

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: 696-8LED4010-12-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: P27781[_4000K
 Test Lab: INNOVATION CENTER(G2)
 Issue Date: 3/3/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: LUMIERE
 Catalog Number: 696-8LED4010-12-BK-OSL
 Description: BOCA 696, 8 WATT, 4000K CCT, 10 DEGREE SPOT OPTIC,
 FLUSH HOOD BLACK, OVERALL SPREAD LENS
 Light Source: (1) SORAA 4000K 90 CRI LED
 SM16-07-10D-940-03
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 388.6 lumens
 Efficiency: N/A
 Efficacy: 49.2 lumens/watt
 N/A
 Luminous Opening: Circular (Dia: 0.17' x H: 0')
 CIE Type: Indirect

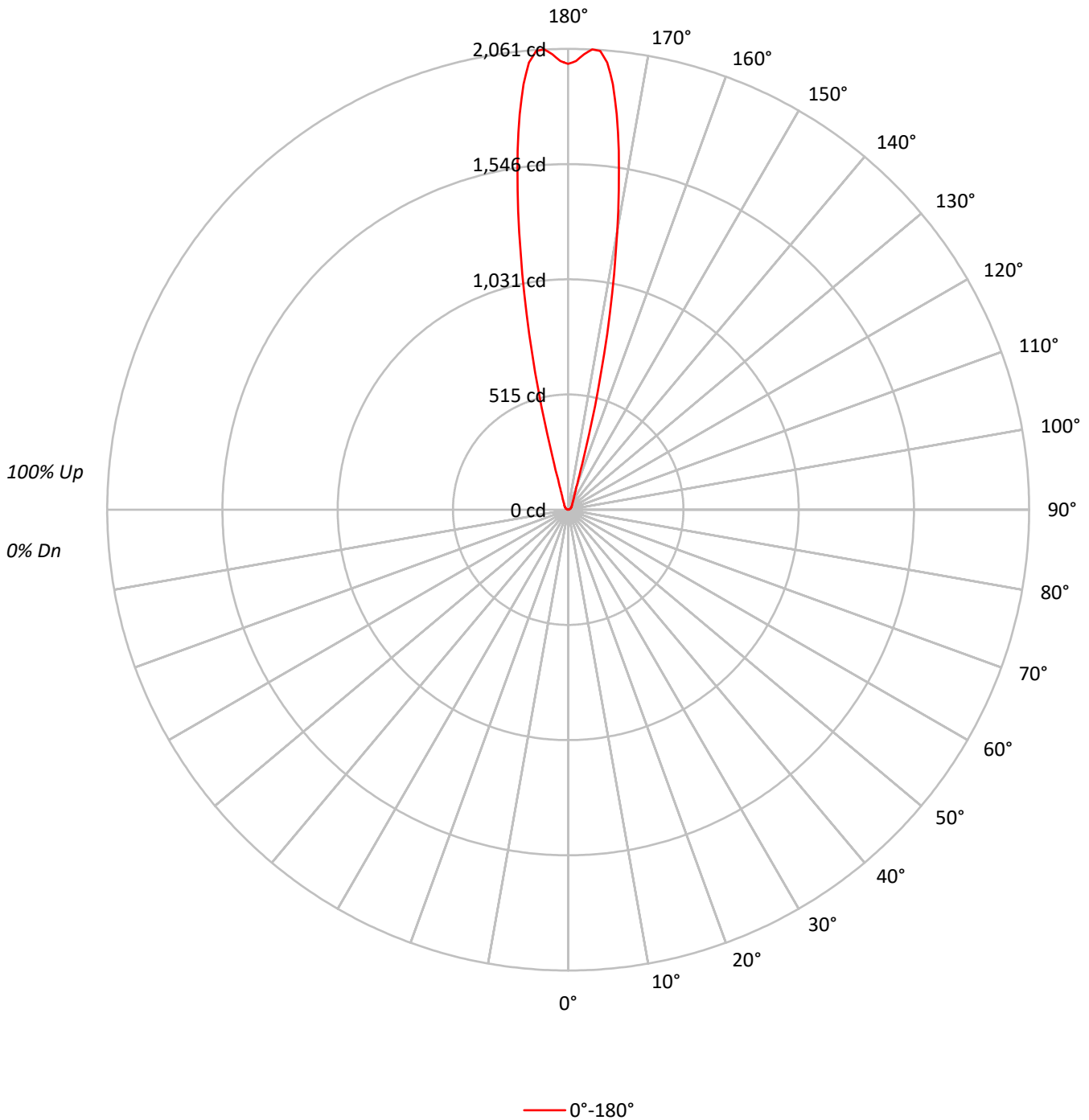
Input Watts (W): 7.9
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 24 FT



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	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°	6599
100°	3312
105°	6667
110°	8591
115°	11047
120°	11638
125°	13262
130°	14518
135°	15638
140°	17526
145°	19198
150°	24281
155°	33498
160°	56527
165°	208385
170°	631605
175°	994037

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°	0.8	0.2
100°-110°	3.7	1.0
110°-120°	9.2	2.4
120°-130°	13.8	3.5
130°-140°	17.7	4.5
140°-150°	20.7	5.3
150°-160°	29.7	7.6
160°-170°	127.0	32.7
170°-180°	166.1	42.7
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°	13.7	3.5
90°-150°	65.9	16.9
90°-180°	389.0	100.1
0°-180°	388.6	100.0

CANDELA DISTRIBUTION:

	0°	Flux
90°	0	
95°	1	1
105°	3	4
115°	9	9
125°	15	14
135°	22	18
145°	32	21
155°	62	30
165°	408	127
175°	2007	166
180°	1994	

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CANDELA DISTRIBUTION (FULL):

	0°
90°	0.0
92.5°	0.0
95°	1.2
97.5°	1.2
100°	1.2
102.5°	2.3
105°	3.5
107.5°	4.8
110°	6.0
112.5°	8.3
115°	9.5
117.5°	10.6
120°	11.8
122.5°	14.3
125°	15.4
127.5°	16.6
130°	18.9
132.5°	21.2
135°	22.4
137.5°	24.9
140°	27.2
142.5°	29.5
145°	31.9
147.5°	36.7
150°	42.6
151°	46.1
152°	49.6
153°	53.2
154°	56.7
155°	61.5
156°	67.4
157°	74.5
158°	82.8
159°	93.4
160°	107.7
161°	127.7
162°	160.9
163°	214.0
164°	295.6
165°	408.0
166°	548.8
167°	713.2
168°	894.1
169°	1073.9
170°	1260.7

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CANDELA DISTRIBUTION (continued):

	0°
171°	1446.5
172°	1621.5
173°	1782.3
174°	1913.5
175°	2007.1
176°	2056.7
177°	2061.5
178°	2037.8
179°	2007.1
180°	1994.0

(END OF REPORT)