SIX+ PAR 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 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

Six+ Par L (Full Output- No UV)

Key Measurements

Output

Total Lumen Output: 6763 lm

Peak Intensity: 99753 cd

Beam

Beam Angle (50%): 13.9°

Field Angle (10%): 24.3°

Cutoff Angle (2.5%): 31.4°

Color

Color Temperature: 6612 K

CRI: 63.4

TLCI: 72

TM30 R_F: 76.5

TM30 R_g: 122.8

Power Details

Efficacy: 47 Lumen/Watt

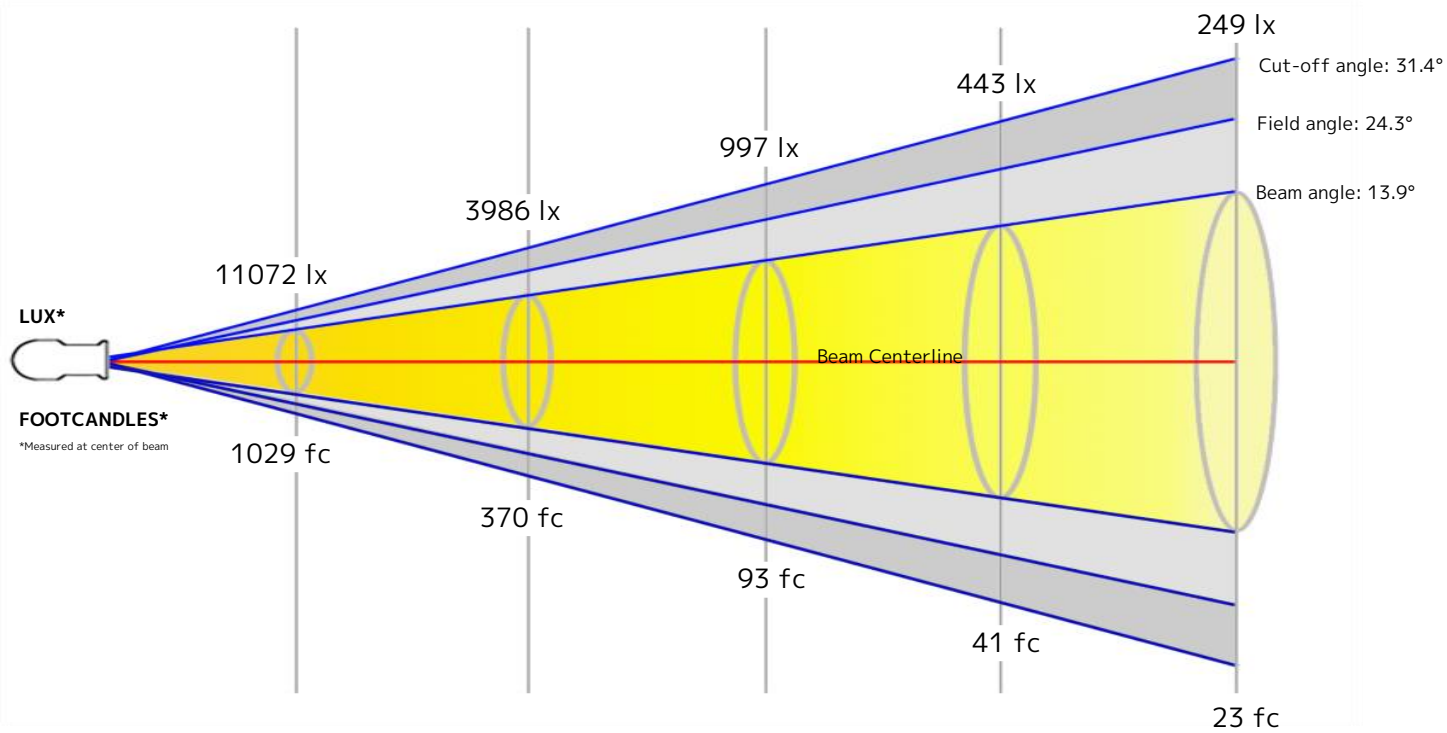
Power: 145.3 W

Supply Voltage: 120 V

Current: 1.22 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.7 m	4.9 m



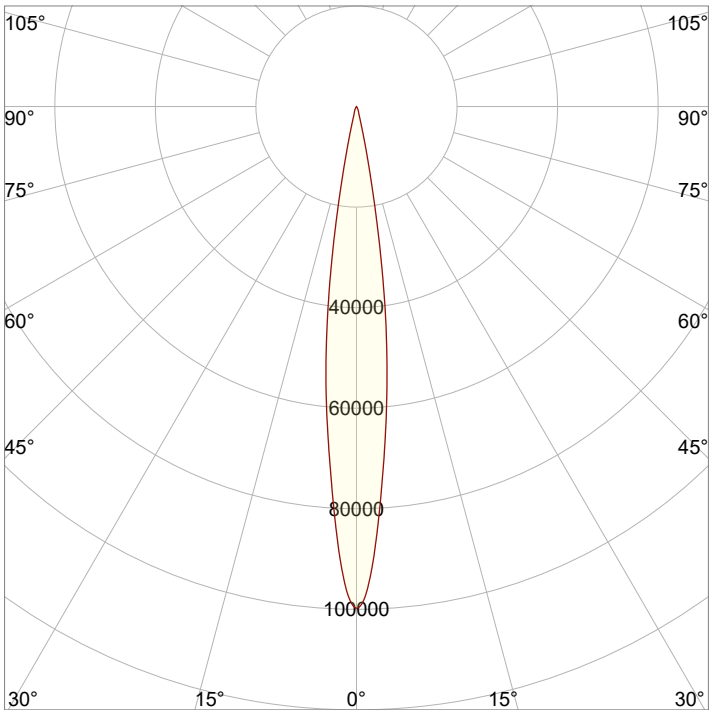
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.4 ft	4 ft	8 ft	12 ft	16 ft

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	99651	24913	11072	6228	3986	2768	2034	1557	1230	997	824	692	590	508	443	389	345	308	276	249
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	9257.8	2314.5	1028.6	578.6	370.3	257.2	188.9	144.7	114.3	92.6	76.5	64.3	54.8	47.2	41.1	36.2	32	28.6	25.6	23.1

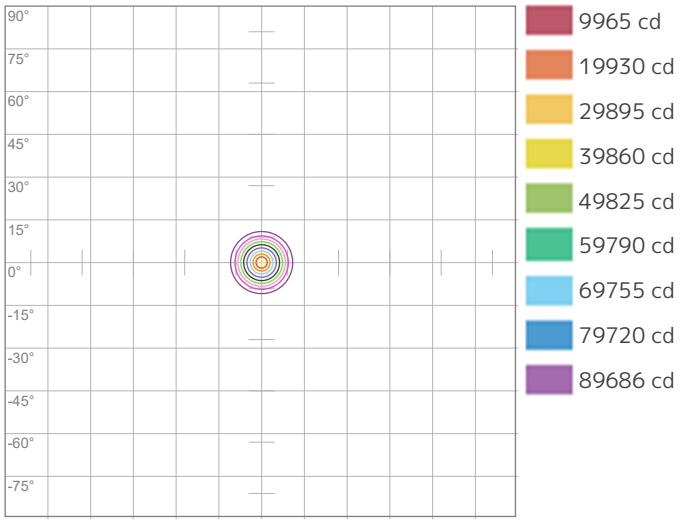
Measurement Date: 2/22/2024

Angular Distribution



Beam Angle - 50%
13.9°
Field Angle - 10%
24.3°
Cutoff Angle - 2.5%
31.4°

ISO Diagrams

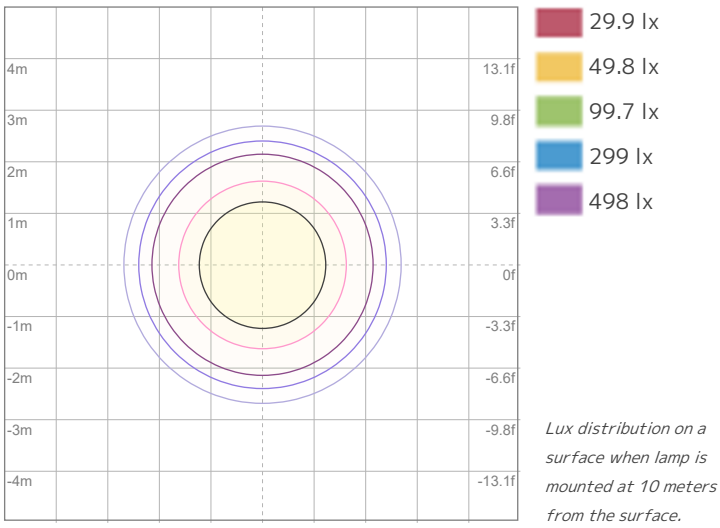


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 99651 cd



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

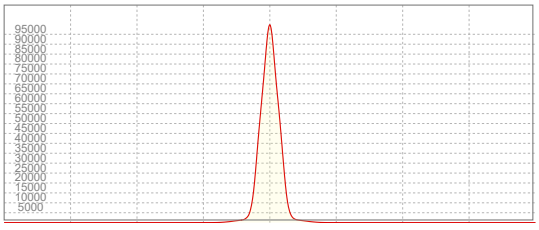
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 997 lx

Linear Distribution



Peak Candela
99753 cd

Calculate Center Beam Intensities
lux = 99753 / distance(m)^2
fc = 99753 / distance(ft)^2

Measurement Date: 2/22/2024

Six+ Par L (Full Output)

Key Measurements

Output

Total Lumen Output: 5538 lm

Peak Intensity: 83555 cd

Beam

Beam Angle (50%): 13.8°

Field Angle (10%): 24.1°

Cutoff Angle (2.5%): 31°

Color

Color Temperature: 7430 K

CRI: 64.5

TLCI: 74

TM30 R_F: 76.1

TM30 R_g: 121.6

Power Details

Efficacy: 39 Lumen/Watt

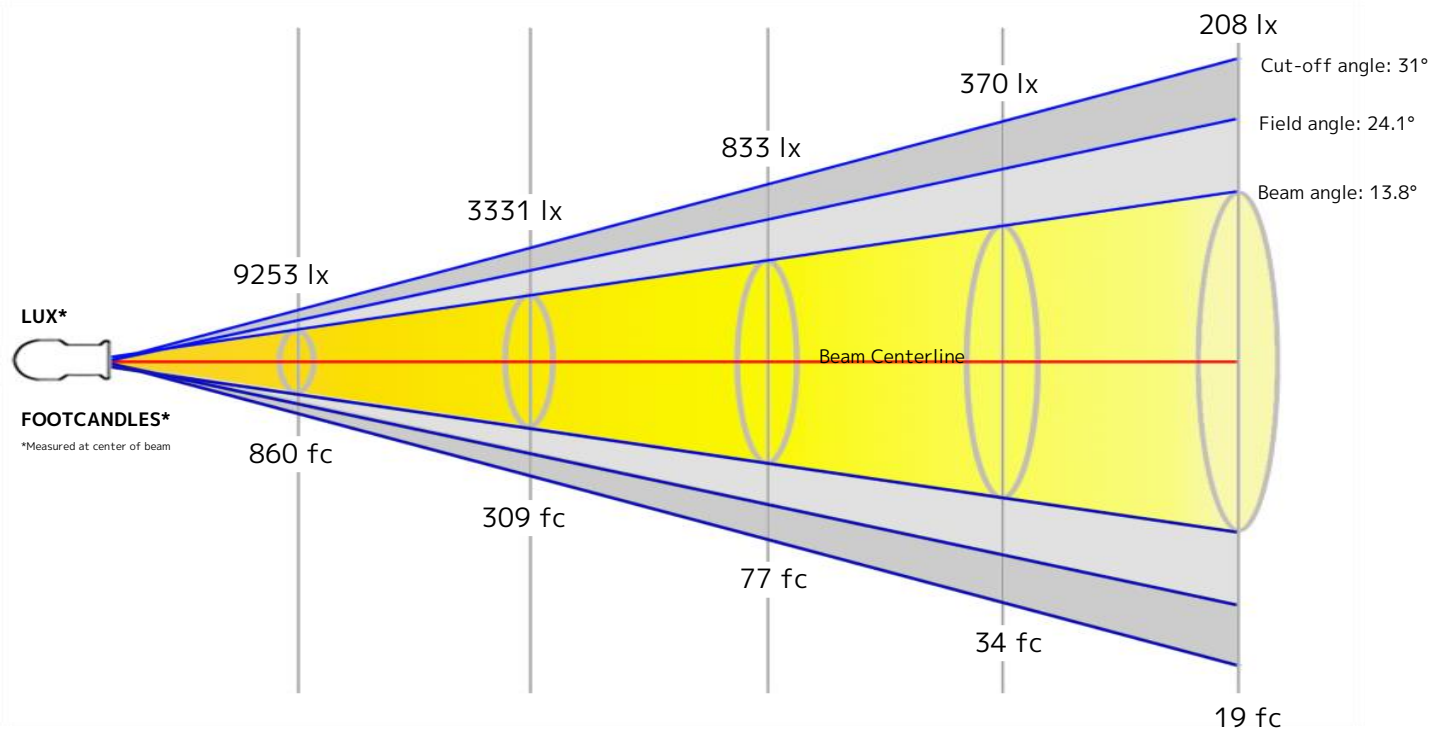
Power: 143.1 W

Supply Voltage: 121 V

Current: 1.19 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.8 m



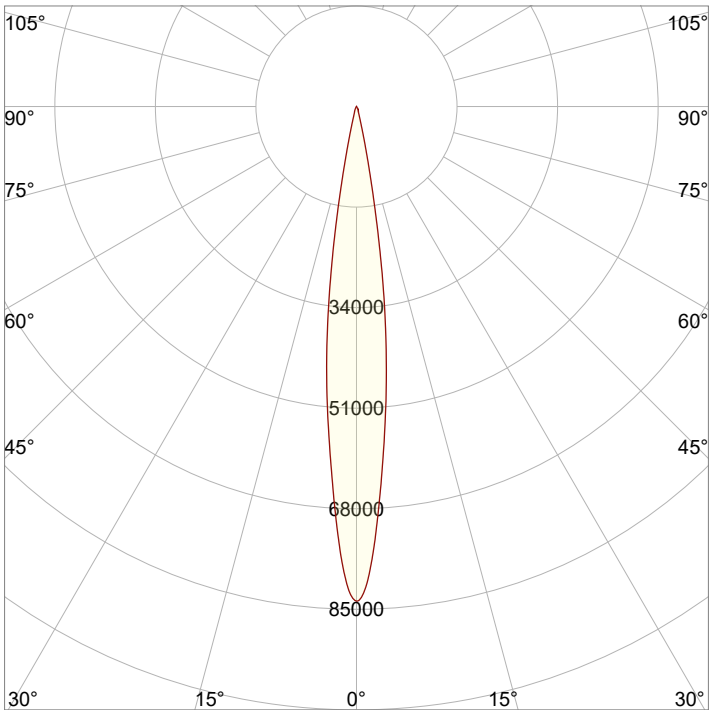
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.4 ft	4 ft	7.9 ft	11.9 ft	15.9 ft

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	83278	20820	9253	5205	3331	2313	1700	1301	1028	833	688	578	493	425	370	325	288	257	231	208
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	7736.8	1934.2	859.6	483.6	309.5	214.9	157.9	120.9	95.5	77.4	63.9	53.7	45.8	39.5	34.4	30.2	26.8	23.9	21.4	19.3

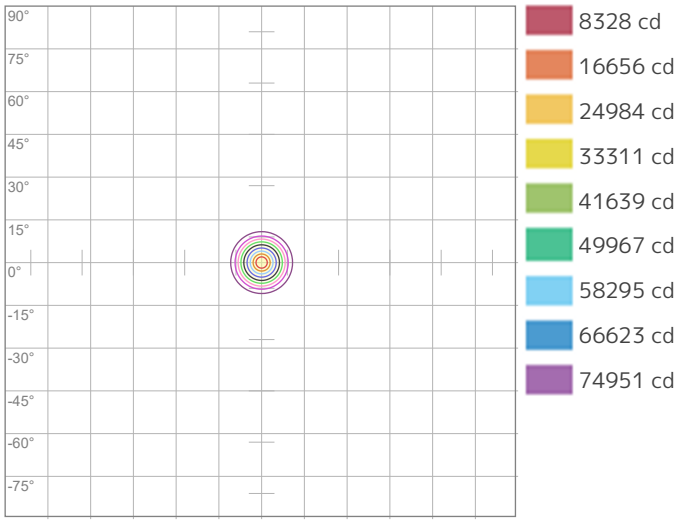
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
13.8°
Field Angle - 10%
24.1°
Cutoff Angle - 2.5%
31°

ISO Diagrams

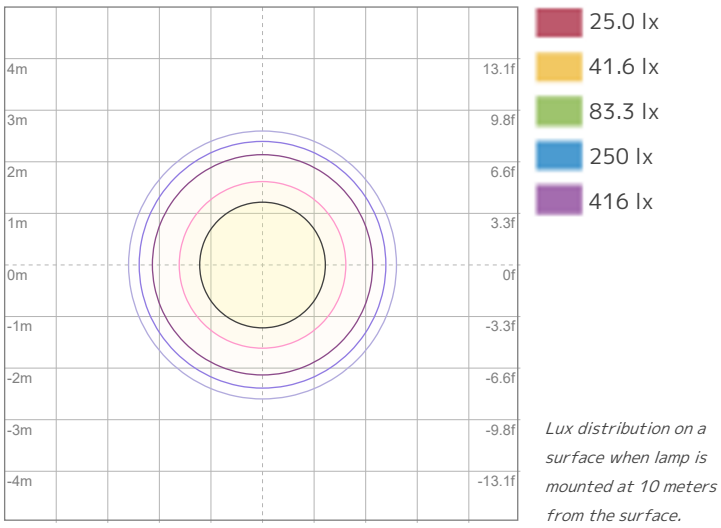


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 83278 cd



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

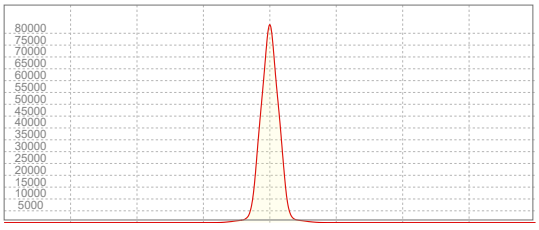
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 833 lx

Linear Distribution



Peak Candela

83555 cd

Calculate Center Beam Intensities

lux = 83555 / distance(m)^2

fc = 83555 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 6083 lm

Peak Intensity: 93637 cd

Beam

Beam Angle (50%): 13.5°

Field Angle (10%): 23.7°

Cutoff Angle (2.5%): 30.6°

Color

Color Temperature: 2652 K

CRI: 89.4

TLCI: 82

TM30 R_F: 91.2

TM30 R_g: 106.4

Power Details

Efficacy: 50 Lumen/Watt

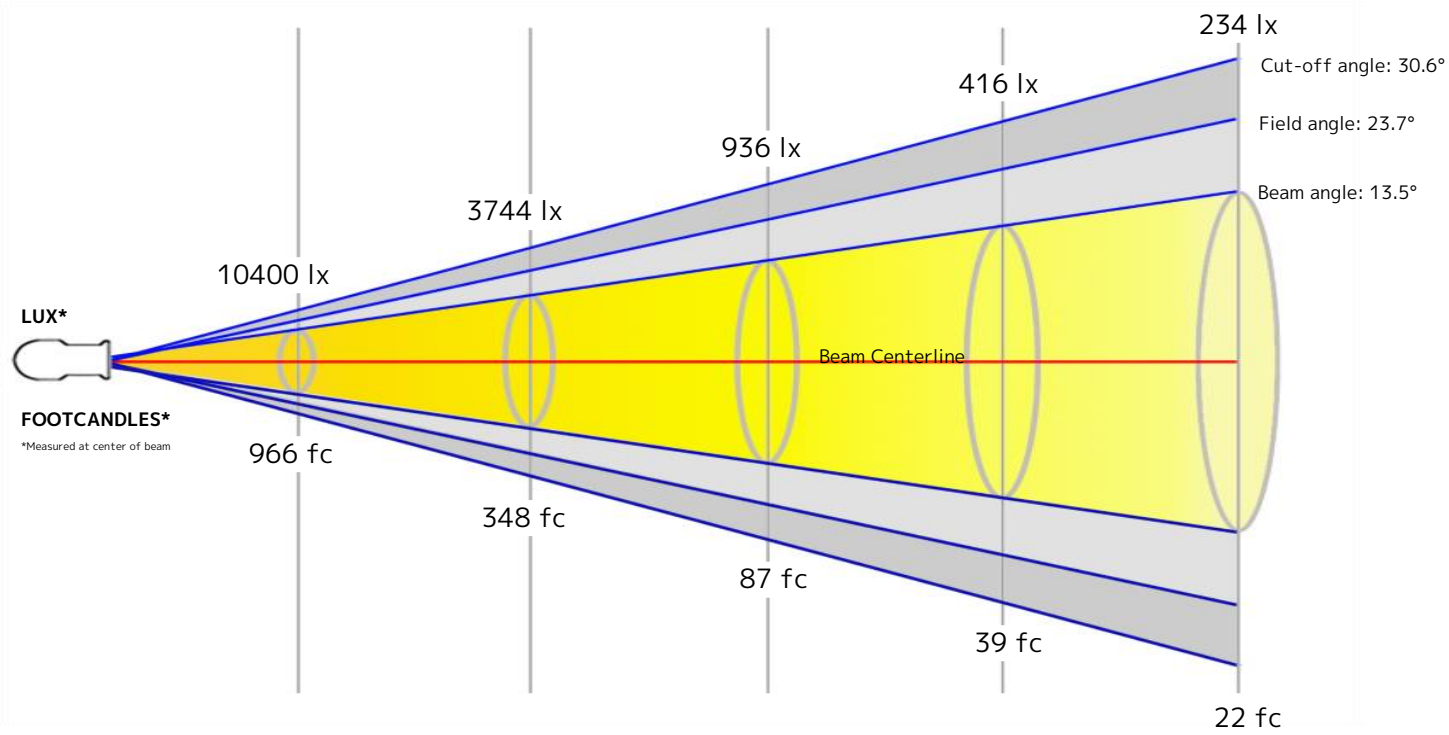
Power: 121.5 W

Supply Voltage: 121 V

Current: 1.01 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.7 m



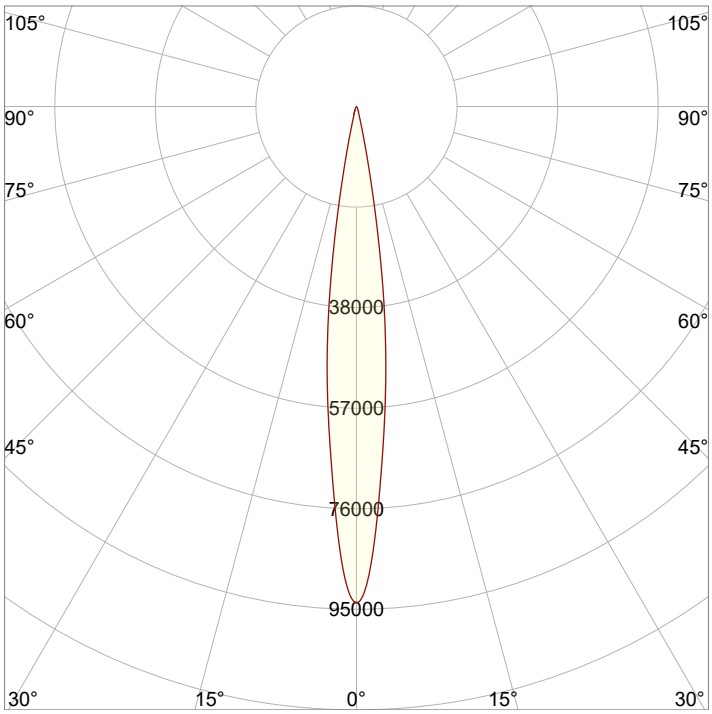
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.3 ft	3.9 ft	7.8 ft	11.7 ft	15.6 ft

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	93597	23399	10400	5850	3744	2600	1910	1462	1156	936	774	650	554	478	416	366	324	289	259	234
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	8695.5	2173.9	966.2	543.5	347.8	241.5	177.5	135.9	107.4	87	71.9	60.4	51.5	44.4	38.6	34	30.1	26.8	24.1	21.7

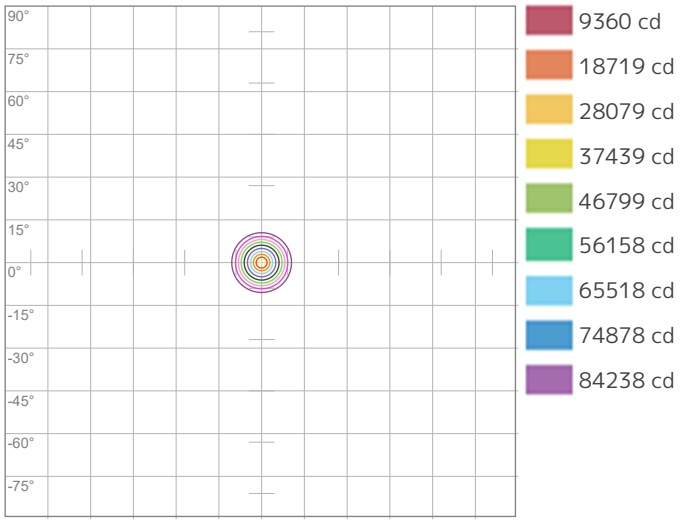
Measurement Date: 2/22/2024

Angular Distribution



Beam Angle - 50%
13.5°
Field Angle - 10%
23.7°
Cutoff Angle - 2.5%
30.6°

ISO Diagrams

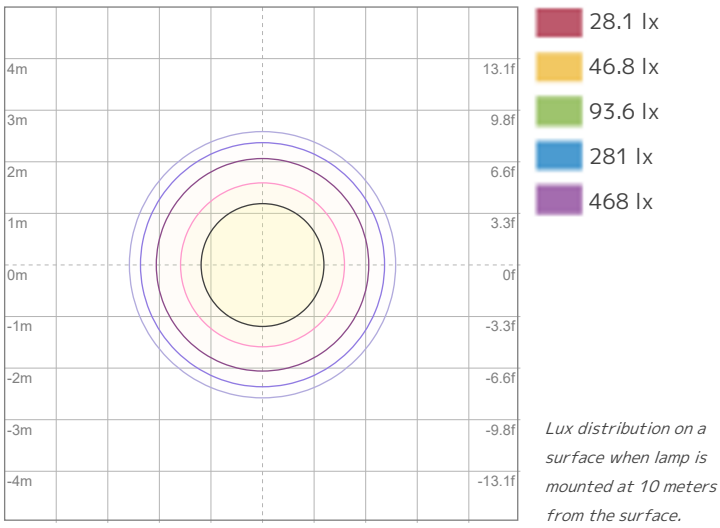


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 93597 cd



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

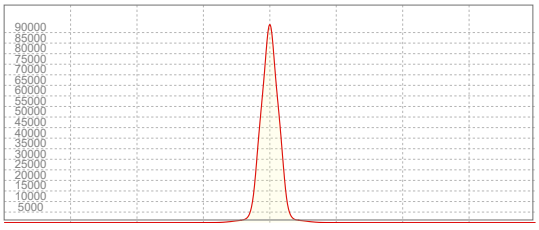
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 936 lx

Linear Distribution



Peak Candela

93637 cd

Calculate Center Beam Intensities

lux = 93637 / distance(m)^2

fc = 93637 / distance(ft)^2

Measurement Date: 2/22/2024

Key Measurements

Output

Total Lumen Output: 6576 lm

Peak Intensity: 101563 cd

Beam

Beam Angle (50%): 13.5°

Field Angle (10%): 23.7°

Cutoff Angle (2.5%): 30.7°

Color

Color Temperature: 3200 K

CRI: 91.7

TLCI: 85

TM30 R_F: 92.1

TM30 R_g: 107.0

Power Details

Efficacy: 49 Lumen/Watt

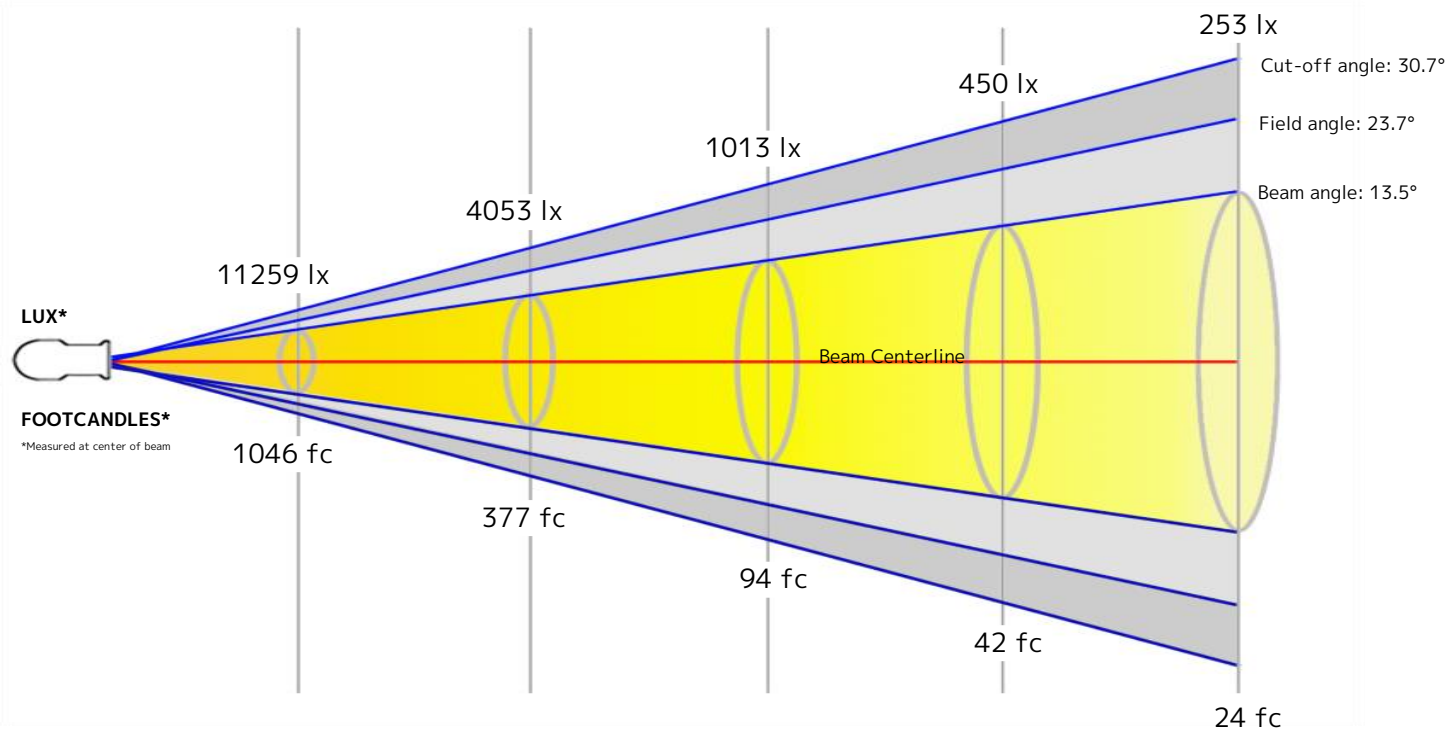
Power: 133.9 W

Supply Voltage: 120 V

Current: 1.12 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.7 m



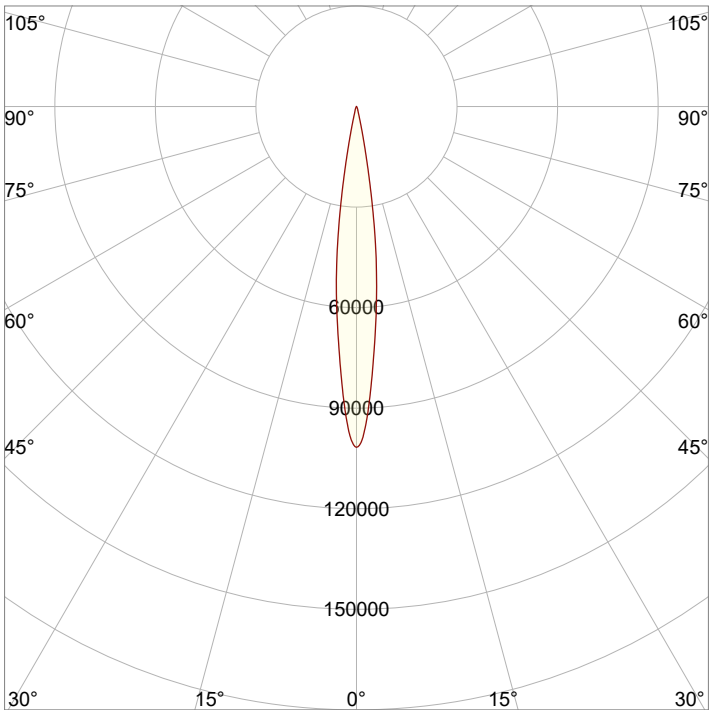
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.3 ft	3.9 ft	7.8 ft	11.6 ft	15.5 ft

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	101334	25333	11259	6333	4053	2815	2068	1583	1251	1013	837	704	600	517	450	396	351	313	281	253
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	9414.2	2353.6	1046	588.4	376.6	261.5	192.1	147.1	116.2	94.1	77.8	65.4	55.7	48	41.8	36.8	32.6	29.1	26.1	23.5

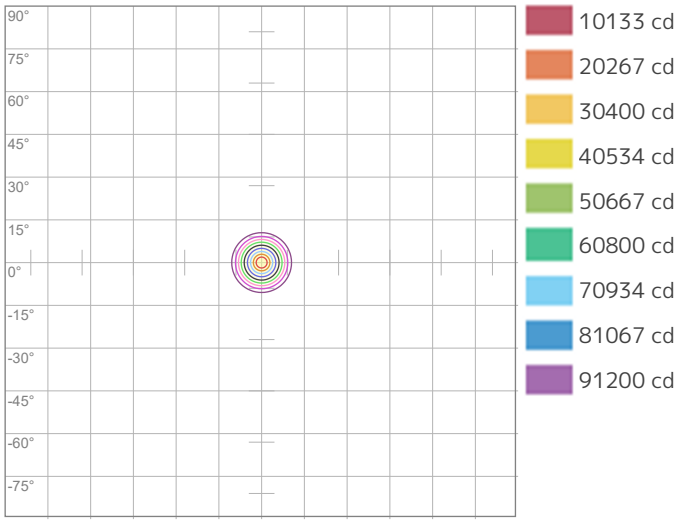
Measurement Date: 2/22/2024

Angular Distribution



Beam Angle - 50%
13.5°
Field Angle - 10%
23.7°
Cutoff Angle - 2.5%
30.7°

ISO Diagrams

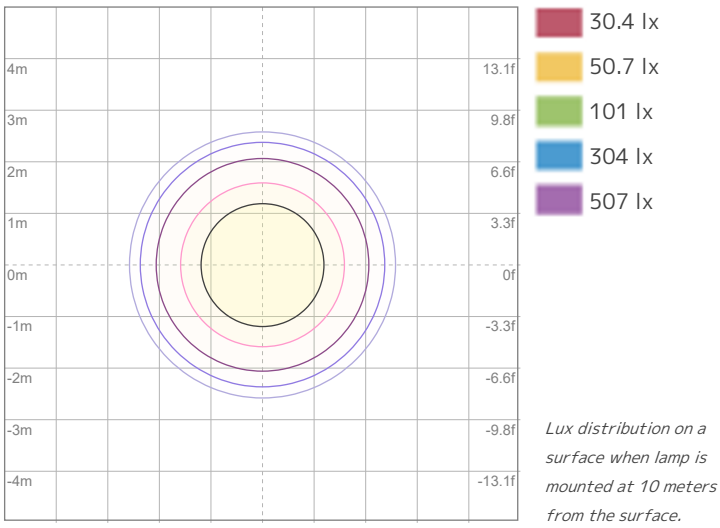


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 101334 cd



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

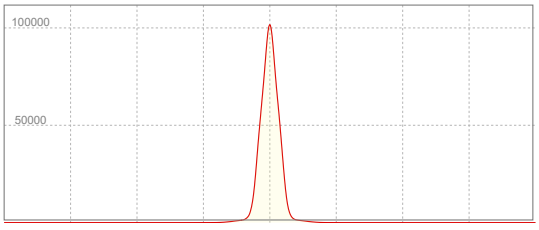
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 1013 lx

Linear Distribution



Peak Candela

101563 cd

Calculate Center Beam Intensities

lux = 101563 / distance(m)^2

fc = 101563 / distance(ft)^2

Measurement Date: 2/22/2024

Key Measurements

Output

Total Lumen Output: 6195 lm

Peak Intensity: 93100 cd

Beam

Beam Angle (50%): 13.7°

Field Angle (10%): 24°

Cutoff Angle (2.5%): 31°

Color

Color Temperature: 4522 K

CRI: 90.9

TLCI: 84

TM30 R_F: 90.6

TM30 R_g: 107.4

Power Details

Efficacy: 49 Lumen/Watt

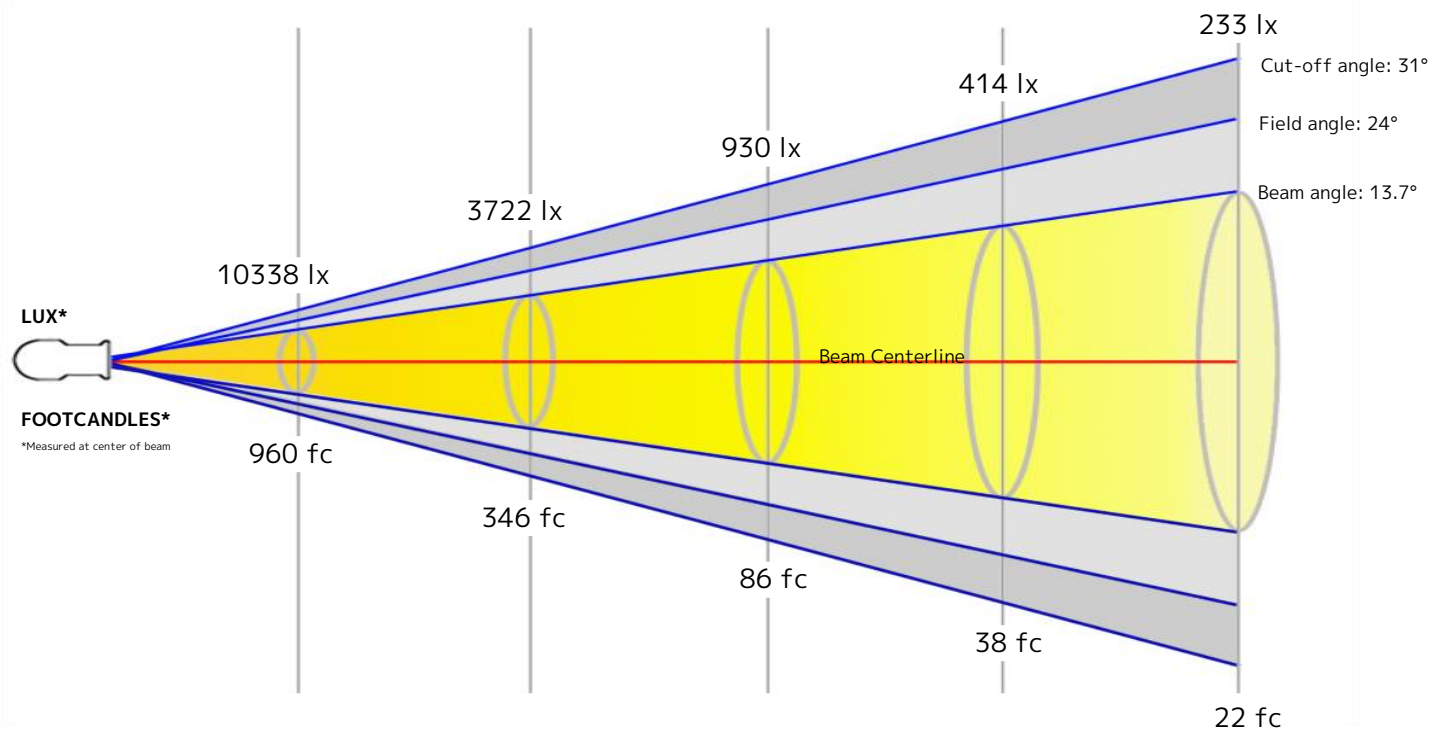
Power: 125.6 W

Supply Voltage: 121 V

Current: 1.05 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.8 m



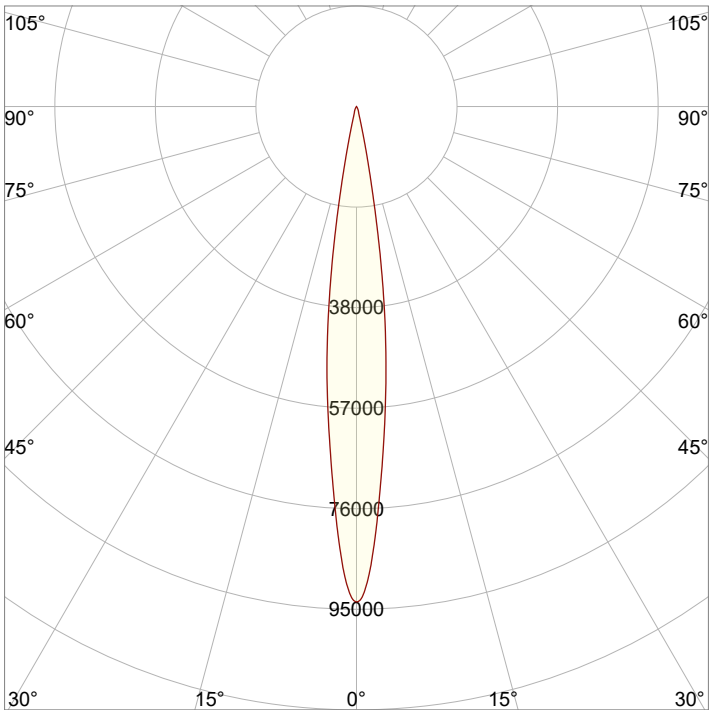
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.3 ft	3.9 ft	7.9 ft	11.8 ft	15.7 ft

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	93040	23260	10338	5815	3722	2584	1899	1454	1149	930	769	646	551	475	414	363	322	287	258	233
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	8643.7	2160.9	960.4	540.2	345.7	240.1	176.4	135.1	106.7	86.4	71.4	60	51.1	44.1	38.4	33.8	29.9	26.7	23.9	21.6

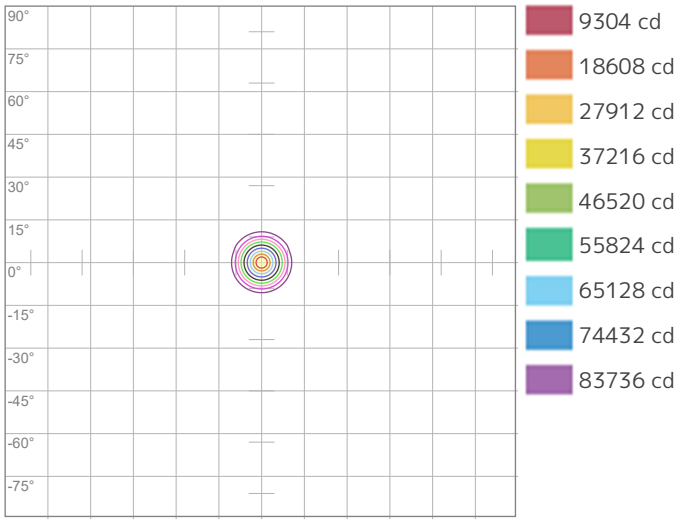
Measurement Date: 2/22/2024

Angular Distribution



Beam Angle - 50%
13.7°
Field Angle - 10%
24°
Cutoff Angle - 2.5%
31°

ISO Diagrams

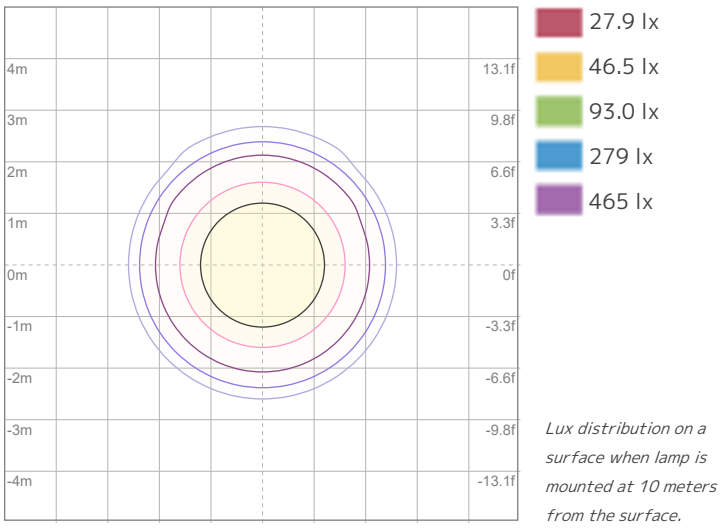


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 93040 cd



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

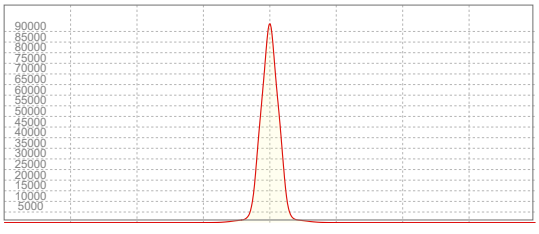
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 930 lx

Linear Distribution



Peak Candela
93100 cd

Calculate Center Beam Intensities

lux = 93100 / distance(m)^2

fc = 93100 / distance(ft)^2

Measurement Date: 2/22/2024

Key Measurements

Output

Total Lumen Output: 7300 lm

Peak Intensity: 108285 cd

Beam

Beam Angle (50%): 13.6°

Field Angle (10%): 24°

Cutoff Angle (2.5%): 31.4°

Color

Color Temperature: 5532 K

CRI: 90.2

TLCI: 85

TM30 R_F: 89.1

TM30 R_g: 107.0

Power Details

Efficacy: 51 Lumen/Watt

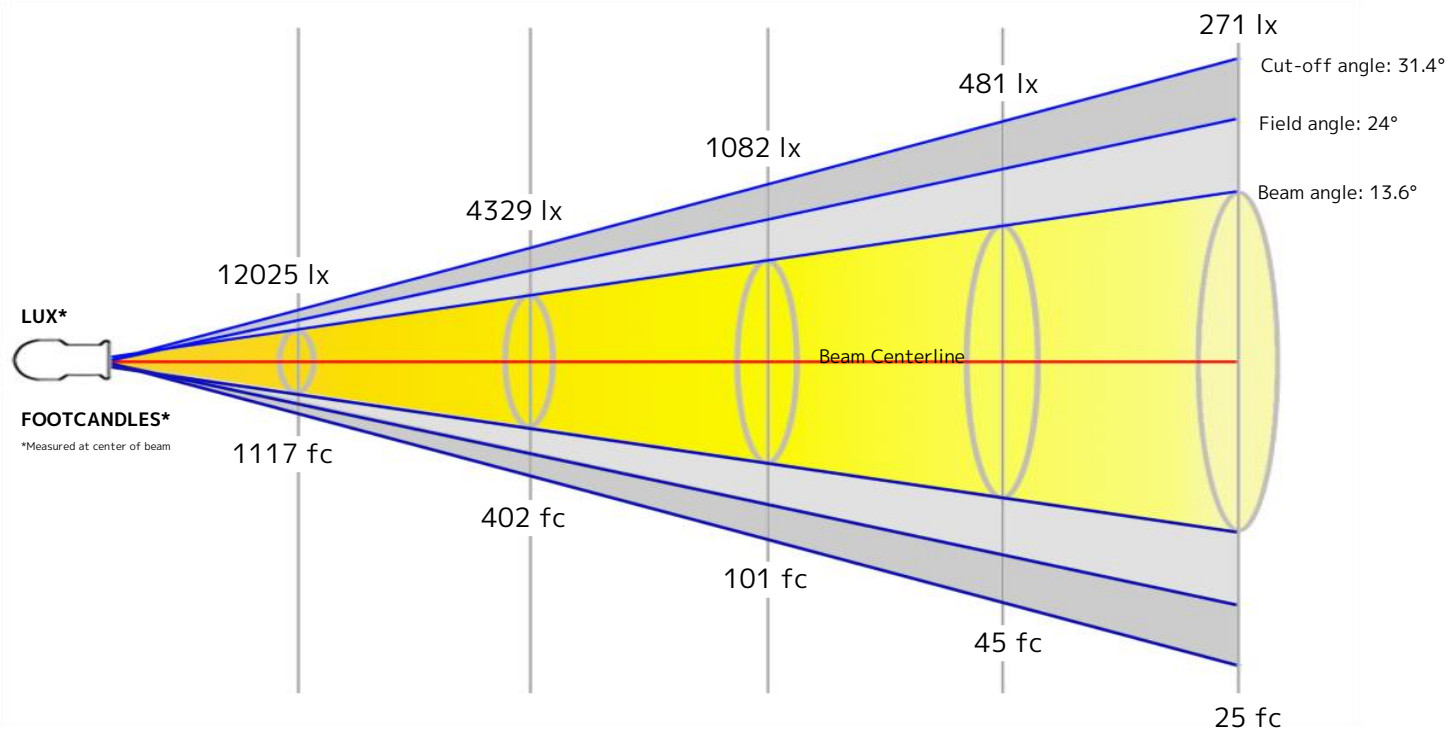
Power: 142.8 W

Supply Voltage: 120 V

Current: 1.20 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.8 m



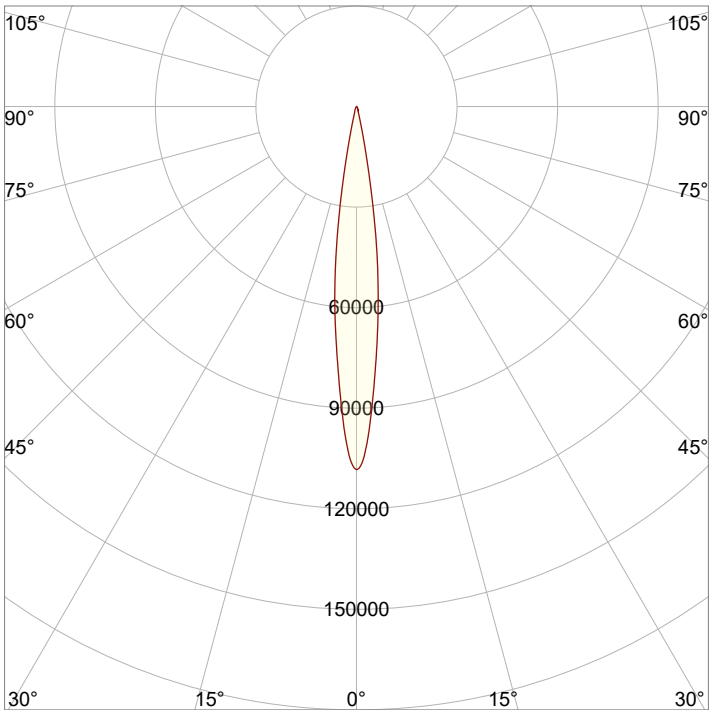
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.3 ft	3.9 ft	7.8 ft	11.8 ft	15.7 ft

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	108226	27056	12025	6764	4329	3006	2209	1691	1336	1082	894	752	640	552	481	423	374	334	300	271
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	10054.5	2513.6	1117.2	628.4	402.2	279.3	205.2	157.1	124.1	100.5	83.1	69.8	59.5	51.3	44.7	39.3	34.8	31	27.9	25.1

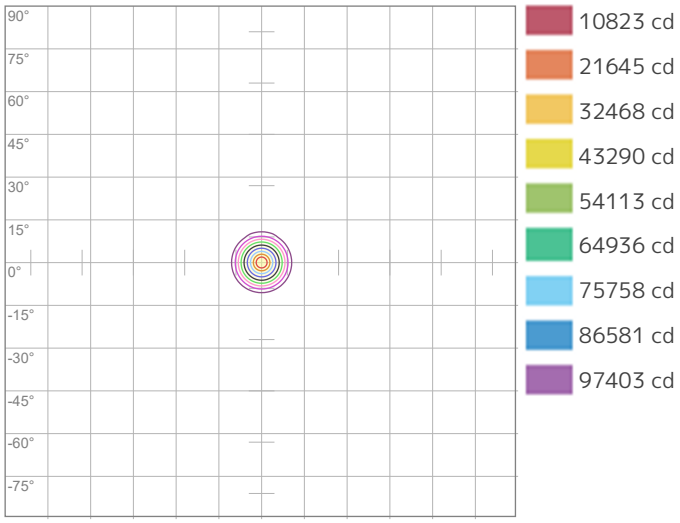
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
13.6°
Field Angle - 10%
24°
Cutoff Angle - 2.5%
31.4°

ISO Diagrams

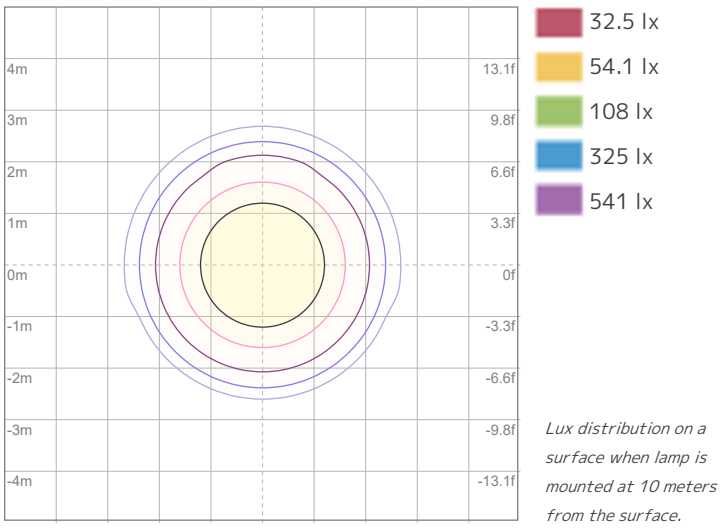


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 108226 cd



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

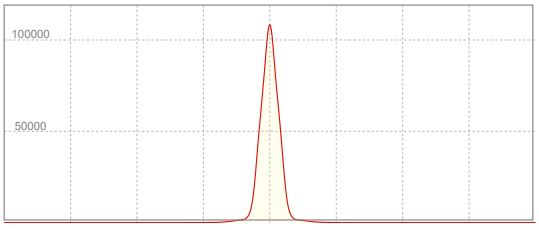
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 1082 lx

Linear Distribution



Peak Candela

108285 cd

Calculate Center Beam Intensities

lux = 108285 / distance(m)^2

fc = 108285 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 6177 lm

Peak Intensity: 93199 cd

Beam

Beam Angle (50%): 13.7°

Field Angle (10%): 24°

Cutoff Angle (2.5%): 31°

Color

Color Temperature: 6026 K

CRI: 89.9

TLCI: 86

TM30 R_F: 88.9

TM30 R_g: 107.0

Power Details

Efficacy: 47 Lumen/Watt

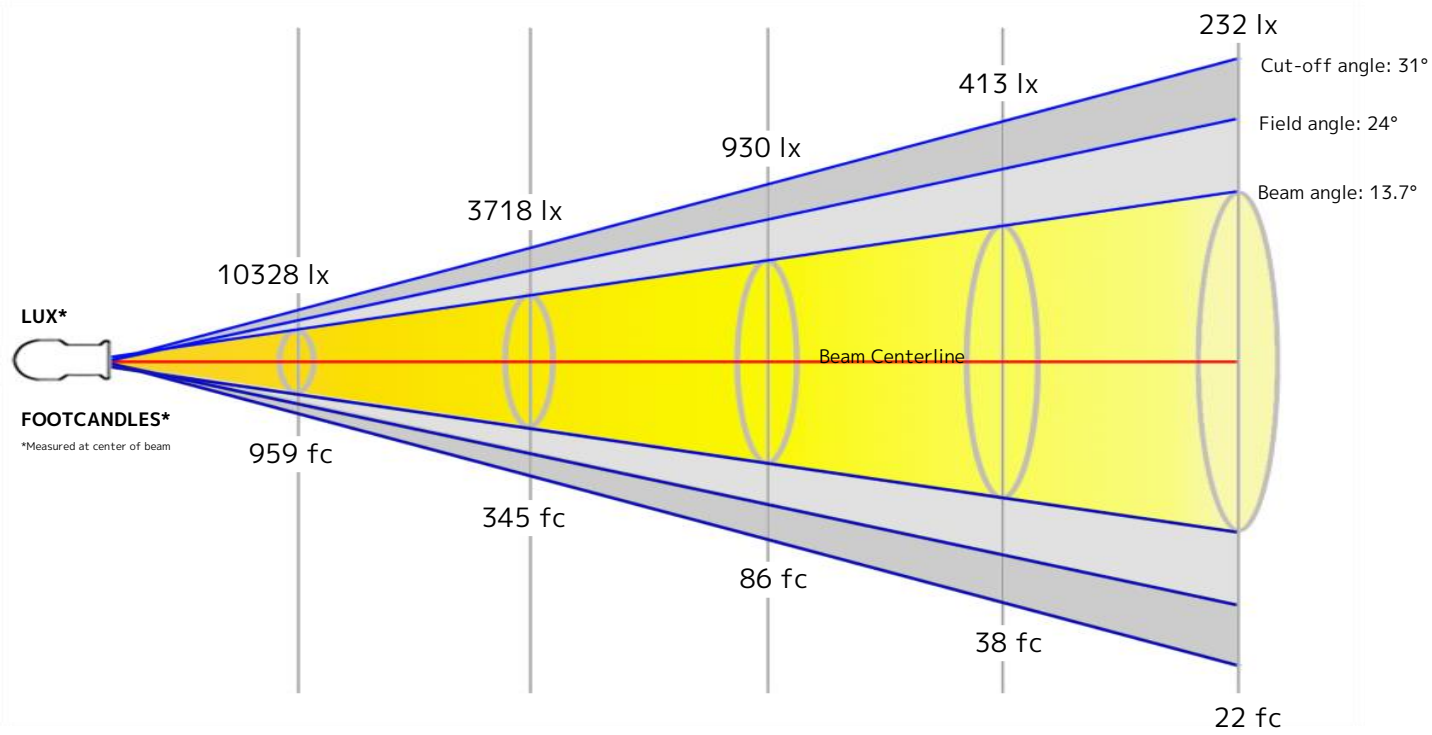
Power: 132.7 W

Supply Voltage: 119 V

Current: 1.12 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.8 m



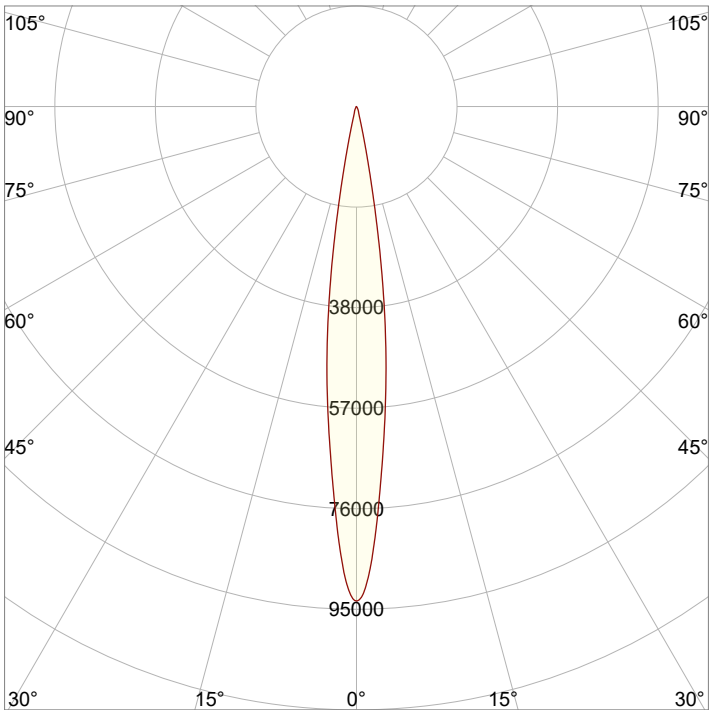
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.4 ft	3.9 ft	7.9 ft	11.8 ft	15.7 ft

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	92951	23238	10328	5809	3718	2582	1897	1452	1148	930	768	645	550	474	413	363	322	287	257	232
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	8635.4	2158.9	959.5	539.7	345.4	239.9	176.2	134.9	106.6	86.4	71.4	60	51.1	44.1	38.4	33.7	29.9	26.7	23.9	21.6

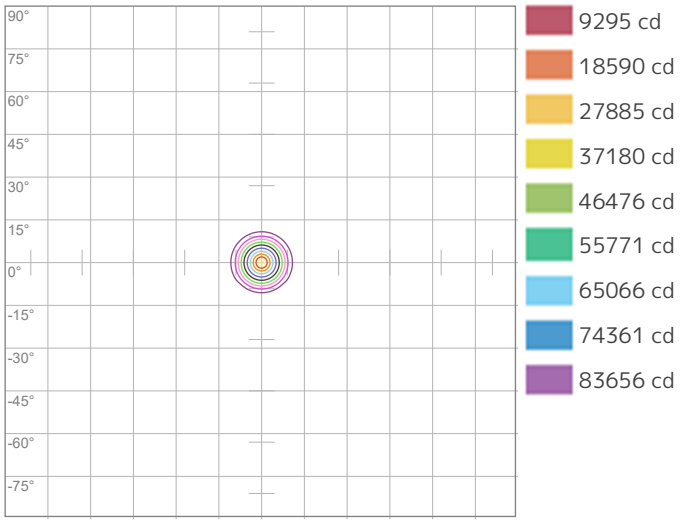
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
13.7°
Field Angle - 10%
24°
Cutoff Angle - 2.5%
31°

ISO Diagrams

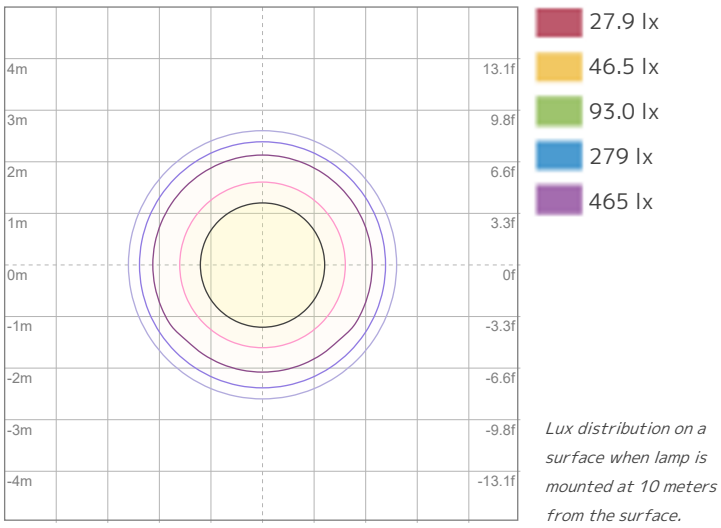


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 92951 cd



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

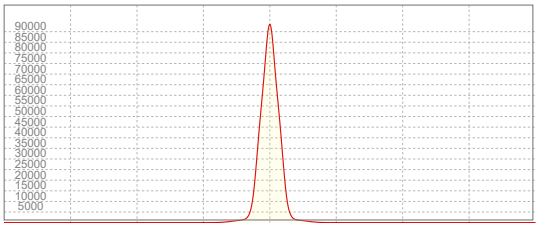
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 930 lx

Linear Distribution



Peak Candela

93199 cd

Calculate Center Beam Intensities

lux = 93199 / distance(m)^2

fc = 93199 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 6073 lm

Peak Intensity: 89648 cd

Beam

Beam Angle (50%): 13.7°

Field Angle (10%): 24°

Cutoff Angle (2.5%): 31.3°

Color

Color Temperature: 6457 K

CRI: 89.7

TLCI: 87

TM30 R_F: 88.6

TM30 R_g: 106.7

Power Details

Efficacy: 50 Lumen/Watt

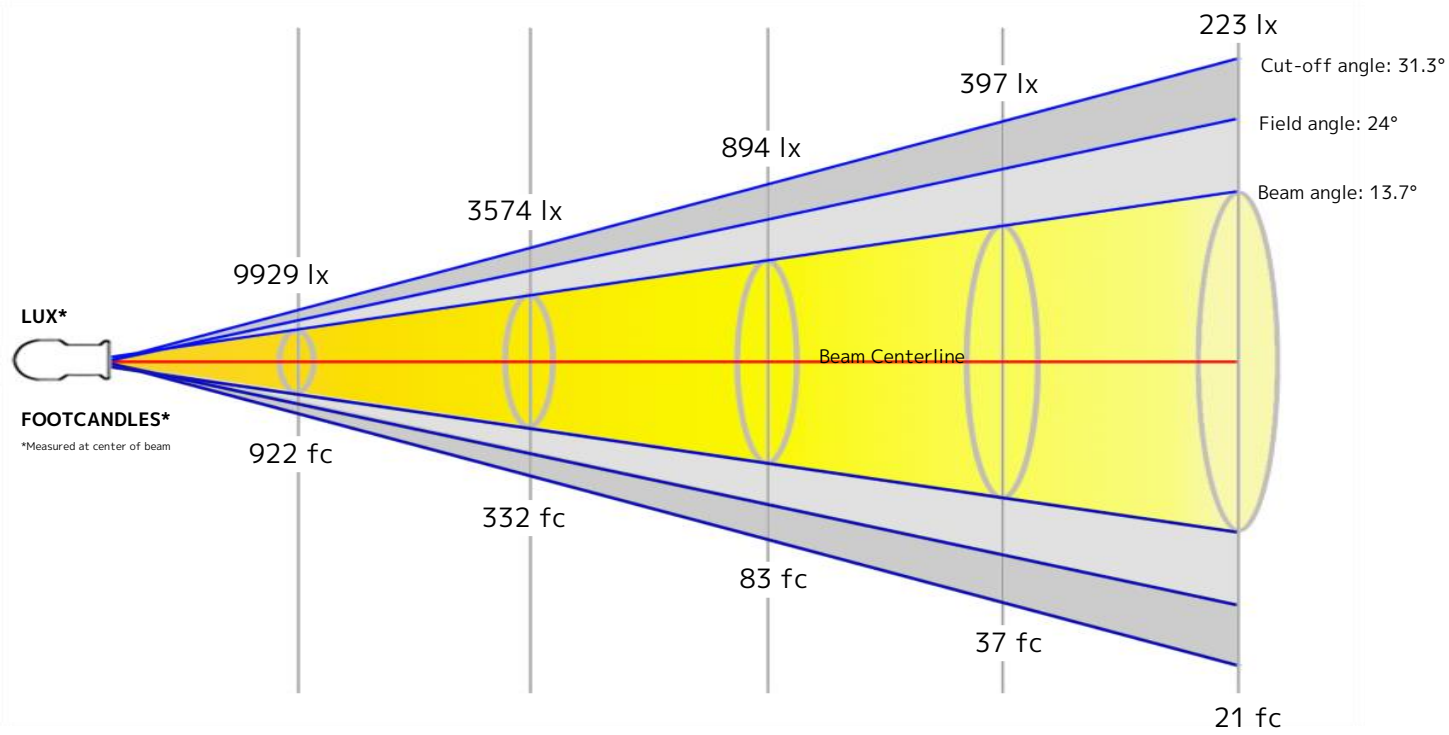
Power: 122.6 W

Supply Voltage: 119 V

Current: 1.03 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.8 m



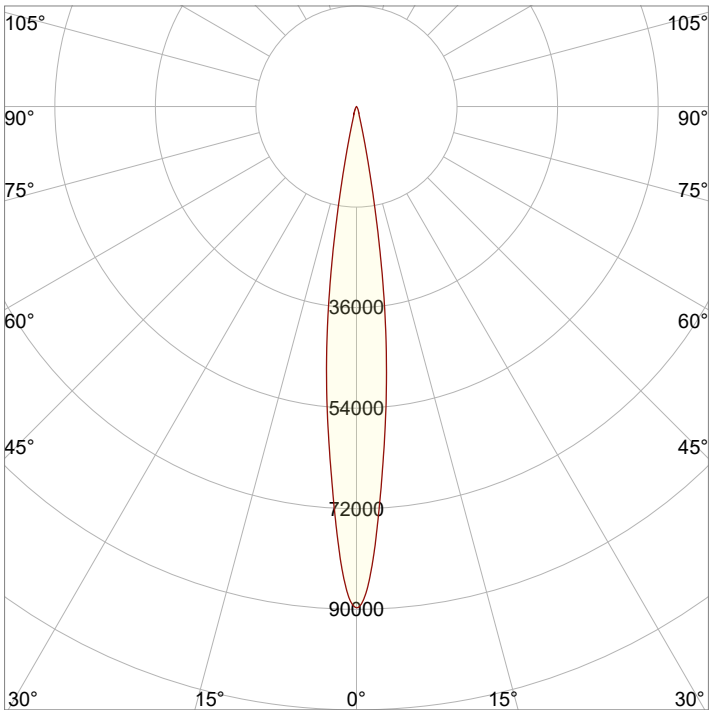
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.4 ft	3.9 ft	7.9 ft	11.8 ft	15.7 ft

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	89357	22339	9929	5585	3574	2482	1824	1396	1103	894	738	621	529	456	397	349	309	276	248	223
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	8301.6	2075.4	922.4	518.8	332.1	230.6	169.4	129.7	102.5	83	68.6	57.6	49.1	42.4	36.9	32.4	28.7	25.6	23	20.8

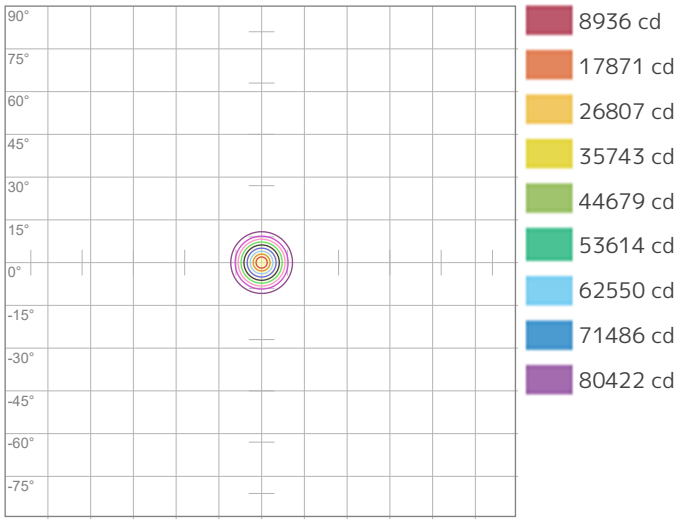
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
13.7°
Field Angle - 10%
24°
Cutoff Angle - 2.5%
31.3°

ISO Diagrams

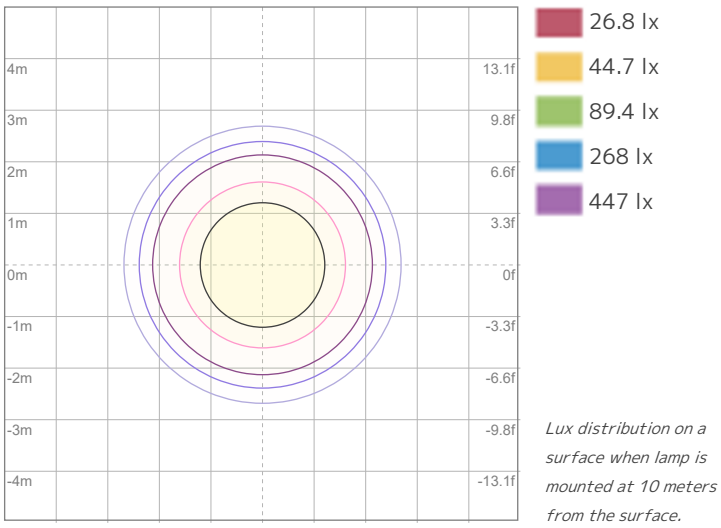


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 89357 cd



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

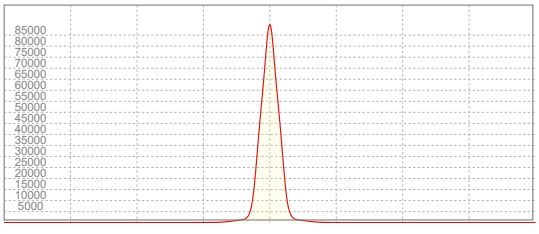
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 894 lx

Linear Distribution



Peak Candela

89648 cd

Calculate Center Beam Intensities

lux = 89648 / distance(m)^2

fc = 89648 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5712 lm

Peak Intensity: 86482 cd

Beam

Beam Angle (50%): 13.7°

Field Angle (10%): 24°

Cutoff Angle (2.5%): 31.1°

Color

Color Temperature: 8450 K

CRI: 89.1

TLCI: 87

TM30 R_F: 87.3

TM30 R_g: 104.8

Power Details

Efficacy: 47 Lumen/Watt

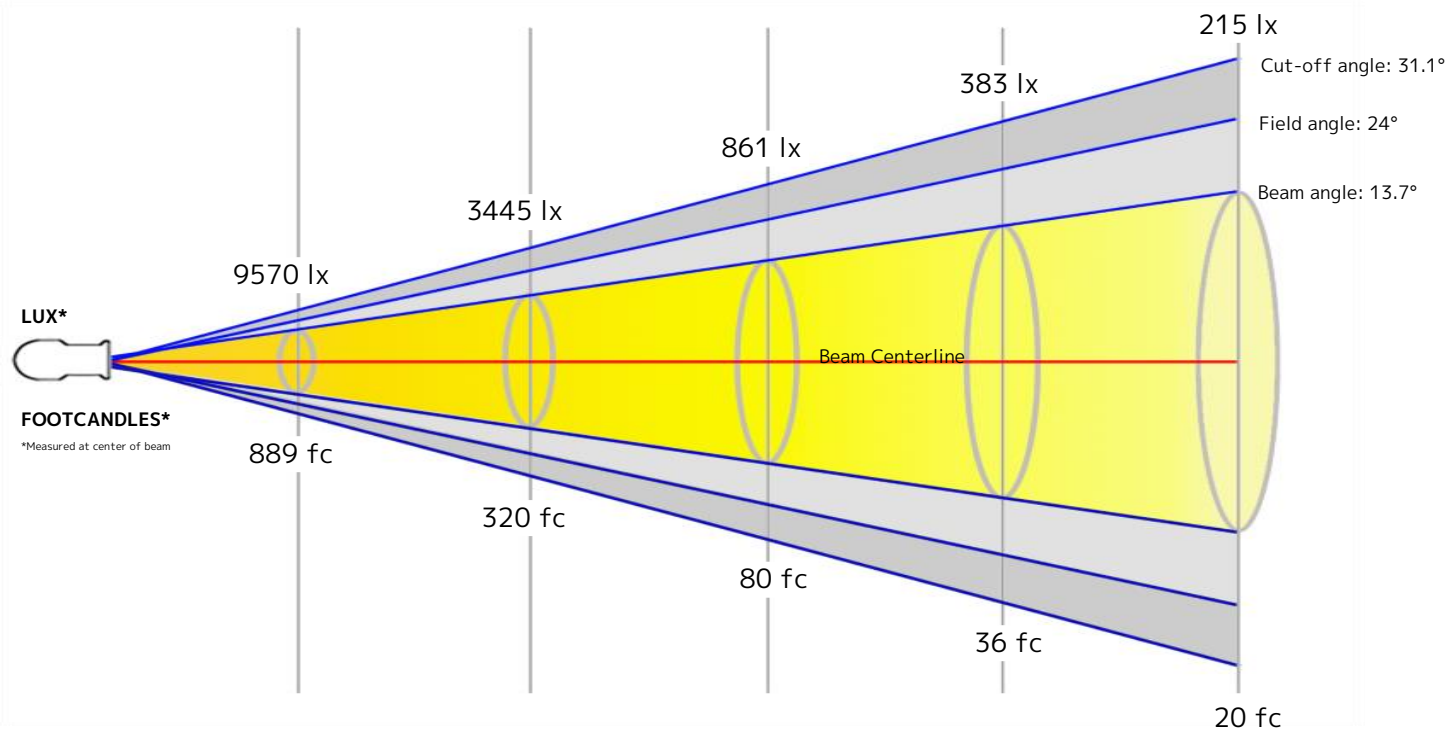
Power: 121.6 W

Supply Voltage: 119 V

Current: 1.02 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	0.7 m	1.2 m	2.4 m	3.6 m	4.8 m



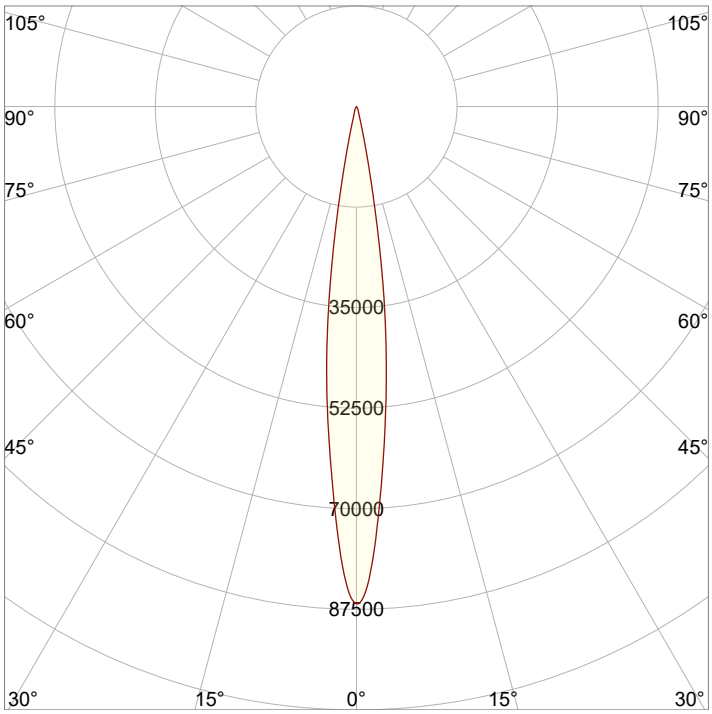
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	2.4 ft	3.9 ft	7.9 ft	11.8 ft	15.8 ft

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	86129	21532	9570	5383	3445	2392	1758	1346	1063	861	712	598	510	439	383	336	298	266	239	215
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	8001.7	2000.4	889.1	500.1	320.1	222.3	163.3	125	98.8	80	66.1	55.6	47.3	40.8	35.6	31.3	27.7	24.7	22.2	20

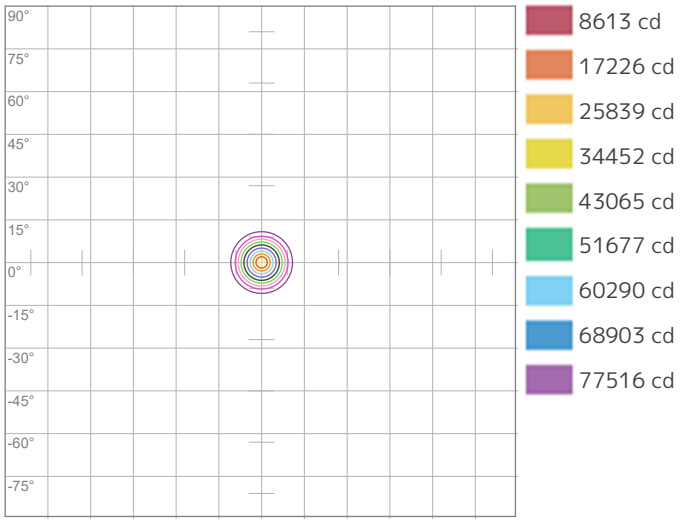
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
13.7°
Field Angle - 10%
24°
Cutoff Angle - 2.5%
31.1°

ISO Diagrams

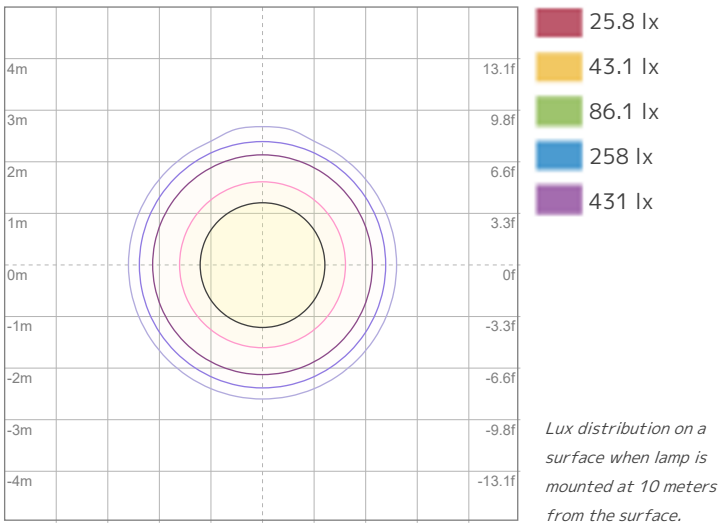


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 86129 cd



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

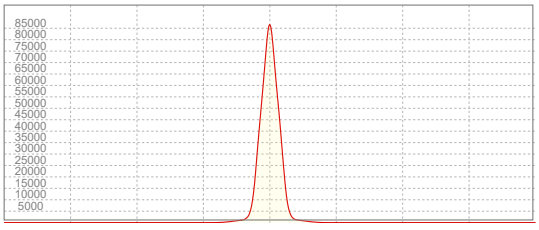
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 861 lx

Linear Distribution



Peak Candela

86482 cd

Calculate Center Beam Intensities

lux = 86482 / distance(m)^2

fc = 86482 / distance(ft)^2

Measurement Date: 2/23/2024

Six+ Par L (20°, Full Output- No UV)

Key Measurements

Output

Total Lumen Output: 4904 lm

Peak Intensity: 35156 cd

Beam

Beam Angle (50%): 19.4°

Field Angle (10%): 35.4°

Cutoff Angle (2.5%): 48.5°

Color

Color Temperature: 7339 K

CRI: 68.9

TLCI: 79

TM30 R_F: 78.6

TM30 R_g: 119.4

Power Details

Efficacy: 42 Lumen/Watt

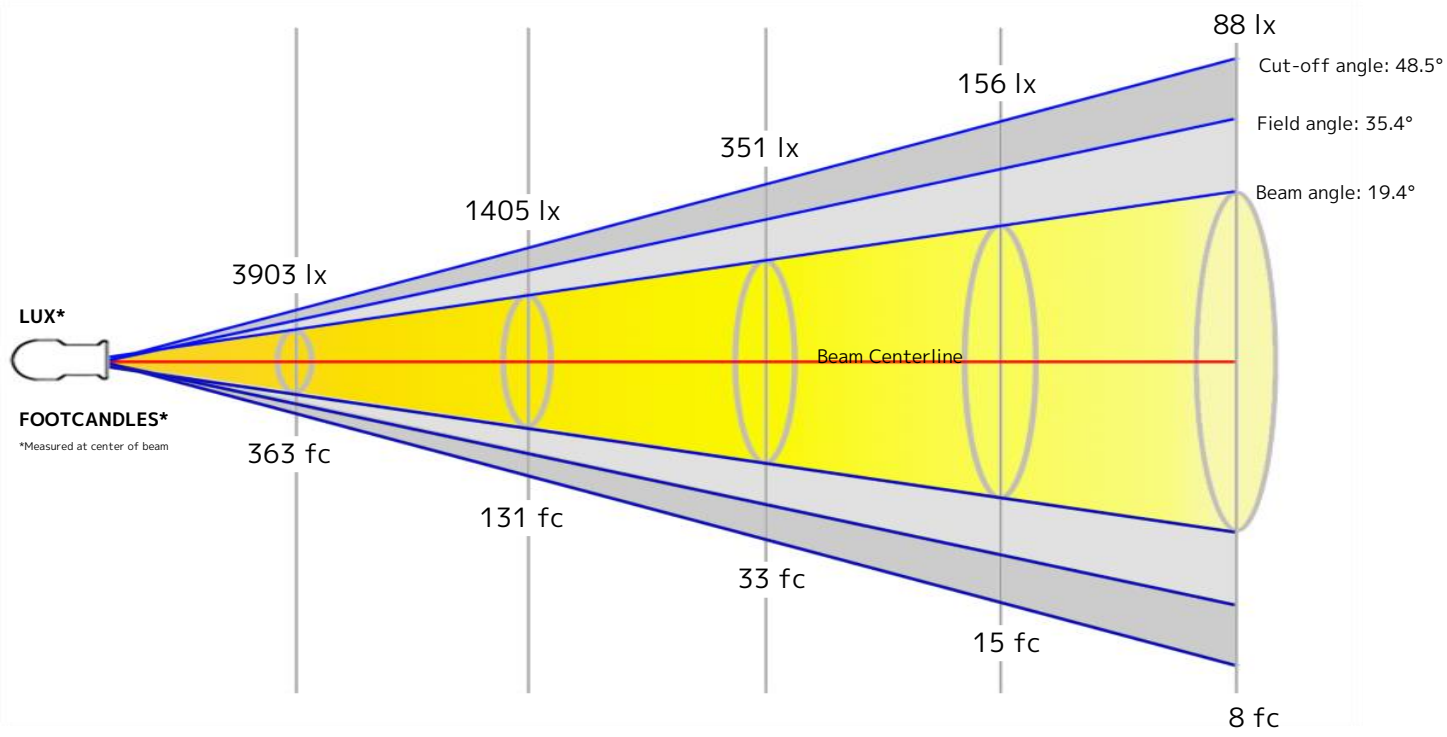
Power: 116.5 W

Supply Voltage: 120 V

Current: 0.973 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



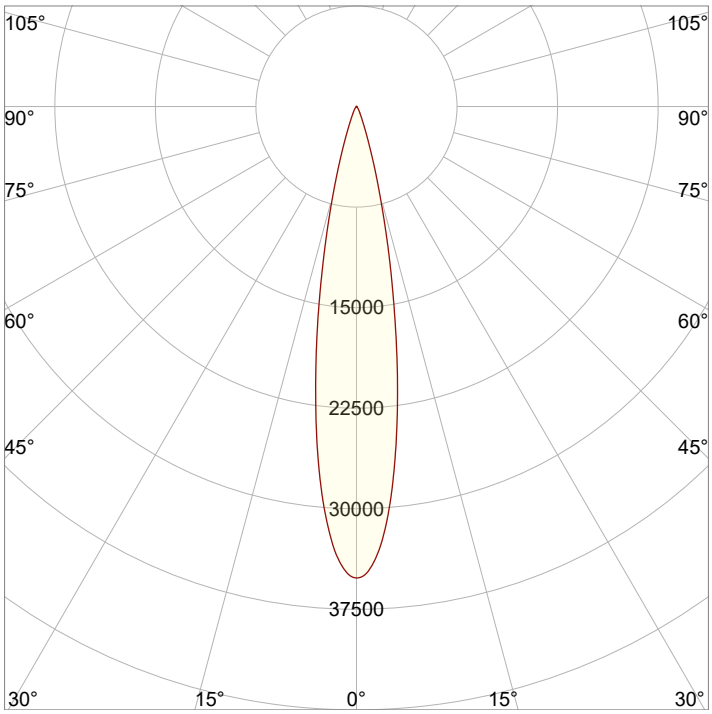
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.2 ft	16.8 ft	22.4 ft

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	35126	8781	3903	2195	1405	976	717	549	434	351	290	244	208	179	156	137	122	108	97	88
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	3263.3	815.8	362.6	204	130.5	90.6	66.6	51	40.3	32.6	27	22.7	19.3	16.6	14.5	12.7	11.3	10.1	9	8.2

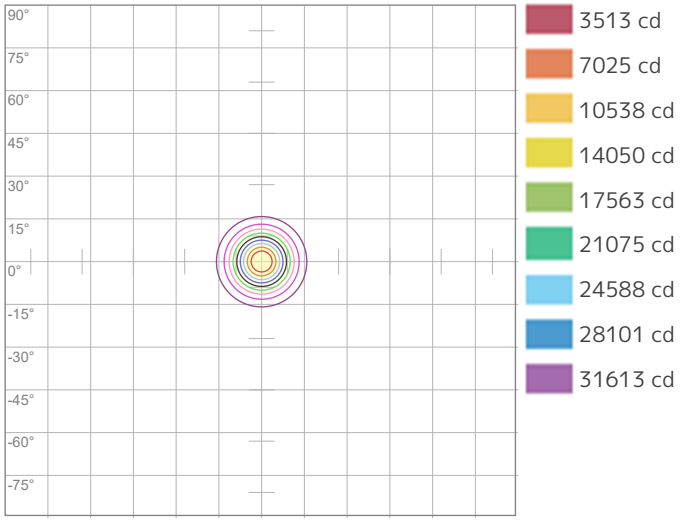
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.4°
Field Angle - 10%
35.4°
Cutoff Angle - 2.5%
48.5°

ISO Diagrams

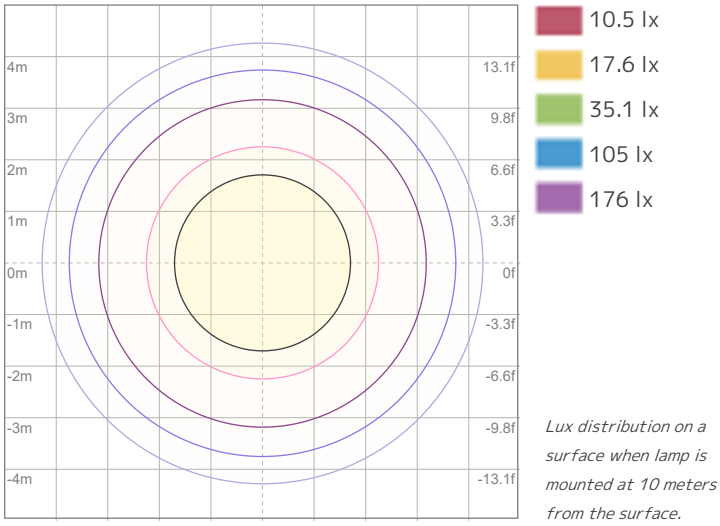


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 35126 cd



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

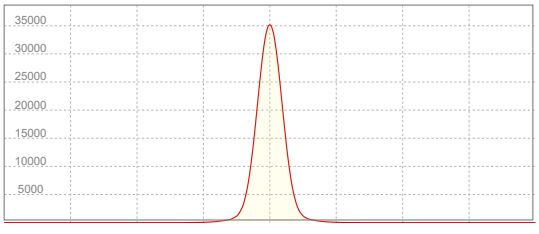
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 351 lx

Linear Distribution



Peak Candela

35156 cd

Calculate Center Beam Intensities

lux = 35156 / distance(m)^2

fc = 35156 / distance(ft)^2

Measurement Date: 2/23/2024

Six+ Par L (20°, Full Output)

Key Measurements

Output

Total Lumen Output: 5183 lm

Peak Intensity: 37042 cd

Beam

Beam Angle (50%): 19.4°

Field Angle (10%): 35.5°

Cutoff Angle (2.5%): 48.3°

Color

Color Temperature: 7869 K

CRI: 68.0

TLCI: 78

TM30 R_F: 77.4

TM30 R_g: 119.2

Power Details

Efficacy: 36 Lumen/Watt

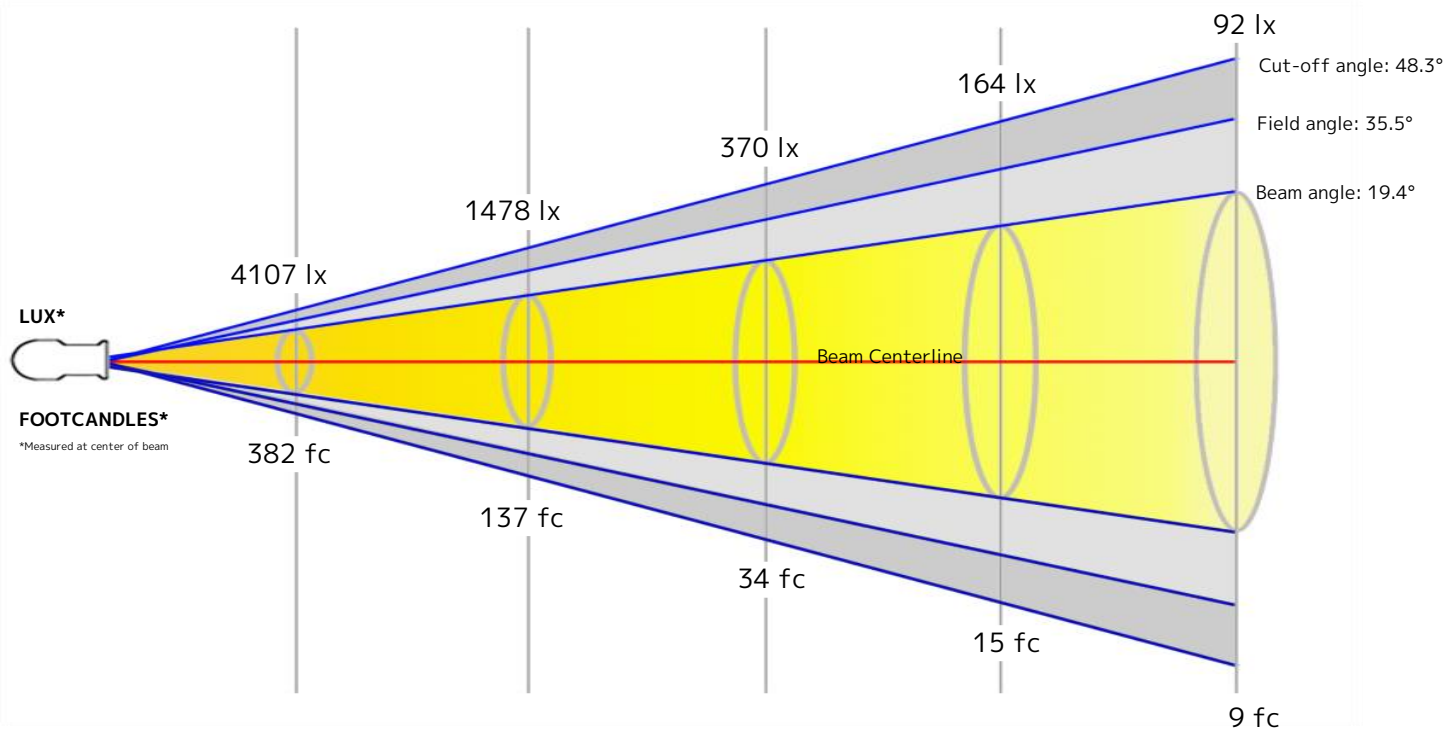
Power: 142.2 W

Supply Voltage: 120 V

Current: 1.19 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



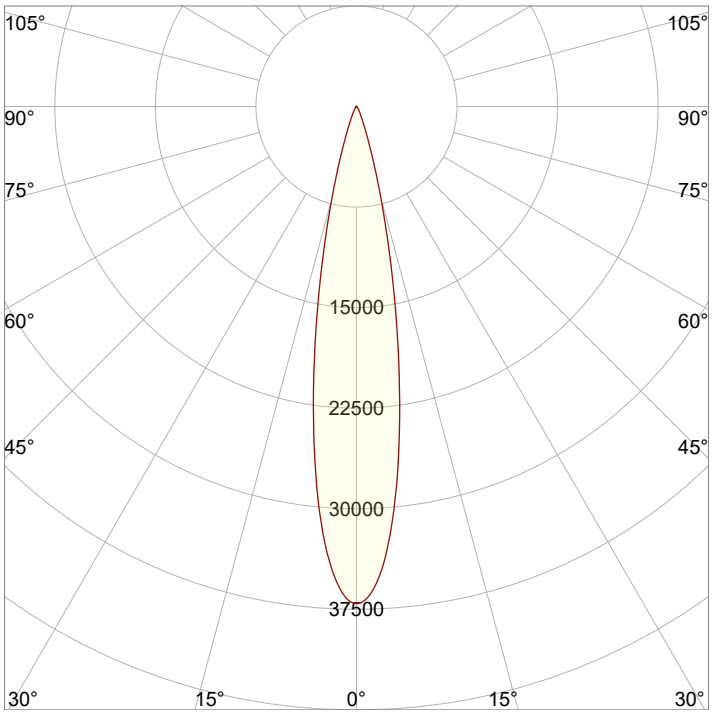
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.2 ft	16.8 ft	22.4 ft

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	36960	9240	4107	2310	1478	1027	754	578	456	370	305	257	219	189	164	144	128	114	102	92
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	3433.7	858.4	381.5	214.6	137.3	95.4	70.1	53.7	42.4	34.3	28.4	23.8	20.3	17.5	15.3	13.4	11.9	10.6	9.5	8.6

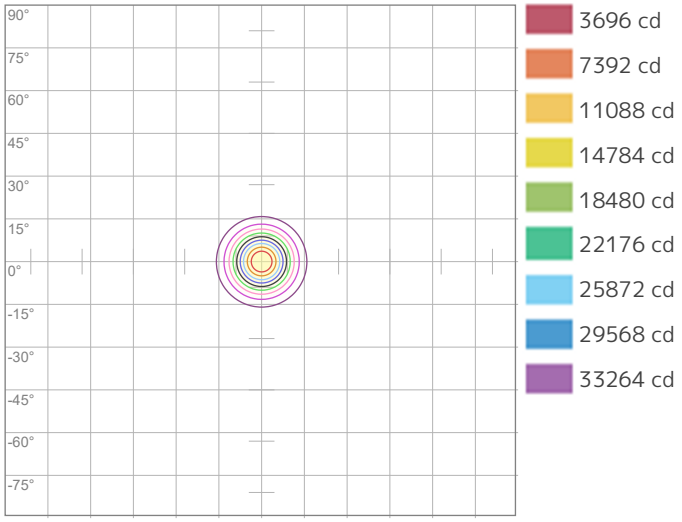
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.4°
Field Angle - 10%
35.5°
Cutoff Angle - 2.5%
48.3°

ISO Diagrams

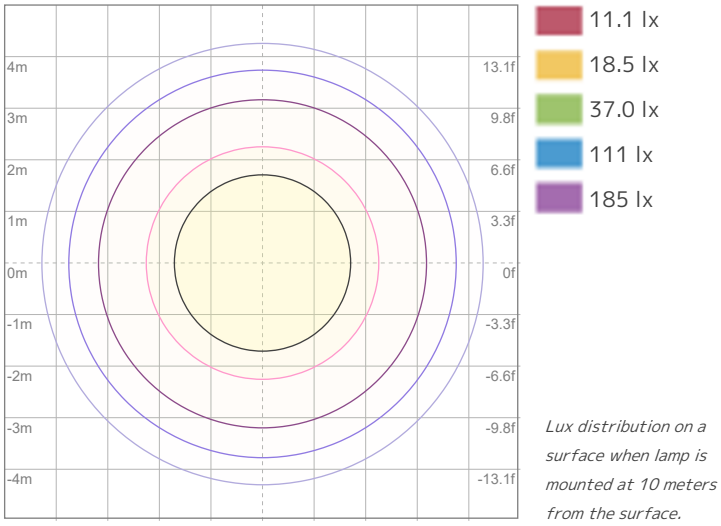


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 36960 cd



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

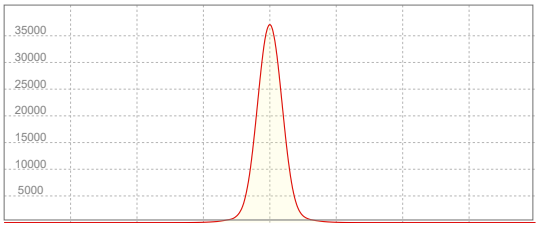
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 370 lx

Linear Distribution



Peak Candela

37042 cd

Calculate Center Beam Intensities

lux = 37042 / distance(m)^2

fc = 37042 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5174 lm

Peak Intensity: 38908 cd

Beam

Beam Angle (50%): 19.2°

Field Angle (10%): 35°

Cutoff Angle (2.5%): 46.7°

Color

Color Temperature: 2709 K

CRI: 89.9

TLCI: 83

TM30 R_F: 91.9

TM30 R_g: 105.7

Power Details

Efficacy: 46 Lumen/Watt

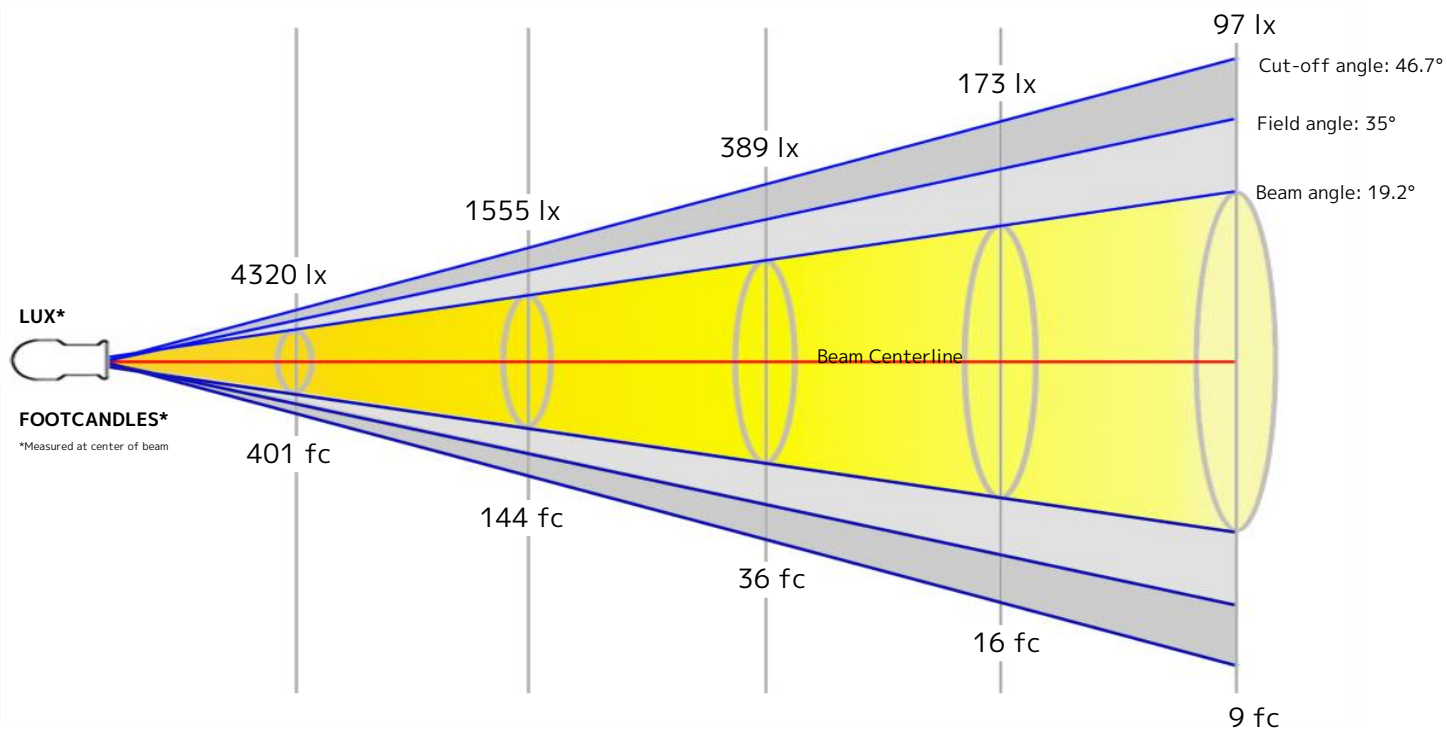
Power: 113.7 W

Supply Voltage: 121 V

Current: 0.947 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



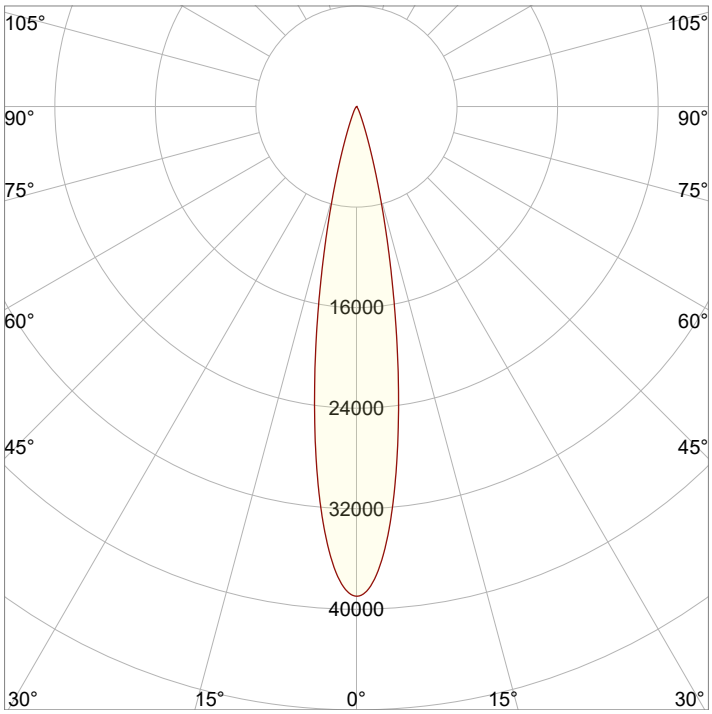
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.5 ft	11.1 ft	16.6 ft	22.1 ft

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	38884	9721	4320	2430	1555	1080	794	608	480	389	321	270	230	198	173	152	135	120	108	97
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	3612.4	903.1	401.4	225.8	144.5	100.3	73.7	56.4	44.6	36.1	29.9	25.1	21.4	18.4	16.1	14.1	12.5	11.1	10	9

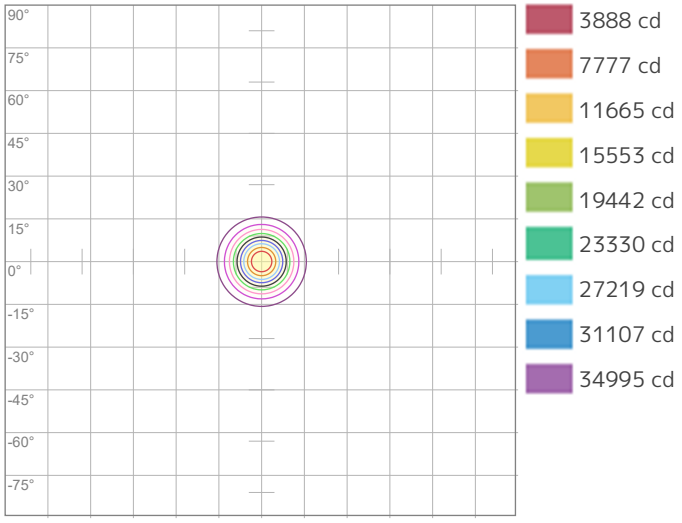
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.2°
Field Angle - 10%
35°
Cutoff Angle - 2.5%
46.7°

ISO Diagrams

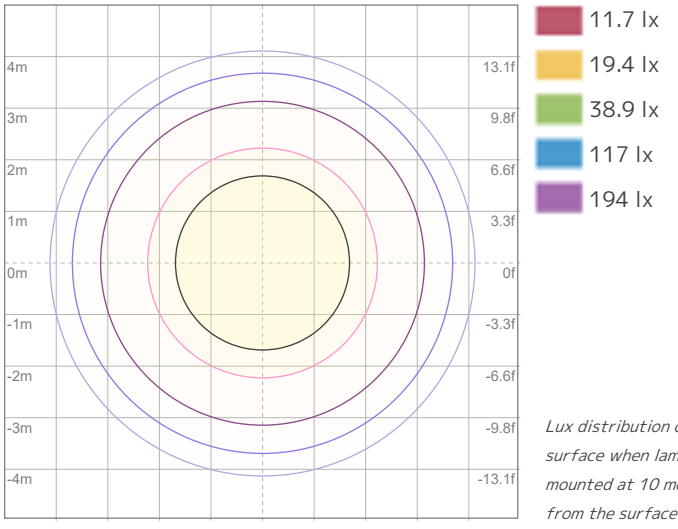


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 38884 cd



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

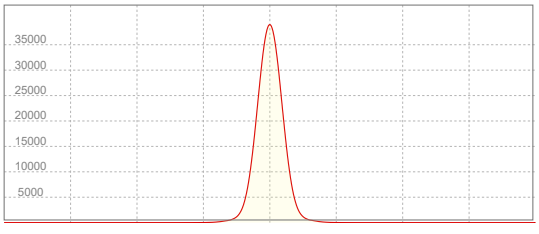
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 389 lx

Linear Distribution



Peak Candela

38908 cd

Calculate Center Beam Intensities

lux = 38908 / distance(m)^2

fc = 38908 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5580 lm

Peak Intensity: 41166 cd

Beam

Beam Angle (50%): 19.2°

Field Angle (10%): 35.2°

Cutoff Angle (2.5%): 47.5°

Color

Color Temperature: 3179 K

CRI: 91.7

TLCI: 85

TM30 R_F: 92.2

TM30 R_g: 106.8

Power Details

Efficacy: 48 Lumen/Watt

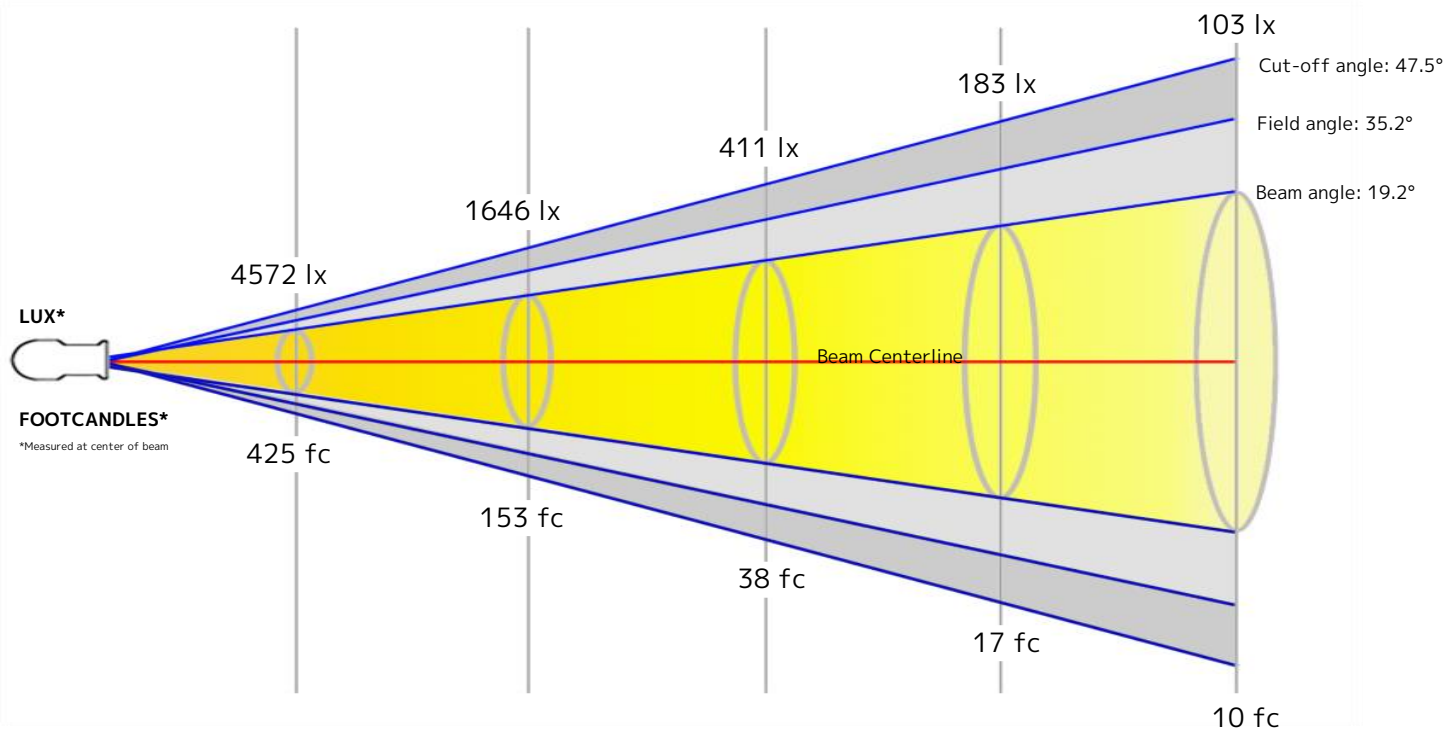
Power: 117.4 W

Supply Voltage: 120 V

Current: 0.981 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



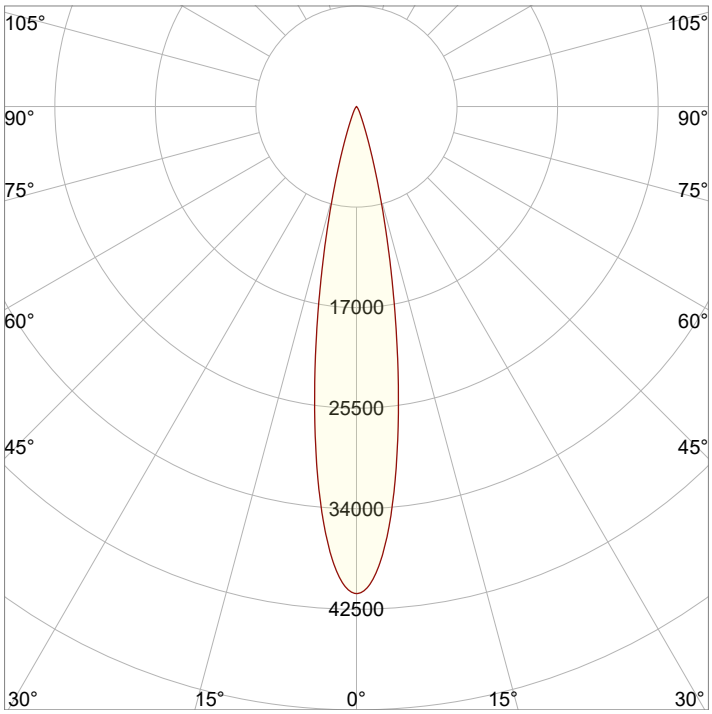
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.1 ft	16.7 ft	22.2 ft

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	41149	10287	4572	2572	1646	1143	840	643	508	411	340	286	243	210	183	161	142	127	114	103
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	3822.9	955.7	424.8	238.9	152.9	106.2	78	59.7	47.2	38.2	31.6	26.5	22.6	19.5	17	14.9	13.2	11.8	10.6	9.6

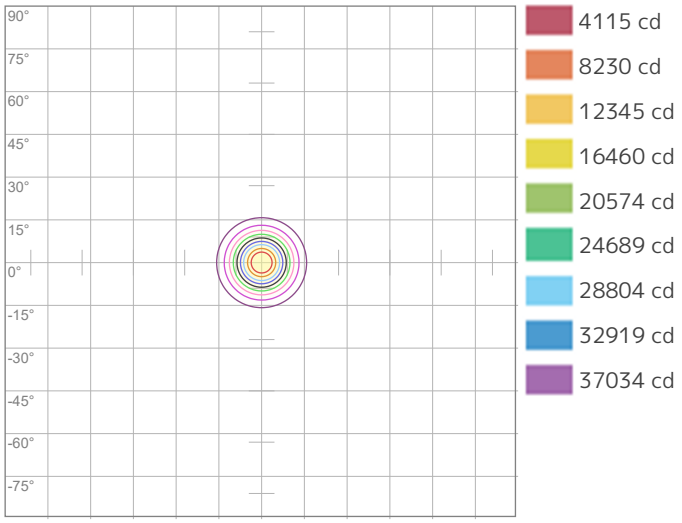
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.2°
Field Angle - 10%
35.2°
Cutoff Angle - 2.5%
47.5°

ISO Diagrams

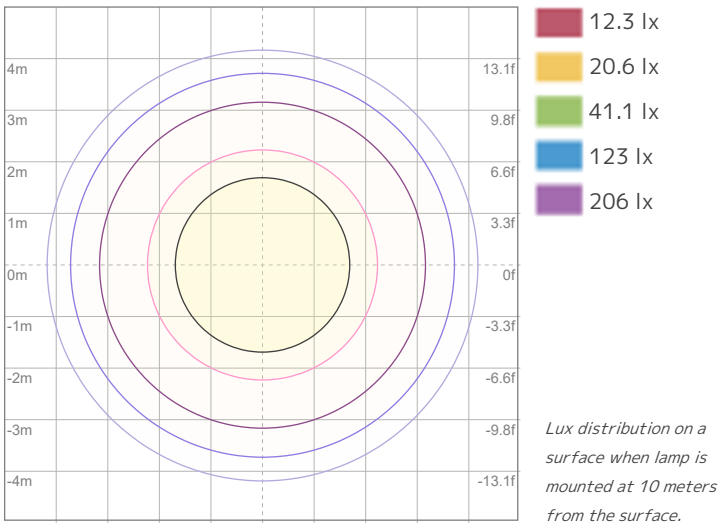


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 41149 cd



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

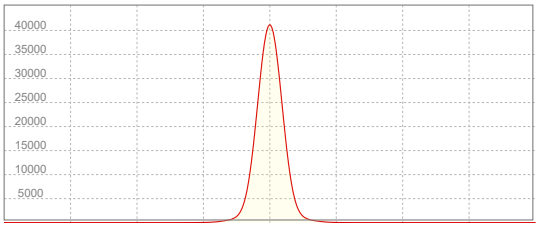
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 411 lx

Linear Distribution



Peak Candela

41166 cd

Calculate Center Beam Intensities

lux = 41166 / distance(m)^2

fc = 41166 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5681 lm

Peak Intensity: 40458 cd

Beam

Beam Angle (50%): 19.3°

Field Angle (10%): 35.5°

Cutoff Angle (2.5%): 48.5°

Color

Color Temperature: 4506 K

CRI: 90.9

TLCI: 84

TM30 R_F: 90.6

TM30 R_g: 107.4

Power Details

Efficacy: 49 Lumen/Watt

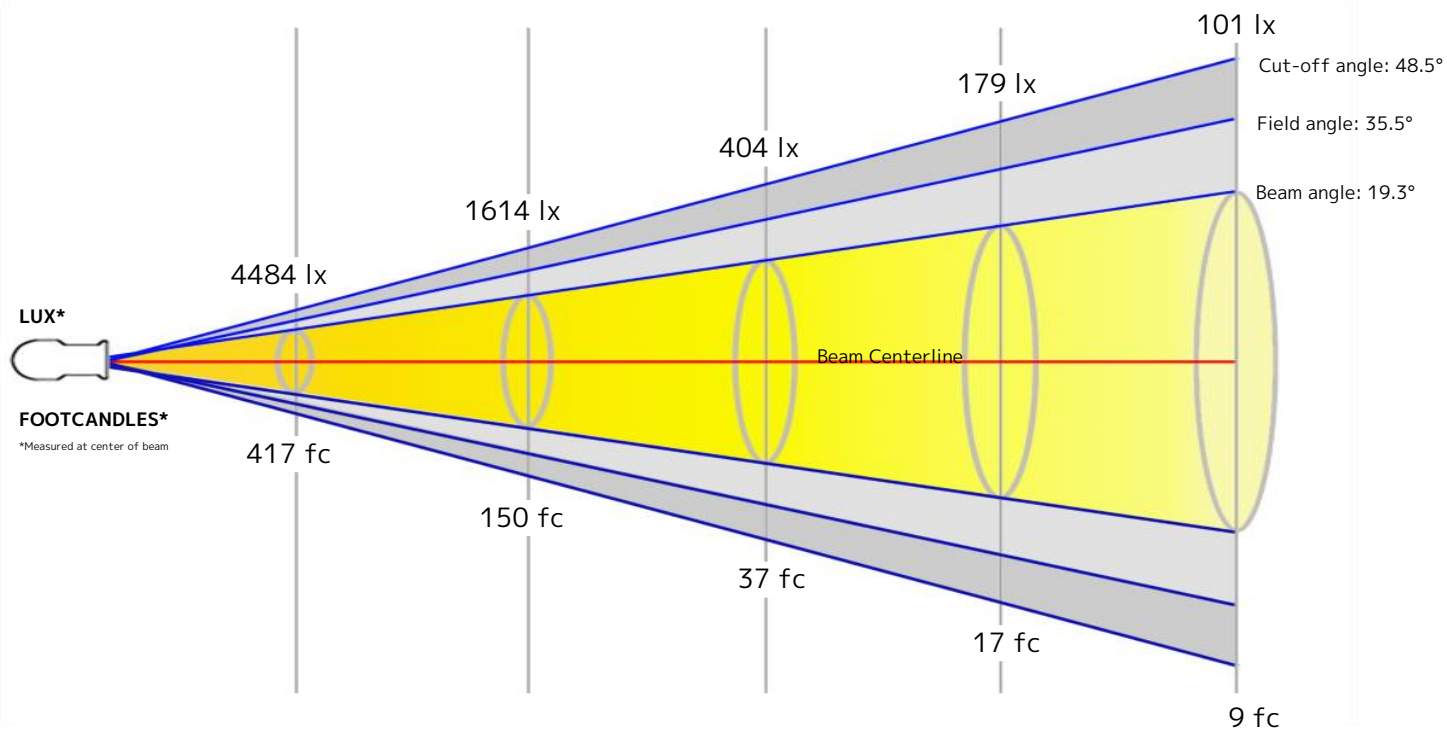
Power: 116.5 W

Supply Voltage: 120 V

Current: 0.971 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



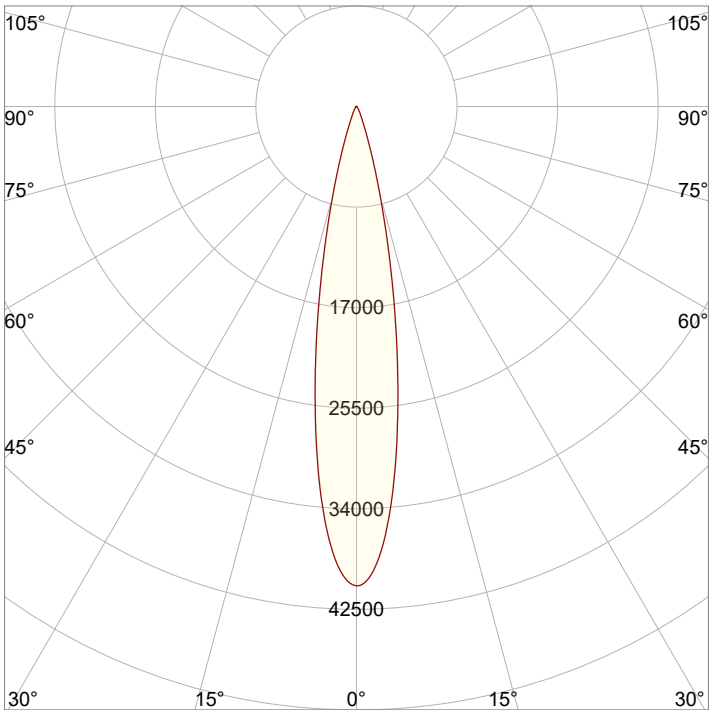
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.2 ft	16.8 ft	22.3 ft

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	40360	10090	4484	2523	1614	1121	824	631	498	404	334	280	239	206	179	158	140	125	112	101
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	3749.6	937.4	416.6	234.3	150	104.2	76.5	58.6	46.3	37.5	31	26	22.2	19.1	16.7	14.6	13	11.6	10.4	9.4

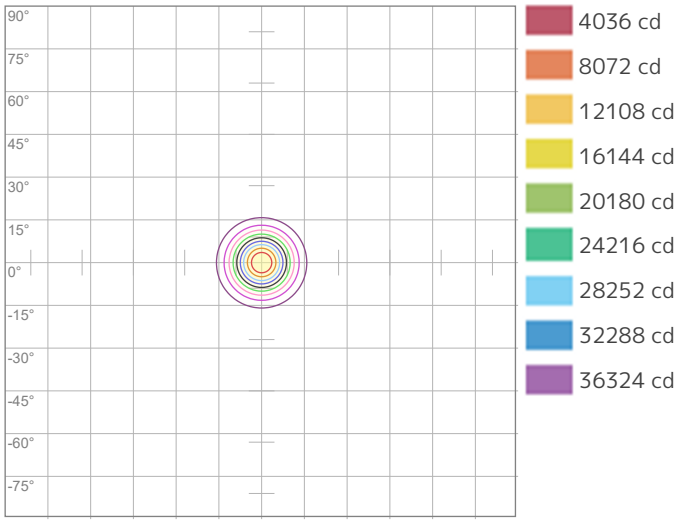
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.3°
Field Angle - 10%
35.5°
Cutoff Angle - 2.5%
48.5°

ISO Diagrams

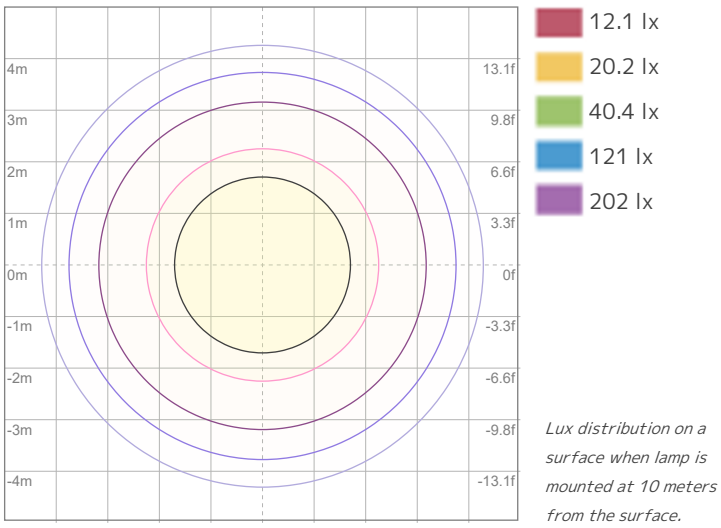


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 40360 cd



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

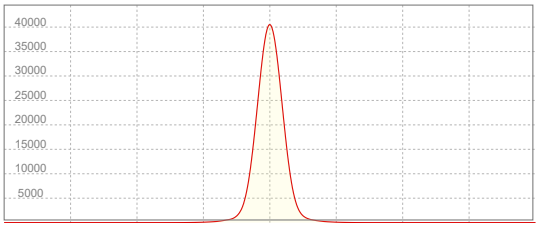
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 404 lx

Linear Distribution



Peak Candela

40458 cd

Calculate Center Beam Intensities

lux = 40458 / distance(m)^2

fc = 40458 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5583 lm

Peak Intensity: 39515 cd

Beam

Beam Angle (50%): 19.3°

Field Angle (10%): 35.5°

Cutoff Angle (2.5%): 48.8°

Color

Color Temperature: 5643 K

CRI: 90.1

TLCI: 86

TM30 R_F: 89.2

TM30 R_g: 107.1

Power Details

Efficacy: 48 Lumen/Watt

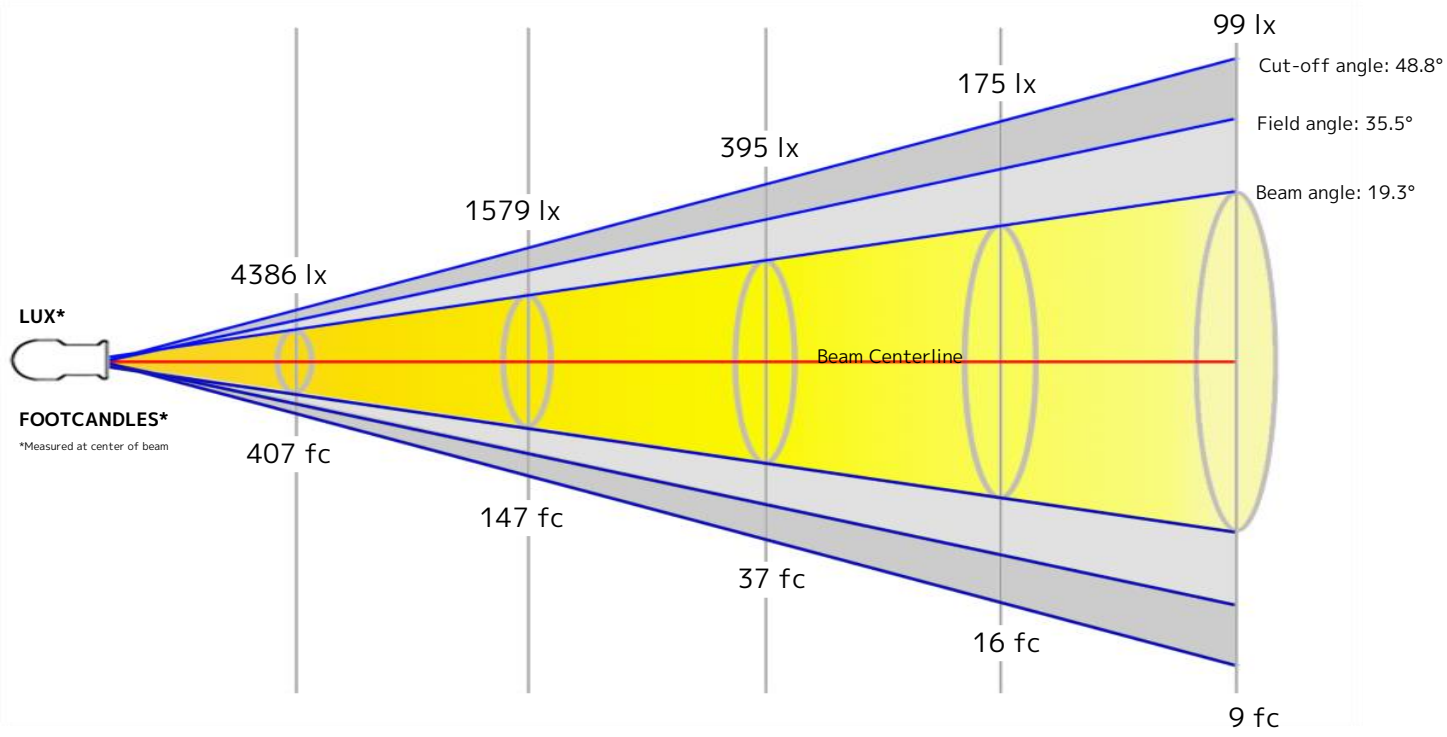
Power: 115.1 W

Supply Voltage: 120 V

Current: 0.966 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



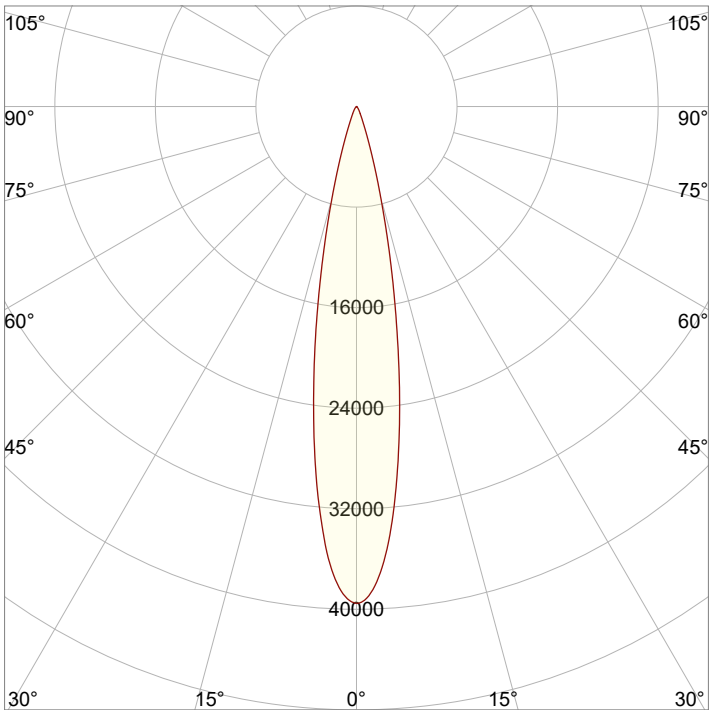
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.2 ft	16.8 ft	22.3 ft

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	39473	9868	4386	2467	1579	1096	806	617	487	395	326	274	234	201	175	154	137	122	109	99
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	3667.2	916.8	407.5	229.2	146.7	101.9	74.8	57.3	45.3	36.7	30.3	25.5	21.7	18.7	16.3	14.3	12.7	11.3	10.2	9.2

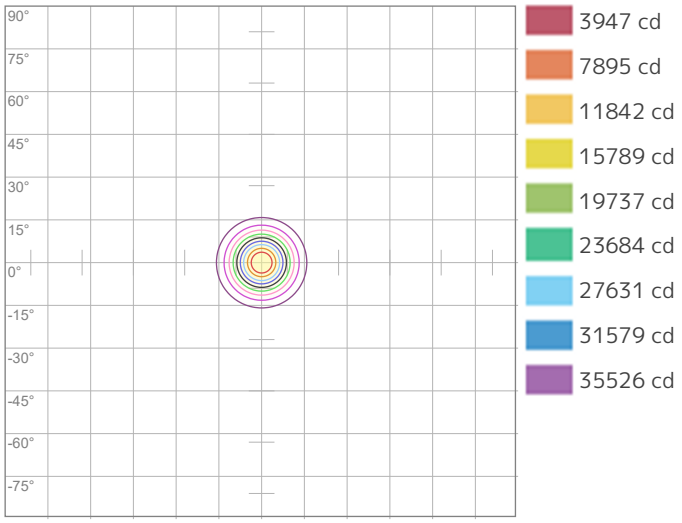
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.3°
Field Angle - 10%
35.5°
Cutoff Angle - 2.5%
48.8°

ISO Diagrams

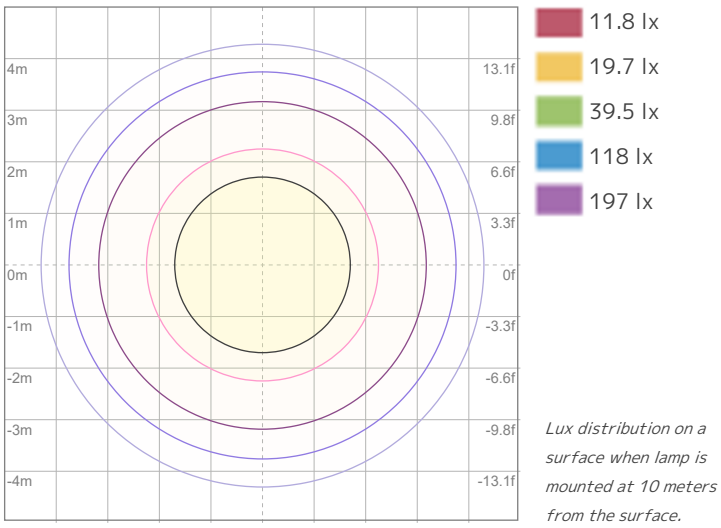


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 39473 cd



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

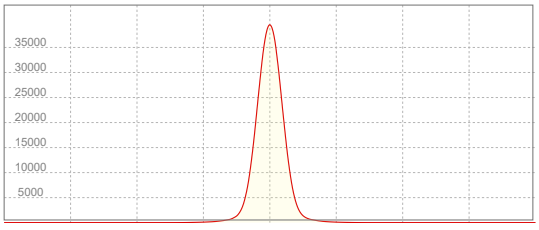
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 395 lx

Linear Distribution



Peak Candela

39515 cd

Calculate Center Beam Intensities

lux = 39515 / distance(m)^2

fc = 39515 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5867 lm

Peak Intensity: 41227 cd

Beam

Beam Angle (50%): 19.4°

Field Angle (10%): 35.5°

Cutoff Angle (2.5%): 49°

Color

Color Temperature: 6030 K

CRI: 89.9

TLCI: 86

TM30 R_F: 88.9

TM30 R_g: 106.9

Power Details

Efficacy: 48 Lumen/Watt

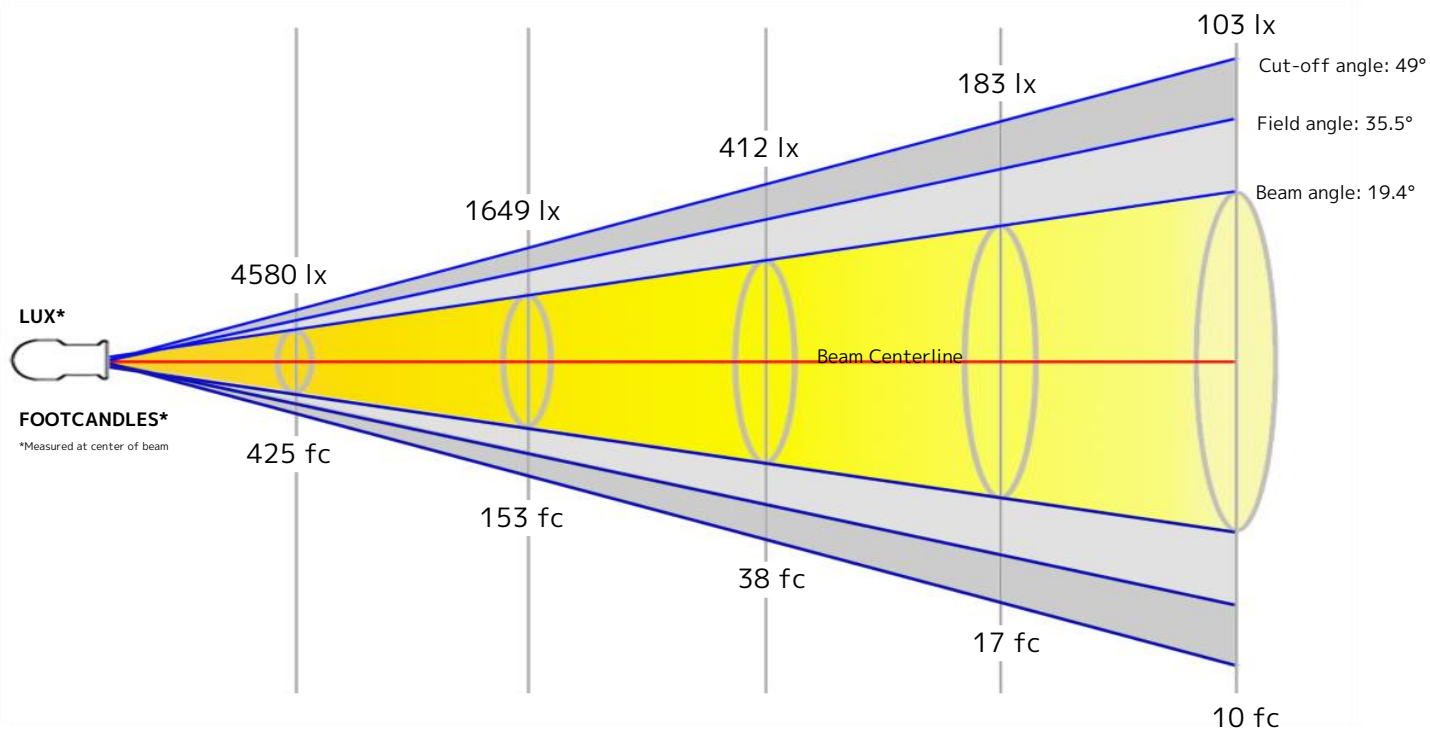
Power: 121.5 W

Supply Voltage: 121 V

Current: 1.01 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



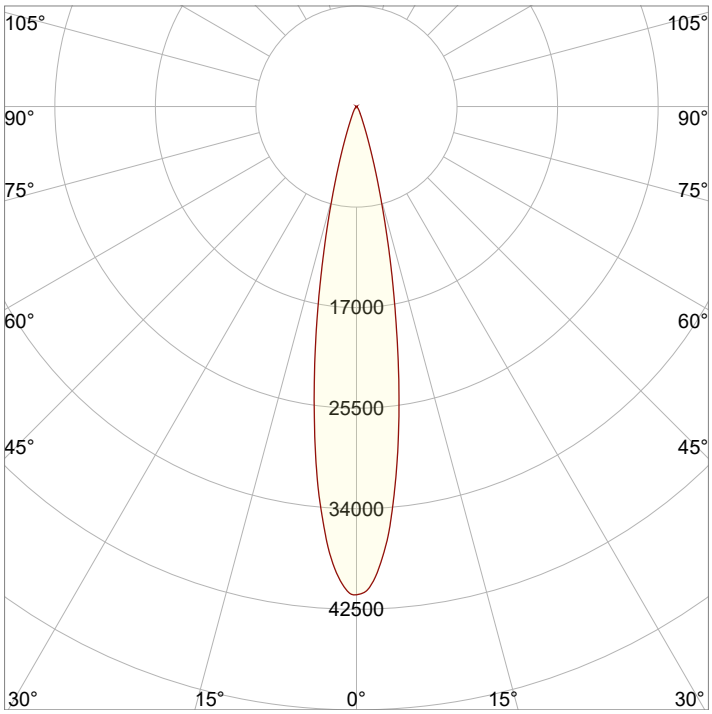
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.2 ft	16.8 ft	22.4 ft

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	41216	10304	4580	2576	1649	1145	841	644	509	412	341	286	244	210	183	161	143	127	114	103
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	3829.1	957.3	425.5	239.3	153.2	106.4	78.1	59.8	47.3	38.3	31.6	26.6	22.7	19.5	17	15	13.2	11.8	10.6	9.6

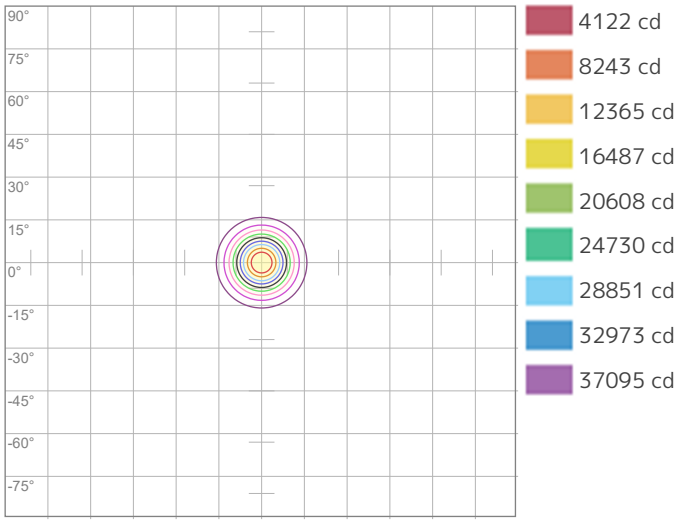
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.4°
Field Angle - 10%
35.5°
Cutoff Angle - 2.5%
49°

ISO Diagrams

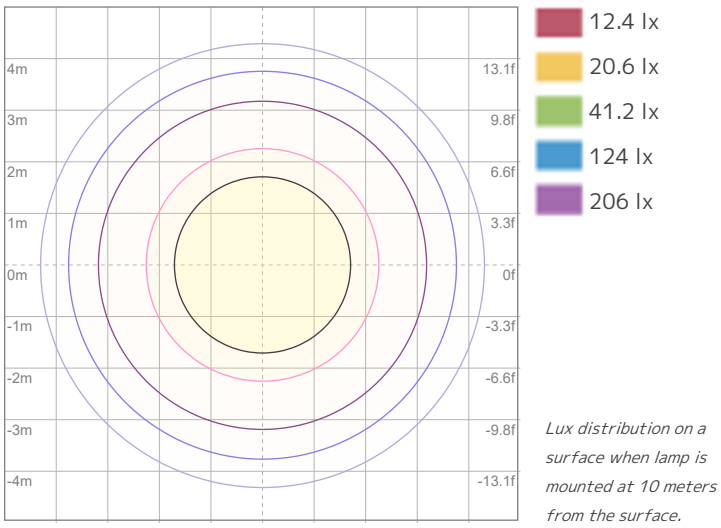


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 41216 cd



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

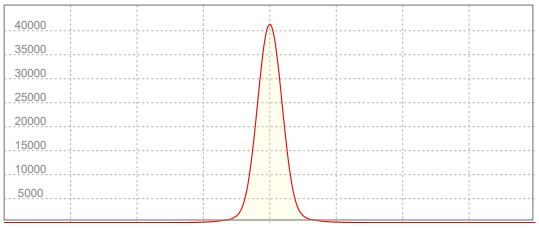
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 412 lx

Linear Distribution



Peak Candela

41227 cd

Calculate Center Beam Intensities

lux = 41227 / distance(m)^2

fc = 41227 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 5627 lm

Peak Intensity: 40597 cd

Beam

Beam Angle (50%): 19.4°

Field Angle (10%): 35.5°

Cutoff Angle (2.5%): 48.1°

Color

Color Temperature: 6504 K

CRI: 89.7

TLCI: 87

TM30 R_F: 88.6

TM30 R_g: 106.3

Power Details

Efficacy: 46 Lumen/Watt

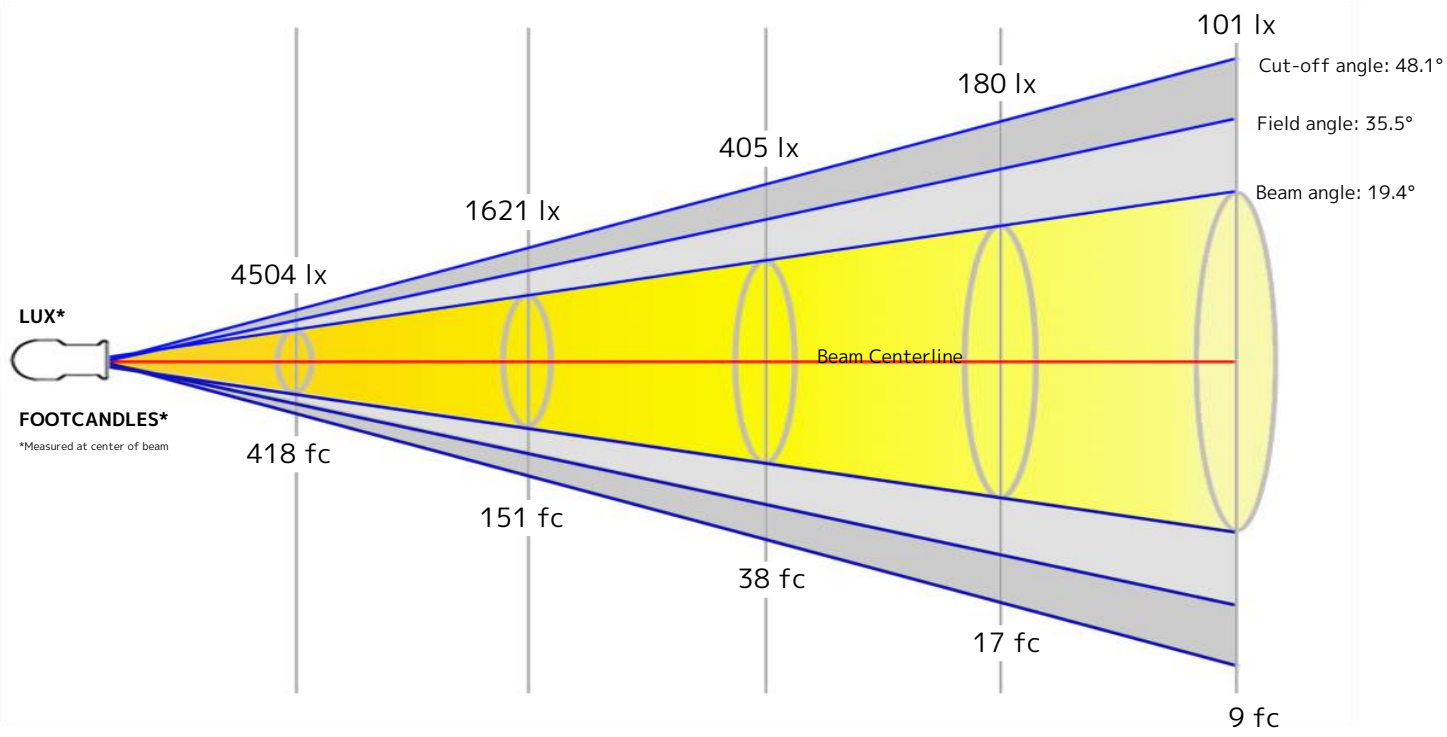
Power: 121.4 W

Supply Voltage: 120 V

Current: 1.01 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.8 m



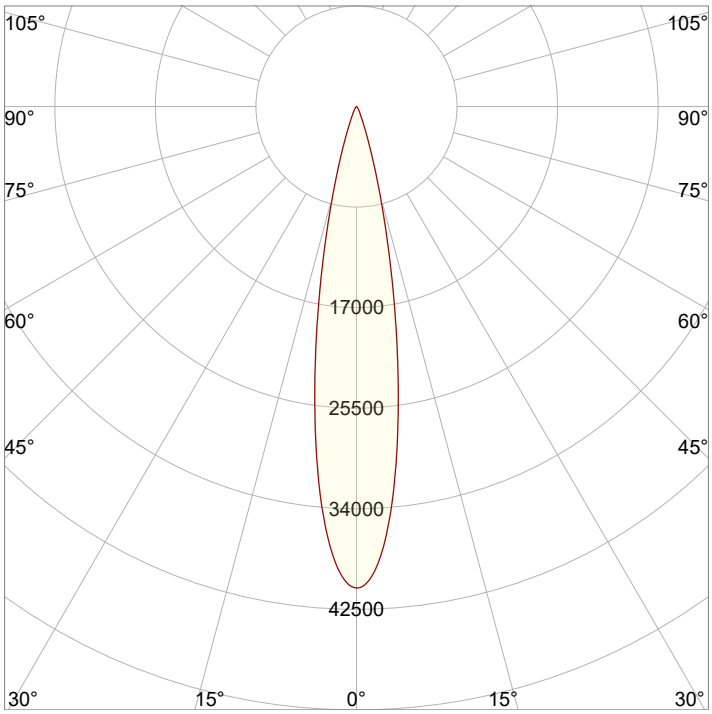
Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.3 ft	5.6 ft	11.2 ft	16.8 ft	22.4 ft

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	40534	10134	4504	2533	1621	1126	827	633	500	405	335	281	240	207	180	158	140	125	112	101
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	3765.7	941.4	418.4	235.4	150.6	104.6	76.9	58.8	46.5	37.7	31.1	26.2	22.3	19.2	16.7	14.7	13	11.6	10.4	9.4

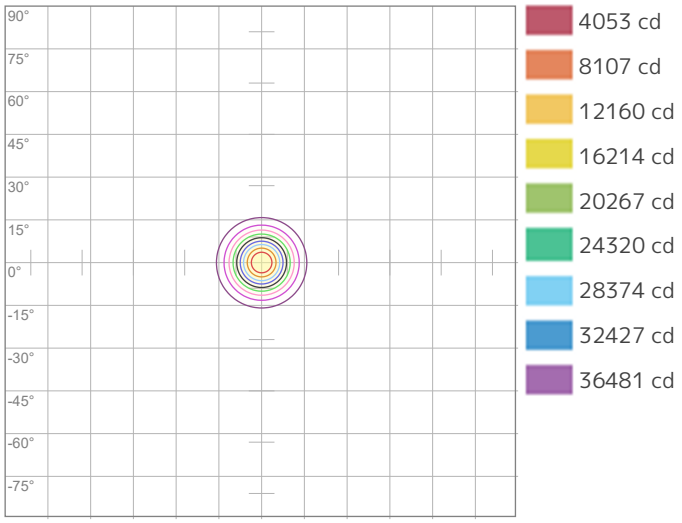
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.4°
Field Angle - 10%
35.5°
Cutoff Angle - 2.5%
48.1°

ISO Diagrams

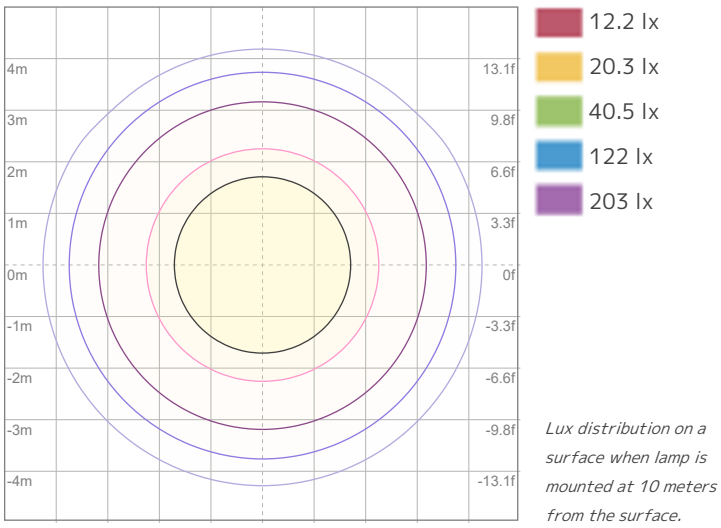


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 40534 cd



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

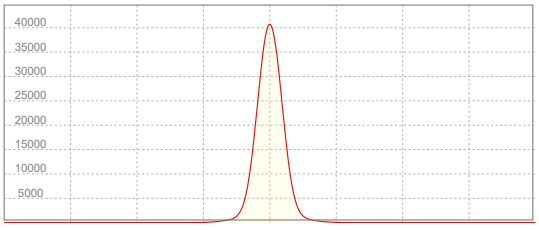
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 405 lx

Linear Distribution



Peak Candela

40597 cd

Calculate Center Beam Intensities

lux = 40597 / distance(m)^2

fc = 40597 / distance(ft)^2

Measurement Date: 2/23/2024

Key Measurements

Output

Total Lumen Output: 7001 lm

Peak Intensity: 48189 cd

Beam

Beam Angle (50%): 19.5°

Field Angle (10%): 35.8°

Cutoff Angle (2.5%): 49.5°

Color

Color Temperature: 8577 K

CRI: 88.7

TLCI: 86

TM30 R_F: 87.1

TM30 R_g: 104.8

Power Details

Efficacy: 49 Lumen/Watt

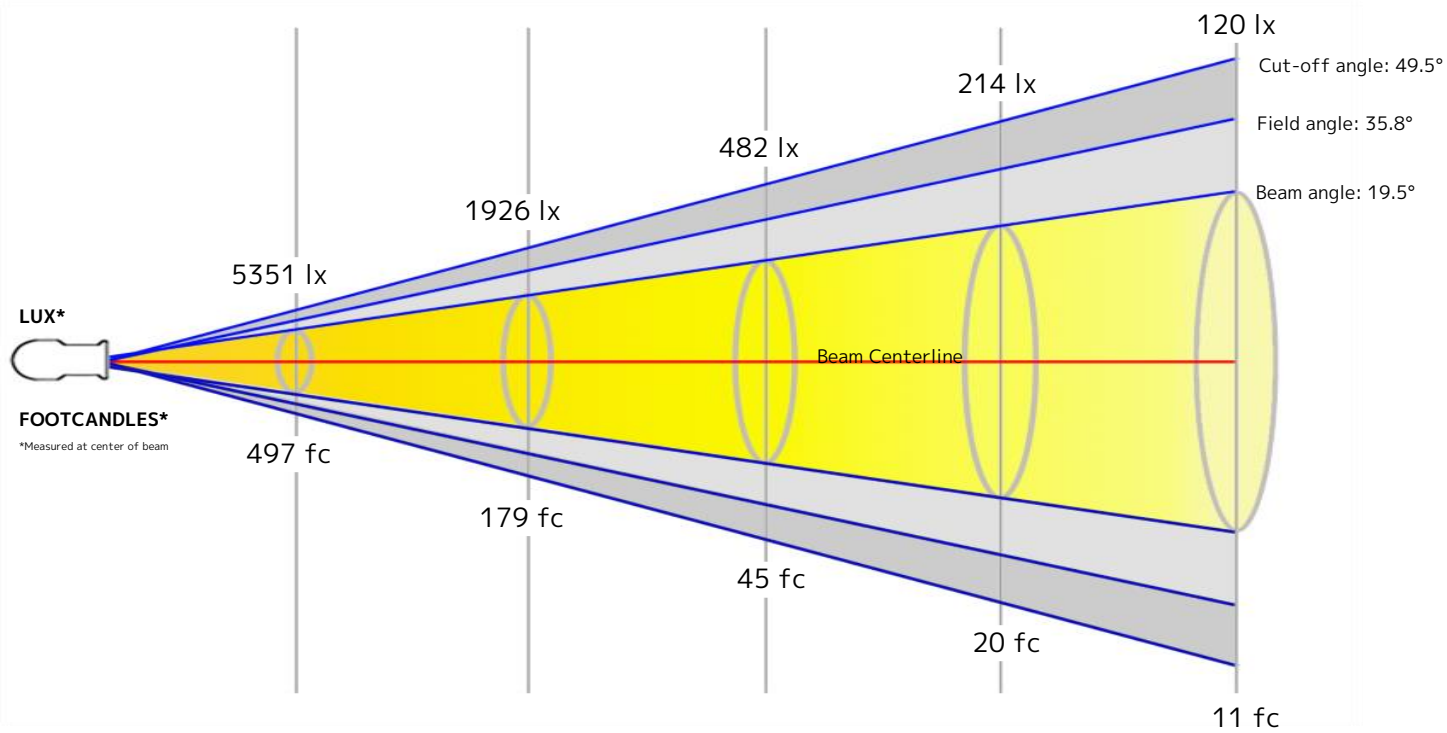
Power: 142.9 W

Supply Voltage: 120 V

Current: 1.19 A

Beam Details

Distance	3 m	5 m	10 m	15 m	20 m
Beam Width	1 m	1.7 m	3.4 m	5.1 m	6.9 m



Distance	9.8 ft	16.4 ft	32.8 ft	49.2 ft	65.6 ft
Beam Width	3.4 ft	5.6 ft	11.3 ft	16.9 ft	22.5 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	48161	12040	5351	3010	1926	1338	983	753	595	482	398	334	285	246	214	188	167	149	133	120
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	4474.3	1118.6	497.1	279.6	179	124.3	91.3	69.9	55.2	44.7	37	31.1	26.5	22.8	19.9	17.5	15.5	13.8	12.4	11.2

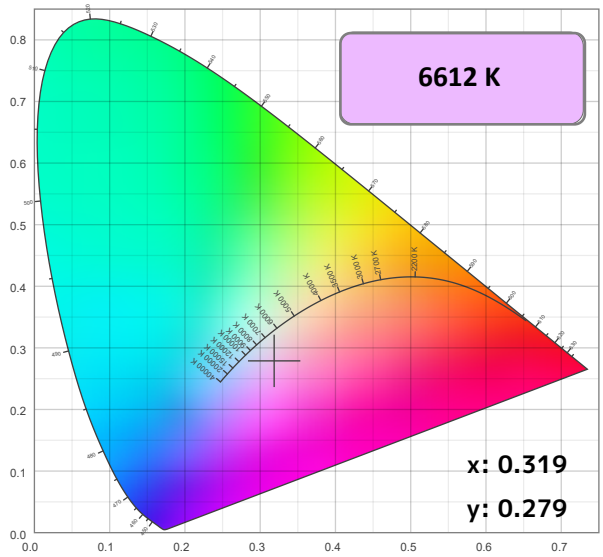
Measurement Date: 2/23/2024

Color Temperature: 6612K

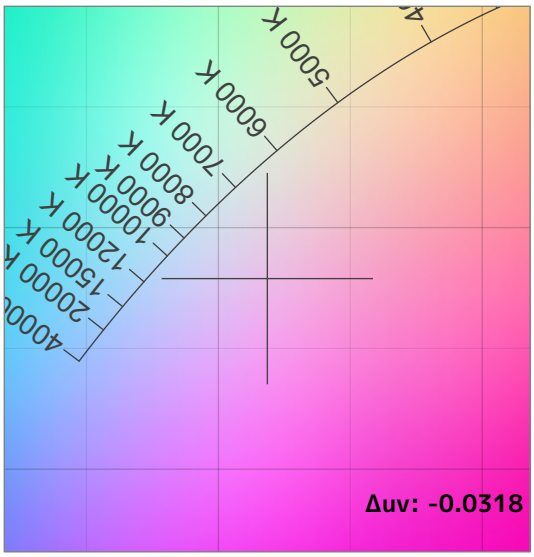
Accuracy Metric Overview

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
63.4	-55.7	76.5	122.8	72	85.3	0.319	0.279	-0.0318	5	37

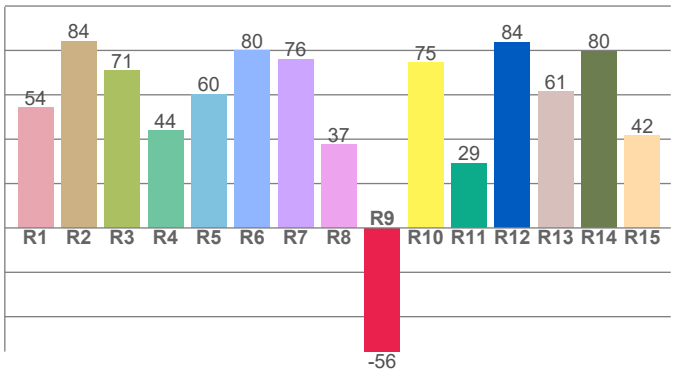
CIE 1931



CIE 1931 ZOOMED

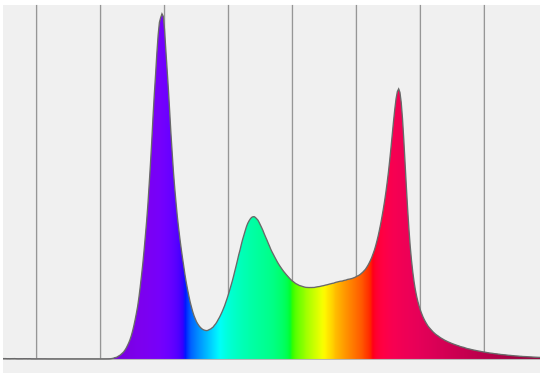


CRI: 63.4 (R1-R8)



Spectral Power Distribution (SPD)

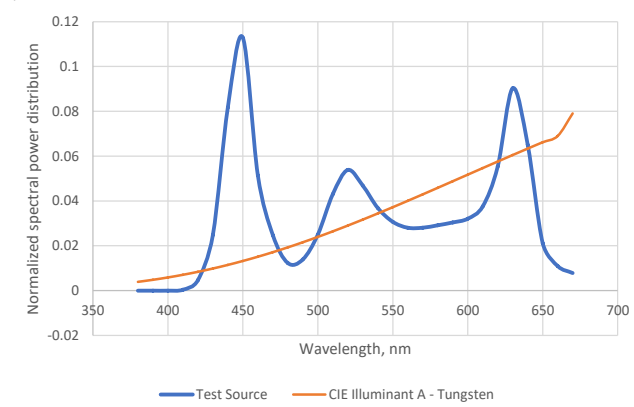
Dominant Wavelength 360 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 5

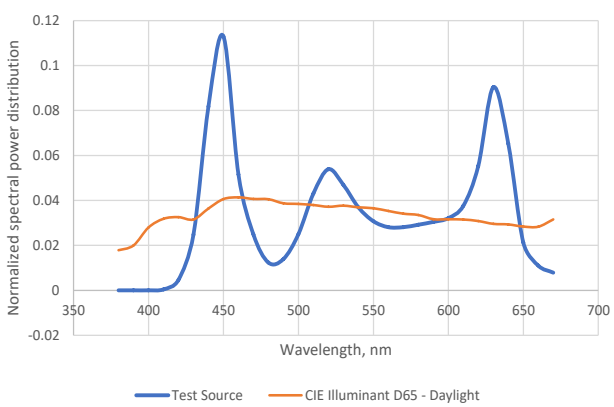
Spectral variance



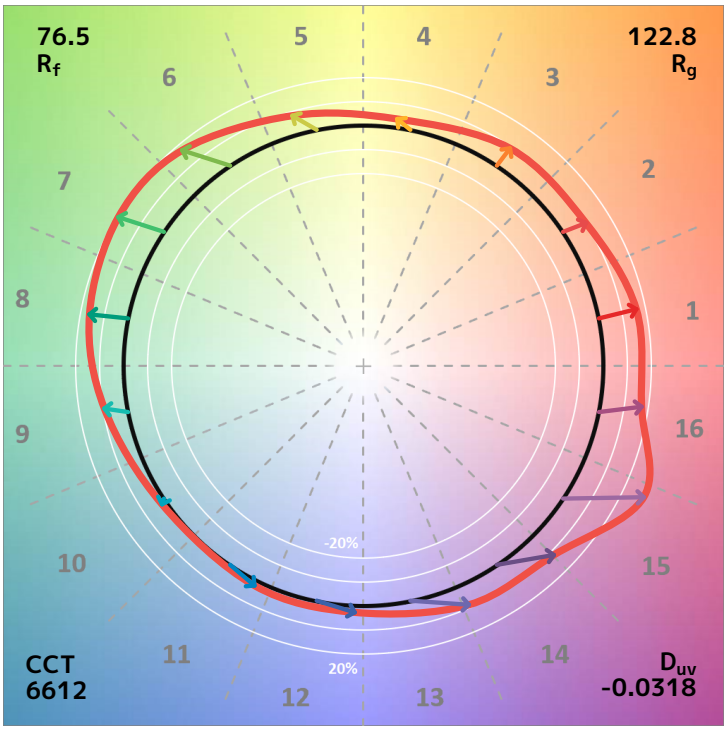
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 37

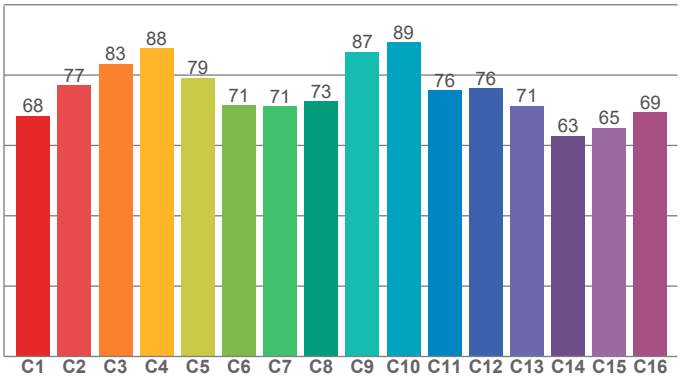
Spectral variance



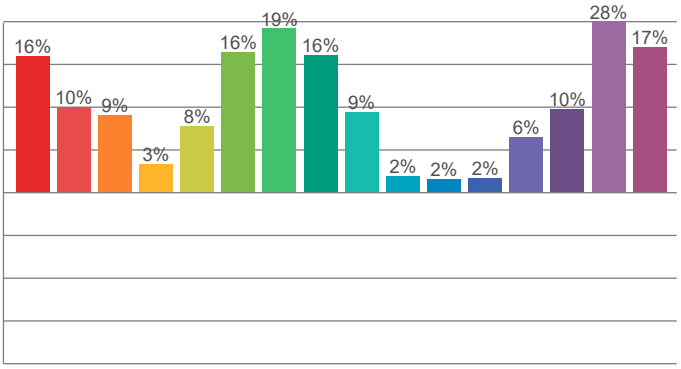
Measurement Date: 2/22/2024



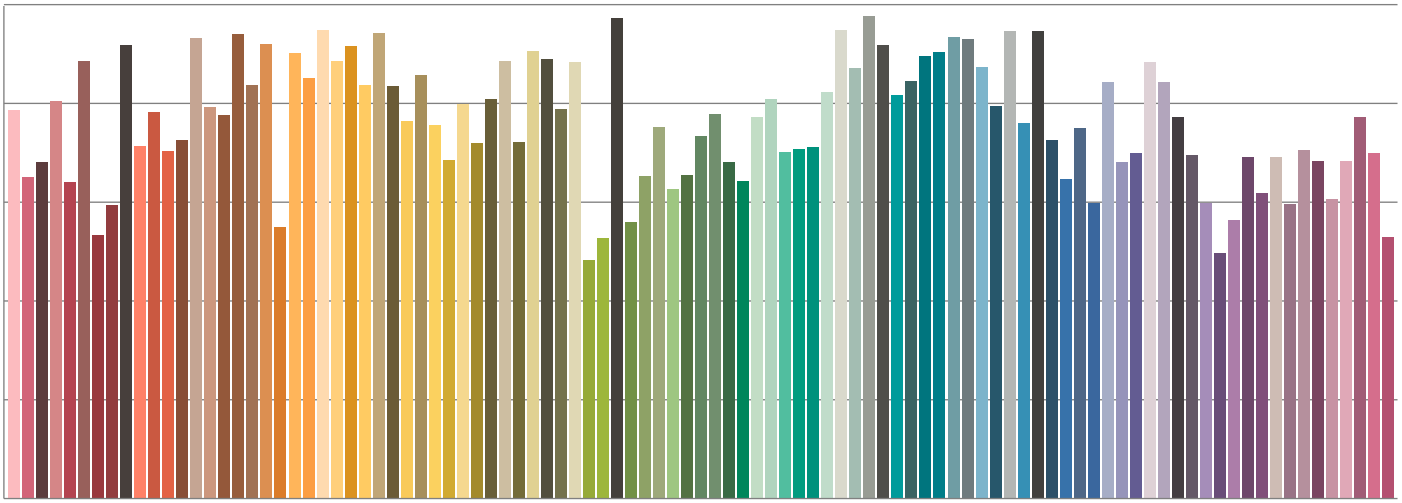
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



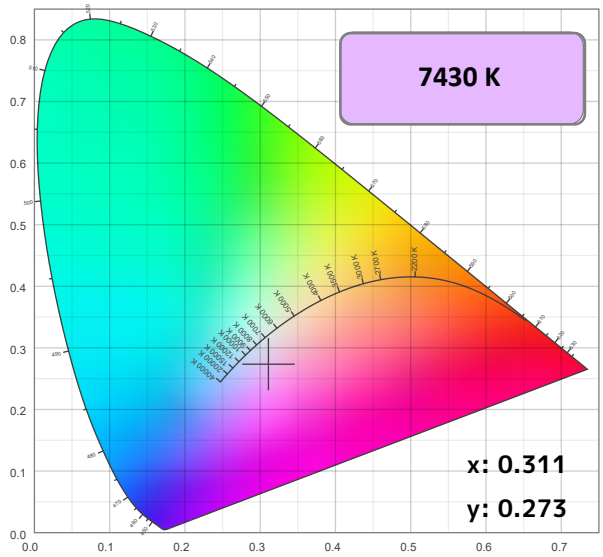
Measurement Date: 2/22/2024

Color Temperature: 7430K

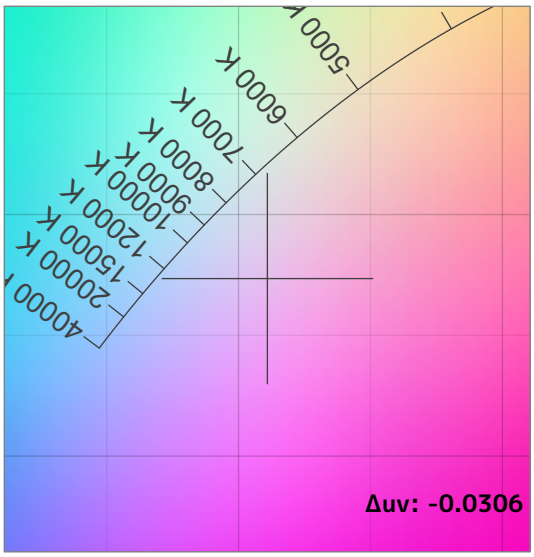
Accuracy Metric Overview

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
64.5	-59.3	76.1	121.6	74	85.2	0.311	0.273	-0.0306	8	50

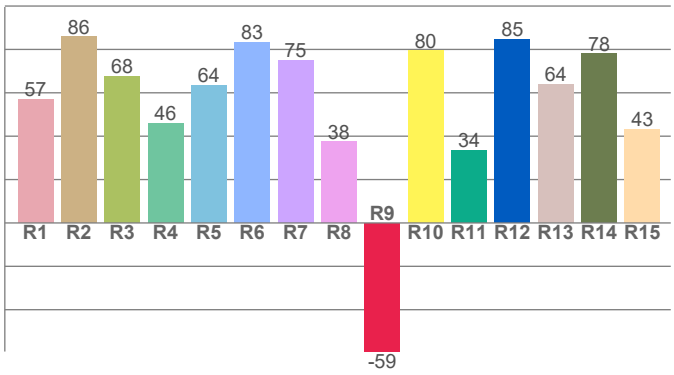
CIE 1931



CIE 1931 ZOOMED

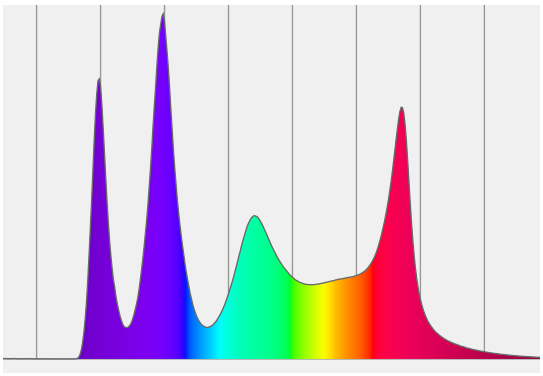


CRI: 64.5 (R1-R8)



Spectral Power Distribution (SPD)

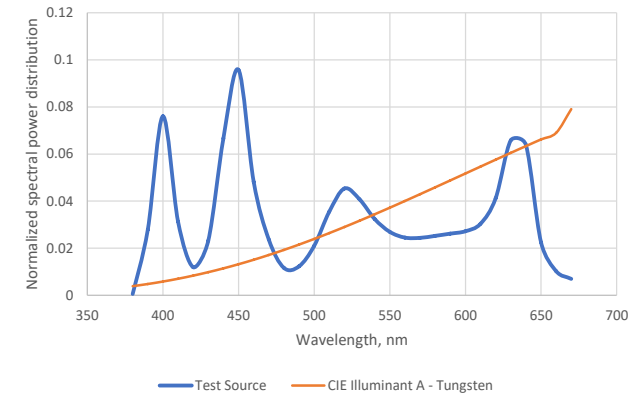
Dominant Wavelength 360 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 8

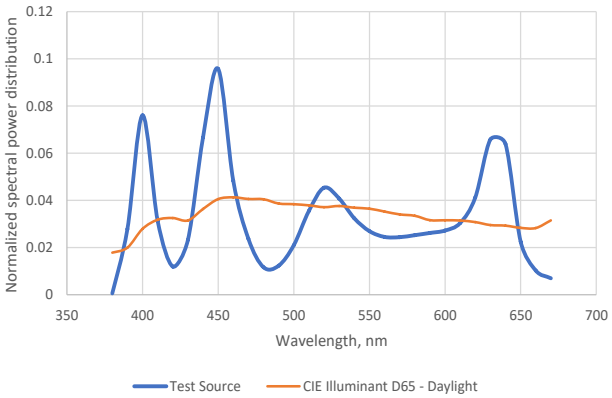
Spectral variance



SSI Spectral Variance Graph- Daylight

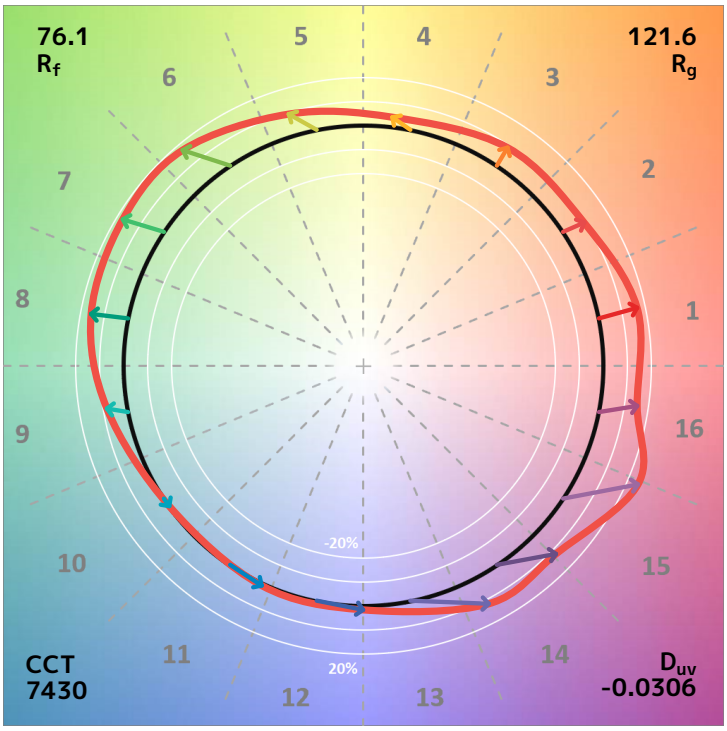
SSI [CIE D65] 50

Spectral variance

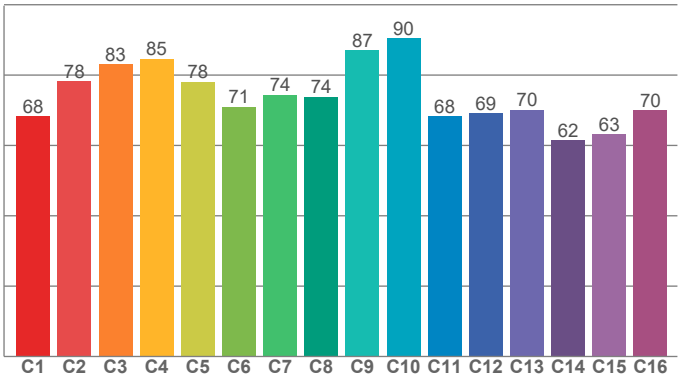


SSI [CIE D65] - Daylight **50**

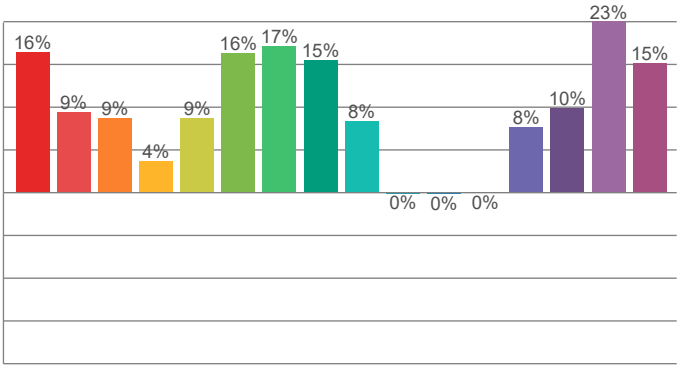
Measurement Date: 2/23/2024



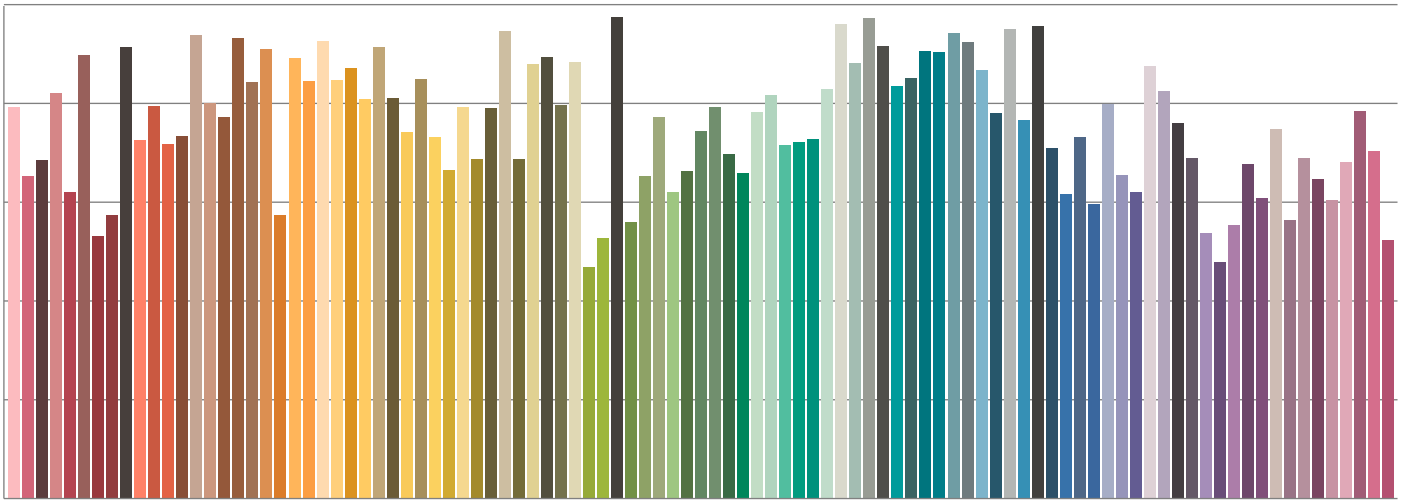
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin

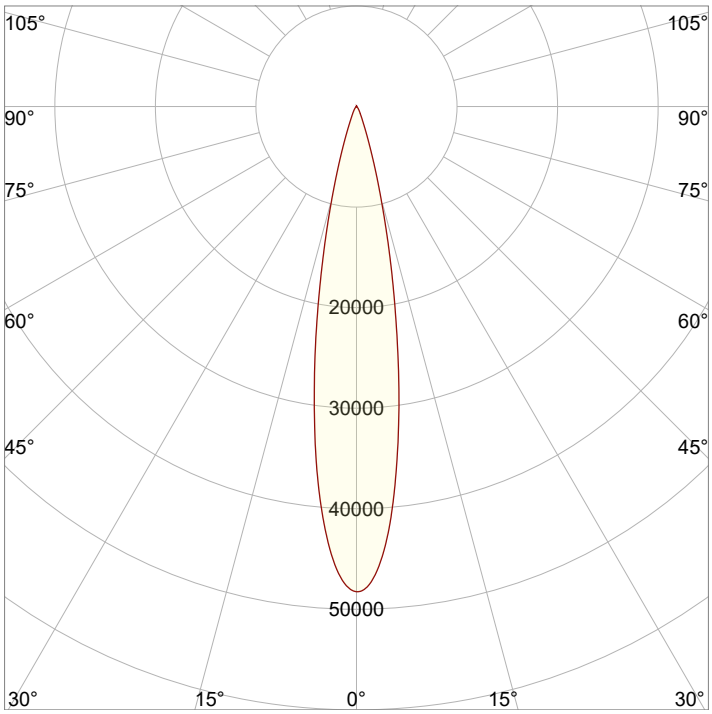


TM30-18 R_f Values per Reference Color (CES)



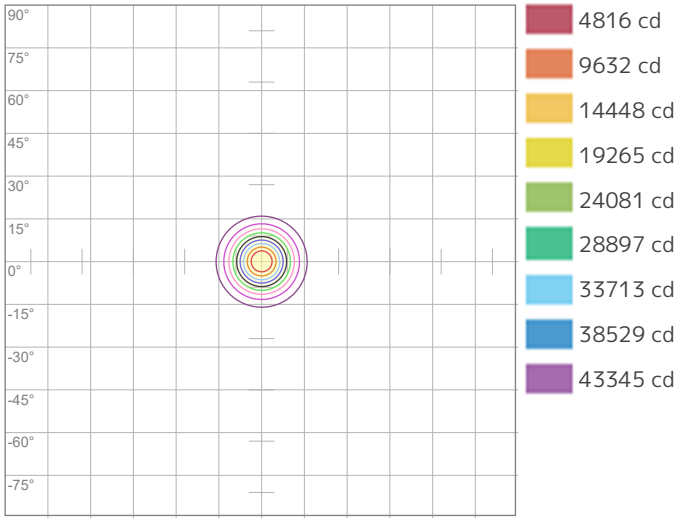
Measurement Date: 2/23/2024

Angular Distribution



Beam Angle - 50%
19.5°
Field Angle - 10%
35.8°
Cutoff Angle - 2.5%
49.5°

ISO Diagrams

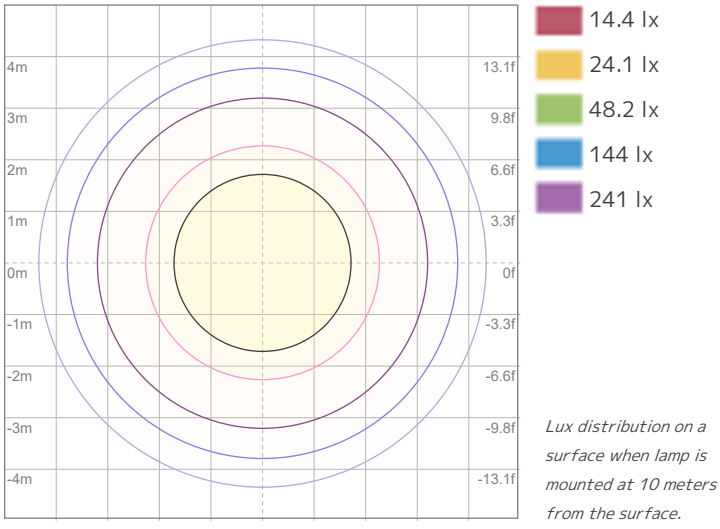


ISO Candela Diagram

Conditions:

Number of c-planes: 2

Candela at center: 48161 cd



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

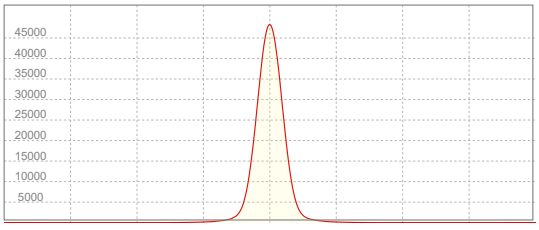
ISO LUX Diagram

Conditions:

Number of c-planes: 2

LUX at center: 482 lx

Linear Distribution



Peak Candela

48189 cd

Calculate Center Beam Intensities

lux = 48189 / distance(m)^2

fc = 48189 / distance(ft)^2

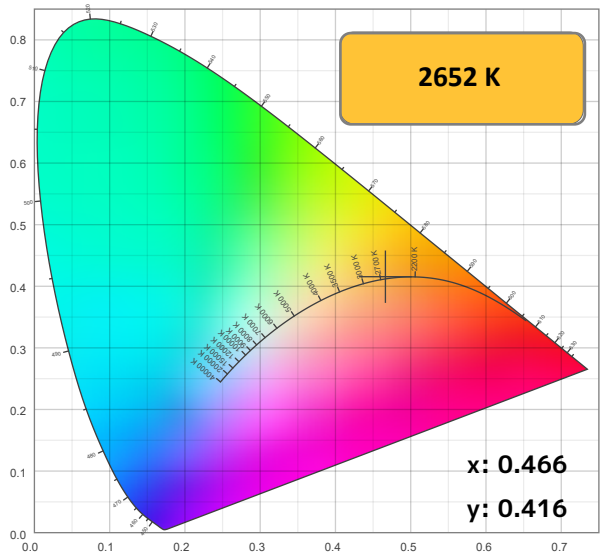
Measurement Date: 2/23/2024

Color Temperature: 2652K

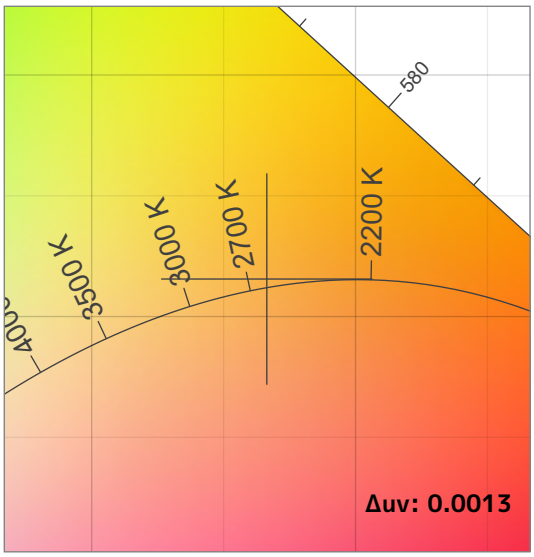
Accuracy Metric Overview

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
89.4	72.5	91.2	106.4	82	89.3	0.466	0.416	0.0013	63	13

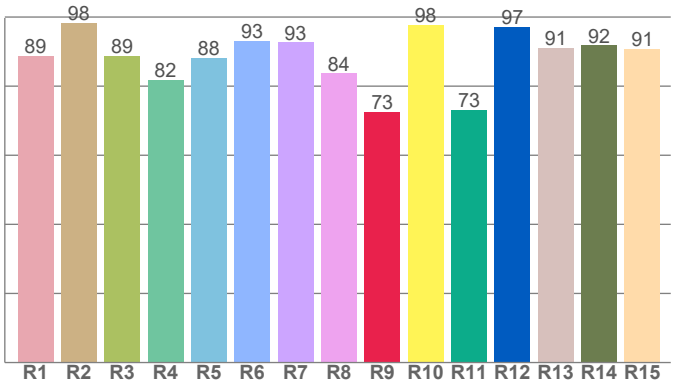
CIE 1931



CIE 1931 ZOOMED

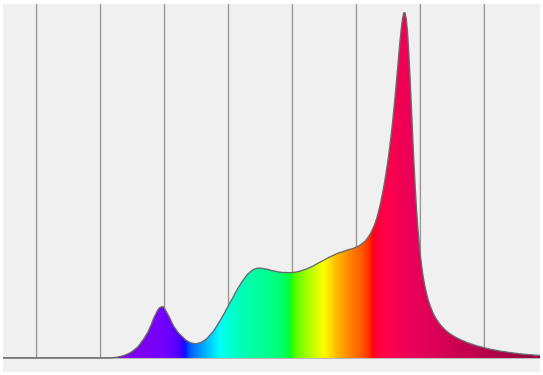


CRI: 89.4 (R1-R8)



Spectral Power Distribution (SPD)

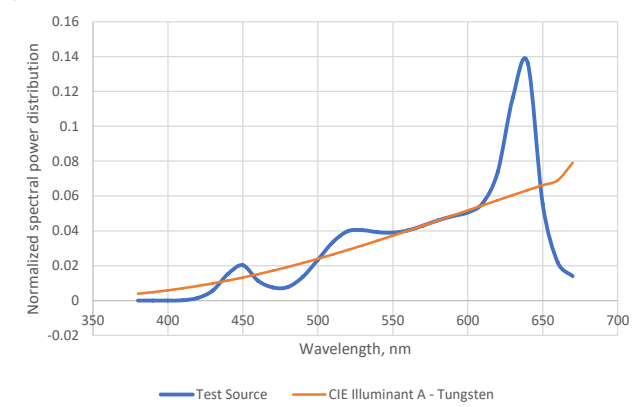
Dominant Wavelength 584 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 63

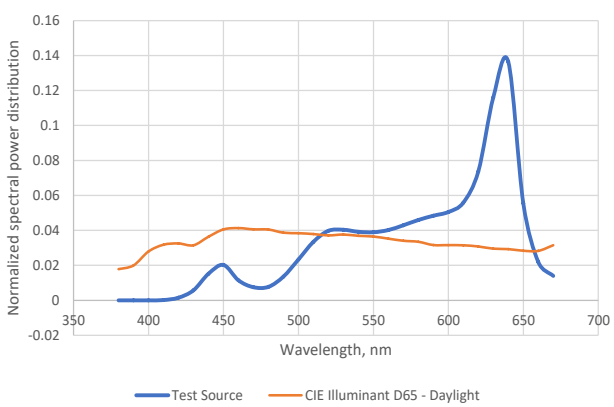
Spectral variance



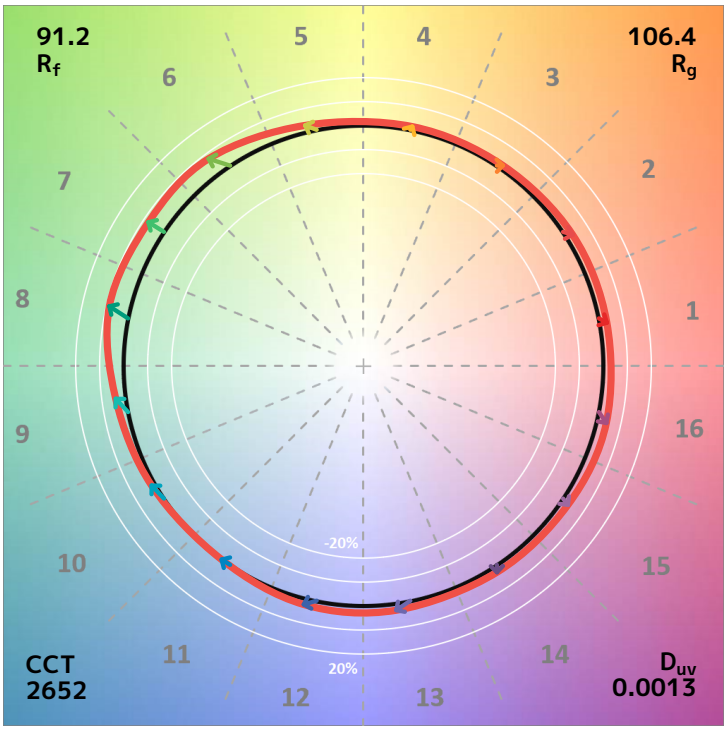
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 13

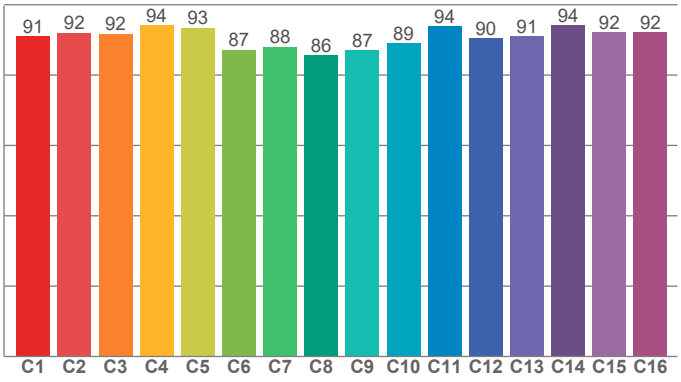
Spectral variance



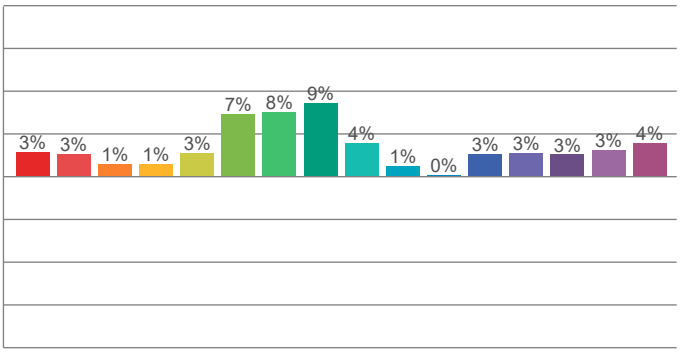
Measurement Date: 2/22/2024



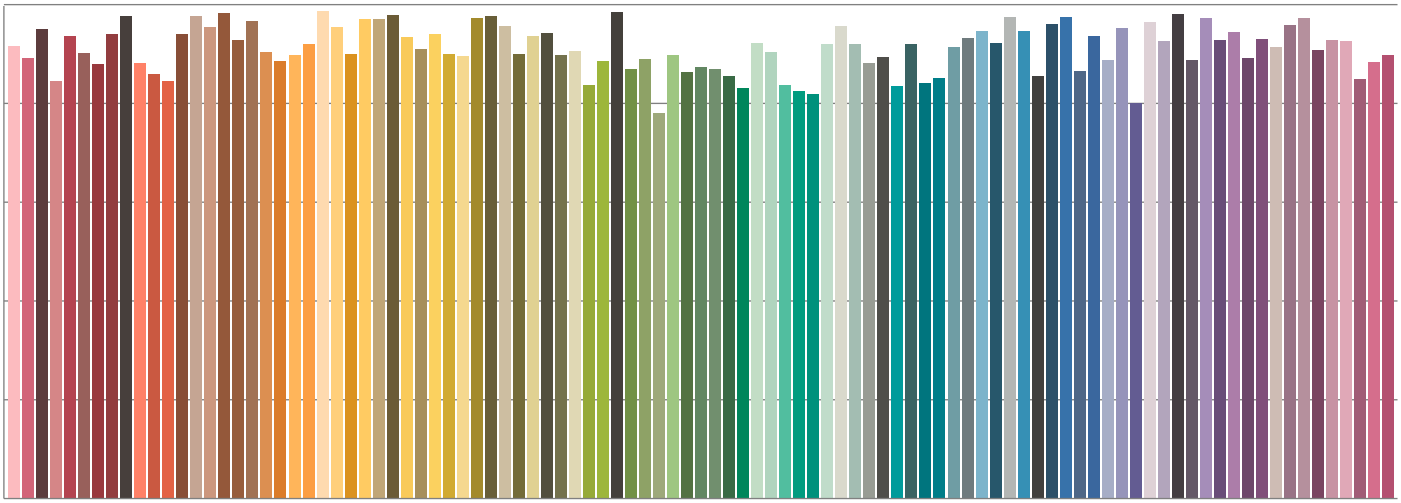
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



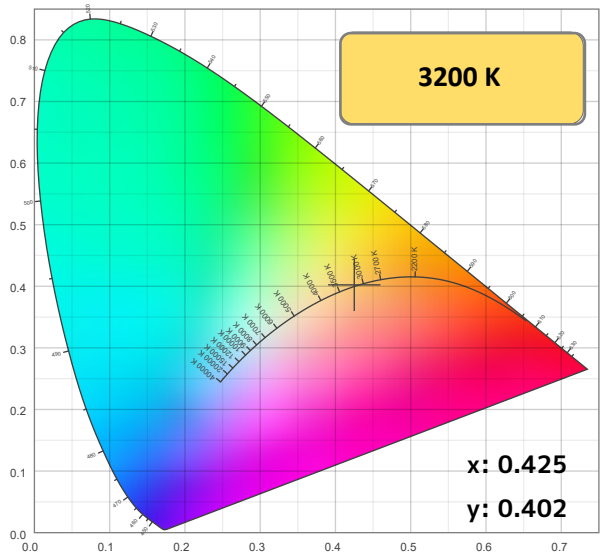
Measurement Date: 2/22/2024

Color Temperature: 3200K

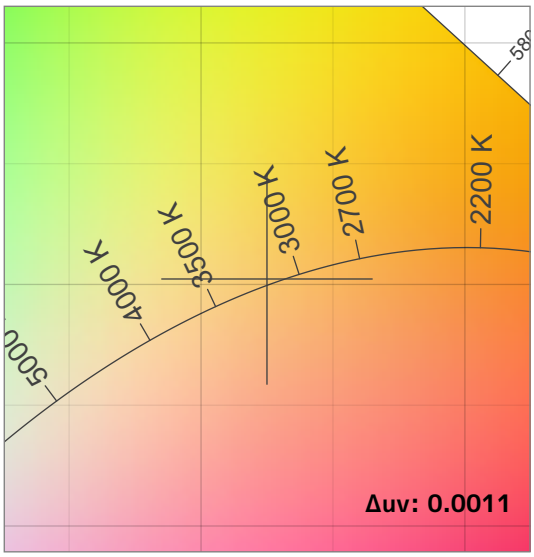
Accuracy Metric Overview

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
91.7	79.4	92.1	107.0	85	92.2	0.425	0.402	0.0011	66	31

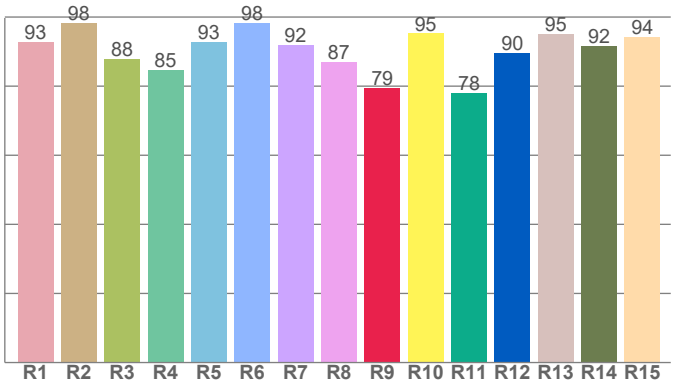
CIE 1931



CIE 1931 ZOOMED

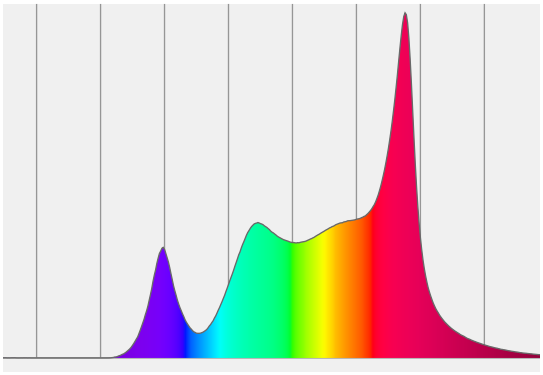


CRI: 91.7 (R1-R8)



Spectral Power Distribution (SPD)

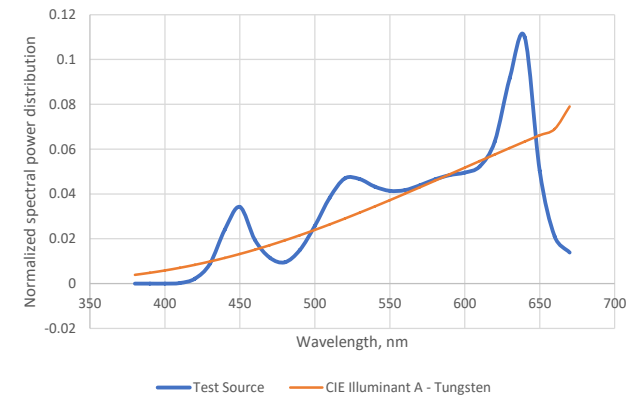
Dominant Wavelength 583 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 66

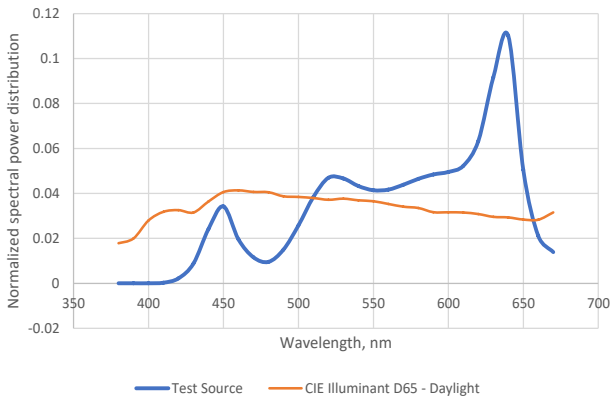
Spectral variance



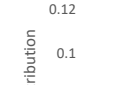
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 31

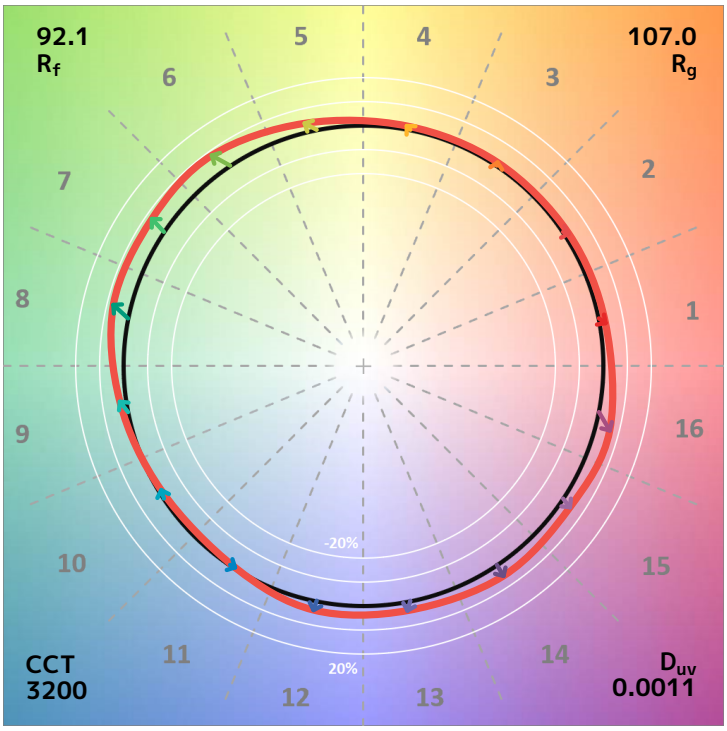
Spectral variance



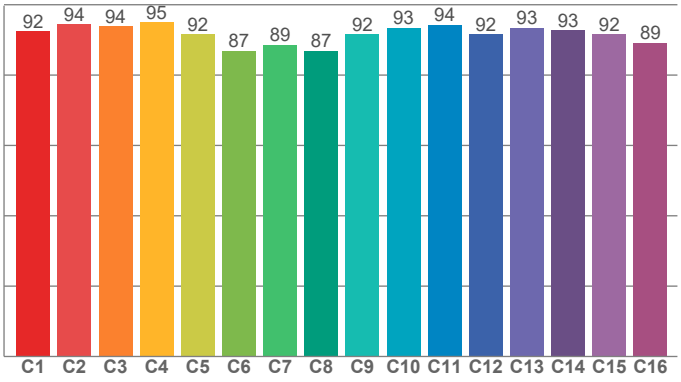
SSI [CIE D65] - Daylight **31**



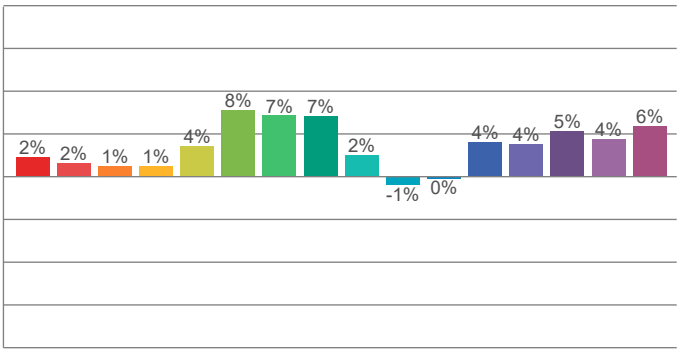
Measurement Date: 2/22/2024



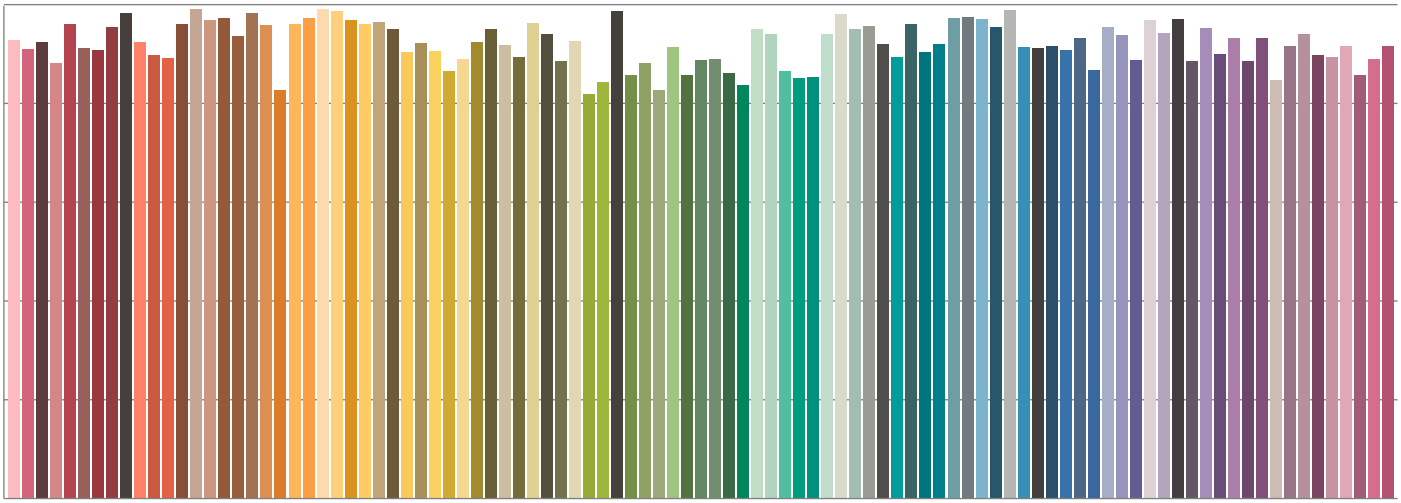
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



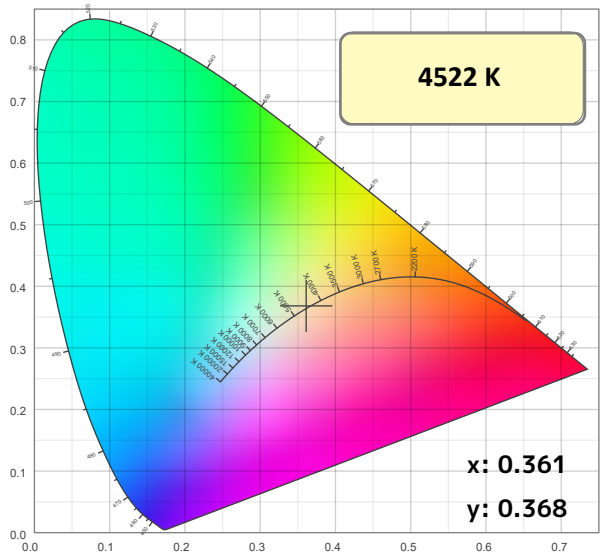
Measurement Date: 2/22/2024

Color Temperature: 4522K

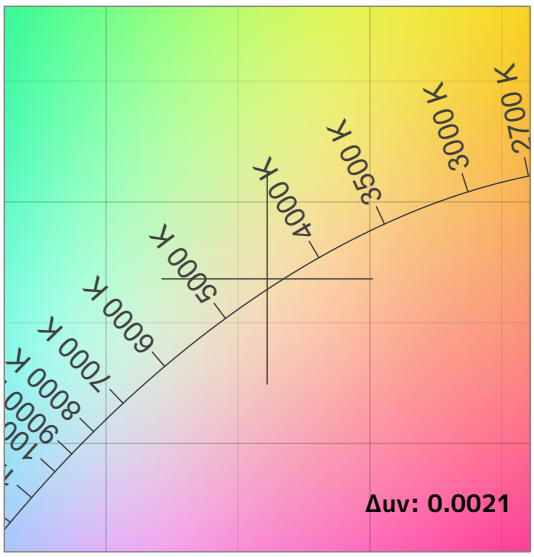
Accuracy Metric Overview

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
90.9	85.4	90.6	107.4	84	93.1	0.361	0.368	0.0021	47	50

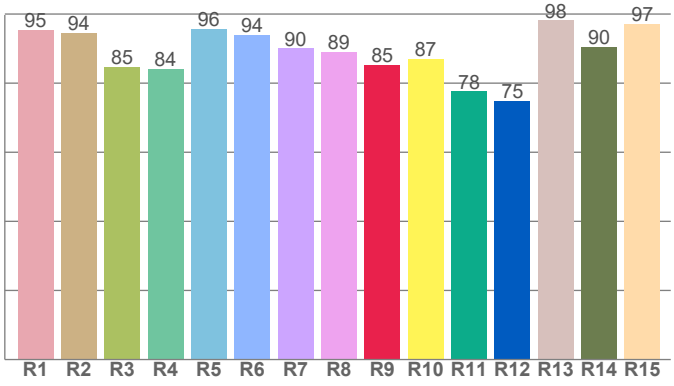
CIE 1931



CIE 1931 ZOOMED

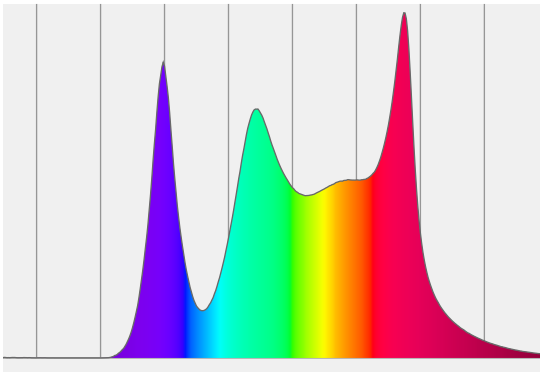


CRI: 90.9 (R1-R8)



Spectral Power Distribution (SPD)

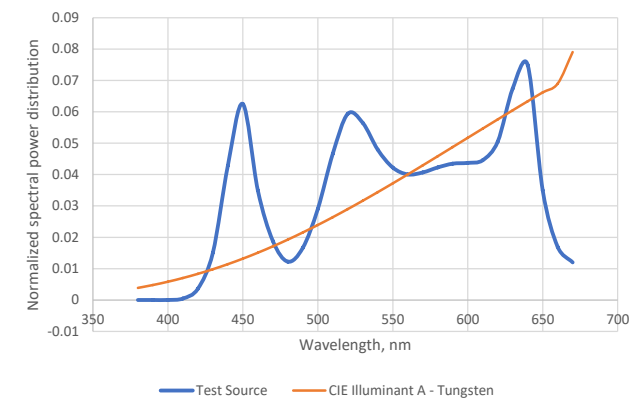
Dominant Wavelength 580 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 47

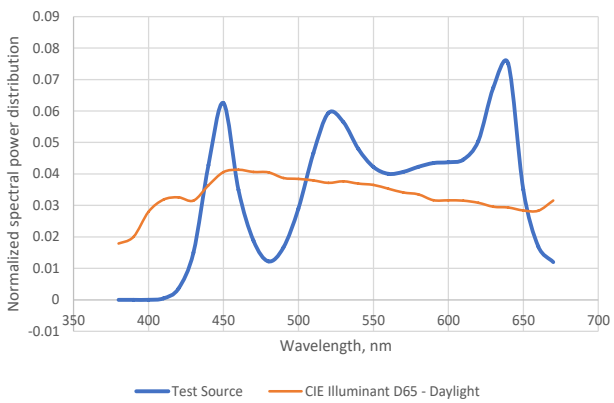
Spectral variance



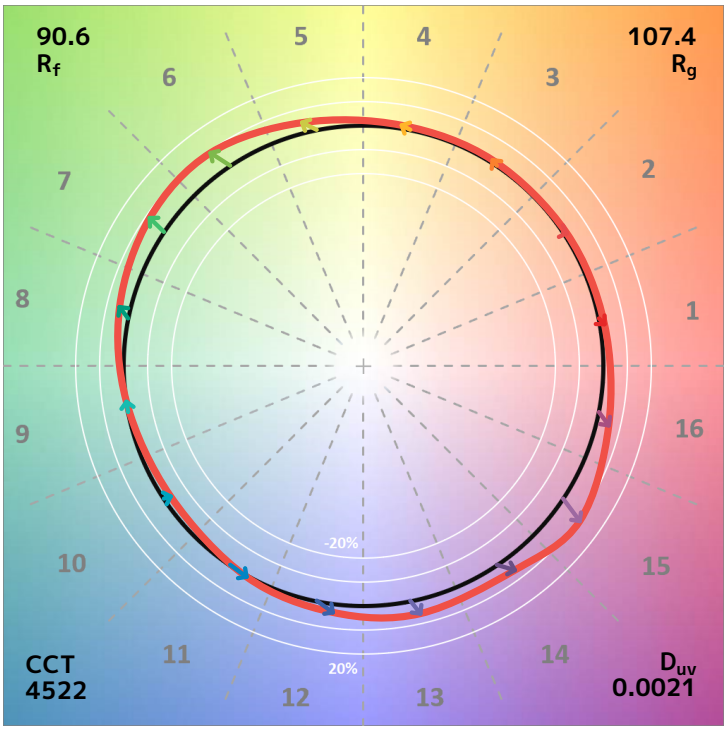
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 50

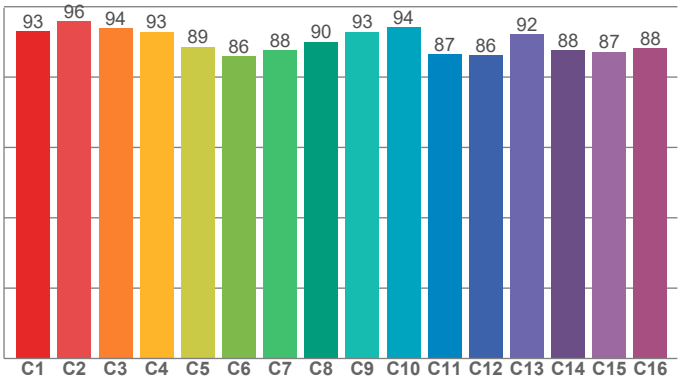
Spectral variance



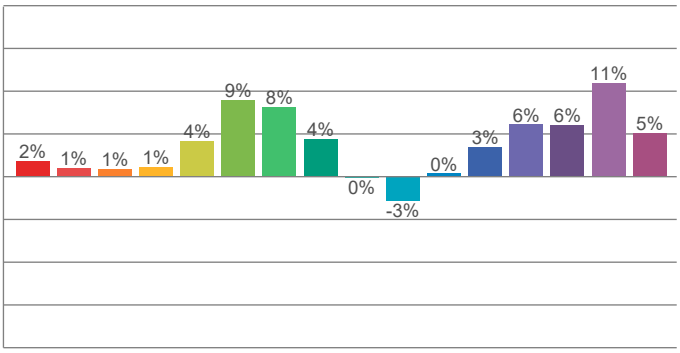
Measurement Date: 2/22/2024



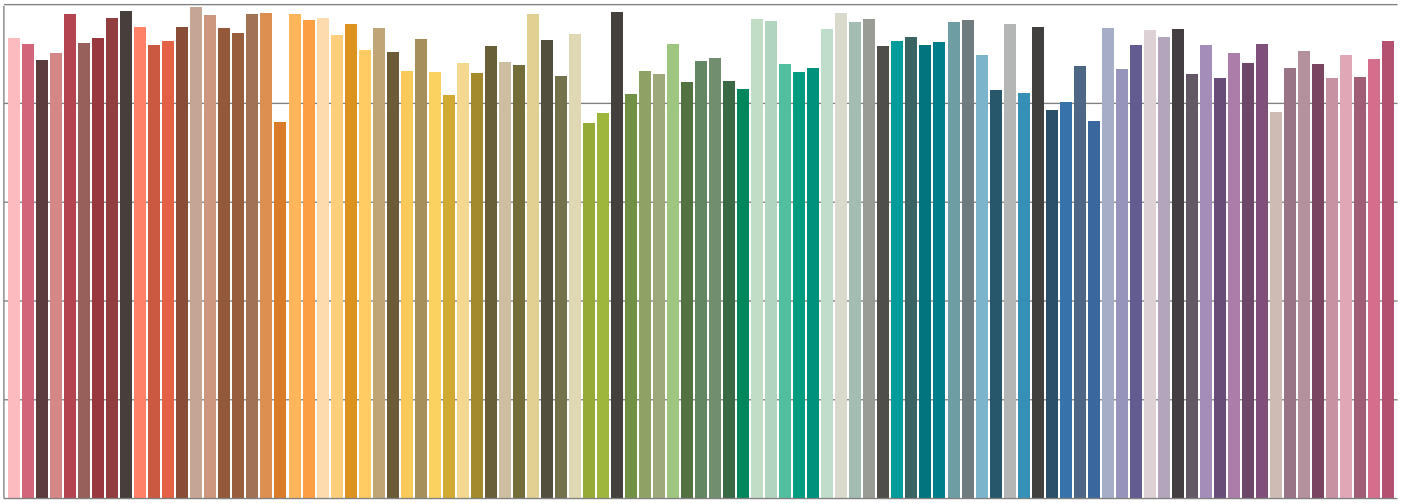
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



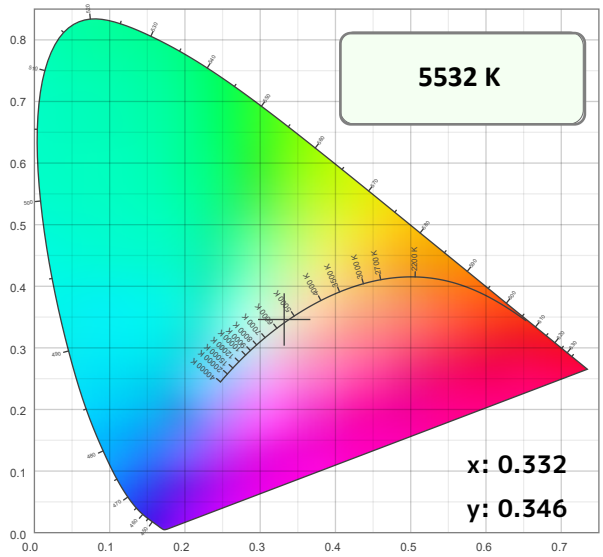
Measurement Date: 2/22/2024

Color Temperature: 5532K

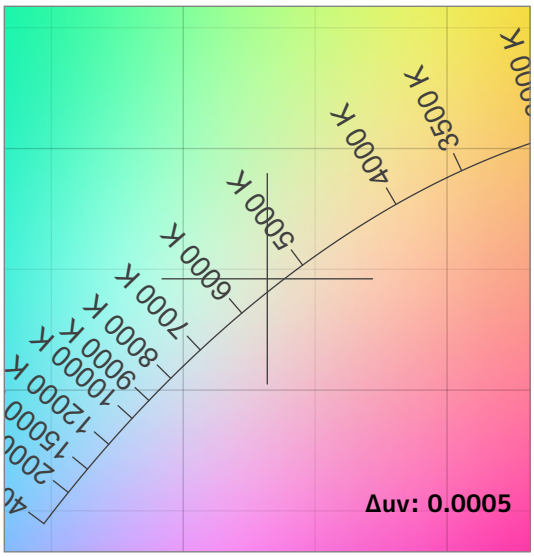
Accuracy Metric Overview

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
90.2	98.3	89.1	107.0	85	91.9	0.332	0.346	0.0005	32	55

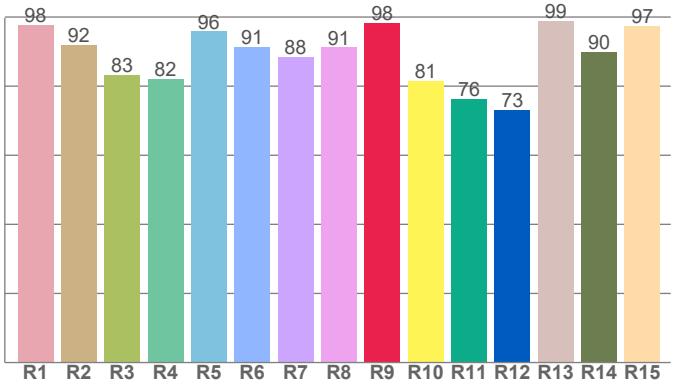
CIE 1931



CIE 1931 ZOOMED

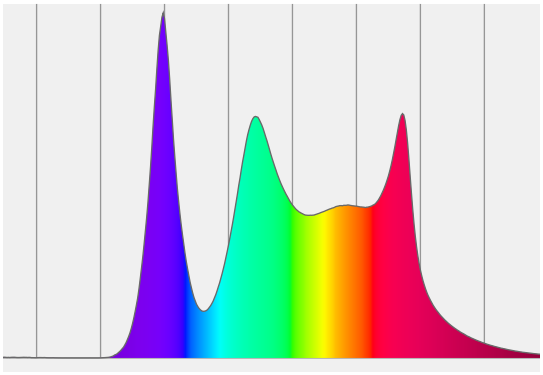


CRI: 90.2 (R1-R8)



Spectral Power Distribution (SPD)

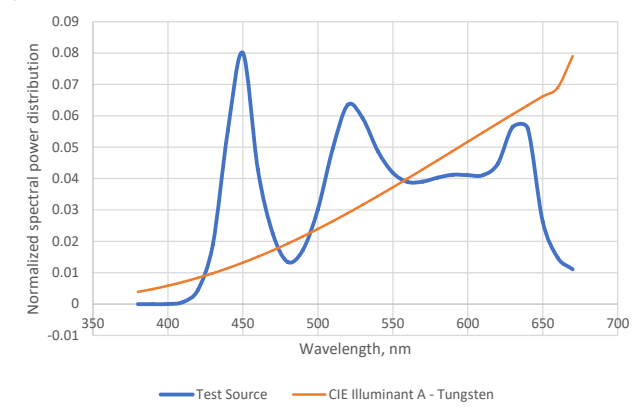
Dominant Wavelength 578 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 32

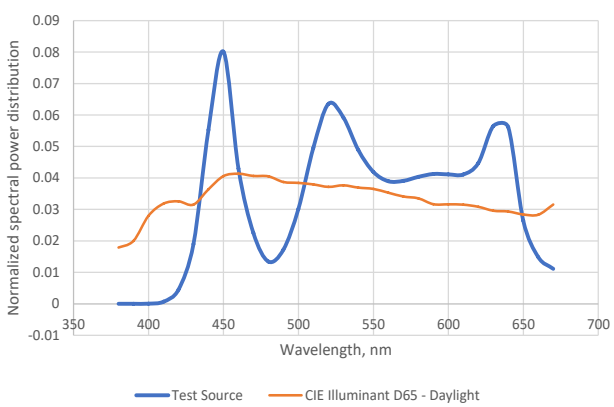
Spectral variance



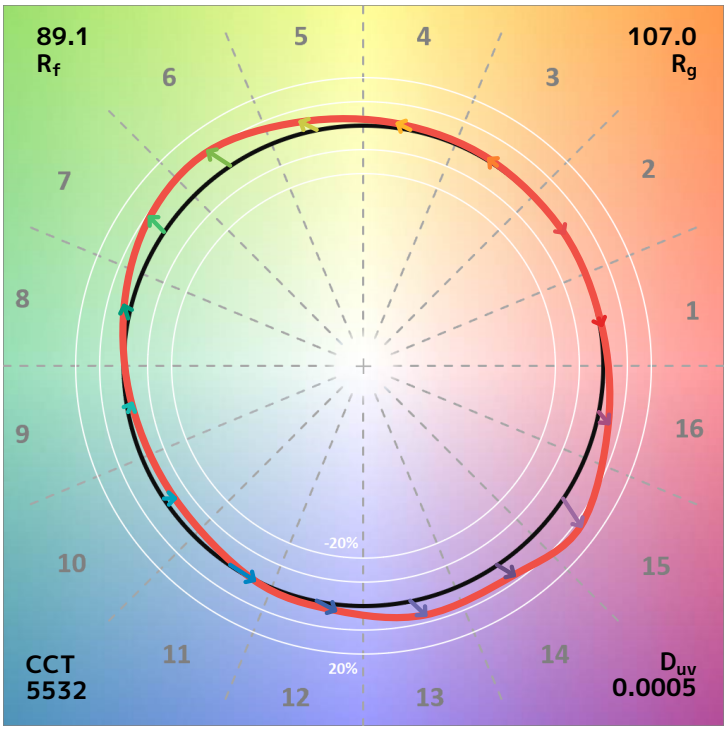
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 55

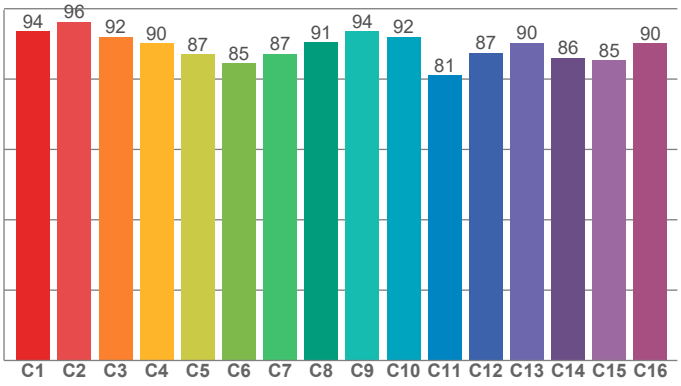
Spectral variance



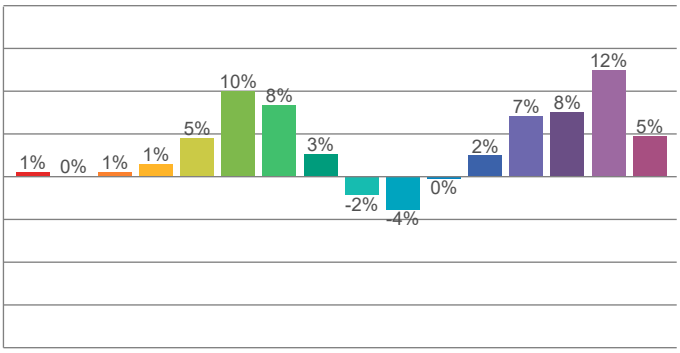
Measurement Date: 2/23/2024



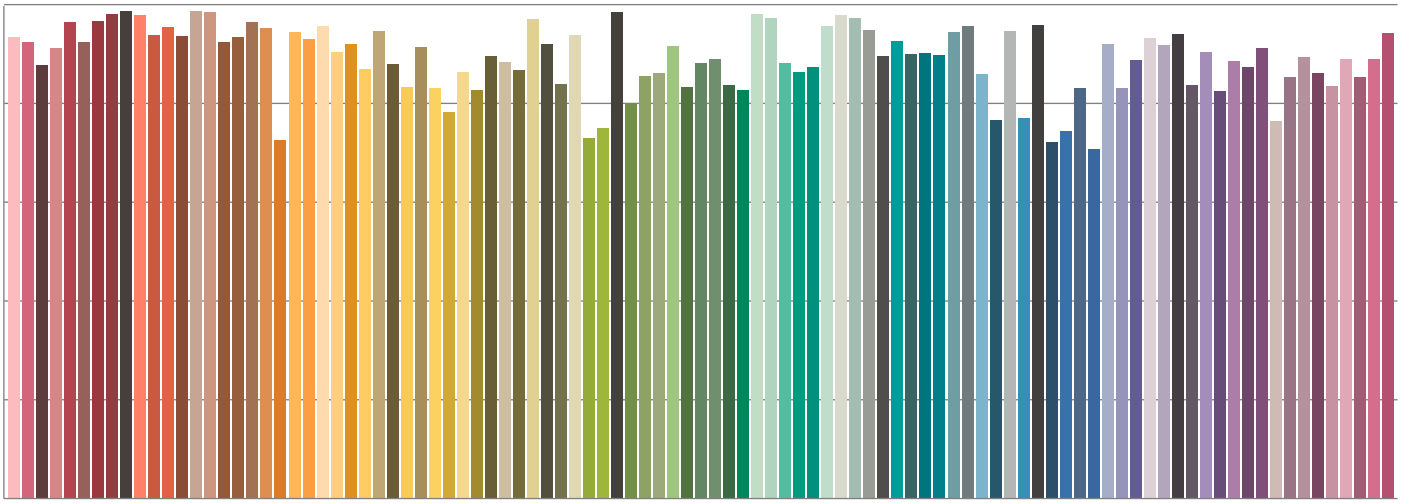
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



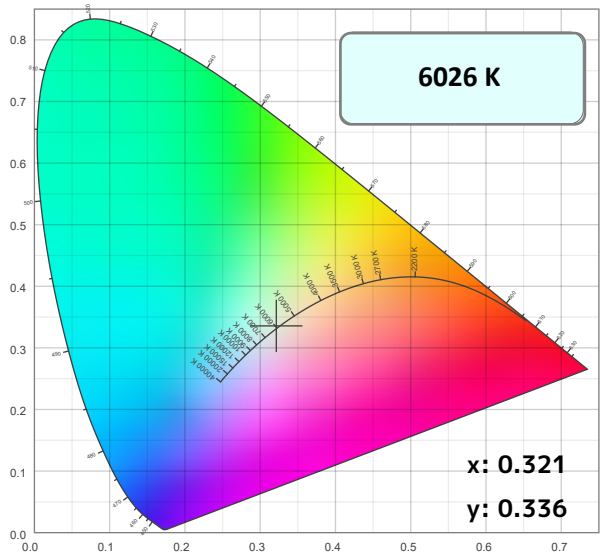
Measurement Date: 2/23/2024

Color Temperature: 6026K

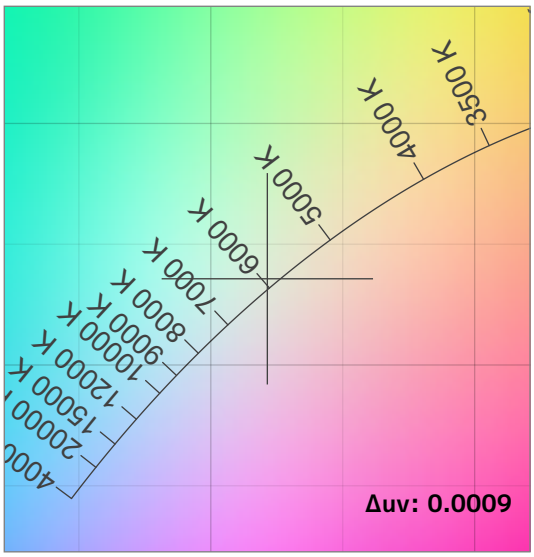
Accuracy Metric Overview

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	96.0	88.9	107.0	86	91.6	0.321	0.336	0.0009	26	55

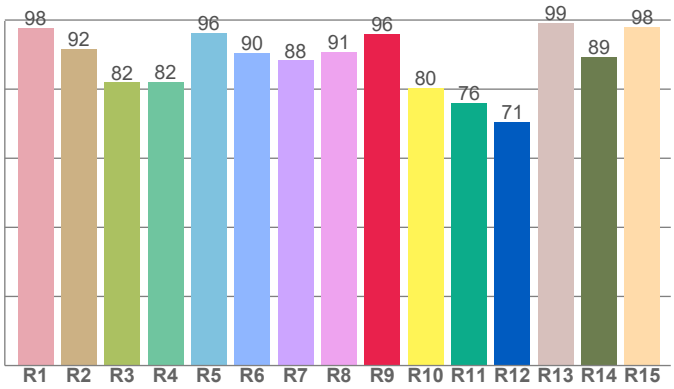
CIE 1931



CIE 1931 ZOOMED

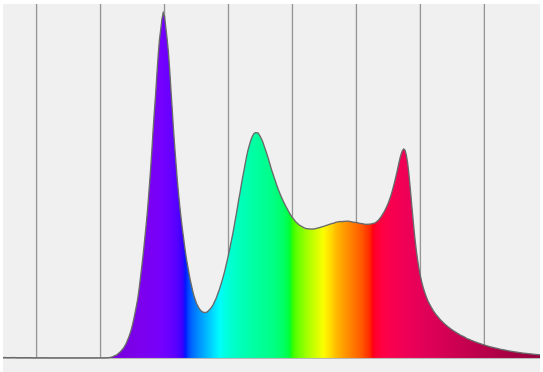


CRI: 89.9 (R1-R8)



Spectral Power Distribution (SPD)

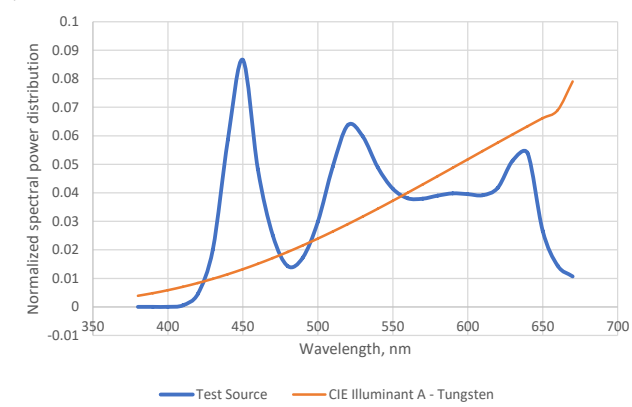
Dominant Wavelength 580 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 26

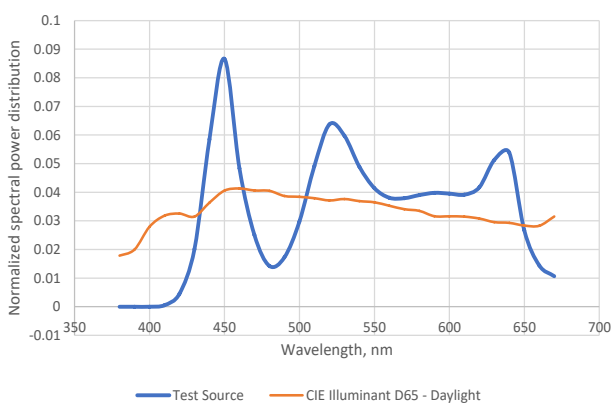
Spectral variance



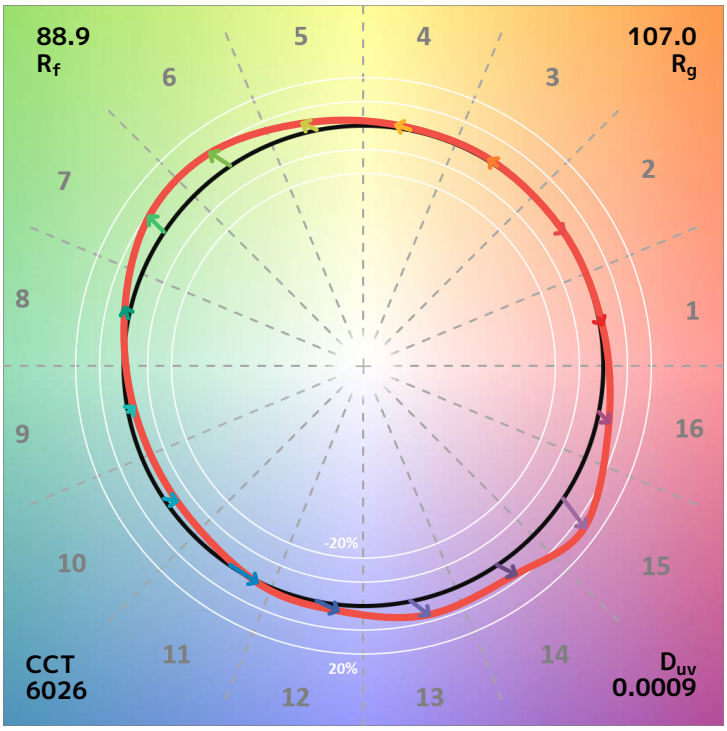
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 55

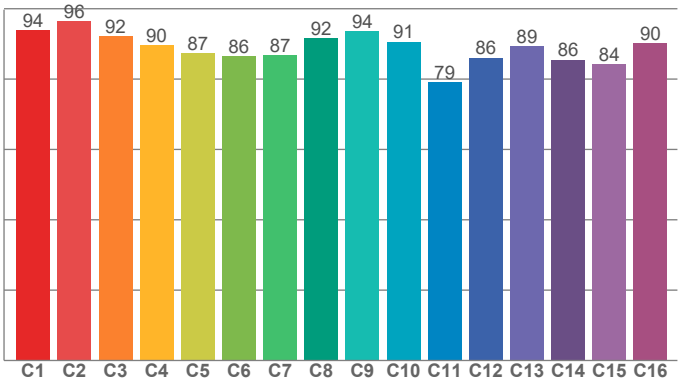
Spectral variance



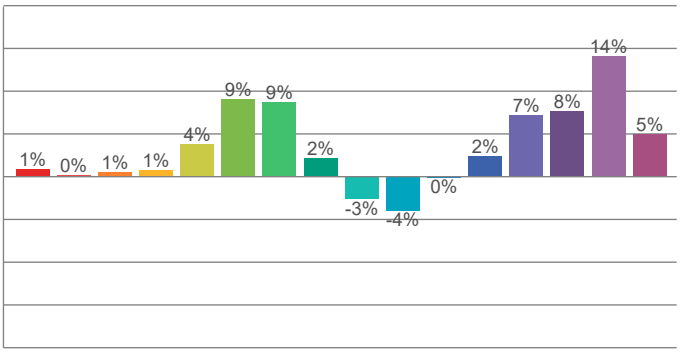
Measurement Date: 2/23/2024



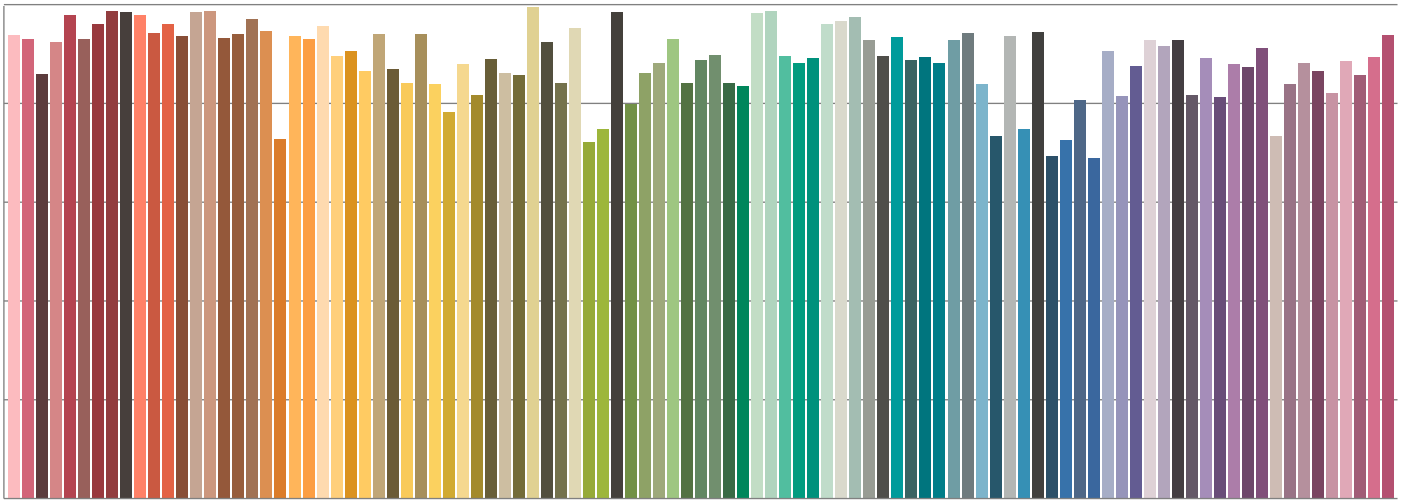
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



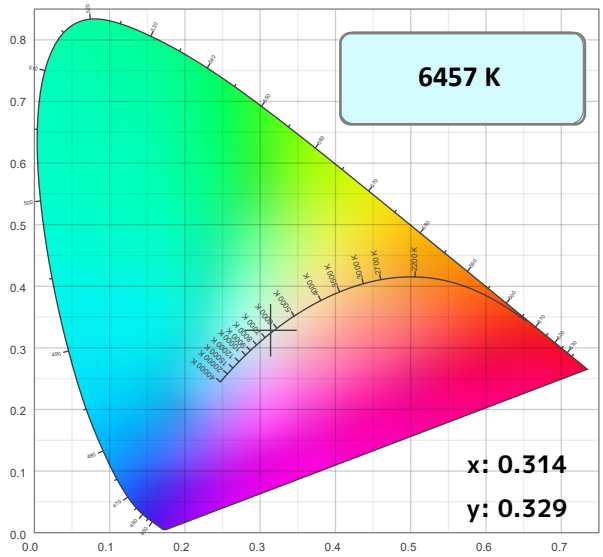
Measurement Date: 2/23/2024

Color Temperature: 6457K

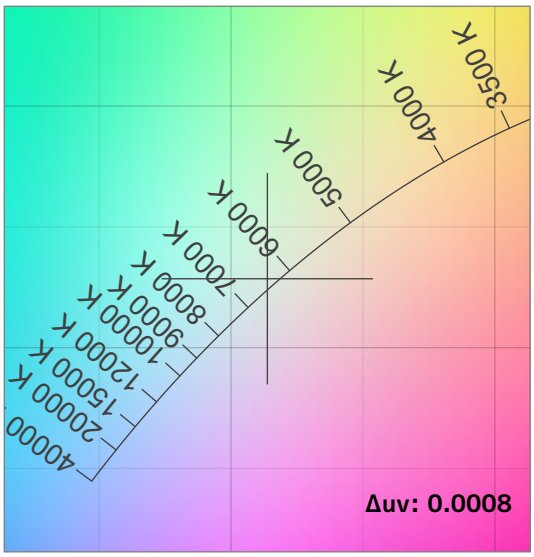
Accuracy Metric Overview

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
89.7	96.8	88.6	106.7	87	91.5	0.314	0.329	0.0008	22	55

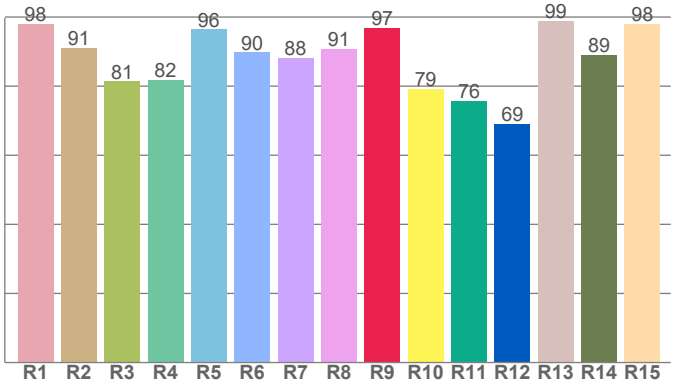
CIE 1931



CIE 1931 ZOOMED

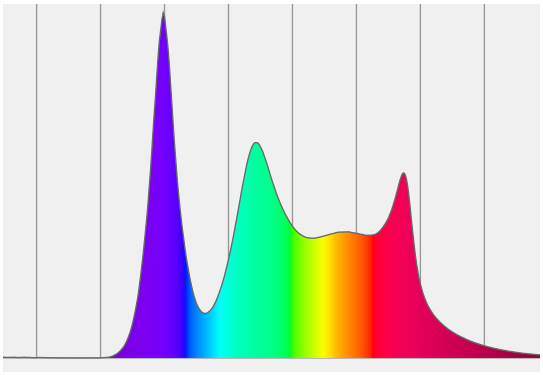


CRI: 89.7 (R1-R8)



Spectral Power Distribution (SPD)

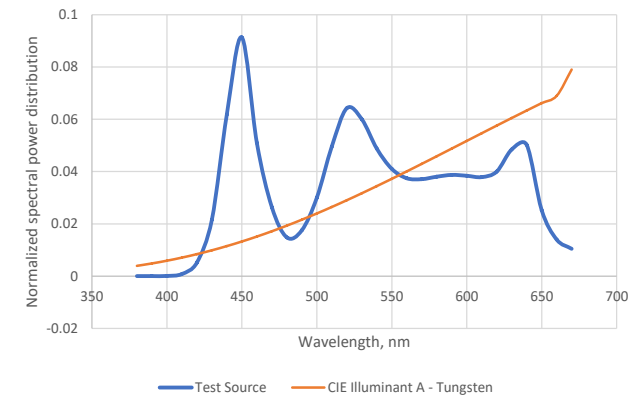
Dominant Wavelength 829 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 22

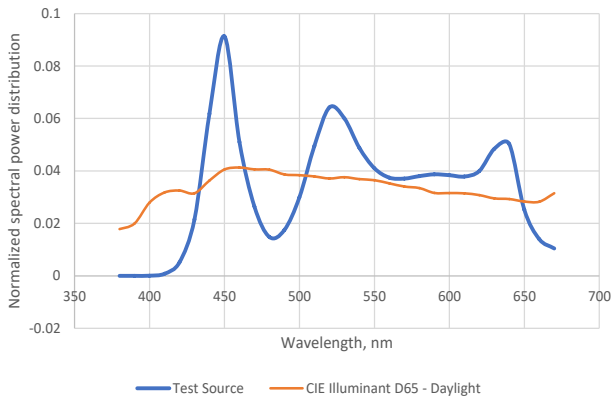
Spectral variance



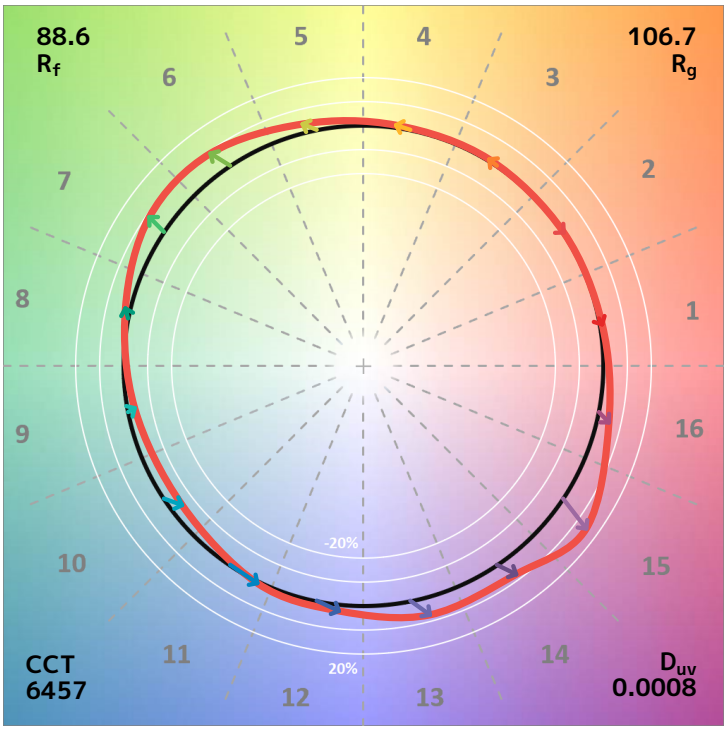
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 55

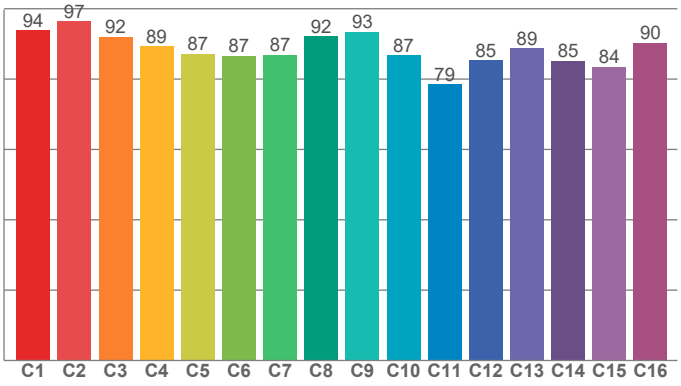
Spectral variance



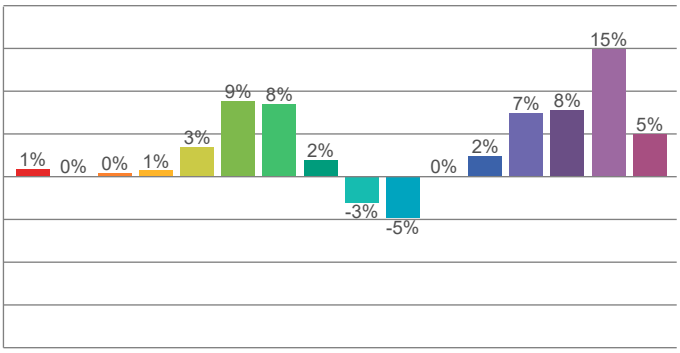
Measurement Date: 2/23/2024



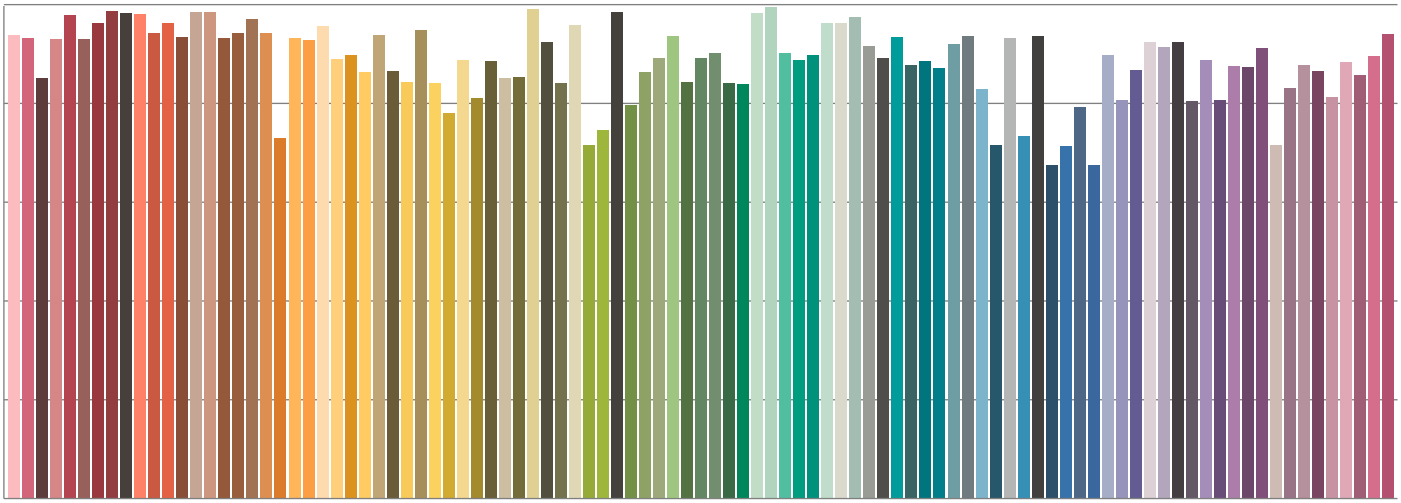
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



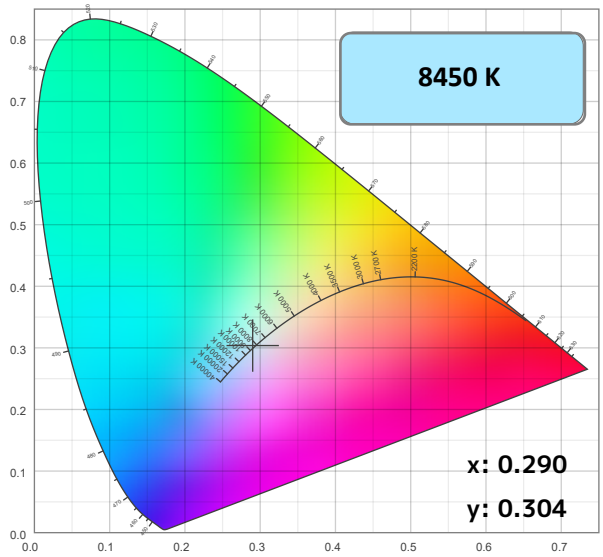
Measurement Date: 2/23/2024

Color Temperature: 8450K

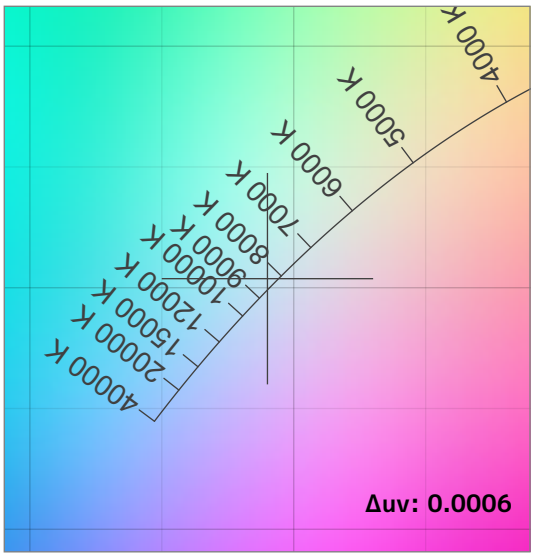
Accuracy Metric Overview

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
89.1	96.6	87.3	104.8	87	90.4	0.290	0.304	0.0006	5	51

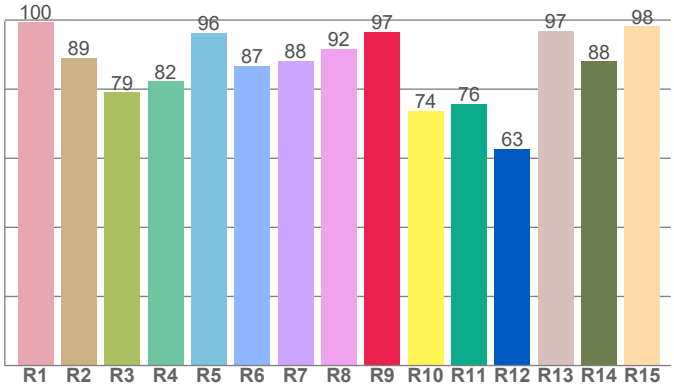
CIE 1931



CIE 1931 ZOOMED

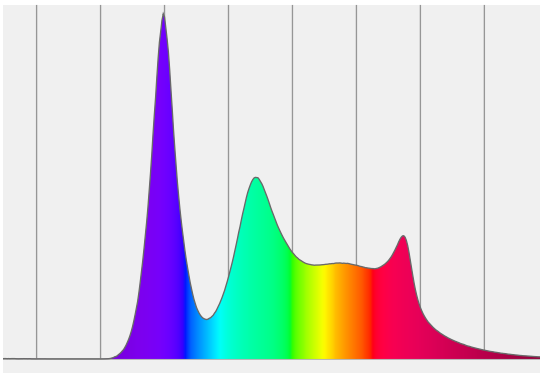


CRI: 89.1 (R1-R8)



Spectral Power Distribution (SPD)

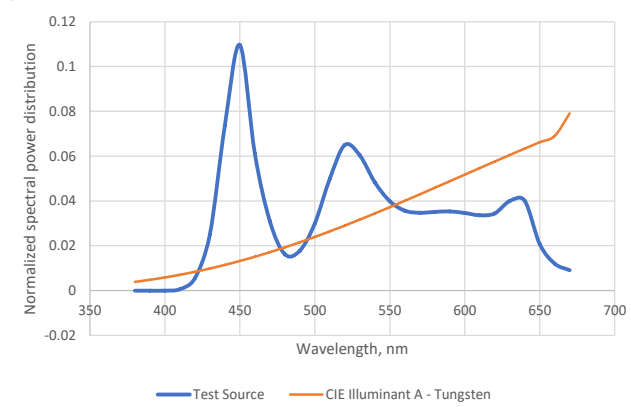
Dominant Wavelength 476 nm



SSI Spectral Variance Graph- Tungsten

SSI [CIE A] 5

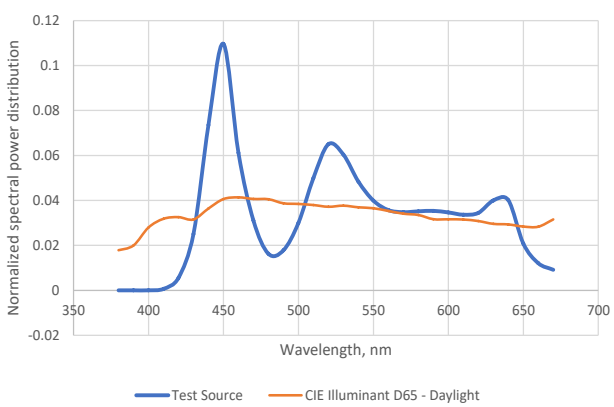
Spectral variance



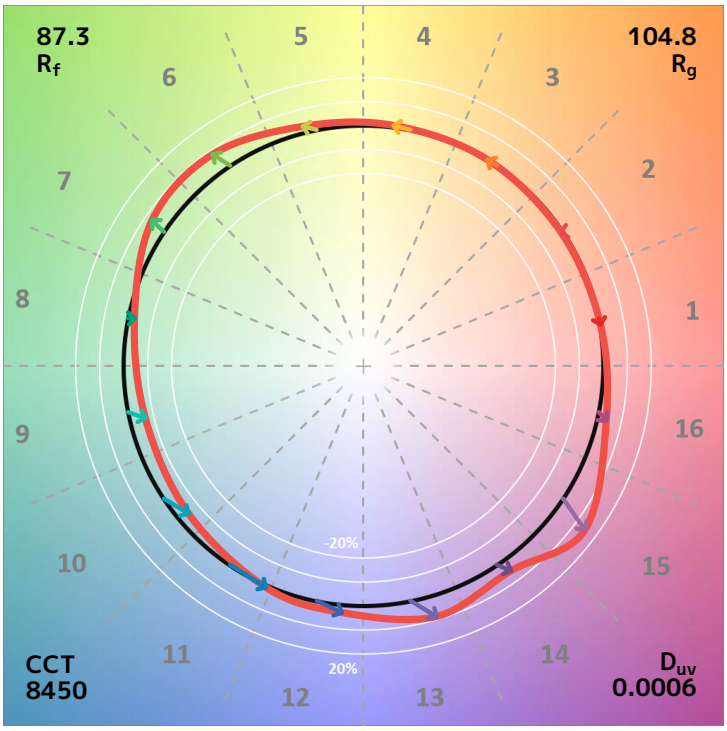
SSI Spectral Variance Graph- Daylight

SSI [CIE D65] 51

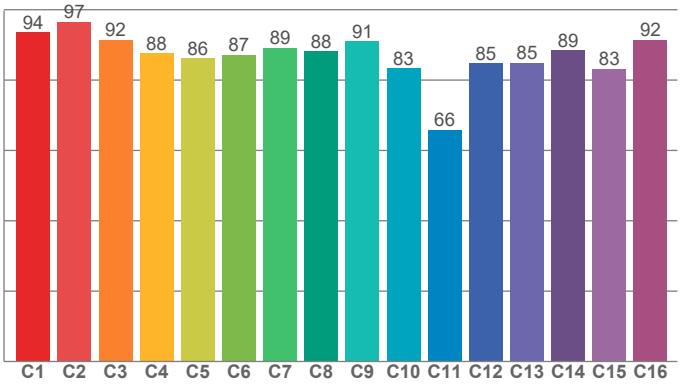
Spectral variance



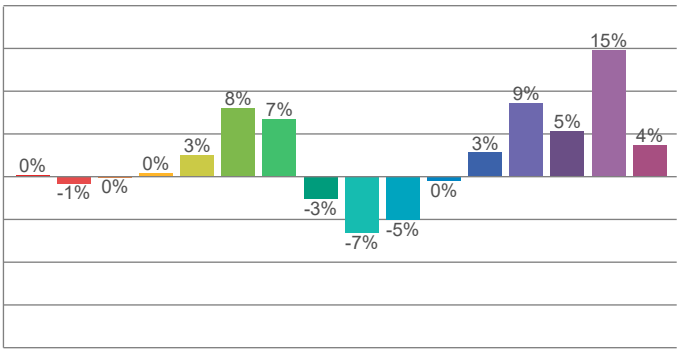
Measurement Date: 2/23/2024



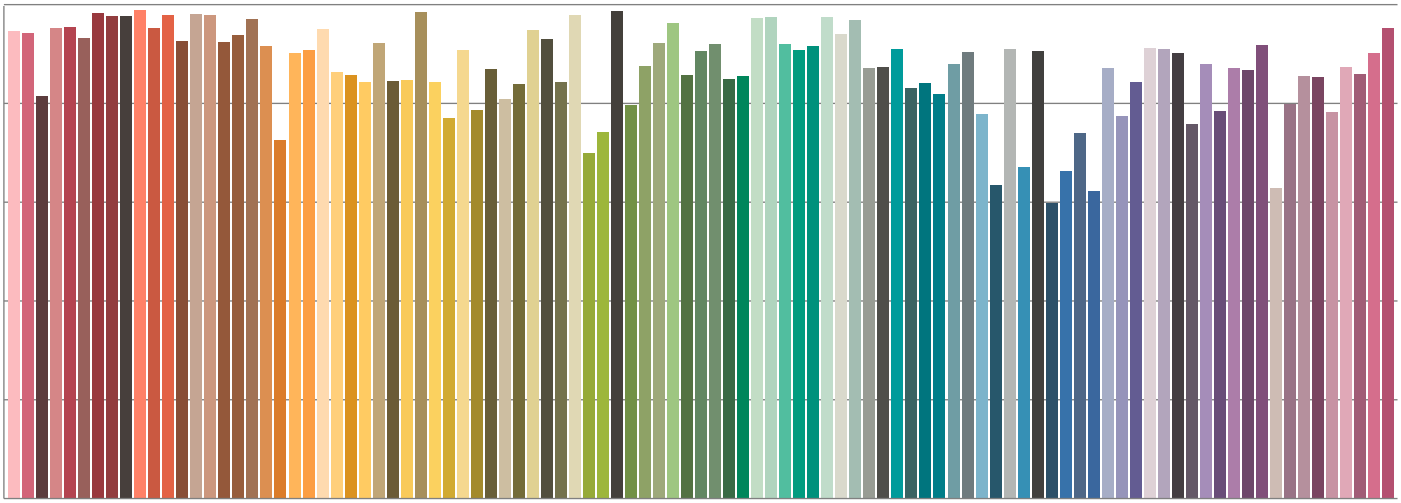
TM30-18 R_f Values per Hue Bin



TM30 Chroma Shift per Hue Bin



TM30-18 R_f Values per Reference Color (CES)



Measurement Date: 2/23/2024

Measurements

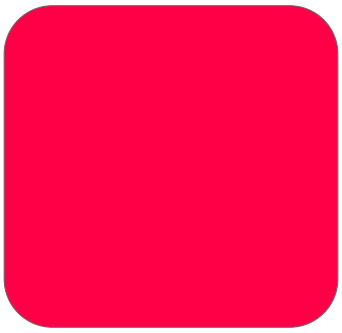
Total Lumen Output: 1005 lm

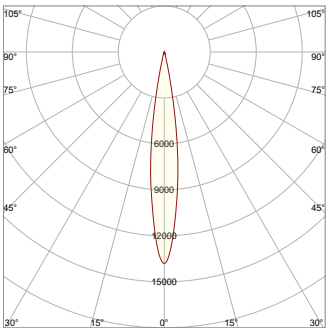
Peak Intensity: 13731 cd

Efficacy: 27 Lumen/Watt

Power: 37.2 W

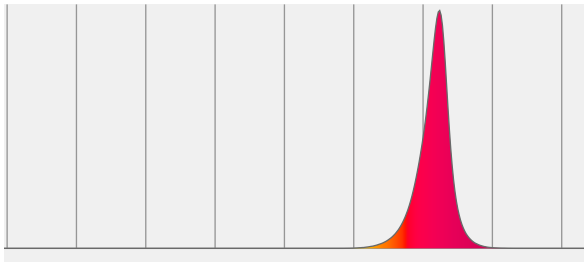
Voltage: 121 V, Current: 0.322 A

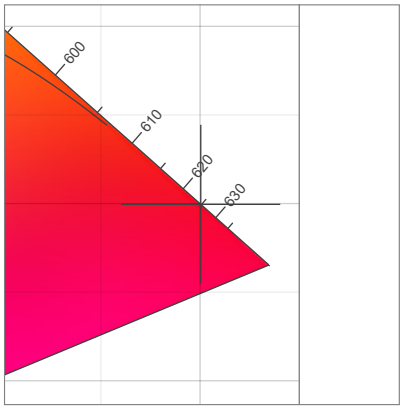




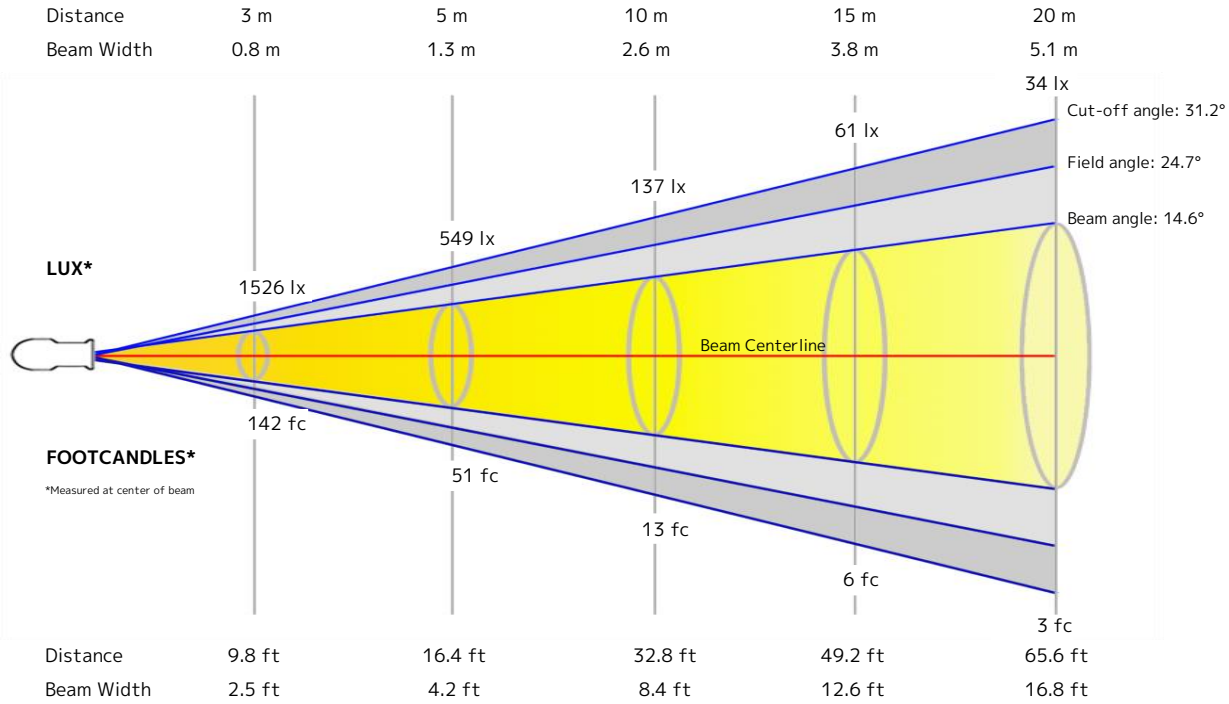
Spectral Power Distribution

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	0.700	0.300	0.539	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	13731	3433	1526	858	549	381	280	215	170	137	113	95	81	70	61	54	48	42	38	34
FC	1275.6	318.9	141.7	79.7	51	35.4	26	19.9	15.7	12.8	10.5	8.9	7.5	6.5	5.7	5	4.4	3.9	3.5	3.2

Measurement Date: 2/22/2024

Measurements

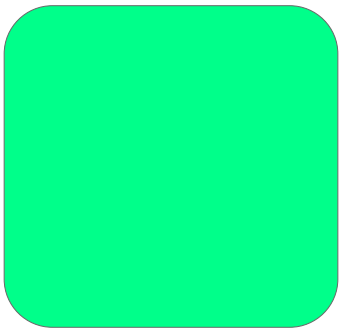
Total Lumen Output: 2203 lm

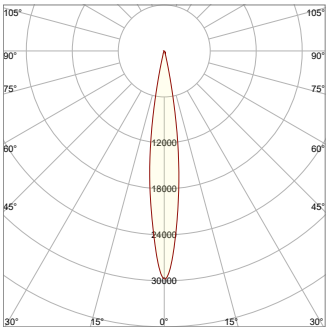
Peak Intensity: 29577 cd

Efficacy: 53 Lumen/Watt

Power: 41.7 W

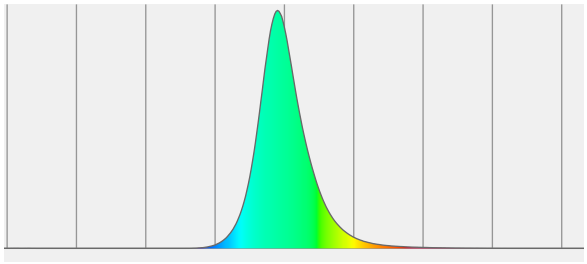
Voltage: 121 V, Current: 0.358 A

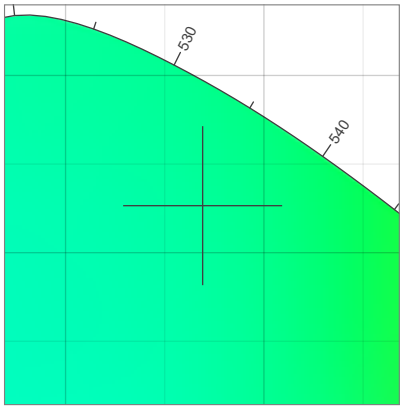




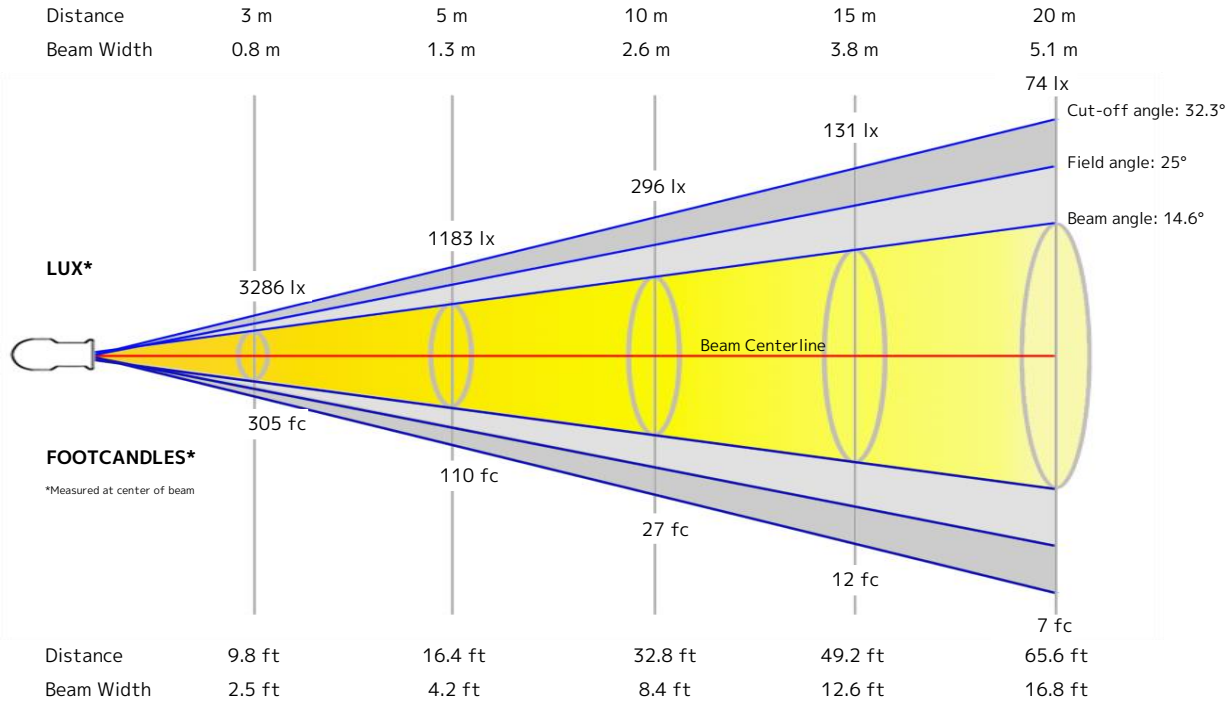
Spectral Power Distribution

Dominant Wavelength 528 nm





Dominant Wavelength	Color Coordinate CIE 1931	Color Coordinate CIE1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964
nm	x	y	u	v
528	0.169	0.727	0.059	0.383



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	29577	7394	3286	1849	1183	822	604	462	365	296	244	205	175	151	131	116	102	91	82	74
FC	2747.7	686.9	305.3	171.7	109.9	76.3	56.1	42.9	33.9	27.5	22.7	19.1	16.3	14	12.2	10.7	9.5	8.5	7.6	6.9

Measurement Date: 2/22/2024

Measurements

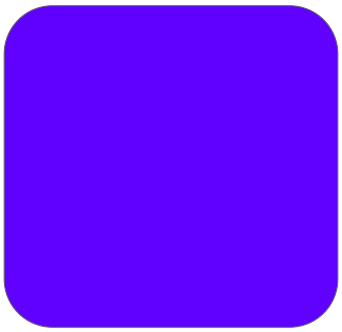
Total Lumen Output: 435 lm

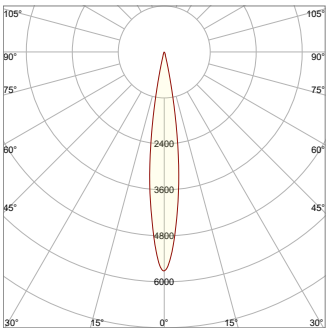
Peak Intensity: 5691 cd

Efficacy: 10 Lumen/Watt

Power: 43.3 W

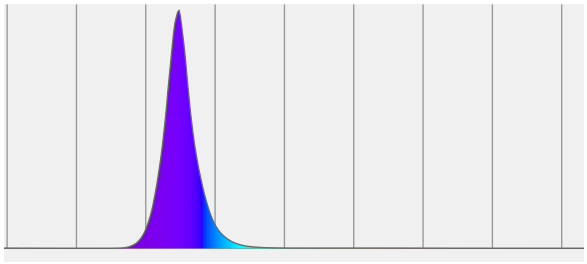
Voltage: 121 V, Current: 0.370 A

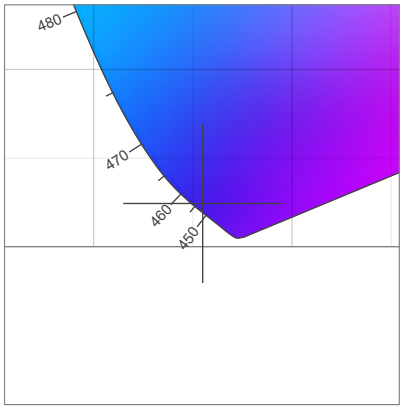




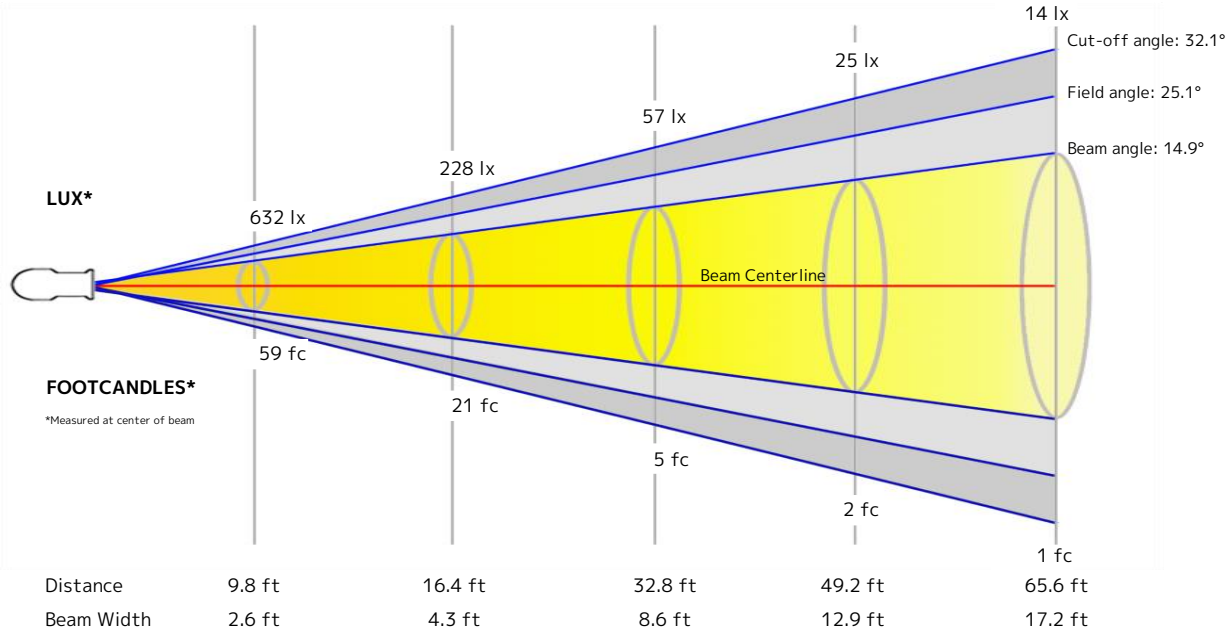
Spectral Power Distribution

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	0.049



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	5691	1423	632	356	228	158	116	89	70	57	47	40	34	29	25	22	20	18	16	14
FC	528.7	132.2	58.7	33	21.1	14.7	10.8	8.3	6.5	5.3	4.4	3.7	3.1	2.7	2.3	2.1	1.8	1.6	1.5	1.3

Measurement Date: 2/22/2024

Measurements

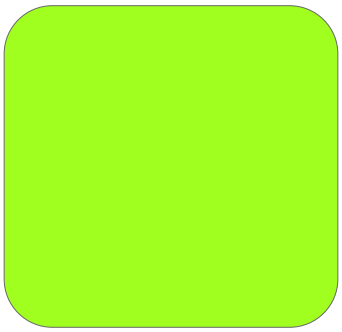
Total Lumen Output: 3603 lm

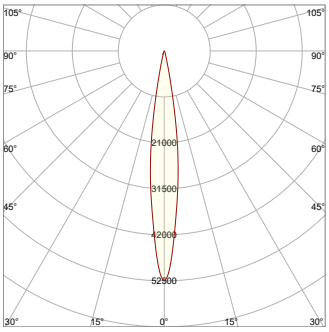
Peak Intensity: 52122 cd

Efficacy: 81 Lumen/Watt

Power: 44.3 W

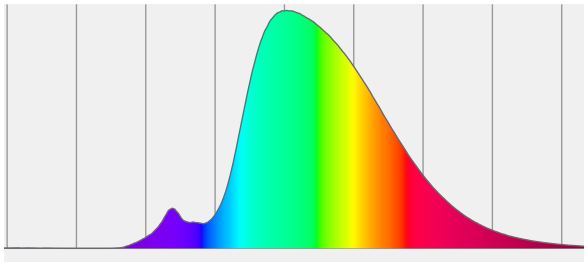
Voltage: 121 V, Current: 0.377 A

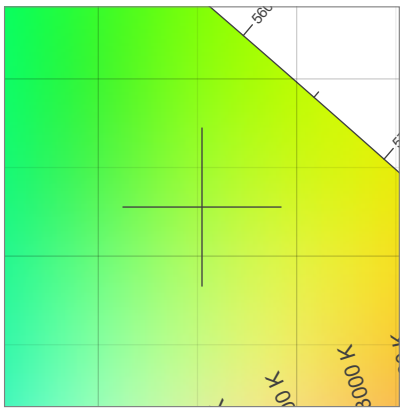




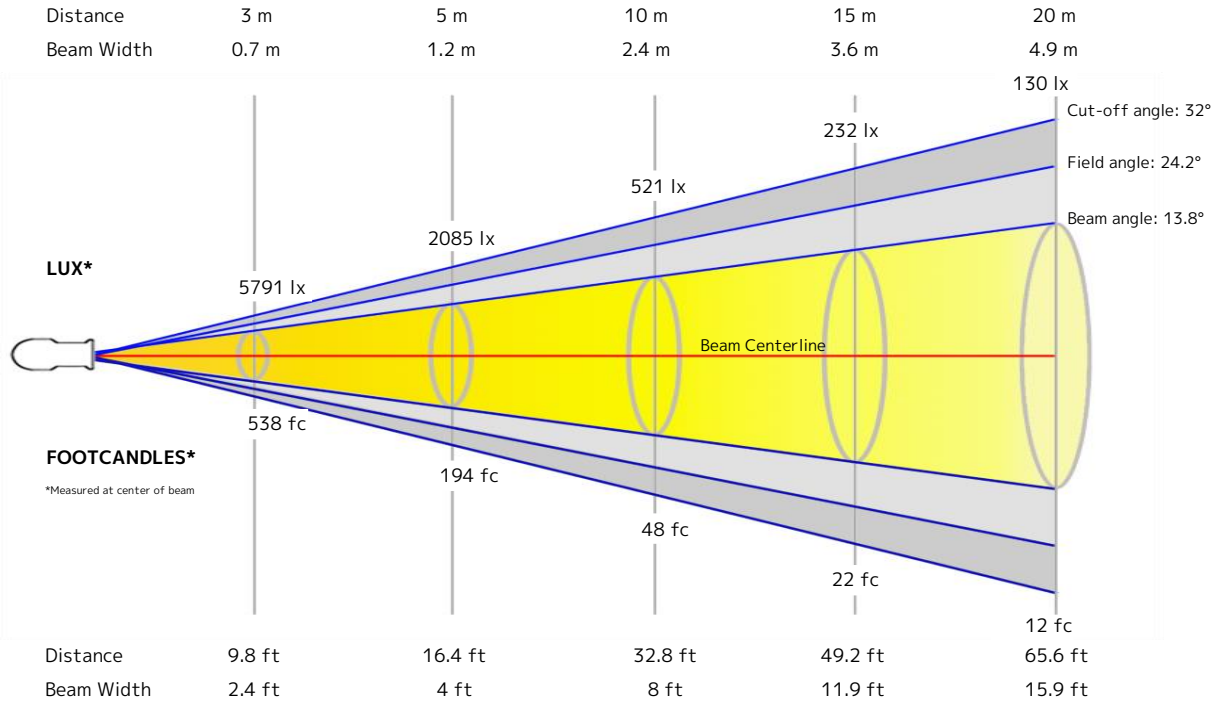
Spectral Power Distribution

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	0.352	0.528	0.163	0.367



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	52122	13030	5791	3258	2085	1448	1064	814	643	521	431	362	308	266	232	204	180	161	144	130
FC	4842.3	1210.6	538	302.6	193.7	134.5	98.8	75.7	59.8	48.4	40	33.6	28.7	24.7	21.5	18.9	16.8	14.9	13.4	12.1

Measurement Date: 2/22/2024

Measurements

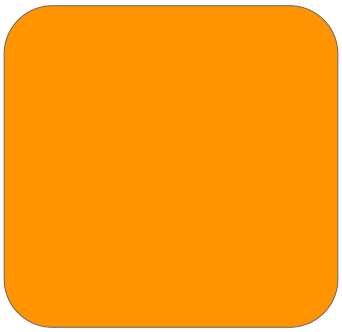
Total Lumen Output: 2159 lm

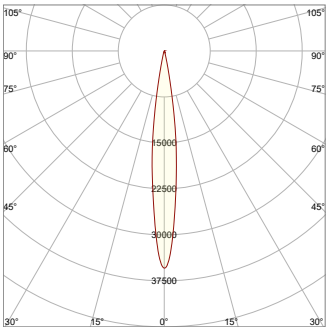
Peak Intensity: 35245 cd

Efficacy: 49 Lumen/Watt

Power: 43.9 W

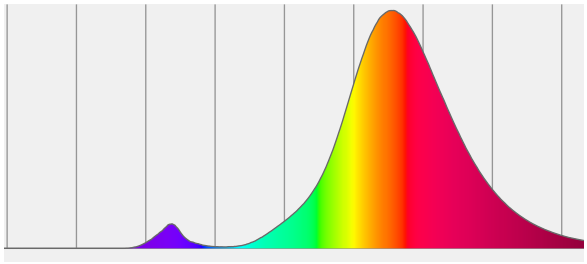
Voltage: 121 V, Current: 0.374 A

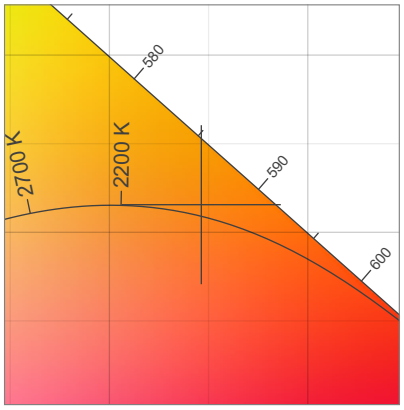




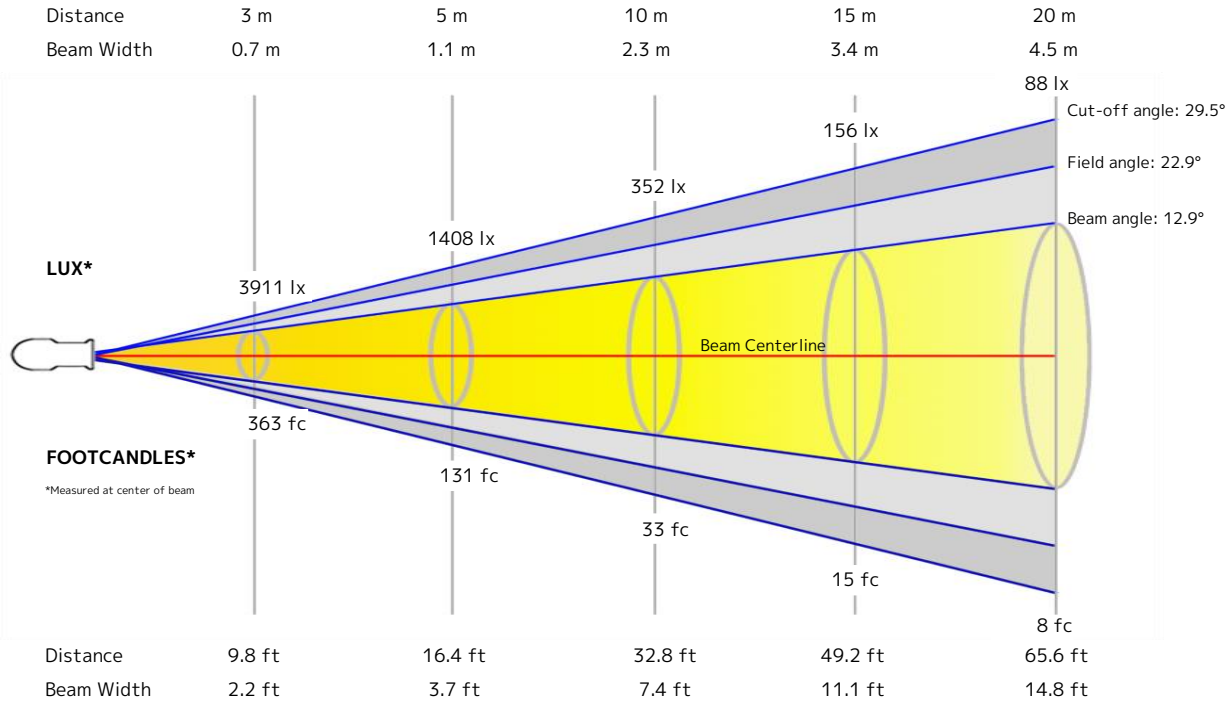
Spectral Power Distribution

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	0.546	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	35198	8799	3911	2200	1408	978	718	550	435	352	291	244	208	180	156	137	122	109	98	88
FC	3270	817.5	363.3	204.4	130.8	90.8	66.7	51.1	40.4	32.7	27	22.7	19.3	16.7	14.5	12.8	11.3	10.1	9.1	8.2

Measurement Date: 2/22/2024

Measurements

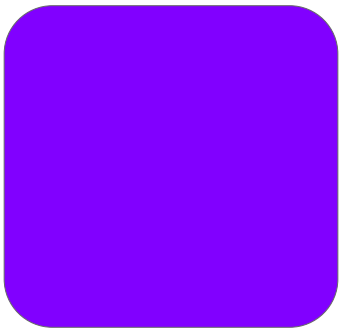
Total Lumen Output: 23.7 lm

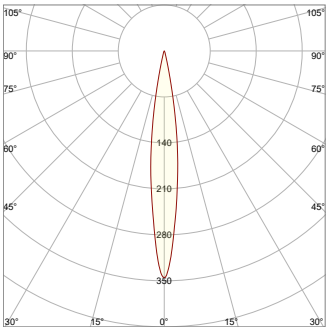
Peak Intensity: 343 cd

Efficacy: 1 Lumen/Watt

Power: 31.0 W

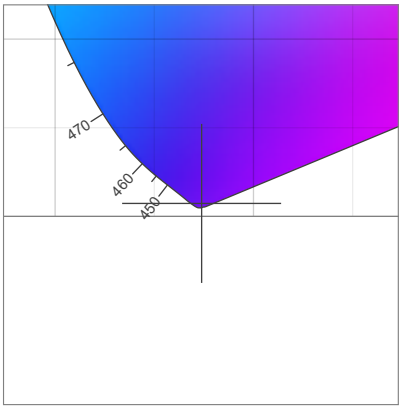
Voltage: 121 V, Current: 0.272 A



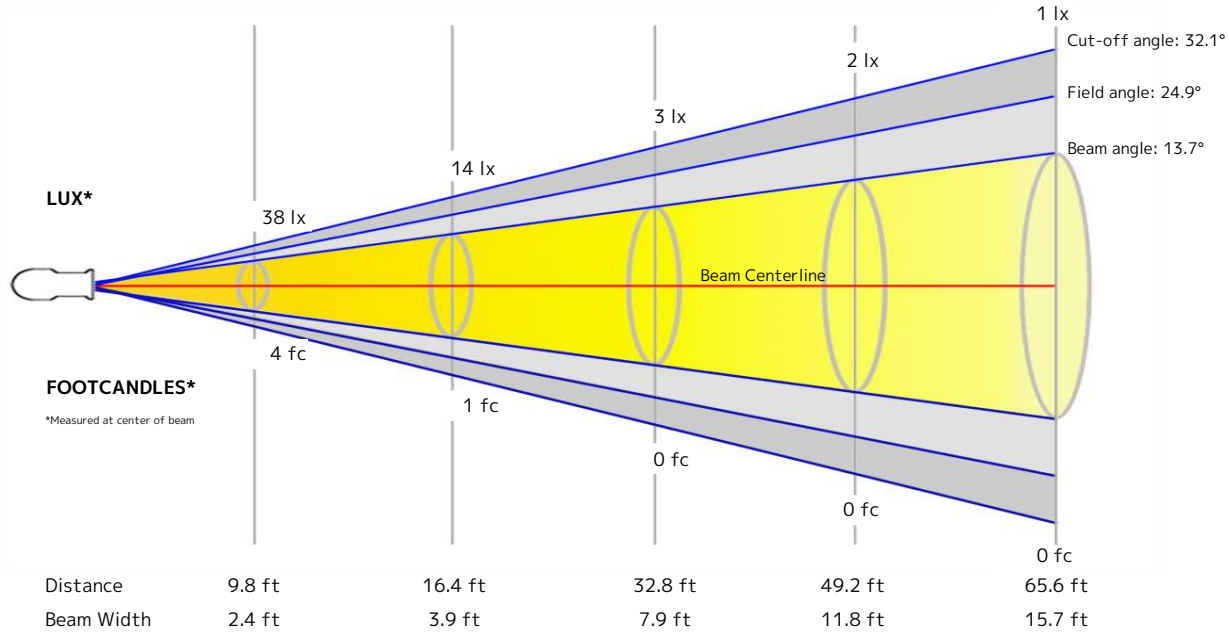


Spectral Power Distribution

Dominant Wavelength 408 nm



Dominant Wavelength	Color Coordinate CIE 1931	Color Coordinate CIE1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964
nm	x	y	u	v
408	0.174	0.007	0.254	0.016



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	343	86	38	21	14	10	7	5	4	3	3	2	2	2	2	1	1	1	1	1
FC	31.8	8	3.5	2	1.3	0.9	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1

Measurement Date: 2/22/2024