

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: P367486

Luminaire Tested: **MSA-SA2C-760-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367486  
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-SA2C-760-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 12104 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

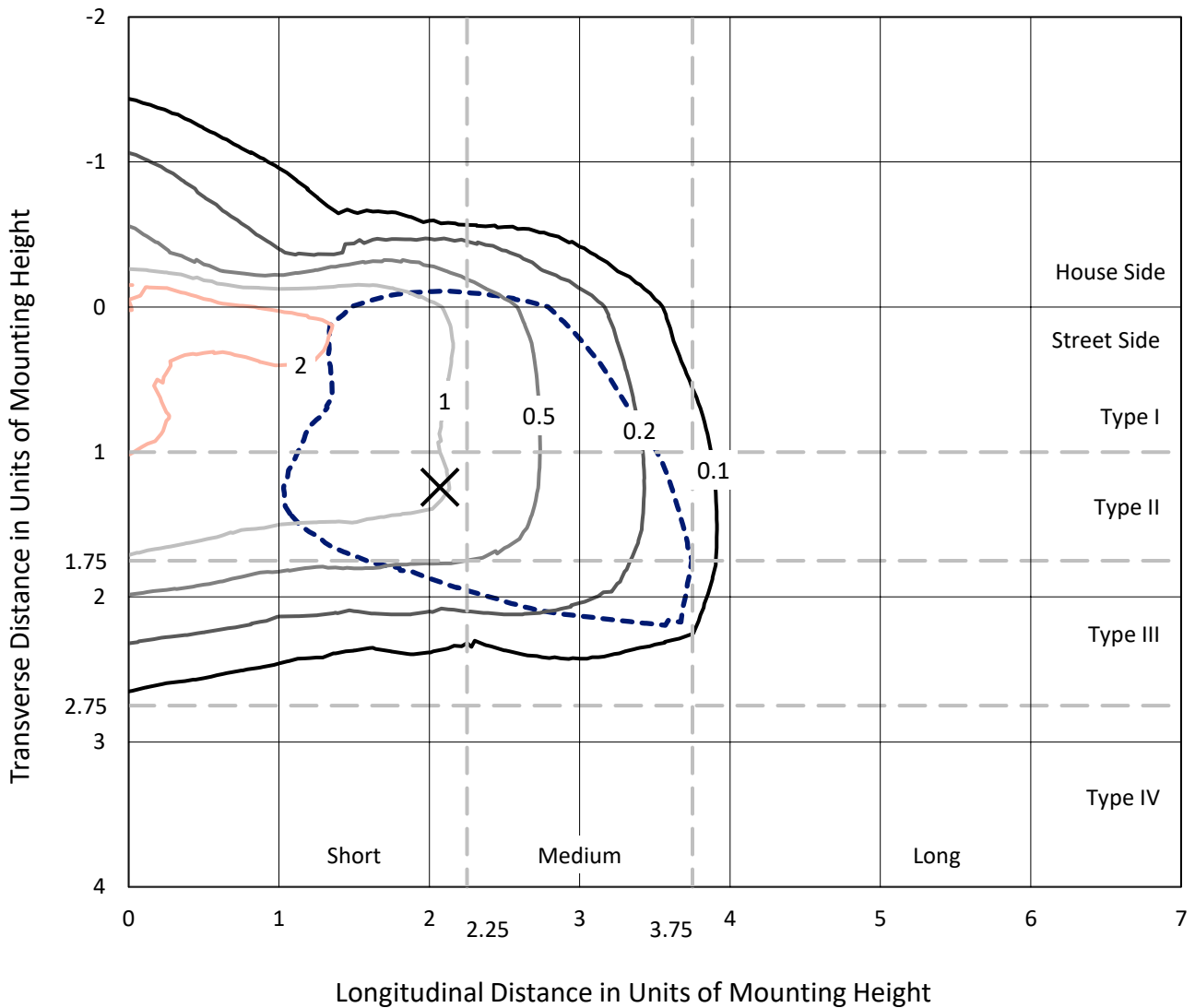
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

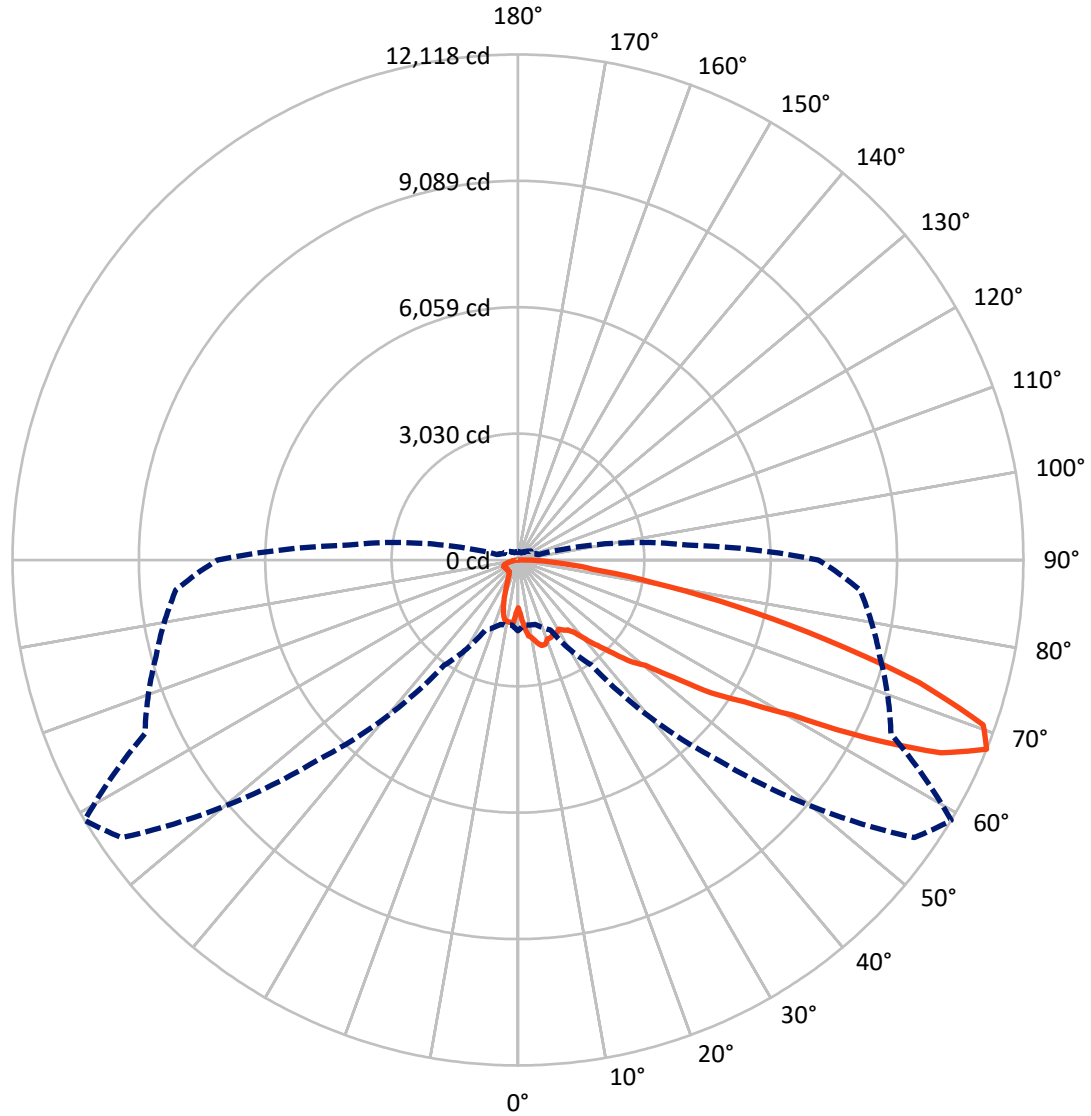
✕ Max cd  
 - - - 1/2 Max cd



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	1821.9	0.0	1821.9
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	10282.1	0.0	10282.1
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	12104.0	0.0	12104.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.6	1.2
10°-20°	442.7	3.7
20°-30°	632.2	5.2
30°-40°	931.5	7.7
40°-50°	1573.8	13.0
50°-60°	2738.8	22.6
60°-70°	3490.1	28.8
70°-80°	1848.0	15.3
80°-90°	297.3	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°	12104.0	100.0
0°-180°	12104.0	100.0

**Coefficient of Utilization**



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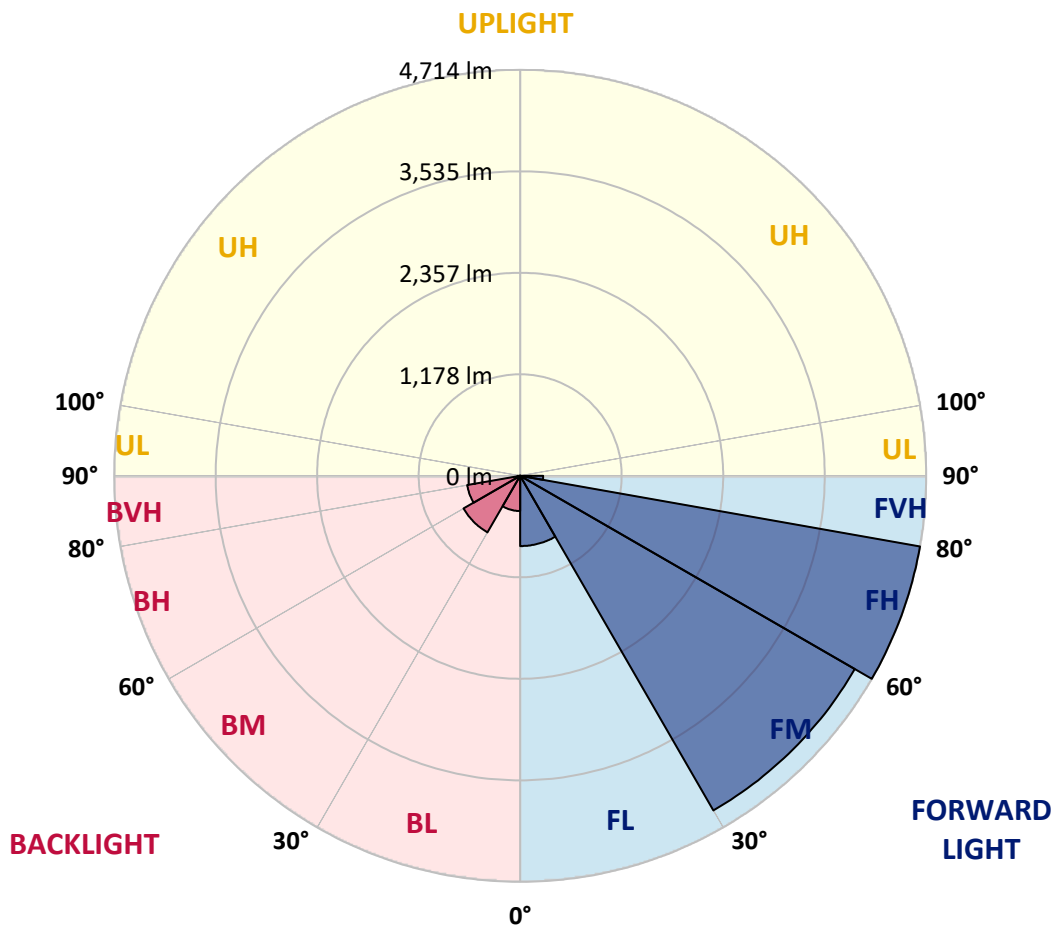
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	815.8	6.7			
FM (30°-60°)	4485.6	37.1			
FH (60°-80°)	4713.7	38.9			G2/5000
FVH (80°-90°)	267.0	2.2			G3/500
BL (0°-30°)	408.6	3.4	B1/500		
BM (30°-60°)	758.6	6.3	B1/1000		
BH (60°-80°)	624.4	5.2	B2/1000		G2/1000
BVH (80°-90°)	30.3	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°	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4
2.5°	1430.0	1363.3	1292.6	1312.6	1353.1	1371.6	1351.6	1332.1	1306.9	1277.2	1378.7
5°	1734.2	1635.2	1620.8	1620.3	1606.0	1548.5	1622.4	1617.2	1647.0	1677.8	1756.8
7.5°	1820.9	1783.9	1743.9	1762.9	1690.6	1687.5	1802.4	1835.2	1892.7	1873.7	1979.9
10°	1776.3	1734.7	1755.7	1748.0	1754.7	1830.6	1900.9	1902.9	1964.5	2025.0	1956.8
12.5°	1697.8	1700.9	1784.5	1781.4	1889.1	2030.1	2051.2	2034.8	2135.3	2094.3	2152.7
15°	1753.7	1791.1	1770.1	1788.1	1830.6	2010.1	2068.6	2128.1	2223.5	2260.5	2202.0
17.5°	1842.9	1862.9	1768.6	1758.8	1846.5	1931.7	2076.8	2127.6	2142.5	2405.6	2323.0
20°	1805.0	1845.5	1753.2	1634.7	1780.4	1893.2	2036.3	2020.9	2093.2	2416.9	2348.2
22.5°	1912.7	1845.5	1728.0	1643.9	1695.2	1798.8	1920.4	2021.4	2107.1	2350.7	2384.6
25°	1933.2	1901.4	1791.6	1708.0	1690.6	1727.5	1900.9	1967.1	2111.7	2441.0	2365.1
27.5°	2058.4	2010.7	1787.0	1789.6	1702.9	1637.8	1839.3	1978.3	2164.0	2385.1	2412.8
30°	2213.8	2177.4	1896.8	1907.0	1787.0	1667.0	1881.4	1923.5	2194.3	2472.3	2472.8
32.5°	2330.2	2394.3	2112.7	1973.2	1930.6	1840.9	1816.8	2006.0	2158.9	2630.3	2575.4
35°	2540.0	2589.7	2278.9	2167.1	2023.0	1921.9	1992.2	2060.4	2306.1	2838.0	2727.7
37.5°	2928.3	2870.8	2587.7	2411.8	2357.9	2212.2	2251.2	2203.5	2466.1	3071.4	3026.2
40°	3152.9	3103.2	2805.2	2707.7	2494.3	2512.8	2464.1	2499.0	2680.0	3319.6	3305.3
42.5°	3374.5	3307.8	3056.0	2988.3	2775.4	2685.2	2693.9	2806.7	3009.8	3720.7	3673.0
45°	3593.5	3422.7	3312.5	3330.4	3227.8	3042.7	3055.5	3161.7	3369.9	4179.3	4069.5
47.5°	3761.3	3620.2	3534.0	3512.0	3461.2	3708.9	3598.2	3641.2	3733.1	4587.6	4546.0
50°	4078.8	3914.1	3801.8	3770.0	3942.3	4287.0	4061.3	3968.5	4163.9	5115.4	5093.8
52.5°	4587.1	4381.9	4194.7	4192.6	4441.9	4665.5	4824.6	4664.5	4736.3	5656.0	5717.6
55°	5030.8	4793.3	4625.0	4717.9	5072.8	5209.8	5749.9	5624.7	5564.2	6201.8	6377.7
57.5°	5196.4	4918.9	4809.2	4946.1	5469.3	6173.0	6743.9	6414.6	6355.6	6819.3	7188.1
60°	4832.8	4539.4	4546.0	4804.0	5710.4	6880.4	7830.8	7551.3	7205.5	7588.2	7948.3
62.5°	3796.7	3531.5	3704.3	4096.7	5508.3	7567.7	9287.5	9405.5	8176.5	8225.7	8369.9
65°	2580.5	2396.9	2552.8	2937.0	4467.6	7942.6	10675.0	11147.9	9060.8	8643.3	8552.0
67.5°	1698.3	1568.5	1598.8	1854.2	3075.5	6771.1	11602.8	12118.3	9869.2	8985.9	8230.9
70°	1315.1	1210.5	1197.2	1331.0	1824.0	4704.0	11053.0	11836.7	10361.6	8664.8	7174.3
72.5°	1032.0	952.5	959.7	1088.4	1412.6	2609.8	8553.0	10065.6	9619.9	7472.8	5511.9
75°	804.8	739.6	776.1	923.3	1306.4	1621.9	5901.2	7639.5	7437.4	5533.4	3143.7
77.5°	584.2	542.2	594.0	786.3	1227.9	1391.6	3673.6	5329.8	4764.5	2841.1	1078.7
80°	383.2	359.6	402.1	641.2	1113.6	1339.2	2270.2	3265.8	2354.3	798.1	408.3
82.5°	225.7	215.4	250.8	433.9	895.1	1255.1	1514.1	1814.7	963.3	337.5	217.0
85°	118.5	110.8	148.7	249.3	617.0	1145.9	1192.0	1086.4	465.2	146.7	103.6
87.5°	39.5	38.5	63.1	96.4	233.4	608.3	636.0	516.0	191.8	42.6	22.6
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°	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4	1145.4
2.5°	1392.6	1372.1	1254.1	1270.5	1285.9	1278.2	1273.6	1220.2	1215.1	1291.0	1284.9
5°	1754.7	1669.6	1569.0	1564.4	1498.2	1430.5	1443.9	1422.3	1428.5	1459.8	1462.9
7.5°	1946.0	1839.9	1743.9	1588.0	1455.7	1348.5	1365.4	1360.3	1346.4	1417.2	1436.2
10°	1942.4	1848.1	1739.8	1551.1	1461.8	1374.6	1270.0	1171.0	1141.8	1106.9	1110.0
12.5°	2070.7	1987.1	1751.1	1558.8	1437.7	1287.4	1091.5	983.3	879.7	877.6	851.5
15°	2110.7	2049.1	1775.2	1514.7	1269.0	1053.5	850.9	733.5	658.6	643.7	621.7
17.5°	2211.7	2115.3	1701.9	1372.1	1073.0	823.8	639.6	557.5	551.4	561.7	550.4
20°	2218.4	2062.0	1569.5	1161.3	862.2	624.2	521.6	480.6	502.7	527.8	526.8
22.5°	2212.8	1994.8	1455.2	981.7	647.8	501.6	457.0	447.8	468.3	505.7	510.4
25°	2155.3	1972.7	1312.1	806.3	525.7	429.8	417.5	423.2	448.8	492.9	492.9
27.5°	2215.3	1882.9	1132.5	656.0	442.1	382.6	391.4	405.7	424.7	475.0	484.2
30°	2195.8	1912.7	987.9	528.3	389.8	349.8	369.3	383.7	405.2	457.5	462.1
32.5°	2248.1	1833.2	866.3	444.2	355.5	337.0	341.6	361.1	389.3	430.3	438.5
35°	2328.2	1862.4	726.8	399.6	338.5	322.1	330.8	346.2	374.4	414.4	421.1
37.5°	2583.6	1860.9	630.4	374.9	335.5	319.0	323.1	333.9	366.7	403.2	418.5
40°	2747.7	1967.6	542.7	369.3	331.9	317.5	313.9	325.7	351.9	395.0	405.7
42.5°	3056.0	2032.7	504.7	367.3	331.3	308.8	305.2	319.0	344.7	384.7	401.1
45°	3381.7	2125.6	474.5	366.2	329.8	307.2	296.5	313.9	335.5	373.9	392.9
47.5°	3764.9	2322.0	457.5	362.6	326.7	309.3	293.4	302.1	326.2	364.7	383.7
50°	4266.5	2582.1	461.1	357.5	331.3	309.8	288.8	292.9	314.9	352.4	371.9
52.5°	4876.4	2984.7	484.2	359.6	334.4	307.2	286.7	284.7	303.7	336.5	356.0
55°	5611.4	3556.1	553.4	369.3	334.4	306.7	283.6	274.4	288.8	315.4	334.4
57.5°	6498.2	4217.8	688.9	373.9	331.9	303.7	277.0	260.6	269.3	291.3	309.3
60°	7259.9	4751.7	828.4	377.0	337.0	296.5	263.6	243.1	248.8	265.7	281.6
62.5°	7648.2	4901.5	870.4	374.4	350.8	291.9	247.7	224.7	225.2	239.5	253.9
65°	7721.0	4702.0	701.7	371.9	368.8	291.3	236.5	208.8	205.2	215.4	227.7
67.5°	7202.0	4081.3	506.3	366.2	370.8	288.3	228.8	195.9	186.7	193.9	204.1
70°	6115.1	3286.8	425.2	354.9	346.2	272.9	215.4	182.6	170.3	175.4	183.1
72.5°	4558.9	2431.8	370.8	330.8	301.6	233.4	194.9	167.7	154.9	158.5	164.1
75°	2532.8	1297.2	310.3	287.7	246.2	188.8	166.2	148.7	137.5	139.0	145.2
77.5°	841.2	478.6	227.7	228.3	186.2	145.7	137.0	127.2	118.5	119.0	124.1
80°	381.1	264.7	163.1	164.1	129.8	105.7	105.1	102.1	96.4	94.9	98.5
82.5°	221.1	160.5	111.8	106.7	83.6	68.7	76.4	74.9	73.3	67.7	68.7
85°	108.7	86.2	58.5	55.4	46.2	34.4	41.0	42.6	41.0	34.9	34.4
87.5°	26.7	28.2	14.4	13.3	7.7	3.6	6.2	6.2	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)