

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: P368212

Luminaire Tested: **MSA-SA4A-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368212
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-SA4A-730-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 13854 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

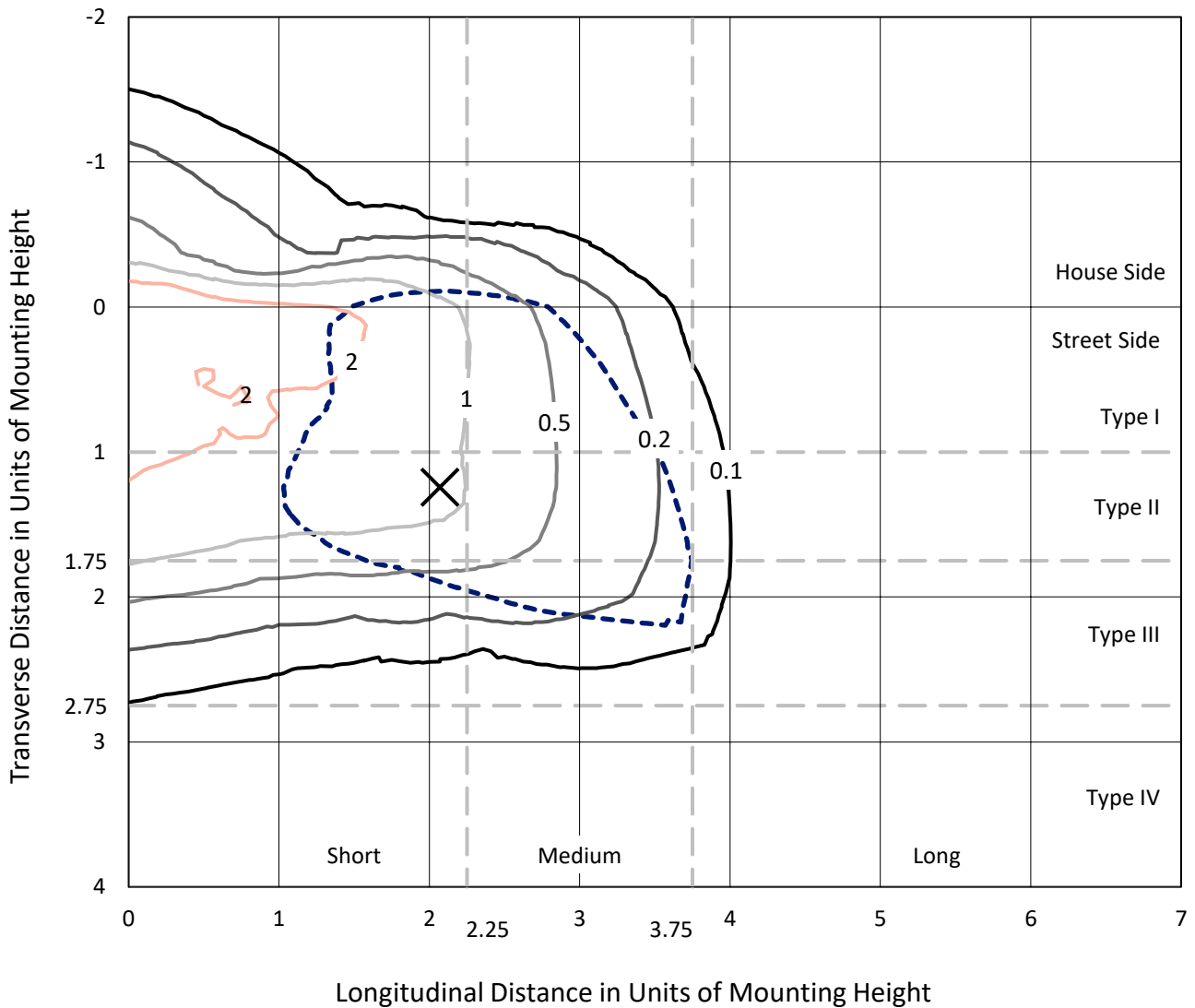
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

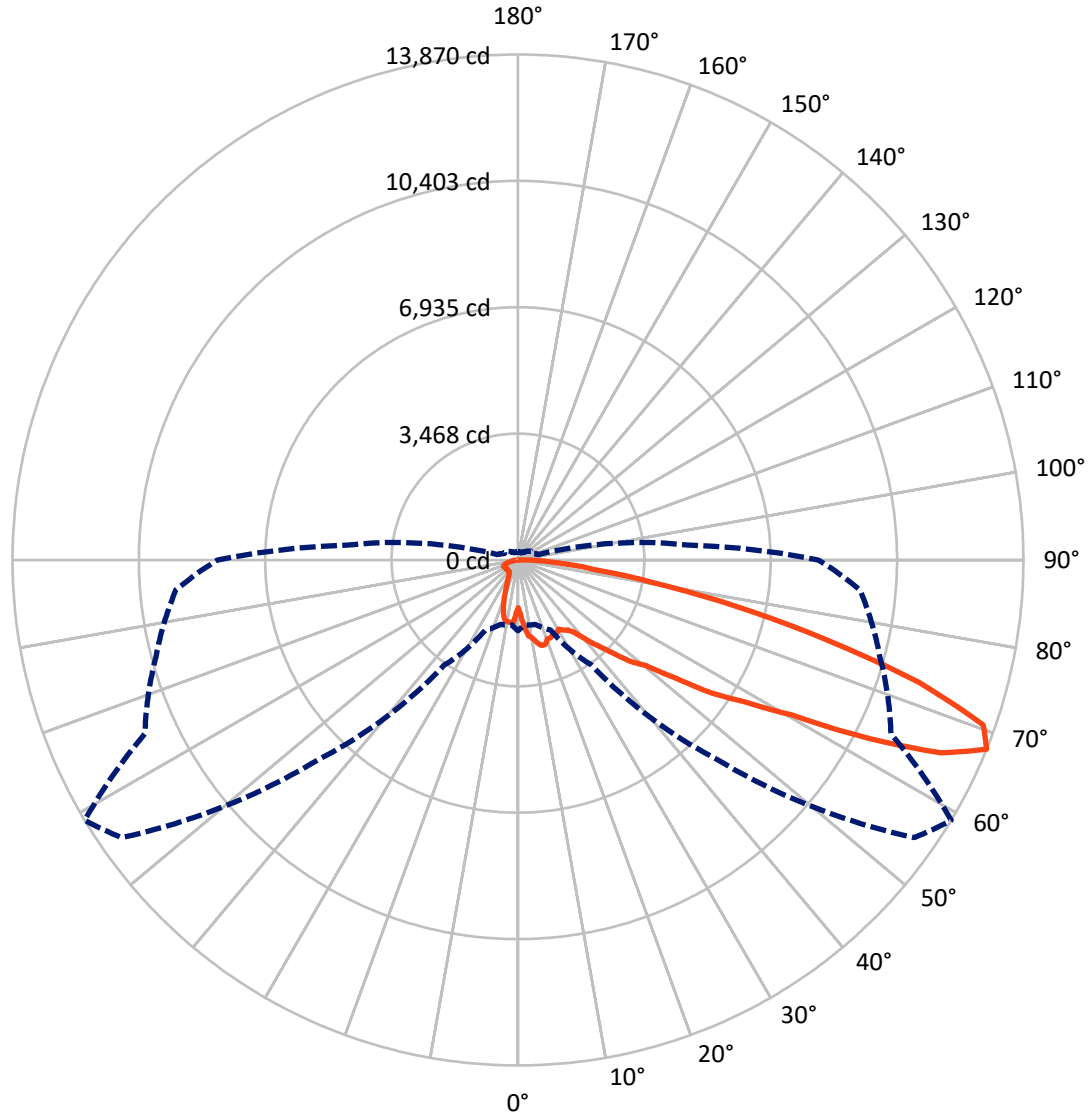
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 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
House Side	Lumens	2085.3	0.0	2085.3
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	11768.7	0.0	11768.7
	% Fixture	84.9	0.0	84.9
Total	Lumens	13854.0	0.0	13854.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.2	1.2
10°-20°	506.7	3.7
20°-30°	723.6	5.2
30°-40°	1066.2	7.7
40°-50°	1801.4	13.0
50°-60°	3134.8	22.6
60°-70°	3994.7	28.8
70°-80°	2115.2	15.3
80°-90°	340.3	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°	13854.0	100.0
0°-180°	13854.0	100.0

Coefficient of Utilization



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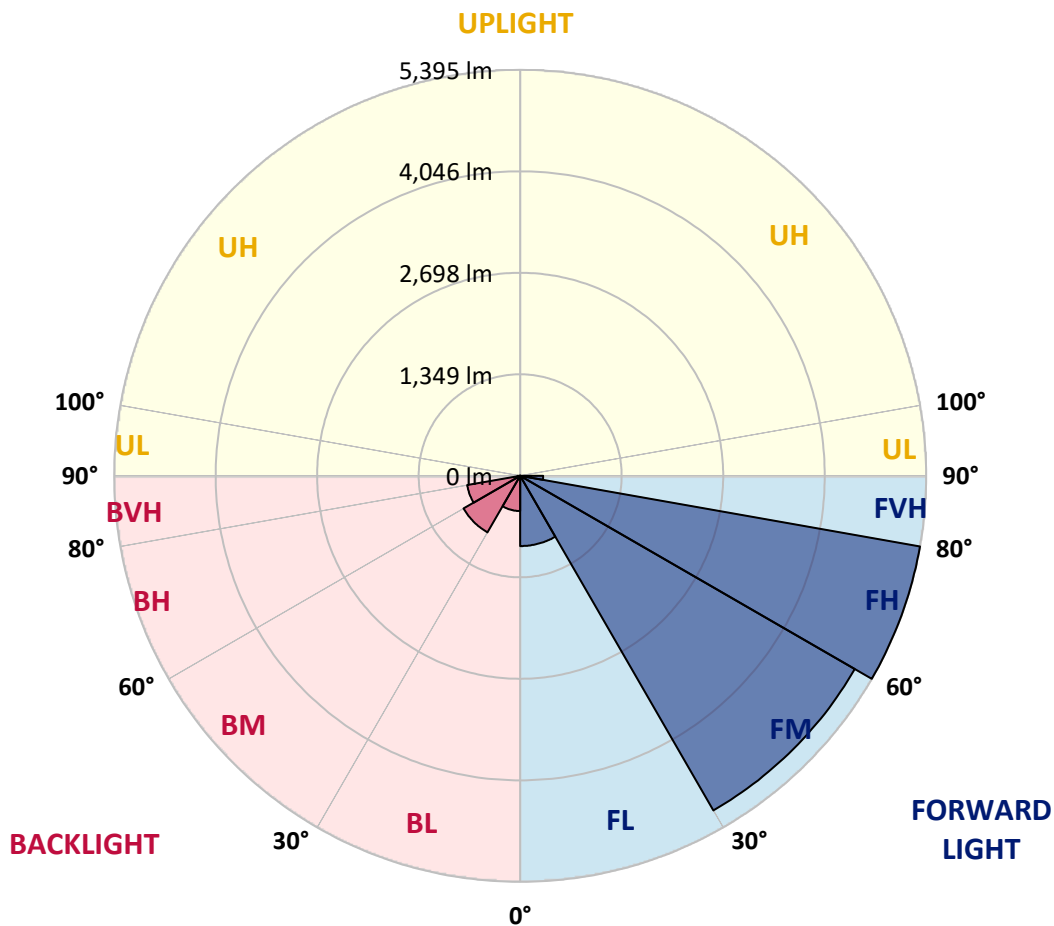
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	933.8	6.7			
FM (30°-60°)	5134.1	37.1			
FH (60°-80°)	5395.2	38.9			G3/7500
FVH (80°-90°)	305.6	2.2			G3/500
BL (0°-30°)	467.6	3.4	B1/500		
BM (30°-60°)	868.3	6.3	B1/1000		
BH (60°-80°)	714.7	5.2	B2/1000		G2/1000
BVH (80°-90°)	34.6	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°	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0
2.5°	1636.8	1560.5	1479.4	1502.3	1548.7	1569.9	1547.0	1524.7	1495.9	1461.8	1578.1
5°	1984.9	1871.6	1855.2	1854.6	1838.2	1772.4	1856.9	1851.1	1885.1	1920.3	2010.8
7.5°	2084.1	2041.9	1996.1	2017.8	1935.0	1931.5	2063.0	2100.6	2166.3	2144.6	2266.1
10°	2033.1	1985.5	2009.6	2000.8	2008.4	2095.3	2175.7	2178.1	2248.5	2317.8	2239.7
12.5°	1943.2	1946.8	2042.5	2038.9	2162.2	2323.7	2347.7	2329.0	2444.0	2397.1	2464.0
15°	2007.2	2050.1	2026.0	2046.6	2095.3	2300.8	2367.7	2435.8	2545.0	2587.3	2520.3
17.5°	2109.4	2132.3	2024.3	2013.1	2113.5	2210.9	2377.1	2435.2	2452.2	2753.4	2658.9
20°	2065.9	2112.3	2006.6	1871.0	2037.8	2166.9	2330.7	2313.1	2395.9	2766.3	2687.7
22.5°	2189.2	2112.3	1977.9	1881.6	1940.3	2058.9	2198.0	2313.7	2411.7	2690.6	2729.3
25°	2212.7	2176.3	2050.7	1955.0	1935.0	1977.3	2175.7	2251.5	2417.0	2793.9	2707.0
27.5°	2356.0	2301.4	2045.4	2048.3	1949.1	1874.6	2105.3	2264.4	2476.9	2729.9	2761.6
30°	2533.8	2492.2	2171.0	2182.8	2045.4	1908.0	2153.4	2201.6	2511.5	2829.7	2830.3
32.5°	2667.1	2740.5	2418.2	2258.5	2209.8	2107.0	2079.4	2296.1	2471.0	3010.6	2947.7
35°	2907.2	2964.2	2608.4	2480.4	2315.5	2199.8	2280.2	2358.3	2639.5	3248.3	3122.1
37.5°	3351.6	3285.9	2961.8	2760.5	2698.8	2532.1	2576.7	2522.1	2822.7	3515.4	3463.8
40°	3608.8	3551.8	3210.8	3099.2	2855.0	2876.1	2820.3	2860.3	3067.5	3799.6	3783.2
42.5°	3862.4	3786.1	3497.8	3420.3	3176.7	3073.4	3083.4	3212.5	3445.0	4258.7	4204.1
45°	4113.1	3917.6	3791.4	3811.9	3694.5	3482.6	3497.2	3618.8	3857.1	4783.5	4657.9
47.5°	4305.1	4143.6	4045.0	4019.7	3961.6	4245.2	4118.4	4167.7	4272.8	5250.9	5203.3
50°	4668.5	4480.0	4351.5	4315.1	4512.3	4906.8	4648.5	4542.3	4765.9	5855.0	5830.3
52.5°	5250.3	5015.4	4801.2	4798.8	5084.1	5340.1	5522.1	5338.9	5421.1	6473.8	6544.2
55°	5758.1	5486.3	5293.7	5400.0	5806.2	5963.0	6581.2	6437.9	6368.7	7098.4	7299.8
57.5°	5947.7	5630.1	5504.5	5661.2	6260.1	7065.5	7719.0	7342.0	7274.5	7805.3	8227.4
60°	5531.5	5195.7	5203.3	5498.6	6536.0	7875.1	8963.0	8643.0	8247.3	8685.3	9097.4
62.5°	4345.6	4042.1	4239.9	4689.0	6304.7	8661.8	10630.3	10765.3	9358.7	9415.0	9580.0
65°	2953.6	2743.4	2921.9	3361.6	5113.5	9091.0	12218.3	12759.6	10370.8	9892.9	9788.4
67.5°	1943.8	1795.3	1829.9	2122.3	3520.1	7750.1	13280.4	13870.4	11296.0	10285.1	9420.9
70°	1505.3	1385.5	1370.2	1523.5	2087.7	5384.1	12651.0	13548.1	11859.6	9917.6	8211.5
72.5°	1181.2	1090.2	1098.4	1245.8	1616.8	2987.1	9789.6	11520.9	11010.7	8553.2	6308.8
75°	921.1	846.6	888.3	1056.7	1495.3	1856.4	6754.4	8744.0	8512.7	6333.4	3598.2
77.5°	668.7	620.5	679.8	900.0	1405.5	1592.8	4204.7	6100.4	5453.4	3251.8	1234.6
80°	438.6	411.5	460.3	733.9	1274.6	1532.9	2598.4	3737.9	2694.7	913.5	467.3
82.5°	258.3	246.6	287.1	496.7	1024.5	1436.6	1733.1	2077.1	1102.5	386.3	248.3
85°	135.6	126.8	170.3	285.3	706.3	1311.5	1364.4	1243.4	532.5	167.9	118.6
87.5°	45.2	44.0	72.2	110.4	267.1	696.3	728.0	590.6	219.6	48.7	25.8
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°	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0	1311.0
2.5°	1593.9	1570.4	1435.4	1454.2	1471.8	1463.0	1457.7	1396.7	1390.8	1477.7	1470.6
5°	2008.4	1911.0	1795.9	1790.6	1714.9	1637.4	1652.6	1628.0	1635.0	1670.8	1674.4
7.5°	2227.4	2105.9	1996.1	1817.6	1666.1	1543.4	1562.8	1556.9	1541.1	1622.1	1643.8
10°	2223.3	2115.3	1991.4	1775.3	1673.2	1573.4	1453.6	1340.3	1306.8	1266.9	1270.4
12.5°	2370.0	2274.4	2004.3	1784.1	1645.6	1473.6	1249.3	1125.4	1006.8	1004.5	974.6
15°	2415.8	2345.4	2031.9	1733.7	1452.4	1205.9	974.0	839.5	753.8	736.8	711.5
17.5°	2531.5	2421.1	1947.9	1570.4	1228.2	942.9	732.1	638.2	631.1	642.9	629.9
20°	2539.1	2360.1	1796.5	1329.2	986.9	714.5	597.1	550.1	575.3	604.1	602.9
22.5°	2532.7	2283.2	1665.6	1123.7	741.5	574.2	523.1	512.5	536.0	578.9	584.1
25°	2466.9	2257.9	1501.8	922.9	601.8	492.0	477.9	484.3	513.7	564.2	564.2
27.5°	2535.6	2155.2	1296.3	750.9	506.1	438.0	447.9	464.4	486.1	543.6	554.2
30°	2513.3	2189.2	1130.7	604.7	446.2	400.4	422.7	439.1	463.8	523.7	529.0
32.5°	2573.2	2098.2	991.6	508.4	406.8	385.7	391.0	413.3	445.6	492.6	502.0
35°	2664.8	2131.7	831.9	457.3	387.5	368.7	378.7	396.3	428.6	474.4	482.0
37.5°	2957.1	2129.9	721.5	429.2	384.0	365.2	369.9	382.2	419.8	461.4	479.1
40°	3145.0	2252.0	621.1	422.7	379.8	363.4	359.3	372.8	402.7	452.1	464.4
42.5°	3497.8	2326.6	577.7	420.4	379.3	353.4	349.3	365.2	394.5	440.3	459.1
45°	3870.6	2432.9	543.1	419.2	377.5	351.7	339.3	359.3	384.0	428.0	449.7
47.5°	4309.2	2657.7	523.7	415.1	374.0	354.0	335.8	345.8	373.4	417.4	439.1
50°	4883.3	2955.4	527.8	409.2	379.3	354.6	330.5	335.2	360.5	403.3	425.6
52.5°	5581.4	3416.2	554.2	411.5	382.8	351.7	328.2	325.8	347.6	385.1	407.4
55°	6422.7	4070.2	633.5	422.7	382.8	351.1	324.7	314.1	330.5	361.1	382.8
57.5°	7437.7	4827.6	788.5	428.0	379.8	347.6	317.0	298.2	308.2	333.5	354.0
60°	8309.6	5438.7	948.1	431.5	385.7	339.3	301.8	278.3	284.7	304.1	322.3
62.5°	8754.0	5610.2	996.3	428.6	401.6	334.0	283.6	257.1	257.7	274.2	290.6
65°	8837.3	5381.8	803.1	425.6	422.1	333.5	270.6	238.9	234.8	246.6	260.7
67.5°	8243.2	4671.4	579.4	419.2	424.5	329.9	261.8	224.3	213.7	221.9	233.7
70°	6999.2	3762.0	486.7	406.3	396.3	312.3	246.6	209.0	194.9	200.8	209.6
72.5°	5218.0	2783.4	424.5	378.7	345.2	267.1	223.1	192.0	177.3	181.4	187.9
75°	2899.0	1484.7	355.2	329.4	281.8	216.0	190.2	170.3	157.3	159.1	166.1
77.5°	962.8	547.7	260.7	261.3	213.1	166.7	156.8	145.6	135.6	136.2	142.1
80°	436.2	302.9	186.7	187.9	148.5	120.9	120.4	116.8	110.4	108.6	112.7
82.5°	253.0	183.8	128.0	122.1	95.7	78.7	87.5	85.7	84.0	77.5	78.7
85°	124.5	98.6	66.9	63.4	52.8	39.3	47.0	48.7	47.0	39.9	39.3
87.5°	30.5	32.3	16.4	15.3	8.8	4.1	7.0	7.0	8.8	5.9	2.9
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)