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Total pages 5
Date: 2016/12/16
Model # **UNLE-1-28K-WH**

Driver Model # GFP361DA-2415-1 QTY 1

LED Model # N/A

Report #1123

Rendered to

LIGHTING INNOVATIONS, INC

3609 SWENSON ST. CHARLES, IL 60174

Test: Electrical and Photometric tests as required to the IESNA test standard.

Statement of Limitation: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Standards used: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IESNA LM-79-2008: Electrical and Photometric Measurements of Solid State Lighting & FC Lighting Products.

ANSI NEMA ANSLG C78.77: 2012: Specifications of the Chromaticity of Solid State Lighting & FC Lighting Products.

Description of sample: Fc/SSL Lab received one production sample of model number **UNLE-1-28K-WH.** The sample was received by Fc lighting on 2016/12/16, in undamaged condition and one sample was tested as received. **Date of tests:** 2016/12/16.

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Equipment list

Equipment Used	Model
TRIPP-LIFE (Power Supply)	SU1500XL
Goniometer	mk350n plus
UPRTEK (Led meter)	mk3505

Calibration

Calibration date 2016/5/20

Next calibration 2017/5/20

Test Methods

Seasoning in Sample Orientation – LED Products

No seasoning was performed In accordance with IESNA LM-79

Photometric and Electrical Measurements- Distribution Method

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was allowed to stabilize for at least thirty minutes before measurements were made.

Some graphics were created with Photometric Plus software.

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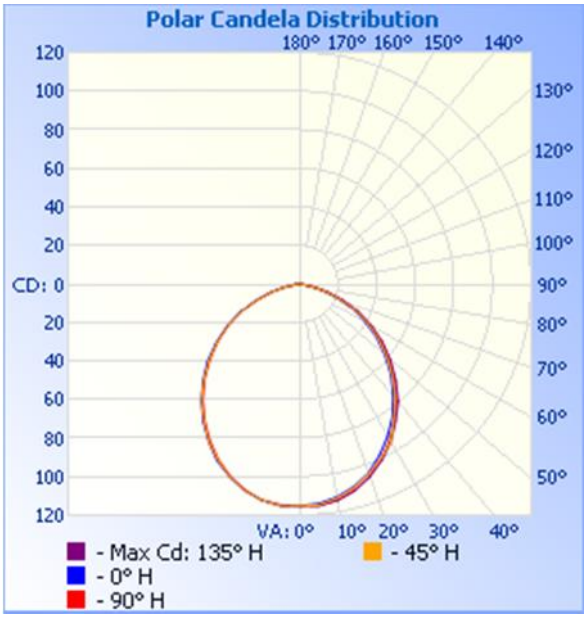
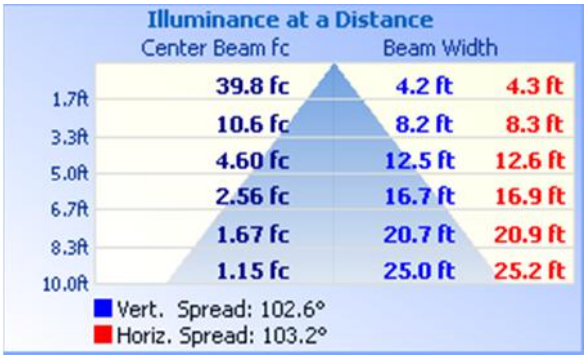
RESULTS OF TEST (cont'd)
Photometric and Electrical Measurements at Ambient Temperature Distribution

Filename:	UNLE-1-**28**K-WH
Manufacturer:	FC/SSL Lighting
Luminaire:	ultra-thin profile undercabinet luminaire
Lamp:	LED
Lamp Output:	Total luminaire Lumens: 292.9
Max Candela:	115.5 at Horizontal: 135°, Vertical: 5°
Input Wattage:	6
Luminous Opening:	Rectangle w/Luminous Sides (L: 12", W: 1.3", H: 0.3")
Test:	Type C Intensity
Test Date:	2016/12/16
Test Lab:	FC/SSL Lab
Photometry :	Type C
Cutoff Class:	Cutoff
NEMA Type:	7 X 7



Flood Summary				
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	97.3%	285.1	153.6	153.3
Beam (50%):	69.2%	202.7	103.2	102.6
Total:	100%	292.9		



Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	88.0	30%
0-40	141.8	48.4%
0-60	241.0	82.3%
60-90	50.6	17.3%
70-100	19.9	6.8%
90-120	1.3	0.5%
0-90	291.5	99.5%
90-180	1.3	0.5%
0-180	292.9	100%

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Coefficients Of Utilization - Zonal Cavity Method																	
Effective Floor Cavity Reflectance: 20%																	
RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.09	1.05	1.01	.97	1.07	1.03	.99	.86	.98	.95	.93	.94	.92	.90	.91	.89	.87	.85
2	1.00	.92	.86	.80	.97	.90	.84	.73	.87	.82	.77	.83	.79	.75	.80	.77	.74	.72
3	.91	.81	.73	.67	.89	.80	.72	.63	.77	.71	.65	.74	.69	.64	.71	.67	.63	.61
4	.84	.72	.64	.57	.82	.71	.63	.54	.68	.62	.56	.66	.60	.55	.64	.59	.55	.52
5	.77	.65	.56	.50	.75	.64	.56	.47	.62	.54	.49	.60	.53	.48	.58	.52	.48	.46
6	.71	.59	.50	.44	.70	.58	.49	.42	.56	.48	.43	.54	.47	.43	.52	.47	.42	.40
7	.66	.53	.45	.39	.65	.52	.44	.37	.51	.43	.38	.49	.43	.38	.48	.42	.38	.36
8	.62	.49	.40	.35	.60	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.32
9	.58	.45	.37	.31	.56	.44	.36	.30	.43	.36	.31	.42	.35	.31	.41	.35	.31	.29
10	.54	.41	.34	.28	.53	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26

Picture (not to scale)

Candela Table - Type C					
	0	45	90	135	180
0	115	115	115	115	115
5	114	115	115	116	116
10	112	113	114	114	114
15	109	109	110	111	111
20	104	105	106	107	107
25	98	100	100	101	101
30	91	95	94	95	95
35	84	85	86	87	87
40	76	77	78	79	79
45	67	68	70	70	71
50	58	59	61	61	63
55	49	50	52	52	53
60	39	41	43	43	44
65	30	31	33	33	34
70	21	22	23	24	25
75	12	13	14	15	16
80	5	6	7	7	8
85	1	2	2	2	3
90	1	1	2	2	2
95	1	1	2	2	2
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

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Conclusion

The results tabulated in this report are representative of the actual test sample submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

TEST COMPLETION SIGN OFF

-TEST COMPLETED BY ENGINEER TECH: Steve Dziurgot DATE 2016/12/16

-FINAL APPROVAL SIGN OFF BY: Alex Kochetkov DATE 2016/12/21