

SunPort II

Deep Well Skylight

Integrated Fluorescent

SunPort Industries

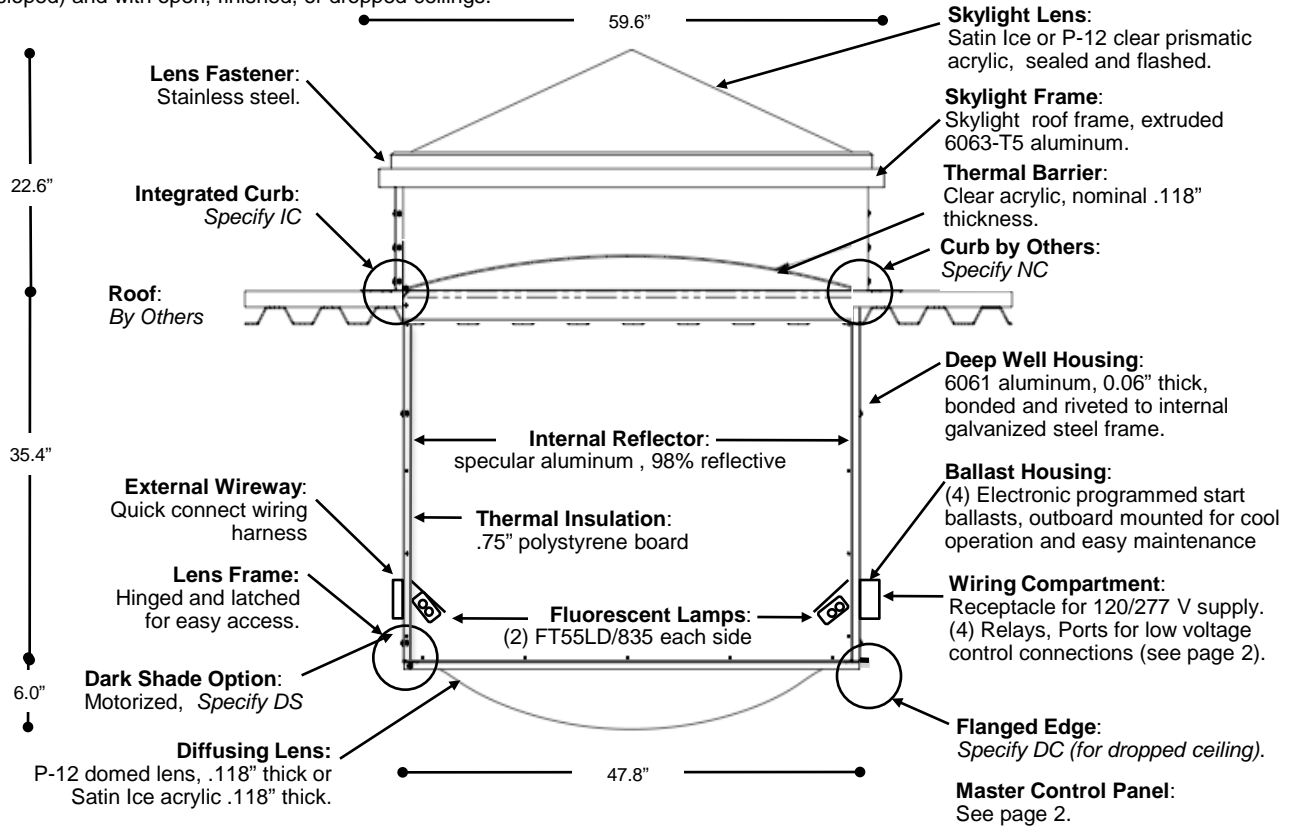
66 Fort Point Street, Norwalk, CT 06855
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 www.sunportdaylighting.com

General Description:

SunPort II is a high-performance deep well skylight with integrated fluorescent lighting. An internal thermal barrier and insulated well achieve "HVAC neutral performance". Photocell control dims the electric lighting when available daylighting provides required light level. SunPort II is designed for use in low-rise applications, such as warehouses, industrial, offices, stores, schools, and healthcare, and can be installed in all roof types (metal, built-up, membrane, flat or sloped) and with open, finished, or dropped ceilings.

General Specifications:

- Skylight meets AAMA requirements
- UL Listed
- 3.96 to 4.17 Amps at 120VAC
- .90 Ballast Factor, 500W at full power.
- On/Off or Dimming Ballast
- Photocell control daylight integration
- 4-level step or linear dim control



Model	Length	Width	Depth	Ballast	Control	Curb	Drop Clg	Grate	Shade
SP2	475	475	460						

SunPort 2 with integrated fluorescent

SD - Standard on/off ballasts for step-dim control
 LD - Linear dimming ballasts

CP - SunPort Control Panel and plug-in wiring
 NP - External control and wiring by others

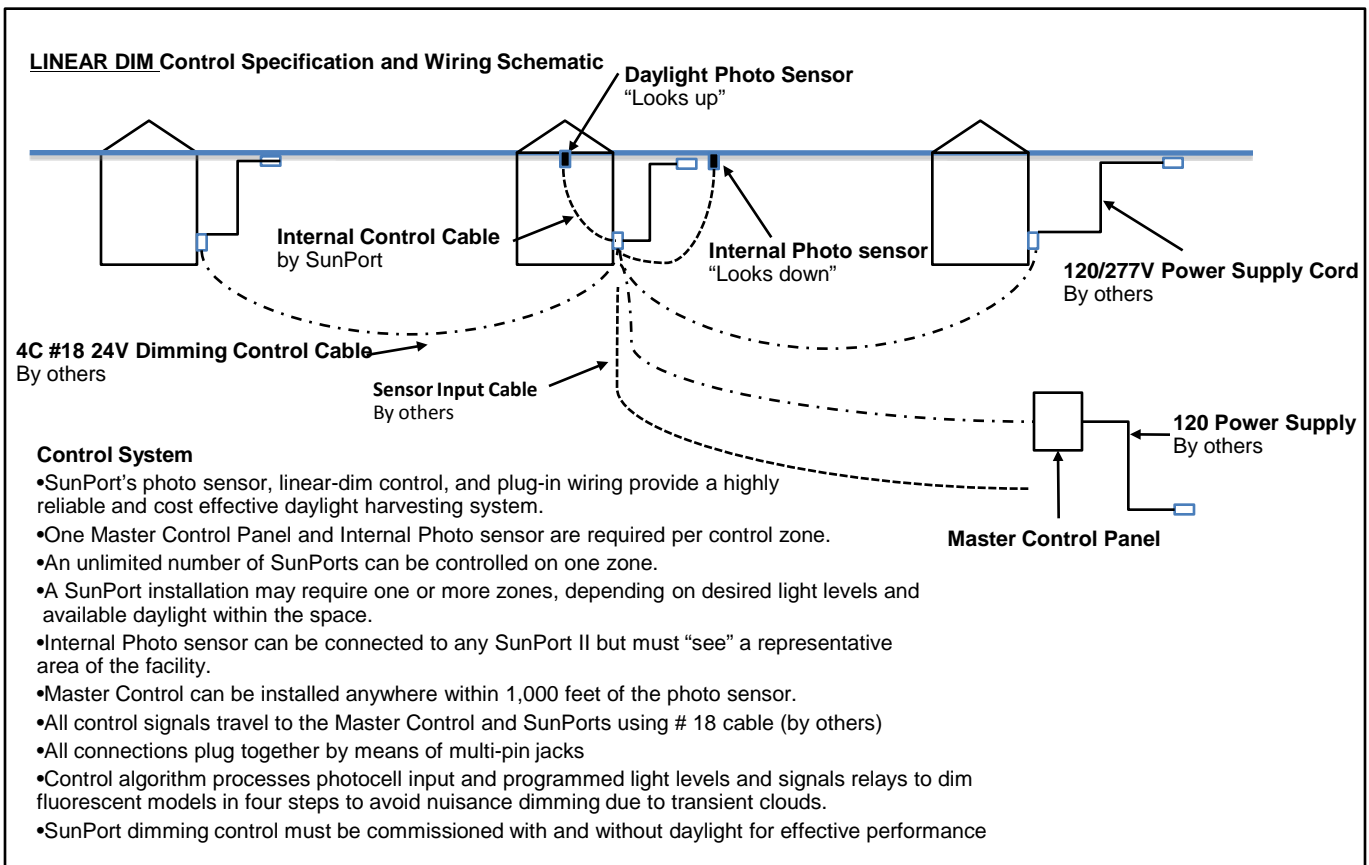
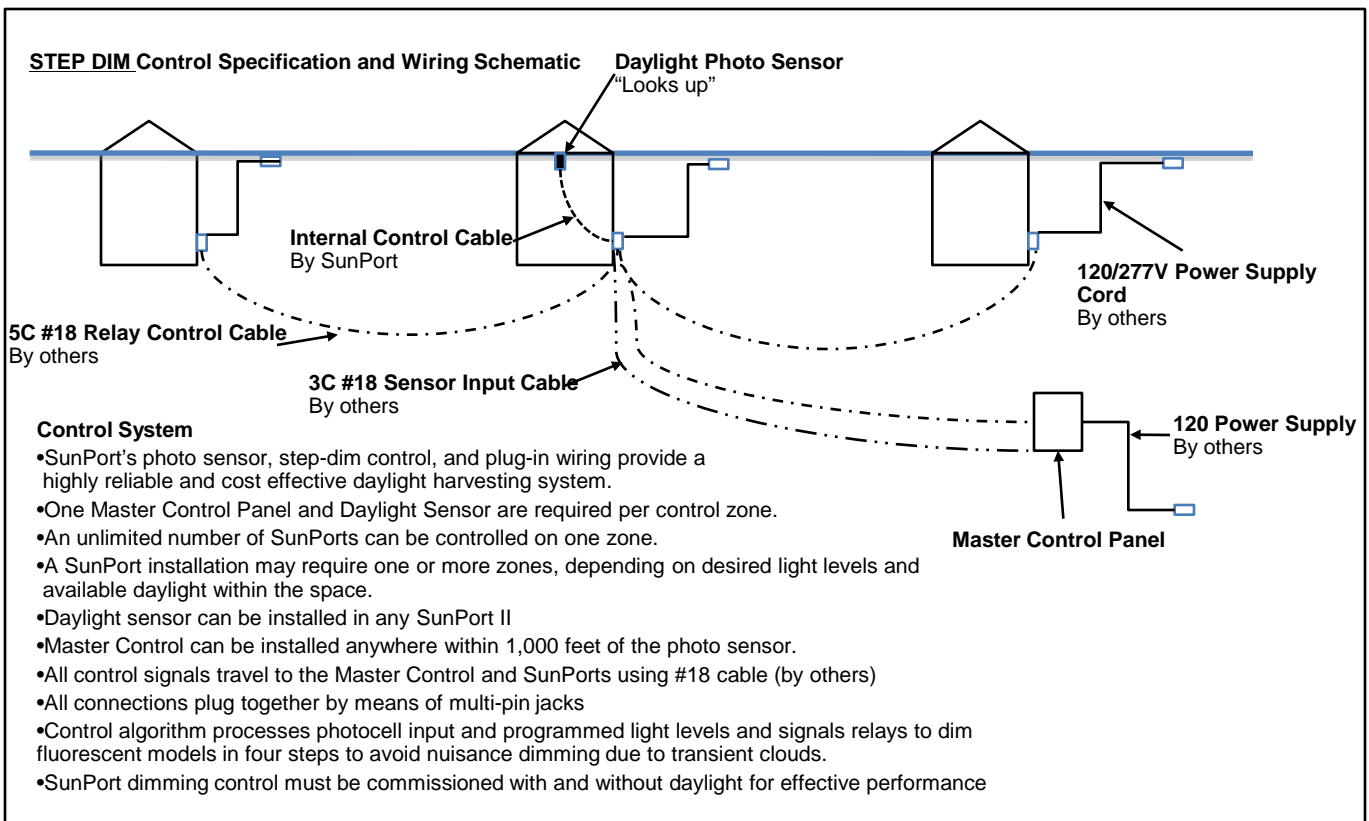
IC - Integral Curb
 NC - No Curb (curb by others)

DC - Drop Ceiling Flange
 ND - No Drop Ceiling

SG - Security Grate
 NG - No Grate

DS - Dark Shade
 NS - No Shade

SunPort II Deep Well Skylight Integrated Fluorescent



SunPort II Deep Well Skylight with Integrated Fluorescent

Daylight Only - Iso-footcandle Plot for SunPort II

AGi32 v2.04 Photometric Report
September 21, noon, Norwalk, CT
Calculations according to IESNA LM-63-1995

Characteristics

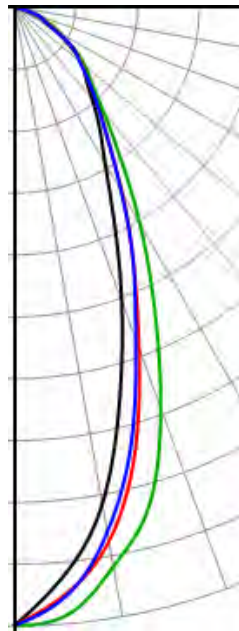
Total Source Lumens	914,319
Total Luminaire Efficiency	9.2%
Spacing Criteria (0-180)	0.64
Spacing Criteria (90-270)	0.82
Spacing Criteria (Diagonal)	0.78
Basic Luminous Shape	Square
Luminous Length	3.98'
Luminous Width	3.98'
Luminous Height	0.25'

Zonal Lumen Summary

Zone	Lumens	% Source	% Luminaire
0-30	43778	4.8	52.1
0-40	58481	6.4	69.6
0-60	78482	8.6	93.4
0-90	84022	9.2	100

Candela Distribution

	0	45	90	135
0	86,610	86,610	86,610	86,610
5	79,878	82,527	85,450	82,840
10	70,688	76,007	79,589	74,691
15	56,836	64,926	72,522	63,142
20	43,804	50,910	59,786	49,573
25	32,894	39,292	46,245	39,249
30	25,341	30,090	35,080	29,858
35	20,748	22,749	25,830	22,826
40	16,898	18,466	19,532	18,027
45	14,093	14,681	15,363	14,627
50	12,357	12,579	12,817	11,870
55	9,380	9,900	9,700	9,861
60	7,105	6,072	7,345	6,350
65	4,818	4,394	5,105	4,413
70	2,225	3,490	2,209	3,351
75	292	21	342	24
80	0	0	0	0
85	0	0	0	0
90	0	0	0	0



The iso-bar foot-candle diagram shown is a typical representation of a given facility layout and interior reflectance. Averages are calculated as well as maximums and minimums. The number of SunPorts recommended is iterated until the daytime and nighttime foot-candle levels have satisfied the customers requirement. Polygon floor plans can be accommodated as well as non-uniform locations of SunPorts.

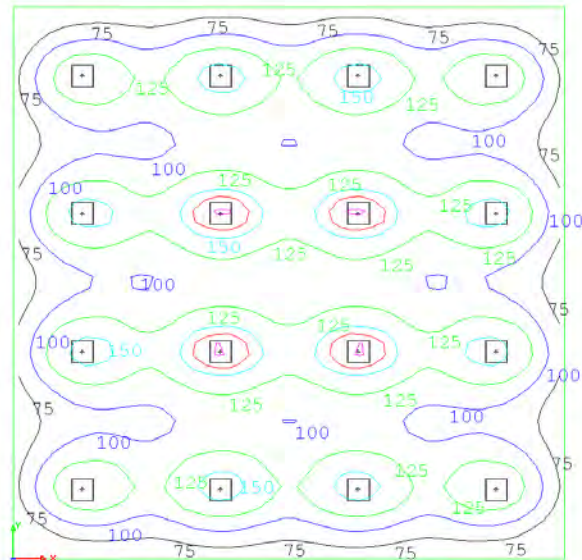
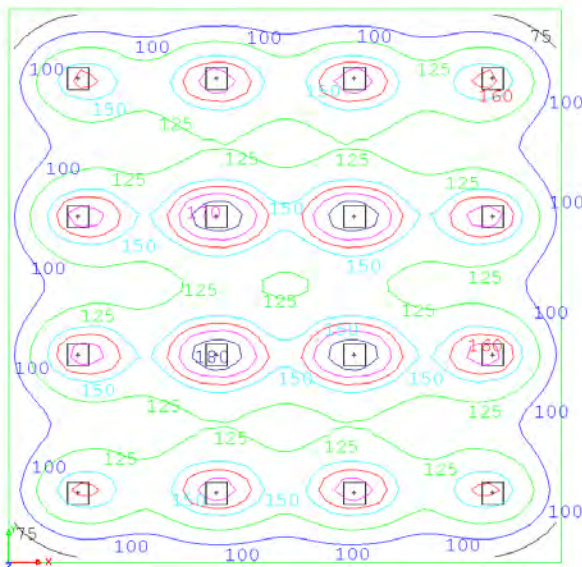
Daylight Only - Iso-footcandle Plot for SunPort II

100' x 100' x 30' space with SunPort II on 25' x 25' spacing Percentage Roof Penetration of 2.6%)
Calculations at 30" above the floor using AGi32

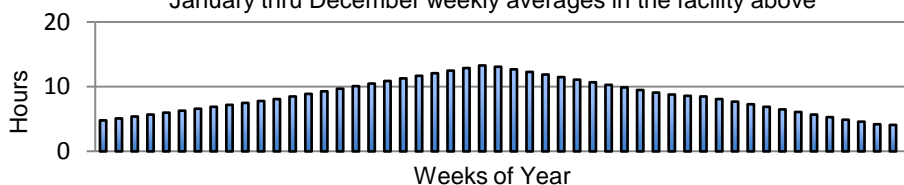
June 21, noon, in Norwalk, CT

80-50-20 interior reflectance average = 129 FC

0-30-5 interior reflectance average = 112 FC



Hours per Day SunPort Daylight Illumination Exceeds Specification
January thru December weekly averages in the facility above



SunPort II Deep Well Skylight Integrated Fluorescent

Electric Light Only - Iso-footcandle Plot for SunPort II

AGi32 v2.04 Photometric Report
Calculations according to IESNA LM-63-1995

Characteristics

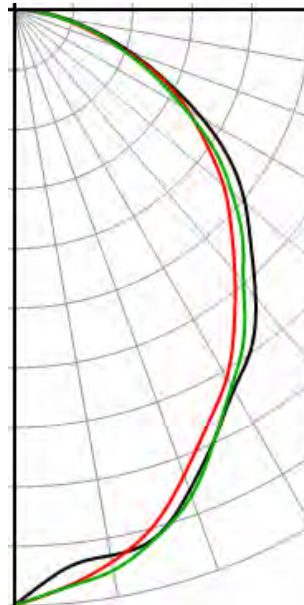
Total Source Lumens	38,400
Total Luminaire Efficiency	58.8%
Spacing Criteria (0-180)	1.12
Spacing Criteria (90-270)	1.12
Spacing Criteria (Diagonal)	1.22
Basic Luminous Shape	Square
Luminous Length	3.98'
Luminous Width	3.98'
Luminous Height	0.25'

Zonal Lumen Summary

Zone	Lumens	% Source	% Luminaire
0-30	6784	17.7	30
0-40	10738	28.0	47.6
0-60	18170	47.3	80.5
0-90	22580	58.8	100

Candela Distribution

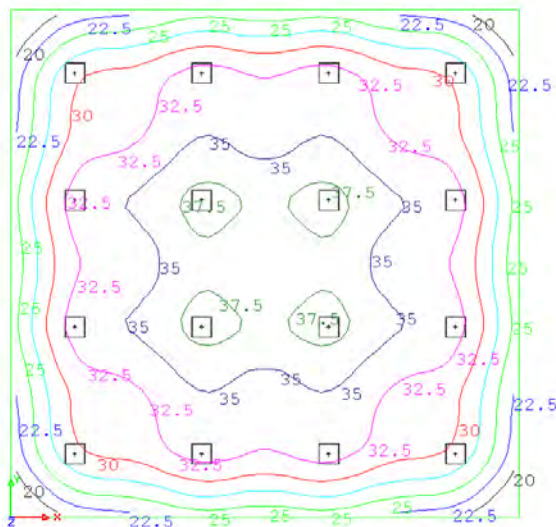
	0	45	90
0	9,572	9,572	9,572
5	9,037	9,320	9,329
10	8,908	9,015	9,150
15	8,775	8,599	8,791
20	8,224	7,968	8,316
25	7,610	7,352	7,620
30	7,052	6,827	6,987
35	6,636	6,160	6,429
40	6,027	5,508	5,724
45	5,375	4,922	5,182
50	4,837	4,383	4,556
55	4,233	3,767	3,922
60	3,473	3,213	3,134
65	2,669	2,600	2,445
70	1,969	1,855	1,820
75	1,340	1,190	1,280
80	826	755	746
85	444	464	425
90	216	230	196



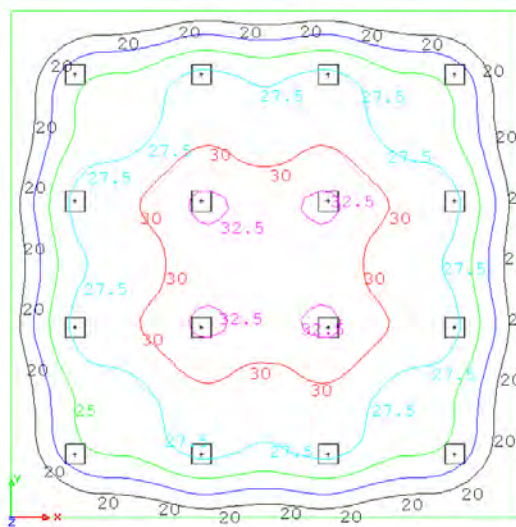
Electric Light Only - Iso-footcandle Plot for SunPort II

100' x 100' x 30' space with 16 SunPort II and 500W each on 25' x 25' spacing. Calculations at 30" above the floor using AGi32 Ballast Factor: .90

80-50-20 interior reflectance average = 30.6 FC



0-30-5 interior reflectance average = 26 FC



Quick Calculator for Electric Illumination

The table below estimates illumination for spaces of different sizes with different layouts of SunPorts. FC at 30" above floor with a ballast factor of .90.

Length	Width	Height	Sq Ft	# of SP	Sq Ft/SP	Watt/Sq Ft	Roof Pen %	SP Height	FC
500	500	30	250,000	400	625	0.72	2.6%	23.5	36
200	200	25	40,000	64	625	0.72	2.6%	18.5	34
200	200	25	40,000	80	500	0.90	3.2%	18.5	43
100	100	25	10,000	20	500	0.90	3.2%	18.5	43
100	100	20	10,000	20	500	0.90	3.2%	13.5	43
60	60	20	3,600	6	600	0.75	2.7%	13.5	32
60	60	20	3,600	9	400	1.12	4.0%	13.5	48