DESCRIPTION - H4 LED 2ND GENERATION DOWNLIGHT TRIMS

Halo H4 LED is a three part system of 4" recessed downlights with EL406 Series LED Light Engines and TL4 and TLS4 Series LED Trims designed for installation in H4 LED H457 series housings with integral LED dimmable drivers. Halo LED Downlight Trims are offered in lensed baffles and reflectors; and wet location shower rated models. TL4 and TLS4 Series LED Trims are compatible with EL406 LED light engines only. Halo LED offers high quality, fit, finish, and performance in an energy-efficient, high-efficacy downlight.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

MECHANICAL

Baffles and Reflectors

- Precision formed aluminum
- High quality 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 have a tapered 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 polymer (polycarbonate plastic) lens models offer a familiar "bulb-like" appearance, and are impact resistant
- Solite® flat glass lensed trims offer high-clarity 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, (shower rated) and are IP66 Ingress Protection rated for dust and water
- "Dead front" shower trim features a non-electrically conductive (plastic). One piece baffle, ring, and lens are formed from plastics
  - special polymers to meet Halo performance and quality standards.
- H4 LED trims offer ENERGY STAR® Certification when used with designated Halo H4 LED Light Engines*
- Can be used to meet State of California Title 24, Washington State Energy Code - WSEC, and International Energy Conservation Code – IECC High Efficacy requirements when used with designated LED Light Engines*

*Refer to compliance matrix

Warranty

Cooper Lighting Solutions provides a five 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 Solutions Terms and Conditions of sale. Refer to www.cooperlighting.com)

H4 LED Downlight Trims

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

4-Inch LED Trims

FOR USE WITH EL4 LED LIGHT ENGINES AND H455, H456 AND H457 SERIES 4" LED HOUSINGS

Complete fixture consists of LED Housing, LED Light Engine and LED trim.

High Efficacy LED

90 CRI

nominal CCT 2700K 3000K 3500K 4000K

ENERGY STAR

Can be used for IECC International Energy Conservation Code High Efficacy Compliance

RoHS

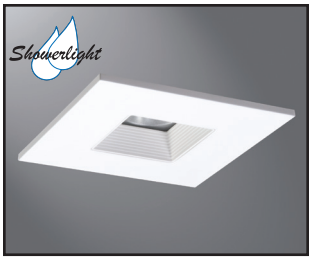
Efficiency Standards T24 California Title 24 Residential and Non-Residential Compliant

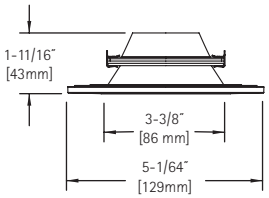
Refer to ENERGY STAR® Certified Products List.
Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Appliance Efficiency Database under JA8.

H4 LED 2ND GENERATION DOWNLIGHT SERIES – LED TRIMS

SQUARE SOLITE® GLASS LENS BAFFLE TRIMS

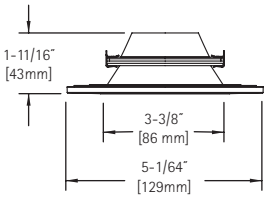
Wet Location Listed For Shower Applications





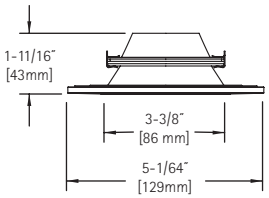
TLS408WHWB

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



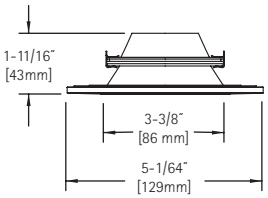
TLS408WHBB

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



TLS408SNBB

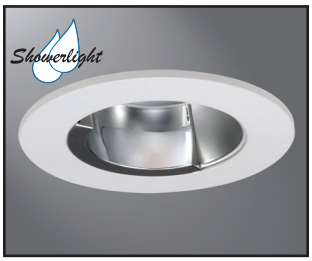
Square Baffle Trim with Solite® Glass Lens, Black Baffle, Satin Nickel Ring

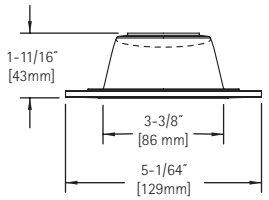


TLS408TBZBB

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

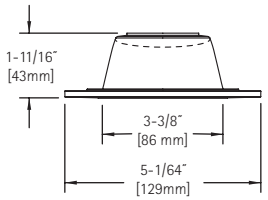
WALL WASH TRIMS





TL409WW

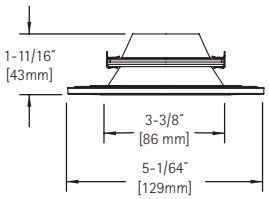
Wall Wash Downlight - Semi-Specular Clear Reflector with Specular Wall Wash Optic, Diffuse Polymer Lens and White Ring



TL409WHWW

Wall Wash Downlight - White Reflector with Specular Wall Wash Optic, Diffuse Polymer Lens and White Ring

"DEAD FRONT" POLYMER SHOWER TRIM



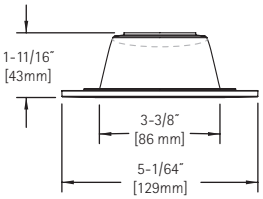
TL422PS

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

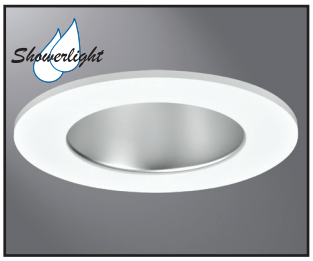
H4 LED 2ND GENERATION DOWNLIGHT SERIES – LED TRIMS

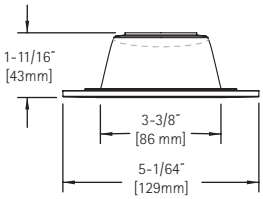
DEEP REGRESSED REFLECTOR AND BAFFLE TRIMS WITH DIFFUSE POLYMER DOME LENS

Wet Location Listed For Shower Applications

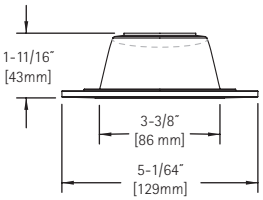


TL410SC
Specular Clear Reflector, Diffuse Dome (polymer) Lens, White Ring

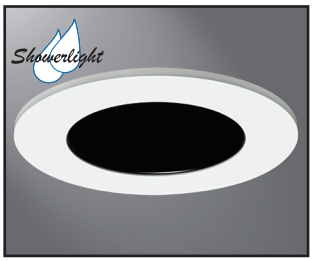


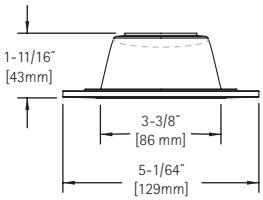


TL410H
Haze Reflector, Diffuse Dome (polymer) Lens, White Ring

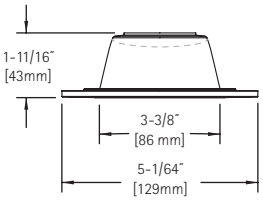


TL410WH
White Reflector, Diffuse Dome (polymer) Lens, White Ring

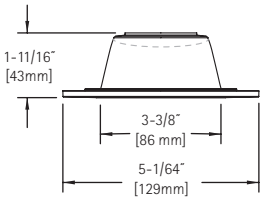




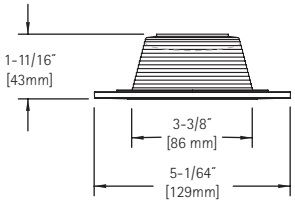
TL410SBK
Specular Black Reflector, Diffuse Dome (polymer) Lens, White Ring



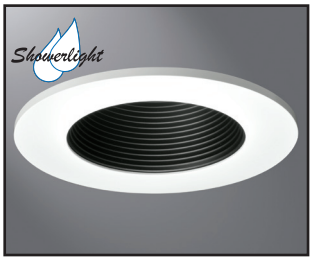
TL410SN
Satin Nickel Reflector, Diffuse Dome (polymer) Lens, Satin Nickel Ring

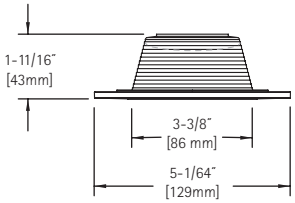


TL410TBZ
Tuscan Bronze Reflector, Diffuse Dome (polymer) Lens, Tuscan Bronze Ring



TL411WB
White Baffle, Diffuse Dome (polymer) Lens, White Ring

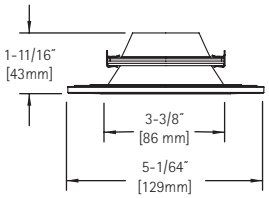




TL411BB
Black Baffle, Diffuse Dome (polymer) Lens, White Ring

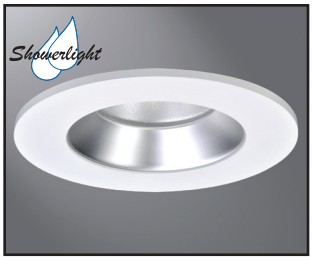
REFLECTOR AND BAFFLE TRIMS WITH SOLITE® GLASS LENS

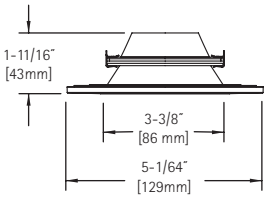
Wet Location Listed For Shower Applications



TL402SCS

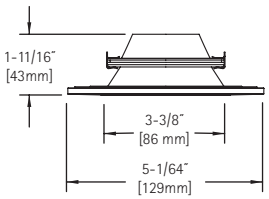
Specular Clear Reflector with Solite® Glass Lens, White Ring





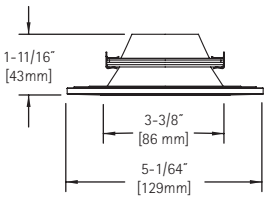
TL402HS

Haze Reflector with Solite® Glass Lens, White Ring



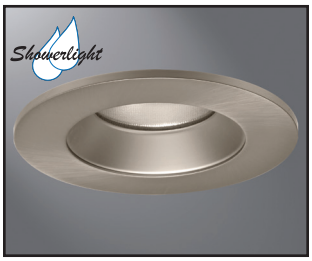
TL402WHS

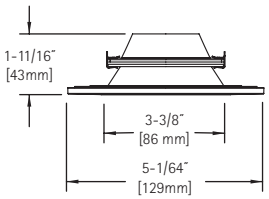
White Reflector with Solite® Glass Lens, White Ring



TL402SBKS

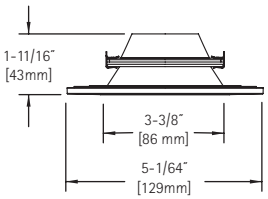
Specular Black Reflector with Solite® Glass Lens, White Ring





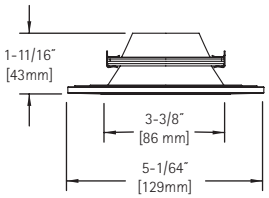
TL402SNS

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



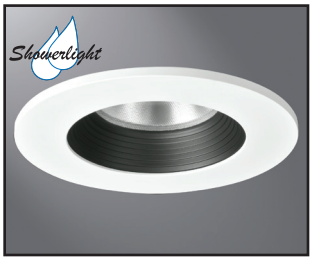
TL402TBZS

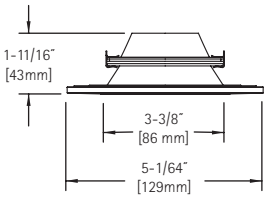
Tuscan Bronze Reflector with Solite® Glass Lens, Tuscan Bronze Ring



TL403WBS

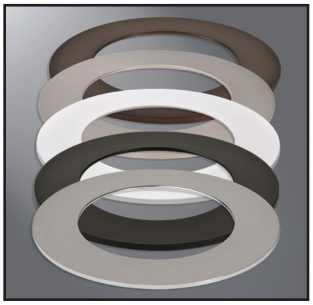
White Baffle with Solite® Glass Lens, White Ring





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 2nd Generation Downlight Collection - Lumen and Compliance Summary

H4 LED Downlight Collection		ELG406927 - 2700K				ELG406930 - 3000K				ELG406935 - 3500K				ELG406940 - 4000K			
Trim Type	Trim Model	LUMENS (1)	ENERGY STAR (2)	California T24 (3)	IECC & WSEC (4)	LUMENS (1)	ENERGY STAR (2)	California T24 (3)	IECC & WSEC (4)	LUMENS (1)	ENERGY STAR (2)	California T24 (3)	IECC & WSEC (4)	LUMENS (1)	ENERGY STAR (2)	California T24 (3)	IECC & WSEC (4)
Specular Reflector, Diffuse Polymer Lens	TL410SC	660	Yes	Yes	Yes	720	Yes	Yes	Yes	730	Yes	Yes	Yes	810	Yes	Yes	Yes
Haze Reflector, Diffuse Polymer Lens	TL410H	650	Yes	Yes	Yes	710	Yes	Yes	Yes	720	Yes	Yes	Yes	800	Yes	Yes	Yes
White Reflector, Diffuse Polymer Lens	TL410WH	630	Yes	Yes	Yes	690	Yes	Yes	Yes	700	Yes	Yes	Yes	770	Yes	Yes	Yes
Specular Black Reflector, Diffuse Polymer Lens	TL410SBK	460	No	No	No	500	No	No	No	510	No	No	No	560	Yes	No	Yes
Satin Nickel Reflector, Diffuse Polymer Lens	TL410SN	560	Yes	No	Yes	610	Yes	Yes	Yes	620	Yes	Yes	Yes	680	Yes	Yes	Yes
Tuscan Bronze Reflector, Diffuse Polymer Lens	TL410TBZ	450	No	No	No	500	No	No	No	510	No	No	No	560	Yes	No	Yes
White Baffle, Diffuse Polymer Lens	TL411WB	647	Yes	Yes	Yes	690	Yes	Yes	Yes	700	Yes	Yes	Yes	770	Yes	Yes	Yes
Black Baffle, Diffuse Polymer Lens	TL411BB	450	No	No	No	490	No	No	No	500	No	No	No	550	No	No	Yes
Solite® Glass Lens Specular Clear Reflector	TL402SCS	710	Yes	Yes	Yes	770	Yes	Yes	Yes	780	Yes	Yes	Yes	860	Yes	Yes	Yes
Solite® Glass Lens Haze Reflector	TL402HS	740	Yes	Yes	Yes	810	Yes	Yes	Yes	820	Yes	Yes	Yes	900	Yes	Yes	Yes
Solite® Glass Lens White Reflector	TL402WHS	710	Yes	Yes	Yes	780	Yes	Yes	Yes	790	Yes	Yes	Yes	870	Yes	Yes	Yes
Solite® Glass Lens White Baffle	TL403WBS	700	Yes	Yes	Yes	760	Yes	Yes	Yes	780	Yes	Yes	Yes	850	Yes	Yes	Yes
Solite® Glass Lens Specular Black Reflector	TL402SBKS	650	Yes	Yes	Yes	710	Yes	Yes	Yes	720	Yes	Yes	Yes	800	Yes	Yes	Yes
Solite® Glass Lens Satin Nickel Reflector	TL402SNS	660	Yes	Yes	Yes	720	Yes	Yes	Yes	730	Yes	Yes	Yes	800	Yes	Yes	Yes
Solite® Glass Lens Tuscan Bronze Reflector	TL402TBZS	630	Yes	Yes	Yes	690	Yes	Yes	Yes	700	Yes	Yes	Yes	770	Yes	Yes	Yes
Solite® Glass Lens Black Baffle	TL403BBS	630	Yes	Yes	Yes	690	Yes	Yes	Yes	700	Yes	Yes	Yes	770	Yes	Yes	Yes
Square Baffle Trim, Solite® Glass Lens, White Ring & White Baffle	TLS408WHWB	680	Yes	Yes	Yes	740	Yes	Yes	Yes	750	Yes	Yes	Yes	830	Yes	Yes	Yes
Square Baffle Trim, Solite® Glass Lens, White Ring & Black Baffle	TLS408WHBB	640	Yes	Yes	Yes	710	Yes	Yes	Yes	720	Yes	Yes	Yes	790	Yes	Yes	Yes
Square Baffle Trim, Solite® Glass Lens, Satin Nickel Ring & Black Baffle	TLS408SNBB	660	Yes	Yes	Yes	720	Yes	Yes	Yes	730	Yes	Yes	Yes	800	Yes	Yes	Yes
Square Baffle Trim, Solite® Glass Lens, Tuscan Bronze Ring & Black Baffle	TLS408TBZBB	630	Yes	Yes	Yes	690	Yes	Yes	Yes	700	Yes	Yes	Yes	770	Yes	Yes	Yes
Wall Wash, Semi-Specular Reflector with Diffuse Polymer Lens & White Ring	TL409WW	640	Yes	Yes	Yes	700	Yes	Yes	Yes	710	Yes	Yes	Yes	780	Yes	Yes	Yes
Wall Wash, White Reflector, with Diffuse Polymer Lens & White Ring	TL409WHWW	640	Yes	Yes	Yes	710	Yes	Yes	Yes	720	Yes	Yes	Yes	790	Yes	Yes	Yes
White Baffle Shower Trim, All Polymer: Lens, Baffle & Ring	TL422PS	680	Yes	Yes	Yes	750	Yes	Yes	Yes	760	Yes	Yes	Yes	840	Yes	Yes	Yes

(1) Trims are tested with designated LED Light Engines in accordance with IES LM-79 Photometric Measurement Standards. Field results may vary.

(2) Tested and qualified to ENERGY STAR® standards, consult the ENERGY STAR® Qualified Products List

(3) May be used for California Title 24 compliance, and registered with State of California; consult the CEC Title 20 Appliance Database

(4) May be used for IECC - International Energy Conservation Code and WSEC - Washington State Energy Code

Halo H4 LED 2nd Generation Downlight Photometry

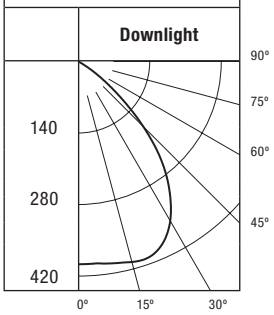
Representative photometric test report for 3000°K color temperature, 90CRI. Multipliers may be used to determine relative lumen values with other color temperatures

Correlated Color Temperature (CCT) as tested: 3000°K				
Color Temperature	2700°K	3000°K	3500°K	4000°K
Multiplier	0.913	1.000	1.014	1.118

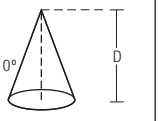
EL406930-TL410SC

Test Number	P123670
LED Module	EL406930
Trim	4" Specular Clear Reflector, Polycarbonate Frost Dome Lens, White Ring
Lumens	55.4 Lm/W
SC	1.29 / 1.29 / 1.25

CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	13.1	7	7
7'	8.1	9	9
8'	6.2	10.2	10.2
9'	4.9	11.6	11.6
10'	4	12.8	12.8
12'	2.8	15.4	15.4

LUMINANCE DATA

Angle	0°
45	41329
55	14297
65	1601
75	685
85	0

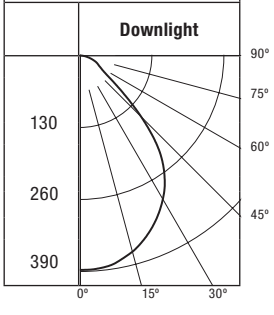
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	333	46.2
0-40	527	73.2
0-60	714	99.2
0-90	720	100.0
90-180	0	0.0
0-180	720	100.0

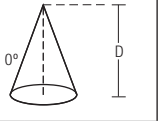
EL406930-TL411WB

Test Number	P123690
LED Module	EL406930
Trim	4" White Baffle, Polycarbonate Frost Dome Lens, White Ring
Lumens	53.1 Lm/W
SC	1.16 / 1.16 / 1.2

CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	12.8	6.2	6.2
7'	7.9	8	8
8'	6	9.2	9.2
9'	4.8	10.4	10.4
10'	3.9	11.4	11.4
12'	2.7	13.8	13.8

LUMINANCE DATA

Angle	0°
45	48625
55	21600
65	18264
75	16267
85	10819

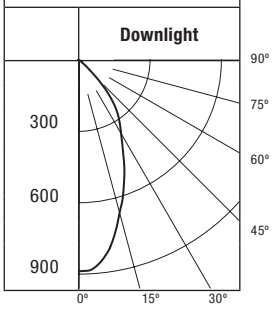
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	290	42.0
0-40	455	66.0
0-60	630	91.3
0-90	690	100.0
90-180	0	0.0
0-180	690	100.0

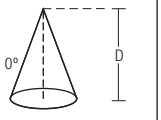
EL406930-TL402SCS

Test Number	P123702
LED Module	EL406930
Trim	4" Specular Clear Reflector w/ Solite® Glass Lens , White Ring
Lumens	59.2 Lm/W
SC	0.75 / 0.75 / 0.84

CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	29.3	4	4
7'	18.1	5.2	5.2
8'	13.9	6	6
9'	11	6.6	6.6
10'	8.9	7.4	7.4
12'	6.2	9	9

LUMINANCE DATA

Angle	0°
45	25791
55	4747
65	3240
75	0
85	0

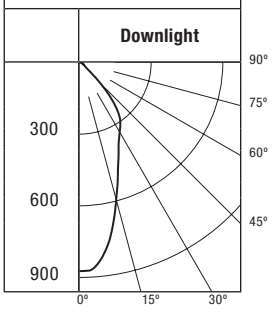
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	472	61.3
0-40	652	84.7
0-60	760	98.7
0-90	770	100.0
90-180	0	0.0
0-180	770	100.0

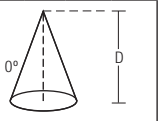
EL406930-TL403WBS

Test Number	P123714
LED Module	EL406930
Trim	4" White Baffle w/ Solite® Glass Lens, White Ring
Lumens	58.5 Lm/W
SC	0.66 / 0.66 / 0.82

CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	28.9	3.6	3.6
7'	17.8	4.6	4.6
8'	13.6	5.2	5.2
9'	10.8	5.8	5.8
10'	8.7	6.6	6.6
12'	6.1	7.8	7.8

LUMINANCE DATA

Angle	0°
45	28616
55	8005
65	6824
75	3921
85	2033

ZONAL LUMEN SUMMARY

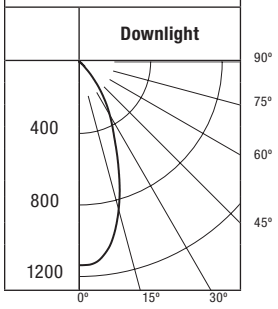
Zone	Lumens	%Fixture
0-30	424	55.8
0-40	606	79.7
0-60	733	96.4
0-90	760	100.0
90-180	0	0.0
0-180	760	100.0

Halo H4 LED 2nd Generation Downlight Photometry

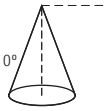
EL406930-TLS408WHWB

Test Number	P123750
LED Module	EL406930
Trim	4" Square Baffle Trim, Solite Lens, White Ring with White Baffle
Lumens	56.9 Lm/W
SC	0.71 / 0.69 / 0.73

CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	37.6	3.8	3.8
7'	23.2	4.8	4.8
8'	17.8	5.6	5.4
9'	14	6.2	6.2
10'	11.4	7	6.8
12'	7.9	8.4	8.2

LUMINANCE DATA

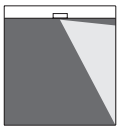
Angle	0°
45	16824
55	9999
65	11645
75	6288
85	4891

ZONAL LUMEN SUMMARY

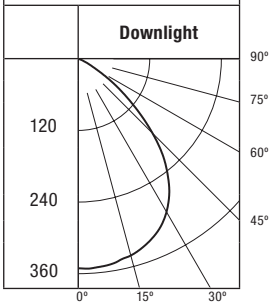
Zone	Lumens	%Fixture
0-30	554	74.9
0-40	676	91.3
0-60	726	98.1
0-90	740	100.0
90-180	0	0.0
0-180	740	100.0

EL406930-TL409WW

Test Number	P123730
Light Module	EL406930
Trim	4" Wall Wash, Semi-Specular Clear Reflector, White Ring
Lumens	53.8 Lm/W
SC	1.19 / 1.24 / 1.22



CANDLEPOWER DISTRIBUTION



SINGLE UNIT FOOTCANDLES

2.5' FROM WALL
(Distance From Fixture Along Wall)

DD	●	1'	2'	3'	4'	5'	6'
1'	8.1	5.6	2.2	0.7	0.2	0.1	0
2'	14.9	12.3	6.9	3.1	1.3	0.5	0.2
3'	9.7	8.5	5.9	3.8	2	0.9	0.4
4'	6.2	5.7	4.4	3	1.9	1.2	0.6
5'	4	3.8	3.1	2.4	1.6	1.1	0.7
6'	2.7	2.6	2.2	1.8	1.4	1	0.7
7'	1.9	1.8	1.6	1.4	1.1	0.8	0.6
8'	1.3	1.3	1.2	1	0.9	0.7	0.5
9'	1	0.9	0.9	0.8	0.7	0.6	0.5
10'	0.7	0.7	0.7	0.6	0.6	0.5	0.4

MULTIPLE UNIT FOOTCANDLES

2.5' FROM WALL
(Spacing Between Fixtures)

DD	--3'--			--4'--		
1'	8.9	7.5	8.9	8.4	4.4	8.4
2'	18	19.5	18	16.1	13.9	16.1
3'	13.5	14.5	13.5	11.7	11.9	11.7
4'	9.2	10.1	9.2	8.1	8.8	8.1
5'	6.4	7	6.4	5.7	6.2	5.7
6'	4.5	4.8	4.5	4	4.4	4
7'	3.2	3.4	3.2	2.9	3.2	2.9
8'	2.4	2.5	2.4	2.2	2.4	2.2
9'	1.8	1.8	1.8	1.7	1.8	1.7
10'	1.4	1.4	1.4	1.3	1.4	1.3

LUMINANCE DATA

Angle	0°
45	48255
55	51372
65	33851
75	13321
85	3882

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	271	38.7
0-40	428	61.1
0-60	645	92.2
0-90	700	100.0
90-180	0	0.0
0-180	700	100.0

ORDERING INFORMATION

SAMPLE NUMBER: H457ICAT1E - EL406930 - **TL410SC**
Complete unit includes H4 LED housing, light engine and trim; ordered separately.
Housing: Refer to housing specification sheets for specification and details.
(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 1	Accessories
TL410SC = Specular Clear Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated **TL410H =** Haze Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated **TL410WH =** White Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated **TL410SN =** Satin Nickel Reflector, Diffuse Polymer Dome Lens, Satin Nickel Ring, Shower Rated **TL410TBZ =** Tuscan Bronze Reflector, Diffuse Polymer Dome Lens, Tuscan Bronze Ring, Shower Rated **TL410SBK =** Black Specular Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated **TL411WB =** White Baffle, Diffuse Polymer Dome Lens, White Ring, Shower Rated **TL411BB =** Black Baffle, Diffuse Polymer Dome Lens, White Ring, Shower Rated **TL402SCS =** Specular Clear Reflector, Solite® Glass Lens, and White Ring, Shower Rated **TL402HS =** Haze Reflector, Solite® Glass Lens, and White Ring, Shower Rated **TL402WHS =** White Reflector, Solite® Glass Lens, and White Ring, Shower Rated **TL402SNS =** Satin Nickel Reflector, Solite® Glass Lens, and Satin Nickel Ring, Shower Rated **TL402TBZS =** Tuscan Bronze Reflector, Solite® Glass Lens, and Tuscan Bronze Ring, Shower Rated **TL402SBKS =** Black Specular Reflector, Solite® Glass Lens, and White Ring, Shower Rated **TL403WBS =** White Baffle, Solite® Glass Lens, and White Ring, Shower Rated **TL403BBS =** Black Baffle, Solite® Glass Lens, 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 **TL409WHWW =** Wall Wash, White Reflector with White Ring, Shower Rated **TL422PS =** Polymer “Dead Front” White Baffle & Regressed Lens, White Ring, Shower Rated	**Thin Profile Designer Trim Rings** *For use with Round TL4 trims (not compatible with Square TLS4 trims)* **TRM400WH =** White **TRM400BK =** Black **TRM400SN =** Satin Nickel **TRM400TBZ =** Tuscan Bronze **TRM400PC =** Polished Chrome

Notes:

1 Compatible with H4 LED Light Engines

1st Gen	2nd Gen
EL405827 **EL405830** **EL405835** **EL405840**	**EL406927** **EL406930** **EL406935** **EL406940**

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