

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[\_4000K

Luminaire Tested: 696-8LED4025-12-BK

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: P27781[\_4000K  
 Test Lab: INNOVATION CENTER(G2)  
 Issue Date: 3/3/2020  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: LUMIERE  
 Catalog Number: 696-8LED4025-12-BK  
 Description: BOCA 696, 8 WATT, 4000K CCT, 25 DEGREE NARROW  
 OPTIC, FLUSH HOOD BLACK  
 Light Source: (1) SORAA 4000K 90 CRI 25° NFL LED  
 SM16-07-25D-940-03  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
 Luminaire Lumens: 443.0 lumens  
 Efficiency: N/A  
 Efficacy: 56.8 lumens/watt  
 N/A  
 Luminous Opening: Circular (Dia: 0.17' x H: 0')  
 CIE Type: Indirect

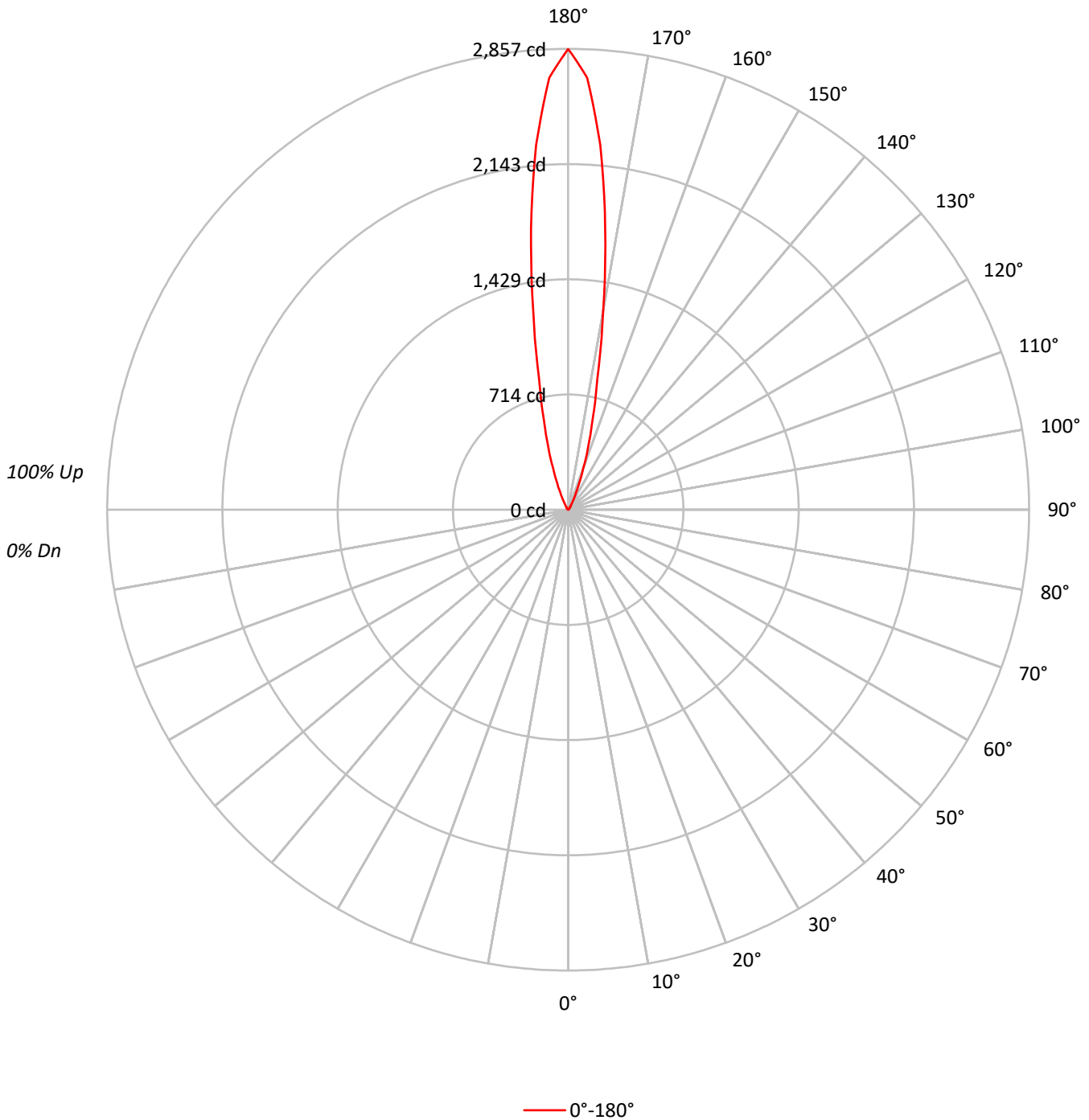
Input Watts (W): 7.8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 24 FT



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									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	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°	0
105°	2006
110°	3020
115°	3672
120°	4252
125°	4602
130°	4914
135°	5928
140°	8239
145°	13449
150°	24786
155°	61297
160°	146640
165°	300472
170°	622461
175°	1124979

**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°	0.0	0.0
100°-110°	1.4	0.3
110°-120°	3.1	0.7
120°-130°	4.5	1.0
130°-140°	6.7	1.5
140°-150°	14.9	3.4
150°-160°	57.4	13.0
160°-170°	171.2	38.7
170°-180°	183.7	41.5
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°	4.5	1.0
90°-150°	30.7	6.9
90°-180°	443.0	100.0
0°-180°	443.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
90°	0	
95°	0	0
105°	1	1
115°	3	3
125°	5	5
135°	8	7
145°	22	15
155°	113	57
165°	588	171
175°	2271	184
180°	2857	

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**CANDELA DISTRIBUTION (FULL):**

	0°
90°	0.0
92.5°	0.0
95°	0.0
97.5°	0.0
100°	0.0
102.5°	1.1
105°	1.1
107.5°	2.1
110°	2.1
112.5°	3.1
115°	3.1
117.5°	3.1
120°	4.3
122.5°	4.3
125°	5.3
127.5°	5.3
130°	6.4
132.5°	7.4
135°	8.5
137.5°	9.5
140°	12.8
142.5°	18.0
145°	22.3
147.5°	28.6
150°	43.5
152.5°	70.1
155°	112.6
157.5°	178.4
160°	279.3
162.5°	418.4
165°	588.3
167.5°	834.6
170°	1242.5
172.5°	1759.6
175°	2271.5
177.5°	2681.3
180°	2856.6

(END OF REPORT)