

Photometric Test Report

Relevant Standards

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

Prepared For RAB Lighting Inc.

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Test Date

2022/1/12

Issue Date

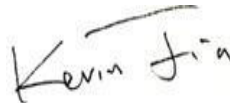
2022/1/13

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		36890
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	162.0
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		227.7
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%		5.95%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9		0.953
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3985±275	3935
		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		96
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%		0.36%
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		0.499

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2022/1/12	ALEDL5TN/480	F1
2	Goniophotometer Test	2022/1/12	ALEDL5TN/480	F1
3	THD and PF Test	2022/1/12	ALEDL5TN/480	F1

Remark(If any)

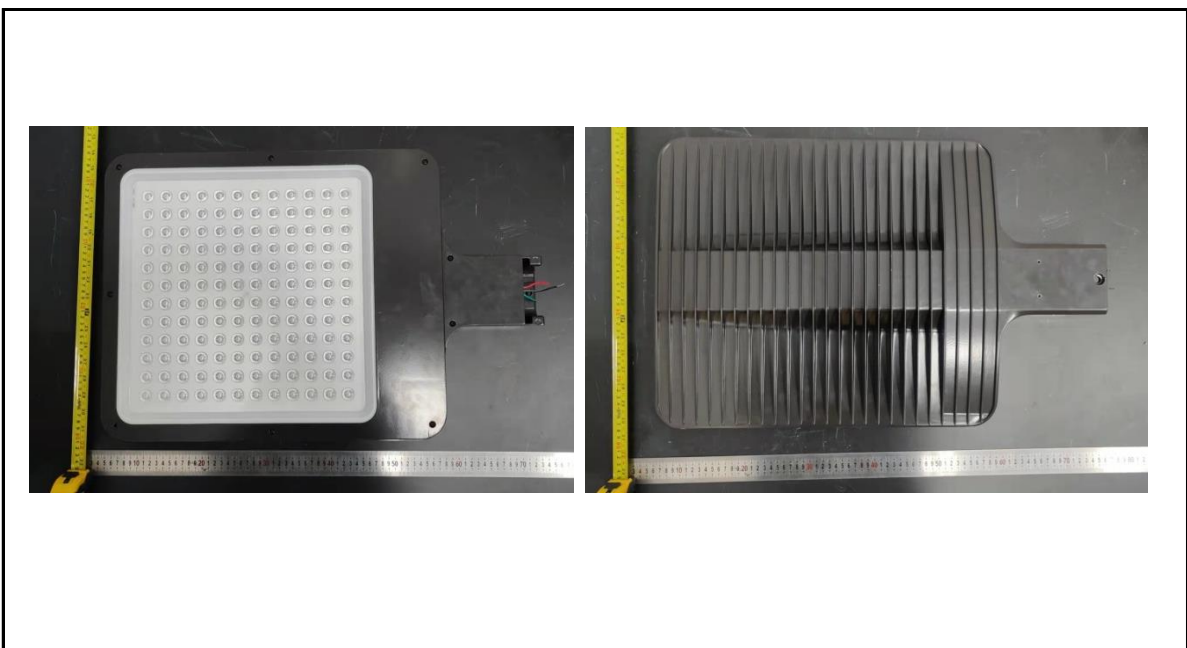
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3.0 Production Description

Luminaire Description: 220W/30,000 lm @ 4000K

Electrical Specification: 480V,50/60HZ

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	ALEDL5TN/480	Sample ID.	F1
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
480.03	60	0.494	226.1	0.953

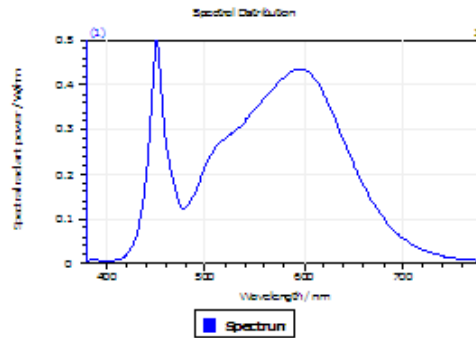
Test Result

CCT (K)	CRI	R9	Duv
3935	83	7	0.00037

Rf	Rg	IES Rcs,h1
84	96	-12%

4.1 Integrating Sphere Test

Results



Spectral values

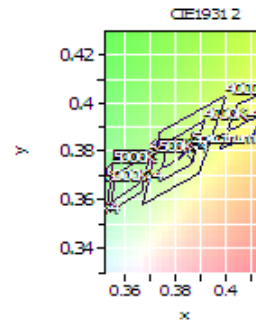
DominantWavelength	579.12 nm
Purity	0.290
PeakWavelength	451.04 nm
Radiant Power	75.69 W
Width50%	18.98 nm

Color Coordinates

Correlated Color Temperat 3935 K

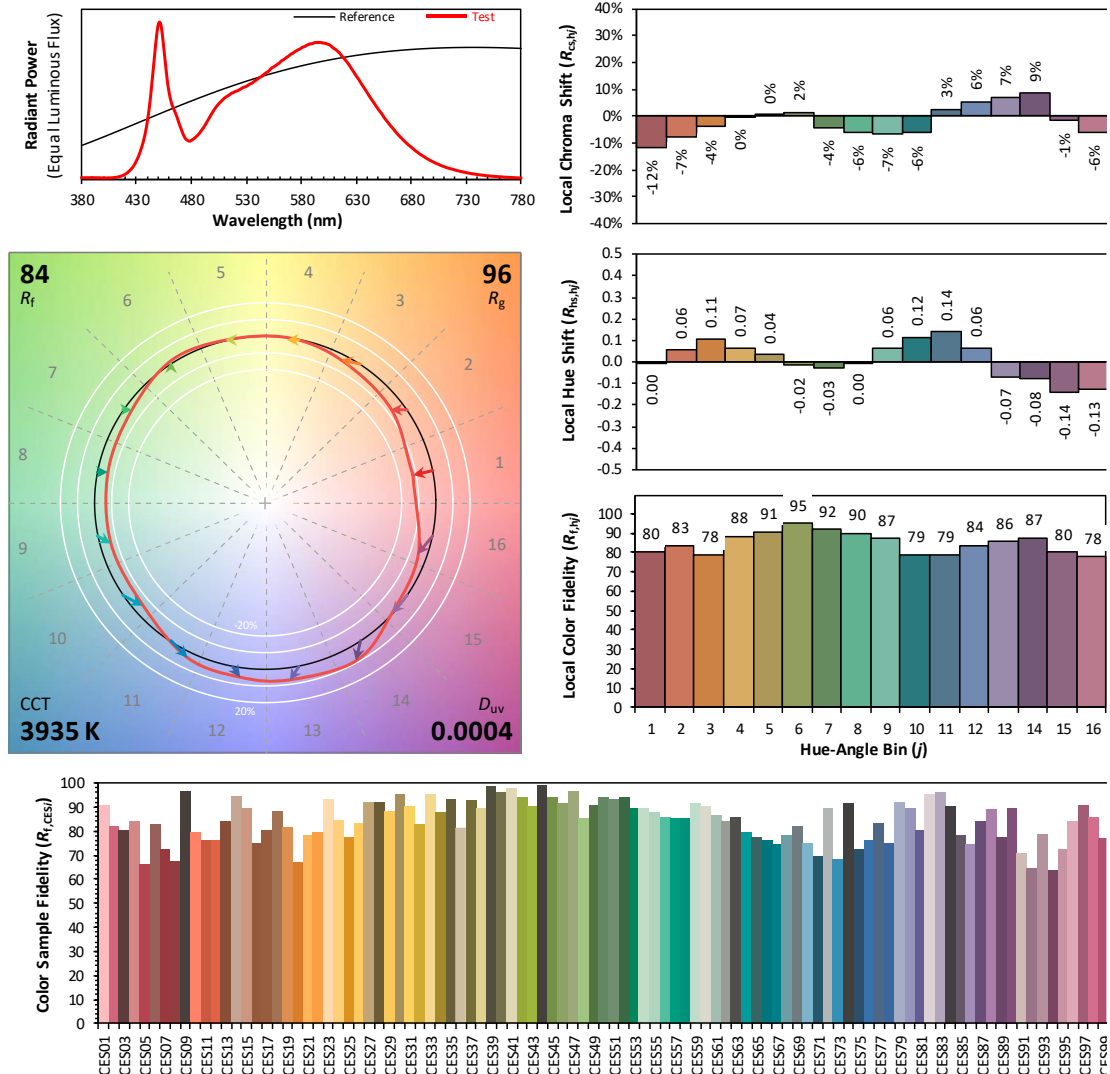
x: 0.3837 u: 0.2261 u': 0.2261
y: 0.3795 v: 0.3355 v': 0.5033

ResultsCRICRI01	81.0	ResultsCRICRI09	7.1
ResultsCRICRI02	89.8	ResultsCRICRI10	76.3
ResultsCRICRI03	95.5	ResultsCRICRI11	80.5
ResultsCRICRI04	81.4	ResultsCRICRI12	64.2
ResultsCRICRI05	81.6	ResultsCRICRI13	83.2
ResultsCRICRI06	86.4	ResultsCRICRI14	97.9
ResultsCRICRI07	85.1	ResultsCRICRI15	74.3
ResultsCRICRI08	63.0	ResultsCRICRI16	71.9
ResultsCRI	83.0		



PlanckDistance 3.7E-004

4.1 Integrating Sphere Test



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

x 0.3836
 y 0.3795
 u' 0.2261
 v' 0.5033

CIE 13.3-1995
 (CRI)

R_a 83
 R_g 9

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.	ALEDL5TN/480	Sample ID.	F1
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	480.05	60	0.499	227.7	0.951

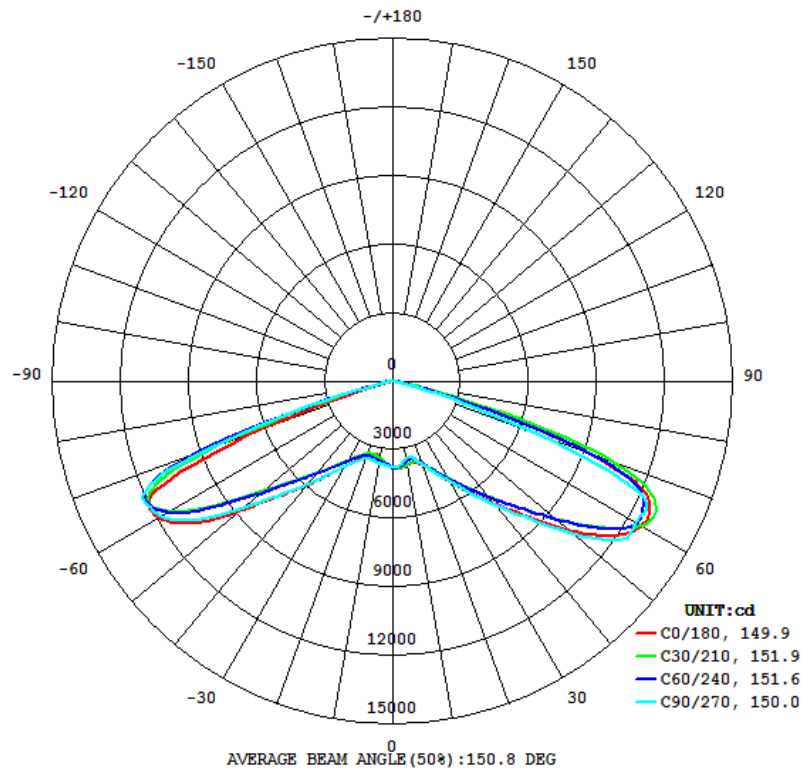
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
36890	155.8	155.3	149.9	150.0	162.0

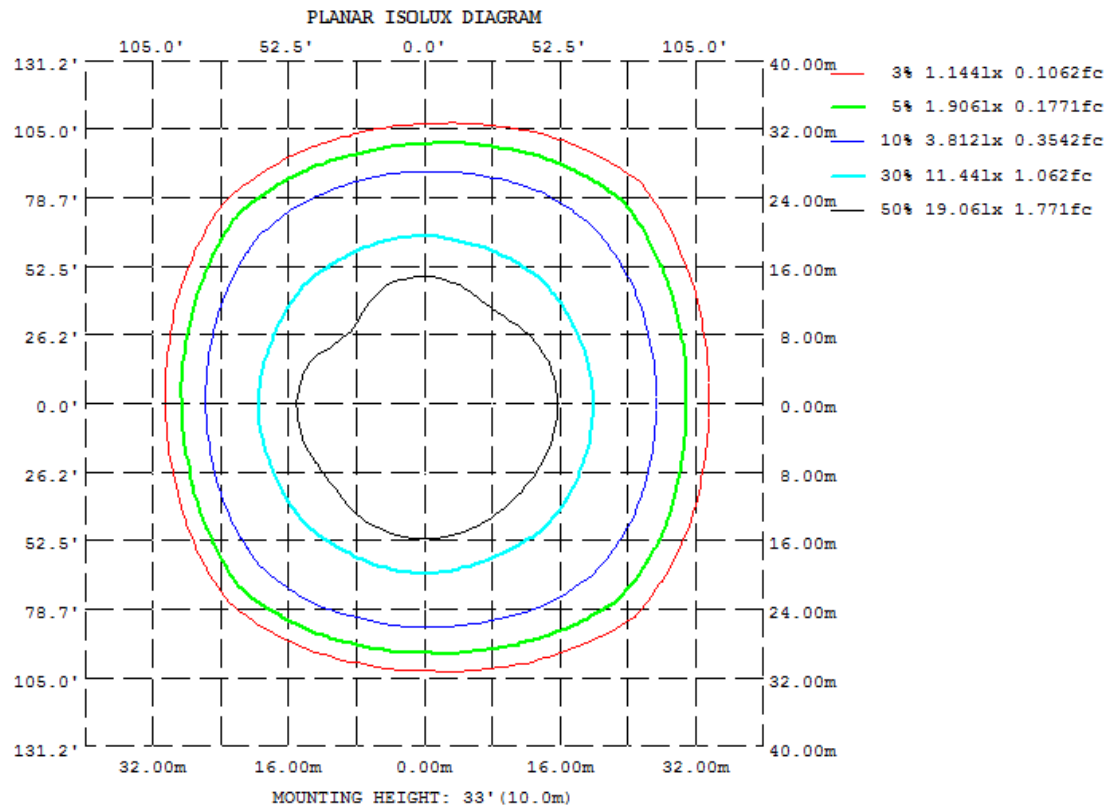
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.36%	B5-U0-G4

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

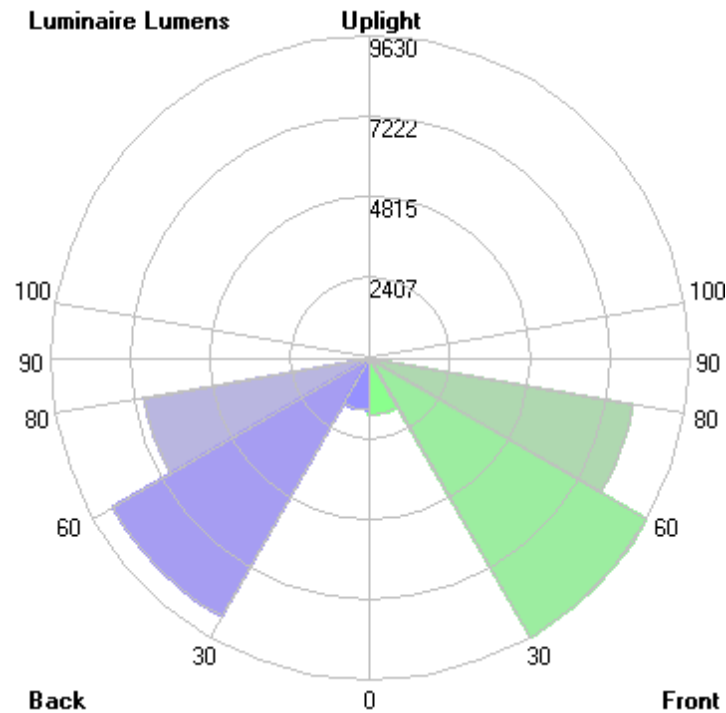
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	375.2	365.5	346.7	347.2	342.5	351.3	366.9	373.6
20	391.6	382.7	386.4	350.5	345.5	340.3	362.2	373.6
30	504.3	485.0	506.3	436.1	430.2	393.6	433.9	437.2
40	703.7	648.6	708.8	581.2	596.4	508.8	588.8	573.3
50	1014	911.6	1035	822.0	883.9	718.2	860.0	799.6
60	1264	1276	1239	1210	1191	1144	1180	1179
70	920.6	1055	687.0	892.2	619.9	970.4	865.0	1122
80	30.82	48.50	18.04	29.17	16.54	30.50	18.97	49.21
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	351.38	0 - 10	351.38	0.95%
10-20	1009.00	0 - 20	1360.38	3.69%
20-30	1884.46	0 - 30	3244.84	8.80%
30-40	3322.94	0 - 40	6567.78	17.80%
40-50	5697.28	0 - 50	12265.06	33.25%
50-60	9537.56	0 - 60	21802.62	59.10%
60-70	11488.98	0 - 70	33291.60	90.25%
70-80	3466.27	0 - 80	36757.87	99.64%
80-90	132.25	0 - 90	36890.12	100.00%
90-100	0.00	0 - 100	36890.12	100.00%
100-110	0.00	0 - 110	36890.12	100.00%
110-120	0.00	0 - 120	36890.12	100.00%
120-130	0.00	0 - 130	36890.12	100.00%
130-140	0.00	0 - 140	36890.12	100.00%
140-150	0.00	0 - 150	36890.12	100.00%
150-160	0.00	0 - 160	36890.12	100.00%
160-170	0.00	0 - 170	36890.12	100.00%
170-180	0.00	0 - 180	36890.12	100.00%

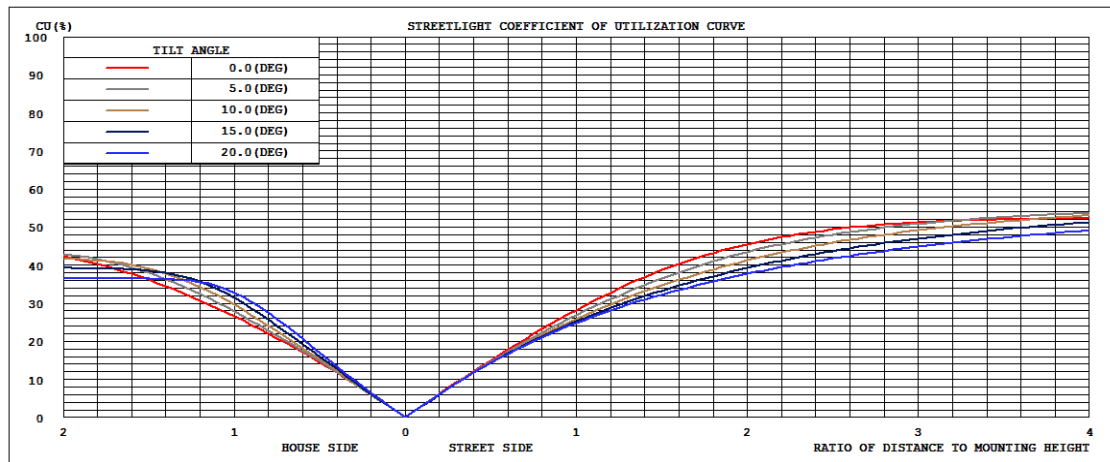
4.2 Goniophotometer Test

LCS/BUG

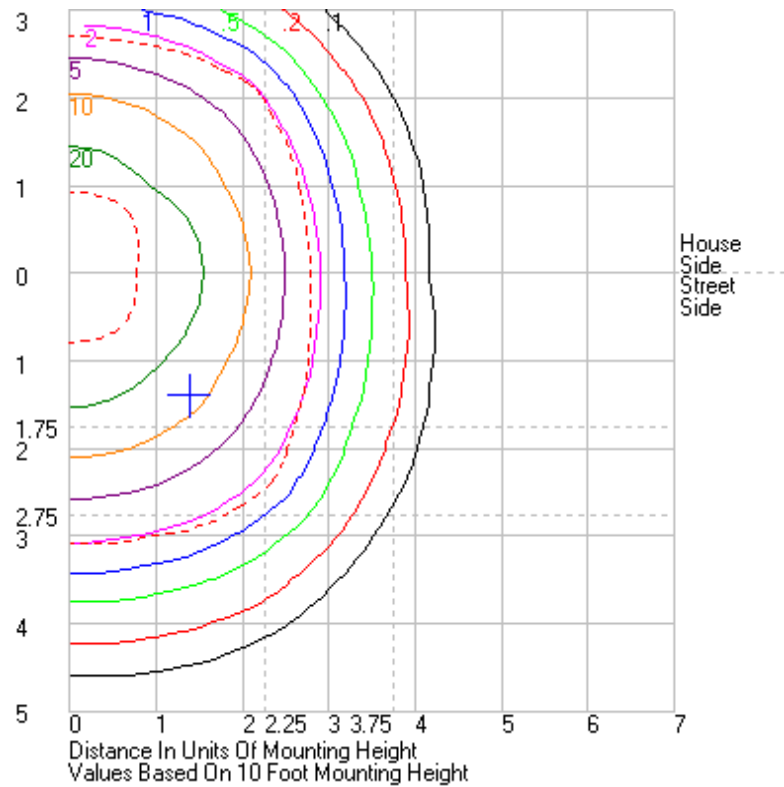


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1686.0	N.A.	4.6
FM - Front-Medium (30-60)	9629.7	N.A.	26.1
FH - Front-High (60-80)	8028.3	N.A.	21.8
FVH - Front-Very High (80-90)	80.5	N.A.	0.2
BL - Back-Low (0-30)	1558.9	N.A.	4.2
BM - Back-Medium (30-60)	8928.1	N.A.	24.2
BH - Back-High (60-80)	6927.0	N.A.	18.8
BVH - Back-Very High (80-90)	51.8	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	36890.3	N.A.	100.0
BUG Rating	B5-U0-G4		

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	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31	3807.31
1	3827.8	3830.25	3832.66	3831.24	3827.26	3820.44	3812.54	3805.13	3799.05	3792.43	3786.25	3780.59	3771.48	3769.6	3771.28	3774.21	3779.37	3784.92	3792.23	3800.2	3809.16	3818.02	3826.3	3832.11	3827.8
2	3845.35	3846.5	3845.91	3839.13	3829.97	3818.01	3804.48	3791.09	3779.75	3771.37	3765.77	3755.92	3740.47	3733.82	3734.04	3737.06	3744.05	3754.63	3769.26	3785.95	3805.03	3822.05	3836.37	3847.43	3845.35
3	3855.36	3855.18	3849.39	3836.62	3823.98	3808.79	3789.23	3771.46	3759.28	3749.92	3740.84	3729.6	3709.16	3699.06	3698.04	3699.68	3707.5	3723.79	3746.3	3769.9	3794.41	3817.53	3840.5	3856.34	3855.36
4	3852.19	3850.66	3842.01	3826.64	3806.87	3785.53	3761.75	3742.49	3733.23	3724.07	3711.54	3699.7	3676.06	3661.28	3659.76	3664.35	3679.33	3699.97	3729.16	3759.09	3786.32	3809.63	3831.51	3851.96	3852.19
5	3846.26	3842.03	3828.37	3808.09	3775.79	3750.31	3724.06	3702.26	3697.8	3692.51	3683.81	3667.75	3641.18	3625.4	3622	3635.76	3656.79	3680.3	3714.33	3748.76	3776.11	3796.47	3817.42	3843.38	3846.26
6	3837.98	3831.37	3813.58	3779.84	3741.74	3709.26	3679.48	3658.03	3658.75	3657.75	3647.48	3624.41	3597.74	3580.63	3584.89	3606.45	3634.99	3664.9	3702.16	3739.58	3760.62	3779.32	3800.91	3830.84	3837.98
7	3827.5	3819.51	3795.73	3747.23	3697.98	3656.31	3623.35	3603.48	3609.05	3616.01	3603.37	3580.95	3552.58	3535.82	3546.54	3579.99	3619.75	3654.82	3694.32	3732.65	3749.48	3763.52	3783.66	3816.26	3827.5
8	3807.52	3805.79	3776.29	3714.75	3654.51	3605.44	3565.9	3544.11	3560.74	3569.03	3561.49	3540.27	3509.12	3493.81	3509.86	3555.77	3606.35	3645.91	3686.54	3722.78	3739.39	3750.64	3768.71	3799.65	3807.52
9	3781.35	3781.85	3754.64	3684.18	3612.42	3557.24	3512.43	3489.13	3509.8	3520.47	3518.55	3499.62	3466.12	3454.16	3476.86	3534.14	3592.42	3636.16	3678.52	3713.7	3729.05	3741.97	3753.63	3771.93	3781.35
10	3752.31	3755.98	3728.05	3654.65	3576.19	3516.18	3467.23	3439.26	3457.91	3471.99	3477.07	3460.27	3424.96	3415.69	3446.53	3512.53	3577.42	3623.44	3668.92	3704.2	3721.68	3735.93	3736.95	3742.08	3752.31
11	3728.08	3734.43	3702.82	3627.41	3549.1	3487.42	3435.49	3402.49	3414.61	3429.61	3434.94	3425.28	3388.79	3380.93	3419.34	3491.77	3560.81	3608.06	3655.71	3693.99	3714.29	3730.14	3719.8	3716.59	3728.08
12	3713.79	3721.69	3682.52	3606.54	3529.71	3471.6	3421.25	3379.74	3380.13	3390.29	3399.83	3396.88	3357.76	3350.44	3393.26	3470.32	3543.32	3589.86	3639.89	3681.42	3706.45	3725.51	3705.28	3701.65	3713.79
13	3706.75	3718.01	3670.73	3593.09	3520.01	3472.55	3422.4	3373.57	3359.51	3358.94	3370.67	3369.69	3331.24	3324.76	3367.31	3445.05	3524.62	3571.17	3623.55	3666.88	3697.6	3719.45	3696.63	3695.87	3706.75
14	3707.15	3719.99	3665.9	3589.38	3523.75	3489.94	3444.82	3384.9	3353.09	3339.8	3350.93	3351.91	3317.41	3309.78	3345.33	3421.44	3506.76	3552.3	3605.83	3652.94	3687.43	3712.71	3693.89	3698.43	3707.15
15	3712.94	3725.88	3667.65	3598.12	3543.24	3525.43	3483.7	3413.89	3361.31	3333.19	3343.34	3346.74	3313.13	3303.58	3331.23	3400.66	3490.28	3536.79	3592.22	3640.2	3677.56	3706.93	3698.84	3707.02	3712.94
16	3729.54	3738.28	3681.33	3621.73	3578.33	3575.28	3538.43	3457.89	3383.64	3342.78	3346.56	3352.92	3320.56	3306.14	3327.53	3383.89	3474.88	3523.42	3581.61	3629.68	3667.04	3701.06	3709.56	3722.31	3729.54
17	3758.33	3762.87	3709.2	3657.22	3629.13	3640.06	3604.73	3511.41	3423.13	3363.86	3360.3	3368.84	3336.25	3314.93	3333.32	3377.16	3461.67	3515.05	3577.83	3621.6	3659.95	3699.56	3727.17	3744.86	3758.33
18	3798.86	3800.14	3748.74	3701.76	3694.08	3713.95	3684.27	3580.29	3476.42	3400.38	3387.52	3394.51	3362.82	3331.63	3345.58	3378.53	3458.23	3515.13	3581.23	3619.17	3658.65	3704.41	3749.53	3777.16	3798.86
19	3850.84	3846.17	3801.5	3759.47	3766.79	3796.1	3769.75	3651.17	3536.01	3446.99	3428.13	3431.52	3404.21	3358.21	3362.7	3387.23	3464.39	3524.47	3596.06	3624.98	3665.54	3716.02	3778.46	3818.78	3850.84
20	3915.72	3903.04	3864.58	3827.15	3851.04	3884.45	3864.46	3734.02	3606.5	3505.1	3478.85	3480.46	3454.89	3396.7	3385.37	3402.57	3479.97	3544.17	3622.31	3640.96	3682.05	3736.18	3813.14	3871.54	3915.72
21	3991.39	3973.12	3936.87	3906.08	3940.58	3978.66	3963.94	3820.85	3681	3568.77	3538.97	3536.7	3511.64	3442.4	3416.9	3423.42	3503.71	3573.25	3658.28	3668.42	3706.1	3763.95	3859.11	3935.99	3991.39
22	4077.19	4051.35	4019.28	3990.16	4032.59	4076.69	4062.15	3909.79	3758.14	3635.92	3604.01	3598.73	3576.21	3494.83	3457.58	3452.47	3534.3	3609.23	3702.15	3705.14	3739.8	3800.74	3916.37	4010.73	4077.19
23	4175.41	4145.45	4109.42	4083.18	4134.74	4181.23	4174.95	4013.18	3848.68	3710.1	3676.49	3667.42	3647.1	3553.66	3507.32	3490.82	3574.11	3655.88	3756.07	3751.91	3784.34	3846.2	3983.3	4094.23	4175.41
24	4279.75	4247.38	4207.99	4177.16	4236.55	4290.18	4283.6	4112.64	3935.58	3786.87	3751.02	3742.65	3722.99	3618.41	3562.82	3535.9	3622.84	3710.25	3817.52	3807.82	3835.1	3900.56	4053.36	4184.23	4279.75
25	4390.38	4350.54	4308.48	4277.33	4343.53	4402.36	4401.29	4218.99	4032.52	3867.92	3830.1	3823.29	3806.77	3690.55	3623.49	3587.84	3680.79	3747.35	3887.93	3870.39	3895.22	3964.41	4134.49	4281.34	4390.38
26	4508.39	4468	4416.75	4381.91	4456.97	4521.79	4527.32	4335.13	4133.78	3955.04	3916.95	3911.97	3896.32	3767.94	3689.58	3647.32	3744.94	3844.79	3967.97	3941.73	3962.62	4036.18	4220.23	4384.46	4508.39
27	4631.37	4585.07	4530.31	4489.67	4568.01	4642.77	4646.16	4444.89	4237.17	4046.46	4003.36	4002.01	3987.01	3850.42	3760.03	3712.33	3813.86	3922.84	4053.01	4020.24	4036.28	4111.03	4310.18	4493.72	4631.37
28	4760.04	4711.55	4650.26	4605.13	4694.47	4772.6	4781.65	4575.59	4354.27	4147.64	4100.84	4101.88	4088.6	3939.73	3834.54	3780.3	3888.27	4007.56	4145.62	4104.39	4116.36	4192.58	4408.27	4611.19	4760.04
29	4898.24	4846.16	4776.53	4723.15	4816.44	4904.68	4917.06	4700.2	4467.33	4247.45	4196.36	4207.03	4192.93	4031.53	3914.34	3855.74	3967.33	4096.49	4239.3	4196.88	4202.89	4279.26	4512.35	4736.61	4898.24
30	5042.95	4987.69	4907.97	4850.06	4948.87	5048.85	5062.7	4837.11	4591.99	4361.06	4302.5	4316.19	4301.55	4133.28	4001.3	3936.19	4051.52	4190.54	4339.29	4294.2	4293.93	4371.73	4622.43	4870.04	5042.95
31	5197.13	5134.96	5049.47	4983.9	5088.94	5202.52	5229.85	4991.44	4725.19	4477.12	4413.16	4434.12	4421.33	4239.46	4089.63	4021.74	4141.72	4289.48	4445.62	4397.88	4391.8	4474.87	4742.04	5010.76	5197.13
32	5367.57	5298.83	5195.39	5121.49	5227.56	5360.55	5393.14	5140.36	4854.44	4597.1	4528.35	4559.9	4546.36	4350.57	4186.64	4114.89	4236.98	4398.77	4562	4509.88	4497.32	4583.85	4868.01	5165.76	5367.57
33	5545.86	5468	5350.58	5271.51	5383.25	5535.05	5583.54	5318.01	5004.85	4730.22	4656.99	4695	4683.02	4473.8	4290.76	4212.36	4341.1	4518.36	4690.87	4631.11	4607.8	4700.83	5004.59	5328.18	5545.86
34	5732.28	5646.47	5512.22	5421.55	5537.1	5716.4	5779.16	5496.83	5148.92	4859.34	4786.36	4839.5	4831.86	4605.29	4401.42	4314.97	4450.12	4646.87	4830.96	4762.42	4725.11	4823.87	5147.15	5502.82	5732.28
35	5935.82	5842.83	5681.67	5583.23	5701.39	5902.63	5974.26	5682.34	5307.37	5001.74	4928.9	5001.06	4994.07	4750.8	4520.93	4426.51	4566.55	4789.77	4983.31	4904.52	4848.03	4955.37	5300.43	5683.98	5935.82
36	6139.8	6040.39	5859.59	5753.52	5878.07	6109.79	6197.96	5894.34	5479.03	5148.38	5074.37	5167.1	5165.9	4908.73	4647.24	4544.97	4691.92	4946.44	5148.47	5058.4	4980.23	5095.52	5460.69	5879.23	6139.8
37	6359.99	6248.68	6043.71	5923.23	6051.11	6309.46	6398.97	6084.71	5642.94	5302.01	5231.93	5351.46	5351.25	5075.17	4782.05	4670.68	4823.02	5109.39	5322.2	5222.97	5121.76	5242.1	5631.17	6086.69	6359.99
38	6581.95	6468.39	6233.68	6105.93	6244.71	6525.71	6627.96	6308.35	5833.19	5466.48	5394.51	5540.03	5546	5252.14											

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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
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
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
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
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.	ALEDL5TN/480	Sample ID.	F1
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
480.03	60	0.494	226.1	0.953	5.95%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2021/12/26	2022/12/25
DLF108	Auxiliary Lamp	2021/12/26	2022/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2021/12/26	2022/12/25
DLF116	AC Power Source	2021/12/26	2022/12/25
DLF113	Power Meter	2021/12/26	2022/12/25
DLF112	Temperature Recorder	2021/12/26	2022/12/25
DLF114	Temperature & Humidity Datalogger	2021/12/26	2022/12/25
DLF101	Goniophotometer	2021/12/26	2022/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2021/12/26	2022/12/25
DLF104	AC Power Source	2021/12/26	2022/12/25
DLF507	DC Power Source	2021/12/26	2022/12/25
DLF102	Power Meter	2021/12/26	2022/12/25
DLF111	Temperature & Humidity Datalogger	2021/12/26	2022/12/25
DLF119	Power Meter	2021/12/26	2022/12/25
DLF031	Temperature data logger	2021/12/26	2022/12/25
DLF022	Digital power meter	2021/12/26	2022/12/25
DLF003	Temperature & Humidity Datalogger	2021/12/26	2022/12/25

***** End of Test Report*****