

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: P367454

Luminaire Tested: **MSA-SA2C-740-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367454
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-740-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12365 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

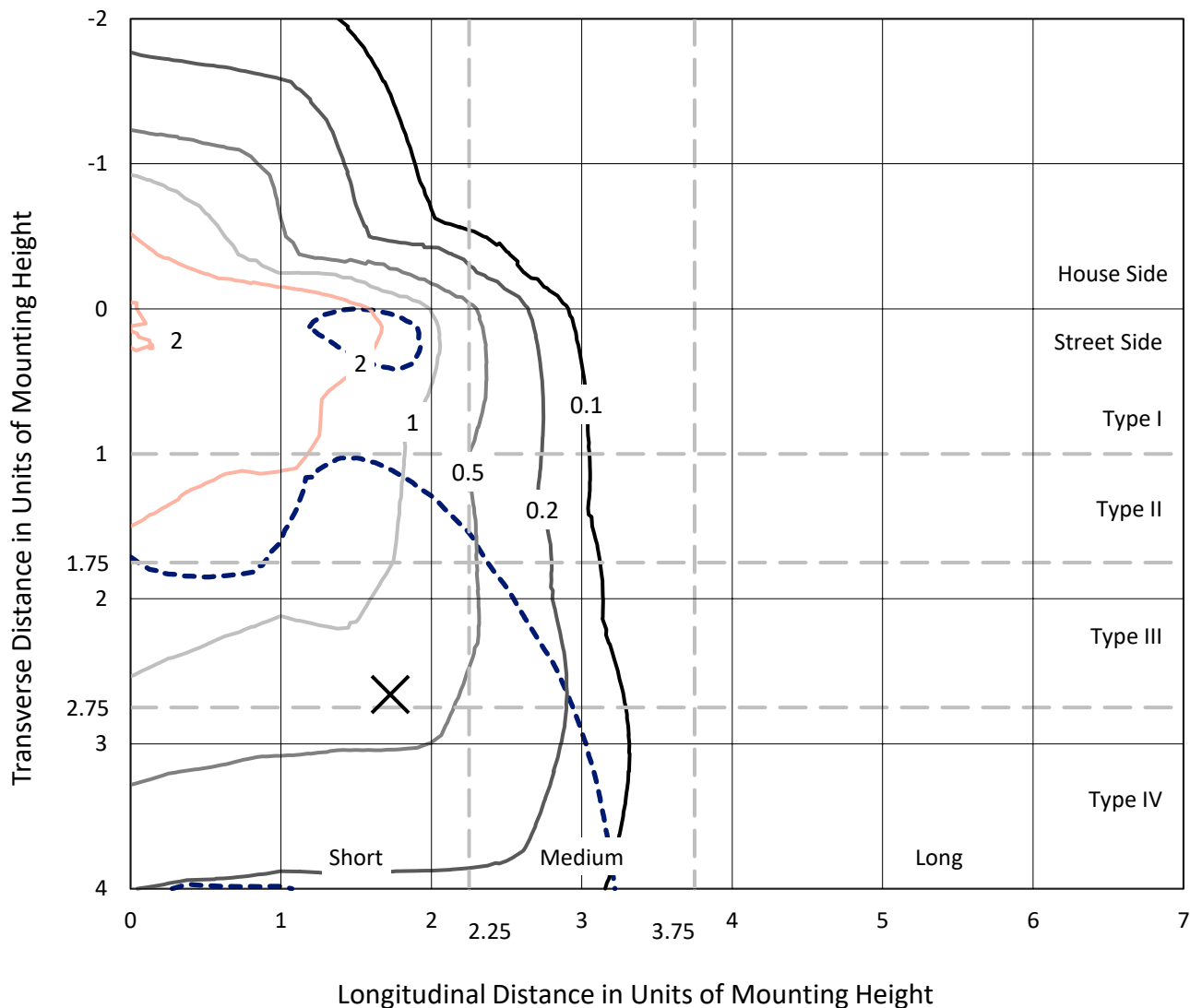
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

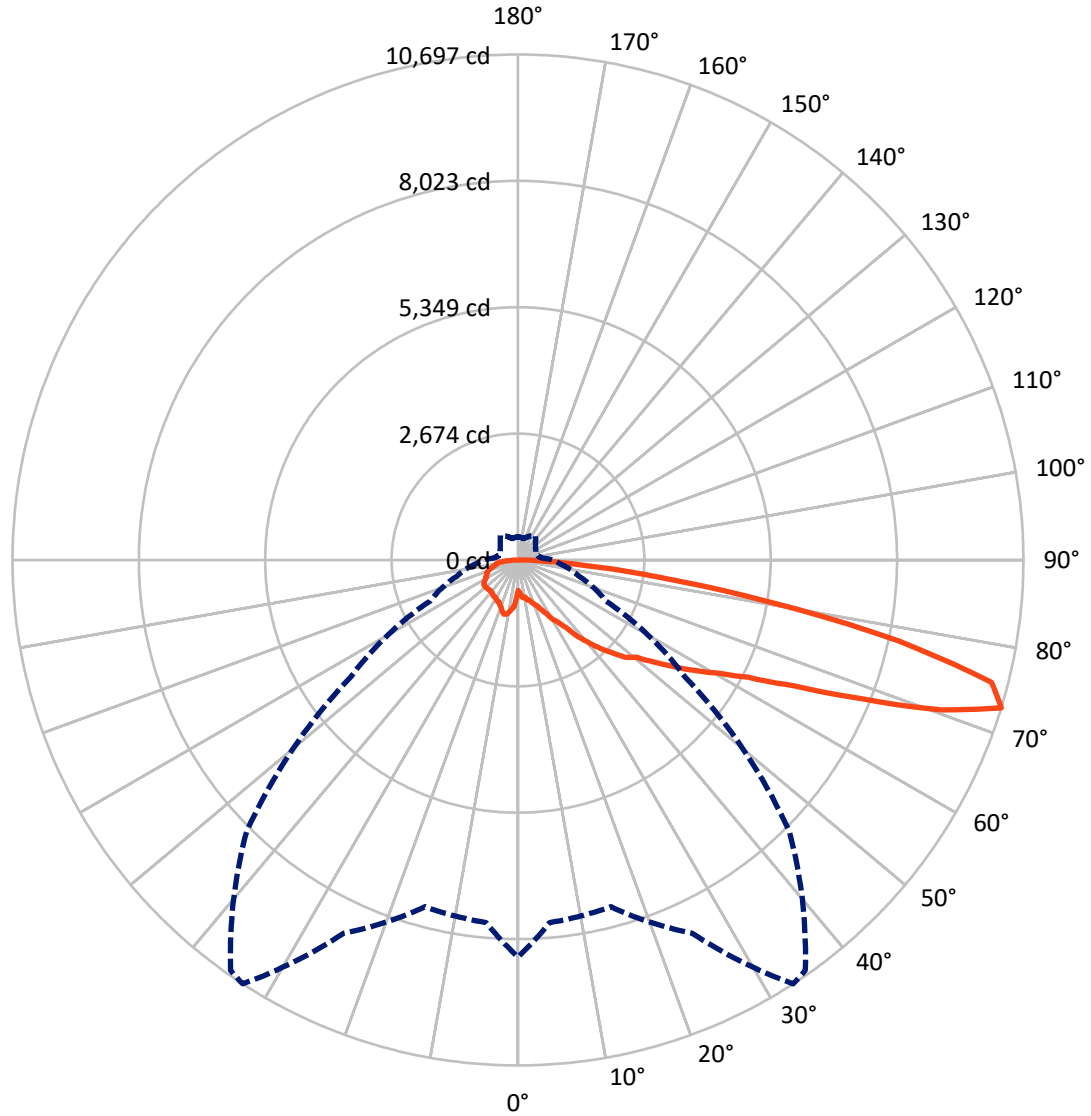
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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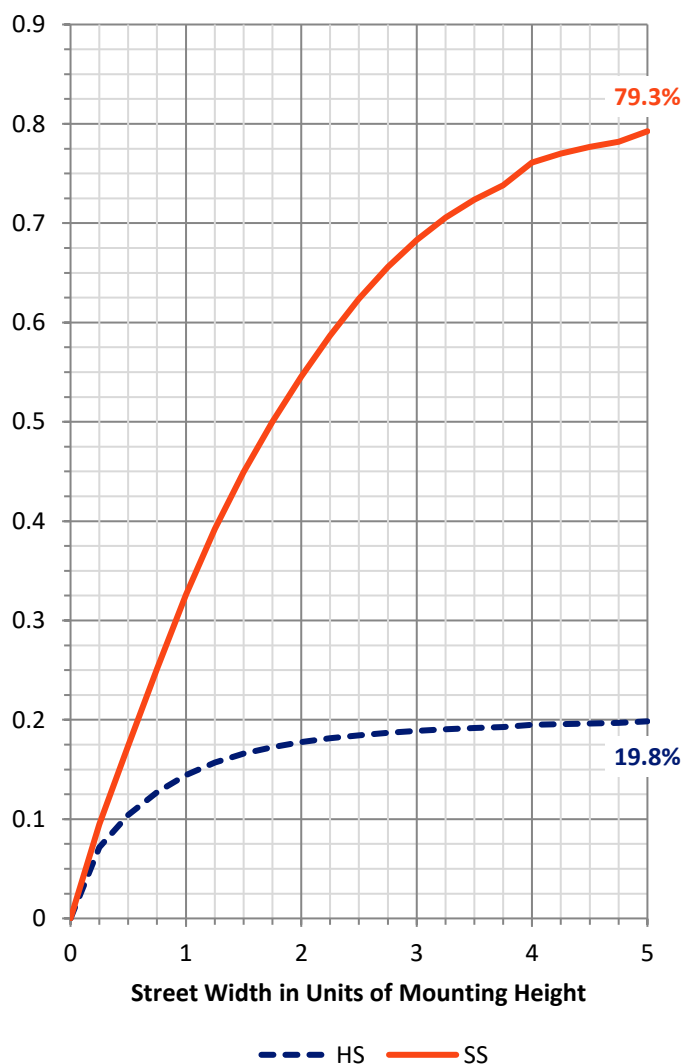
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2501.4	0.0	2501.4
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	9863.6	0.0	9863.6
	% Fixture	79.8	0.0	79.8
Total	Lumens	12365.0	0.0	12365.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.2	0.7
10°-20°	329.5	2.7
20°-30°	600.8	4.9
30°-40°	1016.3	8.2
40°-50°	1690.8	13.7
50°-60°	2481.4	20.1
60°-70°	3174.3	25.7
70°-80°	2582.6	20.9
80°-90°	400.0	3.2
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°	12365.0	100.0
0°-180°	12365.0	100.0

Coefficient of Utilization



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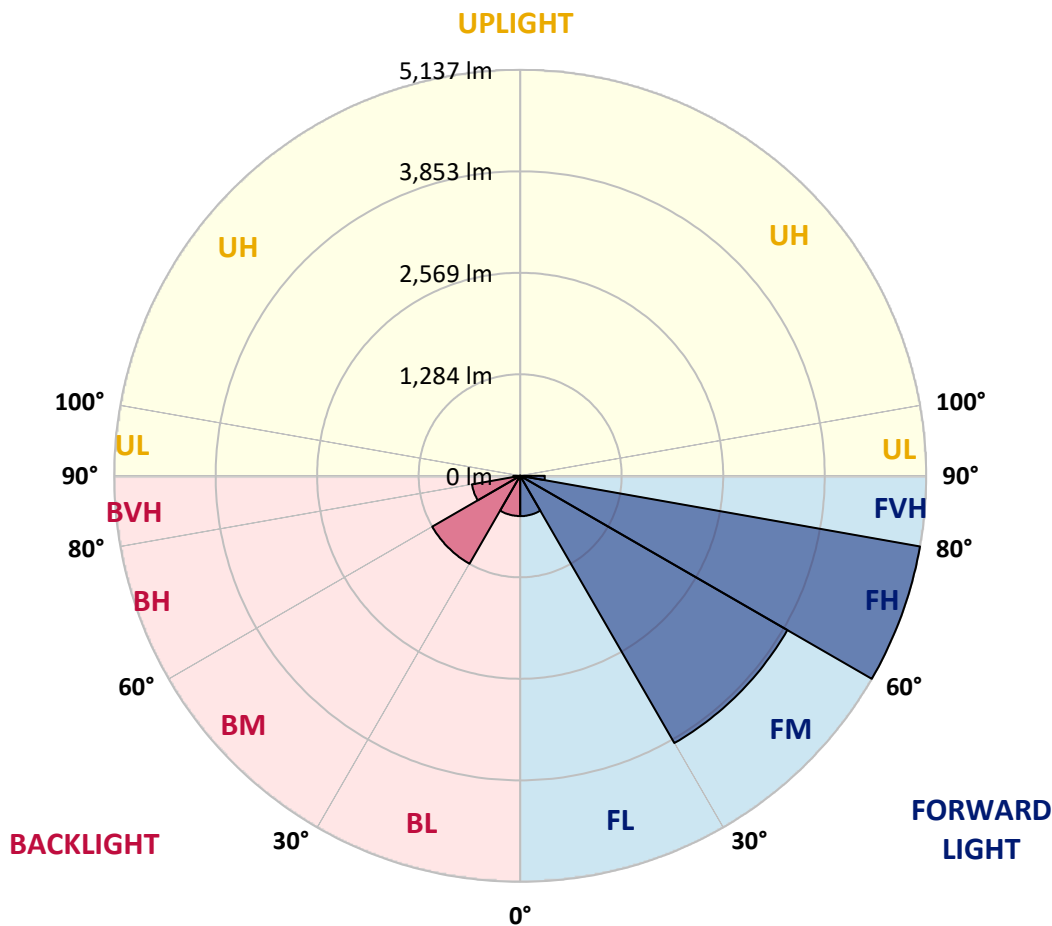
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	510.3	4.1			
FM (30°-60°)	3903.9	31.6			
FH (60°-80°)	5137.2	41.5			G3/7500
FVH (80°-90°)	312.2	2.5			G3/500
BL (0°-30°)	509.1	4.1	B2/1000		
BM (30°-60°)	1284.7	10.4	B2/2500		
BH (60°-80°)	619.8	5.0	B2/1000		G2/1000
BVH (80°-90°)	87.8	0.7			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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4
2.5°	735.1	712.0	674.0	673.0	694.0	698.6	712.5	713.5	718.6	710.4	768.9
5°	811.0	786.4	771.5	776.6	766.9	778.7	778.7	812.5	857.7	910.0	984.4
7.5°	828.9	811.0	794.1	806.9	808.9	797.6	808.4	887.9	969.5	1021.8	1140.8
10°	793.0	775.1	787.9	792.0	791.5	817.1	873.0	936.7	1027.4	1123.9	1188.0
12.5°	786.4	799.2	805.3	812.5	861.2	868.9	953.6	1019.2	1110.5	1195.2	1361.9
15°	885.4	902.3	864.3	861.8	877.7	884.8	972.6	1038.7	1172.1	1314.2	1464.0
17.5°	1026.4	1032.6	964.4	929.5	941.3	946.9	985.4	1068.5	1150.6	1413.2	1599.9
20°	1162.9	1167.0	1038.7	960.8	1002.3	1008.5	1044.4	1092.1	1156.7	1468.6	1691.7
22.5°	1306.0	1279.8	1139.3	1040.8	1064.9	1066.4	1087.5	1113.6	1205.4	1459.9	1803.5
25°	1462.4	1446.0	1269.0	1174.7	1173.6	1152.6	1153.6	1191.1	1257.2	1553.2	1876.9
27.5°	1670.2	1672.2	1415.2	1364.5	1284.9	1271.1	1201.8	1271.6	1347.0	1554.2	2035.4
30°	1939.5	1889.7	1618.9	1536.8	1458.3	1429.1	1335.2	1394.7	1427.5	1643.0	2207.7
32.5°	2158.5	2144.1	1831.2	1707.1	1578.9	1612.7	1509.1	1456.8	1515.8	1795.8	2468.8
35°	2368.3	2321.1	2055.9	1894.3	1759.4	1738.9	1671.7	1680.4	1716.3	1989.2	2810.0
37.5°	2681.2	2655.6	2373.9	2115.4	2052.3	1968.7	1926.1	1953.3	1925.1	2237.0	3321.4
40°	3031.0	2882.3	2639.7	2409.3	2291.4	2232.4	2247.2	2221.6	2200.1	2515.0	3779.9
42.5°	3366.0	3230.6	2816.1	2712.5	2558.6	2583.2	2501.7	2519.6	2580.7	2909.5	4204.2
45°	3730.7	3437.8	3003.3	2912.0	2801.7	2833.0	2898.2	2878.7	2978.7	3374.7	4603.8
47.5°	3912.8	3634.3	3233.1	3084.4	3082.8	3017.7	3414.2	3457.3	3300.9	3719.4	5009.5
50°	4088.2	3814.3	3404.0	3303.4	3230.6	3370.1	3909.2	3810.2	3592.2	4114.9	5455.8
52.5°	4332.4	4020.0	3599.9	3492.7	3583.0	3712.2	4304.2	4284.7	3877.9	4521.7	5843.6
55°	4518.6	4203.1	3894.9	3795.3	3967.7	4094.4	4706.3	4588.9	4122.6	4820.2	6089.3
57.5°	4844.8	4521.2	4330.3	4109.3	4419.1	4417.0	5094.1	5003.3	4384.2	5065.4	6188.3
60°	5363.4	4983.3	4783.8	4528.9	4860.7	4979.2	5537.3	5275.7	4569.4	5220.3	6009.8
62.5°	6091.3	5639.9	5316.2	5063.9	5468.6	5683.0	6084.6	5474.2	4581.2	5176.2	5540.4
65°	6991.5	6442.7	6018.5	5751.7	6419.6	6725.8	6746.4	5596.8	4472.4	4720.2	4553.5
67.5°	7869.7	7252.6	6810.0	6860.7	7835.9	7981.0	7463.5	5699.4	3888.2	3790.2	3161.8
70°	8447.8	7778.9	7484.0	8022.6	9504.0	9355.2	8044.6	5429.1	3061.8	2457.0	1780.5
72.5°	8404.2	7704.0	7597.9	8713.0	10697.1	10604.3	8115.4	4317.5	2050.8	1343.4	887.9
75°	6846.9	6302.7	6543.7	8248.3	10353.4	10348.8	7045.9	2672.5	1052.1	689.9	561.2
77.5°	3785.6	3574.3	4282.6	6245.2	8243.7	8285.7	4760.7	1212.1	567.3	488.8	422.7
80°	1326.0	1306.5	1855.9	3370.1	5422.9	5433.2	2213.9	554.5	412.4	369.8	310.3
82.5°	484.7	480.6	769.4	1565.5	2985.9	2979.2	839.7	345.2	305.7	261.6	204.7
85°	193.4	189.3	351.9	695.1	1371.6	1349.6	326.2	195.9	200.1	155.9	100.5
87.5°	53.3	55.4	119.5	217.5	420.1	389.3	82.1	66.2	81.0	63.6	31.8
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°	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4	648.4
2.5°	779.2	784.3	733.5	751.5	774.6	786.9	793.0	766.9	775.6	812.5	811.0
5°	999.7	979.2	959.7	979.7	966.4	947.4	978.2	976.7	996.7	1016.7	1021.3
7.5°	1164.4	1137.7	1128.5	1083.4	1038.2	992.6	1032.1	1056.7	1061.8	1111.6	1132.6
10°	1223.9	1213.6	1217.2	1157.7	1152.1	1156.7	1120.3	1080.8	1104.9	1084.4	1099.8
12.5°	1361.4	1387.0	1323.4	1282.9	1279.3	1251.1	1178.3	1152.6	1125.4	1153.6	1139.3
15°	1471.7	1519.4	1451.1	1379.8	1299.3	1255.7	1193.6	1154.7	1136.7	1142.9	1125.4
17.5°	1633.2	1677.9	1504.5	1395.2	1312.1	1248.0	1153.1	1070.0	1114.1	1117.7	1097.7
20°	1740.4	1743.5	1522.4	1357.3	1282.4	1171.1	1078.7	1005.9	1056.7	1108.5	1131.1
22.5°	1845.1	1822.0	1544.5	1327.0	1174.1	1066.4	1021.3	1016.7	1054.6	1098.2	1103.4
25°	1923.6	1927.2	1557.3	1315.7	1110.5	963.8	963.8	997.2	1030.5	1134.1	1129.0
27.5°	2113.9	1973.8	1507.6	1263.9	1022.3	903.8	964.4	1009.0	1024.9	1137.2	1148.5
30°	2252.4	2161.1	1517.8	1175.2	933.1	875.6	925.4	981.3	1025.4	1155.2	1151.1
32.5°	2484.7	2239.0	1541.9	1050.5	866.4	864.8	909.0	967.9	1020.8	1135.7	1141.8
35°	2741.7	2468.8	1474.7	955.6	850.5	858.7	915.6	939.2	1001.3	1128.0	1133.6
37.5°	3217.2	2588.9	1432.2	882.3	840.2	863.8	885.4	921.8	984.4	1089.5	1126.4
40°	3496.3	2836.1	1274.2	839.7	818.7	859.7	870.5	901.3	935.1	1043.3	1066.9
42.5°	3863.6	2914.1	1139.3	792.5	807.9	842.8	875.1	882.8	905.4	970.5	1013.6
45°	4169.8	2972.6	996.2	754.6	771.5	880.2	882.3	878.7	874.6	898.7	934.1
47.5°	4486.8	3129.5	864.3	712.5	757.6	911.0	885.9	853.0	836.1	839.2	872.0
50°	4836.6	3243.4	771.0	678.1	760.7	911.0	903.3	826.9	793.0	784.3	818.7
52.5°	5144.4	3256.7	700.2	650.4	747.9	879.7	915.1	810.5	753.5	732.5	764.8
55°	5312.1	3088.0	648.9	625.3	715.1	851.5	909.0	801.2	705.8	689.9	718.6
57.5°	5308.5	2807.9	605.3	590.4	677.6	812.0	874.6	751.0	676.6	667.4	695.6
60°	5117.2	2479.6	571.9	561.7	639.1	754.6	813.0	718.1	648.4	643.8	674.5
62.5°	4683.3	2140.6	539.6	531.4	603.2	714.0	783.8	681.7	619.1	618.6	647.9
65°	3835.3	1718.4	509.4	507.3	569.9	674.0	756.1	650.9	588.9	599.1	628.9
67.5°	2642.7	1207.5	477.0	483.2	539.1	635.5	735.1	630.4	557.1	578.1	604.8
70°	1450.1	746.9	441.1	453.5	500.1	590.9	702.2	597.1	515.5	547.8	566.3
72.5°	737.6	498.1	396.5	416.0	452.4	525.3	640.7	548.9	470.9	483.2	492.9
75°	495.5	375.0	346.8	368.3	394.5	462.7	568.4	503.7	428.3	426.8	437.5
77.5°	374.5	292.9	294.4	319.1	336.0	406.8	510.9	465.8	392.4	388.8	404.7
80°	273.9	222.1	237.0	262.6	278.0	365.2	473.5	423.7	343.7	329.3	342.7
82.5°	181.6	157.5	175.4	201.1	213.4	305.2	429.9	359.6	280.1	243.7	245.7
85°	85.7	82.6	104.6	117.0	132.9	189.3	321.6	248.8	178.5	147.7	154.4
87.5°	19.5	26.2	34.4	33.9	39.5	50.8	100.0	69.8	51.8	35.4	23.6
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)