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ID: 4396

Product Report Card

Manufacturer: Halo
Model Number Tested: RLS4099FS1EWHDMR
Other Model Numbers:

Manufacturer's Description

Type of Device: LED 10.8 W 4" Downlight
Operating Voltage: 120
Input Power: 10.8 W
Input Current: 0.092 A
Input Frequency: 60 Hz

Control Type: Forward and Reverse Phase Control
Dimming Range: Not Specified
Output Power: Not Specified
Lumen Output: 1500 lm
Type/Shape: 4" Downlight
Base Type: N/A

Lutron Test Results

Date Tested 08/12/2021
Test Voltage 120 V
Test Notes Test results valid only at 120V and 60 Hz.

Lutron Recommended Products

Lutron products not in this list can be considered to be not recommended, based on our testing.

Product	Model Number	Control Type(1)	Fixtures per Dimmer (2)	Measured Dimming Range (3) (Software Trim Settings)		Perceived Low End (4)	Comments
			Min-Max	Low End	High End		
Commercial Systems							
Vive	MRF2S-6ELV	RP	1 - 13	1%	97%	10%	
Vive	MRF2S-6CL	FP	1 - 13	1%	96%	11%	
Panel Module	GP (Harrier) Card	FP	1 - 26	1%	98%	11%	Rating is per output. Use load type 2-1.
Grafik QS/Wallbox Power Module	Grafik Eye QS Main Unit Family/LQRJ-WPM-6P	FP	1 - 26	1%	98%	11%	Rating is per channel; total quantity per Main Unit is 65.
Grafik Eye 3000/HomeWorks Illumination/HomeWorks QS	Grafik Eye 3000 Family/HWI-WPM-6D-120	FP	1 - 26	1%	98%	11%	
Panel Module	HW/LP-RPM-4U-120	FP	1 - 26	1%	98%	11%	Rating is per channel; total per module is 26.
Panel Module	HW/LP-RPM-4A-120	RP	1 - 99	1%	98%	10%	Rating is per channel; total per module is 158.
Panel Module	HW/LP-RPM-4A-120	FP	1 - 36	1%	98%	11%	Rating is per channel; total per module is 57.
Energi Savr Node DIN-Rail (120/277 V PRO LED+ Phase Adaptive)	QSN-4A5-S (Zones 2-4 - Reverse-Phase)	RP	1 - 41	1%	98%	10%	

Product	Model Number	Control Type[1]	Fixtures per Dimmer [2]	Measured Dimming Range [3] (Software Trim Settings)		Perceived Low End [4]	Comments
			Min-Max	Low End	High End		
Energi Savr Node DIN-Rail (120/277 V PRO LED+ Phase Adaptive)	QSN-4A5-S (Zone 1 - Reverse-Phase)	RP	1 - 65	1%	98%	10%	
Energi Savr Node DIN-Rail (120/277 V PRO LED+ Phase Adaptive)	QSN-4A5-S (Zones 2-4 - Forward-Phase)	FP	1 - 18	1%	98%	9%	
Energi Savr Node DIN-Rail (120/277 V PRO LED+ Phase Adaptive)	QSN-4A5-S (Zone 1 - Forward-Phase)	FP	1 - 26	1%	98%	9%	
Vive	RMJS-PNE-DV, RP	RP	1 - 18	3%	98%	16%	
Vive	RMJS-PNE-DV, FP	FP	1 - 18	2%	97%	14%	
Interfaces							
Power Modules	PHPM-PA with GRAFIK Eye QS Main Unit	RP	1 - 106	1%	98%	10%	
Power Modules	PHPM-WBXwith 3-wire fluorescent control	RP	1 - 106	1%	98%	10%	
Residential Systems							
RA2 Select/RadioRA 2/RadioRA 3	RRD-PRO, FP, no neutral	FP	1 - 23	1%	96%	11%	
HomeWorks QS/HomeWorks QSX	HQRx-PRO, FP, no neutral	FP	1 - 23	1%	96%	11%	
RA2 Select/RadioRA 2/RadioRA 3	RRD-PRO, RP, no neutral (default)	RP	1 - 23	1%	97%	10%	
HomeWorks QS/HomeWorks QSX	HQRx-PRO, RP, no neutral (default)	RP	1 - 23	1%	97%	10%	
RA2 Select/RadioRA 2/RadioRA 3	RRD-PRO, FP, w/ neutral	FP	1 - 23	1%	96%	11%	
HomeWorks QS/HomeWorks QSX	HQRx-PRO, FP, w/ neutral	FP	1 - 23	1%	96%	11%	
RadioRA 3	RRST-PRO-N, FP	FP	1 - 23	1%	96%	11%	
HomeWorks QSX	HRST-PRO-N, FP	FP	1 - 23	1%	96%	11%	
RA2 Select/RadioRA 2/RadioRA 3	RRD-PRO, RP, w/ neutral (default)	RP	1 - 23	1%	97%	10%	
HomeWorks QS/HomeWorks QSX	HQRx-PRO, RP, w/ neutral (default)	RP	1 - 23	1%	97%	10%	
RadioRA 3	RRST-PRO-N, RP	RP	1 - 23	1%	97%	10%	
HomeWorks QSX	HRST-PRO-N, RP	RP	1 - 23	1%	97%	10%	
RA2 Select/RadioRA 2/RadioRA 3	RRD-6CL (R3)	FP	1 - 13	1%	96%	11%	
HomeWorks QS/HomeWorks QSX	HQRD-6CL (H2)/HQRA-6CL (H2)	FP	1 - 13	1%	96%	11%	
RA2 Select/RadioRA 2/RadioRA 3	RRD-10ND	FP	1 - 13	1%	96%	11%	
HomeWorks QS/HomeWorks QSX	HQRD-10ND	FP	1 - 13	1%	96%	11%	

Product	Model Number	Control Type[1]	Fixtures per Dimmer [2]	Measured Dimming Range [3] (Software Trim Settings)		Perceived Low End [4]	Comments
			Min-Max	Low End	High End		
RadioRA 2/RadioRA 3	Hybrid Keypad LED+ RRD-HN6BRL	FP	1 - 9	1%	96%	11%	Installation with a neutral wire is required.
HomeWorks QS/HomeWorks QSX	Hybrid Keypad LED+ HQRD-HN6BRL	FP	1 - 9	1%	96%	11%	Installation with a neutral wire is required.
Panel Module	GP (Harrier) Card	FP	1 - 26	1%	98%	11%	Rating is per output. Use load type 2-1.
Grafik QS/Wallbox Power Module	Grafik Eye QS Main Unit Family/LQRJ-WPM-6P	FP	1 - 26	1%	98%	11%	Rating is per channel; total quantity per Main Unit is 65.
Grafik Eye 3000/HomeWorks Illumination/HomeWorks QS	Grafik Eye 3000 Family/HWI-WPM-6D-120	FP	1 - 26	1%	98%	11%	
Panel Module	HW/LP-RPM-4U-120	FP	1 - 26	1%	98%	11%	Rating is per channel; total per module is 26.
Panel Module	HW/LP-RPM-4A-120	RP	1 - 99	1%	98%	10%	Rating is per channel; total per module is 158.
Panel Module	HW/LP-RPM-4A-120	FP	1 - 36	1%	98%	11%	Rating is per channel; total per module is 57.
HomeWorks QS/HomeWorks QSX DIN-Rail Power Module (120/277 V PRO LED+ Phase Adaptive)	LQSE-4A5-120-D (Zones 2-4 - Reverse-Phase)	RP	1 - 41	1%	98%	10%	
HomeWorks QS/HomeWorks QSX DIN-Rail Power Module (120/277 V PRO LED+ Phase Adaptive)	LQSE-4A5-120-D (Zone 1 - Reverse-Phase)	RP	1 - 65	1%	98%	10%	
HomeWorks QS/HomeWorks QSX DIN-Rail Power Module (120/277 V PRO LED+ Phase Adaptive)	LQSE-4A5-120-D (Zones 2-4 - Forward-Phase)	FP	1 - 18	1%	98%	9%	
HomeWorks QS/HomeWorks QSX DIN-Rail Power Module (120/277 V PRO LED+ Phase Adaptive)	LQSE-4A5-120-D (Zone 1 - Forward-Phase)	FP	1 - 26	1%	98%	9%	
WallBox Dimmers							
Standard 150W LED+ Dimmers	AYCL-153P, CTCL-153P, DVCL-153P, LECL-153P, SCL-153P, TGCL-153P	FP	1 - 13	1%	97%	10%	
Slide to-off 150W LED+ Dimmers	CTCL-150 / LECL-150	FP	1 - 13	1%	97%	10%	
Dalia LED+	RCL-153PNL	FP	1 - 13	1%	97%	10%	
Caseta Wireless	PD-6WCL (SD12)	FP	1 - 13	1%	96%	11%	
Maestro LED+	MACL-153M (TX)	FP	1 - 13	1%	96%	11%	
Sunnata LED+	STCL-153	FP	1 - 13	1%	96%	11%	
Maestro Sensor	MSCL-OP153M (T2)/MSCL-VP153M (T2)	FP	1 - 13	1%	96%	11%	
Maestro LED+	MACL-LFQ	FP	1 - 6	1%	96%	11%	

Product	Model Number	Control Type[1]	Fixtures per Dimmer [2]	Measured Dimming Range [3] (Software Trim Settings)		Perceived Low End [4]	Comments
			Min-Max	Low End	High End		
Diva/Skylark ContourReverse Phase LED Preset Dimmers	DVRP-253PCTRP-253P	RP	1 - 23	3%	96%	17%	
Nova T*Reverse Phase LEDSlide to-off Dimmer	NTRP-250	RP	1 - 23	3%	96%	17%	
Maestro PRO LED+	MA-PRO, FP, no neutral	FP	1 - 23	1%	96%	11%	
Maestro PRO LED+	MA-PRO, RP, no neutral (default)	RP	1 - 23	1%	97%	10%	
Maestro PRO LED+	MA-PRO, FP, w/ neutral	FP	1 - 23	1%	96%	11%	
Sunnata PRO LED+	ST-PRO-N, FP	FP	1 - 23	1%	96%	11%	
Maestro PRO LED+	MA-PRO, RP, w/ neutral (default)	RP	1 - 23	1%	97%	10%	
Sunnata PRO LED+	ST-PRO-N, RP	RP	1 - 23	1%	97%	10%	
Caseta WirelessPhase Selectable	PD-5NE	RP	1 - 23	1%	97%	10%	
Grafik T	Phase Selectable GT-5NEM/ GTJ-5NEM	RP	1 - 23	1%	97%	10%	

Notes:

- * Identical model numbers with different compatibility codes may have different performance; (_) means there is no compatibility code assigned; contact technical support for additional information.
- (1) Control types of FP and RP represent Forward Phase and Reverse Phase, respectively. See product literature for details.
- (2) Maximum Fixtures per Dimmer value represents the maximum safe loading of the control.
- (3) Values are based on light output using the specified dimming control, and may not be an indication of the fixture's full rated capability. Values are set to optimize performance, such as reducing dead travel, ensuring that fixtures turn on at low end, reducing turn-on time at low end, and trimming out instability. Software trim values are indicated in parentheses when applicable.
- (4) Perceived light level percentage is the square root of the measured light level percentage, per IESNA Lighting Handbook.
- (5) Interfaces have been tested with the listed control; any compatible dimmer may be used instead, but high end/low end light levels may vary slightly.

For any questions on this report, please contact the Lutron LED Center of Excellence at 877-DIM-LED8 or leds@lutron.com.
This information was posted with the consent and cooperation of the device manufacturer. Please be aware that device manufacturers may modify their product at any time, without notice to Lutron, and therefore Lutron cannot ensure future compatibility. For more detailed and up to date fixture specifications, performance and/or any related recall information, visit the manufacturer's website. The latest Lutron test results can always be found at www.lutron.com/LEDtool.