KL CYC L

Photometric &

Chromaticity Test Reports

CONTENTS

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 2π 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

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+52 (728) 282-7070

Key Measurements

Output

Total Lumen Output: 7598 lm

Peak Intensity: 6131 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 5838 K

CRI: 92.7

TLCI: 86

TM30 R_F: 92.0

TM30 R_g: 103.7

Power Details

Efficacy: 50 Lumen/Watt

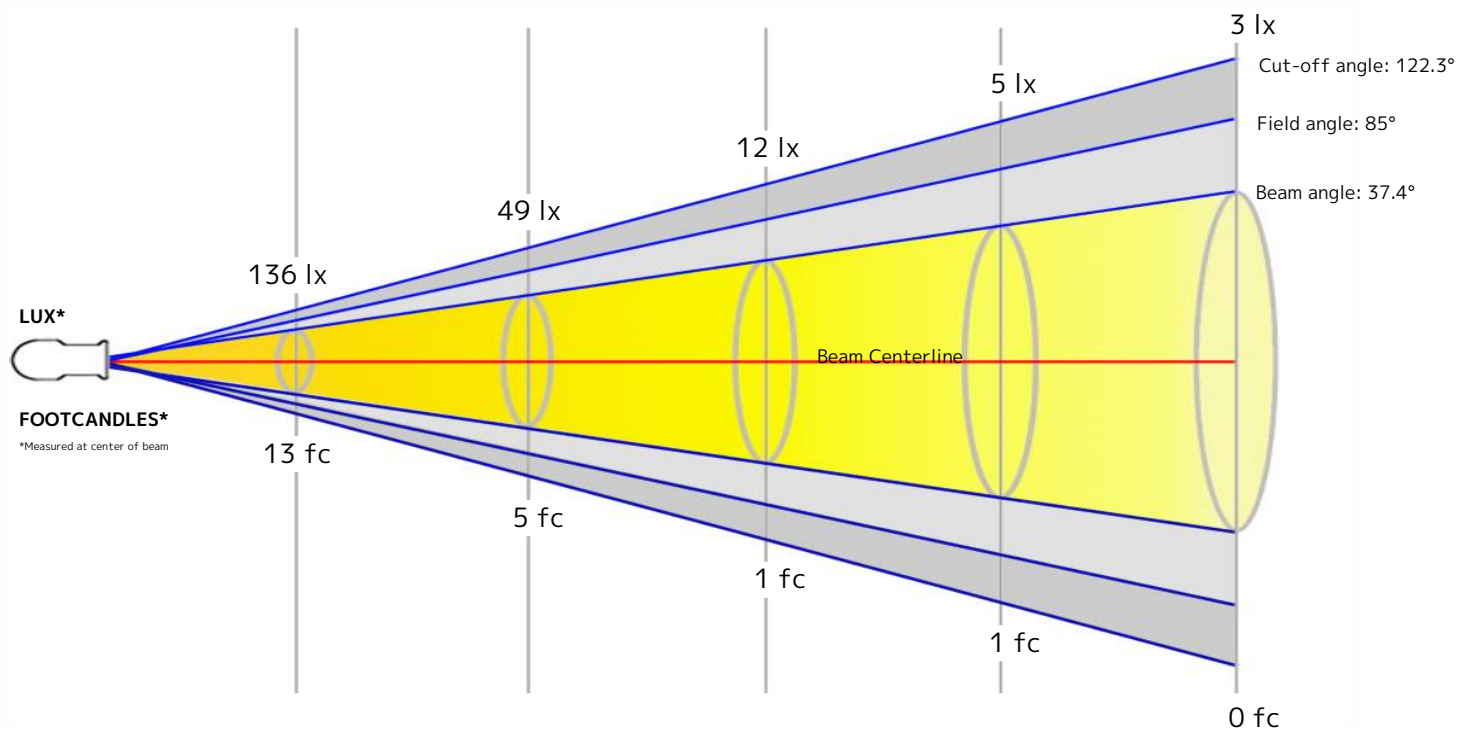
Power: 153 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.8 m	10.2 m	13.5 m



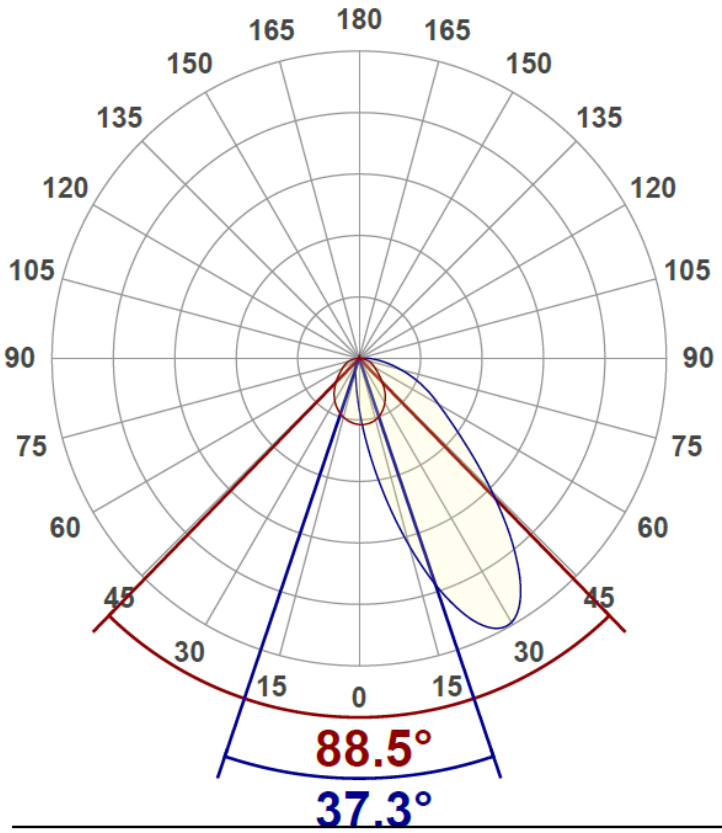
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.6 ft	11.1 ft	22.2 ft	33.3 ft	44.4 ft

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	1221	305	136	76	49	34	25	19	15	12	10	8	7	6	5	5	4	4	3	3
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	113.4	28.4	12.6	7.1	4.5	3.2	2.3	1.8	1.4	1.1	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.3

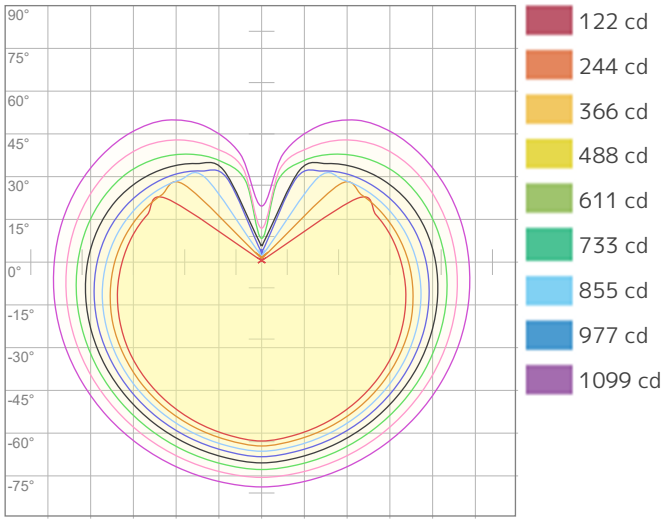
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

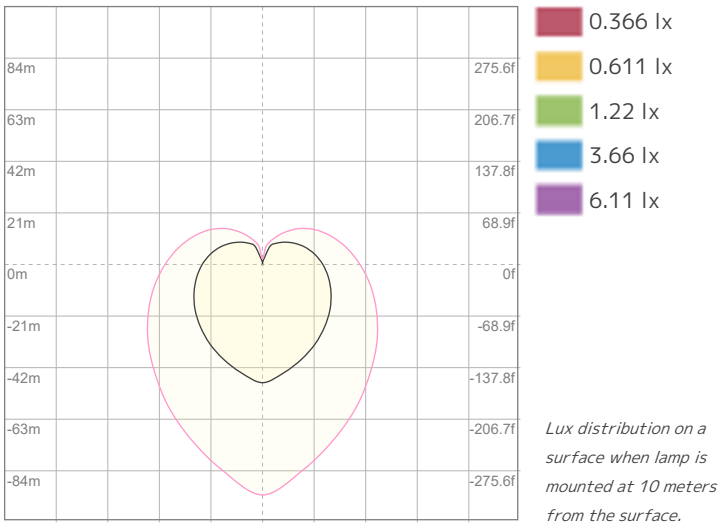


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 1221 cd



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

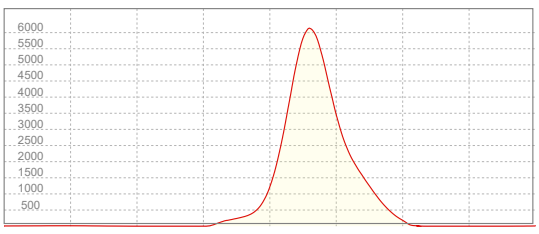
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 12.2 lx

Linear Distribution



Peak Candela

6131 cd

Calculate Center Beam Intensities

lux = 6131 / distance(m)^2

fc = 6131 / distance(ft)^2

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 7388 lm

Peak Intensity: 5760 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 2437 K

CRI: 96.5

TLCI: 82

TM30 R_F: 93.1

TM30 R_g: 103.3

Power Details

Efficacy: 51 Lumen/Watt

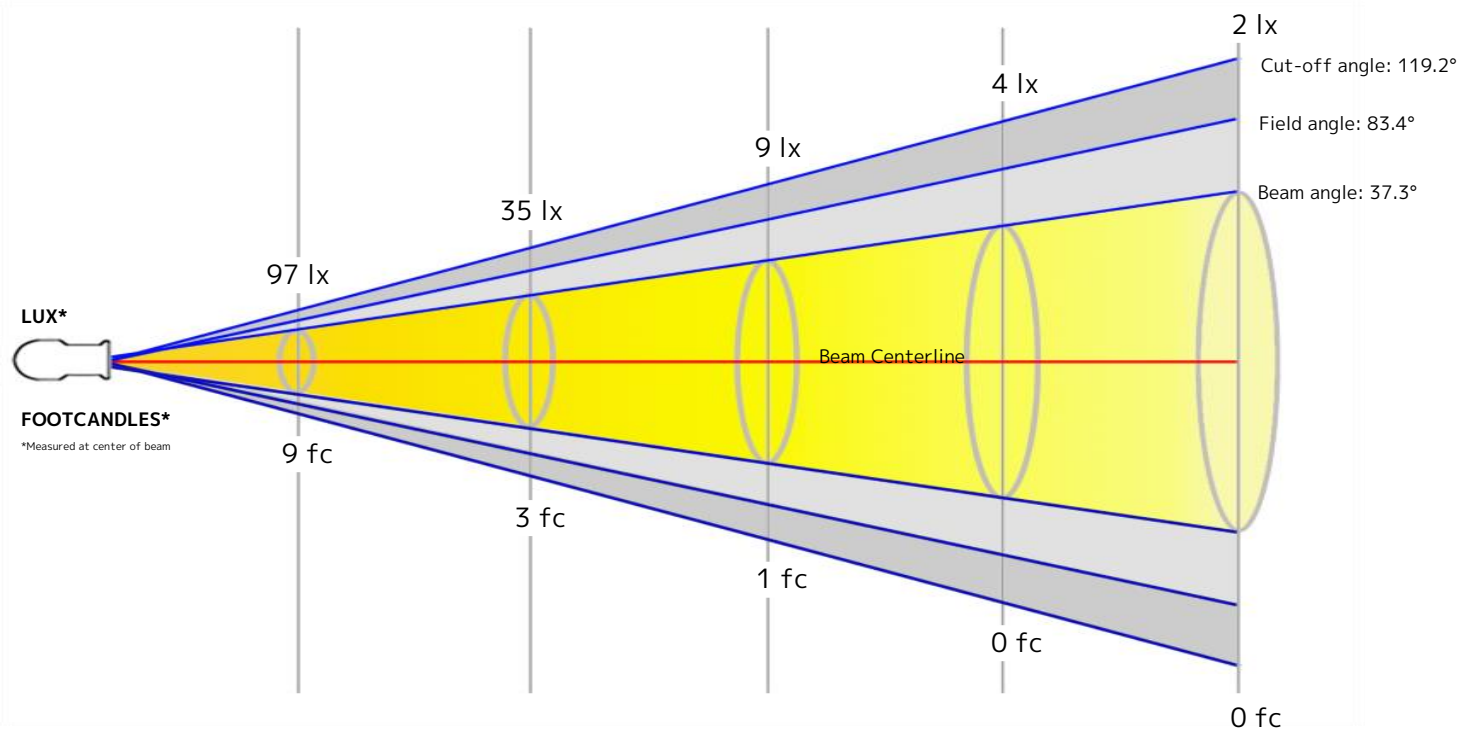
Power: 145 W

Supply Voltage: 118 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.7 m	10.1 m	13.5 m



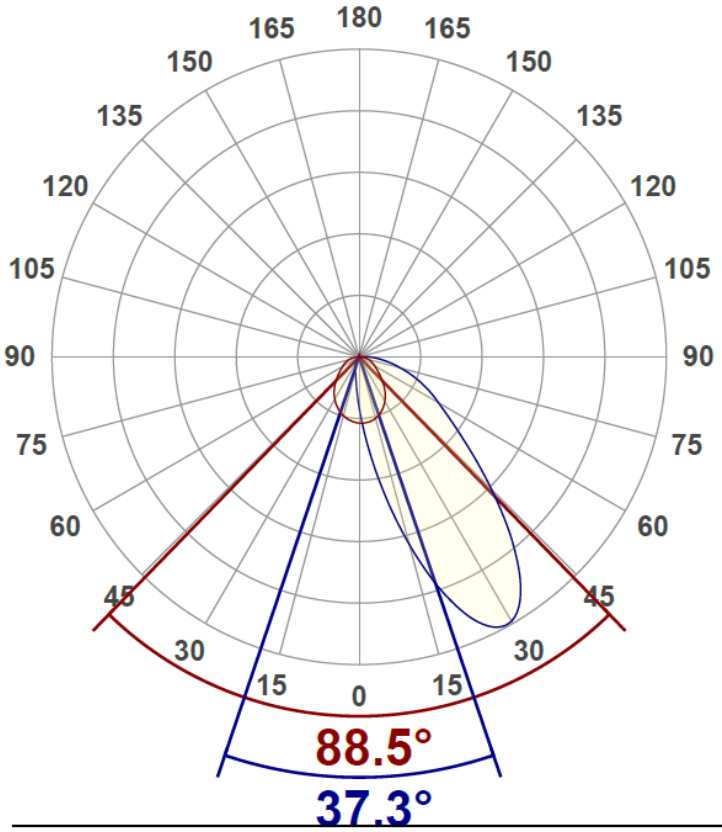
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.6 ft	11.1 ft	22.1 ft	33.2 ft	44.2 ft

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	874	219	97	55	35	24	18	14	11	9	7	6	5	4	4	3	3	3	2	2
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	81.2	20.3	9	5.1	3.2	2.3	1.7	1.3	1	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2

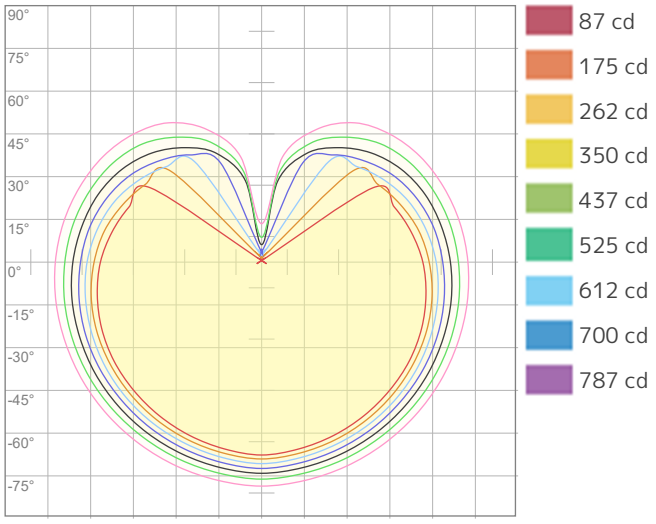
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

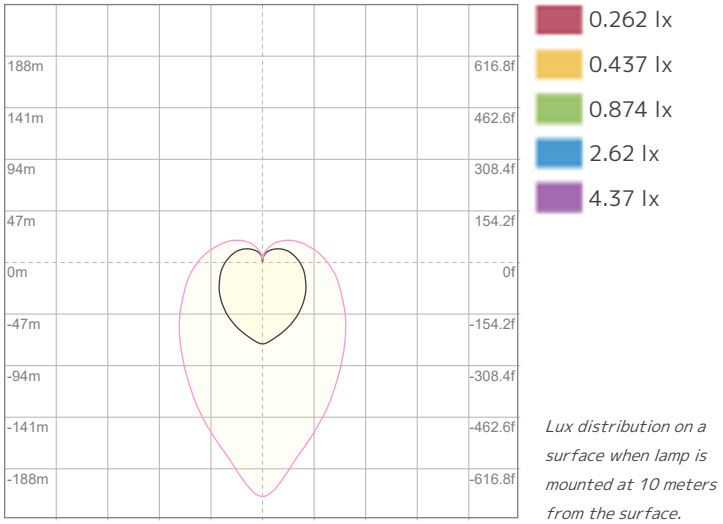


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 874 cd



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

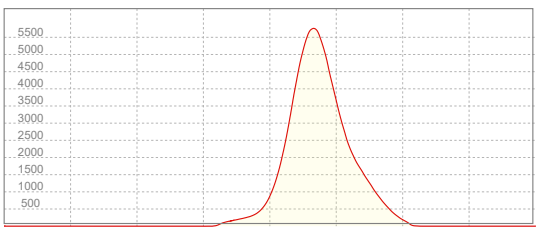
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 8.74 lx

Linear Distribution



Peak Candela

5760 cd

Calculate Center Beam Intensities

lux = 5760 / distance(m)^2

fc = 5760 / distance(ft)^2

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 7216 lm

Peak Intensity: 5489 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 3213 K

CRI: 96.2

TLCI: 86

TM30 R_F: 93.3

TM30 R_g: 104.0

Power Details

Efficacy: 49 Lumen/Watt

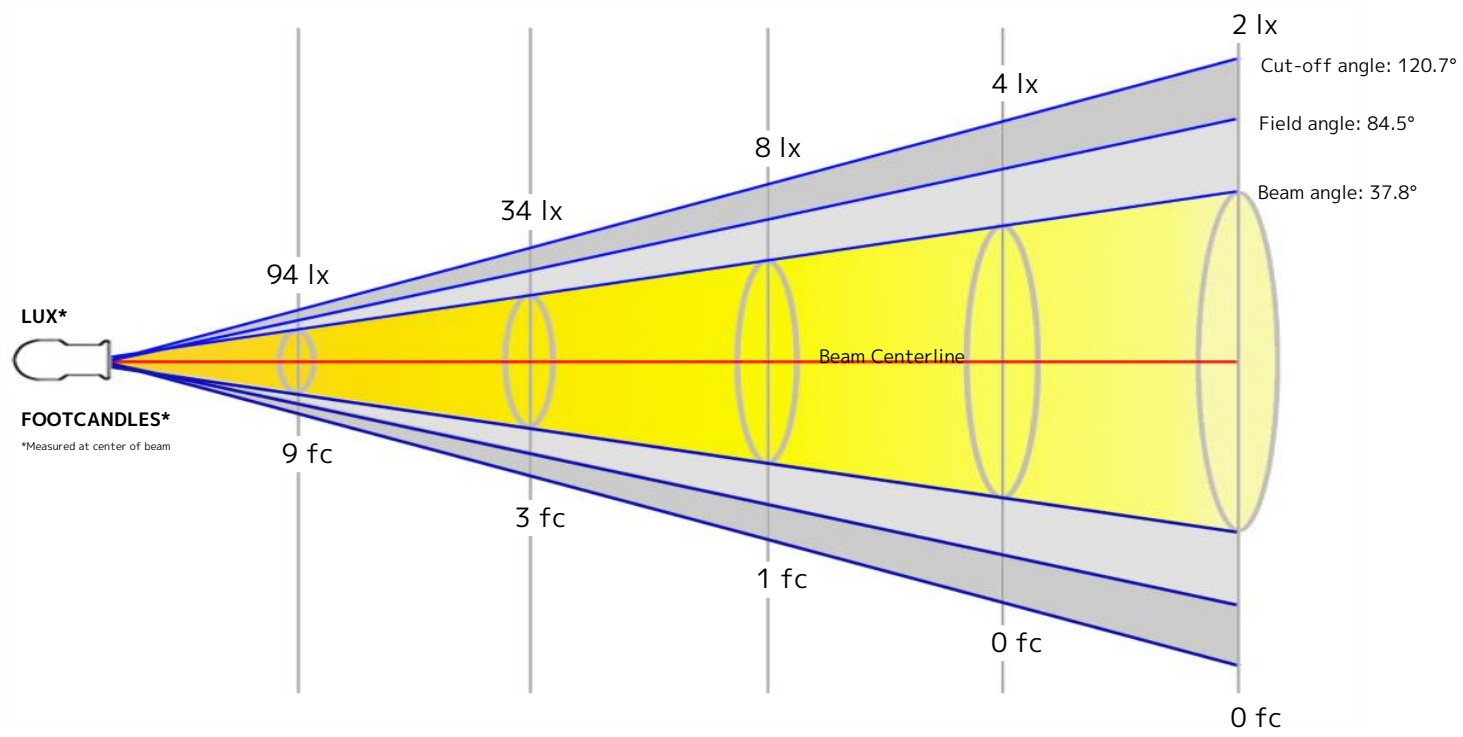
Power: 148 W

Supply Voltage: 118 V

Current: - A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	2.1 m	3.4 m	6.9 m	10.3 m	13.7 m



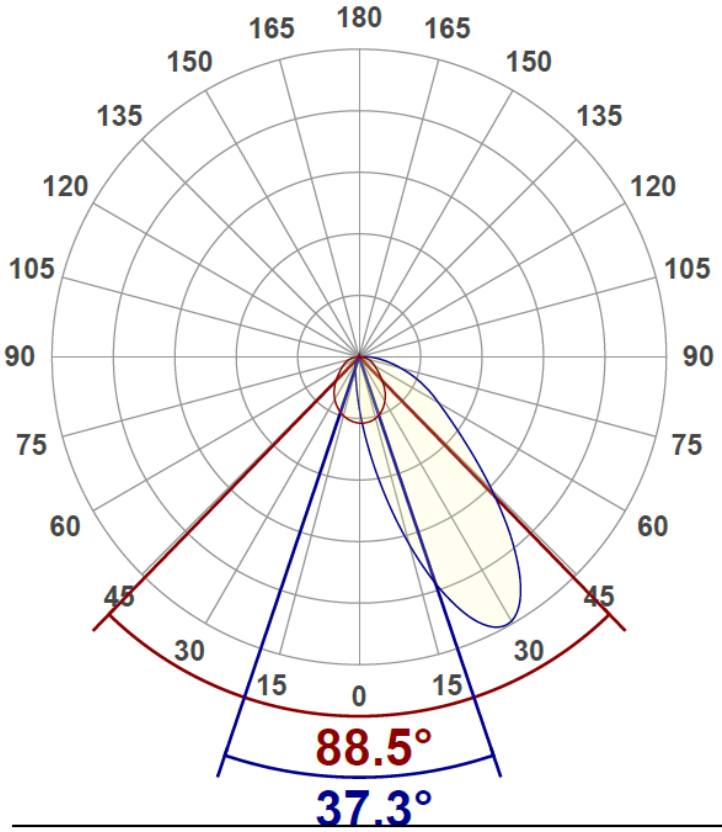
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.7 ft	11.2 ft	22.5 ft	33.7 ft	45 ft

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	843	211	94	53	34	23	17	13	10	8	7	6	5	4	4	3	3	3	2	2
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	78.3	19.6	8.7	4.9	3.1	2.2	1.6	1.2	1	0.8	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2

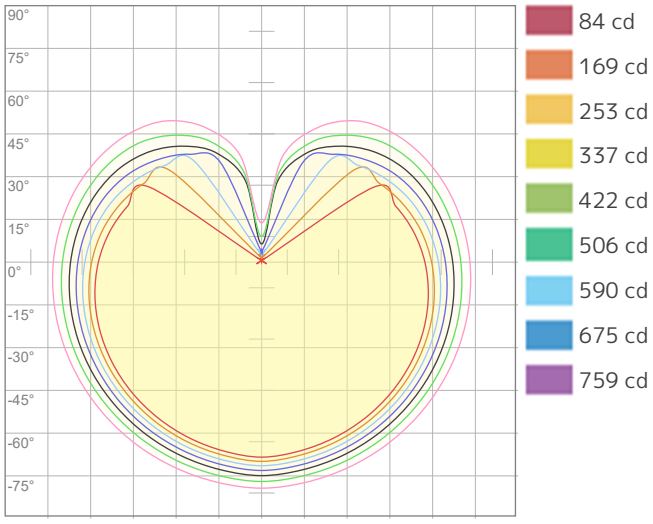
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

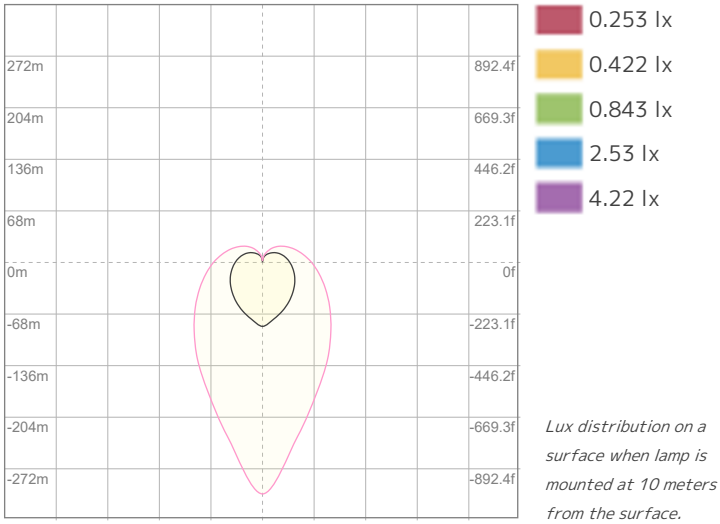


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 843 cd



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

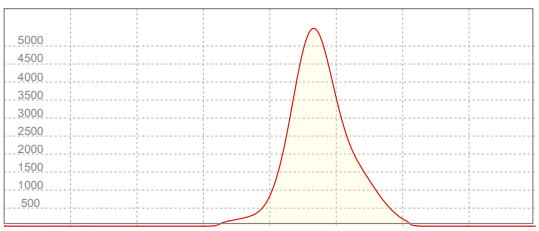
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 8.43 lx

Linear Distribution



Peak Candela

5489 cd

Calculate Center Beam Intensities

lux = 5489 / distance(m)^2

fc = 5489 / distance(ft)^2

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 6760 lm

Peak Intensity: 5205 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 4530 K

CRI: 94.9

TLCI: 84

TM30 R_F: 92.5

TM30 R_g: 105.3

Power Details

Efficacy: 44 Lumen/Watt

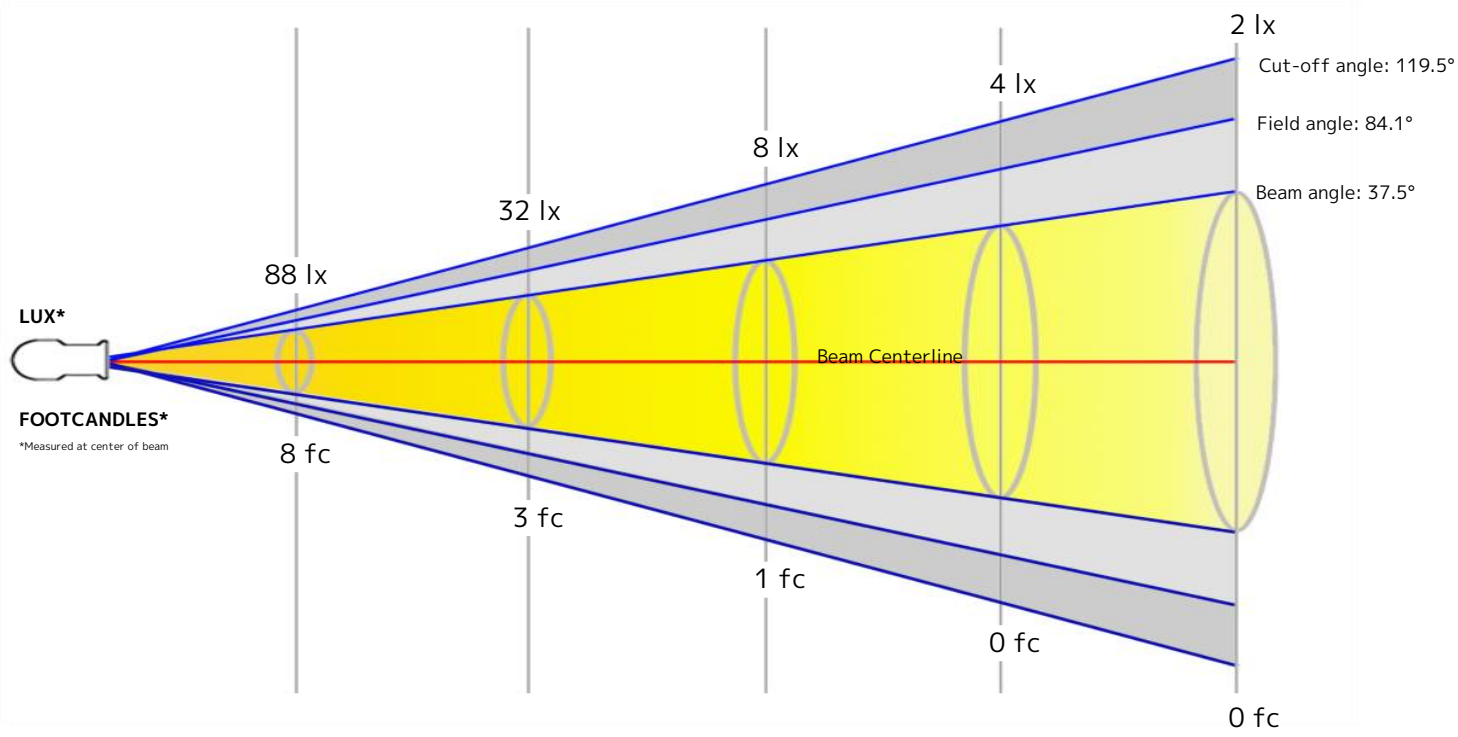
Power: 152 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.8 m	10.2 m	13.6 m



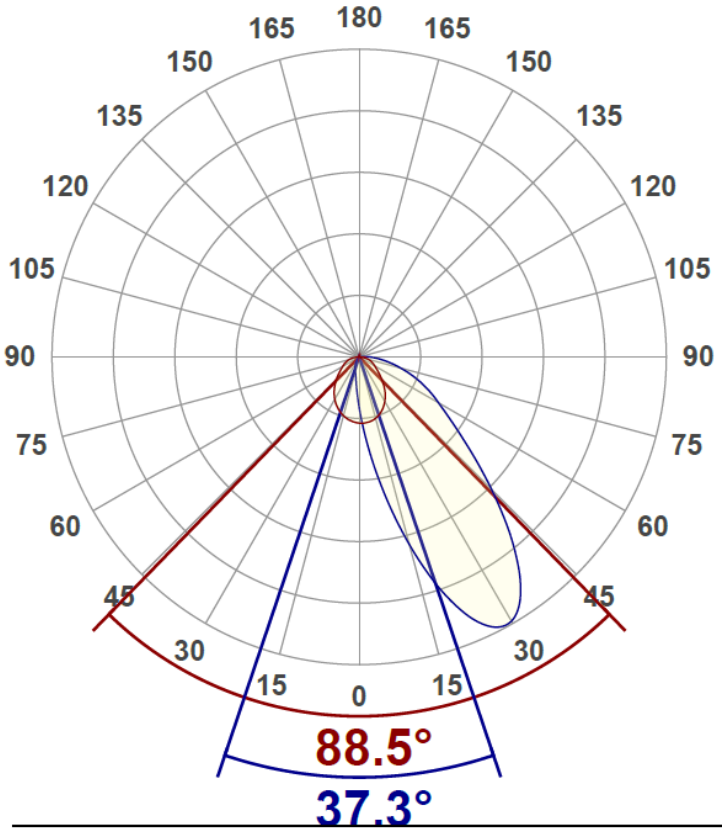
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.7 ft	11.1 ft	22.3 ft	33.4 ft	44.5 ft

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	794	199	88	50	32	22	16	12	10	8	7	6	5	4	4	3	3	2	2	2
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	73.8	18.4	8.2	4.6	3	2	1.5	1.2	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2

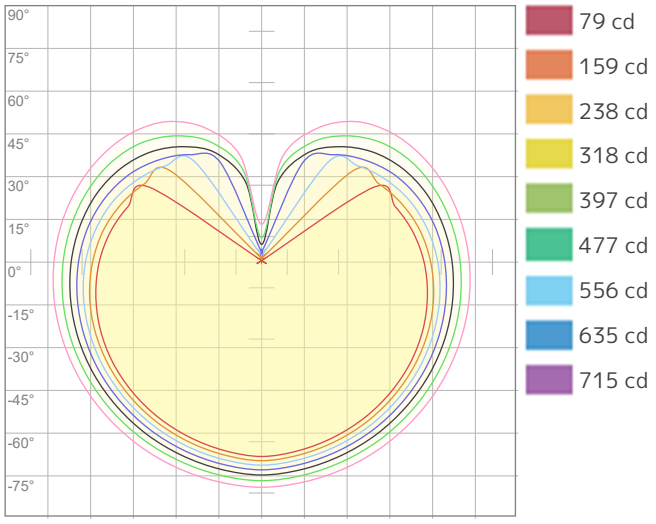
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

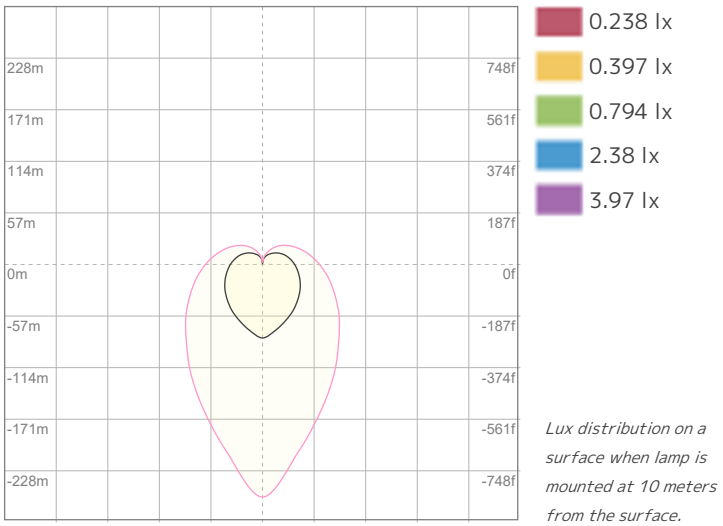


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 794 cd



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

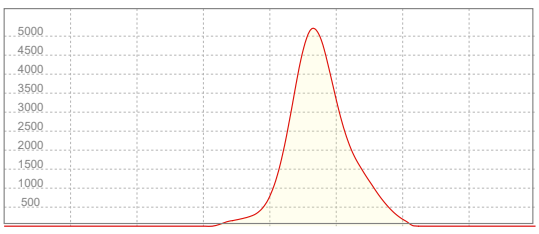
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 7.94 lx

Linear Distribution



Peak Candela

5205 cd

Calculate Center Beam Intensities

lux = 5205 / distance(m)^2

fc = 5205 / distance(ft)^2

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 6728 lm

Peak Intensity: 5131 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 5612 K

CRI: 93.5

TLCI: 86

TM30 R_F: 91.3

TM30 R_g: 105.2

Power Details

Efficacy: 43 Lumen/Watt

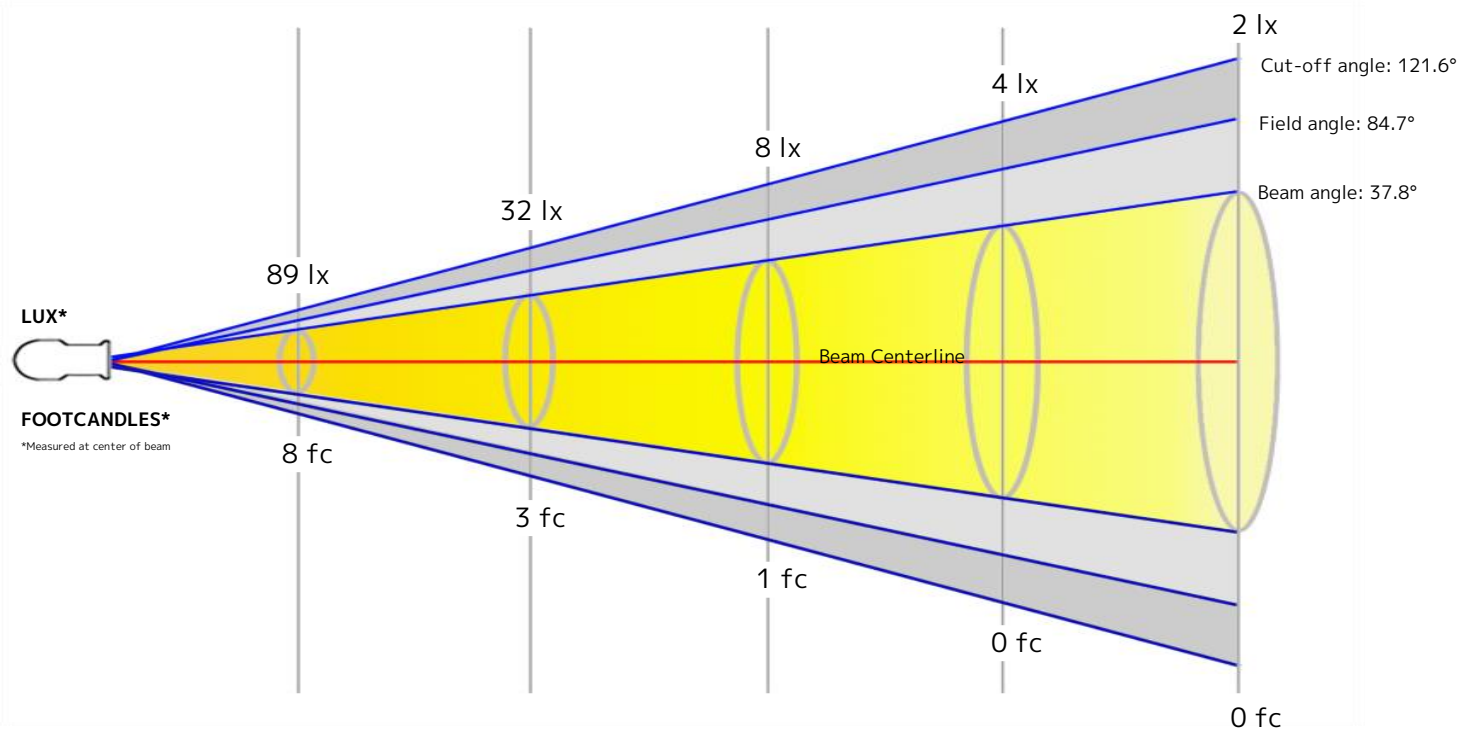
Power: 155 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	2.1 m	3.4 m	6.8 m	10.3 m	13.7 m



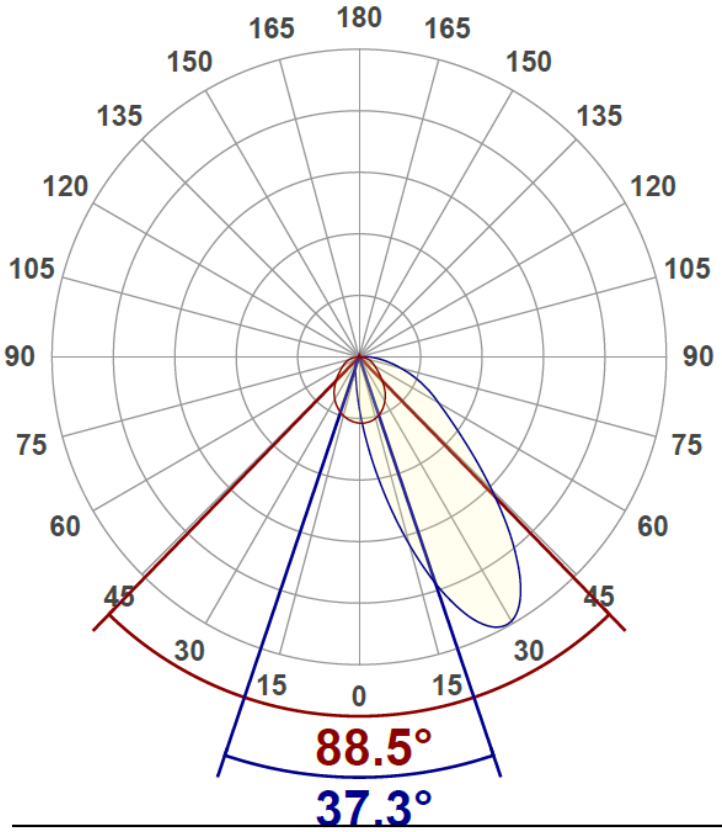
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.7 ft	11.2 ft	22.4 ft	33.6 ft	44.9 ft

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	802	200	89	50	32	22	16	13	10	8	7	6	5	4	4	3	3	2	2	2
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	74.5	18.6	8.3	4.7	3	2.1	1.5	1.2	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2

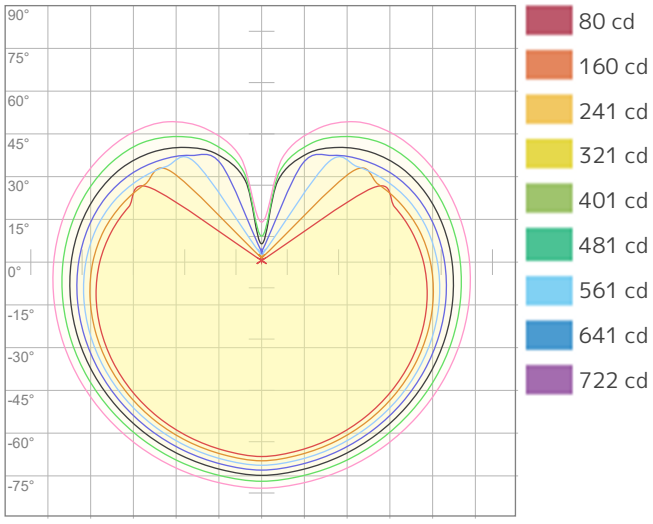
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

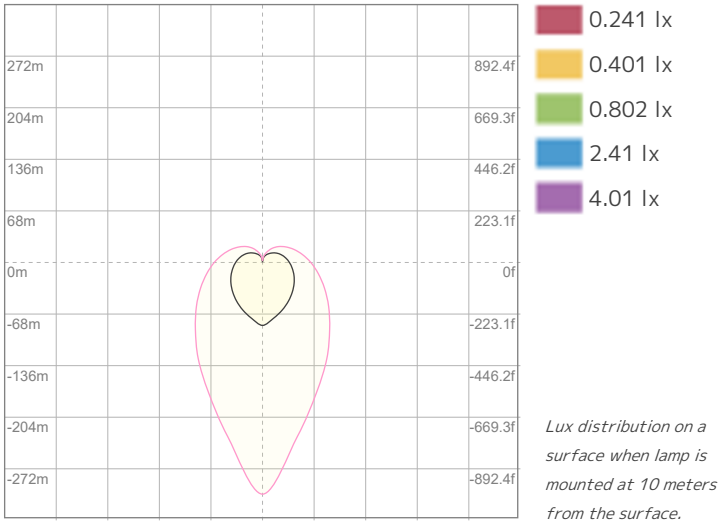


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 802 cd



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

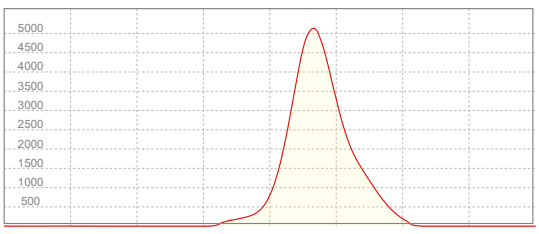
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 8.02 lx

Linear Distribution



Peak Candela

5131 cd

Calculate Center Beam Intensities

$lux = 5131 / distance(m)^2$

$fc = 5131 / distance(ft)^2$

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 6621 lm

Peak Intensity: 5064 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 6032 K

CRI: 93.2

TLCI: 87

TM30 R_F: 91.4

TM30 R_g: 105.5

Power Details

Efficacy: 43 Lumen/Watt

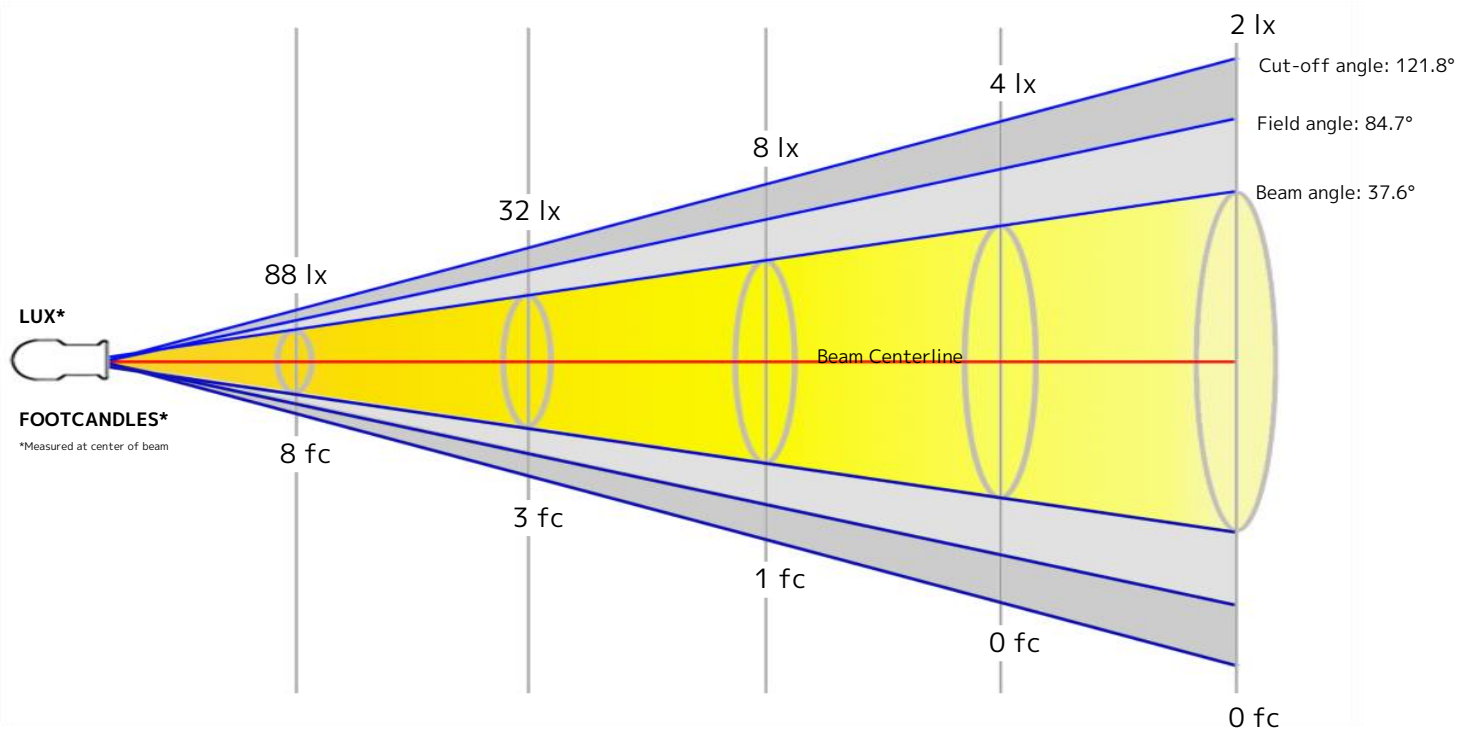
Power: 154 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.8 m	10.2 m	13.6 m



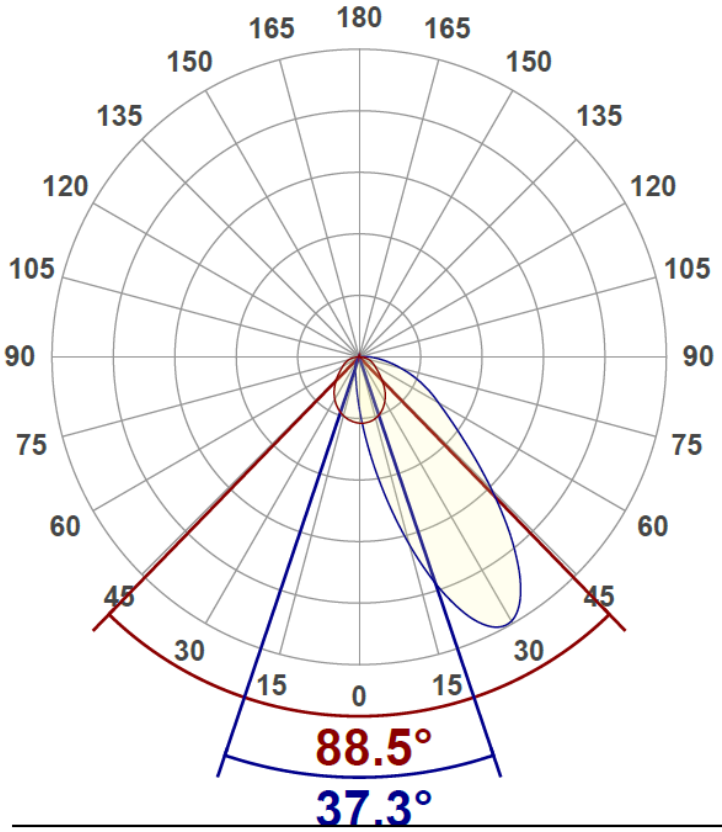
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.7 ft	11.2 ft	22.3 ft	33.5 ft	44.7 ft

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	789	197	88	49	32	22	16	12	10	8	7	5	5	4	4	3	3	2	2	2
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	73.3	18.3	8.1	4.6	2.9	2	1.5	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2

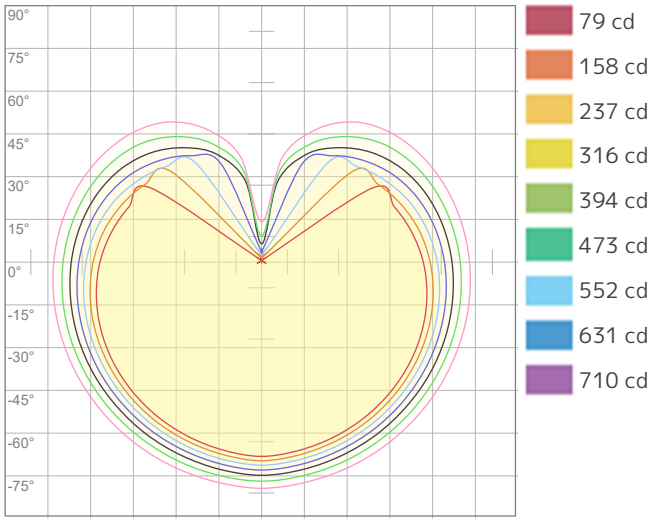
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

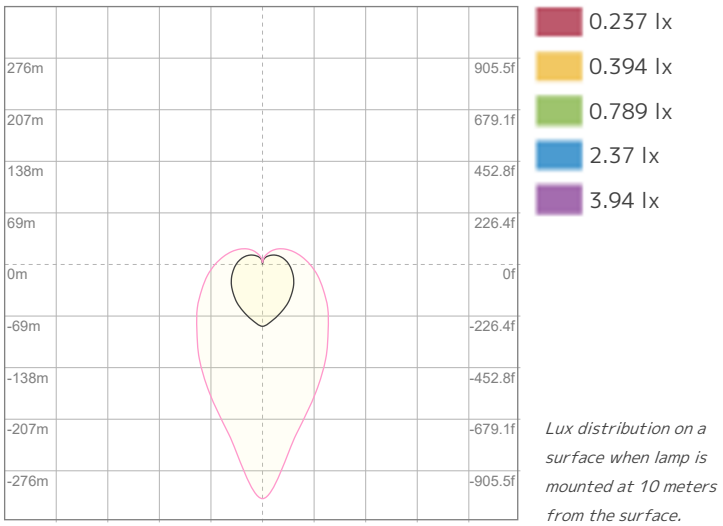


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 789 cd



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

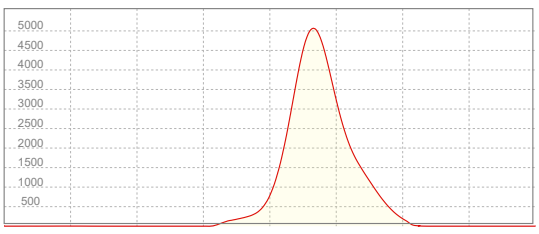
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 7.89 lx

Linear Distribution



Peak Candela

5064 cd

Calculate Center Beam Intensities

lux = 5064 / distance(m)^2

fc = 5064 / distance(ft)^2

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 6498 lm

Peak Intensity: 4990 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 6500 K

CRI: 93.0

TLCI: 87

TM30 R_F: 91.1

TM30 R_g: 105.2

Power Details

Efficacy: 42 Lumen/Watt

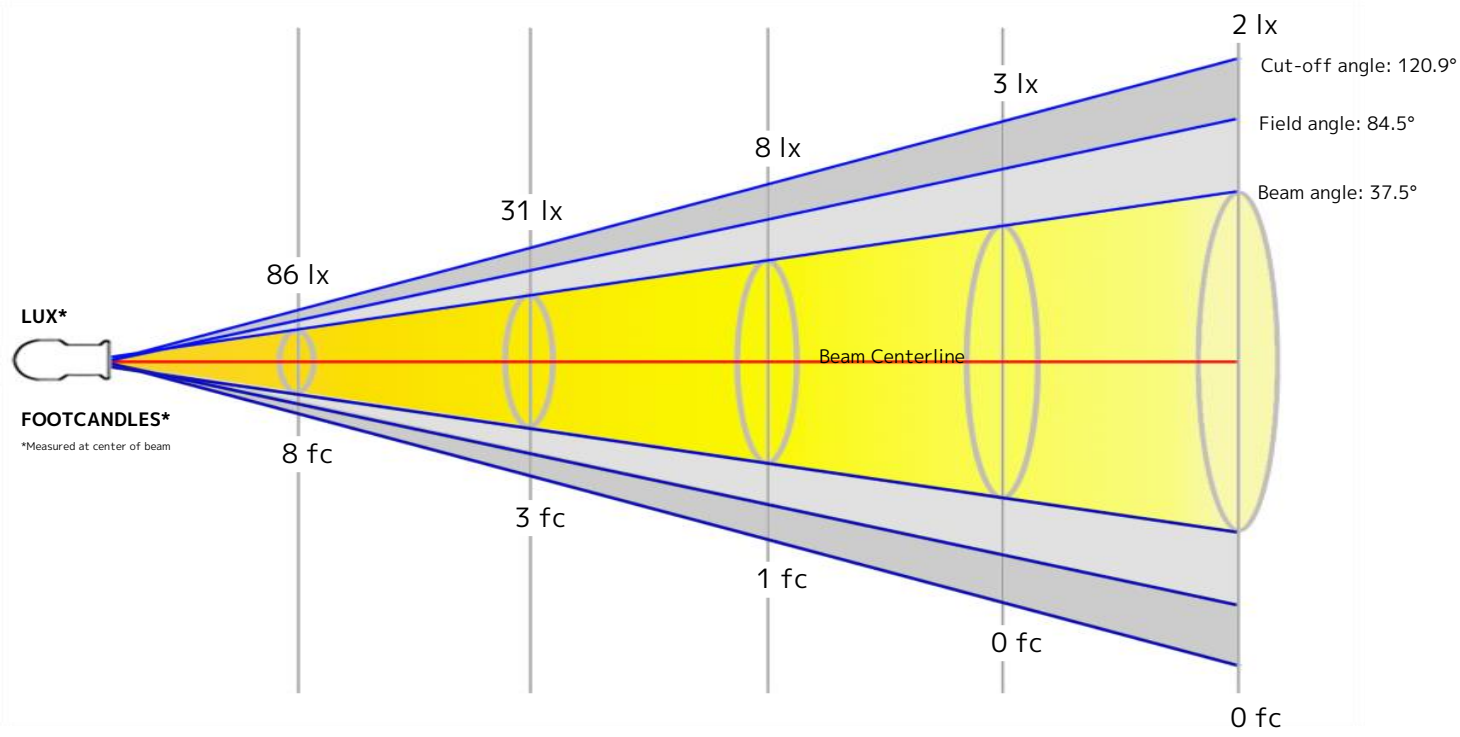
Power: 153 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.8 m	10.2 m	13.6 m



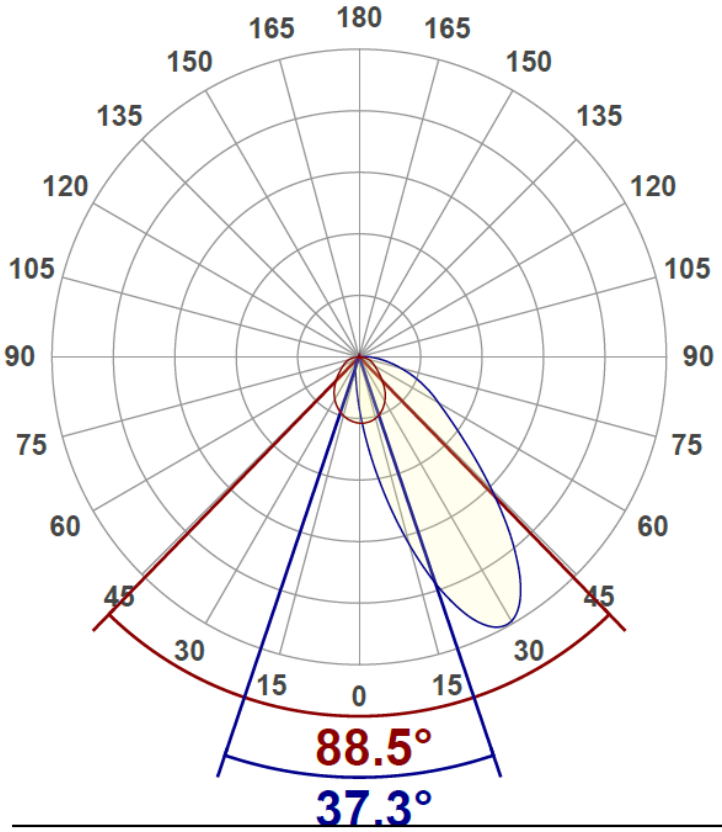
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.7 ft	11.1 ft	22.3 ft	33.4 ft	44.6 ft

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	772	193	86	48	31	21	16	12	10	8	6	5	5	4	3	3	3	2	2	2
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	71.7	17.9	8	4.5	2.9	2	1.5	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2

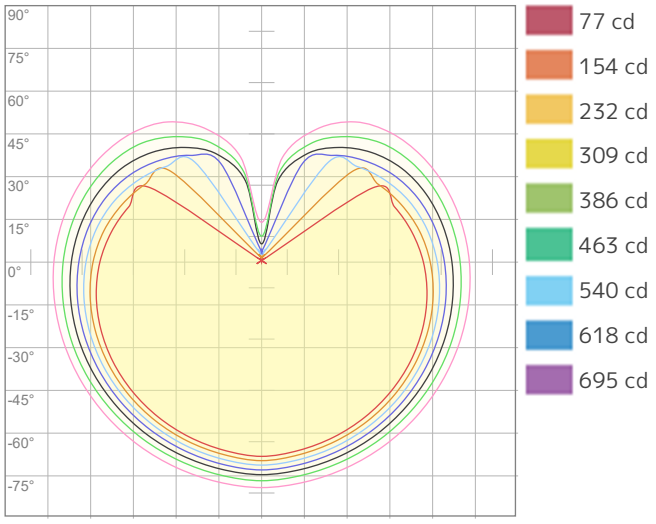
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

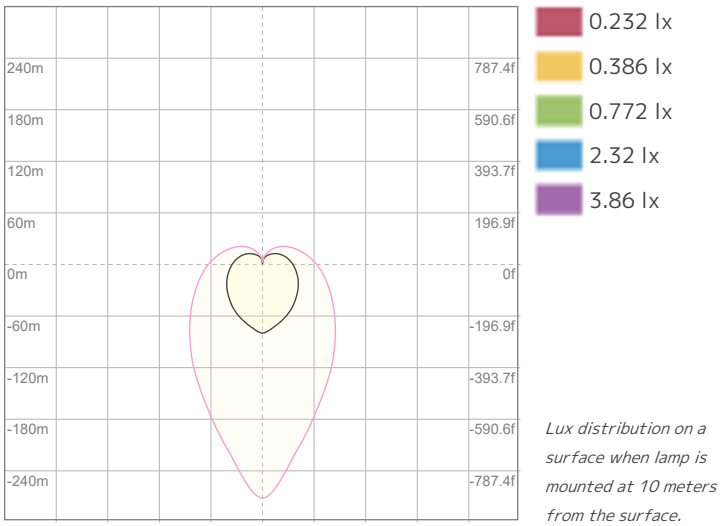


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 772 cd



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

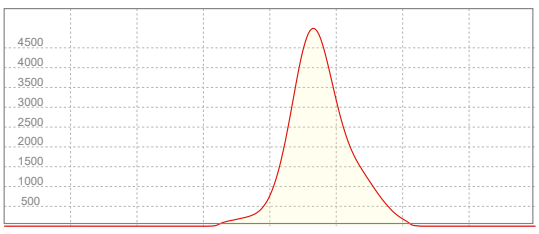
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 7.72 lx

Linear Distribution



Peak Candela

4990 cd

Calculate Center Beam Intensities

$lux = 4990 / distance(m)^2$

$fc = 4990 / distance(ft)^2$

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 6330 lm

Peak Intensity: 4853 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 7487 K

CRI: 92.6

TLCI: 87

TM30 R_F: 90.6

TM30 R_g: 104.8

Power Details

Efficacy: 41 Lumen/Watt

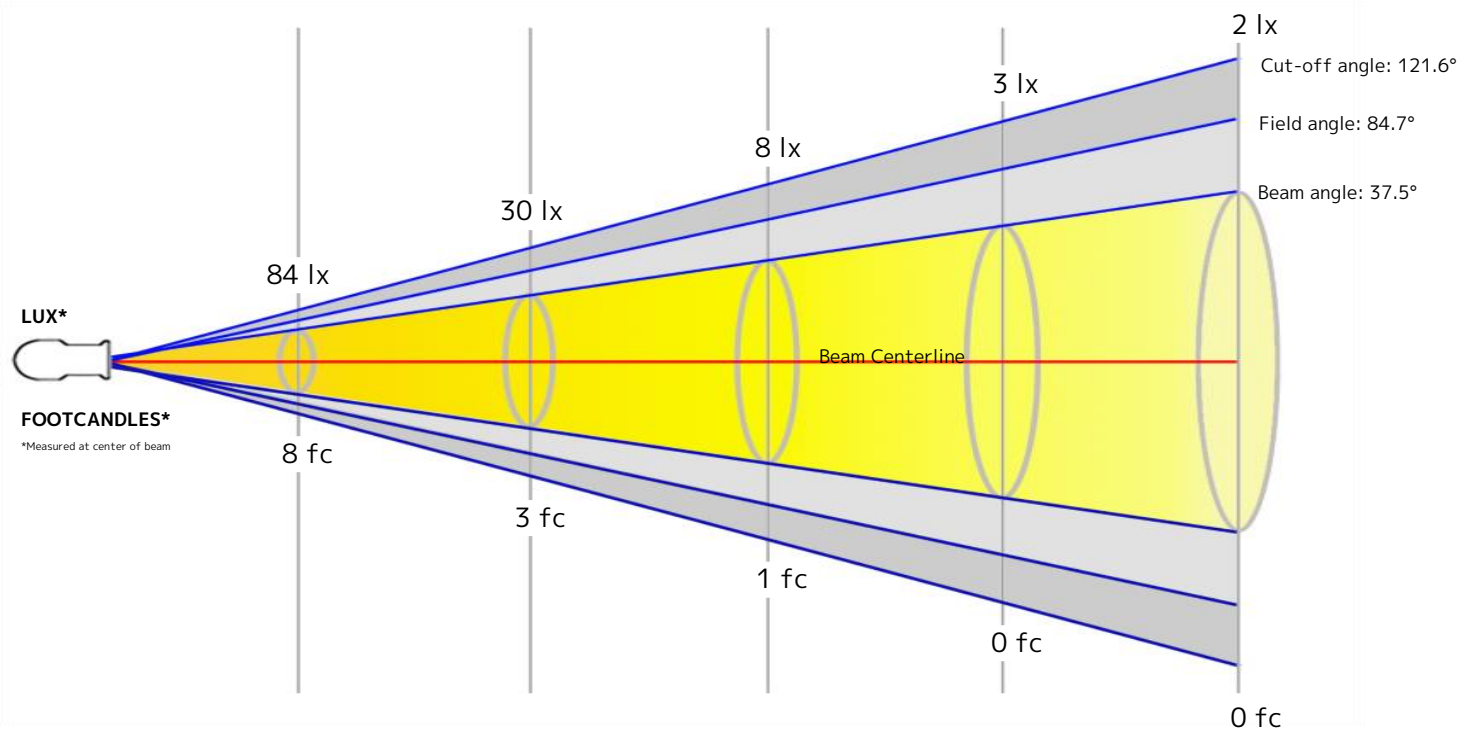
Power: 153 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.8 m	10.2 m	13.6 m



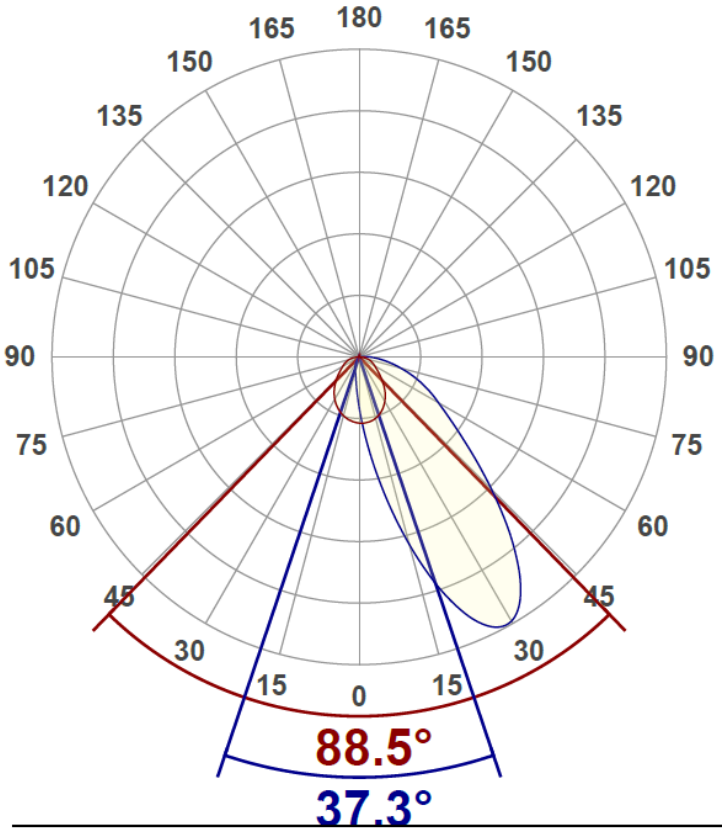
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.7 ft	11.1 ft	22.3 ft	33.4 ft	44.6 ft

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	757	189	84	47	30	21	15	12	9	8	6	5	4	4	3	3	3	2	2	2
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	70.3	17.6	7.8	4.4	2.8	2	1.4	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2

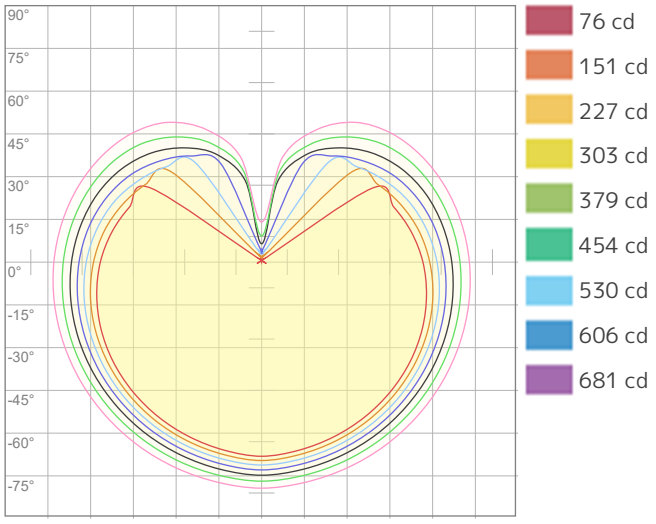
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

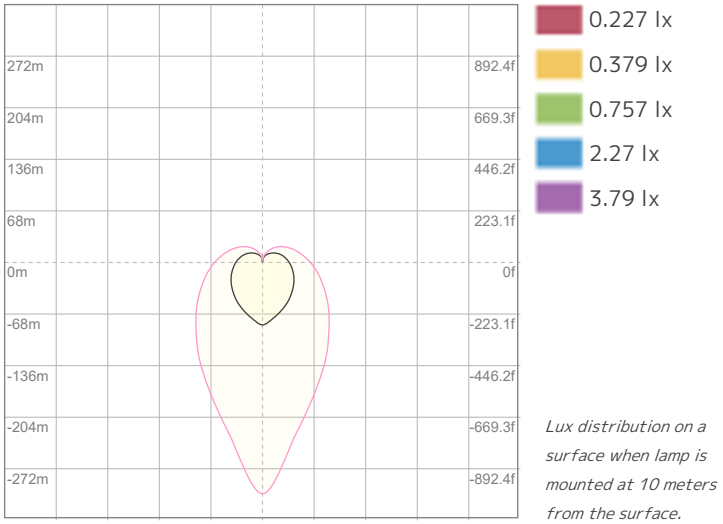


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 757 cd



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

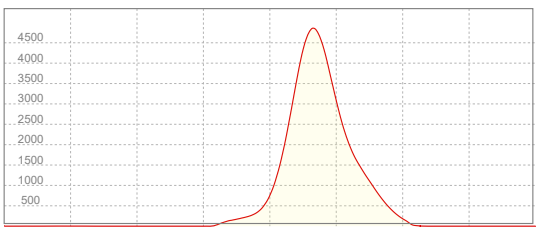
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 7.57 lx

Linear Distribution



Peak Candela

4853 cd

Calculate Center Beam Intensities

$lux = 4853 / distance(m)^2$

$fc = 4853 / distance(ft)^2$

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 6360 lm

Peak Intensity: 4925 cd

Beam

Beam Angle (50%): 88.5° x 37.3°

Field Angle (10%): 160.2° x 84.5°

Cutoff Angle (2.5%): 171.5° x 120.4°

Color

Color Temperature: 7632 K

CRI: 92.5

TLCI: 87

TM30 R_F: 90.5

TM30 R_g: 105.1

Power Details

Efficacy: 41 Lumen/Watt

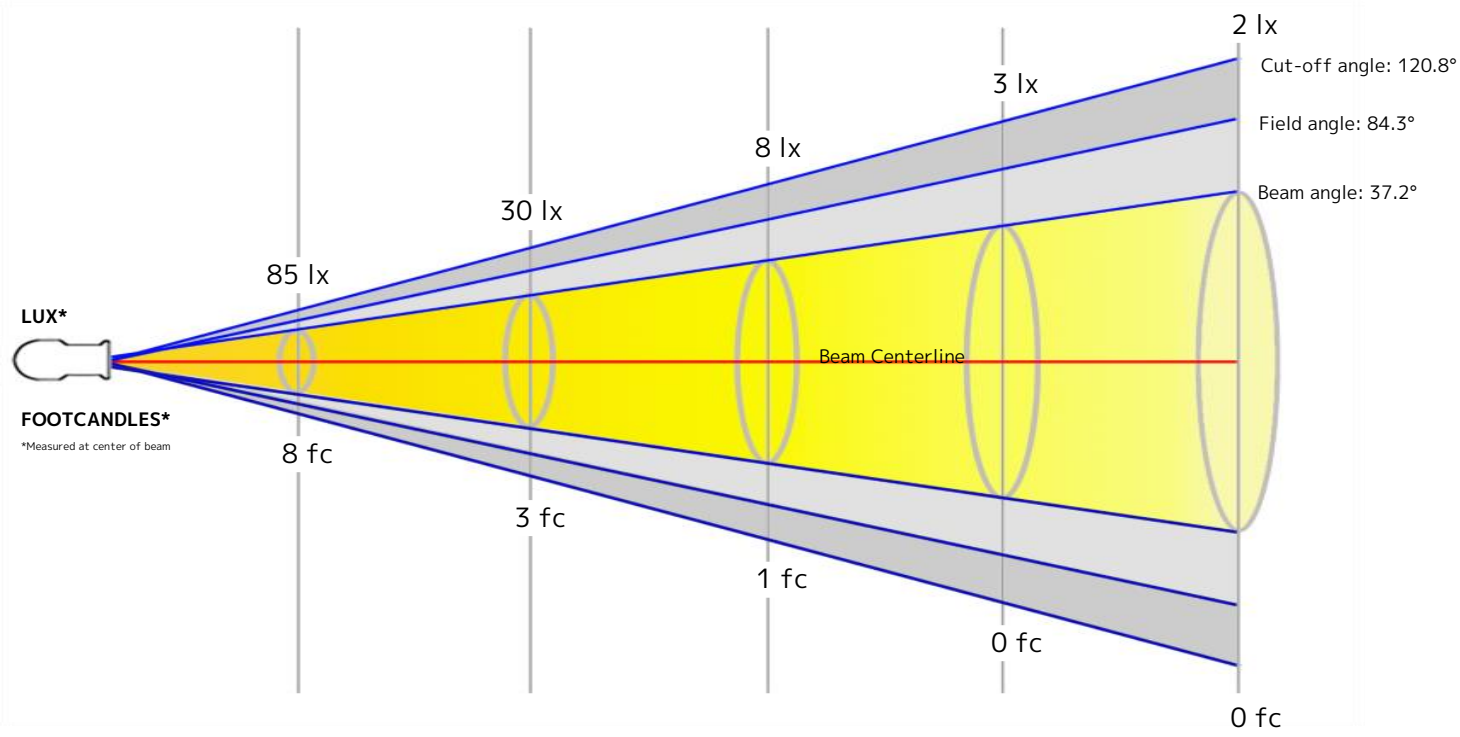
Power: 154 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m 2	5 m	10 m	15 m	20 m
Beam Width	m	3.4 m	6.7 m	10.1 m	13.5 m



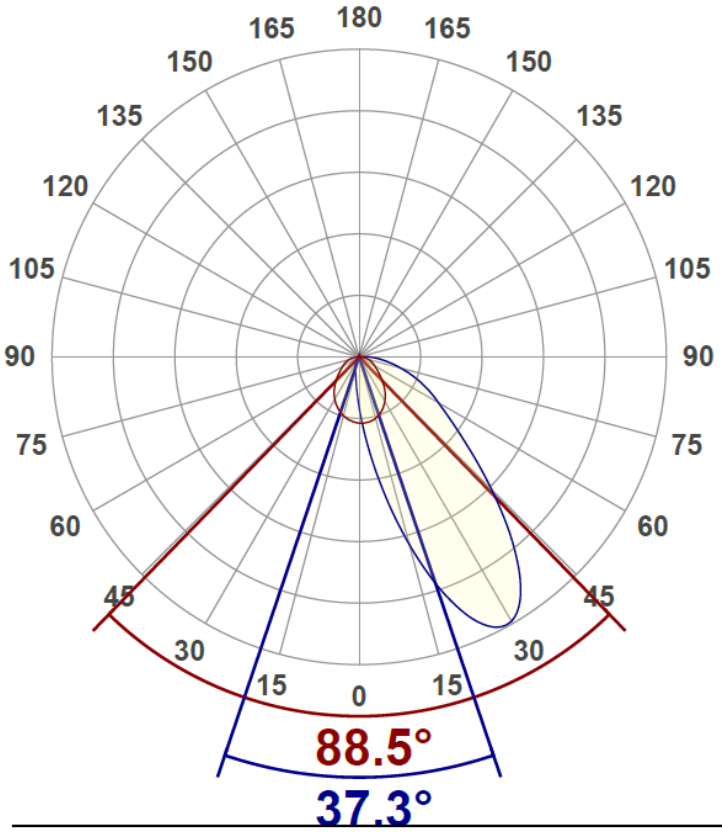
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	6.6 ft	11 ft	22.1 ft	33.1 ft	44.2 ft

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	762	191	85	48	30	21	16	12	9	8	6	5	5	4	3	3	3	2	2	2
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	70.8	17.7	7.9	4.4	2.8	2	1.4	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2

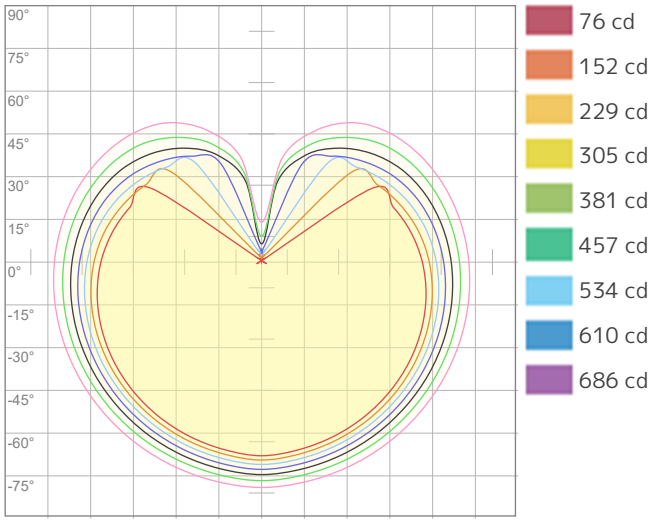
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
88.5°	37.3°
Field Angle - 10%	Field Angle - 10%
160.2°	84.5°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
171.5°	120.4°

ISO Diagrams

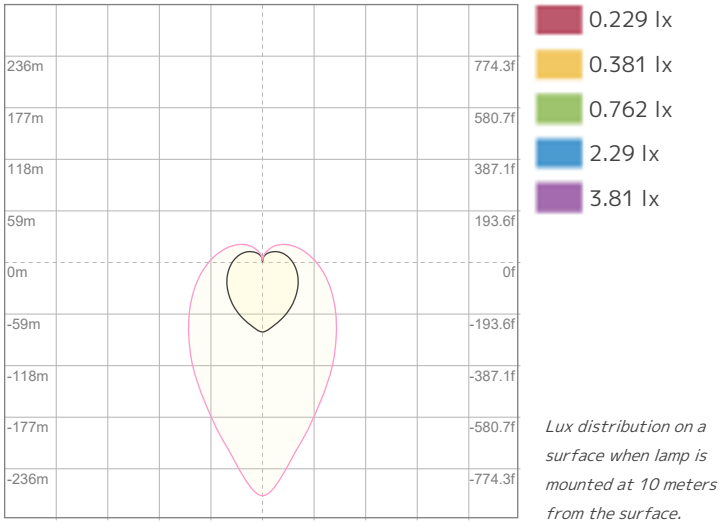


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 762 cd



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

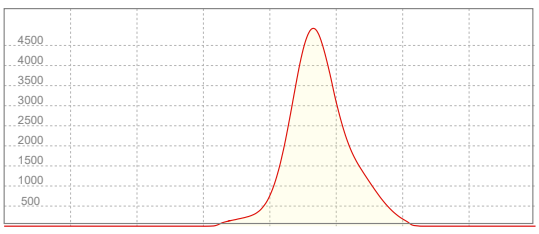
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 7.62 lx

Linear Distribution



Peak Candela

4925 cd

Calculate Center Beam Intensities

$lux = 4925 / distance(m)^2$

$fc = 4925 / distance(ft)^2$

Measurement Date: 5/16/2024

Key Measurements

Output

Total Lumen Output: 8606 lm

Peak Intensity: 9673 cd

Beam

Beam Angle (50%): 76.2° x 25°

Field Angle (10%): 126.3° x 80.6°

Cutoff Angle (2.5%): 135.4° x 84.3°

Color

Color Temperature: 5750 K

CRI: 92.5

TLCI: 86

TM30 R_F: 91.9

TM30 R_g: 103.2

Power Details

Efficacy: 57 Lumen/Watt

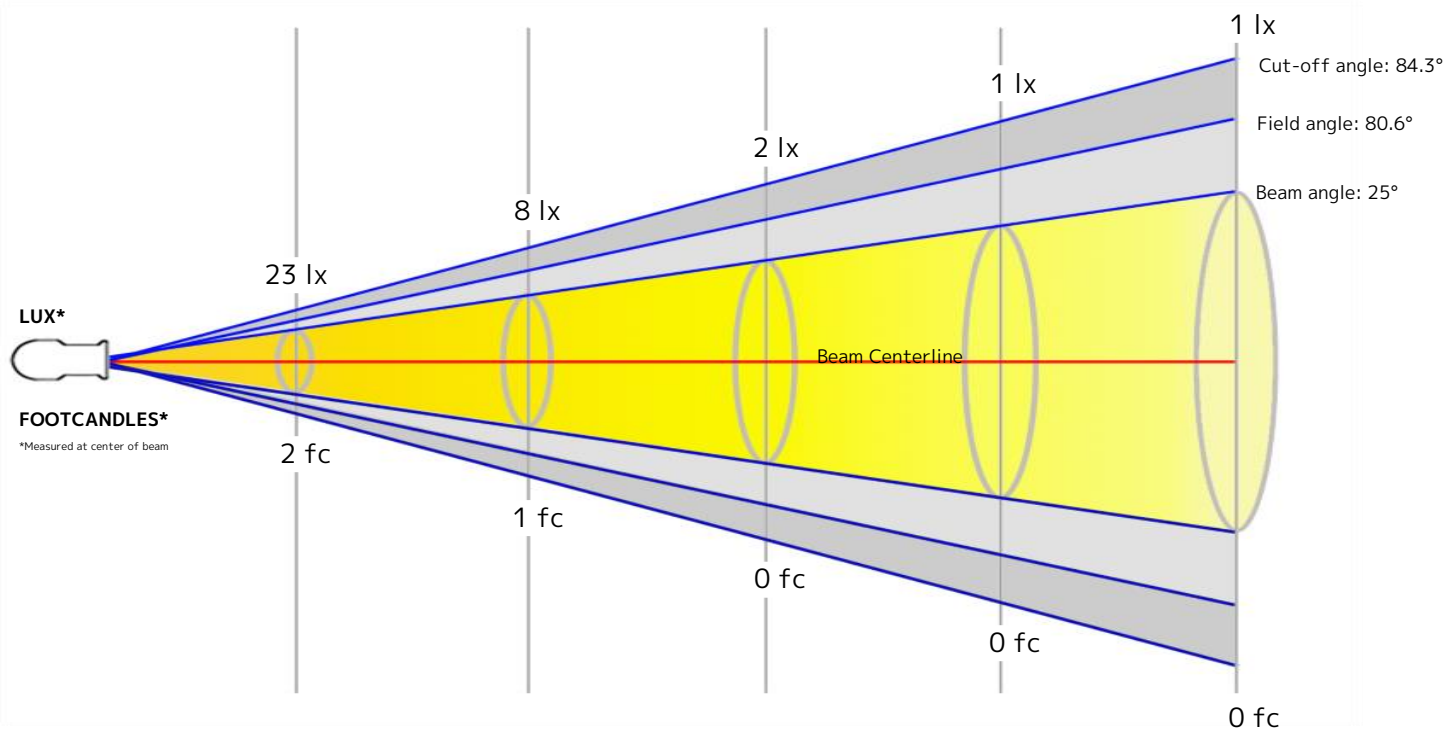
Power: 152 W

Supply Voltage: 117 V

Current: - A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1.3 m	2.2 m	4.4 m	6.7 m	8.9 m



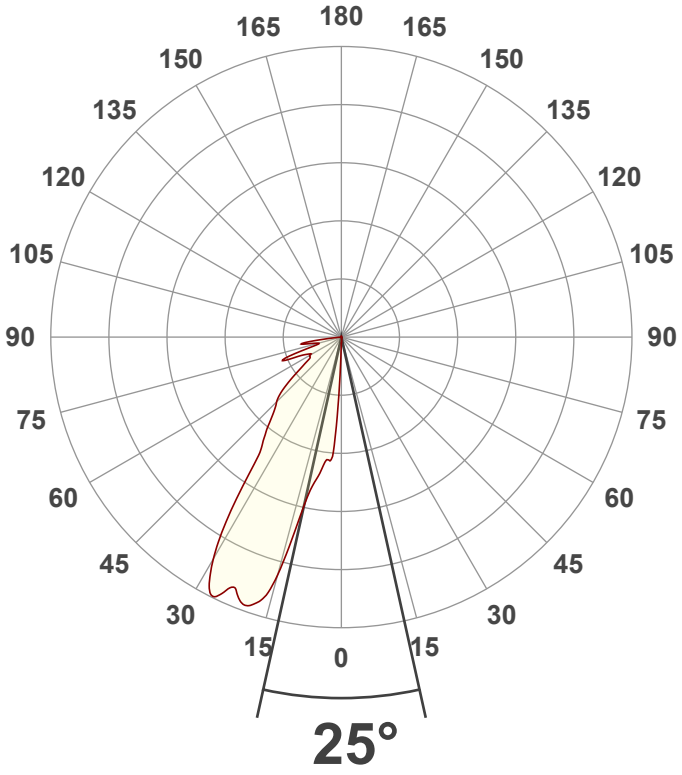
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	4.3 ft	7.3 ft	14.5 ft	21.8 ft	29.1 ft

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	207	52	23	13	8	6	4	3	3	2	2	1	1	1	1	1	1	1	1	1
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	19.2	4.8	2.1	1.2	0.8	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0

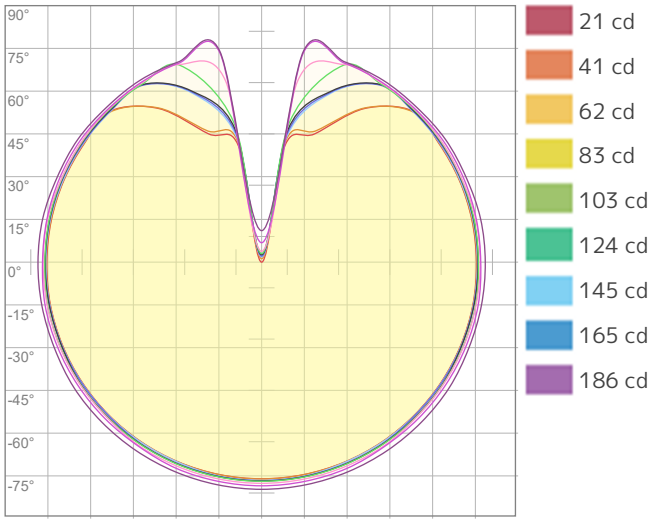
Measurement Date: 5/16/2024

Angular Distribution



0° Plane	90° Plane
Beam Angle - 50%	Beam Angle - 50%
25°	76.2°
Field Angle - 10%	Field Angle - 10%
80.6°	126.3°
Cutoff Angle - 2.5%	Cutoff Angle - 2.5%
84.3°	135.4°

ISO Diagrams

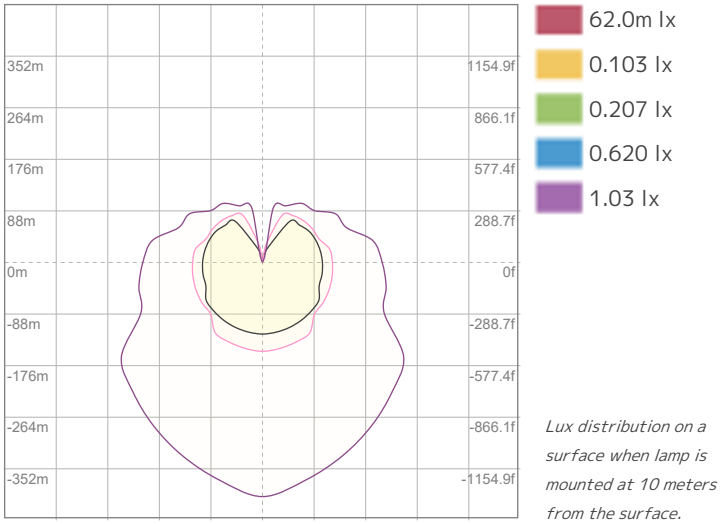


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 207 cd



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

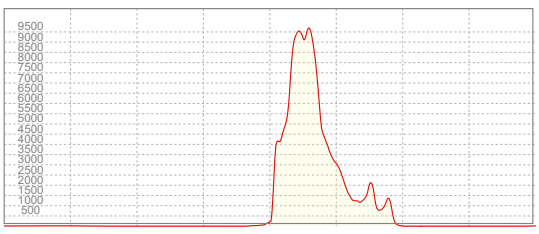
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 2.07 lx

Linear Distribution



Peak Candela

9673 cd

Calculate Center Beam Intensities

$lux = 9673 / distance(m)^2$

$fc = 9673 / distance(ft)^2$

Measurement Date: 5/16/2024

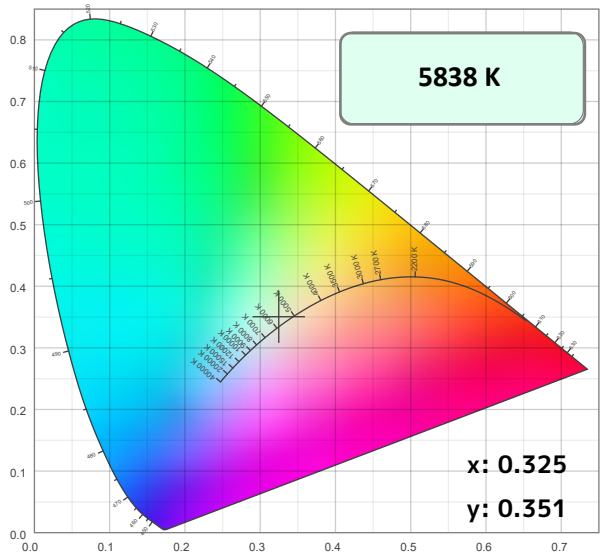
Prepared For ELATION PROFESSIONAL

Color Temperature: 5838K

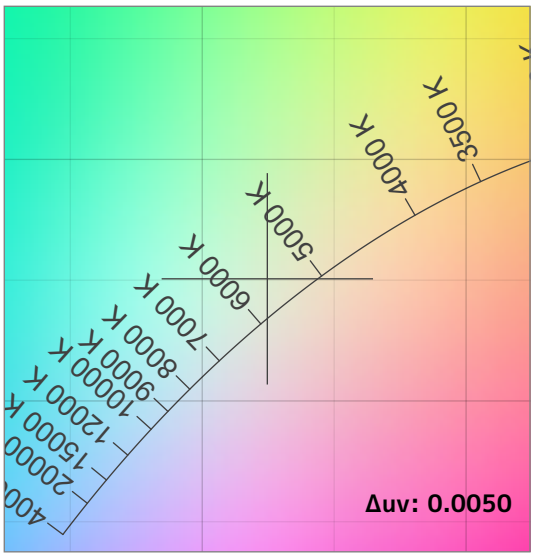
Accuracy Metric Overview

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
92.7	74.1	92.0	103.7	86	93.8	0.325	0.351	0.0050	31	58

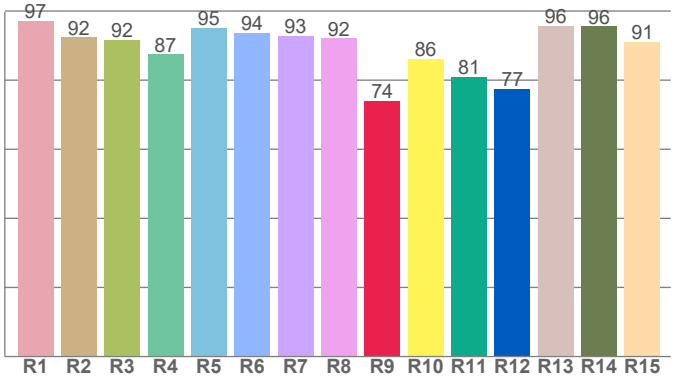
CIE 1931



CIE 1931 ZOOMED

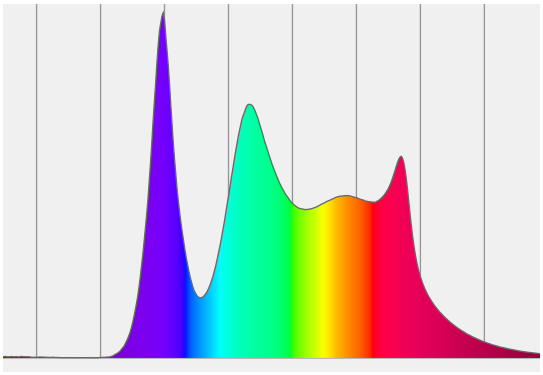


CRI: 92.7 (R1-R8)



Spectral Power Distribution (SPD)

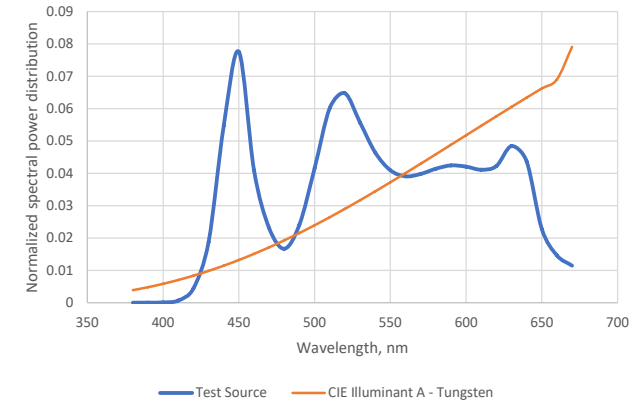
Dominant Wavelength 569 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 31

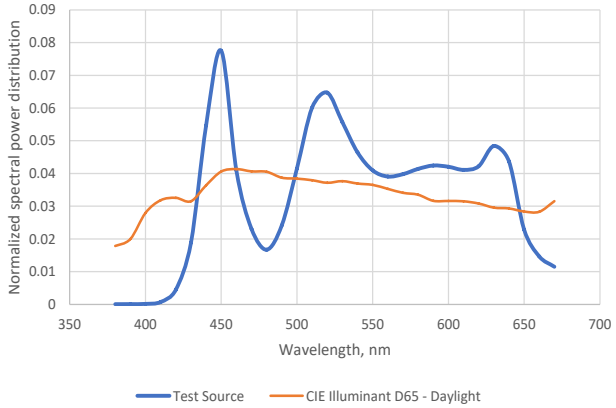
Spectral variance



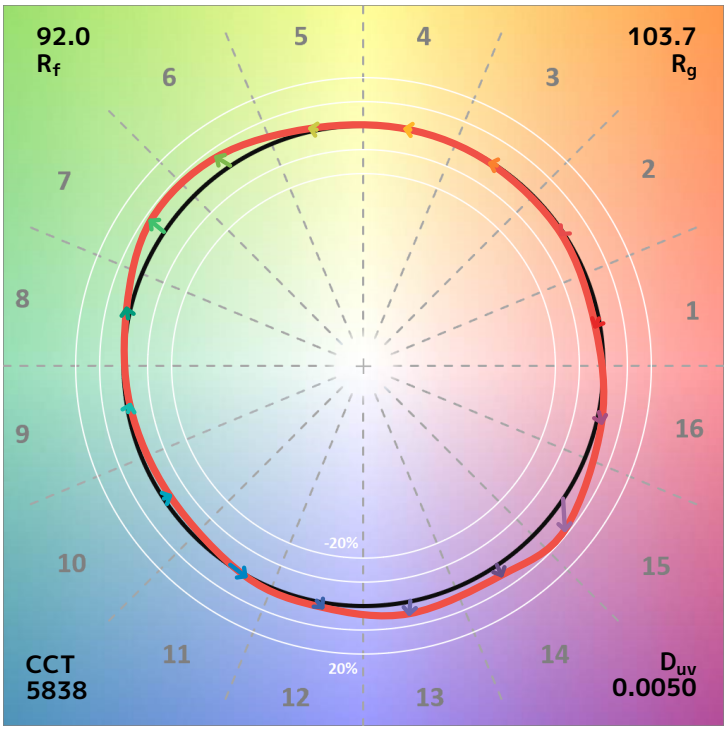
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 58

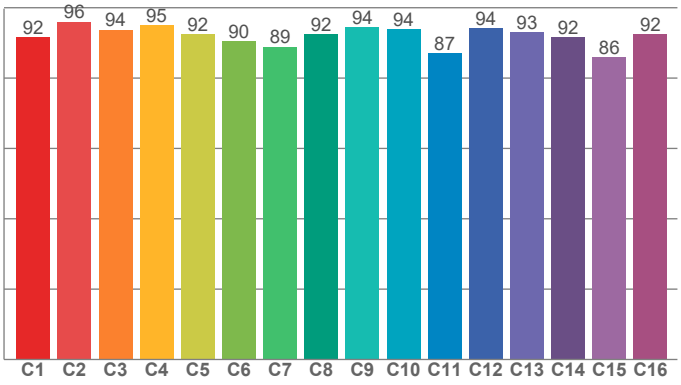
Spectral variance



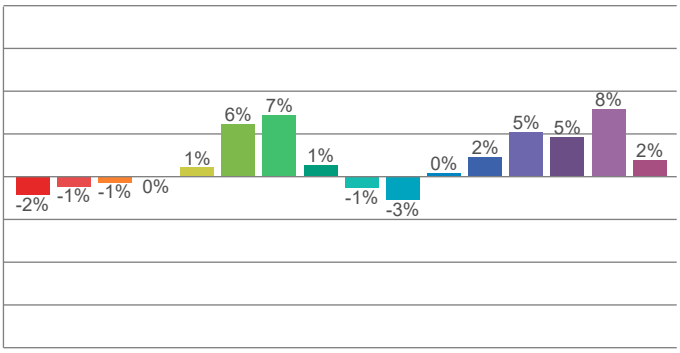
Measurement Date: 5/16/2024



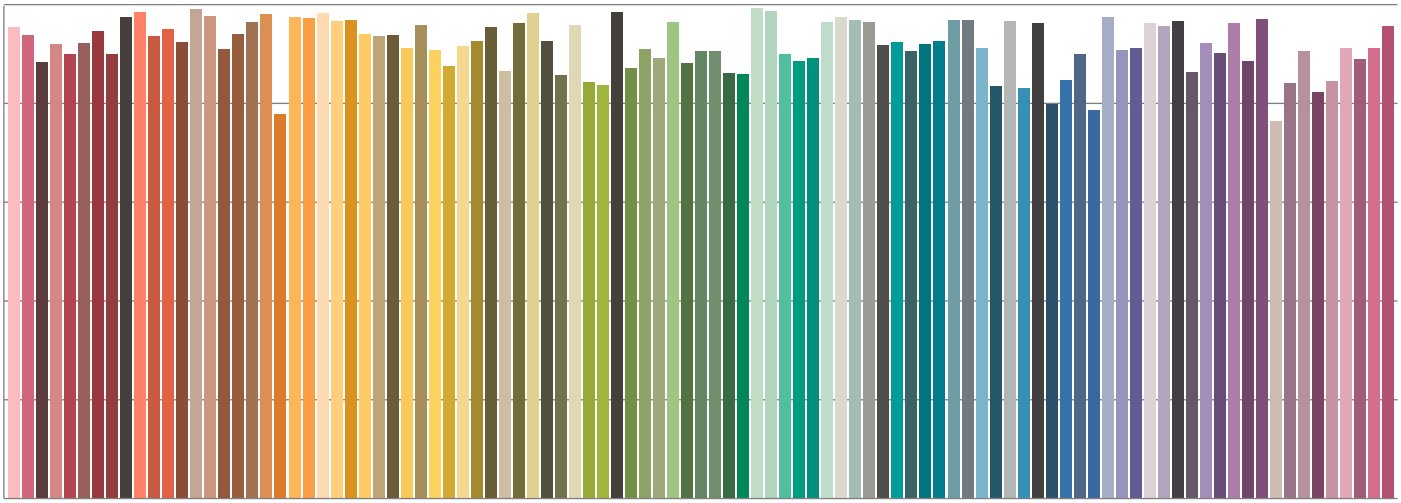
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



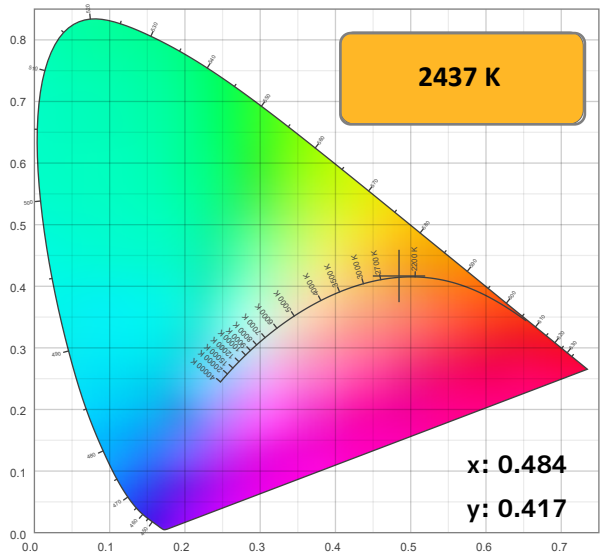
Measurement Date: 5/16/2024

Color Temperature: 2437K

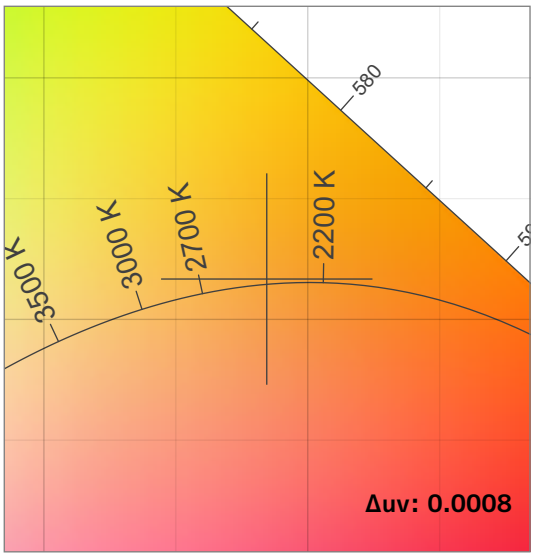
Accuracy Metric Overview

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
96.5	93.9	93.1	103.3	82	90.9	0.484	0.417	0.0008	64	11

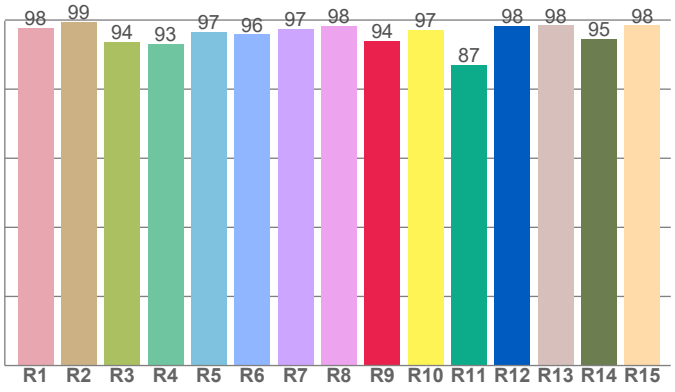
CIE 1931



CIE 1931 ZOOMED

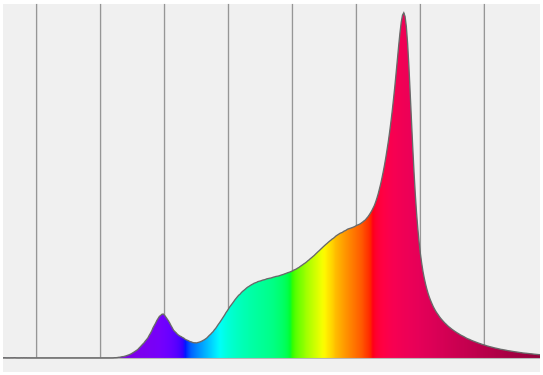


CRI: 96.5 (R1-R8)



Spectral Power Distribution (SPD)

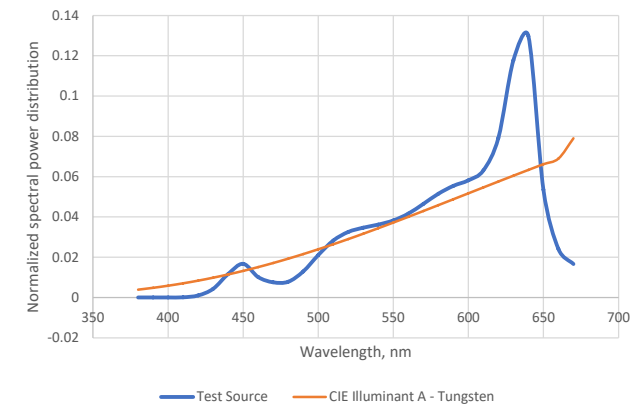
Dominant Wavelength 586 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 64

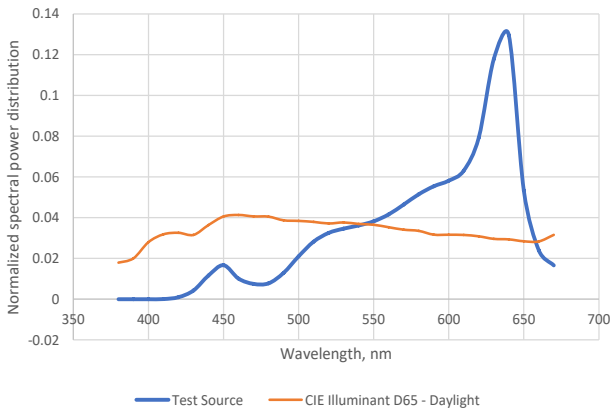
Spectral variance



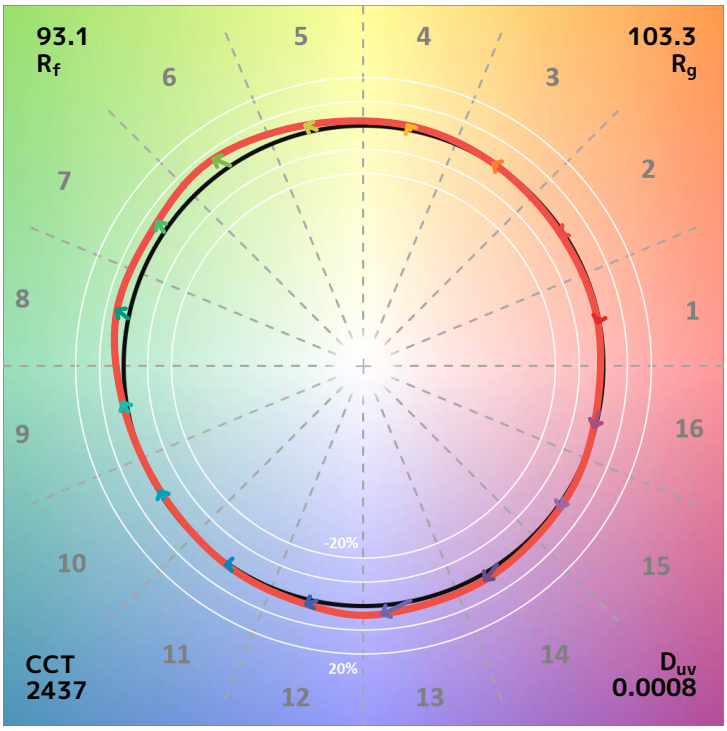
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 11

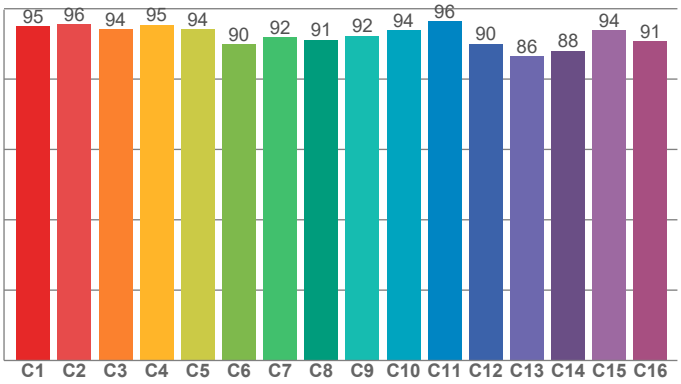
Spectral variance



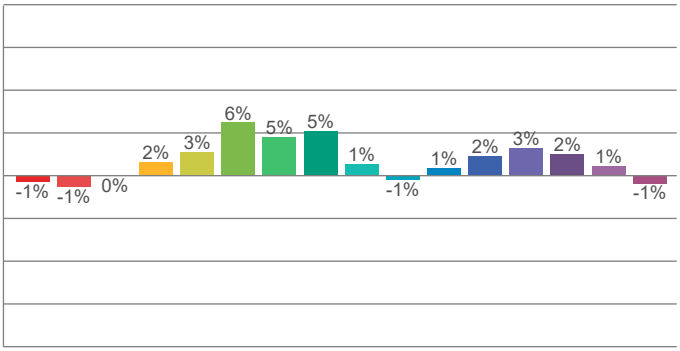
Measurement Date: 5/16/2024



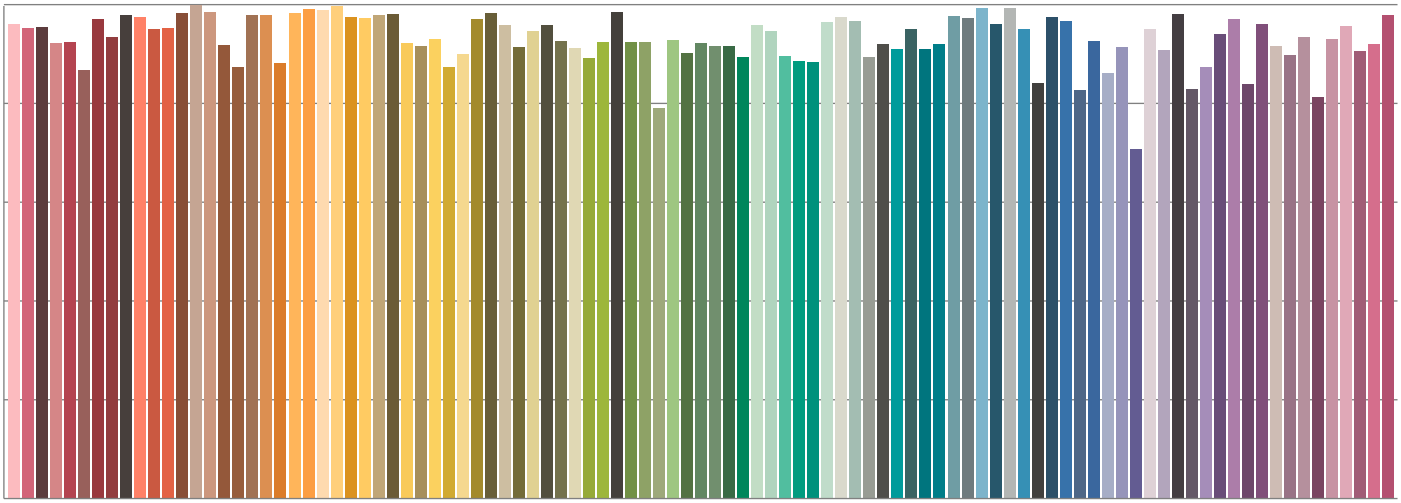
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



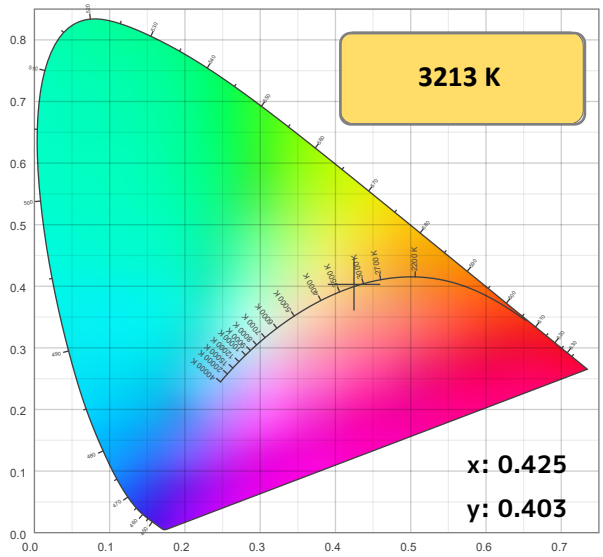
Measurement Date: 5/16/2024

Color Temperature: 3213K

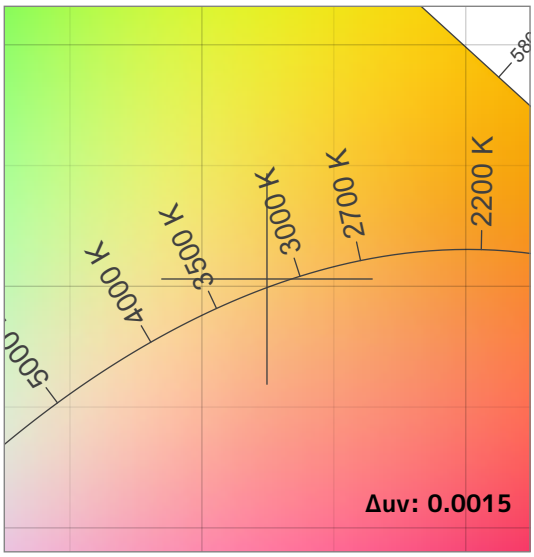
Accuracy Metric Overview

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
96.2	91.0	93.3	104.0	86	93.9	0.425	0.403	0.0015	68	36

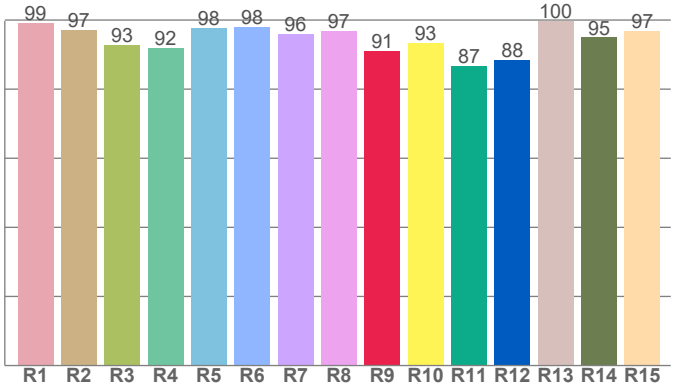
CIE 1931



CIE 1931 ZOOMED

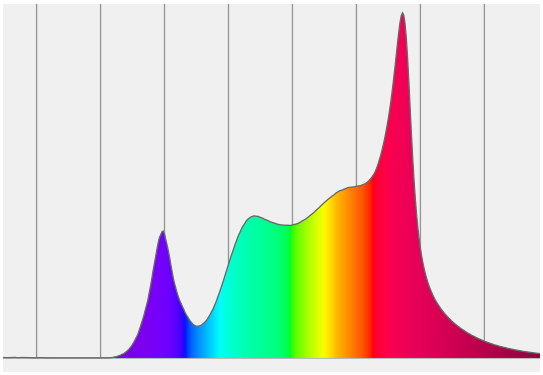


CRI: 96.2 (R1-R8)



Spectral Power Distribution (SPD)

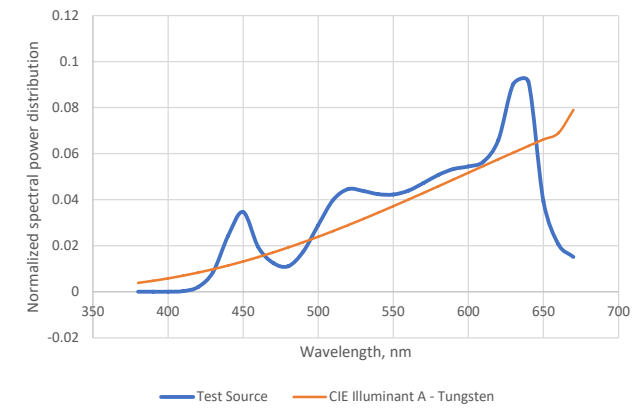
Dominant Wavelength 582 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 68

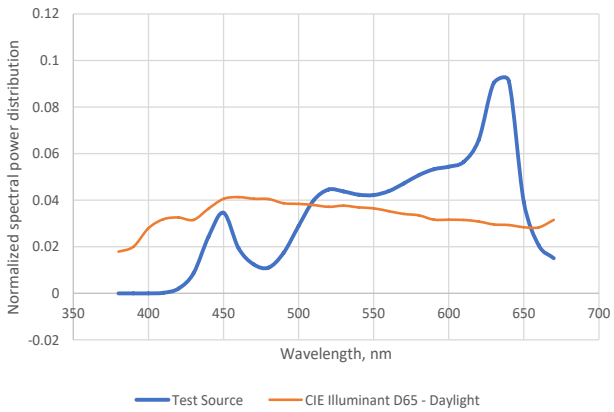
Spectral variance



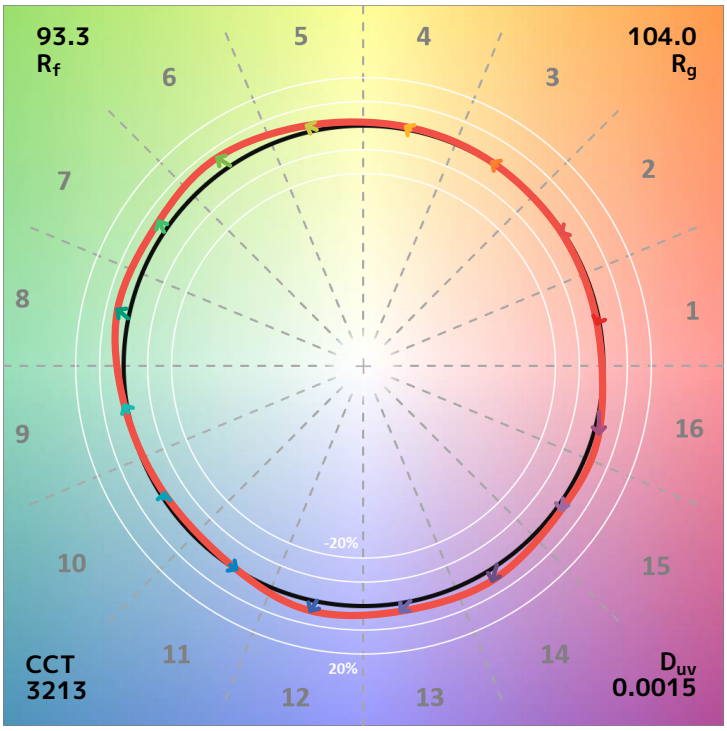
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 36

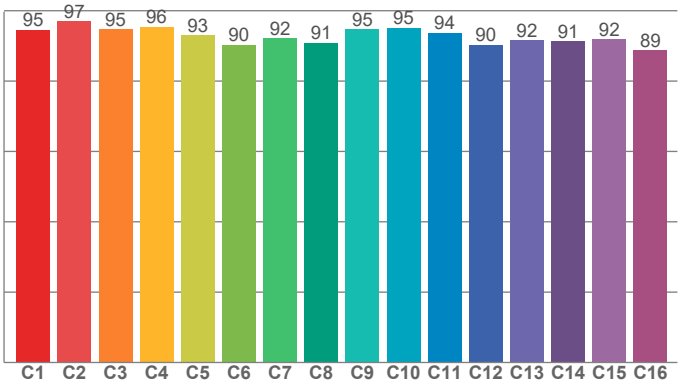
Spectral variance



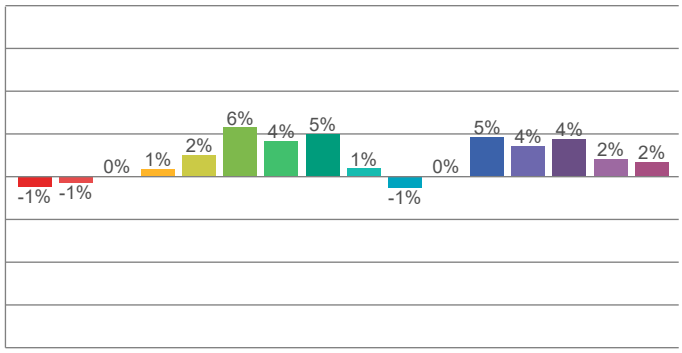
Measurement Date: 5/16/2024



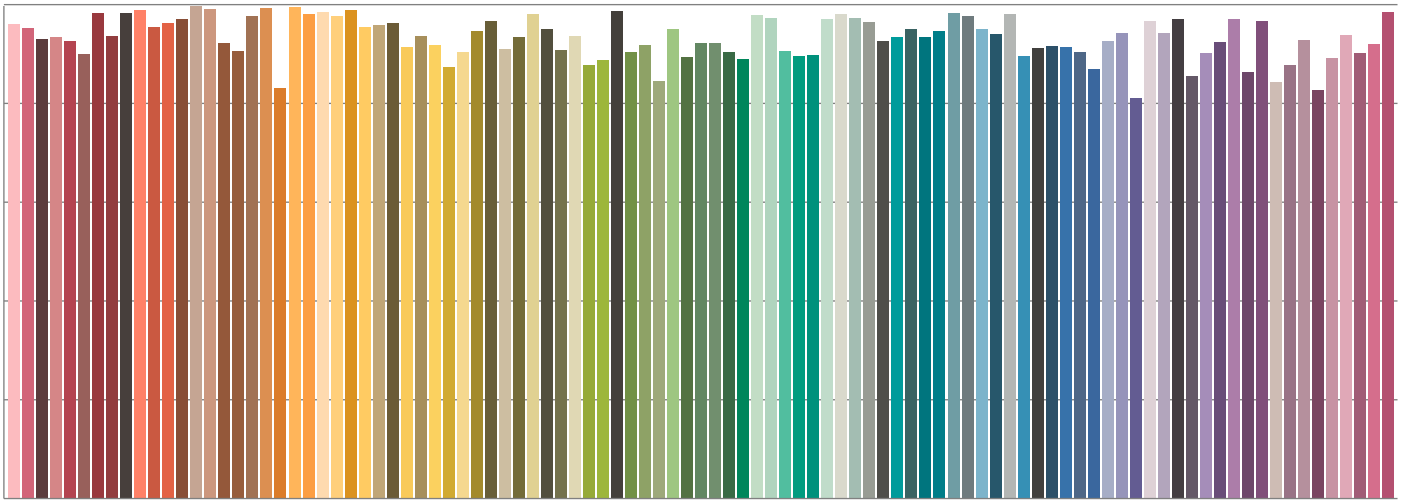
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



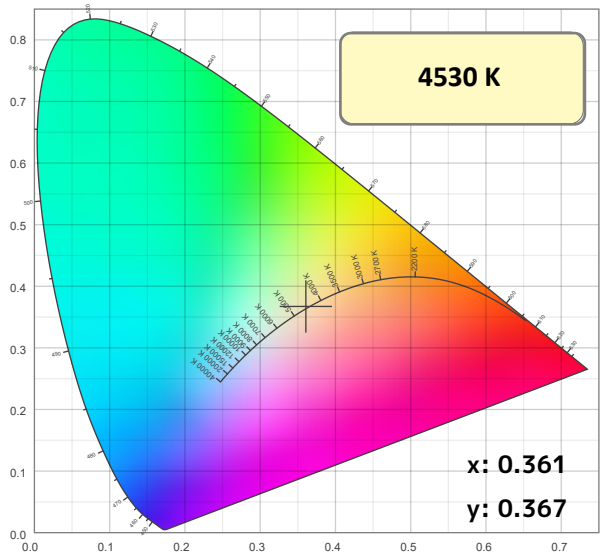
Measurement Date: 5/16/2024

Color Temperature: 4530K

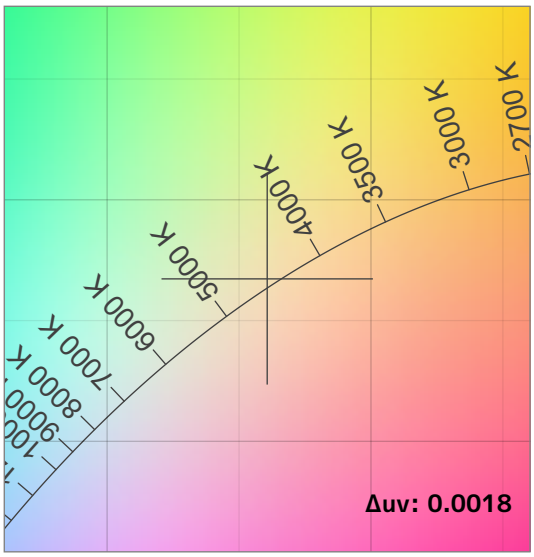
Accuracy Metric Overview

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
94.9	92.9	92.5	105.3	84	95.0	0.361	0.367	0.0018	47	54

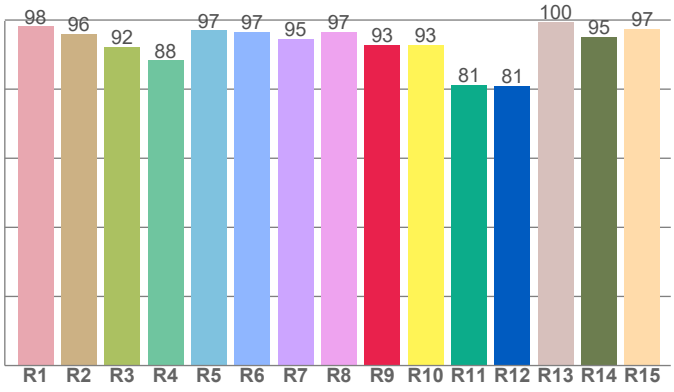
CIE 1931



CIE 1931 ZOOMED

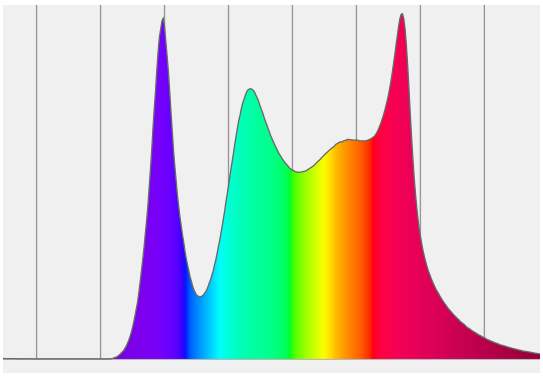


CRI: 94.9 (R1-R8)



Spectral Power Distribution (SPD)

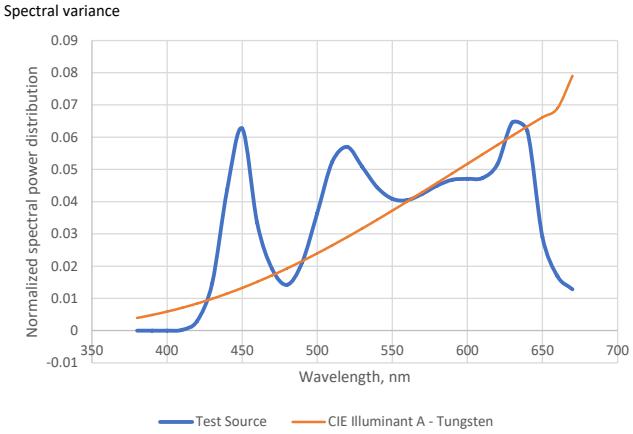
Dominant Wavelength 580 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 47

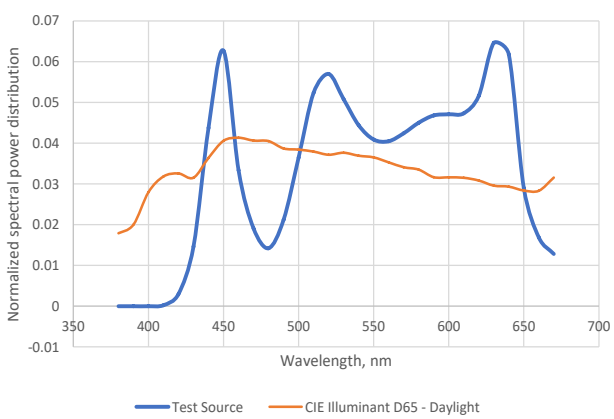
Spectral variance



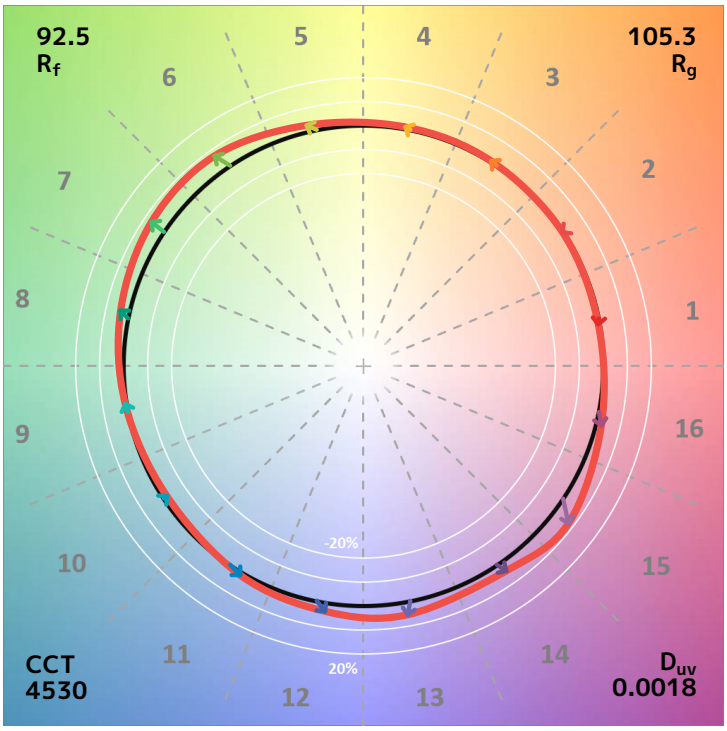
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 54

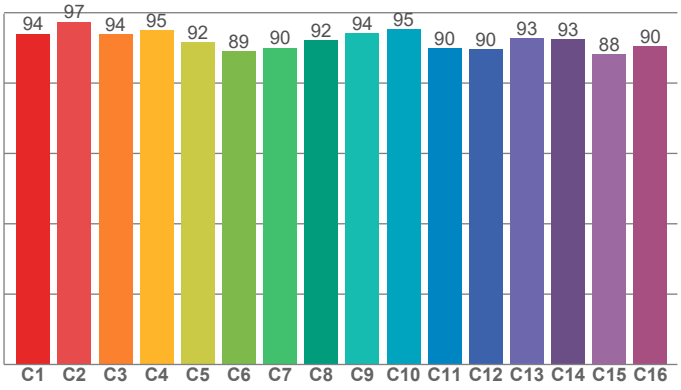
Spectral variance



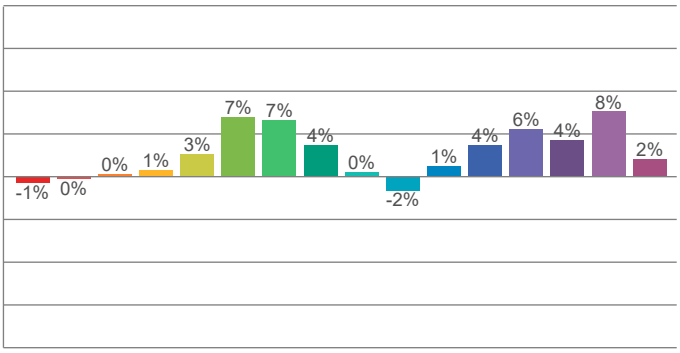
Measurement Date: 5/16/2024



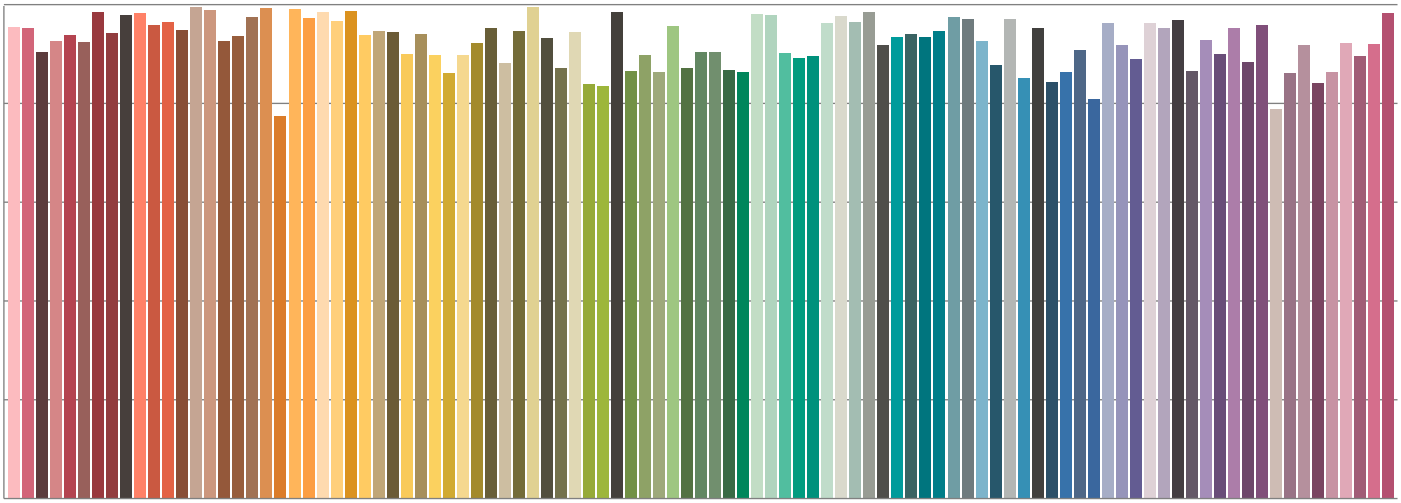
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



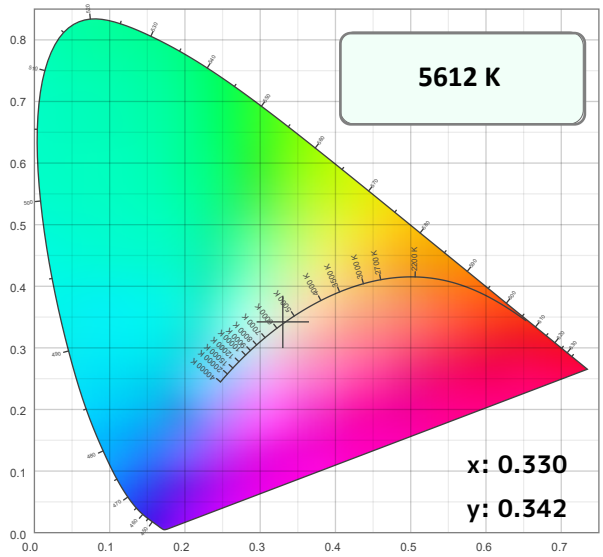
Measurement Date: 5/16/2024

Color Temperature: 5612K

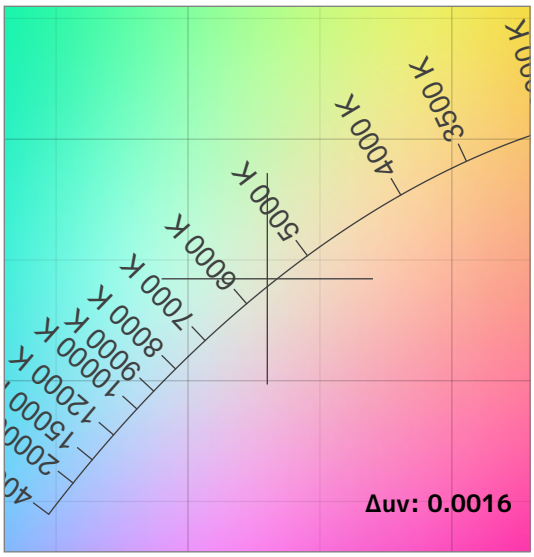
Accuracy Metric Overview

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
93.5	82.4	91.3	105.2	86	93.6	0.330	0.342	0.0016	32	58

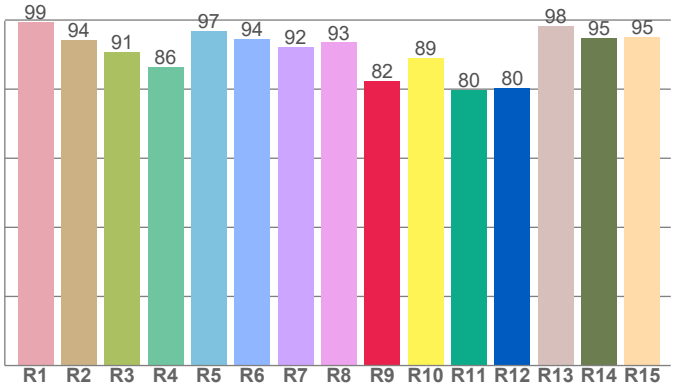
CIE 1931



CIE 1931 ZOOMED

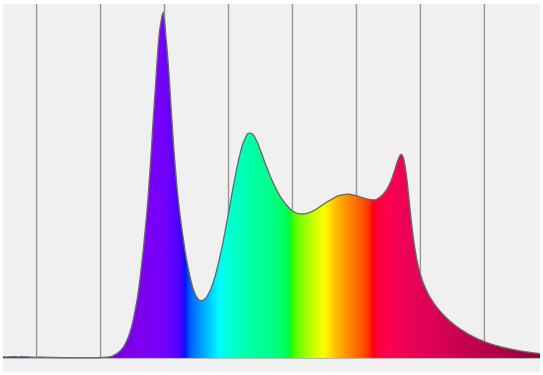


CRI: 93.5 (R1-R8)



Spectral Power Distribution (SPD)

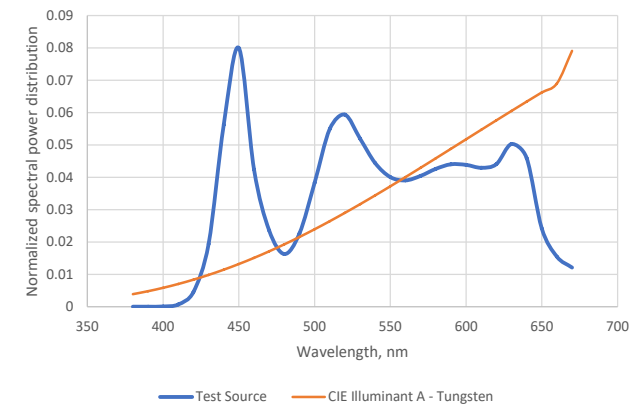
Dominant Wavelength 581 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 32

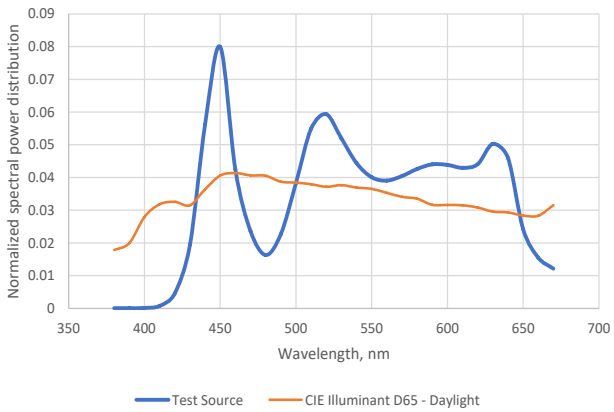
Spectral variance



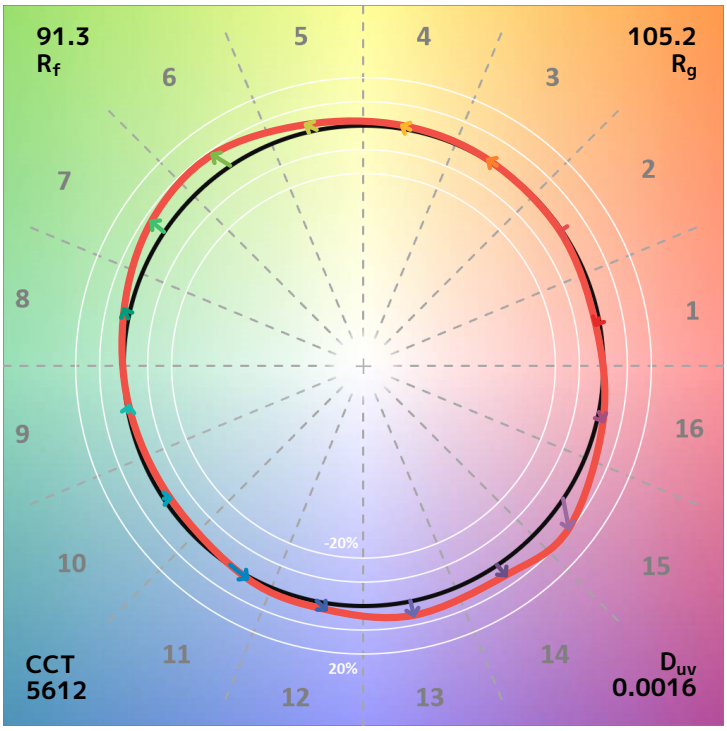
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 58

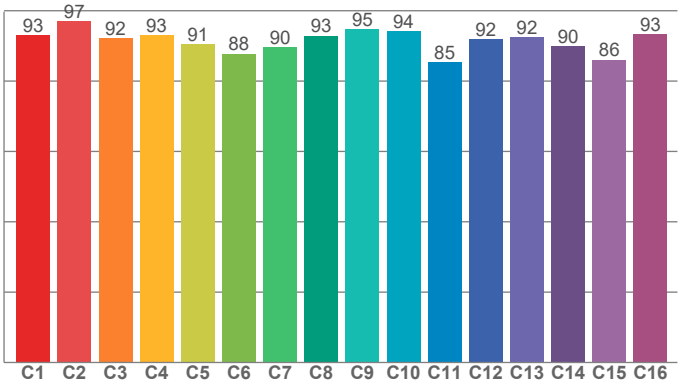
Spectral variance



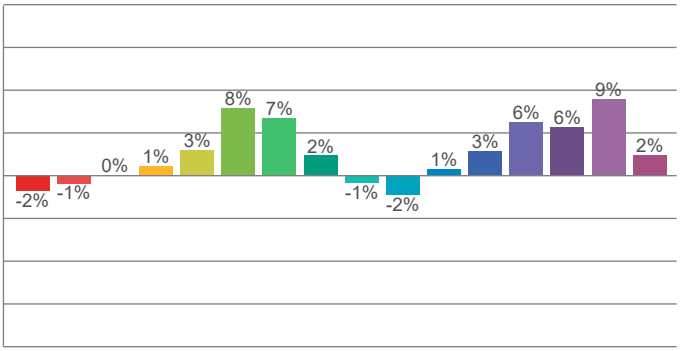
Measurement Date: 5/16/2024



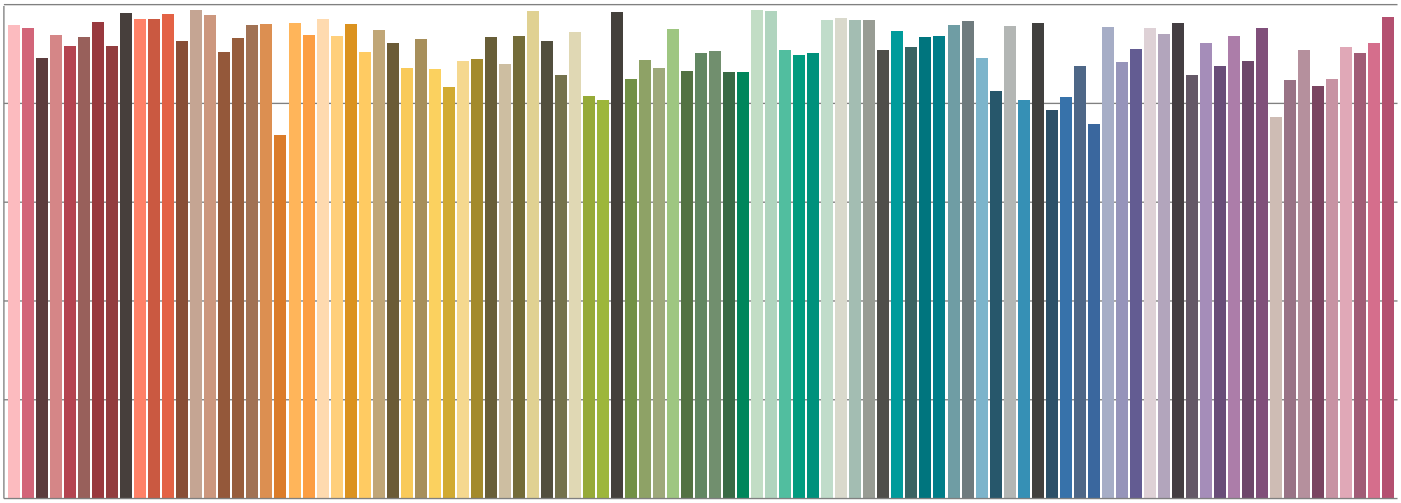
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



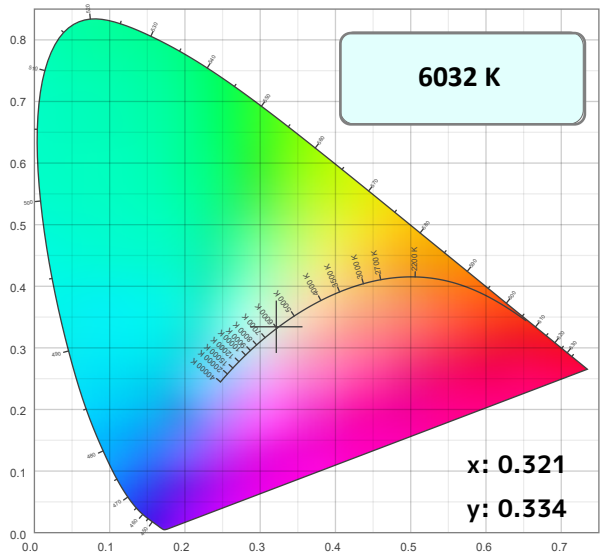
Measurement Date: 5/16/2024

Color Temperature: 6032K

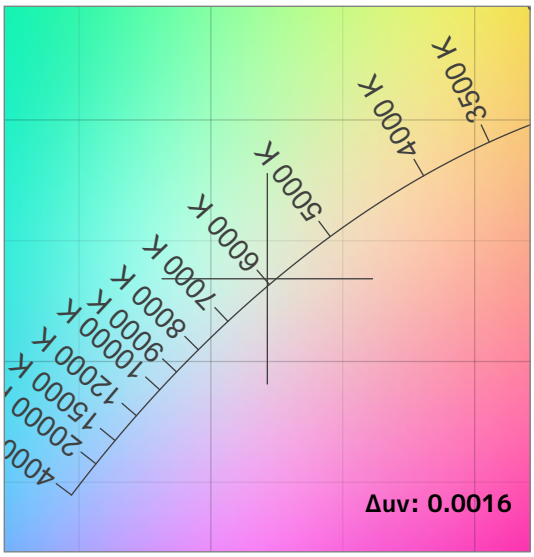
Accuracy Metric Overview

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
93.2	86.4	91.4	105.5	87	93.8	0.321	0.334	0.0016	27	58

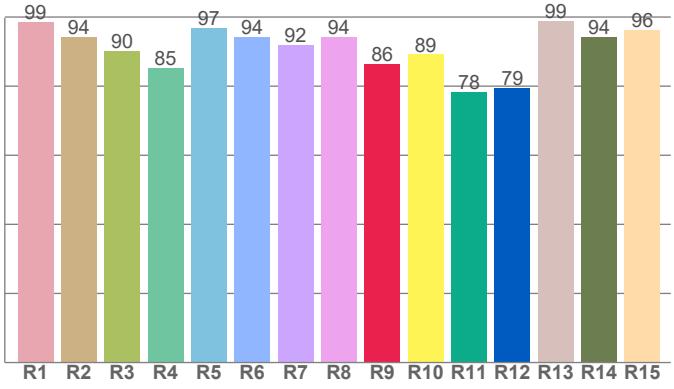
CIE 1931



CIE 1931 ZOOMED

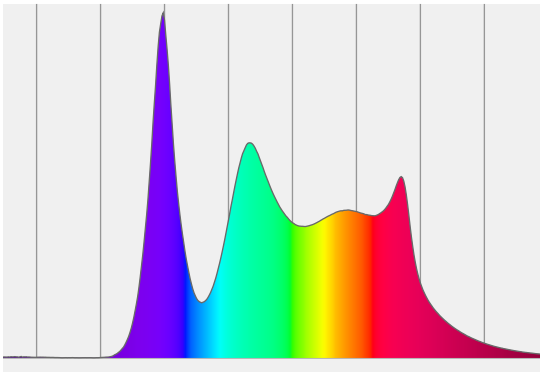


CRI: 93.2 (R1-R8)



Spectral Power Distribution (SPD)

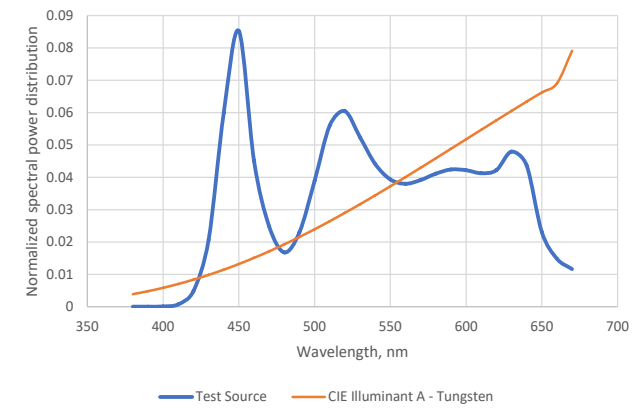
Dominant Wavelength 584 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 27

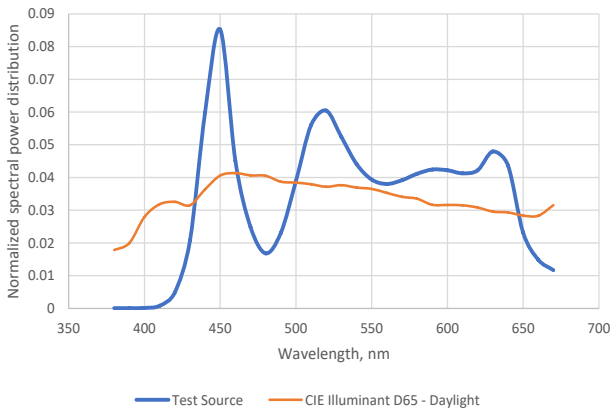
Spectral variance



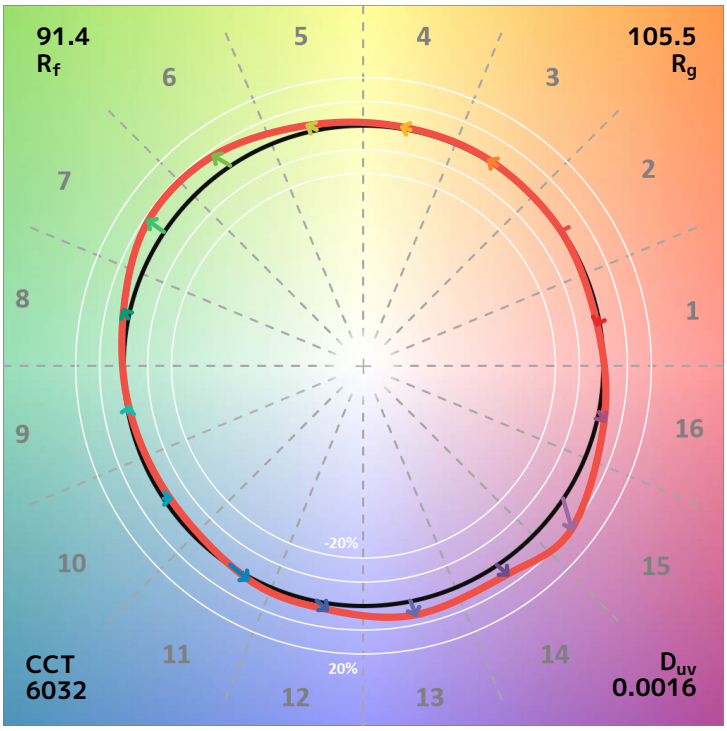
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 58

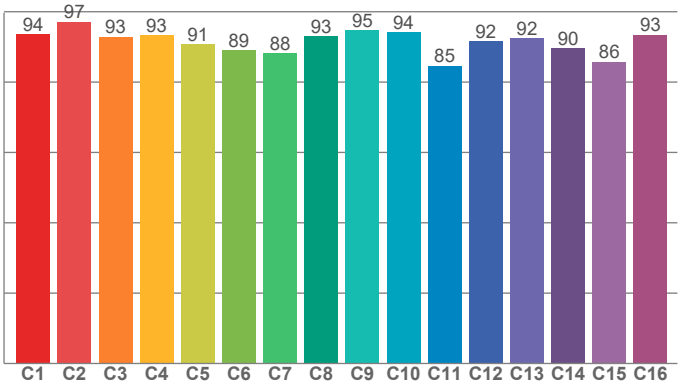
Spectral variance



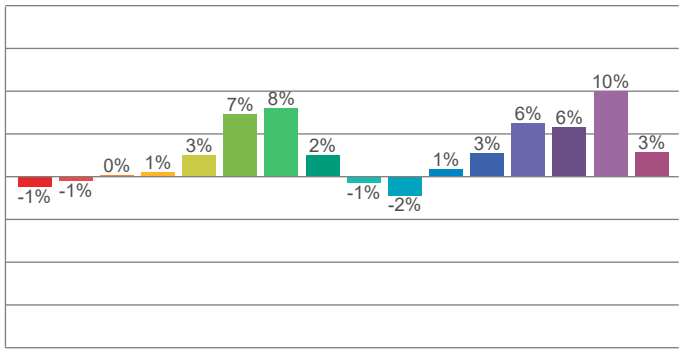
Measurement Date: 5/16/2024



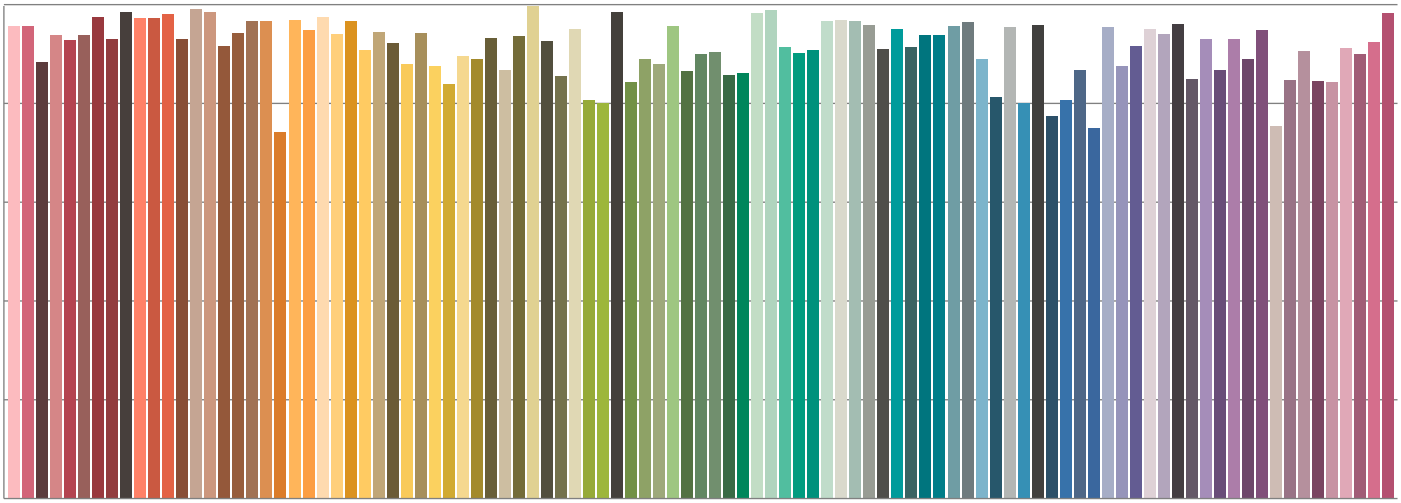
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



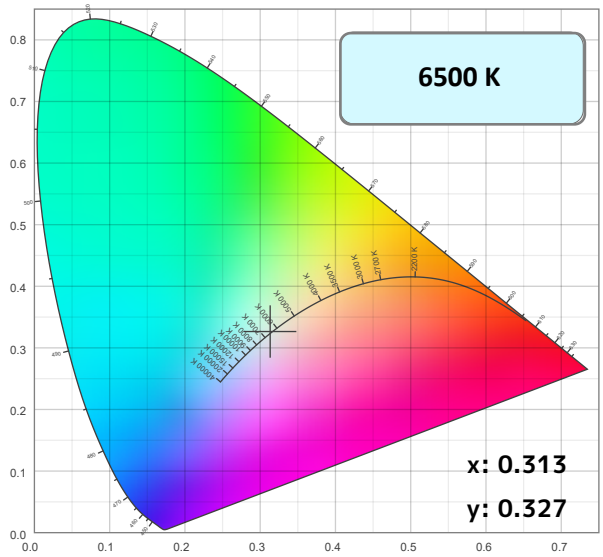
Measurement Date: 5/16/2024

Color Temperature: 6500K

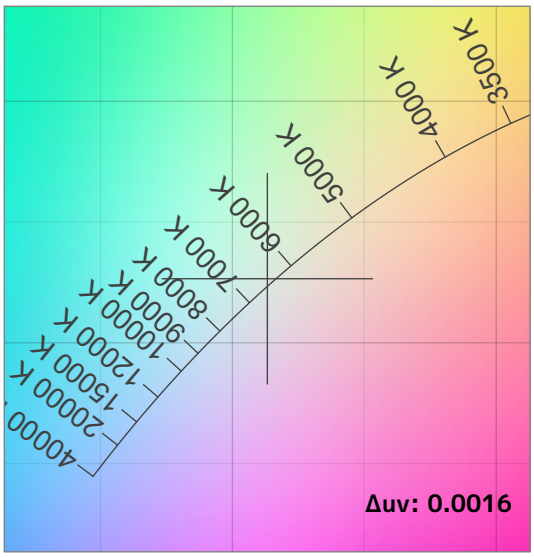
Accuracy Metric Overview

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
93.0	84.2	91.1	105.2	87	93.6	0.313	0.327	0.0016	21	57

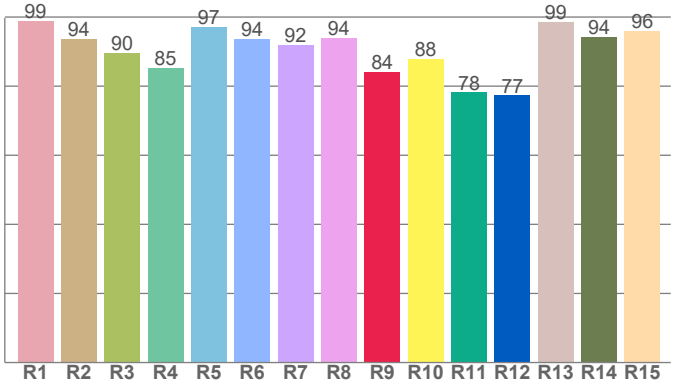
CIE 1931



CIE 1931 ZOOMED

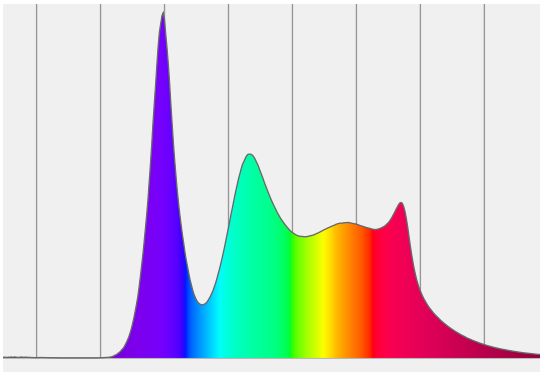


CRI: 93.0 (R1-R8)



Spectral Power Distribution (SPD)

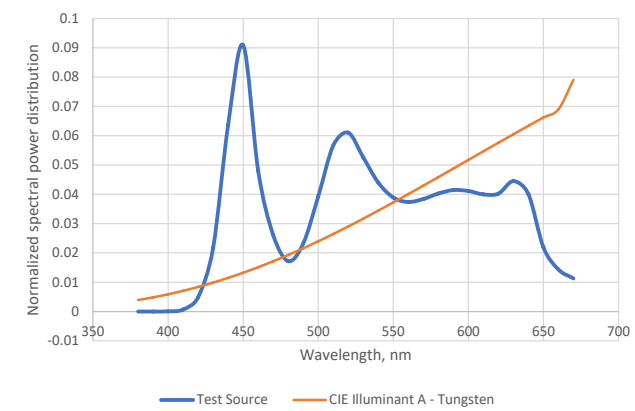
Dominant Wavelength 360 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 21

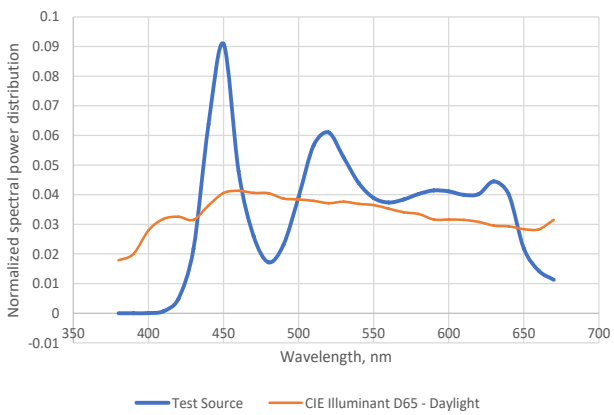
Spectral variance



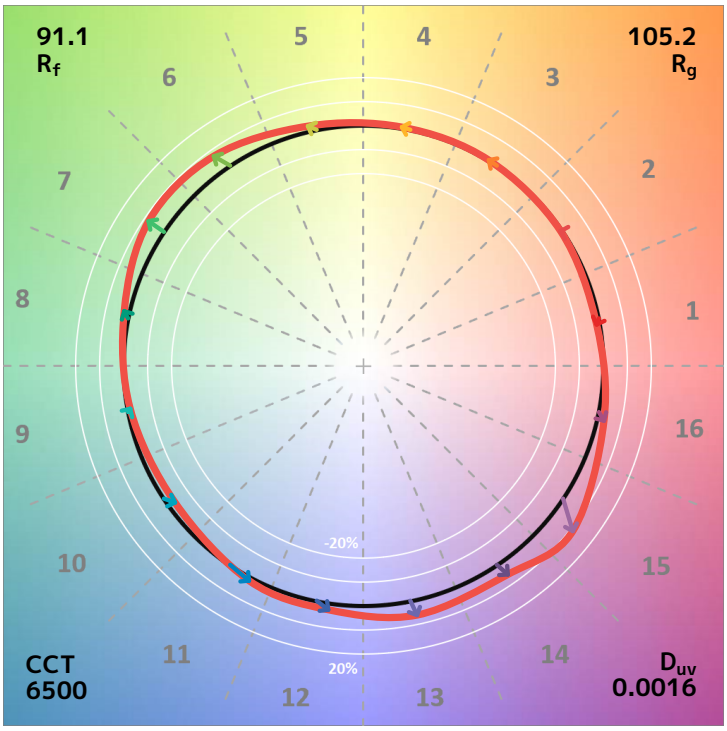
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 57

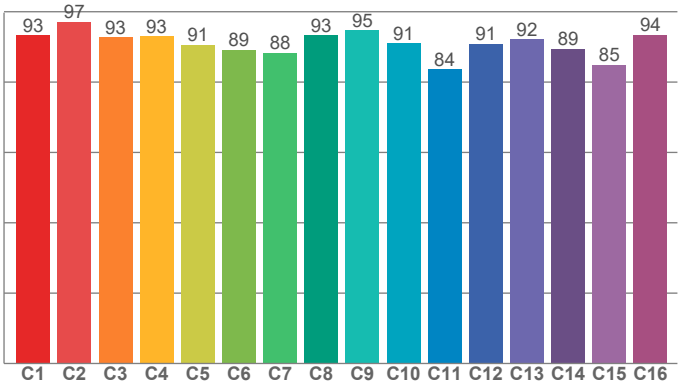
Spectral variance



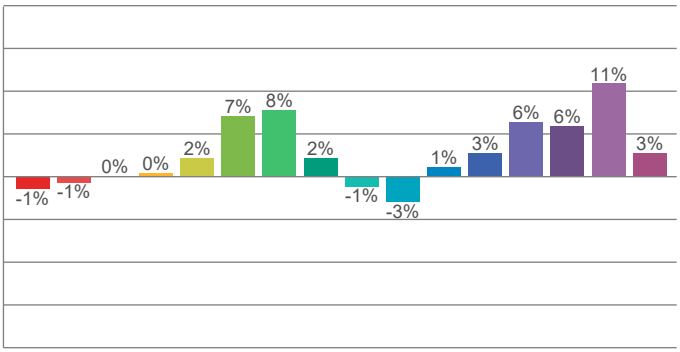
Measurement Date: 5/16/2024



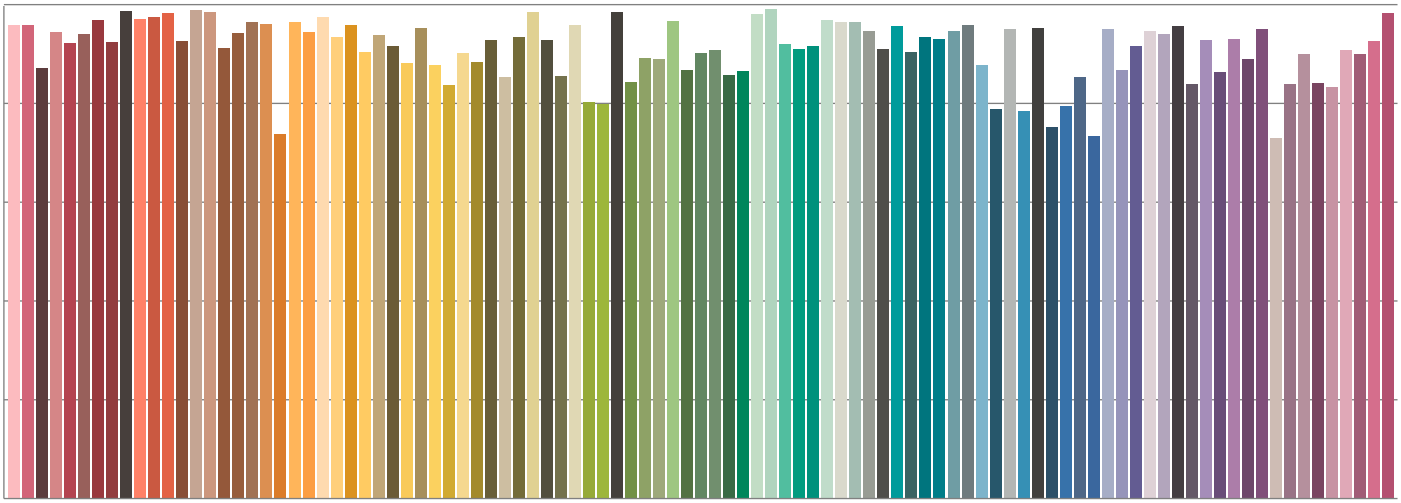
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



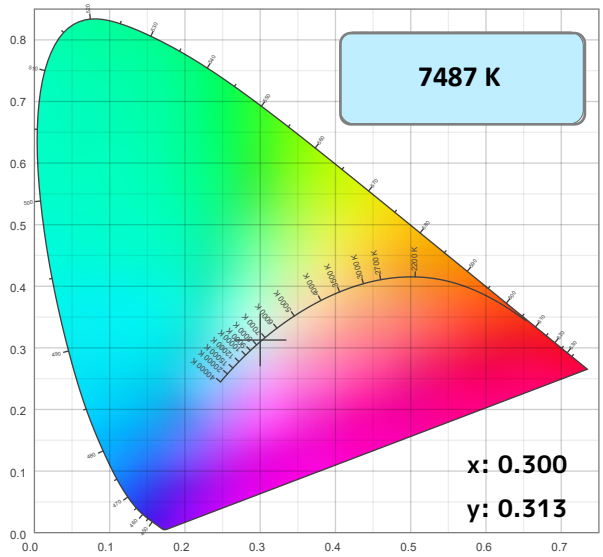
Measurement Date: 5/16/2024

Color Temperature: 7487K

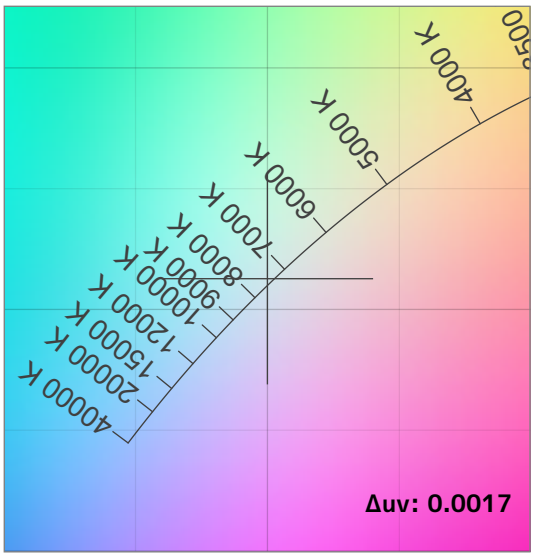
Accuracy Metric Overview

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
92.6	83.3	90.6	104.8	87	93.4	0.300	0.313	0.0017	13	55

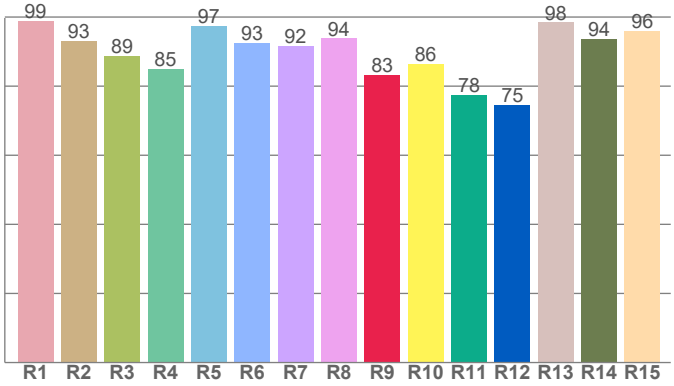
CIE 1931



CIE 1931 ZOOMED

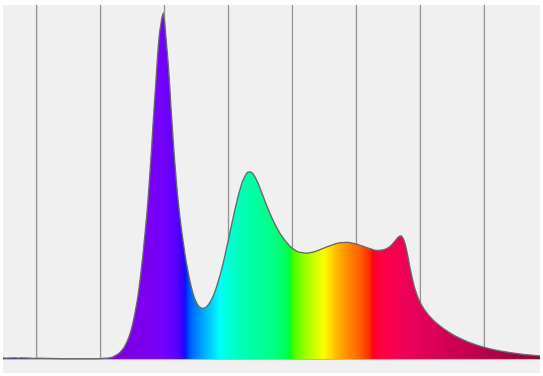


CRI: 92.6 (R1-R8)



Spectral Power Distribution (SPD)

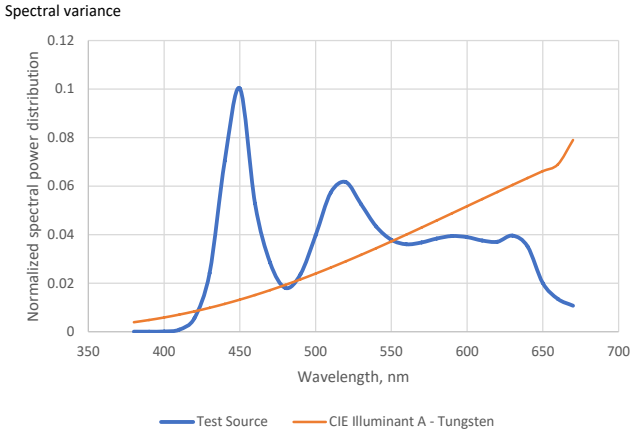
Dominant Wavelength 473 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 13

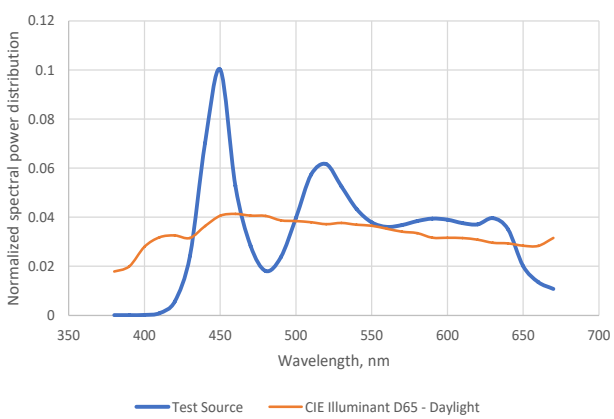
Spectral variance



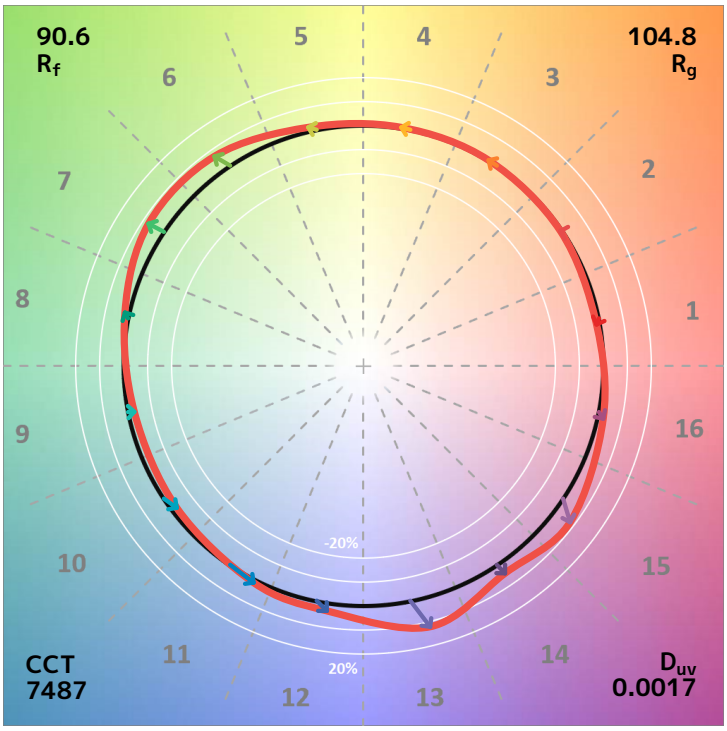
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 55

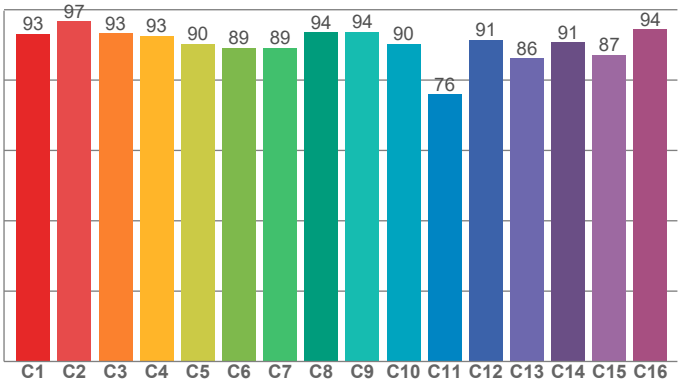
Spectral variance



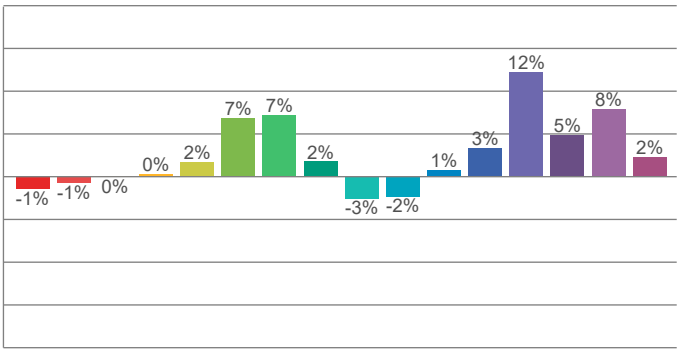
Measurement Date: 5/16/2024



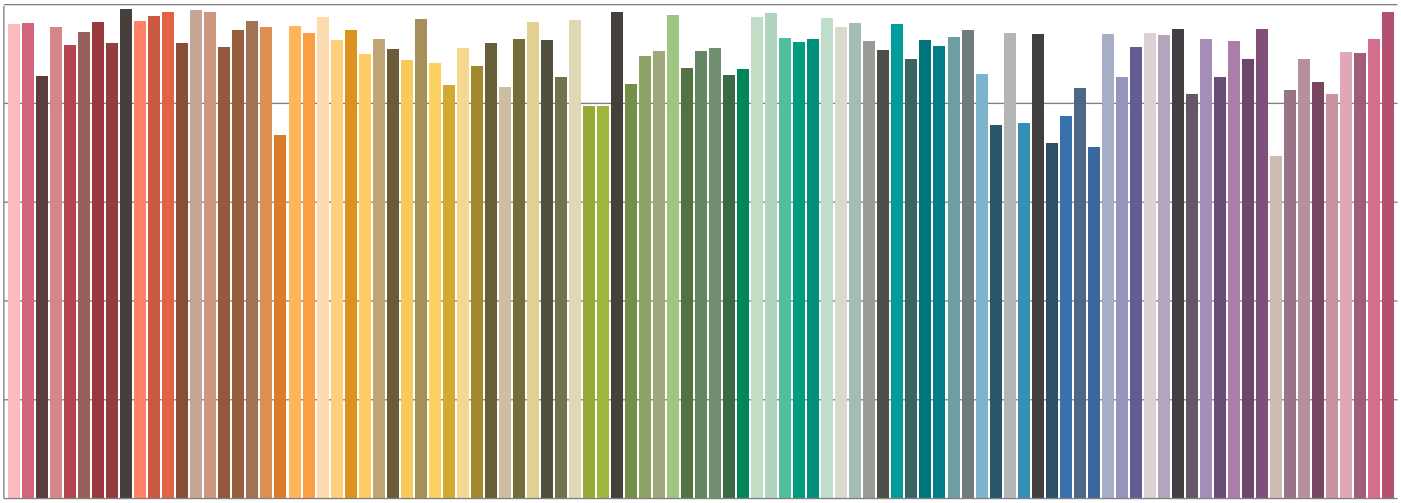
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



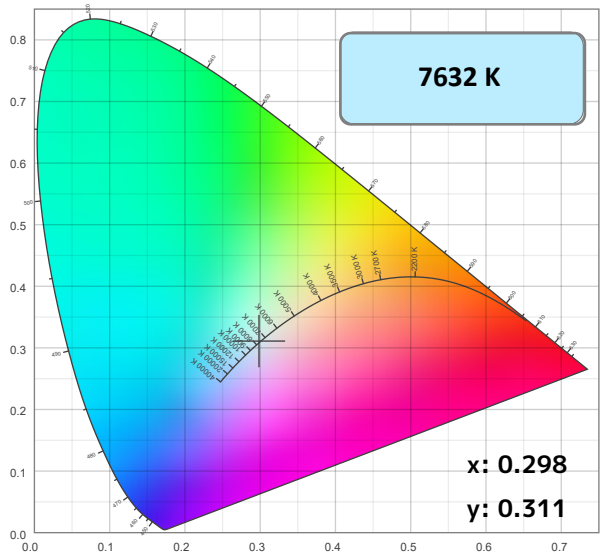
Measurement Date: 5/16/2024

Color Temperature: 7632K

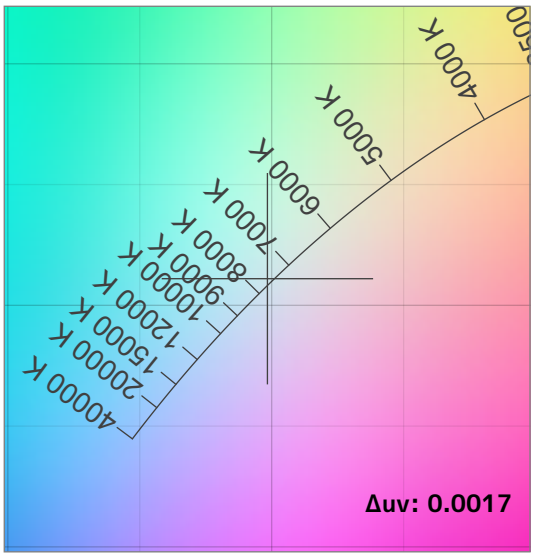
Accuracy Metric Overview

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
92.5	81.3	90.5	105.1	87	93.2	0.298	0.311	0.0017	12	55

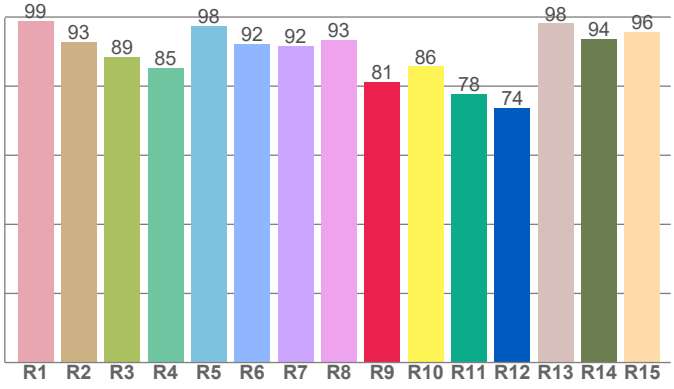
CIE 1931



CIE 1931 ZOOMED

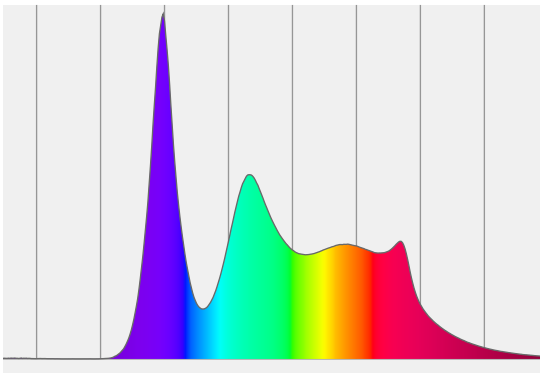


CRI: 92.5 (R1-R8)



Spectral Power Distribution (SPD)

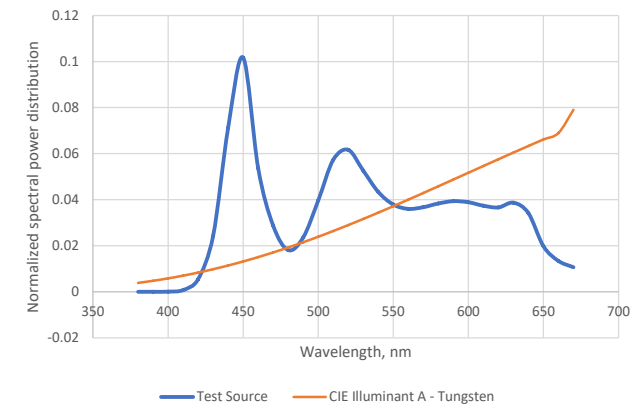
Dominant Wavelength 474 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 12

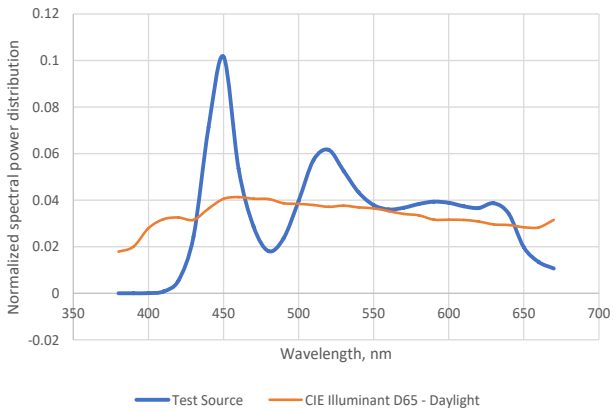
Spectral variance



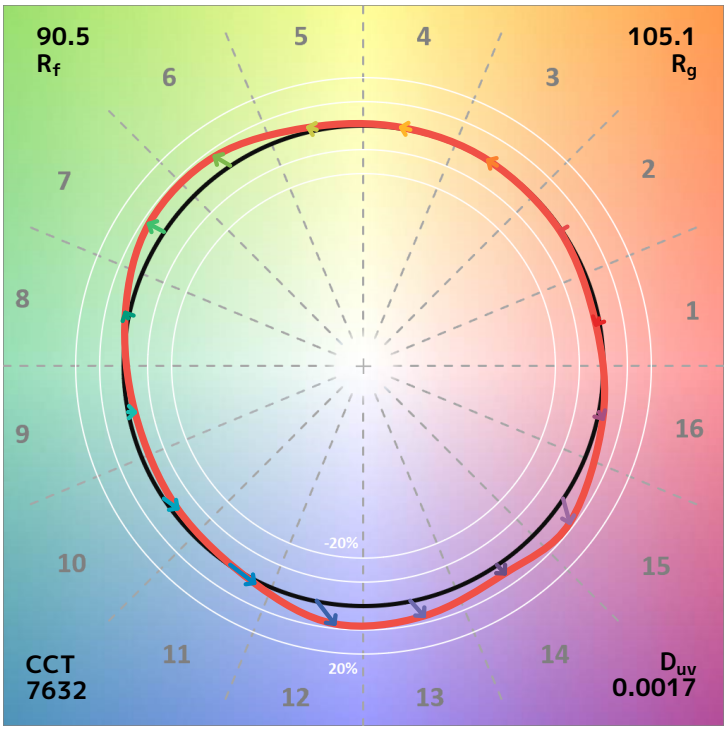
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 55

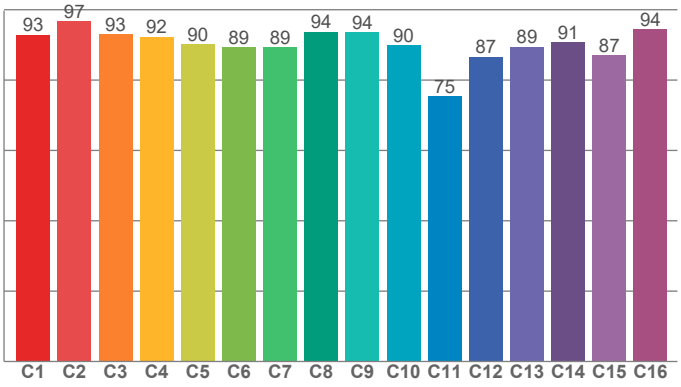
Spectral variance



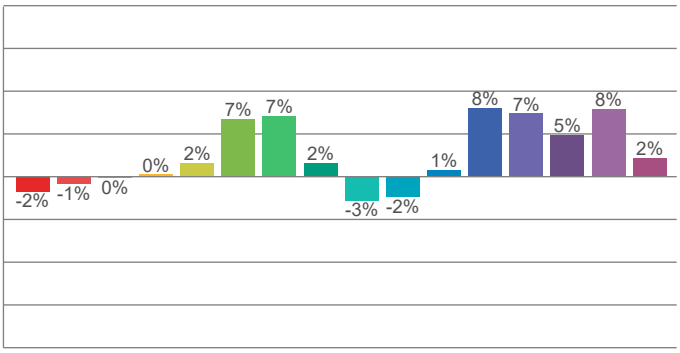
Measurement Date: 5/16/2024



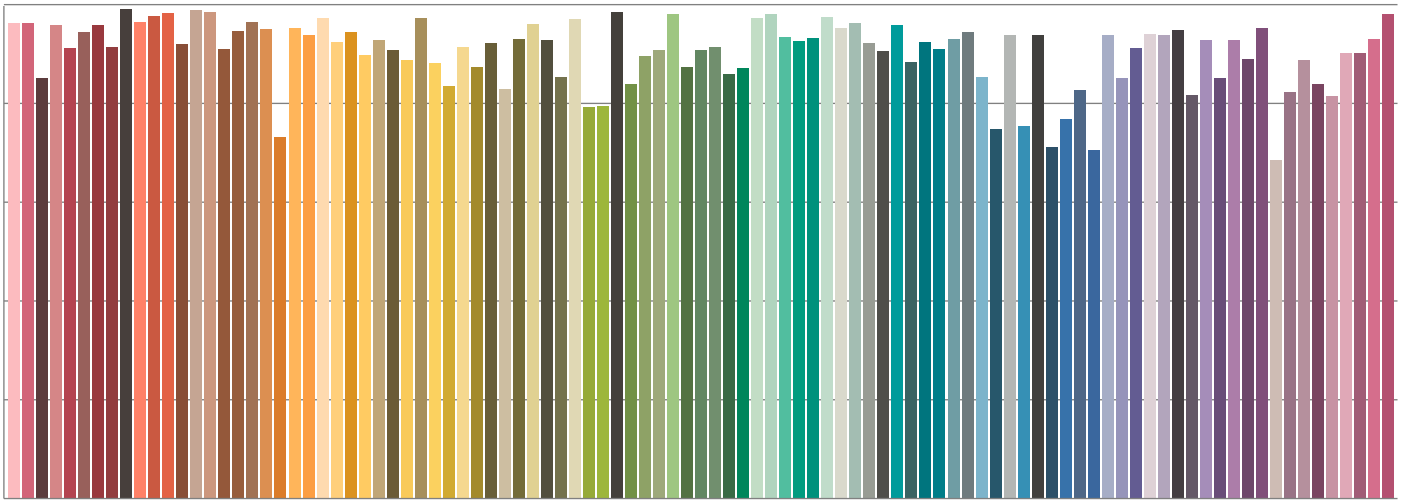
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



Measurement Date: 5/16/2024

Measurements

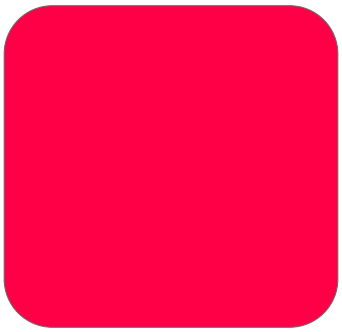
Total Lumen Output: 1722 lm

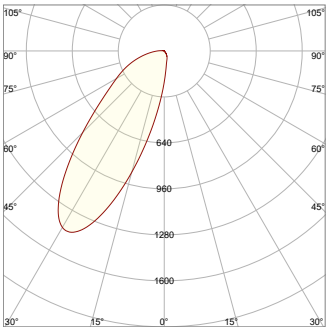
Peak Intensity: 215 cd

Efficacy: 20 Lumen/Watt

Power: 86.0 W

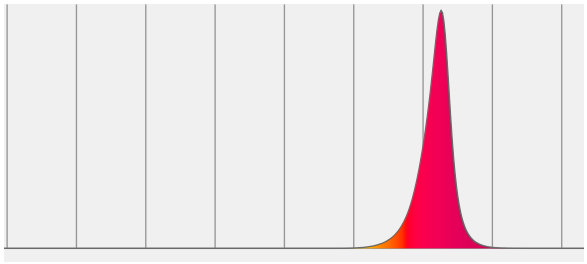
Voltage: 120 V, Current: - A

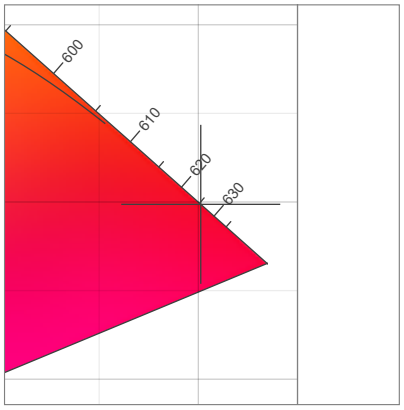




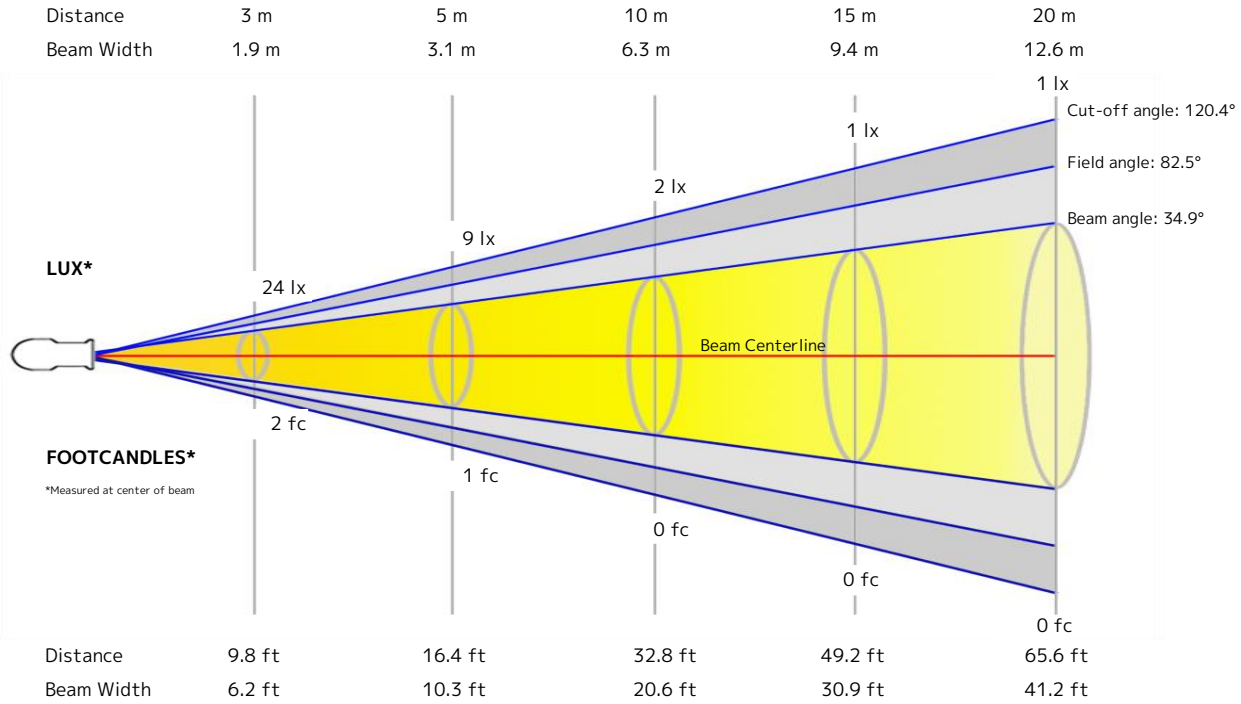
Spectral Power Distribution

Dominant Wavelength 625 nm





Dominant Wavelength	Color Coordinate CIE 1931	Color Coordinate CIE1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964
nm	x	y	u	v
625	0.701	0.299	0.541	0.346



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	215	54	24	13	9	6	4	3	3	2	2	1	1	1	1	1	1	1	1	1
FC	20	5	2.2	1.2	0.8	0.6	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0

Measurement Date: 5/15/2024

Measurements

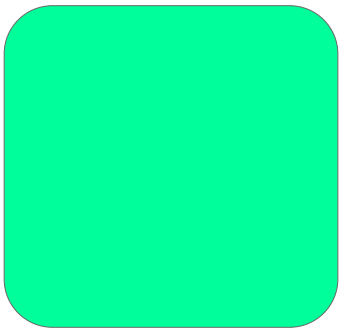
Total Lumen Output: 3706 lm

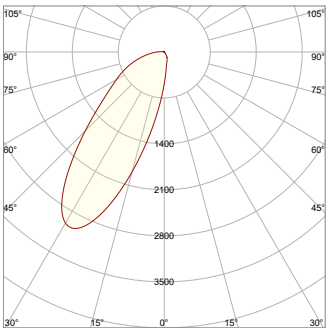
Peak Intensity: 482 cd

Efficacy: 36 Lumen/Watt

Power: 103 W

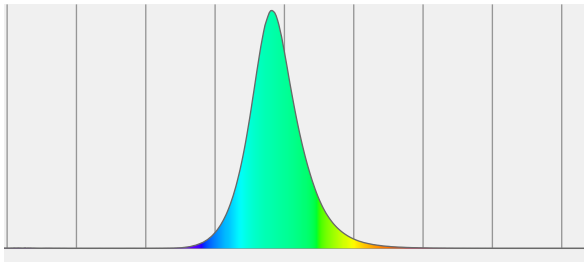
Voltage: 121 V, Current: - A

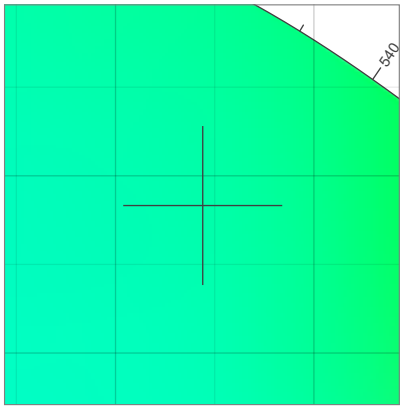




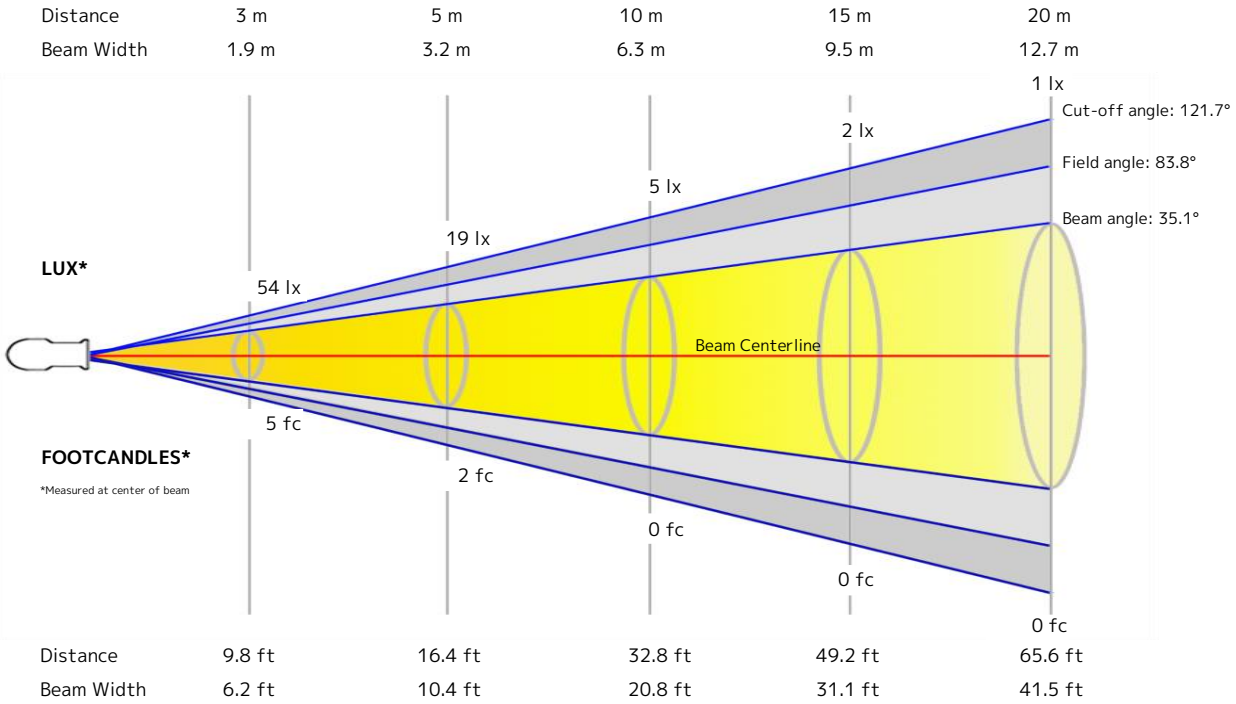
Spectral Power Distribution

Dominant Wavelength 520 nm





Dominant Wavelength	Color Coordinate CIE 1931	Color Coordinate CIE1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964
nm	x	y	u	v
520	0.144	0.683	0.053	0.376



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	482	121	54	30	19	13	10	8	6	5	4	3	3	2	2	2	2	1	1	1
FC	44.8	11.2	5	2.8	1.8	1.2	0.9	0.7	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1

Measurement Date: 5/15/2024

Measurements

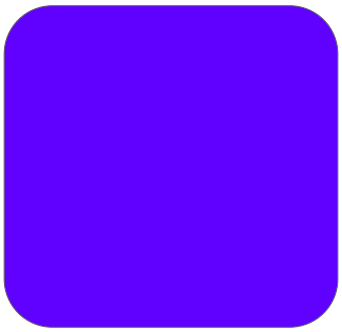
Total Lumen Output: 741 lm

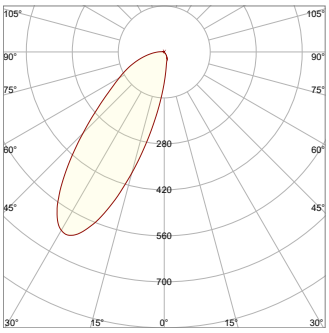
Peak Intensity: 92.9 cd

Efficacy: 8 Lumen/Watt

Power: 96.0 W

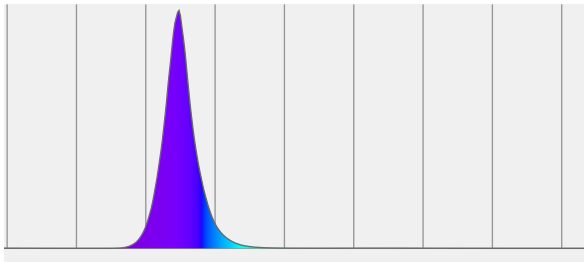
Voltage: 120 V, Current: - A

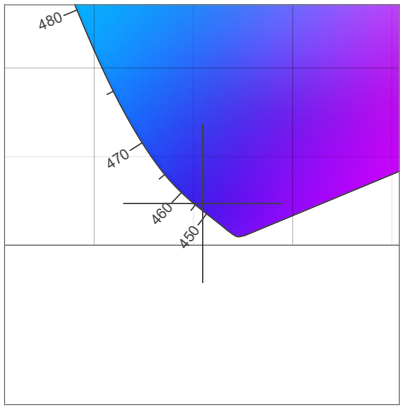




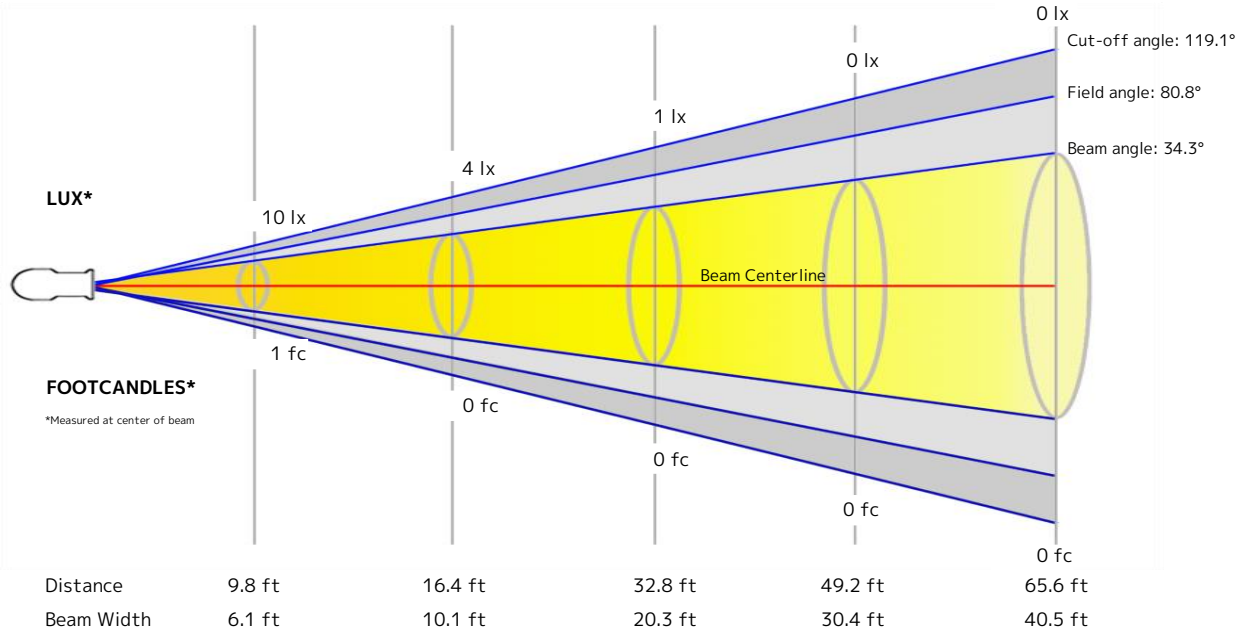
Spectral Power Distribution

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	0.155	0.024	0.208	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	93	23	10	6	4	3	2	1	1	1	1	1	1	0	0	0	0	0	0	0
FC	8.6	2.2	1	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0

Measurement Date: 5/15/2024

Measurements

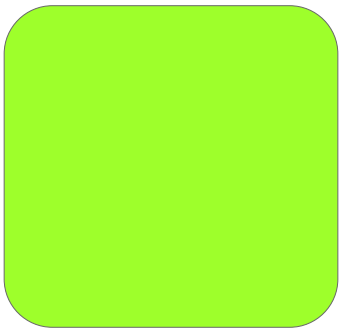
Total Lumen Output: 7950 lm

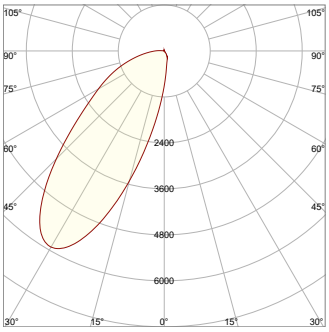
Peak Intensity: 909 cd

Efficacy: 79 Lumen/Watt

Power: 100 W

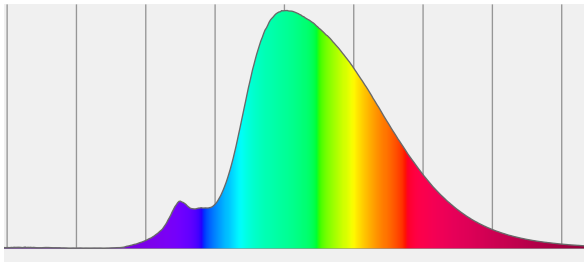
Voltage: 120 V, Current: - A

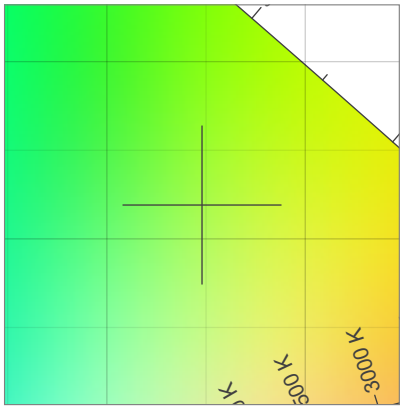




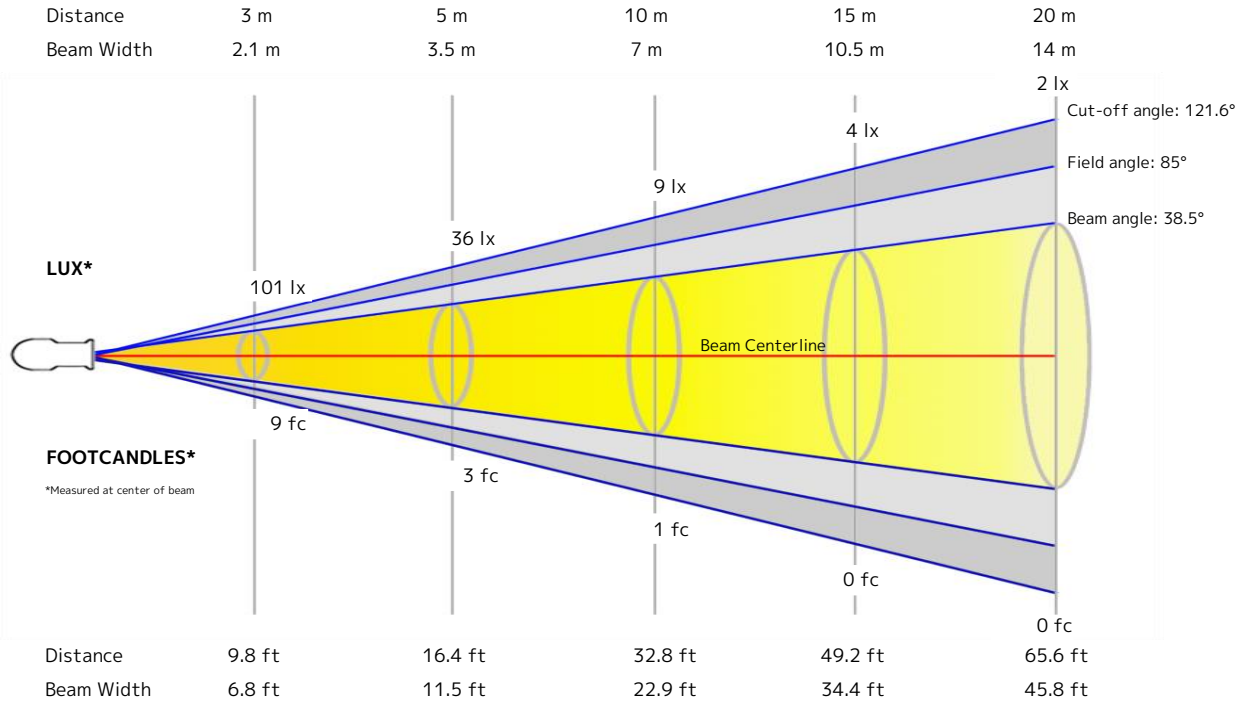
Spectral Power Distribution

Dominant Wavelength 559 nm





Dominant Wavelength	Color Coordinate CIE 1931	Color Coordinate CIE1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964
nm	x	y	u	v
559	0.348	0.519	0.163	0.365



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	909	227	101	57	36	25	19	14	11	9	8	6	5	5	4	4	3	3	3	2
FC	84.4	21.1	9.4	5.3	3.4	2.3	1.7	1.3	1	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2

Measurement Date: 5/15/2024

Measurements

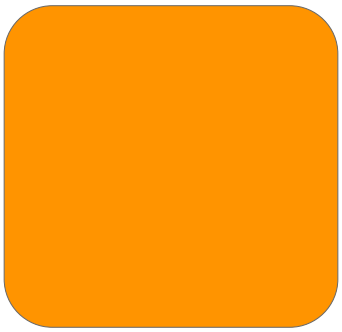
Total Lumen Output: 4585 lm

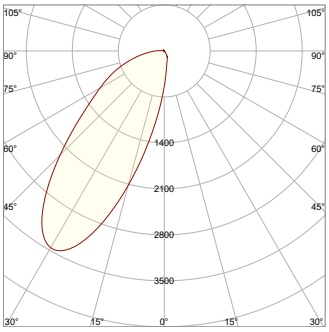
Peak Intensity: 540 cd

Efficacy: 47 Lumen/Watt

Power: 98.0 W

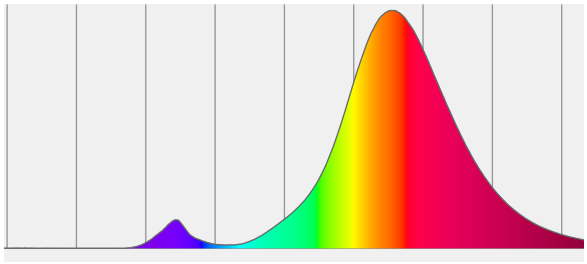
Voltage: 121 V, Current: - A

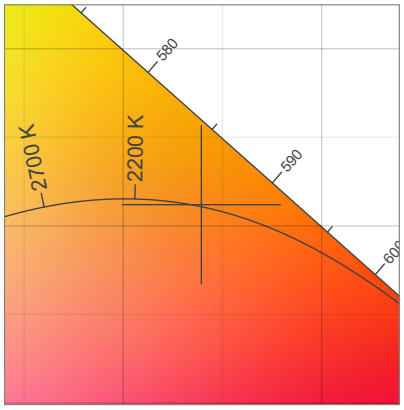




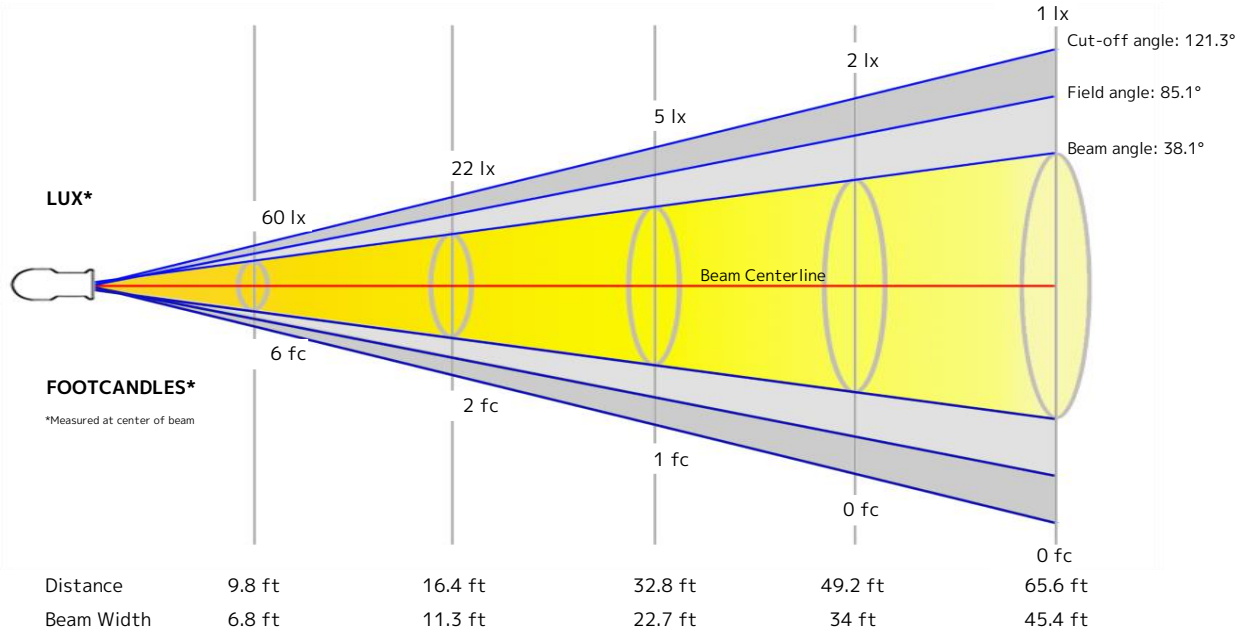
Spectral Power Distribution

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	0.539	0.412	0.314	0.360



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	540	135	60	34	22	15	11	8	7	5	4	4	3	3	2	2	2	2	1	1
FC	50.1	12.5	5.6	3.1	2	1.4	1	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1

Measurement Date: 5/15/2024