

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: P368346

Luminaire Tested: **MSA-SA4B-730-U-SL4**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368346  
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-SA4B-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: 17235 lumens  
Efficiency: N/A  
Efficacy: 100.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

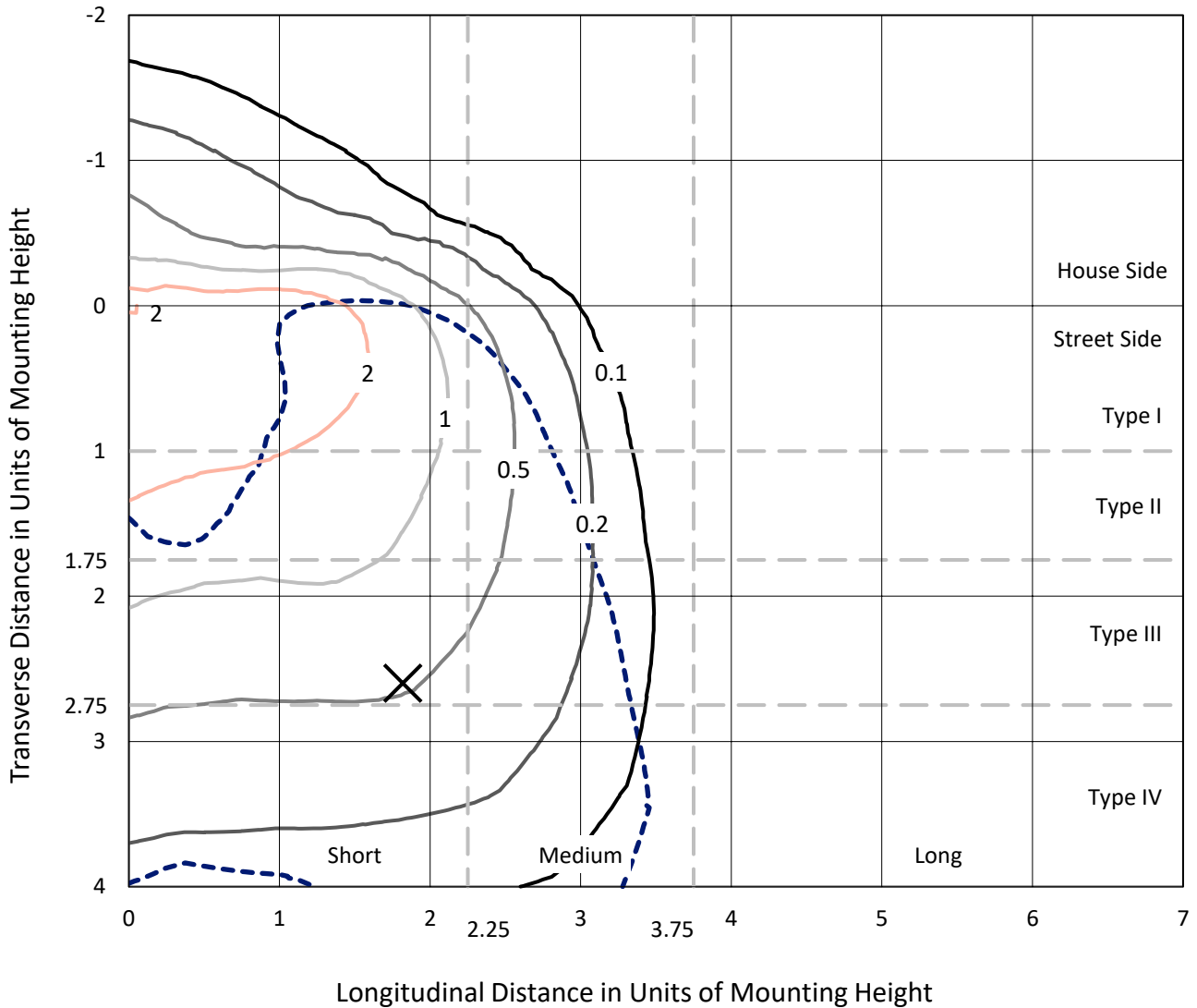
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

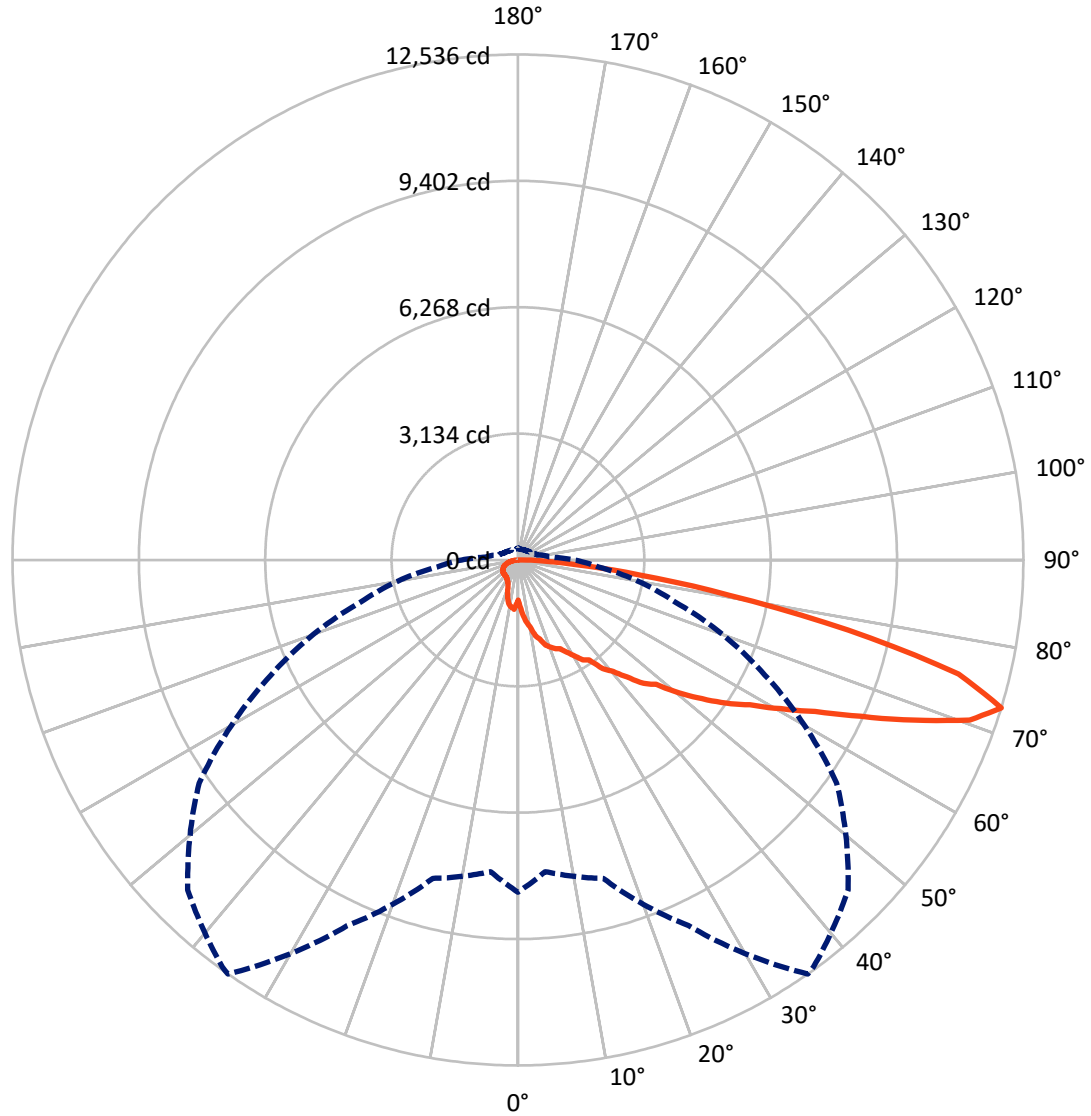
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 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	2312.9	0.0	2312.9
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	14922.1	0.0	14922.1
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	17235.0	0.0	17235.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.4	0.8
10°-20°	466.3	2.7
20°-30°	810.2	4.7
30°-40°	1354.1	7.9
40°-50°	2350.3	13.6
50°-60°	3553.0	20.6
60°-70°	4602.9	26.7
70°-80°	3396.5	19.7
80°-90°	569.2	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°	17235.0	100.0
0°-180°	17235.0	100.0

**Coefficient of Utilization**

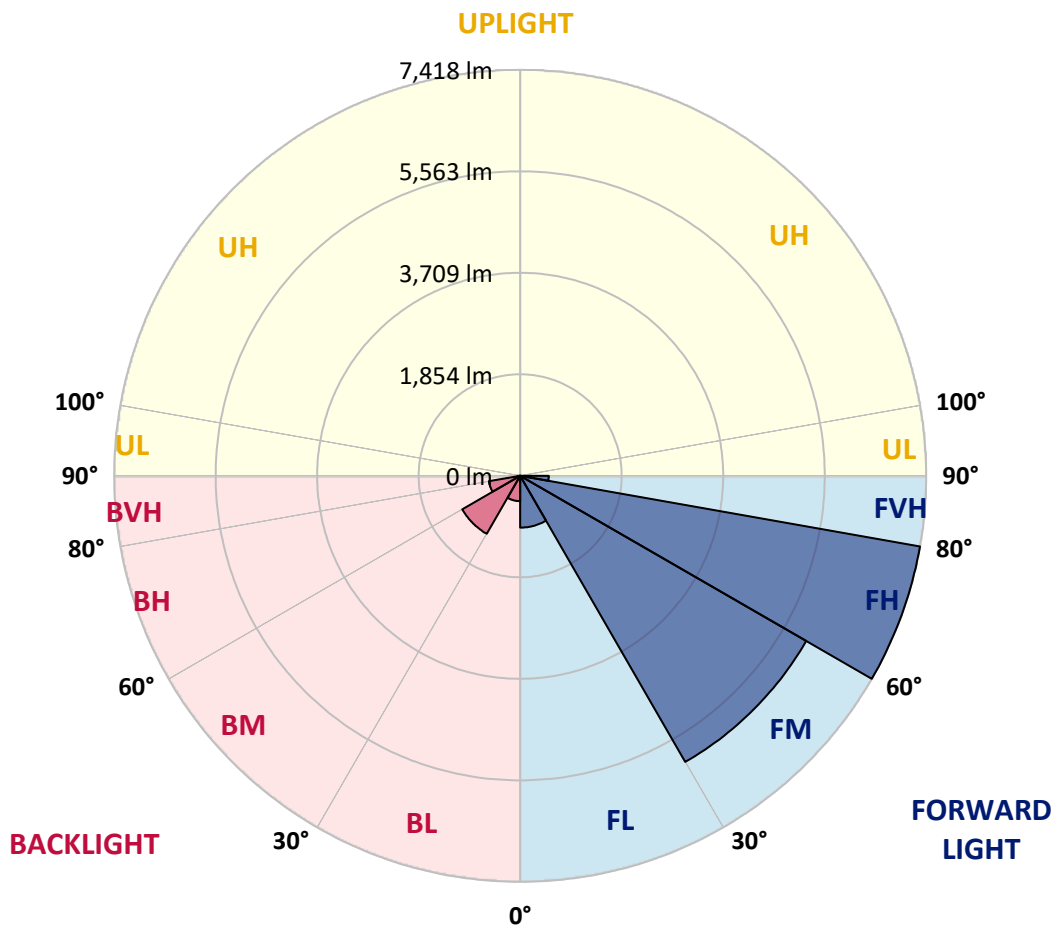


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	946.6	5.5			
FM (30°-60°)	6035.1	35.0			
FH (60°-80°)	7417.8	43.0			G3/7500
FVH (80°-90°)	522.6	3.0			G4/750
BL (0°-30°)	462.3	2.7	B1/500		
BM (30°-60°)	1222.4	7.1	B2/2500		
BH (60°-80°)	581.6	3.4	B2/1000		G2/1000
BVH (80°-90°)	46.6	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-G4**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0
2.5°	1242.4	1182.9	1131.4	1129.2	1177.0	1195.4	1188.0	1171.8	1152.7	1112.2	1200.5
5°	1556.6	1471.2	1455.0	1435.9	1392.5	1404.3	1333.7	1387.4	1404.3	1443.3	1502.1
7.5°	1741.9	1691.9	1652.9	1636.7	1561.7	1552.9	1500.6	1577.2	1609.5	1604.4	1691.9
10°	1814.8	1769.1	1772.1	1719.1	1694.8	1705.1	1711.0	1712.5	1732.4	1748.5	1704.4
12.5°	1852.3	1869.9	1934.7	1898.6	1929.5	1942.0	2003.8	1940.5	1942.8	1859.6	1905.2
15°	2041.3	2085.5	2047.9	2046.5	2036.9	2057.5	2110.5	2067.8	2100.9	2074.4	2015.6
17.5°	2269.4	2282.6	2210.5	2181.1	2219.3	2212.7	2199.5	2206.1	2123.7	2276.7	2204.6
20°	2339.2	2391.5	2296.6	2181.1	2307.6	2324.5	2321.6	2292.9	2151.7	2372.3	2302.5
22.5°	2542.3	2471.7	2396.6	2323.1	2387.8	2397.4	2381.2	2312.8	2265.7	2349.5	2404.7
25°	2634.2	2617.3	2521.7	2512.8	2441.5	2407.7	2435.6	2415.7	2369.4	2518.7	2457.7
27.5°	2844.6	2824.7	2604.8	2695.3	2591.6	2582.7	2434.9	2501.1	2547.4	2536.4	2627.6
30°	3082.9	3105.8	2784.3	2874.8	2754.9	2738.7	2590.1	2673.9	2705.6	2715.9	2829.9
32.5°	3347.8	3410.3	3091.0	3016.7	2952.7	2963.8	2838.0	2685.0	2807.8	3048.4	3097.7
35°	3634.7	3660.4	3325.7	3213.9	3046.9	3035.1	3037.3	3056.5	3180.8	3455.2	3493.4
37.5°	4165.0	4045.9	3752.4	3469.1	3413.2	3303.6	3377.9	3436.8	3561.1	3981.9	4142.2
40°	4491.6	4403.4	3956.1	3792.1	3637.6	3647.9	3786.9	3786.2	4079.7	4513.7	4758.7
42.5°	4794.0	4697.6	4276.1	4111.3	3964.9	4001.0	4040.7	4110.6	4673.3	5372.9	5484.7
45°	5037.5	4826.3	4523.3	4486.5	4365.9	4318.0	4486.5	4598.3	5383.2	6068.1	6132.8
47.5°	5203.0	5029.4	4732.9	4700.6	4611.5	4728.5	5188.3	5260.4	5933.4	6766.2	6761.0
50°	5454.6	5217.0	4949.2	4932.3	5183.1	5245.6	5806.2	5798.8	6469.0	7345.8	7224.4
52.5°	5744.4	5445.0	5154.4	5336.1	5718.6	5749.5	6235.8	6433.7	7053.8	7904.9	7587.8
55°	6077.6	5742.9	5461.9	5704.7	6274.0	6182.8	6674.9	7158.2	7785.7	8494.1	7850.4
57.5°	6490.3	6084.2	5856.9	6226.2	6780.9	6861.8	7303.9	7912.2	8374.9	8860.4	8041.7
60°	6925.8	6449.1	6240.9	6592.6	7490.7	7583.4	8016.0	8539.0	9035.5	9205.4	8005.7
62.5°	7341.4	6825.7	6637.4	7071.4	8277.8	8507.3	8826.6	9159.8	9585.0	9289.3	7569.4
65°	7804.1	7287.7	7169.3	7820.3	9345.2	9573.2	9990.3	9890.3	9773.3	8992.1	6847.8
67.5°	8294.0	7769.5	7791.6	8689.0	10603.8	10642.8	11283.5	10618.6	9551.9	8205.0	5636.3
70°	8557.4	8020.4	8247.7	9615.2	11884.5	11828.6	11959.6	10814.2	8649.3	6485.9	3884.8
72.5°	8238.1	7759.2	8175.6	10005.1	12536.3	12476.0	11580.0	9652.7	6762.5	4033.4	2014.1
75°	6975.1	6513.1	7150.1	8918.6	11285.8	11341.7	9855.0	7178.1	3871.5	1622.0	836.4
77.5°	4739.5	4501.2	5047.0	6647.7	8383.0	8576.5	7312.0	4197.4	1625.7	671.6	506.1
80°	2504.8	2391.5	2794.6	3829.6	5308.2	5452.4	4299.6	2090.6	832.7	434.7	361.2
82.5°	1360.9	1313.1	1529.3	1969.2	3016.0	3141.8	2229.6	1388.8	561.3	272.2	220.7
85°	914.4	896.0	1039.4	1057.8	1426.4	1467.5	1168.2	1069.6	336.9	133.1	145.7
87.5°	457.6	439.2	547.3	483.3	544.4	545.1	535.5	682.6	85.3	44.1	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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0
2.5°	1202.0	1176.2	1087.2	1086.5	1099.7	1090.9	1097.5	1061.5	1046.0	1116.7	1113.0
5°	1494.0	1416.8	1342.5	1316.7	1286.6	1221.1	1224.8	1225.5	1214.5	1256.4	1259.4
7.5°	1665.4	1572.7	1504.3	1367.5	1260.1	1176.2	1187.3	1199.8	1187.3	1243.2	1263.8
10°	1690.4	1616.9	1535.2	1382.9	1311.6	1235.8	1159.3	1091.6	1083.6	1057.8	1065.9
12.5°	1839.0	1778.0	1607.3	1440.3	1357.2	1241.0	1101.2	1024.0	959.2	970.3	949.7
15°	1961.1	1917.7	1713.2	1494.8	1296.1	1152.0	1003.4	897.4	839.3	832.7	812.1
17.5°	2126.7	2064.9	1722.8	1457.2	1217.4	1044.6	876.8	756.9	731.9	721.6	711.3
20°	2206.1	2095.0	1688.2	1339.5	1125.5	916.6	751.8	648.8	641.5	659.8	656.2
22.5°	2275.2	2120.0	1657.3	1268.2	982.0	787.1	666.5	598.8	590.7	614.2	618.6
25°	2315.7	2191.4	1623.5	1195.4	893.0	690.7	602.5	564.2	565.7	596.6	592.9
27.5°	2498.1	2216.4	1538.2	1109.3	790.8	619.4	571.6	551.7	543.6	586.3	590.0
30°	2612.9	2379.7	1519.0	1018.1	715.0	567.2	543.6	535.5	534.1	585.5	589.2
32.5°	2826.2	2434.1	1527.9	918.8	646.6	551.0	523.0	522.3	537.0	586.3	592.2
35°	3121.9	2663.6	1485.2	862.1	609.1	526.0	506.8	512.7	537.7	591.4	599.5
37.5°	3698.7	2879.9	1498.4	809.2	596.6	517.9	502.4	506.1	546.6	604.7	626.7
40°	4155.5	3272.0	1477.8	782.7	579.7	516.4	492.9	507.6	545.8	612.0	631.9
42.5°	4817.5	3584.6	1480.1	756.2	578.9	510.5	491.4	509.0	544.4	605.4	632.6
45°	5385.4	3864.9	1511.7	740.8	571.6	520.1	489.2	511.3	534.8	581.9	612.0
47.5°	5851.1	4177.5	1544.0	726.0	568.6	528.9	487.0	495.8	518.6	555.4	582.6
50°	6230.6	4397.5	1585.2	723.1	568.6	524.5	481.1	480.4	499.5	528.9	554.7
52.5°	6526.3	4552.7	1613.2	726.8	568.6	507.6	473.7	467.8	479.6	501.0	526.7
55°	6740.4	4600.5	1590.4	736.3	567.9	492.1	460.5	455.3	461.2	475.9	500.2
57.5°	6826.5	4474.7	1454.3	719.4	567.9	481.1	444.3	438.4	444.3	455.3	479.6
60°	6610.9	4070.1	1257.9	676.0	556.9	466.4	425.9	422.2	431.1	440.6	464.2
62.5°	6070.3	3532.4	1048.2	624.5	534.1	453.9	408.3	409.0	423.0	436.2	459.8
65°	5230.2	2882.1	873.9	572.3	505.4	434.0	389.9	395.0	414.9	432.5	456.1
67.5°	4115.7	2135.5	735.6	521.5	464.9	401.6	369.3	370.7	384.7	401.6	424.4
70°	2751.2	1358.7	604.7	462.0	411.9	359.7	337.6	332.5	328.8	343.5	363.4
72.5°	1395.5	802.6	496.5	395.0	354.6	314.1	297.2	283.9	273.6	282.5	297.9
75°	731.2	561.3	400.9	328.1	292.8	267.0	254.5	236.9	229.5	234.7	245.7
77.5°	517.1	439.2	324.4	259.7	238.3	211.9	214.1	195.7	189.8	192.7	204.5
80°	397.2	347.9	249.4	196.4	183.9	158.2	165.5	154.5	147.1	145.7	154.5
82.5°	270.7	261.9	177.3	137.6	128.7	110.3	120.6	116.2	106.7	100.8	105.2
85°	182.4	173.6	108.1	79.4	75.8	57.4	73.6	70.6	62.5	53.7	54.4
87.5°	31.6	58.1	30.9	19.9	18.4	6.6	16.9	16.2	14.7	7.4	5.9
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)