

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: P368442

Luminaire Tested: **MSA-SA4B-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368442
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-SA4B-830-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: 15417 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - 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



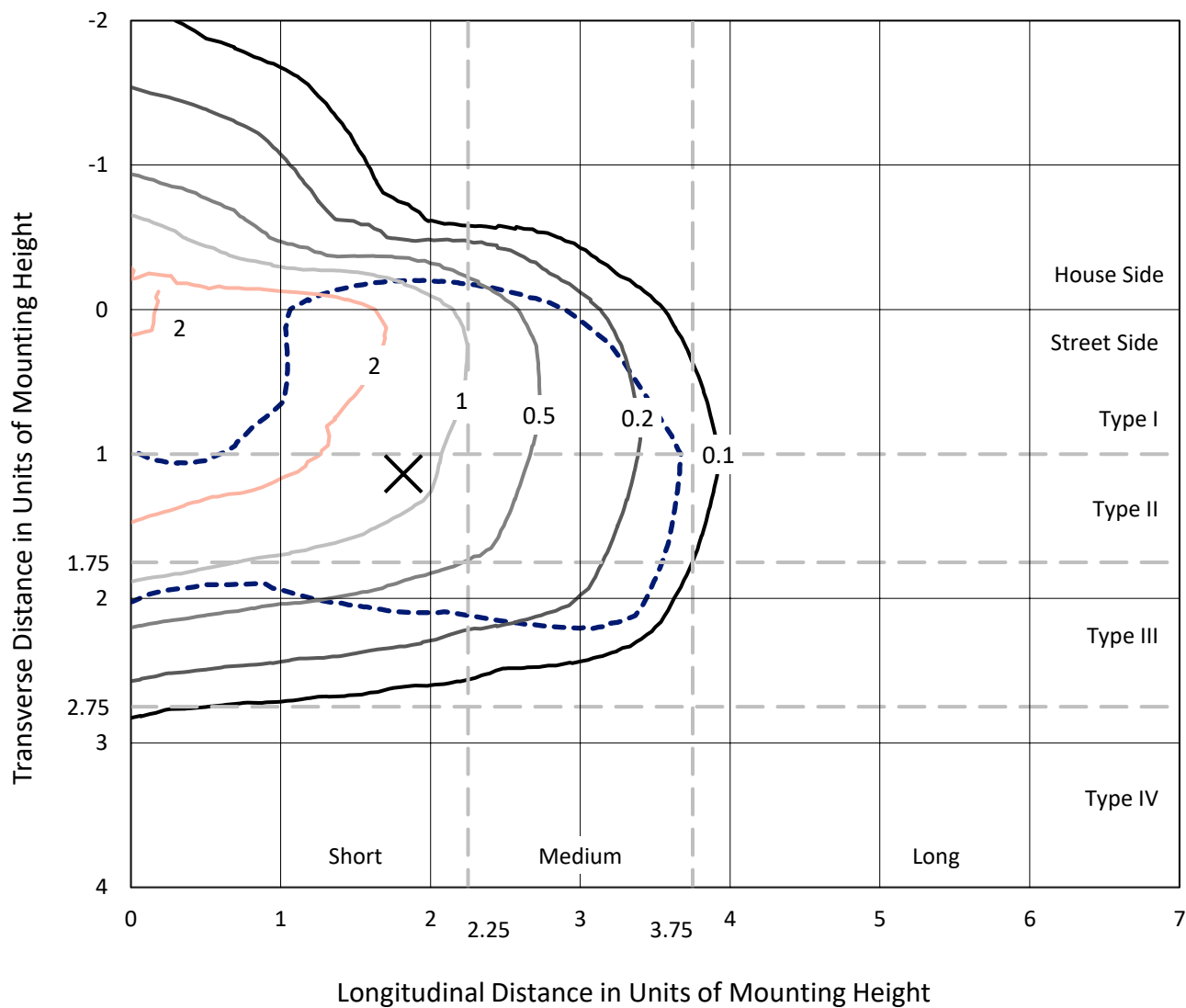
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

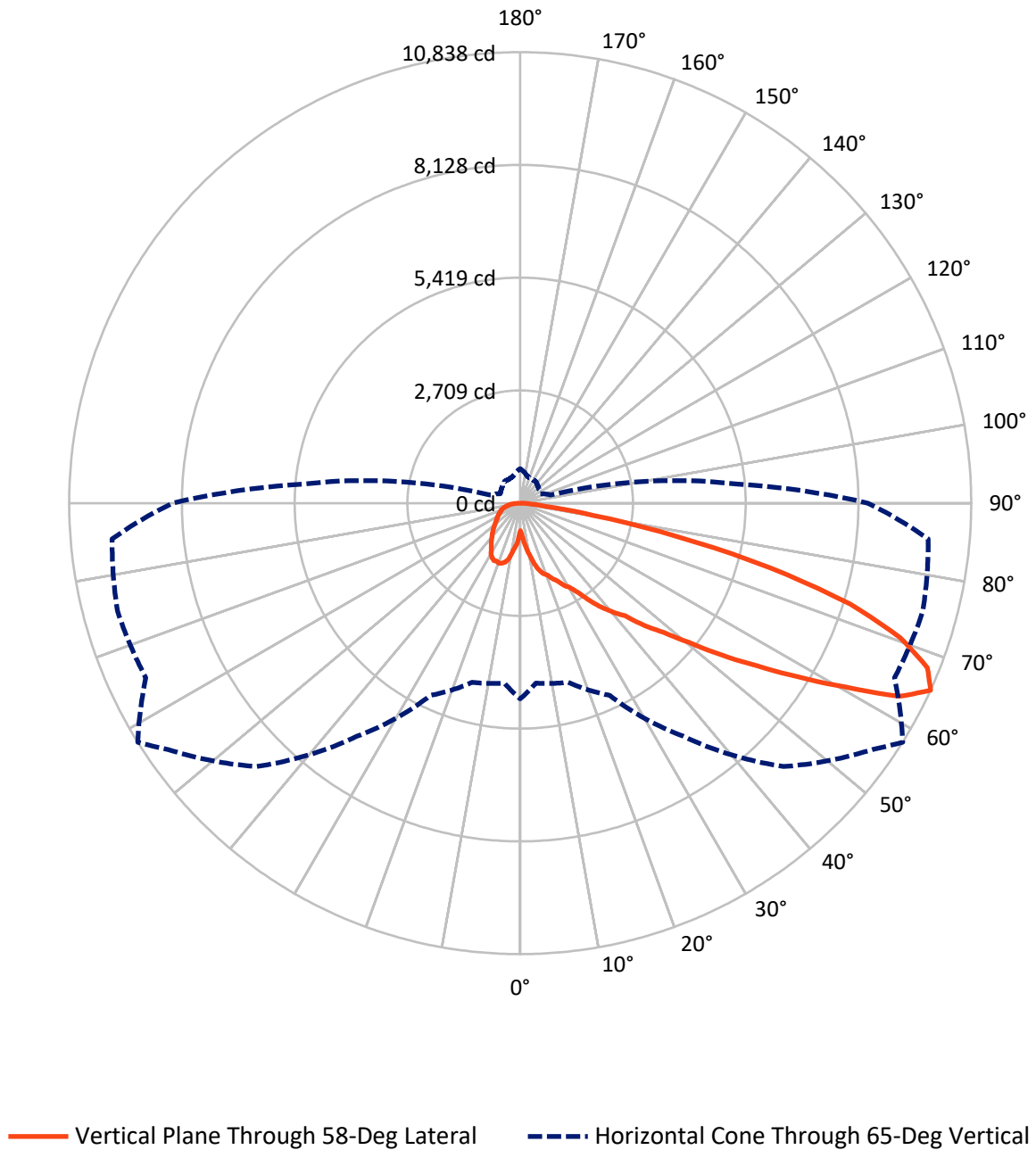
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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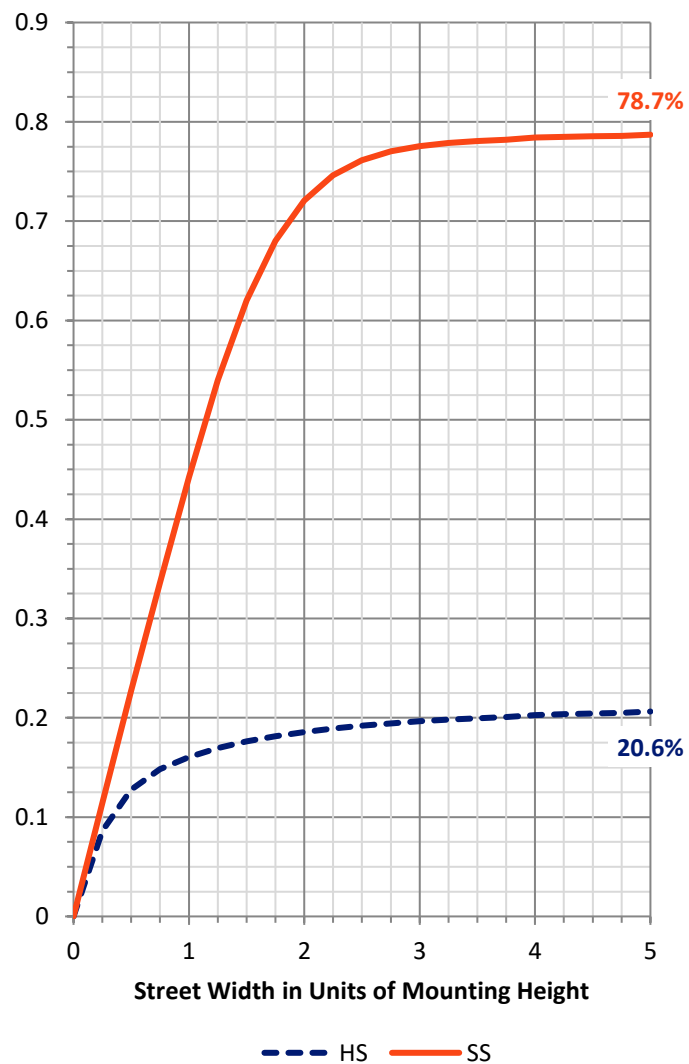
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3247.3	0.0	3247.3
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	12169.7	0.0	12169.7
	% Fixture	78.9	0.0	78.9
Total	Lumens	15417.0	0.0	15417.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.8	0.7
10°-20°	440.0	2.9
20°-30°	844.3	5.5
30°-40°	1393.8	9.0
40°-50°	2316.7	15.0
50°-60°	3826.0	24.8
60°-70°	4292.1	27.8
70°-80°	1951.5	12.7
80°-90°	251.7	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°	15417.0	100.0
0°-180°	15417.0	100.0

Coefficient of Utilization



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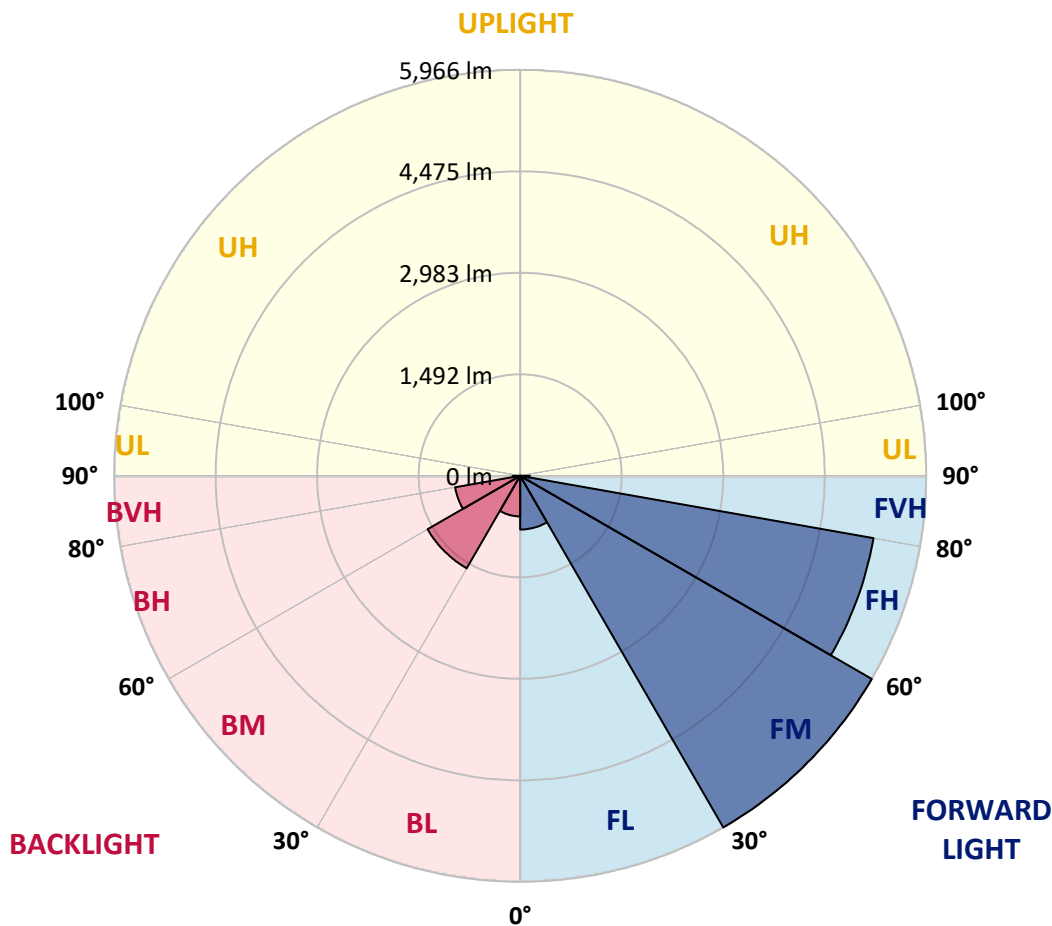
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	788.9	5.1			
FM	(30°-60°)	5966.1	38.7			
FH	(60°-80°)	5272.9	34.2			G3/7500
FVH	(80°-90°)	141.7	0.9			G2/225
BL	(0°-30°)	596.2	3.9	B2/1000		
BM	(30°-60°)	1570.5	10.2	B2/2500		
BH	(60°-80°)	970.7	6.3	B2/1000		G2/1000
BVH	(80°-90°)	110.0	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 III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9
2.5°	790.3	766.6	726.8	736.4	759.5	772.4	764.7	754.4	740.9	738.3	797.4
5°	1023.4	977.8	959.2	951.5	923.2	906.6	935.4	931.6	947.0	975.2	1033.0
7.5°	1193.5	1161.4	1130.6	1127.4	1072.8	1053.6	1092.1	1112.6	1140.3	1140.9	1219.2
10°	1284.7	1257.1	1256.5	1227.6	1223.1	1259.7	1260.3	1275.7	1278.9	1311.7	1296.3
12.5°	1383.6	1381.7	1417.0	1416.3	1457.4	1517.8	1487.6	1487.6	1496.6	1456.8	1505.6
15°	1619.2	1639.8	1573.6	1584.5	1584.5	1643.6	1641.7	1653.2	1680.8	1670.6	1648.7
17.5°	1864.5	1877.3	1804.1	1736.1	1741.2	1728.4	1774.6	1779.1	1752.7	1872.2	1845.8
20°	2022.4	2072.5	1918.4	1833.0	1849.7	1864.5	1866.4	1838.8	1825.3	2008.9	1973.0
22.5°	2217.6	2175.2	2034.0	1939.6	1964.6	1944.7	1940.9	1962.1	1980.7	2050.0	2108.4
25°	2347.9	2344.7	2175.2	2071.8	2044.2	2038.5	2077.6	2069.3	2113.6	2239.4	2202.8
27.5°	2537.3	2596.4	2295.9	2321.6	2200.2	2072.5	2198.3	2236.2	2315.8	2295.3	2376.8
30°	2904.6	2860.3	2546.3	2539.2	2401.8	2294.6	2381.9	2349.8	2493.0	2488.5	2548.9
32.5°	3204.4	3235.2	2840.4	2766.5	2664.4	2535.4	2477.6	2566.8	2643.9	2770.4	2804.4
35°	3521.5	3514.5	3141.5	2992.5	2823.7	2770.4	2841.6	2878.9	3042.6	3158.8	3077.9
37.5°	4014.6	3958.8	3531.8	3250.0	3123.5	3104.2	3226.2	3172.3	3349.5	3377.1	3422.7
40°	4473.0	4304.8	3888.8	3565.8	3364.9	3436.8	3440.7	3447.7	3542.7	3617.9	3843.2
42.5°	4909.0	4790.8	4251.5	4008.9	3712.9	3642.9	3686.6	3701.3	3941.4	4094.9	4406.9
45°	5504.8	5188.3	4772.9	4523.8	4192.5	4103.2	4072.4	4199.5	4431.3	4780.6	5048.3
47.5°	6008.8	5723.1	5326.9	4998.9	4628.4	4883.3	4708.7	4637.4	4948.8	5381.5	5807.8
50°	6426.7	6112.2	5723.7	5534.3	5475.3	5702.5	5249.3	5257.6	5542.7	6153.2	6641.8
52.5°	6750.3	6414.5	6070.4	5974.1	6304.1	6435.1	6107.7	6058.2	6266.2	6987.9	7574.7
55°	7052.7	6696.4	6430.6	6627.1	7183.1	7197.8	7174.7	6900.6	7151.0	7882.2	8540.3
57.5°	7130.4	6746.5	6569.9	6851.8	7603.6	8188.5	8418.3	7880.3	8135.2	8695.7	9367.3
60°	6730.4	6401.7	6331.1	6713.7	7830.9	8686.1	9286.4	8964.7	8869.0	9348.6	9946.4
62.5°	5911.2	5529.8	5587.0	6118.6	7591.4	8883.2	9972.1	10223.1	9644.0	9868.0	10199.3
65°	4704.8	4340.8	4456.3	5095.8	6839.6	8948.7	10322.6	10837.5	9923.9	10015.1	9841.1
67.5°	3318.0	2987.4	3133.1	3960.1	5689.7	8110.2	10383.0	10551.2	9626.0	9595.8	8862.6
70°	1879.9	1672.5	1830.4	2520.0	4015.9	6460.8	9909.8	9688.3	9091.8	8664.2	7415.5
72.5°	862.2	791.0	866.7	1282.8	2312.0	4299.1	8090.3	8291.2	7834.1	7299.3	5641.5
75°	458.4	433.4	465.5	640.7	1081.8	2338.9	5748.1	6200.1	5956.8	5536.2	3680.1
77.5°	340.9	321.7	337.1	415.4	577.8	914.9	3266.0	3836.1	3928.6	3541.5	2043.6
80°	261.3	245.9	261.3	314.0	400.0	434.7	1396.4	1788.1	2036.5	1645.5	812.2
82.5°	193.9	183.6	207.4	235.6	281.2	271.6	495.6	617.0	795.5	543.8	316.5
85°	154.1	141.2	150.2	159.9	179.8	149.0	226.6	253.6	268.4	224.7	116.8
87.5°	60.4	55.9	109.1	86.0	73.2	44.9	68.1	77.0	79.0	75.8	34.0
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°	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9	661.9
2.5°	803.8	797.4	759.5	771.7	791.6	795.5	803.8	780.7	769.2	811.5	813.5
5°	1038.2	1003.5	985.5	987.4	974.6	954.7	984.9	1004.8	1012.5	1043.9	1055.5
7.5°	1219.9	1178.1	1148.0	1113.3	1064.5	1033.0	1085.7	1124.2	1144.7	1210.2	1235.9
10°	1300.8	1267.4	1261.0	1217.3	1216.0	1215.4	1212.8	1199.3	1243.6	1237.2	1255.2
12.5°	1467.7	1460.6	1399.6	1382.3	1384.2	1382.3	1328.4	1325.8	1326.4	1385.5	1364.3
15°	1623.1	1624.3	1568.5	1505.6	1449.1	1431.7	1410.5	1400.9	1415.0	1448.4	1427.9
17.5°	1815.0	1821.4	1661.6	1562.1	1487.6	1485.7	1434.9	1375.2	1461.3	1481.8	1459.3
20°	1938.9	1912.0	1715.5	1548.6	1527.4	1469.6	1406.7	1324.5	1399.0	1449.1	1463.2
22.5°	2056.4	2009.6	1765.6	1572.3	1470.9	1402.2	1341.2	1287.9	1311.7	1367.5	1358.5
25°	2136.0	2123.2	1834.9	1629.5	1469.0	1316.2	1234.0	1200.0	1212.2	1298.8	1290.5
27.5°	2326.1	2187.4	1822.7	1644.2	1407.3	1198.7	1157.6	1121.0	1108.8	1202.5	1228.2
30°	2453.2	2396.1	1904.3	1621.1	1329.6	1102.4	1042.0	1034.3	1038.2	1144.7	1151.8
32.5°	2668.9	2520.6	2037.8	1532.5	1216.7	1031.1	961.8	965.0	982.3	1060.0	1076.0
35°	2893.6	2805.0	2055.8	1469.0	1124.8	955.3	927.1	904.6	914.3	982.3	985.5
37.5°	3311.0	3004.7	2166.2	1370.7	1057.4	926.5	872.5	852.6	857.8	896.3	923.9
40°	3678.2	3406.0	2114.9	1275.7	974.0	887.9	820.5	805.8	790.3	828.2	845.6
42.5°	4266.9	3692.3	2097.5	1171.1	934.8	835.9	789.7	750.5	735.8	767.9	799.3
45°	4855.7	3996.0	2003.1	1065.1	879.6	832.1	744.8	707.5	711.4	740.3	772.4
47.5°	5511.9	4403.7	1843.3	962.4	819.2	813.5	699.8	683.8	695.3	727.4	759.5
50°	6287.4	4836.4	1711.0	870.0	776.2	757.6	694.0	674.8	685.7	723.6	755.0
52.5°	7135.6	5310.9	1614.7	784.6	727.4	713.3	701.7	683.1	696.0	728.7	761.5
55°	7978.5	5744.3	1549.2	726.1	685.7	694.7	717.8	704.3	710.7	735.1	767.9
57.5°	8603.9	5972.8	1417.6	663.9	651.7	683.8	719.7	697.2	701.1	735.1	770.4
60°	8967.3	6016.5	1201.2	613.1	624.7	661.9	699.8	670.9	668.4	724.2	768.5
62.5°	8927.5	5762.9	952.8	566.9	593.9	629.2	669.6	642.0	649.1	725.5	772.4
65°	8357.3	5244.8	757.6	527.8	556.6	593.2	644.6	633.7	667.7	776.9	827.6
67.5°	7355.8	4487.8	608.6	491.2	522.0	568.8	661.9	690.8	705.6	829.5	881.5
70°	5961.3	3486.9	507.2	459.1	494.4	580.4	712.0	706.2	694.0	804.5	845.6
72.5°	4306.8	2390.3	446.2	427.6	460.3	545.7	713.3	682.5	667.1	734.5	764.0
75°	2694.6	1426.0	389.7	387.8	408.3	489.2	681.2	653.6	611.9	645.2	683.8
77.5°	1539.0	730.0	328.1	345.4	357.6	424.4	609.9	584.9	547.7	561.8	599.7
80°	587.5	353.1	276.7	306.9	303.7	359.5	516.8	511.1	468.7	473.2	496.3
82.5°	276.7	197.7	229.8	263.9	246.5	286.3	419.9	418.0	380.7	344.8	363.4
85°	102.7	105.3	168.2	201.0	171.4	184.9	303.7	295.3	259.4	218.9	242.0
87.5°	23.1	37.9	82.8	104.7	59.7	57.1	122.6	106.6	102.7	61.0	64.2
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)