

Juniper  
**Spotlight**  
**Photometry Results**  
4/22/2021

# Spotlight – General Simulation Setup

## Overview

Khatod PL135910

Input Lumens of 500 at 5W  
or 800 at 8.6W

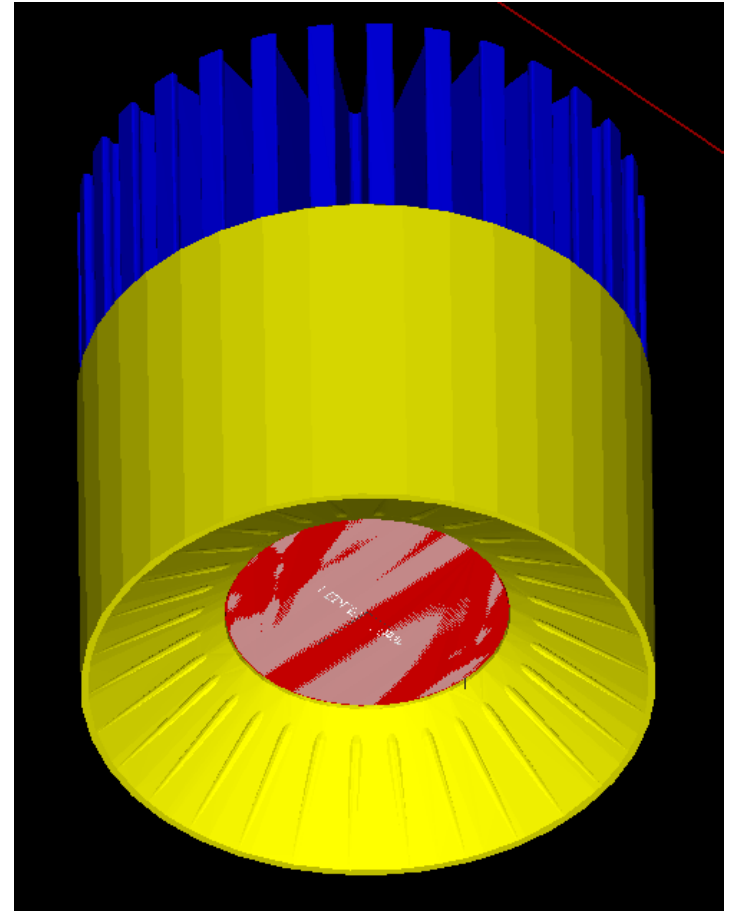
## Khatod Base Photometry

21°, 37°, 50°

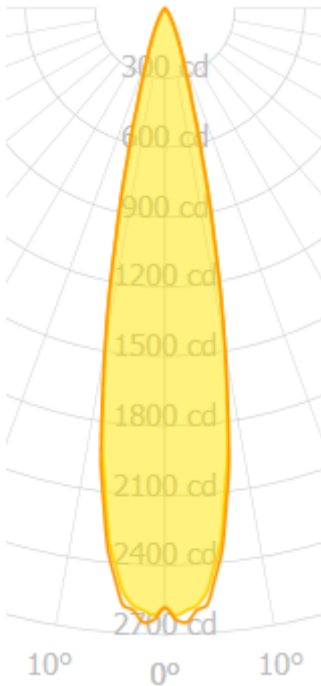
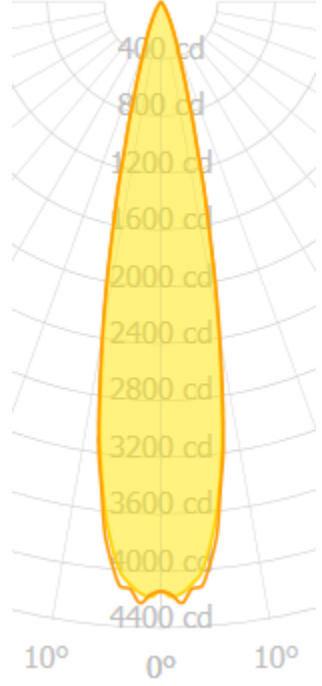
## Materials

Housing/cone – semi-gloss black paint (5% reflectance)

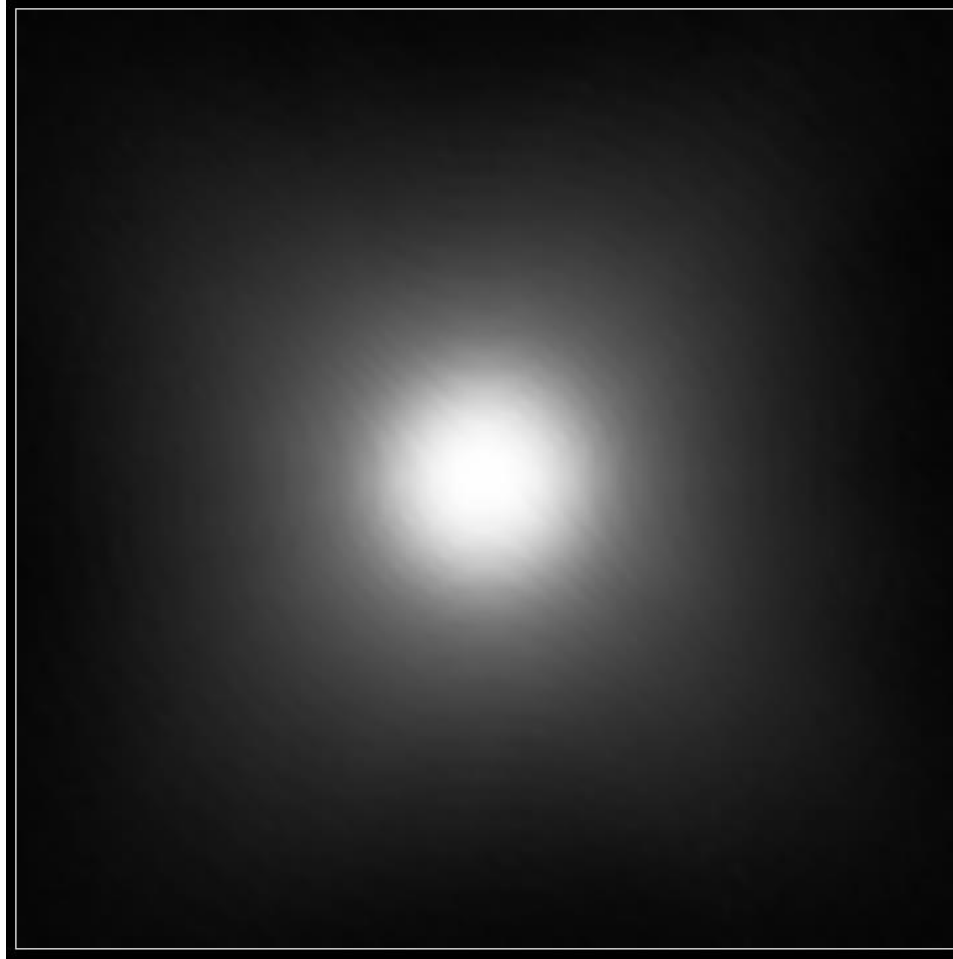
Misc parts behind lens (heat sink and holder) - semi-gloss black paint (5% reflectance)



# Spotlight - 21° - Results

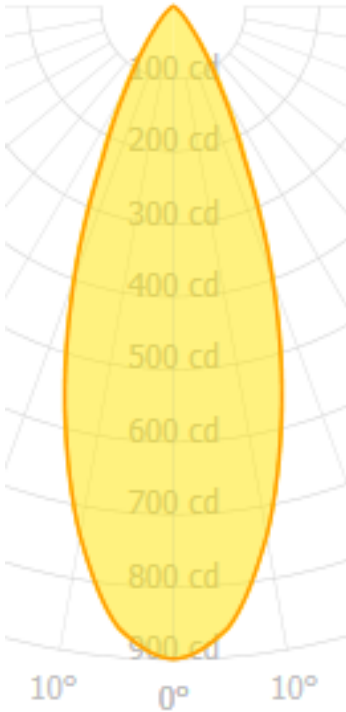
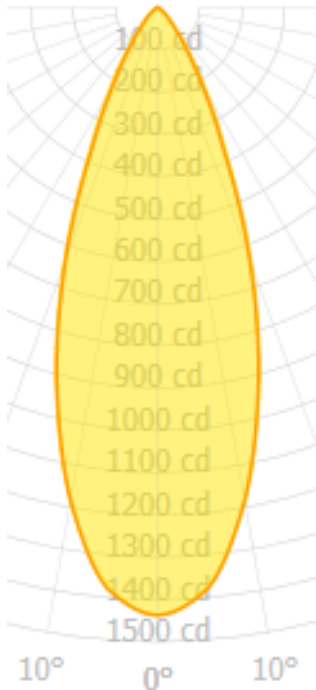
	500lm	800lm
<b>Output Lumens</b>	460.4	736.6
<b>Efficacy</b>	92.1lm/W	85.7lm/W
<b>Beam Angle</b>	21.4°	21.4°
<b>Candela Polar Plot</b>	 A candela polar plot for a 500lm spotlight. The plot shows a narrow beam of light centered at 0° on a grid with radial lines every 10° and concentric arcs representing candela values from 300 to 2700. The beam is highlighted in yellow, reaching a peak of approximately 2700 cd at the center.	 A candela polar plot for an 800lm spotlight. The plot shows a narrow beam of light centered at 0° on a grid with radial lines every 10° and concentric arcs representing candela values from 400 to 4400. The beam is highlighted in yellow, reaching a peak of approximately 4400 cd at the center.

# Spotlight - 21° - Illuminance Plane

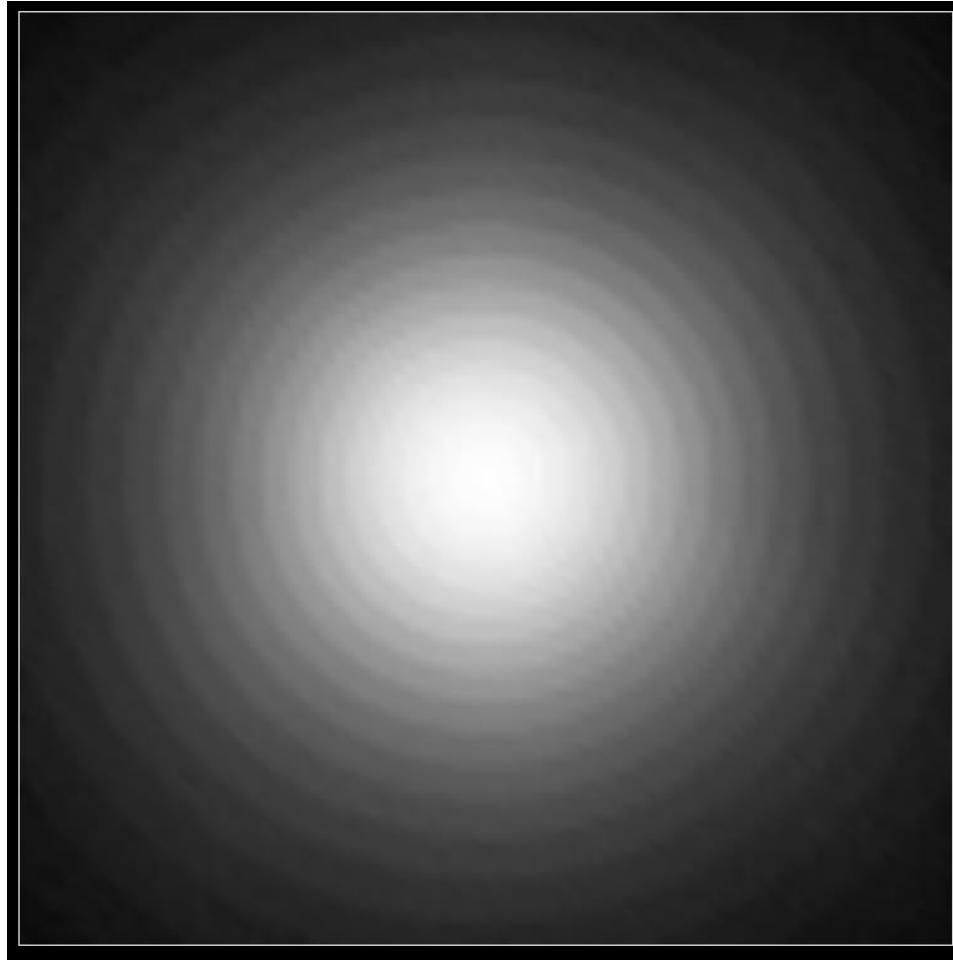


*20' x 20', 10' below*

# Spotlight - 37° - Results

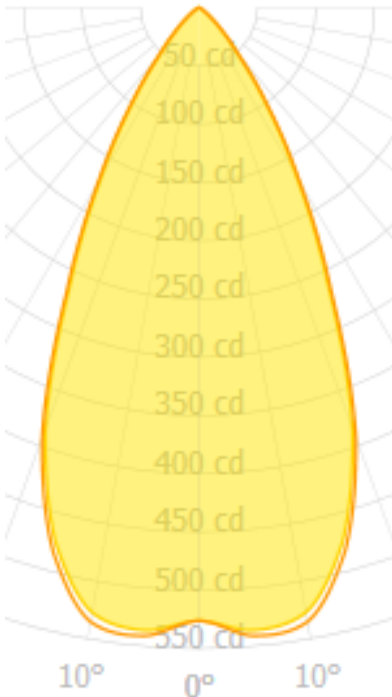
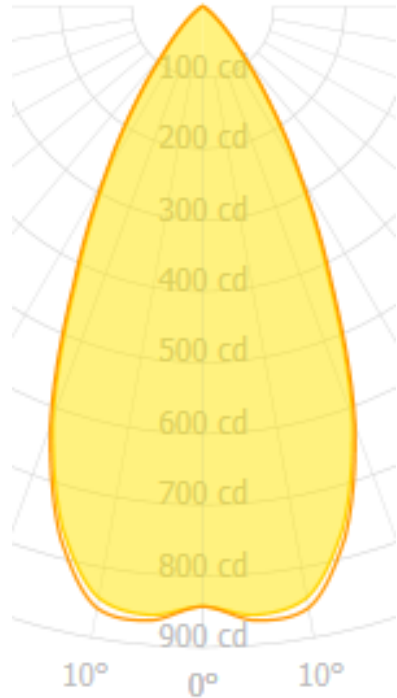
	500lm	800lm
Output Lumens	425.5	680.9
Efficacy	85.1lm/W	79.2lm/W
Beam Angle	37.4°	37.4°
Candela Polar Plot	 A candela polar plot for a 500lm spotlight. The plot shows a yellow, elongated beam shape centered at 0°. The beam is wider at the base and tapers towards the top. The background features a grid of concentric circles representing candela values from 100 to 900 in increments of 100. The horizontal axis is marked with 10° on the left and right, and 0° at the center.	 A candela polar plot for an 800lm spotlight. The plot shows a yellow, elongated beam shape centered at 0°. The beam is wider at the base and tapers towards the top. The background features a grid of concentric circles representing candela values from 100 to 1500 in increments of 100. The horizontal axis is marked with 10° on the left and right, and 0° at the center.

# Spotlight - 37° - Illuminance Plane

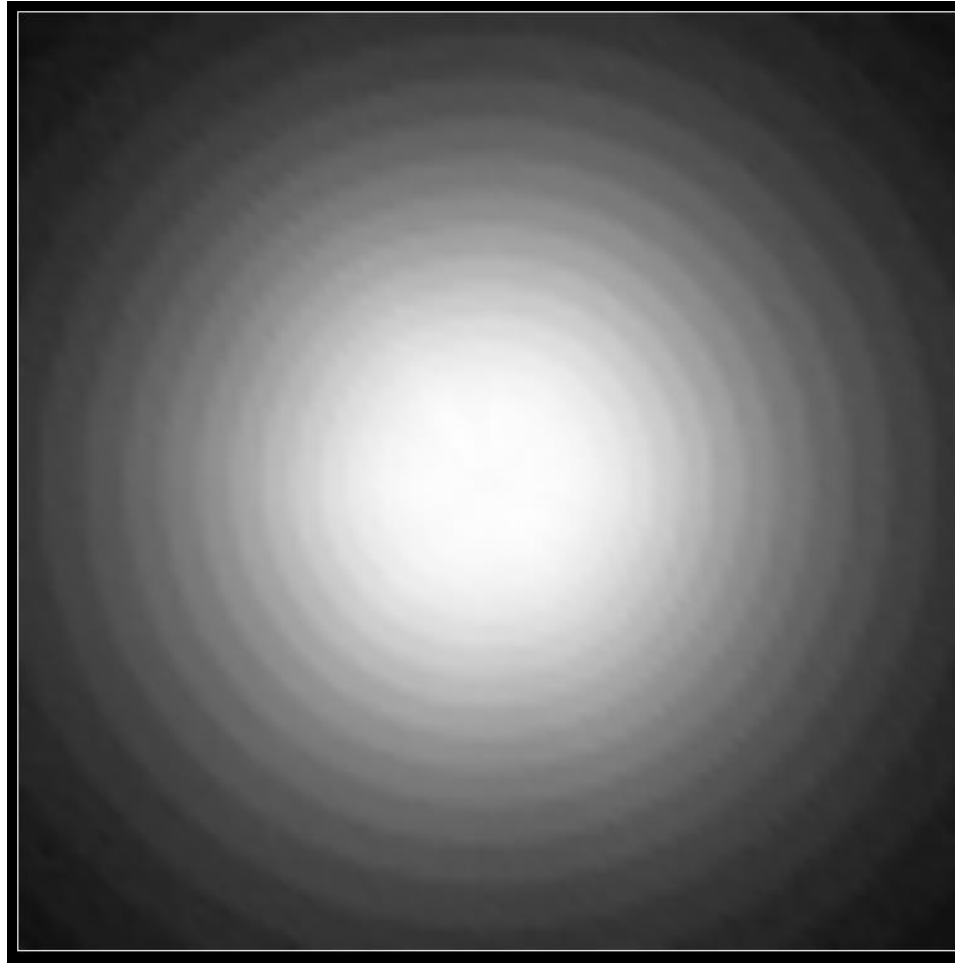


*20' x 20', 10' below*

# Spotlight - 50° - Results

	500lm	800lm
Output Lumens	400.4	640.7
Efficacy	80.1lm/W	74.5lm/W
Beam Angle	49.7°	49.7°
Candela Polar Plot	 A candela polar plot for a 500lm spotlight. The plot shows a yellow teardrop-shaped beam on a grid of concentric circles and radial lines. The radial lines are labeled with candela values: 50 cd, 100 cd, 150 cd, 200 cd, 250 cd, 300 cd, 350 cd, 400 cd, 450 cd, and 500 cd. The beam angle is marked as 10° on the left and right, and 0° at the bottom center.	 A candela polar plot for an 800lm spotlight. The plot shows a yellow teardrop-shaped beam on a grid of concentric circles and radial lines. The radial lines are labeled with candela values: 100 cd, 200 cd, 300 cd, 400 cd, 500 cd, 600 cd, 700 cd, 800 cd, and 900 cd. The beam angle is marked as 10° on the left and right, and 0° at the bottom center.

# Spotlight - 50° - Illuminance Plane



*20' x 20', 10' below*