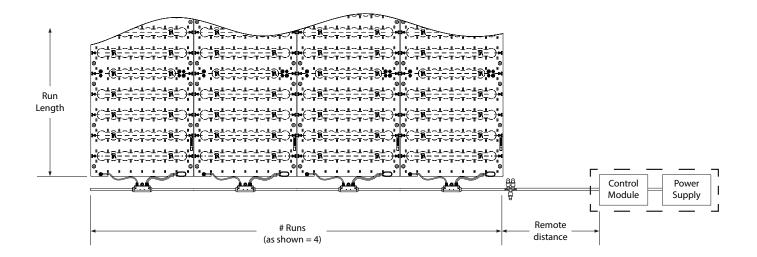# COOLEDGE TILE INTERIOR TUNABLE WHITE LAYOUT GUIDELINES

COOLEDGE™

CALCULATING MAXIMUM RUN LENGTH

Use the following table to determine the maximum run length possible based on the number of runs, the light output of the TILEs, and the CCT for one (1) 90W channel. The values shown correspond to the nearest cut increment of the TILE, dimensions are in m.

# of Runs	9680 lm/m² (TILE-TUN-900-xxx-R3)		6460 lm/m² (TILE-TUN-600-xxx-R3)	
	TNW	DTW	TNW	DTW
1	3.36	3.54	4.14	4.38
2	1.86	2.04	2.82	3.12
3	1.20	1.38	1.86	2.04
4	0.90	1.02	1.38	1.56
5	0.72	0.78	1.08	1.20
6	0.60	0.66	0.90	1.02
7	0.48	0.54	0.78	0.84
8	0.42	0.48	0.66	0.78

# of Runs	3230 lm/m² (TILE-TUN-300-xxx-R3)		1610 lm/m² (TILE-TUN-150-xxx-R3)	
	TNW	DTW	TNW	DTW
1	6.12	6.30	8.58	8.76
2	5.76	6.00	8.10	8.34
3	3.84	4.14	7.50	8.04
4	2.88	3.12	5.64	6.00
5	2.28	2.46	4.50	4.80
6	1.92	2.04	3.72	4.02
7	1.62	1.74	3.18	3.42
8	1.44	1.56	2.82	3.00

Example 1: DTW; 6460 lm/m²; 5 Runs (as shown in the diagram above)
• Using the table, the corresponding value for this configuration is 1.2m. This means that two full regular TILEs may be used without being cut for each of the 4 runs.

Example 2: TNW; 1610 lm/m²; 5 Runs
• Using the table, the corresponding value for this configuration is 4.5m. This means that 7.5 regular TILEs may be used.

CALCULATING REMOTE POWER & CONTROL DISTANCE

Due to a voltage drop caused by the resistance of the cable carrying power between the Power Supply/Control Module and the TILEs, there is a maximum distance from the TILEs at which the power and control units may be mounted.

The maximum distance is dependent upon the size of the conductors used and the total load (# of TILEs x power per TILE as determined by lumen rating)

Use the tables below to determine the size of the conductors required to achieve the maximum "remote distance" – the distance between the Control Module and TILEs if the Control Module is located near the power supply OR the total distance between the Power Supply and TILEs if the Control Module is located near the TILEs.

TILE INTERIOR: 1610LM (VALUES IN M)

Size (mm²)	Configuration (# Runs x Maximum Length per Run)							
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)	5 x max length (m)	6 x max length (m)	7 x max length (m)	8 x max length (m)
1.5	4.3	4.3	4.6	11.6	27.4	29	29.6	29.9
2.5	6.7	6.9	7.3	18.4	43.7	46	46.9	47.4
4.0	10.8	11	11.7	29.4	69.6	73.2	74.7	75.4
6.0	17.1	17.4	18.6	46.9	110.6	116.4	118.9	120.1

TILE INTERIOR: 3230LM (VALUES IN M)

Conductor Size (mm²)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)	5 x max length (m)
1.5	3.4	3.7	13	16.6	19.7
2.5	5.3	5.8	20.6	26.5	31.2
4.0	8.5	9.1	32.8	42.2	49.7
6.0	13.6	14.6	52.3	67.2	79.1

TILE INTERIOR: 6460LM (VALUES IN M)

Conductor Size (mm²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.5	3.7	12.3	18	19.8
2.5	5.9	19.8	28.7	31.5
4.0	9.4	31.5	45.7	50.1
6.0	15.1	50.1	72.7	79.9

TILE INTERIOR: 9680LM (VALUES IN M)

Conductor Size (mm²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.5	3.8	16.3	19.8	20.9
2.5	5.9	25.9	31.4	33.4
4.0	9.6	41.3	50	53
6.0	15.2	65.7	79.6	84.3

*The control module accepts wire sizes in the range of 1.5mm² to 4.0mm². The 6.0mm² numbers in the chart are based on connecting a short length of 4.0mm² wire to the control module and then splicing on a subsequent length of 6.0mm² wire to supply the TILEs.

Example
- Required "remote distance" = 20m
- TILE Light Output = 6450lm/m²
- # Runs = 3 (assumes maximum run length)

Therefore, conductor size required = 2.5mm² (or larger)