

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: P368464

Luminaire Tested: **MSA-SA4C-727-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368464
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-SA4C-727-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: 20094 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

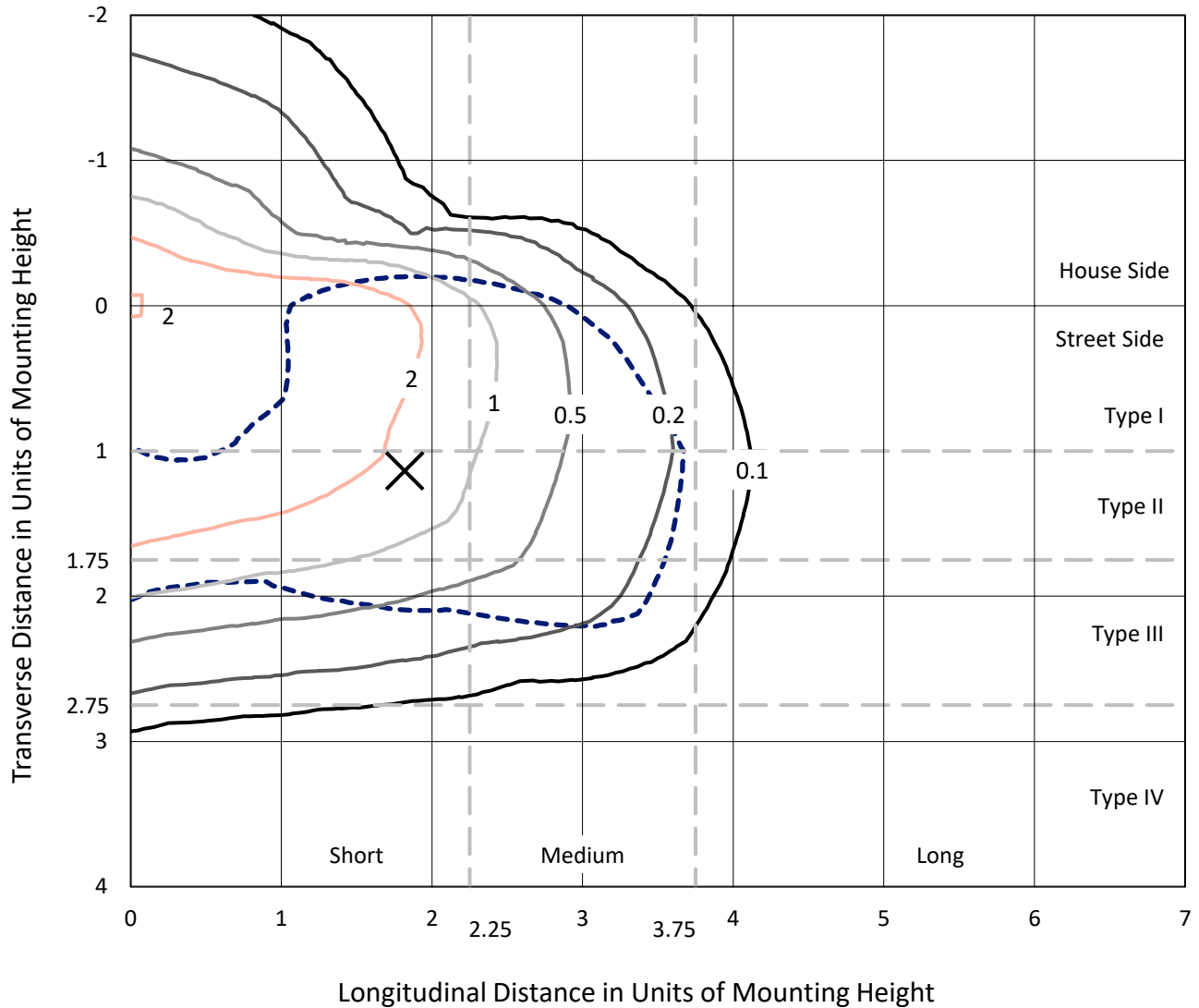
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

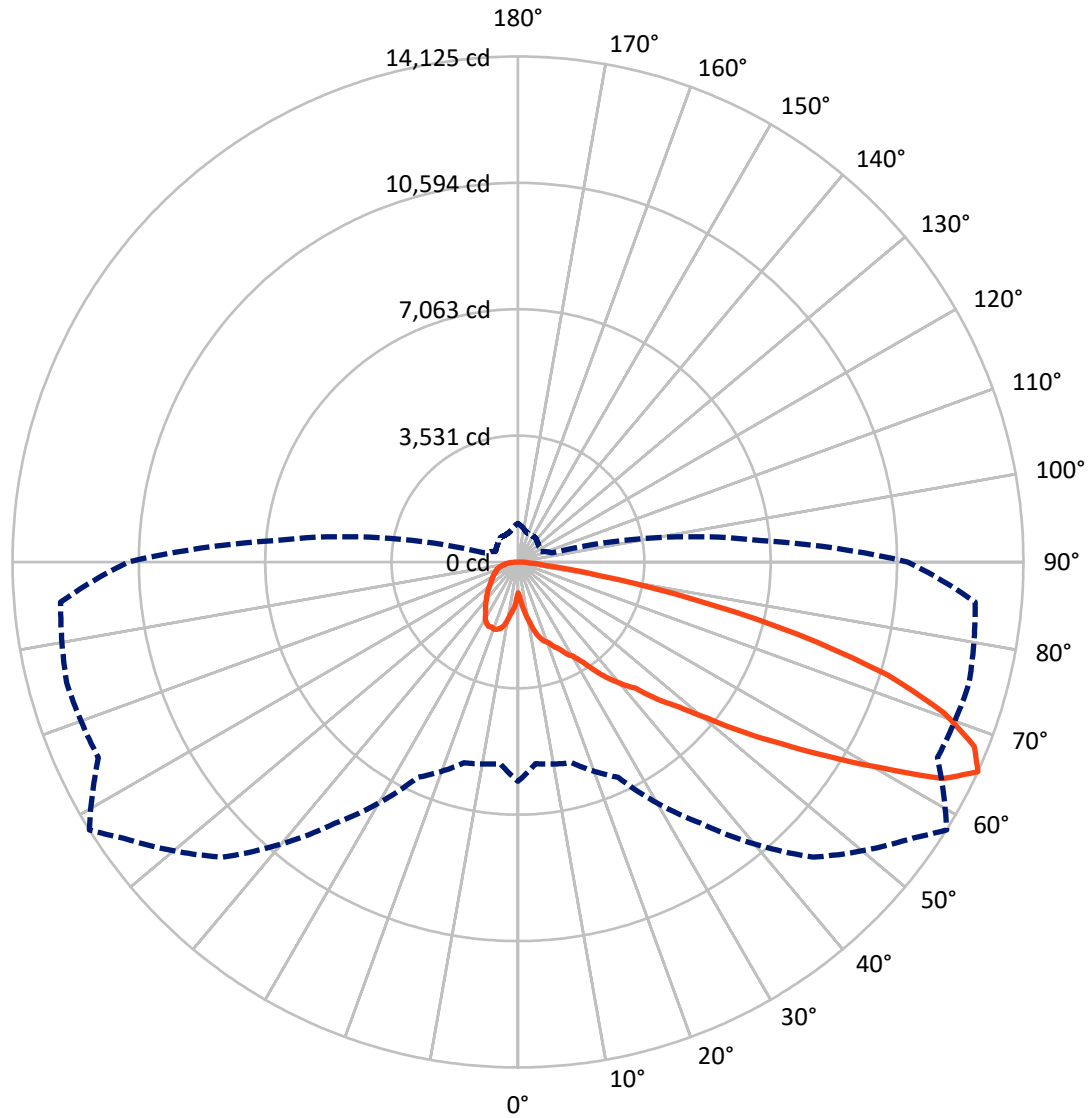
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 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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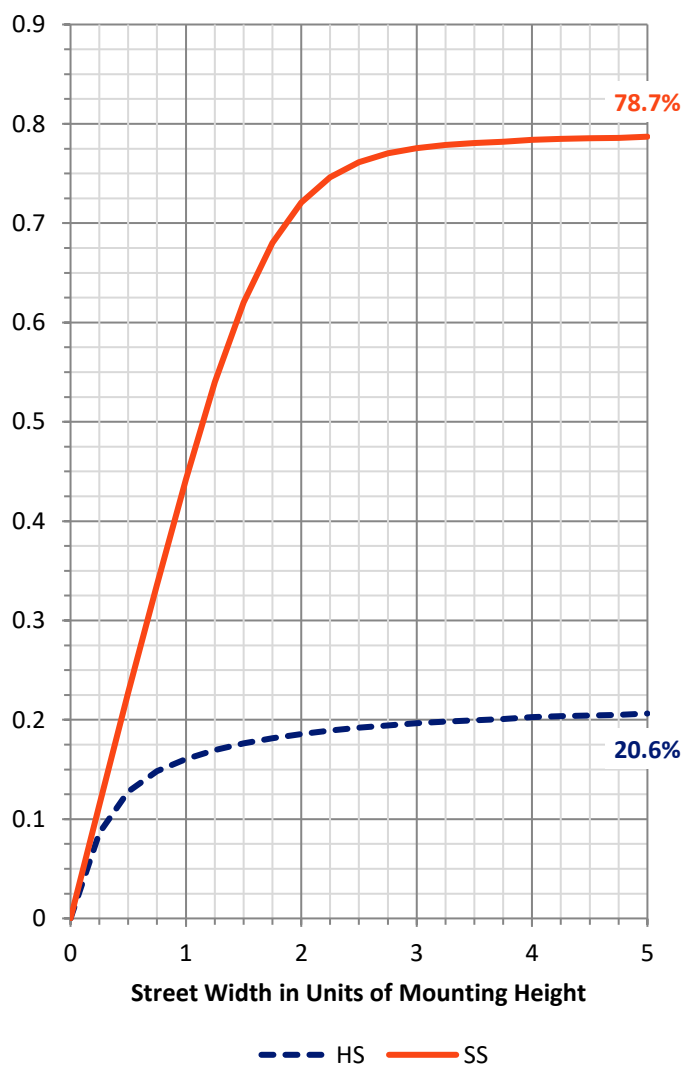
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4232.4	0.0	4232.4
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	15861.6	0.0	15861.6
	% Fixture	78.9	0.0	78.9
Total	Lumens	20094.0	0.0	20094.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.4	0.7
10°-20°	573.5	2.9
20°-30°	1100.4	5.5
30°-40°	1816.7	9.0
40°-50°	3019.5	15.0
50°-60°	4986.7	24.8
60°-70°	5594.2	27.8
70°-80°	2543.5	12.7
80°-90°	328.0	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°	20094.0	100.0
0°-180°	20094.0	100.0

Coefficient of Utilization

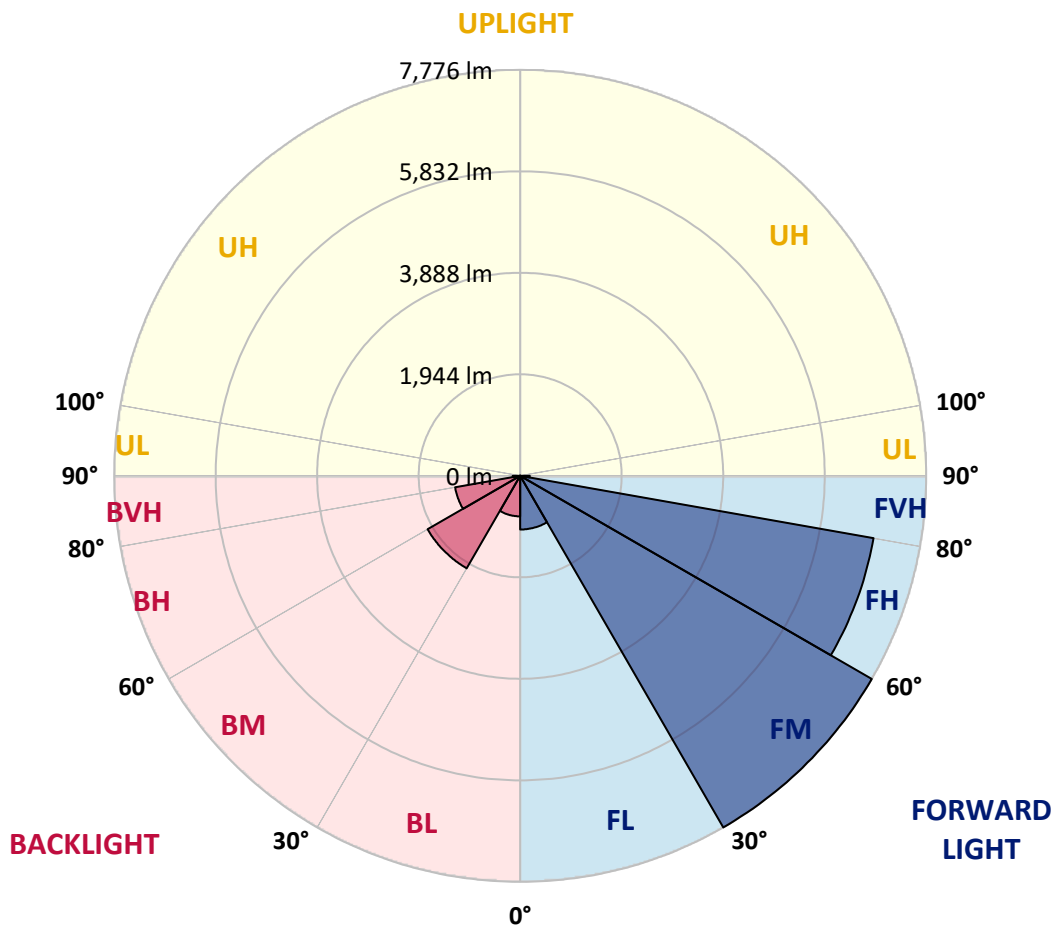


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1028.3	5.1			
FM (30°-60°)	7776.0	38.7			
FH (60°-80°)	6872.6	34.2			G3/7500
FVH (80°-90°)	184.7	0.9			G2/225
BL (0°-30°)	777.0	3.9	B2/1000		
BM (30°-60°)	2046.9	10.2	B2/2500		
BH (60°-80°)	1265.2	6.3	B3/2500		G3/2500
BVH (80°-90°)	143.3	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-G3
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7
2.5°	1030.1	999.1	947.3	959.8	989.9	1006.7	996.6	983.2	965.7	962.3	1039.3
5°	1333.9	1274.5	1250.2	1240.1	1203.3	1181.6	1219.2	1214.2	1234.3	1271.1	1346.4
7.5°	1555.6	1513.8	1473.6	1469.4	1398.3	1373.2	1423.4	1450.2	1486.2	1487.0	1589.1
10°	1674.4	1638.5	1637.6	1600.0	1594.1	1641.8	1642.6	1662.7	1666.9	1709.6	1689.5
12.5°	1803.3	1800.8	1846.8	1846.0	1899.5	1978.2	1938.9	1938.9	1950.6	1898.7	1962.3
15°	2110.4	2137.2	2051.0	2065.2	2065.2	2142.2	2139.7	2154.8	2190.8	2177.4	2148.9
17.5°	2430.1	2446.8	2351.4	2262.7	2269.4	2252.7	2312.9	2318.8	2284.5	2440.1	2405.8
20°	2635.9	2701.2	2500.4	2389.1	2410.8	2430.1	2432.6	2396.6	2379.0	2618.4	2571.5
22.5°	2890.3	2835.1	2651.0	2528.0	2560.6	2534.7	2529.7	2557.3	2581.5	2671.9	2748.1
25°	3060.2	3056.0	2835.1	2700.4	2664.4	2656.9	2707.9	2697.0	2754.8	2918.8	2871.1
27.5°	3307.0	3384.0	2992.4	3025.9	2867.7	2701.2	2865.2	2914.6	3018.4	2991.6	3097.8
30°	3785.7	3728.0	3318.8	3309.6	3130.5	2990.7	3104.5	3062.7	3249.3	3243.5	3322.1
32.5°	4176.5	4216.7	3702.0	3605.8	3472.7	3304.5	3229.2	3345.5	3446.0	3610.8	3655.2
35°	4589.9	4580.7	4094.5	3900.3	3680.3	3610.8	3703.7	3752.2	3965.6	4117.1	4011.6
37.5°	5232.5	5159.7	4603.3	4235.9	4071.1	4045.9	4204.9	4134.6	4365.6	4401.6	4461.0
40°	5830.0	5610.8	5068.5	4647.6	4385.7	4479.4	4484.4	4493.6	4617.5	4715.4	5009.1
42.5°	6398.2	6244.2	5541.3	5225.0	4839.2	4748.0	4804.9	4824.2	5137.1	5337.1	5743.8
45°	7174.8	6762.2	6220.8	5896.1	5464.3	5348.0	5307.8	5473.5	5775.6	6230.8	6579.8
47.5°	7831.6	7459.3	6943.0	6515.4	6032.5	6364.7	6137.1	6044.2	6450.1	7014.1	7569.7
50°	8376.4	7966.4	7460.1	7213.2	7136.3	7432.5	6841.7	6852.6	7224.1	8019.9	8656.7
52.5°	8798.2	8360.5	7912.0	7786.5	8216.6	8387.3	7960.5	7896.1	8167.2	9107.8	9872.6
55°	9192.3	8727.9	8381.4	8637.5	9362.2	9381.4	9351.3	8994.0	9320.3	10273.4	11131.2
57.5°	9293.5	8793.1	8563.0	8930.4	9910.3	10672.6	10972.2	10270.9	10603.1	11333.7	12209.0
60°	8772.2	8343.8	8251.7	8750.5	10206.5	11321.1	12103.5	11684.3	11559.6	12184.7	12963.8
62.5°	7704.5	7207.4	7281.9	7974.7	9894.4	11578.0	12997.2	13324.4	12569.6	12861.7	13293.5
65°	6132.1	5657.6	5808.3	6641.7	8914.5	11663.4	13454.1	14125.2	12934.5	13053.3	12826.5
67.5°	4324.6	3893.6	4083.6	5161.4	7415.8	10570.5	13532.8	13752.0	12546.2	12506.9	11551.2
70°	2450.2	2179.9	2385.7	3284.5	5234.2	8420.8	12916.1	12627.4	11850.0	11292.7	9665.1
72.5°	1123.8	1030.9	1129.7	1671.9	3013.3	5603.2	10544.6	10806.5	10210.7	9513.6	7353.0
75°	597.5	564.8	606.7	835.1	1410.0	3048.5	7491.9	8081.0	7763.9	7215.8	4796.6
77.5°	444.3	419.2	439.3	541.4	753.1	1192.4	4256.8	4999.9	5120.4	4615.8	2663.5
80°	340.6	320.5	340.6	409.2	521.3	566.5	1820.0	2330.5	2654.3	2144.7	1058.6
82.5°	252.7	239.3	270.3	307.1	366.5	354.0	646.0	804.2	1036.8	708.8	412.5
85°	200.8	184.1	195.8	208.4	234.3	194.1	295.4	330.5	349.8	292.9	152.3
87.5°	78.7	72.8	142.3	112.1	95.4	58.6	88.7	100.4	102.9	98.7	44.4
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°	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7
2.5°	1047.7	1039.3	989.9	1005.8	1031.8	1036.8	1047.7	1017.6	1002.5	1057.7	1060.2
5°	1353.1	1307.9	1284.5	1287.0	1270.3	1244.3	1283.7	1309.6	1319.6	1360.6	1375.7
7.5°	1589.9	1535.5	1496.2	1451.0	1387.4	1346.4	1415.0	1465.2	1492.0	1577.4	1610.8
10°	1695.4	1651.9	1643.5	1586.6	1584.9	1584.1	1580.7	1563.1	1620.9	1612.5	1636.0
12.5°	1912.9	1903.7	1824.2	1801.6	1804.1	1801.6	1731.3	1728.0	1728.8	1805.8	1778.2
15°	2115.4	2117.1	2044.3	1962.3	1888.7	1866.1	1838.5	1825.9	1844.3	1887.8	1861.1
17.5°	2365.6	2374.0	2165.6	2035.9	1938.9	1936.4	1870.3	1792.4	1904.6	1931.3	1902.1
20°	2527.1	2492.0	2235.9	2018.4	1990.8	1915.4	1833.4	1726.3	1823.4	1888.7	1907.1
22.5°	2680.3	2619.2	2301.2	2049.3	1917.1	1827.6	1748.1	1678.6	1709.6	1782.4	1770.7
25°	2784.0	2767.3	2391.6	2123.8	1914.6	1715.4	1608.3	1564.0	1579.9	1692.9	1682.0
27.5°	3031.7	2851.0	2375.7	2143.1	1834.3	1562.3	1508.8	1461.1	1445.2	1567.3	1600.8
30°	3197.4	3123.0	2482.0	2112.9	1733.0	1436.8	1358.1	1348.1	1353.1	1492.0	1501.2
32.5°	3478.6	3285.3	2656.0	1997.5	1585.7	1343.9	1253.5	1257.7	1280.3	1381.6	1402.5
35°	3771.5	3656.0	2679.4	1914.6	1466.1	1245.2	1208.3	1179.1	1191.6	1280.3	1284.5
37.5°	4315.4	3916.2	2823.4	1786.6	1378.2	1207.5	1137.2	1111.3	1118.0	1168.2	1204.2
40°	4794.0	4439.2	2756.4	1662.7	1269.4	1157.3	1069.4	1050.2	1030.1	1079.5	1102.1
42.5°	5561.4	4812.5	2733.8	1526.3	1218.4	1089.5	1029.3	978.2	959.0	1000.8	1041.8
45°	6328.7	5208.3	2610.8	1388.3	1146.4	1084.5	970.7	922.2	927.2	964.8	1006.7
47.5°	7184.0	5739.6	2402.5	1254.4	1067.8	1060.2	912.1	891.2	906.3	948.1	989.9
50°	8194.8	6303.6	2230.1	1133.9	1011.7	987.4	904.6	879.5	893.7	943.1	984.1
52.5°	9300.2	6922.0	2104.6	1022.6	948.1	929.7	914.6	890.4	907.1	949.8	992.4
55°	10399.0	7486.9	2019.2	946.4	893.7	905.4	935.5	918.0	926.3	958.1	1000.8
57.5°	11214.0	7784.8	1847.7	865.3	849.4	891.2	938.1	908.8	913.8	958.1	1004.2
60°	11687.6	7841.7	1565.7	799.1	814.2	862.7	912.1	874.5	871.1	943.9	1001.7
62.5°	11635.8	7511.2	1241.8	738.9	774.0	820.1	872.8	836.8	846.0	945.6	1006.7
65°	10892.7	6835.9	987.4	687.9	725.5	773.2	840.2	825.9	870.3	1012.5	1078.6
67.5°	9587.3	5849.3	793.3	640.2	680.3	741.4	862.7	900.4	919.6	1081.2	1148.9
70°	7769.7	4544.7	661.1	598.3	644.3	756.5	928.0	920.5	904.6	1048.5	1102.1
72.5°	5613.3	3115.4	581.6	557.3	600.0	711.3	929.7	889.5	869.4	957.3	995.8
75°	3512.1	1858.5	507.9	505.4	532.2	637.6	887.8	851.9	797.5	841.0	891.2
77.5°	2005.8	951.4	427.6	450.2	466.1	553.1	795.0	762.3	713.8	732.2	781.6
80°	765.7	460.2	360.7	400.0	395.8	468.6	673.6	666.1	610.9	616.7	646.8
82.5°	360.7	257.7	299.6	343.9	321.3	373.2	547.3	544.8	496.2	449.4	473.6
85°	133.9	137.2	219.2	261.9	223.4	241.0	395.8	384.9	338.1	285.4	315.5
87.5°	30.1	49.4	107.9	136.4	77.8	74.5	159.8	138.9	133.9	79.5	83.7
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)