

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: P368324

Luminaire Tested: **MSA-SA4B-727-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368324
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-727-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: 15827 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

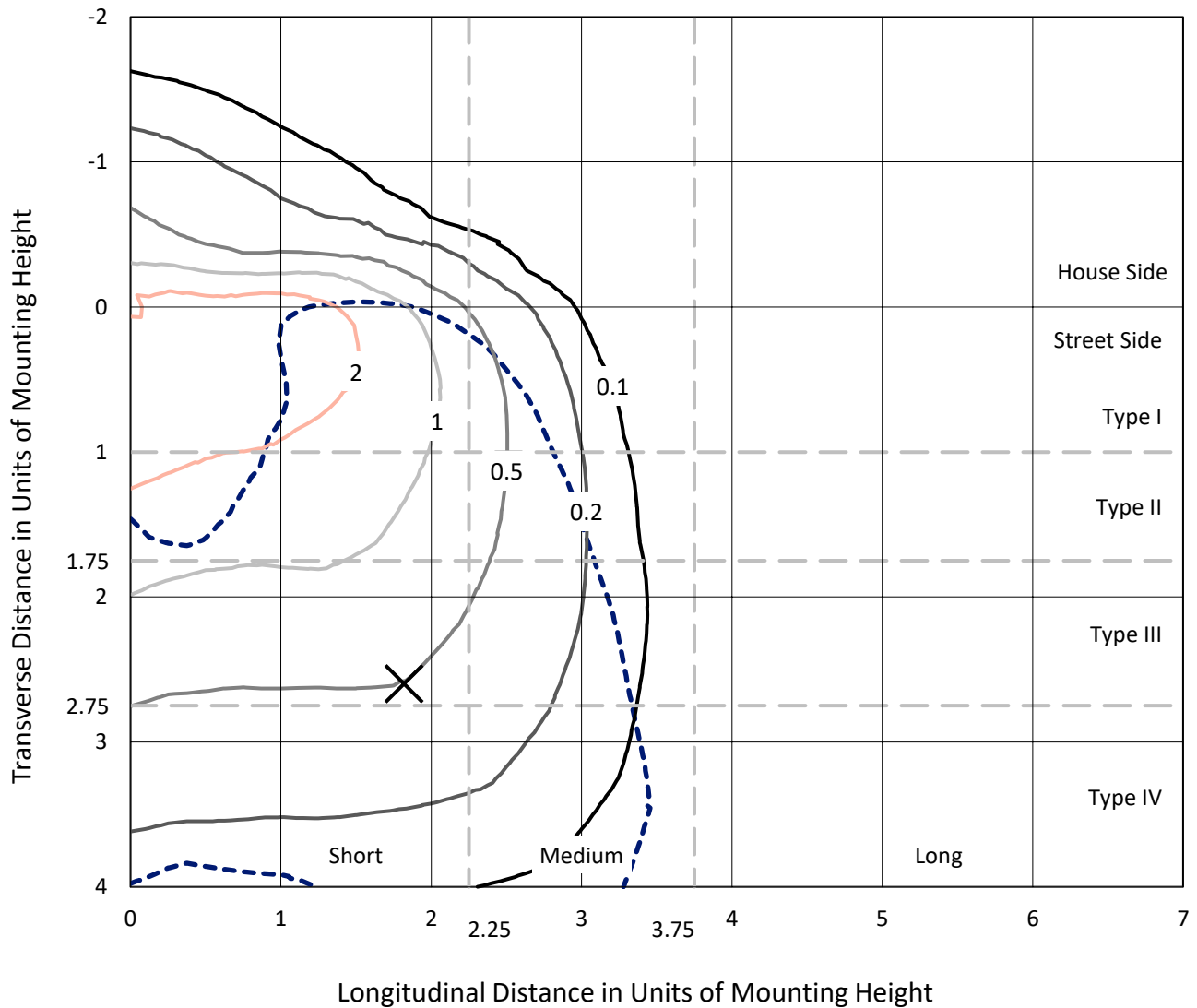
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368324
 CATALOG NUMBER: MSA-SA4B-727-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

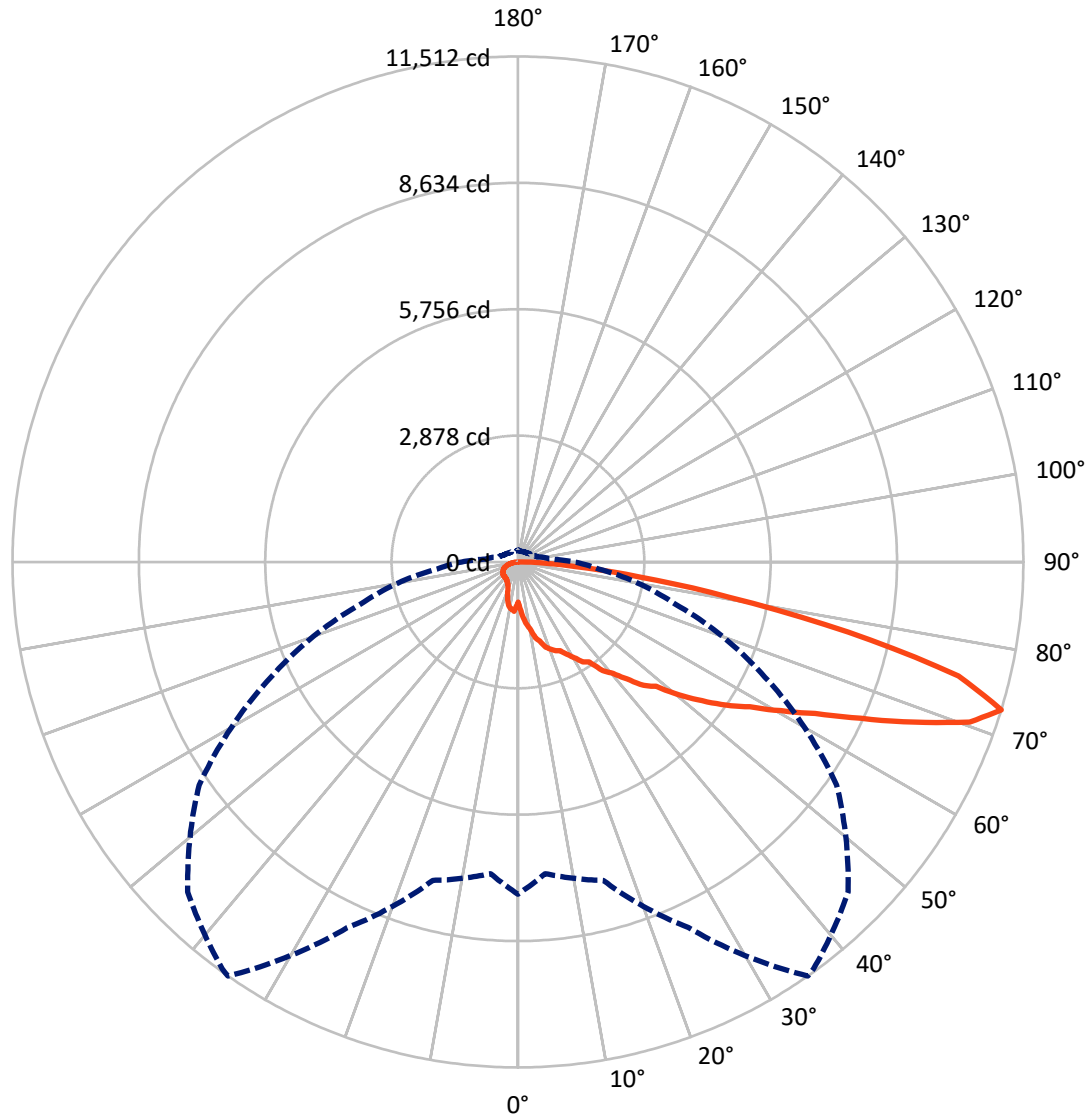
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type IV - Short - N/A

REPORT NUMBER: P368324
CATALOG NUMBER: MSA-SA4B-727-U-SL4

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368324

CATALOG NUMBER: MSA-SA4B-727-U-SL4

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2123.9	0.0	2123.9
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	13703.1	0.0	13703.1
	% Fixture	86.6	0.0	86.6
Total	Lumens	15827.0	0.0	15827.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	0.8
10°-20°	428.2	2.7
20°-30°	744.0	4.7
30°-40°	1243.5	7.9
40°-50°	2158.3	13.6
50°-60°	3262.8	20.6
60°-70°	4226.9	26.7
70°-80°	3119.0	19.7
80°-90°	522.7	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°	15827.0	100.0
0°-180°	15827.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368324

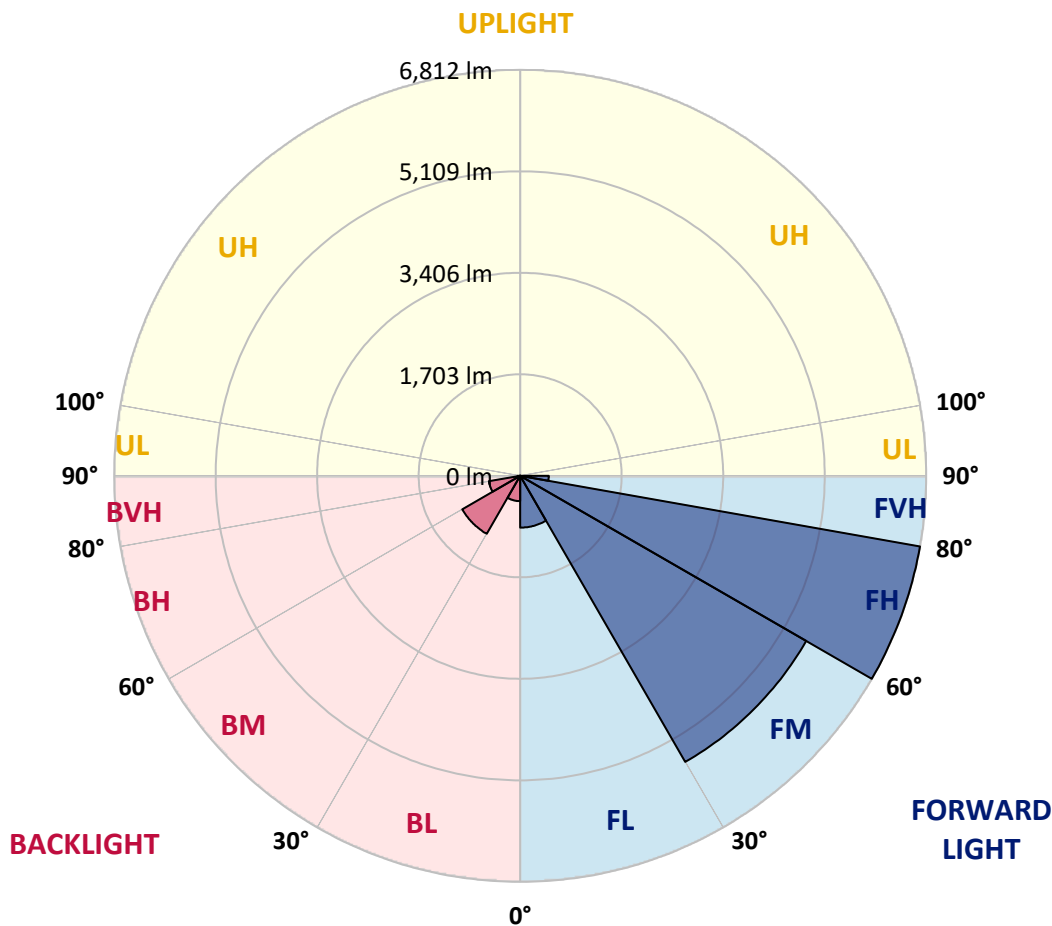
CATALOG NUMBER: MSA-SA4B-727-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	869.2	5.5			
FM (30°-60°)	5542.1	35.0			
FH (60°-80°)	6811.8	43.0			G3/7500
FVH (80°-90°)	480.0	3.0			G3/500
BL (0°-30°)	424.5	2.7	B1/500		
BM (30°-60°)	1122.5	7.1	B2/2500		
BH (60°-80°)	534.1	3.4	B2/1000		G2/1000
BVH (80°-90°)	42.8	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





REPORT NUMBER: P368324

CATALOG NUMBER: MSA-SA4B-727-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6
2.5°	1140.9	1086.2	1038.9	1036.9	1080.8	1097.7	1091.0	1076.1	1058.5	1021.4	1102.4
5°	1429.4	1351.0	1336.2	1318.6	1278.8	1289.6	1224.7	1274.0	1289.6	1325.4	1379.4
7.5°	1599.6	1553.7	1517.9	1503.0	1434.1	1426.0	1378.1	1448.3	1478.0	1473.3	1553.7
10°	1666.5	1624.6	1627.3	1578.7	1556.4	1565.8	1571.3	1572.6	1590.8	1605.7	1565.2
12.5°	1701.0	1717.2	1776.6	1743.5	1771.9	1783.4	1840.1	1782.0	1784.0	1707.7	1749.6
15°	1874.6	1915.1	1880.6	1879.3	1870.5	1889.4	1938.1	1898.9	1929.3	1905.0	1850.9
17.5°	2084.0	2096.1	2029.9	2002.9	2038.0	2032.0	2019.8	2025.9	1950.2	2090.7	2024.5
20°	2148.1	2196.1	2109.0	2002.9	2119.1	2134.6	2131.9	2105.6	1975.9	2178.5	2114.4
22.5°	2334.6	2269.7	2200.8	2133.3	2192.7	2201.5	2186.6	2123.8	2080.6	2157.6	2208.3
25°	2419.0	2403.5	2315.7	2307.6	2242.0	2211.0	2236.6	2218.4	2175.8	2313.0	2256.9
27.5°	2612.2	2594.0	2392.0	2475.1	2379.8	2371.7	2236.0	2296.8	2339.3	2329.2	2412.9
30°	2831.1	2852.0	2556.8	2639.9	2529.8	2514.9	2378.5	2455.5	2484.5	2494.0	2598.7
32.5°	3074.3	3131.7	2838.5	2770.3	2711.5	2721.7	2606.1	2465.6	2578.4	2799.3	2844.6
35°	3337.7	3361.4	3054.0	2951.3	2798.0	2787.2	2789.2	2806.8	2920.9	3172.9	3208.0
37.5°	3824.8	3715.3	3445.8	3185.7	3134.4	3033.7	3102.0	3156.0	3270.2	3656.6	3803.8
40°	4124.7	4043.6	3632.9	3482.3	3340.4	3349.9	3477.6	3476.9	3746.4	4145.0	4369.9
42.5°	4402.3	4313.8	3926.8	3775.5	3641.0	3674.1	3710.6	3774.8	4291.6	4934.0	5036.7
45°	4625.9	4432.1	4153.8	4120.0	4009.2	3965.3	4120.0	4222.7	4943.4	5572.3	5631.8
47.5°	4777.9	4618.5	4346.3	4316.5	4234.8	4342.2	4764.4	4830.6	5448.7	6213.4	6208.7
50°	5009.0	4790.8	4544.9	4529.3	4759.7	4817.1	5331.9	5325.1	5940.5	6745.7	6634.2
52.5°	5275.1	5000.2	4733.3	4900.2	5251.5	5279.8	5726.4	5908.1	6477.5	7259.1	6968.0
55°	5581.1	5273.8	5015.7	5238.6	5761.5	5677.7	6129.6	6573.4	7149.7	7800.2	7209.1
57.5°	5960.1	5587.2	5378.5	5717.6	6226.9	6301.2	6707.2	7265.9	7690.8	8136.6	7384.7
60°	6360.0	5922.3	5731.1	6054.0	6878.8	6963.9	7361.1	7841.4	8297.4	8453.4	7351.6
62.5°	6741.7	6268.1	6095.2	6493.7	7601.6	7812.3	8105.5	8411.5	8802.0	8530.4	6951.1
65°	7166.6	6692.3	6583.6	7181.4	8581.8	8791.2	9174.2	9082.3	8974.9	8257.5	6288.4
67.5°	7616.4	7134.8	7155.1	7979.2	9737.6	9773.4	10361.7	9751.1	8771.6	7534.7	5175.8
70°	7858.3	7365.2	7573.9	8829.7	10913.6	10862.3	10982.5	9930.8	7942.7	5956.0	3567.4
72.5°	7565.1	7125.3	7507.7	9187.7	11512.2	11456.8	10634.0	8864.1	6210.0	3703.9	1849.6
75°	6405.2	5981.0	6566.0	8190.0	10363.8	10415.1	9049.9	6591.7	3555.2	1489.5	768.1
77.5°	4352.4	4133.5	4634.7	6104.6	7698.2	7875.8	6714.6	3854.5	1492.9	616.7	464.8
80°	2300.1	2196.1	2566.3	3516.7	4874.5	5006.9	3948.4	1919.8	764.7	399.2	331.7
82.5°	1249.7	1205.8	1404.4	1808.4	2769.6	2885.1	2047.5	1275.4	515.4	249.9	202.7
85°	839.7	822.8	954.5	971.4	1309.8	1347.7	1072.7	982.2	309.4	122.3	133.8
87.5°	420.2	403.3	502.6	443.8	499.9	500.6	491.8	626.9	78.4	40.5	24.3
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: P368324
 CATALOG NUMBER: MSA-SA4B-727-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6
2.5°	1103.8	1080.2	998.4	997.7	1009.9	1001.8	1007.9	974.8	960.6	1025.4	1022.1
5°	1372.0	1301.0	1232.8	1209.2	1181.5	1121.4	1124.7	1125.4	1115.3	1153.8	1156.5
7.5°	1529.4	1444.3	1381.4	1255.8	1157.2	1080.2	1090.3	1101.8	1090.3	1141.6	1160.5
10°	1552.3	1484.8	1409.8	1270.0	1204.4	1134.9	1064.6	1002.5	995.0	971.4	978.8
12.5°	1688.8	1632.7	1476.0	1322.7	1246.3	1139.6	1011.2	940.3	880.9	891.0	872.1
15°	1800.9	1761.1	1573.3	1372.6	1190.3	1057.9	921.4	824.1	770.8	764.7	745.8
17.5°	1952.9	1896.2	1582.1	1338.2	1118.0	959.2	805.2	695.1	672.1	662.7	653.2
20°	2025.9	1923.9	1550.3	1230.1	1033.5	841.7	690.4	595.8	589.1	605.9	602.6
22.5°	2089.4	1946.8	1521.9	1164.6	901.8	722.8	612.0	549.9	542.4	564.1	568.1
25°	2126.5	2012.4	1490.9	1097.7	820.1	634.3	553.2	518.1	519.5	547.8	544.5
27.5°	2294.1	2035.3	1412.5	1018.7	726.2	568.8	524.9	506.6	499.2	538.4	541.8
30°	2399.4	2185.3	1394.9	934.9	656.6	520.8	499.2	491.8	490.4	537.7	541.1
32.5°	2595.3	2235.3	1403.0	843.7	593.8	506.0	480.3	479.6	493.1	538.4	543.8
35°	2866.9	2446.0	1363.9	791.7	559.3	483.0	465.4	470.8	493.8	543.1	550.5
37.5°	3396.5	2644.6	1376.0	743.1	547.8	475.6	461.4	464.8	501.9	555.3	575.5
40°	3816.0	3004.7	1357.1	718.7	532.3	474.2	452.6	466.1	501.2	562.0	580.3
42.5°	4424.0	3291.8	1359.1	694.4	531.6	468.8	451.2	467.5	499.9	555.9	580.9
45°	4945.5	3549.2	1388.2	680.2	524.9	477.6	449.2	469.5	491.1	534.3	562.0
47.5°	5373.1	3836.3	1417.9	666.7	522.2	485.7	447.2	455.3	476.2	510.0	535.0
50°	5721.6	4038.2	1455.7	664.0	522.2	481.6	441.8	441.1	458.7	485.7	509.3
52.5°	5993.2	4180.8	1481.4	667.4	522.2	466.1	435.0	429.6	440.4	460.0	483.7
55°	6189.8	4224.7	1460.5	676.2	521.5	451.9	422.9	418.1	423.5	437.1	459.4
57.5°	6268.8	4109.2	1335.5	660.7	521.5	441.8	408.0	402.6	408.0	418.1	440.4
60°	6070.9	3737.6	1155.1	620.8	511.4	428.3	391.1	387.7	395.9	404.6	426.3
62.5°	5574.4	3243.8	962.6	573.5	490.4	416.8	374.9	375.6	388.4	400.6	422.2
65°	4802.9	2646.7	802.5	525.6	464.1	398.6	358.0	362.8	381.0	397.2	418.8
67.5°	3779.5	1961.0	675.5	478.9	426.9	368.8	339.1	340.5	353.3	368.8	389.8
70°	2526.4	1247.7	555.3	424.2	378.3	330.3	310.1	305.3	302.0	315.5	333.7
72.5°	1281.5	737.0	456.0	362.8	325.6	288.4	272.9	260.7	251.3	259.4	273.6
75°	671.5	515.4	368.2	301.3	268.9	245.2	233.7	217.5	210.8	215.5	225.6
77.5°	474.9	403.3	297.9	238.5	218.9	194.5	196.6	179.7	174.3	177.0	187.8
80°	364.8	319.5	229.0	180.4	168.9	145.2	152.0	141.9	135.1	133.8	141.9
82.5°	248.6	240.5	162.8	126.3	118.2	101.3	110.8	106.7	97.9	92.5	96.6
85°	167.5	159.4	99.3	73.0	69.6	52.7	67.6	64.8	57.4	49.3	50.0
87.5°	29.0	53.4	28.4	18.2	16.9	6.1	15.5	14.9	13.5	6.8	5.4
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)