

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: P367749

Luminaire Tested: **MSA-SA3A-760-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367749  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-760-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9632 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

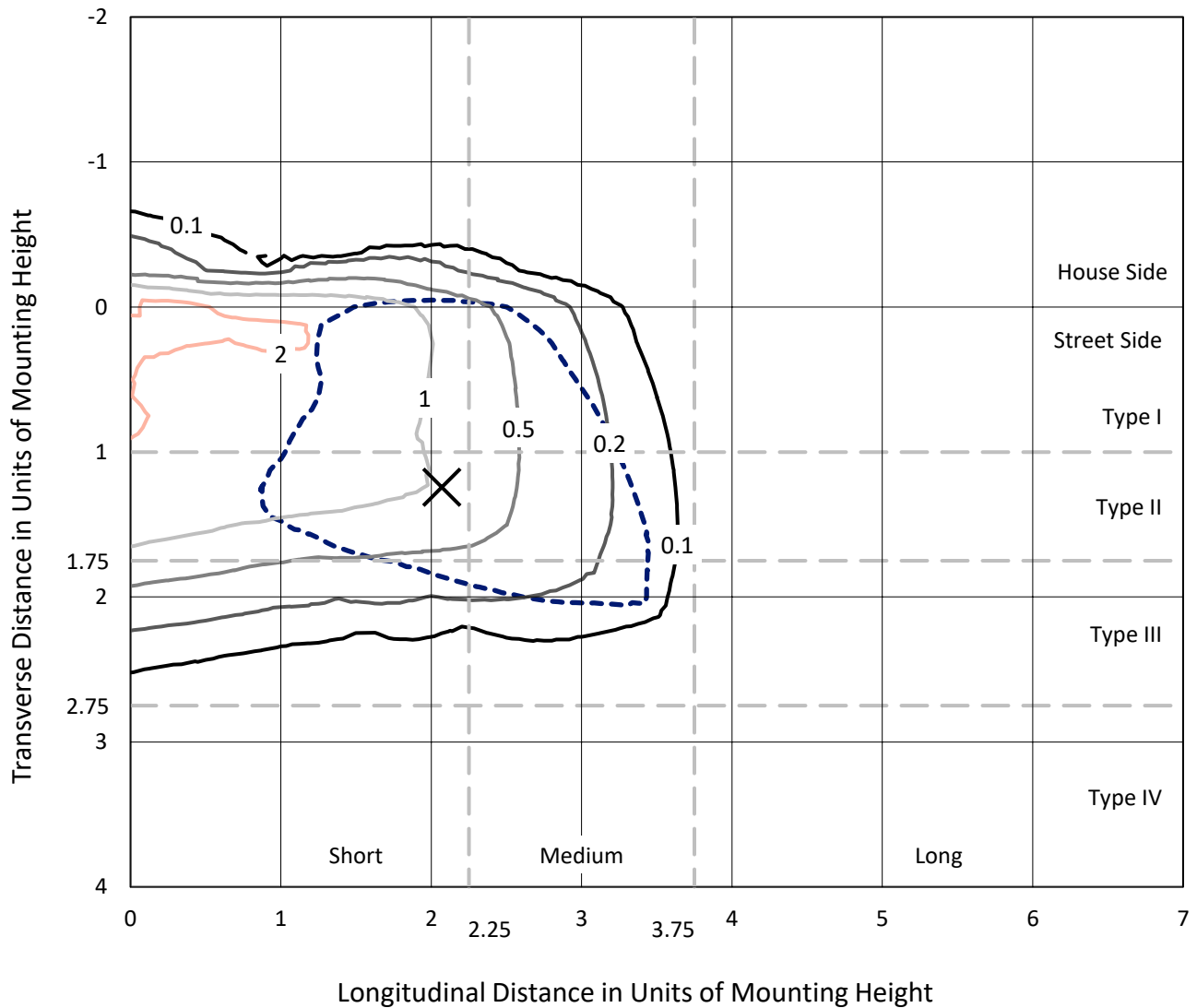
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

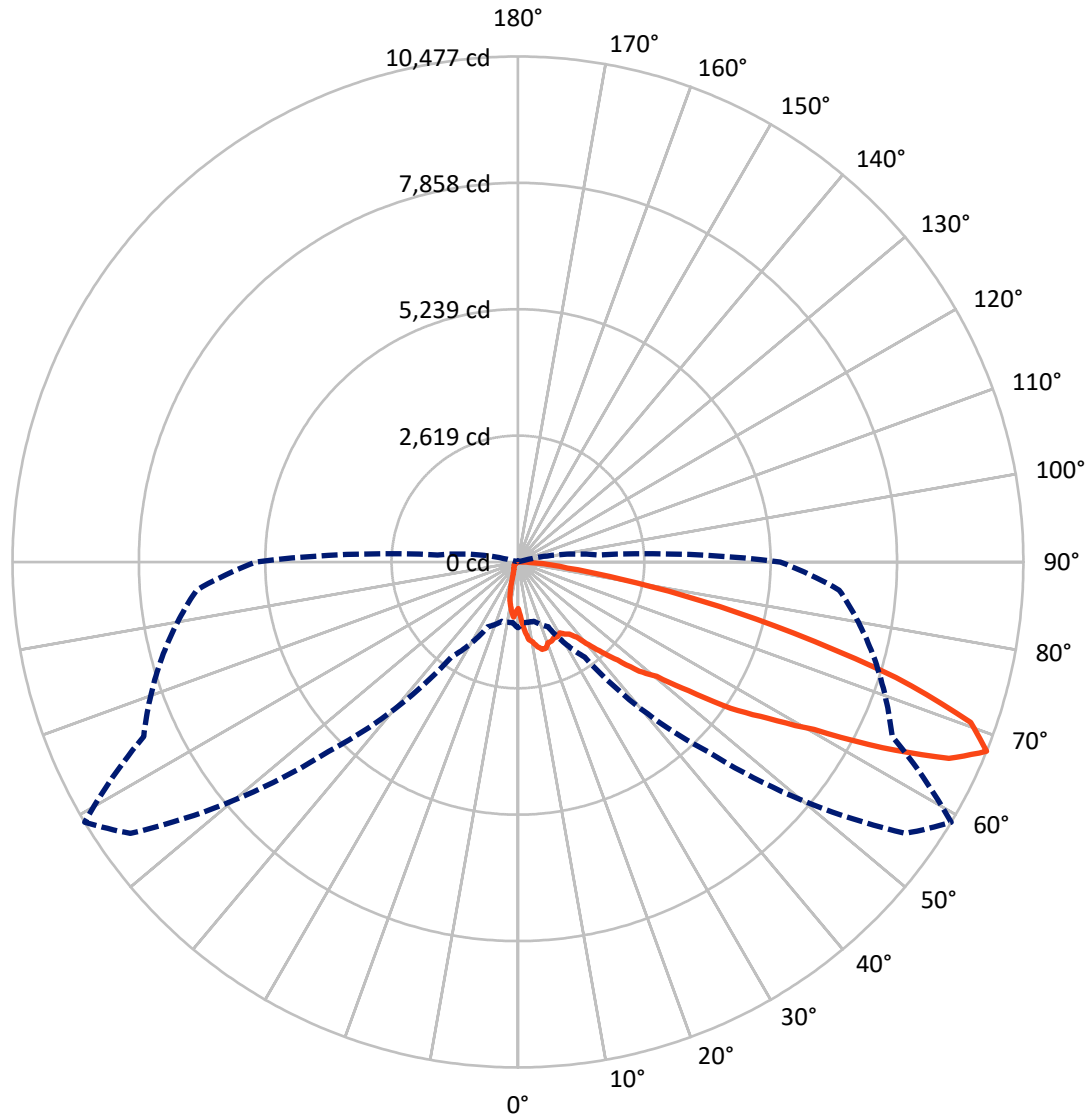
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc  
 Type 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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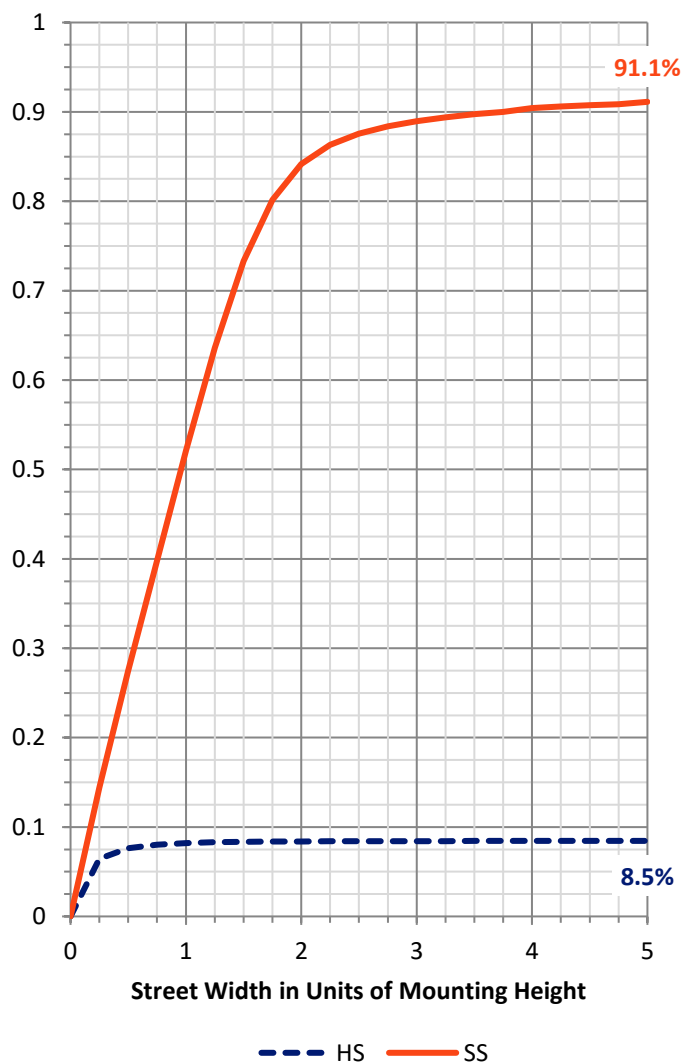
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	819.1	0.0	819.1
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	8812.9	0.0	8812.9
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	9632.0	0.0	9632.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.2	1.2
10°-20°	329.9	3.4
20°-30°	490.8	5.1
30°-40°	757.1	7.9
40°-50°	1351.2	14.0
50°-60°	2404.6	25.0
60°-70°	2800.5	29.1
70°-80°	1245.4	12.9
80°-90°	135.3	1.4
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°	9632.0	100.0
0°-180°	9632.0	100.0

**Coefficient of Utilization**

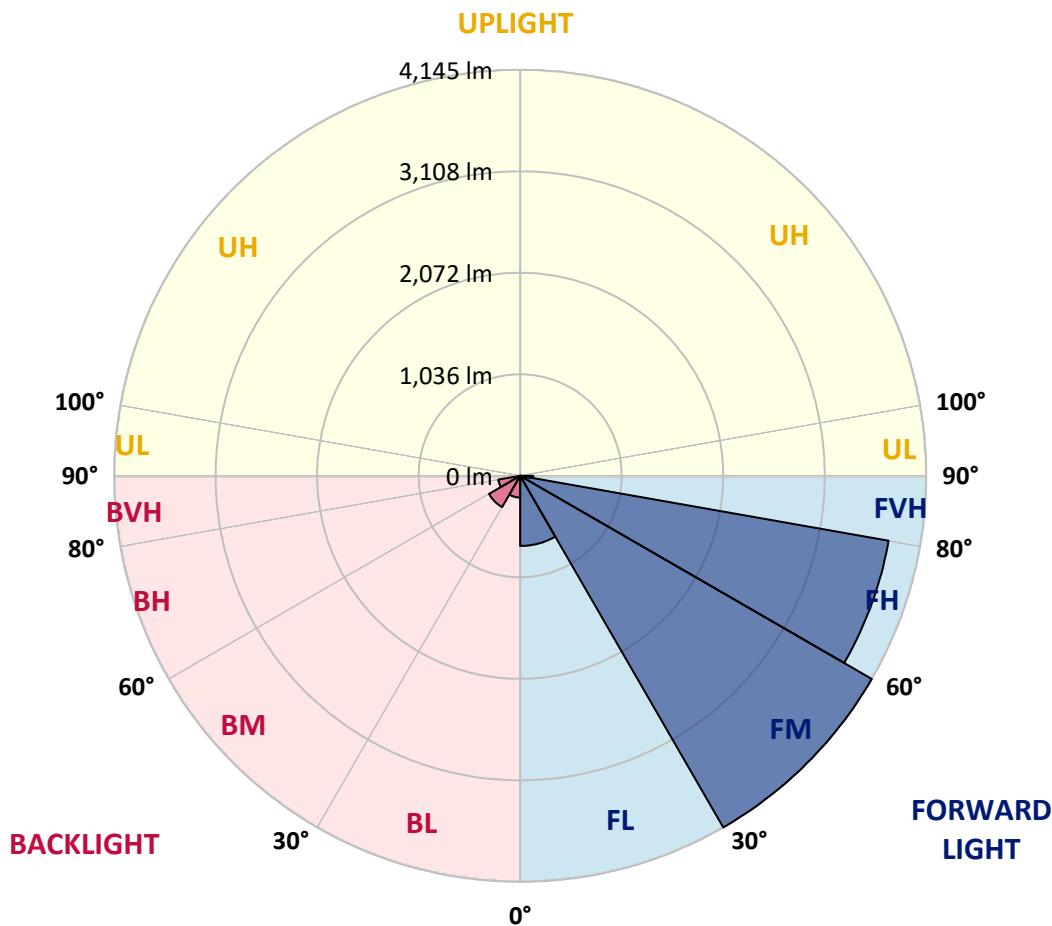


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	716.4	7.4			
FM (30°-60°)	4144.6	43.0			
FH (60°-80°)	3819.0	39.6			G2/5000
FVH (80°-90°)	132.8	1.4			G2/225
BL (0°-30°)	221.5	2.3	B1/500		
BM (30°-60°)	368.3	3.8	B1/1000		
BH (60°-80°)	226.9	2.4	B1/500		G1/500
BVH (80°-90°)	2.4	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-G2**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7
2.5°	1256.3	1209.0	1141.7	1161.7	1179.8	1196.8	1168.6	1152.5	1144.7	1075.4	1162.2
5°	1542.6	1483.6	1452.9	1445.1	1425.6	1382.2	1454.3	1422.2	1432.9	1446.5	1474.8
7.5°	1629.9	1603.1	1558.7	1575.3	1501.2	1494.8	1594.8	1622.6	1659.2	1634.3	1668.5
10°	1585.1	1538.7	1559.7	1553.8	1550.9	1616.3	1686.5	1688.0	1742.6	1768.9	1653.3
12.5°	1496.3	1501.7	1576.8	1570.9	1668.5	1799.2	1815.3	1798.2	1887.4	1841.6	1824.0
15°	1555.3	1599.2	1557.7	1571.9	1606.5	1769.9	1827.0	1879.6	1964.0	1991.3	1872.8
17.5°	1626.5	1630.9	1555.3	1537.7	1625.0	1701.1	1835.7	1879.1	1887.4	2126.9	1982.5
20°	1588.0	1625.5	1535.3	1424.6	1560.2	1663.6	1800.1	1786.5	1842.1	2166.9	2007.4
22.5°	1690.4	1636.8	1521.2	1437.8	1483.6	1577.7	1693.3	1782.6	1866.0	2071.3	2039.6
25°	1700.2	1680.6	1577.7	1503.6	1495.8	1519.7	1680.6	1738.2	1868.9	2157.1	2012.3
27.5°	1809.9	1787.5	1576.8	1584.1	1510.9	1437.3	1619.2	1754.3	1922.1	2105.0	2070.3
30°	1951.3	1953.3	1681.6	1704.5	1600.2	1481.7	1669.4	1706.5	1958.2	2188.3	2113.2
32.5°	2094.7	2153.7	1888.9	1767.5	1734.8	1649.9	1607.0	1778.2	1918.6	2330.8	2220.5
35°	2312.7	2352.7	2059.6	1950.8	1822.6	1726.0	1776.7	1838.2	2060.6	2519.5	2361.5
37.5°	2681.9	2609.7	2365.9	2176.6	2145.9	2003.5	2028.9	1973.8	2205.4	2741.9	2640.5
40°	2889.7	2824.3	2570.7	2478.5	2282.5	2304.4	2224.4	2256.6	2415.6	2973.6	2894.6
42.5°	3106.2	3043.8	2821.4	2756.0	2569.2	2478.5	2442.4	2558.0	2738.0	3359.3	3258.9
45°	3323.7	3165.2	3071.1	3103.8	3019.9	2840.4	2798.5	2901.4	3090.1	3833.4	3643.2
47.5°	3507.1	3373.5	3302.8	3287.6	3255.0	3504.2	3333.5	3378.8	3462.2	4252.8	4122.1
50°	3837.8	3706.1	3595.4	3564.7	3723.7	4077.2	3813.9	3726.1	3892.9	4759.5	4677.1
52.5°	4315.2	4147.5	3971.4	3971.9	4271.8	4465.9	4590.8	4436.7	4467.9	5317.0	5280.4
55°	4699.1	4485.9	4340.1	4455.2	4902.4	5011.2	5487.7	5352.6	5312.1	5834.0	5789.1
57.5°	4751.7	4496.2	4426.9	4628.8	5240.9	5935.4	6448.0	6110.5	6048.6	6266.6	6355.8
60°	4260.1	3989.0	4041.2	4366.0	5351.1	6498.7	7329.8	7054.2	6660.6	6773.3	6834.8
62.5°	3177.4	2960.9	3107.2	3537.4	4926.3	6876.2	8350.5	8478.3	7370.7	7153.7	7140.5
65°	2061.5	1926.0	2022.0	2374.7	3728.0	6833.3	9262.6	9816.6	7930.1	7463.9	7236.6
67.5°	1363.6	1260.7	1274.4	1483.1	2410.7	5557.4	9807.8	10477.4	8559.3	7640.0	6686.0
70°	1016.4	935.4	940.3	1053.5	1430.9	3665.1	9047.5	9956.1	8789.0	7029.8	5396.5
72.5°	733.0	678.9	724.2	850.1	1140.3	1938.2	6743.5	8199.4	7663.9	5544.8	3635.9
75°	507.7	472.1	546.2	711.1	1040.8	1203.2	4456.2	5902.3	5371.6	3478.8	1643.6
77.5°	281.4	270.7	377.5	579.4	944.7	986.1	2729.7	3878.3	2979.4	1247.1	391.1
80°	122.9	119.0	182.9	435.0	794.0	891.0	1536.8	2150.3	1172.0	222.4	126.3
82.5°	52.7	50.7	78.0	261.9	577.0	745.2	947.6	1034.9	403.3	68.8	71.7
85°	9.3	10.2	31.2	138.0	351.2	378.5	686.2	612.6	202.9	32.7	51.2
87.5°	0.0	0.0	4.9	26.8	65.8	108.3	297.5	214.6	38.5	10.7	8.8
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°	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7	963.7
2.5°	1174.4	1147.1	1043.2	1030.0	1015.9	994.9	987.1	942.3	936.4	994.0	994.0
5°	1461.7	1364.1	1265.1	1187.1	1117.3	1020.8	993.5	965.2	942.3	936.4	954.4
7.5°	1613.3	1494.3	1338.8	1140.3	979.3	839.3	780.8	739.9	694.0	707.7	715.0
10°	1605.0	1478.7	1280.2	1025.2	846.7	692.1	543.3	456.5	408.2	384.3	381.4
12.5°	1686.5	1567.5	1240.7	933.5	705.7	492.1	341.9	279.9	244.3	244.8	241.9
15°	1733.8	1604.1	1194.9	817.4	497.0	316.5	237.0	223.4	218.5	223.9	220.9
17.5°	1817.2	1642.6	1091.0	644.3	341.9	239.0	218.0	212.6	219.0	230.2	227.3
20°	1810.9	1575.8	943.2	454.1	252.6	215.1	206.3	198.0	211.2	222.9	220.9
22.5°	1805.0	1510.4	804.2	335.1	211.2	196.1	188.7	185.3	192.2	205.8	208.7
25°	1753.3	1478.2	663.3	251.7	191.2	178.0	174.6	171.7	174.1	185.3	184.8
27.5°	1816.7	1396.8	512.1	211.2	177.0	161.4	158.5	153.6	148.8	158.5	160.0
30°	1803.5	1408.0	401.4	185.8	162.9	141.9	142.9	132.7	123.9	132.7	132.7
32.5°	1851.3	1326.1	321.4	168.7	148.8	133.6	121.4	110.7	104.4	109.7	110.7
35°	1921.1	1329.5	251.7	158.0	136.6	119.0	104.4	93.6	87.8	90.2	91.7
37.5°	2154.7	1306.1	210.2	149.7	132.2	110.2	95.1	81.0	77.1	80.0	81.4
40°	2306.9	1368.5	185.3	145.3	121.0	101.4	81.4	71.2	67.8	69.3	71.7
42.5°	2593.6	1403.1	173.1	140.5	110.7	86.8	69.7	63.9	59.0	61.0	62.9
45°	2900.4	1462.2	163.9	135.1	102.9	76.1	61.5	56.6	50.2	50.7	52.7
47.5°	3277.4	1602.6	153.1	125.8	92.2	69.3	54.6	47.3	41.5	41.0	43.4
50°	3783.6	1790.4	143.4	114.1	85.3	63.4	47.8	38.5	33.7	32.2	34.1
52.5°	4324.0	2033.3	133.1	105.8	77.1	55.6	41.0	31.2	26.8	25.8	27.3
55°	4859.5	2266.4	123.4	100.5	68.3	47.8	34.6	25.8	21.9	21.0	21.9
57.5°	5469.7	2518.5	110.7	89.7	60.0	41.5	28.8	21.5	18.0	17.1	17.6
60°	5929.1	2607.3	100.0	78.0	52.2	36.6	24.4	17.1	14.6	13.7	14.1
62.5°	6147.1	2462.4	89.7	67.8	45.8	31.7	20.5	14.1	12.2	11.2	11.2
65°	6090.5	2141.5	79.5	58.0	39.5	26.3	16.1	12.2	10.7	9.3	8.8
67.5°	5437.0	1675.8	67.8	48.8	33.2	21.5	13.7	11.7	9.8	8.8	7.3
70°	4311.8	1213.4	55.1	40.5	27.8	17.6	10.7	10.7	9.3	8.8	6.8
72.5°	2826.3	763.8	44.9	32.7	22.9	13.7	8.3	9.8	8.8	8.8	6.3
75°	1224.6	273.1	36.1	26.3	19.0	9.3	7.3	8.8	9.3	8.8	7.3
77.5°	286.8	84.9	28.3	21.0	15.6	6.3	7.3	8.8	9.3	8.3	6.3
80°	107.8	36.1	18.5	13.7	12.2	3.9	6.3	5.4	4.9	3.4	1.0
82.5°	65.4	15.1	9.8	6.8	5.9	1.0	2.9	2.0	1.0	1.0	0.0
85°	46.3	7.3	5.4	4.9	2.9	0.0	0.5	0.0	0.0	0.5	0.0
87.5°	6.3	2.0	2.4	2.4	2.0	0.0	0.0	0.0	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)