

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: P368473

Luminaire Tested: **MSA-SA4C-730-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368473  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-730-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17960 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G3

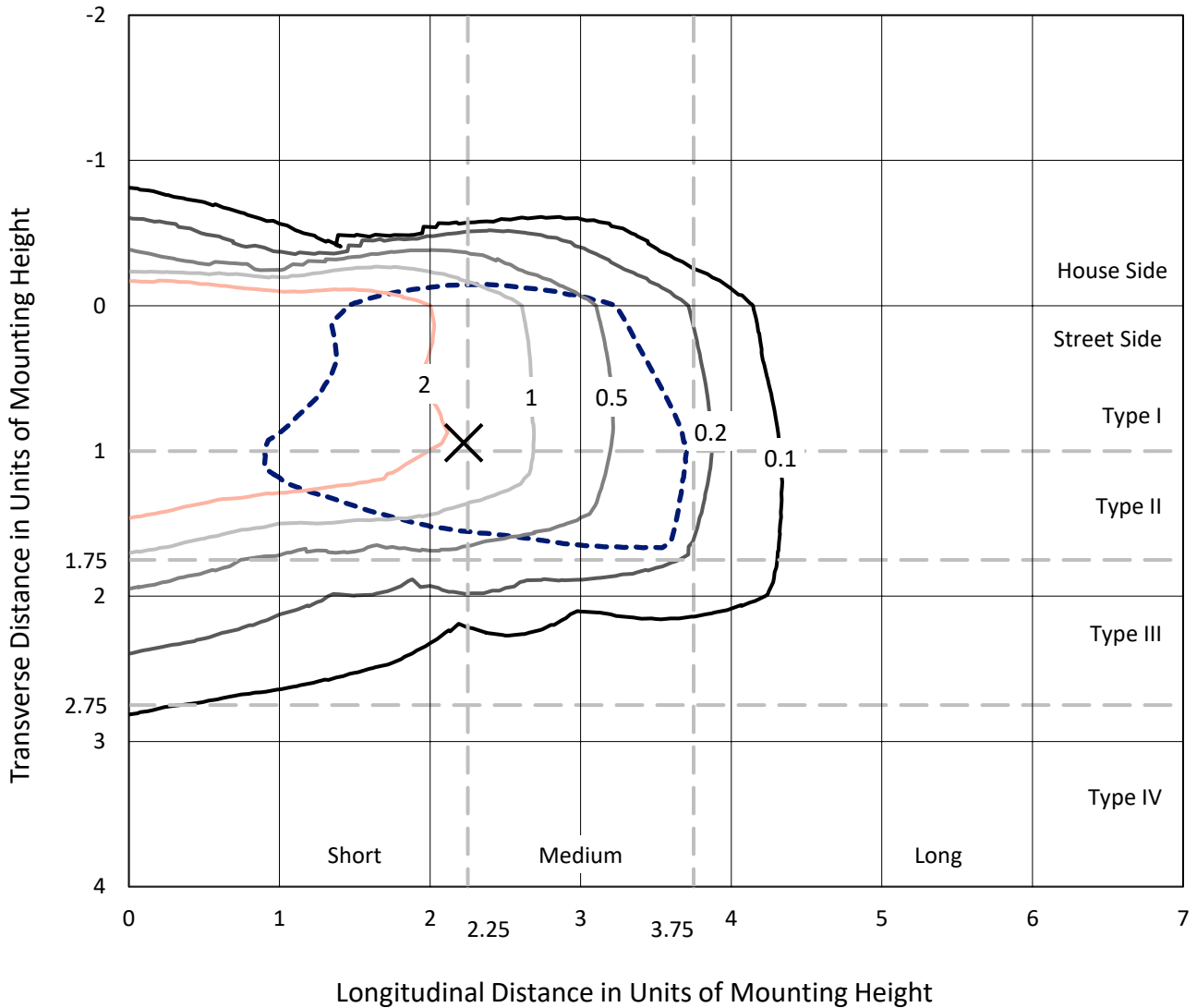
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

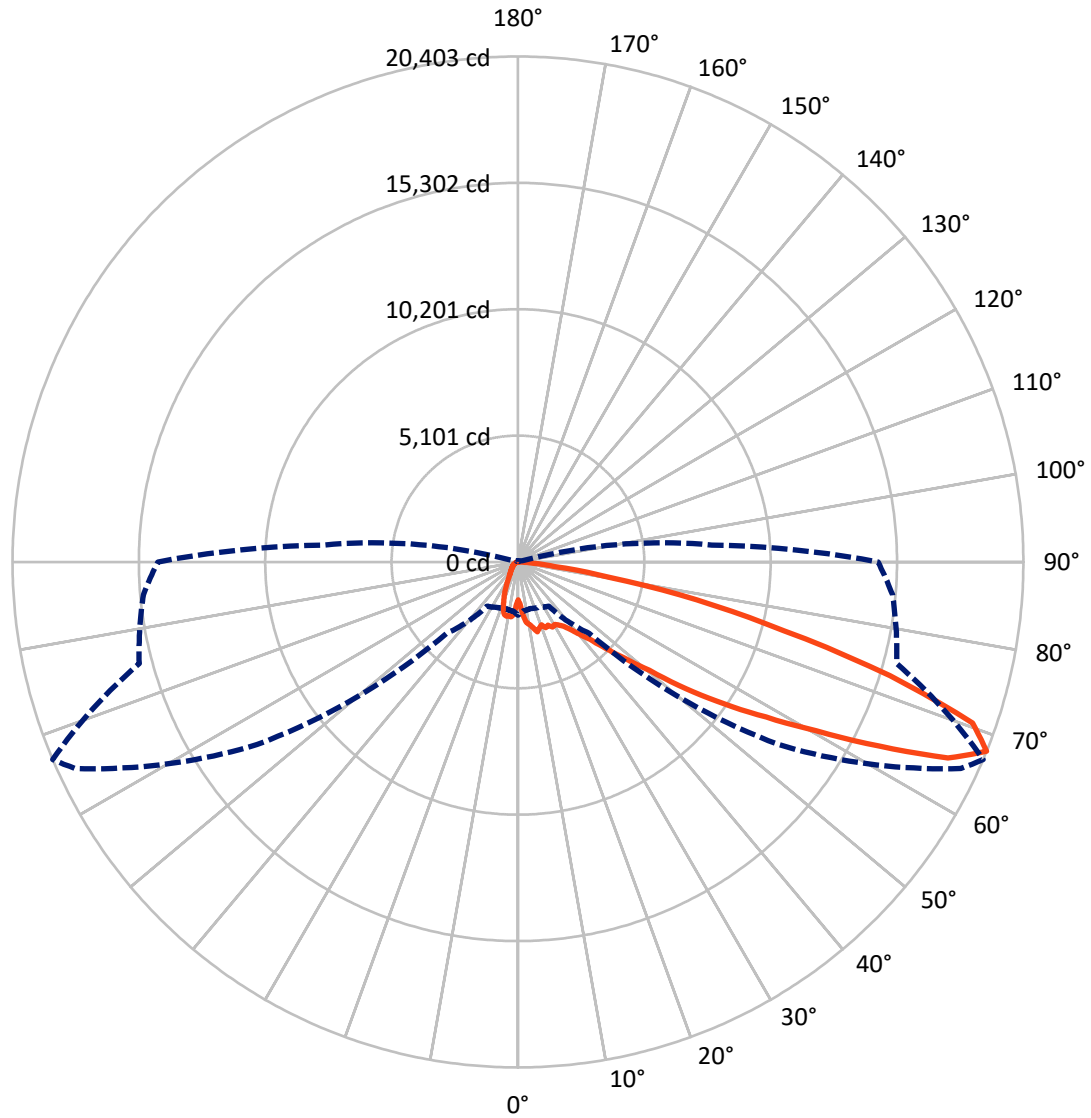
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type II - Short - N/A

REPORT NUMBER: P368473  
CATALOG NUMBER: MSA-SA4C-730-U-SL2-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P368473

CATALOG NUMBER: MSA-SA4C-730-U-SL2-HSS

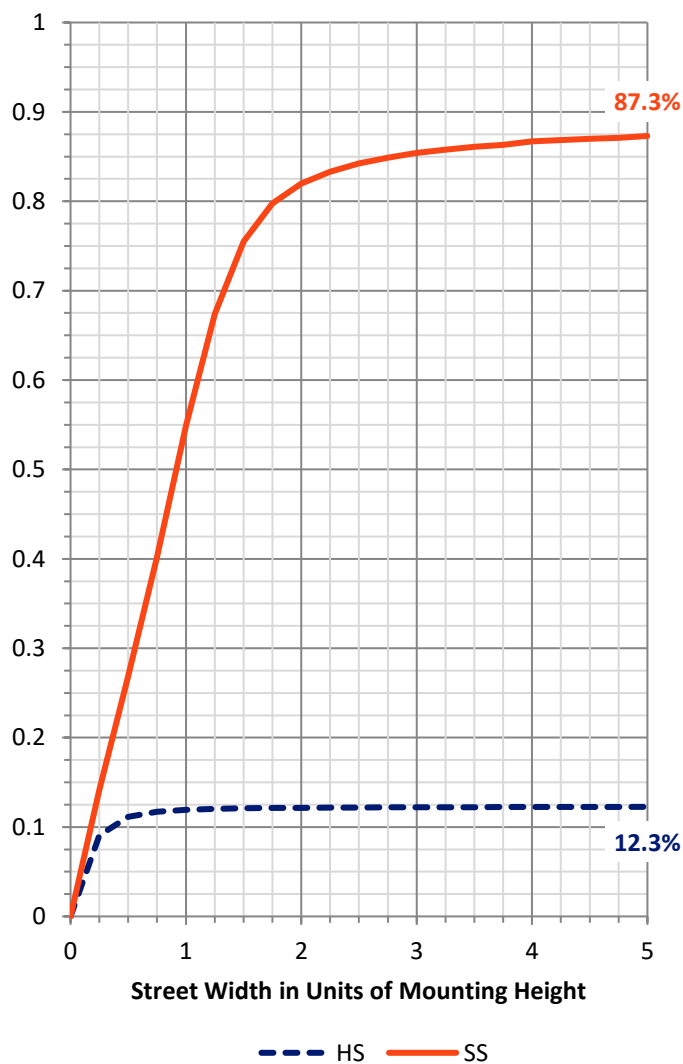
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2221.1	0.0	2221.1
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	15738.9	0.0	15738.9
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	17960.0	0.0	17960.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.0	1.1
10°-20°	568.1	3.2
20°-30°	890.4	5.0
30°-40°	1435.6	8.0
40°-50°	2638.1	14.7
50°-60°	4455.3	24.8
60°-70°	4925.6	27.4
70°-80°	2578.0	14.4
80°-90°	276.8	1.5
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°	17960.0	100.0
0°-180°	17960.0	100.0

**Coefficient of Utilization**

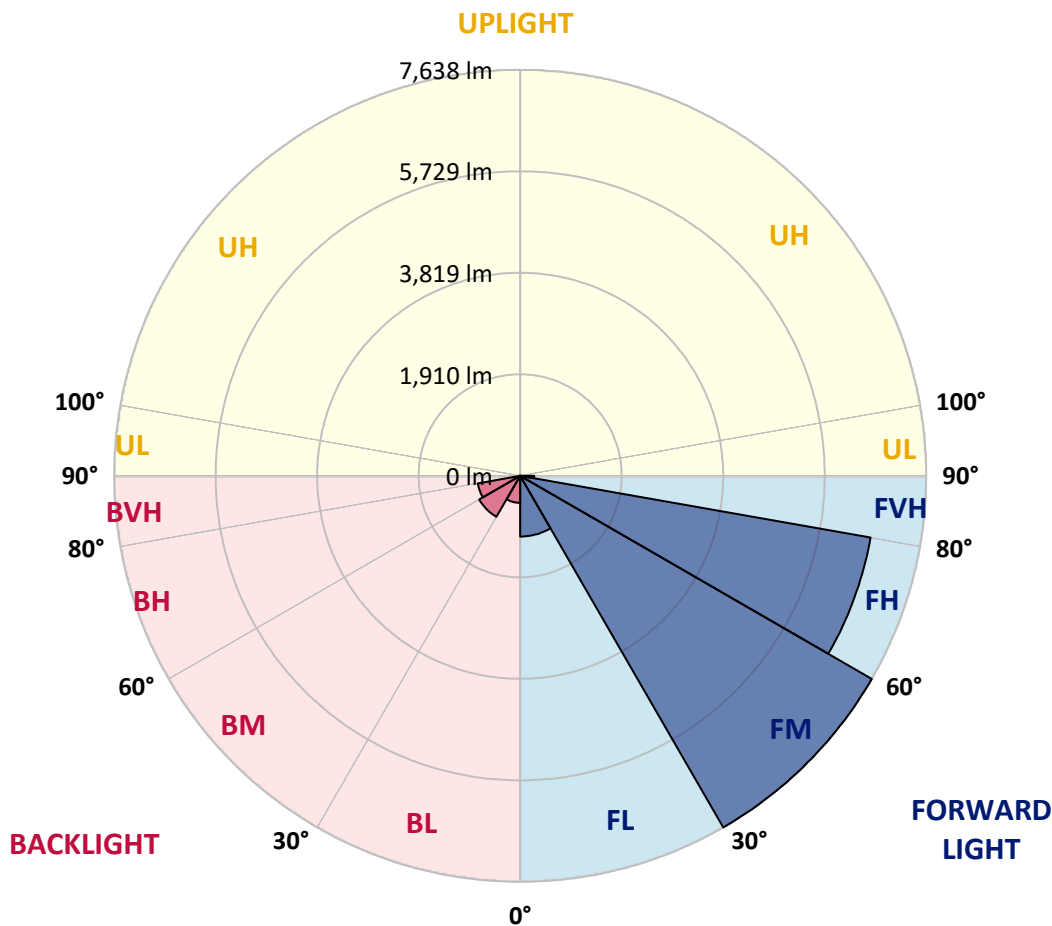


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1142.0	6.4			
FM (30°-60°)	7638.5	42.5			
FH (60°-80°)	6693.4	37.3			G3/7500
FVH (80°-90°)	265.1	1.5			G3/500
BL (0°-30°)	508.6	2.8	B2/1000		
BM (30°-60°)	890.6	5.0	B1/1000		
BH (60°-80°)	810.2	4.5	B2/1000		G2/1000
BVH (80°-90°)	11.8	0.1			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7
2.5°	1805.7	1744.7	1640.8	1670.9	1731.0	1781.1	1757.5	1711.0	1711.9	1664.5	1834.9
5°	2100.9	2018.9	1958.8	1979.8	1977.0	1975.2	2087.3	2130.1	2148.3	2226.7	2342.4
7.5°	2185.7	2156.5	2093.6	2112.8	2049.9	2054.5	2251.3	2437.1	2466.3	2514.6	2720.5
10°	2152.9	2096.4	2119.2	2119.2	2120.1	2222.1	2354.2	2531.9	2567.4	2753.3	2775.1
12.5°	2117.3	2120.1	2210.3	2193.9	2317.8	2500.9	2545.5	2745.1	2727.7	2889.0	3128.6
15°	2249.4	2318.7	2260.4	2283.1	2295.0	2510.0	2582.0	2847.1	2923.6	3127.7	3283.5
17.5°	2476.3	2485.4	2364.2	2331.4	2417.1	2478.1	2623.0	2750.5	2801.5	3337.3	3557.7
20°	2517.3	2575.6	2452.6	2263.1	2444.4	2528.2	2629.4	2690.4	2712.3	3401.9	3712.6
22.5°	2764.2	2699.5	2502.7	2358.8	2410.7	2501.8	2564.7	2748.7	2879.9	3279.9	3861.1
25°	2890.8	2873.5	2685.8	2562.8	2510.0	2502.7	2646.7	2786.1	2828.0	3406.5	3897.6
27.5°	3194.2	3155.0	2791.5	2776.0	2602.0	2449.0	2649.4	2899.9	2978.3	3287.1	4034.2
30°	3606.9	3592.4	3108.6	3098.6	2821.6	2546.4	2797.0	2970.1	2922.7	3348.2	4125.3
32.5°	4022.4	4140.8	3646.1	3363.7	3155.9	2904.5	2755.1	2948.2	3033.0	3496.7	4293.0
35°	4524.4	4610.0	4106.2	3901.2	3439.3	3072.1	3033.0	3156.9	3193.3	3673.4	4483.4
37.5°	5402.7	5273.3	4844.2	4495.2	4252.9	3670.7	3477.6	3379.2	3463.9	3913.0	4872.4
40°	6051.3	5969.3	5440.9	5232.3	4674.7	4334.0	3829.2	3737.2	3832.0	4159.0	5143.0
42.5°	6833.9	6663.6	6166.1	6024.9	5450.9	4794.1	4282.0	4313.9	4254.7	4644.6	5617.7
45°	7541.8	7157.4	6880.4	6912.3	6606.2	5718.8	5037.3	5021.8	4972.6	5348.0	6116.9
47.5°	8018.3	7682.2	7412.5	7324.1	7287.7	7345.1	6128.8	5853.6	5817.2	6086.9	6903.2
50°	8274.3	7906.3	7572.8	7591.0	8330.8	8887.5	7254.9	6864.0	6877.7	7159.2	7978.2
52.5°	8102.2	7685.8	7334.1	7675.8	9139.9	9916.1	9118.9	8184.2	8501.2	8429.2	9420.5
55°	7306.8	6945.1	6695.5	7306.8	9228.2	11023.0	11413.9	10171.2	10100.1	9936.1	10890.9
57.5°	5968.4	5656.8	5502.9	6147.9	8261.6	11915.0	13718.9	12417.0	11811.1	11124.2	12111.8
60°	4446.9	4217.3	4057.0	4397.7	6509.6	11048.6	15228.6	14533.4	13831.9	12269.4	13208.7
62.5°	3293.5	3106.8	2936.4	2967.4	4482.5	9502.5	15808.0	16775.5	16372.9	13478.4	14243.7
65°	2628.4	2458.1	2338.7	2270.4	2776.0	7149.2	15001.7	18613.2	19077.8	14617.2	14990.8
67.5°	2146.5	2002.5	1943.3	2021.7	2177.5	4075.2	12847.9	19728.3	20402.5	15825.3	15174.8
70°	1746.5	1628.1	1621.7	1833.1	2005.3	2484.5	9450.5	18958.5	19465.9	16031.2	14071.5
72.5°	1217.2	1165.3	1248.2	1547.9	1987.0	2069.0	5427.2	15688.6	15706.9	14159.0	11574.2
75°	688.8	680.6	811.8	1234.5	1935.1	2048.1	3025.7	11086.8	11095.0	10708.7	8018.3
77.5°	379.0	354.4	472.8	834.5	1661.8	2000.7	1951.5	7570.1	7376.0	5959.3	3662.5
80°	174.9	164.9	256.0	534.8	1215.4	1892.3	1564.3	4160.9	3751.8	1941.5	893.8
82.5°	72.0	68.3	117.5	343.5	768.0	1524.2	1318.3	1845.8	1481.4	369.0	276.1
85°	12.8	13.7	48.3	207.7	430.0	702.4	1068.7	876.5	644.1	102.0	151.2
87.5°	0.0	0.0	10.0	50.1	103.9	192.2	433.7	245.1	168.5	30.1	44.6
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°	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7	1529.7
2.5°	1868.6	1853.1	1696.4	1703.7	1714.6	1704.6	1702.8	1659.1	1619.0	1751.1	1749.3
5°	2363.3	2253.1	2144.7	2102.8	2012.6	1894.1	1895.0	1857.7	1819.4	1873.2	1873.2
7.5°	2715.9	2563.8	2426.2	2181.1	1942.4	1726.5	1707.3	1656.3	1598.0	1668.2	1681.8
10°	2797.9	2665.8	2488.1	2128.3	1902.3	1691.9	1460.4	1270.0	1181.7	1140.7	1133.4
12.5°	3050.3	2951.9	2554.6	2156.5	1831.3	1475.0	1096.0	870.1	716.1	704.3	687.9
15°	3218.8	3149.6	2620.2	2086.4	1530.6	1060.5	688.8	528.4	466.5	461.0	452.8
17.5°	3480.3	3360.0	2557.4	1863.1	1197.1	699.7	462.8	417.3	424.6	441.0	428.2
20°	3586.9	3351.8	2420.7	1539.7	840.9	469.2	401.8	377.2	396.3	411.8	404.5
22.5°	3696.2	3375.5	2299.5	1269.1	549.4	388.1	358.1	345.3	347.1	362.6	363.5
25°	3695.3	3441.1	2159.2	988.5	409.1	345.3	323.4	307.0	300.7	311.6	308.9
27.5°	3874.8	3365.5	1903.2	733.4	359.9	308.9	287.9	267.9	245.1	256.0	256.0
30°	3875.7	3488.5	1724.7	526.6	329.8	275.1	256.9	225.9	199.5	208.6	209.5
32.5°	3978.6	3381.9	1559.8	402.7	306.1	255.1	215.0	186.8	171.3	176.7	176.7
35°	4096.2	3473.0	1306.5	355.3	282.4	226.9	184.0	161.3	149.4	154.0	154.0
37.5°	4484.3	3453.9	1130.6	330.7	266.9	205.0	167.6	142.1	136.7	139.4	143.0
40°	4624.6	3589.6	891.9	316.1	241.4	184.9	147.6	128.5	121.2	123.0	123.9
42.5°	4981.7	3619.7	712.5	304.3	218.7	160.3	131.2	117.5	108.4	108.4	111.2
45°	5376.2	3695.3	566.7	294.3	199.5	143.9	118.4	107.5	93.8	92.0	95.7
47.5°	5947.5	3985.0	461.9	274.2	176.7	133.9	109.3	92.9	82.0	78.4	82.0
50°	6903.2	4477.0	408.2	249.6	160.3	125.7	96.6	79.3	71.1	66.5	69.2
52.5°	8251.6	5327.0	379.9	226.9	145.8	113.0	86.6	69.2	61.0	57.4	59.2
55°	9749.4	6301.9	366.3	204.1	133.0	99.3	75.6	61.0	53.8	49.2	50.1
57.5°	11134.2	7218.4	352.6	182.2	120.3	88.4	66.5	53.8	46.5	41.9	42.8
60°	12499.0	7950.0	319.8	156.7	108.4	79.3	58.3	46.5	41.9	36.4	36.4
62.5°	13706.2	8387.3	272.4	135.7	97.5	70.2	51.9	41.9	38.3	32.8	32.8
65°	14527.9	8407.4	219.6	116.6	85.6	60.1	45.6	39.2	35.5	29.2	28.2
67.5°	14539.8	7860.7	175.8	103.9	75.6	52.8	41.0	37.4	32.8	27.3	25.5
70°	13013.7	6494.1	146.7	91.1	65.6	46.5	35.5	35.5	31.9	26.4	23.7
72.5°	10409.9	4962.6	123.0	79.3	58.3	40.1	32.8	33.7	31.0	26.4	23.7
75°	6997.0	2846.2	102.0	67.4	51.0	33.7	31.9	32.8	31.9	26.4	22.8
77.5°	3222.5	906.5	79.3	55.6	43.7	28.2	31.0	31.0	29.2	23.7	20.0
80°	726.1	223.2	57.4	41.0	35.5	21.0	28.2	25.5	22.8	16.4	11.8
82.5°	264.2	68.3	34.6	25.5	21.9	8.2	18.2	18.2	16.4	11.8	7.3
85°	151.2	35.5	19.1	16.4	11.8	3.6	10.0	10.9	9.1	8.2	3.6
87.5°	49.2	8.2	9.1	10.0	9.1	1.8	3.6	3.6	2.7	1.8	0.0
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)