MARK ARCHITECTURAL

SPECIFICATIONS TYPE:

PROJECT:



WHISPER dc2dc architecture

HIGHLIGHTS

- 2000 to 9000 lumen output packages available
- From 122 to 154 lumens per watt (LPW), depending on size, lens, and lumen combination
- 2.5 MacAdam Ellipse
- 1X4, 2X2 and 2X4 sizes available
- Declare Listed
- UGR data on page 3

DIMENSIONS



DISTRIBUTION





FIXTURE PERFORMANCE

Size	Nominal Lumens	Delivered Lumens*	DC Input Watts**	LPW	# Device Addresses
	2000LM	1946	15	131	1
	2500LM	2516	19	132	1
	3000LM	3039	24	129	1
	3300LM	3327	26	128	1
	3500LM	3526	28	126	1
	4000LM	3903	31	126	1
	4500LM	4529	35	129	1
	4800LM	4812	38	128	1
IX4	5000LM	5035	38	131	1
	5500LM	5546	43	130	1
	6000LM	6051	47	128	1
	6500LM	6550	52	127	2
	7000LM	7042	56	125	2
	7200LM	7232	58	124	2
	7500LM	7546	58	130	2
	8000LM	7808	60	129	2
	2000LM	2013	15	139	1
	2500LM	2494	18	136	1
	3000LM	2969	22	134	1
	3300LM	3264	25	132	1
	3500LM	3468	26	132	1
	4000LM	3960	30	133	1
	4500LM	4473	35	127	1
	4800LM	4755	37	127	1
2x2	5000LM	4951	39	128	1
	5500LM	5422	43	126	1
	6000LM	5913	48	122	1
	6500LM	6433	48	133	1
	7000LM	6912	52	132	2
	7200LM	7107	54	131	2
	7500LM	7412	57	131	2
	8000LM	7880	61	129	2
	8200LM	8098	63	129	2
	3000LM	3014	20	154	1
	3300LM	3310	22	148	1
	3500LM	3554	24	147	1
	4000LM	4326	29	151	1
	4500LM	4546	32	142	1
	4800LM	4838	34	141	1
	5000LM	5012	36	141	1
	5500LM	5527	39	140	1
2x4	6000LM	6033	44	139	1
	6500LM	6529	48	137	1
	7000LM	7052	52	136	2
	7200LM	7214	53	136	2
	7500LM	7535	56	135	2
	8000LM	8032	61	133	2
	8200LM	8238	62	132	2
	8500LM	8542	65	131	2
	9000LM	10106	72	141	2

*Based on 35K 80CRI with SWC center shielding **DC Wattage = AC wattage * .93



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WHISPER DC2DC Architecture

Example: WHSPR 2X4 80CRI 35K 4000LM DARK 57VDC SWC DCHUB **ORDERING** Voltage Series Size **LED Color Rendering LED Color Temp** LED Output¹ **Minimum Dimming Level** WHSPR Whisper LED **2X2** 2'x2' 80CRI >80 CRI 2000LM² DARK Constant Current, Dimming to 0.1% 57VDC 57 Volt DC 27K 2700K 2000 Lumens **2X4** 2'x4' 90CRI >90CRI зок 3000K 2500LM² 2500 Lumens 1X4 1'x4' 35K 3500K 3000LM 3000 Lumens 4000K 3300LM 3300 Lumens **40K** 3500LM 50K 5000K 3500 Lumens 4000LM 4000 Lumens 4500LM 4500 Lumens 4800 Lumens 4800LM 5000 Lumens 5000LM 5500LM 5500 Lumens 6000LM 6000 Lumens 6500LM 6500 Lumens 7000LM 7000 Lumens 7200LM 7200 Lumens 7500LM 75000 Lumens 8000LM 8000 Lumens 8200LM3 8200 Lumens 8500LM⁴ 8500 Lumens 9000LM⁴ 9000 Lumens 1. Nominal values. Consult Fixture Performance table for actual delivered lumens. 2. Not available with 2X4 3. Not availale with 1X4 4. Not available with 1X4 or 2X2

Shield	ling Center	Finish		Contro	linput	Primary Se	nsors ¹	Option	5
SWC	Soft White Acrylic	(blank)	Standard White paint	DCHUB	Required Power and Control Hub	(blank)	No Sensor	(blank)	No Options
YBC	Microprismatic Conical	AMF	Anti-Microbial White		(Ordered Separately)	VPIR15ADC	PIR OCC Sensor with Auto-Dim Photocell,	СР	Chicago Plenum
GHC ¹	De-Giaring Lens Hexagonal De-Glare Lens	RALTBD ¹ 1. RALTBD with applic	RALPaint Finish is for pricing only. Replace cable RAL number & finish ing order			1. Not availab	Large Motion Range le with 1x4 size.	LATC	Earthquake Clips

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WHISPER DC2DC Architecture

PHOTOMETRICS



Page 3

Test Report: ISF 231930P82 IES LM79-08 Catalog #: WHSPR 2X4 35K 80CRI 8000LM SWC 8032 Lumens. Wattage**: 60.6 Efficacy: 133

Zonal Lumen Summary					
0-30	2,309.50	28.80%			
0-40	3,729.60	46.40%			
0-60	6,425.10	80.00%			
60-90	1,606.90	20.00%			
70-100	665.6	8.30%			
90-120	0	0%			
0-90	8,032.00	100%			
90-180	0	0%			
0-180	8,032.00	100%			
0-180	7,884.90	100%			

** Standard photometry based on AC wattage. DC wattage = AC wattage * .93

PROJECTED LED LUMEN MAINTENANCE

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	10,000	60,000	100,000
Lumen Maintenance Factor	1	0.98	0.91	0.86

YBC Test Report: ISF 231931P82 IES LM79-08 Catalog #: WHSPR 2X4 35K 80CRI 8000LM YBC Lumens: 7829.7

Wattage**: 60.6 Efficacy: 129					
Zonal Lumen Summary					
Zone	Lumens	% Luminaire			
0-30	2,377.90	30.40%			
0-40	3,831.90	48.90%			
0-60	6,392.30	81.60%			
60-90	1,437.30	18.40%			
70-100	601.6	7.70%			
90-120	0	0%			

7,829.70 ** Standard photometry based on AC wattage. DC wattage = AC wattage * .93

7,829.70

0

100%

0%

100%



GHC Test Report: ISF 231929P82 IES LM79-08 Catalog #: WHSPR 2X4 35K 80CRI 8000LM GHC 78872 Lumens: Wattage**: 60.6 Efficacy: 130

Zonal Lumen Summary					
0-30	2,267.50	28.70%			
0-40	3,663.60	46.50%			
0-60	6,314.80	80.10%			
60-90	1,572.30	19.90%			
70-100	649.2	8.20%			
90-120	0	0%			
0-90	7,887.20	100%			
90-180	0	0%			
0-180	7,887.20	100%			
0-180	7,647.30	100%			

** Standard photometry based on AC wattage. DC wattage = AC wattage * .93

CCT/CRI SCALING CHART

0-90

90-180

0-180

ССТ	CRI	MULTIPLIER	
27K	80CRI	0.94	
30K	80CRI	0.97	
35K	80CRI	1.00	
40K	80CRI	1.02	
50K	80CRI	1.04	R9
27K	90CRI	0.79	57.35
30K	90CRI	0.81	52.70
35K	90CRI	0.83	56.18
40K	90CRI	0.84	58.38
50K	90CRI	0.89	55.60

Lumen scaling charts can be used to approximate the lumen values at different Kelvin temperatures, color rendering indices, optics, or sheilding.

Example: Calculating the lumen change from 80CRI 35K to 80CRI 40K = Lumen output for WHSPR 2X4 35K 80CRI 8000LM SWC (8032) x 1.02 multiplier = 8193 lumens

SHIELDING SCALING CHART

Shielding	Multiplier
SWC	1.000
YBC	0.999
GHC	0.989

* Based upon Soft White Acrylic (SWC) shielding

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WHISPER DC2DC Architecture

UGR CHART

		UGR (70% 50% 20% reflectance using a 4H x 8H room size)					
			Crosswise	lo /or checture	using u Hix o	Endwise	
SIZE	LUMEN PACKAGE	SWC	VBC	GHC	SWC	VRC	GHC
5122	2000LM	18.0	173	18.0	16.8	16.3	16.9
	2500LM	18.0	18.2	18.0	177	10.5	17.8
	2000LM	10.5	10.2	10.5	17.7	17.2	17.0
	2200LM	19.0	10.0	19.5	10.3	17.0	10.0
	3300LM	19.9	19.1	19.9	18.7	18.2	10.0
	3500LM	20.1	19.3	20.1	18.9	18.4	19.0
	4000LM	20.4	19.7	20.4	19.2	18.7	19.4
	4500LM	21.0	20.2	20.9	19.7	19.2	19.9
1x4	4800LM	21.2	20.4	21.1	19.9	19.4	20.1
	5000LM	21.3	20.6	21.3	20.1	19.6	20.2
	5500LM	21.7	20.9	21.6	20.4	19.9	20.6
	6000LM	22.0	21.2	21.9	20.7	20.2	20.9
	6500LM	22.2	21.5	22.2	21.0	20.5	21.2
	7000LM	22.5	21.7	22.5	21.3	20.8	21.4
	7200LM	22.6	21.8	22.6	21.4	20.9	21.5
	7500LM	22.7	22.0	22.7	21.5	21.0	21.7
	8000LM	22.9	22.1	22.8	21.6	21.1	21.8
	2000LM	17.6	16.6	17.6	17.5	17.5	17.6
	2500LM	18.3	17.4	18.3	18.2	18.2	18.3
	3000LM	18.9	18.0	18.9	18.8	18.8	18.9
	3300LM	19.2	18.3	19.2	19.1	19.1	19.3
	3500LM	19.4	18.5	19.5	19.4	19.3	19.5
	4000LM	19.9	19.0	19.9	19.8	19.8	19.9
	4500LM	20.3	19.4	20.3	20.2	20.2	20.4
	4800LM	20.5	19.6	20.6	20.4	20.4	20.6
2x2	5000LM	20.7	19.8	20.7	20.6	20.6	20.7
	5500LM	21.0	20.1	21.0	20.9	20.9	21.0
	6000LM	21.3	20.4	21.3	21.2	21.2	21.3
	6500LM	21.6	20.7	21.6	21.5	21.5	21.6
	7000LM	21.8	20.9	21.9	21.7	21.7	21.9
	7200LM	21.9	21.0	22.0	21.8	21.8	22.0
	7500LM	22.1	21.2	22.1	22.0	22.0	22.1
	8000LM	22.3	21.4	22.3	22.2	22.2	22.3
	8200LM	22.4	21.5	22.4	22.3	22.3	22.4
	3000LM	17.3	15.9	17.0	16.6	16.6	16.6
	3300LM	17.6	16.2	17.3	16.9	17.0	16.9
	3500LM	17.8	16.4	17.6	17.1	17.2	17.1
	4000LM	18.5	17.1	18.3	17.8	17.9	17.8
	4500LM	18.7	17.3	18.4	18.0	18.1	18.0
	4800LM	18.9	17.5	18.6	18.2	18.3	18.2
	5000LM	19.0	17.6	18.8	18.3	18.4	18.3
	5500LM	19.4	18.0	19.1	18.7	18.8	18.7
2x4	6000LM	19.7	18.3	19.4	19.0	19.1	19.0
	6500LM	20.0	18.5	19.7	19.2	19.3	19.2
	7000LM	20.2	18.8	20.0	19.5	19.6	19.5
	7200LM	20.3	18.9	20.0	19.6	19.7	19.6
	7500LM	20.5	19.0	20.2	19.7	19.8	19.7
	8000LM	20.7	19.3	20.4	20.0	20.1	20.0
	8200LM	20.8	19.3	20.5	20.0	20.1	20.0
	8500LM	20.9	19.5	20.6	20.2	20.3	20.2
	9000LM	21.5	20.1	21.2	20.8	20.8	20.8

*UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR" and/ or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application.

For more information on UGR see UGR FAQ

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WHISPER ARCHITECTURAL DC2DC Architecture

MOUNTING

Recessed, lay-in formed steel trim. Universal trim accommodates 9/16" slot grid or 15/16" inverted tee, or 9/16" inverted tee.



For recessed mounting in hard ceiling applications, use one of the following drywall grid adapters (ordered separately).

Fixture	Drywall Grid Adapter (DGA)
WHSPR 2X2	DGA22
WHSPR 2X4	DGA24
WHSPR 1X4	DGA14WHS



Pictured with Occupancy Sensor and Photocell

INTELLIGENT LUMINAIRE TECHNOLOGY GUIDE



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DC2DC

DC-powered Lighting, DC2DC Architecture

Acuity Brands' DC2DC architecture provides for distributed low-voltage DC power and digital controls for a range of LED luminaires, including the WHISPER LED.

The DC2DC architecture enhances an LED lighting system's efficiency by eliminating the need and cost to convert AC to DC power at the luminaire and facilitating the installation and commissioning of lighting controls. Intrinsically more efficient by design, our DC-powered lighting architecture also delivers savings at design and installation, facilitates maintenance, and empowers lighting design focused on sustainable and well-being applications. Components include:

- DCHUB (ordered separately), distributes DC power and control to up to 1080 VA of DC-powered LED luminaires including support for emergency lighting.* DCHUB ordered separately. DCHUB input voltage is 120-277 volt AC.
- 57 VDC powered LED luminaires, with Static CCT or Tunable White options.
- nLight® Wired networked lighting control, with nLight control devices (ordered separately) and/or sensors embedded within luminaires.
- Standard Class 2 power and control cables, 16 AWG.

* The number of luminaires that can be supported by a single DCHUB port is a function of luminaire wattage. Please refer to the DCHUB spec sheet for additional details.

Click <u>DC2DC</u> for more information.



Note: All luminaires require 57VDC DCHUB option

SPECIFICATIONS

Housing

Nominal 1'x4', 2'x2' or 2'x4' housings fabricated from 22-gauge, cold-rolled steel. Air return option available.

Finish

Matte-white powder coat.

Reflector

Precision-formed steel; highly reflective white.

Shielding

Hinged door frame is constructed of extruded aluminum center and side rails with cold-rolled steel end caps capturing the 3 individual optical panels, forming a single unit. The frame can be positioned on either side of the fixture housing to provide easy room side access for maintenance. Shielding options are as follows: Center Panel: Soft-White Acrylic (SWC) or Micro-Prismatic Conical De-Glaring Acrylic Lens (YBC) or Hexagonal De-Glare Lens (GHC) options available.

Side Panels: Soft-White Acrylic only.

Mounting

Accommodates 9/16" slot grid or 15/16" inverted tee or 9/16" inverted tee.

For recessed mounting in hard ceiling applications, use a Drywall Grid Adapter (DGA22, DGA24, or DGA14WHS). Ordered separately.

Source

Multiple lumen packages available with 2700K, 3000K, 3500K, 4000K and 5000K CCT in either 80CRI or 90CRI.

Driver

eldoLED constant current driver options deliver choice of dimming range for ultrasmooth dimming resolution from 100% to less than 1%, and choices for control, while assuring flicker free, low current inrush, 89% efficiency and low EMI. Two drivers used for lumen packages over 4800LM. Consult 'Intelligent Luminaire Technology Guide' for additional details.

Integrated Controls

Color Consistency

Optional Vertex embedded sensor with 360 degrees of full coverage with PIR occupancy and on/off auto-dimming photocell

The Acuity Brands circuit boards with color a variation of no greater than a 2.5 Step MacAdam (2.5SDCM) along the black body locus from board to board.

Maintenance

Serviceable from below with easy access to electrical components.

Certification

CSA Certified to meet U.S. and Canadian standards, CSA Certified for damp locations, IC-rated, optional Chicago plenum rating available

Fixture Weight

1x4: 22lbs.

2x2: 28lbs.

2x4: 38lbs.

Warrantv

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C

Specifications subject to change without notice.