

Photometric Test Report

Relevant Standards

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

Prepared For

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2021/11/30

Issue Date

2021/12/3

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		11825
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	154.4
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		76.6
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	6.65%
		20.00%	277V	14.18%
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	3985±275	3901
		4 step	3985±154	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		84
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		11
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		85
Minimum Rg (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥89		96
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%		0.68%
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		0.640
(Goniophotometer - Section 4.2)		Non-Worst Case		0.311
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		76.6
(Goniophotometer - Section 4.2)		Non-Worst Case		75.4

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/11/30	ALEDM5TN	L1
2	Goniophotometer Test	2021/11/30	ALEDM5TN	L1
3	THD and PF Test	2021/11/30	ALEDM5TN	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.

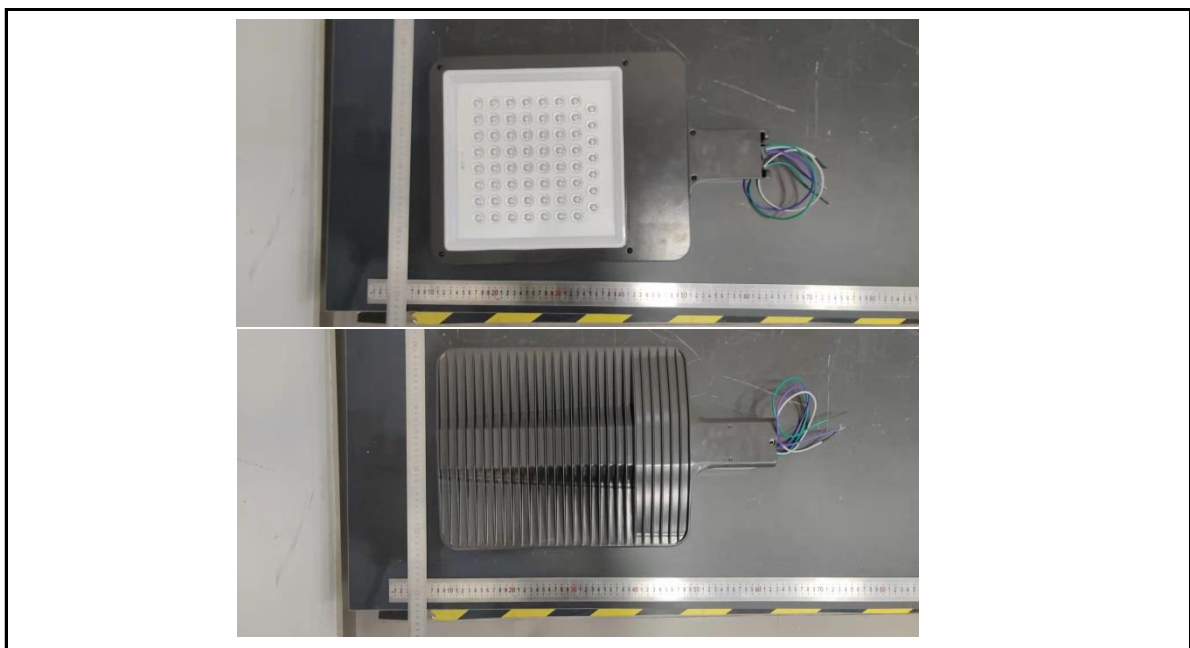
3.0 Production Description

Luminaire Description: ALEDM5TN

Description: 78W/10,000 lm @ 4000K

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.	ALEDM5TN	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
119.95	60	0.641	76.7	0.997
276.97	60	0.312	75.5	0.874

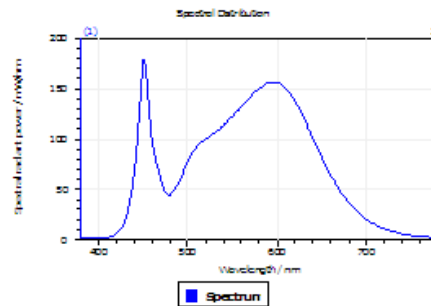
Test Result

CCT (K)	CRI	R9	Duv
3901	84	11	0.000052

Rf	Rg	IES Rcs,h1
85	96	-12%

4.1 Integrating Sphere Test

Results



Spectral values

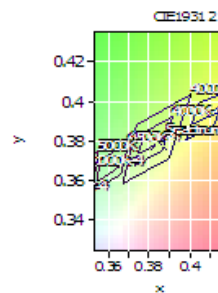
DominantWavelength	579.41 nm
Purity	0.295
PeakWavelength	451.19 nm
Radiant Power	27.21 W
Width50%	18.71 nm

Color Coordinates

Correlated Color Temperat 3901 K

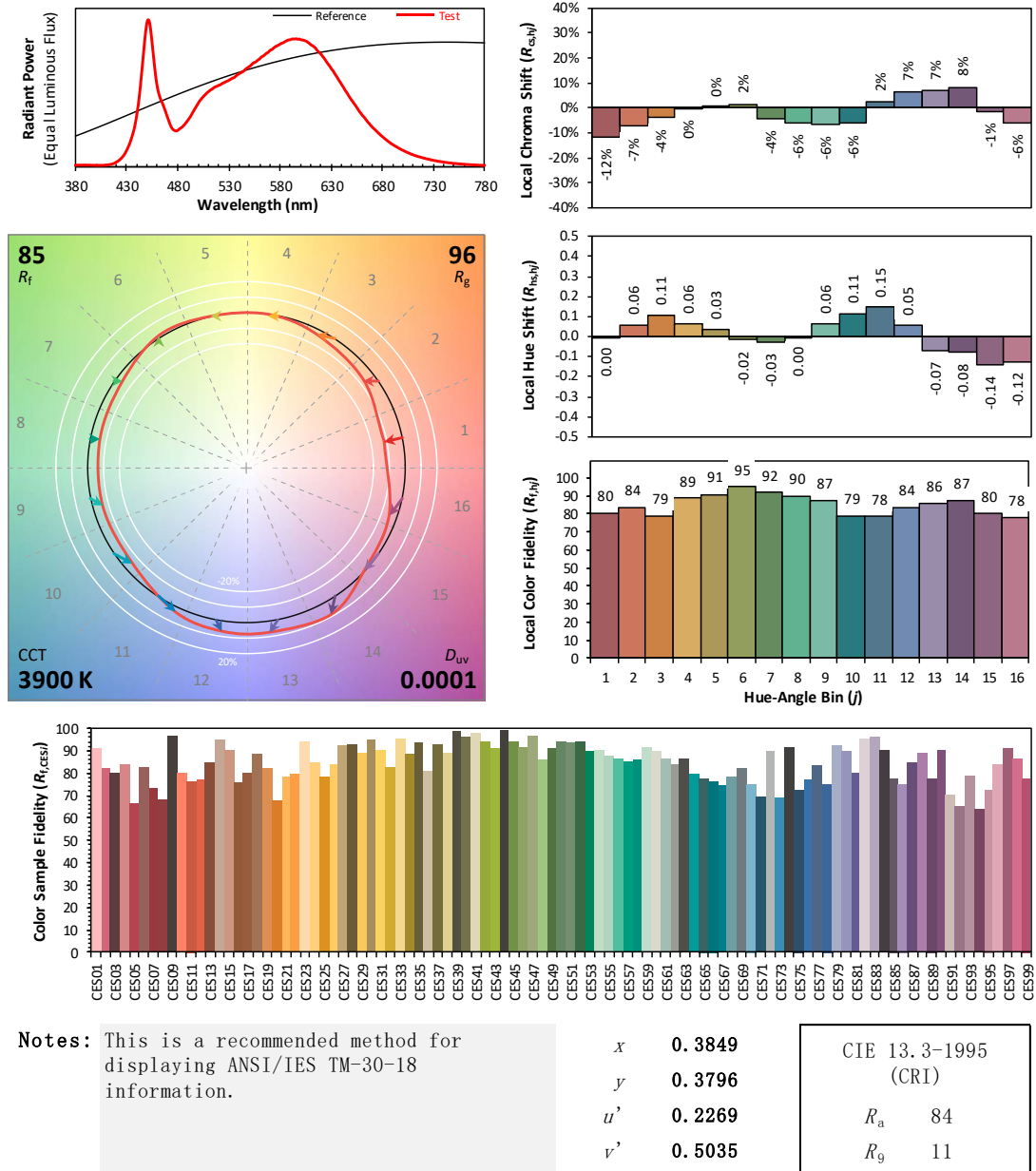
x: 0.3850 u: 0.2269 u': 0.2269
y: 0.3796 v: 0.3357 v': 0.5035

ResultsCRICRI01	81.8	ResultsCRICRI09	10.7
ResultsCRICRI02	90.1	ResultsCRICRI10	76.7
ResultsCRICRI03	95.6	ResultsCRICRI11	81.5
ResultsCRICRI04	82.4	ResultsCRICRI12	64.0
ResultsCRICRI05	82.4	ResultsCRICRI13	83.8
ResultsCRICRI06	86.6	ResultsCRICRI14	97.9
ResultsCRICRI07	85.7	ResultsCRICRI15	75.6
ResultsCRICRI08	64.6	ResultsCRICRI16	73.2
ResultsCRI	83.6		



PlanckDistance 5.2E-005

4.1 Integrating Sphere Test



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.	ALEDM5TN	Sample ID.	L1
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	120.05	60	0.640	76.6	0.997
NON-WROST CASE	277.03	60	0.311	75.4	0.874

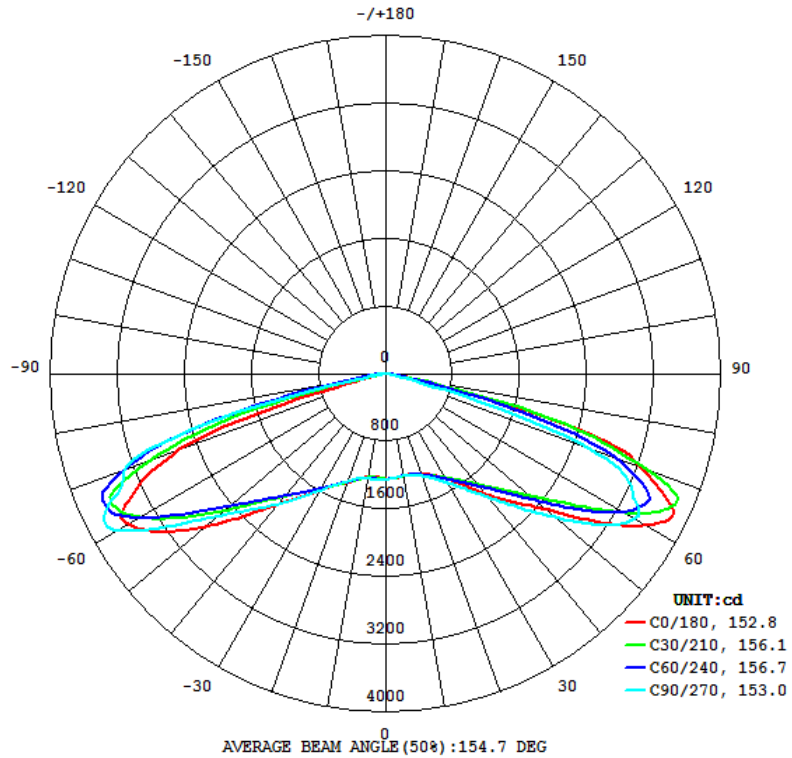
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
11825	160.2	159.8	152.8	153.0	154.4

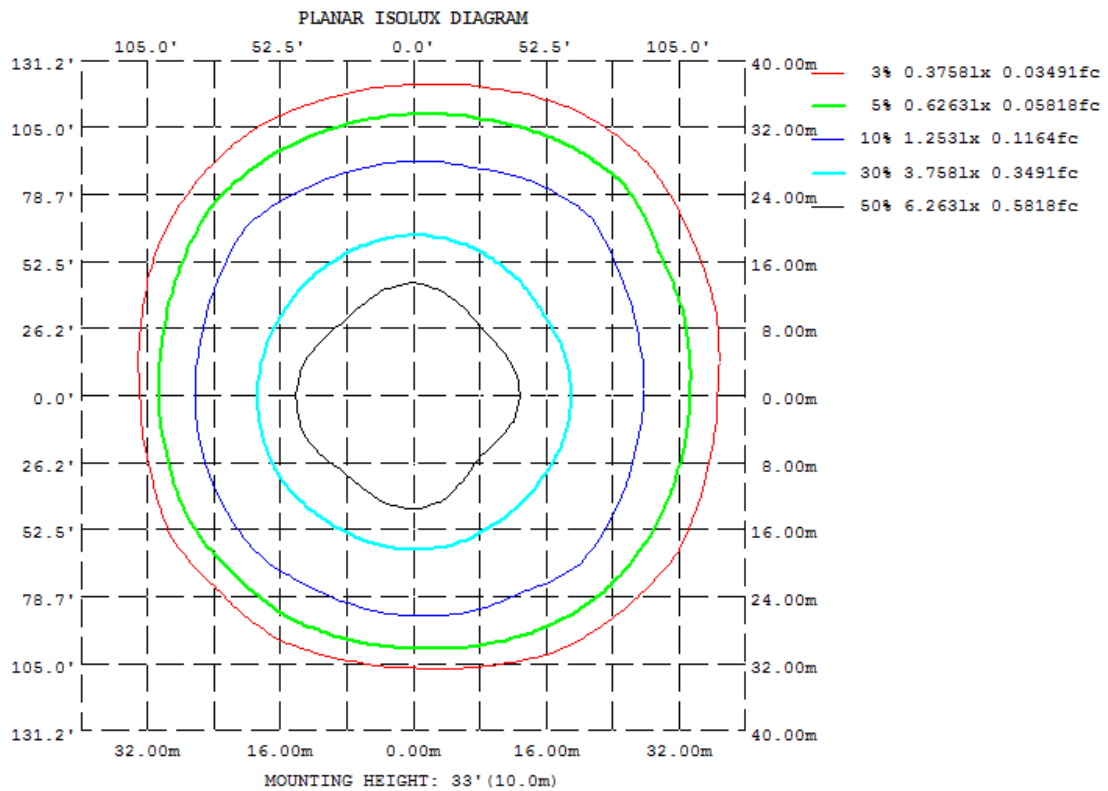
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.68%	B3-U0-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

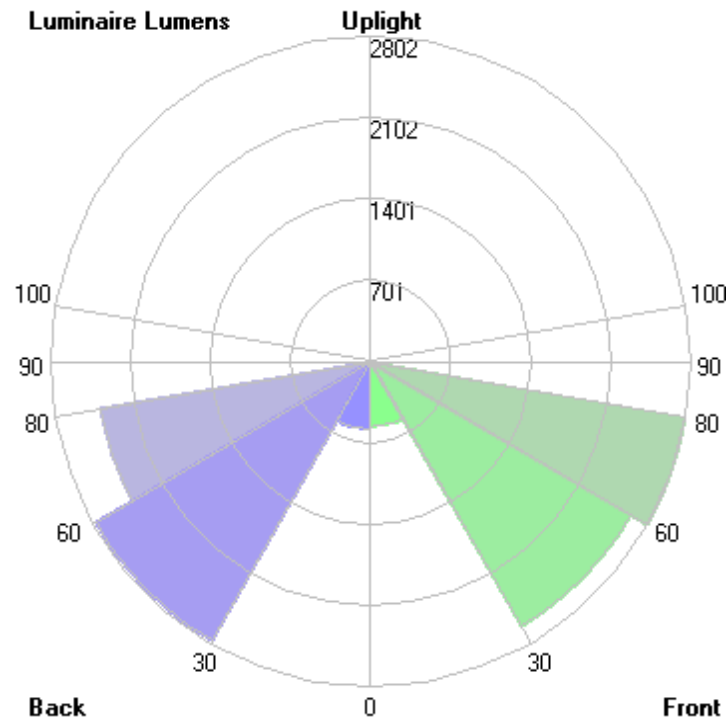
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	1232	1232	1230	1248	1239	1254	1260	1265
20	1265	1284	1294	1353	1377	1367	1359	1334
30	1434	1413	1496	1541	1597	1559	1597	1518
40	1860	1674	1909	1845	2018	1842	2016	1794
50	2495	2191	2643	2435	2813	2395	2620	2257
60	3589	3220	3428	3407	3548	3376	3704	3280
70	3231	3570	2603	2630	2628	3556	3307	4264
80	169.3	322.9	67.30	100.7	100.2	331.8	220.6	751.4
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	119.01	0 - 10	119.01	1.01%
10-20	363.35	0 - 20	482.36	4.08%
20-30	657.90	0 - 30	1140.26	9.64%
30-40	1061.84	0 - 40	2202.10	18.62%
40-50	1679.03	0 - 50	3881.13	32.82%
50-60	2664.93	0 - 60	6546.06	55.36%
60-70	3454.12	0 - 70	10000.18	84.57%
70-80	1744.78	0 - 80	11744.96	99.32%
80-90	80.07	0 - 90	11825.03	100.00%
90-100	0.00	0 - 100	11825.03	100.00%
100-110	0.00	0 - 110	11825.03	100.00%
110-120	0.00	0 - 120	11825.03	100.00%
120-130	0.00	0 - 130	11825.03	100.00%
130-140	0.00	0 - 140	11825.03	100.00%
140-150	0.00	0 - 150	11825.03	100.00%
150-160	0.00	0 - 160	11825.03	100.00%
160-170	0.00	0 - 170	11825.03	100.00%
170-180	0.00	0 - 180	11825.03	100.00%

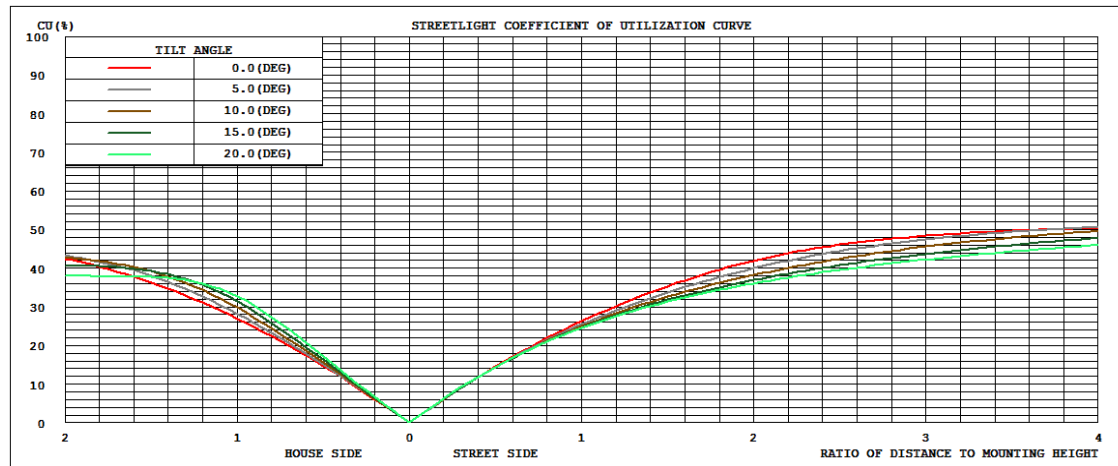
4.2 Goniophotometer Test

LCS/BUG

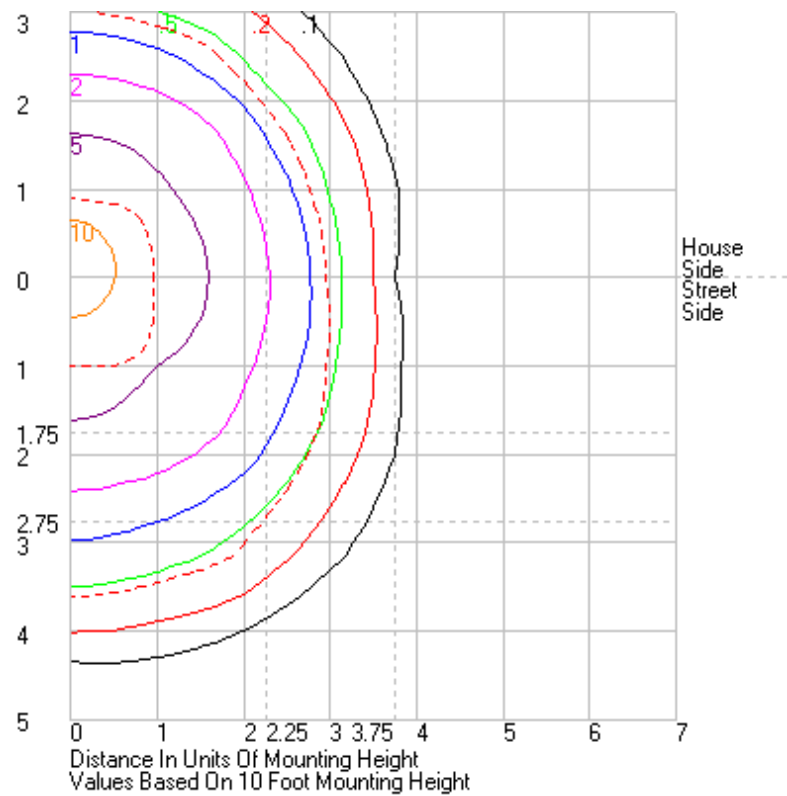


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	559.6	N.A.	4.7
FM - Front-Medium (30-60)	2629.6	N.A.	22.2
FH - Front-High (60-80)	2802.3	N.A.	23.7
FVH - Front-Very High (80-90)	49.5	N.A.	0.4
BL - Back-Low (0-30)	580.7	N.A.	4.9
BM - Back-Medium (30-60)	2776.2	N.A.	23.5
BH - Back-High (60-80)	2396.5	N.A.	20.3
BVH - Back-Very High (80-90)	30.6	N.A.	0.3
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	11825.0	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	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64	1252.64
1	1250.04	1250.03	1249.81	1249.57	1250.25	1251.62	1251.43	1251.43	1251.16	1252.15	1252.52	1254.83	1248.39	1249.33	1250.45	1251.6	1253.63	1255.94	1256.58	1256.84	1256.34	1256.8	1256.56	1257.89	1250.04
2	1248.47	1247.78	1247.56	1247.79	1248.46	1249.81	1249.62	1249.62	1249.37	1250.27	1250.93	1252.73	1246.82	1248.38	1249.99	1251.83	1254.55	1257.97	1259.32	1259.31	1258.37	1257.92	1256.55	1256.76	1248.47
3	1247.76	1246.64	1246.1	1245.3	1244.88	1246.24	1246.23	1246.7	1246.93	1248.7	1247.84	1248.96	1242.79	1245.23	1248.13	1252.49	1256.12	1259.77	1261.56	1261.78	1259.95	1258.37	1256.13	1255.91	1247.76
4	1248.89	1247.52	1245.35	1242.85	1242	1242.42	1243.06	1243.74	1244.87	1245.61	1244.47	1244.91	1238.13	1240.96	1245.42	1250.89	1257.26	1261.34	1264.04	1263.14	1260.88	1259.76	1257.77	1257.91	1248.89
5	1247.14	1246.63	1244.6	1241.01	1238.36	1238.38	1239.45	1240.79	1241.89	1242.15	1241.23	1240.82	1233.98	1236.88	1242.56	1249.3	1257.22	1262.23	1265.17	1264.5	1262.69	1262.01	1259.27	1256.99	1247.14
6	1244.6	1243.55	1241.67	1238.79	1234.75	1234.74	1237.17	1238.74	1240.12	1240.36	1239.22	1238.09	1230.56	1233.95	1240.75	1247.98	1256.79	1263.11	1265.81	1265.81	1264.04	1263.57	1259	1255.42	1244.6
7	1242.43	1241.72	1238.06	1235.61	1232.43	1232.05	1235.18	1238.33	1239.62	1239.64	1238.5	1237.83	1229.25	1232.4	1240.31	1247.77	1257.02	1263.32	1265.09	1265.31	1265.59	1264.24	1258.58	1254.07	1242.43
8	1238.58	1238.34	1235.63	1233.34	1230.65	1229.48	1233.33	1238.4	1240.3	1240.06	1239.82	1239.83	1229.98	1233.1	1240.82	1248.26	1257.45	1262.19	1263.29	1263.3	1266.26	1264.69	1258.36	1251.07	1238.58
9	1234.12	1233.77	1232.88	1231.74	1229.28	1226.77	1231.3	1238.46	1241.87	1243.68	1243.91	1244.01	1232.89	1236.14	1243.8	1250.3	1256.79	1261.3	1261.3	1260.81	1264.45	1264.61	1257.21	1248.18	1234.12
10	1231.53	1231.74	1230.38	1231.51	1227.71	1224.79	1230.38	1239.4	1244.76	1248.49	1249.71	1250.67	1239.04	1241.69	1248.3	1253.64	1257.07	1262.26	1260.17	1258.81	1263.31	1264.54	1256.09	1245.23	1231.53
11	1229.93	1231.94	1230.14	1231.94	1227.22	1224.94	1231.25	1242.05	1247.72	1254.56	1258.08	1259.35	1247.52	1249.81	1255.45	1258.65	1259.32	1264.06	1259.53	1257.92	1262.43	1264.46	1255.66	1244.59	1229.93
12	1229.5	1233.7	1232.97	1233.25	1228.53	1226.53	1233.27	1245.22	1252.78	1261.97	1267.69	1268.71	1257.36	1259.93	1264.39	1264.04	1263.63	1267.93	1262.25	1259.12	1263.37	1264.74	1257.47	1245.28	1229.5
13	1228.13	1235.11	1237.8	1236.21	1230.8	1229.68	1236.87	1249.51	1259.01	1270.16	1279.24	1279.44	1268.15	1270.41	1274.48	1271.14	1269.71	1275.03	1267.65	1263.86	1265.26	1266.54	1260.93	1245.95	1228.13
14	1228.12	1236.46	1242.94	1240.98	1234.08	1234.06	1241.18	1254.27	1265.47	1281.24	1290.41	1291.23	1281.67	1283.3	1285.57	1281.17	1279.72	1284.5	1275.93	1271.71	1270.37	1269.54	1264.7	1246.41	1228.12
15	1230.1	1239.82	1247.84	1247.44	1238.49	1240.2	1247.52	1260.23	1272.76	1292.37	1302.38	1304.14	1296.14	1297.7	1297.75	1292.27	1292.05	1293.42	1284.36	1280.3	1278.74	1274.41	1267.88	1248.53	1230.1
16	1234.11	1244.35	1254.41	1254.42	1243.24	1247.64	1255.64	1266.71	1281.1	1303.62	1315.56	1317.97	1311.5	1312.37	1311.01	1306.23	1304.91	1303.93	1295.98	1290.73	1289.79	1281.82	1272.16	1253.25	1234.11
17	1239.4	1249.67	1261.45	1262.44	1249.65	1255.95	1264.64	1275.51	1291.02	1315.13	1328.55	1331.74	1326.82	1327.27	1324.56	1320.72	1317.45	1317.38	1310.9	1303.76	1300.53	1291.69	1278.26	1259.3	1239.4
18	1246.12	1256.5	1268.87	1268.97	1257.72	1265.4	1274.57	1285.78	1302.27	1326.76	1343.4	1346.69	1343.26	1342.47	1337.93	1335.89	1331.54	1332.2	1329.12	1320.6	1313.48	1304.03	1286.52	1265.93	1246.12
19	1254.7	1263.55	1277	1275.98	1266.64	1273.7	1283.61	1295.57	1315.35	1339.46	1358.22	1362.63	1359.99	1358.44	1352.31	1352.04	1347.23	1346.43	1342.63	1336.66	1329.06	1319.13	1295.43	1273.92	1254.7
20	1265.34	1272.08	1285.37	1284.25	1277.53	1283.31	1294.03	1307.24	1330.26	1353.34	1374.34	1379.74	1376.67	1375.32	1367.74	1367.19	1363.21	1360.85	1358.94	1352.2	1347.55	1334.2	1305.29	1284.22	1265.34
21	1277.48	1282.43	1293.73	1293.45	1288.72	1293.68	1306.7	1320.21	1345.74	1369.19	1391.61	1396.85	1392.84	1392.21	1384.58	1382.47	1378.42	1376.31	1377.3	1368.94	1366.59	1349.54	1316.21	1296.16	1277.48
22	1290.2	1294.36	1303.14	1302.82	1300.67	1305.59	1320.61	1333.81	1361.2	1384.43	1410.22	1414.22	1408.73	1408.89	1403.04	1399.35	1393.65	1393.04	1396.39	1387.97	1384.62	1365.68	1329.21	1308.43	1290.2
23	1301.49	1306.65	1315.14	1314.1	1314.35	1320.3	1337.09	1350.79	1378.47	1402.86	1428.68	1432.33	1425.46	1425.89	1422.51	1416.37	1410.48	1411.85	1416.83	1408.21	1404.18	1382.75	1344.5	1321.21	1301.49
24	1315.73	1318.75	1327.94	1325.58	1328.97	1334.89	1354.38	1368.1	1395.84	1421.35	1447.02	1450.43	1442.96	1442.48	1442.05	1434.81	1429.4	1432.46	1438.38	1430.53	1425.03	1400.62	1361.58	1332.91	1315.73
25	1332.14	1335.05	1341.81	1336.83	1344.74	1352.8	1373.84	1387.67	1415.06	1441.44	1466.16	1470.89	1463.38	1461.76	1462.69	1453.65	1449.79	1452.55	1459.54	1453.17	1447.39	1417.91	1380.59	1348.71	1332.14
26	1349.24	1353.81	1353.56	1348.63	1362.13	1372.54	1395.41	1409.44	1435.73	1461.42	1485.32	1494.05	1485.76	1482.63	1481.94	1472.45	1471.78	1473.52	1482.87	1475.78	1470.63	1434.99	1398.54	1365.42	1349.24
27	1367.94	1372.95	1367.36	1361.95	1380	1392.46	1417.35	1431.42	1456.22	1480.73	1504.81	1517.45	1510.43	1505.05	1501.55	1492.56	1494.1	1496.96	1508.04	1499.23	1496.02	1453.35	1419.06	1383.7	1367.94
28	1386.8	1394.21	1384.09	1378.14	1400.04	1417	1442.53	1456.76	1479.18	1501.01	1527.08	1545.21	1537.71	1530.01	1523.84	1512.9	1515.7	1522.71	1534.84	1526.4	1520.29	1474.22	1440.6	1403.44	1386.8
29	1409.36	1416.21	1401.73	1395.24	1420.63	1440.45	1467.66	1481.45	1501.15	1520.7	1549.27	1574.78	1566.32	1557.05	1547.4	1535.63	1540.23	1550.12	1564.91	1554.53	1544.29	1496.53	1462.04	1424.65	1409.36
30	1433.92	1439.97	1421.88	1413.27	1442.87	1467.56	1496.23	1509.26	1526.13	1541.44	1574.01	1605.4	1596.71	1585.34	1571.46	1558.73	1565.66	1579.82	1597.36	1585.84	1569.05	1518.01	1486.59	1447.84	1433.92
31	1462.76	1467.96	1442.91	1430.5	1466.04	1496.54	1526.67	1539.5	1551.96	1563.23	1600.39	1637.59	1628.9	1614.94	1596.91	1580.63	1592.02	1611.99	1631.38	1619.16	1595.34	1540.66	1510.62	1474.29	1462.76
32	1492.58	1496.78	1466.99	1449.32	1488.98	1525.41	1557.88	1570.27	1577.84	1585.13	1627.03	1669.51	1663.12	1646.85	1624.16	1602.11	1618.91	1645.65	1668.07	1654.22	1621.13	1566.36	1537.58	1502.07	1492.58
33	1526.52	1530.61	1491.66	1471.54	1514.1	1559.99	1593.77	1605.76	1606.41	1612.37	1657.18	1705.49	1699.74	1680.9	1651.86	1625.64	1647.85	1681.37	1705.76	1691.05	1647.8	1590.55	1565.04	1533.6	1526.52
34	1562.94	1564.89	1516.5	1494.31	1539.92	1593.59	1628.88	1639.73	1634.55	1637.06	1687.2	1741.81	1737.86	1717.78	1680.68	1651.57	1678.77	1718.63	1744.66	1729.26	1675.78	1613.98	1594.09	1568.05	1562.94
35	1604.06	1602.83	1544.69	1519.55	1568.27	1631.11	1666.95	1678.23	1665.38	1666.52	1719.51	1781.7	1778.05	1757.45	1711.63	1677.84	1710.2	1756.97	1786.69	1769.97	1706.71	1638.63	1624.91	1604.63	1604.06
36	1648.62	1643.33	1575.03	1545.37	1598.78	1671.79	1709.9	1719.74	1698.21	1698.53	1753.76	1823.66	1821.1	1800.3	1744.21	1706.23	1742.22	1797.86	1829.32	1812.3	1740.16	1667.06	1656.1	1645.96	1648.62
37	1696.47	1685.9	1607.63	1574.36	1630.78	1714.2	1753.57	1760.63	1729.17	1729.02	1790.81	1868.35	1865.25	1844.16	1780.28	1735.1	1776.17	1839.84	1873.95	1855.36	1774.21	1697.13	1690.58	1690.65	1696.47
38	1749.81	1732.16	1641.98	1606.27	1667.76	1762.86	1803.57	1809.13	1764.76	1767.41	1830.58	1915.03	1913.02	1890.98	18										

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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
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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
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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.	ALEDM5TN	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
119.95	60	0.641	76.7	0.997	6.65%
276.97	60	0.312	75.5	0.874	14.18%

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*****