Project	Catalog #	Туре	
Prepared by	Notes	Date	



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HALO Commercial

HCD Professional Direct Mount Commercial Downlighting System

8" • Round • Downlight/Wall Wash

The HCD System offers total flexibility as a modular downlighting system built on a series of Factory Preset or Selectable (Lumen/CCT) LED Module Kits that easily interchange with a complete fleet of reflectors. Available in both rounds and squares, in multiple sizes and beam distributions. HCD installs-from-below and mounts securely to any retrofit/remodel/new construction ceiling.

Typical Applications Healthcare • Hospitality • Education • Mixed Use • Services • Retail































Top Product Features

- 8" install-from-below retrofit/remodel or add mounting frames for new construction
- · All HCD Module Kits fit all HCD trims all sizes and shapes
- Factory preset or Field-Selectable Lumens: Options from 500 to 5000 lms (nominal)
- Factory preset or 5-color Field-Selectable CCT: 2700K, 3000K, 3500K, 4000K, 5000K
- · 90 CRI Standard
- Distributions: Precision-formed round reflectors Medium / Wide / Narrow (match HC Series)
- · Field-installed wall wash distribution lens kit available
- Finishes: Specular, Haze (Semi-Specular), Matte White (paintable), and Matte Black reflectors
- Dimming: 0-10V down to 1% (dim-to-off with WaveLinx) in UNV 120-277V; 347V (Canada)
- Emergency battery backup, WaveLinx Wireless PRO/LITE, and Chicago Plenum options available
- L80 at 60,000 hours (80% lumen maintenance at 60,000 hours)
- 5-year warranty











HALO Commercial

HCD 8" Round Direct Mount Downlights & Wall Washers

Fixture Order Information

A Complete Luminaire consists of 2 or 3* parts

	Sample Order Numbers:		
	1) Module Kit	2) Reflector	3*) Mounting Frame
Direct-Mount (New Construction, Retrofit, or Remodel)	HCDQCLS510CSD	HCD8TRWF	[No Frame]
New Construction with Frame	HCDQCLS510CSD	HCD8TRWF	HCD8MFRQC

LED Module Order Information (All Module Kits fit any HCD Reflector - 4", 6", or 8"; Round or Square)

Domestic Preferences (2)	Module Kit
[Blank]=Standard BAA=Buy American Act TAA=Trade Agreements Act	Junction Box Module Kit HCDJB = 8" Junction Box Module Kit: LED Engine & Driver on 20" flex conduit (Input wiring and connectors by installer).
TAA-Tidde Agreements Act	Quick Connect Module Kit HCDQC = 8" Quick Connect Module Kit: LED Engine & Driver on 20" flex conduit w/ 5-conductor quick connect on flex conduit & 1/2" snap-fitting for input knock out.
	Emergency Module Kit HCDE = 8" Emergency Module Kit: LED Engine & Driver with Battery Pack on 20" flex conduit w/ 6-conductor quick connect on flex conduit & 1/2" snap-fitting for input knock out. Emergency battery with test switch is attached to module kit driver box. Add emergency option code to model number: EM06 or EM14 Note: IEM reflector must be ordered separately for integral emergency.
	WaveLinx Wireless Module Kit w/ Quick Connect HCDW = 8" WaveLinx Wireless Module Kit w/ Quick Connect: LED Engine & Driver on 20" flex conduit w/ 5-conductor quick connect on flex conduit & 1/2" snap-fitting for input knock out. Add WaveLinx Wireless option code to model number: WPN (WaveLinx PRO) or WLN (WaveLinx LITE)
	Chicago Plenum Module Kit (9) HCDCP = 8" Chicago Plenum Module Kit: LED Engine & Driver on 18" CCEA compliant FMT and junction box with wiring for power and 0-10V dimming between LED Engine and driver box (Input FMT wiring and connectors to driver box, by others).
Notes	Notes
(2) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1938 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to <u>DOMESTIC_PREFERENCES</u> website for more information.	(5) Chicago Plenum (CP) module kits FMT conduit have larger bend radius, requiring deeper plenum height. Minimum plenum height 7.25" (2x8) with 24" grid/framing width for all Chicago Plenum module kits All - Module Kits Notes 1. Module Kits are universal for all reflectors: 2. For installation from below a finished ceiling, direct-mount through the ceiling opening. The installer must cutout a precise aperture opening for the appropriate reflector size.

	Selectable Options (0)				
Lumen Selectable*	Factory Preset Lumens**	Color Selectable*	D = Dimmable, UNV 120-277V, 50/60Hz		
LS510 = 500/750/1000lm (Preset 1000lm)	L05 = 500 lumen - IC	CS = 90CRI, selectable 2700K-3000K-3500K-4000K-5000K	0-10V 1%-100% dimming at 120-277V on 0-10V controls.		
Type IC, air permeable insulation contact	L07 = 750 lumen – IC	(Preset at 3500K)	Compatible with WaveLinx Wireless dim-to-off functionality.		
	L10 = 1000 lumen - IC				
LS1525 = 1500/2000/2500lm (Preset 2500lm)	L15 = 1500 lumen - Non-IC	Factory Preset CCT**	Canada Option		
Type Non-IC, insulation 3" spacing	L20 = 2000 lumen - Non-IC	927 = 90CRI, 2700K	D347 = Dimmable 347VAC 50/60Hz 0-10V 1%-100% dimming.		
	L25 = 2500 lumen - Non-IC L30 = 3000 lumen - Non-IC***	930 = 90CRI, 3000K	Available on HCDQC module kits only. Canada only. (1)		
LS3040 = 3000/3500/4000lm (Preset 4000lm)	L35 = 3500 lumen - Non-IC***	935 = 90CRI, 3500K	Callada Olliy. W		
Type Non-IC, Marked Spacing, see note below***	L40 = 4000 lumen- Non-IC***	940 = 90CRI, 4000K			
	L41 = 4000 lumen- Non-IC***	950 = 90CRI, 5000K			
LS4050 = 4000/4500/5000lm (Preset 5000lm)	L45 = 4500 lumen- Non-IC***				
Type Non-IC, Marked Spacing, see note below***	L50 = 5000 lumen- Non-IC***				
	Notes		Notes		
(0) Selectable Lumen and Selectable CCT must be specified toge	(1) Not available with CP models				
Factory Preset Lumen and CCT must be specified together - Fixed					
*Field-selected switch settings by installer accessed in hinged si **Factory preset individual switch settings secured under fixed of					
***3000/3500/4000, 4000/4500/5000lm	Factory preset individual switch settings secured under fixed cover. Torx screw on cover secures presets yet allows for re-set access if needed. Factory label notes preset lumen and CCT.				
Non-IC, Marked Spacing - Marked Spacing Center to Center of Adjacent Luminaires = 36"	/ - Center of Luminoire to Building Member - 10"	/ - Minimum quarkand = 0.5"			
- marked opacing Genter to Genter of Adjacent Luminaires = 30	/ - Genter of Luminane to Building Member = 18 /	/ = Willimum Overneau = 0.5			

Emergency Options (Add emergency suffix code option to HCDE emergency module kits only) EM06 = 6-watt self-test emergency battery with test switch for remote or integral test. Remote switchplate included, back box by others. Integral reflector order separately. Use with "D" driver only. Option only with HCDE module kits. (1)(3)(4) **EM14** = 14-watt self-test emergency battery with test switch for remote or integral test. Remote switchplate included, back box by others. Integral reflector order separately. Use with "D" driver only. Option only with HCDE module kits. (1)(3) WaveLinx Options (Add WaveLinx suffix code option to HCDW WaveLinx module kits only) WPN = WaveLinx PRO Wireless Node & Power Pack. Add WPN code to HCDW module kits. Option only with HCDW module kits. (9)(4) WLN = WaveLinx LITE Wireless Node & Power Pack. Add WLN code to HCDW module kits. Option only with HCDW module kits. (9)(4) Emergency Options with WaveLinx (Add emergency with WaveLinx suffix code option to HCDE emergency module kits only) (6) EM06WPN = 6-watt emergency with WaveLinx Pro Wireless Node EM06WLN = 6-watt emergency with WaveLinx LITE Wireless Node EM14WPN = 14-watt emergency with WaveLinx Pro Wireless Node EM14WLN = 14-watt emergency with WaveLinx LITE Wireless Node

Flex conduit w/ 5-conductor quick connects on each end. Extend connection between module kit and new construction frame.

HCDX06 = 6 ft. Extension Cable

HCDX12 = 12 ft. Extension Cable

HCDX20 = 20 ft. Extension Cable

Use with HCD4MFQC, HCD6MFQC & HCD8MFQC Quick Connect Mounting Frames only

Use with HCD468QC*, HCD468W* Quick Connect Module Kits only

Notes

Extension cables not compatible with HCD468E emergency or HCD468CP* Chicago Plenum

If using the WaveLinx models, the dimming wires in the quick connect and the building junction box should not be connected.

- (1) Not available with Chicago Plenum models
- (3) Not available with D347 (347V models)
- (4) Use with "D" driver
- (6) For Emergency Options with WaveLinx, order HCDE module kit

Trim Order Information

Domestic Preferences (2)	Reflectors	Туре	Finish	Emergency	Wall Wash Accessory Kits (Field Installed - Order Separately)
[Blank] =Standard BAA =Buy American Act TAA =Trade Agreements Act	Medium Reflector HCD8T = 8" Medium 70° Distribution Reflector Wide (Shallow) Reflector HCD81T = 8" Wide (Shallow) 85° Distribution Reflector* Narrow Reflector HCD82T = 8" Narrow 55° Distribution Reflector*	R = Round	C = Specular Clear CWF = Specular Clear / White Flange CBF = Specular Clear / Black Flange H = Haze (Semi-specular) / White Flange HBF = Haze (Semi-specular) / White Flange HBF = Haze (Semi-Specular)/Black Flange MW = Matte White (paintable) MWBF = Matte White/Black Flange MB = Matte Black	IEM = Reflector for use with integral emergency module kits only. Provides access hole for emergency test switch, if integral switch is desired. Use with HCDE emergency module kits.	Medium Wall Wash Kit HCD8TRLWW = 8" Round Lensed Wall Wash Kit Wide (Shallow) Wall Wash Kit HCD81TRLWW = 8" Wide (Shallow) Round Lensed Wall Wash Kit Narrow Wall Wash Kit HCD82TRLWW = 8" Narrow Lensed Wall Wash Kit
(2) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information.	Reflector notes: Reflectors work with all module kits Compatible with HCD8MFR* round aperture mounting frames Reflectors attach to module kits and install from below the ceiling opening with integral mousetrap springs Maximum ceiling thickness 1.5' Wall wash kits are accessories for field installation Direct-mount requires a precise aperture cutout 8' Round = 8.25' Retrofit & New			IEM Notes: Emergency battery with test switch is attached to module kit. Add emergency suffix code to HCDE model number: EM06 or EM14 "IEM reflector ordered separately	Wall wash kits are not available for IEM reflectors. For BAA/TAA wall wash option, add "WW" to the reflector catalog (example: TAA-HCD8TRCWW).

Accessories Order Information

Oversize Medium "Goof" Ring	Туре	1	Finish
HCD8G = 8" Goof Ring for Medium Reflectors Round - 8.25" MIN ceiling opening 9.75" MAX ceiling opening, 10.75" OD	R = Round	C = Specular Clear H = Haze (Semi-specular)	MW = Matte White (paintable) MB = Matte Black

Mounting Frames Order Information

Domestic Preferences (2)		Accessories		
[Blank]=Standard BAA=Buy American Act TAA=Trade Agreements Act	Basic New Construction Mounting Frames HCD8MFR = 8" Round mounting frame Ceiling cut-outs: Round 8.25"	<u>Description:</u> Basic mounting frame only, no additional junction box for through-wiring. (Thumb screws on frame for securing the Module Kit Driver-Box.) Install frame and LED Module kit together during rough-in phase. Installer supplies wire to Module Kit.		
	Junction Box New Construction Mounting Frames HCD8MFRJB = 8" Round mounting frame Ceiling cut-outs: Round 8.25"	Description: Mounting frame with Trade-Size Junction Box for through-wiring. Thumb screws on frame for securing the Module Kit Driver-Box. Install frame and LED Module kit together during rough-in phase. Installer provides wire to junction box and between junction box and Module Kit.		
	Quick Connect New Construction Mounting Frames HCD8MFRQC = 8" Round mounting frame Ceiling cut-outs: Round 8.25"	Description: Mounting frame with Trade-Size Junction Box for through-wiring and Quick Connect flex. Quick Conne has 5-conductor plug-ins for power and 0-10V dimming. (Thumb screws on frame for securing the Module Kit Driv Box.) Only frame is required at rough-in. Module Kit and Reflector installed via Quick Link during trim-out phase. Installer provides wire to mounting frame junction box only.		
	Chicago Plenum New Construction Mounting Frames HCD8MFRCP = 8" Round mounting frame Ceiling cut-outs: Round 8.25" Description: Chicago Plenum mounting frame with CCEA compliant Trade-Size Juntion box for through-with CCEA compliant Trade-Size Juntion box for through-with Screws on frame for securing the Module Kit Driver-Box.) Install frame and LED Module kit togeth rough-in phase. Installer provides wire to junction box and between junction box and Module Kit.			
Notes		Notes		
(2) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC. PREFERENCES website for more information.	New Construction Mounting Frame Notes: - Type-IC with low-lumen module kits 500-750-1000lm - Type Non-IC, Warked Spacing with mid/high-lumen 3000-2500lm - Type Non-IC, Marked Spacing with mid/high-lumen 3000-3500-4000lm and high-lumen 4000-4500-5000lm module kits (36" center-to-center, 18" center to building member, 0.5" minimum overhead spacing). - Chicago Plenum (CP) new construction mounting frames are CCEA compliant with pre-installed J-box for mains input, and Type Non-IC rated per CCEA			

HCD Module Kit & Mounting Frame Compatibility

Н	HCD Pro System downlights can be installed as retrofit,		Frameless	Mounting Frames				
re	model, direct-mount new construction.		Retrofit,	Basic	Junction Box	Quick Connect	Chicago Plenum	
trame new construction. All HCD Module Kits fit all HCD trims.		remodel, and new construction direct-mount						
	Junction Box (Base)		√ 1	√ 1	√ 2			
Module Kits	Quick Connect (includes EM & WLX options)			√ ₃	√ 4	√ 5		
	Chicago Plenum						√ 2	

- 1. Installer provide mains wiring & connection to Module Kit driver box
- 2. Installer provide mains wiring & connection to Frame junction box and/or Module Kit driver box
- 3. Frame and mains-half of provided quick connect installed before finished ceiling; module kit and trim installed after finished ceiling 4. Mains-half of quick connect can be field-installed in frame junction box, or connected directly to mains
- $5. \ Note: Mains-half of quick connect included with module kit will be recycled in this configuration \\$

Product Specifications

Module Kit & LED Engine

- For use in retrofit, remodel, and new construction mounting types.
- HCD Module Kits fit all 4", 6", and 8" round or square reflectors (order module kits and reflectors separately)
- Module kit LED engines attach to reflectors with three toolless lever clamps.
- Mousetrap springs on reflectors for direct-mount from below a finished ceiling, in retrofit, remodeling or in new construction mounting frames.
- LED engine aluminum heat sinks feature passive conduction of heat away from the LED array for optimal performance and long life
- Module kits include LED engine, driver junction box, and durable metal flex conduit; with quick-connect box on applicable models

Module Kits

- HCDJB Basic Junction Box Module Kit with LED Engine & driver box on 20" metal flex. Input wiring and connections to the driver box by installer.
- HCDQC Quick Connect Module Kit with LED Engine & driver box on 20" metal flex with 5-conductor quick-connect on a metal flex whip and 1/2" KO snap-fitting for mains terminations by others.
- HCDE Emergency Module Kit with LED Engine & driver box and battery pack & test switch on 20" metal flex with 6-conductor quick-connect on a metal flex whip and 1/2" KO snap-fitting for mains terminations by others.
 - Emergency battery pack and remote test switch are attached to module kit.
 - Add emergency suffix code option to catalog number: EM06 or EM14 (see Emergency Backup Options for details)
 - For emergency with WaveLinx Wireless add suffix code option to catalog number of HCDE module kits only: EM06WPN, EM06WLN, EM14WPN, EM14WLN
- HCDCP Chicago Plenum Module Kit with LED Engine & driver box on 18" CCEA compliant metal flex. CCEA compliant mains and dimmer wiring to HCDCP module kit driver box by installer.
- HCDW WaveLinx Module Kit with LED Engine & driver box on a 20" metal flex with 3-conductor quick-connect on a metal flex whip and 1/2" KO snap-fitting for mains terminations by others.
 - Add WaveLinx Wireless Node suffix code to catalog number: WPN - WaveLinx or WLN
 - WaveLinx Lite (see WaveLinx Connected Lighting website for details)

Module Kit Driver Box

- · Galvanized steel electrical box
- · Integral driver
- · 18 cubic inch internal volume
- Listed for six #12 AWG 90° C splice conductors, two in, two out plus ground
- (4) 1/2" trade size pry outs
- (3) 4-port push wire nuts for mains voltage with 1-port for fixture connection

New Construction Mounting Frames

- Galvanized steel plaster frame with integral bar hangers
- · Available in 4", 6", 8" Round and Square
- Integral 3/8" drywall/plaster collar for ease in position locating and ceiling cut-out
- Round aperture diameter sized for industry standard hole saws HCD8 = 8.25"
- Bar hanger vertical brackets adjust 2" vertically from above & below ceiling
- Bar hangers horizontal adjusting from 10-1/2" to 24-1/2" wide
- Setscrews provide positive horizontal and vertical locking
- Captive nail for use in standard dimensional and engineered framing lumber
- Through-hole in bar bracket ends for additional nail or screw attachment (nail or screw by others)
- Flange lip on bar bracket ends level platform in framing construction
- Integral grid clip attaches directly to T-grid
- All mounting frames have knurled thumb screws for securing module kit driver box, when needed

Mounting Frame Junction Box

- · Trade-size galvanized steel junction box
- · 25 in3 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

Quick Connect Box (available on HCDQC, HCDW, HCDE Module Kits)

- Galvanized steel enclosure on metal flex conduit whip end terminating with 1/2" KO snap-fitting for mains connections by others
- Tool-less access snap cover
- HCDQC (Quick Connect module kits) and HCDW (WaveLinx module kits): Quick connect 5-conductor mains & dimming in/out wiring on 3-conductor line voltage mains & 2-conductor 0-10V connectors
 - HCDW Wavelinx use only the 3-condutor line quick connections
- HCDE (Emergency module kits): Quick connect 6-conductor mains & dimming in/out wiring on 4-conductor line voltage + battery mains & 2-conductor 0-10V connectors

Emergency Battery Backup Options

- · Available on HCDE Emergency Module Kits
- Provide 90 minutes of standby egress lighting; consult national Life Safety Code and local code authority for specific requirements
- EM06 6-Watt self-test emergency battery with test switch
- EM14 14-W self-test emergency battery with test switch
- · Self-Test (self-diagnostic) standard on models
- Emergency test switch may be installed with included remote switchplate or integral in reflector
 - Electrical box, as required, for remote switchplate by installer
 - · IEM reflector ordered separately
- IEM not available on HCD41T 4", Shallow-Wide round reflectors.

LED

- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation
- · LED is 90 CRI minimum, R9 greater than 50
- LED color uniformity & accuracy within 3-step SDCM at 2700K and 50000K and 4-step SDCM at 3000K, 3500K, & 4000K
- Lumen maintenance 80% at 60,000 hours (L80 / 60,000 hours)

Lumen and CCT Color Selection

- Lumen and CCT selection switches are on the module kit driver box.
- Field-select switch settings by installer accessed under galvanized steel hinged snap-latch cover that protects lumen and CCT settings yet allows for quick changes

OR

- Factory ordered preset individual switch settings secure under galvanized steel fixed cover. Torx screw on cover secures presets yet allows for re-set access if needed. Factory label notes preset lumen and CCT. (See ordering information section for factory preset ordering codes.)
- 500/750/1000, 1500/2000/2500, 3000/3500/4000, 4000/4500/5000 field selectable lumens or factory preset lumen options
- 2700-3000-3500-4000-5000K field selectable CCT or factory preset CCT options
- Selectable lumen and CCT must be specified together, example: "LS510" lumen, "CS" CCT
- Factory preset lumen and CCT must be specified together, example: "L05" lumen, "935" CCT

Electronic Driver

- · Integrated in module kit driver box
- 120-277V 50/60 Hz constant current driver
- Continuous dimming from 100% to 1% with 0 -10V analog dimming controls
- · Dims to off after 1% level is reached
- Compatible with WaveLinx and WaveLinx Lite Wireless dim-to-off functionality

Canada Electronic Driver Option (Available on HCDQC module kits only)

- 347VAC 50/60Hz constant current driver
- Continuous dimming from 100% to 1%, with 0-10V analog dimming controls
- · Dims to off after 1% level is reached
- 347VAC driver option available on HCDQC quickconnect module kits only
- 347V driver is not currently available with WaveLinx or WaveLinx Lite Wireless.

Reflectors

- Direct-mount feature of HCD4-6-8 series requires a precise ceiling cut-out for secure round & square reflectors for module kit retention. See technical data for ceiling cut-out sizes.
- Three lever clamps and a key-slot for accurate positioning and securing reflector to the LED engine
- Integral mousetrap springs on reflector secure assembly for direct-mount from below the finished ceiling

continued on next page





Product Specifications

Medium Distribution Round Reflectors

- 4", 6", 8" round reflectors designed to fit all module kits
- · Round spun aluminum
- Available in specular and haze (semi-specular), matte white and matte black painted finishes.
 Matte white is paintable (overpaint by others)
- Prismatic lensed wall-wash accessory kits for field installation, in round and square reflectors.
- Reflector optical design delivers medium 1.0 spacing criteria and 55 degree cutoff (nominal, field results may vary by aperture and finish)
- Deep regressed LED source for low glare, UGR < 19
- Round accessory goof rings cover ceiling irregularities
- Goof rings for medium reflectors available in specular and haze (semi-specular), matte white and matte black painted finishes. Matte white is paintable (overpaint by others)

Narrow Distribution Round Reflectors

- 4", 6", 8" round reflector designs fit all module kits
- Narrow distribution dimensions equivalent to HALO Commercial HC series 41x-61x-81x reflectors, allowing use of HCD and HC series on the same job for consistent appearance
- · Round spun aluminum
- Available in specular and haze (semi-specular), matte white and matte black painted finishes.
 Matte white is paintable (overpaint by others)
- Deep regressed LED source for low glare, UGR < 19
- Prismatic lensed wall-wash accessory kits for field installation
- Narrow reflector optical design delivers wide 0.7 spacing criteria and 50 degree cutoff (nominal, field results may vary by aperture and finish)

Wide (Shallow) Distribution Round Reflectors

- 4", 6", 8" round shallow reflector designs fit all module kits
- Ultra-shallow for installation in reduced plenum heights
- Wide distribution optical design delivers wide 1.28 spacing criteria and 65°+ cutoff (nominal, field results may vary by aperture and finish)
- · Round spun aluminum
- Available in specular and haze (semi-specular), matte white and matte black painted finishes.
 Matte white is paintable (overpaint by others)
- Shallow regression of LED source, UGR < 23
- Shallow prismatic lensed wall-wash accessory kits 6" and 8" for field installation (shallow wall wash not available in 4")

Compliance

- cULus damp and wet location listed, covered ceilings only and IP65 rated below the ceiling (IP64 with lensed wall wash accessory)
- · Airtight per ASTM-E283
- IC listed LS510: 500, 750, 1000 lumen module kit - suitable for direct contact with air permeable insulation. IC models are also suitable for Non-IC installations. (Emergency battery module kits are not IC, Non-IC only)
- Non-IC listed LS1525: 1500-2000-2500 lumen, LS3040: 3000-3500-4000 lumen and LS4050: 4000-4500-5000 module kits. Insulation must be kept 3" from top and sides of luminaire.

- Marked spacing: 3000-3500-4000 lumen and 4000-4500-5000 lumen are Non-IC AND require marked spacing.
 - Center to Center Adjacent Luminaires = 36"
 - Center of Luminaire to Building = 18"
 - Minimum overhead = 0.5"
- Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions per FCC CFR Title 47 Part 15 Class A at 277V and Class B at 120V CAN ICES-005(B)/NMB-005(B) at 120VAC and CAN ICES-005(A)/NMB-005(A) at 277VAC
- · Contains no mercury or lead and RoHS compliant
- · Photometric testing per IES LM-79-08
- · Photometric file format per IES LM-63-19
- Lumen maintenance projections per IES LM-80-08 and TM-21-11
- ENERGY STAR® reference Certified Light Fixtures database (not applicable: matte black reflectors, WaveLinx. and 347V module kits)
- 500-750-1000 lumen, ICAT models certified to State of California Title 24, JA8. Refer to MAEDBS Database JA8 High Efficacy LED Lighting
- All models may be used to comply with State of California Title 24 non-residential code as a dimmable LED luminaire
- BAA and TAA product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to Cooper Lighting Solutions <u>DOMESTIC</u> <u>PREFERENCES</u> website for more information.

WaveLinx Wireless Connected Lighting

- WaveLinx PRO WPN wireless when used with wireless sensors can provide daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS -Real Time Location Services.
- WaveLinx LITE WLN wireless when used with wireless sensors may provide daylight dimming and PIR motion sensing, scene and grouping configuration.
- WPN and WLN wireless include wireless node for communication with WaveLinx wireless sensors and control devices (ordered separately from WaveLinx Controls group). Wireless node with integral power supply is factory installed on the module kit driver box, using one 1/2" KO.
- Refer to WaveLinx PRO and WaveLinx LITE specifications and guides for details.

Warranty

 Five year limited warranty, consult website for details. <u>www.cooperlighting.com/legal</u>

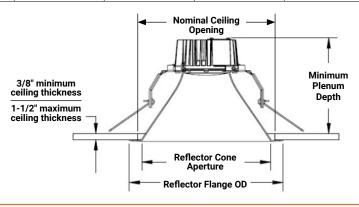


Technical Data

Ceiling Cutout Openings and Reflector Flange/Aperture

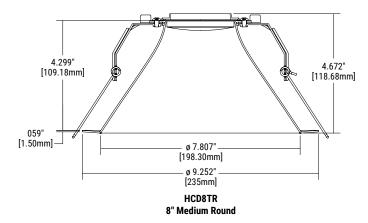
Ceiling Opening		Retrofit / Remodel & New Construction						
Type Reflectors		Distribution	Nominal Ceiling Opening	Nominal Ceiling Opening	Minimum Plenum Depth*	Reflector Flange OD	Reflector Cone Aperture	
			Remodel / Retrofit	New Construction	Depth		Aperture	
	HCD8TR	Medium			6.50"	9.25"	7.81"	
Round	HCD81TR	Wide	8.250" Standard Hole Saw	8.250" Standard Hole Saw	4.00"	9.50"	7.81"	
	HCD82TR	Narrow			6.50"	9.14"	7.78"	

^{* 12.5&}quot; of plenum height required for Chicago Plenum module kits installation.

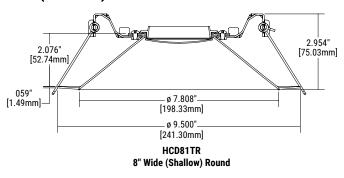


Dimensions - Reflectors

Medium Round Reflectors

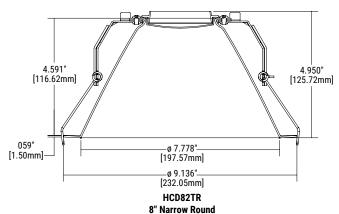


Wide (Shallow) Reflectors

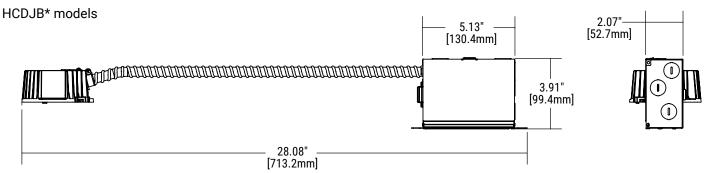


Narrow Reflectors

Flange & optic dimensions match HC Series Round Reflectors (61x)

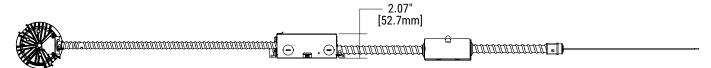


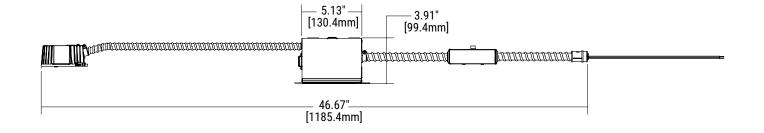
Junction Box Module Kit



Quick Connect Module Kit

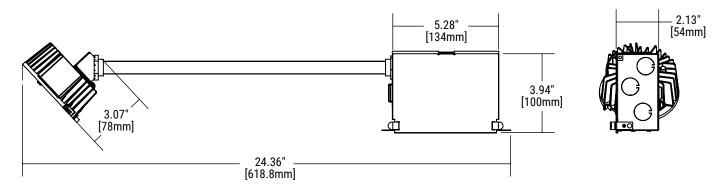
HCDQC* models HCDQC*347 models (Canada only)





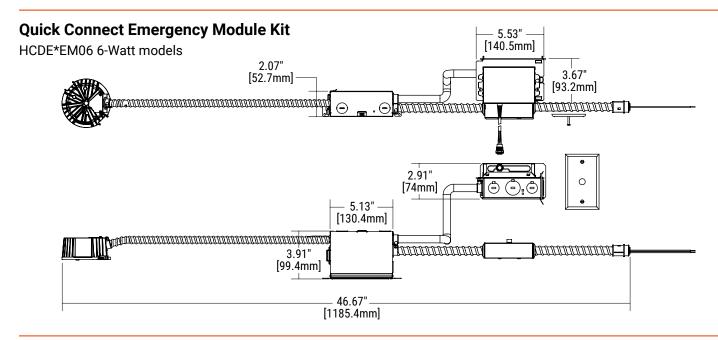
Chicago Plenum Module Kit

HCDCP* models

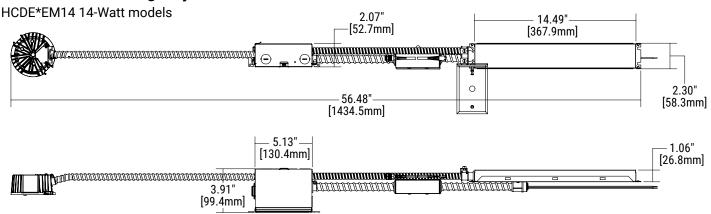




Dimensions - Module Kits

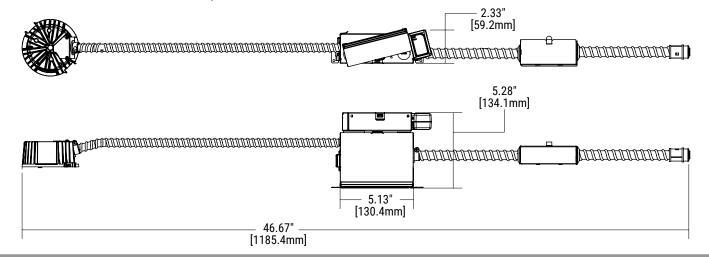


Quick Connect Emergency Module Kit



Quick Connect WaveLinx Wireless Module Kit

HCDW*WPN WaveLinx PRO models | HCDW*WLN WaveLinx LITE models

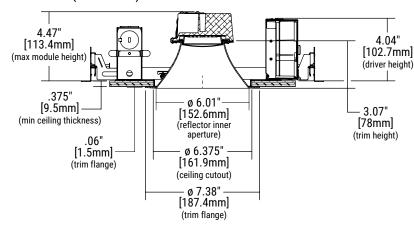


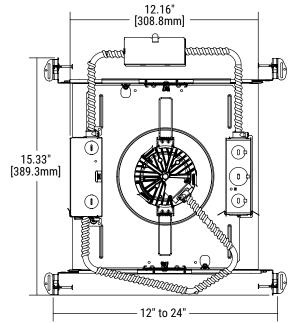


Dimensions - Mounting Frame + Module Kit + Reflector

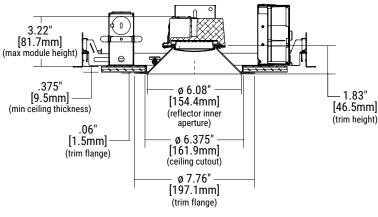
6" New Construction - Round

Medium (HCD6TR*)





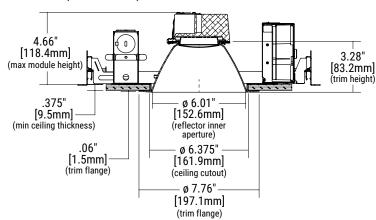
Wide (Shallow) (HCD61TR*)



Model	Distribution	Max. Module Height	Trim Height	Trim Flange
HCD62TR	Narrow	4.66"	3.28"	7.76"
HCD6TR	Medium	4.47"	3.07"	7.38"
HCD61TR	Wide	3.22"	1.83"	7.76"

^{*} Max. height with hanger bar bracket 4.0".

Narrow (HCD62TR*)



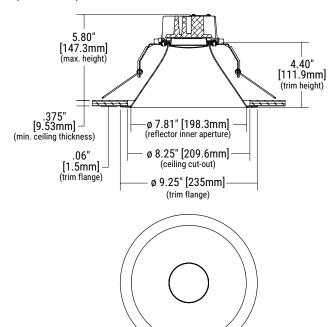
Dimensions - Module Kit + Reflector

8" Retrofit - Medium Round Reflector & Oversized Goof Ring

(Rings designed for optimum fit with medium distribution series reflectors, but may be used with others as noted below)

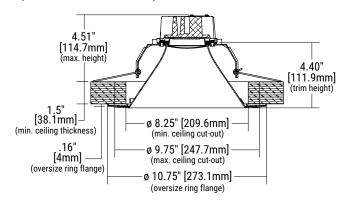
Medium

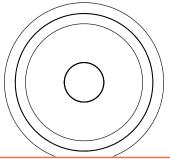
(HCD8TR*)



Medium + Goof Ring

(HCD8TR* + HCD8GR*)





8" Retrofit - Wide (Shallow) Round Reflector & Narrow Round Reflector

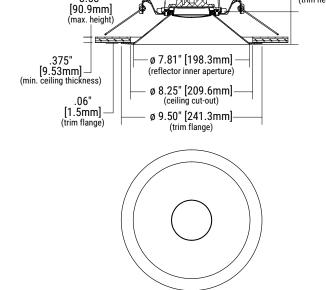
2.19" [55.7mm]

(trim height)

Wide (Shallow)

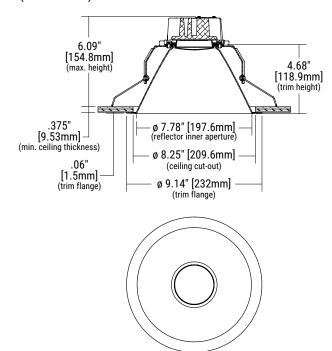
3.58"

(HCD81TR*)



Narrow

(HCD82TR*)



Energy Data

500 LM	120V	277 V	347V
Input Current (A)	0.053A	0.025A	0.018A
Input Power (W)	6.34W	6.47W	5.86W
Inrush (A)	3.7A	9.5A	1.05A
Inrush Duration (ms)	0.015ms	0.011ms	0.050ms

Total Energy Data				
750 LM	120V	277V	347V	
Input Current (A)	0.080A	0.036A	0.026A	
Input Power (W)	9.61W	9.76W	8.68W	
Inrush (A)	3.7A	9.5A	1.05A	
Inrush Duration (ms)	0.015ms	0.011ms	0.050ms	

1000 LM	120V	277V	347V	
Input Current (A)	0.104A	0.046A	0.033A	
Input Power (W)	12.54W	12.61W	11.12W	
Inrush (A)	3.7A	9.5A	1.05A	
Inrush Duration (ms)	0.015ms	0.011ms	0.050ms	

120V	277V	347V
0.131A	0.060A	0.048A
15.68W	15.84W	15.71W
11.5A	22.8A	3.3A
0.004ms	0.003ms	0.034ms
	0.131A 15.68W 11.5A	0.131A 0.060A 15.68W 15.84W 11.5A 22.8A

2011 Elicity Data						
2000lm	120V	277V	347V			
Input Current (A)	0.173A	0.077A	0.073A			
Input Power (W)	20.77W	20.9W	20.76W			
Inrush (A)	11.5A	22.8A	3.3A			
Inrush Duration (ms)	0.004ms	0.003ms	0.034ms			

2500lm	120V	277V	347V	
Input Current (A)	0.216A	0.095A	0.077A	
Input Power (W)	25.91W	25.88W	25.82W 3.3A	
Inrush (A)	11.5A	22.8A		
Inrush Duration (ms)	0.004ms	0.003ms	0.034ms	

3000lm	120V	277V	347V	
Input Current (A)	0.255A 0.116A		0.093A	
Input Power (W)	30.5W	30.6W	29.93W	
Inrush (A)	12.5A	30A	3.9A	
Inrush Duration (ms)	0.005ms	0.004ms	0.065ms	

40W Energy Data							
3500lm 120V 277V 3:							
Input Current (A)	0.3A	0.135A	0.108A				
Input Power (W)	35.9W	36.18W	34.85W				
Inrush (A)	12.5A	30A	3.9A				
Inrush Duration (ms)	0.005ms	0.004ms	0.065ms				

4000lm	120V	277V	347V
Input Current (A)	0.338A	0.151A	0.121A
Input Power (W)	40.45W	40.45W	39.65W
Inrush (A)	12.5A	30A	3.9A
Inrush Duration (ms)	0.005ms	0.004ms	0.065ms

4000lm	120V	277 V	347V
Input Current (A)	0.336A	0.151A	0.127A
Input Power (W)	40.21W	40.25W	39.83W
Inrush (A)	15.9A	38A	3.7A
Inrush Duration (ms)	0.005ms	0.004ms	0.075ms

JOW Lifelyy Data							
4500lm	120V	277V	347V				
Input Current (A)	0.382A 0.17A		0.192A				
Input Power (W)	45.63W	45.74W	44.93W				
Inrush (A)	15.9A	38A	3.7A				
Inrush Duration (ms)	0.005ms	0.004ms	0.075ms				

5000lm	120V	277 V	347 V	
Input Current (A)	0.431A 0.189A		0.154A	
Input Power (W)	50.75W	50.77W	49.64W	
Inrush (A)	15.9A	38A	3.7A	
Inrush Duration (ms)	0.005ms	0.004ms	0.075ms	

Energy Data - All Drivers							
Frequency (Hz)	50/60Hz						
THD %	≤20%						
PF	≥0.90						
Min start temp*	-40°						
T Ambient	35°						
Sound Rating**	≤22dba						

^{**} Sound rating: Max at 1 ft at any dimming level.



^{*} Emergency Battery packs are rated for Non-Insulated ceiling installation, and have a minimum starting temperature of 0°C.

Lumen Data - 8-inch HCD8

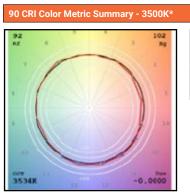
Values based on medium distribution haze (semi-specular) finish reflector; field results and alternate finishes may vary. (Refer also to finish multipliers in photometry.) Photometric lab testing per IES LM-79-08; field results may vary.

HCD8			270	OK .	300	OK .	350	00K	400	OOK	500	OK C
Module Kit Lumen Range	Lumen Selected	Wattage	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
LS510	500	5.0	524	105	535	107	543	109	550	110	559	112
LS510	750	7.5	776	103	791	106	803	107	815	109	827	110
LS510	1000	10.0	1008	101	1028	103	1044	104	1058	106	1074	107
LS1525	1500	15.0	1533	102	1564	104	1587	106	1610	107	1634	109
LS1525	2000	20.0	2005	100	2044	102	2075	104	2104	105	2135	107
LS1525	2500	25.0	2440	98	2488	100	2526	101	2561	102	2599	104
LS3040	3000	28.5	2990	105	3048	107	3095	109	3138	110	3185	112
LS3040	3500	33.5	3440	103	3507	105	3561	106	3611	108	3664	109
LS3040	4000	38.5	3867	100	3943	102	4003	104	4059	105	4119	107
LS4550	4000	38.0	3805	100	3880	102	3939	104	3995	105	4054	107
LS4550	4500	44.0	4209	96	4291	98	4357	99	4418	100	4483	102
LS4550	5000	48.0	4590	96	4680	98	4752	99	4818	100	4889	102

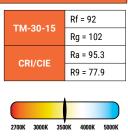
HCD8 WallWash			270)0K	300	ок	350	00K	400	00K	500)0K
Module Kit Lumen Range	Lumen Selected	Wattage	Delivered Lumens	LPW								
LS510	500	5.0	522	104	532	106	540	108	548	110	556	111
LS510	750	7.5	772	103	787	105	799	107	811	108	823	110
LS510	1000	10.0	1003	100	1023	102	1038	104	1053	105	1068	107
LS1525	1500	15.0	1526	102	1556	104	1580	105	1602	107	1625	108
LS1525	2000	20.0	1995	100	2034	102	2065	103	2094	105	2125	106
LS1525	2500	25.0	2428	97	2476	99	2514	101	2549	102	2586	103
LS3040	3000	28.5	2975	104	3033	106	3080	108	3123	110	3169	111
LS3040	3500	33.5	3423	102	3490	104	3543	106	3593	107	3646	109
LS3040	4000	38.5	3848	100	3924	102	3983	103	4039	105	4099	106
LS4550	4000	38.0	3786	100	3861	102	3920	103	3975	105	4034	106
LS4550	4500	44.0	4188	95	4270	97	4335	99	4396	100	4461	101
LS4550	5000	48.0	4567	95	4657	97	4728	98	4794	100	4865	101

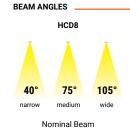
To estimate lumen output in emergency mode, multiply nominal battery wattage by LPW. Example: 6W x 115 LPW = 690 lumens.

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



___ Test Source





* Color values are based on HCD42TRMW reflector, other finishes and field results may vary.



Reference Illuminant

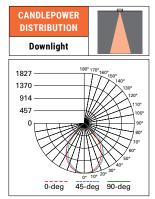
Photometric Data



Note: Refer to IES files for specific tested values & data

8" ROUND - MEDIUM DISTRIBUTION - HAZE FINISH, 2500 LUMEN MODEL, 90 CRI, 3500K

8" ROUND					
Test Number	P776182				
Module Kit	HCDJBLS1525CSD				
Reflector	HCD8TRH				
Lumens	2526 Lm				
Efficacy	101 Lm/W				
SC	1.08				
UGR	14				



CONE OF LIGHT							
000							
МН	FC	L	W				
5.5'	60.3	5.9	5.9				
7'	37.2	7.5	7.5				
8'	28.5	8.6	8.6				
9'	22.5	9.6	9.7				
10'	18.2	10.7	10.8				
12'	12.7	12.9	12.9				

CANDELA TABLE					
Degrees Vertical	Candela				
0	1822				
5	1806				
15	1673				
25	1417				
35	1033				
45	329				
55	30				
65	13				
75	5				
85	1				
90	0				

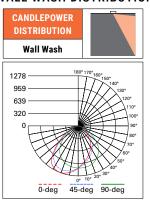
ZONAL LUMEN SUMMARY							
Zone	Lumens	% Fixture					
0-30	1316	52.1					
0-40	2002	79.3					
0-60	2503	99.1					
0-90	2526	100					
90-180	0	0					
0-180	2526	100					

LUMINANCE					
Average Candela Degrees	Average 0° Luminance				
45	14201				
55	1602				
65	961				
75	625				
85	350				

Values are nominal for haze (semi-specular) reflectors, other may vary. SC = Spacing Criteria UGR = Unified Glare Rating

8" ROUND - MEDIUM WALL WASH DISTRIBUTION - HAZE FINISH, 2500 LUMEN MODEL, 90 CRI, 3500K

8" ROUND WALL WASH					
Test Number	P776187				
Module Kit	HCDJBLS1525CSD				
Reflector	HCD8TRH - HCD8TRLWW				
Lumens	2514 Lm				
Efficacy	100.5 Lm/W				
sc	1.27				



CANDELA TABLE						
Degrees Vertical	Candela					
0	1075					
5	991					
15	846					
25	701					
35	532					
45	353					
55	224					
65	130					
75	54					
85	10					
90	0					

ZONAL LUMEN SUMMARY							
Zone	Lumens	% Fixture					
0-30	849	33.8					
0-40	1385	55.1					
0-60	2220	88.3					
0-90	2514	100					
90-180	0	0					
0-180	2514	100					

LUMINANCE					
Average Candela Degrees	Average 0° Luminance				
45	15241				
55	11896				
65	9406				
75	6417				
85	3328				

Values are nominal for haze (semi-specular) reflectors, other may vary. SC = Spacing Criteria UGR = Unified Glare Rating

	SINGLE UNIT FOOTCANDLES								
	2.5' from wall (distance from fixture along wall)								
	1	13.4	9.6	4.6	1.9	0.8	0.4	0.2	
	2	20.3	16.1	9	4.3	2	1	0.5	
	3	18.4	15.9	11	6.2	3.2	1.7	0.9	
	4	14	12.6	9.7	6.6	4	2.3	1.3	
	5	9.7	9	7.5	5.6	3.9	2.5	1.6	
	6	6.7	6.4	5.5	4.4	3.4	2.4	1.7	
	7	4.7	4.6	4.1	3.5	2.8	2.1	1.6	
	8	3.4	3.3	3.1	2.7	2.3	1.8	1.4	
	9	2.6	2.5	2.3	2.1	1.8	1.5	1.2	
,	10	2	1.9	1.8	1.7	1.5	1.3	1.1	

MULTIPLE UNIT I					
2.5' from wall (Distance from fixture along wall) 3 —					
1	15.6	14.2	15.3		
2	25	25.8	24.6		
3	25.1	27.8	24.6		
4	20.8	22.9	20.5		
5	15.5	16.9	15.3		
6	11.3	12.1	11.1		
7	8.3	8.8	8.2		
8	6.2	6.5	6.1		
9	4.7	4.9	4.7		
10	3.7	3.8	3.6		

	2.5' from wall (Distance from fixture along wall) 4				
14.4	9.7	14.2			
22.6	18.6	22.3			
22	22.5	21.7			
18.2	19.7	17.9			
13.8	15.1	13.6			
10.2	11.2	10.1			
7.6	8.3	7.5			
5.8	6.2	5.7			
4.4	4.7	4.4			
3.5	3.7	3.4			

Photometric Multipliers (Nominal Lumen Values)

500 Lumen	750 Lumen	1000 Lumen	1500 Lumen	2000 Lumen	2500 Lumen	3000 Lumen	3500 Lumen	4000 Lumen	4000 Lumen	4500 Lumen	5000 Lumen
0.21	0.32	0.41	0.63	0.82	1.00	1.23	1.41	1.58	1.56	1.72	1.88

Multipliers for relative lumen values with other series models.

Color Finish Multipliers

Finish code	Finish code C Finish Specular Clear Multiplier 1.08		W/WB	BB	
Finish			Matte White	Matte Black	
Multiplier			0.94	0.59	

Multipliers for relative lumen values with other color finishes.

CCT Multipliers - 90CRI

2700K	3000K	3500K	4000K	5000K
0.97	0.98	1.00	1.01	1.03

Multipliers for relative lumen values with other series color temperatures.

Note: To estimate lumen output in emergency mode, multiply the nominal battery wattage by the LPW of the fixture.

Connected Solutions



WaveLinx LITE Wireless Node - WLN

WaveLinx LITE devices only compatible with the WaveLinx LITE system.

- · 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
- · Refer to the WaveLinx system specifications for details

WaveLinx mobile app settings







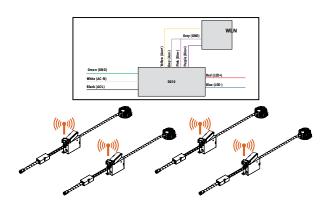








WaveLinx LITE Wireless Node (WLN) Wiring Diagram





Corgan Lighting Students Congan Lighting Students The Congan Lig

WaveLinx PRO Wireless Node - WPN

WaveLinx PRO devices only compatible with the WaveLinx PRO system.

- · 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 WaveLinx Area Controller, Wall Stations, and Control Devices
- · Stand-Alone Offices or Entire Building Network Installations



WaveLinx mobile app settings









eptacle

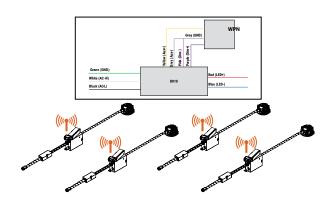




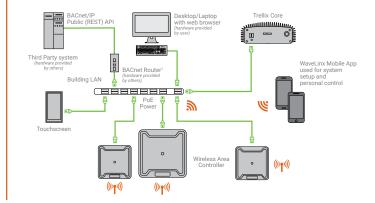




WaveLinx PRO Wireless Node (WPN) Wiring Diagram



WaveLinx CORE Building Management Integration





www.cooperlighting.com