

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: P367852

Luminaire Tested: **MSA-SA3B-740-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367852
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-SA3B-740-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14905 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

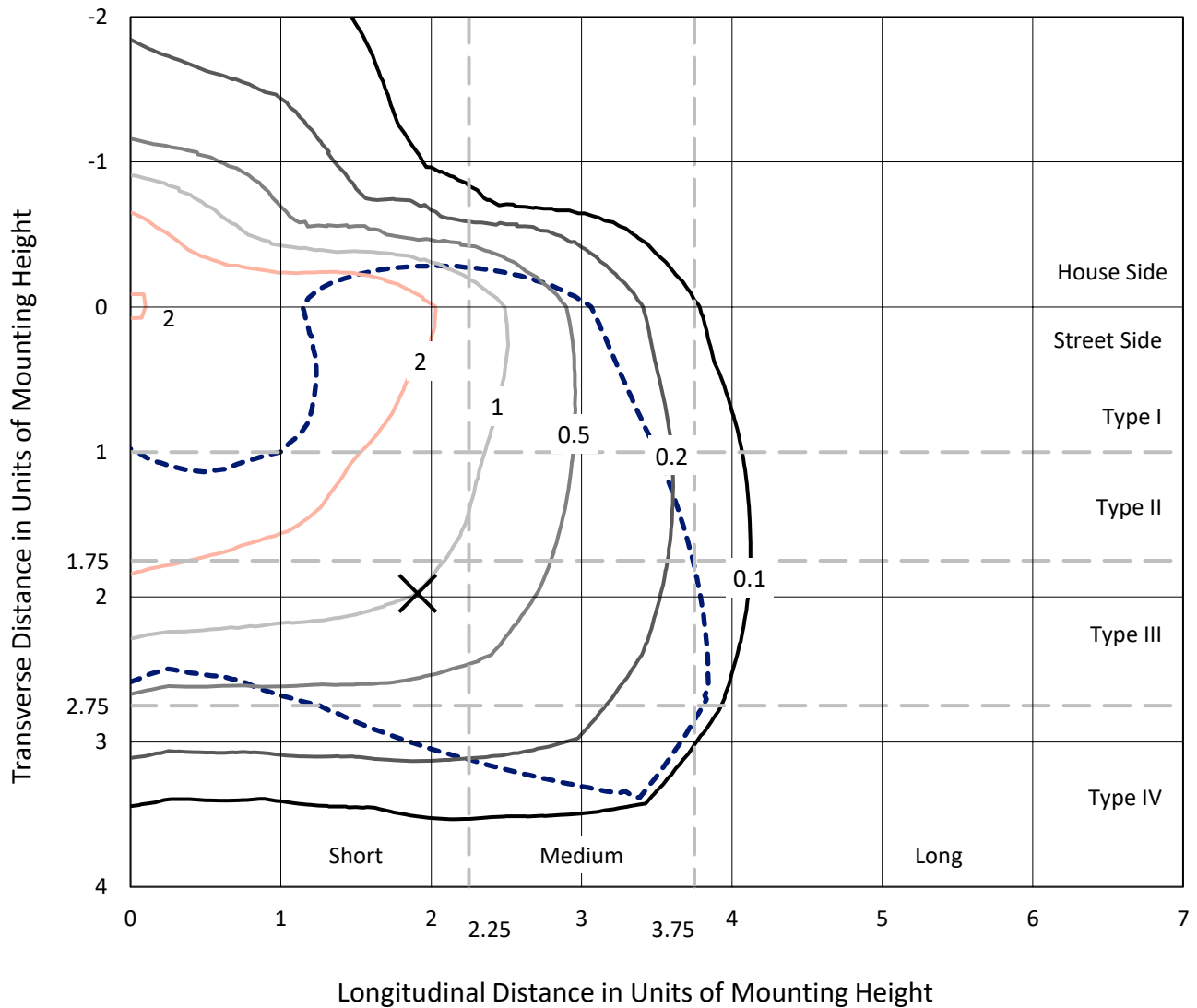
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

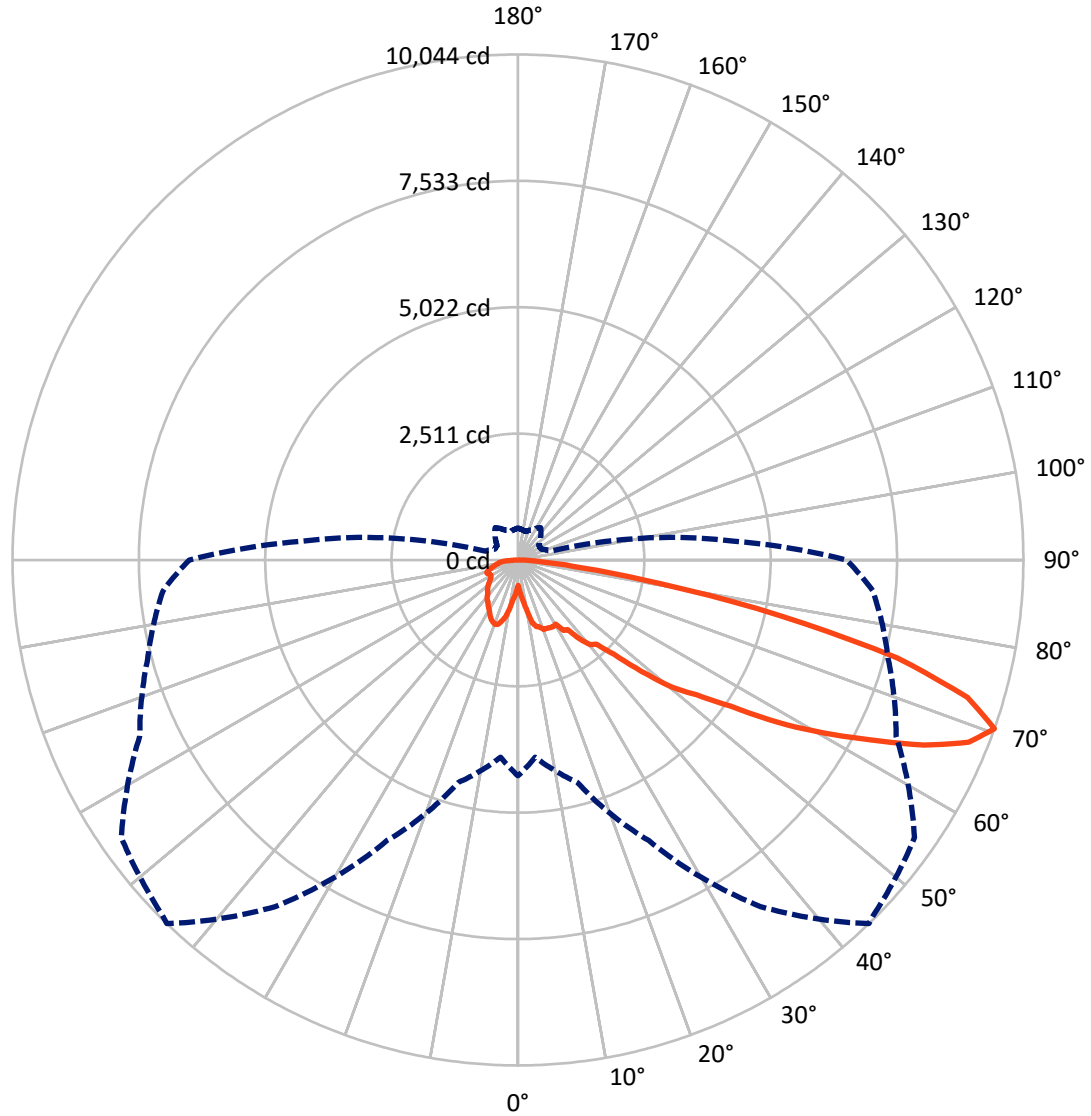
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.5 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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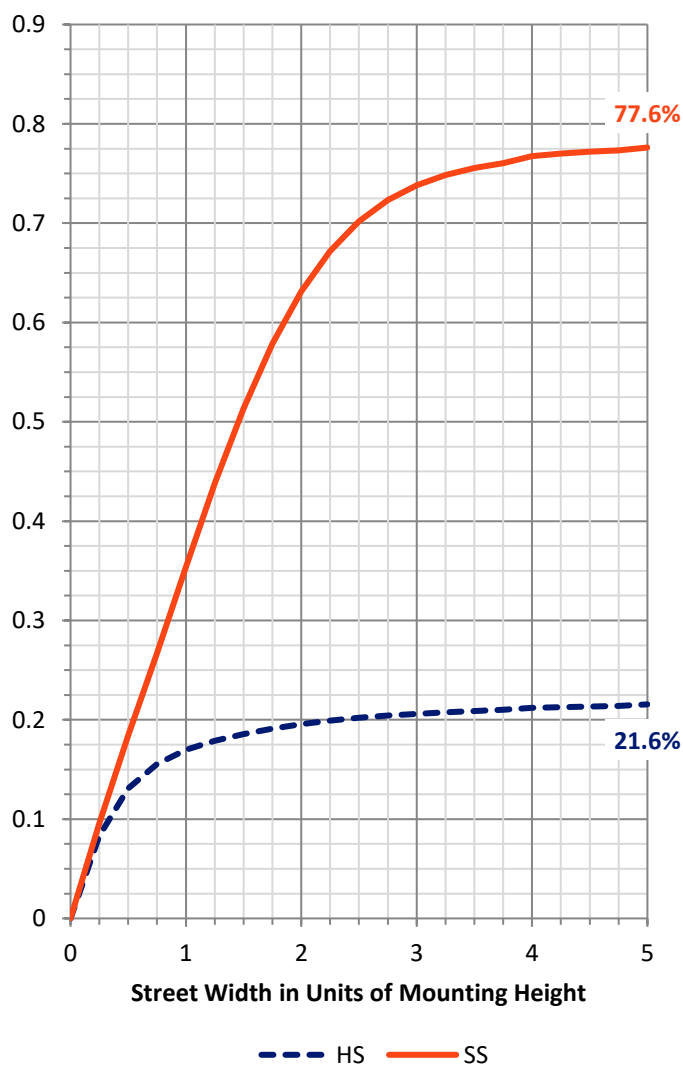
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3288.6	0.0	3288.6
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	11616.4	0.0	11616.4
	% Fixture	77.9	0.0	77.9
Total	Lumens	14905.0	0.0	14905.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	0.5
10°-20°	365.8	2.5
20°-30°	683.6	4.6
30°-40°	1097.2	7.4
40°-50°	1852.0	12.4
50°-60°	3300.3	22.1
60°-70°	4514.4	30.3
70°-80°	2654.7	17.8
80°-90°	357.4	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°	14905.0	100.0
0°-180°	14905.0	100.0

Coefficient of Utilization

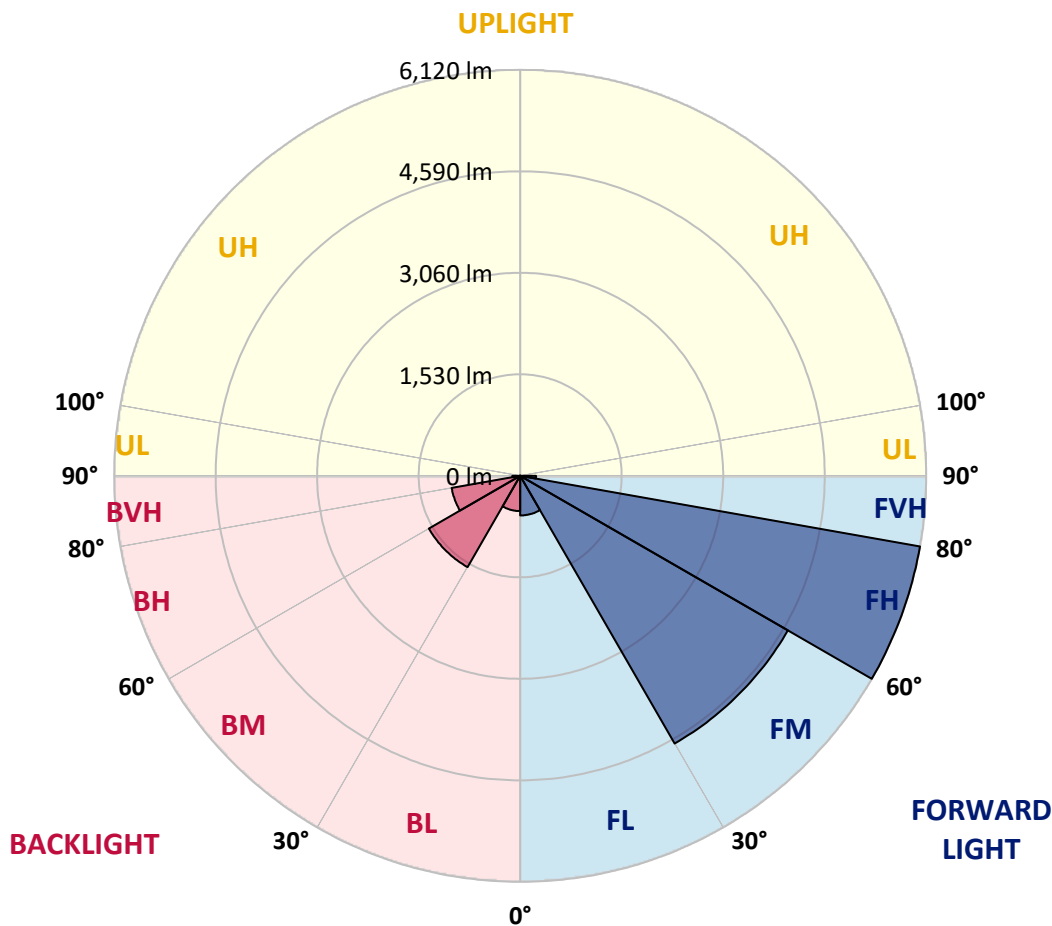


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	597.3	4.0			
FM (30°-60°)	4660.4	31.3			
FH (60°-80°)	6120.5	41.1			G3/7500
FVH (80°-90°)	238.2	1.6			G3/500
BL (0°-30°)	531.5	3.6	B2/1000		
BM (30°-60°)	1589.2	10.7	B2/2500		
BH (60°-80°)	1048.7	7.0	B3/2500		G3/2500
BVH (80°-90°)	119.2	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6
2.5°	614.8	602.6	573.3	583.0	595.3	600.1	598.9	597.7	578.8	572.0	605.6
5°	835.4	808.5	787.2	778.6	750.5	728.5	715.0	750.5	745.0	754.2	777.4
7.5°	1043.2	1026.1	977.8	960.7	903.3	865.4	861.1	889.2	896.6	881.9	921.6
10°	1177.1	1147.7	1138.0	1097.0	1057.3	1051.2	1047.5	1034.7	1016.9	1015.7	980.3
12.5°	1281.0	1296.2	1304.2	1257.1	1258.4	1280.4	1268.7	1216.8	1186.8	1134.3	1138.6
15°	1467.4	1489.4	1426.4	1396.5	1339.0	1372.0	1367.7	1324.4	1320.1	1285.9	1246.1
17.5°	1629.9	1639.7	1534.6	1466.1	1446.6	1398.9	1411.7	1413.0	1356.7	1417.9	1382.4
20°	1643.4	1678.2	1557.2	1420.9	1479.6	1473.5	1475.3	1463.1	1389.1	1490.0	1476.5
22.5°	1709.4	1656.2	1547.4	1447.8	1463.1	1472.3	1480.8	1466.1	1461.9	1518.1	1559.0
25°	1697.2	1680.0	1570.0	1485.7	1487.5	1489.4	1493.6	1537.6	1532.8	1609.1	1630.5
27.5°	1811.4	1785.2	1576.8	1556.0	1508.3	1497.9	1468.6	1560.3	1631.8	1629.9	1747.9
30°	2029.0	2002.1	1733.2	1672.7	1586.5	1480.2	1536.4	1658.7	1714.9	1733.8	1883.6
32.5°	2368.8	2412.8	2041.2	1797.4	1690.4	1667.2	1661.1	1648.9	1788.2	1881.7	2018.0
35°	2856.5	2821.7	2404.3	2064.5	1799.8	1700.2	1713.7	1788.2	1953.8	2014.3	2140.2
37.5°	3415.1	3343.0	2869.3	2367.0	2115.2	1990.5	1945.9	2018.0	2054.7	2102.3	2359.6
40°	3982.8	3806.8	3325.9	2764.8	2304.6	2210.5	2171.4	2082.8	2169.0	2265.5	2592.5
42.5°	4531.0	4394.8	3822.7	3239.7	2623.7	2288.1	2266.7	2180.0	2447.0	2549.1	2928.6
45°	5105.5	4789.6	4331.8	3775.7	3090.0	2668.9	2637.1	2481.3	2823.5	3036.2	3402.9
47.5°	5491.8	5199.0	4798.1	4210.8	3480.5	3305.7	3245.2	2978.7	3289.2	3565.4	4135.6
50°	5857.2	5555.9	5134.9	4686.9	4187.6	3986.5	3857.6	3413.9	3869.2	4319.0	5075.0
52.5°	6380.4	6110.9	5526.0	5166.6	4947.2	4452.8	4356.9	4113.0	4547.5	5154.4	6101.7
55°	6939.6	6572.3	6042.4	5843.2	5754.6	5121.4	5043.2	4888.0	5450.8	6009.4	7099.7
57.5°	7186.5	6803.3	6511.2	6392.0	6384.6	6093.1	6003.3	5895.1	6374.3	6742.8	8039.0
60°	7382.7	6971.4	6854.6	6921.2	7163.3	6971.4	6854.6	6759.3	7126.0	7467.6	8805.4
62.5°	7346.6	6934.1	6994.0	7196.9	7814.7	7871.0	7781.1	7550.1	7871.0	8061.6	9244.8
65°	6764.8	6383.4	6732.4	7214.0	8420.4	8869.6	8864.7	8260.3	8371.5	8371.5	9198.4
67.5°	5745.4	5350.6	5922.0	7063.0	8839.0	9661.0	9662.2	9013.2	8417.3	8340.3	8479.7
70°	4290.2	3932.7	4575.0	6151.2	8406.9	10044.2	9988.6	9620.7	8291.4	7618.6	7083.2
72.5°	2562.5	2331.5	2922.5	4477.9	7171.2	9339.5	9487.4	8920.9	7590.4	6335.8	5063.4
75°	1163.6	1063.4	1373.2	2572.3	5119.6	7790.3	7951.0	7528.7	6029.0	4556.7	2926.2
77.5°	498.1	471.2	599.5	1141.0	2822.9	5327.4	5656.8	5380.5	4084.9	2648.1	1294.4
80°	320.2	303.1	368.5	548.8	1310.9	2878.5	3162.1	3058.8	2081.0	1029.8	455.9
82.5°	191.3	185.8	246.3	344.7	715.0	1266.9	1427.6	1465.5	864.2	462.0	261.0
85°	104.5	105.7	135.1	209.0	429.0	493.2	528.0	574.5	407.0	267.7	126.5
87.5°	34.8	40.3	54.4	84.9	152.8	139.3	140.0	162.6	171.7	111.2	40.3
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°	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6	506.6
2.5°	611.1	600.1	572.0	573.9	584.3	586.7	589.8	572.0	568.4	602.0	605.0
5°	781.0	745.0	728.5	723.0	707.1	701.6	730.9	744.4	757.8	784.1	796.9
7.5°	917.3	877.0	847.0	819.5	796.3	782.9	832.4	870.3	893.5	947.3	971.7
10°	979.7	944.8	933.8	911.8	929.6	969.9	979.1	980.3	1031.6	1030.4	1040.8
12.5°	1103.7	1081.1	1045.1	1053.0	1099.5	1141.0	1129.4	1147.1	1165.5	1209.5	1189.3
15°	1216.8	1210.7	1177.1	1182.6	1191.7	1243.7	1250.4	1268.1	1296.2	1331.1	1307.2
17.5°	1356.1	1353.7	1271.8	1264.5	1285.9	1336.6	1320.7	1289.5	1382.4	1419.7	1409.9
20°	1450.9	1432.5	1327.4	1296.2	1350.6	1357.4	1339.0	1289.5	1370.2	1451.5	1473.5
22.5°	1529.7	1508.3	1400.1	1339.0	1328.0	1331.1	1331.1	1321.9	1361.6	1428.2	1427.6
25°	1593.3	1613.4	1475.9	1417.2	1358.6	1285.2	1276.1	1284.0	1306.6	1435.0	1430.7
27.5°	1752.8	1697.2	1501.6	1457.6	1337.2	1221.7	1246.7	1259.0	1266.3	1406.9	1430.1
30°	1856.7	1873.8	1593.3	1481.4	1306.0	1150.8	1159.3	1194.8	1237.6	1403.8	1410.5
32.5°	1996.6	1959.9	1736.3	1441.7	1222.9	1108.0	1092.1	1139.8	1203.3	1354.3	1372.6
35°	2126.8	2170.2	1796.8	1434.4	1164.8	1043.8	1061.0	1077.5	1143.5	1299.3	1320.7
37.5°	2432.4	2333.4	1966.7	1398.9	1116.6	1011.4	993.1	1018.2	1074.4	1194.8	1244.3
40°	2664.6	2670.7	2003.3	1354.3	1024.3	965.0	925.9	950.9	974.8	1070.7	1092.1
42.5°	3100.3	2967.1	2093.2	1256.5	966.2	895.3	873.3	884.3	888.0	928.3	963.8
45°	3654.7	3342.4	2128.6	1125.1	889.8	866.6	822.0	816.5	796.3	801.8	833.0
47.5°	4421.6	3927.8	2103.0	985.2	822.0	829.3	765.2	740.1	712.0	718.7	748.0
50°	5413.5	4675.9	2101.1	866.6	775.5	780.4	727.9	682.7	654.5	668.6	694.3
52.5°	6526.4	5426.4	2109.7	785.3	724.8	722.4	703.4	648.4	625.8	640.5	669.8
55°	7591.1	6071.7	2173.2	734.0	672.3	676.5	683.9	637.4	612.4	625.8	656.4
57.5°	8517.6	6581.4	2149.4	679.6	623.4	642.9	662.5	622.1	603.2	622.8	653.3
60°	9165.4	6818.0	1961.2	627.6	587.3	614.2	652.1	620.3	617.9	660.0	696.7
62.5°	9401.9	6730.6	1594.5	586.7	565.9	610.5	675.9	660.6	663.1	715.0	765.8
65°	9056.6	6271.0	1189.3	560.4	549.4	628.3	730.9	684.5	650.9	693.7	740.1
67.5°	8074.5	5453.9	869.1	537.8	530.5	656.4	781.7	682.0	619.7	663.1	701.0
70°	6532.5	4304.9	672.9	509.1	505.4	637.4	786.5	663.7	586.1	614.2	635.6
72.5°	4476.0	2947.6	557.4	481.6	462.0	564.7	746.8	622.8	545.8	562.3	580.0
75°	2501.4	1654.4	468.7	447.4	404.6	503.0	700.4	598.3	515.8	520.7	545.1
77.5°	1122.7	715.7	397.9	402.1	352.6	444.9	639.9	559.2	470.0	459.0	483.4
80°	424.7	349.0	322.7	339.8	296.4	385.6	576.9	523.8	421.7	407.6	421.7
82.5°	246.3	211.5	239.6	261.6	235.3	354.5	550.6	491.4	371.6	336.1	348.4
85°	114.3	109.4	143.6	169.9	164.4	276.2	471.2	369.7	264.6	223.7	247.5
87.5°	29.9	33.6	50.7	59.9	61.1	94.7	181.5	137.5	103.3	78.2	75.2
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)