

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: P368210

Luminaire Tested: **MSA-SA4A-730-U-SL2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368210  
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-SA4A-730-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 14026 lumens  
Efficiency: N/A  
Efficacy: 108.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G3

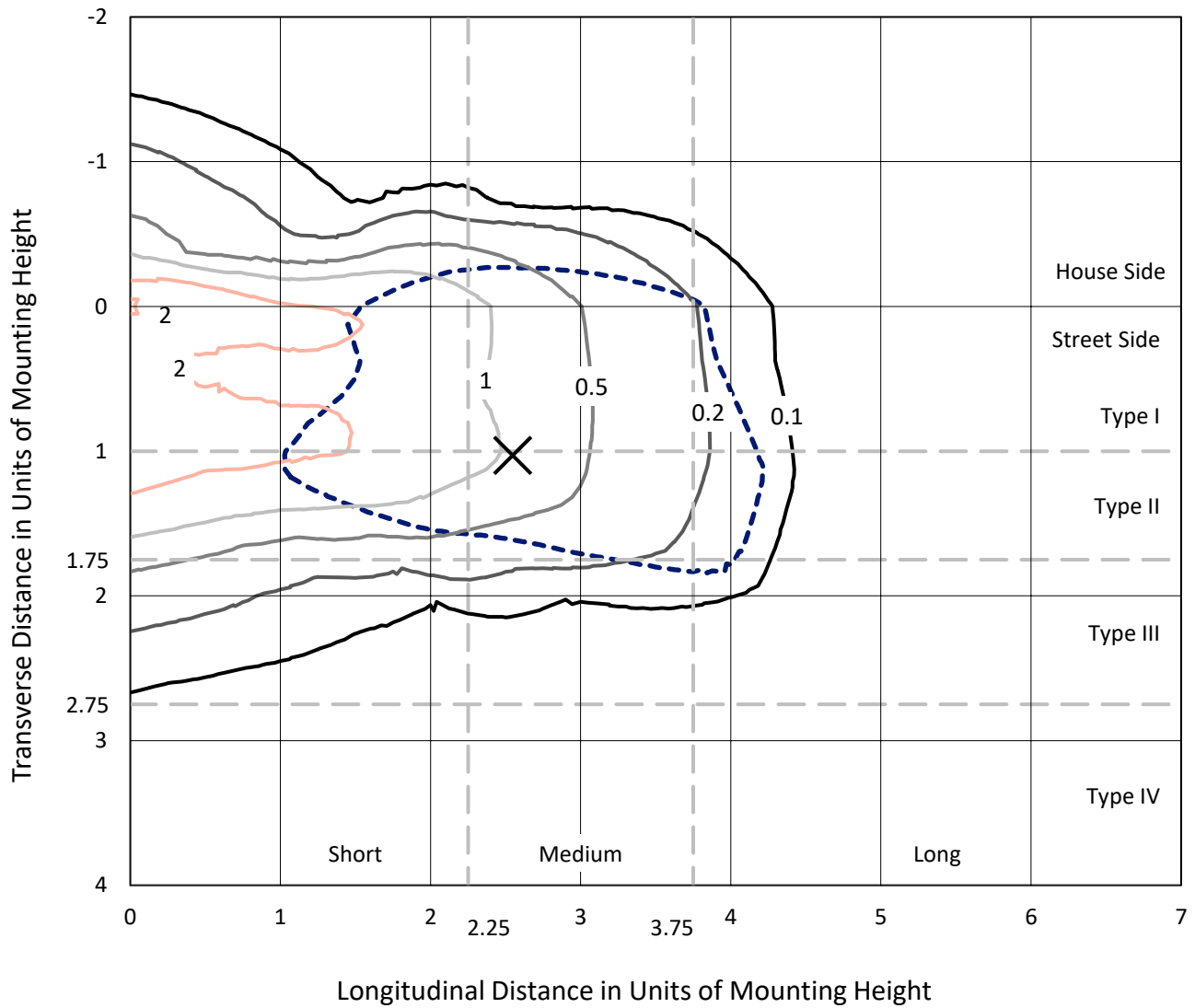
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

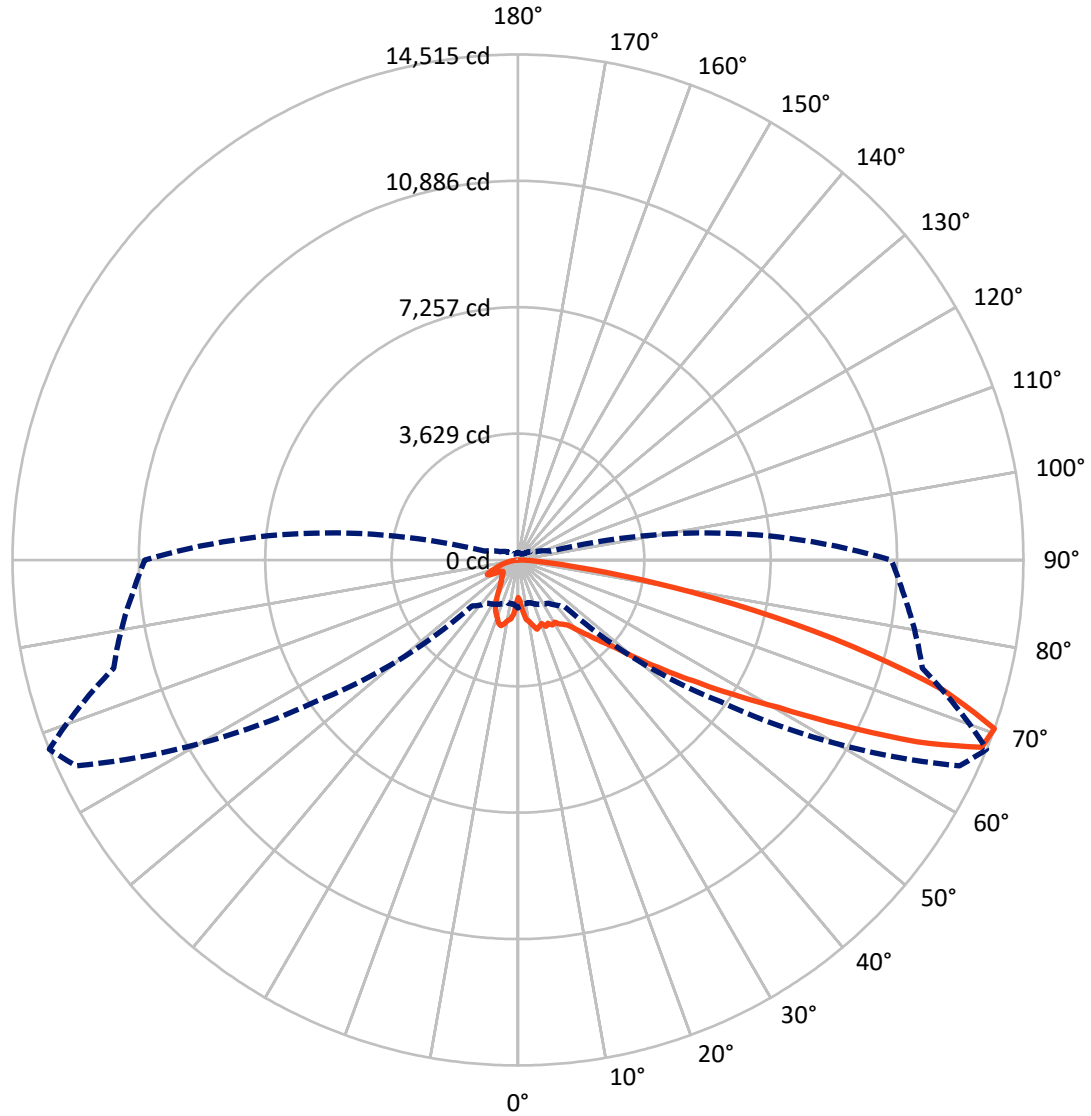
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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	2677.9	0.0	2677.9
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	11348.1	0.0	11348.1
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	14026.0	0.0	14026.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.6	1.0
10°-20°	468.1	3.3
20°-30°	712.1	5.1
30°-40°	1087.7	7.8
40°-50°	1870.3	13.3
50°-60°	3095.7	22.1
60°-70°	3816.5	27.2
70°-80°	2451.7	17.5
80°-90°	380.3	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°	14026.0	100.0
0°-180°	14026.0	100.0

**Coefficient of Utilization**

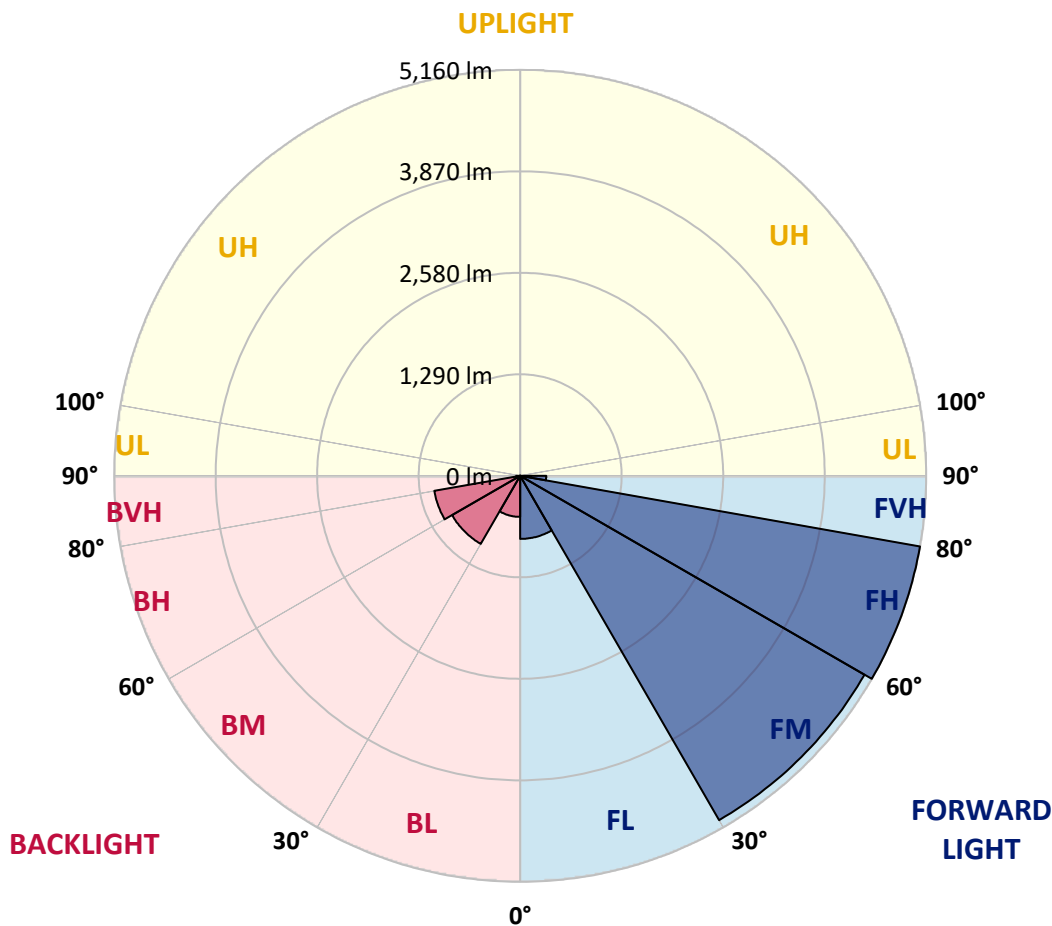


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	802.0	5.7			
FM (30°-60°)	5054.1	36.0			
FH (60°-80°)	5160.5	36.8			G3/7500
FVH (80°-90°)	331.5	2.4			G3/500
BL (0°-30°)	521.8	3.7	B2/1000		
BM (30°-60°)	999.6	7.1	B1/1000		
BH (60°-80°)	1107.7	7.9	B3/2500		G3/2500
BVH (80°-90°)	48.8	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4
2.5°	1235.7	1185.8	1135.3	1160.0	1199.3	1233.9	1226.9	1231.0	1183.4	1177.0	1302.0
5°	1455.8	1370.1	1368.3	1369.5	1373.0	1333.1	1430.6	1481.1	1492.2	1543.9	1666.6
7.5°	1532.1	1497.5	1462.3	1479.9	1435.3	1439.4	1559.1	1690.6	1721.7	1759.3	1927.2
10°	1516.3	1483.4	1494.0	1496.9	1505.1	1571.5	1648.4	1774.6	1801.0	1920.7	1964.2
12.5°	1518.6	1512.8	1562.1	1563.8	1651.9	1771.0	1801.6	1917.8	1928.4	2016.4	2197.8
15°	1599.0	1639.6	1612.0	1626.6	1643.7	1786.3	1830.3	1997.0	2060.4	2173.7	2309.9
17.5°	1755.8	1767.5	1684.8	1663.0	1718.8	1762.2	1862.6	1934.8	2001.2	2317.6	2505.4
20°	1792.2	1823.9	1725.3	1613.1	1731.1	1791.6	1861.4	1894.3	1946.0	2338.7	2605.2
22.5°	1948.3	1882.6	1763.4	1666.0	1704.7	1763.4	1813.9	1937.8	2073.4	2278.2	2705.0
25°	2037.0	1998.8	1892.6	1788.1	1755.2	1757.0	1854.4	1965.3	2012.3	2366.9	2725.0
27.5°	2251.2	2190.2	1951.3	1931.3	1807.4	1711.2	1860.9	2033.4	2115.6	2297.6	2822.4
30°	2519.5	2473.1	2159.7	2133.2	1944.2	1776.3	1943.0	2083.9	2072.2	2342.8	2889.9
32.5°	2736.7	2814.2	2497.8	2289.4	2155.0	1994.1	1917.2	2075.1	2191.9	2447.9	3004.4
35°	3046.6	3119.4	2761.3	2620.5	2328.7	2095.1	2097.4	2196.0	2268.3	2570.6	3132.3
37.5°	3583.2	3519.2	3231.0	3008.5	2821.8	2473.1	2368.6	2334.0	2392.1	2720.8	3383.0
40°	3970.0	3916.0	3576.7	3449.9	3086.6	2884.0	2597.6	2564.7	2667.4	2875.8	3587.9
42.5°	4428.5	4332.2	4016.4	3911.9	3532.1	3167.0	2878.2	2897.0	2946.8	3168.2	3864.9
45°	4895.2	4661.5	4482.5	4474.3	4220.7	3716.4	3328.4	3313.1	3314.9	3598.4	4176.1
47.5°	5265.6	5055.4	4850.6	4753.1	4625.1	4666.8	3982.4	3803.3	3749.3	4031.7	4642.8
50°	5516.2	5274.4	5042.5	5019.6	5361.3	5586.1	4596.4	4405.0	4438.5	4651.6	5265.0
52.5°	5521.5	5234.5	4992.6	5152.9	5957.7	6279.4	5654.2	5119.4	5226.3	5371.2	6076.8
55°	5137.6	4840.0	4682.7	5047.8	6190.7	7101.8	7140.5	6264.1	6140.8	6194.2	7047.2
57.5°	4328.1	4027.6	3936.0	4373.3	5748.7	7894.9	8935.6	7631.9	7270.3	7047.2	8041.6
60°	3258.0	2997.9	2941.0	3219.8	4766.0	7661.8	10389.1	9334.2	8597.5	7999.9	9039.0
62.5°	2443.2	2256.5	2170.8	2210.7	3297.9	6904.0	11343.6	11485.1	10441.9	9040.1	10013.4
65°	1985.3	1834.4	1758.1	1706.5	2051.1	5338.4	11171.0	13295.4	12596.3	10132.6	10771.8
67.5°	1658.3	1524.5	1489.3	1539.8	1621.4	3097.1	9820.9	14308.1	14355.6	11210.3	11215.0
70°	1376.6	1277.4	1264.4	1407.7	1515.1	1869.1	7093.6	13989.9	14514.7	12018.7	11111.1
72.5°	1063.7	1010.3	1008.5	1233.3	1505.1	1593.2	4224.2	12085.6	12790.6	11760.4	10094.4
75°	737.9	700.9	729.1	1013.8	1470.5	1616.1	2410.9	9413.5	9941.2	10007.5	8086.2
77.5°	507.8	476.7	507.2	733.2	1313.2	1654.8	1686.5	6806.5	6865.2	6710.8	4631.6
80°	353.4	331.7	355.1	518.9	1022.0	1637.8	1435.9	4285.3	3931.9	2995.0	1482.8
82.5°	219.0	212.5	238.3	369.8	719.7	1489.9	1360.7	2211.3	1688.3	826.5	529.5
85°	115.1	105.7	138.5	241.3	450.2	1169.3	1275.0	1009.1	651.6	293.5	212.5
87.5°	34.0	30.5	53.4	97.4	190.8	524.2	729.7	427.9	243.0	86.3	66.3
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°	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4	1075.4
2.5°	1310.8	1304.4	1217.5	1228.6	1247.4	1252.1	1251.5	1219.8	1186.4	1279.7	1276.8
5°	1669.5	1611.4	1567.9	1558.5	1505.1	1451.7	1470.5	1464.0	1455.8	1498.1	1503.4
7.5°	1927.8	1847.4	1796.9	1667.1	1543.9	1437.0	1471.1	1481.6	1460.5	1536.8	1559.7
10°	1995.9	1932.5	1877.9	1711.2	1643.1	1580.8	1488.7	1383.6	1369.5	1325.5	1330.8
12.5°	2171.4	2162.6	1976.5	1829.7	1741.1	1617.2	1418.2	1290.9	1181.7	1187.0	1155.3
15°	2309.9	2314.6	2091.0	1885.5	1647.8	1458.7	1224.5	1066.0	953.9	931.6	908.7
17.5°	2496.0	2486.6	2100.4	1818.6	1517.5	1240.4	953.3	796.0	777.2	790.1	770.2
20°	2577.0	2494.3	2040.5	1652.5	1313.8	942.2	720.3	636.9	673.3	725.0	726.1
22.5°	2649.8	2508.3	2009.4	1518.6	1042.5	685.1	578.2	563.0	605.8	675.7	681.5
25°	2646.9	2573.5	1953.6	1383.6	808.3	534.8	502.5	513.6	564.7	637.5	641.6
27.5°	2780.1	2523.6	1808.6	1206.3	608.7	457.9	466.1	486.6	510.7	580.0	593.5
30°	2779.0	2616.4	1735.8	990.9	489.0	419.7	440.9	458.5	478.4	541.8	549.5
32.5°	2844.7	2555.9	1691.8	770.8	438.5	410.3	415.6	433.2	462.0	504.8	510.1
35°	2924.0	2624.6	1550.9	612.3	419.7	402.1	406.2	416.2	442.6	481.9	487.2
37.5°	3178.1	2637.5	1495.1	516.0	418.5	398.6	398.0	403.3	433.2	469.0	484.9
40°	3277.3	2755.5	1332.5	481.9	414.4	398.6	390.4	393.3	418.0	463.7	476.1
42.5°	3515.1	2794.8	1212.2	470.2	414.4	391.5	378.6	383.3	412.1	452.6	472.0
45°	3759.9	2850.6	1069.0	467.9	413.9	391.0	366.3	376.9	400.3	434.4	455.5
47.5°	4108.6	3051.3	925.7	460.8	409.2	393.9	363.4	362.8	383.3	412.7	432.6
50°	4677.4	3364.8	814.8	452.0	409.7	391.5	357.5	349.3	362.8	388.6	408.0
52.5°	5469.3	3899.0	771.3	447.3	405.0	382.2	347.5	334.6	342.2	362.8	381.6
55°	6388.6	4620.4	814.2	447.3	395.7	367.5	333.4	318.2	322.3	336.4	354.6
57.5°	7462.8	5516.8	1021.4	440.9	383.9	349.9	316.4	298.8	300.0	312.3	328.7
60°	8584.6	6518.3	1485.8	435.6	375.7	330.5	296.4	278.2	276.5	288.2	302.9
62.5°	9708.2	7442.3	1974.2	447.9	373.3	314.1	275.3	257.1	256.5	267.1	279.4
65°	10601.6	8073.9	2095.7	497.8	388.6	295.3	253.6	236.6	235.4	244.2	257.7
67.5°	11040.1	8165.5	1592.0	560.0	420.9	277.7	232.5	216.6	215.4	224.8	236.6
70°	10715.5	7539.7	982.7	566.5	419.1	257.1	210.7	197.2	194.9	204.9	213.7
72.5°	9514.4	6595.2	746.7	501.3	362.8	227.8	189.0	177.3	173.8	182.6	190.8
75°	7636.6	5236.2	598.2	404.5	285.9	192.0	167.3	156.1	152.0	160.3	167.3
77.5°	4448.4	2945.7	437.3	315.8	216.0	156.7	142.6	132.7	128.0	136.8	142.1
80°	1446.4	981.5	274.7	226.6	157.9	122.7	115.6	108.6	103.9	109.8	111.5
82.5°	519.5	365.1	152.0	139.1	105.1	88.1	87.5	83.4	77.5	79.8	79.8
85°	230.1	166.7	90.4	74.6	62.8	47.0	55.2	52.2	46.4	45.2	43.4
87.5°	64.6	55.2	32.9	25.2	20.5	7.6	17.6	15.8	12.9	11.7	8.2
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)