

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: P368444

Luminaire Tested: **MSA-SA4B-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368444
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-SA4B-830-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: 15475 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

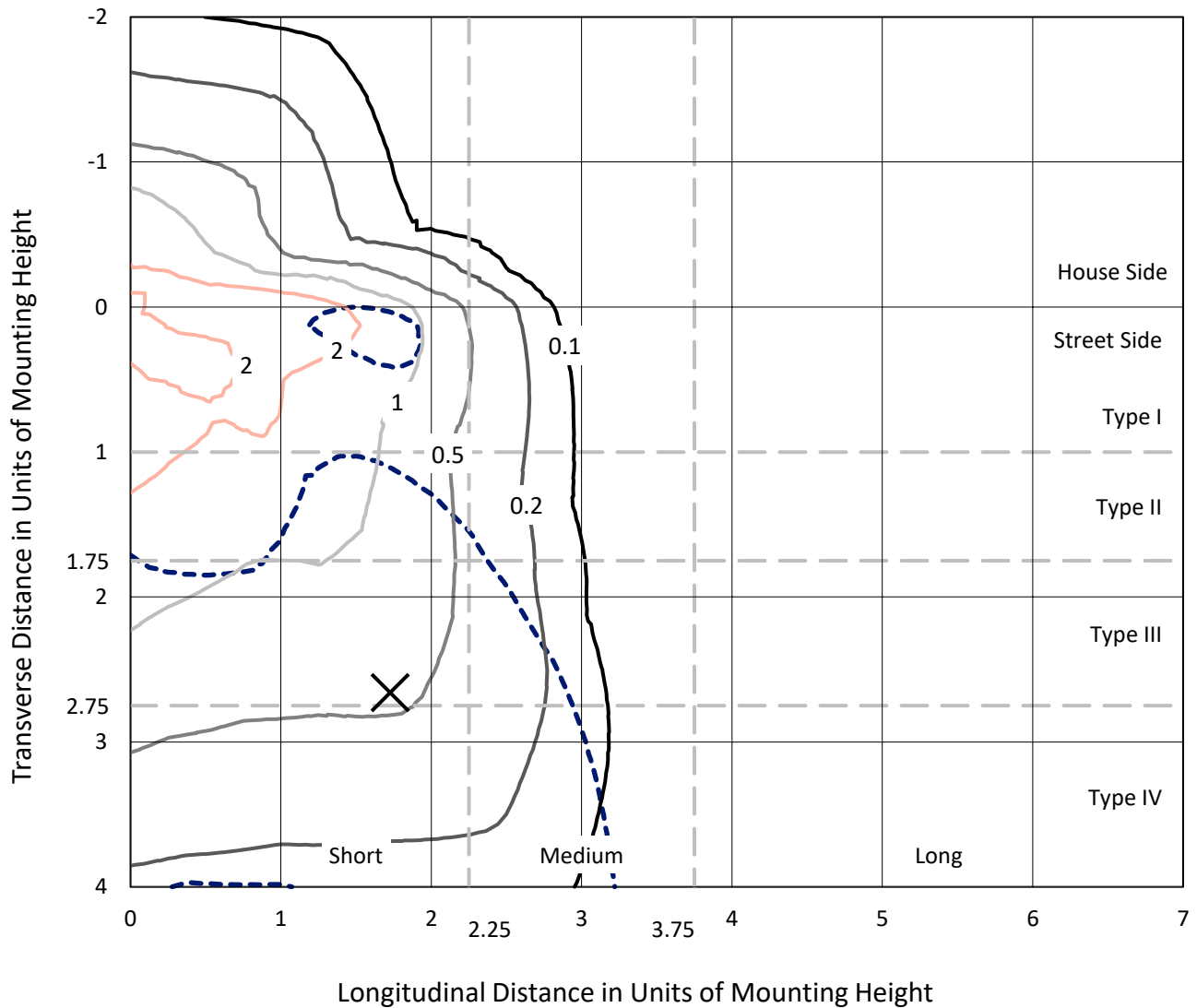
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

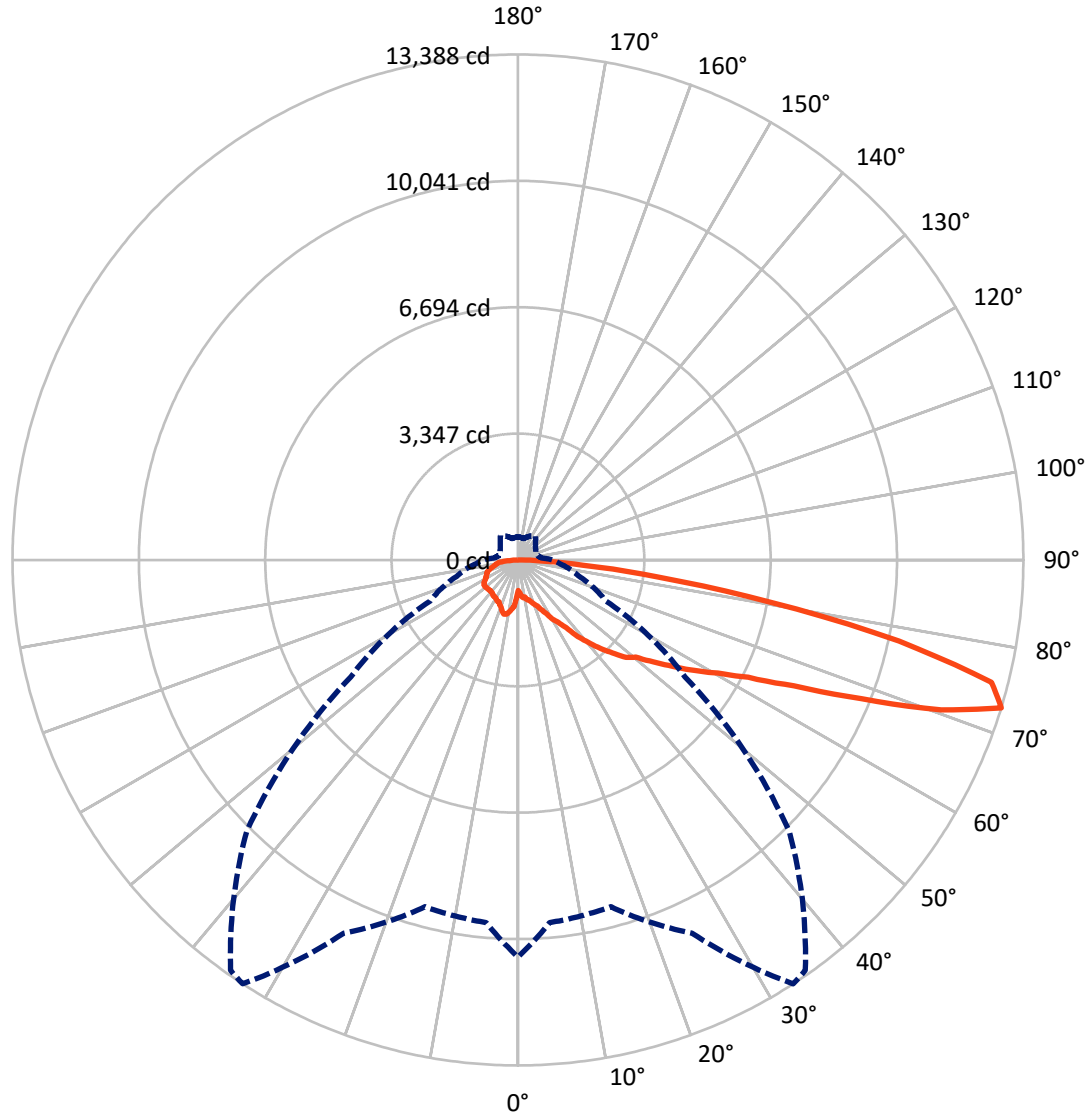
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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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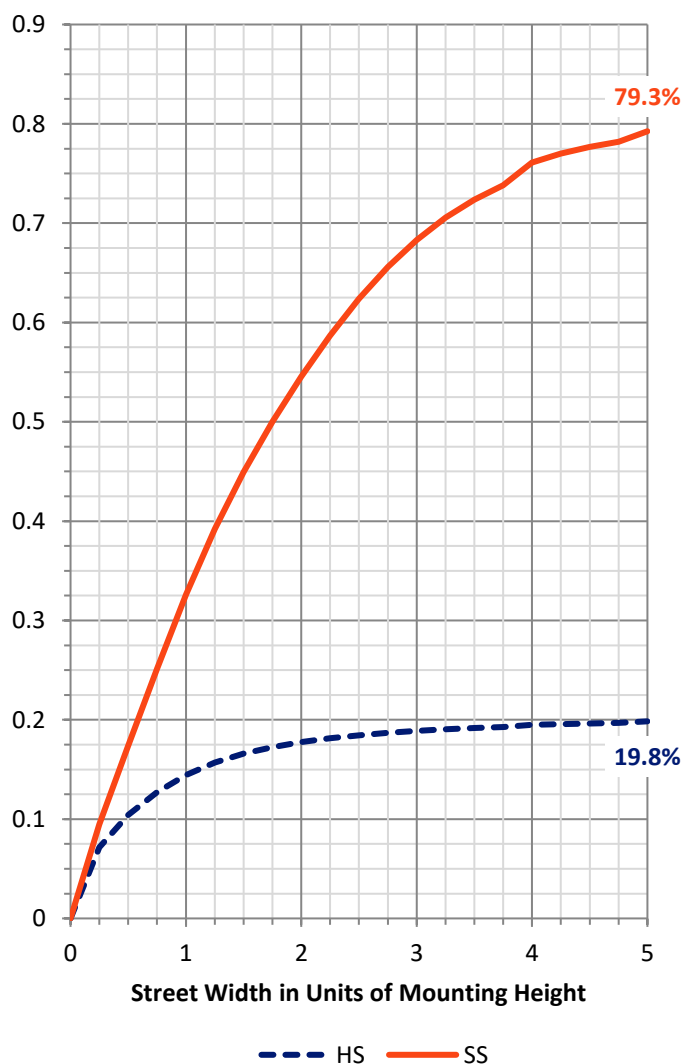
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3130.6	0.0	3130.6
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	12344.4	0.0	12344.4
	% Fixture	79.8	0.0	79.8
Total	Lumens	15475.0	0.0	15475.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	0.7
10°-20°	412.3	2.7
20°-30°	751.9	4.9
30°-40°	1272.0	8.2
40°-50°	2116.1	13.7
50°-60°	3105.6	20.1
60°-70°	3972.8	25.7
70°-80°	3232.2	20.9
80°-90°	500.6	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°	15475.0	100.0
0°-180°	15475.0	100.0

Coefficient of Utilization



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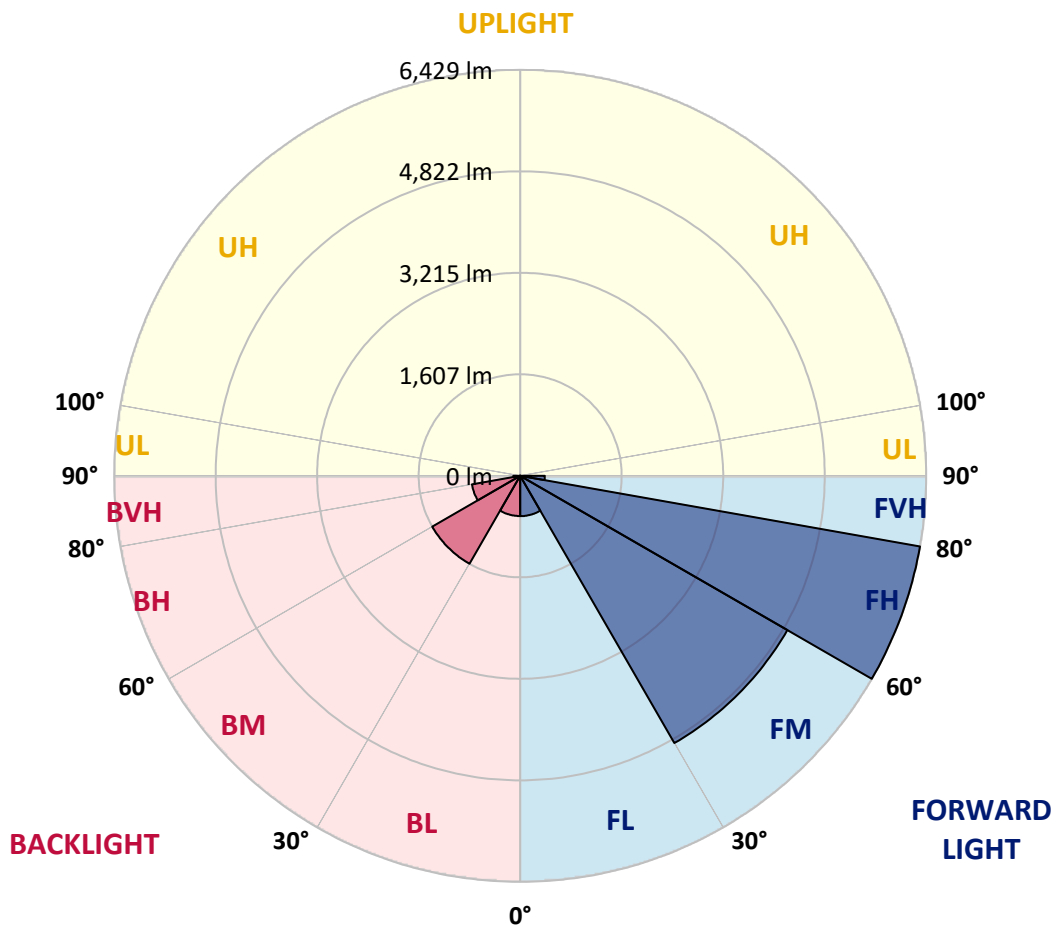
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	638.6	4.1			
FM (30°-60°)	4885.8	31.6			
FH (60°-80°)	6429.3	41.5			G3/7500
FVH (80°-90°)	390.7	2.5			G3/500
BL (0°-30°)	637.1	4.1	B2/1000		
BM (30°-60°)	1607.8	10.4	B2/2500		
BH (60°-80°)	775.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	109.9	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°	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4
2.5°	919.9	891.1	843.5	842.3	868.6	874.4	891.7	893.0	899.4	889.1	962.3
5°	1015.0	984.1	965.5	971.9	959.7	974.5	974.5	1016.9	1073.4	1138.9	1231.9
7.5°	1037.4	1015.0	993.8	1009.8	1012.4	998.3	1011.7	1111.2	1213.3	1278.8	1427.7
10°	992.5	970.0	986.1	991.2	990.6	1022.7	1092.6	1172.2	1285.9	1406.6	1486.8
12.5°	984.1	1000.2	1007.9	1016.9	1077.9	1087.5	1193.4	1275.6	1389.9	1495.8	1704.4
15°	1108.0	1129.2	1081.7	1078.5	1098.4	1107.4	1217.2	1300.0	1466.9	1644.7	1832.2
17.5°	1284.6	1292.3	1206.9	1163.2	1178.0	1185.1	1233.2	1337.2	1439.9	1768.6	2002.3
20°	1455.3	1460.5	1300.0	1202.4	1254.4	1262.1	1307.0	1366.8	1447.6	1838.0	2117.2
22.5°	1634.5	1601.7	1425.8	1302.6	1332.7	1334.7	1361.0	1393.7	1508.6	1827.0	2257.2
25°	1830.3	1809.7	1588.2	1470.1	1468.8	1442.5	1443.8	1490.7	1573.5	1943.9	2349.0
27.5°	2090.3	2092.8	1771.2	1707.6	1608.1	1590.8	1504.1	1591.4	1685.8	1945.2	2547.3
30°	2427.3	2365.0	2026.1	1923.3	1825.1	1788.5	1671.0	1745.5	1786.6	2056.2	2763.0
32.5°	2701.4	2683.4	2291.8	2136.5	1976.0	2018.4	1888.7	1823.2	1897.0	2247.5	3089.8
35°	2964.0	2904.9	2573.0	2370.8	2202.0	2176.3	2092.2	2103.1	2148.0	2489.6	3516.7
37.5°	3355.6	3323.5	2971.0	2647.5	2568.5	2463.9	2410.6	2444.6	2409.3	2799.6	4156.7
40°	3793.4	3607.2	3303.6	3015.3	2867.7	2793.8	2812.5	2780.4	2753.4	3147.6	4730.7
42.5°	4212.6	4043.1	3524.4	3394.7	3202.1	3233.0	3130.9	3153.4	3229.7	3641.2	5261.6
45°	4669.0	4302.5	3758.7	3644.5	3506.4	3545.6	3627.1	3602.7	3727.9	4223.5	5761.7
47.5°	4896.9	4548.4	4046.3	3860.2	3858.2	3776.7	4272.9	4326.9	4131.1	4654.9	6269.5
50°	5116.5	4773.7	4260.1	4134.3	4043.1	4217.7	4892.4	4768.5	4495.7	5149.9	6828.0
52.5°	5422.1	5031.1	4505.3	4371.2	4484.2	4645.9	5386.8	5362.4	4853.3	5659.0	7313.3
55°	5655.1	5260.3	4874.5	4749.9	4965.6	5124.2	5890.1	5743.1	5159.5	6032.6	7620.8
57.5°	6063.4	5658.3	5419.5	5142.8	5530.6	5528.0	6375.4	6261.8	5486.9	6339.4	7744.7
60°	6712.4	6236.7	5987.0	5667.9	6083.3	6231.6	6930.1	6602.7	5718.7	6533.3	7521.3
62.5°	7623.4	7058.4	6653.4	6337.5	6844.0	7112.4	7615.0	6851.1	5733.4	6478.1	6933.9
65°	8750.0	8063.1	7532.2	7198.4	8034.2	8417.5	8443.2	7004.5	5597.3	5907.4	5698.8
67.5°	9849.1	9076.8	8522.8	8586.3	9806.7	9988.4	9340.6	7132.9	4866.1	4743.5	3957.1
70°	10572.6	9735.5	9366.3	10040.4	11894.4	11708.2	10068.0	6794.6	3831.9	3075.0	2228.3
72.5°	10518.0	9641.7	9508.8	10904.5	13387.6	13271.4	10156.6	5403.5	2566.6	1681.3	1111.2
75°	8569.0	7887.9	8189.6	10322.9	12957.5	12951.7	8818.1	3344.7	1316.7	863.4	702.3
77.5°	4737.7	4473.2	5359.8	7816.0	10317.1	10369.7	5958.1	1517.0	710.0	611.8	529.0
80°	1659.5	1635.1	2322.6	4217.7	6786.9	6799.7	2770.7	694.0	516.1	462.9	388.4
82.5°	606.7	601.5	963.0	1959.3	3736.9	3728.6	1050.9	432.0	382.6	327.4	256.1
85°	242.0	236.9	440.4	869.9	1716.6	1689.0	408.3	245.2	250.4	195.2	125.8
87.5°	66.8	69.3	149.6	272.2	525.8	487.3	102.7	82.8	101.4	79.6	39.8
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°	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4	811.4
2.5°	975.2	981.6	918.0	940.5	969.4	984.8	992.5	959.7	970.7	1016.9	1015.0
5°	1251.2	1225.5	1201.1	1226.2	1209.5	1185.7	1224.2	1222.3	1247.3	1272.4	1278.2
7.5°	1457.3	1423.9	1412.3	1355.8	1299.3	1242.2	1291.6	1322.5	1328.9	1391.1	1417.5
10°	1531.7	1518.9	1523.4	1448.9	1441.9	1447.6	1402.1	1352.6	1382.8	1357.1	1376.4
12.5°	1703.8	1735.9	1656.3	1605.6	1601.1	1565.8	1474.6	1442.5	1408.5	1443.8	1425.8
15°	1841.8	1901.5	1816.1	1726.9	1626.1	1571.5	1493.9	1445.1	1422.6	1430.3	1408.5
17.5°	2044.0	2099.9	1882.9	1746.2	1642.2	1561.9	1443.1	1339.1	1394.4	1398.9	1373.8
20°	2178.2	2182.1	1905.4	1698.6	1604.9	1465.6	1350.1	1258.9	1322.5	1387.3	1415.5
22.5°	2309.2	2280.3	1933.0	1660.8	1469.5	1334.7	1278.2	1272.4	1319.9	1374.5	1380.9
25°	2407.4	2411.9	1949.0	1646.7	1389.9	1206.3	1206.3	1248.0	1289.7	1419.4	1413.0
27.5°	2645.6	2470.3	1886.7	1581.8	1279.4	1131.1	1206.9	1262.8	1282.7	1423.2	1437.4
30°	2818.9	2704.6	1899.6	1470.8	1167.7	1095.8	1158.1	1228.1	1283.3	1445.7	1440.6
32.5°	3109.7	2802.2	1929.8	1314.8	1084.3	1082.4	1137.6	1211.4	1277.5	1421.3	1429.0
35°	3431.3	3089.8	1845.7	1196.0	1064.4	1074.7	1145.9	1175.4	1253.1	1411.7	1418.8
37.5°	4026.4	3240.0	1792.4	1104.2	1051.5	1081.1	1108.0	1153.6	1231.9	1363.5	1409.8
40°	4375.7	3549.4	1594.7	1050.9	1024.6	1075.9	1089.4	1127.9	1170.3	1305.8	1335.3
42.5°	4835.3	3647.0	1425.8	991.8	1011.1	1054.8	1095.2	1104.8	1133.1	1214.6	1268.5
45°	5218.6	3720.2	1246.7	944.3	965.5	1101.6	1104.2	1099.7	1094.6	1124.7	1169.0
47.5°	5615.3	3916.7	1081.7	891.7	948.2	1140.1	1108.7	1067.6	1046.4	1050.3	1091.3
50°	6053.1	4059.2	964.9	848.7	952.0	1140.1	1130.5	1034.9	992.5	981.6	1024.6
52.5°	6438.3	4075.9	876.3	814.0	936.0	1101.0	1145.3	1014.3	943.1	916.7	957.2
55°	6648.2	3864.7	812.1	782.6	894.9	1065.7	1137.6	1002.8	883.3	863.4	899.4
57.5°	6643.7	3514.1	757.5	738.9	848.0	1016.2	1094.6	939.8	846.8	835.2	870.5
60°	6404.3	3103.3	715.8	703.0	799.9	944.3	1017.5	898.8	811.4	805.7	844.2
62.5°	5861.2	2678.9	675.4	665.1	755.0	893.6	980.9	853.2	774.9	774.2	810.8
65°	4800.0	2150.6	637.5	634.9	713.2	843.5	946.3	814.7	737.0	749.8	787.1
67.5°	3307.4	1511.2	597.0	604.7	674.7	795.4	919.9	789.0	697.2	723.5	756.9
70°	1814.8	934.7	552.1	567.5	625.9	739.5	878.9	747.3	645.2	685.6	708.7
72.5°	923.2	623.4	496.2	520.6	566.2	657.4	801.8	686.9	589.3	604.7	616.9
75°	620.1	469.3	434.0	460.9	493.7	579.1	711.3	630.4	536.0	534.1	547.6
77.5°	468.6	366.6	368.5	399.3	420.5	509.1	639.4	582.9	491.1	486.6	506.5
80°	342.8	278.0	296.6	328.7	347.9	457.1	592.5	530.3	430.1	412.1	428.8
82.5°	227.3	197.1	219.6	251.7	267.1	382.0	538.0	450.0	350.5	304.9	307.5
85°	107.2	103.4	131.0	146.4	166.3	236.9	402.5	311.4	223.4	184.9	193.2
87.5°	24.4	32.7	43.0	42.4	49.4	63.6	125.2	87.3	64.8	44.3	29.5
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)