

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: P596428

Luminaire Tested: **MSA-SA4B-722-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596428  
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-SA4B-722-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: 14316 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

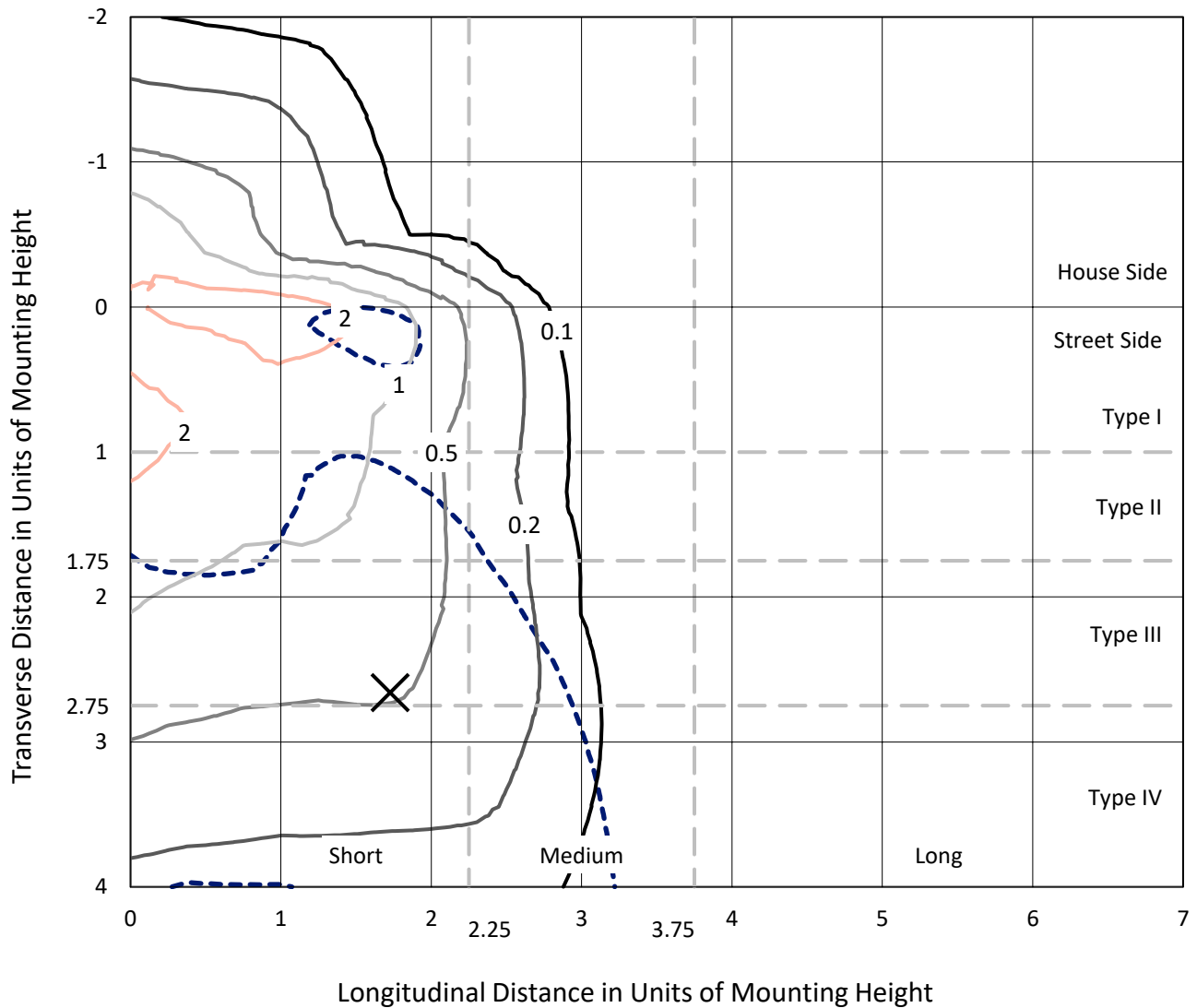
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

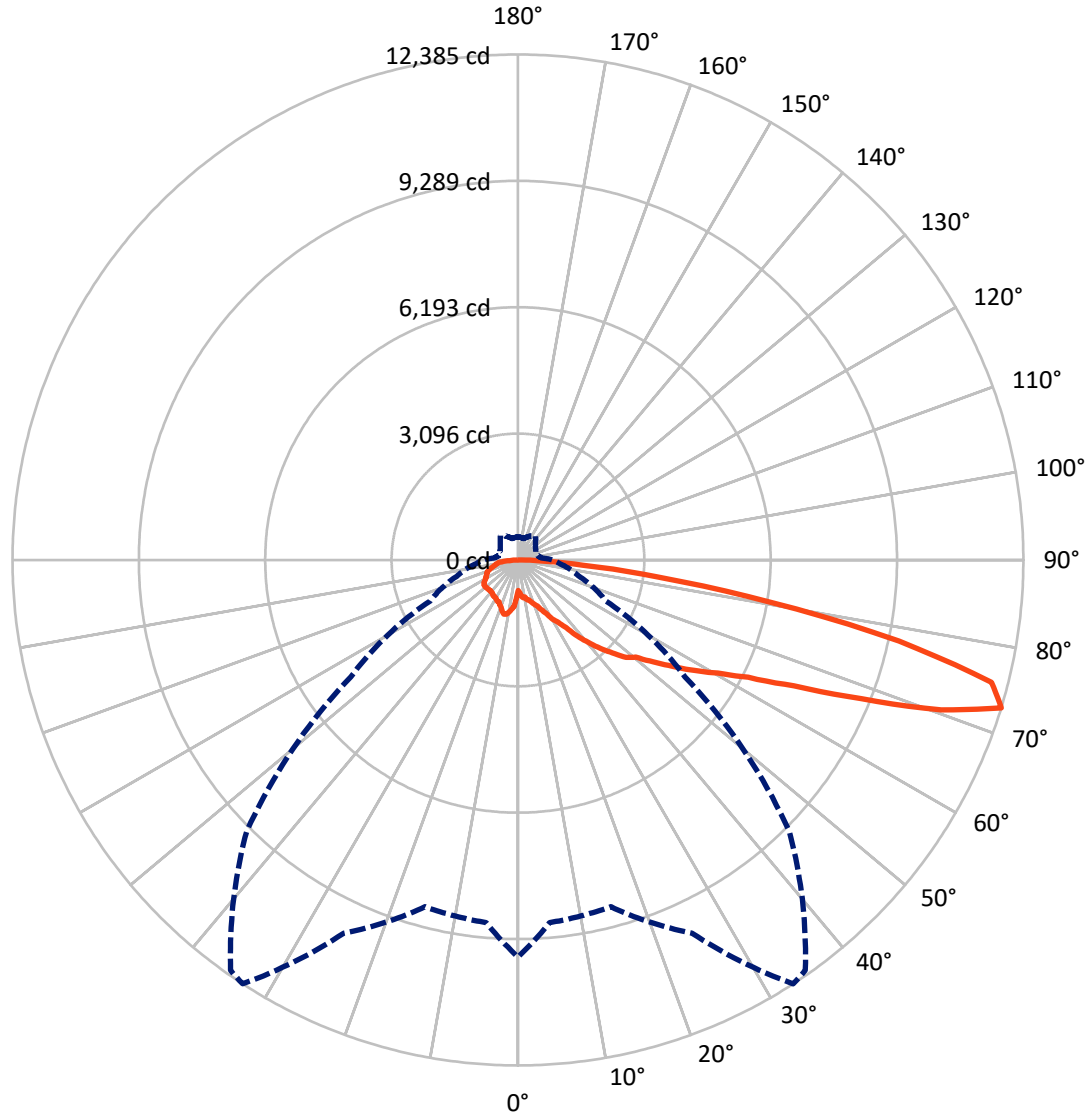
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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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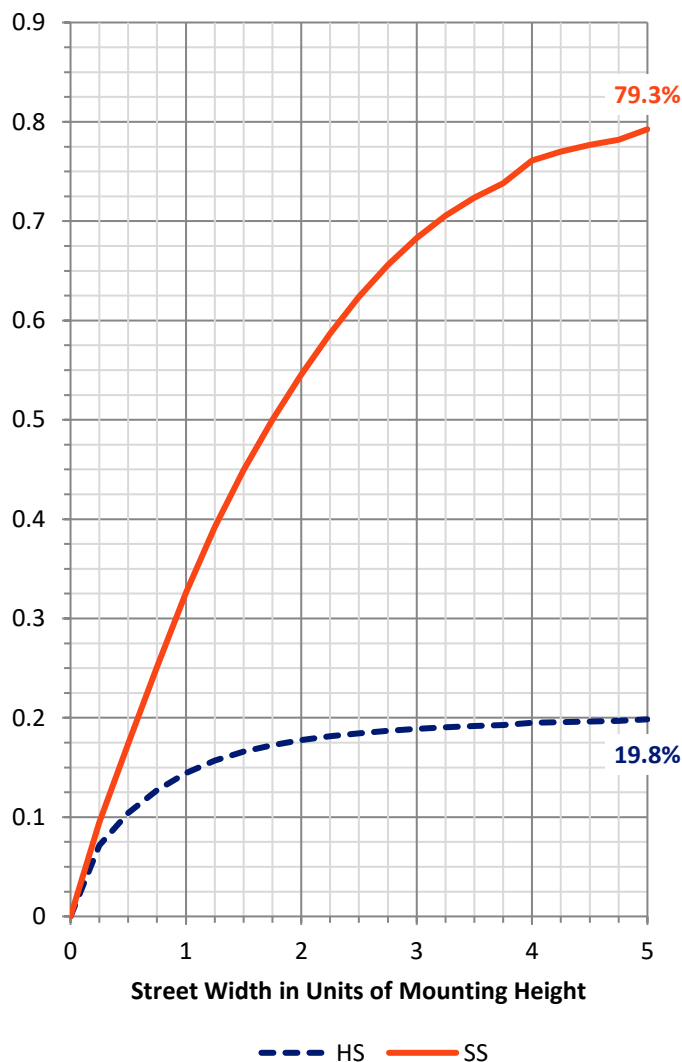
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2896.1	0.0	2896.1
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	11419.9	0.0	11419.9
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	14316.0	0.0	14316.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.2	0.7
10°-20°	381.4	2.7
20°-30°	695.6	4.9
30°-40°	1176.7	8.2
40°-50°	1957.6	13.7
50°-60°	2873.0	20.1
60°-70°	3675.2	25.7
70°-80°	2990.1	20.9
80°-90°	463.1	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°	14316.0	100.0
0°-180°	14316.0	100.0

**Coefficient of Utilization**



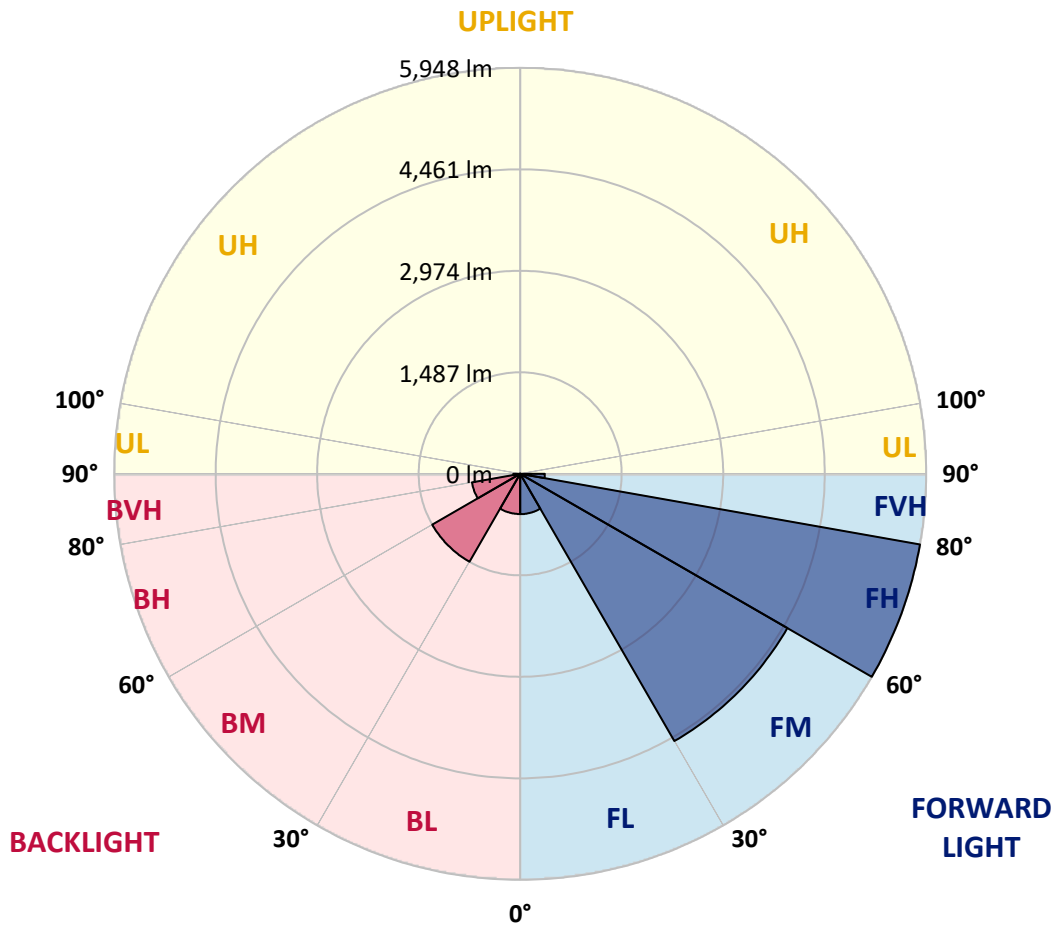
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	590.8	4.1			
FM (30°-60°)	4519.9	31.6			
FH (60°-80°)	5947.8	41.5			G3/7500
FVH (80°-90°)	361.4	2.5			G3/500
BL (0°-30°)	589.4	4.1	B2/1000		
BM (30°-60°)	1487.4	10.4	B2/2500		
BH (60°-80°)	717.6	5.0	B2/1000		G2/1000
BVH (80°-90°)	101.7	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°	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7
2.5°	851.0	824.3	780.4	779.2	803.5	808.9	824.9	826.1	832.0	822.5	890.2
5°	938.9	910.4	893.2	899.1	887.9	901.5	901.5	940.7	993.0	1053.6	1139.7
7.5°	959.7	938.9	919.3	934.2	936.6	923.5	936.0	1028.0	1122.4	1183.0	1320.8
10°	918.2	897.4	912.2	917.0	916.4	946.1	1010.8	1084.4	1189.6	1301.2	1375.4
12.5°	910.4	925.3	932.4	940.7	997.1	1006.0	1104.0	1180.1	1285.8	1383.8	1576.8
15°	1025.1	1044.7	1000.7	997.7	1016.1	1024.5	1126.0	1202.6	1357.0	1521.5	1695.0
17.5°	1188.4	1195.5	1116.5	1076.1	1089.8	1096.3	1140.9	1237.1	1332.1	1636.2	1852.3
20°	1346.3	1351.1	1202.6	1112.4	1160.5	1167.6	1209.2	1264.4	1339.2	1700.3	1958.6
22.5°	1512.0	1481.8	1319.0	1205.0	1232.9	1234.7	1259.0	1289.3	1395.6	1690.2	2088.1
25°	1693.2	1674.2	1469.3	1360.0	1358.8	1334.5	1335.7	1379.0	1455.6	1798.3	2173.0
27.5°	1933.7	1936.1	1638.5	1579.7	1487.7	1471.7	1391.5	1472.3	1559.6	1799.5	2356.6
30°	2245.5	2187.9	1874.3	1779.3	1688.4	1654.6	1545.9	1614.8	1652.8	1902.2	2556.1
32.5°	2499.1	2482.5	2120.2	1976.5	1828.0	1867.2	1747.2	1686.6	1754.9	2079.2	2858.4
35°	2742.0	2687.3	2380.3	2193.2	2037.0	2013.3	1935.5	1945.6	1987.2	2303.1	3253.3
37.5°	3104.3	3074.6	2748.5	2449.2	2376.1	2279.3	2230.1	2261.5	2228.9	2589.9	3845.4
40°	3509.3	3337.1	3056.2	2789.5	2652.9	2584.6	2601.8	2572.1	2547.2	2911.8	4376.4
42.5°	3897.1	3740.3	3260.4	3140.5	2962.3	2990.8	2896.4	2917.2	2987.9	3368.5	4867.5
45°	4319.4	3980.2	3477.2	3371.5	3243.8	3280.0	3355.5	3332.9	3448.7	3907.2	5330.2
47.5°	4530.2	4207.7	3743.3	3571.1	3569.3	3493.8	3952.9	4002.8	3821.7	4306.3	5799.9
50°	4733.3	4416.2	3941.0	3824.6	3740.3	3901.8	4526.0	4411.4	4159.0	4764.2	6316.6
52.5°	5016.0	4654.3	4167.9	4043.8	4148.3	4298.0	4983.3	4960.8	4489.8	5235.1	6765.6
55°	5231.6	4866.3	4509.4	4394.2	4593.7	4740.4	5448.9	5312.9	4773.1	5580.8	7050.1
57.5°	5609.3	5234.5	5013.6	4757.6	5116.4	5114.0	5897.9	5792.8	5076.0	5864.7	7164.7
60°	6209.7	5769.6	5538.6	5243.4	5627.7	5764.9	6411.0	6108.1	5290.4	6044.0	6958.0
62.5°	7052.4	6529.8	6155.1	5862.9	6331.4	6579.7	7044.7	6338.0	5304.0	5992.9	6414.6
65°	8094.7	7459.2	6968.1	6659.3	7432.5	7787.1	7810.8	6479.9	5178.1	5465.0	5271.9
67.5°	9111.4	8397.0	7884.5	7943.3	9072.2	9240.3	8641.1	6598.7	4501.7	4388.2	3660.7
70°	9780.8	9006.3	8664.8	9288.4	11003.6	10831.3	9314.0	6285.7	3544.9	2844.7	2061.4
72.5°	9730.3	8919.6	8796.7	10087.8	12385.0	12277.5	9395.9	4998.8	2374.4	1555.4	1028.0
75°	7927.2	7297.1	7576.2	9549.7	11987.0	11981.7	8157.7	3094.2	1218.1	798.8	649.7
77.5°	4382.9	4138.2	4958.4	7230.6	9544.4	9593.1	5511.9	1403.4	656.8	566.0	489.4
80°	1535.2	1512.6	2148.7	3901.8	6278.6	6290.5	2563.2	642.0	477.5	428.2	359.3
82.5°	561.2	556.5	890.8	1812.5	3457.0	3449.3	972.2	399.7	354.0	302.9	237.0
85°	223.9	219.1	407.4	804.7	1588.1	1562.5	377.7	226.9	231.6	180.5	116.4
87.5°	61.8	64.1	138.4	251.8	486.4	450.8	95.0	76.6	93.8	73.6	36.8
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°	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7	750.7
2.5°	902.1	908.1	849.3	870.0	896.8	911.0	918.2	887.9	898.0	940.7	938.9
5°	1157.5	1133.7	1111.2	1134.3	1118.9	1096.9	1132.5	1130.8	1153.9	1177.1	1182.4
7.5°	1348.1	1317.2	1306.6	1254.3	1202.0	1149.2	1194.9	1223.4	1229.3	1287.0	1311.3
10°	1417.0	1405.1	1409.3	1340.4	1333.9	1339.2	1297.1	1251.3	1279.2	1255.5	1273.3
12.5°	1576.2	1605.9	1532.2	1485.3	1481.2	1448.5	1364.2	1334.5	1303.0	1335.7	1319.0
15°	1703.9	1759.1	1680.1	1597.6	1504.3	1453.8	1382.0	1336.8	1316.1	1323.2	1303.0
17.5°	1890.9	1942.6	1741.9	1615.4	1519.2	1444.9	1335.1	1238.9	1289.9	1294.1	1270.9
20°	2015.1	2018.6	1762.7	1571.4	1484.7	1355.8	1248.9	1164.6	1223.4	1283.4	1309.5
22.5°	2136.2	2109.5	1788.2	1536.4	1359.4	1234.7	1182.4	1177.1	1221.0	1271.5	1277.5
25°	2227.1	2231.2	1803.0	1523.3	1285.8	1115.9	1115.9	1154.5	1193.1	1313.1	1307.1
27.5°	2447.4	2285.3	1745.4	1463.3	1183.6	1046.4	1116.5	1168.2	1186.6	1316.7	1329.7
30°	2607.8	2502.1	1757.3	1360.6	1080.3	1013.8	1071.4	1136.1	1187.2	1337.4	1332.7
32.5°	2876.8	2592.3	1785.2	1216.3	1003.1	1001.3	1052.4	1120.7	1181.8	1314.9	1322.0
35°	3174.3	2858.4	1707.4	1106.4	984.7	994.2	1060.1	1087.4	1159.3	1306.0	1312.5
37.5°	3724.9	2997.4	1658.1	1021.5	972.8	1000.1	1025.1	1067.2	1139.7	1261.4	1304.2
40°	4047.9	3283.6	1475.2	972.2	947.8	995.4	1007.8	1043.5	1082.7	1208.0	1235.3
42.5°	4473.2	3373.9	1319.0	917.6	935.4	975.8	1013.2	1022.1	1048.2	1123.6	1173.5
45°	4827.7	3441.6	1153.3	873.6	893.2	1019.1	1021.5	1017.3	1012.6	1040.5	1081.5
47.5°	5194.7	3623.3	1000.7	824.9	877.2	1054.7	1025.6	987.6	968.0	971.6	1009.6
50°	5599.8	3755.2	892.6	785.1	880.7	1054.7	1045.8	957.3	918.2	908.1	947.8
52.5°	5956.1	3770.6	810.7	753.1	865.9	1018.5	1059.5	938.3	872.4	848.1	885.5
55°	6150.3	3575.2	751.3	724.0	827.9	985.9	1052.4	927.7	817.2	798.8	832.0
57.5°	6146.2	3250.9	700.8	683.6	784.5	940.1	1012.6	869.5	783.3	772.6	805.3
60°	5924.6	2870.9	662.2	650.3	740.0	873.6	941.3	831.4	750.7	745.3	781.0
62.5°	5422.2	2478.3	624.8	615.3	698.4	826.7	907.5	789.3	716.8	716.2	750.1
65°	4440.5	1989.5	589.7	587.4	659.8	780.4	875.4	753.6	681.8	693.7	728.1
67.5°	3059.7	1398.0	552.3	559.4	624.2	735.8	851.0	729.9	645.0	669.3	700.2
70°	1678.9	864.7	510.7	525.0	579.0	684.2	813.0	691.3	596.9	634.3	655.7
72.5°	854.0	576.7	459.1	481.6	523.8	608.1	741.8	635.5	545.2	559.4	570.7
75°	573.7	434.1	401.5	426.4	456.7	535.7	658.0	583.2	495.9	494.1	506.6
77.5°	433.5	339.1	340.9	369.4	389.0	471.0	591.5	539.3	454.3	450.2	468.6
80°	317.1	257.2	274.4	304.1	321.9	422.8	548.2	490.6	397.9	381.3	396.7
82.5°	210.2	182.3	203.1	232.8	247.1	353.4	497.7	416.3	324.3	282.1	284.5
85°	99.2	95.6	121.2	135.4	153.8	219.1	372.4	288.0	206.7	171.0	178.8
87.5°	22.6	30.3	39.8	39.2	45.7	58.8	115.8	80.8	60.0	41.0	27.3
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)