Date: 22 October 2012

Client: IMO Precision Controls Limited

Subject: Lumens per Circuit Watt measurement results

Measurement parameter:	Sample 1: LED Evolution 3000K / 60°
Voltage	230.3
Current (mA)	52.9
Wattage	9.2
VA	12.2
Power factor	0.89
Lumens after 30 minutes operation	612
Ambient temperature during lumens test (°C)	24.6
Calculated lumens per circuit watt	60.3
Luminaire operating temperature (°C)	46.3

Measurement parameter:	Sample 1: LED Evolution 3000K / Ellipse
Voltage	230.5
Current (mA)	53.2
Wattage	9.2
VA	12.2
Power factor	0.89
Lumens after 30 minutes operation	619
Ambient temperature during lumens test (°C)	24.6
Calculated lumens per circuit watt	60.4
Luminaire operating temperature (°C)	46.4

Measurement parameter:	Sample 1: LED Evolution 3000K / 40°
Voltage	230.3
Current (mA)	53.1
Wattage	9.2
VA	12.1
Power factor	0.89
Lumens after 30 minutes operation	627
Ambient temperature during lumens test (°C)	24.6
Calculated lumens per circuit watt	60.6
Luminaire operating temperature (°C)	46.4

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Measurement parameter:	Sample 2: LED Evolution 4250K / 60°
Voltage	230.4
Current (mA)	53.4
Wattage	9.2
VA	12.3
Power factor	0.89
Lumens after 30 minutes operation	703
Ambient temperature during lumens test (°C)	24.6
Calculated lumens per circuit watt	69.6
Luminaire operating temperature (°C)	46.3

Measurement parameter:	Sample 2: LED Evolution 4250K / Ellipse
Voltage	230.3
Current (mA)	53.2
Wattage	9.2
VA	12.2
Power factor	0.89
Lumens after 30 minutes operation	717
Ambient temperature during lumens test (°C)	24.6
Calculated lumens per circuit watt	70.4
Luminaire operating temperature (°C)	46.4

Measurement parameter:	Sample 2: LED Evolution 4250K / 40°
Voltage	230.3
Current (mA)	53.1
Wattage	9.2
VA	12.4
Power factor	0.89
Lumens after 30 minutes operation	734
Ambient temperature during lumens test (°C)	24.6
Calculated lumens per circuit watt	70.6
Luminaire operating temperature (°C)	46.4