

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[\_40000K

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

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[\_40000K  
 Test Lab: INNOVATION CENTER(G2)  
 Issue Date: 3/3/2020  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: LUMIERE  
 Catalog Number: 696-8LED4025-12-BK-LSL  
 Description: BOCA 696, 8 WATT, 4000K CCT, 25 DEGREE NARROW  
 OPTIC, FLUSH HOOD BLACK, LINEAR SPREAD LENS  
 Light Source: (1) SORAA 4000K 90 CRI 25° NFL  
 SM16-07-25D-940-03  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
 Luminaire Lumens: 359.5 lumens  
 Efficiency: N/A  
 Efficacy: 46.1 lumens/watt  
 N/A  
 Luminous Opening: Circular (Dia: 0.17' x H: 0')  
 CIE Type: Indirect

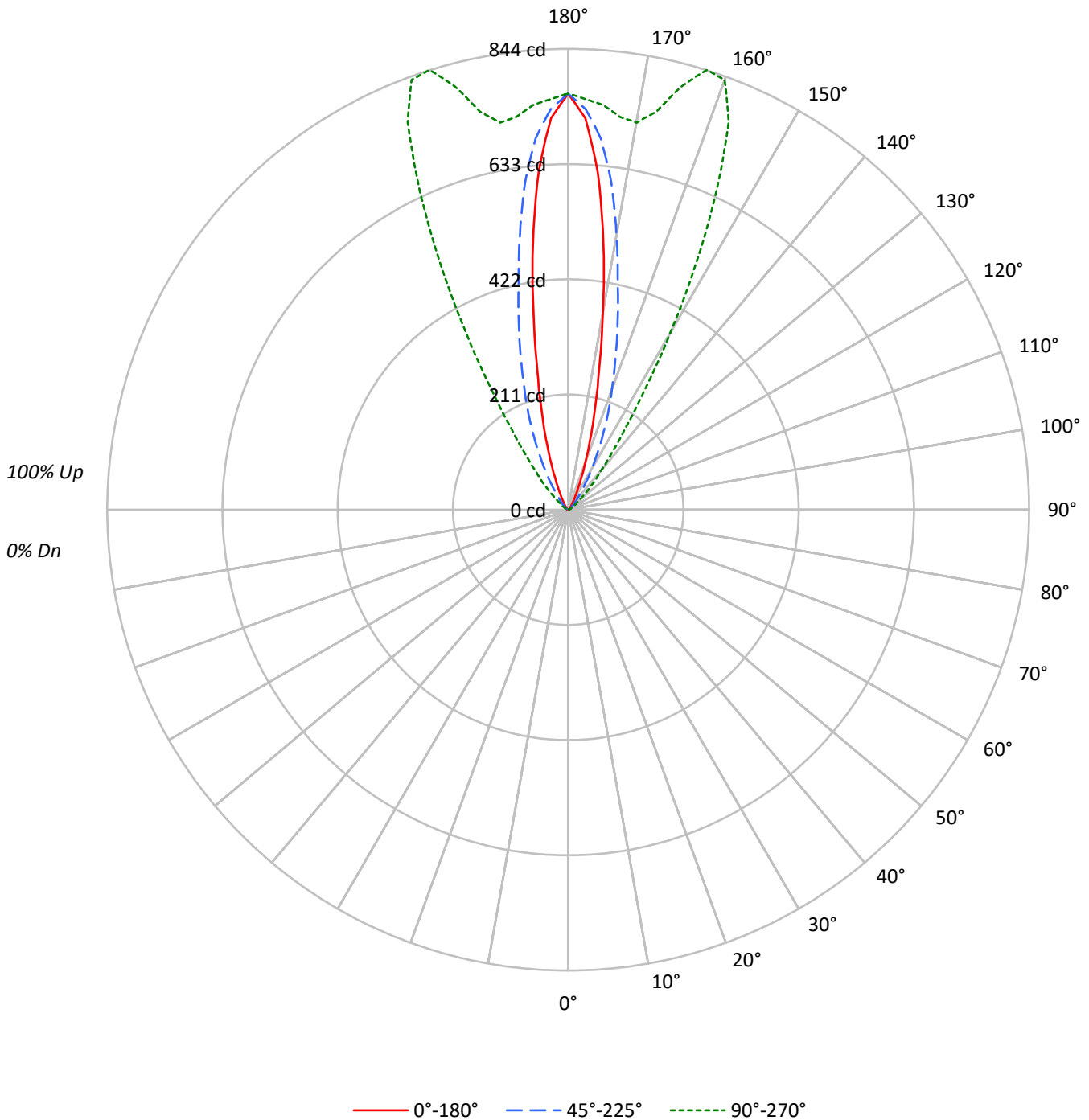
Input Watts (W): 7.8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 24 FT



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	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°	45°	90°
95°	0	0	0
100°	2681	0	0
105°	1799	1799	1799
110°	2723	2723	4084
115°	3305	3305	5635
120°	2794	3831	7565
125°	3340	4964	11558
130°	3705	6609	19096
135°	4026	9376	35459
140°	5546	16024	59846
145°	6956	27128	109084
150°	11485	48569	212935
155°	22464	80876	349047
160°	48291	122764	439841
165°	94974	178204	410252
170°	182465	255476	360621
175°	307568	337990	368353

**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°	1.2	0.3
110°-120°	3.2	0.9
120°-130°	6.9	1.9
130°-140°	17.1	4.8
140°-150°	47.1	13.1
150°-160°	106.2	29.5
160°-170°	117.8	32.8
170°-180°	60.0	16.7
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°	4.4	1.2
90°-150°	75.6	21.0
90°-180°	360.0	100.1
0°-180°	359.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
90°	0	0	0	0	0	
95°	0	0	0	0	0	0
105°	1	1	1	1	1	1
115°	3	3	3	4	5	2
125°	4	5	6	10	13	4
135°	6	8	13	33	51	5
145°	12	16	45	127	181	8
155°	41	58	149	387	641	21
165°	186	224	349	611	803	53
175°	621	637	682	727	744	51
180°	762	762	762	762	762	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
90°	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.0	0.0	0.0
102.5°	0.9	0.9	0.9	0.9	0.9
105°	0.9	0.9	0.9	0.9	0.9
107.5°	1.9	0.9	0.9	1.9	1.9
110°	1.9	1.9	1.9	1.9	2.8
112.5°	1.9	1.9	1.9	2.8	3.9
115°	2.8	2.8	2.8	3.9	4.8
117.5°	2.8	2.8	3.9	4.8	5.8
120°	2.8	3.9	3.9	5.8	7.7
122.5°	3.9	3.9	4.8	7.7	11.5
125°	3.9	4.8	5.8	9.6	13.4
127.5°	4.8	4.8	7.7	13.4	18.2
130°	4.8	5.8	8.6	18.2	24.9
132.5°	5.8	6.7	10.5	24.9	35.5
135°	5.8	7.7	13.4	32.5	50.8
137.5°	6.7	9.6	18.2	46.9	72.9
140°	8.6	11.5	24.9	66.1	92.9
142.5°	10.5	13.4	33.6	91.0	132.3
145°	11.5	16.3	45.0	126.5	181.1
147.5°	14.4	20.2	62.3	171.6	261.6
150°	20.2	28.8	85.3	224.3	373.8
152.5°	27.8	40.2	114.0	300.9	504.2
155°	41.3	58.5	148.6	387.2	641.2
157.5°	61.3	83.4	189.8	475.4	767.7
160°	92.0	121.7	233.8	548.3	837.7
162.5°	133.2	167.8	285.6	591.4	844.4
165°	185.9	224.3	348.9	610.5	803.2
167.5°	259.7	298.1	418.8	621.0	746.6
170°	364.2	401.6	509.9	643.1	719.8
172.5°	493.6	525.3	604.7	686.2	725.6
175°	621.0	637.4	682.4	726.5	743.8
177.5°	717.9	724.5	734.2	746.6	752.4
180°	761.9	761.9	761.9	761.9	761.9

(END OF REPORT)