

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: P367684

Luminaire Tested: **MSA-SA3A-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367684
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-730-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: 10482 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

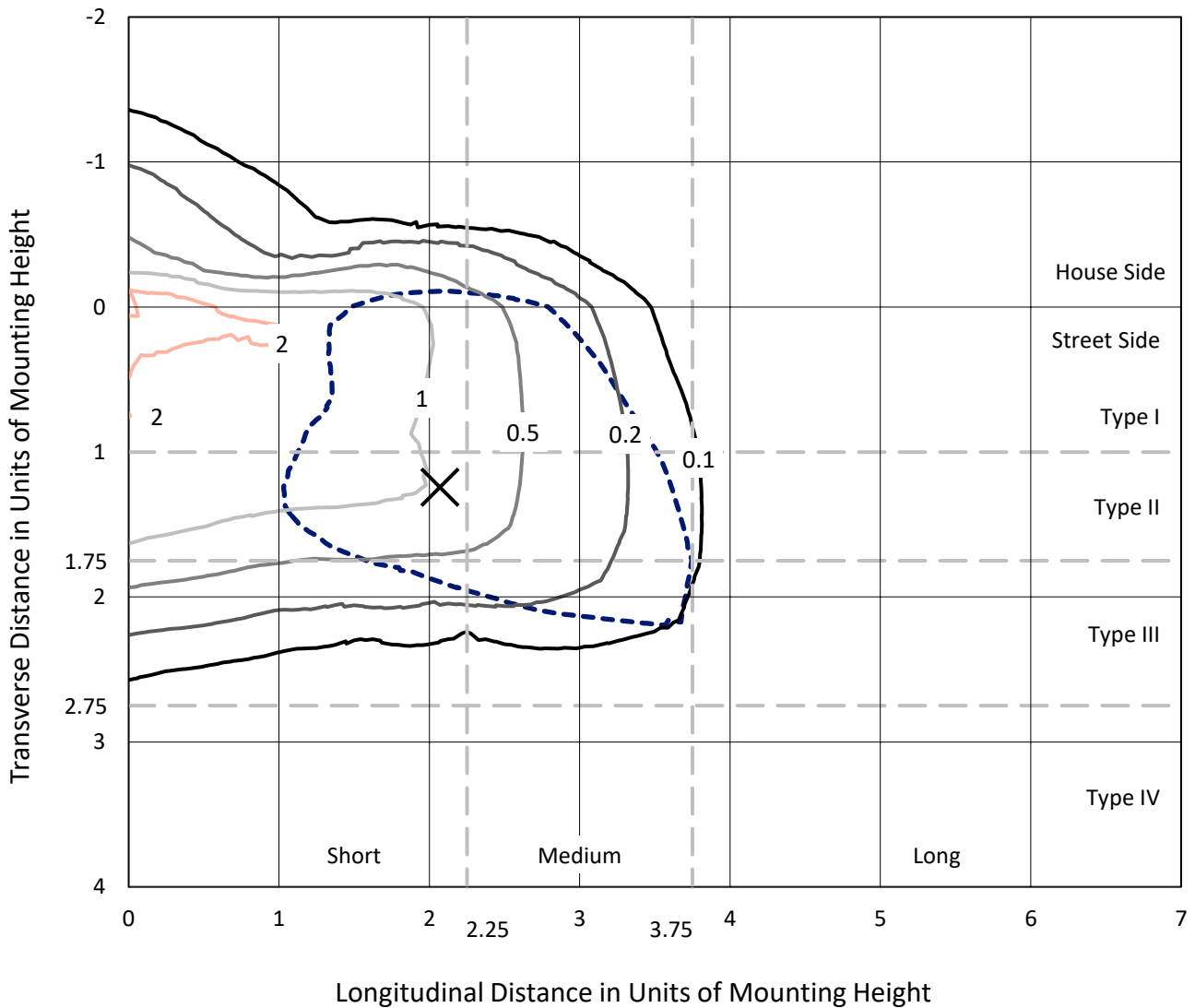
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

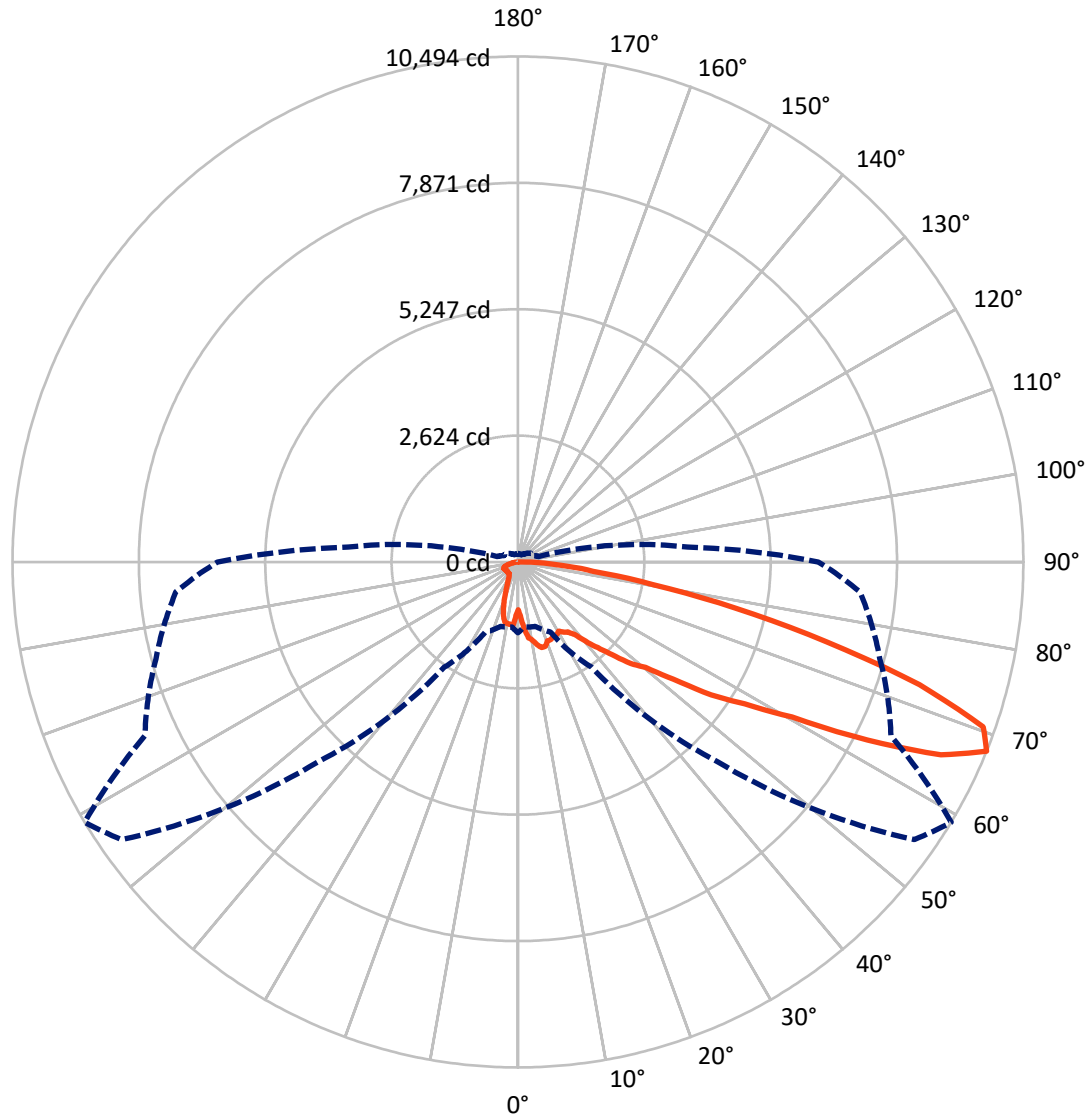
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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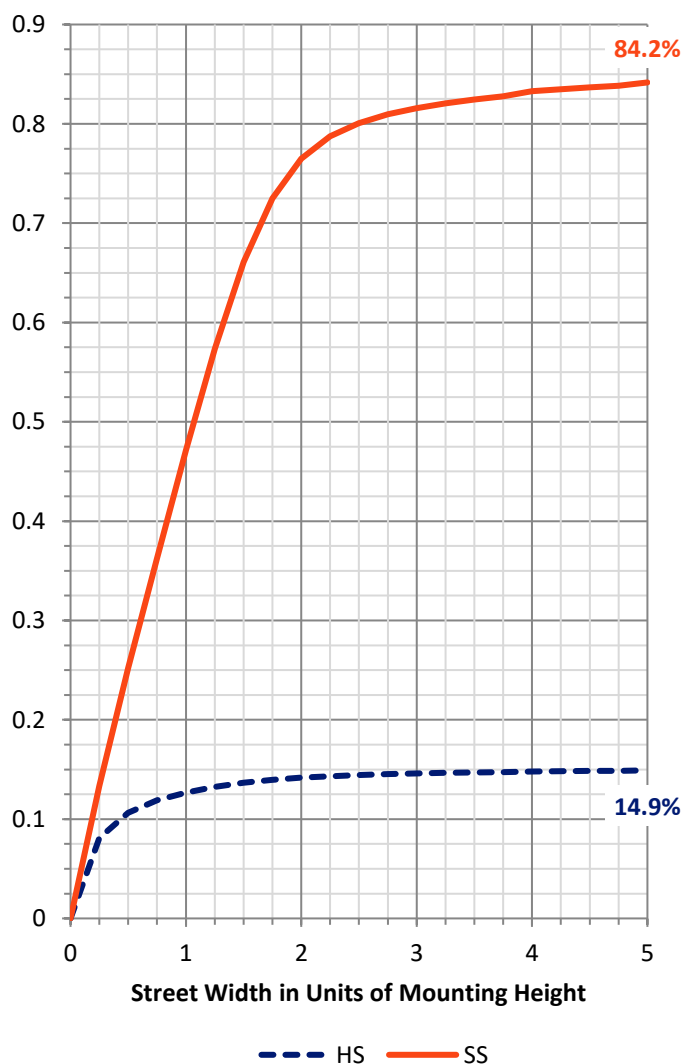
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1577.8	0.0	1577.8
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	8904.2	0.0	8904.2
	% Fixture	84.9	0.0	84.9
Total	Lumens	10482.0	0.0	10482.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.5	1.2
10°-20°	383.3	3.7
20°-30°	547.5	5.2
30°-40°	806.7	7.7
40°-50°	1362.9	13.0
50°-60°	2371.8	22.6
60°-70°	3022.4	28.8
70°-80°	1600.4	15.3
80°-90°	257.4	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°	10482.0	100.0
0°-180°	10482.0	100.0

Coefficient of Utilization



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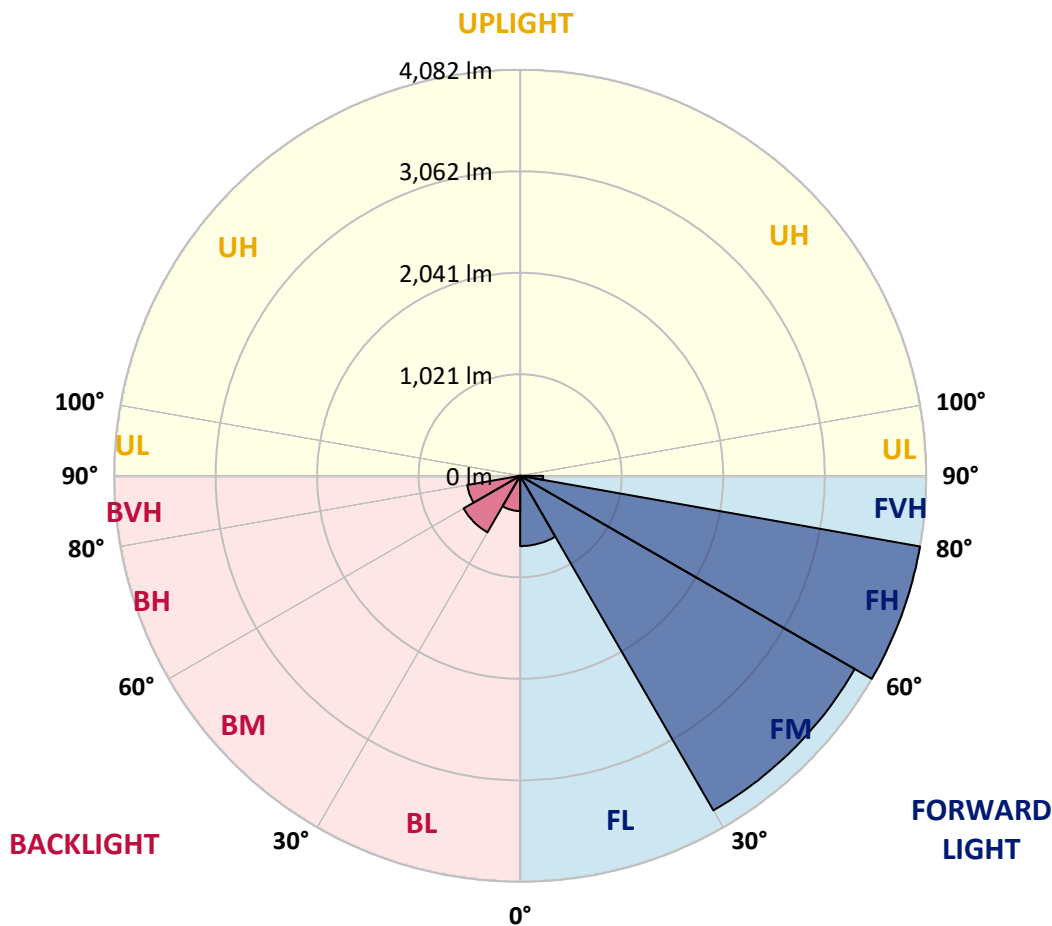
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	706.5	6.7			
FM (30°-60°)	3884.5	37.1			
FH (60°-80°)	4082.0	38.9			G2/5000
FVH (80°-90°)	231.2	2.2			G3/500
BL (0°-30°)	353.8	3.4	B1/500		
BM (30°-60°)	657.0	6.3	B1/1000		
BH (60°-80°)	540.8	5.2	B2/1000		G2/1000
BVH (80°-90°)	26.2	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9
2.5°	1238.4	1180.7	1119.4	1136.7	1171.8	1187.8	1170.4	1153.6	1131.8	1106.0	1194.0
5°	1501.8	1416.1	1403.6	1403.2	1390.8	1341.0	1405.0	1400.5	1426.3	1452.9	1521.3
7.5°	1576.9	1544.9	1510.2	1526.7	1464.0	1461.4	1560.9	1589.3	1639.1	1622.6	1714.6
10°	1538.2	1502.2	1520.5	1513.8	1519.6	1585.3	1646.2	1647.9	1701.2	1753.7	1694.6
12.5°	1470.3	1472.9	1545.3	1542.7	1635.9	1758.1	1776.3	1762.1	1849.2	1813.6	1864.3
15°	1518.7	1551.1	1532.9	1548.4	1585.3	1740.8	1791.4	1842.9	1925.6	1957.5	1906.9
17.5°	1596.0	1613.3	1531.6	1523.1	1599.1	1672.8	1798.5	1842.5	1855.4	2083.2	2011.7
20°	1563.1	1598.2	1518.2	1415.6	1541.8	1639.5	1763.4	1750.1	1812.7	2093.0	2033.5
22.5°	1656.4	1598.2	1496.5	1423.6	1468.0	1557.8	1663.0	1750.5	1824.7	2035.7	2065.0
25°	1674.1	1646.6	1551.6	1479.1	1464.0	1496.0	1646.2	1703.5	1828.7	2113.9	2048.2
27.5°	1782.5	1741.2	1547.6	1549.8	1474.7	1418.3	1592.9	1713.2	1874.0	2065.5	2089.5
30°	1917.1	1885.6	1642.6	1651.5	1547.6	1443.6	1629.3	1665.7	1900.2	2141.0	2141.4
32.5°	2017.9	2073.5	1829.6	1708.8	1671.9	1594.2	1573.3	1737.2	1869.6	2277.8	2230.3
35°	2199.6	2242.7	1973.5	1876.7	1751.9	1664.4	1725.2	1784.3	1997.1	2457.7	2362.2
37.5°	2535.9	2486.1	2240.9	2088.6	2041.9	1915.8	1949.5	1908.2	2135.7	2659.8	2620.7
40°	2730.4	2687.3	2429.3	2344.9	2160.1	2176.1	2133.9	2164.1	2320.9	2874.8	2862.4
42.5°	2922.3	2864.6	2646.5	2587.8	2403.5	2325.3	2332.9	2430.6	2606.5	3222.1	3180.8
45°	3112.0	2964.1	2868.6	2884.1	2795.3	2634.9	2646.0	2738.0	2918.3	3619.3	3524.2
47.5°	3257.2	3135.1	3060.5	3041.4	2997.4	3211.9	3116.0	3153.3	3232.8	3972.8	3936.8
50°	3532.2	3389.6	3292.3	3264.8	3414.0	3712.5	3517.1	3436.7	3605.9	4429.9	4411.2
52.5°	3972.4	3794.7	3632.6	3630.8	3846.7	4040.3	4178.0	4039.5	4101.6	4898.1	4951.4
55°	4356.6	4150.9	4005.3	4085.6	4393.0	4511.6	4979.4	4871.0	4818.6	5370.7	5523.0
57.5°	4500.1	4259.8	4164.7	4283.3	4736.4	5345.8	5840.2	5555.0	5503.9	5905.5	6224.9
60°	4185.1	3931.1	3936.8	4160.3	4945.2	5958.3	6781.4	6539.3	6240.0	6571.3	6883.1
62.5°	3287.9	3058.2	3207.9	3547.7	4770.1	6553.6	8042.9	8145.1	7080.8	7123.5	7248.3
65°	2234.7	2075.7	2210.7	2543.4	3868.9	6878.3	9244.5	9654.0	7846.6	7485.0	7406.0
67.5°	1470.7	1358.3	1384.5	1605.7	2663.4	5863.7	10048.0	10494.4	8546.6	7781.7	7127.9
70°	1138.9	1048.3	1036.7	1152.7	1579.5	4073.7	9571.8	10250.5	8973.1	7503.7	6212.9
72.5°	893.7	824.9	831.1	942.6	1223.3	2260.0	7406.8	8716.8	8330.8	6471.4	4773.3
75°	696.9	640.5	672.1	799.5	1131.3	1404.5	5110.4	6615.7	6440.7	4791.9	2722.4
77.5°	505.9	469.5	514.4	680.9	1063.4	1205.1	3181.3	4615.6	4126.1	2460.4	934.1
80°	331.8	311.4	348.2	555.2	964.3	1159.8	1966.0	2828.1	2038.8	691.2	353.6
82.5°	195.4	186.6	217.2	375.8	775.1	1086.9	1311.2	1571.5	834.2	292.3	187.9
85°	102.6	95.9	128.8	215.9	534.4	992.3	1032.3	940.8	402.9	127.0	89.7
87.5°	34.2	33.3	54.6	83.5	202.1	526.8	550.8	446.9	166.1	36.9	19.5
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°	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9	991.9
2.5°	1206.0	1188.2	1086.0	1100.3	1113.6	1106.9	1102.9	1056.7	1052.3	1118.0	1112.7
5°	1519.6	1445.8	1358.8	1354.8	1297.5	1238.8	1250.4	1231.7	1237.1	1264.2	1266.8
7.5°	1685.3	1593.3	1510.2	1375.2	1260.6	1167.8	1182.4	1178.0	1166.0	1227.3	1243.7
10°	1682.1	1600.4	1506.7	1343.2	1265.9	1190.4	1099.8	1014.1	988.8	958.6	961.2
12.5°	1793.2	1720.8	1516.5	1349.9	1245.1	1114.9	945.2	851.5	761.8	760.0	737.4
15°	1827.8	1774.5	1537.3	1311.7	1098.9	912.4	736.9	635.2	570.3	557.5	538.4
17.5°	1915.3	1831.8	1473.8	1188.2	929.2	713.4	553.9	482.8	477.5	486.4	476.6
20°	1921.1	1785.6	1359.2	1005.6	746.7	540.6	451.7	416.2	435.3	457.1	456.2
22.5°	1916.2	1727.5	1260.2	850.2	561.0	434.4	395.8	387.8	405.5	438.0	442.0
25°	1866.5	1708.4	1136.2	698.3	455.3	372.2	361.6	366.5	388.7	426.9	426.9
27.5°	1918.5	1630.6	980.8	568.1	382.9	331.4	338.9	351.4	367.8	411.3	419.3
30°	1901.6	1656.4	855.5	457.5	337.6	302.9	319.8	332.3	350.9	396.2	400.2
32.5°	1946.9	1587.5	750.2	384.7	307.8	291.8	295.8	312.7	337.1	372.7	379.8
35°	2016.2	1612.8	629.4	346.0	293.2	279.0	286.5	299.8	324.3	358.9	364.7
37.5°	2237.4	1611.5	545.9	324.7	290.5	276.3	279.8	289.2	317.6	349.1	362.5
40°	2379.5	1703.9	470.0	319.8	287.4	275.0	271.8	282.1	304.7	342.0	351.4
42.5°	2646.5	1760.3	437.1	318.0	286.9	267.4	264.3	276.3	298.5	333.1	347.4
45°	2928.5	1840.7	410.9	317.2	285.6	266.1	256.7	271.8	290.5	323.8	340.2
47.5°	3260.3	2010.8	396.2	314.0	282.9	267.8	254.1	261.6	282.5	315.8	332.3
50°	3694.8	2236.0	399.3	309.6	286.9	268.3	250.1	253.6	272.7	305.2	322.0
52.5°	4222.9	2584.7	419.3	311.4	289.6	266.1	248.3	246.5	263.0	291.4	308.3
55°	4859.4	3079.6	479.3	319.8	289.6	265.6	245.6	237.6	250.1	273.2	289.6
57.5°	5627.4	3652.6	596.5	323.8	287.4	263.0	239.9	225.6	233.2	252.3	267.8
60°	6287.0	4115.0	717.4	326.5	291.8	256.7	228.3	210.5	215.4	230.1	243.9
62.5°	6623.3	4244.7	753.8	324.3	303.8	252.7	214.5	194.6	195.0	207.4	219.9
65°	6686.4	4071.9	607.7	322.0	319.4	252.3	204.8	180.8	177.7	186.6	197.2
67.5°	6236.9	3534.4	438.4	317.2	321.1	249.6	198.1	169.7	161.7	167.9	176.8
70°	5295.6	2846.4	368.2	307.4	299.8	236.3	186.6	158.1	147.5	151.9	158.6
72.5°	3947.9	2105.9	321.1	286.5	261.2	202.1	168.8	145.2	134.1	137.3	142.1
75°	2193.4	1123.4	268.7	249.2	213.2	163.5	143.9	128.8	119.0	120.4	125.7
77.5°	728.5	414.4	197.2	197.7	161.2	126.1	118.6	110.2	102.6	103.1	107.5
80°	330.0	229.2	141.3	142.1	112.4	91.5	91.1	88.4	83.5	82.2	85.3
82.5°	191.4	139.0	96.8	92.4	72.4	59.5	66.2	64.9	63.5	58.6	59.5
85°	94.2	74.6	50.6	48.0	40.0	29.8	35.5	36.9	35.5	30.2	29.8
87.5°	23.1	24.4	12.4	11.5	6.7	3.1	5.3	5.3	6.7	4.4	2.2
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)