

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: P368618

Luminaire Tested: **MSA-SA4D-730-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368618
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-730-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23924 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

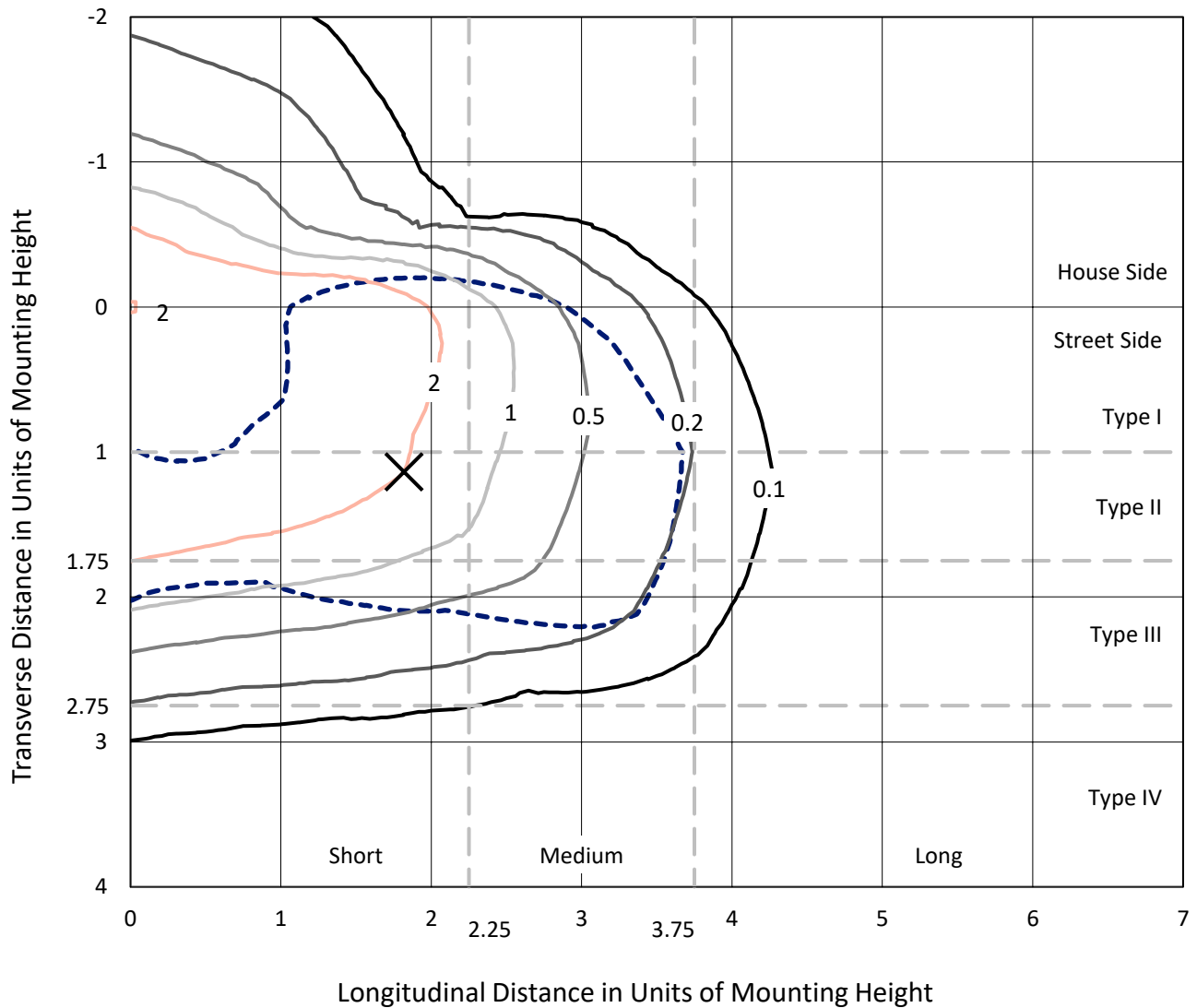
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

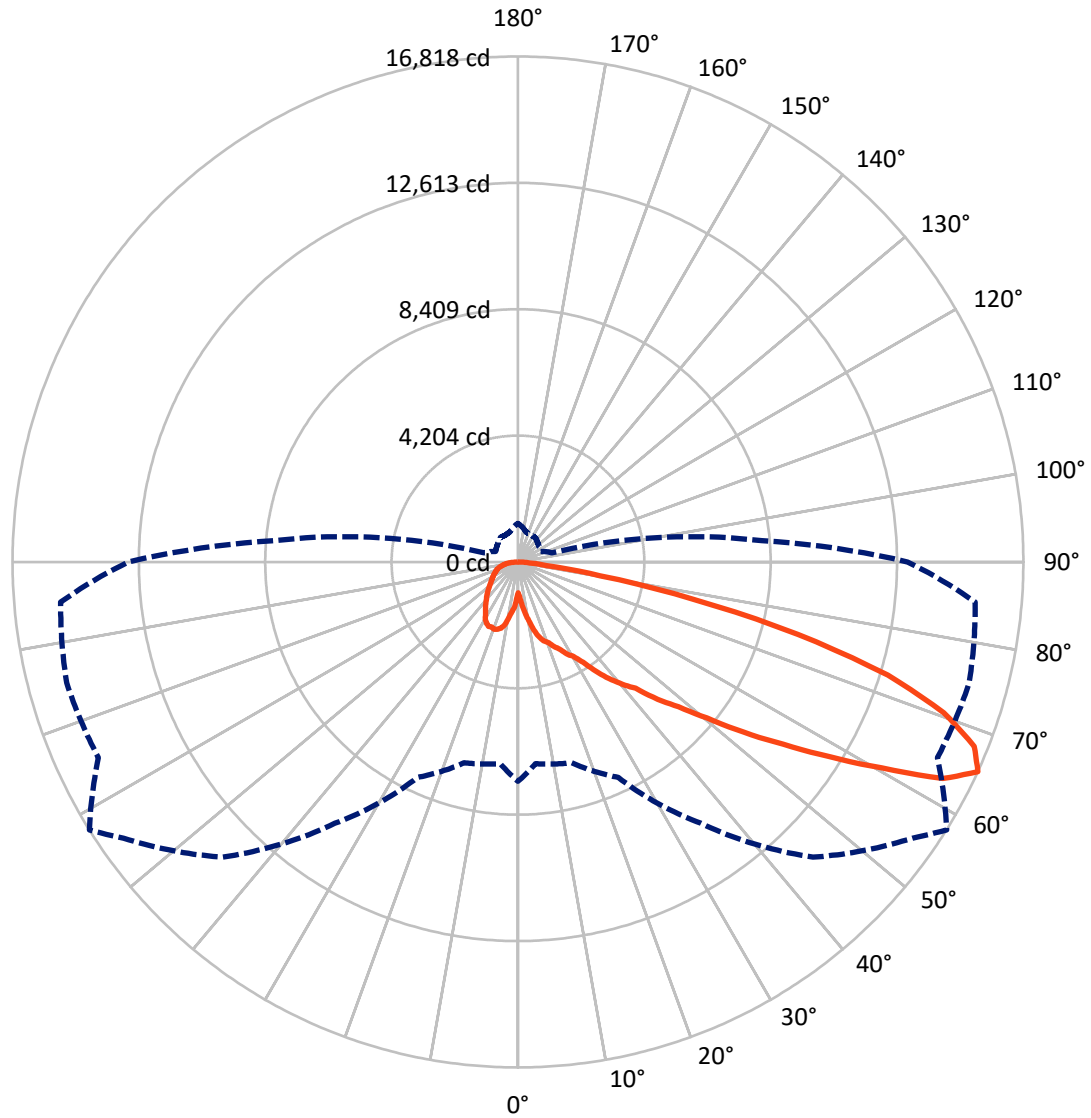
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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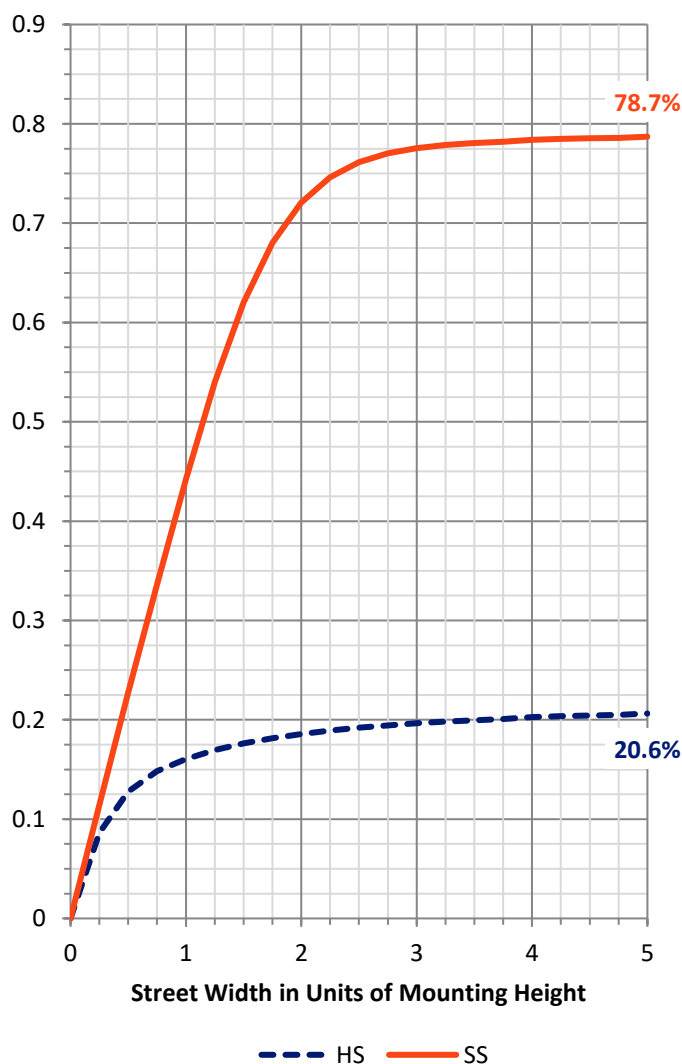
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5039.1	0.0	5039.1
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	18884.9	0.0	18884.9
	% Fixture	78.9	0.0	78.9
Total	Lumens	23924.0	0.0	23924.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.5	0.7
10°-20°	682.8	2.9
20°-30°	1310.1	5.5
30°-40°	2162.9	9.0
40°-50°	3595.1	15.0
50°-60°	5937.2	24.8
60°-70°	6660.5	27.8
70°-80°	3028.4	12.7
80°-90°	390.6	1.6
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°	23924.0	100.0
0°-180°	23924.0	100.0

Coefficient of Utilization



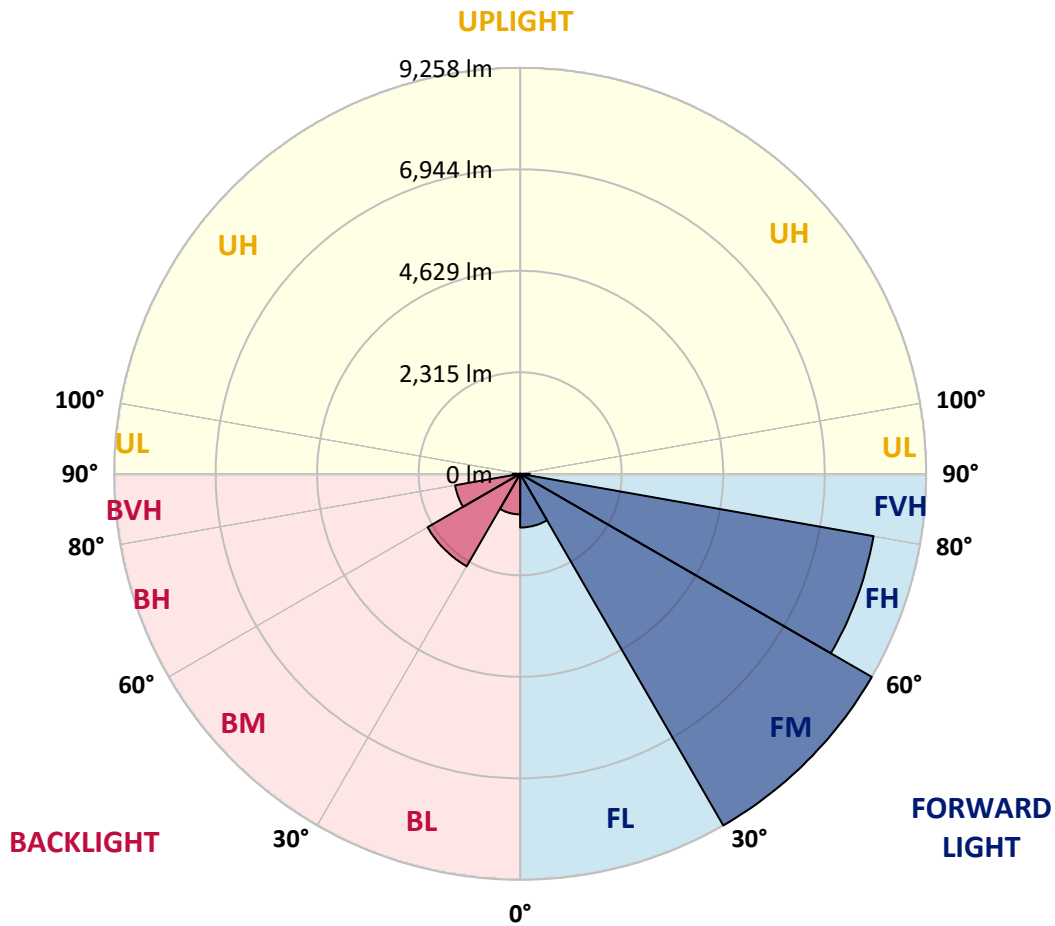
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1224.3	5.1			
FM (30°-60°)	9258.2	38.7			
FH (60°-80°)	8182.5	34.2			G4/12000
FVH (80°-90°)	219.9	0.9			G2/225
BL (0°-30°)	925.1	3.9	B2/1000		
BM (30°-60°)	2437.1	10.2	B2/2500		
BH (60°-80°)	1506.3	6.3	B3/2500		G3/2500
BVH (80°-90°)	170.6	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2
2.5°	1226.4	1189.6	1127.8	1142.8	1178.6	1198.6	1186.6	1170.7	1149.7	1145.7	1237.4
5°	1588.1	1517.4	1488.5	1476.5	1432.7	1406.8	1451.6	1445.6	1469.5	1513.4	1603.1
7.5°	1852.1	1802.3	1754.5	1749.5	1664.8	1634.9	1694.7	1726.6	1769.4	1770.4	1892.0
10°	1993.6	1950.8	1949.8	1904.9	1898.0	1954.7	1955.7	1979.7	1984.6	2035.4	2011.5
12.5°	2147.0	2144.0	2198.8	2197.8	2261.6	2355.3	2308.4	2308.4	2322.4	2260.6	2336.3
15°	2512.7	2544.6	2441.9	2458.9	2458.9	2550.5	2547.5	2565.5	2608.3	2592.4	2558.5
17.5°	2893.3	2913.2	2799.6	2694.0	2702.0	2682.0	2753.8	2760.8	2719.9	2905.2	2864.4
20°	3138.4	3216.1	2977.0	2844.4	2870.3	2893.3	2896.3	2853.4	2832.5	3117.4	3061.6
22.5°	3441.2	3375.5	3156.3	3009.8	3048.7	3017.8	3011.8	3044.7	3073.6	3181.2	3271.9
25°	3643.5	3638.5	3375.5	3215.1	3172.2	3163.3	3224.0	3211.1	3279.8	3475.1	3418.3
27.5°	3937.4	4029.0	3562.8	3602.6	3414.3	3216.1	3411.3	3470.1	3593.7	3561.8	3688.3
30°	4507.3	4438.5	3951.3	3940.4	3727.2	3560.8	3696.3	3646.5	3868.6	3861.7	3955.3
32.5°	4972.5	5020.4	4407.6	4293.1	4134.7	3934.4	3844.7	3983.2	4102.8	4299.0	4351.8
35°	5464.7	5453.8	4874.9	4643.8	4381.7	4299.0	4409.6	4467.4	4721.5	4901.8	4776.3
37.5°	6229.9	6143.2	5480.7	5043.3	4847.0	4817.1	5006.4	4922.7	5197.7	5240.5	5311.3
40°	6941.2	6680.2	6034.6	5533.5	5221.6	5333.2	5339.2	5350.1	5497.6	5614.2	5963.9
42.5°	7617.7	7434.4	6597.5	6220.9	5761.6	5653.0	5720.8	5743.7	6116.3	6354.4	6838.6
45°	8542.3	8051.1	7406.5	7019.9	6505.9	6367.4	6319.5	6516.8	6876.5	7418.5	7833.9
47.5°	9324.4	8881.0	8266.3	7757.2	7182.3	7577.9	7306.9	7196.3	7679.5	8351.0	9012.5
50°	9973.0	9484.8	8882.0	8588.1	8496.5	8849.2	8145.8	8158.7	8601.1	9548.6	10306.7
52.5°	10475.1	9954.1	9420.0	9270.6	9782.7	9985.9	9477.8	9401.1	9723.9	10843.8	11754.4
55°	10944.4	10391.4	9979.0	10283.8	11146.6	11169.5	11133.7	10708.3	11096.8	12231.6	13252.8
57.5°	11064.9	10469.1	10195.2	10632.5	11799.2	12706.8	13063.5	12228.6	12624.1	13493.9	14536.0
60°	10444.2	9934.1	9824.5	10418.3	12151.9	13479.0	14410.5	13911.4	13762.9	14507.2	15434.7
62.5°	9173.0	8581.1	8669.8	9494.8	11780.3	13784.8	15474.6	15864.1	14965.5	15313.2	15827.3
65°	7300.9	6736.0	6915.3	7907.6	10613.6	13886.5	16018.5	16817.6	15399.8	15541.3	15271.3
67.5°	5148.9	4635.8	4862.0	6145.2	8829.2	12585.3	16112.2	16373.2	14937.6	14890.7	13753.0
70°	2917.2	2595.4	2840.5	3910.5	6231.9	10025.8	15377.9	15034.2	14108.6	13445.1	11507.3
72.5°	1338.0	1227.4	1345.0	1990.6	3587.7	6671.2	12554.4	12866.2	12156.9	11327.0	8754.5
75°	711.4	672.5	722.3	994.3	1678.8	3629.5	8919.9	9621.3	9243.7	8591.1	5710.8
77.5°	529.0	499.1	523.1	644.6	896.7	1419.7	5068.2	5952.9	6096.4	5495.6	3171.2
80°	405.5	381.6	405.5	487.2	620.7	674.5	2167.0	2774.7	3160.3	2553.5	1260.3
82.5°	300.9	284.9	321.8	365.6	436.4	421.4	769.1	957.4	1234.4	843.9	491.2
85°	239.1	219.2	233.1	248.1	279.0	231.1	351.7	393.5	416.5	348.7	181.3
87.5°	93.7	86.7	169.4	133.5	113.6	69.7	105.6	119.6	122.5	117.6	52.8
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°	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2	1027.2
2.5°	1247.4	1237.4	1178.6	1197.6	1228.4	1234.4	1247.4	1211.5	1193.6	1259.3	1262.3
5°	1611.0	1557.2	1529.3	1532.3	1512.4	1481.5	1528.3	1559.2	1571.2	1620.0	1637.9
7.5°	1893.0	1828.2	1781.4	1727.6	1651.9	1603.1	1684.7	1744.5	1776.4	1878.0	1917.9
10°	2018.5	1966.7	1956.7	1889.0	1887.0	1886.0	1882.0	1861.1	1929.8	1919.9	1947.8
12.5°	2277.5	2266.6	2171.9	2145.0	2148.0	2145.0	2061.3	2057.4	2058.4	2150.0	2117.1
15°	2518.7	2520.6	2434.0	2336.3	2248.7	2221.8	2188.9	2173.9	2195.8	2247.7	2215.8
17.5°	2816.5	2826.5	2578.4	2424.0	2308.4	2305.4	2226.7	2134.1	2267.6	2299.5	2264.6
20°	3008.8	2967.0	2662.1	2403.1	2370.2	2280.5	2182.9	2055.4	2170.9	2248.7	2270.6
22.5°	3191.2	3118.4	2739.8	2439.9	2282.5	2175.9	2081.3	1998.6	2035.4	2122.1	2108.2
25°	3314.7	3294.8	2847.4	2528.6	2279.5	2042.4	1914.9	1862.1	1881.0	2015.5	2002.6
27.5°	3609.6	3394.4	2828.5	2551.5	2183.9	1860.1	1796.3	1739.5	1720.6	1866.1	1905.9
30°	3806.9	3718.2	2955.0	2515.7	2063.3	1710.7	1617.0	1605.0	1611.0	1776.4	1787.4
32.5°	4141.6	3911.5	3162.3	2378.2	1888.0	1600.1	1492.5	1497.4	1524.3	1644.9	1669.8
35°	4490.3	4352.8	3190.2	2279.5	1745.5	1482.5	1438.7	1403.8	1418.7	1524.3	1529.3
37.5°	5137.9	4662.7	3361.5	2127.1	1640.9	1437.7	1354.0	1323.1	1331.1	1390.8	1433.7
40°	5707.8	5285.4	3281.8	1979.7	1511.4	1377.9	1273.3	1250.4	1226.4	1285.2	1312.1
42.5°	6621.4	5729.7	3254.9	1817.3	1450.6	1297.2	1225.5	1164.7	1141.8	1191.6	1240.4
45°	7535.0	6201.0	3108.5	1652.9	1364.9	1291.2	1155.7	1097.9	1103.9	1148.7	1198.6
47.5°	8553.3	6833.6	2860.4	1493.5	1271.3	1262.3	1086.0	1061.1	1079.0	1128.8	1178.6
50°	9756.8	7505.1	2655.1	1350.0	1204.5	1175.6	1077.0	1047.1	1064.1	1122.8	1171.7
52.5°	11072.9	8241.4	2505.7	1217.5	1128.8	1106.9	1089.0	1060.1	1080.0	1130.8	1181.6
55°	12381.0	8913.9	2404.1	1126.8	1064.1	1078.0	1113.9	1092.9	1102.9	1140.8	1191.6
57.5°	13351.4	9268.6	2199.8	1030.2	1011.2	1061.1	1116.9	1082.0	1088.0	1140.8	1195.6
60°	13915.4	9336.3	1864.1	951.5	969.4	1027.2	1086.0	1041.1	1037.2	1123.8	1192.6
62.5°	13853.6	8942.8	1478.5	879.7	921.6	976.4	1039.1	996.3	1007.3	1125.8	1198.6
65°	12968.9	8138.8	1175.6	819.0	863.8	920.6	1000.3	983.4	1036.2	1205.5	1284.2
67.5°	11414.6	6964.2	944.5	762.2	810.0	882.7	1027.2	1072.0	1094.9	1287.2	1367.9
70°	9250.7	5410.9	787.1	712.4	767.2	900.7	1104.9	1095.9	1077.0	1248.4	1312.1
72.5°	6683.2	3709.2	692.4	663.5	714.3	846.9	1106.9	1059.1	1035.2	1139.8	1185.6
75°	4181.5	2212.8	604.8	601.8	633.6	759.2	1057.1	1014.2	949.5	1001.3	1061.1
77.5°	2388.1	1132.8	509.1	536.0	554.9	658.6	946.5	907.6	849.8	871.8	930.5
80°	911.6	548.0	429.4	476.2	471.3	557.9	802.0	793.1	727.3	734.3	770.1
82.5°	429.4	306.9	356.7	409.5	382.6	444.4	651.6	648.6	590.8	535.0	563.9
85°	159.4	163.4	261.0	311.8	266.0	286.9	471.3	458.3	402.5	339.7	375.6
87.5°	35.9	58.8	128.5	162.4	92.7	88.7	190.3	165.4	159.4	94.6	99.6
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)