LIGHTOLIER
by signify

Downlighting

EasyLyte

Z4RDL 4" Round downlight

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

EasyLyte downlights are adaptable, and flexible for your changing project needs. EasyLyte is your best choice without sacrificing ease of installation or product quality. Ideal for use in open office, healthcare, design build, and other light commercial applications.

Standard luminaire = Frame + Engine/Trim + Accessories (optional)

Buy American Act of 1933 (BAA)** Compliant luminaire* = Frame-BAC + Engine/Trim-BAC

* BAA compliance requires that BAC option be selected for each of frame and engine/trim.
  Frame and engine/trim will be ordered/shipped together (ex: 4RN-BAC-Z4RDL20835WOCDZ10U-BAC).
  Accessories (optional) are not currently BAA-compliant.

Frame

Standard example: 4RN │ BAC example: 4RN-BAC

Series	Aperture	Installation		Options	
4	**R**				
4 Uniframe 4-inch	R Round	N New construction (Non-IC) R Remodeler (Non-IC) A AirSeal (IC)[1]	— Universal 120/277/347V[2] LC Chicago Plenum[3] EM6 Emergency, 6W Self-Test/Self-Diagnostic (not available for BAC)[3,4]	3 347V (for non-Z10 configurations) RADIO Integral Interact Pro RF sensor (120/277/347V) (enables wireless connected lighting control)[3,5] requires above ceiling access BAC Meets the requirements of the Buy American Act of 1933 (BAA)**	

Engine / Trim

Standard example: Z4RDL20835WOCDZ10U │ BAC example: Z4RDL20935WOCDZ10U-BAC

Series	Lumen	CRI/CCT	Beam	Style	Reflector	Flange	Dimming		Voltage		Options
Z4RDL			**W**								
Z4RDL EasyLyte 4-inch Round downlight	05 500lm 10 1000lm 15 1500lm 20 2000lm 25 2500lm	927 90CRI / 2700K 930 90CRI / 3000K 935 90CRI / 3500K 940 90CRI / 4000K 950 90CRI / 5000K	W Wide	O Open S Step baffle	— White BK Black DB Dark Bronze CD Clear Diffuse	WH White BK Black	Z10 0-10V 1% L Lutron LDE1 EcoSystem (fade-to-black) E ELV[6] P Power over Ethernet (PoE)		U 120/277V 3 347V[7,8] (Z10 only) U 120/277/347V 1 120V E Ethernet 48V DC		BAC Meets the requirements of the Buy American Act of 1933 (BAA) **

Accessories (Not currently BAA-compliant - learn more on page 2)

SBA — Interact Ready System Bridge Accessory with integral occupancy and daylight sensor (compatible with all 0-10V options, see SBA spec sheet)[9]
CAEM6 — Field installable Bodine BSL6 6W battery pack with self-test/self-diagnostic for use with new construction (N) frames, 120-277V
AMS — ActiLume multi-sensor (optional accessory for PoE configurations)
CAEM6TSCP — Surface mount cover plate to remote mount test switch for EM6 frame option.

Sloped Ceiling   example: 7920MD

Series	Degree of Slope	
7920 Sloped Ceiling Adapter 4"	MC 5º MD 10º ME 15º MF 20º MG 25º MH 30º	

1. There is a 2000lm (20) limit with 4" (4RA) IC housings.
2. Universal 120-347V is for 0-10v (Z10) dimming configurations only. For 347V non-Z10 dimming, order 347V (3) frame with (U) light engine/trim.
3. Interact Pro (RADIO), Emergency (EM6) and Chicago Plenum (LC) are only available with New construction (N) installs.
4. EM6 option compatible with new construction (N) frame only. Order CAEM6TSCP ceiling mounting plate accessory for remote mounted test switch. EM6 option not compatible with Power over Ethernet or 347V configurations.
5. Integral Interact Pro RF sensor enables network lighting control; to be specified with 0-10V light engines only.
6. ELV (E) dimming is only compatible with 1000lm (10), 1500lm (15), 2000lm (20) configurations. Not compatible with 347V frame options.
7. Specify standard UNV frame for use with 347V light engines.
8. The 347V light engine voltage option is available only with Z10 dimming option. For other dimming protocols order (U) light engine and 347V (3) frame.
9. Requires IRT9015 IR remote & Interact Pro App for commissioning.
** Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

IC INSULATION CONTACT · WET LOCATION · c UL us LISTED · RoHS COMPLIANT · ENERGY STAR · interact ready.

Z4RDL EasyLyte 4"

Round Downlight

Features

Optics

- Provides a 70° cutoff (physical and reflected)
- Wide beam distribution for general illumination
- Spun aluminum outer reflector with integral flange painted white
- Injection molded plastic trim inserts in splay and baffle options
- Reflectors available in painted clear diffuse, white, black and dark bronze

Quality of light

- Lumen Maintenance: L70 at 60,000 hours
- Color consistency: 2 SDCM
- 90 CRI minimum

Construction (New Construction)

- Galvanized stamped steel for dry / plaster ceilings.
- Pre-installed telescoping mounting bars (13" - 24")
- Frame accommodates C- channel, black iron, and 3/4" EMT for mounting distances greater than 24" between joists.
- Manufactured from 20 gage galvanized steel construction with rolled edge aperture to guide cutting tools for perfect hole cutting.

> **Max ceiling thickness is 1.5" (38 mm).**
> **Including PoE frame 4.88" (124 mm).**

Patented install Mounting frame

- Pre-installed mounting bars allow for fast and tool-less install into T-grid and hat channel ceilings
- Close-cut aperture design eliminates an undesired gap between ceiling material and reflector
- Simple plug-and-play connection between frame and light engine from below the ceiling allows for:
  • Easy upgrades
  • Technology changes
  • Repairs and troubleshooting

Dimming

120/277V

- Advance 0-10V 1% dimming
- Lutron Hi-lume EcoSystem H Series 1% dimming

347V

- Integral 347V drivers available for 0-10v (Z10) light engine configurations with standard universal frames.
- For 347V and non-0-10v dimming, order (U) light engine and 347V (3) frame (includes step down transformer). Not compatible with ELV dimming.

Emergency

Remote ceiling mounted test switch. Accessory ceiling mounting plate available (CAEM6TSCP) for remote mounted test switch. See Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

Power over Ethernet

Powered via Philips PoE lighting controller: complies with FCC rules per Title 47 part 15 (Class A) for EMI / RFI (conducted & radiated). PoE lighting controller accessible from below ceiling.

Rated life: 60,000 hrs at 70% lumen maintenance based on IES LM-80-08 and TM-21-11.

Sloped Ceiling Adapter

Material: 16 ga. spun aluminum, matte white finish.

Installation: Installs with standard recessed fixture in sloped ceilings without changing the vertical axis of the fixture or its lighting characteristics.

Perforated Tabs (4): Provide temporary support for the slope ceiling adapter during installation.

Locking Screws (4): Secure slope ceiling adapter to mounting frame of fixture.

Support: Fixture must be supported by ceiling structure — not Slope Ceiling Adapter.

Options and Accessories

Field Installed Emergency: Refer to Calculite-Lyte-Profile-EasyLyte Emergency Battery Pack specification sheet for more details.

CAEM6: Field install EM6 kit with Bodine BSL6 6W battery pack with self-test/self-diagnostic, mounts to new construction frame. Includes ceiling plate for remote test switch.

CAEM6TSCP: Ceiling cover plate for remote mounted EM6 test switch. 1" (25mm) hole, 4 ⅜" (109mm) x 2 ⅝" (69mm) rectangular. Includes two mounting screws.

ENERGY STAR® exceptions

- 500lm configurations
- Black & Dark bronze finishes
- Power Over Ethernet drivers

Labels and Listings

- cULus listed for wet location
- ENERGY STAR® certified
- RoHS certified

Warranty

5 year limited warranty
Visit Signify.com/warranties for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

Finishes

White
Brightest aperture when illuminated and provides the smoothest transition to most ceilings when off (only available with a white flange).

Black
Specular finish that provides the lowest aperture brightness possible and reduces source identification in a ceiling significantly.

Dark Bronze
Specular finish that provides the lowest aperture brightness possible and reduces source identification in a ceiling significantly.

Clear diffuse
Slightly diffuse clear finish that softens the light and reduces the mirror image effect with traditional aluminum specular finishes (only available with a white flange).
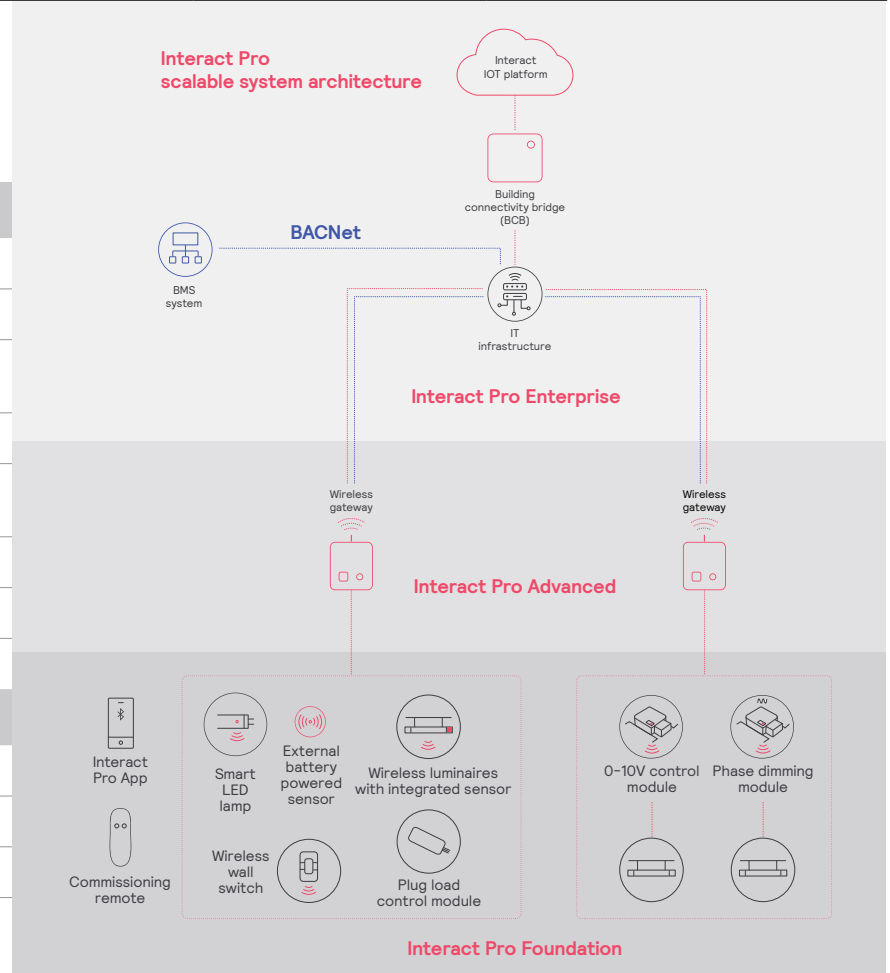
Z4RDL EasyLyte 4"
Round Downlight

interact

	Interact Pro scalable system		
	Foundation	**Advanced**	**Enterprise**
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• luminaires with integrated sensors	150
• smart TLEDS	150
Total number of ZGP devices (sensors and switches)	50
• sensors	30
• switches	50
• zones and groups	64
Group level	
Recommended number of lights	40 (recommended 25)
Number of ZGP devices	5
Number of scenes	16

Interact Pro scalable system architecture

Interact IOT platform

Building connectivity bridge (BCB)

BACNet

BMS system

IT infrastructure

Interact Pro Enterprise

Wireless gateway

Wireless gateway

Interact Pro Advanced

Interact Pro App

Commissioning remote

Smart LED lamp

External battery powered sensor

Wireless wall switch

Wireless luminaires with integrated sensor

Plug load control module

0-10V control module

Phase dimming module

Interact Pro Foundation

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Wireless Controls Options

Interact Pro scalable sensor
(System Bridge Accessory with –CS option):

- CS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & BlueTooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote onsite to identify and group devices together.
- Compatible with:
  - SWS200 wireless scene switch
  - Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
  - Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
  - Battery powered IP65 presence sensor OCC sensor IA CM IP65 WH
  - Battery powered IP65 presence & daylight sensor OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit: www.interact-lighting.com/interactproscalablesystem.

Interact Pro Enterprise
(System Bridge Accessory with –SB option):

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1) and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- SB option in addition to occupancy and daylight sensing supports advanced IoT capabilities such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices.

Emergency Options (ER100)
(System Bridge Accessory with –ER100 option):

- Power Sensing (Factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output
- Power Interruption Detection (Field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output

Radio only sensor (RADIO):

- Integral RADIO only sensor simply enables wireless mesh connectivity to the luminaire without any occupancy or daylight sensing.
- Ideal for applications where sensing functionality is managed by other Interact devices and the luminaire only needs to have wireless connectivity.

Wired Controls Options

Interact Office Wired (PoE):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- PoE lighting controller is accessible from below.
- Integral sensor option for occupancy sensing (PIR) and/or daylight harvesting available for additional energy savings.

- Optional integral emergency controller and battery pack provides 600lm nominal output.
- Test switch and indicator light mounted on side of chassis on one end.
- Emergency battery has a 3 month pre-installed shelf life, and must be stored and installed in environments of 20C to 30C (-4F to 86F) ambient, and 45-85% relative humidity.
- For more information on Interact Office Wired, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices.

Interact Office Wired (PoE), Static White:

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.

- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible Zigbee Green Power wall dimmer and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on wayfinding, room/desk reservation and offers open APIs
- Requires compatible Interact Office Gateway and internet connectivity for commissioning.
- For more information on Interact Office Wireless, visit: www.interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices.

Z4RDL   EasyLyte 4"
Round Downlight

AccuRender Technology (CRI 90+)

The right light brings colors to life. Our new AccuRender technology helps ensure colors are rendered more accurately and consistently, while doing so as efficiently as CRI 80 products.

Standard CRI 80
Good color rendering and high efficacy

Standard CRI 90
Better color rendering and low efficacy

AccuRender
Best color rendering, color preference and high efficacy

Enjoy design flexibility

Full range of products and options:

- Available soon in across Lightolier portfolio for application flexibility
- Multiple color temperatures (CCTs) and lumen packages offered

Promote savings

High efficacy, with no penalty:

- Energy efficacy compares well to conventional 80 CRI
- Up to 25% more energy savings vs competitor 90 CRI[1]
- Helps meet Title 24 requirements

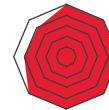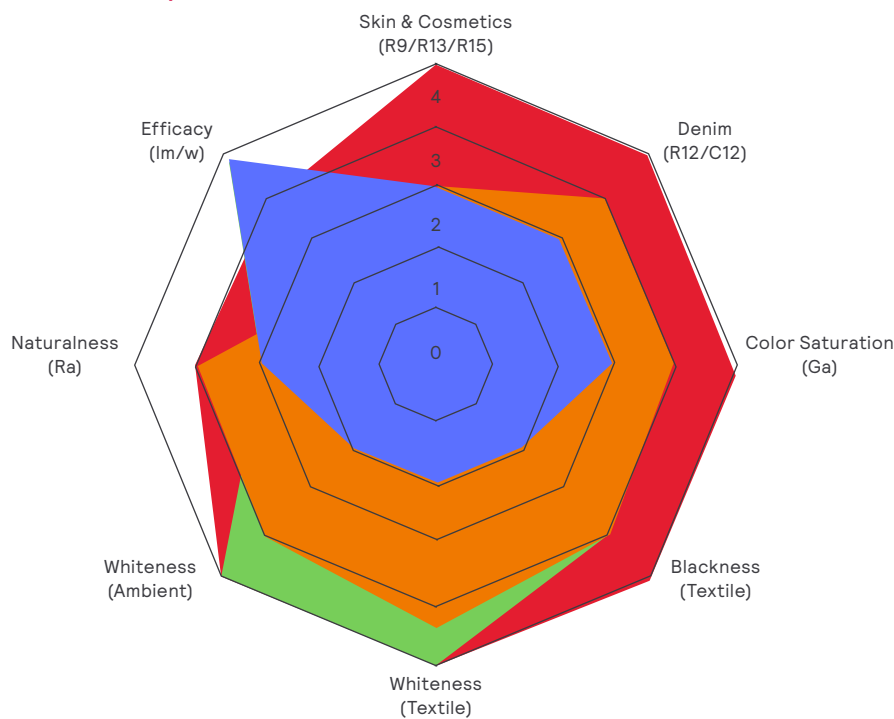### Show your true colors

High color rendering:

- True to life colors to help energize your environment and render better flesh tones critical for healthcare hospitality and retail applications.
- R_a up to 94 CRI
  R_9 up to 67 CRI
  G_a up to 99 CRI
  C_9 up to 94 CRI
- R_f up to 92 TM-30
  $R_{f,h1}$ up to 91 TM-30
  R_9 up to 100 TM-30
  $R_{cs,h1}$ up to -5% TM-30

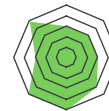### Achieve color balance

Best in class color consistency:

- Promote aesthetic harmony in your space with ≤ 2 SDCM

LED Color Recipes

(Radar chart with axes: Skin & Cosmetics (R9/R13/R15), Denim (R12/C12), Color Saturation (Ga), Blackness (Textile), Whiteness (Textile), Whiteness (Ambient), Naturalness (Ra), Efficacy (lm/w); scale 0–4)

Crisp White

Dial-up the drama of your display. Highlight the variances in white tones, add contrast to blacks and create a real pleasing sparkle effect while retaining warm skin tones.

Premium White

The new benchmark for retail fashion. Delivering stronger and brighter whites via the best lighting technology on the market with minimal compromise to energy savings.

Premium Color

Enhance the contrast between colors and whites to achieve new depths of color rendering for a vibrant saturated fashion-forward visual experience that won't affect the atmosphere and will have a positive effect on energy efficiency.
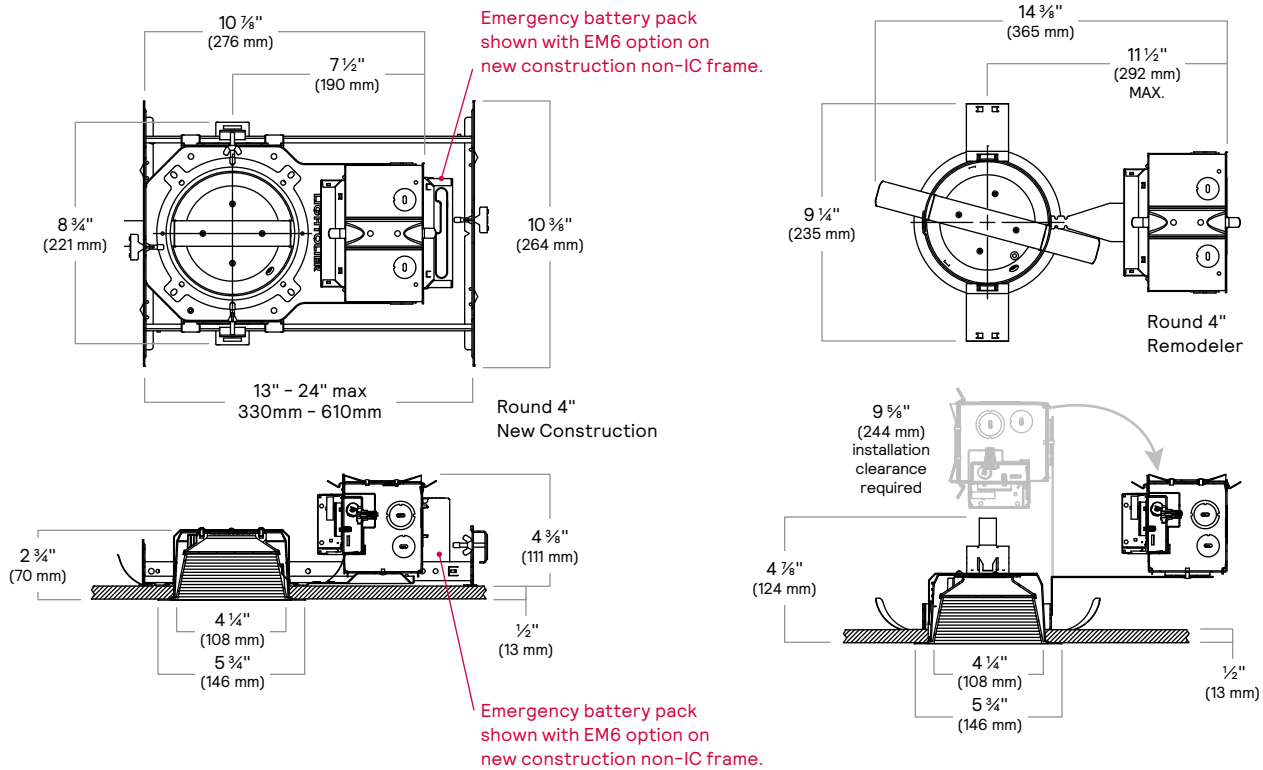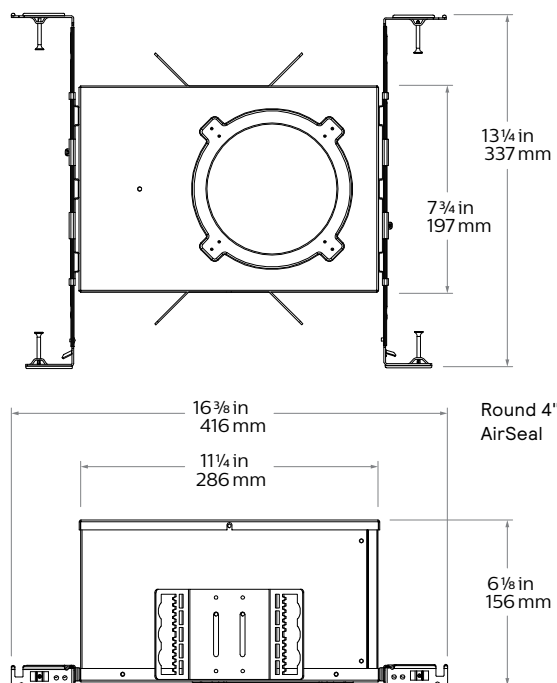
Standard Color

Standard CRI 90
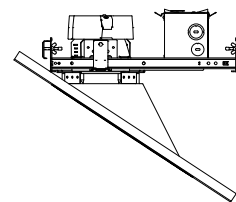
Z4RDL   EasyLyte 4"

Round Downlight

Dimensions

10 ⅞" (276 mm)

7 ½" (190 mm)

Emergency battery pack shown with EM6 option on new construction non-IC frame.

8 ¾" (221 mm)

10 ⅜" (264 mm)

13" – 24" max 330mm - 610mm

Round 4" New Construction

2 ¾" (70 mm)

4 ¼" (108 mm)

5 ¾" (146 mm)

4 ⅜" (111 mm)

½" (13 mm)

Emergency battery pack shown with EM6 option on new construction non-IC frame.

14 ⅜" (365 mm)

11 ½" (292 mm) MAX.

9 ¼" (235 mm)

Round 4" Remodeler

9 ⅝" (244 mm) installation clearance required

4 ⅞" (124 mm)

4 ¼" (108 mm)

5 ¾" (146 mm)

½" (13 mm)

AirSeal (A)

13 ¼ in 337 mm

7 ¾ in 197 mm

Round 4" AirSeal

16 ⅜ in 416 mm

11 ¼ in 286 mm

6 ⅛ in 156 mm

Sloped Ceiling Adapter

Electrical

All have an input frequency of 50/60Hz

Light engine	Input volts	Input Current	Input Power	LED Drive Current	LED Power	THD Factor @ Max Load	Power Factor @ Max Load
Z4*05*	120V	0.050A	6.0W	0.15A	5.0W	<10%	>0.9
	277V	0.022A	6.1W	0.15A	5.0W	<15%	>0.9
	347V	0.021A	7.2W	0.15A	5.0W	<15%	>0.9
Z4*10*	120V	0.074A	8.9W	0.22A	7.4W	<10%	>0.9
	277V	0.033A	9.1W	0.22A	7.4W	<15%	>0.9
	347V	0.030A	10.3W	0.22A	7.4W	<15%	>0.9
Z4*15*	120V	0.113A	13.6W	0.33A	11.5W	<10%	>0.9
	277V	0.050A	13.9W	0.33A	11.5W	<15%	>0.9
	347V	0.044A	15.4W	0.33A	11.5W	<15%	>0.9
Z4*20*	120V	0.167A	20.0W	0.50A	17.2W	<10%	>0.9
	277V	0.072A	20.0W	0.50A	17.2W	<15%	>0.9
	347V	0.062A	21.5W	0.50A	17.2W	<15%	>0.9
Z4*25*	120V	0.216A	25.9W	0.64A	22.5W	<10%	>0.9
	277V	0.094A	25.9W	0.64A	22.5W	<15%	>0.9
	347V	0.078A	27.2W	0.64A	22.5W	<15%	>0.9

Z4RDL EasyLyte 4"

Round Downlight

Photometry

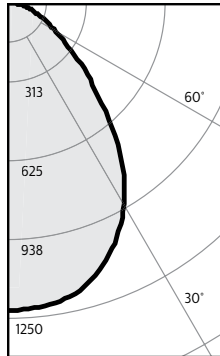| Reflector	Flux (lm)	Power (W)	Efficacy (lm/W)	CRI	R9	Beam Angle	Field Angle	Spacing Criterion
Open DL – Bronze	485	7.3	66.4	94	60	74°	108°	1.072
Open DL – Black	459	7.3	62.9	93	58	74°	107°	1.070
Open DL – White	660	7.3	90.5	93	56	79°	129°	1.130
Open DL – Clear Diffuse	653	7.3	89.5	93	56	83°	120°	1.178
Baffle – Black	390	7.3	53.4	93	59	74°	108°	1.073
Baffle – White	731	7.3	100.2	93	57	82°	140°	1.166
Open DL – Bronze	689	10.0	68.6	94	60	74°	108°	1.072
Open DL – Black	653	10.0	65.0	93	58	74°	107°	1.070
Open DL – White	939	10.0	93.4	93	56	79°	129°	1.130
Open DL – Clear Diffuse	928	10.0	92.4	93	56	83°	120°	1.178
Baffle – Black	554	10.0	55.1	93	59	74°	108°	1.073
Baffle – White	1039	10.0	103.5	93	57	82°	140°	1.166
Open DL – Bronze	1022	14.6	70.0	94	60	74°	108°	1.072
Open DL – Black	968	14.6	66.3	93	58	74°	107°	1.070
Open DL – White	1392	14.6	95.4	93	56	79°	129°	1.130
Open DL – Clear Diffuse	1376	14.6	94.3	93	56	83°	120°	1.178
Baffle – Black	821	14.6	56.3	93	59	74°	108°	1.073
Baffle – White	1541	14.6	105.6	93	57	82°	140°	1.166
Open DL – Bronze	1534	20.0	76.7	94	60	74°	108°	1.072
Open DL – Black	1453	20.6	70.6	93	58	74°	107°	1.070
Open DL – White	2089	20.6	101.4	93	56	79°	129°	1.130
Open DL – Clear Diffuse	2066	20.6	100.3	93	56	83°	120°	1.178
Baffle – Black	1233	21.3	57.9	93	59	74°	108°	1.073
Baffle – White	2313	20.6	112.3	93	57	82°	140°	1.166
Open DL – Bronze	1895	27.4	69.1	94	60	74°	108°	1.072
Open DL – Black	1796	27.4	65.5	93	58	74°	107°	1.070
Open DL – White	2581	27.4	94.1	93	56	79°	129°	1.130
Open DL – Clear Diffuse	2552	27.4	93.1	93	56	83°	120°	1.178
Baffle – Black	1523	27.4	55.5	93	59	74°	108°	1.073
Baffle – White	2858	27.4	104.2	93	57	82°	140°	1.166

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

Downlight, Wide beam, 2300lm Engine, 112 lm/W at 21W

Candela Curves

Frame: **4RN**
Engine / Trim:
Z4RDL20935WSWHZ10U

Output lumens:	2314 lms
Input watts[1]:	20.6 W
CRI:	90 min
CCT[2]:	3500K
Beam Angle:	79°
Spacing Crit.:	1.14

Zonal summary

Zone	Lumens	%Luminaire
0-30	909	39.3%
0-40	1401	60.5%
0-60	2037	88.0%
0-90	2314	100.0%

Angle	Mean CP	Lumens
0	1214	
5	1208	115
10	1194	
15	1162	327
20	1101	
25	1020	468
30	918	
35	791	492
40	645	
45	491	383
50	378	
55	278	253
60	209	
65	161	161
70	120	
75	84	89
80	51	
85	24	27
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	49	5.7'
6'	34	6.8'
7'	25	8.0'
8'	19	9.1'
9'	15	10.3'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data – RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	97.0	0.91
6'	64.0	0.60
7'	46.0	0.43
8'	38.0	0.36
9'	30.0	0.29

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 112.3 lm/w
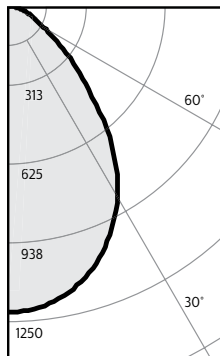Report[3]: STMR-522-I

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method – Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	99	100	95	97	93	88
2	103	96	90	85	94	84	90	82	87	80	77
3	95	86	79	74	84	73	82	72	79	70	67
4	88	78	70	64	76	64	74	63	72	62	60
5	82	71	63	57	70	57	67	56	66	55	53
6	76	64	57	51	64	51	62	50	60	50	48
7	71	59	51	46	58	46	57	45	56	45	43
8	67	54	47	41	54	41	53	41	51	41	39
9	63	50	43	38	50	38	49	38	48	37	36
10	59	47	40	35	46	35	45	35	44	34	33

(Room Cavity Ratio)

Adjustment factors

Finish

WH = 100%
BK = 54%

Downlight, Wide beam, 2100lm Engine, 102 lm/W at 21W

Candela Curves

Frame: **4RN**
Engine / Trim:
Z4RDL20935WOWHZ10U

Output lumens:	2090 lms
Input watts[1]:	20.6 W
CRI:	90 min
CCT[2]:	3500K
Beam Angle:	82°
Spacing Crit.:	1.1

Zonal summary

Zone	Lumens	%Luminaire
0-30	1181	40.7%
0-40	1816	62.6%
0-60	2609	90.0%
0-90	2900	100.0%

Angle	Mean CP	Lumens
0	1215	
5	1205	114
10	1177	
15	1130	318
20	1063	
25	977	448
30	871	
35	742	461
40	593	
45	439	343
50	323	
55	223	204
60	157	
65	116	117
70	88	
75	62	66
80	38	
85	18	20
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	49	5.5'
6'	34	6.6'
7'	25	7.7'
8'	19	8.8'
9'	15	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data – RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	89.0	0.91
6'	58.0	0.60
7'	42.0	0.43
8'	35.0	0.36
9'	28.0	0.29

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 101.5 lm/w
Report[3]: STMR-531-I

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method – Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	99	101	96	97	93	88
2	103	96	90	85	94	84	91	83	87	81	77
3	95	86	79	74	85	73	82	72	79	71	68
4	88	78	71	65	77	64	74	64	72	63	60
5	82	71	63	57	70	57	68	57	66	56	54
6	77	65	57	51	64	51	62	51	61	50	48
7	72	60	52	46	59	46	57	46	56	46	44
8	67	55	47	42	54	42	53	42	52	42	40
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33

(Room Cavity Ratio)

Adjustment factors

Finish

WH = 100%
CD = 98%
DB = 73%
BK = 70%

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1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.