

MILLENIUM DOWNLIGHT

Luminaires for High Abuse Applications

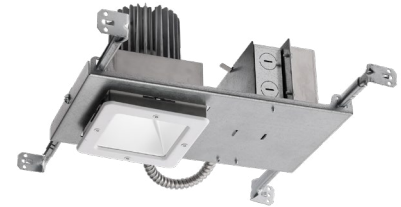
HADL4 SERIES using Indigo-Clean Technology

PRODUCT FEATURES:

- » 4" sealed, recessed downlight with flush trim, round or square aperture
- » Provides on-demand environmental disinfection via LED light
- » Single, white disinfection mode
- » Independent laboratory tested to kill harmful bacteria, including Staph*, such as MRSA**
- » Peace of Mind Guarantee® against breakage



Round



Square

SPECIFICATIONS

HEAT SINK: Die-cast aluminum with external radial fins for natural convection.

ROUGH-IN FRAME: 18-gauge die-formed, corrosion-resistant steel. Vertically adjustable collar accommodates ceiling thicknesses up to 1.5", adjustable post-installation. Adjustable mounting bars for installation with wood and steel frame joists and T-grid ceiling systems spaced up to 24" on center. Quick-access junction box accessible post-installation from above and below ceiling. Includes (5) 1/2" knock-outs to allow straight conduit runs.

TRIM/HOUSING SECTION: IP-rated housing section incorporates the heat sink, LED module, optics and lower trim. Flush lens trim secured with three (Round) or four (Square) Torx® tamper-resistant, captive fasteners. Closed-cell gasketing at ceiling flange. See Trim Ordering Information for available options.

OPTICAL: Diffused tempered-glass upper lens. 1/8" clear polycarbonate flush lens at ceiling trim with continuous seal to trim ring. Available with various reflector finishes. See Ordering Information for available options.

ELECTRICAL: Single, white disinfection mode. Serviceable white and 405nm Indigo LED array. Available 3200K, 3700K and 4300K color temperature with 3-step MacAdam variation allowance. Minimum 82 CRI standard. 120, 277 and 347VAC, 50/60Hz electrical input with serviceable high power factor electronic, constant-current drivers (<10% THD, >0.90 PF). Minimum 85% driver efficiency. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities; 0.2mA maximum source current. Optional eldoLED ECOdrive DALI-2/LEDcode2 driver with 1-100% range.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric information, go to www.kenall.com.

WARRANTY: Limited five (5) year LED warranty. Peace of Mind Guarantee against breakage.

LISTINGS: Luminaire is certified to UL standards by Intertek Testing Laboratory for non-IC and Wet Location installations. IP65 rating per IEC60598. Optional CCEA compliance. EPA Est. No. 99283-WI-1.

* Per independent lab report #5GS-09S17036476. Contact Kenall for a copy of this report.

**Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016.



ORDERING INFORMATION (EX: HADL4S-FF-XFW-22C-37K8-CD-G-RIG4S-277-DIM1-CCEA)

TRIM							ROUGH-IN			
Model	Trim Style	Trim Finish	Lamp Power	Lamp Color	Reflector Finish	Flush Lens Type	Rough-In	Input Voltage	Driver Type	Options
	FF		22C			G				
Model			Lamp Power			Rough-In				
HADL4	4" Medical - Round		22C 22 Watt White & Indigo LED			RIG4 4" High Abuse Rough-In - Round				
HADL4S	4" Medical - Square					RIG4S 4" High Abuse Rough-In - Square				
Trim Style			Lamp Color			Input Voltage				
FF	Flush Lens (With Fasteners)		32K8 3200K / 80 CRI min.			120 120VAC, 50/60Hz				
			37K8 3700K / 80 CRI min.			277 277VAC, 50/60Hz				
			43K8 4300K / 80 CRI min.			347▲ 347VAC, 60Hz				
Trim Finish			Reflector Finish			Driver Type				
2FW	Cold-Rolled Steel in Flat White		FW Flat White			DIM1 0-10V Dimming to 1% Dim-to-Dark				
5BR	Type 304 Stainless Steel with 4B Brushed Finish		CD Clear Diffuse			DALI DALI-2/LEDcode2 Dimming to 1% without Dim-to-Dark				
5FW	Type 304 Stainless Steel in Flat White		CSS Clear Semi-Specular (round only)							
XBR	Type 316 Stainless Steel with 4B Brushed Finish									
XFW	Type 316 Stainless Steel in Flat White		Flush Lens Type			Options				
			G 1/8" Clear Polycarbonate			LEL Emergency Battery Backup with Remote Test Switch (0°C min ambient)				
						FS Fuse & Holder				
						CCEA CCEA Approved				

▲ N/A with DALI Driver Type. N/A with LEL and CCEA option



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PERFORMANCE

Optic				Lamp Power	Initial Delivered Lumens, By Lamp Color			Efficacy (lm/W)	Input Power (W)	TM-21 Reported L90 (hrs)	TM-21 Reported L70 (hrs)
Aperture	Trim Style	Reflector Finish	Lens Type		32K8	37K8	43K8				
Round	FF	CD	G	22C	1,684	1,684	1,794	71 - 75	24	>55,000	>55,000
		CSS			1,707	1,707	1,818	71 - 76	24	>55,000	>55,000
		FW			1,599	1,599	1,703	67 - 71	24	>55,000	>55,000
Square	FF	CD	G	22C	1,439	1,439	1,533	60 - 64	24	>55,000	>55,000
		FW			1,385	1,385	1,475	58 - 62	24	>55,000	>55,000

Subject to change without notice. Visit www.kenall.com for ies files and additional information.

Round Aperture Candela Curve	HADL4-FF-rrrr-22C-37K8-CSS-G		Distance to illuminated plane (ft)
	Initial center beam foot-candles	Beam diameter (ft)	
	68.6	4.6	5'
	47.6	5.5	6'
	35.0	6.4	7'
	26.8	7.3	8'
	21.2	8.2	9'
	17.1	9.1	10'
Spacing Criteria: 0.93		foot-candle multipliers for 32K8 (1.00), 43K8 (1.07)	
Beam Angle: 49		Beam diameter is where foot-candles drop to 50% of maximum	

Round Aperture Candela Curve	HADL4-FF-rrrr-22C-37K8-CD-G		Distance to illuminated plane (ft)	HADL4S-FF-rrrr-22C-37K8-CD-G		Square Aperture Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	69.7	4.6	5'	71.5	5.2	
	48.4	5.5	6'	49.7	6.3	
	35.6	6.4	7'	36.5	7.3	
	27.2	7.3	8'	27.9	8.4	
	21.5	8.2	9'	22.1	9.4	
	17.4	9.1	10'	17.9	10.4	
Spacing Criteria: 0.92		foot-candle multipliers for 32K8 (1.00), 43K8 (1.07)				Spacing Criteria: 0.84
Beam Angle: 49		Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 55

Round Aperture Candela Curve	HADL4-FF-rrrr-22C-37K8-FW-G		Distance to illuminated plane (ft)	HADL4S-FF-rrrr-22C-37K8-FW-G		Square Aperture Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	53.6	5.7	5'	55.1	5.7	
	37.2	6.8	6'	38.3	6.9	
	27.3	7.9	7'	28.1	8	
	20.9	9.1	8'	21.5	9.2	
	16.5	10.2	9'	17.0	10.3	
	13.4	11.3	10'	13.8	11.5	
Spacing Criteria: 0.88		foot-candle multipliers for 32K8 (1.00), 43K8 (1.07)				Spacing Criteria: 0.92
Beam Angle: 59		Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 60



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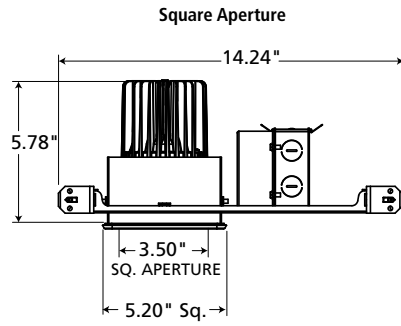
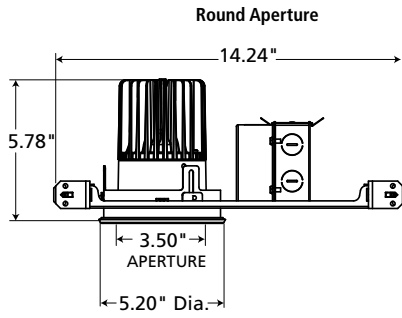
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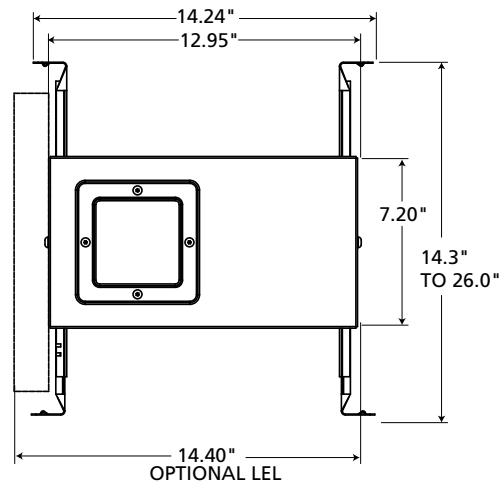
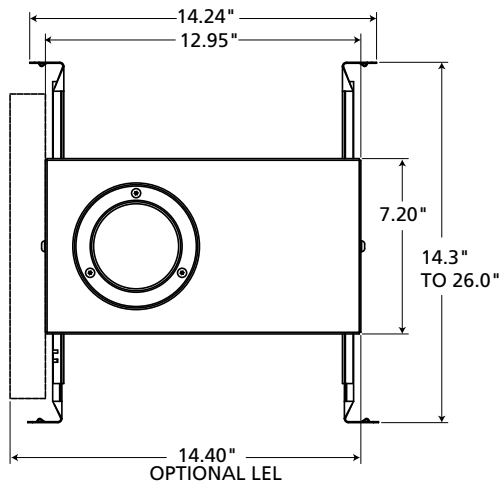
HADL4 SERIES using Indigo-Clean Technology

DIMENSIONAL DATA

CROSS SECTION



BOTTOM VIEW



RECOMMENDED CEILING CUTOUT: 4.875" DIA.

RECOMMENDED CEILING CUTOUT: 4.875" X 4.875"



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