

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: P596779

Luminaire Tested: **MSA-SA4B-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596779
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-SA4B-827-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 10695 lumens
Efficiency: N/A
Efficacy: 62.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

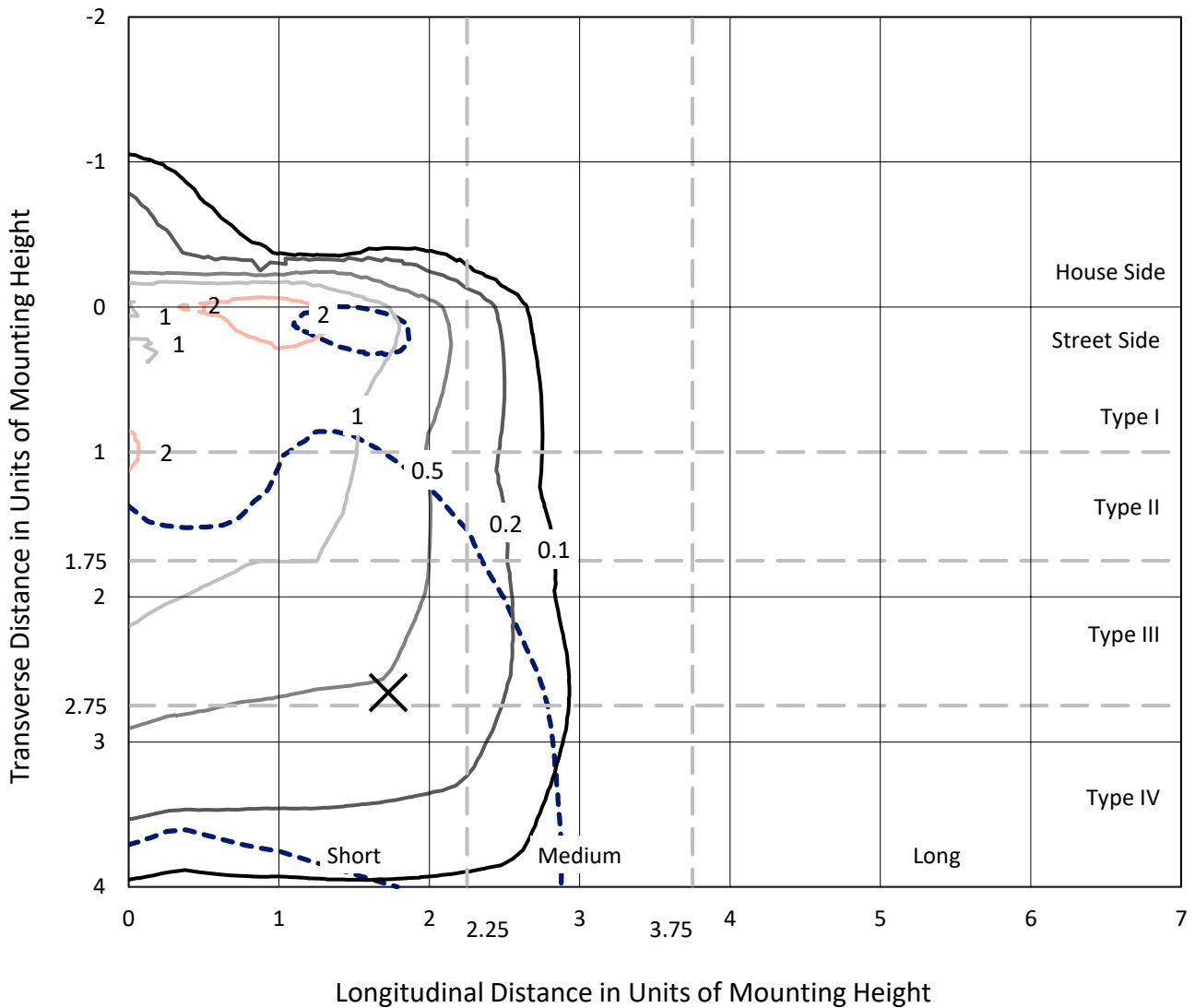
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

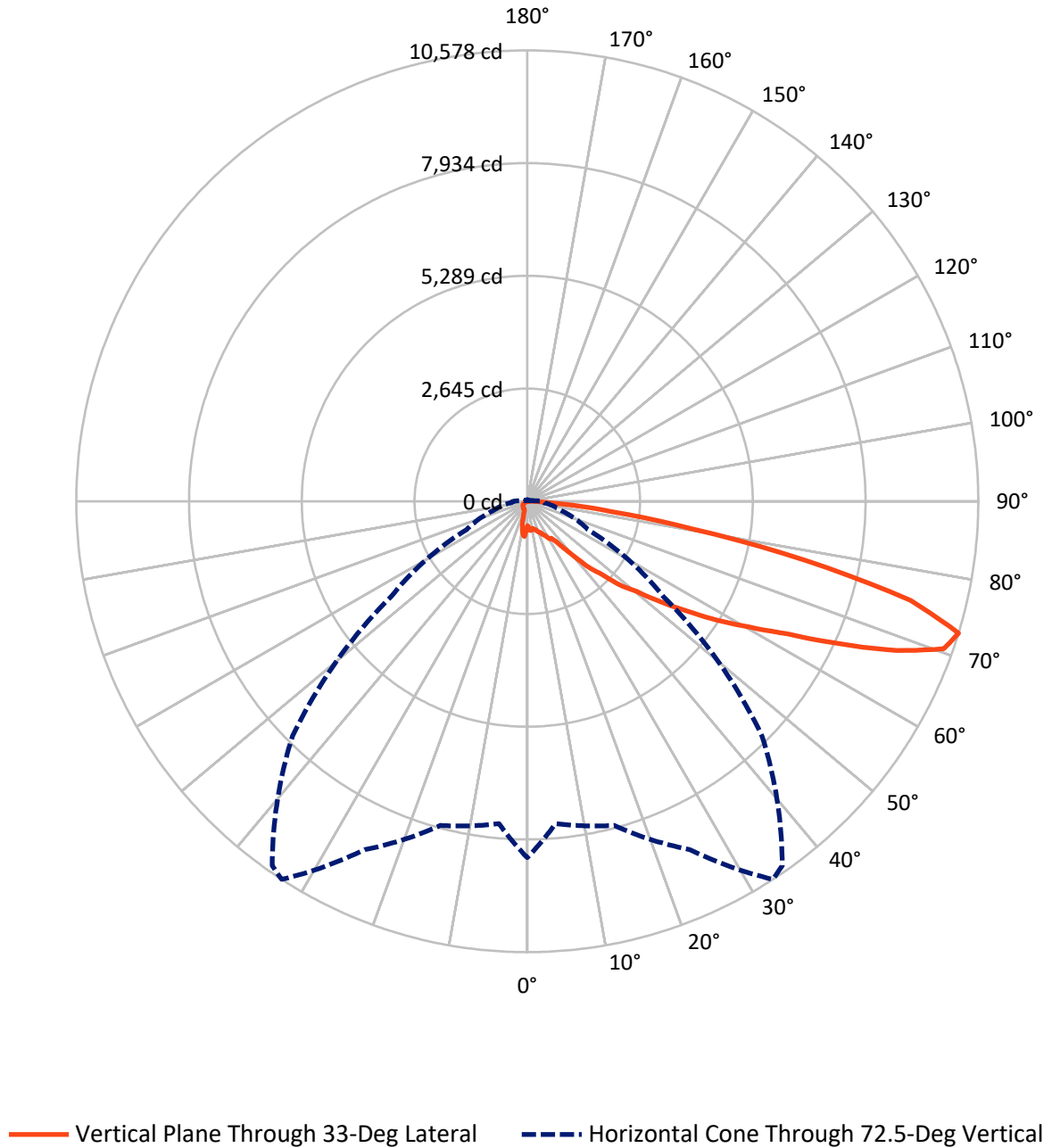
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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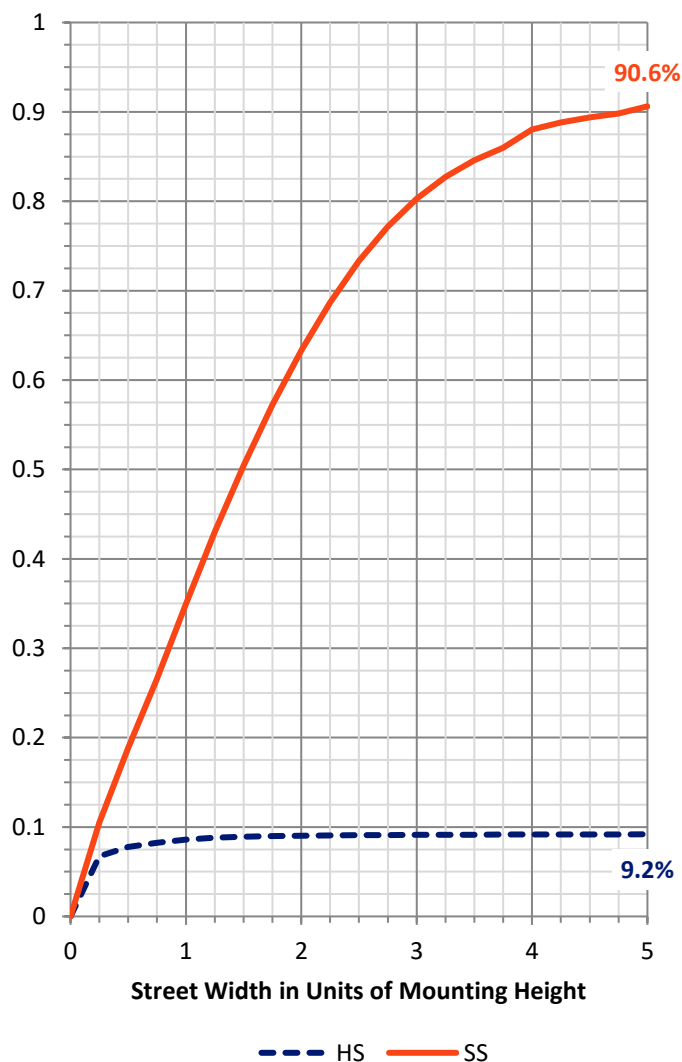
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	988.9	0.0	988.9
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	9706.1	0.0	9706.1
	% Fixture	90.8	0.0	90.8
Total	Lumens	10695.0	0.0	10695.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	0.7
10°-20°	219.4	2.1
20°-30°	372.1	3.5
30°-40°	680.9	6.4
40°-50°	1437.2	13.4
50°-60°	2404.5	22.5
60°-70°	3218.5	30.1
70°-80°	2102.4	19.7
80°-90°	186.4	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°	10695.0	100.0
0°-180°	10695.0	100.0

Coefficient of Utilization

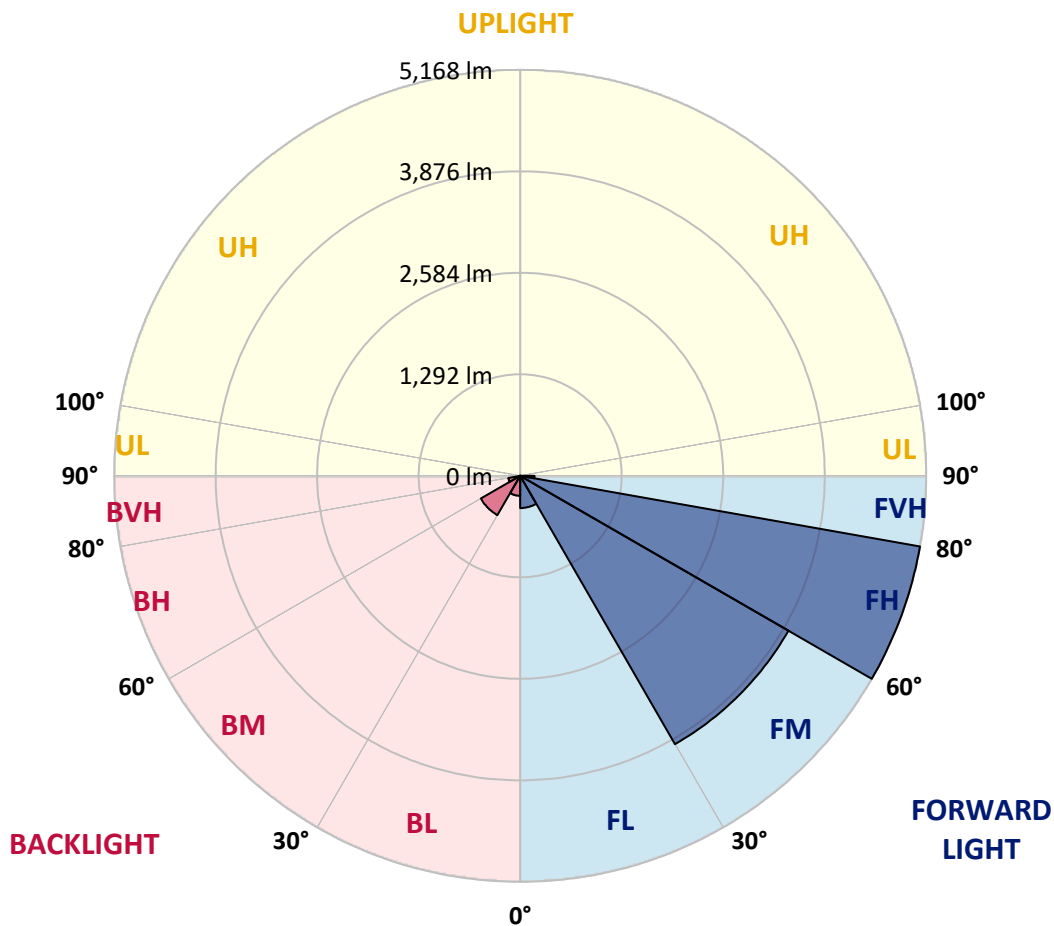


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	410.6	3.8			
FM (30°-60°)	3944.5	36.9			
FH (60°-80°)	5168.3	48.3			G3/7500
FVH (80°-90°)	182.8	1.7			G2/225
BL (0°-30°)	254.5	2.4	B1/500		
BM (30°-60°)	578.1	5.4	B1/1000		
BH (60°-80°)	152.6	1.4	B1/500		G1/500
BVH (80°-90°)	3.6	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°	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8
2.5°	678.1	652.0	614.0	616.4	622.9	628.2	642.5	636.5	625.3	624.7	678.1
5°	718.5	689.4	687.0	690.6	688.8	698.3	686.4	725.0	757.7	796.9	859.8
7.5°	698.9	685.2	668.0	685.8	685.2	680.5	688.2	766.6	845.6	895.4	999.3
10°	642.5	627.0	640.1	646.0	641.9	662.7	714.3	778.5	872.9	977.4	1027.8
12.5°	626.4	635.9	640.7	640.7	680.5	691.2	770.1	830.7	942.9	1025.5	1172.1
15°	688.8	707.2	674.5	667.4	679.9	685.8	773.7	846.7	990.4	1141.3	1264.2
17.5°	788.0	786.8	736.3	708.4	728.0	742.2	790.9	876.4	960.8	1232.1	1410.2
20°	856.2	857.4	766.6	708.4	773.1	781.4	835.5	903.7	970.3	1277.8	1505.8
22.5°	944.1	912.7	812.3	755.9	799.8	807.6	866.9	921.0	1018.9	1272.5	1628.2
25°	1016.0	995.8	869.3	830.1	869.3	858.6	912.7	994.0	1071.2	1357.4	1700.0
27.5°	1127.6	1093.2	909.7	916.8	914.4	922.2	934.6	1059.3	1163.2	1361.6	1866.3
30°	1231.5	1211.3	999.9	999.9	1023.1	1008.3	1017.2	1168.0	1252.3	1457.8	2053.3
32.5°	1339.0	1340.2	1106.2	1049.8	1031.4	1092.6	1152.5	1220.8	1359.8	1622.8	2339.5
35°	1623.4	1599.7	1309.9	1169.2	1154.3	1150.8	1247.0	1431.6	1550.4	1837.8	2724.9
37.5°	2196.4	2113.9	1748.1	1439.9	1384.1	1365.1	1474.4	1663.8	1782.0	2153.7	3362.0
40°	2784.3	2632.9	2226.7	1879.3	1698.2	1616.3	1743.4	1904.3	2114.5	2502.8	3951.7
42.5°	3300.3	3113.2	2587.1	2353.2	2117.5	2081.8	1962.5	2224.3	2589.5	3011.1	4529.4
45°	3803.2	3435.1	2907.8	2722.5	2436.3	2456.5	2416.1	2643.0	3083.0	3568.1	5041.9
47.5°	4149.4	3818.7	3300.9	3060.4	2945.8	2827.6	3148.3	3384.0	3522.4	3922.0	5484.8
50°	4522.3	4187.4	3638.7	3470.7	3319.9	3439.2	3855.5	3886.9	3875.7	4252.1	5786.5
52.5°	5003.9	4609.0	4026.5	3836.5	3922.0	4040.7	4521.1	4527.0	4189.8	4530.0	6003.8
55°	5449.2	5011.6	4543.1	4363.8	4542.5	4642.8	5175.5	4980.1	4372.7	4718.8	6110.7
57.5°	6076.8	5570.3	5230.1	4914.2	5276.4	5180.2	5750.8	5460.5	4578.1	4844.1	6071.5
60°	6870.1	6274.0	5933.1	5598.8	5987.2	6052.5	6312.6	5700.4	4657.7	4885.1	5835.8
62.5°	7677.1	7077.4	6629.1	6402.2	6842.8	7057.8	6832.7	5819.7	4562.1	4804.9	5301.9
65°	8678.2	7910.5	7386.7	7253.7	8070.2	8386.1	7447.9	5848.8	4377.4	4363.8	4262.8
67.5°	9364.1	8616.5	8136.1	8358.8	9345.0	9370.6	8000.1	5857.7	3755.7	3416.7	2797.9
70°	9526.7	8726.3	8511.4	9166.9	10362.2	10041.0	8178.3	5406.4	2785.5	2027.8	1279.0
72.5°	8362.9	7592.2	7871.9	9014.3	10578.3	10431.1	7784.6	3900.6	1568.2	811.1	392.5
75°	5129.7	4663.6	5905.2	7642.7	9285.7	9190.7	6073.3	2015.3	631.8	324.2	146.7
77.5°	2230.9	2071.7	3081.8	5071.0	6672.4	6587.5	3558.6	742.2	326.6	228.0	74.2
80°	738.1	716.1	1167.4	2401.3	3908.3	3833.5	1499.3	308.8	232.8	182.9	41.6
82.5°	175.2	174.0	407.3	1105.0	1991.0	1928.6	460.2	170.4	168.6	144.3	22.0
85°	43.9	45.1	112.8	451.9	808.7	713.1	119.9	84.9	118.8	98.0	11.3
87.5°	0.0	0.0	29.1	64.7	122.3	76.6	13.1	22.6	33.3	35.0	5.9
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°	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8	568.8
2.5°	690.0	683.5	630.0	643.1	663.3	661.5	674.5	664.4	655.5	699.5	695.3
5°	877.6	842.0	825.4	848.5	836.1	807.0	831.3	827.1	820.0	834.9	846.1
7.5°	1018.3	985.7	970.8	922.2	851.5	795.7	804.6	783.8	764.2	787.4	811.1
10°	1064.7	1046.8	1045.1	950.1	883.6	802.8	707.2	624.7	602.7	573.6	586.7
12.5°	1190.5	1201.2	1134.1	1023.1	894.8	739.9	570.0	453.1	405.6	374.7	376.5
15°	1293.9	1331.3	1233.9	1034.4	787.4	564.1	379.4	274.3	244.6	236.9	234.5
17.5°	1447.7	1483.9	1264.8	954.2	634.8	382.4	244.0	213.8	215.5	220.9	219.7
20°	1561.7	1556.3	1238.0	812.3	467.9	250.6	204.3	200.1	209.6	225.0	221.5
22.5°	1671.5	1634.7	1221.4	681.1	302.8	201.3	197.1	196.5	205.5	220.3	224.5
25°	1749.9	1755.8	1193.5	533.2	220.3	187.0	190.6	196.0	204.9	220.9	218.5
27.5°	1974.3	1808.1	1077.1	387.2	185.9	179.3	188.2	198.9	201.9	222.1	222.7
30°	2119.8	2005.2	1001.1	260.7	171.6	165.7	183.5	197.7	201.3	227.4	229.2
32.5°	2373.4	2090.1	913.2	193.6	159.7	161.5	172.8	191.8	208.4	236.3	237.5
35°	2688.7	2362.7	754.1	174.0	155.6	152.6	157.9	179.9	207.2	237.5	243.5
37.5°	3289.0	2526.0	597.9	168.6	155.6	150.2	155.6	168.6	203.7	249.4	261.9
40°	3691.0	2858.5	431.1	167.4	152.6	147.9	149.6	162.7	193.6	242.3	260.7
42.5°	4186.2	2998.6	317.7	164.5	149.6	142.5	143.7	160.3	183.5	227.4	241.1
45°	4591.8	3100.8	250.0	163.3	142.5	140.1	142.5	158.5	174.0	195.4	207.8
47.5°	4899.9	3219.5	200.7	155.6	140.7	140.1	137.2	148.4	157.9	163.3	171.6
50°	5125.6	3192.8	166.3	143.7	134.8	138.4	133.0	134.8	137.2	134.2	143.7
52.5°	5263.9	3096.6	138.4	129.4	127.7	130.6	124.1	118.8	114.6	112.2	118.2
55°	5314.4	2903.6	117.6	111.0	115.2	116.4	111.0	101.5	94.4	90.8	95.6
57.5°	5218.8	2609.7	102.1	92.0	101.5	101.5	94.4	84.3	76.0	70.1	74.8
60°	4976.5	2284.9	90.8	76.6	86.7	87.3	79.0	68.3	61.8	55.8	58.8
62.5°	4525.3	1931.0	79.6	66.5	74.8	75.4	65.3	55.2	50.5	43.9	46.3
65°	3622.7	1476.8	67.7	58.8	64.7	62.9	54.0	46.9	41.0	35.0	36.2
67.5°	2351.4	911.5	58.8	53.4	54.6	52.8	45.7	41.0	34.4	29.7	30.3
70°	1052.8	392.5	51.7	48.1	47.5	44.5	38.6	38.0	33.8	29.7	29.7
72.5°	324.8	147.9	44.5	43.3	41.0	37.4	33.8	36.2	33.3	28.5	27.9
75°	128.3	67.7	36.8	36.8	35.6	30.9	30.3	32.7	30.9	26.1	24.9
77.5°	67.1	42.8	30.3	31.5	30.9	23.8	27.3	29.7	28.5	22.0	18.4
80°	39.8	26.1	22.6	25.5	24.9	16.6	20.8	19.0	13.7	6.5	1.8
82.5°	22.0	11.9	10.1	14.8	14.8	5.9	10.7	9.5	5.3	0.0	0.0
85°	10.7	8.3	7.7	8.3	5.9	1.8	5.3	5.3	3.0	0.0	0.0
87.5°	5.3	4.8	3.6	3.0	2.4	0.0	1.8	2.4	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)