

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

DLF2111113

Report Number

DLF2111113-1a

Test Date

2021/11/24

Issue Date

2021/12/1

Prepared By

Wangzun Zhu

Wangzun Zhu

Approved By

Kevin Jia

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		36872
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	136.4
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		270.3
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	1.63%
		20.00%	277V	4.05%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.999
		0.9	277V	0.966
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3985±275	3892
		4 step	3985±154	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		83
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		7
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		95
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%		0.23%
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		2.256
(Goniophotometer - Section 4.2)		Non-Worst Case		0.974
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		270.3
(Goniophotometer - Section 4.2)		Non-Worst Case		259.7

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/11/24	ALEDL2TN	A1
2	Goniophotometer Test	2021/11/24	ALEDL2TN	A1
3	THD and PF Test	2021/11/24	ALEDL2TN	A1

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.

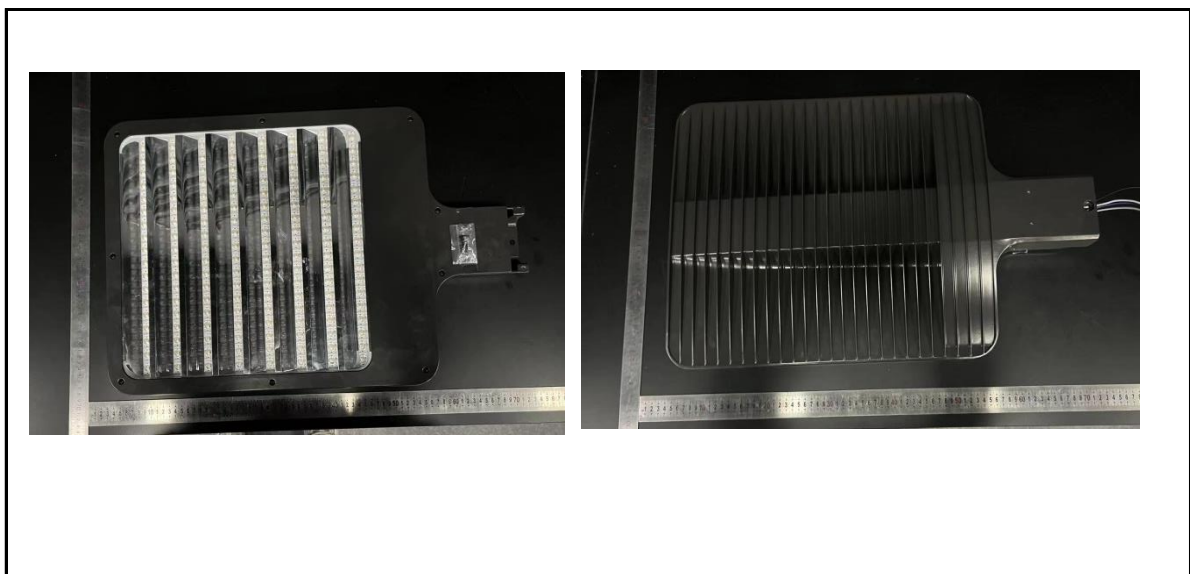
3.0 Production Description

Luminaire Description: ALEDL2TN

Description: 260W/36,000 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.	ALEDL2TN	Sample ID.	A1
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
120.00	60	2.243	268.9	0.999
277.05	60	0.970	259.6	0.966

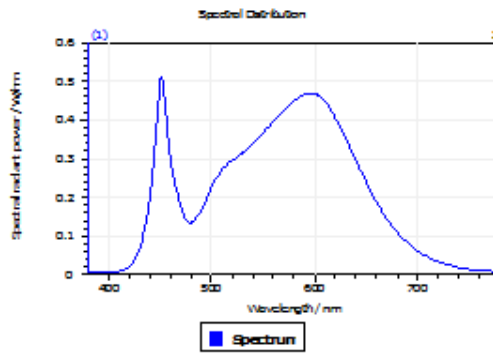
Test Result

CCT (K)	CRI	R9	Duv
3892	83	7	0.0034

Rf	Rg	IES Rcs,h1
84	95	-12%

4.1 Integrating Sphere Test

Results



Spectral values

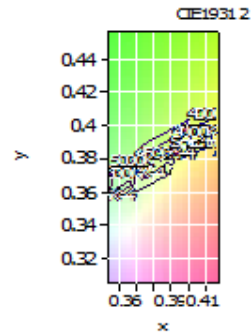
DominantWavelength	579.30 nm
Purity	0.300
PeakWavelength	451.42 nm
Radiant Power	80.86 W
Width50%:	20.22 nm

Color Coordinates

Correlated Color Temperat 3892 K

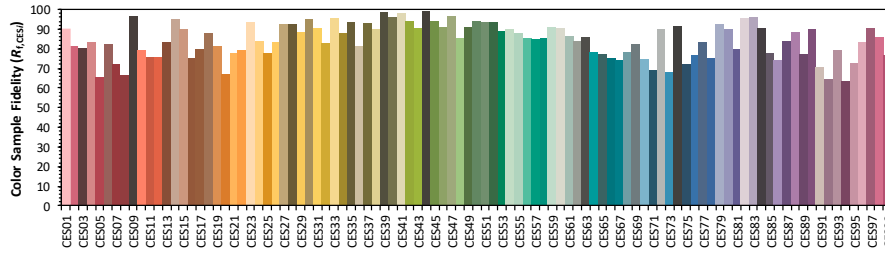
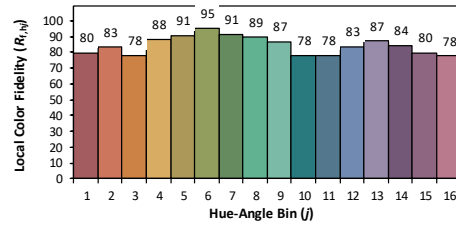
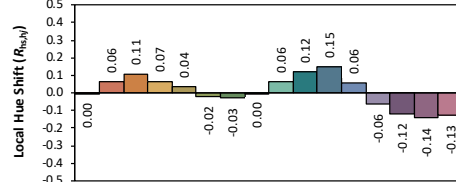
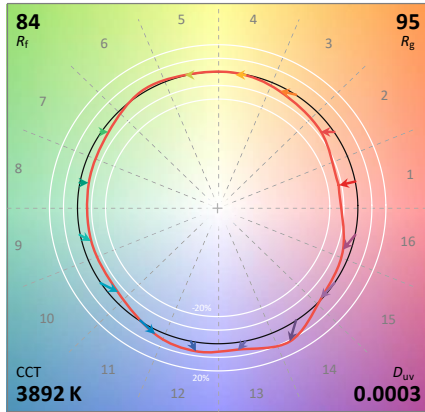
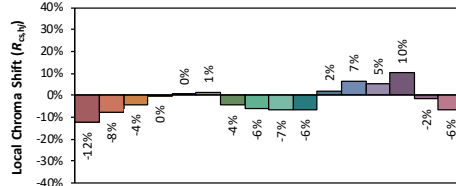
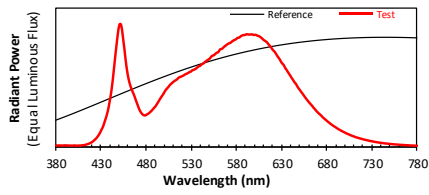
x: 0.3856 u: 0.2269 u': 0.2269
y: 0.3806 v: 0.3360 v': 0.5040

ResultsCRICRI01	80.9	ResultsCRICRI09	7.2
ResultsCRICRI02	89.5	ResultsCRICRI10	75.3
ResultsCRICRI03	95.4	ResultsCRICRI11	80.5
ResultsCRICRI04	81.6	ResultsCRICRI12	63.3
ResultsCRICRI05	81.5	ResultsCRICRI13	83.0
ResultsCRICRI06	85.8	ResultsCRICRI14	97.7
ResultsCRICRI07	85.5	ResultsCRICRI15	74.5
ResultsCRICRI08	63.4	ResultsCRICRI16	72.2
ResultsCRI	83.0		



PlanckDistance 3.4E-004

4.1 Integrating Sphere Test



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

x 0.3856
 y 0.3806
 u' 0.2269
 v' 0.5040

CIE 13.3-1995 (CRI)	
R_a	83
R_g	7

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.	ALEDL2TN	Sample ID.	A1
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	119.97	60	2.256	270.3	0.999
NON-WROST CASE	277.01	60	0.974	259.7	0.963

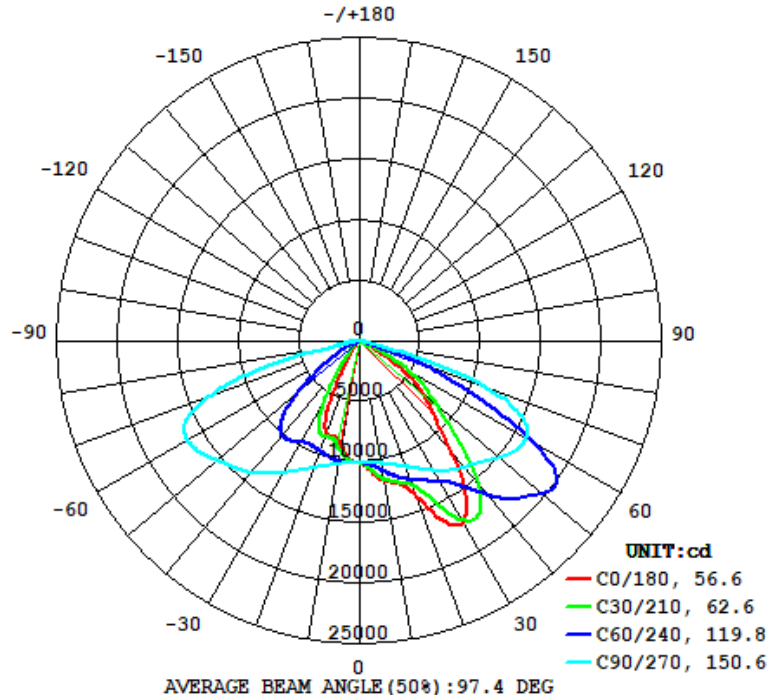
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
36872	95.2	159.0	56.6	150.6	136.4

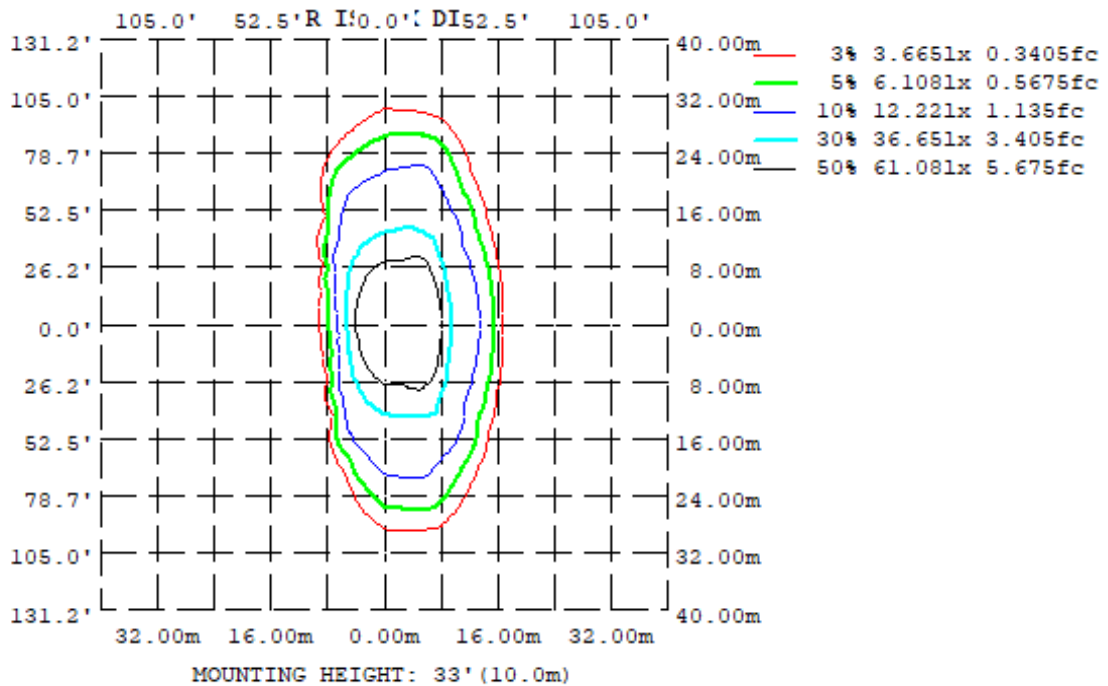
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.23%	B4-U0-G3

4.2 Goniophotometer Test

Light Distribution Curve



Isolux Plot



4.2 Goniophotometer Test

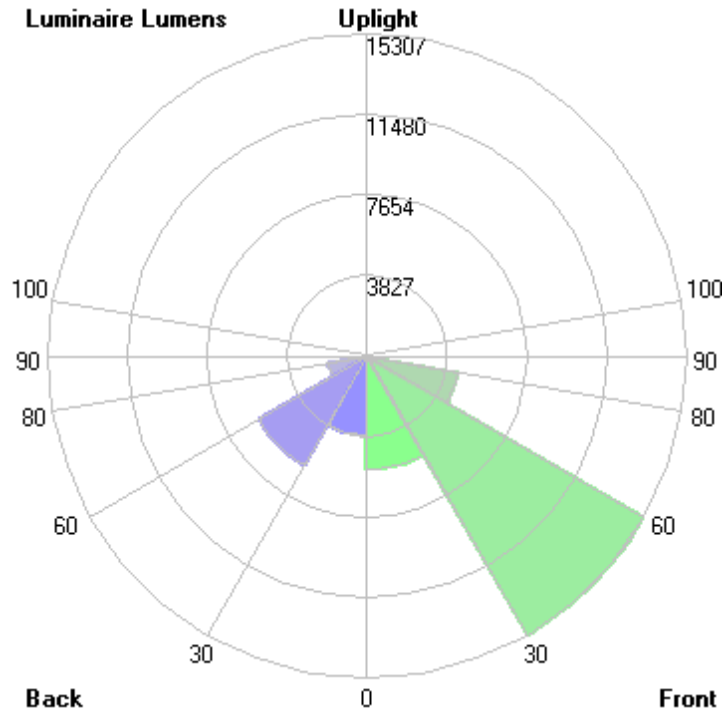
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	1171	1129	1028	939.4	886.3	968.8	1030	1126
20	1352	1241	1106	843.2	811.7	867.9	1113	1245
30	1720	1514	1238	773.5	350.6	863.0	1256	1581
40	1169	1841	1357	344.9	103.4	511.8	1421	1814
50	695.6	1393	1499	107.2	27.68	147.1	1540	1252
60	211.7	679.1	1597	23.60	10.66	49.34	1642	636.1
70	16.57	89.60	1108	13.62	9.088	16.18	1307	90.15
80	5.325	12.42	58.93	3.362	1.937	7.301	135.9	14.48
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: *10cd							

	Zonal (lm)		Total (lm)	Percent
0-10	978.05	0 - 10	978.05	2.65%
10-20	2975.74	0 - 20	3953.79	10.72%
20-30	5224.08	0 - 30	9177.87	24.89%
30-40	6988.91	0 - 40	16166.78	43.85%
40-50	7416.31	0 - 50	23583.09	63.96%
50-60	6894.98	0 - 60	30478.07	82.66%
60-70	4845.98	0 - 70	35324.05	95.80%
70-80	1462.18	0 - 80	36786.23	99.77%
80-90	86.01	0 - 90	36872.24	100.00%
90-100	0.00	0 - 100	36872.24	100.00%
100-110	0.00	0 - 110	36872.24	100.00%
110-120	0.00	0 - 120	36872.24	100.00%
120-130	0.00	0 - 130	36872.24	100.00%
130-140	0.00	0 - 140	36872.24	100.00%
140-150	0.00	0 - 150	36872.24	100.00%
150-160	0.00	0 - 160	36872.24	100.00%
160-170	0.00	0 - 170	36872.24	100.00%
170-180	0.00	0 - 180	36872.24	100.00%

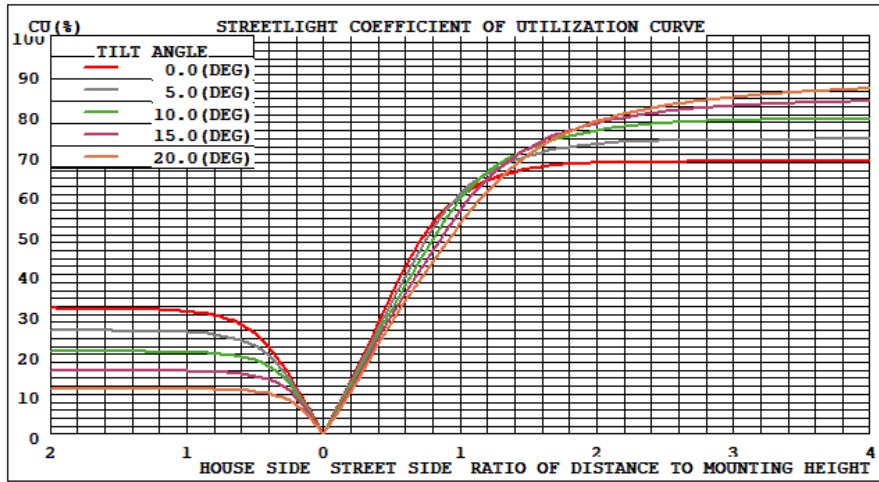
4.2 Goniophotometer Test

LCS/BUG

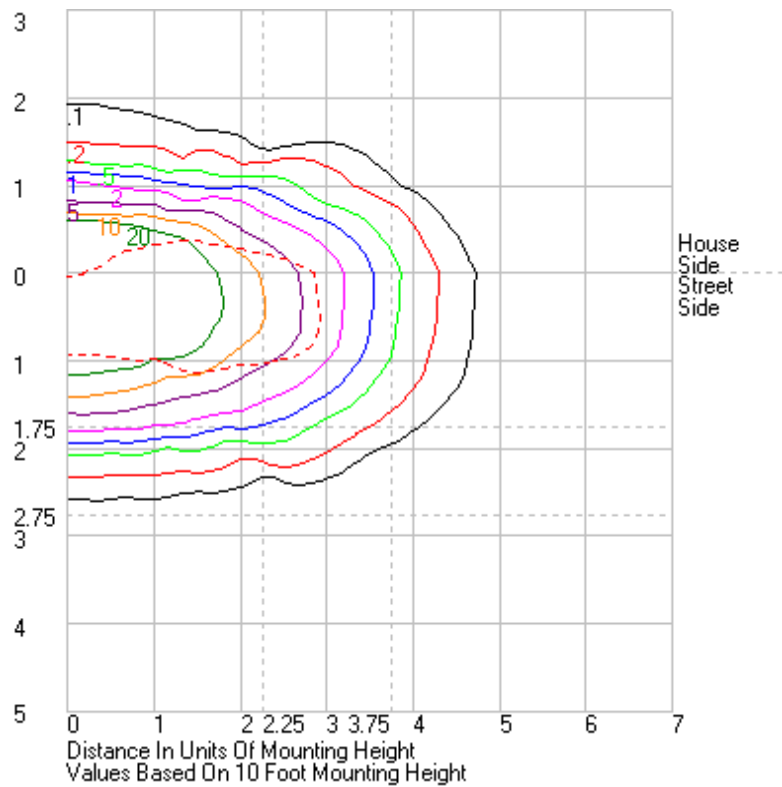


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	5408.3	N.A.	14.7
FM - Front-Medium (30-60)	15307.1	N.A.	41.5
FH - Front-High (60-80)	4438.7	N.A.	12.0
FVH - Front-Very High (80-90)	51.8	N.A.	0.1
BL - Back-Low (0-30)	3769.6	N.A.	10.2
BM - Back-Medium (30-60)	5993.1	N.A.	16.3
BH - Back-High (60-80)	1869.5	N.A.	5.1
BVH - Back-Very High (80-90)	34.2	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	36872.3	N.A.	100.0
BUG Rating	B4-U0-G3		

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	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8	10063.8
1	10144.3	10136.3	10130.4	10120.4	10109.3	10098.2	10034.5	10027.8	10016.9	10010	10003.3	9996.63	10094.8	10089.8	10088.3	10086.5	10086.1	10087.5	10034.7	10037.1	10039.2	10040	10042.3	10040.5	10144.3
2	10208.1	10197.7	10180.4	10155.6	10131.9	10112.9	10043.5	10027.9	10016.7	10003.3	9988.1	9974.6	10077.9	10077	10082.3	10086.5	10086.6	10089.1	10041.4	10053.1	10064.3	10081.9	10097.3	10103.3	10208.1
3	10320.4	10299.3	10261.6	10210.7	10167.6	10133.1	10054.7	10039.1	10014.5	9985.7	9958.66	9939.26	10039	10044	10058.6	10077.9	10095.1	10098.3	10052.8	10075.7	10103.6	10142.3	10179.5	10203.5	10320.4
4	10503.3	10466.5	10386.5	10296.1	10214.8	10156.9	10070.4	10050.3	10012.2	9962.84	9908.37	9871.08	9970.71	9983.85	10025.1	10066	10100.4	10114.4	10075.2	10100.9	10158.5	10232.5	10306	10365.9	10503.3
5	10736.4	10683.1	10570.5	10407.5	10272.9	10188.5	10092.6	10063.8	10007.7	9923.11	9840.06	9770.58	9862.19	9899.28	9970.23	10046.6	10102.6	10133	10095.5	10136.7	10224.7	10348.1	10496.2	10587.1	10736.4
6	10982	10925.3	10783.1	10562.4	10351.2	10228.3	10119.8	10081.7	9990.11	9871.08	9724.1	9610.88	9689.81	9750.06	9883.65	10014.1	10108.8	10158.8	10120.4	10182	10309.3	10521.4	10719.8	10834.4	10982
7	11212.5	11153.5	10992.5	10737.6	10448.9	10275.1	10155.3	10099.8	9971.89	9779.9	9566.03	9420.16	9493.68	9574.43	9749.61	9965.91	10114.8	10187.6	10158.7	10235.2	10420.3	10709.8	10936	11061.7	11212.5
8	11410.8	11356.4	11202.5	10924.8	10564.5	10326.2	10191.4	10119.7	9951.9	9667.08	9389.66	9218.86	9286.78	9383.95	9600.57	9889.06	10115.5	10222.8	10199.6	10297.2	10561.2	10904.7	11145.7	11262.8	11410.8
9	11589.5	11531.7	11385.5	11109.8	10701.5	10384.3	10234.4	10147	9912.37	9536.83	9212.9	9021.66	9086	9195.18	9442.85	9790.97	10121.7	10265.3	10253.2	10374.4	10717	11095.7	11325.5	11435.2	11589.5
10	11711.4	11686.4	11546.2	11285.1	10842.8	10449.7	10282.9	10173.7	9857.78	9394.32	9036.86	8806.49	8663.14	8995.66	9279.23	9688.37	10112.9	10307.1	10301.3	10460.6	10887.5	11264.4	11488	11590.8	11711.4
11	11831.9	11784.7	11700.8	11442.6	10994.2	10522.8	10333.3	10198.6	9787.31	9254.06	8839.65	8587.03	8643.22	8779.78	9111.91	9574.8	10092.1	10355.3	10361.4	10555.2	11051.4	11246	11631.3	11681.2	11831.9
12	11936.5	11899	11789.5	11585.4	11147.8	10605	10393.6	10224.7	9718.46	9120.05	8651.9	8392.05	8449.26	8585.14	8933.52	9456.01	10057.3	10404	10423.9	10661.3	11215	11576.7	11714.2	11798.8	11936.5
13	12018.3	11988.2	11899.1	11723.3	11294	10695.8	10458.8	10254.6	9641.19	8970.18	8466.29	8244.17	8309.48	8420.08	8753.79	9343.56	10018.1	10459.6	10497.1	10781.2	11375.5	11710.8	11834.8	11882.3	12018.3
14	12143.3	12098.8	11999.7	11838.5	11440.2	10793.7	10523.4	10279.6	9555.57	8822.98	8325.35	8170.48	8251.86	8313.76	8594.52	9224.12	9980.65	10519.1	10574.1	10918.8	11522.5	11803.6	11928.7	12017.9	12143.3
15	12239.6	12192.6	12064.1	11917.1	11574.5	10899.9	10602	10308.3	9484.77	8680.13	8241.15	8155.99	8237.91	8284.12	8478.2	9092.73	9935.14	10577	10656.8	11056.6	11661.2	11913.6	12031.6	12112.5	12239.6
16	12309.1	12291.5	12191.8	12022.3	11707.9	11017.9	10679.6	10332.9	9413.25	8550.63	8216.75	8162.12	8248.35	8279.71	8406.44	8972.83	9886.63	10639.4	10741.7	11199	11801.3	12011	12143.4	12213	12309.1
17	12483.8	12360.9	12271.1	12112.2	11833.7	11141.4	10762.7	10355.8	9340.3	8463.39	8218.65	8191.43	8273.22	8297.68	8391.16	8857.17	9842.71	10702.7	10830.2	11347.4	11934.2	12089.5	12251.3	12312.1	12483.8
18	12716.1	12560.6	12373.1	12193.2	11961.2	11275.6	10859.1	10380.5	9267.4	8412.82	8238.57	8211.73	8270.54	8316.23	8395.56	8674.74	9798.5	10765.1	10923.4	11495.1	12039	12218.5	12326.6	12524.1	12716.1
19	13033.7	12809.4	12451.2	12293.8	12086.3	11415	10952.9	10400.9	9192.76	8409.66	8274.09	8183.87	8222.77	8309.07	8419.54	8700.34	9755.54	10831.5	11027.7	11649.8	12136.9	12334.1	12485.9	12773.4	13033.7
20	13524.3	13141.5	12641.7	12410.4	12189.1	11556.7	11056.1	10429.2	9126.42	8431.75	8288.17	8103.58	8117.41	8254.97	8446.08	8678.92	9711.08	10898.3	11134.8	11799.8	12256.8	12449.2	12700.7	13146.5	13524.3
21	14015.2	13624.7	12879	12513	12285.6	11700.3	11162.8	10457	9063.98	8464.97	8257.09	7963.32	7941.13	8150.76	8455.55	8689.46	9662.78	10966.8	11252.5	11956.1	12361.3	12564.8	12977.1	13632.1	14015.2
22	14559.2	14111.6	13174.7	12639.8	12399.3	11848.5	11270.4	10478.9	9021.38	8505	8173.23	7741.8	7687.92	7970.89	8427.65	8719.2	9621.28	11031.9	11372.3	12112.3	12474.2	12674.7	13349.9	14183.5	14559.2
23	15180.7	14651.5	13616.7	12741.1	12524.4	12008.1	11398.3	10515.4	8998.75	8541.77	8030.26	7447.1	7354.84	7724.89	8363.33	8763.3	9582.16	11098.3	11497.8	12266.2	12566.5	12888.7	13824.9	14801.8	15180.7
24	15803.8	15259.6	14060.2	12925.5	12639.9	12166.2	11517.3	10539.6	8996.2	8549.12	7822.47	7072.08	6956.77	7406.67	8243.21	8807	9547.35	11166	11633	12425.5	12727.5	13122	14350.3	15409.4	15803.8
25	16366.7	15856.4	14543.1	13161.2	12754.1	12324	11657.6	10575.9	9029.98	8526.95	7556.7	6640.92	6460.81	7010.84	8054.89	8853.27	9523.05	11234.6	11770.1	12582.5	12878.2	13429.6	14929.5	15999.4	16366.7
26	16827.6	16402.3	15128.6	13455.7	12866.5	12486.8	11799.6	10613.2	9084.27	8460.08	7222.71	6102.97	5904.53	6538.43	7823.85	8876.85	9512.06	11311.9	11915.7	12736.8	13021.6	13778.7	15520.4	16526.5	16827.6
27	17142.7	16839.2	15680	13781.1	13030.1	12641.2	11938.5	10647.6	9137.85	8350.29	6821.59	5564.48	5328.23	6022.66	7525.21	8872.92	9520.79	11386.3	12065.5	12891.7	13179.4	14219.5	16080.6	16926.7	17142.7
28	17296.4	17136.1	16238.2	14151.2	13178.9	12812.2	12095.9	10694.9	9201.79	8190.33	6531.72	4993.91	4706.53	5458.8	7163.36	8368.83	9554.55	11461.3	12225.6	13044	13339.6	14727.1	16594.4	17183.8	17296.4
29	17316.5	17280.6	16722.4	14609.7	13326.7	12970.9	12233.6	10735.4	9262.46	7994.33	5860.44	4385.37	4085.9	4868.49	6746.46	8753.55	9614.19	11541.4	12388.9	13187.2	13494.4	15263.8	17001.9	17291.7	17316.5
30	17204.6	17302.8	17102.2	15140.5	13477.5	13134.8	12383.5	10782.3	9332.17	7734.99	5355.73	3784.43	3506.49	4268.77	6280.57	8629.79	9691.04	11619.6	12556.9	13322.3	13725.2	15811.5	17279.8	17280.5	17204.6
31	17018.1	17207	17349.4	15669.3	13628.2	13295.7	12531.3	10834.6	9384.87	7440.04	4793.02	3247.34	3003.09	3698.3	5770.05	8465.21	9774.98	11702.2	12727.1	13474.2	13995.6	16353.1	17445.4	17163.2	17018.1
32	16735.4	17025.8	17482.3	16206	13780.7	13435.4	12663.6	10881.2	9414.05	7087.17	4225.38	2787.28	2580.94	3187	5239.65	8258.87	9862.9	11793.8	12898.8	13624.1	14293.4	16847.9	17502.4	16957.1	16735.4
33	16378.7	16758.8	17520.6	16736.5	14009.7	13561.7	12806.8	10938.9	9425.5	6674.95	3696.72	2406.08	2222.18	2747.68	4682.57	8006.27	9945.83	11880.8	13074.7	13779.1	14646	17289.8	17460.1	16687	16378.7
34	15938.9	16417.3	17458.6	17191.9	14284.3	13688.1	12930.6	10984.3	9394.7	6232.48	3213.11	2069.53	1893.64	2381.7	4153.42	7713.51	10031.7	11970.2	13248	13918.8	15022.5	17643.6	17326.4	16337.3	15938.9
35	15400	15985.9	17324.8	17593.5	14592.7	13791.6	13058.8	11041.3	9326.33	5789.91	2805.71	1750.01	1628.59	2055.52	3653.23	7366.34	10099.1	12056.2	13416.2	14067.1	15451	17905.7	17131.9	15890.2	15400
36	14814	15466	17121.9	17901.4	14939.8	13888.9	13192.2	11110	9225.05	5315.41	2446.49	1480.1	1419.38	1733.39	3210.17	6975.78	10151.4	12140	13590.6	14207.8	15959.3	18084.2	16864	15348.9	14814
37	14052.1	14880.6	16812.6	18122.7	15309.4	13978.7	13301.9	11172.9	9076.16	4805.46	2104.9	1273.2	1210.58	1528.02	2825.02	6549.38	10184.8	12220.5	13750	14324.8	16463	18196.3	16506.4	14718.7	14052.1
38	13280.9	14167.6	16427.1	18276.5	15709.7	14068.4	13402	11248.4	8891.55	4319.28	1794.44	1154.02	1131	1322.66	2473.26	6089.25	10185.7	12304.2	13906.7	14486.2	16981.9	18239.9	16056.6		



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.	ALEDL2TN	Sample ID.	A1
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° C ± 1° 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
120.00	60	2.243	268.9	0.999	1.63%
277.05	60	0.970	259.6	0.966	4.05%

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*****