

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: P367350

Luminaire Tested: **MSA-SA2B-760-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367350  
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-760-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: 10229 lumens  
Efficiency: N/A  
Efficacy: 120.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3

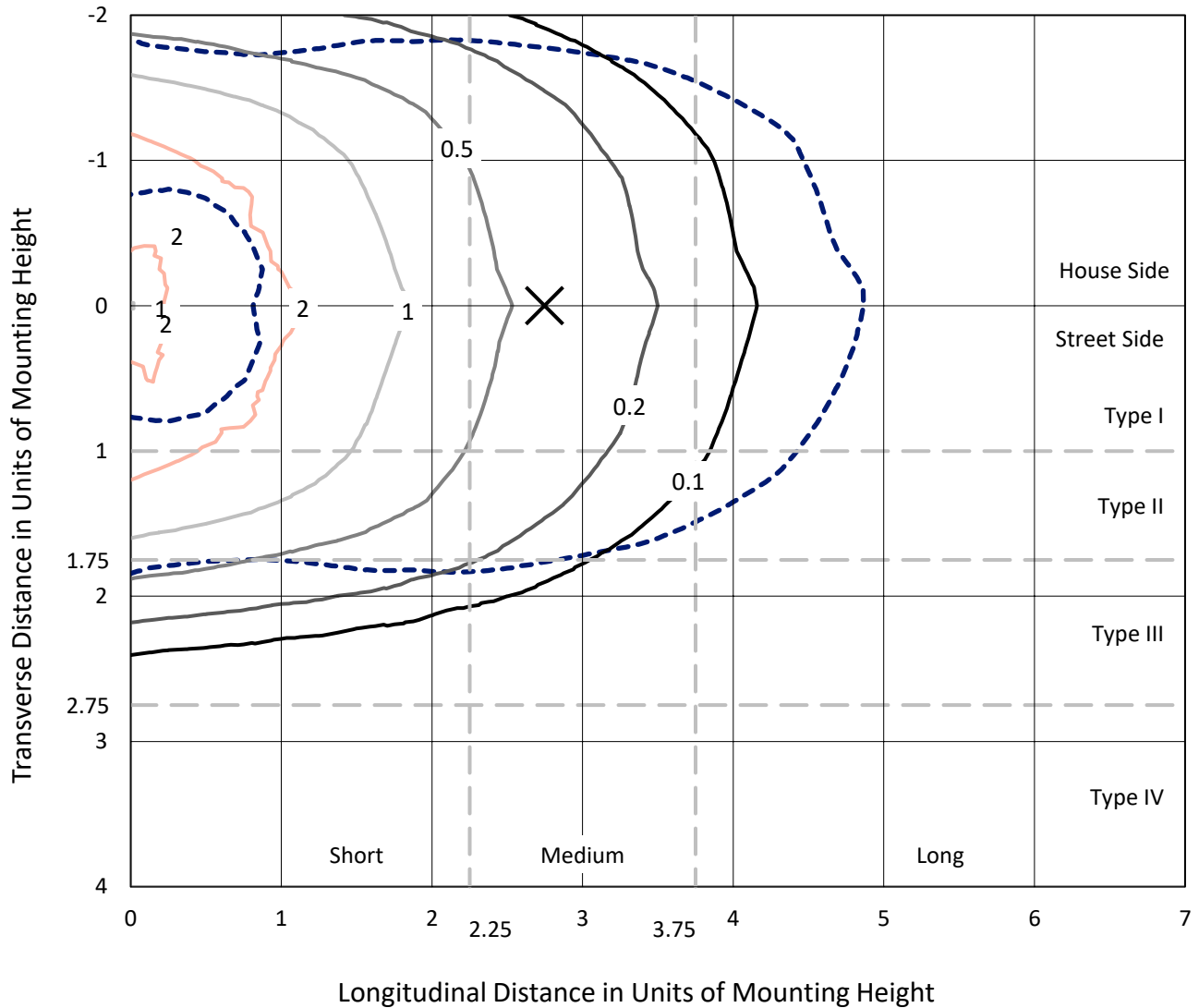
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

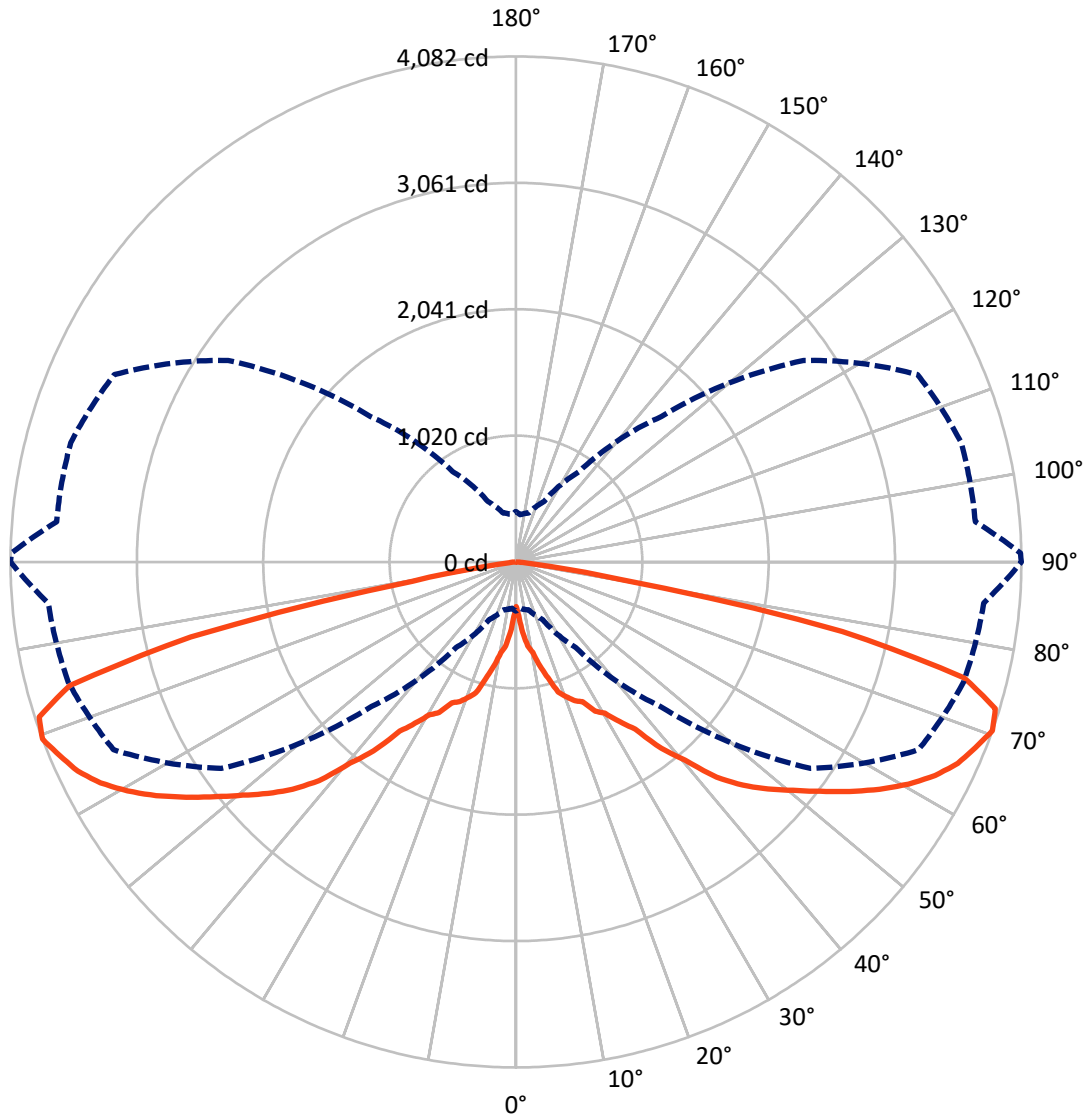
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.6 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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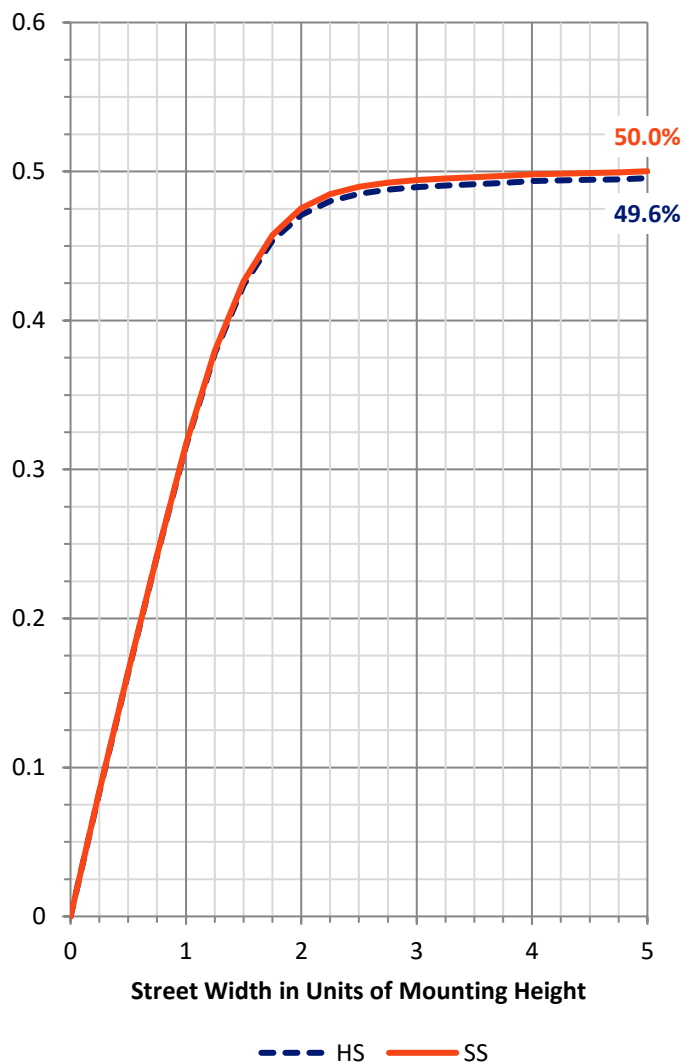
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5095.6	0.0	5095.6
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	5133.4	0.0	5133.4
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	10229.0	0.0	10229.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.1	0.5
10°-20°	248.2	2.4
20°-30°	536.7	5.2
30°-40°	1023.9	10.0
40°-50°	1860.2	18.2
50°-60°	2613.1	25.5
60°-70°	2495.0	24.4
70°-80°	1280.4	12.5
80°-90°	117.4	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°	10229.0	100.0
0°-180°	10229.0	100.0

**Coefficient of Utilization**



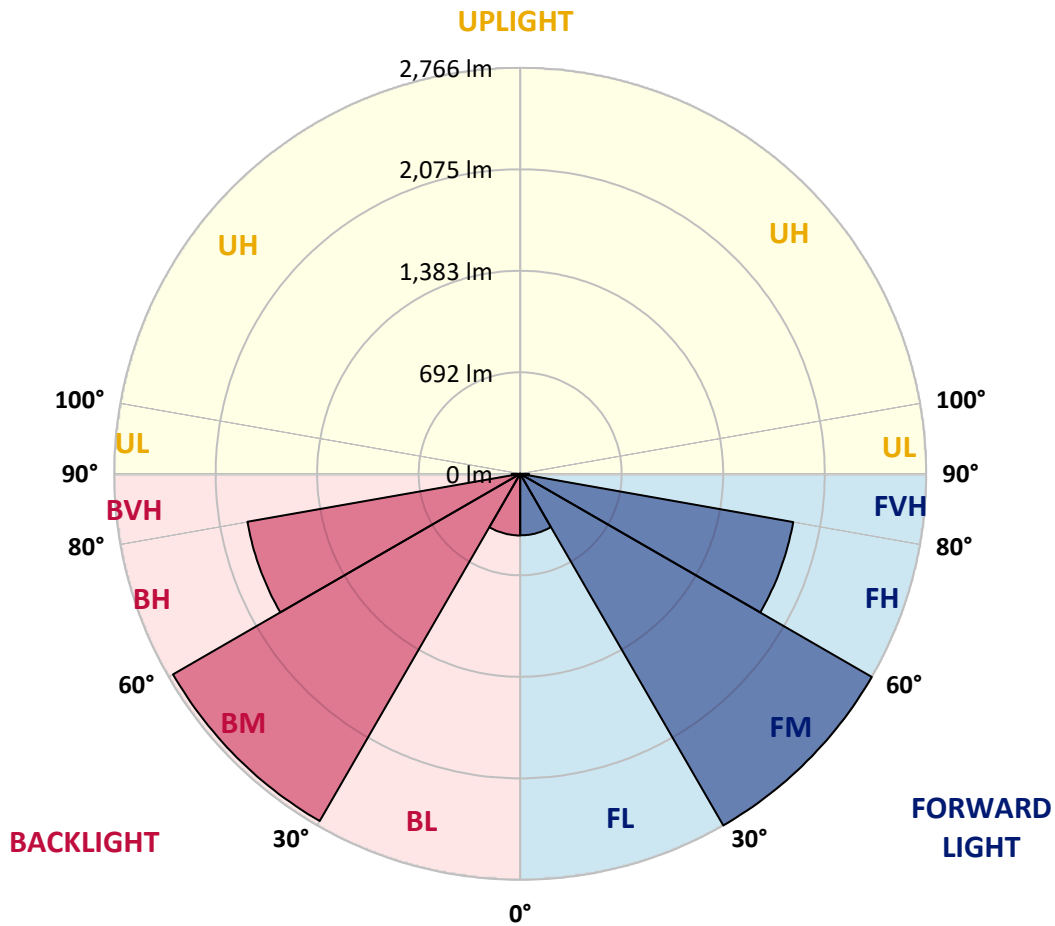
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	419.1	4.1			
FM (30°-60°)	2766.0	27.0			
FH (60°-80°)	1888.7	18.5			G2/5000
FVH (80°-90°)	59.6	0.6			G1/100
BL (0°-30°)	419.9	4.1	B1/500		
BM (30°-60°)	2731.1	26.7	B3/5000		
BH (60°-80°)	1886.7	18.4	B3/2500		G3/2500
BVH (80°-90°)	57.8	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°	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0
2.5°	434.9	418.7	398.4	410.4	415.4	424.1	422.9	418.7	400.9	430.7	434.1
5°	544.3	518.6	509.1	507.4	509.9	501.6	528.6	520.7	535.2	562.2	568.4
7.5°	619.8	600.7	580.4	586.6	560.9	557.2	592.0	623.1	631.0	680.3	683.6
10°	655.4	636.8	642.2	638.4	635.5	659.6	675.7	698.5	731.3	735.9	742.9
12.5°	685.7	693.2	716.8	716.0	754.9	797.6	791.4	815.0	820.4	877.6	860.2
15°	762.4	777.7	776.1	790.6	807.6	877.6	878.1	918.3	955.2	977.5	971.7
17.5°	874.7	880.1	857.7	858.6	907.9	936.5	968.4	961.4	1057.6	1101.5	1104.4
20°	941.9	955.6	929.9	895.9	983.4	1022.7	1040.6	999.5	1102.3	1161.6	1161.6
22.5°	1059.2	1024.0	985.0	962.2	1039.3	1081.2	1079.1	1067.5	1122.2	1227.1	1217.2
25°	1123.9	1104.0	1084.5	1090.3	1129.3	1150.8	1179.4	1152.5	1203.9	1281.8	1249.1
27.5°	1246.6	1209.7	1113.9	1190.2	1190.2	1174.1	1234.6	1247.4	1213.9	1340.7	1365.2
30°	1385.5	1372.6	1237.1	1317.9	1293.0	1247.4	1363.5	1355.2	1298.8	1428.2	1417.0
32.5°	1516.9	1559.2	1430.7	1386.3	1423.6	1441.0	1380.1	1405.0	1415.7	1540.5	1535.1
35°	1718.4	1754.0	1583.6	1572.5	1510.3	1494.1	1540.5	1548.8	1549.7	1681.1	1657.0
37.5°	2067.0	2015.6	1847.3	1768.1	1775.2	1755.7	1764.8	1699.3	1708.4	1899.1	1911.2
40°	2322.0	2263.9	2076.6	2019.8	1880.5	1963.8	1890.0	1883.4	1865.1	2112.2	2105.6
42.5°	2603.5	2523.9	2316.6	2240.7	2092.7	2058.7	2024.7	2101.4	2096.5	2325.3	2375.9
45°	2816.2	2655.3	2547.1	2499.8	2411.1	2327.8	2295.5	2329.9	2314.1	2484.1	2572.4
47.5°	2950.5	2810.8	2686.4	2586.9	2501.9	2706.3	2542.5	2496.5	2464.6	2654.9	2739.9
50°	3057.4	2896.2	2749.4	2716.2	2783.4	2964.2	2705.9	2604.3	2643.3	2783.4	2899.1
52.5°	3086.4	2915.6	2783.8	2762.7	2944.3	2977.0	2935.1	2764.3	2754.0	2937.6	3077.3
55°	2997.7	2834.0	2771.4	2887.0	3087.7	3060.3	3124.2	3015.1	2941.8	3095.2	3270.9
57.5°	2769.3	2606.8	2591.9	2758.5	3011.4	3244.4	3275.9	3189.7	3093.5	3256.0	3463.3
60°	2394.1	2245.7	2283.4	2467.5	2848.9	3180.6	3348.0	3269.3	3239.4	3401.1	3641.6
62.5°	1810.0	1694.3	1795.1	2051.7	2552.1	3098.1	3447.5	3435.1	3392.0	3555.3	3799.1
65°	1154.2	1093.2	1196.0	1456.8	2091.5	2948.0	3495.2	3511.8	3551.6	3674.3	3921.0
67.5°	670.8	638.4	701.0	914.5	1489.5	2420.7	3406.5	3644.5	3665.2	3735.7	4001.0
70°	396.7	375.6	401.3	513.6	843.2	1649.1	2905.7	3586.4	3743.1	3792.0	4081.8
72.5°	302.6	282.7	271.5	303.9	440.3	851.9	1964.6	3040.0	3680.5	3754.7	4047.8
75°	261.6	242.5	229.3	232.2	262.0	404.6	1065.0	2174.4	3136.2	3418.9	3739.0
77.5°	224.7	207.7	198.2	197.3	201.1	222.2	445.2	1179.0	1964.2	2457.6	2695.5
80°	179.9	166.7	164.6	164.6	159.2	157.5	221.4	448.6	747.5	886.3	849.9
82.5°	131.4	118.2	131.4	129.8	121.5	114.8	141.0	194.0	230.5	182.0	143.9
85°	88.7	76.7	86.6	88.3	80.4	59.7	84.6	97.0	99.5	62.2	51.4
87.5°	31.1	30.3	48.9	42.7	34.8	20.3	31.1	33.6	35.2	22.0	14.9
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°	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0	359.0
2.5°	435.3	430.3	405.4	409.2	418.7	423.3	427.8	409.2	400.1	429.1	426.2
5°	570.0	551.8	531.5	528.6	529.8	512.0	522.4	517.8	519.9	538.5	542.3
7.5°	682.8	660.8	633.9	612.7	576.2	547.2	571.7	584.1	587.9	621.0	633.5
10°	743.7	725.1	717.2	677.4	665.4	661.6	655.8	635.9	657.9	650.0	656.3
12.5°	863.1	859.4	818.4	792.2	794.7	801.8	765.3	745.4	716.8	761.6	745.4
15°	964.7	980.9	939.8	892.1	868.5	880.5	852.8	823.7	798.0	811.7	794.3
17.5°	1094.5	1094.0	1014.0	963.0	961.0	960.1	919.1	855.3	885.9	876.4	877.2
20°	1163.3	1152.1	1052.6	993.7	1043.9	1026.1	989.2	907.1	942.7	954.3	961.8
22.5°	1220.9	1214.7	1094.0	1050.9	1083.3	1083.7	1046.8	1003.7	999.1	1035.2	1015.7
25°	1261.1	1286.0	1172.4	1162.0	1176.1	1162.0	1126.0	1097.8	1079.5	1133.4	1079.5
27.5°	1356.5	1321.2	1184.4	1243.3	1252.0	1181.1	1226.3	1193.1	1142.5	1209.3	1231.3
30°	1424.5	1445.2	1269.0	1357.7	1347.3	1281.8	1300.5	1299.3	1238.7	1368.9	1353.6
32.5°	1541.4	1516.5	1407.0	1400.0	1424.9	1422.0	1390.5	1405.8	1420.7	1515.2	1538.0
35°	1661.2	1687.7	1495.3	1543.0	1536.0	1491.2	1573.7	1564.2	1608.5	1802.5	1738.3
37.5°	1931.5	1805.0	1693.5	1687.3	1734.5	1741.6	1715.1	1756.9	1852.7	2001.9	2070.8
40°	2108.5	2050.9	1861.4	1868.9	1803.4	1916.1	1841.5	1976.2	2049.2	2300.8	2276.4
42.5°	2376.3	2235.8	2053.8	2078.6	2065.4	2011.1	2109.3	2178.5	2283.0	2475.0	2598.9
45°	2575.7	2382.9	2296.7	2281.4	2279.7	2374.2	2361.8	2472.5	2509.8	2654.1	2756.9
47.5°	2727.0	2563.3	2435.6	2453.0	2402.4	2672.3	2528.4	2562.9	2638.3	2774.3	2894.1
50°	2906.5	2724.1	2579.0	2622.1	2745.3	2848.9	2718.7	2659.9	2696.8	2857.2	2990.7
52.5°	3072.8	2880.8	2721.2	2757.3	2958.3	2911.1	2897.0	2748.2	2743.6	2872.5	3024.3
55°	3267.2	3050.8	2909.8	3024.3	3095.6	3037.1	3014.7	2833.6	2721.6	2793.4	2936.4
57.5°	3457.9	3219.1	3079.0	3102.6	3193.0	3135.0	2967.1	2688.1	2548.3	2562.4	2707.1
60°	3636.6	3373.7	3258.1	3235.3	3307.4	3079.8	2785.9	2421.5	2236.2	2202.2	2327.4
62.5°	3789.6	3503.1	3393.6	3331.5	3400.3	3081.9	2503.6	1993.7	1790.1	1674.8	1772.3
65°	3911.0	3610.5	3532.5	3500.2	3525.1	2894.5	2063.7	1463.8	1214.3	1086.6	1143.4
67.5°	3991.9	3670.6	3634.9	3677.2	3345.6	2410.7	1528.9	936.9	706.0	636.4	672.0
70°	4075.6	3723.6	3722.4	3578.5	2836.9	1662.0	893.0	540.2	410.8	383.9	406.3
72.5°	4047.4	3660.6	3679.3	3129.6	1965.9	888.4	471.4	305.5	278.2	287.7	307.6
75°	3748.1	3328.1	3238.2	2249.9	1115.2	412.9	271.5	231.3	229.7	244.2	263.7
77.5°	2718.7	2317.8	2079.9	1275.2	478.0	223.5	199.8	193.2	193.2	204.8	222.2
80°	896.3	775.7	808.4	493.3	225.9	154.2	155.9	158.8	157.9	160.9	175.4
82.5°	147.2	152.6	235.9	201.5	136.4	105.3	117.7	123.5	125.2	111.9	127.3
85°	52.2	58.9	100.3	93.3	78.8	53.1	77.5	86.6	85.4	74.6	82.5
87.5°	16.2	20.7	36.5	28.2	23.6	14.5	29.0	34.0	42.7	17.4	15.8
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)