

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: P27782[\_4000k

Luminaire Tested: 696-8LED4025-12-BK-OSL

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: P27782[\_4000k  
 Test Lab: INNOVATION CENTER(G2)  
 Issue Date: 3/3/2020  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: LUMIERE  
 Catalog Number: 696-8LED4025-12-BK-OSL  
 Description: BOCA 696, 8 WATT, 4000K CCT, 25 DEGREE NARROW  
 OPTIC, FLUSH HOOD BLACK, OVERALL SPREAD LENS  
 Light Source: (1) SORAA 4000K 90 CRI LED  
 SM16-07-25D-940-03  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
 Luminaire Lumens: 407.0 lumens  
 Efficiency: N/A  
 Efficacy: 52.2 lumens/watt  
 N/A  
 Luminous Opening: Circular (Dia: 0.17' x H: 0')  
 CIE Type: Indirect

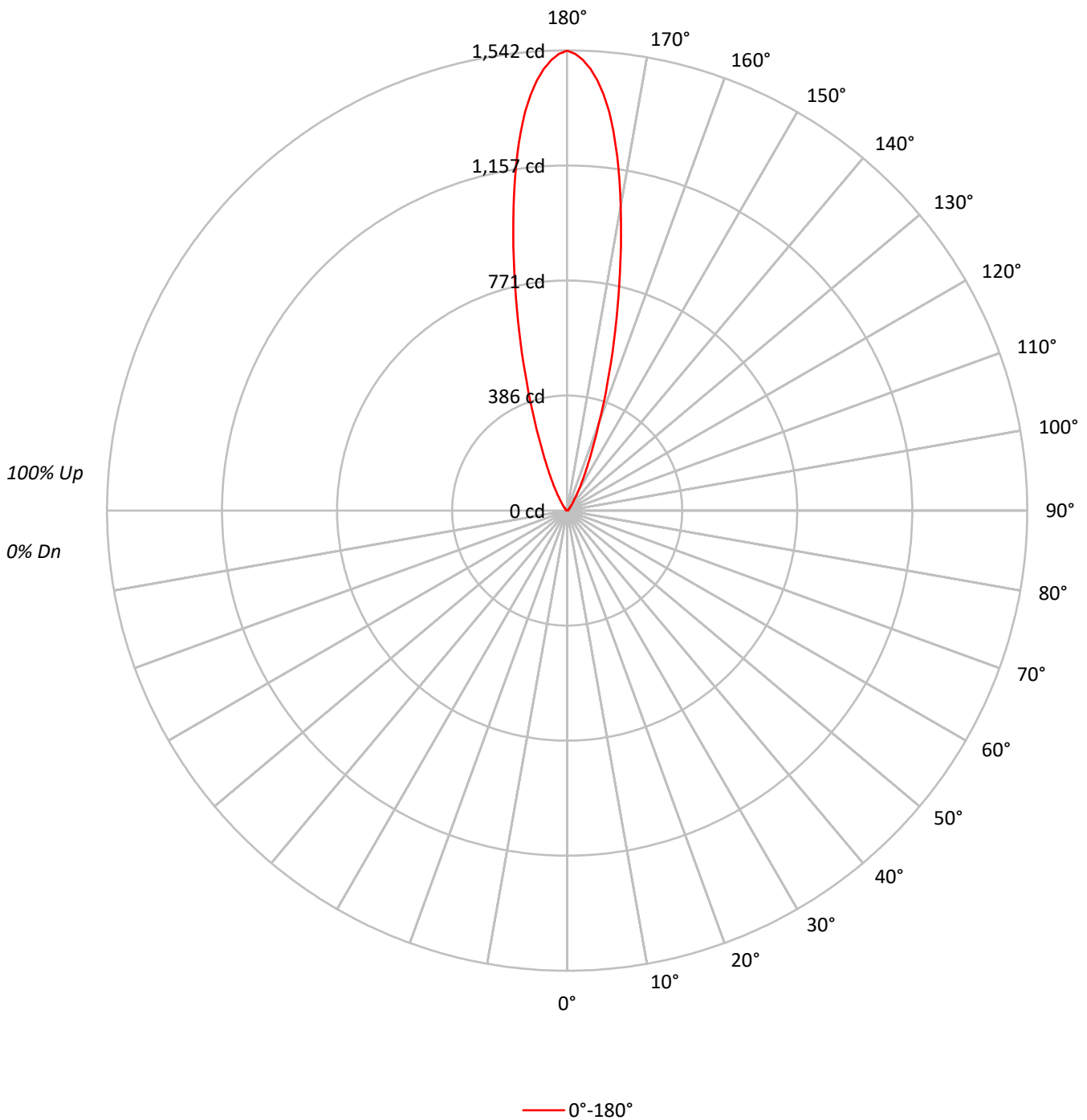
Input Watts (W): 7.8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 24 FT



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	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	27	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°	2978
105°	1998
110°	3024
115°	3670
120°	4247
125°	4604
130°	5717
135°	8114
140°	11612
145°	20456
150°	40547
155°	81482
160°	163890
165°	316679
170°	518090
175°	693545

**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°	0.1	0.0
100°-110°	1.2	0.3
110°-120°	2.9	0.7
120°-130°	5.1	1.3
130°-140°	9.1	2.2
140°-150°	23.2	5.7
150°-160°	73.2	18.0
160°-170°	170.2	41.8
170°-180°	121.8	29.9
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°	4.2	1.0
90°-150°	41.7	10.3
90°-180°	407.0	100.0
0°-180°	407.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
90°	0	
95°	0	0
105°	1	1
115°	3	3
125°	5	5
135°	12	9
145°	34	23
155°	150	73
165°	620	170
175°	1400	122
180°	1542	

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**CANDELA DISTRIBUTION (FULL):**

	0°
90°	0.0
92.5°	0.0
95°	0.0
97.5°	0.0
100°	1.0
102.5°	1.0
105°	1.0
107.5°	1.0
110°	2.1
112.5°	2.1
115°	3.1
117.5°	3.1
120°	4.3
122.5°	5.4
125°	5.4
127.5°	6.4
130°	7.4
132.5°	9.5
135°	11.6
137.5°	13.8
140°	18.0
142.5°	24.4
145°	34.0
147.5°	48.8
150°	71.2
152.5°	104.1
155°	149.7
157.5°	214.5
160°	312.1
162.5°	448.0
165°	620.0
166°	695.3
167°	774.0
168°	859.9
169°	946.0
170°	1034.1
171°	1121.1
172°	1201.8
173°	1278.2
174°	1344.1
175°	1400.4
176°	1445.9
177°	1483.2
178°	1510.7
179°	1531.0

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

  
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**CANDELA DISTRIBUTION (continued):**

180°  $\overbrace{\hspace{1.5cm}}^{0^\circ}$   
1541.5

(END OF REPORT)