

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: P368496

Luminaire Tested: **MSA-SA4C-740-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368496
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-740-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23903 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G4

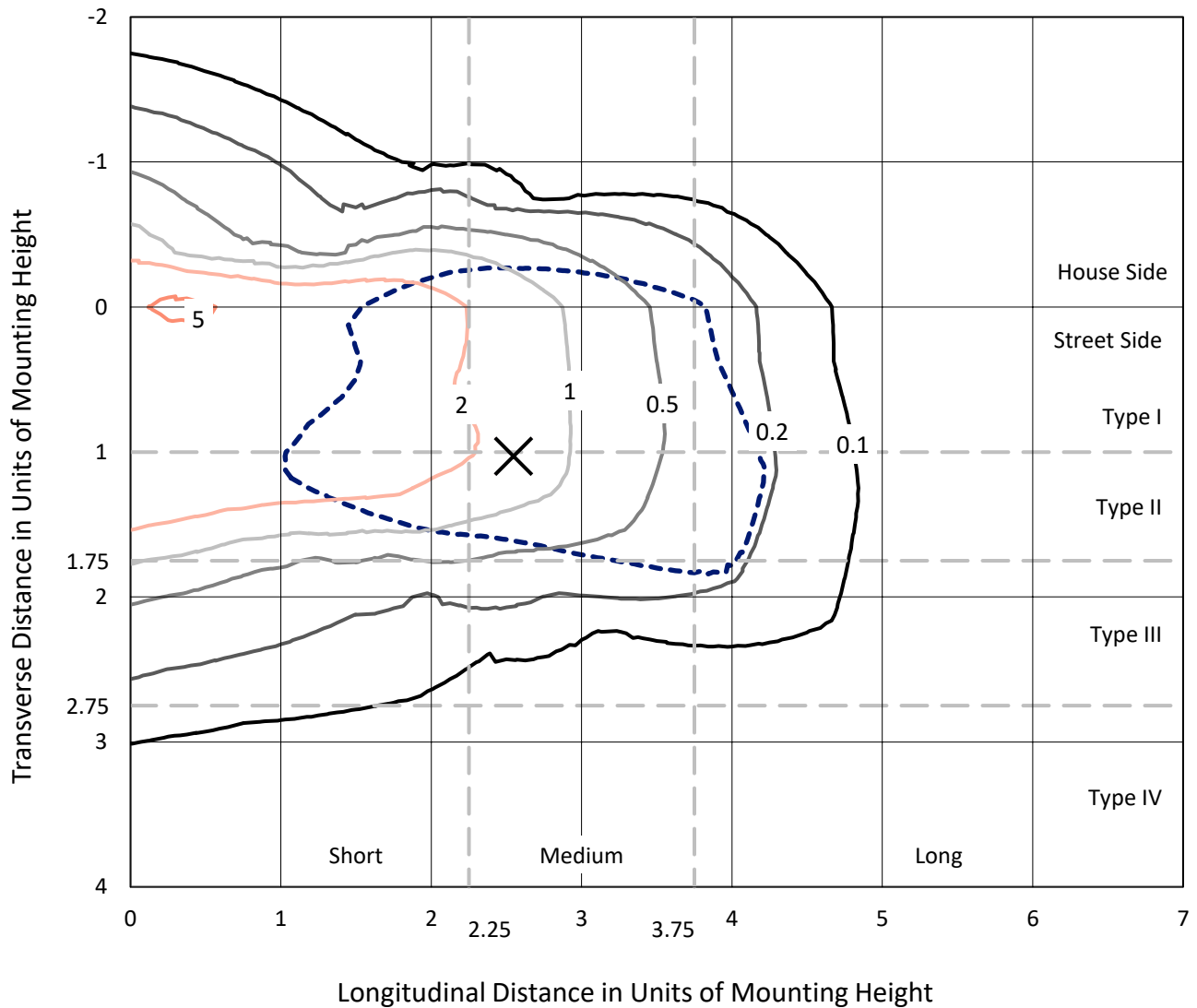
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

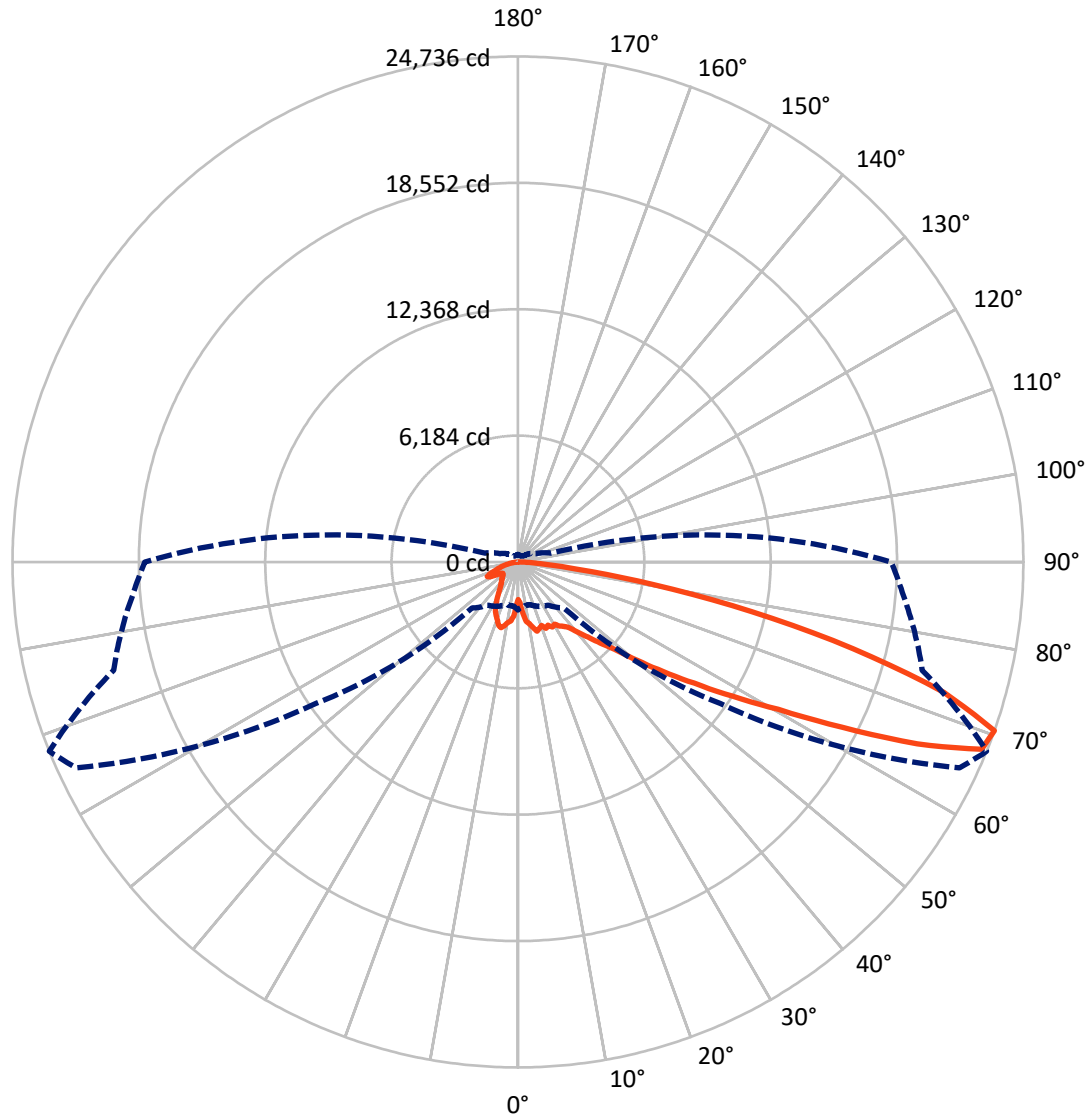
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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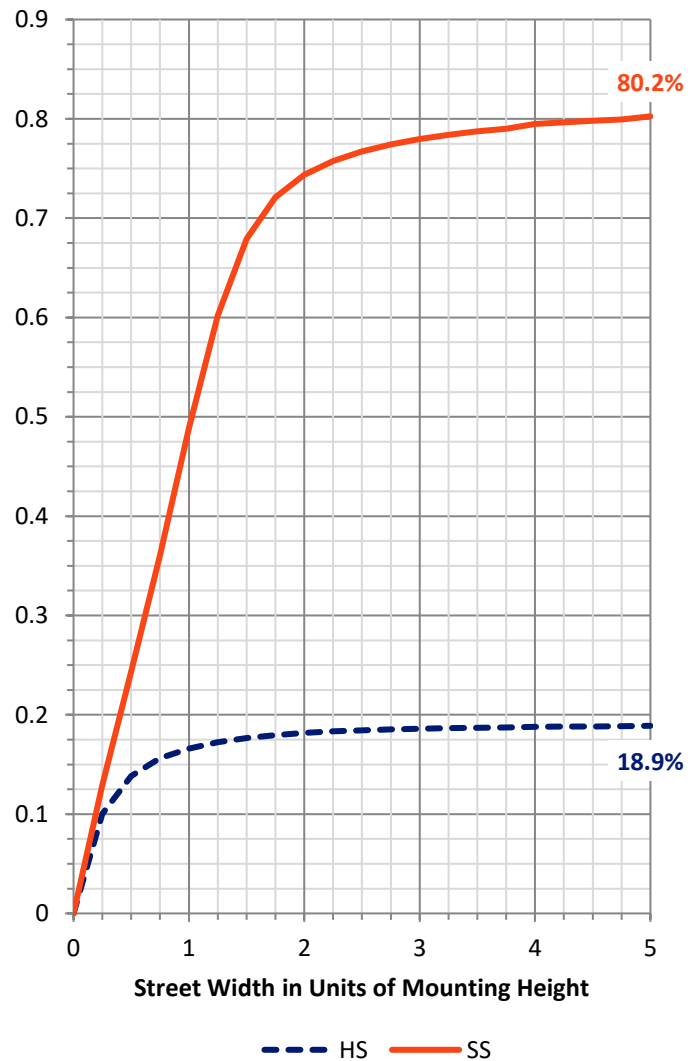
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4563.7	0.0	4563.7
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	19339.3	0.0	19339.3
	% Fixture	80.9	0.0	80.9
Total	Lumens	23903.0	0.0	23903.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.7	1.0
10°-20°	797.8	3.3
20°-30°	1213.6	5.1
30°-40°	1853.7	7.8
40°-50°	3187.3	13.3
50°-60°	5275.6	22.1
60°-70°	6504.1	27.2
70°-80°	4178.1	17.5
80°-90°	648.1	2.7
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°	23903.0	100.0
0°-180°	23903.0	100.0



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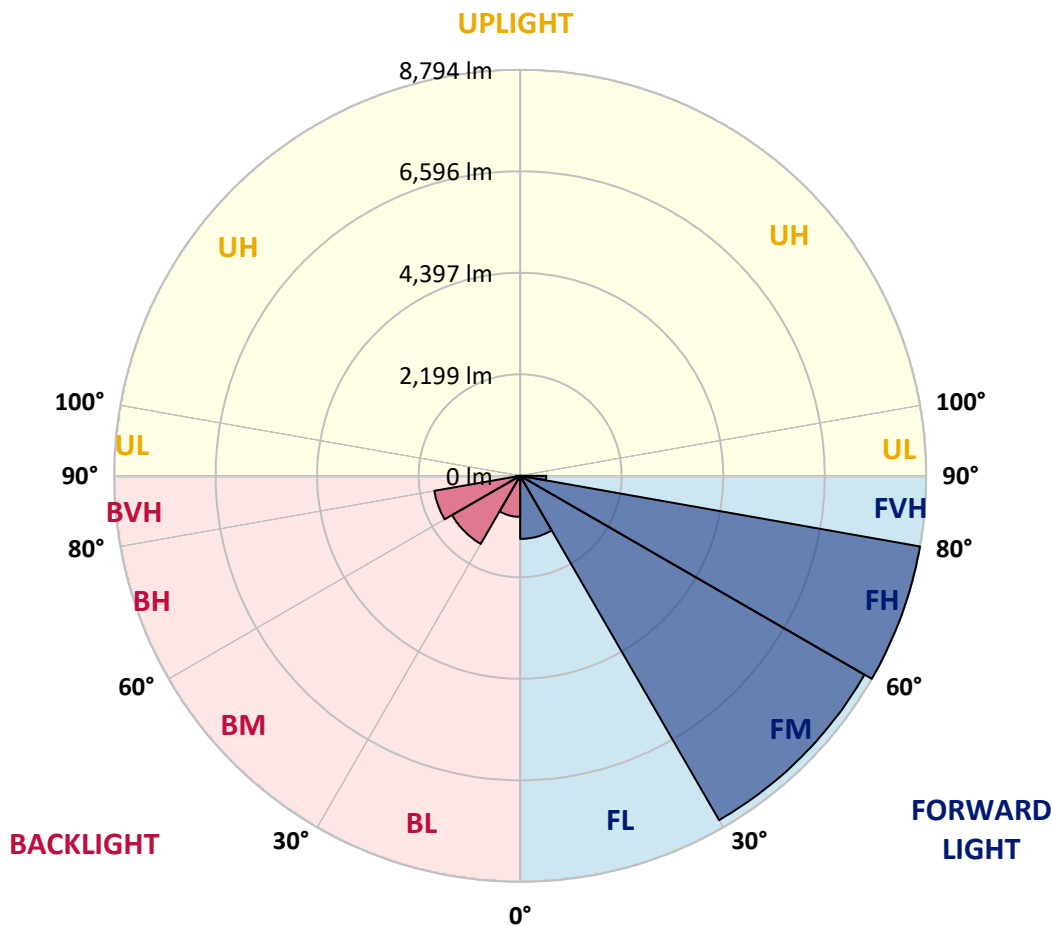
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1366.8	5.7			
FM (30°-60°)	8613.2	36.0			
FH (60°-80°)	8794.4	36.8			G4/12000
FVH (80°-90°)	564.9	2.4			G4/750
BL (0°-30°)	889.3	3.7	B2/1000		
BM (30°-60°)	1703.4	7.1	B2/2500		
BH (60°-80°)	1887.8	7.9	B3/2500		G3/2500
BVH (80°-90°)	83.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7
2.5°	2105.8	2020.8	1934.8	1976.8	2043.8	2102.8	2090.8	2097.8	2016.8	2005.8	2218.9
5°	2481.0	2334.9	2331.9	2333.9	2339.9	2271.9	2438.0	2524.0	2543.0	2631.0	2840.1
7.5°	2611.0	2552.0	2492.0	2522.0	2446.0	2453.0	2657.1	2881.1	2934.2	2998.2	3284.3
10°	2584.0	2528.0	2546.0	2551.0	2565.0	2678.1	2809.1	3024.2	3069.2	3273.3	3347.3
12.5°	2588.0	2578.0	2662.1	2665.1	2815.1	3018.2	3070.2	3268.3	3286.3	3436.4	3745.5
15°	2725.1	2794.1	2747.1	2772.1	2801.1	3044.2	3119.2	3403.4	3511.4	3704.5	3936.6
17.5°	2992.2	3012.2	2871.1	2834.1	2929.2	3003.2	3174.3	3297.3	3410.4	3949.6	4269.7
20°	3054.2	3108.2	2940.2	2749.1	2950.2	3053.2	3172.3	3228.3	3316.3	3985.6	4439.8
22.5°	3320.3	3208.3	3005.2	2839.1	2905.2	3005.2	3091.2	3302.3	3533.4	3882.5	4609.8
25°	3471.4	3406.4	3225.3	3047.2	2991.2	2994.2	3160.3	3349.3	3429.4	4033.6	4643.8
27.5°	3836.5	3732.5	3325.3	3291.3	3080.2	2916.2	3171.3	3465.4	3605.4	3915.6	4809.9
30°	4293.7	4214.7	3680.5	3635.4	3313.3	3027.2	3311.3	3551.4	3531.4	3992.6	4925.0
32.5°	4663.9	4795.9	4256.7	3901.5	3672.5	3398.3	3267.3	3536.4	3735.5	4171.7	5120.0
35°	5192.1	5316.1	4705.9	4465.8	3968.6	3570.4	3574.4	3742.5	3865.5	4380.7	5338.1
37.5°	6106.4	5997.4	5506.2	5127.0	4808.9	4214.7	4036.6	3977.6	4076.6	4636.8	5765.3
40°	6765.7	6673.6	6095.4	5879.3	5260.1	4915.0	4426.8	4370.7	4545.8	4900.9	6114.4
42.5°	7547.0	7382.9	6844.7	6666.6	6019.4	5397.1	4904.9	4937.0	5022.0	5399.1	6586.6
45°	8342.3	7944.2	7639.0	7625.0	7192.9	6333.5	5672.3	5646.2	5649.2	6132.4	7116.8
47.5°	8973.6	8615.4	8266.3	8100.2	7882.1	7953.2	6786.7	6481.6	6389.5	6870.7	7912.1
50°	9400.7	8988.6	8593.4	8554.4	9136.6	9519.8	7833.1	7507.0	7564.0	7927.1	8972.6
52.5°	9409.7	8920.5	8508.4	8781.5	10153.0	10701.2	9635.8	8724.5	8906.5	9153.6	10356.1
55°	8755.5	8248.3	7980.2	8602.4	10550.2	12102.8	12168.8	10675.2	10465.2	10556.2	12009.8
57.5°	7375.9	6863.7	6707.7	7453.0	9796.9	13454.3	15228.0	13006.2	12389.9	12009.8	13704.4
60°	5552.2	5109.0	5012.0	5487.2	8122.2	13057.2	17705.0	15907.3	14651.8	13633.4	15404.1
62.5°	4163.7	3845.5	3699.5	3767.5	5620.2	11765.7	19331.7	19572.8	17795.1	15406.1	17064.8
65°	3383.3	3126.2	2996.2	2908.2	3495.4	9097.6	19037.6	22658.0	21466.5	17267.9	18357.3
67.5°	2826.1	2598.0	2538.0	2624.0	2763.1	5278.1	16736.6	24383.7	24464.7	19104.6	19112.6
70°	2345.9	2176.9	2154.9	2399.0	2582.0	3185.3	12088.8	23841.5	24735.8	20482.1	18935.5
72.5°	1812.7	1721.7	1718.7	2101.8	2565.0	2715.1	7198.9	20596.2	21797.7	20042.0	17202.8
75°	1257.5	1194.5	1242.5	1727.7	2506.0	2754.1	4108.6	16042.4	16941.7	17054.8	13780.5
77.5°	865.3	812.3	864.3	1249.5	2237.9	2820.1	2874.1	11599.6	11699.6	11436.5	7893.1
80°	602.2	565.2	605.2	884.4	1741.7	2791.1	2447.0	7302.9	6700.7	5104.0	2527.0
82.5°	373.1	362.1	406.2	630.3	1226.5	2539.0	2318.9	3768.5	2877.1	1408.6	902.4
85°	196.1	180.1	236.1	411.2	767.3	1992.8	2172.9	1719.7	1110.4	500.2	362.1
87.5°	58.0	52.0	91.0	166.1	325.1	893.4	1243.5	729.3	414.2	147.1	113.0
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°	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7	1832.7
2.5°	2233.9	2222.9	2074.8	2093.8	2125.8	2133.8	2132.8	2078.8	2021.8	2180.9	2175.9
5°	2845.1	2746.1	2672.1	2656.1	2565.0	2474.0	2506.0	2495.0	2481.0	2553.0	2562.0
7.5°	3285.3	3148.3	3062.2	2841.1	2631.0	2449.0	2507.0	2525.0	2489.0	2619.0	2658.1
10°	3401.4	3293.3	3200.3	2916.2	2800.1	2694.1	2537.0	2357.9	2333.9	2258.9	2267.9
12.5°	3700.5	3685.5	3368.3	3118.2	2967.2	2756.1	2417.0	2199.9	2013.8	2022.8	1968.8
15°	3936.6	3944.6	3563.4	3213.3	2808.1	2486.0	2086.8	1816.7	1625.6	1587.6	1548.6
17.5°	4253.7	4237.7	3579.4	3099.2	2586.0	2113.8	1624.6	1356.5	1324.5	1346.5	1312.5
20°	4391.7	4250.7	3477.4	2816.1	2238.9	1605.6	1227.5	1085.4	1147.5	1235.5	1237.5
22.5°	4515.8	4274.7	3424.4	2588.0	1776.7	1167.5	985.4	959.4	1032.4	1151.5	1161.5
25°	4510.8	4385.7	3329.3	2357.9	1377.5	911.4	856.3	875.3	962.4	1086.4	1093.4
27.5°	4737.9	4300.7	3082.2	2055.8	1037.4	780.3	794.3	829.3	870.3	988.4	1011.4
30°	4735.9	4458.8	2958.2	1688.7	833.3	715.3	751.3	781.3	815.3	923.4	936.4
32.5°	4847.9	4355.7	2883.1	1313.5	747.3	699.3	708.3	738.3	787.3	860.3	869.3
35°	4983.0	4472.8	2643.0	1043.4	715.3	685.3	692.3	709.3	754.3	821.3	830.3
37.5°	5416.2	4494.8	2548.0	879.3	713.3	679.3	678.3	687.3	738.3	799.3	826.3
40°	5585.2	4695.9	2270.9	821.3	706.3	679.3	665.3	670.3	712.3	790.3	811.3
42.5°	5990.4	4762.9	2065.8	801.3	706.3	667.3	645.3	653.3	702.3	771.3	804.3
45°	6407.5	4857.9	1821.7	797.3	705.3	666.3	624.2	642.3	682.3	740.3	776.3
47.5°	7001.8	5200.1	1577.6	785.3	697.3	671.3	619.2	618.2	653.3	703.3	737.3
50°	7971.2	5734.3	1388.6	770.3	698.3	667.3	609.2	595.2	618.2	662.3	695.3
52.5°	9320.7	6644.6	1314.5	762.3	690.3	651.3	592.2	570.2	583.2	618.2	650.3
55°	10887.3	7874.1	1387.6	762.3	674.3	626.2	568.2	542.2	549.2	573.2	604.2
57.5°	12718.0	9401.7	1740.7	751.3	654.3	596.2	539.2	509.2	511.2	532.2	560.2
60°	14629.8	11108.4	2532.0	742.3	640.3	563.2	505.2	474.2	471.2	491.2	516.2
62.5°	16544.6	12683.0	3364.3	763.3	636.3	535.2	469.2	438.2	437.2	455.2	476.2
65°	18067.2	13759.5	3571.4	848.3	662.3	503.2	432.2	403.2	401.2	416.2	439.2
67.5°	18814.5	13915.5	2713.1	954.4	717.3	473.2	396.2	369.1	367.1	383.2	403.2
70°	18261.3	12849.1	1674.7	965.4	714.3	438.2	359.1	336.1	332.1	349.1	364.1
72.5°	16214.4	11239.5	1272.5	854.3	618.2	388.2	322.1	302.1	296.1	311.1	325.1
75°	13014.2	8923.5	1019.4	689.3	487.2	327.1	285.1	266.1	259.1	273.1	285.1
77.5°	7581.0	5020.0	745.3	538.2	368.1	267.1	243.1	226.1	218.1	233.1	242.1
80°	2465.0	1672.7	468.2	386.2	269.1	209.1	197.1	185.1	177.1	187.1	190.1
82.5°	885.4	622.2	259.1	237.1	179.1	150.1	149.1	142.1	132.1	136.1	136.1
85°	392.2	284.1	154.1	127.1	107.0	80.0	94.0	89.0	79.0	77.0	74.0
87.5°	110.0	94.0	56.0	43.0	35.0	13.0	30.0	27.0	22.0	20.0	14.0
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)