

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: P367630

Luminaire Tested: **MSA-SA2D-760-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367630
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-SA2D-760-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: 13519 lumens
Efficiency: N/A
Efficacy: 104.8 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): 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: 28.75 FT

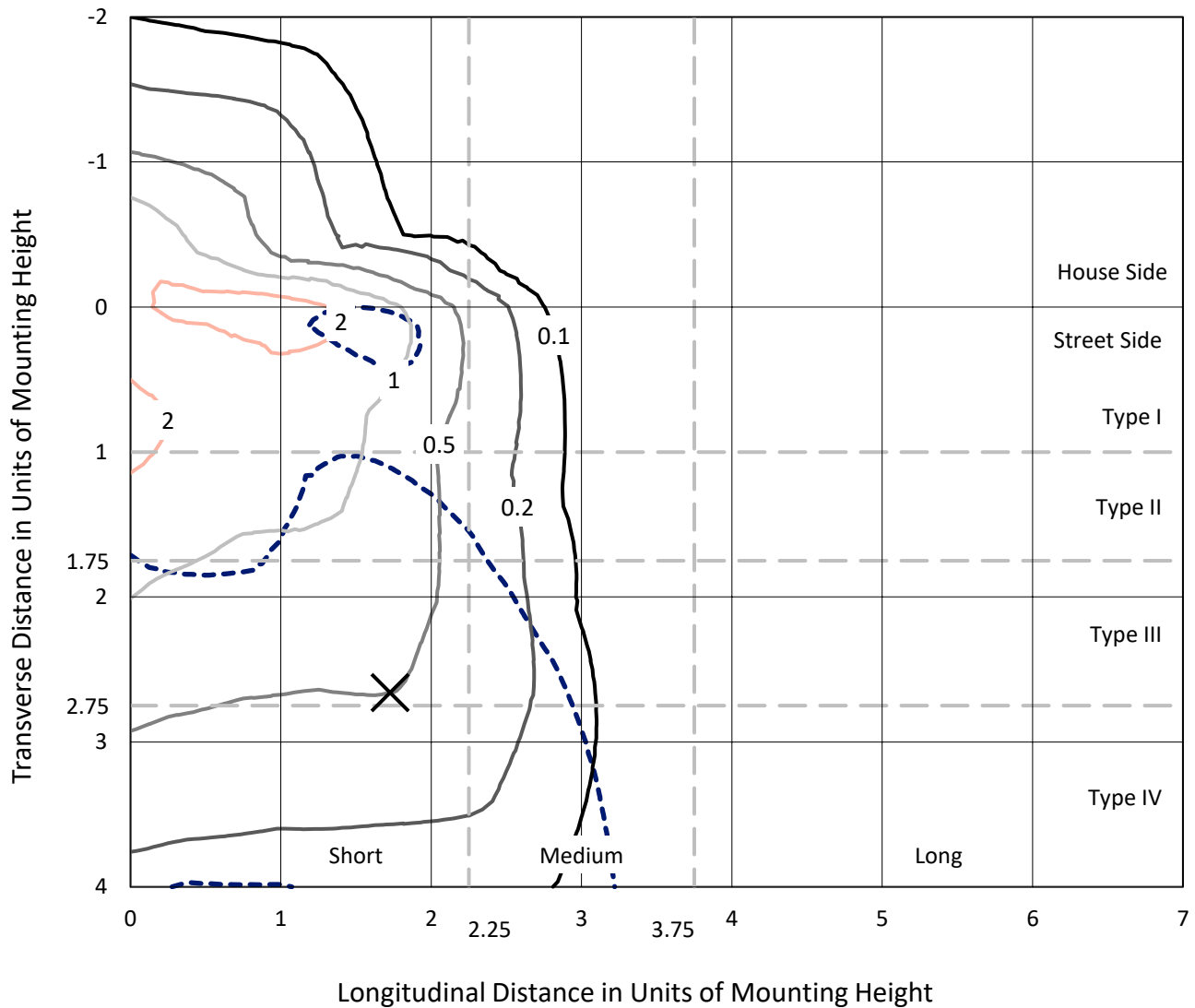


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Iso-Footcandle Lines of Horizontal Illumination

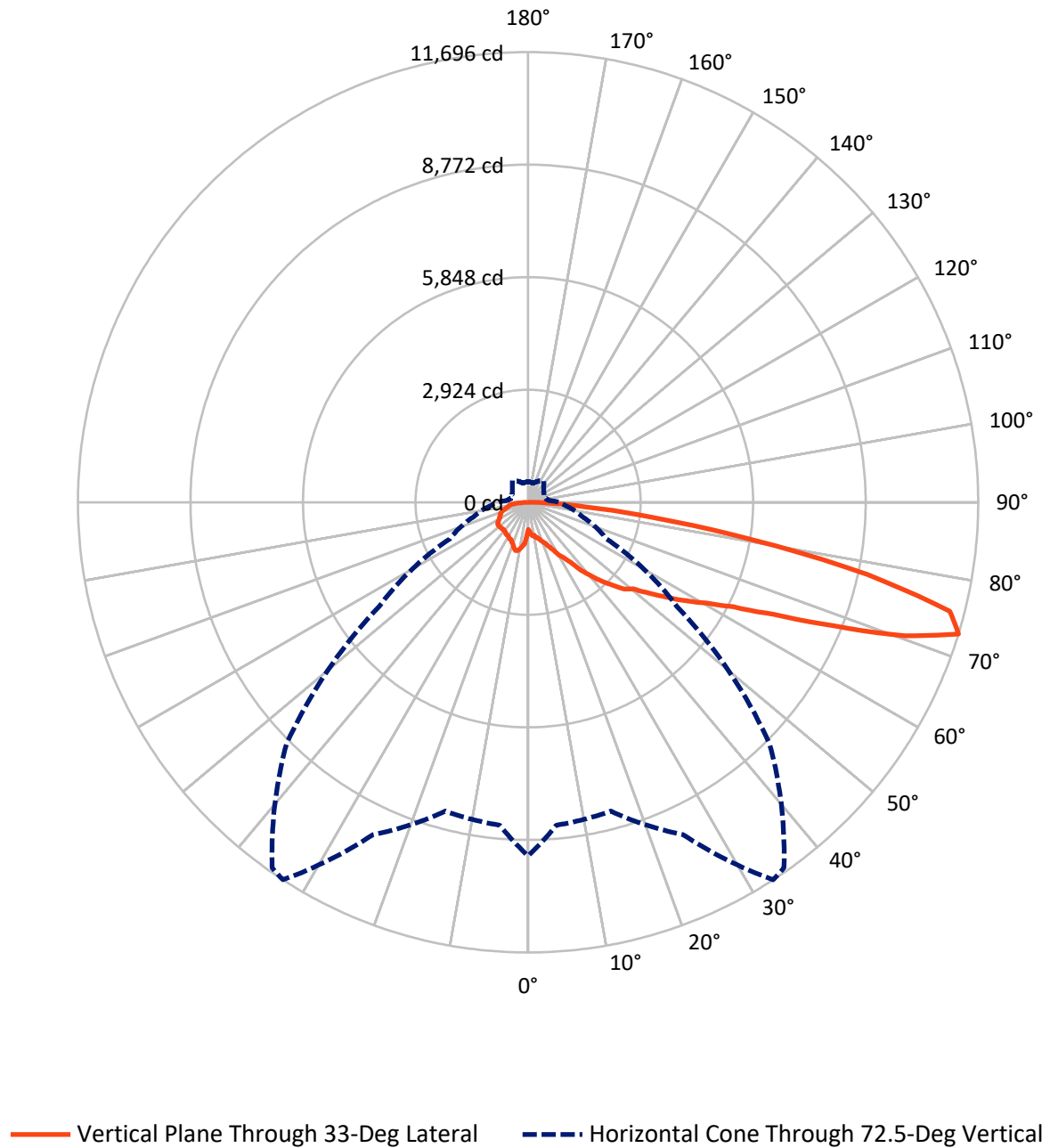
× Max cd
 --- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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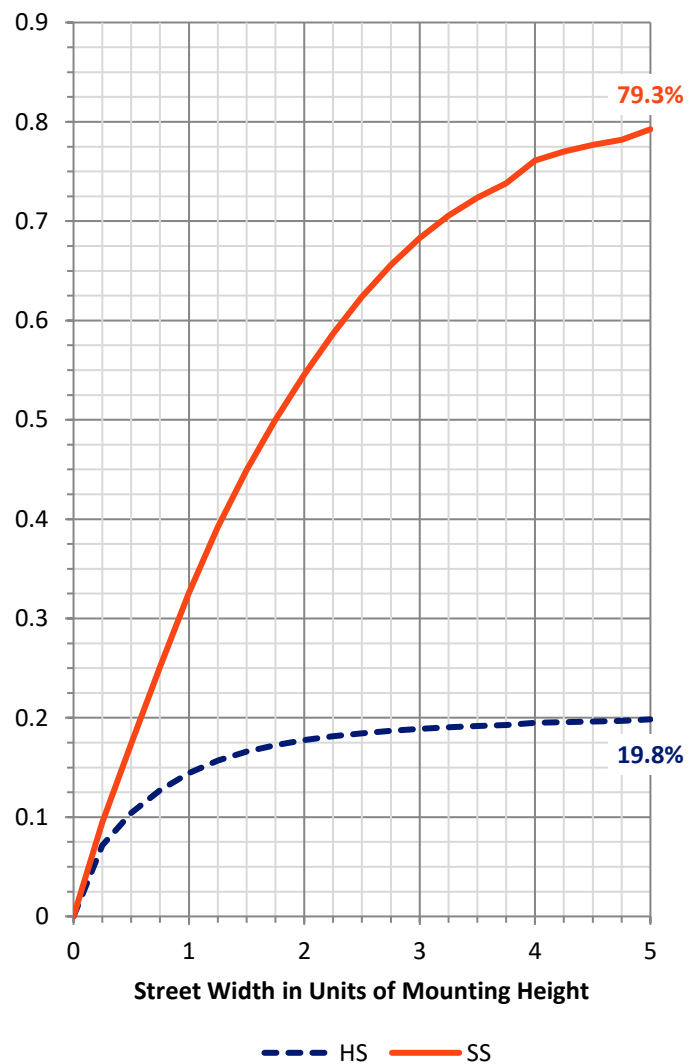
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2734.9	0.0	2734.9
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	10784.1	0.0	10784.1
	% Fixture	79.8	0.0	79.8
Total	Lumens	13519.0	0.0	13519.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	0.7
10°-20°	360.2	2.7
20°-30°	656.8	4.9
30°-40°	1111.2	8.2
40°-50°	1848.6	13.7
50°-60°	2713.0	20.1
60°-70°	3470.6	25.7
70°-80°	2823.7	20.9
80°-90°	437.3	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°	13519.0	100.0
0°-180°	13519.0	100.0

Coefficient of Utilization



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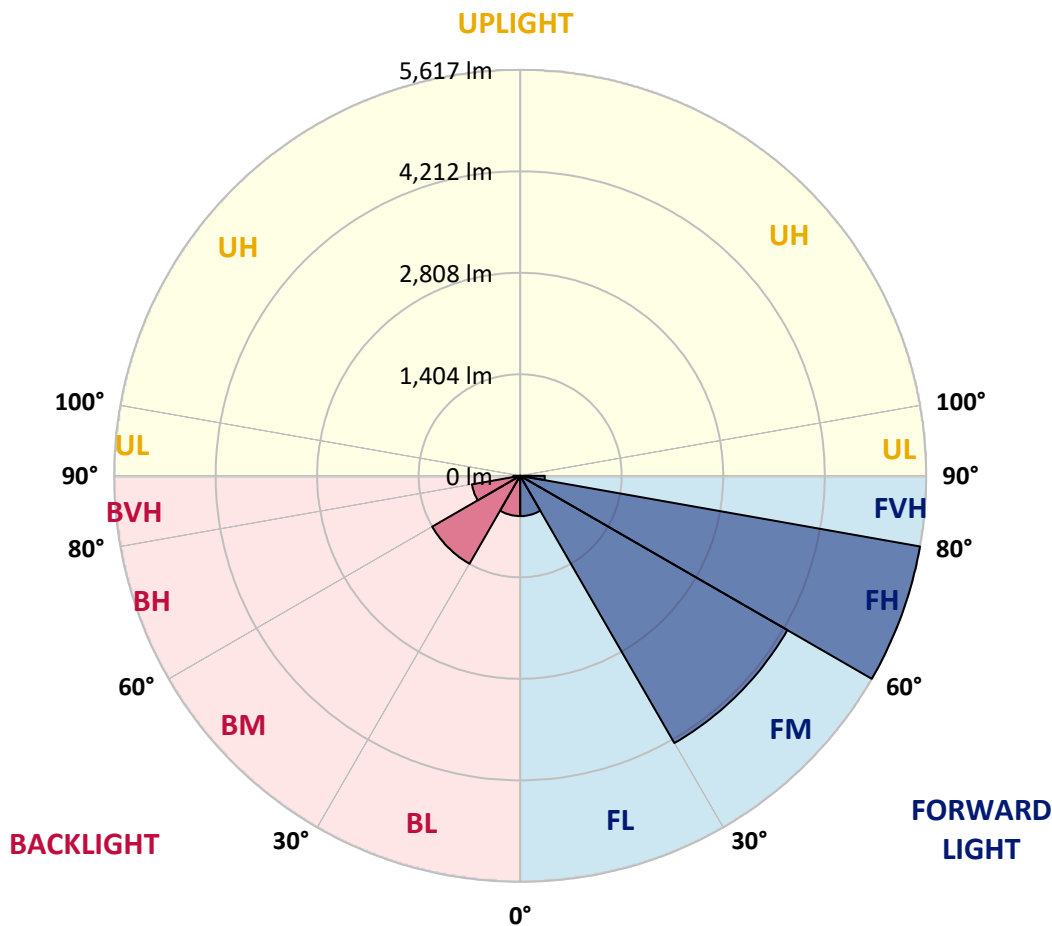
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	557.9	4.1			
FM	(30°-60°)	4268.3	31.6			
FH	(60°-80°)	5616.6	41.5			G3/7500
FVH	(80°-90°)	341.3	2.5			G3/500
BL	(0°-30°)	556.6	4.1	B2/1000		
BM	(30°-60°)	1404.6	10.4	B2/2500		
BH	(60°-80°)	677.7	5.0	B2/1000		G2/1000
BVH	(80°-90°)	96.0	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°	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9
2.5°	803.7	778.4	736.9	735.8	758.8	763.8	779.0	780.1	785.7	776.7	840.7
5°	886.7	859.7	843.5	849.1	838.4	851.3	851.3	888.3	937.7	994.9	1076.2
7.5°	906.3	886.7	868.2	882.2	884.4	872.1	883.9	970.8	1060.0	1117.2	1247.3
10°	867.0	847.4	861.4	865.9	865.4	893.4	954.5	1024.1	1123.3	1228.8	1298.9
12.5°	859.7	873.8	880.5	888.3	941.6	950.0	1042.6	1114.4	1214.2	1306.7	1489.0
15°	968.0	986.5	945.0	942.2	959.6	967.4	1063.3	1135.7	1281.5	1436.8	1600.6
17.5°	1122.2	1128.9	1054.4	1016.2	1029.1	1035.3	1077.3	1168.2	1257.9	1545.1	1749.2
20°	1271.4	1275.9	1135.7	1050.4	1095.9	1102.6	1141.8	1194.0	1264.7	1605.6	1849.6
22.5°	1427.9	1399.3	1245.6	1137.9	1164.3	1166.0	1189.0	1217.6	1317.9	1596.1	1971.9
25°	1598.9	1581.0	1387.5	1284.3	1283.2	1260.2	1261.3	1302.2	1374.6	1698.2	2052.1
27.5°	1826.0	1828.3	1547.3	1491.8	1404.9	1389.7	1314.0	1390.3	1472.7	1699.3	2225.4
30°	2120.5	2066.1	1770.0	1680.2	1594.4	1562.5	1459.8	1524.9	1560.8	1796.3	2413.8
32.5°	2360.0	2344.3	2002.1	1866.4	1726.2	1763.2	1649.9	1592.7	1657.2	1963.5	2699.3
35°	2589.3	2537.7	2247.8	2071.1	1923.6	1901.2	1827.7	1837.3	1876.5	2174.9	3072.2
37.5°	2931.4	2903.4	2595.5	2312.8	2243.9	2152.4	2105.9	2135.6	2104.8	2445.8	3631.3
40°	3313.9	3151.3	2886.0	2634.2	2505.2	2440.7	2457.0	2428.9	2405.4	2749.7	4132.7
42.5°	3680.1	3532.1	3078.9	2965.6	2797.4	2824.3	2735.1	2754.8	2821.5	3181.0	4596.5
45°	4078.9	3758.7	3283.6	3183.8	3063.2	3097.4	3168.7	3147.4	3256.7	3689.7	5033.4
47.5°	4278.0	3973.5	3534.9	3372.2	3370.6	3299.3	3732.9	3780.0	3608.9	4066.5	5477.0
50°	4469.8	4170.3	3721.6	3611.7	3532.1	3684.6	4274.1	4165.8	3927.5	4498.9	5964.9
52.5°	4736.7	4395.2	3935.9	3818.7	3917.4	4058.7	4705.9	4684.6	4239.8	4943.7	6388.9
55°	4940.3	4595.4	4258.3	4149.5	4338.0	4476.5	5145.6	5017.1	4507.4	5270.1	6657.6
57.5°	5297.0	4943.1	4734.5	4492.8	4831.5	4829.3	5569.6	5470.3	4793.4	5538.2	6765.8
60°	5864.0	5448.4	5230.3	4951.5	5314.4	5443.9	6054.1	5768.1	4995.8	5707.5	6570.6
62.5°	6659.8	6166.3	5812.4	5536.5	5979.0	6213.4	6652.5	5985.1	5008.7	5659.3	6057.5
65°	7644.1	7044.0	6580.2	6288.5	7018.7	7353.5	7376.0	6119.2	4889.8	5160.7	4978.5
67.5°	8604.2	7929.5	7445.5	7501.0	8567.2	8725.9	8160.0	6231.3	4251.1	4143.9	3456.9
70°	9236.2	8504.9	8182.4	8771.3	10391.0	10228.3	8795.4	5935.8	3347.6	2686.4	1946.6
72.5°	9188.6	8423.0	8307.0	9526.2	11695.5	11594.0	8872.8	4720.5	2242.2	1468.8	970.8
75°	7485.9	6890.9	7154.5	9018.1	11319.7	11314.7	7703.5	2921.9	1150.3	754.3	613.5
77.5°	4138.9	3907.8	4682.3	6828.1	9013.0	9059.0	5205.0	1325.2	620.3	534.5	462.1
80°	1449.7	1428.4	2029.1	3684.6	5929.0	5940.3	2420.5	606.3	450.9	404.4	339.3
82.5°	530.0	525.5	841.2	1711.6	3264.6	3257.3	918.1	377.4	334.3	286.0	223.8
85°	211.4	206.9	384.7	759.9	1499.6	1475.5	356.7	214.2	218.7	170.5	109.9
87.5°	58.3	60.6	130.7	237.8	459.3	425.7	89.7	72.3	88.6	69.5	34.8
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°	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9
2.5°	851.9	857.5	802.0	821.6	846.8	860.3	867.0	838.4	848.0	888.3	886.7
5°	1093.0	1070.6	1049.3	1071.2	1056.6	1035.8	1069.5	1067.8	1089.7	1111.6	1116.6
7.5°	1273.1	1243.9	1233.8	1184.5	1135.1	1085.2	1128.4	1155.3	1160.9	1215.3	1238.3
10°	1338.1	1326.9	1330.8	1265.8	1259.6	1264.7	1224.8	1181.7	1208.0	1185.6	1202.4
12.5°	1488.4	1516.5	1446.9	1402.6	1398.7	1367.9	1288.2	1260.2	1230.5	1261.3	1245.6
15°	1609.0	1661.2	1586.6	1508.6	1420.6	1372.9	1305.0	1262.4	1242.8	1249.5	1230.5
17.5°	1785.7	1834.5	1644.9	1525.4	1434.6	1364.5	1260.7	1169.9	1218.1	1222.0	1200.2
20°	1902.9	1906.2	1664.5	1483.9	1402.1	1280.4	1179.4	1099.8	1155.3	1211.9	1236.6
22.5°	2017.3	1992.1	1688.6	1450.9	1283.7	1166.0	1116.6	1111.6	1153.1	1200.7	1206.3
25°	2103.1	2107.0	1702.7	1438.5	1214.2	1053.8	1053.8	1090.2	1126.7	1240.0	1234.4
27.5°	2311.2	2158.1	1648.3	1381.9	1117.7	988.2	1054.4	1103.1	1120.5	1243.4	1255.7
30°	2462.6	2362.8	1659.5	1284.9	1020.1	957.3	1011.7	1072.9	1121.1	1263.0	1258.5
32.5°	2716.6	2448.0	1685.8	1148.6	947.2	945.6	993.8	1058.3	1116.0	1241.7	1248.4
35°	2997.6	2699.3	1612.4	1044.8	929.8	938.8	1001.1	1026.9	1094.7	1233.3	1239.4
37.5°	3517.5	2830.5	1565.8	964.6	918.6	944.4	968.0	1007.8	1076.2	1191.2	1231.6
40°	3822.6	3100.8	1393.1	918.1	895.1	939.9	951.7	985.4	1022.4	1140.7	1166.5
42.5°	4224.1	3186.1	1245.6	866.5	883.3	921.4	956.8	965.2	989.9	1061.1	1108.2
45°	4559.0	3250.0	1089.1	825.0	843.5	962.4	964.6	960.7	956.2	982.6	1021.3
47.5°	4905.5	3421.6	945.0	779.0	828.3	996.0	968.5	932.7	914.1	917.5	953.4
50°	5288.0	3546.1	842.9	741.4	831.7	996.0	987.6	904.1	867.0	857.5	895.1
52.5°	5624.5	3560.7	765.5	711.1	817.7	961.8	1000.5	886.1	823.9	800.9	836.2
55°	5807.9	3376.2	709.4	683.6	781.8	931.0	993.8	876.0	771.7	754.3	785.7
57.5°	5804.0	3070.0	661.8	645.5	740.9	887.8	956.2	821.0	739.7	729.6	760.5
60°	5594.8	2711.0	625.3	614.1	698.8	825.0	888.9	785.2	708.9	703.8	737.5
62.5°	5120.3	2340.3	590.0	581.0	659.5	780.7	856.9	745.3	676.9	676.4	708.3
65°	4193.3	1878.8	556.9	554.7	623.1	736.9	826.7	711.7	643.8	655.0	687.6
67.5°	2889.4	1320.2	521.6	528.3	589.4	694.9	803.7	689.3	609.1	632.1	661.2
70°	1585.5	816.6	482.3	495.8	546.8	646.1	767.8	652.8	563.6	599.0	619.2
72.5°	806.5	544.6	433.5	454.8	494.6	574.3	700.5	600.1	514.8	528.3	539.0
75°	541.8	410.0	379.1	402.7	431.3	505.9	621.4	550.7	468.3	466.6	478.4
77.5°	409.4	320.2	321.9	348.8	367.3	444.7	558.6	509.2	429.0	425.1	442.5
80°	299.5	242.8	259.1	287.1	304.0	399.3	517.6	463.2	375.8	360.1	374.6
82.5°	198.5	172.2	191.8	219.8	233.3	333.7	470.0	393.1	306.2	266.4	268.6
85°	93.7	90.3	114.4	127.9	145.3	206.9	351.6	272.0	195.2	161.5	168.8
87.5°	21.3	28.6	37.6	37.0	43.2	55.5	109.4	76.3	56.6	38.7	25.8
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)