# SIX+ BAR L

Photometric &

Chromaticity Test Reports

# CONTENTS

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# Testing Process

**Total Lumen Measurements**

Lumens are measured using a Viso Systems Lab Spion. As a goniophotometer, the Viso calculates the field lumens of the fixture by taking multiple measurements across the light beam.

Many lumens figures provided for entertainment lighting fixtures are only $2\pi$ sphere values, some even emphasize the LED engine lumens. All Elation product photometric data is the actual light output from the fixture lens, never a theoretical value based on calculation or using the source lumens as the fixtures output. We advise to always compare total fixture lumens acquired with identical measurement systems when comparing lighting fixtures.

**Test Lab Equipment and Process**

Elation operates an optical testing laboratory at its Los Angeles, CA headquarters to provide accurate photometric data for its lighting products. The testing lab is both light and climate- controlled and contains a variety of precise lighting measurement systems. Fixtures are analyzed with the sophisticated Viso Systems Lab Spion equipment, which measures all light and color parameters by panning the light beam at a precise speed and from different angles through a calibrated, laser aligned light and color sensor. Test data is collected and summarized by the Viso Light Inspector software. This type of measurement system is referred to as a Goniophotometer.

The Viso software calculates all relevant types of measurements, from beam angles, candela to center light intensity at a variety of distances to the latest color quality measurements like TM30 or CQS as well as accurate color temperature. This wealth of data is then processed by an Elation specific template which is included in the photometric test report for various fixture conditions such as zoom angles and color correction filters.

The Viso software also creates IES (Illuminating Engineering Society) files for each test report. IES is an industry standard file format created for the easy electronic transfer of photometric test data, which is widely used by lighting manufacturers for photometric data distribution.

Additionally, fixtures are periodically rechecked for accuracy using various hand-held light meters including one or more of the devices listed below. This is done to ensure the test data contained in this report is as accurate as possible.

Asenstek Lighting Passport | Konica Minolta T-10 | Sekonic C800U

## Key Measurements

### Output

Total Lumen Output: 7961 lm

Peak Intensity: 53780 cd

### Beam

Beam Angle (50%): 20.1°

Field Angle (10%): 36.2°

Cutoff Angle (2.5%): 50.3°

### Color

Color Temperature: 6754 K

CRI: 65.6

TLCI: 72

TM30 $R_F$: 77.6

TM30 $R_g$: 121.4

### Power Details

Efficacy: 46 Lumen/Watt

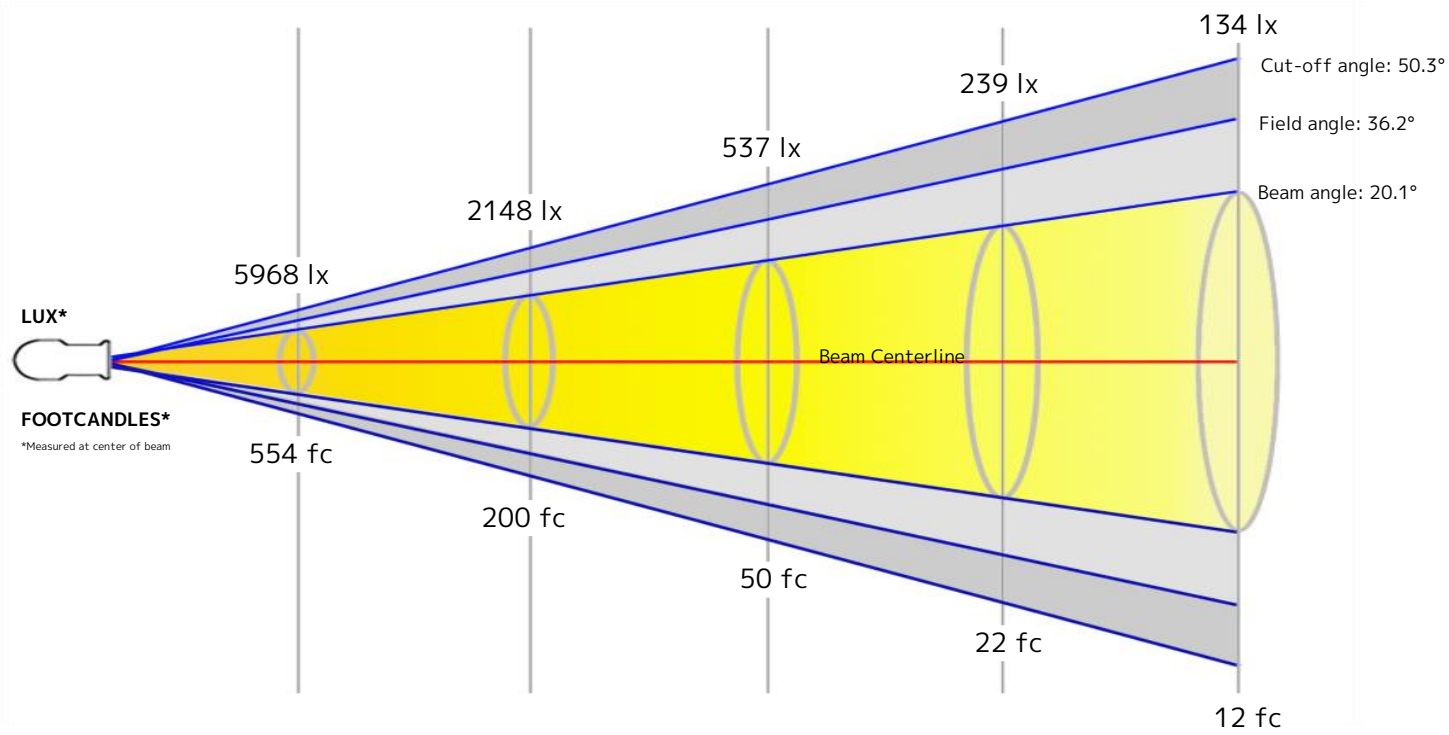
Power: 174.2 W

Supply Voltage: 120 V

Current: 1.46 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.5 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.6 ft | 17.4 ft | 23.3 ft |

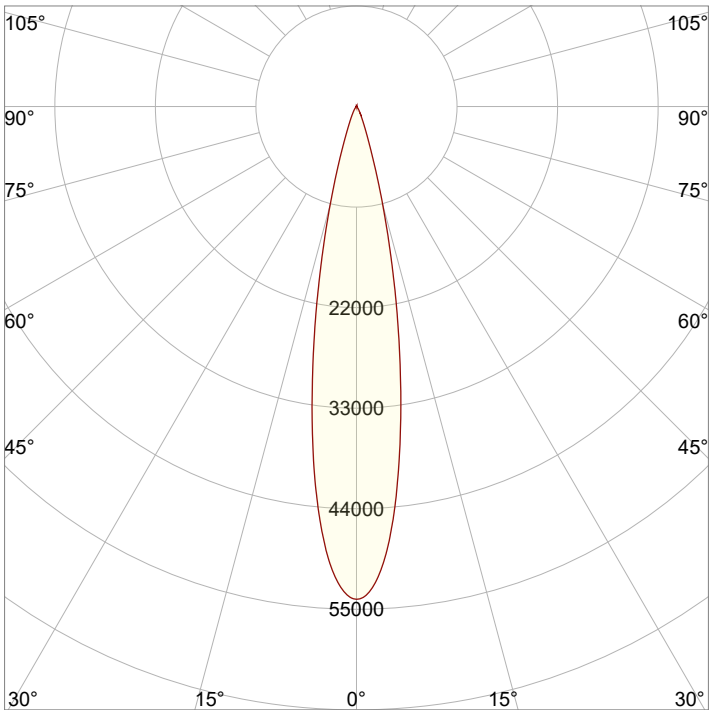
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 53712 | 13428 | 5968 | 3357 | 2148 | 1492 | 1096 | 839 | 663 | 537 | 444 | 373 | 318 | 274 | 239 | 210 | 186 | 166 | 149 | 134 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4990 | 1247.5 | 554.4 | 311.9 | 199.6 | 138.6 | 101.8 | 78 | 61.6 | 49.9 | 41.2 | 34.7 | 29.5 | 25.5 | 22.2 | 19.5 | 17.3 | 15.4 | 13.8 | 12.5 |



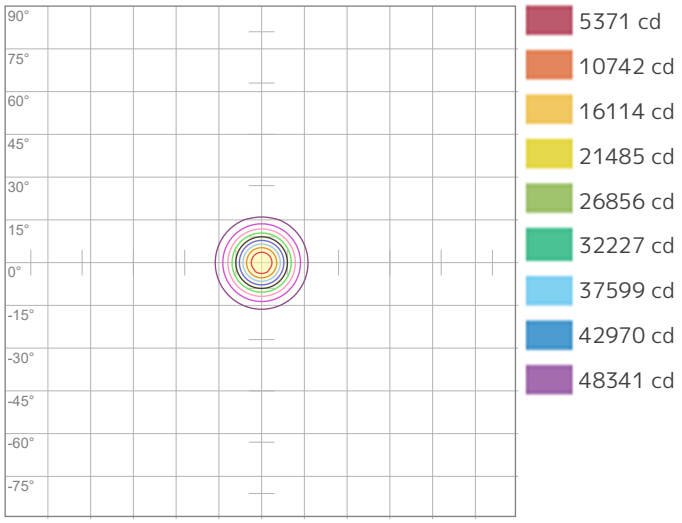
Measurement Date: 8/7/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.1° |
| **Field Angle - 10%** |
| 36.2° |
| **Cutoff Angle - 2.5%** |
| 50.3° |

## ISO Diagrams

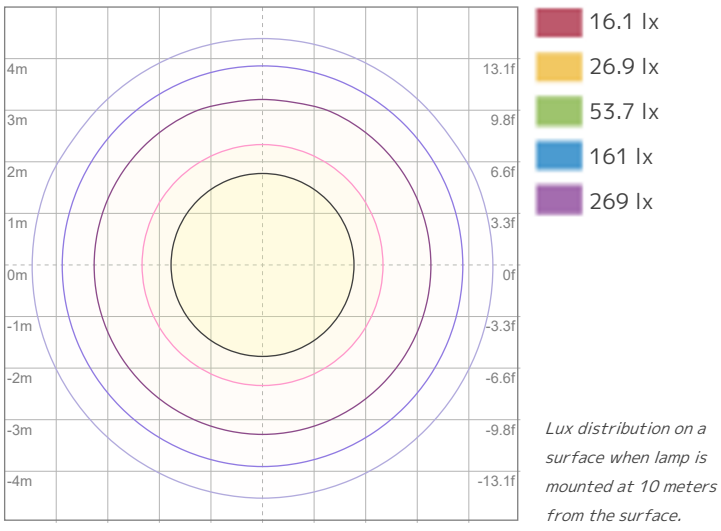



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 53712 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

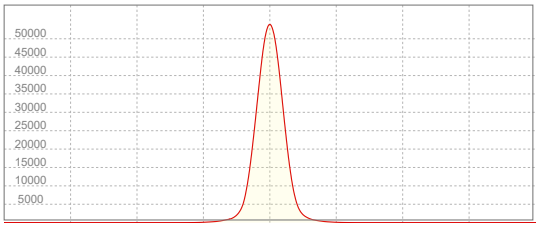
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 537 lx

## Linear Distribution




**Peak Candela**

**53780 cd**

**Calculate Center Beam Intensities**

**lux = 53780 / distance(m)$^2$**

**fc = 53780 / distance(ft)$^2$**



**Measurement Date: 8/7/2024**

# Six+ Bar L (Full Output)

## Key Measurements

### Output

Total Lumen Output: 6699 lm

Peak Intensity: 45441 cd

### Beam

Beam Angle (50%): 20.1°

Field Angle (10%): 36.3°

Cutoff Angle (2.5%): 50.3°

### Color

Color Temperature: 7496 K

CRI: 64.4

TLCI: 72

TM30 $R_F$: 76.1

TM30 $R_g$: 121.6

### Power Details

Efficacy: 37 Lumen/Watt

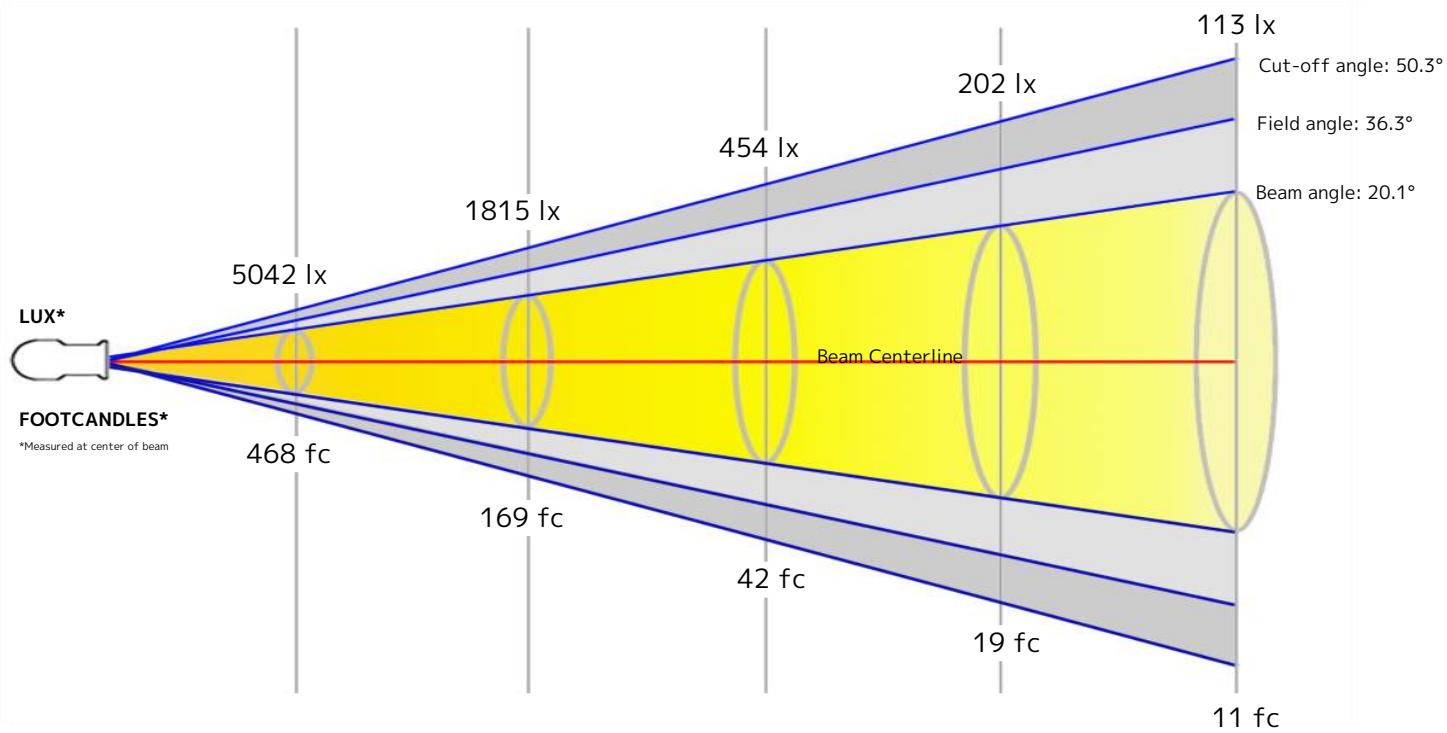
Power: 179.4 W

Supply Voltage: 119 V

Current: 1.51 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.5 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.6 ft | 17.4 ft | 23.2 ft |

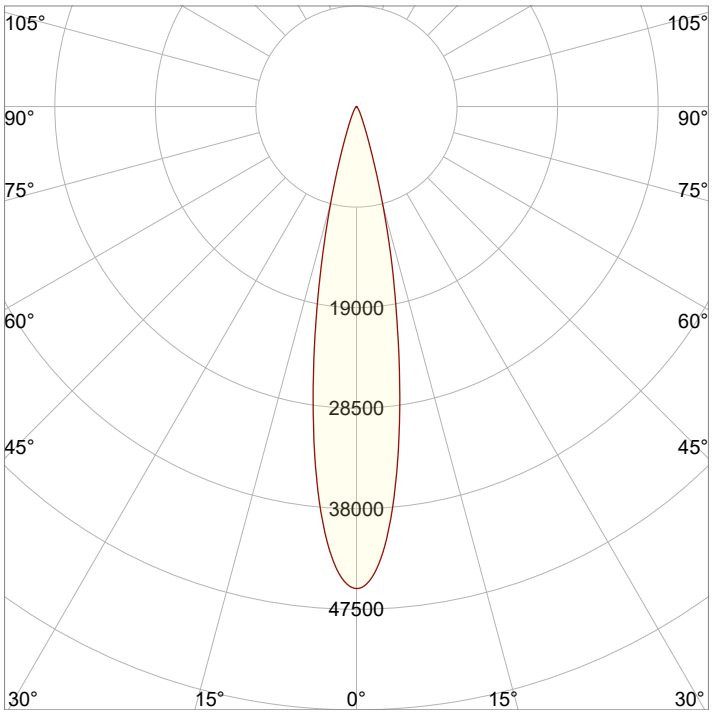
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 45375 | 11344 | 5042 | 2836 | 1815 | 1260 | 926 | 709 | 560 | 454 | 375 | 315 | 268 | 232 | 202 | 177 | 157 | 140 | 126 | 113 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4215.5 | 1053.9 | 468.4 | 263.5 | 168.6 | 117.1 | 86 | 65.9 | 52 | 42.2 | 34.8 | 29.3 | 24.9 | 21.5 | 18.7 | 16.5 | 14.6 | 13 | 11.7 | 10.5 |



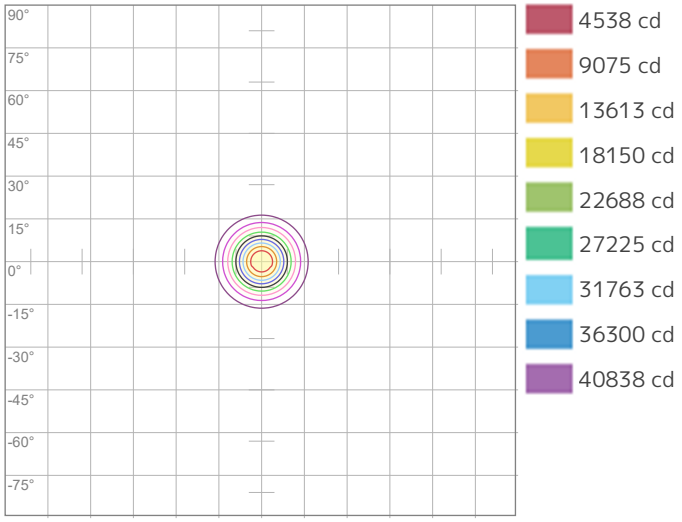
Measurement Date: 8/7/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.1° |
| Field Angle - 10% |
| 36.3° |
| Cutoff Angle - 2.5% |
| 50.3° |

## ISO Diagrams

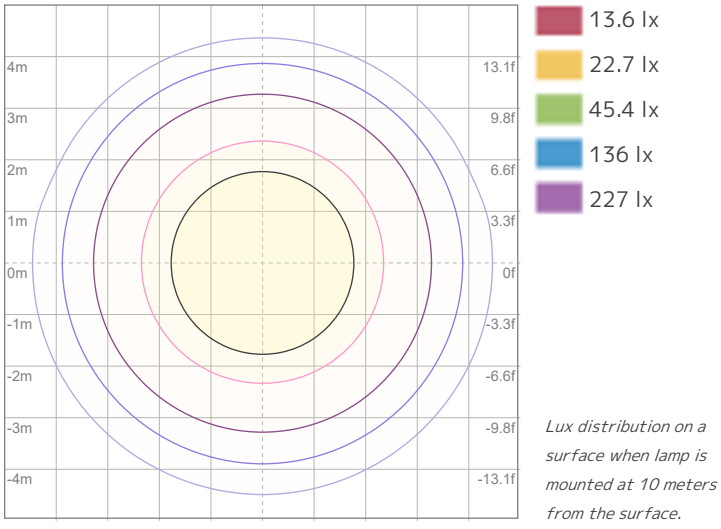



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 45375 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

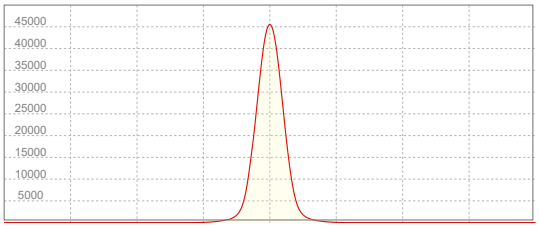
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 454 lx

## Linear Distribution




**Peak Candela**

**45441 cd**

**Calculate Center Beam Intensities**

**lux = 45441 / distance(m)$^2$**

**fc = 45441 / distance(ft)$^2$**



**Measurement Date: 8/7/2024**

## Key Measurements

### Output

Total Lumen Output: 5849 lm

Peak Intensity: 40030 cd

### Beam

Beam Angle (50%): 20°

Field Angle (10%): 36°

Cutoff Angle (2.5%): 49.8°

### Color

Color Temperature: 2443 K

CRI: 86.4

TLCI: 78

TM30 $R_F$: 89.4

TM30 $R_g$: 106.8

### Power Details

Efficacy: 52 Lumen/Watt

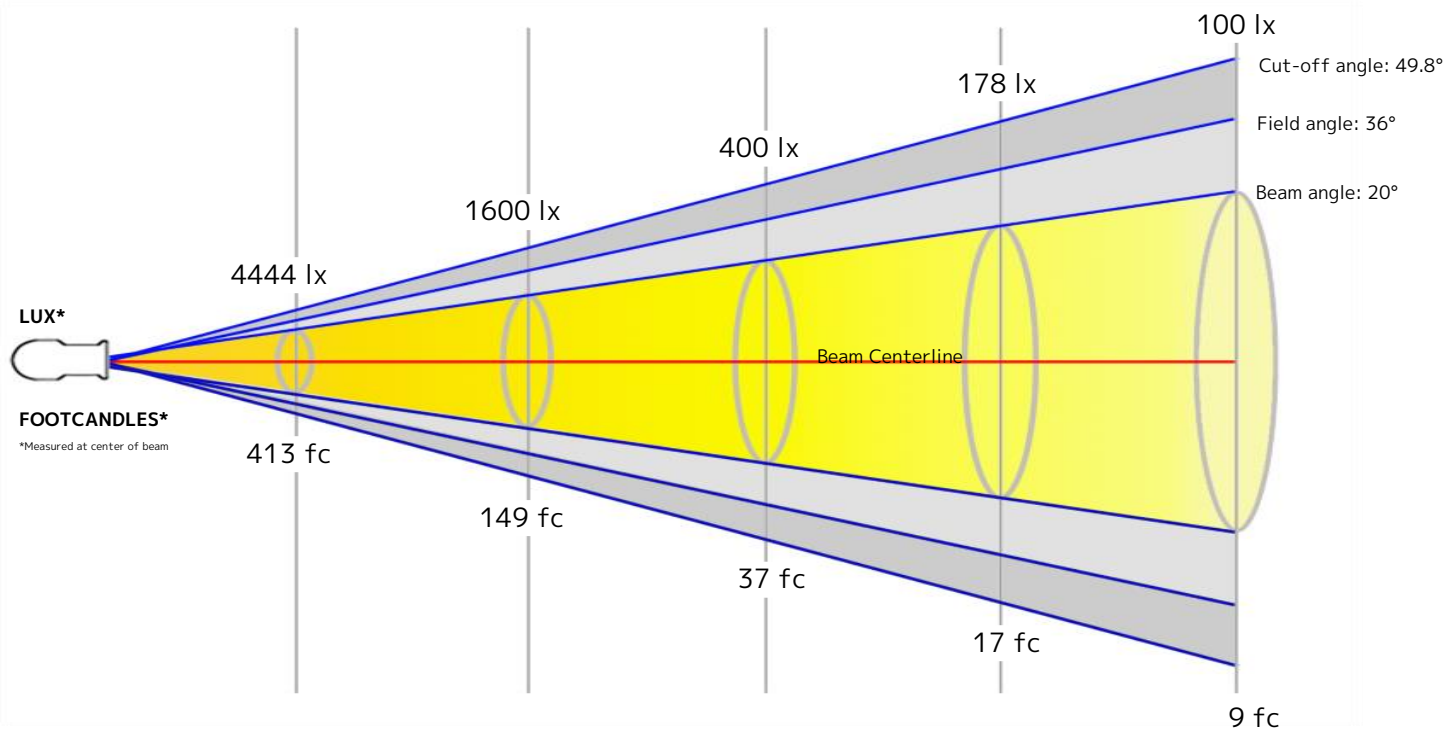
Power: 113.4 W

Supply Voltage: 120 V

Current: 0.952 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.5 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.6 ft | 17.3 ft | 23.1 ft |

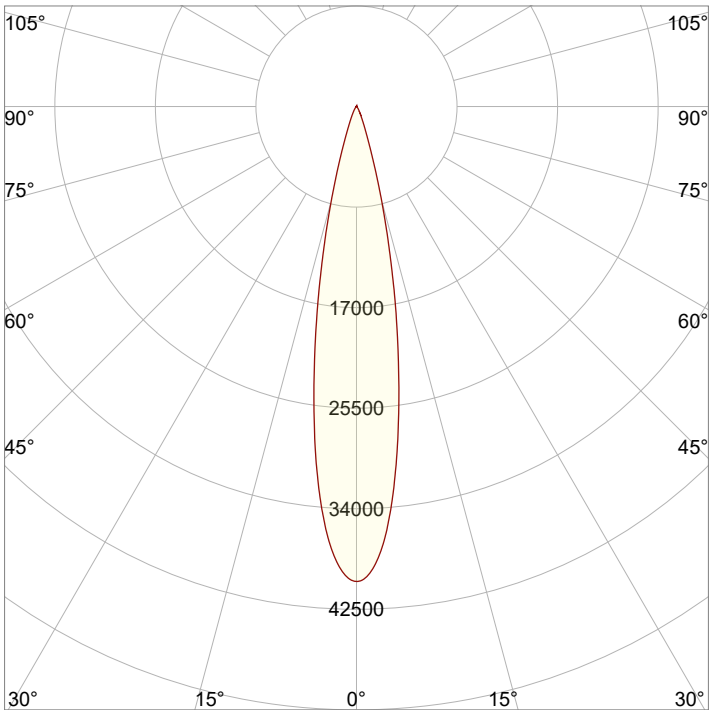
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 40000 | 10000 | 4444 | 2500 | 1600 | 1111 | 816 | 625 | 494 | 400 | 331 | 278 | 237 | 204 | 178 | 156 | 138 | 123 | 111 | 100 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 3716.1 | 929 | 412.9 | 232.3 | 148.6 | 103.2 | 75.8 | 58.1 | 45.9 | 37.2 | 30.7 | 25.8 | 22 | 19 | 16.5 | 14.5 | 12.9 | 11.5 | 10.3 | 9.3 |



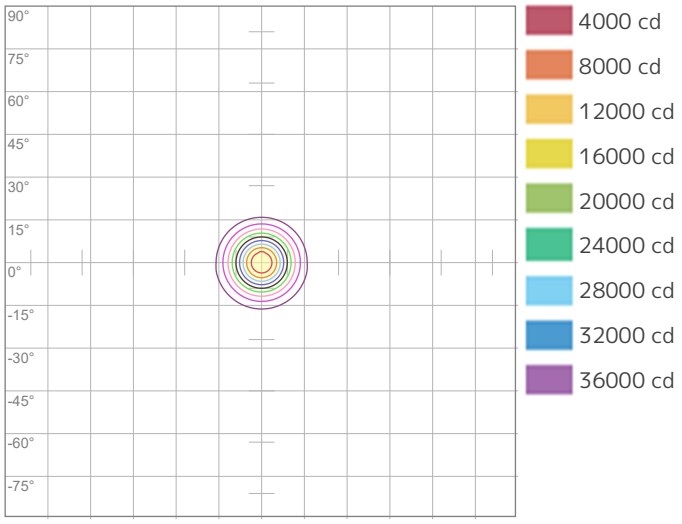
Measurement Date: 8/7/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20° |
| Field Angle - 10% |
| 36° |
| Cutoff Angle - 2.5% |
| 49.8° |

## ISO Diagrams

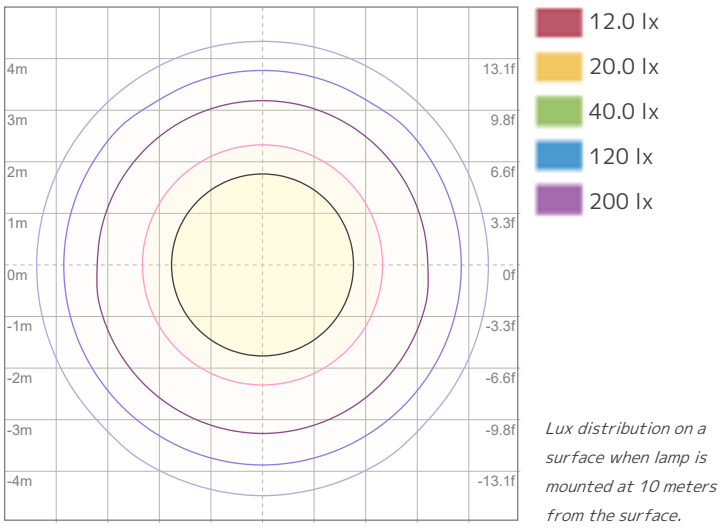



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 40000 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

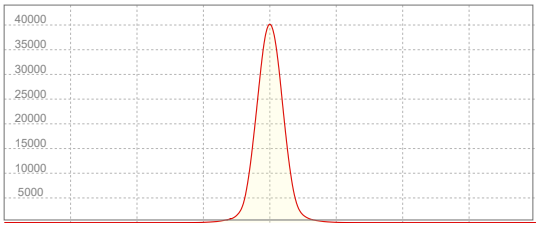
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 400 lx

## Linear Distribution




**Peak Candela**

**40030 cd**

**Calculate Center Beam Intensities**

**lux = 40030 / distance(m)$^2$**

**fc = 40030 / distance(ft)$^2$**



**Measurement Date: 8/7/2024**

## Key Measurements

### Output

Total Lumen Output: 6065 lm

Peak Intensity: 41452 cd

### Beam

Beam Angle (50%): 20°

Field Angle (10%): 35.9°

Cutoff Angle (2.5%): 50.3°

### Color

Color Temperature: 3147 K

CRI: 92.3

TLCI: 83

TM30 $R_F$: 92.0

TM30 $R_g$: 106.7

### Power Details

Efficacy: 53 Lumen/Watt

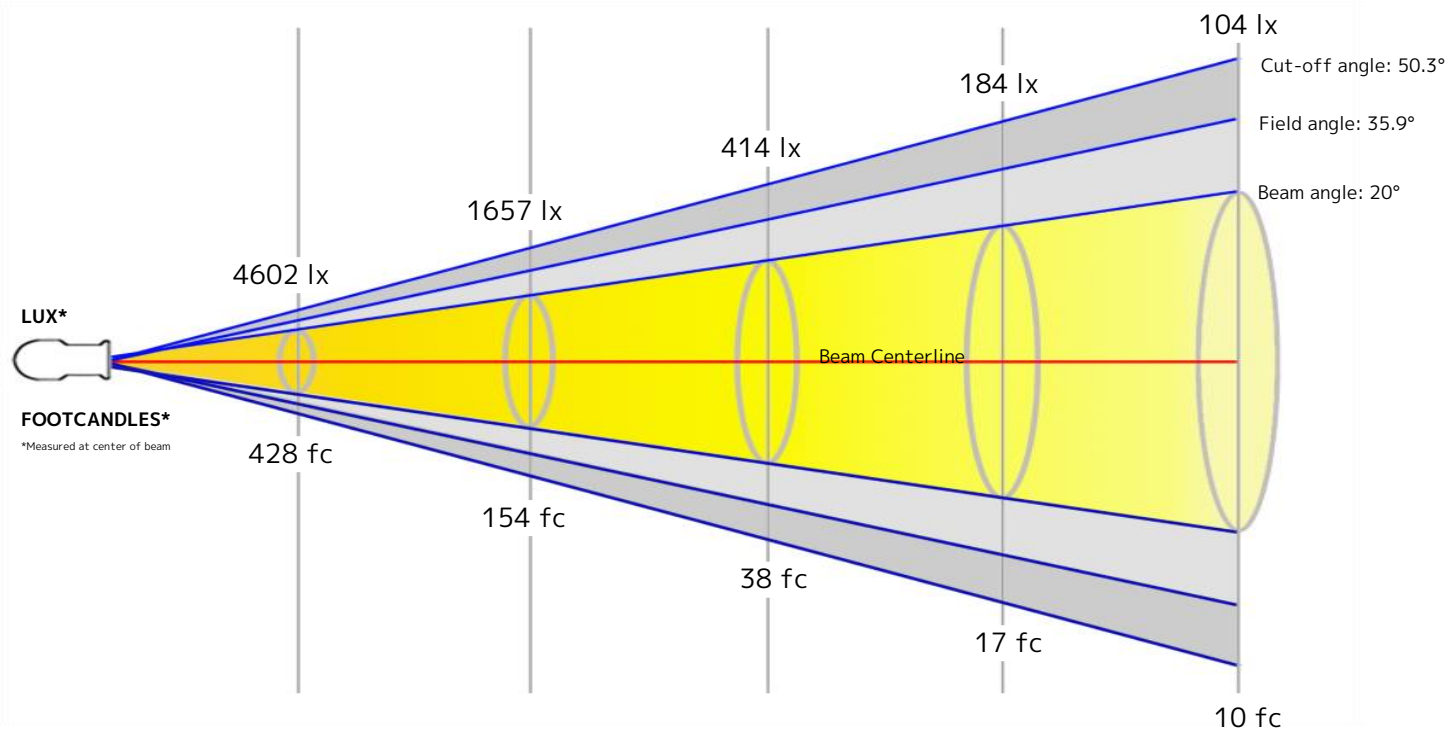
Power: 113.9 W

Supply Voltage: 120 V

Current: 0.956 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.5 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.6 ft | 17.4 ft | 23.1 ft |

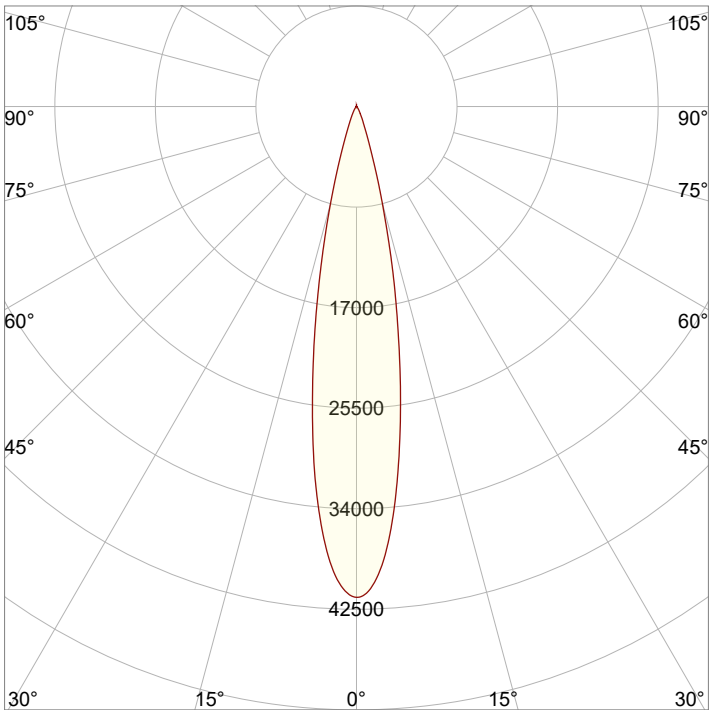
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 41420 | 10355 | 4602 | 2589 | 1657 | 1151 | 845 | 647 | 511 | 414 | 342 | 288 | 245 | 211 | 184 | 162 | 143 | 128 | 115 | 104 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 3848 | 962 | 427.6 | 240.5 | 153.9 | 106.9 | 78.5 | 60.1 | 47.5 | 38.5 | 31.8 | 26.7 | 22.8 | 19.6 | 17.1 | 15 | 13.3 | 11.9 | 10.7 | 9.6 |



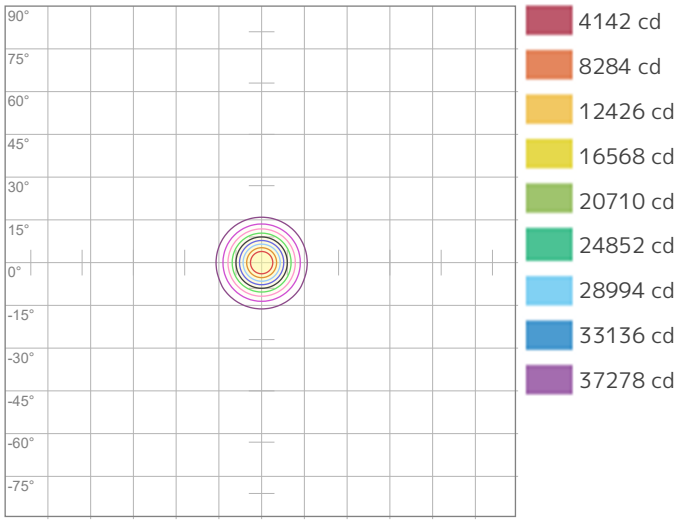
Measurement Date: 8/7/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20° |
| **Field Angle - 10%** |
| 35.9° |
| **Cutoff Angle - 2.5%** |
| 50.3° |

## ISO Diagrams

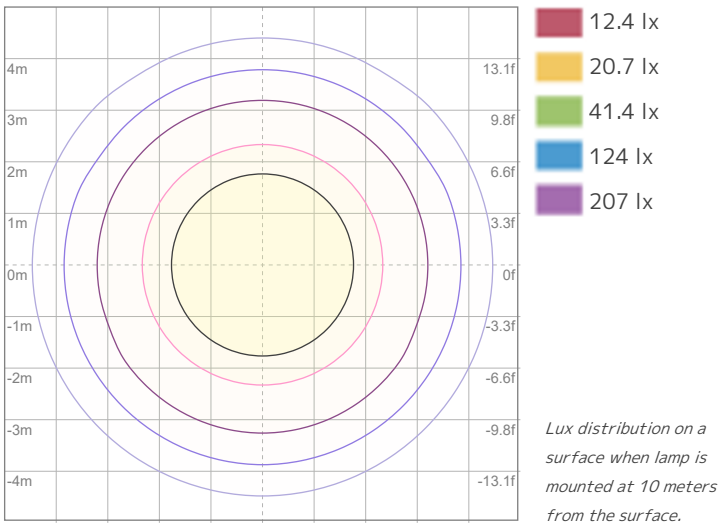



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 41420 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

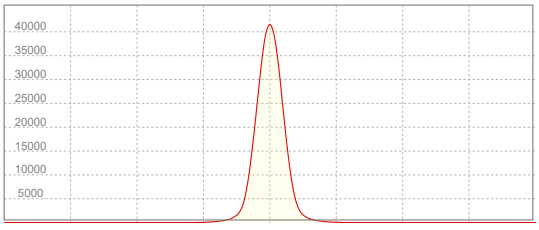
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 414 lx

## Linear Distribution




**Peak Candela**

**41452 cd**

**Calculate Center Beam Intensities**

**lux = 41452 / distance(m)$^2$**

**fc = 41452 / distance(ft)$^2$**



**Measurement Date: 8/7/2024**

## Key Measurements

### Output

Total Lumen Output: 6835 lm

Peak Intensity: 45618 cd

### Beam

Beam Angle (50%): 20.2°

Field Angle (10%): 36.3°

Cutoff Angle (2.5%): 50.7°

### Color

Color Temperature: 4462 K

CRI: 92.1

TLCI: 80

TM30 $R_F$: 90.1

TM30 $R_g$: 106.8

### Power Details

Efficacy: 55 Lumen/Watt

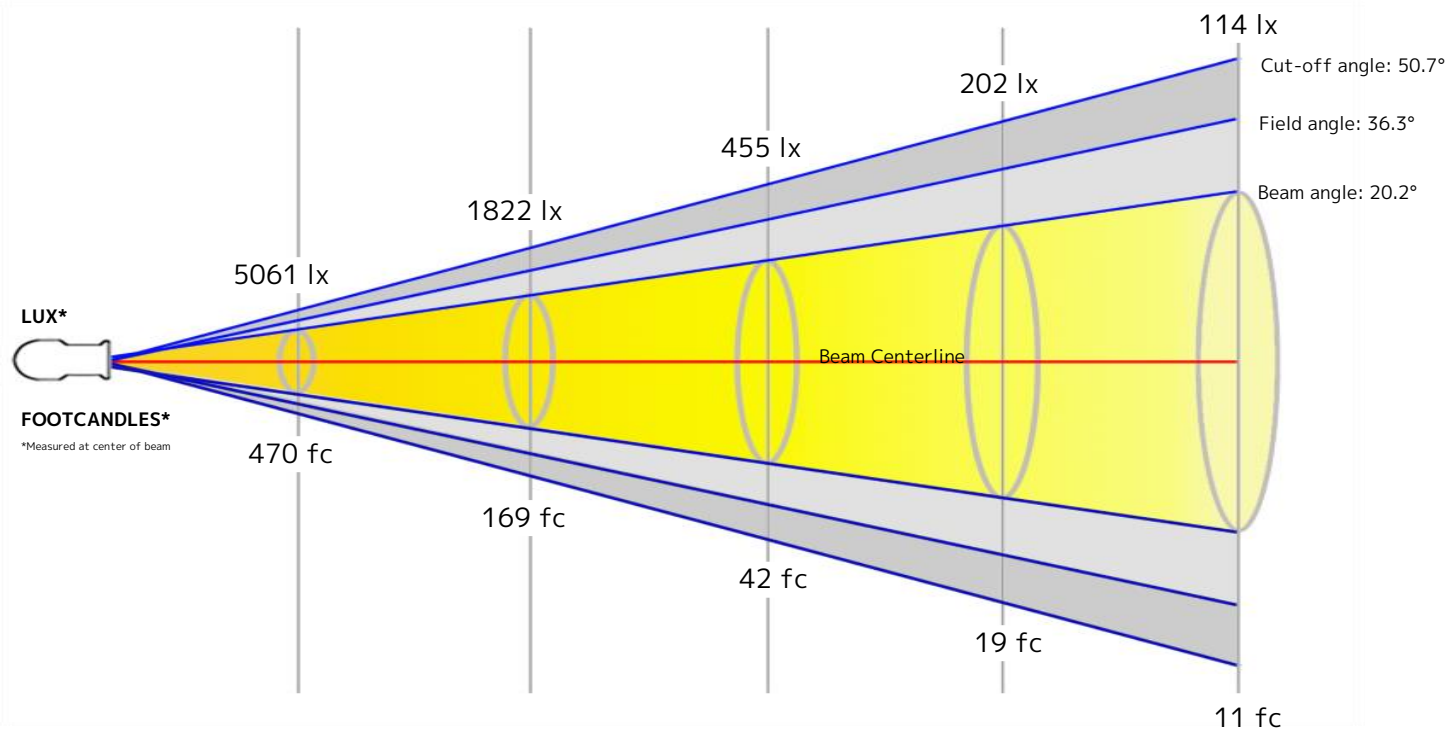
Power: 124.2 W

Supply Voltage: 120 V

Current: 1.04 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.6 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.7 ft | 17.5 ft | 23.3 ft |

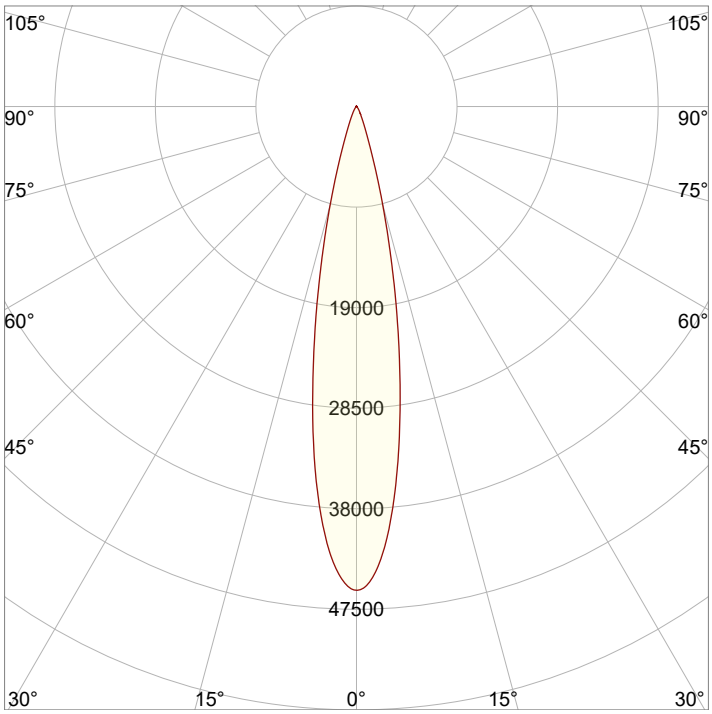
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 45545 | 11386 | 5061 | 2847 | 1822 | 1265 | 929 | 712 | 562 | 455 | 376 | 316 | 269 | 232 | 202 | 178 | 158 | 141 | 126 | 114 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4231.3 | 1057.8 | 470.1 | 264.5 | 169.3 | 117.5 | 86.4 | 66.1 | 52.2 | 42.3 | 35 | 29.4 | 25 | 21.6 | 18.8 | 16.5 | 14.6 | 13.1 | 11.7 | 10.6 |



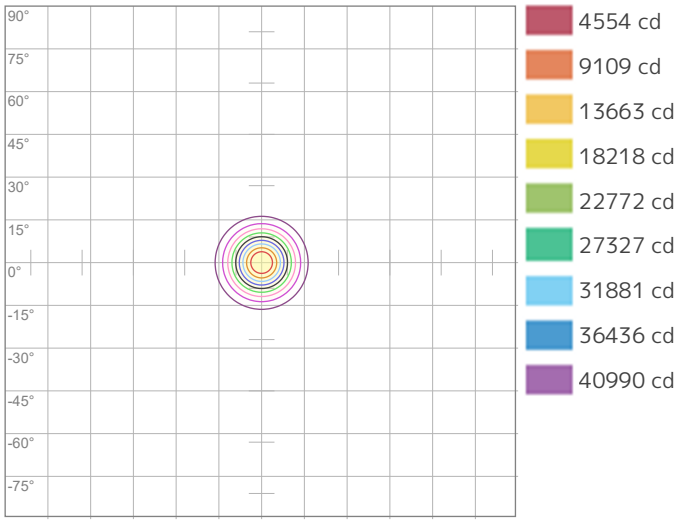
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.2° |
| Field Angle - 10% |
| 36.3° |
| Cutoff Angle - 2.5% |
| 50.7° |

## ISO Diagrams

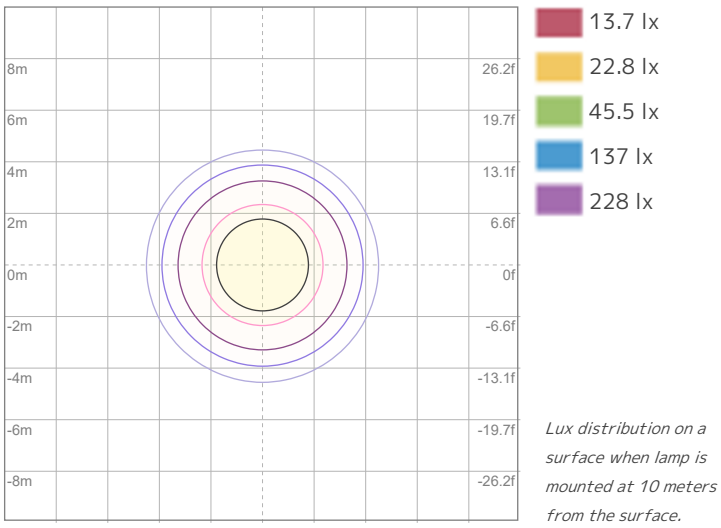



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 45545 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

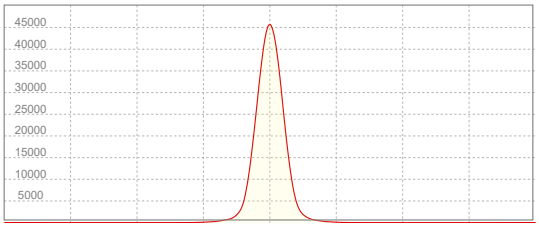
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 455 lx

## Linear Distribution




**Peak Candela**

**45618 cd**

**Calculate Center Beam Intensities**

**lux = 45618 / distance(m)$^2$**

**fc = 45618 / distance(ft)$^2$**



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 7053 lm

Peak Intensity: 47020 cd

### Beam

Beam Angle (50%): 20.1°

Field Angle (10%): 36.1°

Cutoff Angle (2.5%): 51.2°

### Color

Color Temperature: 5638 K

CRI: 89.9

TLCI: 84

TM30 $R_F$: 88.8

TM30 $R_g$: 107.4

### Power Details

Efficacy: 52 Lumen/Watt

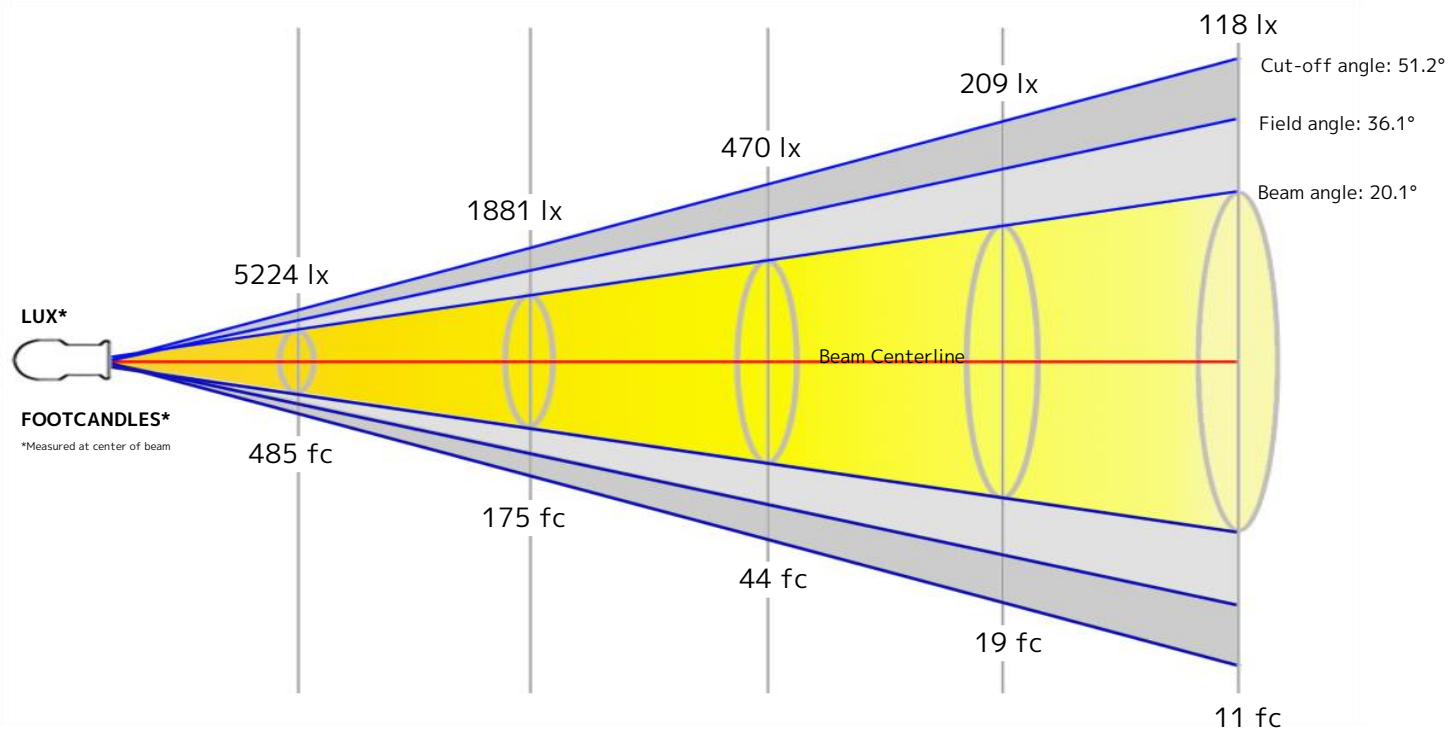
Power: 135.2 W

Supply Voltage: 120 V

Current: 1.13 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.6 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.6 ft | 17.5 ft | 23.3 ft |

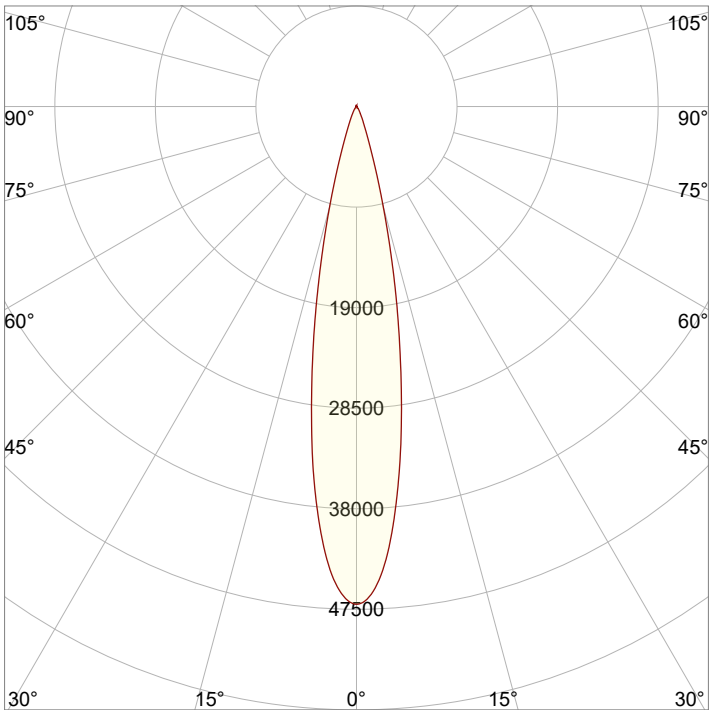
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 47015 | 11754 | 5224 | 2938 | 1881 | 1306 | 959 | 735 | 580 | 470 | 389 | 326 | 278 | 240 | 209 | 184 | 163 | 145 | 130 | 118 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4367.8 | 1092 | 485.3 | 273 | 174.7 | 121.3 | 89.1 | 68.2 | 53.9 | 43.7 | 36.1 | 30.3 | 25.8 | 22.3 | 19.4 | 17.1 | 15.1 | 13.5 | 12.1 | 10.9 |



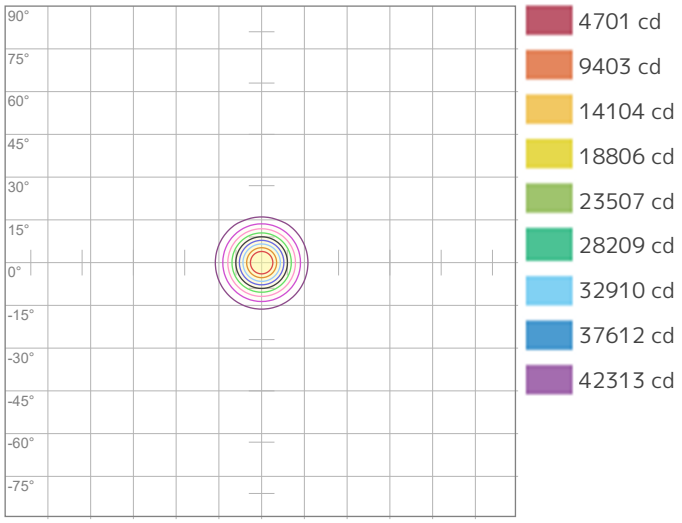
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.1° |
| Field Angle - 10% |
| 36.1° |
| Cutoff Angle - 2.5% |
| 51.2° |

## ISO Diagrams

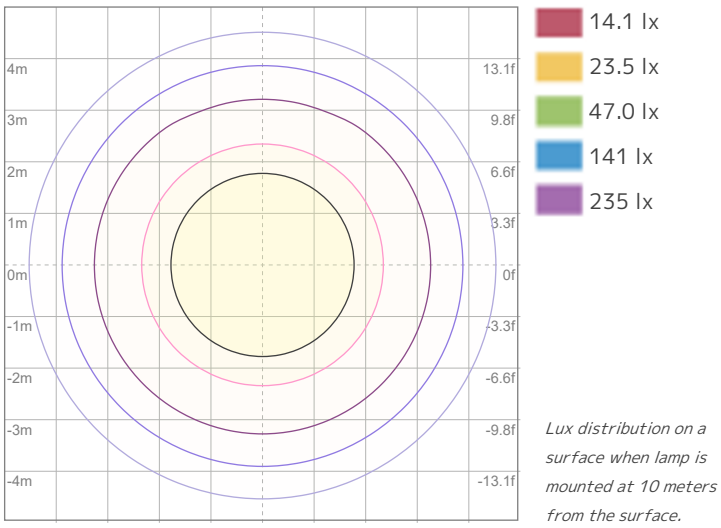



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 47015 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

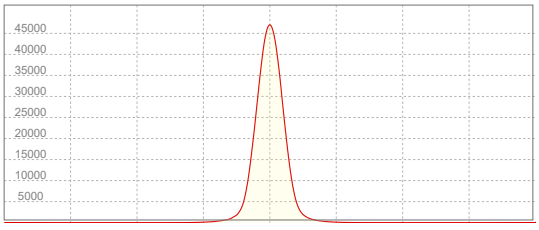
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 470 lx

## Linear Distribution




**Peak Candela**

**47020 cd**

**Calculate Center Beam Intensities**

lux = 47020 / distance(m)$^2$

fc = 47020 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 6867 lm

Peak Intensity: 46369 cd

### Beam

Beam Angle (50%): 20.2°

Field Angle (10%): 36.2°

Cutoff Angle (2.5%): 50.4°

### Color

Color Temperature: 6021 K

CRI: 90.0

TLCI: 85

TM30 $R_F$: 88.5

TM30 $R_g$: 107.0

### Power Details

Efficacy: 51 Lumen/Watt

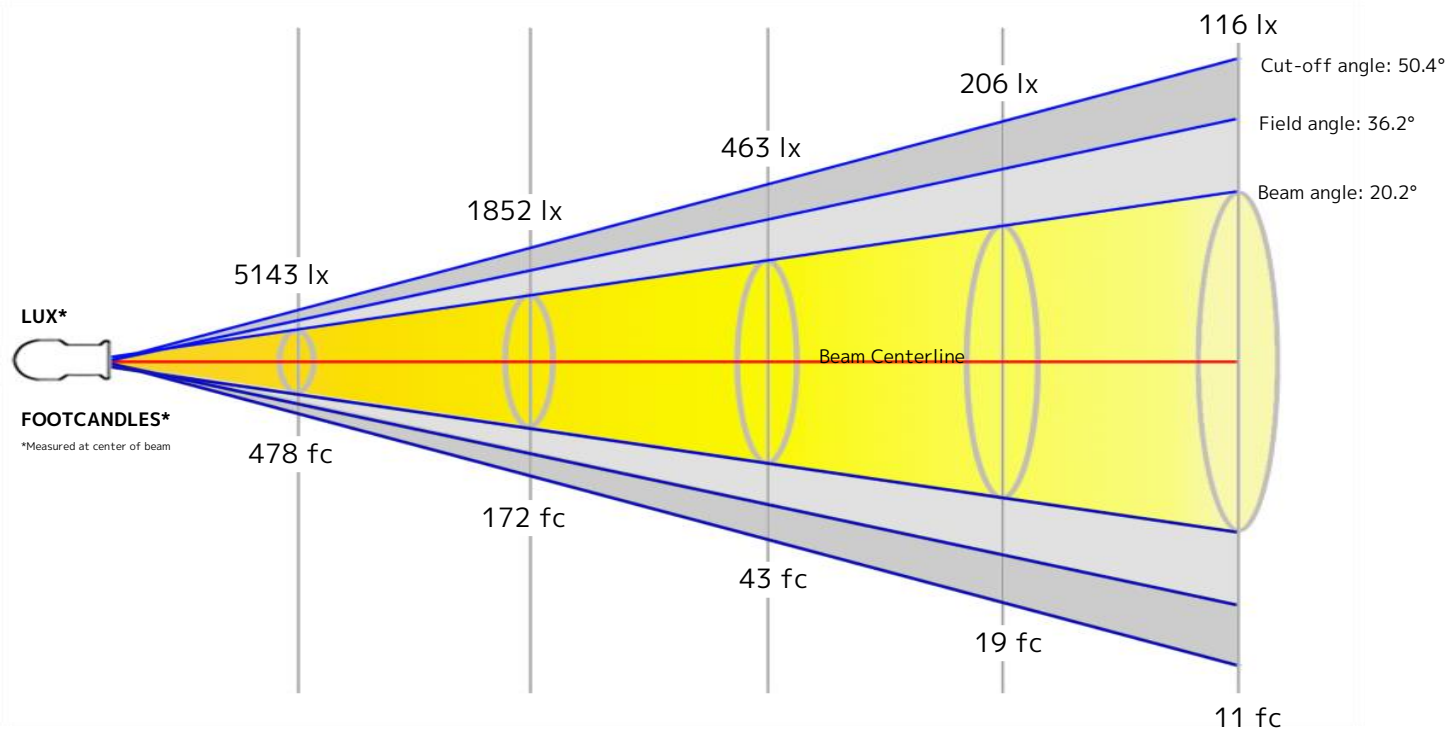
Power: 134.8 W

Supply Voltage: 119 V

Current: 1.14 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.6 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.7 ft | 17.5 ft | 23.3 ft |

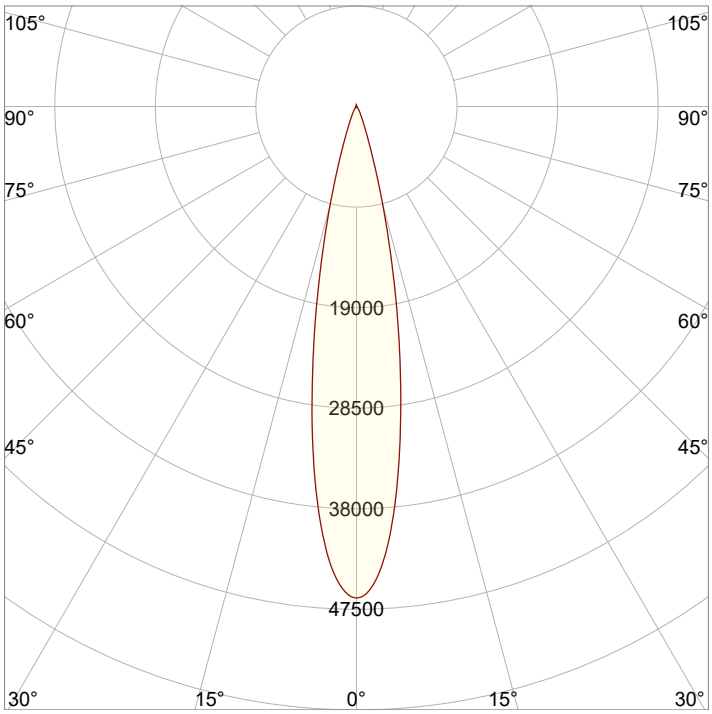
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 46288 | 11572 | 5143 | 2893 | 1852 | 1286 | 945 | 723 | 571 | 463 | 383 | 321 | 274 | 236 | 206 | 181 | 160 | 143 | 128 | 116 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4300.3 | 1075.1 | 477.8 | 268.8 | 172 | 119.5 | 87.8 | 67.2 | 53.1 | 43 | 35.5 | 29.9 | 25.4 | 21.9 | 19.1 | 16.8 | 14.9 | 13.3 | 11.9 | 10.8 |



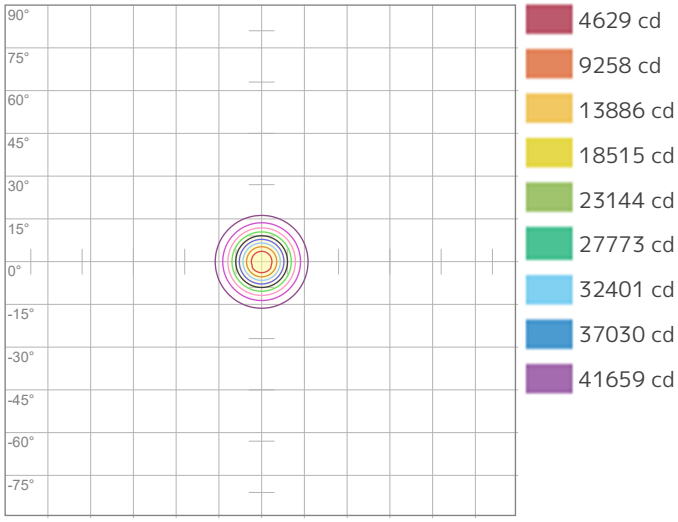
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.2° |
| Field Angle - 10% |
| 36.2° |
| Cutoff Angle - 2.5% |
| 50.4° |

## ISO Diagrams

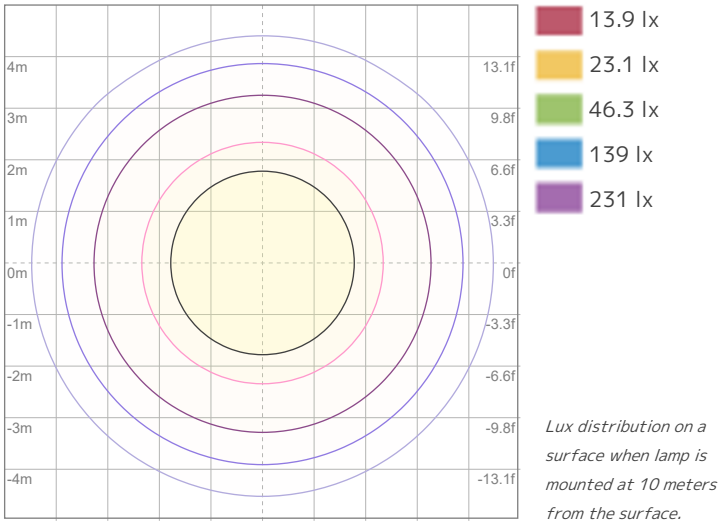



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 46288 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

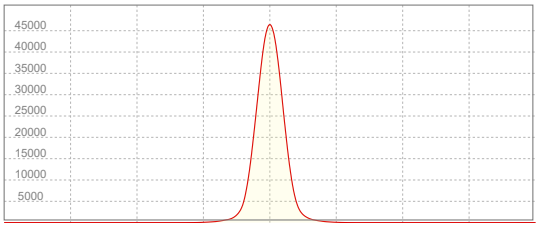
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 463 lx

## Linear Distribution




**Peak Candela**

**46369 cd**

**Calculate Center Beam Intensities**

**lux = 46369 / distance(m)$^2$**

**fc = 46369 / distance(ft)$^2$**



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 7054 lm

Peak Intensity: 46893 cd

### Beam

Beam Angle (50%): 20.2°

Field Angle (10%): 36.2°

Cutoff Angle (2.5%): 50.9°

### Color

Color Temperature: 6510 K

CRI: 89.8

TLCI: 86

TM30 $R_F$: 88.2

TM30 $R_g$: 106.4

### Power Details

Efficacy: 51 Lumen/Watt

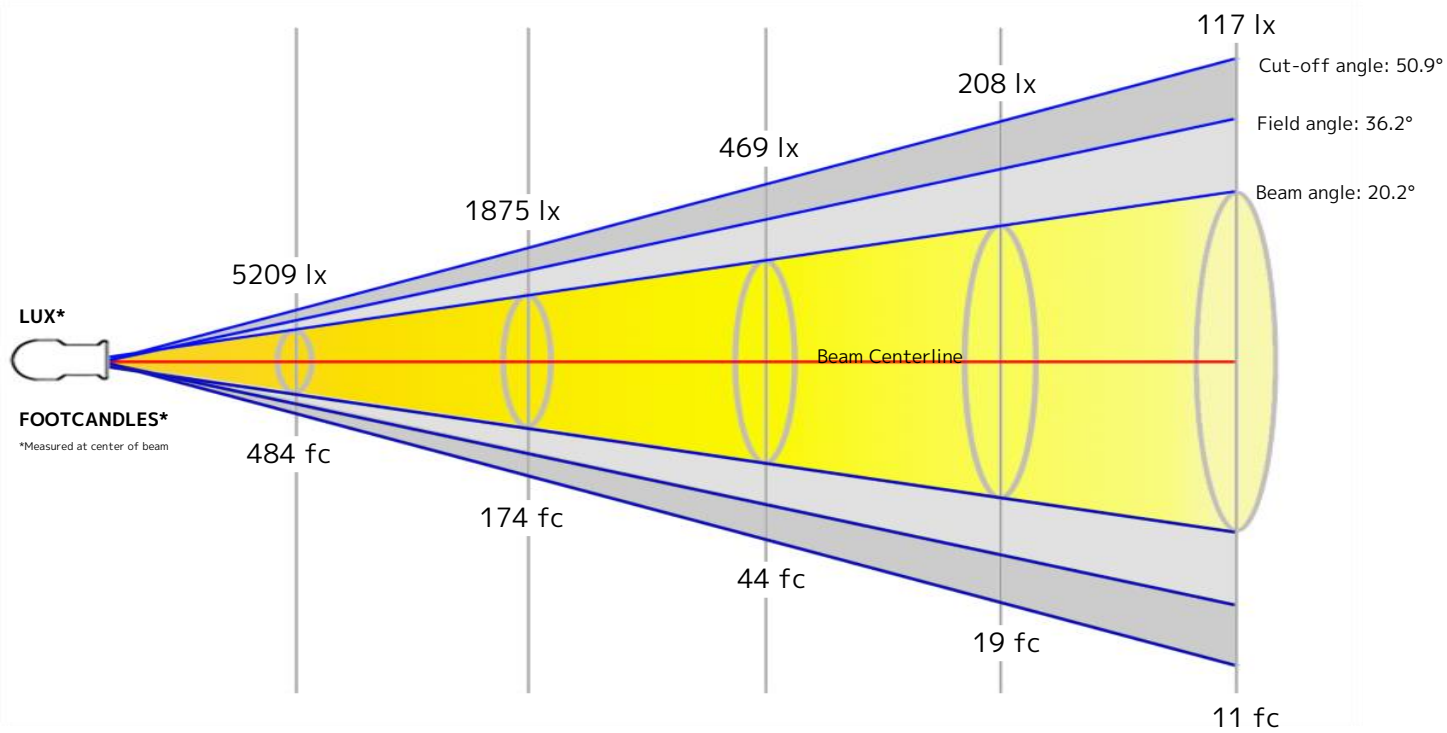
Power: 137.8 W

Supply Voltage: 119 V

Current: 1.16 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.6 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.7 ft | 17.5 ft | 23.3 ft |

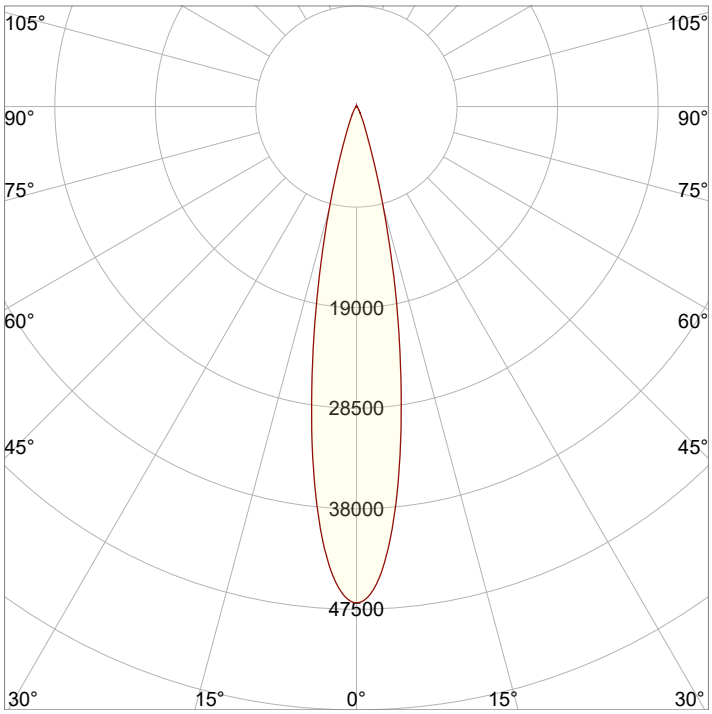
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 46882 | 11721 | 5209 | 2930 | 1875 | 1302 | 957 | 733 | 579 | 469 | 387 | 326 | 277 | 239 | 208 | 183 | 162 | 145 | 130 | 117 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4355.5 | 1088.9 | 483.9 | 272.2 | 174.2 | 121 | 88.9 | 68.1 | 53.8 | 43.6 | 36 | 30.2 | 25.8 | 22.2 | 19.4 | 17 | 15.1 | 13.4 | 12.1 | 10.9 |



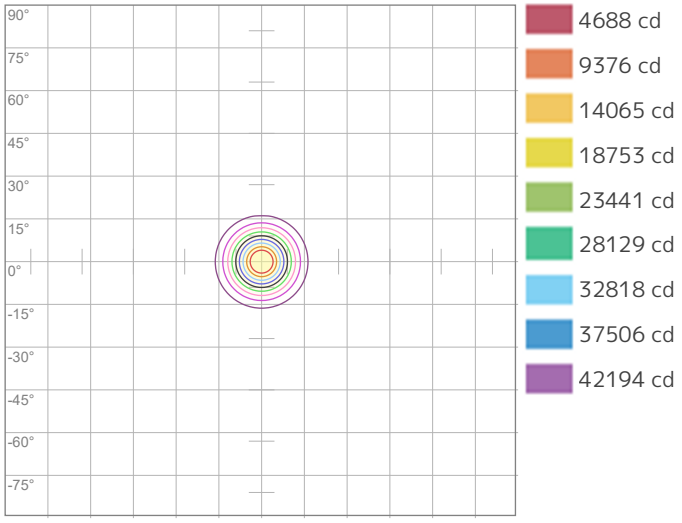
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.2° |
| **Field Angle - 10%** |
| 36.2° |
| **Cutoff Angle - 2.5%** |
| 50.9° |

## ISO Diagrams

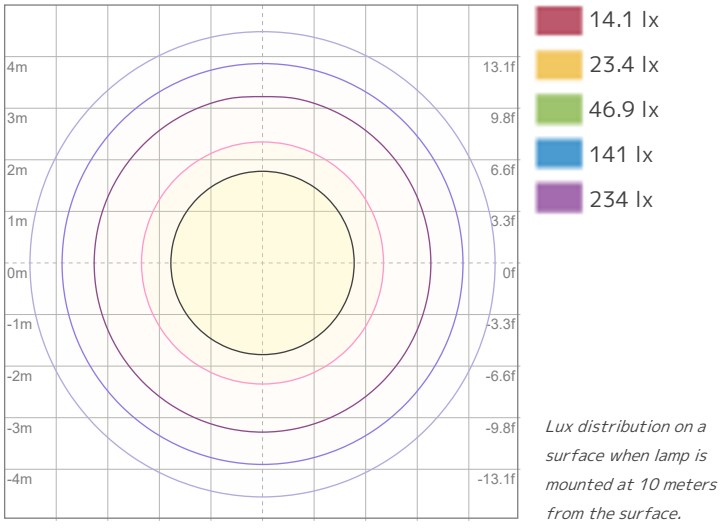



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 46882 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

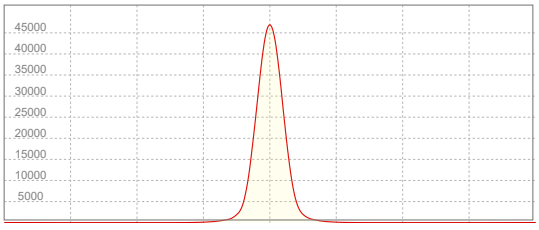
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 469 lx

## Linear Distribution




**Peak Candela**

**46893 cd**

**Calculate Center Beam Intensities**

**lux = 46893 / distance(m)$^2$**

**fc = 46893 / distance(ft)$^2$**



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 7349 lm

Peak Intensity: 48606 cd

### Beam

Beam Angle (50%): 20.2°

Field Angle (10%): 36.3°

Cutoff Angle (2.5%): 51°

### Color

Color Temperature: 8510 K

CRI: 89.0

TLCI: 86

TM30 $R_F$: 87.0

TM30 $R_g$: 105.2

### Power Details

Efficacy: 50 Lumen/Watt

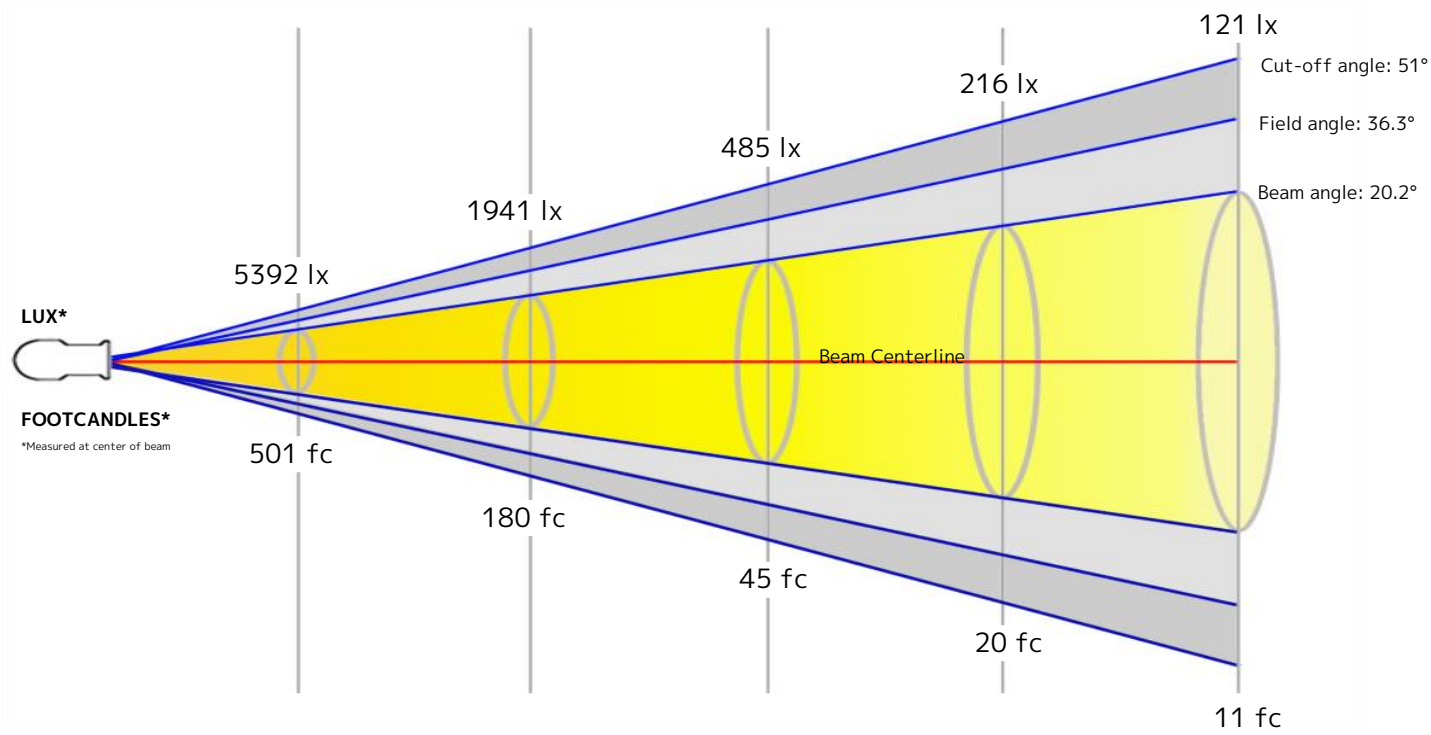
Power: 147.8 W

Supply Voltage: 119 V

Current: 1.24 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.1 m | 1.8 m | 3.6 m | 5.3 m | 7.1 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 3.5 ft | 5.8 ft | 11.7 ft | 17.5 ft | 23.3 ft |

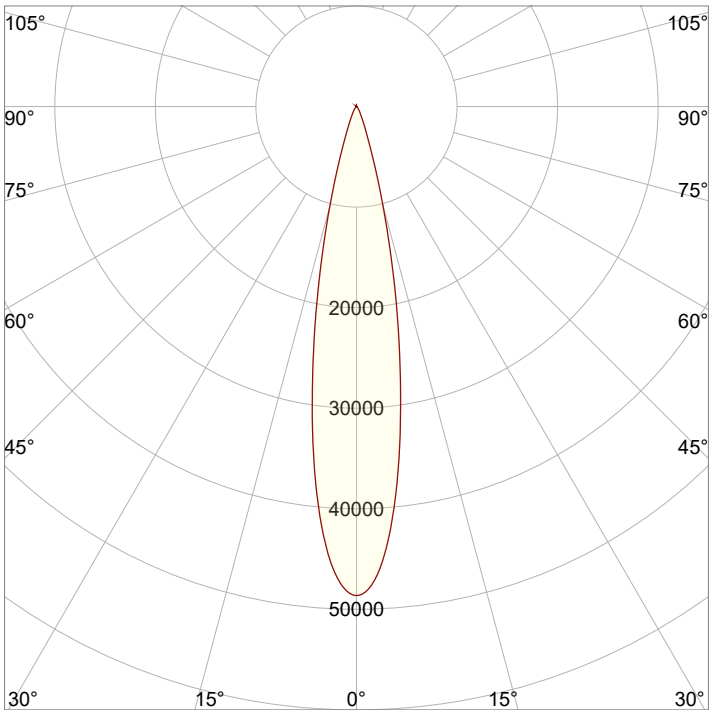
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 48526 | 12131 | 5392 | 3033 | 1941 | 1348 | 990 | 758 | 599 | 485 | 401 | 337 | 287 | 248 | 216 | 190 | 168 | 150 | 134 | 121 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 4508.2 | 1127.1 | 500.9 | 281.8 | 180.3 | 125.2 | 92 | 70.4 | 55.7 | 45.1 | 37.3 | 31.3 | 26.7 | 23 | 20 | 17.6 | 15.6 | 13.9 | 12.5 | 11.3 |



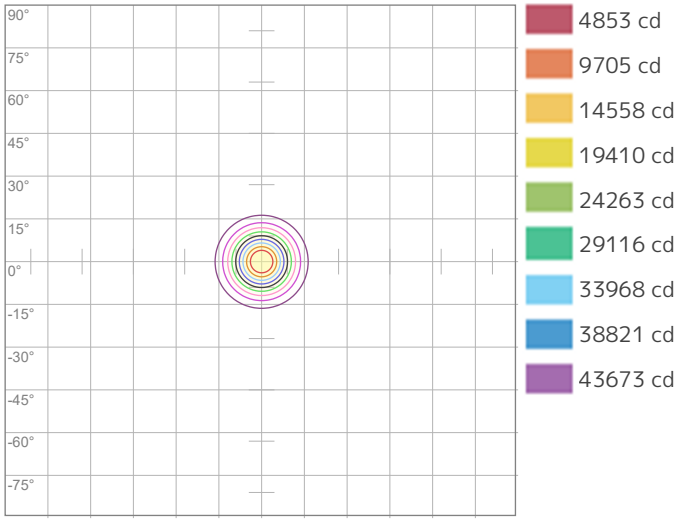
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 20.2° |
| Field Angle - 10% |
| 36.3° |
| Cutoff Angle - 2.5% |
| 51° |

## ISO Diagrams

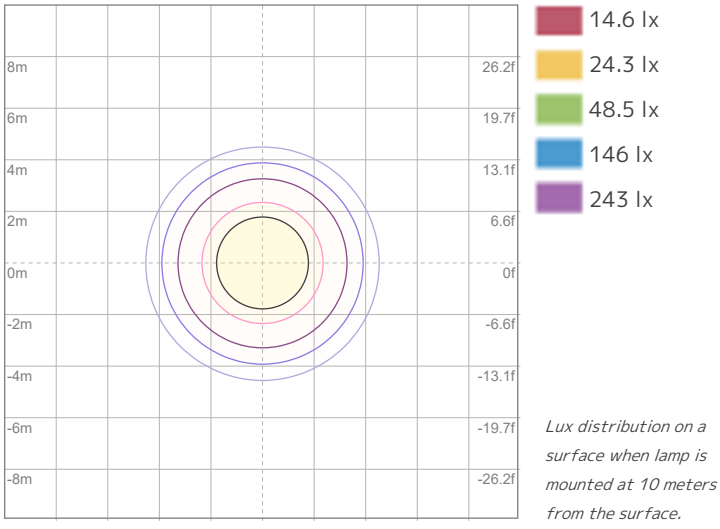



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 48526 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

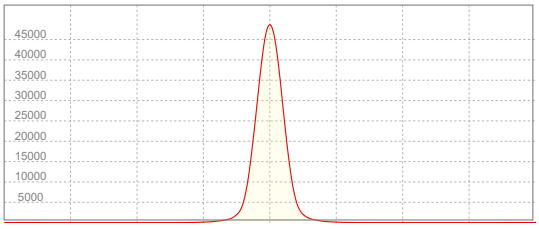
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 485 lx

## Linear Distribution




**Peak Candela**

**48606 cd**

**Calculate Center Beam Intensities**

**lux = 48606 / distance(m)$^2$**

**fc = 48606 / distance(ft)$^2$**



**Measurement Date: 8/8/2024**

# Six+ Bar L (Frost, Full Output, No UV)

## Key Measurements

### Output

Total Lumen Output: 7554 lm

Peak Intensity: 19678 cd

### Beam

Beam Angle (50%): 31.6°

Field Angle (10%): 61.1°

Cutoff Angle (2.5%): 84.4°

### Color

Color Temperature: 6370 K

CRI: 61.7

TLCI: 68

TM30 $R_F$: 76.0

TM30 $R_g$: 123.8

### Power Details

Efficacy: 43 Lumen/Watt

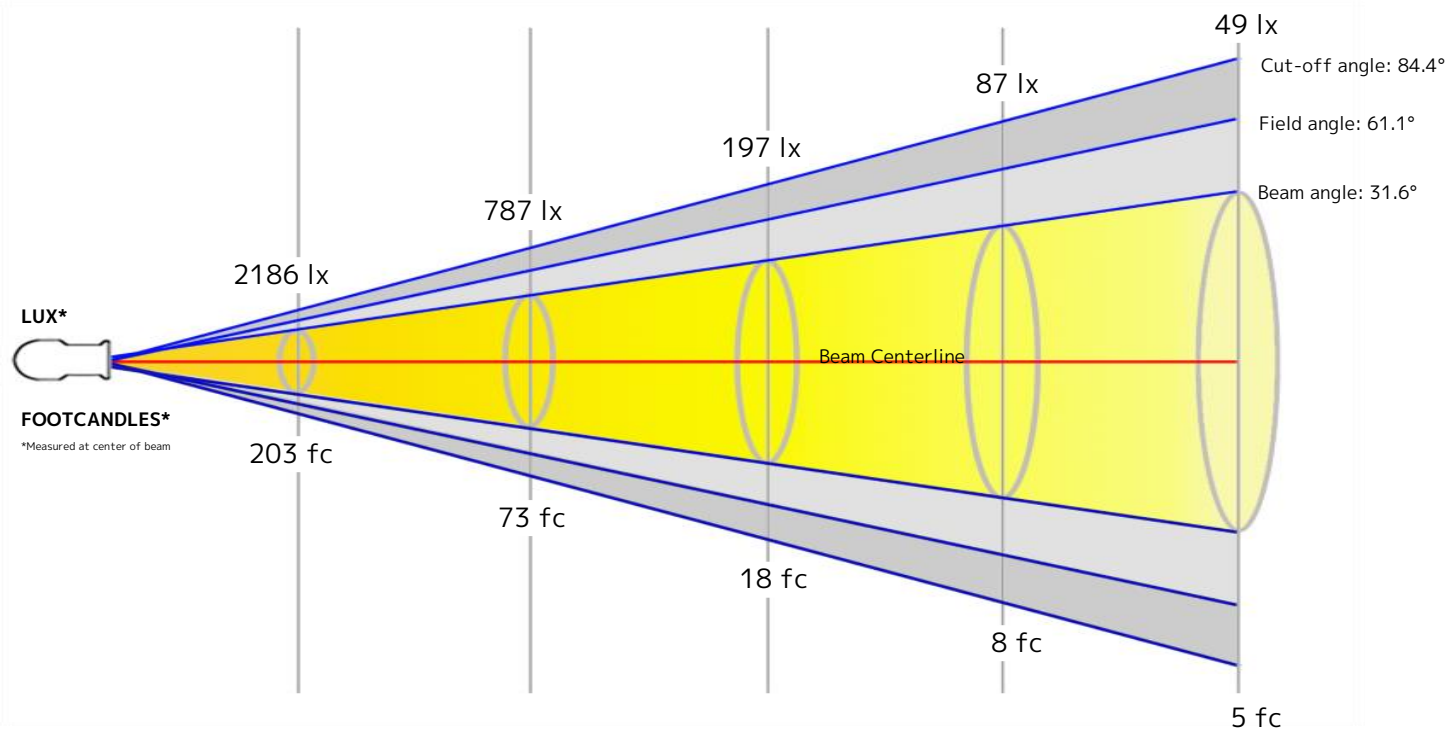
Power: 177.7 W

Supply Voltage: 118 V

Current: 1.50 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.7 m | 8.5 m | 11.3 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.5 ft | 9.3 ft | 18.5 ft | 27.8 ft | 37.1 ft |

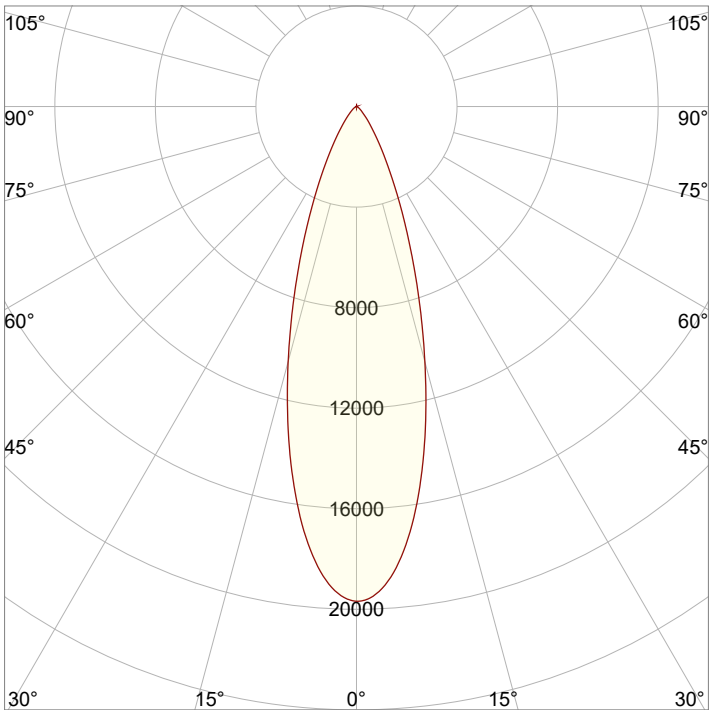
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 19673 | 4918 | 2186 | 1230 | 787 | 546 | 401 | 307 | 243 | 197 | 163 | 137 | 116 | 100 | 87 | 77 | 68 | 61 | 54 | 49 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1827.7 | 456.9 | 203.1 | 114.2 | 73.1 | 50.8 | 37.3 | 28.6 | 22.6 | 18.3 | 15.1 | 12.7 | 10.8 | 9.3 | 8.1 | 7.1 | 6.3 | 5.6 | 5.1 | 4.6 |



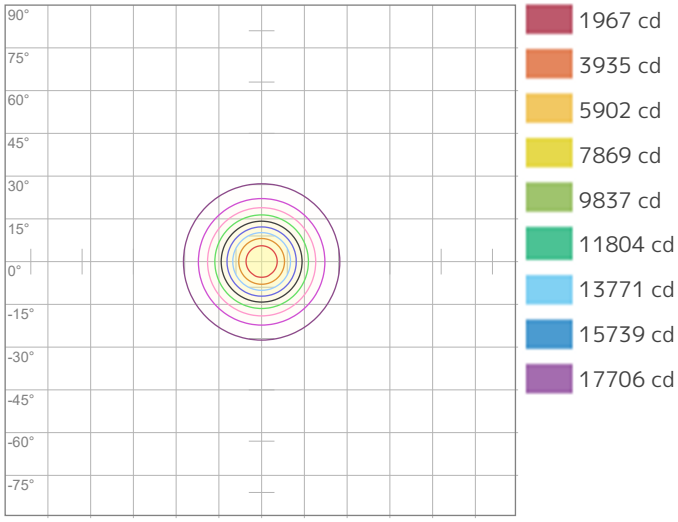
Measurement Date: 8/13/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.6° |
| Field Angle - 10% |
| 61.1° |
| Cutoff Angle - 2.5% |
| 84.4° |

## ISO Diagrams

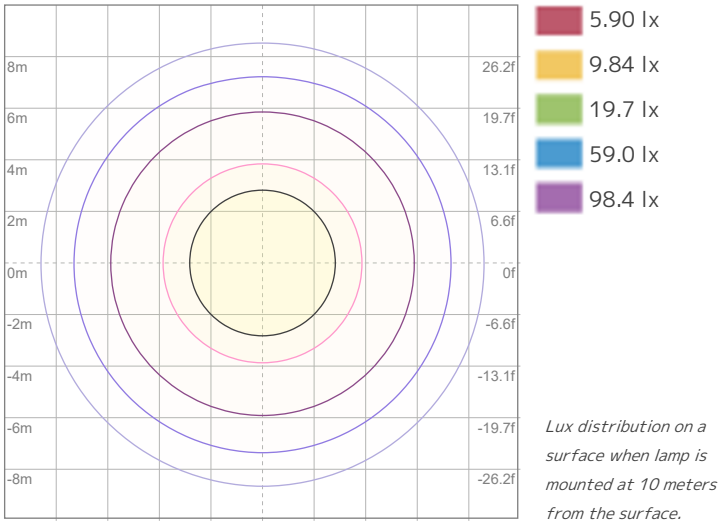



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 19673 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

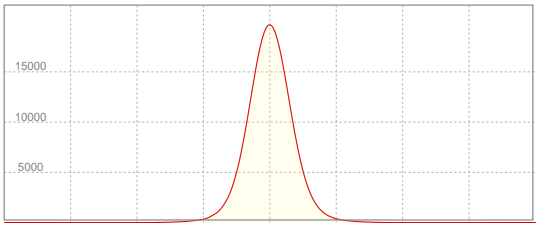
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 197 lx

## Linear Distribution




**Peak Candela**

**19678 cd**

**Calculate Center Beam Intensities**

**lux = 19678 / distance(m)$^2$**

**fc = 19678 / distance(ft)$^2$**



**Measurement Date: 8/13/2024**

## Key Measurements

### Output

Total Lumen Output: 7335 lm

Peak Intensity: 19001 cd

### Beam

Beam Angle (50%): 31.6°

Field Angle (10%): 61.2°

Cutoff Angle (2.5%): 84.7°

### Color

Color Temperature: 6897 K

CRI: 61.9

TLCI: 68

TM30 $R_F$: 75.2

TM30 $R_g$: 123.4

### Power Details

Efficacy: 36 Lumen/Watt

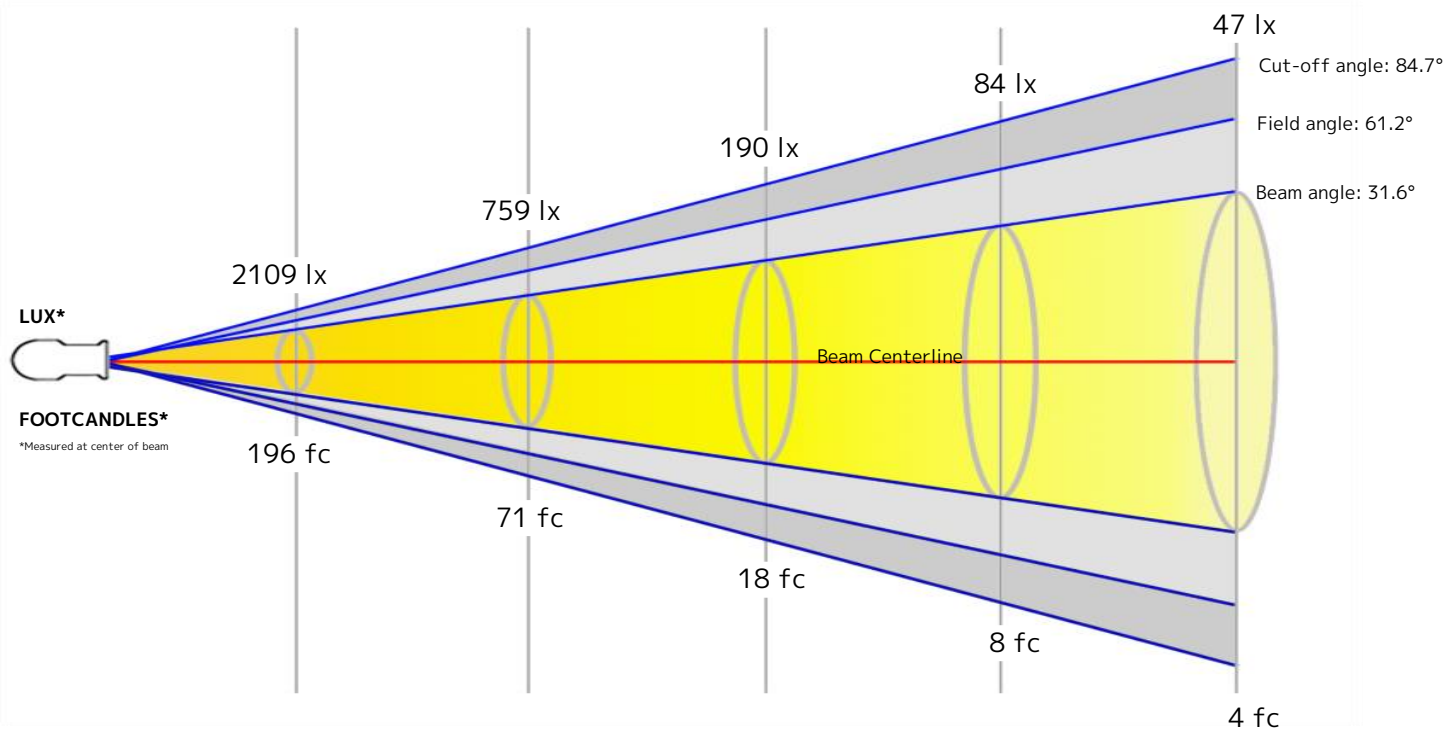
Power: 204.8 W

Supply Voltage: 118 V

Current: 1.73 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.7 m | 8.5 m | 11.3 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.5 ft | 9.3 ft | 18.6 ft | 27.8 ft | 37.1 ft |

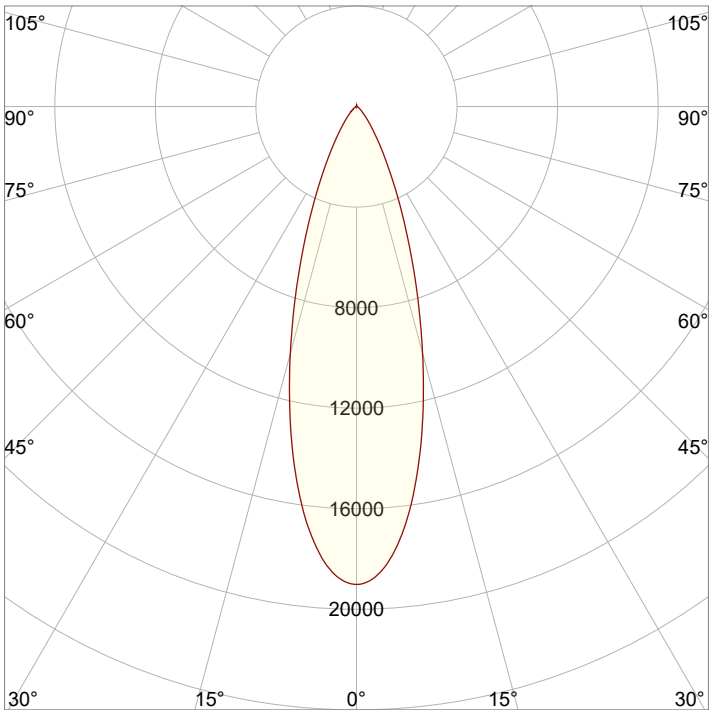
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 18985 | 4746 | 2109 | 1187 | 759 | 527 | 387 | 297 | 234 | 190 | 157 | 132 | 112 | 97 | 84 | 74 | 66 | 59 | 53 | 47 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1763.8 | 441 | 196 | 110.2 | 70.6 | 49 | 36 | 27.6 | 21.8 | 17.6 | 14.6 | 12.2 | 10.4 | 9 | 7.8 | 6.9 | 6.1 | 5.4 | 4.9 | 4.4 |



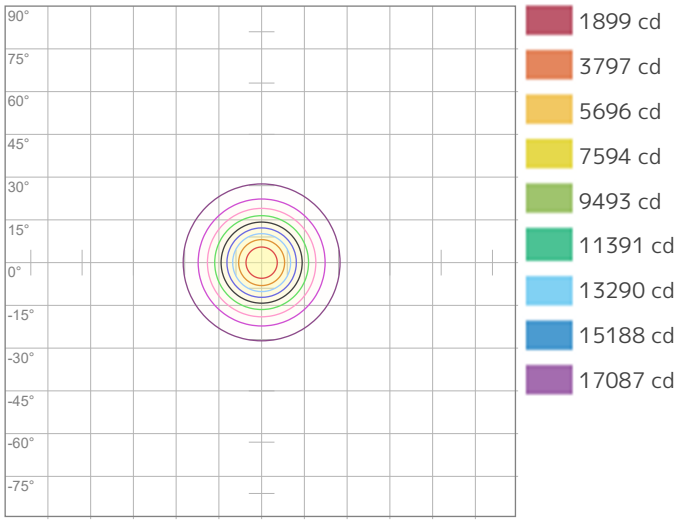
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.6° |
| Field Angle - 10% |
| 61.2° |
| Cutoff Angle - 2.5% |
| 84.7° |

## ISO Diagrams

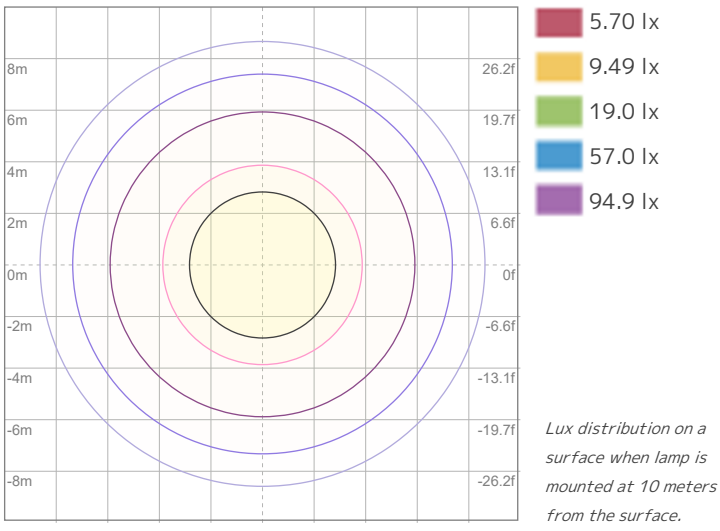



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 18985 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

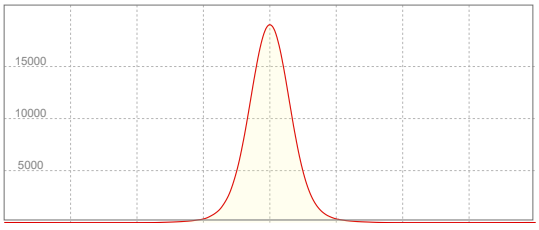
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 190 lx

## Linear Distribution




**Peak Candela**

**19001 cd**

**Calculate Center Beam Intensities**

lux = 19001 / distance(m)$^2$

fc = 19001 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 5335 lm

Peak Intensity: 14010 cd

### Beam

Beam Angle (50%): 31.5°

Field Angle (10%): 60.9°

Cutoff Angle (2.5%): 84°

### Color

Color Temperature: 2681 K

CRI: 90.7

TLCI: 82

TM30 $R_F$: 91.6

TM30 $R_g$: 106.2

### Power Details

Efficacy: 47 Lumen/Watt

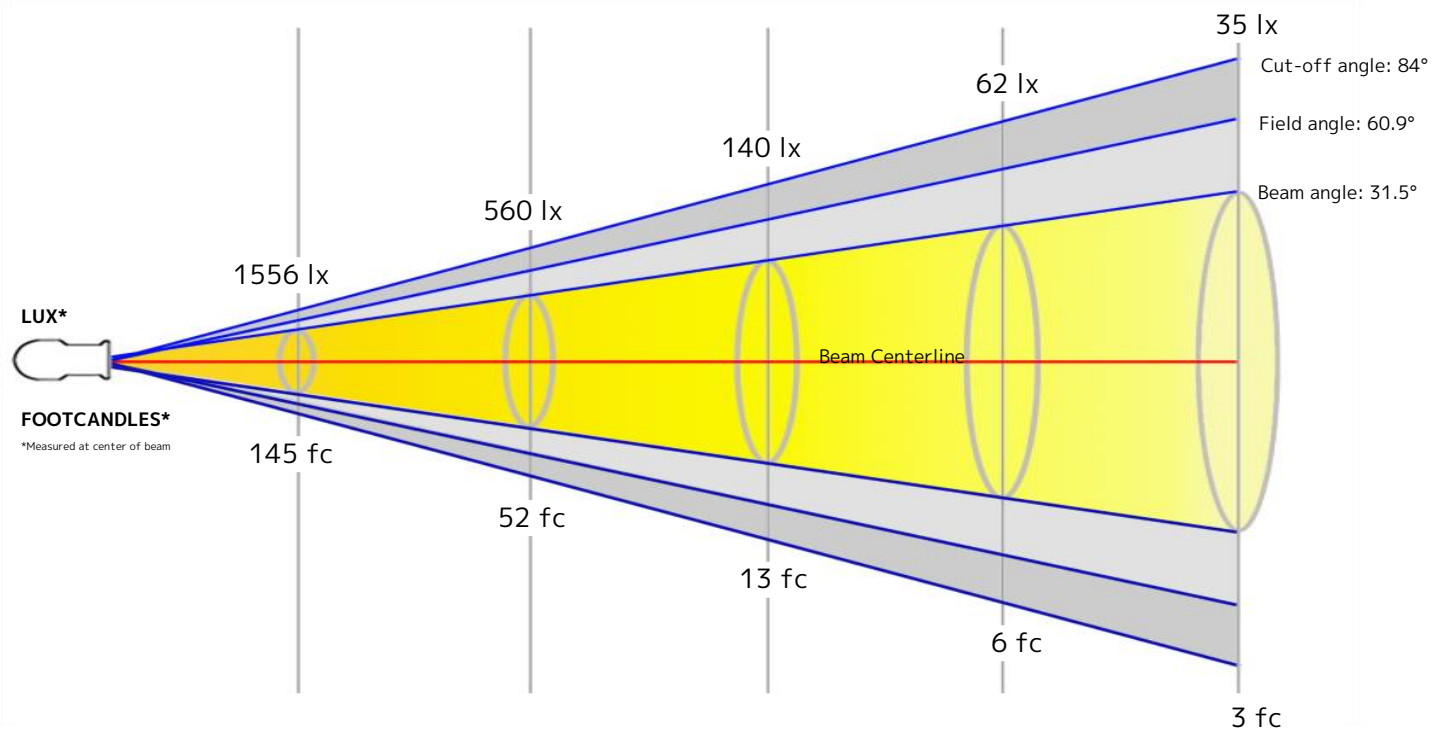
Power: 113.3 W

Supply Voltage: 117 V

Current: 0.971 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.6 m | 8.5 m | 11.3 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.5 ft | 9.3 ft | 18.5 ft | 27.8 ft | 37 ft |

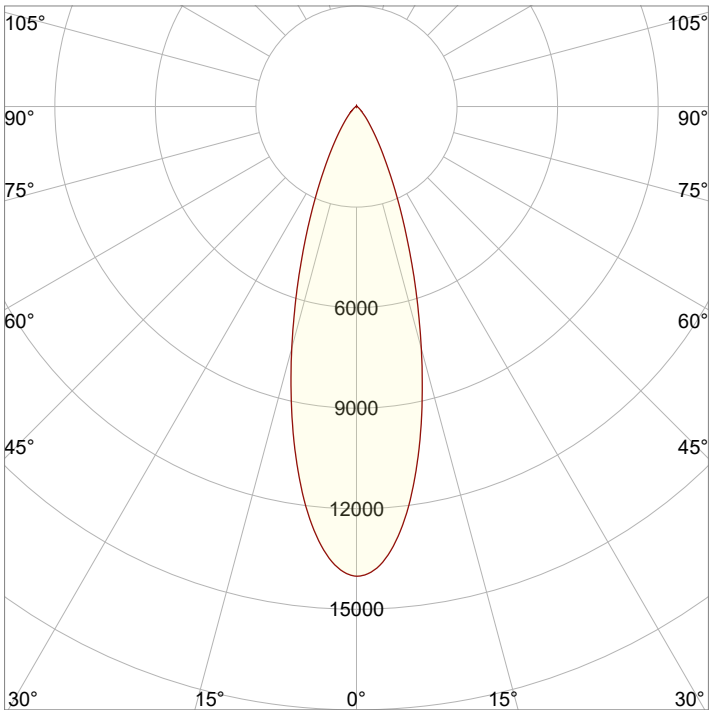
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 14005 | 3501 | 1556 | 875 | 560 | 389 | 286 | 219 | 173 | 140 | 116 | 97 | 83 | 71 | 62 | 55 | 48 | 43 | 39 | 35 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1301.1 | 325.3 | 144.6 | 81.3 | 52 | 36.1 | 26.6 | 20.3 | 16.1 | 13 | 10.8 | 9 | 7.7 | 6.6 | 5.8 | 5.1 | 4.5 | 4 | 3.6 | 3.3 |



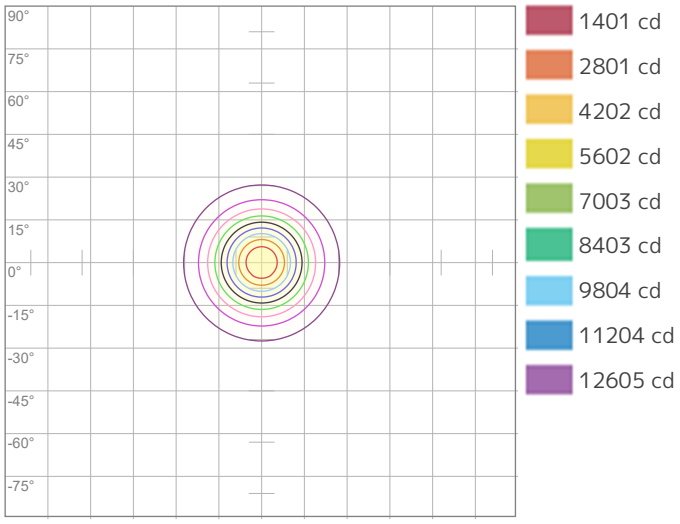
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.5° |
| Field Angle - 10% |
| 60.9° |
| Cutoff Angle - 2.5% |
| 84° |

## ISO Diagrams

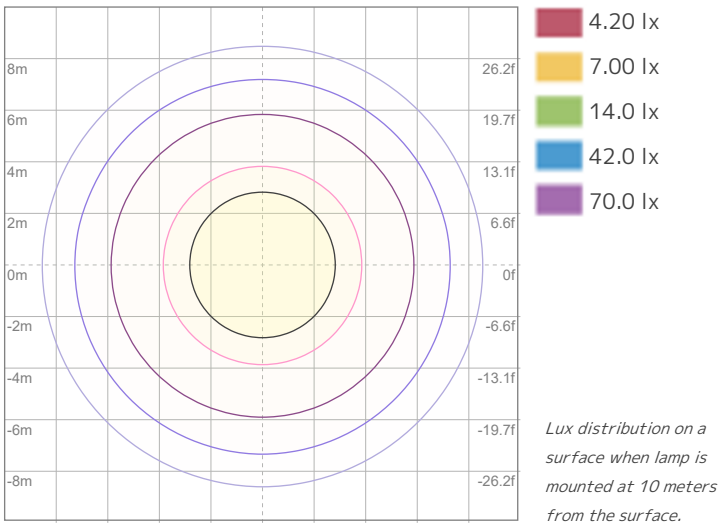



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 14005 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

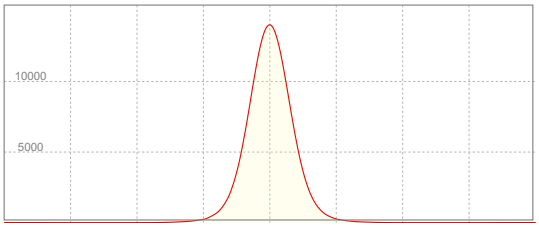
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 140 lx

## Linear Distribution




**Peak Candela**

**14010 cd**

**Calculate Center Beam Intensities**

lux = 14010 / distance(m)$^2$

fc = 14010 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 5589 lm

Peak Intensity: 14285 cd

### Beam

Beam Angle (50%): 31.7°

Field Angle (10%): 61.3°

Cutoff Angle (2.5%): 85.5°

### Color

Color Temperature: 3156 K

CRI: 92.0

TLCI: 83

TM30 $R_F$: 91.8

TM30 $R_g$: 106.9

### Power Details

Efficacy: 49 Lumen/Watt

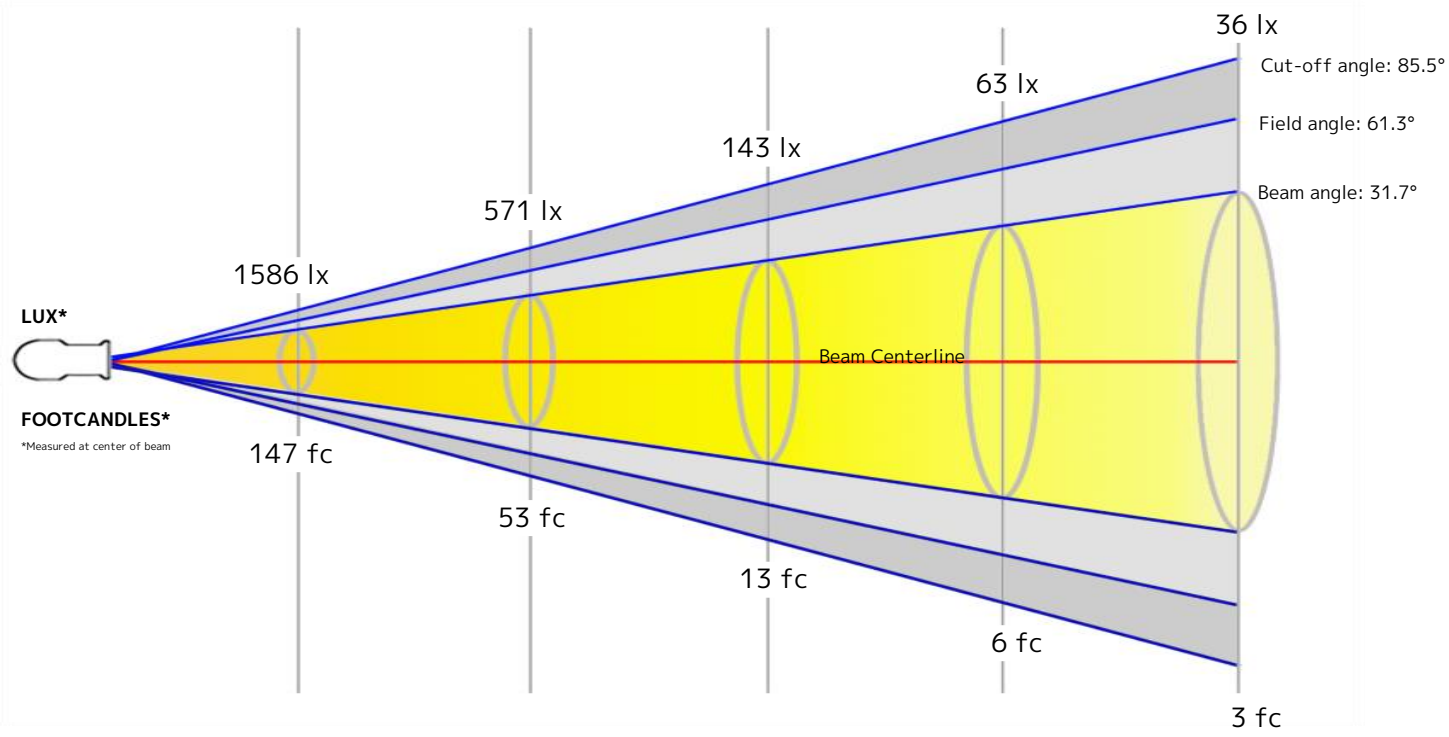
Power: 114.1 W

Supply Voltage: 117 V

Current: 0.975 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.7 m | 8.5 m | 11.3 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.6 ft | 9.3 ft | 18.6 ft | 27.9 ft | 37.2 ft |

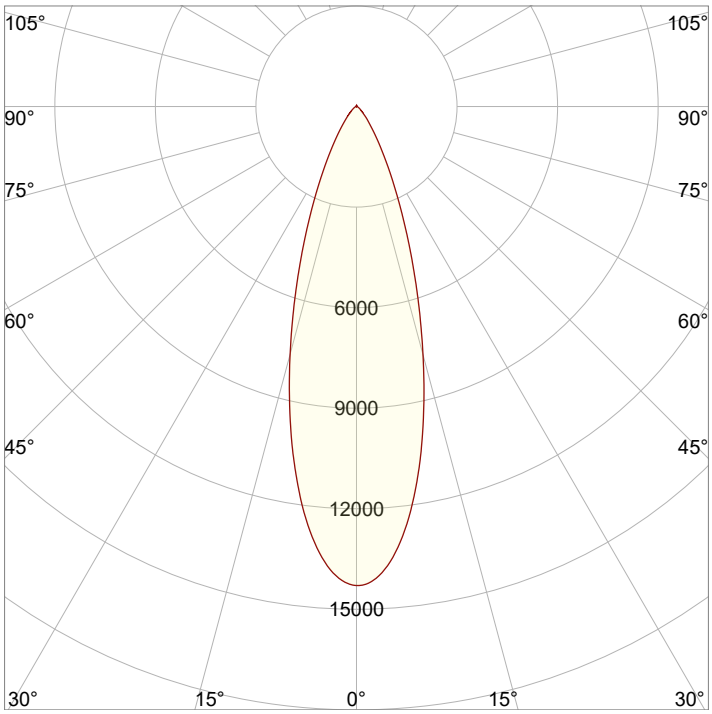
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 14278 | 3569 | 1586 | 892 | 571 | 397 | 291 | 223 | 176 | 143 | 118 | 99 | 84 | 73 | 63 | 56 | 49 | 44 | 40 | 36 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1326.4 | 331.6 | 147.4 | 82.9 | 53.1 | 36.8 | 27.1 | 20.7 | 16.4 | 13.3 | 11 | 9.2 | 7.8 | 6.8 | 5.9 | 5.2 | 4.6 | 4.1 | 3.7 | 3.3 |



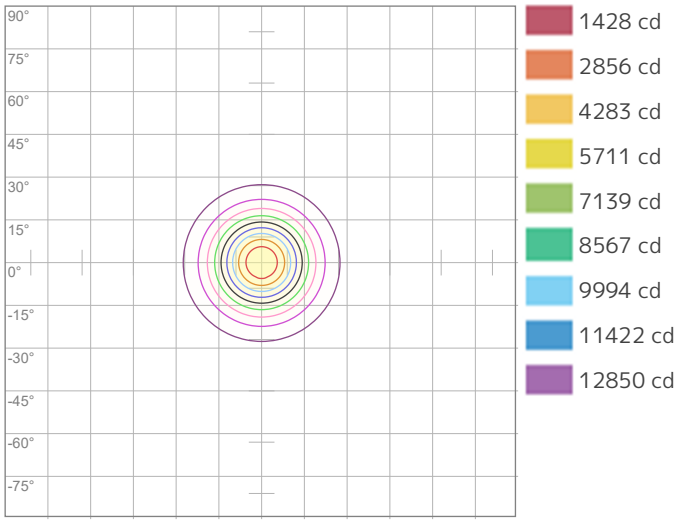
**Measurement Date: 8/8/2024**

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.7° |
| Field Angle - 10% |
| 61.3° |
| Cutoff Angle - 2.5% |
| 85.5° |

## ISO Diagrams

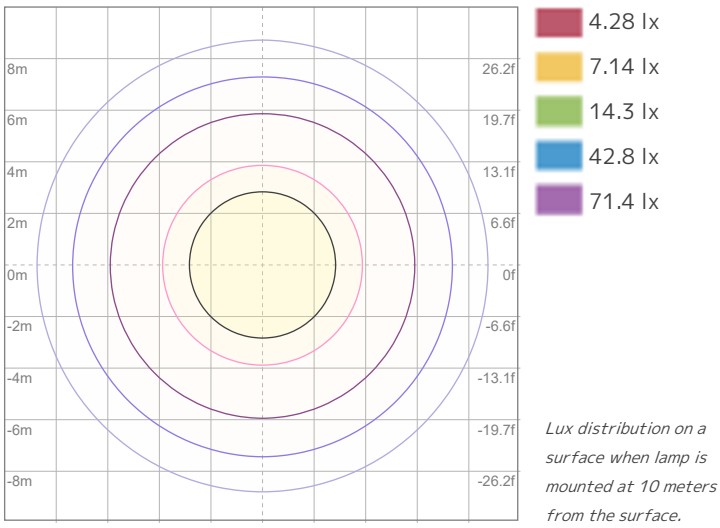



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 14278 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

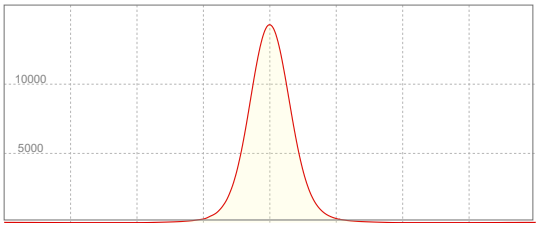
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 143 lx

## Linear Distribution




**Peak Candela**

**14285 cd**

**Calculate Center Beam Intensities**

lux = 14285 / distance(m)$^2$

fc = 14285 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

# Six+ Bar L (Frost, 4500K)

## Key Measurements

### Output

Total Lumen Output: 6065 lm

Peak Intensity: 15326 cd

### Beam

Beam Angle (50%): 31.8°

Field Angle (10%): 61.5°

Cutoff Angle (2.5%): 86°

### Color

Color Temperature: 4465 K

CRI: 91.8

TLCI: 81

TM30 $R_F$: 90.3

TM30 $R_g$: 107.0

### Power Details

Efficacy: 49 Lumen/Watt

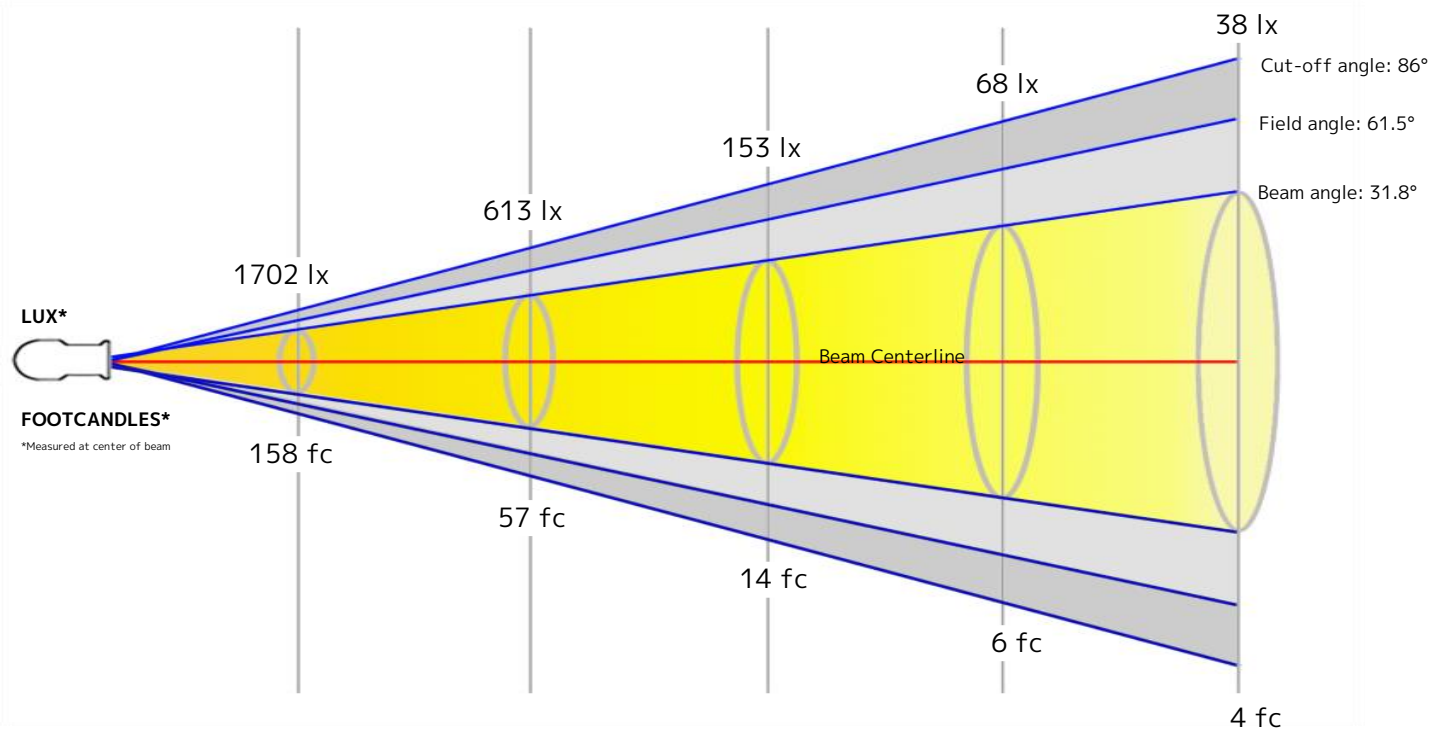
Power: 124.1 W

Supply Voltage: 119 V

Current: 1.04 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.9 m | 5.7 m | 8.6 m | 11.4 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.6 ft | 9.3 ft | 18.7 ft | 28 ft | 37.4 ft |

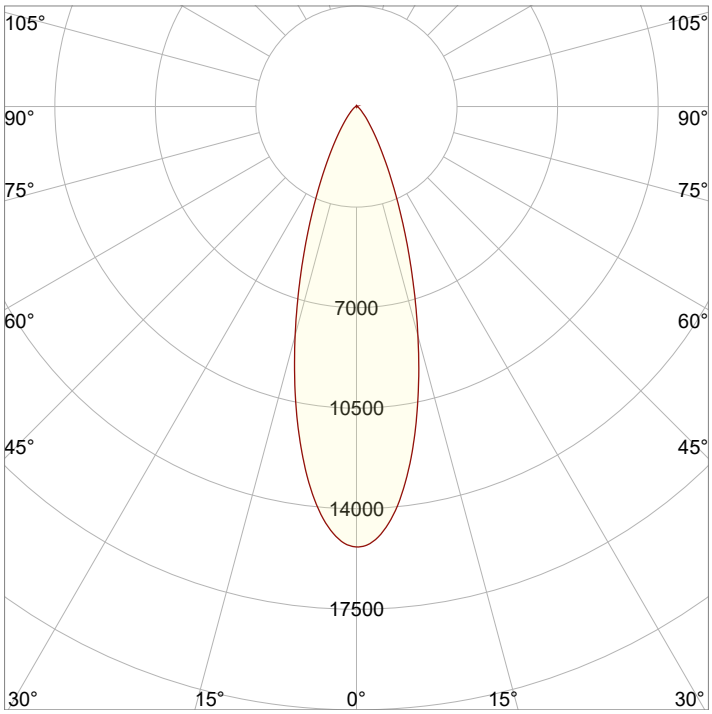
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 15321 | 3830 | 1702 | 958 | 613 | 426 | 313 | 239 | 189 | 153 | 127 | 106 | 91 | 78 | 68 | 60 | 53 | 47 | 42 | 38 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1423.4 | 355.8 | 158.2 | 89 | 56.9 | 39.5 | 29 | 22.2 | 17.6 | 14.2 | 11.8 | 9.9 | 8.4 | 7.3 | 6.3 | 5.6 | 4.9 | 4.4 | 3.9 | 3.6 |



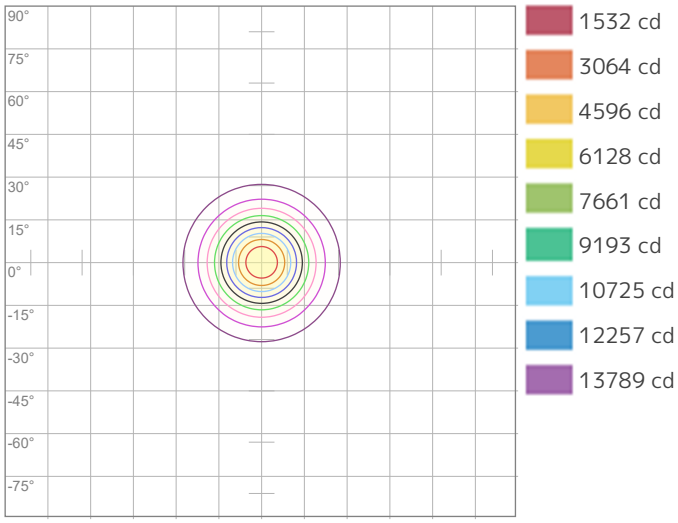
**Measurement Date: 8/8/2024**

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.8° |
| Field Angle - 10% |
| 61.5° |
| Cutoff Angle - 2.5% |
| 86° |

## ISO Diagrams

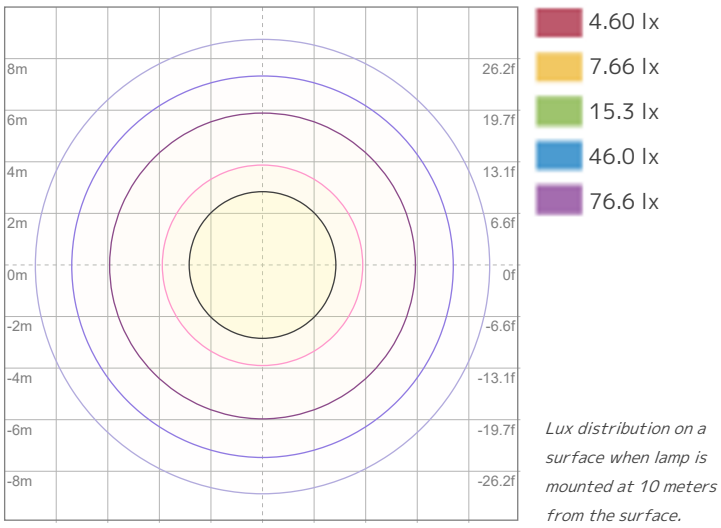



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 15321 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

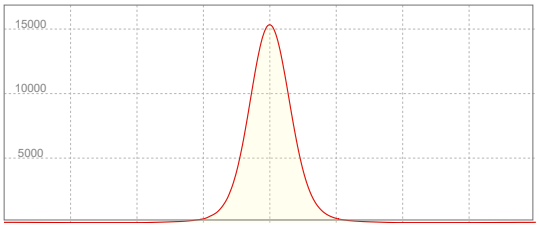
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 153 lx

## Linear Distribution




**Peak Candela**

**15326 cd**

**Calculate Center Beam Intensities**

**lux = 15326 / distance(m)$^2$**

**fc = 15326 / distance(ft)$^2$**



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 6534 lm

Peak Intensity: 16581 cd

### Beam

Beam Angle (50%): 31.8°

Field Angle (10%): 61.5°

Cutoff Angle (2.5%): 85.7°

### Color

Color Temperature: 5660 K

CRI: 89.6

TLCI: 82

TM30 $R_F$: 88.7

TM30 $R_g$: 107.7

### Power Details

Efficacy: 47 Lumen/Watt

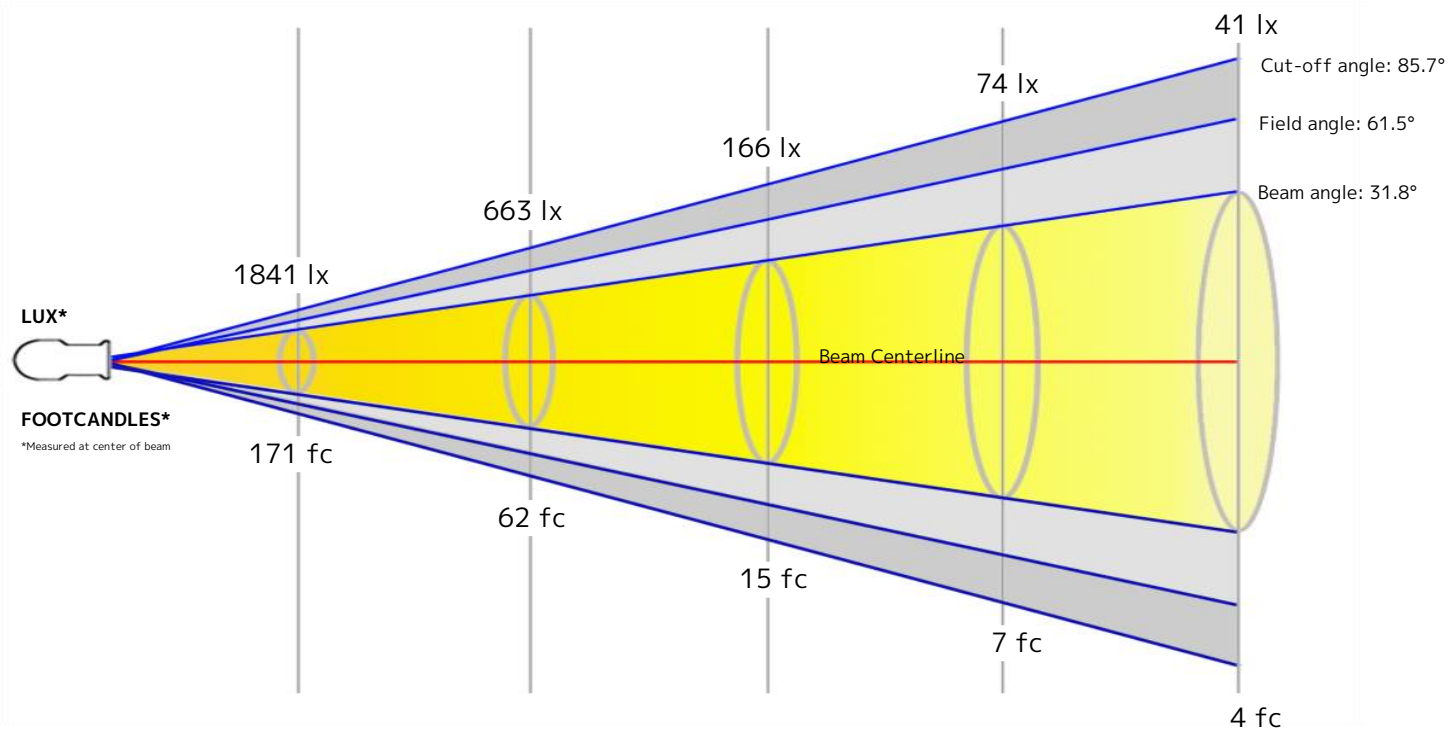
Power: 138.7 W

Supply Voltage: 119 V

Current: 1.17 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.7 m | 8.5 m | 11.4 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.6 ft | 9.3 ft | 18.7 ft | 28 ft | 37.4 ft |

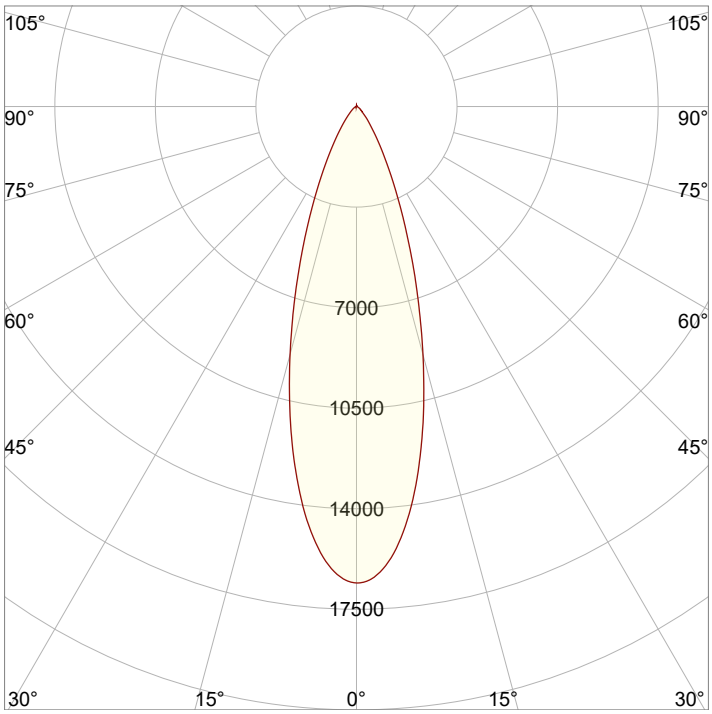
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 16566 | 4142 | 1841 | 1035 | 663 | 460 | 338 | 259 | 205 | 166 | 137 | 115 | 98 | 85 | 74 | 65 | 57 | 51 | 46 | 41 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1539.1 | 384.8 | 171 | 96.2 | 61.6 | 42.8 | 31.4 | 24 | 19 | 15.4 | 12.7 | 10.7 | 9.1 | 7.9 | 6.8 | 6 | 5.3 | 4.8 | 4.3 | 3.8 |



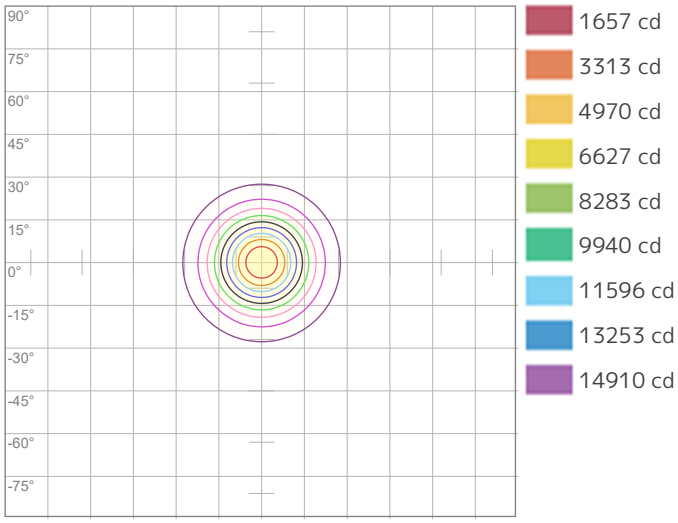
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.8° |
| Field Angle - 10% |
| 61.5° |
| Cutoff Angle - 2.5% |
| 85.7° |

## ISO Diagrams

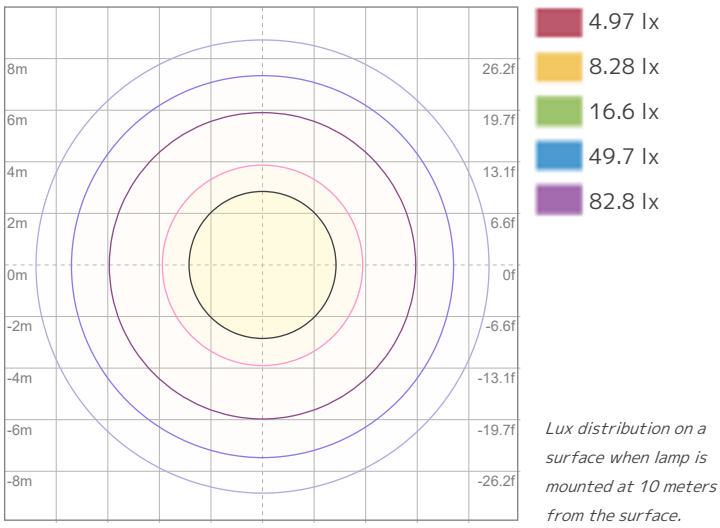



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 16566 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

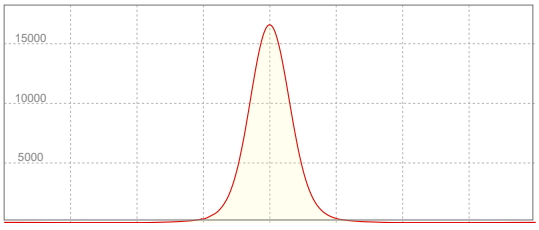
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 166 lx

## Linear Distribution




**Peak Candela**

**16581 cd**

**Calculate Center Beam Intensities**

lux = 16581 / distance(m)$^2$

fc = 16581 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

# Six+ Bar L (Frost, 6000K)

## Key Measurements

### Output

Total Lumen Output: 6768 lm

Peak Intensity: 16984 cd

### Beam

Beam Angle (50%): 31.9°

Field Angle (10%): 61.7°

Cutoff Angle (2.5%): 86.3°

### Color

Color Temperature: 5965 K

CRI: 89.4

TLCI: 82

TM30 $R_F$: 88.4

TM30 $R_g$: 107.7

### Power Details

Efficacy: 48 Lumen/Watt

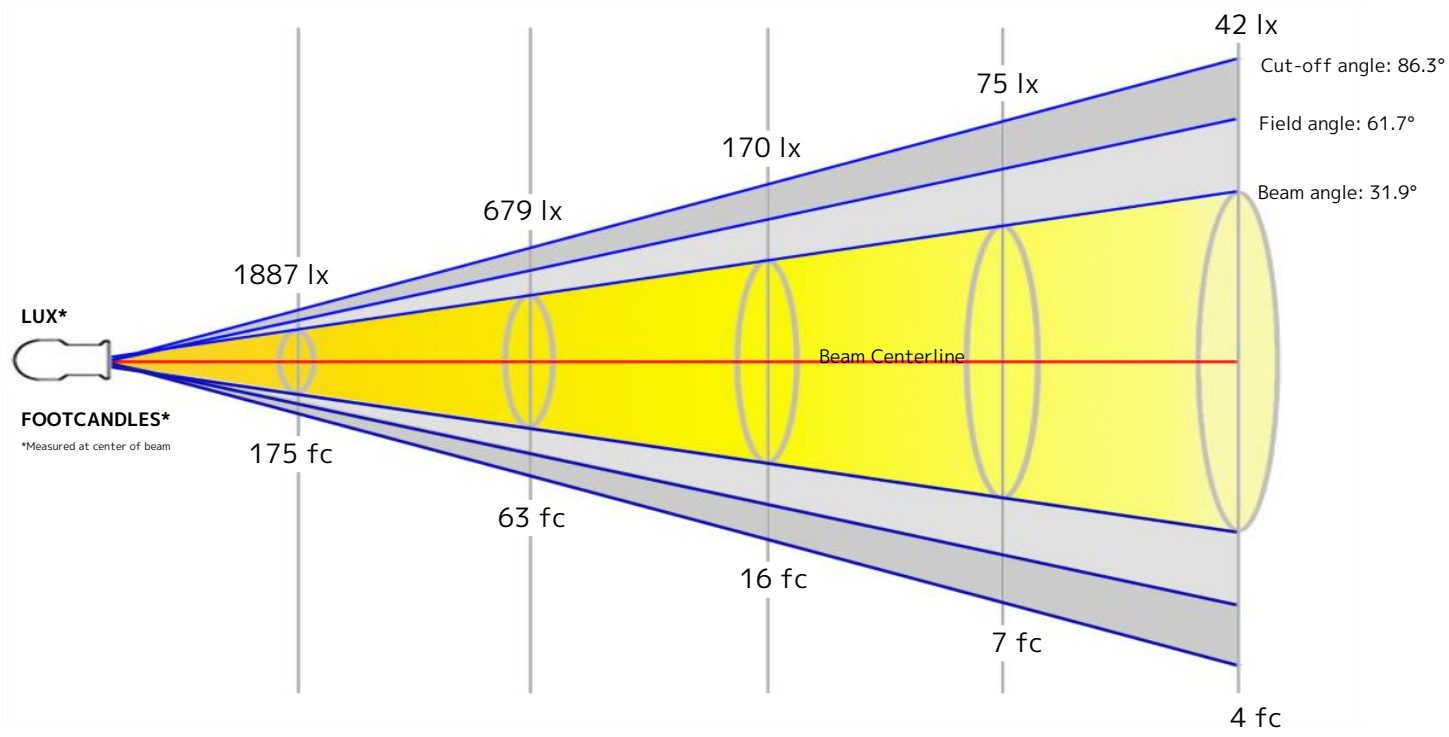
Power: 140.5 W

Supply Voltage: 120 V

Current: 1.18 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.9 m | 5.7 m | 8.6 m | 11.4 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.6 ft | 9.4 ft | 18.7 ft | 28.1 ft | 37.5 ft |

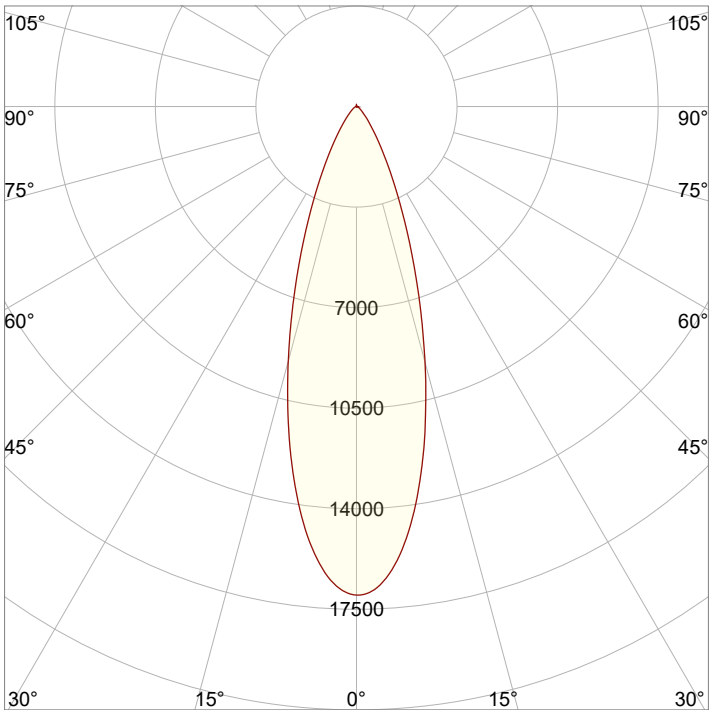
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 16980 | 4245 | 1887 | 1061 | 679 | 472 | 347 | 265 | 210 | 170 | 140 | 118 | 100 | 87 | 75 | 66 | 59 | 52 | 47 | 42 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1577.5 | 394.4 | 175.3 | 98.6 | 63.1 | 43.8 | 32.2 | 24.6 | 19.5 | 15.8 | 13 | 11 | 9.3 | 8 | 7 | 6.2 | 5.5 | 4.9 | 4.4 | 3.9 |



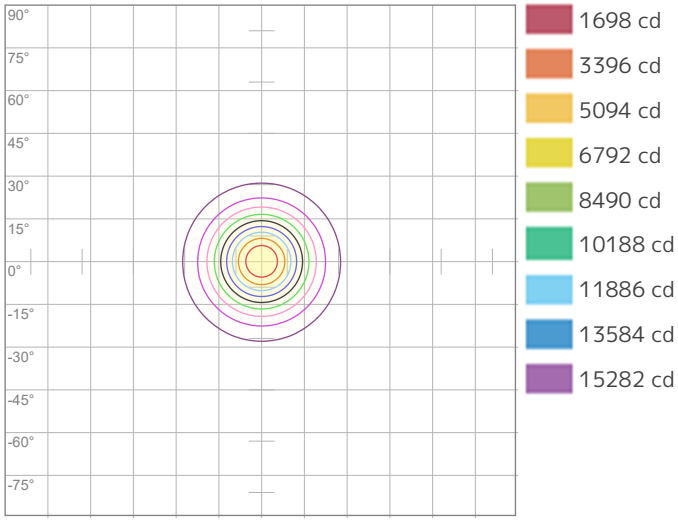
**Measurement Date: 8/8/2024**

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.9° |
| Field Angle - 10% |
| 61.7° |
| Cutoff Angle - 2.5% |
| 86.3° |

## ISO Diagrams

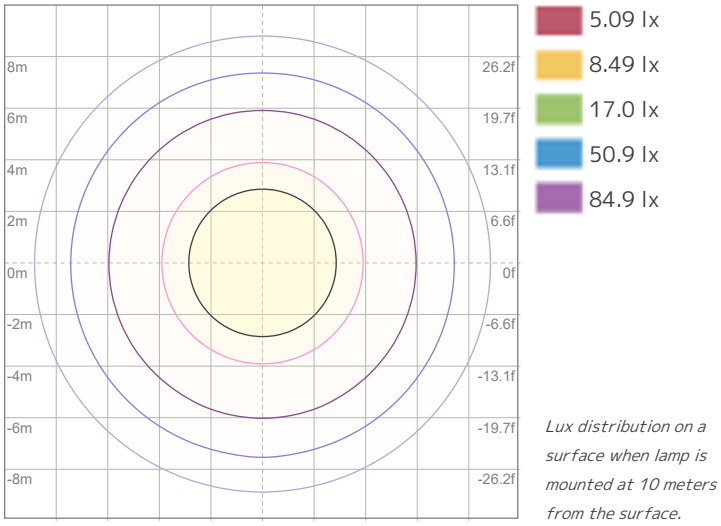



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 16980 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

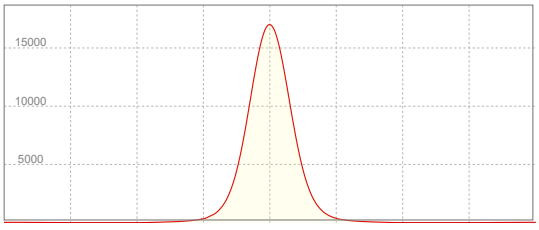
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 170 lx

## Linear Distribution




**Peak Candela**

**16984 cd**

**Calculate Center Beam Intensities**

lux = 16984 / distance(m)$^2$

fc = 16984 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

## Key Measurements

### Output

Total Lumen Output: 6242 lm

Peak Intensity: 15957 cd

### Beam

Beam Angle (50%): 31.7°

Field Angle (10%): 61.4°

Cutoff Angle (2.5%): 85.3°

### Color

Color Temperature: 6567 K

CRI: 89.7

TLCI: 86

TM30 $R_F$: 88.0

TM30 $R_g$: 106.4

### Power Details

Efficacy: 46 Lumen/Watt

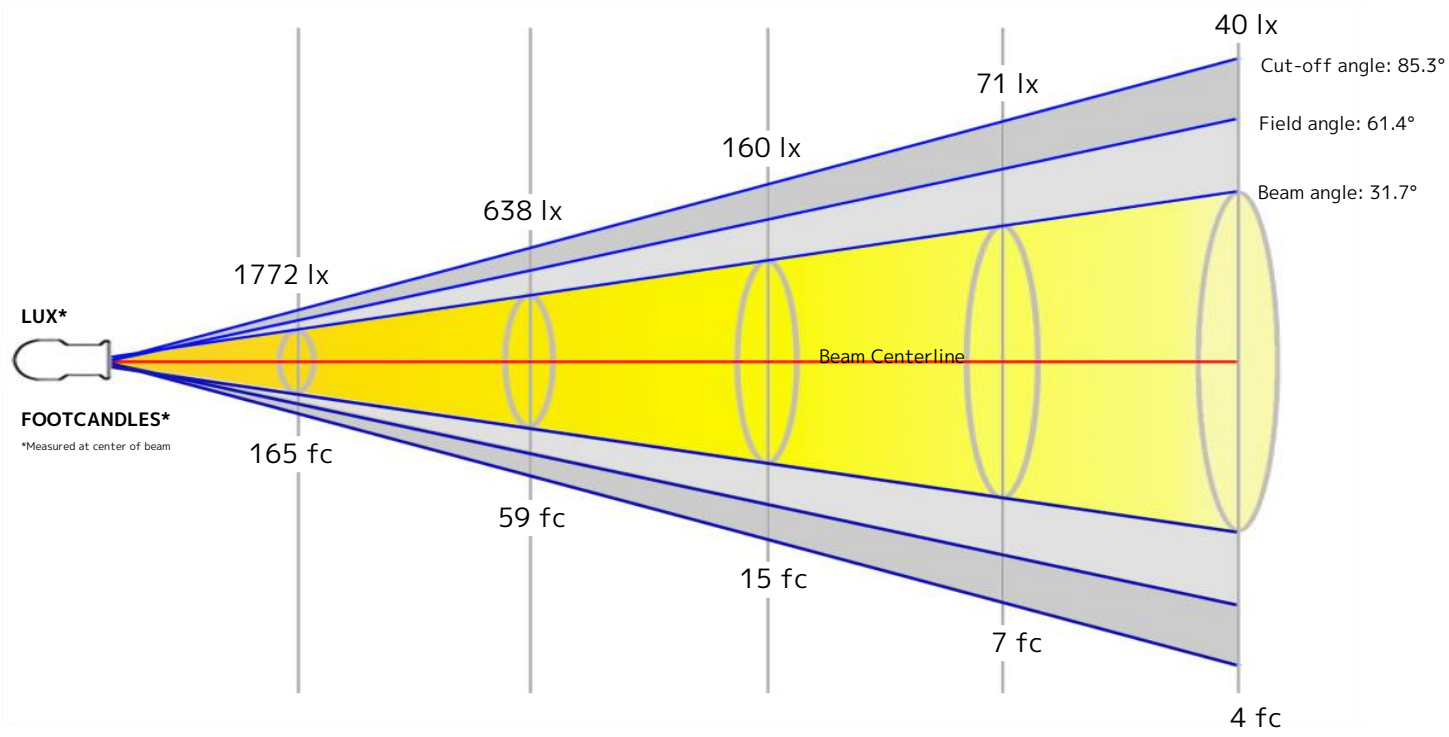
Power: 137.1 W

Supply Voltage: 120 V

Current: 1.15 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.7 m | 8.5 m | 11.4 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.6 ft | 9.3 ft | 18.6 ft | 27.9 ft | 37.3 ft |

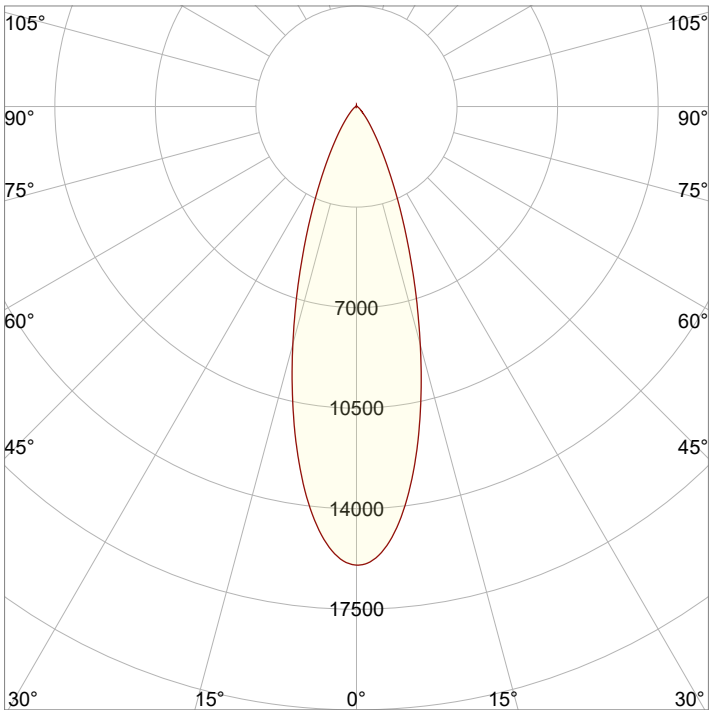
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 15951 | 3988 | 1772 | 997 | 638 | 443 | 326 | 249 | 197 | 160 | 132 | 111 | 94 | 81 | 71 | 62 | 55 | 49 | 44 | 40 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1481.9 | 370.5 | 164.7 | 92.6 | 59.3 | 41.2 | 30.2 | 23.2 | 18.3 | 14.8 | 12.2 | 10.3 | 8.8 | 7.6 | 6.6 | 5.8 | 5.1 | 4.6 | 4.1 | 3.7 |



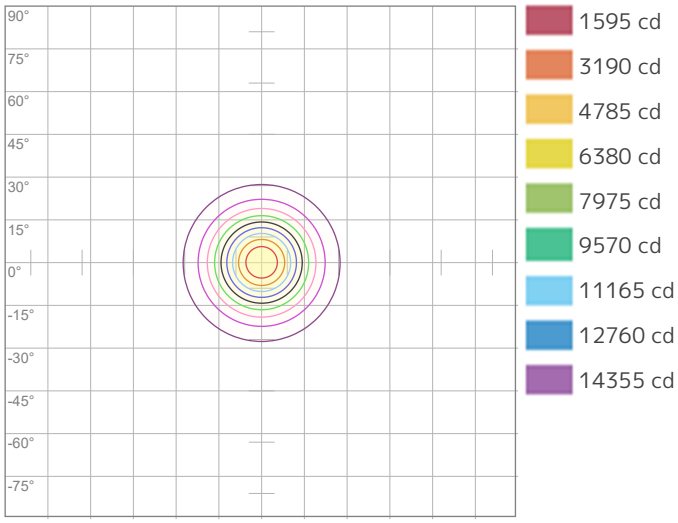
Measurement Date: 8/8/2024

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.7° |
| Field Angle - 10% |
| 61.4° |
| Cutoff Angle - 2.5% |
| 85.3° |

## ISO Diagrams

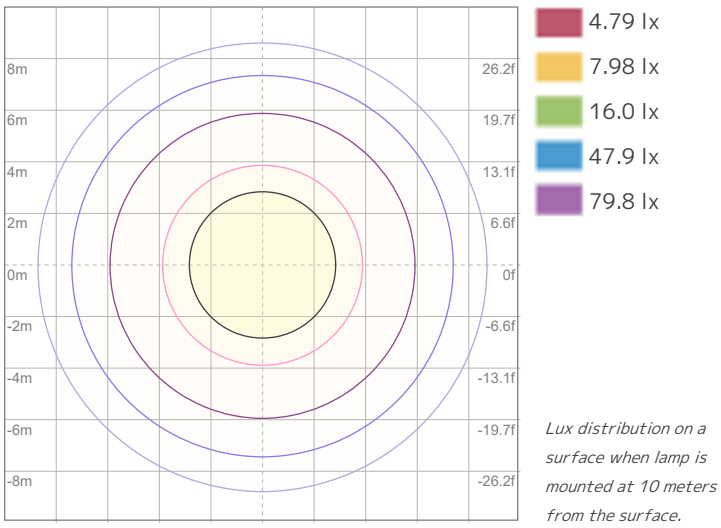



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 15951 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

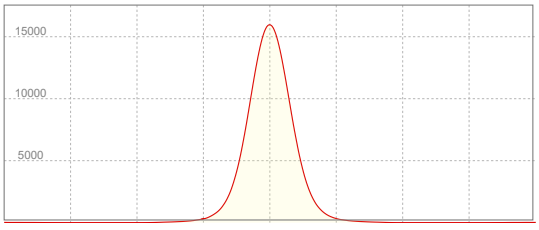
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 160 lx

## Linear Distribution




**Peak Candela**

**15957 cd**

**Calculate Center Beam Intensities**

lux = 15957 / distance(m)$^2$

fc = 15957 / distance(ft)$^2$



**Measurement Date: 8/8/2024**

# Six+ Bar L (Frost, 8500K)

## Key Measurements

### Output

Total Lumen Output: 6628 lm

Peak Intensity: 16659 cd

### Beam

Beam Angle (50%): 31.8°

Field Angle (10%): 61.6°

Cutoff Angle (2.5%): 86.3°

### Color

Color Temperature: 8464 K

CRI: 89.0

TLCI: 87

TM30 $R_F$: 87.0

TM30 $R_g$: 105.4

### Power Details

Efficacy: 45 Lumen/Watt

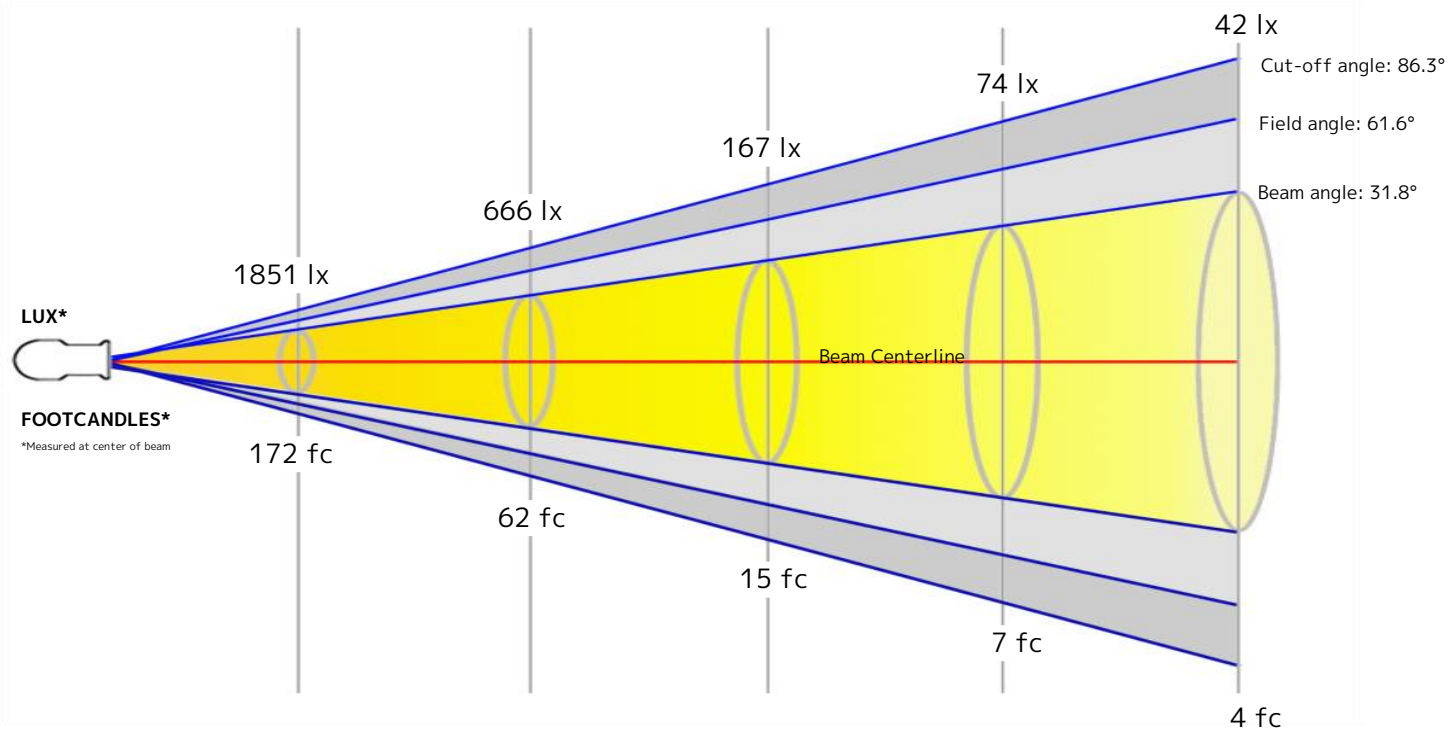
Power: 148 W

Supply Voltage: 119 V

Current: 1.24 A

## Beam Details

| Distance | 3 m | 5 m | 10 m | 15 m | 20 m |
|---|---|---|---|---|---|
| Beam Width | 1.7 m | 2.8 m | 5.7 m | 8.5 m | 11.4 m |




| Distance | 9.8 ft | 16.4 ft | 32.8 ft | 49.2 ft | 65.6 ft |
|---|---|---|---|---|---|
| Beam Width | 5.6 ft | 9.3 ft | 18.7 ft | 28 ft | 37.3 ft |

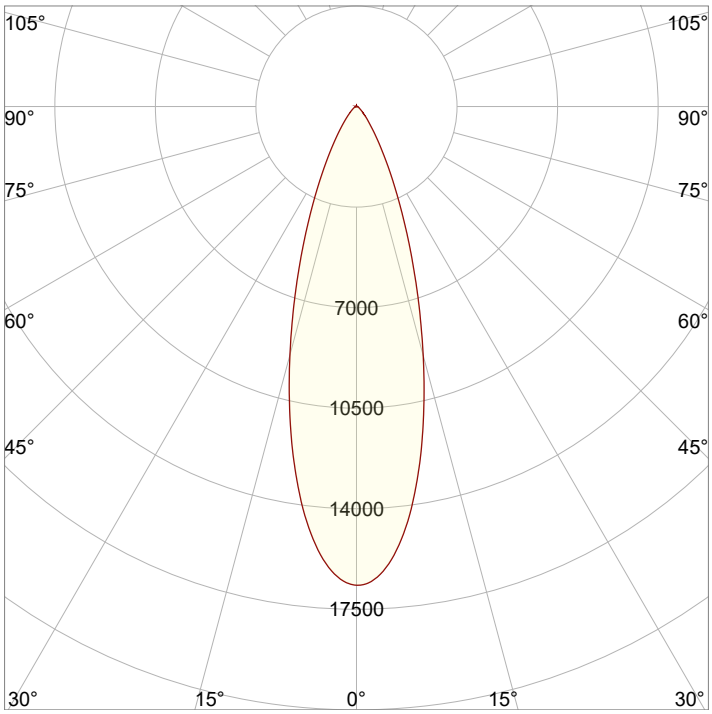
## Beam Intensities from 1-20m

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LX | 16655 | 4164 | 1851 | 1041 | 666 | 463 | 340 | 260 | 206 | 167 | 138 | 116 | 99 | 85 | 74 | 65 | 58 | 51 | 46 | 42 |
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| FC | 1547.3 | 386.8 | 171.9 | 96.7 | 61.9 | 43 | 31.6 | 24.2 | 19.1 | 15.5 | 12.8 | 10.7 | 9.2 | 7.9 | 6.9 | 6 | 5.4 | 4.8 | 4.3 | 3.9 |



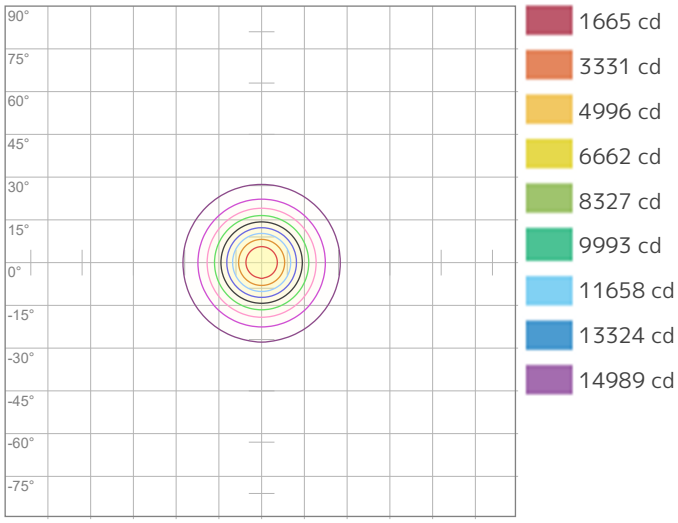
**Measurement Date: 8/8/2024**

## Angular Distribution




| Beam Angle - 50% |
|---|
| 31.8° |
| Field Angle - 10% |
| 61.6° |
| Cutoff Angle - 2.5% |
| 86.3° |

## ISO Diagrams

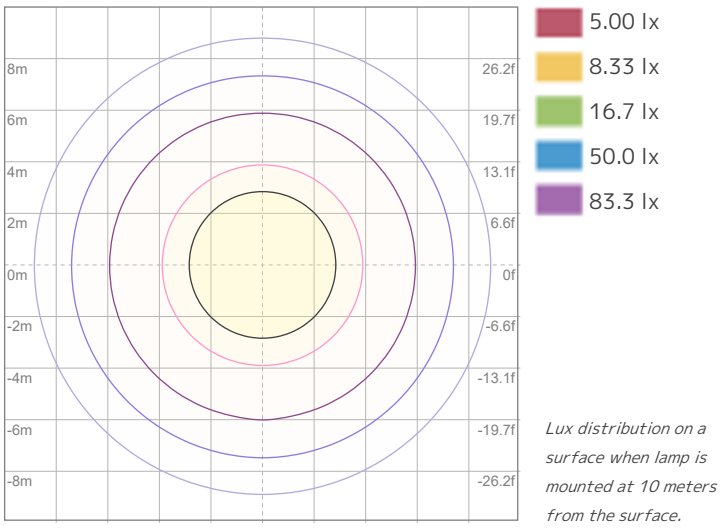



**ISO Candela Diagram**

Conditions:

Number of c-planes: 2

Candela at center: 16655 cd




*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

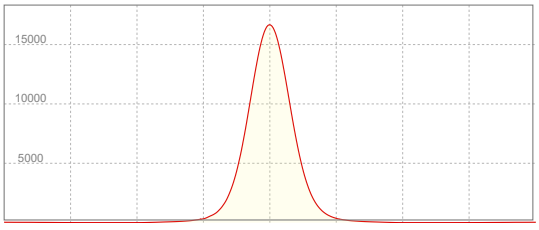
**ISO LUX Diagram**

Conditions:

Number of c-planes: 2

LUX at center: 167 lx

## Linear Distribution




**Peak Candela**

**16659 cd**

**Calculate Center Beam Intensities**

lux = 16659 / distance(m)$^2$

fc = 16659 / distance(ft)$^2$



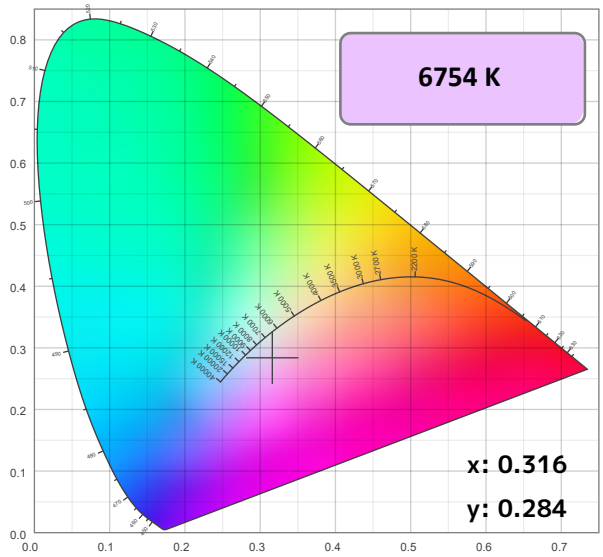
**Measurement Date: 8/8/2024**

# Color Temperature: 6754K

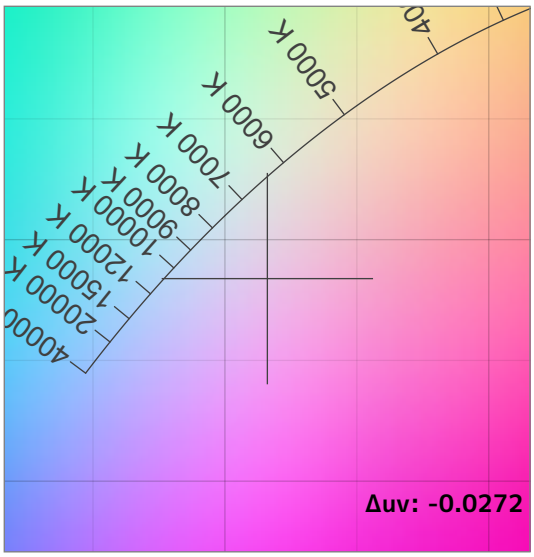
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 65.6 | -62.9 | 77.6 | 121.4 | 72 | 85.8 | 0.316 | 0.284 | -0.0272 | 13 | 42 |

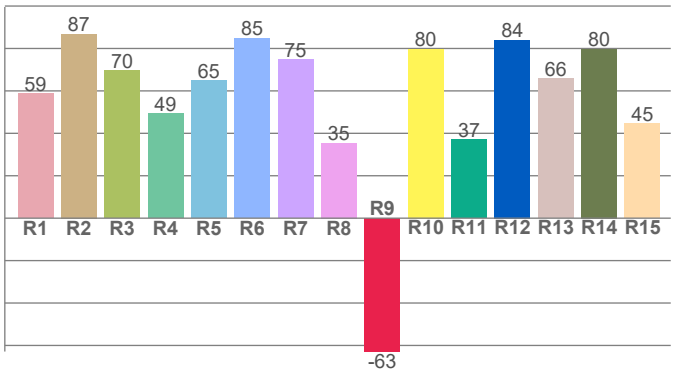
## CIE 1931




## CIE 1931 ZOOMED

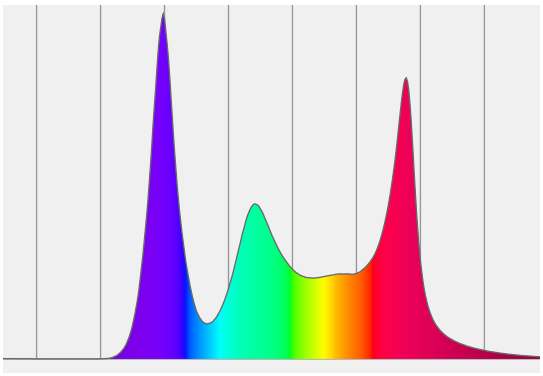



## CRI: 65.6 (R1-R8)




## Spectral Power Distribution (SPD)

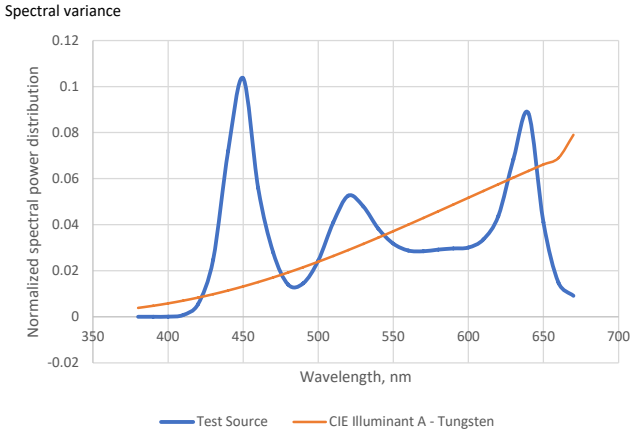
Dominant Wavelength 360 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 13

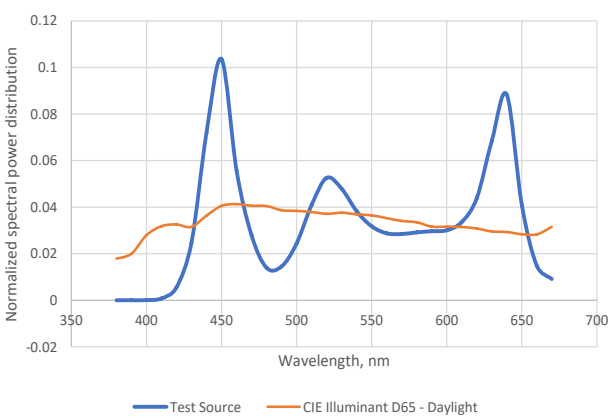
Spectral variance



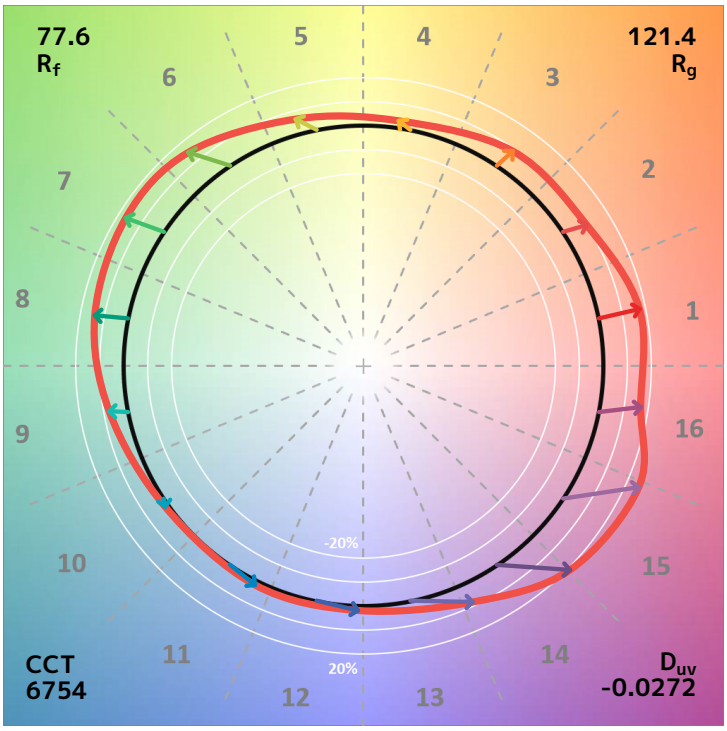

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 42

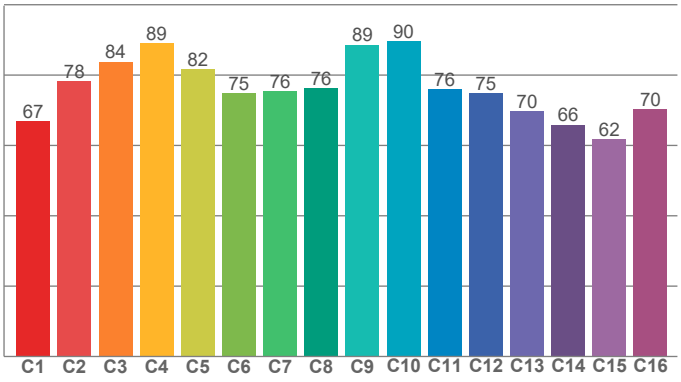
Spectral variance



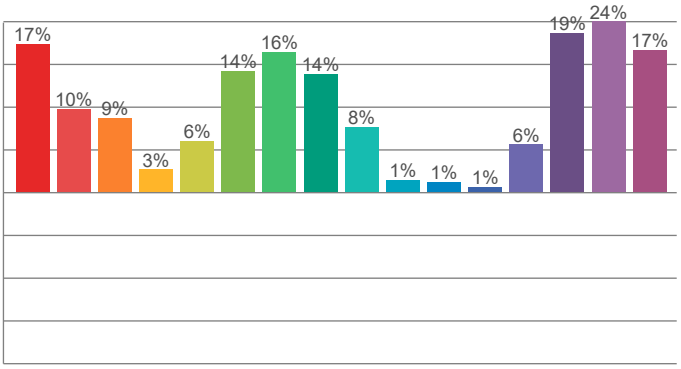

**Measurement Date: 8/7/2024**



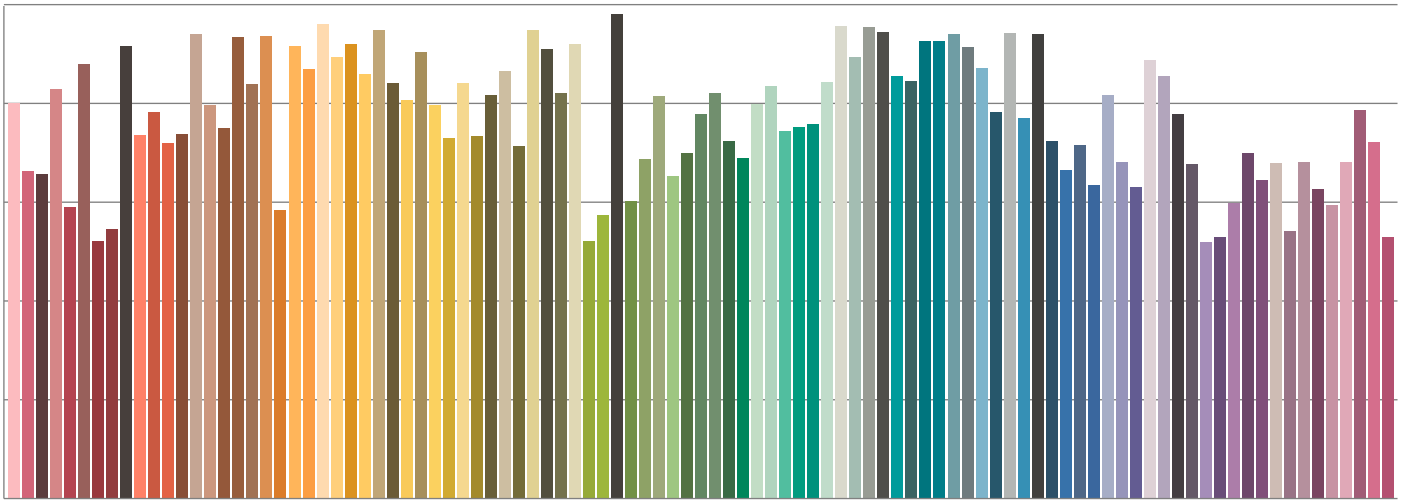

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



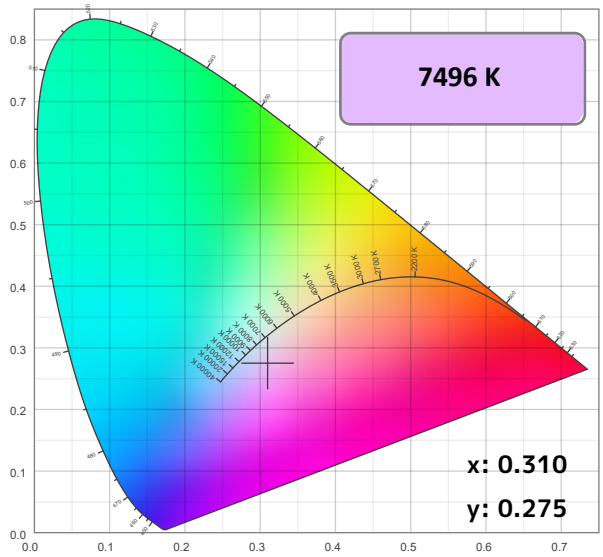
Measurement Date: 8/7/2024

# Color Temperature: 7496K

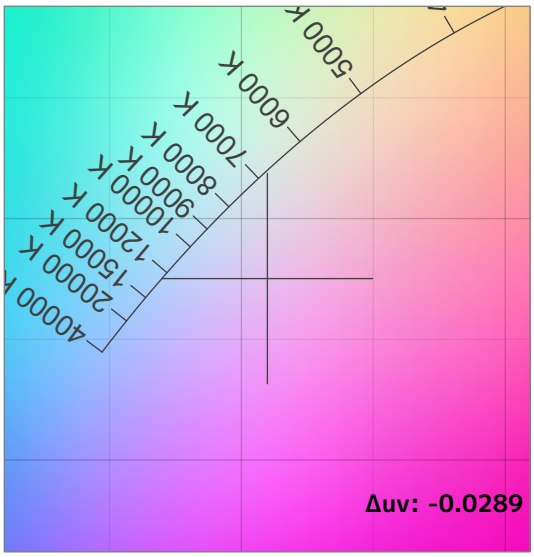
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 64.4 | -68.9 | 76.1 | 121.6 | 72 | 85.2 | 0.310 | 0.275 | -0.0289 | 12 | 52 |

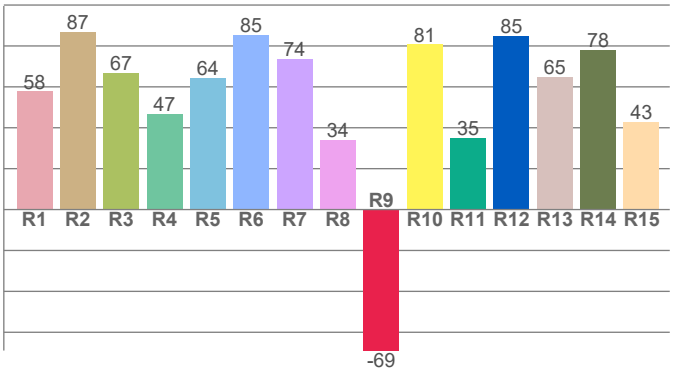
## CIE 1931




## CIE 1931 ZOOMED

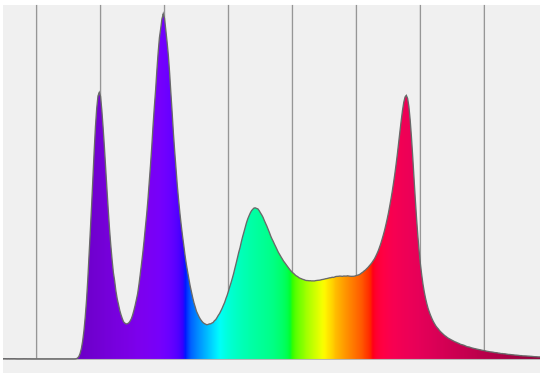



## CRI: 64.4 (R1-R8)




## Spectral Power Distribution (SPD)

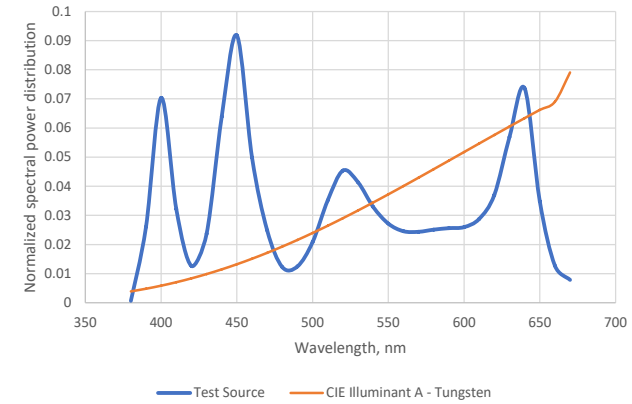
Dominant Wavelength 360 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 12

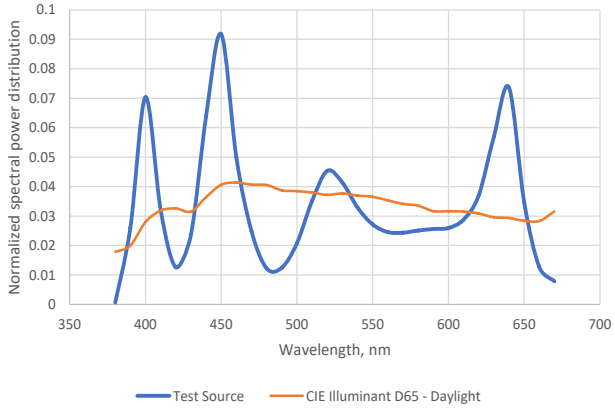
Spectral variance




## SSI Spectral Variance Graph- Daylight

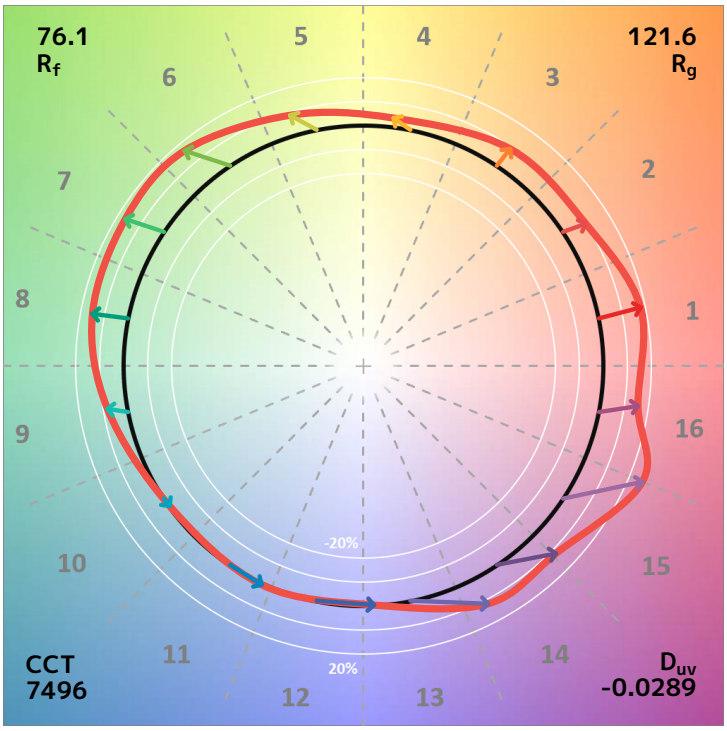
### SSI [CIE D65] 52

Spectral variance

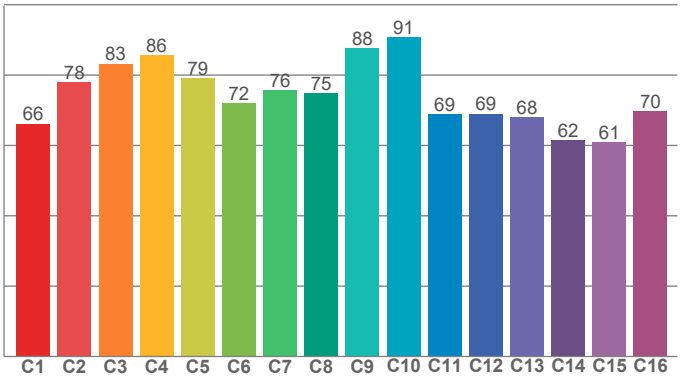



**SSI [CIE D65] - Daylight** **52**

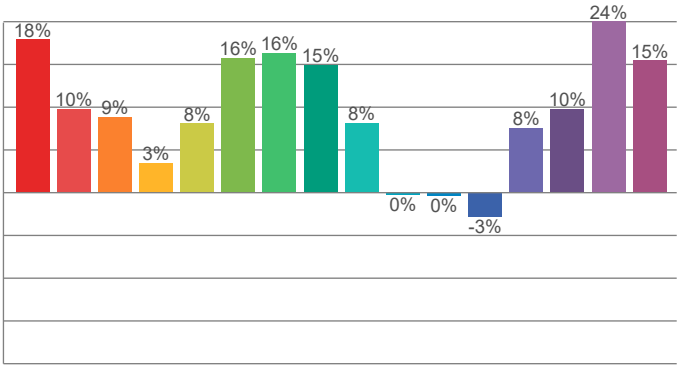
**Measurement Date: 8/7/2024**



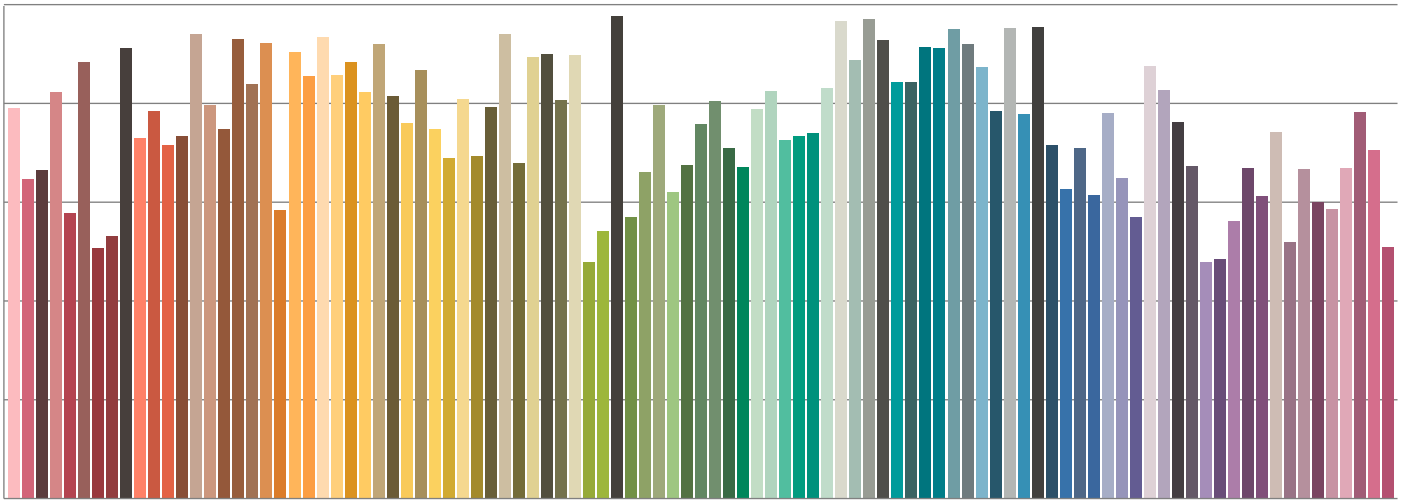

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



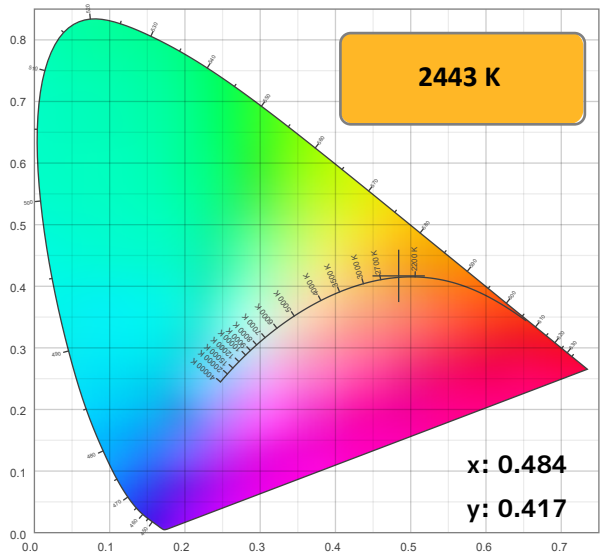
Measurement Date: 8/7/2024

# Color Temperature: 2443K

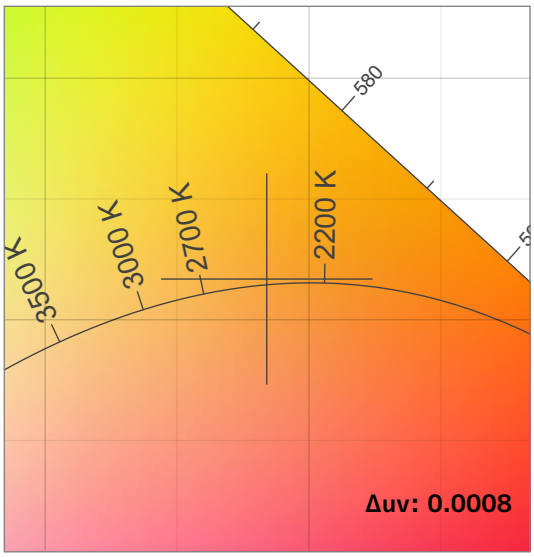
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 86.4 | 64.2 | 89.4 | 106.8 | 78 | 86.1 | 0.484 | 0.417 | 0.0008 | 57 | 3 |

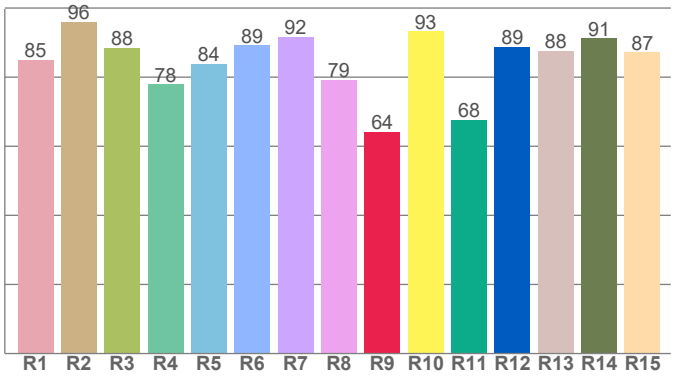
## CIE 1931




## CIE 1931 ZOOMED

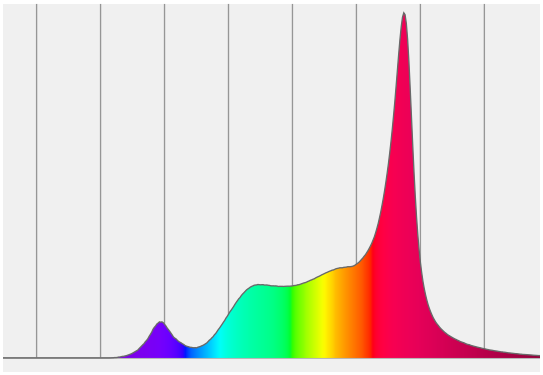



## CRI: 86.4 (R1-R8)




## Spectral Power Distribution (SPD)

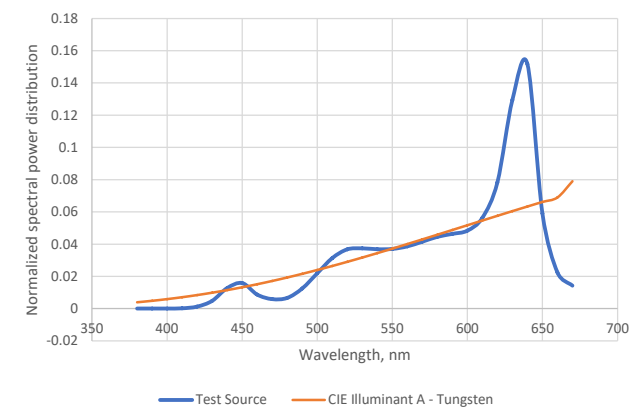
Dominant Wavelength 586 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 57

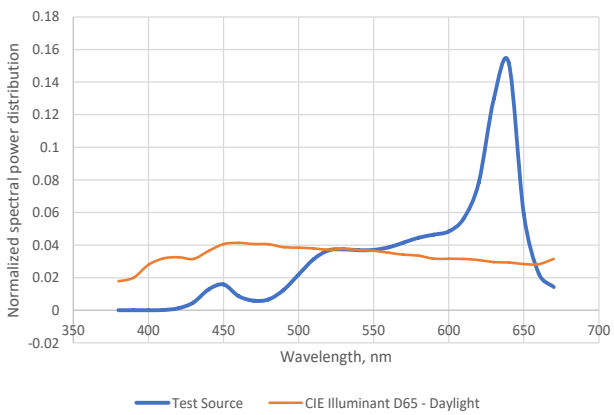
Spectral variance



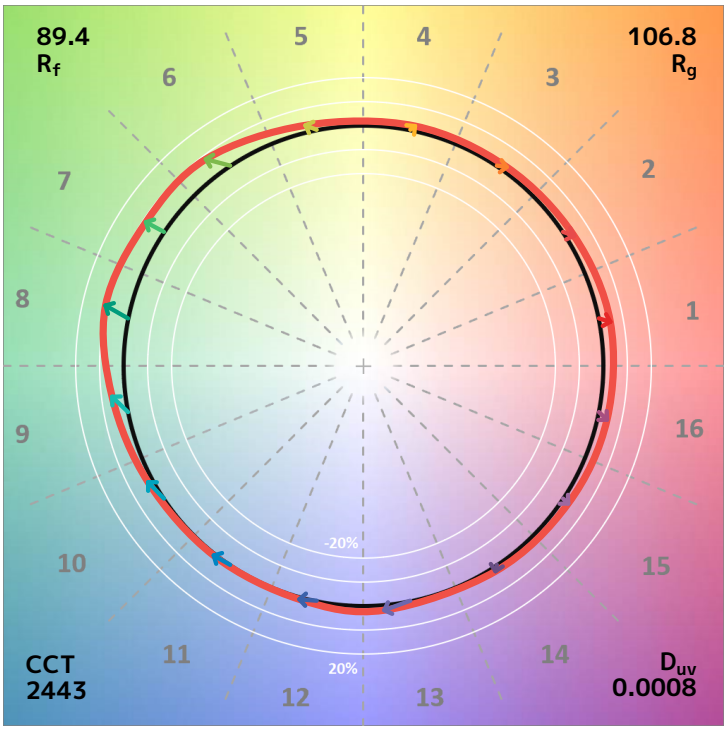

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 3

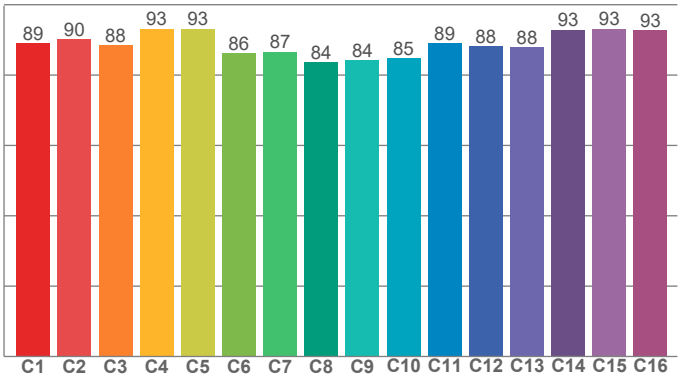
Spectral variance



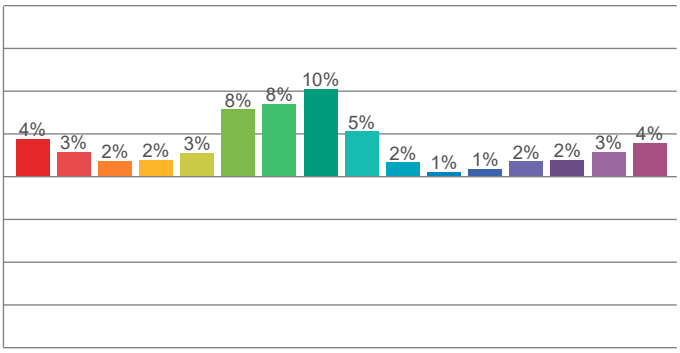

**Measurement Date: 8/7/2024**



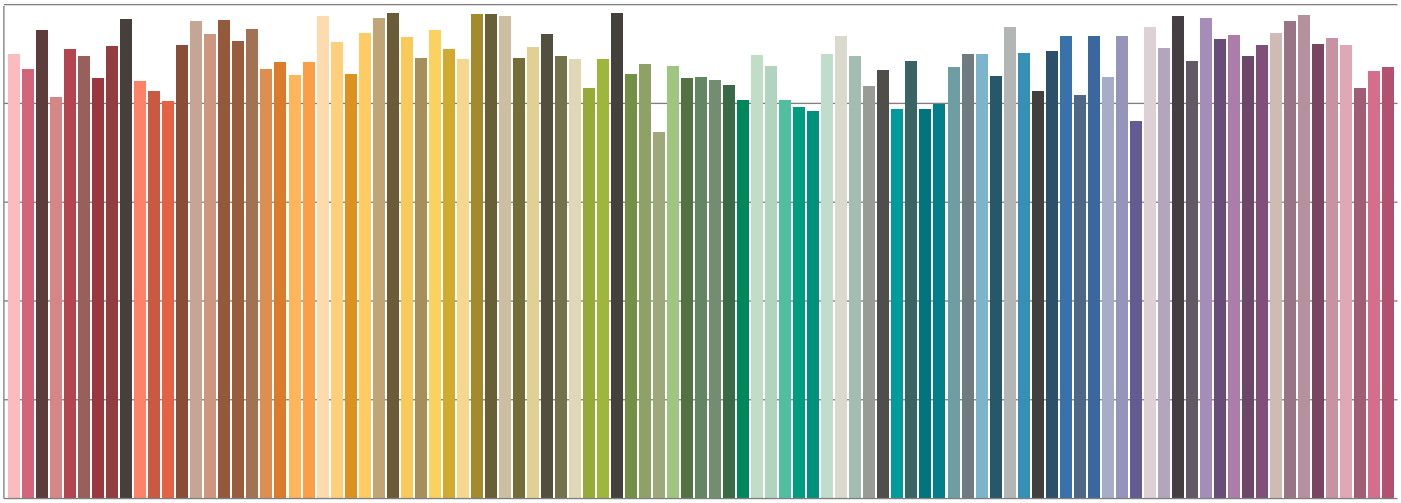

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



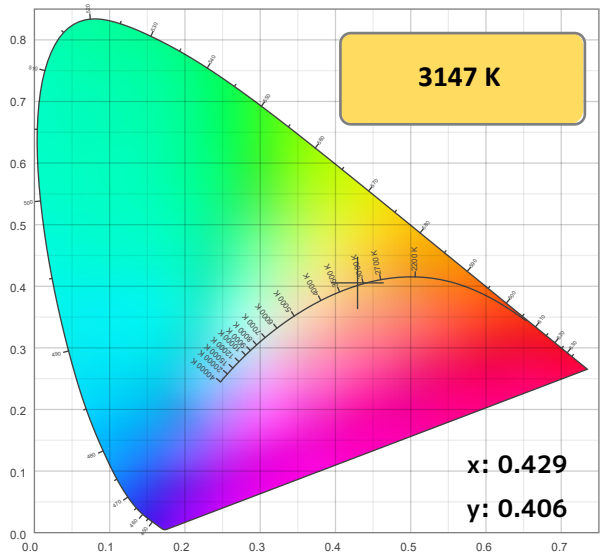
Measurement Date: 8/7/2024

# Color Temperature: 3147K

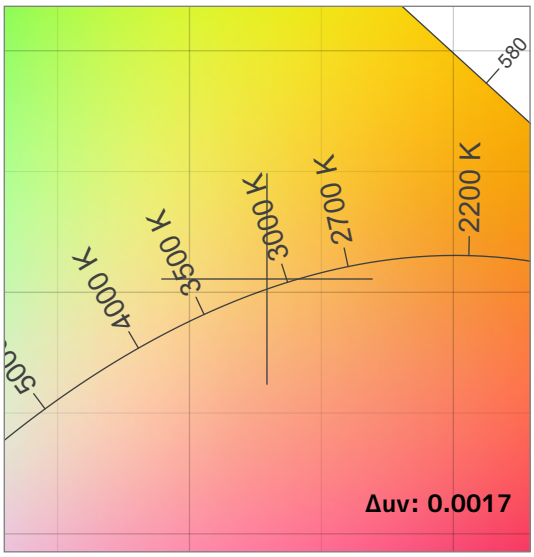
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 92.3 | 84.6 | 92.0 | 106.7 | 83 | 91.8 | 0.429 | 0.406 | 0.0017 | 66 | 30 |

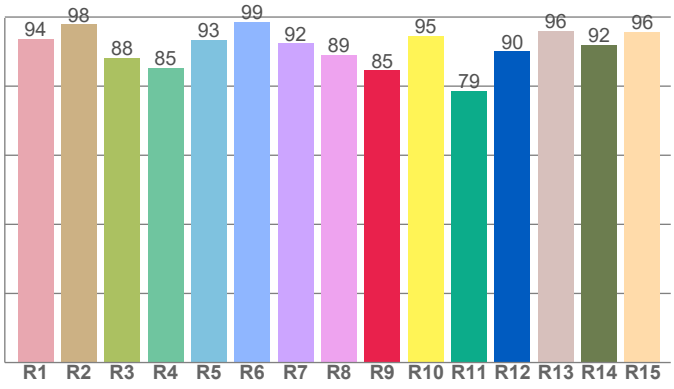
## CIE 1931




## CIE 1931 ZOOMED

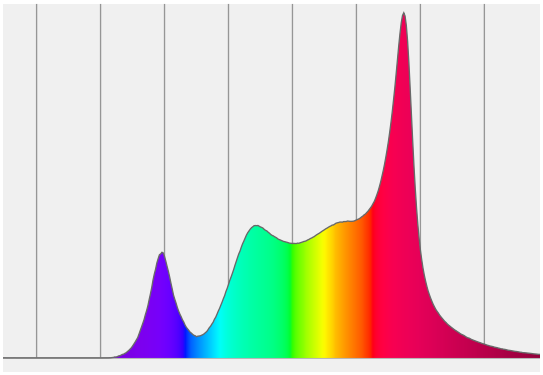



## CRI: 92.3 (R1-R8)




## Spectral Power Distribution (SPD)

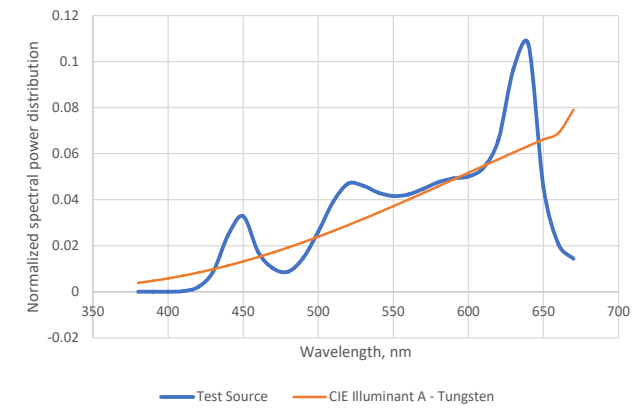
Dominant Wavelength 582 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 66

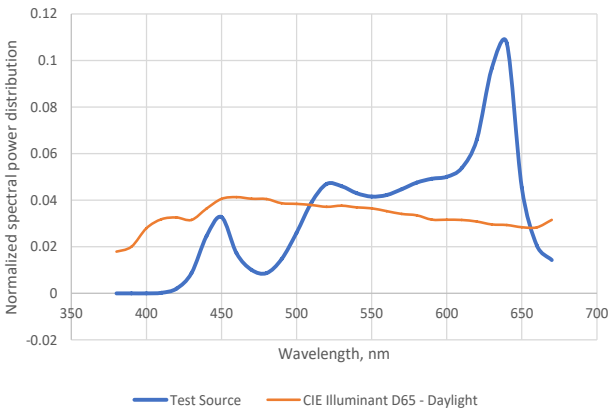
Spectral variance



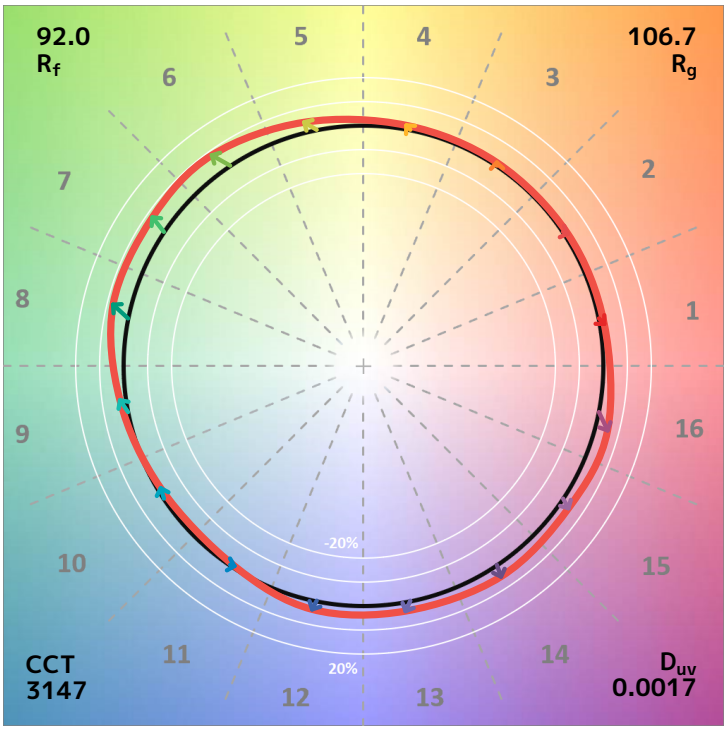

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 30

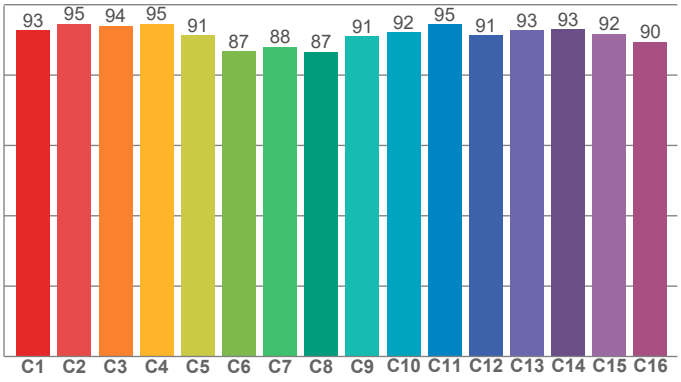
Spectral variance



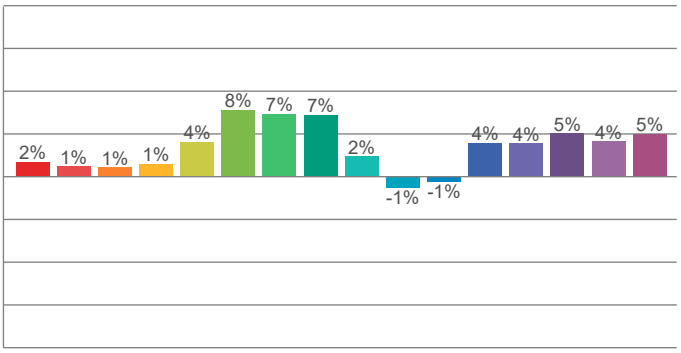

**Measurement Date: 8/7/2024**



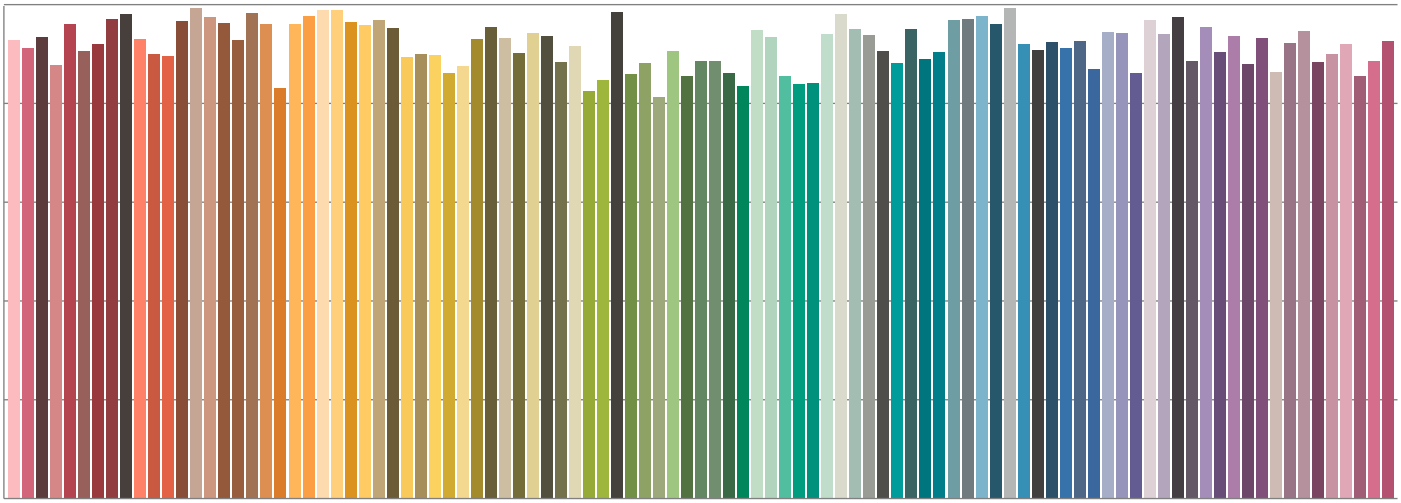

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



Measurement Date: 8/7/2024

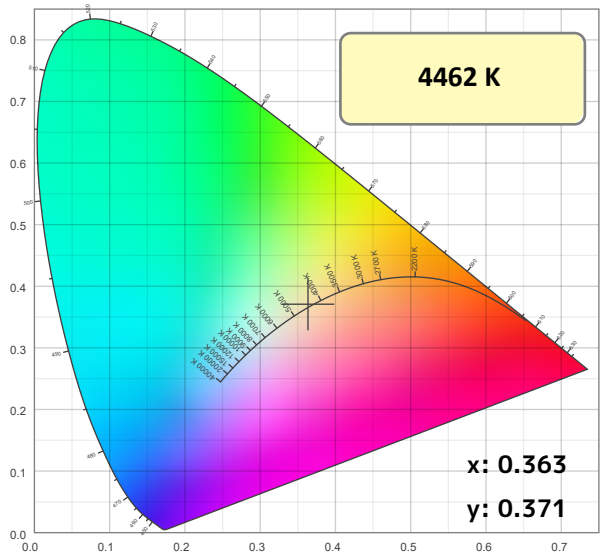
Prepared For ELATION PROFESSIONAL

# Color Temperature: 4462K

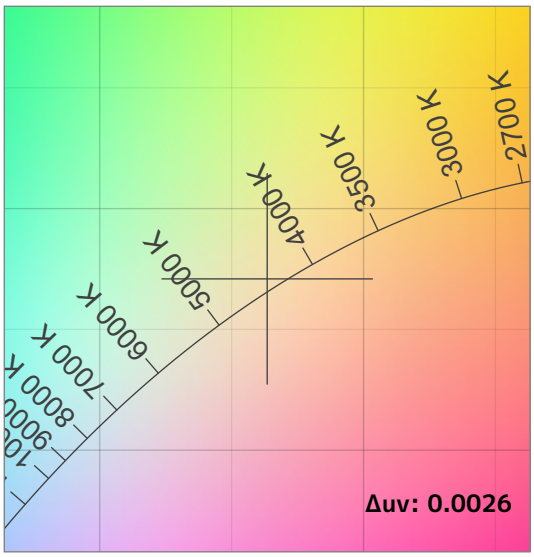
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 92.1 | 96.2 | 90.1 | 106.8 | 80 | 93.0 | 0.363 | 0.371 | 0.0026 | 46 | 51 |

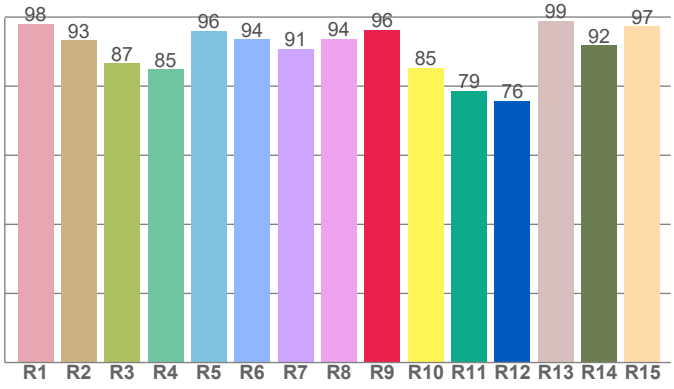
## CIE 1931




## CIE 1931 ZOOMED

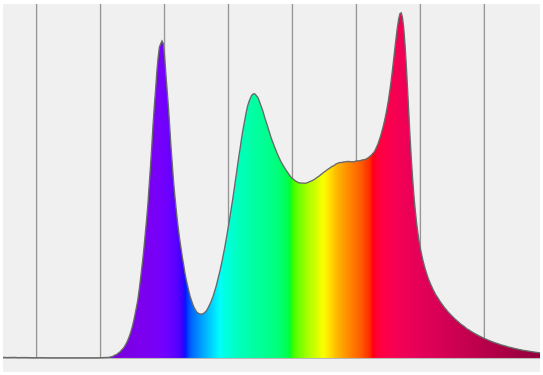



## CRI: 92.1 (R1-R8)




## Spectral Power Distribution (SPD)

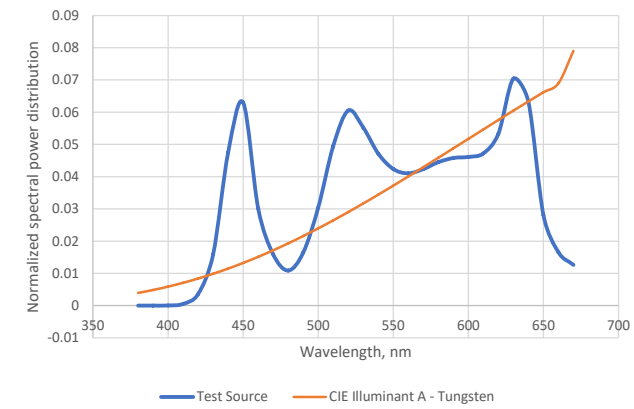
Dominant Wavelength 579 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 46

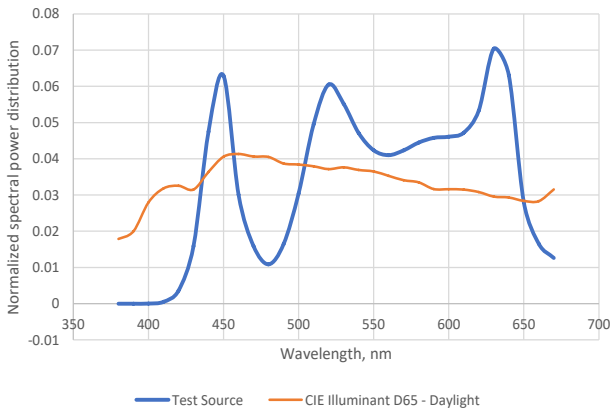
Spectral variance



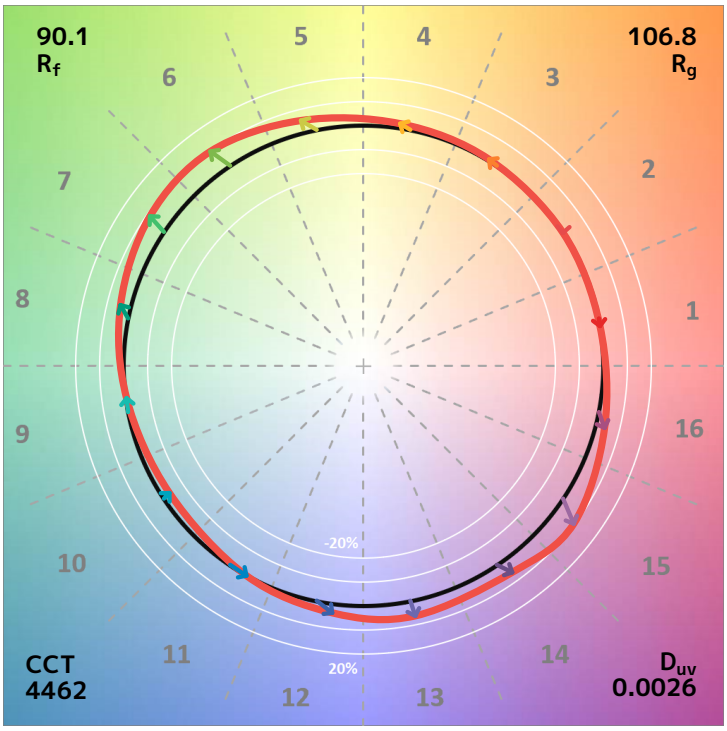

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 51

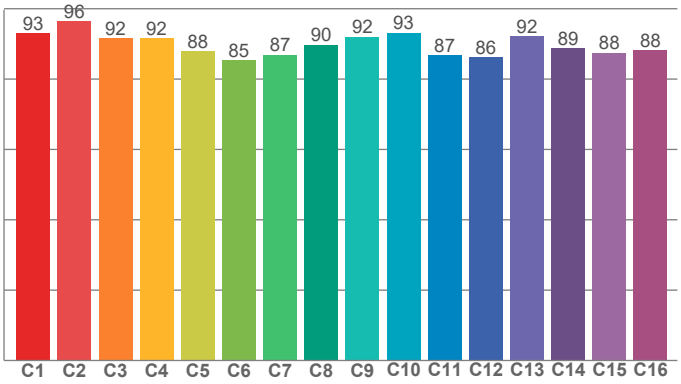
Spectral variance



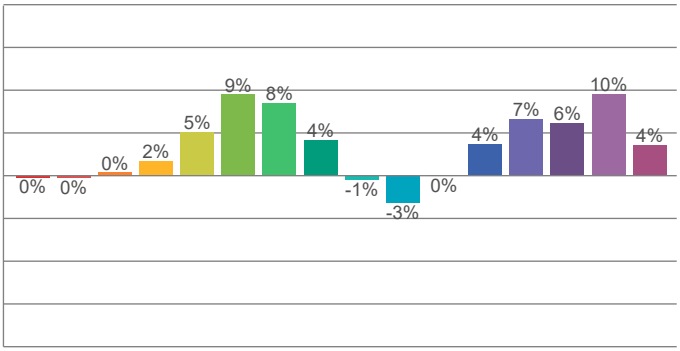

**Measurement Date: 8/8/2024**



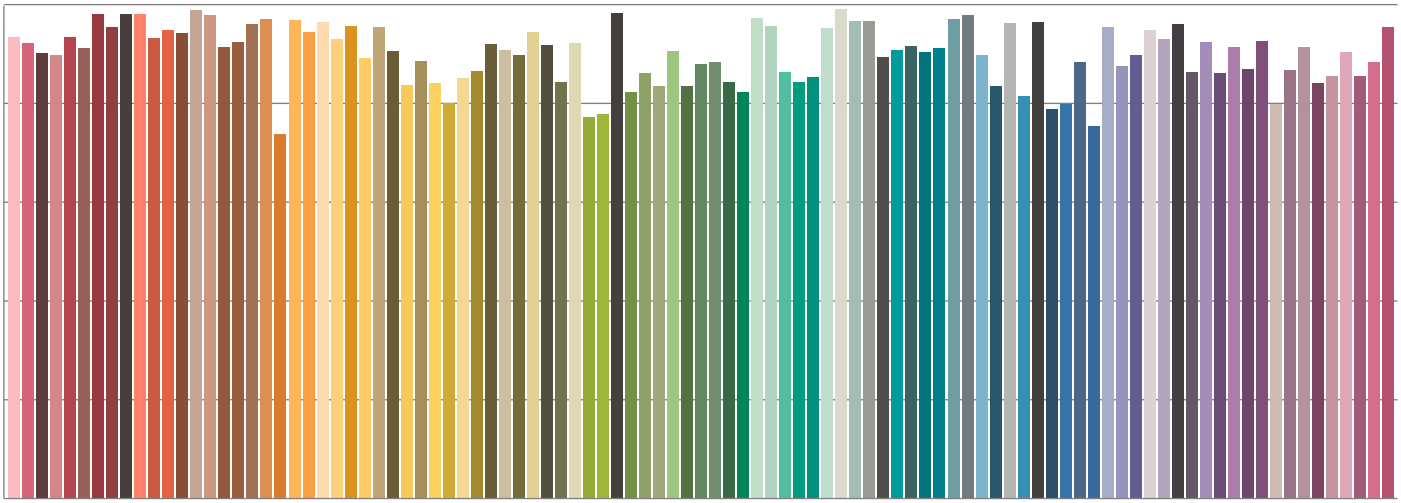

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



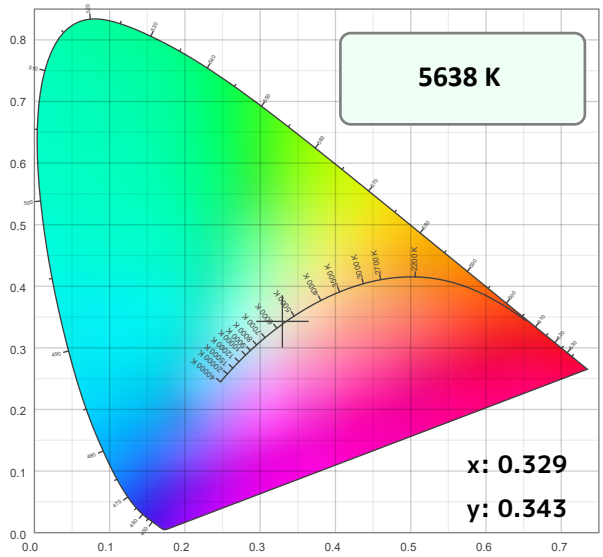
Measurement Date: 8/8/2024

# Color Temperature: 5638K

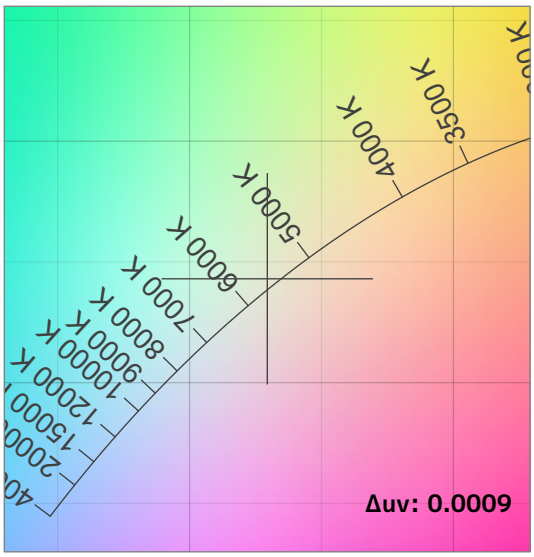
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 89.9 | 97.8 | 88.8 | 107.4 | 84 | 91.8 | 0.329 | 0.343 | 0.0009 | 30 | 55 |

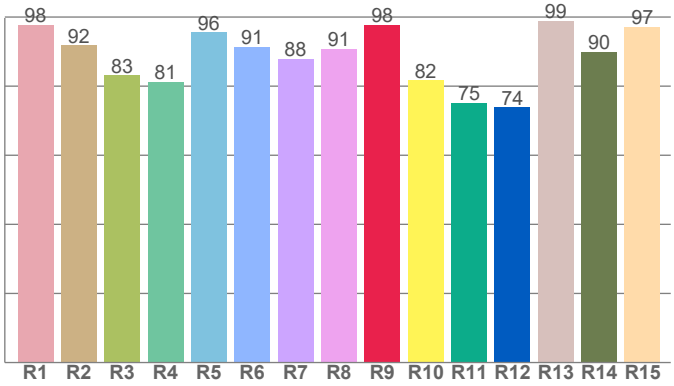
## CIE 1931




## CIE 1931 ZOOMED

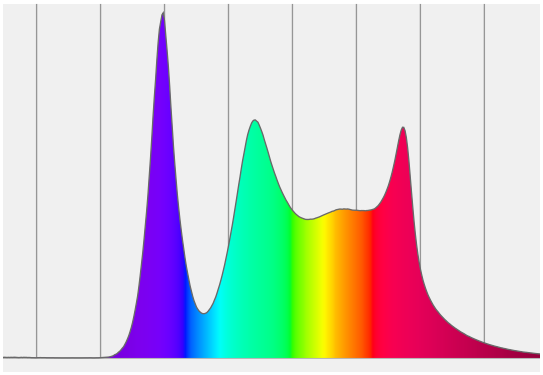



## CRI: 89.9 (R1-R8)




## Spectral Power Distribution (SPD)

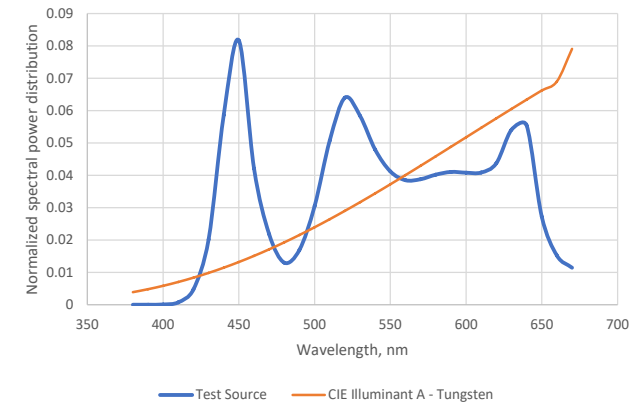
Dominant Wavelength 579 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 30

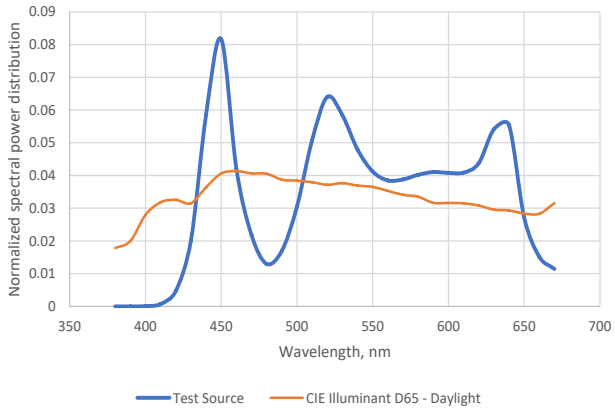
Spectral variance



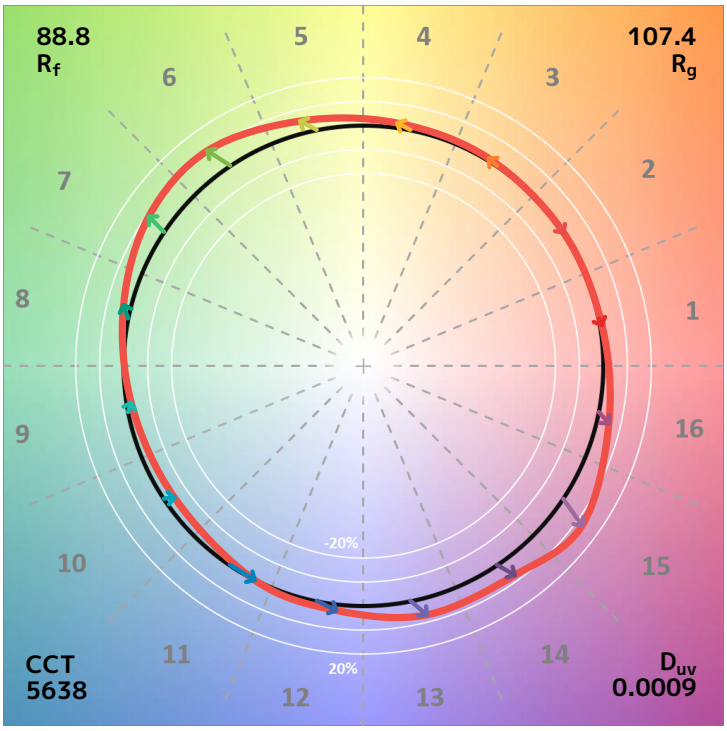

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 55

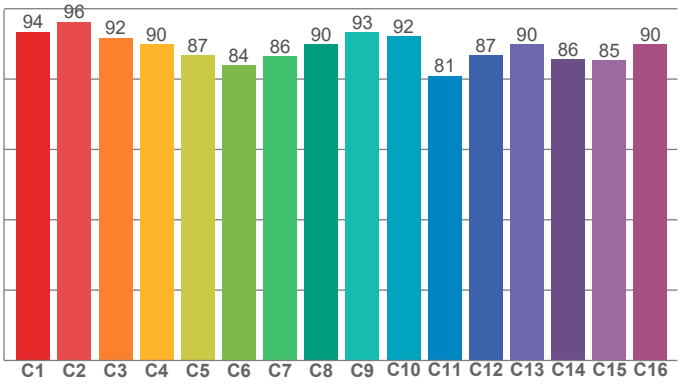
Spectral variance



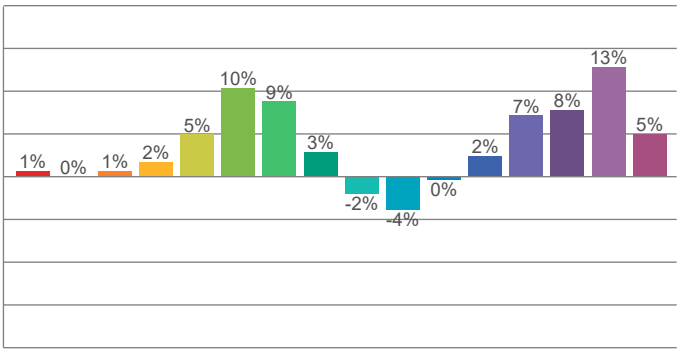

**Measurement Date: 8/8/2024**



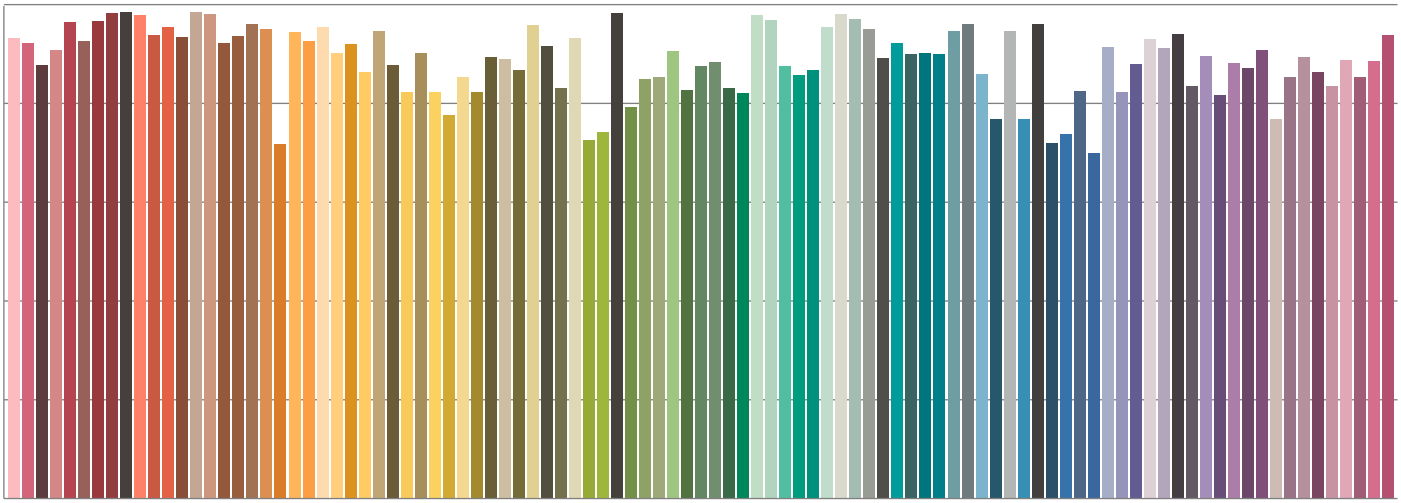

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



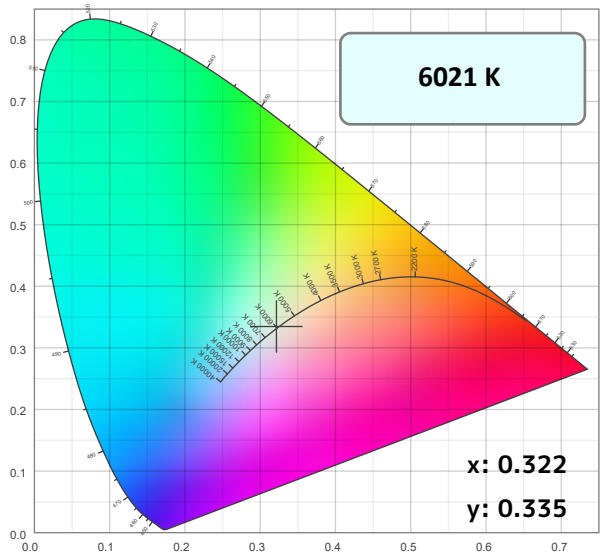
Measurement Date: 8/8/2024

# Color Temperature: 6021K

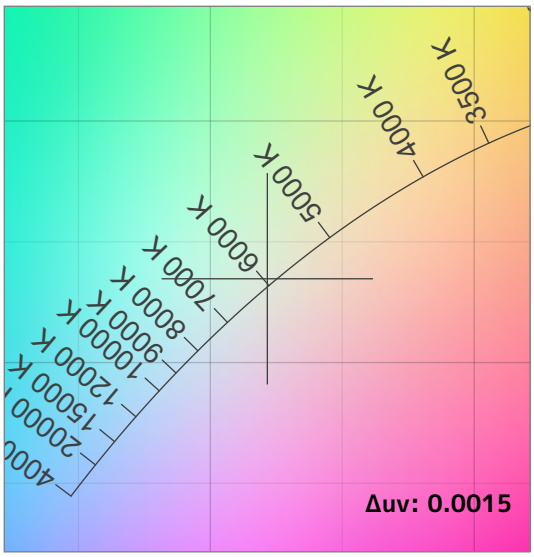
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 90.0 | 97.6 | 88.5 | 107.0 | 85 | 91.4 | 0.322 | 0.335 | 0.0015 | 25 | 55 |

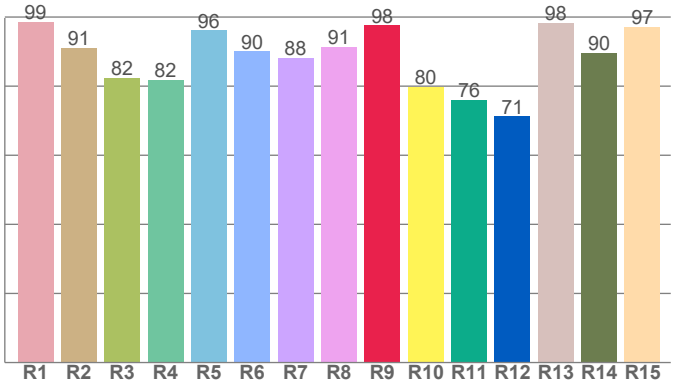
## CIE 1931




## CIE 1931 ZOOMED

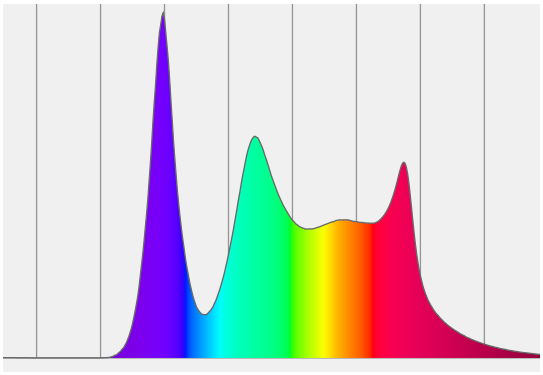



## CRI: 90.0 (R1-R8)




## Spectral Power Distribution (SPD)

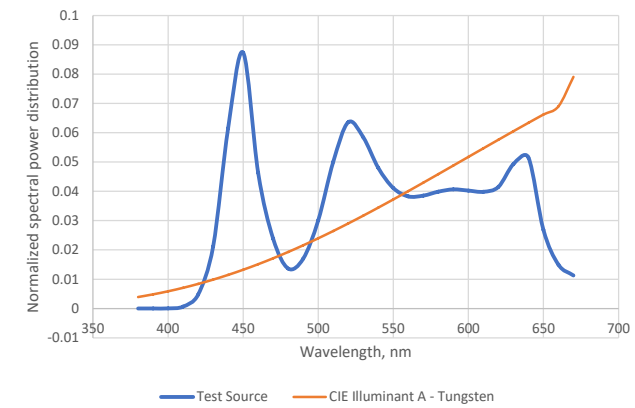
Dominant Wavelength 583 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 25

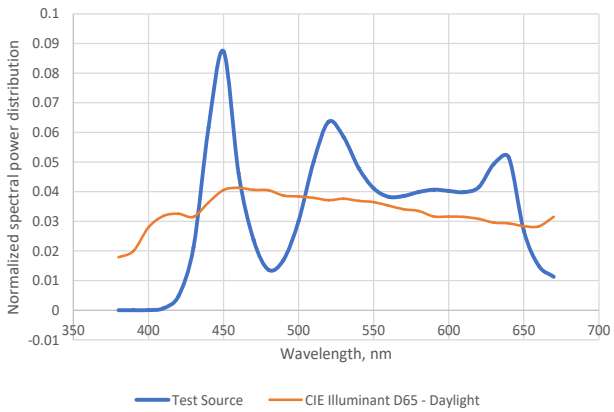
Spectral variance



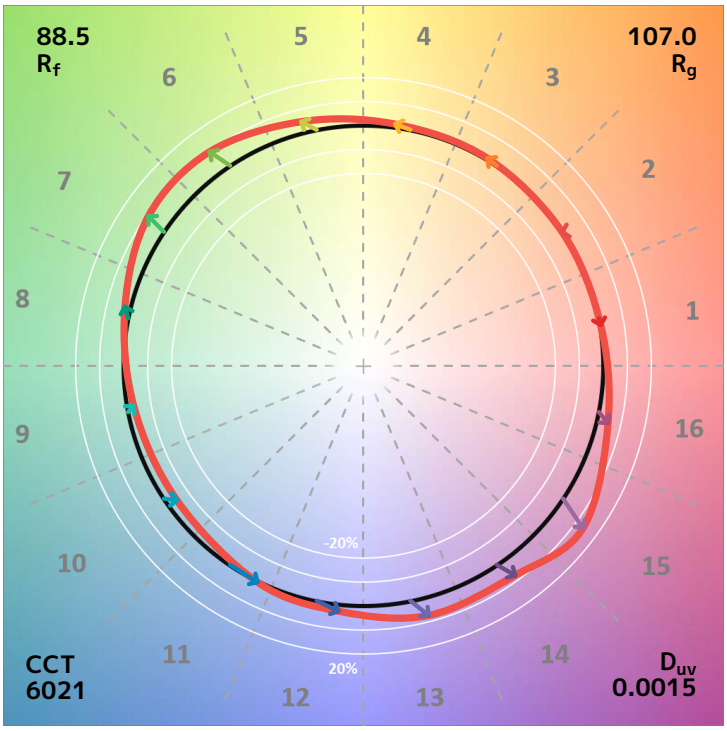

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 55

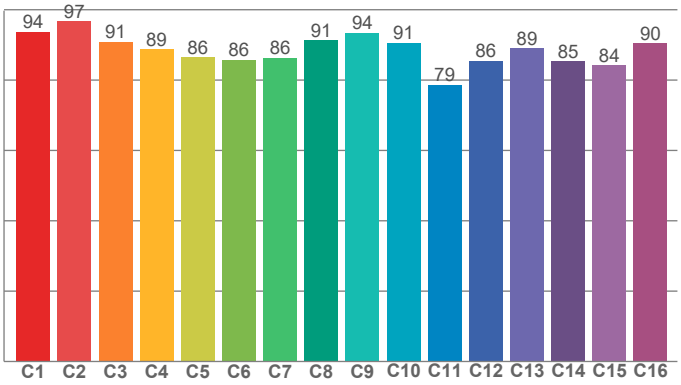
Spectral variance



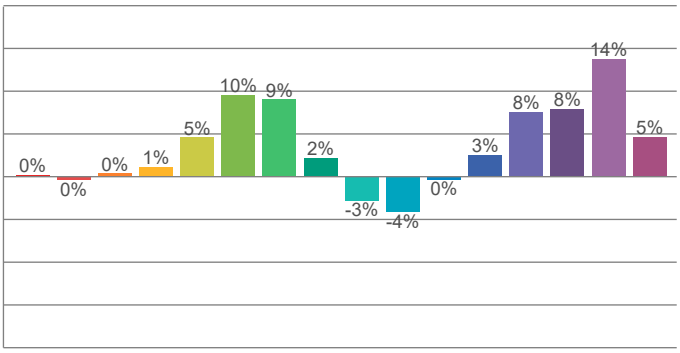

**Measurement Date: 8/8/2024**



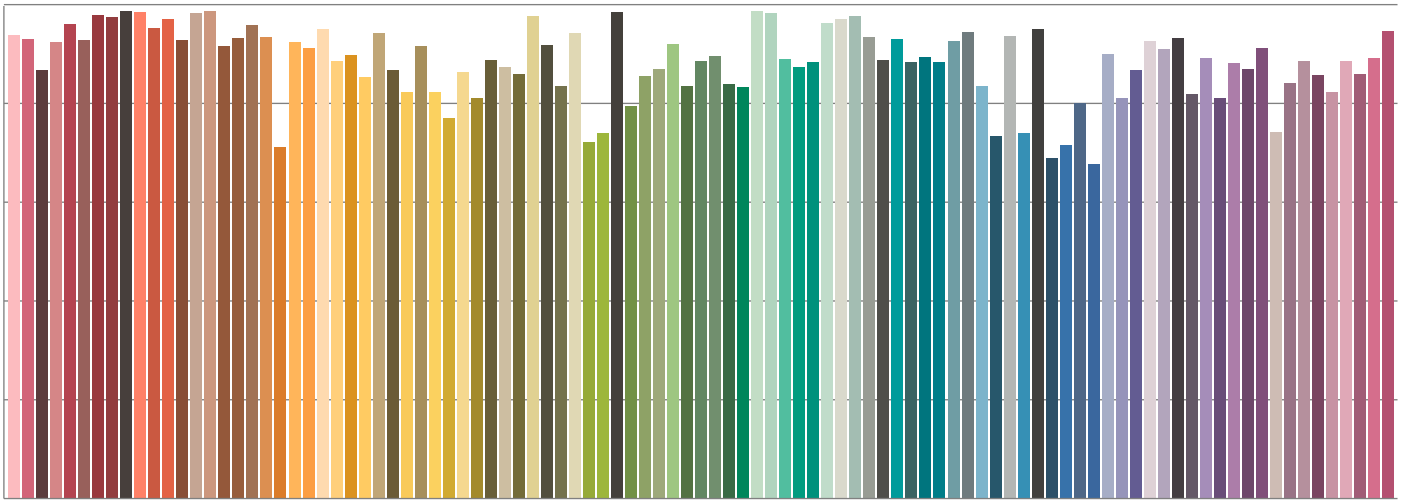

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



Measurement Date: 8/8/2024

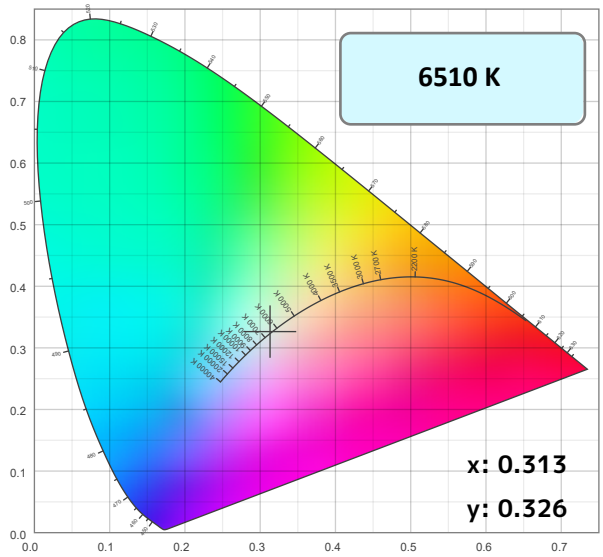
Prepared For ELATION PROFESSIONAL

# Color Temperature: 6510K

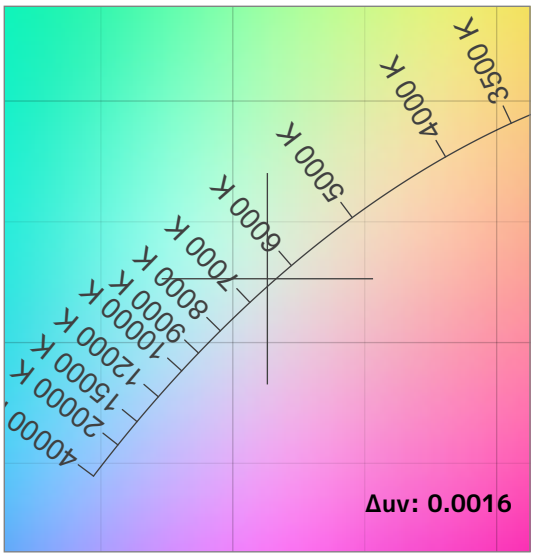
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 89.8 | 95.8 | 88.2 | 106.4 | 86 | 91.2 | 0.313 | 0.326 | 0.0016 | 20 | 55 |

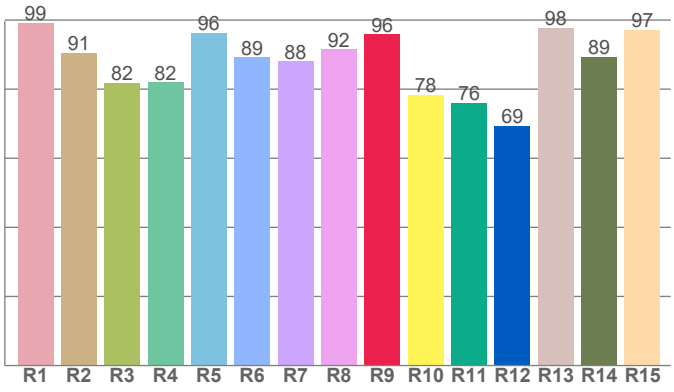
## CIE 1931




## CIE 1931 ZOOMED

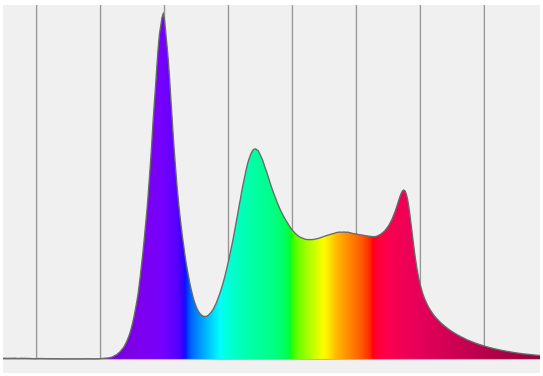



## CRI: 89.8 (R1-R8)




## Spectral Power Distribution (SPD)

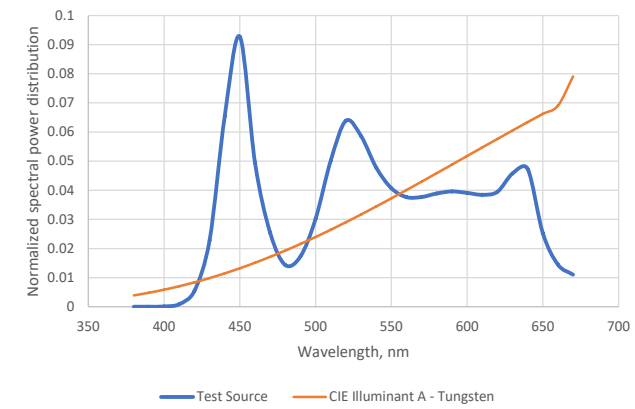
Dominant Wavelength 360 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 20

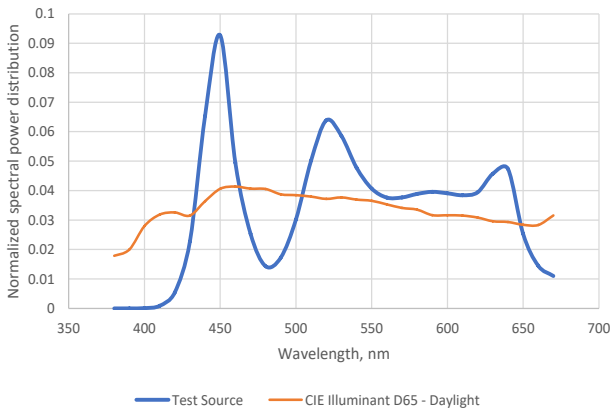
Spectral variance



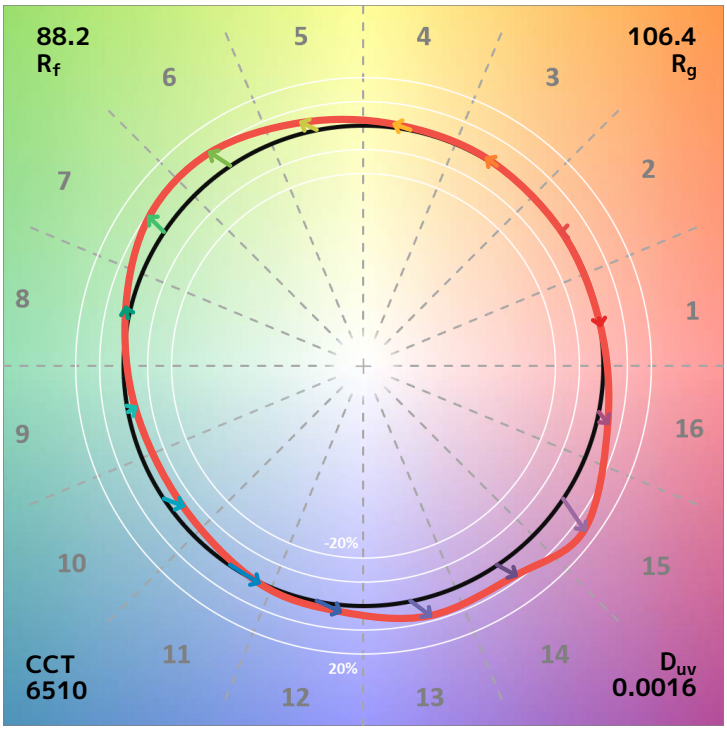

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 55

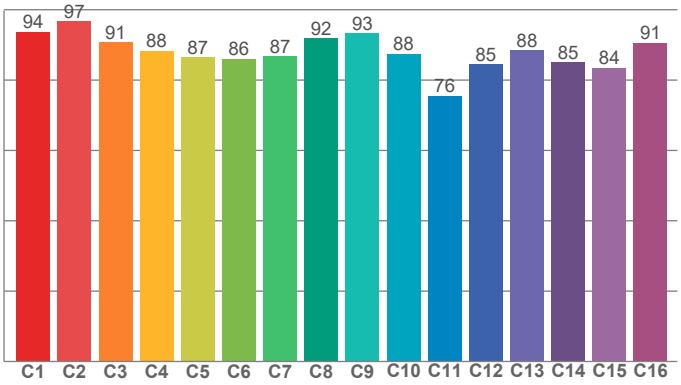
Spectral variance



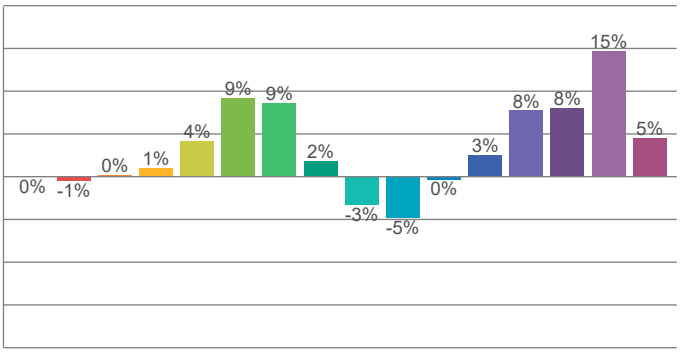

**Measurement Date: 8/8/2024**



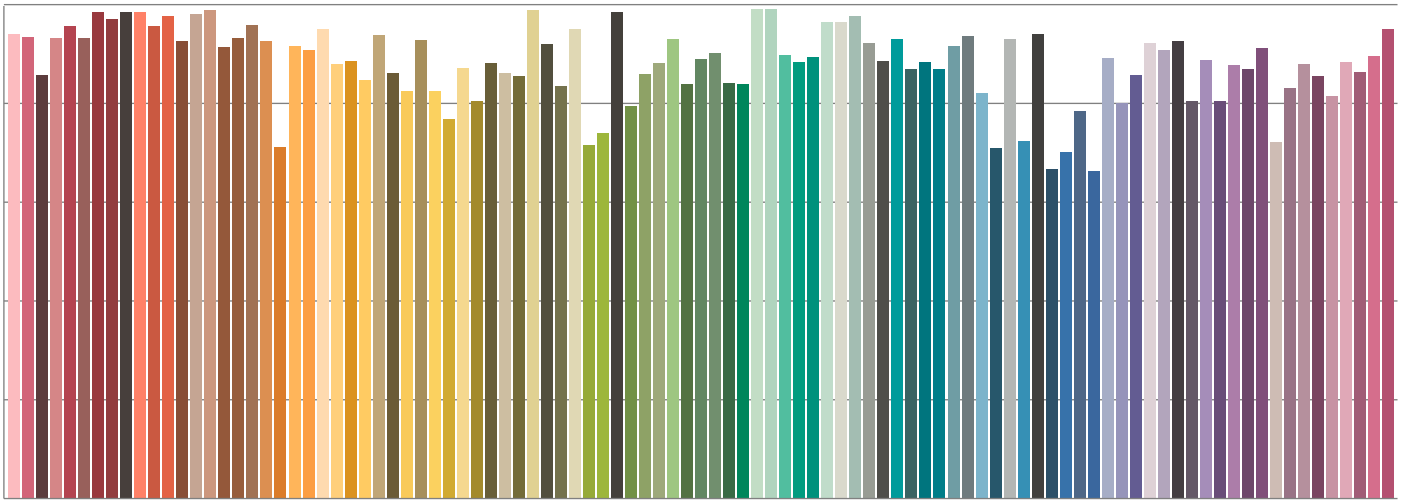

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



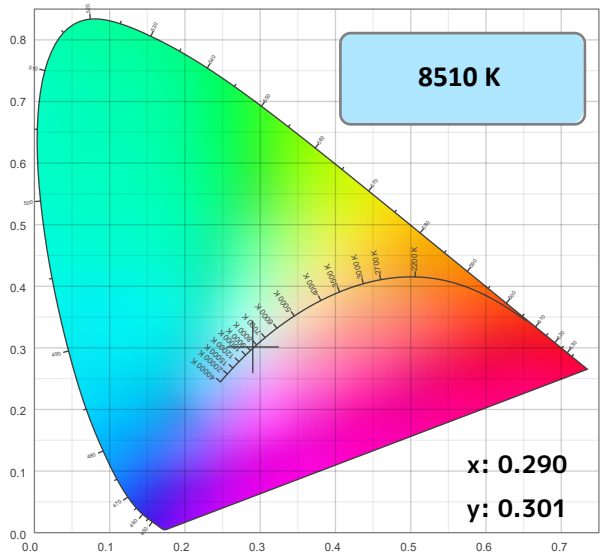
Measurement Date: 8/8/2024

# Color Temperature: 8510K

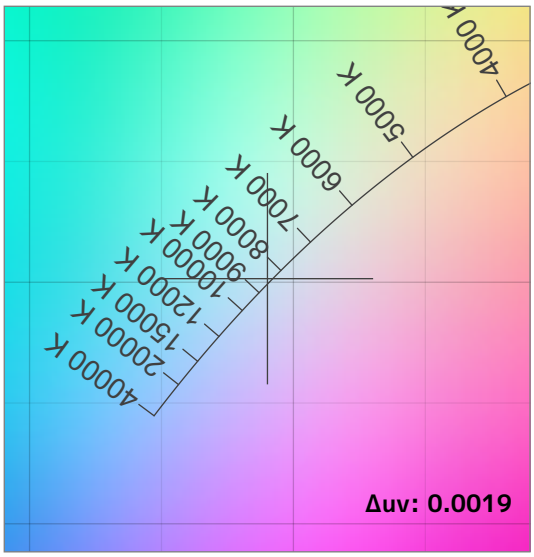
## Accuracy Metric Overview

| Color Rendering Index | Color Rendering Index, R9 (Red Component) | TM-30 Color Fidelity | TM-30 Color Gamut | Television Lighting Consistency Index | Color Quality Scale | Color Coordinate-CIE 1931 | Color Coordinate-CIE 1931 | Deviation from Black Body Locus | SSI [CIE A] Tungsten | SSI [CIE D65] Daylight |
|---|---|---|---|---|---|---|---|---|---|---|
| CRI | CRI R9 | TM30 $R_f$ | TM30 $R_g$ | TLCI | CQS | x | Y | Δuv | SSIt | SSId |
| 89.0 | 93.9 | 87.0 | 105.2 | 86 | 90.2 | 0.290 | 0.301 | 0.0019 | 4 | 51 |

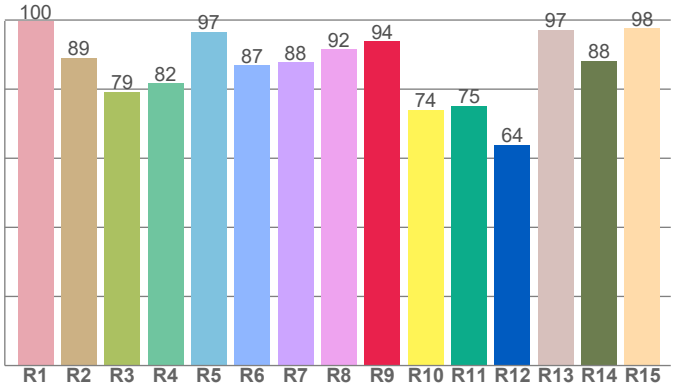
## CIE 1931




## CIE 1931 ZOOMED

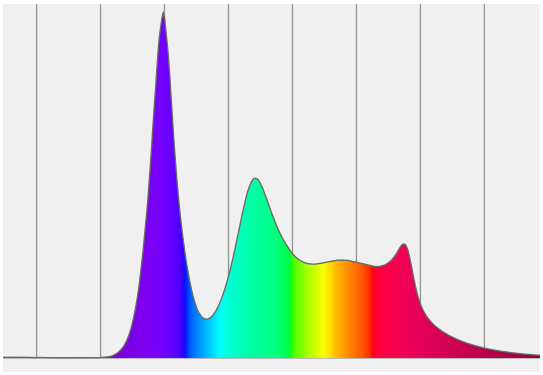



## CRI: 89.0 (R1-R8)




## Spectral Power Distribution (SPD)

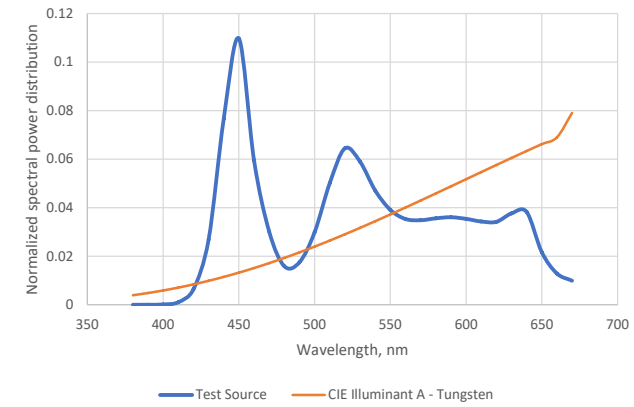
Dominant Wavelength 474 nm



## SSI Spectral Variance Graph- Tungsten

### SSI [CIE A] 4

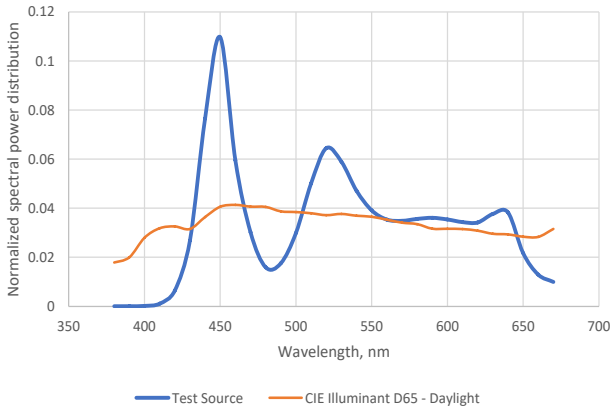
Spectral variance



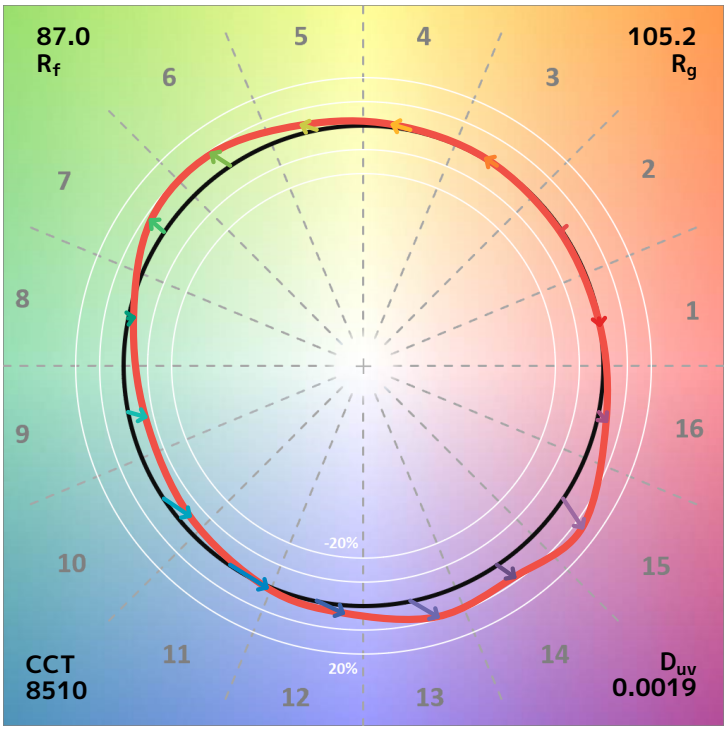

## SSI Spectral Variance Graph- Daylight

### SSI [CIE D65] 51

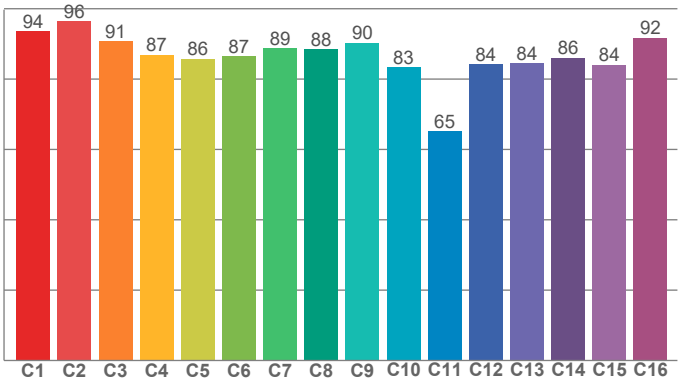
Spectral variance



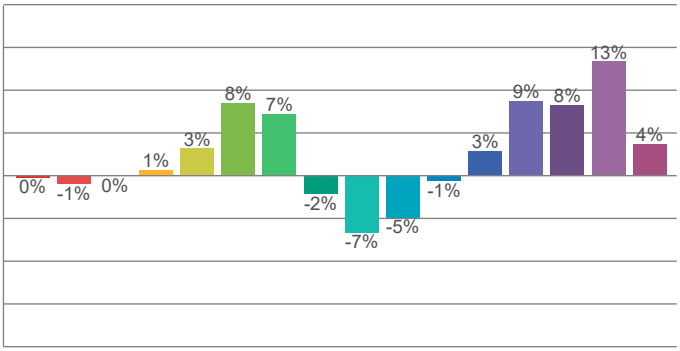

**Measurement Date: 8/8/2024**



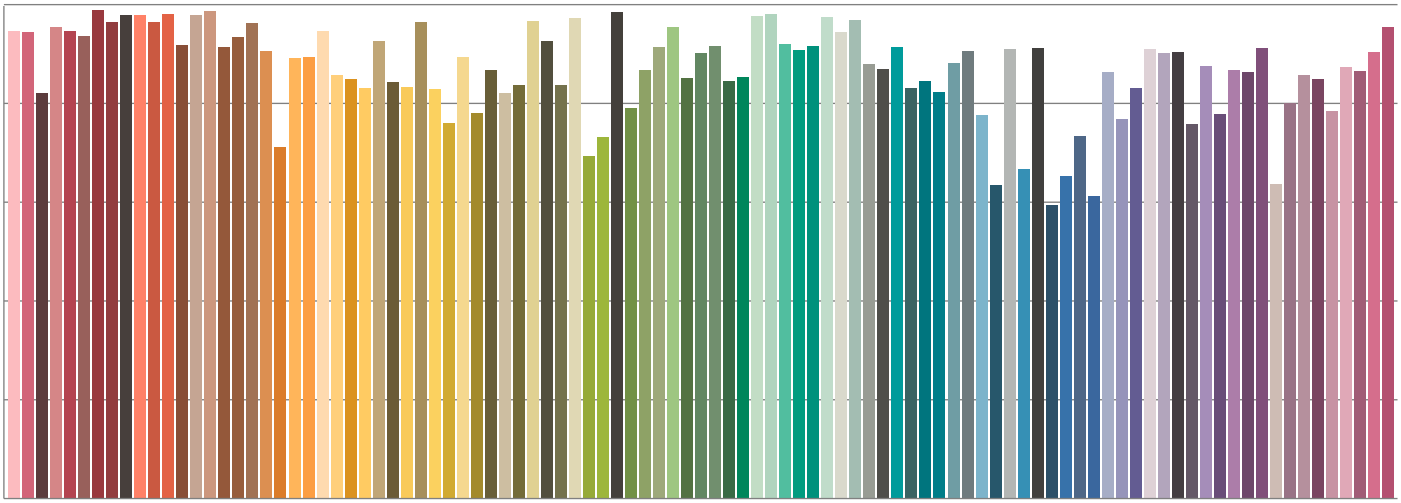

## TM30-18 $R_f$ Values per Hue Bin




## TM30 Chroma Shift per Hue Bin




## TM30-18 $R_f$ Values per Reference Color (CES)



Measurement Date: 8/8/2024

## Measurements

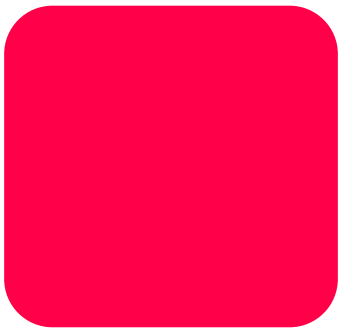
Total Lumen Output: 958 lm

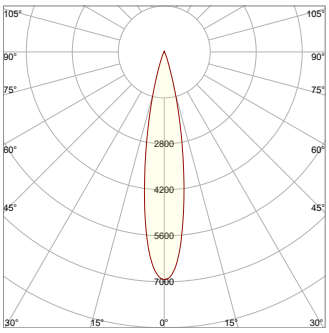
Peak Intensity: 6920 cd

Efficacy: 22 Lumen/Watt

Power: 44.4 W

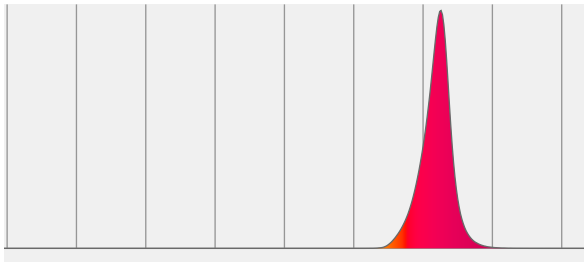
Voltage: 121 V, Current: 0.382 A

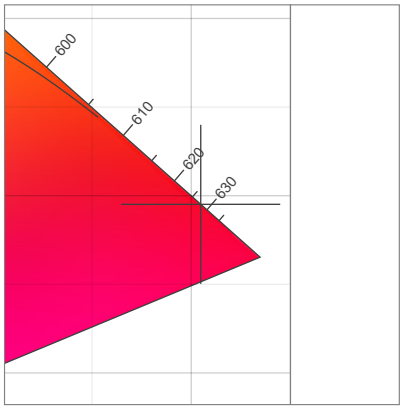




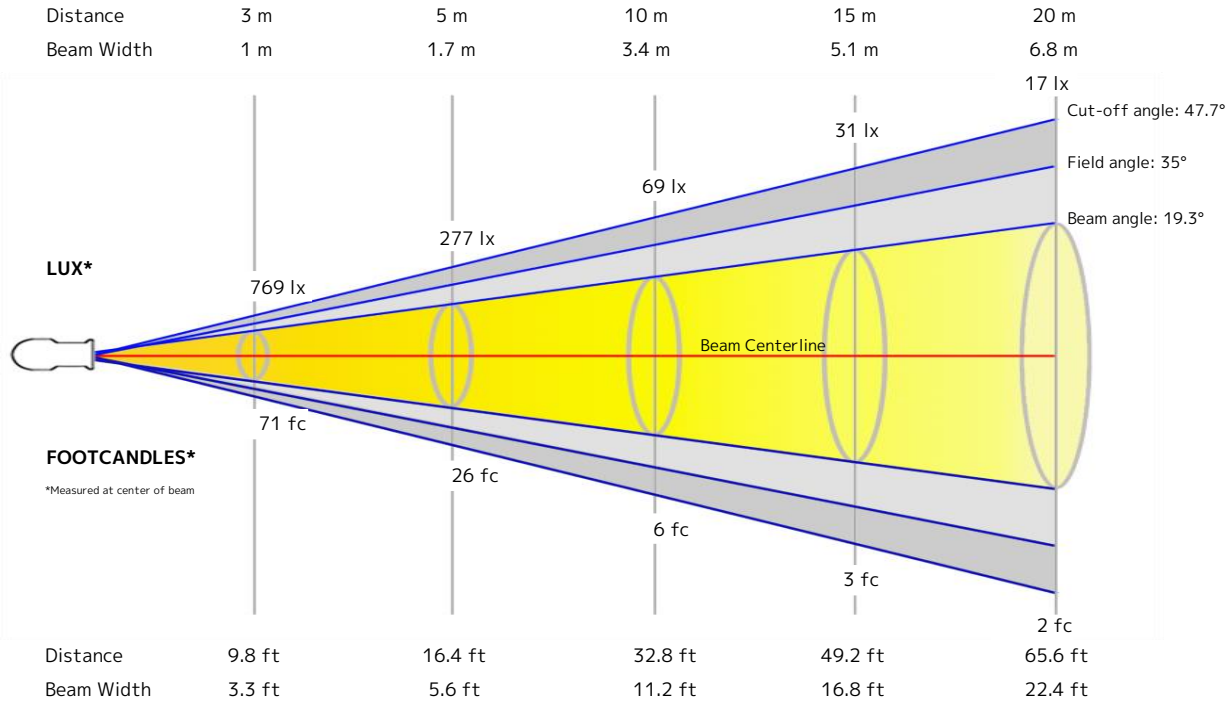

## Spectral Power Distribution

Dominant Wavelength 628 nm






| Dominant Wavelength | Color Coordinate CIE 1931 | Color Coordinate CIE1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---|---|---|---|---|
| nm | x | y | u | v |
| 628 | 0.705 | 0.295 | 0.549 | 0.345 |




**Beam Intensities from 1-20m**

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| LX | 6920 | 1730 | 769 | 433 | 277 | 192 | 141 | 108 | 85 | 69 | 57 | 48 | 41 | 35 | 31 | 27 | 24 | 21 | 19 | 17 |
| FC | 642.9 | 160.7 | 71.4 | 40.2 | 25.7 | 17.9 | 13.1 | 10 | 7.9 | 6.4 | 5.3 | 4.5 | 3.8 | 3.3 | 2.9 | 2.5 | 2.2 | 2 | 1.8 | 1.6 |



**Measurement Date: 8/7/2024**

## Measurements

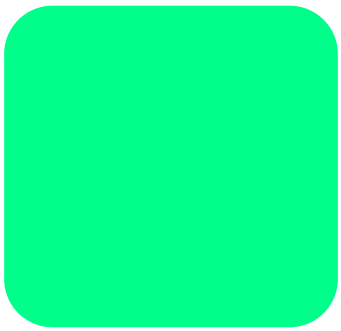
Total Lumen Output: 2088 lm

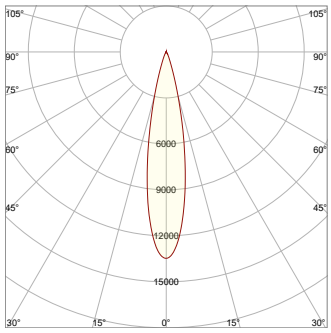
Peak Intensity: 13441 cd

Efficacy: 41 Lumen/Watt

Power: 51.0 W

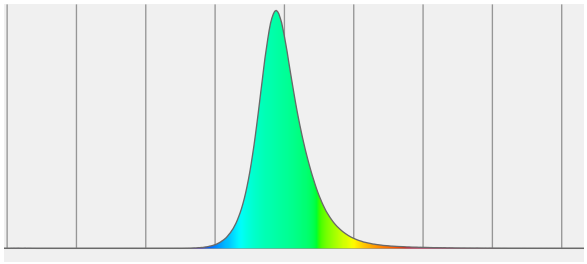
Voltage: 120 V, Current: 0.437 A

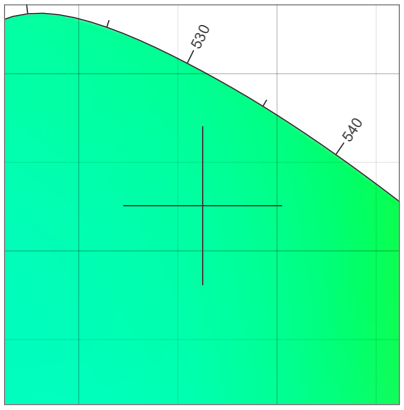




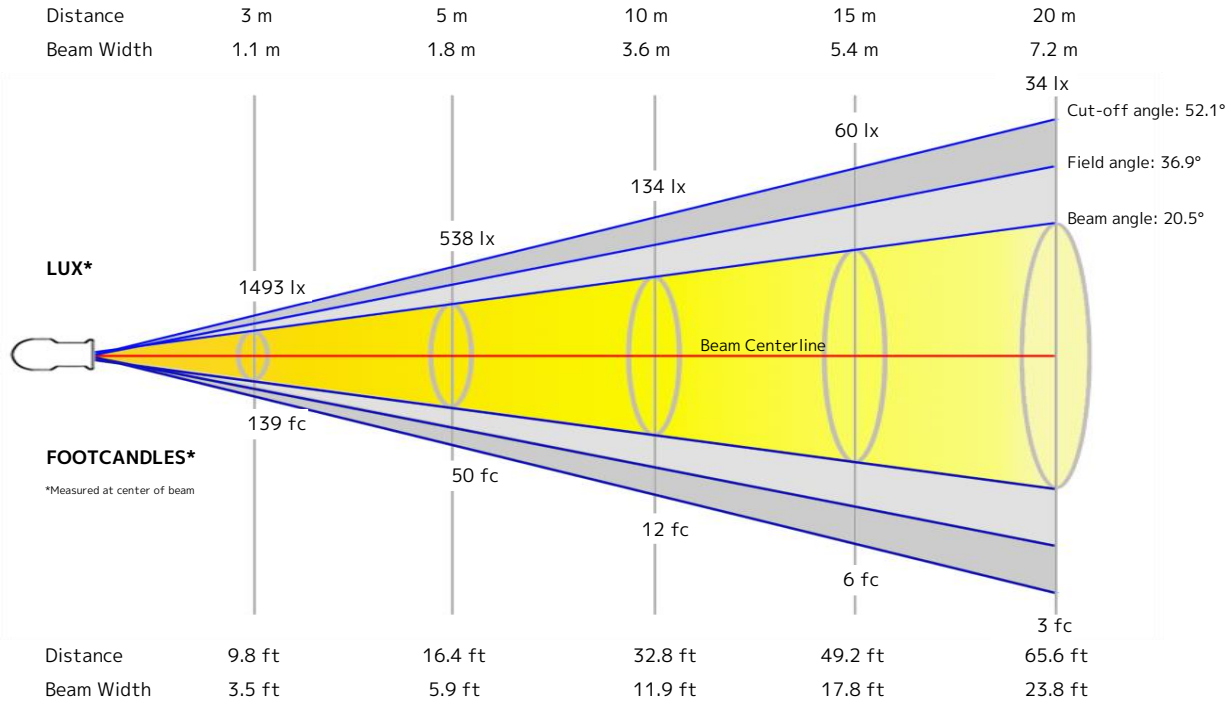

## Spectral Power Distribution

Dominant Wavelength 526 nm






| Dominant Wavelength | Color Coordinate CIE 1931 | Color Coordinate CIE1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---|---|---|---|---|
| nm | x | y | u | v |
| 526 | 0.163 | 0.726 | 0.057 | 0.382 |




**Beam Intensities from 1-20m**

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| LX | 13441 | 3360 | 1493 | 840 | 538 | 373 | 274 | 210 | 166 | 134 | 111 | 93 | 80 | 69 | 60 | 53 | 47 | 41 | 37 | 34 |
| FC | 1248.7 | 312.2 | 138.7 | 78 | 49.9 | 34.7 | 25.5 | 19.5 | 15.4 | 12.5 | 10.3 | 8.7 | 7.4 | 6.4 | 5.5 | 4.9 | 4.3 | 3.9 | 3.5 | 3.1 |



**Measurement Date: 8/7/2024**

## Measurements

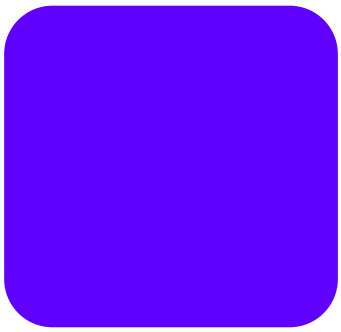
Total Lumen Output: 370 lm

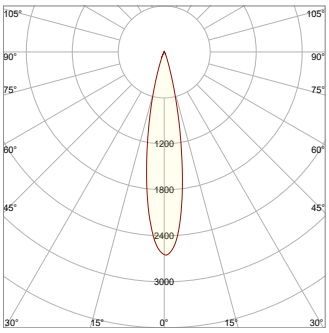
Peak Intensity: 2649 cd

Efficacy: 7 Lumen/Watt

Power: 51.6 W

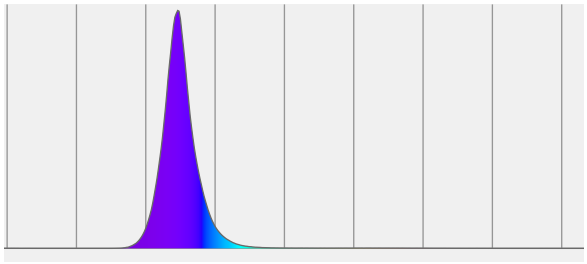
Voltage: 120 V, Current: 0.441 A

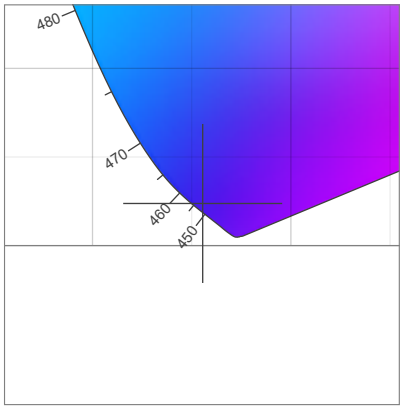




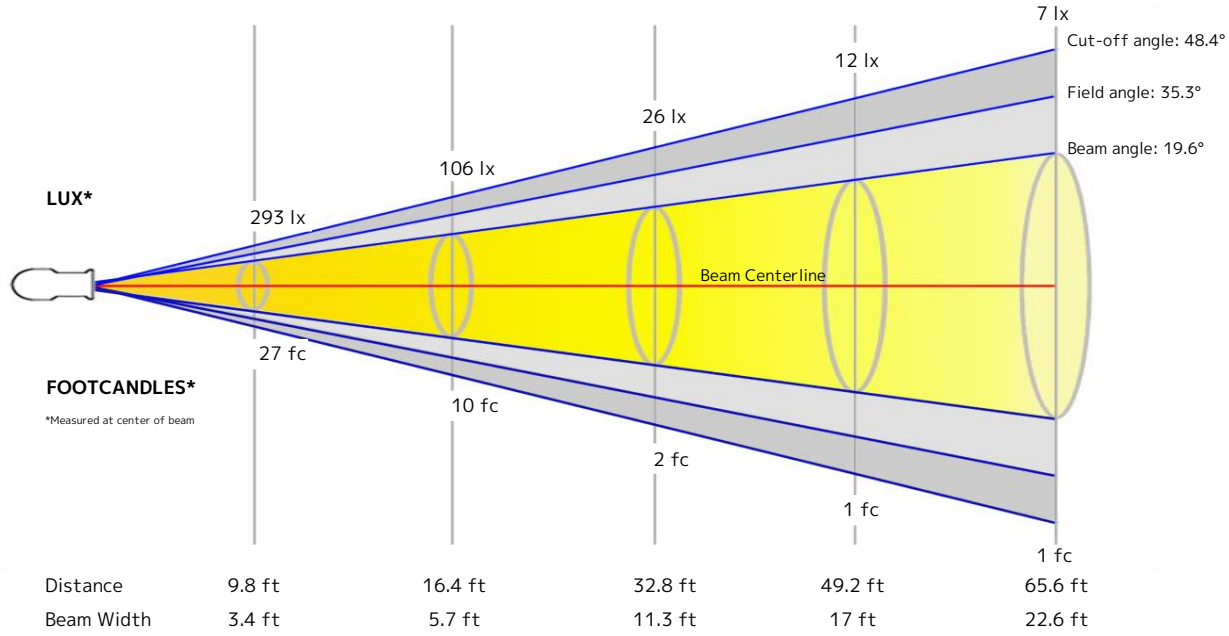

## Spectral Power Distribution

Dominant Wavelength 453 nm






| Dominant Wavelength | Color Coordinate CIE 1931 | Color Coordinate CIE1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---|---|---|---|---|
| nm | x | y | u | v |
| 453 | 0.156 | 0.024 | 0.209 | 0.048 |




**Beam Intensities from 1-20m**

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| LX | 2640 | 660 | 293 | 165 | 106 | 73 | 54 | 41 | 33 | 26 | 22 | 18 | 16 | 13 | 12 | 10 | 9 | 8 | 7 | 7 |
| FC | 245.3 | 61.3 | 27.3 | 15.3 | 9.8 | 6.8 | 5 | 3.8 | 3 | 2.5 | 2 | 1.7 | 1.5 | 1.3 | 1.1 | 1 | 0.8 | 0.8 | 0.7 | 0.6 |



**Measurement Date: 8/7/2024**

## Measurements

Total Lumen Output: 3205 lm

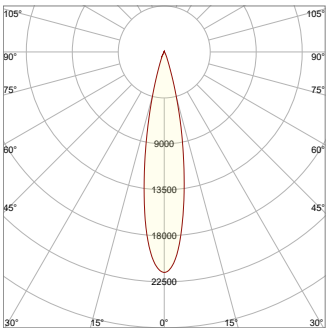
Peak Intensity: 21568 cd

Efficacy: 62 Lumen/Watt

Power: 51.7 W

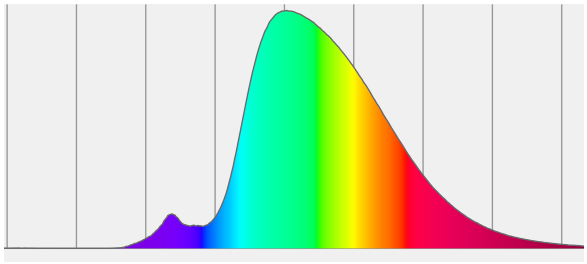
Voltage: 120 V, Current: 0.445 A

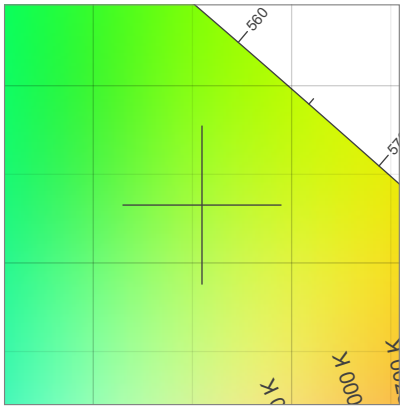




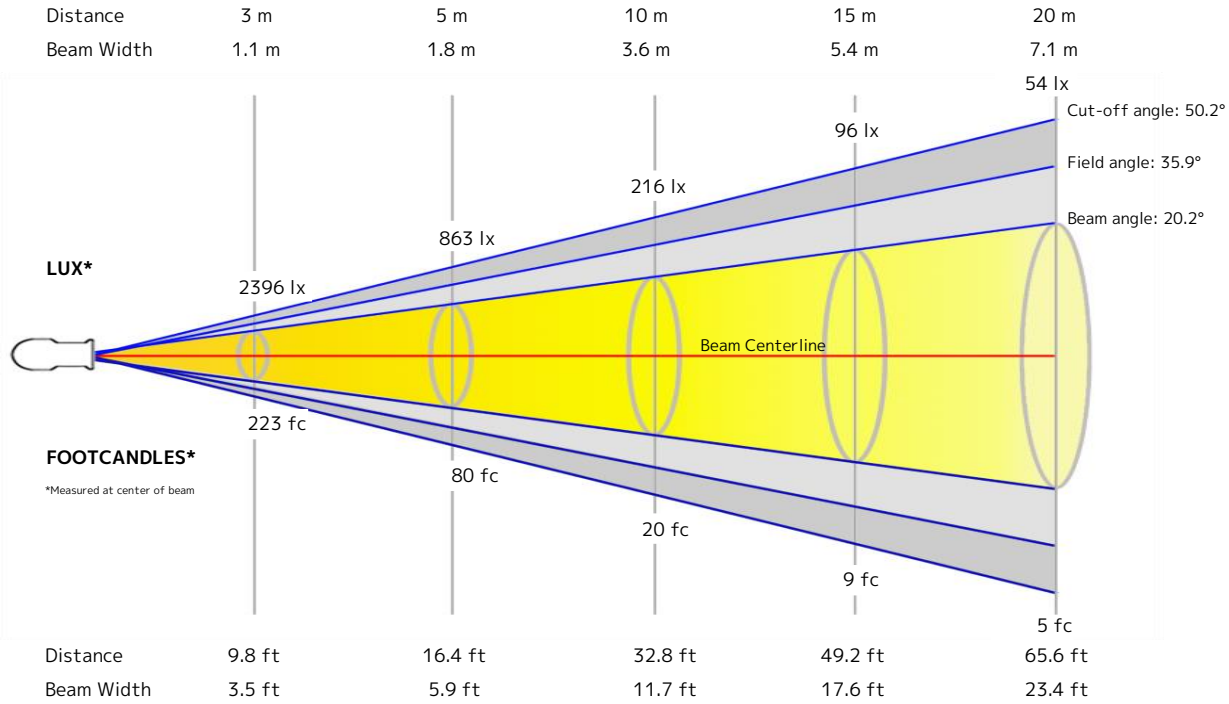

## Spectral Power Distribution

Dominant Wavelength 560 nm






| Dominant Wavelength | Color Coordinate CIE 1931 | Color Coordinate CIE1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---|---|---|---|---|
| nm | x | y | u | v |
| 560 | 0.355 | 0.533 | 0.163 | 0.368 |




**Beam Intensities from 1-20m**

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| LX | 21568 | 5392 | 2396 | 1348 | 863 | 599 | 440 | 337 | 266 | 216 | 178 | 150 | 128 | 110 | 96 | 84 | 75 | 67 | 60 | 54 |
| FC | 2003.8 | 500.9 | 222.6 | 125.2 | 80.2 | 55.7 | 40.9 | 31.3 | 24.7 | 20 | 16.6 | 13.9 | 11.9 | 10.2 | 8.9 | 7.8 | 6.9 | 6.2 | 5.6 | 5 |



**Measurement Date: 8/7/2024**

## Measurements

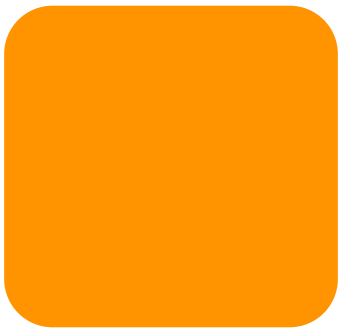
Total Lumen Output: 2061 lm

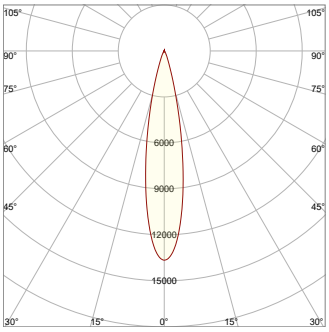
Peak Intensity: 13638 cd

Efficacy: 40 Lumen/Watt

Power: 51.4 W

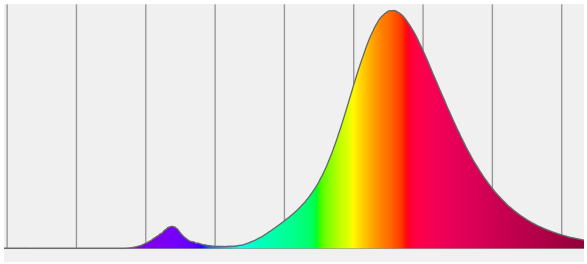
Voltage: 119 V, Current: 0.443 A

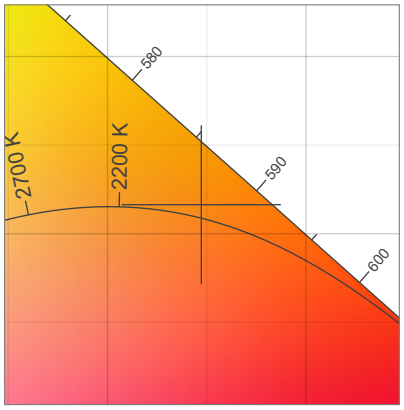




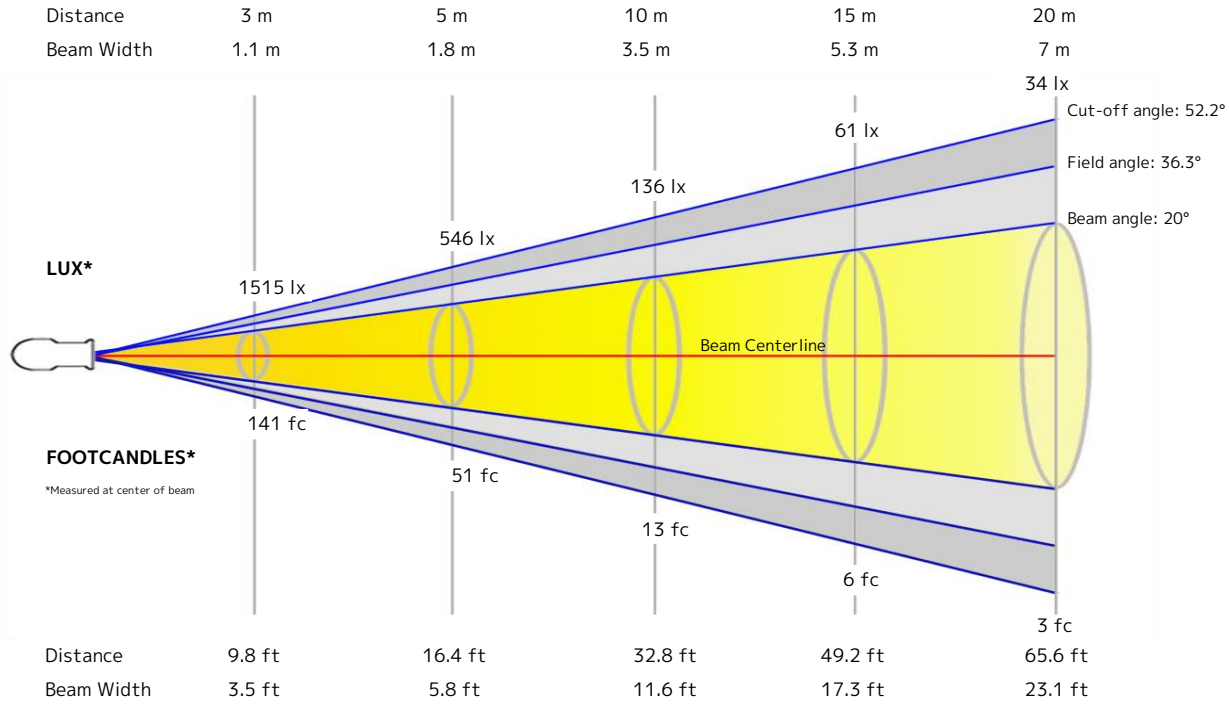

## Spectral Power Distribution

Dominant Wavelength 590 nm






| Dominant Wavelength | Color Coordinate CIE 1931 | Color Coordinate CIE1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---|---|---|---|---|
| nm | x | y | u | v |
| 590 | 0.547 | 0.416 | 0.317 | 0.362 |




**Beam Intensities from 1-20m**

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| LX | 13638 | 3410 | 1515 | 852 | 546 | 379 | 278 | 213 | 168 | 136 | 113 | 95 | 81 | 70 | 61 | 53 | 47 | 42 | 38 | 34 |
| FC | 1267 | 316.8 | 140.8 | 79.2 | 50.7 | 35.2 | 25.9 | 19.8 | 15.6 | 12.7 | 10.5 | 8.8 | 7.5 | 6.5 | 5.6 | 4.9 | 4.4 | 3.9 | 3.5 | 3.2 |



**Measurement Date: 8/7/2024**

## Measurements

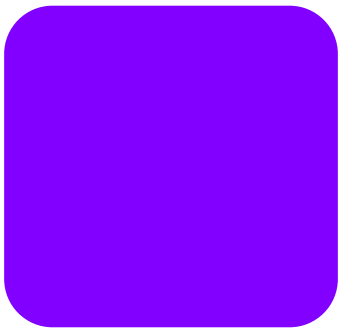
Total Lumen Output: 19.9 lm

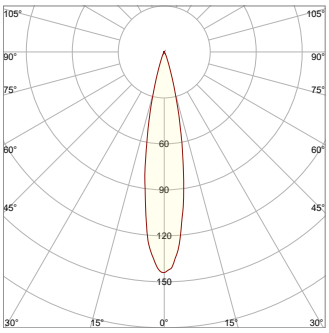
Peak Intensity: 144 cd

Efficacy: 1 Lumen/Watt

Power: 30.7 W

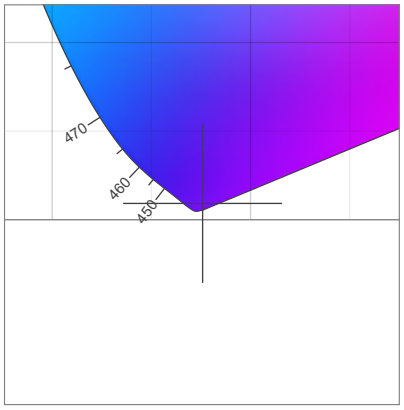
Voltage: 120 V, Current: 0.274 A



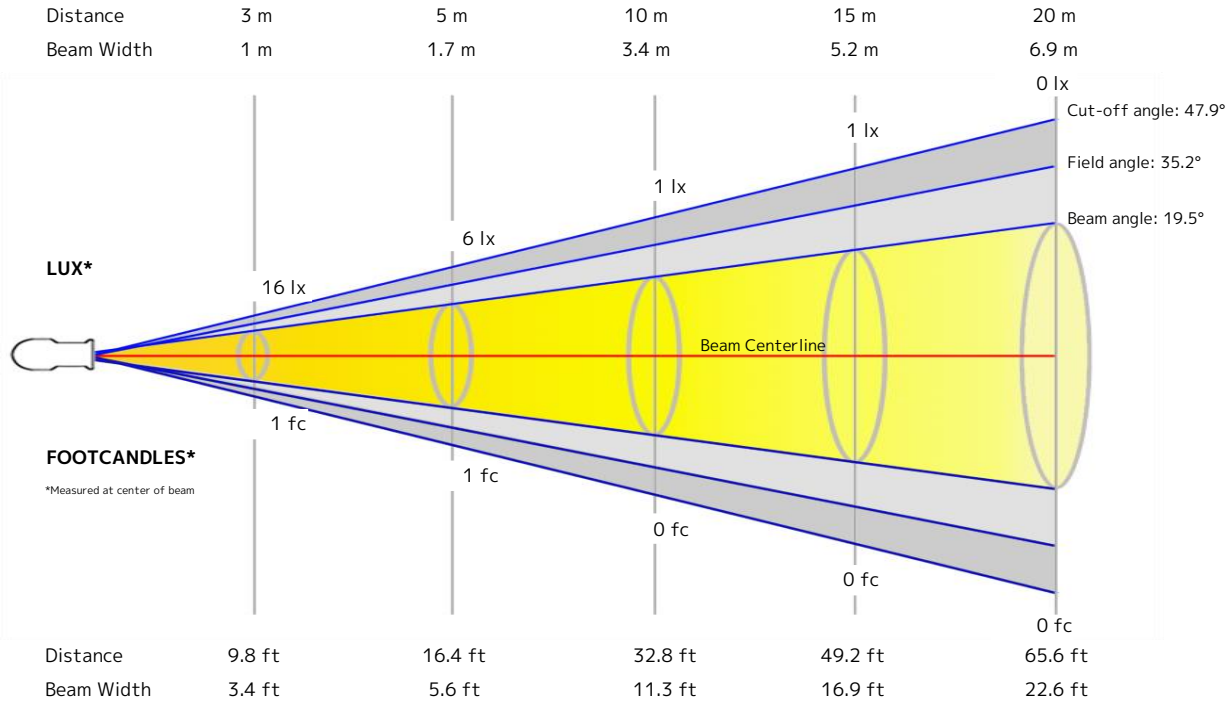



## Spectral Power Distribution

Dominant Wavelength 384 nm




| Dominant Wavelength | Color Coordinate CIE 1931 | Color Coordinate CIE1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---|---|---|---|---|
| nm | x | y | u | v |
| 384 | 0.176 | 0.009 | 0.255 | 0.020 |




**Beam Intensities from 1-20m**

| M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FT | 3.3 | 6.6 | 9.8 | 13.1 | 16.4 | 19.7 | 23 | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| LX | 144 | 36 | 16 | 9 | 6 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| FC | 13.4 | 3.3 | 1.5 | 0.8 | 0.5 | 0.4 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0 | 0 | 0 | 0 |



**Measurement Date: 8/7/2024**