

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: P367691

Luminaire Tested: **MSA-SA3A-730-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367691
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-SA3A-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: 8057 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

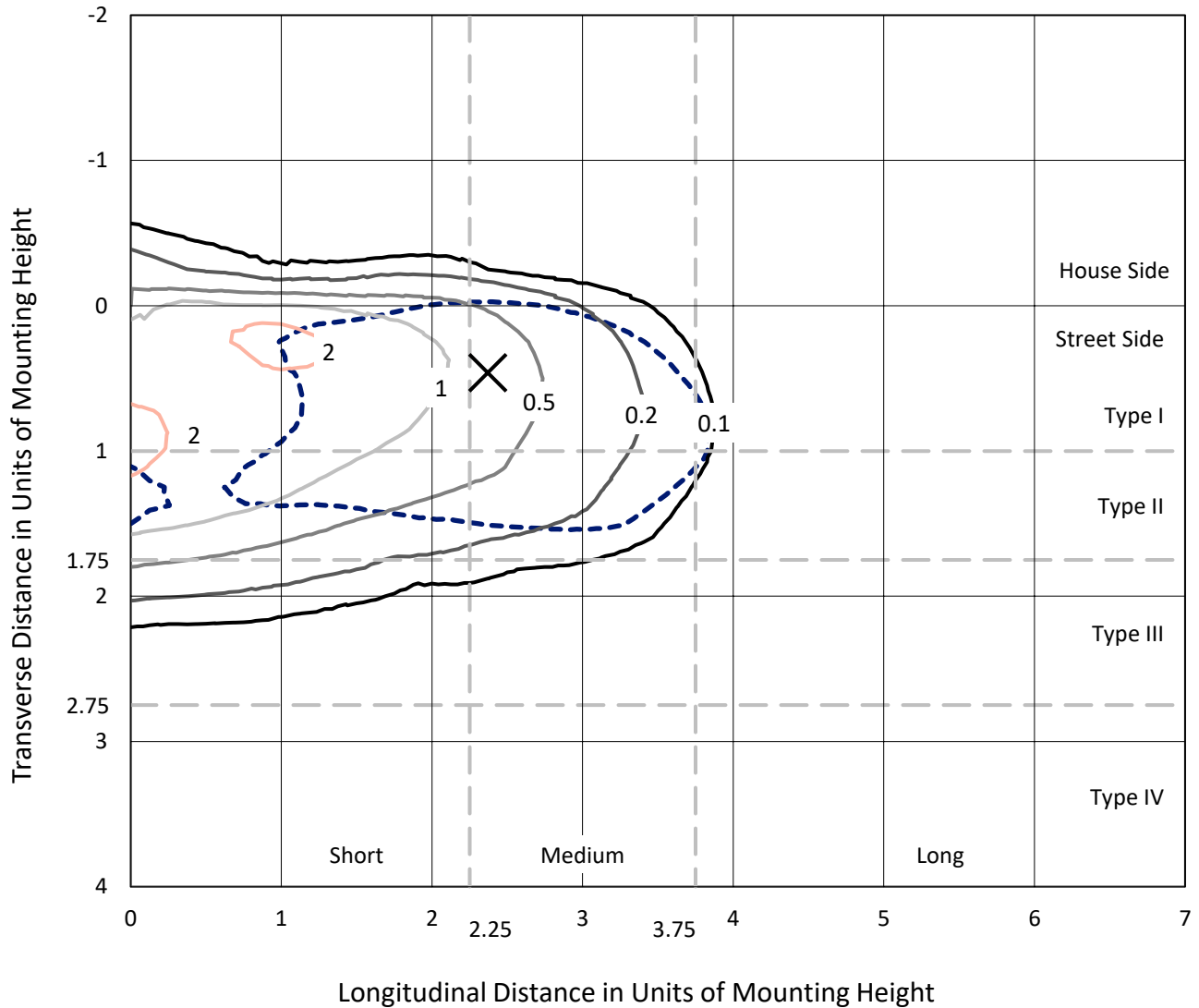
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

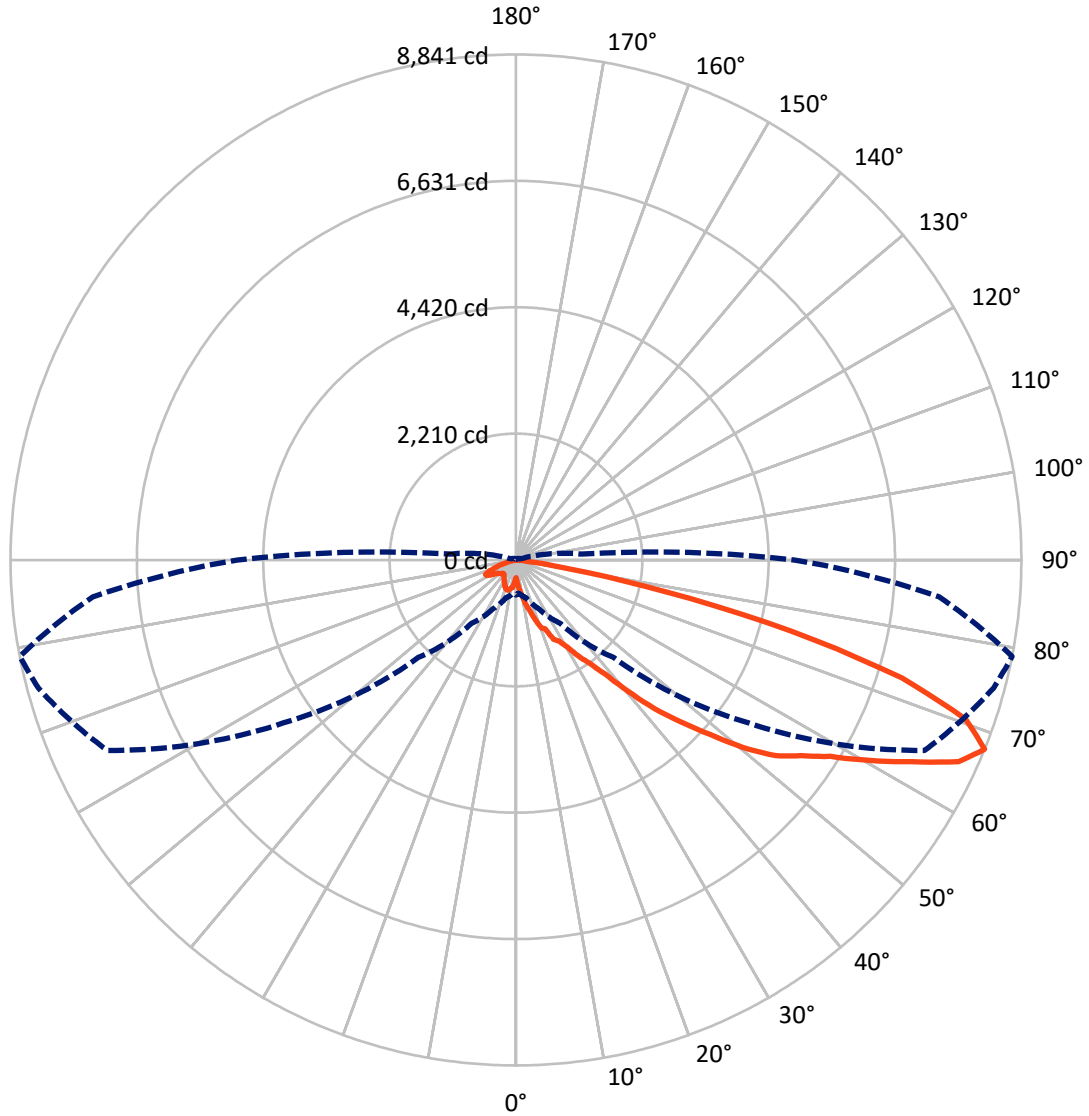
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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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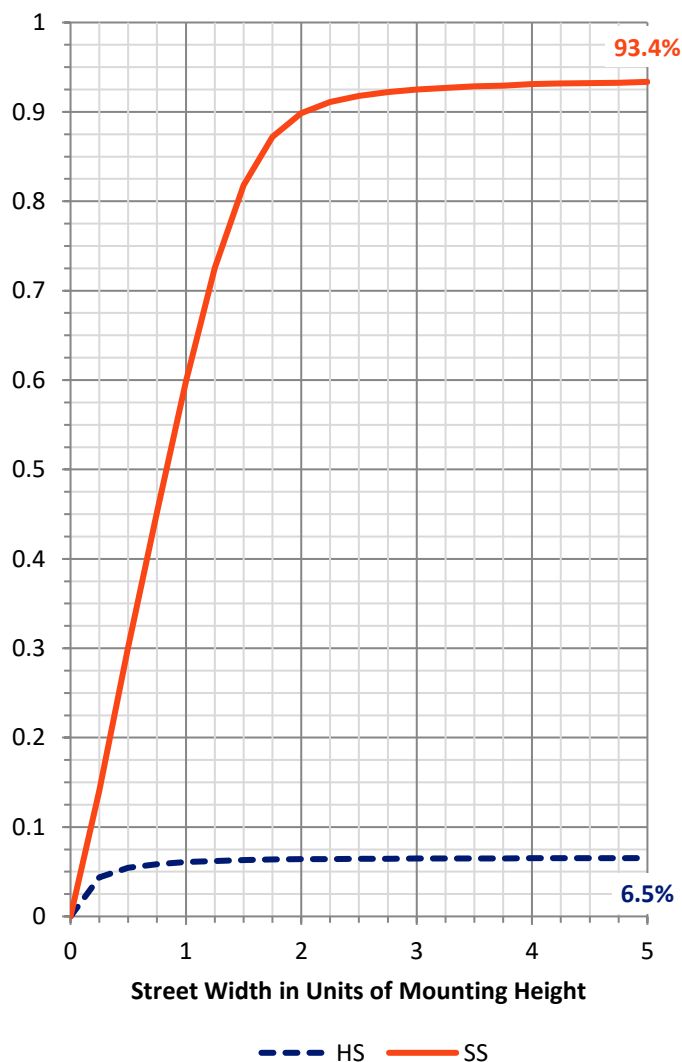
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	529.4	0.0	529.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	7527.6	0.0	7527.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	8057.0	0.0	8057.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	0.6
10°-20°	180.0	2.2
20°-30°	347.3	4.3
30°-40°	682.3	8.5
40°-50°	1366.7	17.0
50°-60°	2184.5	27.1
60°-70°	2198.0	27.3
70°-80°	991.6	12.3
80°-90°	61.4	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°	8057.0	100.0
0°-180°	8057.0	100.0

Coefficient of Utilization



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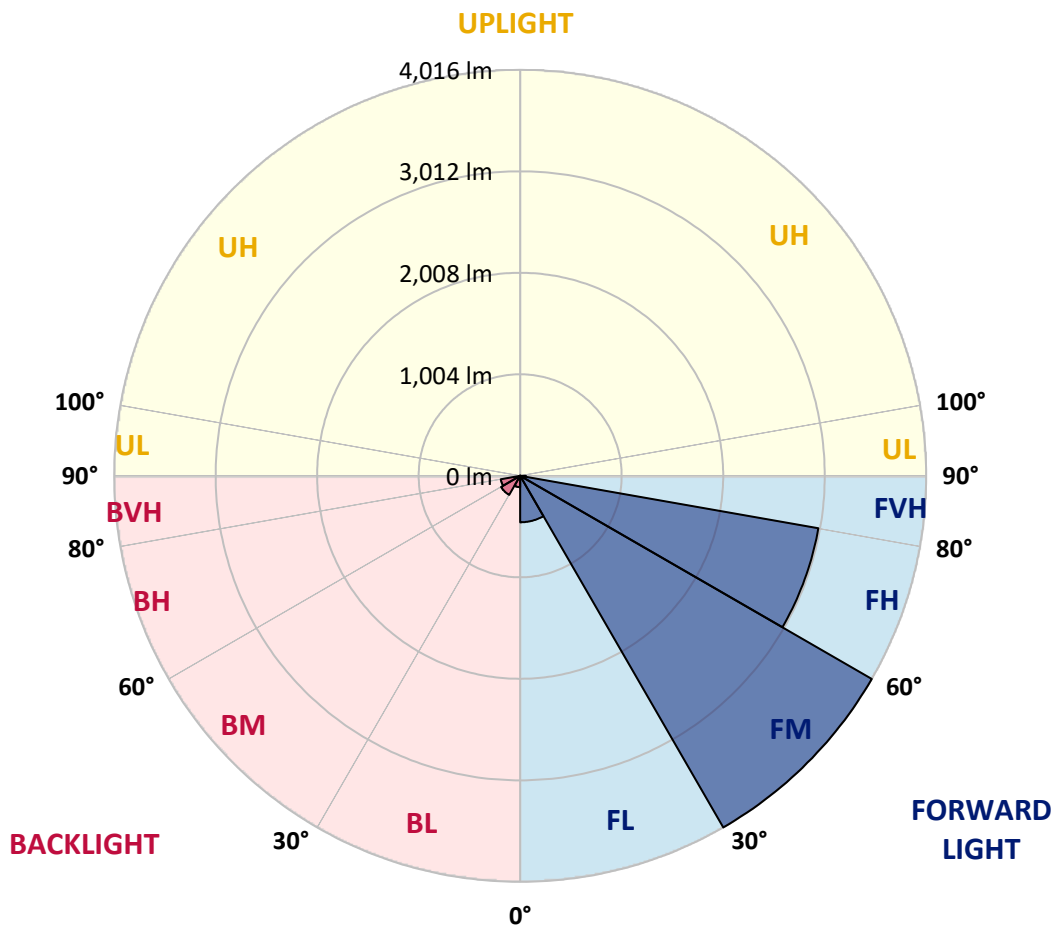
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	460.0	5.7			
FM (30°-60°)	4015.7	49.8			
FH (60°-80°)	2994.5	37.2			G2/5000
FVH (80°-90°)	57.4	0.7			G1/100
BL (0°-30°)	112.5	1.4	B1/500		
BM (30°-60°)	217.8	2.7	B0/220		
BH (60°-80°)	195.2	2.4	B1/500		G1/500
BVH (80°-90°)	3.9	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°	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5
2.5°	419.3	404.2	379.7	393.5	392.6	399.7	386.4	371.7	348.2	371.7	373.5
5°	603.6	575.6	557.8	554.3	534.8	516.5	512.5	497.4	485.9	465.0	483.7
7.5°	751.9	739.1	707.5	704.0	656.0	629.4	637.8	631.1	587.2	565.4	583.6
10°	815.0	792.8	797.2	792.8	772.4	779.9	762.6	742.6	707.5	671.5	626.2
12.5°	839.4	835.9	872.7	868.3	916.3	974.0	935.4	902.1	820.8	811.9	750.2
15°	891.8	914.0	908.7	927.4	958.0	1056.2	1055.3	1063.3	977.1	930.9	841.7
17.5°	938.5	954.9	928.3	949.6	1033.1	1092.6	1172.1	1141.0	1150.8	1103.7	965.6
20°	918.5	937.1	910.5	897.6	1044.6	1157.4	1263.6	1240.9	1299.6	1270.3	1079.7
22.5°	1043.3	1008.2	941.1	899.4	1009.1	1156.1	1296.0	1390.6	1380.4	1308.5	1185.9
25°	1197.4	1176.1	1095.7	1022.0	1031.7	1148.1	1398.2	1537.2	1567.4	1536.7	1286.7
27.5°	1405.3	1400.4	1236.1	1204.1	1109.0	1113.0	1414.2	1721.9	1653.1	1605.1	1404.4
30°	1676.6	1638.0	1443.0	1401.3	1260.9	1192.1	1511.9	1881.4	1830.8	1765.5	1515.0
32.5°	1968.4	1974.2	1725.5	1587.8	1475.0	1393.3	1473.2	1956.0	2050.6	1997.8	1653.1
35°	2299.8	2325.5	2021.3	1859.6	1640.2	1519.9	1639.3	2185.2	2354.9	2215.8	1838.3
37.5°	2810.1	2809.2	2453.9	2131.9	1972.4	1841.9	1916.0	2393.5	2728.8	2533.4	2170.5
40°	3259.1	3161.4	2831.0	2461.0	2212.3	2176.8	2123.0	2678.6	3128.1	3010.4	2465.9
42.5°	3594.5	3525.6	3126.3	2838.5	2530.3	2417.5	2398.4	3096.6	3717.5	3552.7	2887.4
45°	3995.5	3769.9	3475.9	3216.5	2902.5	2869.6	2824.8	3520.7	4403.3	4031.9	3253.8
47.5°	4354.8	4142.5	3864.5	3531.4	3170.7	3441.7	3269.3	3893.4	4902.0	4553.4	3658.0
50°	4657.3	4431.7	4120.3	3866.7	3712.2	3896.0	3608.7	4200.3	5440.8	5158.3	4035.9
52.5°	4811.4	4556.0	4315.3	4158.5	4253.1	4211.8	4068.8	4572.0	5900.0	5688.6	4370.8
55°	4684.8	4435.2	4334.4	4412.1	4699.5	4580.0	4591.6	5148.1	6333.5	6042.1	4662.2
57.5°	4123.4	3895.6	3940.5	4153.2	4703.9	5016.6	5187.6	5707.7	6681.3	6482.7	5111.7
60°	3119.2	2935.8	3101.9	3479.4	4261.6	4929.6	5610.4	6267.3	7178.3	7116.1	5792.1
62.5°	1904.9	1805.4	2040.8	2511.6	3395.9	4502.7	5856.9	7013.5	7709.9	7776.1	6513.8
65°	971.8	926.9	1123.2	1537.2	2294.5	3698.8	5678.8	7477.2	8259.3	8503.6	7201.8
67.5°	612.0	583.2	688.0	937.6	1353.8	2412.6	4972.2	7882.7	8647.5	8840.7	7431.4
70°	424.2	405.9	496.6	643.6	854.1	1299.6	3691.7	7504.3	8339.7	8348.6	6875.8
72.5°	269.2	254.9	343.3	476.6	630.2	671.1	2116.3	5888.5	7138.7	7056.6	5568.2
75°	174.5	167.4	218.1	349.1	484.1	413.9	1046.0	3973.3	5118.8	4990.0	3698.4
77.5°	125.2	120.8	146.1	233.2	344.7	289.6	469.0	2368.2	2934.9	2653.3	1795.2
80°	75.5	75.1	105.7	146.1	245.2	204.3	216.7	1075.3	1137.9	927.8	548.5
82.5°	37.8	39.1	59.1	94.2	157.7	133.7	99.0	358.0	305.6	225.2	111.0
85°	8.9	11.1	31.1	64.8	79.1	53.3	47.1	93.7	83.9	63.5	32.4
87.5°	0.0	0.0	9.8	15.5	21.3	8.9	16.0	17.8	22.7	17.8	6.7
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°	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5	310.5
2.5°	374.0	368.6	336.2	327.8	326.9	317.6	319.8	310.9	311.3	331.3	331.3
5°	476.6	445.5	414.4	386.9	368.2	341.5	331.8	327.8	324.2	332.2	337.1
7.5°	559.6	513.9	457.9	398.0	342.4	304.2	298.9	289.1	285.6	293.6	299.8
10°	596.5	539.6	462.8	375.3	323.3	292.2	266.5	252.7	250.1	249.6	251.8
12.5°	674.7	604.0	468.1	366.9	310.5	276.3	246.9	223.8	202.5	204.8	202.5
15°	737.3	653.8	468.1	346.4	279.4	245.2	193.6	182.1	179.0	183.9	179.9
17.5°	831.9	703.1	444.6	310.0	252.7	190.5	171.0	170.1	176.3	183.4	179.0
20°	888.7	709.7	405.1	268.3	207.4	165.2	158.1	151.0	159.9	165.7	163.4
22.5°	947.8	710.2	365.5	246.1	167.0	150.6	139.0	133.2	134.6	139.9	140.8
25°	973.1	692.9	328.7	216.7	151.5	134.6	122.6	116.4	114.1	116.8	115.9
27.5°	1042.0	659.6	288.7	184.8	143.9	119.5	108.4	100.8	94.2	98.6	99.5
30°	1051.7	648.9	266.9	164.3	134.1	105.7	95.9	87.9	83.1	89.3	89.3
32.5°	1082.8	590.3	255.8	155.9	123.9	97.7	84.4	78.6	77.7	81.7	82.2
35°	1130.8	564.5	239.4	149.2	114.6	88.4	75.9	73.3	72.4	75.5	75.5
37.5°	1293.3	532.5	221.2	143.5	106.6	83.5	73.7	69.3	69.7	72.4	74.2
40°	1401.3	536.5	194.1	136.4	97.3	79.1	69.3	66.2	65.7	67.1	68.4
42.5°	1601.6	539.6	182.1	128.8	90.2	73.7	64.8	62.6	60.8	62.2	63.5
45°	1825.4	556.1	175.9	122.6	86.2	70.6	60.8	59.5	55.5	56.4	58.2
47.5°	2041.3	616.0	168.3	113.7	82.6	68.8	56.9	53.7	51.1	50.6	52.4
50°	2286.5	674.2	159.9	103.9	79.1	66.2	52.9	48.0	46.2	46.2	47.5
52.5°	2505.9	729.7	151.9	97.3	76.4	61.3	49.3	44.4	43.1	43.1	44.9
55°	2736.8	787.9	144.8	91.0	72.8	56.4	46.2	41.7	41.3	40.4	41.7
57.5°	3144.5	914.9	135.9	85.7	68.0	52.4	43.5	39.1	38.2	36.9	38.2
60°	3738.4	1109.9	124.4	80.4	62.2	49.7	41.3	36.0	34.6	32.4	32.9
62.5°	4318.9	1267.6	111.0	73.7	56.9	47.1	37.8	32.4	30.2	27.5	28.0
65°	4816.3	1329.8	96.8	65.7	51.5	40.9	32.9	28.4	25.3	21.8	21.3
67.5°	4874.9	1174.3	83.1	58.2	46.2	34.6	28.0	25.3	20.4	17.3	16.4
70°	4387.3	875.0	69.3	51.5	40.0	29.3	24.0	22.2	19.1	16.4	15.1
72.5°	3493.6	645.8	58.2	45.7	35.1	24.9	20.4	20.9	19.1	16.0	14.2
75°	2310.4	369.5	47.5	38.2	29.3	20.0	18.7	18.7	18.2	15.1	13.3
77.5°	1111.7	159.4	36.4	30.2	23.5	15.1	16.9	16.9	17.3	13.8	11.1
80°	315.3	48.0	22.7	20.4	17.3	10.2	13.3	12.9	11.5	8.0	4.9
82.5°	56.4	18.7	10.2	10.7	9.8	4.0	7.6	7.1	5.8	3.1	0.4
85°	15.5	7.1	5.8	6.2	4.9	1.3	3.1	4.0	3.1	1.8	0.0
87.5°	4.0	3.1	4.0	4.4	3.6	0.4	1.3	0.4	1.3	0.4	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)