

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: P367456

Luminaire Tested: **MSA-SA2C-740-U-T4W**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367456  
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-SA2C-740-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12508 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

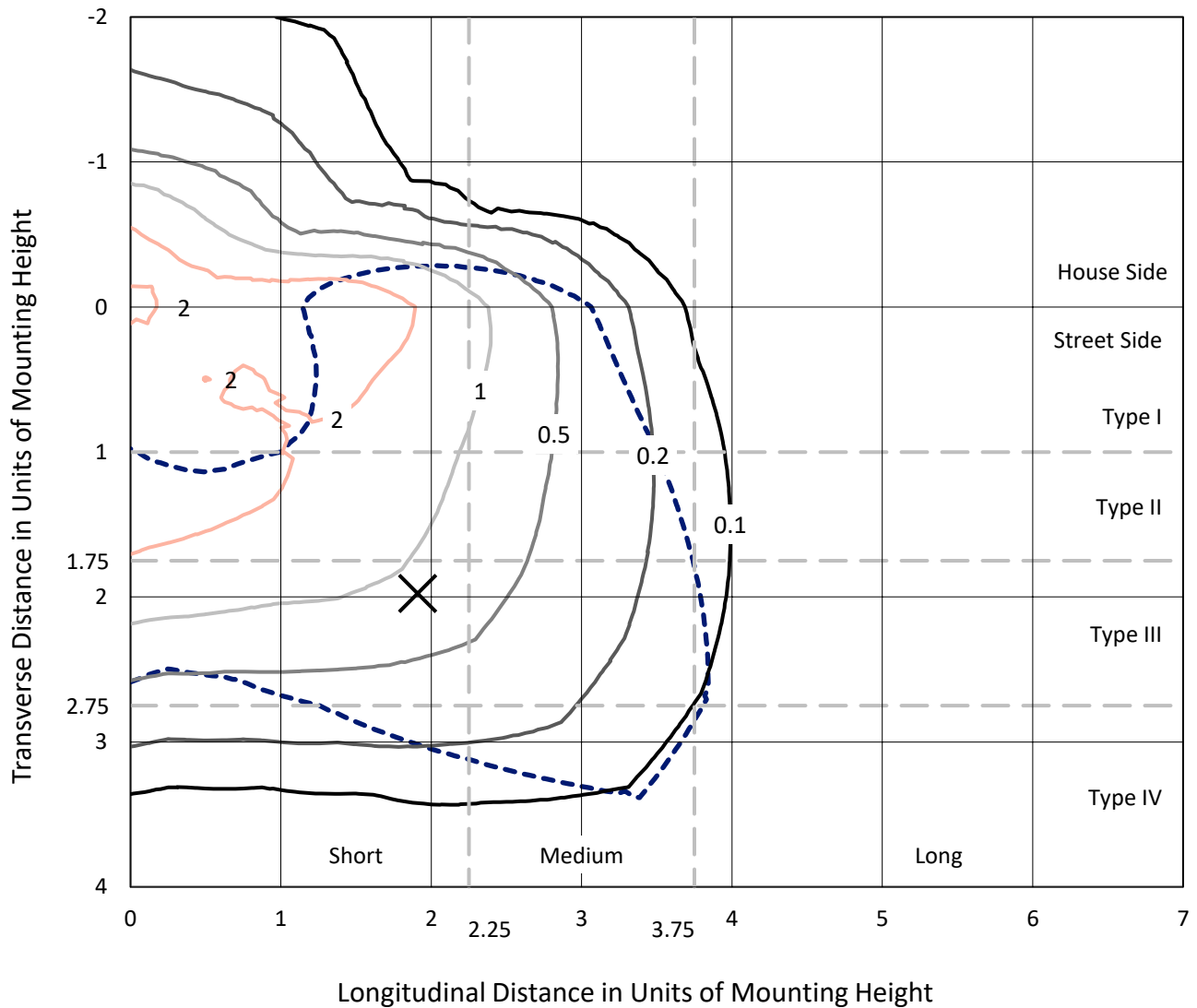
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

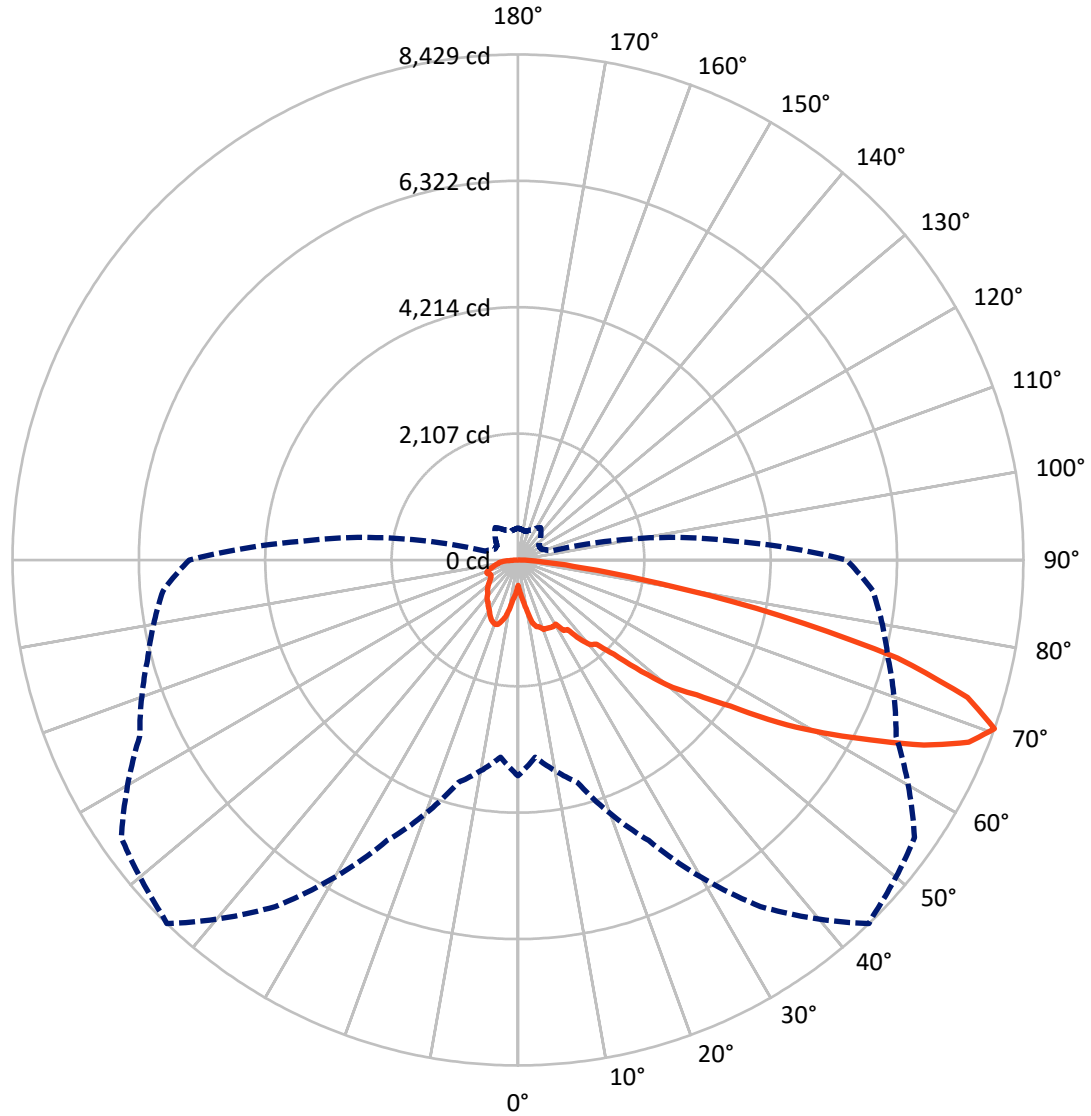
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 fc  
 Type IV - Short - N/A

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### 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
<b>House Side</b>	Lumens	2759.8	0.0	2759.8
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	9748.2	0.0	9748.2
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	12508.0	0.0	12508.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.7	0.5
10°-20°	307.0	2.5
20°-30°	573.6	4.6
30°-40°	920.8	7.4
40°-50°	1554.2	12.4
50°-60°	2769.6	22.1
60°-70°	3788.4	30.3
70°-80°	2227.8	17.8
80°-90°	300.0	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°	12508.0	100.0
0°-180°	12508.0	100.0

**Coefficient of Utilization**



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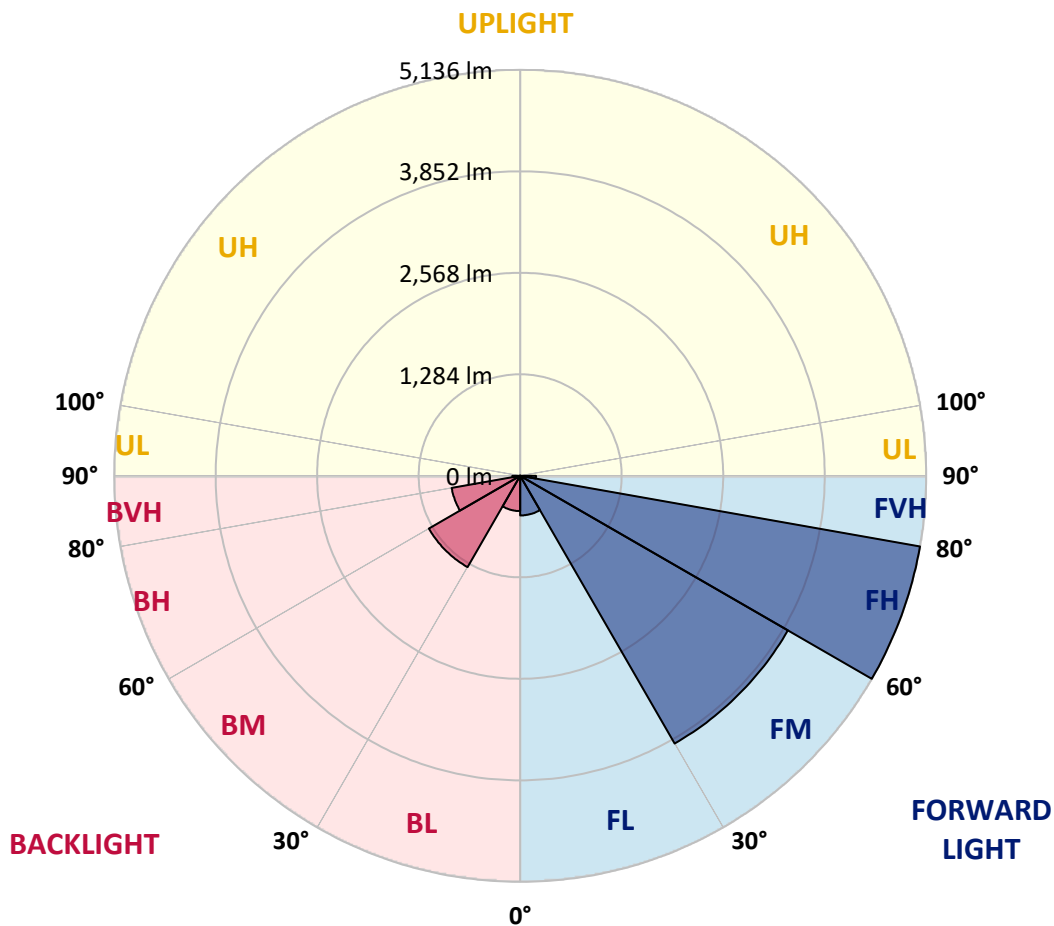
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	501.3	4.0			
FM (30°-60°)	3910.9	31.3			
FH (60°-80°)	5136.2	41.1			G3/7500
FVH (80°-90°)	199.9	1.6			G2/225
BL (0°-30°)	446.0	3.6	B1/500		
BM (30°-60°)	1333.6	10.7	B2/2500		
BH (60°-80°)	880.0	7.0	B2/1000		G2/1000
BVH (80°-90°)	100.0	0.8			G2/225
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°	44°	45°	55°	65°	75°	85°
0°	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2
2.5°	515.9	505.7	481.1	489.3	499.5	503.6	502.6	501.6	485.7	480.0	508.2
5°	701.1	678.5	660.6	653.4	629.8	611.3	600.0	629.8	625.2	632.9	652.4
7.5°	875.5	861.1	820.6	806.2	758.0	726.2	722.6	746.2	752.4	740.1	773.4
10°	987.8	963.2	955.0	920.6	887.3	882.1	879.0	868.3	853.4	852.4	822.6
12.5°	1075.0	1087.8	1094.4	1055.0	1056.0	1074.4	1064.7	1021.1	996.0	951.9	955.5
15°	1231.4	1249.8	1197.0	1171.9	1123.7	1151.4	1147.8	1111.4	1107.8	1079.1	1045.7
17.5°	1367.8	1376.0	1287.8	1230.4	1213.9	1173.9	1184.7	1185.7	1138.6	1189.8	1160.1
20°	1379.1	1408.3	1306.8	1192.4	1241.6	1236.5	1238.1	1227.8	1165.7	1250.4	1239.1
22.5°	1434.5	1389.9	1298.6	1215.0	1227.8	1235.5	1242.7	1230.4	1226.8	1274.0	1308.3
25°	1424.2	1409.9	1317.5	1246.8	1248.3	1249.8	1253.4	1290.4	1286.3	1350.4	1368.3
27.5°	1520.1	1498.1	1323.2	1305.7	1265.7	1257.0	1232.4	1309.3	1369.3	1367.8	1466.8
30°	1702.7	1680.1	1454.5	1403.7	1331.4	1242.2	1289.3	1391.9	1439.1	1455.0	1580.6
32.5°	1987.9	2024.8	1713.0	1508.3	1418.6	1399.1	1394.0	1383.7	1500.6	1579.1	1693.5
35°	2397.1	2367.9	2017.6	1732.5	1510.4	1426.8	1438.1	1500.6	1639.6	1690.4	1796.0
37.5°	2865.9	2805.4	2407.9	1986.3	1775.0	1670.4	1633.0	1693.5	1724.2	1764.2	1980.2
40°	3342.3	3194.6	2791.0	2320.2	1934.0	1855.0	1822.2	1747.8	1820.2	1901.2	2175.6
42.5°	3802.4	3688.0	3208.0	2718.7	2201.7	1920.2	1902.2	1829.4	2053.5	2139.2	2457.6
45°	4284.5	4019.3	3635.2	3168.5	2593.0	2239.7	2213.0	2082.2	2369.4	2547.9	2855.6
47.5°	4608.6	4362.9	4026.5	3533.6	2920.8	2774.1	2723.3	2499.7	2760.2	2992.0	3470.5
50°	4915.3	4662.4	4309.1	3933.1	3514.1	3345.4	3237.2	2864.9	3246.9	3624.4	4258.8
52.5°	5354.3	5128.1	4637.3	4335.7	4151.6	3736.7	3656.2	3451.6	3816.2	4325.5	5120.4
55°	5823.6	5515.3	5070.7	4903.5	4829.1	4297.8	4232.1	4101.9	4574.2	5043.0	5957.9
57.5°	6030.8	5709.2	5464.0	5364.0	5357.9	5113.2	5037.9	4947.1	5349.2	5658.4	6746.2
60°	6195.4	5850.2	5752.3	5808.2	6011.3	5850.2	5752.3	5672.3	5980.0	6266.7	7389.3
62.5°	6165.1	5818.9	5869.2	6039.5	6558.0	6605.2	6529.8	6335.9	6605.2	6765.2	7758.1
65°	5676.9	5356.9	5649.7	6053.8	7066.2	7443.2	7439.1	6931.9	7025.2	7025.2	7719.1
67.5°	4821.4	4490.1	4969.6	5927.2	7417.5	8107.3	8108.4	7563.7	7063.7	6999.0	7116.0
70°	3600.3	3300.3	3839.3	5162.0	7054.9	8428.9	8382.2	8073.5	6958.0	6393.4	5944.1
72.5°	2150.4	1956.6	2452.5	3757.7	6017.9	7837.6	7961.7	7486.3	6369.8	5316.9	4249.1
75°	976.5	892.4	1152.4	2158.6	4296.3	6537.5	6672.3	6318.0	5059.4	3823.9	2455.6
77.5°	418.0	395.4	503.1	957.5	2368.9	4470.6	4747.1	4515.2	3428.0	2222.2	1086.2
80°	268.7	254.4	309.3	460.6	1100.1	2415.6	2653.6	2566.9	1746.3	864.2	382.6
82.5°	160.5	155.9	206.7	289.3	600.0	1063.2	1198.0	1229.8	725.2	387.7	219.0
85°	87.7	88.7	113.3	175.4	360.0	413.9	443.1	482.1	341.6	224.6	106.2
87.5°	29.2	33.8	45.6	71.3	128.2	116.9	117.4	136.4	144.1	93.3	33.8
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°	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2	425.2
2.5°	512.9	503.6	480.0	481.6	490.3	492.3	494.9	480.0	477.0	505.2	507.7
5°	655.4	625.2	611.3	606.7	593.4	588.8	613.4	624.7	636.0	658.0	668.8
7.5°	769.8	736.0	710.8	687.7	668.3	657.0	698.5	730.3	749.8	794.9	815.5
10°	822.1	792.9	783.7	765.2	780.1	813.9	821.6	822.6	865.7	864.7	873.4
12.5°	926.2	907.3	877.0	883.7	922.6	957.5	947.8	962.6	978.0	1015.0	998.0
15°	1021.1	1016.0	987.8	992.4	1000.1	1043.7	1049.3	1064.2	1087.8	1117.0	1097.0
17.5°	1138.0	1136.0	1067.3	1061.1	1079.1	1121.6	1108.3	1082.1	1160.1	1191.4	1183.2
20°	1217.5	1202.2	1113.9	1087.8	1133.4	1139.1	1123.7	1082.1	1149.8	1218.0	1236.5
22.5°	1283.7	1265.7	1175.0	1123.7	1114.5	1117.0	1117.0	1109.3	1142.7	1198.6	1198.0
25°	1337.0	1354.0	1238.6	1189.3	1140.1	1078.6	1070.9	1077.5	1096.5	1204.2	1200.6
27.5°	1470.9	1424.2	1260.1	1223.2	1122.1	1025.2	1046.2	1056.5	1062.7	1180.6	1200.1
30°	1558.1	1572.4	1337.0	1243.2	1096.0	965.7	972.9	1002.6	1038.5	1178.0	1183.7
32.5°	1675.5	1644.8	1457.0	1209.8	1026.2	929.8	916.5	956.5	1009.8	1136.5	1151.9
35°	1784.8	1821.2	1507.8	1203.7	977.5	876.0	890.3	904.2	959.6	1090.3	1108.3
37.5°	2041.2	1958.1	1650.4	1173.9	937.0	848.8	833.4	854.4	901.6	1002.6	1044.2
40°	2236.1	2241.2	1681.2	1136.5	859.6	809.8	777.0	798.0	818.0	898.5	916.5
42.5°	2601.8	2489.9	1756.6	1054.4	810.8	751.3	732.9	742.1	745.2	779.0	808.8
45°	3066.9	2804.8	1786.3	944.2	746.7	727.2	689.8	685.2	668.3	672.9	699.0
47.5°	3710.6	3296.2	1764.8	826.7	689.8	696.0	642.1	621.1	597.5	603.1	627.7
50°	4542.9	3923.9	1763.2	727.2	650.8	654.9	610.8	572.9	549.3	561.1	582.6
52.5°	5476.9	4553.7	1770.4	659.0	608.3	606.2	590.3	544.1	525.2	537.5	562.1
55°	6370.3	5095.3	1823.7	615.9	564.1	567.7	573.9	534.9	513.9	525.2	550.8
57.5°	7147.8	5523.0	1803.7	570.3	523.1	539.5	555.9	522.1	506.2	522.6	548.3
60°	7691.4	5721.5	1645.8	526.7	492.9	515.4	547.2	520.6	518.5	553.9	584.7
62.5°	7889.9	5648.2	1338.1	492.3	474.9	512.4	567.2	554.4	556.5	600.0	642.6
65°	7600.1	5262.5	998.0	470.3	461.1	527.2	613.4	574.4	546.2	582.1	621.1
67.5°	6775.9	4576.8	729.3	451.3	445.2	550.8	656.0	572.4	520.0	556.5	588.3
70°	5482.0	3612.6	564.7	427.2	424.1	534.9	660.1	557.0	491.8	515.4	533.4
72.5°	3756.2	2473.5	467.7	404.1	387.7	473.9	626.7	522.6	458.0	471.8	486.7
75°	2099.1	1388.3	393.4	375.4	339.5	422.1	587.7	502.1	432.9	437.0	457.5
77.5°	942.1	600.6	333.9	337.5	295.9	373.4	537.0	469.3	394.4	385.2	405.7
80°	356.4	292.8	270.8	285.2	248.7	323.6	484.1	439.5	353.9	342.1	353.9
82.5°	206.7	177.5	201.0	219.5	197.5	297.5	462.1	412.3	311.8	282.1	292.3
85°	95.9	91.8	120.5	142.6	138.0	231.8	395.4	310.3	222.1	187.7	207.7
87.5°	25.1	28.2	42.6	50.3	51.3	79.5	152.3	115.4	86.7	65.6	63.1
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)