

# Photometric Test Report

## Relevant Standards

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

## Prepared For RAB Lighting Inc.

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## Project Number

DLF2111105

## Report Number

DLF2111105-15a

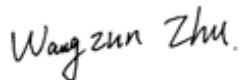
## Test Date

2021/11/9

## Issue Date

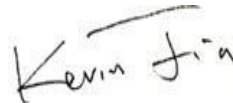
2021/11/12

### 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	36992	
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	140.7
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case	263.0	
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	4.38%	
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	0.963	
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	5029±355	4977
		4 step	5029±220	
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	12	
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	
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%	0.22%	
Input Voltage (V) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case	480	
Input Current (A) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case	0.570	

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/11/9	ALEDL2T/480	O1
2	Goniophotometer Test	2021/11/9	ALEDL2T/480	O1
3	THD and PF Test	2021/11/9	ALEDL2T/480	O1

### 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.

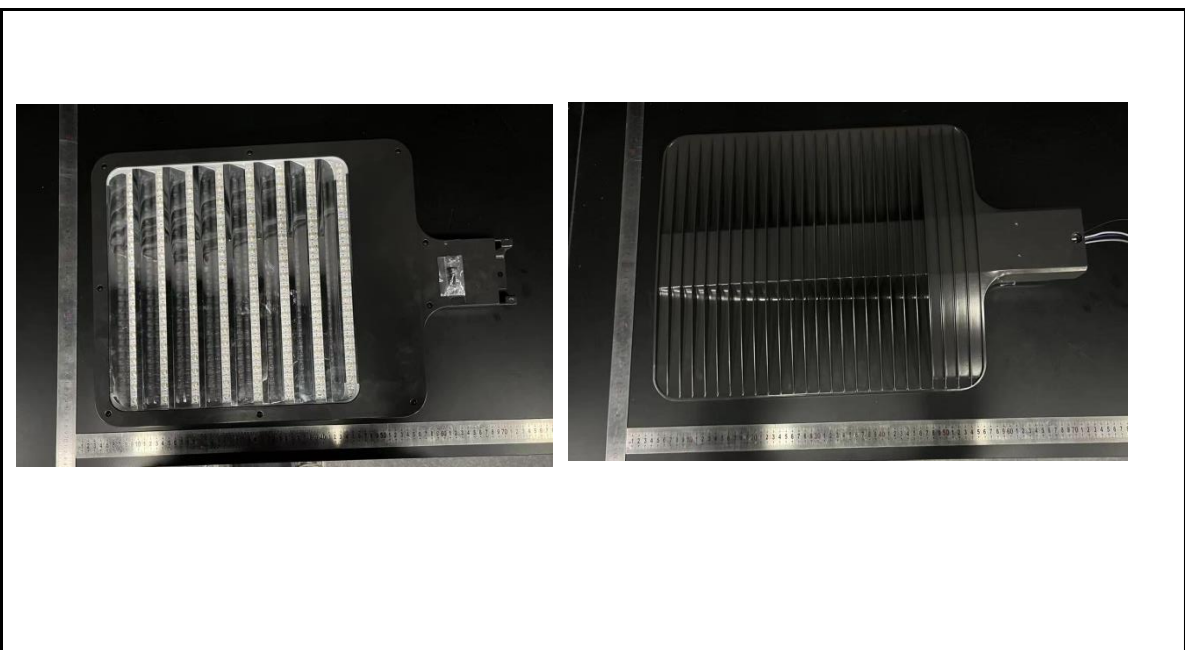
## 3.0 Production Description

**Luminaire Description:** ALEDL2T/480

**Description:** 260W/36,000 lm @ 5000K

**Electrical Specification:** 480V,50/60HZ

### Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Integrating Sphere Test

Model No.	ALEDL2T/480	Sample ID.	O1
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  $\pm 0.2$  percent under load.

The sample was measured using  $4\pi$  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
480.06	60	0.569	262.9	0.963

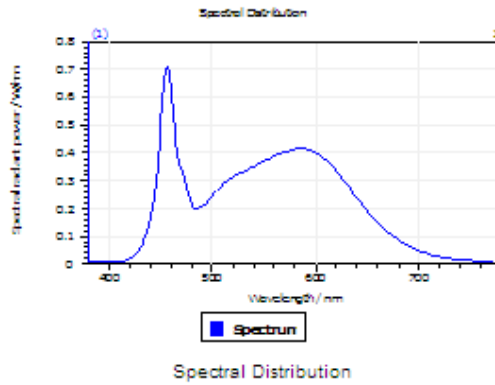
#### Test Result

CCT (K)	CRI	R9	Duv
4977	84	12	0.0011

Rf	Rg	IES Rcs,h1
83	93	-12%

## 4.1 Integrating Sphere Test

### Results



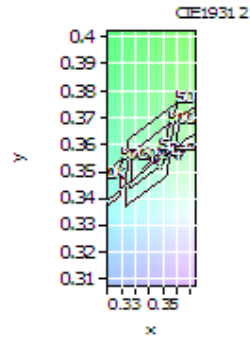
#### Spectral values

DominantWavelength 571.91 nm  
Purity 0.102  
PeakWavelength 456.42 nm  
Radiant Power 80.73 W  
Width50%:

#### Color Coordinates

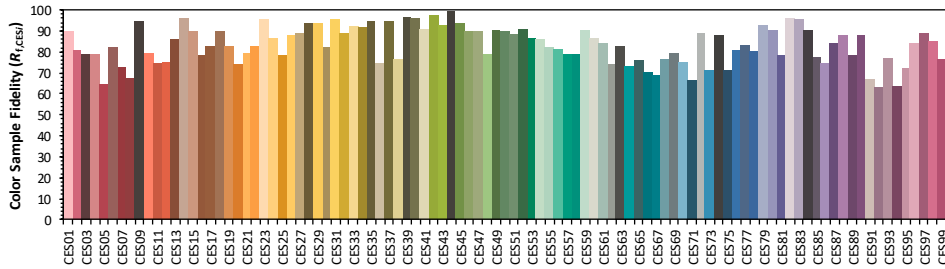
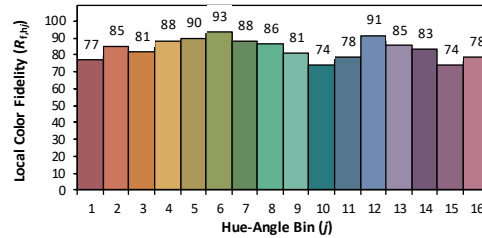
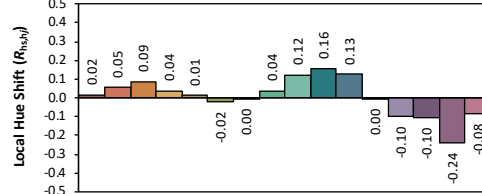
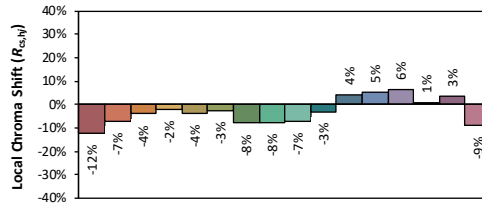
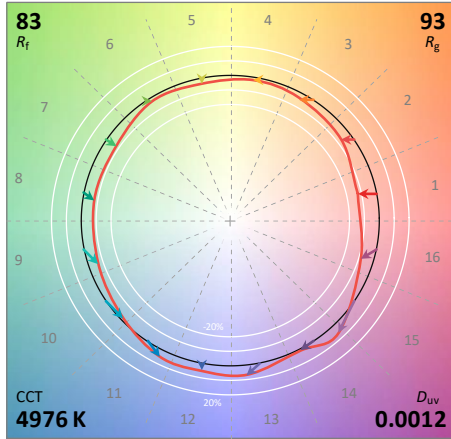
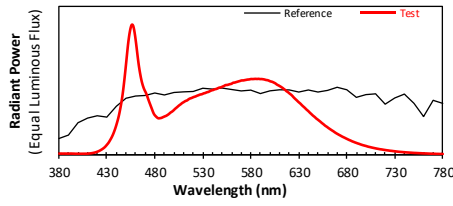
Correlated Color Temperat 4977 K  
x: 0.3460 u: 0.2109 u': 0.2109  
y: 0.3546 v: 0.3242 v': 0.4863

CRI01	83.4	CRI09	12.3
CRI02	92.8	CRI10	81.5
CRI03	95.0	CRI11	79.8
CRI04	80.8	CRI12	62.3
CRI05	83.2	CRI13	86.5
CRI06	87.8	CRI14	98.0
CRI07	85.1	CRI15	78.4
CRI08	66.4	CRI16	73.9
ResultsCRI	84.3		



PlanckDistance 1.1E-003

### 4.1 Integrating Sphere Test



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

$x$  0.3460  
 $y$  0.3546  
 $u'$  0.2109  
 $v'$  0.4863

CIE 13.3-1995 (CRI)	
$R_a$	84
$R_g$	13

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.	ALEDL2T/480	Sample ID.	O1
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  $\pm 0.2$  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  $0.5^{\circ}$  vertical intervals and  $10^{\circ}$  horizontal intervals.

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	480.03	60	0.570	263.0	0.962

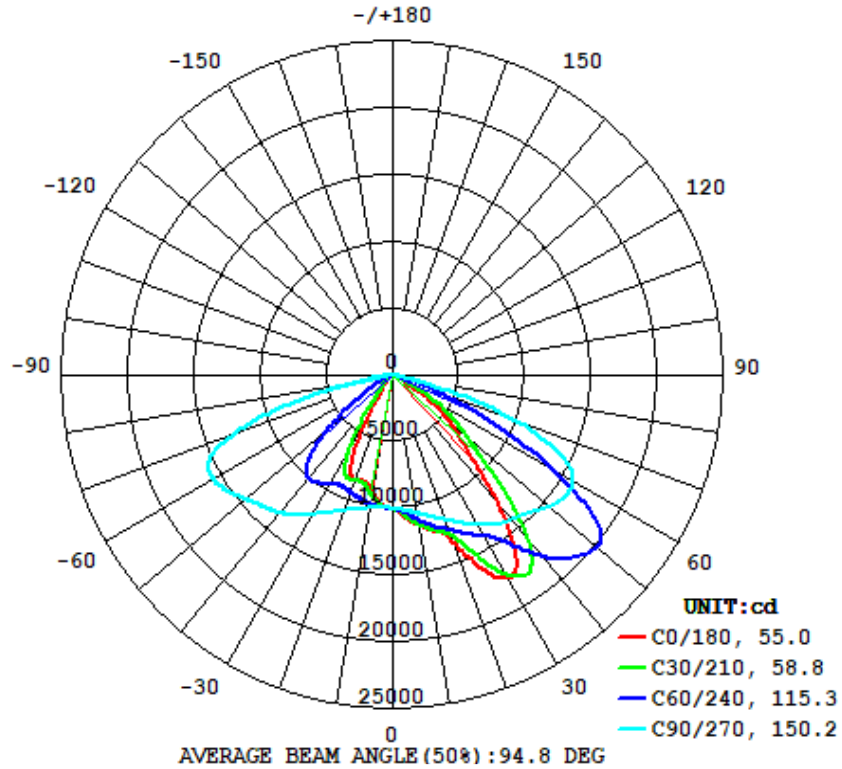
#### Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
36992	95.6	158.7	55.0	150.2	140.7

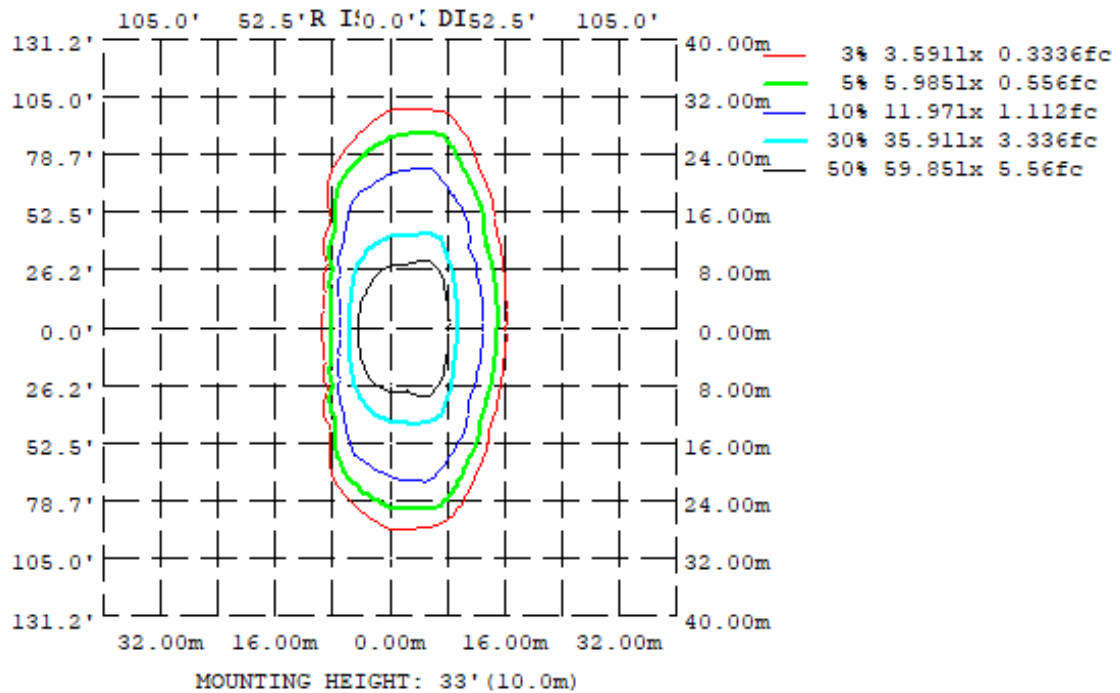
Zonal Lumen Requirement ( $0^{\circ}$ - $90^{\circ}$ )	Zonal Lumen Requirement ( $80^{\circ}$ - $90^{\circ}$ )	BUG rating
100.00%	0.22%	B4-U0-G3

## 4.2 Goniophotometer Test

### Light Distribution Curve



### Isolux Plot



## 4.2 Goniophotometer Test

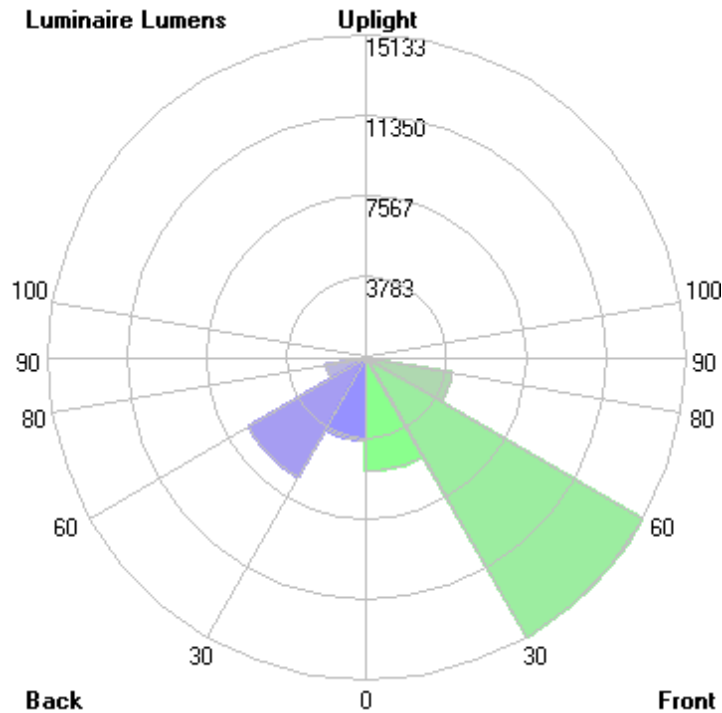
### Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	1139	1124	1052	967.6	897.8	951.3	1013	1090
20	1325	1261	1154	895.1	842.6	860.9	1080	1208
30	1757	1579	1301	931.3	466.5	877.6	1205	1478
40	1227	1921	1409	577.0	111.3	540.6	1350	1847
50	607.1	1324	1534	144.2	37.39	150.5	1453	1416
60	146.2	552.0	1578	42.33	9.074	48.56	1567	609.1
70	13.82	53.24	967.6	13.52	7.639	13.20	1274	88.74
80	3.979	9.497	53.78	3.655	1.345	6.113	160.7	13.97
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	974.06	0 - 10	974.06	2.63%
10-20	2975.84	0 - 20	3949.90	10.68%
20-30	5307.11	0 - 30	9257.01	25.02%
30-40	7274.62	0 - 40	16531.63	44.69%
40-50	7569.20	0 - 50	24100.83	65.15%
50-60	6782.47	0 - 60	30883.30	83.49%
60-70	4649.93	0 - 70	35533.23	96.06%
70-80	1377.72	0 - 80	36910.95	99.78%
80-90	81.02	0 - 90	36991.97	100.00%
90-100	0.00	0 - 100	36991.97	100.00%
100-110	0.00	0 - 110	36991.97	100.00%
110-120	0.00	0 - 120	36991.97	100.00%
120-130	0.00	0 - 130	36991.97	100.00%
130-140	0.00	0 - 140	36991.97	100.00%
140-150	0.00	0 - 150	36991.97	100.00%
150-160	0.00	0 - 160	36991.97	100.00%
160-170	0.00	0 - 170	36991.97	100.00%
170-180	0.00	0 - 180	36991.97	100.00%

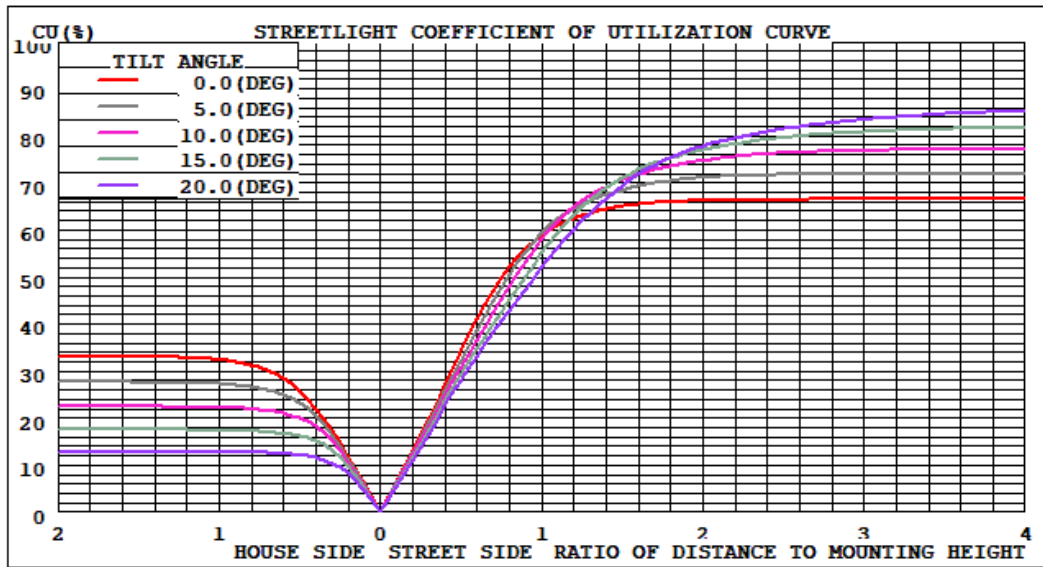
## 4.2 Goniophotometer Test

LCS/BUG

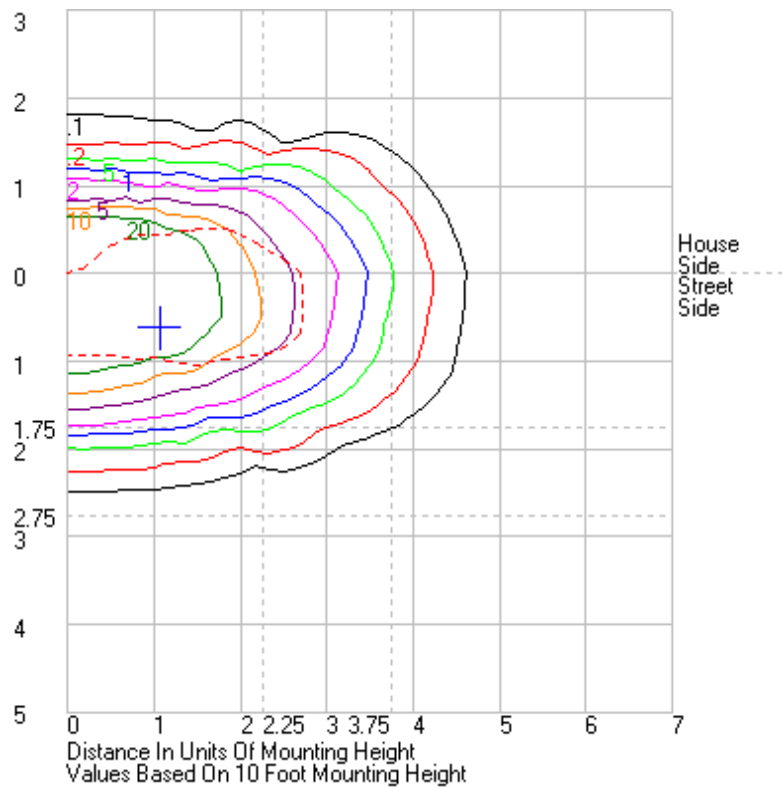


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	5351.5	N.A.	14.5
FM - Front-Medium (30-60)	15133.1	N.A.	40.9
FH - Front-High (60-80)	4121.4	N.A.	11.1
FVH - Front-Very High (80-90)	49.9	N.A.	0.1
BL - Back-Low (0-30)	3905.5	N.A.	10.6
BM - Back-Medium (30-60)	6493.2	N.A.	17.6
BH - Back-High (60-80)	1906.2	N.A.	5.2
BVH - Back-Very High (80-90)	31.1	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
<b>Total</b>	<b>36991.9</b>	<b>N.A.</b>	<b>100.0</b>
<b>BUG Rating</b>	<b>B4-U0-G3</b>		

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	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1	10090.1
1	10115.7	10116.9	10116.9	10115.1	10110.4	10104.7	10050.1	10041	10030.1	10019	10010.5	9999.06	10068.2	10061.9	10057.4	10055.4	10055.9	10057.9	10012	10012.1	10021.1	10026	10032.7	10034.9	10115.7
2	10155.3	10160	10157	10153.3	10146.3	10138.6	10074.6	10059	10043.3	10025.5	10007.7	9985.63	10048.6	10038.9	10035.5	10034.4	10034.6	10043.3	10009.9	10023.5	10037.1	10053.6	10066.2	10155.3	10155.3
3	10257.5	10257.6	10236.4	10208.9	10190	10176.7	10112.2	10087.8	10061.3	10027.9	9986.41	9939.16	9992.16	9988.34	9998.96	10013.5	10023.7	10031.7	9996.45	10010	10032.7	10062.9	10106.3	10147.1	10257.5
4	10417.1	10412.5	10373.4	10305.2	10245.5	10219.4	10151.3	10119.5	10079.3	10010.3	9929.58	9869.41	9914.76	9910.46	9931.27	9973.58	10013.5	10027.2	9998.69	10019.2	10053	10124.7	10218.6	10288.4	10417.1
5	10624.6	10619	10547.2	10436.5	10325.5	10275.3	10200.9	10160.1	10097.5	9979.18	9880.7	9795.41	9829.19	9831.1	9866.4	9921.9	9996.81	10028.9	10003.6	10030.2	10089	10224.8	10363	10475.5	10624.6
6	10822	10820.6	10749.4	10597	10430	10333.7	10254.8	10207.6	10102.1	9951.9	9802.8	9661.1	9678.78	9696.06	9781.47	9873.64	9971.67	10038.8	10014.9	10050.5	10156.3	10344.8	10549.4	10672.5	10822
7	10980.9	10987.7	10928.7	10782.3	10553	10402.4	10310.9	10257.6	10108.8	9917.94	9680.06	9497.69	9502.68	9529.57	9647.22	9818.18	9947.04	10049.6	10030.6	10073.6	10240.5	10500.8	10715.9	10834.2	10980.9
8	11159.4	11155.3	11077.4	10954.8	10694.5	10483.6	10379.1	10311.8	10119.7	9851.03	9544.83	9330.07	9329.02	9355.84	9500.63	9733.8	9925.13	10066.4	10057.6	10107.3	10331.9	10652.8	10851.8	10987.9	11159.4
9	11312.8	11331.3	11249.3	11102.7	10849.9	10564.1	10450.4	10368.9	10131	9763.96	9403.21	9164.11	9151.26	9193.2	9356.42	9625.82	9911.16	10090.7	10091.1	10155.6	10454.5	10781.5	10999.6	11164.3	11312.8
10	11393.7	11419.6	11411.5	11235.9	11011.8	10665.7	10521.9	10427.8	10133.5	9676.04	9272.43	9002.59	8978.41	9024.86	9211.04	9513.03	9886.93	10112.6	10128.2	10213.1	10582.5	10898.8	11159.5	11256.5	11393.7
11	11542.5	11546	11504.2	11402.5	11161.3	10776.7	10612	10487.2	10122.6	9582.44	9134.89	8844.83	8810.26	8865.28	9067.75	9406.25	9847.38	10135.8	10175.1	10282.4	10706.7	11032.9	11251.7	11366.6	11542.5
12	11698.8	11704.9	11620.2	11554.8	11297.8	10887.9	10693.2	10543.1	10093.2	9495.26	9008.89	8665.25	8617.91	8685.77	8930.55	9302.74	9797.39	10157.6	10224.1	10358.5	10828.6	11175.8	11340.4	11514.1	11698.8
13	11838.7	11829	11771.3	11652.2	11426.4	11019	10788.7	10608.9	10068.4	9406.02	8874.05	8500.57	8453.91	8516.05	8780.46	9194.68	9736.11	10181.7	10275.7	10446.5	10936.5	11271.6	11476.5	11641.6	11838.7
14	11958.9	11979.3	11906	11744.1	11557.4	11144.9	10886.2	10668.9	10039.8	9317.11	8722.47	8386.71	8375.62	8393.66	8622.32	9094.79	9684.39	10212.8	10331.7	10540	11041.9	11345.2	11614.5	11792.8	11958.9
15	12115.1	12118.3	12053.6	11877.4	11707.5	11277.8	10978.4	10734.2	10017.1	9244.62	8604.97	8349.74	8343.63	8354.71	8493.97	9003.04	9633.74	10242.9	10395.3	10637.3	11154.4	11453.7	11735.1	11920.8	12115.1
16	12196.2	12231.4	12173.3	12031.1	11858.7	11427.4	11089.9	10809.3	10001	9152.12	8548.1	8329.12	8321.51	8329.39	8429.82	8887.87	9583.22	10281.1	10466.8	10742.7	11287.2	11583.4	11857.4	12049	12196.2
17	12315.9	12335.8	12333.7	12150.7	11981.3	11572.3	11194.2	10874.7	9978.49	9058.05	8535.75	8330.96	8334.17	8323.84	8405.49	8774.97	9537.11	10321.1	10540.1	10856.8	11414	11713.9	12000.1	12137	12315.9
18	12523.8	12481.8	12424.5	12311	12083.8	11726	11308.5	10959.3	9969.53	9894.82	8533.39	8367.85	8377.31	8350.24	8387.56	8799.67	9489.25	10364.2	10622.8	10979.8	11497.4	11823.6	12102.4	12267.3	12523.8
19	12786.5	12715.8	12550.6	12434.4	12186.2	11873.1	11431.5	11039.2	9954.28	8945.54	8550.7	8415.3	8422.31	8392.73	8392.15	8621.81	9448.96	10406	10710	11101.5	11574	11968.4	12204.7	12487	12786.5
20	13246	13064.8	12721.1	12606.8	12322.3	12011.1	11542	11111.3	9944.87	8951.24	8601.29	8454.13	8426.49	8427.69	8422.84	8609.25	9410.36	10444.3	10804.3	11227.3	11672	12082.7	12338.6	12785.5	13246
21	13753.9	13563.5	12964.6	12756.8	12484.3	12159.2	11680.4	11193.2	9953.66	8977.93	8663.71	8445.9	8390.88	8415.39	8465.5	8610.62	9375.34	10484.7	10904.9	11352.3	11784.1	12233.3	12553.5	13238.8	13753.9
22	14261.7	14064.4	13339.8	12872	12634.3	12287.6	11807.7	11256.2	9938.44	9008.76	8711.99	8394.63	8288.41	8362.73	8502.14	8618.02	9333.07	10523.8	11010.1	11475.7	11914.7	12327.3	12814.1	13745.5	14261.7
23	14817	14583.6	13800.1	13033.3	12789.2	12434	11948.4	11334.5	9932.02	9065.79	8728.81	8266.74	8103.34	8237.68	8501	8645.77	9286.83	10559	11122.4	11601	12058	12448.5	13230.4	14295.9	14817
24	15407.5	15137.6	14260.4	13247.6	12956.1	12584.3	12108.2	11414.3	9925.26	9139.76	8702.05	8052.95	7835.81	8032.41	8466.02	8689.95	9256.73	10602.8	11238	11729.9	12183.6	12594.2	13698.1	14835.6	15407.5
25	16012.1	15751.2	14775.7	13566	13128.4	12735.3	12239.1	11484.9	9922.28	9229.91	8618.93	7773.6	7473.18	7751.95	8375.78	8749.46	9234.53	10649.9	11355.3	11855.8	12340.2	12796.6	14208.8	15420.8	16012.1
26	16501.5	16312.9	15316	13884.8	13289.6	12916.7	12405.3	11582.4	9958.15	9312.89	8468.47	7391.36	7014.93	7380.74	8221.07	8807.46	9232.54	10702.6	11481.4	11993.1	12500.9	13044.2	14722	16009.9	16501.5
27	16906	16756.9	15900.7	14274.3	13464.3	13066.8	12554.7	11660.5	9997.96	9364.56	8232.46	6917.42	6484.13	6923.79	7998.18	8844.82	9263.79	10762.2	11615.1	12142.3	12631.8	13386.6	15242.7	16463.8	16906
28	17216.7	17131.5	16460.5	14771.1	13627.1	13229.6	12700.6	11747.2	10063.2	9393.47	7940.51	6382.55	5907.76	6403.49	7707.82	8589.51	9309.87	10821.4	11751.4	12301.1	12818.1	13818.9	15797.7	16846.1	17216.7
29	17438.5	17405.8	16907.5	15266.9	13771.6	13375.8	12866.1	11843.1	10134.7	9378.62	7564.56	5820.24	5297.85	5831.13	7337.61	8837.77	9371.22	10887.7	11903.9	12461.1	12994.7	14281.7	16292.4	17152.5	17438.5
30	17571.5	17595.2	17293.4	15786.9	13950.2	13478.4	13007.6	11919.1	10201.3	9312.54	7117.94	5257.94	4665.33	5241.8	6903.51	8776.34	9442.83	10957.8	12053.4	12615	13153.9	14780.1	16697.3	17361.7	17571.5
31	17608.3	17691.3	17602.4	16335.7	14165.8	13595.8	13159.8	12011.9	10296.4	9194.21	6648.3	4643.55	4046.85	4638.94	6419.05	8657.03	9522.88	11031.8	12210	12752.1	13328.6	15264.9	17031.2	17493.5	17608.3
32	17516.8	17702.8	17830.8	16889.1	14399.9	13711.7	13303.8	12089.2	10386.1	9010.44	6106.33	4014.66	3444.91	4020.4	5901.36	8485.29	9619.53	11117.4	12368.4	12888.8	13529.4	15769.9	17293.7	17533	17516.8
33	17258.8	17559.4	17990.7	17383.8	14720.5	13834	13426.3	12164.9	10490.3	8773.34	5563.03	3432.94	2922.19	3443.75	5355.5	8262.94	9726.15	11204.8	12519.3	13018	13757.6	16305.6	17495.4	17459.6	17258.8
34	16881.7	17265.9	18074.4	17804.1	15058.9	13962.4	13555.3	12254.9	10591.3	8487.83	4999.55	2933.65	2496.49	2598.25	4792.48	7984.45	9829.85	11129.7	12672.9	13152.2	14042.6	16782.7	17626.8	17229	16881.7
35	16341.3	16842.5	18060.8	18174.2	15450.1	14092.7	13668.7	12327.9	10669	8133.68	4404.49	2504.24	2135.09	2914.41	4219.36	7685.39	9927.03	11388.8	12820.8	13294.1	14368.5	17186.4	17666.8	16876.3	16341.3
36	15703.7	16289.2	17885.6	18488.7	15905.5	14220.9	13779.7	12427.3	10740.2	7755.56	3847.08	2150.33	1808.79	2157.23	3673.88	7284.14	10005.3	11484.6	12966.1	13417.9	14730.7	17548.2	17605.6	16381.5	15703.7
37	14911.6	15588.2	17584	18746	16354	14333.7	13884.3	12517.6	10767.2	7311.92	3337.2	1825.21	1568.98	1836.73	3185.56	6865.73	10068.9	11577.1	13104.1	13563.6	15151	17852.1	17415.7	15768.8	14911.6
38	14026.1	14773.9	17159	18960.4	16821	14426.8	13961.8	12591.5	10756.6	6841.53	2905.72	1540.5	1378.16	1592.63	276										







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.	ALEDL2T/480	Sample ID.	O1
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
480.06	60	0.569	262.9	0.963	4.38%

## 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\*\*\*\*\*