

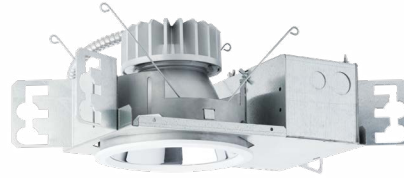
MILLENIUM DOWNLIGHT

Luminaires for High Abuse Applications

HADL SERIES

PRODUCT FEATURES:

- » 6" sealed, recessed downlight with flush lens trim
- » Peace of Mind Guarantee™ against breakage
- » Delivered lumens: 715 - 5,305 lm
- » 1% Dimming via 0-10V, DALI or EcoSystem control



PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

SPECIFICATIONS

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

ROUGH-IN FRAME: 18-gauge die-formed, corrosion-resistant steel (type 304 stainless with NAT option). Vertically adjustable collar accommodates ceiling thicknesses up to 2", adjustable post-installation. Universal mounting brackets accept 3/4" and 1-1/2" lathers channel, 1/2" EMT conduit and hanger bars. Quick-access junction box accessible post-installation from above and below ceiling. Includes (4) 1/2" and (2) 3/4" knock-outs to allow straight conduit runs. Listed for (8) 12AWG, 90°C conductors and feed-thru branch wiring. Provided with FMC with electrical quick-connect to Trim Section.

TRIM/HOUSING SECTION: IP-rated housing section incorporates the heat sink, LED module, optics and lower trim. Flush lens trim secured with four (4) Torx® tamper-resistant, captive fasteners. See trim ordering information for available options.

OPTICAL: High-Efficiency mixing chamber design with regressed diffused tempered-glass lens producing uniform light output. Available with various reflector distribution patterns and finishes. Flush lens trim options include a clear lens. See distribution and reflector finish ordering information for available options.

ELECTRICAL: LED array available in multiple CCT and CRI combinations with a maximum 3-step MacAdam variation allowance. See Trim Ordering Information for available options. 120-277VAC or 347VAC, 50/60Hz electrical input with serviceable constant current driver (<20% THD, >0.90 PF). Minimum 85% driver efficiency. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities (non dim-to-dark with 347V); 165µA maximum source current. Optional eldoLED ECODrive DALI driver with 1-100% range and Lutron Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology.

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.

INSTALLATION: Suitable for ambient temperature temperatures of -30°C to +40°C.

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.



ORDERING INFORMATION (EX: HADL6-FF-2FW-22L-40K8-W-CSS-G-RIG6-DV-DIM1)

TRIM

Model	Trim Style	Trim Finish	Lamp Power	Lamp Color	Distribution	Reflector Finish	Flush Lens Type
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HADL6

FF

Trim Style

FF Flush Lens (With Fasteners - IP65)

Trim Finish

2FW Cold-Rolled Steel in Flat White
5BR Type 304 Stainless Steel with 4B Brushed Finish
XBR Type 316 Stainless Steel with 4B Brushed Finish
5FW Type 304 Stainless Steel in Flat White
XFW Type 316 Stainless Steel in Flat White
PAFW Aluminum in Flat White

Lamp Power

12L 12 Watt LED
22L 22 Watt LED
33L 33 Watt LED
55L* 55 Watt LED

Lamp Color

30K8 3000K / 80 CRI min.
30K9 3000K / 90 CRI min.
35K8 3500K / 80 CRI min.
35K9 3500K / 90 CRI min.
40K8 4000K / 80 CRI min.
40K9 4000K / 90 CRI min.
50K8 5000K / 80 CRI min.

Distribution

M Medium
W Wide

Reflector Finish

FW Flat White
CS Clear Specular
CSS Clear Semi-Specular

Flush Lens Type

G 1/8" Clear Polycarbonate
9 1/4" Clear Polycarbonate

ROUGH-IN

Rough-In	Input Voltage	Driver Type	Options
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RIG6

Rough-In

RIG6 6" Rough-In

Input Voltage

DV 120-277V, 50/60Hz
120 120VAC, 60Hz
277 277VAC, 60Hz
347* 347VAC, 60Hz

Driver Type

DIM1 0-10V Dimming to 1%
DALI DALI Dimming to 1%
ECO1 Lutron Hi-Lume 1% EcoSystem®

Options

LEL Emergency Battery Backup with Remote Test Switch
NAT† Natatorium Environment
FS Fuse & Holder
CCEA CCEA Approved (specified voltage required; n/a 347V)
9500 Torx® Screwdriver

- * N/A with DALI or ECO1 Driver Type. N/A with LEL option
- † Requires selection of XBR or XFW Trim Finish. Rough-In frame constructed of Type 304 stainless steel in lieu of corrosion-resistant steel
- ▲ Must be installed with a minimum 24" on-center spacing, 12" from wall, and have 3" clearance above the Trim/Housing



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HADL SERIES

PERFORMANCE

Distribution	Optic		Lamp Power	Initial Delivered Lumens, By Lamp Color							Efficacy (lm/W)	Input Power (W)	Estd. L70 LED Life (hrs)	
	Reflector Finish	Lens Type		30K8	30K9	35K8	35K9	40K8	40K9	50K8				
M	CS	G	12L	1,048	876	1,048	887	1,090	887	1,114	58 - 74	15	80,000	
			22L	1,716	1,435	1,716	1,452	1,785	1,452	1,823	60 - 76	24	85,000	
			33L	2,487	2,079	2,487	2,104	2,586	2,104	2,642	59 - 75	35	70,000	
		55L	4,436	3,709	4,436	3,754	4,613	3,754	4,713	60 - 76	62	75,000		
		9	12L	923	772	923	781	960	781	980	51 - 65	15	80,000	
			22L	1,511	1,263	1,511	1,279	1,571	1,279	1,605	53 - 67	24	85,000	
	33L		2,189	1,830	2,189	1,853	2,277	1,853	2,326	52 - 66	35	70,000		
	CSS	G	12L	1,048	876	1,048	887	1,090	887	1,114	58 - 74	15	80,000	
			22L	1,716	1,435	1,716	1,452	1,785	1,452	1,823	60 - 76	24	85,000	
			33L	2,487	2,079	2,487	2,104	2,586	2,104	2,642	59 - 75	35	70,000	
		9	55L	4,436	3,709	4,436	3,754	4,613	3,754	4,713	60 - 76	62	75,000	
			12L	923	772	923	781	960	781	980	51 - 65	15	80,000	
			22L	1,511	1,263	1,511	1,279	1,571	1,279	1,605	53 - 67	24	85,000	
	FW	G	33L	2,189	1,830	2,189	1,853	2,277	1,853	2,326	52 - 66	35	70,000	
			55L	3,905	3,265	3,905	3,305	4,061	3,305	4,149	53 - 67	62	75,000	
			12L	972	813	972	822	1,011	822	1,033	54 - 69	15	80,000	
		9	22L	1,591	1,331	1,591	1,347	1,655	1,347	1,691	55 - 70	24	85,000	
			33L	2,305	1,928	2,305	1,951	2,398	1,951	2,450	55 - 70	35	70,000	
			55L	4,113	3,439	4,113	3,481	4,277	3,481	4,370	55 - 70	62	75,000	
	W	CS	G	12L	1,180	986	1,180	998	1,227	998	1,253	67 - 86	15	80,000
				22L	1,932	1,615	1,932	1,635	2,009	1,635	2,052	67 - 86	24	85,000
				33L	2,799	2,340	2,799	2,369	2,911	2,369	2,974	67 - 85	35	70,000
			9	55L	4,993	4,175	4,993	4,225	5,193	4,225	5,305	67 - 86	62	75,000
				12L	1,039	868	1,039	879	1,080	879	1,104	59 - 75	15	80,000
22L				1,701	1,422	1,701	1,439	1,769	1,439	1,807	59 - 75	24	85,000	
CSS		G	33L	2,464	2,060	2,464	2,085	2,562	2,085	2,618	59 - 75	35	70,000	
			55L	4,396	3,675	4,396	3,720	4,571	3,720	4,670	59 - 75	62	75,000	
			12L	1,001	837	1,001	847	1,041	847	1,064	57 - 73	15	80,000	
		9	22L	1,639	1,371	1,639	1,387	1,705	1,387	1,742	57 - 73	24	85,000	
			33L	2,375	1,986	2,375	2,010	2,470	2,010	2,524	57 - 72	35	70,000	
			55L	4,238	3,543	4,238	3,586	4,407	3,586	4,502	57 - 73	62	75,000	
FW		G	12L	881	737	881	746	917	746	937	50 - 64	15	80,000	
			22L	1,443	1,207	1,443	1,221	1,501	1,221	1,534	50 - 64	24	85,000	
			33L	2,091	1,748	2,091	1,770	2,175	1,770	2,222	50 - 63	35	70,000	
		9	55L	3,731	3,119	3,731	3,157	3,880	3,157	3,964	50 - 64	62	75,000	
			12L	1,109	928	1,109	939	1,154	939	1,179	63 - 81	15	80,000	
			22L	1,817	1,519	1,817	1,537	1,889	1,537	1,930	63 - 80	24	85,000	
CSS		G	33L	2,632	2,201	2,632	2,227	2,737	2,227	2,796	63 - 80	35	70,000	
			55L	4,695	3,926	4,695	3,974	4,883	3,974	4,989	63 - 80	62	75,000	
			12L	977	817	977	827	1,016	827	1,038	56 - 71	15	80,000	
		9	22L	1,599	1,337	1,599	1,353	1,663	1,353	1,699	56 - 71	24	85,000	
			33L	2,317	1,937	2,317	1,961	2,410	1,961	2,462	55 - 70	35	70,000	
			55L	4,134	3,456	4,134	3,498	4,299	3,498	4,392	56 - 71	62	75,000	

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HADL SERIES

PERFORMANCE

Wide Distribution Candela Curve	HADL6-FF-12L-40K8-W-CS-G		Distance to illuminated plane (ft)	HADL6-FF-12L-40K8-M-CS-G		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	28.4	7.6	5'	86.4	3.2	
	22.5	7.8	6'	60.0	3.5	
	16.5	9.2	7'	44.1	4.0	
	12.6	10.5	8'	33.7	4.6	
	10.0	11.8	9'	26.7	5.2	
	8.1	13.0	10'	21.6	5.8	
Spacing Criteria: 1.4	foot-candle multipliers for 30K8(.96), 30K9(.80), 35K8(.96), 35K9(.81), 40K9(.81), 50K8(1.0)				Spacing Criteria: 0.62	
Beam Angle: 59°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 34°	

Wide Distribution Candela Curve	HADL6-FF-22L-40K8-W-CS-G		Distance to illuminated plane (ft)	HADL6-FF-22L-40K8-M-CS-G		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	46.6	7.6	5'	141.4	3.2	
	36.8	7.8	6'	98.2	3.5	
	27.0	9.2	7'	72.2	4.0	
	20.7	10.5	8'	55.2	4.6	
	16.4	11.8	9'	43.7	5.2	
	13.3	13.0	10'	35.4	5.8	
Spacing Criteria: 1.4	foot-candle multipliers for 30K8(.96), 30K9(.80), 35K8(.96), 35K9(.81), 40K9(.81), 50K8(1.0)				Spacing Criteria: 0.62	
Beam Angle: 59°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 34°	

Wide Distribution Candela Curve	HADL6-FF-33L-40K8-W-CS-G		Distance to illuminated plane (ft)	HADL6-FF-33L-40K8-M-CS-G		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	67.5	7.6	5'	204.9	3.2	
	53.4	7.8	6'	142.3	3.5	
	39.1	9.2	7'	104.5	4.0	
	29.9	10.5	8'	80.0	4.6	
	23.8	11.8	9'	63.2	5.2	
	19.3	13.0	10'	51.2	5.8	
Spacing Criteria: 1.36	foot-candle multipliers for 30K8(.96), 30K9(.80), 35K8(.96), 35K9(.81), 40K9(.81), 50K8(1.0)				Spacing Criteria: 0.36	
Beam Angle: 54°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 21°	

Wide Distribution Candela Curve	HADL6-FF-55L-40K8-W-CS-G		Distance to illuminated plane (ft)	HADL6-FF-55L-40K8-M-CS-G		Medium Distribution Candela Curve
	Initial center beam foot-candles	Beam diameter (ft)		Initial center beam foot-candles	Beam diameter (ft)	
	120.4	7.6	5'	365.5	3.2	
	95.2	7.8	6'	253.8	3.5	
	69.7	9.2	7'	186.5	4.0	
	53.4	10.5	8'	142.8	4.6	
	42.5	11.8	9'	112.8	5.2	
	34.4	13.0	10'	91.4	5.8	
Spacing Criteria: 1.36	foot-candle multipliers for 30K8(.96), 30K9(.80), 35K8(.96), 35K9(.81), 40K9(.81), 50K8(1.0)				Spacing Criteria: 0.36	
Beam Angle: 54°	Beam diameter is where foot-candles drop to 50% of maximum				Beam Angle: 21°	



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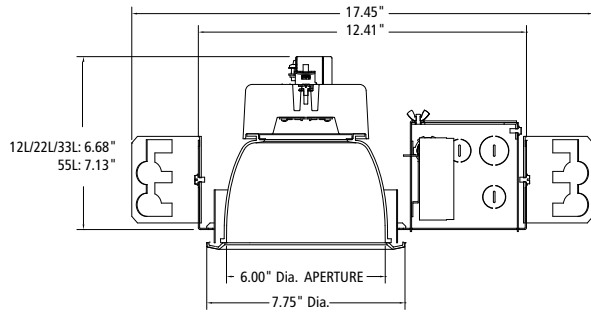
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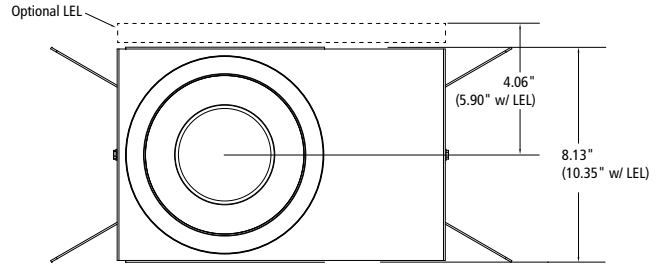
HADL SERIES

DIMENSIONAL DATA

CROSS SECTION



BOTTOM VIEW



RECOMMENDED CEILING CUT-OUT: 7.38" Dia.

