

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: P367924

Luminaire Tested: **MSA-SA3C-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-727-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15125 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

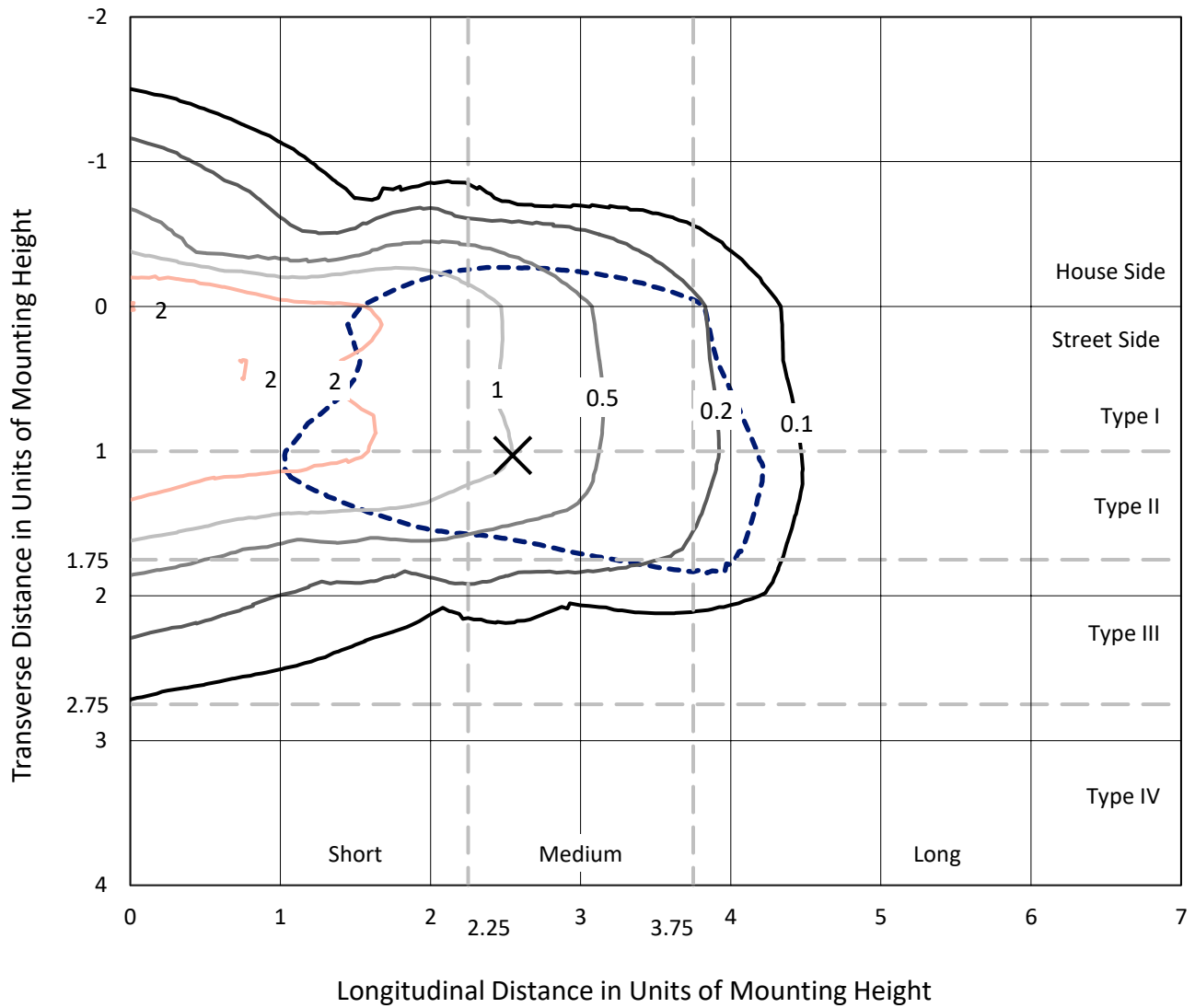
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

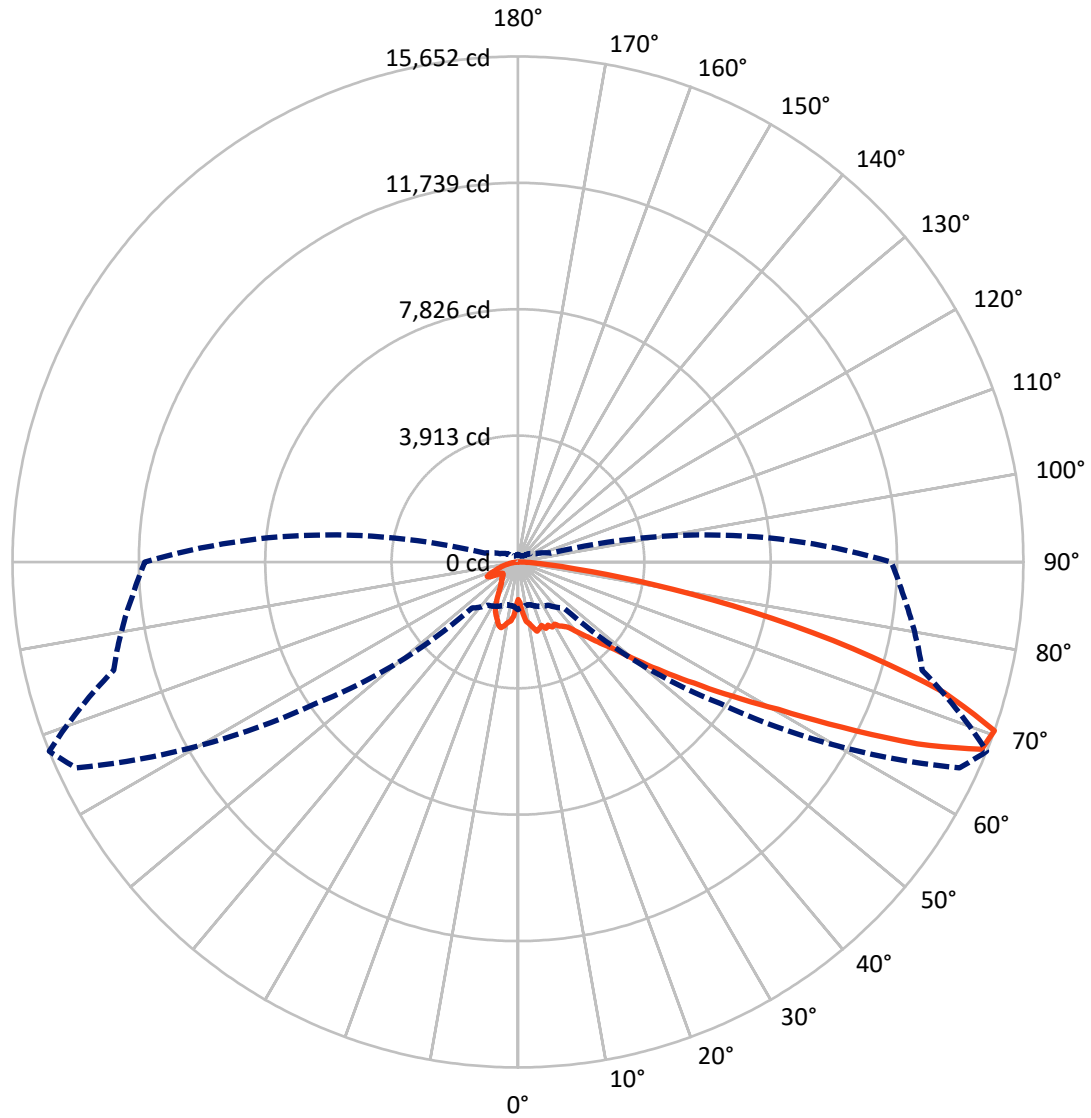
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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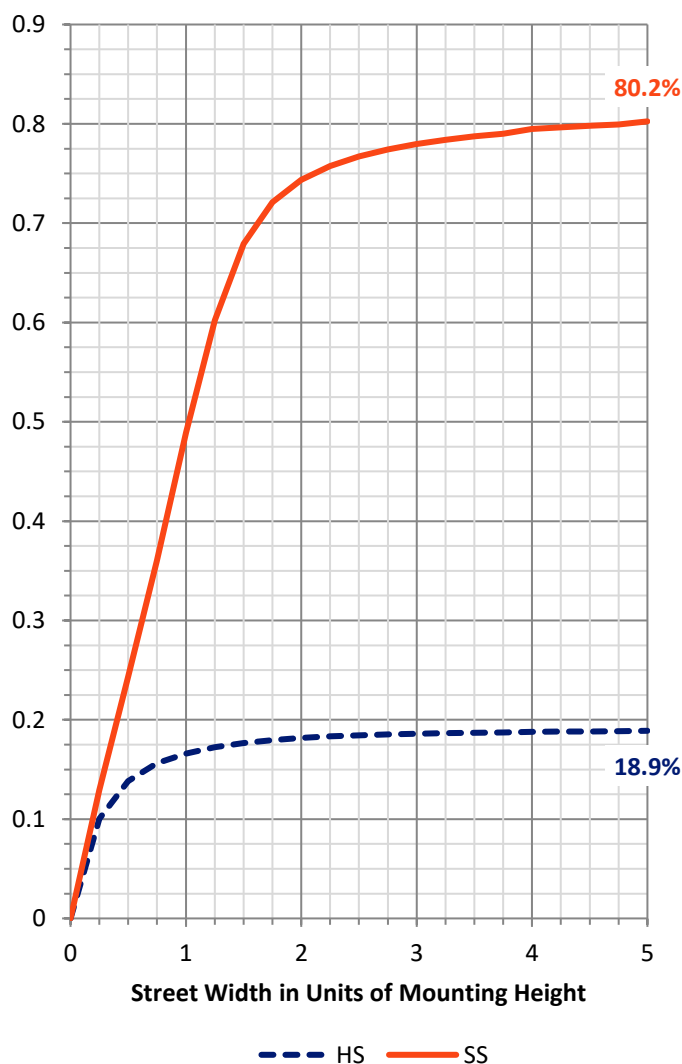
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2887.7	0.0	2887.7
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	12237.3	0.0	12237.3
	% Fixture	80.9	0.0	80.9
Total	Lumens	15125.0	0.0	15125.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	1.0
10°-20°	504.8	3.3
20°-30°	767.9	5.1
30°-40°	1172.9	7.8
40°-50°	2016.8	13.3
50°-60°	3338.2	22.1
60°-70°	4115.6	27.2
70°-80°	2643.8	17.5
80°-90°	410.1	2.7
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°	15125.0	100.0
0°-180°	15125.0	100.0

Coefficient of Utilization



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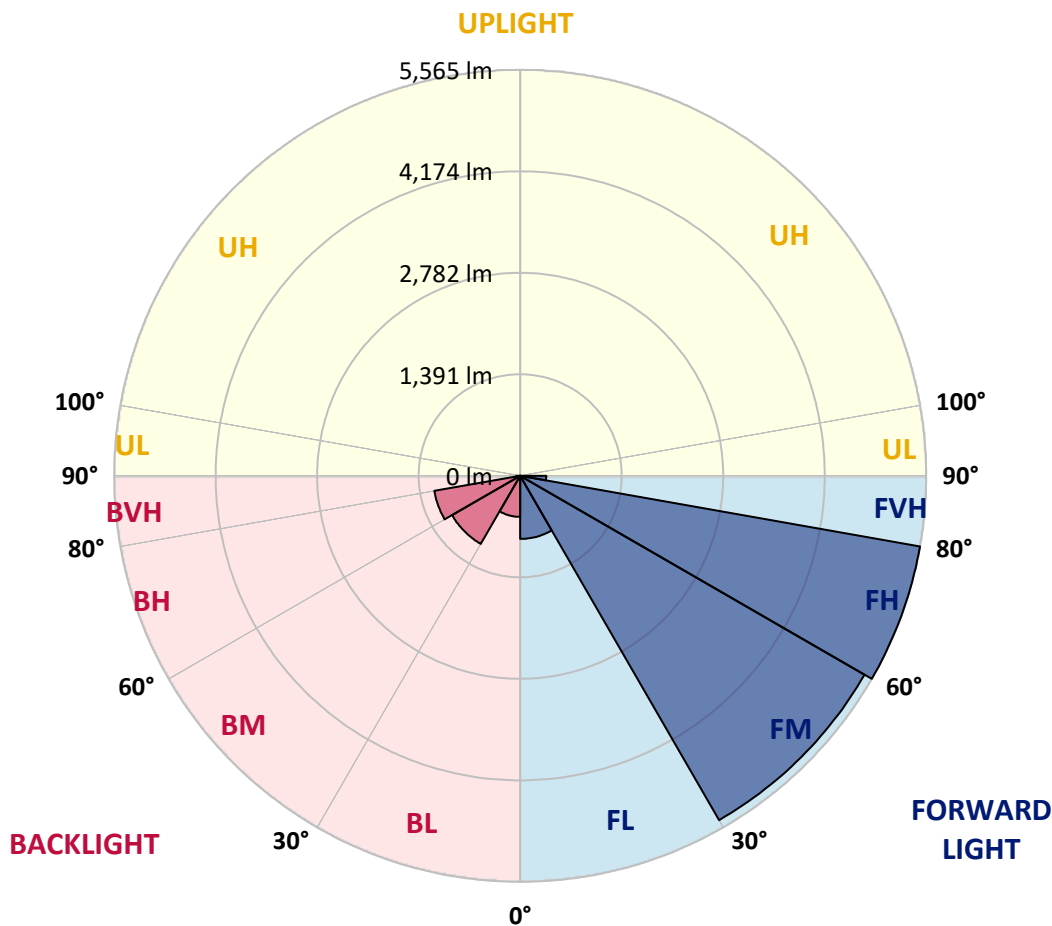
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	864.9	5.7			
FM (30°-60°)	5450.1	36.0			
FH (60°-80°)	5564.8	36.8			G3/7500
FVH (80°-90°)	357.5	2.4			G3/500
BL (0°-30°)	562.7	3.7	B2/1000		
BM (30°-60°)	1077.9	7.1	B2/2500		
BH (60°-80°)	1194.5	7.9	B3/2500		G3/2500
BVH (80°-90°)	52.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7
2.5°	1332.5	1278.7	1224.3	1250.8	1293.3	1330.6	1323.0	1327.4	1276.2	1269.2	1404.0
5°	1569.9	1477.5	1475.6	1476.8	1480.6	1437.6	1542.7	1597.1	1609.1	1664.8	1797.1
7.5°	1652.2	1614.8	1576.8	1595.8	1547.7	1552.2	1681.3	1823.1	1856.6	1897.2	2078.2
10°	1635.1	1599.6	1611.0	1614.2	1623.1	1694.6	1777.5	1913.6	1942.1	2071.2	2118.1
12.5°	1637.6	1631.3	1684.5	1686.4	1781.3	1909.8	1942.7	2068.1	2079.5	2174.4	2370.0
15°	1724.3	1768.0	1738.3	1754.1	1772.4	1926.3	1973.7	2153.5	2221.9	2344.1	2490.9
17.5°	1893.4	1906.0	1816.8	1793.3	1853.5	1900.3	2008.6	2086.4	2158.0	2499.2	2701.7
20°	1932.6	1966.8	1860.4	1739.5	1866.8	1932.0	2007.3	2042.7	2098.5	2521.9	2809.3
22.5°	2101.0	2030.1	1901.6	1796.5	1838.3	1901.6	1956.0	2089.6	2235.8	2456.7	2916.9
25°	2196.6	2155.4	2040.8	1928.2	1892.7	1894.6	1999.7	2119.3	2170.0	2552.3	2938.5
27.5°	2427.6	2361.8	2104.1	2082.6	1949.1	1845.2	2006.7	2192.8	2281.4	2477.6	3043.5
30°	2716.9	2666.9	2328.9	2300.4	2096.6	1915.5	2095.3	2247.2	2234.6	2526.4	3116.3
32.5°	2951.1	3034.7	2693.5	2468.8	2323.8	2150.4	2067.4	2237.7	2363.7	2639.7	3239.8
35°	3285.4	3363.9	2977.7	2825.8	2511.2	2259.2	2261.8	2368.1	2446.0	2772.0	3377.8
37.5°	3863.9	3794.9	3484.1	3244.2	3042.9	2666.9	2554.2	2516.9	2579.5	2934.0	3648.1
40°	4281.1	4222.9	3857.0	3720.2	3328.4	3110.0	2801.1	2765.7	2876.4	3101.2	3869.0
42.5°	4775.5	4671.7	4331.1	4218.4	3808.9	3415.1	3103.7	3123.9	3177.7	3416.4	4167.8
45°	5278.7	5026.8	4833.7	4824.9	4551.4	4007.6	3589.2	3572.7	3574.6	3880.4	4503.3
47.5°	5678.2	5451.5	5230.6	5125.5	4987.5	5032.5	4294.4	4101.3	4043.1	4347.6	5006.5
50°	5948.5	5687.7	5437.6	5412.9	5781.3	6023.8	4956.5	4750.2	4786.2	5016.0	5677.5
52.5°	5954.2	5644.6	5383.8	5556.6	6424.5	6771.4	6097.2	5520.5	5635.8	5792.1	6553.0
55°	5540.2	5219.2	5049.6	5443.3	6675.8	7658.2	7700.0	6754.9	6622.0	6679.6	7599.4
57.5°	4667.2	4343.1	4244.4	4716.0	6199.1	8513.4	9635.8	8229.9	7839.9	7599.4	8671.7
60°	3513.2	3232.8	3171.4	3472.1	5139.5	8262.1	11203.1	10065.6	9271.2	8626.8	9747.2
62.5°	2634.6	2433.3	2340.9	2383.9	3556.3	7444.9	12232.4	12385.0	11260.1	9748.5	10798.0
65°	2140.9	1978.2	1895.9	1840.2	2211.8	5756.7	12046.3	14337.2	13583.3	10926.5	11615.9
67.5°	1788.3	1643.9	1606.0	1660.4	1748.4	3339.8	10590.4	15429.2	15480.4	12088.7	12093.8
70°	1484.4	1377.4	1363.5	1518.0	1633.8	2015.5	7649.4	15086.1	15652.0	12960.4	11981.7
72.5°	1147.0	1089.4	1087.5	1330.0	1623.1	1718.0	4555.2	13032.6	13792.8	12681.9	10885.4
75°	795.7	755.8	786.2	1093.2	1585.7	1742.7	2599.8	10151.1	10720.1	10791.7	8719.8
77.5°	547.6	514.0	546.9	790.6	1416.1	1784.5	1818.7	7339.8	7403.1	7236.7	4994.5
80°	381.1	357.7	383.0	559.6	1102.1	1766.1	1548.4	4621.0	4239.9	3229.7	1599.0
82.5°	236.1	229.2	257.0	398.8	776.1	1606.6	1467.3	2384.6	1820.6	891.3	571.0
85°	124.1	113.9	149.4	260.2	485.5	1261.0	1374.9	1088.2	702.6	316.5	229.2
87.5°	36.7	32.9	57.6	105.1	205.7	565.3	786.8	461.5	262.1	93.1	71.5
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°	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7	1159.7
2.5°	1413.5	1406.6	1312.9	1324.9	1345.2	1350.2	1349.6	1315.4	1279.3	1380.0	1376.8
5°	1800.3	1737.6	1690.8	1680.7	1623.1	1565.5	1585.7	1578.7	1569.9	1615.5	1621.2
7.5°	2078.8	1992.1	1937.7	1797.8	1664.8	1549.6	1586.3	1597.7	1574.9	1657.2	1681.9
10°	2152.3	2083.9	2025.0	1845.2	1771.8	1704.7	1605.3	1492.0	1476.8	1429.4	1435.0
12.5°	2341.5	2332.0	2131.4	1973.1	1877.5	1744.0	1529.4	1392.0	1274.3	1280.0	1245.8
15°	2490.9	2496.0	2254.8	2033.3	1776.9	1573.0	1320.5	1149.6	1028.7	1004.6	979.9
17.5°	2691.6	2681.5	2264.9	1961.1	1636.3	1337.6	1028.0	858.4	838.1	852.0	830.5
20°	2778.9	2689.7	2200.4	1781.9	1416.7	1016.0	776.7	686.8	726.1	781.8	783.0
22.5°	2857.4	2704.9	2166.8	1637.6	1124.2	738.7	623.5	607.1	653.3	728.6	734.9
25°	2854.3	2775.1	2106.7	1492.0	871.7	576.7	541.9	553.9	609.0	687.5	691.9
27.5°	2998.0	2721.3	1950.3	1300.9	656.4	493.8	502.6	524.8	550.7	625.4	640.0
30°	2996.7	2821.4	1871.8	1068.5	527.3	452.6	475.4	494.4	515.9	584.3	592.5
32.5°	3067.6	2756.2	1824.4	831.2	472.9	442.5	448.2	467.2	498.2	544.4	550.1
35°	3153.1	2830.2	1672.4	660.2	452.6	433.6	438.0	448.8	477.3	519.7	525.4
37.5°	3427.2	2844.1	1612.3	556.4	451.3	429.8	429.2	434.9	467.2	505.8	522.9
40°	3534.1	2971.4	1436.9	519.7	446.9	429.8	421.0	424.1	450.7	500.1	513.4
42.5°	3790.5	3013.8	1307.2	507.0	446.9	422.2	408.3	413.4	444.4	488.1	508.9
45°	4054.5	3073.9	1152.7	504.5	446.3	421.6	395.0	406.4	431.7	468.4	491.2
47.5°	4430.5	3290.4	998.3	496.9	441.2	424.8	391.8	391.2	413.4	445.0	466.5
50°	5043.9	3628.5	878.6	487.4	441.8	422.2	385.5	376.6	391.2	419.1	439.9
52.5°	5897.8	4204.5	831.8	482.4	436.8	412.1	374.7	360.8	369.0	391.2	411.5
55°	6889.1	4982.5	878.0	482.4	426.7	396.3	359.6	343.1	347.5	362.7	382.3
57.5°	8047.5	5949.1	1101.4	475.4	414.0	377.3	341.2	322.2	323.5	336.8	354.5
60°	9257.2	7029.0	1602.2	469.7	405.1	356.4	319.7	300.1	298.2	310.8	326.6
62.5°	10468.8	8025.4	2128.8	483.0	402.6	338.7	296.9	277.3	276.6	288.0	301.3
65°	11432.3	8706.5	2259.9	536.8	419.1	318.4	273.5	255.1	253.8	263.3	277.9
67.5°	11905.2	8805.3	1716.7	603.9	453.9	299.4	250.7	233.6	232.3	242.4	255.1
70°	11555.1	8130.5	1059.7	610.9	452.0	277.3	227.3	212.7	210.2	220.9	230.4
72.5°	10259.9	7111.9	805.2	540.6	391.2	245.6	203.8	191.2	187.4	196.9	205.7
75°	8234.9	5646.5	645.0	436.1	308.3	207.0	180.4	168.4	164.0	172.8	180.4
77.5°	4797.0	3176.5	471.6	340.6	233.0	169.0	153.8	143.1	138.0	147.5	153.2
80°	1559.8	1058.4	296.3	244.3	170.3	132.3	124.7	117.1	112.0	118.4	120.3
82.5°	560.2	393.7	164.0	150.0	113.3	95.0	94.3	89.9	83.6	86.1	86.1
85°	248.1	179.8	97.5	80.4	67.7	50.6	59.5	56.3	50.0	48.7	46.8
87.5°	69.6	59.5	35.4	27.2	22.2	8.2	19.0	17.1	13.9	12.7	8.9
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)