

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: P367792

Luminaire Tested: **MSA-SA3B-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367792
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-SA3B-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: 12213 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

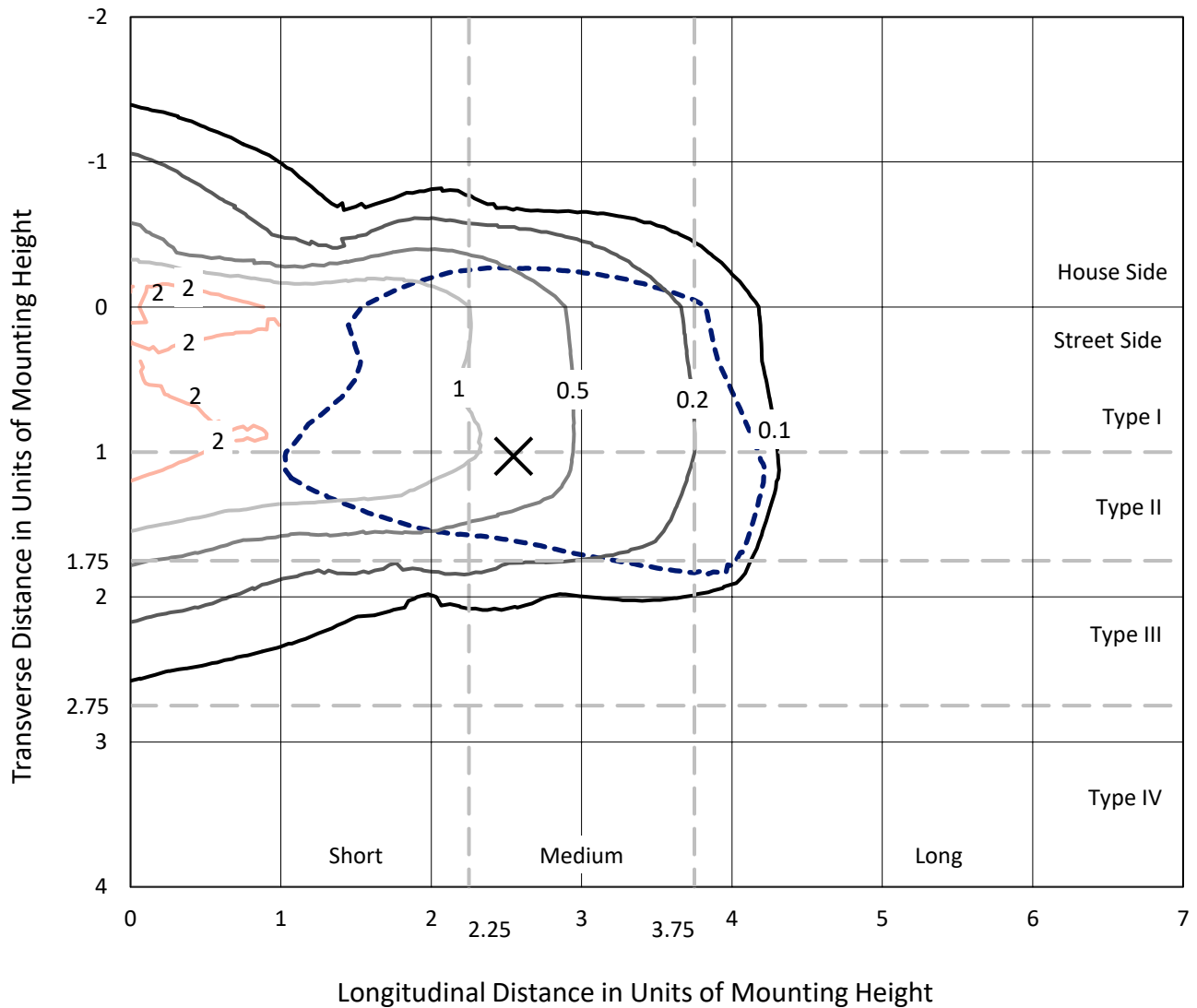
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

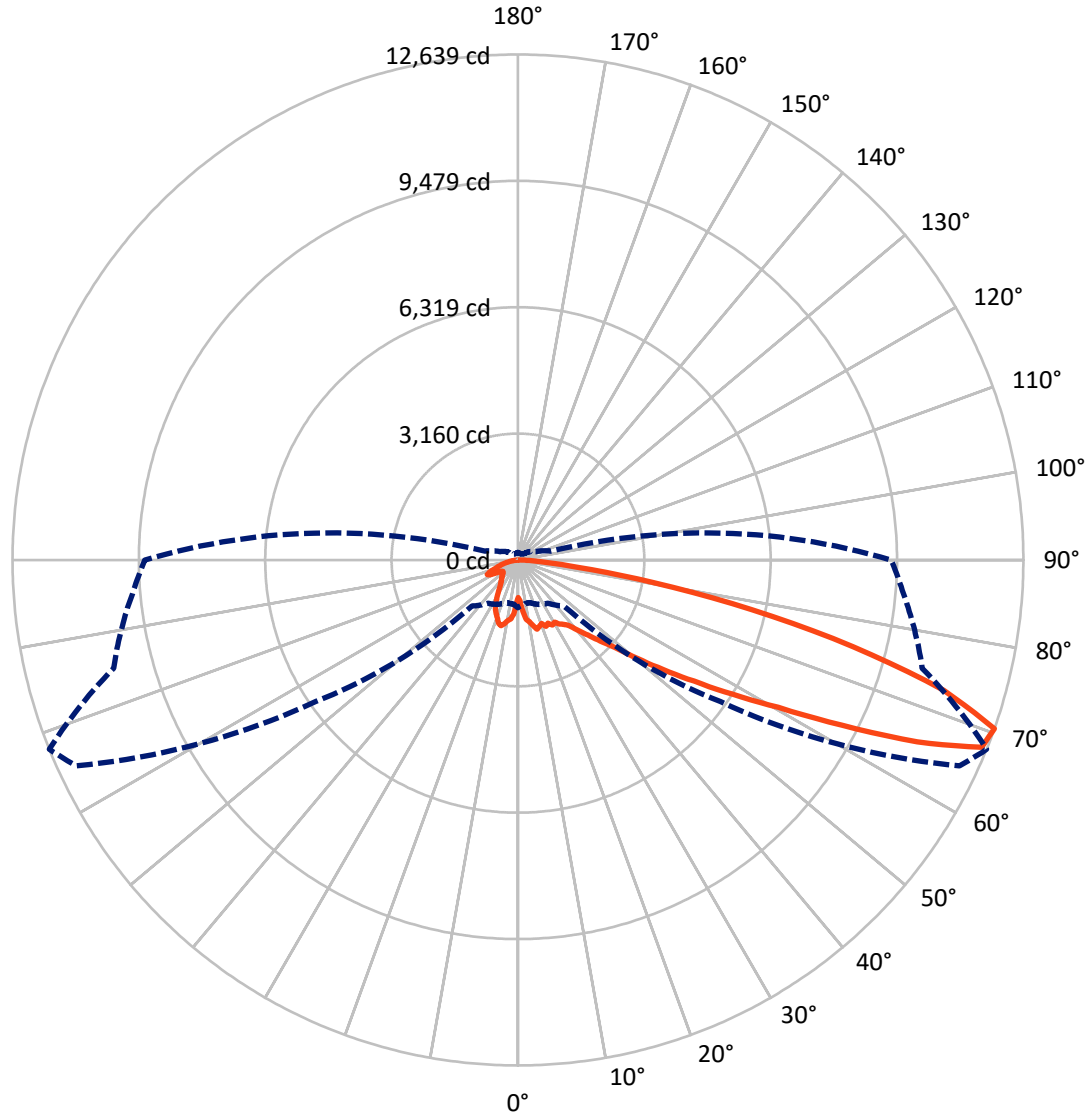
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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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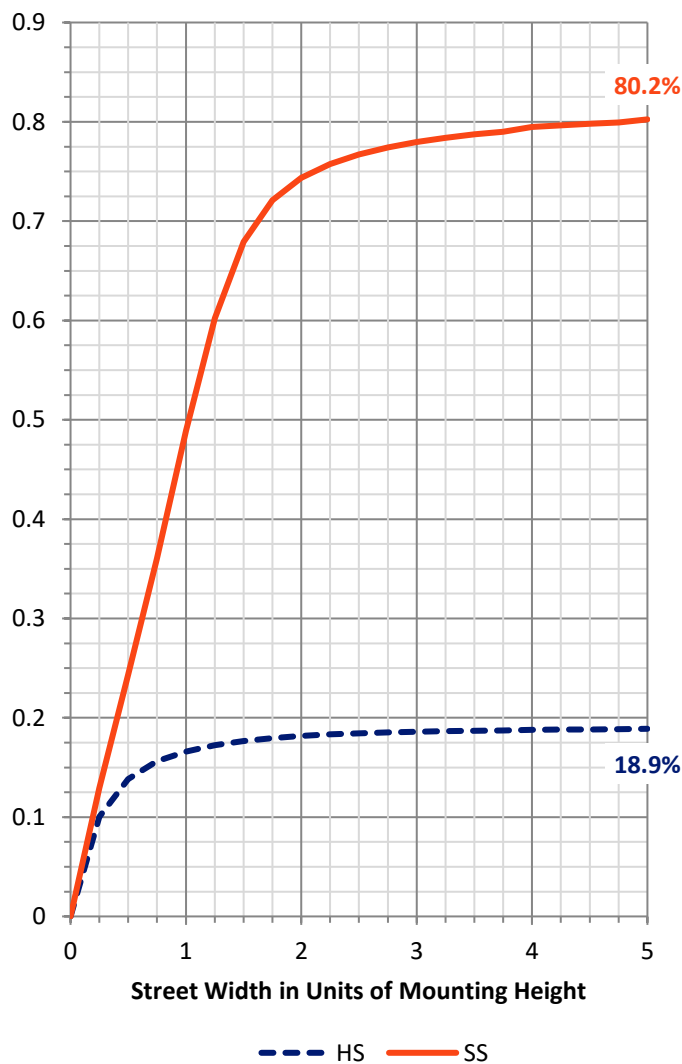
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2331.8	0.0	2331.8
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	9881.2	0.0	9881.2
	% Fixture	80.9	0.0	80.9
Total	Lumens	12213.0	0.0	12213.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	1.0
10°-20°	407.6	3.3
20°-30°	620.1	5.1
30°-40°	947.1	7.8
40°-50°	1628.5	13.3
50°-60°	2695.5	22.1
60°-70°	3323.2	27.2
70°-80°	2134.8	17.5
80°-90°	331.1	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°	12213.0	100.0
0°-180°	12213.0	100.0

Coefficient of Utilization



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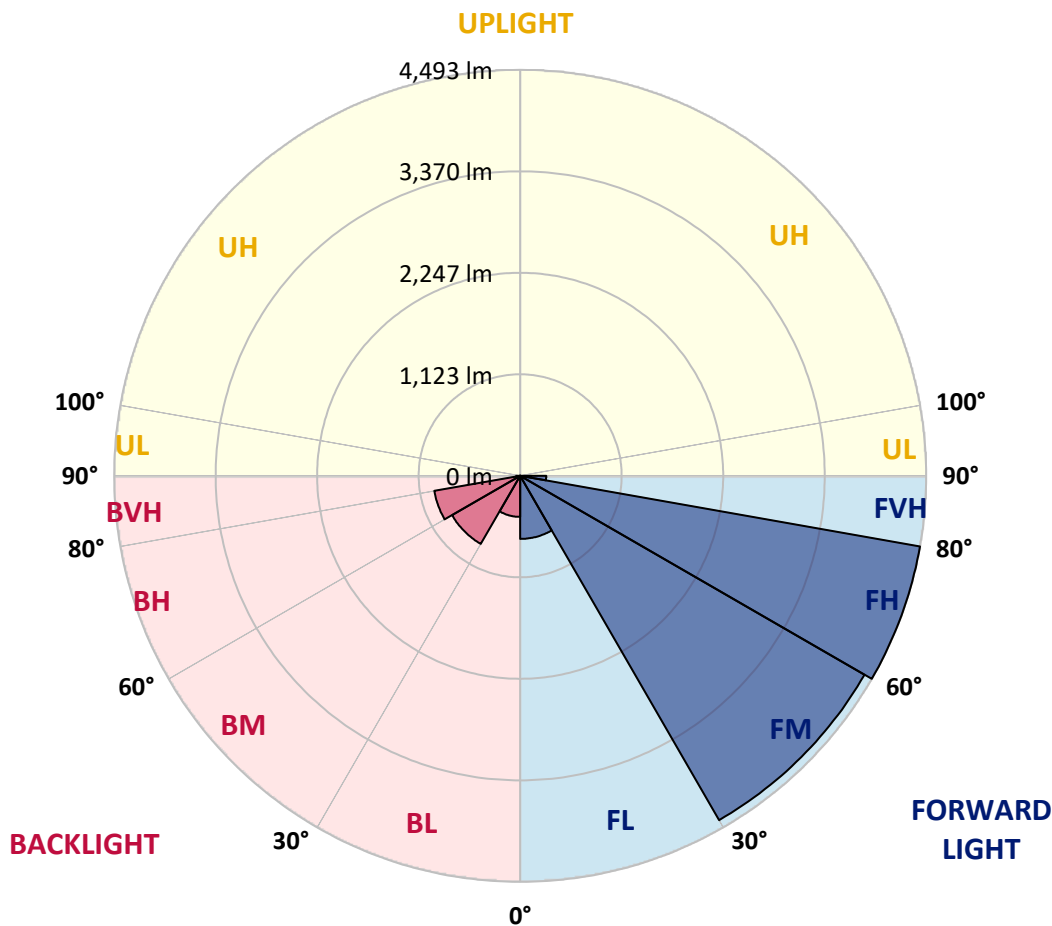
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	698.4	5.7			
FM (30°-60°)	4400.8	36.0			
FH (60°-80°)	4493.4	36.8			G2/5000
FVH (80°-90°)	288.6	2.4			G3/500
BL (0°-30°)	454.4	3.7	B1/500		
BM (30°-60°)	870.4	7.1	B1/1000		
BH (60°-80°)	964.5	7.9	B2/1000		G2/1000
BVH (80°-90°)	42.5	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4
2.5°	1076.0	1032.5	988.6	1010.0	1044.3	1074.4	1068.3	1071.9	1030.5	1024.8	1133.7
5°	1267.6	1193.0	1191.5	1192.5	1195.6	1160.8	1245.7	1289.6	1299.3	1344.3	1451.1
7.5°	1334.1	1303.9	1273.3	1288.6	1249.7	1253.3	1357.6	1472.1	1499.2	1531.9	1678.1
10°	1320.3	1291.7	1300.9	1303.4	1310.6	1368.3	1435.3	1545.2	1568.2	1672.5	1710.3
12.5°	1322.3	1317.2	1360.2	1361.7	1438.4	1542.1	1568.7	1669.9	1679.1	1755.8	1913.7
15°	1392.4	1427.6	1403.6	1416.4	1431.2	1555.4	1593.7	1738.9	1794.1	1892.8	2011.3
17.5°	1528.8	1539.1	1467.0	1448.1	1496.6	1534.5	1621.9	1684.7	1742.5	2018.0	2181.6
20°	1560.5	1588.1	1502.2	1404.6	1507.4	1560.0	1620.8	1649.5	1694.4	2036.4	2268.5
22.5°	1696.5	1639.2	1535.5	1450.6	1484.4	1535.5	1579.4	1687.3	1805.4	1983.7	2355.3
25°	1773.7	1740.4	1647.9	1556.9	1528.3	1529.9	1614.7	1711.3	1752.2	2060.9	2372.7
27.5°	1960.2	1907.1	1699.0	1681.7	1573.8	1490.0	1620.3	1770.6	1842.2	2000.6	2457.6
30°	2193.8	2153.4	1880.5	1857.5	1692.9	1546.7	1691.9	1814.6	1804.3	2040.0	2516.4
32.5°	2382.9	2450.4	2174.9	1993.5	1876.4	1736.4	1669.4	1806.9	1908.6	2131.5	2616.0
35°	2652.8	2716.2	2404.4	2281.7	2027.7	1824.3	1826.3	1912.2	1975.1	2238.3	2727.5
37.5°	3120.0	3064.3	2813.3	2619.6	2457.1	2153.4	2062.5	2032.3	2082.9	2369.1	2945.7
40°	3456.9	3409.8	3114.4	3004.0	2687.6	2511.2	2261.8	2233.2	2322.6	2504.1	3124.1
42.5°	3856.1	3772.2	3497.2	3406.3	3075.5	2757.6	2506.1	2522.5	2565.9	2758.6	3365.4
45°	4262.4	4059.0	3903.1	3895.9	3675.1	3236.0	2898.2	2884.9	2886.4	3133.3	3636.3
47.5°	4585.0	4402.0	4223.6	4138.7	4027.3	4063.6	3467.6	3311.7	3264.7	3510.5	4042.6
50°	4803.2	4592.6	4390.7	4370.8	4668.3	4864.0	4002.2	3835.6	3864.8	4050.3	4584.4
52.5°	4807.8	4557.9	4347.3	4486.8	5187.6	5467.7	4923.3	4457.7	4550.7	4677.0	5291.4
55°	4473.5	4214.4	4077.4	4395.3	5390.5	6183.8	6217.5	5454.4	5347.1	5393.6	6136.3
57.5°	3768.7	3507.0	3427.2	3808.0	5005.6	6874.4	7780.6	6645.4	6330.5	6136.3	7002.1
60°	2836.8	2610.4	2560.8	2803.6	4150.0	6671.4	9046.2	8127.7	7486.2	6965.9	7870.6
62.5°	2127.4	1964.8	1890.2	1925.0	2871.6	6011.6	9877.3	10000.5	9092.2	7871.6	8719.1
65°	1728.7	1597.3	1530.9	1485.9	1785.9	4648.3	9727.1	11576.9	10968.1	8822.8	9379.5
67.5°	1444.0	1327.4	1296.8	1340.7	1411.8	2696.8	8551.4	12458.6	12500.0	9761.3	9765.4
70°	1198.6	1112.2	1101.0	1225.7	1319.3	1627.5	6176.7	12181.6	12638.5	10465.1	9674.9
72.5°	926.2	879.7	878.1	1073.9	1310.6	1387.2	3678.2	10523.4	11137.3	10240.2	8789.6
75°	642.5	610.3	634.8	882.7	1280.4	1407.2	2099.3	8196.7	8656.2	8714.0	7041.0
77.5°	442.1	415.0	441.6	638.4	1143.4	1440.9	1468.5	5926.7	5977.8	5843.4	4032.9
80°	307.7	288.8	309.2	451.9	889.9	1426.1	1250.3	3731.3	3423.6	2607.9	1291.1
82.5°	190.7	185.0	207.5	322.0	626.7	1297.3	1184.8	1925.5	1470.0	719.7	461.1
85°	100.2	92.0	120.6	210.1	392.0	1018.2	1110.2	878.7	567.4	255.6	185.0
87.5°	29.6	26.6	46.5	84.8	166.1	456.5	635.4	372.6	211.6	75.1	57.8
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°	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4	936.4
2.5°	1141.4	1135.8	1060.1	1069.8	1086.2	1090.3	1089.8	1062.2	1033.0	1114.3	1111.7
5°	1453.7	1403.1	1365.3	1357.1	1310.6	1264.1	1280.4	1274.8	1267.6	1304.4	1309.0
7.5°	1678.6	1608.6	1564.6	1451.6	1344.3	1251.3	1280.9	1290.1	1271.7	1338.2	1358.1
10°	1737.9	1682.7	1635.1	1490.0	1430.7	1376.5	1296.3	1204.8	1192.5	1154.2	1158.8
12.5°	1890.7	1883.1	1721.0	1593.2	1516.1	1408.2	1234.9	1124.0	1028.9	1033.5	1005.9
15°	2011.3	2015.4	1820.7	1641.8	1434.8	1270.2	1066.2	928.2	830.6	811.2	791.2
17.5°	2173.4	2165.2	1828.9	1583.5	1321.3	1080.0	830.1	693.1	676.8	688.0	670.6
20°	2243.9	2171.8	1776.7	1438.9	1143.9	820.4	627.2	554.6	586.3	631.3	632.3
22.5°	2307.3	2184.1	1749.6	1322.3	907.8	596.5	503.5	490.2	527.5	588.3	593.4
25°	2304.7	2240.9	1701.1	1204.8	703.8	465.7	437.5	447.3	491.7	555.1	558.7
27.5°	2420.8	2197.4	1574.8	1050.4	530.1	398.7	405.8	423.7	444.7	505.0	516.8
30°	2419.8	2278.2	1511.4	862.8	425.8	365.5	383.9	399.2	416.6	471.8	478.4
32.5°	2477.0	2225.5	1473.1	671.1	381.8	357.3	361.9	377.2	402.3	439.6	444.2
35°	2546.0	2285.3	1350.4	533.1	365.5	350.1	353.7	362.4	385.4	419.6	424.2
37.5°	2767.3	2296.6	1301.9	449.3	364.4	347.1	346.6	351.2	377.2	408.4	422.2
40°	2853.7	2399.3	1160.3	419.6	360.9	347.1	339.9	342.5	363.9	403.8	414.5
42.5°	3060.7	2433.6	1055.5	409.4	360.9	340.9	329.7	333.8	358.8	394.1	411.0
45°	3273.9	2482.1	930.8	407.4	360.4	340.4	319.0	328.2	348.6	378.2	396.6
47.5°	3577.5	2656.9	806.1	401.2	356.3	343.0	316.4	315.9	333.8	359.3	376.7
50°	4072.8	2929.9	709.5	393.6	356.8	340.9	311.3	304.1	315.9	338.4	355.2
52.5°	4762.3	3395.0	671.6	389.5	352.7	332.8	302.6	291.4	298.0	315.9	332.2
55°	5562.8	4023.2	709.0	389.5	344.5	320.0	290.3	277.0	280.6	292.9	308.7
57.5°	6498.2	4803.7	889.4	383.9	334.3	304.6	275.5	260.2	261.2	271.9	286.2
60°	7475.0	5675.7	1293.7	379.3	327.1	287.8	258.1	242.3	240.7	251.0	263.7
62.5°	8453.3	6480.3	1719.0	390.0	325.1	273.5	239.7	223.9	223.4	232.6	243.3
65°	9231.2	7030.3	1824.8	433.4	338.4	257.1	220.8	206.0	205.0	212.6	224.4
67.5°	9613.1	7110.0	1386.2	487.6	366.5	241.8	202.4	188.6	187.6	195.8	206.0
70°	9330.4	6565.1	855.7	493.3	365.0	223.9	183.5	171.7	169.7	178.4	186.1
72.5°	8284.6	5742.7	650.2	436.5	315.9	198.3	164.6	154.4	151.3	159.0	166.1
75°	6649.5	4559.4	520.9	352.2	248.9	167.1	145.7	136.0	132.4	139.5	145.7
77.5°	3873.4	2564.9	380.8	275.0	188.1	136.5	124.2	115.5	111.4	119.1	123.7
80°	1259.5	854.6	239.2	197.3	137.5	106.8	100.7	94.6	90.5	95.6	97.1
82.5°	452.4	317.9	132.4	121.1	91.5	76.7	76.2	72.6	67.5	69.5	69.5
85°	200.4	145.2	78.7	64.9	54.7	40.9	48.0	45.5	40.4	39.4	37.8
87.5°	56.2	48.0	28.6	22.0	17.9	6.6	15.3	13.8	11.2	10.2	7.2
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)