

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: P367739

Luminaire Tested: **MSA-SA3A-750-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367739
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-SA3A-750-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: 8784 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

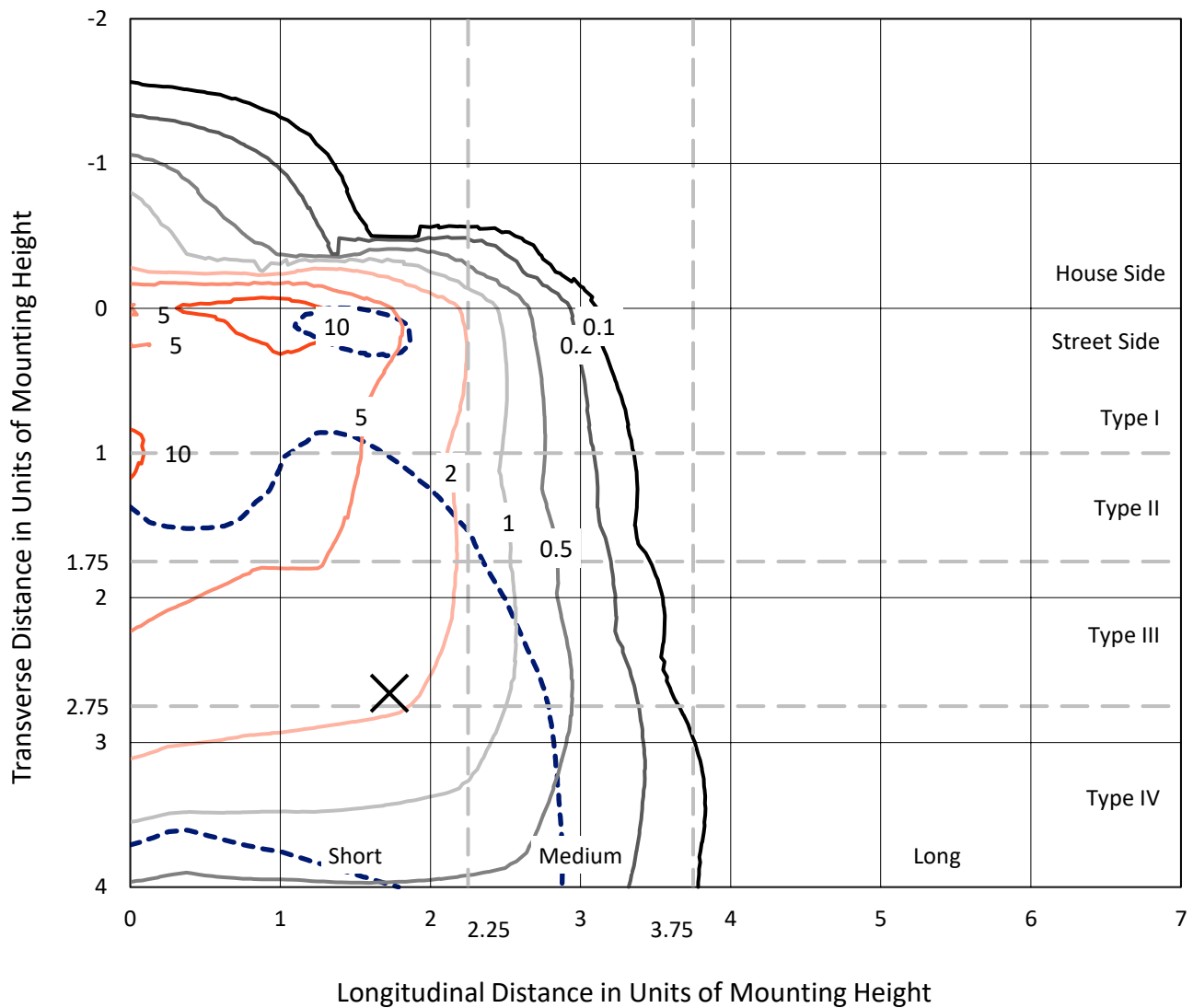
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

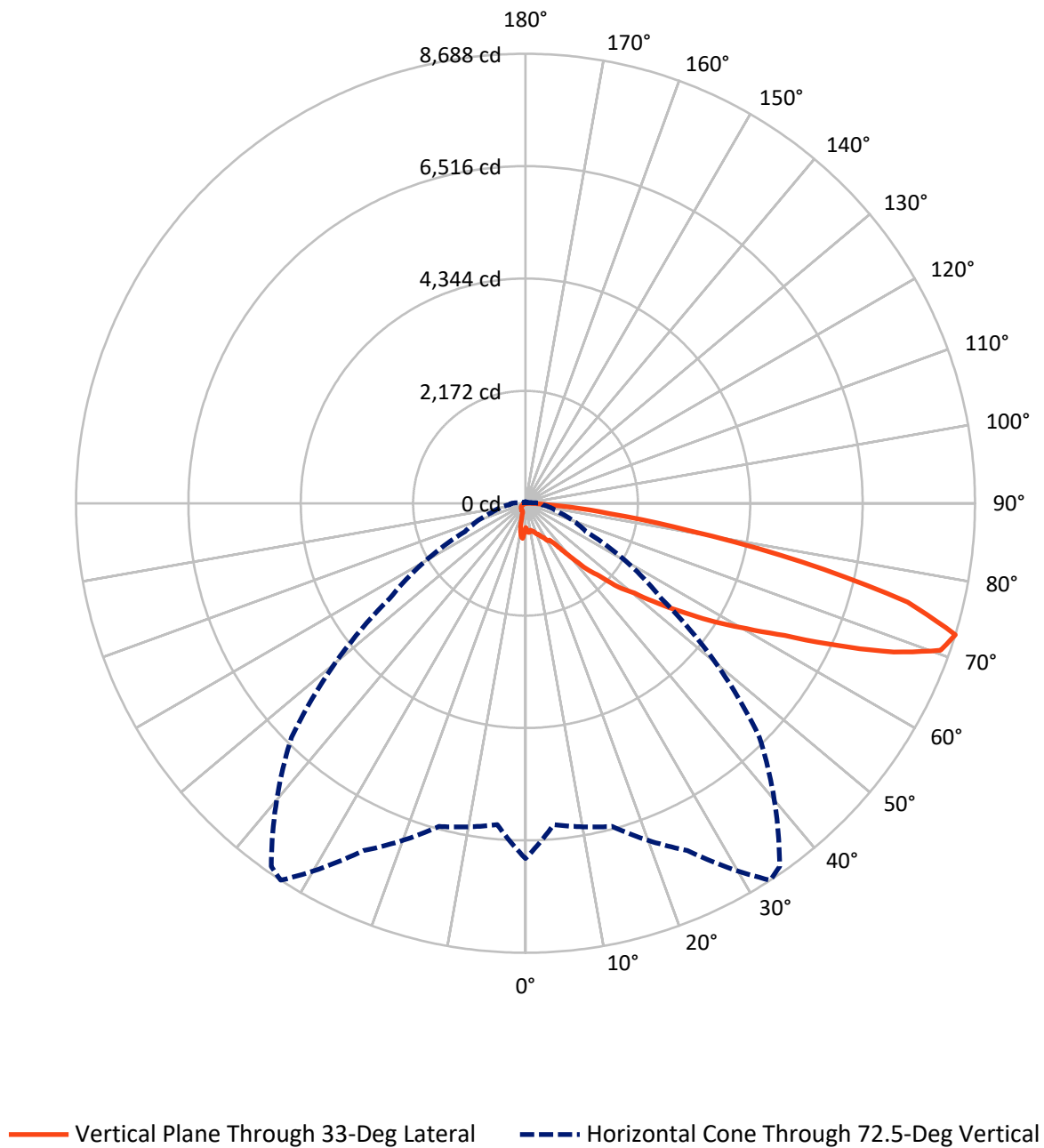
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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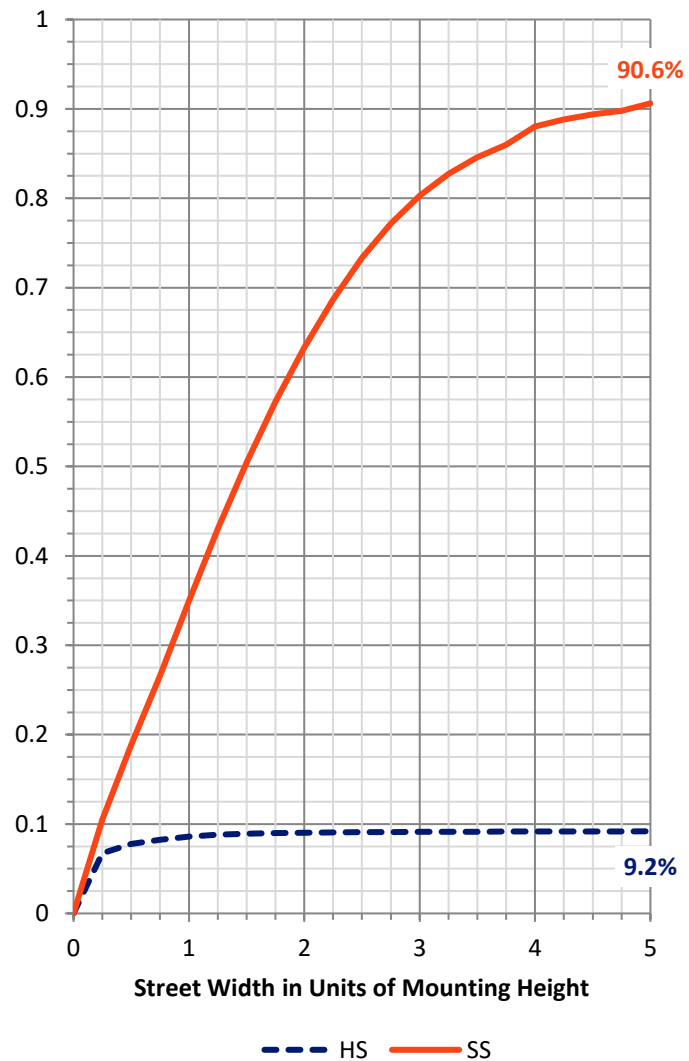
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	812.2	0.0	812.2
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	7971.8	0.0	7971.8
	% Fixture	90.8	0.0	90.8
Total	Lumens	8784.0	0.0	8784.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.5	0.7
10°-20°	180.2	2.1
20°-30°	305.6	3.5
30°-40°	559.3	6.4
40°-50°	1180.4	13.4
50°-60°	1974.8	22.5
60°-70°	2643.4	30.1
70°-80°	1726.7	19.7
80°-90°	153.1	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°	8784.0	100.0
0°-180°	8784.0	100.0

Coefficient of Utilization



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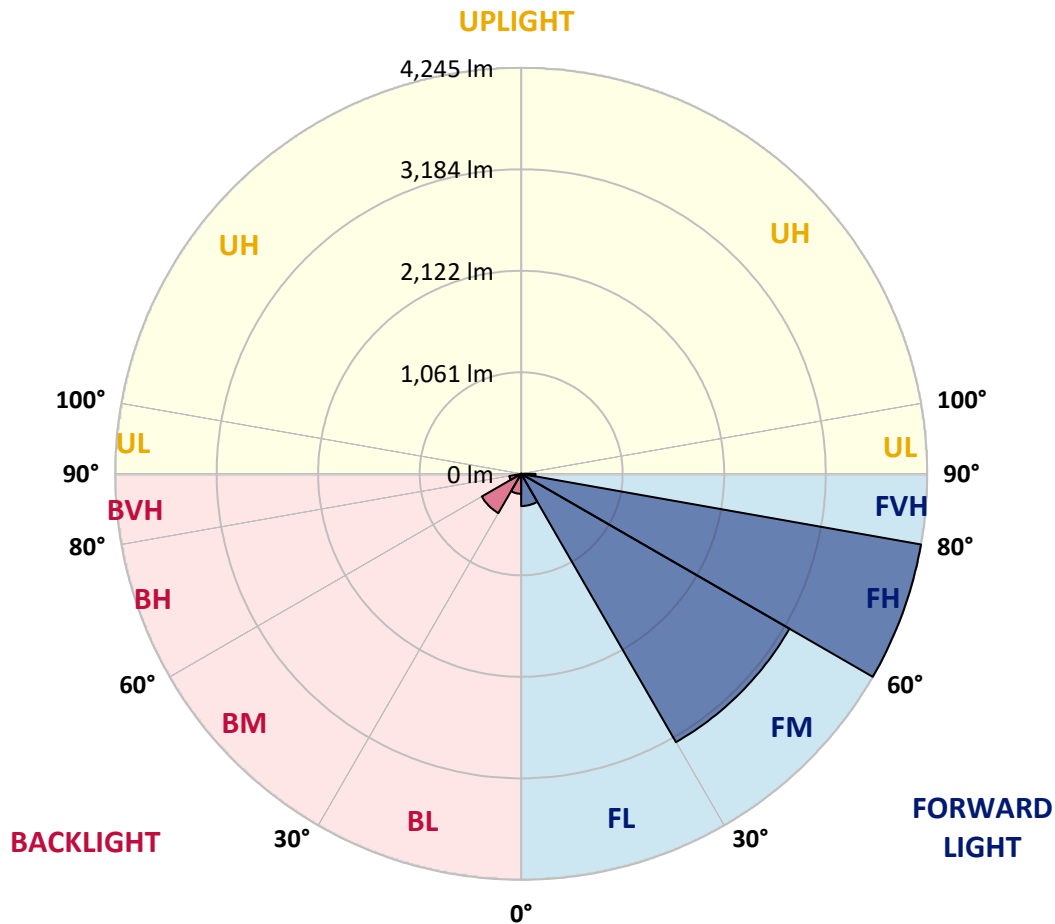
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	337.2	3.8			
FM	(30°-60°)	3239.7	36.9			
FH	(60°-80°)	4244.8	48.3			G2/5000
FVH	(80°-90°)	150.1	1.7			G2/225
BL	(0°-30°)	209.1	2.4	B1/500		
BM	(30°-60°)	474.8	5.4	B1/1000		
BH	(60°-80°)	125.4	1.4	B1/500		G1/500
BVH	(80°-90°)	3.0	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°	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2
2.5°	556.9	535.5	504.3	506.2	511.6	516.0	527.7	522.8	513.5	513.0	556.9
5°	590.1	566.2	564.3	567.2	565.7	573.5	563.8	595.5	622.3	654.5	706.2
7.5°	574.0	562.8	548.7	563.3	562.8	558.9	565.2	629.6	694.5	735.4	820.8
10°	527.7	515.0	525.7	530.6	527.2	544.3	586.7	639.4	716.9	802.7	844.2
12.5°	514.5	522.3	526.2	526.2	558.9	567.7	632.5	682.3	774.5	842.2	962.7
15°	565.7	580.8	554.0	548.2	558.4	563.3	635.5	695.4	813.5	937.3	1038.3
17.5°	647.2	646.2	604.7	581.8	597.9	609.6	649.6	719.8	789.1	1012.0	1158.3
20°	703.2	704.2	629.6	581.8	635.0	641.8	686.2	742.3	796.9	1049.5	1236.8
22.5°	775.4	749.6	667.2	620.8	656.9	663.3	712.0	756.4	836.9	1045.1	1337.2
25°	834.4	817.9	714.0	681.8	714.0	705.2	749.6	816.4	879.8	1114.9	1396.3
27.5°	926.1	897.8	747.1	753.0	751.0	757.4	767.6	870.0	955.4	1118.3	1532.8
30°	1011.5	994.9	821.3	821.3	840.3	828.1	835.4	959.3	1028.5	1197.3	1686.4
32.5°	1099.7	1100.7	908.6	862.2	847.1	897.3	946.6	1002.7	1116.8	1332.9	1921.5
35°	1333.3	1313.8	1075.8	960.3	948.1	945.1	1024.1	1175.8	1273.4	1509.4	2238.0
37.5°	1804.0	1736.2	1435.8	1182.6	1136.8	1121.2	1210.9	1366.5	1463.6	1768.9	2761.3
40°	2286.8	2162.4	1828.8	1543.5	1394.8	1327.5	1431.9	1564.0	1736.7	2055.6	3245.6
42.5°	2710.6	2557.0	2124.9	1932.7	1739.1	1709.8	1611.8	1826.9	2126.8	2473.1	3720.1
45°	3123.7	2821.3	2388.2	2236.1	2001.0	2017.6	1984.4	2170.7	2532.1	2930.5	4141.0
47.5°	3408.0	3136.3	2711.1	2513.6	2419.4	2322.4	2585.7	2779.3	2893.0	3221.2	4504.8
50°	3714.2	3439.2	2988.6	2850.5	2726.7	2824.7	3166.6	3192.4	3183.2	3492.3	4752.5
52.5°	4109.8	3785.4	3307.0	3151.0	3221.2	3318.7	3713.3	3718.1	3441.1	3720.6	4931.0
55°	4475.5	4116.1	3731.3	3584.0	3730.8	3813.2	4250.7	4090.3	3591.3	3875.7	5018.8
57.5°	4991.0	4575.0	4295.6	4036.1	4333.6	4254.6	4723.3	4484.8	3760.1	3978.6	4986.6
60°	5642.6	5152.9	4873.0	4598.4	4917.4	4971.0	5184.6	4681.8	3825.4	4012.2	4793.0
62.5°	6305.3	5812.8	5444.6	5258.3	5620.1	5796.7	5611.8	4779.8	3746.9	3946.4	4354.6
65°	7127.6	6497.0	6066.9	5957.6	6628.2	6887.6	6117.1	4803.7	3595.2	3584.0	3501.1
67.5°	7690.9	7076.9	6682.3	6865.2	7675.3	7696.2	6570.6	4811.1	3084.6	2806.2	2298.0
70°	7824.5	7167.1	6990.5	7529.0	8510.7	8246.8	6717.0	4440.4	2287.8	1665.5	1050.5
72.5°	6868.6	6235.6	6465.3	7403.6	8688.2	8567.2	6393.6	3203.6	1288.0	666.2	322.4
75°	4213.2	3830.3	4850.1	6277.1	7626.5	7548.5	4988.1	1655.2	518.9	266.3	120.5
77.5°	1832.3	1701.5	2531.1	4164.9	5480.2	5410.4	2922.7	609.6	268.2	187.3	61.0
80°	606.2	588.2	958.8	1972.2	3210.0	3148.5	1231.4	253.6	191.2	150.2	34.1
82.5°	143.9	142.9	334.6	907.6	1635.2	1584.0	378.0	140.0	138.5	118.5	18.0
85°	36.1	37.1	92.7	371.1	664.2	585.7	98.5	69.7	97.5	80.5	9.3
87.5°	0.0	0.0	23.9	53.2	100.5	62.9	10.7	18.5	27.3	28.8	4.9
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°	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2	467.2
2.5°	566.7	561.3	517.4	528.2	544.7	543.3	554.0	545.7	538.4	574.5	571.1
5°	720.8	691.5	677.9	696.9	686.7	662.8	682.8	679.4	673.5	685.7	695.0
7.5°	836.4	809.6	797.4	757.4	699.3	653.5	660.8	643.8	627.7	646.7	666.2
10°	874.4	859.8	858.3	780.3	725.7	659.4	580.8	513.0	495.0	471.1	481.8
12.5°	977.8	986.6	931.5	840.3	734.9	607.7	468.2	372.1	333.1	307.7	309.2
15°	1062.7	1093.4	1013.4	849.6	646.7	463.3	311.6	225.3	200.9	194.6	192.6
17.5°	1189.0	1218.7	1038.8	783.7	521.3	314.1	200.4	175.6	177.0	181.4	180.4
20°	1282.6	1278.2	1016.8	667.2	384.3	205.8	167.8	164.4	172.2	184.8	181.9
22.5°	1372.8	1342.6	1003.2	559.4	248.7	165.3	161.9	161.4	168.7	180.9	184.3
25°	1437.2	1442.1	980.3	437.9	180.9	153.6	156.5	160.9	168.3	181.4	179.5
27.5°	1621.6	1485.0	884.7	318.0	152.6	147.3	154.6	163.4	165.8	182.4	182.9
30°	1741.1	1646.9	822.2	214.1	140.9	136.1	150.7	162.4	165.3	186.8	188.2
32.5°	1949.3	1716.7	750.1	159.0	131.2	132.7	141.9	157.5	171.2	194.1	195.1
35°	2208.3	1940.5	619.4	142.9	127.8	125.3	129.7	147.8	170.2	195.1	200.0
37.5°	2701.3	2074.6	491.1	138.5	127.8	123.4	127.8	138.5	167.3	204.8	215.1
40°	3031.5	2347.7	354.1	137.5	125.3	121.4	122.9	133.6	159.0	199.0	214.1
42.5°	3438.2	2462.8	260.9	135.1	122.9	117.0	118.0	131.7	150.7	186.8	198.0
45°	3771.3	2546.7	205.3	134.1	117.0	115.1	117.0	130.2	142.9	160.4	170.7
47.5°	4024.4	2644.3	164.8	127.8	115.6	115.1	112.7	121.9	129.7	134.1	140.9
50°	4209.7	2622.3	136.6	118.0	110.7	113.6	109.2	110.7	112.7	110.2	118.0
52.5°	4323.4	2543.3	113.6	106.3	104.9	107.3	101.9	97.5	94.1	92.2	97.1
55°	4364.8	2384.8	96.6	91.2	94.6	95.6	91.2	83.4	77.5	74.6	78.5
57.5°	4286.3	2143.4	83.9	75.6	83.4	83.4	77.5	69.3	62.4	57.5	61.4
60°	4087.3	1876.6	74.6	62.9	71.2	71.7	64.9	56.1	50.7	45.8	48.3
62.5°	3716.7	1586.0	65.4	54.6	61.4	61.9	53.6	45.4	41.5	36.1	38.0
65°	2975.4	1212.9	55.6	48.3	53.2	51.7	44.4	38.5	33.7	28.8	29.7
67.5°	1931.3	748.6	48.3	43.9	44.9	43.4	37.6	33.7	28.3	24.4	24.9
70°	864.7	322.4	42.4	39.5	39.0	36.6	31.7	31.2	27.8	24.4	24.4
72.5°	266.8	121.4	36.6	35.6	33.7	30.7	27.8	29.7	27.3	23.4	22.9
75°	105.3	55.6	30.2	30.2	29.3	25.4	24.9	26.8	25.4	21.5	20.5
77.5°	55.1	35.1	24.9	25.8	25.4	19.5	22.4	24.4	23.4	18.0	15.1
80°	32.7	21.5	18.5	21.0	20.5	13.7	17.1	15.6	11.2	5.4	1.5
82.5°	18.0	9.8	8.3	12.2	12.2	4.9	8.8	7.8	4.4	0.0	0.0
85°	8.8	6.8	6.3	6.8	4.9	1.5	4.4	4.4	2.4	0.0	0.0
87.5°	4.4	3.9	2.9	2.4	2.0	0.0	1.5	2.0	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)