

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: P367728

Luminaire Tested: **MSA-SA3A-750-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367728
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-750-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11510 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

Input Watts (W): 96
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: 24 FT

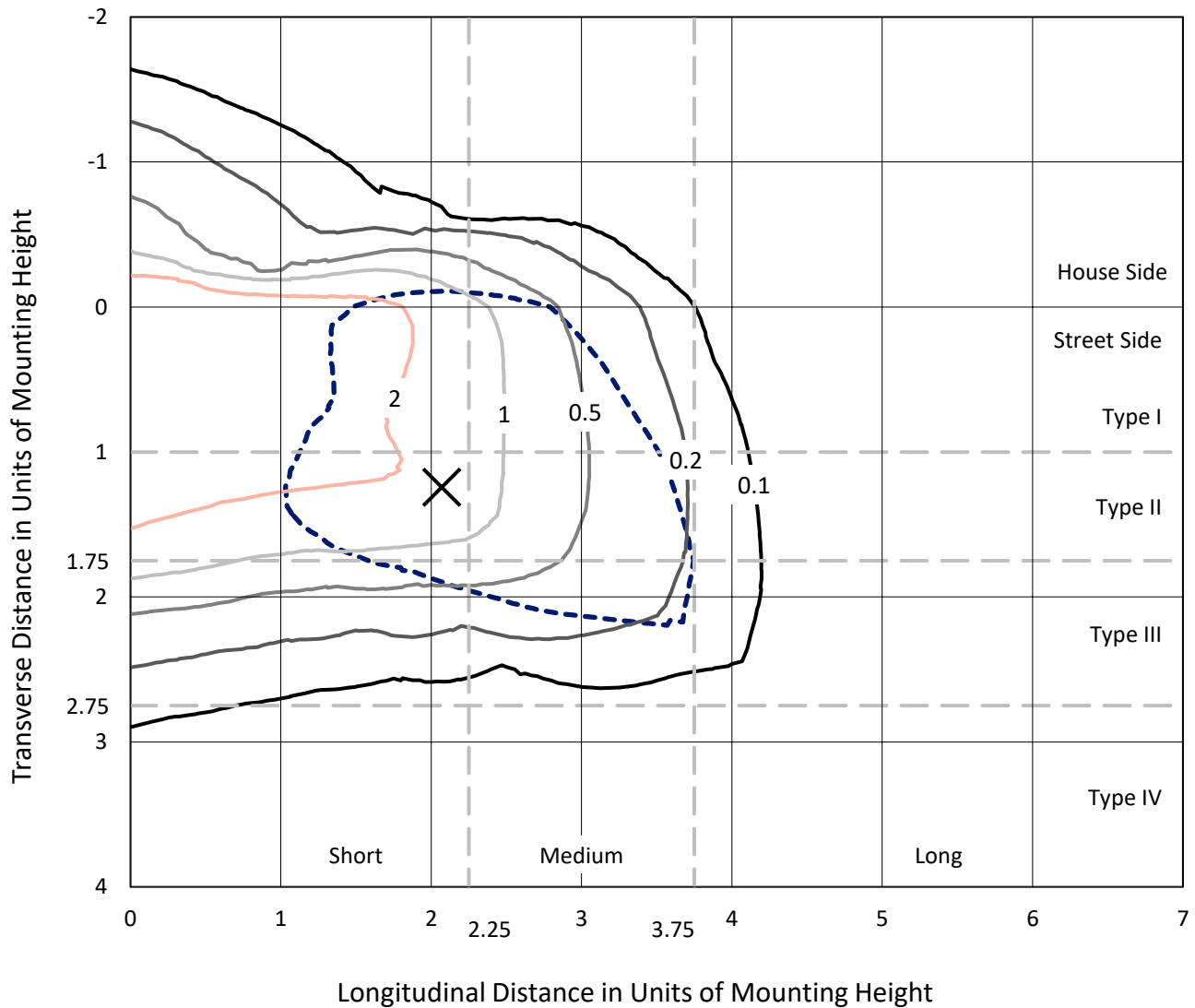


REPORT NUMBER: P367728

CATALOG NUMBER: MSA-SA3A-750-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

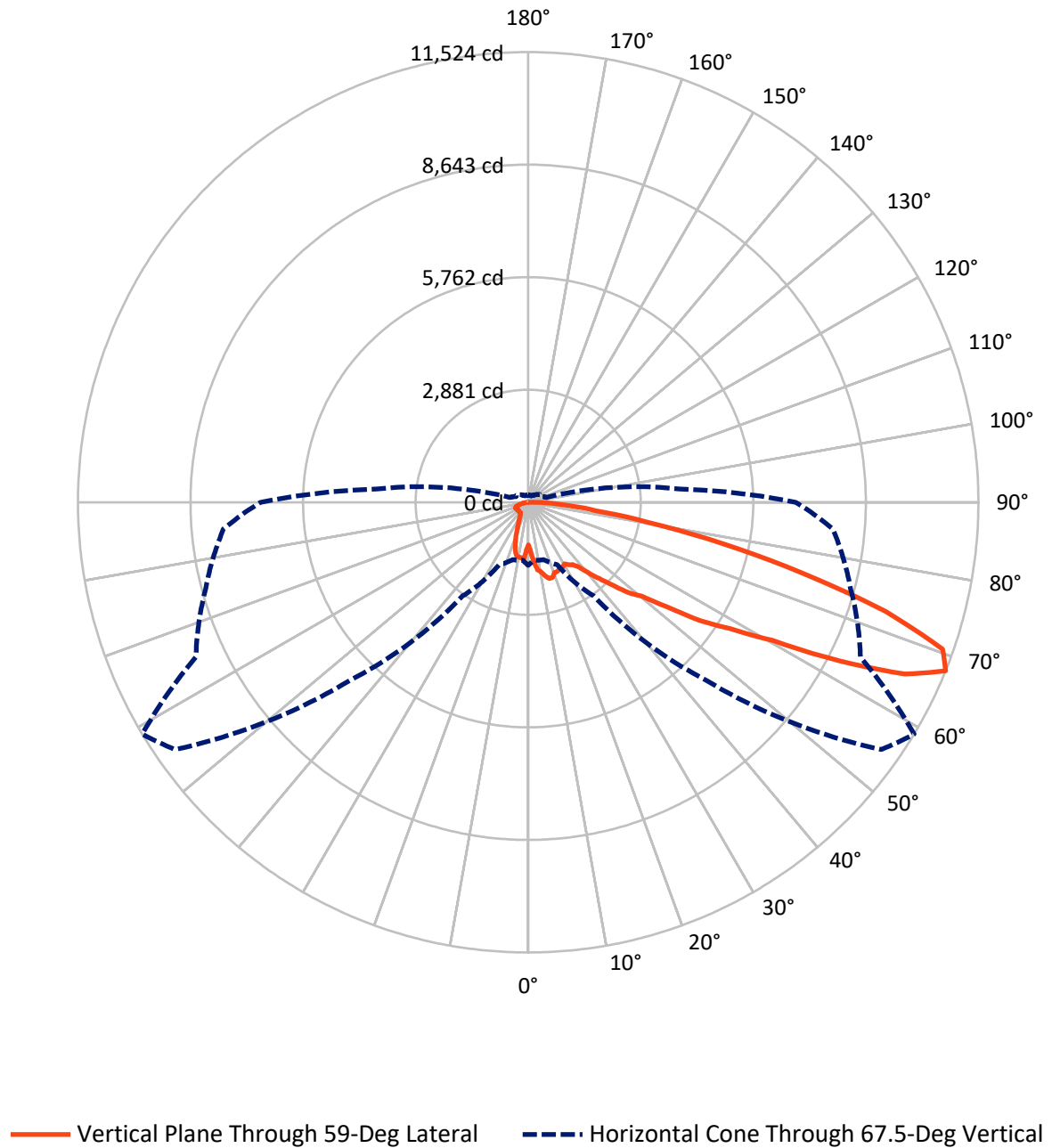


Based on 20 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Short - N/A

REPORT NUMBER: P367728

CATALOG NUMBER: MSA-SA3A-750-U-SL3

Luminous Intensity Polar Plot



REPORT NUMBER: P367728

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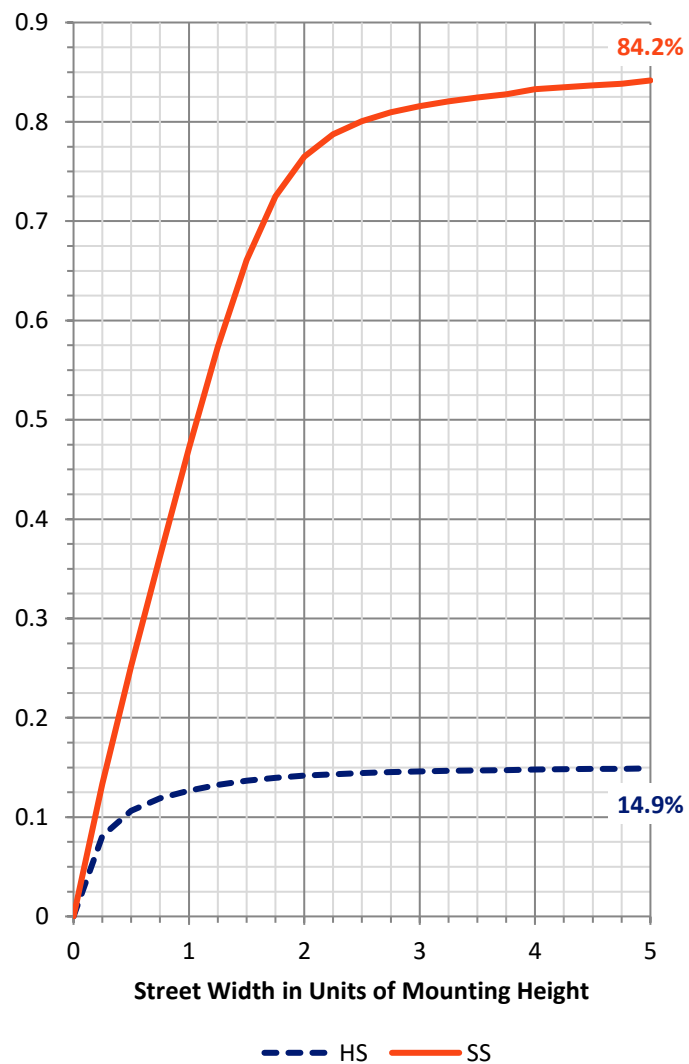
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1732.5	0.0	1732.5
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	9777.5	0.0	9777.5
	% Fixture	84.9	0.0	84.9
Total	Lumens	11510.0	0.0	11510.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	1.2
10°-20°	420.9	3.7
20°-30°	601.1	5.2
30°-40°	885.8	7.7
40°-50°	1496.6	13.0
50°-60°	2604.4	22.6
60°-70°	3318.8	28.8
70°-80°	1757.3	15.3
80°-90°	282.7	2.5
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°	11510.0	100.0
0°-180°	11510.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367728

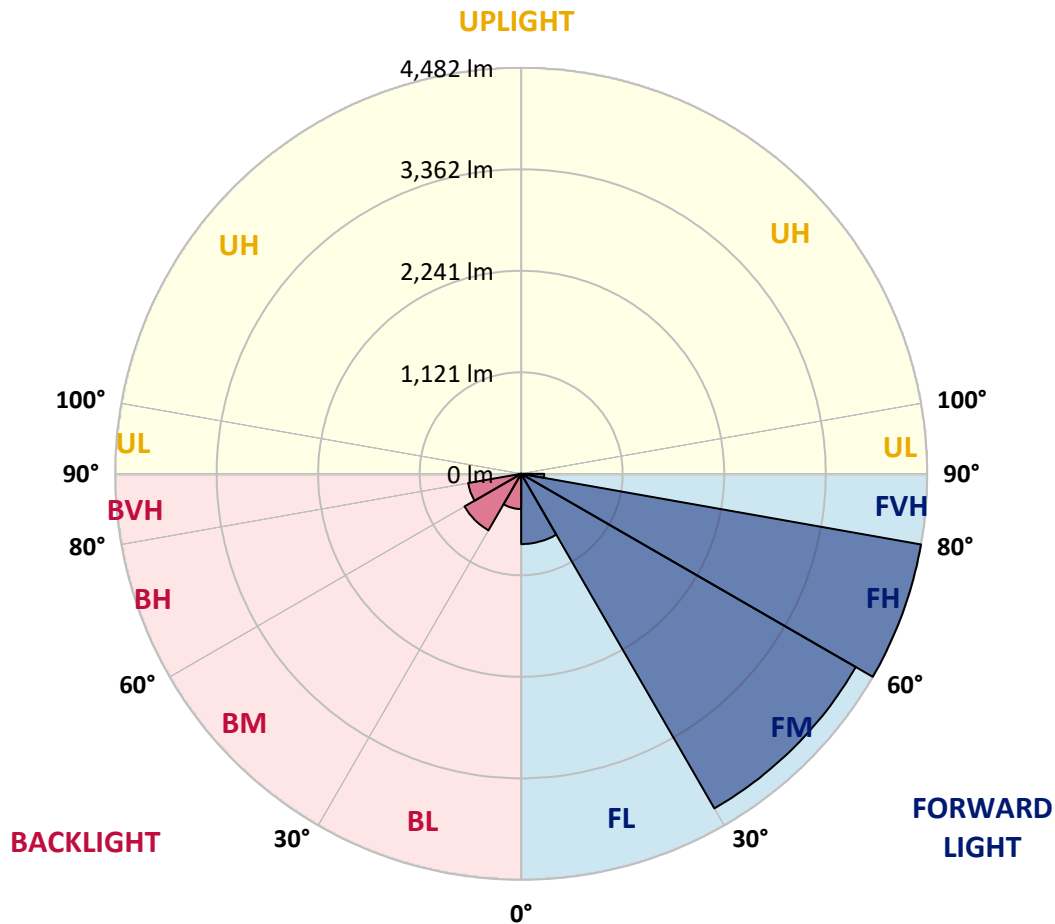
CATALOG NUMBER: MSA-SA3A-750-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	775.8	6.7			
FM	(30°-60°)	4265.4	37.1			
FH	(60°-80°)	4482.3	38.9			G2/5000
FVH	(80°-90°)	253.9	2.2			G3/500
BL	(0°-30°)	388.5	3.4	B1/500		
BM	(30°-60°)	721.4	6.3	B1/1000		
BH	(60°-80°)	593.8	5.2	B2/1000		G2/1000
BVH	(80°-90°)	28.8	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 Short



REPORT NUMBER: P367728

CATALOG NUMBER: MSA-SA3A-750-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1
2.5°	1359.9	1296.4	1229.1	1248.2	1286.7	1304.2	1285.2	1266.7	1242.8	1214.5	1311.1
5°	1649.1	1555.0	1541.3	1540.8	1527.2	1472.5	1542.8	1537.9	1566.2	1595.4	1670.5
7.5°	1731.5	1696.4	1658.4	1676.4	1607.6	1604.7	1714.0	1745.2	1799.8	1781.8	1882.7
10°	1689.1	1649.6	1669.6	1662.3	1668.6	1740.8	1807.6	1809.6	1868.1	1925.6	1860.8
12.5°	1614.5	1617.4	1696.9	1694.0	1796.4	1930.5	1950.5	1934.9	2030.5	1991.5	2047.1
15°	1667.6	1703.2	1683.2	1700.3	1740.8	1911.5	1967.1	2023.7	2114.4	2149.5	2093.9
17.5°	1752.5	1771.5	1681.8	1672.5	1755.9	1836.9	1974.9	2023.2	2037.3	2287.6	2209.0
20°	1716.4	1754.9	1667.1	1554.5	1693.0	1800.3	1936.4	1921.7	1990.5	2298.3	2232.9
22.5°	1818.8	1754.9	1643.2	1563.2	1612.0	1710.5	1826.1	1922.2	2003.7	2235.4	2267.6
25°	1838.3	1808.1	1703.7	1624.2	1607.6	1642.7	1807.6	1870.5	2008.1	2321.2	2249.0
27.5°	1957.3	1912.0	1699.3	1701.8	1619.3	1557.4	1749.1	1881.3	2057.8	2268.0	2294.4
30°	2105.1	2070.5	1803.7	1813.5	1699.3	1585.2	1789.1	1829.1	2086.6	2351.0	2351.5
32.5°	2215.9	2276.8	2009.0	1876.4	1835.9	1750.5	1727.6	1907.6	2052.9	2501.2	2449.0
35°	2415.3	2462.7	2167.1	2060.8	1923.7	1827.6	1894.4	1959.3	2192.9	2698.7	2593.9
37.5°	2784.6	2729.9	2460.7	2293.4	2242.2	2103.7	2140.7	2095.4	2345.1	2920.7	2877.7
40°	2998.2	2950.9	2667.5	2574.8	2371.9	2389.5	2343.2	2376.3	2548.5	3156.7	3143.1
42.5°	3208.9	3145.5	2906.0	2841.6	2639.2	2553.4	2561.7	2669.0	2862.1	3538.2	3492.8
45°	3417.2	3254.8	3149.9	3167.0	3069.4	2893.3	2905.5	3006.5	3204.5	3974.2	3869.8
47.5°	3576.7	3442.6	3360.6	3339.6	3291.3	3526.9	3421.6	3462.5	3549.9	4362.5	4322.9
50°	3878.6	3722.0	3615.2	3585.0	3748.9	4076.6	3862.0	3773.7	3959.6	4864.3	4843.9
52.5°	4362.0	4166.9	3988.8	3986.9	4223.9	4436.6	4587.8	4435.6	4503.9	5378.4	5437.0
55°	4783.9	4558.0	4398.1	4486.3	4823.9	4954.1	5467.7	5348.7	5291.1	5897.4	6064.7
57.5°	4941.4	4677.5	4573.2	4703.4	5200.9	5870.1	6413.0	6099.8	6043.7	6484.7	6835.4
60°	4595.6	4316.6	4322.9	4568.3	5430.1	6542.7	7446.5	7180.7	6851.9	7215.8	7558.2
62.5°	3610.3	3358.2	3522.5	3895.7	5238.0	7196.3	8831.7	8943.9	7775.2	7822.1	7959.1
65°	2453.9	2279.3	2427.5	2792.9	4248.3	7552.8	10151.1	10600.8	8616.1	8219.1	8132.3
67.5°	1614.9	1491.5	1520.3	1763.2	2924.6	6438.8	11033.4	11523.6	9384.8	8544.9	7827.0
70°	1250.6	1151.1	1138.4	1265.7	1734.4	4473.2	10510.6	11255.8	9853.1	8239.6	6822.2
72.5°	981.4	905.8	912.6	1035.0	1343.3	2481.7	8133.3	9571.6	9147.8	7106.1	5241.4
75°	765.3	703.3	738.0	878.0	1242.3	1542.3	5611.6	7264.6	7072.4	5261.9	2989.4
77.5°	555.5	515.6	564.8	747.7	1167.7	1323.3	3493.3	5068.2	4530.7	2701.7	1025.7
80°	364.4	341.9	382.4	609.7	1058.9	1273.5	2158.8	3105.5	2238.8	758.9	388.3
82.5°	214.6	204.9	238.5	412.6	851.1	1193.5	1439.8	1725.7	916.0	320.9	206.3
85°	112.7	105.4	141.4	237.0	586.8	1089.6	1133.5	1033.1	442.4	139.5	98.5
87.5°	37.6	36.6	60.0	91.7	221.9	578.5	604.8	490.7	182.4	40.5	21.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P367728

CATALOG NUMBER: MSA-SA3A-750-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1
2.5°	1324.2	1304.7	1192.6	1208.2	1222.8	1215.5	1211.1	1160.4	1155.5	1227.7	1221.8
5°	1668.6	1587.6	1492.0	1487.6	1424.7	1360.3	1373.0	1352.5	1358.4	1388.1	1391.1
7.5°	1850.5	1749.6	1658.4	1510.1	1384.2	1282.3	1298.4	1293.5	1280.3	1347.7	1365.7
10°	1847.1	1757.4	1654.5	1475.0	1390.1	1307.2	1207.7	1113.5	1085.7	1052.6	1055.5
12.5°	1969.1	1889.5	1665.2	1482.3	1367.2	1224.3	1037.9	935.0	836.5	834.5	809.7
15°	2007.1	1948.6	1688.1	1440.3	1206.7	1001.8	809.2	697.5	626.3	612.1	591.2
17.5°	2103.2	2011.5	1618.4	1304.7	1020.4	783.3	608.2	530.2	524.3	534.1	523.4
20°	2109.5	1960.8	1492.5	1104.3	819.9	593.6	496.0	457.0	478.0	501.9	500.9
22.5°	2104.2	1896.9	1383.8	933.6	616.0	477.0	434.6	425.8	445.3	480.9	485.3
25°	2049.5	1875.9	1247.7	766.7	499.9	408.7	397.0	402.4	426.8	468.7	468.7
27.5°	2106.6	1790.5	1077.0	623.8	420.4	363.9	372.2	385.8	403.9	451.7	460.4
30°	2088.1	1818.8	939.4	502.4	370.7	332.6	351.2	364.8	385.3	435.1	439.5
32.5°	2137.8	1743.2	823.8	422.4	338.0	320.5	324.8	343.4	370.2	409.2	417.0
35°	2213.9	1771.0	691.1	380.0	321.9	306.3	314.6	329.2	356.1	394.1	400.4
37.5°	2456.8	1769.6	599.4	356.5	319.0	303.4	307.3	317.5	348.7	383.4	398.0
40°	2612.9	1871.0	516.0	351.2	315.6	301.9	298.5	309.7	334.6	375.6	385.8
42.5°	2906.0	1933.0	479.9	349.2	315.1	293.6	290.2	303.4	327.8	365.8	381.4
45°	3215.7	2021.2	451.2	348.3	313.6	292.2	281.9	298.5	319.0	355.6	373.6
47.5°	3580.1	2208.1	435.1	344.8	310.7	294.1	279.0	287.3	310.2	346.8	364.8
50°	4057.1	2455.3	438.5	340.0	315.1	294.6	274.6	278.5	299.5	335.1	353.6
52.5°	4637.1	2838.2	460.4	341.9	318.0	292.2	272.7	270.7	288.7	320.0	338.5
55°	5336.0	3381.6	526.3	351.2	318.0	291.7	269.7	260.9	274.6	300.0	318.0
57.5°	6179.3	4010.8	655.1	355.6	315.6	288.7	263.4	247.8	256.1	277.0	294.1
60°	6903.6	4518.5	787.7	358.5	320.5	281.9	250.7	231.2	236.6	252.7	267.8
62.5°	7272.9	4661.0	827.7	356.1	333.6	277.5	235.6	213.6	214.1	227.8	241.4
65°	7342.1	4471.2	667.2	353.6	350.7	277.0	224.9	198.5	195.1	204.9	216.6
67.5°	6848.5	3881.0	481.4	348.3	352.6	274.1	217.5	186.3	177.5	184.4	194.1
70°	5815.0	3125.5	404.3	337.5	329.2	259.5	204.9	173.6	161.9	166.8	174.1
72.5°	4335.1	2312.4	352.6	314.6	286.8	221.9	185.3	159.5	147.3	150.7	156.1
75°	2408.5	1233.5	295.1	273.6	234.1	179.5	158.0	141.4	130.7	132.2	138.0
77.5°	799.9	455.1	216.6	217.0	177.1	138.5	130.2	121.0	112.7	113.2	118.0
80°	362.4	251.7	155.1	156.1	123.4	100.5	100.0	97.1	91.7	90.2	93.6
82.5°	210.2	152.7	106.3	101.5	79.5	65.4	72.7	71.2	69.7	64.4	65.4
85°	103.4	81.9	55.6	52.7	43.9	32.7	39.0	40.5	39.0	33.2	32.7
87.5°	25.4	26.8	13.7	12.7	7.3	3.4	5.9	5.9	7.3	4.9	2.4
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)