| Project | | Catalog # | | Type | |
|---|---|---|---|---|---|
| Prepared by | | Notes | | Date | |



High Lumen

Low Lumen

# HALO Commercial
## HC6R | HM6R | 62R

6-inch LED retrofit regressed lens downlight

### Typical Applications

Office • Healthcare • Hospitality • Institutional • Mixed-Use/Retail

## 🔗 Interactive Menu

## Product Certification

ENERGY STAR · Efficiency Standards T24 Can be used to comply with California Title 24 Non-Residential · FC · RoHS COMPLIANT · c(UL)us LISTED

## Product Features

seleCCTable colors · selectable lumens · WaveLinx

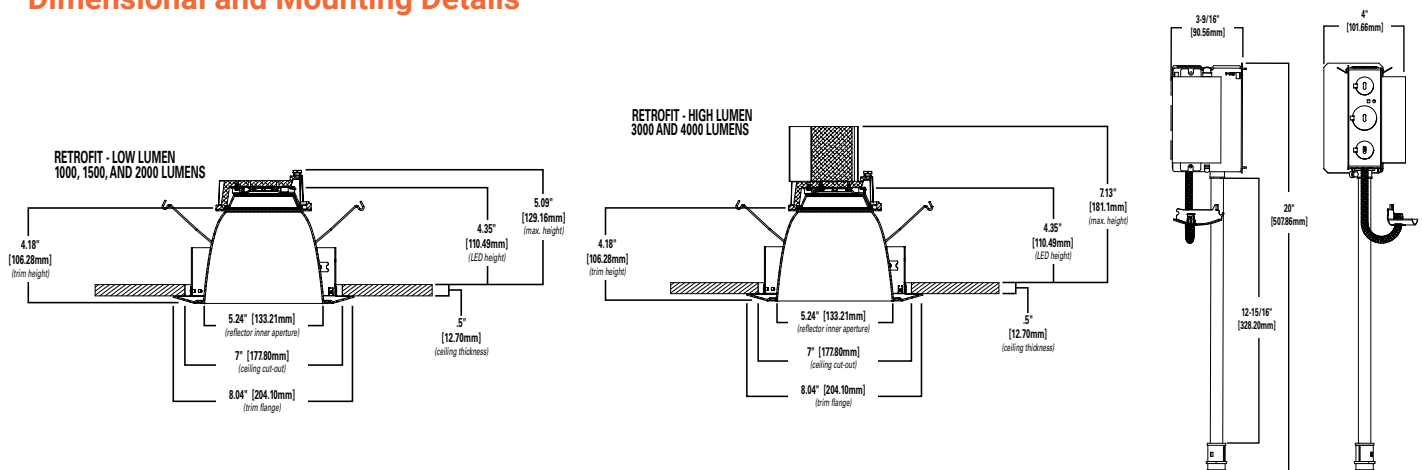## Top Product Features

- Remodel/retrofit series; 1,000 to 4,000 lumens
- Medium beam distribution; Specular, Semi-Specular and White reflector finishes
- 2700K, 3000K, 3500K and 4000K CCT; 80 or 90 CRI
- Universal voltage 120V-277V; Standard 0-10V driver dims to 1%
- Factory installed connected lighting and emergency options

## Dimensional and Mounting Details



RETROFIT - LOW LUMEN
1000, 1500, AND 2000 LUMENS

4.18" [106.28mm] (trim height)
5.09" [129.16mm] (max. height)
4.35" [110.49mm] (LED height)
5.24" [133.21mm] (reflector inner aperture)
7" [177.80mm] (ceiling cut-out)
8.04" [204.10mm] (trim flange)
5" [12.70mm] (ceiling thickness)

RETROFIT - HIGH LUMEN
3000 AND 4000 LUMENS

4.18" [106.28mm] (trim height)
7.13" [181.1mm] (max. height)
4.35" [110.49mm] (LED height)
5.24" [133.21mm] (reflector inner aperture)
7" [177.80mm] (ceiling cut-out)
8.04" [204.10mm] (trim flange)
5" [12.70mm] (ceiling thickness)

3-9/16" [90.56mm]
4" [101.66mm]
20" [507.86mm]
12-15/16" [328.20mm]

**COOPER** Lighting Solutions

## Order Information

**Sample Number : HC6R20D010 – HM6R12835 – 62RMDC**

A complete luminaire consists of a frame/collar, LED module, and reflector (ordered separately)

| Frame / Collar | Lumens | Input / Control | Factory Installed Options | Accessories |
|---|---|---|---|---|
| **Frame / Collar** | **Lumens** | **Input / Control** | **Factory Installed Options** | **Accessories** |
| **HC6R** = 6" retrofit kit for 6.625" (6-5/8") to 7.0" (7-0") nominal ceiling cutout aperture existing open frame commercial housings | **10** = 1000 lumens (nominal)<br>**15** = 1500 lumens (nominal)<br>**20** = 2000 lumens (nominal)<br>**30** = 3000 lumens (nominal)<br>**40** = 4000 lumens (nominal) | **D010**=120-277VAC 50/60Hz 0-10V analog 1% - 100% dimming<br>**D010347** = 347VAC 50/60Hz 0-10V analog 1%-100% dimming (Canada only) | **REM7** = integral 7 watt emergency module with remote test / indicator light, for use with D010 only<br>**REM14** = integral 14 watt emergency module with remote test / indicator light, for use with D010 only<br>**BOD7ST** = 7.5 watt Bodine self-test diagnostic emergency module with remote test / indicator light, use with D010 only<br>**WTA**=Factory installed WaveLinx sensor Kit [1]<br>**WTK** = Factory installed WaveLinx Lite Sensor Kit [2] | **H347** = 347 to 120V step down transformer, 75VA<br>**H347200** = 347 to 120V step down transformer, 200VA sensor kit, for use with D010 driver only<br>**WTA**= Field installed WaveLinx sensor Kit [1]<br>**WTK** = Field installed WaveLinx Lite Sensor Kit [2] |
| **Notes** | **Notes** | **Notes** | **Notes** | **Notes** |
| | | | (1) WTA = WaveLinx tile mount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx system specifications)<br>(2) WTK = WaveLinx Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx Lite system specifications) | (1) WTA = WaveLinx tile mount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx system specifications)<br>(2) WTK = WaveLinx Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx Lite system specifications) |

| LED Module | Lumens | CRI/CCT |
|---|---|---|
| **LED Module** | **Lumens** | **CRI/CCT** |
| **HM6R** = 6" retrofit module for use for use HC6R and HC56R series retrofit kits and 62R trims only | **12**=1000, 1500, 2000 lumens (nominal) Use with HC6R10*, HC6R15*, HC6R20*, HC56R10*, HC56R15*, HC56R20* mounting frames, and 62R trims only<br>**34**=3000, 4000 (nominal) For use with HC6R30*, HC6R40*, HC56R30*, HC56R40* mounting frames, and 62R trims only | **827** = 80 CRI (min), 2700K CCT<br>**830** = 80 CRI (min), 3000K CCT<br>**835** = 80 CRI (min), 3500K CCT<br>**840** = 80 CRI (min), 4000K CCT<br>**927** = 90 CRI (min), 2700K CCT<br>**930** = 90 CRI (min), 3000K CCT<br>**935** = 90 CRI (min), 3500K CCT<br>**940** = 90 CRI (min), 4000K CCT |
| **Notes** | **Notes** | **Notes** |
| | | |

| Reflector | Distribution | Finish | Flange |
|---|---|---|---|
| **Reflector** | **Distribution** | **Finish** | **Flange** |
| **62R** = 6" retrofit conical reflector for use HC6R and HC56R series retrofit kits only | **MD** = medium distribution 55° beam angle,1.04 SC | **C** = Specular clear<br>**H** = Semi-specular clear<br>**W** = White (white flange) | **Blank** = Polished flange standard with C & H reflectors<br>**Blank** = White flange standard with W reflector<br>**WF** = White flange option available with C & H reflectors |
| **Notes** | **Notes** | **Notes** | **Notes** |
| | | | |

**COOPER**
Lighting Solutions

## Product Specifications

### Housing Frame/Collar
- Galvanized steel collar; 2" thick
- Accommodates open frame housing openings 6.625" (6-5/8") to 7.0" (7-0") nominal ceiling cutout aperture
- Installs with two remodel spring clips from below the ceiling

### Junction Box
- Galvanized steel junction box
- Provided with armored cables for flexible connections to the LED module and existing junction box for mains voltage connections
- 20 in$^3$ internal volume excluding voltage barrier
- 25 in$^3$ internal total volume
- Voltage barrier for 0-10V dimming wires (occupies one 1/2" pry-out space)
- Listed for eight #12 AWG (four in, four out) 90°C conductors and feed-thru branch wiring
- Three 1/2" and two 3/4" trade size pry-outs available
- Three 4-port push wire nuts for mains voltage with 1-port for fixture connection

### LED Module
- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation
- Available in 80 or 90 color rendering index (CRI)
- Color accuracy within 3 SDCM provides color consistency and uniformity
- 90 CRI option: R9>50 (refer to chromaticity information for details)
- Available in 2700K, 3000K, 3500K and 4000K correlated color temperature (CCT)
- Lumen options include 1,000, 1,500, 2,000, 3,000 and 4,000 lumens (nominal)
- Passive thermal management achieves 60,000 hours at 70% lumen maintenance (L70) in insulated ceilings (IC) and non-IC applications
- Integral diffuse lens provides visual shielding
- Integral connector allows quick connection to housing flex

### Reflector
- Self-flanged aluminum reflectors available in medium distribution pattern
- Reflectors attach to LED module with three speed clamps
- Available in multiple painted or plated finishes

### Reflector/Module Retention
- Reflector/module assembly is securely retained in the housing with two torsion springs

### Driver
- Field-replaceable constant current driver provides low noise operation
- Universal 120-277VAC 50/60Hz input standard
- 347VAC 50/60Hz input option (Canada only)
- Continuous, 1% to 100% dimming with 0-10V analog control

### Emergency Option
- Provides 90 minutes of standby lighting, meeting most life safety codes for egress lighting
- Available with integral or remote charge indicator and test switch
- Available Self-Test (self-diagnostic) with remote charge indicator and test switch

### Connected Lighting System Options
Two WaveLinx connected systems to choose. Summary information provided below, refer to WaveLinx system specifications and application guides for details.

#### WaveLinx Wireless System Tilemount Sensor Kit
- WaveLinx Wireless WTA tile mount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS - Real Time Location Services available.

#### WaveLinx Lite System Tilemount Sensor Kit
- WaveLinx Lite WTK tile mount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

#### WaveLinx Tilemount Kits Application
- The WTA and WTK tilemount kits include a control module mounted on the luminaire junction box via 1/2" knock-out, and a tilemount sensor on 54-inch whip; for ceiling installation by direct-mount spring clips or via mounting bracket in octagon ceiling boxes.
- The WTA and WTK tilemount kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.

### Compliance
- cULus damp and wet location listed in protected ceilings
- IP20 - Above finished ceiling; IP65 - Below finished ceiling
- Non-Insulated ceiling (Non-IC) rated for 2,000, 3,000 and 4,000 lumen models (insulation must be kept 3" from top and sides)
- Insulated ceiling (IC) rated for 1,000 and 1,500 lumen models and suitable for direct contact with air permeable insulation* (IC models are also suitable for Non-IC installations)
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions FCC CFR Title 47 Part 15 Class A at 120/277V
- Contains no mercury or lead and RoHS compliant
- Photometric testing completed in accordance of IES LM-79-08
- Lumen maintenance projection in accordance of IES LM-80-08 and TM-21-11
- 1,000 and 1,500 lumen, 90 CRI, ICAT models may be used to comply with State of California Title 24 residential code, per JA8 certification standards
- May be used to comply with State of California Title 24 non-residential code as a dimmable LED luminaire
- ENERGY STAR® certified, reference certified light fixtures database

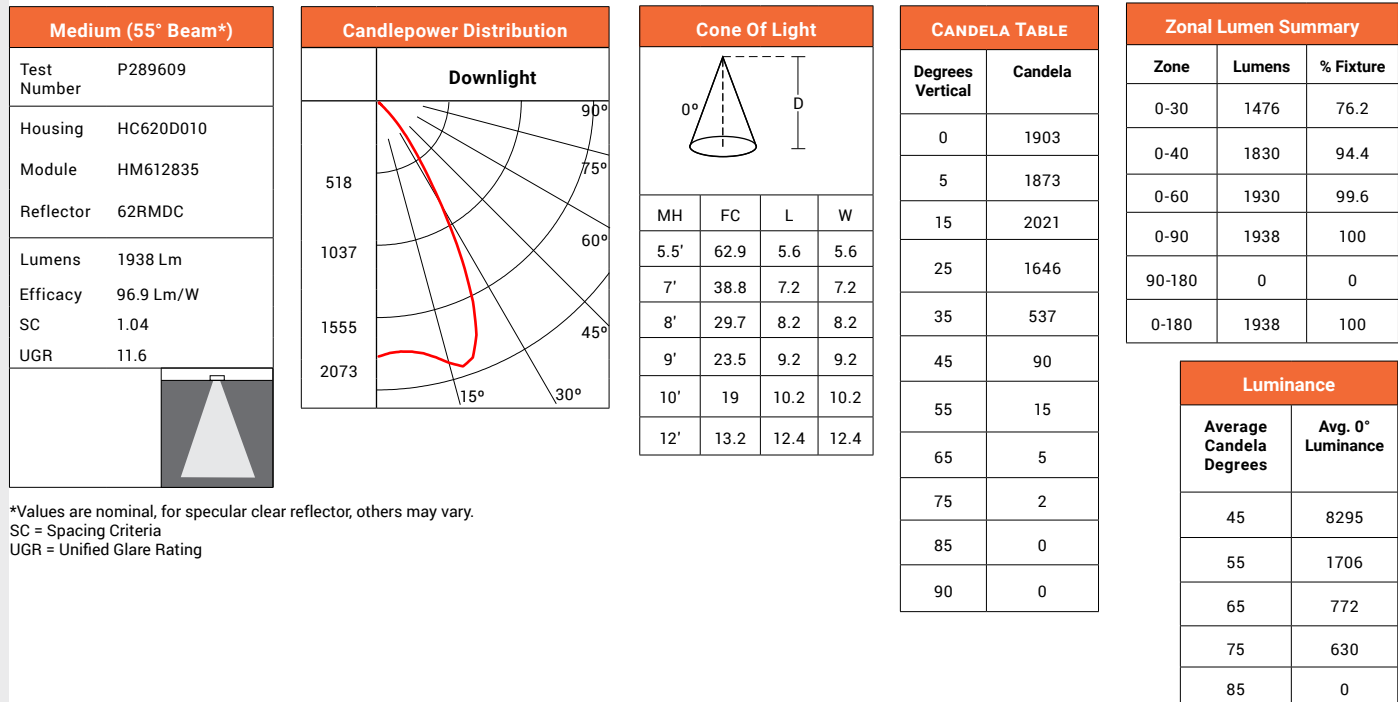  *Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013

### Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

## Photometric Data

### MEDIUM DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80CRI, 3500K

#### Medium (55° Beam*)

| | |
|---|---|
| Test Number | P289609 |
| Housing | HC620D010 |
| Module | HM612835 |
| Reflector | 62RMDC |
| Lumens | 1938 Lm |
| Efficacy | 96.9 Lm/W |
| SC | 1.04 |
| UGR | 11.6 |

#### Candlepower Distribution

**Downlight**

518
1037
1555
2073

90º 75º 60º 45º 30º 15º

*Values are nominal, for specular clear reflector, others may vary.
SC = Spacing Criteria
UGR = Unified Glare Rating

#### Cone Of Light

| MH | FC | L | W |
|---|---|---|---|
| 5.5' | 62.9 | 5.6 | 5.6 |
| 7' | 38.8 | 7.2 | 7.2 |
| 8' | 29.7 | 8.2 | 8.2 |
| 9' | 23.5 | 9.2 | 9.2 |
| 10' | 19 | 10.2 | 10.2 |
| 12' | 13.2 | 12.4 | 12.4 |

#### Candela Table

| Degrees Vertical | Candela |
|---|---|
| 0 | 1903 |
| 5 | 1873 |
| 15 | 2021 |
| 25 | 1646 |
| 35 | 537 |
| 45 | 90 |
| 55 | 15 |
| 65 | 5 |
| 75 | 2 |
| 85 | 0 |
| 90 | 0 |

#### Zonal Lumen Summary

| Zone | Lumens | % Fixture |
|---|---|---|
| 0-30 | 1476 | 76.2 |
| 0-40 | 1830 | 94.4 |
| 0-60 | 1930 | 99.6 |
| 0-90 | 1938 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 1938 | 100 |

#### Luminance

| Average Candela Degrees | Avg. 0° Luminance |
|---|---|
| 45 | 8295 |
| 55 | 1706 |
| 65 | 772 |
| 75 | 630 |
| 85 | 0 |

### Photometric Multipliers (Nominal Lumen Values)

| 1000 Lumen | 1500 Lumen | 2000 Lumen | 3000 Lumen | 4000 lumen |
|---|---|---|---|---|
| 0.52 | 0.72 | 1.00 | 1.44 | 2.02 |

Multipliers for relative lumen values with other series models.

### Color Finish Multipliers

| Finish code | C | H | W/WB | BB |
|---|---|---|---|---|
| Finish | Specular Clear | Semi-Specular | Matte White | Black Baffle |
| Multiplier | 1.00 | 0.91 | 0.92 | 0.84 |

Multipliers for relative lumen values with other color finishes.

### CCT Multipliers - 80CRI

| 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|
| 0.93 | 0.95 | 1.00 | 1.05 |

Multipliers for relative lumen values with other series color temperatures.

### CCT Multipliers – 90CRI

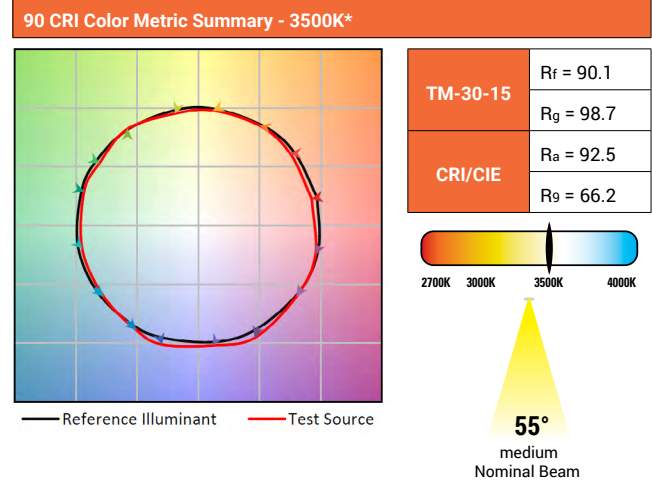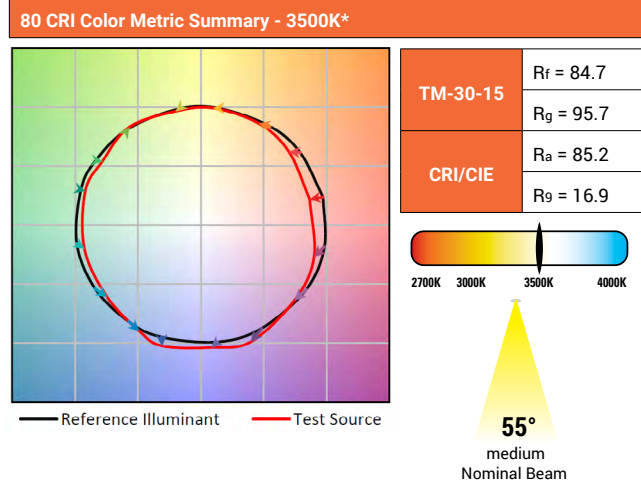| 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|
| 0.75 | 0.82 | 0.90 | 0.89 |

Multipliers for relative lumen values with other series color temperatures.

Note: Refer to IES files for more product data.

COOPER Lighting Solutions

## Energy & Performance Data

**COLOR METRICS - TM-30-15 & CRI/CIE (3500K)**

**80 CRI Color Metric Summary - 3500K\***



| TM-30-15 | $R_f$ = 84.7 |
| | $R_g$ = 95.7 |
| CRI/CIE | $R_a$ = 85.2 |
| | $R_9$ = 16.9 |

2700K 3000K 3500K 4000K

— Reference Illuminant  — Test Source

**55°** medium Nominal Beam

**90 CRI Color Metric Summary - 3500K\***



| TM-30-15 | $R_f$ = 90.1 |
| | $R_g$ = 98.7 |
| CRI/CIE | $R_a$ = 92.5 |
| | $R_9$ = 66.2 |

2700K 3000K 3500K 4000K

— Reference Illuminant  — Test Source

**55°** medium Nominal Beam

\* Color values are based on 61WDWB reflector, other finishes and field results may vary.

| Series | 1000 lumen | |
|---|---|---|
| Input Voltage 120-277VAC | 120V | 277V |
| Input Current (A) | 0.085 | 0.042 |
| Input Power (W) | 10.1 | 10.9 |
| In-rush Current (A) | 0.644 | 1.95 |
| In-rush Duration (ms) | 0.125 | 0.24 |
| THDi (%) | 8.6 | 15.6 |
| PF: | ≥ 0.90 | |
| (Nominal input 120-277VAC & 100% of rated output power) | | |
| Minimum starting temperature  -30°C (-22°F)\* | | |
| Sound Rating:  Class A standards | | |

| Series | 1500 lumen | |
|---|---|---|
| Input Voltage 120-277VAC | 120V | 277V |
| Input Current (A) | 0.119 | 0.055 |
| Input Power (W) | 14.2 | 14.9 |
| In-rush Current (A) | 0.212 | 0.85 |
| In-rush Duration (ms) | 0.28 | 0.32 |
| THDi (%) | 7.8 | 16.3 |
| PF: | ≥ 0.90 | |
| (Nominal input 120-277VAC & 100% of rated output power) | | |
| Minimum starting temperature  -30°C (-22°F)\* | | |
| Sound Rating:  Class A standards | | |

| Series | 2000 lumen | |
|---|---|---|
| Input Voltage 120-277VAC | 120V | 277V |
| Input Current (A) | 0.176 | 0.082 |
| Input Power (W) | 21.1 | 21.4 |
| In-rush Current (A) | 0.588 | 0.624 |
| In-rush Duration (ms) | 0.3 | 0.38 |
| THDi (%) | 8.8 | 11.2 |
| PF: | ≥ 0.90 | |
| (Nominal input 120-277VAC & 100% of rated output power) | | |
| Minimum starting temperature  -30°C (-22°F)\* | | |
| Sound Rating:  Class A standards | | |

| Series | 3000 lumen | |
|---|---|---|
| Input Voltage 120-277VAC | 120V | 277V |
| Input Current (A) | 0.228 | 0.102 |
| Input Power (W) | 27.2 | 27 |
| In-rush Current (A) | 0.898 | 1.7 |
| In-rush Duration (ms) | 0.36 | 0.38 |
| THDi (%) | 9.7 | 9.3 |
| PF: | ≥ 0.90 | |
| (Nominal input 120-277VAC & 100% of rated output power) | | |
| Minimum starting temperature  -30°C (-22°F)\* | | |
| Sound Rating:  Class A standards | | |

| Series | 4000 lumen | |
|---|---|---|
| Input Voltage 120-277VAC | 120V | 277V |
| Input Current (A) | 0.345 | 0.15 |
| Input Power (W) | 41.3 | 40.7 |
| In-rush Current (A) | 1.05 | 2.23 |
| In-rush Duration (ms) | 0.32 | 0.34 |
| THDi (%) | 10.06 | 14.01 |
| PF: | ≥ 0.90 | |
| (Nominal input 120-277VAC & 100% of rated output power) | | |
| Minimum starting temperature  -30°C (-22°F)\* | | |
| Sound Rating:  Class A standards | | |

**Notes:**
\* Emergency Battery packs are rated for a minimum starting temperature of 0°C.


COOPER
Lighting Solutions
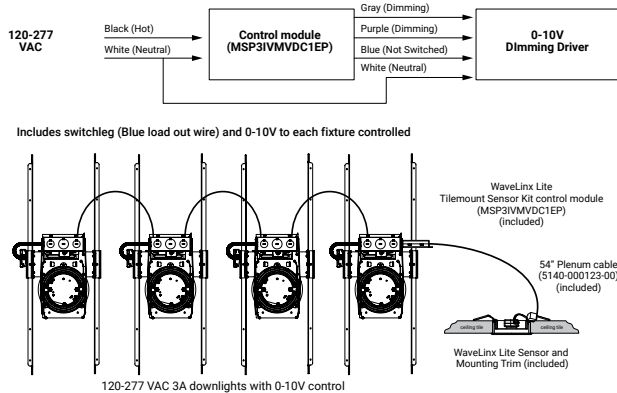
## Connected Systems
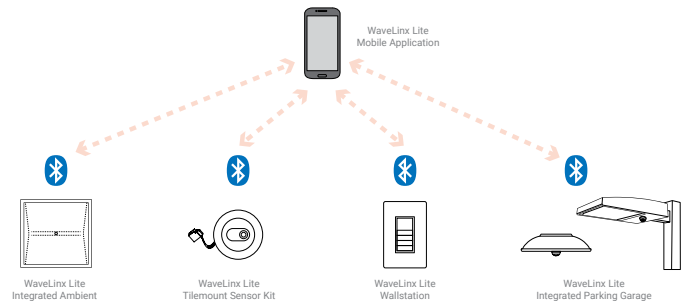
### WaveLinx Lite - WTK Tilemount Sensor

- Intuitive Android™ or Apple® iOS® app for basic system code compliant set up and configuration via Bluetooth
- Up to 28 unique areas per project site (WaveLinx Lite Bluetooth network)
- Up to 50 devices for an area, any one of 16 control zones, up to 6 occupancy sets, and custom lighting scenes
- Automatic occupancy or vacancy, sensor sensitivity, daylight dimming, etc. configurable through the app
- Refer to the WaveLinx system specifications for details

| Device Security | Manual Dimmer | Occupancy Sensor | Daylighting Control | Manually Switched ON/OFF | Tuning Control | Lumen Maintenance Control | Scenes |

#### WaveLinx Lite WTK Tilemount Wiring Diagram

120-277 VAC — Black (Hot) / White (Neutral) → Control module (MSP3IVMVDC1EP) → Gray (Dimming) / Purple (Dimming) / Blue (Not Switched) / White (Neutral) → 0-10V DImming Driver

**Includes switchleg (Blue load out wire) and 0-10V to each fixture controlled**

WaveLinx Lite Tilemount Sensor Kit control module (MSP3IVMVDC1EP) (included)

54" Plenum cable (5140-000123-00) (included)

WaveLinx Lite Sensor and Mounting Trim (included)

120-277 VAC 3A downlights with 0-10V control

#### WaveLinx Lite Bluetooth Enabled System

WaveLinx Lite Mobile Application

WaveLinx Lite Integrated Ambient

WaveLinx Lite Tilemount Sensor Kit

WaveLinx Lite Wallstation

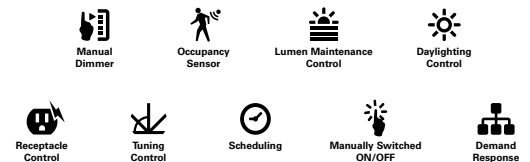WaveLinx Lite Integrated Parking Garage
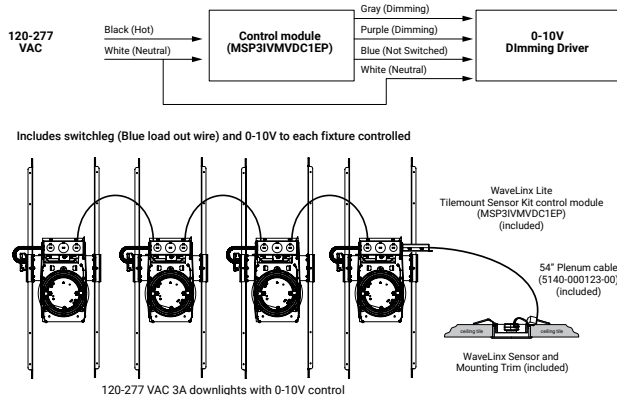
---

### WaveLinx Wireless – WTA Tilemount Sensor

- WaveLinx Wireless functionality configures zones and customizes settings from one secure mobile app
- Automatic code commissioning that meets the strictest codes
- Fixtures and sensors integrate with Wireless Area Controller, Wall Stations, and Control Devices
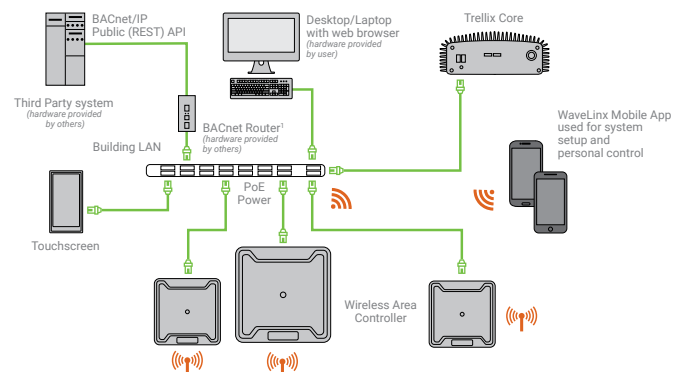- Stand-Alone Offices or Entire Building Network Installations

**Downlights with tilemount sensor wireless communication**
Highly efficient LED fixtures

**+**

**Wireless Area Controller**
Provides centralized coordination of multiple area control options

**+**

**Wireless Wall Station/Receptacle**
Provides customized wireless control of each area

**+**

**Mobile Applications**
Provides personalized, local control from a tablet or smartphone

#### WaveLinx mobile app settings

| Manual Dimmer | Occupancy Sensor | Lumen Maintenance Control | Daylighting Control |
| Receptacle Control | Tuning Control | Scheduling | Manually Switched ON/OFF | Demand Response |

#### WaveLinx Lite WTA Tilemount Wiring Diagram

120-277 VAC — Black (Hot) / White (Neutral) → Control module (MSP3IVMVDC1EP) → Gray (Dimming) / Purple (Dimming) / Blue (Not Switched) / White (Neutral) → 0-10V DImming Driver

**Includes switchleg (Blue load out wire) and 0-10V to each fixture controlled**

WaveLinx Lite Tilemount Sensor Kit control module (MSP3IVMVDC1EP) (included)

54" Plenum cable (5140-000123-00) (included)

WaveLinx Sensor and Mounting Trim (included)

120-277 VAC 3A downlights with 0-10V control

#### WaveLinx Wireless Trellix Building Management Integration

BACnet/IP Public (REST) API

Desktop/Laptop with web browser (hardware provided by user)

Trellix Core

Third Party system (hardware provided by others)

Building LAN

BACnet Router[1] (hardware provided by others)

Touchscreen

PoE Power

Wireless Area Controller

WaveLinx Mobile App used for system setup and personal control

## Non - Halo Commercial Open Frame Housing*

| Manufacturer | Brand | Series<br>Open Frame Models Only | Housing Aperture |
|---|---|---|---|
| Cooper Lighting Solutions | Halo | M700T | 7.0" (7-0") |
| Cooper Lighting Solutions | Halo | H600T | 7.0" (7-0") |
| Acuity Brands® | Lithonia Lighting® | LF6N, LP6N, 6HF, 6VF, 6VI | 7.0" (7-0") |
| Acuity Brands® | Juno® Elate™ | A6, P6, C6, M6 | 6.875" (6-7/8") |
| Acuity Brands® | Juno® | CV6, CH6, M6, MX6, TC906 | 6.875" (6-7/8") |
| Signify N.V. | Omega Lighting | OM6 | 6.625" (6-5/8") |
| Signify N.V. | Capri Lighting | CM6 | 6.75" (6-3/4") |
| Signify N.V. | Lightolier® Lytecaster | 1102P1, 1102F1, 1102FH*, 1100FT, 1102D1, 1102DH*, 1102T*, 1102HF | 6.8125" (6-13/16") |

*This is a representative list of non - Halo Commercial housings deemed capable of retrofit.  Models must be open frame versions of the respective series.  Information noted about these other manufacturers products are obtained from published information made available by the manufacturer and is deemed to be reliable, but has not been verified.  The specifications of these products and their conditions of use may change without notice to Cooper Lighting Solutions or any other user.  Cooper Lighting Solutions makes no specific recommendation on product selection and there are no warranties of performance or compatibility implied.
*Installer should ensure proper local and national electrical codes are followed; and that the application and conditions of use are per these and manufacturer guidelines.
*Installer is responsible to verify mechanical, dimensional, and site conditions are suitable for proper installation of the retrofit assembly.

Acuity Brands®, Juno®, Elate™, Lithonia Lighting®, Signify N.V. (formerly Philips Lighting N.V.), Lightolier®, Calculite, Lytecaster, Omega Lighting, Capri Lighting, and their product brand names, where identified above, are tradenames or trademarks of each respective company and Cooper Lighting Solutions makes no representations on these trademarks.