

Photometric Test Report

Relevant Standards

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

Prepared For

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Test Date

2021/11/1

Issue Date

2021/11/4

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		11639
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	155.0
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		75.1
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	6.46%
		20.00%	277V	13.72%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.997
		0.9	277V	0.874
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	5029±355	4989
		4 step	5029±220	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		85
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		16
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		93
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%		0.64%
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		0.627
(Goniophotometer - Section 4.2)		Non-Worst Case		0.306
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		75.1
(Goniophotometer - Section 4.2)		Non-Worst Case		74.2

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/11/1	ALEDM5T	L1
2	Goniophotometer Test	2021/11/1	ALEDM5T	L1
3	THD and PF Test	2021/11/1	ALEDM5T	L1

Remark(If any)

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- 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.

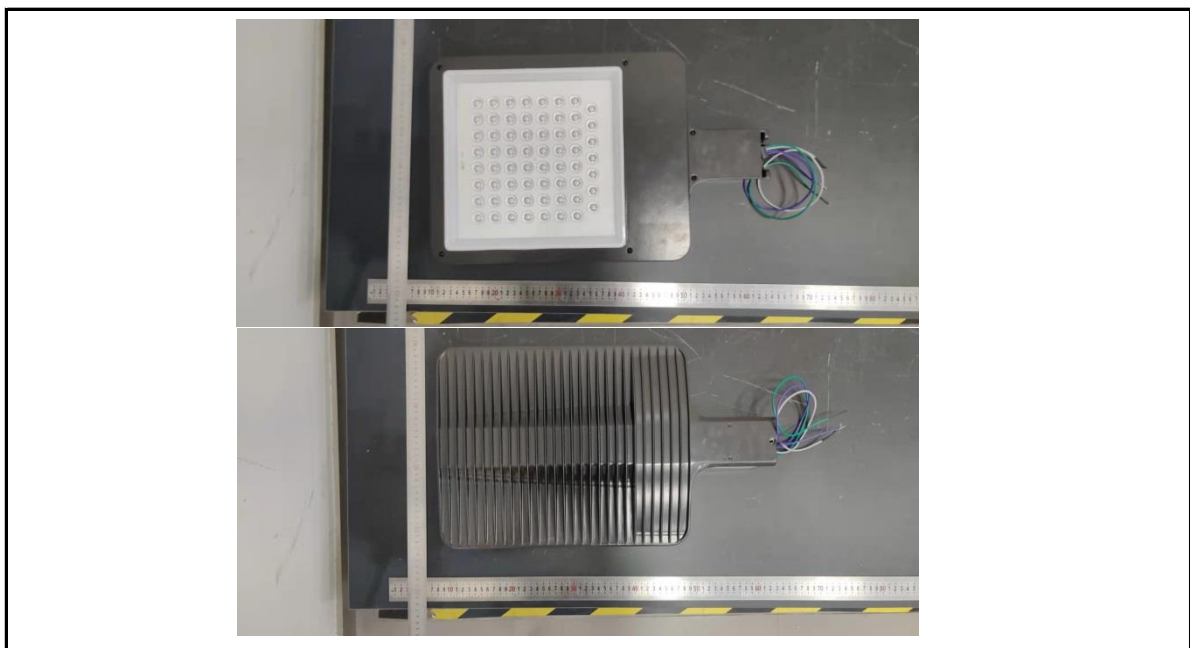
3.0 Production Description

Luminaire Description: ALEDM5T

Description: 78W/10,000 lm @ 5000K

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.	ALEDM5T	Sample ID.	L1
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
120.01	60	0.646	77.3	0.997
276.97	60	0.314	76.0	0.874

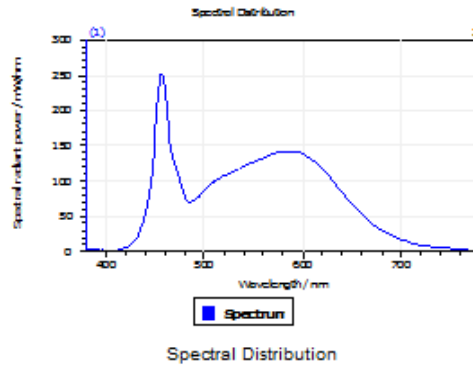
Test Result

CCT (K)	CRI	R9	Duv
4989	85	16	0.00066

Rf	Rg	IES Rcs,h1
83	93	-12%

4.1 Integrating Sphere Test

Results



Spectral values

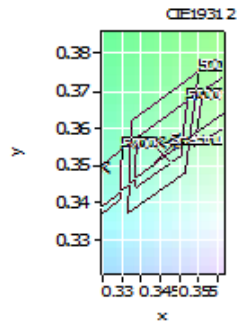
DominantWavelength 572.24 nm
Purity 0.097
PeakWavelength 456.92 nm
Radiant Power 27.94 W
Width50%:

Date: 2021/11/1 17:16:41

Color Coordinates

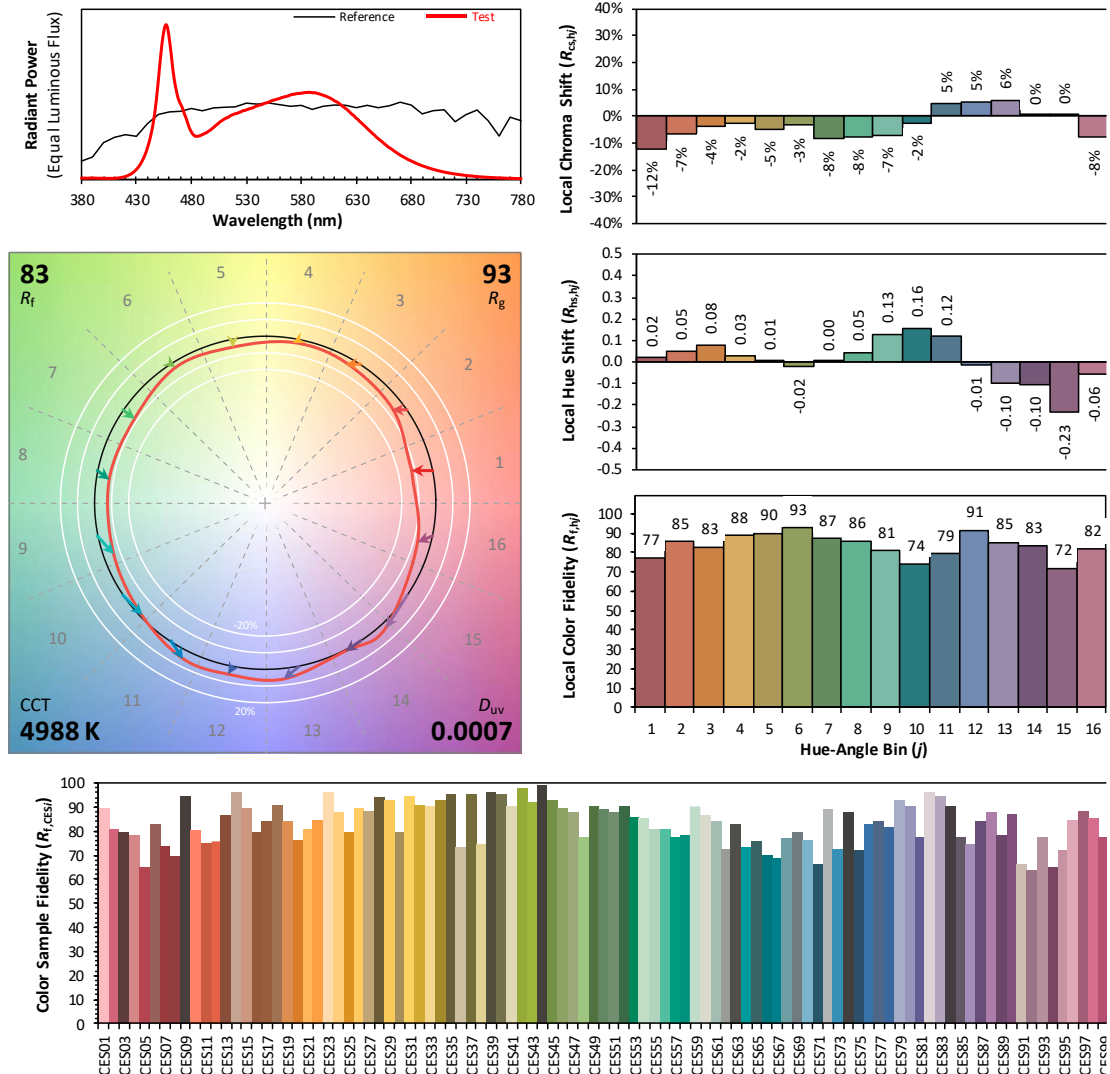
Correlated Color Temporal 4989 K
x: 0.3456 u: 0.2111 u': 0.2111
y: 0.3533 v: 0.3237 v': 0.4856

CRI01	84.4	CRI09	16.3
CRI02	94.0	CRI10	84.1
CRI03	94.7	CRI11	80.3
CRI04	81.0	CRI12	63.1
CRI05	84.0	CRI13	87.8
CRI06	88.9	CRI14	98.0
CRI07	84.8	CRI15	79.6
CRI08	67.3	CRI16	74.7
ResultsCRI	84.9		



PlanckDistance 6.6E-004

4.1 Integrating Sphere Test



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

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	ALEDM5T	Sample ID.	L1
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	120.10	60	0.627	75.1	0.997
NON-WORST CASE	277.00	60	0.306	74.2	0.874

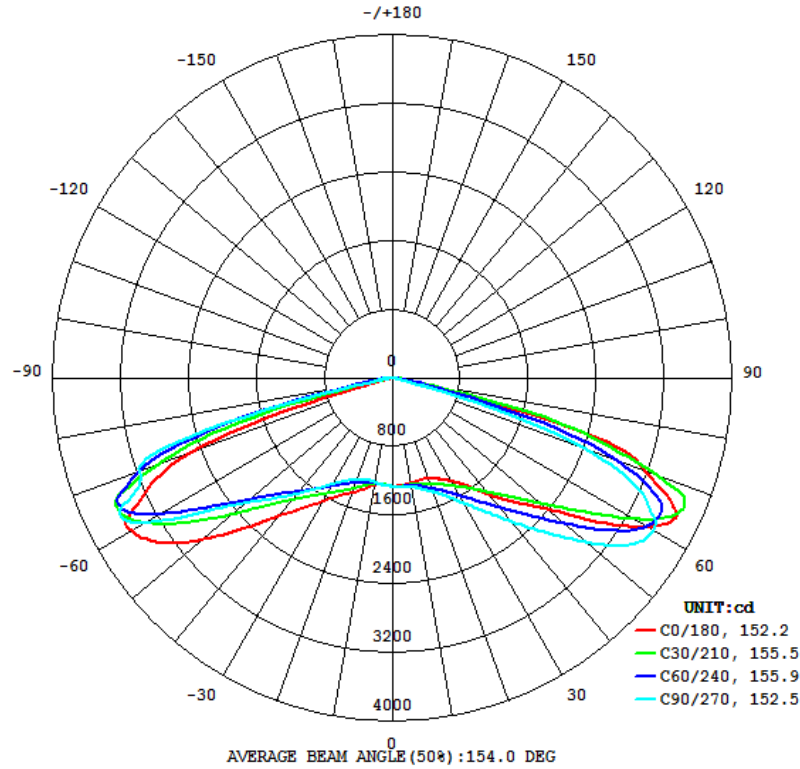
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
11639	158.9	158.8	152.2	152.5	155.0

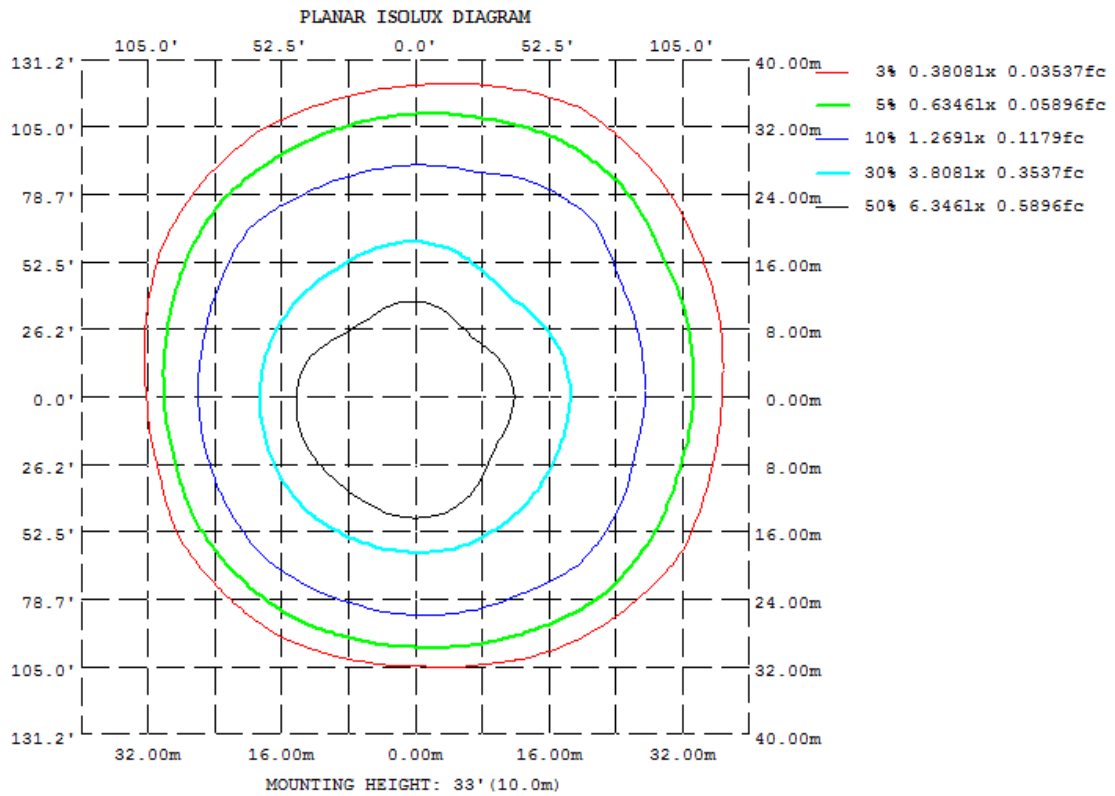
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.64%	B3-U0-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

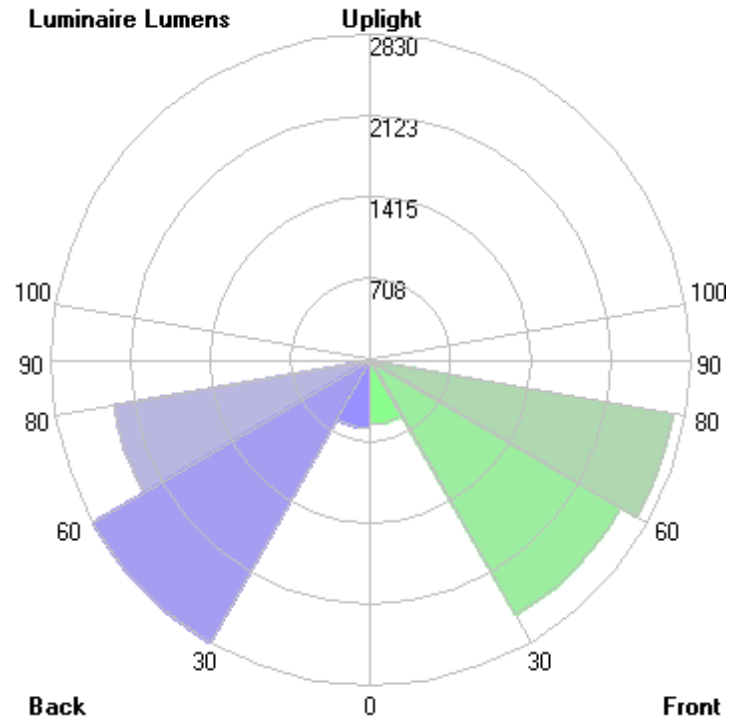
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	1247	1265	1288	1300	1270	1248	1236	1240
20	1254	1352	1418	1469	1430	1339	1264	1260
30	1394	1509	1685	1695	1660	1497	1426	1378
40	1780	1804	2191	2060	2101	1740	1765	1592
50	2376	2384	2978	2739	2929	2238	2265	1989
60	3467	3347	3543	3599	3557	3234	3373	2874
70	3170	3375	2384	2586	2514	3489	3171	4110
80	236.4	305.2	59.46	93.91	79.33	288.8	236.1	689.5
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	120.59	0 - 10	120.59	1.04%
10-20	368.95	0 - 20	489.54	4.21%
20-30	664.17	0 - 30	1153.71	9.91%
30-40	1067.64	0 - 40	2221.35	19.09%
40-50	1685.24	0 - 50	3906.59	33.56%
50-60	2636.45	0 - 60	6543.04	56.22%
60-70	3363.98	0 - 70	9907.02	85.12%
70-80	1657.98	0 - 80	11565.00	99.36%
80-90	73.94	0 - 90	11638.94	100.00%
90-100	0.00	0 - 100	11638.94	100.00%
100-110	0.00	0 - 110	11638.94	100.00%
110-120	0.00	0 - 120	11638.94	100.00%
120-130	0.00	0 - 130	11638.94	100.00%
130-140	0.00	0 - 140	11638.94	100.00%
140-150	0.00	0 - 150	11638.94	100.00%
150-160	0.00	0 - 160	11638.94	100.00%
160-170	0.00	0 - 170	11638.94	100.00%
170-180	0.00	0 - 180	11638.94	100.00%

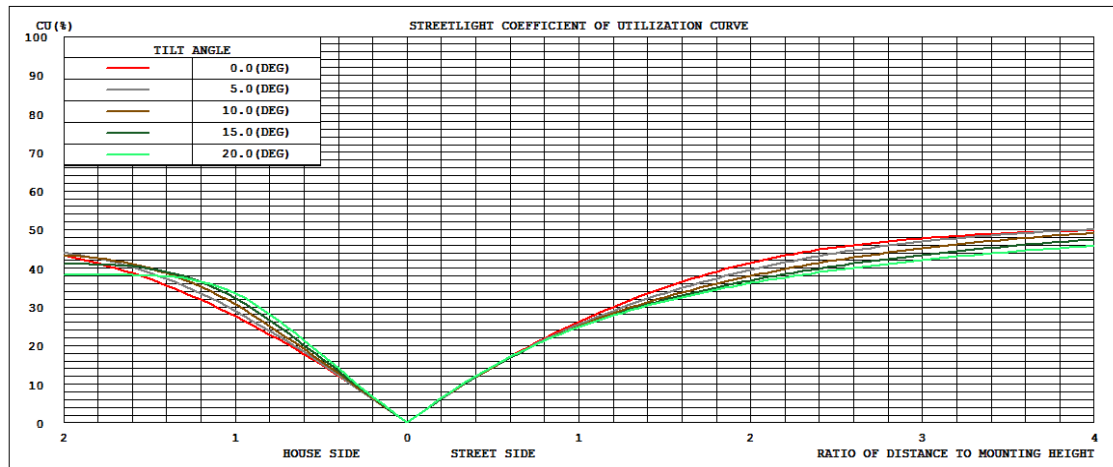
4.2 Goniophotometer Test

LCS/BUG

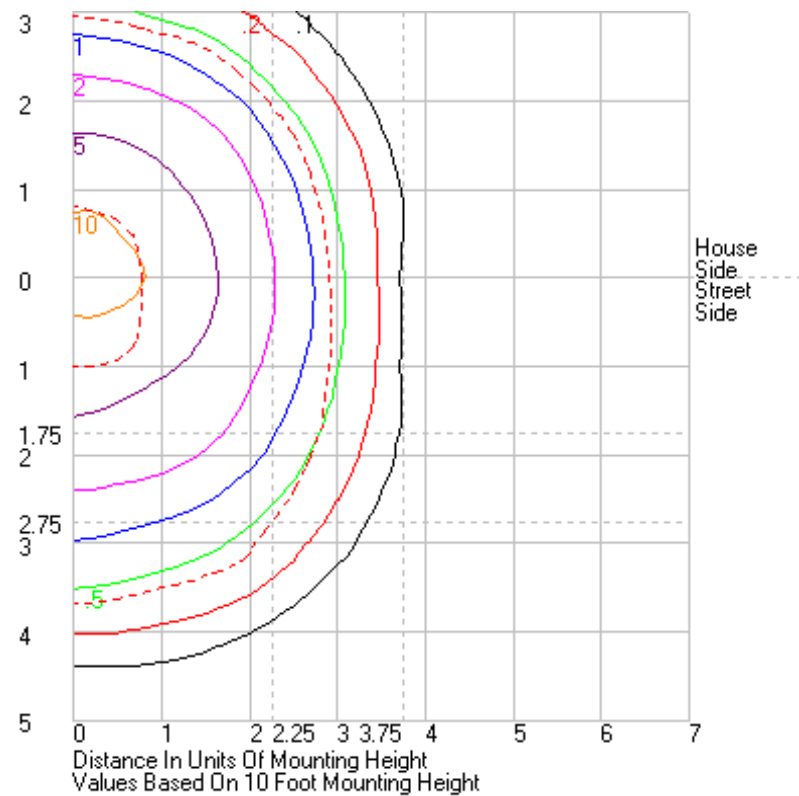


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	557.8	N.A.	4.8
FM - Front-Medium (30-60)	2558.9	N.A.	22.0
FH - Front-High (60-80)	2715.0	N.A.	23.3
FVH - Front-Very High (80-90)	47.7	N.A.	0.4
BL - Back-Low (0-30)	595.9	N.A.	5.1
BM - Back-Medium (30-60)	2830.4	N.A.	24.3
BH - Back-High (60-80)	2307.0	N.A.	19.8
BVH - Back-Very High (80-90)	26.2	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	11638.9	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	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2	1269.2
1	1268.32	1269.88	1271.64	1274.16	1275.41	1275.7	1276.11	1276.15	1275.42	1275.67	1275.28	1274.84	1268.29	1267.39	1266.68	1267.14	1267.82	1267.96	1268.03	1268	1268.25	1269.4	1270.95	1272.77	1268.32
2	1265.84	1268.56	1271.25	1275.27	1278.65	1280.01	1280.58	1280.45	1278.86	1278.45	1276.64	1274.62	1266.86	1265.32	1263.95	1263.78	1264.23	1264.19	1264.38	1264.41	1264.18	1265.35	1267.06	1269.59	1265.84
3	1263.39	1266.98	1270.78	1275.97	1279.15	1280.95	1282.5	1282.95	1282.2	1279.68	1275.76	1272.18	1262.99	1259.94	1258.92	1260.78	1261.7	1261.25	1261.92	1261.44	1260.33	1261.03	1262.63	1265.58	1263.39
4	1263.12	1267.15	1271.45	1274.43	1277.83	1279.82	1281.86	1283.43	1282.97	1279.97	1274.66	1269.02	1258.75	1254.89	1254.26	1256.51	1260.13	1259.45	1260.13	1258.77	1256.97	1257.45	1259.94	1264.21	1263.12
5	1261.12	1266.95	1271.26	1273.27	1274.88	1276.73	1279.86	1282.74	1282.31	1280.26	1274.4	1267.4	1254.91	1250.67	1250.01	1252.9	1257.69	1257.46	1258.1	1257	1254.71	1255.87	1258.57	1261.85	1261.12
6	1257.52	1264.74	1269.91	1271.27	1271.51	1272.86	1277.8	1280.94	1282.08	1280.68	1275.74	1267.84	1252.72	1247.73	1247.29	1249.77	1255.15	1255.8	1255.8	1254.04	1252.27	1254.04	1254.29	1257.58	1257.52
7	1255.03	1263.35	1266.97	1268.39	1267.91	1270.81	1277.33	1281.84	1282.51	1282.22	1279.1	1269.86	1252.53	1246.4	1245.72	1248.44	1252.67	1252.7	1251.31	1249.51	1250.68	1250.85	1250.67	1253.61	1255.03
8	1251.2	1262.24	1264.93	1265.85	1266.94	1270.77	1279.12	1284.49	1285.56	1285.4	1284.17	1275.63	1255.54	1247.81	1245.73	1248.08	1249.31	1248.54	1246.36	1244.21	1246.93	1247.68	1247.21	1248.98	1251.2
9	1248.22	1260.85	1263.59	1264.92	1267.61	1272.54	1282.94	1289.8	1290.4	1291.21	1291.74	1283.72	1261.64	1252.15	1247.54	1247.71	1245.95	1245.21	1241.18	1238.12	1241.36	1244.11	1243.22	1244.59	1248.22
10	1246.64	1260.83	1262.43	1265.34	1270.08	1275.68	1288.13	1296.75	1297.63	1300.38	1301.7	1293.85	1269.66	1259.08	1251.78	1247.78	1243.67	1242.34	1235.9	1232.17	1236.36	1240.43	1240.5	1240.66	1246.64
11	1245.5	1262.62	1262.87	1267.13	1273.45	1282.15	1296.04	1305.32	1307.34	1311.64	1313.18	1305.76	1280.76	1267.49	1258.57	1250.06	1243.5	1241.67	1232.37	1227.19	1231.5	1236.65	1238.49	1238.01	1245.5
12	1243.53	1263.55	1265.29	1270.65	1279.34	1290.77	1306.63	1317.23	1319.11	1325.69	1327.01	1318.97	1293.66	1278.78	1266.8	1253.85	1245.98	1242.57	1229.91	1223.33	1228.33	1235.12	1237.83	1234.21	1243.53
13	1240.17	1263.35	1269.76	1276.82	1288.06	1301.68	1317.63	1329.44	1333.64	1341.62	1341.92	1333.56	1307.83	1291.51	1277.19	1260	1250.29	1244.42	1229.22	1222.49	1226.32	1234.47	1237.36	1230.1	1240.17
14	1236.74	1263.38	1275	1284.84	1298.06	1313.91	1329.86	1342.94	1349.44	1358.1	1357.34	1348.92	1323.83	1305.37	1288.17	1268.59	1256.36	1245.99	1228.36	1222.25	1226.99	1235.16	1236.45	1225.8	1236.74
15	1234.44	1263.9	1280.84	1295.59	1309.2	1326.99	1343.36	1356.26	1365.55	1376.21	1374.13	1365.18	1340.74	1320.46	1299.94	1279.04	1262.69	1248.33	1230.06	1222.97	1231.18	1237.47	1235.57	1223.38	1234.44
16	1234.21	1264.42	1287.82	1308.28	1320.95	1341.66	1357.6	1370.69	1382.21	1393.49	1391.47	1382.52	1358.3	1336.3	1312.63	1291.71	1269	1253.18	1234.82	1226.63	1234.97	1240.09	1235.13	1223.41	1234.21
17	1236.44	1267.72	1295.39	1319.31	1332.8	1355.55	1372.72	1386.12	1398.9	1411.62	1409.36	1399.34	1375.83	1352.33	1326.4	1304.13	1277.26	1258.94	1240.92	1233.03	1239.12	1243.58	1235.82	1225.24	1236.44
18	1240.05	1273.22	1303.32	1330.66	1346.39	1370.85	1387.79	1402.05	1417.41	1429.87	1428.38	1417.04	1393.41	1368.51	1340.44	1315.3	1286.39	1264.32	1247.16	1239.92	1246.38	1248.6	1237.67	1228.62	1240.05
19	1246.5	1280.15	1311.53	1340.99	1360.3	1384.99	1402.61	1419.39	1436.85	1448.38	1448.29	1435.57	1411.81	1385.34	1354.78	1326.85	1295.28	1270.16	1254.44	1246.72	1255.25	1254.71	1241.32	1234.1	1246.5
20	1254.3	1288.56	1320.81	1351.88	1374.89	1398.64	1418	1436.08	1456.31	1468.72	1469.4	1454.27	1429.58	1402.55	1370.17	1339.2	1304.48	1278.07	1263.58	1254.44	1264.3	1260.48	1246.29	1241.26	1254.3
21	1263.29	1297.64	1330.48	1363.9	1389.19	1414.15	1435.16	1454.63	1477.62	1489.26	1492.4	1472.79	1445.22	1419.37	1386.94	1352.3	1314	1287.28	1273.32	1263.38	1272.78	1265.79	1253.49	1248.35	1263.29
22	1272.08	1307.44	1341.39	1375.7	1403.62	1429.78	1454.06	1474.66	1496.62	1509.97	1513.69	1491.29	1461.36	1435.46	1404.93	1365.35	1325.4	1298.19	1285.49	1273.99	1280.76	1273.41	1261.54	1256.68	1272.08
23	1281.01	1317.69	1353.75	1389.14	1420.92	1448.33	1474.98	1496.31	1517.76	1532.9	1536.77	1510.29	1477.48	1451.71	1423.06	1378.7	1338.81	1310.78	1298.87	1286.25	1291.24	1283.03	1269.97	1265.4	1281.01
24	1292.67	1328.94	1366.45	1402.13	1439.54	1468.22	1497.76	1520.59	1540.47	1556.48	1559.13	1530.3	1495.54	1467.58	1440.21	1392.32	1352.72	1323.18	1310.81	1301.22	1303.4	1294.78	1278.91	1275.41	1292.67
25	1305.05	1342.89	1379.13	1415.16	1459.11	1489.84	1523.63	1545.67	1563.52	1580.95	1581.22	1553.57	1516.51	1485.67	1458.75	1407.26	1368.16	1334.97	1324.18	1317.29	1317.88	1307.91	1290.27	1287.25	1305.05
26	1318.75	1359.27	1390.71	1430.04	1481.07	1517.33	1552.3	1573.78	1590.08	1604.06	1604.31	1579.25	1541.41	1505.78	1476.44	1424.1	1383.2	1349.94	1339.6	1332.23	1334.96	1321.14	1304.31	1299.56	1318.75
27	1332.27	1375.71	1404.08	1446.36	1503.37	1545.21	1582.59	1602.82	1615.56	1626.66	1627.52	1607.49	1567.79	1528.1	1494.1	1441.15	1398.11	1367.02	1358.35	1350.03	1352.38	1334.78	1321.37	1313.01	1333.27
28	1351.06	1393.27	1421.43	1466.43	1531.11	1577.56	1615.89	1632.74	1642.85	1648.99	1653.2	1638.79	1596.98	1553.32	1513	1460.26	1416	1386.05	1379.49	1370.74	1369.65	1348.16	1338.03	1328.27	1351.06
29	1370.92	1412.8	1439.64	1487.61	1558.68	1610.59	1649.43	1666.69	1672.1	1670.82	1680.22	1671.09	1627.19	1580.51	1533.89	1478.73	1435.72	1407.6	1400.77	1391.42	1384.88	1362.9	1354.78	1345.79	1370.92
30	1394.07	1434.34	1460.08	1508.7	1587.55	1642.77	1685.29	1701.19	1700.63	1694.81	1709.36	1704.98	1660.42	1610.28	1555.34	1497.02	1456.81	1431.09	1426.19	1416.01	1402.41	1378.29	1371.32	1366.13	1394.07
31	1419.31	1458.6	1479	1532.14	1618.14	1681.56	1724.68	1737.85	1733.38	1722.49	1739.8	1741.43	1694.03	1641.98	1577.47	1514.06	1478.42	1457.11	1452.17	1440.48	1421.93	1395.28	1389.65	1388.07	1419.31
32	1446.51	1485.21	1498.39	1553.03	1647.7	1719.6	1765.08	1776.01	1763.34	1749.41	1771.68	1778.79	1730.49	1675.95	1601.51	1532.49	1501.75	1483.8	1479.57	1467.07	1441.21	1415.91	1409.6	1411.07	1446.51
33	1474.34	1515	1520.64	1578.8	1681.51	1762.11	1810.51	1817.4	1797.08	1780.58	1806.35	1820.38	1768.55	1712.15	1628.53	1551.57	1526.7	1513.21	1510.79	1496.02	1463.34	1435.43	1431.5	1434.41	1474.34
34	1505.45	1546.65	1544.04	1605.67	1715.56	1808.86	1856.45	1860.34	1832.91	1812.23	1842.2	1862.14	1808.12	1749.46	1656.01	1572.01	1552.39	1543.65	1540.97	1522.82	1484.23	1452.62	1455.63	1458.37	1505.45
35	1541.14	1579.21	1570.9	1633.72	1751.31	1853.09	1904.7	1905.63	1864.69	1848.44	1879.58	1905.61	1849.88	1789.39	1683.94	1594.26	1579.57	1576.02	1576.58	1554.15	1504.92	1470.35	1481.37	1488.31	1541.14
36	1582.91	1613.82	1598.87	1665.57	1793.44	1905	1956.93	1955.04	1903.59	1884.68	1920.3	1953.43	1894.27	1830.82	1713.97	1619.35	1606.77	1611.31	1610.74	1585.16	1529.01	1489.75	1508.35	1524.96	1582.91
37	1630.48	1651.11	1629.52	1696.4	1835.02	1956.59	2009.61	2005.7	1941.5	1923.62	1962.29	2001.73	1942.13	1874.53	1744.67	1645.96	1635.7	1645.47	1645.83	1617.26	1551.82	1512.45	1537.91	1570.57	1630.48
38	1678.13	1691.67	1662.89	1730.84	1880.06	2011.02	2067.86	2059.69	1984.06	1966.91	2007.65	2055.22	1991.39	1920.79	1777.61	1675.5	1665.73								

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.	ALEDM5T	Sample ID.	L1
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
120.01	60	0.646	77.3	0.997	6.46%
276.97	60	0.314	76.0	0.874	13.72%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2020/12/26	2021/12/25
DLF108	Auxiliary Lamp	2020/12/26	2021/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2020/12/26	2021/12/25
DLF116	AC Power Source	2020/12/26	2021/12/25
DLF113	Power Meter	2020/12/26	2021/12/25
DLF112	Temperature Recorder	2020/12/26	2021/12/25
DLF114	Temperature & Humidity Datalogger	2020/12/26	2021/12/25
DLF101	Goniophotometer	2020/12/26	2021/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2020/12/26	2021/12/25
DLF104	AC Power Source	2020/12/26	2021/12/25
DLF507	DC Power Source	2020/12/26	2021/12/25
DLF102	Power Meter	2020/12/26	2021/12/25
DLF111	Temperature & Humidity Datalogger	2020/12/26	2021/12/25
DLF119	Power Meter	2020/12/26	2021/12/25
DLF031	Temperature data logger	2020/12/26	2021/12/25
DLF022	Digital power meter	2020/12/26	2021/12/25
DLF003	Temperature & Humidity Datalogger	2020/12/26	2021/12/25

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