

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: P367308

Luminaire Tested: **MSA-SA2B-740-U-SL2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367308  
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-SA2B-740-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: 9895 lumens  
Efficiency: N/A  
Efficacy: 116.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3

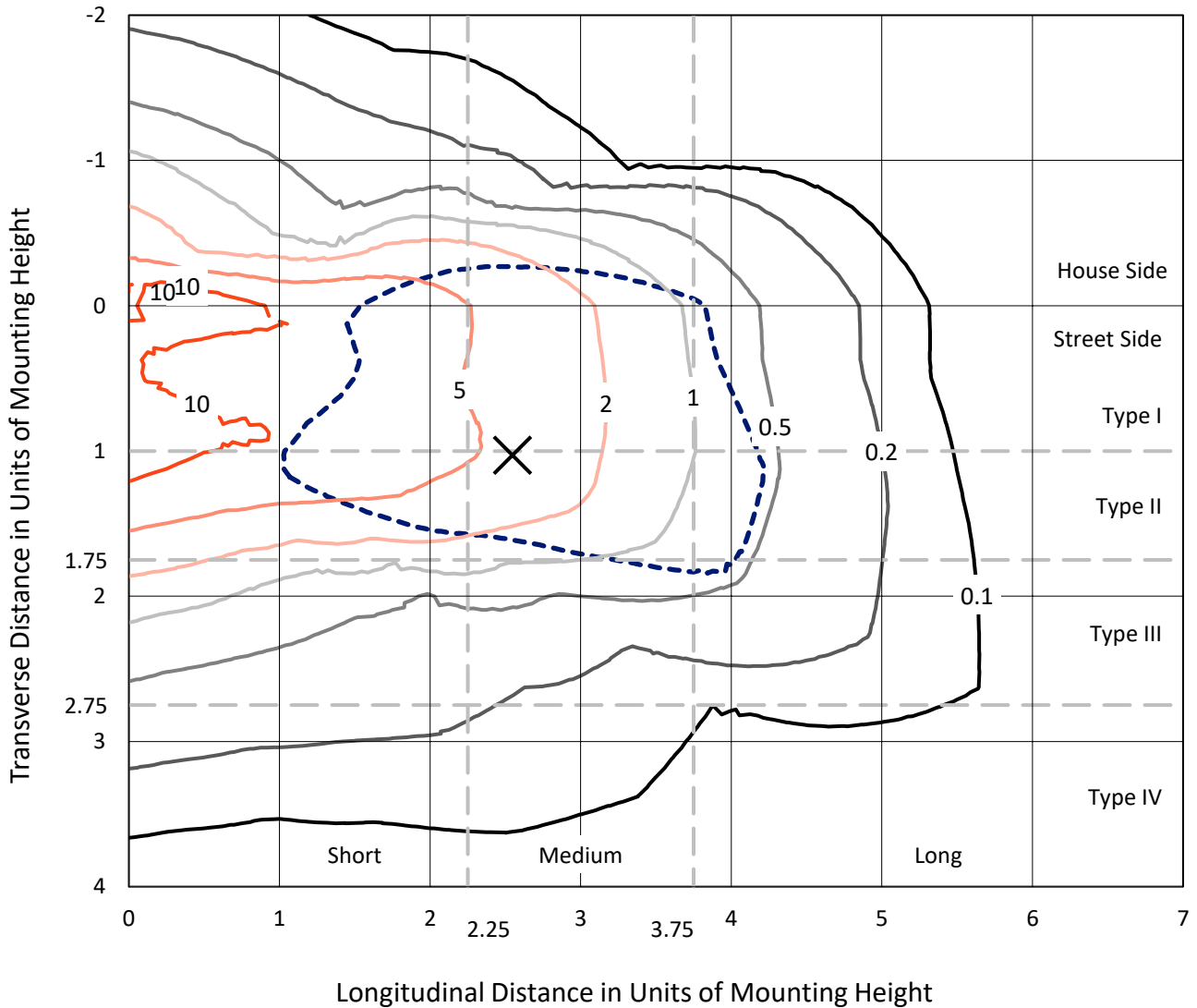
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

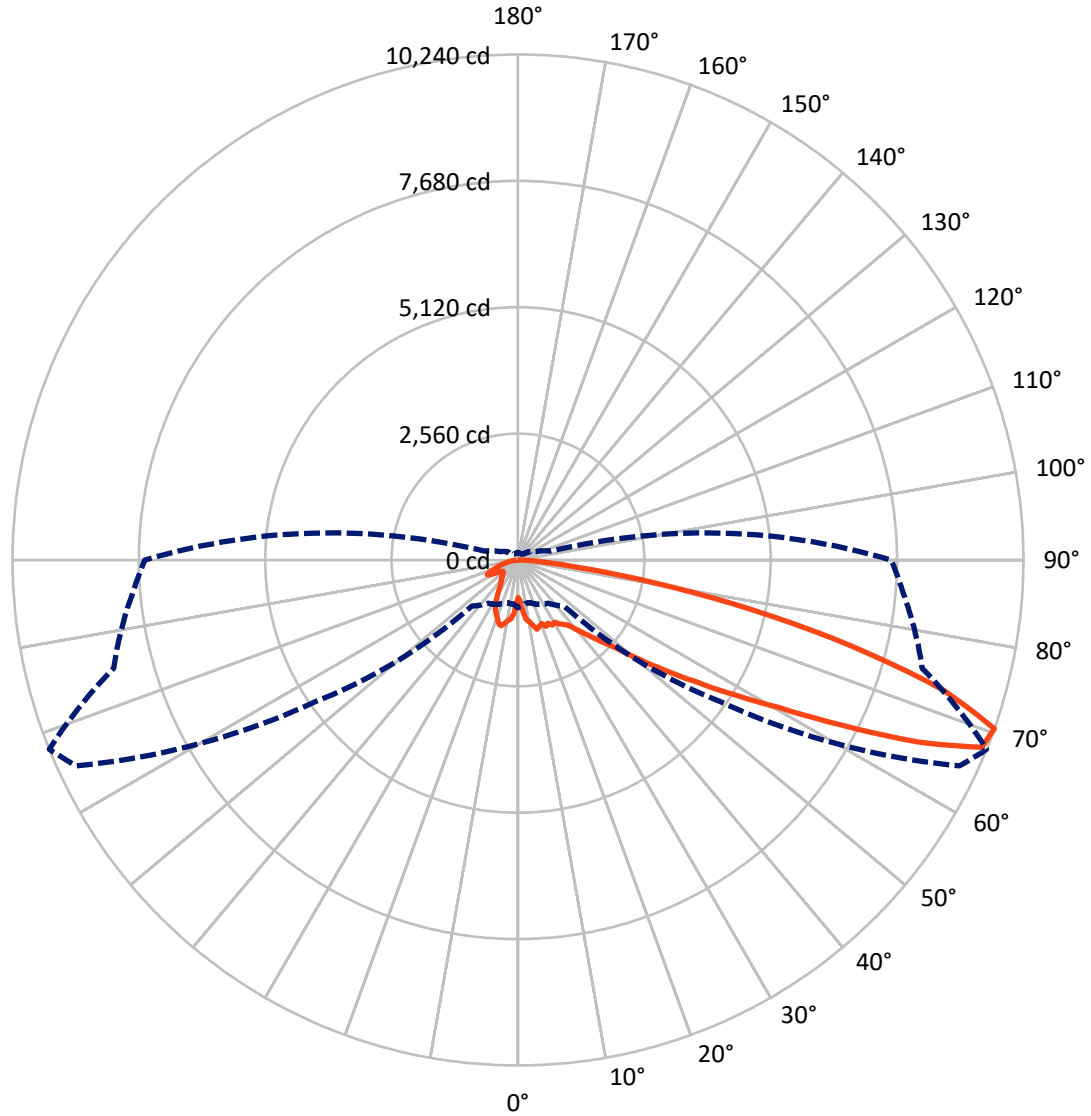
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15 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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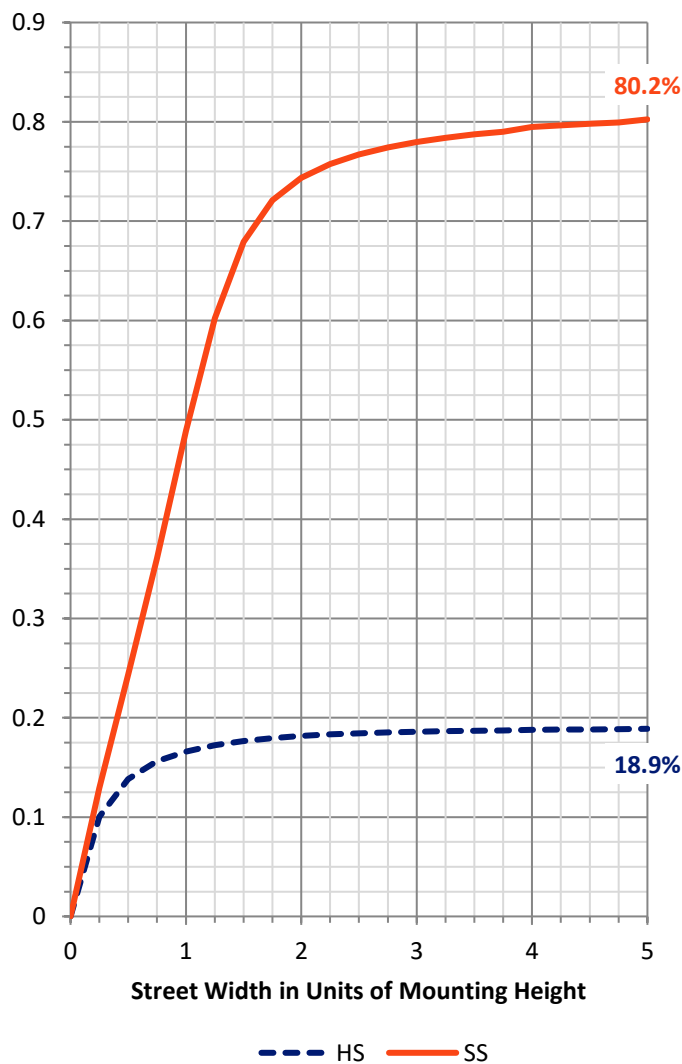
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1889.2	0.0	1889.2
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	8005.8	0.0	8005.8
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	9895.0	0.0	9895.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.3	1.0
10°-20°	330.3	3.3
20°-30°	502.4	5.1
30°-40°	767.4	7.8
40°-50°	1319.4	13.3
50°-60°	2183.9	22.1
60°-70°	2692.5	27.2
70°-80°	1729.6	17.5
80°-90°	268.3	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°	9895.0	100.0
0°-180°	9895.0	100.0

**Coefficient of Utilization**



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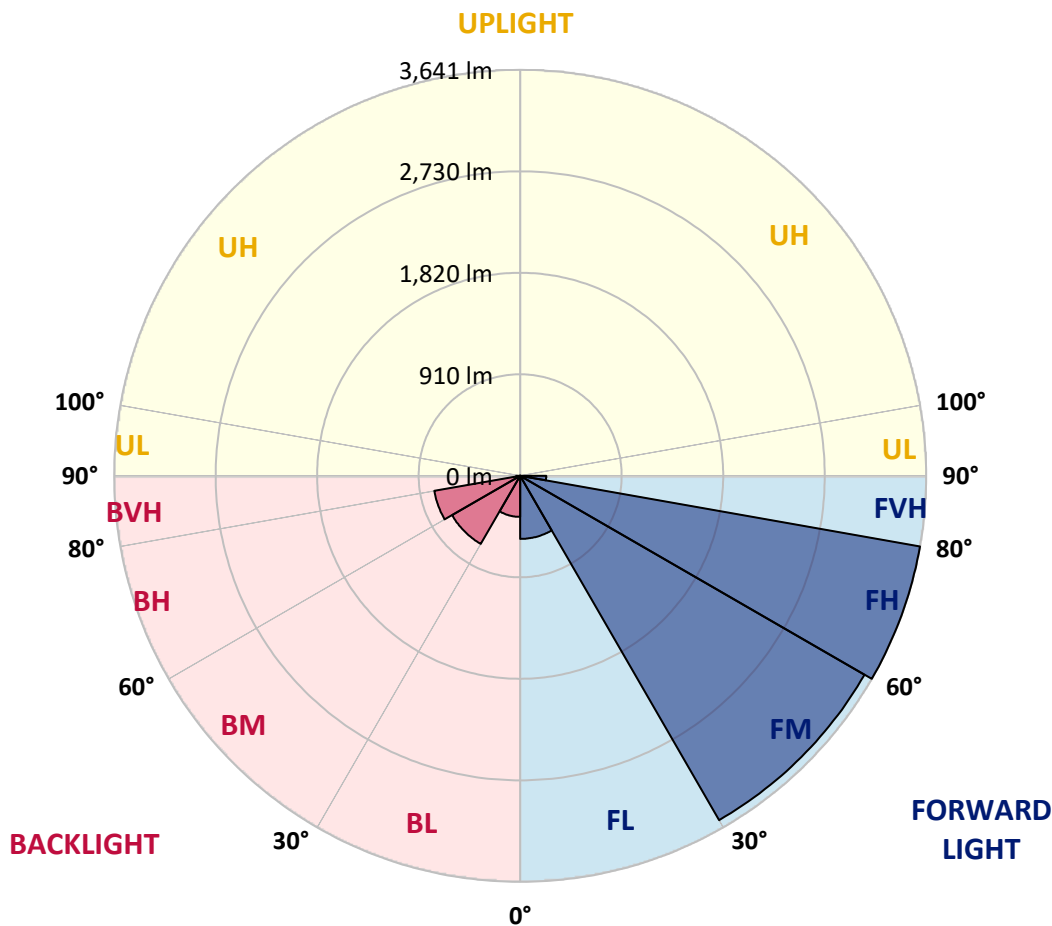
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	565.8	5.7			
FM (30°-60°)	3565.6	36.0			
FH (60°-80°)	3640.6	36.8			G2/5000
FVH (80°-90°)	233.8	2.4			G3/500
BL (0°-30°)	368.1	3.7	B1/500		
BM (30°-60°)	705.2	7.1	B1/1000		
BH (60°-80°)	781.5	7.9	B2/1000		G2/1000
BVH (80°-90°)	34.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7
2.5°	871.7	836.5	800.9	818.3	846.1	870.5	865.5	868.4	834.9	830.3	918.5
5°	1027.0	966.6	965.3	966.2	968.6	940.5	1009.2	1044.8	1052.7	1089.2	1175.7
7.5°	1080.9	1056.4	1031.6	1044.0	1012.5	1015.4	1099.9	1192.7	1214.6	1241.1	1359.6
10°	1069.7	1046.5	1054.0	1056.0	1061.8	1108.6	1162.9	1251.9	1270.5	1355.0	1385.7
12.5°	1071.4	1067.2	1102.0	1103.2	1165.4	1249.4	1271.0	1353.0	1360.4	1422.5	1550.5
15°	1128.1	1156.7	1137.2	1147.6	1159.6	1260.2	1291.3	1408.9	1453.6	1533.5	1629.6
17.5°	1238.7	1246.9	1188.6	1173.2	1212.6	1243.2	1314.0	1365.0	1411.8	1635.0	1767.5
20°	1264.3	1286.7	1217.1	1138.0	1221.3	1263.9	1313.2	1336.4	1372.8	1649.9	1837.9
22.5°	1374.5	1328.1	1244.0	1175.3	1202.6	1244.0	1279.7	1367.0	1462.7	1607.2	1908.3
25°	1437.0	1410.1	1335.2	1261.4	1238.2	1239.5	1308.2	1386.5	1419.6	1669.8	1922.4
27.5°	1588.2	1545.1	1376.6	1362.5	1275.1	1207.2	1312.8	1434.5	1492.5	1620.9	1991.1
30°	1777.4	1744.7	1523.6	1504.9	1371.6	1253.2	1370.8	1470.2	1461.9	1652.8	2038.8
32.5°	1930.7	1985.3	1762.1	1615.1	1520.3	1406.8	1352.5	1463.9	1546.4	1726.9	2119.5
35°	2149.3	2200.7	1948.1	1848.7	1642.9	1478.0	1479.7	1549.3	1600.2	1813.5	2209.8
37.5°	2527.8	2482.7	2279.4	2122.4	1990.7	1744.7	1671.0	1646.6	1687.6	1919.5	2386.6
40°	2800.8	2762.7	2523.3	2433.8	2177.5	2034.6	1832.5	1809.3	1881.8	2028.8	2531.2
42.5°	3124.2	3056.3	2833.5	2759.8	2491.8	2234.2	2030.5	2043.7	2078.9	2235.1	2726.6
45°	3453.4	3288.6	3162.3	3156.5	2977.6	2621.9	2348.1	2337.3	2338.6	2538.6	2946.1
47.5°	3714.7	3566.5	3421.9	3353.2	3262.9	3292.3	2809.5	2683.1	2645.0	2844.2	3275.3
50°	3891.6	3721.0	3557.4	3541.2	3782.2	3940.9	3242.6	3107.6	3131.2	3281.6	3714.3
52.5°	3895.3	3692.8	3522.2	3635.2	4203.0	4429.9	3988.9	3611.6	3687.0	3789.3	4287.1
55°	3624.5	3414.5	3303.5	3561.1	4367.4	5010.1	5037.5	4419.2	4332.2	4369.9	4971.6
57.5°	3053.4	2841.3	2776.7	3085.3	4055.6	5569.6	6303.9	5384.1	5129.0	4971.6	5673.2
60°	2298.4	2115.0	2074.8	2271.5	3362.3	5405.2	7329.3	6585.1	6065.3	5643.8	6376.8
62.5°	1723.6	1591.9	1531.4	1559.6	2326.6	4870.6	8002.6	8102.4	7366.5	6377.6	7064.2
65°	1400.6	1294.2	1240.3	1203.9	1447.0	3766.1	7880.9	9379.6	8886.4	7148.3	7599.3
67.5°	1169.9	1075.5	1050.6	1086.3	1143.8	2184.9	6928.4	10094.0	10127.5	7908.6	7911.9
70°	971.1	901.1	892.0	993.1	1068.9	1318.6	5004.3	9869.5	10239.8	8478.9	7838.6
72.5°	750.4	712.7	711.5	870.1	1061.8	1123.9	2980.1	8526.1	9023.5	8296.7	7121.4
75°	520.6	494.5	514.3	715.2	1037.4	1140.1	1700.8	6641.0	7013.3	7060.1	5704.6
77.5°	358.2	336.3	357.8	517.2	926.4	1167.4	1189.8	4801.8	4843.2	4734.3	3267.5
80°	249.3	234.0	250.5	366.1	721.0	1155.4	1013.0	3023.1	2773.8	2112.9	1046.1
82.5°	154.5	149.9	168.1	260.9	507.7	1051.1	960.0	1560.0	1191.0	583.1	373.5
85°	81.2	74.5	97.7	170.2	317.6	824.9	899.5	711.9	459.7	207.1	149.9
87.5°	24.0	21.5	37.7	68.7	134.6	369.8	514.8	301.9	171.4	60.9	46.8
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°	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7	758.7
2.5°	924.8	920.2	858.9	866.8	880.0	883.3	882.9	860.6	837.0	902.8	900.7
5°	1177.8	1136.8	1106.1	1099.5	1061.8	1024.1	1037.4	1032.8	1027.0	1056.9	1060.6
7.5°	1360.0	1303.3	1267.6	1176.1	1089.2	1013.8	1037.8	1045.3	1030.4	1084.2	1100.3
10°	1408.0	1363.3	1324.8	1207.2	1159.1	1115.2	1050.2	976.1	966.2	935.1	938.8
12.5°	1531.9	1525.7	1394.4	1290.8	1228.3	1140.9	1000.5	910.7	833.6	837.4	815.0
15°	1629.6	1632.9	1475.1	1330.2	1162.5	1029.1	863.9	752.1	673.0	657.2	641.1
17.5°	1760.9	1754.3	1481.8	1283.0	1070.5	875.1	672.5	561.6	548.3	557.4	543.3
20°	1818.0	1759.6	1439.5	1165.8	926.8	664.7	508.1	449.3	475.0	511.4	512.3
22.5°	1869.4	1769.6	1417.6	1071.4	735.5	483.3	407.9	397.1	427.4	476.7	480.8
25°	1867.3	1815.5	1378.2	976.1	570.3	377.3	354.5	362.4	398.4	449.7	452.6
27.5°	1961.3	1780.3	1275.9	851.0	429.5	323.0	328.8	343.3	360.3	409.2	418.7
30°	1960.5	1845.8	1224.6	699.1	345.0	296.1	311.0	323.4	337.5	382.2	387.6
32.5°	2006.9	1803.1	1193.5	543.8	309.4	289.5	293.2	305.6	325.9	356.2	359.9
35°	2062.8	1851.6	1094.1	431.9	296.1	283.7	286.6	293.6	312.3	340.0	343.7
37.5°	2242.1	1860.7	1054.8	364.0	295.3	281.2	280.8	284.5	305.6	330.9	342.1
40°	2312.1	1943.9	940.1	340.0	292.4	281.2	275.4	277.5	294.9	327.2	335.9
42.5°	2479.8	1971.7	855.2	331.7	292.4	276.2	267.1	270.4	290.7	319.3	333.0
45°	2652.5	2011.0	754.1	330.1	292.0	275.8	258.4	265.9	282.4	306.5	321.4
47.5°	2898.5	2152.6	653.1	325.1	288.6	277.9	256.3	255.9	270.4	291.1	305.2
50°	3299.8	2373.8	574.8	318.9	289.1	276.2	252.2	246.4	255.9	274.2	287.8
52.5°	3858.4	2750.6	544.2	315.6	285.7	269.6	245.2	236.1	241.4	255.9	269.2
55°	4507.0	3259.6	574.4	315.6	279.1	259.2	235.2	224.5	227.4	237.3	250.1
57.5°	5264.8	3892.0	720.6	311.0	270.8	246.8	223.2	210.8	211.6	220.3	231.9
60°	6056.2	4598.5	1048.2	307.3	265.0	233.2	209.1	196.3	195.1	203.3	213.7
62.5°	6848.9	5250.3	1392.7	316.0	263.4	221.6	194.2	181.4	181.0	188.4	197.1
65°	7479.2	5695.9	1478.4	351.2	274.2	208.3	178.9	166.9	166.1	172.3	181.8
67.5°	7788.5	5760.5	1123.1	395.1	296.9	195.9	164.0	152.8	152.0	158.6	166.9
70°	7559.5	5319.1	693.3	399.6	295.7	181.4	148.7	139.1	137.5	144.5	150.7
72.5°	6712.2	4652.7	526.8	353.7	255.9	160.7	133.3	125.1	122.6	128.8	134.6
75°	5387.4	3694.0	422.0	285.3	201.7	135.4	118.0	110.2	107.3	113.1	118.0
77.5°	3138.3	2078.1	308.5	222.8	152.4	110.6	100.6	93.6	90.3	96.5	100.2
80°	1020.4	692.4	193.8	159.9	111.4	86.6	81.6	76.6	73.3	77.4	78.7
82.5°	366.5	257.6	107.3	98.1	74.1	62.1	61.7	58.8	54.7	56.3	56.3
85°	162.3	117.6	63.8	52.6	44.3	33.1	38.9	36.9	32.7	31.9	30.6
87.5°	45.6	38.9	23.2	17.8	14.5	5.4	12.4	11.2	9.1	8.3	5.8
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)