

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: P596940

Luminaire Tested: **MSA-SA2B-835-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596940
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-835-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: 8433 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

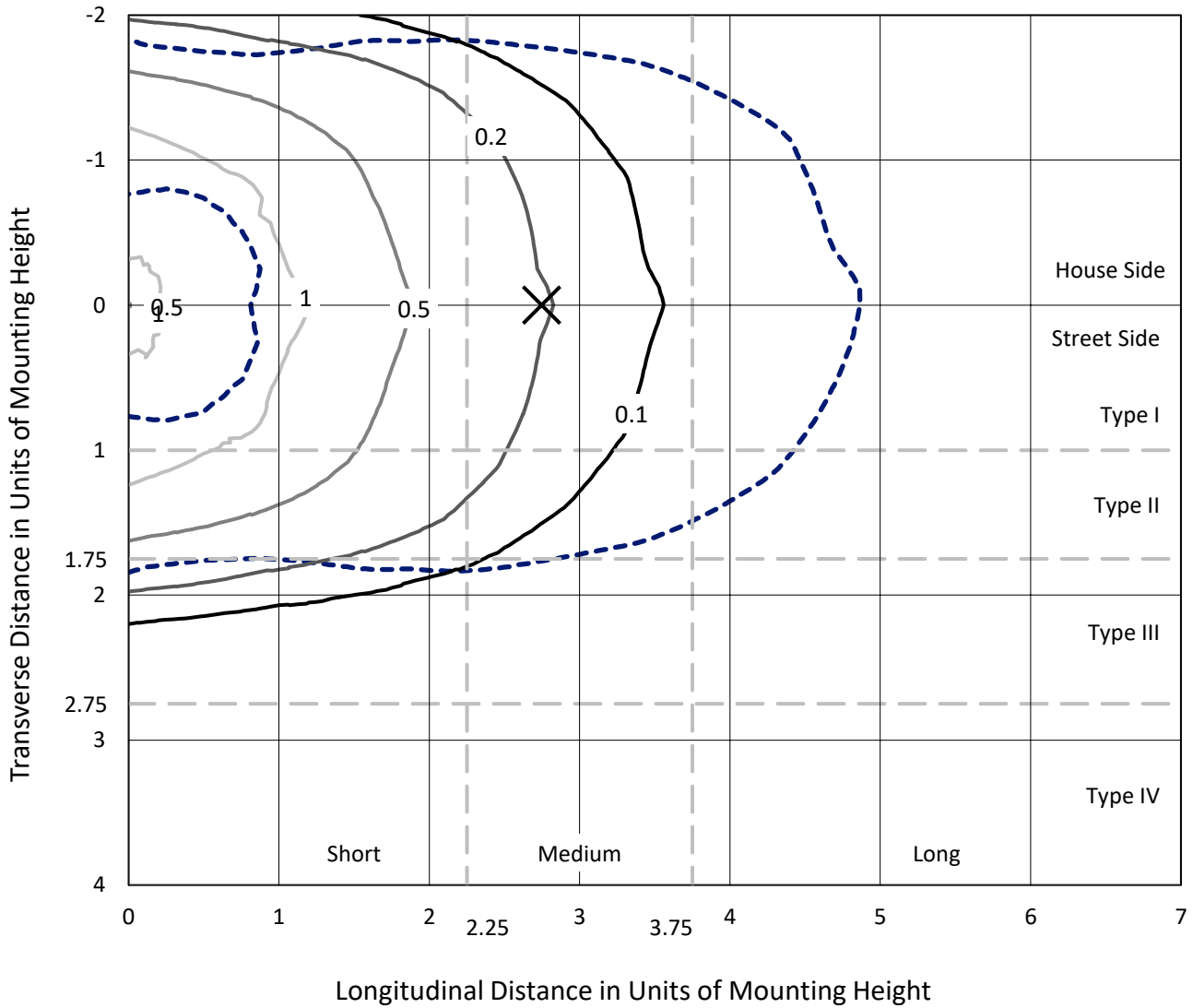
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

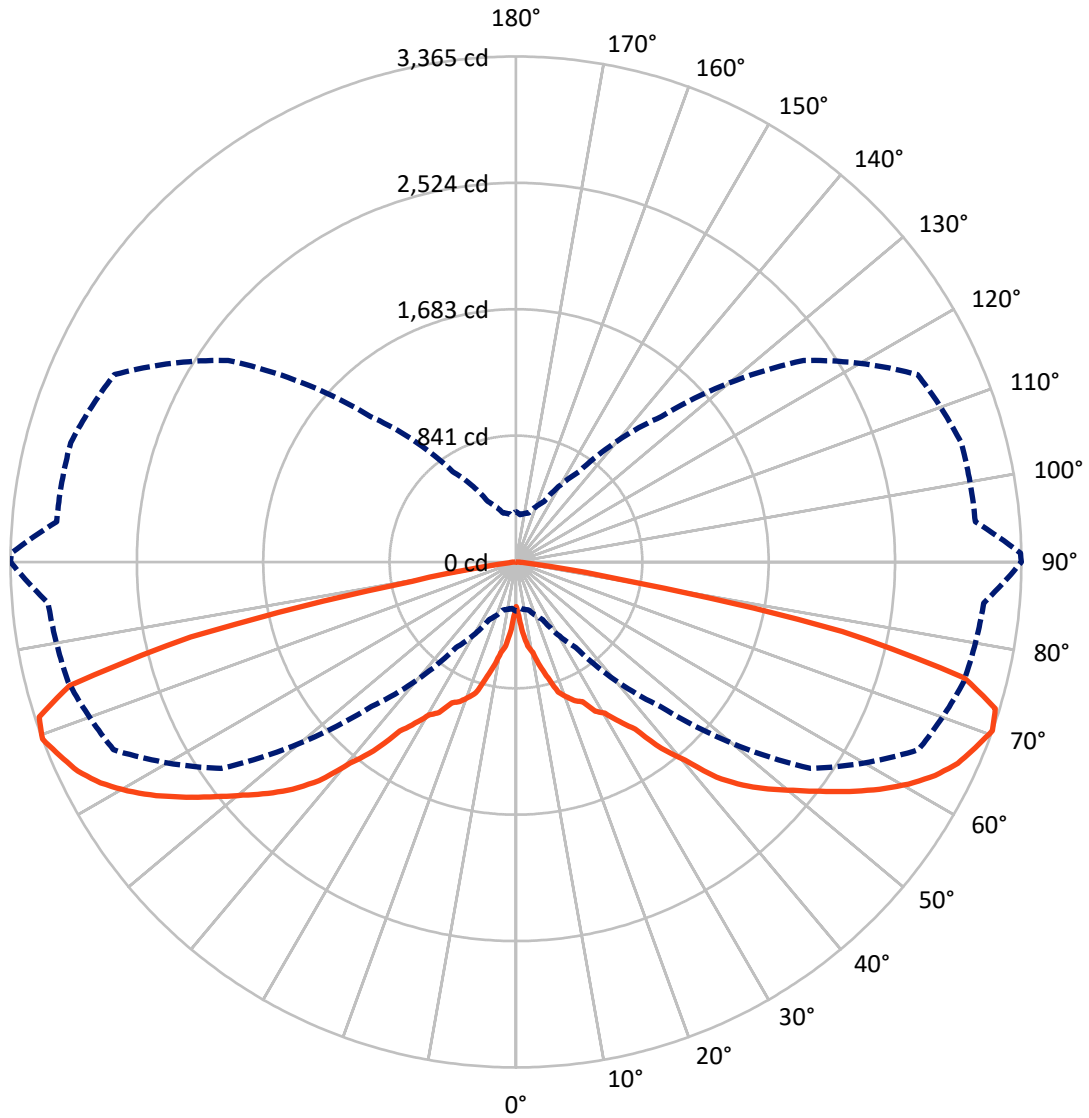
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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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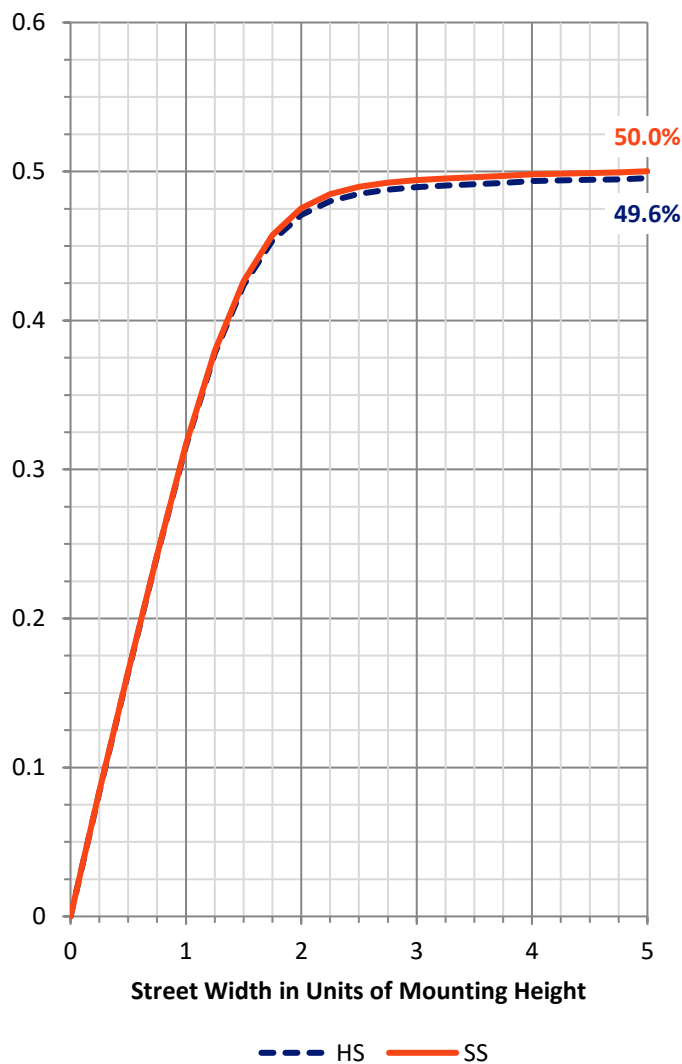
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4200.9	0.0	4200.9
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	4232.1	0.0	4232.1
	% Fixture	50.2	0.0	50.2
Total	Lumens	8433.0	0.0	8433.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.6	0.5
10°-20°	204.6	2.4
20°-30°	442.5	5.2
30°-40°	844.2	10.0
40°-50°	1533.5	18.2
50°-60°	2154.3	25.5
60°-70°	2056.9	24.4
70°-80°	1055.6	12.5
80°-90°	96.8	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°	8433.0	100.0
0°-180°	8433.0	100.0

Coefficient of Utilization



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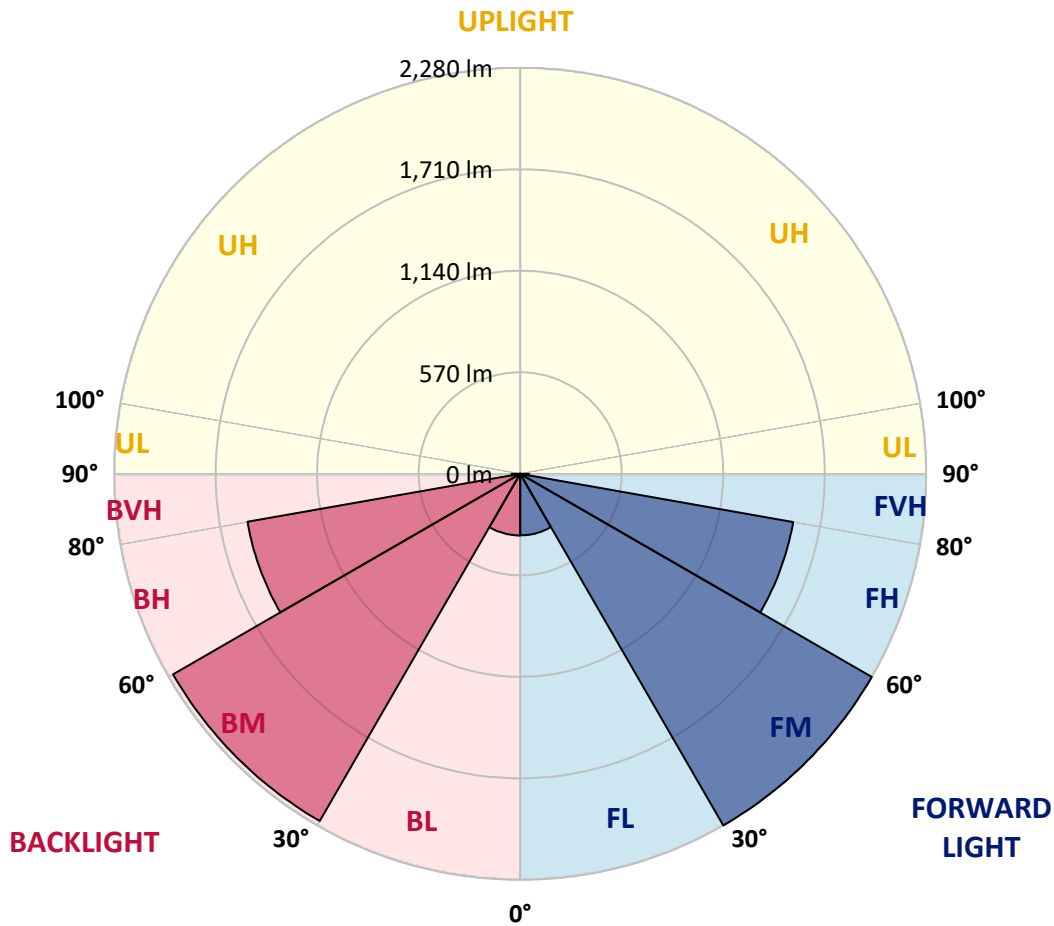
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	345.5	4.1			
FM (30°-60°)	2280.4	27.0			
FH (60°-80°)	1557.1	18.5			G1/1800
FVH (80°-90°)	49.1	0.6			G1/100
BL (0°-30°)	346.2	4.1	B1/500		
BM (30°-60°)	2251.6	26.7	B2/2500		
BH (60°-80°)	1555.4	18.4	B3/2500		G3/2500
BVH (80°-90°)	47.7	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°	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0
2.5°	358.5	345.2	328.4	338.4	342.5	349.6	348.6	345.2	330.5	355.1	357.8
5°	448.8	427.6	419.7	418.3	420.4	413.6	435.8	429.3	441.2	463.5	468.6
7.5°	511.0	495.2	478.5	483.6	462.4	459.3	488.1	513.7	520.2	560.9	563.6
10°	540.4	525.0	529.4	526.3	523.9	543.8	557.1	575.9	602.9	606.7	612.5
12.5°	565.3	571.5	590.9	590.2	622.4	657.6	652.5	671.9	676.4	723.5	709.2
15°	628.5	641.2	639.8	651.8	665.8	723.5	723.9	757.0	787.5	805.9	801.1
17.5°	721.2	725.6	707.1	707.8	748.5	772.1	798.4	792.6	871.9	908.1	910.5
20°	776.5	787.8	766.6	738.6	810.7	843.2	857.9	824.0	908.8	957.7	957.7
22.5°	873.2	844.2	812.1	793.3	856.8	891.4	889.6	880.1	925.2	1011.7	1003.5
25°	926.6	910.2	894.1	898.9	931.0	948.8	972.4	950.1	992.5	1056.8	1029.8
27.5°	1027.7	997.3	918.4	981.2	981.2	967.9	1017.8	1028.4	1000.7	1105.3	1125.5
30°	1142.2	1131.6	1019.9	1086.5	1066.0	1028.4	1124.1	1117.3	1070.8	1177.4	1168.2
32.5°	1250.6	1285.4	1179.5	1142.9	1173.7	1188.0	1137.8	1158.3	1167.2	1270.0	1265.6
35°	1416.7	1446.1	1305.6	1296.4	1245.1	1231.8	1270.0	1276.9	1277.6	1385.9	1366.1
37.5°	1704.1	1661.7	1523.0	1457.7	1463.5	1447.4	1454.9	1400.9	1408.5	1565.7	1575.6
40°	1914.3	1866.4	1712.0	1665.1	1550.3	1619.0	1558.2	1552.7	1537.7	1741.4	1735.9
42.5°	2146.4	2080.7	1909.9	1847.3	1725.3	1697.3	1669.2	1732.5	1728.4	1917.0	1958.7
45°	2321.7	2189.1	2099.9	2060.9	1987.8	1919.1	1892.4	1920.8	1907.8	2047.9	2120.7
47.5°	2432.4	2317.3	2214.7	2132.7	2062.6	2231.1	2096.1	2058.2	2031.9	2188.7	2258.8
50°	2520.6	2387.7	2266.7	2239.3	2294.7	2443.7	2230.8	2147.0	2179.2	2294.7	2390.0
52.5°	2544.5	2403.7	2295.0	2277.6	2427.3	2454.3	2419.8	2279.0	2270.4	2421.8	2537.0
55°	2471.4	2336.4	2284.8	2380.1	2545.6	2523.0	2575.6	2485.7	2425.3	2551.7	2696.6
57.5°	2283.1	2149.1	2136.8	2274.2	2482.7	2674.7	2700.7	2629.6	2550.3	2684.3	2855.2
60°	1973.8	1851.4	1882.5	2034.3	2348.7	2622.1	2760.2	2695.3	2670.6	2803.9	3002.2
62.5°	1492.2	1396.8	1479.9	1691.5	2104.0	2554.1	2842.2	2832.0	2796.4	2931.1	3132.0
65°	951.5	901.3	986.0	1201.0	1724.3	2430.4	2881.5	2895.2	2928.0	3029.2	3232.5
67.5°	553.0	526.3	577.9	754.0	1228.0	1995.6	2808.4	3004.6	3021.7	3079.8	3298.5
70°	327.1	309.7	330.8	423.5	695.2	1359.6	2395.5	2956.7	3085.9	3126.2	3365.1
72.5°	249.5	233.1	223.9	250.5	363.0	702.4	1619.7	2506.3	3034.3	3095.5	3337.1
75°	215.7	199.9	189.0	191.4	216.0	333.6	878.0	1792.6	2585.5	2818.6	3082.5
77.5°	185.2	171.2	163.4	162.7	165.8	183.2	367.1	972.0	1619.3	2026.1	2222.2
80°	148.3	137.4	135.7	135.7	131.2	129.9	182.5	369.8	616.2	730.7	700.6
82.5°	108.3	97.4	108.3	107.0	100.1	94.7	116.2	160.0	190.0	150.0	118.6
85°	73.1	63.2	71.4	72.8	66.3	49.2	69.7	80.0	82.0	51.3	42.4
87.5°	25.6	24.9	40.3	35.2	28.7	16.7	25.6	27.7	29.1	18.1	12.3
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°	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0	296.0
2.5°	358.9	354.8	334.3	337.3	345.2	349.0	352.7	337.3	329.8	353.7	351.3
5°	469.9	454.9	438.2	435.8	436.8	422.1	430.6	426.9	428.6	444.0	447.0
7.5°	562.9	544.8	522.6	505.1	475.1	451.1	471.3	481.6	484.6	512.0	522.2
10°	613.1	597.8	591.3	558.5	548.6	545.5	540.7	524.3	542.4	535.9	541.0
12.5°	711.6	708.5	674.7	653.1	655.2	661.0	630.9	614.5	590.9	627.8	614.5
15°	795.3	808.6	774.8	735.5	716.0	725.9	703.0	679.1	657.9	669.2	654.8
17.5°	902.3	902.0	836.0	793.9	792.2	791.6	757.7	705.1	730.4	722.5	723.2
20°	959.0	949.8	867.8	819.2	860.6	845.9	815.5	747.8	777.2	786.8	792.9
22.5°	1006.5	1001.4	902.0	866.4	893.1	893.4	863.0	827.4	823.7	853.4	837.4
25°	1039.7	1060.2	966.5	958.0	969.6	958.0	928.3	905.0	890.0	934.4	890.0
27.5°	1118.3	1089.2	976.5	1025.0	1032.2	973.7	1011.0	983.6	941.9	997.0	1015.1
30°	1174.3	1191.4	1046.2	1119.3	1110.8	1056.8	1072.2	1071.1	1021.2	1128.5	1115.9
32.5°	1270.7	1250.2	1160.0	1154.2	1174.7	1172.3	1146.3	1159.0	1171.3	1249.2	1268.0
35°	1369.5	1391.4	1232.8	1272.1	1266.3	1229.4	1297.4	1289.5	1326.1	1486.0	1433.1
37.5°	1592.3	1488.1	1396.2	1391.0	1430.0	1435.8	1413.9	1448.5	1527.4	1650.4	1707.2
40°	1738.3	1690.8	1534.6	1540.7	1486.7	1579.7	1518.2	1629.3	1689.4	1896.9	1876.7
42.5°	1959.1	1843.2	1693.2	1713.7	1702.7	1658.0	1739.0	1796.0	1882.2	2040.4	2142.6
45°	2123.5	1964.5	1893.4	1880.8	1879.4	1957.4	1947.1	2038.4	2069.1	2188.1	2272.8
47.5°	2248.2	2113.2	2007.9	2022.3	1980.6	2203.1	2084.5	2112.9	2175.1	2287.2	2385.9
50°	2396.2	2245.8	2126.2	2161.7	2263.2	2348.7	2241.4	2192.8	2223.3	2355.5	2465.6
52.5°	2533.3	2375.0	2243.4	2273.2	2438.9	2400.0	2388.3	2265.6	2261.9	2368.2	2493.3
55°	2693.5	2515.1	2398.9	2493.3	2552.1	2503.9	2485.4	2336.0	2243.8	2302.9	2420.8
57.5°	2850.8	2653.9	2538.4	2557.9	2632.4	2584.5	2446.1	2216.1	2100.9	2112.5	2231.8
60°	2998.1	2781.4	2686.0	2667.2	2726.7	2539.1	2296.7	1996.3	1843.5	1815.5	1918.7
62.5°	3124.2	2888.0	2797.8	2746.5	2803.3	2540.8	2064.0	1643.6	1475.8	1380.8	1461.1
65°	3224.3	2976.5	2912.3	2885.6	2906.1	2386.3	1701.4	1206.8	1001.1	895.8	942.6
67.5°	3291.0	3026.1	2996.7	3031.6	2758.1	1987.4	1260.5	772.4	582.0	524.6	554.0
70°	3360.0	3069.8	3068.8	2950.2	2338.8	1370.2	736.2	445.3	338.7	316.5	334.9
72.5°	3336.8	3017.9	3033.3	2580.1	1620.7	732.4	388.6	251.9	229.3	237.2	253.6
75°	3090.0	2743.8	2669.6	1854.8	919.4	340.4	223.9	190.7	189.3	201.3	217.4
77.5°	2241.4	1910.9	1714.7	1051.3	394.1	184.2	164.7	159.3	159.3	168.8	183.2
80°	738.9	639.5	666.5	406.7	186.3	127.1	128.5	130.9	130.2	132.6	144.6
82.5°	121.3	125.8	194.5	166.1	112.4	86.8	97.1	101.8	103.2	92.3	104.9
85°	43.1	48.5	82.7	76.9	64.9	43.7	63.9	71.4	70.4	61.5	68.0
87.5°	13.3	17.1	30.1	23.2	19.5	12.0	23.9	28.0	35.2	14.4	13.0
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)