

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: P368067

Luminaire Tested: **MSA-SA3D-727-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368067
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-727-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12293 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

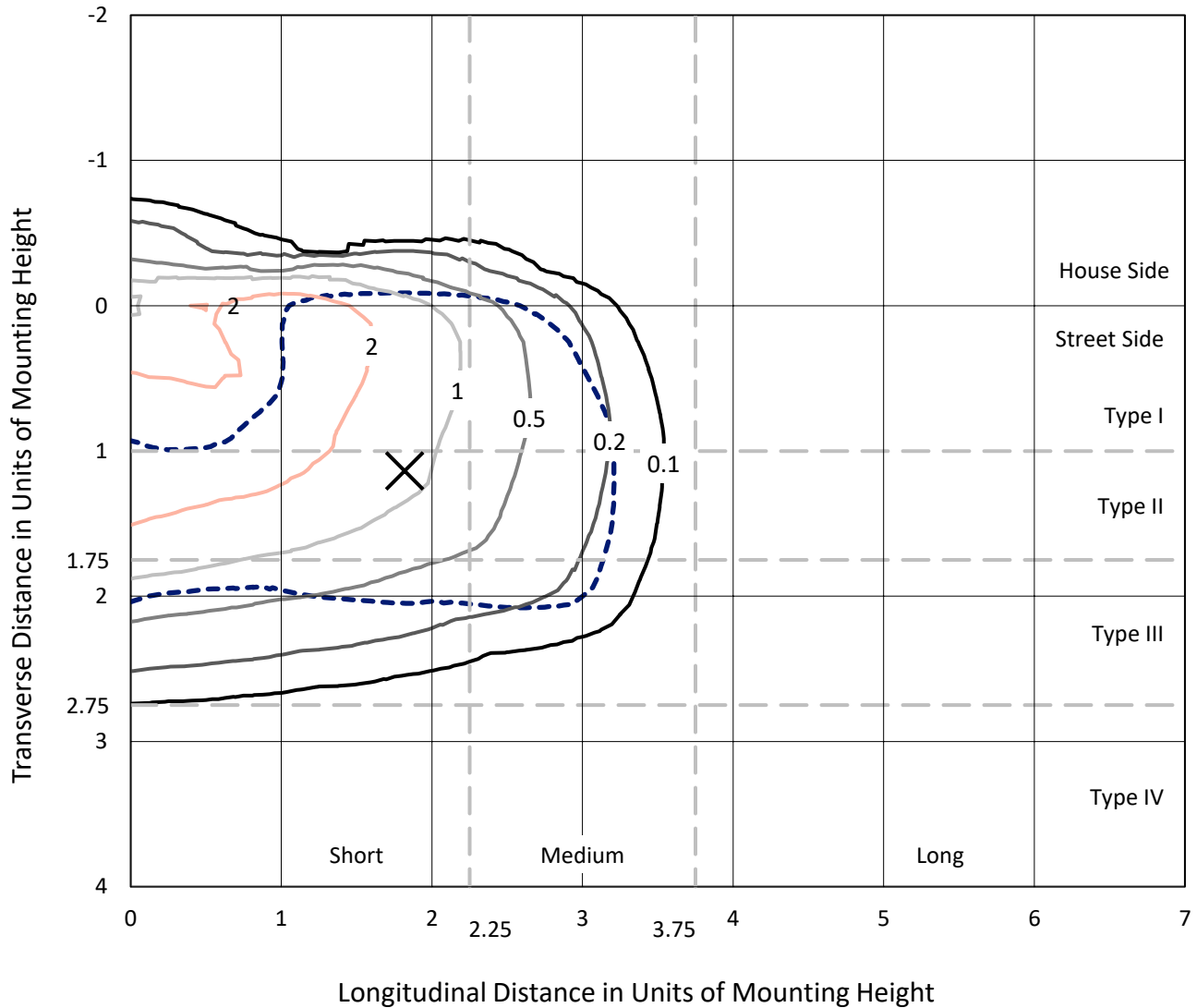
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

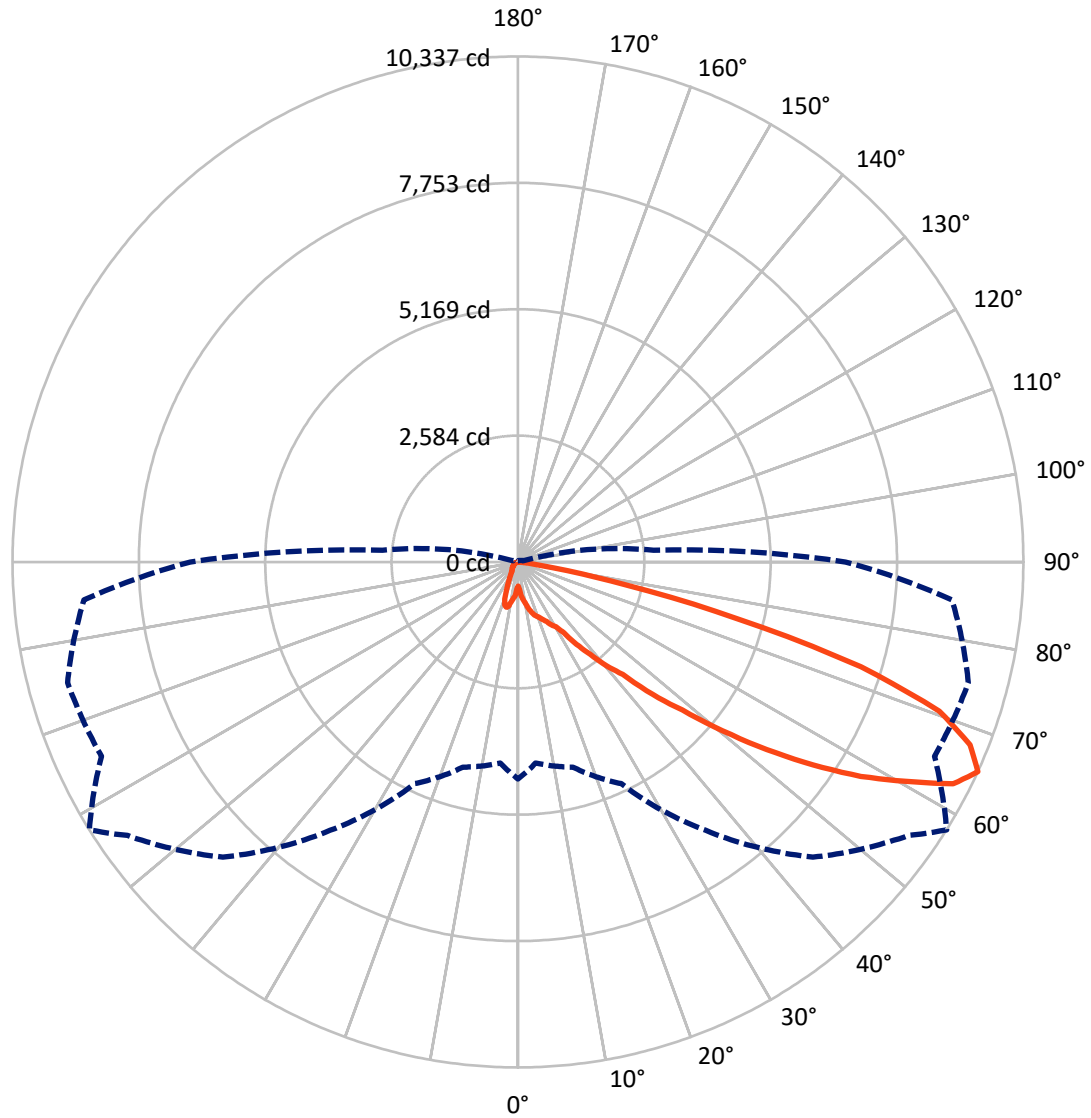
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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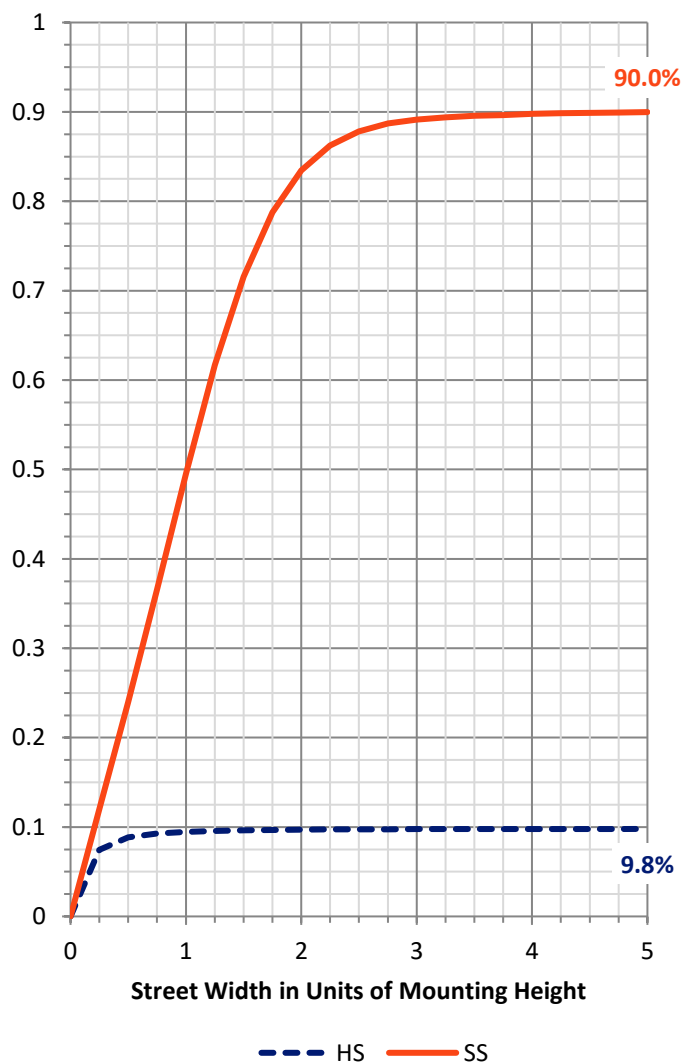
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1213.0	0.0	1213.0
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	11080.0	0.0	11080.0
	% Fixture	90.1	0.0	90.1
Total	Lumens	12293.0	0.0	12293.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	0.6
10°-20°	252.3	2.1
20°-30°	488.4	4.0
30°-40°	974.5	7.9
40°-50°	1992.3	16.2
50°-60°	3533.7	28.7
60°-70°	3725.4	30.3
70°-80°	1207.8	9.8
80°-90°	49.4	0.4
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°	12293.0	100.0
0°-180°	12293.0	100.0

Coefficient of Utilization



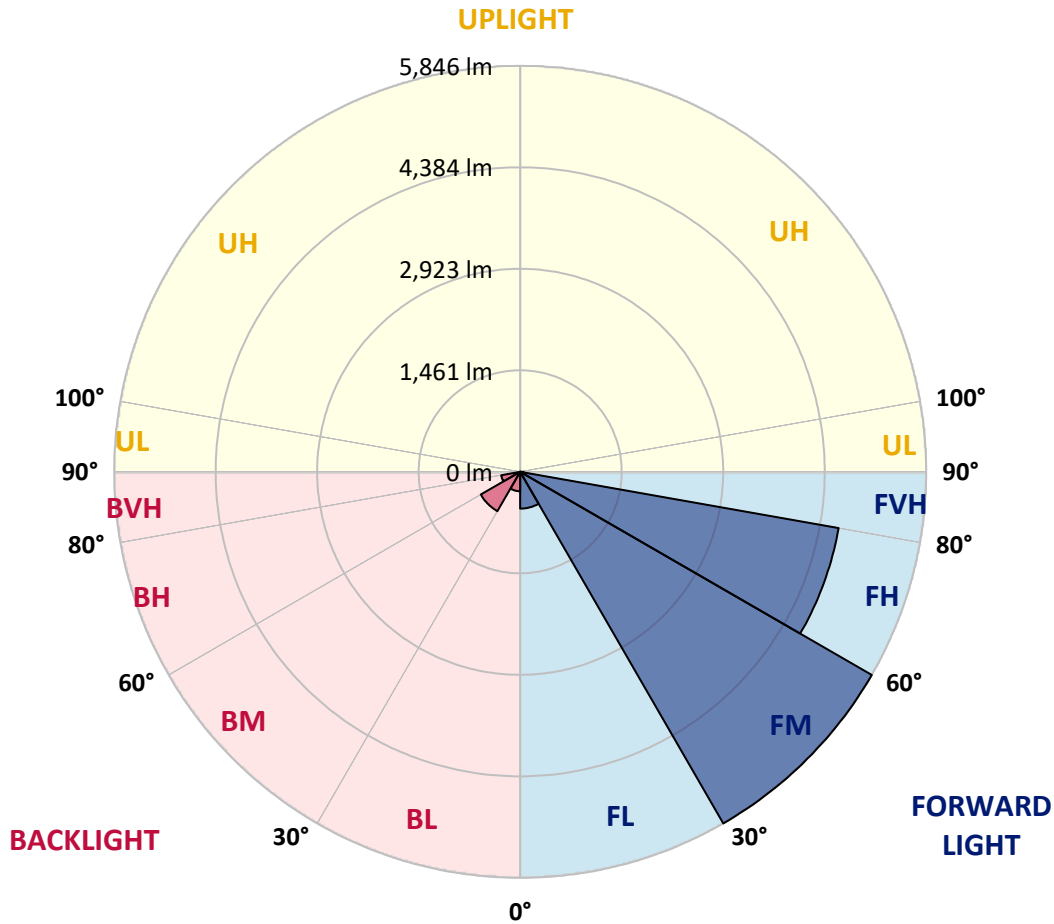
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	530.3	4.3			
FM (30°-60°)	5846.0	47.6			
FH (60°-80°)	4656.4	37.9			G2/5000
FVH (80°-90°)	47.3	0.4			G1/100
BL (0°-30°)	279.6	2.3	B1/500		
BM (30°-60°)	654.5	5.3	B1/1000		
BH (60°-80°)	276.9	2.3	B1/500		G1/500
BVH (80°-90°)	2.1	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1
2.5°	600.8	582.8	554.4	559.2	564.8	575.9	566.9	558.6	549.6	537.8	582.8
5°	725.4	695.6	692.8	686.6	681.8	681.1	692.1	688.7	693.5	715.7	738.5
7.5°	771.0	758.6	735.0	744.7	729.5	717.7	766.9	782.8	813.3	823.6	883.2
10°	766.2	748.2	757.9	762.7	773.1	816.0	847.2	864.5	890.8	947.5	935.8
12.5°	788.3	804.3	814.6	815.3	868.6	947.5	969.7	984.2	1031.3	1053.4	1111.6
15°	862.4	888.7	872.1	879.0	896.3	992.5	1044.4	1076.3	1142.7	1214.7	1229.2
17.5°	968.3	984.9	950.3	925.4	973.1	1025.7	1119.9	1153.1	1195.3	1363.5	1394.7
20°	1101.9	1130.3	1055.5	956.5	1019.5	1081.8	1184.2	1200.2	1245.2	1464.6	1513.7
22.5°	1414.0	1371.8	1257.6	1103.3	1084.6	1112.3	1209.9	1272.1	1348.3	1521.3	1635.5
25°	1722.0	1707.5	1539.3	1367.0	1242.4	1180.1	1309.5	1344.1	1468.7	1656.3	1719.3
27.5°	2064.6	2093.7	1812.7	1708.2	1463.9	1260.4	1371.8	1458.3	1605.8	1705.4	1857.0
30°	2516.6	2470.2	2140.8	2036.3	1757.3	1481.2	1533.1	1538.6	1755.3	1867.4	2011.3
32.5°	2871.0	2900.7	2486.8	2326.3	2103.4	1821.0	1654.2	1726.2	1881.2	2131.1	2267.4
35°	3254.4	3251.6	2848.1	2632.2	2340.8	2098.6	2013.4	2066.0	2260.5	2543.6	2579.6
37.5°	3827.5	3778.4	3302.2	2985.9	2738.1	2531.1	2466.1	2396.2	2596.9	2866.8	3001.8
40°	4368.1	4198.5	3758.3	3383.2	3066.2	2981.7	2746.4	2789.3	2848.8	3205.3	3578.3
42.5°	4914.2	4809.0	4220.6	3906.4	3516.7	3316.0	3162.4	3142.3	3425.4	3847.6	4233.1
45°	5634.7	5312.8	4842.2	4566.0	4114.7	3913.3	3789.4	3863.5	4118.2	4734.9	4991.7
47.5°	6239.6	5943.4	5539.2	5119.7	4646.3	4872.6	4640.1	4523.1	4872.6	5510.1	5851.3
50°	6759.4	6429.2	6020.2	5709.4	5632.6	5849.9	5379.3	5422.2	5649.2	6398.1	6590.5
52.5°	7137.3	6789.8	6432.7	6282.5	6597.4	6706.8	6470.8	6375.9	6582.2	7155.3	7248.7
55°	7421.8	7066.0	6787.1	6994.0	7603.1	7567.1	7650.2	7326.2	7523.5	7945.0	7900.7
57.5°	7439.1	7017.6	6854.2	7187.1	8023.2	8580.4	8823.3	8272.4	8384.5	8562.4	8462.7
60°	6895.0	6475.6	6462.5	6935.2	8145.0	8842.7	9374.3	9105.7	8955.5	9087.7	8898.8
62.5°	5811.2	5517.7	5654.7	6177.3	7691.7	8698.1	9667.7	9991.0	9406.1	9435.9	9167.3
65°	4437.3	4129.3	4343.8	5002.1	6700.6	8536.1	9750.8	10337.0	9397.8	9534.8	8909.9
67.5°	2938.8	2760.2	3003.2	3728.5	5327.4	7535.3	9707.9	9973.7	9099.5	9147.9	7954.0
70°	1517.2	1473.6	1670.1	2242.5	3581.8	5789.0	9286.4	9141.0	8493.9	7880.6	6135.1
72.5°	485.9	488.0	676.9	1024.4	1931.1	3524.4	7138.0	7337.3	6796.8	5764.8	3745.8
75°	215.3	211.8	283.1	429.8	805.0	1580.1	4434.5	4649.8	4231.7	3171.4	1574.6
77.5°	155.0	150.2	181.3	251.2	398.7	535.7	2079.2	2243.9	1918.6	1099.1	360.6
80°	109.4	108.7	131.5	176.5	249.2	238.1	656.8	736.4	589.7	266.5	105.9
82.5°	61.6	63.7	91.4	124.6	151.6	119.0	184.8	203.5	198.6	141.9	46.4
85°	29.8	33.2	59.5	90.0	79.6	46.4	65.8	71.3	83.1	82.4	23.5
87.5°	0.0	0.0	24.2	40.8	21.5	6.9	20.1	22.8	22.1	26.3	5.5
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°	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1	492.1
2.5°	591.8	587.6	535.0	539.2	550.9	546.1	550.2	540.6	529.5	574.5	573.8
5°	748.2	717.1	700.4	685.2	688.0	656.8	674.8	683.1	681.8	707.4	714.3
7.5°	885.2	843.7	810.5	778.7	730.2	686.6	713.6	730.9	742.7	787.0	804.3
10°	949.6	915.7	902.5	840.3	805.6	778.7	746.1	722.6	732.3	720.5	732.3
12.5°	1090.8	1068.0	1017.4	954.5	912.9	857.6	736.4	635.4	573.1	573.8	569.6
15°	1219.5	1218.2	1142.7	1038.2	917.8	760.0	571.0	443.7	384.8	368.2	362.7
17.5°	1387.7	1367.0	1229.2	1074.9	858.2	588.3	389.0	303.8	298.3	308.0	303.8
20°	1495.0	1464.6	1272.1	1021.6	707.4	398.0	293.5	269.2	285.9	299.7	296.2
22.5°	1602.3	1556.6	1304.7	956.5	503.2	291.4	265.1	260.9	271.3	288.6	291.4
25°	1661.1	1652.1	1368.4	834.7	344.7	255.4	255.4	254.0	257.5	269.9	267.9
27.5°	1832.1	1710.3	1320.6	651.3	266.5	234.6	238.1	236.7	224.3	236.7	237.4
30°	1938.7	1882.6	1324.1	463.7	234.6	207.6	216.6	205.6	186.9	197.3	195.2
32.5°	2153.2	2013.4	1313.7	312.8	213.9	198.0	184.1	168.2	154.3	158.5	155.0
35°	2403.1	2296.5	1173.2	251.2	199.3	175.1	153.0	137.0	122.5	126.0	125.3
37.5°	2900.0	2561.6	1056.9	226.3	189.6	160.6	135.0	112.8	105.2	107.3	109.4
40°	3360.3	3003.9	840.3	215.3	173.0	143.3	111.4	95.5	90.7	92.1	94.1
42.5°	4048.3	3355.5	634.7	204.2	156.4	121.1	92.7	82.4	77.5	80.3	81.7
45°	4714.1	3654.5	474.1	194.5	142.6	104.5	78.2	71.3	65.8	67.8	70.6
47.5°	5379.3	3986.7	353.7	179.3	127.4	90.0	67.1	62.3	58.8	59.5	63.0
50°	5974.5	4141.7	278.2	160.6	114.9	78.2	60.9	56.1	54.7	55.4	58.1
52.5°	6411.9	4143.1	234.6	144.0	103.1	69.2	57.4	51.9	51.2	52.6	55.4
55°	6807.1	4032.4	203.5	129.4	92.7	63.0	54.7	49.8	49.8	51.2	54.0
57.5°	7069.5	3828.9	176.5	114.2	83.7	59.5	52.6	47.8	47.1	46.4	48.4
60°	7197.5	3551.3	149.5	100.4	75.4	57.4	51.2	42.2	41.5	40.1	41.5
62.5°	7116.5	3203.9	125.3	86.5	67.1	54.7	45.0	36.7	35.3	32.5	34.6
65°	6702.6	2781.7	105.9	74.1	58.1	46.4	38.1	31.1	27.7	24.2	23.5
67.5°	5856.2	2259.8	88.6	63.7	49.8	38.1	31.1	27.7	21.5	18.7	18.0
70°	4388.8	1542.8	73.4	54.7	41.5	32.5	26.3	24.9	20.1	18.0	16.6
72.5°	2574.7	832.6	61.6	47.8	35.3	27.0	21.5	22.8	20.1	16.6	15.2
75°	1028.5	276.9	49.1	38.1	28.4	19.4	18.0	18.7	18.0	15.2	12.5
77.5°	234.6	87.2	38.1	29.8	22.1	12.5	14.5	15.9	15.9	12.5	9.0
80°	73.4	34.6	22.1	18.7	15.9	6.9	10.4	11.1	7.6	3.5	0.0
82.5°	23.5	9.7	7.6	7.6	6.9	1.4	2.1	1.4	0.0	0.0	0.0
85°	9.0	6.2	4.8	4.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.5	2.8	2.1	2.8	1.4	0.0	0.0	0.0	0.0	0.0	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)