

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: P597140

Luminaire Tested: **MSA-SA4C-835-U-SL2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597140  
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-SA4C-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: 19706 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G3

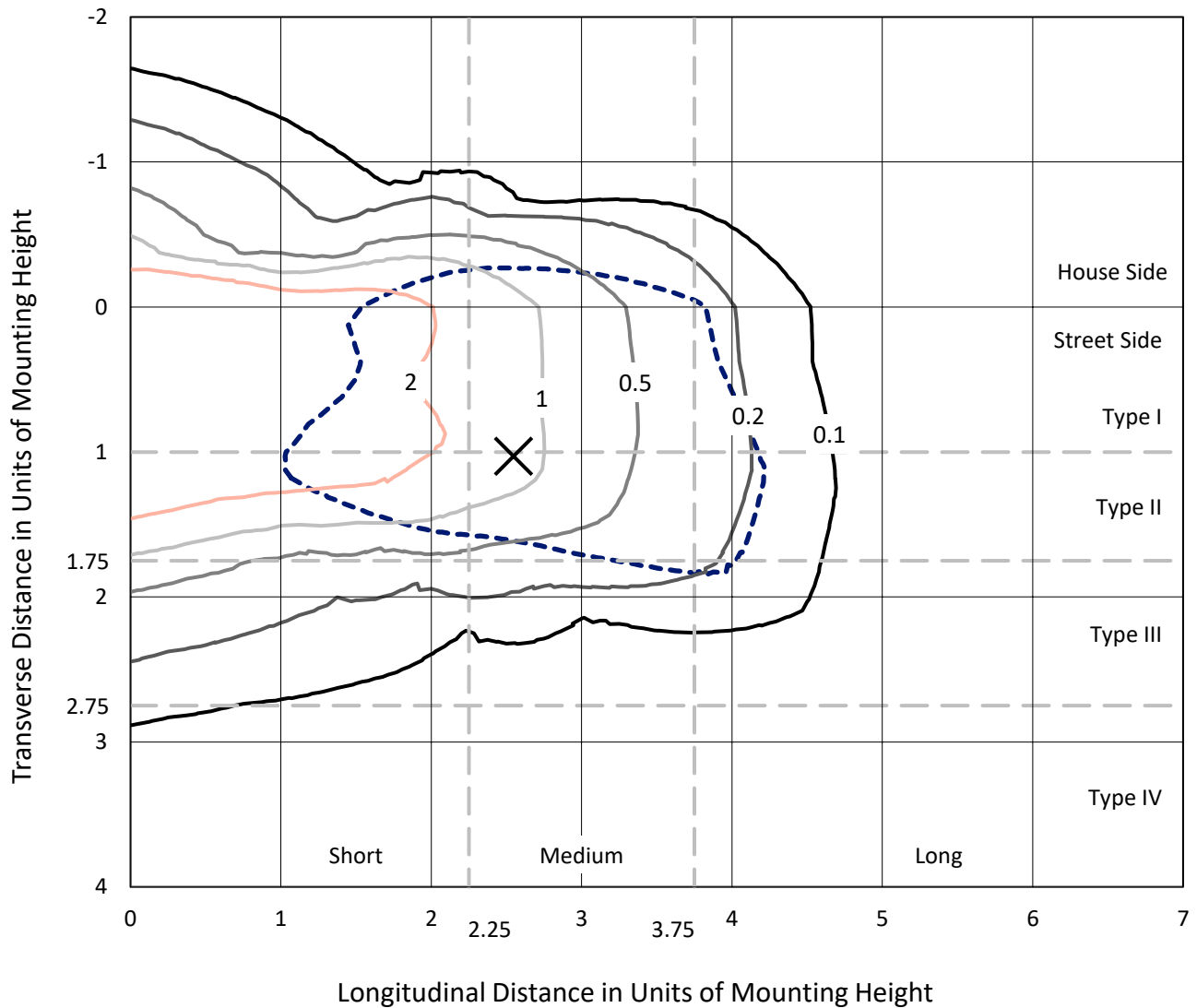
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

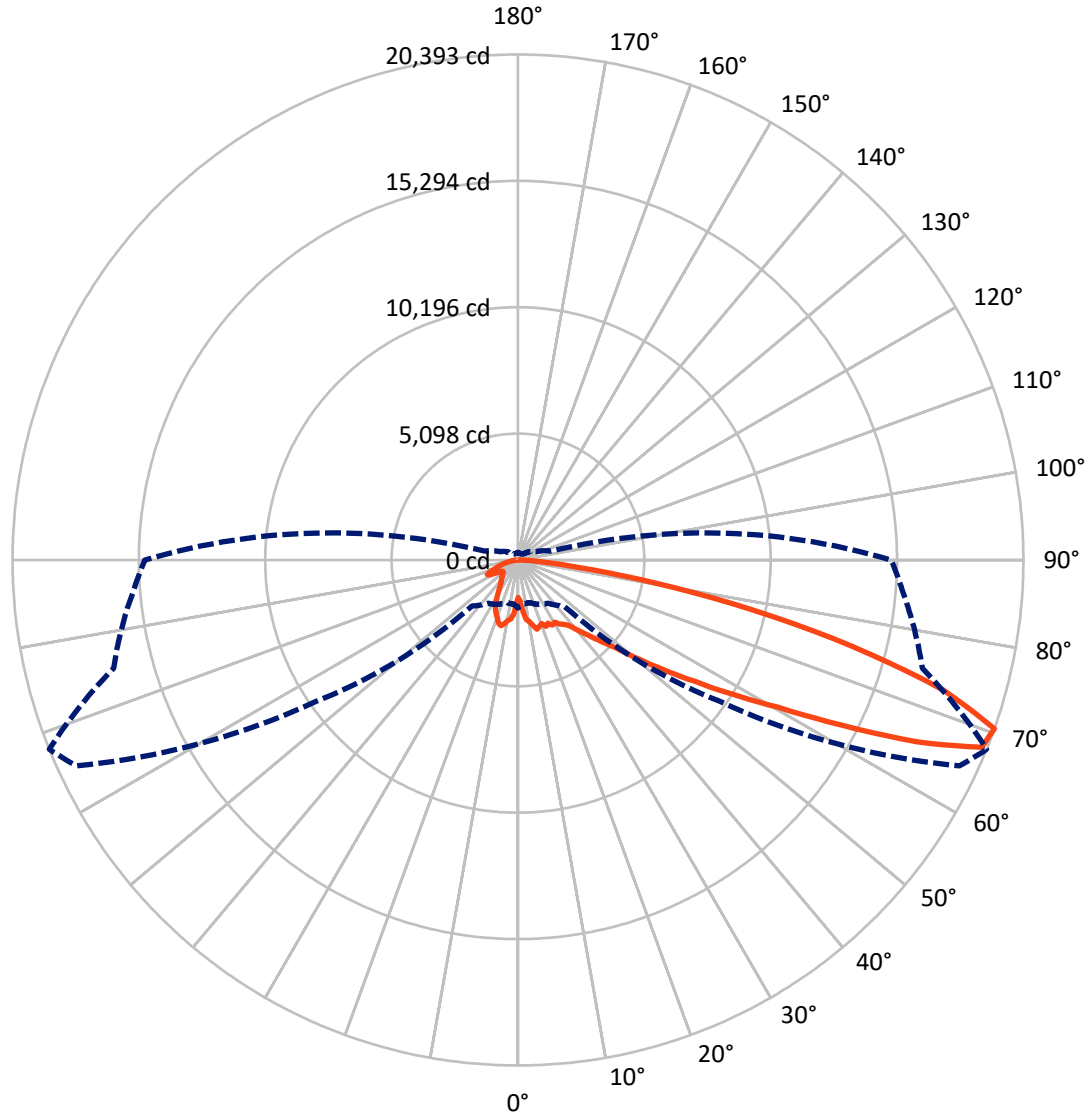
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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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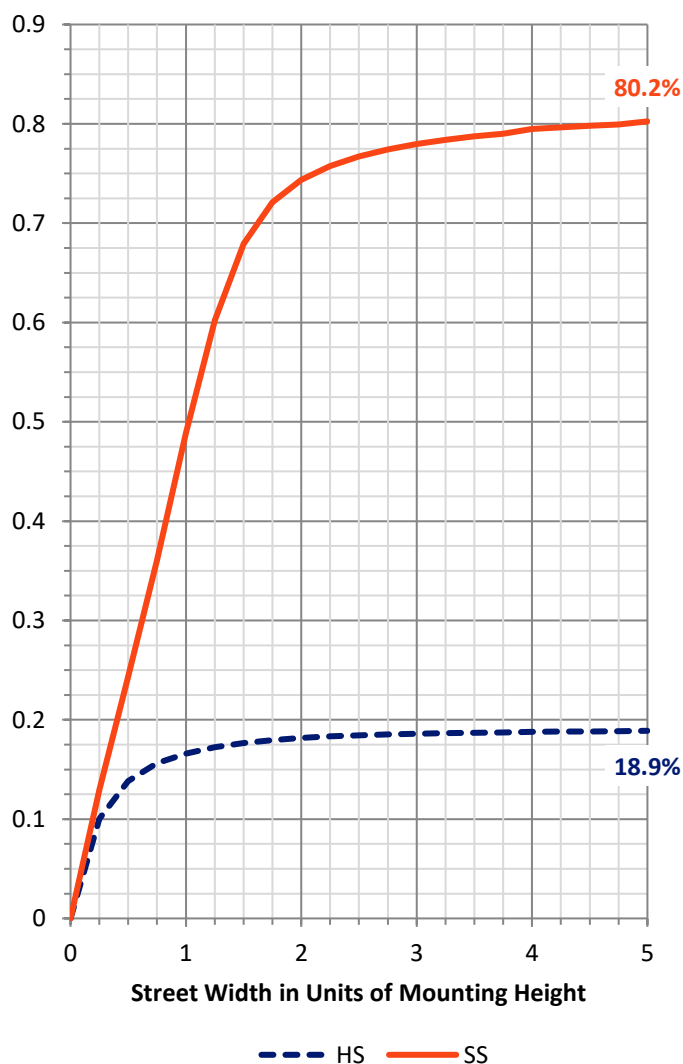
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3762.4	0.0	3762.4
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	15943.6	0.0	15943.6
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	19706.0	0.0	19706.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.8	1.0
10°-20°	657.7	3.3
20°-30°	1000.5	5.1
30°-40°	1528.2	7.8
40°-50°	2627.7	13.3
50°-60°	4349.3	22.1
60°-70°	5362.1	27.2
70°-80°	3444.5	17.5
80°-90°	534.3	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°	19706.0	100.0
0°-180°	19706.0	100.0

**Coefficient of Utilization**



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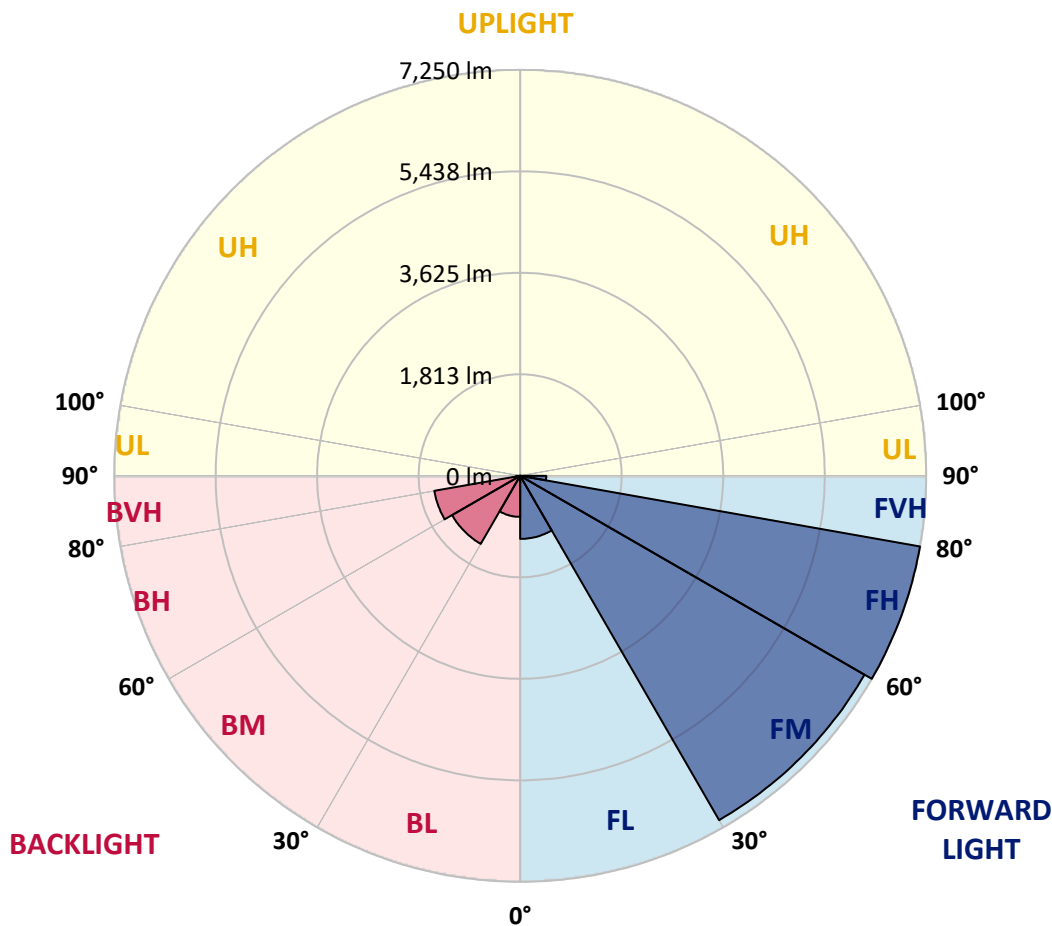
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1126.8	5.7			
FM (30°-60°)	7100.8	36.0			
FH (60°-80°)	7250.3	36.8			G3/7500
FVH (80°-90°)	465.7	2.4			G3/500
BL (0°-30°)	733.1	3.7	B2/1000		
BM (30°-60°)	1404.3	7.1	B2/2500		
BH (60°-80°)	1556.3	7.9	B3/2500		G3/2500
BVH (80°-90°)	68.6	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-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9
2.5°	1736.1	1666.0	1595.1	1629.7	1684.9	1733.6	1723.7	1729.5	1662.7	1653.6	1829.3
5°	2045.4	1924.9	1922.5	1924.1	1929.1	1873.0	2009.9	2080.8	2096.5	2169.1	2341.4
7.5°	2152.6	2103.9	2054.4	2079.2	2016.5	2022.3	2190.5	2375.3	2419.0	2471.8	2707.6
10°	2130.3	2084.1	2099.0	2103.1	2114.6	2207.8	2315.9	2493.2	2530.3	2698.6	2759.6
12.5°	2133.6	2125.4	2194.6	2197.1	2320.8	2488.2	2531.1	2694.4	2709.3	2833.0	3087.8
15°	2246.6	2303.5	2264.7	2285.4	2309.3	2509.7	2571.5	2805.8	2894.8	3054.0	3245.4
17.5°	2466.8	2483.3	2367.0	2336.5	2414.8	2475.9	2616.9	2718.4	2811.5	3256.1	3520.0
20°	2517.9	2562.5	2423.9	2266.4	2432.2	2517.1	2615.3	2661.4	2734.0	3285.8	3660.2
22.5°	2737.3	2645.0	2477.5	2340.6	2395.1	2477.5	2548.5	2722.5	2913.0	3200.8	3800.4
25°	2861.9	2808.2	2659.0	2512.2	2466.0	2468.5	2605.4	2761.2	2827.2	3325.4	3828.5
27.5°	3162.9	3077.1	2741.4	2713.4	2539.4	2404.1	2614.4	2856.9	2972.4	3228.0	3965.4
30°	3539.8	3474.6	3034.2	2997.1	2731.5	2495.7	2729.9	2927.8	2911.3	3291.5	4060.2
32.5°	3845.0	3953.8	3509.3	3216.5	3027.6	2801.7	2693.6	2915.5	3079.6	3439.2	4221.0
35°	4280.4	4382.7	3879.6	3681.7	3271.8	2943.5	2946.8	3085.4	3186.8	3611.5	4400.8
37.5°	5034.2	4944.3	4539.4	4226.8	3964.5	3474.6	3327.8	3279.2	3360.8	3822.7	4753.0
40°	5577.7	5501.9	5025.2	4847.0	4336.5	4052.0	3649.5	3603.3	3747.6	4040.4	5040.8
42.5°	6221.9	6086.6	5642.9	5496.1	4962.5	4449.5	4043.7	4070.1	4140.2	4451.1	5430.1
45°	6877.5	6549.3	6297.7	6286.2	5929.9	5221.4	4676.3	4654.8	4657.3	5055.7	5867.2
47.5°	7397.9	7102.7	6814.8	6677.9	6498.1	6556.7	5595.1	5343.5	5267.6	5664.3	6522.9
50°	7750.1	7410.3	7084.5	7052.4	7532.4	7848.3	6457.7	6188.9	6235.9	6535.3	7397.1
52.5°	7757.5	7354.2	7014.4	7239.6	8370.3	8822.3	7943.9	7192.6	7342.7	7546.4	8537.7
55°	7218.1	6800.0	6579.0	7092.0	8697.7	9977.7	10032.2	8800.8	8627.6	8702.7	9901.0
57.5°	6080.8	5658.6	5529.9	6144.3	8076.7	11092.0	12554.2	10722.5	10214.4	9901.0	11298.2
60°	4577.3	4212.0	4132.0	4523.7	6696.1	10764.5	14596.3	13114.2	12079.2	11239.6	12699.4
62.5°	3432.6	3170.3	3049.9	3106.0	4633.4	9699.8	15937.3	16136.1	14670.5	12701.0	14068.5
65°	2789.3	2577.3	2470.1	2397.5	2881.7	7500.2	15694.9	18679.6	17697.3	14235.9	15134.0
67.5°	2329.9	2141.9	2092.4	2163.3	2277.9	4351.3	13797.9	20102.3	20169.1	15750.1	15756.7
70°	1934.0	1794.6	1776.5	1977.7	2128.7	2626.0	9966.2	19655.3	20392.6	16885.8	15610.7
72.5°	1494.4	1419.4	1416.9	1732.8	2114.6	2238.4	5934.8	16979.8	17970.3	16522.9	14182.3
75°	1036.7	984.7	1024.3	1424.3	2066.0	2270.5	3387.2	13225.6	13967.0	14060.2	11360.8
77.5°	713.4	669.7	712.6	1030.1	1844.9	2324.9	2369.5	9562.9	9645.4	9428.5	6507.2
80°	496.5	466.0	499.0	729.1	1435.9	2301.0	2017.3	6020.6	5524.1	4207.8	2083.3
82.5°	307.6	298.6	334.8	519.6	1011.1	2093.2	1911.8	3106.8	2372.0	1161.2	743.9
85°	161.6	148.5	194.6	339.0	632.6	1642.9	1791.3	1417.7	915.5	412.4	298.6
87.5°	47.8	42.9	75.1	136.9	268.0	736.5	1025.2	601.2	341.4	121.2	93.2
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°	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9	1510.9
2.5°	1841.7	1832.6	1710.5	1726.2	1752.6	1759.2	1758.4	1713.8	1666.8	1797.9	1793.8
5°	2345.6	2263.9	2202.9	2189.7	2114.6	2039.6	2066.0	2056.9	2045.4	2104.7	2112.2
7.5°	2708.5	2595.5	2524.5	2342.3	2169.1	2019.0	2066.8	2081.7	2052.0	2159.2	2191.3
10°	2804.1	2715.1	2638.4	2404.1	2308.5	2221.0	2091.5	1943.9	1924.1	1862.3	1869.7
12.5°	3050.7	3038.4	2776.9	2570.7	2446.2	2272.2	1992.6	1813.6	1660.2	1667.6	1623.1
15°	3245.4	3252.0	2937.7	2649.1	2315.1	2049.5	1720.4	1497.7	1340.2	1308.9	1276.7
17.5°	3506.8	3493.6	2950.9	2555.1	2132.0	1742.7	1339.4	1118.4	1092.0	1110.1	1082.1
20°	3620.6	3504.3	2866.8	2321.7	1845.8	1323.7	1012.0	894.8	946.0	1018.6	1020.2
22.5°	3722.9	3524.1	2823.1	2133.6	1464.7	962.5	812.4	790.9	851.1	949.3	957.5
25°	3718.8	3615.7	2744.7	1943.9	1135.7	751.3	706.0	721.6	793.4	895.7	901.4
27.5°	3906.0	3545.6	2541.0	1694.8	855.3	643.3	654.8	683.7	717.5	814.8	833.8
30°	3904.3	3675.9	2438.8	1392.2	687.0	589.7	619.4	644.1	672.2	761.2	772.0
32.5°	3996.7	3590.9	2376.9	1082.9	616.1	576.5	583.9	608.7	649.1	709.3	716.7
35°	4108.0	3687.4	2179.0	860.2	589.7	564.9	570.7	584.7	621.9	677.1	684.5
37.5°	4465.2	3705.6	2100.6	724.9	588.0	560.0	559.2	566.6	608.7	659.0	681.2
40°	4604.5	3871.3	1872.2	677.1	582.3	560.0	548.5	552.6	587.2	651.5	668.9
42.5°	4938.6	3926.6	1703.1	660.6	582.3	550.1	532.0	538.6	579.0	635.9	663.1
45°	5282.5	4005.0	1501.9	657.3	581.4	549.3	514.6	529.5	562.5	610.3	640.0
47.5°	5772.4	4287.0	1300.6	647.4	574.8	553.4	510.5	509.7	538.6	579.8	607.8
50°	6571.6	4727.4	1144.7	635.1	575.7	550.1	502.3	490.7	509.7	546.0	573.2
52.5°	7684.1	5477.9	1083.7	628.5	569.1	536.9	488.2	470.1	480.8	509.7	536.1
55°	8975.7	6491.6	1143.9	628.5	555.9	516.3	468.5	447.0	452.8	472.6	498.1
57.5°	10485.0	7750.9	1435.1	619.4	539.4	491.5	444.5	419.8	421.4	438.8	461.9
60°	12061.0	9157.9	2087.4	612.0	527.8	464.3	416.5	390.9	388.5	404.9	425.6
62.5°	13639.6	10456.1	2773.6	629.3	524.5	441.2	386.8	361.2	360.4	375.3	392.6
65°	14894.9	11343.5	2944.3	699.4	546.0	414.8	356.3	332.4	330.7	343.1	362.1
67.5°	15510.9	11472.2	2236.7	786.8	591.3	390.1	326.6	304.3	302.7	315.9	332.4
70°	15054.9	10593.0	1380.6	795.9	588.9	361.2	296.1	277.1	273.8	287.8	300.2
72.5°	13367.4	9266.0	1049.1	704.3	509.7	320.0	265.6	249.1	244.1	256.5	268.0
75°	10729.1	7356.7	840.4	568.2	401.6	269.7	235.1	219.4	213.6	225.2	235.1
77.5°	6249.9	4138.6	614.4	443.7	303.5	220.2	200.4	186.4	179.8	192.2	199.6
80°	2032.2	1379.0	386.0	318.4	221.9	172.4	162.5	152.6	146.0	154.2	156.7
82.5°	729.9	513.0	213.6	195.5	147.6	123.7	122.9	117.1	108.9	112.2	112.2
85°	323.3	234.2	127.0	104.7	88.2	66.0	77.5	73.4	65.2	63.5	61.0
87.5°	90.7	77.5	46.2	35.5	28.9	10.7	24.7	22.3	18.1	16.5	11.5
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)