

Photometric Test Report

Relevant Standards

- ☒ IES LM-79-2019
- ☒ ANSI C82.77-10:2014

Prepared For

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DLF2503101

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2025/3/5

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The results contained in this report pertain only to the tested sample.

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1.0 Test Summary

DLC Technical Requirements v5.1

Outdoor - Non-Cutoff and Semi-Cutoff Wall-Mounted Area Luminaires				
Requirement Category	Test Method	Requirements		Test value
Luminaire Output (lm) (Goniophotometer - Section 4.2 (0°-180° zones)	IES LM-79-2019	300		1699
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2) (0°-180° zones)	IES LM-79-2019	Standard 105	Premium 120	126.8
Luminaire Output (lm) (Goniophotometer - Section 4.2) (0°-90° zones)	IES LM-79-2019	300		1076
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2) (0°-90° zones)	IES LM-79-2019	Standard 105	Premium 120	80.3
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		13.4
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77-10:2014	20.00%	120V	5.45%
		20.00%	277V	10.79%
Power Factor (THD & PF - section 4.3)	ANSI C82.77-10:2014	0.9	120V	0.996
		0.9	277V	0.948
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2019	7 step	3045±175	3034
		4 step	3045±100	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2019 CIE 13.3-1995	≥70		84
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2019 CIE 13.3-1995	-		13
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		85
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%		-11%
Zonal Lumen Requirement (80°-90°) (Goniophotometer - Section 4.2)	IES LM-79-2019	≤10%		18.08%
Input Voltage (V)				
(Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		277
(Goniophotometer - Section 4.2)		Non-Worst Case		120
Input Current (A)				
(Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		0.051
(Goniophotometer - Section 4.2)		Non-Worst Case		0.111
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		13.4
(Goniophotometer - Section 4.2)		Non-Worst Case		13.3

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025/3/5	ET @ 14W/3000K	N/A	DLF2503101-G1
2	Goniophotometer Test	2025/3/5	ET @ 14W/3000K	N/A	DLF2503101-G1
3	THD and PF Test	2025/3/5	ET @ 14W/3000K	N/A	DLF2503101-G1

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: ET @ 14W/3000K

Electrical Specification: 120V-277V,50/60HZ

Received Date: 2025/3/4

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	ET @ 14W/3000K	Sample ID.	DLF2503101-G1
Operate time (Min.)	90	Stabilization time (Min.)	45
Temperature (°C)	25.1	Humidity (%RH)	57.0

Test Method

The samples were tested according to the IES LM-79-2019.

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature and relative humidity condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$ and 10% - 65% RH.

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
119.99	60	0.113	13.5	0.996
277.03	60	0.052	13.6	0.948

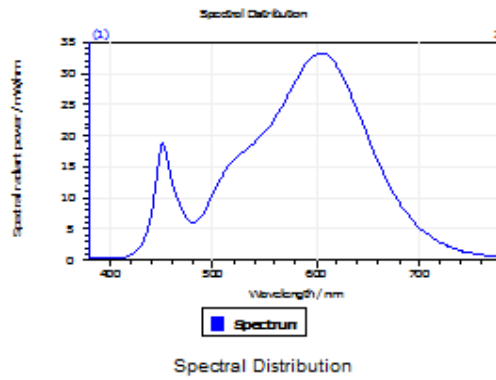
Test Result

CCT (K)	CRI	R9	Duv
3034	84	13	-0.00002

Rf	Rg	IES Rcs,h1
85	96	-11%

4.1 Integrating Sphere Test

Results

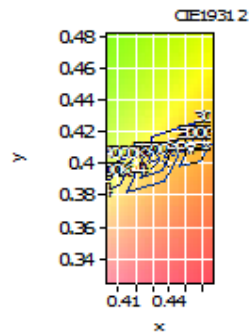


Spectral values

DominantWavelength 582.69 nm
Purity 0.514
PeakWavelength 604.38 nm
Radiant Power 5.019 W
Width50%:

Color Coordinates

Correlated Color Temperat 3034 K
x: 0.4345 u: 0.2494 u': 0.2494
y: 0.4032 v: 0.3471 v': 0.5207
CRI01 82.6 CRI09 12.6
CRI02 91.2 CRI10 79.5
CRI03 97.0 CRI11 82.4
CRI04 82.6 CRI12 70.0
CRI05 82.5 CRI13 84.6
CRI06 89.1 CRI14 98.8
CRI07 84.5 CRI15 75.5
CRI08 62.1 CRI16 73.2
ResultsCRI 84.0



PlanckDistance 2.0E-005

4.1 Integrating Sphere Test

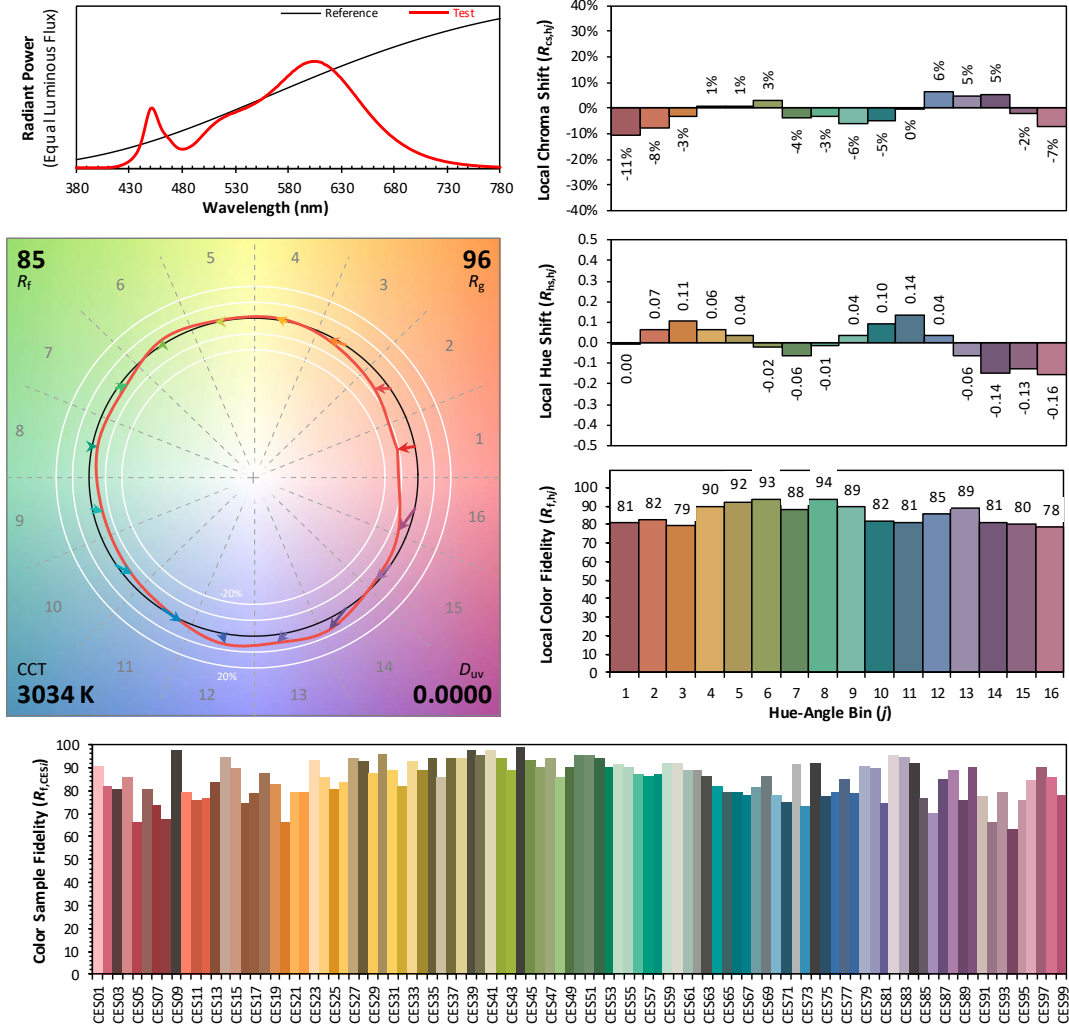
IES TM-30-18 Color Rendition Report

Source: DLF2503101-7a

Manufacturer: RAB Lighting Inc.

Date: 2025/3/5

Model: ET @ 14W/3000K



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

x 0.4345
 y 0.4032
 u' 0.2494
 v' 0.5207

CIE 13.3-1995
(CRI)

R_a 84
 R_g 15

4.1 Integrating Sphere Test

Spectral Distribution over Visible Wavelength							
WL (nm)	Radiant (Watts/nm)	WL (nm)	Radiant (Watts/nm)	WL (nm)	Radiant (Watts/nm)	WL (nm)	Radiant (Watts/nm)
380	2.83E-04	485	6.39E-03	590	3.15E-02	695	6.09E-03
385	2.81E-04	490	7.33E-03	595	3.25E-02	700	5.25E-03
390	2.94E-04	495	8.84E-03	600	3.31E-02	705	4.51E-03
395	2.81E-04	500	1.06E-02	605	3.33E-02	710	3.87E-03
400	2.75E-04	505	1.23E-02	610	3.30E-02	715	3.33E-03
405	2.84E-04	510	1.39E-02	615	3.22E-02	720	2.84E-03
410	3.34E-04	515	1.51E-02	620	3.12E-02	725	2.45E-03
415	4.81E-04	520	1.61E-02	625	2.97E-02	730	2.09E-03
420	8.17E-04	525	1.69E-02	630	2.80E-02	735	1.80E-03
425	1.39E-03	530	1.75E-02	635	2.60E-02	740	1.53E-03
430	2.35E-03	535	1.82E-02	640	2.40E-02	745	1.31E-03
435	3.97E-03	540	1.88E-02	645	2.19E-02	750	1.14E-03
440	7.05E-03	545	1.96E-02	650	1.97E-02	755	9.75E-04
445	1.31E-02	550	2.05E-02	655	1.77E-02	760	8.43E-04
450	1.86E-02	555	2.15E-02	660	1.58E-02	765	7.22E-04
455	1.69E-02	560	2.28E-02	665	1.39E-02	770	6.23E-04
460	1.26E-02	565	2.42E-02	670	1.23E-02	775	5.34E-04
465	1.02E-02	570	2.56E-02	675	1.07E-02	780	4.69E-04
470	8.24E-03	575	2.72E-02	680	9.39E-03		
475	6.57E-03	580	2.87E-02	685	8.16E-03		
480	6.03E-03	585	3.03E-02	690	7.09E-03		

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	ET @ 14W/3000K	Sample ID.	DLF2503101-G1
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-79-2019.

Photometric paramters were measured using a type C goniophotometer and software.

The ambient temperature shall be maintained at 25° C ± 1.2° C and 10% - 65% RH, 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.

Airflow for the instantaneous tangential velocity of any point on the DUT shall be less than an upper tolerance limit of 0.20 m/s.

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	277.03	60	0.051	13.4	0.948
NON-WORST CASE	120.01	60	0.111	13.3	0.996

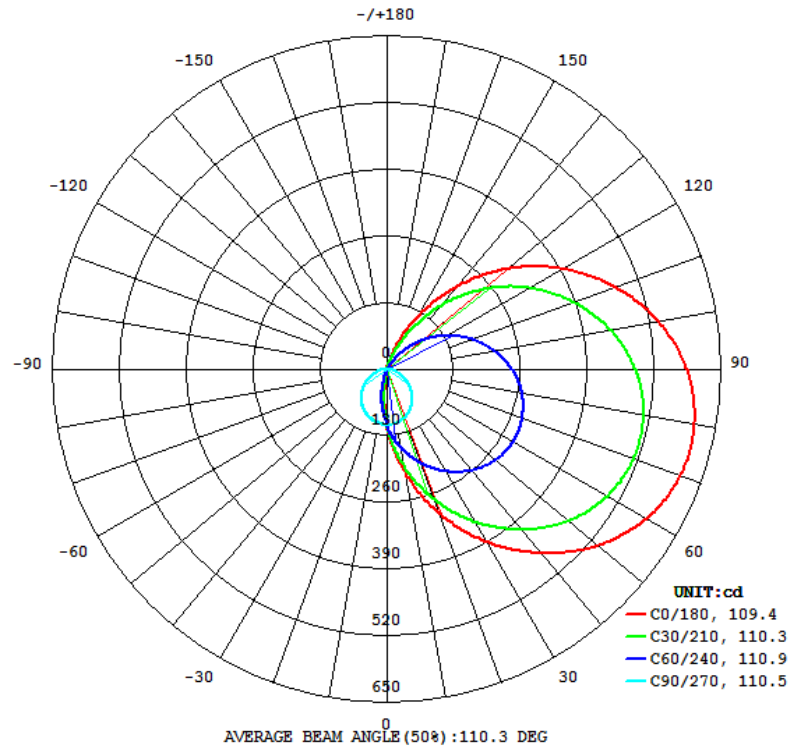
Test Result

Result type	Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
0°-180° zones	1699	162.3	162.2	109.4	110.5	126.8
0°-90° zones	1076	95.4	162.2	69.0	110.5	80.3

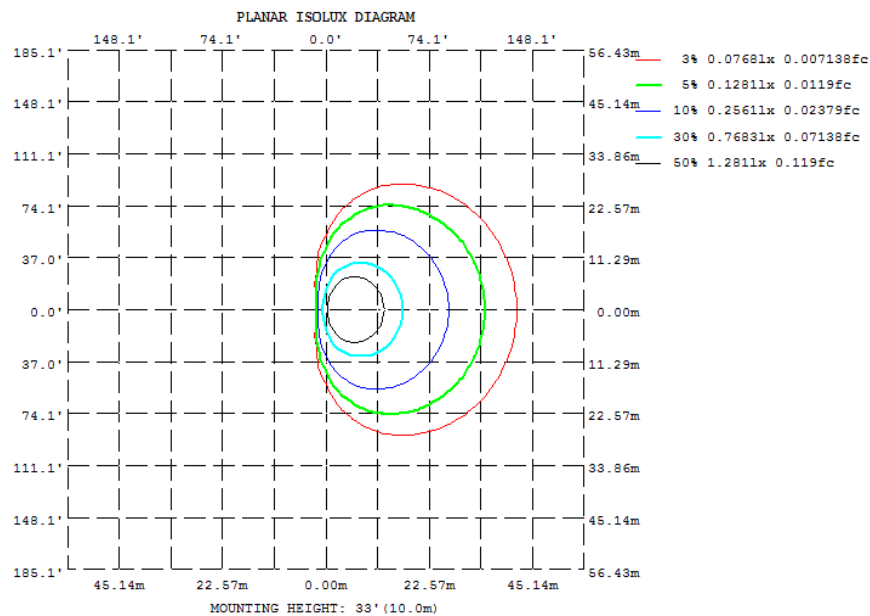
Zonal Lumen Requirement (80°-90°)	BUG rating
18.08%	B0-U3-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

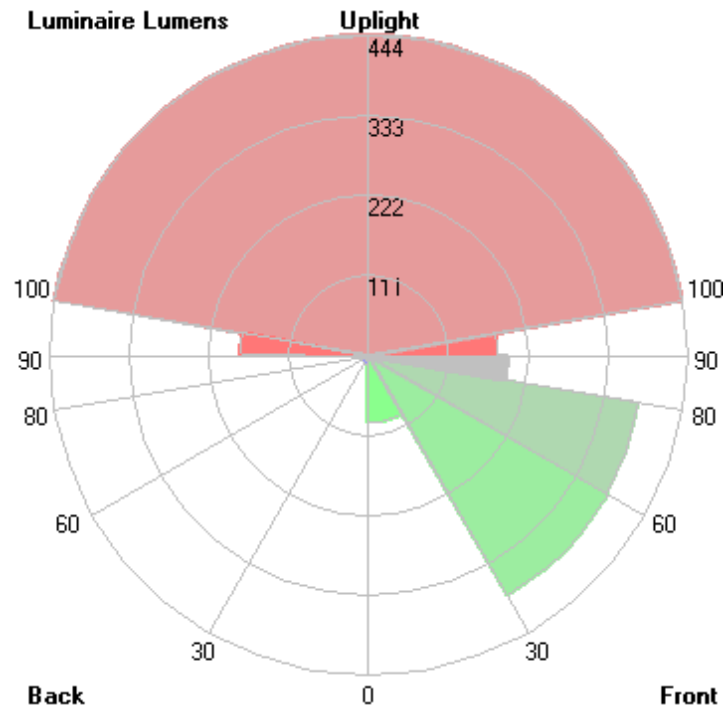
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	203.2	173.9	107.2	47.43	25.20	47.43	107.2	173.9
20	298.7	237.0	101.3	1.551	0.3374	1.551	101.3	237.0
30	388.6	294.0	91.74	0.2465	0.3203	0.2465	91.74	294.0
40	468.7	341.1	78.76	0.2555	0.3174	0.2555	78.76	341.1
50	534.7	376.9	63.37	0.3279	0.3837	0.3279	63.37	376.9
60	582.2	399.0	46.39	0.3344	0.4427	0.3344	46.39	399.0
70	607.2	405.9	28.82	0.3302	0.4253	0.3302	28.82	405.9
80	607.7	397.8	12.48	0.3286	0.3517	0.3286	12.48	397.8
90	583.9	375.1	2.062	0.3440	0.3678	0.3440	2.062	375.1
100	537.5	339.1	0.1316	0.3854	0.4571	0.3854	0.1316	339.1
110	473.0	291.9	0.1418	0.3948	0.5228	0.3948	0.1418	291.9
120	394.6	236.1	0.1582	0.3856	0.5333	0.3856	0.1582	236.1
130	306.9	174.5	0.1895	0.3821	0.5121	0.3821	0.1895	174.5
140	213.4	110.8	0.2311	0.3773	0.4854	0.3773	0.2311	110.8
150	120.4	48.75	0.2498	0.3290	0.3867	0.3290	0.2498	48.75
160	36.79	1.342	0.2572	0.2570	0.2406	0.2570	0.2572	1.342
170	0.1002	0.2105	0.2264	0.1773	0.1235	0.1773	0.2264	0.2105
180	0.1266	0.2279	0.1792	0.1189	0.1257	0.1189	0.1792	0.2279
DEG	LUMINOUS INTENSITY:cd							

	Zonal (lm)		Total (lm)	Percent
0-10	10.48	0 - 10	10.48	0.62%
10-20	32.82	0 - 20	43.30	2.55%
20-30	61.98	0 - 30	105.28	6.20%
30-40	96.62	0 - 40	201.90	11.89%
40-50	131.97	0 - 50	333.87	19.65%
50-60	163.65	0 - 60	497.52	29.29%
60-70	186.59	0 - 70	684.11	40.27%
70-80	197.31	0 - 80	881.42	51.89%
80-90	194.51	0 - 90	1075.93	63.34%
90-100	179.15	0 - 100	1255.08	73.88%
100-110	153.37	0 - 110	1408.45	82.91%
110-120	120.50	0 - 120	1528.95	90.00%
120-130	85.02	0 - 130	1613.97	95.01%
130-140	51.86	0 - 140	1665.83	98.06%
140-150	25.10	0 - 150	1690.93	99.54%
150-160	7.34	0 - 160	1698.27	99.97%
160-170	0.48	0 - 170	1698.75	100.00%
170-180	0.02	0 - 180	1698.77	100.00%

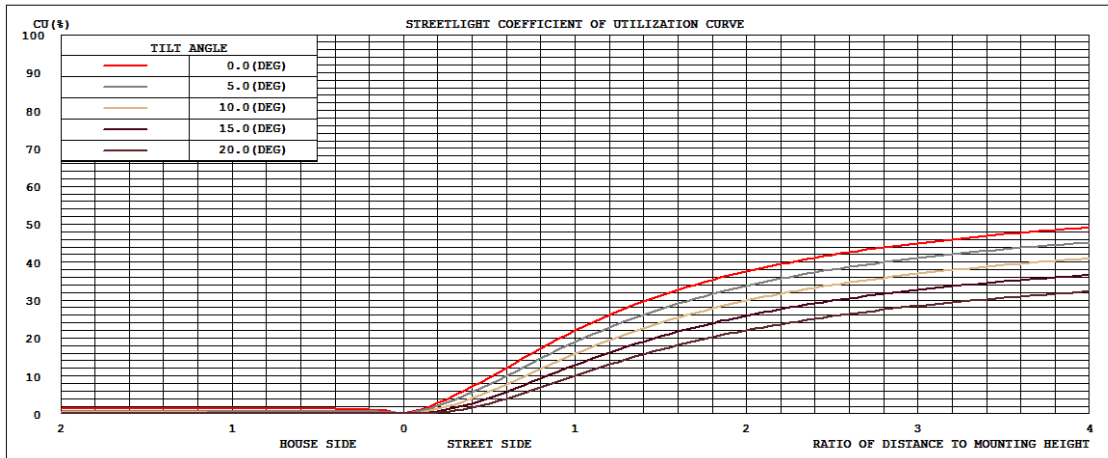
4.2 Goniophotometer Test

LCS/BUG

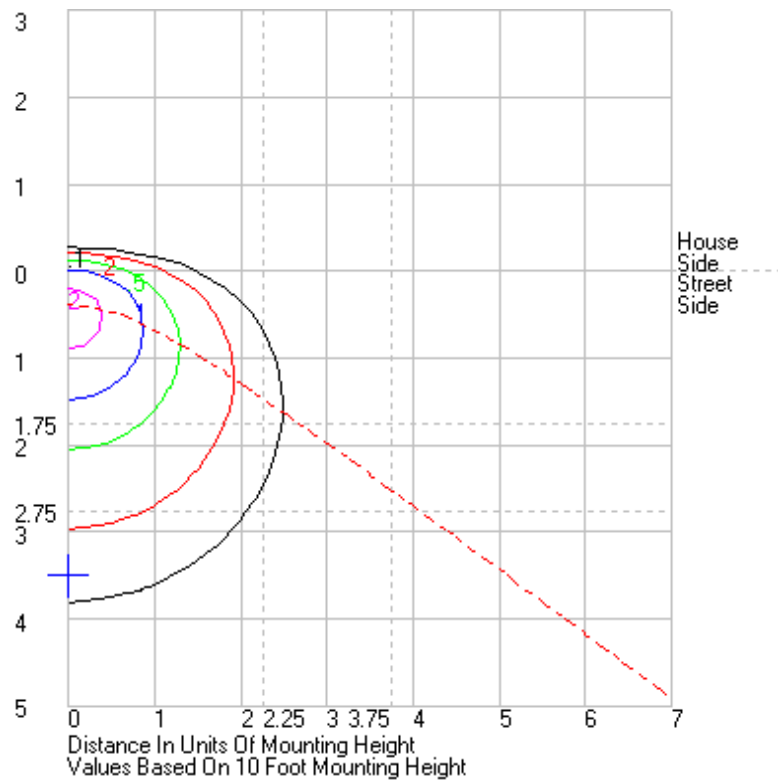


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	93.3	N.A.	5.5
FM - Front-Medium (30-60)	384.2	N.A.	22.6
FH - Front-High (60-80)	381.1	N.A.	22.4
FVH - Front-Very High (80-90)	194.1	N.A.	11.4
BL - Back-Low (0-30)	11.9	N.A.	0.7
BM - Back-Medium (30-60)	8.0	N.A.	0.5
BH - Back-High (60-80)	2.8	N.A.	0.2
BVH - Back-Very High (80-90)	0.5	N.A.	0.0
UL - Uplight-Low (90-100)	179.2	N.A.	10.5
UH - Uplight-High (100-180)	443.7	N.A.	26.1
Total	1698.8	N.A.	100.0
BUG Rating	B0-U3-G2		

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	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76	108.76
1	117.69	117.14	116.43	115.16	113.54	111.48	109.18	106.83	104.48	102.48	100.81	99.656	99.515	99.656	100.81	102.48	104.48	106.83	109.18	111.48	113.54	115.16	116.43	117.14	117.69
2	126.92	125.97	124.48	121.72	118.1	113.84	109.1	104.37	99.911	96.061	93.023	91.006	90.665	91.006	93.023	96.061	99.911	104.37	109.1	113.84	118.1	121.72	124.48	125.97	126.92
3	136.07	135	132.41	128.2	122.54	116.08	109.01	102	95.418	89.811	85.379	82.594	81.923	82.594	85.379	89.811	95.418	102	109.01	116.08	122.54	128.2	132.41	135	136.07
4	145.75	144.16	140.53	134.75	127.14	118.39	108.88	99.527	90.89	83.521	77.822	74.153	73.301	74.153	77.822	83.521	90.89	99.527	108.88	118.39	127.14	134.75	140.53	144.16	145.75
5	155.45	153.38	148.79	141.32	131.54	120.55	108.74	97.079	86.417	77.286	70.391	66.14	64.943	66.14	70.391	77.286	86.417	97.079	108.74	120.55	131.54	141.32	148.79	153.38	155.45
6	164.86	162.5	156.96	147.9	136.11	122.71	108.5	94.543	81.898	71.2	63.083	57.955	56.667	57.955	63.083	71.2	81.898	94.543	108.5	122.71	136.11	147.9	156.96	162.5	164.86
7	174.44	171.79	165.14	154.53	140.42	124.88	108.21	92.033	77.415	65.102	55.884	50.128	48.462	50.128	55.884	65.102	77.415	92.033	108.21	124.88	140.42	154.53	165.14	171.79	174.44
8	184.01	180.88	173.2	160.95	145.01	126.93	107.92	89.527	72.94	59.403	48.877	42.418	40.602	42.418	48.877	59.403	72.94	89.527	107.92	126.93	145.01	160.95	173.2	180.88	184.01
9	193.66	190.25	181.43	167.45	149.6	128.98	107.55	86.988	68.52	53.322	41.934	34.869	32.738	34.869	41.934	53.322	68.52	86.988	107.55	128.98	149.6	167.45	181.43	190.25	193.66
10	203.17	199.33	189.59	173.89	153.97	130.99	107.2	84.406	64.096	47.428	35.072	27.523	25.202	27.523	35.072	47.428	64.096	84.406	107.2	130.99	153.97	173.89	189.59	199.33	203.17
11	212.9	208.63	197.66	180.43	158.29	132.98	106.78	81.808	59.785	41.656	28.426	20.471	18.483	20.471	28.426	41.656	59.785	81.808	106.78	132.98	158.29	180.43	197.66	208.63	212.9
12	222.62	217.85	205.87	186.84	162.44	134.91	106.3	79.25	55.387	36.02	21.879	13.958	11.764	13.958	21.879	36.02	55.387	79.25	106.3	134.91	162.44	186.84	205.87	217.85	222.62
13	231.95	227.14	213.96	193.27	166.76	136.74	105.81	76.615	51.116	30.432	15.994	7.938	5.919	7.938	15.994	30.432	51.116	76.615	105.81	136.74	166.76	193.27	213.96	227.14	231.95
14	241.65	236.39	222.1	199.66	170.99	138.56	105.27	74.02	46.784	24.966	10.377	4.075	2.3	4.075	10.377	24.966	46.784	74.02	105.27	138.56	170.99	199.66	222.1	236.39	241.65
15	251.37	245.58	230.15	206.04	175.15	140.32	104.71	71.398	42.596	19.734	5.966	1.144	0.564	1.144	5.966	19.734	42.596	71.398	104.71	140.32	175.15	206.04	230.15	245.58	251.37
16	260.7	254.69	238.3	212.25	179.26	142.09	104.11	68.747	38.396	14.871	2.837	0.239	0.312	0.239	2.837	14.871	38.396	68.747	104.11	142.09	179.26	212.25	238.3	254.69	260.7
17	270.31	263.8	246.16	218.51	183.37	143.81	103.43	66.096	34.243	10.305	0.754	0.222	0.318	0.222	0.754	10.305	34.243	66.096	103.43	143.81	183.37	218.51	246.16	263.8	270.31
18	279.78	272.89	254.14	224.76	187.31	145.49	102.8	63.42	30.106	6.561	0.251	0.225	0.324	0.225	0.251	6.561	30.106	63.42	102.8	145.49	187.31	224.76	254.14	272.89	279.78
19	289.2	281.99	261.93	230.94	191.28	147.14	102.08	60.791	26.038	3.705	0.25	0.229	0.331	0.229	0.25	3.705	26.038	60.791	102.08	147.14	191.28	230.94	261.93	281.99	289.2
20	298.67	290.99	269.97	237	195.22	148.6	101.27	58.147	22.033	1.551	0.253	0.233	0.337	0.233	0.253	1.551	22.033	58.147	101.27	148.6	195.22	237	269.97	290.99	298.67
21	307.9	299.81	277.67	242.97	199.1	150.04	100.51	55.475	18.111	0.504	0.255	0.236	0.343	0.236	0.255	0.504	18.111	55.475	100.51	150.04	199.1	242.97	277.67	299.81	307.9
22	317.13	308.62	285.31	248.96	202.78	151.48	99.689	52.817	14.52	0.284	0.256	0.238	0.344	0.238	0.256	0.284	14.52	52.817	99.689	151.48	202.78	248.96	285.31	308.62	317.13
23	326.45	317.38	293.11	254.92	206.54	152.81	98.811	50.092	11.166	0.279	0.254	0.238	0.344	0.238	0.254	0.279	11.166	50.092	98.811	152.81	206.54	254.92	293.11	317.38	326.45
24	335.52	326.07	300.56	260.65	210.18	154.1	97.892	47.445	8.081	0.274	0.252	0.238	0.343	0.238	0.252	0.274	8.081	47.445	97.892	154.1	210.18	260.65	300.56	326.07	335.52
25	344.71	334.76	308.02	266.44	213.8	155.41	96.979	44.745	5.746	0.269	0.248	0.237	0.341	0.237	0.248	0.269	5.746	44.745	96.979	155.41	213.8	266.44	308.02	334.76	344.71
26	353.58	343.31	315.41	272.06	217.28	156.57	95.961	42.049	3.628	0.264	0.245	0.236	0.339	0.236	0.245	0.264	3.628	42.049	95.961	156.57	217.28	272.06	315.41	343.31	353.58
27	362.58	351.74	322.8	277.58	220.63	157.75	94.975	39.368	2.07	0.259	0.242	0.235	0.335	0.235	0.242	0.259	2.07	39.368	94.975	157.75	220.63	277.58	322.8	351.74	362.58
28	371.22	360.17	330.01	283.2	224.08	158.84	93.95	36.717	0.998	0.254	0.238	0.233	0.329	0.233	0.238	0.254	0.998	36.717	93.95	158.84	224.08	283.2	330.01	360.17	371.22
29	379.85	368.43	337.07	288.54	227.22	159.82	92.834	34.062	0.462	0.25	0.235	0.232	0.324	0.232	0.235	0.25	0.462	34.062	92.834	159.82	227.22	288.54	337.07	368.43	379.85
30	388.61	376.58	344.18	293.99	230.45	160.85	91.743	31.404	0.268	0.247	0.234	0.232	0.32	0.232	0.234	0.247	0.268	31.404	91.743	160.85	230.45	293.99	344.18	376.58	388.61
31	397.14	384.67	351.06	299.09	233.62	161.73	90.556	28.783	0.263	0.245	0.234	0.234	0.32	0.234	0.234	0.245	0.263	28.783	90.556	161.73	233.62	299.09	351.06	384.67	397.14
32	405.72	392.79	357.89	304.12	236.63	162.51	89.367	26.16	0.261	0.245	0.235	0.237	0.318	0.237	0.235	0.245	0.261	26.16	89.367	162.51	236.63	304.12	357.89	392.79	405.72
33	413.93	400.71	364.67	309.22	239.64	163.3	88.154	23.589	0.26	0.245	0.237	0.239	0.317	0.239	0.237	0.245	0.26	23.589	88.154	163.3	239.64	309.22	364.67	400.71	413.93
34	422.08	408.34	371.21	314.04	242.37	164.03	86.899	21.035	0.259	0.246	0.239	0.242	0.315	0.242	0.239	0.246	0.259	21.035	86.899	164.03	242.37	314.04	371.21	408.34	422.08
35	430.29	416.17	377.79	318.86	245.21	164.67	85.613	18.519	0.257	0.246	0.241	0.246	0.314	0.246	0.241	0.246	0.257	18.519	85.613	164.67	245.21	318.86	377.79	416.17	430.29
36	438	423.5	384.17	323.52	247.86	165.26	84.312	16.132	0.256	0.247	0.244	0.25	0.313	0.25	0.244	0.247	0.256	16.132	84.312	165.26	247.86	323.52	384.17	423.5	438
37	445.76	431.14	390.62	328.13	250.47	165.79	82.97	13.869	0.255	0.248	0.247	0.256	0.313	0.256	0.247	0.248	0.255	13.869	82.97	165.79	250.47	328.13	390.62	431.14	445.76
38	453.6	438.39	396.49	332.57	253.03	166.28	81.588	11.797	0.255	0.25	0.252	0.262	0.314	0.262	0.252	0.25	0.255	11.797	81.588	166.28	253.03	332.57	396.49	438.39	453.6
39	460.98	445.5	402.74	336.98	255.39	166.71	80.195	9.817	0.256	0.252	0.257	0.268	0.315	0.268	0.257	0.252	0.256	9.817	80.195	166.71	255.39	336.98	402.74	445.5	460.98
40	468.72	452.64	408.64	341.12	257.68	166.97	78.756	8.076	0.257	0.255	0.263	0.276	0.317	0.276	0.263	0.255	0.257	8.076	78.756	166.97	257.68	341.12	408.64	452.64	468.72
41	475.94	459.45	414.35	345.3	260.02	167.23	77.333	6.451	0.258	0.259	0.269	0.284	0.321	0.284	0.269	0.258	6.451	77.333	167.23	260.02	345.3	414.35	459.45	475.94	
42	483.06	466.24	419.91	349.32	262.13	167.5	75.841	5.047	0.26	0.264	0.277	0.293	0.325	0.293	0.277	0.264	0.26	5.047	75.841	167.5	262.13	349.32			

50	534.7	514.76	459.83	376.94	275.74	166.73	63.374	0.265	0.298	0.328	0.363	0.391	0.384	0.391	0.363	0.328	0.298	0.265	63.374	166.73	275.74	376.94	459.83	514.76	534.7
51	540.21	519.97	464.14	379.81	276.99	166.33	61.717	0.264	0.301	0.334	0.371	0.4	0.392	0.4	0.371	0.334	0.301	0.264	61.717	166.33	276.99	379.81	464.14	519.97	540.21
52	545.82	525.08	468.34	382.55	278.13	165.87	60.055	0.263	0.303	0.339	0.377	0.407	0.399	0.407	0.377	0.339	0.303	0.263	60.055	165.87	278.13	382.55	468.34	525.08	545.82
53	551.11	530.13	472.17	385.02	279.23	165.36	58.369	0.263	0.305	0.342	0.383	0.413	0.405	0.413	0.383	0.342	0.305	0.263	58.369	165.36	279.23	385.02	472.17	530.13	551.11
54	556.3	534.83	475.9	387.48	280.09	164.75	56.678	0.262	0.305	0.344	0.386	0.418	0.411	0.418	0.386	0.344	0.305	0.262	56.678	164.75	280.09	387.48	475.9	534.83	556.3
55	560.8	539.29	479.55	389.78	280.95	164.13	55.009	0.26	0.305	0.343	0.388	0.421	0.417	0.421	0.388	0.343	0.305	0.26	55.009	164.13	280.95	389.78	479.55	539.29	560.8
56	565.85	543.71	482.82	391.9	281.67	163.42	53.321	0.257	0.302	0.343	0.389	0.422	0.423	0.422	0.389	0.343	0.302	0.257	53.321	163.42	281.67	391.9	482.82	543.71	565.85
57	570.41	547.8	486.16	393.97	282.25	162.7	51.589	0.255	0.3	0.341	0.388	0.422	0.427	0.422	0.388	0.341	0.3	0.255	51.589	162.7	282.25	393.97	486.16	547.8	570.41
58	574.61	551.83	489.03	395.79	282.83	161.9	49.87	0.251	0.297	0.339	0.387	0.423	0.432	0.423	0.387	0.339	0.297	0.251	49.87	161.9	282.83	395.79	489.03	551.83	574.61
59	578.42	555.55	492	397.4	283.27	161.01	48.121	0.248	0.295	0.337	0.386	0.423	0.437	0.423	0.386	0.337	0.295	0.248	48.121	161.01	283.27	397.4	492	555.55	578.42
60	582.25	559.06	494.63	398.97	283.5	160.03	46.391	0.245	0.292	0.334	0.385	0.423	0.443	0.423	0.385	0.334	0.292	0.245	46.391	160.03	283.5	398.97	494.63	559.06	582.25
61	585.82	562.44	497.14	400.38	283.71	159.1	44.653	0.242	0.289	0.333	0.384	0.424	0.447	0.424	0.384	0.333	0.289	0.242	44.653	159.1	283.71	400.38	497.14	562.44	585.82
62	589.35	565.45	499.47	401.67	283.8	158.07	42.904	0.239	0.287	0.331	0.382	0.424	0.451	0.424	0.382	0.331	0.287	0.239	42.904	158.07	283.8	401.67	499.47	565.45	589.35
63	592.43	568.3	501.46	402.75	283.76	156.89	41.129	0.237	0.285	0.329	0.38	0.424	0.452	0.424	0.38	0.329	0.285	0.237	41.129	156.89	283.76	402.75	501.46	568.3	592.43
64	595.33	570.93	503.32	403.67	283.68	155.8	39.376	0.234	0.283	0.328	0.378	0.422	0.454	0.422	0.378	0.328	0.283	0.234	39.376	155.8	283.68	403.67	503.32	570.93	595.33
65	597.88	573.41	505.01	404.28	283.35	154.53	37.612	0.231	0.281	0.328	0.376	0.421	0.455	0.421	0.376	0.328	0.281	0.231	37.612	154.53	283.35	404.28	505.01	573.41	597.88
66	600.15	575.67	506.66	405.01	282.98	153.3	35.843	0.23	0.28	0.328	0.374	0.418	0.454	0.418	0.374	0.328	0.28	0.23	35.843	153.3	282.98	405.01	506.66	575.67	600.15
67	602.56	577.43	507.88	405.45	282.6	152.03	34.095	0.228	0.279	0.329	0.372	0.414	0.45	0.414	0.372	0.329	0.279	0.228	34.095	152.03	282.6	405.45	507.88	577.43	602.56
68	604.17	579.41	509	405.76	281.96	150.62	32.334	0.225	0.278	0.329	0.37	0.408	0.443	0.408	0.37	0.329	0.278	0.225	32.334	150.62	281.96	405.76	509	579.41	604.17
69	605.79	580.71	509.86	405.87	281.35	149.26	30.569	0.223	0.277	0.33	0.369	0.402	0.435	0.402	0.369	0.33	0.277	0.223	30.569	149.26	281.35	405.87	509.86	580.71	605.79
70	607.25	581.94	510.51	405.93	280.59	147.76	28.815	0.221	0.276	0.33	0.367	0.397	0.425	0.397	0.367	0.33	0.276	0.221	28.815	147.76	280.59	405.93	510.51	581.94	607.25
71	608.3	582.87	511.23	405.77	279.76	146.22	27.074	0.219	0.275	0.33	0.366	0.392	0.415	0.392	0.366	0.33	0.275	0.219	27.074	146.22	279.76	405.77	511.23	582.87	608.3
72	609.2	583.54	511.66	405.59	278.71	144.61	25.331	0.217	0.274	0.33	0.366	0.389	0.404	0.389	0.366	0.33	0.274	0.217	25.331	144.61	278.71	405.59	511.66	583.54	609.2
73	609.94	584.25	511.88	405.22	277.7	143.03	23.615	0.215	0.274	0.33	0.366	0.386	0.395	0.386	0.366	0.33	0.274	0.215	23.615	143.03	277.7	405.22	511.88	584.25	609.94
74	610.42	584.5	511.68	404.52	276.56	141.34	21.92	0.213	0.273	0.33	0.367	0.384	0.384	0.384	0.367	0.33	0.273	0.213	21.92	141.34	276.56	404.52	511.68	584.5	610.42
75	610.37	584.53	511.41	403.71	275.24	139.65	20.234	0.212	0.273	0.33	0.368	0.384	0.375	0.384	0.368	0.33	0.273	0.212	20.234	139.65	275.24	403.71	511.41	584.53	610.37
76	610.31	584.4	510.98	402.82	273.86	137.88	18.641	0.21	0.272	0.33	0.368	0.385	0.369	0.385	0.368	0.33	0.272	0.21	18.641	137.88	273.86	402.82	510.98	584.4	610.31
77	610.25	583.9	510.22	401.84	272.47	135.97	17.039	0.207	0.271	0.33	0.369	0.386	0.364	0.386	0.369	0.33	0.271	0.207	17.039	135.97	272.47	401.84	510.22	583.9	610.25
78	609.48	583.25	509.46	400.63	270.84	134.05	15.478	0.205	0.27	0.329	0.369	0.387	0.36	0.387	0.369	0.329	0.27	0.205	15.478	134.05	270.84	400.63	509.46	583.25	609.48
79	608.59	582.31	508.33	399.34	269.19	132.16	13.973	0.202	0.268	0.329	0.369	0.387	0.355	0.387	0.369	0.329	0.268	0.202	13.973	132.16	269.19	399.34	508.33	582.31	608.59
80	607.69	581.28	507.14	397.78	267.43	130.18	12.478	0.199	0.266	0.329	0.37	0.388	0.352	0.388	0.37	0.329	0.266	0.199	12.478	130.18	267.43	397.78	507.14	581.28	607.69
81	606.22	579.86	505.61	396.19	265.57	128.27	11.067	0.196	0.265	0.329	0.37	0.389	0.349	0.389	0.37	0.329	0.265	0.196	11.067	128.27	265.57	396.19	505.61	579.86	606.22
82	604.76	578.18	504.03	394.43	263.71	126.22	9.732	0.194	0.264	0.329	0.372	0.391	0.348	0.391	0.372	0.329	0.264	0.194	9.732	126.22	263.71	394.43	504.03	578.18	604.76
83	602.98	576.37	502.25	392.39	261.55	124.19	8.424	0.192	0.263	0.33	0.374	0.393	0.348	0.393	0.374	0.33	0.263	0.192	8.424	124.19	261.55	392.39	502.25	576.37	602.98
84	600.99	574.3	499.94	390.33	259.43	122.04	7.207	0.19	0.263	0.331	0.376	0.396	0.35	0.396	0.376	0.331	0.263	0.19	7.207	122.04	259.43	390.33	499.94	574.3	600.99
85	598.7	572.17	497.68	388.22	257.3	119.93	6.099	0.189	0.263	0.333	0.379	0.399	0.352	0.399	0.379	0.333	0.263	0.189	6.099	119.93	257.3	388.22	497.68	572.17	598.7
86	596.03	569.66	495.38	385.87	254.92	117.79	5.075	0.189	0.264	0.334	0.382	0.402	0.354	0.402	0.382	0.334	0.264	0.189	5.075	117.79	254.92	385.87	495.38	569.66	596.03
87	593.31	566.87	492.72	383.35	252.55	115.57	4.152	0.189	0.265	0.336	0.385	0.405	0.356	0.405	0.385	0.336	0.265	0.189	4.152	115.57	252.55	383.35	492.72	566.87	593.31
88	590.36	563.97	490.01	380.76	250.09	113.39	3.323	0.189	0.267	0.339	0.388	0.409	0.359	0.409	0.388	0.339	0.267	0.189	3.323	113.39	250.09	380.76	490.01	563.97	590.36
89	587.15	560.75	486.87	378.03	247.48	111.12	2.616	0.19	0.268	0.341	0.391	0.412	0.364	0.412	0.391	0.341	0.268	0.19	2.616	111.12	247.48	378.03	486.87	560.75	587.15
90	583.95	557.39	483.64	375.14	244.8	108.82	2.062	0.191	0.27	0.344	0.395	0.416	0.368	0.416	0.395	0.344	0.27	0.191	2.062	108.82	244.8	375.14	483.64	557.39	583.95
91	580.16	553.94	480.14	372.05	242.19	106.54	1.592	0.192	0.272	0.347	0.398	0.42	0.37	0.42	0.398	0.347	0.272	0.192	1.592	106.54	242.19	372.05	480.14	553.94	580.16
92	576.21	550.1	476.82	368.87	239.22	104.24	1.184	0.194	0.275	0.35	0.4	0.423	0.374	0.423	0.4	0.35	0.275	0.194	1.184	104.24	239.22	368.87	476.82	550.1	576.21
93	572.13	546.14	473.1	365.61	236.33	101.86	0.841	0.195	0.277	0.352	0.403	0.426	0.377	0.426	0.403	0.352	0.277	0.195	0.841	101.86	236.33	365.61	473.1	546.14	572.13
94	567.72	541.95	469.31	362.2	233.48	99.516	0.558	0.197	0.279	0.356	0.408	0.431	0.384	0.431	0.408	0.356	0.27								

104	513.63	489.72	422.11	321.45	199.74	74.654	0.135	0.213	0.307	0.393	0.456	0.491	0.49	0.491	0.456	0.393	0.307	0.213	0.135	74.654	199.74	321.45	422.11	489.72	513.63
105	507.16	483.7	416.61	316.85	195.94	72.089	0.137	0.213	0.307	0.393	0.456	0.492	0.496	0.492	0.456	0.393	0.307	0.213	0.137	72.089	195.94	316.85	416.61	483.7	507.16
106	500.68	477.41	410.93	311.93	192.2	69.529	0.137	0.214	0.307	0.393	0.456	0.491	0.502	0.491	0.456	0.393	0.307	0.214	0.137	69.529	192.2	311.93	410.93	477.41	500.68
107	493.85	470.91	405.2	307.1	188.26	66.881	0.139	0.213	0.306	0.392	0.455	0.489	0.507	0.489	0.455	0.392	0.306	0.213	0.139	66.881	188.26	307.1	405.2	470.91	493.85
108	487.05	464.48	399.3	302.12	184.39	64.373	0.14	0.213	0.305	0.391	0.455	0.49	0.513	0.49	0.455	0.391	0.305	0.213	0.14	64.373	184.39	302.12	399.3	464.48	487.05
109	480.18	457.55	393.31	297.05	180.45	61.881	0.141	0.214	0.306	0.392	0.457	0.493	0.518	0.493	0.457	0.392	0.306	0.214	0.141	61.881	180.45	297.05	393.31	457.55	480.18
110	472.95	450.86	387.3	291.93	176.47	59.227	0.142	0.216	0.307	0.395	0.459	0.494	0.523	0.494	0.459	0.395	0.307	0.216	0.142	59.227	176.47	291.93	387.3	450.86	472.95
111	465.63	443.61	380.99	286.67	172.41	56.628	0.143	0.217	0.309	0.397	0.462	0.497	0.527	0.497	0.462	0.397	0.309	0.217	0.143	56.628	172.41	286.67	380.99	443.61	465.63
112	458.07	436.4	374.66	281.5	168.41	54.101	0.145	0.218	0.31	0.398	0.463	0.499	0.53	0.499	0.463	0.398	0.31	0.218	0.145	54.101	168.41	281.5	374.66	436.4	458.07
113	450.68	429.17	368.21	275.95	164.2	51.44	0.146	0.219	0.31	0.396	0.46	0.496	0.532	0.496	0.46	0.396	0.31	0.219	0.146	51.44	164.2	275.95	368.21	429.17	450.68
114	442.88	421.72	361.61	270.44	160.01	48.873	0.148	0.22	0.309	0.395	0.459	0.493	0.533	0.493	0.459	0.395	0.309	0.22	0.148	48.873	160.01	270.44	361.61	421.72	442.88
115	435.17	414.33	354.85	264.98	155.9	46.319	0.149	0.221	0.308	0.393	0.456	0.49	0.534	0.49	0.456	0.393	0.308	0.221	0.149	46.319	155.9	264.98	354.85	414.33	435.17
116	427.02	406.79	348.23	259.25	151.65	43.716	0.151	0.221	0.307	0.389	0.45	0.484	0.535	0.484	0.45	0.389	0.307	0.221	0.151	43.716	151.65	259.25	348.23	406.79	427.02
117	419.23	399.06	341.27	253.59	147.42	41.141	0.152	0.223	0.307	0.388	0.448	0.482	0.536	0.482	0.448	0.388	0.307	0.223	0.152	41.141	147.42	253.59	341.27	399.06	419.23
118	411.23	391.29	334.4	247.79	143.09	38.601	0.154	0.224	0.306	0.386	0.446	0.478	0.537	0.478	0.446	0.386	0.306	0.224	0.154	38.601	143.09	247.79	334.4	391.29	411.23
119	402.77	383.31	327.24	242.01	138.71	36.032	0.156	0.225	0.306	0.386	0.444	0.475	0.535	0.475	0.444	0.386	0.306	0.225	0.156	36.032	138.71	242.01	327.24	383.31	402.77
120	394.58	375.3	320.1	236.08	134.18	33.465	0.158	0.227	0.307	0.386	0.443	0.474	0.533	0.474	0.443	0.386	0.307	0.227	0.158	33.465	134.18	236.08	320.1	375.3	394.58
121	386.11	367.32	312.88	230.12	129.95	30.978	0.16	0.228	0.308	0.385	0.441	0.472	0.532	0.472	0.441	0.385	0.308	0.228	0.16	30.978	129.95	230.12	312.88	367.32	386.11
122	377.59	359.11	305.6	224.1	125.55	28.43	0.163	0.23	0.309	0.385	0.44	0.47	0.532	0.47	0.44	0.385	0.309	0.23	0.163	28.43	125.55	224.1	305.6	359.11	377.59
123	368.97	350.81	298.21	218	121.13	25.938	0.165	0.232	0.31	0.385	0.44	0.469	0.532	0.469	0.44	0.385	0.31	0.232	0.165	25.938	121.13	218	298.21	350.81	368.97
124	360.37	342.47	290.72	211.94	116.75	23.471	0.168	0.235	0.311	0.385	0.438	0.467	0.531	0.467	0.438	0.385	0.311	0.235	0.168	23.471	116.75	211.94	290.72	342.47	360.37
125	351.62	334.1	283.28	205.78	112.36	21.025	0.171	0.237	0.313	0.384	0.436	0.464	0.528	0.464	0.436	0.384	0.313	0.237	0.171	21.025	112.36	205.78	283.28	334.1	351.62
126	342.81	325.55	275.54	199.57	107.91	18.657	0.174	0.239	0.313	0.384	0.434	0.461	0.525	0.461	0.434	0.384	0.313	0.239	0.174	18.657	107.91	199.57	275.54	325.55	342.81
127	333.84	316.96	268	193.36	103.51	16.376	0.178	0.242	0.315	0.383	0.432	0.457	0.52	0.457	0.432	0.383	0.315	0.242	0.178	16.376	103.51	193.36	268	316.96	333.84
128	324.79	308.46	260.27	187.09	99.098	14.209	0.182	0.245	0.316	0.383	0.43	0.454	0.517	0.454	0.43	0.383	0.316	0.245	0.182	14.209	99.098	187.09	260.27	308.46	324.79
129	316.01	299.66	252.5	180.91	94.648	12.169	0.185	0.249	0.317	0.382	0.428	0.45	0.514	0.45	0.428	0.382	0.317	0.249	0.185	12.169	94.648	180.91	252.5	299.66	316.01
130	306.88	290.96	244.73	174.52	90.298	10.252	0.189	0.252	0.319	0.382	0.426	0.447	0.512	0.447	0.426	0.382	0.319	0.252	0.189	10.252	90.298	174.52	244.73	290.96	306.88
131	297.71	282.15	236.91	168.29	85.842	8.452	0.194	0.255	0.321	0.382	0.423	0.444	0.51	0.444	0.423	0.382	0.321	0.255	0.194	8.452	85.842	168.29	236.91	282.15	297.71
132	288.42	273.33	229.03	161.82	81.449	6.788	0.198	0.259	0.323	0.382	0.418	0.441	0.509	0.441	0.418	0.382	0.323	0.259	0.198	6.788	81.449	161.82	229.03	273.33	288.42
133	279.28	264.45	221.14	155.51	77.11	5.321	0.203	0.263	0.325	0.379	0.415	0.438	0.507	0.438	0.415	0.379	0.325	0.263	0.203	5.321	77.11	155.51	221.14	264.45	279.28
134	269.86	255.48	213.22	149.15	72.763	3.993	0.208	0.267	0.327	0.376	0.414	0.435	0.504	0.435	0.414	0.376	0.327	0.267	0.208	3.993	72.763	149.15	213.22	255.48	269.86
135	260.61	246.49	205.19	142.72	68.419	2.833	0.212	0.27	0.329	0.376	0.415	0.432	0.502	0.432	0.415	0.376	0.329	0.27	0.212	2.833	68.419	142.72	205.19	246.49	260.61
136	251.21	237.43	197.23	136.27	64.139	1.869	0.217	0.274	0.33	0.376	0.416	0.429	0.5	0.429	0.416	0.376	0.33	0.274	0.217	1.869	64.139	136.27	197.23	237.43	251.21
137	241.6	228.4	189.28	129.83	59.842	1.173	0.221	0.277	0.331	0.377	0.415	0.425	0.498	0.425	0.415	0.377	0.331	0.277	0.221	1.173	59.842	129.83	189.28	228.4	241.6
138	232.29	219.41	181.28	123.48	55.526	0.683	0.226	0.28	0.332	0.378	0.412	0.421	0.495	0.421	0.412	0.378	0.332	0.28	0.226	0.683	55.526	123.48	181.28	219.41	232.29
139	222.86	210.25	173.21	117.12	51.258	0.326	0.229	0.282	0.332	0.377	0.409	0.416	0.491	0.416	0.409	0.377	0.332	0.282	0.229	0.326	51.258	117.12	173.21	210.25	222.86
140	213.44	201.28	165.26	110.77	47.016	0.181	0.231	0.283	0.332	0.377	0.404	0.41	0.485	0.41	0.404	0.377	0.332	0.283	0.231	0.181	47.016	110.77	165.26	201.28	213.44
141	204.01	192.17	157.3	104.43	42.805	0.18	0.234	0.285	0.331	0.375	0.399	0.403	0.479	0.403	0.399	0.375	0.331	0.285	0.234	0.18	42.805	104.43	157.3	192.17	204.01
142	194.55	183.07	149.2	98.184	38.598	0.183	0.236	0.286	0.332	0.371	0.393	0.396	0.471	0.396	0.393	0.371	0.332	0.286	0.236	0.183	38.598	98.184	149.2	183.07	194.55
143	185.1	173.96	141.15	91.914	34.418	0.187	0.239	0.286	0.332	0.368	0.388	0.389	0.464	0.389	0.388	0.368	0.332	0.286	0.239	0.187	34.418	91.914	141.15	173.96	185.1
144	175.78	164.94	133.09	85.543	30.22	0.19	0.241	0.287	0.33	0.363	0.381	0.381	0.455	0.381	0.381	0.363	0.33	0.287	0.241	0.19	30.22	85.543	133.09	164.94	175.78
145	166.5	155.94	125.08	79.284	26.085	0.193	0.244	0.287	0.328	0.359	0.373	0.373	0.444	0.373	0.373	0.359	0.328	0.287	0.244	0.193	26.085	79.284	125.08	155.94	166.5
146	157.07	146.87	117.15	73.097	22.036	0.196	0.245	0.287	0.324	0.352	0.365	0.362	0.432	0.362	0.365	0.352	0.324	0.287	0.245	0.196	22.036	73.097	117.15	146.87	157.07
147	147.84	137.86	109.43	66.977	18.151	0.199	0.245	0.285	0.32	0.345	0.355	0.352	0.419	0.352	0.355	0.345	0.32	0.285	0.245	0.199	18.151	66.977	109.43	137.86	147.84
148	138.66	128.91	101.48	60.854	14.534	0.202	0.246	0.284	0.317	0.338	0.347	0.342	0.406	0.342	0.347	0.338	0.317	0.284	0.246	0.202	14.534				

158	52.376	44.944	27.592	5.964	0.201	0.235	0.262	0.278	0.283	0.279	0.268	0.25	0.278	0.25	0.268	0.279	0.283	0.278	0.262	0.235	0.201	5.964	27.592	44.944	52.376
159	44.427	37.355	21.257	3.112	0.204	0.237	0.26	0.273	0.275	0.269	0.256	0.237	0.261	0.237	0.256	0.269	0.275	0.273	0.26	0.237	0.204	3.112	21.257	37.355	44.427
160	36.792	29.815	15.325	1.342	0.206	0.236	0.257	0.267	0.266	0.257	0.243	0.223	0.241	0.223	0.243	0.257	0.266	0.267	0.257	0.236	0.206	1.342	15.325	29.815	36.792
161	29.254	22.8	9.736	0.355	0.209	0.237	0.254	0.26	0.256	0.246	0.23	0.211	0.223	0.211	0.23	0.246	0.256	0.26	0.254	0.237	0.209	0.355	9.736	22.8	29.254
162	22.108	16.263	5.224	0.182	0.212	0.238	0.253	0.256	0.25	0.237	0.22	0.2	0.209	0.2	0.22	0.237	0.25	0.256	0.253	0.238	0.212	0.182	5.224	16.263	22.108
163	15.46	10.085	2.603	0.184	0.214	0.238	0.25	0.25	0.242	0.228	0.209	0.19	0.195	0.19	0.209	0.228	0.242	0.25	0.25	0.238	0.214	0.184	2.603	10.085	15.46
164	9.58	5.136	1.004	0.188	0.217	0.238	0.247	0.244	0.234	0.219	0.2	0.181	0.183	0.181	0.2	0.219	0.234	0.244	0.247	0.238	0.217	0.188	1.004	5.136	9.58
165	5.224	2.101	0.171	0.192	0.219	0.239	0.244	0.239	0.227	0.211	0.19	0.171	0.17	0.171	0.19	0.211	0.227	0.239	0.244	0.239	0.219	0.192	0.171	2.101	5.224
166	1.952	0.26	0.167	0.196	0.221	0.238	0.241	0.234	0.221	0.204	0.183	0.164	0.159	0.164	0.183	0.204	0.221	0.234	0.241	0.238	0.221	0.196	0.167	0.26	1.952
167	0.11	0.144	0.172	0.2	0.223	0.237	0.238	0.229	0.215	0.197	0.175	0.158	0.149	0.158	0.175	0.197	0.215	0.229	0.238	0.237	0.223	0.2	0.172	0.144	0.11
168	0.093	0.149	0.177	0.204	0.225	0.236	0.235	0.224	0.208	0.19	0.167	0.151	0.139	0.151	0.167	0.19	0.208	0.224	0.235	0.236	0.225	0.204	0.177	0.149	0.093
169	0.096	0.154	0.182	0.207	0.226	0.234	0.23	0.218	0.201	0.183	0.159	0.145	0.13	0.145	0.159	0.183	0.201	0.218	0.23	0.234	0.226	0.207	0.182	0.154	0.096
170	0.1	0.159	0.187	0.211	0.228	0.233	0.226	0.212	0.195	0.177	0.153	0.14	0.123	0.14	0.153	0.177	0.195	0.212	0.226	0.233	0.228	0.211	0.187	0.159	0.1
171	0.104	0.164	0.192	0.214	0.23	0.232	0.223	0.208	0.19	0.172	0.146	0.135	0.125	0.135	0.146	0.172	0.19	0.208	0.223	0.232	0.23	0.214	0.192	0.164	0.104
172	0.109	0.169	0.197	0.218	0.232	0.231	0.221	0.204	0.185	0.167	0.141	0.13	0.128	0.13	0.141	0.167	0.185	0.204	0.221	0.231	0.232	0.218	0.197	0.169	0.109
173	0.113	0.174	0.202	0.223	0.235	0.232	0.221	0.202	0.183	0.164	0.138	0.129	0.128	0.129	0.138	0.164	0.183	0.202	0.221	0.232	0.235	0.223	0.202	0.174	0.113
174	0.117	0.179	0.207	0.227	0.238	0.234	0.221	0.202	0.182	0.164	0.137	0.129	0.128	0.129	0.137	0.164	0.182	0.202	0.221	0.234	0.238	0.227	0.207	0.179	0.117
175	0.121	0.183	0.211	0.229	0.239	0.232	0.218	0.198	0.177	0.16	0.133	0.128	0.128	0.128	0.133	0.16	0.177	0.198	0.218	0.232	0.239	0.229	0.211	0.183	0.121
176	0.123	0.186	0.213	0.229	0.235	0.225	0.209	0.188	0.167	0.152	0.125	0.124	0.128	0.124	0.125	0.152	0.167	0.188	0.209	0.225	0.235	0.229	0.213	0.186	0.123
177	0.124	0.188	0.213	0.227	0.23	0.216	0.198	0.176	0.155	0.141	0.116	0.117	0.128	0.117	0.116	0.141	0.155	0.176	0.198	0.216	0.23	0.227	0.213	0.188	0.124
178	0.125	0.191	0.215	0.227	0.227	0.21	0.19	0.167	0.146	0.133	0.108	0.112	0.126	0.112	0.108	0.133	0.146	0.167	0.19	0.21	0.227	0.227	0.215	0.191	0.125
179	0.126	0.193	0.217	0.227	0.226	0.206	0.184	0.159	0.138	0.125	0.101	0.108	0.125	0.108	0.101	0.125	0.138	0.159	0.184	0.206	0.226	0.227	0.217	0.193	0.126
180	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	ET @ 14W/3000K	Sample ID.	DLF2503101-G1
Temperature (°C)	25.1	Humidity (%RH)	57.0

Test Method

The samples were tested according to the ANSI C82.77-10:2014.

The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ and 10% - 65% RH. 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
119.99	60	0.113	13.5	0.996	5.45%
277.03	60	0.052	13.6	0.948	10.79%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2024/12/23	2025/12/22
DLF108	Auxiliary Lamp	2024/12/23	2025/12/22
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.473 A, Tungsten, Omni-derectional	2024/12/23	2025/12/22
DLF116	AC Power Source	2024/12/13	2025/12/12
DLF516	Power Meter	2024/12/13	2025/12/12
DLF114	Temperature & Humidity Datalogger	2024/12/19	2025/12/18
DLF101	Goniophotometer	2024/12/23	2025/12/22
DLF521	Measurement Standard Lamp Standard Lamp Type: Tungsten, Omni- derectional	2024/12/23	2025/12/22
DLF512	AC Power Source	2024/12/13	2025/12/12
DLF507	DC Power Source	2024/12/13	2025/12/12
DLF111	Temperature & Humidity Datalogger	2024/12/19	2025/12/18
DLF119	Power Meter	2024/12/13	2025/12/12
DLF530	Hot-wire anemometer	2025/1/23	2026/1/22
DLF129	Clock	2024/6/20	2025/6/19

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