# **UF Report**

2025-09-01 to 2025-09-22

# **■** Executive Summary

Robot deployment during 2025-09-01 to 2025-09-22 processed 64.0 total tasks, covering 344,342.0 square feet with 57.8 total running hours.

2

Total Robots

344,342.0

Sq Ft Cleaned

vs last: -12716.0 sq ft

88.2%

Coverage

vs last: +17.4%

57.8

Total Running Hours

vs last: -26.2 hrs

2.4

Avg Daily Running Hours per Robot (hrs/robot)

vs last: -0.5 hrs/robot

16/23

Days with Tasks vs last: +0.0 days

## 23.3 kWh

**Energy Used** 

vs last: -7.6 kWh

# **6** Key Achievements

- 64.0 total tasks processed during reporting period
- 344,342.0 square feet cleaned across all locations
- 2.0 robots actively deployed and monitored
- 80.0 charging sessions during the period

## Individual Robot Performance

Robot ID	Location	Total Tasks	Tasks Completed	Total Area Cleaned	Average Coverage	Days with Tasks	Running Hours
811135422060228	Building 43 Marston Science Library	26	20	180,751 sq ft	87.4%	14	32.1 hrs
811135422060216	Building 205 Dental Science	38	31	163,591 sq ft	89.1%	10	25.7 hrs

## Individual Robot ROI Breakdown

Investment and ROI analysis per robot based on lease model and operational savings.

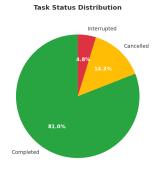
Robot ID	Months Deployed	Total Investment	Cumulative Savings	ROI
811135422060216	2	\$3,000.00	\$1,248.58	41.6%
811135422060228	2	\$3,000.00	\$1,331.29	44.4%

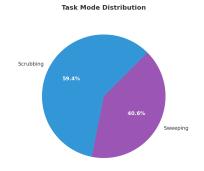
# Task & Schedule Performance

# **Task Management Efficiency**

Task tracking across all facilities: 64 total tasks with 31,990 sq ft total coverage and 54.2 minutes average task duration.

Metric	Total	Completed	In Progress	Average Duration
All Facilities	64	51	0	54.2 min (vs last: +8.4 min)





# **Task Efficiency by Location**

Daily task performance showing running hours and coverage efficiency patterns for each location. Each chart displays actual operational data to identify location-specific performance trends.





# **⚠** Operational Inefficiency Analysis

Identifying opportunities to maximize ROI through improved utilization and coverage optimization.



\$1,171.72

22 days

11.8%

Total Additional Savings Potential

Missed Operational Days

Average Coverage Gap (88.2% current)

# Missed Operational Days by Facility

Days without any completed tasks represent untapped operational capacity.

Facility	Days Utilized	Missed Days	Avg Daily Area Cleaned	Potential Savings from Full Utilization
Building 205 Dental Science	10 / 23	13	16,359 sq ft	\$664.59
Building 43 Marston Science Library	14 / 23	9	12,911 sq ft	\$363.12

Potential additional savings from missed days: \$1,027.71

# 

Tasks that completed with less than 100% of planned area coverage.

Facility	Map Name	Task Count	Average Coverage	Potential Savings at 100%
Building 205 Dental Science	1#0#Bld_205_Dental_Sci_1fl	2	1.0%	\$52.20
Building 43 Marston Science Library	1#0#43_Marston_Library_F1	1	4.0%	\$30.62
Building 43 Marston Science Library	2#0#43_Marston_library_2nd	1	0.0%	\$23.47
Building 43 Marston Science Library	5#0#Marston-5th-floor	2	59.5%	\$19.49
Building 43 Marston Science Library	1#1#43_Main_areaMarston_Library_F1	1	66.0%	\$7.61
Building 205 Dental Science	-1#0#Bld_205_Dental_Sci_Grd	2	45.0%	\$6.42
Building 205 Dental Science	1#1#dental_ground_elevator	2	49.0%	\$3.51
Building 205 Dental Science	2#0#Bld205-Floor2	1	95.0%	\$0.67

√ Note: These metrics identify operational patterns that, if optimized, could increase ROI. See the Financial Performance section below for the projected ROI impact if these inefficiencies were eliminated.

# Facility-Specific Performance

### **Building 205 Dental Science**

Performance metrics for Building 205 Dental Science: 38 total tasks, 163,591 sq ft total area cleaned, 89.1% average coverage, 6363.4 sq ft/hour time efficiency, and 1.4 sq ft/fl oz water efficiency.

Metric	Performance	vs Last Period
Total Area Cleaned	163,591 sq ft	-72364.0 sq ft
Average Coverage	89.1%	+18.0%
Running Hours	25.7 hours	-12.3 hrs
Time Efficiency	6363.4 sq ft/hr	+152.7 sq ft/hr
Power Efficiency	17,801 sq ft/kWh	+87.0 sq ft/kWh
Water Efficiency	1.4 sq ft/fl oz	+0.4 sq ft/fl oz

## **Building 43 Marston Science Library**

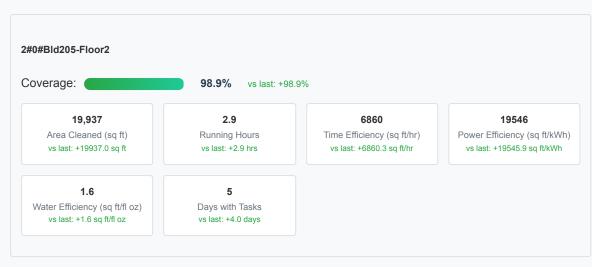
Performance metrics for Building 43 Marston Science Library: 26 total tasks, 180,751 sq ft total area cleaned, 87.4% average coverage, 5629.2 sq ft/hour time efficiency, and 0.0 sq ft/fl oz water efficiency.

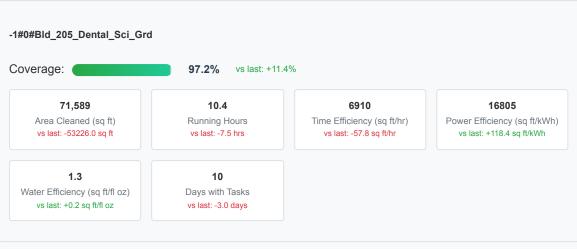
Metric	Performance	vs Last Period
Total Area Cleaned	180,751 sq ft	-64511.0 sq ft
Average Coverage	87.4%	+17.0%
Running Hours	32.1 hours	-13.9 hrs
Time Efficiency	5629.2 sq ft/hr	+300.0 sq ft/hr
Power Efficiency	12,810 sq ft/kWh	-1117.0 sq ft/kWh
Water Efficiency	0.0 sq ft/fl oz	0 sq ft/fl oz

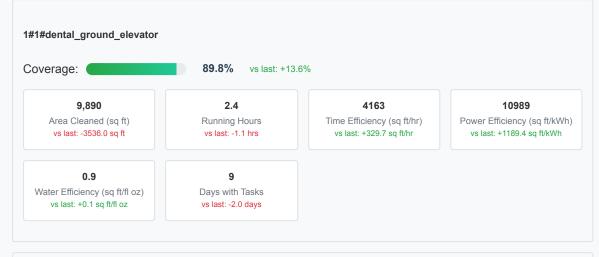
## **Map-Specific Performance**

Coverage: (actual area / planned area) × 100. Area Cleaned: sum of actual cleaned area converted to sq ft. Running Hours: sum of task durations converted from seconds. Power Efficiency: area cleaned / energy consumption. Time Efficiency: area cleaned / running hours. Water Efficiency: area cleaned / water consumption. Days with Tasks: unique dates when tasks occurred.

### **Building 205 Dental Science Maps**







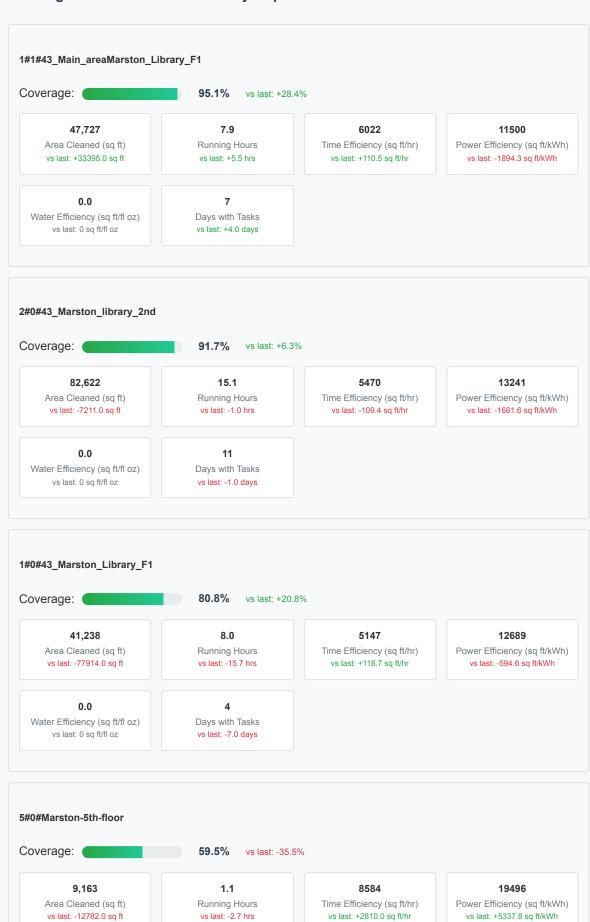


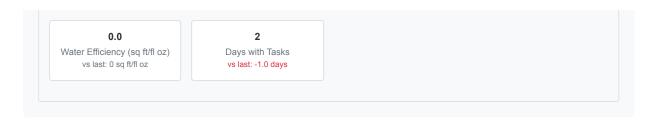
1.7

Water Efficiency (sq ft/fl oz) vs last: +0.7 sq ft/fl oz 6

Days with Tasks vs last: -5.0 days

### **Building 43 Marston Science Library Maps**



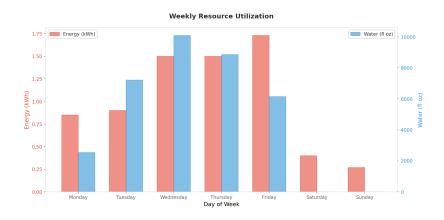




# **Resource Utilization & Efficiency**

#### **Resource Performance**

Resource utilization: 23.30 kWh total energy consumption, 114280 fl oz total water usage, 14779 sq ft per kWh energy efficiency, and 386 sq ft per gallon water efficiency.



#### **Energy Usage by Facility**

- Building 205 Dental Science: 9.2 kWh (vs last: -4.1 kWh)
- Building 43 Marston Science Library: 14.1 kWh (vs last: -3.5 kWh)

#### Water Usage by Facility

- Building 205 Dental Science: 114280 fl oz (vs last: -116161.0 fl oz)
- Building 43 Marston Science Library: 0 fl oz (vs last: 0 fl oz)

## Financial Performance

Financial analysis based on actual resource usage: \$0.00/sq ft average cost per square foot, \$0.00 total operational cost, 43.0 hours saved compared to manual cleaning, and \$1,076.07 in realized savings.

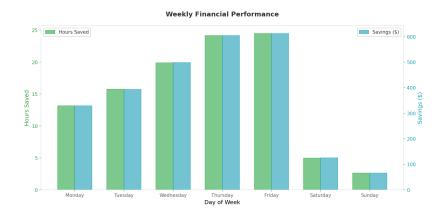
Operational Metric	Value	vs Previous Period	Notes
Cost per Sq Ft	\$0.00/sq ft	0	Operational efficiency (water + energy cost per area)
Total Operational Cost	\$0.00	0	Robot operational cost this period
ROI	43.0%	+16.9%	Return on Investment (cumulative savings ÷ total investment × 100)
Total Investment	\$6,000.00	N/A	Cumulative lease investment (\$1500/month per robot)
Cost Efficiency Improvement	100.0%	+0.0%	Efficiency improvement vs manual cleaning
Water Cost	\$0.00	0	Water resource cost component
Energy Cost	\$0.00	0	Energy resource cost component

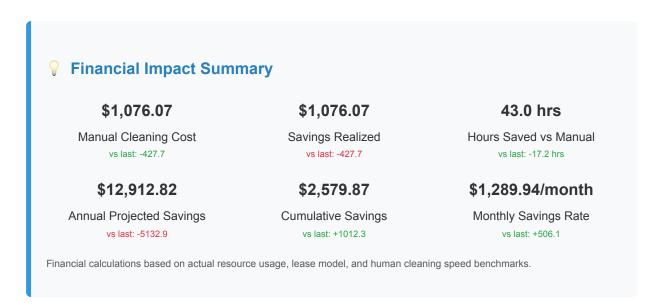
# **ROI Calculation Method**

**ROI Formula:** Cumulative Savings ÷ Total Investment × 100

**Investment:** \$1,500/month per robot × months elapsed (rounded up for billing)

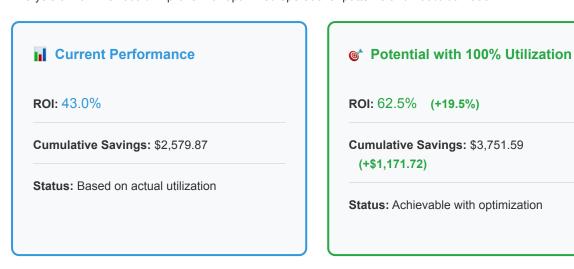
Cumulative Savings: All-time savings from first robot task to end of reporting period

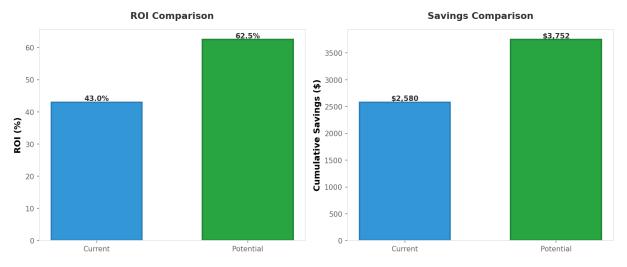




# **ROI Improvement Potential**

Analysis of how ROI could improve with optimized operational patterns and 100% utilization.





#### Mark How to Achieve Potential ROI

## • 77 Ensure Consistent Daily Operations

Eliminate 22 missed operational days to unlock **\$1,027.71** in additional savings.

## • In Optimize Cleaning Maps for 100% Coverage

Close the 11.8% coverage gap to achieve \$144.01 in additional savings.

## • of Combined Impact

Implementing both improvements would increase ROI from **43.0%** to **62.5%** (**+19.5 percentage points**).

**Methodology:** The ideal ROI scenario assumes all calendar days within the reporting period have tasks with average daily performance, and all tasks achieve 100% planned coverage. Investment remains constant based on actual lease duration. This represents a realistic upper bound for operational optimization.

# Charging Sessions Performance

Charging patterns and battery management during the reporting period: 80 total sessions, 339.5 minutes average duration, and 20.8% average power gain per session.

#### 80

Total Charging Sessions vs last: +8.0 sessions

#### 339.5 min

Avg Charging Duration vs last: +32.7 min

#### 81.0 min

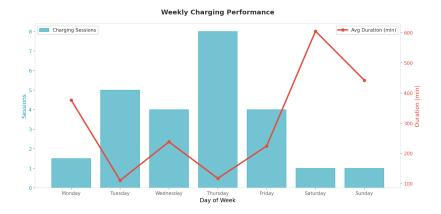
Median Charging Duration
vs last: -60.0 min

## +20.8%

Avg Power Gain per Session vs last: -1.6%

## +8.0%

Median Power Gain per Session vs last: +1.0%



## **Charging Patterns by Location**

Location	Total Sessions	Avg Duration	Median Duration	Avg Power Gain	Median Power Gain
Building 205 Dental Science	vs last: +5.0 sessions	258.5 min vs last: +1.2 min	16.0 min vs last: -91.0 min	+12.9% vs last: -6.4%	+1.0% vs last: -5.0%
Building 43 Marston Science Library	36 vs last: +3.0 sessions	422.8 min vs last: +61.5 min	192.0 min vs last: +20.5 min	+30.6% vs last: +4.4%	+31.0% vs last: +14.0%

# **©** Conclusion

2025-09-01 To 2025-09-22 performance summary: 79.7% task completion rate across 2.0 robot(s), 64.0 tasks completed, 344,342.0 sq ft cleaned, 80.0 charging sessions, and 43.0% return on investment.

#### **UF Report**

Period: 2025-09-01 to 2025-09-22

Robots Included: 2

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