

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: P277814

Luminaire Tested: 696-8LED2710-12-BK-DIFF

Issue Date: 3/3/2020

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

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**Test Information**

Test Method: LM-79-2019  
 Report Number: P277814  
 Test Lab: INNOVATION CENTER(G2)  
 Issue Date: 3/3/2020  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: LUMIERE  
 Catalog Number: 696-8LED2710-12-BK-DIFF  
 Description: BOCA 696, 8 WATT, 2700K CCT, 10 DEGREE SPOT OPTIC,  
 FLUSH HOOD BLACK, DIFFUSED LENS  
 Light Source: (1) SORAA 2700K 90 CRI LED  
 SM16-07-10D-927-03  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
 Luminaire Lumens: 261.9 lumens  
 Efficiency: N/A  
 Efficacy: 32.7 lumens/watt  
 N/A  
 Luminous Opening: Circular (Dia: 0.17' x H: 0')  
 CIE Type: Indirect

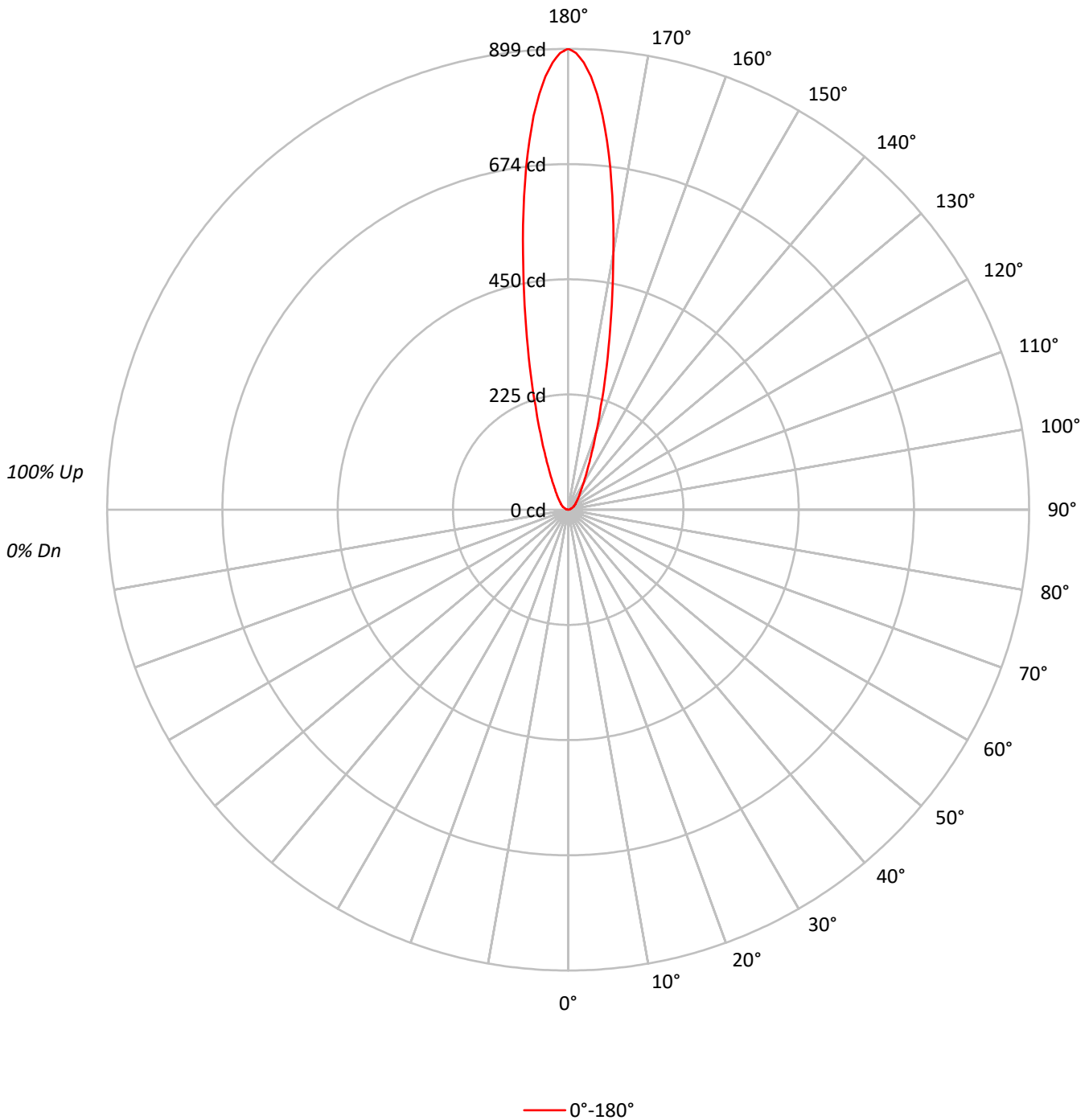
Input Watts (W): 8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 24 FT



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

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### Luminous Intensity Polar Plot



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**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°	5116
105°	7052
110°	7934
115°	10625
120°	11746
125°	13337
130°	14740
135°	16538
140°	19967
145°	24758
150°	33277
155°	50200
160°	82918
165°	147847
170°	254346
175°	382115

**MAXIMUM LUMINANCE 45°-90°:**

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

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**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°	0.7	0.3
100°-110°	3.9	1.5
110°-120°	8.7	3.3
120°-130°	13.9	5.3
130°-140°	18.7	7.1
140°-150°	26.3	10.1
150°-160°	44.1	16.8
160°-170°	81.0	30.9
170°-180°	64.9	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°	13.3	5.1
90°-150°	72.2	27.6
90°-180°	262.0	100.0
0°-180°	261.9	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
90°	0	
95°	0	1
105°	4	4
115°	9	9
125°	16	14
135°	24	19
145°	41	26
155°	92	44
165°	289	81
175°	772	65
180°	899	

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**CANDELA DISTRIBUTION (FULL):**

	0°
90°	0.0
92.5°	0.0
95°	0.0
97.5°	0.9
100°	1.8
102.5°	2.7
105°	3.7
107.5°	4.6
110°	5.5
112.5°	7.3
115°	9.1
117.5°	10.0
120°	11.9
122.5°	13.7
125°	15.5
127.5°	17.3
130°	19.2
132.5°	21.0
135°	23.7
137.5°	27.4
140°	31.0
142.5°	35.6
145°	41.1
147.5°	48.4
150°	58.4
152.5°	73.0
155°	92.2
157.5°	118.7
160°	157.9
162.5°	211.8
165°	289.5
166°	325.1
167°	365.3
168°	408.2
169°	455.6
170°	507.7
171°	562.4
172°	617.2
173°	672.9
174°	724.0
175°	771.5
176°	812.6
177°	846.3
178°	872.9
179°	891.2

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



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**CANDELA DISTRIBUTION (continued):**

180° |  $\frac{0^\circ}{899.4}$

(END OF REPORT)