PROJECT	Job Name		Catalog Number	
INFORMATION	Fixture Type	A	Approved by	

### MEDMASTER DOWNLIGHT

# Luminaires for Behavioral Health Applications

## **BHDL4 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





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. Anti-microbial finish standard on all exposed painted surfaces. 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. NSF2 Splash/Non-Food Zone. Optional CCEA compliant. EPA Est. No. 99283-WI-1.

- \* Per independent lab report #SGS-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: BHDL4-FF-5FW-22C-37K8-CSS-G-RIG4-277-DALI-FS)

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 BHDL4 BHDL4	4" Medical - Ro			Lamp 22C	Power 22 Watt White &	Indigo LED		n ' Behavioral Rough-In ' Behavioral Rough-In		
Trim S	t <b>yle</b> Flush Lens (With F			Lamp 32K8 37K8 43K8	Color 3200K / 80 CRI m 3700K / 80 CRI m 4300K / 80 CRI m	nin.	Input Vo 120 12 277 27	3		
Trim Finish 2FW Cold-Rolled Steel in Flat White 5BR Type 304 Stainless Steel with 4B Brushed Finish 5FW Type 304 Stainless Steel in Flat White			Reflec FW CD CSS	Flat White Driver Type Clear Diffuse DIM1 0-10V Dimming to 1% Dim-to-Dark Clear Semi-Specular (round only) DALI DALI-2/LEDcode2 Dimming to 1% without					hout Dim-to-Dark	
			Flush G	<b>Lens Type</b> 1/8" Clear Polyca	rbonate	Options LEL Emergency Battery Backup with Remote Test Switch 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	Initial Delive	red Lumens, By	Lamp Color Efficacy		Input Power	TM-21 Reported	TM-21 Reported
Aperture	Trim Style	Reflector Finish	Lens Type	Power	32K8	37K8	43K8	(lm/W)	(W)	L90 (hrs)	L70 (hrs)
Round FF		CD		22C	1,684	1,684	1,794	71 - 75	24	>55,000	>55,000
	FF	CSS	G 220		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	G .		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.

	BHDL4-FF-rrrr-2	2C-37K8-CSS-G			
Round Aperture Candela Curve	Initial center beam foot-candles	Beam diameter (ft)	Distance to illuminated plane (ft)		
499	68.6	4.6	5'		
999	47.6	5.5	6'		
1498	35.0	6.4	7'		
1937	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				

	BHDL4-FF-rrrr-22C-37K8-CD-G			BHDL4S-FF-rrrr-	22C-37K8-CD-G		
Round Aperture Candela Curve	Initial center beam foot-candles	Beam diameter (ft)	Distance to illuminated plane (ft)	Initial center beam foot-candles	Beam diameter (ft)	Square Aperture Candela Curve	
495	69.7	4.6	5'	71.5	5.2	447	
990	48.4	5.5	6'	49.7	6.3	894	
1485	35.6	6.4	7'	36.5	7.3	1341 /	
1961	27.2	7.3	8'	27.9	8.4		
$  \times / \uparrow +$	21.5	8.2	9'	22.1	9.4	$HT \setminus Y \mid$	
	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					

	BHDL4-FF-rrrr-22C-37K8-FW-G			BHDL4S-FF-rrrr-	22C-37K8-FW-G		
Round Aperture Candela Curve	Initial center beam foot-candles	Beam diameter (ft)	Distance to illuminated plane (ft)	Initial center beam foot-candles	Beam diameter (ft)	Square Aperture Candela Curve	
335	53.6	5.7	5'	55.1	5.7	345	
670	37.2	6.8	6'	38.3	6.9	689	
1339	27.3	7.9	7'	28.1	8	1034 /	
1339	20.9	9.1	8'	21.5	9.2		
1 X/X+	16.5	10.2	9'	17.0	10.3	$HX \setminus Y \mid$	
	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 diame	eter is where foot-candles drop to 50%	Beam Angle: 60			



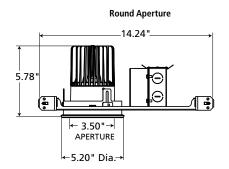
# **MEDMASTER DOWNLIGHT**

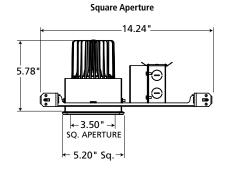
Luminaires for Behavioral Health Applications

# **BHDL4 SERIES using Indigo-Clean Technology**

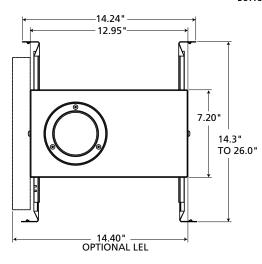
**DIMENSIONAL DATA** 

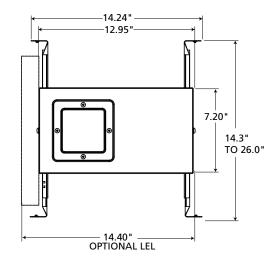
### **CROSS SECTION**





### **BOTTOM VIEW**





RECOMMENDED CEILING CUTOUT: 4.875" DIA.

RECOMMENDED CEILING CUTOUT: 4.875" X 4.875"