

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: P840109

Luminaire Tested: **LD4C100D010 EU41009027 4LBCSSQMW**

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: P840109  
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: LD4C100D010 EU41009027 4LBCSSQMW  
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MW FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

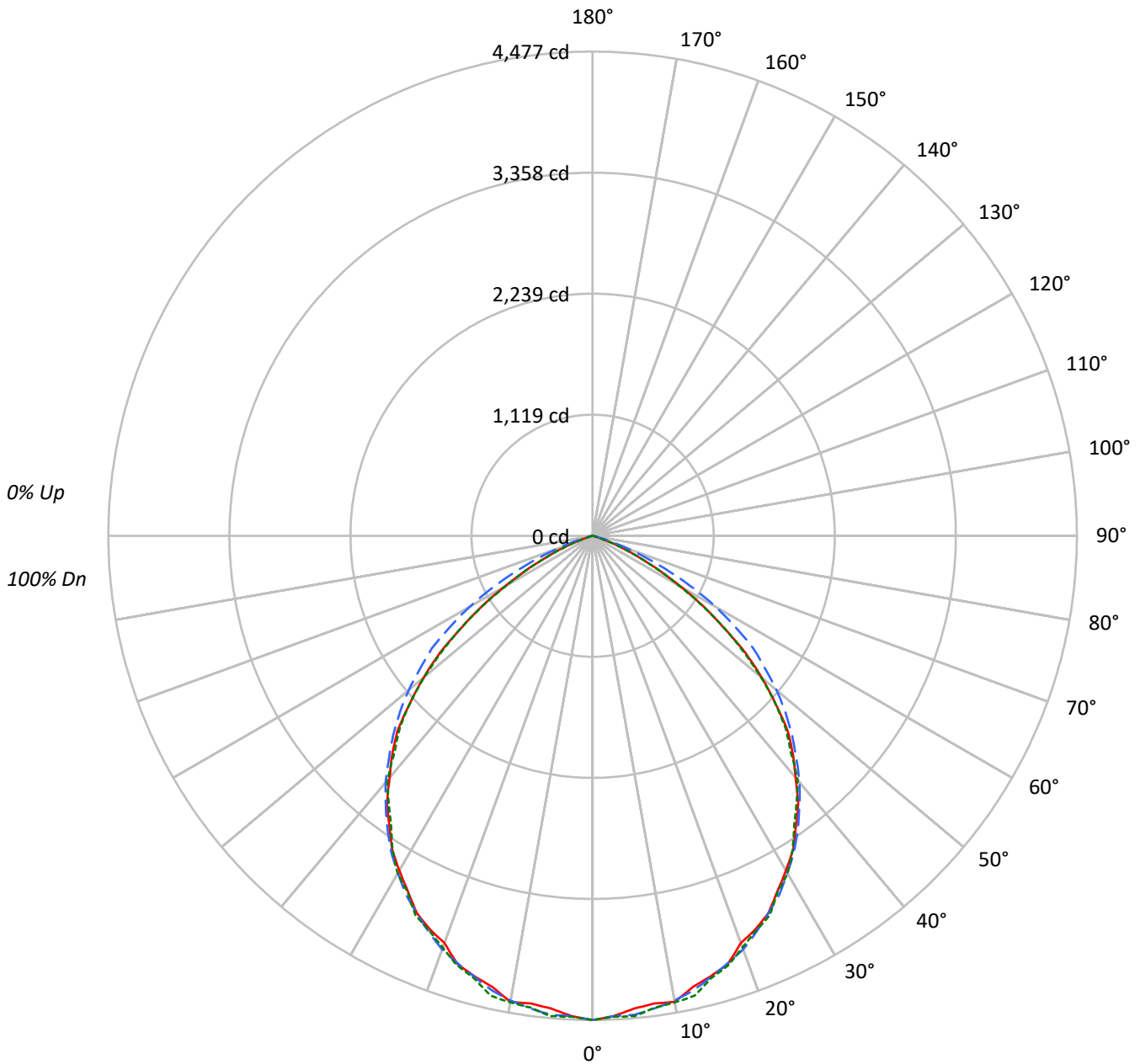
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9564.0 lumens  
Efficiency: N/A  
Efficacy: 83.6 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): 114.4  
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					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	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°	432000	432000	432000
5°	425030	430560	431791
10°	428700	427456	429308
15°	421187	421817	423085
20°	411393	417923	415972
25°	409619	409619	412323
30°	398200	401030	401754
35°	385778	389535	382774
40°	367682	374874	371662
45°	347976	355795	344510
50°	306450	333169	304543
55°	248197	304888	249273
60°	181611	252820	177964
65°	110366	180024	107467
70°	43051	96906	41273
75°	4735	26134	4735
80°	3612	3612	3612
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	422.6	4.4
10°-20°	1195.9	12.5
20°-30°	1774.4	18.6
30°-40°	2056.0	21.5
40°-50°	1971.3	20.6
50°-60°	1449.4	15.2
60°-70°	626.0	6.5
70°-80°	67.6	0.7
80°-90°	0.9	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°	3392.9	35.5
0°-40°	5448.9	57.0
0°-60°	8869.5	92.7
0°-90°	9564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9564.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4477	4477	4477	4477	4477	
5°	4388	4433	4445	4452	4458	419
15°	4216	4242	4223	4229	4235	1188
25°	3848	3841	3848	3854	3873	1762
35°	3275	3294	3307	3300	3250	2048
45°	2550	2557	2607	2569	2525	1939
55°	1475	1628	1812	1622	1482	1328
65°	483	604	788	598	471	497
75°	13	19	70	13	13	39
85°	0	0	0	0	0	1
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°	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2
2.5°	4445.3	4496.2	4502.6	4470.7	4458.0	4439.1	4483.4	4451.8	4464.5	4451.8	4445.3
5°	4388.2	4445.3	4451.8	4451.8	4439.1	4432.6	4451.8	4445.3	4439.1	4426.3	4445.3
7.5°	4362.8	4394.4	4426.3	4388.2	4407.2	4400.9	4445.3	4426.3	4419.9	4419.9	4407.2
10°	4375.5	4369.0	4394.4	4356.3	4369.0	4356.3	4394.4	4394.4	4381.7	4369.0	4362.8
12.5°	4273.5	4324.4	4324.4	4318.1	4305.4	4286.2	4324.4	4350.1	4311.7	4311.7	4305.4
15°	4216.4	4229.1	4235.4	4235.4	4229.1	4241.9	4260.8	4235.4	4241.9	4210.0	4222.7
17.5°	4152.9	4127.4	4146.4	4133.7	4140.1	4152.9	4178.3	4178.3	4140.1	4133.7	4146.4
20°	4006.5	4082.8	4089.3	4051.1	4057.4	4057.4	4102.0	4063.9	4089.3	4057.4	4070.1
22.5°	3936.5	3987.3	3993.8	3943.0	3974.6	3936.5	3981.1	3923.8	3987.3	3943.0	3961.9
25°	3847.5	3841.2	3860.2	3834.8	3841.2	3841.2	3872.9	3847.5	3866.7	3841.2	3847.5
27.5°	3701.4	3752.2	3745.8	3720.3	3733.0	3726.8	3790.4	3720.3	3758.5	3726.8	3739.5
30°	3574.0	3618.6	3605.9	3580.5	3580.5	3561.3	3631.3	3612.1	3605.9	3605.9	3599.4
32.5°	3446.8	3453.3	3440.6	3446.8	3453.3	3427.9	3485.0	3459.6	3453.3	3459.6	3466.0
35°	3275.1	3275.1	3287.8	3268.8	3294.3	3294.3	3345.1	3313.2	3307.0	3287.8	3307.0
37.5°	3122.5	3103.6	3109.8	3109.8	3122.5	3135.2	3160.6	3147.9	3147.9	3129.0	3141.7
40°	2919.1	2906.4	2925.3	2925.3	2944.5	2944.5	2969.9	2957.2	2976.2	2976.2	2976.2
42.5°	2741.1	2741.1	2728.4	2747.3	2753.8	2747.3	2791.9	2785.4	2791.9	2779.2	2785.4
45°	2550.1	2550.1	2537.4	2531.2	2562.8	2556.6	2607.4	2588.2	2613.7	2601.0	2607.4
47.5°	2289.3	2321.2	2302.0	2321.2	2359.4	2365.9	2397.5	2384.8	2410.2	2391.3	2416.7
50°	2041.5	2041.5	2060.5	2085.9	2124.0	2130.5	2168.7	2194.1	2206.8	2213.0	2219.5
52.5°	1780.8	1774.3	1793.5	1825.1	1857.0	1882.5	1920.6	1958.8	1984.2	2022.3	2003.1
55°	1475.4	1488.1	1507.3	1545.4	1596.3	1627.9	1659.8	1710.7	1755.3	1774.3	1812.4
57.5°	1214.6	1201.9	1214.6	1265.5	1322.8	1348.2	1392.8	1443.7	1507.3	1545.4	1558.1
60°	941.1	947.6	960.3	1004.9	1049.3	1087.5	1106.6	1189.2	1246.5	1284.7	1310.1
62.5°	693.3	706.0	718.7	756.9	801.3	833.2	864.8	934.9	985.7	1023.9	1049.3
65°	483.4	489.6	508.8	527.8	572.4	604.1	629.5	686.8	737.7	769.6	788.5
67.5°	298.9	305.1	317.9	343.5	375.2	400.6	426.1	464.2	508.8	540.5	547.0
70°	152.6	159.1	165.3	184.5	209.9	222.6	241.6	273.5	305.1	330.6	343.5
72.5°	50.9	50.9	57.3	70.1	82.8	95.5	101.7	133.6	159.1	171.8	178.0
75°	12.7	12.7	12.7	12.7	12.7	19.2	19.2	38.1	50.9	63.6	70.1
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	12.7	12.7
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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°	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2	4477.2
2.5°	4477.2	4464.5	4458.0	4464.5	4464.5	4458.0	4477.2	4502.6	4534.3	4451.8
5°	4470.7	4458.0	4470.7	4432.6	4451.8	4439.1	4464.5	4458.0	4483.4	4458.0
7.5°	4451.8	4426.3	4432.6	4413.6	4439.1	4407.2	4426.3	4464.5	4439.1	4400.9
10°	4388.2	4375.5	4419.9	4356.3	4343.6	4369.0	4419.9	4381.7	4369.0	4381.7
12.5°	4324.4	4324.4	4343.6	4292.7	4299.0	4311.7	4337.1	4311.7	4324.4	4356.3
15°	4254.6	4241.9	4273.5	4235.4	4229.1	4216.4	4241.9	4241.9	4254.6	4235.4
17.5°	4171.8	4152.9	4152.9	4140.1	4133.7	4165.6	4178.3	4184.5	4191.0	4165.6
20°	4070.1	4063.9	4082.8	4063.9	4070.1	4076.6	4076.6	4063.9	4121.0	4051.1
22.5°	3961.9	3981.1	3955.7	3943.0	3955.7	3968.4	3968.4	3974.6	3961.9	3949.2
25°	3854.0	3866.7	3872.9	3834.8	3854.0	3834.8	3879.4	3885.6	3860.2	3872.9
27.5°	3758.5	3739.5	3733.0	3707.6	3720.3	3714.1	3720.3	3720.3	3758.5	3707.6
30°	3612.1	3593.2	3599.4	3580.5	3586.7	3580.5	3586.7	3586.7	3612.1	3605.9
32.5°	3472.3	3453.3	3459.6	3440.6	3440.6	3446.8	3434.1	3434.1	3453.3	3440.6
35°	3338.6	3294.3	3300.5	3294.3	3300.5	3275.1	3275.1	3268.8	3281.6	3249.6
37.5°	3147.9	3129.0	3122.5	3116.3	3122.5	3109.8	3122.5	3103.6	3122.5	3097.1
40°	2976.2	2963.4	2969.9	2931.8	2931.8	2938.0	2925.3	2919.1	2925.3	2950.7
42.5°	2804.6	2779.2	2766.5	2753.8	2760.0	2741.1	2734.6	2721.9	2734.6	2709.2
45°	2601.0	2601.0	2594.7	2562.8	2569.3	2569.3	2543.9	2518.4	2524.7	2524.7
47.5°	2416.7	2404.0	2397.5	2365.9	2359.4	2353.2	2327.5	2308.5	2308.5	2289.3
50°	2213.0	2200.3	2181.4	2149.5	2136.8	2098.6	2079.7	2054.2	2028.8	2028.8
52.5°	2022.3	1977.7	1952.3	1901.4	1882.5	1863.3	1812.4	1793.5	1774.3	1755.3
55°	1793.5	1755.3	1704.5	1647.1	1621.7	1589.8	1538.9	1500.8	1475.4	1481.8
57.5°	1570.8	1507.3	1456.4	1380.1	1348.2	1329.0	1278.2	1227.3	1201.9	1201.9
60°	1297.4	1246.5	1182.9	1112.9	1087.5	1055.8	992.0	960.3	941.1	922.2
62.5°	1036.6	998.5	941.1	852.1	833.2	801.3	756.9	718.7	699.5	699.5
65°	775.8	737.7	686.8	623.3	597.8	572.4	534.3	496.1	476.9	470.7
67.5°	547.0	502.3	458.0	407.1	387.9	375.2	337.1	311.6	298.9	292.4
70°	330.6	305.1	273.5	235.3	216.1	203.4	178.0	159.1	152.6	146.3
72.5°	171.8	152.6	127.1	101.7	89.0	76.3	63.6	50.9	44.6	44.6
75°	63.6	50.9	31.9	19.2	12.7	12.7	12.7	12.7	12.7	12.7
77.5°	12.7	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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)