

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: P367937

Luminaire Tested: **MSA-SA3C-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-727-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11401 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

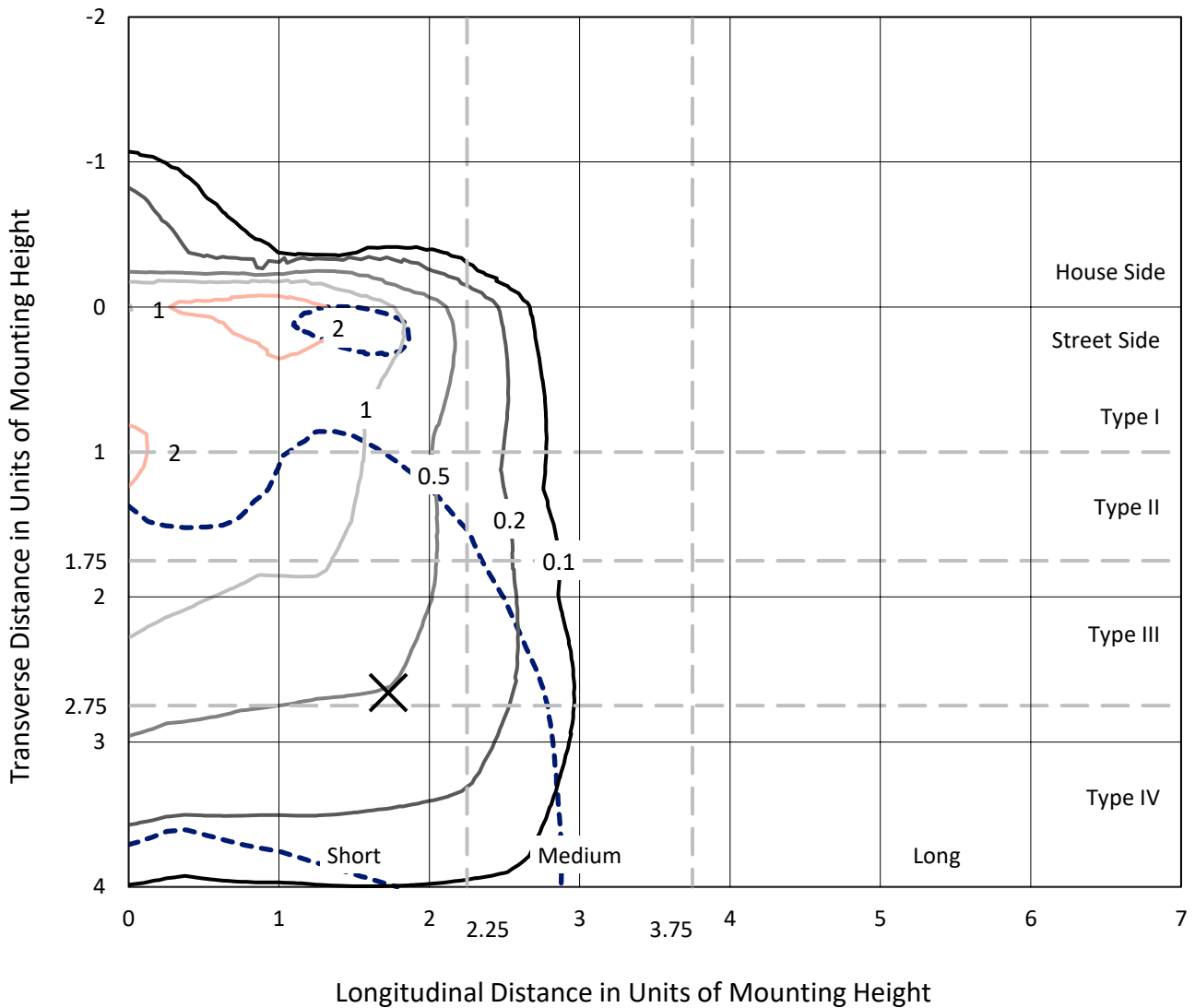
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

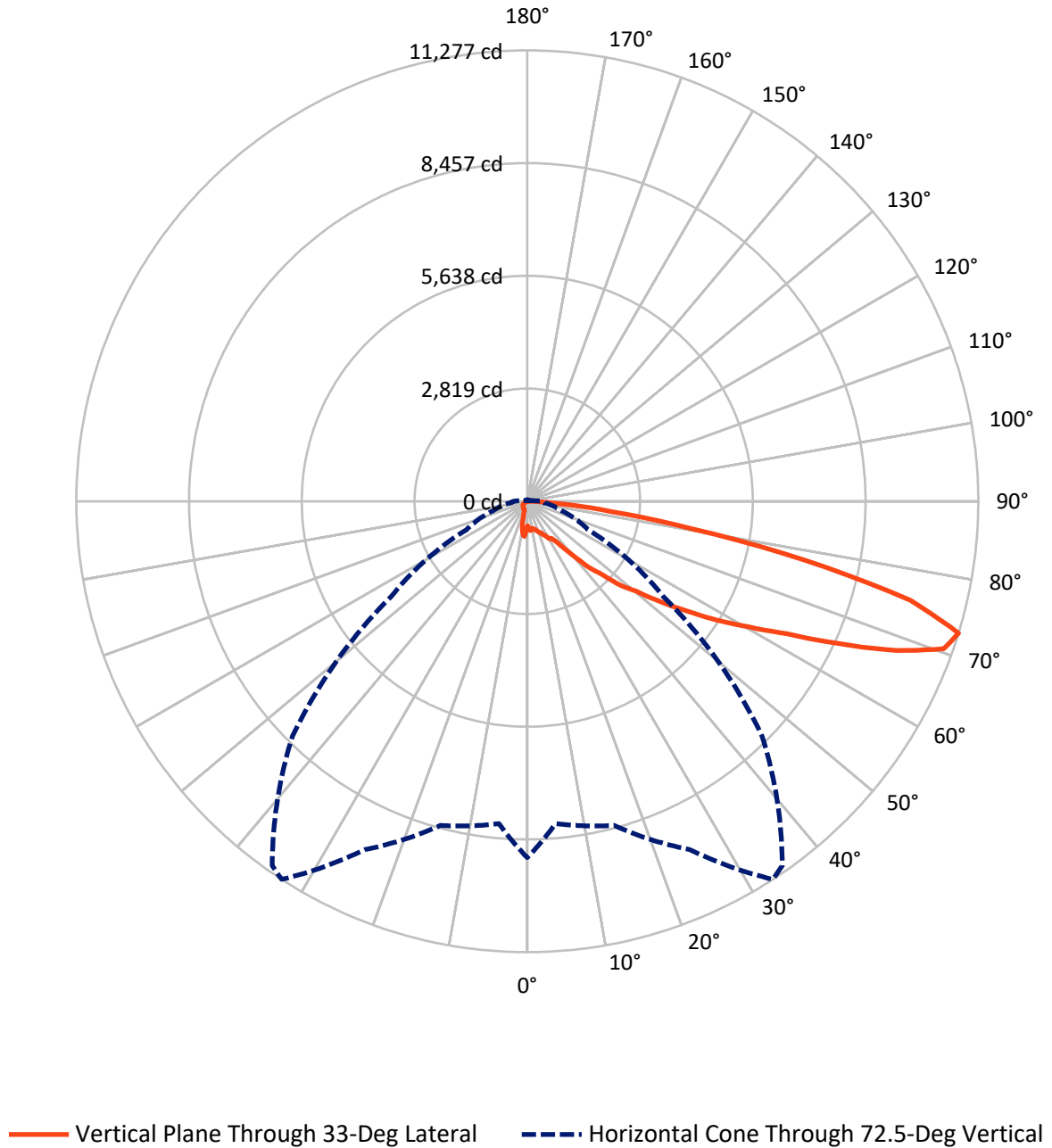
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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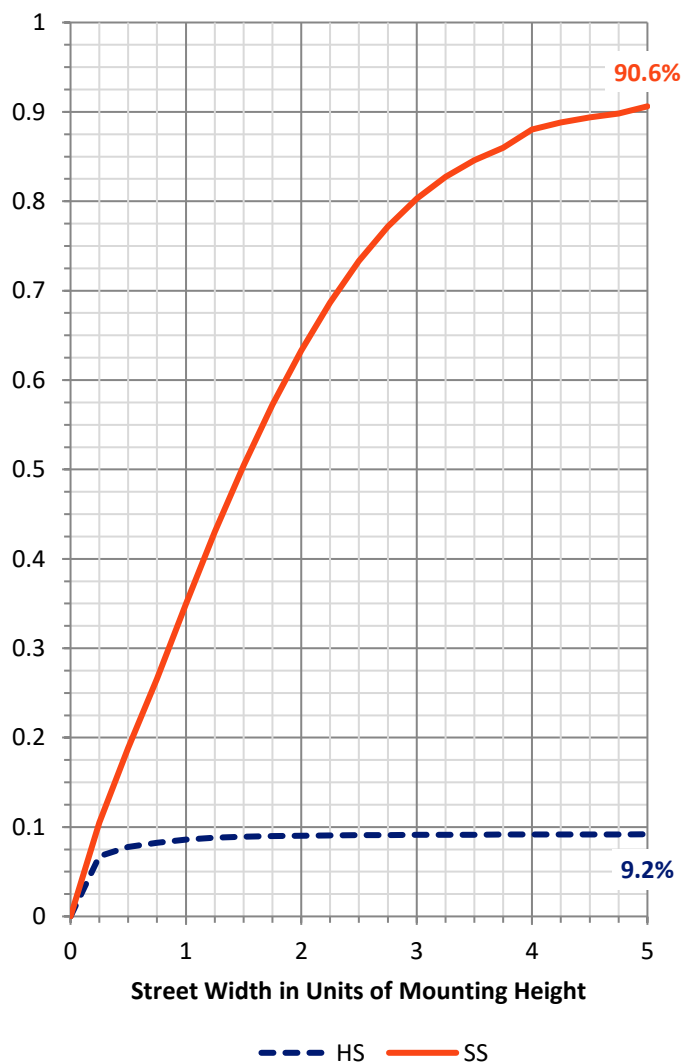
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1054.2	0.0	1054.2
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	10346.8	0.0	10346.8
	% Fixture	90.8	0.0	90.8
Total	Lumens	11401.0	0.0	11401.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	0.7
10°-20°	233.9	2.1
20°-30°	396.6	3.5
30°-40°	725.9	6.4
40°-50°	1532.0	13.4
50°-60°	2563.2	22.5
60°-70°	3431.0	30.1
70°-80°	2241.2	19.7
80°-90°	198.7	1.7
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°	11401.0	100.0
0°-180°	11401.0	100.0

Coefficient of Utilization

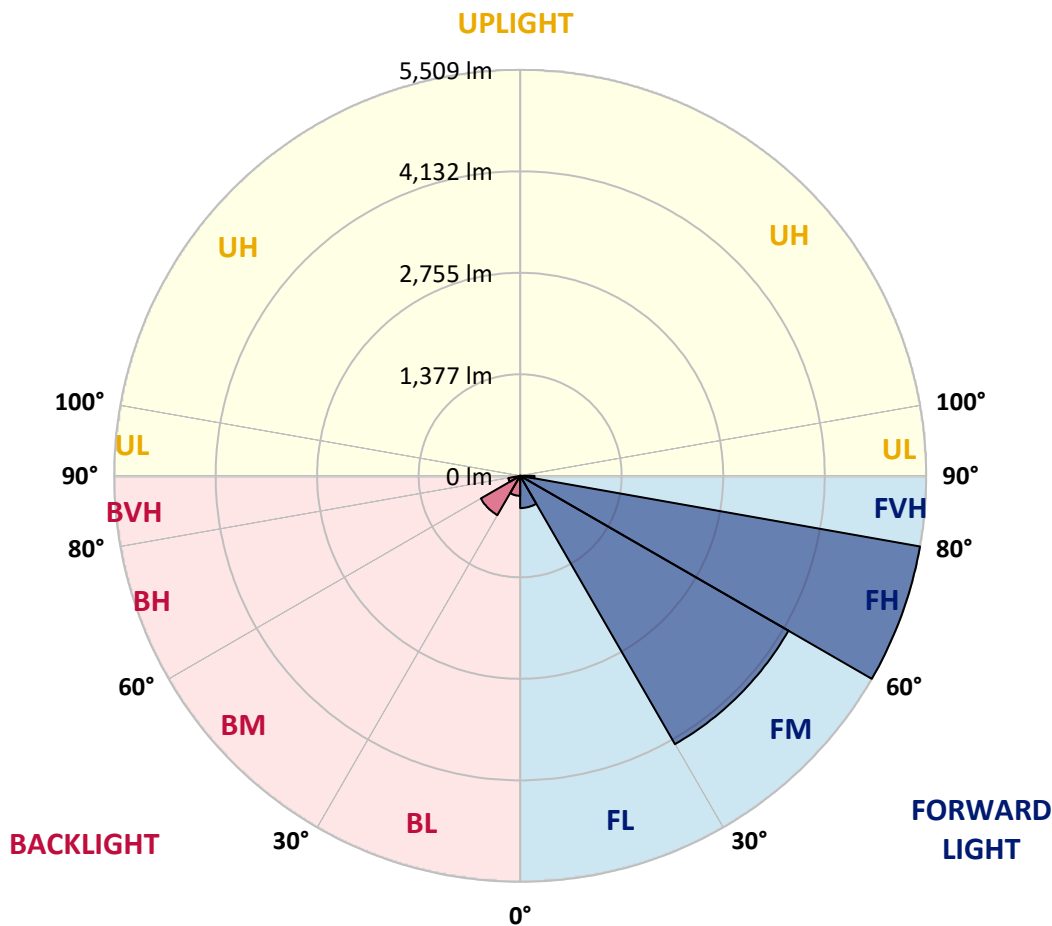


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	437.7	3.8			
FM (30°-60°)	4204.9	36.9			
FH (60°-80°)	5509.4	48.3			G3/7500
FVH (80°-90°)	194.9	1.7			G2/225
BL (0°-30°)	271.3	2.4	B1/500		
BM (30°-60°)	616.3	5.4	B1/1000		
BH (60°-80°)	162.7	1.4	B1/500		G1/500
BVH (80°-90°)	3.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4
2.5°	722.9	695.0	654.5	657.0	664.0	669.7	684.9	678.6	666.5	665.9	722.9
5°	765.9	734.9	732.4	736.2	734.3	744.4	731.7	772.9	807.7	849.5	916.6
7.5°	745.0	730.5	712.1	731.1	730.5	725.4	733.6	817.2	901.4	954.5	1065.3
10°	684.9	668.4	682.4	688.7	684.3	706.4	761.5	829.8	930.5	1041.9	1095.7
12.5°	667.8	677.9	683.0	683.0	725.4	736.8	821.0	885.5	1005.2	1093.2	1249.5
15°	734.3	753.9	719.1	711.5	724.8	731.1	824.8	902.6	1055.8	1216.6	1347.6
17.5°	840.0	838.7	784.9	755.2	776.0	791.2	843.1	934.3	1024.2	1313.4	1503.3
20°	912.8	914.0	817.2	755.2	824.1	833.0	890.6	963.4	1034.3	1362.2	1605.3
22.5°	1006.4	972.9	865.9	805.8	852.6	860.9	924.2	981.8	1086.2	1356.5	1735.6
25°	1083.0	1061.5	926.7	884.9	926.7	915.3	972.9	1059.6	1141.9	1447.0	1812.2
27.5°	1202.0	1165.3	969.7	977.3	974.8	983.0	996.3	1129.2	1240.0	1451.4	1989.5
30°	1312.8	1291.3	1065.9	1065.9	1090.6	1074.8	1084.3	1245.1	1335.0	1554.0	2188.9
32.5°	1427.4	1428.6	1179.3	1119.1	1099.5	1164.7	1228.6	1301.4	1449.5	1730.0	2494.0
35°	1730.6	1705.3	1396.4	1246.3	1230.5	1226.7	1329.3	1526.1	1652.7	1959.1	2904.8
37.5°	2341.4	2253.4	1863.5	1535.0	1475.5	1455.2	1571.7	1773.6	1899.6	2295.8	3584.0
40°	2968.1	2806.7	2373.7	2003.4	1810.3	1723.0	1858.4	2030.0	2254.1	2668.0	4212.5
42.5°	3518.1	3318.7	2757.9	2508.5	2257.2	2219.2	2092.0	2371.2	2760.5	3209.9	4828.4
45°	4054.3	3661.8	3099.7	2902.2	2597.1	2618.7	2575.6	2817.4	3286.5	3803.6	5374.7
47.5°	4423.3	4070.7	3518.8	3262.4	3140.2	3014.3	3356.1	3607.4	3754.9	4180.9	5846.9
50°	4820.8	4463.8	3878.9	3699.8	3539.0	3666.3	4110.0	4143.5	4131.5	4532.8	6168.5
52.5°	5334.2	4913.2	4292.3	4089.7	4180.9	4307.5	4819.6	4825.9	4466.4	4829.1	6400.1
55°	5808.9	5342.4	4843.0	4651.8	4842.3	4949.3	5517.1	5308.9	4661.3	5030.3	6514.1
57.5°	6478.0	5938.0	5575.3	5238.6	5624.7	5522.2	6130.5	5820.9	4880.3	5163.9	6472.3
60°	7323.7	6688.1	6324.8	5968.4	6382.4	6452.0	6729.3	6076.7	4965.1	5207.6	6221.0
62.5°	8183.9	7544.6	7066.7	6824.9	7294.5	7523.7	7283.8	6203.9	4863.2	5122.1	5651.9
65°	9251.1	8432.6	7874.3	7732.6	8602.9	8939.7	7939.5	6234.9	4666.4	4651.8	4544.2
67.5°	9982.2	9185.3	8673.2	8910.5	9961.9	9989.2	8528.2	6244.4	4003.6	3642.2	2982.6
70°	10155.6	9302.4	9073.2	9772.0	11046.2	10703.8	8718.1	5763.3	2969.3	2161.6	1363.5
72.5°	8915.0	8093.4	8391.5	9609.4	11276.6	11119.7	8298.4	4158.1	1671.7	864.7	418.4
75°	5468.4	4971.5	6295.0	8147.2	9898.6	9797.4	6474.2	2148.4	673.5	345.6	156.3
77.5°	2378.1	2208.5	3285.2	5405.7	7112.9	7022.3	3793.5	791.2	348.1	243.1	79.1
80°	786.8	763.4	1244.5	2559.8	4166.3	4086.6	1598.3	329.2	248.1	195.0	44.3
82.5°	186.7	185.5	434.2	1178.0	2122.4	2055.9	490.6	181.7	179.8	153.8	23.4
85°	46.8	48.1	120.3	481.7	862.1	760.2	127.9	90.5	126.6	104.4	12.0
87.5°	0.0	0.0	31.0	69.0	130.4	81.7	13.9	24.1	35.4	37.3	6.3
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°	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4	606.4
2.5°	735.5	728.6	671.6	685.5	707.0	705.1	719.1	708.3	698.8	745.7	741.2
5°	935.6	897.6	879.9	904.5	891.2	860.2	886.2	881.7	874.2	890.0	902.0
7.5°	1085.6	1050.8	1034.9	983.0	907.7	848.2	857.7	835.5	814.7	839.3	864.7
10°	1134.9	1116.0	1114.1	1012.8	941.9	855.8	753.9	665.9	642.5	611.5	625.4
12.5°	1269.1	1280.5	1209.0	1090.6	953.9	788.7	607.7	483.0	432.3	399.4	401.3
15°	1379.3	1419.2	1315.3	1102.7	839.3	601.3	404.5	292.4	260.8	252.6	250.0
17.5°	1543.2	1581.8	1348.3	1017.2	676.7	407.6	260.2	227.9	229.8	235.5	234.2
20°	1664.8	1659.1	1319.8	865.9	498.8	267.1	217.7	213.3	223.4	239.9	236.1
22.5°	1781.9	1742.6	1302.1	726.0	322.8	214.6	210.2	209.5	219.0	234.8	239.3
25°	1865.4	1871.7	1272.3	568.4	234.8	199.4	203.2	208.9	218.4	235.5	232.9
27.5°	2104.7	1927.4	1148.2	412.7	198.1	191.2	200.7	212.1	215.2	236.7	237.4
30°	2259.8	2137.6	1067.2	277.9	182.9	176.6	195.6	210.8	214.6	242.4	244.3
32.5°	2530.0	2228.1	973.5	206.4	170.3	172.2	184.2	204.5	222.2	251.9	253.2
35°	2866.2	2518.7	803.9	185.5	165.8	162.7	168.4	191.8	220.9	253.2	259.5
37.5°	3506.1	2692.7	637.4	179.8	165.8	160.1	165.8	179.8	217.1	265.9	279.1
40°	3934.6	3047.2	459.5	178.5	162.7	157.6	159.5	173.4	206.4	258.3	277.9
42.5°	4462.6	3196.6	338.6	175.3	159.5	151.9	153.2	170.9	195.6	242.4	257.0
45°	4894.9	3305.5	266.5	174.1	151.9	149.4	151.9	169.0	185.5	208.3	221.5
47.5°	5223.4	3432.1	213.9	165.8	150.0	149.4	146.2	158.2	168.4	174.1	182.9
50°	5463.9	3403.6	177.2	153.2	143.7	147.5	141.8	143.7	146.2	143.1	153.2
52.5°	5611.4	3301.0	147.5	138.0	136.1	139.3	132.3	126.6	122.2	119.6	126.0
55°	5665.2	3095.3	125.3	118.4	122.8	124.1	118.4	108.2	100.6	96.8	101.9
57.5°	5563.3	2782.0	108.9	98.1	108.2	108.2	100.6	89.9	81.0	74.7	79.8
60°	5305.1	2435.7	96.8	81.7	92.4	93.0	84.2	72.8	65.8	59.5	62.7
62.5°	4824.0	2058.5	84.8	70.9	79.8	80.4	69.6	58.9	53.8	46.8	49.4
65°	3861.8	1574.2	72.2	62.7	69.0	67.1	57.6	50.0	43.7	37.3	38.6
67.5°	2506.6	971.6	62.7	57.0	58.2	56.3	48.7	43.7	36.7	31.6	32.3
70°	1122.3	418.4	55.1	51.3	50.6	47.5	41.1	40.5	36.1	31.6	31.6
72.5°	346.2	157.6	47.5	46.2	43.7	39.9	36.1	38.6	35.4	30.4	29.8
75°	136.7	72.2	39.2	39.2	38.0	32.9	32.3	34.8	32.9	27.9	26.6
77.5°	71.5	45.6	32.3	33.5	32.9	25.3	29.1	31.6	30.4	23.4	19.6
80°	42.4	27.9	24.1	27.2	26.6	17.7	22.2	20.3	14.6	7.0	1.9
82.5°	23.4	12.7	10.8	15.8	15.8	6.3	11.4	10.1	5.7	0.0	0.0
85°	11.4	8.9	8.2	8.9	6.3	1.9	5.7	5.7	3.2	0.0	0.0
87.5°	5.7	5.1	3.8	3.2	2.5	0.0	1.9	2.5	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)