

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: P367372

Luminaire Tested: **MSA-SA2B-830-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367372
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-830-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8129 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

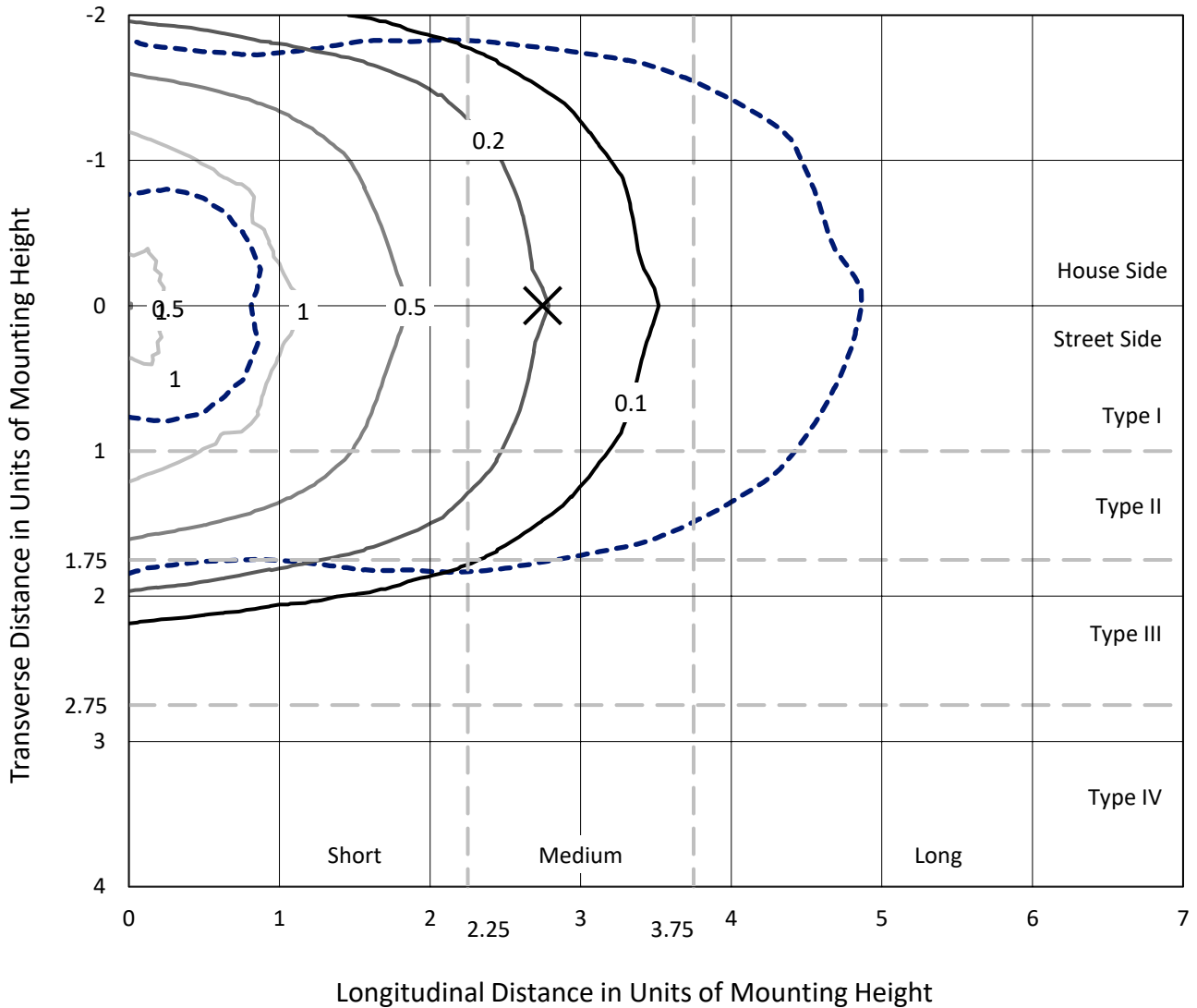
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

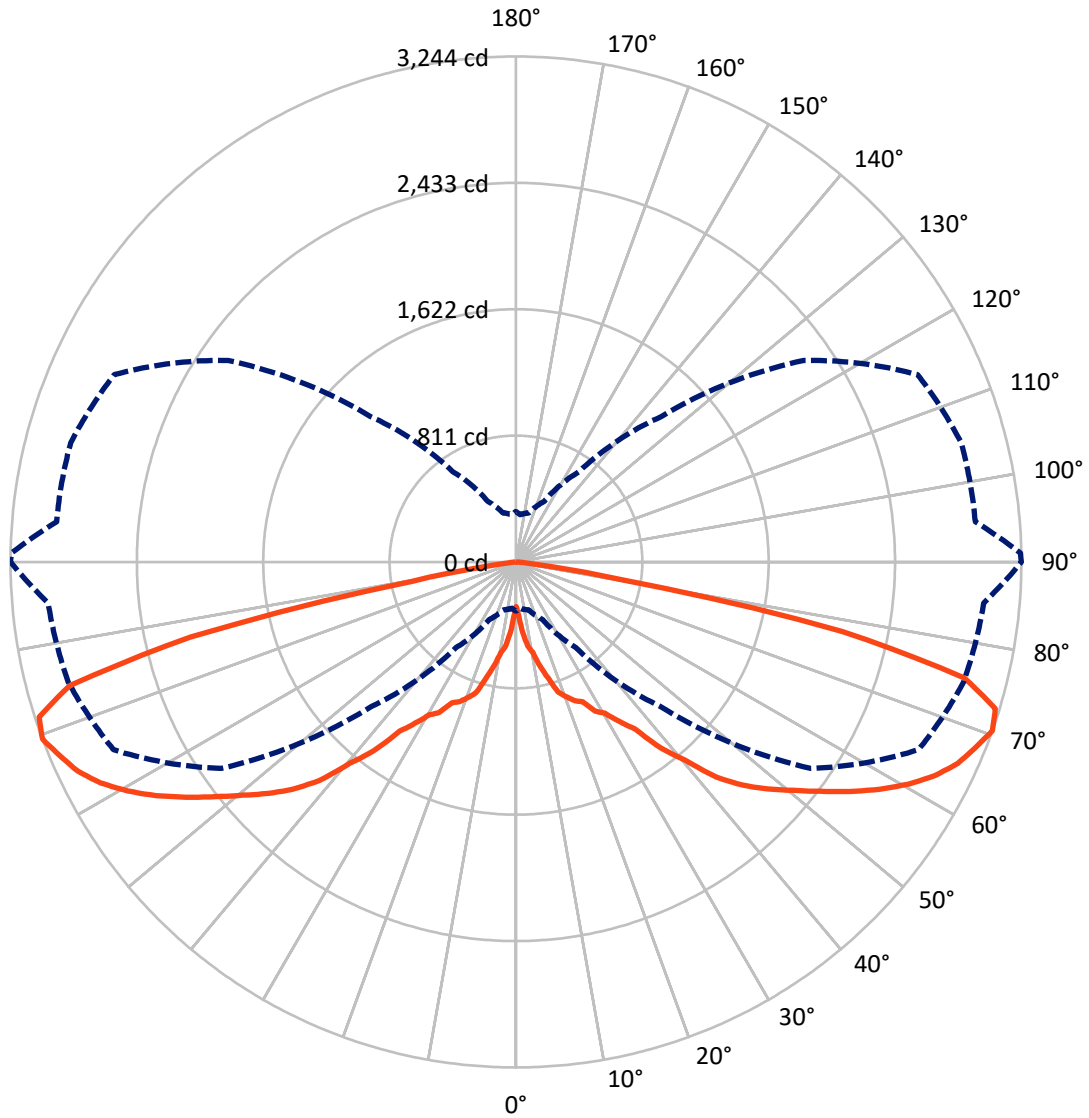
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical



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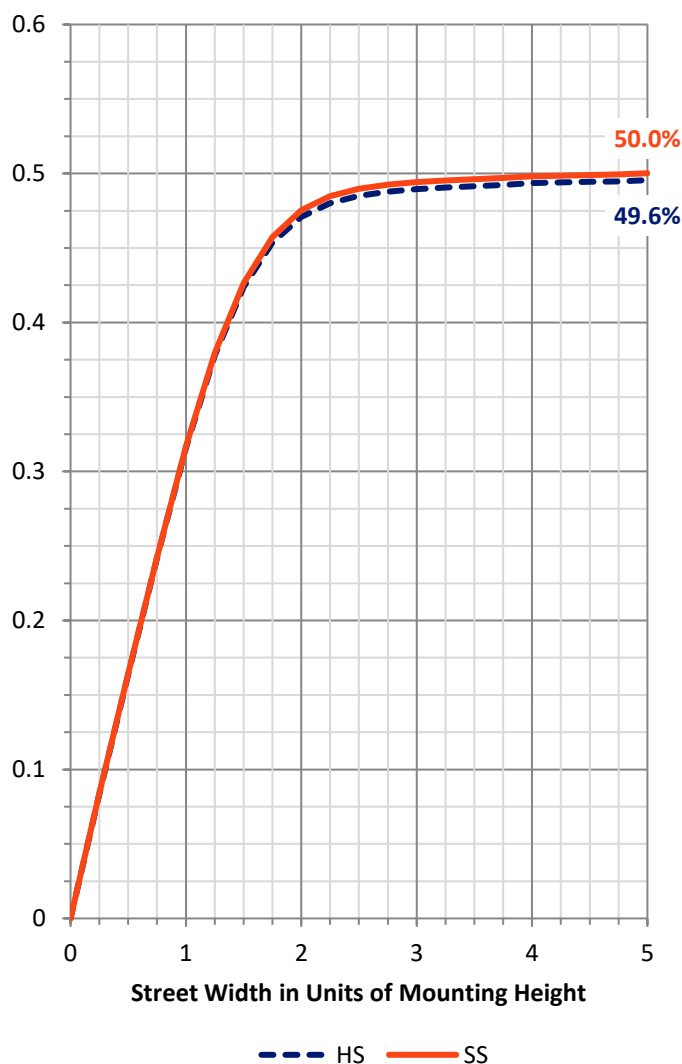
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4049.5	0.0	4049.5
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	4079.6	0.0	4079.6
	% Fixture	50.2	0.0	50.2
Total	Lumens	8129.0	0.0	8129.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	0.5
10°-20°	197.3	2.4
20°-30°	426.5	5.2
30°-40°	813.7	10.0
40°-50°	1478.3	18.2
50°-60°	2076.6	25.5
60°-70°	1982.8	24.4
70°-80°	1017.6	12.5
80°-90°	93.3	1.1
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°	8129.0	100.0
0°-180°	8129.0	100.0

Coefficient of Utilization



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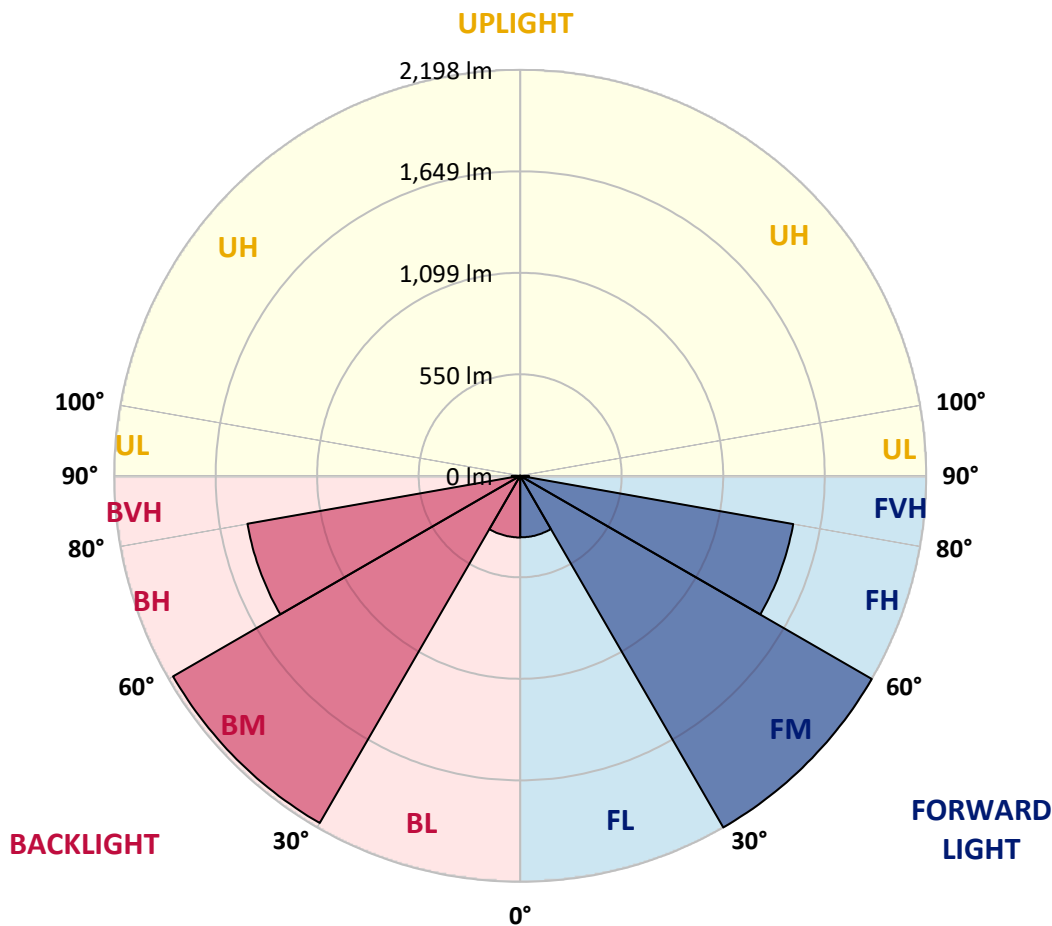
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	333.1	4.1			
FM (30°-60°)	2198.2	27.0			
FH (60°-80°)	1501.0	18.5			G1/1800
FVH (80°-90°)	47.3	0.6			G1/100
BL (0°-30°)	333.7	4.1	B1/500		
BM (30°-60°)	2170.4	26.7	B2/2500		
BH (60°-80°)	1499.3	18.4	B3/2500		G3/2500
BVH (80°-90°)	46.0	0.6			G1/100
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°	65°	75°	85°	90°
0°	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3
2.5°	345.6	332.8	316.6	326.2	330.1	337.0	336.0	332.8	318.6	342.3	344.9
5°	432.6	412.2	404.6	403.3	405.2	398.6	420.1	413.8	425.3	446.7	451.7
7.5°	492.5	477.4	461.2	466.2	445.8	442.8	470.5	495.2	501.4	540.6	543.3
10°	520.9	506.0	510.3	507.4	505.1	524.2	537.0	555.1	581.2	584.8	590.4
12.5°	544.9	550.9	569.6	569.0	599.9	633.9	628.9	647.7	652.0	697.5	683.6
15°	605.9	618.1	616.7	628.3	641.8	697.5	697.8	729.7	759.1	776.9	772.2
17.5°	695.2	699.4	681.6	682.3	721.5	744.2	769.6	764.0	840.4	875.4	877.7
20°	748.5	759.4	739.0	712.0	781.5	812.8	826.9	794.3	876.0	923.1	923.1
22.5°	841.8	813.8	782.8	764.7	825.9	859.2	857.6	848.4	891.8	975.2	967.3
25°	893.2	877.3	861.9	866.5	897.4	914.6	937.3	915.9	956.7	1018.7	992.7
27.5°	990.7	961.4	885.3	945.9	945.9	933.0	981.1	991.3	964.6	1065.5	1084.9
30°	1101.0	1090.8	983.1	1047.3	1027.6	991.3	1083.6	1077.0	1032.2	1135.0	1126.1
32.5°	1205.5	1239.1	1137.0	1101.7	1131.4	1145.2	1096.8	1116.5	1125.1	1224.3	1220.0
35°	1365.6	1393.9	1258.5	1249.6	1200.2	1187.4	1224.3	1230.9	1231.5	1335.9	1316.8
37.5°	1642.7	1601.8	1468.1	1405.1	1410.7	1395.2	1402.5	1350.4	1357.7	1509.2	1518.8
40°	1845.3	1799.2	1650.2	1605.1	1494.4	1560.6	1502.0	1496.7	1482.2	1678.6	1673.3
42.5°	2069.0	2005.7	1841.0	1780.7	1663.1	1636.1	1609.1	1670.0	1666.1	1847.9	1888.1
45°	2238.0	2110.2	2024.2	1986.6	1916.1	1849.9	1824.2	1851.5	1839.0	1974.1	2044.3
47.5°	2344.7	2233.7	2134.9	2055.8	1988.3	2150.7	2020.6	1984.0	1958.6	2109.8	2177.4
50°	2429.7	2301.6	2185.0	2158.6	2212.0	2355.6	2150.4	2069.6	2100.6	2212.0	2303.9
52.5°	2452.8	2317.1	2212.3	2195.5	2339.8	2365.8	2332.6	2196.8	2188.6	2334.5	2445.6
55°	2382.3	2252.2	2202.4	2294.3	2453.8	2432.0	2482.8	2396.1	2337.8	2459.7	2599.4
57.5°	2200.8	2071.6	2059.8	2192.2	2393.2	2578.3	2603.4	2534.8	2458.4	2587.6	2752.3
60°	1902.6	1784.7	1814.6	1960.9	2264.0	2527.6	2660.7	2598.1	2574.4	2702.9	2893.9
62.5°	1438.4	1346.5	1426.5	1630.5	2028.1	2462.0	2739.8	2729.9	2695.6	2825.4	3019.1
65°	917.2	868.8	950.5	1157.7	1662.1	2342.8	2777.6	2790.8	2822.5	2920.0	3116.0
67.5°	533.1	507.4	557.1	726.8	1183.7	1923.7	2707.1	2896.3	2912.7	2968.7	3179.6
70°	315.3	298.5	318.9	408.2	670.1	1310.6	2309.2	2850.1	2974.7	3013.5	3243.8
72.5°	240.5	224.7	215.8	241.5	349.9	677.0	1561.3	2415.9	2924.9	2983.9	3216.8
75°	207.9	192.7	182.2	184.5	208.2	321.5	846.4	1728.0	2492.3	2717.0	2971.4
77.5°	178.6	165.1	157.5	156.8	159.8	176.6	353.8	937.0	1561.0	1953.0	2142.1
80°	143.0	132.4	130.8	130.8	126.5	125.2	175.9	356.5	594.0	704.4	675.4
82.5°	104.4	93.9	104.4	103.1	96.5	91.3	112.0	154.2	183.2	144.6	114.3
85°	70.5	60.9	68.9	70.2	63.9	47.4	67.2	77.1	79.1	49.4	40.9
87.5°	24.7	24.1	38.9	33.9	27.7	16.1	24.7	26.7	28.0	17.5	11.9
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3	285.3
2.5°	345.9	342.0	322.2	325.2	332.8	336.4	340.0	325.2	317.9	341.0	338.7
5°	453.0	438.5	422.4	420.1	421.0	406.9	415.1	411.5	413.1	428.0	430.9
7.5°	542.6	525.2	503.7	486.9	457.9	434.9	454.3	464.2	467.2	493.5	503.4
10°	591.0	576.2	570.0	538.3	528.8	525.8	521.2	505.4	522.8	516.6	521.5
12.5°	685.9	683.0	650.3	629.6	631.6	637.2	608.2	592.4	569.6	605.2	592.4
15°	766.6	779.5	746.9	709.0	690.2	699.8	677.7	654.6	634.2	645.1	631.2
17.5°	869.8	869.4	805.9	765.3	763.7	763.0	730.4	679.7	704.0	696.5	697.1
20°	924.5	915.6	836.5	789.7	829.6	815.4	786.1	720.9	749.2	758.4	764.3
22.5°	970.2	965.3	869.4	835.2	860.9	861.2	831.9	797.6	794.0	822.7	807.2
25°	1002.2	1022.0	931.7	923.5	934.7	923.5	894.8	872.4	857.9	900.7	857.9
27.5°	1078.0	1050.0	941.3	988.0	995.0	938.6	974.5	948.2	908.0	961.0	978.5
30°	1132.0	1148.5	1008.5	1079.0	1070.7	1018.7	1033.5	1032.5	984.4	1087.9	1075.7
32.5°	1224.9	1205.2	1118.2	1112.6	1132.3	1130.0	1105.0	1117.2	1129.0	1204.2	1222.3
35°	1320.1	1341.2	1188.4	1226.2	1220.6	1185.1	1250.6	1243.0	1278.3	1432.5	1381.4
37.5°	1534.9	1434.5	1345.8	1340.9	1378.4	1384.0	1363.0	1396.2	1472.3	1590.9	1645.6
40°	1675.6	1629.8	1479.3	1485.2	1433.1	1522.7	1463.4	1570.5	1628.5	1828.5	1809.0
42.5°	1888.4	1776.8	1632.1	1651.9	1641.4	1598.2	1676.3	1731.3	1814.3	1966.9	2065.4
45°	2046.9	1893.7	1825.2	1813.0	1811.7	1886.8	1876.9	1964.9	1994.5	2109.2	2190.9
47.5°	2167.2	2037.0	1935.6	1949.4	1909.2	2123.7	2009.4	2036.7	2096.7	2204.7	2299.9
50°	2309.8	2164.9	2049.6	2083.8	2181.7	2264.0	2160.6	2113.8	2143.1	2270.6	2376.7
52.5°	2441.9	2289.4	2162.6	2191.2	2351.0	2313.4	2302.2	2184.0	2180.3	2282.8	2403.4
55°	2596.4	2424.5	2312.5	2403.4	2460.1	2413.6	2395.8	2251.8	2162.9	2219.9	2333.5
57.5°	2748.0	2558.2	2446.9	2465.7	2537.5	2491.4	2357.9	2136.2	2025.2	2036.4	2151.4
60°	2890.0	2681.1	2589.2	2571.1	2628.4	2447.5	2213.9	1924.4	1777.1	1750.1	1849.6
62.5°	3011.6	2783.9	2696.9	2647.5	2702.2	2449.2	1989.6	1584.4	1422.6	1331.0	1408.4
65°	3108.1	2869.2	2807.3	2781.6	2801.4	2300.3	1640.0	1163.3	965.0	863.5	908.6
67.5°	3172.3	2917.0	2888.7	2922.3	2658.7	1915.8	1215.0	744.6	561.1	505.7	534.0
70°	3238.9	2959.2	2958.2	2843.9	2254.5	1320.8	709.6	429.3	326.5	305.1	322.9
72.5°	3216.5	2909.1	2923.9	2487.1	1562.3	706.0	374.6	242.8	221.1	228.6	244.5
75°	2978.6	2644.9	2573.4	1788.0	886.2	328.1	215.8	183.8	182.5	194.0	209.5
77.5°	2160.6	1842.0	1652.9	1013.4	379.9	177.6	158.8	153.5	153.5	162.8	176.6
80°	712.3	616.4	642.4	392.1	179.6	122.6	123.9	126.2	125.5	127.8	139.4
82.5°	117.0	121.2	187.5	160.1	108.4	83.7	93.6	98.2	99.5	89.0	101.1
85°	41.5	46.8	79.7	74.1	62.6	42.2	61.6	68.9	67.9	59.3	65.6
87.5°	12.8	16.5	29.0	22.4	18.8	11.5	23.1	27.0	33.9	13.8	12.5
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)