



Luminaire Schedule						
Symbol	Qty	Label	Description	Arrangement	Lumens	LLF
	2	HBE-045_single	HBE-090-50-11-80-045	SINGLE	5028	1.060
	60	HBE45d_b2b_164w	2 x HBE-090-50-11-80-0	BACK-BACK	5028	1.060

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Floor Calc Points	Illuminance	Lux	154.14	198	65	2.37	3.05
Rack East Calc Points	Illuminance	Lux	135.67	155	128	1.06	1.21
Rack North Calc Points	Illuminance	Lux	143.67	155	131	1.10	1.18

LPD Area Summary				
Label	Area	Total Watts	LPD	LPD Units
Lighting Power Density	3367	10028.41	2.978	Watts/Sq.M.

### Calculations Based on the Following Assumptions

**Environment:** Cold storage facility  
**Operating Temp:** -25° C  
**Dimensions:** 65m x 58m x 13.6-14.4m (sloped ceiling)  
**Lighting Spec:** 160 Lux 1m above floor, 80 Lux on bottom 3m of pallet rack face  
**Pallet Racks:** drawn as solid objects to simulate full shelves, coloured brown to simulate cardboard boxes, 59% reflectivity  
**Ceiling Colour:** off-white, 80% reflectivity  
**Wall Colour:** off-white, 80% reflectivity  
**Floor Colour:** grey concrete, 28% reflectivity

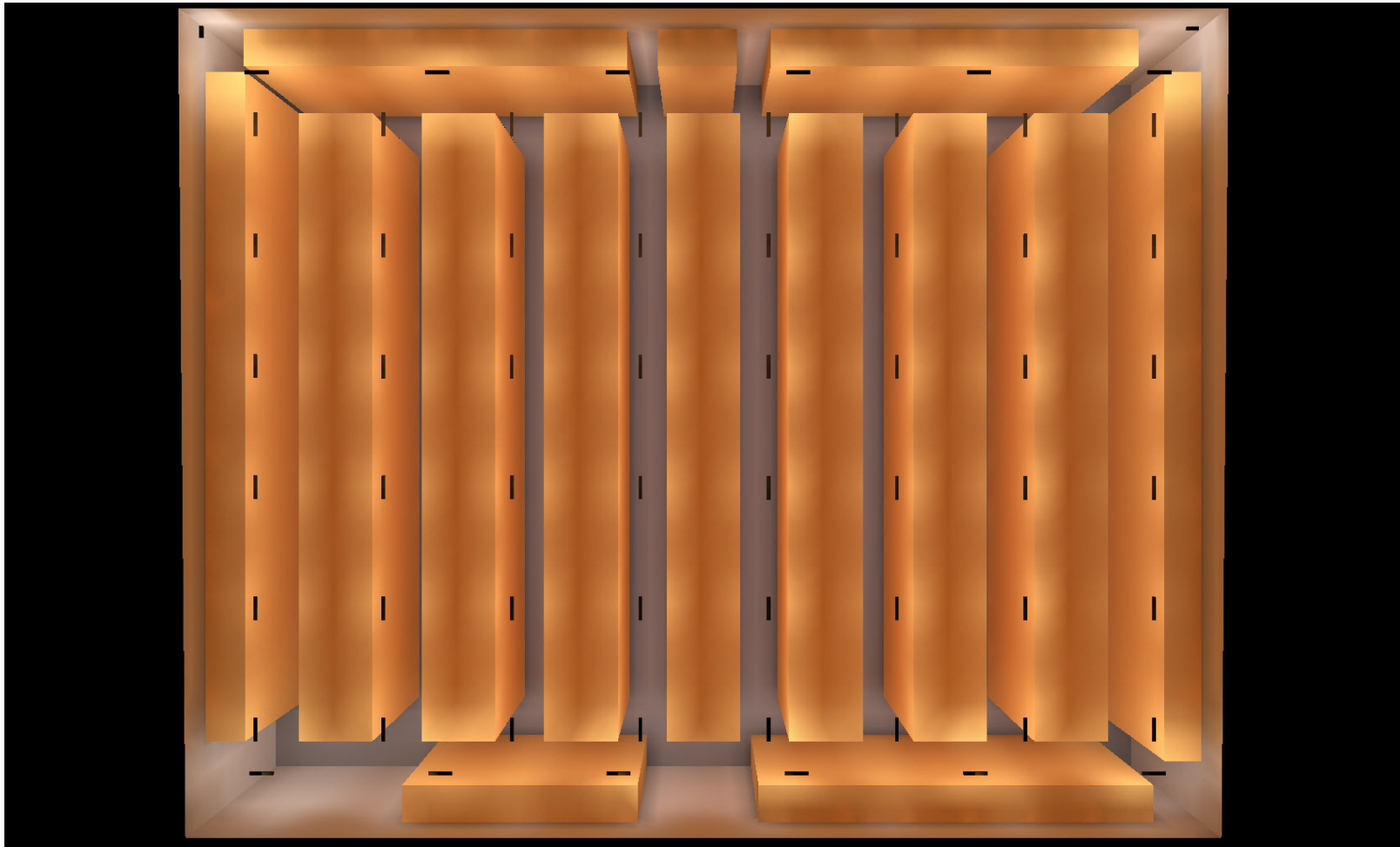


## LED Lighting Implementation Cold Storage Case Study

### Light Power Canada Inc.

1395 Charlotte Rd.  
 North Vancouver, BC Canada V7J 1H1  
 Tel.: (604) 998-0573  
 Sales inquiries : mike.w@lightpowercanada.com  
 Technical inquiries : andrew.irving@lightpowercanada.com





Overhead view of 65m x 58m x 13.5-14.6m freezer compartment with pallet racks represented as solid objects to simulate full shelves and luminaires represented by black rectangles.

## **LED Lighting Implementation**

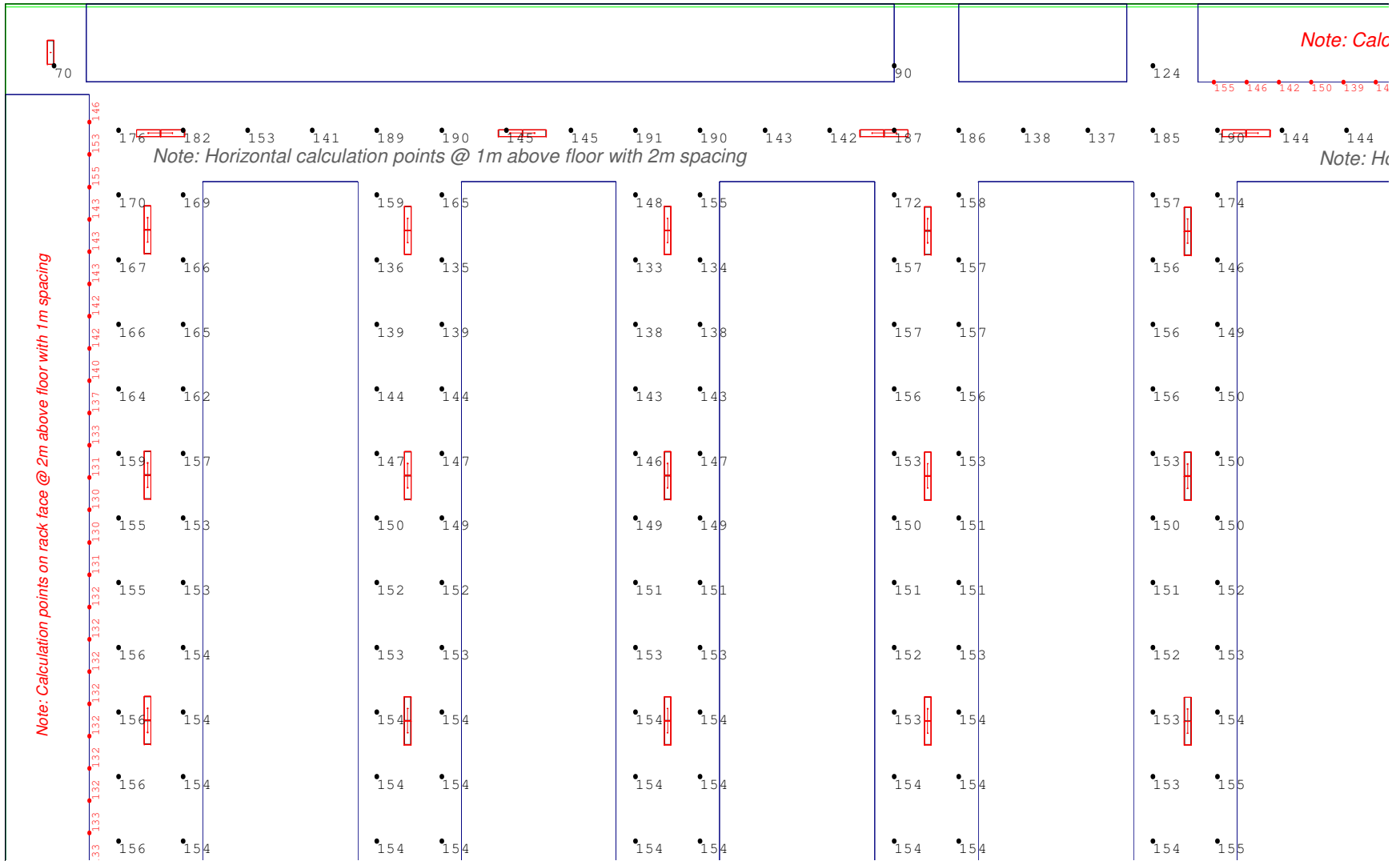
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View of point by point Lux levels - NW quadrant

**LED Lighting Implementation**  
**Cold Storage Case Study**

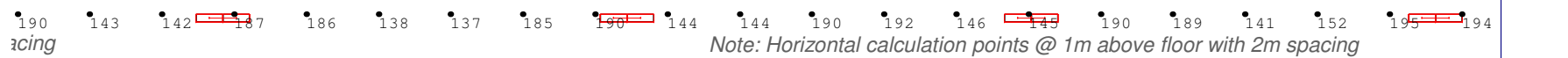
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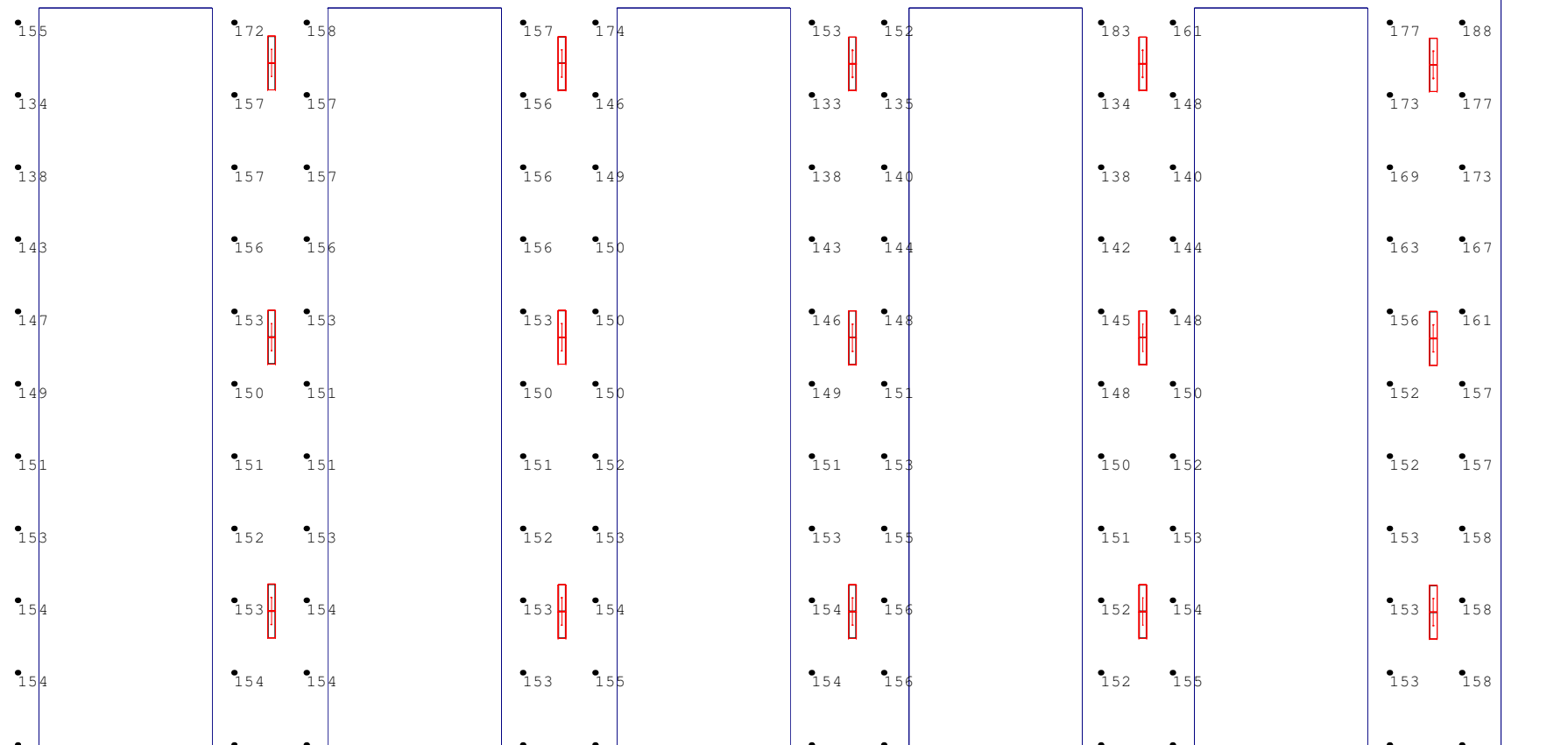
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Note: Calculation points on rack face @ 2m above floor with 1m spacing



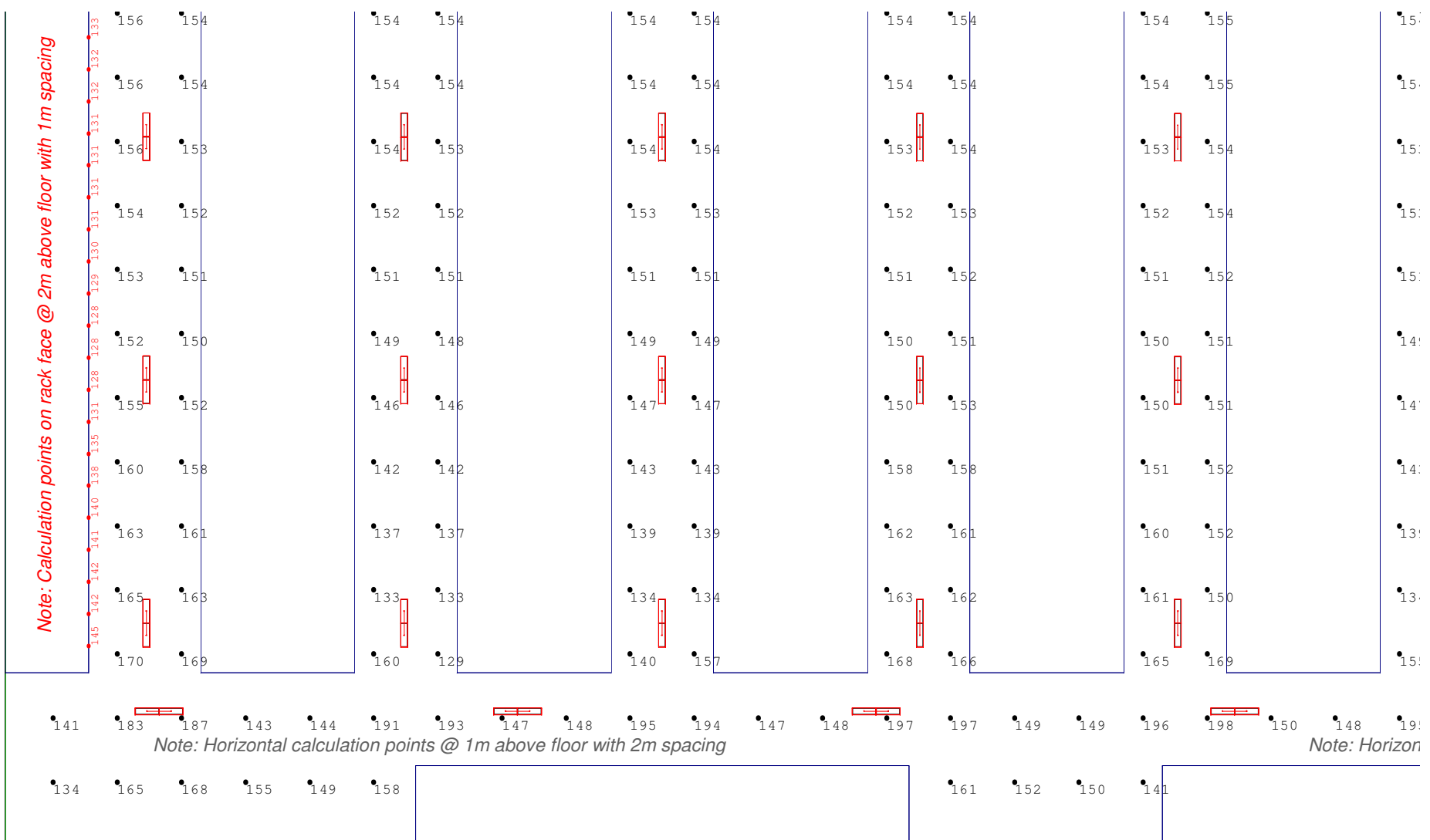
Note: Horizontal calculation points @ 1m above floor with 2m spacing



View of point by point Lux levels - NE Quadrant

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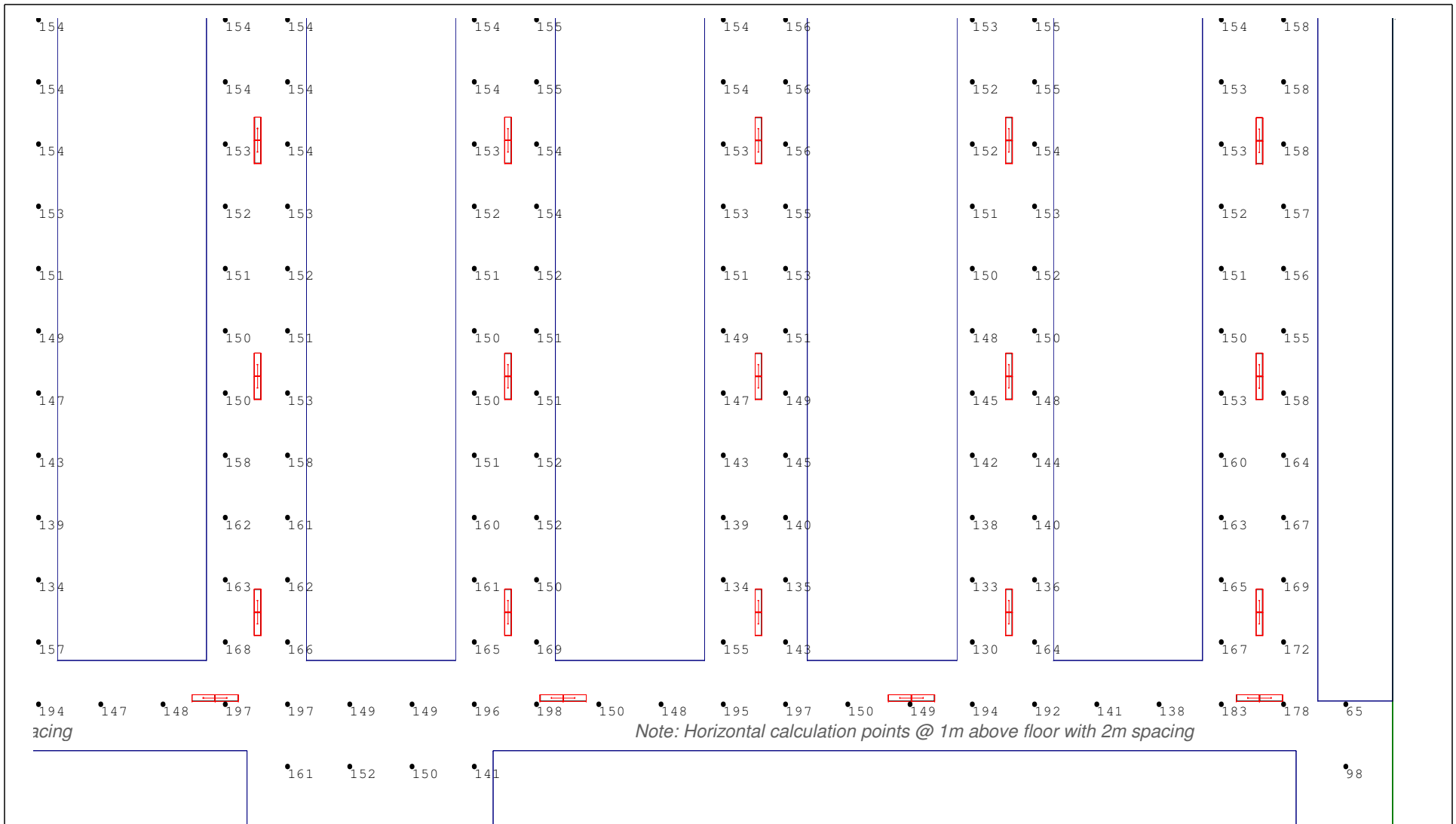




View of point by point Lux levels - SW quadrant

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