PROJECT	Job Name	(Catalog Number	
INFORMATION	Fixture Type		Approved by	

Luminaires for High Abuse Applications

HADL SERIES

PRODUCT FEATURES:

- » 6" sealed, recessed downlight with flush lens trim
- » Peace of Mind Guarantee® against breakage
- » 630 4,600 delivered lumens with multiple distribution, reflector finish and lens options
- » 1% Dimming via 0-10V or DALI-2 control
- » NSF2 and IP65 ingress protection rating
- » Ligature resistant construction

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: Clear tempered glass upper lens. 1/8" or 1/4" clear polycarbonate flush lens at ceiling trim. Continuous seal between lens and trim ring. Available with various reflector distribution patterns and finishes. See Ordering Information for available options.

ELECTRICAL: LED source 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; 0.2mA maximum source current. Optional eldoLED ECOdrive DALI-2 (DT6) / 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.

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

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. Ligature resistant construction













ORDERING INFORMATION (EX: HADL6-FF-2FW-18L-40K8-W-CSS-G-RIG6-DV-DIM1)

TRIM						ROUGI	H-IN			
Model	Trim Style Trim Finish Lamp Power	Lamp	Color Distribution	Reflector Finish	Flush Lens Type	Rough-I	ln	Input Voltage	Driver Type	Options
<u>HADI</u>	<u> </u>			_		RIG	6			
Trim St	yle	Lamp	Color			Rough-	-In			
FF F	lush Lens (With Fasteners - IP65)	30K8				RIG6	6" F	Rough-In		
		30K9								
Trim Fi		35K8				Input V				
2FW	Cold-Rolled Steel in Flat White	35K9				DV		-277V, 50/60Hz		
5BR	Type 304 Stainless Steel with 4B Brushed Finish	40K8				120		VAC, 60Hz		
XBR	Type 316 Stainless Steel with 4B Brushed Finish	40K9				277		VAC, 60Hz		
5FW	Type 304 Stainless Steel in Flat White	50K8	5000K / 80 CRI r	min.		347*	347	VAC, 60Hz		
XFW PAFW	Type 316 Stainless Steel in Flat White Aluminum in Flat White	Dietri	ibution			Driver	Tuna			
PATV	Aluminum in rial write	M	Medium			DIM1	,,	OV Dimmina to 10	/ with Dim to Do	velz
Lamp D	lower	W	Wide			DALI		DV Dimming to 1% I-2/LEDcode2 Dim		
Lamp P 9L	9 Watt LED	vv	wide			DALI	DAL	I-Z/LEDCOUEZ DIII	illillig to 176 with	iout Dilli-to-Dark
18L	18 Watt LED	Poflo	ctor Finish			Option				
24L	24 Watt LED	FW	Flat White			LEL		ergency Battery Ba	ckup with Romo	to Tast Switch
32L	32 Watt LED	CS	Clear Specular			NAT†		atorium Environme		te lest switch
43L▲	43 Watt LED	CSS	Clear Semi-Specular			FS		& Holder	CIII	
43L	45 Wall LLD	CJJ	cicai sciiii specaiai					A Approved (spec	ified voltage regi	iired)
		Flush	Lens Type					ppiorea (spee	med voltage requ	acu,
		G	1/8" Clear Polycarbor	nate						
		9	1/4" Clear Polycarbor			* N/A	with [DALI Driver Type. N	V/A with LEL and	CCEA option
			, , , , , , , , , , , , , , , , , , , ,					election of XBR or		
								d of Type 304 stai		
							tant s			
						▲ Mus	t be ir	nstalled with a mir	nimum 24" on-ce	enter spacing,
						12"	from v	wall, and have 3"	clearance above	the
						Trim	/Housi	ing		



N/A with W-CS Distribution-Reflector Finish

Luminaires for High Abuse Applications

HADL SERIES

PERFORMANCE - MEDIUM DISTRIBUTION

	Optic		1	Initial Delivered Lumens, By Lamp Color					Efficacy	Input	TM-21	TM-21	
Distribution	Reflector Finish	Lens Type	Lamp Power	30K8	35K8	35K9	40K8	40K9	50K8	(lm/W)	Power (W)	Reported L90 (hrs)	Reported L70 (hrs)
			9L	1,079	1,104	908	1,111	926	1,123	75 - 96	12	>55,000	>55,000
			18L	1,887	1,931	1,587	1,942	1,620	1,965	75 - 97	20	>55,000	>55,000
		G	24L	2,769	2,833	2,329	2,850	2,377	2,883	79 - 101	28	52,000	>55,000
			32L	3,482	3,564	2,929	3,584	2,990	3,625	75 - 97	38	52,000	>55,000
	CS		43L	4,459	4,564	3,751	4,590	3,829	4,643	71 - 91	51	51,000	>55,000
	CS		9L	1,055	1,080	888	1,086	906	1,099	73 - 94	12	>55,000	>55,000
			18L	1,846	1,889	1,553	1,900	1,585	1,922	74 - 95	20	>55,000	>55,000
		9	24L	2,709	2,772	2,279	2,788	2,326	2,820	77 - 99	28	52,000	>55,000
			32L	3,407	3,486	2,866	3,507	2,925	3,547	74 - 95	38	52,000	>55,000
			43L	4,363	4,465	3,670	4,491	3,746	4,542	70 - 89	51	51,000	>55,000
	CSS	G	9L	948	971	798	976	814	987	66 - 84	12	>55,000	>55,000
			18L	1,659	1,697	1,395	1,707	1,424	1,727	66 - 85	20	>55,000	>55,000
			24L	2,434	2,491	2,047	2,505	2,090	2,534	69 - 89	28	52,000	>55,000
			32L	3,061	3,133	2,575	3,151	2,629	3,187	66 - 85	38	52,000	>55,000
M			43L	3,920	4,012	3,298	4,035	3,366	4,081	62 - 80	51	51,000	>55,000
IVI		9	9L	928	950	780	955	797	966	64 - 82	12	>55,000	>55,000
			18L	1,623	1,661	1,365	1,670	1,394	1,690	65 - 83	20	>55,000	>55,000
			24L	2,381	2,437	2,003	2,451	2,045	2,479	68 - 87	28	52,000	>55,000
			32L	2,995	3,065	2,519	3,083	2,572	3,118	65 - 83	38	52,000	>55,000
			43L	3,835	3,925	3,226	3,948	3,293	3,993	61 - 78	51	51,000	>55,000
			9L	980	1,003	824	1,009	842	1,020	68 - 87	12	>55,000	>55,000
		G	18L	1,714	1,754	1,442	1,764	1,472	1,785	69 - 88	20	>55,000	>55,000
			24L	2,515	2,574	2,116	2,589	2,160	2,618	72 - 92	28	52,000	>55,000
			32L	3,163	3,237	2,661	3,256	2,716	3,293	68 - 88	38	52,000	>55,000
	FW		43L	4,051	4,145	3,407	4,170	3,478	4,217	65 - 83	51	51,000	>55,000
	1 V V		9L	959	981	806	987	823	998	66 - 85	12	>55,000	>55,000
			18L	1,677	1,716	1,411	1,726	1,440	1,746	67 - 86	20	>55,000	>55,000
		9	24L	2,460	2,518	2,070	2,533	2,113	2,562	70 - 90	28	52,000	>55,000
			32L	3,094	3,167	2,603	3,185	2,657	3,222	67 - 86	38	52,000	>55,000
			43L	3,963	4,056	3,334	4,079	3,403	4,126	63 - 81	51	51,000	>55,000

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Luminaires for High Abuse Applications

HADL SERIES

PERFORMANCE - WIDE DISTRIBUTION

	Optic		Lamp	Initial Delivered Lumens, By Lamp Color					F(C)	Input	TM-21	TM-21	
Distribution	Reflector Finish	Lens Type	Power	30K8	35K8	35K9	40K8	40K9	50K8	Efficacy (lm/W)	Power (W)	Reported L90 (hrs)	Reported L70 (hrs)
			9L	1,063	1,088	895	1,095	913	1,107	74 - 94	12	>55,000	>55,000
			18L	1,860	1,904	1,565	1,915	1,597	1,937	74 - 95	20	>55,000	>55,000
		G	24L	2,729	2,793	2,296	2,810	2,344	2,842	78 - 100	28	52,000	>55,000
			32L	3,433	3,513	2,888	3,534	2,948	3,574	74 - 95	38	52,000	>55,000
	CC		43L	4,396	4,499	3,698	4,525	3,775	4,577	70 - 90	51	51,000	>55,000
	CS		9L	1,040	1,065	875	1,071	893	1,083	72 - 92	12	>55,000	>55,000
			18L	1,820	1,862	1,531	1,873	1,563	1,895	73 - 93	20	>55,000	>55,000
		9	24L	2,670	2,733	2,246	2,749	2,293	2,780	76 - 98	28	52,000	>55,000
			32L	3,358	3,437	2,825	3,457	2,884	3,497	73 - 93	38	52,000	>55,000
			43L	4,301	4,401	3,618	4,427	3,693	4,478	69 - 88	51	51,000	>55,000
	CSS	G	9L	1,008	1,032	848	1,038	866	1,049	70 - 90	12	>55,000	>55,000
			18L	1,763	1,804	1,483	1,815	1,514	1,836	71 - 90	20	>55,000	>55,000
			24L	2,587	2,647	2,176	2,663	2,221	2,693	74 - 95	28	52,000	>55,000
			32L	3,253	3,329	2,737	3,349	2,794	3,387	70 - 90	38	52,000	>55,000
w			43L	4,166	4,264	3,505	4,289	3,578	4,338	66 - 85	51	51,000	>55,000
VV		9	9L	986	1,009	830	1,015	847	1,027	68 - 88	12	>55,000	>55,000
			18L	1,725	1,765	1,451	1,776	1,481	1,796	69 - 89	20	>55,000	>55,000
			24L	2,531	2,590	2,129	2,605	2,173	2,635	72 - 93	28	52,000	>55,000
			32L	3,183	3,257	2,678	3,277	2,733	3,314	69 - 88	38	52,000	>55,000
			43L	4,076	4,172	3,429	4,196	3,500	4,244	65 - 83	51	51,000	>55,000
			9L	899	920	756	925	772	936	62 - 80	12	>55,000	>55,000
			18L	1,572	1,609	1,323	1,618	1,350	1,637	63 - 81	20	>55,000	>55,000
		G	24L	2,307	2,361	1,940	2,375	1,981	2,402	66 - 84	28	52,000	>55,000
			32L	2,901	2,969	2,441	2,987	2,491	3,021	63 - 81	38	52,000	>55,000
	F\A/		43L	3,715	3,802	3,126	3,825	3,191	3,868	59 - 76	51	51,000	>55,000
	FW		9L	879	900	740	905	755	916	61 - 78	12	>55,000	>55,000
			18L	1,538	1,574	1,294	1,583	1,321	1,601	62 - 79	20	>55,000	>55,000
		9	24L	2,257	2,310	1,898	2,323	1,938	2,350	64 - 83	28	52,000	>55,000
			32L	2,838	2,905	2,388	2,922	2,437	2,955	61 - 79	38	52,000	>55,000
			43L	3,635	3,720	3,058	3,742	3,121	3,785	58 - 74	51	51,000	>55,000

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Luminaires for High Abuse Applications

HADL SERIES

PERFORMANCE

	HADL6-FF-18L	-40K8-W-CS-G		HADL6-FF-18L	-40K8-M-CS-G		
Wide Distribution Candela Curve	Initial center beam foot-candles	Beam diameter (ft)	Distance to illuminated plane (ft)	Initial center beam foot-candles	Beam diameter (ft)	Medium Distribution Candela Curve	
523	54.5	5.3	5'	77.2	5.0	640	
1047	37.9	6.4	6'	53.6	6.0	1280	
1570	27.8	7.5	7'	39.4	7.0	1921 / 2561	
	21.3	8.5	8'	30.2	8.0		
	16.8	9.6	9'	23.8	9.0	+ + \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	13.6	10.7	10'	19.3	10.0		
Spacing Criteria: 1.35	Foot-ca	Foot-candle multipliers for 30K8 (0.97), 35K8 (0.99), 35K9 (0.82), 40K9 (0.83), 50K8 (1.01)					
Beam Angle: 56°		Beam diameter is where foot-candles drop to 50% of maximum					

	HADL6-FF-18L	-40K8-W-CSS-G		HADL6-FF-18L	-40K8-M-CSS-G	Medium Distribution Candela Curve	
Wide Distribution Candela Curve	Initial center beam foot-candles	Beam diameter (ft)	Distance to illuminated plane (ft)	Initial center beam foot-candles	Beam diameter (ft)		
418	56.9	3.9	5'	105.0	4.5	656	
835	39.5	4.6	6'	72.9	5.4	1312	
1253	29.0	5.4	7'	53.5	6.3	1968 / 2624	
10,0	22.2	6.2	8'	41.0	7.2	2024	
	17.6	7.0	9'	32.4	8.1	++\>	
	14.2	7.7	10'	26.2	9.0	1	
Spacing Criteria: 1.28	Foot-ca	Spacing Criteria: 0.72					
Beam Angle: 42°		Beam Angle: 49°					

	HADL6-FF-18L	-40K8-W-FW-G		HADL6-FF-18L	-40K8-M-FW-G		
Wide Distribution Candela Curve	Initial center beam foot-candles	Beam diameter (ft)	Distance to illuminated plane (ft)	Initial center beam foot-candles	Beam diameter (ft)	Medium Distribution Candela Curve	
348	55.7	6.3	5'	61.5	6.4	828	
696	38.6	7.6	6'	42.7	7.7	1242	
1043	28.4	8.8	7'	31.4	9.0	1056	
X /	21.7	10.1	8'	24.0	10.3		
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	17.2	11.4	9'	19.0	11.6		
	13.9	12.6	10'	15.4	12.9		
Spacing Criteria: 1.1	Foot-ca	Spacing Criteria: 1.03					
Beam Angle: 65°		Beam diame	eter is where foot-candles drop to 50%	of maximum		Beam Angle: 66°	

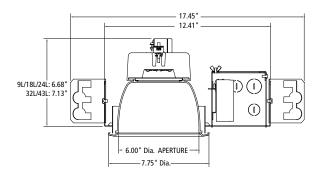


Luminaires for High Abuse Applications

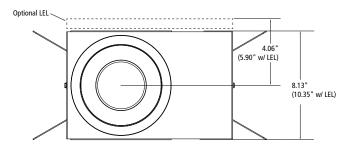
HADL SERIES

DIMENSIONAL DATA

CROSS SECTION



BOTTOM VIEW



RECOMMENDED CEILING CUT-OUT: 7.38" Dia.