

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: P840238

Luminaire Tested: **LD4C70D010 EU4709027 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: P840238
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: LD4C70D010 EU4709027 4LBCSSQMMS
Description: 4 INCH 7000 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

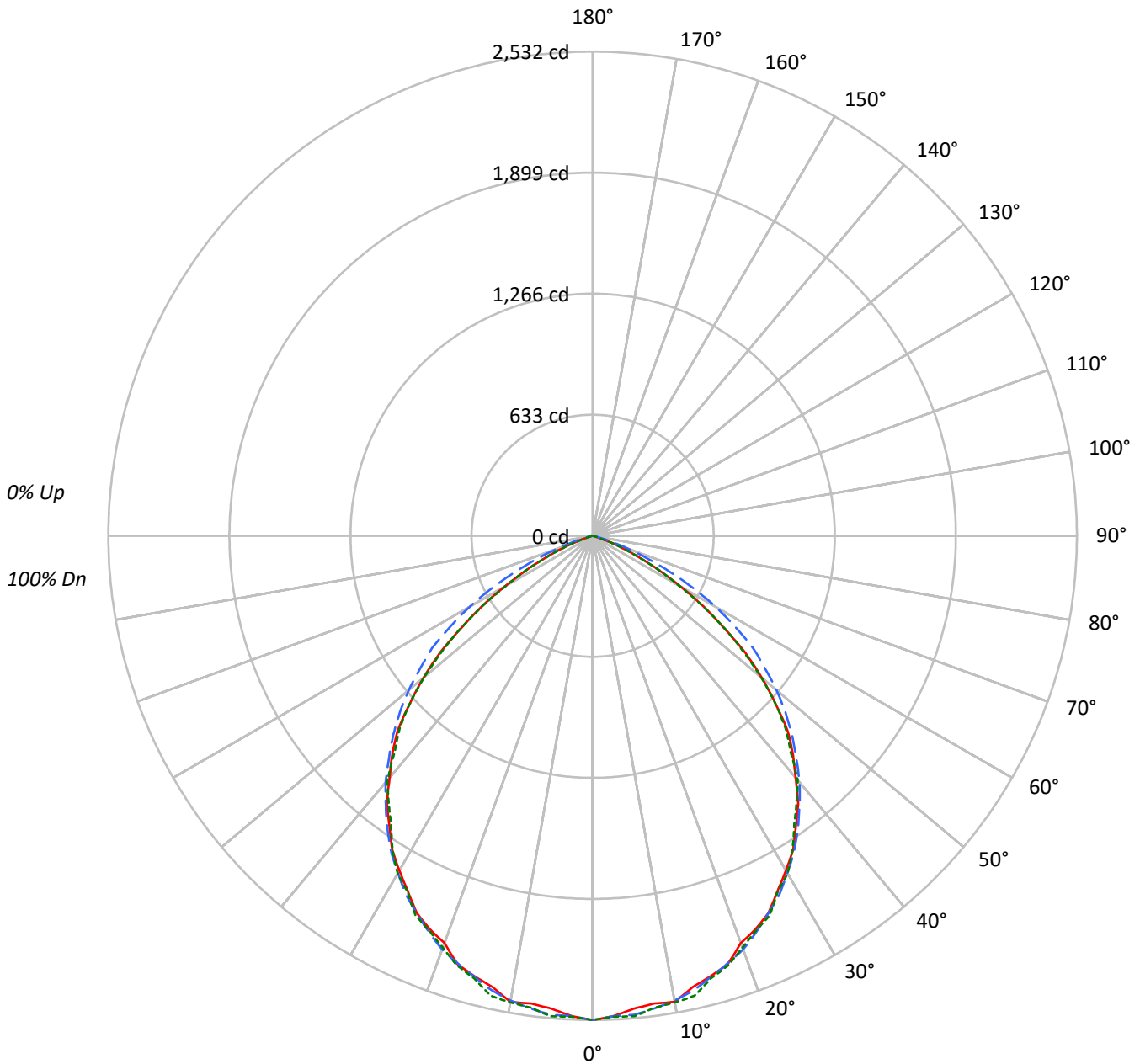
Lumens per Lamp: N/A
Luminaire Lumens: 5409.0 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 78
Input Voltage (V):
Input Current (Ain): 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°	244320	244320	244320
5°	240381	243509	244207
10°	242455	241749	242798
15°	238204	238564	239283
20°	232666	236362	235263
25°	231665	231665	233187
30°	225205	226809	227210
35°	218173	220305	216488
40°	207943	212011	210198
45°	196797	201232	194845
50°	173317	188433	172236
55°	140365	172429	140988
60°	102722	142977	100638
65°	62421	101827	60777
70°	24346	54815	23359
75°	2684	14763	2684
80°	2056	2056	2056
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.0	4.4
10°-20°	676.3	12.5
20°-30°	1003.5	18.6
30°-40°	1162.8	21.5
40°-50°	1114.9	20.6
50°-60°	819.7	15.2
60°-70°	354.0	6.5
70°-80°	38.2	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°	1918.9	35.5
0°-40°	3081.7	57.0
0°-60°	5016.2	92.7
0°-90°	5409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2532	2532	2532	2532	2532	
5°	2482	2507	2514	2518	2521	237
15°	2385	2399	2388	2392	2395	672
25°	2176	2172	2176	2180	2190	996
35°	1852	1863	1870	1867	1838	1158
45°	1442	1446	1475	1453	1428	1096
55°	834	921	1025	917	838	751
65°	273	342	446	338	266	281
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°	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1
2.5°	2514.1	2542.8	2546.5	2528.5	2521.3	2510.5	2535.6	2517.7	2524.9	2517.7	2514.1
5°	2481.8	2514.1	2517.7	2517.7	2510.5	2506.9	2517.7	2514.1	2510.5	2503.4	2514.1
7.5°	2467.4	2485.3	2503.4	2481.8	2492.5	2489.0	2514.1	2503.4	2499.7	2499.7	2492.5
10°	2474.6	2470.9	2485.3	2463.7	2470.9	2463.7	2485.3	2485.3	2478.1	2470.9	2467.4
12.5°	2416.9	2445.7	2445.7	2442.2	2435.0	2424.1	2445.7	2460.2	2438.5	2438.5	2435.0
15°	2384.6	2391.8	2395.4	2395.4	2391.8	2399.0	2409.7	2395.4	2399.0	2381.0	2388.2
17.5°	2348.7	2334.3	2345.0	2337.8	2341.5	2348.7	2363.1	2363.1	2341.5	2337.8	2345.0
20°	2265.9	2309.1	2312.7	2291.2	2294.7	2294.7	2319.9	2298.4	2312.7	2294.7	2301.9
22.5°	2226.3	2255.1	2258.7	2230.0	2247.9	2226.3	2251.5	2219.1	2255.1	2230.0	2240.7
25°	2176.0	2172.4	2183.2	2168.8	2172.4	2172.4	2190.3	2176.0	2186.8	2172.4	2176.0
27.5°	2093.3	2122.1	2118.4	2104.1	2111.3	2107.7	2143.7	2104.1	2125.6	2107.7	2114.9
30°	2021.3	2046.5	2039.3	2025.0	2025.0	2014.1	2053.7	2042.9	2039.3	2039.3	2035.7
32.5°	1949.4	1953.1	1945.9	1949.4	1953.1	1938.7	1971.0	1956.6	1953.1	1956.6	1960.2
35°	1852.2	1852.2	1859.4	1848.7	1863.1	1863.1	1891.9	1873.8	1870.3	1859.4	1870.3
37.5°	1766.0	1755.2	1758.8	1758.8	1766.0	1773.1	1787.5	1780.3	1780.3	1769.6	1776.8
40°	1650.9	1643.7	1654.4	1654.4	1665.3	1665.3	1679.7	1672.5	1683.2	1683.2	1683.2
42.5°	1550.2	1550.2	1543.0	1553.8	1557.4	1553.8	1579.0	1575.3	1579.0	1571.8	1575.3
45°	1442.2	1442.2	1435.0	1431.5	1449.4	1445.9	1474.7	1463.8	1478.2	1471.0	1474.7
47.5°	1294.8	1312.8	1301.9	1312.8	1334.4	1338.0	1355.9	1348.8	1363.1	1352.4	1366.8
50°	1154.6	1154.6	1165.3	1179.7	1201.3	1204.9	1226.5	1240.9	1248.1	1251.6	1255.3
52.5°	1007.1	1003.5	1014.3	1032.2	1050.3	1064.6	1086.2	1107.8	1122.2	1143.7	1132.9
55°	834.4	841.6	852.5	874.0	902.8	920.7	938.7	967.5	992.7	1003.5	1025.0
57.5°	686.9	679.7	686.9	715.7	748.1	762.5	787.7	816.5	852.5	874.0	881.2
60°	532.3	535.9	543.1	568.3	593.4	615.0	625.9	672.5	705.0	726.5	740.9
62.5°	392.1	399.3	406.5	428.1	453.2	471.2	489.1	528.7	557.5	579.1	593.4
65°	273.4	276.9	287.8	298.5	323.7	341.6	356.0	388.4	417.2	435.2	446.0
67.5°	169.1	172.6	179.8	194.3	212.2	226.6	241.0	262.5	287.8	305.7	309.3
70°	86.3	90.0	93.5	104.3	118.7	125.9	136.6	154.7	172.6	187.0	194.3
72.5°	28.8	28.8	32.4	39.6	46.8	54.0	57.5	75.6	90.0	97.1	100.7
75°	7.2	7.2	7.2	7.2	7.2	10.9	10.9	21.6	28.8	36.0	39.6
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°	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1	2532.1
2.5°	2532.1	2524.9	2521.3	2524.9	2524.9	2521.3	2532.1	2546.5	2564.4	2517.7
5°	2528.5	2521.3	2528.5	2506.9	2517.7	2510.5	2524.9	2521.3	2535.6	2521.3
7.5°	2517.7	2503.4	2506.9	2496.2	2510.5	2492.5	2503.4	2524.9	2510.5	2489.0
10°	2481.8	2474.6	2499.7	2463.7	2456.5	2470.9	2499.7	2478.1	2470.9	2478.1
12.5°	2445.7	2445.7	2456.5	2427.8	2431.3	2438.5	2452.9	2438.5	2445.7	2463.7
15°	2406.2	2399.0	2416.9	2395.4	2391.8	2384.6	2399.0	2399.0	2406.2	2395.4
17.5°	2359.4	2348.7	2348.7	2341.5	2337.8	2355.9	2363.1	2366.6	2370.3	2355.9
20°	2301.9	2298.4	2309.1	2298.4	2301.9	2305.5	2305.5	2298.4	2330.6	2291.2
22.5°	2240.7	2251.5	2237.2	2230.0	2237.2	2244.4	2244.4	2247.9	2240.7	2233.5
25°	2179.6	2186.8	2190.3	2168.8	2179.6	2168.8	2194.0	2197.5	2183.2	2190.3
27.5°	2125.6	2114.9	2111.3	2096.9	2104.1	2100.5	2104.1	2104.1	2125.6	2096.9
30°	2042.9	2032.2	2035.7	2025.0	2028.5	2025.0	2028.5	2028.5	2042.9	2039.3
32.5°	1963.8	1953.1	1956.6	1945.9	1945.9	1949.4	1942.2	1942.2	1953.1	1945.9
35°	1888.2	1863.1	1866.6	1863.1	1866.6	1852.2	1852.2	1848.7	1855.9	1837.9
37.5°	1780.3	1769.6	1766.0	1762.4	1766.0	1758.8	1766.0	1755.2	1766.0	1751.6
40°	1683.2	1676.0	1679.7	1658.1	1658.1	1661.6	1654.4	1650.9	1654.4	1668.8
42.5°	1586.2	1571.8	1564.6	1557.4	1561.0	1550.2	1546.6	1539.4	1546.6	1532.2
45°	1471.0	1471.0	1467.5	1449.4	1453.1	1453.1	1438.7	1424.3	1427.9	1427.9
47.5°	1366.8	1359.6	1355.9	1338.0	1334.4	1330.8	1316.3	1305.6	1305.6	1294.8
50°	1251.6	1244.4	1233.7	1215.7	1208.5	1186.9	1176.2	1161.8	1147.4	1147.4
52.5°	1143.7	1118.5	1104.1	1075.4	1064.6	1053.8	1025.0	1014.3	1003.5	992.7
55°	1014.3	992.7	964.0	931.6	917.2	899.1	870.4	848.8	834.4	838.1
57.5°	888.4	852.5	823.7	780.5	762.5	751.6	722.9	694.1	679.7	679.7
60°	733.7	705.0	669.0	629.4	615.0	597.1	561.0	543.1	532.3	521.5
62.5°	586.3	564.7	532.3	481.9	471.2	453.2	428.1	406.5	395.6	395.6
65°	438.8	417.2	388.4	352.5	338.1	323.7	302.2	280.6	269.7	266.2
67.5°	309.3	284.1	259.0	230.2	219.4	212.2	190.6	176.2	169.1	165.4
70°	187.0	172.6	154.7	133.1	122.2	115.1	100.7	90.0	86.3	82.8
72.5°	97.1	86.3	71.9	57.5	50.3	43.1	36.0	28.8	25.2	25.2
75°	36.0	28.8	18.0	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)