

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

DLF2111105

Report Number

DLF2111105-10a

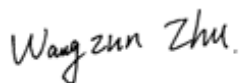
Test Date

2021/11/8

Issue Date

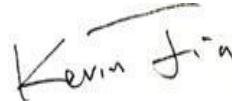
2021/11/11

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		50899
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	137.3
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		370.6
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	2.86%
		20.00%	277V	10.14%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.999
		0.9	277V	0.961
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	5029±355	4990
		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		14
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%		1.00%
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		3.088
(Goniophotometer - Section 4.2)		Non-Worst Case		1.374
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		370.6
(Goniophotometer - Section 4.2)		Non-Worst Case		366.7

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/11/8	ALEDXL4T	J1
2	Goniophotometer Test	2021/11/8	ALEDXL4T	J1
3	THD and PF Test	2021/11/8	ALEDXL4T	J1

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: ALEDXL4T

Description: 385W/50,000 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.	ALEDXL4T	Sample ID.	J1
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
119.93	60	3.074	368.4	0.999
277.01	60	1.366	363.6	0.961

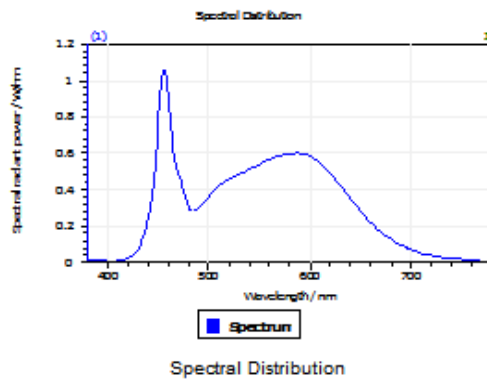
Test Result

CCT (K)	CRI	R9	Duv
4990	85	14	0.00087

Rf	Rg	IES Rcs,h1
84	94	-12%

4.1 Integrating Sphere Test

Results



Spectral values

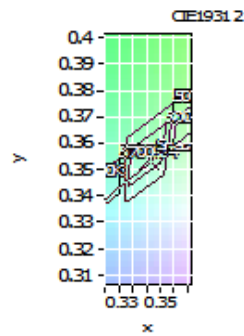
DominantWavelength 572.01 nm
Purity 0.099
PeakWavelength 455.97 nm
Radiant Power 117.7 W
Width50%:

Color Coordinates

Correlated Color Temporal 4990 K
x: 0.3456 u: 0.2109 u': 0.2109
y: 0.3537 v: 0.3239 v': 0.4858

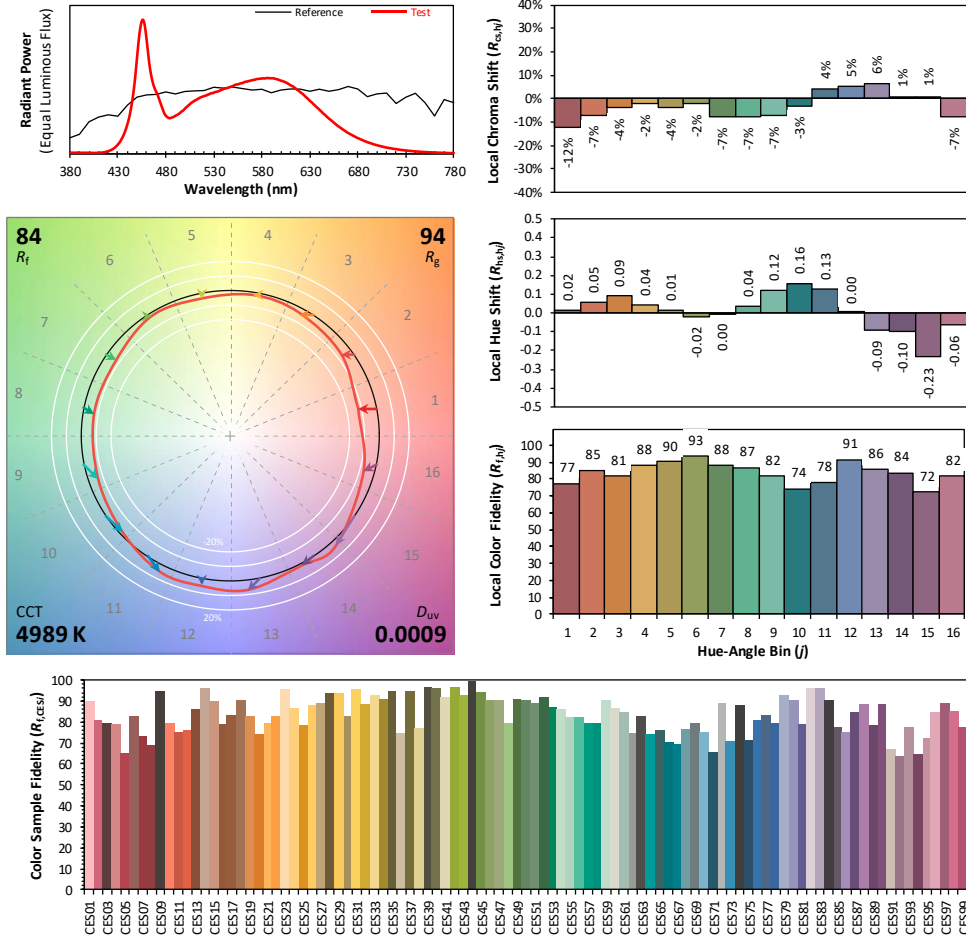
CRI01	83.7	CRI09	14.2
CRI02	92.9	CRI10	81.7
CRI03	95.0	CRI11	80.6
CRI04	81.4	CRI12	62.3
CRI05	83.6	CRI13	86.8
CRI06	87.9	CRI14	98.0
CRI07	85.3	CRI15	78.9
CRI08	67.1	CRI16	74.4

ResultsCRI 84.6



PlanckDistance 8.7E-004

4.1 Integrating Sphere Test



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

x **0.3456**
 y **0.3537**
 u' **0.2109**
 v' **0.4858**

CIE 13.3-1995 (CRI)	
R_a	84
R_g	15

lors 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.	ALEDXL4T	Sample ID.	J1
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° C ± 1° 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	3.088	370.6	0.999
NON-WROST CASE	277.04	60	1.374	366.7	0.963

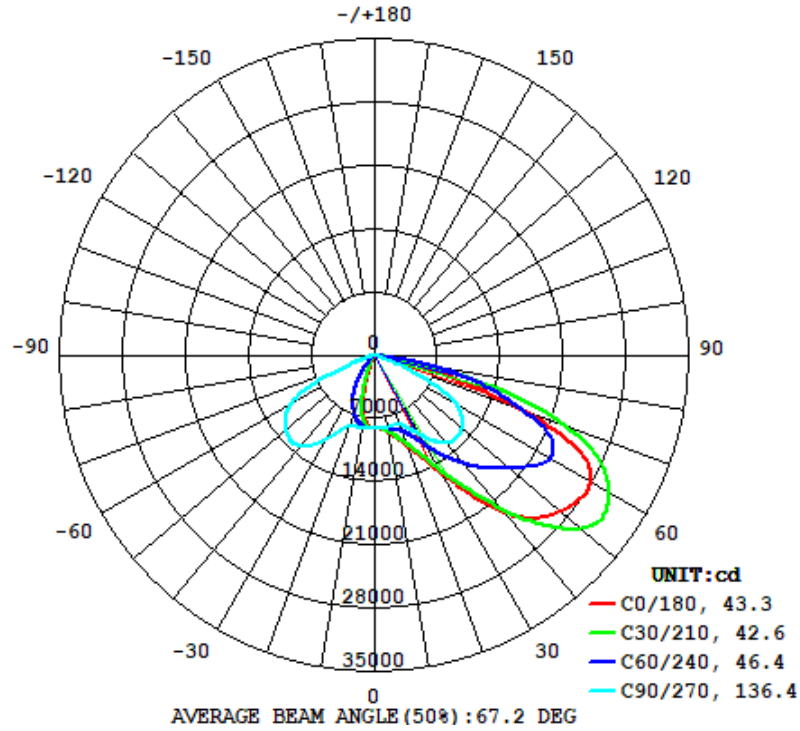
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
50899	97.9	149.3	43.3	136.4	137.3

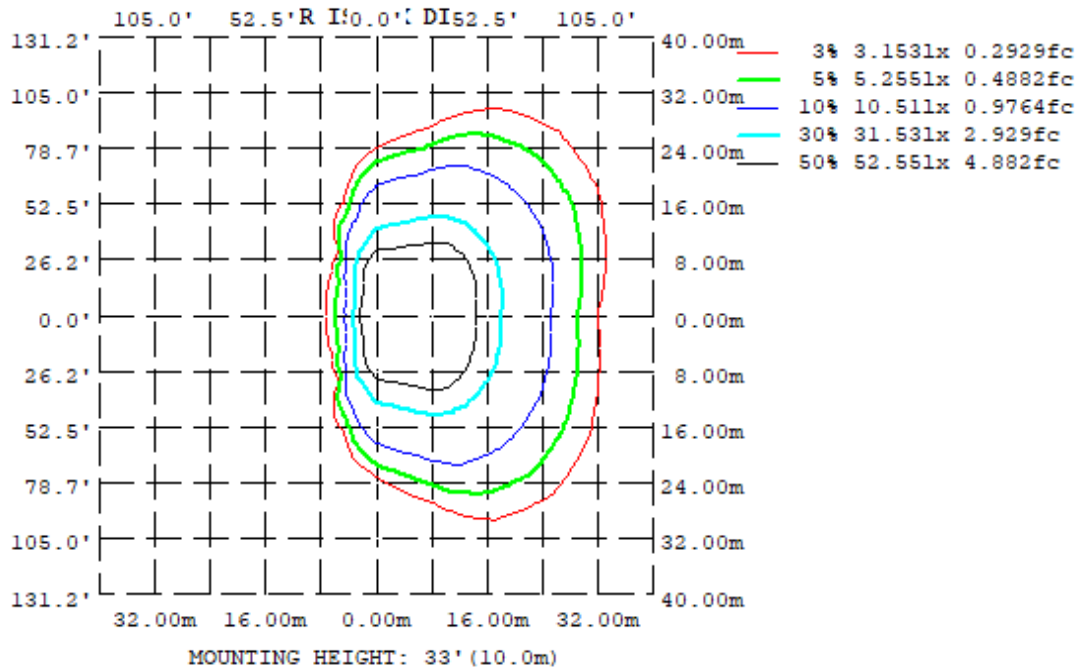
Zonal Lumen Requirement (0°-90°)	Zonal Lumen Requirement (80°-90°)	BUG rating
100.00%	1.00%	B3-U0-G5

4.2 Goniophotometer Test

Light Distribution Curve



Isolux Plot



4.2 Goniophotometer Test

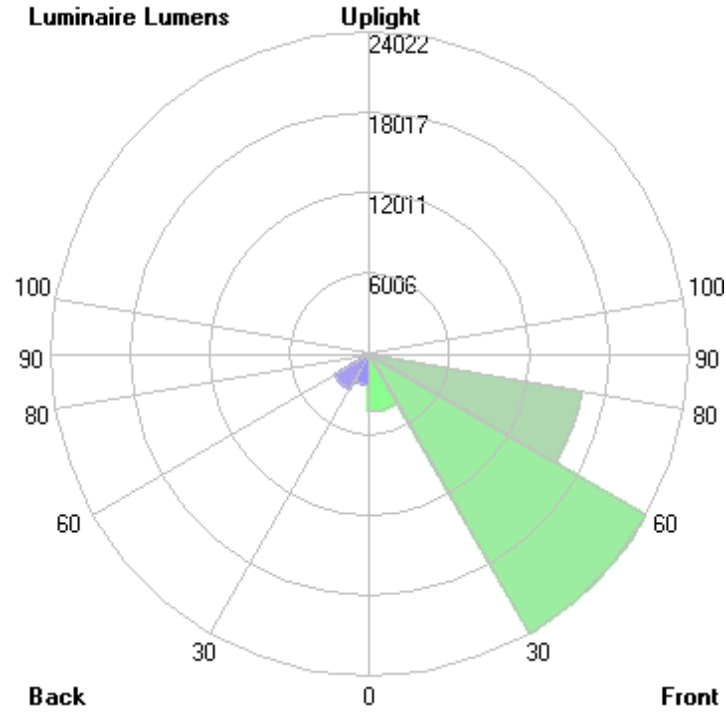
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	861.0	843.1	814.9	763.2	702.8	773.4	829.1	842.4
20	1062	978.2	820.9	507.4	252.5	504.8	838.1	985.4
30	1512	1307	1021	194.3	82.95	184.9	1061	1319
40	2276	1886	1268	77.62	46.77	80.76	1313	1875
50	2690	2636	1271	44.33	16.09	47.34	1292	2578
60	2783	2875	1034	16.89	8.185	18.76	1074	2954
70	1705	2236	216.9	9.989	5.420	10.97	315.7	2361
80	168.6	531.6	42.12	4.766	2.859	5.474	47.07	823.2
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	772.34	0 - 10	772.34 1.52%
10-20	2181.77	0 - 20	2954.11 5.80%
20-30	3590.97	0 - 30	6545.08 12.86%
30-40	6105.20	0 - 40	12650.28 24.85%
40-50	9295.07	0 - 50	21945.35 43.12%
50-60	11692.25	0 - 60	33637.60 66.09%
60-70	11134.37	0 - 70	44771.97 87.96%
70-80	5616.92	0 - 80	50388.89 99.00%
80-90	510.39	0 - 90	50899.28 100.00%
90-100	0.00	0 - 100	50899.28 100.00%
100-110	0.00	0 - 110	50899.28 100.00%
110-120	0.00	0 - 120	50899.28 100.00%
120-130	0.00	0 - 130	50899.28 100.00%
130-140	0.00	0 - 140	50899.28 100.00%
140-150	0.00	0 - 150	50899.28 100.00%
150-160	0.00	0 - 160	50899.28 100.00%
160-170	0.00	0 - 170	50899.28 100.00%
170-180	0.00	0 - 180	50899.28 100.00%

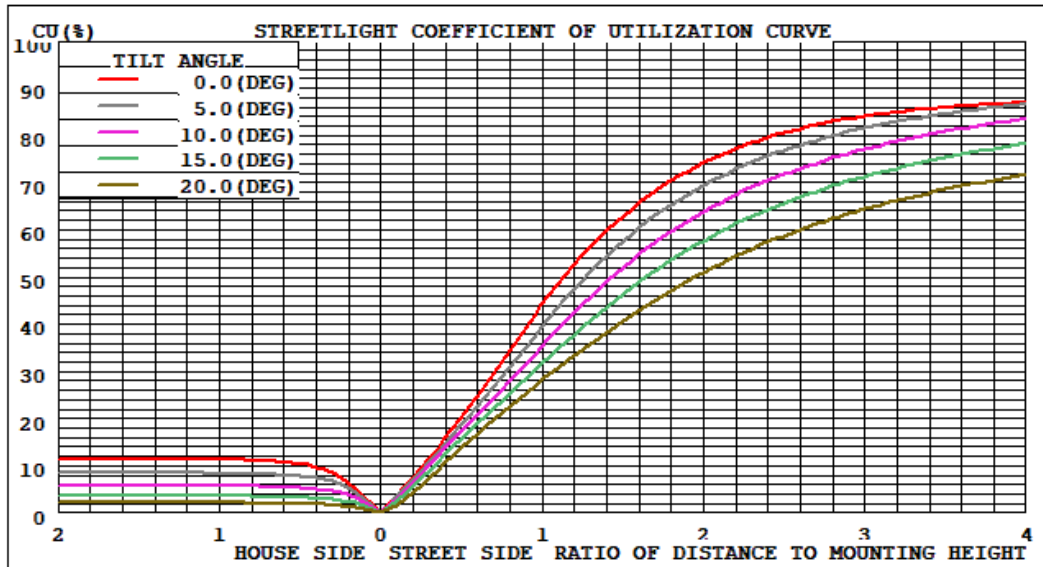
4.2 Goniophotometer Test

LCS/BUG

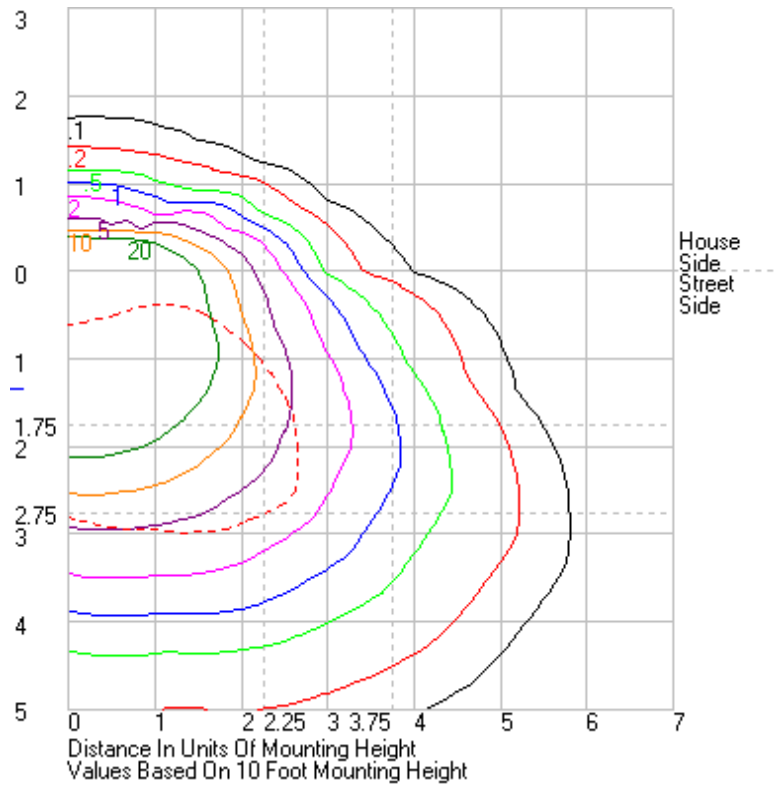


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	4253.6	N.A.	8.4
FM - Front-Medium (30-60)	24022.4	N.A.	47.2
FH - Front-High (60-80)	16213.5	N.A.	31.9
FVH - Front-Very High (80-90)	487.0	N.A.	1.0
BL - Back-Low (0-30)	2291.5	N.A.	4.5
BM - Back-Medium (30-60)	3070.1	N.A.	6.0
BH - Back-High (60-80)	537.8	N.A.	1.1
BVH - Back-Very High (80-90)	23.4	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	50899.3	N.A.	100.0
BUG Rating	B3-U0-G5		

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	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55	8165.55
1	8149.07	8145.16	8141.77	8139.87	8139.86	8140.23	8141.58	8095.14	8094.91	8092.75	8090.63	8090.59	8178.7	8176.02	8172.75	8169.15	8164.37	8158.43	8151.31	8095.2	8086.15	8077.11	8070.27	8065.7	8149.07
2	8138.54	8133.5		8131	8131.59	8133.96	8137.52	8143.09	8099.6	8095.14	8090.66	8088.6	8177.62	8177.49	8179.65	8181.18	8180.17	8174.18	8164.26	8104.38	8090.74	8074.96	8063.68	8056.92	8138.54
3	8135.7	8130.48	8128.21	8128.3	8132.1	8137.97	8147.17	8106.31	8101.93	8090.83	8077.35	8066.06	8152.92	8157.04	8169.73	8184.34	8192.39	8191.27	8180.39	8115.74	8097.44	8079.44	8065.96	8057.13	8135.7
4	8147.27	8140.42	8137.35	8134.16	8135.31	8141.3	8152.56	8113.01	8101.94	8074.96	8042.18	8019.24	8101.62	8140.88	8172.94	8200.26	8209	8199.94	8133.69	8111.48	8091.17	8077.89	8066.74	8147.27	
5	8175.86	8167.43	8159.37	8149.86	8145.7	8147.65	8158.4	8155.33	8093.31	8046.41	7989.9	7951.19	8020.59	8042.18	8089.34	8149.45	8200.32	8225.75	8220.16	8156.1	8133.68	8113.43	8102.53	8094.24	8175.86
6	8226	8216.23	8199.91	8177.08	8161.69	8155.6	8162.75	8117.62	8077.71	8001.65	7918.18	7842.6	7902.69	7931.4	8011.32	8110.71	8192.26	8239.75	8241.24	8178.39	8163.05	8147.04	8144.05	8142.6	8226
7	8299.36	8286.78	8260.04	8219.52	8183.38	8163.73	8166.36	8115.37	8050.5	7943.98	7808.91	7704.41	7747.67	7788.41	7902.39	8052.72	8176.47	8248.42	8260.21	8201.21	8193.03	8195.63	8206.84	8211.12	8299.36
8	8389.77	8377.42	8340.56	8276.03	8208.39	8170.52	8165.51	8106.56	8016.52	7859.1	7675.77	7529.72	7546.13	7602.56	7762.98	7966.4	8147.38	8250.54	8275.9	8223.48	8233.43	8257.5	8288.7	8301.69	8389.77
9	8491.24	8478.96	8438.49	8348.17	8239.01	8175.19	8158.73	8090.95	7977.24	7754.46	7506.91	7309.95	7307.5	7380.44	7591.89	7860.89	8106.47	8244.26	8286.41	8243.56	8275.16	8335.23	8386.19	8403.88	8491.24
10	8610.18	8594.32	8544.83	8431.13	8275.13	8178.36	8149.11	8064.33	7915.55	7632.22	7311.99	7055.29	7028.1	7116.48	7385.55	7733.66	8046.3	8231.15	8291.23	8261.83	8323.01	8423.62	8497.44	8518.55	8610.18
11	8745	8729.09	8665.36	8520.75	8314.93	8177.46	8135.1	8034.64	7835.57	7479.28	7075.01	6754.39	6673.58	6796.23	7139.06	7573.38	7972.54	8211.15	8291.21	8275.08	8372.26	8522.99	8621.79	8654.12	8745
12	8900.46	8883.31	8805.49	8615.43	8358.34	8174.15	8119.66	8001.62	7745.53	7309.47	6811.09	6367.13	6269.19	6420.82	6856.89	7394.78	7887.91	8188.65	8287.75	8286.42	8427.92	8628.41	8765	8807.19	8900.46
13	9068.18	9051.01	8960.87	8722.52	8407.52	8173.83	8104.31	7971.72	7649.26	7111.73	6495.37	5979.67	5817.44	5992.05	6522.36	7193.32	7788.41	8157.47	8277.31	8293.02	8485.63	8740.54	8921.95	8975.95	9068.18
14	9247.46	9229.6	9128.8	8838.7	8462.04	8174.95	8088.92	7933.66	7542.13	6893.55	6137.61	5565.89	5341.04	5537.06	6147.22	6966.24	7678.24	8121.6	8264.69	8299.78	8548.08	8864.55	9096.37	9161.65	9247.46
15	9436.27	9420.27	9303.77	8962.34	8520.62	8178.78	8076.85	7900.38	7423.23	6655.01	5779.86	5102.55	4850.98	5068.53	5746.24	6704.87	7557.03	8083.5	8253.64	8306.46	8612.87	8996.94	9283.05	9364.57	9436.27
16	9639.11	9624.88	9499.68	9102.8	8583.05	8186.59	8073.63	7871.36	7294.45	6368.93	5355.38	4625.97	4358.4	4591.03	5319.95	6416.17	7421.42	8048.54	8248.61	8320	8682	9140.03	9487.65	9576.21	9639.11
17	9853.33	9835.26	9701.35	9249.74	8654.36	8207.15	8084.31	7850.35	7172.31	6082.78	4929.64	4152.12	3870.79	4107.13	4885.54	6100.13	7278.71	8017.44	8254.13	8340.46	8757.93	9298.2	9709.37	9800.89	9853.33
18	10080.1	10062.8	9920.45	9407.24	8737.31	8243.1	8109.75	7839.14	7031.53	5770.89	4498.99	3688.89	3393.41	3636.68	4446.35	5756.29	7128.55	7995.95	8274.88	8372.45	8849.42	9465.74	9945.15	10040.7	10080.1
19	10335.3	10316.3	10152.1	9587.87	8838.25	8295.6	8149.06	7838.86	6893.03	5424.03	4061.69	3230.26	2945.97	3197.12	4012.58	5406.28	6973.91	7984.19	8315.99	8425.13	8949.38	9647.37	10187.1	10298.9	10335.3
20	10615.5	10594.4	10406.9	9781.95	8955.55	8368.64	8208.8	7852.38	6754.68	5073.74	3630.67	2800.98	2524.93	2761.07	3586.45	5047.86	6809.13	7986.92	8381.42	8500.2	9068.95	9854.22	10445.3	10587.6	10615.5
21	10926.2	10896.5	10678.4	9988.81	9099.35	8467.18	8295.47	7883.41	6607.92	4721.29	3227.12	2404.77	2148.11	2371.56	3182.91	4678.89	6637.54	8012.56	8473.52	8604.35	9214.94	10070.9	10730.8	10903.1	10926.2
22	11251	11230.9	10975.9	10218.4	9262.59	8587.11	8405.23	7932.71	6459.76	4380.83	2846.53	2049.79	1823.11	2024.52	2796.11	4316.68	6456.36	8057.4	8597.4	8738.73	9385.72	10300.3	11039	11244.4	11251
23	11608.3	11588.7	11304.5	10477.5	9459.27	8738.47	8554.2	8001.42	6311.59	4033.45	2480.25	1739.01	1583.69	1729.66	2430.02	3953.81	6258.59	8122.38	8755.22	8906.08	9600.64	10565.6	11380.1	11612.8	11608.3
24	12010.7	11989	11669.9	10756.1	9678.56	8923.82	8720.03	8094.06	6138.41	3692.96	2149.93	1485.74	1387.72	1506.21	2105.47	3601.86	6061.97	8206.2	8940.78	9102.4	9836.07	10864.4	11749.3	12011.5	12010.7
25	12439.4	12428.8	12065.8	11068.7	9925.33	9126.12	8910.73	8194.13	5953.69	3352.52	1856.66	1289.85	1193.23	1322.66	1816.86	3260.59	5859.63	8305.3	9161.26	9329.15	10103.3	11190.1	12151	12453.1	12439.4
26	12905.8	12904.4	12503.3	11412.5	10205.5	9360.42	9138.79	8306.24	5765.31	3040.71	1608	1142.11	1073.76	1166.26	1578.15	2941.98	5644.55	8421.23	9412.01	9583.42	10393.6	11538.8	12586.8	12925.2	12905.8
27	13401.3	13405.6	12980.8	11782.1	10506.3	9614.66	9375.11	8419.9	5565.87	2740.14	1397.11	1031.16	983.22	1060.57	1409.5	2632.65	5425.06	8547.5	9682.11	9867.79	10715.7	11916.9	13065.6	13440.1	13401.3
28	13939.2	13948.6	13507.9	12169.1	10837.5	9893.86	9636.44	8547.17	5349.74	2447.63	1237.22	951.42	920.69	974.17	1241.26	2349.12	5203.61	8676.69	9978.4	10174.4	11056	12314.6	13568.3	13993.9	13939.2
29	14500.8	14525.4	14035.4	12600.1	11188	10199.2	9914.77	8671.15	5130.51	2189.76	1114.53	893.42	872.51	918.04	1122.41	2091.09	4973.27	8805.76	10287.3	10492.4	11423.1	12743.3	14107.8	14600.1	14500.8
30	15117.7	15160.9	14589.3	13069.8	11564.3	10521.7	10209.1	8786.31	4903.56	1942.7	1014.78	845.93	829.51	867.77	1026.69	1848.55	4738.01	8928.3	10614.4	10843.3	11800.5	13194.8	14687.7	15239.7	15117.7
31	15767.9	15839.9	15201.9	13559.2	11949.4	10860.6	10495.5	8901.21	4670.17	1716.49	939.75	806.55	789.93	829	954.78	1635.2	4499.02	9037.52	10931.3	11187	12198.5	13674.1	15284.9	15913.9	15767.9
32	16461.8	16573.1	15868.9	14048.9	12354.3	11204	10799.9	9009.5	4422.28	1509.04	883.76	769.16	750.72	788.87	903.43	1466.38	4254.9	9133.81	11251.4	11526.2	12598.7	14167.4	15931.9	16626.8	16461.8
33	17191	17320.6	16562.9	14559.4	12760.4	11549.8	11092.9	9094.98	4171.75	1333.18	838.54	733.23	713.1	750.85	861.11	1319.79	3999.18	9212.62	11558.7	11879.7	13012.7	14692.6	16596.6	17375.8	17191
34	17954.7	18142.4	17276.3	15106.3	13183.6	11885.4	11368.6	9157.35	3915.29	1196.17	799.58	697.12	676.17	715.21	823.36	1187.44	3750.26	9265.58	11849.6	12223.1	13429.5	15215.1	17305	18158.3	17954.7
35	18755.4	18964.7	18031.3	15679.2	13583.7	12225.9	11647.6	9199.52	3649	1079.96	763.94	671.97	640.04	679.17	788.61	1082.73	3495.66	9290.02	12126.3	12548.8	13839.8	15765.3	18037.2	18966.6	18755.4
36	19582	19848.9	18818	16275.1	13983.8	12554.3	11900.5	9211.98	3393.75	987.6	730.29	634.43	604.41	643.23	754.47	998.52	3231.2	9284.86	12383.5	12865.8	14252.3	16329.3	18786.4	19827.5	19582
37	20412.1	20725.4	19629.5	16893.1	14411.2	12870.7	12139.6	9201	3129.8	915.37	696.22	596.21	570.02	608.34	719.8	933.9	2963.22	9245.05	12612.8	13167.4	14665.8	16912.1	19577.2	20715.3	20412.1
38	21217.1	21608.2	20478.5	17525.4	14848.6	13183.2	12353	9161.73	2869.23	858.98	670	562.78	534.76	573.93	685.53	884.36	2712.11	9170.41	12818	134					



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.	ALEDXL4T	Sample ID.	J1
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
119.93	60	3.074	368.4	0.999	2.86%
277.01	60	1.366	363.6	0.961	10.14%

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*****