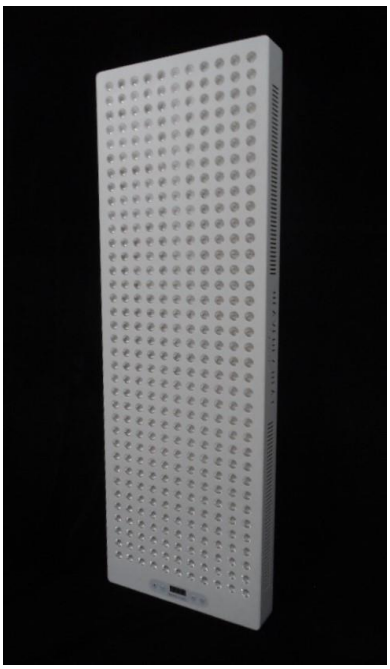
LightLab INTERNATIONAL ALLENTOWN LLC

Grid Application Distance Measurement Test Report

Test Report Number: LLIA002619-003

Catalog Number: RL1500-W
Portable, formed white steel housing, aluminum heatsink, with 3 fans above heatsink.
396 groups of one red and one infrared LED with clear plastic optics in front.
Two Fahold FD-240EL-056B LED drivers and One ZF120A-1202000 fan power supply.



Performance Summary

Electrical		
Voltage	120.0	Vac
Current	3.626	A
Power	434.6	W
Frequency	60.02	Hz
Power Factor	0.999	
Current THD	4.6	%
Ambient Temperature	25.2	°C
Grid Dimensions		
Test Plane Distance	6	inches
X Axis minimum	-14	inches
X Axis maximum	14	inches
X Axis increments	2	inches
Y Axis minimum	-28	inches
Y Axis maximum	28	inches
Y Axis increments	2	inches
Number of measurement points	435	

Prepared For:
Heavenly Heat Saunas
543 E. Andy Devine Ave
Kingman, AZ 86401, USA

Test date: 05/16/2025
Report date: 05/20/2025

Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2025.05.20 14:31:04 -04'00'

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance Tabulation (mW/cm^2) (350-1050nm)

Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.00	0.11	0.12	0.20	0.03	0.31	0.06	0.10	0.05	0.39	0.05	0.00	0.00	0.00	0.00
26	0.00	0.00	0.02	0.03	0.40	0.24	0.57	0.48	0.34	0.38	0.09	0.04	0.02	0.07	0.00
24	0.01	0.03	0.22	0.16	0.28	0.43	0.38	0.40	1.20	0.00	0.27	0.10	0.06	0.04	0.00
22	0.01	0.19	0.39	0.69	2.80	5.17	3.92	5.57	4.36	4.59	2.22	0.55	0.00	0.22	0.04
20	0.04	0.22	0.36	3.58	20.34	29.76	29.61	28.37	29.62	28.79	21.42	5.12	0.68	0.41	0.15
18	0.38	0.20	0.90	4.17	25.57	39.63	38.01	37.28	39.25	38.42	28.16	4.96	0.71	0.29	0.35
16	0.07	0.18	0.45	4.04	25.07	42.96	42.99	38.91	41.05	41.80	28.36	5.06	0.46	0.31	0.09
14	0.09	0.51	0.67	4.59	23.25	44.86	41.06	39.67	40.98	43.17	26.08	4.90	0.88	0.77	0.09
12	0.33	0.55	0.90	4.58	26.06	39.59	37.76	36.93	37.71	37.44	28.02	5.37	1.10	0.20	0.10
10	0.45	0.20	0.61	5.00	24.17	40.48	37.33	38.13	38.22	39.24	26.21	6.05	0.57	0.21	0.08
8	0.09	0.00	0.80	3.65	23.65	39.91	41.96	40.43	40.77	39.53	23.81	4.70	0.99	0.48	0.09
6	0.23	0.73	1.17	3.87	23.14	37.99	40.55	37.72	39.93	39.97	25.78	4.76	0.60	0.57	0.06
4	0.39	0.19	0.44	3.52	22.52	35.81	36.50	37.96	38.67	37.72	25.88	5.72	0.65	0.63	0.11
2	0.09	0.31	0.75	5.27	23.78	37.86	38.65	36.61	37.21	40.88	27.09	5.06	1.05	0.55	0.11
0	0.08	0.42	0.52	4.02	22.28	41.31	39.55	40.71	39.22	42.11	28.07	6.05	0.94	0.70	0.09
-2	0.07	0.18	0.62	3.90	23.18	41.04	39.53	39.56	42.48	41.26	27.75	6.28	0.64	0.22	0.45
-4	0.38	0.81	0.55	3.82	22.83	38.31	38.21	37.79	37.93	38.33	26.72	5.06	0.85	0.35	0.06
-6	0.06	0.28	0.49	4.07	24.86	40.20	41.62	38.41	39.07	40.48	26.23	4.53	1.29	0.20	0.00
-8	0.04	0.16	1.24	5.43	24.59	42.77	44.41	42.30	42.27	44.53	30.73	4.80	0.63	0.22	0.04
-10	0.07	0.20	0.76	4.66	24.56	43.30	42.64	42.76	41.50	42.83	30.87	5.02	0.61	0.15	0.05
-12	0.40	0.46	1.25	4.54	26.19	42.44	40.89	40.55	43.29	41.75	30.55	4.73	0.65	0.22	0.47
-14	0.31	0.23	0.50	4.42	25.62	47.01	44.00	44.57	48.48	47.00	34.64	5.28	0.98	0.73	0.16
-16	0.02	0.68	0.43	4.14	30.49	48.83	46.73	47.09	48.02	51.01	35.34	5.72	0.58	0.18	0.36
-18	0.05	0.05	0.30	3.75	28.03	45.59	46.20	45.39	47.27	47.02	34.82	7.73	0.72	0.12	0.33
-20	0.02	0.00	0.26	2.70	22.56	30.72	28.30	29.30	30.44	30.52	26.50	4.01	0.97	0.03	0.23
-22	0.11	0.57	0.51	0.91	1.70	4.06	4.11	5.69	5.47	3.61	3.12	1.16	0.16	0.02	0.24
-24	0.00	0.00	0.02	0.07	0.66	0.24	0.74	0.44	0.37	0.62	0.21	0.14	0.23	0.06	0.00
-26	0.00	0.00	0.00	0.01	0.06	0.07	0.20	0.44	0.63	0.65	0.45	0.17	0.00	0.34	0.00
-28	0.14	0.09	0.00	0.00	0.00	0.17	0.02	0.39	0.51	0.20	0.01	0.09	0.00	0.24	0.00

Center Point Irradiance (350-1050nm)	40.71	mW/cm^2
Average Irradiance (350-1050nm)	14.37	mW/cm^2
Maximum Irradiance (350-1050nm)	51.01	mW/cm^2
Minimum Irradiance (350-1050nm)	0.00	mW/cm^2
Max/Min Ratio	n/a	
Max/Avg Ratio	3.55	
Target Area Radiant Power (350-1050nm)	145.38	W

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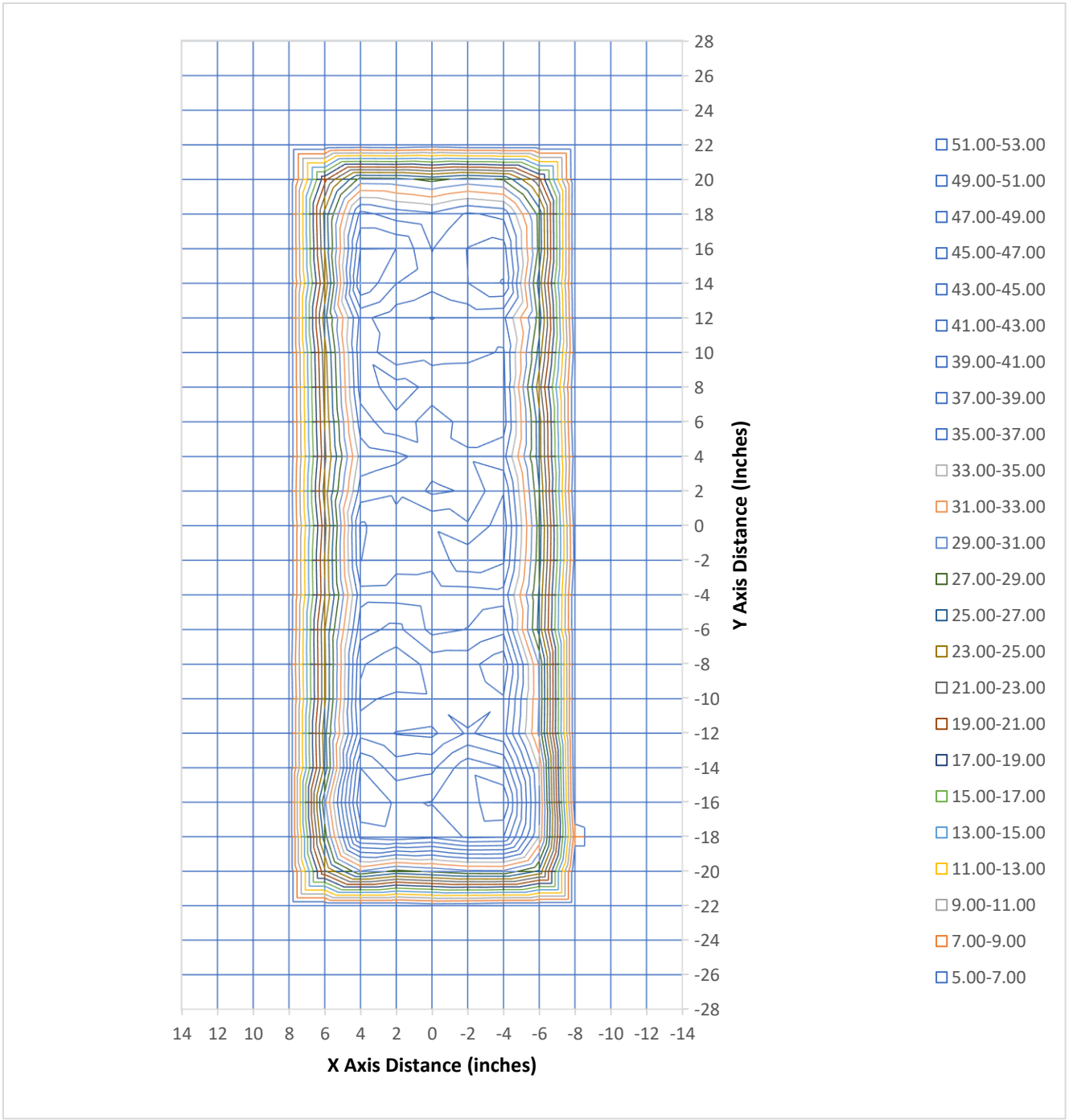
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LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (350-1050nm) in mW/cm^2
Test Distance = 6 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Red Irradiance Tabulation (mW/cm^2) (600-700nm)

X Axis Distance (inches)

Y Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.00	0.05	0.07	0.07	0.04	0.11	0.06	0.12	0.05	0.11	0.05	0.00	0.00	0.00	0.03
26	0.00	0.00	0.02	0.03	0.15	0.18	0.21	0.20	0.21	0.19	0.09	0.04	0.02	0.07	0.00
24	0.01	0.03	0.13	0.17	0.22	0.27	0.29	0.30	0.40	0.29	0.21	0.10	0.06	0.04	0.05
22	0.01	0.12	0.18	0.49	1.48	2.13	2.00	2.40	2.23	2.13	1.46	0.43	0.18	0.15	0.04
20	0.10	0.17	0.28	1.50	11.20	17.37	16.38	17.96	15.90	17.07	12.58	3.84	0.35	0.20	0.13
18	0.11	0.16	0.37	2.08	16.50	25.73	22.56	23.98	25.19	23.07	15.59	3.94	0.43	0.24	0.15
16	0.07	0.16	0.33	2.00	14.87	25.95	26.94	23.22	24.48	25.62	17.97	3.52	0.38	0.23	0.09
14	0.09	0.25	0.45	2.20	13.27	29.06	25.65	24.84	24.31	25.97	15.71	3.56	0.52	0.31	0.09
12	0.14	0.25	0.47	2.02	14.75	22.21	22.41	22.21	22.89	20.76	15.54	4.12	0.55	0.20	0.11
10	0.15	0.17	0.39	2.04	12.45	22.88	20.93	22.63	21.08	22.21	13.33	4.09	0.44	0.21	0.08
8	0.09	0.17	0.47	1.93	12.41	22.94	22.64	22.81	22.93	22.04	13.34	3.49	0.53	0.30	0.09
6	0.15	0.26	0.45	1.75	12.05	20.98	22.90	21.27	22.44	21.43	14.39	3.53	0.43	0.30	0.06
4	0.14	0.15	0.32	1.56	11.04	19.35	19.83	20.07	19.70	20.66	13.42	3.38	0.44	0.29	0.10
2	0.08	0.18	0.39	1.77	11.41	20.20	18.53	19.00	19.47	18.18	12.68	3.50	0.51	0.28	0.16
0	0.07	0.22	0.30	1.64	10.66	21.13	20.33	19.13	19.60	19.70	13.49	3.50	0.49	0.27	0.09
-2	0.14	0.13	0.33	1.35	11.97	20.14	19.19	19.49	20.21	20.31	14.34	3.62	0.41	0.18	0.17
-4	0.14	0.21	0.29	1.35	10.65	19.04	16.78	18.84	18.64	16.67	10.57	3.23	0.46	0.26	0.06
-6	0.06	0.13	0.25	1.44	9.56	18.28	16.86	17.52	17.87	18.14	12.15	2.62	0.44	0.16	0.09
-8	0.05	0.11	0.34	1.42	10.57	18.69	18.69	18.66	18.04	17.38	12.08	2.84	0.34	0.15	0.06
-10	0.04	0.11	0.33	1.33	10.14	17.93	17.90	19.87	16.72	18.47	11.47	2.91	0.39	0.12	0.06
-12	0.11	0.17	0.33	1.28	10.16	18.30	15.68	15.24	15.96	16.33	12.31	2.51	0.31	0.14	0.13
-14	0.11	0.11	0.21	1.32	9.25	17.55	16.50	16.34	17.11	15.00	11.32	2.87	0.39	0.21	0.13
-16	0.02	0.16	0.19	1.18	9.88	18.85	17.14	16.94	18.30	16.93	10.93	3.20	0.28	0.10	0.12
-18	0.06	0.04	0.14	1.07	8.49	17.70	17.87	16.60	17.38	17.97	10.86	3.54	0.30	0.10	0.09
-20	0.02	0.00	0.12	0.87	11.70	11.82	12.42	13.13	12.01	13.42	8.51	2.25	0.25	0.04	0.07
-22	0.04	0.09	0.14	0.27	0.70	2.12	1.98	2.39	2.65	1.81	0.88	0.33	0.09	0.03	0.07
-24	0.00	0.00	0.02	0.07	0.23	0.17	0.35	0.26	0.23	0.28	0.13	0.08	0.11	0.07	0.00
-26	0.00	0.00	0.00	0.01	0.12	0.07	0.12	0.19	0.17	0.15	0.11	0.10	0.00	0.06	0.00
-28	0.03	0.02	0.00	0.00	0.00	0.08	0.02	0.09	0.09	0.07	0.01	0.05	0.00	0.04	0.00

Center Point Irradiance (600-700nm)	19.13	mW/cm^2
Average Irradiance (600-700nm)	6.99	mW/cm^2
Maximum Irradiance (600-700nm)	29.06	mW/cm^2
Minimum Irradiance (600-700nm)	0.00	mW/cm^2
Max/Min Ratio	n/a	
Max/Avg Ratio	4.15	
Target Area Radiant Power (600-700nm)	70.76	W

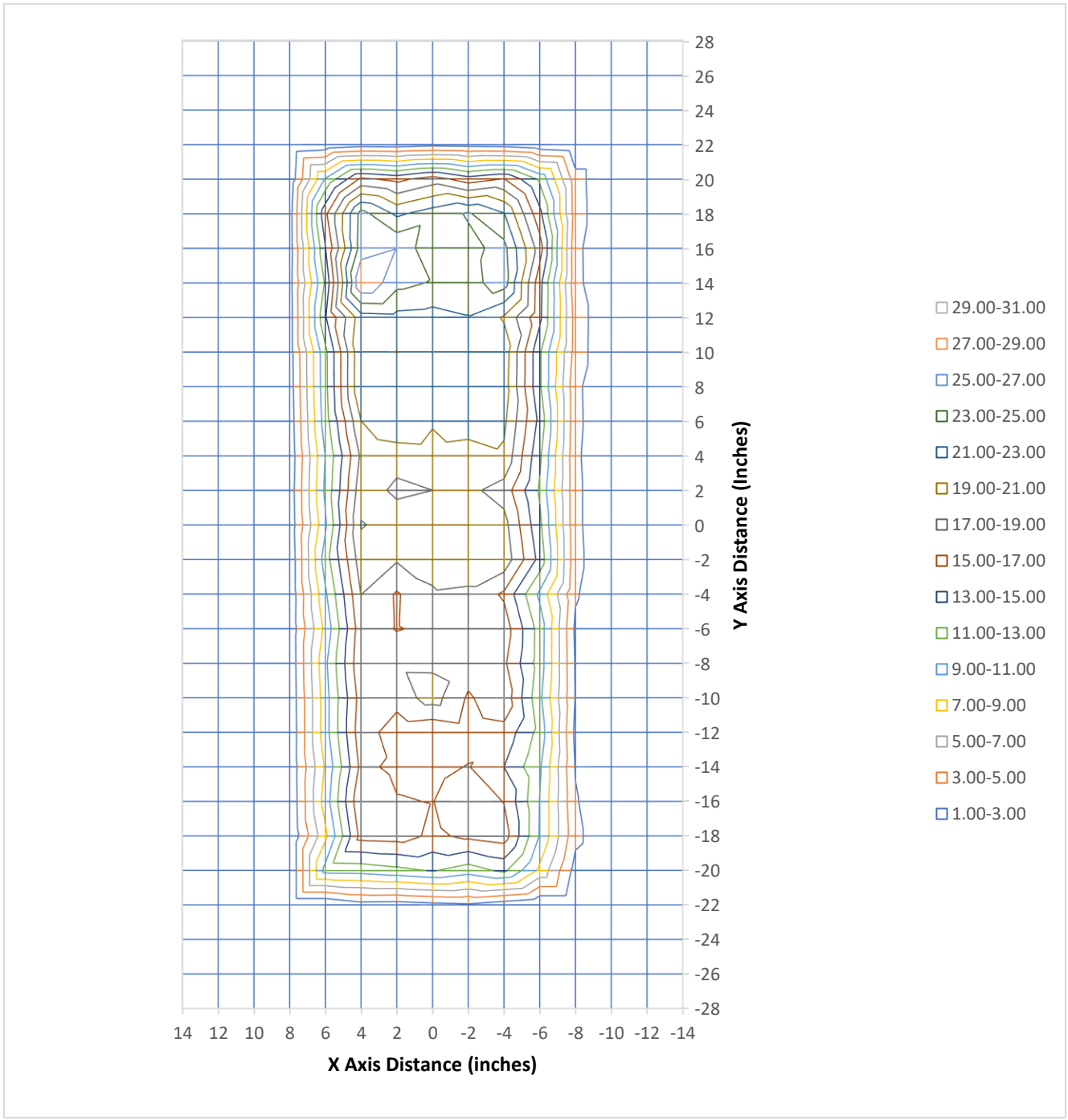
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Report of Test

Test Report Number: LLIA002619-003

Irradiance (600-700nm) in mW/cm^2
Test Distance = 6 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

NIR Irradiance Tabulation (mW/cm^2) (780-1050nm)

X Axis Distance (inches)

Y Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.00	0.04	0.02	0.11	0.00	0.17	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.22	0.07	0.33	0.26	0.10	0.15	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.10	0.00	0.06	0.15	0.09	0.10	0.74	0.00	0.06	0.00	0.00	0.00	0.00
22	0.00	0.04	0.20	0.20	1.19	2.88	1.92	2.83	2.12	2.38	0.77	0.12	0.00	0.06	0.00
20	0.00	0.05	0.09	1.93	8.89	11.77	12.45	9.80	13.17	11.24	8.61	1.13	0.30	0.19	0.00
18	0.22	0.04	0.48	2.06	8.65	13.46	15.06	12.48	13.62	14.55	12.07	0.99	0.21	0.01	0.20
16	0.00	0.01	0.12	1.96	9.79	16.45	15.51	14.79	15.78	15.50	9.76	1.41	0.08	0.09	0.00
14	0.00	0.24	0.16	2.14	9.32	15.17	14.92	13.81	15.83	16.17	9.88	1.28	0.33	0.42	0.00
12	0.17	0.28	0.36	2.42	10.66	16.28	14.94	13.82	14.31	15.84	11.56	1.17	0.53	0.00	0.00
10	0.26	0.03	0.22	2.69	11.00	16.60	15.64	14.62	16.44	16.06	12.22	1.80	0.13	0.00	0.00
8	0.00	0.00	0.30	1.71	10.86	16.02	18.22	16.20	16.86	16.47	10.03	1.18	0.42	0.14	0.00
6	0.07	0.39	0.65	2.08	10.60	16.00	16.82	15.42	16.57	17.68	10.86	1.21	0.18	0.25	0.00
4	0.23	0.04	0.12	1.93	11.15	15.83	16.20	16.45	17.91	16.40	11.74	2.14	0.21	0.30	0.01
2	0.01	0.14	0.37	3.22	12.00	16.81	19.26	16.40	17.00	21.41	13.58	1.52	0.51	0.22	0.00
0	0.01	0.19	0.22	2.28	11.08	19.25	18.59	19.51	18.90	21.27	13.78	2.29	0.37	0.38	0.00
-2	0.00	0.06	0.28	2.45	10.62	19.78	19.59	18.66	21.03	20.13	12.72	2.41	0.23	0.03	0.24
-4	0.20	0.55	0.26	2.32	11.45	18.63	20.63	17.88	18.49	20.74	15.40	1.80	0.32	0.09	0.00
-6	0.00	0.15	0.24	2.37	14.31	21.19	24.09	19.84	20.33	21.37	13.47	1.86	0.76	0.04	0.00
-8	0.00	0.06	0.83	3.75	13.41	23.32	24.84	22.48	23.48	25.87	17.66	1.93	0.29	0.07	0.00
-10	0.02	0.09	0.45	3.19	13.91	24.61	23.76	21.74	23.87	23.05	18.43	2.07	0.22	0.02	0.00
-12	0.24	0.28	0.85	3.09	15.37	23.42	24.44	23.34	25.91	24.09	17.44	2.18	0.34	0.08	0.32
-14	0.18	0.12	0.29	2.95	15.61	28.15	26.52	26.37	29.83	30.82	22.20	2.36	0.53	0.49	0.00
-16	0.01	0.51	0.24	2.86	19.60	29.06	28.75	28.35	28.66	32.74	22.97	2.46	0.30	0.07	0.18
-18	0.00	0.00	0.16	2.55	18.44	26.91	27.51	26.73	28.50	28.04	22.94	3.84	0.44	0.02	0.20
-20	0.00	0.00	0.14	1.64	9.95	17.71	15.20	15.10	17.39	16.36	17.11	1.72	0.64	0.00	0.16
-22	0.07	0.44	0.35	0.56	0.99	1.85	2.00	2.98	2.55	1.79	2.05	0.73	0.07	0.00	0.16
-24	0.00	0.00	0.00	0.00	0.39	0.07	0.38	0.18	0.15	0.36	0.08	0.06	0.08	0.00	0.00
-26	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.22	0.44	0.46	0.33	0.05	0.00	0.31	0.00
-28	0.10	0.04	0.00	0.00	0.00	0.10	0.00	0.28	0.39	0.14	0.00	0.04	0.00	0.19	0.00

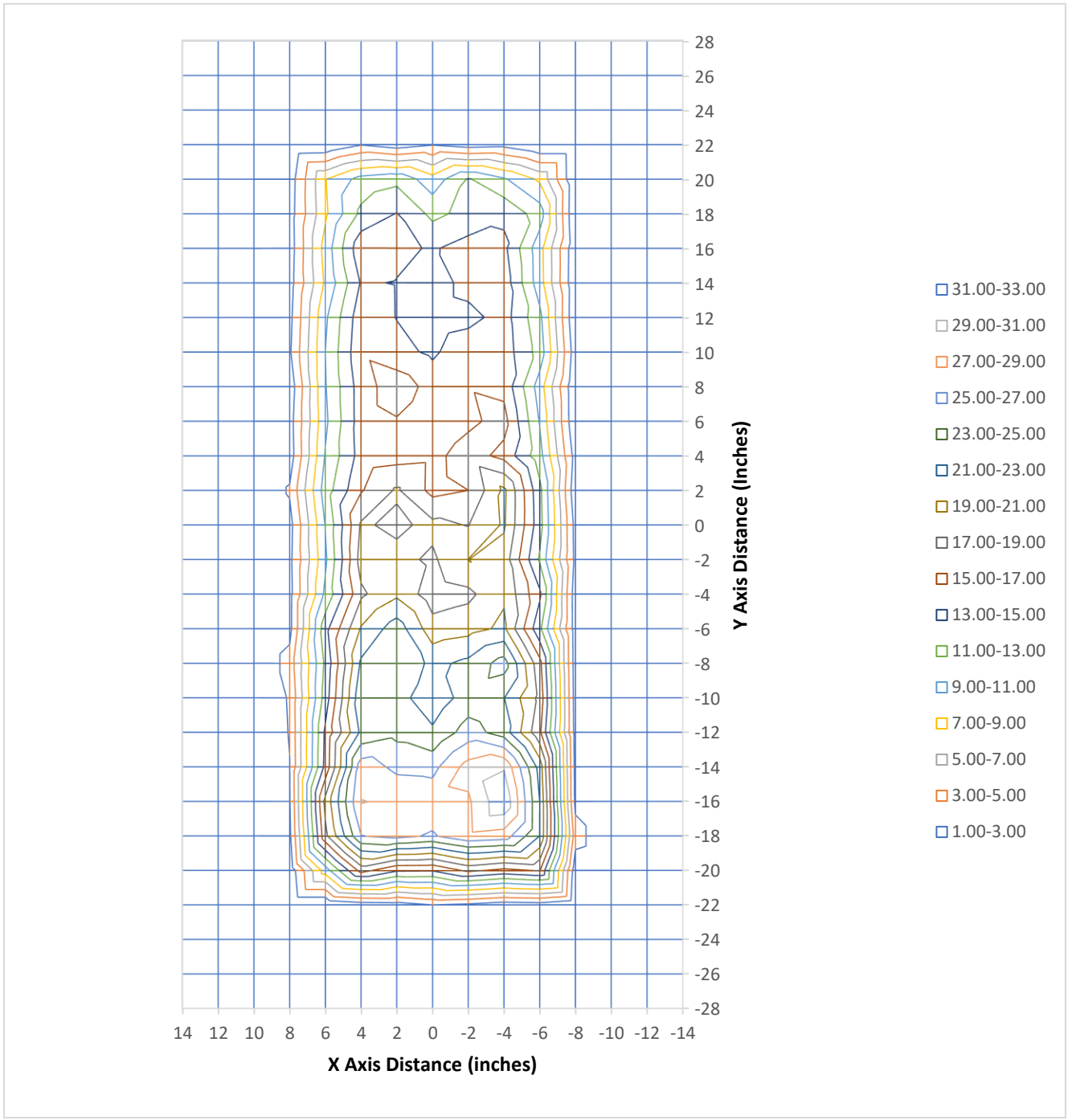
Center Point Irradiance (780-1050nm)	19.51	mW/cm^2
Average Irradiance (780-1050nm)	7.03	mW/cm^2
Maximum Irradiance (780-1050nm)	32.74	mW/cm^2
Minimum Irradiance (780-1050nm)	0.00	mW/cm^2
Max/Min Ratio	n/a	
Max/Avg Ratio	4.66	
Target Area Radiant Power (780-1050nm)	71.08	W

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (780-1050nm) in mW/cm^2
Test Distance = 6 inches



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LightLab INTERNATIONAL ALLENTOWN LLC

Test Report Number: LLIA002619-003

Test Equipment Configuration:	LightLab International Allentown Application Distance Measurement Grid Measurements acquired using a spectral irradiance meter (350-1050nm) The rectangular scan method was employed using cartesian coordinates. No symmetry was applied to the results.
Test Procedure:	Tested in accordance with the applicable sections of: LM-91-22, LM-79-19, LM-58-20
Significance:	The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.
Notes:	The measurements and other derived quantities contained in this report are based on the absolute data as measured. Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results. This report is free of erasures and corrections This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

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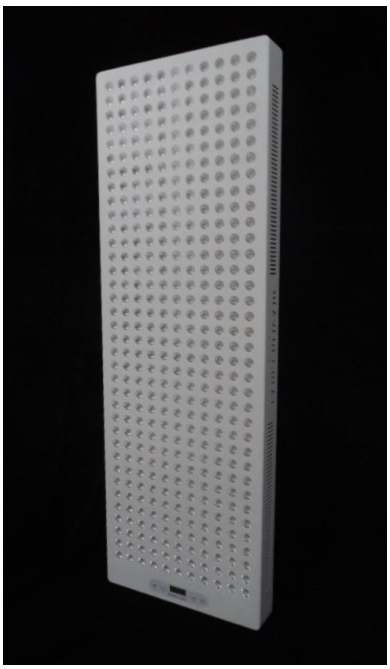
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LightLab INTERNATIONAL ALLENTOWN LLC

Grid Application Distance Measurement Test Report

Test Report Number: LLIA002619-003

Catalog Number: RL1500-W
Portable, formed white steel housing, aluminum heatsink, with 3 fans above heatsink.
396 groups of one red and one infrared LED with clear plastic optics in front.
Two Fahold FD-240EL-056B LED drivers and One ZF120A-1202000 fan power supply.



Performance Summary

Electrical		
Voltage	120.0	Vac
Current	3.626	A
Power	434.6	W
Frequency	60.02	Hz
Power Factor	0.999	
Current THD	4.6	%
Ambient Temperature	25.2	°C
Grid Dimensions		
Test Plane Distance	12	inches
X Axis minimum	-14	inches
X Axis maximum	14	inches
X Axis increments	2	inches
Y Axis minimum	-28	inches
Y Axis maximum	28	inches
Y Axis increments	2	inches
Number of measurement points	435	

Prepared For:
Heavenly Heat Saunas
543 E. Andy Devine Ave
Kingman, AZ 86401, USA

Test date: 05/16/2025
Report date: 05/20/2025

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance Tabulation (mW/cm^2) (350-1050nm)

Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.00	0.00	0.24	0.39	0.16	0.17	0.33	0.13	0.46	0.33	0.31	0.36	0.04	0.02	0.04
26	0.05	0.01	0.12	0.00	0.62	0.78	0.52	0.86	0.44	0.78	0.26	0.19	0.12	0.06	0.05
24	0.03	0.34	0.52	0.85	1.03	2.76	3.01	3.03	2.05	2.67	1.15	0.86	0.57	0.16	0.04
22	0.36	0.16	0.47	1.69	5.71	9.02	8.42	9.11	8.74	9.19	5.03	1.96	0.81	0.14	0.00
20	0.11	0.31	1.76	5.46	13.52	21.83	23.24	21.43	23.90	21.28	15.24	5.73	2.31	0.30	0.14
18	0.58	0.39	1.73	6.32	19.88	33.25	36.17	33.55	34.38	31.59	22.51	8.84	2.23	0.39	0.49
16	0.49	0.97	2.15	7.50	20.63	39.09	40.64	37.40	37.28	35.26	22.38	7.98	2.64	0.56	0.34
14	0.15	0.47	2.88	6.48	20.01	36.33	38.99	37.14	37.72	38.51	23.19	9.88	3.10	0.48	0.15
12	0.21	0.84	1.94	6.80	21.85	35.24	37.21	38.25	37.50	34.76	24.52	8.19	2.57	0.53	0.26
10	0.32	0.50	1.96	8.94	21.16	34.34	38.26	36.43	38.49	36.06	21.58	8.03	2.64	0.46	0.87
8	0.32	0.65	1.89	7.29	21.07	33.94	38.27	37.58	38.31	35.26	21.28	8.16	3.13	0.86	0.30
6	0.66	0.61	2.99	6.61	19.67	32.81	36.72	37.69	37.25	34.00	22.37	7.76	3.08	0.62	0.53
4	0.67	1.06	2.73	6.46	19.54	33.00	37.43	36.12	36.37	36.51	21.83	9.24	3.23	1.13	0.79
2	0.62	0.57	2.22	6.71	19.51	33.55	36.25	37.80	36.69	36.50	21.93	9.44	2.57	0.67	0.71
0	0.38	0.50	1.72	8.17	20.89	34.12	36.18	38.20	38.67	35.56	22.42	9.36	3.16	0.74	0.30
-2	0.41	0.77	2.31	7.87	19.58	33.62	36.92	37.80	39.16	37.31	22.67	8.13	3.38	0.53	0.37
-4	0.70	0.52	2.21	6.85	21.41	35.75	38.93	40.34	37.72	36.12	22.74	8.59	2.35	1.26	0.47
-6	0.24	0.89	1.84	6.75	20.36	35.20	39.86	38.79	39.44	36.25	24.38	8.96	2.39	1.19	0.36
-8	0.30	0.91	3.19	8.27	22.25	36.69	41.12	38.54	39.01	37.60	25.75	8.42	2.42	0.56	0.89
-10	0.81	0.47	3.05	7.40	20.92	37.98	40.38	40.32	39.57	38.25	25.67	8.67	2.79	0.66	0.22
-12	0.27	0.86	2.96	7.64	21.74	37.89	40.42	42.56	41.66	41.14	24.86	8.48	2.26	0.64	0.76
-14	0.23	0.35	2.17	7.79	24.06	39.09	41.73	43.49	42.92	41.45	26.13	9.13	3.78	1.24	0.28
-16	0.24	0.74	2.69	7.86	23.61	41.77	44.05	43.42	42.57	42.01	27.89	9.43	2.77	0.58	0.24
-18	0.59	0.35	1.83	7.70	23.08	37.57	40.33	39.85	39.55	37.00	26.71	8.93	2.59	0.50	0.57
-20	0.49	0.24	0.87	5.49	14.17	23.29	24.78	25.08	25.76	25.81	16.07	6.73	2.32	0.33	0.42
-22	0.02	0.50	0.50	1.40	5.20	7.80	9.01	10.90	9.61	10.21	5.55	2.15	1.22	0.15	0.31
-24	0.12	0.06	0.56	0.41	1.01	1.70	2.97	2.91	3.08	2.52	1.07	0.61	0.22	0.09	0.04
-26	0.02	0.06	0.32	0.58	0.24	0.34	0.38	0.79	1.06	0.77	0.34	0.19	0.06	0.38	0.02
-28	0.00	0.11	0.36	0.63	0.41	0.72	0.31	0.48	0.52	0.38	0.30	0.45	0.23	0.02	0.00

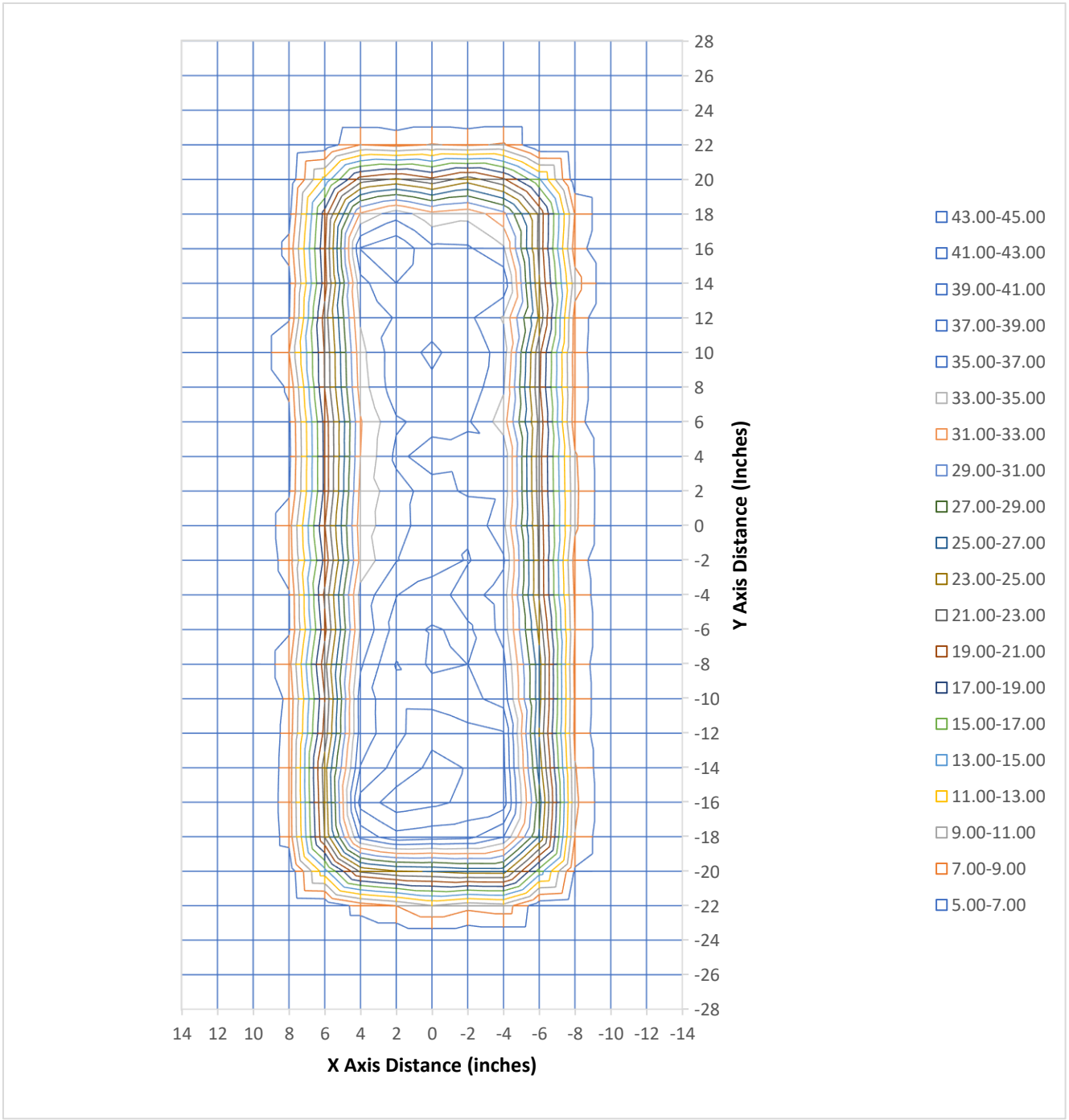
Center Point Irradiance (350-1050nm)	38.20	mW/cm^2
Average Irradiance (350-1050nm)	13.74	mW/cm^2
Maximum Irradiance (350-1050nm)	44.05	mW/cm^2
Minimum Irradiance (350-1050nm)	0.00	mW/cm^2
Max/Min Ratio	n/a	
Max/Avg Ratio	3.21	
Target Area Radiant Power (350-1050nm)	138.95	W

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (350-1050nm) in mW/cm^2
Test Distance = 12 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Red Irradiance Tabulation (mW/cm^2) (600-700nm)

X Axis Distance (inches)

Y Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.00	0.09	0.11	0.14	0.11	0.13	0.18	0.12	0.19	0.19	0.18	0.15	0.04	0.02	0.04
26	0.05	0.12	0.15	0.15	0.28	0.35	0.35	0.36	0.31	0.37	0.21	0.16	0.11	0.07	0.11
24	0.03	0.15	0.24	0.48	0.68	1.10	1.27	1.31	1.20	1.14	0.81	0.49	0.27	0.15	0.14
22	0.15	0.14	0.46	1.03	2.76	3.96	4.17	4.42	4.26	4.01	2.88	1.43	0.59	0.14	0.09
20	0.10	0.24	0.81	2.57	7.29	11.66	12.21	11.63	11.28	11.12	7.90	4.14	1.66	0.22	0.13
18	0.21	0.31	0.94	3.49	12.35	20.62	21.85	20.80	21.37	19.31	12.78	5.65	1.70	0.29	0.22
16	0.23	0.42	1.16	3.75	12.12	22.54	25.29	23.28	22.76	21.89	14.40	5.55	1.60	0.36	0.26
14	0.14	0.36	1.21	3.52	11.65	22.60	24.65	22.94	22.87	21.43	13.87	5.95	1.84	0.34	0.15
12	0.17	0.45	1.11	3.50	12.76	21.80	22.53	22.46	22.17	19.77	13.23	5.66	1.91	0.43	0.21
10	0.20	0.34	1.08	3.62	11.45	21.59	22.42	21.22	21.15	19.73	12.16	5.41	1.94	0.36	0.31
8	0.22	0.41	1.06	3.39	10.75	19.88	21.86	21.50	21.15	19.12	11.85	5.08	1.84	0.49	0.24
6	0.28	0.39	1.12	3.21	10.40	18.80	20.52	20.02	20.83	18.28	11.89	4.95	1.88	0.40	0.31
4	0.28	0.47	1.07	3.04	10.18	18.65	20.22	19.49	19.53	18.78	11.59	5.34	1.88	0.49	0.32
2	0.29	0.36	1.04	3.05	9.97	18.18	19.31	19.50	19.34	18.41	11.41	5.06	1.74	0.39	0.31
0	0.21	0.33	0.87	3.03	9.66	17.32	18.84	18.88	18.92	17.34	11.51	4.89	1.61	0.41	0.21
-2	0.21	0.40	0.89	2.96	9.98	17.19	17.97	17.92	18.28	17.51	11.32	4.69	1.66	0.33	0.23
-4	0.25	0.31	0.84	2.73	9.37	17.19	17.53	18.17	18.30	16.20	10.51	4.51	1.44	0.45	0.28
-6	0.14	0.38	0.78	2.59	8.67	16.40	17.73	17.99	17.52	16.16	10.74	4.45	1.36	0.42	0.21
-8	0.17	0.35	0.88	2.76	9.17	16.39	17.94	17.42	16.54	15.44	10.53	4.39	1.43	0.30	0.28
-10	0.23	0.25	0.85	2.58	8.65	15.51	17.14	16.82	15.81	15.43	10.08	4.34	1.48	0.31	0.15
-12	0.15	0.32	0.82	2.63	8.29	15.88	16.43	15.89	15.93	15.30	10.02	4.18	1.24	0.29	0.25
-14	0.13	0.19	0.75	2.53	8.48	15.68	15.89	15.97	16.04	15.04	10.06	4.36	1.52	0.35	0.17
-16	0.13	0.30	0.76	2.38	8.44	16.14	15.98	15.81	16.21	14.86	9.71	4.29	1.52	0.25	0.14
-18	0.17	0.18	0.59	2.30	7.76	14.37	15.88	14.93	14.95	14.39	9.34	4.19	1.41	0.22	0.19
-20	0.14	0.13	0.37	1.82	6.47	10.60	11.56	11.78	11.40	11.29	6.86	3.17	1.02	0.16	0.16
-22	0.02	0.19	0.24	0.63	2.21	3.88	4.52	4.62	4.84	4.16	2.44	0.94	0.40	0.10	0.13
-24	0.10	0.05	0.20	0.21	0.43	0.84	1.22	1.22	1.22	1.03	0.46	0.25	0.12	0.15	0.04
-26	0.03	0.05	0.14	0.17	0.15	0.19	0.20	0.30	0.31	0.28	0.24	0.12	0.07	0.11	0.02
-28	0.00	0.10	0.11	0.13	0.16	0.18	0.19	0.20	0.19	0.15	0.15	0.14	0.12	0.03	0.01

Center Point Irradiance (600-700nm)	18.88	mW/cm^2
Average Irradiance (600-700nm)	6.73	mW/cm^2
Maximum Irradiance (600-700nm)	25.29	mW/cm^2
Minimum Irradiance (600-700nm)	0.00	mW/cm^2
Max/Min Ratio	8389.99	
Max/Avg Ratio	3.76	
Target Area Radiant Power (600-700nm)	68.09	W

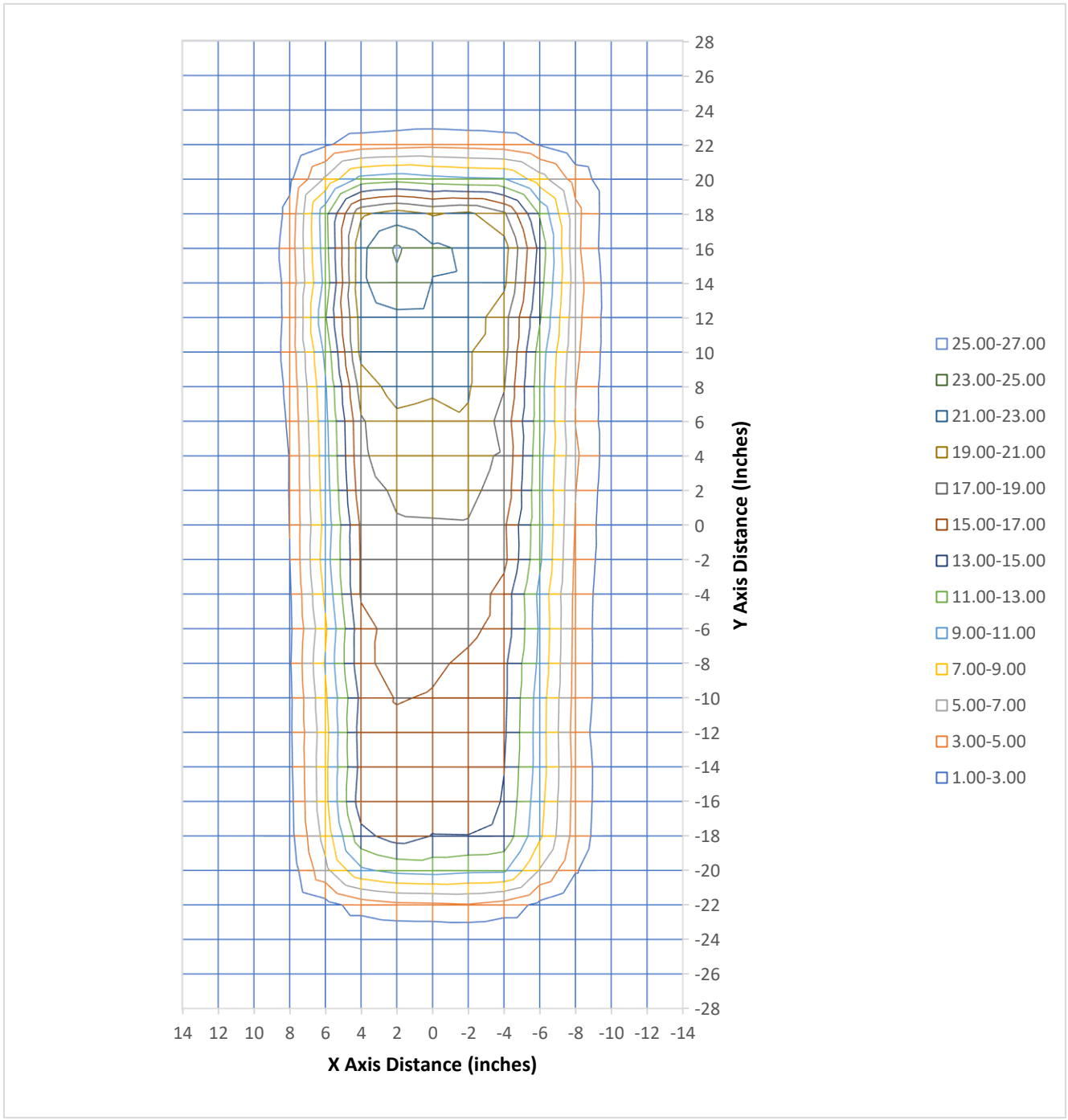
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Report of Test

Test Report Number: LLIA002619-003

Irradiance (600-700nm) in mW/cm^2
Test Distance = 12 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

NIR Irradiance Tabulation (mW/cm^2) (780-1050nm)

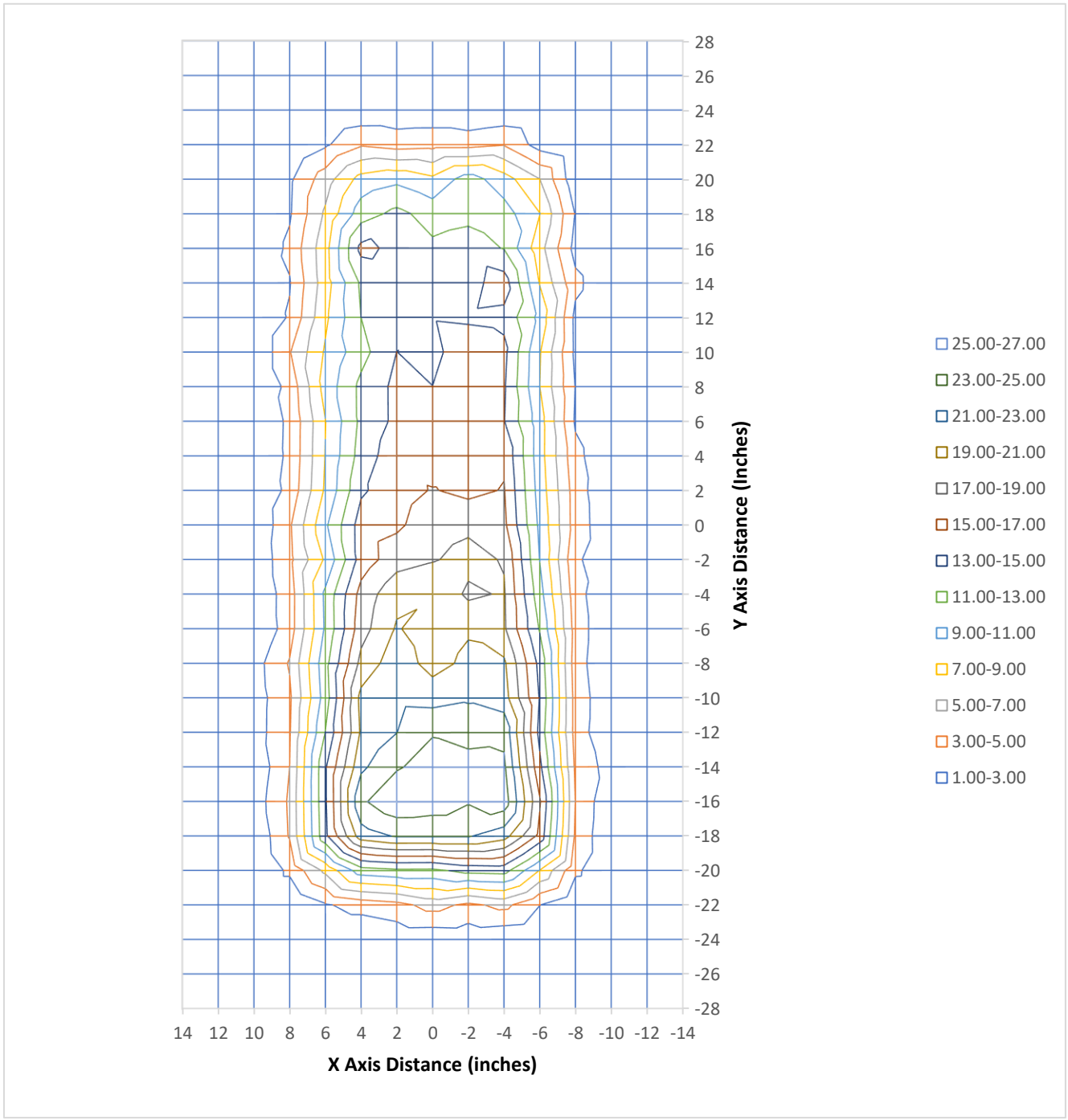
Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.00	0.00	0.12	0.21	0.04	0.05	0.15	0.00	0.18	0.11	0.08	0.20	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.30	0.39	0.18	0.49	0.13	0.38	0.05	0.04	0.01	0.00	0.00
24	0.00	0.12	0.27	0.30	0.35	1.54	1.57	1.57	0.86	1.42	0.33	0.34	0.26	0.02	0.00
22	0.18	0.02	0.04	0.66	2.70	4.73	4.15	4.34	4.34	4.86	2.14	0.54	0.22	0.00	0.00
20	0.01	0.07	0.87	2.64	6.06	9.75	10.51	9.42	11.93	9.86	7.01	1.55	0.52	0.08	0.01
18	0.32	0.08	0.79	2.77	7.31	12.04	13.52	12.17	12.48	11.85	9.05	2.89	0.53	0.10	0.24
16	0.25	0.47	0.94	3.44	8.27	15.56	14.46	13.41	13.91	12.91	7.74	2.31	0.92	0.20	0.05
14	0.01	0.12	1.52	2.87	8.10	13.30	13.80	13.52	14.24	15.99	8.88	3.53	1.14	0.14	0.00
12	0.04	0.28	0.83	3.21	8.60	13.00	14.14	14.84	14.66	14.44	10.43	2.46	0.66	0.10	0.05
10	0.11	0.15	0.88	4.83	9.24	12.29	15.01	14.42	16.32	15.53	9.16	2.55	0.69	0.11	0.50
8	0.09	0.24	0.82	3.61	9.79	13.49	15.50	15.02	16.04	15.24	9.01	2.93	1.13	0.32	0.06
6	0.34	0.22	1.68	3.28	8.94	13.46	15.48	16.50	15.63	15.08	9.87	2.73	1.08	0.23	0.23
4	0.36	0.56	1.51	3.32	9.06	13.84	16.30	15.80	15.98	16.66	9.83	3.59	1.19	0.58	0.44
2	0.29	0.21	1.11	3.55	9.29	14.69	16.20	17.12	16.43	17.12	10.13	4.02	0.82	0.29	0.38
0	0.17	0.17	0.85	4.72	10.63	15.93	16.63	18.14	18.62	17.46	10.54	4.07	1.41	0.33	0.09
-2	0.20	0.33	1.39	4.49	9.29	15.87	18.17	18.83	19.66	18.84	10.93	3.34	1.54	0.20	0.14
-4	0.39	0.22	1.35	3.97	11.41	17.74	20.46	20.85	18.60	19.21	11.78	3.83	0.91	0.77	0.19
-6	0.10	0.44	1.05	4.00	11.28	18.19	21.20	19.74	20.76	19.31	12.81	4.15	1.02	0.72	0.15
-8	0.12	0.52	2.11	5.18	12.30	19.60	22.22	20.19	21.52	21.36	14.38	3.93	0.98	0.26	0.59
-10	0.53	0.22	1.98	4.65	11.94	21.60	22.38	22.26	22.74	21.89	14.85	4.21	1.27	0.35	0.07
-12	0.12	0.49	1.99	4.83	13.03	21.27	22.97	24.87	24.37	24.53	14.38	4.19	1.01	0.36	0.48
-14	0.10	0.16	1.38	5.00	14.74	22.60	24.81	25.82	25.69	25.36	15.51	4.62	2.04	0.84	0.11
-16	0.12	0.40	1.85	5.29	14.71	24.66	26.56	26.20	25.16	26.13	17.23	4.95	1.23	0.33	0.10
-18	0.36	0.17	1.20	5.16	14.47	22.06	23.15	23.13	23.13	21.83	16.38	4.64	1.14	0.28	0.35
-20	0.28	0.11	0.50	3.42	7.45	12.06	12.58	12.52	13.58	13.76	8.91	3.39	1.21	0.17	0.21
-22	0.00	0.27	0.27	0.76	2.79	3.77	4.33	5.75	4.54	5.55	3.04	1.20	0.73	0.04	0.13
-24	0.02	0.00	0.35	0.20	0.58	0.85	1.59	1.51	1.64	1.31	0.61	0.36	0.10	0.00	0.00
-26	0.00	0.01	0.17	0.39	0.09	0.15	0.18	0.47	0.70	0.46	0.04	0.07	0.00	0.23	0.00
-28	0.00	0.00	0.18	0.46	0.22	0.50	0.07	0.27	0.29	0.23	0.14	0.28	0.08	0.00	0.00

Center Point Irradiance (780-1050nm)	18.14	mW/cm^2
Average Irradiance (780-1050nm)	6.67	mW/cm^2
Maximum Irradiance (780-1050nm)	26.56	mW/cm^2
Minimum Irradiance (780-1050nm)	0.00	mW/cm^2
Max/Min Ratio	n/a	
Max/Avg Ratio	3.98	
Target Area Radiant Power (780-1050nm)	67.49	W

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (780-1050nm) in mW/cm^2
Test Distance = 12 inches



Test Report Number: LLIA002619-003

Test Equipment Configuration:	LightLab International Allentown Application Distance Measurement Grid Measurements acquired using a spectral irradiance meter (350-1050nm) The rectangular scan method was employed using cartesian coordinates. No symmetry was applied to the results.
Test Procedure:	Tested in accordance with the applicable sections of: LM-91-22, LM-79-19, LM-58-20
Significance:	The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.
Notes:	The measurements and other derived quantities contained in this report are based on the absolute data as measured. Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results. This report is free of erasures and corrections This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

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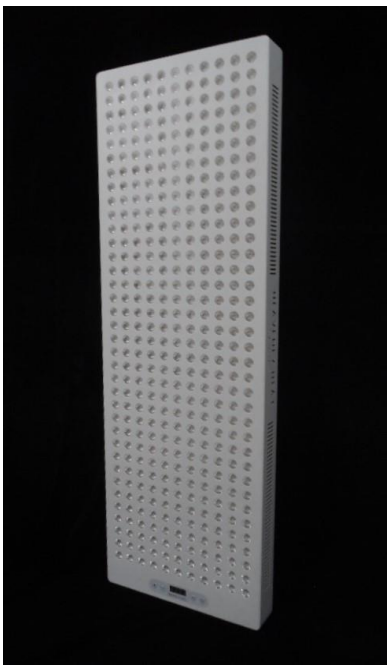
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LightLab INTERNATIONAL ALLENTOWN LLC

Grid Application Distance Measurement Test Report

Test Report Number: LLIA002619-003

Catalog Number: RL1500-W
Portable, formed white steel housing, aluminum heatsink, with 3 fans above heatsink.
396 groups of one red and one infrared LED with clear plastic optics in front.
Two Fahold FD-240EL-056B LED drivers and One ZF120A-1202000 fan power supply.



Performance Summary

Electrical		
Voltage	120.0	Vac
Current	3.626	A
Power	434.6	W
Frequency	60.02	Hz
Power Factor	0.999	
Current THD	4.6	%
Ambient Temperature	25.2	°C
Grid Dimensions		
Test Plane Distance	24	inches
X Axis minimum	-14	inches
X Axis maximum	14	inches
X Axis increments	2	inches
Y Axis minimum	-28	inches
Y Axis maximum	28	inches
Y Axis increments	2	inches
Number of measurement points	435	

Prepared For:
Heavenly Heat Saunas
543 E. Andy Devine Ave
Kingman, AZ 86401, USA

Test date: 05/16/2025
Report date: 05/20/2025

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance Tabulation (mW/cm^2) (350-1050nm)

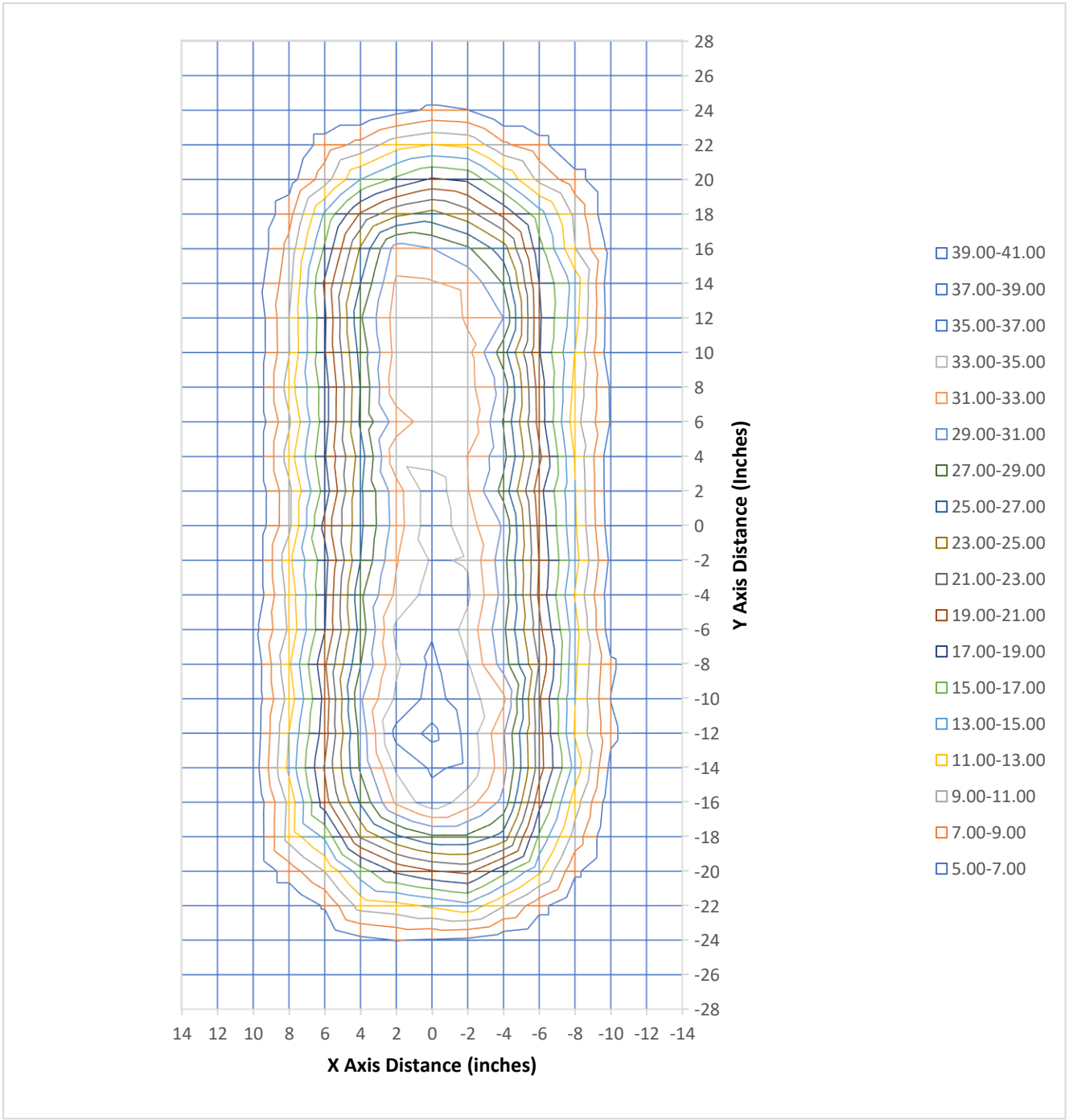
Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.33	0.14	0.66	0.38	0.74	1.35	0.97	0.81	1.56	0.75	0.61	0.85	0.44	0.30	0.41
26	0.33	0.69	0.48	1.38	1.35	2.06	3.50	3.77	2.58	2.29	2.29	0.98	0.80	0.23	0.52
24	0.24	1.19	1.35	1.76	4.16	4.76	6.33	7.35	7.04	4.82	3.54	2.00	1.47	0.99	0.31
22	0.42	1.41	2.55	4.93	7.90	9.64	12.14	13.00	12.54	9.36	7.72	4.14	2.57	1.07	0.47
20	1.08	1.85	2.83	6.03	10.06	14.98	17.38	19.23	18.58	14.76	10.47	7.83	3.42	2.25	0.70
18	0.81	2.50	3.71	8.21	15.29	21.19	24.45	25.64	23.78	20.45	15.82	10.51	4.51	2.73	1.53
16	1.27	2.05	4.08	9.64	17.26	25.21	31.91	31.02	29.27	25.86	17.66	11.09	6.26	2.36	1.08
14	1.68	2.33	5.69	10.23	19.28	26.98	33.29	33.15	32.51	28.84	18.98	14.19	5.43	2.74	1.81
12	1.58	2.47	4.83	10.98	18.64	28.72	33.91	34.98	32.67	30.97	19.29	13.83	5.69	3.41	1.27
10	1.39	3.35	4.92	10.88	18.83	27.76	33.66	34.56	33.61	27.84	19.13	12.91	5.59	3.61	1.89
8	1.05	3.31	4.74	11.90	18.00	27.07	34.37	34.32	33.73	30.11	20.02	12.39	6.72	2.43	1.80
6	1.50	3.03	4.64	10.66	18.01	27.34	31.89	34.18	34.49	28.84	20.24	11.77	6.85	3.69	1.91
4	1.55	2.24	4.67	11.95	18.79	25.94	34.43	34.08	32.95	29.67	21.48	12.81	5.57	2.71	1.53
2	1.08	3.18	4.84	10.44	17.84	26.64	32.14	36.33	33.09	28.26	19.73	13.10	5.61	3.64	1.69
0	1.67	3.33	4.77	10.47	19.62	26.59	31.98	36.39	33.81	30.72	20.39	13.28	5.77	3.58	1.98
-2	1.78	2.49	4.80	12.44	18.12	26.99	32.83	35.21	34.83	29.77	20.88	13.82	6.49	2.88	1.35
-4	1.73	2.29	5.00	11.67	18.58	28.52	33.42	35.93	35.33	30.27	20.57	12.81	5.68	2.76	1.21
-6	1.78	2.44	6.17	11.28	18.87	27.76	35.50	36.80	34.35	29.40	21.60	13.75	5.76	3.64	1.58
-8	1.04	3.32	5.23	12.65	20.65	28.92	34.66	37.41	35.09	30.07	22.86	13.36	7.35	3.87	1.85
-10	1.13	2.60	5.30	11.75	19.61	30.67	35.36	37.74	35.83	33.47	21.25	13.05	6.95	3.80	1.30
-12	1.87	3.74	5.39	13.03	20.03	29.61	37.66	39.57	36.37	31.19	21.75	12.78	7.49	2.84	1.29
-14	1.04	3.30	5.74	13.48	21.18	29.31	35.28	37.26	36.59	31.79	21.92	14.22	6.42	2.67	1.25
-16	0.78	3.49	5.05	11.48	20.08	27.24	33.34	36.35	33.90	30.36	19.65	11.93	5.58	2.48	1.16
-18	1.63	2.13	5.00	11.75	15.34	23.17	26.55	28.60	28.56	26.18	16.66	10.14	5.01	2.20	1.02
-20	0.54	1.43	3.80	8.00	11.04	16.03	19.35	20.81	21.48	17.62	13.38	7.41	3.63	1.46	0.75
-22	0.24	1.36	1.83	4.01	7.22	11.77	12.29	13.32	14.38	11.13	7.71	4.55	3.14	1.62	0.91
-24	0.69	0.42	0.96	1.85	3.47	6.42	7.05	6.82	6.54	5.57	3.97	2.39	1.63	1.08	0.72
-26	0.09	0.62	0.85	1.65	1.42	2.52	3.84	2.96	3.04	3.35	1.59	1.71	0.55	0.68	0.12
-28	0.46	0.17	0.24	0.57	1.07	0.92	1.47	1.74	1.64	1.47	1.09	0.92	0.67	0.14	0.33

Center Point Irradiance (350-1050nm)	36.39	mW/cm^2
Average Irradiance (350-1050nm)	13.12	mW/cm^2
Maximum Irradiance (350-1050nm)	39.57	mW/cm^2
Minimum Irradiance (350-1050nm)	0.09	mW/cm^2
Max/Min Ratio	433.63	
Max/Avg Ratio	3.02	
Target Area Radiant Power (350-1050nm)	132.68	W

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (350-1050nm) in mW/cm^2
Test Distance = 24 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Red Irradiance Tabulation (mW/cm^2) (600-700nm)

X Axis Distance (inches)

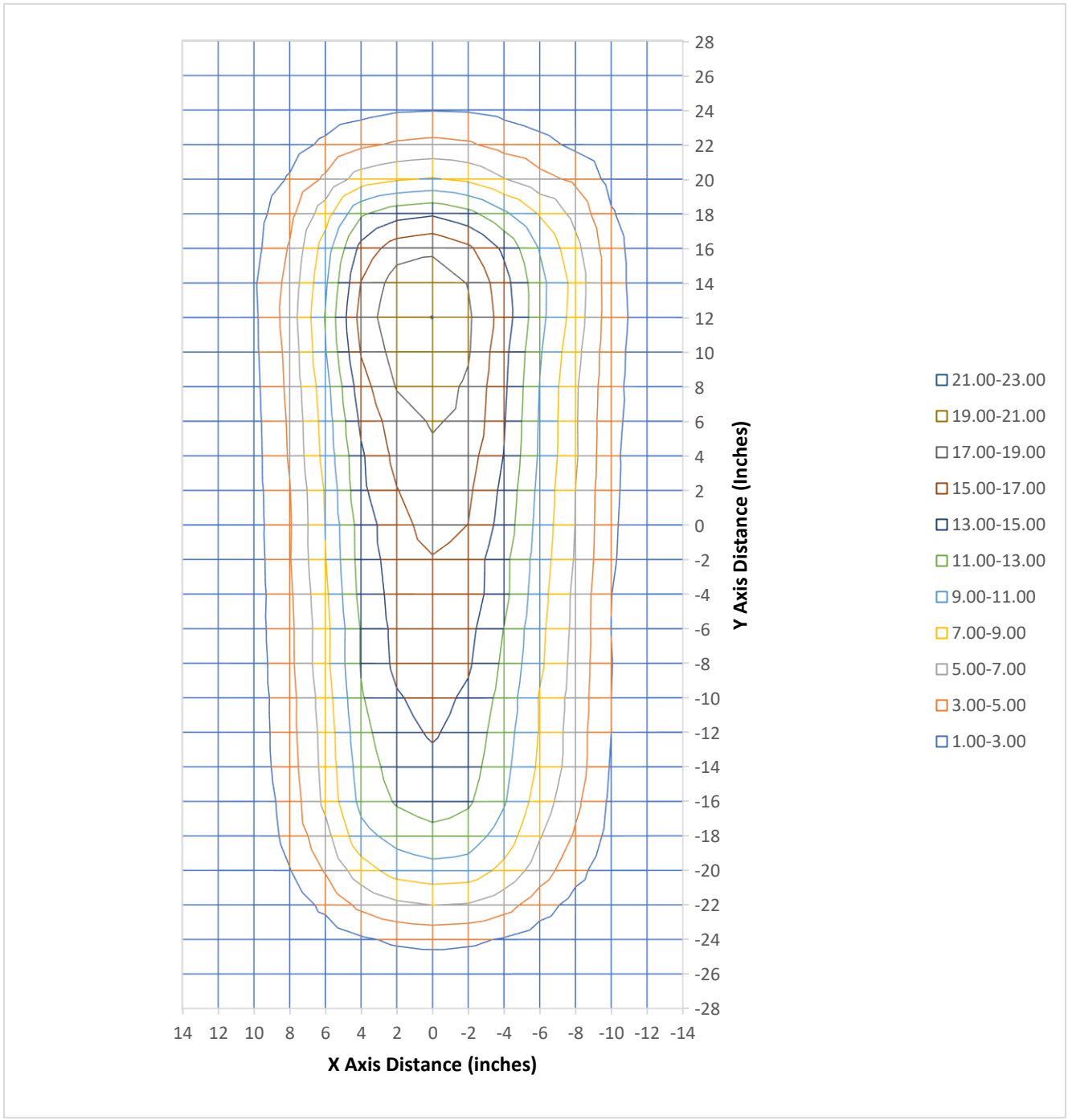
Y Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.14	0.12	0.28	0.29	0.45	0.58	0.56	0.64	0.67	0.48	0.45	0.36	0.26	0.19	0.14
26	0.18	0.29	0.35	0.65	0.75	1.03	1.33	1.41	1.27	1.14	0.94	0.60	0.45	0.20	0.19
24	0.19	0.43	0.73	1.09	1.84	2.34	2.82	2.93	2.85	2.48	1.94	1.27	0.85	0.52	0.24
22	0.28	0.61	1.20	2.14	3.40	4.63	5.25	5.50	5.24	4.28	3.62	2.60	1.54	0.84	0.43
20	0.45	0.84	1.64	3.19	5.33	7.94	8.76	9.14	8.57	7.09	5.60	4.62	2.37	1.31	0.61
18	0.46	1.06	2.14	4.40	8.10	12.67	14.22	14.71	13.61	11.39	8.82	6.37	3.18	1.62	0.82
16	0.61	1.09	2.37	5.18	9.95	15.61	18.06	18.65	17.39	14.57	10.87	7.59	3.75	1.76	0.79
14	0.67	1.20	2.75	5.63	10.64	17.05	19.97	20.09	18.90	15.78	11.63	8.30	3.76	1.95	0.95
12	0.68	1.22	2.62	5.89	11.11	17.76	20.48	21.04	19.31	16.09	11.60	8.13	3.82	2.06	0.92
10	0.68	1.31	2.58	5.60	10.84	17.13	19.85	20.46	19.18	15.57	11.21	7.64	3.68	1.98	0.98
8	0.57	1.28	2.47	5.46	10.19	16.14	19.13	19.80	18.72	15.37	10.94	7.28	3.65	1.77	0.97
6	0.64	1.25	2.38	5.27	9.86	15.37	18.10	19.20	18.56	15.15	10.81	7.22	3.52	1.90	0.97
4	0.62	1.09	2.33	5.18	9.67	14.70	17.58	18.63	17.84	14.93	10.73	7.25	3.41	1.79	1.00
2	0.53	1.17	2.31	4.90	9.17	14.55	16.93	18.22	17.34	14.49	10.45	6.98	3.36	1.87	0.94
0	0.60	1.15	2.26	4.79	9.07	13.88	16.36	17.75	16.98	14.20	10.25	6.95	3.29	1.82	0.91
-2	0.60	1.04	2.16	4.86	8.91	13.84	15.96	16.88	16.23	13.56	10.02	6.82	3.22	1.70	0.80
-4	0.59	1.03	2.13	4.65	8.59	13.60	15.75	16.77	16.13	13.55	9.77	6.54	3.03	1.59	0.71
-6	0.57	0.95	2.19	4.51	8.34	13.14	15.59	16.60	15.58	12.95	9.51	6.47	2.98	1.63	0.80
-8	0.44	1.06	2.05	4.50	8.41	13.14	15.46	16.30	15.26	12.62	9.36	6.33	3.05	1.58	0.78
-10	0.43	0.93	2.03	4.26	8.02	12.82	14.81	15.70	14.63	12.29	8.85	6.19	3.00	1.57	0.69
-12	0.53	1.00	1.94	4.29	7.75	12.37	14.39	15.21	14.24	11.89	8.87	5.99	3.01	1.48	0.70
-14	0.38	0.94	1.93	4.13	7.66	11.93	13.85	14.51	13.83	11.58	8.65	5.98	2.83	1.39	0.69
-16	0.40	0.89	1.73	3.81	7.45	11.54	13.21	13.98	13.27	11.19	8.07	5.46	2.61	1.28	0.66
-18	0.38	0.76	1.60	3.59	6.33	10.33	11.71	12.36	11.94	10.13	7.13	4.77	2.37	1.13	0.57
-20	0.23	0.52	1.23	2.92	5.16	8.08	9.81	10.31	10.12	8.43	5.99	3.68	1.72	0.86	0.41
-22	0.15	0.44	0.76	1.80	3.50	5.49	6.57	7.02	6.84	5.80	3.91	2.26	1.14	0.62	0.33
-24	0.20	0.20	0.41	0.87	1.72	2.72	3.33	3.57	3.36	2.83	1.95	1.10	0.62	0.38	0.23
-26	0.08	0.20	0.30	0.51	0.74	1.25	1.58	1.62	1.63	1.41	0.84	0.55	0.25	0.23	0.09
-28	0.14	0.11	0.12	0.24	0.36	0.48	0.59	0.64	0.59	0.53	0.39	0.25	0.21	0.09	0.14

Center Point Irradiance (600-700nm)	17.75	mW/cm^2
Average Irradiance (600-700nm)	6.41	mW/cm^2
Maximum Irradiance (600-700nm)	21.04	mW/cm^2
Minimum Irradiance (600-700nm)	0.08	mW/cm^2
Max/Min Ratio	275.93	
Max/Avg Ratio	3.28	
Target Area Radiant Power (600-700nm)	64.87	W

Report of Test

Test Report Number: LLIA002619-003

Irradiance (600-700nm) in mW/cm^2
Test Distance = 24 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

NIR Irradiance Tabulation (mW/cm^2) (780-1050nm)

Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.17	0.02	0.32	0.10	0.29	0.69	0.40	0.17	0.82	0.27	0.17	0.45	0.14	0.10	0.24
26	0.12	0.40	0.13	0.66	0.59	1.03	2.00	2.18	1.30	1.14	1.27	0.38	0.34	0.03	0.29
24	0.05	0.70	0.57	0.67	2.12	2.38	3.32	4.04	3.83	2.26	1.58	0.73	0.61	0.41	0.07
22	0.15	0.72	1.26	2.58	4.13	4.84	6.51	6.98	6.78	4.94	3.84	1.54	0.99	0.23	0.05
20	0.58	0.96	1.17	2.80	4.66	6.86	8.30	9.51	9.42	7.41	4.78	3.01	1.04	0.84	0.10
18	0.35	1.30	1.54	3.73	6.77	8.28	9.92	10.46	9.83	8.75	6.64	3.82	1.31	0.97	0.63
16	0.60	0.94	1.69	4.35	6.99	9.32	12.84	11.84	11.41	10.61	6.58	3.44	2.27	0.61	0.30
14	0.91	1.11	2.66	4.48	8.11	9.61	12.58	12.54	12.78	12.22	7.15	5.38	1.65	0.78	0.77
12	0.81	1.21	2.17	4.87	7.27	10.42	12.65	13.33	12.81	13.75	7.46	5.26	1.83	1.17	0.35
10	0.63	1.82	2.28	5.11	7.66	10.23	13.02	13.48	13.73	11.76	7.70	4.93	1.88	1.48	0.87
8	0.48	1.87	2.23	6.05	7.59	10.55	14.29	13.88	14.15	13.69	8.56	4.80	2.75	0.64	0.71
6	0.76	1.59	2.22	5.22	7.88	11.37	13.18	14.33	14.96	12.93	8.95	4.44	3.01	1.67	0.90
4	0.85	1.14	2.30	6.32	8.68	10.87	15.68	14.77	14.42	13.81	10.00	5.20	2.13	0.92	0.47
2	0.56	1.79	2.47	5.38	8.38	11.67	14.54	16.91	15.02	13.18	8.95	5.69	2.20	1.63	0.64
0	0.97	1.94	2.47	5.52	9.90	12.20	15.02	17.57	16.08	15.45	9.67	5.95	2.41	1.58	0.99
-2	1.05	1.42	2.58	7.04	8.90	12.70	16.15	17.49	17.54	15.34	10.35	6.46	3.05	1.14	0.55
-4	1.03	1.20	2.79	6.65	9.64	14.26	16.98	18.30	18.11	15.80	10.29	6.02	2.59	1.15	0.50
-6	1.10	1.46	3.57	6.53	10.18	14.13	18.75	19.22	18.01	15.82	11.48	6.81	2.71	1.83	0.73
-8	0.59	2.05	3.08	7.70	11.64	15.20	18.44	20.14	18.96	16.79	12.72	6.70	3.95	2.08	0.94
-10	0.70	1.63	3.19	7.26	11.25	17.00	19.74	21.12	20.32	19.84	12.04	6.65	3.67	2.02	0.61
-12	1.23	2.49	3.35	8.29	11.90	16.64	22.00	22.99	21.19	18.56	12.45	6.63	4.07	1.32	0.60
-14	0.67	2.19	3.66	8.74	12.85	16.67	20.46	21.72	21.49	19.16	12.67	7.72	3.42	1.25	0.55
-16	0.35	2.31	3.23	7.43	12.00	15.10	19.05	21.11	19.50	18.05	11.21	6.29	2.90	1.18	0.50
-18	1.16	1.32	3.16	7.52	8.72	12.21	14.17	15.49	15.59	14.95	9.19	5.24	2.59	1.05	0.45
-20	0.31	0.89	2.35	4.75	5.70	7.62	9.16	10.05	10.58	8.82	6.95	3.64	1.90	0.59	0.35
-22	0.09	0.84	1.06	2.15	3.57	5.77	5.50	6.05	7.01	5.15	3.72	2.24	1.76	0.93	0.51
-24	0.46	0.22	0.55	0.97	1.71	3.36	3.39	3.15	3.08	2.66	1.98	1.26	0.96	0.64	0.45
-26	0.02	0.36	0.50	1.06	0.69	1.23	2.10	1.32	1.38	1.79	0.76	1.05	0.30	0.41	0.03
-28	0.30	0.06	0.11	0.31	0.62	0.40	0.82	1.04	0.92	0.89	0.61	0.56	0.38	0.05	0.17

Center Point Irradiance (780-1050nm)	17.57	mW/cm^2
Average Irradiance (780-1050nm)	6.38	mW/cm^2
Maximum Irradiance (780-1050nm)	22.99	mW/cm^2
Minimum Irradiance (780-1050nm)	0.02	mW/cm^2
Max/Min Ratio	1530.84	
Max/Avg Ratio	3.60	
Target Area Radiant Power (780-1050nm)	64.53	W

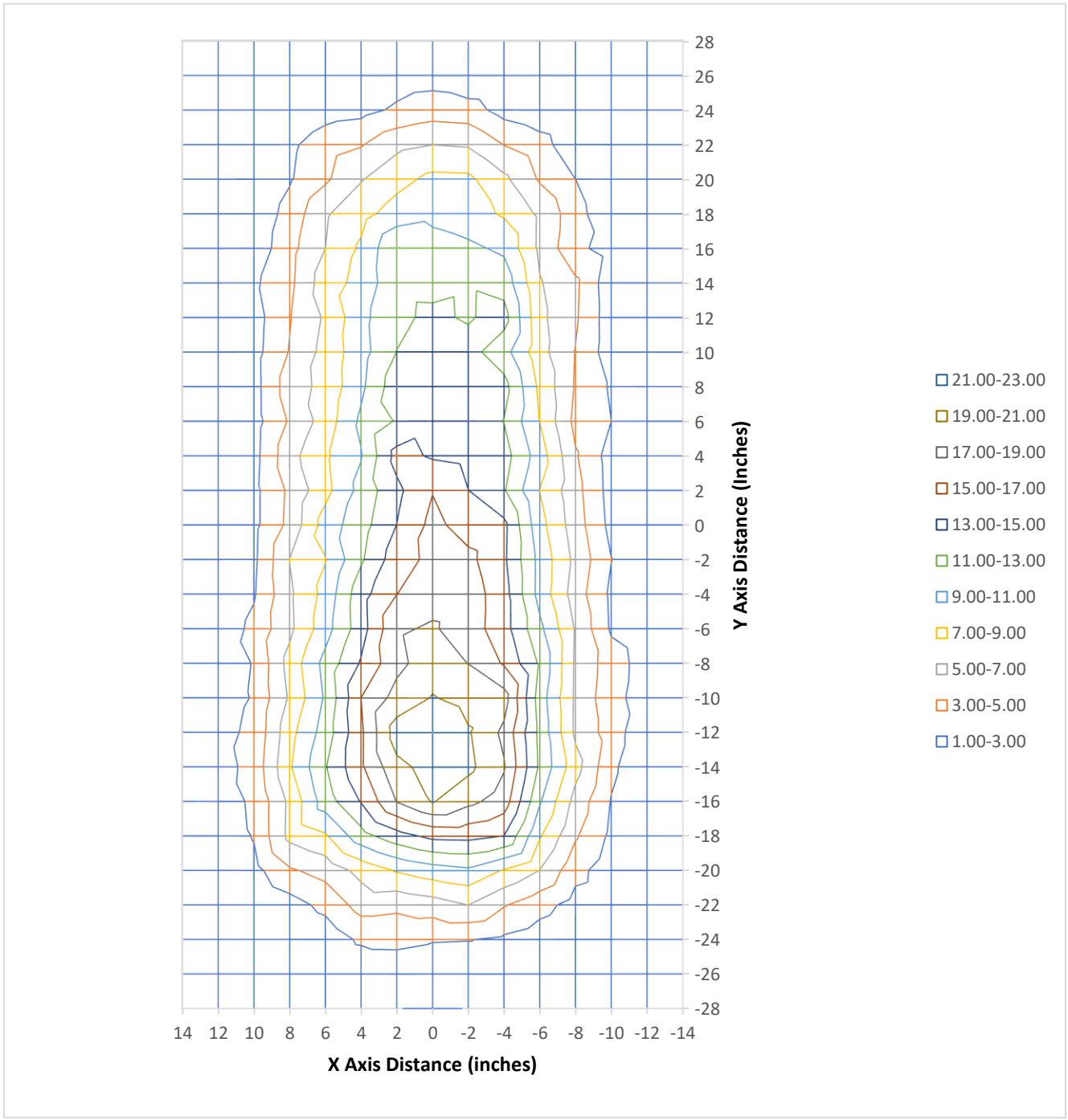
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Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (780-1050nm) in mW/cm^2
Test Distance = 24 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Test Report Number: LLIA002619-003

Test Equipment Configuration:	LightLab International Allentown Application Distance Measurement Grid Measurements acquired using a spectral irradiance meter (350-1050nm) The rectangular scan method was employed using cartesian coordinates. No symmetry was applied to the results.
Test Procedure:	Tested in accordance with the applicable sections of: LM-91-22, LM-79-19, LM-58-20
Significance:	The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.
Notes:	The measurements and other derived quantities contained in this report are based on the absolute data as measured. Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results. This report is free of erasures and corrections This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

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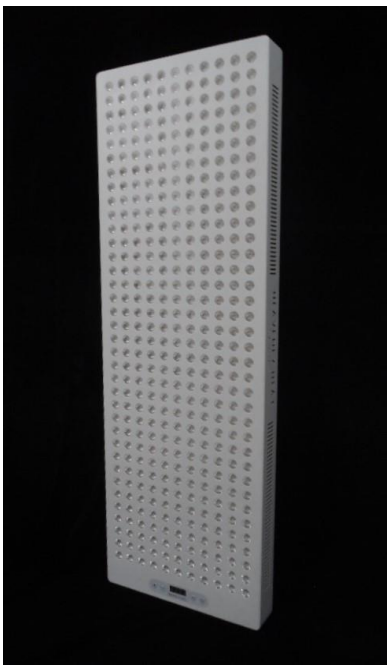
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LightLab INTERNATIONAL ALLENTOWN LLC

Grid Application Distance Measurement Test Report

Test Report Number: LLIA002619-003

Catalog Number: RL1500-W
Portable, formed white steel housing, aluminum heatsink, with 3 fans above heatsink.
396 groups of one red and one infrared LED with clear plastic optics in front.
Two Fahold FD-240EL-056B LED drivers and One ZF120A-1202000 fan power supply.



Performance Summary

Electrical		
Voltage	120.0	Vac
Current	3.626	A
Power	434.6	W
Frequency	60.02	Hz
Power Factor	0.999	
Current THD	4.6	%
Ambient Temperature	25.2	°C
Grid Dimensions		
Test Plane Distance	36	inches
X Axis minimum	-14	inches
X Axis maximum	14	inches
X Axis increments	2	inches
Y Axis minimum	-28	inches
Y Axis maximum	28	inches
Y Axis increments	2	inches
Number of measurement points	435	

Prepared For:
Heavenly Heat Saunas
543 E. Andy Devine Ave
Kingman, AZ 86401, USA

Test date: 05/16/2025
Report date: 05/20/2025

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance Tabulation (mW/cm^2) (350-1050nm)

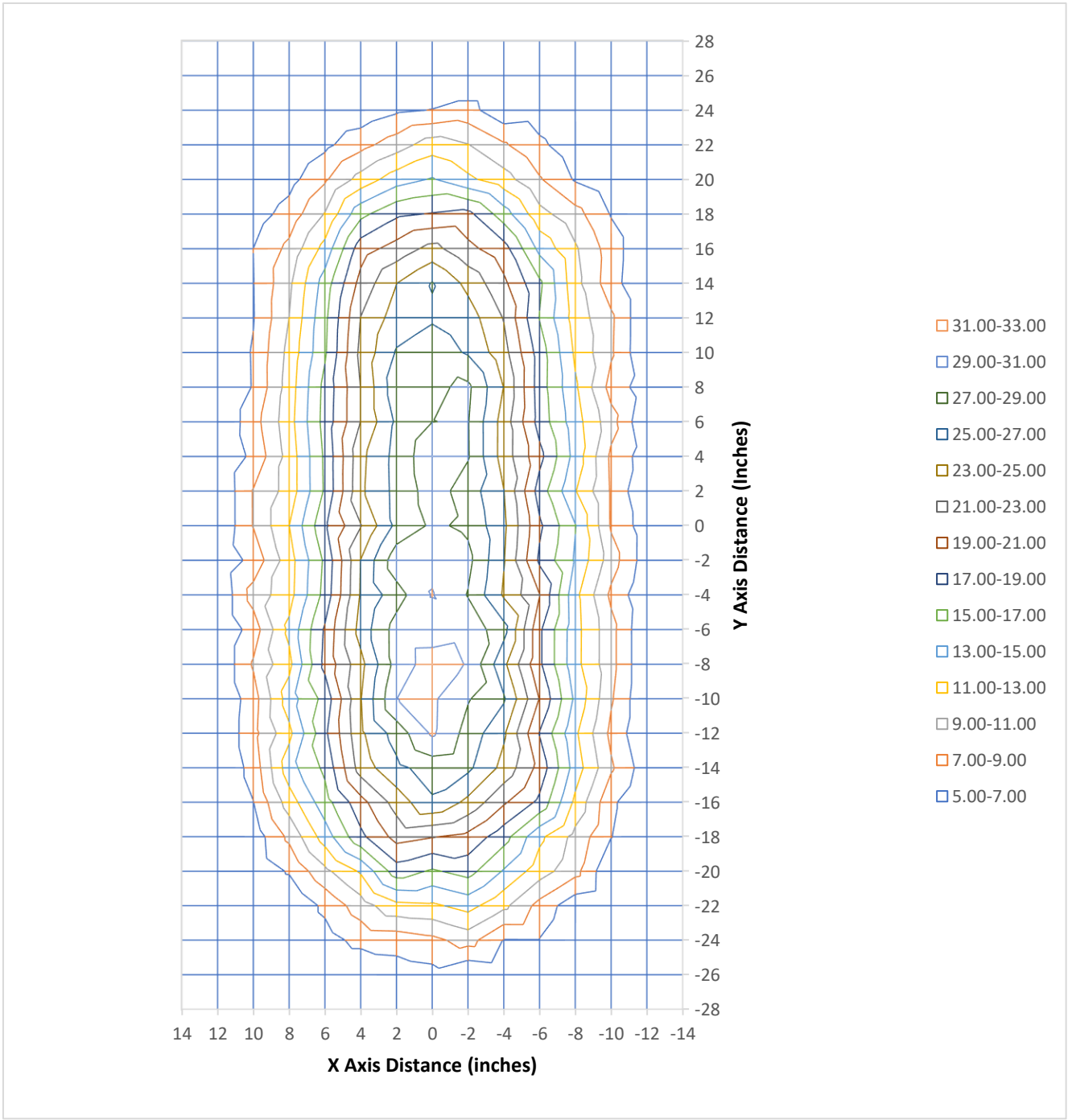
Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.22	0.36	1.11	1.69	1.50	2.84	2.16	3.43	3.19	2.82	2.21	1.11	0.68	0.30	0.19
26	0.32	1.21	1.19	1.70	2.68	3.49	3.99	4.26	4.96	3.46	3.01	1.93	1.84	0.79	0.69
24	0.65	1.81	1.89	3.04	4.34	5.58	6.65	7.07	7.74	5.53	5.93	4.36	2.12	1.36	0.77
22	0.97	2.20	2.89	4.62	6.52	8.33	10.03	12.02	11.07	9.25	7.41	5.79	4.24	2.62	1.52
20	1.66	2.32	3.77	6.29	8.71	11.75	14.08	15.16	13.40	11.84	9.19	6.79	5.56	2.45	2.13
18	1.62	2.65	6.02	7.81	11.11	16.41	18.60	19.12	19.55	15.93	11.65	9.73	6.87	3.37	1.71
16	2.67	4.29	7.01	9.52	13.70	20.10	21.78	23.63	21.51	19.82	14.43	11.26	8.04	4.77	3.04
14	1.94	4.67	6.94	10.57	15.91	21.68	24.95	27.10	24.42	21.42	17.38	11.65	7.85	4.94	2.35
12	2.89	4.76	6.89	11.00	16.52	23.04	25.94	26.77	25.99	22.88	16.90	12.09	9.37	4.48	2.49
10	2.90	4.19	7.18	11.60	16.70	23.50	27.17	28.03	26.78	23.75	18.05	12.65	9.27	4.63	3.13
8	3.01	3.88	7.13	11.91	17.60	23.03	28.29	28.59	29.40	24.94	17.99	13.27	8.26	5.83	3.38
6	3.12	4.75	8.15	12.17	17.75	23.03	27.35	28.98	29.11	24.12	18.19	13.85	9.78	4.69	3.18
4	3.24	5.13	7.48	11.76	17.34	24.47	27.65	30.45	29.15	24.11	19.61	14.22	8.60	5.90	3.41
2	2.38	4.99	9.12	11.78	17.26	24.63	27.58	29.96	28.04	25.05	18.08	13.11	8.75	4.73	2.68
0	3.21	4.10	9.09	12.97	18.61	22.89	27.51	29.33	28.63	25.41	19.35	15.08	8.76	5.88	2.66
-2	2.29	5.38	7.66	12.10	17.37	25.04	30.25	30.62	29.52	25.12	18.63	14.74	9.95	5.86	3.50
-4	2.96	4.23	9.82	12.23	17.67	25.17	28.16	31.08	28.89	24.75	21.06	13.54	8.57	5.25	2.62
-6	3.30	4.23	7.90	13.47	19.26	25.83	29.82	29.88	30.37	27.70	19.37	13.67	9.68	4.97	3.30
-8	2.44	4.46	9.23	12.43	19.52	24.33	29.80	32.05	30.86	25.47	19.36	13.65	9.68	4.78	2.66
-10	2.14	4.32	8.08	14.06	17.67	24.89	30.97	31.33	29.14	27.25	20.90	14.56	9.24	4.80	3.55
-12	3.23	4.34	8.34	12.47	18.53	24.61	27.83	31.28	28.24	25.29	18.88	13.35	8.50	4.47	2.66
-14	3.20	4.29	7.71	14.19	17.43	23.91	26.52	27.81	27.42	24.37	20.32	14.05	9.30	5.76	2.91
-16	2.87	4.76	6.96	11.97	16.15	20.28	23.80	26.76	24.47	21.26	18.52	12.51	7.42	4.16	2.15
-18	1.81	3.22	5.81	9.45	13.96	18.50	21.69	21.08	20.39	17.79	13.46	10.33	7.07	3.77	2.65
-20	2.08	2.37	5.56	7.20	10.49	13.24	18.04	16.71	17.73	14.80	11.91	9.65	5.11	3.03	1.77
-22	1.47	2.45	3.22	5.03	7.47	10.02	12.41	12.62	13.72	11.48	8.31	5.69	3.83	2.22	1.92
-24	1.11	1.12	2.04	3.32	6.16	7.65	7.77	8.46	9.81	6.90	6.92	3.94	3.07	1.42	1.36
-26	0.93	0.97	1.18	3.07	2.97	4.08	6.07	6.36	4.87	5.53	3.29	2.41	2.17	0.85	0.75
-28	0.49	1.04	1.05	1.11	2.38	2.59	3.52	2.90	3.47	3.31	1.92	1.21	0.86	1.04	0.28

Center Point Irradiance (350-1050nm)	29.33	mW/cm^2
Average Irradiance (350-1050nm)	12.19	mW/cm^2
Maximum Irradiance (350-1050nm)	32.05	mW/cm^2
Minimum Irradiance (350-1050nm)	0.19	mW/cm^2
Max/Min Ratio	168.13	
Max/Avg Ratio	2.63	
Target Area Radiant Power (350-1050nm)	123.30	W

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (350-1050nm) in mW/cm^2
Test Distance = 36 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Red Irradiance Tabulation (mW/cm^2) (600-700nm)

Y Axis Distance (inches) \ X Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.18	0.27	0.50	0.69	0.77	1.05	1.05	1.24	1.19	1.08	0.92	0.64	0.44	0.36	0.18
26	0.25	0.54	0.72	0.96	1.35	1.66	1.88	1.97	2.01	1.72	1.54	1.12	0.89	0.54	0.43
24	0.42	0.78	1.12	1.70	2.14	2.62	3.01	3.15	3.14	2.65	2.45	1.95	1.36	0.88	0.57
22	0.58	1.09	1.59	2.37	3.14	3.87	4.52	4.79	4.61	4.10	3.52	2.89	2.15	1.37	0.87
20	0.81	1.38	2.11	3.21	4.39	5.78	6.75	6.79	6.30	5.69	4.84	3.98	3.12	1.72	1.15
18	0.92	1.59	2.83	4.13	5.95	8.28	9.68	9.64	9.11	8.06	6.57	5.41	3.98	2.31	1.30
16	1.10	1.96	3.35	5.19	7.72	10.93	12.70	12.86	12.09	10.73	8.50	6.69	4.77	2.79	1.63
14	1.08	2.15	3.67	5.88	8.90	12.48	14.67	14.90	13.99	12.24	9.80	7.38	5.18	2.96	1.67
12	1.26	2.27	3.79	6.14	9.50	13.30	15.51	15.77	14.99	12.99	10.08	7.65	5.42	2.96	1.74
10	1.30	2.26	3.89	6.43	9.68	13.66	16.17	16.42	15.42	13.49	10.56	7.75	5.43	3.02	1.84
8	1.30	2.12	3.79	6.48	9.82	13.46	16.26	16.55	15.84	13.55	10.46	7.79	5.21	3.11	1.85
6	1.26	2.20	3.87	6.34	9.54	13.02	15.60	16.28	15.65	13.40	10.36	7.80	5.30	2.91	1.79
4	1.24	2.18	3.71	6.03	9.15	12.67	15.21	15.98	15.17	13.01	10.32	7.67	5.09	2.94	1.76
2	1.15	2.12	3.70	5.86	8.86	12.32	14.72	15.45	14.71	12.89	10.01	7.37	5.03	2.76	1.65
0	1.19	1.97	3.61	5.79	8.70	11.75	14.31	14.97	14.39	12.61	9.86	7.35	4.85	2.82	1.60
-2	1.04	2.06	3.43	5.51	8.27	11.62	14.00	14.49	13.82	12.12	9.39	7.15	4.82	2.77	1.62
-4	1.13	1.87	3.49	5.40	8.10	11.31	13.36	14.11	13.46	11.77	9.40	6.87	4.55	2.66	1.47
-6	1.10	1.80	3.25	5.40	8.04	11.06	13.27	13.68	13.27	11.74	9.06	6.67	4.55	2.51	1.53
-8	0.96	1.79	3.25	5.06	7.86	10.71	12.99	13.59	12.91	11.16	8.74	6.45	4.45	2.40	1.40
-10	0.93	1.68	3.02	5.08	7.40	10.51	12.60	13.00	12.28	10.83	8.49	6.38	4.35	2.34	1.46
-12	0.99	1.64	2.99	4.72	7.24	10.06	11.91	12.48	11.73	10.37	8.12	6.06	4.08	2.29	1.32
-14	0.94	1.57	2.78	4.66	6.84	9.52	11.22	11.73	11.33	9.89	7.87	5.92	4.02	2.27	1.32
-16	0.86	1.51	2.56	4.34	6.47	8.82	10.53	11.10	10.47	9.15	7.31	5.40	3.55	1.93	1.08
-18	0.65	1.21	2.21	3.83	5.81	8.09	9.69	10.01	9.51	8.25	6.39	4.75	3.22	1.76	1.05
-20	0.60	0.93	1.94	3.15	4.95	6.75	8.34	8.68	8.44	7.28	5.60	4.01	2.53	1.45	0.84
-22	0.47	0.80	1.41	2.41	3.81	5.40	6.61	6.97	6.80	5.84	4.33	2.97	1.93	1.03	0.65
-24	0.37	0.49	0.94	1.67	2.73	3.70	4.32	4.72	4.68	3.84	3.09	2.03	1.34	0.64	0.47
-26	0.28	0.41	0.57	1.16	1.62	2.21	2.77	2.99	2.72	2.46	1.77	1.23	0.81	0.40	0.30
-28	0.19	0.28	0.44	0.60	1.02	1.35	1.65	1.65	1.72	1.46	1.03	0.64	0.41	0.30	0.15

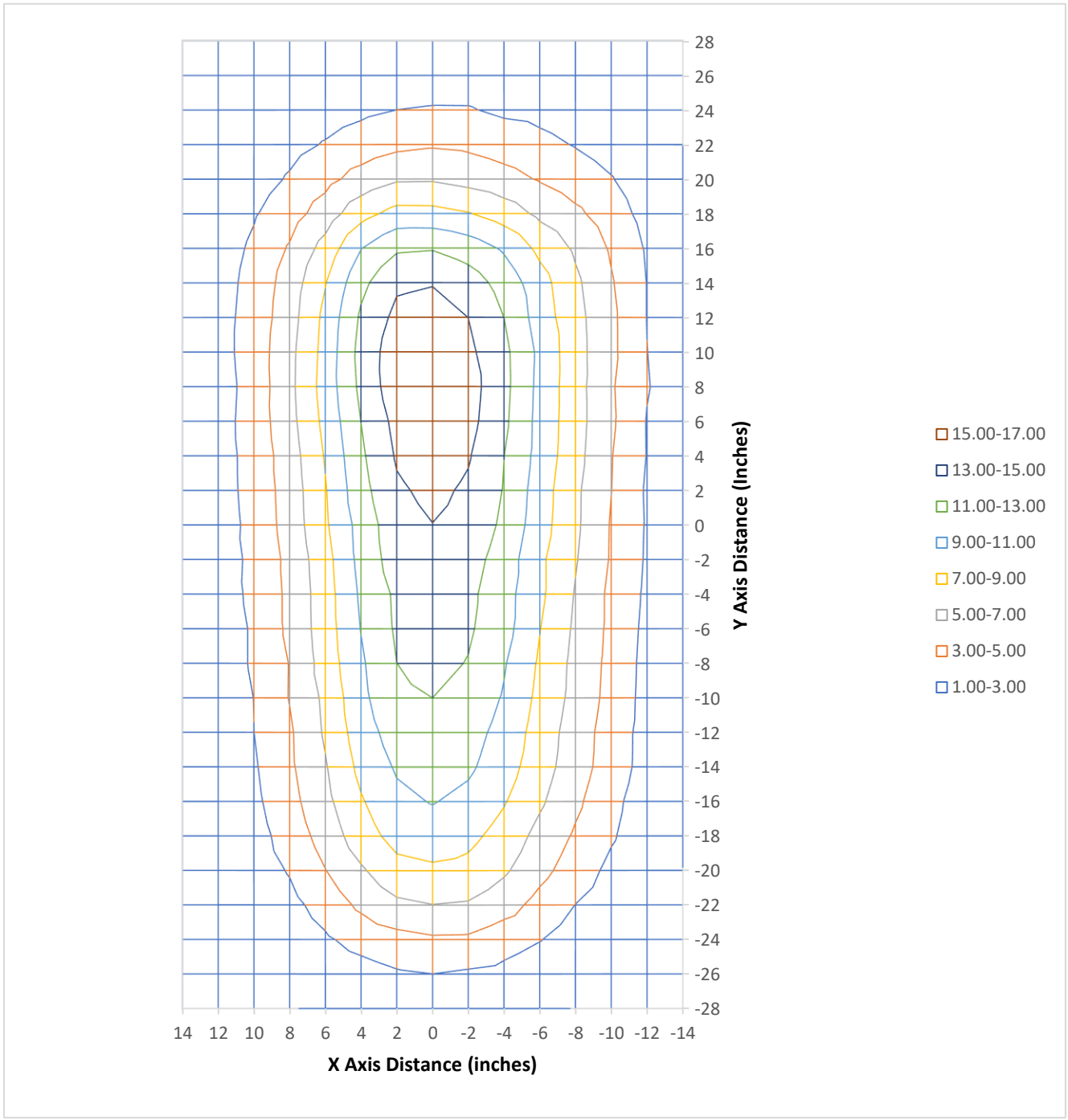
Center Point Irradiance (600-700nm)	14.97	mW/cm^2
Average Irradiance (600-700nm)	5.97	mW/cm^2
Maximum Irradiance (600-700nm)	16.55	mW/cm^2
Minimum Irradiance (600-700nm)	0.15	mW/cm^2
Max/Min Ratio	108.72	
Max/Avg Ratio	2.77	
Target Area Radiant Power (600-700nm)	60.44	W

LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

Irradiance (600-700nm) in mW/cm^2
Test Distance = 36 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Report of Test

Test Report Number: LLIA002619-003

NIR Irradiance Tabulation (mW/cm^2) (780-1050nm)

X Axis Distance (inches)

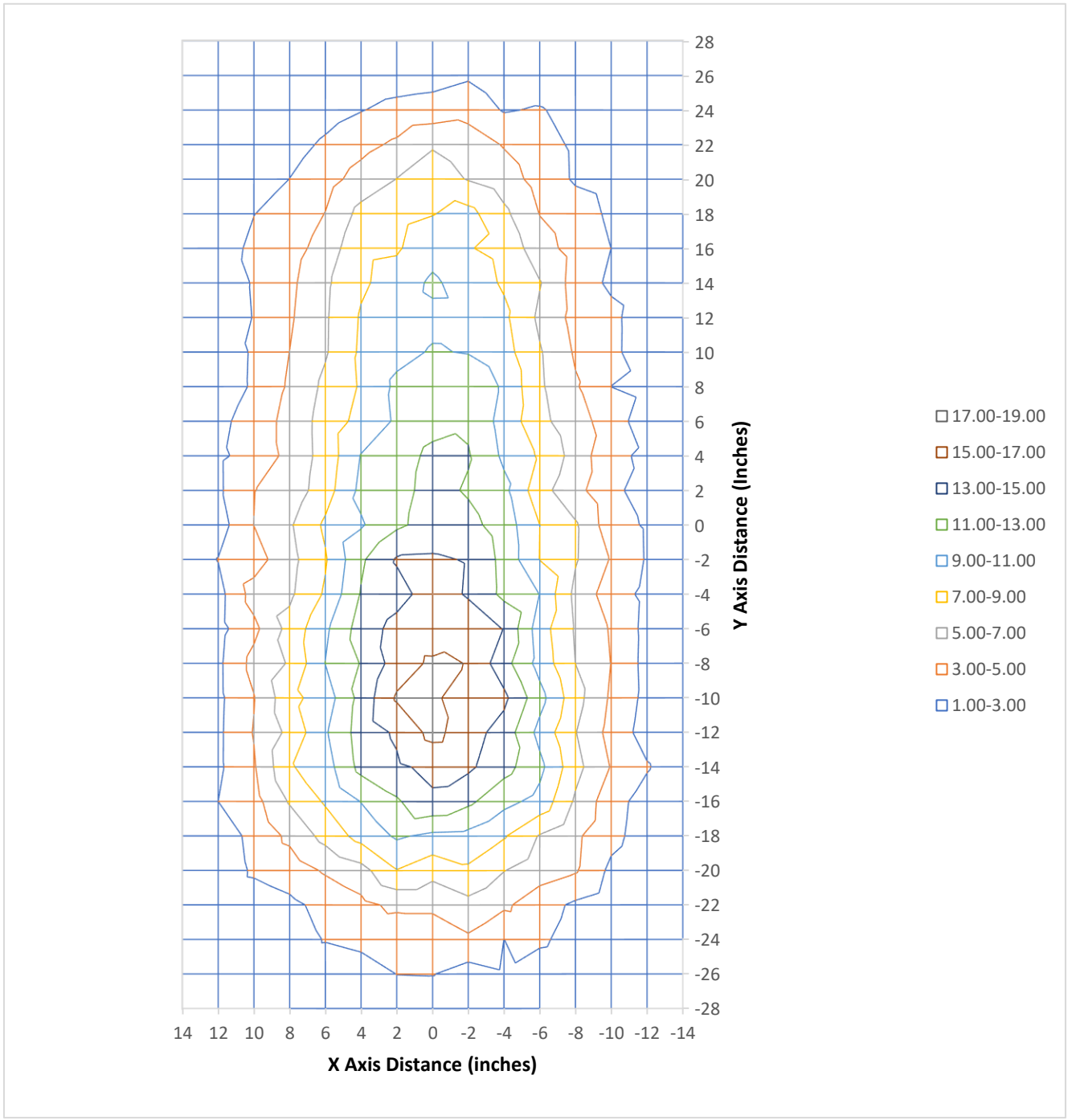
Y Axis Distance (inches)	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14
28	0.05	0.08	0.56	0.94	0.73	1.65	1.11	2.01	1.80	1.64	1.23	0.47	0.24	0.00	0.01
26	0.06	0.60	0.47	0.74	1.31	1.80	2.07	2.25	2.74	1.70	1.45	0.81	0.83	0.24	0.25
24	0.23	0.91	0.77	1.30	2.18	2.92	3.55	3.80	4.26	2.84	3.19	2.16	0.77	0.49	0.19
22	0.39	1.00	1.28	2.22	3.33	4.39	5.36	6.82	6.07	4.86	3.71	2.71	1.95	1.17	0.62
20	0.79	0.93	1.65	3.02	4.23	5.78	7.03	7.95	6.88	5.96	4.24	2.75	2.26	0.73	0.90
18	0.71	1.05	2.97	3.61	5.05	7.62	8.46	8.92	9.63	7.43	4.95	4.03	2.62	1.05	0.42
16	1.45	2.10	3.39	4.21	5.80	8.59	8.78	10.19	9.09	8.55	5.75	4.32	2.99	1.83	1.31
14	0.86	2.25	3.10	4.55	6.65	8.71	9.80	11.36	9.99	8.78	7.11	4.16	2.61	1.85	0.68
12	1.50	2.31	3.04	4.74	6.77	9.18	10.02	10.55	10.54	9.40	6.61	4.35	3.62	1.50	0.75
10	1.46	1.84	3.22	5.01	6.80	9.32	10.45	11.15	10.89	9.78	7.17	4.76	3.59	1.58	1.19
8	1.56	1.75	3.27	5.26	7.44	9.20	11.42	11.54	12.66	10.69	7.28	5.22	2.99	2.50	1.39
6	1.68	2.40	4.02	5.57	7.84	9.63	11.27	12.15	12.67	10.28	7.57	5.74	4.13	1.74	1.31
4	1.86	2.68	3.65	5.58	7.77	11.08	11.88	13.58	13.15	10.63	8.75	6.21	3.43	2.66	1.54
2	1.19	2.67	4.94	5.76	8.10	11.49	12.32	13.69	12.78	11.52	7.75	5.58	3.61	1.94	1.02
0	1.84	2.08	5.02	6.74	9.34	10.78	12.65	13.78	13.63	12.08	9.00	7.23	3.80	2.78	1.06
-2	1.23	3.06	4.10	6.37	8.80	12.68	15.19	15.26	14.88	12.41	8.96	7.17	4.83	2.82	1.69
-4	1.68	2.29	5.82	6.64	9.25	13.12	14.22	16.01	14.79	12.51	10.94	6.47	3.94	2.51	1.14
-6	1.98	2.37	4.48	7.68	10.62	13.89	15.69	15.59	16.25	14.92	9.94	6.79	4.81	2.40	1.62
-8	1.45	2.59	5.63	7.17	11.03	13.10	15.93	17.37	16.94	13.75	10.28	6.99	4.96	2.34	1.25
-10	1.17	2.57	4.91	8.40	9.95	13.69	17.25	17.28	16.19	15.45	11.69	7.74	4.69	2.42	1.88
-12	2.01	2.64	5.10	7.49	10.75	13.89	15.30	17.63	15.85	14.17	10.38	7.07	4.33	2.13	1.32
-14	2.02	2.65	4.79	8.80	10.12	13.61	14.70	15.42	15.36	13.70	11.52	7.64	4.88	3.18	1.51
-16	1.81	3.00	4.28	7.18	9.23	11.05	12.73	14.72	13.41	11.57	10.37	6.70	3.78	2.18	1.06
-18	1.14	1.97	3.52	5.44	7.65	9.72	11.25	10.55	10.43	9.18	6.84	5.32	3.62	1.97	1.40
-20	1.40	1.42	3.34	3.94	5.23	6.27	8.92	7.69	8.66	7.05	5.92	5.20	2.54	1.53	0.91
-22	0.88	1.51	1.78	2.57	3.55	4.47	5.45	5.45	6.42	5.36	3.83	2.66	1.85	1.18	1.15
-24	0.69	0.63	1.09	1.63	3.15	3.67	3.36	3.62	4.68	2.99	3.50	1.87	1.63	0.77	0.79
-26	0.59	0.53	0.62	1.71	1.33	1.83	3.03	3.08	2.10	2.77	1.51	1.16	1.25	0.46	0.43
-28	0.27	0.66	0.59	0.52	1.25	1.17	1.73	1.24	1.55	1.69	0.87	0.57	0.45	0.65	0.13

Center Point Irradiance (780-1050nm)	13.78	mW/cm^2
Average Irradiance (780-1050nm)	5.91	mW/cm^2
Maximum Irradiance (780-1050nm)	17.63	mW/cm^2
Minimum Irradiance (780-1050nm)	0.00	mW/cm^2
Max/Min Ratio	n/a	
Max/Avg Ratio	2.98	
Target Area Radiant Power (780-1050nm)	59.82	W

Report of Test

Test Report Number: LLIA002619-003

Total Irradiance (780-1050nm) in mW/cm^2
Test Distance = 36 inches



LightLab INTERNATIONAL ALLENTOWN LLC

Test Report Number: LLIA002619-003

Test Equipment Configuration:	LightLab International Allentown Application Distance Measurement Grid Measurements acquired using a spectral irradiance meter (350-1050nm) The rectangular scan method was employed using cartesian coordinates. No symmetry was applied to the results.
Test Procedure:	Tested in accordance with the applicable sections of: LM-91-22, LM-79-19, LM-58-20
Significance:	The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.
Notes:	The measurements and other derived quantities contained in this report are based on the absolute data as measured. Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results. This report is free of erasures and corrections This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

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