

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: P840110

Luminaire Tested: **LD4C100D010 EU41009030 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: P840110
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 EU41009030 4LBCSSQMMS
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

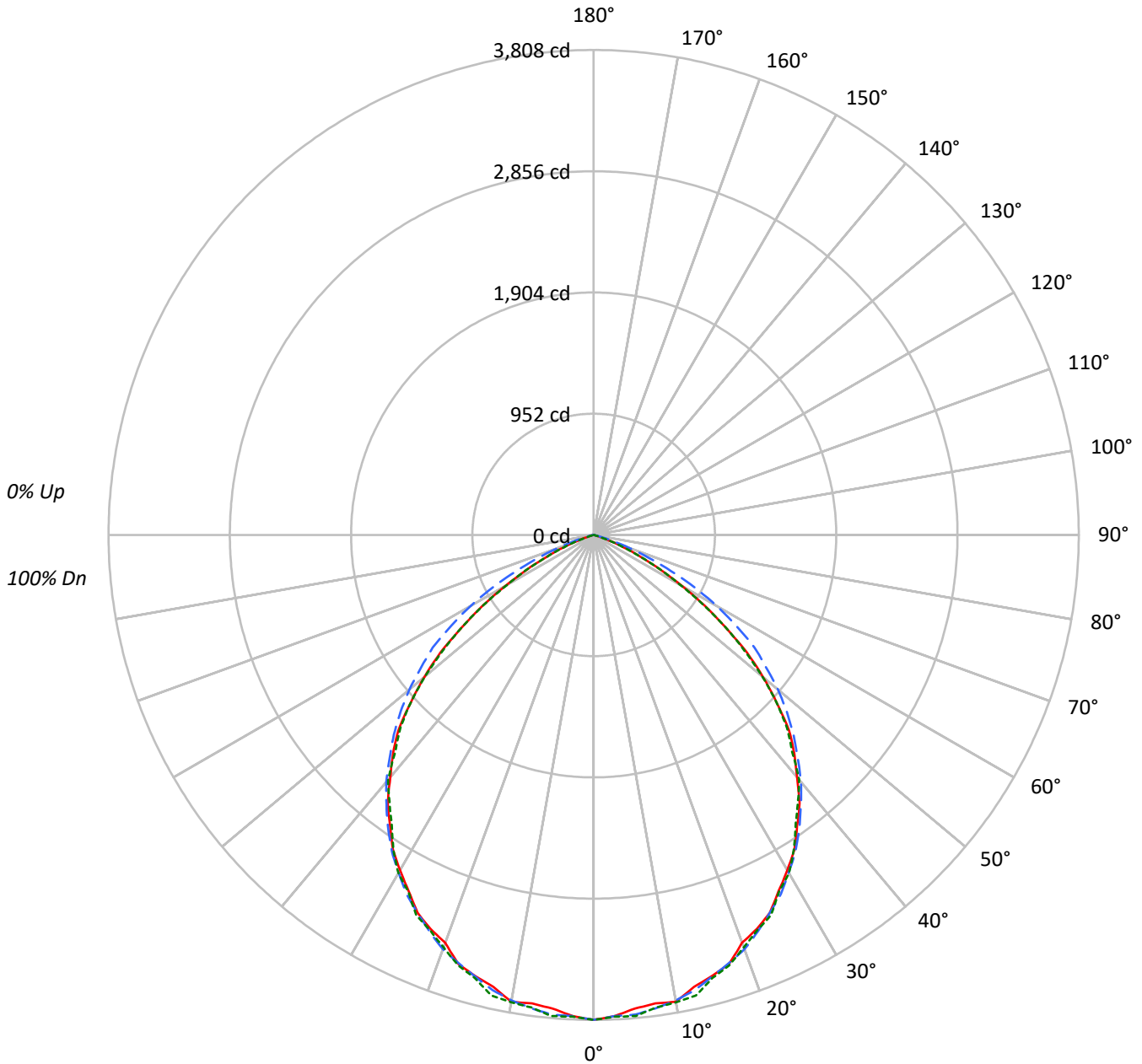
Lumens per Lamp: N/A
Luminaire Lumens: 8134.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 114.4
Input Voltage (V):
Input Current (A_{in}): 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°	367410	367410	367410
5°	361482	366179	367235
10°	364603	363545	365123
15°	358215	358744	359823
20°	349887	355431	353778
25°	348371	348371	350670
30°	338659	341066	341679
35°	328096	331288	325551
40°	312702	318823	316090
45°	295946	302605	292998
50°	260636	283363	259015
55°	211087	259299	212012
60°	154459	215016	151352
65°	93859	153106	91393
70°	36618	82434	35123
75°	4026	22219	4026
80°	3056	3056	3056
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.4	4.4
10°-20°	1017.1	12.5
20°-30°	1509.1	18.6
30°-40°	1748.6	21.5
40°-50°	1676.5	20.6
50°-60°	1232.7	15.2
60°-70°	532.4	6.5
70°-80°	57.5	0.7
80°-90°	0.7	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°	2885.6	35.5
0°-40°	4634.2	57.0
0°-60°	7543.4	92.7
0°-90°	8134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8134.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3808	3808	3808	3808	3808	
5°	3732	3770	3781	3786	3792	356
15°	3586	3608	3591	3597	3602	1011
25°	3272	3267	3272	3278	3294	1498
35°	2785	2802	2812	2807	2764	1742
45°	2169	2174	2218	2185	2147	1649
55°	1255	1384	1541	1379	1260	1129
65°	411	514	671	508	400	423
75°	11	16	60	11	11	33
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°	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8
2.5°	3780.6	3823.9	3829.4	3802.3	3791.5	3775.3	3813.1	3786.2	3797.0	3786.2	3780.6
5°	3732.1	3780.6	3786.2	3786.2	3775.3	3769.8	3786.2	3780.6	3775.3	3764.5	3780.6
7.5°	3710.5	3737.4	3764.5	3732.1	3748.2	3742.9	3780.6	3764.5	3759.0	3759.0	3748.2
10°	3721.3	3715.8	3737.4	3704.9	3715.8	3704.9	3737.4	3737.4	3726.6	3715.8	3710.5
12.5°	3634.6	3677.8	3677.8	3672.5	3661.7	3645.4	3677.8	3699.6	3667.0	3667.0	3661.7
15°	3586.0	3596.8	3602.1	3602.1	3596.8	3607.6	3623.7	3602.1	3607.6	3580.5	3591.3
17.5°	3531.9	3510.3	3526.4	3515.6	3521.1	3531.9	3553.6	3553.6	3521.1	3515.6	3526.4
20°	3407.5	3472.4	3477.9	3445.4	3450.7	3450.7	3488.7	3456.2	3477.9	3450.7	3461.5
22.5°	3347.9	3391.1	3396.7	3353.4	3380.3	3347.9	3385.8	3337.1	3391.1	3353.4	3369.5
25°	3272.2	3266.9	3283.0	3261.4	3266.9	3266.9	3293.8	3272.2	3288.5	3266.9	3272.2
27.5°	3148.0	3191.2	3185.7	3164.1	3174.9	3169.6	3223.6	3164.1	3196.5	3169.6	3180.4
30°	3039.6	3077.6	3066.7	3045.1	3045.1	3028.8	3088.4	3072.0	3066.7	3066.7	3061.2
32.5°	2931.5	2937.0	2926.2	2931.5	2937.0	2915.4	2963.9	2942.3	2937.0	2942.3	2947.8
35°	2785.4	2785.4	2796.2	2780.1	2801.7	2801.7	2845.0	2817.8	2812.5	2796.2	2812.5
37.5°	2655.6	2639.5	2644.8	2644.8	2655.6	2666.4	2688.1	2677.3	2677.3	2661.1	2672.0
40°	2482.6	2471.8	2487.9	2487.9	2504.2	2504.2	2525.9	2515.1	2531.2	2531.2	2531.2
42.5°	2331.2	2331.2	2320.4	2336.5	2342.0	2336.5	2374.5	2369.0	2374.5	2363.7	2369.0
45°	2168.8	2168.8	2158.0	2152.7	2179.6	2174.3	2217.6	2201.3	2222.9	2212.1	2217.6
47.5°	1947.0	1974.2	1957.8	1974.2	2006.6	2012.1	2039.1	2028.2	2049.9	2033.8	2055.4
50°	1736.3	1736.3	1752.4	1774.0	1806.5	1812.0	1844.4	1866.0	1876.9	1882.2	1887.7
52.5°	1514.5	1509.0	1525.3	1552.2	1579.4	1601.0	1633.4	1665.9	1687.5	1720.0	1703.6
55°	1254.8	1265.6	1281.9	1314.3	1357.6	1384.5	1411.7	1454.9	1492.9	1509.0	1541.4
57.5°	1033.0	1022.2	1033.0	1076.2	1125.0	1146.6	1184.6	1227.8	1281.9	1314.3	1325.2
60°	800.4	805.9	816.7	854.7	892.4	924.9	941.2	1011.4	1060.1	1092.6	1114.2
62.5°	589.6	600.5	611.3	643.7	681.5	708.6	735.5	795.1	838.4	870.8	892.4
65°	411.1	416.4	432.7	448.9	486.8	513.7	535.4	584.1	627.4	654.5	670.6
67.5°	254.2	259.5	270.3	292.2	319.1	340.7	362.4	394.8	432.7	459.7	465.2
70°	129.8	135.3	140.6	156.9	178.5	189.3	205.5	232.6	259.5	281.1	292.2
72.5°	43.3	43.3	48.8	59.6	70.4	81.2	86.5	113.6	135.3	146.1	151.4
75°	10.8	10.8	10.8	10.8	10.8	16.3	16.3	32.4	43.3	54.1	59.6
77.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	10.8	10.8
80°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
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°	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8	3807.8
2.5°	3807.8	3797.0	3791.5	3797.0	3797.0	3791.5	3807.8	3829.4	3856.3	3786.2
5°	3802.3	3791.5	3802.3	3769.8	3786.2	3775.3	3797.0	3791.5	3813.1	3791.5
7.5°	3786.2	3764.5	3769.8	3753.7	3775.3	3748.2	3764.5	3797.0	3775.3	3742.9
10°	3732.1	3721.3	3759.0	3704.9	3694.1	3715.8	3759.0	3726.6	3715.8	3726.6
12.5°	3677.8	3677.8	3694.1	3650.9	3656.2	3667.0	3688.6	3667.0	3677.8	3704.9
15°	3618.4	3607.6	3634.6	3602.1	3596.8	3586.0	3607.6	3607.6	3618.4	3602.1
17.5°	3548.0	3531.9	3531.9	3521.1	3515.6	3542.7	3553.6	3558.9	3564.4	3542.7
20°	3461.5	3456.2	3472.4	3456.2	3461.5	3467.1	3467.1	3456.2	3504.8	3445.4
22.5°	3369.5	3385.8	3364.2	3353.4	3364.2	3375.0	3375.0	3380.3	3369.5	3358.7
25°	3277.7	3288.5	3293.8	3261.4	3277.7	3261.4	3299.3	3304.6	3283.0	3293.8
27.5°	3196.5	3180.4	3174.9	3153.3	3164.1	3158.8	3164.1	3164.1	3196.5	3153.3
30°	3072.0	3055.9	3061.2	3045.1	3050.4	3045.1	3050.4	3050.4	3072.0	3066.7
32.5°	2953.1	2937.0	2942.3	2926.2	2926.2	2931.5	2920.7	2920.7	2937.0	2926.2
35°	2839.5	2801.7	2807.0	2801.7	2807.0	2785.4	2785.4	2780.1	2790.9	2763.8
37.5°	2677.3	2661.1	2655.6	2650.3	2655.6	2644.8	2655.6	2639.5	2655.6	2634.0
40°	2531.2	2520.4	2525.9	2493.4	2493.4	2498.7	2487.9	2482.6	2487.9	2509.5
42.5°	2385.3	2363.7	2352.9	2342.0	2347.3	2331.2	2325.7	2314.9	2325.7	2304.1
45°	2212.1	2212.1	2206.8	2179.6	2185.1	2185.1	2163.5	2141.9	2147.2	2147.2
47.5°	2055.4	2044.6	2039.1	2012.1	2006.6	2001.3	1979.5	1963.4	1963.4	1947.0
50°	1882.2	1871.3	1855.2	1828.1	1817.3	1784.8	1768.7	1747.1	1725.5	1725.5
52.5°	1720.0	1682.0	1660.4	1617.1	1601.0	1584.7	1541.4	1525.3	1509.0	1492.9
55°	1525.3	1492.9	1449.6	1400.9	1379.2	1352.1	1308.8	1276.4	1254.8	1260.3
57.5°	1336.0	1281.9	1238.7	1173.8	1146.6	1130.3	1087.1	1043.8	1022.2	1022.2
60°	1103.4	1060.1	1006.1	946.5	924.9	897.9	843.7	816.7	800.4	784.3
62.5°	881.6	849.2	800.4	724.7	708.6	681.5	643.7	611.3	594.9	594.9
65°	659.8	627.4	584.1	530.1	508.4	486.8	454.4	421.9	405.6	400.3
67.5°	465.2	427.2	389.5	346.2	329.9	319.1	286.7	265.0	254.2	248.7
70°	281.1	259.5	232.6	200.2	183.8	173.0	151.4	135.3	129.8	124.5
72.5°	146.1	129.8	108.1	86.5	75.7	64.9	54.1	43.3	38.0	38.0
75°	54.1	43.3	27.1	16.3	10.8	10.8	10.8	10.8	10.8	10.8
77.5°	10.8	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
80°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
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)