

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: P840236

Luminaire Tested: **LD4C65D010 EU4659050 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: P840236  
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 EU4659050 4LBCSSQMMS  
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

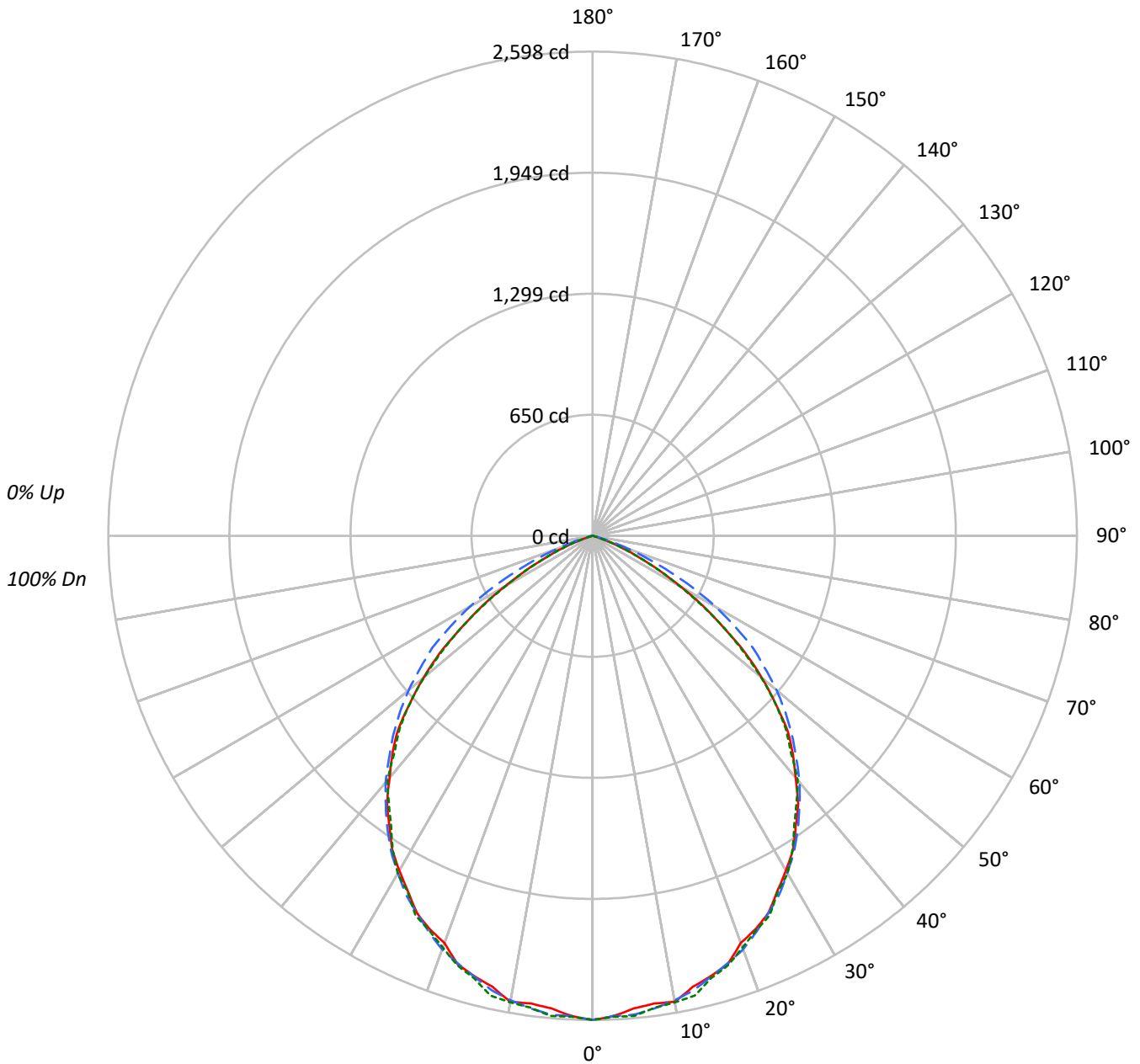
Lumens per Lamp: N/A  
Luminaire Lumens: 5549.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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°	250649	250649	250649
5°	246599	249805	250522
10°	248725	248010	249088
15°	244377	244737	245476
20°	238693	242482	241352
25°	237659	237659	239224
30°	231032	232681	233093
35°	223827	226006	222084
40°	213321	217503	215639
45°	201900	206430	199881
50°	177805	193312	176695
55°	143999	176904	144638
60°	105366	146682	103243
65°	64042	104453	62352
70°	24967	56225	23952
75°	2759	15136	2759
80°	2111	2111	2111
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	245.2	4.4
10°-20°	693.8	12.5
20°-30°	1029.5	18.6
30°-40°	1192.9	21.5
40°-50°	1143.7	20.6
50°-60°	840.9	15.2
60°-70°	363.2	6.5
70°-80°	39.2	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°	1968.5	35.5
0°-40°	3161.4	57.0
0°-60°	5146.1	92.7
0°-90°	5549.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5549.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2598	2598	2598	2598	2598	
5°	2546	2572	2579	2583	2586	243
15°	2446	2461	2450	2454	2457	689
25°	2232	2229	2232	2236	2247	1022
35°	1900	1911	1919	1915	1885	1188
45°	1480	1483	1513	1491	1465	1125
55°	856	944	1052	941	860	770
65°	280	350	458	347	273	288
75°	7	11	41	7	7	23
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°	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7
2.5°	2579.1	2608.7	2612.4	2593.9	2586.5	2575.5	2601.3	2582.9	2590.3	2582.9	2579.1
5°	2546.0	2579.1	2582.9	2582.9	2575.5	2571.8	2582.9	2579.1	2575.5	2568.2	2579.1
7.5°	2531.3	2549.6	2568.2	2546.0	2557.0	2553.4	2579.1	2568.2	2564.4	2564.4	2557.0
10°	2538.6	2534.9	2549.6	2527.5	2534.9	2527.5	2549.6	2549.6	2542.3	2534.9	2531.3
12.5°	2479.5	2509.0	2509.0	2505.4	2498.0	2486.9	2509.0	2523.9	2501.6	2501.6	2498.0
15°	2446.4	2453.7	2457.4	2457.4	2453.7	2461.1	2472.1	2457.4	2461.1	2442.6	2450.0
17.5°	2409.5	2394.7	2405.7	2398.3	2402.1	2409.5	2424.2	2424.2	2402.1	2398.3	2405.7
20°	2324.6	2368.8	2372.6	2350.5	2354.1	2354.1	2380.0	2357.8	2372.6	2354.1	2361.5
22.5°	2283.9	2313.4	2317.2	2287.7	2306.1	2283.9	2309.8	2276.5	2313.4	2287.7	2298.7
25°	2232.3	2228.7	2239.7	2224.9	2228.7	2228.7	2247.0	2232.3	2243.4	2228.7	2232.3
27.5°	2147.5	2177.0	2173.3	2158.5	2165.9	2162.3	2199.2	2158.5	2180.7	2162.3	2169.7
30°	2073.6	2099.5	2092.1	2077.4	2077.4	2066.2	2106.9	2095.7	2092.1	2092.1	2088.4
32.5°	1999.8	2003.6	1996.2	1999.8	2003.6	1988.9	2022.0	2007.2	2003.6	2007.2	2011.0
35°	1900.2	1900.2	1907.6	1896.6	1911.3	1911.3	1940.8	1922.3	1918.7	1907.6	1918.7
37.5°	1811.7	1800.7	1804.3	1804.3	1811.7	1819.0	1833.8	1826.4	1826.4	1815.4	1822.8
40°	1693.6	1686.3	1697.3	1697.3	1708.4	1708.4	1723.1	1715.8	1726.8	1726.8	1726.8
42.5°	1590.4	1590.4	1583.0	1594.0	1597.7	1594.0	1619.9	1616.1	1619.9	1612.5	1616.1
45°	1479.6	1479.6	1472.2	1468.6	1486.9	1483.3	1512.8	1501.7	1516.4	1509.1	1512.8
47.5°	1328.3	1346.8	1335.6	1346.8	1368.9	1372.7	1391.0	1383.7	1398.4	1387.4	1402.2
50°	1184.5	1184.5	1195.5	1210.2	1232.4	1236.1	1258.3	1273.0	1280.4	1284.0	1287.8
52.5°	1033.2	1029.4	1040.6	1058.9	1077.5	1092.2	1114.3	1136.5	1151.2	1173.4	1162.2
55°	856.0	863.4	874.5	896.6	926.2	944.5	963.0	992.5	1018.4	1029.4	1051.6
57.5°	704.7	697.3	704.7	734.2	767.5	782.2	808.1	837.6	874.5	896.6	904.0
60°	546.0	549.8	557.2	583.1	608.8	630.9	642.1	690.0	723.2	745.3	760.1
62.5°	402.3	409.6	417.0	439.1	464.9	483.4	501.8	542.4	571.9	594.1	608.8
65°	280.5	284.1	295.2	306.2	332.1	350.5	365.2	398.5	428.0	446.5	457.5
67.5°	173.4	177.0	184.4	199.3	217.7	232.4	247.2	269.3	295.2	313.6	317.3
70°	88.5	92.3	95.9	107.0	121.8	129.2	140.2	158.7	177.0	191.8	199.3
72.5°	29.5	29.5	33.3	40.6	48.0	55.4	59.0	77.5	92.3	99.7	103.3
75°	7.4	7.4	7.4	7.4	7.4	11.1	11.1	22.1	29.5	36.9	40.6
77.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	7.4	7.4
80°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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°	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7	2597.7
2.5°	2597.7	2590.3	2586.5	2590.3	2590.3	2586.5	2597.7	2612.4	2630.8	2582.9
5°	2593.9	2586.5	2593.9	2571.8	2582.9	2575.5	2590.3	2586.5	2601.3	2586.5
7.5°	2582.9	2568.2	2571.8	2560.8	2575.5	2557.0	2568.2	2590.3	2575.5	2553.4
10°	2546.0	2538.6	2564.4	2527.5	2520.1	2534.9	2564.4	2542.3	2534.9	2542.3
12.5°	2509.0	2509.0	2520.1	2490.6	2494.2	2501.6	2516.4	2501.6	2509.0	2527.5
15°	2468.5	2461.1	2479.5	2457.4	2453.7	2446.4	2461.1	2461.1	2468.5	2457.4
17.5°	2420.5	2409.5	2409.5	2402.1	2398.3	2416.9	2424.2	2427.8	2431.6	2416.9
20°	2361.5	2357.8	2368.8	2357.8	2361.5	2365.2	2365.2	2357.8	2391.0	2350.5
22.5°	2298.7	2309.8	2295.1	2287.7	2295.1	2302.4	2302.4	2306.1	2298.7	2291.3
25°	2236.0	2243.4	2247.0	2224.9	2236.0	2224.9	2250.8	2254.4	2239.7	2247.0
27.5°	2180.7	2169.7	2165.9	2151.1	2158.5	2154.9	2158.5	2158.5	2180.7	2151.1
30°	2095.7	2084.8	2088.4	2077.4	2081.0	2077.4	2081.0	2081.0	2095.7	2092.1
32.5°	2014.6	2003.6	2007.2	1996.2	1996.2	1999.8	1992.5	1992.5	2003.6	1996.2
35°	1937.1	1911.3	1914.9	1911.3	1914.9	1900.2	1900.2	1896.6	1903.9	1885.4
37.5°	1826.4	1815.4	1811.7	1808.0	1811.7	1804.3	1811.7	1800.7	1811.7	1796.9
40°	1726.8	1719.4	1723.1	1701.0	1701.0	1704.6	1697.3	1693.6	1697.3	1712.0
42.5°	1627.2	1612.5	1605.1	1597.7	1601.4	1590.4	1586.6	1579.2	1586.6	1571.8
45°	1509.1	1509.1	1505.5	1486.9	1490.7	1490.7	1475.9	1461.2	1464.8	1464.8
47.5°	1402.2	1394.8	1391.0	1372.7	1368.9	1365.3	1350.4	1339.4	1339.4	1328.3
50°	1284.0	1276.6	1265.6	1247.1	1239.7	1217.6	1206.6	1191.9	1177.1	1177.1
52.5°	1173.4	1147.5	1132.7	1103.2	1092.2	1081.1	1051.6	1040.6	1029.4	1018.4
55°	1040.6	1018.4	988.9	955.7	940.9	922.4	892.9	870.8	856.0	859.8
57.5°	911.4	874.5	845.0	800.7	782.2	771.1	741.6	712.1	697.3	697.3
60°	752.7	723.2	686.3	645.7	630.9	612.6	575.5	557.2	546.0	535.0
62.5°	601.4	579.3	546.0	494.4	483.4	464.9	439.1	417.0	405.9	405.9
65°	450.1	428.0	398.5	361.6	346.9	332.1	310.0	287.8	276.7	273.1
67.5°	317.3	291.5	265.7	236.2	225.1	217.7	195.6	180.8	173.4	169.7
70°	191.8	177.0	158.7	136.5	125.4	118.0	103.3	92.3	88.5	84.9
72.5°	99.7	88.5	73.8	59.0	51.6	44.3	36.9	29.5	25.9	25.9
75°	36.9	29.5	18.5	11.1	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	7.4	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
80°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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)