

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: P368055

Luminaire Tested: **MSA-SA3D-727-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368055  
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-SA3D-727-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 13643 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G3

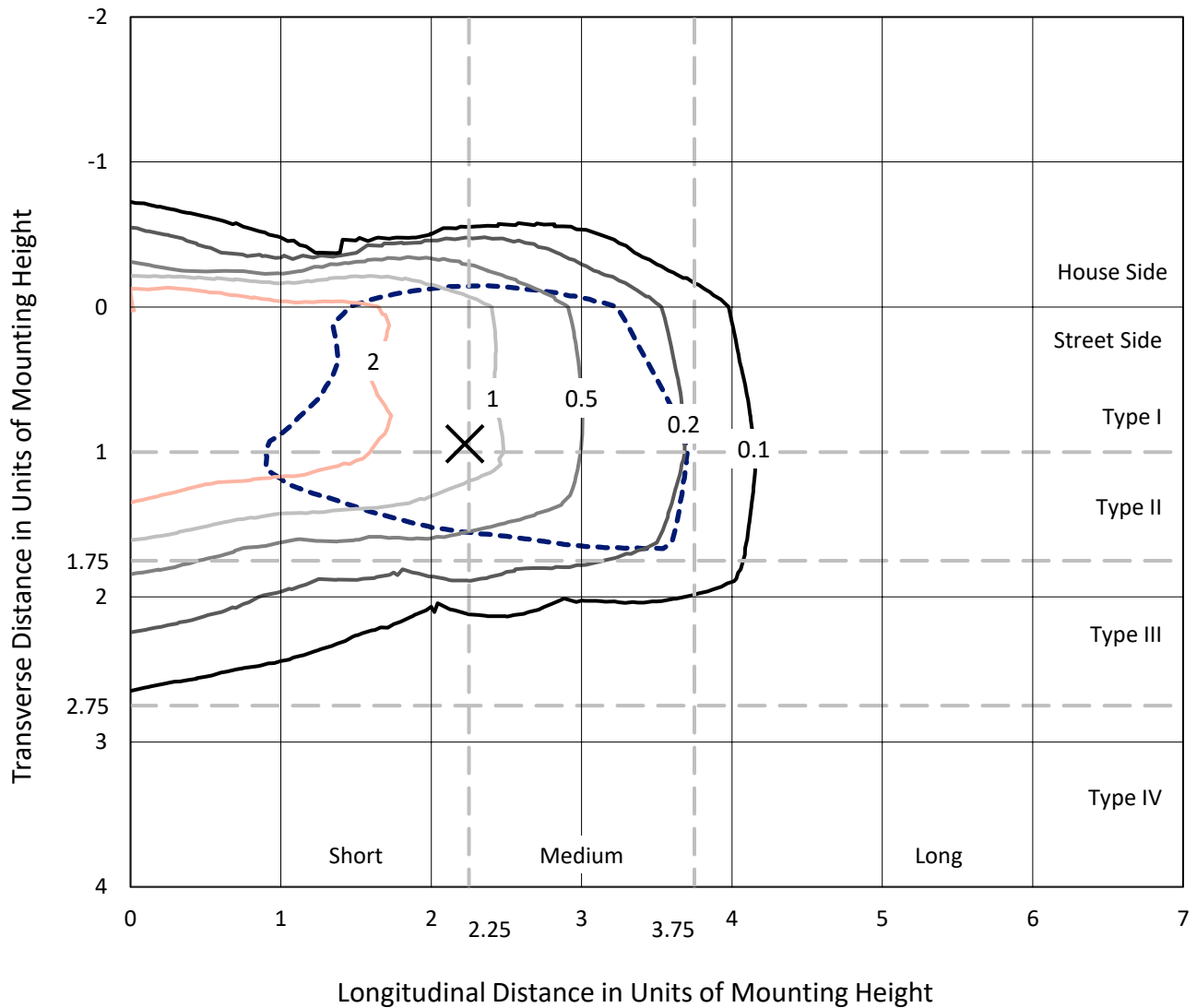
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

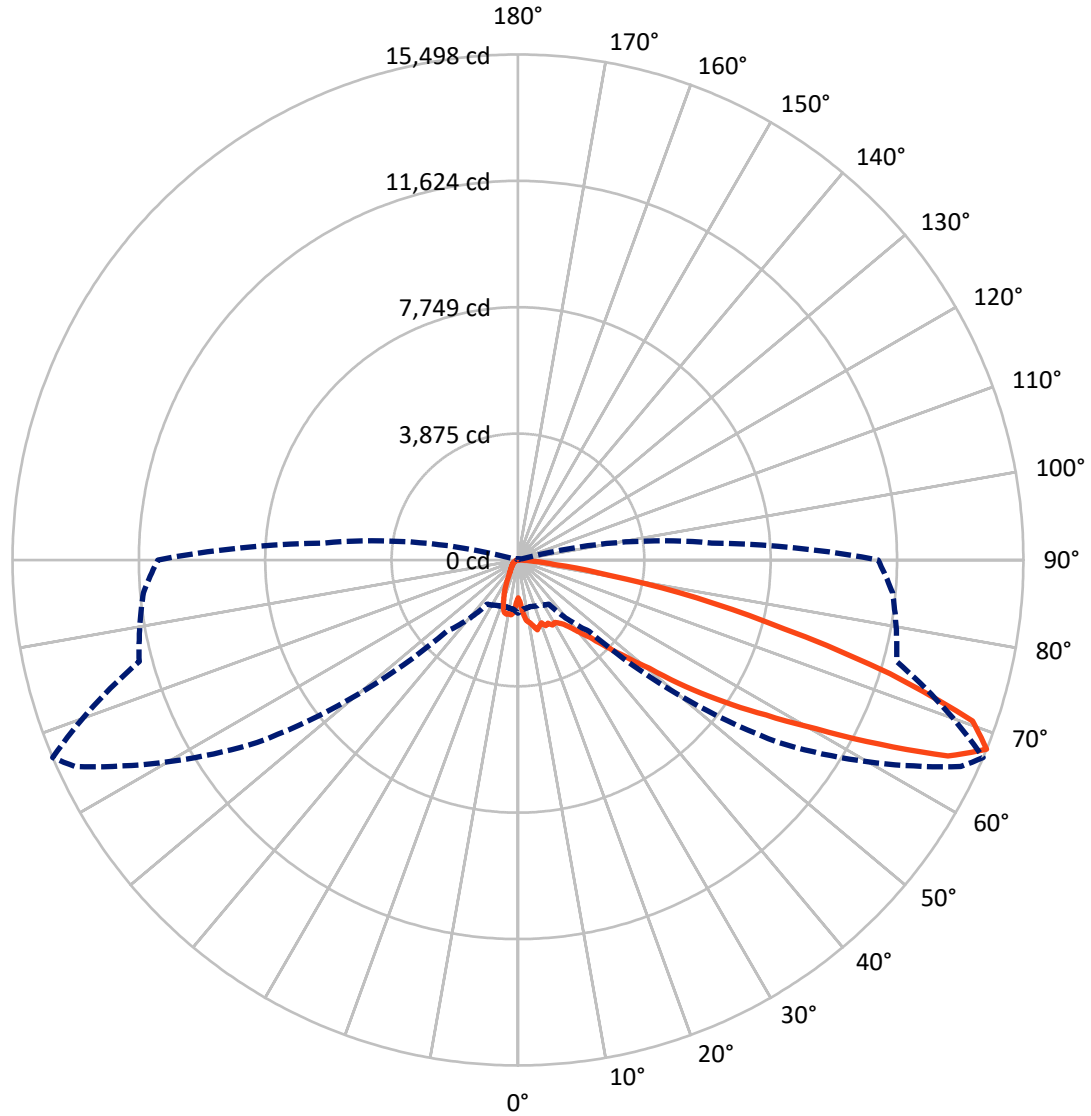
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



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

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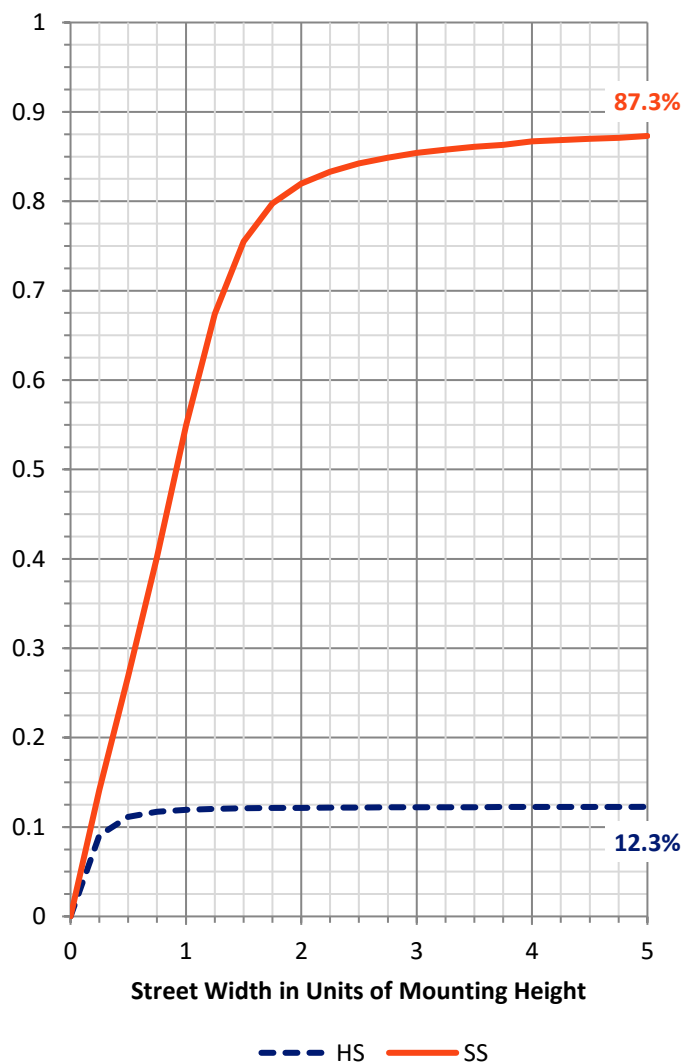
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1687.2	0.0	1687.2
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	11955.8	0.0	11955.8
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	13643.0	0.0	13643.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.9	1.1
10°-20°	431.6	3.2
20°-30°	676.4	5.0
30°-40°	1090.6	8.0
40°-50°	2004.0	14.7
50°-60°	3384.4	24.8
60°-70°	3741.6	27.4
70°-80°	1958.3	14.4
80°-90°	210.3	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°	13643.0	100.0
0°-180°	13643.0	100.0

**Coefficient of Utilization**



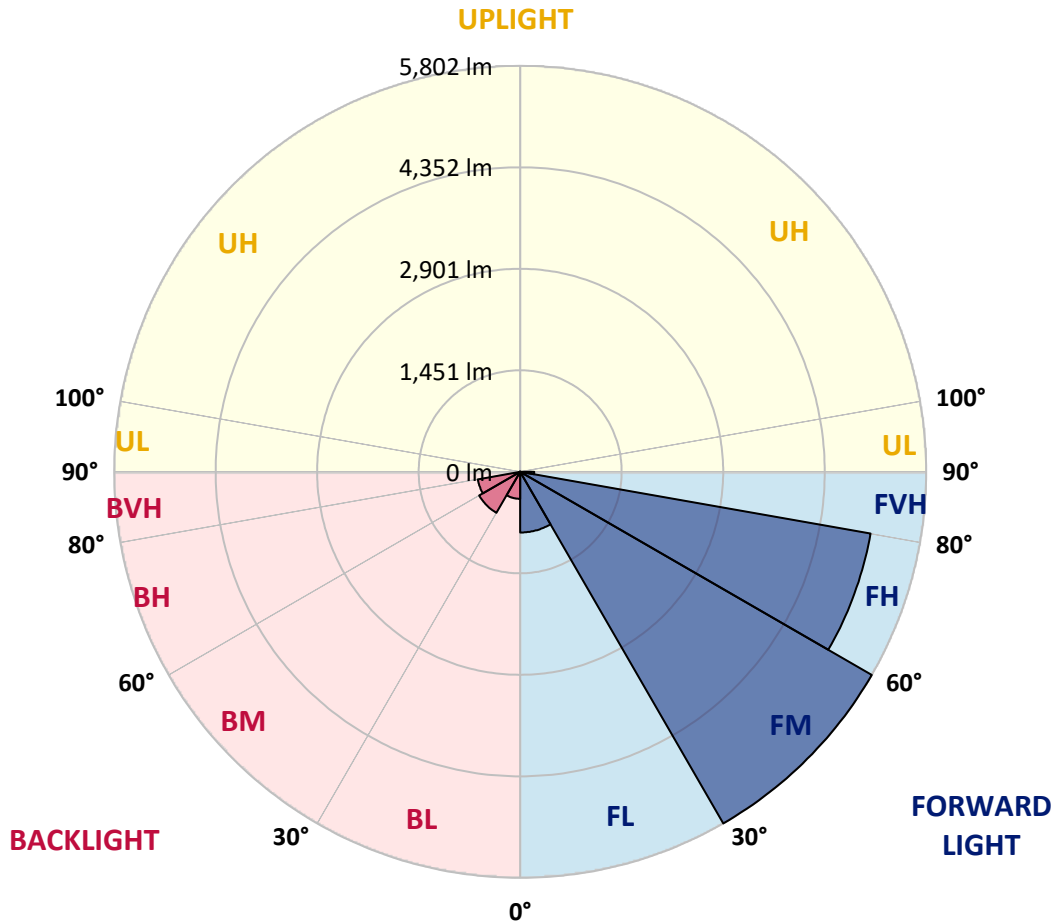
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	867.5	6.4			
FM (30°-60°)	5802.4	42.5			
FH (60°-80°)	5084.5	37.3			G3/7500
FVH (80°-90°)	201.3	1.5			G2/225
BL (0°-30°)	386.3	2.8	B1/500		
BM (30°-60°)	676.5	5.0	B1/1000		
BH (60°-80°)	615.4	4.5	B2/1000		G2/1000
BVH (80°-90°)	9.0	0.1			G0/10
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°	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0
2.5°	1371.7	1325.3	1246.4	1269.3	1315.0	1353.0	1335.0	1299.7	1300.4	1264.4	1393.8
5°	1595.9	1533.6	1488.0	1503.9	1501.8	1500.4	1585.6	1618.1	1631.9	1691.4	1779.3
7.5°	1660.3	1638.2	1590.4	1604.9	1557.2	1560.6	1710.1	1851.3	1873.5	1910.1	2066.5
10°	1635.4	1592.5	1609.8	1609.8	1610.5	1688.0	1788.3	1923.3	1950.3	2091.5	2108.1
12.5°	1608.4	1610.5	1679.0	1666.5	1760.6	1899.8	1933.7	2085.2	2072.1	2194.6	2376.6
15°	1708.7	1761.3	1717.0	1734.4	1743.3	1906.7	1961.4	2162.7	2220.9	2375.9	2494.3
17.5°	1881.1	1888.0	1795.9	1771.0	1836.1	1882.5	1992.5	2089.4	2128.1	2535.1	2702.6
20°	1912.2	1956.5	1863.1	1719.1	1856.8	1920.5	1997.3	2043.7	2060.3	2584.2	2820.2
22.5°	2099.8	2050.6	1901.1	1791.8	1831.2	1900.4	1948.2	2088.0	2187.7	2491.5	2933.0
25°	2196.0	2182.8	2040.2	1946.8	1906.7	1901.1	2010.5	2116.4	2148.2	2587.7	2960.7
27.5°	2426.4	2396.7	2120.5	2108.8	1976.6	1860.3	2012.6	2202.9	2262.4	2497.0	3064.5
30°	2739.9	2728.9	2361.4	2353.8	2143.4	1934.4	2124.7	2256.2	2220.2	2543.4	3133.7
32.5°	3055.5	3145.5	2769.7	2555.2	2397.4	2206.3	2092.8	2239.6	2303.9	2656.2	3261.1
35°	3436.9	3501.9	3119.2	2963.5	2612.6	2333.7	2303.9	2398.1	2425.7	2790.5	3405.7
37.5°	4104.0	4005.8	3679.8	3414.7	3230.6	2788.4	2641.7	2566.9	2631.3	2972.5	3701.2
40°	4596.8	4534.5	4133.1	3974.6	3551.1	3292.2	2908.8	2838.9	2910.9	3159.3	3906.8
42.5°	5191.3	5061.9	4684.0	4576.7	4140.7	3641.7	3252.8	3277.0	3232.0	3528.2	4267.4
45°	5729.0	5437.0	5226.6	5250.8	5018.3	4344.2	3826.5	3814.7	3777.4	4062.5	4646.6
47.5°	6091.0	5835.6	5630.8	5563.6	5535.9	5579.5	4655.6	4446.6	4418.9	4623.8	5243.9
50°	6285.5	6005.9	5752.6	5766.4	6328.4	6751.2	5511.0	5214.1	5224.5	5438.4	6060.5
52.5°	6154.7	5838.4	5571.2	5830.8	6942.9	7532.6	6927.0	6216.9	6457.8	6403.1	7156.1
55°	5550.5	5275.7	5086.1	5550.5	7010.1	8373.5	8670.4	7726.4	7672.4	7547.8	8273.1
57.5°	4533.8	4297.1	4180.2	4670.1	6275.8	9051.0	10421.3	9432.3	8972.1	8450.3	9200.5
60°	3378.0	3203.6	3081.8	3340.7	4944.9	8392.8	11568.1	11040.0	10507.1	9320.2	10033.8
62.5°	2501.9	2360.0	2230.6	2254.1	3405.0	7218.4	12008.3	12743.3	12437.4	10238.6	10820.0
65°	1996.6	1867.2	1776.6	1724.7	2108.8	5430.7	11395.8	14139.2	14492.1	11103.7	11387.5
67.5°	1630.5	1521.2	1476.2	1535.7	1654.1	3095.7	9759.7	14986.3	15498.4	12021.4	11527.3
70°	1326.7	1236.7	1231.9	1392.5	1523.3	1887.3	7178.9	14401.5	14787.0	12177.8	10689.2
72.5°	924.6	885.2	948.1	1175.8	1509.4	1571.7	4122.7	11917.6	11931.4	10755.6	8792.2
75°	523.2	517.0	616.6	937.8	1470.0	1555.8	2298.4	8421.9	8428.1	8134.7	6091.0
77.5°	287.9	269.2	359.2	633.9	1262.4	1519.8	1482.4	5750.5	5603.1	4526.9	2782.2
80°	132.9	125.3	194.5	406.3	923.2	1437.4	1188.3	3160.7	2850.0	1474.8	678.9
82.5°	54.7	51.9	89.3	260.9	583.4	1157.8	1001.4	1402.2	1125.3	280.3	209.7
85°	9.7	10.4	36.7	157.8	326.7	533.6	811.8	665.8	489.3	77.5	114.9
87.5°	0.0	0.0	7.6	38.1	78.9	146.0	329.4	186.2	128.0	22.8	33.9
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°	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0	1162.0
2.5°	1419.5	1407.7	1288.7	1294.2	1302.5	1294.9	1293.5	1260.3	1229.8	1330.2	1328.8
5°	1795.3	1711.5	1629.2	1597.3	1528.8	1438.8	1439.5	1411.1	1382.1	1422.9	1422.9
7.5°	2063.1	1947.5	1843.0	1656.8	1475.5	1311.5	1297.0	1258.2	1213.9	1267.2	1277.6
10°	2125.4	2025.0	1890.1	1616.7	1445.1	1285.2	1109.4	964.8	897.6	866.5	860.9
12.5°	2317.1	2242.3	1940.6	1638.2	1391.1	1120.5	832.6	660.9	544.0	535.0	522.5
15°	2445.1	2392.5	1990.4	1584.9	1162.7	805.6	523.2	401.4	354.3	350.2	344.0
17.5°	2643.7	2552.4	1942.7	1415.3	909.4	531.5	351.6	317.0	322.5	335.0	325.3
20°	2724.7	2546.2	1838.9	1169.6	638.8	356.4	305.2	286.5	301.1	312.8	307.3
22.5°	2807.8	2564.2	1746.8	964.1	417.3	294.8	272.0	262.3	263.7	275.4	276.1
25°	2807.1	2614.0	1640.2	750.9	310.7	262.3	245.7	233.2	228.4	236.7	234.6
27.5°	2943.4	2556.5	1445.8	557.1	273.4	234.6	218.7	203.5	186.2	194.5	194.5
30°	2944.1	2650.0	1310.1	400.0	250.5	209.0	195.2	171.6	151.6	158.5	159.2
32.5°	3022.3	2569.0	1184.8	305.9	232.5	193.8	163.3	141.9	130.1	134.3	134.3
35°	3111.6	2638.2	992.4	269.9	214.5	172.3	139.8	122.5	113.5	117.0	117.0
37.5°	3406.4	2623.7	858.9	251.2	202.8	155.7	127.3	108.0	103.8	105.9	108.7
40°	3513.0	2726.8	677.5	240.2	183.4	140.5	112.1	97.6	92.0	93.4	94.1
42.5°	3784.3	2749.6	541.2	231.2	166.1	121.8	99.7	89.3	82.4	82.4	84.4
45°	4084.0	2807.1	430.5	223.5	151.6	109.3	90.0	81.7	71.3	69.9	72.7
47.5°	4517.9	3027.2	350.9	208.3	134.3	101.7	83.0	70.6	62.3	59.5	62.3
50°	5243.9	3400.9	310.1	189.6	121.8	95.5	73.4	60.2	54.0	50.5	52.6
52.5°	6268.2	4046.6	288.6	172.3	110.7	85.8	65.7	52.6	46.4	43.6	45.0
55°	7405.9	4787.1	278.2	155.0	101.0	75.4	57.4	46.4	40.8	37.4	38.1
57.5°	8457.9	5483.3	267.8	138.4	91.4	67.1	50.5	40.8	35.3	31.8	32.5
60°	9494.6	6039.1	242.9	119.0	82.4	60.2	44.3	35.3	31.8	27.7	27.7
62.5°	10411.6	6371.3	206.9	103.1	74.1	53.3	39.4	31.8	29.1	24.9	24.9
65°	11035.9	6386.5	166.8	88.6	65.1	45.7	34.6	29.8	27.0	22.1	21.5
67.5°	11044.9	5971.3	133.6	78.9	57.4	40.1	31.1	28.4	24.9	20.8	19.4
70°	9885.7	4933.1	111.4	69.2	49.8	35.3	27.0	27.0	24.2	20.1	18.0
72.5°	7907.7	3769.8	93.4	60.2	44.3	30.5	24.9	25.6	23.5	20.1	18.0
75°	5315.2	2162.1	77.5	51.2	38.8	25.6	24.2	24.9	24.2	20.1	17.3
77.5°	2447.9	688.6	60.2	42.2	33.2	21.5	23.5	23.5	22.1	18.0	15.2
80°	551.6	169.6	43.6	31.1	27.0	15.9	21.5	19.4	17.3	12.5	9.0
82.5°	200.7	51.9	26.3	19.4	16.6	6.2	13.8	13.8	12.5	9.0	5.5
85°	114.9	27.0	14.5	12.5	9.0	2.8	7.6	8.3	6.9	6.2	2.8
87.5°	37.4	6.2	6.9	7.6	6.9	1.4	2.8	2.8	2.1	1.4	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)