

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: P840108

Luminaire Tested: **LD4C100D010 EU41009027 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: P840108  
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 EU41009027 4LBCSSQMMS  
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

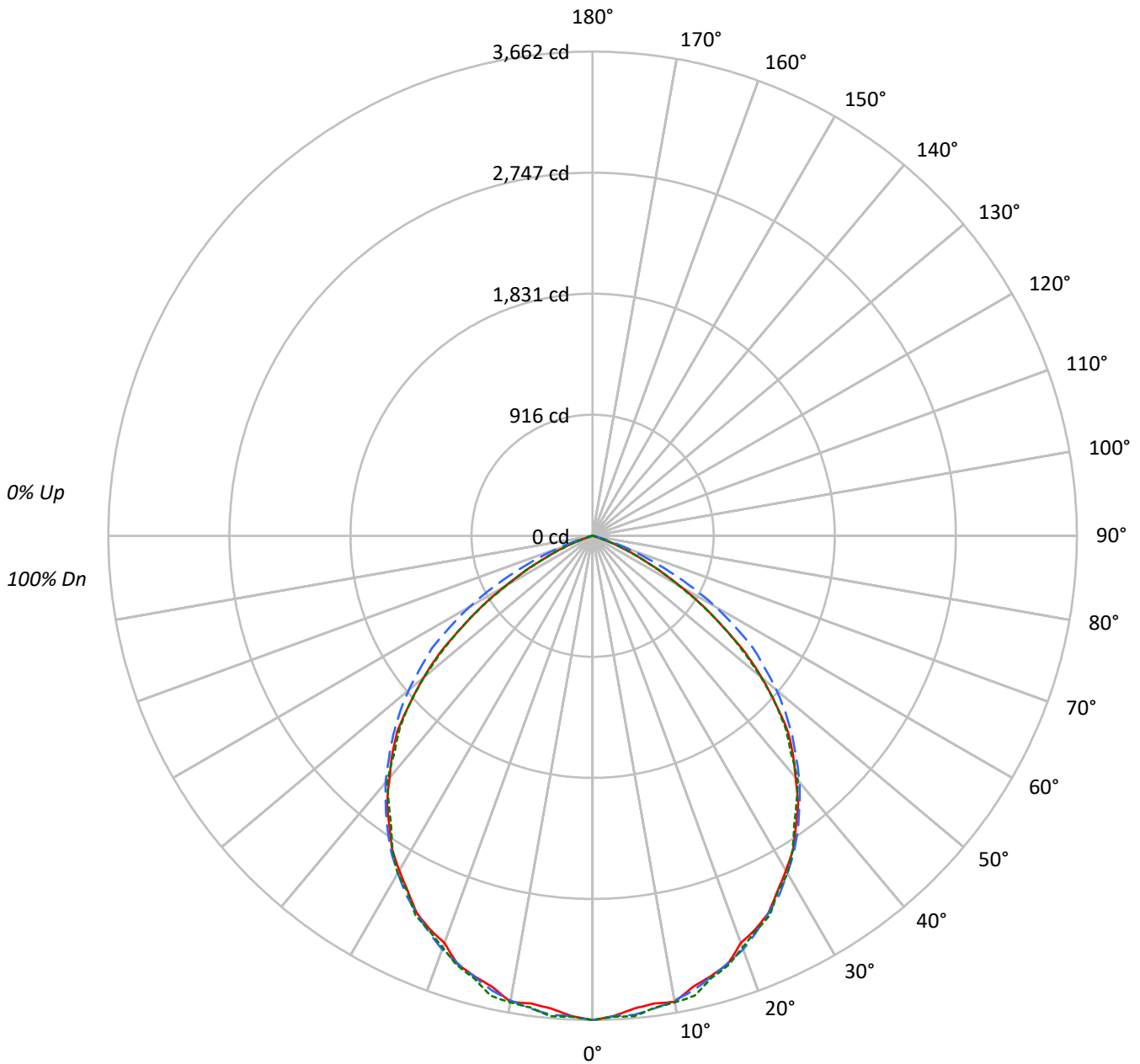
Lumens per Lamp: N/A  
Luminaire Lumens: 7823.0 lumens  
Efficiency: N/A  
Efficacy: 68.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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					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°	353362	353362	353362
5°	347660	352183	353191
10°	350661	349642	351161
15°	344520	345029	346068
20°	336507	341847	340255
25°	335052	335052	337266
30°	325713	328030	328621
35°	315551	318625	313101
40°	300748	306630	304011
45°	284633	291033	281795
50°	250669	272525	249108
55°	203012	249391	203903
60°	148554	206795	145563
65°	90275	147261	87900
70°	35208	79274	33769
75°	3877	21362	3877
80°	2945	2945	2945
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	345.7	4.4
10°-20°	978.2	12.5
20°-30°	1451.4	18.6
30°-40°	1681.7	21.5
40°-50°	1612.4	20.6
50°-60°	1185.5	15.2
60°-70°	512.0	6.5
70°-80°	55.3	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°	2775.3	35.5
0°-40°	4457.0	57.0
0°-60°	7255.0	92.7
0°-90°	7823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7823.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3662	3662	3662	3662	3662	
5°	3589	3626	3636	3641	3646	342
15°	3449	3470	3454	3459	3464	972
25°	3147	3142	3147	3152	3168	1441
35°	2679	2695	2705	2700	2658	1675
45°	2086	2091	2133	2102	2065	1586
55°	1207	1332	1482	1326	1212	1086
65°	395	494	645	489	385	406
75°	10	16	57	10	10	32
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°	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2
2.5°	3636.1	3677.7	3683.0	3656.9	3646.5	3631.0	3667.3	3641.4	3651.8	3641.4	3636.1
5°	3589.4	3636.1	3641.4	3641.4	3631.0	3625.7	3641.4	3636.1	3631.0	3620.6	3636.1
7.5°	3568.6	3594.5	3620.6	3589.4	3604.9	3599.8	3636.1	3620.6	3615.3	3615.3	3604.9
10°	3579.0	3573.7	3594.5	3563.3	3573.7	3563.3	3594.5	3594.5	3584.1	3573.7	3568.6
12.5°	3495.6	3537.2	3537.2	3532.1	3521.7	3506.0	3537.2	3558.2	3526.8	3526.8	3521.7
15°	3448.9	3459.3	3464.4	3464.4	3459.3	3469.7	3485.2	3464.4	3469.7	3443.6	3454.0
17.5°	3396.9	3376.1	3391.6	3381.2	3386.5	3396.9	3417.7	3417.7	3386.5	3381.2	3391.6
20°	3277.2	3339.6	3344.9	3313.7	3318.8	3318.8	3355.3	3324.1	3344.9	3318.8	3329.2
22.5°	3219.9	3261.5	3266.8	3225.2	3251.1	3219.9	3256.4	3209.5	3261.5	3225.2	3240.7
25°	3147.1	3142.0	3157.5	3136.7	3142.0	3142.0	3167.9	3147.1	3162.8	3142.0	3147.1
27.5°	3027.6	3069.2	3063.9	3043.1	3053.5	3048.4	3100.4	3043.1	3074.3	3048.4	3058.8
30°	2923.4	2959.9	2949.5	2928.7	2928.7	2913.0	2970.3	2954.6	2949.5	2949.5	2944.2
32.5°	2819.4	2824.7	2814.3	2819.4	2824.7	2803.9	2850.6	2829.8	2824.7	2829.8	2835.1
35°	2678.9	2678.9	2689.3	2673.8	2694.6	2694.6	2736.2	2710.1	2705.0	2689.3	2705.0
37.5°	2554.1	2538.6	2543.7	2543.7	2554.1	2564.5	2585.3	2574.9	2574.9	2559.4	2569.8
40°	2387.7	2377.3	2392.8	2392.8	2408.5	2408.5	2429.3	2418.9	2434.4	2434.4	2434.4
42.5°	2242.1	2242.1	2231.7	2247.2	2252.5	2247.2	2283.7	2278.4	2283.7	2273.3	2278.4
45°	2085.9	2085.9	2075.5	2070.4	2096.3	2091.2	2132.8	2117.1	2137.9	2127.5	2132.8
47.5°	1872.6	1898.7	1883.0	1898.7	1929.9	1935.2	1961.1	1950.7	1971.5	1956.0	1976.8
50°	1669.9	1669.9	1685.4	1706.2	1737.4	1742.7	1773.9	1794.7	1805.1	1810.2	1815.5
52.5°	1456.6	1451.3	1467.0	1492.9	1519.0	1539.8	1571.0	1602.2	1623.0	1654.2	1638.5
55°	1206.8	1217.2	1232.9	1264.1	1305.7	1331.6	1357.7	1399.3	1435.8	1451.3	1482.5
57.5°	993.5	983.1	993.5	1035.1	1082.0	1102.8	1139.3	1180.9	1232.9	1264.1	1274.5
60°	769.8	775.1	785.5	822.0	858.3	889.5	905.2	972.7	1019.6	1050.8	1071.6
62.5°	567.1	577.5	587.9	619.1	655.4	681.5	707.4	764.7	806.3	837.5	858.3
65°	395.4	400.5	416.2	431.7	468.2	494.1	514.9	561.8	603.4	629.5	645.0
67.5°	244.5	249.6	260.0	281.0	306.9	327.7	348.5	379.7	416.2	442.1	447.4
70°	124.8	130.1	135.2	150.9	171.7	182.1	197.6	223.7	249.6	270.4	281.0
72.5°	41.6	41.6	46.9	57.3	67.7	78.1	83.2	109.3	130.1	140.5	145.6
75°	10.4	10.4	10.4	10.4	10.4	15.7	15.7	31.2	41.6	52.0	57.3
77.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	10.4	10.4
80°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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°	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2	3662.2
2.5°	3662.2	3651.8	3646.5	3651.8	3651.8	3646.5	3662.2	3683.0	3708.9	3641.4
5°	3656.9	3646.5	3656.9	3625.7	3641.4	3631.0	3651.8	3646.5	3667.3	3646.5
7.5°	3641.4	3620.6	3625.7	3610.2	3631.0	3604.9	3620.6	3651.8	3631.0	3599.8
10°	3589.4	3579.0	3615.3	3563.3	3552.9	3573.7	3615.3	3584.1	3573.7	3584.1
12.5°	3537.2	3537.2	3552.9	3511.3	3516.4	3526.8	3547.6	3526.8	3537.2	3563.3
15°	3480.1	3469.7	3495.6	3464.4	3459.3	3448.9	3469.7	3469.7	3480.1	3464.4
17.5°	3412.4	3396.9	3396.9	3386.5	3381.2	3407.3	3417.7	3422.8	3428.1	3407.3
20°	3329.2	3324.1	3339.6	3324.1	3329.2	3334.5	3334.5	3324.1	3370.8	3313.7
22.5°	3240.7	3256.4	3235.6	3225.2	3235.6	3246.0	3246.0	3251.1	3240.7	3230.3
25°	3152.4	3162.8	3167.9	3136.7	3152.4	3136.7	3173.2	3178.3	3157.5	3167.9
27.5°	3074.3	3058.8	3053.5	3032.7	3043.1	3038.0	3043.1	3043.1	3074.3	3032.7
30°	2954.6	2939.1	2944.2	2928.7	2933.8	2928.7	2933.8	2933.8	2954.6	2949.5
32.5°	2840.2	2824.7	2829.8	2814.3	2814.3	2819.4	2809.0	2809.0	2824.7	2814.3
35°	2730.9	2694.6	2699.7	2694.6	2699.7	2678.9	2678.9	2673.8	2684.2	2658.1
37.5°	2574.9	2559.4	2554.1	2549.0	2554.1	2543.7	2554.1	2538.6	2554.1	2533.3
40°	2434.4	2424.0	2429.3	2398.1	2398.1	2403.2	2392.8	2387.7	2392.8	2413.6
42.5°	2294.1	2273.3	2262.9	2252.5	2257.6	2242.1	2236.8	2226.4	2236.8	2216.0
45°	2127.5	2127.5	2122.4	2096.3	2101.6	2101.6	2080.8	2060.0	2065.1	2065.1
47.5°	1976.8	1966.4	1961.1	1935.2	1929.9	1924.8	1903.8	1888.3	1888.3	1872.6
50°	1810.2	1799.8	1784.3	1758.2	1747.8	1716.6	1701.1	1680.3	1659.5	1659.5
52.5°	1654.2	1617.7	1596.9	1555.3	1539.8	1524.1	1482.5	1467.0	1451.3	1435.8
55°	1467.0	1435.8	1394.2	1347.3	1326.5	1300.4	1258.8	1227.6	1206.8	1212.1
57.5°	1284.9	1232.9	1191.3	1128.9	1102.8	1087.1	1045.5	1003.9	983.1	983.1
60°	1061.2	1019.6	967.6	910.3	889.5	863.6	811.4	785.5	769.8	754.3
62.5°	847.9	816.7	769.8	697.0	681.5	655.4	619.1	587.9	572.2	572.2
65°	634.6	603.4	561.8	509.8	489.0	468.2	437.0	405.8	390.1	385.0
67.5°	447.4	410.9	374.6	333.0	317.3	306.9	275.7	254.9	244.5	239.2
70°	270.4	249.6	223.7	192.5	176.8	166.4	145.6	130.1	124.8	119.7
72.5°	140.5	124.8	104.0	83.2	72.8	62.4	52.0	41.6	36.5	36.5
75°	52.0	41.6	26.1	15.7	10.4	10.4	10.4	10.4	10.4	10.4
77.5°	10.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
80°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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)