

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: P596736

Luminaire Tested: **MSA-SA3D-827-U-T4FT**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596736
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 14666 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

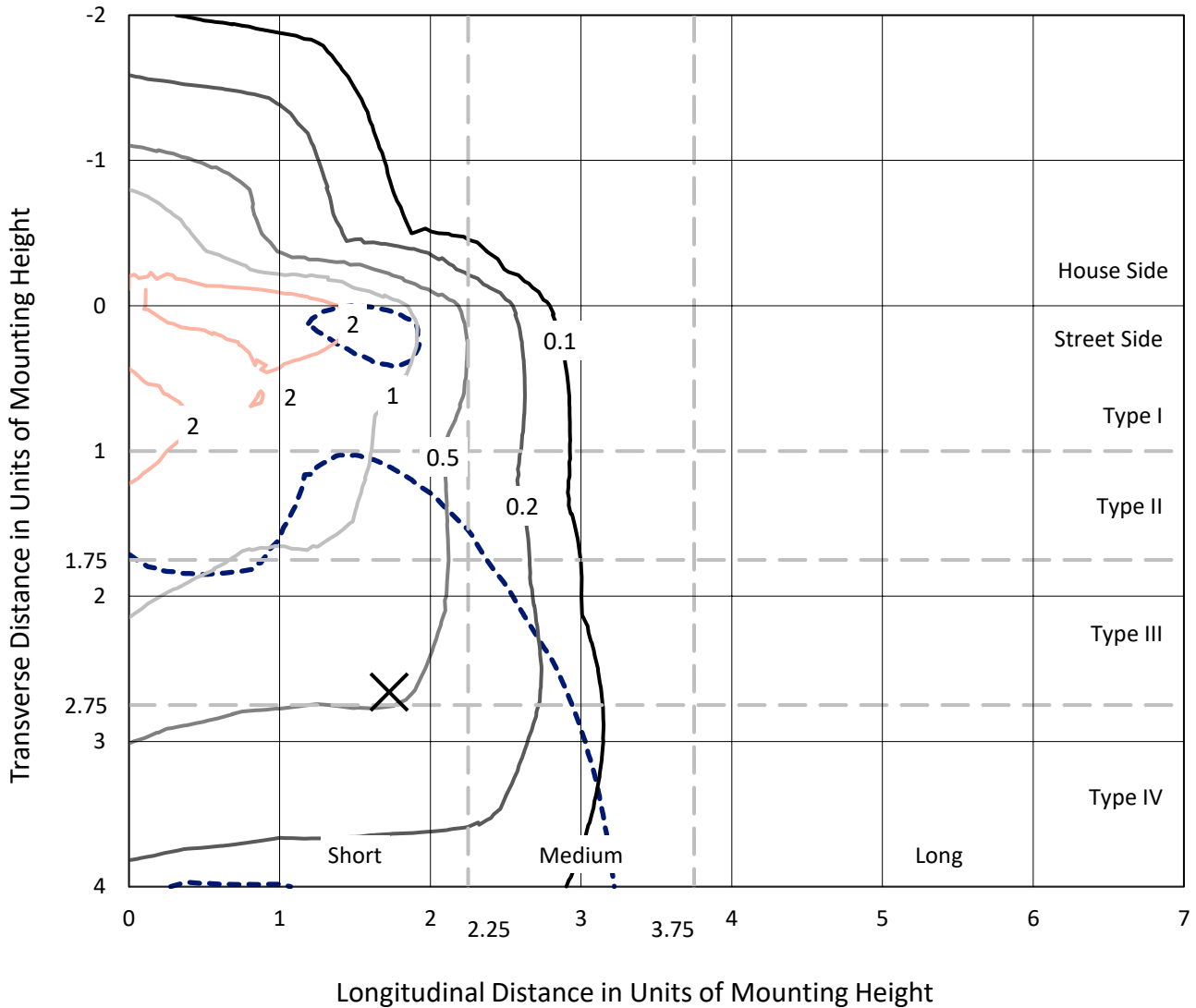
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

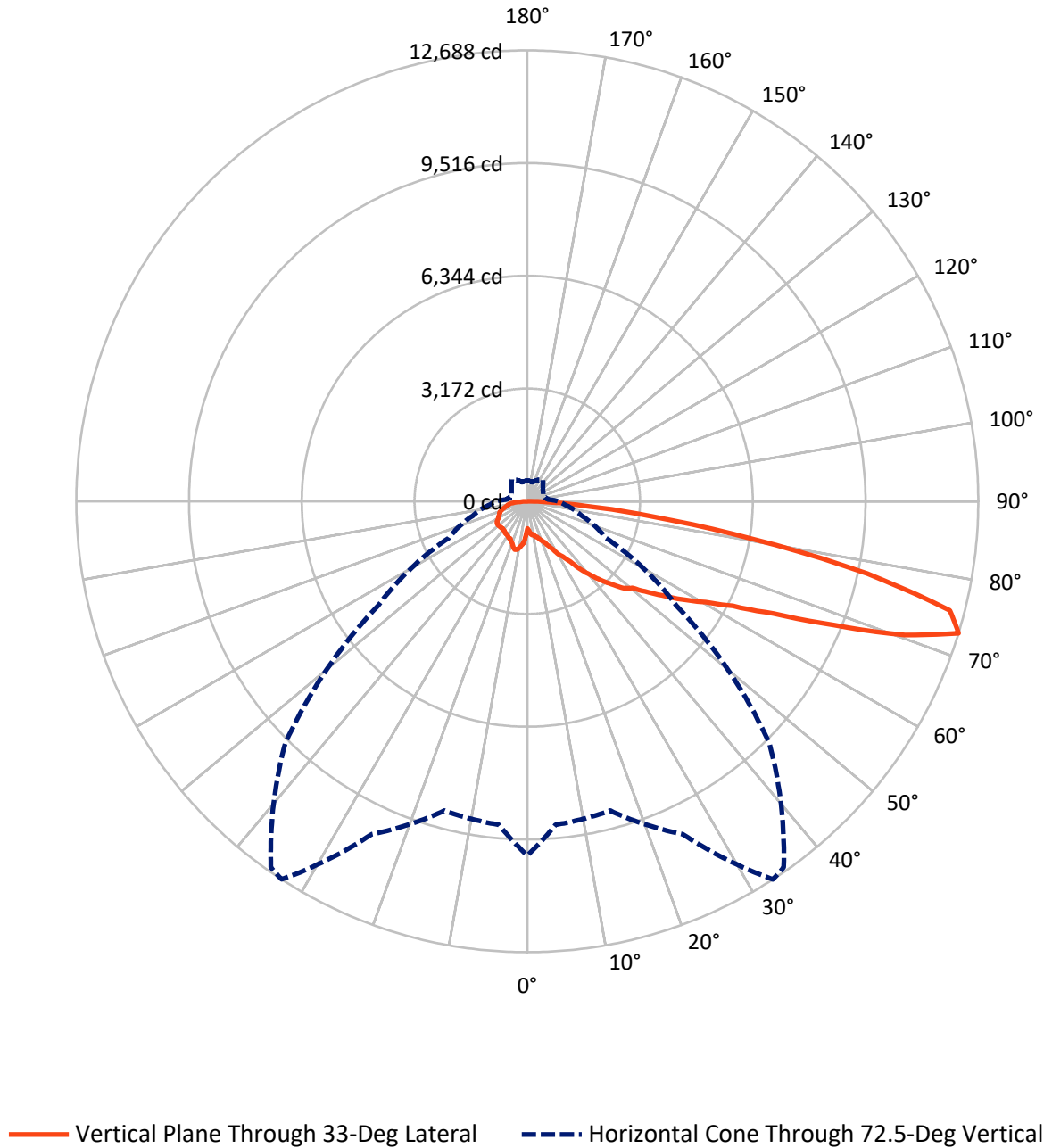
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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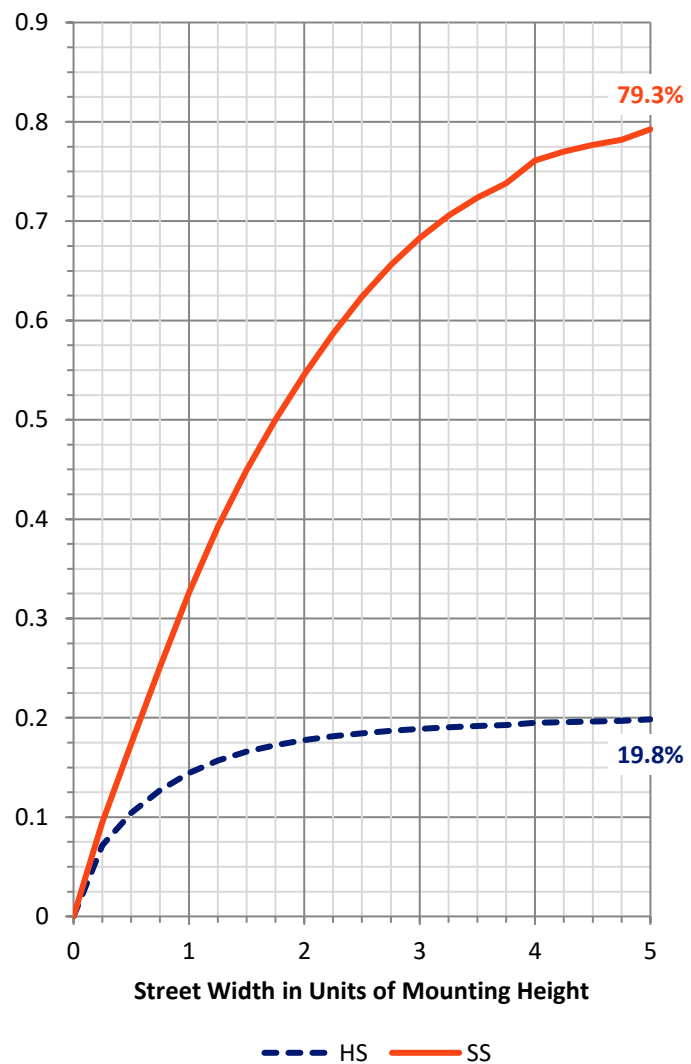
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2966.9	0.0	2966.9
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	11699.1	0.0	11699.1
	% Fixture	79.8	0.0	79.8
Total	Lumens	14666.0	0.0	14666.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.8	0.7
10°-20°	390.8	2.7
20°-30°	712.6	4.9
30°-40°	1205.5	8.2
40°-50°	2005.5	13.7
50°-60°	2943.2	20.1
60°-70°	3765.1	25.7
70°-80°	3063.2	20.9
80°-90°	474.4	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°	14666.0	100.0
0°-180°	14666.0	100.0



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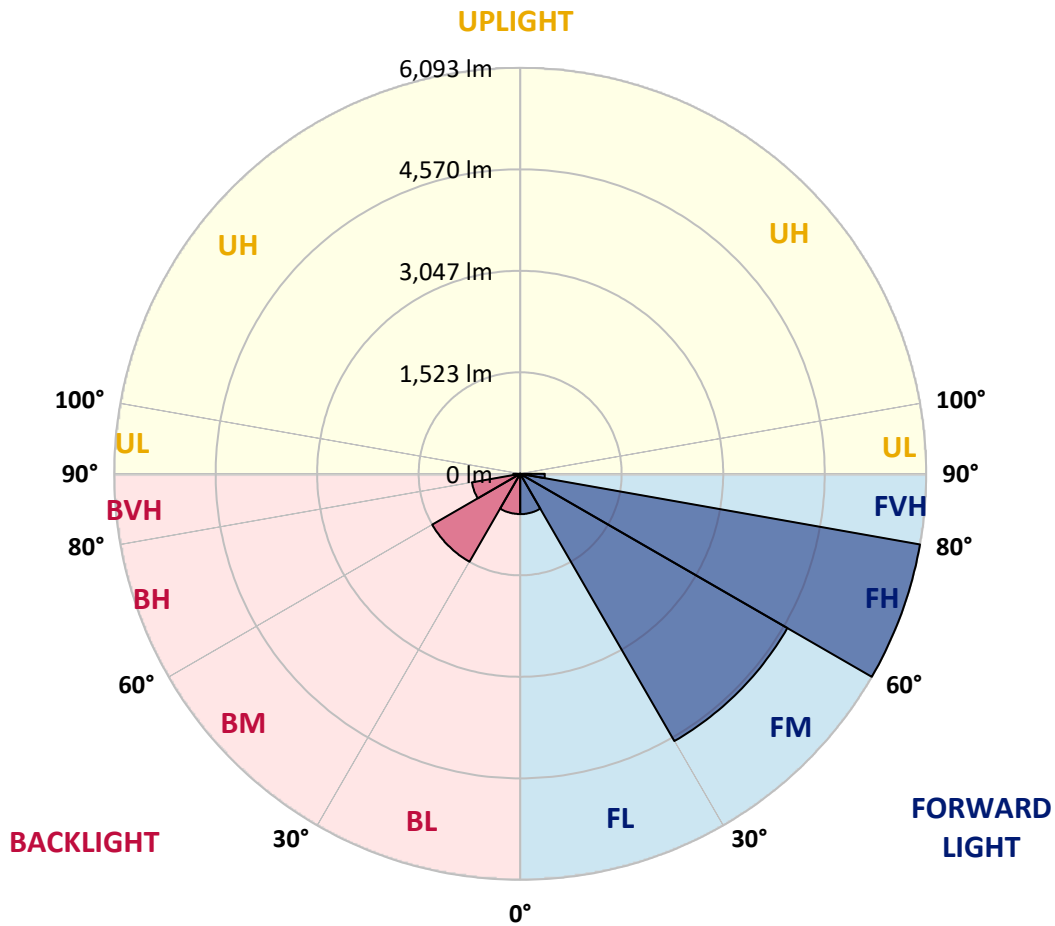
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	605.3	4.1			
FM (30°-60°)	4630.4	31.6			
FH (60°-80°)	6093.2	41.5			G3/7500
FVH (80°-90°)	370.3	2.5			G3/500
BL (0°-30°)	603.8	4.1	B2/1000		
BM (30°-60°)	1523.8	10.4	B2/2500		
BH (60°-80°)	735.1	5.0	B2/1000		G2/1000
BVH (80°-90°)	104.1	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°	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0
2.5°	871.8	844.5	799.4	798.2	823.2	828.7	845.1	846.3	852.4	842.6	912.0
5°	961.9	932.7	915.0	921.1	909.6	923.6	923.6	963.7	1017.3	1079.3	1167.5
7.5°	983.2	961.9	941.8	957.0	959.5	946.1	958.9	1053.2	1149.9	1211.9	1353.1
10°	940.6	919.3	934.5	939.4	938.8	969.2	1035.5	1111.0	1218.6	1333.0	1409.1
12.5°	932.7	947.9	955.2	963.7	1021.5	1030.6	1131.0	1208.9	1317.2	1417.6	1615.3
15°	1050.1	1070.2	1025.2	1022.1	1041.0	1049.5	1153.5	1232.0	1390.2	1558.7	1736.4
17.5°	1217.4	1224.7	1143.8	1102.4	1116.4	1123.1	1168.8	1267.3	1364.7	1676.2	1897.6
20°	1379.3	1384.1	1232.0	1139.5	1188.8	1196.1	1238.7	1295.3	1372.0	1741.9	2006.5
22.5°	1549.0	1518.0	1351.3	1234.5	1263.1	1264.9	1289.8	1320.9	1429.8	1731.5	2139.2
25°	1734.6	1715.1	1505.2	1393.3	1392.0	1367.1	1368.3	1412.7	1491.2	1842.3	2226.2
27.5°	1981.0	1983.4	1678.6	1618.4	1524.1	1507.6	1425.5	1508.2	1597.7	1843.5	2414.2
30°	2300.4	2241.4	1920.1	1822.8	1729.7	1695.0	1583.7	1654.3	1693.2	1948.7	2618.6
32.5°	2560.2	2543.1	2172.0	2024.8	1872.7	1912.8	1789.9	1727.9	1797.8	2130.0	2928.3
35°	2809.0	2753.0	2438.5	2246.9	2086.8	2062.5	1982.8	1993.1	2035.7	2359.4	3332.9
37.5°	3180.1	3149.7	2815.7	2509.1	2434.2	2335.1	2284.6	2316.8	2283.4	2653.3	3939.4
40°	3595.1	3418.6	3130.9	2857.7	2717.8	2647.8	2665.4	2635.0	2609.5	2983.0	4483.4
42.5°	3992.4	3831.8	3340.2	3217.3	3034.7	3063.9	2967.2	2988.5	3060.9	3450.9	4986.5
45°	4425.0	4077.6	3562.2	3453.9	3323.1	3360.2	3437.5	3414.4	3533.0	4002.7	5460.5
47.5°	4640.9	4310.6	3834.8	3658.4	3656.5	3579.3	4049.6	4100.7	3915.1	4411.6	5941.7
50°	4849.0	4524.1	4037.4	3918.1	3831.8	3997.2	4636.7	4519.3	4260.7	4880.7	6471.0
52.5°	5138.6	4768.1	4269.8	4142.7	4249.7	4403.1	5105.2	5082.0	4599.6	5363.1	6931.0
55°	5359.5	4985.3	4619.6	4501.6	4706.0	4856.3	5582.1	5442.8	4889.8	5717.2	7222.4
57.5°	5746.4	5362.5	5136.2	4874.0	5241.4	5239.0	6042.1	5934.4	5200.1	6008.0	7339.8
60°	6361.5	5910.7	5674.0	5371.6	5765.3	5905.8	6567.8	6257.5	5419.7	6191.8	7128.1
62.5°	7224.8	6689.4	6305.5	6006.2	6486.2	6740.6	7216.9	6492.9	5433.7	6139.4	6571.4
65°	8292.6	7641.6	7138.5	6822.1	7614.2	7977.4	8001.8	6638.3	5304.7	5598.6	5400.8
67.5°	9334.2	8602.3	8077.2	8137.5	9294.0	9466.2	8852.3	6760.0	4611.7	4495.5	3750.2
70°	10019.9	9226.5	8876.7	9515.5	11272.6	11096.1	9541.7	6439.4	3631.6	2914.3	2111.8
72.5°	9968.2	9137.7	9011.7	10334.4	12687.7	12577.6	9625.6	5121.0	2432.4	1593.4	1053.2
75°	8121.0	7475.5	7761.5	9783.2	12280.1	12274.6	8357.1	3169.8	1247.8	818.3	665.6
77.5°	4490.1	4239.4	5079.6	7407.4	9777.7	9827.6	5646.6	1437.7	672.9	579.8	501.3
80°	1572.7	1549.6	2201.2	3997.2	6432.1	6444.3	2625.9	657.7	489.2	438.7	368.1
82.5°	574.9	570.1	912.6	1856.9	3541.5	3533.6	996.0	409.5	362.6	310.3	242.8
85°	229.4	224.5	417.4	824.4	1626.9	1600.7	386.9	232.4	237.3	185.0	119.2
87.5°	63.3	65.7	141.8	258.0	498.3	461.8	97.3	78.5	96.1	75.4	37.7
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°	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0	769.0
2.5°	924.2	930.3	870.0	891.3	918.7	933.3	940.6	909.6	919.9	963.7	961.9
5°	1185.8	1161.5	1138.3	1162.1	1146.2	1123.7	1160.2	1158.4	1182.1	1205.9	1211.3
7.5°	1381.1	1349.4	1338.5	1285.0	1231.4	1177.3	1224.1	1253.3	1259.4	1318.4	1343.4
10°	1451.7	1439.5	1443.8	1373.2	1366.5	1372.0	1328.8	1281.9	1310.5	1286.2	1304.4
12.5°	1614.7	1645.1	1569.7	1521.6	1517.4	1483.9	1397.5	1367.1	1334.8	1368.3	1351.3
15°	1745.5	1802.1	1721.2	1636.6	1541.1	1489.4	1415.8	1369.5	1348.2	1355.5	1334.8
17.5°	1937.2	1990.1	1784.5	1654.9	1556.3	1480.3	1367.7	1269.1	1321.5	1325.7	1302.0
20°	2064.3	2068.0	1805.8	1609.8	1521.0	1389.0	1279.5	1193.1	1253.3	1314.8	1341.5
22.5°	2188.4	2161.1	1831.9	1574.0	1392.6	1264.9	1211.3	1205.9	1250.9	1302.6	1308.7
25°	2281.5	2285.8	1847.1	1560.6	1317.2	1143.2	1143.2	1182.7	1222.3	1345.2	1339.1
27.5°	2507.3	2341.2	1788.1	1499.1	1212.6	1072.0	1143.8	1196.7	1215.6	1348.8	1362.2
30°	2671.5	2563.2	1800.3	1393.9	1106.7	1038.6	1097.6	1163.9	1216.2	1370.1	1365.3
32.5°	2947.1	2655.7	1828.9	1246.0	1027.6	1025.8	1078.1	1148.1	1210.7	1347.0	1354.3
35°	3251.9	2928.3	1749.2	1133.5	1008.7	1018.5	1086.0	1114.0	1187.6	1337.9	1344.6
37.5°	3815.9	3070.6	1698.7	1046.5	996.6	1024.6	1050.1	1093.3	1167.5	1292.3	1336.1
40°	4146.9	3363.9	1511.3	996.0	971.0	1019.7	1032.5	1069.0	1109.1	1237.5	1265.5
42.5°	4582.5	3456.4	1351.3	940.0	958.2	999.6	1037.9	1047.1	1073.8	1151.1	1202.2
45°	4945.8	3525.7	1181.5	895.0	915.0	1044.0	1046.5	1042.2	1037.3	1065.9	1107.9
47.5°	5321.7	3711.9	1025.2	845.1	898.6	1080.5	1050.7	1011.8	991.7	995.4	1034.3
50°	5736.7	3847.0	914.4	804.3	902.3	1080.5	1071.4	980.8	940.6	930.3	971.0
52.5°	6101.7	3862.8	830.5	771.5	887.1	1043.4	1085.4	961.3	893.8	868.8	907.1
55°	6300.7	3662.6	769.6	741.6	848.1	1010.0	1078.1	950.3	837.2	818.3	852.4
57.5°	6296.4	3330.4	717.9	700.3	803.7	963.1	1037.3	890.7	802.5	791.5	825.0
60°	6069.5	2941.0	678.4	666.2	758.1	895.0	964.3	851.8	769.0	763.6	800.1
62.5°	5554.8	2538.9	640.0	630.3	715.5	846.9	929.6	808.6	734.3	733.7	768.4
65°	4549.1	2038.2	604.1	601.7	675.9	799.4	896.8	772.1	698.5	710.6	745.9
67.5°	3134.5	1432.2	565.8	573.1	639.4	753.8	871.8	747.7	660.7	685.7	717.3
70°	1720.0	885.8	523.2	537.8	593.2	700.9	832.9	708.2	611.5	649.8	671.7
72.5°	874.9	590.8	470.3	493.4	536.6	623.0	759.9	651.0	558.5	573.1	584.7
75°	587.7	444.7	411.3	436.8	467.9	548.8	674.1	597.5	508.0	506.2	519.0
77.5°	444.1	347.4	349.2	378.4	398.5	482.5	606.0	552.4	465.4	461.2	480.0
80°	324.9	263.4	281.1	311.5	329.8	433.2	561.6	502.5	407.6	390.6	406.4
82.5°	215.4	186.8	208.1	238.5	253.1	362.0	509.8	426.5	332.2	289.0	291.4
85°	101.6	98.0	124.1	138.7	157.6	224.5	381.5	295.1	211.7	175.2	183.1
87.5°	23.1	31.0	40.8	40.2	46.8	60.2	118.6	82.7	61.4	42.0	28.0
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)