

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: P367883

Luminaire Tested: **MSA-SA3B-760-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367883  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-760-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12158 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

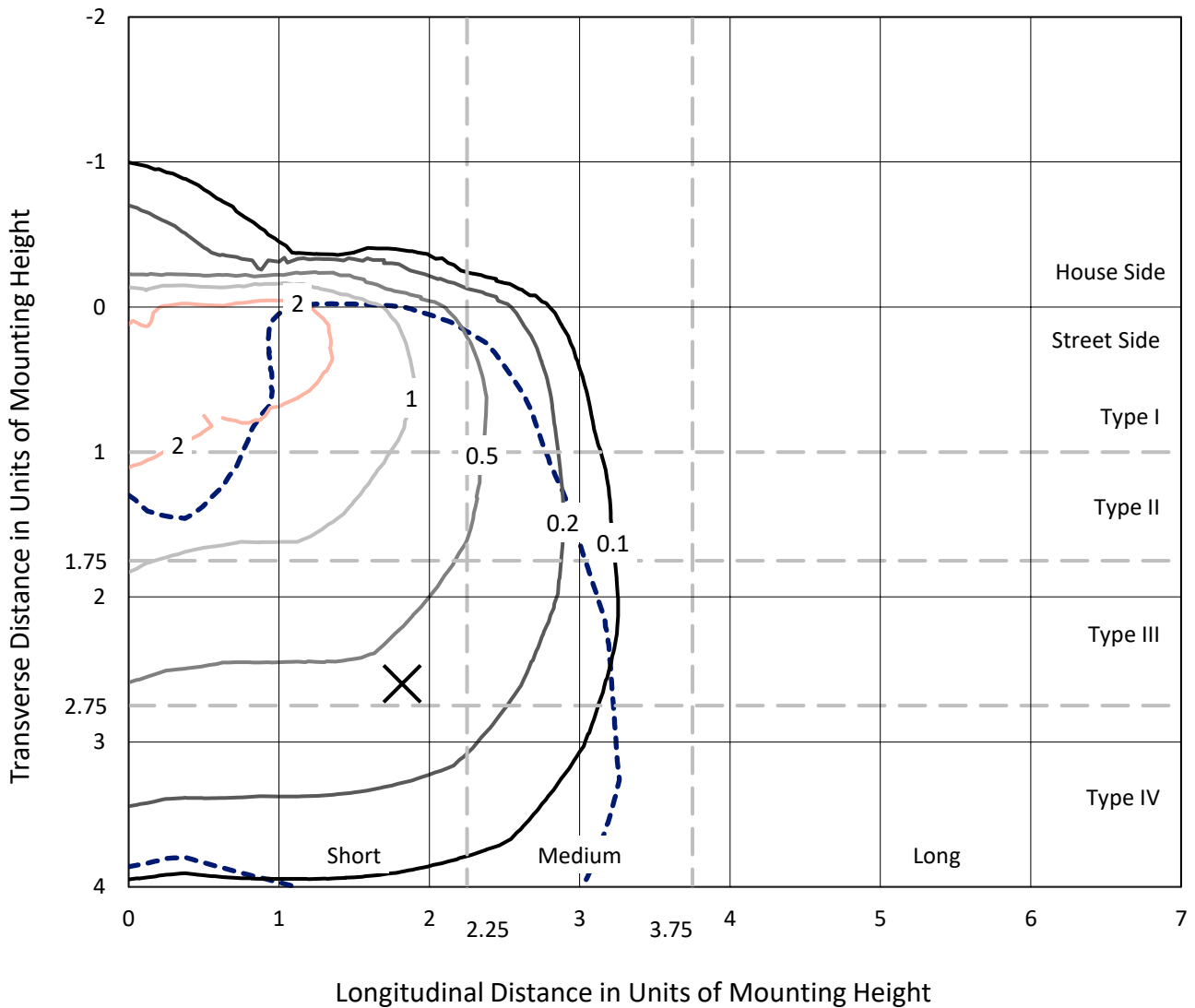
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

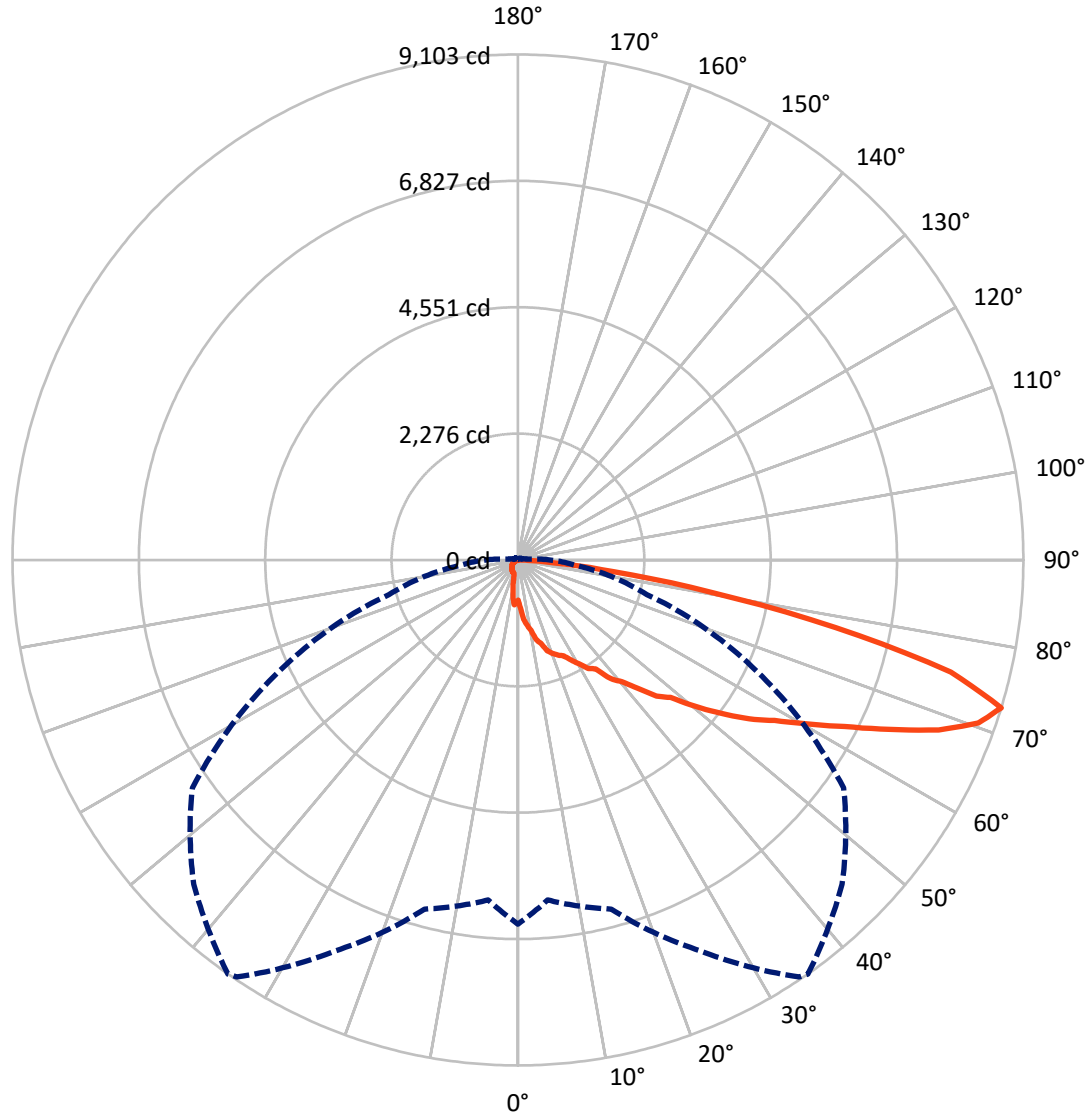
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

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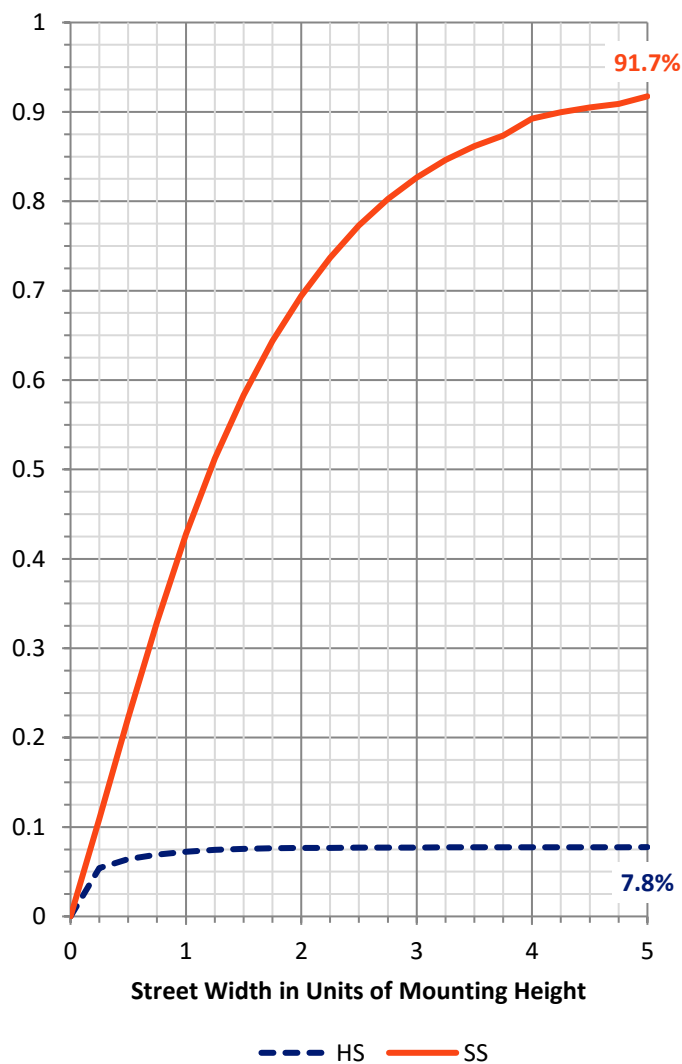
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	948.3	0.0	948.3
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	11209.7	0.0	11209.7
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	12158.0	0.0	12158.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.4	0.8
10°-20°	311.1	2.6
20°-30°	566.6	4.7
30°-40°	977.4	8.0
40°-50°	1737.4	14.3
50°-60°	2592.6	21.3
60°-70°	3312.3	27.2
70°-80°	2304.5	19.0
80°-90°	263.6	2.2
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°	12158.0	100.0
0°-180°	12158.0	100.0

**Coefficient of Utilization**



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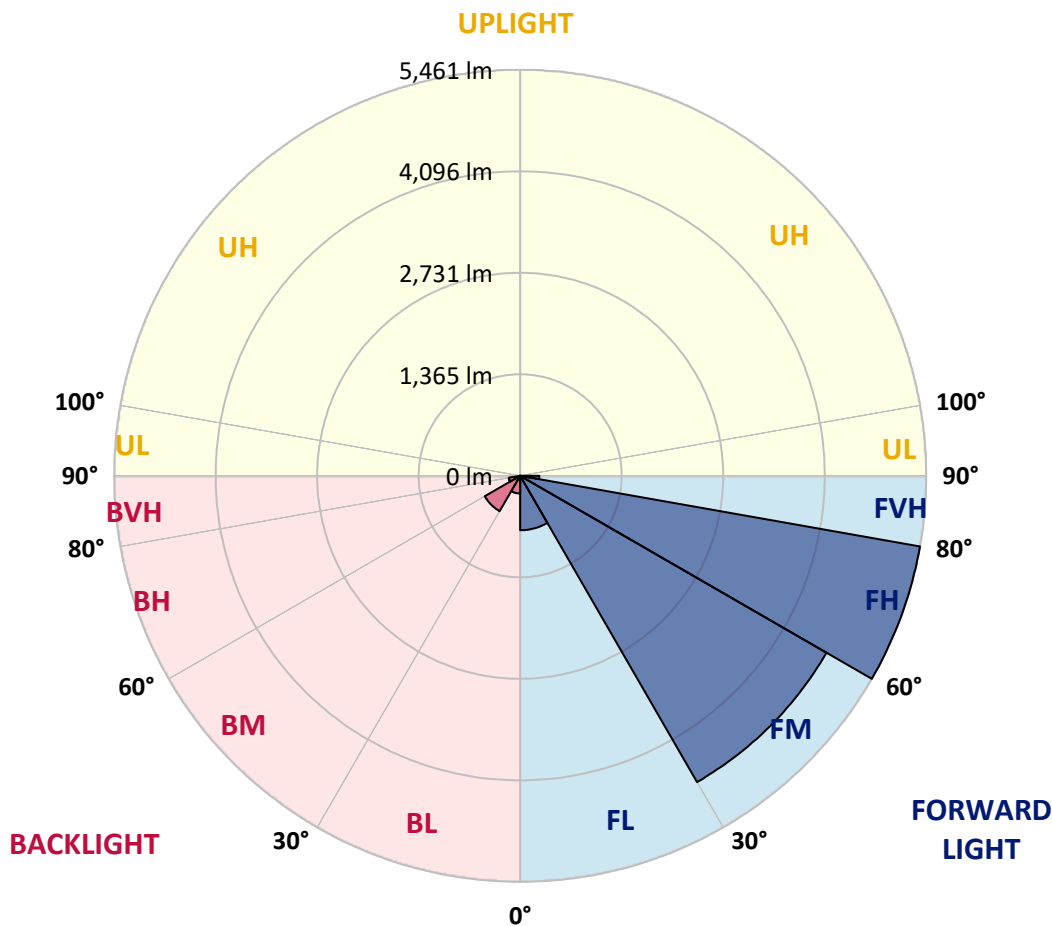
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	731.6	6.0			
FM (30°-60°)	4757.5	39.1			
FH (60°-80°)	5461.4	44.9			G3/7500
FVH (80°-90°)	259.2	2.1			G3/500
BL (0°-30°)	238.5	2.0	B1/500		
BM (30°-60°)	549.9	4.5	B1/1000		
BH (60°-80°)	155.5	1.3	B1/500		G1/500
BVH (80°-90°)	4.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3
2.5°	921.7	885.6	826.9	831.2	857.5	863.0	870.9	850.2	831.8	799.4	862.4
5°	1180.8	1128.9	1095.8	1085.5	1070.2	1071.4	1034.1	1047.6	1043.9	1067.7	1096.5
7.5°	1326.9	1298.2	1256.6	1245.0	1188.7	1182.6	1136.8	1198.5	1204.6	1196.1	1243.1
10°	1384.9	1347.0	1351.9	1308.5	1280.4	1287.8	1295.1	1300.0	1307.9	1315.9	1258.4
12.5°	1419.2	1425.9	1492.5	1447.3	1475.4	1475.4	1524.9	1472.3	1474.2	1416.7	1426.5
15°	1573.2	1610.5	1580.5	1579.9	1549.3	1557.3	1614.7	1573.2	1594.6	1577.5	1511.5
17.5°	1766.3	1773.6	1716.8	1691.8	1719.3	1719.9	1695.4	1693.6	1619.0	1744.9	1664.9
20°	1828.0	1869.6	1788.9	1691.1	1805.4	1799.9	1798.1	1769.4	1645.3	1820.1	1754.1
22.5°	1996.1	1936.8	1881.8	1817.7	1862.3	1862.3	1855.5	1792.6	1744.3	1813.4	1841.5
25°	2048.7	2056.0	1984.5	1963.7	1964.9	1909.9	1905.1	1878.2	1831.7	1949.7	1893.4
27.5°	2229.6	2226.5	2054.8	2112.9	2038.9	2039.5	1904.4	1964.9	1972.9	1956.4	2019.3
30°	2407.4	2457.0	2197.8	2271.2	2193.5	2170.3	2038.3	2092.1	2106.1	2087.2	2166.6
32.5°	2634.2	2706.9	2455.1	2383.0	2264.4	2330.4	2239.4	2112.2	2181.9	2351.2	2395.8
35°	2874.4	2909.8	2641.5	2540.7	2406.8	2406.2	2403.2	2413.6	2490.6	2681.3	2719.1
37.5°	3305.9	3222.2	2979.5	2748.5	2778.4	2711.8	2665.4	2714.3	2794.3	3108.5	3270.4
40°	3546.7	3486.2	3144.5	3007.6	2859.1	2883.6	3009.5	3004.0	3217.3	3546.1	3788.7
42.5°	3780.8	3723.3	3387.2	3276.5	3085.9	3152.5	3207.5	3277.2	3714.2	4244.7	4377.9
45°	3989.2	3820.5	3583.4	3587.6	3488.6	3496.6	3593.7	3657.9	4289.9	4833.8	4927.3
47.5°	4115.1	3976.3	3749.0	3744.7	3738.6	3701.3	4159.1	4217.8	4748.9	5394.9	5403.5
50°	4292.3	4118.8	3919.5	3923.2	4064.4	4143.2	4689.6	4683.5	5192.0	5863.1	5665.7
52.5°	4513.0	4300.9	4081.5	4244.7	4462.8	4591.2	5034.9	5215.8	5668.1	6157.0	5768.3
55°	4795.3	4530.1	4318.6	4527.6	5003.7	5053.3	5372.9	5754.9	6187.0	6457.1	5801.3
57.5°	5126.6	4810.0	4638.9	4975.6	5450.5	5451.7	5864.9	6329.4	6505.4	6579.4	5764.1
60°	5483.5	5114.4	4942.0	5245.2	5943.1	5993.2	6411.9	6646.6	6828.7	6641.1	5697.4
62.5°	5797.7	5390.0	5256.2	5612.5	6483.4	6602.0	6888.6	6855.0	7062.2	6718.7	5528.1
65°	6171.7	5746.9	5658.9	6185.2	7188.7	7351.9	7424.0	7224.8	7140.4	6658.8	5087.5
67.5°	6542.1	6144.8	6142.4	6820.2	8113.4	8169.7	8093.9	7746.1	7049.4	6130.8	4280.1
70°	6803.1	6376.5	6537.2	7515.7	8953.8	8796.1	8477.1	7992.4	6391.7	4698.8	2796.2
72.5°	6558.0	6146.7	6509.1	7763.2	9057.7	9102.9	8255.2	7159.4	4748.9	2403.2	1012.1
75°	4983.6	4731.8	5651.6	6887.4	8041.9	8052.3	6890.5	5049.6	2338.4	652.7	279.9
77.5°	2510.1	2430.1	3577.2	4889.5	5867.3	5850.2	4734.2	2705.1	752.4	217.0	141.2
80°	1270.6	1206.5	1522.5	2637.9	3484.3	3510.0	2703.3	1211.4	379.5	118.0	97.8
82.5°	780.5	740.8	833.0	1193.6	1691.1	1732.1	1025.6	767.0	235.3	69.7	89.2
85°	151.0	158.9	478.6	597.7	675.4	659.5	303.8	631.4	70.9	41.6	64.8
87.5°	0.0	2.4	110.6	195.0	195.6	173.6	69.1	140.0	9.8	11.6	7.9
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°	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3	724.3
2.5°	872.8	863.6	787.2	778.6	780.5	767.6	763.4	736.5	729.8	771.3	778.6
5°	1084.2	1023.1	952.2	926.6	886.8	819.6	809.8	792.7	773.8	781.1	775.6
7.5°	1213.8	1132.5	1056.7	921.7	809.8	712.0	696.1	666.8	637.5	638.1	657.0
10°	1234.6	1166.1	1061.6	897.2	769.5	647.2	540.9	463.9	429.0	397.9	407.0
12.5°	1355.0	1291.4	1098.9	889.9	710.8	520.1	380.8	305.6	272.6	261.6	260.4
15°	1451.6	1401.4	1162.5	867.3	580.6	366.1	272.6	250.6	244.5	254.9	251.8
17.5°	1595.2	1504.7	1155.7	773.8	442.5	278.1	251.2	248.1	255.5	261.6	263.4
20°	1658.1	1528.0	1109.9	627.1	331.3	254.9	245.1	239.0	252.4	270.8	267.1
22.5°	1721.7	1567.7	1056.1	513.4	266.5	243.9	238.4	233.5	243.9	261.6	265.9
25°	1750.4	1631.2	996.2	400.9	247.5	231.0	227.4	229.2	237.7	253.6	251.8
27.5°	1895.3	1638.6	881.9	316.6	239.6	221.9	221.9	226.1	226.1	247.5	245.7
30°	1985.7	1762.6	789.0	266.5	230.4	209.0	216.4	218.2	215.1	238.4	240.2
32.5°	2144.6	1796.9	698.6	244.5	215.7	207.2	206.0	207.2	209.6	232.2	232.9
35°	2389.1	1965.6	575.1	235.9	208.4	198.0	189.5	196.2	202.3	218.8	221.9
37.5°	2867.1	2138.5	468.8	229.2	204.7	189.5	186.4	185.2	196.2	215.1	221.2
40°	3253.9	2444.7	381.4	223.7	197.4	184.6	176.6	177.2	187.0	201.1	210.2
42.5°	3801.6	2666.0	323.3	215.1	187.0	174.2	165.0	170.5	174.8	189.5	195.6
45°	4258.7	2837.7	284.8	209.6	176.6	164.4	157.1	163.2	158.9	166.2	174.8
47.5°	4622.4	2987.5	256.1	196.2	169.9	158.9	149.7	147.9	140.6	142.4	150.4
50°	4822.2	2962.4	232.2	182.7	161.4	153.4	140.6	127.7	118.0	117.3	122.2
52.5°	4893.1	2828.5	212.7	171.1	151.0	141.2	126.5	108.8	99.0	96.0	100.2
55°	4912.7	2636.0	195.0	158.3	141.2	125.9	110.6	91.7	81.3	76.4	80.7
57.5°	4849.1	2339.6	177.9	146.1	129.6	111.2	94.7	75.2	65.4	59.3	63.0
60°	4692.0	1963.1	162.6	130.8	117.3	98.4	80.1	60.5	50.1	44.6	46.4
62.5°	4344.3	1539.0	146.1	116.7	104.5	86.2	67.2	47.7	37.9	33.0	33.6
65°	3815.0	1147.2	127.1	103.3	92.9	74.6	53.8	36.7	28.7	24.4	23.8
67.5°	3039.4	777.4	108.2	89.2	82.5	63.0	42.8	28.7	22.6	19.6	18.3
70°	1786.5	391.8	89.8	77.0	70.9	52.6	33.6	23.2	20.8	18.3	17.1
72.5°	589.2	169.3	70.3	63.6	58.7	42.2	26.3	21.4	20.2	17.7	16.5
75°	205.4	97.8	52.0	48.9	46.4	31.8	22.0	19.6	19.6	17.1	15.3
77.5°	134.5	75.8	38.5	35.4	34.8	23.2	18.9	18.3	17.1	14.1	11.6
80°	111.8	42.8	26.9	25.1	24.4	14.7	15.3	13.4	10.4	6.1	2.4
82.5°	103.3	25.7	14.1	15.3	14.1	5.5	8.6	7.3	5.5	2.4	0.0
85°	60.5	11.6	7.9	7.9	6.1	1.2	4.3	4.3	2.4	0.6	0.0
87.5°	6.7	5.5	4.3	4.3	3.1	0.0	1.8	1.2	0.0	0.0	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)