

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: P368219

Luminaire Tested: **MSA-SA4A-730-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368219
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-SA4A-730-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 10649 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

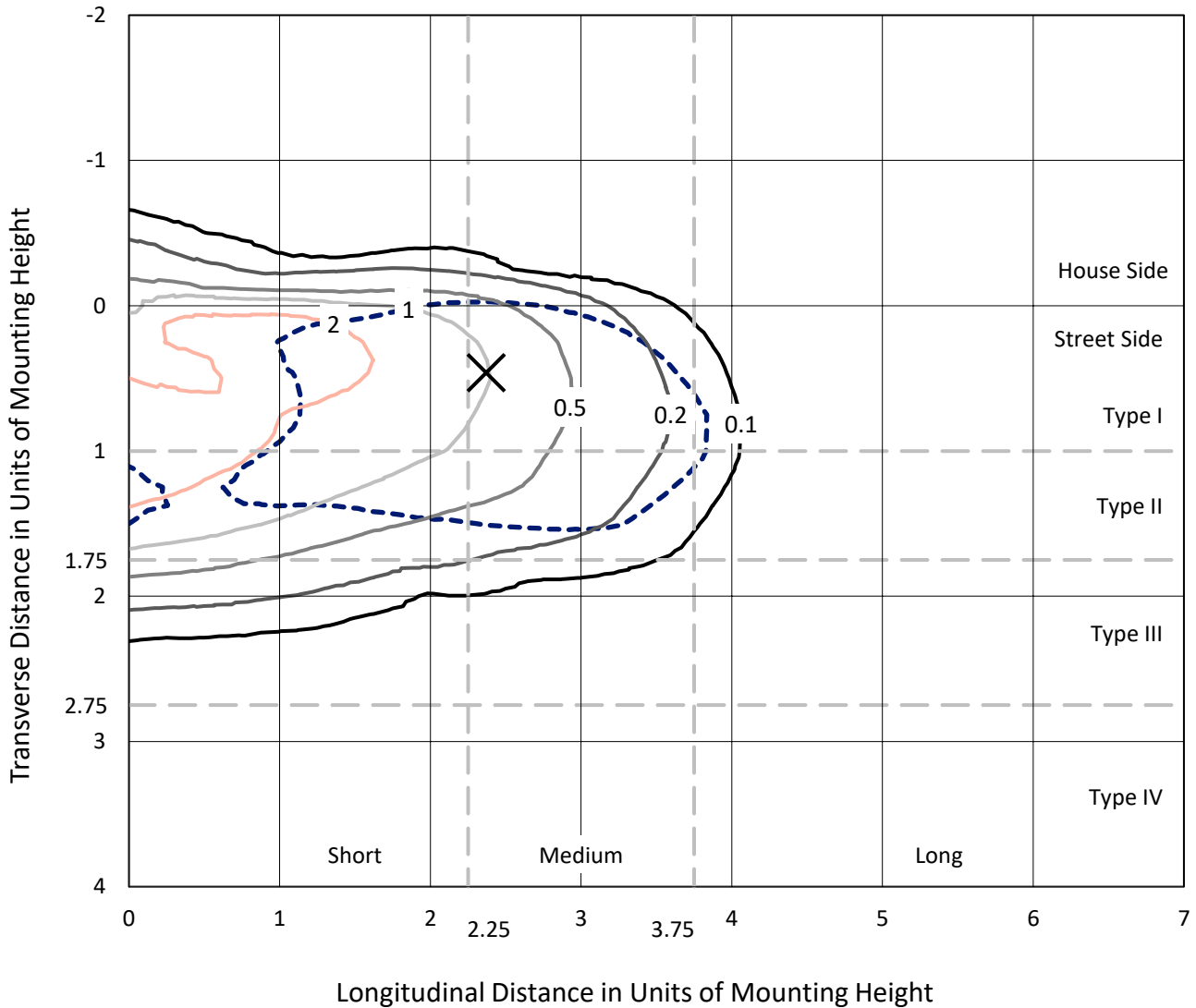
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

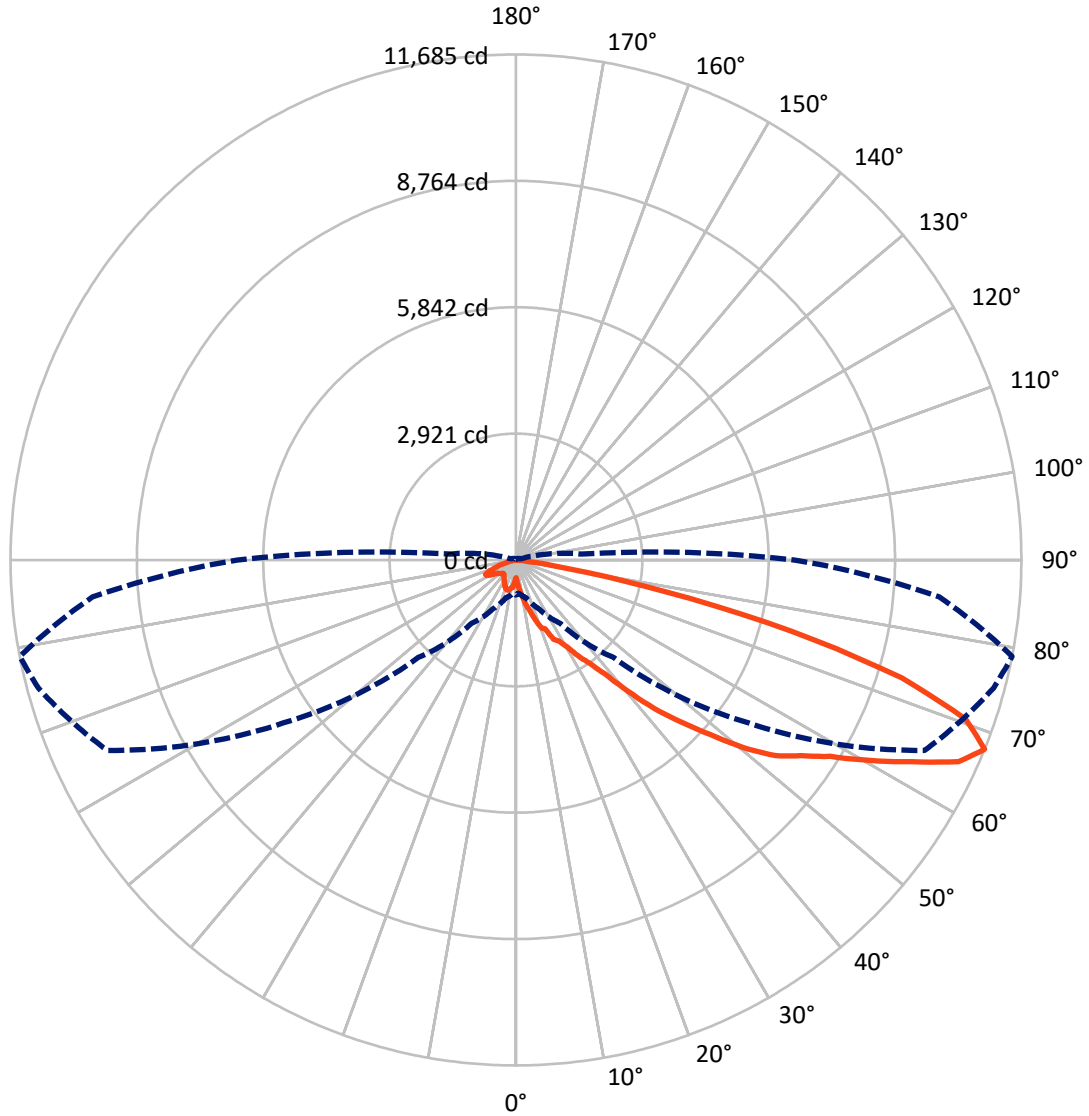
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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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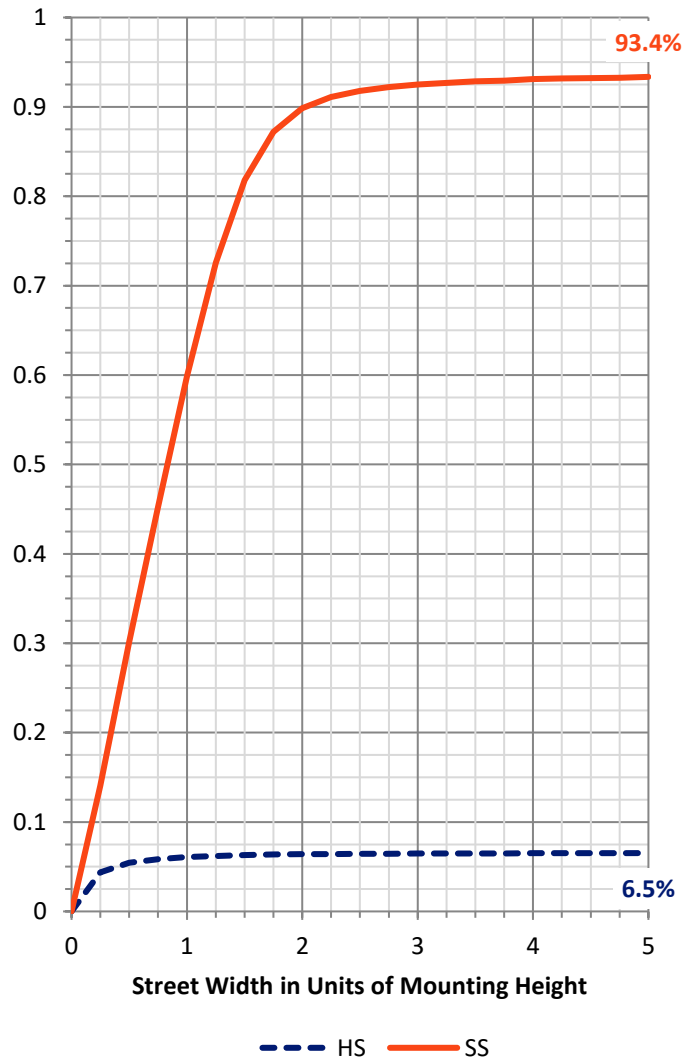
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	699.7	0.0	699.7
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	9949.3	0.0	9949.3
	% Fixture	93.4	0.0	93.4
Total	Lumens	10649.0	0.0	10649.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	0.6
10°-20°	237.9	2.2
20°-30°	459.1	4.3
30°-40°	901.7	8.5
40°-50°	1806.4	17.0
50°-60°	2887.3	27.1
60°-70°	2905.1	27.3
70°-80°	1310.6	12.3
80°-90°	81.1	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°	10649.0	100.0
0°-180°	10649.0	100.0

Coefficient of Utilization



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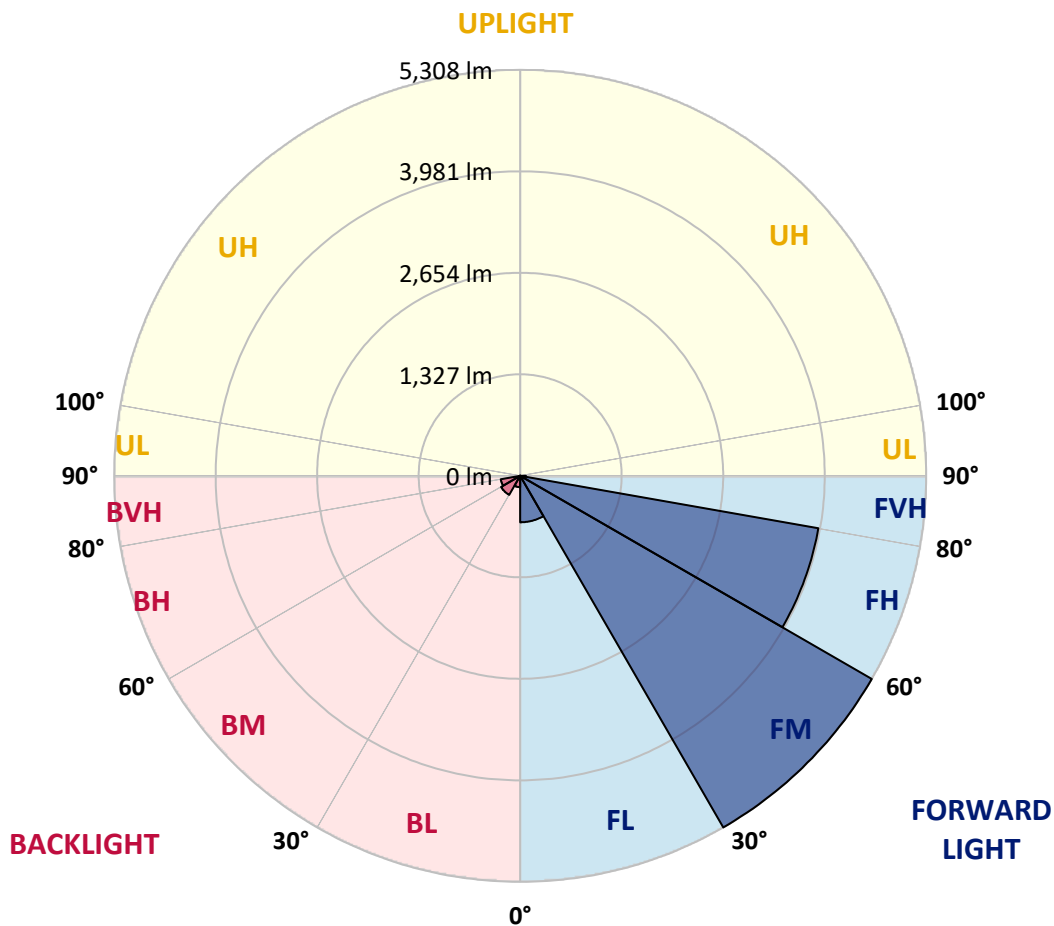
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	607.9	5.7			
FM (30°-60°)	5307.6	49.8			
FH (60°-80°)	3957.8	37.2			G2/5000
FVH (80°-90°)	75.9	0.7			G1/100
BL (0°-30°)	148.7	1.4	B1/500		
BM (30°-60°)	287.9	2.7	B1/1000		
BH (60°-80°)	257.9	2.4	B1/500		G1/500
BVH (80°-90°)	5.2	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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3
2.5°	554.2	534.2	501.9	520.1	518.9	528.3	510.7	491.3	460.2	491.3	493.7
5°	797.8	760.8	737.3	732.6	706.8	682.7	677.4	657.5	642.2	614.6	639.3
7.5°	993.8	976.8	935.1	930.4	867.0	831.8	843.0	834.2	776.1	747.3	771.4
10°	1077.2	1047.8	1053.7	1047.8	1020.8	1030.8	1007.9	981.5	935.1	887.6	827.7
12.5°	1109.5	1104.8	1153.5	1147.6	1211.0	1287.4	1236.3	1192.3	1084.8	1073.1	991.5
15°	1178.8	1208.1	1201.1	1225.7	1266.2	1396.0	1394.8	1405.3	1291.5	1230.4	1112.4
17.5°	1240.4	1262.1	1226.9	1255.1	1365.4	1444.1	1549.2	1508.1	1521.0	1458.8	1276.2
20°	1214.0	1238.6	1203.4	1186.4	1380.7	1529.8	1670.1	1640.2	1717.6	1678.9	1427.1
22.5°	1378.9	1332.6	1243.9	1188.7	1333.7	1528.0	1713.0	1838.0	1824.5	1729.4	1567.4
25°	1582.6	1554.5	1448.2	1350.8	1363.7	1517.5	1848.0	2031.7	2071.6	2031.1	1700.6
27.5°	1857.4	1850.9	1633.7	1591.4	1465.8	1471.1	1869.1	2275.9	2184.9	2121.5	1856.2
30°	2216.0	2165.0	1907.3	1852.1	1666.6	1575.6	1998.2	2486.7	2419.7	2333.4	2002.4
32.5°	2601.7	2609.3	2280.6	2098.6	1949.5	1841.5	1947.2	2585.3	2710.3	2640.5	2184.9
35°	3039.6	3073.7	2671.6	2457.9	2167.9	2008.8	2166.7	2888.2	3112.4	2928.7	2429.7
37.5°	3714.1	3713.0	3243.3	2817.7	2607.0	2434.4	2532.4	3163.5	3606.7	3348.4	2868.8
40°	4307.6	4178.5	3741.7	3252.7	2924.0	2877.0	2806.0	3540.4	4134.4	3978.9	3259.2
42.5°	4750.8	4659.8	4132.1	3751.7	3344.3	3195.2	3170.0	4092.8	4913.4	4695.6	3816.3
45°	5280.9	4982.7	4594.1	4251.3	3836.2	3792.8	3733.5	4653.4	5819.8	5329.1	4300.6
47.5°	5755.8	5475.2	5107.7	4667.5	4190.8	4548.9	4321.1	5145.9	6479.0	6018.2	4834.8
50°	6155.6	5857.4	5445.9	5110.7	4906.4	5149.4	4769.6	5551.5	7191.1	6817.8	5334.3
52.5°	6359.3	6021.7	5703.6	5496.4	5621.4	5566.8	5377.8	6042.9	7798.1	7518.7	5777.0
55°	6192.0	5862.1	5728.8	5831.6	6211.4	6053.4	6068.7	6804.3	8371.0	7986.0	6162.0
57.5°	5450.0	5148.8	5208.1	5489.3	6217.2	6630.5	6856.5	7543.9	8830.7	8568.3	6756.1
60°	4122.7	3880.3	4099.8	4598.8	5632.5	6515.4	7415.4	8283.6	9487.6	9405.4	7655.5
62.5°	2517.8	2386.3	2697.4	3319.7	4488.4	5951.3	7741.2	9269.8	10190.2	10277.7	8609.4
65°	1284.4	1225.1	1484.6	2031.7	3032.6	4888.8	7505.8	9882.6	10916.4	11239.3	9518.7
67.5°	808.9	770.8	909.3	1239.2	1789.3	3188.7	6571.8	10418.6	11429.5	11684.8	9822.2
70°	560.6	536.5	656.3	850.6	1128.9	1717.6	4879.4	9918.5	11022.7	11034.4	9087.8
72.5°	355.7	337.0	453.8	629.9	833.0	887.0	2797.2	7782.8	9435.3	9326.7	7359.6
75°	230.7	221.3	288.2	461.4	639.9	547.1	1382.5	5251.6	6765.5	6595.3	4888.2
77.5°	165.5	159.7	193.1	308.2	455.5	382.7	619.9	3130.0	3879.1	3506.9	2372.8
80°	99.8	99.2	139.7	193.1	324.0	270.0	286.5	1421.2	1504.0	1226.3	725.0
82.5°	49.9	51.7	78.1	124.5	208.4	176.7	130.9	473.1	403.9	297.6	146.8
85°	11.7	14.7	41.1	85.7	104.5	70.4	62.2	123.9	110.9	83.9	42.9
87.5°	0.0	0.0	12.9	20.5	28.2	11.7	21.1	23.5	29.9	23.5	8.8
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°	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3	410.3
2.5°	494.3	487.2	444.4	433.2	432.1	419.7	422.7	410.9	411.5	437.9	437.9
5°	629.9	588.8	547.7	511.3	486.6	451.4	438.5	433.2	428.5	439.1	445.6
7.5°	739.7	679.2	605.2	526.0	452.6	402.1	395.1	382.2	377.5	388.0	396.2
10°	788.4	713.2	611.7	496.0	427.4	386.3	352.2	334.0	330.5	329.9	332.8
12.5°	891.7	798.4	618.7	484.9	410.3	365.1	326.4	295.9	267.7	270.6	267.7
15°	974.5	864.1	618.7	457.9	369.2	324.0	255.9	240.7	236.6	243.0	237.7
17.5°	1099.5	929.3	587.6	409.7	334.0	251.8	226.0	224.8	233.1	242.4	236.6
20°	1174.6	938.1	535.4	354.6	274.1	218.4	209.0	199.6	211.3	219.0	216.0
22.5°	1252.7	938.7	483.1	325.2	220.7	199.0	183.7	176.1	177.9	184.9	186.1
25°	1286.2	915.8	434.4	286.5	200.2	177.9	162.0	153.8	150.9	154.4	153.2
27.5°	1377.2	871.7	381.6	244.2	190.2	157.9	143.2	133.3	124.5	130.3	131.5
30°	1390.1	857.7	352.8	217.2	177.3	139.7	126.8	116.2	109.8	118.0	118.0
32.5°	1431.2	780.2	338.1	206.0	163.8	129.1	111.5	103.9	102.7	108.0	108.6
35°	1494.6	746.1	316.4	197.2	151.5	116.8	100.4	96.9	95.7	99.8	99.8
37.5°	1709.4	703.8	292.3	189.6	140.9	110.4	97.4	91.6	92.2	95.7	98.0
40°	1852.1	709.1	256.5	180.2	128.6	104.5	91.6	87.5	86.9	88.6	90.4
42.5°	2116.8	713.2	240.7	170.2	119.2	97.4	85.7	82.8	80.4	82.2	83.9
45°	2412.7	735.0	232.5	162.0	113.9	93.3	80.4	78.7	73.4	74.6	76.9
47.5°	2698.0	814.2	222.5	150.3	109.2	91.0	75.1	71.0	67.5	66.9	69.3
50°	3022.0	891.1	211.3	137.4	104.5	87.5	69.9	63.4	61.1	61.1	62.8
52.5°	3312.0	964.5	200.8	128.6	101.0	81.0	65.2	58.7	56.9	56.9	59.3
55°	3617.3	1041.4	191.4	120.3	96.3	74.6	61.1	55.2	54.6	53.4	55.2
57.5°	4156.2	1209.3	179.6	113.3	89.8	69.3	57.5	51.7	50.5	48.7	50.5
60°	4941.0	1467.0	164.4	106.3	82.2	65.7	54.6	47.5	45.8	42.9	43.4
62.5°	5708.3	1675.4	146.8	97.4	75.1	62.2	49.9	42.9	39.9	36.4	37.0
65°	6365.7	1757.6	128.0	86.9	68.1	54.0	43.4	37.6	33.5	28.8	28.2
67.5°	6443.2	1552.1	109.8	76.9	61.1	45.8	37.0	33.5	27.0	22.9	21.7
70°	5798.7	1156.4	91.6	68.1	52.8	38.7	31.7	29.4	25.2	21.7	20.0
72.5°	4617.6	853.5	76.9	60.5	46.4	32.9	27.0	27.6	25.2	21.1	18.8
75°	3053.7	488.4	62.8	50.5	38.7	26.4	24.7	24.7	24.1	20.0	17.6
77.5°	1469.3	210.7	48.1	39.9	31.1	20.0	22.3	22.3	22.9	18.2	14.7
80°	416.8	63.4	29.9	27.0	22.9	13.5	17.6	17.0	15.3	10.6	6.5
82.5°	74.6	24.7	13.5	14.1	12.9	5.3	10.0	9.4	7.6	4.1	0.6
85°	20.5	9.4	7.6	8.2	6.5	1.8	4.1	5.3	4.1	2.3	0.0
87.5°	5.3	4.1	5.3	5.9	4.7	0.6	1.8	0.6	1.8	0.6	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)