

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: P596456

Luminaire Tested: **MSA-SA4D-722-U-RW**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596456  
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-SA4D-722-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19861 lumens  
Efficiency: N/A  
Efficacy: 76.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U0 - G4

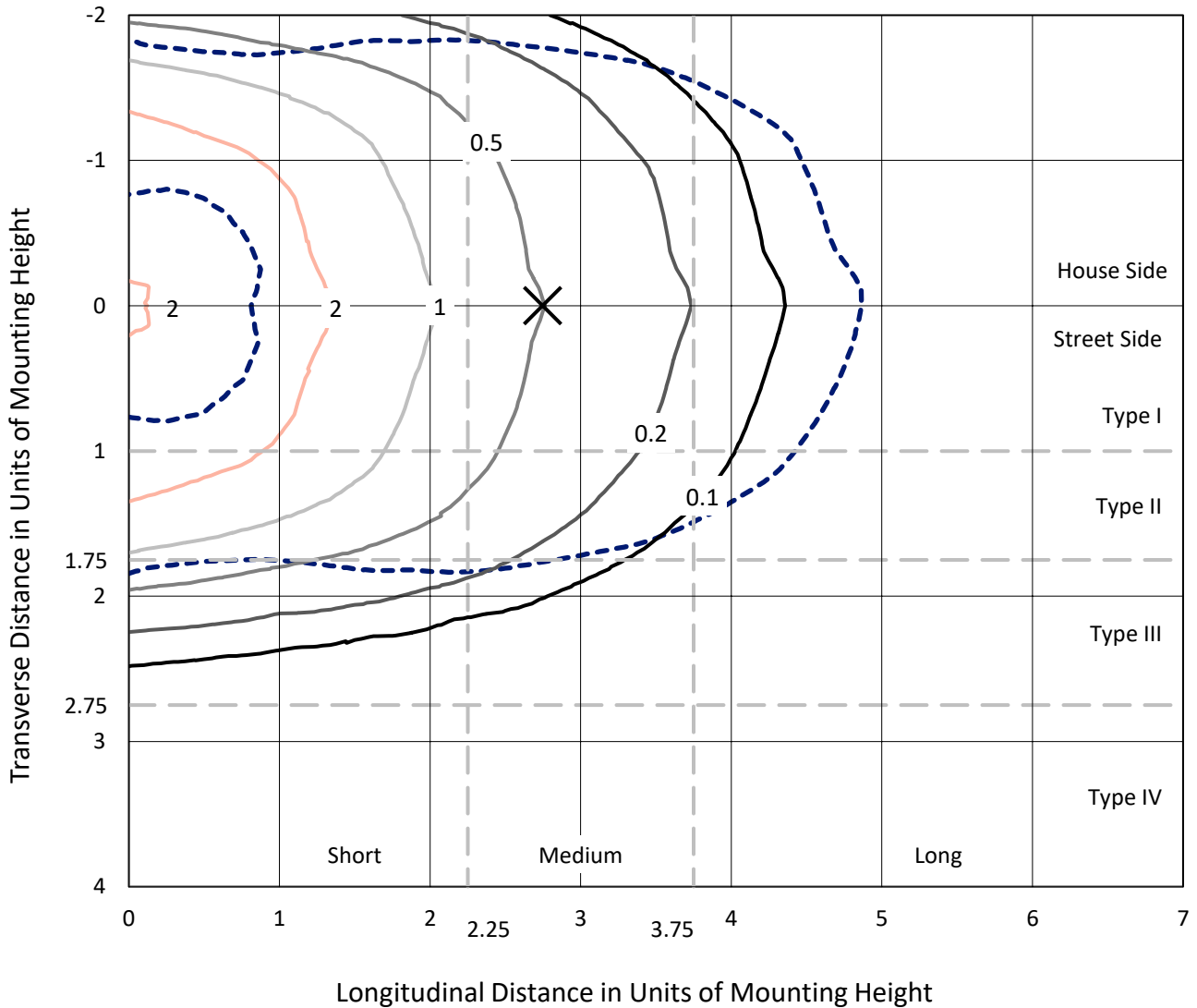
Input Watts (W): 259  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

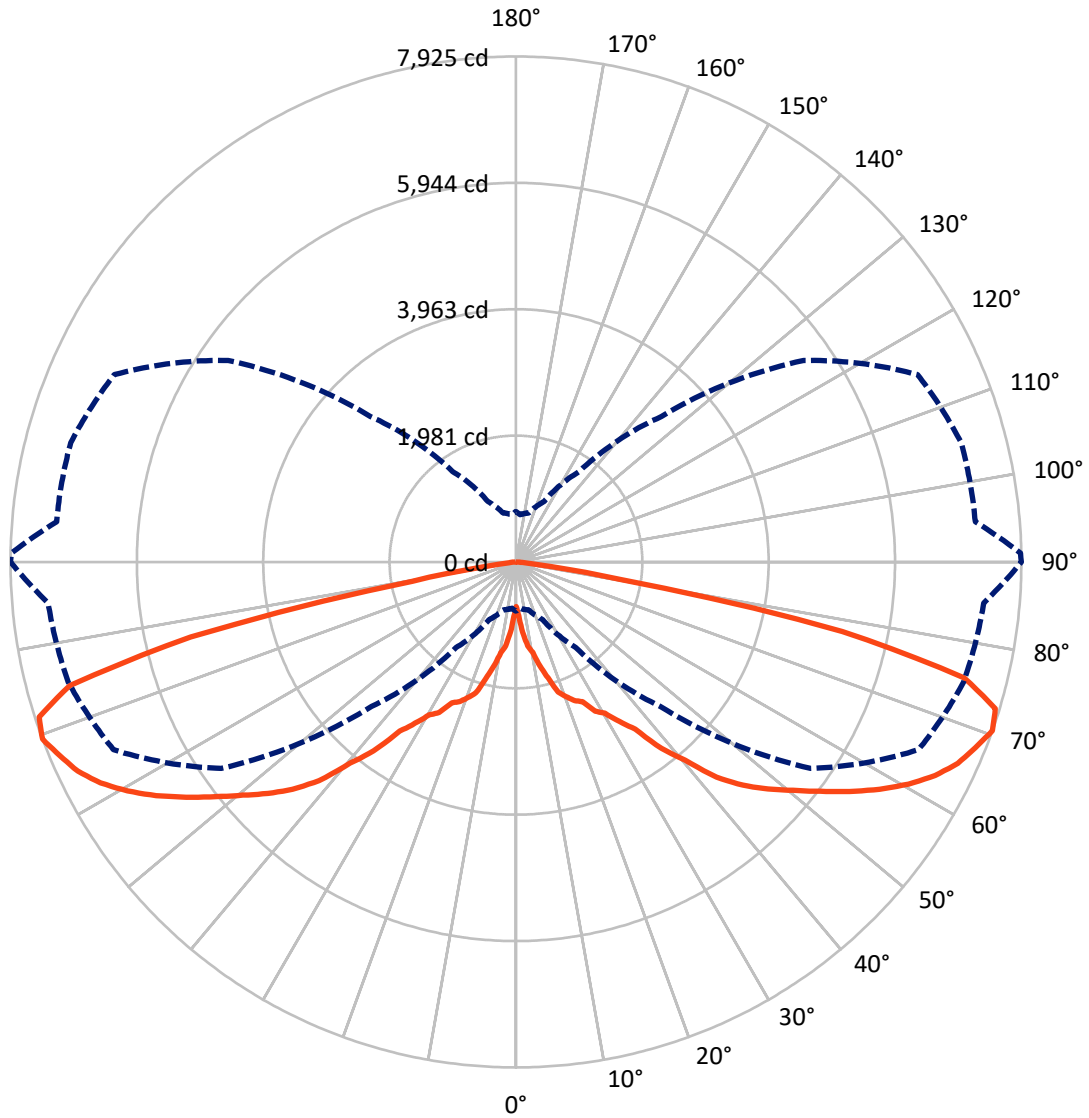
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 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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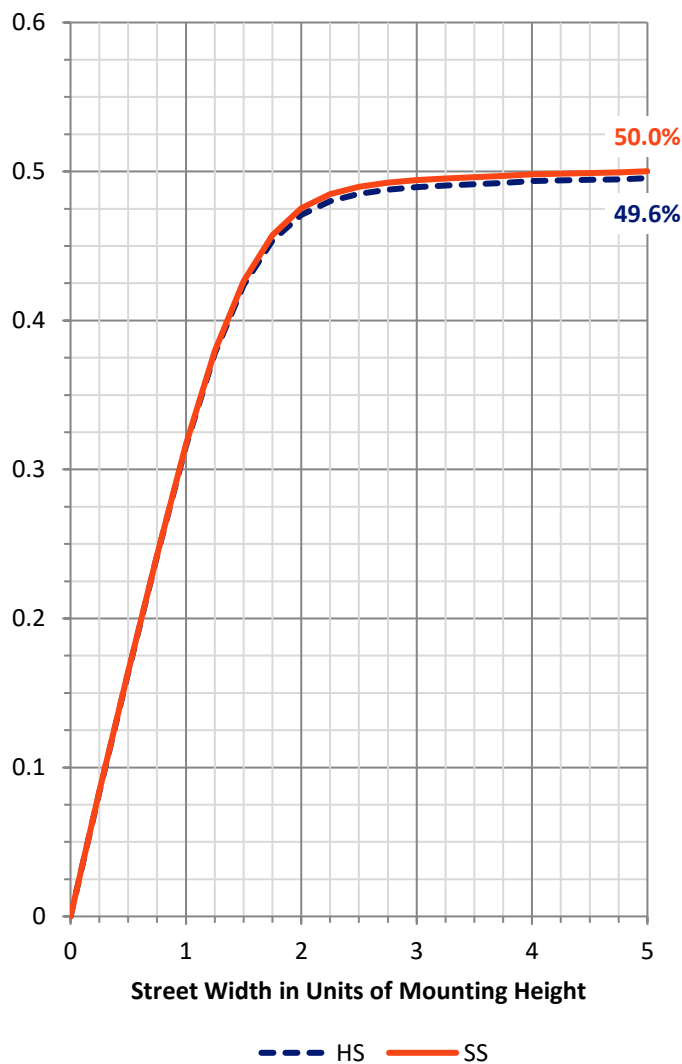
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9893.7	0.0	9893.7
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	9967.3	0.0	9967.3
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	19861.0	0.0	19861.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.1	0.5
10°-20°	482.0	2.4
20°-30°	1042.0	5.2
30°-40°	1988.1	10.0
40°-50°	3611.7	18.2
50°-60°	5073.6	25.5
60°-70°	4844.3	24.4
70°-80°	2486.1	12.5
80°-90°	227.9	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°	19861.0	100.0
0°-180°	19861.0	100.0

**Coefficient of Utilization**



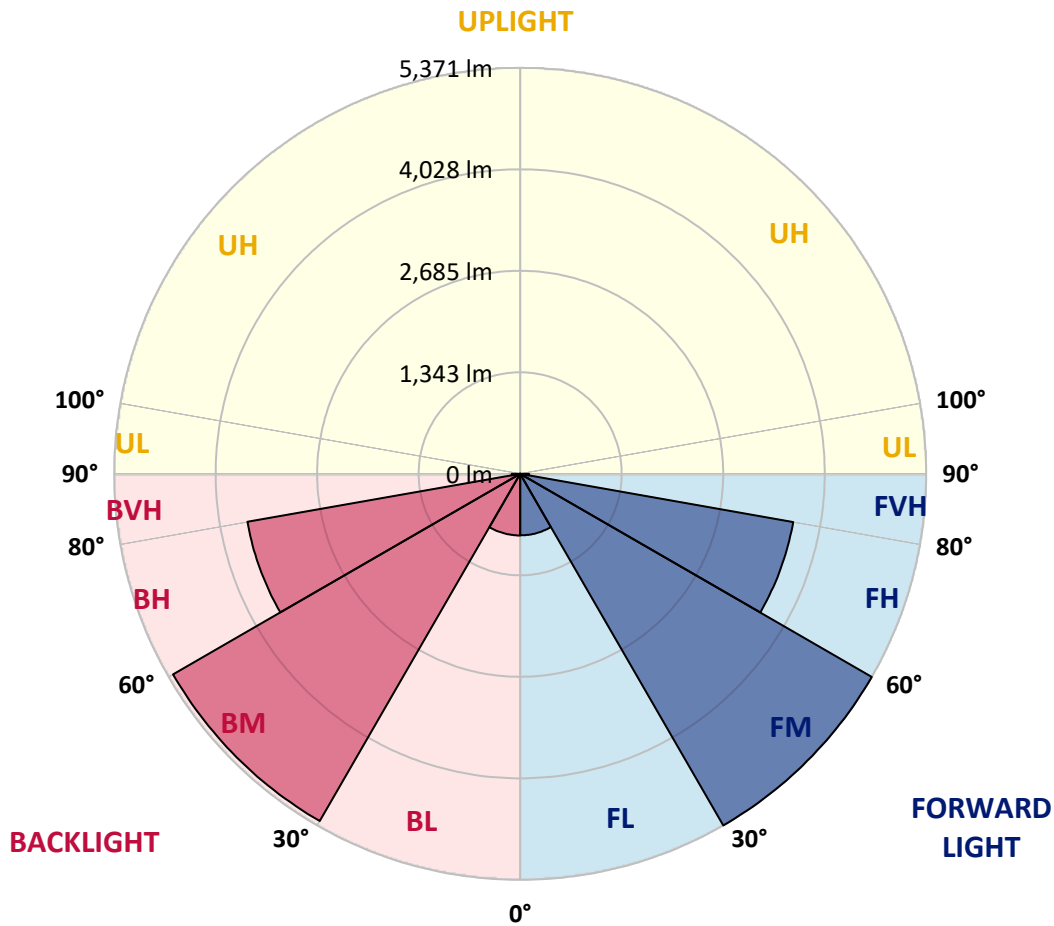
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	813.8	4.1			
FM (30°-60°)	5370.6	27.0			
FH (60°-80°)	3667.2	18.5			G2/5000
FVH (80°-90°)	115.7	0.6			G2/225
BL (0°-30°)	815.4	4.1	B2/1000		
BM (30°-60°)	5302.9	26.7	B4/8500		
BH (60°-80°)	3663.2	18.4	B4/5000		G4/5000
BVH (80°-90°)	112.3	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1
2.5°	844.4	813.0	773.5	796.9	806.5	823.5	821.0	813.0	778.4	836.3	842.8
5°	1056.9	1007.0	988.5	985.2	990.1	974.0	1026.3	1011.0	1039.2	1091.5	1103.6
7.5°	1203.4	1166.4	1126.9	1139.0	1089.1	1081.8	1149.5	1209.8	1225.1	1320.9	1327.3
10°	1272.6	1236.4	1246.8	1239.6	1234.0	1280.7	1312.0	1356.3	1419.9	1428.8	1442.4
12.5°	1331.4	1345.9	1391.7	1390.1	1465.8	1548.7	1536.6	1582.5	1593.0	1704.1	1670.2
15°	1480.3	1510.1	1506.8	1535.0	1568.0	1704.1	1704.9	1782.9	1854.6	1898.0	1886.8
17.5°	1698.4	1708.9	1665.4	1667.0	1762.8	1818.4	1880.3	1866.7	2053.4	2138.7	2144.4
20°	1828.8	1855.4	1805.5	1739.5	1909.3	1985.8	2020.4	1940.7	2140.3	2255.4	2255.4
22.5°	2056.6	1988.2	1912.5	1868.3	2018.0	2099.3	2095.3	2072.7	2179.0	2382.6	2363.3
25°	2182.2	2143.5	2105.7	2117.0	2192.7	2234.5	2290.0	2237.7	2337.5	2488.9	2425.3
27.5°	2420.4	2348.8	2162.9	2311.0	2311.0	2279.6	2397.1	2422.1	2356.9	2603.2	2650.7
30°	2690.1	2665.1	2401.9	2558.9	2510.6	2422.1	2647.4	2631.3	2521.9	2773.0	2751.3
32.5°	2945.3	3027.4	2777.8	2691.7	2764.2	2798.0	2679.6	2727.9	2748.9	2991.1	2980.7
35°	3336.5	3405.7	3074.9	3053.1	2932.4	2901.0	2991.1	3007.2	3008.9	3264.0	3217.3
37.5°	4013.4	3913.6	3586.8	3433.1	3446.7	3408.9	3426.6	3299.4	3317.1	3687.4	3710.8
40°	4508.5	4395.8	4031.9	3921.7	3651.2	3813.0	3669.7	3656.8	3621.4	4101.2	4088.3
42.5°	5055.0	4900.5	4498.0	4350.7	4063.3	3997.3	3931.3	4080.2	4070.6	4514.9	4613.1
45°	5467.9	5155.6	4945.5	4853.8	4681.5	4519.7	4456.9	4523.8	4493.2	4823.2	4994.6
47.5°	5728.7	5457.5	5216.0	5022.8	4857.8	5254.6	4936.7	4847.3	4785.4	5154.8	5319.8
50°	5936.4	5623.3	5338.3	5274.0	5404.4	5755.3	5253.8	5056.6	5132.3	5404.4	5628.9
52.5°	5992.8	5661.1	5405.2	5364.1	5716.7	5780.3	5699.0	5367.3	5347.2	5703.8	5975.1
55°	5820.5	5502.6	5381.0	5605.6	5995.2	5942.1	6066.0	5854.3	5711.8	6009.7	6351.0
57.5°	5377.0	5061.4	5032.5	5356.1	5847.1	6299.4	6360.6	6193.2	6006.4	6322.0	6724.5
60°	4648.5	4360.3	4433.6	4791.0	5531.5	6175.5	6500.7	6347.7	6289.8	6603.7	7070.6
62.5°	3514.4	3289.8	3485.4	3983.6	4955.2	6015.3	6693.9	6669.7	6586.0	6903.1	7376.4
65°	2240.9	2122.6	2322.2	2828.6	4060.9	5723.9	6786.4	6818.6	6895.9	7134.2	7613.1
67.5°	1302.4	1239.6	1361.1	1775.7	2892.1	4700.0	6614.2	7076.2	7116.5	7253.3	7768.5
70°	770.3	729.3	779.2	997.3	1637.2	3202.0	5641.8	6963.5	7267.8	7362.8	7925.4
72.5°	587.6	549.0	527.2	590.0	854.8	1654.1	3814.6	5902.6	7146.2	7290.3	7859.4
75°	507.9	470.9	445.1	450.8	508.7	785.6	2067.9	4221.9	6089.4	6638.3	7259.7
77.5°	436.3	403.3	384.8	383.2	390.4	431.4	864.5	2289.2	3813.8	4771.7	5233.7
80°	349.3	323.6	319.6	319.6	309.1	305.9	429.8	870.9	1451.3	1721.0	1650.1
82.5°	255.2	229.4	255.2	251.9	235.8	223.0	273.7	376.7	447.5	353.4	279.3
85°	172.3	148.9	168.2	171.5	156.2	115.9	164.2	188.4	193.2	120.7	99.8
87.5°	60.4	58.8	95.0	82.9	67.6	39.4	60.4	65.2	68.4	42.7	29.0
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°	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1	697.1
2.5°	845.2	835.5	787.2	794.5	813.0	821.8	830.7	794.5	776.8	833.1	827.5
5°	1106.8	1071.4	1031.9	1026.3	1028.7	994.1	1014.2	1005.4	1009.4	1045.6	1052.9
7.5°	1325.7	1283.1	1230.7	1189.7	1118.9	1062.5	1110.0	1134.2	1141.4	1205.8	1229.9
10°	1444.1	1407.8	1392.5	1315.3	1291.9	1284.7	1273.4	1234.8	1277.4	1262.1	1274.2
12.5°	1675.9	1668.6	1588.9	1538.2	1543.1	1556.7	1485.9	1447.3	1391.7	1478.7	1447.3
15°	1873.1	1904.5	1824.8	1732.2	1686.3	1709.7	1655.8	1599.4	1549.5	1576.1	1542.3
17.5°	2125.0	2124.2	1968.9	1869.9	1865.8	1864.2	1784.5	1660.6	1720.2	1701.6	1703.2
20°	2258.7	2236.9	2043.7	1929.4	2026.8	1992.2	1920.6	1761.2	1830.4	1853.0	1867.5
22.5°	2370.5	2358.5	2124.2	2040.5	2103.3	2104.1	2032.5	1948.8	1939.9	2009.9	1972.1
25°	2448.6	2496.9	2276.4	2256.2	2283.6	2256.2	2186.2	2131.5	2096.1	2200.7	2096.1
27.5°	2633.8	2565.3	2299.7	2414.0	2430.9	2293.3	2381.0	2316.6	2218.4	2348.0	2390.7
30°	2765.8	2806.0	2463.9	2636.2	2616.0	2488.9	2525.1	2522.7	2405.2	2657.9	2628.1
32.5°	2992.8	2944.5	2732.0	2718.3	2766.6	2760.9	2699.8	2729.5	2758.5	2942.0	2986.3
35°	3225.4	3276.9	2903.4	2996.0	2982.3	2895.4	3055.5	3037.0	3123.2	3499.9	3375.1
37.5°	3750.2	3504.7	3288.2	3276.1	3367.9	3381.5	3330.0	3411.3	3597.3	3887.0	4020.7
40°	4093.9	3982.0	3614.2	3628.7	3501.5	3720.4	3575.5	3837.1	3978.8	4467.4	4419.9
42.5°	4613.9	4341.0	3987.7	4036.0	4010.2	3904.8	4095.5	4229.9	4432.8	4805.5	5046.2
45°	5001.1	4626.8	4459.4	4429.6	4426.4	4609.9	4585.7	4800.6	4873.1	5153.2	5352.8
47.5°	5294.9	4976.9	4729.0	4762.8	4664.6	5188.6	4909.3	4976.1	5122.6	5386.6	5619.3
50°	5643.4	5289.2	5007.5	5091.2	5330.3	5531.5	5278.8	5164.5	5236.1	5547.6	5806.8
52.5°	5966.2	5593.5	5283.6	5353.6	5744.0	5652.3	5624.9	5335.9	5327.1	5577.4	5872.0
55°	6343.7	5923.5	5649.9	5872.0	6010.5	5897.0	5853.5	5501.7	5284.4	5423.7	5701.4
57.5°	6714.0	6250.3	5978.3	6024.2	6199.6	6086.9	5760.9	5219.2	4948.0	4975.3	5256.2
60°	7060.9	6550.6	6326.0	6281.7	6421.8	5979.9	5409.2	4701.6	4341.8	4275.8	4518.9
62.5°	7357.9	6801.7	6589.2	6468.5	6602.1	5983.9	4861.0	3870.9	3475.7	3251.9	3441.1
65°	7593.8	7010.2	6858.9	6796.1	6844.4	5620.1	4007.0	2842.2	2357.7	2109.7	2220.0
67.5°	7750.7	7126.9	7057.7	7139.8	6495.8	4680.7	2968.6	1819.2	1370.8	1235.6	1304.8
70°	7913.3	7230.0	7227.5	6948.2	5508.2	3227.0	1733.8	1048.8	797.7	745.4	788.8
72.5°	7858.6	7107.6	7143.8	6076.5	3817.0	1725.0	915.2	593.2	540.1	558.6	597.3
75°	7277.4	6462.0	6287.4	4368.4	2165.3	801.7	527.2	449.2	445.9	474.1	511.9
77.5°	5278.8	4500.4	4038.4	2476.0	928.1	433.9	388.0	375.1	375.1	397.6	431.4
80°	1740.3	1506.0	1569.6	957.9	438.7	299.4	302.7	308.3	306.7	312.3	340.5
82.5°	285.8	296.2	458.0	391.2	264.8	204.5	228.6	239.9	243.1	217.3	247.1
85°	101.4	114.3	194.8	181.1	152.9	103.0	150.5	168.2	165.8	144.9	160.2
87.5°	31.4	40.2	70.8	54.7	45.9	28.2	56.3	66.0	82.9	33.8	30.6
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)