

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: P597178

Luminaire Tested: **MSA-SA4D-835-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597178
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-835-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21990 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

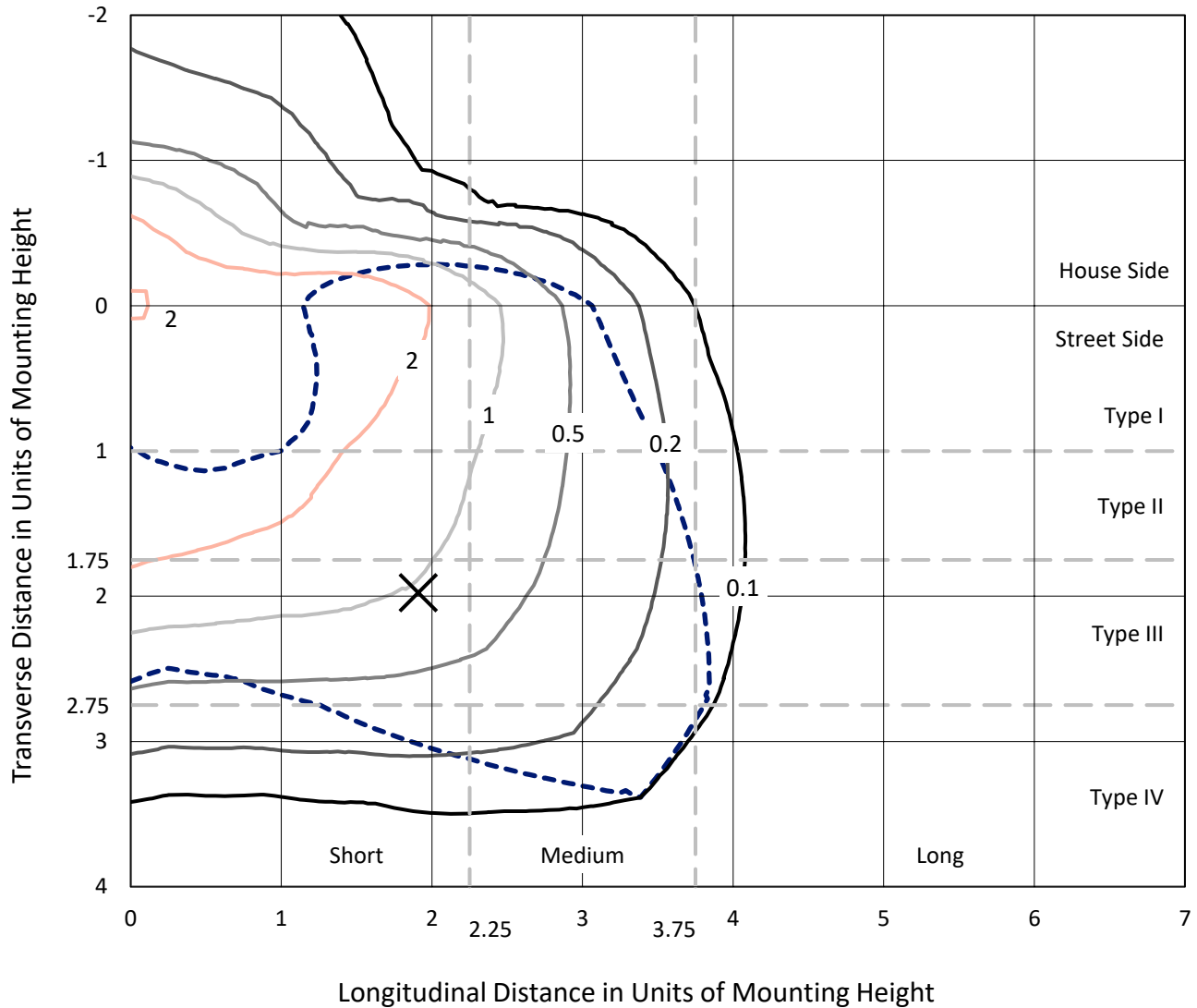
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

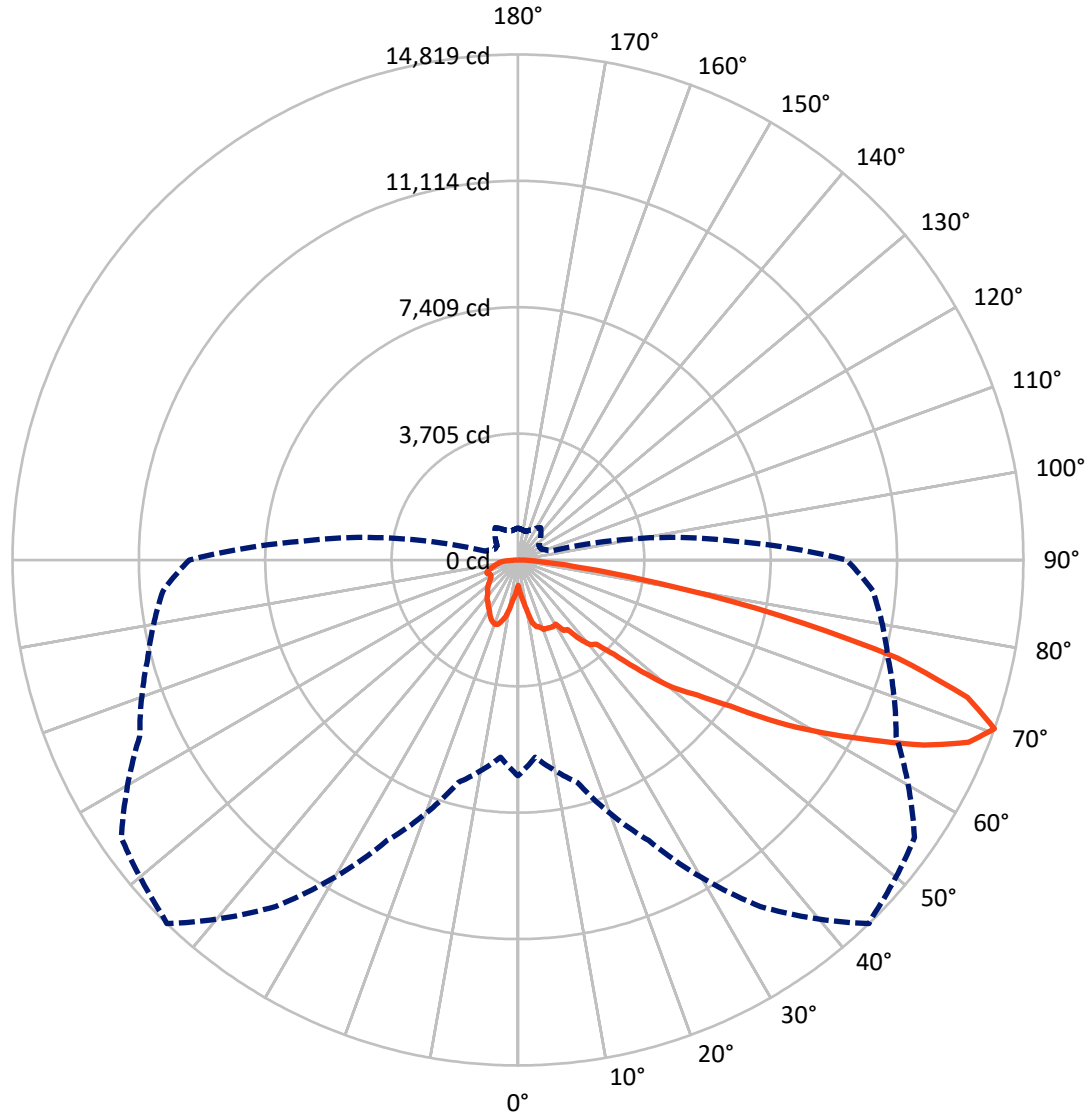
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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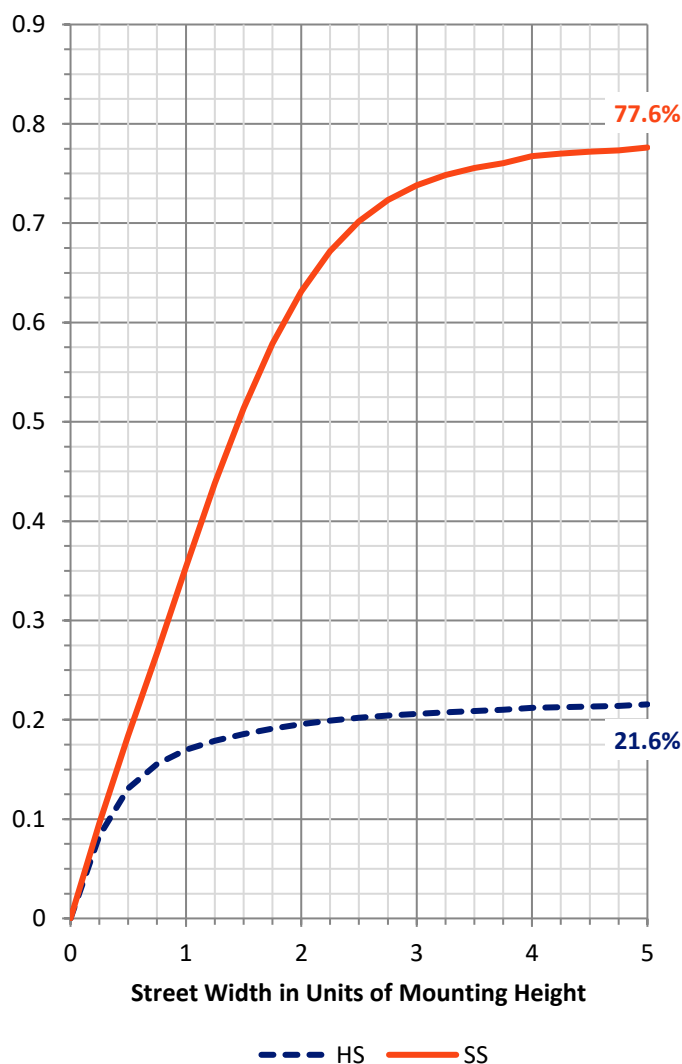
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4851.9	0.0	4851.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	17138.1	0.0	17138.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	21990.0	0.0	21990.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.2	0.5
10°-20°	539.7	2.5
20°-30°	1008.5	4.6
30°-40°	1618.8	7.4
40°-50°	2732.4	12.4
50°-60°	4869.1	22.1
60°-70°	6660.3	30.3
70°-80°	3916.6	17.8
80°-90°	527.4	2.4
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°	21990.0	100.0
0°-180°	21990.0	100.0

Coefficient of Utilization



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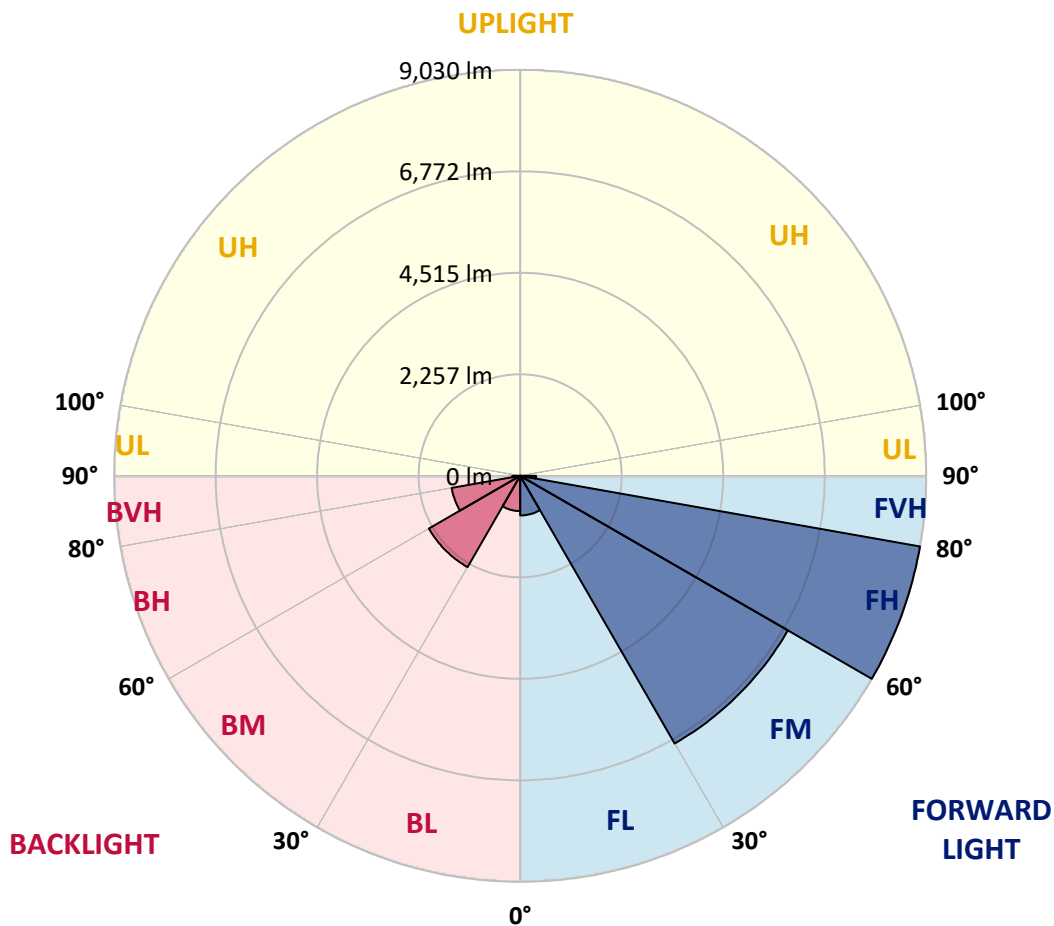
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	881.2	4.0			
FM (30°-60°)	6875.7	31.3			
FH (60°-80°)	9029.8	41.1			G4/12000
FVH (80°-90°)	351.5	1.6			G3/500
BL (0°-30°)	784.2	3.6	B2/1000		
BM (30°-60°)	2344.7	10.7	B2/2500		
BH (60°-80°)	1547.2	7.0	B3/2500		G3/2500
BVH (80°-90°)	175.9	0.8			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5
2.5°	907.1	889.0	845.7	860.2	878.2	885.4	883.6	881.8	853.9	843.9	893.5
5°	1232.6	1192.9	1161.3	1148.7	1107.2	1074.8	1054.9	1107.2	1099.1	1112.6	1146.9
7.5°	1539.1	1513.9	1442.6	1417.4	1332.6	1276.7	1270.4	1311.9	1322.7	1301.1	1359.7
10°	1736.6	1693.3	1678.9	1618.5	1559.9	1550.8	1545.4	1526.5	1500.3	1498.5	1446.2
12.5°	1889.9	1912.4	1924.1	1854.7	1856.5	1889.0	1871.8	1795.2	1751.0	1673.5	1679.8
15°	2164.9	2197.3	2104.5	2060.3	1975.5	2024.2	2017.9	1953.9	1947.6	1897.1	1838.5
17.5°	2404.7	2419.1	2264.0	2163.1	2134.2	2063.9	2082.8	2084.6	2001.7	2091.8	2039.5
20°	2424.5	2475.9	2297.4	2096.3	2182.9	2173.9	2176.6	2158.6	2049.5	2198.2	2178.4
22.5°	2521.9	2443.5	2283.0	2136.0	2158.6	2172.1	2184.7	2163.1	2156.8	2239.7	2300.1
25°	2503.9	2478.6	2316.3	2191.9	2194.6	2197.3	2203.6	2268.6	2261.3	2374.0	2405.6
27.5°	2672.5	2633.7	2326.3	2295.6	2225.3	2209.9	2166.7	2301.9	2407.4	2404.7	2578.7
30°	2993.5	2953.8	2557.1	2467.8	2340.7	2183.8	2266.8	2447.1	2530.0	2558.0	2778.9
32.5°	3494.8	3559.7	3011.5	2651.8	2494.0	2459.7	2450.7	2432.7	2638.2	2776.2	2977.3
35°	4214.3	4162.9	3547.1	3045.8	2655.4	2508.4	2528.2	2638.2	2882.6	2971.8	3157.6
37.5°	5038.4	4932.0	4233.3	3492.1	3120.6	2936.7	2870.9	2977.3	3031.4	3101.7	3481.3
40°	5876.1	5616.4	4906.8	4079.1	3400.1	3261.3	3203.6	3072.8	3200.0	3342.4	3824.8
42.5°	6684.8	6483.8	5639.8	4779.7	3870.8	3375.8	3344.2	3216.2	3610.2	3760.8	4320.7
45°	7532.4	7066.2	6390.9	5570.4	4558.8	3937.5	3890.6	3660.7	4165.6	4479.4	5020.4
47.5°	8102.2	7670.3	7078.9	6212.4	5134.9	4877.0	4787.8	4394.6	4852.7	5260.2	6101.5
50°	8641.4	8196.9	7575.7	6914.8	6178.1	5881.5	5691.2	5036.6	5708.4	6372.0	7487.3
52.5°	9413.2	9015.6	8152.7	7622.6	7298.9	6569.4	6427.9	6068.1	6709.2	7604.5	9002.1
55°	10238.3	9696.4	8914.6	8620.7	8490.0	7555.8	7440.4	7211.4	8041.8	8865.9	10474.5
57.5°	10602.5	10037.2	9606.2	9430.4	9419.6	8989.5	8856.9	8697.3	9404.2	9947.9	11860.3
60°	10892.0	10285.1	10112.9	10211.2	10568.3	10285.1	10112.9	9972.3	10513.3	11017.3	12991.0
62.5°	10838.8	10230.1	10318.5	10617.8	11529.4	11612.4	11479.8	11139.0	11612.4	11893.7	13639.3
65°	9980.4	9417.8	9932.6	10643.1	12423.0	13085.7	13078.5	12186.7	12350.8	12350.8	13570.8
67.5°	8476.4	7894.0	8737.0	10420.4	13040.6	14253.3	14255.1	13297.6	12418.4	12304.8	12510.4
70°	6329.6	5802.1	6749.8	9075.1	12403.1	14818.6	14736.6	14193.8	12232.7	11240.0	10450.1
72.5°	3780.6	3439.8	4311.7	6606.4	10580.0	13779.0	13997.2	13161.4	11198.5	9347.4	7470.2
75°	1716.7	1568.9	2026.0	3795.1	7553.1	11493.4	11730.5	11107.4	8894.8	6722.7	4317.1
77.5°	734.8	695.2	884.5	1683.4	4164.7	7859.7	8345.7	7938.1	6026.6	3906.9	1909.7
80°	472.5	447.2	543.7	809.7	1934.0	4246.8	4665.1	4512.8	3070.1	1519.3	672.6
82.5°	282.2	274.1	363.4	508.5	1054.9	1869.1	2106.3	2162.2	1274.9	681.6	385.0
85°	154.2	156.0	199.3	308.4	633.0	727.6	779.0	847.6	600.5	394.9	186.6
87.5°	51.4	59.5	80.2	125.3	225.4	205.6	206.5	239.8	253.4	164.1	59.5
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°	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5	747.5
2.5°	901.7	885.4	843.9	846.7	862.0	865.6	870.1	843.9	838.5	888.1	892.6
5°	1152.3	1099.1	1074.8	1066.7	1043.2	1035.1	1078.4	1098.2	1118.0	1156.8	1175.8
7.5°	1353.4	1293.9	1249.7	1209.1	1174.9	1155.0	1228.0	1284.0	1318.2	1397.6	1433.6
10°	1445.3	1394.0	1377.7	1345.3	1371.4	1430.9	1444.4	1446.2	1522.0	1520.2	1535.5
12.5°	1628.4	1595.0	1541.8	1553.5	1622.1	1683.4	1666.3	1692.4	1719.4	1784.4	1754.6
15°	1795.2	1786.2	1736.6	1744.7	1758.2	1834.9	1844.8	1870.9	1912.4	1963.8	1928.6
17.5°	2000.8	1997.2	1876.3	1865.5	1897.1	1971.9	1948.5	1902.5	2039.5	2094.5	2080.1
20°	2140.5	2113.5	1958.4	1912.4	1992.6	2002.6	1975.5	1902.5	2021.5	2141.4	2173.9
22.5°	2256.8	2225.3	2065.7	1975.5	1959.3	1963.8	1963.8	1950.3	2008.9	2107.2	2106.3
25°	2350.6	2380.4	2177.5	2090.9	2004.4	1896.2	1882.6	1894.4	1927.7	2117.1	2110.8
27.5°	2585.9	2503.9	2215.4	2150.4	1972.8	1802.4	1839.4	1857.4	1868.2	2075.6	2109.9
30°	2739.2	2764.5	2350.6	2185.6	1926.8	1697.8	1710.4	1762.7	1825.8	2071.1	2081.0
32.5°	2945.7	2891.6	2561.6	2127.0	1804.2	1634.7	1611.3	1681.6	1775.4	1998.1	2025.1
35°	3137.7	3201.8	2650.9	2116.2	1718.5	1540.0	1565.3	1589.6	1687.0	1916.9	1948.5
37.5°	3588.6	3442.5	2901.5	2063.9	1647.3	1492.2	1465.2	1502.2	1585.1	1762.7	1835.8
40°	3931.2	3940.2	2955.6	1998.1	1511.2	1423.7	1366.0	1403.0	1438.1	1579.7	1611.3
42.5°	4574.1	4377.5	3088.2	1853.8	1425.5	1320.9	1288.5	1304.7	1310.1	1369.6	1421.9
45°	5391.9	4931.1	3140.5	1659.9	1312.8	1278.5	1212.7	1204.6	1174.9	1183.0	1229.0
47.5°	6523.4	5794.9	3102.6	1453.5	1212.7	1223.5	1128.9	1091.9	1050.4	1060.3	1103.6
50°	7986.8	6898.5	3099.9	1278.5	1144.2	1151.4	1073.9	1007.1	965.7	986.4	1024.3
52.5°	9628.7	8005.8	3112.5	1158.6	1069.4	1065.8	1037.8	956.7	923.3	944.9	988.2
55°	11199.4	8957.9	3206.3	1082.9	991.8	998.1	1008.9	940.4	903.5	923.3	968.4
57.5°	12566.3	9709.9	3171.1	1002.6	919.7	948.5	977.4	917.9	889.9	918.8	963.9
60°	13522.1	10058.8	2893.4	926.0	866.5	906.2	962.1	915.2	911.6	973.8	1027.9
62.5°	13871.0	9929.9	2352.4	865.6	834.9	900.7	997.2	974.7	978.3	1054.9	1129.8
65°	13361.6	9251.8	1754.6	826.8	810.6	926.9	1078.4	1009.8	960.3	1023.4	1091.9
67.5°	11912.6	8046.3	1282.1	793.5	782.6	968.4	1153.2	1006.2	914.3	978.3	1034.2
70°	9637.8	6351.2	992.7	751.1	745.7	940.4	1160.4	979.2	864.7	906.2	937.7
72.5°	6603.7	4348.7	822.3	710.5	681.6	833.1	1101.8	918.8	805.2	829.5	855.7
75°	3690.5	2440.8	691.6	660.0	596.9	742.1	1033.3	882.7	761.0	768.2	804.3
77.5°	1656.3	1055.8	587.0	593.3	520.3	656.4	944.0	825.0	693.4	677.1	713.2
80°	626.6	514.8	476.1	501.3	437.3	568.9	851.2	772.7	622.1	601.4	622.1
82.5°	363.4	312.0	353.4	385.9	347.1	523.0	812.4	724.9	548.2	495.9	513.9
85°	168.6	161.4	211.9	250.7	242.5	407.5	695.2	545.5	390.4	330.0	365.2
87.5°	44.2	49.6	74.8	88.4	90.2	139.8	267.8	202.9	152.4	115.4	110.9
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)