

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: P367658

Luminaire Tested: **MSA-SA3A-727-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367658
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-SA3A-727-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10074 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

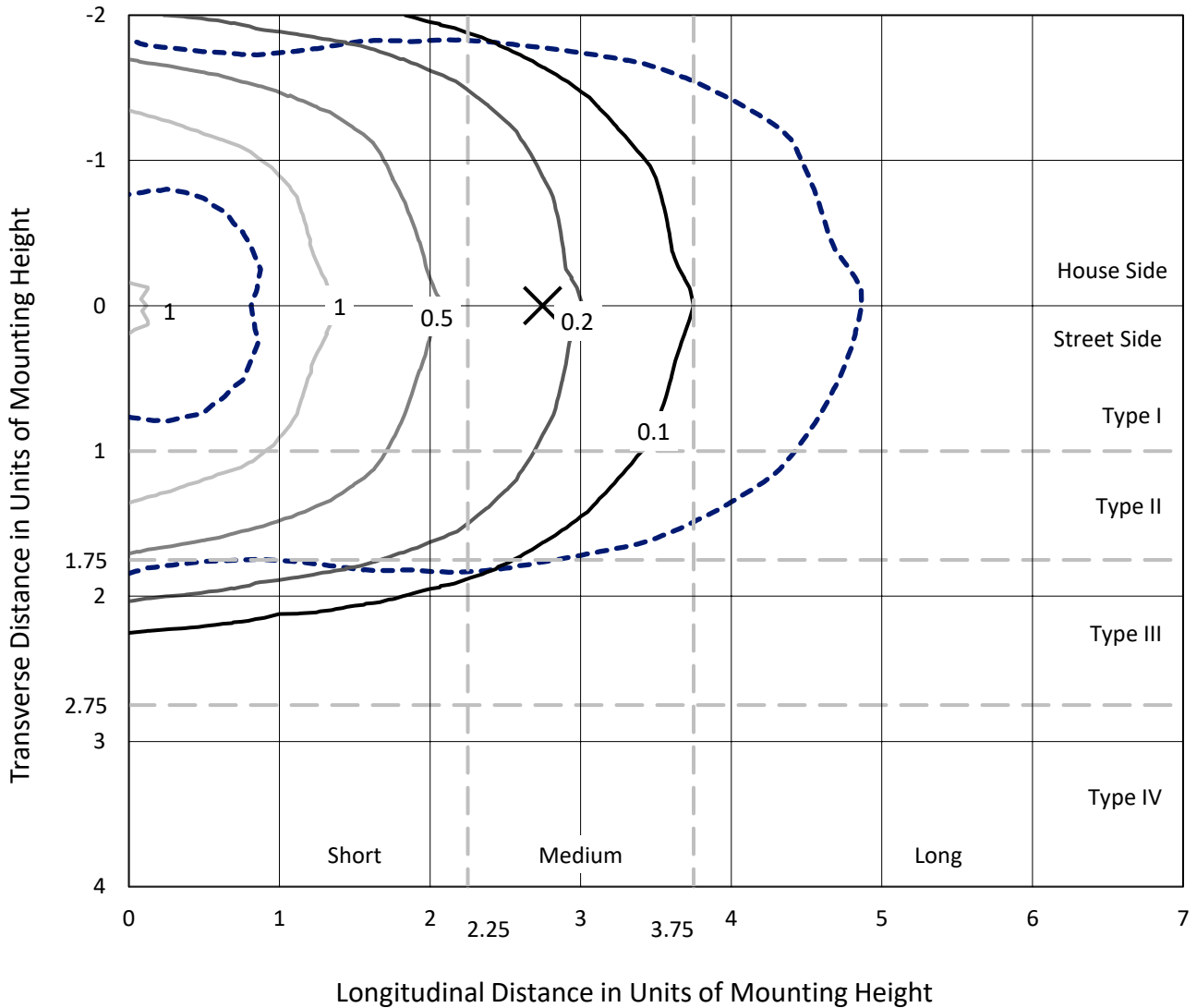
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

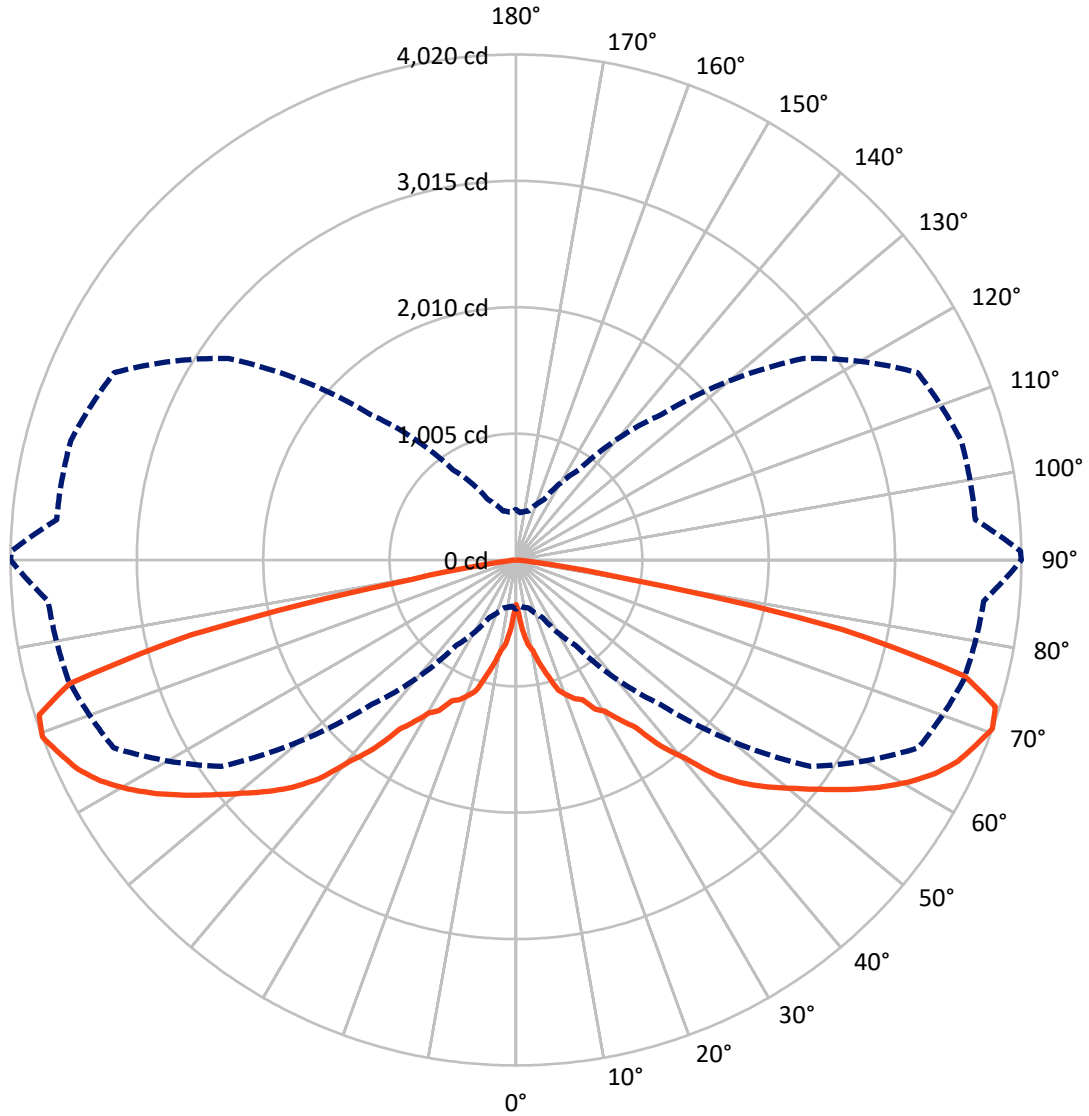
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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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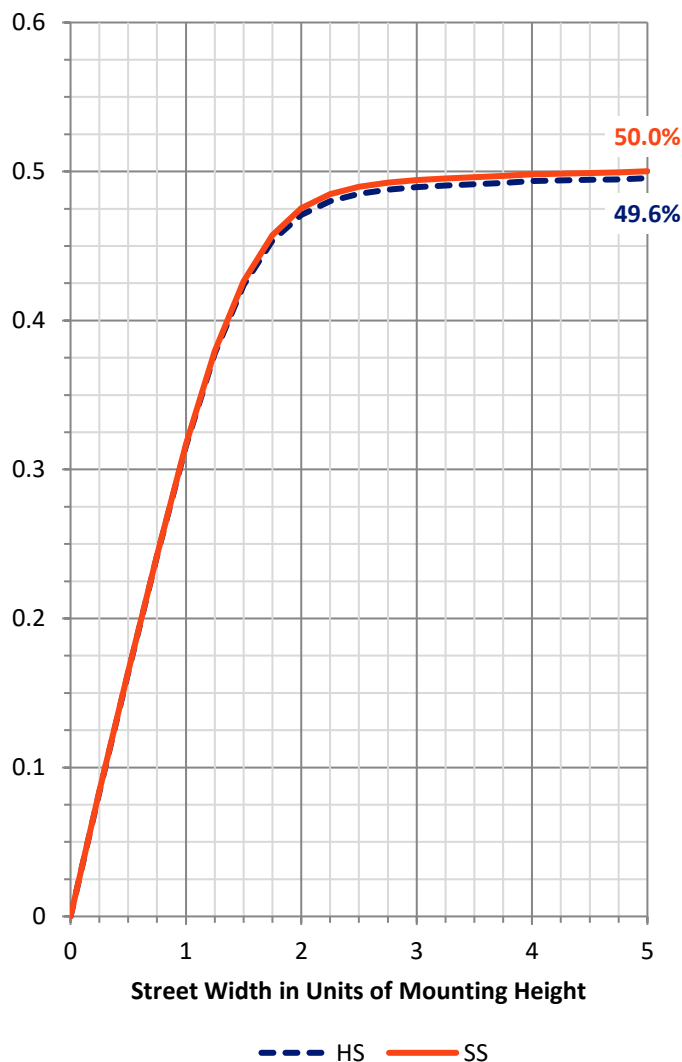
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5018.3	0.0	5018.3
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	5055.7	0.0	5055.7
	% Fixture	50.2	0.0	50.2
Total	Lumens	10074.0	0.0	10074.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.3	0.5
10°-20°	244.5	2.4
20°-30°	528.5	5.2
30°-40°	1008.4	10.0
40°-50°	1832.0	18.2
50°-60°	2573.5	25.5
60°-70°	2457.2	24.4
70°-80°	1261.0	12.5
80°-90°	115.6	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°	10074.0	100.0
0°-180°	10074.0	100.0

Coefficient of Utilization



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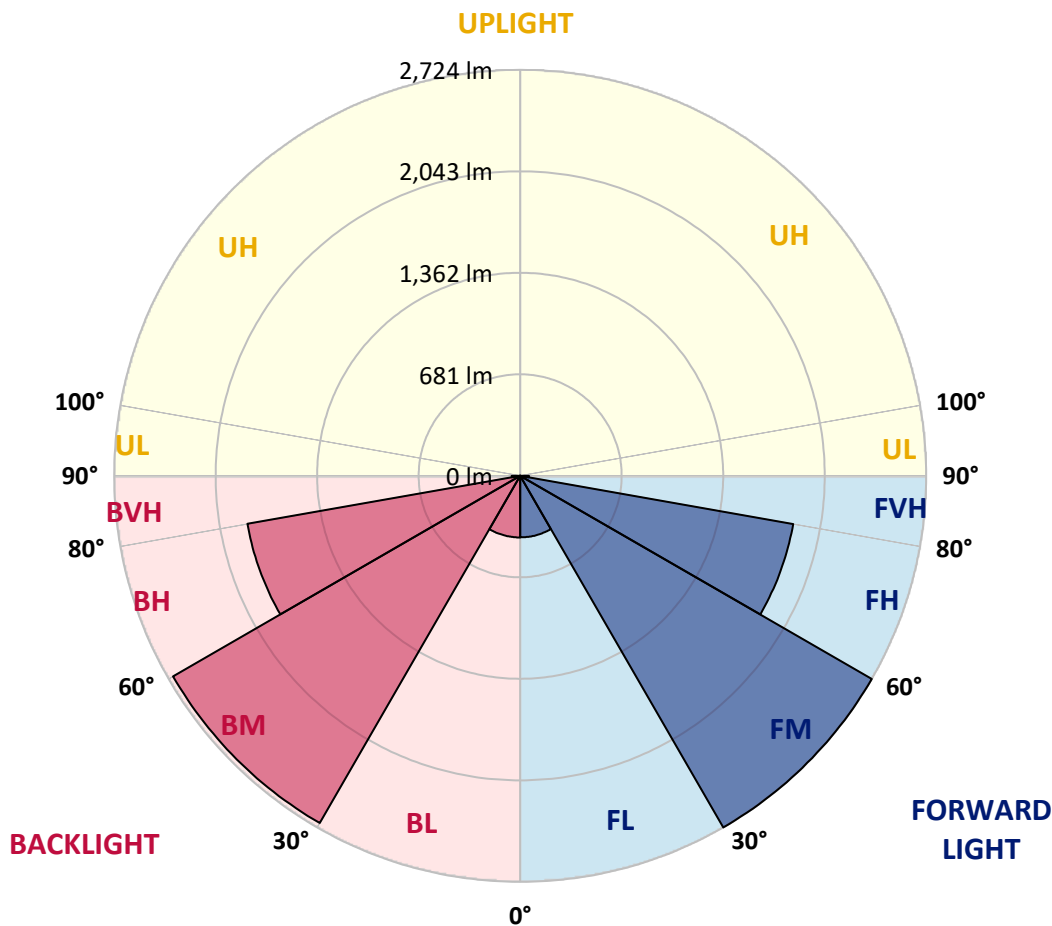
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	412.8	4.1			
FM (30°-60°)	2724.1	27.0			
FH (60°-80°)	1860.1	18.5			G2/5000
FVH (80°-90°)	58.7	0.6			G1/100
BL (0°-30°)	413.6	4.1	B1/500		
BM (30°-60°)	2689.7	26.7	B3/5000		
BH (60°-80°)	1858.1	18.4	B3/2500		G3/2500
BVH (80°-90°)	56.9	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°	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6
2.5°	428.3	412.4	392.4	404.2	409.1	417.7	416.5	412.4	394.8	424.2	427.5
5°	536.1	510.8	501.4	499.7	502.2	494.0	520.6	512.8	527.1	553.6	559.8
7.5°	610.4	591.6	571.6	577.7	552.4	548.7	583.0	613.7	621.4	670.0	673.3
10°	645.5	627.1	632.4	628.8	625.9	649.6	665.5	688.0	720.2	724.7	731.6
12.5°	675.3	682.7	705.9	705.1	743.5	785.5	779.4	802.7	808.0	864.3	847.2
15°	750.8	765.9	764.3	778.6	795.3	864.3	864.7	904.4	940.7	962.7	957.0
17.5°	861.5	866.8	844.7	845.6	894.1	922.3	953.8	946.8	1041.5	1084.8	1087.7
20°	927.6	941.1	915.8	882.3	968.5	1007.2	1024.8	984.4	1085.6	1144.0	1144.0
22.5°	1043.2	1008.5	970.1	947.6	1023.6	1064.8	1062.8	1051.3	1105.2	1208.5	1198.7
25°	1106.9	1087.3	1068.1	1073.8	1112.2	1133.4	1161.6	1135.0	1185.7	1262.4	1230.2
27.5°	1227.7	1191.4	1097.1	1172.2	1172.2	1156.3	1215.9	1228.5	1195.5	1320.4	1344.5
30°	1364.5	1351.8	1218.3	1297.9	1273.4	1228.5	1342.8	1334.7	1279.2	1406.5	1395.5
32.5°	1493.9	1535.6	1409.0	1365.3	1402.0	1419.2	1359.2	1383.7	1394.3	1517.2	1511.9
35°	1692.3	1727.5	1559.6	1548.6	1487.4	1471.5	1517.2	1525.4	1526.2	1655.6	1631.9
37.5°	2035.7	1985.1	1819.3	1741.3	1748.3	1729.1	1738.1	1673.6	1682.5	1870.4	1882.2
40°	2286.8	2229.6	2045.1	1989.2	1852.0	1934.0	1861.4	1854.8	1836.9	2080.2	2073.7
42.5°	2564.0	2485.6	2281.5	2206.8	2061.0	2027.5	1994.1	2069.6	2064.7	2290.1	2339.9
45°	2773.5	2615.1	2508.5	2462.0	2374.6	2292.5	2260.7	2294.6	2279.0	2446.4	2533.4
47.5°	2905.8	2768.2	2645.7	2547.7	2464.0	2665.3	2504.0	2458.7	2427.3	2614.7	2698.4
50°	3011.1	2852.3	2707.7	2675.1	2741.2	2919.2	2664.9	2564.8	2603.2	2741.2	2855.1
52.5°	3039.7	2871.5	2741.6	2720.8	2899.6	2931.9	2890.7	2722.4	2712.2	2893.1	3030.7
55°	2952.3	2791.0	2729.4	2843.3	3040.9	3014.0	3076.8	2969.5	2897.2	3048.3	3221.4
57.5°	2727.3	2567.3	2552.6	2716.7	2965.8	3195.2	3226.3	3141.3	3046.6	3206.7	3410.8
60°	2357.8	2211.7	2248.8	2430.1	2805.7	3132.4	3297.3	3219.7	3190.3	3349.6	3586.4
62.5°	1782.6	1668.7	1767.9	2020.6	2513.4	3051.1	3395.3	3383.0	3340.6	3501.4	3741.5
65°	1136.7	1076.6	1177.9	1434.7	2059.8	2903.3	3442.2	3458.6	3497.8	3618.6	3861.6
67.5°	660.6	628.8	690.4	900.7	1467.0	2384.0	3354.9	3589.2	3609.6	3679.1	3940.4
70°	390.7	369.9	395.2	505.9	830.5	1624.2	2861.7	3532.1	3686.4	3734.6	4020.0
72.5°	298.0	278.5	267.4	299.3	433.6	839.0	1934.9	2994.0	3624.8	3697.8	3986.5
75°	257.6	238.8	225.8	228.6	258.0	398.5	1048.9	2141.5	3088.7	3367.1	3682.3
77.5°	221.3	204.6	195.2	194.3	198.0	218.8	438.5	1161.2	1934.5	2420.3	2654.7
80°	177.2	164.1	162.1	162.1	156.8	155.1	218.0	441.8	736.1	872.9	837.0
82.5°	129.4	116.4	129.4	127.8	119.6	113.1	138.8	191.1	227.0	179.2	141.7
85°	87.4	75.5	85.3	87.0	79.2	58.8	83.3	95.5	98.0	61.2	50.6
87.5°	30.6	29.8	48.2	42.1	34.3	20.0	30.6	33.1	34.7	21.6	14.7
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°	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6
2.5°	428.7	423.8	399.3	403.0	412.4	416.9	421.3	403.0	394.0	422.6	419.7
5°	561.4	543.4	523.4	520.6	521.8	504.2	514.4	509.9	512.0	530.4	534.0
7.5°	672.4	650.8	624.3	603.4	567.5	538.9	563.0	575.3	578.9	611.6	623.9
10°	732.5	714.1	706.3	667.1	655.3	651.6	645.9	626.3	647.9	640.2	646.3
12.5°	850.0	846.4	806.0	780.2	782.7	789.6	753.7	734.1	705.9	750.0	734.1
15°	950.1	966.0	925.6	878.6	855.4	867.2	839.8	811.3	785.9	799.4	782.3
17.5°	1077.9	1077.5	998.7	948.4	946.4	945.6	905.2	842.3	872.5	863.1	863.9
20°	1145.6	1134.6	1036.6	978.7	1028.1	1010.5	974.2	893.3	928.4	939.9	947.2
22.5°	1202.4	1196.3	1077.5	1035.0	1066.8	1067.3	1030.9	988.5	984.0	1019.5	1000.3
25°	1242.0	1266.5	1154.6	1144.4	1158.3	1144.4	1108.9	1081.1	1063.2	1116.3	1063.2
27.5°	1335.9	1301.2	1166.5	1224.4	1233.0	1163.2	1207.7	1175.0	1125.2	1191.0	1212.6
30°	1402.9	1423.3	1249.8	1337.1	1326.9	1262.4	1280.8	1279.6	1220.0	1348.2	1333.0
32.5°	1518.0	1493.5	1385.7	1378.8	1403.3	1400.4	1369.4	1384.5	1399.2	1492.3	1514.7
35°	1636.0	1662.1	1472.7	1519.6	1512.7	1468.6	1549.8	1540.5	1584.1	1775.2	1711.9
37.5°	1902.2	1777.7	1667.8	1661.7	1708.3	1715.2	1689.1	1730.3	1824.6	1971.6	2039.4
40°	2076.5	2019.8	1833.2	1840.5	1776.0	1887.1	1813.6	1946.3	2018.2	2266.0	2241.9
42.5°	2340.3	2201.9	2022.6	2047.1	2034.1	1980.6	2077.4	2145.5	2248.4	2437.5	2559.5
45°	2536.7	2346.8	2261.9	2246.8	2245.2	2338.2	2326.0	2435.0	2471.8	2613.8	2715.1
47.5°	2685.7	2524.4	2398.7	2415.8	2366.0	2631.8	2490.1	2524.0	2598.3	2732.2	2850.2
50°	2862.5	2682.8	2539.9	2582.4	2703.7	2805.7	2677.5	2619.6	2655.9	2813.9	2945.4
52.5°	3026.2	2837.2	2680.0	2715.5	2913.5	2867.0	2853.1	2706.5	2702.0	2829.0	2978.4
55°	3217.7	3004.6	2865.8	2978.4	3048.7	2991.1	2969.0	2790.6	2680.4	2751.0	2891.9
57.5°	3405.5	3170.3	3032.3	3055.6	3144.6	3087.4	2922.1	2647.3	2509.7	2523.6	2666.1
60°	3581.5	3322.6	3208.7	3186.3	3257.3	3033.1	2743.7	2384.8	2202.3	2168.8	2292.1
62.5°	3732.1	3450.0	3342.2	3281.0	3348.8	3035.2	2465.6	1963.4	1763.0	1649.5	1745.4
65°	3851.8	3555.8	3479.0	3447.1	3471.6	2850.6	2032.4	1441.7	1195.9	1070.1	1126.0
67.5°	3931.4	3615.0	3579.8	3621.5	3294.9	2374.2	1505.8	922.7	695.3	626.7	661.8
70°	4013.8	3667.2	3666.0	3524.3	2793.9	1636.8	879.4	532.0	404.6	378.1	400.1
72.5°	3986.1	3605.2	3623.5	3082.1	1936.1	875.0	464.2	300.9	274.0	283.3	302.9
75°	3691.3	3277.7	3189.1	2215.8	1098.3	406.7	267.4	227.8	226.2	240.5	259.7
77.5°	2677.5	2282.7	2048.4	1255.9	470.8	220.1	196.8	190.3	190.3	201.7	218.8
80°	882.7	763.9	796.2	485.9	222.5	151.9	153.5	156.4	155.6	158.4	172.7
82.5°	144.9	150.2	232.3	198.4	134.3	103.7	116.0	121.7	123.3	110.2	125.3
85°	51.4	58.0	98.8	91.9	77.6	52.3	76.3	85.3	84.1	73.5	81.2
87.5°	15.9	20.4	35.9	27.8	23.3	14.3	28.6	33.5	42.1	17.1	15.5
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)