




Prisoner Lighting System - Quick Reference

Light Types

Type	Color	Intensity	Range	State
Entrance	 Blue	3	10	Always On
Prisoner	 Orange	2	8	Off When Rescued
Player	 Yellow	-	-	Always On

Default Colors

Entrance: RGB(0, 128, 255) Hex: #0080FF
Prisoner: RGB(255, 128, 0) Hex: #FF8000

Flicker Settings

yaml

Min Intensity: 0.8 (80% of base)
Max Intensity: 1.2 (120% of base)
Speed: 10 (changes per second)
Smoothing: 0.1 (transition time)

Setup Steps

1. Create Point Light prefab
2. Create PrisonerLightingSystem GameObject
3. Assign prefab to system
4. Configure colors & settings
5. Play - lights auto-spawn at prisoners/entrance

Position Calculation

World Position = Grid Position × Cell Size
Y Height = Cell Size × 0.5 (center of cell)

Example:
Grid: (7, 8)
Cell Size: 2
World: (14, 1, 16)

Runtime Behavior

Game Start:

→ 1 blue light at entrance

→ 10 orange lights at prisoners

Rescue Prisoner:

→ Orange light.SetActive(false)

→ Visual confirmation

Game Restart:

→ ClearAllLights()

→ Reinitialize on next start

Quick Tweaks

Brighter/Dimmer

csharp

prisonerLightIntensity = 2f; // ← Change (1-5)

Wider/Narrower Range

csharp

prisonerLightRange = 8f; // ← Change (2-15)

More/Less Flicker

csharp

minFlickerIntensity = 0.8f; // ← Lower = more dramatic

maxFlickerIntensity = 1.2f; // ← Higher = more dramatic

Faster/Slower Flicker

csharp

flickerSpeed = 10f; // ← Higher = faster

Custom Colors

csharp

prisonerLightColor = new Color(1f, 0f, 0f); // Red

entranceLightColor = new Color(0f, 1f, 0f); // Green



Components Hierarchy

PrisonerLightingSystem

├─ Entrance_Light

| └─ Light (Component)

| └─ FlickeringLight (Component)

├─ Prisoner_Light_7_8

| └─ Light (Component)

| └─ FlickeringLight (Component)

├─ Prisoner_Light_12_4

| └─ Light (Component)

| └─ FlickeringLight (Component)

└─ ... (remaining prisoners)



Visual Indicators

- Blue = Safety (entrance/exit)
- Orange = Objective (prisoner location)
- Yellow = Player (your position)
- Dark = Extinguished (rescued)



Debug Commands

csharp

// Show light count

Debug.Log(\$"Lights: {prisonerLights.Count} prisoners + 1 entrance");

// Check specific light

if (prisonerLights.ContainsKey(position))

 Debug.Log("Light exists at position");

// Visualize in Scene view

OnDrawGizmos() *// Draws wire spheres at light positions*



Performance

Shadows: Disabled (recommended)

Update Rate: Every frame (flickering)

Light Count: 11 max (1 entrance + 10 prisoners)

Impact: Low-Medium



Testing Checklist

- ☐ Blue light at entrance ✓
- ☐ Orange lights at prisoners ✓
- ☐ Lights flicker ✓
- ☐ Orange light disables on rescue ✓
- ☐ Blue light stays on ✓
- ☐ Visible from distance ✓


Usage Tips

For Players:

- **Follow blue** to find exit
- **Follow orange** to find prisoners
- **Lights extinguish** = prisoner rescued
- **Navigate by lights** in dark dungeon

For Designers:

- **Blue = Safe** (consistent theming)
- **Orange = Danger/Distress** (needs help)
- **Flicker = Alive** (dynamic world)
- **Disable = Complete** (visual feedback)

Follow the Lights  - Blue for safety, orange for rescue!