

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: P840272

Luminaire Tested: **LD4C90D010 EU4909035 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: P840272  
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: LD4C90D010 EU4909035 4LBCSSQMMS  
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

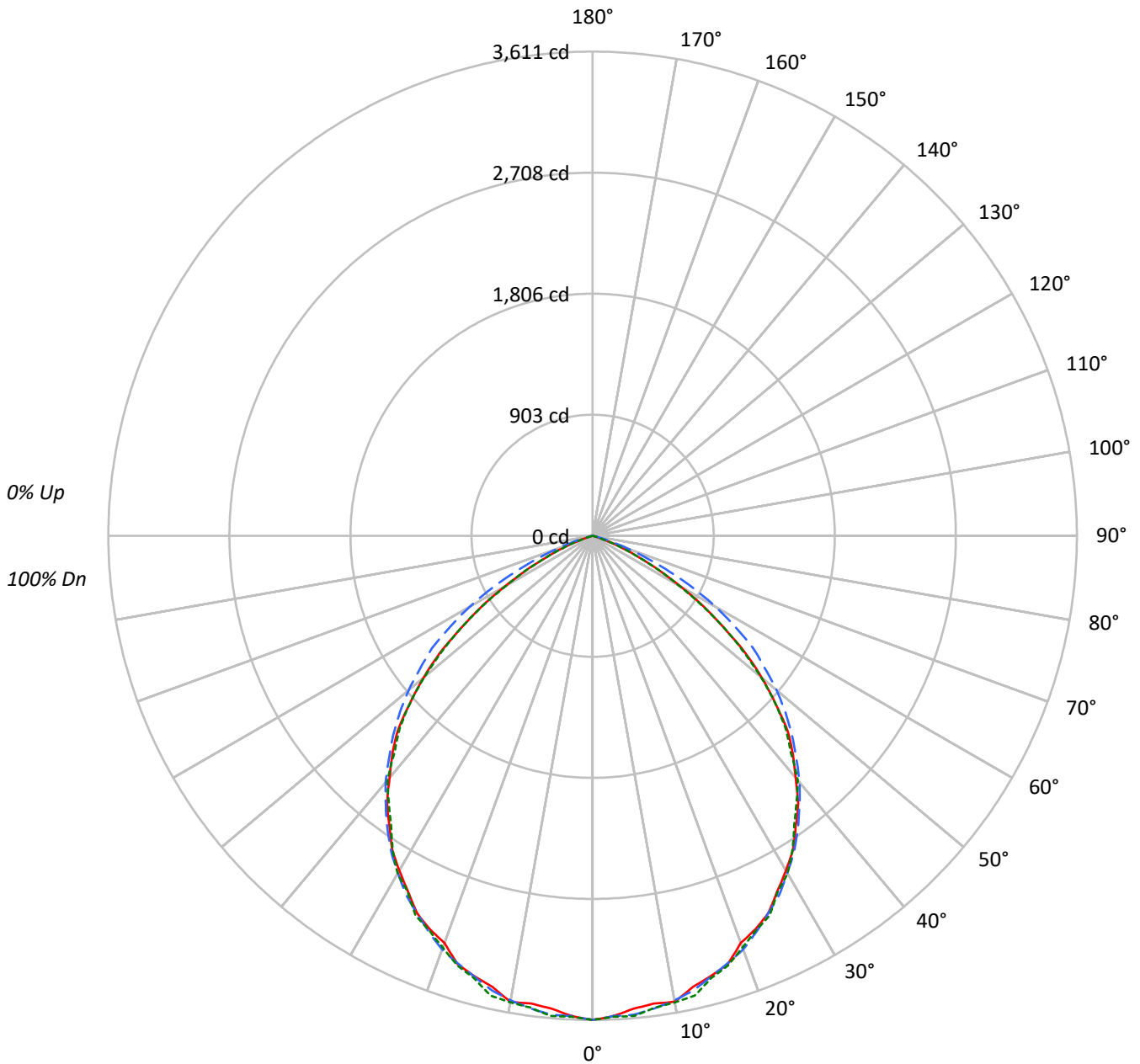
Lumens per Lamp: N/A  
Luminaire Lumens: 7713.0 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 97.1  
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°	348392	348392	348392
5°	342769	347234	348222
10°	345733	344724	346223
15°	339675	340174	341203
20°	331774	337041	335470
25°	330336	330336	332518
30°	321134	323418	323997
35°	311110	314149	308695
40°	296516	302323	299741
45°	280635	286939	277838
50°	247141	268697	245610
55°	200152	245875	201044
60°	146470	203881	143518
65°	88996	145184	86667
70°	34700	78146	33290
75°	3840	21063	3840
80°	2889	2889	2889
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	340.8	4.4
10°-20°	964.4	12.5
20°-30°	1431.0	18.6
30°-40°	1658.1	21.5
40°-50°	1589.7	20.6
50°-60°	1168.9	15.2
60°-70°	504.8	6.5
70°-80°	54.5	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°	2736.2	35.5
0°-40°	4394.3	57.0
0°-60°	7152.9	92.7
0°-90°	7713.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7713.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3611	3611	3611	3611	3611	
5°	3539	3575	3585	3590	3595	338
15°	3400	3421	3405	3411	3416	958
25°	3103	3098	3103	3108	3123	1421
35°	2641	2657	2667	2662	2621	1652
45°	2057	2062	2103	2072	2036	1563
55°	1190	1313	1462	1308	1195	1071
65°	390	487	636	482	380	401
75°	10	16	56	10	10	31
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°	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7
2.5°	3585.0	3626.0	3631.2	3605.5	3595.2	3579.9	3615.7	3590.2	3600.4	3590.2	3585.0
5°	3538.9	3585.0	3590.2	3590.2	3579.9	3574.7	3590.2	3585.0	3579.9	3569.7	3585.0
7.5°	3518.4	3543.9	3569.7	3538.9	3554.2	3549.2	3585.0	3569.7	3564.5	3564.5	3554.2
10°	3528.7	3523.4	3543.9	3513.2	3523.4	3513.2	3543.9	3543.9	3533.7	3523.4	3518.4
12.5°	3446.4	3487.4	3487.4	3482.4	3472.2	3456.7	3487.4	3508.2	3477.2	3477.2	3472.2
15°	3400.4	3410.6	3415.7	3415.7	3410.6	3420.9	3436.2	3415.7	3420.9	3395.2	3405.4
17.5°	3349.1	3328.6	3343.9	3333.6	3338.9	3349.1	3369.6	3369.6	3338.9	3333.6	3343.9
20°	3231.1	3292.6	3297.9	3267.1	3272.1	3272.1	3308.1	3277.3	3297.9	3272.1	3282.4
22.5°	3174.6	3215.6	3220.9	3179.8	3205.4	3174.6	3210.6	3164.4	3215.6	3179.8	3195.1
25°	3102.8	3097.8	3113.1	3092.6	3097.8	3097.8	3123.3	3102.8	3118.3	3097.8	3102.8
27.5°	2985.0	3026.0	3020.8	3000.3	3010.6	3005.5	3056.8	3000.3	3031.1	3005.5	3015.8
30°	2882.3	2918.3	2908.0	2887.5	2887.5	2872.0	2928.5	2913.0	2908.0	2908.0	2902.8
32.5°	2779.7	2785.0	2774.7	2779.7	2785.0	2764.5	2810.5	2790.0	2785.0	2790.0	2795.2
35°	2641.2	2641.2	2651.5	2636.2	2656.7	2656.7	2697.7	2672.0	2667.0	2651.5	2667.0
37.5°	2518.2	2502.9	2507.9	2507.9	2518.2	2528.4	2548.9	2538.7	2538.7	2523.4	2533.7
40°	2354.1	2343.9	2359.1	2359.1	2374.6	2374.6	2395.1	2384.9	2400.2	2400.2	2400.2
42.5°	2210.6	2210.6	2200.3	2215.6	2220.8	2215.6	2251.6	2246.4	2251.6	2241.3	2246.4
45°	2056.6	2056.6	2046.3	2041.3	2066.8	2061.8	2102.8	2087.3	2107.8	2097.6	2102.8
47.5°	1846.3	1872.0	1856.5	1872.0	1902.8	1908.0	1933.5	1923.3	1943.8	1928.5	1949.0
50°	1646.4	1646.4	1661.7	1682.2	1713.0	1718.2	1749.0	1769.5	1779.7	1784.7	1790.0
52.5°	1436.1	1430.9	1446.4	1471.9	1497.6	1518.1	1548.9	1579.7	1600.2	1630.9	1615.5
55°	1189.8	1200.1	1215.6	1246.3	1287.3	1312.9	1338.6	1379.6	1415.6	1430.9	1461.6
57.5°	979.5	969.3	979.5	1020.5	1066.8	1087.3	1123.3	1164.3	1215.6	1246.3	1256.6
60°	759.0	764.2	774.5	810.4	846.2	877.0	892.5	959.0	1005.3	1036.0	1056.5
62.5°	559.1	569.4	579.6	610.4	646.2	671.9	697.4	753.9	795.0	825.7	846.2
65°	389.8	394.9	410.3	425.6	461.6	487.1	507.7	553.9	594.9	620.6	635.9
67.5°	241.1	246.1	256.3	277.0	302.6	323.1	343.6	374.4	410.3	435.9	441.1
70°	123.0	128.3	133.3	148.8	169.3	179.5	194.8	220.6	246.1	266.6	277.0
72.5°	41.0	41.0	46.2	56.5	66.7	77.0	82.0	107.8	128.3	138.5	143.6
75°	10.3	10.3	10.3	10.3	10.3	15.5	15.5	30.8	41.0	51.3	56.5
77.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	10.3	10.3
80°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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°	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7	3610.7
2.5°	3610.7	3600.4	3595.2	3600.4	3600.4	3595.2	3610.7	3631.2	3656.7	3590.2
5°	3605.5	3595.2	3605.5	3574.7	3590.2	3579.9	3600.4	3595.2	3615.7	3595.2
7.5°	3590.2	3569.7	3574.7	3559.4	3579.9	3554.2	3569.7	3600.4	3579.9	3549.2
10°	3538.9	3528.7	3564.5	3513.2	3502.9	3523.4	3564.5	3533.7	3523.4	3533.7
12.5°	3487.4	3487.4	3502.9	3461.9	3466.9	3477.2	3497.7	3477.2	3487.4	3513.2
15°	3431.2	3420.9	3446.4	3415.7	3410.6	3400.4	3420.9	3420.9	3431.2	3415.7
17.5°	3364.4	3349.1	3349.1	3338.9	3333.6	3359.4	3369.6	3374.7	3379.9	3359.4
20°	3282.4	3277.3	3292.6	3277.3	3282.4	3287.6	3287.6	3277.3	3323.4	3267.1
22.5°	3195.1	3210.6	3190.1	3179.8	3190.1	3200.3	3200.3	3205.4	3195.1	3184.9
25°	3108.1	3118.3	3123.3	3092.6	3108.1	3092.6	3128.6	3133.6	3113.1	3123.3
27.5°	3031.1	3015.8	3010.6	2990.0	3000.3	2995.3	3000.3	3000.3	3031.1	2990.0
30°	2913.0	2897.8	2902.8	2887.5	2892.5	2887.5	2892.5	2892.5	2913.0	2908.0
32.5°	2800.3	2785.0	2790.0	2774.7	2774.7	2779.7	2769.5	2769.5	2785.0	2774.7
35°	2692.5	2656.7	2661.7	2656.7	2661.7	2641.2	2641.2	2636.2	2646.4	2620.7
37.5°	2538.7	2523.4	2518.2	2513.2	2518.2	2507.9	2518.2	2502.9	2518.2	2497.7
40°	2400.2	2389.9	2395.1	2364.4	2364.4	2369.4	2359.1	2354.1	2359.1	2379.7
42.5°	2261.8	2241.3	2231.1	2220.8	2225.8	2210.6	2205.3	2195.1	2205.3	2184.8
45°	2097.6	2097.6	2092.5	2066.8	2072.0	2072.0	2051.5	2031.0	2036.1	2036.1
47.5°	1949.0	1938.7	1933.5	1908.0	1902.8	1897.7	1877.0	1861.7	1861.7	1846.3
50°	1784.7	1774.5	1759.2	1733.5	1723.2	1692.5	1677.2	1656.7	1636.2	1636.2
52.5°	1630.9	1594.9	1574.4	1533.4	1518.1	1502.7	1461.6	1446.4	1430.9	1415.6
55°	1446.4	1415.6	1374.6	1328.4	1307.8	1282.1	1241.1	1210.3	1189.8	1195.1
57.5°	1266.8	1215.6	1174.5	1113.0	1087.3	1071.8	1030.8	989.8	969.3	969.3
60°	1046.3	1005.3	954.0	897.5	877.0	851.5	800.0	774.5	759.0	743.7
62.5°	836.0	805.2	759.0	687.2	671.9	646.2	610.4	579.6	564.2	564.2
65°	625.7	594.9	553.9	502.6	482.1	461.6	430.9	400.1	384.6	379.6
67.5°	441.1	405.1	369.3	328.3	312.8	302.6	271.8	251.3	241.1	235.8
70°	266.6	246.1	220.6	189.8	174.3	164.1	143.6	128.3	123.0	118.0
72.5°	138.5	123.0	102.5	82.0	71.8	61.5	51.3	41.0	36.0	36.0
75°	51.3	41.0	25.7	15.5	10.3	10.3	10.3	10.3	10.3	10.3
77.5°	10.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
80°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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)