

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: P368088

Luminaire Tested: **MSA-SA3D-730-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-730-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18080 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

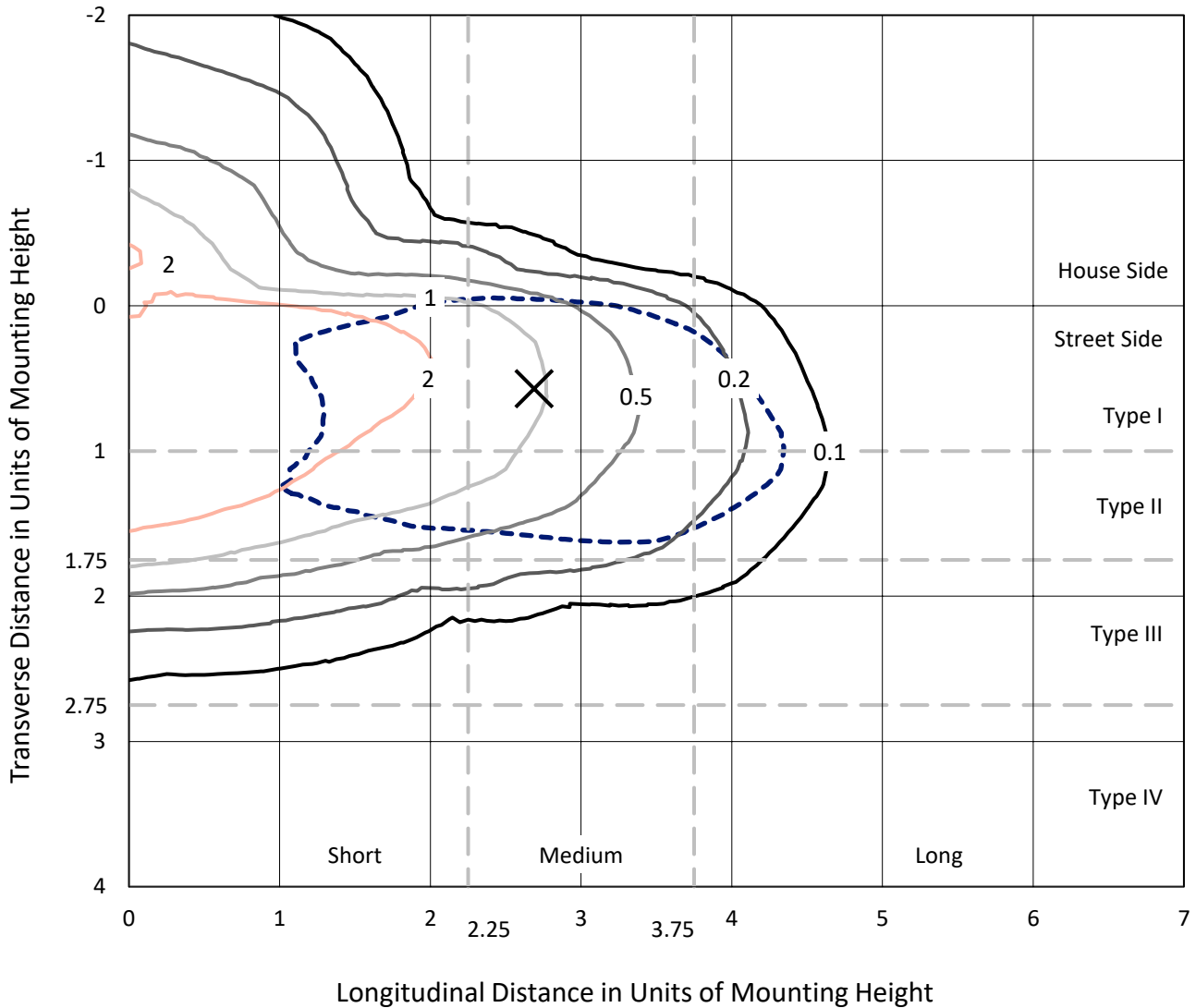
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

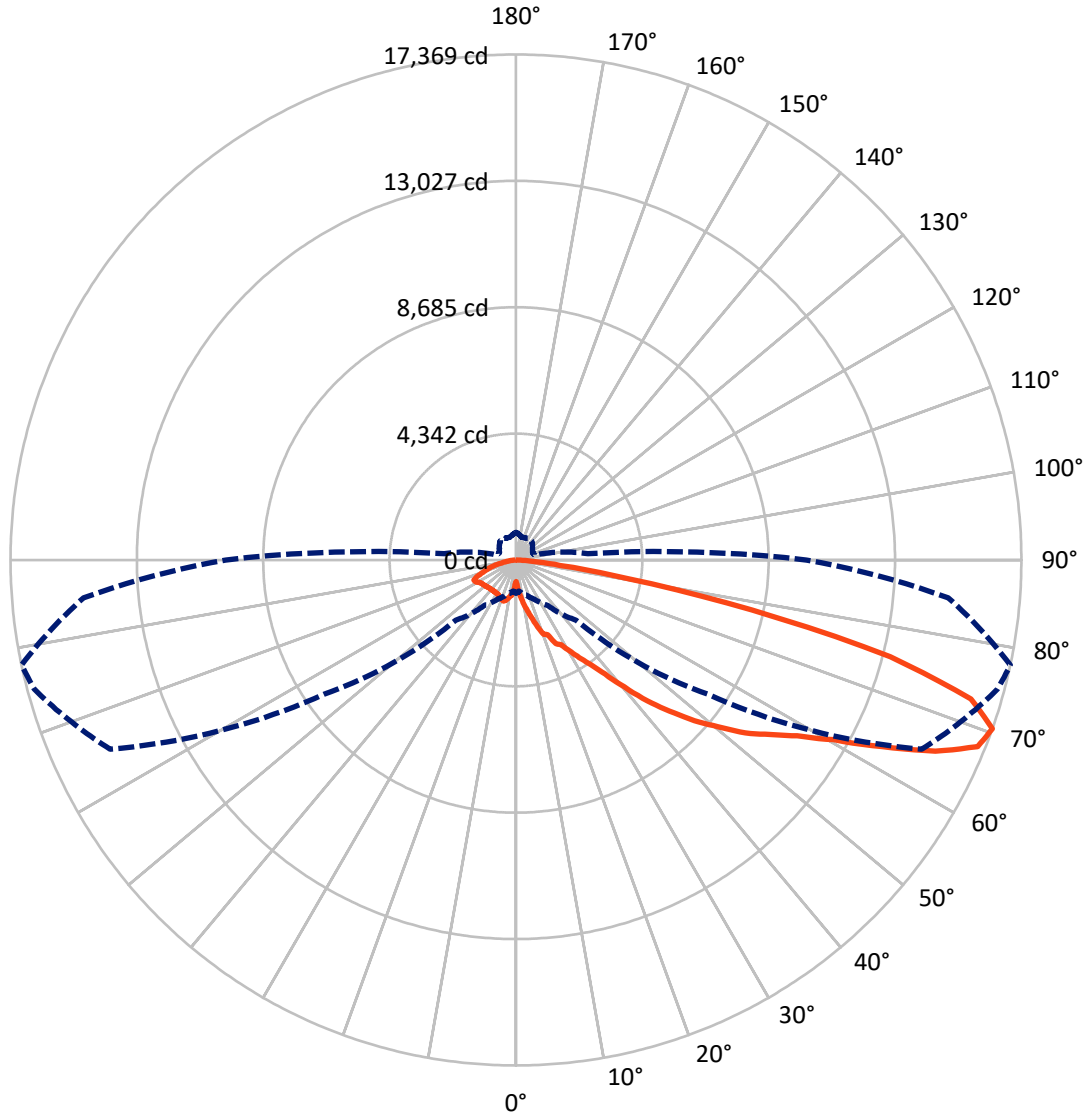
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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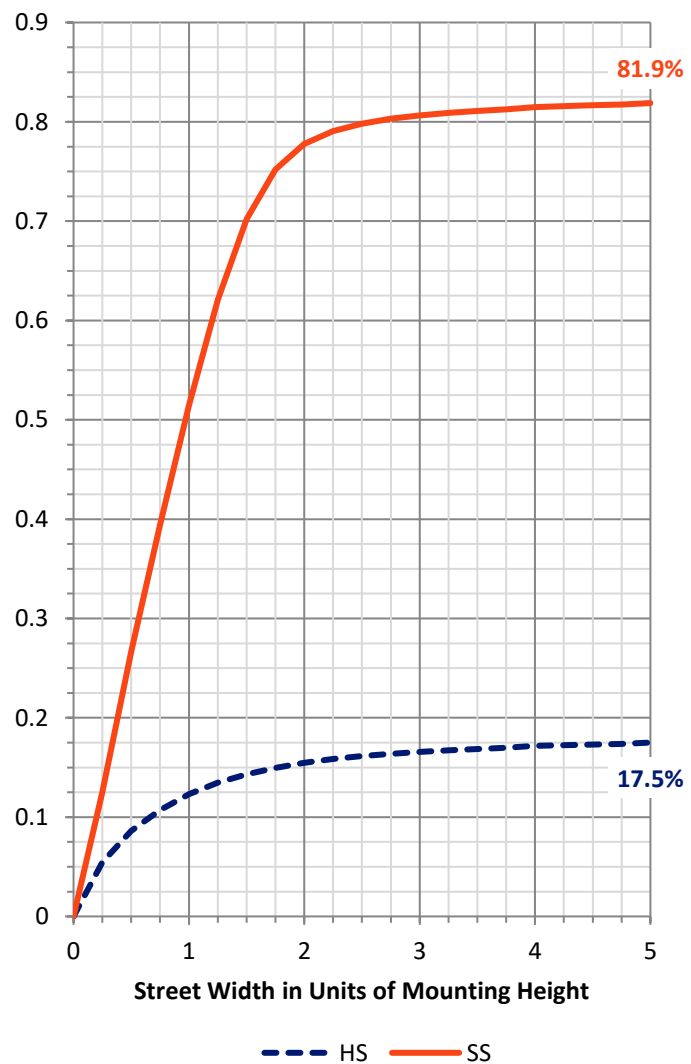
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3227.0	0.0	3227.0
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	14853.0	0.0	14853.0
	% Fixture	82.2	0.0	82.2
Total	Lumens	18080.0	0.0	18080.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.9	0.6
10°-20°	501.9	2.8
20°-30°	966.1	5.3
30°-40°	1627.2	9.0
40°-50°	2815.6	15.6
50°-60°	4251.1	23.5
60°-70°	4708.7	26.0
70°-80°	2714.7	15.0
80°-90°	380.7	2.1
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°	18080.0	100.0
0°-180°	18080.0	100.0

Coefficient of Utilization

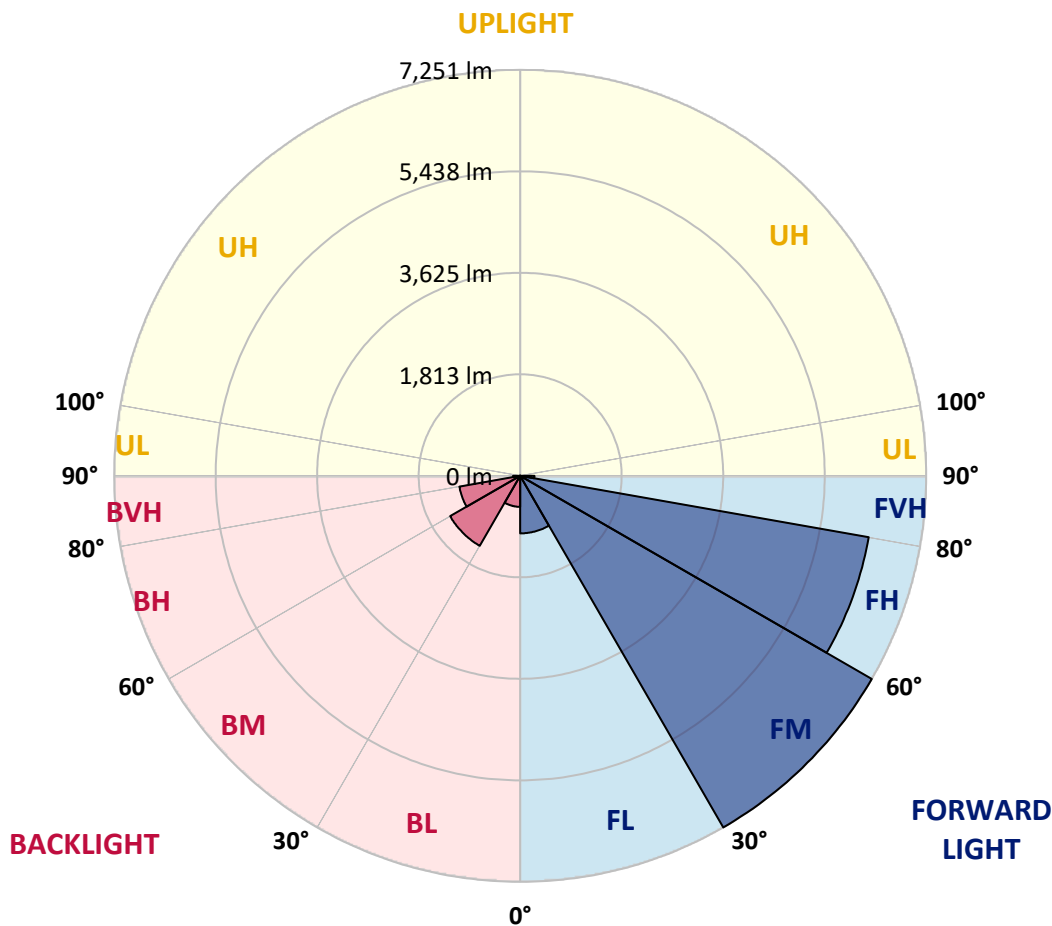


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1027.8	5.7			
FM (30°-60°)	7250.6	40.1			
FH (60°-80°)	6320.6	35.0			G3/7500
FVH (80°-90°)	254.0	1.4			G3/500
BL (0°-30°)	554.1	3.1	B2/1000		
BM (30°-60°)	1443.3	8.0	B2/2500		
BH (60°-80°)	1102.8	6.1	B3/2500		G3/2500
BVH (80°-90°)	126.8	0.7			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1
2.5°	948.9	915.0	863.8	884.9	910.5	913.5	905.2	858.5	842.6	878.1	888.6
5°	1329.5	1272.3	1237.6	1226.3	1187.8	1108.0	1165.2	1135.8	1141.9	1124.5	1158.5
7.5°	1649.9	1611.4	1560.2	1545.9	1457.7	1395.1	1434.3	1421.5	1359.7	1335.6	1374.0
10°	1812.7	1770.5	1772.7	1741.8	1718.5	1724.5	1704.9	1648.4	1602.4	1570.0	1477.3
12.5°	1910.7	1921.2	1977.7	1961.9	2050.1	2122.5	2067.4	1983.8	1838.3	1808.9	1717.0
15°	2143.6	2182.7	2130.0	2154.1	2191.8	2330.5	2307.9	2289.8	2136.0	2078.7	1909.2
17.5°	2383.2	2390.8	2310.9	2298.1	2388.5	2458.6	2546.8	2445.0	2463.9	2423.9	2149.6
20°	2434.5	2486.5	2371.9	2292.8	2479.0	2617.6	2726.9	2619.1	2718.6	2729.2	2347.8
22.5°	2622.2	2559.6	2408.9	2331.2	2494.0	2664.4	2842.2	2902.5	2870.9	2781.9	2539.3
25°	2752.6	2719.4	2565.6	2479.7	2541.5	2698.3	3010.3	3167.8	3195.7	3183.7	2721.7
27.5°	2994.5	3011.1	2694.5	2718.6	2632.7	2647.0	3111.3	3519.8	3345.7	3297.5	2947.8
30°	3376.6	3302.8	2947.8	2967.4	2824.9	2800.8	3324.6	3823.6	3667.6	3609.5	3133.9
32.5°	3775.3	3782.1	3351.0	3183.7	3107.6	3083.4	3282.4	3982.6	4074.6	3999.2	3415.1
35°	4337.6	4298.4	3788.2	3568.1	3293.0	3250.8	3583.1	4443.9	4612.7	4401.7	3749.0
37.5°	5193.8	5075.5	4481.6	3972.8	3769.3	3721.1	4012.8	4857.7	5237.5	4975.2	4294.6
40°	5881.2	5640.8	5101.1	4481.6	4137.1	4196.7	4318.0	5359.6	5885.7	5738.0	4799.6
42.5°	6429.2	6215.9	5539.8	5104.1	4636.1	4562.2	4694.9	5981.5	6767.6	6622.9	5429.7
45°	6954.5	6520.4	6032.7	5640.8	5190.8	5280.5	5260.9	6616.1	7849.2	7403.7	5986.7
47.5°	7473.0	7065.3	6555.0	6028.2	5575.2	6133.7	5924.9	7087.9	8578.7	8248.6	6573.1
50°	8139.3	7690.9	7109.8	6579.9	6308.6	6717.1	6366.6	7487.4	9395.8	9008.4	7126.3
52.5°	8581.8	8145.4	7635.9	7257.5	7232.6	7075.1	6985.4	7993.1	10111.8	9876.6	7712.7
55°	8529.8	8109.2	7878.5	7920.0	8227.5	7696.1	7623.0	8741.5	10858.7	10586.6	8345.8
57.5°	7877.8	7418.8	7467.8	7713.5	8539.6	8786.8	8662.4	9541.2	11525.0	11401.4	9129.0
60°	6136.7	5900.8	6299.5	6748.7	8122.0	9106.3	9980.6	10516.5	12345.0	12542.5	10359.0
62.5°	3986.4	3671.3	4301.4	5064.2	6876.1	8895.3	11323.0	12366.1	13688.2	14136.6	12228.2
65°	2065.2	2014.7	2455.6	3156.5	4786.8	7584.6	11796.3	14306.2	15320.7	15843.0	14013.8
67.5°	1501.4	1407.9	1612.2	2024.5	2922.1	5172.0	10899.4	15790.3	16631.4	17110.0	15051.6
70°	1143.4	1074.0	1230.1	1485.6	1908.4	2921.4	8045.9	15385.5	17137.1	17369.3	14913.7
72.5°	856.2	796.7	933.1	1171.3	1470.5	1644.6	4755.9	12650.3	16274.1	16353.3	13385.2
75°	683.6	637.6	696.4	924.8	1198.4	1119.3	2526.4	9165.1	13222.4	13290.2	10224.1
77.5°	560.8	521.6	545.7	693.4	932.3	841.9	1253.4	5830.0	8394.8	8290.8	5752.3
80°	457.5	423.6	434.9	501.2	710.0	628.6	704.0	3041.2	4004.5	3843.2	2392.3
82.5°	352.0	323.3	346.0	368.6	514.0	451.5	410.8	1383.8	1640.1	1527.8	877.3
85°	235.9	209.5	300.7	276.6	336.2	277.4	224.6	551.0	611.3	569.8	308.3
87.5°	64.8	61.1	101.0	137.9	137.9	104.8	82.2	133.4	170.3	149.2	72.4
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°	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1	737.1
2.5°	893.1	876.6	832.9	829.1	839.6	841.1	834.4	818.5	810.2	855.5	848.7
5°	1150.2	1091.4	1055.9	1023.5	978.3	945.9	954.2	976.8	984.3	1018.3	1022.0
7.5°	1349.9	1272.3	1194.6	1090.6	1022.0	978.3	1011.5	1035.6	1054.4	1102.7	1122.3
10°	1436.6	1352.2	1242.1	1132.8	1114.0	1121.5	1102.7	1108.7	1138.1	1140.4	1150.2
12.5°	1597.9	1502.1	1303.9	1205.2	1199.9	1215.7	1209.0	1236.8	1257.2	1312.2	1288.8
15°	1752.4	1630.3	1350.7	1249.7	1227.8	1259.5	1296.4	1343.1	1386.8	1438.8	1412.5
17.5°	1940.1	1756.1	1352.9	1229.3	1233.1	1300.9	1339.3	1365.0	1495.4	1567.0	1530.8
20°	2058.4	1769.0	1302.4	1178.8	1233.1	1294.1	1347.6	1375.5	1521.7	1629.5	1654.4
22.5°	2165.4	1773.5	1263.2	1151.7	1186.3	1267.0	1347.6	1409.4	1502.9	1606.2	1609.9
25°	2224.2	1769.7	1212.7	1153.9	1185.6	1225.5	1297.1	1353.7	1423.0	1567.0	1570.7
27.5°	2374.9	1720.7	1163.0	1163.0	1179.6	1181.1	1272.3	1305.4	1315.2	1446.4	1469.7
30°	2418.7	1731.3	1156.9	1161.5	1169.8	1154.7	1194.6	1216.5	1230.8	1343.9	1347.6
32.5°	2488.8	1646.9	1175.0	1147.9	1137.4	1135.1	1144.9	1164.5	1170.5	1239.9	1252.7
35°	2573.9	1612.9	1181.1	1144.1	1123.0	1111.7	1141.1	1117.0	1135.8	1217.2	1226.3
37.5°	2851.3	1566.2	1212.0	1144.1	1117.0	1104.2	1089.9	1101.2	1168.3	1246.6	1294.9
40°	3028.4	1580.5	1204.4	1155.4	1096.7	1084.6	1060.5	1101.9	1205.9	1344.6	1380.8
42.5°	3338.9	1588.8	1213.5	1150.2	1103.4	1056.7	1072.5	1117.8	1227.0	1306.2	1362.0
45°	3660.0	1614.5	1207.4	1134.3	1088.4	1110.2	1088.4	1129.1	1181.1	1183.3	1225.5
47.5°	3975.1	1717.7	1194.6	1101.9	1084.6	1141.9	1086.1	1092.9	1096.7	1110.2	1160.0
50°	4345.1	1827.8	1176.5	1056.7	1089.9	1143.4	1094.4	1061.2	1057.5	1101.9	1157.7
52.5°	4765.7	1952.1	1153.2	1013.0	1059.0	1129.1	1123.0	1063.5	1031.1	1074.0	1129.8
55°	5260.9	2093.8	1126.0	969.3	1025.0	1130.6	1138.9	1047.7	1031.8	1078.6	1138.1
57.5°	5918.9	2298.8	1073.3	906.0	983.6	1107.2	1098.2	1029.6	1014.5	1064.2	1126.0
60°	7041.9	2693.0	997.9	843.4	939.1	1049.9	1065.0	997.2	982.1	1037.1	1101.9
62.5°	8545.6	3167.1	906.7	782.4	884.9	988.1	1023.5	950.4	948.9	1019.0	1086.9
65°	9945.2	3436.2	812.5	726.6	829.1	930.8	976.8	906.7	909.7	997.9	1065.7
67.5°	10527.1	3119.6	728.1	676.8	765.0	865.3	938.4	872.8	863.0	969.3	1031.8
70°	9980.6	2478.2	655.0	624.1	692.7	794.4	884.9	827.6	805.0	901.4	950.4
72.5°	8831.2	2065.9	586.4	562.3	629.3	719.8	812.5	766.5	737.1	811.0	854.7
75°	6903.2	1695.1	508.0	501.2	557.0	652.0	737.1	705.5	667.8	714.5	758.2
77.5°	3930.6	1072.5	426.6	431.1	471.1	571.3	646.7	621.8	583.4	603.0	653.5
80°	1573.0	541.2	342.9	346.0	379.9	469.6	535.9	526.8	486.9	502.7	537.4
82.5°	587.9	297.0	253.2	254.8	288.7	371.6	457.5	453.0	415.3	404.0	423.6
85°	233.7	147.0	155.3	162.0	194.5	267.6	367.1	325.6	281.1	246.5	258.5
87.5°	55.8	46.7	54.3	57.3	63.3	83.7	134.2	107.8	110.8	88.9	66.3
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)