

Photometric Test Report

Relevant Standards

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

Prepared For

RAB Lighting Inc.

Room 6A33, No.1388, Wuzhong road, Shanghai, China

Xiao Xiang, 15921313292, Gary.Xiao@rabweb.com

Prepared By

Deliver Co., Ltd.

Block 11, 78 Keling Road, SSTP, Suzhou, China

0512-66801950, kevin.jia@szdeliver.com

Project Number

DLF2301106

Report Number

DLF2301106-11a

Test Date

2023/1/11

Issue Date


2023/1/16

Prepared By



Wangzun Zhu

Approved By



Kevin Jia

The results contained in this report pertain only to the tested sample.

This report shall not be reproduced, except in full, without written approval of Deliver Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP.

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		13545
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	146.1
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		92.7
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	5.26%
		20.00%	277V	11.71%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.998
		0.9	277V	0.902
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3045±175	2908
		4 step	3045±100	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		81
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		2
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		83
Minimum Rg (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥89		98
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%		0.30%
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		0.774
(Goniophotometer - Section 4.2)		Non-Worst Case		0.365
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		92.7
(Goniophotometer - Section 4.2)		Non-Worst Case		91.1

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2023/1/11	ALEDM5TY	K1
2	Goniophotometer Test	2023/1/11	ALEDM5TY	K1
3	THD and PF Test	2023/1/11	ALEDM5TY	K1

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.

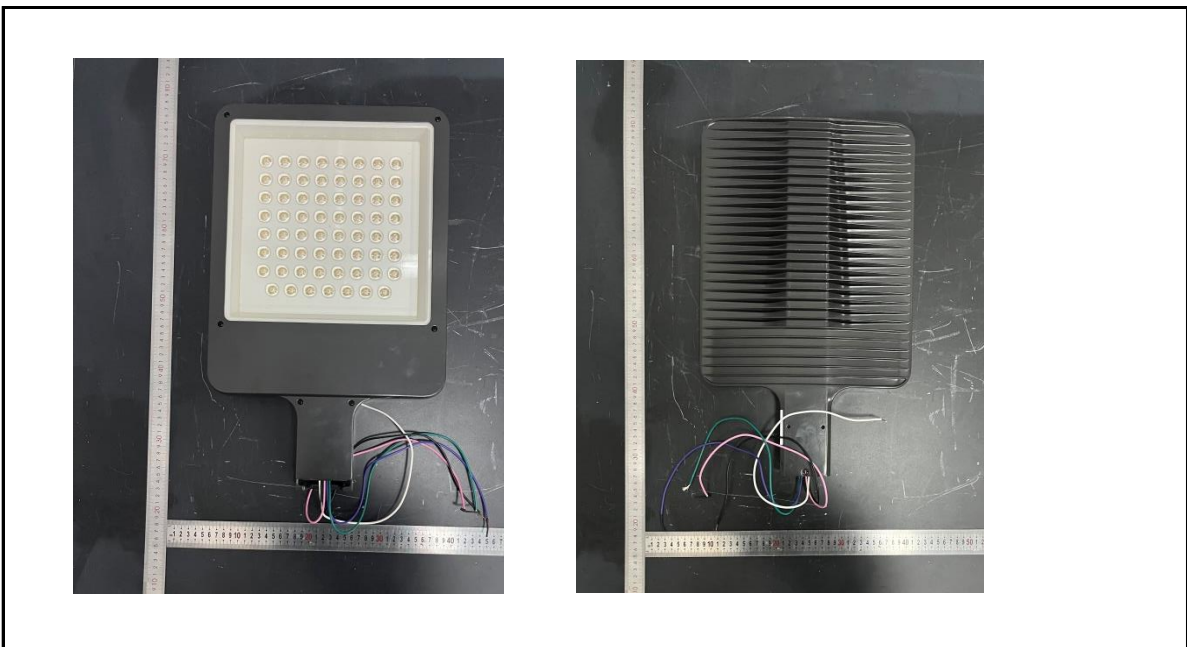
3.0 Production Description

Luminaire Description: ALEDM5TY

Description: 90W @ 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.	ALEDM5TY	Sample ID.	K1
Operate 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 parameters 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
120.07	60	0.767	91.9	0.998
277.01	60	0.361	90.2	0.902

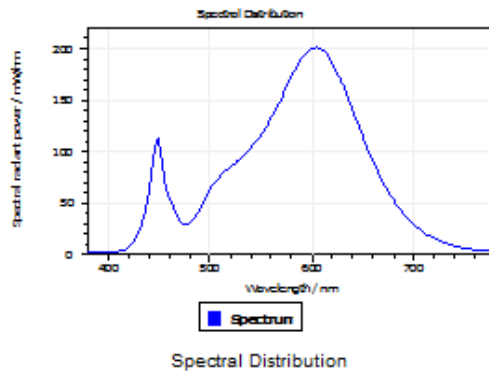
Test Result

CCT (K)	CRI	R9	Duv
2908	81	2	0.0021

Rf	Rg	IES Rcs,h1
83	98	-12%

4.1 Integrating Sphere Test

Results

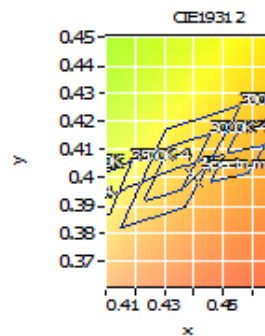


Spectral values

DominantWavelength 584.00 nm
Purity 0.522
PeakWavelength 603.81 nm
Radiant Power 29.2 W
Width50%:

Color Coordinates

Correlated Color Temporal 2908 K
x: 0.4404 u: 0.2547 u': 0.2547
y: 0.3998 v: 0.3468 v': 0.5202
CRI01 79.9 CRI09 2.3
CRI02 90.6 CRI10 79.2
CRI03 95.3 CRI11 78.9
CRI04 79.1 CRI12 74.8
CRI05 80.2 CRI13 82.4
CRI06 88.7 CRI14 98.0
CRI07 81.0 CRI15 72.2
CRI08 56.2 CRI16 70.1
ResultsCRI 81.4



PlanckDistance 2.1E-003

4.1 Integrating Sphere Test

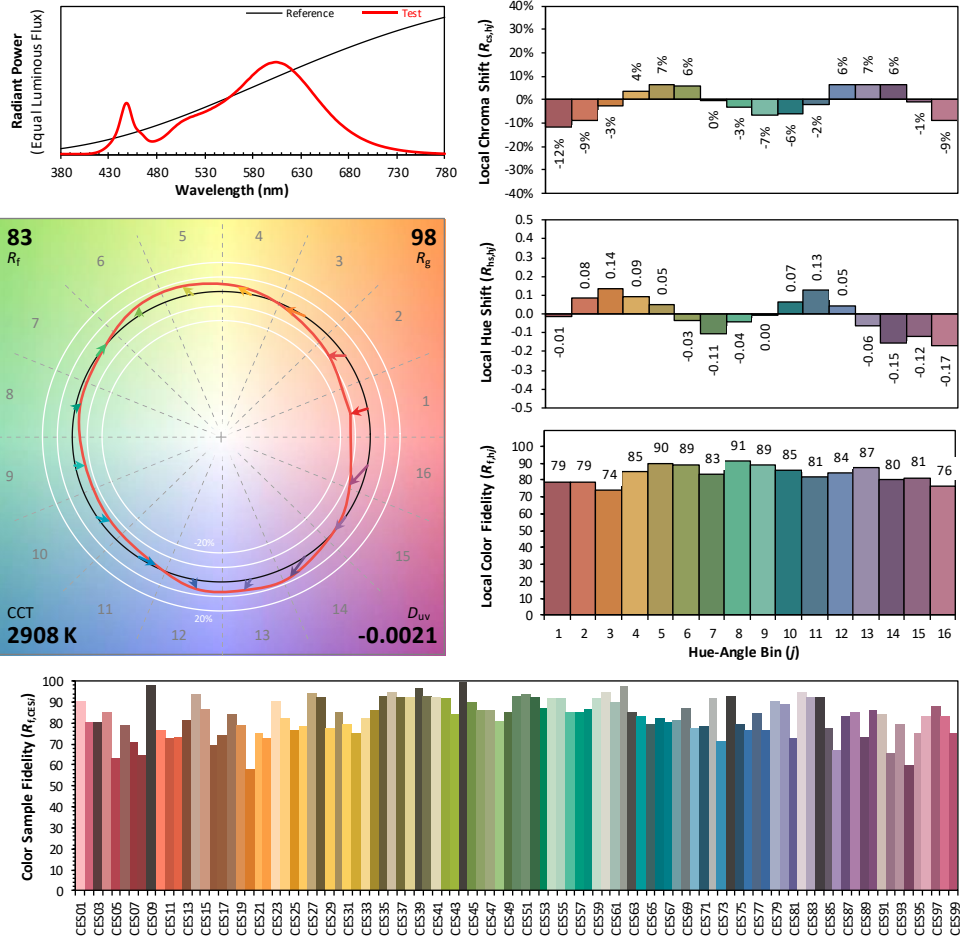
IES TM-30-18 Color Rendition Report

Source: DLF2301106-11a

Manufacturer: RAB Lighting Inc.

Date: 2023/1/11

Model: ALEDM5TY



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

x 0.4404
 y 0.3998
 u' 0.2547
 v' 0.5202

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.	ALEDM5TY	Sample ID.	K1
Operate 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 parameters 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	119.96	60	0.774	92.7	0.998
NON-WORST CASE	277.07	60	0.365	91.1	0.902

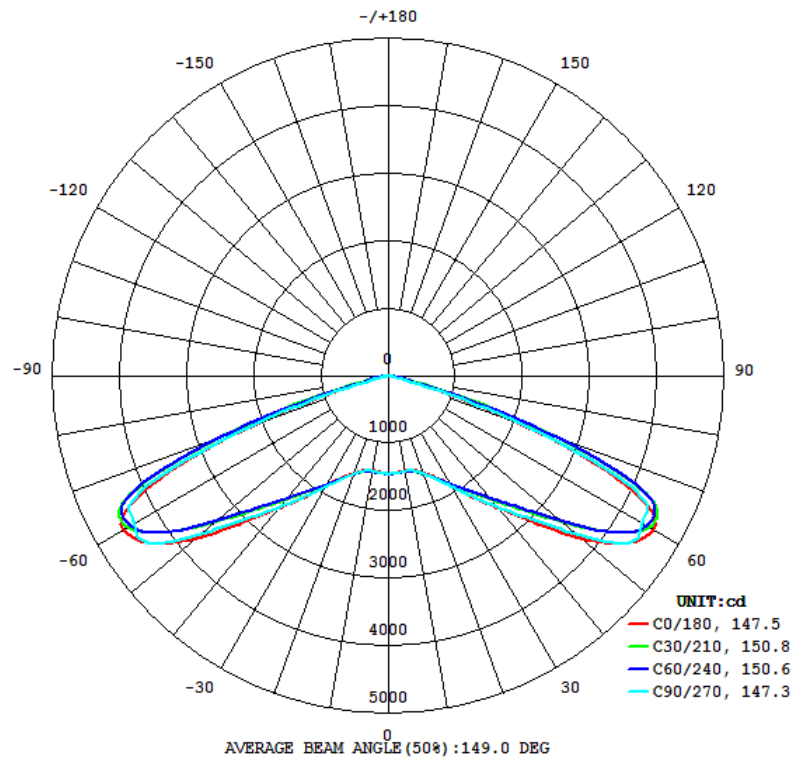
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
13545	154.8	153.8	147.5	147.3	146.1

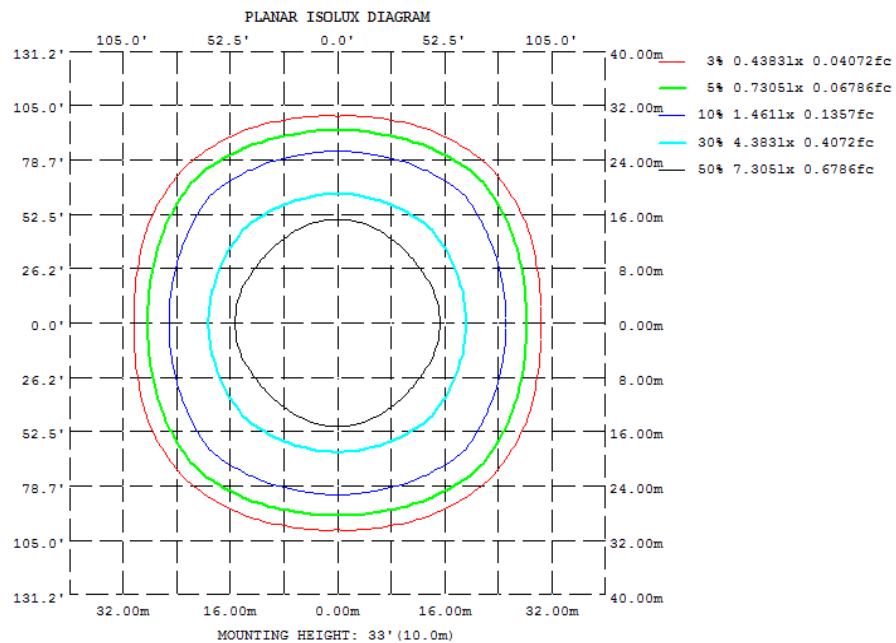
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.30%	B3-U0-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

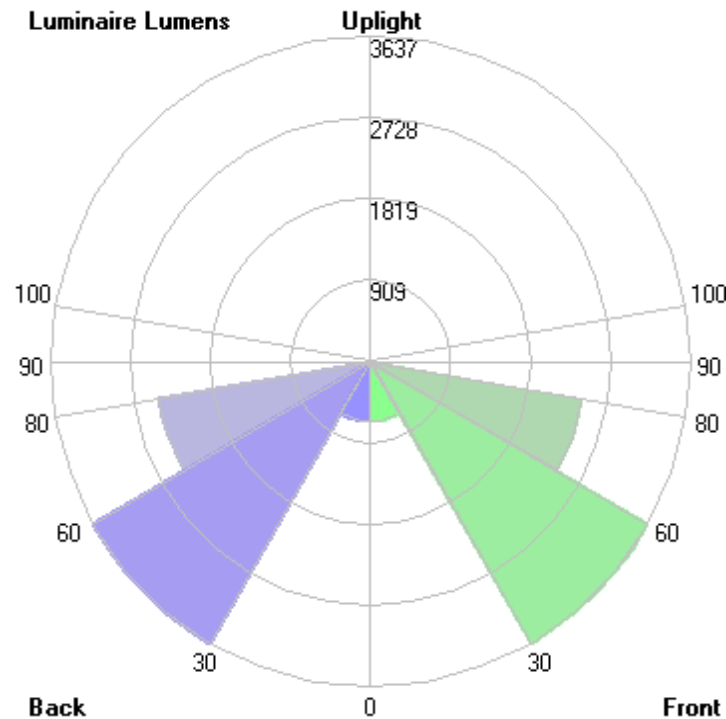
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	1430	1455	1439	1455	1430	1455	1439	1455
20	1535	1561	1552	1561	1535	1561	1552	1561
30	1880	1833	1906	1833	1880	1833	1906	1833
40	2557	2318	2545	2318	2557	2318	2545	2318
50	3740	3228	3650	3228	3740	3228	3650	3228
60	4559	4597	4374	4597	4559	4597	4374	4597
70	2137	3141	2204	3141	2137	3141	2204	3141
80	81.97	136.5	74.10	136.5	81.97	136.5	74.10	136.5
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							

	Zonal (lm)		Total (lm)	Percent
0-10	138.35	0 - 10	138.35	1.02%
10-20	421.09	0 - 20	559.44	4.13%
20-30	787.56	0 - 30	1347.00	9.94%
30-40	1348.42	0 - 40	2695.42	19.90%
40-50	2257.13	0 - 50	4952.55	36.56%
50-60	3669.31	0 - 60	8621.86	63.65%
60-70	3912.92	0 - 70	12534.78	92.54%
70-80	970.04	0 - 80	13504.82	99.70%
80-90	39.96	0 - 90	13544.78	100.00%
90-100	0.00	0 - 100	13544.78	100.00%
100-110	0.00	0 - 110	13544.78	100.00%
110-120	0.00	0 - 120	13544.78	100.00%
120-130	0.00	0 - 130	13544.78	100.00%
130-140	0.00	0 - 140	13544.78	100.00%
140-150	0.00	0 - 150	13544.78	100.00%
150-160	0.00	0 - 160	13544.78	100.00%
160-170	0.00	0 - 170	13544.78	100.00%
170-180	0.00	0 - 180	13544.78	100.00%

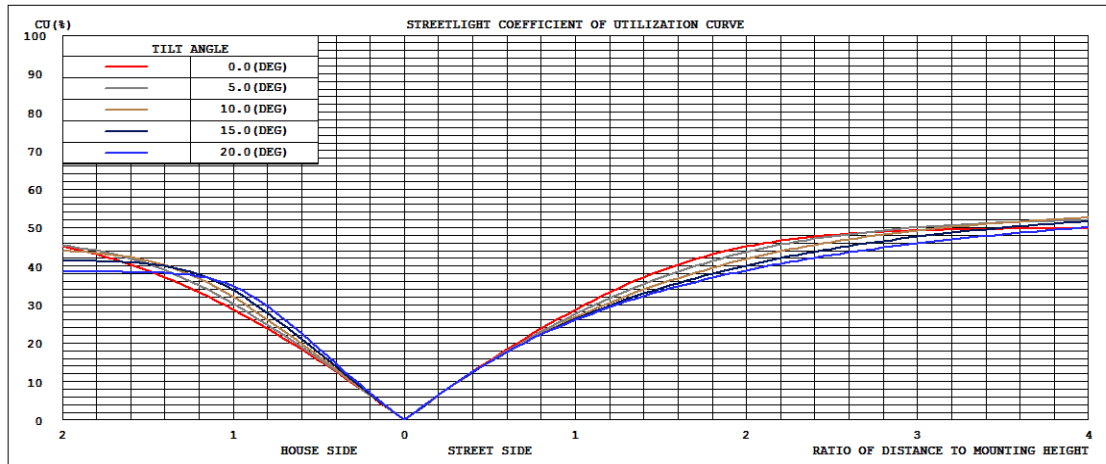
4.2 Goniophotometer Test

LCS/BUG

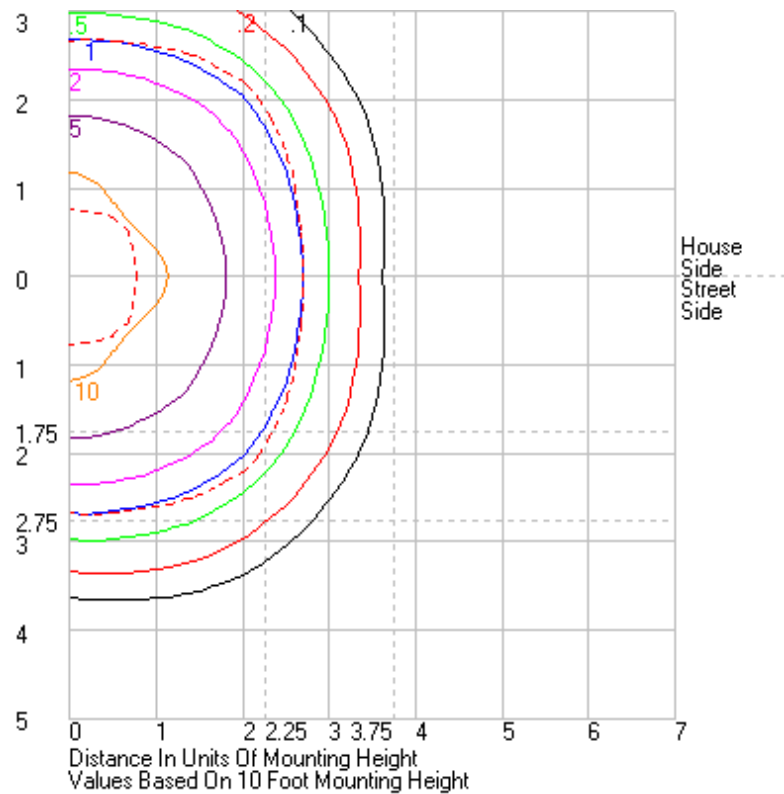


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	673.5	N.A.	5.0
FM - Front-Medium (30-60)	3637.4	N.A.	26.9
FH - Front-High (60-80)	2441.5	N.A.	18.0
FVH - Front-Very High (80-90)	20.0	N.A.	0.1
BL - Back-Low (0-30)	673.5	N.A.	5.0
BM - Back-Medium (30-60)	3637.4	N.A.	26.9
BH - Back-High (60-80)	2441.5	N.A.	18.0
BVH - Back-Very High (80-90)	20.0	N.A.	0.1
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	13544.8	N.A.	100.0
BUG Rating	B3-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	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	1460.93	
1	1460.18	1460.28	1460.04	1459.97	1459.62	1459.26	1459.27	1459.26	1459.62	1459.97	1460.04	1460.28	1460.18	1460.28	1460.04	1459.97	1459.62	1459.26	1459.27	1459.26	1459.62	1459.97	1460.04	1460.28	1460.18	1460.18
2	1459	1459.23	1459.4	1459.86	1459.9	1458.9	1457.93	1458.9	1459.9	1459.86	1459.4	1459.23	1459	1459.23	1459.4	1459.86	1459.9	1458.9	1457.93	1458.9	1459.9	1459.86	1459.4	1459.23	1459	1459
3	1456.3	1456.77	1457.29	1458.13	1459.22	1458.54	1457.23	1458.54	1459.22	1458.13	1457.29	1456.77	1456.3	1456.77	1457.29	1458.13	1459.22	1458.54	1457.23	1458.54	1459.22	1458.13	1457.29	1456.77	1456.3	1456.3
4	1450.12	1451.29	1454.63	1456.9	1458.21	1458.09	1457.38	1458.09	1458.21	1456.9	1454.63	1451.29	1450.12	1451.29	1454.63	1456.9	1458.21	1458.09	1457.38	1458.09	1458.21	1456.9	1454.63	1451.29	1450.12	1450.12
5	1445.05	1446.68	1450.23	1455.45	1456.84	1456.68	1455.18	1456.68	1456.84	1455.45	1450.23	1446.68	1445.05	1446.68	1450.23	1455.45	1456.84	1456.68	1455.18	1456.68	1456.84	1455.45	1450.23	1446.68	1445.05	1445.05
6	1442.24	1445.27	1448.43	1453.17	1454.76	1453.82	1451.05	1453.82	1454.76	1453.17	1448.43	1445.27	1442.24	1445.27	1448.43	1453.17	1454.76	1453.82	1451.05	1453.82	1454.76	1453.17	1448.43	1445.27	1442.24	1442.24
7	1437.02	1441.52	1449.14	1452.11	1452.41	1450.85	1446.5	1450.85	1452.41	1452.11	1449.14	1441.52	1437.02	1441.52	1449.14	1452.11	1452.41	1450.85	1446.5	1450.85	1452.41	1452.11	1449.14	1441.52	1437.02	1437.02
8	1432.42	1438.19	1447.84	1453.4	1450.7	1447.35	1442.4	1447.35	1450.7	1453.4	1447.84	1438.19	1432.42	1438.19	1447.84	1453.4	1450.7	1447.35	1442.4	1447.35	1450.7	1453.4	1447.84	1438.19	1432.42	1432.42
9	1430.74	1436.24	1446.62	1454.53	1449.48	1444.76	1439.69	1444.76	1449.48	1454.53	1446.62	1436.24	1430.74	1436.24	1446.62	1454.53	1449.48	1444.76	1439.69	1444.76	1449.48	1454.53	1446.62	1436.24	1430.74	1430.74
10	1430.39	1436.58	1446.46	1454.97	1449.3	1444.03	1438.58	1444.03	1449.3	1454.97	1446.46	1436.58	1430.39	1436.58	1446.46	1454.97	1449.3	1444.03	1438.58	1444.03	1449.3	1454.97	1446.46	1436.58	1430.39	1430.39
11	1430.14	1438.07	1448.73	1455.79	1451.24	1443.76	1438.15	1443.76	1451.24	1455.79	1448.73	1438.07	1430.14	1438.07	1448.73	1455.79	1451.24	1443.76	1438.15	1443.76	1451.24	1455.79	1448.73	1438.07	1430.14	1430.14
12	1431.25	1440.6	1453.76	1458.17	1454.29	1445.34	1439.88	1445.34	1454.29	1458.17	1453.76	1440.6	1431.25	1440.6	1453.76	1458.17	1454.29	1445.34	1439.88	1445.34	1458.17	1454.29	1445.34	1439.88	1431.25	1431.25
13	1434.93	1445.3	1460.02	1464.61	1458.91	1449.85	1444.88	1449.85	1458.91	1464.61	1460.02	1445.3	1434.93	1445.3	1460.02	1464.61	1458.91	1449.85	1444.88	1449.85	1458.91	1464.61	1460.02	1445.3	1434.93	1434.93
14	1442.6	1452.63	1467.3	1471.91	1466.27	1457.1	1451.52	1457.1	1466.27	1471.91	1467.3	1452.63	1442.6	1452.63	1467.3	1471.91	1466.27	1457.1	1451.52	1457.1	1466.27	1471.91	1467.3	1452.63	1442.6	1442.6
15	1453.26	1462.88	1477.55	1481.15	1474.94	1465.63	1460.92	1465.63	1474.94	1481.15	1477.55	1462.88	1453.26	1462.88	1477.55	1481.15	1474.94	1465.63	1460.92	1465.63	1474.94	1481.15	1477.55	1462.88	1453.26	1453.26
16	1465.85	1474.99	1489.92	1492.54	1485.25	1477.29	1473.98	1477.29	1485.25	1492.54	1489.92	1474.99	1465.85	1474.99	1489.92	1492.54	1485.25	1477.29	1473.98	1477.29	1485.25	1492.54	1489.92	1474.99	1465.85	1465.85
17	1481.49	1489.23	1505.49	1507.45	1498.72	1491.31	1489.18	1491.31	1498.72	1507.45	1505.49	1489.23	1481.49	1489.23	1505.49	1507.45	1498.72	1491.31	1489.18	1491.31	1498.72	1507.45	1505.49	1489.23	1481.49	1481.49
18	1498.2	1505.71	1522.59	1524.07	1514.68	1508.07	1507.53	1508.07	1514.68	1524.07	1522.59	1505.71	1498.2	1505.71	1522.59	1524.07	1514.68	1508.07	1507.53	1508.07	1514.68	1524.07	1522.59	1505.71	1498.2	1498.2
19	1515.87	1523.17	1541.4	1542.08	1533.05	1527.02	1528.38	1527.02	1533.05	1542.08	1541.4	1523.17	1515.87	1523.17	1541.4	1542.08	1533.05	1527.02	1528.38	1527.02	1533.05	1542.08	1541.4	1523.17	1515.87	1515.87
20	1535.11	1542.73	1561.51	1561.45	1553.22	1549.05	1551.9	1549.05	1553.22	1561.45	1561.51	1542.73	1535.11	1542.73	1561.51	1561.45	1553.22	1549.05	1551.9	1549.05	1553.22	1561.45	1561.51	1542.73	1535.11	1535.11
21	1557.36	1563.35	1582.22	1582.61	1575.94	1572.41	1574.58	1572.41	1575.94	1582.61	1582.22	1563.35	1557.36	1563.35	1582.22	1582.61	1575.94	1572.41	1574.58	1572.41	1575.94	1582.61	1582.22	1563.35	1557.36	1557.36
22	1583.12	1586.17	1605.52	1604.89	1601.04	1596.11	1599.44	1596.11	1601.04	1604.89	1605.52	1586.17	1583.12	1586.17	1605.52	1604.89	1601.04	1596.11	1599.44	1596.11	1601.04	1604.89	1605.52	1586.17	1583.12	1583.12
23	1612.06	1613.12	1629.36	1628.51	1627.69	1623	1628.03	1623	1627.69	1628.51	1629.36	1613.12	1612.06	1613.12	1629.36	1628.51	1627.69	1623	1628.03	1623	1627.69	1628.51	1629.36	1613.12	1612.06	1612.06
24	1640.87	1642.75	1654.84	1652.84	1654.87	1653.44	1659.69	1653.44	1654.87	1652.84	1654.84	1642.75	1640.87	1642.75	1654.84	1652.84	1654.87	1653.44	1659.69	1653.44	1654.87	1652.84	1654.84	1642.75	1640.87	1640.87
25	1670.84	1675.8	1683.91	1679.62	1684.24	1686.7	1693.19	1686.7	1684.24	1679.62	1683.91	1675.8	1670.84	1675.8	1683.91	1679.62	1684.24	1686.7	1693.19	1686.7	1684.24	1679.62	1683.91	1675.8	1670.84	1670.84
26	1704.42	1709.55	1713.92	1707.35	1715.56	1722.36	1729.93	1722.36	1715.56	1707.35	1713.92	1709.55	1704.42	1709.55	1713.92	1707.35	1715.56	1722.36	1729.93	1722.36	1715.56	1707.35	1713.92	1709.55	1704.42	1704.42
27	1740.43	1745.92	1747.93	1736.44	1749.18	1760.59	1768.69	1760.59	1749.18	1736.44	1747.93	1745.92	1740.43	1745.92	1747.93	1736.44	1749.18	1760.59	1768.69	1760.59	1749.18	1736.44	1747.93	1745.92	1740.43	1740.43
28	1783.29	1787.4	1784.81	1767.44	1784.79	1801.93	1811.85	1801.93	1784.79	1767.44	1784.81	1787.4	1783.29	1787.4	1784.81	1767.44	1784.79	1801.93	1811.85	1801.93	1784.79	1767.44	1784.81	1787.4	1783.29	1783.29
29	1828.63	1831.44	1821.63	1798.81	1821.97	1845.41	1857.05	1845.41	1821.97	1798.81	1821.63	1831.44	1828.63	1831.44	1821.63	1798.81	1821.97	1845.41	1857.05	1845.41	1821.97	1798.81	1821.63	1831.44	1828.63	1828.63
30	1880.46	1879.65	1861.78	1833.04	1860.96	1892.14	1905.69	1892.14	1860.96	1833.04	1861.78	1879.65	1880.46	1879.65	1861.78	1833.04	1860.96	1892.14	1905.69	1892.14	1860.96	1833.04	1861.78	1879.65	1880.46	1880.46
31	1936.17	1931.06	1902.37	1869.13	1900.54	1940.14	1955.31	1940.14	1900.54	1869.13	1902.37	1931.06	1936.17	1931.06	1902.37	1869.13	1900.54	1940.14	1955.31	1940.14	1900.54	1869.13	1902.37	1931.06	1936.17	1936.17
32	1992.9	1985.21	1946.87	1908.45	1942.99	1990.91	2007.88	1990.91	1942.99	1908.45	1946.87	1985.21	1992.9	1985.21	1946.87	1908.45	1942.99	1990.91	2007.88	1990.91	1942.99	1908.45	1946.87	1985.21	1992.9	1992.9
33	2054.78	2044.89	1992.98	1950.96	1986.85	2043.08	2063.36	2043.08	1986.85	1950.96	1992.98	2044.89	2054.78	2044.89	1992.98	1950.96	1986.85	2043.08	2063.36	2043.08	1986.85	1950.96	1992.98	2044.89	2054.78	2054.78
34	2118.78	2106.7	2041.03	1995.15	2033.68	2099.32	2122.47	2099.32	2033.68	1995.15	2041.03	2106.7	2118.78	2106.7	2041.03	1995.15	2033.68	2099.32	2122.47	2099.32	2033.68	1995.15	2041.03	2106.7	2118.78	2118.78
35	2189.26	2172.26	2094.1	2043.17	2082.25	2159.28	2186.58	2159.28	2082.25	2043.17	2094.1	2172.26	2189.26	2172.26	2094.1	2043.17	2082.25	2159.28	2186.58	2159.28	2082.25	2043.17	2094.1	2172.26	2189.26	2189.26
36	2263.96	2240.74	2146.56	2091.87	2132.67	2222.86	2250.9	2222.86	2132.67	2091.87	2146.56	2240.74	2263.96	2240.74	2146.56	2091.87	2132.67	2222.86	2250.9	2222.86	2132.67	2091.87	2146.56	2240.74	2263.96	2263.96
37	2338.36	2310.95	2204.16	2143.26	218																					

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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	ALEDM5TY	Sample ID.	K1
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
120.07	60	0.767	91.9	0.998	5.26%
277.01	60	0.361	90.2	0.902	11.71%

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*****