

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: P368080

Luminaire Tested: **MSA-SA3D-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368080
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-730-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 17787 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

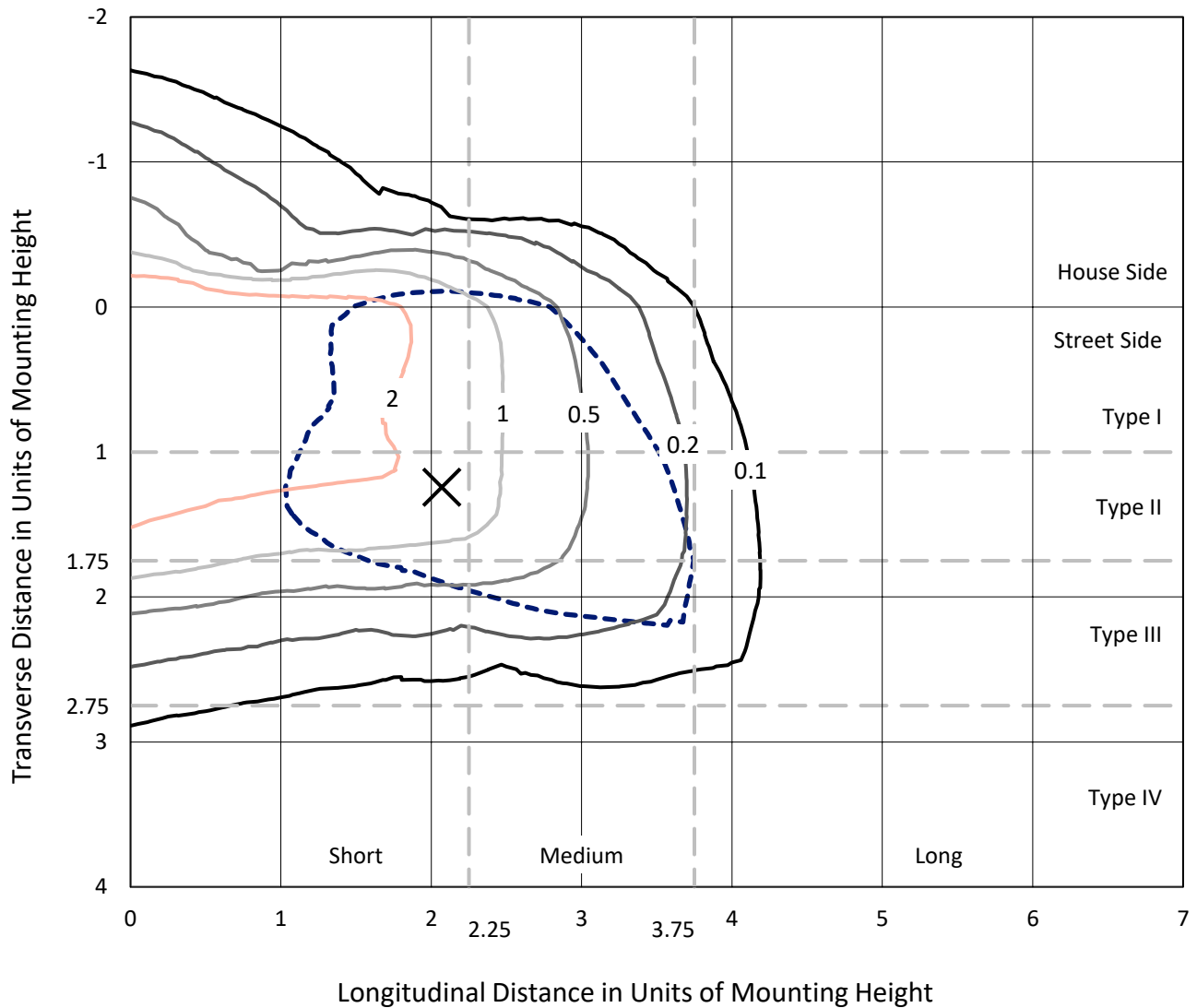
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

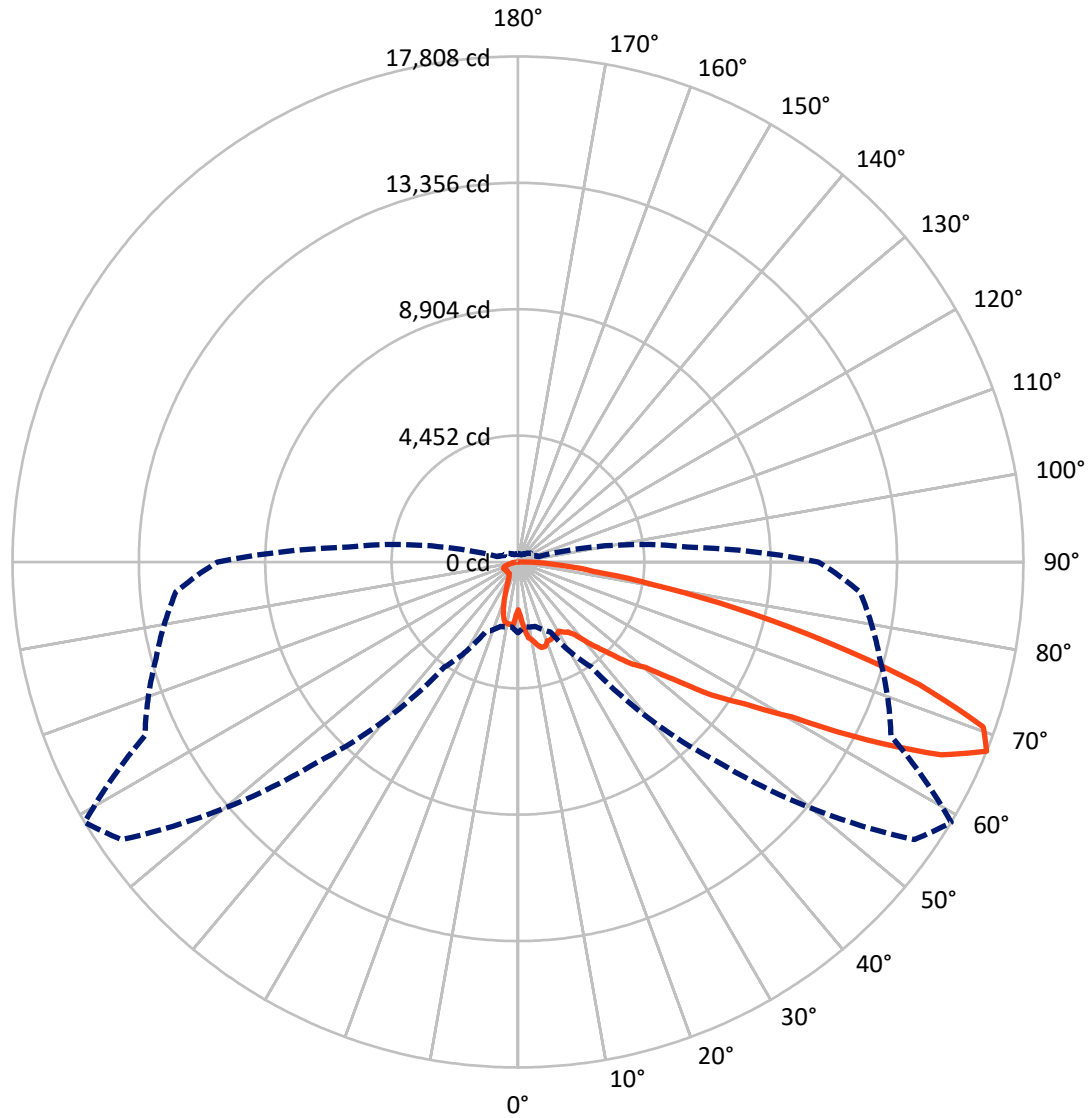
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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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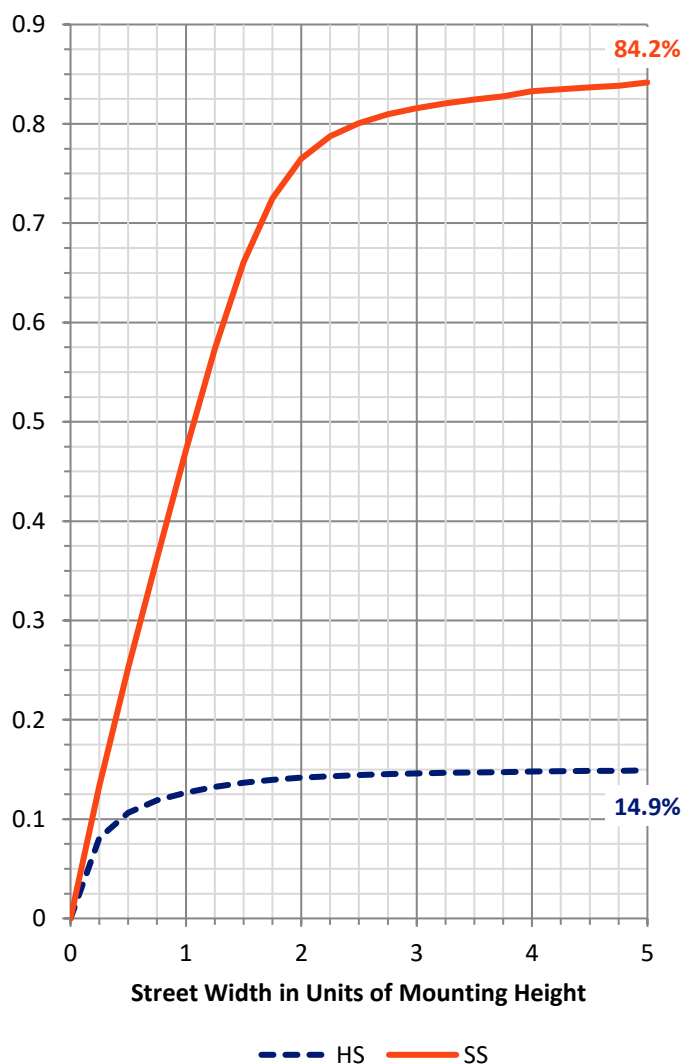
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2677.3	0.0	2677.3
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	15109.7	0.0	15109.7
	% Fixture	84.9	0.0	84.9
Total	Lumens	17787.0	0.0	17787.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.8	1.2
10°-20°	650.5	3.7
20°-30°	929.0	5.2
30°-40°	1368.9	7.7
40°-50°	2312.8	13.0
50°-60°	4024.7	22.6
60°-70°	5128.7	28.8
70°-80°	2715.7	15.3
80°-90°	436.9	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°	17787.0	100.0
0°-180°	17787.0	100.0

Coefficient of Utilization



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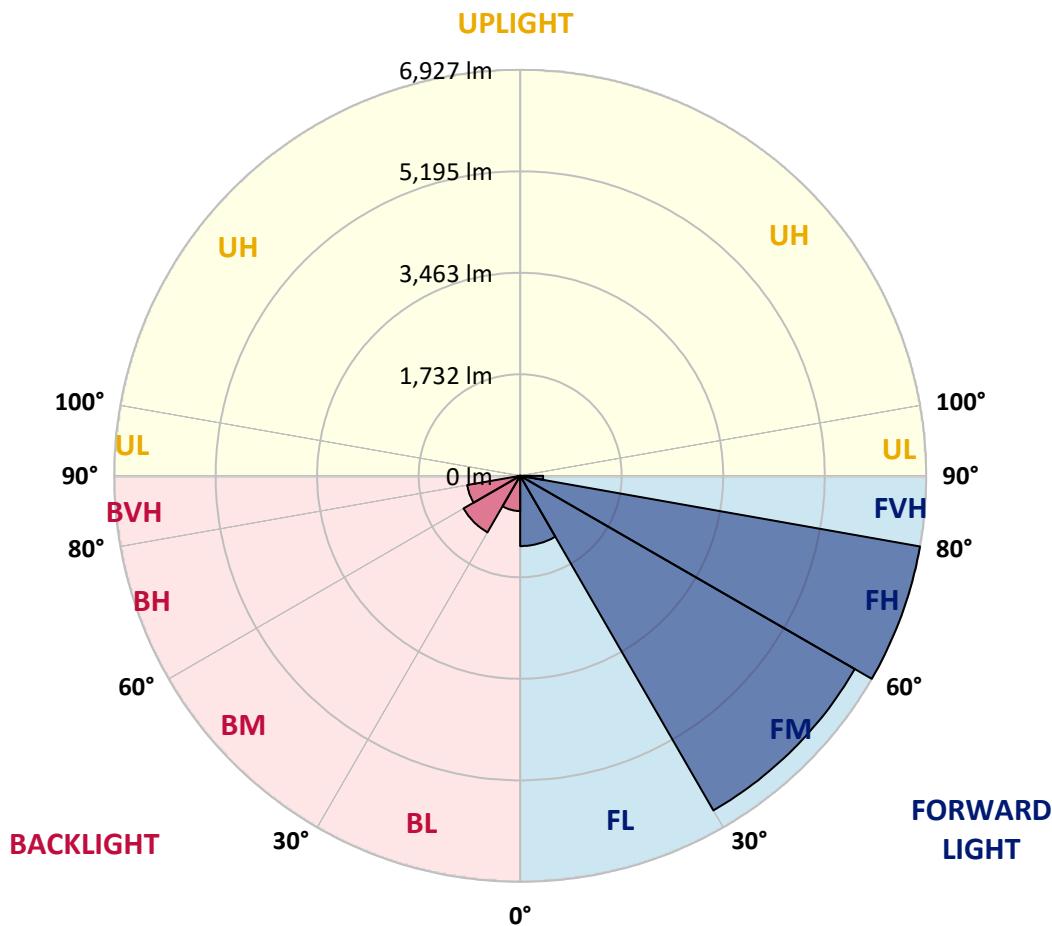
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1198.9	6.7			
FM (30°-60°)	6591.6	37.1			
FH (60°-80°)	6926.8	38.9			G3/7500
FVH (80°-90°)	392.4	2.2			G3/500
BL (0°-30°)	600.4	3.4	B2/1000		
BM (30°-60°)	1114.8	6.3	B2/2500		
BH (60°-80°)	917.6	5.2	B2/1000		G2/1000
BVH (80°-90°)	44.5	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1
2.5°	2101.4	2003.5	1899.4	1928.8	1988.4	2015.5	1986.1	1957.5	1920.5	1876.8	2026.1
5°	2548.4	2402.9	2381.8	2381.1	2360.0	2275.6	2384.1	2376.6	2420.3	2465.5	2581.6
7.5°	2675.8	2621.5	2562.7	2590.6	2484.4	2479.8	2648.7	2696.9	2781.3	2753.4	2909.5
10°	2610.2	2549.2	2580.1	2568.8	2578.6	2690.1	2793.4	2796.4	2886.9	2975.8	2875.5
12.5°	2494.9	2499.4	2622.3	2617.8	2776.1	2983.3	3014.2	2990.1	3137.9	3077.6	3163.5
15°	2577.1	2632.1	2601.2	2627.6	2690.1	2953.9	3039.9	3127.3	3267.5	3321.8	3235.8
17.5°	2708.2	2737.6	2598.9	2584.6	2713.5	2838.6	3051.9	3126.5	3148.4	3535.1	3413.7
20°	2652.4	2712.0	2576.3	2402.2	2616.3	2782.1	2992.4	2969.8	3076.0	3551.7	3450.7
22.5°	2810.7	2712.0	2539.4	2415.8	2491.1	2643.4	2822.0	2970.5	3096.4	3454.4	3504.2
25°	2840.9	2794.1	2632.8	2510.0	2484.4	2538.6	2793.4	2890.6	3103.2	3587.1	3475.5
27.5°	3024.8	2954.7	2626.1	2629.8	2502.4	2406.7	2702.9	2907.2	3180.1	3504.9	3545.6
30°	3253.2	3199.7	2787.4	2802.4	2626.1	2449.7	2764.7	2826.6	3224.5	3633.1	3633.8
32.5°	3424.3	3518.5	3104.7	2899.7	2837.1	2705.2	2669.8	2947.9	3172.5	3865.2	3784.6
35°	3732.6	3805.7	3348.9	3184.6	2972.8	2824.3	2927.6	3027.8	3388.9	4170.5	4008.4
37.5°	4303.1	4218.7	3802.7	3544.1	3465.0	3250.9	3308.2	3238.1	3624.0	4513.4	4447.1
40°	4633.3	4560.2	4122.2	3979.0	3665.5	3692.6	3621.0	3672.3	3938.3	4878.3	4857.2
42.5°	4958.9	4860.9	4490.8	4391.3	4078.5	3945.9	3958.7	4124.5	4423.0	5467.7	5397.6
45°	5280.8	5029.8	4867.7	4894.1	4743.3	4471.2	4490.1	4646.1	4952.1	6141.5	5980.2
47.5°	5527.2	5320.0	5193.3	5160.9	5086.3	5450.4	5287.5	5350.9	5485.8	6741.5	6680.5
50°	5993.8	5751.9	5586.8	5540.0	5793.3	6299.8	5968.2	5831.7	6118.9	7517.1	7485.5
52.5°	6740.8	6439.3	6164.2	6161.1	6527.5	6856.1	7089.8	6854.6	6960.1	8311.6	8402.0
55°	7392.8	7043.8	6796.5	6933.0	7454.6	7655.8	8449.5	8265.6	8176.7	9113.6	9372.1
57.5°	7636.2	7228.4	7067.1	7268.4	8037.2	9071.4	9910.3	9426.4	9339.7	10021.1	10563.0
60°	7101.8	6670.7	6680.5	7059.6	8391.5	10110.8	11507.5	11096.7	10588.7	11150.9	11680.1
62.5°	5579.2	5189.6	5443.6	6020.2	8094.5	11120.8	13648.1	13821.5	12015.5	12087.9	12299.7
65°	3792.1	3522.3	3751.4	4316.0	6565.1	11671.8	15687.0	16382.0	13315.0	12701.4	12567.2
67.5°	2495.7	2305.0	2349.4	2724.8	4519.5	9950.2	17050.5	17808.0	14502.9	13204.9	12095.4
70°	1932.6	1778.8	1759.2	1956.0	2680.3	6912.6	16242.5	17394.2	15226.5	12733.1	10542.7
72.5°	1516.5	1399.7	1410.3	1599.5	2075.8	3835.1	12568.7	14791.5	14136.5	10981.4	8099.8
75°	1182.6	1086.9	1140.4	1356.7	1919.8	2383.4	8671.9	11226.3	10929.3	8131.4	4619.7
77.5°	858.5	796.7	872.8	1155.5	1804.5	2044.9	5398.3	7832.2	7001.6	4175.0	1585.1
80°	563.0	528.4	590.9	942.2	1636.4	1968.0	3336.1	4799.1	3459.7	1172.8	600.0
82.5°	331.6	316.6	368.6	637.7	1315.3	1844.4	2225.1	2666.8	1415.5	496.0	318.8
85°	174.1	162.8	218.6	366.3	906.8	1683.9	1751.7	1596.4	683.6	215.6	152.3
87.5°	58.0	56.5	92.7	141.7	343.0	893.9	934.6	758.3	281.9	62.6	33.2
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°	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1	1683.1
2.5°	2046.4	2016.3	1842.9	1867.0	1889.6	1878.3	1871.6	1793.2	1785.6	1897.2	1888.1
5°	2578.6	2453.4	2305.7	2298.9	2201.7	2102.2	2121.8	2090.1	2099.2	2145.2	2149.7
7.5°	2859.7	2703.7	2562.7	2333.6	2139.1	1981.6	2006.5	1998.9	1978.6	2082.6	2110.5
10°	2854.4	2715.8	2556.7	2279.3	2148.2	2020.0	1866.3	1720.8	1677.8	1626.6	1631.1
12.5°	3042.9	2920.0	2573.3	2290.6	2112.8	1891.9	1604.0	1444.9	1292.7	1289.7	1251.2
15°	3101.7	3011.2	2608.7	2225.8	1864.8	1548.2	1250.5	1077.9	967.8	946.0	913.5
17.5°	3250.2	3108.5	2500.9	2016.3	1576.8	1210.5	939.9	819.3	810.3	825.4	808.8
20°	3260.0	3030.1	2306.5	1706.5	1267.1	917.3	766.6	706.3	738.7	775.6	774.1
22.5°	3251.7	2931.3	2138.4	1442.7	952.0	737.2	671.6	658.0	688.2	743.2	750.0
25°	3167.2	2898.9	1928.1	1184.9	772.6	631.6	613.6	621.8	659.5	724.4	724.4
27.5°	3255.4	2767.0	1664.3	964.0	649.7	562.3	575.1	596.2	624.1	698.0	711.5
30°	3226.8	2810.7	1451.7	776.4	572.8	514.1	542.7	563.8	595.5	672.3	679.1
32.5°	3303.7	2693.9	1273.1	652.7	522.3	495.2	502.0	530.6	572.1	632.4	644.5
35°	3421.3	2736.9	1068.1	587.2	497.5	473.4	486.2	508.8	550.2	609.0	618.8
37.5°	3796.6	2734.6	926.4	551.0	493.0	468.8	474.9	490.7	538.9	592.4	615.1
40°	4037.8	2891.4	797.5	542.7	487.7	466.6	461.3	478.6	517.1	580.4	596.2
42.5°	4490.8	2987.1	741.7	539.7	486.9	453.8	448.5	468.8	506.5	565.3	589.4
45°	4969.5	3123.5	697.2	538.2	484.7	451.5	435.7	461.3	493.0	549.5	577.4
47.5°	5532.5	3412.2	672.3	532.9	480.1	454.5	431.1	444.0	479.4	535.9	563.8
50°	6269.7	3794.4	677.6	525.4	486.9	455.3	424.4	430.4	462.8	517.8	546.5
52.5°	7165.9	4386.1	711.5	528.4	491.4	451.5	421.3	418.3	446.2	494.5	523.1
55°	8246.0	5225.7	813.3	542.7	491.4	450.7	416.8	403.3	424.4	463.6	491.4
57.5°	9549.2	6198.1	1012.3	549.5	487.7	446.2	407.0	382.9	395.7	428.1	454.5
60°	10668.5	6982.7	1217.3	554.0	495.2	435.7	387.4	357.3	365.6	390.4	413.8
62.5°	11239.1	7202.8	1279.1	550.2	515.6	428.9	364.1	330.1	330.9	352.0	373.1
65°	11346.2	6909.6	1031.1	546.5	541.9	428.1	347.5	306.8	301.5	316.6	334.7
67.5°	10583.4	5997.6	743.9	538.2	545.0	423.6	336.2	287.9	274.4	284.9	300.0
70°	8986.2	4830.0	624.9	521.6	508.8	401.0	316.6	268.3	250.2	257.8	269.1
72.5°	6699.3	3573.5	545.0	486.2	443.2	343.0	286.4	246.5	227.6	232.9	241.2
75°	3722.0	1906.2	456.0	422.9	361.8	277.4	244.2	218.6	202.0	204.3	213.3
77.5°	1236.1	703.2	334.7	335.4	273.6	214.1	201.3	186.9	174.1	174.9	182.4
80°	560.0	388.9	239.7	241.2	190.7	155.3	154.5	150.0	141.7	139.4	144.7
82.5°	324.9	235.9	164.3	156.8	122.9	101.0	112.3	110.0	107.8	99.5	101.0
85°	159.8	126.6	85.9	81.4	67.8	50.5	60.3	62.6	60.3	51.3	50.5
87.5°	39.2	41.5	21.1	19.6	11.3	5.3	9.0	9.0	11.3	7.5	3.8
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)