

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: P840114

Luminaire Tested: **LD4C100D010 EU41009040 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: P840114  
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 EU41009040 4LBCSSQMMS  
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

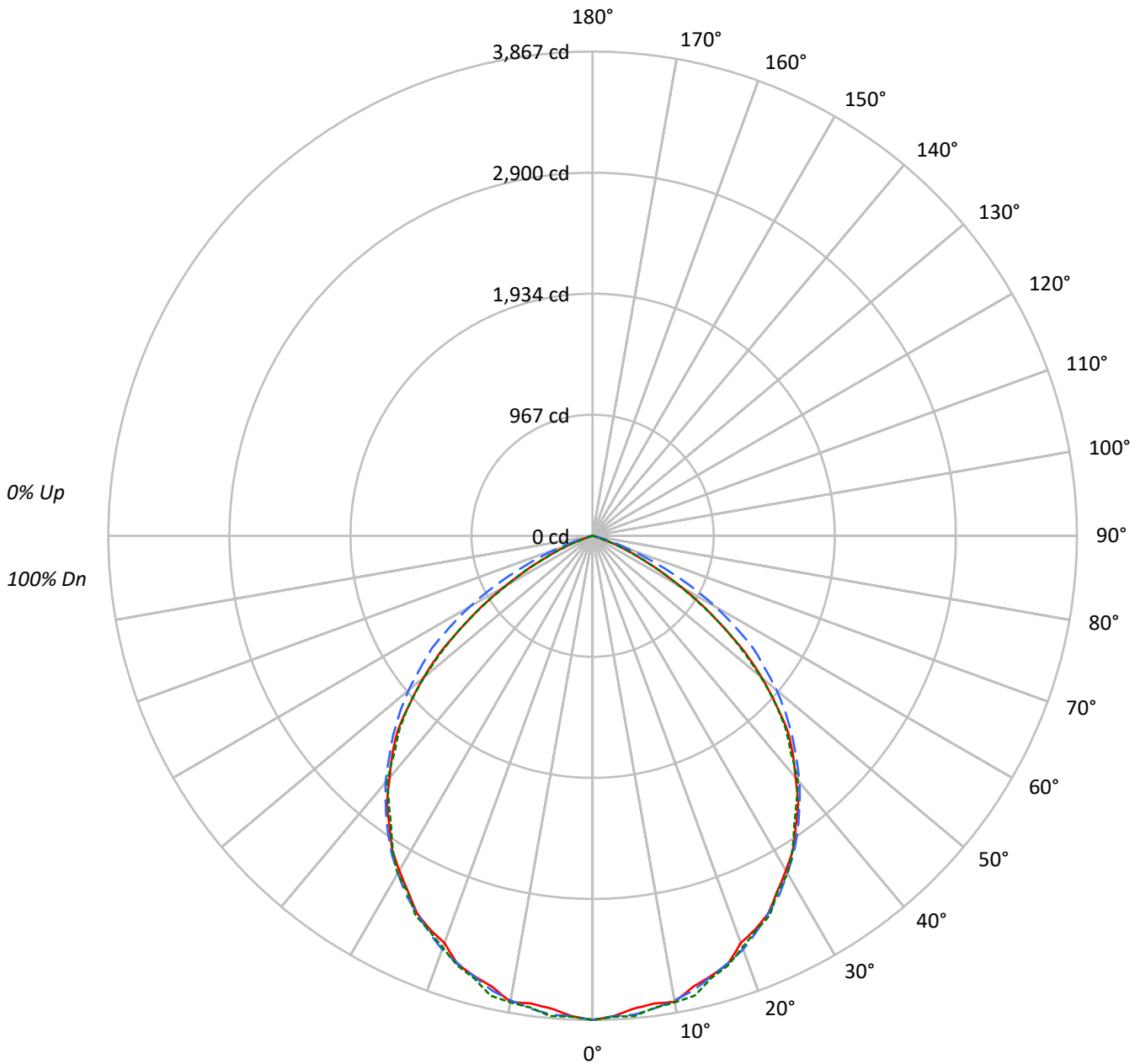
Lumens per Lamp: N/A  
Luminaire Lumens: 8260.0 lumens  
Efficiency: N/A  
Efficacy: 72.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 114.4  
Input Voltage (V):  
Input Current (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: 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°	373103	373103	373103
5°	367080	371855	372921
10°	370247	369169	370776
15°	363759	364299	365397
20°	355308	360945	359261
25°	353768	353768	356100
30°	343907	346358	346982
35°	333172	336423	330593
40°	317551	323761	320990
45°	300530	307285	297528
50°	264674	287746	263023
55°	214350	263320	215292
60°	156852	218354	153688
65°	95320	155481	92809
70°	37183	83703	35659
75°	4101	22555	4101
80°	3112	3112	3112
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	365.0	4.4
10°-20°	1032.8	12.5
20°-30°	1532.5	18.6
30°-40°	1775.7	21.5
40°-50°	1702.5	20.6
50°-60°	1251.8	15.2
60°-70°	540.7	6.5
70°-80°	58.4	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°	2930.3	35.5
0°-40°	4706.0	57.0
0°-60°	7660.2	92.7
0°-90°	8260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8260.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3867	3867	3867	3867	3867	
5°	3790	3828	3839	3845	3850	362
15°	3642	3664	3647	3652	3658	1026
25°	3323	3318	3323	3328	3345	1521
35°	2828	2845	2856	2850	2807	1769
45°	2202	2208	2252	2219	2180	1674
55°	1274	1406	1565	1401	1280	1147
65°	418	522	681	516	406	429
75°	11	17	60	11	11	34
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°	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8
2.5°	3839.2	3883.1	3888.7	3861.2	3850.2	3833.8	3872.1	3844.8	3855.8	3844.8	3839.2
5°	3789.9	3839.2	3844.8	3844.8	3833.8	3828.2	3844.8	3839.2	3833.8	3822.8	3839.2
7.5°	3767.9	3795.3	3822.8	3789.9	3806.3	3800.9	3839.2	3822.8	3817.2	3817.2	3806.3
10°	3778.9	3773.3	3795.3	3762.3	3773.3	3762.3	3795.3	3795.3	3784.3	3773.3	3767.9
12.5°	3690.9	3734.8	3734.8	3729.4	3718.4	3701.8	3734.8	3757.0	3723.8	3723.8	3718.4
15°	3641.5	3652.5	3657.9	3657.9	3652.5	3663.5	3679.9	3657.9	3663.5	3635.9	3646.9
17.5°	3586.6	3564.7	3581.0	3570.1	3575.7	3586.6	3608.6	3608.6	3575.7	3570.1	3581.0
20°	3460.3	3526.1	3531.7	3498.8	3504.2	3504.2	3542.7	3509.8	3531.7	3504.2	3515.2
22.5°	3399.8	3443.7	3449.3	3405.4	3432.7	3399.8	3438.3	3388.8	3443.7	3405.4	3421.7
25°	3322.9	3317.5	3333.9	3311.9	3317.5	3317.5	3344.8	3322.9	3339.5	3317.5	3322.9
27.5°	3196.7	3240.6	3235.0	3213.1	3224.1	3218.7	3273.6	3213.1	3246.0	3218.7	3229.7
30°	3086.7	3125.2	3114.3	3092.3	3092.3	3075.7	3136.2	3119.6	3114.3	3114.3	3108.7
32.5°	2976.9	2982.5	2971.5	2976.9	2982.5	2960.5	3009.8	2987.9	2982.5	2987.9	2993.5
35°	2828.5	2828.5	2839.5	2823.2	2845.1	2845.1	2889.0	2861.5	2856.1	2839.5	2856.1
37.5°	2696.8	2680.4	2685.8	2685.8	2696.8	2707.7	2729.7	2718.7	2718.7	2702.4	2713.3
40°	2521.1	2510.1	2526.5	2526.5	2543.0	2543.0	2565.0	2554.0	2570.4	2570.4	2570.4
42.5°	2367.3	2367.3	2356.4	2372.7	2378.3	2372.7	2411.3	2405.7	2411.3	2400.3	2405.7
45°	2202.4	2202.4	2191.4	2186.0	2213.4	2208.0	2251.9	2235.4	2257.3	2246.3	2251.9
47.5°	1977.2	2004.8	1988.2	2004.8	2037.7	2043.3	2070.6	2059.7	2081.6	2065.3	2087.2
50°	1763.2	1763.2	1779.5	1801.5	1834.4	1840.0	1873.0	1894.9	1905.9	1911.3	1916.9
52.5°	1538.0	1532.4	1548.9	1576.3	1603.8	1625.8	1658.8	1691.7	1713.7	1746.6	1730.0
55°	1274.2	1285.2	1301.8	1334.7	1378.6	1406.0	1433.5	1477.5	1516.0	1532.4	1565.3
57.5°	1049.0	1038.0	1049.0	1092.9	1142.4	1164.4	1202.9	1246.9	1301.8	1334.7	1345.7
60°	812.8	818.4	829.4	867.9	906.2	939.2	955.8	1027.0	1076.6	1109.5	1131.5
62.5°	598.8	609.8	620.7	653.7	692.0	719.6	746.9	807.4	851.3	884.3	906.2
65°	417.5	422.9	439.4	455.8	494.4	521.7	543.7	593.2	637.1	664.7	681.0
67.5°	258.2	263.5	274.5	296.7	324.0	346.0	368.0	400.9	439.4	466.8	472.4
70°	131.8	137.4	142.8	159.3	181.3	192.3	208.6	236.2	263.5	285.5	296.7
72.5°	43.9	43.9	49.5	60.5	71.5	82.5	87.8	115.4	137.4	148.3	153.7
75°	11.0	11.0	11.0	11.0	11.0	16.6	16.6	32.9	43.9	54.9	60.5
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	11.0	11.0
80°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
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°	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8	3866.8
2.5°	3866.8	3855.8	3850.2	3855.8	3855.8	3850.2	3866.8	3888.7	3916.1	3844.8
5°	3861.2	3850.2	3861.2	3828.2	3844.8	3833.8	3855.8	3850.2	3872.1	3850.2
7.5°	3844.8	3822.8	3828.2	3811.9	3833.8	3806.3	3822.8	3855.8	3833.8	3800.9
10°	3789.9	3778.9	3817.2	3762.3	3751.4	3773.3	3817.2	3784.3	3773.3	3784.3
12.5°	3734.8	3734.8	3751.4	3707.4	3712.8	3723.8	3745.8	3723.8	3734.8	3762.3
15°	3674.5	3663.5	3690.9	3657.9	3652.5	3641.5	3663.5	3663.5	3674.5	3657.9
17.5°	3603.0	3586.6	3586.6	3575.7	3570.1	3597.6	3608.6	3614.0	3619.6	3597.6
20°	3515.2	3509.8	3526.1	3509.8	3515.2	3520.8	3520.8	3509.8	3559.1	3498.8
22.5°	3421.7	3438.3	3416.3	3405.4	3416.3	3427.3	3427.3	3432.7	3421.7	3410.7
25°	3328.5	3339.5	3344.8	3311.9	3328.5	3311.9	3350.4	3355.8	3333.9	3344.8
27.5°	3246.0	3229.7	3224.1	3202.1	3213.1	3207.7	3213.1	3213.1	3246.0	3202.1
30°	3119.6	3103.3	3108.7	3092.3	3097.7	3092.3	3097.7	3097.7	3119.6	3114.3
32.5°	2998.8	2982.5	2987.9	2971.5	2971.5	2976.9	2965.9	2965.9	2982.5	2971.5
35°	2883.4	2845.1	2850.5	2845.1	2850.5	2828.5	2828.5	2823.2	2834.1	2806.6
37.5°	2718.7	2702.4	2696.8	2691.4	2696.8	2685.8	2696.8	2680.4	2696.8	2674.8
40°	2570.4	2559.4	2565.0	2532.1	2532.1	2537.4	2526.5	2521.1	2526.5	2548.4
42.5°	2422.2	2400.3	2389.3	2378.3	2383.7	2367.3	2361.7	2350.8	2361.7	2339.8
45°	2246.3	2246.3	2241.0	2213.4	2219.0	2219.0	2197.0	2175.1	2180.4	2180.4
47.5°	2087.2	2076.2	2070.6	2043.3	2037.7	2032.3	2010.1	1993.8	1993.8	1977.2
50°	1911.3	1900.3	1884.0	1856.4	1845.4	1812.5	1796.1	1774.2	1752.2	1752.2
52.5°	1746.6	1708.1	1686.1	1642.2	1625.8	1609.2	1565.3	1548.9	1532.4	1516.0
55°	1548.9	1516.0	1472.1	1422.6	1400.6	1373.0	1329.1	1296.2	1274.2	1279.8
57.5°	1356.7	1301.8	1257.8	1192.0	1164.4	1147.8	1103.9	1060.0	1038.0	1038.0
60°	1120.5	1076.6	1021.6	961.1	939.2	911.8	856.7	829.4	812.8	796.4
62.5°	895.3	862.3	812.8	735.9	719.6	692.0	653.7	620.7	604.2	604.2
65°	670.0	637.1	593.2	538.3	516.3	494.4	461.4	428.5	411.9	406.5
67.5°	472.4	433.9	395.5	351.6	335.0	324.0	291.1	269.1	258.2	252.6
70°	285.5	263.5	236.2	203.3	186.7	175.7	153.7	137.4	131.8	126.4
72.5°	148.3	131.8	109.8	87.8	76.9	65.9	54.9	43.9	38.5	38.5
75°	54.9	43.9	27.6	16.6	11.0	11.0	11.0	11.0	11.0	11.0
77.5°	11.0	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
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)