


Test Report No ELN22090287	ULR No. TC576222000000477F	QR Code (Test Report)	QR Code (Certificate) 
Date of Receipt 27.09.2022	Page No. Page 1 of 10		
Report Issue Date 01.10.2022	Date(s) of Performance 28.09.2022 To 30.09.2022		
No. of Sample Tested 01	Sample Condition Good		

Name of Customer	Leo Lights
Address of Customer	Om Industrial Estate, Vadolgaon, Behind Gnp Galaxy Mall, Near Reliance Petrol Pump Ambernath(W)
Name of Manufacturer	Leo Lights
Brand Name	--
Name of Sample/ Model No./ Sample No.	Bent FLDC 003 Flood Light 100W
Statement of Conformity	NA
Product Rating	230Vac, 50Hz, 100W
Test Location	At Lab
Tested By	
Reviewed By	
Authorised By	

Possible Test Case Verdicts			
Test case does not applied	NA	Test case does meet the requirements	P (Pass)
Test case does not meet the requirements	F (Fail)	Sample under Test	SUT

MARKING LABEL			
NA			

Declaration,

1. The results of testing in this report apply only to the sample product/item, which was tested.
2. EAMP Laboratories has not participated in the sample selection.
3. This Test Report shall not be reproduced wholly or in part without the prior written approval of the EAMP Laboratories.
4. Client has to make arrangement for taking back the sample **within one week** after the issue of the test report. After this period EAMP Laboratories reserves the right to dispose the Item.

Additional Info

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Sr. No.	Test Name	Test Standard	Page. No.
1	Photometry & Colorimetry Test	IES LM 79: 2008	2 of 10
2	Ingress Protection Test	IS 10322 (Part 1): 2014, Cl. No. 9.2	7 of 10
3	Impact test	IEC 62262:2002, Clause No. 6	9 of 10

Name of Test: Photometry Test Report

Applicable Test Standards or Test Methods	IES LM 79:2008, Cl No.9, 10, 11 & 12
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Test Date(s)	29.09.2022
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Equipment and Calibration Details				
Sr. No.	Name of Instruments	Lab ID No.	Due Date	Traceable to
1	Moving Mirror Type C Goniophotometer GMS 3000	EAMP-E-001	11.02.2023	CSIR-NPL, New Delhi
2	Spectroradiometer with Integrating Sphere SL 300	EAMP -E-006	11.02.2023	CSIR-NPL, New Delhi
3	Halolux Ceram Standard Lamp 230Vac, 150W E27	EAMP-SL-001	27.06.2023	ERDA, Vadodara
4	Spectral Standard Lamp 30Vdc, 6A E-27	EAMP-SL-002	27.06.2023	ERDA, Vadodara

Environmental Conditions		
Ambient Temperature (°C)	Relative Humidity (%RH)	Air Pressure (hPa)
25.7°C	47.0%	--

1.1.Test Details:	
No. of Hours operated prior to measurement	0 Hrs
Total Operating time of product for measurement including stabilization	118 Minutes
Orientation (burning position) of SSL product during test	Normal Burning Position
Self-Absorption Factor	1.2270
Sphere Diameter	1.5 mtr
Coating Reflectance	93%
Sphere Geometry	4π
Bandwidth of Spectrometer	380 to 780nm
Photometric Distance of Goniophotometer	20.35m

Rated Electrical Values and Nominal CCT				
Voltage	Current	Power	Frequency	CCT
230VAC	0.48	100W	50Hz	--
Light Source		Driver / Ballast		
Make/Specifications	Quantity	Make/Specifications	Quantity	
--	--	--	--	

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1.2. Test Observation

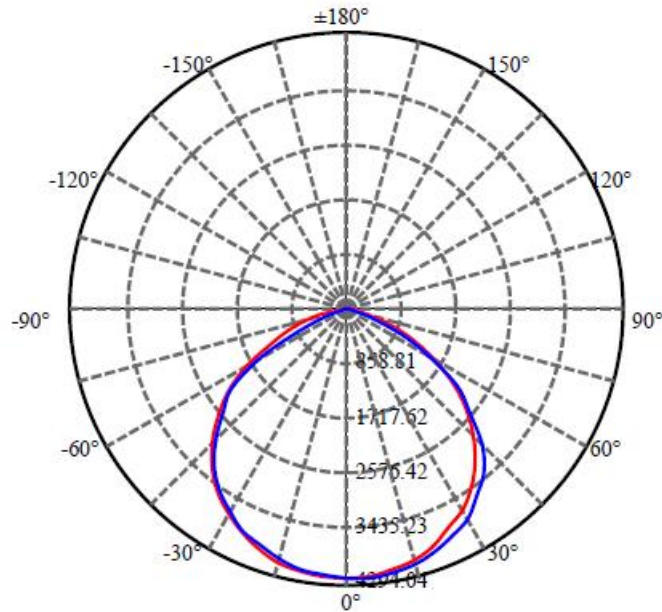
S. No	Parameters	Units	Results	
Electrical Parameters				
1	Voltage	Vac	230.24	
2	Current	A	0.4190	
3	Power	W	95.07	
4	Power Factor		0.9845	
5	Frequency	Hz	50	
Photometric Parameter				
1	Luminous Flux	lm	11149.44	
2	Luminous Efficacy	lm/W	117.28	
3	Luminous Intensity (Maximum)	cd	4294.037	
4	Luminous Intensity (Central)	cd	4187.400	
5	Beam Angle	°	Vert. Spread	Horiz. Spread
			110.8	110.6
Colorimetric Parameter				
1	Correlated Color Temperature	K	6832	
2	Color Rendering Index (Ra)		82.0	
3	Chromaticity Coordinate (x)		0.3062	
4	Chromaticity Coordinate (y)		0.3323	

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Photometric Graphs

Light Distribution Curve



Lux distance Curve

Illuminance at a Distance

	Center Beam LUX	Beam Width	
		V	H
2m	1046.85 LUX	5.8m	5.8m
4m	261.71 LUX	11.6m	11.5m
6m	116.32 LUX	17.4m	17.3m
8m	65.43 LUX	23.2m	23.1m
10m	41.87 LUX	29.0m	28.8m
12m	29.08 LUX	34.7m	34.6m

Vert. Spread: 110.8

Horiz. Spread: 110.6

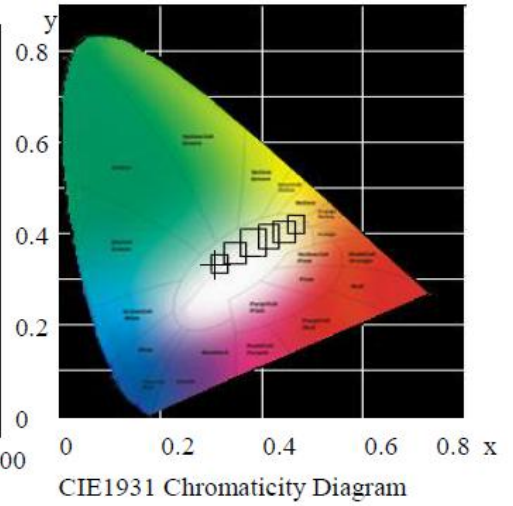
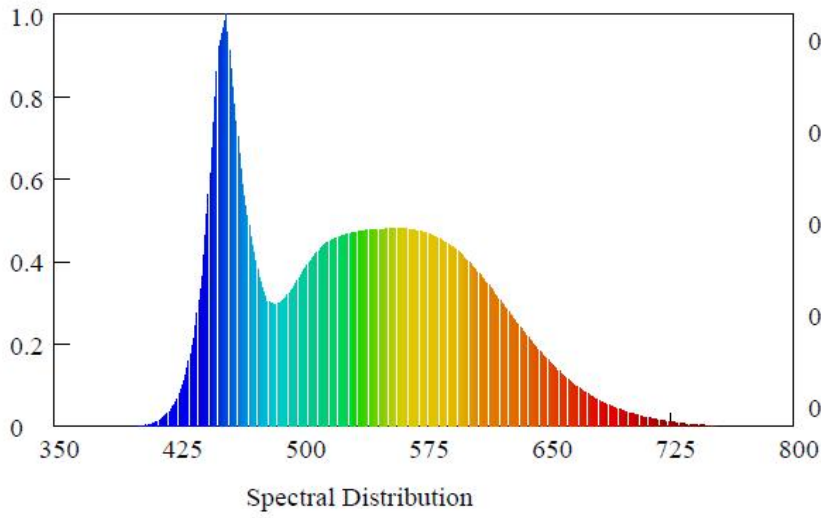
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Intensity Data													
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	
0.0	4187.40	4162.36	4116.32	4061.00	3933.39	3754.08	3594.16	3381.74	3112.38	2771.95	2416.57	2035.75	
22.5	4187.40	4175.15	4151.47	4073.48	3981.60	3841.95	3674.13	3456.49	3209.05	2877.48	2538.98	2120.04	
45.0	4187.40	4202.61	4161.50	4078.44	3996.20	3886.83	3694.81	3500.74	3261.43	2976.08	2640.15	2164.01	
67.5	4187.40	4186.16	4159.31	4118.00	4026.30	3904.03	3728.88	3541.34	3298.86	2977.07	2538.79	2097.62	
90.0	4187.40	4193.21	4168.72	4107.28	4013.46	3907.19	3756.08	3551.42	3312.31	2965.68	2492.02	2108.02	
112.5	4187.40	4196.23	4169.31	4103.69	4009.05	3891.69	3747.00	3556.03	3325.94	3017.62	2600.77	2141.02	
135.0	4187.40	4181.91	4165.87	4080.57	4013.43	3884.23	3724.20	3531.23	3317.58	3047.76	2741.21	2287.30	
157.5	4187.40	4165.18	4124.51	4059.11	3951.37	3835.24	3681.79	3488.10	3266.32	2969.08	2652.55	2262.65	
180.0	4187.40	4179.73	4149.84	4073.11	3961.65	3819.50	3670.49	3478.26	3245.65	2925.40	2623.33	2236.46	
202.5	4187.40	4177.19	4143.30	4066.53	3941.18	3797.04	3621.87	3439.75	3215.99	2936.69	2605.95	2217.22	
225.0	4187.40	4160.26	4089.54	4030.33	3923.43	3784.86	3615.46	3409.05	3206.34	2949.76	2640.56	2209.65	
247.5	4187.40	4163.44	4099.00	4020.10	3920.55	3768.95	3630.15	3443.85	3215.01	2897.76	2528.05	2185.20	
270.0	4187.40	4156.27	4102.30	4010.14	3911.75	3793.44	3633.20	3448.89	3189.85	2877.67	2509.45	2167.80	
292.5	4187.40	4181.09	4104.11	4035.97	3949.32	3802.94	3631.74	3446.24	3211.11	2922.56	2530.11	2175.51	
315.0	4187.40	4167.13	4132.93	4045.10	3914.21	3765.16	3609.35	3411.31	3167.26	2925.73	2587.51	2164.00	
337.5	4187.40	4184.88	4116.97	4020.12	3903.15	3754.32	3584.53	3372.39	3117.91	2800.54	2481.08	2082.80	
360.0	4187.40	4162.36	4116.32	4061.00	3933.39	3754.08	3594.16	3381.74	3112.38	2771.95	2416.57	2035.75	
C/γ(°)	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	115.0	
0.0	1580.62	1105.71	668.76	309.74	72.29	12.12	2.02	1.62	1.62	2.02	2.42	3.23	
22.5	1672.10	1187.01	703.96	313.19	73.91	13.88	2.45	1.22	1.63	2.04	2.86	3.27	
45.0	1628.66	1194.87	608.54	211.34	59.21	13.16	2.88	1.64	1.64	2.06	2.47	3.29	
67.5	1672.15	989.74	520.07	119.38	49.98	13.22	3.30	1.24	1.24	1.65	2.07	3.30	
90.0	1480.35	961.02	419.69	111.67	49.82	14.11	3.32	1.25	1.25	1.66	2.08	2.91	
112.5	1760.35	1160.11	559.44	156.48	56.36	15.56	3.37	1.26	1.26	1.68	2.10	2.94	
135.0	1759.49	1297.14	763.42	294.30	63.76	17.73	2.96	1.27	1.69	1.69	2.53	2.96	
157.5	1833.77	1399.01	886.70	438.11	117.39	20.54	2.52	1.26	1.26	1.68	2.52	3.35	
180.0	1803.14	1341.95	891.67	469.26	151.04	25.04	1.62	1.62	1.21	1.62	2.02	2.42	
202.5	1797.46	1382.60	878.31	457.74	125.36	18.78	2.45	1.22	1.22	1.63	2.04	2.86	
225.0	1770.93	1209.26	710.10	281.65	57.15	12.34	3.29	0.82	1.23	1.64	2.06	2.88	
247.5	1570.53	1081.45	515.11	123.92	40.07	12.81	4.54	0.83	1.24	1.24	2.07	2.89	
270.0	1556.32	886.30	385.24	97.14	38.61	12.04	5.40	0.83	1.25	1.66	2.08	2.91	
292.5	1562.23	1043.17	430.31	108.10	40.38	10.52	5.05	1.26	1.26	1.68	2.10	2.94	
315.0	1695.73	1114.30	636.32	200.57	43.49	8.87	3.38	1.27	1.27	1.69	2.11	2.96	
337.5	1676.55	1213.71	740.38	337.49	76.30	10.48	1.68	1.26	1.68	2.10	2.10	3.35	
360.0	1580.62	1105.71	668.76	309.74	72.29	12.12	2.02	1.62	1.62	2.02	2.42	3.23	
C/γ(°)	120.0	125.0	130.0	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0	180.0
0.0	4.04	4.44	5.25	5.65	6.06	6.87	7.27	7.27	7.27	7.67	8.08	8.08	8.48
22.5	4.08	4.49	5.31	5.72	6.12	6.94	6.94	6.94	7.35	7.35	7.76	8.17	8.17
45.0	3.70	4.52	5.35	5.76	6.17	6.58	6.99	7.40	7.40	7.40	7.81	7.81	8.22
67.5	3.72	4.54	4.96	5.78	6.20	7.02	7.02	7.02	7.44	7.44	7.85	8.26	8.26
90.0	3.32	4.15	4.98	5.40	6.23	6.64	7.06	7.06	7.47	7.47	7.89	8.30	8.30
112.5	3.79	4.63	5.47	5.89	6.31	6.31	6.73	7.15	7.57	7.57	7.99	8.41	8.41
135.0	3.80	4.22	5.07	5.49	5.91	6.76	7.18	7.18	7.18	7.60	7.60	8.02	8.44
157.5	3.77	4.19	4.61	5.45	5.87	6.29	6.71	7.13	7.13	7.55	7.97	8.38	8.38
180.0	3.63	4.04	4.44	5.25	6.06	6.46	6.46	6.87	6.87	7.27	7.67	7.67	8.48
202.5	3.67	4.49	4.90	5.31	5.72	6.12	6.53	6.94	7.35	7.35	7.76	7.76	8.17
225.0	3.70	4.11	4.93	5.35	6.17	6.17	6.58	6.99	6.99	7.40	8.22	7.81	8.22
247.5	3.30	4.13	4.96	5.78	5.78	6.20	6.61	7.02	7.44	7.44	7.85	7.85	8.26
270.0	3.32	4.15	4.98	5.40	6.23	6.23	7.06	7.06	7.47	7.47	7.89	7.89	8.30
292.5	3.37	4.21	5.05	5.89	6.31	6.73	7.15	7.15	7.57	7.57	7.99	7.99	8.41
315.0	3.80	4.22	5.07	5.49	6.33	6.76	7.18	7.60	7.60	7.60	8.02	7.60	8.44
337.5	3.77	4.61	5.03	5.87	5.87	6.71	6.71	7.13	7.55	7.55	7.97	7.97	8.38
360.0	4.04	4.44	5.25	5.65	6.06	6.87	7.27	7.27	7.27	7.67	8.08	8.08	8.48

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Colorimetric Graphs

Spectroradiometric Parameters



1.3.Conclusion: NA

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Name of Test: Ingress Protection Test Report

Applicable Test Standards or Test Methods	IS 10322 (Part 1): 2014, Cl. No. 9.2 IS 10322 (Part 5/ Sec 3): 2013, Cl. No. 14
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Test Discipline	Electrical	Test Group	Lamps, Luminaires and Accessories
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Test Date(s)	30.09.2022
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Equipment and Calibration Details

Sr. No.	Name of Instruments	Lab ID No.	Due Date	Traceable to
1	IP 5X6X Chamber (Measuring Scale)	EAMP-E-072	21.05.2023	BICL, Kalyan
	IP 5X6X Chamber (Test Sieves)		09.04.2023	G&B, Mumbai
	IP 5X6X Chamber (Flow Totalizer)		17.11.2022	E. I. Noida
2	IP X6 Water Jet Nozzle	EAMP-E-138	12.11.2022	Tanson Instrument

Environmental Conditions

Ambient Temperature (°C)	Relative Humidity (%RH)	Air Pressure (hPa)
27.4°C	47%	-

1.1 Test Details:

Characteristic Numeral	Degree of Protection as IS 10322 (Part 5/ Sec 3): 2013		Remark
	Brief Description	Cl. No	
Degree of protection against Solid Foreign Objects (First Characteristic Numeral:IP6X)			
0	Not Protected	-	-
2	Solid-Object-Proof Luminaires	9.2.0	-
3	Solid-Object-Proof Luminaires	9.2.0	-
4	Solid-Object-Proof Luminaires	9.2.0	-
5	Dust Proof Luminaires	9.2.1	-
6	Dust Tight Luminaires	9.2.2	Applied
Degree of protection against Water (Second Characteristic Numeral:IPX6)			
0	Not Protected	-	-
1	Drip Proof Luminaires	9.2.3	-
3	Rain Proof Luminaires	9.2.4	-
4	Splash Proof Luminaires	9.2.5	-
5	Jet Proof Luminaires	9.2.6	-
6	Powerful Water Jet Proof Luminaires	9.2.7	Applied
7	Water Tight Luminaires	9.2.8	-

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1.2 Test Observation

Clause	Test/ Requirement Name	Test Result/ Observation	Verdict
14 (9)	Resistance to dust and moisture		P
14 (-)	If IP > IP 20 the order of tests as specified in clause 9.2	IP 66	P
14 (9.2)	Tests for ingress of dust, solid objects and moisture:	See below	P
	- Classification according to IP.....	IP 66	P
	- mounting position during test.....	Normal Position	--
	- fixing screws tightened; torque (Nm).....	--	--
	- Tests according to clauses.....	9.2.2 & 9.2.7	--
	- electric strength test afterwards	Withstood	P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire	Complied	P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	No trace of water on current carrying parts or on insulation	P
	d) i) For luminaires without drain holes – no water entry	Satisfactory	P
	e) no water in watertight luminaire		N/A
	f) no contact with live parts (IP 2X)		N/A
	g) no entry into enclosure (IP 3X and IP 4X)		N/A
	h) no contact with live parts (IP3X and IP4X)		N/A

1.3 Conclusion: The result of the test were in compliance with the requirements in the test standard.

Photographs (before testing)



Photographs (after testing)

1. No ingress of Solid Objects



2. No ingress of water



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Name of Test: Impact (IK) Test Report

Applicable Test Standards or Test Methods	IEC 62262: 2002, Cl. No. 6
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Test Discipline	Electrical	Test Group	Environmental Test Facilities
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Test Date(s)	30.09.2022
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Equipment and Calibration Details

Sr. No.	Name of Instruments	Lab ID No.	Due Date	Traceable to
1	Impact Test Setup: Hammer	EAMP-E-017	24.05.2023	G&B, Mumbai

Environmental Conditions

Ambient Temperature (°C)	Relative Humidity (%RH)	Air Pressure (hPa)
26.4	47.0	1000.3

1.4. Test Details:

Sr. No.	Parameter	Details
1	IK Test Rating	IK 07
2	Impact Hammer	Vertical Impact Hammer
3	Number of Impacts	3 Impacts on 5 Locations each

Other information

Whether the product operated during test?	No
If yes, Input Voltage?	--

1.5. Test Observation:

The sample under test withstood without any visual damage after applying impact of IK07

1.6. Conclusion: After the test, there was no damage, no deformation, and no access to live parts.

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1.7. Photographs

Before Testing,



After Impact



****End of Report****

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