

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: P840198

Luminaire Tested: **LD4C50D010 EU4509027 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: P840198
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: LD4C50D010 EU4509027 4LBCSSQMMS
Description: 4 INCH 5000 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

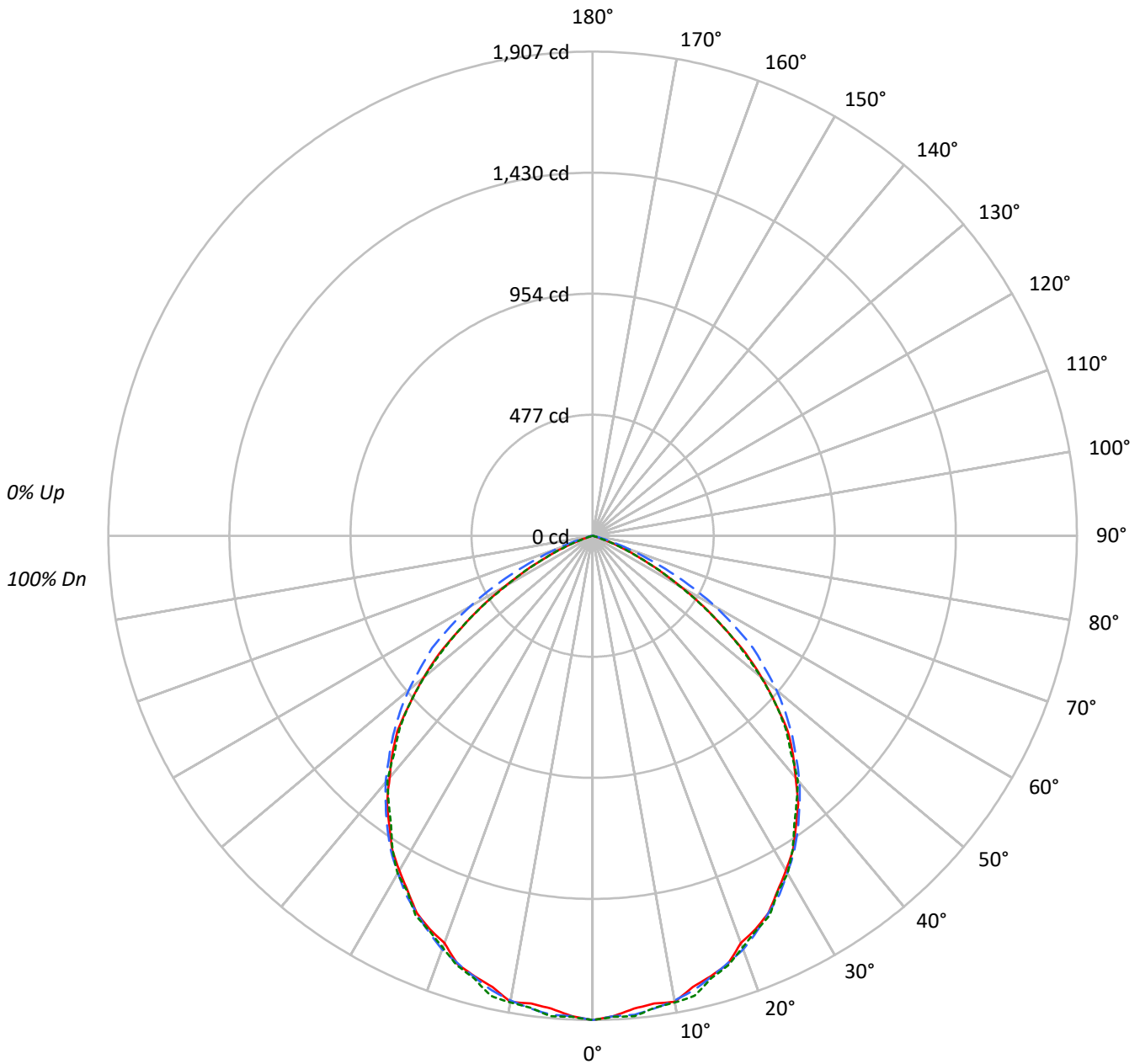
Lumens per Lamp: N/A
Luminaire Lumens: 4074.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 58.4
Input Voltage (V):
Input Current (A_{in}): 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

TEST NUMBER: P840198

CATALOG NUMBER: LD4C50D010 EU4509027 4LBCSSQMMS

Luminous Intensity Polar Plot





TEST NUMBER: P840198

CATALOG NUMBER: LD4C50D010 EU4509027 4LBCSSQMMS

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°	184024	184024	184024
5°	181056	183409	183932
10°	182610	182081	182875
15°	179417	179677	180226
20°	175246	178019	177197
25°	174483	174483	175633
30°	169619	170834	171135
35°	164330	165932	163058
40°	156615	159689	158316
45°	148232	151562	146745
50°	130536	141929	129725
55°	105728	129868	106183
60°	77365	107701	75802
65°	47009	76690	45777
70°	18337	41273	17576
75°	2013	11110	2013
80°	1556	1556	1556
85°	0	0	0



TEST NUMBER: P840198

CATALOG NUMBER: LD4C50D010 EU4509027 4LBCSSQMMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.0	4.4
10°-20°	509.4	12.5
20°-30°	755.8	18.6
30°-40°	875.8	21.5
40°-50°	839.7	20.6
50°-60°	617.4	15.2
60°-70°	266.7	6.5
70°-80°	28.8	0.7
80°-90°	0.4	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°	1445.3	35.5
0°-40°	2321.1	57.0
0°-60°	3778.2	92.7
0°-90°	4074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1907	1907	1907	1907	1907	
5°	1869	1888	1894	1896	1899	178
15°	1796	1807	1799	1802	1804	506
25°	1639	1636	1639	1642	1650	750
35°	1395	1403	1409	1406	1384	872
45°	1086	1089	1111	1094	1075	826
55°	628	694	772	691	631	566
65°	206	257	336	255	200	212
75°	5	8	30	5	5	17
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P840198

CATALOG NUMBER: LD4C50D010 EU4509027 4LBCSSQMMS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2
2.5°	1893.6	1915.2	1918.0	1904.4	1899.0	1890.9	1909.8	1896.3	1901.7	1896.3	1893.6
5°	1869.3	1893.6	1896.3	1896.3	1890.9	1888.2	1896.3	1893.6	1890.9	1885.5	1893.6
7.5°	1858.4	1871.9	1885.5	1869.3	1877.3	1874.7	1893.6	1885.5	1882.7	1882.7	1877.3
10°	1863.8	1861.1	1871.9	1855.7	1861.1	1855.7	1871.9	1871.9	1866.5	1861.1	1858.4
12.5°	1820.4	1842.1	1842.1	1839.4	1834.0	1825.8	1842.1	1853.0	1836.7	1836.7	1834.0
15°	1796.1	1801.5	1804.2	1804.2	1801.5	1806.9	1815.0	1804.2	1806.9	1793.3	1798.7
17.5°	1769.0	1758.2	1766.2	1760.8	1763.6	1769.0	1779.8	1779.8	1763.6	1760.8	1766.2
20°	1706.7	1739.2	1741.9	1725.7	1728.3	1728.3	1747.3	1731.1	1741.9	1728.3	1733.7
22.5°	1676.8	1698.5	1701.3	1679.6	1693.1	1676.8	1695.8	1671.4	1698.5	1679.6	1687.7
25°	1638.9	1636.3	1644.3	1633.5	1636.3	1636.3	1649.7	1638.9	1647.1	1636.3	1638.9
27.5°	1576.7	1598.3	1595.6	1584.8	1590.2	1587.5	1614.6	1584.8	1601.0	1587.5	1592.9
30°	1522.4	1541.4	1536.0	1525.2	1525.2	1517.0	1546.8	1538.7	1536.0	1536.0	1533.3
32.5°	1468.3	1471.0	1465.6	1468.3	1471.0	1460.2	1484.5	1473.7	1471.0	1473.7	1476.4
35°	1395.1	1395.1	1400.5	1392.4	1403.3	1403.3	1424.9	1411.3	1408.7	1400.5	1408.7
37.5°	1330.1	1322.0	1324.7	1324.7	1330.1	1335.5	1346.3	1340.9	1340.9	1332.9	1338.3
40°	1243.4	1238.0	1246.1	1246.1	1254.3	1254.3	1265.1	1259.7	1267.8	1267.8	1267.8
42.5°	1167.6	1167.6	1162.2	1170.3	1173.0	1170.3	1189.3	1186.5	1189.3	1183.9	1186.5
45°	1086.3	1086.3	1080.9	1078.2	1091.7	1089.0	1110.7	1102.5	1113.4	1107.9	1110.7
47.5°	975.2	988.8	980.6	988.8	1005.0	1007.8	1021.3	1015.9	1026.7	1018.6	1029.5
50°	869.6	869.6	877.7	888.5	904.8	907.5	923.8	934.6	940.0	942.7	945.5
52.5°	758.6	755.8	764.0	777.5	791.1	801.9	818.1	834.4	845.2	861.5	853.3
55°	628.5	633.9	642.1	658.3	680.0	693.5	707.0	728.7	747.7	755.8	772.0
57.5°	517.4	512.0	517.4	539.0	563.5	574.3	593.3	615.0	642.1	658.3	663.7
60°	400.9	403.6	409.1	428.1	447.0	463.2	471.4	506.6	531.0	547.2	558.1
62.5°	295.3	300.7	306.2	322.4	341.3	354.9	368.4	398.2	419.9	436.1	447.0
65°	205.9	208.6	216.7	224.8	243.8	257.3	268.1	292.6	314.2	327.8	335.9
67.5°	127.3	130.0	135.4	146.3	159.8	170.7	181.5	197.7	216.7	230.2	233.0
70°	65.0	67.8	70.4	78.6	89.4	94.8	102.9	116.5	130.0	140.8	146.3
72.5°	21.7	21.7	24.4	29.8	35.3	40.7	43.3	56.9	67.8	73.2	75.8
75°	5.4	5.4	5.4	5.4	5.4	8.2	8.2	16.2	21.7	27.1	29.8
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	5.4	5.4
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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



TEST NUMBER: P840198

CATALOG NUMBER: LD4C50D010 EU4509027 4LBCSSQMMS

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2	1907.2
2.5°	1907.2	1901.7	1899.0	1901.7	1901.7	1899.0	1907.2	1918.0	1931.5	1896.3
5°	1904.4	1899.0	1904.4	1888.2	1896.3	1890.9	1901.7	1899.0	1909.8	1899.0
7.5°	1896.3	1885.5	1888.2	1880.1	1890.9	1877.3	1885.5	1901.7	1890.9	1874.7
10°	1869.3	1863.8	1882.7	1855.7	1850.2	1861.1	1882.7	1866.5	1861.1	1866.5
12.5°	1842.1	1842.1	1850.2	1828.6	1831.2	1836.7	1847.5	1836.7	1842.1	1855.7
15°	1812.3	1806.9	1820.4	1804.2	1801.5	1796.1	1806.9	1806.9	1812.3	1804.2
17.5°	1777.1	1769.0	1769.0	1763.6	1760.8	1774.4	1779.8	1782.5	1785.3	1774.4
20°	1733.7	1731.1	1739.2	1731.1	1733.7	1736.5	1736.5	1731.1	1755.4	1725.7
22.5°	1687.7	1695.8	1685.0	1679.6	1685.0	1690.4	1690.4	1693.1	1687.7	1682.2
25°	1641.7	1647.1	1649.7	1633.5	1641.7	1633.5	1652.5	1655.2	1644.3	1649.7
27.5°	1601.0	1592.9	1590.2	1579.3	1584.8	1582.1	1584.8	1584.8	1601.0	1579.3
30°	1538.7	1530.6	1533.3	1525.2	1527.8	1525.2	1527.8	1527.8	1538.7	1536.0
32.5°	1479.1	1471.0	1473.7	1465.6	1465.6	1468.3	1462.8	1462.8	1471.0	1465.6
35°	1422.2	1403.3	1405.9	1403.3	1405.9	1395.1	1395.1	1392.4	1397.9	1384.3
37.5°	1340.9	1332.9	1330.1	1327.4	1330.1	1324.7	1330.1	1322.0	1330.1	1319.3
40°	1267.8	1262.3	1265.1	1248.9	1248.9	1251.5	1246.1	1243.4	1246.1	1256.9
42.5°	1194.7	1183.9	1178.5	1173.0	1175.7	1167.6	1164.9	1159.4	1164.9	1154.0
45°	1107.9	1107.9	1105.3	1091.7	1094.5	1094.5	1083.6	1072.8	1075.4	1075.4
47.5°	1029.5	1024.0	1021.3	1007.8	1005.0	1002.4	991.4	983.4	983.4	975.2
50°	942.7	937.3	929.2	915.6	910.2	894.0	885.9	875.1	864.2	864.2
52.5°	861.5	842.4	831.6	810.0	801.9	793.7	772.0	764.0	755.8	747.7
55°	764.0	747.7	726.1	701.6	690.8	677.2	655.5	639.3	628.5	631.2
57.5°	669.1	642.1	620.4	587.9	574.3	566.1	544.5	522.8	512.0	512.0
60°	552.6	531.0	503.9	474.1	463.2	449.7	422.6	409.1	400.9	392.8
62.5°	441.6	425.3	400.9	363.0	354.9	341.3	322.4	306.2	298.0	298.0
65°	330.5	314.2	292.6	265.5	254.7	243.8	227.6	211.3	203.2	200.5
67.5°	233.0	214.0	195.1	173.4	165.2	159.8	143.6	132.7	127.3	124.6
70°	140.8	130.0	116.5	100.2	92.1	86.7	75.8	67.8	65.0	62.3
72.5°	73.2	65.0	54.2	43.3	37.9	32.5	27.1	21.7	19.0	19.0
75°	27.1	21.7	13.6	8.2	5.4	5.4	5.4	5.4	5.4	5.4
77.5°	5.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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)