

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P840126

Luminaire Tested: **LD4C10D010 EU4109050 4LBCSSQMMS**

Issue Date: 5/25/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P840126  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209253)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/25/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C10D010 EU4109050 4LBCSSQMMS  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

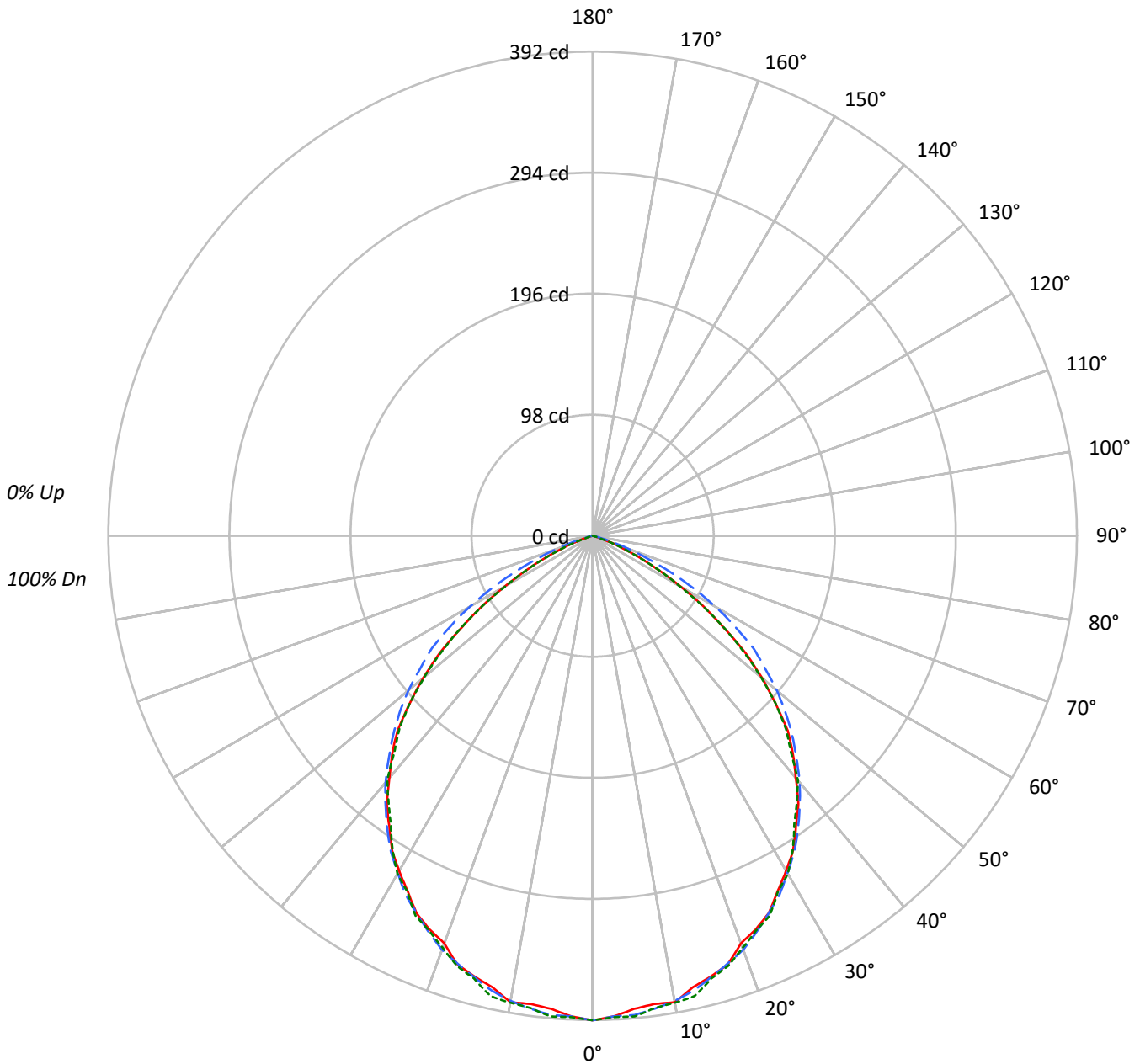
Lumens per Lamp: N/A  
Luminaire Lumens: 838.0 lumens  
Efficiency: N/A  
Efficacy: 85.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.8  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89																			
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	37853	37853	37853
5°	37242	37726	37833
10°	37565	37457	37614
15°	36900	36960	37070
20°	36051	36616	36452
25°	35889	35889	36123
30°	34895	35141	35196
35°	33806	34136	33535
40°	32220	32850	32560
45°	30484	31180	30184
50°	26855	29196	26690
55°	21751	26714	21835
60°	15921	22154	15593
65°	9680	15776	9406
70°	3780	8492	3611
75°	410	2274	410
80°	333	333	333
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.0	4.4
10°-20°	104.8	12.5
20°-30°	155.5	18.6
30°-40°	180.1	21.5
40°-50°	172.7	20.6
50°-60°	127.0	15.2
60°-70°	54.9	6.5
70°-80°	5.9	0.7
80°-90°	0.1	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	297.3	35.5
0°-40°	477.4	57.0
0°-60°	777.2	92.7
0°-90°	838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	838.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	392	392	392	392	392	
5°	384	388	390	390	391	37
15°	369	372	370	371	371	104
25°	337	337	337	338	339	154
35°	287	289	290	289	285	179
45°	223	224	228	225	221	170
55°	129	143	159	142	130	116
65°	42	53	69	52	41	44
75°	1	2	6	1	1	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3
2.5°	389.5	394.0	394.5	391.7	390.6	389.0	392.8	390.1	391.2	390.1	389.5
5°	384.5	389.5	390.1	390.1	389.0	388.4	390.1	389.5	389.0	387.8	389.5
7.5°	382.3	385.0	387.8	384.5	386.2	385.6	389.5	387.8	387.3	387.3	386.2
10°	383.4	382.8	385.0	381.7	382.8	381.7	385.0	385.0	383.9	382.8	382.3
12.5°	374.4	378.9	378.9	378.4	377.2	375.6	378.9	381.2	377.8	377.8	377.2
15°	369.4	370.6	371.1	371.1	370.6	371.7	373.3	371.1	371.7	368.9	370.0
17.5°	363.9	361.6	363.3	362.2	362.8	363.9	366.1	366.1	362.8	362.2	363.3
20°	351.1	357.7	358.3	355.0	355.5	355.5	359.4	356.1	358.3	355.5	356.6
22.5°	344.9	349.4	349.9	345.5	348.3	344.9	348.8	343.8	349.4	345.5	347.1
25°	337.1	336.6	338.2	336.0	336.6	336.6	339.3	337.1	338.8	336.6	337.1
27.5°	324.3	328.8	328.2	326.0	327.1	326.5	332.1	326.0	329.3	326.5	327.7
30°	313.2	317.1	315.9	313.7	313.7	312.0	318.2	316.5	315.9	315.9	315.4
32.5°	302.0	302.6	301.5	302.0	302.6	300.4	305.4	303.1	302.6	303.1	303.7
35°	287.0	287.0	288.1	286.4	288.6	288.6	293.1	290.3	289.8	288.1	289.8
37.5°	273.6	271.9	272.5	272.5	273.6	274.7	276.9	275.8	275.8	274.2	275.3
40°	255.8	254.7	256.3	256.3	258.0	258.0	260.2	259.1	260.8	260.8	260.8
42.5°	240.2	240.2	239.1	240.7	241.3	240.7	244.6	244.1	244.6	243.5	244.1
45°	223.4	223.4	222.3	221.8	224.6	224.0	228.5	226.8	229.0	227.9	228.5
47.5°	200.6	203.4	201.7	203.4	206.7	207.3	210.1	209.0	211.2	209.5	211.8
50°	178.9	178.9	180.5	182.8	186.1	186.7	190.0	192.2	193.4	193.9	194.5
52.5°	156.0	155.5	157.1	159.9	162.7	164.9	168.3	171.6	173.9	177.2	175.5
55°	129.3	130.4	132.1	135.4	139.9	142.6	145.4	149.9	153.8	155.5	158.8
57.5°	106.4	105.3	106.4	110.9	115.9	118.1	122.0	126.5	132.1	135.4	136.5
60°	82.5	83.0	84.1	88.1	91.9	95.3	97.0	104.2	109.2	112.6	114.8
62.5°	60.7	61.9	63.0	66.3	70.2	73.0	75.8	81.9	86.4	89.7	91.9
65°	42.4	42.9	44.6	46.2	50.2	52.9	55.2	60.2	64.6	67.4	69.1
67.5°	26.2	26.7	27.9	30.1	32.9	35.1	37.3	40.7	44.6	47.4	47.9
70°	13.4	13.9	14.5	16.2	18.4	19.5	21.2	24.0	26.7	29.0	30.1
72.5°	4.5	4.5	5.0	6.1	7.3	8.4	8.9	11.7	13.9	15.1	15.6
75°	1.1	1.1	1.1	1.1	1.1	1.7	1.7	3.3	4.5	5.6	6.1
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1	1.1
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3	392.3
2.5°	392.3	391.2	390.6	391.2	391.2	390.6	392.3	394.5	397.3	390.1
5°	391.7	390.6	391.7	388.4	390.1	389.0	391.2	390.6	392.8	390.6
7.5°	390.1	387.8	388.4	386.7	389.0	386.2	387.8	391.2	389.0	385.6
10°	384.5	383.4	387.3	381.7	380.6	382.8	387.3	383.9	382.8	383.9
12.5°	378.9	378.9	380.6	376.1	376.7	377.8	380.0	377.8	378.9	381.7
15°	372.8	371.7	374.4	371.1	370.6	369.4	371.7	371.7	372.8	371.1
17.5°	365.5	363.9	363.9	362.8	362.2	365.0	366.1	366.6	367.2	365.0
20°	356.6	356.1	357.7	356.1	356.6	357.2	357.2	356.1	361.1	355.0
22.5°	347.1	348.8	346.6	345.5	346.6	347.7	347.7	348.3	347.1	346.0
25°	337.7	338.8	339.3	336.0	337.7	336.0	339.9	340.5	338.2	339.3
27.5°	329.3	327.7	327.1	324.9	326.0	325.4	326.0	326.0	329.3	324.9
30°	316.5	314.8	315.4	313.7	314.3	313.7	314.3	314.3	316.5	315.9
32.5°	304.2	302.6	303.1	301.5	301.5	302.0	300.9	300.9	302.6	301.5
35°	292.5	288.6	289.2	288.6	289.2	287.0	287.0	286.4	287.5	284.7
37.5°	275.8	274.2	273.6	273.0	273.6	272.5	273.6	271.9	273.6	271.4
40°	260.8	259.7	260.2	256.9	256.9	257.4	256.3	255.8	256.3	258.5
42.5°	245.7	243.5	242.4	241.3	241.8	240.2	239.6	238.5	239.6	237.4
45°	227.9	227.9	227.4	224.6	225.1	225.1	222.9	220.7	221.2	221.2
47.5°	211.8	210.6	210.1	207.3	206.7	206.2	203.9	202.3	202.3	200.6
50°	193.9	192.8	191.1	188.3	187.2	183.9	182.2	180.0	177.8	177.8
52.5°	177.2	173.3	171.1	166.6	164.9	163.3	158.8	157.1	155.5	153.8
55°	157.1	153.8	149.3	144.3	142.1	139.3	134.8	131.5	129.3	129.8
57.5°	137.6	132.1	127.6	120.9	118.1	116.4	112.0	107.5	105.3	105.3
60°	113.7	109.2	103.6	97.5	95.3	92.5	86.9	84.1	82.5	80.8
62.5°	90.8	87.5	82.5	74.7	73.0	70.2	66.3	63.0	61.3	61.3
65°	68.0	64.6	60.2	54.6	52.4	50.2	46.8	43.5	41.8	41.2
67.5°	47.9	44.0	40.1	35.7	34.0	32.9	29.5	27.3	26.2	25.6
70°	29.0	26.7	24.0	20.6	18.9	17.8	15.6	13.9	13.4	12.8
72.5°	15.1	13.4	11.1	8.9	7.8	6.7	5.6	4.5	3.9	3.9
75°	5.6	4.5	2.8	1.7	1.1	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG







— 0°-180°    - - 45°-225°    - - - - 90°-270°









(END OF REPORT)