

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: P597142

Luminaire Tested: **MSA-SA4C-835-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597142  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-835-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19464 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G4

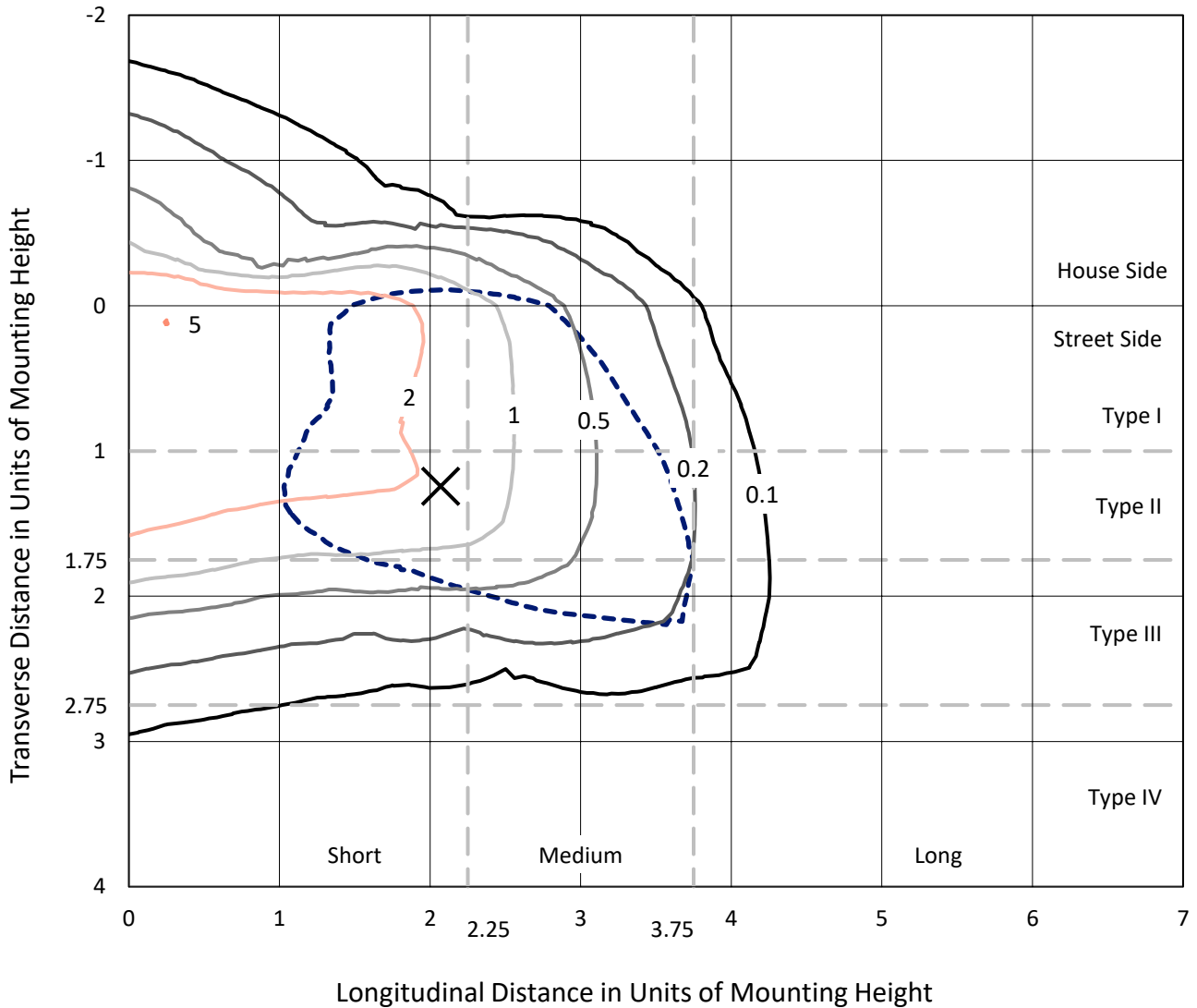
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

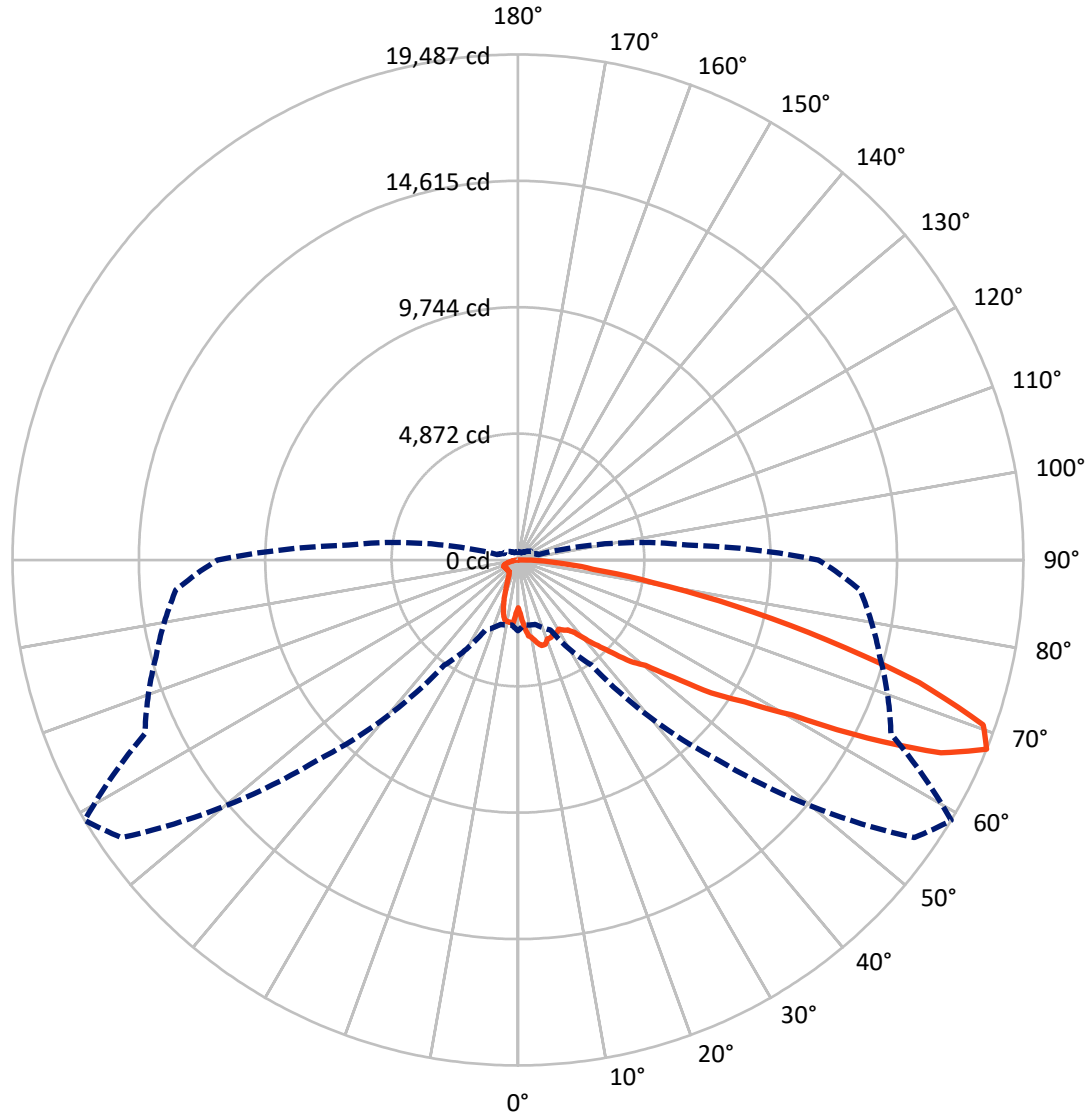
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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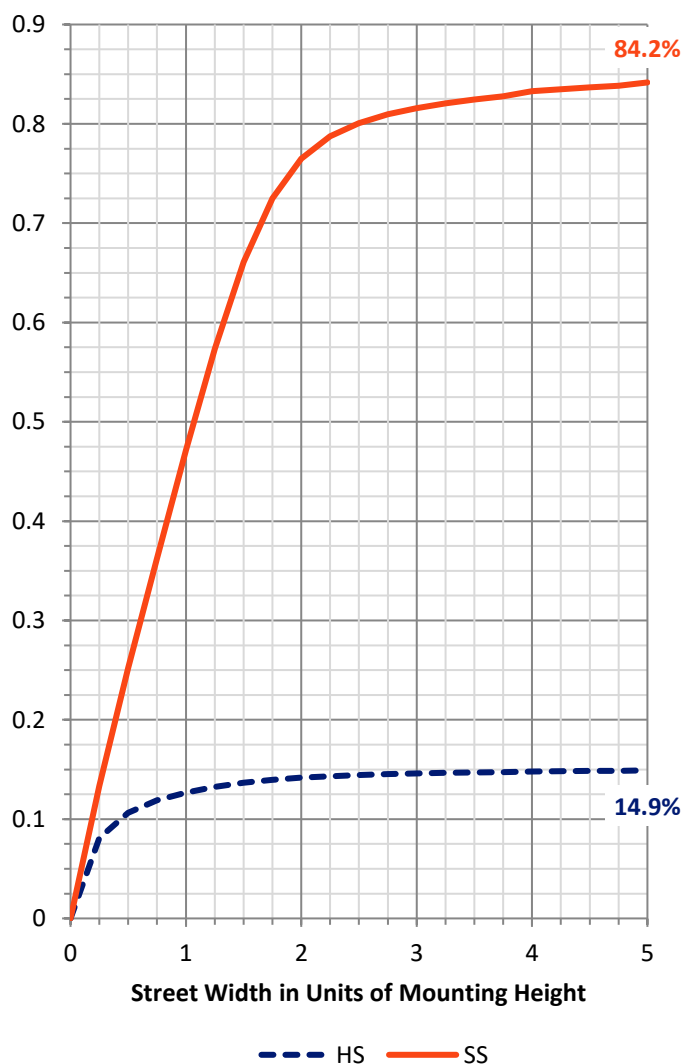
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2929.7	0.0	2929.7
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	16534.3	0.0	16534.3
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	19464.0	0.0	19464.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.5	1.2
10°-20°	711.8	3.7
20°-30°	1016.6	5.2
30°-40°	1498.0	7.7
40°-50°	2530.8	13.0
50°-60°	4404.2	22.6
60°-70°	5612.3	28.8
70°-80°	2971.7	15.3
80°-90°	478.1	2.5
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°	19464.0	100.0
0°-180°	19464.0	100.0

**Coefficient of Utilization**



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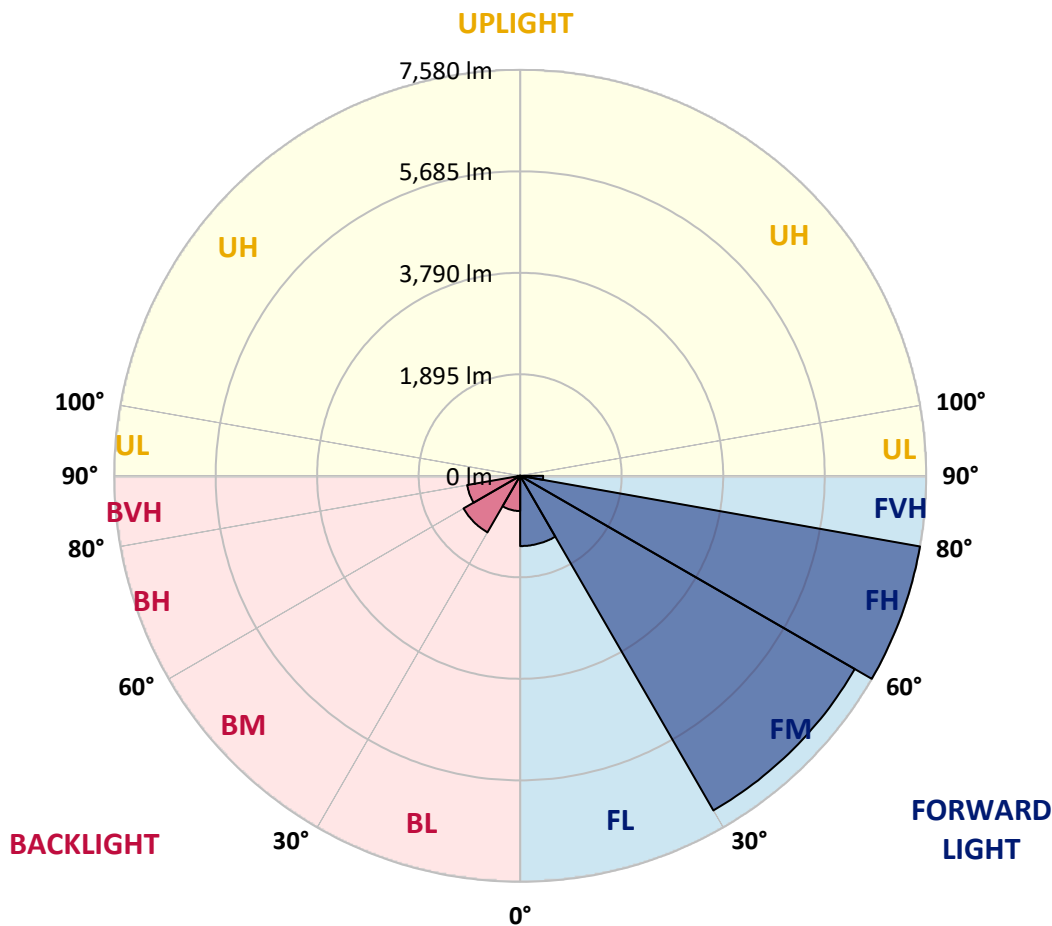
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1311.9	6.7			
FM (30°-60°)	7213.1	37.1			
FH (60°-80°)	7579.9	38.9			G4/12000
FVH (80°-90°)	429.4	2.2			G3/500
BL (0°-30°)	657.0	3.4	B2/1000		
BM (30°-60°)	1219.9	6.3	B2/2500		
BH (60°-80°)	1004.1	5.2	B3/2500		G3/2500
BVH (80°-90°)	48.7	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8
2.5°	2299.6	2192.4	2078.5	2110.7	2175.9	2205.6	2173.4	2142.0	2101.6	2053.8	2217.1
5°	2788.7	2629.5	2606.4	2605.6	2582.5	2490.1	2608.9	2600.6	2648.5	2698.0	2825.0
7.5°	2928.1	2868.7	2804.4	2834.9	2718.6	2713.6	2898.4	2951.2	3043.6	3013.0	3183.8
10°	2856.3	2789.5	2823.3	2811.0	2821.7	2943.8	3056.8	3060.1	3159.0	3256.4	3146.7
12.5°	2730.1	2735.1	2869.5	2864.6	3037.8	3264.6	3298.4	3272.0	3433.7	3367.7	3461.7
15°	2820.0	2880.2	2846.4	2875.3	2943.8	3232.4	3326.5	3422.1	3575.6	3635.0	3540.9
17.5°	2963.6	2995.7	2844.0	2828.3	2969.3	3106.2	3339.7	3421.3	3445.2	3868.4	3735.6
20°	2902.5	2967.7	2819.2	2628.7	2862.9	3044.4	3274.5	3249.8	3366.1	3886.5	3776.0
22.5°	3075.7	2967.7	2778.8	2643.5	2726.0	2892.6	3088.1	3250.6	3388.3	3780.1	3834.6
25°	3108.7	3057.6	2881.1	2746.6	2718.6	2778.0	3056.8	3163.2	3395.8	3925.3	3803.2
27.5°	3310.0	3233.3	2873.6	2877.8	2738.4	2633.6	2957.8	3181.3	3479.9	3835.4	3879.9
30°	3559.9	3501.3	3050.2	3066.7	2873.6	2680.6	3025.4	3093.0	3528.6	3975.6	3976.4
32.5°	3747.1	3850.2	3397.4	3173.1	3104.6	2960.3	2921.5	3225.8	3471.6	4229.6	4141.4
35°	4084.5	4164.5	3664.6	3484.8	3253.1	3090.6	3203.6	3313.3	3708.4	4563.7	4386.4
37.5°	4708.9	4616.5	4161.2	3878.3	3791.7	3557.4	3620.1	3543.4	3965.7	4939.0	4866.4
40°	5070.1	4990.1	4510.9	4354.2	4011.1	4040.8	3962.4	4018.5	4309.6	5338.2	5315.1
42.5°	5426.4	5319.2	4914.2	4805.4	4463.1	4317.9	4331.9	4513.4	4840.0	5983.2	5906.5
45°	5778.6	5504.0	5326.6	5355.5	5190.5	4892.8	4913.4	5084.1	5419.0	6720.6	6544.1
47.5°	6048.4	5821.5	5683.0	5647.5	5565.8	5964.2	5786.1	5855.3	6003.0	7377.1	7310.3
50°	6558.9	6294.1	6113.5	6062.4	6339.5	6893.8	6530.9	6381.6	6695.8	8225.9	8191.2
52.5°	7376.3	7046.4	6745.3	6742.0	7142.9	7502.5	7758.2	7500.8	7616.3	9095.2	9194.2
55°	8089.8	7707.9	7437.3	7586.6	8157.4	8377.6	9246.2	9044.9	8947.6	9972.8	10255.7
57.5°	8356.2	7910.0	7733.4	7953.7	8795.0	9926.6	10844.6	10315.1	10220.3	10965.9	11558.9
60°	7771.4	7299.6	7310.3	7725.2	9182.6	11064.0	12592.4	12142.9	11587.0	12202.3	12781.3
62.5°	6105.3	5678.8	5956.8	6587.8	8857.7	12169.3	14934.9	15124.6	13148.3	13227.5	13459.3
65°	4149.6	3854.4	4105.1	4722.9	7184.1	12772.2	17166.0	17926.5	14570.3	13898.9	13752.1
67.5°	2731.0	2522.3	2570.9	2981.7	4945.6	10888.4	18658.1	19487.0	15870.2	14449.9	13235.8
70°	2114.8	1946.6	1925.1	2140.4	2933.0	7564.4	17773.9	19034.2	16662.0	13933.6	11536.7
72.5°	1659.5	1531.7	1543.2	1750.3	2271.5	4196.6	13753.8	16186.1	15469.4	12016.7	8863.4
75°	1294.1	1189.4	1247.9	1484.7	2100.8	2608.1	9489.5	12284.8	11959.8	8898.1	5055.3
77.5°	939.5	871.8	955.1	1264.4	1974.6	2237.7	5907.3	8570.6	7661.7	4568.6	1734.6
80°	616.1	578.2	646.7	1031.0	1790.7	2153.6	3650.6	5251.6	3785.9	1283.4	656.6
82.5°	362.9	346.4	403.3	697.8	1439.3	2018.3	2434.8	2918.2	1549.0	542.7	348.9
85°	190.5	178.2	239.2	400.9	992.3	1842.6	1916.9	1747.0	748.1	235.9	166.6
87.5°	63.5	61.9	101.5	155.1	375.3	978.2	1022.8	829.8	308.5	68.5	36.3
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8	1841.8
2.5°	2239.4	2206.4	2016.7	2043.1	2067.8	2055.4	2048.0	1962.2	1954.0	2076.1	2066.2
5°	2821.7	2684.8	2523.1	2515.7	2409.3	2300.4	2321.8	2287.2	2297.1	2347.4	2352.4
7.5°	3129.3	2958.6	2804.4	2553.6	2340.8	2168.4	2195.7	2187.4	2165.1	2279.0	2309.5
10°	3123.6	2971.8	2797.8	2494.2	2350.7	2210.5	2042.2	1883.0	1836.0	1779.9	1784.9
12.5°	3329.8	3195.3	2815.9	2506.6	2312.0	2070.3	1755.2	1581.2	1414.6	1411.3	1369.2
15°	3394.1	3295.1	2854.7	2435.7	2040.6	1694.2	1368.4	1179.5	1059.1	1035.1	999.7
17.5°	3556.6	3401.5	2736.7	2206.4	1725.5	1324.6	1028.5	896.6	886.7	903.2	885.0
20°	3567.3	3315.7	2523.9	1867.4	1386.5	1003.8	838.8	772.8	808.3	848.7	847.1
22.5°	3558.2	3207.7	2340.0	1578.7	1041.7	806.7	734.9	720.1	753.1	813.3	820.7
25°	3465.9	3172.2	2109.9	1296.6	845.4	691.2	671.4	680.5	721.7	792.6	792.6
27.5°	3562.4	3027.9	1821.2	1054.9	711.0	615.3	629.3	652.4	682.9	763.8	778.6
30°	3531.0	3075.7	1588.6	849.6	626.9	562.5	593.9	617.0	651.6	735.7	743.2
32.5°	3615.2	2947.9	1393.1	714.3	571.6	541.9	549.3	580.7	626.0	692.0	705.2
35°	3743.8	2994.9	1168.8	642.5	544.4	518.0	532.0	556.7	602.1	666.4	677.2
37.5°	4154.6	2992.4	1013.7	602.9	539.4	513.0	519.6	537.0	589.7	648.3	673.0
40°	4418.5	3164.0	872.7	593.9	533.7	510.6	504.8	523.8	565.8	635.1	652.4
42.5°	4914.2	3268.7	811.6	590.6	532.8	496.5	490.8	513.0	554.3	618.6	645.0
45°	5438.0	3418.0	763.0	588.9	530.4	494.1	476.7	504.8	539.4	601.3	631.8
47.5°	6054.1	3733.9	735.7	583.1	525.4	497.4	471.8	485.8	524.6	586.4	617.0
50°	6860.8	4152.1	741.5	574.9	532.8	498.2	464.4	471.0	506.4	566.6	598.0
52.5°	7841.5	4799.6	778.6	578.2	537.8	494.1	461.1	457.8	488.3	541.1	572.4
55°	9023.5	5718.4	890.0	593.9	537.8	493.2	456.1	441.3	464.4	507.3	537.8
57.5°	10449.6	6782.4	1107.7	601.3	533.7	488.3	445.4	419.0	433.0	468.5	497.4
60°	11674.4	7641.1	1332.1	606.2	541.9	476.7	424.0	391.0	400.0	427.3	452.8
62.5°	12298.8	7881.9	1399.7	602.1	564.2	469.3	398.4	361.3	362.1	385.2	408.3
65°	12415.9	7561.1	1128.3	598.0	593.0	468.5	380.2	335.7	329.9	346.4	366.2
67.5°	11581.2	6563.0	814.1	588.9	596.3	463.5	367.9	315.1	300.2	311.8	328.3
70°	9833.4	5285.4	683.8	570.8	556.7	438.8	346.4	293.6	273.8	282.1	294.5
72.5°	7330.9	3910.4	596.3	532.0	485.0	375.3	313.4	269.7	249.1	254.9	263.9
75°	4072.9	2086.0	499.0	462.7	395.9	303.5	267.2	239.2	221.0	223.5	233.4
77.5°	1352.7	769.6	366.2	367.0	299.4	234.2	220.2	204.6	190.5	191.4	199.6
80°	612.8	425.6	262.3	263.9	208.7	169.9	169.1	164.1	155.1	152.6	158.4
82.5°	355.5	258.2	179.8	171.6	134.4	110.5	122.9	120.4	117.9	108.9	110.5
85°	174.9	138.6	94.0	89.1	74.2	55.3	66.0	68.5	66.0	56.1	55.3
87.5°	42.9	45.4	23.1	21.4	12.4	5.8	9.9	9.9	12.4	8.2	4.1
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)