

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: P368248

Luminaire Tested: **MSA-SA4A-740-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-740-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15719 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

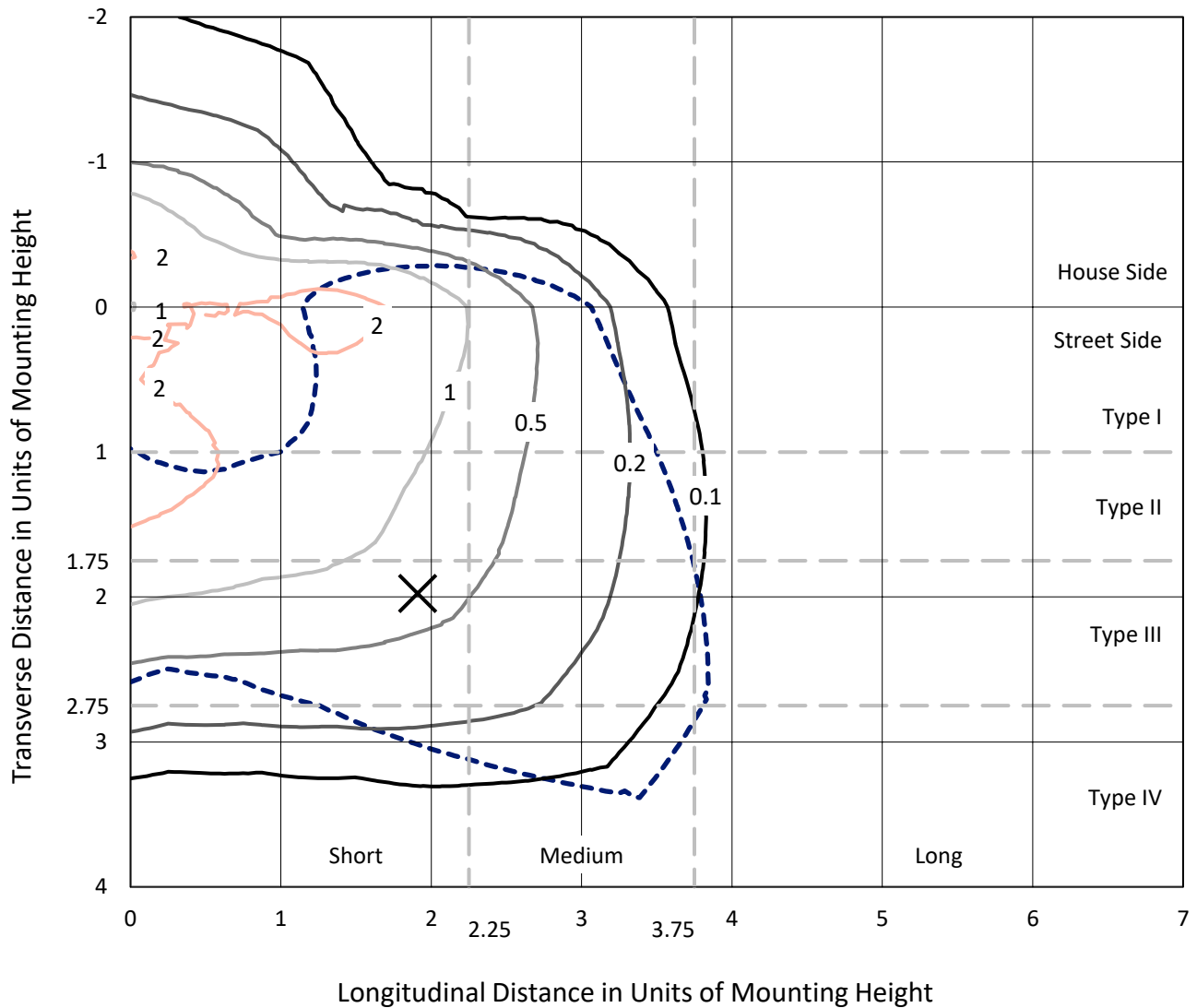
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P368248
 CATALOG NUMBER: MSA-SA4A-740-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

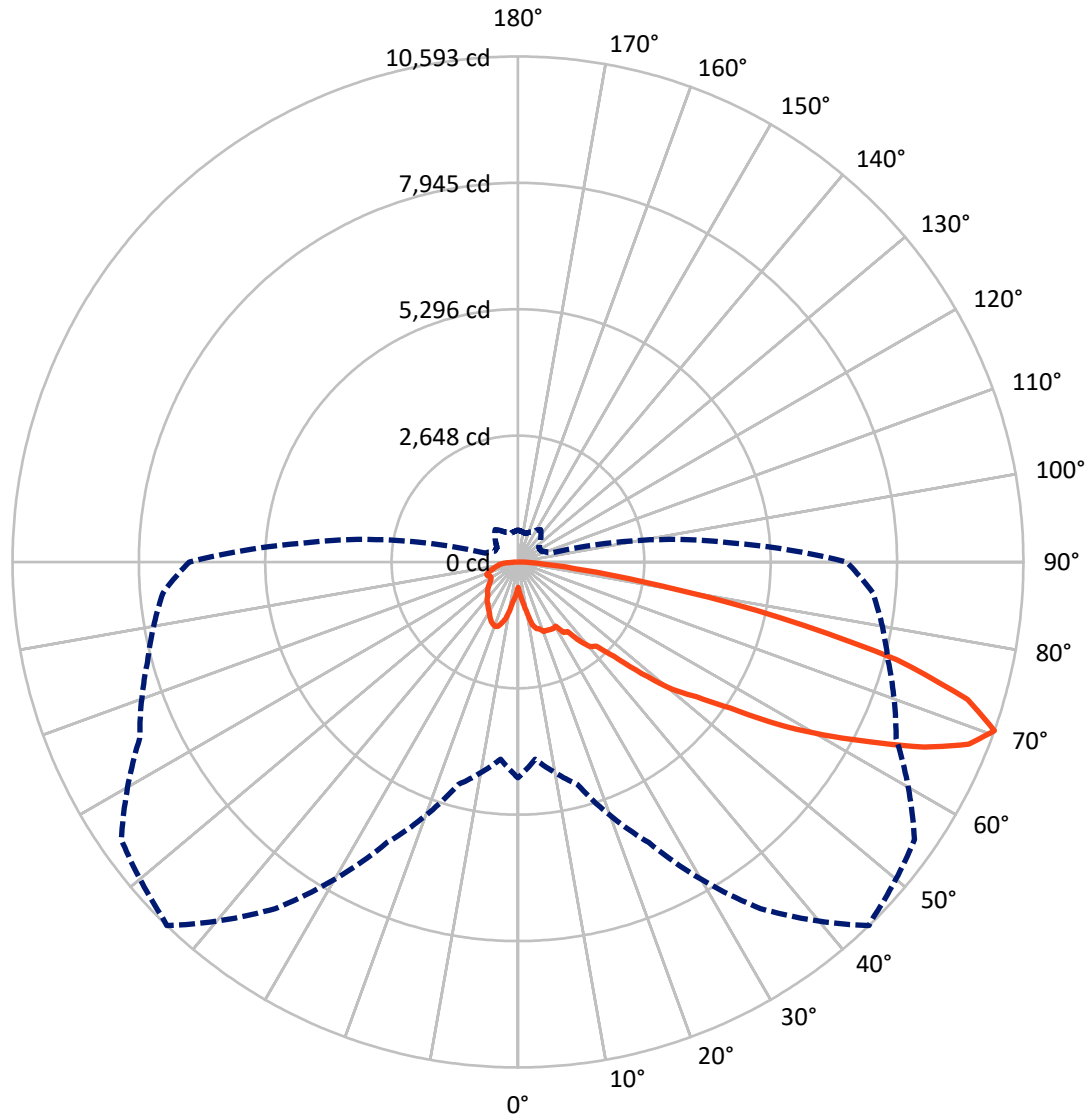
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P368248
CATALOG NUMBER: MSA-SA4A-740-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3468.2	0.0	3468.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	12250.8	0.0	12250.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	15719.0	0.0	15719.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.8	0.5
10°-20°	385.8	2.5
20°-30°	720.9	4.6
30°-40°	1157.2	7.4
40°-50°	1953.2	12.4
50°-60°	3480.6	22.1
60°-70°	4760.9	30.3
70°-80°	2799.7	17.8
80°-90°	377.0	2.4
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°	15719.0	100.0
0°-180°	15719.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368248

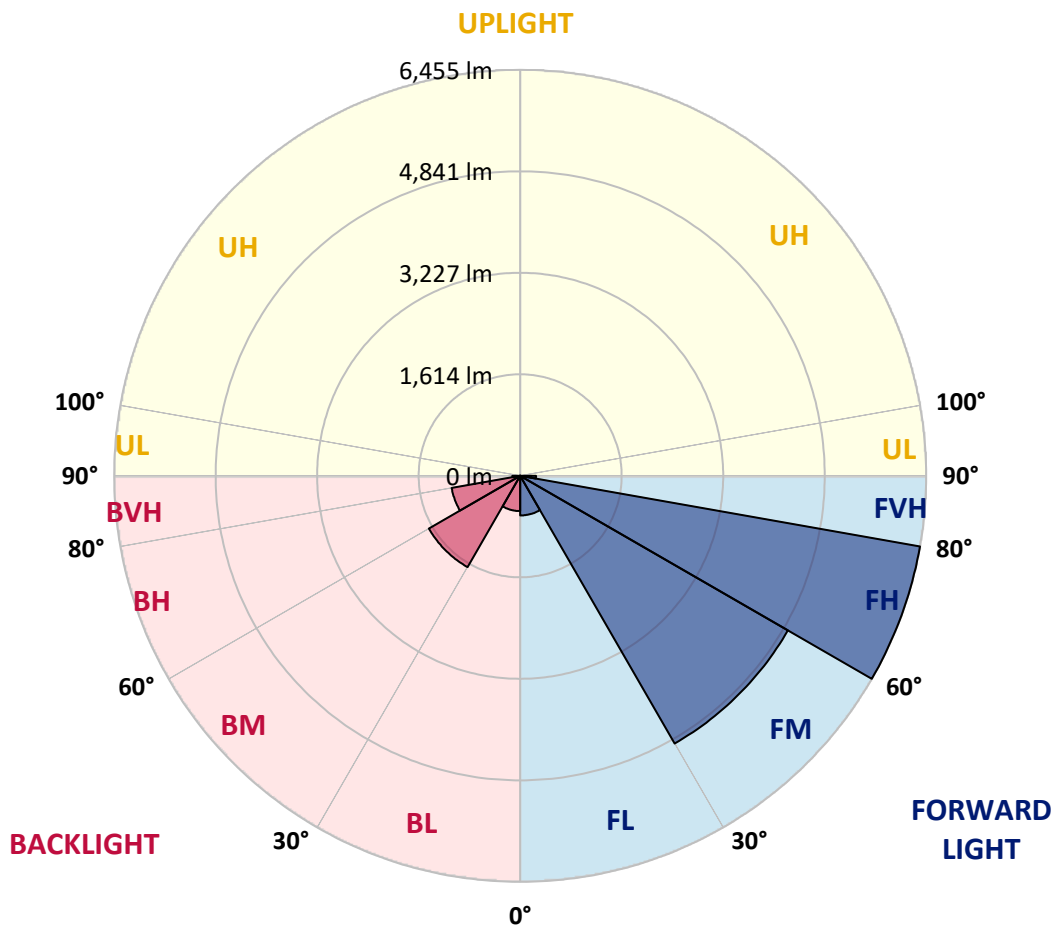
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	629.9	4.0			
FM (30°-60°)	4914.9	31.3			
FH (60°-80°)	6454.7	41.1			G3/7500
FVH (80°-90°)	251.2	1.6			G3/500
BL (0°-30°)	560.5	3.6	B2/1000		
BM (30°-60°)	1676.0	10.7	B2/2500		
BH (60°-80°)	1105.9	7.0	B3/2500		G3/2500
BVH (80°-90°)	125.7	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short





REPORT NUMBER: P368248

CATALOG NUMBER: MSA-SA4A-740-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3
2.5°	648.4	635.5	604.6	614.9	627.8	632.9	631.6	630.3	610.4	603.3	638.7
5°	881.1	852.7	830.1	821.1	791.5	768.3	754.1	791.5	785.7	795.3	819.8
7.5°	1100.2	1082.2	1031.2	1013.2	952.6	912.6	908.1	937.8	945.5	930.0	971.9
10°	1241.4	1210.4	1200.1	1156.9	1115.0	1108.6	1104.7	1091.2	1072.5	1071.2	1033.8
12.5°	1350.9	1367.0	1375.4	1325.8	1327.1	1350.3	1338.0	1283.2	1251.7	1196.2	1200.7
15°	1547.5	1570.7	1504.3	1472.7	1412.1	1447.0	1442.4	1396.7	1392.2	1356.1	1314.2
17.5°	1718.9	1729.3	1618.4	1546.2	1525.6	1475.3	1488.8	1490.1	1430.8	1495.3	1457.9
20°	1733.1	1769.9	1642.2	1498.5	1560.4	1553.9	1555.9	1543.0	1465.0	1571.3	1557.2
22.5°	1802.7	1746.7	1631.9	1526.9	1543.0	1552.7	1561.7	1546.2	1541.7	1601.0	1644.2
25°	1789.8	1771.8	1655.8	1566.8	1568.8	1570.7	1575.2	1621.6	1616.5	1697.0	1719.6
27.5°	1910.4	1882.7	1662.9	1641.0	1590.7	1579.7	1548.8	1645.5	1720.9	1718.9	1843.3
30°	2139.8	2111.5	1827.9	1764.1	1673.2	1561.0	1620.3	1749.2	1808.5	1828.5	1986.4
32.5°	2498.2	2544.6	2152.7	1895.5	1782.8	1758.3	1751.8	1738.9	1885.9	1984.5	2128.2
35°	3012.5	2975.8	2535.6	2177.2	1898.1	1793.1	1807.2	1885.9	2060.5	2124.3	2257.1
37.5°	3601.6	3525.5	3026.0	2496.2	2230.7	2099.2	2052.2	2128.2	2166.9	2217.2	2488.5
40°	4200.4	4014.7	3507.5	2915.8	2430.5	2331.2	2290.0	2196.5	2287.4	2389.2	2734.1
42.5°	4778.5	4634.8	4031.5	3416.6	2766.9	2413.1	2390.5	2299.0	2580.7	2688.3	3088.6
45°	5384.3	5051.1	4568.4	3981.9	3258.7	2814.6	2781.1	2616.8	2977.7	3202.0	3588.7
47.5°	5791.7	5483.0	5060.1	4440.8	3670.6	3486.2	3422.4	3141.4	3468.8	3760.1	4361.5
50°	6177.1	5859.4	5415.3	4942.8	4416.3	4204.2	4068.2	3600.3	4080.5	4554.8	5352.1
52.5°	6728.8	6444.6	5827.8	5448.8	5217.4	4696.0	4594.8	4337.6	4795.9	5435.9	6434.9
55°	7318.6	6931.2	6372.4	6162.3	6068.8	5401.1	5318.6	5154.9	5748.5	6337.6	7487.4
57.5°	7578.9	7174.8	6866.7	6741.1	6733.3	6425.9	6331.1	6217.1	6722.4	7111.0	8478.1
60°	7785.8	7352.1	7229.0	7299.2	7554.5	7352.1	7229.0	7128.4	7515.1	7875.4	9286.3
62.5°	7747.8	7312.8	7375.9	7589.9	8241.5	8300.8	8206.1	7962.4	8300.8	8501.9	9749.7
65°	7134.2	6732.0	7100.1	7607.9	8880.2	9354.0	9348.8	8711.4	8828.7	8828.7	9700.7
67.5°	6059.2	5642.8	6245.4	7448.8	9321.7	10188.6	10189.9	9505.4	8877.0	8795.8	8942.8
70°	4524.6	4147.5	4824.9	6487.1	8866.1	10592.7	10534.1	10146.1	8744.2	8034.6	7470.0
72.5°	2702.5	2458.9	3082.1	4722.4	7562.8	9849.6	10005.6	9408.1	8005.0	6681.8	5339.9
75°	1227.2	1121.5	1448.2	2712.8	5399.2	8215.7	8385.2	7939.9	6358.2	4805.6	3086.0
77.5°	525.3	496.9	632.3	1203.3	2977.1	5618.3	5965.7	5674.4	4308.0	2792.7	1365.1
80°	337.7	319.7	388.6	578.8	1382.5	3035.7	3334.8	3225.8	2194.6	1086.0	480.8
82.5°	201.7	195.9	259.7	363.5	754.1	1336.1	1505.6	1545.6	911.4	487.3	275.2
85°	110.2	111.5	142.4	220.4	452.5	520.1	556.9	605.9	429.3	282.3	133.4
87.5°	36.7	42.5	57.4	89.6	161.1	147.0	147.6	171.4	181.1	117.3	42.5
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: P368248
 CATALOG NUMBER: MSA-SA4A-740-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3
2.5°	644.5	632.9	603.3	605.2	616.2	618.7	622.0	603.3	599.4	634.9	638.1
5°	823.7	785.7	768.3	762.5	745.7	739.9	770.8	785.0	799.2	826.9	840.5
7.5°	967.4	924.9	893.3	864.3	839.8	825.6	877.8	917.8	942.3	999.0	1024.8
10°	1033.2	996.4	984.8	961.6	980.3	1022.9	1032.5	1033.8	1088.0	1086.7	1097.6
12.5°	1164.0	1140.2	1102.1	1110.5	1159.5	1203.3	1191.1	1209.8	1229.1	1275.5	1254.2
15°	1283.2	1276.8	1241.4	1247.2	1256.8	1311.6	1318.7	1337.4	1367.0	1403.8	1378.6
17.5°	1430.2	1427.6	1341.3	1333.5	1356.1	1409.6	1392.8	1359.9	1457.9	1497.2	1486.9
20°	1530.1	1510.8	1399.9	1367.0	1424.4	1431.5	1412.1	1359.9	1445.0	1530.7	1553.9
22.5°	1613.2	1590.7	1476.6	1412.1	1400.5	1403.8	1403.8	1394.1	1436.0	1506.3	1505.6
25°	1680.3	1701.5	1556.5	1494.6	1432.8	1355.4	1345.8	1354.1	1378.0	1513.3	1508.8
27.5°	1848.5	1789.8	1583.6	1537.2	1410.2	1288.4	1314.8	1327.7	1335.5	1483.7	1508.2
30°	1958.1	1976.1	1680.3	1562.3	1377.3	1213.6	1222.7	1260.0	1305.2	1480.5	1487.6
32.5°	2105.7	2067.0	1831.1	1520.4	1289.7	1168.5	1151.8	1202.0	1269.1	1428.3	1447.6
35°	2242.9	2288.7	1894.9	1512.7	1228.5	1100.8	1118.9	1136.3	1205.9	1370.3	1392.8
37.5°	2565.2	2460.8	2074.1	1475.3	1177.5	1066.7	1047.3	1073.8	1133.1	1260.0	1312.2
40°	2810.1	2816.6	2112.7	1428.3	1080.2	1017.7	976.5	1002.9	1028.0	1129.2	1151.8
42.5°	3269.7	3129.2	2207.5	1325.1	1019.0	944.2	921.0	932.6	936.5	979.0	1016.4
45°	3854.2	3524.9	2244.9	1186.6	938.4	913.9	866.9	861.1	839.8	845.6	878.5
47.5°	4663.1	4142.3	2217.8	1039.0	866.9	874.6	806.9	780.5	750.9	758.0	788.9
50°	5709.2	4931.2	2215.9	913.9	817.9	823.1	767.6	719.9	690.3	705.1	732.2
52.5°	6882.9	5722.7	2224.9	828.2	764.4	761.8	741.8	683.8	660.0	675.5	706.4
55°	8005.6	6403.3	2291.9	774.1	709.0	713.5	721.2	672.2	645.8	660.0	692.2
57.5°	8982.7	6940.9	2266.8	716.7	657.4	678.0	698.7	656.1	636.1	656.8	689.0
60°	9665.9	7190.3	2068.3	661.9	619.4	647.7	687.7	654.2	651.6	696.1	734.8
62.5°	9915.3	7098.1	1681.6	618.7	596.8	643.9	712.8	696.7	699.3	754.1	807.6
65°	9551.2	6613.5	1254.2	591.0	579.4	662.6	770.8	721.9	686.4	731.5	780.5
67.5°	8515.4	5751.7	916.5	567.2	559.4	692.2	824.3	719.3	653.5	699.3	739.3
70°	6889.3	4540.0	709.6	536.9	533.0	672.2	829.5	700.0	618.1	647.7	670.3
72.5°	4720.5	3108.5	587.8	507.9	487.3	595.5	787.6	656.8	575.6	593.0	611.7
75°	2638.0	1744.7	494.3	471.8	426.7	530.4	738.6	631.0	544.0	549.1	574.9
77.5°	1184.0	754.7	419.6	424.1	371.9	469.2	674.8	589.7	495.6	484.0	509.8
80°	447.9	368.0	340.3	358.4	312.6	406.7	608.4	552.4	444.7	429.9	444.7
82.5°	259.7	223.0	252.7	275.9	248.1	373.8	580.7	518.2	391.9	354.5	367.4
85°	120.5	115.4	151.5	179.2	173.4	291.3	496.9	389.9	279.1	235.9	261.0
87.5°	31.6	35.4	53.5	63.2	64.5	99.9	191.4	145.0	108.9	82.5	79.3
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)