

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: P367794

Luminaire Tested: **MSA-SA3B-727-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367794  
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-SA3B-727-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: 12063 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

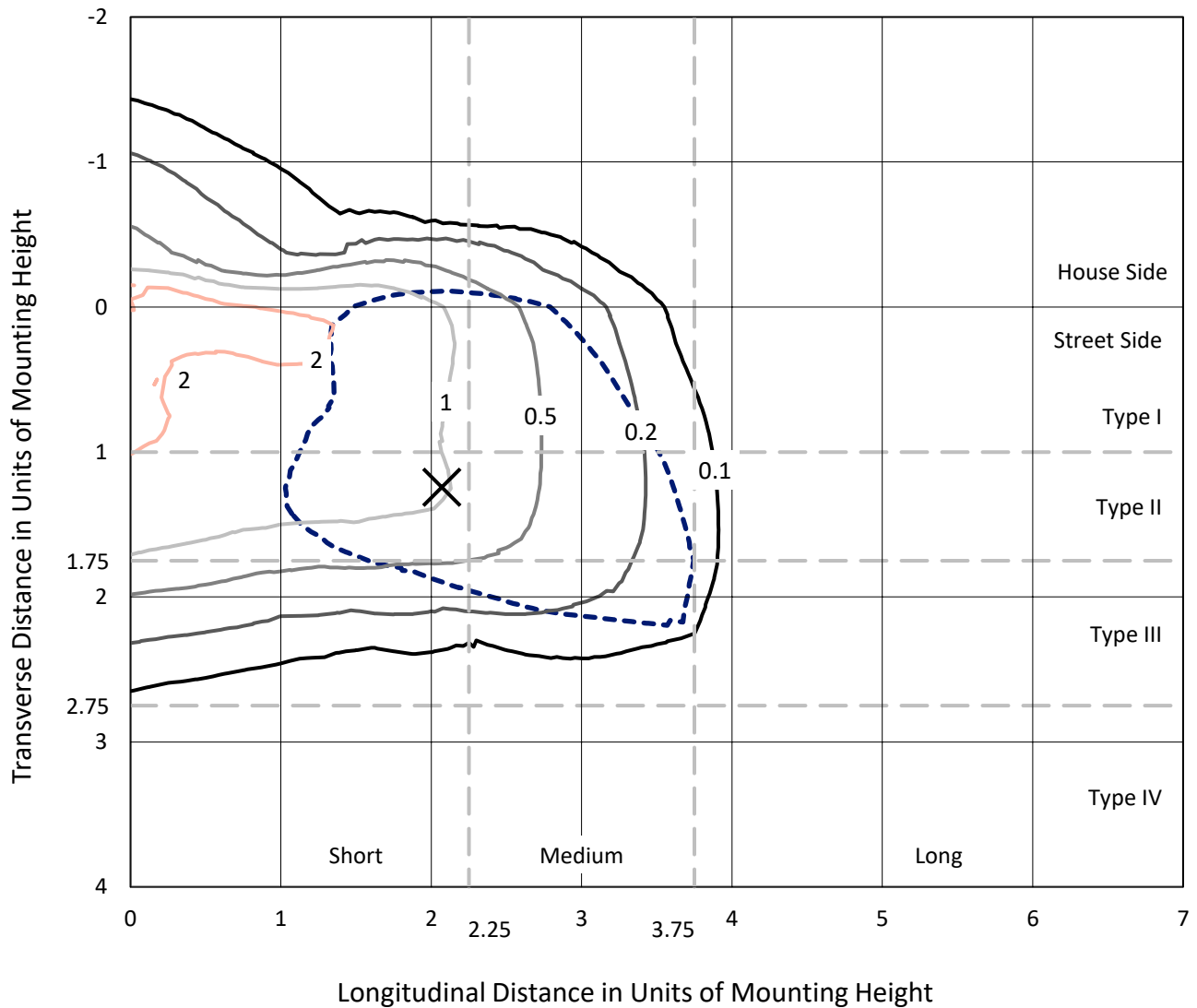
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

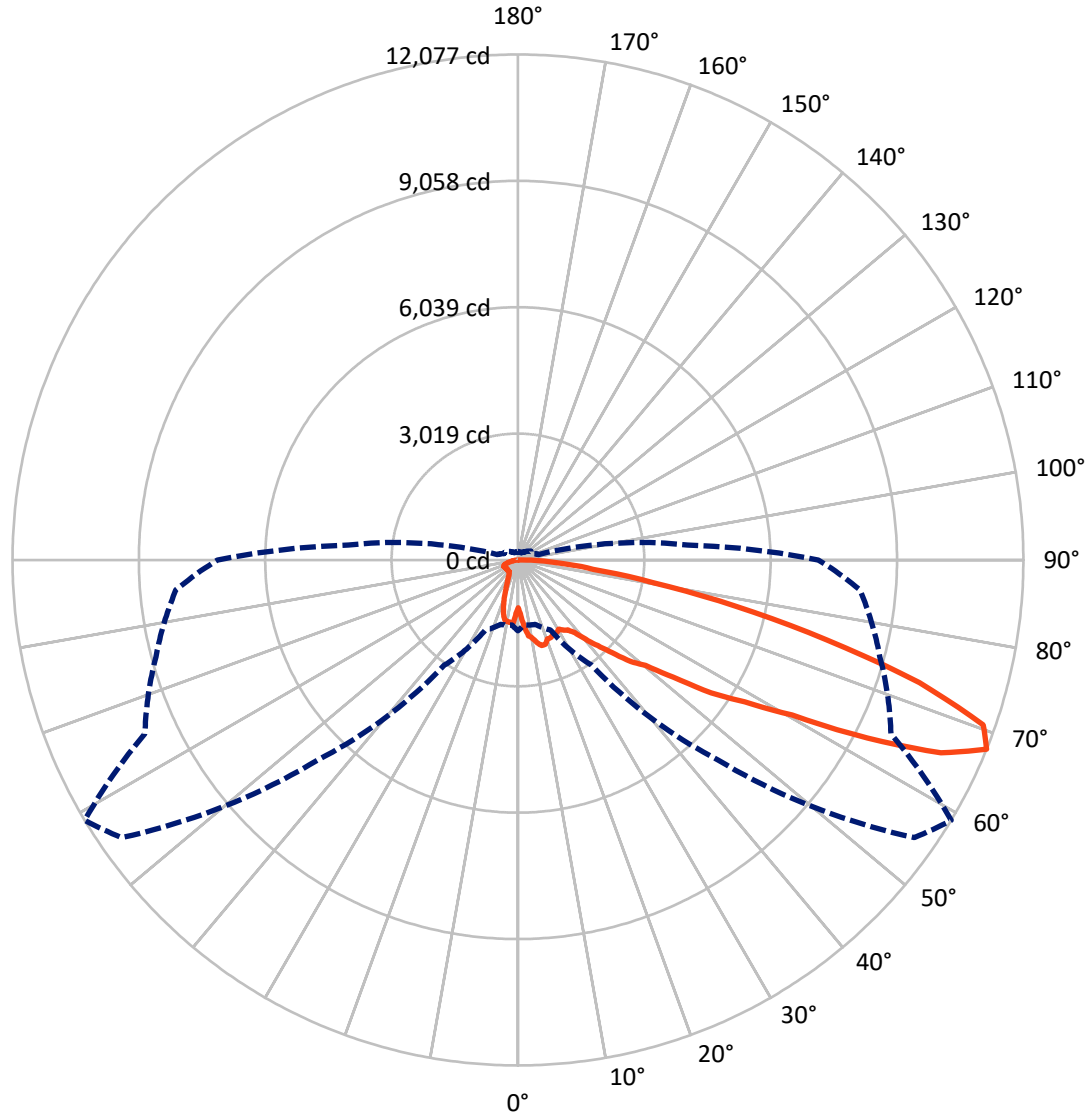
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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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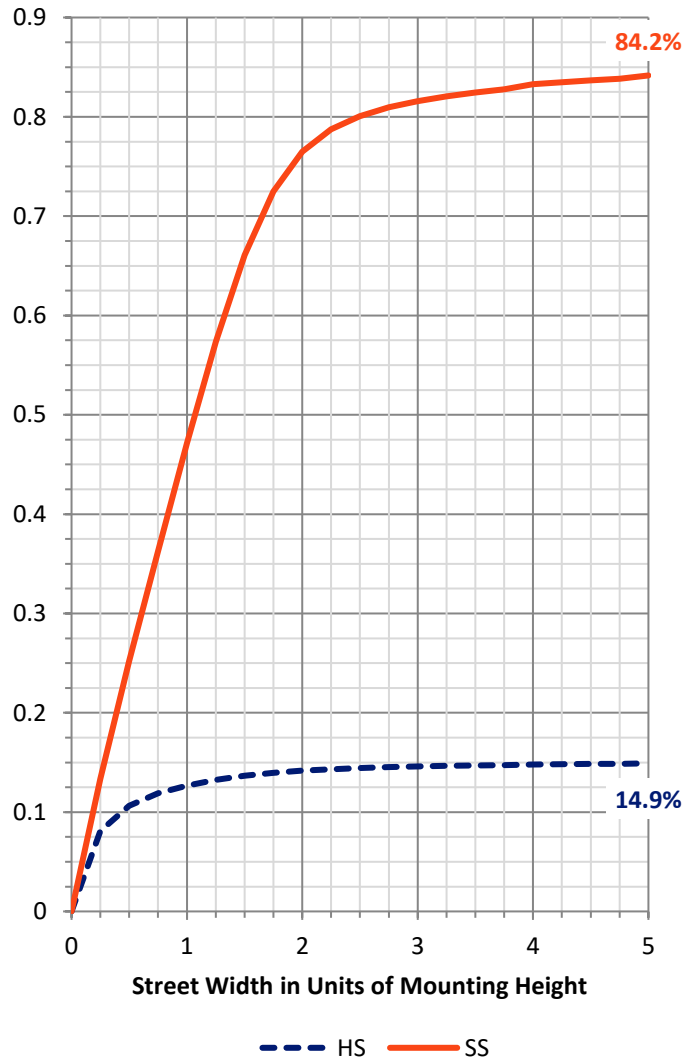
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1815.7	0.0	1815.7
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	10247.3	0.0	10247.3
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	12063.0	0.0	12063.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.1	1.2
10°-20°	441.2	3.7
20°-30°	630.0	5.2
30°-40°	928.4	7.7
40°-50°	1568.5	13.0
50°-60°	2729.5	22.6
60°-70°	3478.3	28.8
70°-80°	1841.8	15.3
80°-90°	296.3	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°	12063.0	100.0
0°-180°	12063.0	100.0

**Coefficient of Utilization**



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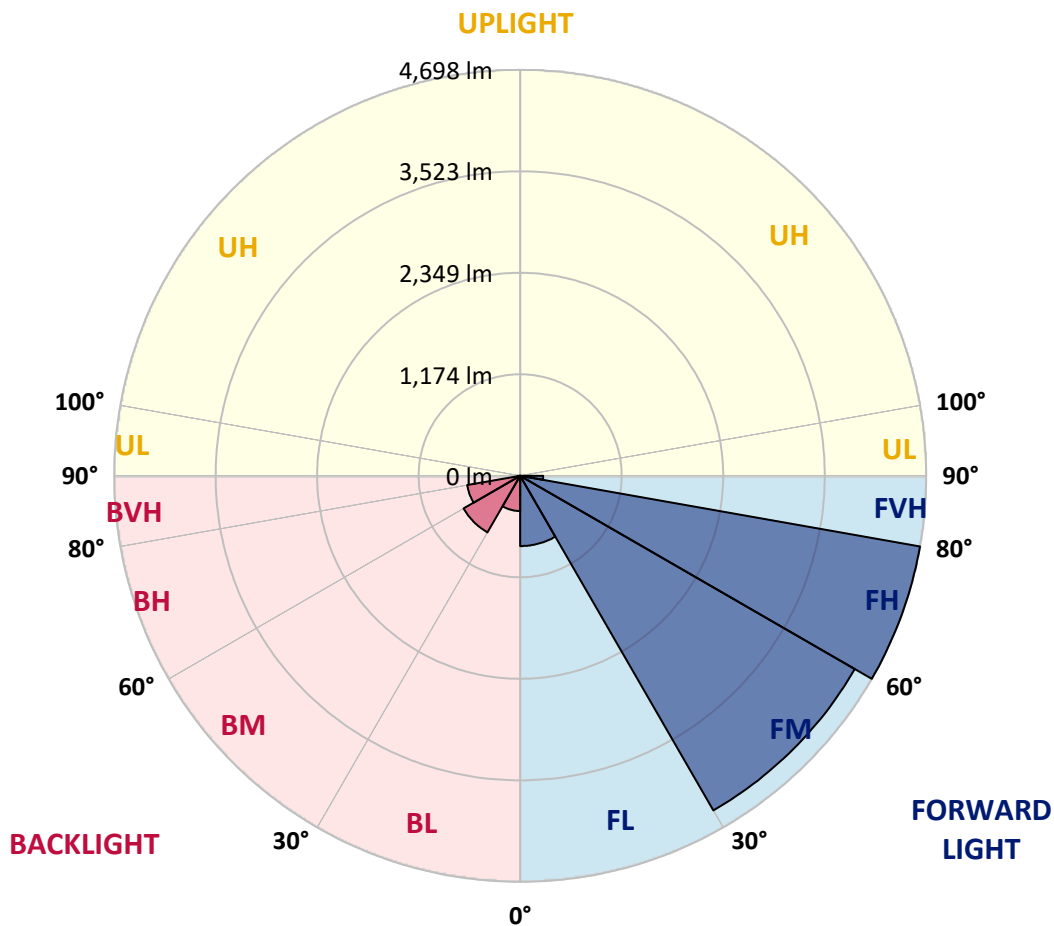
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	813.1	6.7			
FM (30°-60°)	4470.4	37.1			
FH (60°-80°)	4697.7	38.9			G2/5000
FVH (80°-90°)	266.1	2.2			G3/500
BL (0°-30°)	407.2	3.4	B1/500		
BM (30°-60°)	756.1	6.3	B1/1000		
BH (60°-80°)	622.3	5.2	B2/1000		G2/1000
BVH (80°-90°)	30.2	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°	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5
2.5°	1425.2	1358.7	1288.2	1308.1	1348.5	1366.9	1347.0	1327.5	1302.5	1272.9	1374.1
5°	1728.3	1629.7	1615.3	1614.8	1600.5	1543.3	1616.9	1611.8	1641.4	1672.1	1750.8
7.5°	1814.7	1777.9	1738.0	1756.9	1684.9	1681.8	1796.3	1829.0	1886.3	1867.4	1973.2
10°	1770.2	1728.8	1749.8	1742.1	1748.8	1824.4	1894.5	1896.5	1957.8	2018.2	1950.2
12.5°	1692.0	1695.1	1778.4	1775.3	1882.7	2023.3	2044.2	2027.9	2128.1	2087.2	2145.4
15°	1747.7	1785.1	1764.1	1782.0	1824.4	2003.3	2061.6	2120.9	2216.0	2252.8	2194.5
17.5°	1836.7	1856.6	1762.6	1752.9	1840.3	1925.1	2069.8	2120.4	2135.2	2397.5	2315.2
20°	1798.9	1839.2	1747.2	1629.1	1774.3	1886.8	2029.4	2014.1	2086.1	2408.7	2340.2
22.5°	1906.2	1839.2	1722.2	1638.4	1689.5	1792.7	1913.9	2014.6	2100.0	2342.8	2376.5
25°	1926.7	1895.0	1785.6	1702.2	1684.9	1721.7	1894.5	1960.4	2104.6	2432.7	2357.1
27.5°	2051.4	2003.8	1781.0	1783.5	1697.1	1632.2	1833.1	1971.6	2156.7	2377.0	2404.6
30°	2206.3	2170.0	1890.4	1900.6	1781.0	1661.4	1875.0	1916.9	2186.9	2463.9	2464.4
32.5°	2322.3	2386.2	2105.6	1966.5	1924.1	1834.6	1810.6	1999.2	2151.6	2621.4	2566.7
35°	2531.4	2581.0	2271.2	2159.8	2016.1	1915.4	1985.4	2053.4	2298.3	2828.4	2718.5
37.5°	2918.4	2861.1	2578.9	2403.6	2349.9	2204.7	2243.6	2196.1	2457.8	3061.0	3016.0
40°	3142.3	3092.7	2795.7	2698.5	2485.9	2504.3	2455.7	2490.5	2670.9	3308.4	3294.1
42.5°	3363.1	3296.6	3045.6	2978.2	2766.0	2676.1	2684.7	2797.2	2999.6	3708.1	3660.6
45°	3581.4	3411.1	3301.2	3319.1	3216.9	3032.4	3045.1	3150.9	3358.5	4165.1	4055.7
47.5°	3748.5	3607.9	3522.1	3500.1	3449.5	3696.4	3586.0	3628.9	3720.4	4572.0	4530.6
50°	4064.9	3900.9	3788.9	3757.2	3929.0	4272.5	4047.6	3955.0	4149.8	5098.1	5076.6
52.5°	4571.5	4367.1	4180.5	4178.4	4426.9	4649.7	4808.2	4648.7	4720.3	5636.8	5698.2
55°	5013.7	4777.0	4609.4	4701.9	5055.6	5192.1	5730.4	5605.7	5545.3	6180.7	6356.1
57.5°	5178.8	4902.3	4792.9	4929.4	5450.8	6152.1	6721.1	6392.9	6334.1	6796.2	7163.8
60°	4816.4	4524.0	4530.6	4787.8	5691.0	6857.0	7804.3	7525.7	7181.1	7562.5	7921.3
62.5°	3783.8	3519.5	3691.8	4082.8	5489.6	7542.0	9256.0	9373.6	8148.8	8197.9	8341.5
65°	2571.8	2388.8	2544.2	2927.0	4452.4	7915.7	10638.8	11110.1	9030.1	8614.0	8523.0
67.5°	1692.5	1563.2	1593.4	1847.9	3065.1	6748.2	11563.5	12077.3	9835.7	8955.5	8203.0
70°	1310.7	1206.4	1193.1	1326.5	1817.8	4688.1	11015.5	11796.6	10326.5	8635.5	7150.0
72.5°	1028.5	949.3	956.4	1084.7	1407.8	2600.9	8524.0	10031.5	9587.3	7447.5	5493.2
75°	802.1	737.1	773.4	920.1	1302.0	1616.4	5881.2	7613.6	7412.2	5514.7	3133.1
77.5°	582.2	540.3	592.0	783.6	1223.8	1386.8	3661.1	5311.7	4748.4	2831.5	1075.0
80°	381.9	358.3	400.8	639.0	1109.8	1334.7	2262.5	3254.7	2346.3	795.4	406.9
82.5°	224.9	214.7	250.0	432.5	892.0	1250.9	1509.0	1808.6	960.0	336.4	216.2
85°	118.1	110.4	148.2	248.4	615.0	1142.0	1188.0	1082.7	463.6	146.2	103.3
87.5°	39.4	38.3	62.9	96.1	232.6	606.3	633.9	514.3	191.2	42.4	22.5
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°	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5	1141.5
2.5°	1387.9	1367.4	1249.8	1266.2	1281.5	1273.9	1269.3	1216.1	1211.0	1286.7	1280.5
5°	1748.8	1663.9	1563.7	1559.1	1493.2	1425.7	1439.0	1417.5	1423.7	1454.8	1457.9
7.5°	1939.4	1833.6	1738.0	1582.6	1450.7	1343.9	1360.8	1355.7	1341.9	1412.4	1431.3
10°	1935.9	1841.8	1733.9	1545.8	1456.9	1370.0	1265.7	1167.0	1137.9	1103.1	1106.2
12.5°	2063.7	1980.3	1745.2	1553.5	1432.9	1283.1	1087.8	979.9	876.7	874.6	848.6
15°	2103.5	2042.2	1769.2	1509.5	1264.7	1050.0	848.1	731.0	656.4	641.5	619.6
17.5°	2204.2	2108.1	1696.1	1367.4	1069.4	821.0	637.4	555.7	549.5	559.7	548.5
20°	2210.9	2055.0	1564.2	1157.3	859.3	622.1	519.9	479.0	501.0	526.0	525.0
22.5°	2205.3	1988.0	1450.2	978.4	645.6	499.9	455.5	446.3	466.7	504.0	508.6
25°	2148.0	1966.0	1307.6	803.6	524.0	428.4	416.1	421.7	447.3	491.2	491.2
27.5°	2207.8	1876.6	1128.7	653.8	440.6	381.3	390.0	404.3	423.3	473.4	482.6
30°	2188.4	1906.2	984.5	526.5	388.5	348.6	368.1	382.4	403.8	456.0	460.6
32.5°	2240.5	1827.0	863.4	442.7	354.3	335.8	340.4	359.9	388.0	428.9	437.1
35°	2320.3	1856.1	724.4	398.2	337.4	321.0	329.7	345.1	373.2	413.0	419.7
37.5°	2574.8	1854.6	628.2	373.7	334.3	318.0	322.0	332.8	365.5	401.8	417.1
40°	2738.4	1960.9	540.8	368.1	330.7	316.4	312.8	324.6	350.7	393.6	404.3
42.5°	3045.6	2025.8	503.0	366.0	330.2	307.7	304.2	318.0	343.5	383.4	399.7
45°	3370.2	2118.4	472.8	365.0	328.7	306.2	295.5	312.8	334.3	372.7	391.6
47.5°	3752.1	2314.1	456.0	361.4	325.6	308.2	292.4	301.1	325.1	363.5	382.4
50°	4252.0	2573.3	459.6	356.3	330.2	308.8	287.8	291.9	313.9	351.2	370.6
52.5°	4859.8	2974.6	482.6	358.3	333.3	306.2	285.8	283.7	302.6	335.3	354.8
55°	5592.4	3544.1	551.6	368.1	333.3	305.7	282.7	273.5	287.8	314.4	333.3
57.5°	6476.2	4203.5	686.5	372.7	330.7	302.6	276.0	259.7	268.4	290.4	308.2
60°	7235.3	4735.6	825.6	375.7	335.8	295.5	262.7	242.3	247.9	264.8	280.6
62.5°	7622.3	4884.9	867.5	373.2	349.7	290.9	246.9	223.9	224.4	238.7	253.0
65°	7694.9	4686.0	699.3	370.6	367.5	290.4	235.7	208.1	204.5	214.7	227.0
67.5°	7177.6	4067.5	504.5	365.0	369.6	287.3	228.0	195.3	186.1	193.2	203.5
70°	6094.4	3275.7	423.8	353.7	345.1	272.0	214.7	182.0	169.7	174.8	182.5
72.5°	4543.4	2423.5	369.6	329.7	300.6	232.6	194.3	167.2	154.4	158.0	163.6
75°	2524.2	1292.8	309.3	286.8	245.4	188.1	165.6	148.2	137.0	138.5	144.7
77.5°	838.3	476.9	227.0	227.5	185.6	145.2	136.5	126.8	118.1	118.6	123.7
80°	379.8	263.8	162.6	163.6	129.3	105.3	104.8	101.7	96.1	94.6	98.1
82.5°	220.3	160.0	111.4	106.3	83.3	68.5	76.2	74.6	73.1	67.5	68.5
85°	108.4	85.9	58.3	55.2	46.0	34.2	40.9	42.4	40.9	34.8	34.2
87.5°	26.6	28.1	14.3	13.3	7.7	3.6	6.1	6.1	7.7	5.1	2.6
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)