Project		Catalog #		Type	
Prepared by		Notes		Date	



HALO Commercial

HC6R | HM6R | 62R

6-inch LED retrofit downlight

Typical Applications

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

Interactive Menu

- Order Information page 2
- Product Specifications page 3
- Photometric Data page 4
- Energy & Performance Data page 5
- Connected Systems page 7
- Product Warranty

Product Certification

ENERGY STAR · Efficiency Standards T24 Can be used to comply with California Title 24 Non-Residential · wet location · FC · RoHS Compliant · UL Certified

Product Features

Showerlight

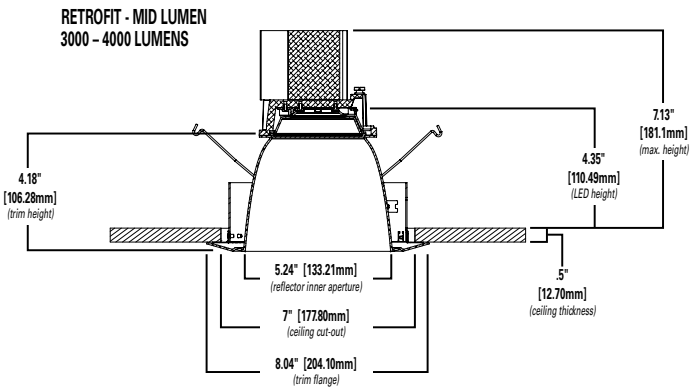
Control Compatibility

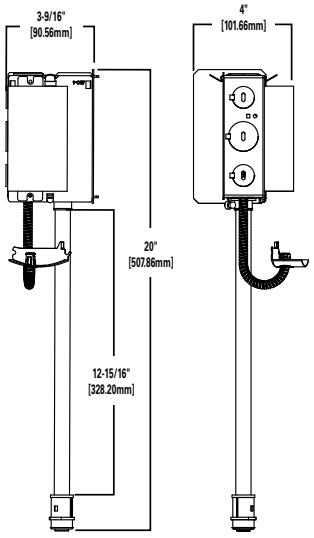
WaveLinx LITE · WaveLinx PRO

Top Product Features

- Remodel/retrofit series; 500 to 6,000 lumens
- Medium beam distribution; Specular, Semi-Specular and White reflector finishes
- 2700K, 3000K, 3500K 4000K, 5000K CCT; 80 or 90 CRI
- Retrofit 6-5/8" to 7-0" apertures
- Oversize reflector flange accommodates range of retrofit apertures
- Universal voltage 120V-277V; Standard 0-10V driver dims to 1%
- Factory installed connected lighting and emergency options

Dimensional and Mounting Details





additional product diagrams

Order Information

Sample Number : HC6R20D010 – HM6R0525835 – 62RMDC

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

Frame / Collar | Lumens | Driver Options | Factory Installed Emergency & Connected Lighting Options | Accessories (Order & Install Separately)

Frame / Collar [1]	Lumens	Driver Options	Factory Installed Emergency & Connected Lighting Options	Accessories (Order & Install Separately)
HC6R = 6" retrofit kit for 6.625" (6-5/8") to 7.0" (7-0") nominal ceiling cutout aperture	**05** = 500 lm **07** = 750 lm **10** = 1000 lm **15** = 1500 lm **20** = 2000 lm **25** = 2500 lm **30** = 3000 lm **35** = 3500 lm **40** = 4000 lm **45** = 4500 lm [6] **50** = 5000 lm [6] **55** = 5500 lm [6] **60** = 6000 lm [6]	**D010**=UNV 120-277V, 50/60Hz, 0-10V 1%-100% dimming at 120-277V on 0-10V controls **Canada Option 500-5000 lumens:** **D010347** = 347VAC 50/60Hz 0-10V 1%-100% dimming. For 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000lm models only **Canada Option 5500-6000 lumens:** **D010X347** = step down transformer factory installed (with standard "D010" 120V-277V LED driver). For 5500, 6000lm models only	**REM7** = 7 watt emergency battery pack with remote test / indicator light, use with D010 only [1] [2] [5] **REM14** = 14 watt emergency battery pack with remote test / indicator light, use with D010 only [1] [2] [5] **BOD7ST** = 7.5 watt Bodine self-test emergency battery pack with remote test / indicator light, use with D010 only [1] [2] [5] **WTA** = Factory WaveLinx Tilemount Sensor Kit [3] **WTK** = Factory WaveLinx LITE Commercial Tilemount Sensor Kit [4] **WPN** = WaveLinx PRO Wireless Node without sensor [10]	**H347** = 347 to 120V step down transformer, 75VA **H347200** = 347 to 120V step down transformer, 200VA sensor kit, for use with D010 driver only **WTA**= Field installed WaveLinx sensor Kit [3] **WTK** = Field installed WaveLinx LITE Sensor Kit [4] **HL6RSMF** = 6" aperture new construction mounting frame with integral wood & T-grid bar hangers, adjust for 8" to 24" wide [9]
Notes	**Notes**	**Notes**	**Notes**	**Notes**
(1) Not available with CP models	(6) Marked Spacing: Center to Center of Adjacent Luminaires = 36" Center of Luminaire to Building Member = 18" Minimum overhead = 0.5		(1) Not available with CP models (2) Not available with D010347 (347V models) (3) WTA = WaveLinx tilemount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx specifications) (4) WTK = WaveLinx LITE tilemount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx LITE specifications) (5) Emergency battery backup options are Non-IC only, and rated for a minimum starting temperature of 0°C (10) 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.	(3) WTA = WaveLinx tilemount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx system specifications) (4) WTK = WaveLinx LITE tilemount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx LITE system specifications) (9) HL6RSMF for use with HC56R retrofit kit ONLY (aperture size not compatible with HC6R)

LED Module | Lumens | CRI/CCT

LED Module	Lumens	CRI/CCT
HM6R = 6" LED Modules For use with HC6R - HC56R Retrofit Kit housings only	**0525** = 500 - 2500 lumen **3040** = 3000-4000 lumen **4560** = 4500-6000 lumen	**827** = 80CRI, 2700K **830** = 80CRI, 3000K **835** = 80CRI, 3500K **840** = 80CRI, 4000K **850** = 80CRI, 5000K **927** = 90CRI, 2700K **930** = 90CRI, 3000K **935** = 90CRI, 3500K **940** = 90CRI, 4000K **950** = 90CRI, 5000K
Notes	**Notes**	**Notes**

Reflector | Distribution | Finish | Flange

Reflector	Distribution	Finish	Flange [8]
62R = 6" retrofit conical reflector for use HC6R and HC56R series retrofit kits only [7]	**MD** = medium distribution 55° beam angle,1.04 SC	**C** = Specular clear **H** = Semi-specular clear **W** = White (white flange)	**Blank** = Polished flange standard with C & H reflectors **Blank** = White flange standard with W reflector **WF** = White flange option available with C & H reflectors
Notes	**Notes**	**Notes**	**Notes**
(7) 62R trims feature an oversized trim ring to meet a range of nominal ceiling openings when retrofitting. See line art for dimensions.			(8) Oversize flange accommodates range of retrofit apertures

Product Specifications

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

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

LED Module
- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation
- Available in 80 or 90 color rendering index (CRI)
- Color accuracy within 3 SDCM provides color consistency and uniformity
- 90 CRI option: R9>50 (refer to chromaticity information for details)
- Available in 2700K, 3000K, 3500K, 4000K and 5000K correlated color temperature (CCT)
- Lumen options include 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000 lumens (nominal)
- Passive thermal management achieves 60,000 hours at 70% lumen maintenance (L70) in insulated ceilings (IC) and non-IC applications
- Integral diffuse lens provides visual shielding
- Integral connector allows quick connection to housing flex

Reflector
- Self-flanged aluminum reflectors available in medium distribution pattern
- Reflectors attach to LED module with three speed clamps
- Available in multiple painted or plated finishes
- Oversize flange accommodates range of retrofit apertures

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

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

Canada Options
- 347VAC 50/60Hz; 1% dimming on 0 -10V analog control, for 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000 lumen models only
- 347V step down transformer factory installed with the standard “D010” 120V-277V, LED driver on 5500, 6000 lumen models only

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

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 WTA 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 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.

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

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

Compliance
- cULus Certified to UL 1598 / C22.2 No. 250.0, suitable for damp locations and wet locations in covered ceilings only
- Emergency options provided with UL Listed emergency drivers to UL 924 / C22.2 No. 141, suitable for indoor/damp locations.
- IP20 - Above finished ceiling; IP65 - Below finished ceiling
- Non-Insulated ceiling (Non-IC) rated for 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000 lumen models (insulation must be kept 3" from top and sides)
- Insulated ceiling (IC) rated for 500, 750, 1000, 1500, 2000 lumen models and suitable for direct contact with air permeable insulation* (IC models are also suitable for Non-IC installations)
- Non-IC marked spacing required for 4500, 5000, 5500, 6000 lumen models
  - Marked Spacing Center to Center of Adjacent Luminaires = 36”
  - Center of Luminaire to Building Member = 18”
  - Minimum overhead = 0.5”
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions FCC CFR Title 47 Part 15 Class A at 120/277V
- Contains no mercury or lead and RoHS compliant
- Photometric testing completed in accordance of IES LM-79-08
- Lumen maintenance projection in accordance of IES LM-80-08 and TM-21-11
- 500, 750, 1000, 1500, 2000 lumen, 90 CRI, ICAT models may be used to comply with State of California Title 24 residential code, per JA8 certification standards
- May be used to comply with State of California Title 24 non-residential code as a dimmable LED luminaire
- ENERGY STAR® certified, reference certified light fixtures database

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

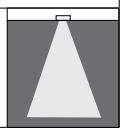
Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Photometric Data

View IES files

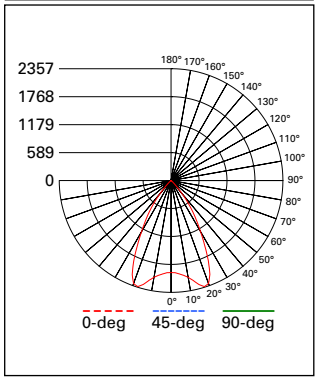
MEDIUM DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80CRI, 3500K

Medium (55° Beam*)	
Test Number	P581892
Housing	HC6R20D010
Module	HM6R0525835
Reflector	62RMDC
Lumens	2305 Lm
Efficacy	115.3 Lm/W
SC	1.08
UGR	11.6

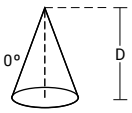


CANDLEPOWER DISTRIBUTION

Downlight



Cone Of Light



MH	FC	L	W
5.5'	68	5.8	5.8
7'	42	7.4	7.4
8'	32.1	8.4	8.4
9'	25.4	9.4	9.4
10'	20.6	10.6	10.6
12'	14.3	12.6	12.6

CANDELA TABLE

Degrees Vertical	Candela
0	1950
5	1986
15	2281
25	1868
35	796
45	123
55	15
65	4
75	2
85	0
90	0

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1670	72.5
0-40	2164	93.9
0-60	2299	99.7
0-90	2305	100
90-180	0	0
0-180	2305	100

Luminance

Average Candela Degrees	Avg. 0° Luminance
45	9528
55	1395
65	571
75	318
85	0

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

Photometric Multipliers (Nominal Lumen Values)

500 Lumen	750 Lumen	1000 Lumen	1500 Lumen	2000 Lumen	2500 Lumen	3000 Lumen	3500 Lumen
0.33	0.44	0.54	0.74	1.00	1.12	1.46	1.76

4000 Lumen	4500 Lumen	5000 Lumen	5500 Lumen	6000 Lumen
1.81	2.17	2.28	2.38	2.65

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 White Baffle	Black Baffle
Multiplier	1.00	0.92	0.91	0.82

Multipliers for relative lumen values with other color finishes.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K	5000K
0.92	0.98	1.00	1.03	1.03

Multipliers for relative lumen values with other series color temperatures.

CCT Multipliers – 90CRI

2700K	3000K	3500K	4000K	5000K
0.77	0.84	0.89	0.90	0.90

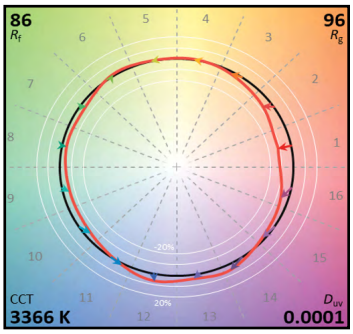
Multipliers for relative lumen values with other series color temperatures.

Note: Refer to IES files for more product data.

Energy & Performance Data

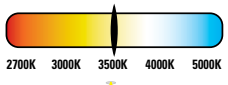
COLOR METRICS - TM-30-15 & CRI/CIE (3500K)

80 CRI Color Metric Summary - 3500K*



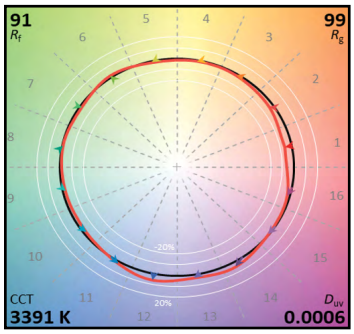
Reference Illuminant — Test Source

TM-30-15	Rf = 86
	Rg = 95.5
CRI/CIE	Ra = 83.8
	R9 = 10.3



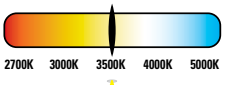
55°
medium
Nominal Beam

90 CRI Color Metric Summary - 3500K*



Reference Illuminant — Test Source

TM-30-15	Rf = 91.1
	Rg = 99
CRI/CIE	Ra = 92.4
	R9 = 55.1



55°
medium
Nominal Beam

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

ENERGY DATA

Series	500 lumen		750 lumen		1000 lumen		1500 lumen		2000 lumen	
Input Voltage 120-277VAC	120V	277V	120V	277V	120V	277V	120V	277V	120V	277V
Input Current (A)	0.051	0.026	0.067	0.036	0.083	0.039	0.119	0.053	0.171	0.077
Input Power (W)	6.1	6.5	7.9	8.3	10	10.4	14.5	14.5	20.9	20.6
In-rush (A)	1.9	8.4	2	8.4	2.2	8.5	2.7	8.5	2.1	9.7
Inrush duration (µs)	251	135	237	133	250	134	250	139	245	131
THD (%)	6.2	13.5	7.4	8.8	5.4	10.3	10	6.7	6.5	7.9
PF	≥ 0.99	≥ 0.9	≥ 0.98	≥ 0.92	≥ 0.99	≥ 0.95	≥ 0.99	≥ 0.97	≥ 0.99	≥ 0.96

Series	2500 lumen		3000 lumen		3500 lumen		4000 lumen		4500 lumen	
Input Voltage 120-277VAC	120V	277V	120V	277V	120V	277V	120V	277V	120V	277V
Input Current (A)	0.23	0.103	0.24	0.107	0.292	0.152	0.351	0.159	0.384	0.172
Input Power (W)	27.5	27.5	28.6	28.5	34.6	35.1	42.1	42.1	45.9	45.6
In-rush (A)	2.5	5.6	2.5	11.6	3.4	13.9	3.1	14.7	3.1	14.8
Inrush duration (µs)	232	123	216	111	183	95	200	98	202	100
THD (%)	6.5	8.1	7.8	8.3	5.6	10	4.1	9.5	4.5	8.5
PF	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.93	≥ 0.99	≥ 0.94	≥ 0.99	≥ 0.95

Series	5000 lumen		5500 lumen		6000 lumen	
Input Voltage 120-277VAC	120V	277V	120V	277V	120V	277V
Input Current (A)	0.419	0.186	0.457	0.201	0.489	0.214
Input Power (W)	50.1	49.5	54.6	53.7	58.4	57.4
In-rush (A)	3.1	15	3.2	14.8	3.4	14.8
Inrush duration (µs)	202	117	196	131	192	121
THD (%)	5.5	7.6	7	7.2	8.1	7.2
PF	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.97

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.

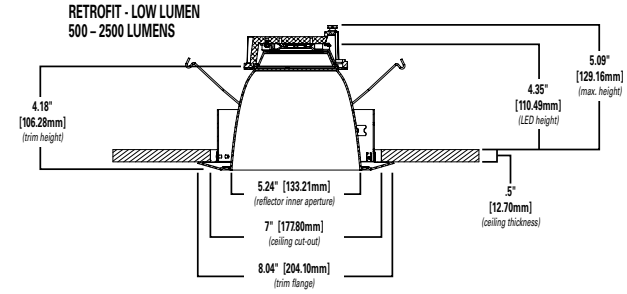
Non - Halo Commercial Open Frame Housing*

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

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

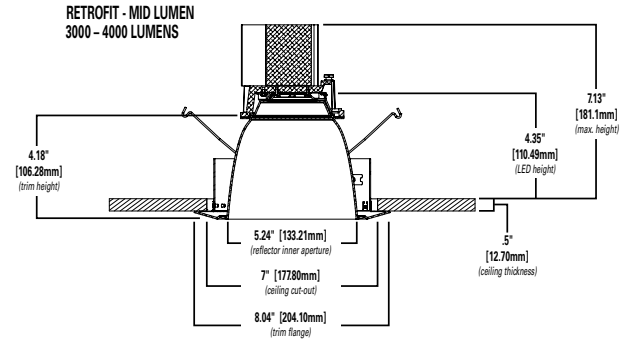
Acuity Brands®, Juno®, Elate™, Lithonia Lighting®, Signify N.V. (formerly Philips Lighting N.V.), Lightolier®, Calculite, Lytecaster, Omega Lighting, Capri Lighting, and their product brand names, where identified above, are tradenames or trademarks of each respective company and Cooper Lighting Solutions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

Dimensional and Mounting Details



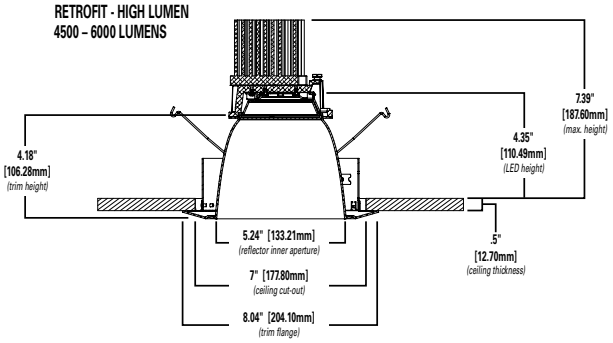


Low Lumen Module



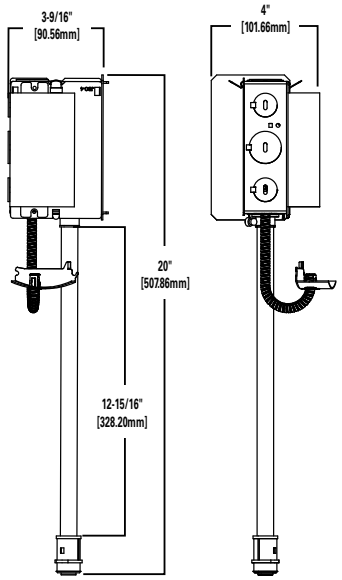


Mid Lumen Module





High Lumen Module



Connected Solutions

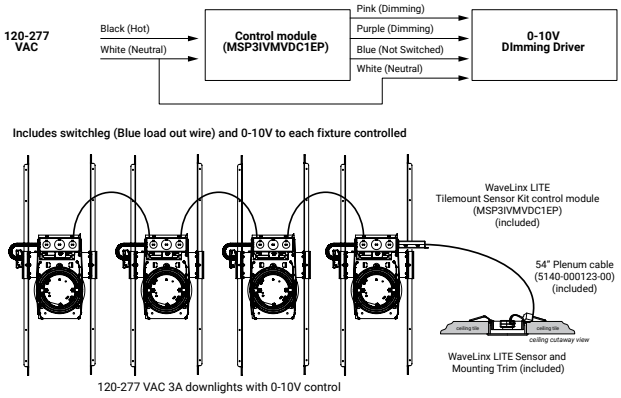


WaveLinx LITE - WTK Tilemount Sensor

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

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

WaveLinx LITE WTK Tilemount Wiring Diagram



WaveLinx LITE Bluetooth Enabled System



WaveLinx PRO – WTA Tilemount Sensor



- WaveLinx PRO tilemount 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

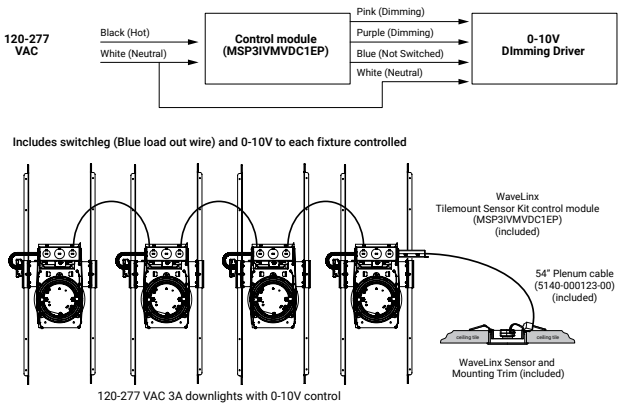
Mobile Applications
Provides personalized, local control from a tablet or smartphone

WaveLinx mobile app settings

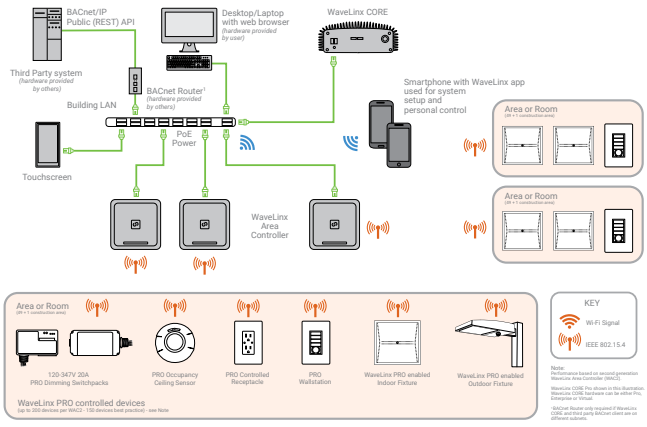
Manual Dimmer | Occupancy Sensor | Lumen Maintenance Control | Daylighting Control

Receptacle Control | Tuning Control | Scheduling | Manually Switched ON/OFF | Demand Response

WaveLinx WTA Tilemount Wiring Diagram



WaveLinx CORE Building Management Integration



Connected Solutions

WaveLinx PRO Wireless Node - WPN

- 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



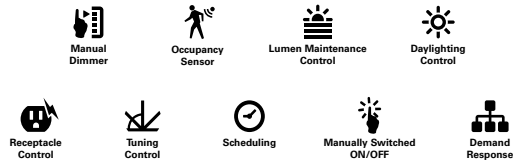
Downlights with wireless communication
Highly efficient LED fixtures

WaveLinx Area Controller
Provides centralized coordination of multiple area control options

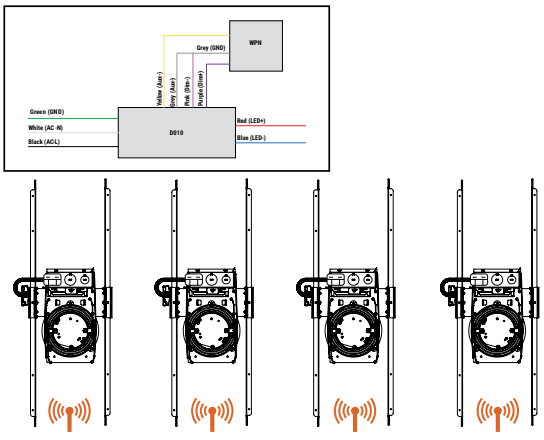
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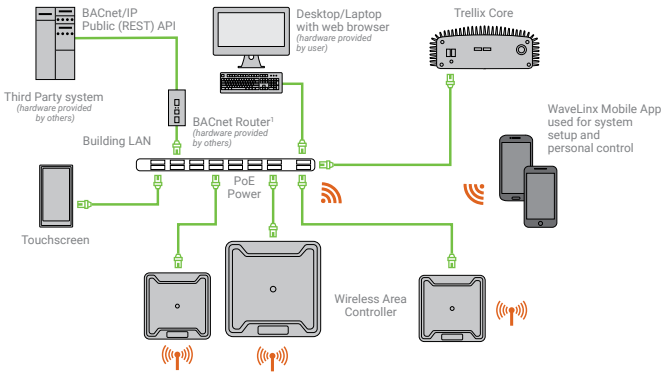


WaveLinx PRO Wireless Node (WPN) Wiring Diagram



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

WaveLinx CORE Building Management Integration



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Specifications and dimensions subject to change without notice.