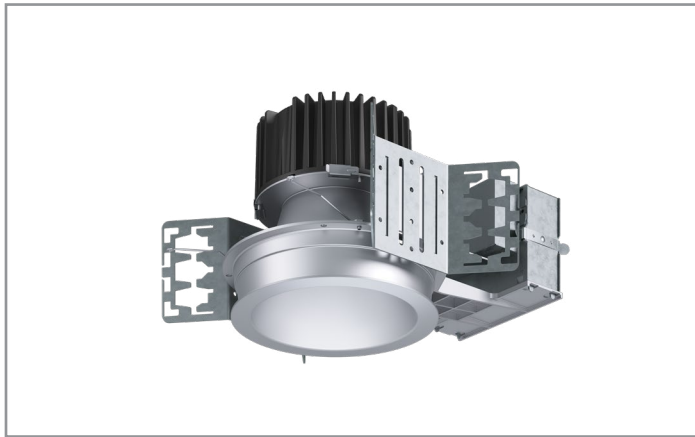| Project		Catalog #		Type	
Prepared by		Notes		Date	

Portfolio

LD4D | EU4D | 4LB
VividTune and BioUp

4" Round, New Construction Downlight
with High Center Beam Optics
Tunable White BioUp and dim to warm
800-3500 Lumens

Typical Applications Office • Education • Healthcare • Hospitality •
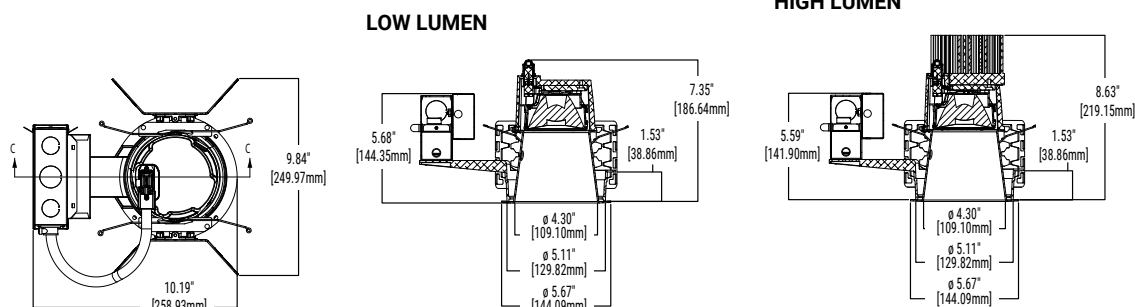Retail • Code-Compliance Areas • Sports Venues

Interactive Menu

UL CERTIFIED · Efficiency Standards T24 Can be used to comply with Title 24 Part 6 LED Enclosed Light Source Requirements (JA8) · RoHS COMPLIANT · CHICAGO PLENUM APPROVED

wet location · WaveLinx LITE · WaveLinx PRO · powered by fifthlight technology

D2W™ · VividTune color tuning solutions · BioUp Melanopic Lighting · BAA BUY AMERICAN ACT COMPLIANT OPTIONS AVAILABLE · TAA TRADE AGREEMENTS ACT COMPLIANT OPTIONS AVAILABLE

Top Product Features

- 800-3500 lumens
- Precision interchangeable optics
- Easy disconnect for LED engine replacement and installation
- Optional snap in driver for ease of replacement
- Standard 0-10V driver dims to 1%
- D2W™ option from 3000K to 1850K
- Tunable White CCT range: W2N = 2700K to 6500K or 2000K to 5000K / BioUp = 2700K to 5000K
- Options to meet Buy American and other domestic preference requirements

Dimensional and Mounting Details

LOW LUMEN

HIGH LUMEN

9.84" [249.97mm]
10.19" [258.93mm]

5.68" [144.35mm]
7.35" [186.64mm]
1.53" [38.86mm]
ø 4.30" [109.10mm]
ø 5.11" [129.82mm]
ø 5.67" [144.09mm]

5.59" [141.90mm]
8.63" [219.15mm]
1.53" [38.86mm]
ø 4.30" [109.10mm]
ø 5.11" [129.82mm]
ø 5.67" [144.09mm]

CLICK HERE dimension information

*T24 and RoHS are self-tested by Cooper Lighting Solutions. Not a third party certification.

COOPER Lighting Solutions
a Signify business

Single Line Order Information

SAMPLE ORDER NUMBER: **LD4D15R25D2WD010DP1H**

Invoice will indicate separate fixture components (housing, trim, module) which will ship complete from a single CLS facility in separate cartons.
To receive separate components (housing, trim, module) shipment, click on the "Multi-Line Ordering Information Option" button to the right.

Housing	Lumen [1]	Optic		Color Control	CCT [20]	Optic Position
LD4D=LED Downlight 4" Nominal Aperture **LD4DCP**=LED Downlight 4" Nominal Aperture, Chicago Plenum For BAA or TAA use Multi-line Ordering	**08**=800 lumens [27] **10**=1000 Lumens [28] **15**=1500 Lumens **20**=2000 Lumens **25**=2500 lumens **30**=3000 Lumens [10] **35**=3500 lumens [10]	**R25**=25° **R30**=30° **R35**=35° **R40**=40° **R45**=45°	**R50**=50° **R55**=55° **R60**=60° **R65**=65° **R70**=70°	**D2W**=Dim to warm for 800-2500 lumens; 90CRI, 1850K-3000K **W2N2765**=Tunable White for 1000-3500 lumens, 2700K-6500K (D5LT & DE010 drivers only), 90CRI **W2N2050**=Tunable White for 1000-3500 lumens, 2000K-5000K (D5LT & DE010 drivers only), 90CRI **B2750**=BioUp 2700K-5000K, 800-2500 lumens (D5LT & DE010 drivers only) **B**=BioUp static CCT, for use with 3500K, 4000K and 5000K, 800-2500 lumens (D5LT & DE010 drivers only)	**Static BioUp** **35**=3500K **40**=4000K **50**=5000K	**Blank**=Engine accepts optic only (preferred if media will not be used) **2M**=Engine accepts up to 2 lenses or media (optic is recessed in engine)

Voltage	Driver	Driver Options	Hanger Bars
Dim-to Warm **Blank**=120-277V 800 lumens **1**=120V 1000-2500 lumens **2**=277V 1000 to 2500 lumens **3**=347V (D010 driver 800-2500 lumens) Limited to 800 lumens with remote drver	**Dim-to Warm** **D010**=0-10V 1% dimming **D010TR**=0-10V or (120V) phase cut 1% dimming **DE010**=0-10V linear 0.1% dimming **D5LT**=DALI T6 Logarithmic 0.1% Dimming **DMX**=DMX/RDM Logarithmic 0.1% Dimming [14] **DMXC5**=DMX/RDM Logarithmic 0.1 % Dimming with RJ45 connection [14] **DLE**=Lutron Ecosystem 1-100% dimming **DLVP**=Low voltage dimming 1-100% for use with DLVP system [3]	**Blank**=Integral driver **RD100**=Remote 100ft [3] [33] **RD75**=Remote 75ft [3] [33] **RD50**=Remote 50ft [3] [33] **RD25**=Remote 25ft [3] **RD15**=Remote 15ft [3] **RD5**=Remote 5ft [3] **RD2**=Remote 2ft [3] **PD**=Plug in Driver	**Blank**=Without hanger bars **B26**=C-channel Bar Hanger, 26" Long, Pair
Tunable White **Blank**=1000 lumens **1**=120V 1500-3500 lumens **2**=277V 1500-3500 lumens **3**=347V Step down transformer (Limited to 1000 lumens with remote driver)	**Tunable White** **DE010W2N2765**=0-10V 0.1% Dimming, 2700-6500K **DE010W2N2050**=0-10V 0.1% Dimming, 2000-5000K **D5LTW2N2765**=DALI T6 0.1% Dimming, 2700-6500K **D5LTW2N2050**=DALI T6 0.1% Dimming, 2000-5000K		
BioUp Tunable White **Blank**=800 lumens **1**=120V 1000-2500 lumens **2**=277V 1000-2500 lumens **3**=347V Step down transformer (Limited to 800 lumens with remote driver)	**BioUp Tunable White** **DE010B2750**=0-10V 0.1% dimming, tunable white 2700-6500K **DE010B35**= 0-10V 0.1% dimming, static white 3500K **DE010B40**= 0-10V 0.1% dimming, static white 4000K **DE010B50**=0-10V 0.1% dimming, static white 5000K **D5LTB2750**=DALI T6 0.1% dimming, tunable white 2700-6500K **D5LTB35**= DALI T6 0.1% dimming, static white 3500K **D5LTB40**= DALI T6 0.1% dimming, static white 4000K **D5LTB50**= DALI T6 0.1% dimming, static white 5000K		

Trim Distribution	Trim Flange	Trim Finish	Options [3] [16] [31]
DP=45° cutoff downlight **S**=Shallow trim **CS**=Cast shallow trim	**0**=White Polymer Trim Ring **1**=Self-flanged [13] **2**=White Painted Self-flanged **4**=Knife edge rimless use with die cast only [8] [23]	**LI**=Specular Clear [9] **H**=Semi-Specular Clear [9] **WMH**=Warm Haze [9] **WH**=Wheat [9] **GPH**=Graphite Haze [9] **B**=Specular Black [9] **MW**=Matte White (Antimicrobial) **MB**=Matte Black [8] **MMS**=Matte Metallic Silver [8]	**EMBOD**=Bodine® Emergency Module with Remote Test Switch [25] **EMBOD6ST**=Bodine® 6W Self Test Emergency Module with Remote Test Switch **EM7**=7W Emergency Module with Remote Test Switch **EM14**=14W Emergency Module with Remote Test Switch **EM14RSD**=14W Self Diagnostic Replaceable Emergency Battery Pack with Integral Test Switch **EMBOD7ST**=Bodine® Self Test Emergency Module [25] **IEMBOD**=Bodine® Emergency Module with Integral Test Switch [6] [25] **IEM7**=7W Emergency Module with Integral Test Switch [6] **IEM14**=14W Emergency Module with Integral Test Switch [6] **IEM14RSD**=14W Self Diagnostic Replaceable Emergency Battery Pack with Remote Test Switch [6] **IEMBOD6ST** =Bodine® 6W Self Test Emergency Module with Integral Test Switch [5] **EMV7**=7W Low Voltage Emergency Module with Remote Test Switch [4] **EMV14**=14W Low Voltage Emergency Module with Remote Test Switch [4] **ETRD**=Emergency transfer device [32] **WPST**=Factory installed Wavelinx (includes control module, sensor, cable, tilemount and ceiling mount sensor) [15] [18] **WLST**=Factory installed WaveLinx LITE Sensor Kit [15] [17] **WPN** = WaveLinx PRO Wireless Node without sensor [21] **WLN** = WaveLinx LITE Wireless Node without sensor [25] [35]

COOPER
Lighting Solutions
a Signify business

Single Line Order Information

Accessories (*Sold separately*) [22]			
TRM4P=White metal trim ring [2] **LGSKT4IP66**=IP66 Gasket Kit **DT4RF**=4 inch frosted acrylic ring [29] **PRR4**=Rimless Plaster Ring [2] **RKP4**=Knife Edge plaster Ring [24]	**RPM4MW**=Rimless Millwork Ring, Matte White [2] **RPM4MB**=Rimless Millwork Ring, Matte Black [2] **RKM4MW**=Knife Edge Millwork Ring, Matte White [24] **RKM4MB**=Knife Edge Millwork Ring, Matte Black [24] **HSA4**=Slope Adapter for 4" Aperture Housings, Specify Slope	**Connected Lighting Systems** [3] [15] [16] [31] **WPST**=Field installed WaveLinx sensor Kit [18] **WLST**=Field installed WaveLinx LITE Sensor Kit [17] **Transformers** **H347**=H347 for all selections	**Bar Hangers** **HB50**=C-channel Bar Hanger, 50" Long, Pair **RMB22**=Wood Joist Bar Hanger, 22" Long, Pair

Notes:

1. Nominal Lumens will vary depending on selected color.

2. Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).

3. Not available with Chicago Plenum.

4. ULus listed only

5. Available with 45D cutoff (DP) trim only. Not available with LI or WH finishes. Required for use with IEMBOD6ST. Not offered with remote driver.

6. Available with 45 degree cutoff (DP) trim only. Required for use with all IEMBOD, IEM7, IEM14, IEMV7 and IEMV14 housings. Not offered with remote driver.

8. Available only on CS distributions.

9. Not available on CS distributions.

10. Product is marked spacing. Reference table on page 4.

13. Flange is the same finish as the reflector

14. DMX fixtures default to full on upon loss of DMX signal.

15. Refer to system specifications for additional information,features, and benefits. Order either factory installed option or accessory. Use with 0-10V driver.

16. Non-IC

17. WLST=WaveLinx LITE tilemount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx LITE system specifications)

18. WPST=WaveLinx wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with 0-10V only.

20. Not required for W2N and D2W.

21. WPN = WaveLinx PRO wireless node provides luminaire-level control with scene and zone configuration; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only.

22. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

23. Accessory (Requires knife edge accessory ring)

24. Order die cast trim with flange type 4

25. Not available for W2N

27. IC rated

28. Tunable white IC rated with 1000 lumens

29. Order with self flanged trim.

30. Offered with DLVP up to 2000 lumens with 98 CRI.

31. 120V-277V

32. Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others)

33. Not available with Lutron drivers

35. WLN = WaveLinx LITE wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only.

Product Specifications

Lower Shielding Reflector
- Spun aluminum reflector provides superior lumen output with minimal source brightness
- Spun reflectors are available in all Portfolio anodized finishes
- Plaster lathing ring and millwork ring accessory for flush reflector transition
- Decorative frosted acrylic ring provides a light glow in the ceiling

Optic
- Interchangeable silicone optic in 5° increments from 10°-70° providing smooth beam without color separation
- Elliptical beams
- Available media holder fits onto optic holder and holds up to two lens media

Trim Retention
- Two torsion springs hold reflector flange tightly to the finished ceiling surface

Plaster Frame/Collar
- Die-cast aluminum 1 ½" deep collar
- Accommodates up to 2" ceiling thickness

Universal Mounting Bracket
- Accepts 1/2" Electric Metallic Tube (EMT), C-channel and bar hangers
- Adjusts 5" vertically from above and below the ceiling

Junction box
- Four 1/2" and two 3/4" trade size pry outs positioned to allow straight conduit runs
- Lever connectors for simple push in wiring
- Listed for eight #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring

Thermal
- Aluminum heat sink conducts heat away from the LED module for improved performance and longer life

LED System
- Contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution without pixilation
- Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded
- Quick disconnect allows for tool-less replacement of LED engine from below ceiling

Vividtune
- W2N: L70 55,000 hours
- **D2W™** – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources.
- **W2N** - Tunable white CCT range 2700K to 6500K or 2000K to 5000K, 90 CRI. Standard
- **BioUp** - Tunable white CCT range 2700K to 5000K Provides the biological effectiveness of natural sunlight, with color temperatures that are more comfortable for indoor environments

Driver
- Standard 120-277V 0-10V dimming driver provides flicker free dimming from 100% to 1%
- Optional 120V leading edge/0-10V, <1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem
- Driver can be serviced from above or through the aperture
- Distributed low voltage power system combines power, lighting, and controls with ease of installation.
- Optional Magnetically guided snap in driver for ease of maintenance.

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 with remote charge indicator and test switch
- Emergency transfer device (ETRD) senses the loss of power regardless of local control settings allowing emergency power to the fixture.
- UL 924 listed
- EM14RSD with simplified battery replacement and self diagnostics

Connected Lighting System
Two WaveLinx connected solutions to choose from. Refer to WaveLinx system specifications and application guides for details.

WaveLinx PRO Tilemount Sensor Kit
- WaveLinx PRO WPST tilemount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS - Real Time Location Services available.

WaveLinx PRO Wireless Node
- WaveLinx PRO WPN wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only. **Note:** Not compatible with 347V or Chicago plenum.

WaveLinx LITE Tilemount Sensor Kit
- WaveLinx LITE WLST tilemount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

WaveLinx LITE Wireless Node
- WaveLinx LITE WLN wireless node provides luminaire level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only. **Note:** Not compatible with 347V or Chicago plenum.

WaveLinx Tilemount Sensor Kits Application
- The WPST and WLST tilemount sensor 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 WPST and WLST tilemount sensor kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.
- **Note: WaveLinx PRO devices are only compatible with the WaveLinx PRO system.**
- **Note: WaveLinx LITE devices are only compatible with the WaveLinx LITE system.**

Code Compliance
- Thermally protected
- cULus Certified to UL 1598 / C22.2 No. 250.0 suitable for damp locations with covered ceiling
- Optional City of Chicago environmental air (CCEA) marking for plenum applications
- FCC CFR Title 47 Part 15 Class B at 120VAC and Class A at 277VAC
- Insulated ceiling (IC) rated up to 800 lumens (98 CRI & D2W); 1000 lumens (W2N). All others are non-IC rated (insulation must be kept 3" from top and sides of housing).
- Can be used for State of California Title 24 high efficacy LED compliance under JA8, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2016 JA8 High Efficacy Lighting
- RoHS compliant
- Photometric testing completed in accordance with IES LM-79
- LED life testing completed in accordance with IES LM-80-08 and TM-21-11 standards
- See table on page 3 for marked spacing requirements

Warranty
- Five year warranty www.cooperlighting.com/legal

Marked Spacing

4-inch Marked spacing for W2N			
Lumens	Center to Center of Adjacent Luminaire (inches)	Center Luminaire to Building Side Member (inches)	Minimum Overhead Height (inches)
3000	36	18	6
3500	36	18	8

| 4-inch Marked spacing for BioUp			
Lumens	Center to Center of Adjacent Luminaire (inches)	Center Luminaire to Building Side Member (inches)	Minimum Overhead Height (inches)
2000	36	18	6
2500	36	18	8
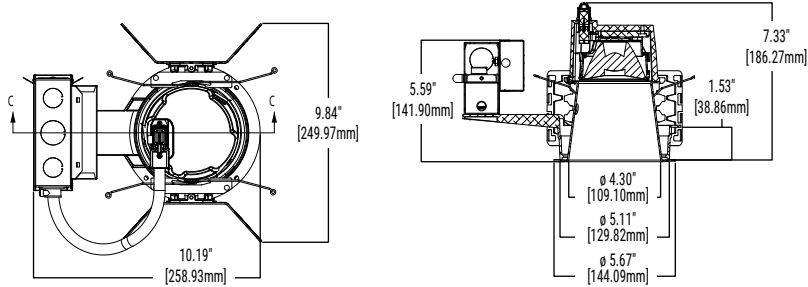
COOPER
Lighting Solutions
a signify business

Dimensional and Mounting Details

LD4D-4LBDP

	Min-Max Lumens	Beam Angles
D2W	800-2500	25°-70°
W2N	1000-3000	25°-70°
BioUp	800-2000	25°-70°
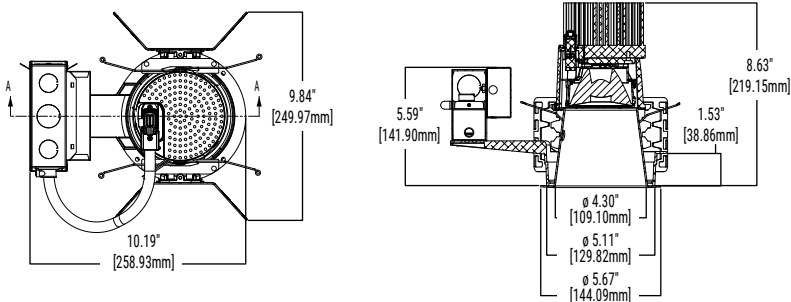
LD4D-4LBDP

	Min-Max Lumens	Beam Angles
W2N	3500	25°-70°
BioUp	2500	25°-70°
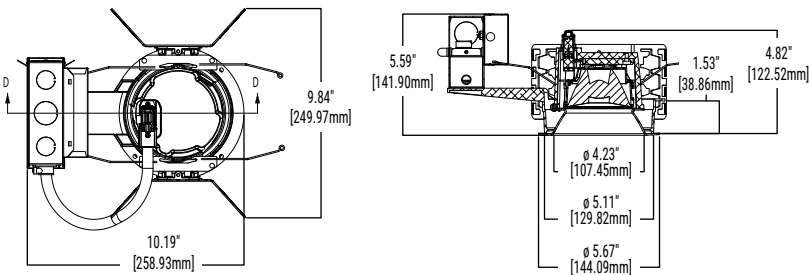
LD4D-4LBS

	Min-Max Lumens	Beam Angles
D2W	800-2500	25°-70°
W2N	1000-3000	25°-70°
BioUp	800-2000	25°-70°
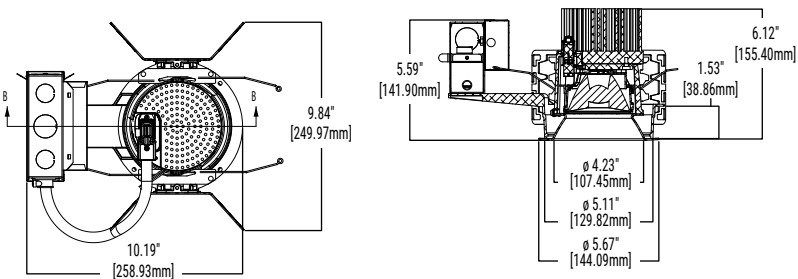
LD4D-4LBS

	Min-Max Lumens	Beam Angles
W2N	3500	25°-70°
BioUp	2500	25°-70°

Emergency Option
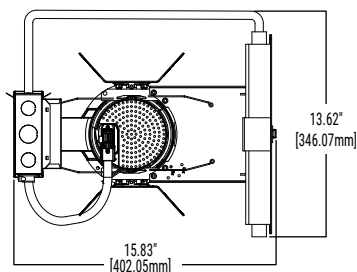
Trim with E option

Trim with EM6 option

Energy and Performance Data

D010 DRIVER ENERGY DATA

Series	250 Lumen		500 Lumen		750 Lumen		1000 Lumen		1500 Lumen		2000 Lumen	
Input Voltage 120-277 VAC	120	277	120	277	120	277	120	277	120	277	120	277
Input Current (A)	0.029	0.017	0.054	0.027	0.065	0.031	0.09	0.045	0.129	0.057	0.194	0.086
Input Power (W)	3.4	3.9	6.5	6.9	7.7	8.1	10.7	11.1	15.5	15.4	23.2	23.1
In-rush (A)	2.1	9.15	2.1	9	2.1	9	2.1	9.1	2.1	9.3		11.1
Inrush duration	250	127	254	128	249	142	255	153	255	236	246	115
THDi (%)	8.2	19.9	7.8	14	8.1	11.2	6.6	9.7	11.5	6.6	9.1	11.1
PF	0.99	0.83	0.99	0.91	0.99	0.93	1.0	0.97	0.99	0.98	0.97	0.97

Series	2500 Lumen		3000 Lumen		3500 Lumen	
Input Voltage 120-277 VAC	120	277	120	277	120	277
Input Current (A)	0.23	0.103	0.27	0.128	0.278	0.133
Input Power (W)	27.5	276	32.3	32.5	33.2	34.2
In-rush (A)	2.6	12.5	2.6	12.9	1.1	2.6
Inrush duration	231	197	212	124	59	38
THDi (%)	7.6	8.8	9.1	16.5	7.3	15.9
PF	1.0	0.97	1.0	0.97	1.0	0.93

| |
|---|
| Minimum starting temperature -30°C (-22°F)*
(Nominal input 120-277VAC & 100% of rated output power) |
| Sound Rating: Class A standards |

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

BIOUP MULTIPLIERS FROM STANDARD 3500K 90CRI

CCT	BioUp Static	BioUp Tunable
2700K	-	0.825
3000K	-	0.813
3500K	0.834	0.834
4000K	0.827	0.827
5000K	0.883	0.883

COOPER
Lighting Solutions
a Signify business
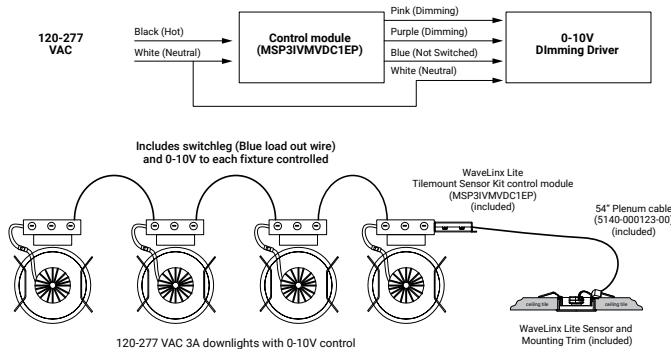
Connected Systems
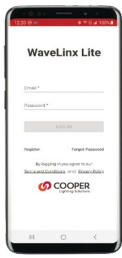
WaveLinx LITE - WLST Tilemount Sensor

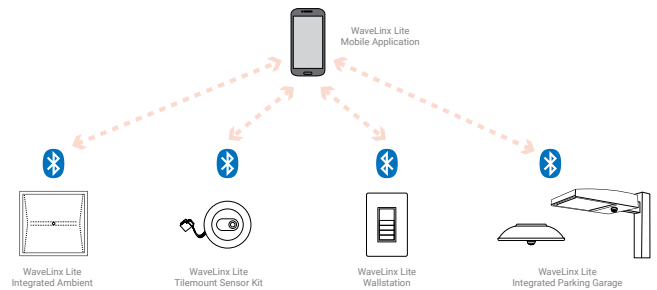**WaveLinx LITE devices only compatible with the WaveLinx LITE system.**

- 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
- 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 WLST Tilemount Wiring Diagram

120-277 VAC — Black (Hot), White (Neutral) → Control module (MSP3IVMVDC1EP) → Pink (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)

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

WaveLinx Lite Sensor and Mounting Trim (included)

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
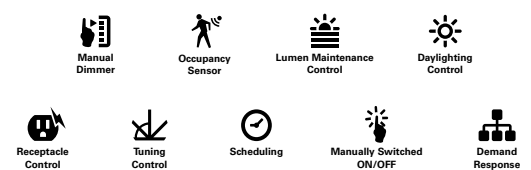
WaveLinx PRO Wireless – WPST Tilemount Sensor

WaveLinx PRO devices only compatible with the WaveLinx PRO system.

- WaveLinx PRO 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
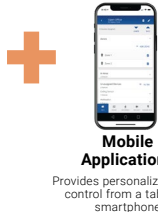- Stand-Alone Offices or Entire Building Network Installations

Downlights with tilemount sensor wireless communication — Highly efficient LED fixtures

+

WaveLinx Area Controller — Provides centralized coordination of multiple area control options
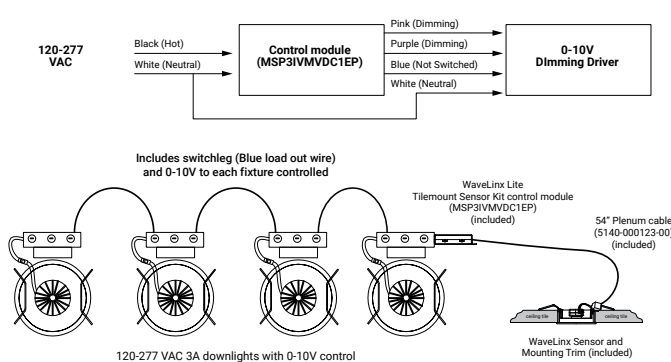
+

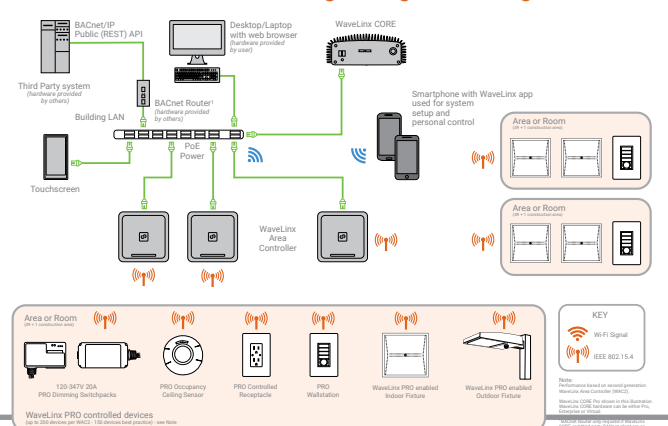**Wireless Wall Station/Receptacle** — Provides customized wireless control of each area

+

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 PRO WPST Tilemount Wiring Diagram

120-277 VAC — Black (Hot), White (Neutral) → Control module (MSP3IVMVDC1EP) → Pink (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)

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

WaveLinx Sensor and Mounting Trim (included)

WaveLinx CORE Building Management Integration

BACnet/IP Public (REST) API · Desktop/Laptop with web browser (hardware provided by user) · WaveLinx CORE

Third Party system (hardware provided by others) · BACnet Router (hardware provided by others) · Smartphone with WaveLinx app used for system setup and personal control

Building LAN · PoE Power · Touchscreen · WaveLinx Area Controller

Area or Room

KEY — Wi-Fi Signal · IEEE 802.15.4

120-347V 20A PRO Dimming Switchpacks · PRO Occupancy Ceiling Sensor · PRO Controlled Receptacle · PRO Wallstation · WaveLinx PRO enabled Indoor Fixture · WaveLinx PRO enabled Outdoor Fixture

WaveLinx PRO controlled devices (up to 200 devices per WAC2 - 150 devices best practice) - see Note

Connected Solutions
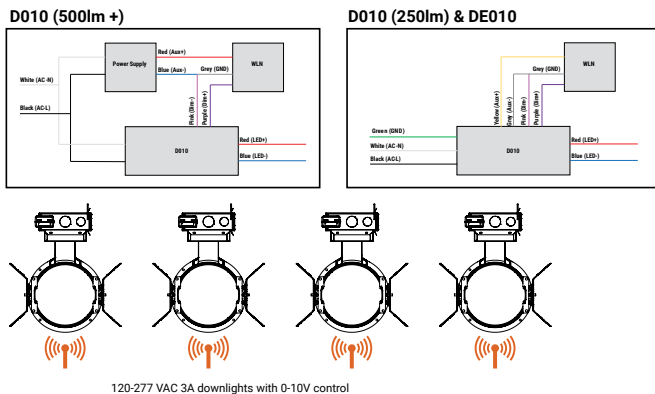
WaveLinx LITE Wireless Node - WLN

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
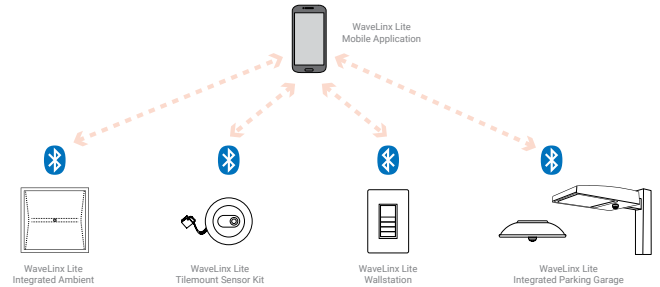- Not available with BioUp or Tunable White

WaveLinx mobile app settings

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

WaveLinx LITE Wireless Node (WLN) Wiring Diagram

D010 (500lm +)
D010 (250lm) & DE010

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
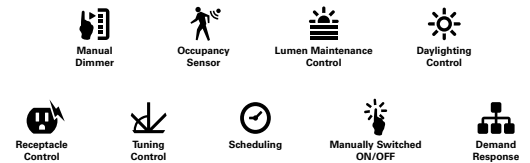

WaveLinx PRO Wireless Node - WPN

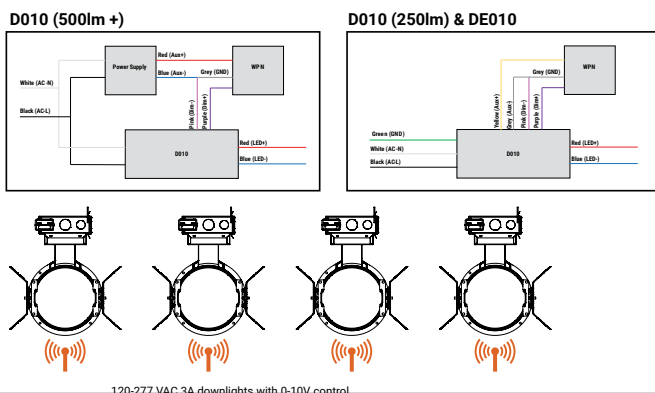**WaveLinx PRO devices only compatible with the WaveLinx PRO system.**

- 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
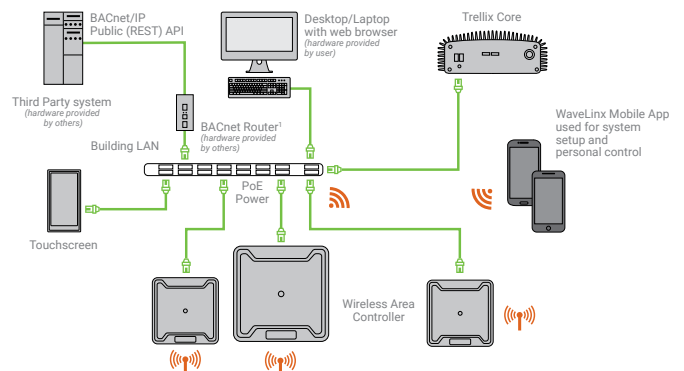- Stand-Alone Offices or Entire Building Network Installations

Downlights with wireless communication
Highly efficient LED fixtures

+

WaveLinx 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 PRO Wireless Node (WPN) Wiring Diagram

D010 (500lm +)
D010 (250lm) & DE010

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

WaveLinx CORE 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)*
BACnet Router[1] *(hardware provided by others)*
Building LAN
WaveLinx Mobile App used for system setup and personal control
PoE Power
Touchscreen
Wireless Area Controller

Proven Research. Industry Recognized.
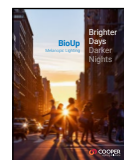
BioUp
Melanopic Lighting

See better　　**Feel better**　　**Function better**

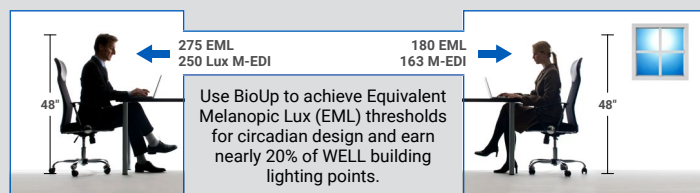See BioUp brochure for more details

ANSI/IES RP-46-23

RECOMMENDED PRACTICE:
SUPPORTING THE PHYSIOLOGICAL
AND BEHAVIORAL EFFECTS
OF LIGHTING IN INTERIOR
DAYTIME ENVIRONMENTS
AN AMERICAN NATIONAL STANDARD

ANSI/IES RP-46-23 / TM18 published March 2024 based on over 40 years of research.

"...circadian clock synchronization is paramount to the body's efficient and appropriate functioning." – TM18

INTERNATIONAL WELL BUILDING INSTITUTE™

BioUp solutions maximize WELL points for Circadian Lighting Design (L03):

275 EML　　180 EML
250 Lux M-EDI　　163 M-EDI

48"　　48"

Use BioUp to achieve Equivalent Melanopic Lux (EML) thresholds for circadian design and earn nearly 20% of WELL building lighting points.

MDER, M-EDI and **EML** are key metrics used to quantify non-visual performance of indoor lighting systems.

The power of healthy daytime lighting in indoor settings
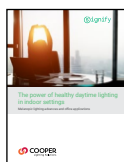
See BioUp white paper for more details

MDER - Melanopic Daylight Efficacy Ratio (MDER) measures the amount of light stimulating to the melanopsin receptors.
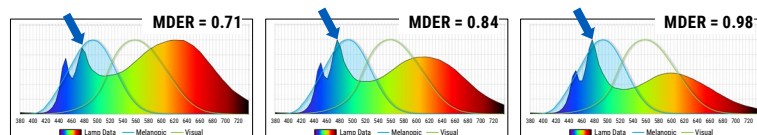
Standard 4000K LED
MDER = .62

380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720
Lamp Data — Melanopic — Visual

BioUp 4000K LED
MDER = .82

380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720
Lamp Data — Melanopic — Visual

30% boost Biological impact
compared to traditional LED sources
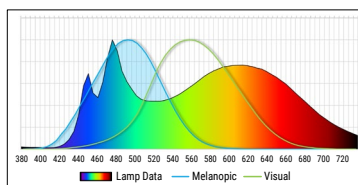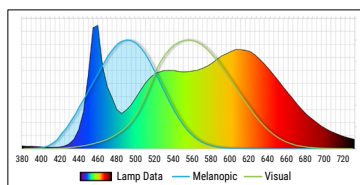
CCT	LED @ ~83 CRI	BioUp Static		BioUp Dynamic	
		MDER	CRI	MDER	CRI
2700K	0.45	-	-	0.43	95
3000K	0.50	-	-	0.57	94
3500K	0.57	0.71	90	0.71	90
4000K	0.65	0.84	87	0.84	87
5000K	0.79	1.00	84	1.00	84

BioUp enhances the LED spectrum with cyan light at 475nm increasing the biological impact of the light to enhance our circadian rhythm which regulates our sleep/wake cycle, daytime engagement, and mood – *all without distorting visual color impression.*

Static (non-tunable)

Static BioUp is used when simple Melanopic Lighting is desired at all times.

Arrow in graph shows BioUp spectrum boost is at 475nm where non-visual biological response is enhanced.

Dynamic - (Tunable)

Dynamic BioUp is used when Melanopic Lighting is desired to adjust during the day.

MDER = 0.71　　MDER = 0.84　　MDER = 0.98

3500K or **4000K** or **5000K**

Cyan light component always present

Evening
MDER = 0.43

Daytime
MDER = 0.98
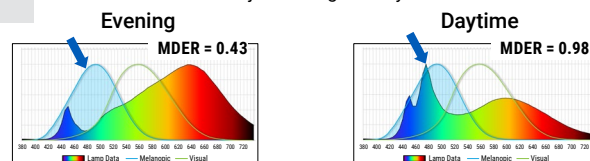
Warmer CCT **Without** Cyan content　　Cooler Light **With** Cyan content

2700K – 5000K

Dimming Control 0% [Intensity] 100%

CCT Control: warm 2700K — CCT — cool 5000K

Dimming Control: 0% [Intensity] 100%

❯no CCT control needed

❯Control with Wavelinx, 2ch 0-10V, or DALI

COOPER
Lighting Solutions
a signify business

Multi-line Order Information

SAMPLE ORDER NUMBER: **LD4D10D010TRIEM14**

Invoice will indicate separate fixture components (housing, trim, module) and may ship from multiple CLS facilities in separate cartons.

Domestic Preferences [1]	Housing	Lumens [2]			Color Control
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**LD4D**=LED Downlight 4-inch Nominal Aperture **LD4DCP**=LED Downlight 4-inch Nominal Aperture, Chicago Plenum	**08**=800 lumens [32] **10**=1000 lumens [33] **15**=1500 lumens	**20**=2000 lumens **25**=2500 lumens	**30**=3000 lumens [3] **35**=3500 lumens [3]	**Blank**=W2N 1000-3500 lumens or BioUp 800-2500 lumens **D2W**=Dim to warm 800-2500 lumens

Voltage	Driver
Dim-to Warm **Blank**=120-277V 800 lumens **1**=120V 1000-2500 lumens **2**=277V 1000 to 2500 lumens **3**=347V (D010 driver 800-2500 lumens) Limited to 800 lumens with remote drver	**Dim-to Warm** **D010**=0-10V 1% dimming **D010TR**=0-10V or (120V) phase cut 1% dimming **DE010**=0-10V linear 0.1% dimming **D5LT**=DALI T6 Logarithmic 0.1% Dimming **DMX**=DMX/RDM Logarithmic 0.1% Dimming [5] **DMXC5**=DMX/RDM Logarithmic 0.1 % Dimming with RJ45 connection [5] **DLE**=Lutron Ecosystem 1-100% dimming **DLVP**=Low voltage dimming 1-100% for use with DLVP system [6]
Tunable White **Blank**=1000 lumens **1**=120V 1500-3500 lumens **2**=277V 1500-3500 lumens **3**=347V Step down transformer (Limited to 1000 lumens with remote driver)	**Tunable White** **DE010W2N2765**=0-10V 0.1% Dimming, 2700-6500K **DE010W2N2050**=0-10V 0.1% Dimming, 2000-5000K **D5LTW2N2765**=DALI T6 0.1% Dimming, 2700-6500K **D5LTW2N2050**=DALI T6 0.1% Dimming, 2000-5000K
BioUp Tunable White **Blank**=800 lumens **1**=120V 1000-2500 lumens **2**=277V 1000-2500 lumens **3**=347V Step down transformer (Limited to 800 lumens with remote driver)	**BioUp Tunable White** **DE010B2750**=0-10V 0.1% dimming, tunable white 2700-6500K **DE010B35**= 0-10V 0.1% dimming, static white 3500K **DE010B40**= 0-10V 0.1% dimming, static white 4000K **DE010B50**= 0-10V 0.1% dimming, static white 5000K **D5LTB2750**=DALI T6 0.1% dimming, tunable white 2700-6500K **D5LTB35**= DALI T6 0.1% dimming, static white 3500K **D5LTB40**= DALI T6 0.1% dimming, static white 4000K **D5LTB50**= DALI T6 0.1% dimming, static white 5000K

Driver Options	Options [6] [29] [30] [8]	
Blank=Integral driver **R**=Remote driver (order remote driver separately) [6] **PD**=Plug in Driver	**EMBOD**=Bodine® Emergency Module with Remote Test Switch [10] **EMBOD6ST**=Bodine® 6W Self Test Emergency Module with Remote Test Switch **EM7**=7W Emergency Module with Remote Test Switch **EM14**=14W Emergency Module with Remote Test Switch **EM14RSD**=14W Self Diagnostic Replaceable Emergency Battery Pack with Integral Test Switch **EMBOD7ST**=Bodine® Self Test Emergency Module [10] **IEMBOD**=Bodine® Emergency Module with Integral Test Switch [10] [22] **IEM7**=7W Emergency Module with Integral Test Switch [22] **IEM14**=14W Emergency Module with Integral Test Switch [22]	**IEM14RSD** =14W Self Diagnostic Replaceable Emergency Battery Pack with Remote Test Switch [22] **IEMBOD6ST** =Bodine® 6W Self Test Emergency Module with Integral Test Switch [17] **EMV7**=7W Low Voltage Emergency Module with Remote Test Switch [7] **EMV14**=14W Low Voltage Emergency Module with Remote Test Switch [7] **ETRD**=Emergency transfer device [31] **WPST**=Factory installed Wavelinx (includes control module, sensor, cable, tilemount and ceiling mount sensor) [11] [13] **WLST**=Factory installed WaveLinx LITE Sensor Kit [11] [12] **WPN** = WaveLinx PRO Wireless Node without sensor [15] **WLN** = WaveLinx LITE Wireless Node without sensor [35]

SAMPLE ORDER NUMBER: **EU4DR2508259030D2W**

Domestic Preferences [1]	Power Module	Optics	Lumen Levels [2]	Color
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**EU4D**=4-inch Universal LED Module	**R25**=25° **R30**=30° **R35**=35° **R40**=40° **R45**=45° **R50**=50° **R55**=55° **R60**=60° **R65**=65° **R70**=70°	**BioUp** **08B**=800 lumens (IC) [32] **1020B**=1000, 1500, 2000 lumens [34] **2500B**=2500 lumens [3] **Dim 2 Warm** **08259030D2W**=800-2500 lumen, 90 CRI, Dim 2 Warm [32] **Tunable white** **1030W2N902765**=1000, 1500, 2000, 2500, 3000 lumens, 90 CRI, tunable white 2700K-6500K [33] **1030W2N902050**=1000, 1500, 2000 , 2500, 3000 lumens, 90 CRI, tunable white 2000K-5000K [33] **35W2N902765**=3500 lumens, 90 CRI, tunable white 2700K-6500K [3] **35W2N902050**=3500 lumens, 90 CRI, tunable white 2000K-5000K [3]	**35**= Static 3500K **40**=Static 4000K **50**=Static 5000K **2750**=BioUp 2700K-5000K

COOPER
Lighting Solutions
a signify business

Multi-line Order Information (continued)

SAMPLE ORDER NUMBER: **4LBDPIH**

Domestic Preferences [1]	Trim	Reflector	Flange	Finish		Options
[Blank]=Standard **BAA**=Buy American Act (S only)	**4LB**=4" LED	**DP**=45° cutoff downlight **S**=Shallow trim **CS**=Cast shallow trim	**0**=White polymer trim ring **1**=Self flanged [18] **2**=White painted self flanged **4**=Knife edge rimless use with die cast only [19]	**LI**=Specular Clear [20] **H**=Semi-Specular Clear [20] **WMH**=Warm Haze [20] **WH**=Wheat [20] **GPH**=Graphite Haze [20]	**B**=Specular Black [20] **MW**=Matte White **MB**=Matte Black [21] **MMS**=Matte Metallic Silver [21]	**E**=Integral Emergency Test Switch Hole [22]

REQUIRED if Remote Driver (R) is specified

SAMPLE ORDER NUMBER: **RD10010D010TREM7**

Domestic Preferences [1]	Remote Drivers [6]		Lumens [2]	Color Control
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**RD100**=Remote 100ft [9] **RD75**=Remote 75ft [9] **RD50**=Remote 50ft [9] **RD25**=Remote 25ft	**RD15**=Remote 15ft **RD5**=Remote 5ft **RD2**=Remote 2ft	**08**=800 lumens **10**=1000 lumens [32]	**[Blank]**=W2N or BioUp **D2W**=Dim to warm

Voltage	Driver
Dim-to Warm **Blank**=120-277V 800 lumens **3**=347V (D010 driver 800 lumens)	**Dim-to Warm** **D010**=0-10V 1% dimming **D010TR**=0-10V or (120V) phase cut 1% dimming **DE010**=0-10V linear 0.1% dimming **D5LT**=DALI T6 Logarithmic 0.1% Dimming **DMX**=DMX/RDM Logarithmic 0.1% Dimming [5] **DMXC5**=DMX/RDM Logarithmic 0.1 % Dimming with RJ45 connection [5] **DLE**=Lutron Ecosystem 1-100% dimming **DLVP**=Low voltage dimming 1-100% for use with DLVP system [6]
Tunable White **Blank**=1000 lumens **3**=347V Step down transformer (1000 lumens)	**Tunable White** **DE010W2N2765**=0-10V 0.1% Dimming, 2700-6500K **DE010W2N2050**=0-10V 0.1% Dimming, 2000-5000K **D5LTW2N2765**=DALI T6 0.1% Dimming, 2700-6500K **D5LTW2N2050**=DALI T6 0.1% Dimming, 2000-5000K
BioUp Tunable White **Blank**=800 lumens **3**=347V Step down transformer (800 lumens)	**BioUp Tunable White** **DE010B2750**=0-10V 0.1% dimming, tunable white 2700-6500K **DE010B35**= 0-10V 0.1% dimming, static white 3500K **DE010B40**= 0-10V 0.1% dimming, static white 4000K **DE010B50**= 0-10V 0.1% dimming, static white 5000K **D5LTB2750**=DALI T6 0.1% dimming, tunable white 2700-6500K **D5LTB35**= DALI T6 0.1% dimming, static white 3500K **D5LTB40**= DALI T6 0.1% dimming, static white 4000K **D5LTB50**= DALI T6 0.1% dimming, static white 5000K

Options [6] [8] [29] [30]	Controls [6] [8] [29] [30]
EMBOD=Bodine® Emergency Module with Remote Test Switch [10] **EMBOD6ST**=Bodine® 6W Self Test Emergency Module with Remote Test Switch **EM7**=7W Emergency Module with Remote Test Switch **EM14**=14W Emergency Module with Remote Test Switch **EMBOD7ST**=Bodine® Self Test Emergency Module with Remote Test Switch [10] **EMV7**=7W Low Voltage Emergency Module with Remote Test Switch [7] **EMV14**=14W Low Voltage Emergency Module with Remote Test Switch [7] **ETRD**=Emergency transfer device [31]	**WPST**=Factory installed Wavelinx (includes control module, sensor, cable, tilemount and ceiling mount sensor) [11] [13] **WLST**=Factory installed WaveLinx LITE Sensor Kit [11] [12] **WPN** = WaveLinx PRO Wireless Node without sensor [15] **WLN** = WaveLinx LITE Wireless Node without sensor [35]

Continued on next page.

Multi-line Order Information (continued)

Accessories (Order separately) [25]

TRM4P=White metal trim ring [26]
LGSKT4IP66=IP66 Gasket Kit
DT4RF=4 inch frosted acrylic ring [28]

PRR4=Rimless Plaster Ring [26]
RKP4=Knife Edge plaster Ring [27]

RPM4MW=Rimless Millwork Ring, Matte White [26]
RPM4MB=Rimless Millwork Ring, Matte Black [26]
RKM4MW=Knife Edge Millwork Ring, Matte White [27]
RKM4MB=Knife Edge Millwork Ring, Matte Black [27]

HSA4=Slope Adapter for 4" Aperture Housings, Specify Slope [34]

Connected Lighting Systems [6] [8] [11] [29] [30]
WPST=Field installed WaveLinx sensor Kit [13]
WLST=Field installed WaveLinx LITE Sensor Kit [12]

Transformers
H347=H347 for 98CRI 4000 lumens and below; D2W 4500 lumens and below; W2N 4000 lumens and below

Bar Hangers
BAA-HB26=C-channel Bar Hanger, 26" Long, Pair [1]
TAA-HB26=C-channel Bar Hanger, 26" Long, Pair [1]
HB26=C-channel Bar Hanger, 26" Long, Pair
HB50=C-channel Bar Hanger, 50" Long, Pair
RMB22=Wood Joist Bar Hanger, 22" Long, Pair

Optics
46R25=25°
46R30 = 30°
46R35 = 35°
46R40 = 40°
46R45 = 45°
46R50 = 50°
46R55 = 55°
46R60 = 60°
46R65 = 65°
46R70 = 70°

Notes:

1. 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. Components shipped separately may be separately analysed under domestic preference requirements. Offered with spun aluminum narrow (N), medium (M) and wide (W) trims.

2. Nominal Lumens will vary depending on selected color, CR. Reference IES files.

3. Product is marked spacing. Reference table on page 4 for the spacing details.

5. DMX fixtures default to full on upon loss of DMX signal.

6. Not available with Chicago Plenum.

7. ULus listed only

8. Non-IC

9. Not available with Lutron drivers

10. Not available for W2N

11. Refer to system specifications for additional information,features, and benefits. Order either factory installed option or accessory. Use with 0-10V driver.

12. WLST=WaveLinx LITE tilemount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx LITE system specifications)

13. WPST=WaveLinx wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with 0-10V only.

15. WPN = WaveLinx PRO wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only.

17. Available with 45D cutoff (DP) trim only. Not available with LI or WH finishes. Required for use with IEMBOD6ST. Not offered with remote driver.

18. Flange is the same finish as the reflector

19. Requires knife edge ring accessory.

20. Anodized or spun reflectors

21. Die cast only

22. Available with 45 degree cut off (DP) trim only. Required for use with all IEMBOD, IEM7, IEM14,IEMV7 and IEMV14 housings. Not offered with remote driver.

23. Offered with DLVP up to 2000 lumens with 98 CRI.

24. Black or white paint.

25. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

26. Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).

27. Order die cast trim with flange type 4

28. Order with self flanged trim.

29. If using remote driver order battery and controls with the remote driver.

30. 120V-277V

31. Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others)

32. Tunable white IC rated with 1000 lumens

33. D2W and BioUp IC rated with 800 lumens

34. Marked spacing for 2000 lumens

35. WLN = WaveLinx LITE wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only.

COOPER
Lighting Solutions
a Signify business

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

© 2024 Cooper Lighting Solutions
All Rights Reserved.

Specifications and dimensions
subject to change without notice.

PS52024424 **page 12**
February 5, 2025 5:36 PM