

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: P840113

Luminaire Tested: **LD4C100D010 EU41009035 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: P840113  
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 EU41009035 4LBCSSQMW  
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MW FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

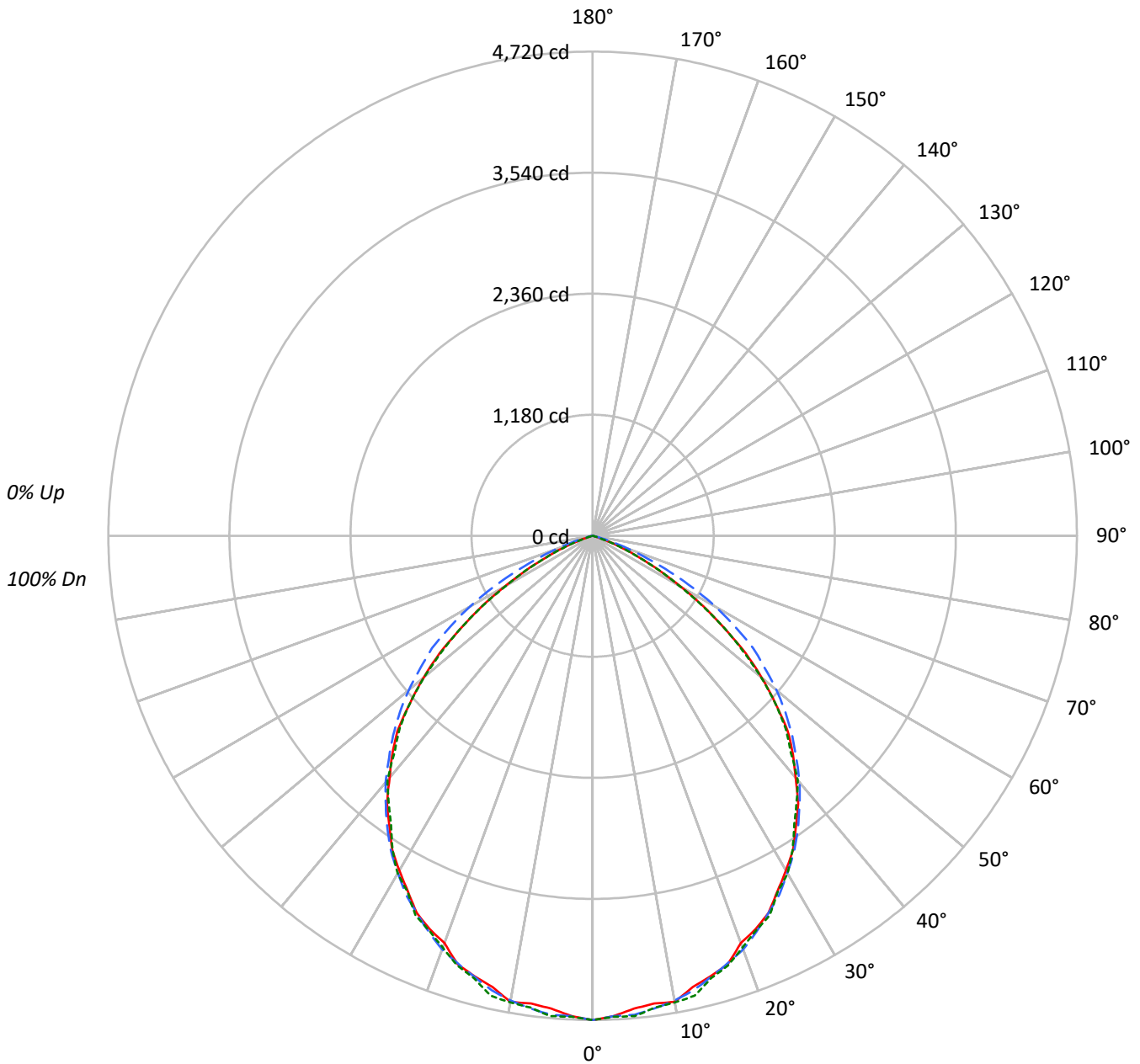
Lumens per Lamp: N/A  
Luminaire Lumens: 10083.0 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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									
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°	455447	455447	455447
5°	448092	453923	455220
10°	451960	450647	452607
15°	444043	444702	446041
20°	433716	440606	438552
25°	431849	431849	434702
30°	419804	422789	423558
35°	406709	410667	403553
40°	387634	395216	391841
45°	366862	375104	363205
50°	323082	351258	321070
55°	261654	321441	262815
60°	191473	266541	187613
65°	116348	189796	113289
70°	45392	102182	43530
75°	4996	27550	4996
80°	3778	3778	3778
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	445.5	4.4
10°-20°	1260.8	12.5
20°-30°	1870.7	18.6
30°-40°	2167.6	21.5
40°-50°	2078.2	20.6
50°-60°	1528.0	15.2
60°-70°	660.0	6.5
70°-80°	71.2	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°	3577.0	35.5
0°-40°	5744.6	57.0
0°-60°	9350.8	92.7
0°-90°	10083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10083.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4720	4720	4720	4720	4720	
5°	4626	4673	4686	4693	4700	441
15°	4445	4472	4452	4459	4465	1253
25°	4056	4050	4056	4063	4083	1857
35°	3453	3473	3486	3480	3426	2159
45°	2688	2695	2749	2709	2662	2044
55°	1555	1716	1911	1710	1562	1400
65°	510	637	831	630	496	524
75°	13	20	74	13	13	41
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°	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2
2.5°	4686.5	4740.1	4747.0	4713.3	4699.9	4680.0	4726.7	4693.4	4706.8	4693.4	4686.5
5°	4626.3	4686.5	4693.4	4693.4	4680.0	4673.1	4693.4	4686.5	4680.0	4666.5	4686.5
7.5°	4599.5	4632.9	4666.5	4626.3	4646.3	4639.7	4686.5	4666.5	4659.7	4659.7	4646.3
10°	4612.9	4606.1	4632.9	4592.7	4606.1	4592.7	4632.9	4632.9	4619.5	4606.1	4599.5
12.5°	4505.4	4559.0	4559.0	4552.5	4539.1	4518.8	4559.0	4586.1	4545.6	4545.6	4539.1
15°	4445.2	4458.6	4465.2	4465.2	4458.6	4472.1	4492.0	4465.2	4472.1	4438.4	4451.8
17.5°	4378.2	4351.4	4371.4	4358.0	4364.8	4378.2	4405.0	4405.0	4364.8	4358.0	4371.4
20°	4223.9	4304.4	4311.2	4271.0	4277.6	4277.6	4324.6	4284.4	4311.2	4277.6	4291.0
22.5°	4150.1	4203.7	4210.5	4156.9	4190.3	4150.1	4197.1	4136.7	4203.7	4156.9	4176.9
25°	4056.3	4049.7	4069.7	4042.9	4049.7	4049.7	4083.1	4056.3	4076.5	4049.7	4056.3
27.5°	3902.2	3955.9	3949.0	3922.2	3935.6	3929.0	3996.1	3922.2	3962.4	3929.0	3942.4
30°	3767.9	3815.0	3801.6	3774.8	3774.8	3754.5	3828.4	3808.1	3801.6	3801.6	3794.7
32.5°	3633.9	3640.7	3627.3	3633.9	3640.7	3613.9	3674.1	3647.3	3640.7	3647.3	3654.1
35°	3452.8	3452.8	3466.2	3446.2	3473.0	3473.0	3526.7	3493.0	3486.4	3466.2	3486.4
37.5°	3291.9	3272.0	3278.5	3278.5	3291.9	3305.4	3332.2	3318.8	3318.8	3298.8	3312.2
40°	3077.5	3064.1	3084.0	3084.0	3104.3	3104.3	3131.1	3117.7	3137.7	3137.7	3137.7
42.5°	2889.8	2889.8	2876.4	2896.4	2903.2	2896.4	2943.4	2936.6	2943.4	2930.0	2936.6
45°	2688.5	2688.5	2675.1	2668.5	2701.9	2695.3	2748.9	2728.7	2755.5	2742.1	2748.9
47.5°	2413.6	2447.2	2427.0	2447.2	2487.4	2494.3	2527.6	2514.2	2541.0	2521.1	2547.9
50°	2152.3	2152.3	2172.3	2199.1	2239.3	2246.1	2286.4	2313.2	2326.6	2333.1	2340.0
52.5°	1877.4	1870.6	1890.8	1924.2	1957.8	1984.6	2024.8	2065.1	2091.9	2132.1	2111.8
55°	1555.4	1568.8	1589.1	1629.3	1682.9	1716.3	1749.9	1803.5	1850.6	1870.6	1910.8
57.5°	1280.5	1267.1	1280.5	1334.1	1394.6	1421.4	1468.4	1522.0	1589.1	1629.3	1642.7
60°	992.2	999.0	1012.4	1059.5	1106.3	1146.5	1166.7	1253.7	1314.1	1354.4	1381.2
62.5°	730.9	744.3	757.7	798.0	844.7	878.4	911.8	985.6	1039.2	1079.4	1106.3
65°	509.6	516.2	536.4	556.4	603.5	636.8	663.6	724.1	777.7	811.4	831.3
67.5°	315.1	321.7	335.1	362.2	395.6	422.4	449.2	489.4	536.4	569.8	576.6
70°	160.9	167.7	174.3	194.5	221.3	234.7	254.7	288.3	321.7	348.5	362.2
72.5°	53.6	53.6	60.5	73.9	87.3	100.7	107.2	140.9	167.7	181.1	187.7
75°	13.4	13.4	13.4	13.4	13.4	20.2	20.2	40.2	53.6	67.0	73.9
77.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	13.4	13.4
80°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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°	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2	4720.2
2.5°	4720.2	4706.8	4699.9	4706.8	4706.8	4699.9	4720.2	4747.0	4780.4	4693.4
5°	4713.3	4699.9	4713.3	4673.1	4693.4	4680.0	4706.8	4699.9	4726.7	4699.9
7.5°	4693.4	4666.5	4673.1	4653.1	4680.0	4646.3	4666.5	4706.8	4680.0	4639.7
10°	4626.3	4612.9	4659.7	4592.7	4579.3	4606.1	4659.7	4619.5	4606.1	4619.5
12.5°	4559.0	4559.0	4579.3	4525.7	4532.2	4545.6	4572.5	4545.6	4559.0	4592.7
15°	4485.5	4472.1	4505.4	4465.2	4458.6	4445.2	4472.1	4472.1	4485.5	4465.2
17.5°	4398.2	4378.2	4378.2	4364.8	4358.0	4391.6	4405.0	4411.6	4418.4	4391.6
20°	4291.0	4284.4	4304.4	4284.4	4291.0	4297.8	4297.8	4284.4	4344.6	4271.0
22.5°	4176.9	4197.1	4170.3	4156.9	4170.3	4183.7	4183.7	4190.3	4176.9	4163.5
25°	4063.1	4076.5	4083.1	4042.9	4063.1	4042.9	4089.9	4096.5	4069.7	4083.1
27.5°	3962.4	3942.4	3935.6	3908.8	3922.2	3915.6	3922.2	3922.2	3962.4	3908.8
30°	3808.1	3788.2	3794.7	3774.8	3781.3	3774.8	3781.3	3781.3	3808.1	3801.6
32.5°	3660.7	3640.7	3647.3	3627.3	3627.3	3633.9	3620.5	3620.5	3640.7	3627.3
35°	3519.8	3473.0	3479.6	3473.0	3479.6	3452.8	3452.8	3446.2	3459.6	3426.0
37.5°	3318.8	3298.8	3291.9	3285.4	3291.9	3278.5	3291.9	3272.0	3291.9	3265.1
40°	3137.7	3124.3	3131.1	3090.9	3090.9	3097.5	3084.0	3077.5	3084.0	3110.9
42.5°	2956.8	2930.0	2916.6	2903.2	2909.8	2889.8	2883.0	2869.6	2883.0	2856.2
45°	2742.1	2742.1	2735.5	2701.9	2708.7	2708.7	2681.9	2655.1	2661.7	2661.7
47.5°	2547.9	2534.5	2527.6	2494.3	2487.4	2480.9	2453.8	2433.8	2433.8	2413.6
50°	2333.1	2319.7	2299.8	2266.1	2252.7	2212.5	2192.5	2165.7	2138.9	2138.9
52.5°	2132.1	2085.0	2058.2	2004.6	1984.6	1964.4	1910.8	1890.8	1870.6	1850.6
55°	1890.8	1850.6	1797.0	1736.5	1709.7	1676.1	1622.4	1582.2	1555.4	1562.3
57.5°	1656.1	1589.1	1535.5	1455.0	1421.4	1401.1	1347.5	1293.9	1267.1	1267.1
60°	1367.8	1314.1	1247.1	1173.3	1146.5	1113.1	1045.8	1012.4	992.2	972.2
62.5°	1092.8	1052.6	992.2	898.4	878.4	844.7	798.0	757.7	737.5	737.5
65°	817.9	777.7	724.1	657.1	630.3	603.5	563.2	523.0	502.8	496.2
67.5°	576.6	529.6	482.8	429.2	409.0	395.6	355.3	328.5	315.1	308.3
70°	348.5	321.7	288.3	248.1	227.9	214.5	187.7	167.7	160.9	154.3
72.5°	181.1	160.9	134.0	107.2	93.8	80.4	67.0	53.6	47.0	47.0
75°	67.0	53.6	33.6	20.2	13.4	13.4	13.4	13.4	13.4	13.4
77.5°	13.4	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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)