

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: P840116

Luminaire Tested: **LD4C100D010 EU41009050 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: P840116  
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 EU41009050 4LBCSSQMMS  
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

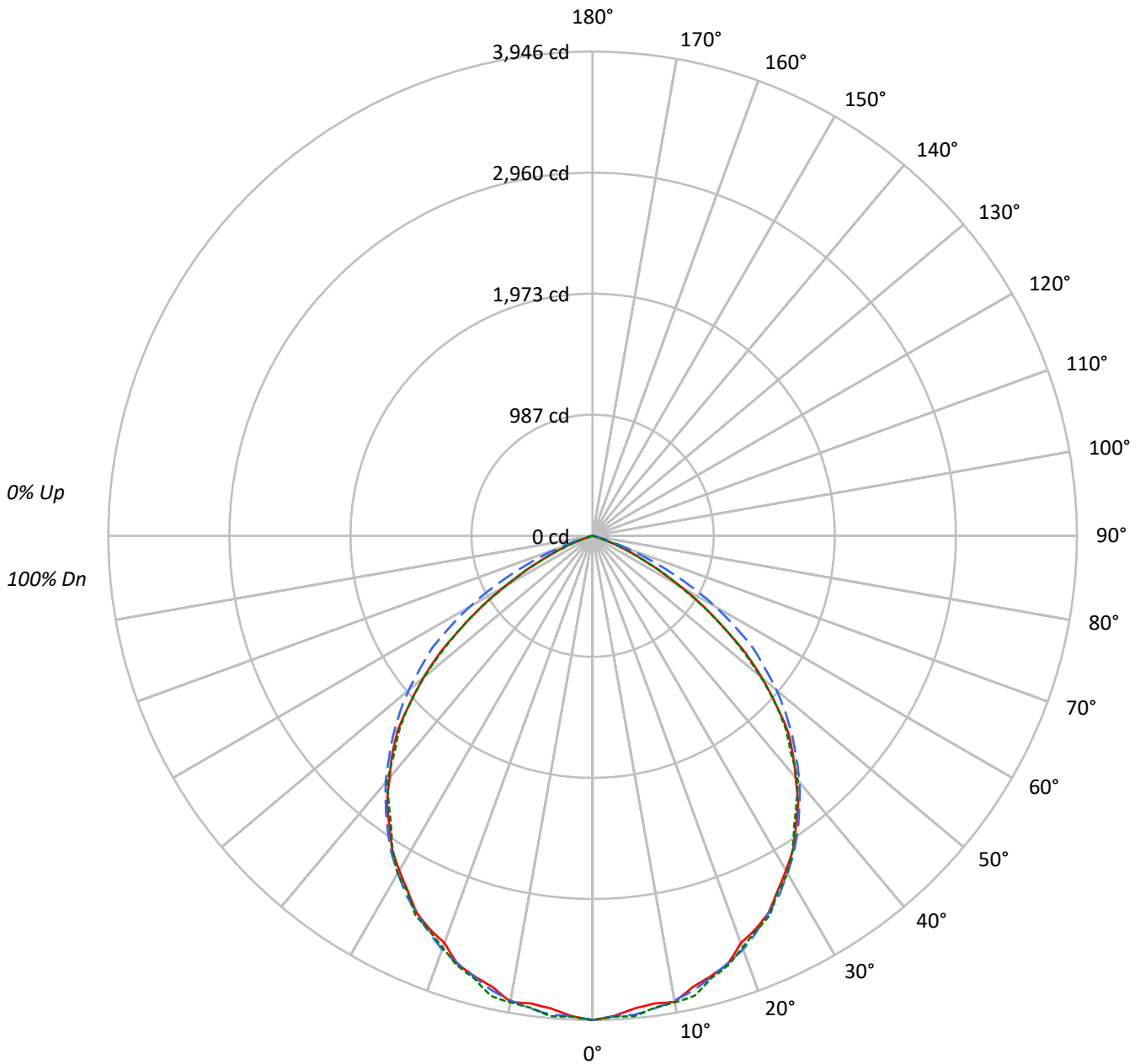
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8430.0 lumens  
Efficiency: N/A  
Efficacy: 73.7 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

TEST NUMBER: P840116

CATALOG NUMBER: LD4C100D010 EU41009050 4LBCSSQMMS

### Luminous Intensity Polar Plot





TEST NUMBER: P840116

CATALOG NUMBER: LD4C100D010 EU41009050 4LBCSSQMMS

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

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

	0°	45°	90°
0°	380774	380774	380774
5°	374635	379507	380592
10°	377869	376772	378408
15°	371251	371800	372919
20°	362619	368369	366655
25°	361050	361050	363435
30°	350982	353478	354113
35°	340028	343350	337389
40°	324088	330424	327602
45°	306712	313617	303655
50°	270123	293675	268442
55°	218758	268737	219716
60°	160075	222831	156852
65°	97284	158677	94727
70°	37944	85424	36393
75°	4175	23002	4175
80°	3167	3167	3167
85°	0	0	0



TEST NUMBER: P840116

CATALOG NUMBER: LD4C100D010 EU41009050 4LBCSSQMMS

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	372.5	4.4
10°-20°	1054.1	12.5
20°-30°	1564.0	18.6
30°-40°	1812.2	21.5
40°-50°	1737.5	20.6
50°-60°	1277.5	15.2
60°-70°	551.8	6.5
70°-80°	59.6	0.7
80°-90°	0.8	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°	2990.6	35.5
0°-40°	4802.8	57.0
0°-60°	7817.9	92.7
0°-90°	8430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8430.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3946	3946	3946	3946	3946	
5°	3868	3907	3918	3924	3929	369
15°	3716	3739	3722	3728	3733	1047
25°	3391	3386	3391	3397	3414	1553
35°	2887	2904	2915	2909	2864	1805
45°	2248	2254	2298	2265	2225	1709
55°	1300	1435	1598	1429	1306	1170
65°	426	532	695	527	415	438
75°	11	17	62	11	11	34
85°	0	0	0	0	0	1
90°	0	0	0	0	0	



TEST NUMBER: P840116

CATALOG NUMBER: LD4C100D010 EU41009050 4LBCSSQMMS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3
2.5°	3918.2	3963.0	3968.8	3940.6	3929.4	3912.7	3951.8	3923.9	3935.1	3923.9	3918.2
5°	3867.9	3918.2	3923.9	3923.9	3912.7	3907.0	3923.9	3918.2	3912.7	3901.5	3918.2
7.5°	3845.5	3873.4	3901.5	3867.9	3884.6	3879.1	3918.2	3901.5	3895.8	3895.8	3884.6
10°	3856.7	3851.0	3873.4	3839.8	3851.0	3839.8	3873.4	3873.4	3862.2	3851.0	3845.5
12.5°	3766.8	3811.6	3811.6	3806.1	3794.9	3778.0	3811.6	3834.3	3800.4	3800.4	3794.9
15°	3716.5	3727.7	3733.2	3733.2	3727.7	3738.9	3755.6	3733.2	3738.9	3710.8	3722.0
17.5°	3660.5	3638.0	3654.7	3643.5	3649.3	3660.5	3682.9	3682.9	3649.3	3643.5	3654.7
20°	3531.5	3598.7	3604.4	3570.8	3576.3	3576.3	3615.6	3582.0	3604.4	3576.3	3587.5
22.5°	3469.7	3514.6	3520.3	3475.4	3503.3	3469.7	3509.1	3458.5	3514.6	3475.4	3492.1
25°	3391.3	3385.8	3402.5	3380.1	3385.8	3385.8	3413.7	3391.3	3408.2	3385.8	3391.3
27.5°	3262.5	3307.3	3301.6	3279.2	3290.4	3284.9	3341.0	3279.2	3312.8	3284.9	3296.1
30°	3150.2	3189.6	3178.3	3155.9	3155.9	3139.0	3200.8	3183.8	3178.3	3178.3	3172.6
32.5°	3038.2	3043.9	3032.7	3038.2	3043.9	3021.5	3071.8	3049.4	3043.9	3049.4	3055.1
35°	2886.7	2886.7	2898.0	2881.3	2903.7	2903.7	2948.5	2920.4	2914.9	2898.0	2914.9
37.5°	2752.3	2735.6	2741.1	2741.1	2752.3	2763.5	2785.9	2774.7	2774.7	2758.0	2769.2
40°	2573.0	2561.8	2578.5	2578.5	2595.4	2595.4	2617.8	2606.6	2623.3	2623.3	2623.3
42.5°	2416.1	2416.1	2404.9	2421.6	2427.3	2421.6	2460.9	2455.2	2460.9	2449.7	2455.2
45°	2247.7	2247.7	2236.5	2231.0	2258.9	2253.5	2298.3	2281.4	2303.8	2292.6	2298.3
47.5°	2017.9	2046.0	2029.1	2046.0	2079.6	2085.3	2113.3	2102.1	2124.5	2107.8	2130.2
50°	1799.5	1799.5	1816.2	1838.6	1872.2	1877.9	1911.5	1933.9	1945.2	1950.6	1956.4
52.5°	1569.6	1563.9	1580.8	1608.7	1636.9	1659.3	1692.9	1726.5	1748.9	1782.5	1765.6
55°	1300.4	1311.6	1328.6	1362.2	1407.0	1434.9	1463.0	1507.9	1547.2	1563.9	1597.5
57.5°	1070.6	1059.4	1070.6	1115.4	1166.0	1188.4	1227.7	1272.5	1328.6	1362.2	1373.4
60°	829.5	835.2	846.4	885.8	924.9	958.5	975.4	1048.2	1098.7	1132.3	1154.7
62.5°	611.1	622.3	633.5	667.1	706.3	734.4	762.3	824.0	868.9	902.5	924.9
65°	426.1	431.6	448.5	465.2	504.5	532.4	554.8	605.4	650.2	678.3	695.0
67.5°	263.5	269.0	280.2	302.8	330.7	353.1	375.5	409.2	448.5	476.4	482.1
70°	134.5	140.2	145.7	162.6	185.0	196.2	212.9	241.1	269.0	291.4	302.8
72.5°	44.8	44.8	50.5	61.7	73.0	84.2	89.7	117.8	140.2	151.4	156.9
75°	11.2	11.2	11.2	11.2	11.2	16.9	16.9	33.6	44.8	56.0	61.7
77.5°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	11.2	11.2
80°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
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



TEST NUMBER: P840116

CATALOG NUMBER: LD4C100D010 EU41009050 4LBCSSQMMS

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3	3946.3
2.5°	3946.3	3935.1	3929.4	3935.1	3935.1	3929.4	3946.3	3968.8	3996.7	3923.9
5°	3940.6	3929.4	3940.6	3907.0	3923.9	3912.7	3935.1	3929.4	3951.8	3929.4
7.5°	3923.9	3901.5	3907.0	3890.3	3912.7	3884.6	3901.5	3935.1	3912.7	3879.1
10°	3867.9	3856.7	3895.8	3839.8	3828.6	3851.0	3895.8	3862.2	3851.0	3862.2
12.5°	3811.6	3811.6	3828.6	3783.7	3789.2	3800.4	3822.8	3800.4	3811.6	3839.8
15°	3750.1	3738.9	3766.8	3733.2	3727.7	3716.5	3738.9	3738.9	3750.1	3733.2
17.5°	3677.2	3660.5	3660.5	3649.3	3643.5	3671.7	3682.9	3688.4	3694.1	3671.7
20°	3587.5	3582.0	3598.7	3582.0	3587.5	3593.2	3593.2	3582.0	3632.3	3570.8
22.5°	3492.1	3509.1	3486.6	3475.4	3486.6	3497.9	3497.9	3503.3	3492.1	3480.9
25°	3397.0	3408.2	3413.7	3380.1	3397.0	3380.1	3419.4	3424.9	3402.5	3413.7
27.5°	3312.8	3296.1	3290.4	3268.0	3279.2	3273.7	3279.2	3279.2	3312.8	3268.0
30°	3183.8	3167.1	3172.6	3155.9	3161.4	3155.9	3161.4	3161.4	3183.8	3178.3
32.5°	3060.6	3043.9	3049.4	3032.7	3032.7	3038.2	3026.9	3026.9	3043.9	3032.7
35°	2942.8	2903.7	2909.2	2903.7	2909.2	2886.7	2886.7	2881.3	2892.5	2864.3
37.5°	2774.7	2758.0	2752.3	2746.8	2752.3	2741.1	2752.3	2735.6	2752.3	2729.9
40°	2623.3	2612.1	2617.8	2584.2	2584.2	2589.7	2578.5	2573.0	2578.5	2600.9
42.5°	2472.1	2449.7	2438.5	2427.3	2432.8	2416.1	2410.3	2399.1	2410.3	2387.9
45°	2292.6	2292.6	2287.1	2258.9	2264.7	2264.7	2242.2	2219.8	2225.3	2225.3
47.5°	2130.2	2119.0	2113.3	2085.3	2079.6	2074.1	2051.5	2034.8	2034.8	2017.9
50°	1950.6	1939.4	1922.7	1894.6	1883.4	1849.8	1833.1	1810.7	1788.3	1788.3
52.5°	1782.5	1743.2	1720.8	1676.0	1659.3	1642.4	1597.5	1580.8	1563.9	1547.2
55°	1580.8	1547.2	1502.4	1451.8	1429.4	1401.3	1356.5	1322.8	1300.4	1306.1
57.5°	1384.6	1328.6	1283.7	1216.5	1188.4	1171.4	1126.6	1081.8	1059.4	1059.4
60°	1143.5	1098.7	1042.7	980.9	958.5	930.6	874.4	846.4	829.5	812.8
62.5°	913.7	880.1	829.5	751.1	734.4	706.3	667.1	633.5	616.6	616.6
65°	683.8	650.2	605.4	549.4	526.9	504.5	470.9	437.3	420.4	414.9
67.5°	482.1	442.8	403.7	358.8	341.9	330.7	297.1	274.7	263.5	257.8
70°	291.4	269.0	241.1	207.4	190.5	179.3	156.9	140.2	134.5	129.0
72.5°	151.4	134.5	112.1	89.7	78.4	67.2	56.0	44.8	39.3	39.3
75°	56.0	44.8	28.1	16.9	11.2	11.2	11.2	11.2	11.2	11.2
77.5°	11.2	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
80°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
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)