

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: P368246

Luminaire Tested: **MSA-SA4A-740-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368246
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-SA4A-740-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 15539 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

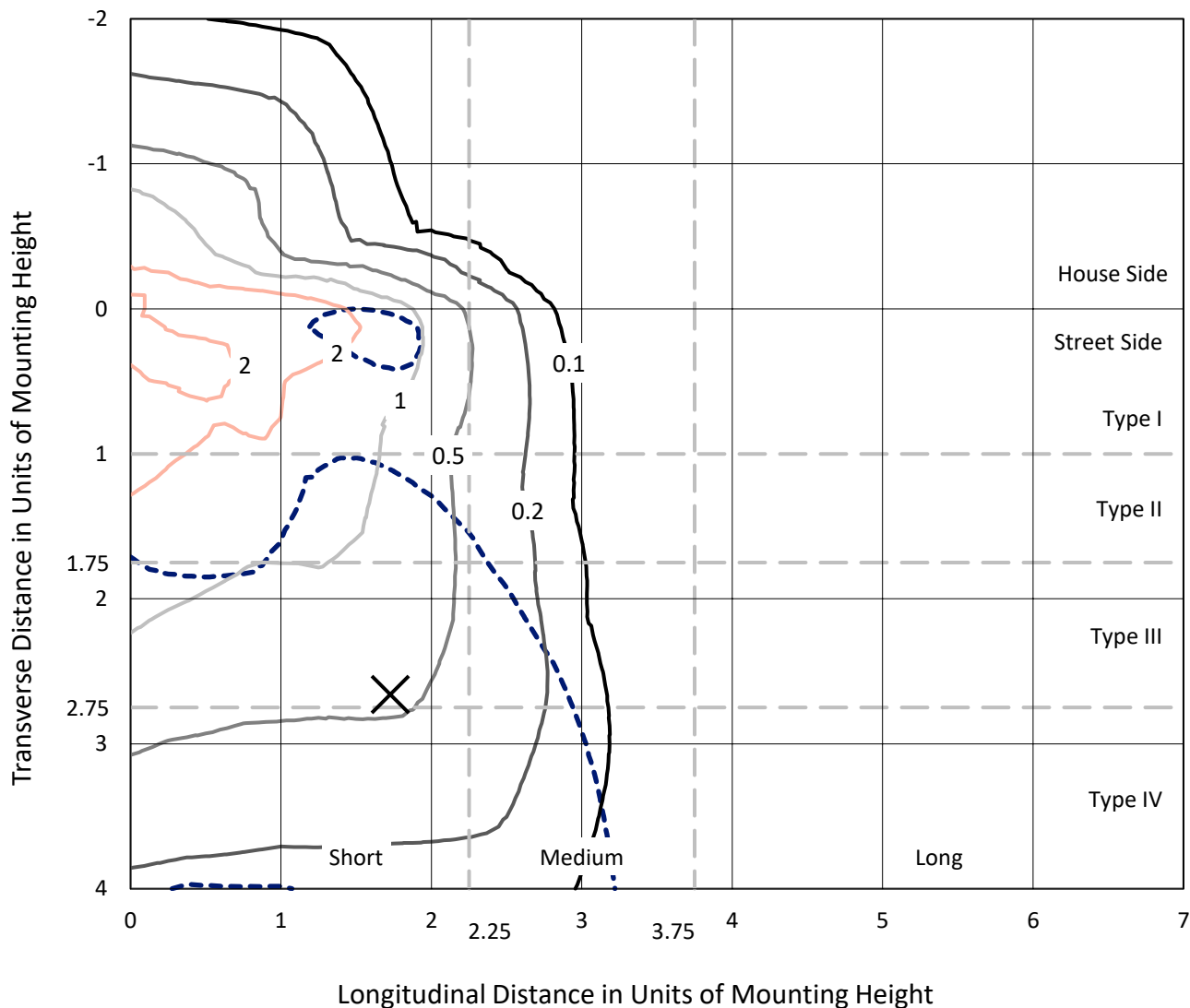
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

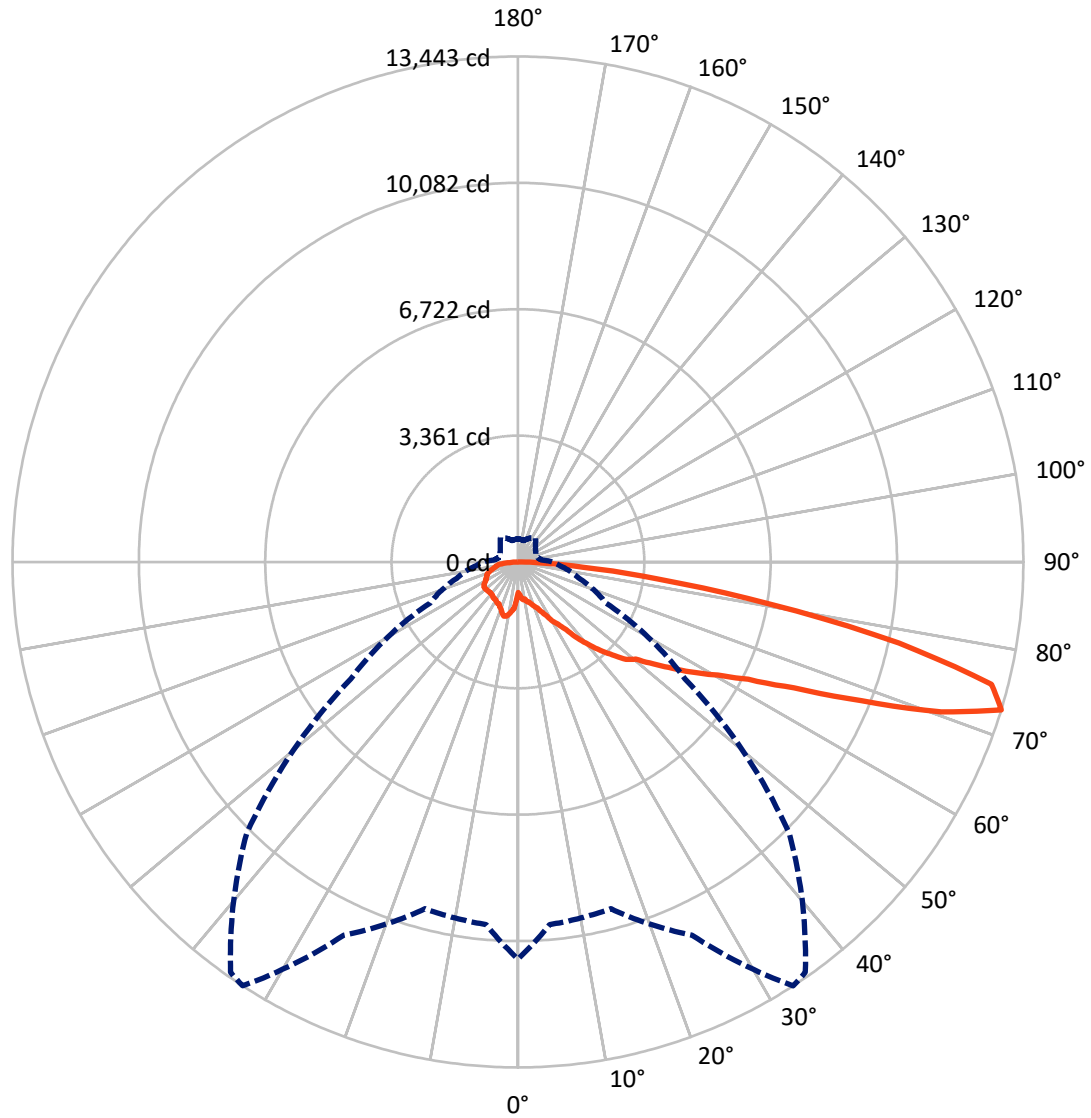
× Max cd
 - - - 1/2 Max cd



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

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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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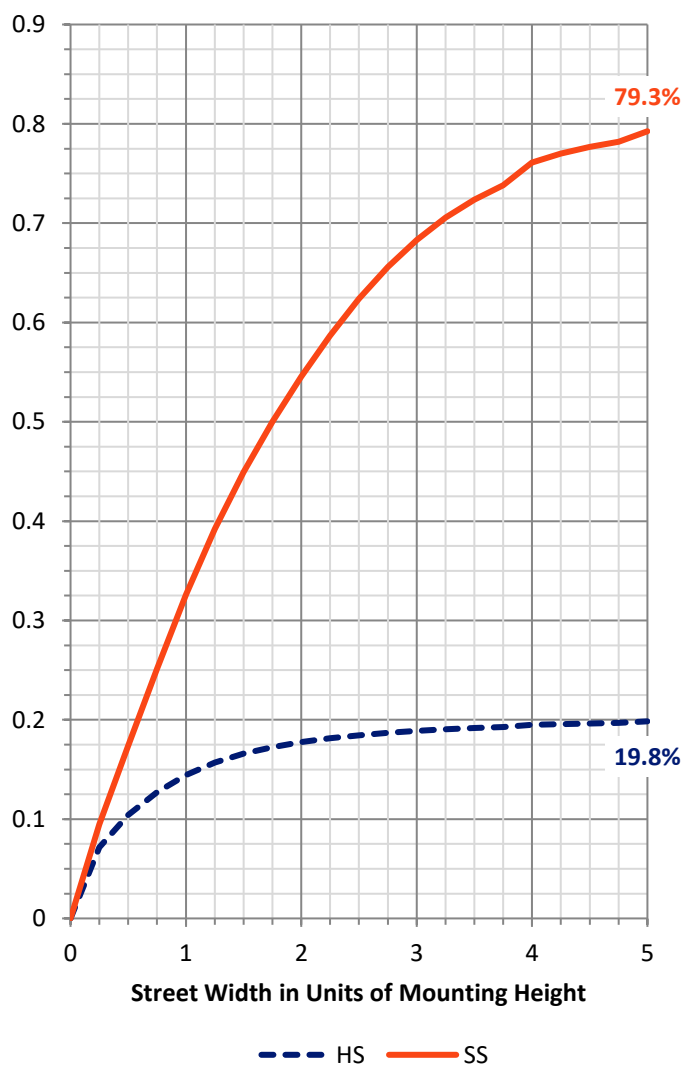
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3143.5	0.0	3143.5
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	12395.5	0.0	12395.5
	% Fixture	79.8	0.0	79.8
Total	Lumens	15539.0	0.0	15539.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	0.7
10°-20°	414.0	2.7
20°-30°	755.0	4.9
30°-40°	1277.2	8.2
40°-50°	2124.9	13.7
50°-60°	3118.4	20.1
60°-70°	3989.2	25.7
70°-80°	3245.6	20.9
80°-90°	502.7	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°	15539.0	100.0
0°-180°	15539.0	100.0

Coefficient of Utilization



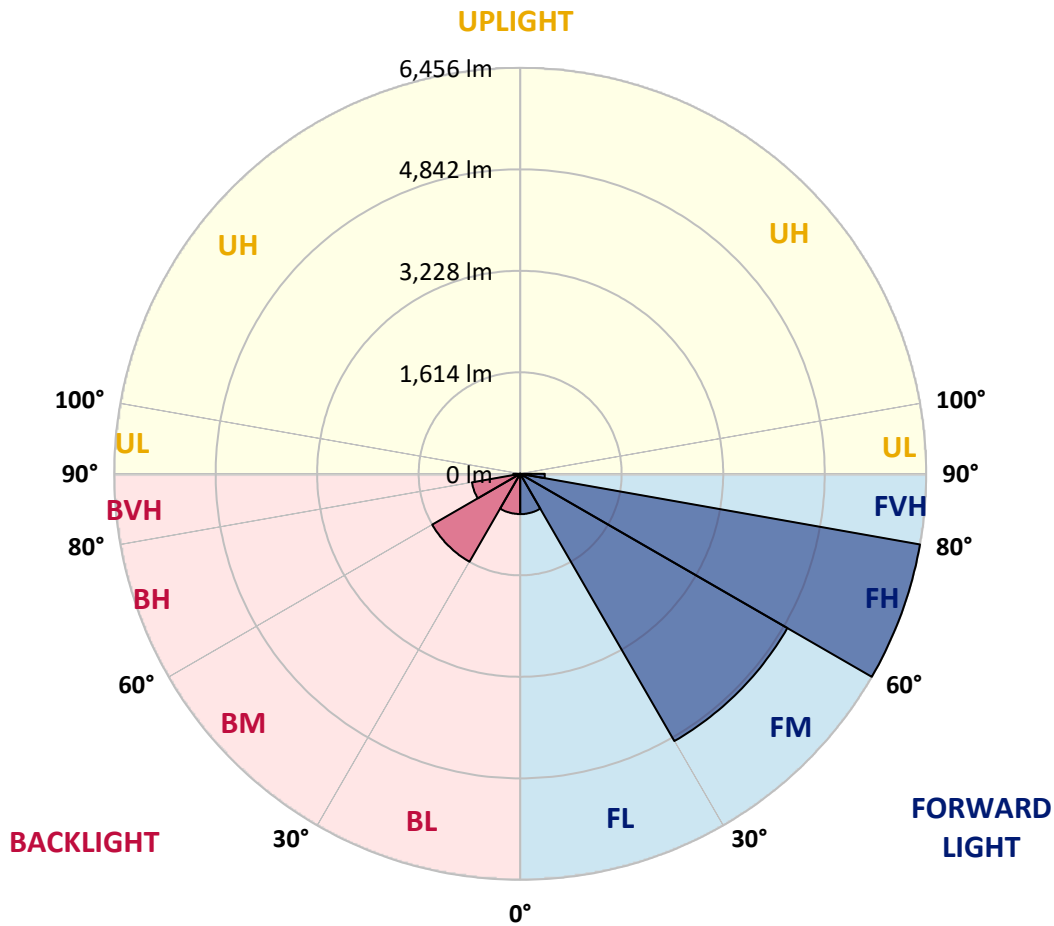
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	641.3	4.1			
FM (30°-60°)	4906.0	31.6			
FH (60°-80°)	6455.9	41.5			G3/7500
FVH (80°-90°)	392.3	2.5			G3/500
BL (0°-30°)	639.8	4.1	B2/1000		
BM (30°-60°)	1614.5	10.4	B2/2500		
BH (60°-80°)	778.9	5.0	B2/1000		G2/1000
BVH (80°-90°)	110.4	0.7			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°	33°	35°	45°	55°	65°	75°	85°
0°	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8
2.5°	923.7	894.7	847.0	845.7	872.2	878.0	895.4	896.7	903.1	892.8	966.3
5°	1019.2	988.2	969.5	976.0	963.7	978.5	978.5	1021.1	1077.8	1143.6	1237.0
7.5°	1041.7	1019.2	997.9	1014.0	1016.6	1002.4	1015.9	1115.8	1218.3	1284.1	1433.6
10°	996.6	974.0	990.1	995.3	994.7	1026.9	1097.1	1177.1	1291.2	1412.4	1492.9
12.5°	988.2	1004.3	1012.1	1021.1	1082.3	1092.0	1198.4	1280.9	1395.6	1502.0	1711.5
15°	1112.6	1133.9	1086.2	1083.0	1103.0	1112.0	1222.2	1305.4	1473.0	1651.5	1839.8
17.5°	1289.9	1297.6	1211.9	1168.1	1182.9	1190.0	1238.3	1342.8	1445.9	1775.9	2010.6
20°	1461.4	1466.5	1305.4	1207.4	1259.6	1267.3	1312.5	1372.4	1453.6	1845.6	2126.0
22.5°	1641.2	1608.3	1431.7	1307.9	1338.2	1340.2	1366.6	1399.5	1514.9	1834.6	2266.5
25°	1837.8	1817.2	1594.8	1476.2	1474.9	1448.5	1449.8	1496.8	1580.0	1951.9	2358.7
27.5°	2098.9	2101.5	1778.5	1714.7	1614.8	1597.4	1510.4	1598.0	1692.8	1953.2	2557.9
30°	2437.3	2374.8	2034.4	1931.3	1832.7	1795.9	1678.0	1752.7	1794.0	2064.7	2774.5
32.5°	2712.6	2694.5	2301.3	2145.3	1984.2	2026.7	1896.5	1830.7	1904.9	2256.8	3102.6
35°	2976.2	2916.9	2583.7	2380.6	2211.1	2185.3	2100.8	2111.8	2156.9	2499.9	3531.2
37.5°	3369.4	3337.2	2983.3	2658.4	2579.1	2474.1	2420.6	2454.7	2419.3	2811.2	4173.9
40°	3809.1	3622.1	3317.2	3027.8	2879.5	2805.4	2824.1	2791.9	2764.8	3160.6	4750.2
42.5°	4230.0	4059.8	3539.0	3408.8	3215.4	3246.3	3143.8	3166.4	3243.1	3656.3	5283.3
45°	4688.3	4320.3	3774.3	3659.5	3520.9	3560.3	3642.1	3617.6	3743.3	4241.0	5785.5
47.5°	4917.2	4567.2	4063.1	3876.1	3874.2	3792.3	4290.6	4344.8	4148.2	4674.2	6295.4
50°	5137.7	4793.4	4277.7	4151.4	4059.8	4235.2	4912.7	4788.3	4514.3	5171.2	6856.2
52.5°	5444.5	5051.9	4524.0	4389.2	4502.7	4665.1	5409.0	5384.5	4873.4	5682.4	7343.6
55°	5678.5	5282.0	4894.6	4769.6	4986.2	5145.4	5914.4	5766.8	5180.8	6057.5	7652.3
57.5°	6088.5	5681.7	5441.9	5164.1	5553.4	5550.9	6401.8	6287.7	5509.6	6365.7	7776.7
60°	6740.2	6262.5	6011.8	5691.4	6108.5	6257.4	6958.7	6630.0	5742.3	6560.3	7552.4
62.5°	7654.9	7087.6	6680.9	6363.7	6872.3	7141.8	7646.5	6879.4	5757.1	6504.9	6962.6
65°	8786.2	8096.5	7563.4	7228.2	8067.5	8452.3	8478.1	7033.5	5620.5	5931.8	5722.3
67.5°	9889.8	9114.3	8558.0	8621.8	9847.3	10029.7	9379.3	7162.4	4886.2	4763.1	3973.5
70°	10616.3	9775.7	9405.1	10081.9	11943.6	11756.7	10109.6	6822.7	3847.8	3087.7	2237.5
72.5°	10561.5	9681.6	9548.2	10949.6	13443.0	13326.3	10198.6	5425.8	2577.2	1688.3	1115.8
75°	8604.4	7920.5	8223.5	10365.6	13011.1	13005.3	8854.6	3358.5	1322.1	867.0	705.2
77.5°	4757.3	4491.7	5382.0	7848.3	10359.8	10412.6	5982.8	1523.2	713.0	614.3	531.2
80°	1666.4	1641.9	2332.2	4235.2	6815.0	6827.9	2782.2	696.8	518.3	464.8	390.0
82.5°	609.2	604.0	966.9	1967.4	3752.4	3744.0	1055.2	433.8	384.2	328.8	257.2
85°	243.0	237.9	442.2	873.5	1723.7	1696.0	410.0	246.2	251.4	196.0	126.3
87.5°	67.0	69.6	150.2	273.3	527.9	489.3	103.1	83.2	101.9	79.9	40.0
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°	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8	814.8
2.5°	979.2	985.6	921.8	944.4	973.4	988.9	996.6	963.7	974.7	1021.1	1019.2
5°	1256.4	1230.6	1206.1	1231.2	1214.5	1190.6	1229.3	1227.4	1252.5	1277.6	1283.4
7.5°	1463.3	1429.8	1418.2	1361.4	1304.7	1247.3	1297.0	1327.9	1334.4	1396.9	1423.3
10°	1538.1	1525.2	1529.7	1454.9	1447.8	1453.6	1407.9	1358.2	1388.5	1362.7	1382.1
12.5°	1710.8	1743.1	1663.1	1612.2	1607.7	1572.2	1480.7	1448.5	1414.3	1449.8	1431.7
15°	1849.4	1909.4	1823.6	1734.0	1632.8	1578.0	1500.0	1451.0	1428.5	1436.2	1414.3
17.5°	2052.5	2108.6	1890.7	1753.4	1648.9	1568.4	1449.1	1344.7	1400.1	1404.6	1379.5
20°	2187.2	2191.1	1913.2	1705.7	1611.6	1471.7	1355.6	1264.1	1327.9	1393.0	1421.4
22.5°	2318.7	2289.7	1941.0	1667.6	1475.5	1340.2	1283.4	1277.6	1325.3	1380.1	1386.6
25°	2417.3	2421.9	1957.1	1653.5	1395.6	1211.2	1211.2	1253.1	1295.0	1425.3	1418.8
27.5°	2656.5	2480.5	1894.5	1588.4	1284.7	1135.8	1211.9	1268.0	1288.0	1429.1	1443.3
30°	2830.5	2715.8	1907.4	1476.8	1172.6	1100.4	1162.9	1233.2	1288.6	1451.7	1446.5
32.5°	3122.6	2813.8	1937.7	1320.2	1088.8	1086.8	1142.3	1216.4	1282.8	1427.2	1434.9
35°	3445.5	3102.6	1853.3	1200.9	1068.8	1079.1	1150.7	1180.3	1258.3	1417.5	1424.6
37.5°	4043.1	3253.4	1799.8	1108.8	1055.9	1085.5	1112.6	1158.4	1237.0	1369.2	1415.6
40°	4393.8	3564.1	1601.2	1055.2	1028.8	1080.4	1093.9	1132.6	1175.1	1311.2	1340.8
42.5°	4855.3	3662.1	1431.7	995.9	1015.3	1059.1	1099.7	1109.4	1137.8	1219.6	1273.8
45°	5240.1	3735.6	1251.9	948.2	969.5	1106.2	1108.8	1104.2	1099.1	1129.4	1173.9
47.5°	5638.5	3932.9	1086.2	895.4	952.1	1144.9	1113.3	1072.0	1050.7	1054.6	1095.9
50°	6078.2	4076.0	968.9	852.2	956.0	1144.9	1135.2	1039.1	996.6	985.6	1028.8
52.5°	6464.9	4092.7	879.9	817.4	939.9	1105.5	1150.0	1018.5	947.0	920.5	961.1
55°	6675.7	3880.6	815.4	785.8	898.6	1070.1	1142.3	1006.9	887.0	867.0	903.1
57.5°	6671.2	3528.7	760.7	742.0	851.5	1020.4	1099.1	943.7	850.3	838.7	874.1
60°	6430.8	3116.1	718.8	705.9	803.2	948.2	1021.7	902.5	814.8	809.0	847.7
62.5°	5885.4	2690.0	678.1	667.8	758.1	897.3	985.0	856.7	778.1	777.4	814.2
65°	4819.9	2159.5	640.1	637.5	716.2	847.0	950.2	818.0	740.0	752.9	790.3
67.5°	3321.1	1517.4	599.5	607.2	677.5	798.7	923.7	792.2	700.1	726.5	760.0
70°	1822.4	938.6	554.4	569.8	628.5	742.6	882.5	750.3	647.8	688.5	711.7
72.5°	927.0	625.9	498.3	522.8	568.6	660.1	805.1	689.7	591.8	607.2	619.5
75°	622.7	471.2	435.8	462.8	495.7	581.5	714.2	633.0	538.3	536.3	549.9
77.5°	470.6	368.1	370.0	401.0	422.2	511.2	642.0	585.3	493.1	488.6	508.6
80°	344.2	279.1	297.8	330.0	349.4	459.0	595.0	532.5	431.9	413.8	430.6
82.5°	228.2	197.9	220.5	252.7	268.2	383.6	540.2	451.9	352.0	306.2	308.8
85°	107.7	103.8	131.5	147.0	167.0	237.9	404.2	312.6	224.3	185.7	194.0
87.5°	24.5	32.9	43.2	42.5	49.6	63.8	125.7	87.7	65.1	44.5	29.7
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)