

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: 696-8LED4036-12-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: P27782[_4000K
 Test Lab: INNOVATION CENTER(G2)
 Issue Date: 3/3/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: LUMIERE
 Catalog Number: 696-8LED4036-12-BK
 Description: BOCA 696, 8 WATT, 4000K CCT, 36 DEGREE WIDE OPTIC,
 FLUSH HOOD BLACK
 Light Source: (1) SORAA 4000K 90 CRI LED
 SM16-07-36D-940-03
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 434.4 lumens
 Efficiency: N/A
 Efficacy: 56.4 lumens/watt
 N/A
 Luminous Opening: Circular (Dia: 0.17' x H: 0')
 CIE Type: Indirect

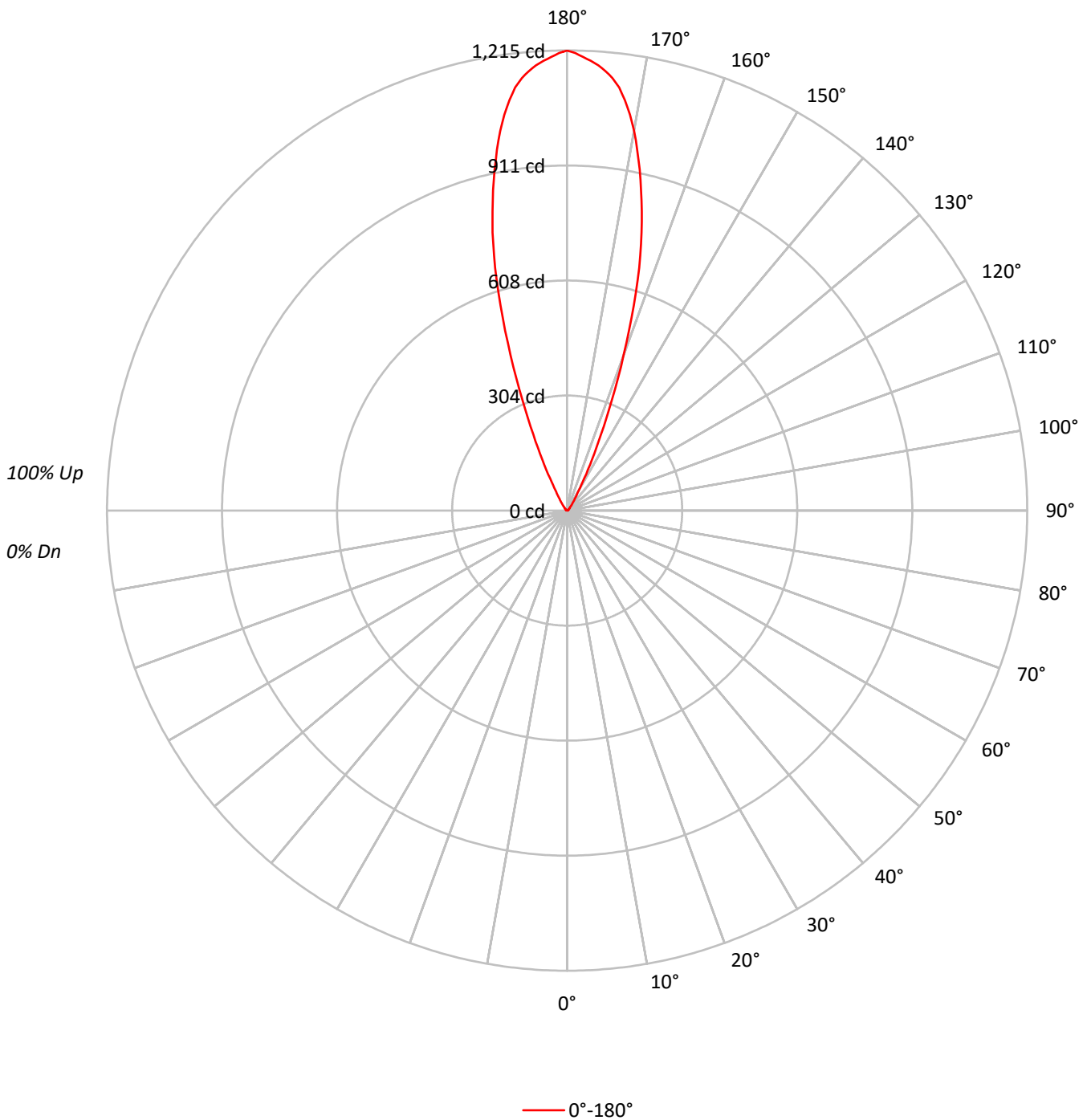
 Input Watts (W): 7.7
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 24 FT



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°	1988
110°	3024
115°	3664
120°	4244
125°	3700
130°	4910
135°	5926
140°	9590
145°	17230
150°	35052
155°	99406
160°	229122
165°	388288
170°	510141
175°	576829

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°	4.3	1.0
130°-140°	7.1	1.6
140°-150°	19.3	4.4
150°-160°	89.6	20.6
160°-170°	202.9	46.7
170°-180°	106.7	24.6
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°	35.2	8.1
90°-180°	434.0	99.9
0°-180°	434.4	100.0

CANDELA DISTRIBUTION:

	0°	Flux
90°	0	
95°	0	0
105°	1	1
115°	3	3
125°	4	4
135°	8	7
145°	29	19
155°	183	90
165°	760	203
175°	1165	107
180°	1215	

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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°	1.0
105°	1.0
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°	4.3
127.5°	5.4
130°	6.4
132.5°	7.4
135°	8.5
137.5°	10.6
140°	14.9
142.5°	20.1
145°	28.6
147.5°	39.3
150°	61.5
151°	76.4
152°	96.7
153°	121.1
154°	149.7
155°	182.6
156°	219.8
157°	264.4
158°	316.4
159°	373.7
160°	436.4
161°	502.2
162°	570.1
163°	637.0
164°	700.7
165°	760.2
166°	814.4
167°	868.5
168°	920.6
169°	970.5
170°	1018.3

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CANDELA DISTRIBUTION (continued):

	0°
171°	1058.5
172°	1094.7
173°	1125.5
174°	1147.7
175°	1164.7
176°	1178.5
177°	1189.1
178°	1198.7
179°	1208.3
180°	1214.6

(END OF REPORT)