

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: P596628

Luminaire Tested: **MSA-SA2C-827-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596628
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-827-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9195 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

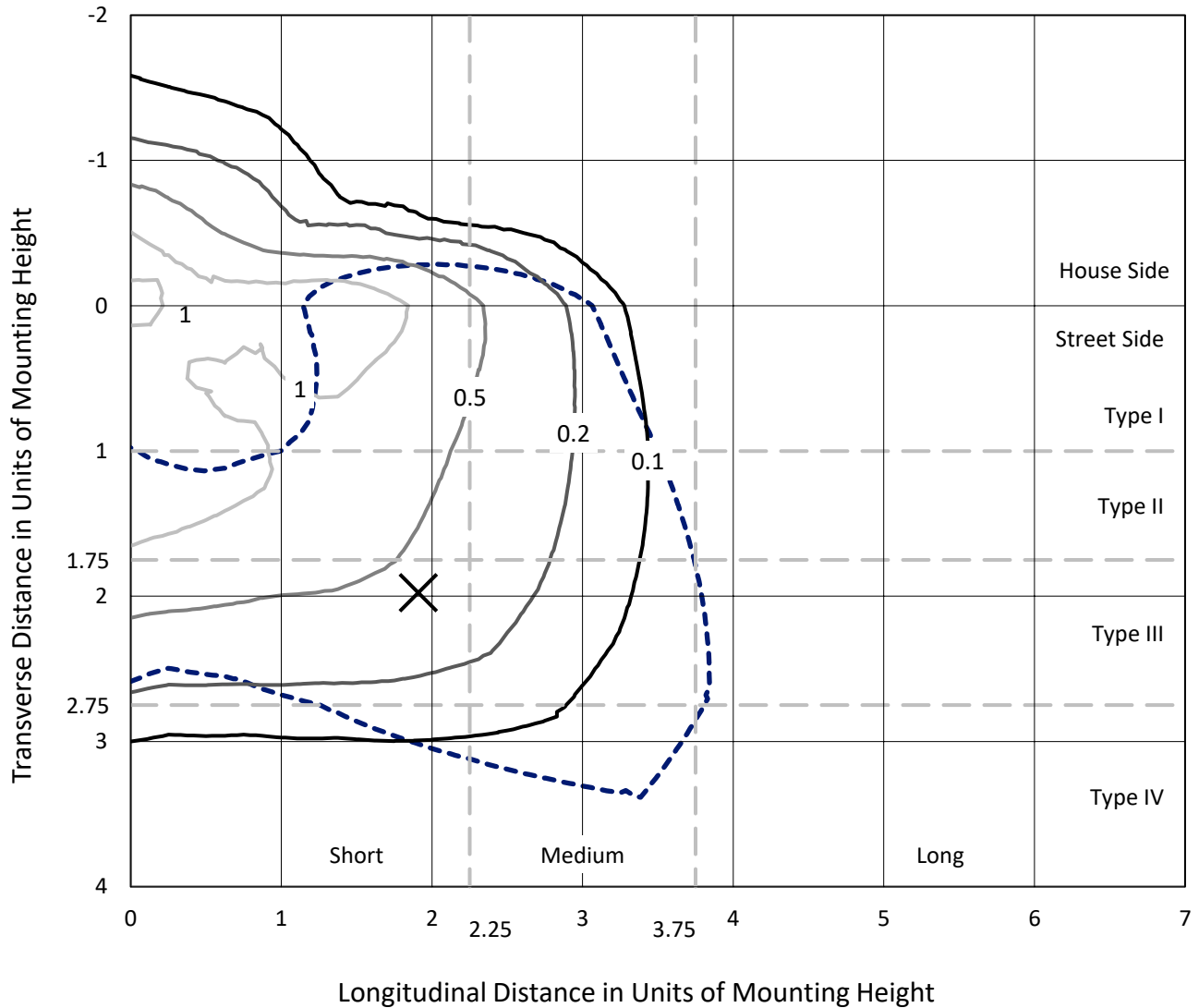
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

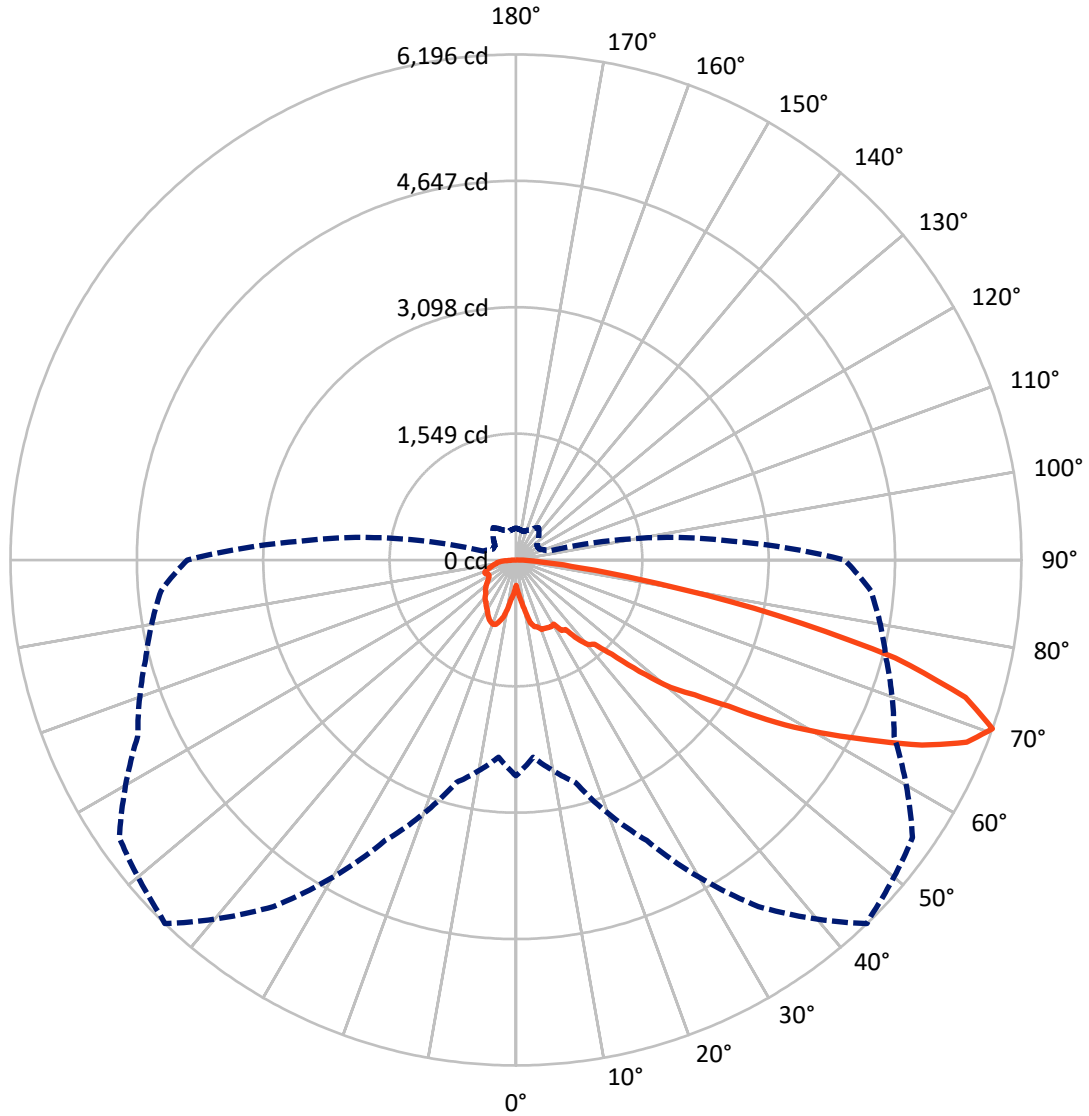
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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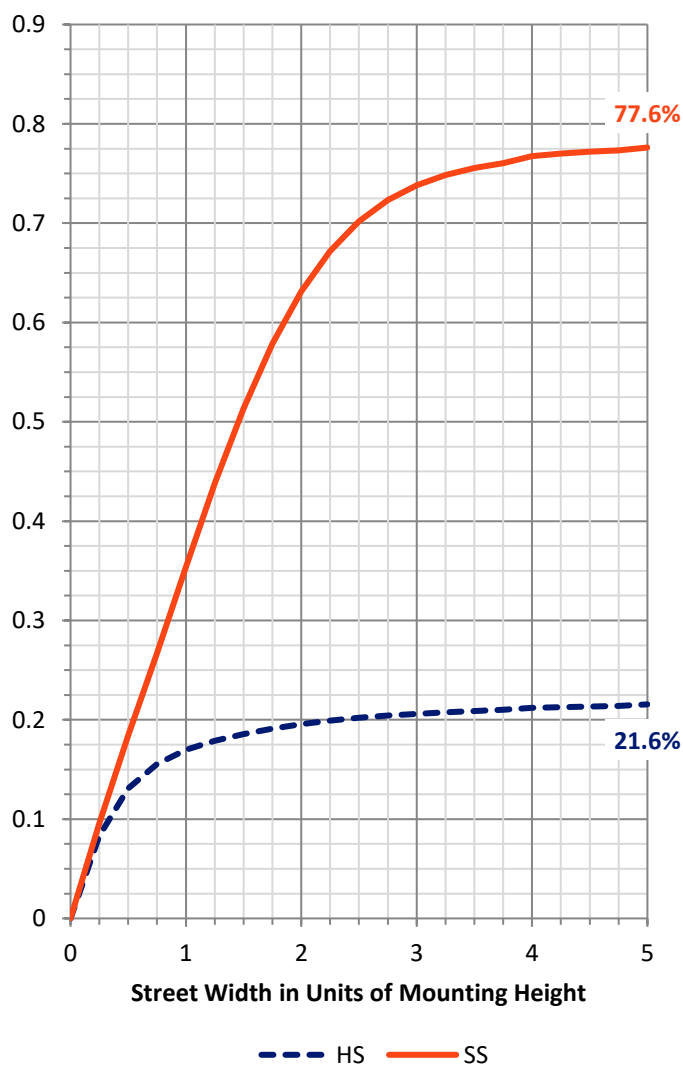
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2028.8	0.0	2028.8
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	7166.2	0.0	7166.2
	% Fixture	77.9	0.0	77.9
Total	Lumens	9195.0	0.0	9195.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	0.5
10°-20°	225.7	2.5
20°-30°	421.7	4.6
30°-40°	676.9	7.4
40°-50°	1142.5	12.4
50°-60°	2036.0	22.1
60°-70°	2785.0	30.3
70°-80°	1637.7	17.8
80°-90°	220.5	2.4
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°	9195.0	100.0
0°-180°	9195.0	100.0

Coefficient of Utilization



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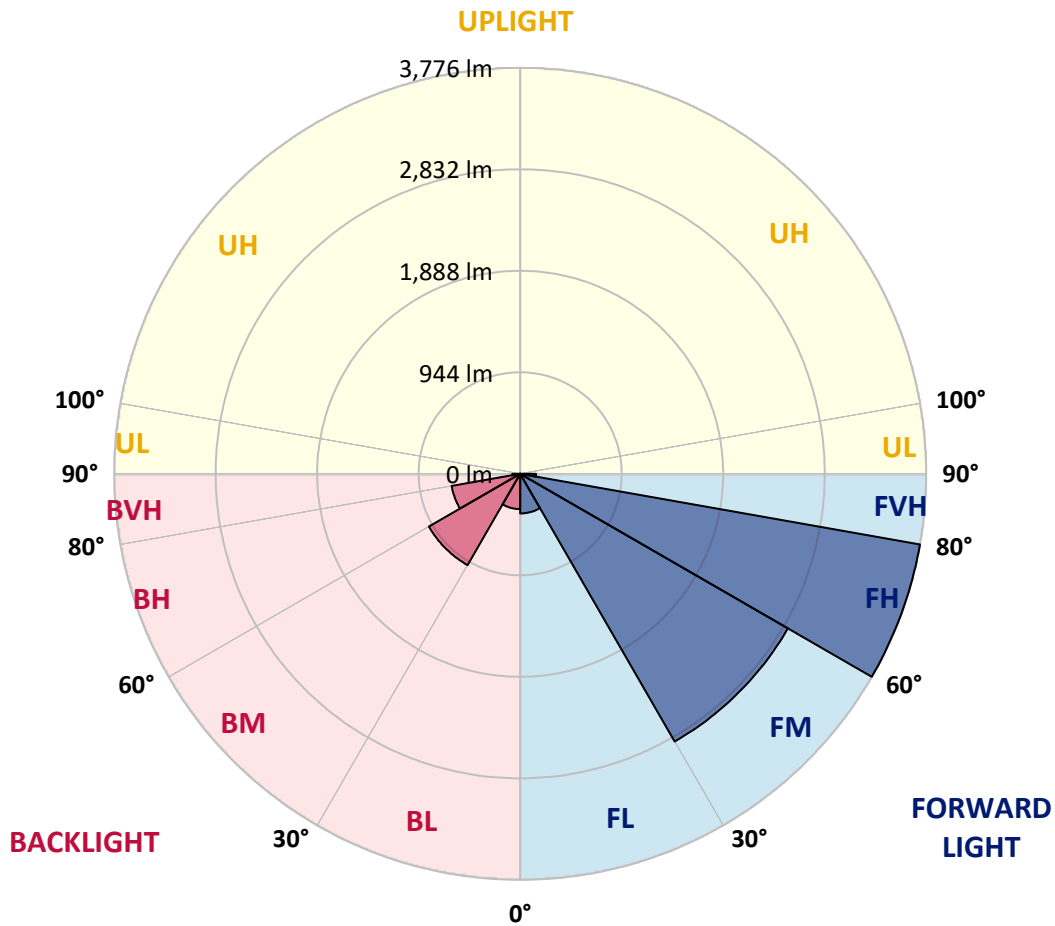
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	368.5	4.0			
FM (30°-60°)	2875.0	31.3			
FH (60°-80°)	3775.8	41.1			G2/5000
FVH (80°-90°)	147.0	1.6			G2/225
BL (0°-30°)	327.9	3.6	B1/500		
BM (30°-60°)	980.4	10.7	B1/1000		
BH (60°-80°)	646.9	7.0	B2/1000		G2/1000
BVH (80°-90°)	73.5	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6
2.5°	379.3	371.7	353.6	359.7	367.2	370.2	369.5	368.7	357.0	352.9	373.6
5°	515.4	498.8	485.6	480.3	463.0	449.4	441.1	463.0	459.6	465.2	479.6
7.5°	643.6	633.0	603.2	592.7	557.2	533.9	531.2	548.6	553.1	544.0	568.5
10°	726.1	708.0	702.0	676.8	652.2	648.5	646.2	638.3	627.4	626.6	604.7
12.5°	790.2	799.7	804.6	775.5	776.3	789.9	782.7	750.6	732.2	699.8	702.4
15°	905.2	918.8	880.0	861.5	826.1	846.4	843.8	817.0	814.4	793.3	768.7
17.5°	1005.5	1011.5	946.7	904.5	892.4	863.0	870.9	871.7	837.0	874.7	852.8
20°	1013.8	1035.3	960.6	876.6	912.8	909.0	910.1	902.6	857.0	919.2	910.9
22.5°	1054.5	1021.7	954.6	893.2	902.6	908.2	913.5	904.5	901.8	936.5	961.8
25°	1047.0	1036.4	968.6	916.5	917.7	918.8	921.4	948.6	945.6	992.7	1005.9
27.5°	1117.5	1101.3	972.7	959.9	930.5	924.1	906.0	962.5	1006.6	1005.5	1078.3
30°	1251.7	1235.1	1069.2	1031.9	978.7	913.1	947.8	1023.2	1057.9	1069.6	1162.0
32.5°	1461.3	1488.5	1259.2	1108.8	1042.8	1028.5	1024.7	1017.2	1103.2	1160.8	1244.9
35°	1762.2	1740.7	1483.2	1273.6	1110.3	1048.9	1057.2	1103.2	1205.3	1242.7	1320.3
37.5°	2106.8	2062.3	1770.1	1460.2	1304.9	1228.0	1200.4	1244.9	1267.5	1297.0	1455.7
40°	2457.0	2348.5	2051.7	1705.6	1421.7	1363.7	1339.6	1284.9	1338.0	1397.6	1599.3
42.5°	2795.2	2711.2	2358.3	1998.6	1618.5	1411.6	1398.4	1344.8	1509.6	1572.6	1806.7
45°	3149.6	2954.7	2672.3	2329.2	1906.2	1646.4	1626.8	1530.7	1741.8	1873.0	2099.3
47.5°	3387.9	3207.3	2960.0	2597.7	2147.1	2039.3	2002.0	1837.6	2029.1	2199.5	2551.3
50°	3613.4	3427.5	3167.7	2891.4	2583.3	2459.3	2379.8	2106.0	2386.9	2664.4	3130.8
52.5°	3936.1	3769.8	3409.0	3187.3	3052.0	2747.0	2687.8	2537.3	2805.4	3179.8	3764.2
55°	4281.1	4054.5	3727.6	3604.7	3550.0	3159.4	3111.2	3015.4	3362.6	3707.2	4379.8
57.5°	4433.4	4197.0	4016.8	3943.3	3938.7	3758.9	3703.5	3636.7	3932.3	4159.7	4959.3
60°	4554.4	4300.7	4228.7	4269.8	4419.1	4300.7	4228.7	4169.8	4396.1	4606.8	5432.1
62.5°	4532.2	4277.7	4314.6	4439.8	4821.0	4855.6	4800.2	4657.7	4855.6	4973.3	5703.2
65°	4173.2	3938.0	4153.3	4450.4	5194.6	5471.7	5468.7	5095.8	5164.4	5164.4	5674.5
67.5°	3544.4	3300.8	3653.3	4357.2	5452.9	5959.9	5960.7	5560.3	5192.7	5145.2	5231.2
70°	2646.7	2426.1	2822.4	3794.7	5186.3	6196.3	6162.0	5935.1	5115.0	4699.9	4369.7
72.5°	1580.8	1438.3	1802.9	2762.4	4424.0	5761.6	5852.9	5503.4	4682.6	3908.6	3123.6
75°	717.8	656.0	847.2	1586.9	3158.3	4805.9	4905.0	4644.5	3719.3	2811.1	1805.2
77.5°	307.3	290.7	369.9	703.9	1741.5	3286.5	3489.7	3319.3	2520.0	1633.6	798.5
80°	197.6	187.0	227.3	338.6	808.7	1775.8	1950.7	1887.0	1283.8	635.3	281.3
82.5°	118.0	114.6	151.9	212.6	441.1	781.6	880.7	904.1	533.1	285.0	161.0
85°	64.5	65.2	83.3	128.9	264.7	304.3	325.7	354.4	251.1	165.1	78.0
87.5°	21.5	24.9	33.6	52.4	94.3	86.0	86.3	100.3	105.9	68.6	24.9
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°	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6	312.6
2.5°	377.0	370.2	352.9	354.0	360.4	361.9	363.8	352.9	350.6	371.4	373.3
5°	481.8	459.6	449.4	446.0	436.2	432.8	450.9	459.2	467.5	483.7	491.6
7.5°	565.9	541.0	522.6	505.6	491.3	483.0	513.5	536.9	551.2	584.4	599.5
10°	604.4	582.9	576.1	562.5	573.4	598.3	604.0	604.7	636.4	635.7	642.1
12.5°	680.9	666.9	644.7	649.6	678.3	703.9	696.7	707.7	719.0	746.1	733.7
15°	750.6	746.9	726.1	729.5	735.2	767.2	771.4	782.3	799.7	821.2	806.4
17.5°	836.6	835.1	784.6	780.1	793.3	824.5	814.7	795.5	852.8	875.8	869.8
20°	895.0	883.7	818.9	799.7	833.2	837.4	826.1	795.5	845.3	895.4	909.0
22.5°	943.7	930.5	863.8	826.1	819.3	821.2	821.2	815.5	840.0	881.1	880.7
25°	982.9	995.3	910.5	874.3	838.1	792.9	787.2	792.1	806.1	885.2	882.6
27.5°	1081.3	1047.0	926.3	899.2	824.9	753.7	769.1	776.7	781.2	867.9	882.2
30°	1145.4	1155.9	982.9	913.9	805.7	709.9	715.2	737.1	763.5	866.0	870.2
32.5°	1231.7	1209.1	1071.1	889.4	754.4	683.5	673.7	703.1	742.4	835.5	846.8
35°	1312.0	1338.8	1108.4	884.9	718.6	644.0	654.5	664.7	705.4	801.5	814.7
37.5°	1500.5	1439.5	1213.3	863.0	688.8	624.0	612.7	628.1	662.8	737.1	767.6
40°	1643.8	1647.6	1235.9	835.5	631.9	595.3	571.2	586.6	601.3	660.5	673.7
42.5°	1912.6	1830.4	1291.3	775.2	596.1	552.3	538.8	545.5	547.8	572.7	594.6
45°	2254.6	2061.9	1313.2	694.1	548.9	534.6	507.1	503.7	491.3	494.7	513.9
47.5°	2727.7	2423.1	1297.3	607.8	507.1	511.6	472.0	456.6	439.2	443.4	461.5
50°	3339.6	2884.6	1296.2	534.6	478.4	481.5	449.0	421.1	403.8	412.5	428.3
52.5°	4026.2	3347.6	1301.5	484.5	447.1	445.6	434.0	400.0	386.1	395.1	413.2
55°	4683.0	3745.7	1340.7	452.8	414.7	417.4	421.9	393.2	377.8	386.1	404.9
57.5°	5254.5	4060.1	1326.0	419.2	384.6	396.6	408.7	383.8	372.1	384.2	403.0
60°	5654.2	4206.0	1209.9	387.2	362.3	378.9	402.3	382.7	381.2	407.2	429.8
62.5°	5800.1	4152.1	983.6	361.9	349.1	376.6	417.0	407.6	409.1	441.1	472.4
65°	5587.1	3868.6	733.7	345.7	338.9	387.6	450.9	422.3	401.5	427.9	456.6
67.5°	4981.2	3364.5	536.1	331.8	327.3	404.9	482.2	420.8	382.3	409.1	432.4
70°	4030.0	2655.7	415.1	314.1	311.8	393.2	485.2	409.4	361.6	378.9	392.1
72.5°	2761.3	1818.4	343.8	297.1	285.0	348.4	460.7	384.2	336.7	346.9	357.8
75°	1543.1	1020.6	289.2	276.0	249.6	310.3	432.1	369.1	318.2	321.2	336.3
77.5°	692.6	441.5	245.4	248.1	217.5	274.5	394.7	345.0	289.9	283.1	298.2
80°	262.0	215.3	199.1	209.6	182.9	237.9	355.9	323.1	260.1	251.5	260.1
82.5°	151.9	130.4	147.8	161.4	145.2	218.7	339.7	303.1	229.2	207.4	214.9
85°	70.5	67.5	88.6	104.8	101.4	170.4	290.7	228.1	163.2	138.0	152.7
87.5°	18.5	20.7	31.3	36.9	37.7	58.4	112.0	84.8	63.7	48.3	46.4
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)