

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: P597162

Luminaire Tested: **MSA-SA4D-835-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597162
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-835-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21545 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G4

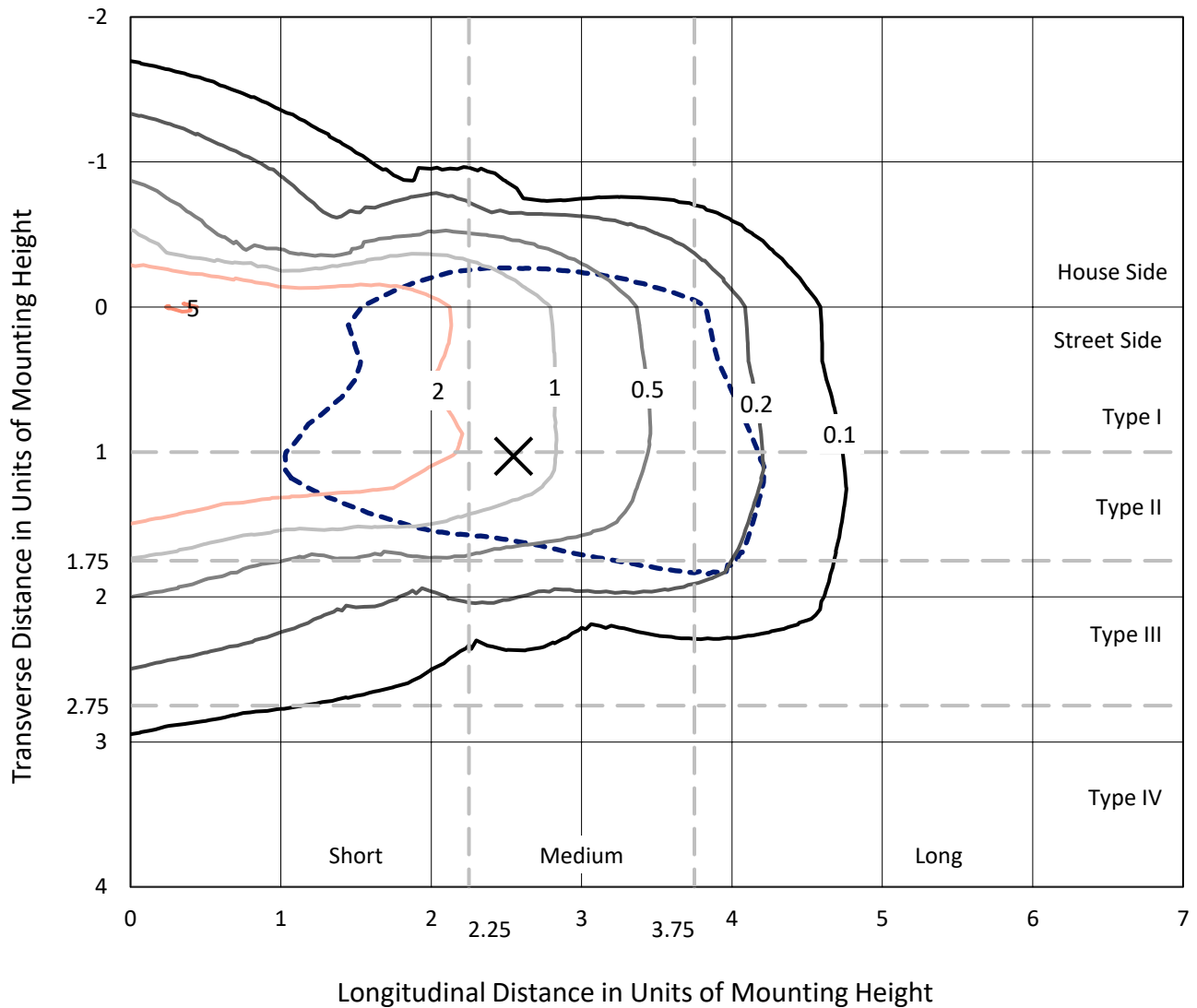
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

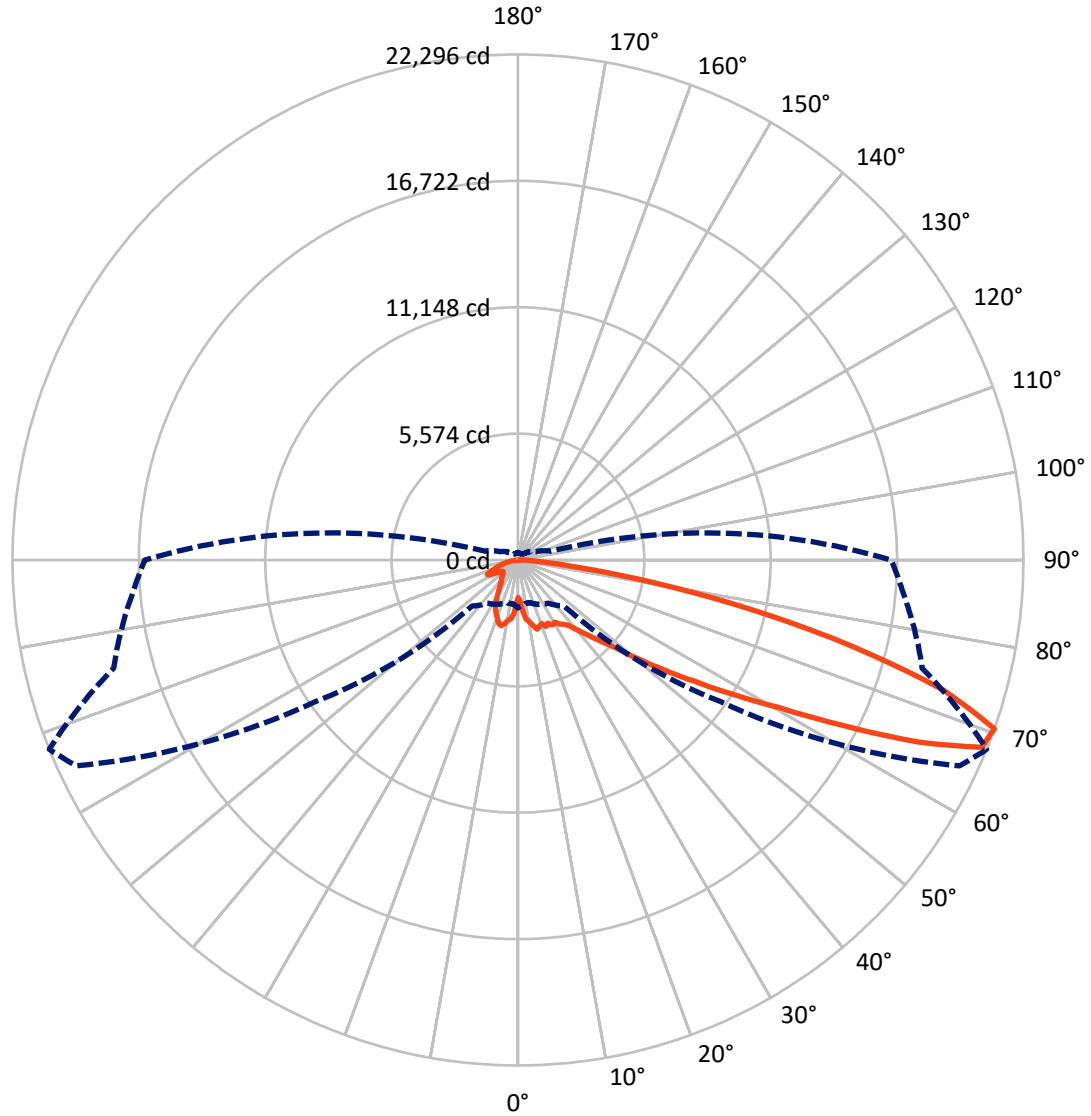
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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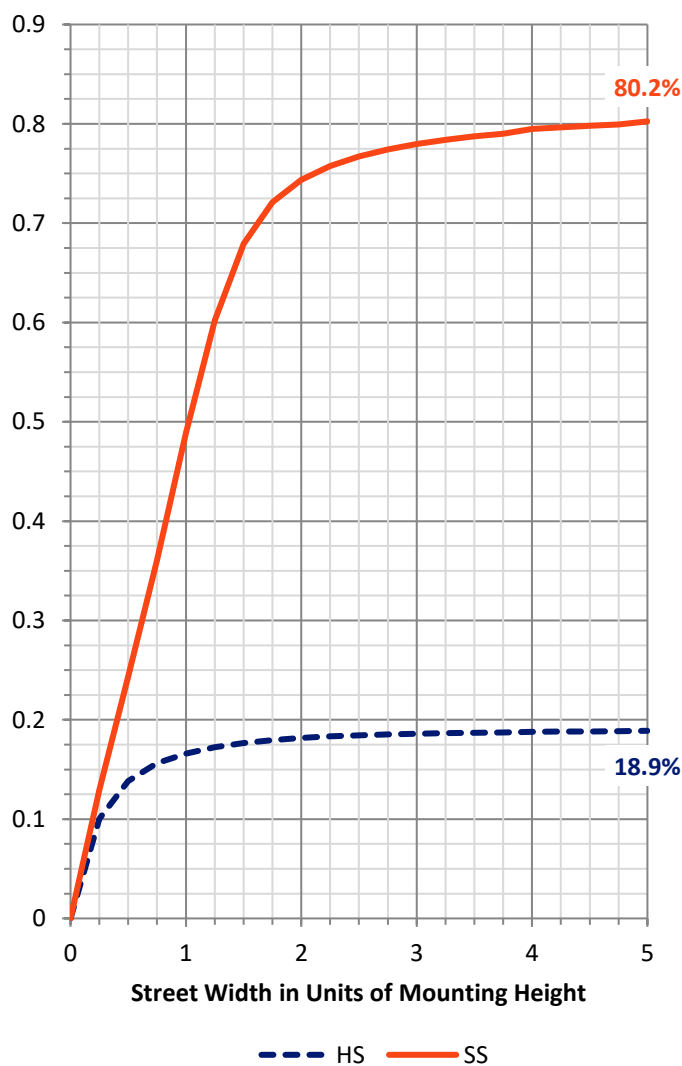
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4113.5	0.0	4113.5
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	17431.5	0.0	17431.5
	% Fixture	80.9	0.0	80.9
Total	Lumens	21545.0	0.0	21545.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.6	1.0
10°-20°	719.1	3.3
20°-30°	1093.9	5.1
30°-40°	1670.8	7.8
40°-50°	2872.9	13.3
50°-60°	4755.2	22.1
60°-70°	5862.5	27.2
70°-80°	3765.9	17.5
80°-90°	584.2	2.7
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°	21545.0	100.0
0°-180°	21545.0	100.0

Coefficient of Utilization



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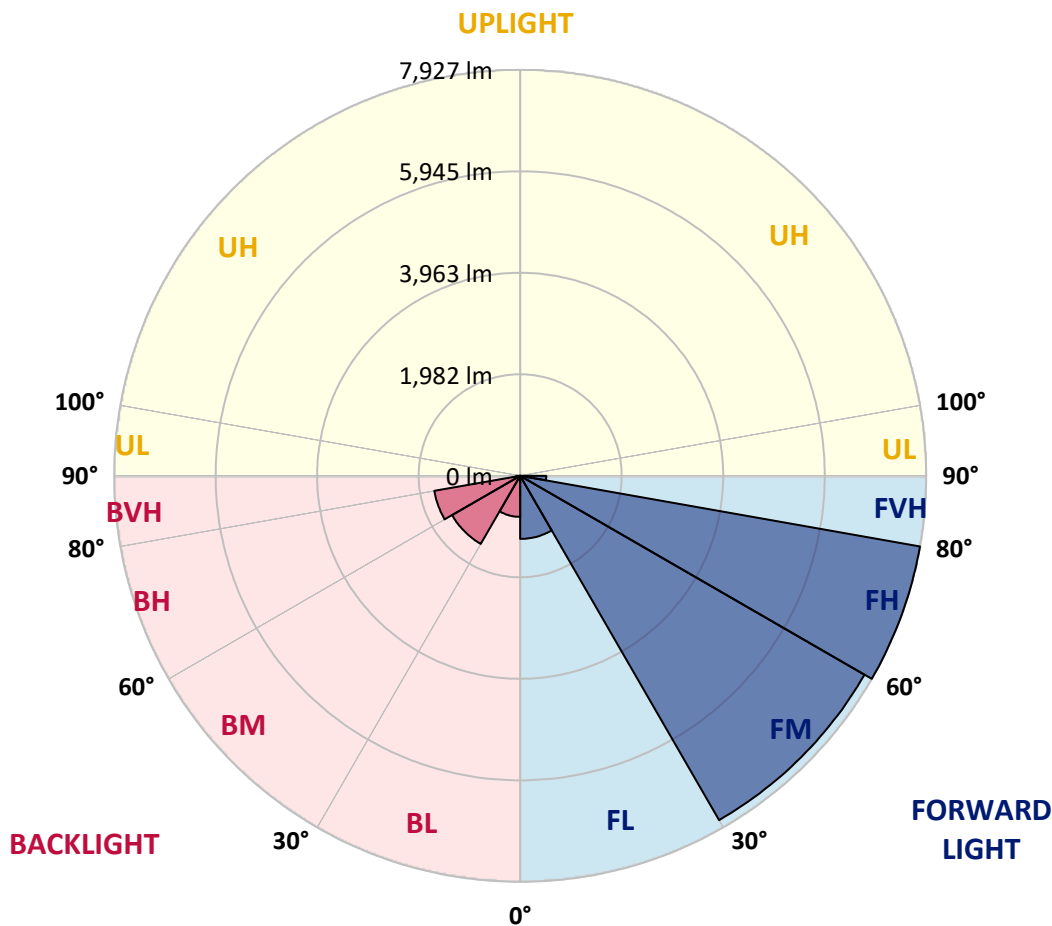
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1232.0	5.7			
FM (30°-60°)	7763.5	36.0			
FH (60°-80°)	7926.9	36.8			G4/12000
FVH (80°-90°)	509.2	2.4			G4/750
BL (0°-30°)	801.5	3.7	B2/1000		
BM (30°-60°)	1535.4	7.1	B2/2500		
BH (60°-80°)	1701.6	7.9	B3/2500		G3/2500
BVH (80°-90°)	75.0	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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9
2.5°	1898.1	1821.5	1743.9	1781.8	1842.2	1895.4	1884.6	1890.9	1817.8	1807.9	2000.0
5°	2236.2	2104.6	2101.9	2103.7	2109.1	2047.8	2197.5	2275.0	2292.1	2371.5	2560.0
7.5°	2353.5	2300.3	2246.2	2273.2	2204.7	2211.0	2394.9	2596.9	2644.7	2702.4	2960.3
10°	2329.1	2278.6	2294.9	2299.4	2312.0	2413.9	2532.0	2725.9	2766.4	2950.4	3017.1
12.5°	2332.7	2323.7	2399.4	2402.2	2537.4	2720.5	2767.3	2945.9	2962.1	3097.4	3376.0
15°	2456.3	2518.5	2476.1	2498.6	2524.8	2743.9	2811.5	3067.6	3165.0	3339.0	3548.2
17.5°	2697.0	2715.0	2587.9	2554.5	2640.2	2706.9	2861.1	2972.0	3073.9	3559.9	3848.5
20°	2752.9	2801.6	2650.1	2477.9	2659.1	2752.0	2859.3	2909.8	2989.2	3592.4	4001.8
22.5°	2992.8	2891.8	2708.7	2559.1	2618.6	2708.7	2786.3	2976.5	3184.8	3499.5	4155.1
25°	3128.9	3070.3	2907.1	2746.6	2696.1	2698.8	2848.5	3018.9	3091.1	3635.7	4185.7
27.5°	3458.1	3364.3	2997.3	2966.6	2776.4	2628.5	2858.4	3123.5	3249.8	3529.3	4335.4
30°	3870.1	3798.9	3317.4	3276.8	2986.5	2728.6	2984.7	3201.1	3183.0	3598.7	4439.1
32.5°	4203.8	4322.8	3836.8	3516.7	3310.2	3063.1	2945.0	3187.5	3367.0	3760.1	4614.9
35°	4679.9	4791.7	4241.6	4025.2	3577.1	3218.2	3221.8	3373.3	3484.2	3948.6	4811.5
37.5°	5504.0	5405.7	4963.0	4621.3	4334.5	3798.9	3638.4	3585.2	3674.5	4179.4	5196.6
40°	6098.3	6015.3	5494.1	5299.3	4741.2	4430.1	3990.1	3939.6	4097.4	4417.5	5511.2
42.5°	6802.5	6654.6	6169.5	6009.0	5425.6	4864.7	4421.1	4449.9	4526.6	4866.5	5936.9
45°	7519.4	7160.5	6885.5	6872.8	6483.3	5708.7	5112.7	5089.2	5092.0	5527.5	6414.8
47.5°	8088.3	7765.5	7450.8	7301.1	7104.6	7168.6	6117.2	5842.2	5759.2	6192.9	7131.6
50°	8473.4	8101.9	7745.7	7710.5	8235.3	8580.7	7060.4	6766.4	6817.8	7145.1	8087.4
52.5°	8481.5	8040.5	7669.0	7915.2	9151.4	9645.6	8685.3	7863.8	8027.9	8250.6	9334.5
55°	7891.8	7434.6	7192.9	7753.8	9509.4	10908.9	10968.4	9622.1	9432.8	9514.8	10825.0
57.5°	6648.3	6186.6	6046.0	6717.7	8830.4	12127.1	13725.8	11723.1	11167.7	10825.0	12352.5
60°	5004.5	4605.0	4517.6	4945.9	7321.0	11769.1	15958.5	14338.1	13206.4	12288.5	13884.5
62.5°	3752.9	3466.2	3334.5	3395.8	5065.8	10605.0	17424.6	17641.9	16039.6	13886.3	15381.4
65°	3049.6	2817.8	2700.6	2621.3	3150.6	8200.1	17159.5	20422.8	19348.9	15564.4	16546.4
67.5°	2547.3	2341.7	2287.6	2365.2	2490.5	4757.4	15085.6	21978.3	22051.3	17219.9	17227.2
70°	2114.5	1962.1	1942.3	2162.3	2327.3	2871.0	10896.3	21489.5	22295.7	18461.6	17067.6
72.5°	1633.9	1551.8	1549.1	1894.5	2312.0	2447.2	6488.7	18564.4	19647.3	18064.8	15505.8
75°	1133.4	1076.6	1119.9	1557.3	2258.8	2482.4	3703.3	14459.8	15270.4	15372.3	12421.0
77.5°	780.0	732.2	779.1	1126.2	2017.1	2541.9	2590.6	10455.3	10545.5	10308.3	7114.5
80°	542.8	509.5	545.5	797.1	1569.9	2515.8	2205.6	6582.5	6039.6	4600.5	2277.7
82.5°	336.3	326.4	366.1	568.1	1105.5	2288.5	2090.2	3396.7	2593.3	1269.6	813.3
85°	176.7	162.3	212.8	370.6	691.6	1796.2	1958.5	1550.0	1000.9	450.9	326.4
87.5°	52.3	46.9	82.1	149.7	293.1	805.2	1120.8	657.3	373.3	132.6	101.9
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9	1651.9
2.5°	2013.5	2003.6	1870.1	1887.3	1916.1	1923.3	1922.4	1873.8	1822.4	1965.7	1961.2
5°	2564.5	2475.2	2408.5	2394.0	2312.0	2229.9	2258.8	2248.9	2236.2	2301.2	2309.3
7.5°	2961.2	2837.7	2760.1	2560.9	2371.5	2207.4	2259.7	2275.9	2243.5	2360.7	2395.8
10°	3065.8	2968.4	2884.6	2628.5	2523.9	2428.3	2286.7	2125.3	2103.7	2036.1	2044.2
12.5°	3335.4	3321.9	3036.1	2810.6	2674.5	2484.2	2178.5	1982.9	1815.1	1823.3	1774.6
15°	3548.2	3555.4	3211.9	2896.3	2531.1	2240.7	1881.0	1637.5	1465.3	1431.0	1395.8
17.5°	3834.1	3819.6	3226.3	2793.5	2330.9	1905.3	1464.4	1222.7	1193.9	1213.7	1183.0
20°	3958.5	3831.4	3134.3	2538.3	2018.0	1447.2	1106.4	978.4	1034.3	1113.6	1115.4
22.5°	4070.3	3853.0	3086.6	2332.7	1601.4	1052.3	888.2	864.7	930.6	1037.9	1046.9
25°	4065.8	3953.1	3000.9	2125.3	1241.7	821.5	771.9	789.0	867.4	979.3	985.6
27.5°	4270.5	3876.4	2778.2	1853.0	935.1	703.3	716.0	747.5	784.5	890.9	911.6
30°	4268.7	4018.9	2666.4	1522.1	751.1	644.7	677.2	704.2	734.9	832.3	844.0
32.5°	4369.7	3926.0	2598.7	1183.9	673.6	630.3	638.4	665.5	709.6	775.5	783.6
35°	4491.4	4031.5	2382.3	940.5	644.7	617.7	624.0	639.3	679.9	740.3	748.4
37.5°	4881.9	4051.4	2296.7	792.6	642.9	612.3	611.4	619.5	665.5	720.5	744.8
40°	5034.2	4232.6	2046.9	740.3	636.6	612.3	599.6	604.1	642.0	712.4	731.3
42.5°	5399.4	4293.0	1862.0	722.3	636.6	601.4	581.6	588.8	633.0	695.2	725.0
45°	5775.4	4378.7	1642.0	718.7	635.7	600.5	562.7	578.9	615.0	667.3	699.7
47.5°	6311.1	4687.1	1422.0	707.8	628.5	605.0	558.2	557.3	588.8	633.9	664.6
50°	7184.8	5168.6	1251.6	694.3	629.4	601.4	549.1	536.5	557.3	596.9	626.7
52.5°	8401.2	5989.2	1184.8	687.1	622.2	587.0	533.8	514.0	525.7	557.3	586.1
55°	9813.3	7097.4	1250.7	687.1	607.8	564.5	512.2	488.7	495.0	516.7	544.6
57.5°	11463.4	8474.3	1569.0	677.2	589.7	537.4	486.0	459.0	460.8	479.7	505.0
60°	13186.6	10012.6	2282.2	669.1	577.1	507.7	455.4	427.4	424.7	442.7	465.3
62.5°	14912.5	11431.9	3032.4	688.0	573.5	482.4	422.9	394.9	394.0	410.3	429.2
65°	16284.9	12402.1	3219.1	764.6	596.9	453.6	389.5	363.4	361.6	375.1	395.9
67.5°	16958.4	12542.8	2445.4	860.2	646.5	426.5	357.1	332.7	330.9	345.4	363.4
70°	16459.8	11581.6	1509.5	870.1	643.8	394.9	323.7	303.0	299.4	314.7	328.2
72.5°	14614.9	10130.7	1147.0	770.1	557.3	349.9	290.4	272.3	266.9	280.4	293.1
75°	11730.3	8043.2	918.8	621.3	439.1	294.9	257.0	239.9	233.5	246.2	257.0
77.5°	6833.2	4524.8	671.8	485.1	331.8	240.8	219.1	203.8	196.6	210.1	218.2
80°	2221.8	1507.7	422.0	348.1	242.6	188.5	177.6	166.8	159.6	168.6	171.3
82.5°	798.0	560.9	233.5	213.7	161.4	135.3	134.4	128.0	119.0	122.6	122.6
85°	353.5	256.1	138.9	114.5	96.5	72.1	84.8	80.3	71.2	69.4	66.7
87.5°	99.2	84.8	50.5	38.8	31.6	11.7	27.1	24.3	19.8	18.0	12.6
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)