

Halo LED Non-IC Housing for New Construction

Recessed 6" sloped ceiling LED Non-IC housing for ceilings from 2/12 to 12/12 pitch. The socket aiming mechanism tilts the lamp straight down regardless of ceiling pitch. Rotational collar allows trim alignment of up to 20 degree rotation. The HL618 system consists of 1) housing with integral LED driver, 2) high-efficacy LED light engine with a section of beam-forming lenses, and 3) slope trim. Housing is suitable for residential or commercial installations in non-insulated ceilings and features airtight code compliant construction.

Design Features

1. Housing

- Single wall square aluminum housing construction
- Sealed and gasketed for airtight ASTM-E283 compliance
- Shipped with overspray protector installed
- Mechanism can be removed from the plaster frame to provide access to the junction box.
- CP - Chicago Plenum model is constructed and gasketed in accordance with City of Chicago CCEA requirements.

Plaster Frame

- Galvanized steel frame. Housing adjusts in plaster frame to accommodate up to 1-3/8" ceiling thickness.
- Regressed locking screw for securing hanger bars.
- Cutouts included for easily crimping hanger bars in position.
- Bar hangers can be repositioned at 90°.

Aiming Mechanism

- Exclusive socket aiming mechanism tilts and rotates to properly align the LED light engine.
- LED light engine may be tilted and locked to accommodate 2/12 to 12/12 pitch
- LED light engine and trim may be rotated laterally up to 20 degrees for compound slope ceilings or to compensate for off-axis aiming

Slide-N-Side™ Junction Box

- Positioned to accommodate straight conduit runs.
- Seven 1/2" trade size conduit knockouts with true pry-out slots.
- Three Slide-N-Side wire traps allow non-metallic sheathed cable to be without removing knockouts.
- Allows wiring connections to be made outside the box.
- Simply insert the cable directly into the trap after connections are made.
- Accommodates the following standard non-metallic sheathed cable type:
 - U.S. #14/2, #14/3, #12/2, #12/3
 - Canada: #14/2, #14/3, #12/2
- Push-wire quick connectors included for field connections.
- CP - Chicago Plenum model features a sealed and gasketed junction box and flex wireway to meet CCEA requirements. CP model box includes seven 1/2" knockouts (Slide-N-Side feature not available with CP).

GOT NAIL! Pass-N-Thru™ Bar Hangers

- Captive preinstalled bar hangers adjust to 24" wide
- Housing can be positioned at any point within 24" span
- Pre-installed nail easily installs in regular lumber, engineered lumber and laminated beams.
- Safety and Guidance system prevents snagging, ensures smooth, straight nail penetration and allows bar hangers to be easily removed if necessary
- Automatic leveling flange aligns the housing and allows holding the housing in place with one hand while driving nails.
- Score lines allow tool-free shortening in narrow joists and bar hangers do not need to be removed for shortening.
- Bar hangers may be repositioned 90° on plaster frame
- Integral T-bar clip snaps onto T-bars; no additional clips are required.

LED Driver

- Integral to the housing, 120V-277V 50/60 Hz universal voltage, constant current dimmable driver provides high-efficiency operation.
- Driver meets FCC 47CFR Part 15 EMI/RFI consumer limits for use in residential and commercial installations.
- Driver features high power factor and low THD and has integral thermal protection in the event of over temperature or internal failure.
- Driver is specifically designed for compatibility with HLM6 LED light engines.
- If dimming is not required the fixture can be operated from a standard wall switch.

Dimming - Phase Control

- Designed for continuous dimming capability to nominally 5% with many 120V Leading Edge (LE) and Trailing Edge (TE) Phase Control dimmers. (Dimmers with low end trim adjustment offer greater assurance of achieving 5% level.)
- Consult dimmer manufacturer for compatibility and conditions of use. (Note some dimmers require a neutral in the wallbox.)

Dimming - 0-10V

- Dimmable to 10% in typical operation with compatible 0-10V DC low voltage dimmers.
- 0-10V DC dimmers operate using two low voltage dimming wires (color coded violet and gray). The low voltage dimming wires are separate from the 120V AC or 277V AC power.

Catalog #	Type
Project	
Comments	Date
Prepared by	

- Switching on/off is controlled via the line voltage (120V AC or 277V AC) power, and dimming is controlled via the 2-wire 0-10V DC low voltage wiring.

2. Optical LED Light Engines (Order Separately)

- Exclusively designed for the HL6 slope system, the form-factor and performance replicate expected PAR lamp qualities in a high lumen LED light engine
- Turn-to-lock base provides secure retention of the LED light engine to the aiming mechanism, and provides a low-voltage electrical quick-connector.
- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation.
- See ordering information for available CCT options.
- Passive thermal management achieves L70 at 50,000 hours in IC and Non-IC applications.

LED Chromaticity

- A tight chromaticity specification ensures LED color uniformity, sustainable Color Rendering Index (CRI) and Correlated Color Temperature (CCT) over the useful life of the LED
- High color performance with 90 CRI minimum, and R9 greater than 50.
- LED color uniformity of 3 SDCM exceeds ENERGY STAR® color standards per ANSI C78.377- 2008.
- Every Halo LED is quality tested, measured, and serialized in a permanent record to register lumens, wattage, CRI and CCT.
- Halo LED serialized testing and measurement ensures color and lumen consistency on a per-unit basis, and validates long-term product consistency over time.

3. Beam Forming Lenses (Interchangeable)

- HLM6 LED light engines are designed to accept HL6 series lens optics
- The 40-degree Flood (FL) lens is included with the LED light engine, and may be ordered separately as a replacement
- Alternate beam options are offered in 25-degree Narrow Flood (NFL) and 55-degree Wide Flood (WFL), ordered separately
- The interchangeable lenses feature beam distributions with refined visual shielding to control beam angle and lumen delivery in accommodating various ceiling heights.



HL618TAT HL618TCP

**1800 Lumen
Slope Ceiling LED
6" Non-IC Air-Tite™
Recessed Housing System**

**Compatible with HLM6
LED Modules, HL6 Beam-
Forming Lens Optics
& Designated Trims**

**High Efficacy LED Housing
27.6W Maximum**

**NON-IC
For NON-INSULATED
CEILING**

**IF INSULATION IS
PRESENT, IT MUST
BE KEPT MIN. 3" FROM
ALL SIDES AND TOP**



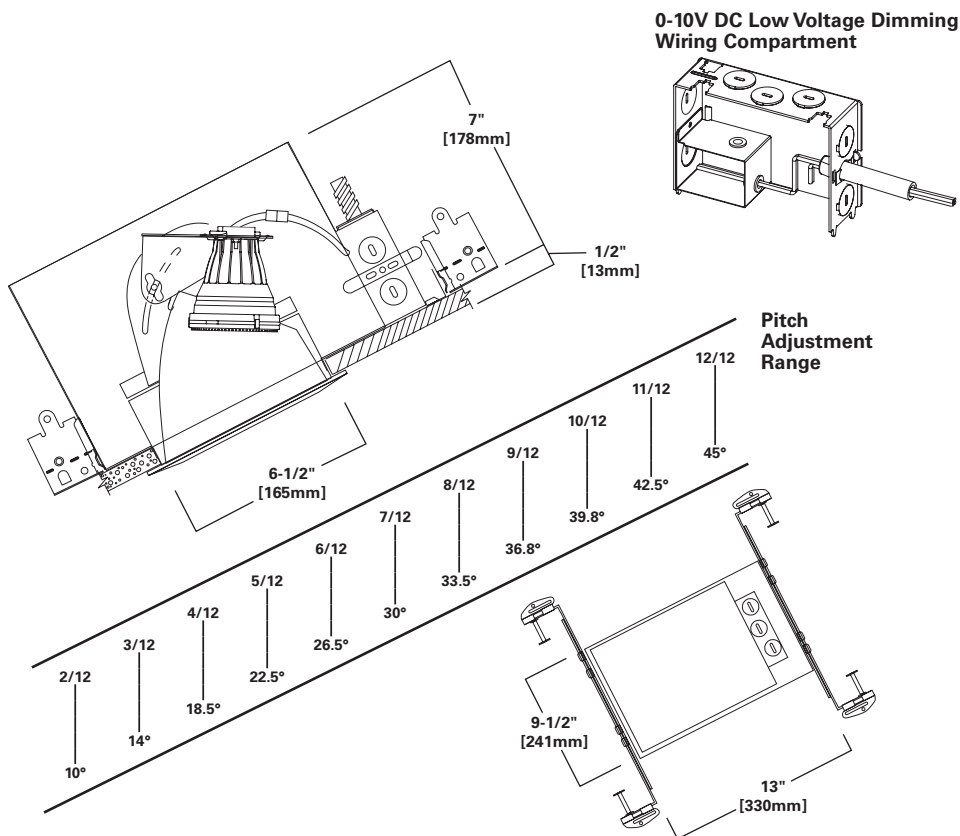
Refer to ENERGY STAR®
Certified Products List.
Can be used to comply with
California Title 24 Non-Residential
Lighting Controls requirements
as a LED Luminaire.

Code Compliance

- cULus 1598 Type Non-IC, if insulation is present it must be kept 3" from sides and top of housing
 - Listed for damp locations.
 - Wet location listed with designated lens trims
- AIR-TITE™
 - Certified per ASTM E283; not exceeding 2.0 CFM under 75 Pascals pressure difference
- Energy Code compliant
 - ENERGY STAR® certified luminaire - consult ENERGY STAR® Certified Product List
 - Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire
- EMI/RFI per FCC 47CFR Part 15 Class B Consumer limits (residential and commercial compliant)

- Contains no mercury or lead and RoHS compliant.
- Chicago Plenum model (HL618TCP) is specially constructed and marked for Chicago Plenum applications (CCEA)
- Junction box features a separate compartment for 0-10V DC low voltage dimming connections, to comply with NEC.

Dimensional Information



Energy Data

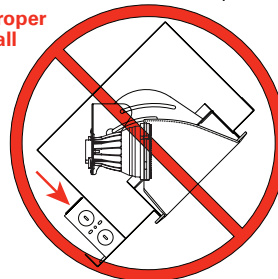
HL618TAT & HL618TCP (1800 Series)

Min. operating temperature	-30C/-22F	
Input Voltage	120V	277V
Input Current (A)	0.23	0.10
Input Power (W)	27.6	27.0
Input Frequency	50/60Hz	
FCC 47CFR Part 15 EMI/RFI	Consumer Limits (Residential & Commercial)	
THD	≤ 20%	
Power Factor	≥ 0.9	
Sound Rating	Class A	

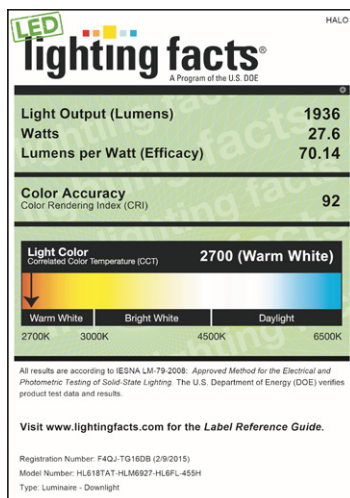
Installation Details

For proper slope aiming install with junction box in upward position.

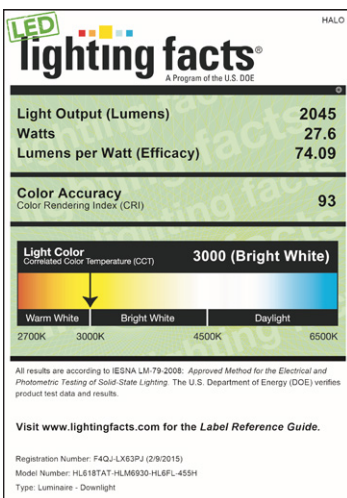
Improper Install



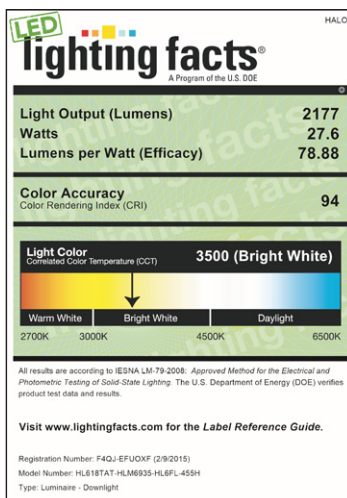
Lighting Facts



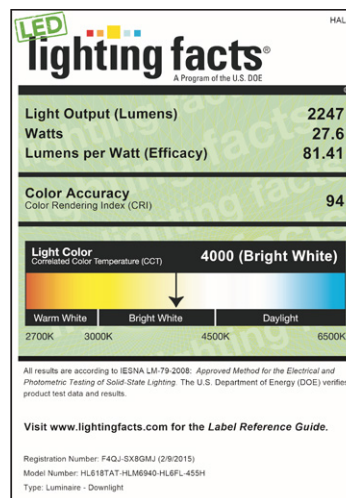
HL618TAT-HLM6927-HL6FL-455H



HL618TAT-HLM6930-HL6FL-455H



HL618TAT-HLM6935-HL6FL-455H



HL618TAT-HLM6940-HL6FL-455H

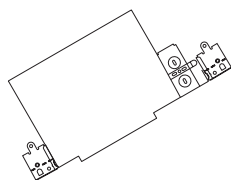
Ordering Information

Sample Number: HL618TAT - HLM6930 - 455W

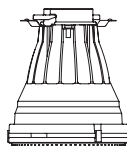
Order LED housing, LED engine with lens optic, and trim separately for a complete luminaire.

1. Housing	2. LED Light Engines	2. Lens Optics Beam Forming	3. LED Trims	System Accessories
HL618TAT = 6" slope ceiling, non-insulated ceiling rated, Air-Tight, recessed housing, UNV 120V-277V HL618TCP = 6" slope ceiling recessed housing, non-insulated ceiling rated, CCEA marked for Chicago Plenum, UNV 120V-277V	HLM6927 = 90CRI, 2700K 40° Flood Lens HLM6930 = 90CRI, 3000K 40° Flood Lens HLM6935 = 90CRI, 3500K 40° Flood Lens HLM6940 = 90CRI, 4000K 40° Flood Lens	HL6NFL = 25° Narrow Flood HL6FL = 40° Flood (1 Included with LED light engine) HL6WFL = 55° Wide Flood HL6LHRPK = Replacement lens holder ring	Reflector - OD: 7-1/4" [184mm] 455SC = Specular Clear Reflector, White Metal Trim Ring 455H = Semi-Specular Haze Reflector, White Metal Trim Ring 455SN = Satin Nickel Reflector, Satin Nickel Metal Trim Ring 455TBZ = Tuscan Bronze Reflector, Tuscan Bronze Metal Trim Ring Baffles - OD: 7-1/4" [184mm] 456W = White Coilex Baffle, White Metal Trim Ring 456P = Black Coilex Baffle, White Metal Trim Ring Lenses and Diffusers "Dead Front" - OD: 8" [203mm] 70P = Albalite Glass Lens, White Polymer Trim Ring 70PS = Albalite Glass Lens, White Polymer Trim Ring, Wet Location - Showerlight 70SNS = Albalite Glass Lens, Satin Nickel Polymer Trim Ring, Wet Location - Showerlight 71P = Drop Opal Glass Lens, White Polymer Trim Ring 71PS = Drop Opal Glass Lens, White Polymer Trim Ring, Wet Location - Showerlight 73P = Fresnel Glass Lens, White Polymer Trim Ring 73PS = Fresnel Glass Lens, White Polymer Trim Ring, Wet Location - Showerlight ERT702 = Drop Opal Plastic Lens, Gloss White Polymer Trim Ring, Wet Location - Showerlight	Upsize Trim Rings OT400P = 6" Upsize White Metal Trim Ring, for use with 6" trims (to be used behind standard trim ring) 6.0" I.D., 9.25" O.D. OT403P = Upsize gloss white polymer trim ring, replaces standard ring included with 455 and 456 trims 6.0" I.D., 8.0" O.D. TRM690WH = 6" LED upsize trim ring, white 6.9" I.D., 9.5" O.D. Ring slips over LED trim. Inset design allows 6" trim to fit into upsize ring surface Designer Trim Rings (O.D. 7-1/4" 184mm) TRM6C = Chrome Metal TRM6MB = Black Metal TRM6P = White Metal TRM6SN = Satin Nickel Metal TRM6TBZ = Tuscan Bronze Metal TRM7MB = Black Polymer

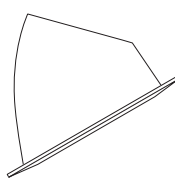
1. Housing



2. Light Engine with Lens Optics



3. Trim



(6" Designer trim rings, for 455 and 456 trims)

Lumen & Energy Code Compliance Summary – HL618TAT & HL618TCP (1800 Series)

Trims	HL618TAT - HLM6927			HL618TAT - HLM6930			HL618TAT - HLM6935			HL618TAT - HLM6940		
	Lumens	LpW	Compliance	Lumens	LpW	Compliance	Lumens	LpW	Compliance	Lumens	LpW	Compliance
70PS	971	35	T24NR	993	35	T24NR	1114	40	T24NR	1153	41	T24NR
71PS	998	36	T24NR	1080	39	T24NR	1145	41	T24NR	1185	42	T24NR
ERT702	1320	47	ES, T24NR	1413	51	ES, T24NR	1514	54	ES, T24NR	1567	56	ES, T24NR
73PS	1395	50	ES, T24NR	1415	51	ES, T24NR	1600	57	ES, T24NR	1656	60	ES, T24NR
456P	1770	64	ES, T24NR	1821	65	ES, T24NR	2030	73	ES, T24NR	2101	76	ES, T24NR
455TBZ	1784	64	ES, T24NR	1882	68	ES, T24NR	2047	74	ES, T24NR	2118	76	ES, T24NR
455SN	1828	66	ES, T24NR	1938	70	ES, T24NR	2097	75	ES, T24NR	2170	78	ES, T24NR
455H	1936	70	ES, T24NR	2045	74	ES, T24NR	2177	78	ES, T24NR	2247	81	ES, T24NR
456W	1908	69	ES, T24NR	1978	71	ES, T24NR	2189	79	ES, T24NR	2265	82	ES, T24NR
455SC	1926	69	ES, T24NR	2069	74	ES, T24NR	2209	80	ES, T24NR	2286	82	ES, T24NR

Wattage 276

LpW = Lumens per Watt

ES: Refer to the ENERGY STAR® Certified Products List

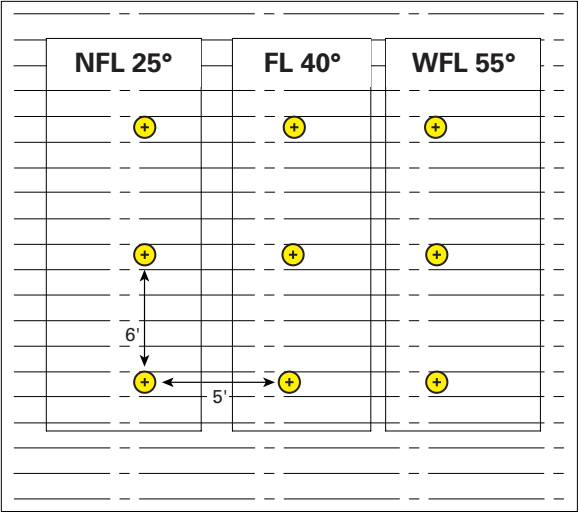
T24NR: Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.

IECC: Can be used to comply with International Energy Conservation Code Residential Energy Efficiency, High Efficacy Luminaire

WSEC - Washington State Energy Code Residential Energy Efficiency, High Efficacy Luminaire

Tested in accordance with IES LM-79 Photometric Measurement Standards. Field results may vary.

Application Modeling – (12/12 Pitch – 1800 Series)



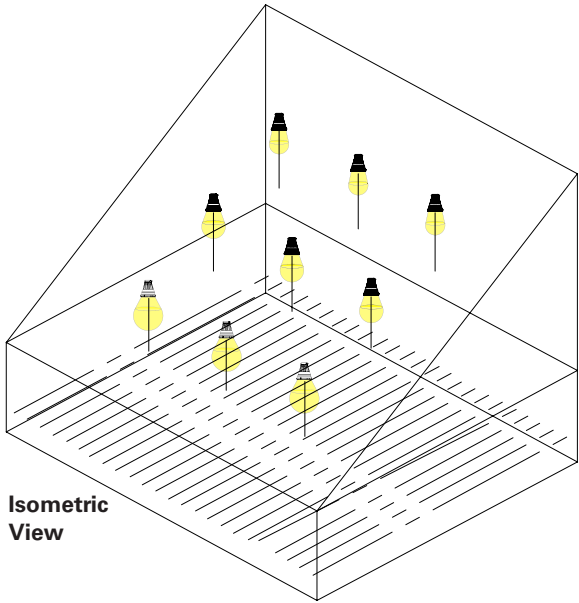
Floor Plan View

Steep 12/12 pitch slope ceiling

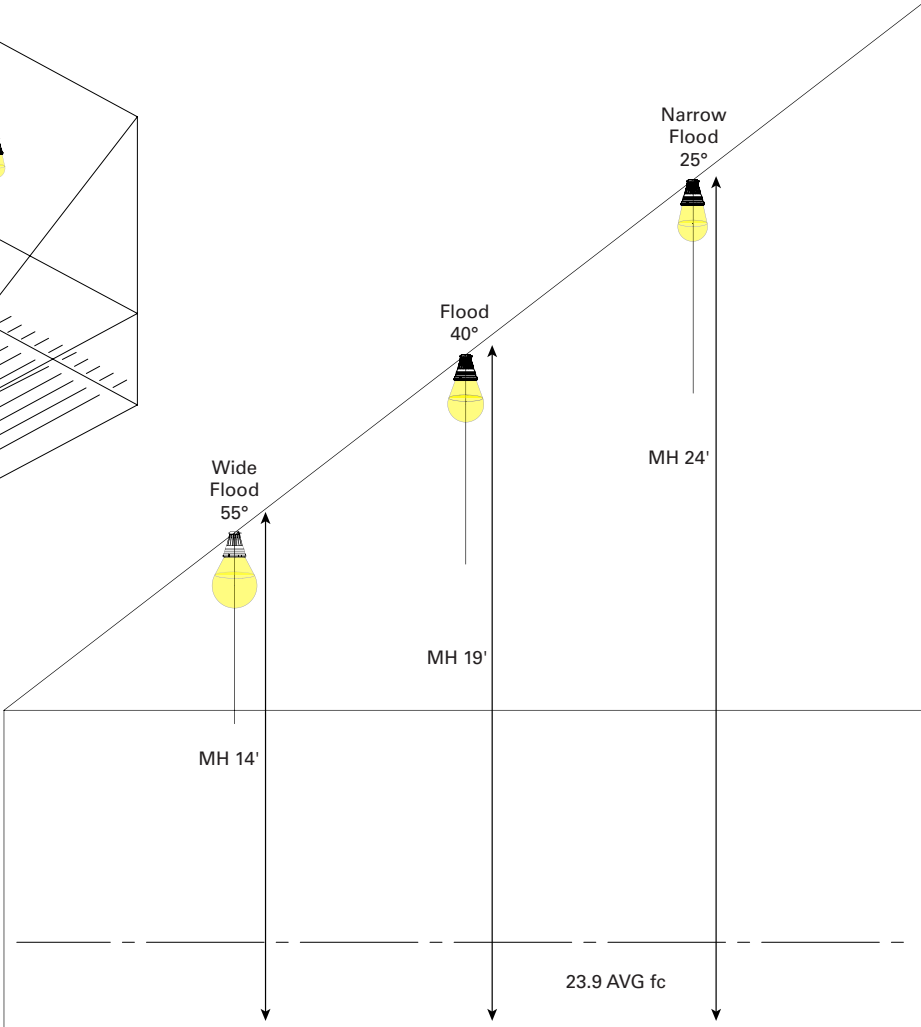
Room Data
12/12 Pitch (45° angle)
5' x 6' Spacing
20' X 24' Room

Luminaire Data
HL618TAT (1800 Series)
2700K HLM6927
Haze trim 455H

12/12 Pitch	Value
Avg. fc	23.91
Max. fc	40.10
Min. fc	3.60
Avg/Min	6.64
Max/Min	11.14



Isometric View



Side View 12/12 Pitch

6/12 Pitch • 1800 Series • 90 CRI

Multiplier Table

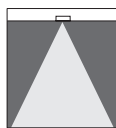
CCT Option	2700 K	3000 K	3500 K	4000 K
CCT Multiplier	0.925	1.000	1.061	1.120

Table based upon testing with 3000°K color temperature, 90CRI.

Multipliers may be used to determine relative lumen values with other color temperatures.

HL618TAT - HLM6930 - HL6NFL - 455H

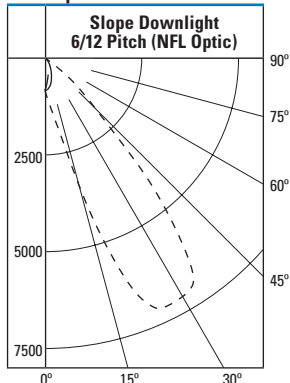
Test Number	P130064
Light Module	1800 Series, 90CRI
Lens Optic	25° Narrow Flood
Trim	6" Aperture, Haze Trim
Lumens	2106 Lm
Efficacy	76.3 Lm/W
CCT	3000K
SC (0/90/45)	1.94 / 0.73 / 1.15



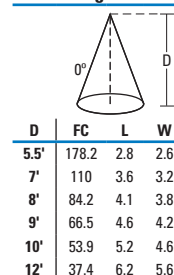
Legend

0-deg:	---
90-deg:	---
180-deg:	---

Candlepower Distribution



Cone of Light



Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1044	49.6
0-40	1702	80.8
0-60	2086	99.1
0-90	2106	100
90-180	0	0
0-180	2106	100

HL618TAT - HLM6930 - HL6FL - 455H

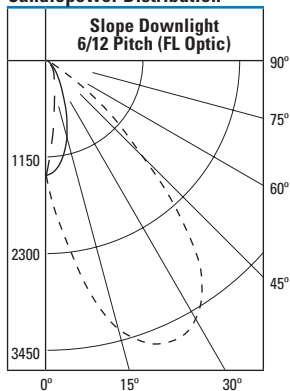
Test Number	P130027
Light Module	1800 Series, 90CRI
Lens Optic	40° Flood
Trim	6" Aperture, Haze Trim
Lumens	2032 Lm
Efficacy	73.6 Lm/W
CCT	3000K
SC (0/90/45)	1.6 / 0.65 / 1.06



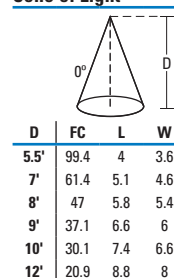
Legend

0-deg:	---
90-deg:	---
180-deg:	---

Candlepower Distribution



Cone of Light

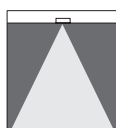


Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1062	52.3
0-40	1592	78.3
0-60	2007	98.8
0-90	2032	100
90-180	0	0
0-180	2032	100

HL618TAT - HLM6930 - HL6WFL - 455H

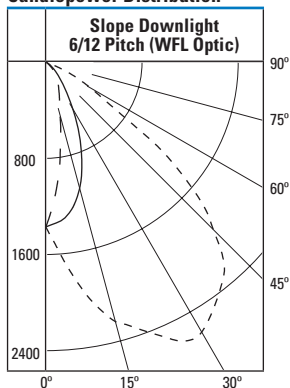
Test Number	P130104
Light Module	1800 Series, 90CRI
Lens Optic	55° Wide Flood
Trim	6" Aperture, Haze Trim
Lumens	2137 Lm
Efficacy	77.4 Lm/W
CCT	3000K
SC (0/90/45)	1.45 / 0.76 / 1.17



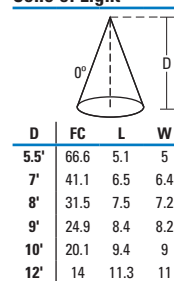
Legend

0-deg:	---
90-deg:	---
180-deg:	---

Candlepower Distribution



Cone of Light



Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	959	44.9
0-40	1490	69.7
0-60	2091	97.9
0-90	2137	100
90-180	0	0
0-180	2137	100

Photometric tests are per IES measurement standards. Tests represent typical fixture performance. Field results may vary.