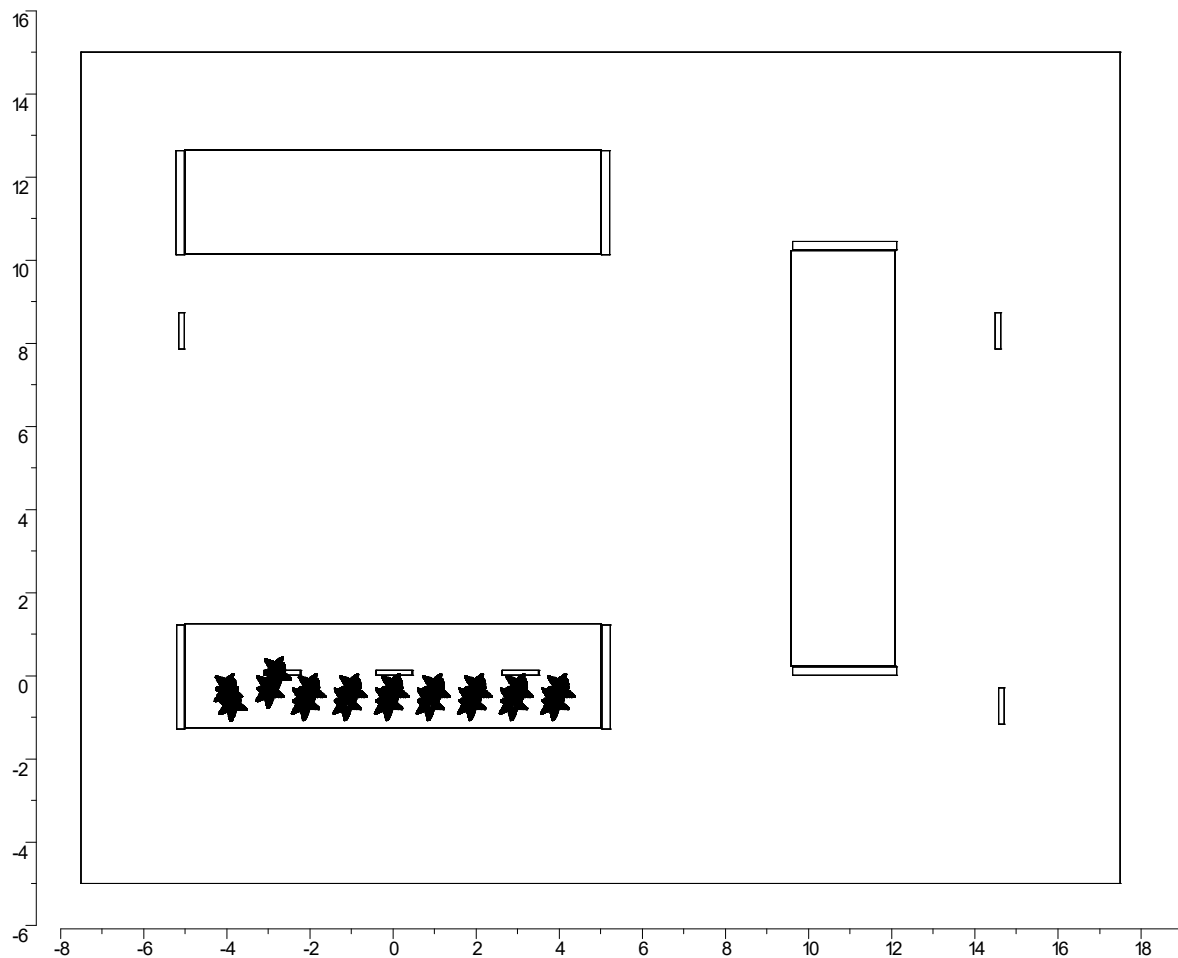


Horti - Vertical farm

Installation Notes:

Customer: OxyTech
Project Code: A-0001B
Date: 08/04/2025

Remarks



Lighting Designer:
Address:
Tel.-Fax

Remarks:

Summary

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1. Project Data and Results

1.1 Area Information

Surface	Color RGB	Coefficient Reflectance	Average Illum. [umol/(s*m2)]	Minimum [umol/(s*m2)]	Maximum [umol/(s*m2)]	Min/Ave	Min/Max	Ave/Max
Wall 1	243 238 227	50%	34.3	5.88	101	0.17	0.06	0.34
Wall 2	243 238 227	50%	36.2	2.19	88.4	0.06	0.02	0.41
Wall 3	243 238 227	50%	12.1	1.50	30.5	0.12	0.05	0.40
Wall 4	243 238 227	50%	29.2	1.46	134	0.05	0.01	0.22
Ambient - Floor	196 189 185	60%	39.9	0.17	222	0.00	0.00	0.18
Ceiling	255 255 255	65%	21.2	1.04	87.3	0.05	0.01	0.24

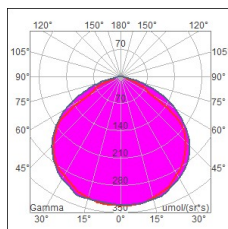
1.2 Luminaire/Measurement Info

Ref.			Color RGB	Total Luminaire Num.	Sour.Ref.
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A Manufacturer Tugs 255,24,255 9 Source-A

Luminaire Name
Measurement Name TUAS-GLIN 300W 230V
(TUAS-GLIN 300W 230V)

Luminaire Code
Measurement Code TUAS-GLIN 300W 230V
(CL4119/19-01I)



Dimmer	Flux [lm]	Current [A]	Power [W]	Luminaires nr.
12 %	908.13	1.3635	307.8100	1
100 %	7620.01	1.3635	307.8100	8

1.3 Source Information

Sour.Ref.	Name	Code	Power [W]	Current [mA]	Flux [umol/s]	Color [K]	Total Number
Source-A	1006B/CL4119/19-01L	1006B/CL4119/19-01L	307.81	1363.5	7620	0	9

1.4 Energy Calculation

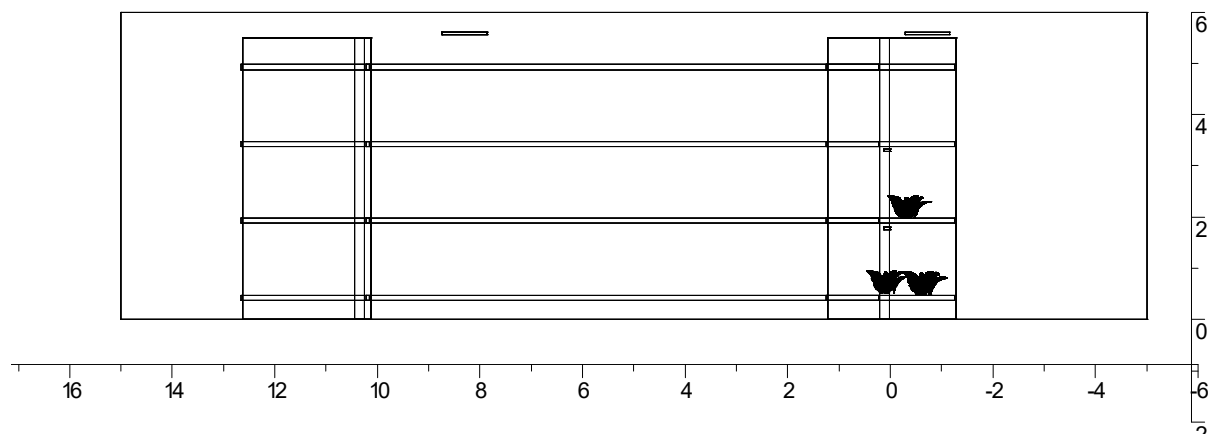
Surface	Area [m²]	Average Illum. [umol/(s*m2)]	Total Power [W]	Specific Power [W/m²]	Specific Lighting Power [W/(m²*100umol/(s*m2))]	Energy Efficiency [m²*umol/(s*m2)/w]
Ambient - Floor	150.00	39.9	2770.29	18.47	46.26	2.16
Ceiling	150.00	21.2	2770.29	18.47	87.29	1.15
Virtual Plane 2	25.04	975	1846.86	73.75	7.56	13.22
Virtual Plane 1	25.04	644	1846.86	73.75	11.45	8.73
Working Plane (h=1.89 m)	150.00	38.8	2770.29	18.47	47.54	2.10

Total Power 2770.29 W

Total Power (Nominal) 2770.29 W

2. Area Views

2.1 Lateral View



3. Luminaire Data

3.1 Luminaire Table

Ref.	On/Off	Coeff. Mant.	Dimmer	Flux [umol/s]	Current [A]	Power [W]	Position x[m] y[m] z[m]	Rotation rx[°] ry[°] rz[°]
A-1	On	0.80	100 %	7620.01	1.3635	307.8100	-5.08 8.30 5.55	0.0 -0.0 0.0
A-2	On	0.80	100 %	7620.01	1.3635	307.8100	-2.67 0.07 1.75	0.0 -0.0 90.0
A-3	On	0.80	12 %	908.13	1.3635	307.8100	-2.66 0.07 3.28	0.0 -0.0 90.0
A-4	On	0.80	100 %	7620.01	1.3635	307.8100	0.02 0.07 1.75	0.0 -0.0 90.0
A-5	On	0.80	100 %	7620.01	1.3635	307.8100	0.03 0.07 3.28	0.0 -0.0 90.0
A-6	On	0.80	100 %	7620.01	1.3635	307.8100	3.06 0.07 1.75	0.0 -0.0 90.0
A-7	On	0.80	100 %	7620.01	1.3635	307.8100	3.07 0.07 3.28	0.0 -0.0 90.0
A-8	On	0.80	100 %	7620.01	1.3635	307.8100	14.56 8.30 5.55	0.0 -0.0 0.0
A-9	On	0.80	100 %	7620.01	1.3635	307.8100	14.64 -0.72 5.55	0.0 -0.0 0.0

3.2 Aiming Summary Table

Mast	Ref.	On/Off	Coeff. Mant.	Dimmer	Flux [umol/s]	Current [A]	Power [W]	Position x[m] y[m] z[m]	Rotation rx[°] ry[°] rz[°]	Aiming x[m] y[m] z[m]	R.Axis [°]
	A-1	On	0.80	100 %	7620.01	1.3635	307.8100	-5.08 8.30 5.55	0.0 -0.0 0.0	-5.08 8.30 -0.00	0.0
	A-2	On	0.80	100 %	7620.01	1.3635	307.8100	-2.67 0.07 1.75	0.0 -0.0 90.0	-2.67 0.07 -0.00	90.0
	A-3	On	0.80	12 %	908.13	1.3635	307.8100	-2.66 0.07 3.28	0.0 -0.0 90.0	-2.66 0.07 0.00	90.0
	A-4	On	0.80	100 %	7620.01	1.3635	307.8100	0.02 0.07 1.75	0.0 -0.0 90.0	0.02 0.07 -0.00	90.0
	A-5	On	0.80	100 %	7620.01	1.3635	307.8100	0.03 0.07 3.28	0.0 -0.0 90.0	0.03 0.07 0.00	90.0
	A-6	On	0.80	100 %	7620.01	1.3635	307.8100	3.06 0.07 1.75	0.0 -0.0 90.0	3.06 0.07 -0.00	90.0
	A-7	On	0.80	100 %	7620.01	1.3635	307.8100	3.07 0.07 3.28	0.0 -0.0 90.0	3.07 0.07 0.00	90.0
	A-8	On	0.80	100 %	7620.01	1.3635	307.8100	14.56 8.30 5.55	0.0 -0.0 0.0	14.56 8.30 -0.00	0.0
	A-9	On	0.80	100 %	7620.01	1.3635	307.8100	14.64 -0.72 5.55	0.0 -0.0 0.0	14.64 -0.72 -0.00	0.0

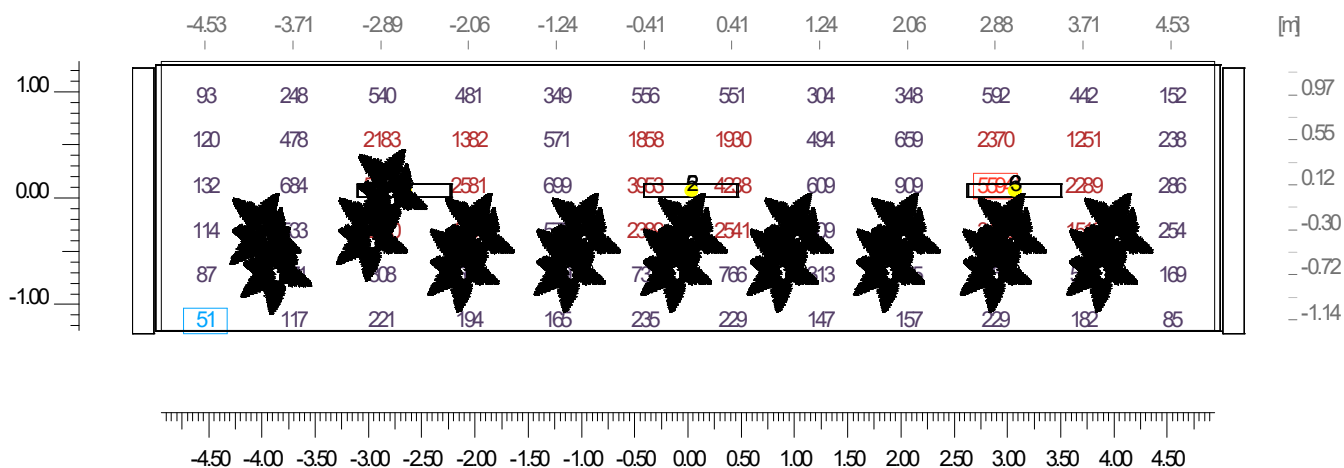
4. Results Table

4.1 Horizontal PPF Density Values on: Virtual Plane 2

Results	Average	Minimum	Maximum	Min/Ave	Min/Max	Ave/Max
Horizontal PPF Density	975 $\mu\text{mol}/(\text{s} \cdot \text{m}^2)$	51 $\mu\text{mol}/(\text{s} \cdot \text{m}^2)$	5594 $\mu\text{mol}/(\text{s} \cdot \text{m}^2)$	0.05	0.01	0.17

Specific Lighting Power
Calculation Type

7.56 $[\text{W}/(\text{m}^2 \cdot 100 \mu\text{mol}/(\text{s} \cdot \text{m}^2))]$
Dir.+Indir. (Accuracy:2)

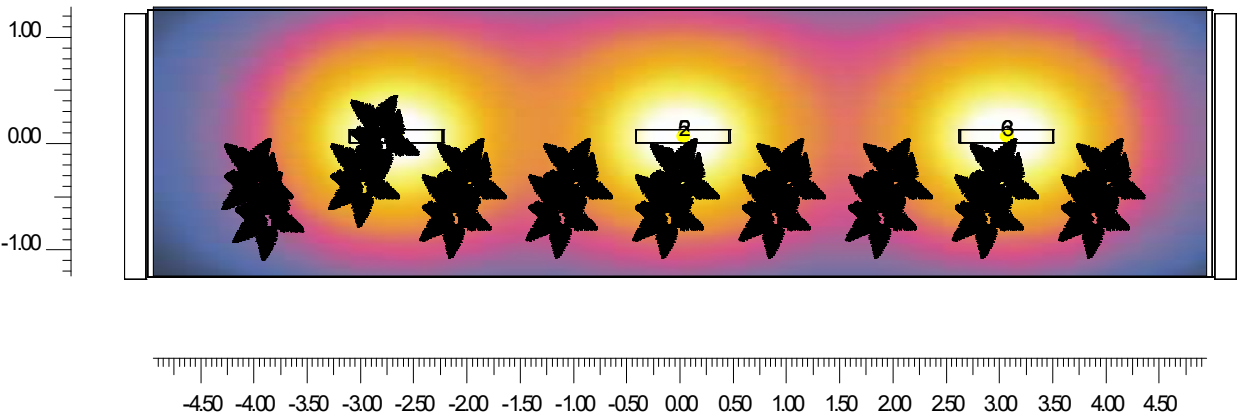


4.2 Horizontal PPF Density Spot Diagram on: Virtual Plane 2

Results	Average	Minimum	Maximum	Min/Ave	Min/Max	Ave/Max
Horizontal PPF Density	975 $\mu\text{mol}/(\text{s}\cdot\text{m}^2)$	51 $\mu\text{mol}/(\text{s}\cdot\text{m}^2)$	5594 $\mu\text{mol}/(\text{s}\cdot\text{m}^2)$	0.05	0.01	0.17

Specific Lighting Power
Calculation Type

7.56 [$\text{W}/(\text{m}^2\cdot 100\mu\text{mol}/(\text{s}\cdot\text{m}^2))$]
Dir.+Indir. (Accuracy:2)



4.3 Horizontal PPF Density Iso Curves on: Virtual Plane 2

Results	Average	Minimum	Maximum	Min/Ave	Min/Max	Ave/Max
Horizontal PPF Density	975 $\mu\text{mol}/(\text{s} \cdot \text{m}^2)$	51 $\mu\text{mol}/(\text{s} \cdot \text{m}^2)$	5594 $\mu\text{mol}/(\text{s} \cdot \text{m}^2)$	0.05	0.01	0.17

Specific Lighting Power
Calculation Type

7.56 [$\text{W}/(\text{m}^2 \cdot 100 \mu\text{mol}/(\text{s} \cdot \text{m}^2))$]
Dir.+Indir. (Accuracy:2)

