



**5 YEAR**  
LIMITED WARRANTY



# RS 1850 LED

## 6 RAIL, FOLDABLE LED FIXTURE

The Sun System® Rail System (RS) 1850 LED is a 6 rail, foldable LED producing 1850  $\mu\text{mol/s}$  with an efficiency of 2.5  $\mu\text{mol/j}$ . This fixture is DLC listed, IP65 wet-rated and comes complete with a manual digital dimming button and an internal embedded smart controller that is compatible with the Gavita e-Series Controller.

Together, these features give you the ability to control up to 500 fixtures (*e-Series Controller required, sold separately*). The Sun System RS 1850 utilizes top-bin Sun System-brand diodes to produce a full-spectrum light source. The RS 1850 operates at 120-277 volt. The power cord is sold separately.

#### FEATURES:

- 6 rail, foldable LED fixture
- Produces 1850  $\mu\text{mol/s}$  operating at 720 W
- 2.5  $\mu\text{mol/j}$
- Manual dim
- Imbedded adaptor for maximum controllability with the Gavita® e-Series Controller (*sold separately*)

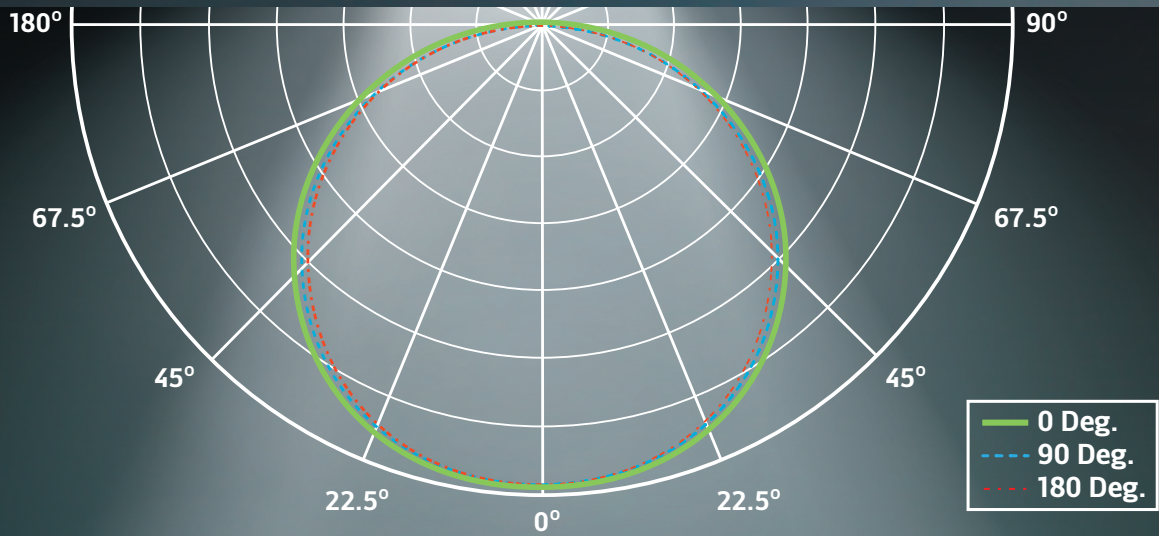
#### SAFETY & CERTIFICATION:

- cETLus
- DLC Hort Listed
- IP65 Wet Rated

#### COMPATIBLE ACCESSORIES:

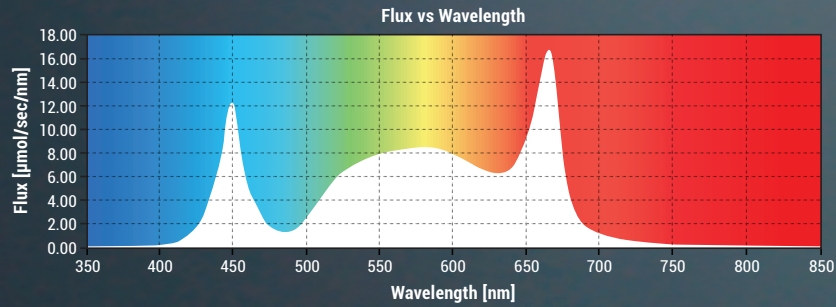
- HGC906147 - Gavita® 8 ft Power Cord 120 Volt for LED
- HGC906148 - Gavita® 8 ft Power Cord 208-240 Volt for LED
- HGC906458 - Gavita® 8 ft Power Cord 277-400 Volt for Gavita LED
- HGC906120 - Gavita® Master Controller EL1 - Gen 2
- HGC906121 - Gavita® Master Controller EL2 - Gen 2





**LIGHT DISTRIBUTION - CANDELA DISTRIBUTION CHART**

**COLOR SPECTRUM**



**PHOTO FLUX SUMMARY VS WAVELENGTH BANDS**

	Wavelength Range [nm]	Wavelength Range [nm]	Total Photon Flux/ % of Total	Wavelength Range [nm]	Wavelength Range [nm]	Total Photon Flux/ % of Total
UV	350-359	0.814289	<b>5.9148 µmol/sec 0.32%</b>	RED	600-609	76.310684
	360-369	0.957942			610-619	69.792794
	370-379	1.087043			620-629	64.391597
	380-389	1.299567			630-639	64.216105
	390-399	1.755981			640-649	77.034314
BLUE	400-409	2.89333	<b>348.6327 µmol/sec 18.75%</b>		650-659	115.039775
	410-419	6.706479			660-669	159.045531
	420-429	18.0595			670-679	86.142701
	430-439	43.931807			680-689	29.199879
	440-449	97.973667			690-699	14.837222
	450-459	88.810812			700-709	9.681523
	460-469	39.340922			710-719	6.961077
	470-479	18.737991			720-729	5.195428
	480-489	13.738555			730-739	3.918577
	490-499	18.439603			740-749	2.973883
GREEN	500-509	32.821564	<b>710.4463 µmol/sec 38.22%</b>	750-759	2.268478	
	510-519	50.126191		760-769	1.741727	
	520-529	63.729081		770-779	1.337306	
	530-539	72.002533		780-789	1.032876	
	540-549	76.848603		790-799	0.806052	
	550-559	80.403059		800-809	0.630679	
	560-569	83.300079		810-819	0.497686	
	570-579	84.967682		820-829	0.3951	
	580-589	84.593084		830-839	0.319678	
	590-599	81.654429		840-850	0.282248	
FAR RED			<b>35.9169 µmol/sec 1.93%</b>	IR	810-819	0.497686
					820-829	0.3951
					830-839	0.319678
					840-850	0.282248
			<b>2.1254 µmol/sec 0.11%</b>			

# GONIOMETRIC SUMMARY CONE OF LIGHT

MOUNTING HEIGHT (FT)	BEAM CONE WIDTH (FT)	ORTHOGONAL BEAM CONE WIDTH (FT)	PROJECTED ILLUMINANCE (FC)
2	7.25	6.83	8575.6
4	14.51	13.67	2143.9
6	21.76	20.50	952.8

## UNIFORMITY (PPFD MAP)

The luminaire was tested with the long axis of the luminaire oriented along the y-axis of the plot.

MOUNTING HEIGHT: 0.5 FEET

17.0	40.0	70.7	87.2	91.0	90.1	85.8	68.5	44.6	22.7	8.8	2.5FT
31.6	111.9	288.5	370.0	374.1	375.5	331.6	303.5	206.3	69.8	17.4	2
52.1	229.9	866.0	1127.2	1166.9	1151.5	1102.4	980.8	678.6	144.9	27.1	1.5
67.5	275.7	1012.1	1316.6	1368.7	1368.2	1308.1	1192.8	836.9	185.2	34.5	1
78.2	303.6	1024.0	1312.8	1358.6	1349.7	1282.4	1150.9	790.5	197.7	39.4	0.5
62.2	272.2	795.8	1044.5	1104.8	1082.8	1037.1	1037.1	629.9	186.7	39.4	0
55.4	244.2	929.2	1271.2	1337.3	1336.0	1296.3	1186.4	845.0	256.3	59.1	0.5
47.4	238.7	892.8	1230.7	1290.3	1290.0	1256.5	1159.6	824.2	240.5	49.9	1
34.5	163.8	635.9	902.4	935.8	939.1	920.0	854.7	607.7	175.8	36.8	1.5
17.8	55.1	136.7	195.1	222.3	224.1	227.3	217.9	153.3	68.1	21.6	2
7.4	18.8	37.0	49.8	54.7	53.1	51.4	45.7	34.0	20.2	10.0	2.5FT
2.5FT	2	1.5	1	0.5	0	0.5	1	1.5	2	2.5FT	

Maximum PPFD: 1368.7  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/max): 0.01  
 Minimum PPFD: 7.4  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/ave): 0.01  
 Average PPFD: 506.2  $\mu\text{mol}/\text{sec}/\text{m}^2$  Maximum DLI: 118.3  $\text{mol}/\text{m}^2/\text{day}$

POWER: 727 WATT

MOUNTING HEIGHT: 1 FEET

58.4	105.6	158.5	177.7	206.3	208.6	196.2	164.6	121.7	76.6	41.7	2.5FT
95.1	197.1	336.4	433.1	463.6	467.1	425.2	375.0	265.1	140.0	55.2	2
144.9	320.2	607.9	804.5	871.8	868.0	802.6	698.7	486.4	230.1	93.8	1.5
168.1	380.9	734.1	979.6	1063.9	1067.5	1004.0	875.3	621.1	289.3	114.0	1
205.1	443.2	825.4	1091.5	1184.0	1179.6	1101.9	945.4	674.9	329.2	131.0	0.5
185.9	426.2	785.2	1035.9	1134.5	1133.6	1065.3	918.7	650.7	333.4	133.2	0
163.3	377.6	749.2	1022.2	1136.1	1148.0	1096.9	970.3	970.3	378.3	157.1	0.5
143.7	338.0	687.1	940.8	1041.8	1053.2	1016.0	903.3	654.0	342.4	139.7	1
107.5	248.4	497.7	697.2	773.4	778.9	748.6	663.5	478.4	255.6	108.6	1.5
64.5	133.7	230.0	316.7	364.6	370.3	363.8	321.3	240.2	149.2	70.0	2
36.0	69.7	107.5	143.8	159.4	159.7	152.6	125.1	111.7	76.6	48.7	2.5FT
2.5FT	2	1.5	1	0.5	0	0.5	1	1.5	2	2.5FT	

Maximum PPFD: 1184.0  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/max): 0.03  
 Minimum PPFD: 36.0  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/ave): 0.07  
 Average PPFD: 483.6  $\mu\text{mol}/\text{sec}/\text{m}^2$  Maximum DLI: 102.3  $\text{mol}/\text{m}^2/\text{day}$

POWER: 727.2 WATT

MOUNTING HEIGHT: 2 FEET

118.0	164.9	212.6	255.6	283.6	290.5	278.9	249.9	208.4	161.6	119.5	2.5FT
154.7	221.4	297.4	355.1	390.9	403.8	381.8	344.6	286.4	218.2	153.0	2
191.6	275.7	383.8	468.1	525.2	538.6	509.9	458.7	375.2	281.8	194.3	1.5
219.3	330.5	456.0	559.6	628.2	646.2	616.1	553.4	456.8	325.8	226.3	1
238.5	358.5	491.5	605.6	678.5	695.7	662.9	590.0	481.8	350.4	236.5	0.5
244.1	357.4	496.0	608.9	686.2	705.5	675.1	600.8	488.3	359.1	239.3	0
234.7	344.6	472.5	587.6	656.6	675.0	644.1	572.0	464.8	344.4	227.5	0.5
209.5	306.7	424.4	525.2	585.1	602.5	575.4	514.4	421.4	309.9	205.1	1
172.3	249.8	346.0	424.7	474.3	491.2	467.8	422.1	340.4	255.4	170.8	1.5
131.7	186.4	245.5	294.9	334.8	345.2	332.0	300.6	249.8	194.9	136.0	2
99.5	137.9	173.4	206.8	227.3	229.1	221.7	197.7	165.6	134.8	98.8	2.5FT
2.5FT	2	1.5	1	0.5	0	0.5	1	1.5	2	2.5FT	

Maximum PPFD: 705.5  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/max): 0.014  
 Minimum PPFD: 98.8  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/ave): 0.027  
 Average PPFD: 363.5  $\mu\text{mol}/\text{sec}/\text{m}^2$  Maximum DLI: 61.0  $\text{mol}/\text{m}^2/\text{day}$

POWER: 727.7 WATT

MOUNTING HEIGHT: 3 FEET

131.8	165.0	195.8	220.3	238.7	242.1	236.3	217.4	193.3	162.7	132.4	2.5FT
156.3	196.8	241.1	270.2	291.5	299.2	286.8	267.9	236.8	197.8	157.9	2
198.1	238.6	270.1	323.4	350.4	358.8	345.6	320.0	280.9	228.5	182.2	1.5
197.9	252.2	312.6	359.7	392.0	401.7	388.7	359.2	316.2	254.5	201.3	1
211.1	268.8	331.7	383.5	417.9	427.1	413.0	379.8	331.8	270.2	211.1	0.5
212.8	270.9	336.4	386.8	422.4	432.8	418.5	385.2	336.5	275.5	213.3	0
207.7	261.8	322.5	374.2	406.3	417.1	403.0	370.6	323.0	266.1	205.4	0.5
191.6	240.6	296.8	343.1	373.2	382.3	370.1	342.0	300.4	247.4	186.3	1
168.8	211.4	258.3	297.2	321.7	331.2	319.8	295.0	259.0	215.7	169.5	1.5
142.9	174.8	208.4	235.6	256.5	262.6	257.2	238.7	212.0	180.2	144.5	2
117.4	144.1	168.4	187.9	200.0	203.6	197.5	180.8	161.7	140.7	116.5	2.5FT
2.5FT	2	1.5	1	0.5	0	0.5	1	1.5	2	2.5FT	

Maximum PPFD: 432.8  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/max): 0.27  
 Minimum PPFD: 116.5  $\mu\text{mol}/\text{sec}/\text{m}^2$  Uniformity (min/ave): 0.43  
 Average PPFD: 267.9  $\mu\text{mol}/\text{sec}/\text{m}^2$  Maximum DLI: 37.4  $\text{mol}/\text{m}^2/\text{day}$

POWER: 728 WATT



## SUN SYSTEM® RS 1850 LED SUMMARY

INPUT VOLTAGE :	120 - 277 V
INPUT POWER:	720 W
INPUT CURRENT :	2.62 A @ 277 V 6.2 A @ 120 V - is this also called: Efficiency (umol/J)
PPF (UMOL/S) :	~1850
HEAT LOAD :	2,450 btu/hr
SPECTRUM :	Full Spectrum
FREQUENCY :	50/60 Hz
POWER FACTOR :	> 0.95
AMBIENT TEMP :	131° F / 55° C
RATING :	IP65, cETLus, DLC
OPTIC :	Conformal Coating
WEIGHT :	24.45 lb (12 kg)
DIMENSIONS :	1100 mm x 1000 mm 70 mm
CERTIFICATIONS :	UL 1598, ANSI/CAN/UL 8800, and CSA C22.2 No. 250.0
WARRANTY :	5 year limited warranty

When purchased from an authorized Hawthorne dealer, this product is covered by a LIMITED WARRANTY, available at [hawthornegc.com/warranties](http://hawthornegc.com/warranties). You can also obtain the Terms of Sale and Limited Warranty by calling Hawthorne toll-free at: 1-888-478-6544 or writing Hawthorne at: Hawthorne Hydroponics LLC, 3204 NW 38th Circle, Vancouver, WA 98660., Attn: Customer Service.

### HAWTHORNE GROW SOLUTIONS

Hawthorne Gardening Company was purposefully built to serve growers with exclusive and distributed performance-based brands including Agrolux, Gavita, General Hydroponics, Grodan, Botanicare, Sun System, Can-Filter, Quest and many more. In addition, Hawthorne has unparalleled distribution capabilities across North America, bold R&D investments, and service solutions that go beyond product. Our goal is to enable growers to seize today's unprecedented opportunities and build the industry of tomorrow.

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