

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: P596766

Luminaire Tested: **MSA-SA4B-827-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596766
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-827-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 14188 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

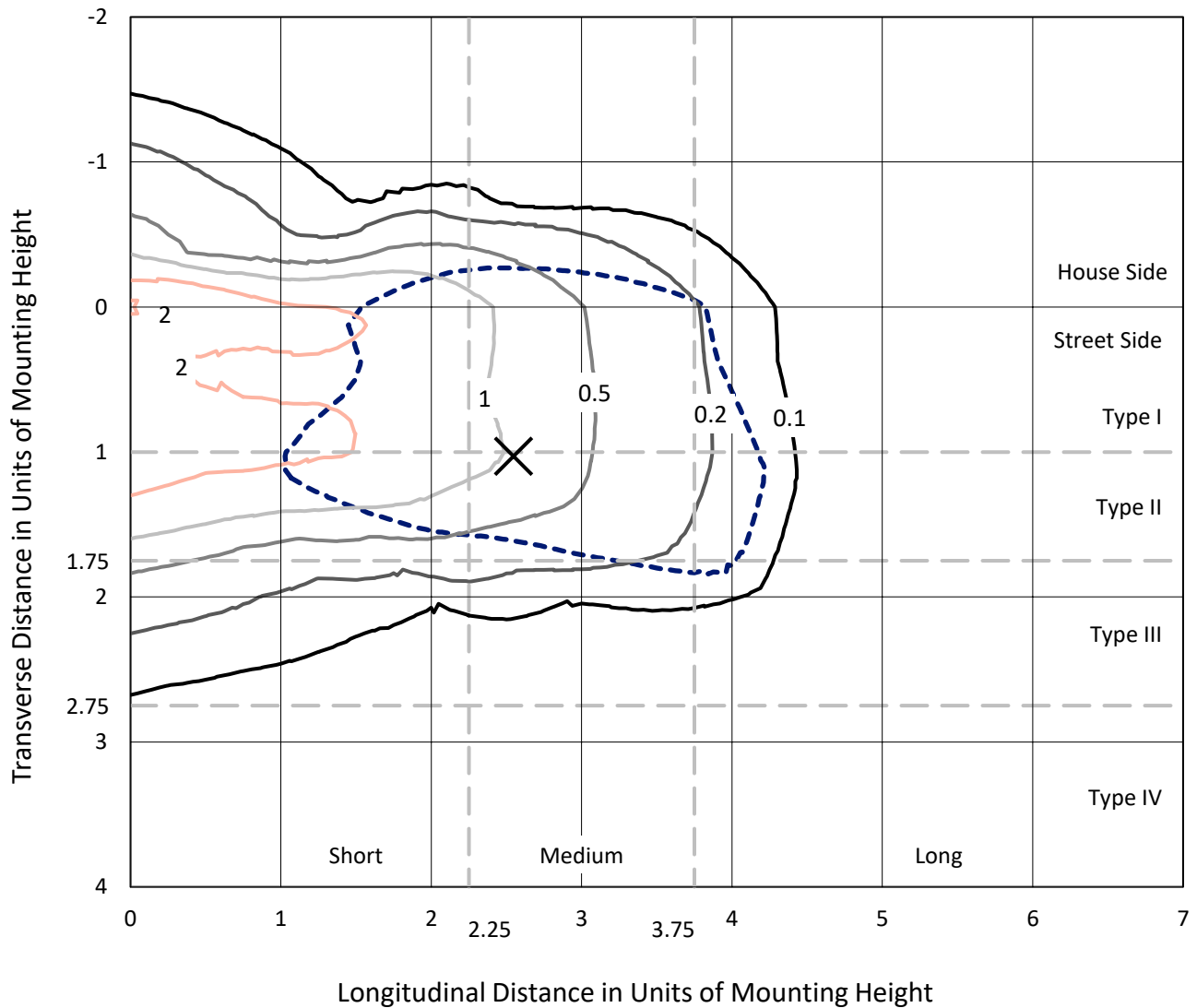
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

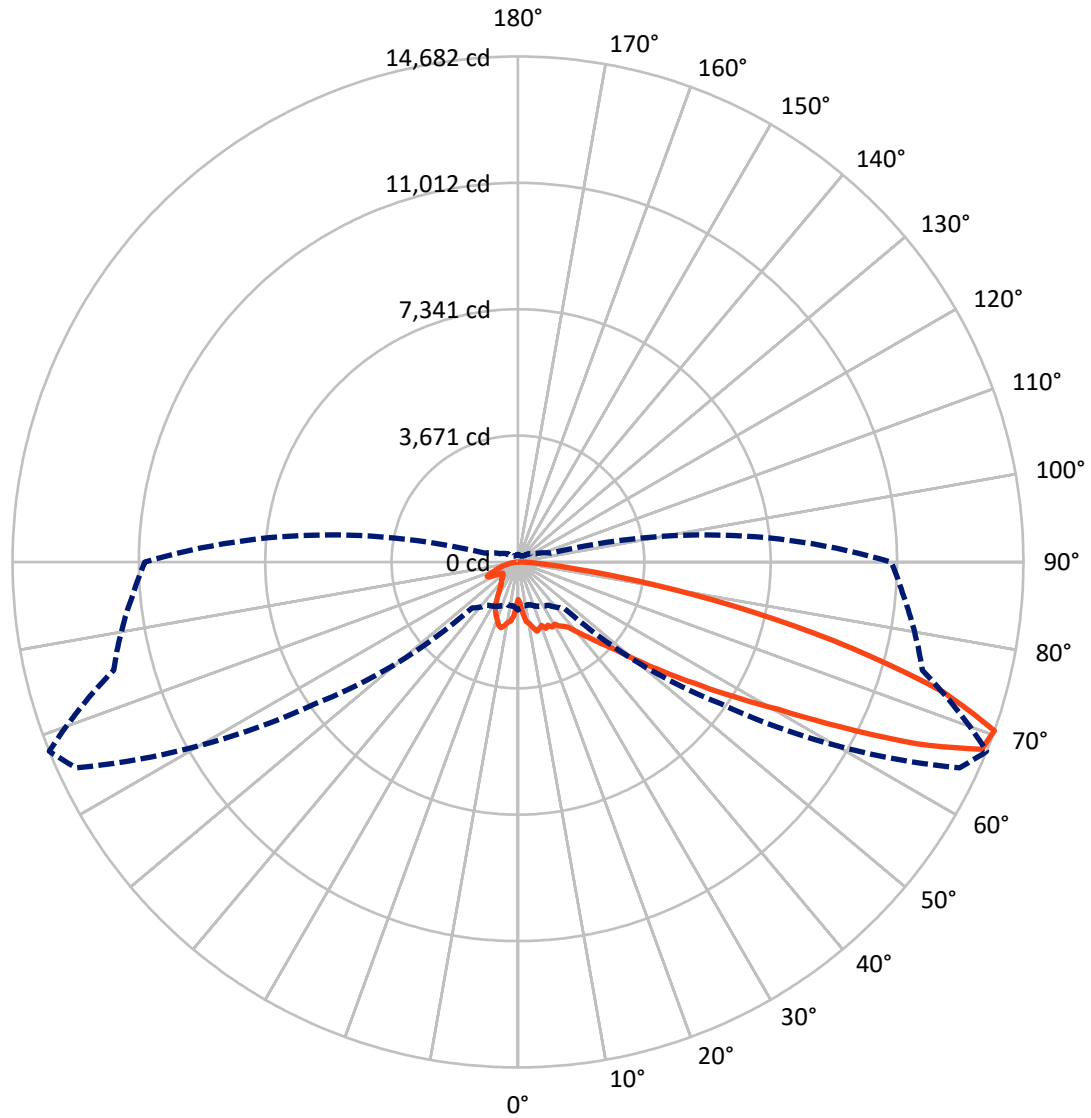
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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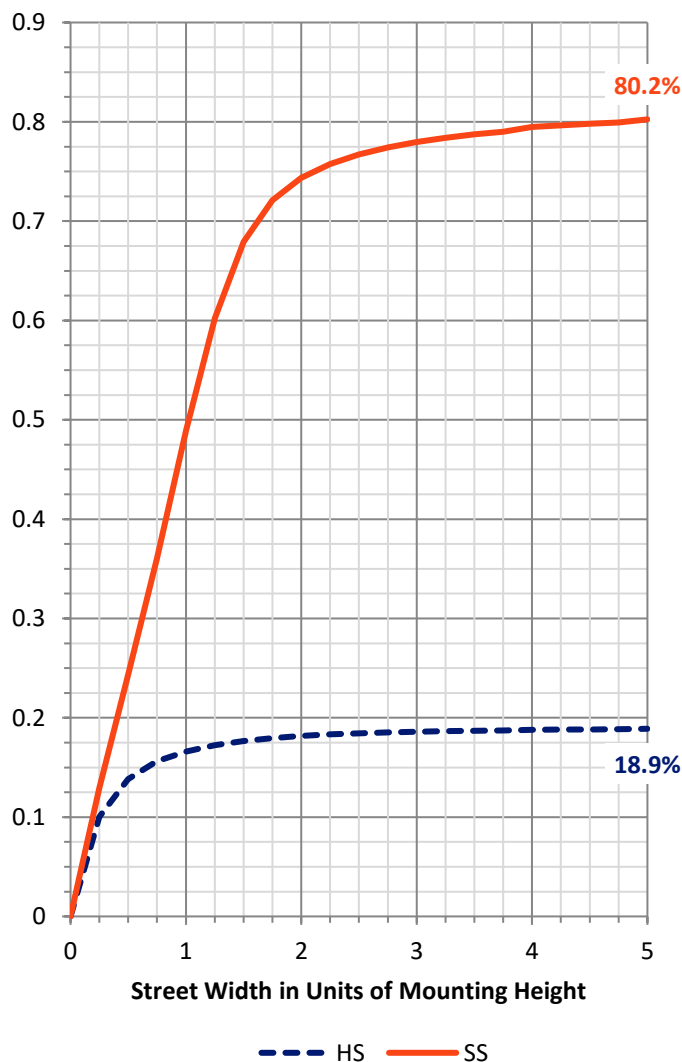
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2708.8	0.0	2708.8
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	11479.2	0.0	11479.2
	% Fixture	80.9	0.0	80.9
Total	Lumens	14188.0	0.0	14188.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.3	1.0
10°-20°	473.5	3.3
20°-30°	720.3	5.1
30°-40°	1100.3	7.8
40°-50°	1891.9	13.3
50°-60°	3131.4	22.1
60°-70°	3860.6	27.2
70°-80°	2480.0	17.5
80°-90°	384.7	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°	14188.0	100.0
0°-180°	14188.0	100.0

Coefficient of Utilization



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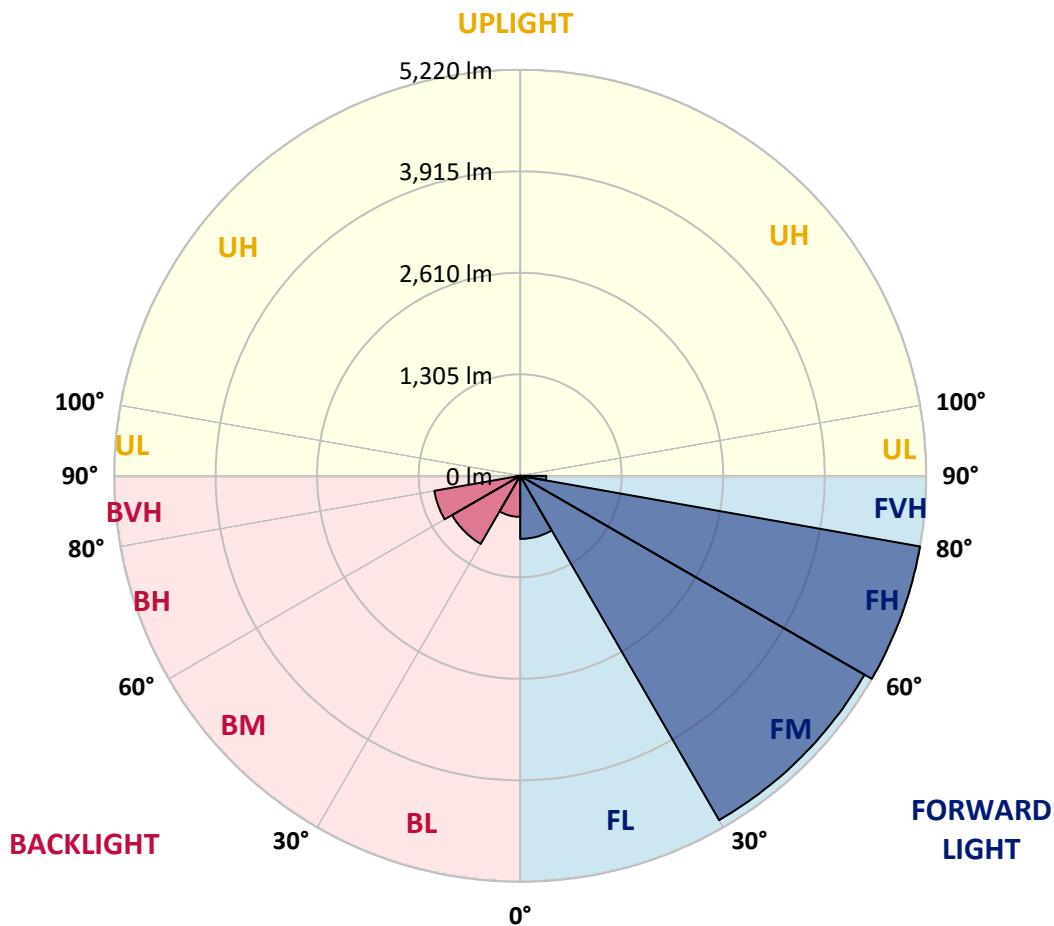
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	811.3	5.7			
FM (30°-60°)	5112.5	36.0			
FH (60°-80°)	5220.1	36.8			G3/7500
FVH (80°-90°)	335.3	2.4			G3/500
BL (0°-30°)	527.8	3.7	B2/1000		
BM (30°-60°)	1011.1	7.1	B2/2500		
BH (60°-80°)	1120.5	7.9	B3/2500		G3/2500
BVH (80°-90°)	49.4	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°	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8
2.5°	1250.0	1199.5	1148.4	1173.4	1213.1	1248.2	1241.0	1245.2	1197.1	1190.6	1317.1
5°	1472.6	1385.9	1384.2	1385.3	1388.9	1348.5	1447.1	1498.2	1509.4	1561.7	1685.8
7.5°	1549.8	1514.8	1479.2	1497.0	1451.8	1456.0	1577.1	1710.1	1741.6	1779.6	1949.5
10°	1533.8	1500.5	1511.2	1514.2	1522.5	1589.6	1667.4	1795.1	1821.8	1942.9	1986.9
12.5°	1536.2	1530.2	1580.1	1581.9	1671.0	1791.5	1822.4	1939.9	1950.6	2039.7	2223.2
15°	1617.5	1658.5	1630.6	1645.4	1662.6	1806.9	1851.5	2020.1	2084.2	2198.8	2336.6
17.5°	1776.1	1787.9	1704.2	1682.2	1738.7	1782.6	1884.1	1957.2	2024.3	2344.3	2534.3
20°	1812.9	1844.9	1745.2	1631.8	1751.1	1812.3	1882.9	1916.2	1968.5	2365.7	2635.3
22.5°	1970.8	1904.3	1783.8	1685.2	1724.4	1783.8	1834.8	1960.1	2097.3	2304.5	2736.2
25°	2060.5	2021.9	1914.4	1808.7	1775.5	1777.2	1875.8	1988.0	2035.6	2394.2	2756.4
27.5°	2277.2	2215.5	1973.8	1953.6	1828.3	1730.9	1882.4	2056.9	2140.1	2324.1	2855.0
30°	2548.6	2501.7	2184.6	2157.9	1966.7	1796.8	1965.5	2108.0	2096.1	2369.9	2923.3
32.5°	2768.3	2846.7	2526.6	2315.8	2179.8	2017.1	1939.4	2099.1	2217.3	2476.2	3039.1
35°	3081.8	3155.5	2793.2	2650.7	2355.6	2119.3	2121.7	2221.4	2294.4	2600.3	3168.5
37.5°	3624.6	3559.8	3268.3	3043.2	2854.4	2501.7	2396.0	2361.0	2419.7	2752.3	3422.1
40°	4015.9	3961.2	3618.0	3489.8	3122.2	2917.3	2627.6	2594.3	2698.2	2909.0	3629.3
42.5°	4479.6	4382.3	4062.8	3957.1	3572.9	3203.6	2911.4	2930.4	2980.9	3204.7	3909.6
45°	4951.7	4715.4	4534.3	4526.0	4269.4	3759.4	3366.9	3351.4	3353.2	3640.0	4224.3
47.5°	5326.4	5113.8	4906.6	4808.0	4678.6	4720.7	4028.3	3847.2	3792.6	4078.2	4696.4
50°	5580.0	5335.3	5100.8	5077.6	5423.2	5650.6	4649.5	4455.9	4489.7	4705.3	5325.8
52.5°	5585.3	5294.9	5050.3	5212.4	6026.5	6351.9	5719.5	5178.5	5286.6	5433.3	6147.0
55°	5197.0	4895.9	4736.8	5106.1	6262.2	7183.8	7223.0	6336.5	6211.8	6265.8	7128.6
57.5°	4378.1	4074.1	3981.4	4423.8	5815.1	7986.0	9038.8	7720.0	7354.2	7128.6	8134.5
60°	3295.6	3032.5	2974.9	3257.0	4821.1	7750.3	10509.1	9442.0	8696.8	8092.3	9143.4
62.5°	2471.4	2282.6	2195.9	2236.3	3336.0	6983.7	11474.6	11617.7	10562.5	9144.5	10129.1
65°	2008.2	1855.6	1778.4	1726.2	2074.7	5400.0	11300.0	13449.0	12741.8	10249.6	10896.3
67.5°	1677.5	1542.1	1506.5	1557.5	1640.1	3132.9	9934.3	14473.3	14521.4	11339.8	11344.6
70°	1392.5	1292.1	1279.0	1423.9	1532.6	1890.7	7175.5	14151.5	14682.3	12157.5	11239.5
72.5°	1076.0	1021.9	1020.2	1247.6	1522.5	1611.6	4273.0	12225.2	12938.3	11896.2	10211.0
75°	746.4	709.0	737.5	1025.5	1487.5	1634.7	2438.7	9522.2	10056.0	10123.1	8179.6
77.5°	513.6	482.2	513.0	741.7	1328.3	1673.9	1706.0	6885.1	6944.5	6788.3	4685.1
80°	357.5	335.5	359.2	524.9	1033.8	1656.7	1452.4	4334.8	3977.3	3029.6	1499.9
82.5°	221.5	215.0	241.1	374.1	728.0	1507.1	1376.4	2236.8	1707.8	836.1	535.6
85°	116.4	106.9	140.1	244.1	455.4	1182.9	1289.7	1020.7	659.1	296.9	215.0
87.5°	34.4	30.9	54.0	98.6	193.0	530.3	738.1	432.9	245.8	87.3	67.1
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°	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8	1087.8
2.5°	1326.0	1319.4	1231.5	1242.8	1261.8	1266.6	1266.0	1233.9	1200.1	1294.5	1291.5
5°	1688.8	1630.0	1586.0	1576.5	1522.5	1468.5	1487.5	1480.9	1472.6	1515.4	1520.7
7.5°	1950.0	1868.7	1817.6	1686.4	1561.7	1453.6	1488.1	1498.8	1477.4	1554.6	1577.7
10°	2018.9	1954.8	1899.6	1730.9	1662.1	1599.1	1505.9	1399.6	1385.3	1340.8	1346.1
12.5°	2196.5	2187.6	1999.3	1850.9	1761.2	1635.9	1434.6	1305.8	1195.3	1200.7	1168.6
15°	2336.6	2341.4	2115.1	1907.3	1666.8	1475.6	1238.7	1078.3	964.9	942.4	919.2
17.5°	2524.8	2515.3	2124.6	1839.6	1535.0	1254.7	964.3	805.2	786.2	799.3	779.1
20°	2606.8	2523.1	2064.1	1671.6	1328.9	953.1	728.6	644.3	681.1	733.3	734.5
22.5°	2680.4	2537.3	2032.6	1536.2	1054.6	693.0	584.9	569.5	612.8	683.5	689.4
25°	2677.5	2603.2	1976.2	1399.6	817.7	541.0	508.3	519.6	571.2	644.9	649.0
27.5°	2812.2	2552.8	1829.5	1220.3	615.8	463.2	471.5	492.3	516.6	586.7	600.3
30°	2811.1	2646.6	1755.9	1002.3	494.6	424.6	445.9	463.8	483.9	548.1	555.8
32.5°	2877.6	2585.4	1711.3	779.7	443.6	415.1	420.4	438.2	467.3	510.7	516.0
35°	2957.7	2654.9	1568.8	619.3	424.6	406.8	410.9	421.0	447.7	487.5	492.9
37.5°	3214.8	2667.9	1512.4	522.0	423.4	403.2	402.6	407.9	438.2	474.4	490.5
40°	3315.2	2787.3	1347.9	487.5	419.2	403.2	394.9	397.8	422.8	469.1	481.6
42.5°	3555.7	2827.1	1226.2	475.6	419.2	396.1	383.0	387.8	416.8	457.8	477.4
45°	3803.3	2883.5	1081.3	473.3	418.6	395.5	370.5	381.2	405.0	439.4	460.8
47.5°	4156.0	3086.6	936.4	466.1	413.9	398.4	367.6	367.0	387.8	417.4	437.6
50°	4731.4	3403.7	824.2	457.2	414.5	396.1	361.6	353.3	367.0	393.1	412.7
52.5°	5532.4	3944.0	780.3	452.5	409.7	386.6	351.5	338.5	346.2	367.0	386.0
55°	6462.3	4673.8	823.6	452.5	400.2	371.7	337.3	321.8	326.0	340.2	358.7
57.5°	7549.0	5580.5	1033.2	445.9	388.3	353.9	320.1	302.2	303.4	315.9	332.5
60°	8683.8	6593.6	1502.9	440.6	380.0	334.3	299.9	281.5	279.7	291.6	306.4
62.5°	9820.3	7528.2	1997.0	453.1	377.7	317.7	278.5	260.1	259.5	270.2	282.6
65°	10724.1	8167.1	2119.9	503.5	393.1	298.7	256.5	239.3	238.1	247.0	260.7
67.5°	11167.6	8259.8	1610.4	566.5	425.8	280.9	235.1	219.1	217.9	227.4	239.3
70°	10839.3	7626.8	994.0	573.0	424.0	260.1	213.2	199.5	197.1	207.2	216.1
72.5°	9624.3	6671.4	755.3	507.1	367.0	230.4	191.2	179.3	175.8	184.7	193.0
75°	7724.8	5296.7	605.1	409.1	289.2	194.2	169.2	158.0	153.8	162.1	169.2
77.5°	4499.8	2979.7	442.4	319.5	218.5	158.5	144.3	134.2	129.4	138.4	143.7
80°	1463.1	992.8	277.9	229.2	159.7	124.1	117.0	109.9	105.1	111.0	112.8
82.5°	525.5	369.3	153.8	140.7	106.3	89.1	88.5	84.3	78.4	80.8	80.8
85°	232.8	168.6	91.4	75.4	63.5	47.5	55.8	52.8	46.9	45.7	43.9
87.5°	65.3	55.8	33.3	25.5	20.8	7.7	17.8	16.0	13.1	11.9	8.3
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)