## DESCRIPTION

Recessed 6-inch LED downlight provides narrow, medium or wide distribution patterns ideal for general area lighting. Lumen options range from 1000 to 4000 lumens in color temperatures of $2700 \mathrm{~K}, 3000 \mathrm{~K}$, 3500 K , and 4000 K ; in 80 or 90 CRI . Luminaire is airtight and can be installed in new construction or below the finished ceiling in remodeling applications. Intended for healthcare, hospitality, office spaces, and institutional applications.

| Catalog \# | HC615D010 | Type |
| :--- | :--- | :---: |
| Project |  |  |
| Comments |  | Date |
| Prepared by |  |  |

## SPECIFICATION FEATURES

## Housing Frame

- Boat shaped galvanized steel plaster frame with adjustable plaster lip accommodates $1 / 2^{\prime \prime}$ to 1-1/2" thick ceilings
- May be installed in new construction; may be installed from below the finished (non-accessible) ceiling in remodeling (with mounting bars removed)
- Provided with (2) old work remodel clips to secure the frame to the ceiling


## Universal Mounting Bracket

- Mounting bracket adjusts 2 " vertically from above the ceiling or thru the aperture
- Use with the included mounting bars or with $1 / 2^{\prime \prime}$ EMT
- Removable to facilitate installation from below the finished ceiling


## Mounting Bars

- Captive pre-installed No Fuss ${ }^{\text {TM }}$ mounting bars lock to tee grid with screwdriver or pliers
- Centering mechanism allows for consistent positioning of fixtures


## LED Module

- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation
- Available in 80 or 90 CRI minimum, accuracy within 3 SDCM provides color uniformity
- 90 CRI option: R9>50 (refer to photometry section)
- Correlated color temperature options
- 2700K
- 3000K
- 3500K
- 4000K
- Passive thermal management achieves L70 at 60,000 hours in IC and non IC applications
- Integral diffuse lens provides visua shielding
- Integral connector allows quick connection to housing flex


## Lumen Options

- Nominal lumen values
- 1000 lm
- 1500 lm
- 2000 Im
- 3000 lm
- 4000 lm


## Reflector

- Self-flanged aluminum reflectors are available in narrow, medium or wide distribution patterns
- Medium distribution polymer non-conductive matte white reflector may be used to meet local codes for 'dead front' applications (Non-IC, 3000 lumen max.)
- Wall wash reflector features a rotatable insert assembly with integral linear spread lens for precise alignment of vertical illumination.
- Reflector attaches to LED module with (3) speed clamps
- Multiple painted or plated finishes are available


## Reflector / Module Retention

- Reflector / module assembly is securely retained in the housing with (2) torsion springs


## Driver

- Field replaceable constant current driver provides low noise operation
- UNV $120-277$ VAC $50 / 60 \mathrm{~Hz}$ input standard
- 347VAC $50 / 60 \mathrm{~Hz}$ input option (Canada only)
- Continuous, 1\%-100\% dimming with $0-10 \mathrm{~V}$ analog control
- Optional low voltage DC driver for use with DLVP distributed low voltage power system


## 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 Options

- WaveLinx - two options:
- Factory installed WaveLinx tile mount sensor kit
- Field installed WaveLinx accessory tile mount sensor kit.
- The WTA WaveLinx tile mount sensor kit offers daylight dimming PIR motion sensing control, and optional RLTS - Real Time Location Services. (Refer to WaveLinx system specifications.) The WTA WaveLinx kit includes control module that mounts on the luminaire electrical junction box via $1 / 2^{\prime \prime}$ knock-out, and tilemount sensor with direct-mount spring clips or for octagon ceiling box with included mounting bracket. (Field mount kit ordered and installed separately).
- Enlighted wireless tile mount sensor and control kit


## Junction Box

- Galvanized steel junction box
- 20 in $^{3}$ internal volume excluding voltage barrier
- 25 in $^{3}$ internal total volume
- Voltage divider for 0-10V dimming wires [occupies (1) $1 / 2{ }^{\prime \prime}$ pry-out space]
- Listed for (8) \#12 AWG (four in, four out) $90^{\circ} \mathrm{C}$ conductors and feed-thru branch wiring
- (3) $1 / 2$ " and (2) $3 / 4$ " trade size pryouts available
- (3) 4-port push wire nuts for mains voltage, with 1-port for fixture connection


## Compliance

- cULus Listed/Classified, wet location labeled for covered ceilings
- IP20 - Above finished ceiling; IP65-Below finished ceiling
- Non-IC rated 3000, 4000 lumen models. Insulation must be kept $3^{\prime \prime}$ from top and sides.
- IC rated 1000, 1500, 2000 lumen models are suitable for direct contact with air permeable insulation (also suitable for Non-IC)
- Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013
- 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 in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- 1000, 1500 and 2000 lumen 90CRI 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 ${ }^{\circledR}$ certified, reference certified light fixtures database


## Warranty

- Limited 5-year warranty, see website for details. www.cooperlighting.com/legal

ENERGY DATA

| Series | 1000 lumen |  |
| :--- | :---: | :---: |
| Input Voltage (VAC) | 120 V | 277 V |
| 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: <br> (Nominal input 120-277VAC \& 100\% of rated output power) |  |  |
| Minimum starting temperature $-30^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right)^{*}$ |  |  |
| Sound Rating: Class A standards |  |  |


| Series | 1500 lumen |  |
| :--- | :---: | :---: |
| Input Voltage (VAC) | 120 V | 277 V |
| 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: <br> (Nominal input 120-277VAC \& 100\% of rated output power) |  |  |
| Minimum starting temperature -30 ${ }^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right)^{*}$ |  |  |
| Sound Rating: Class A standards |  |  |


| Series | 2000 lumen |  |
| :--- | :---: | :---: |
| Input Voltage (VAC) | 120 V | 277 V |
| 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: | $\geq 0.90$ |  |

(Nominal input 120-277VAC \& 100\% of rated output power)
Minimum starting temperature $-30^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right)^{*}$
Sound Rating: Class A standards

| Series | 3000 lumen |  |
| :--- | :---: | :---: |
| Input Voltage (VAC) | 120 V | 277 V |
| 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: <br> (Nominal input 120-277VAC \& 100\% of rated output power) <br> Minimum starting temperature $-30^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right)^{*}$ <br> Sound Rating: Class A standards |  |  |


| Series | 4000 lumen |  |
| :--- | :---: | :---: |
| Input Voltage (VAC) | 120 V | 277 V |
| 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: | $\geq 0.90$ |  |
| (Nominal input 120-277VAC \& 100\% of rated output power) |  |  |
| Minimum starting temperature -30 ${ }^{\circ} \mathrm{C}\left(-22^{\circ} \mathrm{F}\right)^{*}$ |  |  |
| Sound Rating: Class A standards |  |  |

Notes:

* Emergency Battery packs are rated for a minimum starting temperature of $0^{\circ} \mathrm{C}$.


## DIMENSIONS



NEW CONSTRUCTION. LOW LUMEN
1000, 1500, AND 2000 LUMENS


High Lumen ( $\mathbf{3 0 0 0}$ \& 4000 Lumens)

| Distribution | Max. Module Height | Trim Height | LED Height |
| :---: | :---: | :---: | :---: |
| Narrow | $6.6^{\prime \prime}$ | $3.4^{\prime \prime}$ | $3.8^{\prime \prime}$ |
| Medium | $6.7^{\prime \prime}$ | $3.5^{\prime \prime}$ | $3.9^{\prime \prime}$ |
| Wide | $6.5^{\prime \prime}$ | $3.3^{\prime \prime}$ | $3.7^{\prime \prime}$ |
| Baffile | $6.5^{\prime \prime}$ | $3.3^{\prime \prime}$ | $3.7^{\prime \prime}$ |

*Max. height w/hanger bar bracket 4.2"

Low Lumen (1000, $\mathbf{1 5 0 0} \mathbf{~ \& ~} \mathbf{2 0 0 0}$ Lumens)*

| Max. Module Height | Trim Height | LED Height |
| :---: | :---: | :---: |
| $4.5^{\prime \prime}$ | $3.4^{\prime \prime}$ | $3.8^{\prime \prime}$ |
| $4.6^{\prime \prime}$ | $3.5^{\prime \prime}$ | $3.9^{\prime \prime}$ |
| $4.4^{\prime \prime}$ | $3.3^{\prime \prime}$ | $3.7^{\prime \prime}$ |
| $4.4^{\prime \prime}$ | $3.3^{\prime \prime}$ | $3.7^{\prime \prime}$ |

## Ordering Information

Sample Number: HC620D010REM7-HM612835-61MDC
A complete luminaire consists of a housing frame, LED module, and reflector (ordered separately)

| Mounting Frame | Lumens | Input / Control | Factory Installed Options | Accessories |
| :---: | :---: | :---: | :---: | :---: |
| HC6CP = 6" new construction and remodeler housing, CCEA Chicago Plenum rated | $10=1000$ lumens (nominal) <br> $15=1500$ lumens (nominal) <br> $20=2000$ lumens (nominal) <br> $\mathbf{3 0}=3000$ lumens (nominal) <br> $40=4000$ lumens (nominal) | $\begin{aligned} & \text { D010 = 120-277VAC } 50 / 60 \mathrm{~Hz} \\ & \text { O-10V analog 1\%-100\% } \\ & \text { dimming } \\ & \text { D010347 }=347 \mathrm{VAC} 50 / 60 \mathrm{~Hz} \\ & 0-1 \mathrm{~V} \text { analog } 1 \%-100 \%{ }^{1} \\ & \text { dimming (Canada only) }{ }^{1} \end{aligned}$ | REM7 = 7 watt emergency module with remote test / indicator light, use with D010 only 1 <br> REM14 = 14 watt emergency module with remote test / indicator light, use with D010 only ${ }^{1}$ <br> IEM7 = integral 7 watt emergency module with integral test / indicator light, use with D010 only ${ }^{1}$ <br> IEM14 = integral 14 watt emergency module with integral test / indicator light, use with D010 only 1 <br> BOD7ST $=7.5$ watt Bodine self-test diagnostic emergency module with remote test / indicator light, use with D010 only ${ }^{1}$ <br> LWTPD1 = factory installed Enlighted wireless tile mount sensor kit, use with D010 only ${ }^{1}$ <br> WTA=Factory installed WaveLinx tile mount sensor Kit1, 5 | HB128APK = L channel hanger bar, 26", pair (replacement) RMB22 = Adjustable wood joist mounting bars, pair, extend to 22" long <br> HSA6=Slope Adapter for 6" Aperture Housings, Specify Slope (refer to instructions for installation of housing and trim) <br> $\mathbf{H 3 4 7}=347$ to 120 V step down transformer, 75VA H347200 $=347$ to 120 V step down transformer, 200VA <br> PORLWTPD1 = Field installed Enlighted wireless sensor kit, use with D010 only ${ }^{1}$ <br> WTA=Factory installed WaveLinx tile mount sensor Kit 1, 5 |
|  |  | DLV = Distributed Low Voltage driver, $1 \%-100 \%$ dimming DLV for use with DLVP system only. Refer to DLVP low-voltage power module and DLVP specifications for details. ${ }^{1}$ | REMV7 = 7 watt emergency module with remote test / indicator light, use with DLV only 1, 2 <br> REMV14 = 14 watt emergency module with remote test / indicator light, use with DLV only 1, 2 <br> IEMV7 $=$ integral 7 watt emergency module with integral test / indicator light, use with DLV only 1, 2 <br> IEMV14 = integral 14 watt emergency module with integral test / indicator light, use with DLV only 1,2 |  |


| LED Module | Lumens | CRI/CCT |
| :---: | :---: | :---: |
| HM6 $=6$ " LED module | $\mathbf{1 2}=1000,1500$ and 2000 lumens (nominal), use with HC610*, HC615*, HC620* housings 34=3000 and 4000 lumens (nominal), use with HC630*, HC640* housings |  |


| Reflector | Distribution ${ }^{3}$ | Finish | Flange | Accessories |
| :---: | :---: | :---: | :---: | :---: |
| $61=6^{\prime \prime}$ conical reflector | ```ND = narrow 55' beam angle 0.97 SC MD = medium 60' beam angle 1.10 SC WD = wide 65' beam angle 1.28 SC RWW = rotatable wall wash with linear spread lens``` | $\begin{aligned} & \mathbf{C}=\text { Specular clear } \\ & \mathbf{H}=\text { Semi-specular clear } \\ & \mathbf{W}=\text { White } \end{aligned}$ | Blank = Polished flange standard with C \& H reflectors Blank = White flange standard with W reflector $\mathbf{W F}=$ White flange option available with C \& H reflectors | 61RWWPK = rotatable wall wash insert for 6 " reflector -replacement part kit |


| Baffle | Distribution ${ }^{3}$ | Finish | Flange Access | Accessories |
| :---: | :---: | :---: | :---: | :---: |
| $61=6 "$ baffle reflector | WD $=$ wide $65^{\circ}$ beam angle 1.28 SC (nominal) <br> RWW = rotatable wall wash with linear spread lens | $\mathbf{B B}=$ Black baffle <br> $\mathbf{W B}=$ White baffle | Blank = White flange standard with BB, \& WB <br> reflecto <br> $\mathbf{B F}=$ Black flange option available with $B B$ | 61RWWPK = rotatable wall wash insert for 6 " reflector -replacement part kit |
| IEM Reflector | Distribution ${ }^{3}$ | Finish | Flange | Integral Emergency |
| $61=6 "$ IEM reflector for integral emergency only | ND = narrow $55^{\circ}$ beam angle 0.97 SC <br> MD $=$ medium $60^{\circ}$ beam angle 1.10 SC <br> WD $=$ wide $65^{\circ}$ beam angle 1.28 SC | $\begin{aligned} & \mathbf{C}=\text { Specular clear } \\ & \mathbf{H}=\text { Semi-specular clear } \\ & \mathbf{W}=\text { White } \end{aligned}$ | Blank $=$ Polished flange standard with C \& H reflectors <br> Blank = White flange standard with W reflector <br> $\mathbf{W F}=$ White flange option available with C \& H reflectors | IEM = Reflector for integral emergency only |


| IEM Baffle | Distribution ${ }^{3}$ | Finish | Flange | Integral Emergency |
| :---: | :---: | :---: | :---: | :---: |
| $61=6 "$ IEM baffle reflector for integral emergency only | WD $=$ wide $65^{\circ}$ beam angle 1.28 SC (nominal) | BB $=$ Black baffle $\mathbf{W B}=$ White baffle | $\begin{aligned} & \text { Blank = White flange standard with } \mathrm{BB} \text {, } \\ & \& W B \\ & \mathrm{BF}=\text { Black flange option with } \mathrm{BB} \end{aligned}$ | $\mathbf{I E M}=$ Reflector for integral emergency only |


| Reflector | Distribution |  | Finish |
| :--- | :--- | :--- | :--- |
| 61PS $=6 "$ non-conductive <br> polymer 'dead front' <br> conical reflector | MD $=$ medium $60^{\circ}$ beam angle 1.10 SC (nominal) | W $=$ White | Blank $=$ White flange standard with W reflector |

## Notes:

1. Not available with CP version
2. ULus for U.S. only
3. Values are nominal, with specular clear reflector, other finishes and field results may vary.
4. 61PS reflector is for Non-IC environment only, and up to 3000 lumens only.
5. 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 WaveLin $\times$ system specifications)

## PHOTOMETRY

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


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


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


Multipliers for relative lumen values with other color finishes.

PHOTOMETRY
WALL WASH DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500 K


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 <br> White Baffle | Black Baffle |
| Multiplier | 1.00 | 0.91 | 0.92 | 0.84 |

CCT Multipliers - 80CRI

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

Multipliers for relative lumen values with other series color temperatures.
CCT Multipliers - 90CRI

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

Multipliers for relative lumen values with other series color temperatures.

Multipliers for relative lumen values with other color finishes.

## COLOR METRICS

TM-30-15 \& CRI/CIE (3500K)
$\mathbf{8 0}$ CRI Color Metric Summary - 3500K*

——Reference Illuminant ——Test Source

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


90 CRI Color Metric Summary - 3500K*


