

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: P367594

Luminaire Tested: **MSA-SA2D-750-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367594
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-SA2D-750-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 13399 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

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: 24 FT



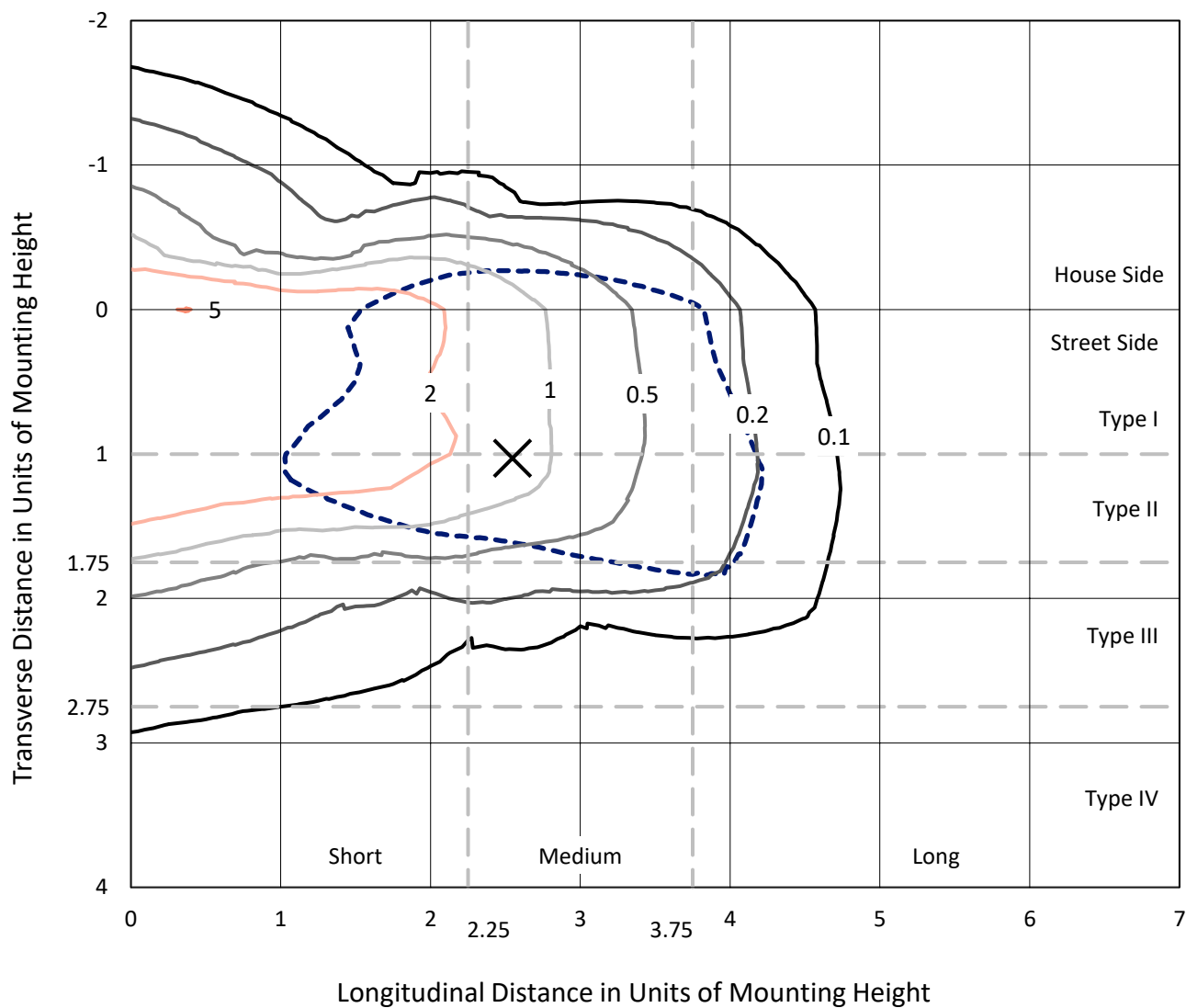
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

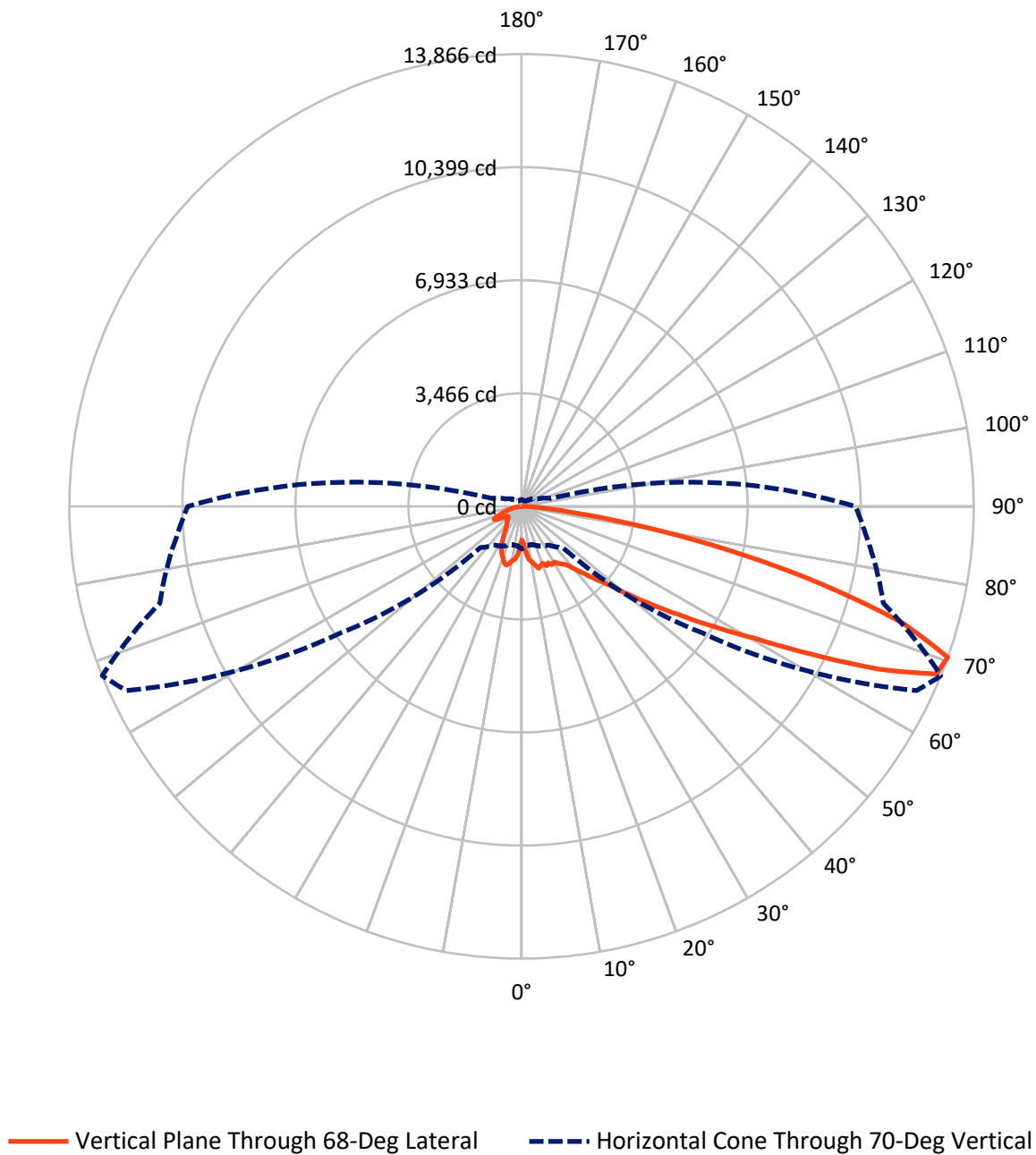


Based on 20 foot mounting height. Maximum calculated value = 5.1 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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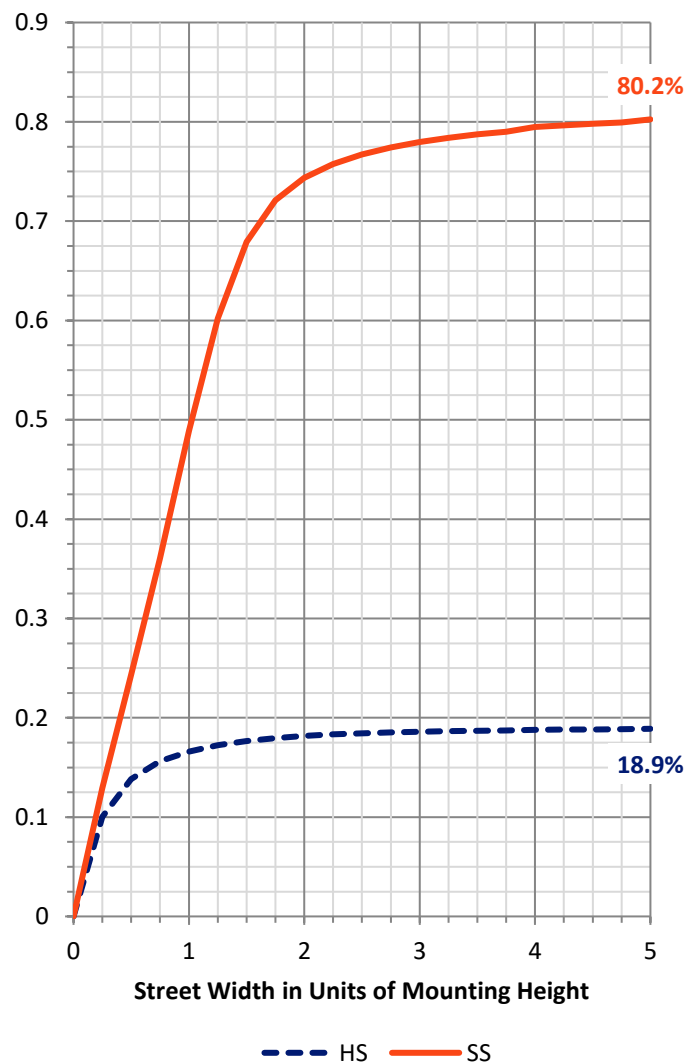
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2558.2	0.0	2558.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	10840.8	0.0	10840.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	13399.0	0.0	13399.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.2	1.0
10°-20°	447.2	3.3
20°-30°	680.3	5.1
30°-40°	1039.1	7.8
40°-50°	1786.7	13.3
50°-60°	2957.3	22.1
60°-70°	3645.9	27.2
70°-80°	2342.1	17.5
80°-90°	363.3	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°	13399.0	100.0
0°-180°	13399.0	100.0

Coefficient of Utilization



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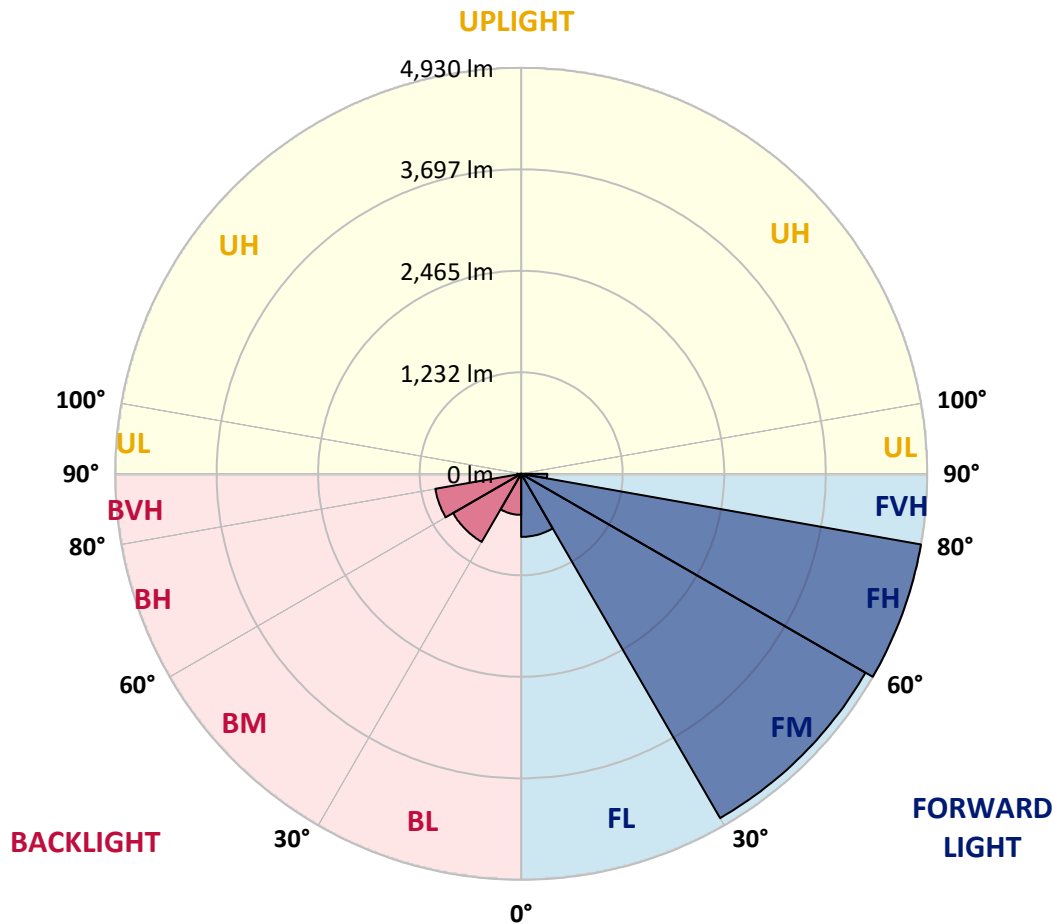
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	766.2	5.7			
FM	(30°-60°)	4828.2	36.0			
FH	(60°-80°)	4929.8	36.8			G2/5000
FVH	(80°-90°)	316.7	2.4			G3/500
BL	(0°-30°)	498.5	3.7	B1/500		
BM	(30°-60°)	954.9	7.1	B1/1000		
BH	(60°-80°)	1058.2	7.9	B3/2500		G3/2500
BVH	(80°-90°)	46.6	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°	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3
2.5°	1180.4	1132.8	1084.5	1108.1	1145.7	1178.8	1172.0	1176.0	1130.5	1124.4	1243.8
5°	1390.7	1308.9	1307.2	1308.3	1311.7	1273.5	1366.6	1414.8	1425.5	1474.9	1592.1
7.5°	1463.6	1430.5	1396.9	1413.7	1371.1	1375.0	1489.4	1615.0	1644.8	1680.7	1841.0
10°	1448.5	1417.1	1427.2	1430.0	1437.8	1501.2	1574.7	1695.2	1720.5	1834.9	1876.4
12.5°	1450.7	1445.1	1492.2	1493.9	1578.0	1691.9	1721.0	1832.1	1842.2	1926.3	2099.6
15°	1527.6	1566.3	1539.9	1553.9	1570.2	1706.5	1748.5	1907.8	1968.3	2076.6	2206.7
17.5°	1677.3	1688.5	1609.4	1588.7	1642.0	1683.5	1779.4	1848.3	1911.7	2214.0	2393.4
20°	1712.1	1742.3	1648.1	1541.0	1653.7	1711.5	1778.2	1809.6	1859.0	2234.1	2488.7
22.5°	1861.2	1798.4	1684.6	1591.5	1628.5	1684.6	1732.8	1851.1	1980.7	2176.4	2584.1
25°	1945.9	1909.5	1808.0	1708.1	1676.7	1678.4	1771.5	1877.5	1922.4	2261.1	2603.1
27.5°	2150.6	2092.3	1864.0	1845.0	1726.6	1634.7	1777.7	1942.5	2021.1	2194.9	2696.2
30°	2406.9	2362.6	2063.1	2037.9	1857.3	1696.9	1856.2	1990.8	1979.6	2238.1	2760.7
32.5°	2614.4	2688.4	2386.1	2187.0	2058.6	1905.0	1831.5	1982.4	2094.0	2338.5	2870.1
35°	2910.4	2980.0	2637.9	2503.3	2224.6	2001.4	2003.7	2097.9	2166.9	2455.7	2992.3
37.5°	3423.0	3361.9	3086.5	2874.0	2695.7	2362.6	2262.7	2229.7	2285.2	2599.2	3231.8
40°	3792.6	3741.0	3416.8	3295.7	2948.6	2755.1	2481.5	2450.0	2548.2	2747.3	3427.5
42.5°	4230.5	4138.6	3836.9	3737.0	3374.2	3025.4	2749.5	2767.4	2815.1	3026.5	3692.2
45°	4676.3	4453.2	4282.1	4274.3	4032.0	3550.3	3179.6	3165.0	3166.7	3437.6	3989.4
47.5°	5030.2	4829.4	4633.7	4540.6	4418.4	4458.2	3804.3	3633.3	3581.7	3851.4	4435.2
50°	5269.6	5038.6	4817.1	4795.2	5121.6	5336.4	4390.9	4208.1	4240.1	4443.6	5029.6
52.5°	5274.7	5000.5	4769.4	4922.5	5691.4	5998.7	5401.4	4890.6	4992.6	5131.1	5805.2
55°	4907.9	4623.6	4473.3	4822.1	5914.0	6784.3	6821.3	5984.1	5866.3	5917.3	6732.2
57.5°	4134.6	3847.5	3760.0	4177.8	5491.7	7541.9	8536.2	7290.7	6945.3	6732.2	7682.1
60°	3112.3	2863.9	2809.5	3075.9	4553.0	7319.3	9924.7	8917.0	8213.2	7642.3	8634.9
62.5°	2334.0	2155.6	2073.8	2111.9	3150.5	6595.3	10836.5	10971.7	9975.2	8636.0	9565.8
65°	1896.6	1752.4	1679.5	1630.2	1959.4	5099.7	10671.6	12701.1	12033.2	9679.6	10290.3
67.5°	1584.2	1456.3	1422.7	1470.9	1548.9	2958.7	9381.8	13668.4	13713.9	10709.2	10713.7
70°	1315.0	1220.3	1207.9	1344.8	1447.4	1785.5	6776.5	13364.5	13865.8	11481.4	10614.4
72.5°	1016.1	965.1	963.4	1178.2	1437.8	1522.0	4035.4	11545.3	12218.8	11234.7	9643.2
75°	704.9	669.6	696.5	968.5	1404.8	1543.8	2303.1	8992.7	9496.8	9560.2	7724.7
77.5°	485.1	455.4	484.5	700.4	1254.5	1580.8	1611.1	6502.2	6558.3	6410.8	4424.6
80°	337.6	316.8	339.3	495.7	976.3	1564.6	1371.7	4093.7	3756.1	2861.1	1416.5
82.5°	209.2	203.0	227.7	353.3	687.5	1423.3	1299.9	2112.5	1612.8	789.6	505.8
85°	109.9	100.9	132.3	230.5	430.1	1117.1	1218.0	964.0	622.5	280.4	203.0
87.5°	32.5	29.2	51.0	93.1	182.3	500.8	697.0	408.8	232.2	82.4	63.4
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°	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3
2.5°	1252.2	1246.1	1163.1	1173.7	1191.7	1196.1	1195.6	1165.3	1133.3	1222.5	1219.7
5°	1594.9	1539.3	1497.8	1488.9	1437.8	1386.8	1404.8	1398.6	1390.7	1431.1	1436.2
7.5°	1841.6	1764.8	1716.5	1592.6	1474.9	1372.8	1405.3	1415.4	1395.2	1468.1	1490.0
10°	1906.7	1846.1	1793.9	1634.7	1569.6	1510.2	1422.1	1321.8	1308.3	1266.2	1271.3
12.5°	2074.3	2065.9	1888.1	1748.0	1663.3	1544.9	1354.8	1233.2	1128.8	1133.9	1103.6
15°	2206.7	2211.2	1997.5	1801.2	1574.1	1393.5	1169.8	1018.4	911.3	890.0	868.1
17.5°	2384.4	2375.5	2006.5	1737.3	1449.6	1184.9	910.7	760.4	742.5	754.8	735.7
20°	2461.8	2382.8	1949.3	1578.6	1255.0	900.1	688.1	608.4	643.2	692.6	693.7
22.5°	2531.4	2396.2	1919.5	1450.7	995.9	654.4	552.4	537.8	578.7	645.5	651.1
25°	2528.6	2458.5	1866.3	1321.8	772.2	510.9	480.0	490.7	539.5	609.0	612.9
27.5°	2655.9	2410.8	1727.8	1152.4	581.5	437.4	445.3	464.9	487.9	554.1	566.9
30°	2654.7	2499.4	1658.2	946.6	467.1	401.0	421.1	438.0	457.0	517.6	524.9
32.5°	2717.5	2441.6	1616.2	736.3	418.9	392.0	397.0	413.9	441.3	482.3	487.3
35°	2793.2	2507.2	1481.6	584.9	401.0	384.1	388.1	397.6	422.8	460.4	465.4
37.5°	3036.1	2519.6	1428.3	492.9	399.8	380.8	380.2	385.3	413.9	448.1	463.2
40°	3130.8	2632.3	1273.0	460.4	395.9	380.8	372.9	375.7	399.3	443.0	454.8
42.5°	3358.0	2669.9	1158.0	449.2	395.9	374.0	361.7	366.2	393.7	432.4	450.9
45°	3591.8	2723.1	1021.2	446.9	395.3	373.5	349.9	360.0	382.5	415.0	435.2
47.5°	3924.9	2914.9	884.3	440.2	390.9	376.3	347.1	346.6	366.2	394.2	413.3
50°	4468.3	3214.4	778.4	431.8	391.4	374.0	341.5	333.7	346.6	371.2	389.7
52.5°	5224.8	3724.7	736.9	427.3	386.9	365.1	332.0	319.6	326.9	346.6	364.5
55°	6103.0	4413.9	777.8	427.3	378.0	351.0	318.5	303.9	307.9	321.3	338.7
57.5°	7129.2	5270.2	975.8	421.1	366.8	334.2	302.3	285.4	286.6	298.3	314.0
60°	8200.8	6226.9	1419.3	416.1	358.9	315.7	283.2	265.8	264.1	275.3	289.4
62.5°	9274.2	7109.6	1885.9	427.9	356.7	300.0	263.0	245.6	245.1	255.2	266.9
65°	10127.7	7713.0	2002.0	475.5	371.2	282.1	242.3	226.0	224.9	233.3	246.2
67.5°	10546.6	7800.4	1520.8	535.0	402.1	265.2	222.1	206.9	205.8	214.8	226.0
70°	10236.5	7202.7	938.7	541.2	400.4	245.6	201.3	188.4	186.2	195.7	204.1
72.5°	9089.1	6300.4	713.3	478.9	346.6	217.6	180.6	169.4	166.0	174.4	182.3
75°	7295.2	5002.2	571.4	386.4	273.1	183.4	159.8	149.2	145.2	153.1	159.8
77.5°	4249.6	2814.0	417.8	301.7	206.4	149.7	136.3	126.7	122.3	130.7	135.7
80°	1381.8	937.6	262.4	216.5	150.8	117.2	110.5	103.7	99.3	104.9	106.5
82.5°	496.3	348.8	145.2	132.9	100.4	84.1	83.6	79.6	74.0	76.3	76.3
85°	219.8	159.3	86.4	71.2	60.0	44.9	52.7	49.9	44.3	43.2	41.5
87.5°	61.7	52.7	31.4	24.1	19.6	7.3	16.8	15.1	12.3	11.2	7.9
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)