

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: P596713

Luminaire Tested: **MSA-SA3C-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-827-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: 10022 lumens
Efficiency: N/A
Efficacy: 60.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

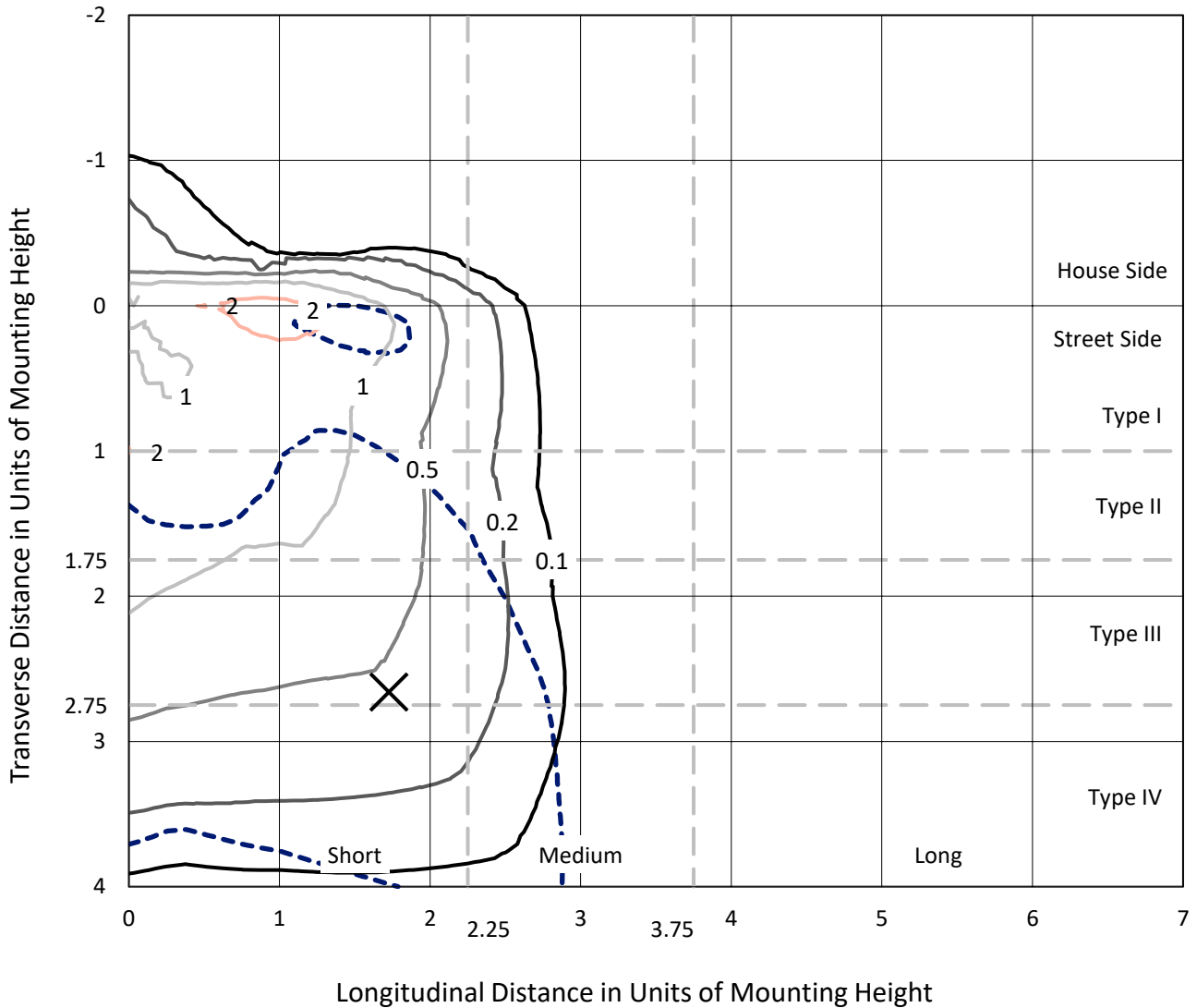
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

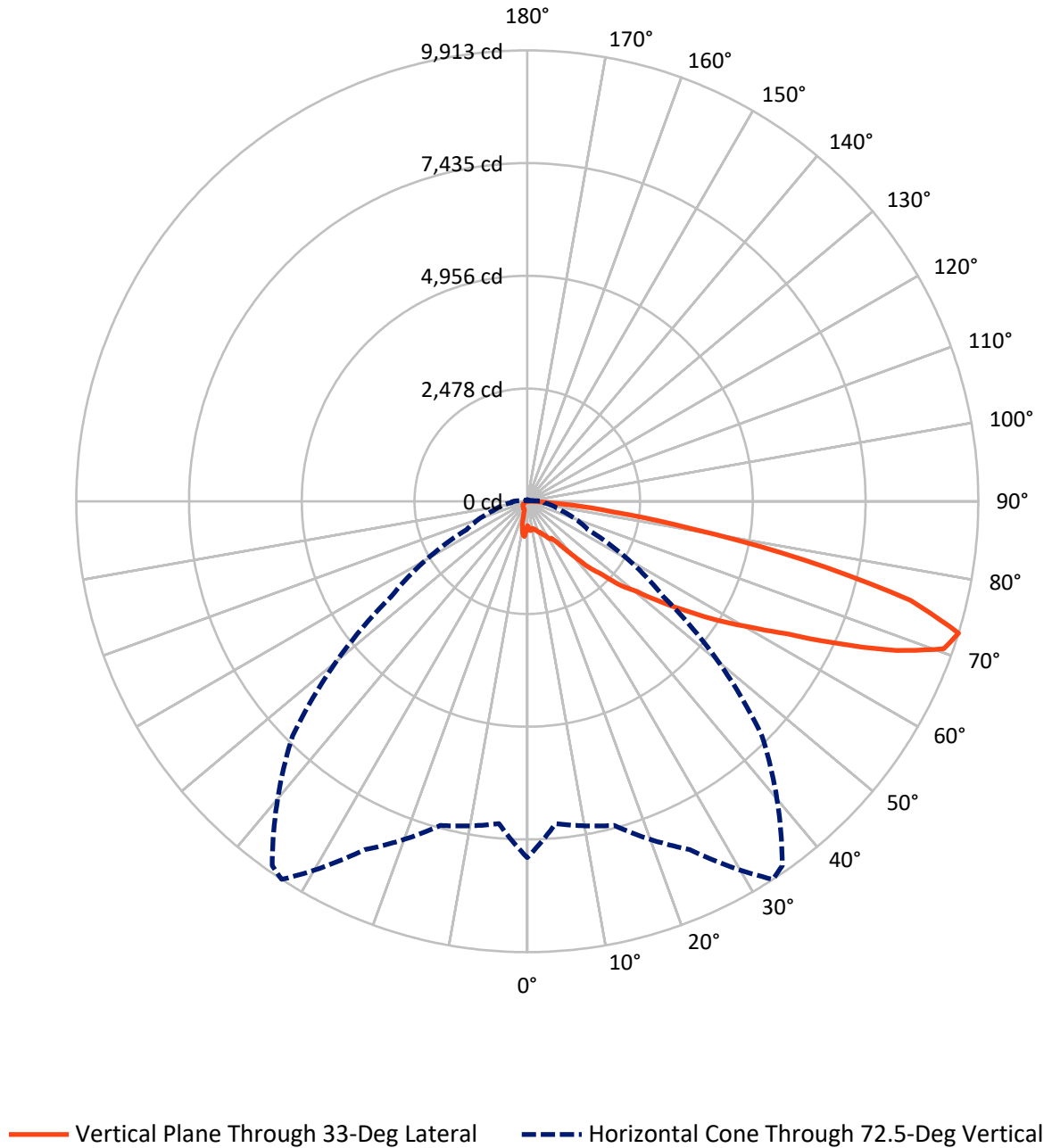
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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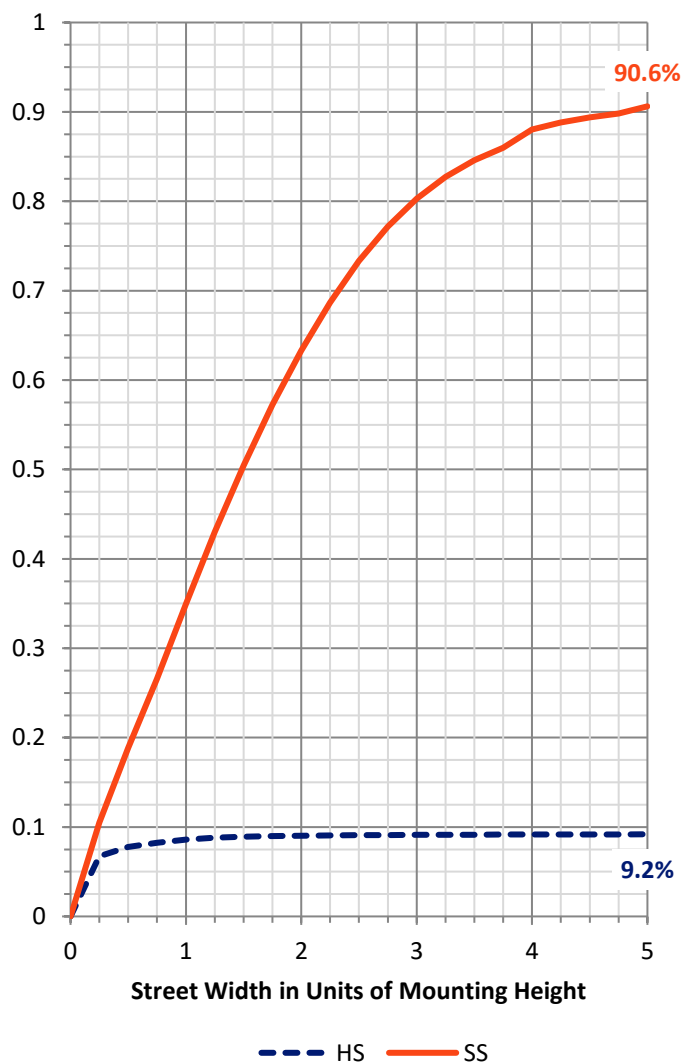
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	926.7	0.0	926.7
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	9095.3	0.0	9095.3
	% Fixture	90.8	0.0	90.8
Total	Lumens	10022.0	0.0	10022.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.0	0.7
10°-20°	205.6	2.1
20°-30°	348.7	3.5
30°-40°	638.1	6.4
40°-50°	1346.7	13.4
50°-60°	2253.2	22.5
60°-70°	3016.0	30.1
70°-80°	1970.1	19.7
80°-90°	174.7	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°	10022.0	100.0
0°-180°	10022.0	100.0

Coefficient of Utilization



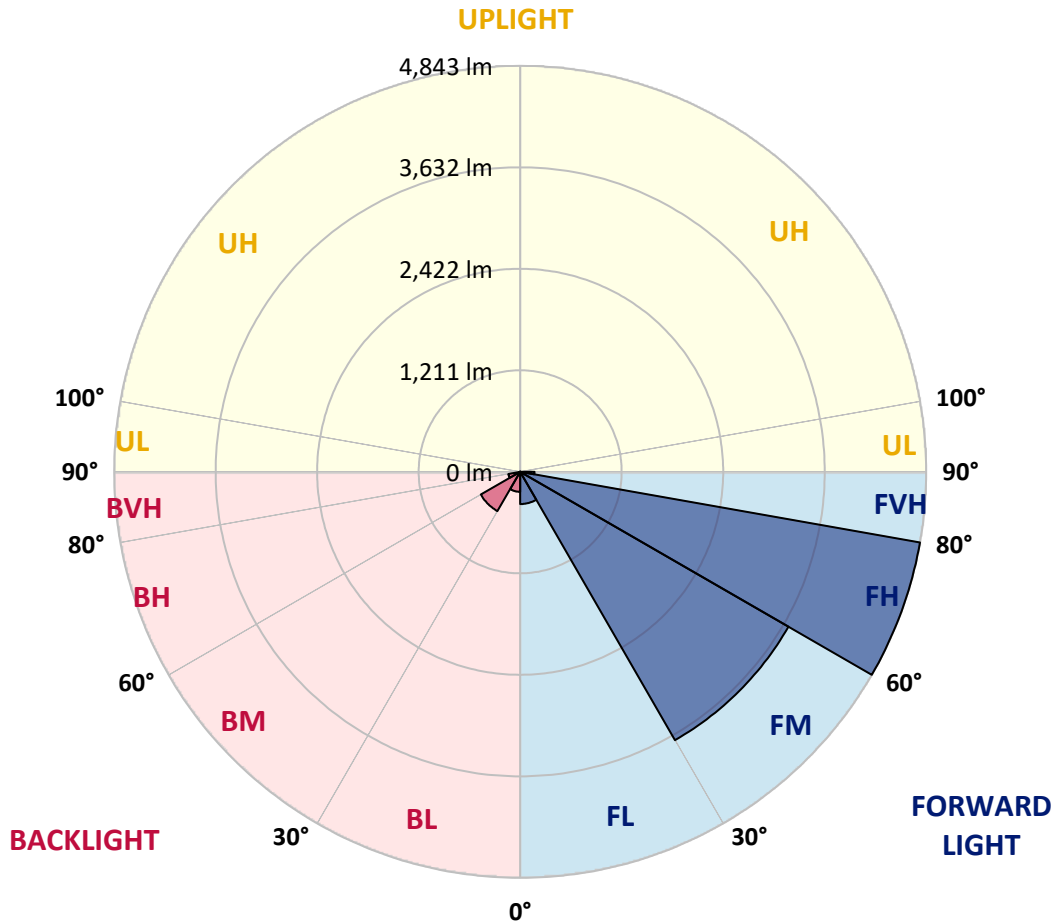
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	384.7	3.8			
FM (30°-60°)	3696.3	36.9			
FH (60°-80°)	4843.1	48.3			G2/5000
FVH (80°-90°)	171.3	1.7			G2/225
BL (0°-30°)	238.5	2.4	B1/500		
BM (30°-60°)	541.7	5.4	B1/1000		
BH (60°-80°)	143.0	1.4	B1/500		G1/500
BVH (80°-90°)	3.4	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1
2.5°	635.4	611.0	575.3	577.6	583.7	588.7	602.1	596.5	585.9	585.4	635.4
5°	673.3	646.0	643.8	647.1	645.5	654.4	643.2	679.4	710.0	746.7	805.7
7.5°	654.9	642.1	626.0	642.7	642.1	637.7	644.9	718.3	792.3	839.1	936.5
10°	602.1	587.6	599.8	605.4	601.5	621.0	669.4	729.5	817.9	915.9	963.2
12.5°	587.0	595.9	600.4	600.4	637.7	647.7	721.7	778.4	883.6	960.9	1098.4
15°	645.5	662.7	632.1	625.4	637.1	642.7	725.0	793.5	928.1	1069.4	1184.6
17.5°	738.4	737.3	690.0	663.8	682.2	695.5	741.2	821.3	900.3	1154.6	1321.5
20°	802.4	803.5	718.3	663.8	724.5	732.3	782.9	846.9	909.2	1197.4	1411.1
22.5°	884.7	855.2	761.2	708.3	749.5	756.7	812.4	863.0	954.8	1192.4	1525.7
25°	952.0	933.1	814.6	777.9	814.6	804.6	855.2	931.5	1003.8	1272.0	1593.0
27.5°	1056.6	1024.4	852.4	859.1	856.9	864.1	875.8	992.7	1090.0	1275.9	1748.8
30°	1154.0	1135.1	937.0	937.0	958.7	944.8	953.2	1094.5	1173.5	1366.0	1924.1
32.5°	1254.7	1255.8	1036.6	983.8	966.5	1023.8	1080.0	1144.0	1274.2	1520.7	2192.3
35°	1521.3	1499.0	1227.5	1095.6	1081.7	1078.3	1168.5	1341.5	1452.8	1722.1	2553.4
37.5°	2058.2	1980.9	1638.1	1349.3	1297.0	1279.2	1381.6	1559.1	1669.8	2018.1	3150.5
40°	2609.1	2467.2	2086.6	1761.1	1591.4	1514.6	1633.7	1784.5	1981.4	2345.3	3703.0
42.5°	3092.6	2917.3	2424.3	2205.1	1984.2	1950.8	1839.0	2084.4	2426.6	2821.6	4244.4
45°	3563.9	3218.9	2724.8	2551.2	2283.0	2301.9	2264.1	2476.6	2889.0	3343.6	4724.6
47.5°	3888.3	3578.4	3093.2	2867.8	2760.4	2649.7	2950.2	3171.1	3300.7	3675.2	5139.7
50°	4237.7	3923.9	3409.8	3252.3	3111.0	3222.8	3612.9	3642.4	3631.8	3984.6	5422.3
52.5°	4689.0	4319.0	3773.1	3595.1	3675.2	3786.5	4236.6	4242.2	3926.1	4245.0	5626.0
55°	5106.3	4696.2	4257.2	4089.2	4256.6	4350.7	4849.8	4666.7	4097.5	4421.9	5726.2
57.5°	5694.4	5219.8	4901.0	4605.0	4944.4	4854.2	5389.0	5116.9	4290.0	4539.3	5689.4
60°	6437.8	5879.2	5559.8	5246.5	5610.4	5671.6	5915.3	5341.7	4364.6	4577.7	5468.5
62.5°	7194.0	6632.0	6211.9	5999.4	6412.2	6613.7	6402.8	5453.5	4275.0	4502.6	4968.3
65°	8132.1	7412.7	6921.9	6797.3	7562.4	7858.4	6979.2	5480.8	4102.0	4089.2	3994.6
67.5°	8774.8	8074.3	7624.1	7832.8	8757.0	8780.9	7496.7	5489.1	3519.4	3201.7	2621.9
70°	8927.3	8177.2	7975.8	8590.1	9710.2	9409.1	7663.6	5066.2	2610.2	1900.2	1198.5
72.5°	7836.7	7114.4	7376.5	8447.1	9912.7	9774.7	7294.7	3655.1	1469.5	760.1	367.8
75°	4806.9	4370.2	5533.6	7161.7	8701.4	8612.3	5691.1	1888.5	592.0	303.8	137.4
77.5°	2090.5	1941.4	2887.8	4751.9	6252.5	6173.0	3334.6	695.5	306.0	213.7	69.6
80°	691.6	671.0	1093.9	2250.2	3662.4	3592.3	1405.0	289.3	218.1	171.4	38.9
82.5°	164.1	163.0	381.7	1035.5	1865.7	1807.3	431.2	159.7	158.0	135.2	20.6
85°	41.2	42.3	105.7	423.4	757.8	668.3	112.4	79.6	111.3	91.8	10.6
87.5°	0.0	0.0	27.3	60.7	114.6	71.8	12.2	21.1	31.2	32.8	5.6
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°	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1
2.5°	646.6	640.4	590.4	602.6	621.5	619.9	632.1	622.6	614.3	655.5	651.6
5°	822.4	789.0	773.4	795.1	783.4	756.2	779.0	775.1	768.4	782.3	792.9
7.5°	954.3	923.7	909.8	864.1	797.9	745.6	754.0	734.5	716.1	737.8	760.1
10°	997.7	981.0	979.3	890.3	828.0	752.3	662.7	585.4	564.8	537.5	549.7
12.5°	1115.6	1125.6	1062.8	958.7	838.5	693.3	534.2	424.6	380.0	351.1	352.8
15°	1212.4	1247.5	1156.2	969.3	737.8	528.6	355.6	257.1	229.2	222.0	219.8
17.5°	1356.6	1390.5	1185.2	894.2	594.8	358.3	228.7	200.3	202.0	207.0	205.9
20°	1463.4	1458.4	1160.1	761.2	438.5	234.8	191.4	187.5	196.4	210.9	207.5
22.5°	1566.3	1531.8	1144.6	638.2	283.8	188.6	184.7	184.2	192.5	206.4	210.3
25°	1639.8	1645.3	1118.4	499.7	206.4	175.3	178.6	183.6	192.0	207.0	204.8
27.5°	1850.1	1694.3	1009.4	362.8	174.2	168.0	176.4	186.4	189.2	208.1	208.7
30°	1986.4	1879.0	938.1	244.3	160.8	155.2	171.9	185.3	188.6	213.1	214.8
32.5°	2224.0	1958.6	855.8	181.4	149.7	151.3	161.9	179.7	195.3	221.5	222.6
35°	2519.5	2214.0	706.7	163.0	145.8	143.0	148.0	168.6	194.2	222.6	228.1
37.5°	3082.0	2367.0	560.3	158.0	145.8	140.8	145.8	158.0	190.9	233.7	245.4
40°	3458.7	2678.6	404.0	156.9	143.0	138.5	140.2	152.5	181.4	227.0	244.3
42.5°	3922.8	2809.9	297.7	154.1	140.2	133.5	134.7	150.2	171.9	213.1	225.9
45°	4302.8	2905.6	234.3	153.0	133.5	131.3	133.5	148.6	163.0	183.1	194.7
47.5°	4591.6	3016.9	188.1	145.8	131.9	131.3	128.5	139.1	148.0	153.0	160.8
50°	4803.1	2991.9	155.8	134.7	126.3	129.6	124.6	126.3	128.5	125.8	134.7
52.5°	4932.7	2901.8	129.6	121.3	119.6	122.4	116.3	111.3	107.4	105.2	110.7
55°	4980.0	2720.9	110.2	104.1	107.9	109.1	104.1	95.1	88.5	85.1	89.6
57.5°	4890.4	2445.5	95.7	86.2	95.1	95.1	88.5	79.0	71.2	65.7	70.1
60°	4663.4	2141.1	85.1	71.8	81.2	81.8	74.0	64.0	57.9	52.3	55.1
62.5°	4240.5	1809.5	74.6	62.3	70.1	70.7	61.2	51.7	47.3	41.2	43.4
65°	3394.7	1383.8	63.4	55.1	60.7	59.0	50.6	44.0	38.4	32.8	33.9
67.5°	2203.4	854.1	55.1	50.1	51.2	49.5	42.8	38.4	32.3	27.8	28.4
70°	986.5	367.8	48.4	45.1	44.5	41.7	36.2	35.6	31.7	27.8	27.8
72.5°	304.4	138.5	41.7	40.6	38.4	35.1	31.7	33.9	31.2	26.7	26.2
75°	120.2	63.4	34.5	34.5	33.4	28.9	28.4	30.6	28.9	24.5	23.4
77.5°	62.9	40.1	28.4	29.5	28.9	22.3	25.6	27.8	26.7	20.6	17.2
80°	37.3	24.5	21.1	23.9	23.4	15.6	19.5	17.8	12.8	6.1	1.7
82.5°	20.6	11.1	9.5	13.9	13.9	5.6	10.0	8.9	5.0	0.0	0.0
85°	10.0	7.8	7.2	7.8	5.6	1.7	5.0	5.0	2.8	0.0	0.0
87.5°	5.0	4.5	3.3	2.8	2.2	0.0	1.7	2.2	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)