

3.5" LED Wall Wash Recessed Downlight 120VAC (50mm Lens)

SORAA arc™

Product Specifications

The Soraa Arc™ Downlight series combines elegant design with Soraa's unique quality of light to create a dynamic and versatile solution for retail, hospitality, and residential applications. Soraa Arc gets its name from the form of its unique die-cast curved heat sink, which is precisely engineered for optimal thermal performance.

1. FRAME

Can be ordered in advance for ceiling construction phase.

Housings: New construction application - thermally protected (T) galvanized steel. Insulation must be kept 3" away from housing. IC type frame inherently protected, suitable for direct contact with insulation. Die-formed housing and integral junction box with five (5) 1/2" pry-outs. Removable power supply cover with Quick Connect fittings.

Remodel application- thermally protected (T) galvanized steel. Housing can be installed from below ceiling. Removable power supply cover with Quick Connect fittings.

Electrical: 120-277VAC fully integral LED electronic constant current driver (included). Frequency: 50/60Hz Power Factor: 0.93 Wattage: 18W.

Dimming and Flicker: Dimming as low as 5%*; Triac, 0-10V, and ELV dimming standard. < 30% Flicker. See sorraa.com for details.

Mounting: Pre-installed mounting brackets allow vertical adjustment of bar hangers up to 1". Complete fixture assembly will not exceed 5 lb. Accommodates ceiling thickness from 1/2" (13mm) to 1.75" (44mm). Ceiling cutout: 4.1" (105mm). Weight of total assembly: Non-IC frame 5 lb (including Light Engine); IC Frame 6.5 lb (including Light Engine); Remodel frame 1.5 lb (excluding Light Engine).

Optional Trimless Adapter: Order separately for use with trimless Light Engines only.

2. LIGHT ENGINE & COLLAR

Soraa VIVID™ LED: Soraa Full Spectrum integral LED Light Engine available in 2700K, 3000K, and 4000K with 95 CRI, 95 R9, and 100 Rw. IR and UV free.

Soraa Optics: Soraa optic technology with exceptional beam control and smooth uniform light distribution.

Construction and Finish: Light Engine includes die-cast aluminum heat sink designed for optimal thermal management. Collar made of die cast aluminium. Durable non-glare satin finish.

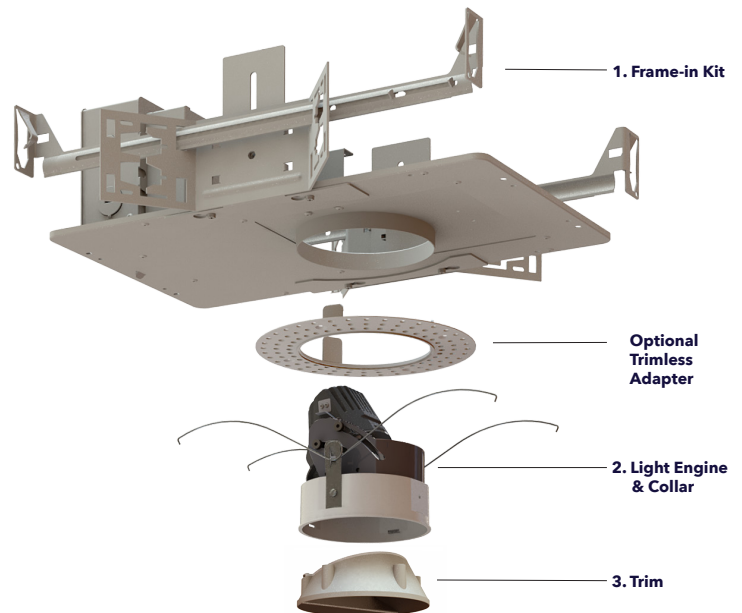
3. SNAP™ TRIMS

Construction and Finish: Die-cast aluminum construction. Magnetic SNAP attachment allows easy tool-free installation and tight ceiling fit. 4 color options available.

Operating Temperature: Minimum -40°C, 25°C typical.

Compliance: cULus listed for damp and dry locations. Wet location listed with Solite lens trim. FCC CFR Title 47 Part 15 Class B compliant. NOM compliant.

Warranty: Five year warranty. See www.sorraa.com.



Order Separate Part Numbers

1. Frame-In Kit (Optional Trimless Adapter)
2. Light Engine & Collars
3. SNAP Trim

Simple Installation, Including SNAP™ Trim

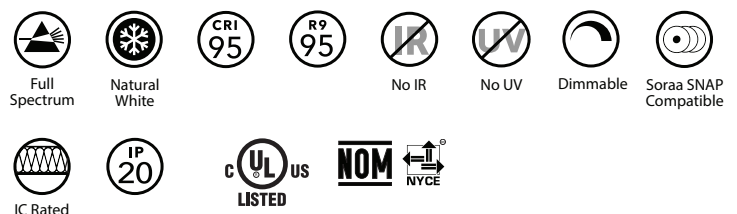
Replaceable Light Engine

Soraa Vivid Full Spectrum LED 95CRI, R9 >95, 100 Rw

Flicker-Free TRIAC/ELV 0-10V Dimming as low as 5%*

25,000 hr Lifetime at 70% Lumen Maintenance

5 year Warranty



* see sorraa.com/resources/arc_compatibility

3.5" LED Wall Wash Recessed Downlight 120VAC (50mm Lens)

Luminaire Specification Guide

1. Frame-In Kit

Sample Number: DFS50-T-U

May be ordered in advance as separate part number

Product Code

DFR50 Downlight New
Construction Frame
(US Frame-in) Round

DFS50 Downlight New
Construction Frame
(US Frame-in) Square

IC Rating

IC IC Rated

T Thermally Protected
Non-IC

CP Chicago Plenum

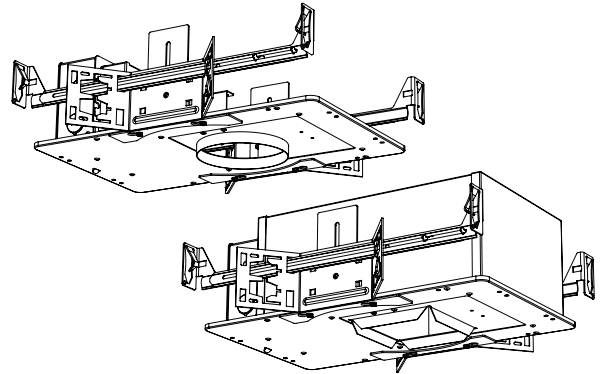
Driver

U 120-277VAC
0-10V:120-277VAC
Triac 120VAC
ELV: 120VAC

LH Lutron LED
Driver, Hi-lume,
EcoSystem,
1% Dim

Options

EMR Emergency
Battery Pack
Installed



1A. Remodel Frame

Sample Number: DRD50-T-U

May be ordered in advance as separate part number

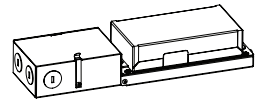
Product Code

DRD50-T Downlight Remodel Frame
Thermally protected non-IC

Driver

U 120-277VAC 0-10V:120-277VAC Triac 120VAC
ELV: 120VAC

LH Lutron LED Driver, Hi-lume, EcoSystem, 1% Dim



Trimless Adaptor

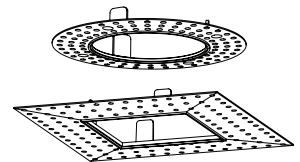
Sample Number: DMS50

Trimless Adaptor required for trimless installation.
May be ordered in advance as separate part number.

Product Code

DMS50 Downlight Trimless Adaptor Square

DMR50 Downlight Trimless Adaptor Round



2. Light Engine & Collar

Sample Number: DESW50-WW-927-F-T-B

Product Code

DESW50 Downlight Light Engine
Square Wall Wash

DERW50 Downlight Light Engine
Round Wall Wash

Beam

WW Wall Wash

CRI/CCT

927 95/2700K

930 95/3000K

940 92/4000K

Mounting

F Frame

R Remodel

Collar

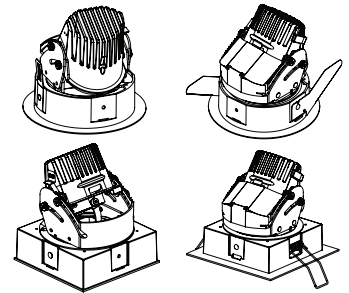
T Trimmed

TL Trimless

Finish

B Black

W White



3. SNAP™ Trim

Sample Number: DTSW50-W

Product Code

DTSW50 Downlight Trim Square Wall Wash

DTRW50 Downlight Trim Round Wall Wash

Finish

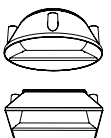
B Black

W White

S Silver

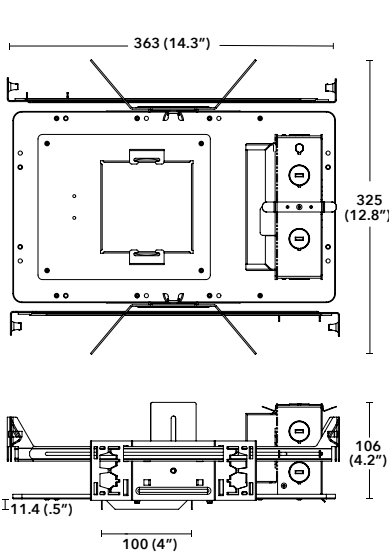
T Tangerine

C Custom

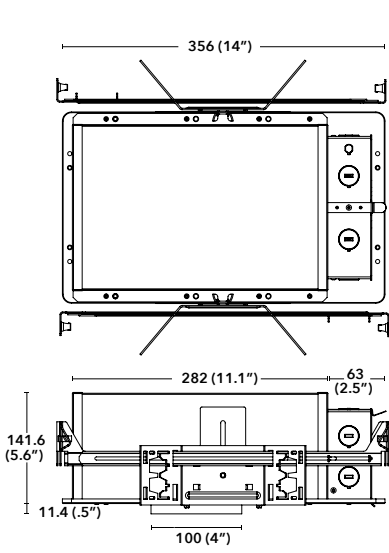


3.5" LED Wall Wash Recessed Downlight
120VAC (50mm Lens)

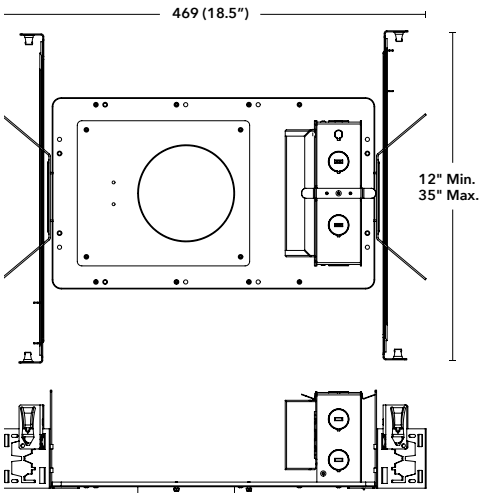
Frame and Trimless Adapter Dimensions



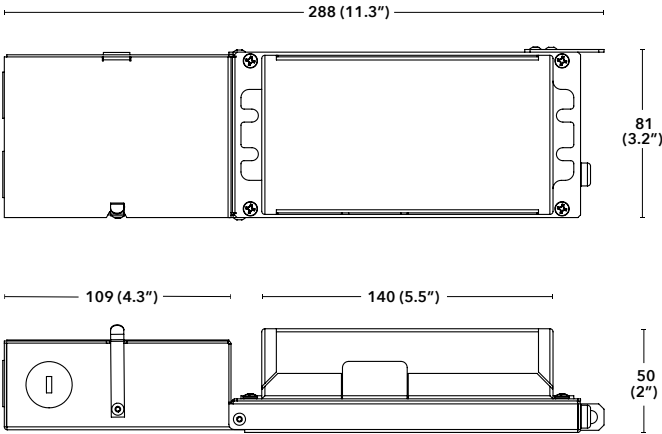
DFR50-T Non IC Thermally Protected
Downlight Frame-In Kit



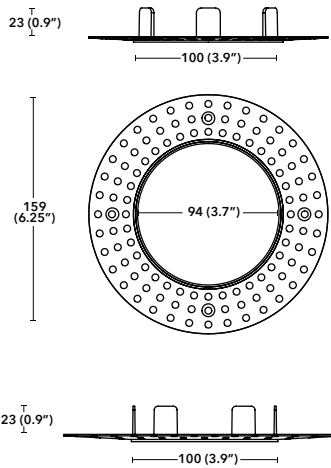
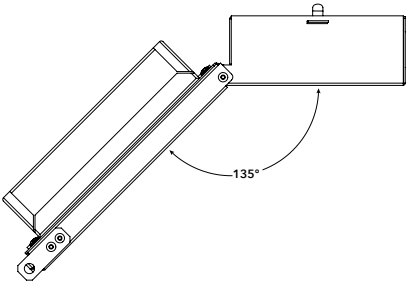
DFR50-IC IC Rated Downlight Frame-In Kit



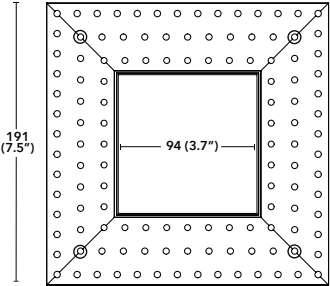
Alternate attachment of rails for DFR50-T and
DFR50-IC. Rails collapse to 12" minimum and ex-
pand to 35" maximum and have breakaway scores
to facilitate custom fit.



DRD50 Downlight Remodel Frame



DMR50
Downlight
Trimless Adapter
Round

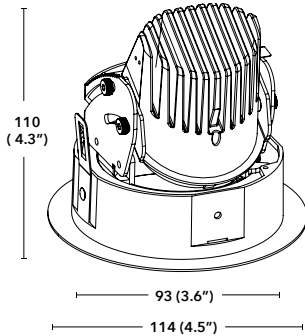


DMS50
Downlight
Trimless Adapter
Square

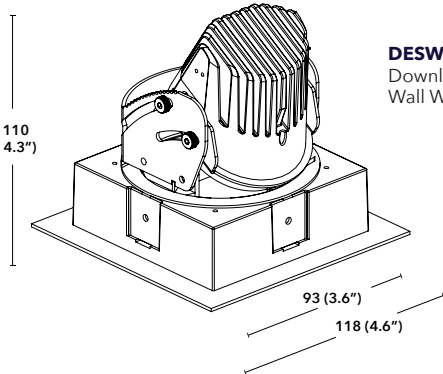
3.5" LED Wall Wash Recessed Downlight 120VAC (50mm Lens)

Light Engine Overview

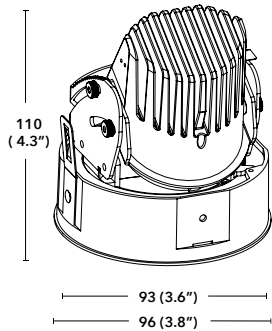
Output	Color & Optics	Operation	Electrical
Lumens 880-1040	CCT 2700K, 3000K, 4000K	Efficacy 48-58 lm/W	Input Voltage 120-277VAC, 50/60hz
CBCP 2560-8380	CRI 95	Ambient Operating Temperature Minimum -40°C, 25°C typical	Input Current @120V (Max) 0.10A
	R9 >95	Lifetime 25,000 hours	Power Factor 0.93
	Rw 100		Top Rated Power 18W
	SDCM 3-step McA		Dimming 100% - 5% (see soraa.com for performance details*)



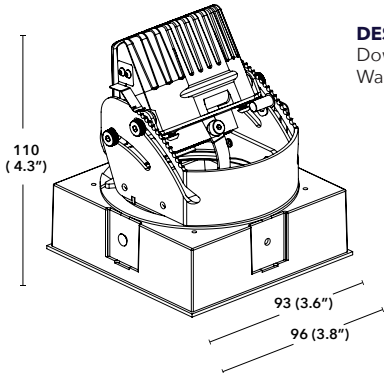
DERW50-T
Downlight Light Engine Round
Wall Wash Trimmed



DESW50-T
Downlight Light Engine Square
Wall Wash Trimmed



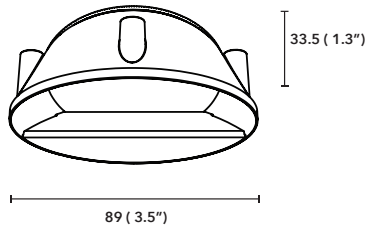
DERW50-TL
Downlight Light Engine Round
Wall Wash Trimless



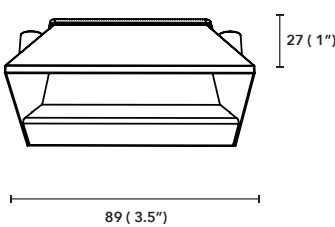
DESW50-TL
Downlight Light Engine Square
Wall Wash Trimless

* soraa.com/resources/arc_compatibility

SNAP™ Trim Overview



DTRW50 Downlight Trim Round Wall Wash



DTSW50 Downlight Trim Square Wall Wash



B Black



W White



S Silver



T Tangerine

3.5" LED Wall Wash Recessed Downlight
120VAC (50mm Lens)

Photometrics

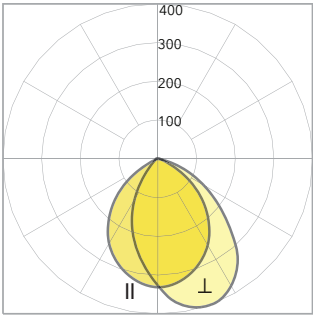
Photometric Base Configuration: CCT- 3000K, Remodel and Non-IC
Photometric scaling: IC and CP - 0.7
FC Multipliers: 2700K: 0.95; 4000K: 1.04

Candlepower

Angle	Across ⊥	45°	Along
0	416	416	416
5	455	438	415
10	483	452	405
15	498	456	391
20	506	453	370
25	497	441	344
30	476	422	316
35	445	395	290
40	400	365	251
45	343	312	213
50	279	257	171
55	225	197	127
60	161	141	87
65	118	95	54
70	87	60	30
75	60	35	14
80	37	19	7
85	22	10	4
90	13	5	3

Coefficients Of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

rc	80				70				50			30			10			0
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88
2	102	95	89	84	100	93	88	93	90	85	82	87	83	80	84	81	78	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	73	85	75	68	63	73	67	62	71	65	61	69	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	52
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

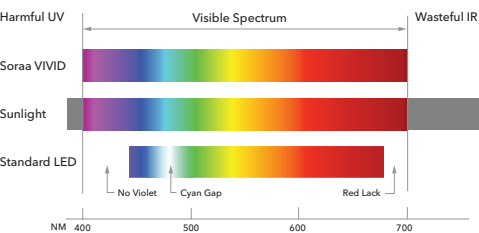


Zonal Lumen Summary			Base Configuration	
Zone	Lumens	% Fixture	CCT: 3000K	
0-30	313	37	Scaling 2700K 0.95 4000K 1.04	
0-40	493	58		
0-60	762	90		
0-90	850	100		
0-180	850	100		

Layout Illuminance Calculations

Spacing (ft)	3		3		3		4		4		4		5		5	
	Distance (ft)		4		5		3		4		5		4		5	
	Illuminance (FC)		Illuminance (FC)		Illuminance (FC)		Illuminance (FC)		Illuminance (FC)		Illuminance (FC)		Illuminance (FC)		Illuminance (FC)	
Dist from Ceiling (ft)	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures
1	9	9	5	5	4	4	8	6	4	4	3	3	4	3	2	2
2	19	19	11	11	7	7	15	13	8	8	5	5	7	6	4	4
3	23	23	16	15	10	10	18	17	12	12	8	8	10	9	7	7
4	21	21	17	17	13	13	16	16	13	14	10	10	11	11	8	8
5	17	17	16	16	14	14	13	13	13	13	11	11	11	11	9	9
6	14	14	15	14	14	13	11	11	11	12	11	11	10	9	9	9
7	11	11	13	12	13	12	9	9	10	10	10	10	8	8	8	8
8	10	10	11	11	11	11	8	8	9	9	10	9	8	8	8	8
9	9	9	10	10	11	10	7	8	8	8	9	9	7	7	7	7

Soraa Arc™ Color and Whiteness Rendering



Soraa has engineered the perfect balance between color rendering and white rendering. Soraa's core technology uses a violet LED emitter as the basis for full spectrum light. This allows both Vivid™ color rendering and Natural White™ white rendering, which creates whiteness by exciting fluorescing agents with violet radiation, without the harmful effect of UV.

CCT	CRI	R9	Rf	Rg	Rfh1	Rw	McA
2700	95	95	90	100	95	120	3
3000	95	95	90	100	95	120	3
4000	92	95	90	100	95	70	4

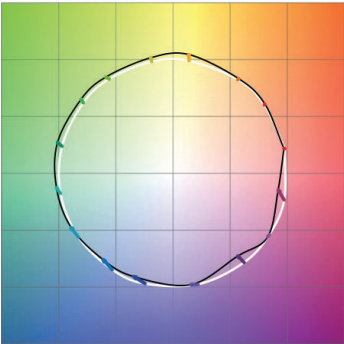
Rf: The TM-30 metric for color fidelity (similarity to colors under natural light), a more accurate version of the CRI Ra. Rf is 100 for natural light.

Rg: The TM-30 metric for color gamut (whether colors are more saturated than under natural light). Rg is 100 for natural light.

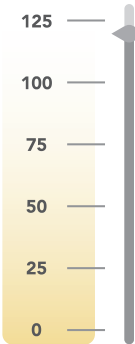
Rfh1: The TM-30 metric for color fidelity for red tones. Rfh1 is a more accurate version of the CRI R9. Rfh1 is 100 for natural light.

Rw: The Soraa-developed metric for white fidelity. Rw measures the magnitude of excitation of whitening agents within white materials. Rw is 100 for natural light.

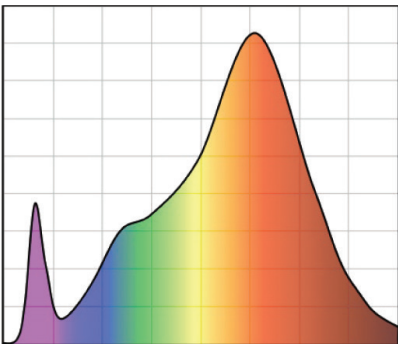
2700K



Rf: 90, Rg: 100, Rfh1: 95

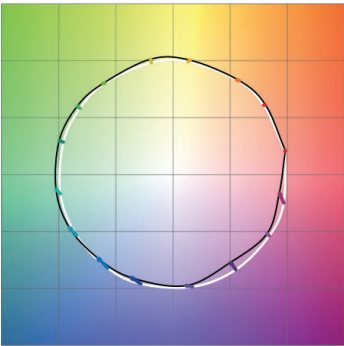


Rw: 120

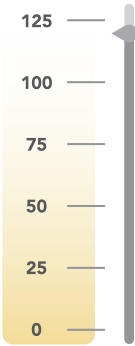


CRI: 95, R9: 95

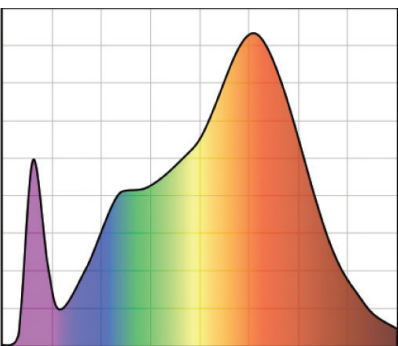
3000K



Rf: 90, Rg: 100, Rfh1: 95

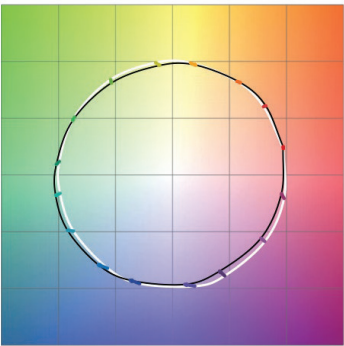


Rw: 120

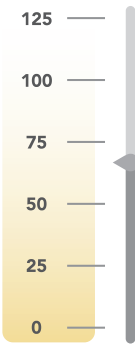


CRI: 95, R9: 95

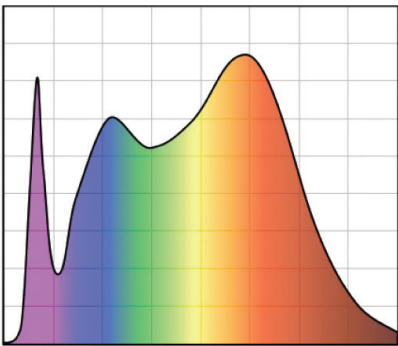
4000K



Rf: 90, Rg: 100, Rfh1: 95



Rw: 70



CRI: 95, R9: 95