

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: P367806

Luminaire Tested: **MSA-SA3B-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367806
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-SA3B-727-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: 12322 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

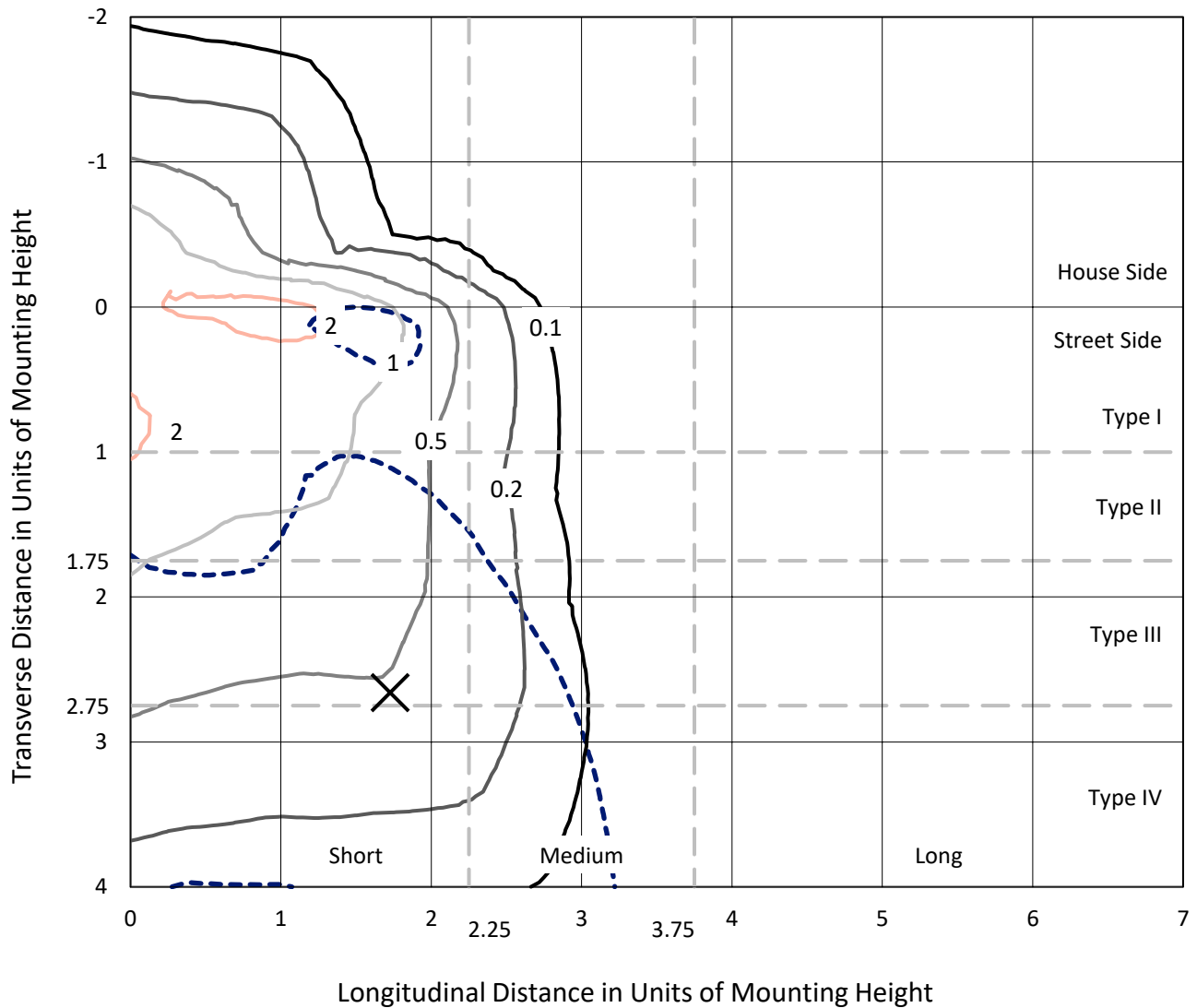
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

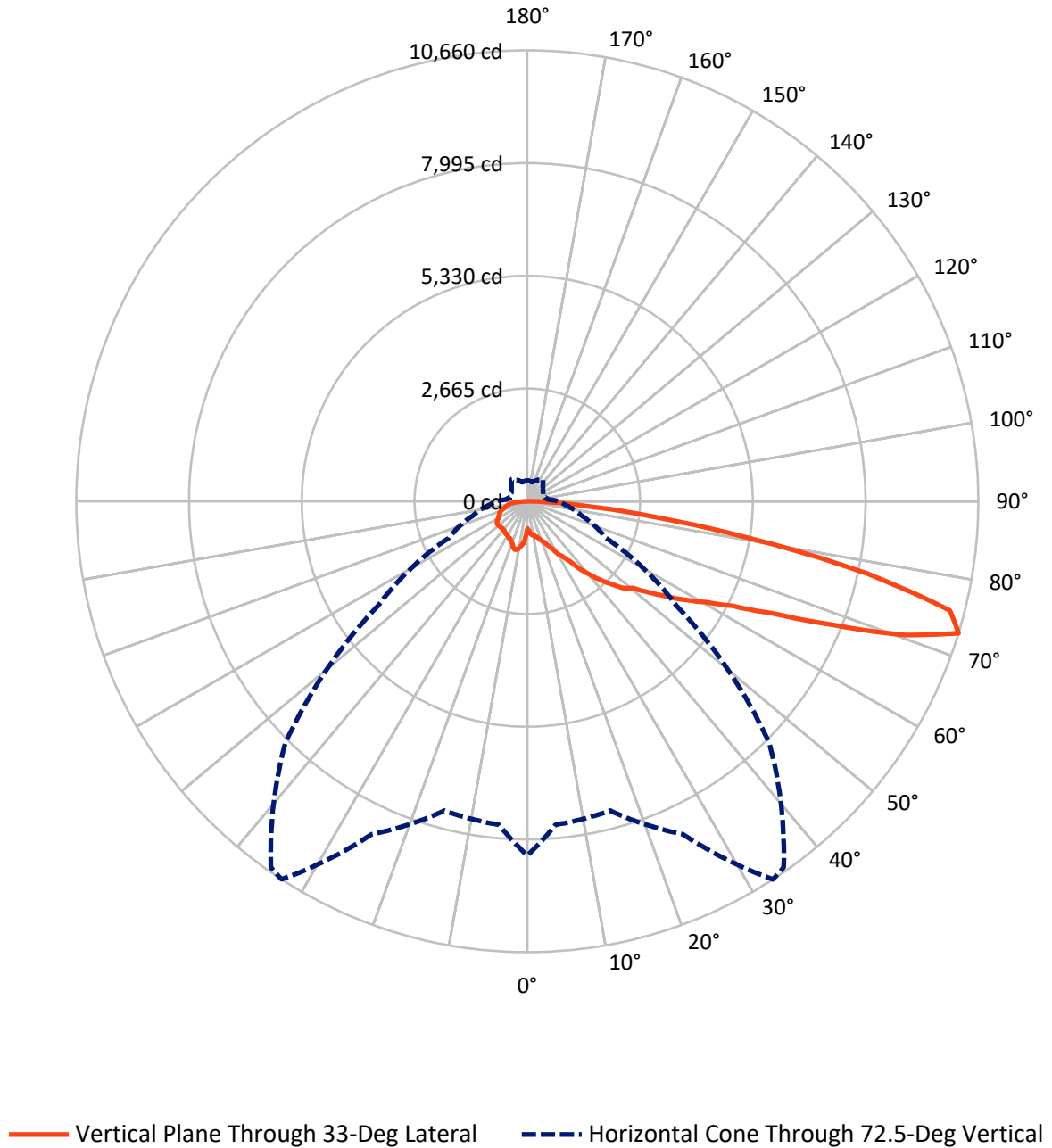
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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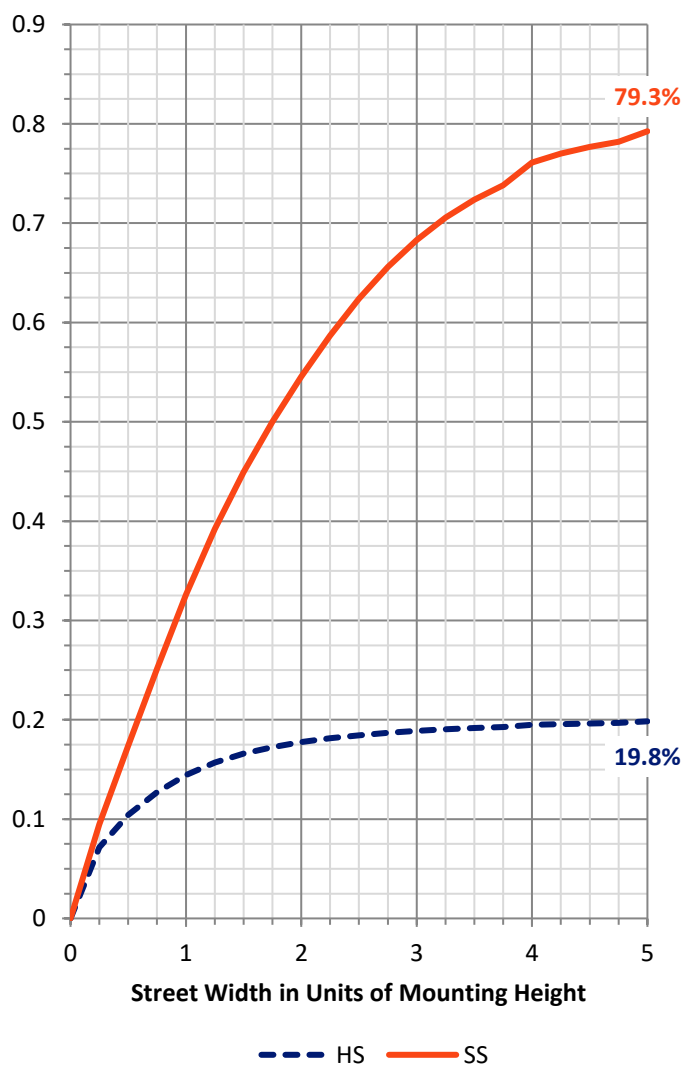
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2492.7	0.0	2492.7
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	9829.3	0.0	9829.3
	% Fixture	79.8	0.0	79.8
Total	Lumens	12322.0	0.0	12322.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.9	0.7
10°-20°	328.3	2.7
20°-30°	598.7	4.9
30°-40°	1012.8	8.2
40°-50°	1685.0	13.7
50°-60°	2472.8	20.1
60°-70°	3163.3	25.7
70°-80°	2573.7	20.9
80°-90°	398.6	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°	12322.0	100.0
0°-180°	12322.0	100.0

Coefficient of Utilization

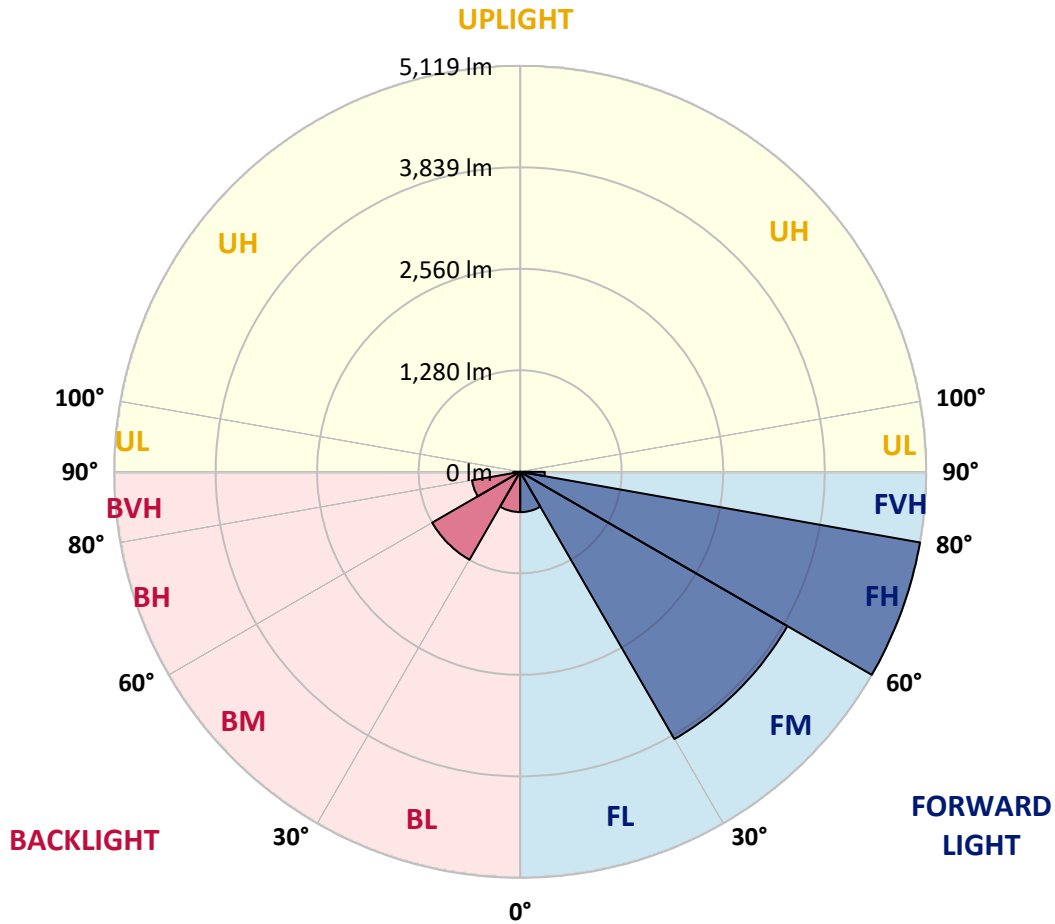


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	508.5	4.1			
FM (30°-60°)	3890.3	31.6			
FH (60°-80°)	5119.3	41.5			G3/7500
FVH (80°-90°)	311.1	2.5			G3/500
BL (0°-30°)	507.3	4.1	B2/1000		
BM (30°-60°)	1280.2	10.4	B2/2500		
BH (60°-80°)	617.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	87.5	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°	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1
2.5°	732.5	709.5	671.7	670.7	691.6	696.2	710.0	711.0	716.1	708.0	766.2
5°	808.2	783.6	768.8	773.9	764.2	776.0	776.0	809.7	854.7	906.8	980.9
7.5°	826.0	808.2	791.3	804.1	806.1	794.9	805.6	884.8	966.1	1018.2	1136.8
10°	790.3	772.4	785.2	789.2	788.7	814.3	870.0	933.4	1023.9	1120.0	1183.9
12.5°	783.6	796.4	802.5	809.7	858.3	865.9	950.3	1015.7	1106.7	1191.0	1357.2
15°	882.3	899.1	861.3	858.8	874.6	881.8	969.2	1035.1	1168.0	1309.6	1458.9
17.5°	1022.8	1029.0	961.0	926.2	938.0	943.6	982.0	1064.8	1146.6	1408.3	1594.3
20°	1158.8	1162.9	1035.1	957.4	998.8	1005.0	1040.7	1088.3	1152.7	1463.5	1685.8
22.5°	1301.4	1275.4	1135.3	1037.2	1061.2	1062.7	1083.7	1109.7	1201.2	1454.8	1797.3
25°	1457.3	1441.0	1264.6	1170.6	1169.6	1148.6	1149.6	1186.9	1252.9	1547.8	1870.4
27.5°	1664.4	1666.4	1410.3	1359.7	1280.5	1266.7	1197.7	1267.2	1342.3	1548.8	2028.3
30°	1932.7	1883.1	1613.2	1531.5	1453.3	1424.1	1330.6	1389.9	1422.6	1637.3	2200.1
32.5°	2151.0	2136.7	1824.9	1701.2	1573.4	1607.1	1503.9	1451.7	1510.5	1789.6	2460.3
35°	2360.1	2313.0	2048.8	1887.7	1753.3	1732.9	1665.9	1674.6	1710.4	1982.3	2800.2
37.5°	2671.9	2646.3	2365.7	2108.1	2045.2	1961.9	1919.4	1946.5	1918.4	2229.2	3309.8
40°	3020.5	2872.3	2630.5	2401.0	2283.4	2224.6	2239.4	2213.9	2192.4	2506.3	3766.8
42.5°	3354.3	3219.3	2806.3	2703.1	2549.7	2574.2	2493.0	2510.9	2571.7	2899.4	4189.5
45°	3717.7	3425.9	2992.9	2901.9	2792.0	2823.2	2888.1	2868.7	2968.4	3363.0	4587.7
47.5°	3899.2	3621.6	3221.9	3073.7	3072.1	3007.2	3402.3	3445.3	3289.4	3706.5	4992.1
50°	4074.0	3801.1	3392.1	3291.9	3219.3	3358.4	3895.6	3797.0	3579.7	4100.6	5436.8
52.5°	4317.3	4006.0	3587.4	3480.6	3570.5	3699.3	4289.2	4269.8	3864.4	4506.0	5823.2
55°	4502.9	4188.5	3881.3	3782.1	3953.9	4080.2	4690.0	4572.9	4108.3	4803.5	6068.1
57.5°	4828.0	4505.4	4315.3	4095.0	4403.7	4401.7	5076.4	4985.9	4369.0	5047.8	6166.7
60°	5344.8	4966.0	4767.2	4513.1	4843.8	4961.9	5518.1	5257.4	4553.5	5202.2	5988.9
62.5°	6070.1	5620.3	5297.8	5046.3	5449.6	5663.2	6063.5	5455.2	4565.3	5158.2	5521.1
65°	6967.2	6420.3	5997.5	5731.7	6397.3	6702.4	6722.9	5577.4	4456.9	4703.8	4537.6
67.5°	7842.4	7227.4	6786.3	6836.9	7808.6	7953.3	7437.5	5679.6	3874.7	3777.0	3150.8
70°	8418.4	7751.9	7458.0	7994.7	9470.9	9322.7	8016.7	5410.2	3051.2	2448.5	1774.3
72.5°	8375.0	7677.2	7571.4	8682.7	10659.9	10567.4	8087.2	4302.5	2043.7	1338.8	884.8
75°	6823.1	6280.7	6521.0	8219.6	10317.4	10312.8	7021.4	2663.2	1048.4	687.5	559.2
77.5°	3772.4	3561.8	4267.8	6223.5	8215.0	8256.9	4744.2	1207.9	565.4	487.1	421.2
80°	1321.4	1301.9	1849.4	3358.4	5404.1	5414.3	2206.2	552.6	411.0	368.6	309.3
82.5°	483.1	479.0	766.8	1560.1	2975.5	2968.9	836.8	344.0	304.7	260.7	204.0
85°	192.7	188.6	350.7	692.6	1366.9	1344.9	325.1	195.3	199.4	155.4	100.2
87.5°	53.2	55.2	119.1	216.7	418.6	388.0	81.8	65.9	80.8	63.4	31.7
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°	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1	646.1
2.5°	776.5	781.6	731.0	748.9	771.9	784.1	790.3	764.2	772.9	809.7	808.2
5°	996.3	975.8	956.4	976.3	963.0	944.1	974.8	973.3	993.2	1013.1	1017.7
7.5°	1160.4	1133.8	1124.6	1079.6	1034.6	989.1	1028.5	1053.0	1058.1	1107.7	1128.7
10°	1219.6	1209.4	1213.0	1153.7	1148.1	1152.7	1116.4	1077.0	1101.1	1080.6	1095.9
12.5°	1356.6	1382.2	1318.8	1278.4	1274.9	1246.7	1174.2	1148.6	1121.5	1149.6	1135.3
15°	1466.5	1514.1	1446.1	1375.0	1294.8	1251.3	1189.5	1150.6	1132.8	1138.9	1121.5
17.5°	1627.6	1672.0	1499.3	1390.4	1307.6	1243.7	1149.1	1066.3	1110.3	1113.8	1093.9
20°	1734.4	1737.5	1517.1	1352.6	1277.9	1167.0	1075.0	1002.4	1053.0	1104.6	1127.1
22.5°	1838.7	1815.7	1539.1	1322.4	1170.1	1062.7	1017.7	1013.1	1051.0	1094.4	1099.5
25°	1916.9	1920.5	1551.9	1311.1	1106.7	960.5	960.5	993.7	1026.9	1130.2	1125.1
27.5°	2106.5	1967.0	1502.3	1259.5	1018.8	900.7	961.0	1005.5	1021.3	1133.3	1144.5
30°	2244.5	2153.6	1512.5	1171.1	929.8	872.6	922.1	977.9	1021.8	1151.2	1147.1
32.5°	2476.1	2231.3	1536.6	1046.9	863.4	861.8	905.8	964.6	1017.2	1131.7	1137.9
35°	2732.2	2460.3	1469.6	952.3	847.5	855.7	912.4	936.0	997.8	1124.1	1129.7
37.5°	3206.1	2579.9	1427.2	879.2	837.3	860.8	882.3	918.6	980.9	1085.7	1122.5
40°	3484.1	2826.3	1269.7	836.8	815.8	856.7	867.5	898.1	931.9	1039.7	1063.2
42.5°	3850.1	2904.0	1135.3	789.8	805.1	839.9	872.1	879.7	902.2	967.1	1010.1
45°	4155.3	2962.2	992.7	751.9	768.8	877.2	879.2	875.6	871.5	895.6	930.8
47.5°	4471.2	3118.6	861.3	710.0	755.0	907.8	882.8	850.1	833.2	836.3	869.0
50°	4819.8	3232.1	768.3	675.8	758.1	907.8	900.2	824.0	790.3	781.6	815.8
52.5°	5126.5	3245.4	697.7	648.2	745.3	876.7	911.9	807.6	750.9	729.9	762.2
55°	5293.7	3077.2	646.6	623.1	712.6	848.5	905.8	798.4	703.4	687.5	716.1
57.5°	5290.1	2798.1	603.2	588.4	675.3	809.2	871.5	748.4	674.2	665.0	693.1
60°	5099.4	2471.0	570.0	559.7	636.9	751.9	810.2	715.6	646.1	641.5	672.2
62.5°	4667.0	2133.1	537.7	529.6	601.1	711.5	781.1	679.3	617.0	616.5	645.6
65°	3822.0	1712.4	507.6	505.5	567.9	671.7	753.5	648.7	586.8	597.0	626.7
67.5°	2633.5	1203.3	475.4	481.5	537.2	633.3	732.5	628.2	555.1	576.1	602.7
70°	1445.1	744.3	439.6	451.9	498.4	588.9	699.8	595.0	513.7	545.9	564.3
72.5°	735.1	496.3	395.1	414.6	450.9	523.4	638.5	547.0	469.3	481.5	491.2
75°	493.8	373.7	345.6	367.0	393.1	461.1	566.4	502.0	426.8	425.3	436.0
77.5°	373.2	291.9	293.4	317.9	334.8	405.4	509.1	464.1	391.0	387.5	403.3
80°	273.0	221.3	236.2	261.7	277.1	364.0	471.8	422.2	342.5	328.2	341.5
82.5°	181.0	156.9	174.8	200.4	212.6	304.1	428.4	358.3	279.1	242.8	244.8
85°	85.4	82.3	104.3	116.5	132.4	188.6	320.5	247.9	177.9	147.2	153.9
87.5°	19.4	26.1	34.2	33.7	39.4	50.6	99.7	69.5	51.6	35.3	23.5
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)