

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: P367838

Luminaire Tested: **MSA-SA3B-740-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367838  
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-740-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: 14424 lumens  
Efficiency: N/A  
Efficacy: 114.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

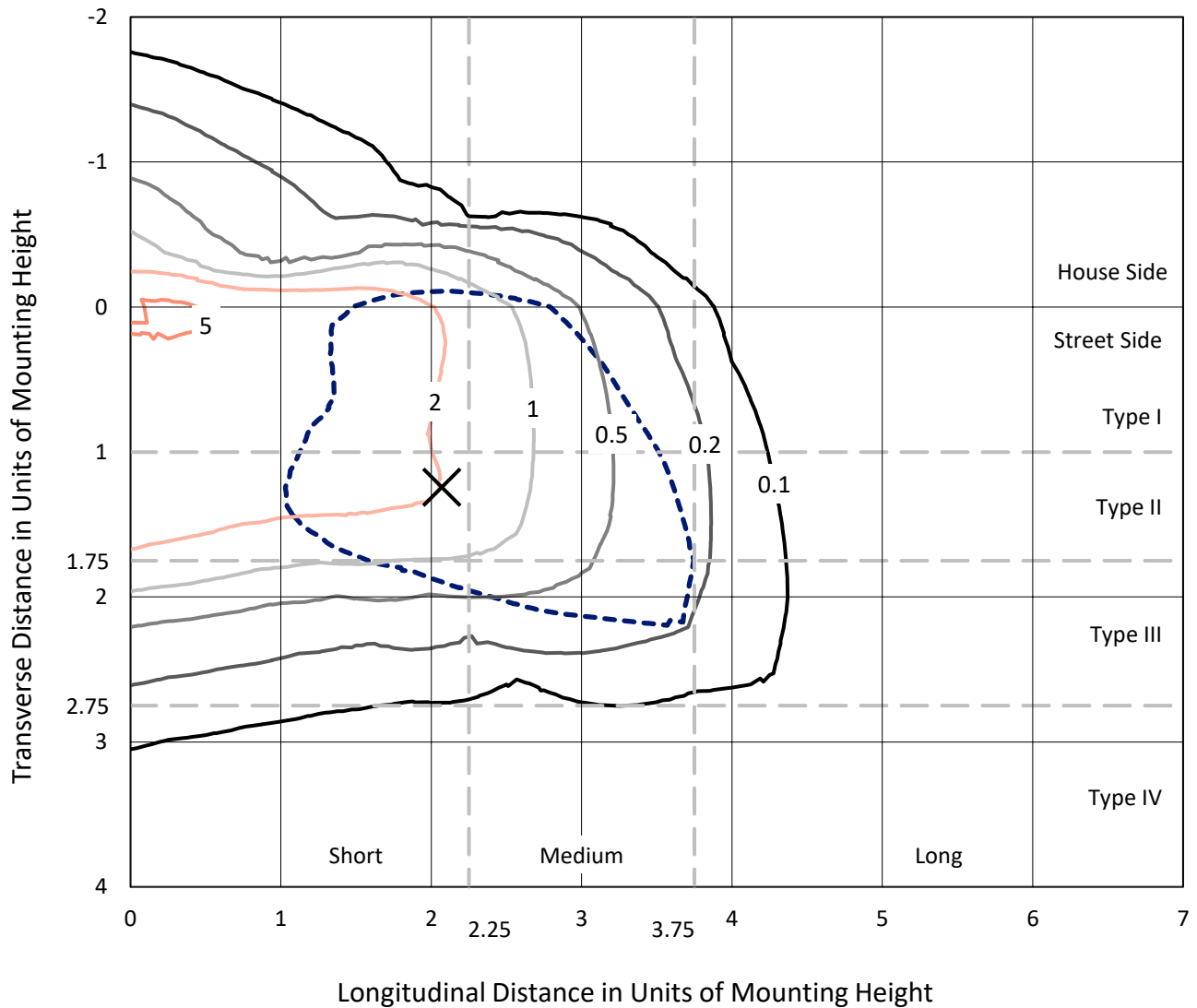
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

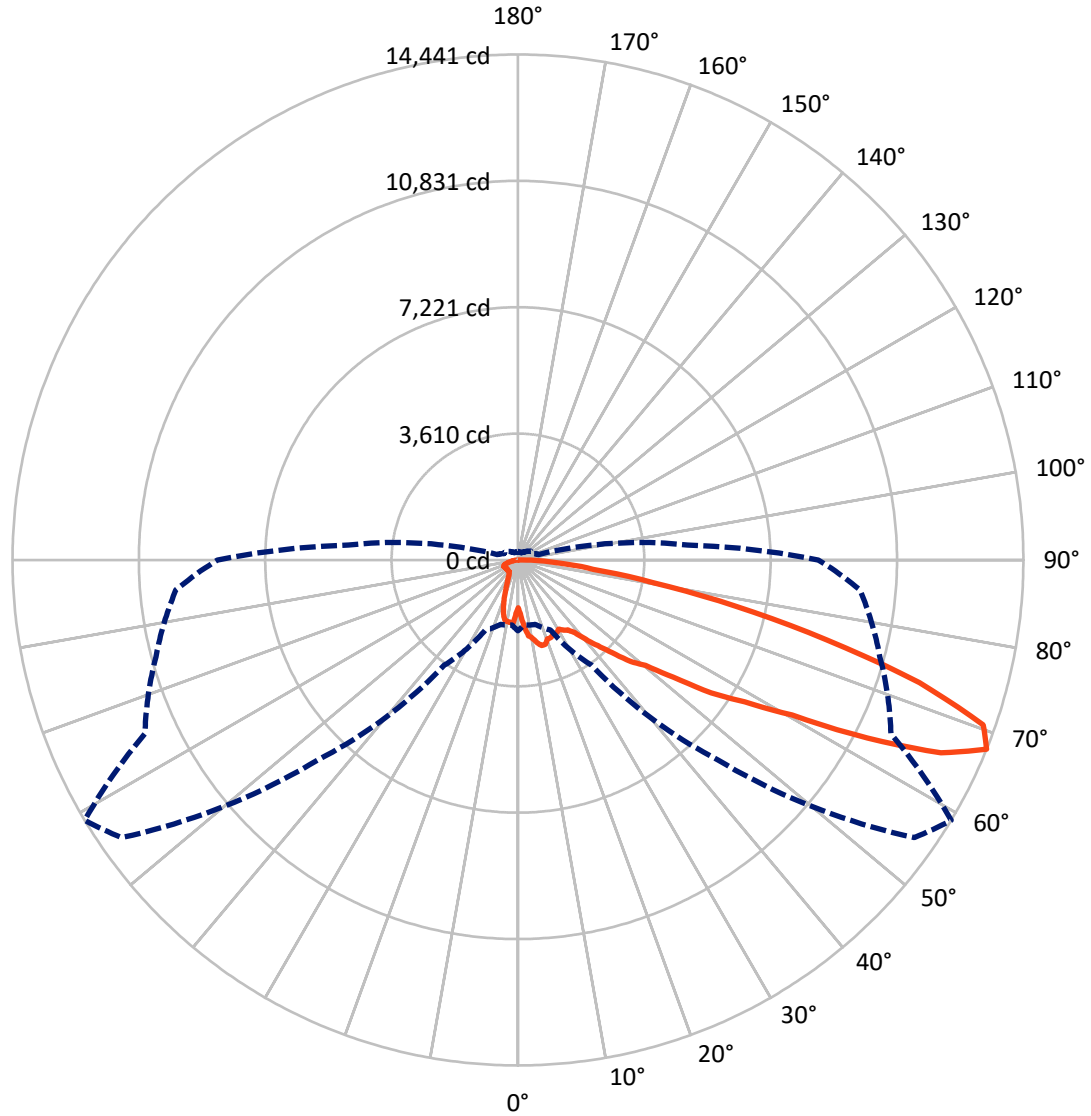
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.8 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	2171.1	0.0	2171.1
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	12252.9	0.0	12252.9
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	14424.0	0.0	14424.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.3	1.2
10°-20°	527.5	3.7
20°-30°	753.3	5.2
30°-40°	1110.1	7.7
40°-50°	1875.5	13.0
50°-60°	3263.8	22.6
60°-70°	4159.0	28.8
70°-80°	2202.2	15.3
80°-90°	354.3	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°	14424.0	100.0
0°-180°	14424.0	100.0

**Coefficient of Utilization**



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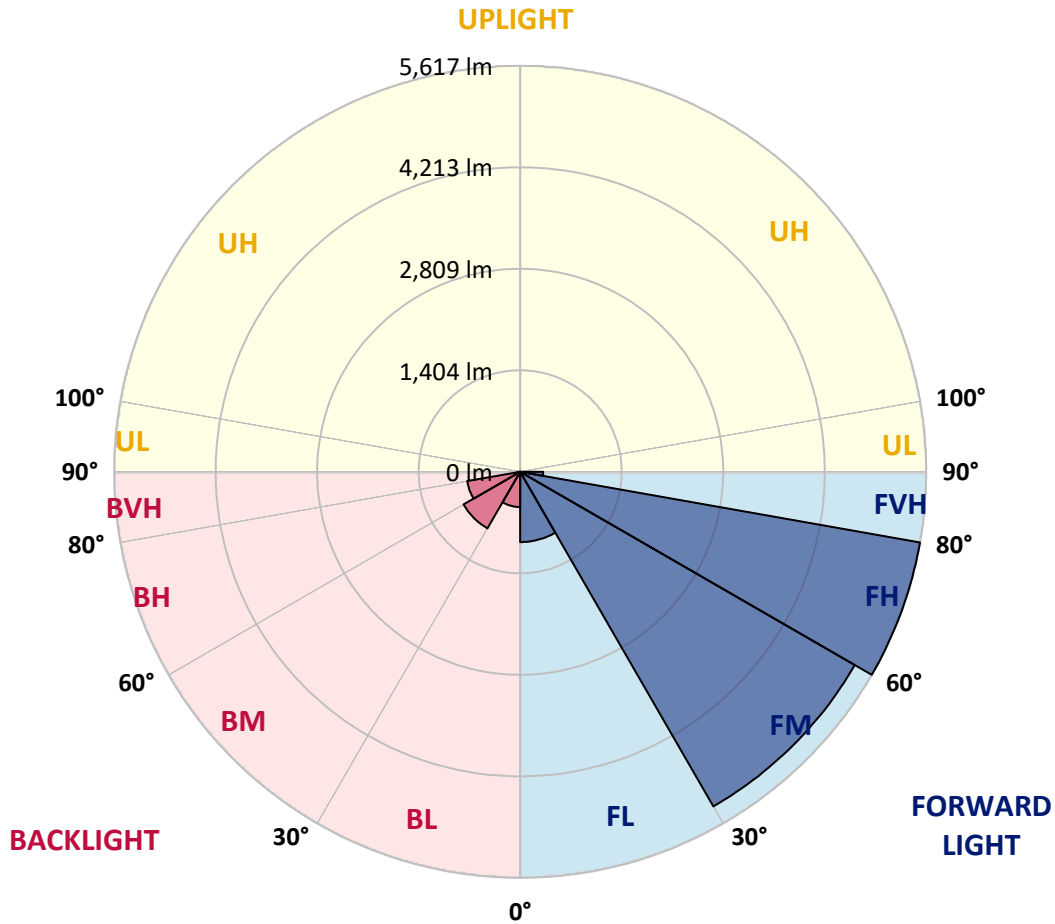
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	972.2	6.7			
FM (30°-60°)	5345.3	37.1			
FH (60°-80°)	5617.1	38.9			G3/7500
FVH (80°-90°)	318.2	2.2			G3/500
BL (0°-30°)	486.9	3.4	B1/500		
BM (30°-60°)	904.0	6.3	B1/1000		
BH (60°-80°)	744.1	5.2	B2/1000		G2/1000
BVH (80°-90°)	36.1	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°	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9
2.5°	1704.1	1624.7	1540.3	1564.2	1612.4	1634.4	1610.6	1587.4	1557.4	1522.0	1643.0
5°	2066.6	1948.6	1931.5	1930.9	1913.8	1845.3	1933.3	1927.2	1962.7	1999.4	2093.5
7.5°	2169.9	2125.9	2078.2	2100.8	2014.6	2011.0	2147.9	2187.0	2255.5	2232.8	2359.4
10°	2116.7	2067.2	2092.3	2083.1	2091.0	2181.5	2265.2	2267.7	2341.0	2413.2	2331.9
12.5°	2023.2	2026.9	2126.5	2122.8	2251.2	2419.3	2444.3	2424.8	2544.6	2495.7	2565.4
15°	2089.8	2134.4	2109.4	2130.8	2181.5	2395.4	2465.1	2536.0	2649.7	2693.7	2624.0
17.5°	2196.2	2220.0	2107.5	2095.9	2200.5	2301.9	2474.9	2535.4	2553.1	2866.7	2768.3
20°	2150.9	2199.2	2089.2	1948.0	2121.6	2256.1	2426.6	2408.3	2494.5	2880.1	2798.2
22.5°	2279.3	2199.2	2059.3	1959.0	2020.1	2143.6	2288.5	2408.9	2511.0	2801.3	2841.6
25°	2303.7	2265.9	2135.0	2035.4	2014.6	2058.6	2265.2	2344.1	2516.5	2908.9	2818.4
27.5°	2452.9	2396.0	2129.5	2132.6	2029.3	1951.7	2191.9	2357.5	2578.8	2842.2	2875.3
30°	2638.1	2594.7	2260.4	2272.6	2129.5	1986.5	2242.0	2292.1	2614.9	2946.2	2946.8
32.5°	2776.8	2853.3	2517.7	2351.4	2300.7	2193.7	2165.0	2390.5	2572.7	3134.4	3069.0
35°	3026.8	3086.1	2715.7	2582.5	2410.7	2290.3	2374.0	2455.3	2748.1	3382.0	3250.6
37.5°	3489.5	3421.1	3083.7	2874.0	2809.9	2636.3	2682.7	2625.9	2938.8	3660.1	3606.3
40°	3757.3	3698.0	3342.9	3226.7	2972.4	2994.4	2936.4	2977.9	3193.7	3955.9	3938.8
42.5°	4021.3	3941.9	3641.7	3561.1	3307.4	3199.8	3210.2	3344.7	3586.7	4433.9	4377.1
45°	4282.3	4078.8	3947.4	3968.8	3846.5	3625.9	3641.1	3767.7	4015.8	4980.4	4849.5
47.5°	4482.2	4314.1	4211.4	4185.1	4124.6	4419.8	4287.8	4339.2	4448.6	5466.9	5417.4
50°	4860.6	4664.3	4530.5	4492.6	4698.0	5108.7	4839.8	4729.1	4962.0	6095.9	6070.2
52.5°	5466.3	5221.8	4998.7	4996.2	5293.3	5559.8	5749.3	5558.6	5644.2	6740.1	6813.5
55°	5995.0	5712.0	5511.5	5622.2	6045.1	6208.3	6852.0	6702.8	6630.7	7390.5	7600.1
57.5°	6192.4	5861.8	5731.0	5894.2	6517.6	7356.2	8036.5	7644.1	7573.8	8126.4	8565.9
60°	5759.1	5409.4	5417.4	5724.8	6804.9	8199.1	9331.7	8998.6	8586.6	9042.6	9471.7
62.5°	4524.4	4208.4	4414.3	4881.9	6564.1	9018.2	11067.7	11208.2	9743.7	9802.4	9974.2
65°	3075.1	2856.3	3042.1	3499.9	5323.9	9465.0	12721.0	13284.6	10797.5	10299.9	10191.1
67.5°	2023.8	1869.2	1905.2	2209.6	3665.0	8068.9	13826.8	14441.1	11760.8	10708.2	9808.5
70°	1567.2	1442.5	1426.6	1586.2	2173.6	5605.6	13171.5	14105.5	12347.6	10325.6	8549.4
72.5°	1229.8	1135.1	1143.6	1297.0	1683.3	3110.0	10192.4	11994.9	11463.7	8905.1	6568.3
75°	959.0	881.4	924.8	1100.2	1556.8	1932.7	7032.3	9103.8	8862.9	6594.0	3746.3
77.5°	696.2	646.1	707.8	937.0	1463.3	1658.3	4377.7	6351.4	5677.8	3385.6	1285.4
80°	456.6	428.5	479.2	764.0	1327.0	1595.9	2705.3	3891.7	2805.6	951.1	486.5
82.5°	268.9	256.7	298.9	517.1	1066.6	1495.7	1804.4	2162.6	1147.9	402.2	258.6
85°	141.2	132.0	177.3	297.1	735.3	1365.5	1420.5	1294.6	554.4	174.8	123.5
87.5°	47.1	45.8	75.2	114.9	278.1	724.9	757.9	614.9	228.6	50.7	26.9
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°	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9	1364.9
2.5°	1659.5	1635.1	1494.5	1514.0	1532.4	1523.2	1517.7	1454.1	1448.0	1538.5	1531.1
5°	2091.0	1989.6	1869.8	1864.3	1785.4	1704.7	1720.6	1695.0	1702.3	1739.6	1743.2
7.5°	2319.0	2192.5	2078.2	1892.4	1734.7	1606.9	1627.1	1621.0	1604.5	1688.8	1711.5
10°	2314.8	2202.3	2073.3	1848.4	1742.0	1638.1	1513.4	1395.5	1360.6	1319.0	1322.7
12.5°	2467.6	2367.9	2086.8	1857.5	1713.3	1534.2	1300.7	1171.7	1048.3	1045.8	1014.7
15°	2515.2	2441.9	2115.5	1805.0	1512.2	1255.5	1014.0	874.1	784.8	767.1	740.8
17.5°	2635.7	2520.7	2028.1	1635.1	1278.7	981.6	762.2	664.4	657.1	669.3	655.9
20°	2643.6	2457.2	1870.4	1383.8	1027.5	743.9	621.6	572.7	599.0	629.0	627.7
22.5°	2636.9	2377.1	1734.1	1169.9	772.0	597.8	544.6	533.6	558.1	602.7	608.2
25°	2568.4	2350.8	1563.5	960.9	626.5	512.2	497.5	504.3	534.8	587.4	587.4
27.5°	2639.9	2243.8	1349.6	781.8	526.9	456.0	466.4	483.5	506.1	566.0	577.0
30°	2616.7	2279.3	1177.2	629.6	464.5	416.9	440.1	457.2	482.9	545.2	550.7
32.5°	2679.0	2184.6	1032.4	529.3	423.6	401.6	407.1	430.3	463.9	512.8	522.6
35°	2774.4	2219.4	866.1	476.2	403.4	383.9	394.2	412.6	446.2	493.9	501.8
37.5°	3078.8	2217.6	751.2	446.8	399.7	380.2	385.1	397.9	437.0	480.4	498.8
40°	3274.4	2344.7	646.7	440.1	395.5	378.4	374.1	388.1	419.3	470.7	483.5
42.5°	3641.7	2422.3	601.5	437.6	394.9	368.0	363.7	380.2	410.8	458.4	478.0
45°	4029.9	2533.0	565.4	436.4	393.0	366.1	353.3	374.1	399.7	445.6	468.2
47.5°	4486.5	2767.1	545.2	432.1	389.4	368.6	349.6	360.0	388.7	434.6	457.2
50°	5084.3	3077.0	549.5	426.0	394.9	369.2	344.1	349.0	375.3	419.9	443.1
52.5°	5811.0	3556.8	577.0	428.5	398.5	366.1	341.7	339.2	361.9	401.0	424.2
55°	6686.9	4237.7	659.5	440.1	398.5	365.5	338.0	327.0	344.1	375.9	398.5
57.5°	7743.8	5026.2	820.9	445.6	395.5	361.9	330.1	310.5	320.9	347.2	368.6
60°	8651.4	5662.5	987.1	449.3	401.6	353.3	314.2	289.7	296.4	316.6	335.6
62.5°	9114.1	5841.0	1037.3	446.2	418.1	347.8	295.2	267.7	268.3	285.4	302.6
65°	9200.9	5603.2	836.2	443.1	439.5	347.2	281.8	248.8	244.5	256.7	271.4
67.5°	8582.4	4863.6	603.3	436.4	441.9	343.5	272.6	233.5	222.5	231.0	243.3
70°	7287.2	3916.8	506.7	423.0	412.6	325.2	256.7	217.6	202.9	209.0	218.2
72.5°	5432.7	2897.9	441.9	394.2	359.4	278.1	232.3	199.9	184.6	188.9	195.6
75°	3018.3	1545.8	369.8	342.9	293.4	224.9	198.0	177.3	163.8	165.6	173.0
77.5°	1002.4	570.3	271.4	272.0	221.9	173.6	163.2	151.6	141.2	141.8	147.9
80°	454.1	315.4	194.4	195.6	154.6	125.9	125.3	121.6	114.9	113.1	117.4
82.5°	263.4	191.3	133.2	127.1	99.6	81.9	91.1	89.2	87.4	80.7	81.9
85°	129.6	102.7	69.7	66.0	55.0	41.0	48.9	50.7	48.9	41.6	41.0
87.5°	31.8	33.6	17.1	15.9	9.2	4.3	7.3	7.3	9.2	6.1	3.1
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)