

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: P368087

Luminaire Tested: **MSA-SA3D-730-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368087
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-730-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13672 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

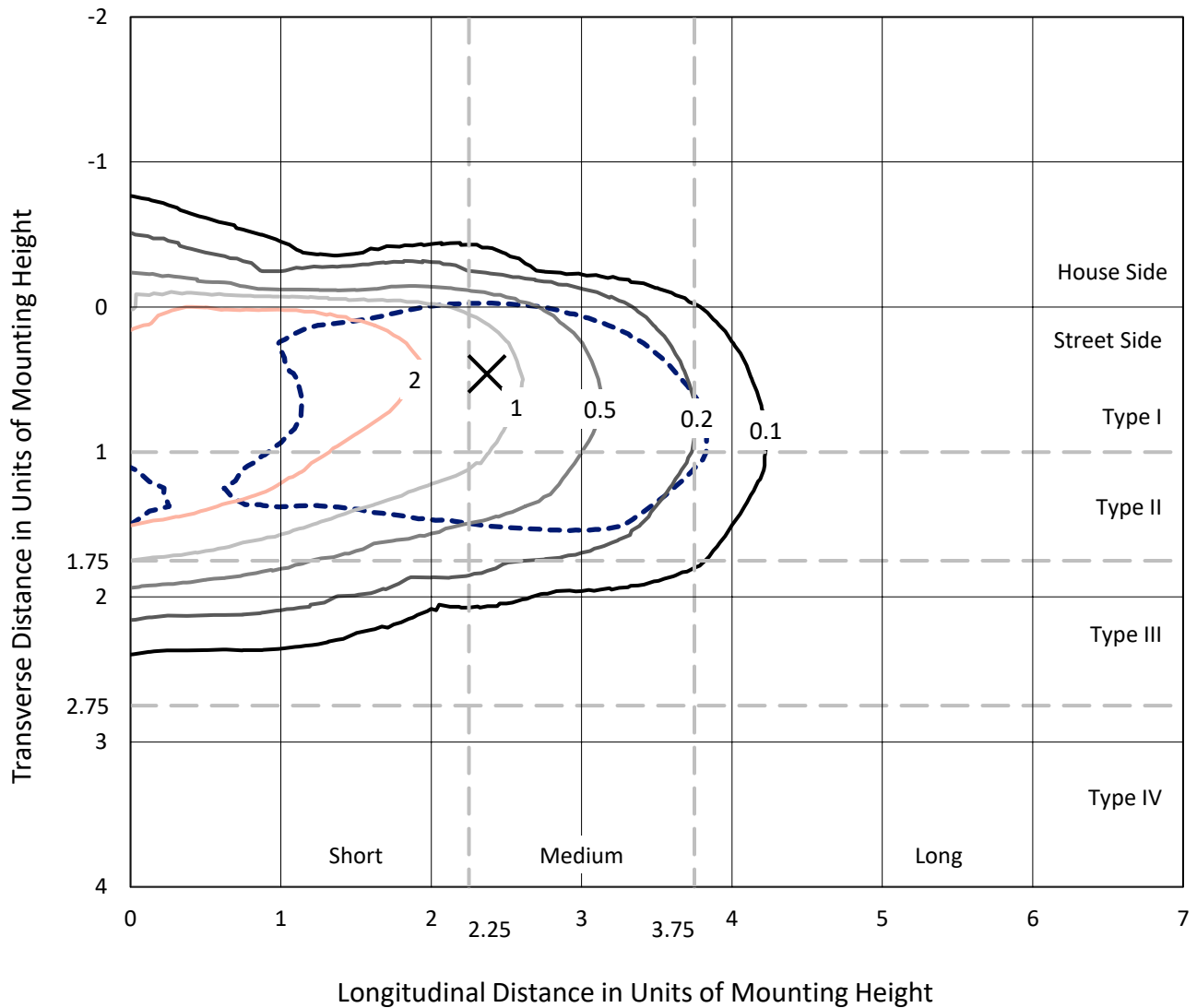
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

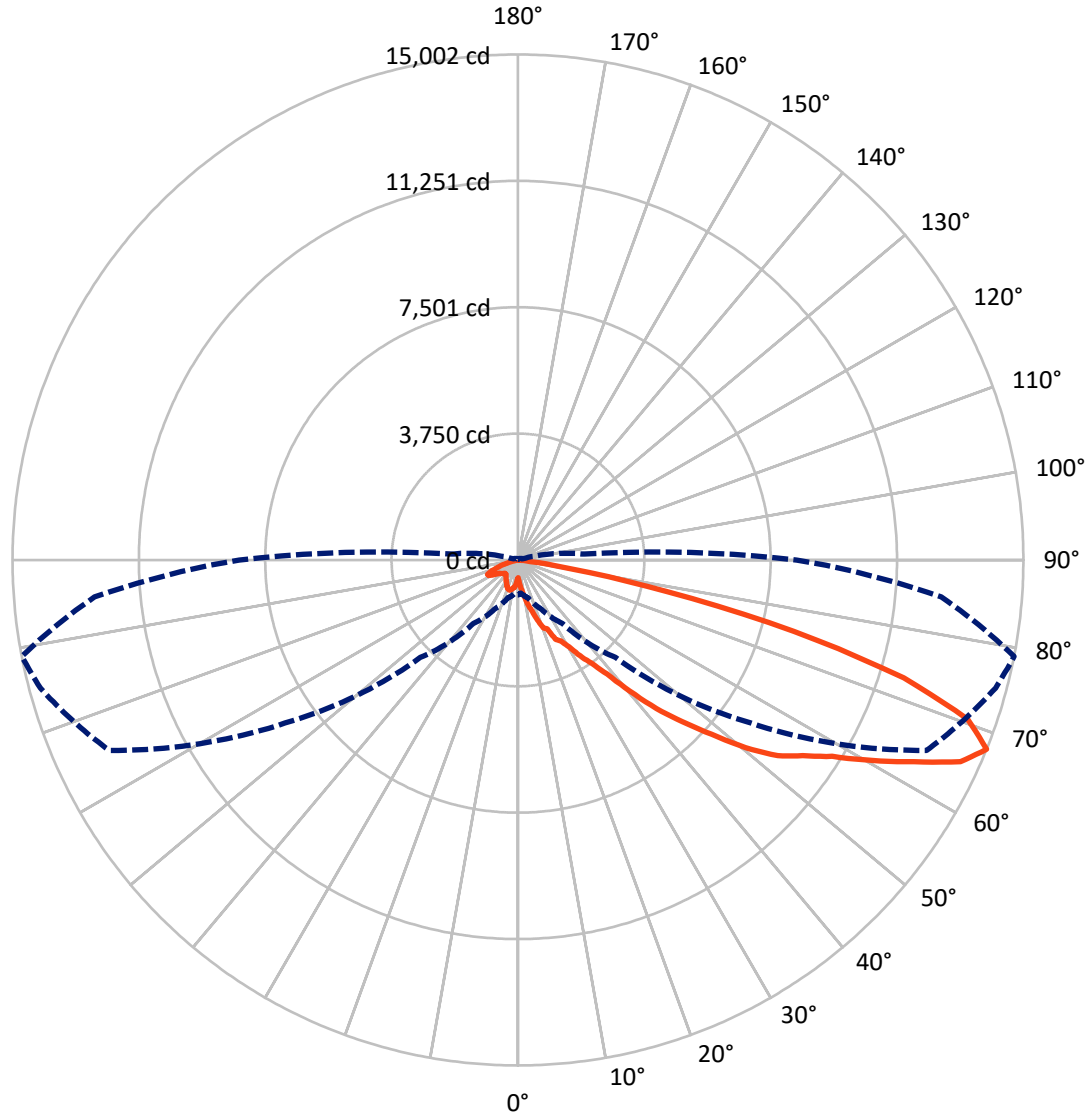
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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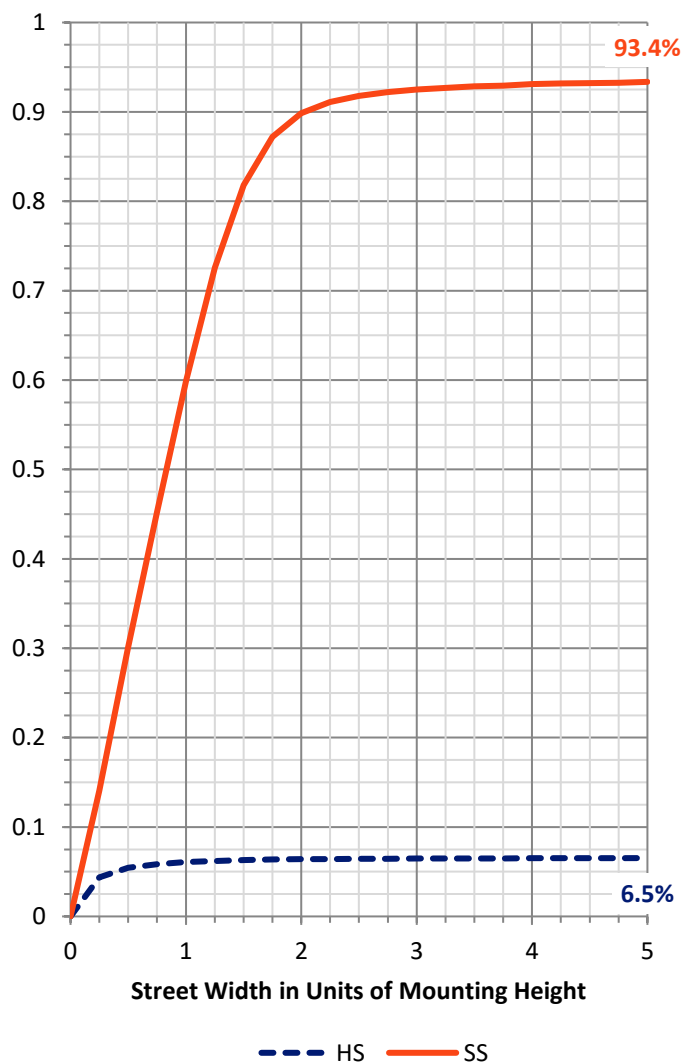
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	898.3	0.0	898.3
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	12773.7	0.0	12773.7
	% Fixture	93.4	0.0	93.4
Total	Lumens	13672.0	0.0	13672.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.6	0.6
10°-20°	305.5	2.2
20°-30°	589.4	4.3
30°-40°	1157.7	8.5
40°-50°	2319.2	17.0
50°-60°	3707.0	27.1
60°-70°	3729.8	27.3
70°-80°	1682.6	12.3
80°-90°	104.1	0.8
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°	13672.0	100.0
0°-180°	13672.0	100.0

Coefficient of Utilization

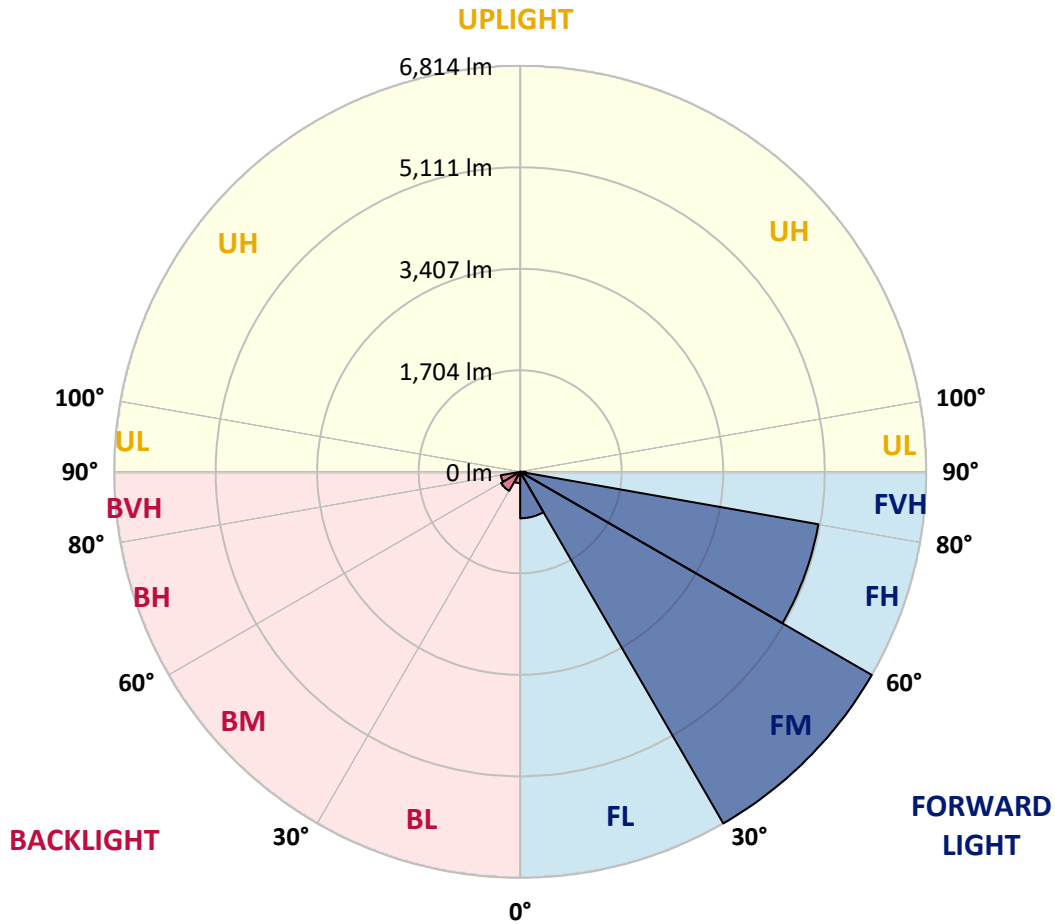


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	780.5	5.7			
FM (30°-60°)	6814.3	49.8			
FH (60°-80°)	5081.3	37.2			G3/7500
FVH (80°-90°)	97.5	0.7			G1/100
BL (0°-30°)	191.0	1.4	B1/500		
BM (30°-60°)	369.6	2.7	B1/1000		
BH (60°-80°)	331.2	2.4	B1/500		G1/500
BVH (80°-90°)	6.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8
2.5°	711.5	685.8	644.4	667.8	666.2	678.3	655.7	630.8	590.9	630.8	633.8
5°	1024.2	976.8	946.6	940.6	907.4	876.5	869.7	844.1	824.5	789.1	820.8
7.5°	1276.0	1254.1	1200.6	1194.6	1113.2	1068.0	1082.3	1071.0	996.4	959.4	990.3
10°	1383.0	1345.3	1352.8	1345.3	1310.6	1323.5	1294.1	1260.1	1200.6	1139.6	1062.7
12.5°	1424.4	1418.4	1481.0	1473.4	1554.8	1652.8	1587.2	1530.7	1392.8	1377.7	1273.0
15°	1513.4	1551.1	1542.0	1573.7	1625.7	1792.2	1790.7	1804.3	1658.1	1579.7	1428.2
17.5°	1592.5	1620.4	1575.2	1611.4	1753.0	1854.0	1988.9	1936.2	1952.8	1872.9	1638.5
20°	1558.6	1590.3	1545.0	1523.2	1772.6	1964.1	2144.2	2105.8	2205.2	2155.5	1832.2
22.5°	1770.4	1710.8	1597.0	1526.2	1712.3	1961.8	2199.2	2359.8	2342.4	2220.3	2012.3
25°	2031.9	1995.7	1859.3	1734.2	1750.8	1948.2	2372.6	2608.5	2659.7	2607.7	2183.4
27.5°	2384.6	2376.3	2097.5	2043.2	1881.9	1888.7	2399.7	2922.0	2805.2	2723.8	2383.1
30°	2845.1	2779.5	2448.7	2377.8	2139.7	2022.9	2565.5	3192.6	3106.6	2995.9	2570.8
32.5°	3340.3	3350.1	2928.0	2694.4	2502.9	2364.3	2499.9	3319.2	3479.7	3390.0	2805.2
35°	3902.5	3946.2	3430.0	3155.6	2783.3	2579.1	2781.8	3708.1	3996.0	3760.1	3119.5
37.5°	4768.5	4767.0	4164.0	3617.6	3347.1	3125.5	3251.3	4061.5	4630.6	4299.0	3683.2
40°	5530.5	5364.6	4803.9	4176.1	3754.0	3693.8	3602.6	4545.4	5308.1	5108.4	4184.4
42.5°	6099.5	5982.7	5305.1	4816.7	4293.7	4102.2	4069.8	5254.6	6308.2	6028.6	4899.6
45°	6780.0	6397.2	5898.2	5458.1	4925.3	4869.5	4793.4	5974.4	7471.9	6841.8	5521.4
47.5°	7389.8	7029.5	6557.7	5992.5	5380.5	5840.2	5547.8	6606.7	8318.3	7726.7	6207.3
50°	7903.0	7520.2	6991.8	6561.5	6299.2	6611.2	6123.6	7127.5	9232.5	8753.2	6848.6
52.5°	8164.5	7731.2	7322.7	7056.6	7217.2	7147.1	6904.4	7758.3	10011.8	9653.0	7416.9
55°	7949.7	7526.2	7355.1	7487.0	7974.6	7771.9	7791.5	8735.8	10747.4	10253.0	7911.3
57.5°	6997.1	6610.5	6686.6	7047.6	7982.2	8512.7	8802.9	9685.5	11337.5	11000.6	8674.0
60°	5293.0	4981.8	5263.7	5904.3	7231.5	8365.0	9520.4	10635.1	12180.9	12075.4	9828.7
62.5°	3232.5	3063.7	3463.1	4262.0	5762.6	7640.7	9938.7	11901.3	13083.0	13195.3	11053.4
65°	1649.0	1572.9	1906.0	2608.5	3893.5	6276.6	9636.5	12688.1	14015.3	14429.8	12220.8
67.5°	1038.6	989.6	1167.4	1591.0	2297.2	4094.0	8437.4	13376.2	14674.0	15001.9	12610.5
70°	719.8	688.9	842.6	1092.1	1449.3	2205.2	6264.5	12734.1	14151.7	14166.8	11667.6
72.5°	456.7	432.6	582.6	808.7	1069.5	1138.8	3591.3	9992.2	12113.8	11974.4	9448.8
75°	296.2	284.1	370.1	592.4	821.5	702.4	1774.9	6742.4	8686.1	8467.5	6275.8
77.5°	212.5	205.0	248.0	395.7	584.9	491.4	795.9	4018.6	4980.3	4502.4	3046.3
80°	128.1	127.4	179.4	248.0	416.0	346.7	367.8	1824.6	1930.9	1574.4	930.8
82.5°	64.1	66.3	100.2	159.8	267.6	226.9	168.1	607.5	518.5	382.1	188.4
85°	15.1	18.8	52.8	110.0	134.2	90.4	79.9	159.0	142.4	107.8	55.0
87.5°	0.0	0.0	16.6	26.4	36.2	15.1	27.1	30.1	38.4	30.1	11.3
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°	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8	526.8
2.5°	634.6	625.5	570.5	556.2	554.7	538.9	542.6	527.6	528.3	562.2	562.2
5°	808.7	755.9	703.2	656.4	624.8	579.6	563.0	556.2	550.2	563.7	572.0
7.5°	949.6	872.0	777.0	675.3	581.1	516.3	507.2	490.6	484.6	498.2	508.7
10°	1012.2	915.7	785.3	636.9	548.7	495.9	452.2	428.8	424.3	423.6	427.3
12.5°	1144.8	1025.0	794.4	622.5	526.8	468.8	419.0	379.9	343.7	347.4	343.7
15°	1251.1	1109.4	794.4	587.9	474.1	416.0	328.6	309.0	303.7	312.0	305.2
17.5°	1411.6	1193.1	754.4	526.1	428.8	323.3	290.2	288.7	299.2	311.3	303.7
20°	1508.1	1204.4	687.4	455.2	352.0	280.4	268.3	256.2	271.3	281.1	277.4
22.5°	1608.3	1205.1	620.3	417.5	283.4	255.5	235.9	226.1	228.4	237.4	238.9
25°	1651.3	1175.7	557.7	367.8	257.0	228.4	208.0	197.5	193.7	198.2	196.7
27.5°	1768.1	1119.2	489.9	313.5	244.2	202.7	183.9	171.1	159.8	167.3	168.8
30°	1784.7	1101.1	453.0	278.9	227.6	179.4	162.8	149.2	140.9	151.5	151.5
32.5°	1837.5	1001.6	434.1	264.5	210.3	165.8	143.2	133.4	131.9	138.7	139.4
35°	1918.9	957.9	406.2	253.2	194.4	150.0	128.9	124.4	122.8	128.1	128.1
37.5°	2194.7	903.7	375.3	243.4	180.9	141.7	125.1	117.6	118.3	122.8	125.9
40°	2377.8	910.4	329.4	231.4	165.1	134.2	117.6	112.3	111.5	113.8	116.1
42.5°	2717.7	915.7	309.0	218.6	153.0	125.1	110.0	106.3	103.3	105.5	107.8
45°	3097.6	943.6	298.5	208.0	146.2	119.8	103.3	101.0	94.2	95.7	98.7
47.5°	3463.9	1045.3	285.6	192.9	140.2	116.8	96.5	91.2	86.7	85.9	88.9
50°	3879.9	1144.1	271.3	176.4	134.2	112.3	89.7	81.4	78.4	78.4	80.6
52.5°	4252.2	1238.3	257.8	165.1	129.6	104.0	83.7	75.4	73.1	73.1	76.1
55°	4644.1	1337.0	245.7	154.5	123.6	95.7	78.4	70.8	70.1	68.6	70.8
57.5°	5336.0	1552.6	230.6	145.5	115.3	88.9	73.9	66.3	64.8	62.6	64.8
60°	6343.7	1883.4	211.0	136.4	105.5	84.4	70.1	61.0	58.8	55.0	55.8
62.5°	7328.7	2151.0	188.4	125.1	96.5	79.9	64.1	55.0	51.2	46.7	47.5
65°	8172.8	2256.5	164.3	111.5	87.4	69.3	55.8	48.2	43.0	36.9	36.2
67.5°	8272.3	1992.7	140.9	98.7	78.4	58.8	47.5	43.0	34.7	29.4	27.9
70°	7444.8	1484.7	117.6	87.4	67.8	49.7	40.7	37.7	32.4	27.9	25.6
72.5°	5928.4	1095.8	98.7	77.6	59.5	42.2	34.7	35.4	32.4	27.1	24.1
75°	3920.6	627.1	80.6	64.8	49.7	33.9	31.7	31.7	30.9	25.6	22.6
77.5°	1886.4	270.6	61.8	51.2	39.9	25.6	28.6	28.6	29.4	23.4	18.8
80°	535.1	81.4	38.4	34.7	29.4	17.3	22.6	21.9	19.6	13.6	8.3
82.5°	95.7	31.7	17.3	18.1	16.6	6.8	12.8	12.1	9.8	5.3	0.8
85°	26.4	12.1	9.8	10.6	8.3	2.3	5.3	6.8	5.3	3.0	0.0
87.5°	6.8	5.3	6.8	7.5	6.0	0.8	2.3	0.8	2.3	0.8	0.0
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)