

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: P368562

Luminaire Tested: **MSA-SA4C-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-830-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: 18994 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

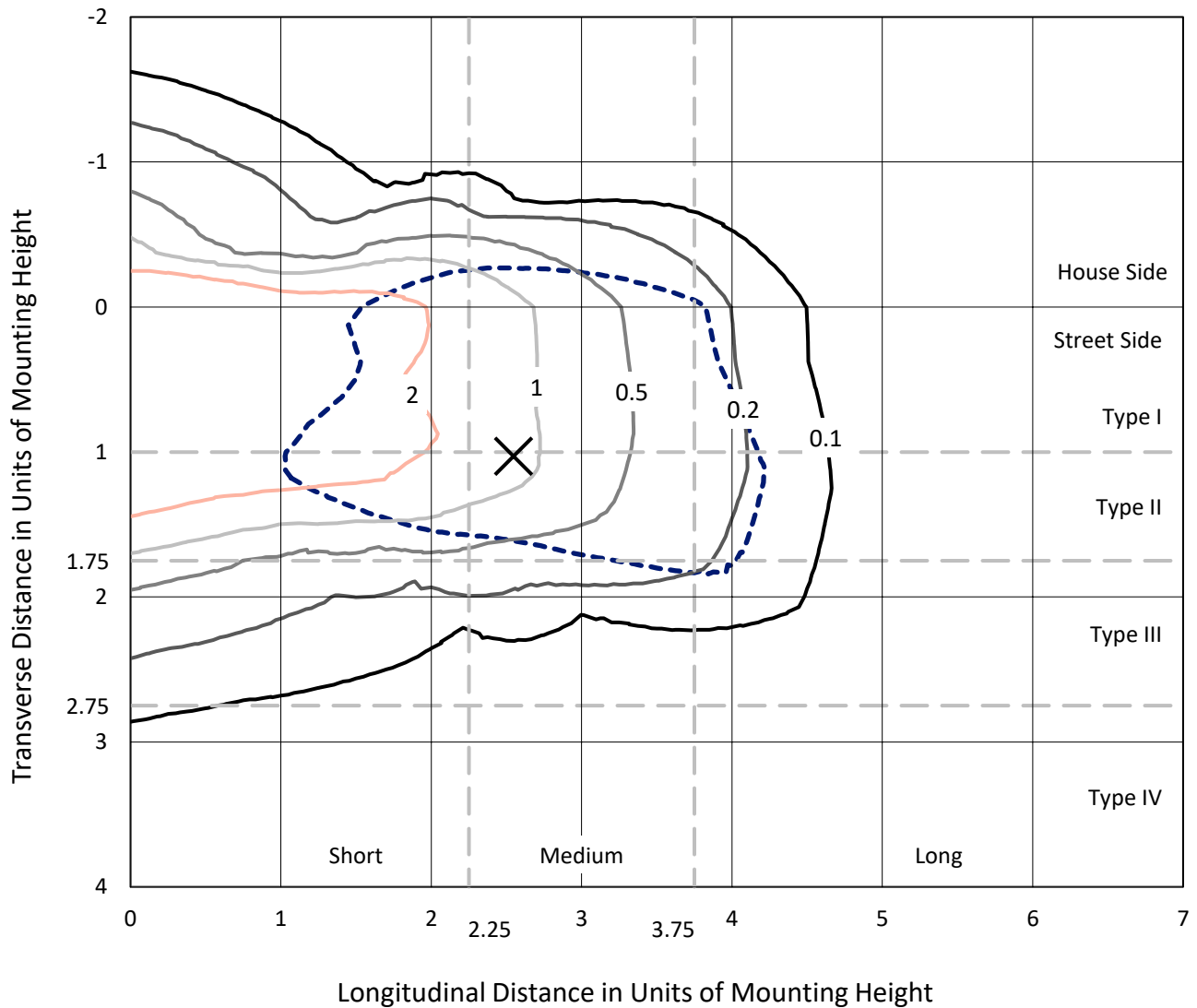
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368562
 CATALOG NUMBER: MSA-SA4C-830-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

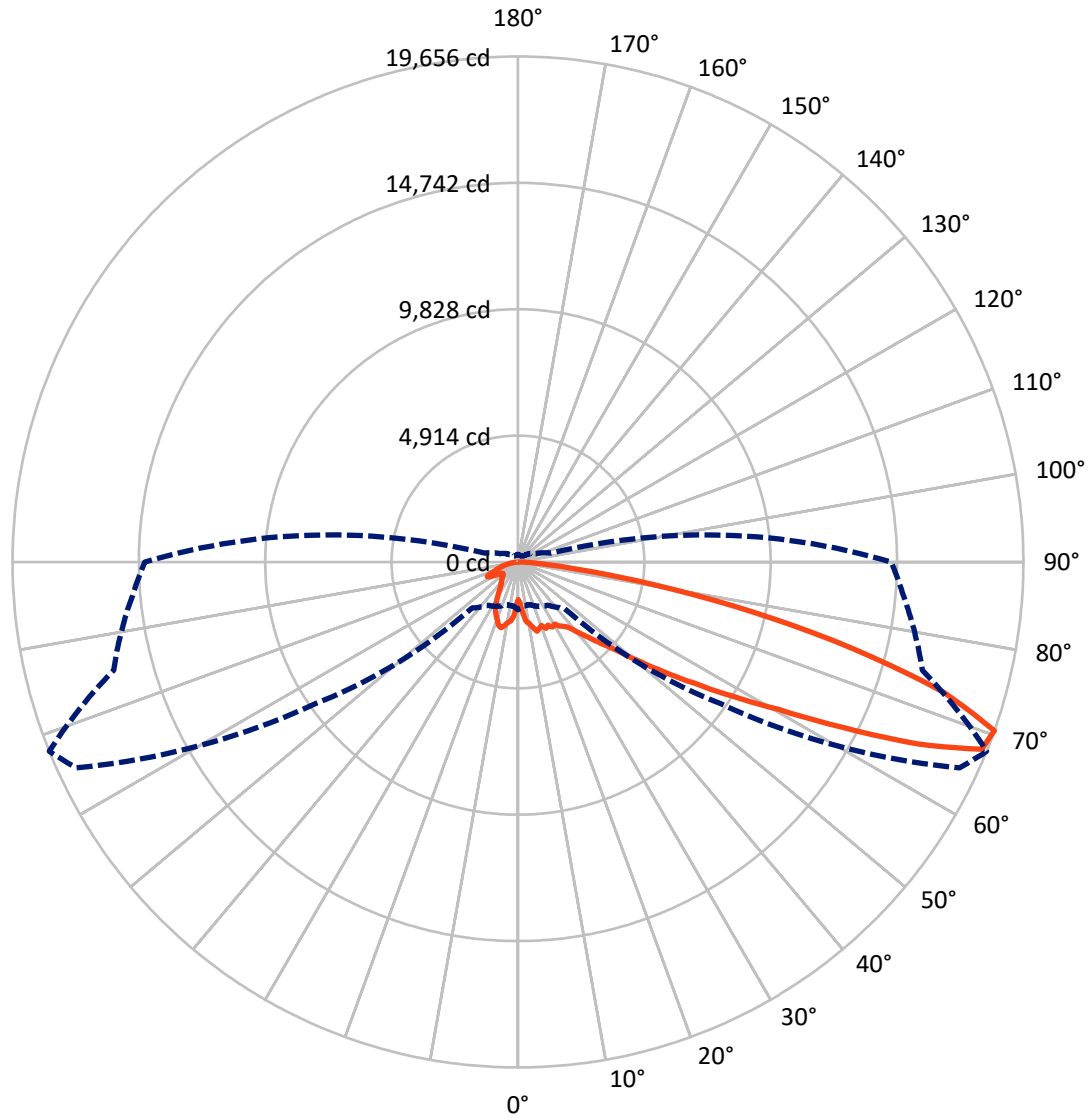
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Medium - N/A

REPORT NUMBER: P368562
CATALOG NUMBER: MSA-SA4C-830-U-SL2

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368562
 CATALOG NUMBER: MSA-SA4C-830-U-SL2

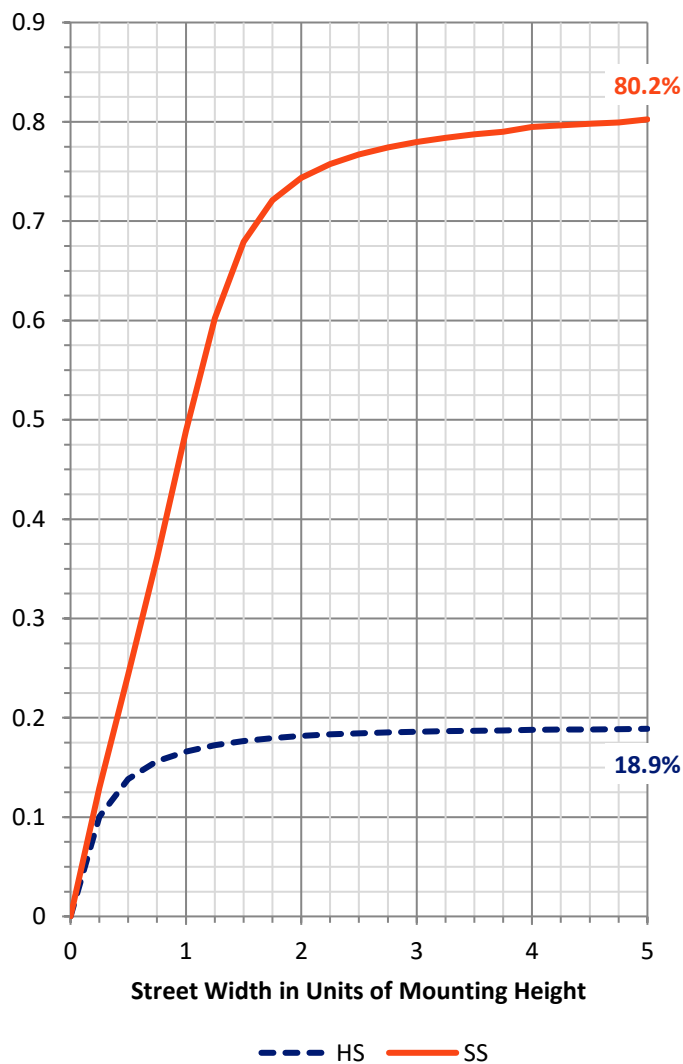
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3626.4	0.0	3626.4
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	15367.6	0.0	15367.6
	% Fixture	80.9	0.0	80.9
Total	Lumens	18994.0	0.0	18994.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.5	1.0
10°-20°	633.9	3.3
20°-30°	964.3	5.1
30°-40°	1473.0	7.8
40°-50°	2532.7	13.3
50°-60°	4192.2	22.1
60°-70°	5168.4	27.2
70°-80°	3320.0	17.5
80°-90°	515.0	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°	18994.0	100.0
0°-180°	18994.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368562

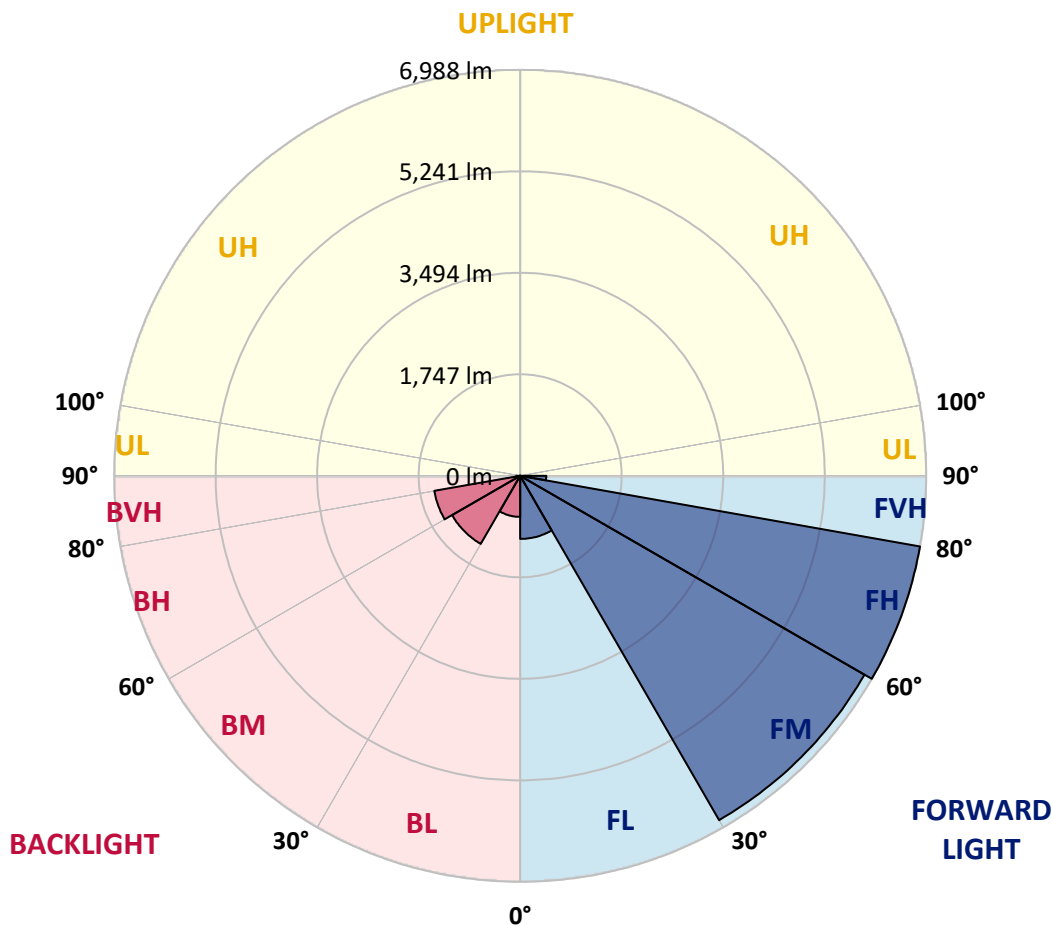
CATALOG NUMBER: MSA-SA4C-830-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1086.1	5.7			
FM (30°-60°)	6844.3	36.0			
FH (60°-80°)	6988.3	36.8			G3/7500
FVH (80°-90°)	448.9	2.4			G3/500
BL (0°-30°)	706.6	3.7	B2/1000		
BM (30°-60°)	1353.6	7.1	B2/2500		
BH (60°-80°)	1500.1	7.9	B3/2500		G3/2500
BVH (80°-90°)	66.1	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





REPORT NUMBER: P368562

CATALOG NUMBER: MSA-SA4C-830-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3
2.5°	1673.4	1605.8	1537.4	1570.8	1624.1	1671.0	1661.4	1667.0	1602.6	1593.9	1763.2
5°	1971.5	1855.4	1853.0	1854.6	1859.4	1805.3	1937.3	2005.6	2020.7	2090.7	2256.8
7.5°	2074.8	2027.9	1980.2	2004.1	1943.6	1949.2	2111.4	2289.4	2331.6	2382.4	2609.8
10°	2053.3	2008.8	2023.1	2027.1	2038.2	2128.1	2232.2	2403.1	2438.9	2601.1	2659.9
12.5°	2056.5	2048.6	2115.3	2117.7	2237.0	2398.3	2439.7	2597.1	2611.4	2730.6	2976.3
15°	2165.4	2220.3	2182.9	2202.8	2225.8	2419.0	2478.6	2704.4	2790.3	2943.7	3128.1
17.5°	2377.7	2393.6	2281.5	2252.1	2327.6	2386.4	2522.4	2620.1	2710.0	3138.4	3392.8
20°	2427.0	2469.9	2336.3	2184.5	2344.3	2426.2	2520.8	2565.3	2635.2	3167.1	3528.0
22.5°	2638.4	2549.4	2388.0	2256.1	2308.5	2388.0	2456.4	2624.1	2807.7	3085.2	3663.1
25°	2758.5	2706.8	2562.9	2421.4	2376.9	2379.3	2511.2	2661.5	2725.1	3205.2	3690.1
27.5°	3048.6	2965.9	2642.4	2615.4	2447.6	2317.3	2520.0	2753.7	2865.0	3111.4	3822.1
30°	3411.9	3349.1	2924.6	2888.8	2632.9	2405.5	2631.3	2822.1	2806.2	3172.6	3913.5
32.5°	3706.0	3811.0	3382.5	3100.3	2918.2	2700.4	2596.3	2810.1	2968.3	3314.9	4068.5
35°	4125.8	4224.3	3739.4	3548.6	3153.5	2837.2	2840.3	2973.9	3071.7	3481.1	4241.8
37.5°	4852.3	4765.7	4375.4	4074.1	3821.3	3349.1	3207.6	3160.7	3239.4	3684.6	4581.3
40°	5376.2	5303.1	4843.6	4671.9	4179.8	3905.6	3517.6	3473.1	3612.2	3894.4	4858.7
42.5°	5997.1	5866.7	5439.0	5297.5	4783.2	4288.7	3897.6	3923.0	3990.6	4290.3	5233.9
45°	6629.0	6312.6	6070.2	6059.1	5715.6	5032.8	4507.3	4486.7	4489.0	4873.0	5655.2
47.5°	7130.6	6846.1	6568.6	6436.7	6263.4	6319.8	5392.9	5150.4	5077.3	5459.7	6287.2
50°	7470.1	7142.6	6828.6	6797.6	7260.2	7564.7	6224.4	5965.3	6010.6	6299.1	7129.9
52.5°	7477.2	7088.5	6761.0	6978.0	8067.9	8503.5	7656.9	6932.7	7077.4	7273.7	8229.3
55°	6957.3	6554.3	6341.3	6835.7	8383.5	9617.2	9669.7	8482.8	8315.9	8388.2	9543.3
57.5°	5861.1	5454.1	5330.1	5922.3	7784.9	10691.2	12100.6	10335.1	9845.4	9543.3	10889.9
60°	4411.9	4059.8	3982.7	4360.3	6454.1	10375.6	14068.9	12640.4	11642.7	10833.5	12240.5
62.5°	3308.6	3055.8	2939.7	2993.8	4466.0	9349.3	15361.5	15553.1	14140.5	12242.1	13560.2
65°	2688.5	2484.2	2380.9	2310.9	2777.5	7229.2	15127.8	18004.7	17057.9	13721.5	14587.2
67.5°	2245.7	2064.5	2016.8	2085.1	2195.6	4194.1	13299.4	19376.0	19440.4	15181.0	15187.4
70°	1864.1	1729.8	1712.3	1906.3	2051.8	2531.1	9606.1	18945.1	19655.8	16275.7	15046.7
72.5°	1440.4	1368.1	1365.7	1670.2	2038.2	2157.5	5720.4	16366.3	17321.0	15925.9	13669.9
75°	999.2	949.2	987.3	1372.9	1991.3	2188.5	3264.8	12747.7	13462.4	13552.2	10950.4
77.5°	687.6	645.5	686.8	992.9	1778.3	2240.9	2283.9	9217.4	9296.9	9087.8	6272.1
80°	478.6	449.1	480.9	702.7	1384.0	2217.9	1944.4	5803.1	5324.5	4055.8	2008.0
82.5°	296.5	287.8	322.7	500.8	974.6	2017.6	1842.7	2994.6	2286.3	1119.3	717.0
85°	155.8	143.1	187.6	326.7	609.7	1583.5	1726.6	1366.5	882.4	397.5	287.8
87.5°	46.1	41.3	72.3	132.0	258.4	709.9	988.1	579.5	329.1	116.9	89.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368562
 CATALOG NUMBER: MSA-SA4C-830-U-SL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3	1456.3
2.5°	1775.1	1766.4	1648.7	1663.8	1689.3	1695.6	1694.8	1651.9	1606.6	1733.0	1729.0
5°	2260.8	2182.1	2123.3	2110.6	2038.2	1965.9	1991.3	1982.6	1971.5	2028.7	2035.9
7.5°	2610.6	2501.7	2433.3	2257.6	2090.7	1946.0	1992.1	2006.4	1977.8	2081.2	2112.2
10°	2702.8	2617.0	2543.0	2317.3	2225.0	2140.8	2016.0	1873.7	1854.6	1795.0	1802.1
12.5°	2940.5	2928.6	2676.6	2477.8	2357.8	2190.1	1920.6	1748.1	1600.2	1607.4	1564.4
15°	3128.1	3134.5	2831.6	2553.4	2231.4	1975.4	1658.3	1443.6	1291.8	1261.6	1230.6
17.5°	3380.1	3367.4	2844.3	2462.7	2054.9	1679.7	1291.0	1077.9	1052.5	1070.0	1043.0
20°	3489.8	3377.7	2763.2	2237.8	1779.1	1275.9	975.4	862.5	911.8	981.8	983.3
22.5°	3588.4	3396.8	2721.1	2056.5	1411.8	927.7	783.0	762.4	820.4	915.0	922.9
25°	3584.4	3485.0	2645.6	1873.7	1094.6	724.2	680.5	695.6	764.7	863.3	868.9
27.5°	3764.9	3417.5	2449.2	1633.6	824.4	620.1	631.2	659.0	691.6	785.4	803.7
30°	3763.3	3543.1	2350.6	1341.9	662.2	568.4	597.0	620.9	647.9	733.7	744.1
32.5°	3852.3	3461.2	2291.0	1043.8	593.8	555.7	562.8	586.7	625.6	683.7	690.8
35°	3959.6	3554.2	2100.2	829.1	568.4	544.5	550.1	563.6	599.4	652.6	659.8
37.5°	4303.8	3571.7	2024.7	698.8	566.8	539.8	539.0	546.1	586.7	635.2	656.6
40°	4438.2	3731.5	1804.5	652.6	561.2	539.8	528.6	532.6	566.0	628.0	644.7
42.5°	4760.1	3784.7	1641.6	636.8	561.2	530.2	512.7	519.1	558.1	612.9	639.1
45°	5091.6	3860.2	1447.6	633.6	560.4	529.4	496.0	510.4	542.2	588.3	616.9
47.5°	5563.8	4132.1	1253.6	624.0	554.1	533.4	492.1	491.3	519.1	558.8	585.9
50°	6334.1	4556.6	1103.4	612.1	554.9	530.2	484.1	473.0	491.3	526.3	552.5
52.5°	7406.5	5280.0	1044.6	605.7	548.5	517.5	470.6	453.1	463.5	491.3	516.7
55°	8651.4	6257.0	1102.6	605.7	535.8	497.6	451.5	430.9	436.4	455.5	480.1
57.5°	10106.1	7470.9	1383.2	597.0	519.9	473.8	428.5	404.6	406.2	422.9	445.2
60°	11625.3	8827.1	2012.0	589.8	508.8	447.6	401.4	376.8	374.4	390.3	410.2
62.5°	13146.8	10078.3	2673.4	606.5	505.6	425.3	372.8	348.2	347.4	361.7	378.4
65°	14356.7	10933.7	2837.9	674.1	526.3	399.9	343.4	320.4	318.8	330.7	349.0
67.5°	14950.5	11057.7	2155.9	758.4	570.0	376.0	314.8	293.3	291.7	304.5	320.4
70°	14510.9	10210.3	1330.7	767.1	567.6	348.2	285.4	267.1	263.9	277.4	289.4
72.5°	12884.5	8931.2	1011.2	678.9	491.3	308.4	256.0	240.1	235.3	247.2	258.4
75°	10341.4	7090.9	810.0	547.7	387.1	259.9	226.6	211.5	205.9	217.0	226.6
77.5°	6024.1	3989.0	592.2	427.7	292.5	212.3	193.2	179.7	173.3	185.2	192.4
80°	1958.7	1329.1	372.0	306.8	213.8	166.1	156.6	147.1	140.7	148.7	151.0
82.5°	703.5	494.5	205.9	188.4	142.3	119.2	118.4	112.9	104.9	108.1	108.1
85°	311.6	225.8	122.4	101.0	85.1	63.6	74.7	70.8	62.8	61.2	58.8
87.5°	87.4	74.7	44.5	34.2	27.8	10.3	23.8	21.5	17.5	15.9	11.1
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)