

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: LUMIERE

Report Number: P27781[\_3000K

Luminaire Tested: 696-8LED3010-12-BK-DIFF

Issue Date: 3/3/2020

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

**Test Information**

Test Method: LM-79-2019  
 Report Number: P27781[\_3000K  
 Test Lab: INNOVATION CENTER(G2)  
 Issue Date: 3/3/2020  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: LUMIERE  
 Catalog Number: 696-8LED3010-12-BK-DIFF  
 Description: BOCA 696, 8 WATT, 3000K CCT, 10 DEGREE SPOT OPTIC,  
 FLUSH HOOD BLACK, DIFFUSED LENS  
 Light Source: (1) SORAA 3000K 90 CRI LED  
 SM16-07-10D-930-03  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
 Luminaire Lumens: 290.1 lumens  
 Efficiency: N/A  
 Efficacy: 36.3 lumens/watt  
 N/A  
 Luminous Opening: Circular (Dia: 0.17' x H: 0')  
 CIE Type: Indirect

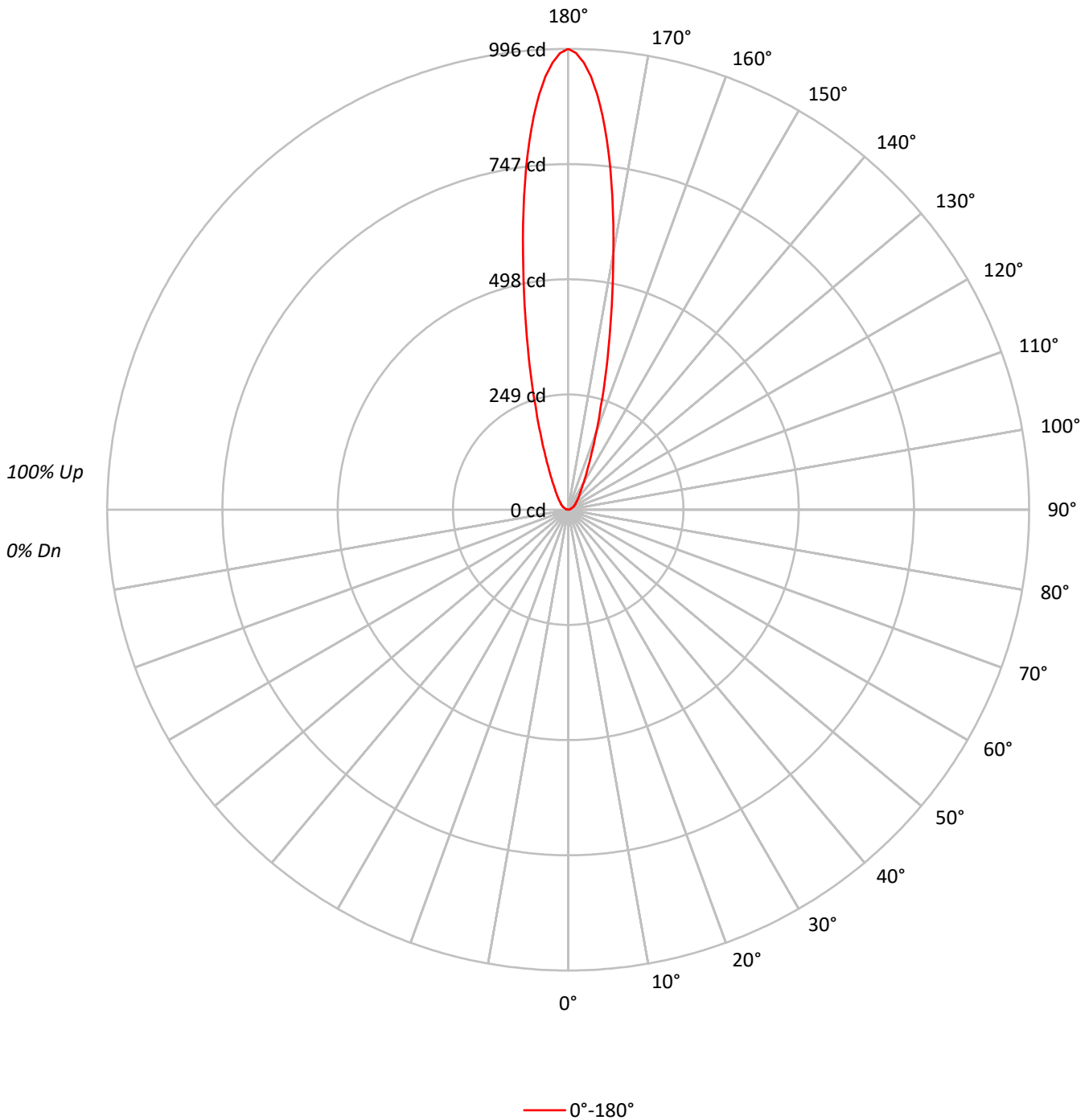
Input Watts (W): 8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 24 FT



Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

TEST NUMBER: P27781[\_3000K  
CATALOG NUMBER: 696-8LED3010-12-BK-DIFF

### Luminous Intensity Polar Plot



TEST NUMBER: P27781[\_3000K  
 CATALOG NUMBER: 696-8LED3010-12-BK-DIFF

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	57	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	28	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

**AVERAGE LUMINANCE (cd/sqm):**

	0°
95°	0
100°	5667
105°	7812
110°	8789
115°	11770
120°	13011
125°	14774
130°	16328
135°	18320
140°	22119
145°	27426
150°	36862
155°	55609
160°	91852
165°	163778
170°	281752
175°	423288

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 0°  
 Luminance: 0 cd/sqm

TEST NUMBER: P27781[\_3000K

CATALOG NUMBER: 696-8LED3010-12-BK-DIFF

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
90°-100°	0.8	0.3
100°-110°	4.3	1.5
110°-120°	9.6	3.3
120°-130°	15.4	5.3
130°-140°	20.7	7.1
140°-150°	29.2	10.1
150°-160°	48.8	16.8
160°-170°	89.8	30.9
170°-180°	71.9	24.8
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	0.0	0.0
90°-120°	14.7	5.1
90°-150°	79.9	27.6
90°-180°	290.0	100.0
0°-180°	290.1	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
90°	0	
95°	0	1
105°	4	4
115°	10	10
125°	17	15
135°	26	21
145°	46	29
155°	102	49
165°	321	90
175°	855	72
180°	996	

TEST NUMBER: P27781[\_3000K  
CATALOG NUMBER: 696-8LED3010-12-BK-DIFF

**CANDELA DISTRIBUTION (FULL):**

	0°
90°	0.0
92.5°	0.0
95°	0.0
97.5°	1.0
100°	2.0
102.5°	3.0
105°	4.1
107.5°	5.1
110°	6.1
112.5°	8.1
115°	10.1
117.5°	11.1
120°	13.2
122.5°	15.2
125°	17.2
127.5°	19.2
130°	21.3
132.5°	23.3
135°	26.3
137.5°	30.4
140°	34.3
142.5°	39.4
145°	45.5
147.5°	53.6
150°	64.7
152.5°	80.9
155°	102.2
157.5°	131.5
160°	174.9
162.5°	234.7
165°	320.6
166°	360.1
167°	404.6
168°	452.2
169°	504.7
170°	562.4
171°	623.0
172°	683.7
173°	745.4
174°	802.0
175°	854.7
176°	900.2
177°	937.5
178°	966.9
179°	987.2

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



TEST NUMBER: P27781[\_3000K  
CATALOG NUMBER: 696-8LED3010-12-BK-DIFF

**CANDELA DISTRIBUTION (continued):**

180° |  $\frac{0^\circ}{996.3}$

(END OF REPORT)