

Photometric Test Report

Relevant Standards

- ☒ IES LM-79-2008
- ☒ ANSI C82.77:2017

Prepared For

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Test Date

2023/1/10

Issue Date

2023/1/14

Prepared By



Wangzun Zhu

Approved By



Kevin Jia

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1.0 Test Summary

DLC Technical Requirements v5.1

Outdoor - Pole/Arm-Mounted Area and Roadway Luminaires				
Requirement Category	Test Method	Requirements		Test value
Luminaire Output (lm) (Goniophotometer - Section 4.2)	IES LM-79-2008	1000		10172
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	125.4
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		81.1
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	2.32%
		20.00%	277V	7.28%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.999
		0.9	277V	0.965
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3045±175	2899
		4 step	3045±100	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		82
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		3
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		84
Minimum Rg (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥89		94
Minimum IES Rcs,h1 (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	-18%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-90°) (Goniophotometer - Section 4.2)	IES LM-79-2008	100%		100.00%
Zonal Lumen Requirement (80°-90°) (Goniophotometer - Section 4.2)	IES LM-79-2008	≤10%		2.05%
Input Voltage (V)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		120
(Goniophotometer - Section 4.2)		Non-Worst Case		277
Input Current (A)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		0.677
(Goniophotometer - Section 4.2)		Non-Worst Case		0.295
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		81.1
(Goniophotometer - Section 4.2)		Non-Worst Case		78.8

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2023/1/10	ALEDS4TY	B1
2	Goniophotometer Test	2023/1/10	ALEDS4TY	B1
3	THD and PF Test	2023/1/10	ALEDS4TY	B1

Remark(If any)

- 1、 This report shall not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the US government.
- 2、 The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.

3.0 Production Description

Luminaire Description: ALEDS4TY

Description: 80W @ 3000K

Electrical Specification: 120V-277V,50/60HZ

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	ALEDS4TY	Sample ID.	B1
Opreate time (Min.)	90	Stabilization time (Min.)	45
Temperature (°C)	25.3	Humidity (%RH)	56.0

Test Method

The samples were tested according to the IES LM-79-2008.

Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$.

The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.

The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ± 0.2 percent under load.

The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

Test Result

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.06	60	0.675	81.0	0.999
277.04	60	0.295	78.9	0.965

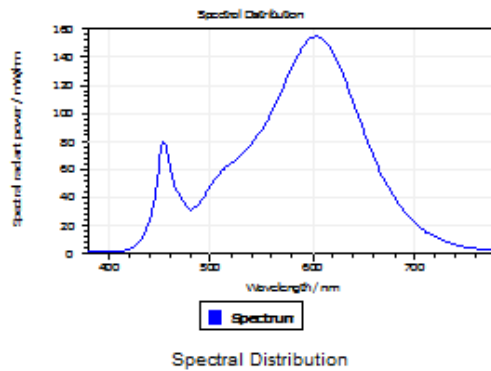
Test Result

CCT (K)	CRI	R9	Duv
2899	82	3	0.00095

Rf	Rg	IES Rcs,h1
84	94	-12%

4.1 Integrating Sphere Test

Results



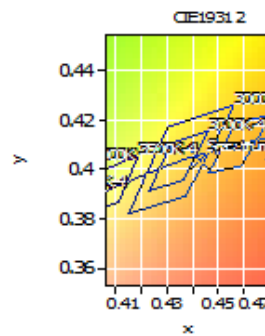
Spectral values

DominantWavelength 583.60 nm
Purity 0.541
PeakWavelength 603.60 nm
Radiant Power 22.24 W
Width50%:

Color Coordinates

Correlated Color Temporal 2899 K
x: 0.4428 u: 0.2546 u': 0.2546
y: 0.4036 v: 0.3480 v': 0.5221

CRI01	80.6	CRI09	3.1
CRI02	92.5	CRI10	83.2
CRI03	93.4	CRI11	77.5
CRI04	78.2	CRI12	73.8
CRI05	80.8	CRI13	83.6
CRI06	91.1	CRI14	97.0
CRI07	80.4	CRI15	72.7
CRI08	55.8	CRI16	69.5
ResultsCRI	81.6		



PlanckDistance 9.5E-004

4.1 Integrating Sphere Test

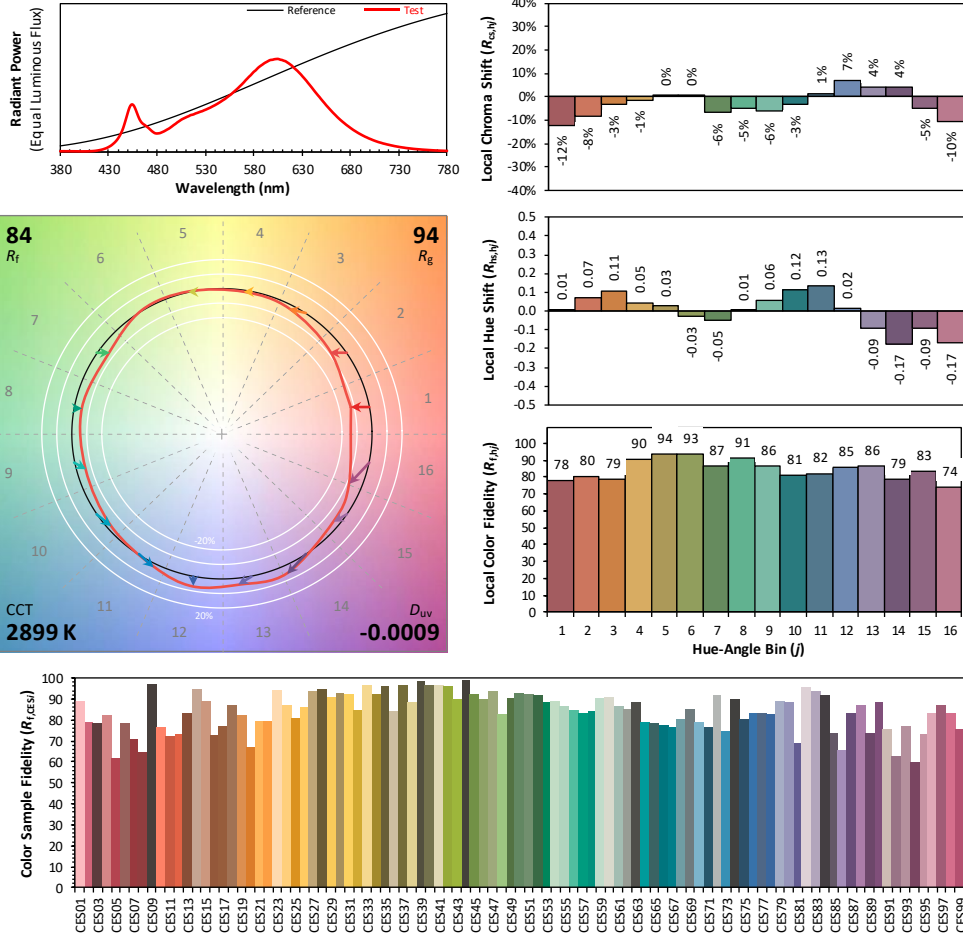
IES TM-30-18 Color Rendition Report

Source: DLF2301106-2a

Manufacturer: RAB Lighting Inc.

Date: 2023/1/10

Model: ALEDS4TY



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4428
 y 0.4036
 u' 0.2546
 v' 0.5221

CIE 13.3-1995
(CRI)

R_a 82
 R_9 3

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	ALEDS4TY	Sample ID.	B1
Opreate time (Min.)	90	Stabilization time (Min.)	45
Temperature (°C)	25.3	Humidity (%RH)	54.0

Test Method

The samples were tested according to the IES LM-79-2008.

Photometric paramters were measured using a type C goniophotometer and software.

The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample.

The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ± 0.2 percent under load.

The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 0.5° vertical intervals and 10° horizontal intervals.

Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	120.00	60	0.677	81.1	0.998
NON-WROST CASE	277.02	60	0.295	78.8	0.965

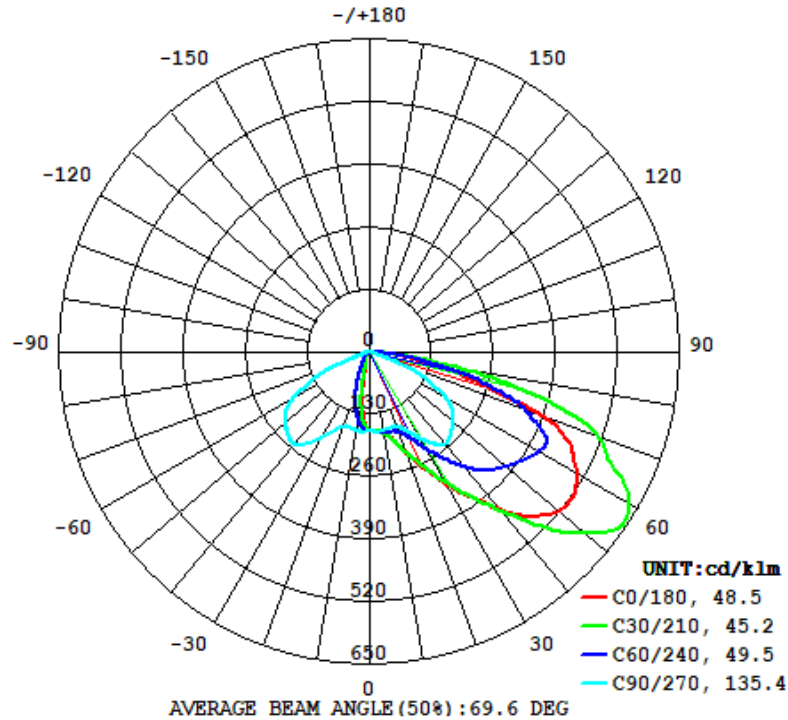
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
10172	96.4	148.2	48.5	135.4	125.4

Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	2.05%	B1-U0-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



4.2 Goniophotometer Test

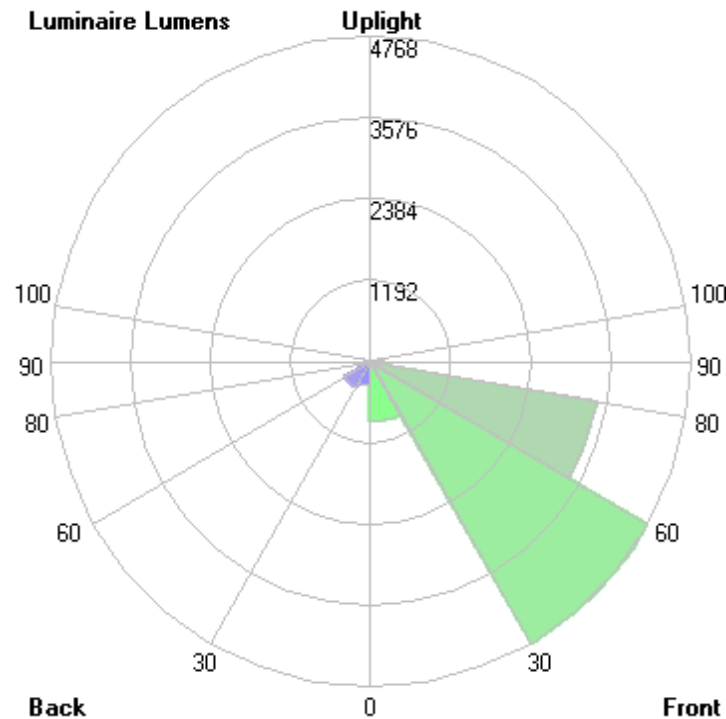
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	168.9	173.1	167.5	125.4	93.87	125.4	167.5	173.1
20	220.8	198.0	166.0	46.79	24.14	46.79	166.0	198.0
30	315.3	265.9	206.7	22.15	16.36	22.15	206.7	265.9
40	430.0	378.1	250.5	16.25	9.199	16.25	250.5	378.1
50	515.5	512.0	229.7	9.556	3.416	9.556	229.7	512.0
60	504.9	576.0	181.7	5.047	2.497	5.047	181.7	576.0
70	376.3	472.6	51.15	3.512	1.727	3.512	51.15	472.6
80	98.80	191.5	7.815	1.579	0.7676	1.579	7.815	191.5
90	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0
DEG	LUMINOUS INTENSITY:cd/klm							

	Zonal (lm)		Total (lm)	Percent
0-10	152.99	0 - 10	152.99	1.50%
10-20	396.86	0 - 20	549.85	5.41%
20-30	688.08	0 - 30	1237.93	12.17%
30-40	1183.31	0 - 40	2421.24	23.80%
40-50	1781.57	0 - 50	4202.81	41.32%
50-60	2247.43	0 - 60	6450.24	63.41%
60-70	2203.49	0 - 70	8653.73	85.07%
70-80	1309.78	0 - 80	9963.51	97.95%
80-90	208.98	0 - 90	10172.49	100.00%
90-100	0.00	0 - 100	10172.49	100.00%
100-110	0.00	0 - 110	10172.49	100.00%
110-120	0.00	0 - 120	10172.49	100.00%
120-130	0.00	0 - 130	10172.49	100.00%
130-140	0.00	0 - 140	10172.49	100.00%
140-150	0.00	0 - 150	10172.49	100.00%
150-160	0.00	0 - 160	10172.49	100.00%
160-170	0.00	0 - 170	10172.49	100.00%
170-180	0.00	0 - 180	10172.49	100.00%

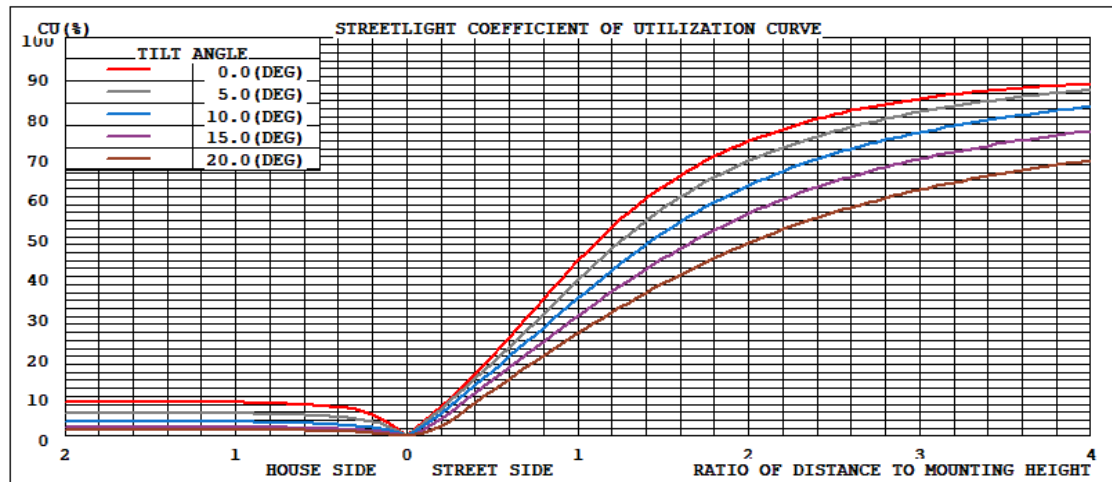
4.2 Goniophotometer Test

LCS/BUG

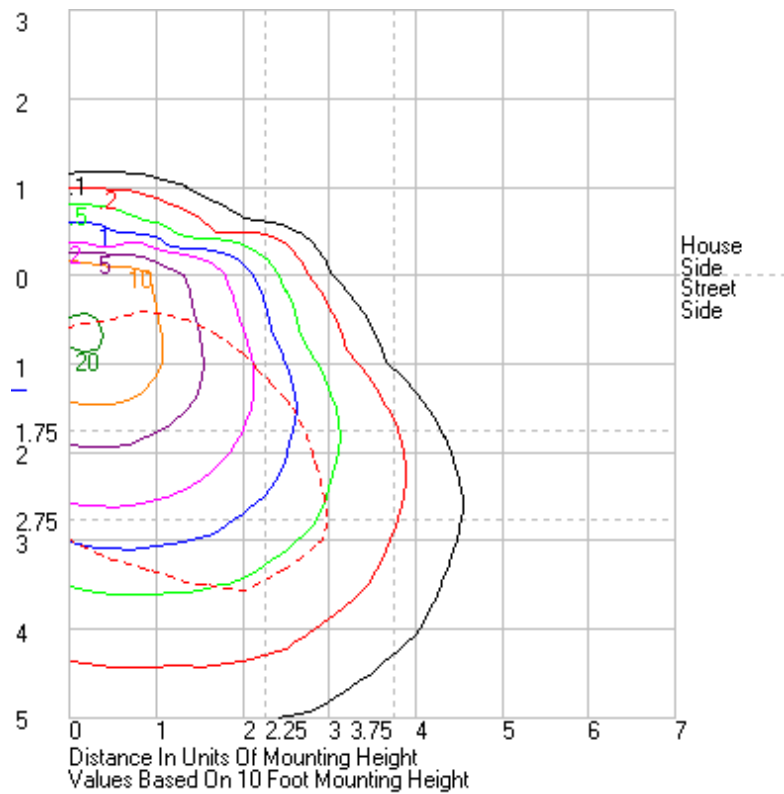


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	889.0	N.A.	8.7
FM - Front-Medium (30-60)	4767.7	N.A.	46.9
FH - Front-High (60-80)	3414.4	N.A.	33.6
FVH - Front-Very High (80-90)	204.1	N.A.	2.0
BL - Back-Low (0-30)	348.9	N.A.	3.4
BM - Back-Medium (30-60)	444.6	N.A.	4.4
BH - Back-High (60-80)	98.8	N.A.	1.0
BVH - Back-Very High (80-90)	4.9	N.A.	0.0
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	10172.4	N.A.	100.0
BUG Rating	B1-U0-G2		

Coefficients of Utilization



Isolines



4.2 Goniophotometer Test

	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360
0	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39	1696.39
1	1696.8	1693.9	1694.11	1694.94	1696.04	1694.72	1694.55	1693.29	1690.15	1687.89	1685.8	1683.92	1684.81	1683.92	1685.8	1687.89	1690.15	1693.29	1694.55	1694.72	1696.04	1694.94	1694.11	1693.9	1696.8
2	1691.95	1690.75	1691.97	1695.05	1697.71	1699.2	1696.74	1692.41	1686.22	1676.41	1668.83	1660.64	1661.23	1660.64	1668.83	1676.41	1686.22	1692.41	1696.74	1699.2	1697.71	1695.05	1691.97	1690.75	1691.95
3	1687.49	1687.26	1690.76	1695.85	1699.65	1702.79	1701	1692.91	1678.89	1658.98	1636.7	1621.62	1617.49	1621.62	1636.7	1658.98	1678.89	1692.91	1701	1702.79	1699.65	1695.85	1690.76	1687.26	1687.49
4	1685.61	1686.14	1692.13	1699.26	1704.47	1709.28	1705.83	1692.55	1667.39	1629.79	1591.85	1561.26	1551.45	1561.26	1591.85	1629.79	1667.39	1692.55	1705.83	1709.28	1704.47	1699.26	1692.13	1686.14	1685.61
5	1683.43	1685.37	1694.92	1703.79	1711.01	1714.82	1710.34	1690.72	1650.53	1591.91	1530.81	1485.18	1475.52	1485.18	1530.81	1591.91	1650.53	1690.72	1710.34	1714.82	1711.01	1703.79	1694.92	1685.37	1683.43
6	1684.4	1686.33	1699.16	1711.83	1719.07	1720.57	1713.26	1686.08	1626.45	1542.21	1457.3	1398.35	1379.78	1398.35	1457.3	1542.21	1626.45	1686.08	1713.26	1720.57	1719.07	1711.83	1699.16	1686.33	1684.4
7	1688.11	1692.69	1707.18	1722.32	1728.07	1724.56	1713.81	1678.44	1595.79	1483.86	1377.74	1303.39	1284.05	1303.39	1377.74	1483.86	1595.79	1678.44	1713.81	1724.56	1728.07	1722.32	1707.18	1692.69	1688.11
8	1695.15	1702.61	1720.94	1732.43	1734.99	1727.33	1714.27	1667.51	1560.46	1419.66	1292.23	1205.2	1181.98	1205.2	1292.23	1419.66	1560.46	1667.51	1714.27	1727.33	1734.99	1732.43	1720.94	1702.61	1695.15
9	1707.23	1717.26	1738.07	1747.93	1742.25	1728.92	1711.35	1651.62	1518.83	1349.88	1200.99	1095.49	1066.29	1095.49	1200.99	1349.88	1518.83	1651.62	1711.35	1728.92	1742.25	1747.93	1738.07	1717.26	1707.23
10	1719.86	1736.33	1760.19	1762.32	1747.77	1727.16	1705.98	1636.4	1473.47	1277.45	1103.42	986.23	955.91	986.23	1103.42	1277.45	1473.47	1636.4	1705.98	1727.16	1747.77	1762.32	1760.19	1736.33	1719.86
11	1742.22	1759.21	1783.69	1778.53	1751.85	1722.93	1699.5	1616.4	1424.81	1200.77	1004.64	875.25	838.18	875.25	1004.64	1200.77	1424.81	1616.4	1699.5	1722.93	1751.85	1778.53	1783.69	1759.21	1742.22
12	1772.16	1791.19	1811.96	1794.74	1753.94	1718.63	1693.67	1595.65	1371.77	1117.52	901.46	763.32	724.02	763.32	901.46	1117.52	1371.77	1595.65	1693.67	1718.63	1753.94	1794.74	1811.96	1791.19	1772.16
13	1811.67	1828.32	1845.57	1812.43	1755.67	1713.96	1686.79	1574.63	1317.28	1034.75	799.81	654.98	615.28	654.98	799.81	1034.75	1317.28	1574.63	1686.79	1713.96	1755.67	1812.43	1845.57	1828.32	1811.67
14	1856.81	1878.21	1883.02	1831.05	1757.58	1708.96	1678.83	1550.2	1261.18	947.75	701.59	555.6	510.26	555.6	701.59	947.75	1261.18	1550.2	1678.83	1708.96	1757.58	1831.05	1883.02	1878.21	1856.81
15	1913.49	1936.67	1928.21	1850.25	1760.55	1705.45	1673.36	1524.91	1199.93	861.14	608.14	461.84	424.81	461.84	608.14	861.14	1199.93	1524.91	1673.36	1705.45	1760.55	1850.25	1928.21	1936.67	1913.49
16	1976.83	2000.46	1982.18	1873.41	1765.91	1703.05	1669.39	1498.97	1136.8	776.59	518.54	384.88	352.79	384.88	518.54	776.59	1136.8	1498.97	1669.39	1703.05	1765.91	1873.41	1982.18	2000.46	1976.83
17	2049.41	2077.72	2043.61	1899.92	1774.99	1705.09	1667.21	1476.76	1074.93	694.76	437.3	326.47	302.97	326.47	437.3	694.76	1074.93	1476.76	1667.21	1705.09	1774.99	1899.92	2043.61	2077.72	2049.41
18	2119.24	2151.88	2110.11	1932.89	1785.48	1707.3	1669.4	1452.78	1013.44	618.08	372.61	287.95	272.58	287.95	372.61	618.08	1013.44	1452.78	1669.4	1707.3	1785.48	1932.89	2110.11	2151.88	2119.24
19	2181.7	2225.77	2182.55	1973.77	1800.91	1714.72	1677.58	1433.06	953.47	544.03	324.51	264.3	255.62	264.3	324.51	544.03	953.47	1433.06	1677.58	1714.72	1800.91	1973.77	2182.55	2225.77	2181.7
20	2248.88	2299.26	2257.97	2016.67	1818.55	1727.17	1690.98	1417.17	896.18	476.51	289.43	250.67	245.88	250.67	289.43	476.51	896.18	1417.17	1690.98	1727.17	1818.55	2016.67	2257.97	2299.26	2248.88
21	2318.75	2373.29	2330.67	2064.79	1840.98	1745.36	1709.67	1402.98	840.24	417.12	267.8	240.78	235.41	240.78	267.8	417.12	840.24	1402.98	1709.67	1745.36	1840.98	2064.79	2330.67	2373.29	2318.75
22	2399.86	2454.18	2402.04	2119	1868.06	1770.19	1733.88	1390.63	786.88	366.82	254.26	231.64	226.23	231.64	254.26	366.82	786.88	1390.63	1733.88	1770.19	1868.06	2119	2402.04	2454.18	2399.86
23	2490.37	2538.2	2475.35	2176.29	1901.75	1800.89	1765.11	1380.61	735.8	327.47	244.17	222.74	217.75	222.74	244.17	327.47	735.8	1380.61	1765.11	1800.89	1901.75	2176.29	2475.35	2538.2	2490.37
24	2579.22	2635.09	2552.19	2240.09	1941.81	1838.31	1801.76	1371.13	685.38	296.8	235.7	214.37	209.88	214.37	235.7	296.8	685.38	1371.13	1801.76	1838.31	1941.81	2240.09	2552.19	2635.09	2579.22
25	2677.75	2737.53	2638.57	2308.32	1991.03	1885.9	1843.76	1363.04	634.27	274.66	227.17	206.9	201.78	206.9	227.17	274.66	634.27	1363.04	1843.76	1885.9	1991.03	2308.32	2638.57	2737.53	2677.75
26	2778.15	2841.94	2729.8	2379.38	2046.29	1935.22	1891.18	1355.64	584.15	259.59	219.48	200.01	194.09	200.01	219.48	259.59	584.15	1355.64	1891.18	1935.22	2046.29	2379.38	2729.8	2841.94	2778.15
27	2881.13	2952.06	2827.38	2456.41	2109.18	1993.47	1941.68	1347.72	534.64	248.94	212.17	193.16	187.26	193.16	212.17	248.94	534.64	1347.72	1941.68	1993.47	2109.18	2456.41	2827.38	2952.06	2881.13
28	2992.23	3065.76	2931.62	2535.86	2177.82	2052.99	1994.15	1339.84	485.3	240.36	205.46	186.83	180.43	186.83	205.46	240.36	485.3	1339.84	1994.15	2052.99	2177.82	2535.86	2931.62	3065.76	2992.23
29	3100.75	3185.29	3034.99	2615.55	2251.7	2115.18	2048.52	1331.92	440.19	232.87	199.4	180.28	173.39	180.28	199.4	232.87	440.19	1331.92	2048.52	2115.18	2251.7	2615.55	3034.99	3185.29	3100.75
30	3210.83	3304.01	3147.39	2708.36	2331.24	2179.61	2105.29	1320.5	397.45	225.6	192.95	173.52	166.61	173.52	192.95	225.6	397.45	1320.5	2105.29	2179.61	2331.24	2708.36	3147.39	3304.01	3210.83
31	3316.83	3422.67	3258.91	2800.69	2416	2243.21	2163.6	1308.56	359.63	218.69	187.1	166.71	159.48	166.71	187.1	218.69	359.63	1308.56	2163.6	2243.21	2416	2800.69	3258.91	3422.67	3316.83
32	3418.35	3547.41	3372.27	2902.4	2499.6	2312.97	2221.27	1295.45	326.97	212.39	181.02	159.79	151.89	159.79	181.02	212.39	326.97	1295.45	2221.27	2312.97	2499.6	2902.4	3372.27	3547.41	3418.35
33	3532.94	3673.64	3489.96	3008.3	2586.9	2382.42	2279.81	1276.99	299.75	206.4	174.76	152.39	144.31	152.39	174.76	206.4	299.75	1276.99	2279.81	2382.42	2586.9	3008.3	3489.96	3673.64	3532.94
34	3636.66	3797.62	3608.01	3117.37	2674.11	2451.51	2335.33	1255.96	277.95	200.45	168.39	145.01	136.83	145.01	168.39	200.45	277.95	1255.96	2335.33	2451.51	2674.11	3117.37	3608.01	3797.62	3636.66
35	3744.75	3918.91	3731.86	3232.38	2761.66	2517.42	2386.42	1229.53	260.3	194.92	161.62	137.56	129.18	137.56	161.62	194.92	260.3	1229.53	2386.42	2517.42	2761.66	3232.38	3731.86	3918.91	3744.75
36	3865.54	4038.95	3862.93	3349.91	2849.56	2581.48	2431.67	1196.73	247.79	189.3	154.76	130.24	122.01	130.24	154.76	189.3	247.79	1196.73	2431.67	2581.48	2849.56	3349.91	3862.93	4038.95	3865.54
37	3978.43	4169.83	3993.69	3472.83	2937.92	2642.71	2475.49	1158.08	237.69	183.57	147.51	123.09	115.09	123.09	147.51	183.57	237.69	1158.08	2475.49	2642.71	2937.92	3472.83	3993.69	4169.83	3978.43
38	4118.23	4306.67	4126.96	3596.7	3027.5	2701.98	2509.94	1117.88	229.74	177.76	140.17	116.39	108.23	116.39	140.17	177.76	229.74	1117.88	2509.94	2701.98	3027.5	3596.7	4126.96	4306.67	4118.23
39	4245.2	4454.03	4266.42	3722.27	3113.32	2752.57	2537.66	1																	

Page 13 of 17

Page 14 of 17



161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	ALEDS4TY	Sample ID.	B1
Temperature (°C)	25.3	Humidity (%RH)	56.0

Test Method

The samples were tested according to the ANSI C82.77:2002.

The total harmonic distortion shall be measured to the 40th order.

The ambient temperature condition was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion were calculated.

Test Results

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
120.06	60	0.675	81.0	0.999	2.32%
277.04	60	0.295	78.9	0.965	7.28%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2022/12/26	2023/12/25
DLF108	Auxiliary Lamp	2022/12/26	2023/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2022/12/26	2023/12/25
DLF116	AC Power Source	2022/12/26	2023/12/25
DLF113	Power Meter	2022/12/26	2023/12/25
DLF112	Temperature Recorder	2022/12/26	2023/12/25
DLF114	Temperature & Humidity Datalogger	2022/12/26	2023/12/25
DLF101	Goniophotometer	2022/12/26	2023/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2022/12/26	2023/12/25
DLF104	AC Power Source	2022/12/26	2023/12/25
DLF507	DC Power Source	2022/12/26	2023/12/25
DLF102	Power Meter	2022/12/26	2023/12/25
DLF111	Temperature & Humidity Datalogger	2022/12/26	2023/12/25
DLF119	Power Meter	2022/12/26	2023/12/25
DLF031	Temperature data logger	2022/12/26	2023/12/25
DLF022	Digital power meter	2022/12/26	2023/12/25
DLF003	Temperature & Humidity Datalogger	2022/12/26	2023/12/25

***** End of Test Report*****