

Photometric Test Report

Relevant Standards

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

Prepared For RAB Lighting Inc.

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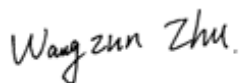
Test Date

2021/11/25

Issue Date

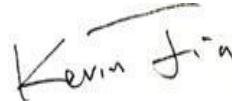
2021/12/1

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		50115
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	133.9
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		374.3
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	2.80%
		20.00%	277V	10.37%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.999
		0.9	277V	0.963
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3985±275	3933
		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%		0.20%
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		3.120
(Goniophotometer - Section 4.2)		Non-Worst Case		1.375
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		374.3
(Goniophotometer - Section 4.2)		Non-Worst Case		366.8

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/11/25	ALEDXLATN	K1
2	Goniophotometer Test	2021/11/25	ALEDXLATN	K1
3	THD and PF Test	2021/11/25	ALEDXLATN	K1

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.

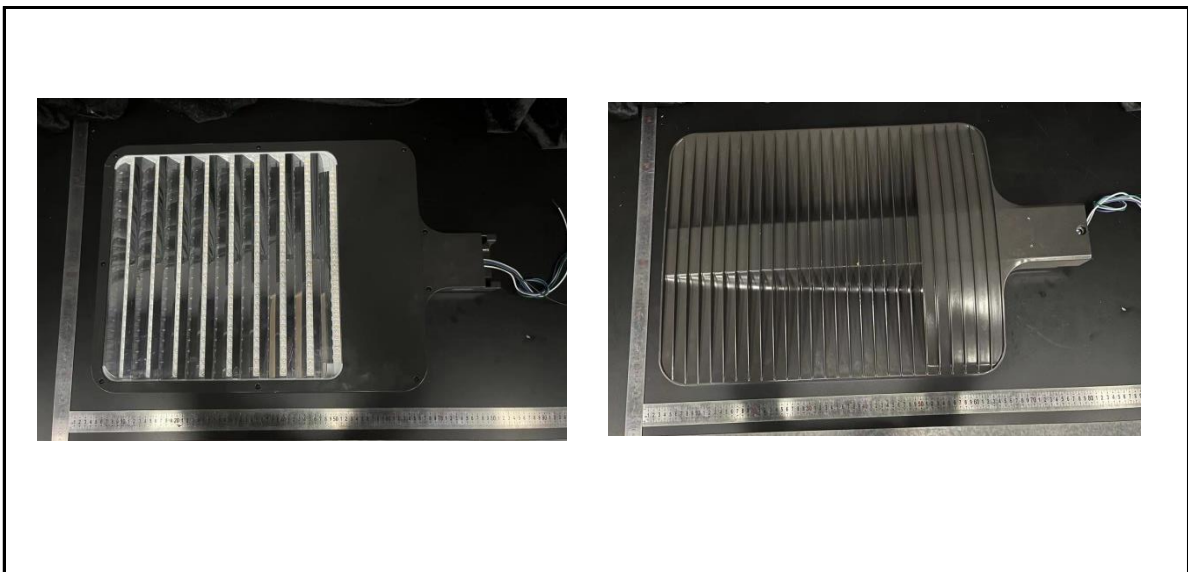
3.0 Production Description

Luminaire Description: ALEDXLATN

Description: 385W/50,000 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.	ALEDXLATN	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
120.02	60	3.097	371.5	0.999
277.01	60	1.374	366.5	0.963

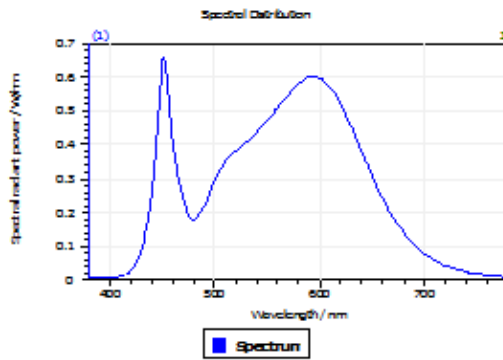
Test Result

CCT (K)	CRI	R9	Duv
3933	83	7	0.000094

Rf	Rg	IES Rcs,h1
84	95	-12%

4.1 Integrating Sphere Test

Results



Spectral values

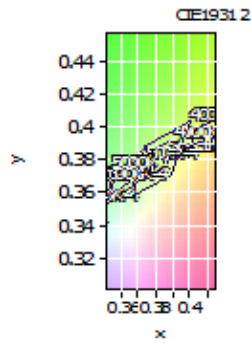
DominantWavelength	579.27 nm
Purity	0.288
PeakWavelength	451.64 nm
Radiant Power	104.4 W
Width50%	21.04 nm

Color Coordinates

Correlated Color Temperat 3933 K

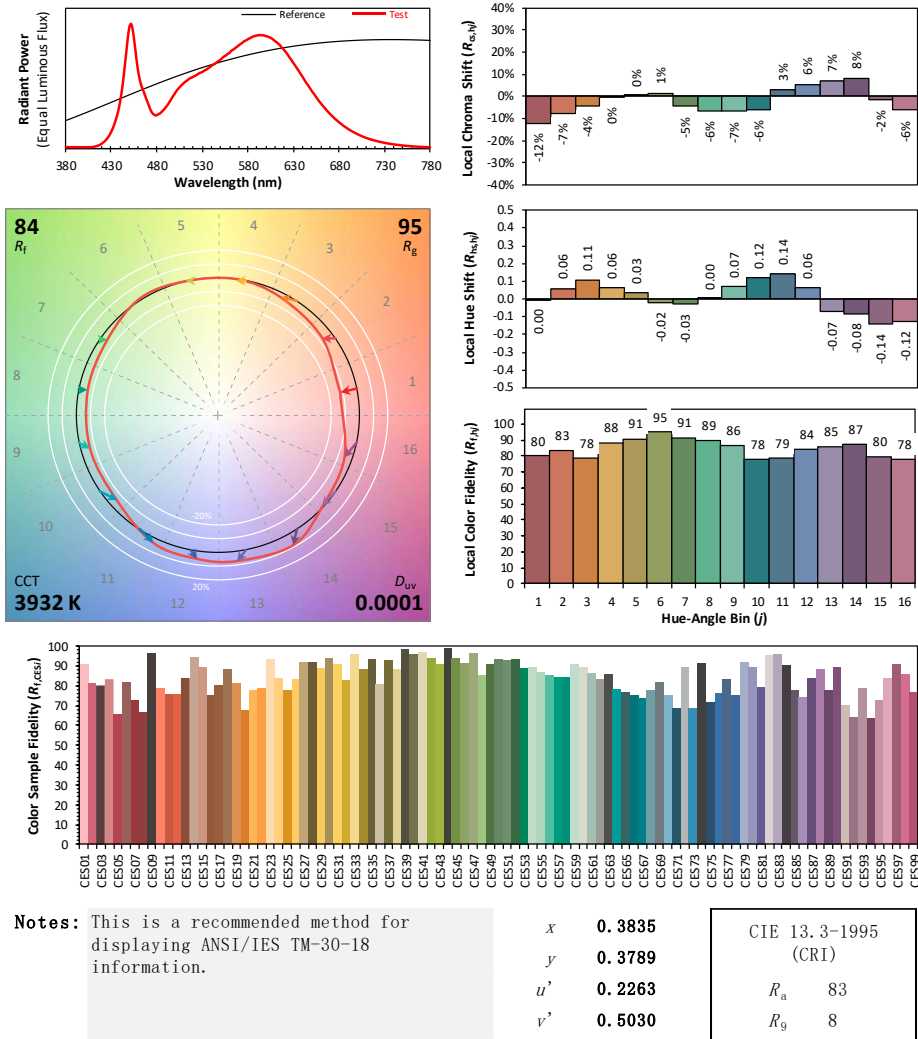
x: 0.3835 u: 0.2263 u': 0.2263
y: 0.3789 v: 0.3353 v': 0.5030

ResultsCRICRI01	80.8	ResultsCRICRI09	6.5
ResultsCRICRI02	89.9	ResultsCRICRI10	76.5
ResultsCRICRI03	95.5	ResultsCRICRI11	79.8
ResultsCRICRI04	80.8	ResultsCRICRI12	64.3
ResultsCRICRI05	81.4	ResultsCRICRI13	83.1
ResultsCRICRI06	86.5	ResultsCRICRI14	97.9
ResultsCRICRI07	84.8	ResultsCRICRI15	74.2
ResultsCRICRI08	62.7	ResultsCRICRI16	71.8
ResultsCRI	82.8		



PlanckDistance 9.4E-005

4.1 Integrating Sphere Test



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.	ALEDXLATN	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° 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	120.04	60	3.120	374.3	0.999
NON-WROST CASE	277.04	60	1.375	366.8	0.963

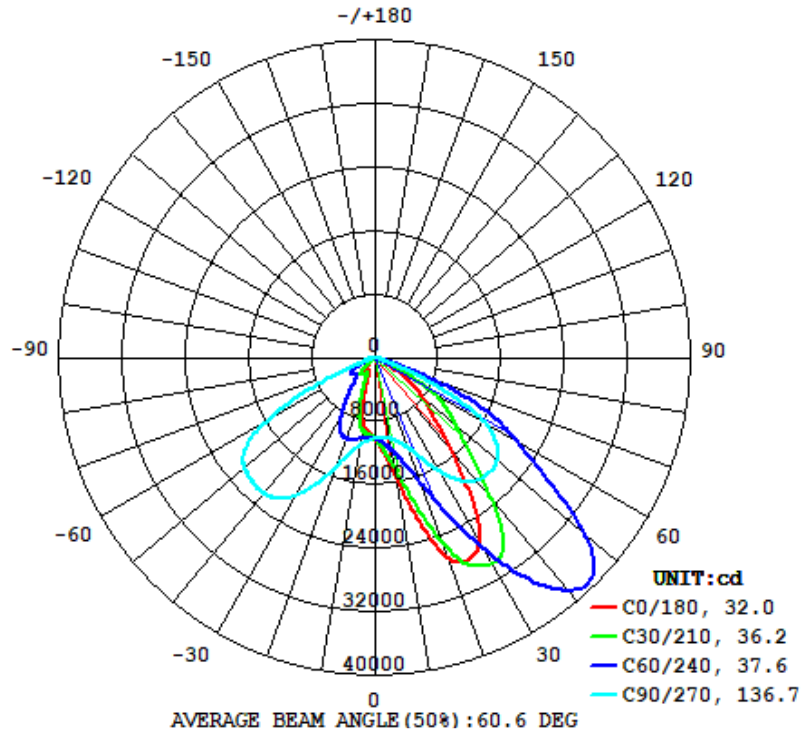
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
50115	80.7	152.7	32.0	136.7	133.9

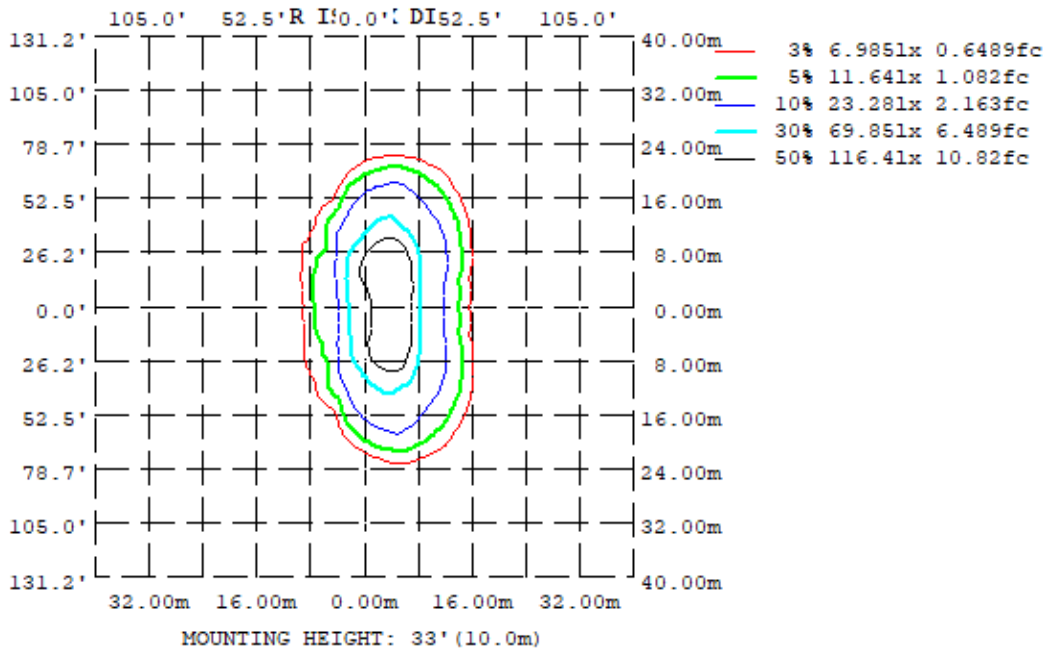
Zonal Lumen Requirement (0°-90°)	Zonal Lumen Requirement (80°-90°)	BUG rating
100.00%	0.20%	B4-U0-G3

4.2 Goniophotometer Test

Light Distribution Curve



Isolux Plot



4.2 Goniophotometer Test

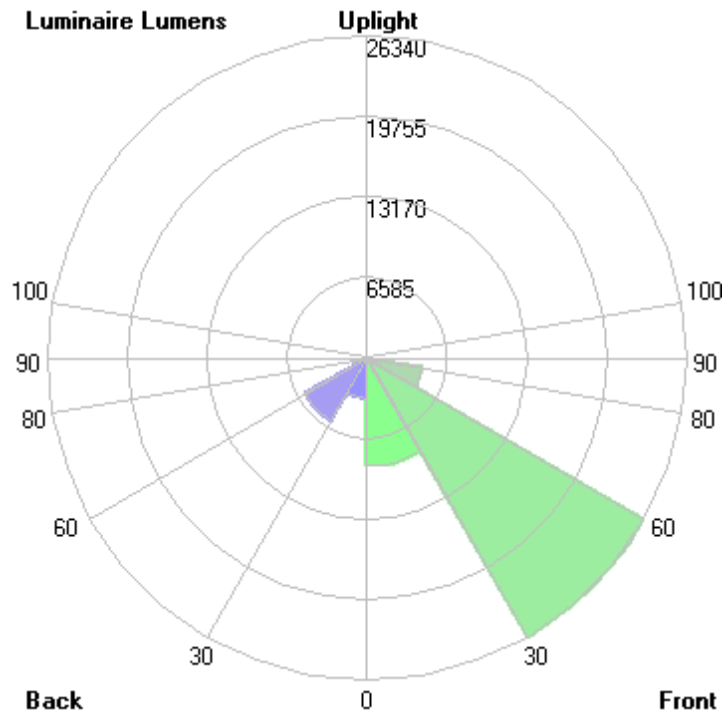
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	1493	1267	1036	918.8	873.1	985.6	1108	1321
20	2670	2094	1201	671.8	329.7	790.6	1450	2394
30	2671	3170	1660	283.8	197.7	349.1	1985	3576
40	1506	3365	2018	258.8	200.5	276.5	2221	3527
50	822.1	2226	2025	287.0	63.91	327.8	2158	2230
60	251.9	1479	1574	99.88	11.38	126.1	1606	1402
70	34.28	232.7	388.2	12.78	6.881	13.43	299.7	167.4
80	10.69	24.25	68.94	6.181	3.201	6.514	59.30	22.03
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	1020.09	0 - 10	1020.09	2.04%
10-20	3656.28	0 - 20	4676.37	9.33%
20-30	7454.27	0 - 30	12130.64	24.21%
30-40	10927.24	0 - 40	23057.88	46.01%
40-50	11521.38	0 - 50	34579.26	69.00%
50-60	9785.86	0 - 60	44365.12	88.53%
60-70	4875.68	0 - 70	49240.80	98.26%
70-80	772.84	0 - 80	50013.64	99.80%
80-90	101.15	0 - 90	50114.79	100.00%
90-100	0.00	0 - 100	50114.79	100.00%
100-110	0.00	0 - 110	50114.79	100.00%
110-120	0.00	0 - 120	50114.79	100.00%
120-130	0.00	0 - 130	50114.79	100.00%
130-140	0.00	0 - 140	50114.79	100.00%
140-150	0.00	0 - 150	50114.79	100.00%
150-160	0.00	0 - 160	50114.79	100.00%
160-170	0.00	0 - 170	50114.79	100.00%
170-180	0.00	0 - 180	50114.79	100.00%

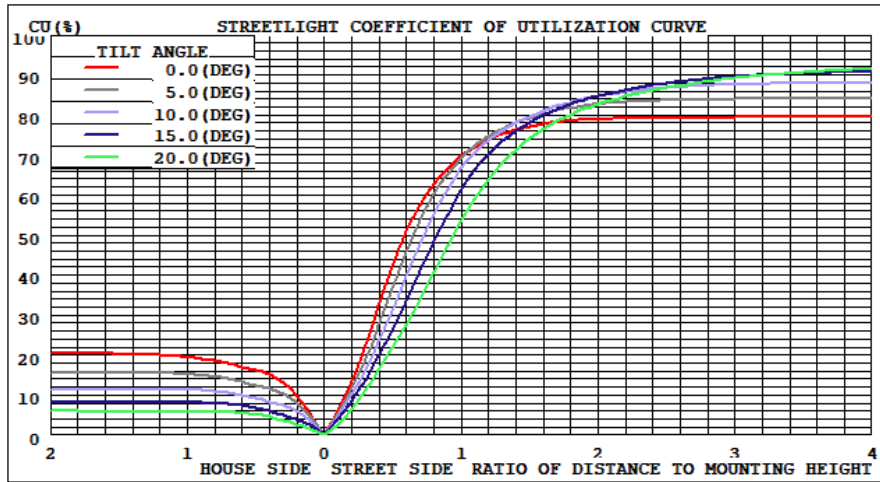
4.2 Goniophotometer Test

LCS/BUG

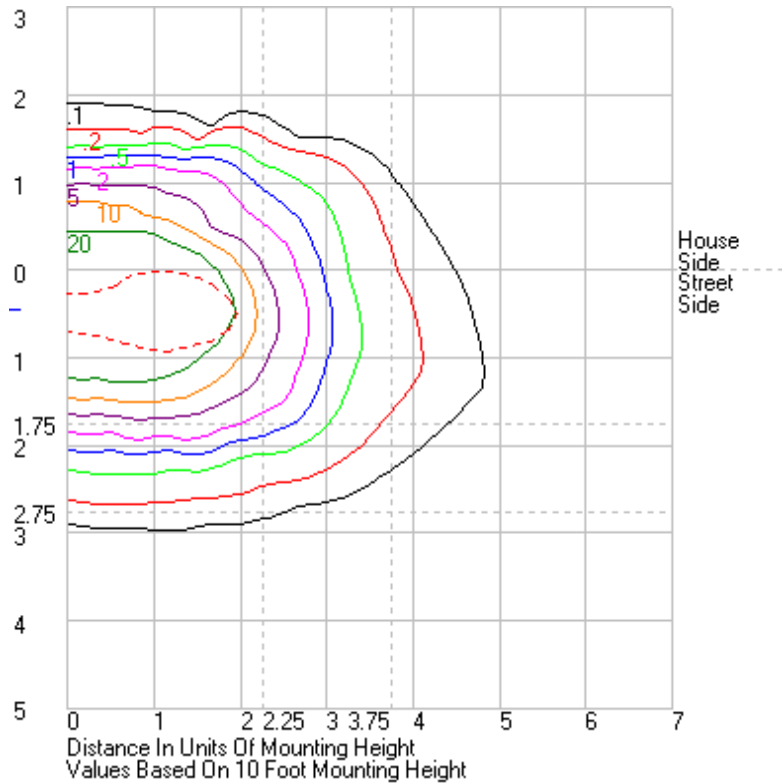


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	8833.5	N.A.	17.6
FM - Front-Medium (30-60)	26339.6	N.A.	52.6
FH - Front-High (60-80)	4614.3	N.A.	9.2
FVH - Front-Very High (80-90)	75.6	N.A.	0.2
BL - Back-Low (0-30)	3297.1	N.A.	6.6
BM - Back-Medium (30-60)	5894.9	N.A.	11.8
BH - Back-High (60-80)	1034.2	N.A.	2.1
BVH - Back-Very High (80-90)	25.6	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	50114.8	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	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153
1	10367.9	10349.9	10323	10283.3	10242.5	10148.8	10102.2	10059.5	10020.5	9998.55	9977.71	9967.55	10069.6	10081	10099.6	10121.8	10151.8	10133.9	10169.6	10200.5	10226.1	10251.3	10264.8	10266.2	10367.9
2	10567.6	10535.3	10478.4	10399.1	10313.8	10171.7	10086.5	10006.1	9940.83	9896.36	9864.67	9851.18	9955.59	9980.45	10023.9	10067.4	10129.2	10149.8	10220	10286.9	10346.5	10406.4	10444.5	10458.5	10567.6
3	10824.6	10763.9	10663.3	10540.3	10403.1	10214.4	10084.1	9966.02	9870.73	9806.32	9762	9742.2	9856.88	9894.16	9954.5	10029	10118.7	10169.9	10280.2	10386.5	10495	10596.8	10670.5	10703.9	10824.6
4	11146.4	11060.9	10913.9	10718.8	10514.8	10269.1	10090.5	9938.77	9812.97	9720.63	9656.21	9628.65	9750.79	9809.05	9896.85	10003.3	10123.4	10210.1	10350.7	10503.8	10660.5	10821.6	10941.8	11008.1	11146.4
5	11543.3	11425.9	11206.6	10926.8	10644.3	10327.3	10110.8	9920.17	9763.03	9640.58	9552.04	9508.46	9634.41	9714.33	9839.25	9984.95	10141.7	10261.8	10431.9	10632.5	10851.4	11077	11269.8	11386.8	11543.3
6	12051.3	11879.4	11565.3	11181	10799	10409.9	10139.9	9908.86	9718.39	9557.96	9433.16	9371.5	9497.61	9599.06	9767.74	9970.14	10166.8	10313.6	10532.4	10778.4	11072.3	11389.6	11674.9	11853.3	12051.3
7	12638	12419.9	12001.2	11482.6	10979.8	10507.9	10177.5	9906.55	9677.67	9470.89	9304.39	9218.02	9346.63	9469	9684.19	9948.61	10202.6	10390	10646.2	10947.9	11317.6	11754.8	12154.8	12420.1	12638
8	13349.5	13020.9	12512.2	11823.7	11184.4	10615.1	10229.7	9917.78	9642	9386.43	9169.44	9066.91	9198.28	9339.86	9592.19	9924.97	10250	10481.4	10771	11129.2	11594.9	12173.9	12707.5	13050.7	13349.5
9	14108	13753.7	13068.2	12230.8	11410.8	10734.1	10288.2	9940.25	9608.49	9287.45	9034.55	8886.33	9007.23	9187.45	9497	9892.17	10299.2	10581.5	10914.8	11331.8	11917.1	12654	13352.7	13789.4	14108
10	14930.9	14488.6	13726.2	12670.7	11666.1	10872.8	10357.4	9969.38	9578.67	9187.86	8874.45	8636.67	8731.21	8964.38	9384.04	9855.76	10357.3	10698.8	11076	11557.5	12284.7	13208.6	14075.3	14637.1	14930.9
11	15928	15417.1	14386	13140.3	11958.6	11025.9	10440.1	10009.6	9549.94	9093.73	8651.9	8295.03	8365.65	8653.34	9220.54	9823.99	10422.2	10837.5	11256.6	11818	12694.5	13845.8	14923.3	15614.5	15928
12	17034.4	16428	15192.5	13710.3	12272.3	11184.1	10535.1	10057	9522.54	8976.04	8365.62	7900.55	7932.59	8270.04	8984.46	9781.42	10481.8	10985.4	11459.8	12115.2	13169.9	14551.9	15880.8	16711.1	17034.4
13	18276.1	17536.8	16121.5	14283.4	12623.2	11372.3	10641.9	10119	9498.29	8822.7	8022.49	7447.57	7451.11	7833.66	8676.05	9703.58	10548.2	11162.1	11703.1	12476.1	13735.5	15384.1	16973.3	17942.1	18276.1
14	19555.7	18780.8	17162.6	14965	13015.8	11570.9	10764.1	10198.1	9480.01	8624.36	7636.33	6947.69	6917.37	7357.06	8327.61	9581.41	10620.5	11356.8	11983.4	12870.1	14355.3	16307.7	18177.2	19250.9	19555.7
15	20885.8	20036	18240.2	15733	13428.8	11785.1	10906.4	10284	9463.91	8396.46	7231.53	6405.37	6343.75	6831.55	7930.9	9415.25	10693.1	11568.3	12299.2	13323.4	15058.2	17336.2	19448.1	20583	20885.8
16	22229.6	21350.1	19461.4	16633.5	13884.9	12044.9	11084.2	10389	9441.76	8118.17	6764.91	5825.14	5722.02	6221.75	7466.12	9196.33	10768.1	11815.6	12659.8	13842.4	15856.9	18502.9	20830.8	21967.7	22229.6
17	23506.6	22629.1	20718.7	17578.3	14381.2	12321.8	11275.2	10509.2	9399.88	7819.33	6263.38	5244.9	5054.87	5604.24	6971.47	8940.15	10833.2	12075.9	13049.7	14405.2	16705.2	19745	22228.8	23322.9	23506.6
18	24723.7	23876.2	21988.7	18609.8	14969.5	12630.8	11481.8	10632.9	9344.06	7490.01	5716.29	4606.38	4401.21	4953.37	6424.7	8642.45	10878.1	12365.8	13497.7	15040.7	17675.1	21080.2	23652.5	24617.8	24723.7
19	25843.5	25044.2	23219.8	19751.3	15660.4	13000.9	11737.3	10781.3	9275	7120.85	5169.08	4010.8	3809.99	4327.66	5830.44	8299.85	10904.3	12688.8	13984.3	15732.7	18743.2	22494.8	25012.9	25819.7	25843.5
20	26701.6	26091.2	24477.1	20940.3	16426.1	13425.5	12014.8	10930.9	9173.8	6717.73	4617.09	3478.7	3296.77	3768.12	5233.46	7905.66	10908.3	13025.9	14495.3	16463.8	19876.4	23944.3	26319.6	26825.3	26701.6
21	27352.9	26922.3	25657.7	22193.2	17286.1	13911.2	12328.3	11106.1	9063.81	6276.24	4069.4	3042.32	2873.47	3303.82	4659.95	7465.49	10887.4	13368.1	15033.4	17255.2	21115.5	25407.6	27526.6	27633.7	27352.9
22	27811.6	27523.6	26684.7	23420.8	18211.7	14468.7	12677.7	11291.4	8933.83	5834.73	3604.51	2673.47	2519.18	2901.25	4129.33	6991.84	10832.3	13711.3	15566	18066.9	22414.5	26855.4	28589	28233.6	27811.6
23	28041.6	27946.5	27582	24676.6	19237.9	15060.9	13052.8	11478.3	8764.51	5373.58	3199.65	2353.38	2235.45	2551.78	3680.7	6481.21	10735.3	14035.6	16130.3	18923.5	23778.6	28301.2	29457.2	28641.3	28041.6
24	28094.4	28159.9	28298.3	25938.2	20337.7	15704.9	13485.4	11688.2	8587.28	4901.12	2854.13	2124.55	2042.69	2279.95	3295.49	5965.36	10608.3	14360.4	16693.9	19788.8	25152.6	29639.2	30172.8	28847.2	28094.4
25	28032.7	28225.1	28826.4	27124.1	21462.5	16409.4	13933.6	11884.8	8361.48	4459.79	2546.47	1981.41	1935.38	2097.42	2929.33	5457.86	10428.2	14661.5	17256.7	20666.2	26556.2	30920.5	30736.8	28939.9	28032.7
26	27891.9	28186	29215.6	28257.4	22707.6	17147.9	14431.3	12092.9	8102.93	4046.29	2305.97	1903.58	1887.43	1985.54	2619	4986.12	10201.9	14938	17820.1	21545.6	28004.4	32095.7	31156.8	28923.9	27891.9
27	27696.2	28086.4	29462.3	29275.3	23979.6	17892.8	14954.3	12297.4	7827.5	3702.83	2141.92	1880.57	1887.86	1942.79	2391.87	4564.51	9927.39	15200.7	18356.3	22412.7	29409.2	33154.5	31505.6	28847.8	27696.2
28	27455.6	27935	29622	30187.3	25270.5	18686.3	15492.8	12482.2	7502.29	3390.34	2042.23	1895.39	1906.42	1942.54	2233.06	4185.36	9597.65	15425.8	18872.4	23277.7	30818.2	34108.4	31745.3	28730.6	27455.6
29	27141.2	27751.2	29723.1	30993.2	26601.3	19479.6	16054	12666.9	7153.37	3103.57	2003.21	1921.33	1935.32	1964.95	2137.8	3831.47	9228.39	15612.2	19375.5	24135.4	32174.7	34988.5	31907.2	28550.7	27141.2
30	26708.1	27497.2	29773.4	31699.8	27935.8	20319.9	16595.2	12842.4	6779.9	2838.37	2003.08	1959.63	1977.36	1999.96	2108.6	3491.03	8827.82	15768.9	19846.5	25001.8	33476.8	35756.1	32005.7	28267	26708.1
31	26080.9	27133.2	29780.3	32312.4	29239.7	21133.2	17124.4	12989.9	6379.81	2631.58	2030.29	2008.08	2029.67	2049.94	2113.16	3196.91	8399.1	15887.1	20285.9	25853.7	34750.9	36436.7	32003.7	27806.9	26080.9
32	25165.4	26545.8	29712.8	32849.2	30533.3	21963.5	17628.4	13124.4	6052.73	2478.34	2070.92	2068.27	2089.02	2115.25	2148.6	2955.07	7948.68	15985.4	20695.5	26698.8	35941.8	37014.5	31862.4	27125.8	25165.4
33	23983.2	25677.5	29529.4	33343.3	31766.8	22842.9	18106.8	13220.5	5709.55	2375.49	2118.7	2130.95	2148.64	2186.51	2197.32	2775.72	7502.84	16040.1	21061.4	27510	37045	37465.2	31513.4	26166.6	23983.2
34	22620.4	24529.5	29212.5	33756.1	32938.7	23654	18551.8	13293.9	5380.78	2329.42	2176.99	2192.13	2200.49	2258.24	2261.44	2657.13	7065.9	16050.8	21384.8	28291.9	38057.1	37790.8	30941	24943.6	22620.4
35	21190.2	23186.7	28658.2	34106.8	34032.2	24485.6	18951.2	13329	5063	2320.23	2247.03	2243.17	2234.48	2322.59	2344.97	2595.07	6632.28	16024	21646.6	29043.1	39030.9	37958.9	30111.3	23543.4	21190.2
36	19808	21801.9	27783.6	34342.1	35065.8	25306.3	19298.1	13316.5	4767.45	2338.53	2321.14	2276.9	2246.61	2368.51	2435.07	2580.2	6217.81	15928.2	21837.2	29736.6	39902.8	37921.6	28995.3	22093.2	19808
37	18486.5	20405.8	26664.3	34450.5	36022	26048.3	19587.2	13254.7	4478.33	2384.64	2398.18	2286.42	2228.6	2393.5	2526.77	2591.29	5811.5	15768.3	21989.8	30367.9	40685.3	37650.3	27684.2	20678.3	18486.5
38	17290.2	19122.9	25405.8	34405	36885.2	26756.4	19827.8	13114.3	4188.44	2440.4	2460.67	2267.57	2183.53	2387.14	2615.65	2635.03	5409.3	15554.2							



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.	ALEDXLATN	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° 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
120.02	60	3.097	371.5	0.999	2.80%
277.01	60	1.374	366.5	0.963	10.37%

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*****