4	484.0
50°	5176.5	3653.5	1317.0	600.8	472.4	435.8	399.7	399.1	415.0	439.4	460.8
52.5°	5422.1	3782.4	1340.3	603.8	472.4	421.7	393.6	388.7	398.5	416.2	437.6
55°	5600.0	3822.2	1321.3	611.8	471.8	408.9	382.6	378.3	383.2	395.4	415.6
57.5°	5671.5	3717.6	1208.2	597.7	471.8	399.7	369.1	364.2	369.1	378.3	398.5
60°	5492.4	3381.5	1045.1	561.6	462.6	387.5	353.9	350.8	358.1	366.1	385.6
62.5°	5043.2	2934.8	870.9	518.9	443.7	377.1	339.2	339.8	351.4	362.4	382.0
65°	4345.3	2394.5	726.0	475.5	419.9	360.6	323.9	328.2	344.7	359.4	378.9
67.5°	3419.4	1774.2	611.2	433.3	386.2	333.7	306.8	308.0	319.6	333.7	352.6
70°	2285.7	1128.8	502.4	383.8	342.2	298.9	280.5	276.2	273.2	285.4	301.9
72.5°	1159.4	666.8	412.5	328.2	294.6	261.0	246.9	235.9	227.3	234.7	247.5
75°	607.5	466.3	333.1	272.6	243.2	221.8	211.5	196.8	190.7	195.0	204.1
77.5°	429.6	364.9	269.5	215.7	198.0	176.0	177.8	162.6	157.7	160.1	169.9
80°	330.0	289.1	207.2	163.2	152.8	131.4	137.5	128.3	122.2	121.0	128.3
82.5°	224.9	217.6	147.3	114.3	107.0	91.7	100.2	96.6	88.6	83.7	87.4
85°	151.6	144.2	89.8	66.0	62.9	47.7	61.1	58.7	51.9	44.6	45.2
87.5°	26.3	48.3	25.7	16.5	15.3	5.5	14.1	13.4	12.2	6.1	4.9
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)