

DESCRIPTION - H4 LED DOWNLIGHT TRIMS - UPDATE

Halo H4 LED family consists of 4" recessed downlights with EL4 Series LED Light Engines and TL4 and TLS4 Series LED Trims designed for installation in H4 LED series housings with integral LED dimmable drivers. Halo LED Downlight Trims are offered in open and lensed baffles and reflectors; and wet location shower rated models. TL4 and TLS4 Series LED Trims are compatible with EL4058x downlight LED light engines. Halo LED offers high quality, fit, finish, and performance in an energy-efficient, high-efficacy downlight.

SPECIFICATION FEATURES

MECHANICAL

Baffles and Reflectors

- Precision formed aluminum
- Reflector Finishes offered in White, Specular Clear, Haze, Specular Black, Satin Nickel, and Tuscan Bronze
- Baffle Finishes offered in White and Black

Trim Rings

- Durable die-cast aluminum
- Precision keyed slots designed to lock with matching keyed bosses in H4 LED Light Engine
- Works with LED Light Engine's heat sink to provide further thermal conduction away from the LED
- Standard finishes offered in White, Black, Satin Nickel, and Tuscan Bronze.
- Optional, thin profile designer trim rings offered in White, Black, Satin Nickel, Tuscan Bronze, and Polished Chrome finishes.
- Thin profile designer trim rings provide subtle ceiling appearance. Thickness dimensions: 0.120" at OD and 0.180" at ID.

FEATURES

- Superior optical design provides high lumen output, smooth beam distribution, and good visual comfort
- Precision design and materials for a high-quality fit and finish
- Multiple trim options allow Halo H4 LED recessed downlights to be used in a wide range of interior spaces
- High-quality standard and plated finishes
- Diffuse dome polycarbonate lens models offer a familiar "bulb-like" appearance, and are impact resistant
- Solite® lensed trims offer high-clarity glass for high-lumen transmission along with a subtle diffusion of source brightness
- Solite® and Diffuse Dome Lensed models are UL/cUL listed for Wet Location, protected ceilings, and are IP66 Ingress Protection rated for dust and water
- Polymer shower trim features a non-electrically conductive plastic "dead front". One piece baffle and ring, and lens are formed from plastics - special polymers to meet Halo performance and quality standards.

Catalog #		Type
Project		
Comments		Date
Prepared by		



H4 LED Downlight Trims Update

TL402, TL403, TL408, TL409, TL410, TL411, TL422

4-Inch LED Trims

FOR USE WITH EL458xx LED LIGHT ENGINES AND H455, H456 SERIES 4" LED HOUSINGS.

Complete fixture consists of H455 or H456 Series LED Housing, EL4058xx Series Light Engine and TL4 Series LED trim.

High Efficacy LED



Qualified & Compliant as designated with LED Light Engine and Trim. Refer to LED Compliance Matrix and Light Engine Specifications.

- H4 LED trims offer ENERGY STAR® Qualification when used with designated Halo H4 LED Light Engines*
- Can be used to meet State of California Title 24 and International Energy Conservation Code – IECC High Efficacy requirements when used with designated LED Light Engines*

*Refer to compliance matrix

Warranty

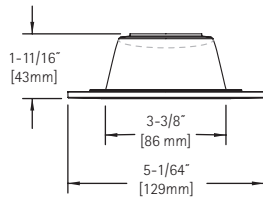
Cooper Lighting provides a three year limited warranty on Halo LED Luminaires which includes the LED Recessed Housing, LED Light Engine, and LED trims. (Subject to all of the limitations set forth in Cooper Lighting Terms and Conditions of sale. Refer to www.cooperlighting.com.)

Compatible with H4 LED Light Engines

Model	Color Temperature
EL405827	2700°K
EL405830	3000°K
EL405835	3500°K
EL405840	4000°K

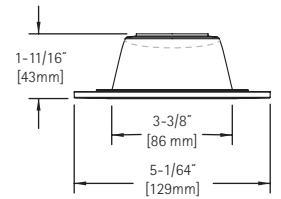
H4 LED DOWNLIGHT SERIES – LED TRIMS - UPDATE

REFLECTOR AND BAFFLE TRIMS WITH DIFFUSE DOME POLYMER LENS



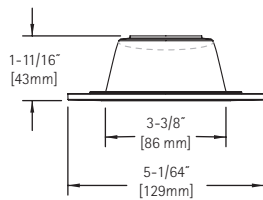
TL410SC

Specular Clear Reflector, Diffuse Dome (polymer) Lens, White Ring



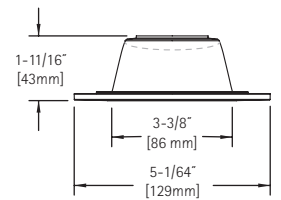
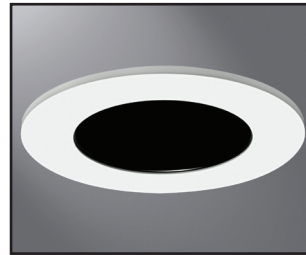
TL410H

Haze Reflector, Diffuse Dome (polymer) Lens, White Ring



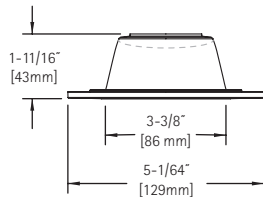
TL410WH

White Reflector, Diffuse Dome (polymer) Lens, White Ring



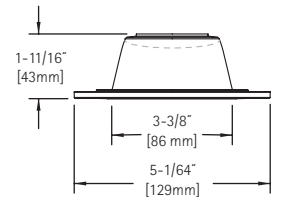
TL410SBK

Specular Black Reflector, Diffuse Dome (polymer) Lens, White Ring



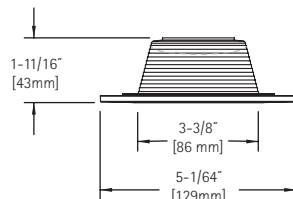
TL410SN

Satin Nickel Reflector, Diffuse Dome (polymer) Lens, Satin Nickel Ring



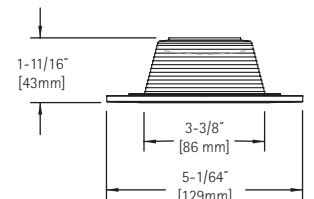
TL410TBZ

Tuscan Bronze Reflector, Diffuse Dome (polymer) Lens, Tuscan Bronze Ring



TL411WB

White Baffle, Diffuse Dome (polymer) Lens, White Ring



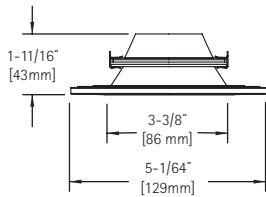
TL411BB

Black Baffle, Diffuse Dome (polymer) Lens, White Ring

H4 LED DOWNLIGHT SERIES – LED TRIMS UPDATE

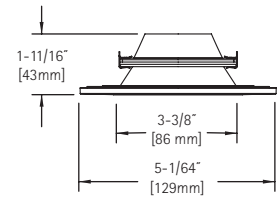
REFLECTOR AND BAFFLE TRIMS WITH SOLITE® GLASS LENS

Wet Location Listed For Shower Applications



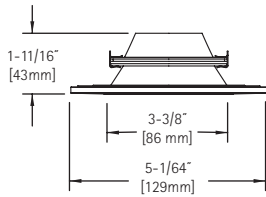
TL402SCS

Specular Clear Reflector with Solite® Glass Lens, White Ring



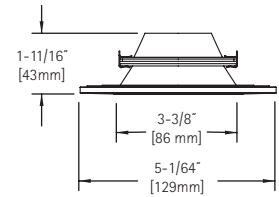
TL402HS

Haze Reflector with Solite® Glass Lens, White Ring



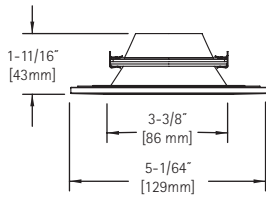
TL402WHS

White Reflector with Solite® Glass Lens, White Ring



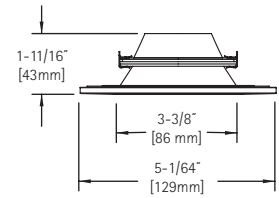
TL402SBKS

Specular Black Reflector with Solite® Glass Lens, White Ring



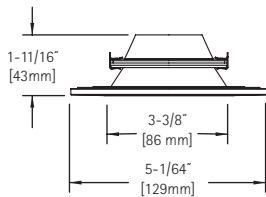
TL402SNS

Satin Nickel Reflector with Solite® Glass Lens, Satin Nickel Ring



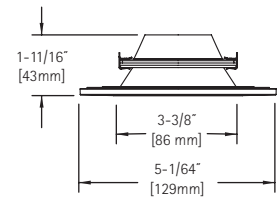
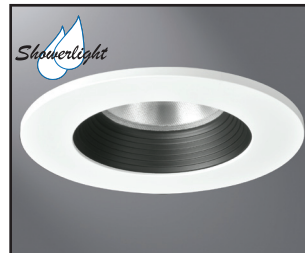
TL402TBZS

Tuscan Bronze Reflector with Solite® Glass Lens, Tuscan Bronze Ring



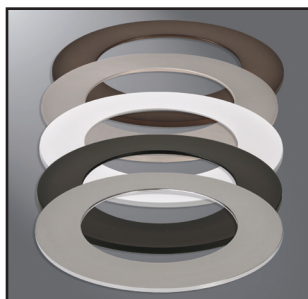
TL403WBS

White Baffle with Solite® Glass Lens, White Ring



TL403BBS

Black Baffle with Solite® Glass Lens, White Ring



TRM400

Designer Trim Rings

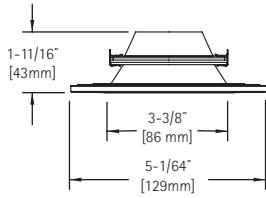
- Optional accessory
- Die-cast trim ring
- Thin Profile provides subtle ceiling appearance (.120" at OD and .180 at ID)
- For use with TL4 round trims (not compatible with TLS4 square trims)

TRM400TBZ	Tuscan Bronze	TRM400BK	Black
TRM400SN	Satin Nickel	TRM400PC	Polished Chrome
TRM400WH	White		

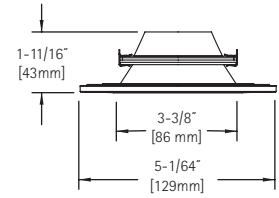
H4 LED DOWNLIGHT SERIES – LED TRIMS - UPDATE

SQUARE SOLITE® GLASS REGRESSED LENS BAFFLE TRIMS

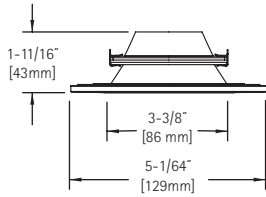
Wet Location Listed For Shower Applications



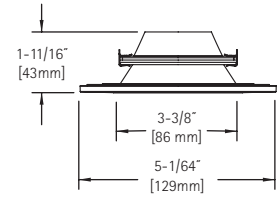
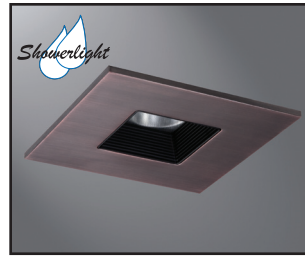
TLS408WHWB
Square Baffle Trim with Solite® Glass Lens, White Baffle, White Ring



TLS408WHBB
Square Baffle Trim with Solite® Glass Lens, Black Baffle, White Ring

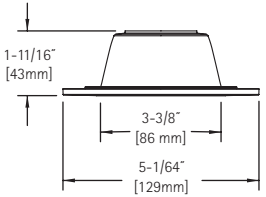


TLS408SNBB
Square Baffle Trim with Solite® Glass Lens, Black Baffle, Satin Nickel Ring

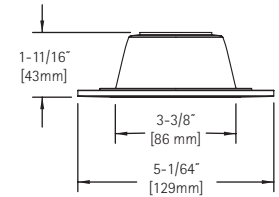


TLS408TBZBB
Square Baffle Trim with Solite® Glass Lens, Black Baffle, Tuscan Bronze Ring

WALL WASH TRIMS

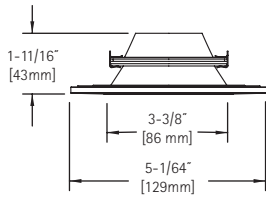


TL409WW
Wall Wash Downlight - Semi-Specular Clear Reflector with Specular Wall Wash Optic, Polymer (Polycarbonate) Diffusing Lens and White Ring



TL409WHWW
Wall Wash Downlight - White Reflector with Specular Wall Wash Optic, Polymer (Polycarbonate) Diffusing Lens and White Ring

POLYMER "DEAD FRONT" SHOWER TRIM



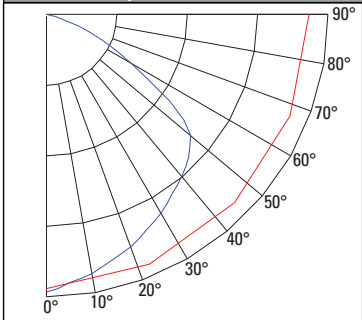
TL422PS
One-piece White Polymer (plastic) Baffle, Ring, and Prismatic Lens formed from special polymers. Shower Trim front is Non-Electrically Conductive "Dead-Front".

PHOTOMETRY

Wall Wash, Semi-Specular Clear Reflector, Specular Wall Wash Optic TL409WW

Spacing Criteria = 1.24
 Lumens per Watt = 42.02 LpW
 Test No. P21178
 Test Model: EL405830 (3000K LED light engine)

Candlepower Distribution Curve



Luminance (Average Candela/M ²)	
Degrees	Avg. 0° Luminance
45	35203
55	32442
65	18662
75	6666
85	2828

Candela Distribution	
Degrees Vertical	Candela
0	278
5	270
15	255
25	238
35	220
45	202
55	151
65	64
75	14
85	2
90	0

2' from Wall - 2' On Center			
Distance From Ceiling in Feet	1'	2'	3'
1'	15.6	15.8	15.6
2'	24.6	27.8	24.6
3'	15.0	16.2	15.0
4'	8.9	9.6	8.9
5'	5.6	5.9	5.6
6'	3.6	3.8	3.6
7'	2.5	2.5	2.5
8'	1.7	1.8	1.7
9'	1.3	1.3	1.3
10'	1.0	1.0	1.0

2' from Wall - 3' On Center			
Distance From Ceiling in Feet	1'	2'	3'
1'	13.8	9.0	13.8
2'	20.2	20.7	20.2
3'	12.6	13.6	12.6
4'	7.7	8.5	7.7
5'	5.0	5.4	5.0
6'	3.3	3.6	3.3
7'	2.3	2.4	2.3
8'	1.6	1.7	1.6
9'	1.2	1.3	1.2
10'	0.9	0.9	0.9

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	217	N/A	61.1
0-40	347	N/A	84.7
0-60	534	N/A	98.3
0-90	576	N/A	100

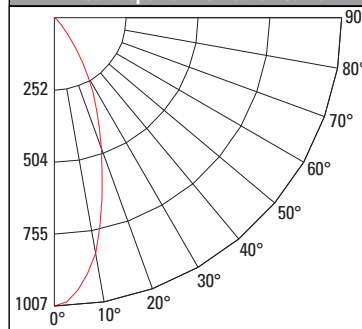
Multiplier				
Color Temperature as tested: 3000°K				
Color Temperature	2700°K	3000°K	3500°K	4000°K
Multiplier	0.9397	1.0000	1.0553	1.1055

Representative photometric test reports are as illustrated in combination with Halo H4 LED Light Engines in 3000°K color temperature. For relative lumen values with other color temperatures options in Halo LED use the appropriate multiplier.

Square Baffle Trim with Solite® Regressed Lens - TLS408WHWB

Spacing Criteria = 0.62
 Lumens per Watt = 41.4 LpW
 Test No. P21157
 Test Model: EL405830 (3000K LED light engine)

Candlepower Distribution Curve



Luminance (Average Candela/M ²)	
Degrees	Avg. 0° Luminance
45	5925
55	2578
65	2041
75	1904
85	1414

Candela Distribution	
Degrees Vertical	Candela
0	1007
5	954
15	650
25	353
35	136
45	34
55	12
65	7
75	4
85	1
90	0

Cone of Light		
Distance to Illuminated Plane	Initial Nadir Foot Candles	Beam Diameter (ft)
5' 6"	33	5.8
7' 0"	21	7.4
8' 0"	16	8.4
9' 0"	12	9.5
10' 0"	10	10.6

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	428	N/A	75.4
0-40	516	N/A	90.8
0-60	556	N/A	97.8
0-90	568	N/A	100

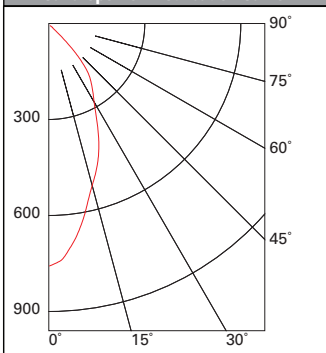
Multiplier				
Color Temperature as tested: 3000°K				
Color Temperature	2700°K	3000°K	3500°K	4000°K
Multiplier	0.8905	0.9476	1.0000	1.0476

Representative photometric test reports are as illustrated in combination with Halo H4 LED Light Engines in 3000°K color temperature. For relative lumen values with other color temperatures options in Halo LED use the appropriate multiplier.

Specular Clear, Solite Lens TL402SCS

Spacing Criteria = 0.7
 Lumens per Watt = 43.53 LpW
 Test No. P20078
 Test Model: EL405835 (3500K LED module)

Candlepower Distribution Curve



Luminance (Average Candela/M ²)	
Degrees	Avg. 0° Luminance
45	15694
55	2795
65	2042
75	953
85	1415

Candela Distribution	
Degrees Vertical	Candela
0	751
5	702
15	516
25	358
35	231
45	90
55	13
65	7
75	2
85	1
90	0

Cone of Light		
Distance to Illuminated Plane	Initial Nadir Foot Candles	Beam Diameter (ft)
5' 6"	25	7.1
7' 0"	15	9.0
8' 0"	12	10.3
9' 0"	9	11.6
10' 0"	8	12.9

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	375	N/A	61.1
0-40	519	N/A	84.7
0-60	603	N/A	98.3
0-90	613	N/A	100

Multiplier				
Color Temperature as tested: 3500°K				
Color Temperature	2700°K	3000°K	3500°K	4000°K
Multiplier	0.8905	0.9476	1.0000	1.0476

Representative photometric test reports are as illustrated for downlighting include open and lensed trims in combination with Halo H4 LED Light Engines in 3500°K color temperature. For relative lumen values with other color temperatures options in Halo LED use the appropriate multiplier.

ORDERING INFORMATION

SAMPLE NUMBER: EL405830 - tl402scs

Complete unit includes H4 LED housing, light engine and trim; ordered separately.

Housing: Refer to housing specification sheets for specification and details.

Light Engine: H4 LED Downlight Light Engines EL406 Series are compatible with this complete collection of H4 LED Downlight Trims.

(Note H4 LED Adjustable Gimbals are available. The H4 Adjustable Gimbals feature a combined trim and light engine, and are not compatible with H4 LED downlight trims. Refer to Adjustable Gimbal Light Engine specification sheets for details.

Trim Options	Accessories
<p>TL410SC = Specular Clear Reflector, White Ring TL410H = Haze Reflector, White Ring TL410WH = White Reflector, White Ring TL410SN = Satin Nickel Reflector, Satin Nickel Ring TL410TBZ = Tuscan Bronze Reflector, Tuscan Bronze Ring TL410SBK = Black Specular Reflector, White Ring TL411WB = White Baffle, White Ring TL411BB = Black Baffle, White Ring TL402SCS = Solite® Glass Lens, Specular Clear Reflector and White Ring, Shower Rated TL402HS = Solite® Glass Lens, Haze Reflector and White Ring, Shower Rated TL402WHS = Solite® Glass Lens, White Reflector and White Ring, Shower Rated TL402SNS = Solite® Glass Lens, Satin Nickel Reflector and Satin Nickel Ring, Shower Rated TL402TBZS = Solite® Glass Lens, Tuscan Bronze Reflector and Tuscan Bronze Ring, Shower Rated TL402SBKS = Solite® Glass Lens, Black Specular Reflector and White Ring, Shower Rated TL403WBS = Solite® Glass Lens, White Baffle and White Ring, Shower Rated TL403BBS = Solite® Glass Lens, Black Baffle and White Ring, Shower Rated TLS408WHWB = Square Baffle Trim, Solite® Glass Lens, White Ring with White Baffle, Shower-rated TLS408WHBB = Square Baffle Trim, Solite® Glass Lens, White Ring with Black Baffle, Shower-rated TLS408SNBB = Square Baffle Trim, Solite® Glass Lens, Satin Nickel Ring with Black Baffle, Shower-rated TLS408TBZBB = Square Baffle Trim, Solite® Glass Lens, Tuscan Bronze Ring with Black Baffle, Shower-rated TL409WW = Wall Wash, Semi-Specular Clear Reflector with White Ring, Shower-rated TL409HWW = Wall Wash, White Reflector with White Ring TL422PS = Polymer "Dead Front" Baffle & Regressed Lens Trim, White Baffle and Ring</p>	<p>Thin Profile Designer Trim Rings <i>For use with Round TL4 trims (not compatible with Square TLS4 trims)</i> TRM400WH = White TRM400BK = Black TRM400SN = Satin Nickel TRM400TBZ = Tuscan Bronze TRM400PC = Polished Chrome</p>

Solite® is a registered trademark of AGC Flat Glass North America

Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com