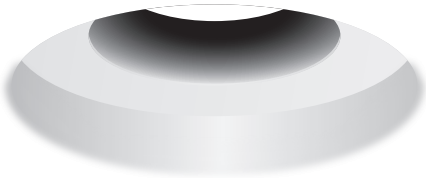
RR2-298-PAR16

Adjustable 35° Shallow Gimbal

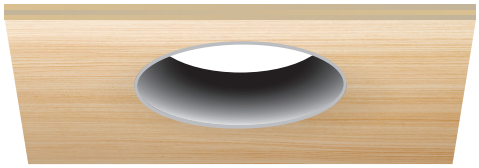
Project Name:		Type:	
Catalog Number:		Date:	

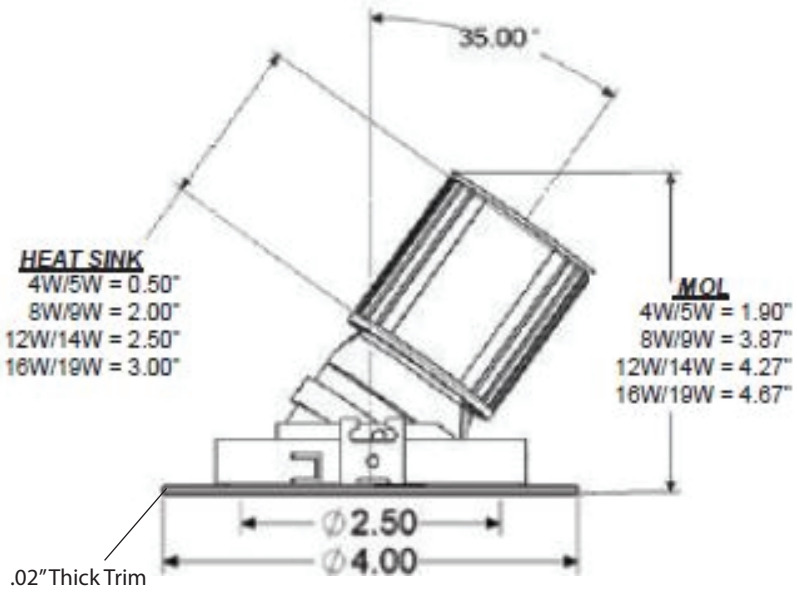
Recessed with Trim

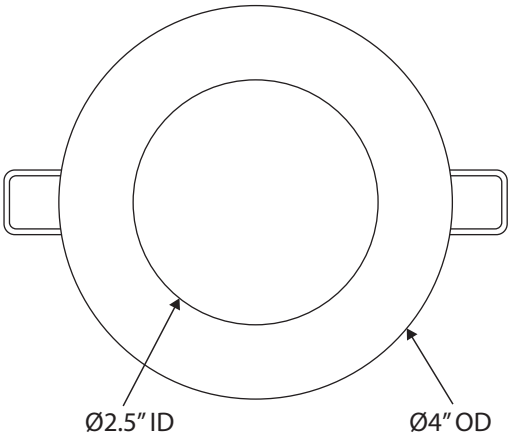
Trimless ½" Recessed



Trimless Wood







Key Features

- 2.5” ID - 4” OD
- 35° Adjustable
- Fixed - Optional
- 365° Rotation
- Shallow Adjustable Gimbal General
- IC or NON IC version
- Remote Transformer Optoin
- .02” Uber Thin Trim Lip
- Over 10,000+ fixture custom color finish options
- 100,0000+ L70 life

LED Source Details

CREE XPL LED maximum rating = 3,000mA

- Fixture operating milliamp range = 450mA to 1150mA.
- Operating 15% to 38% of rated value
- Fixture wattage range = 8W to 20W
- Fixture delivered lumens = 700 to 1,300 lumens
- Calculated L70 CREE LED Life – 75,600 hrs*
- Projected L70 CREE LED Life – 227,000 hrs*

*CREE calculated from XPL2 LM80 and TM21 data

Last revised: 11/14/2023

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Clarté Lighting

RR2-298-PAR16

Adjustable 35° Shallow Gimbal

Ordering

Project Name:		Type:	
Catalog Number:		Date:	

	(a) Driver	(b) Wattage	(c) LED		(d) Beam	(e) Snoot	(f) Reflector	(g) Mounting	(h) Housing	(i) Trim	(j) Accessories	(k) Options	(l) Chromaticity
RR2-298-				-PAR16-									

Recessed Round 2"ID Trim - 2"OD Housing

(a) Driver Options

E	=	ON/OFF (Electronic)
D*	=	MLV 1% Dimming (2 wire)
DC12V	=	.01% PWM DC dimming (2 wire)
DC24V	=	.01% PWM DC dimming (2 wire)
ED	=	Electronic Reverse Phase Dimming 1% (2 wire)
0-10V**	=	Remote mount 4 wire 0-10V LED driver single fixture
0-10V 2	=	Remote mount 4 wire 0-10V driver for up to 2 fixtures
0-10V 3	=	Remote mount 4 wire 0-10V driver for up to 3 fixtures
0-10V 4***	=	Remote mount 4 wire 0-10V driver for up to 4 fixtures
0-10V MRI****	=	0-10V Dimming with 100bd Filter
RDM DMX	=	16 Bit, 4 Channel (2 wire with CAT5)
ABS	=	Absolute Light .001% Dimming (use with RGBW)
ABSX	=	DMX Absolute Light .001% RGBW dimming

*MLV power supply is intended for use with forward phase SCR or Triac dimmers.
*Do not use with relays or toggle switches, do not use with reverse phase dimmers.
**Remote single 0-10V LED driver up to 18' away 18ga and 50' away 12ga
***Remote 0-10V LED driver operates up to 4 fixtures up to 18' away 18ga and 50' away 12ga
****Operates up to 4 recessed LED light fixtures for MRI room installation with remote LED driver

(b) Wattage Options

8W (520 Lumens)	=	ON/OFF, 0-10V 1%
9W (520 Lumens)	=	MLV <1% Dimming
12W (800 Lumens)	=	ON/OFF, 0-10V 1%, ED
14W (800 Lumens)	=	MLV <1% Dimming
16W (1100 Lumens)	=	ON/OFF, 0-10V 1%, ED
17W (1100 Lumens)	=	MLV <1% Dimming
18W (900 Lumens)	=	Absolute Light RGBW
19W (1300 Lumens)	=	DMX Dimming
20W (1300 Lumens)	=	ON/OFF, 0-10V 1%, ED

(c) Lamp Type Options

XLED = Cree XPL2 LED @ All Wattages

(d) Beam Options

NSP	=	Narrow Spot	NFL	=	Narrow Flood
SP	=	Spot	FL	=	Flood

(e) Snoot Color Options

BLKS	=	Black Snoot
WHTS	=	White Snoot
PWTS	=	Pewter Snoot

(f) Reflector/Trim Lip Color Options

WHT/WHT	=	White Relfector/White Trim Lip
WHT/BLK	=	White Relfector/Black Trim Lip
BLK/BLK	=	Black Relfector/Black Trim Lip
BLK/WHT	=	Black Relfector/White Trim Lip

(g) Mounting Options

ADJ	=	Adjustable
FX	=	Fixed
WOS	=	Wires Out the Side (reduces height by 0.5")

(h) Fixture Housing Options

Non-IC Rated:

RMT	=	No housing, no frame, remote transformer spring clip loaded trim
NIC	=	Frame and juction box to be used with trim version
NH-T1	=	No housing with zero plane installation

IC Rated:

AH	=	8" x 8" Architectural housing to be used with trimmed or zero plane installation

(i) Trim Type

T	=	Trimmed
T1	=	Level Plane
T2	=	Trimless ½" Recessed
MT	=	Micro Trim (½" smaller OD)
TLW	=	Trimless Wood

(j) Optical and Accessory Options

LS	=	Lens Softener - +20% increase in beam width. Shields optical face visually. Softens edges of beam.	
LSL	=	Linear Spread Lens - Horizontal or vertical beam elongation.	
WFL	=	Wide Flood Lens - Wall washing increases the beam by 50% width with elimination of center beam.	
LV	=	Louver - Small black hexcel louver elimniates all surface brightness. Creates stronger vertical cut off with -20% beam width.	
CHL	=	Cross Hiar Louver	
H	=	Halogen - 100K warmer. 2700k to 2500K	
DH	=	Dimmed Halogen - 400K warmer. 2700k to 2300K	

(k) Options

RMT14	=	14Watt 12V AC MLV Step Down Transformer
RMT60	=	60Watt 12V AC MLV Step Down Transformer
RMT150	=	150Watt 12V AC MLV Step Down Transformer
RMT300	=	300Watt 12V AC MLV Step Down Transformer
12V	=	DC
24V	=	DC
120V	=	120VAC 60Hz (Standard)
230V	=	230VAC 50Hz
277V	=	277VAC 60Hz
347V	=	347VAC 60Hz
EMG	=	90min Emergency Back-Up Battery
TB	=	DMX 5-pin Plug-in Terminal Block
RMT	=	Remote transformer wtih remodel trim
80+	=	CRI over 80
90+	=	CRI over 90

*Eliminate the need to install new 12V AC step down transformer, Clarté LED trim installs like changing a lamp.

(l) Color Temperature Options

White LED

22K*	=	2200 Kelvin (candlelight color)
27K	=	2700 Kelvin (incandescent color)
30K	=	3000 Kelvin (halogen color)
35K	=	3500 Kelvin (warm incandescent)
40K	=	4000 Kelvin (cool incandescent)
50K	=	5000 Kelvin (day white)
65K	=	6500 Kelvin (12 noon sunlight)

*1050 mA or less

Colored/Themed LED

UV365**	=	365 NM UV black light
UV390**	=	390 NM UV black light
Blue**	=	465 - 485 NM wavelength
Green**	=	520 - 535 NM wavelength
Amber**	=	585 - 595NM wavelength
Red**	=	620 - 630 NM wavelength
RGBW3K***	=	Red, Green, Blue, White
RGBW4K***	=	Red, Green, Blue, White

**700 mA
***Must utilize DMX @ 700 mA

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Clarté Lighting

RR2-298-PAR16

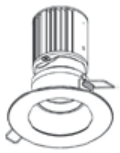
Adjustable 35° Shallow Gimbal

Specifications

Project Name:		Type:	
Catalog Number:		Date:	

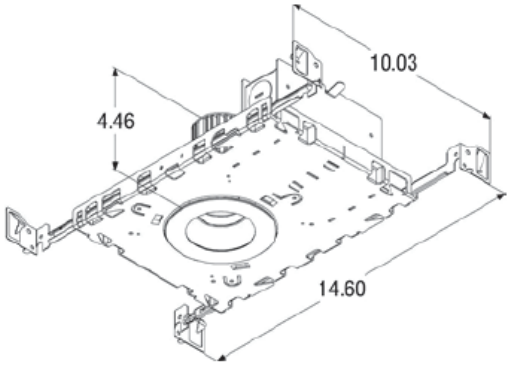
Non-IC

RMT - No Housing Remote Transformer - Trimmed



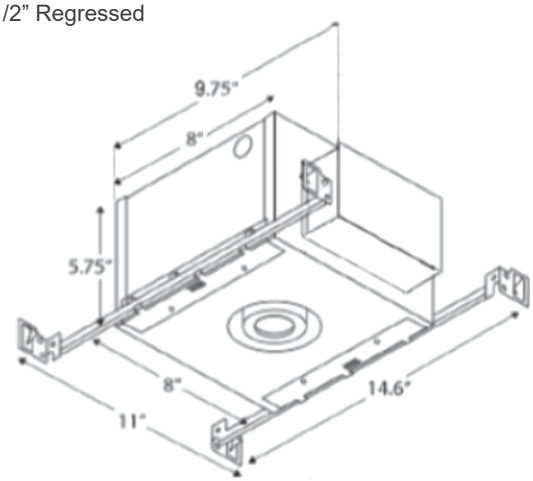
Non-IC

NIC - Framed Fixture with J-Box - Trimmed



IC

AH - Architectural Housing - Trimless, Level Plane or 1/2" Regressed



Housing

- 100% aluminum construction
- IC housing with hinged 4" x 6" side access panel to j-box & LED driver

Electrical

- IC or NON-IC fixture housing
- Optional - 12V AC remote class 2
- Optional - 12V or 24 DC remote class 2
- 100V, 120V, 230V, 277V or 347V

LED

- 3,000 maximum milliamp rated CREE LED
- Operates between 450 to 1200 milliamps
- L70 life = 100,000 hr.+

LED Driver

- D – 2 wire forward phase .01% LED driver fade to off glow to on
- ED – 2 wire reverse phase 1% LED driver
- DC – 12V or 24V
- 0-10V – 3 wire 1% LED driver
- Absolute Light – Remote mount class 2 48V din rail .001% LED system
- 16-bit RMD DMX – 65,536 dimming steps fade to off glow to on

Optics

- TIR discrete injection molded polycarbonate precision LED optic
- 45-degree vertical cut off

Trim

- .02" thin trim lip
- Hydro form reflector - no spin marks

Trim Finish

- Specular Aluminum Anodized
- Matt Aluminum Anodized
- White, Black or Pewter Powder Coat Paint
- 3300+ Custom Power Coat Paint Colors
- 7000+ Custom Wet Paint Colors

Level Plane and Trimless Installation

- Available in trimless ½" recessed, and level plane

Installation

- Accommodates ceiling thickness up to 2.5"
- Universal adjustable 24" adjustable hangar bars

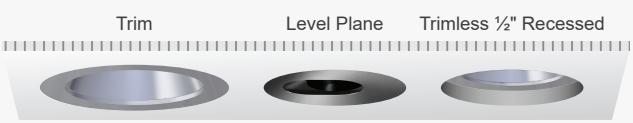
Certification

- UL Damp Listed – IP 52

Warranty

- 5 Year – ED, 0-10V, DMX and colored LED fixtures
- 7 Year – D and White LED fixtures

4 Trim Installation Options



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Clarté Lighting

RR2-298-PAR16

Adjustable 35° Shallow Gimbal

Photometrics

Project Name:		Type:	
Catalog Number:		Date:	

Narrow Narrow Spot 8.5°

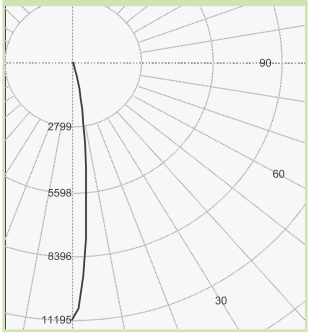
3.3’	1,028 fc	0.5’
6.7’	249 fc	1.0’
10’	112 fc	1.5’
13.3’	63.3 fc	2.0’
16.7’	40.1 fc	2.5’
20’	28 fc	3.0’
26.7’	15.7 fc	4.0’
33.3’	10.1 fc	5.0’
40’	7 fc	6.0’

20W PAR16 - 472 lm
11,195 CBCP

Zonal Flux and Percentages

Zone	Flux (lm)	%Luminaire
0-30	460	97.5
0-40	467	99.0
0-60	472	100.0
0-90	472	100.0
40-70	5	1.0
60-80	0	0.0
90-180	0	0.0
0-180	472	100.0

All planes - Solid (cd)



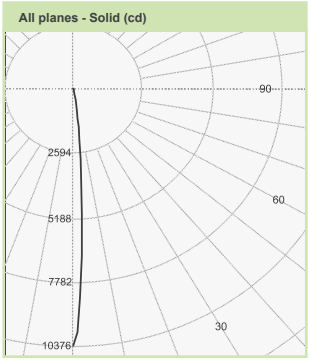
(Rotational Symmetry)

Narrow Narrow Spot 7.9° (with Louver)

3.3’	953 fc	0.5’
6.7’	231 fc	0.9’
10’	104 fc	1.4’
13.3’	58.7 fc	1.8’
16.7’	37.2 fc	2.3’
20’	25.9 fc	2.8’
26.7’	14.6 fc	3.7’
33.3’	9.36 fc	4.6’
40’	6.48 fc	5.5’

20W PAR16 - 382 lm
10,376 CBCP

All planes - Solid (cd)



(Rotational Symmetry)

Wattage & Lumen Output

450 Milliamps - 520 Lumens		700 Milliamps - 800 Lumens	
8W	ON/OFF 0-10V 1% Dimming	12W	ON/OFF 0-10V 1% Dimming ELV 10% Dimming
9W	MLV <1% Dimming	14W	MLV <1% Dimming
1000 Milliamps - 1100 Lumens		**1150 Milliamps - 1300 Lumens**	
16W	ON/OFF 0-10V 1% Dimming ELV 10% Dimming	20W	ON/OFF 0-10V 1% Dimming ELV 10% Dimming
17W	MLV <1% Dimming		
19W	Lutron 1% Dimming DMX .33% Dimming		

3 Step CREE XPL2 LED

Kelvin-CRI	Multiplier
27K-80+ CRI	1
27K-90+ CRI	0.80
30K-80+ CRI	1
30K-90+ CRI	0.85
35K-80+ CRI	105
35K-90+ CRI	0.9
40K-80+ CRI	109
50K-80+ CRI	109
65K-80+ CRI	105

80+ = 84 CRI
90+ = 94 CRI

RGBW V2 Light Output Luminous Flux Clarté Lighting offers 100% of fixtures in optional RGBW3K or RGBW4K

	700 mA RGBW3K	700 mA White 3K
Red	160	
Green	310	
Blue	46	
White	260	
Total	***776***	***970***

*RGBW Fixtures are designed to not operate with all 4 colors at 100% of light for more than 24hrs continuously and suggest operating 55% or less of all 4 colors ON to ensure optimum thermal life of the RGBW LED.

Narrow Spot 12°

2’	3,824 fc	0.4’
4’	956 fc	0.9’
6’	425 fc	1.3’
8’	239 fc	1.8’
10’	153 fc	2.2’
12’	106 fc	2.7’
20’	28 fc	5.2’
26’	16 fc	7.0’
33’	10 fc	8.7’
40’	7 fc	10.5’

20W PAR16 - 1,100 lm
15,296 CBCP

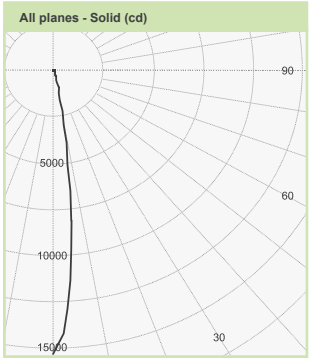
Intensity Summary (cd)

Gamma	All Planes	Flux (lm)
0	15296	
5	9739	696
10	2978	
15	676	236
20	229	
25	135	64
30	90	
35	67	43
40	53	
45	46	35
50	34	
55	23	21
60	15	
65	2	4
70	1	
75	0	0
80	0	
85	0	0
90	0	

Zonal Flux and Percentages

Zone	Flux (lm)	%Luminaire
0-30	997	90.6
0-40	1040	94.6
0-60	1096	99.6
0-90	1100	100.0
40-90	60	5.4
60-90	4	0.4
90-180	0	0.0
0-180	1100	100.0

All planes - Solid (cd)



(Rotational Symmetry)

Spot 19°

2’	1,939 fc	0.7’
4’	485 fc	1.4’
6’	215 fc	2.0’
8’	121 fc	2.7’
10’	78 fc	3.4’
12’	54 fc	4.1’
20’	28 fc	6.1’
26’	16 fc	8.1’
33’	10 fc	10.1’
40’	7 fc	12.1’

20W PAR16 - 1,313 lm
7,757 CBCP

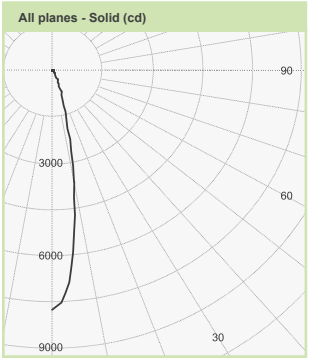
Intensity Summary (cd)

Gamma	All Planes	Flux (lm)
0	7757	
5	6432	519
10	3640	
15	1648	475
20	731	
25	336	166
30	176	
35	110	71
40	77	
45	67	50
50	47	
55	29	26
60	15	
65	3	5
70	1	
75	0	1
80	0	
85	0	0
90	0	

Zonal Flux and Percentages

Zone	Flux (lm)	%Luminaire
0-30	1160	88.3
0-40	1231	93.8
0-60	1308	99.6
0-90	1313	100.0
40-90	82	6.2
60-90	5	0.4
90-180	0	0.0
0-180	1313	100.0

All planes - Solid (cd)



(Rotational Symmetry)

Narrow Flood 24°

2’	1,705 fc	0.7’
4’	426 fc	1.4’
6’	189 fc	2.1‘
8’	107 fc	2.8’
10’	68 fc	3.5’
12’	47 fc	4.3’
20’	17 fc	7.5’
26’	10 fc	10.0’
33’	6 fc	12.4’
40’	5 fc	14.9’

20W PAR16 - 1,306 lm
5,478 CBCP

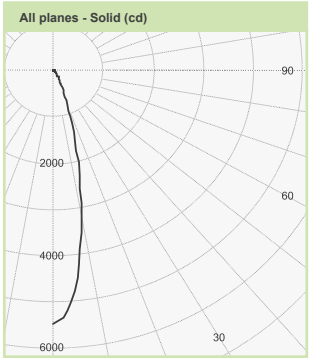
Intensity Summary (cd)

Gamma	All Planes	Flux (lm)
0	5478	
5	4774	404
10	3229	
15	1800	500
20	905	
25	452	219
30	244	
35	146	95
40	98	
45	75	57
50	47	
55	25	25
60	15	
65	3	5
70	1	
75	1	1
80	0	
85	0	0
90	0	

Zonal Flux and Percentages

Zone	Flux (lm)	%Luminaire
0-30	1123	86.0
0-40	1219	93.3
0-60	1301	99.6
0-90	1306	100.0
40-90	88	6.7
60-90	6	0.4
90-180	0	0.0
0-180	1306	100.0

All planes - Solid (cd)



(Rotational Symmetry)

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Clarté Lighting

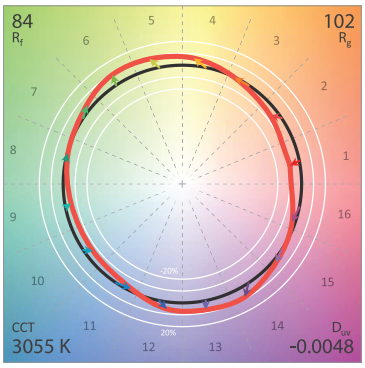
RR2-298-PAR16

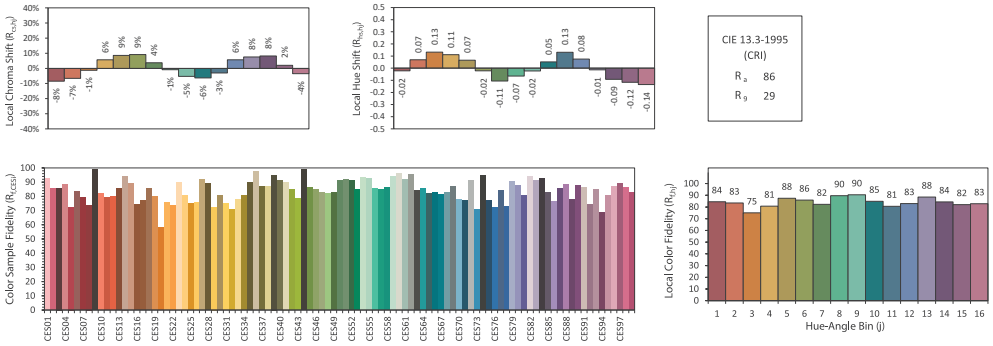
Adjustable 35° Shallow Gimbal

TM-30-18 Color Metrics

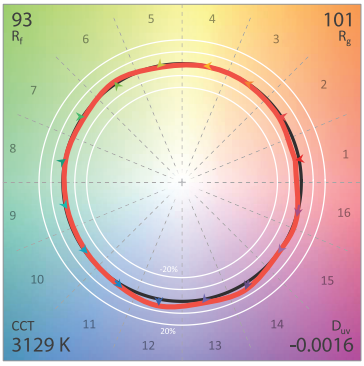
Project Name:		Type:	
Catalog Number:		Date:	

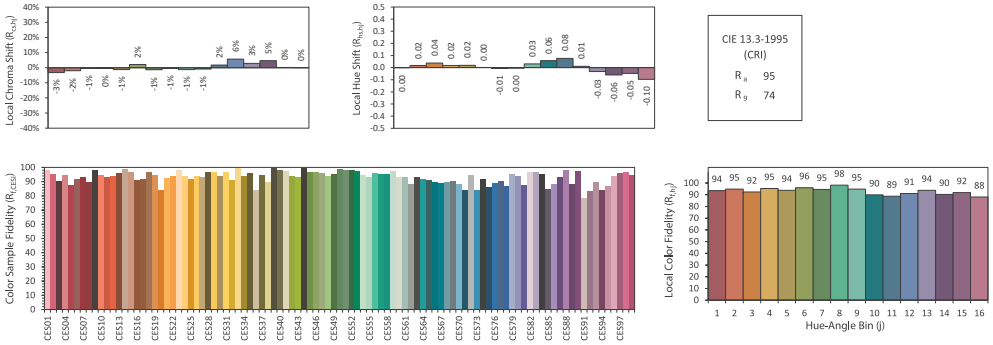
Clarté Lighting 3000K 80+ CRI Color Metrics



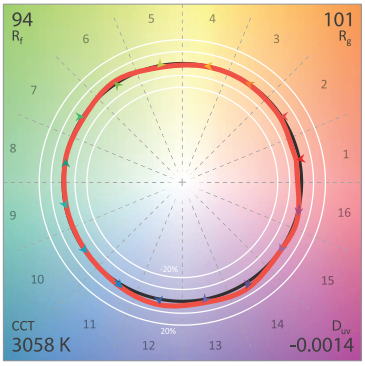


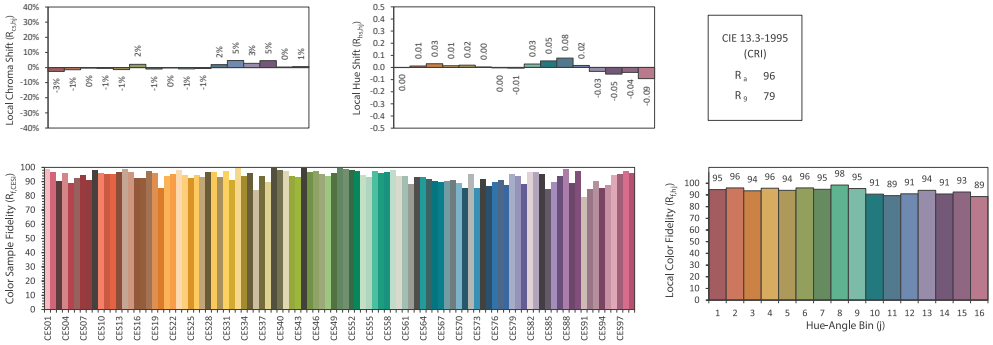
Clarté Lighting 3000K 90+ CRI Color Metrics



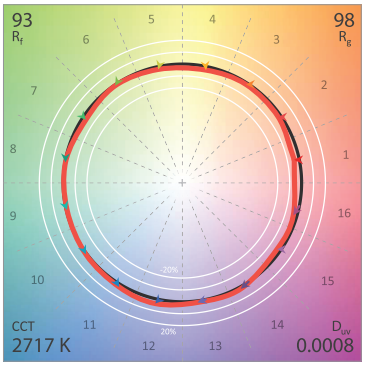


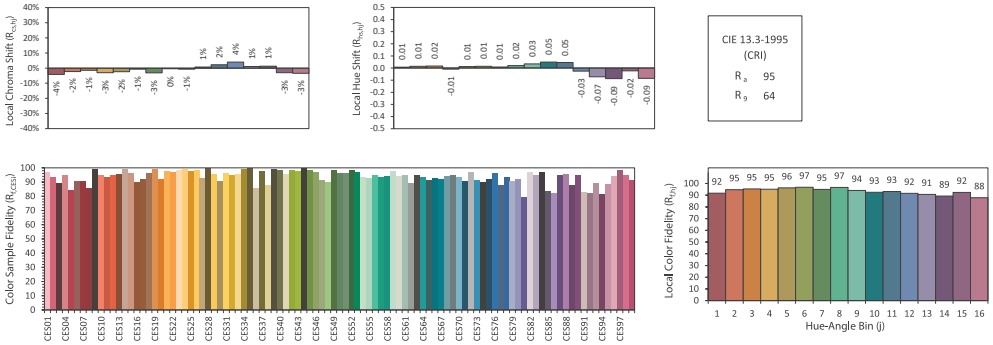
Clarté Lighting 3000K 90+ CRI Halogen Lens (H) Color Metrics





Clarté Lighting 3000K 90+ CRI Dimmed Halogen Lens (DH) Color Metrics





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