

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: P840232

Luminaire Tested: **LD4C65D010 EU4659035 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: P840232  
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: LD4C65D010 EU4659035 4LBCSSQMMS  
Description: 4 INCH 6500 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**

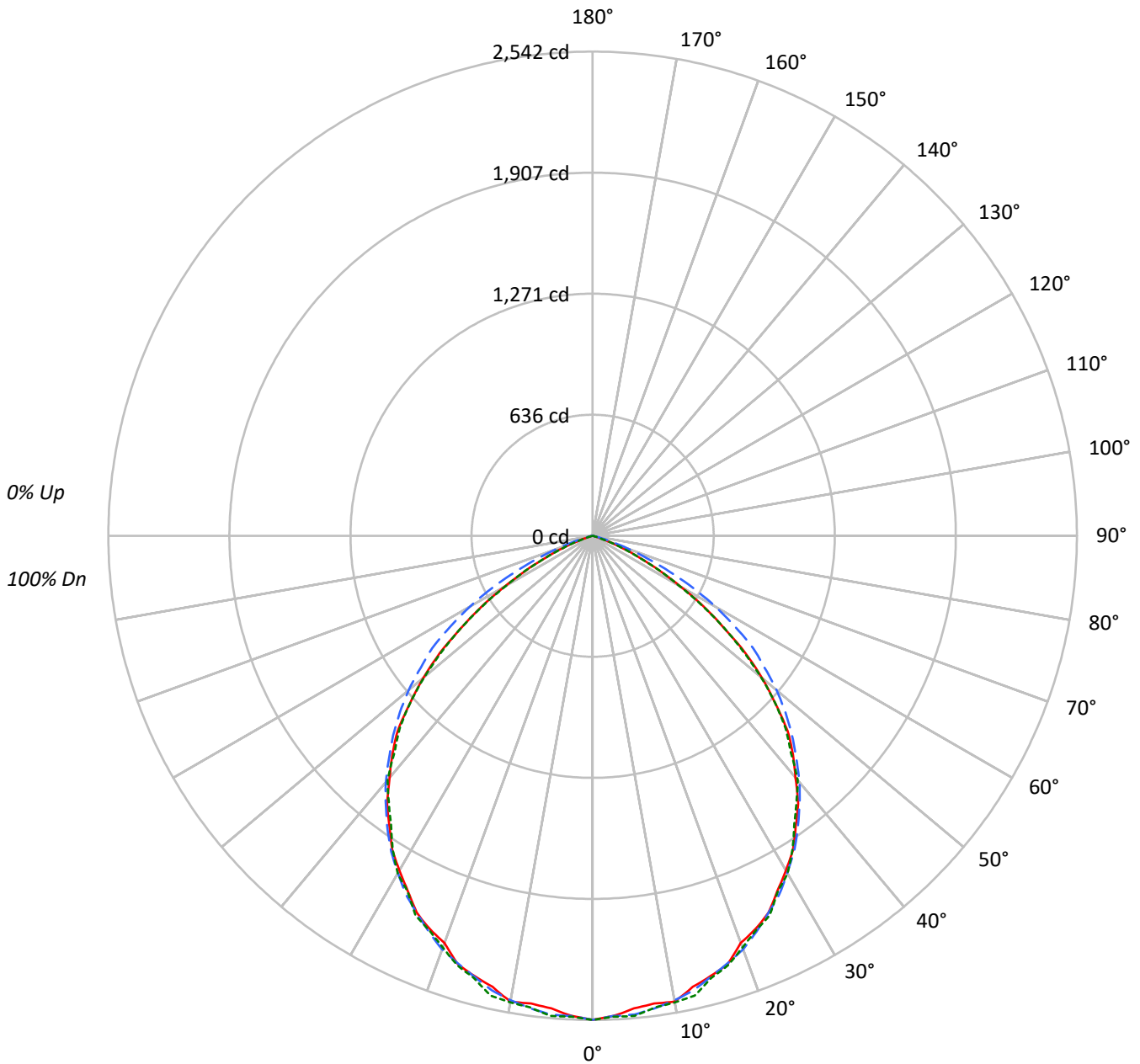
Lumens per Lamp: N/A  
Luminaire Lumens: 5429.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 72.4  
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°	245227	245227	245227
5°	241272	244410	245108
10°	243346	242641	243699
15°	239093	239443	240162
20°	233528	237235	236126
25°	232517	232517	234050
30°	226040	227645	228057
35°	218986	221118	217289
40°	208711	212792	210978
45°	197534	201968	195555
50°	173963	189124	172882
55°	140887	173068	141509
60°	103089	143518	101024
65°	62649	102193	61005
70°	24431	55012	23444
75°	2684	14838	2684
80°	2056	2056	2056
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.9	4.4
10°-20°	678.8	12.5
20°-30°	1007.2	18.6
30°-40°	1167.1	21.5
40°-50°	1119.0	20.6
50°-60°	822.7	15.2
60°-70°	355.3	6.5
70°-80°	38.4	0.7
80°-90°	0.5	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°	1926.0	35.5
0°-40°	3093.1	57.0
0°-60°	5034.8	92.7
0°-90°	5429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5429.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2542	2542	2542	2542	2542	
5°	2491	2516	2523	2527	2531	238
15°	2394	2408	2397	2401	2404	675
25°	2184	2180	2184	2188	2198	1000
35°	1859	1870	1877	1874	1845	1163
45°	1448	1451	1480	1458	1433	1100
55°	838	924	1029	921	841	754
65°	274	343	448	339	267	282
75°	7	11	40	7	7	22
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°	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5
2.5°	2523.4	2522.2	2555.9	2537.8	2530.6	2519.8	2545.0	2527.0	2534.3	2527.0	2523.4
5°	2491.0	2523.4	2527.0	2527.0	2519.8	2516.2	2527.0	2523.4	2519.8	2512.6	2523.4
7.5°	2476.5	2494.5	2512.6	2491.0	2501.7	2498.2	2523.4	2512.6	2508.9	2508.9	2501.7
10°	2483.7	2480.1	2494.5	2472.8	2480.1	2472.8	2494.5	2494.5	2487.3	2480.1	2476.5
12.5°	2425.9	2454.7	2454.7	2451.2	2444.0	2433.1	2454.7	2469.3	2447.5	2447.5	2444.0
15°	2393.5	2400.7	2404.2	2404.2	2400.7	2407.9	2418.6	2404.2	2407.9	2389.8	2397.0
17.5°	2357.4	2342.9	2353.7	2346.5	2350.2	2357.4	2371.8	2371.8	2350.2	2346.5	2353.7
20°	2274.3	2317.6	2321.3	2299.6	2303.2	2303.2	2328.5	2306.8	2321.3	2303.2	2310.4
22.5°	2234.5	2263.4	2267.1	2238.2	2256.2	2234.5	2259.9	2227.3	2263.4	2238.2	2249.0
25°	2184.0	2180.5	2191.2	2176.8	2180.5	2180.5	2198.4	2184.0	2194.9	2180.5	2184.0
27.5°	2101.1	2130.0	2126.3	2111.8	2119.1	2115.5	2151.6	2111.8	2133.5	2115.5	2122.7
30°	2028.8	2054.1	2046.9	2032.5	2032.5	2021.6	2061.3	2050.4	2046.9	2046.9	2043.2
32.5°	1956.6	1960.3	1953.1	1956.6	1960.3	1945.8	1978.2	1963.8	1960.3	1963.8	1967.5
35°	1859.1	1859.1	1866.3	1855.6	1870.0	1870.0	1898.9	1880.7	1877.2	1866.3	1877.2
37.5°	1772.5	1761.7	1765.3	1765.3	1772.5	1779.7	1794.1	1786.9	1786.9	1776.2	1783.4
40°	1657.0	1649.8	1660.5	1660.5	1671.4	1671.4	1685.9	1678.7	1689.4	1689.4	1689.4
42.5°	1556.0	1556.0	1548.7	1559.5	1563.2	1559.5	1584.8	1581.2	1584.8	1577.6	1581.2
45°	1447.6	1447.6	1440.3	1436.8	1454.8	1451.2	1480.1	1469.2	1483.7	1476.4	1480.1
47.5°	1299.5	1317.7	1306.8	1317.7	1339.3	1343.0	1361.0	1353.7	1368.2	1357.4	1371.9
50°	1158.9	1158.9	1169.6	1184.1	1205.7	1209.4	1231.0	1245.5	1252.7	1256.2	1259.9
52.5°	1010.8	1007.2	1018.1	1036.0	1054.2	1068.6	1090.2	1111.9	1126.3	1148.0	1137.1
55°	837.5	844.7	855.6	877.3	906.1	924.1	942.2	971.1	996.4	1007.2	1028.8
57.5°	689.5	682.2	689.5	718.3	750.9	765.3	790.6	819.5	855.6	877.3	884.5
60°	534.2	537.9	545.1	570.5	595.6	617.3	628.2	675.0	707.6	729.2	743.7
62.5°	393.6	400.8	408.0	429.6	454.8	472.9	490.9	530.7	559.6	581.2	595.6
65°	274.4	277.9	288.8	299.6	324.9	342.9	357.3	389.9	418.7	436.9	447.6
67.5°	169.7	173.2	180.4	195.0	213.0	227.4	241.9	263.5	288.8	306.8	310.5
70°	86.6	90.3	93.8	104.7	119.2	126.4	137.1	155.2	173.2	187.6	195.0
72.5°	28.9	28.9	32.5	39.8	47.0	54.2	57.7	75.9	90.3	97.5	101.0
75°	7.2	7.2	7.2	7.2	7.2	10.9	10.9	21.7	28.9	36.1	39.8
77.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	7.2	7.2
80°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5	2541.5
2.5°	2541.5	2534.3	2530.6	2534.3	2534.3	2530.6	2541.5	2555.9	2573.9	2527.0
5°	2537.8	2530.6	2537.8	2516.2	2527.0	2519.8	2534.3	2530.6	2545.0	2530.6
7.5°	2527.0	2512.6	2516.2	2505.4	2519.8	2501.7	2512.6	2534.3	2519.8	2498.2
10°	2491.0	2483.7	2508.9	2472.8	2465.6	2480.1	2508.9	2487.3	2480.1	2487.3
12.5°	2454.7	2454.7	2465.6	2436.8	2440.3	2447.5	2462.0	2447.5	2454.7	2472.8
15°	2415.1	2407.9	2425.9	2404.2	2400.7	2393.5	2407.9	2407.9	2415.1	2404.2
17.5°	2368.1	2357.4	2357.4	2350.2	2346.5	2364.6	2371.8	2375.3	2379.0	2364.6
20°	2310.4	2306.8	2317.6	2306.8	2310.4	2314.1	2314.1	2306.8	2339.3	2299.6
22.5°	2249.0	2259.9	2245.4	2238.2	2245.4	2252.6	2252.6	2256.2	2249.0	2241.8
25°	2187.7	2194.9	2198.4	2176.8	2187.7	2176.8	2202.1	2205.7	2191.2	2198.4
27.5°	2133.5	2122.7	2119.1	2104.6	2111.8	2108.3	2111.8	2111.8	2133.5	2104.6
30°	2050.4	2039.7	2043.2	2032.5	2036.0	2032.5	2036.0	2036.0	2050.4	2046.9
32.5°	1971.0	1960.3	1963.8	1953.1	1953.1	1956.6	1949.4	1949.4	1960.3	1953.1
35°	1895.2	1870.0	1873.5	1870.0	1873.5	1859.1	1859.1	1855.6	1862.8	1844.7
37.5°	1786.9	1776.2	1772.5	1768.9	1772.5	1765.3	1772.5	1761.7	1772.5	1758.1
40°	1689.4	1682.2	1685.9	1664.2	1664.2	1667.8	1660.5	1657.0	1660.5	1675.0
42.5°	1592.1	1577.6	1570.4	1563.2	1566.7	1556.0	1552.3	1545.1	1552.3	1537.9
45°	1476.4	1476.4	1472.9	1454.8	1458.5	1458.5	1444.0	1429.6	1433.1	1433.1
47.5°	1371.9	1364.6	1361.0	1343.0	1339.3	1335.8	1321.2	1310.4	1310.4	1299.5
50°	1256.2	1249.0	1238.3	1220.1	1212.9	1191.3	1180.5	1166.1	1151.7	1151.7
52.5°	1148.0	1122.6	1108.2	1079.3	1068.6	1057.7	1028.8	1018.1	1007.2	996.4
55°	1018.1	996.4	967.5	935.0	920.6	902.4	873.6	851.9	837.5	841.2
57.5°	891.7	855.6	826.7	783.4	765.3	754.4	725.6	696.7	682.2	682.2
60°	736.4	707.6	671.5	631.7	617.3	599.3	563.1	545.1	534.2	523.5
62.5°	588.4	566.8	534.2	483.7	472.9	454.8	429.6	408.0	397.1	397.1
65°	440.4	418.7	389.9	353.8	339.4	324.9	303.3	281.6	270.7	267.2
67.5°	310.5	285.2	260.0	231.1	220.2	213.0	191.3	176.9	169.7	166.0
70°	187.6	173.2	155.2	133.6	122.7	115.5	101.0	90.3	86.6	83.1
72.5°	97.5	86.6	72.2	57.7	50.5	43.3	36.1	28.9	25.3	25.3
75°	36.1	28.9	18.1	10.9	7.2	7.2	7.2	7.2	7.2	7.2
77.5°	7.2	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
80°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
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)