

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: P368214

Luminaire Tested: **MSA-SA4A-730-U-SL4**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368214  
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-SA4A-730-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 13753 lumens  
Efficiency: N/A  
Efficacy: 106.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

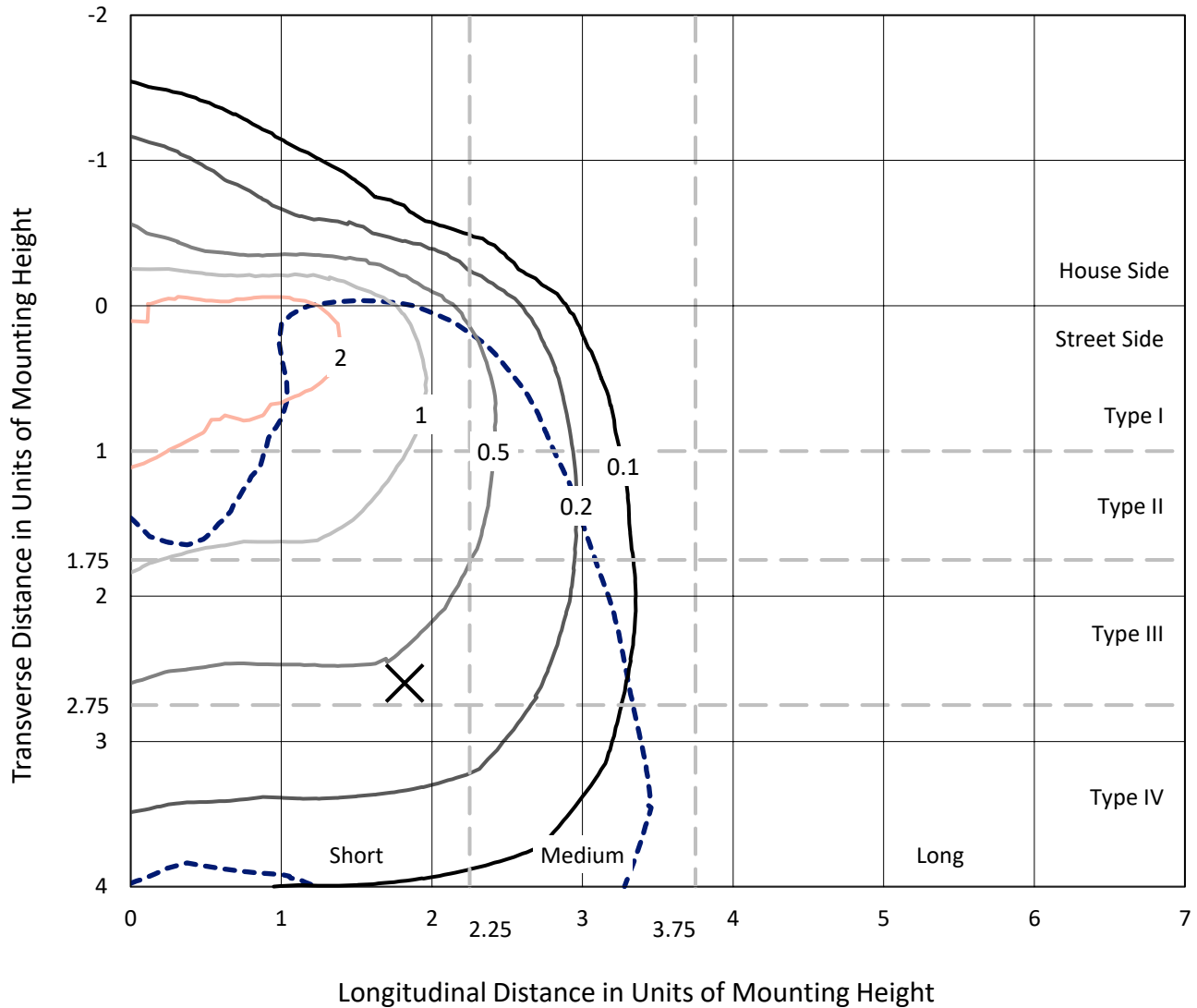
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

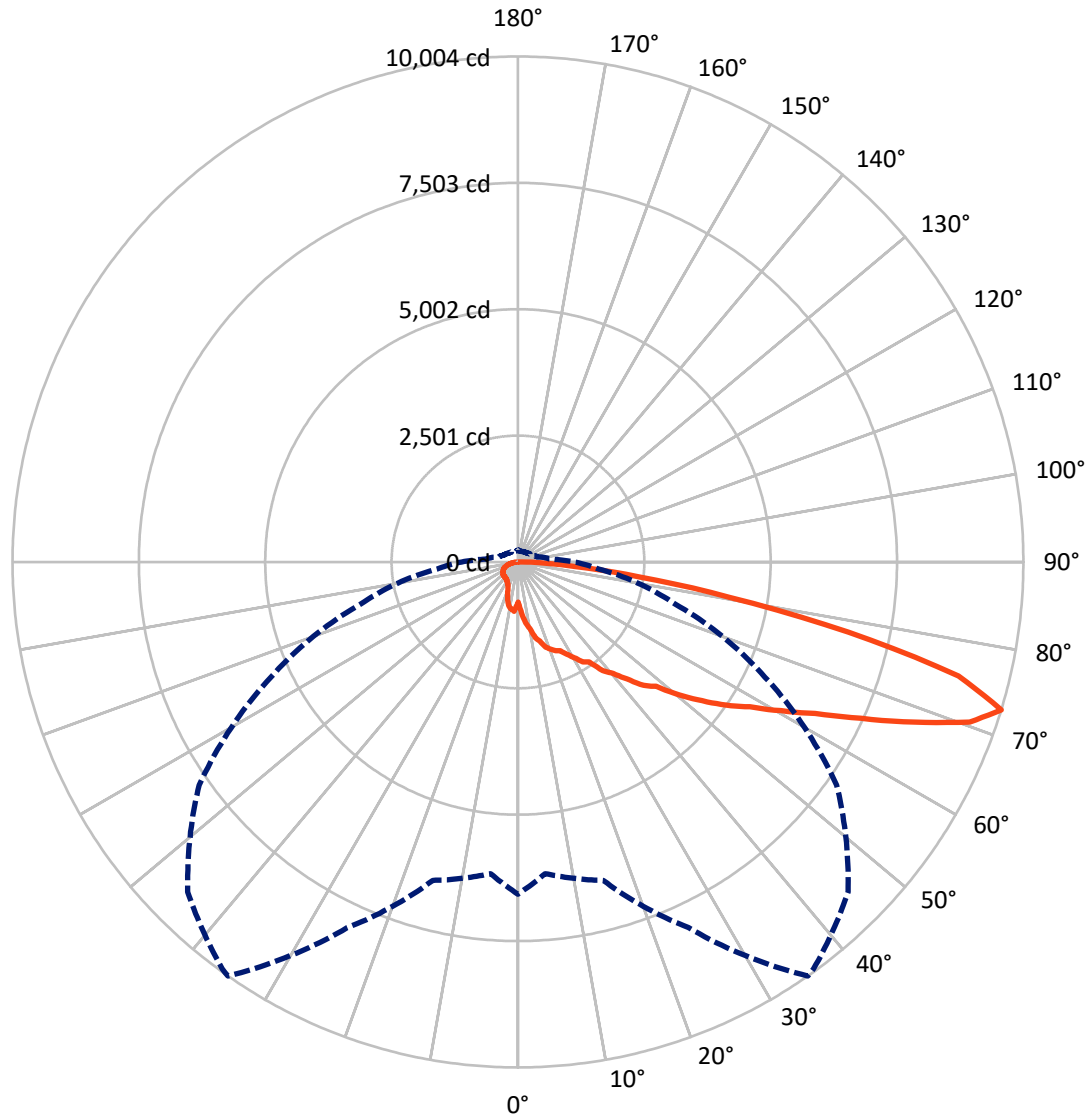
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 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
<b>House Side</b>	Lumens	1845.6	0.0	1845.6
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	11907.4	0.0	11907.4
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	13753.0	0.0	13753.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.6	0.8
10°-20°	372.1	2.7
20°-30°	646.5	4.7
30°-40°	1080.6	7.9
40°-50°	1875.5	13.6
50°-60°	2835.2	20.6
60°-70°	3673.0	26.7
70°-80°	2710.3	19.7
80°-90°	454.2	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°	13753.0	100.0
0°-180°	13753.0	100.0

**Coefficient of Utilization**



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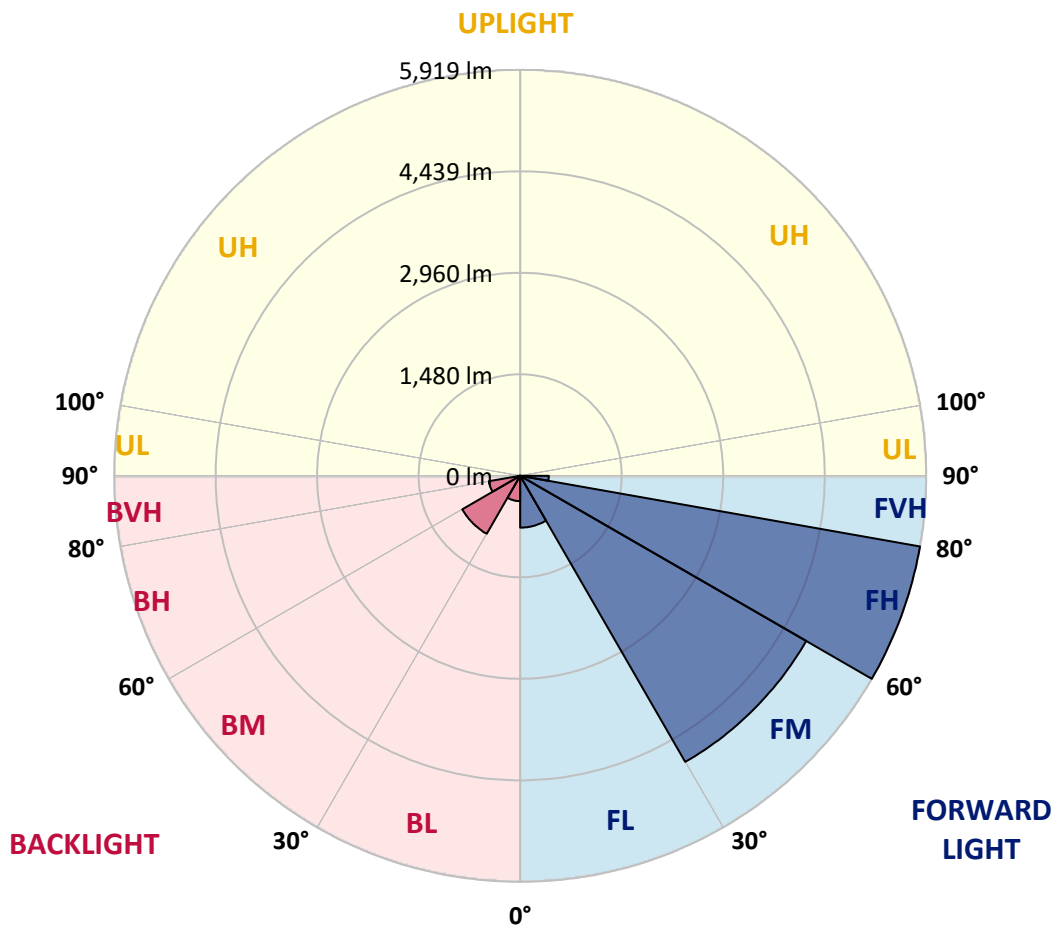
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	755.3	5.5			
FM (30°-60°)	4815.8	35.0			
FH (60°-80°)	5919.2	43.0			G3/7500
FVH (80°-90°)	417.1	3.0			G3/500
BL (0°-30°)	368.9	2.7	B1/500		
BM (30°-60°)	975.4	7.1	B1/1000		
BH (60°-80°)	464.1	3.4	B1/500		G1/500
BVH (80°-90°)	37.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8
2.5°	991.4	943.9	902.8	901.0	939.2	953.9	948.0	935.1	919.8	887.5	958.0
5°	1242.1	1174.0	1161.1	1145.8	1111.2	1120.6	1064.2	1107.1	1120.6	1151.7	1198.6
7.5°	1390.0	1350.1	1319.0	1306.1	1246.2	1239.1	1197.5	1258.5	1284.3	1280.2	1350.1
10°	1448.1	1411.7	1414.1	1371.8	1352.4	1360.7	1365.4	1366.5	1382.4	1395.3	1360.1
12.5°	1478.1	1492.1	1543.8	1515.0	1539.7	1549.7	1599.0	1548.5	1550.3	1483.9	1520.3
15°	1628.9	1664.1	1634.2	1633.0	1625.4	1641.8	1684.1	1650.0	1676.5	1655.3	1608.4
17.5°	1810.9	1821.4	1763.9	1740.4	1771.0	1765.7	1755.1	1760.4	1694.7	1816.8	1759.2
20°	1866.6	1908.3	1832.6	1740.4	1841.4	1854.9	1852.6	1829.7	1717.0	1893.1	1837.3
22.5°	2028.7	1972.3	1912.4	1853.7	1905.4	1913.0	1900.1	1845.5	1807.9	1874.9	1918.9
25°	2102.0	2088.5	2012.2	2005.2	1948.2	1921.2	1943.5	1927.7	1890.7	2009.9	1961.2
27.5°	2269.9	2254.1	2078.6	2150.8	2068.0	2060.9	1943.0	1995.8	2032.8	2024.0	2096.7
30°	2460.1	2478.3	2221.8	2294.0	2198.3	2185.4	2066.8	2133.7	2159.0	2167.2	2258.2
32.5°	2671.4	2721.3	2466.6	2407.3	2356.2	2365.0	2264.6	2142.5	2240.6	2432.5	2471.8
35°	2900.3	2920.9	2653.8	2564.6	2431.3	2421.9	2423.7	2439.0	2538.2	2757.1	2787.6
37.5°	3323.6	3228.5	2994.3	2768.3	2723.7	2636.2	2695.5	2742.4	2841.6	3177.4	3305.4
40°	3584.2	3513.8	3156.9	3026.0	2902.7	2910.9	3021.9	3021.3	3255.5	3601.8	3797.3
42.5°	3825.4	3748.6	3412.2	3280.7	3163.9	3192.7	3224.4	3280.1	3729.2	4287.4	4376.6
45°	4019.7	3851.3	3609.4	3580.1	3483.8	3445.7	3580.1	3669.3	4295.6	4842.1	4893.8
47.5°	4151.8	4013.3	3776.7	3750.9	3679.9	3773.2	4140.1	4197.6	4734.7	5399.2	5395.1
50°	4352.6	4163.0	3949.3	3935.8	4136.0	4185.9	4633.2	4627.3	5162.0	5861.7	5764.9
52.5°	4583.8	4344.9	4113.1	4258.1	4563.3	4588.0	4976.0	5133.9	5628.7	6307.9	6054.9
55°	4849.8	4582.7	4358.4	4552.1	5006.5	4933.7	5326.4	5712.1	6212.8	6778.0	6264.4
57.5°	5179.1	4855.0	4673.7	4968.3	5410.9	5475.5	5828.3	6313.7	6682.9	7070.4	6417.0
60°	5526.6	5146.2	4980.1	5260.7	5977.4	6051.3	6396.5	6813.8	7210.1	7345.7	6388.3
62.5°	5858.2	5446.7	5296.5	5642.8	6605.5	6788.6	7043.4	7309.3	7648.6	7412.6	6040.2
65°	6227.4	5815.4	5720.9	6240.3	7457.2	7639.2	7972.0	7892.2	7798.8	7175.4	5464.3
67.5°	6618.4	6199.8	6217.5	6933.6	8461.5	8492.7	9003.9	8473.3	7622.1	6547.3	4497.6
70°	6828.5	6400.0	6581.4	7672.6	9483.5	9438.9	9543.4	8629.4	6901.9	5175.5	3099.9
72.5°	6573.8	6191.6	6523.9	7983.7	10003.6	9955.4	9240.5	7702.6	5396.2	3218.5	1607.2
75°	5565.9	5197.3	5705.6	7116.7	9005.7	9050.3	7864.0	5727.9	3089.4	1294.3	667.4
77.5°	3782.0	3591.8	4027.4	5304.7	6689.4	6843.8	5834.7	3349.4	1297.3	535.9	403.9
80°	1998.7	1908.3	2230.0	3055.9	4235.8	4350.8	3431.0	1668.2	664.5	346.9	288.2
82.5°	1085.9	1047.8	1220.4	1571.4	2406.7	2507.1	1779.2	1108.2	447.9	217.2	176.1
85°	729.6	715.0	829.4	844.1	1138.2	1171.1	932.1	853.5	268.8	106.2	116.2
87.5°	365.1	350.4	436.7	385.7	434.4	435.0	427.3	544.7	68.1	35.2	21.1
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8	794.8
2.5°	959.2	938.6	867.6	867.0	877.6	870.5	875.8	847.0	834.7	891.1	888.1
5°	1192.2	1130.6	1071.3	1050.7	1026.7	974.4	977.3	977.9	969.1	1002.6	1004.9
7.5°	1329.0	1255.0	1200.4	1091.2	1005.5	938.6	947.4	957.4	947.4	992.0	1008.5
10°	1348.9	1290.2	1225.1	1103.6	1046.6	986.2	925.1	871.1	864.6	844.1	850.6
12.5°	1467.5	1418.8	1282.6	1149.3	1083.0	990.3	878.7	817.1	765.4	774.2	757.8
15°	1564.9	1530.3	1367.1	1192.8	1034.3	919.2	800.7	716.1	669.8	664.5	648.0
17.5°	1697.0	1647.7	1374.7	1162.8	971.5	833.5	699.7	604.0	584.1	575.8	567.6
20°	1760.4	1671.8	1347.2	1068.9	898.1	731.4	599.9	517.7	511.9	526.5	523.6
22.5°	1815.6	1691.7	1322.5	1012.0	783.6	628.1	531.8	477.8	471.4	490.1	493.7
25°	1847.9	1748.7	1295.5	953.9	712.6	551.2	480.7	450.2	451.4	476.1	473.1
27.5°	1993.4	1768.6	1227.4	885.2	631.0	494.3	456.1	440.2	433.8	467.8	470.8
30°	2085.0	1898.9	1212.1	812.4	570.6	452.6	433.8	427.3	426.2	467.2	470.2
32.5°	2255.2	1942.4	1219.2	733.2	516.0	439.7	417.4	416.8	428.5	467.8	472.5
35°	2491.2	2125.5	1185.1	688.0	486.0	419.7	404.4	409.1	429.1	471.9	478.4
37.5°	2951.4	2298.1	1195.7	645.7	476.1	413.2	400.9	403.9	436.1	482.5	500.1
40°	3315.9	2611.0	1179.3	624.6	462.6	412.1	393.3	405.0	435.6	488.4	504.2
42.5°	3844.2	2860.4	1181.0	603.4	462.0	407.4	392.1	406.2	434.4	483.1	504.8
45°	4297.4	3084.1	1206.3	591.1	456.1	415.0	390.4	408.0	426.7	464.3	488.4
47.5°	4669.0	3333.5	1232.1	579.4	453.7	422.0	388.6	395.6	413.8	443.2	464.9
50°	4971.9	3509.1	1265.0	577.0	453.7	418.5	383.9	383.3	398.6	422.0	442.6
52.5°	5207.8	3632.9	1287.3	580.0	453.7	405.0	378.0	373.3	382.7	399.7	420.3
55°	5378.6	3671.1	1269.1	587.6	453.2	392.7	367.5	363.4	368.0	379.8	399.2
57.5°	5447.3	3570.7	1160.5	574.1	453.2	383.9	354.5	349.8	354.5	363.4	382.7
60°	5275.3	3247.8	1003.8	539.4	444.4	372.2	339.9	336.9	344.0	351.6	370.4
62.5°	4843.9	2818.8	836.5	498.4	426.2	362.2	325.8	326.4	337.5	348.1	366.9
65°	4173.5	2299.8	697.4	456.7	403.3	346.3	311.1	315.2	331.1	345.2	363.9
67.5°	3284.2	1704.0	587.0	416.2	371.0	320.5	294.7	295.8	307.0	320.5	338.7
70°	2195.4	1084.2	482.5	368.6	328.7	287.0	269.4	265.3	262.4	274.1	290.0
72.5°	1113.5	640.4	396.2	315.2	282.9	250.6	237.1	226.6	218.4	225.4	237.7
75°	583.5	447.9	319.9	261.8	233.6	213.1	203.1	189.0	183.1	187.3	196.1
77.5°	412.7	350.4	258.9	207.2	190.2	169.1	170.8	156.1	151.4	153.8	163.2
80°	317.0	277.6	199.0	156.7	146.7	126.2	132.1	123.3	117.4	116.2	123.3
82.5°	216.0	209.0	141.5	109.8	102.7	88.0	96.3	92.7	85.1	80.4	83.9
85°	145.6	138.5	86.3	63.4	60.5	45.8	58.7	56.4	49.9	42.9	43.4
87.5°	25.2	46.4	24.7	15.8	14.7	5.3	13.5	12.9	11.7	5.9	4.7
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)