

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: P367551

Luminaire Tested: **MSA-SA2D-730-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367551  
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-SA2D-730-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 10087 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

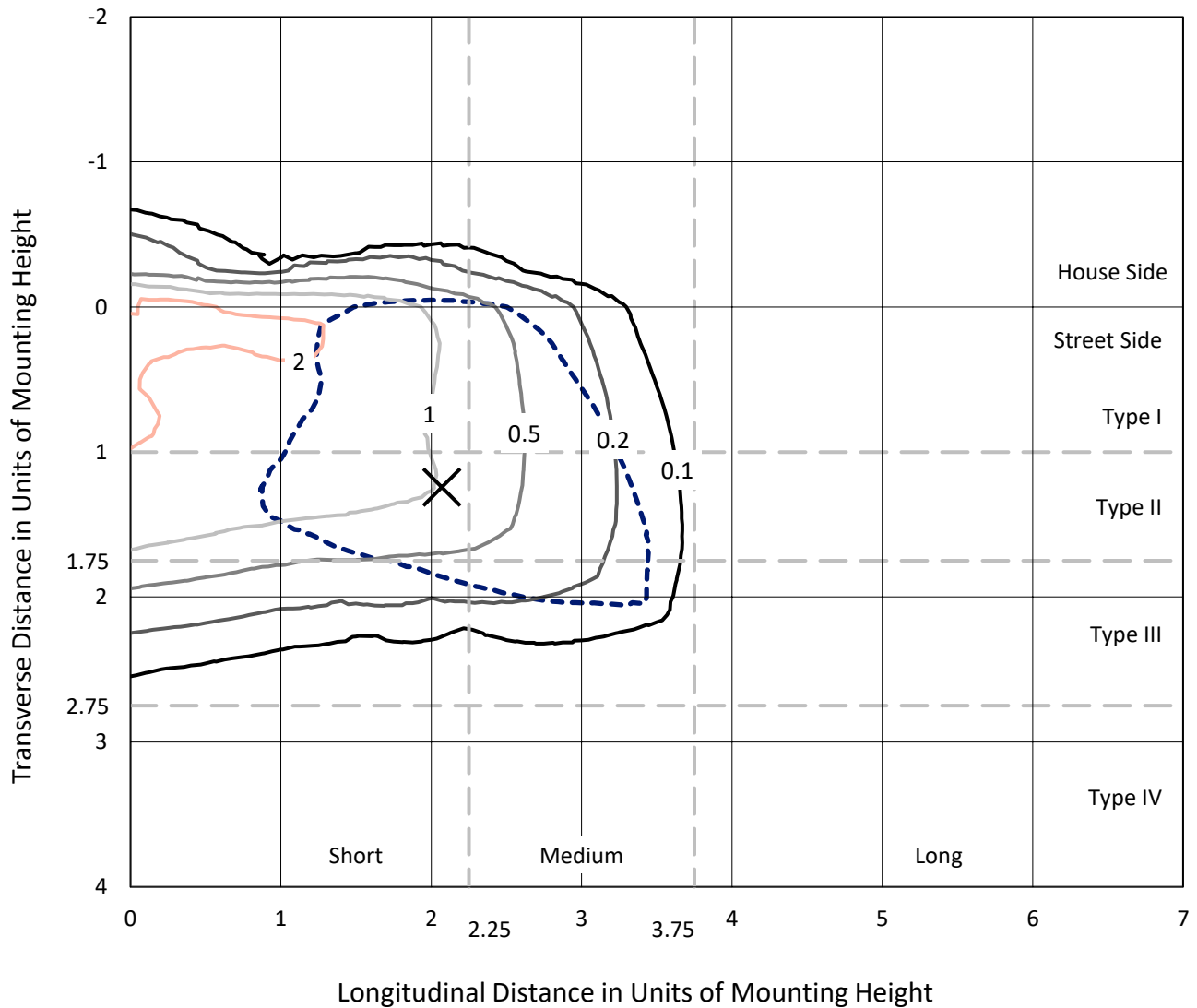
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

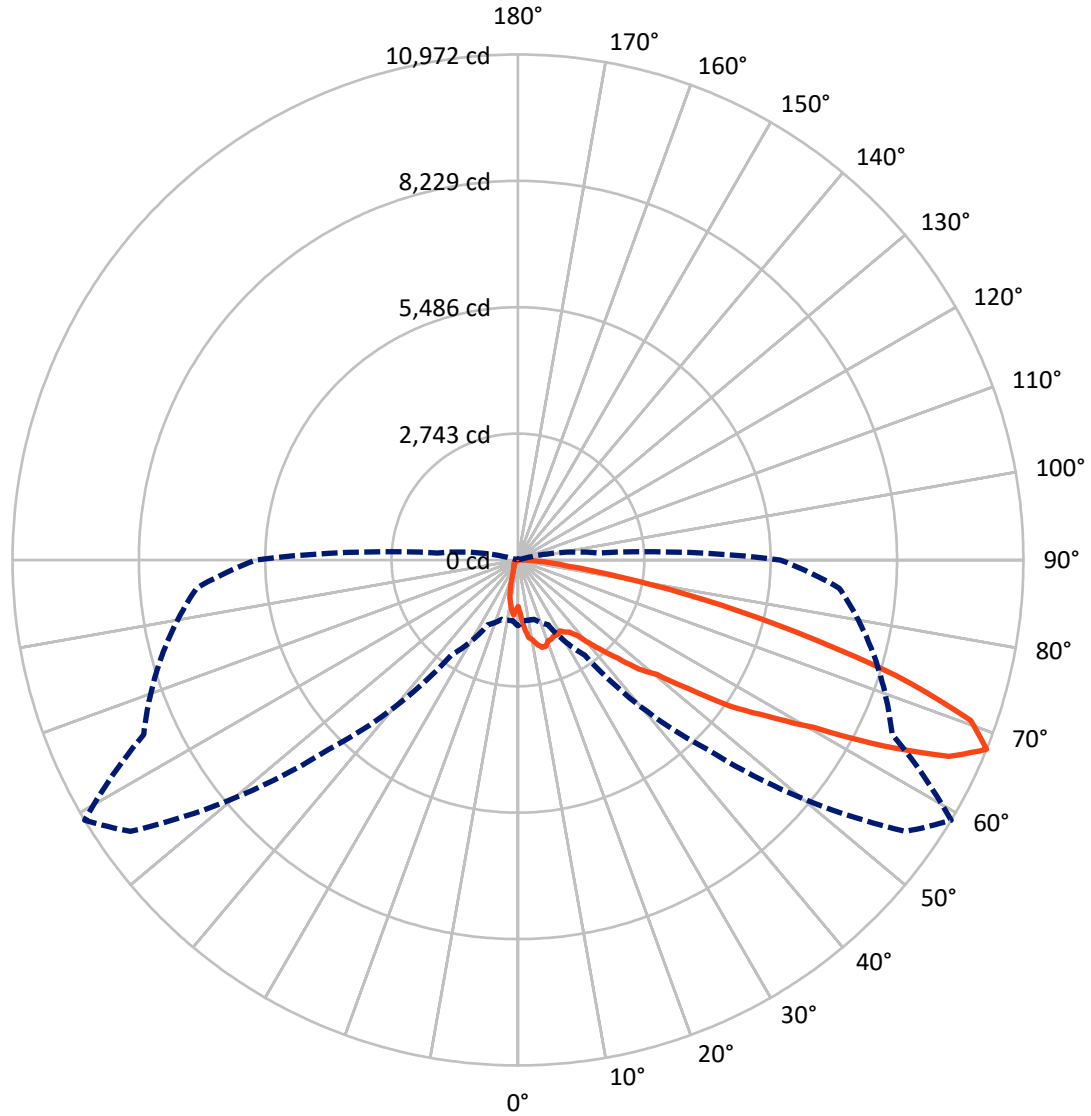
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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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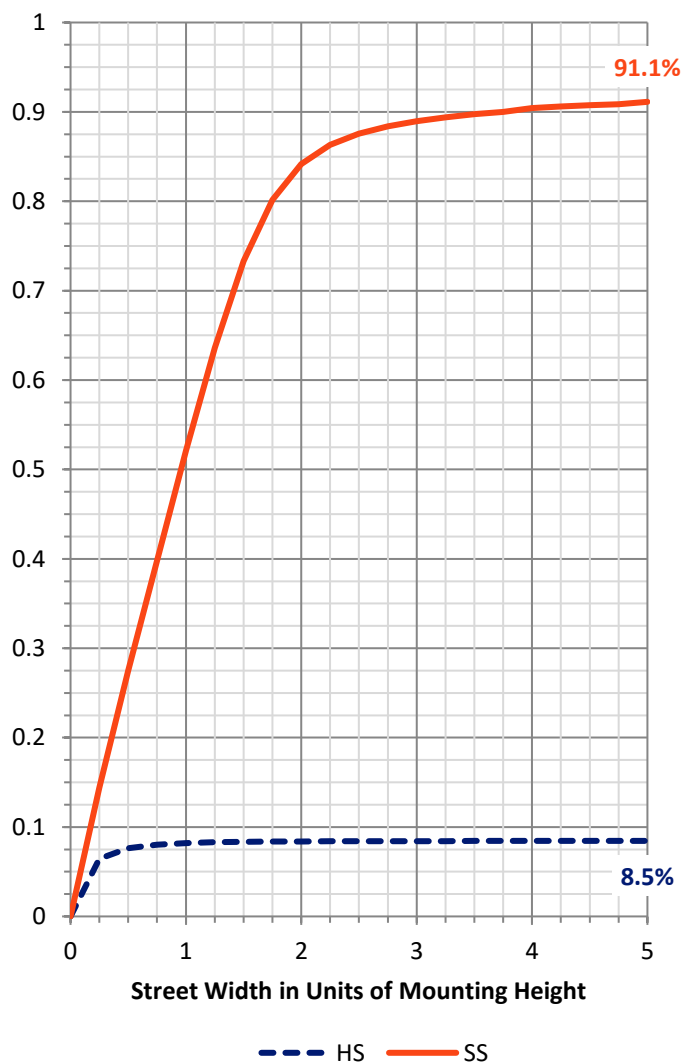
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	857.8	0.0	857.8
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	9229.2	0.0	9229.2
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	10087.0	0.0	10087.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.7	1.2
10°-20°	345.5	3.4
20°-30°	513.9	5.1
30°-40°	792.9	7.9
40°-50°	1415.1	14.0
50°-60°	2518.2	25.0
60°-70°	2932.8	29.1
70°-80°	1304.2	12.9
80°-90°	141.6	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°	10087.0	100.0
0°-180°	10087.0	100.0

**Coefficient of Utilization**



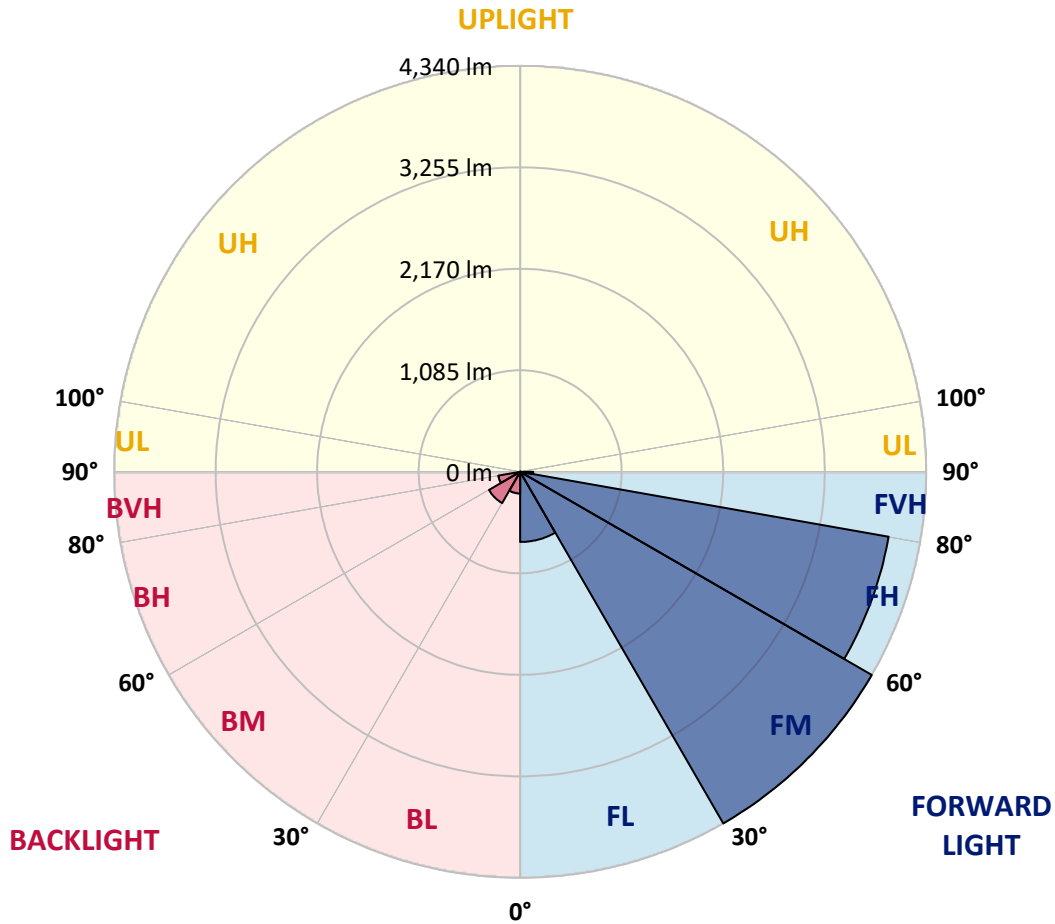
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	750.2	7.4			
FM (30°-60°)	4340.4	43.0			
FH (60°-80°)	3999.4	39.6			G2/5000
FVH (80°-90°)	139.1	1.4			G2/225
BL (0°-30°)	232.0	2.3	B1/500		
BM (30°-60°)	385.7	3.8	B1/1000		
BH (60°-80°)	237.6	2.4	B1/500		G1/500
BVH (80°-90°)	2.5	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°	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2
2.5°	1315.7	1266.1	1195.7	1216.6	1235.5	1253.4	1223.8	1206.9	1198.7	1126.2	1217.1
5°	1615.5	1553.7	1521.5	1513.3	1492.9	1447.5	1523.0	1489.3	1500.6	1514.9	1544.5
7.5°	1706.9	1678.8	1632.3	1649.7	1572.1	1565.4	1670.1	1699.3	1737.6	1711.5	1747.3
10°	1659.9	1611.4	1633.4	1627.2	1624.2	1692.6	1766.2	1767.7	1824.9	1852.5	1731.4
12.5°	1567.0	1572.6	1651.2	1645.1	1747.3	1884.1	1901.0	1883.1	1976.6	1928.6	1910.2
15°	1628.8	1674.7	1631.3	1646.1	1682.4	1853.5	1913.3	1968.4	2056.8	2085.4	1961.3
17.5°	1703.3	1707.9	1628.8	1610.4	1701.8	1781.5	1922.5	1967.9	1976.6	2227.4	2076.2
20°	1663.0	1702.3	1607.8	1491.9	1633.9	1742.2	1885.2	1870.9	1929.1	2269.3	2102.2
22.5°	1770.3	1714.1	1593.0	1505.7	1553.7	1652.3	1773.3	1866.8	1954.1	2169.1	2135.9
25°	1780.5	1760.0	1652.3	1574.6	1566.5	1591.5	1760.0	1820.3	1957.2	2259.0	2107.3
27.5°	1895.4	1871.9	1651.2	1658.9	1582.3	1505.2	1695.7	1837.2	2012.9	2204.4	2168.1
30°	2043.5	2045.5	1761.1	1785.1	1675.8	1551.7	1748.3	1787.1	2050.7	2291.7	2213.1
32.5°	2193.7	2255.5	1978.1	1850.9	1816.7	1727.9	1682.9	1862.2	2009.3	2440.9	2325.4
35°	2422.0	2463.8	2156.9	2043.0	1908.7	1807.5	1860.7	1925.0	2157.9	2638.5	2473.0
37.5°	2808.6	2733.0	2477.6	2279.5	2247.3	2098.1	2124.7	2067.0	2309.6	2871.4	2765.2
40°	3026.2	2957.7	2692.1	2595.6	2390.3	2413.3	2329.5	2363.2	2529.7	3114.0	3031.3
42.5°	3252.9	3187.6	2954.7	2886.2	2690.6	2595.6	2557.8	2678.9	2867.3	3518.0	3412.8
45°	3480.7	3314.8	3216.2	3250.4	3162.5	2974.6	2930.7	3038.4	3236.1	4014.5	3815.3
47.5°	3672.8	3532.8	3458.8	3442.9	3408.7	3669.7	3491.0	3538.5	3625.8	4453.7	4316.8
50°	4019.1	3881.2	3765.2	3733.1	3899.6	4269.8	3994.0	3902.1	4076.8	4984.4	4898.1
52.5°	4519.1	4343.4	4159.0	4159.5	4473.6	4676.9	4807.7	4646.3	4679.0	5568.2	5529.9
55°	4921.1	4697.9	4545.1	4665.7	5134.0	5247.9	5746.9	5605.5	5563.1	6109.6	6062.6
57.5°	4976.2	4708.6	4636.1	4847.5	5488.5	6215.8	6752.6	6399.2	6334.3	6562.6	6656.1
60°	4461.4	4177.4	4232.1	4572.2	5603.9	6805.7	7676.0	7387.4	6975.3	7093.3	7157.6
62.5°	3327.5	3100.7	3254.0	3704.5	5159.1	7201.0	8745.0	8878.8	7718.9	7491.6	7477.9
65°	2158.9	2016.9	2117.6	2486.8	3904.2	7156.1	9700.1	10280.3	8304.8	7816.5	7578.5
67.5°	1428.0	1320.3	1334.6	1553.2	2524.6	5820.0	10271.1	10972.4	8963.6	8000.9	7001.8
70°	1064.4	979.6	984.7	1103.2	1498.5	3838.3	9474.9	10426.4	9204.2	7361.9	5651.4
72.5°	767.7	711.0	758.5	890.2	1194.1	2029.7	7062.1	8586.7	8025.9	5806.7	3807.6
75°	531.7	494.4	572.0	744.7	1089.9	1260.0	4666.7	6181.1	5625.4	3643.2	1721.2
77.5°	294.7	283.5	395.3	606.8	989.3	1032.7	2858.7	4061.5	3120.2	1306.0	409.6
80°	128.7	124.6	191.5	455.6	831.5	933.1	1609.4	2251.9	1227.3	232.9	132.3
82.5°	55.2	53.1	81.7	274.3	604.2	780.4	992.4	1083.8	422.4	72.0	75.1
85°	9.7	10.7	32.7	144.5	367.7	396.3	718.6	641.5	212.5	34.2	53.6
87.5°	0.0	0.0	5.1	28.1	69.0	113.4	311.6	224.7	40.3	11.2	9.2
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°	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2	1009.2
2.5°	1229.9	1201.3	1092.5	1078.7	1063.9	1041.9	1033.8	986.8	980.6	1040.9	1040.9
5°	1530.7	1428.6	1324.9	1243.2	1170.1	1069.0	1040.4	1010.8	986.8	980.6	999.5
7.5°	1689.6	1564.9	1402.0	1194.1	1025.6	879.0	817.7	774.8	726.8	741.1	748.8
10°	1680.9	1548.6	1340.7	1073.6	886.7	724.8	569.0	478.1	427.5	402.5	399.4
12.5°	1766.2	1641.5	1299.3	977.6	739.1	515.3	358.0	293.2	255.9	256.4	253.3
15°	1815.7	1679.8	1251.3	856.0	520.5	331.5	248.2	233.9	228.8	234.4	231.4
17.5°	1903.0	1720.2	1142.5	674.7	358.0	250.3	228.3	222.7	229.3	241.1	238.0
20°	1896.4	1650.2	987.8	475.5	264.6	225.2	216.0	207.4	221.2	233.4	231.4
22.5°	1890.3	1581.8	842.2	350.9	221.2	205.3	197.7	194.1	201.2	215.5	218.6
25°	1836.1	1548.1	694.6	263.5	200.2	186.4	182.8	179.8	182.3	194.1	193.6
27.5°	1902.5	1462.8	536.3	221.2	185.4	169.1	166.0	160.9	155.8	166.0	167.5
30°	1888.7	1474.5	420.3	194.6	170.6	148.6	149.6	138.9	129.7	138.9	138.9
32.5°	1938.8	1388.7	336.6	176.7	155.8	139.9	127.2	115.9	109.3	114.9	115.9
35°	2011.8	1392.3	263.5	165.5	143.0	124.6	109.3	98.1	91.9	94.5	96.0
37.5°	2256.5	1367.8	220.1	156.8	138.4	115.4	99.6	84.8	80.7	83.8	85.3
40°	2415.8	1433.2	194.1	152.2	126.7	106.2	85.3	74.6	71.0	72.5	75.1
42.5°	2716.2	1469.4	181.3	147.1	115.9	90.9	73.0	66.9	61.8	63.8	65.9
45°	3037.4	1531.2	171.6	141.5	107.8	79.7	64.4	59.2	52.6	53.1	55.2
47.5°	3432.2	1678.3	160.4	131.8	96.5	72.5	57.2	49.5	43.4	42.9	45.5
50°	3962.4	1875.0	150.2	119.5	89.4	66.4	50.1	40.3	35.2	33.7	35.8
52.5°	4528.3	2129.3	139.4	110.8	80.7	58.2	42.9	32.7	28.1	27.1	28.6
55°	5089.1	2373.4	129.2	105.2	71.5	50.1	36.3	27.1	23.0	22.0	23.0
57.5°	5728.0	2637.5	115.9	94.0	62.8	43.4	30.1	22.5	18.9	17.9	18.4
60°	6209.2	2730.5	104.7	81.7	54.6	38.3	25.5	17.9	15.3	14.3	14.8
62.5°	6437.5	2578.8	94.0	71.0	48.0	33.2	21.5	14.8	12.8	11.7	11.7
65°	6378.2	2242.7	83.3	60.8	41.4	27.6	16.9	12.8	11.2	9.7	9.2
67.5°	5693.8	1754.9	71.0	51.1	34.7	22.5	14.3	12.3	10.2	9.2	7.7
70°	4515.5	1270.7	57.7	42.4	29.1	18.4	11.2	11.2	9.7	9.2	7.2
72.5°	2959.8	799.8	47.0	34.2	24.0	14.3	8.7	10.2	9.2	9.2	6.6
75°	1282.5	286.0	37.8	27.6	19.9	9.7	7.7	9.2	9.7	9.2	7.7
77.5°	300.3	88.9	29.6	22.0	16.3	6.6	7.7	9.2	9.7	8.7	6.6
80°	112.9	37.8	19.4	14.3	12.8	4.1	6.6	5.6	5.1	3.6	1.0
82.5°	68.4	15.8	10.2	7.2	6.1	1.0	3.1	2.0	1.0	1.0	0.0
85°	48.5	7.7	5.6	5.1	3.1	0.0	0.5	0.0	0.0	0.5	0.0
87.5°	6.6	2.0	2.6	2.6	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)