



## TEST REPORT

**Luminaires for interior lighting, streetlighting  
and floodlighting — Performance requirements  
SANS 475:2022**

**Report Reference No.** .....: AOC250815010ER

**Compiled by (print+ signature)**.....: Bruce Lin

*Bruce Lin*

**Approved by (print+ signature)**.....: Robin Liu

*Robin Liu*

Lab Supervisor

**Date of issue**.....: 2025-08-20

**Testing Laboratory**.....: Shenzhen AOCE Electronic Technology Service Co., Ltd

**Address**.....: Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

**Testing location/address**.....: Same as above

**Applicant's name**.....: Matimba Yeru Energy

**Address**.....: Unit 5351 CX48 Industrial Park 8 Ossewa Street Chloorkop Gauteng 1624

**Manufacturer name**.....: Matimba Yeru Energy

**Address**.....: Unit 5351 CX48 Industrial Park 8 Ossewa Street Chloorkop Gauteng 1624

**Test Object**.....: Floodlighting

**Trade Mark**.....: N/A

**Model / Type reference**.....: MEFL-315W

**Rated voltage (V)**.....: 100-305V~

**Rated frequency (Hz)**.....: 50/60

**Rated Power (VA)**.....: 315

### Test specification:

**Standard**.....: SANS 475:2022

**Test procedure**.....: Type testing

**Non-standard test method**.....: N/A

**Test Report Form No.**.....: AOCE TRF No. (SANS) 475

**Test Report Form(s) Originator**.....: AOCE

**Master TRF**.....: 2025-08-16

Summary of Testing:	
Tests performed (name of test and test clause):	Testing location:
<p>The sample(s) tested complies with the requirements of SANS 475:2022</p> <p>When determining the test conclusion. The Measurement Uncertainty of test has be enconsidered.</p>	<p>Shenzhen AOCE Electronic Technology Service Co., Ltd</p> <p>Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China</p>
Summary of Compliance with National Differences:	
N/A	
Copy of Marking Plate:	
N/A	

<b>Type of light source:</b>	
Product type.....:	<input type="checkbox"/> Interior lighting, <input type="checkbox"/> Streetlighting <input checked="" type="checkbox"/> Floodlighting
Lighting technology used.....:	<input checked="" type="checkbox"/> LED <input type="checkbox"/> Fluorescent lamps <input type="checkbox"/> Induction lamps <input type="checkbox"/> Low-pressure sodium vapour lamps <input type="checkbox"/> HID
<b>Possible Test Case Verdicts:</b>	
Test case does not apply to the test object.....:	N/A (Not Applicable)
Test object does meet the requirement.....:	P (Pass)
Test object does not meet the requirement.....:	F (Fail)
<b>Testing:</b>	
Ambient temperature of tested .....	35.0 °C
Test inputs.....:	230V~
Date of receipt of test item.....:	2025-08-04
Date (s) of performance of tests.....:	2025-08-04 to 2025-08-18
<b>General Remarks:</b>	
Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen AOCE Electronic Technology Service Co., Ltd	
<b>Note:</b>	
N/A	

<b>SANS 475</b>			
Clause	Requirement + Test	Result – Remark	Verdict
<b>4</b>	<b>Requirements</b>		-
<b>4.1</b>	<b>General</b>		-
	Luminaires shall comply with the requirements of SANS 60598-2-1, SANS 60598-2-3 and SANS 60598-2-5, where applicable		P
<b>4.2</b>	<b>Terminal blocks</b>		P
	When luminaires are fitted with supply incoming terminal blocks, the terminal blocks shall be independently fixed and fastened to the body of the luminaire or to the mounting plate. The terminal blocks shall be capable of accepting two 2,5 mm conductors each.		N/A
<b>4.3</b>	<b>Provision for earthing</b>		-
	Luminaires shall have an independent primary earth terminal. All metal covers and louvers shall be independently earthed.		P
<b>4.4</b>	<b>Operating temperatures</b>		-
4.4.1	The rated maximum ambient temperatures ( <i>ta</i> ) of luminaires shall be determined by thermal tests as described in SANS 60598-1		P
4.4.2	Interior luminaires for either LED or fluorescent lamps and surface-mounted commercial decorative HID or LED luminaires shall have a rated maximum ambient temperature of 25 °C		N/A
4.4.3	Interior HID or LED luminaires and floodlighting luminaires, which will be recessed into ceiling voids, shall have a rated maximum ambient temperature of 40 °C		N/A
4.4.4	Streetlighting and outdoor floodlighting luminaires shall have a rated maximum ambient temperature of 35 °C		P
4.4.5	The rated maximum ambient temperature ( <i>ta</i> ) assigned to the luminaire shall also be determined as in 5.2		P
<b>4.5</b>	<b>Resistance to dust, solid objects and moisture</b>		-
4.5.1	The user shall specify the IP rating for the specific application of luminaire		P
4.5.2	Streetlighting and outdoor floodlighting luminaires normally mounted shall have a minimum IP rating of 65.	IP66	P
4.5.3	Interior luminaires shall have a minimum IP rating of 20.		N/A
<b>4.6</b>	<b>Electrical requirements</b>		-
4.6.1	<b>Power factor</b>		-

SANS 475																					
Clause	Requirement + Test	Result – Remark	Verdict																		
4.6.1.1	When tested in accordance with 5.4, a HID luminaires fitted with the appropriate reference lamp(s) or LED luminaire shall have a power factor at the supply terminal block of at least 0,85		P																		
4.6.1.2	For luminaries fitted with fluorescent lamps or LED light sources with lamp power rating ≤ 25 W, the power factor shall be at least 0,5		N/A																		
4.6.2	Lamp voltage <div>Table 1 — Increase in lamp voltage</div> <table><tr><td>1</td><td>2</td></tr><tr><td>Lamp</td><td>Maximum increase in lamp voltage</td></tr><tr><td></td><td>V</td></tr><tr><td>70 W, all variations</td><td>5</td></tr><tr><td>150 W, all variations</td><td>5</td></tr><tr><td>250 W, clear, tubular</td><td>10</td></tr><tr><td>250 W, diffuse, elliptical</td><td>10</td></tr><tr><td>400 W, clear, tubular</td><td>12</td></tr><tr><td>400 W, diffuse, elliptical</td><td>7</td></tr></table>	1	2	Lamp	Maximum increase in lamp voltage		V	70 W, all variations	5	150 W, all variations	5	250 W, clear, tubular	10	250 W, diffuse, elliptical	10	400 W, clear, tubular	12	400 W, diffuse, elliptical	7		N/A
1	2																				
Lamp	Maximum increase in lamp voltage																				
	V																				
70 W, all variations	5																				
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400 W, clear, tubular	12																				
400 W, diffuse, elliptical	7																				
4.7	Photometric requirements		-																		
4.7.1	Streetlighting and floodlighting luminaires		-																		
4.7.1.1	Data sheets		-																		
	The relevant photometric data for the luminaire, selected from the following list, shall be available from the manufacturer in the form of a data sheet		P																		
	a) the catalogue number of the luminaire;		P																		
	b) the catalogue number(s) of the lamp(s) where applicable		N/A																		
	c) the optical setting, if more than one optical setting is possible		N/A																		
	d) a table of luminous intensities (expressed in candelas per 1 000 lamp lumens) in accordance with the layout and co-ordinate system given in CIE 121 and SANS 10098-1; and		P																		
	e) electronic data files in popular format such as ELUMDAT and IESNA		P																		
4.7.1.2	Conformity with data sheets		P																		
	When production samples are being tested, the light output ratio (LOR) of the sample shall not deviate by more than ±15 % from the values given at the corresponding points on the luminous intensity table.		P																		
4.7.2	Interior luminaires		-																		
4.7.2.1	Data sheets		-																		

<b>SANS 475</b>			
<b>Clause</b>	<b>Requirement + Test</b>	<b>Result – Remark</b>	<b>Verdict</b>
	The relevant photometric data for the luminaire, selected from the following list, shall be available from the manufacturer in the form of a data sheet		N/A
	a) the model number or catalogue number of the luminaire;		N/A
	b) the catalogue number(s) of the lamp(s) where applicable;		N/A
	c) the optical setting, if more than one optical setting is possible		N/A
	d) a luminous intensity distribution curve that gives the average luminous intensity distribution expressed in candelas per 1 000 lamp lumens and, in the case of luminaires having an asymmetrical distribution, curves that give the distribution in the two vertical planes through the major axes of the luminaire;		N/A
	e) a table of average luminous intensity values expressed in candelas per 1 000 lamp lumens		N/A
	f) the upward light output ratio (ULOR)		N/A
	g) the downward light output ratio (DLOR)		N/A
	h) the total light output ratio (TLOR)		N/A
	i) the spacing to mounting height ratio that gives a midpoint ratio of at least 0,7		N/A
	j) the luminaires area; and		N/A
	k) the total power consumption of the luminaire in VA		N/A
<b>4.7.2.2</b>	<b>Conformity with data sheet</b>		N/A
	When a luminaire is tested in accordance with 5.6.3, the values determined for the upward light output ratio, the downward light output ratio and the total light output ratio shall not be less than 90 % of those given on the data sheet (see 4.7.1), and the spacing to mounting height ratio shall be that given on the data sheet. The value determined for the luminous intensity at any point shall be not less than 90 % of that given on the data sheet.		N/A
<b>4.8</b>	<b>Mechanical strength</b>		-
	When tested in accordance with 5.7, luminaire housings of streetlights and floodlights shall have adequate mechanical strength and be so constructed that the housing can withstand an impact of 6 J without any visible damage to the housing and without any effect on the proper working of the luminaire.		P
<b>4.9</b>	<b>Resistance to corrosion</b>		-

<b>SANS 475</b>			
Clause	Requirement + Test	Result – Remark	Verdict
	When a specimen or specimens are tested in accordance with 5.8, the test specimen or specimens shall show no evidence of corrosion, or, if the test specimen or specimens have baked powder coatings, there shall be no evidence of any blistering or loss of adhesion of the baked powder coating.		P

<b>5</b>	<b>Inspection and methods of test</b>		-
<b>5.1</b>	<b>General conditions of testing</b>		-
5.1.1	<b>Temperature</b>		-
	Unless otherwise specified, carry out all tests at an ambient temperature as specified in 4.4.1, and measure at a point between 1,0 m and 1,5 m away from, and at the same height as, the luminaire under test.		P
5.1.2	<b>Draughts</b>		-
	Avoid draughts and exercise constant care to keep air movement to a minimum at all times during testing.		P
5.1.3	<b>Electrical supply characteristics</b>		P
5.1.3.1	Operate luminaires at rated supply voltage and at rated frequency		P
5.1.3.2	During tests, maintain the supply voltage and the frequency to within 0,2 % and 0,5 % respectively		P
5.1.3.3	Ensure that the supply voltage at the input terminals to the luminaire has a waveshape such that the r.m.s. summation of the harmonic components does not exceed 3 % of the voltage at the fundamental frequency		P
5.1.3.4	Ensure that the impedance of the power source does not exceed 10 % of the ballast impedance, where applicable		P
5.1.4	<b>Lamps where applicable</b>		-
5.1.4.1	Test the luminaire with reference lamps		P
5.1.4.2	Operate each lamp under test long enough to bring it to a condition of stable operation before measurements are carried out on the luminaire.		P
5.1.5	<b>Measuring instruments</b>		P
5.1.5.1	Use precision quality instruments, accurate to within 0,5 % that are calibrated at regular intervals		P
5.1.5.2	<b>Impedance</b>		-
5.1.5.2.1	<b>Impedance</b>		-

<b>SANS 475</b>			
Clause	Requirement + Test	Result – Remark	Verdict
	a) in the case of potential circuits, instrument potential circuits connected in parallel with the lamp do not draw more than 3 % of the rated current of the lamp, and		P
	b) in the case of current circuits, no instrument current circuit connected in series with the lamp has an impedance such that the voltage drop across this circuit exceeds 2 % of the actual voltage across the lamp		P
5.1.5.2.2	Ensure that instruments are inherently free from errors due to waveform.		P
<b>5.2</b>	<b>Operating temperatures</b>		-
5.2.1	Use a sufficient number of thermocouples to measure the temperature of all controlgear compartment components, including various locations on the diffuser, lamp holder and sealing gasket components		P
5.2.2	Use a test voltage of 1,06 times the rated voltage for the luminaire		P
5.2.3	For the determination of the average temperature of the winding of a component (with a $T_w$ marking) and for the determination of the case temperature of a component (with a $T_c$ marking), excluding capacitors, use a test voltage of 1,00 times the rated voltage.		P
5.2.4	In practice, it is more useful to measure the temperatures of all components at both test voltages and then conduct the analysis of the ballasts and igniters at 1,00 times the rated voltage, and all other components at 1,06 times the rated voltage		P
5.2.5	Compare the measured temperature with the rated limiting temperature of each component and allow for a 10 °C wind cooling effect in accordance with SANS 60598-1.		P
5.2.6	Identify the component that has the smallest difference between the measured temperature and the rated limiting temperature. Use this component as the reference for determining the maximum rated ambient temperature of the luminaire. The $T_a$ value is determined by calculating the difference between the measured temperature and the rated limiting temperature of the component		P
5.2.7	Validate the determined $T_a$ value of the luminaire by subjecting one luminaire sample to a test temperature of $T_a + 10$ °C with an overvoltage of 10 % for 10 days. When the luminaire is examined after the test, there should be no sign of any damage or breakdown		P



<b>SANS 475</b>			
Clause	Requirement + Test	Result – Remark	Verdict
5.2.8	Generate a test report based on the results of the tests. Detail comprehensively the measured temperature, the rated limiting temperature and the individual ambient temperature for each component in the test report		P
<b>5.3</b>	<b>Resistance to dust, solid objects and moisture</b>		-
<b>5.4</b>	<b>Power factor</b>		-
5.4.1	Operate the luminaire under test, fitted with the appropriate reference lamp(s) where applicable, for at least 1 h. Measure the power supplied to, and the r.m.s. current consumed by, the luminaire at each rated supply voltage		P
<b>5.5</b>	<b>Test for lamp voltage where applicable</b>		-
5.5.1	Operate the luminaire under test in its normal position fitted with the appropriate highpressure sodium vapour lamp for a period of 2 h, and measure the voltage across the lamp.		N/A
<b>5.6</b>	<b>Photometric test</b>		P
5.6.1	<b>Apparatus</b>		P
5.6.2	<b>Streetlighting and floodlighting luminaires</b>		P
5.6.3	<b>Interior luminaires</b>		N/A
<b>5.7</b>	<b>Mechanical strength</b>		-
5.7.1	Test for mechanical strength using the method described in of SANS 60598-1 and the methods described in 5.7.2 and 5.7.3		P
5.7.2	Subject the luminaire housing (top of the lamp compartment) to an impact energy equal to between 1 J and 6 J in 1 J intervals		P
5.7.3	Support the luminaire under test as in normal use (horizontal) and drop a solid hardened steel ball of mass $230 \text{ g} \pm 5 \text{ g}$ and approximately 38 mm in diameter from different heights onto the luminaire to exert an impact energy as given in 5.7.2		P
<b>5.8</b>	<b>Resistance to corrosion</b>		-
5.8.1	<b>Test specimen(s)</b>		-
	<b>Metal parts of the luminaire or representative metal parts</b> (for example, hinges, screws and nuts, and metal junctions), or a <b>section</b> of surface area at least $0,02 \text{ m}^2$ , cut from a metal part of the luminaire		P
5.8.2	<b>Procedure</b>		P

**Table 1 Power factor**

Sample No.	P (VA)	Standby power (VA)	Power factor	limit value
MEFL-315W	315	312	0.99	<input type="checkbox"/> 0.5 <input checked="" type="checkbox"/> 0.85

**Table 2 Lamp voltage**

Sample No.	Increase in lamp voltage (V)	limit value
/	/	/

**Table 3 Streetlighting and floodlighting luminaires photometric**

Sample No.	Rated luminous intensities (cd)	Measuring luminous intensities (cd)	limit value
MEFL-315W	19000	18273.2	±15%

**Mechanical strength**

Sample No.	Object	Impact (J)	Verdict
MEFL-315W	housing	6	pass

**Table 4 Interior luminaires luminaires photometric**

Sample No.	Rated TLOR (%)	Measuring TLOR (%)	Required ΔP
			≥90%
Sample No.	Rated DLOR (%)	Measuring DLOR (%)	Required ΔP
			≥90%
Sample No.	Rated ULOR (%)	Measuring ULOR (%)	Required ΔP
			≥90%

## Product Photo

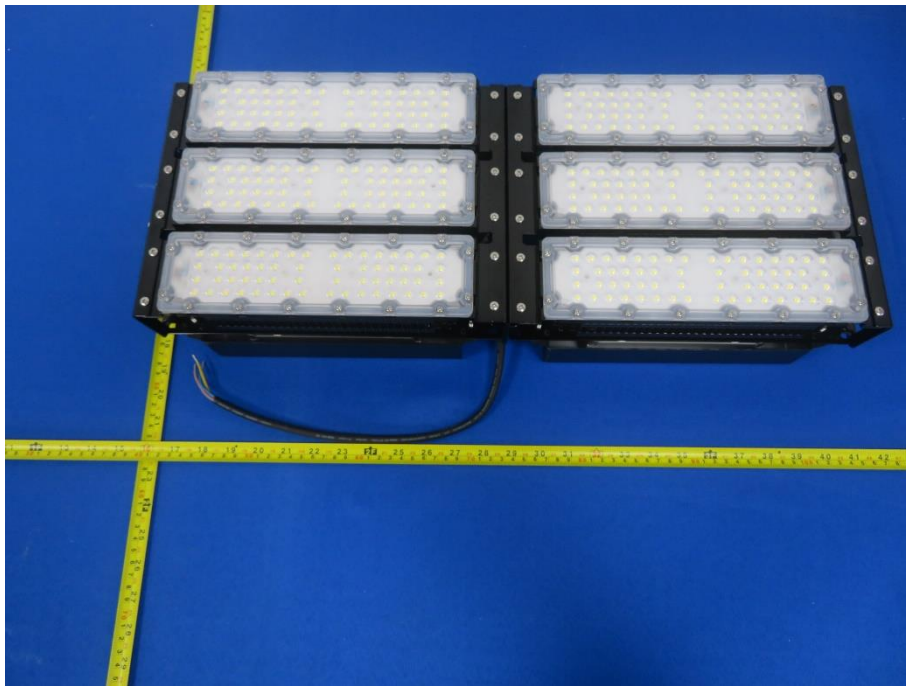


Fig. 1

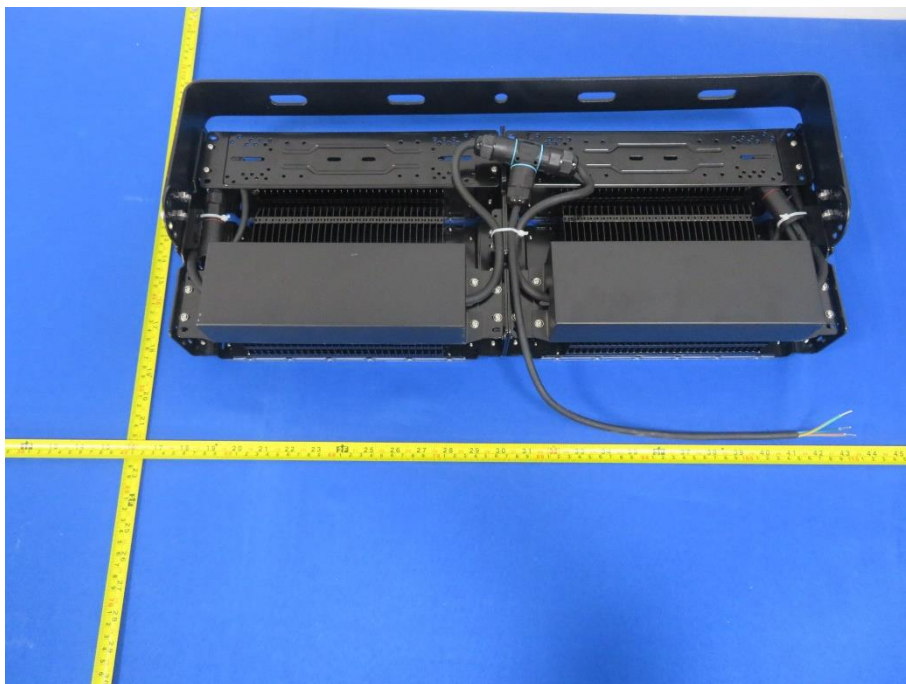


Fig. 2

-- End of Report --