

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: P840183

Luminaire Tested: **LD4C40D010 EU4409035 4LBCSSQMW**

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: P840183
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: LD4C40D010 EU4409035 4LBCSSQMW
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

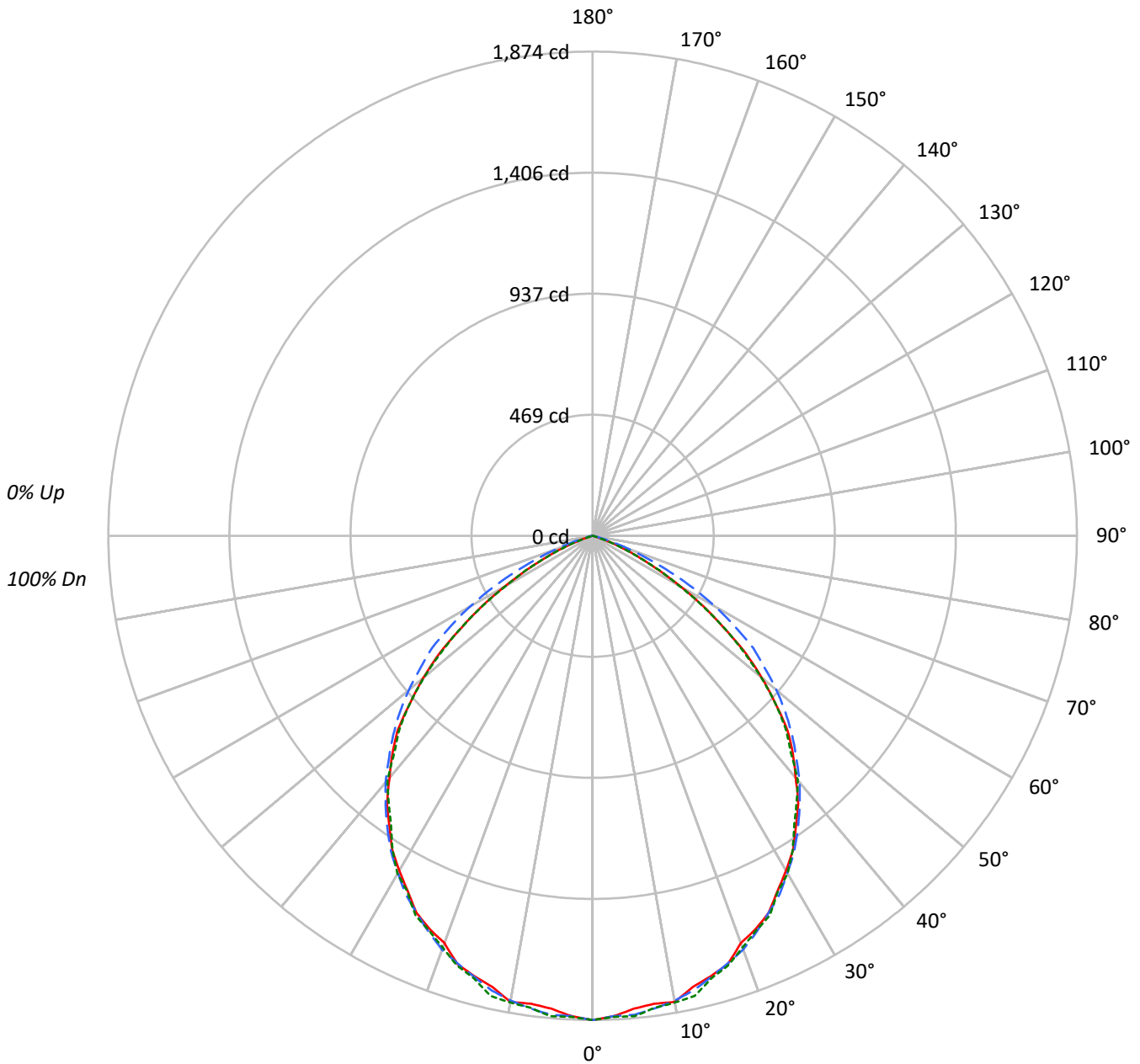
Lumens per Lamp: N/A
Luminaire Lumens: 4004.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
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

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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°	180859	180859	180859
5°	177937	180252	180775
10°	179475	178956	179730
15°	176331	176590	177130
20°	172227	174969	174148
25°	171492	171492	172620
30°	166711	167892	168193
35°	161504	163082	160255
40°	153932	156943	155595
45°	145680	148955	144234
50°	128299	139482	127503
55°	103912	127648	104366
60°	76033	105848	74509
65°	46210	75366	45000
70°	18027	40568	17294
75°	1976	10923	1976
80°	1500	1500	1500
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.9	4.4
10°-20°	500.7	12.5
20°-30°	742.9	18.6
30°-40°	860.8	21.5
40°-50°	825.3	20.6
50°-60°	606.8	15.2
60°-70°	262.1	6.5
70°-80°	28.3	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°	1420.4	35.5
0°-40°	2281.2	57.0
0°-60°	3713.3	92.7
0°-90°	4004.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4004.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1874	1874	1874	1874	1874	
5°	1837	1856	1861	1864	1866	175
15°	1765	1776	1768	1770	1773	498
25°	1611	1608	1611	1614	1621	737
35°	1371	1379	1384	1382	1360	857
45°	1068	1070	1092	1076	1057	812
55°	618	682	759	679	620	556
65°	202	253	330	250	197	208
75°	5	8	29	5	5	16
85°	0	0	0	0	0	0
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°	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4
2.5°	1861.0	1882.3	1885.0	1871.7	1866.4	1858.4	1877.0	1863.8	1869.1	1863.8	1861.0
5°	1837.1	1861.0	1863.8	1863.8	1858.4	1855.7	1863.8	1861.0	1858.4	1853.1	1861.0
7.5°	1826.5	1839.7	1853.1	1837.1	1845.1	1842.5	1861.0	1853.1	1850.4	1850.4	1845.1
10°	1831.8	1829.1	1839.7	1823.8	1829.1	1823.8	1839.7	1839.7	1834.4	1829.1	1826.5
12.5°	1789.1	1810.4	1810.4	1807.8	1802.5	1794.4	1810.4	1821.2	1805.1	1805.1	1802.5
15°	1765.2	1770.5	1773.2	1773.2	1770.5	1775.9	1783.8	1773.2	1775.9	1762.5	1767.8
17.5°	1738.6	1728.0	1735.9	1730.6	1733.3	1738.6	1749.3	1749.3	1733.3	1730.6	1735.9
20°	1677.3	1709.3	1712.0	1696.0	1698.6	1698.6	1717.3	1701.3	1712.0	1698.6	1704.0
22.5°	1648.0	1669.3	1672.0	1650.7	1664.0	1648.0	1666.7	1642.7	1669.3	1650.7	1658.7
25°	1610.8	1608.1	1616.1	1605.4	1608.1	1608.1	1621.4	1610.8	1618.8	1608.1	1610.8
27.5°	1549.6	1570.9	1568.2	1557.5	1562.8	1560.2	1586.9	1557.5	1573.5	1560.2	1565.6
30°	1496.3	1514.9	1509.6	1499.0	1499.0	1490.9	1520.3	1512.2	1509.6	1509.6	1506.9
32.5°	1443.0	1445.7	1440.4	1443.0	1445.7	1435.1	1459.0	1448.4	1445.7	1448.4	1451.1
35°	1371.1	1371.1	1376.4	1368.5	1379.2	1379.2	1400.4	1387.1	1384.5	1376.4	1384.5
37.5°	1307.2	1299.3	1301.9	1301.9	1307.2	1312.6	1323.2	1317.9	1317.9	1310.0	1315.3
40°	1222.1	1216.8	1224.7	1224.7	1232.7	1232.7	1243.4	1238.0	1246.0	1246.0	1246.0
42.5°	1147.6	1147.6	1142.2	1150.2	1152.9	1150.2	1168.8	1166.1	1168.8	1163.5	1166.1
45°	1067.6	1067.6	1062.3	1059.7	1072.9	1070.3	1091.6	1083.6	1094.2	1088.9	1091.6
47.5°	958.4	971.8	963.8	971.8	987.8	990.5	1003.7	998.4	1009.1	1001.1	1011.8
50°	854.7	854.7	862.6	873.3	889.2	892.0	907.9	918.6	923.9	926.5	929.2
52.5°	745.5	742.8	750.8	764.1	777.5	788.1	804.1	820.0	830.7	846.7	838.6
55°	617.7	623.0	631.0	647.0	668.3	681.5	694.9	716.2	734.9	742.8	758.8
57.5°	508.5	503.2	508.5	529.8	553.8	564.4	583.1	604.4	631.0	647.0	652.3
60°	394.0	396.7	402.0	420.7	439.3	455.3	463.3	497.8	521.9	537.8	548.5
62.5°	290.3	295.6	300.9	316.9	335.4	348.8	362.1	391.4	412.7	428.7	439.3
65°	202.4	205.0	213.0	221.0	239.6	252.9	263.5	287.5	308.8	322.2	330.1
67.5°	125.1	127.7	133.1	143.8	157.1	167.7	178.4	194.3	213.0	226.3	229.0
70°	63.9	66.6	69.2	77.2	87.9	93.2	101.1	114.5	127.7	138.4	143.8
72.5°	21.3	21.3	24.0	29.3	34.7	40.0	42.6	55.9	66.6	71.9	74.5
75°	5.3	5.3	5.3	5.3	5.3	8.0	8.0	16.0	21.3	26.6	29.3
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	5.3	5.3
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4	1874.4
2.5°	1874.4	1869.1	1866.4	1869.1	1869.1	1866.4	1874.4	1885.0	1898.3	1863.8
5°	1871.7	1866.4	1871.7	1855.7	1863.8	1858.4	1869.1	1866.4	1877.0	1866.4
7.5°	1863.8	1853.1	1855.7	1847.8	1858.4	1845.1	1853.1	1869.1	1858.4	1842.5
10°	1837.1	1831.8	1850.4	1823.8	1818.5	1829.1	1850.4	1834.4	1829.1	1834.4
12.5°	1810.4	1810.4	1818.5	1797.2	1799.8	1805.1	1815.7	1805.1	1810.4	1823.8
15°	1781.2	1775.9	1789.1	1773.2	1770.5	1765.2	1775.9	1775.9	1781.2	1773.2
17.5°	1746.5	1738.6	1738.6	1733.3	1730.6	1743.9	1749.3	1751.9	1754.6	1743.9
20°	1704.0	1701.3	1709.3	1701.3	1704.0	1706.7	1706.7	1701.3	1725.3	1696.0
22.5°	1658.7	1666.7	1656.1	1650.7	1656.1	1661.4	1661.4	1664.0	1658.7	1653.3
25°	1613.5	1618.8	1621.4	1605.4	1613.5	1605.4	1624.1	1626.7	1616.1	1621.4
27.5°	1573.5	1565.6	1562.8	1552.2	1557.5	1554.9	1557.5	1557.5	1573.5	1552.2
30°	1512.2	1504.3	1506.9	1499.0	1501.6	1499.0	1501.6	1501.6	1512.2	1509.6
32.5°	1453.7	1445.7	1448.4	1440.4	1440.4	1443.0	1437.7	1437.7	1445.7	1440.4
35°	1397.7	1379.2	1381.8	1379.2	1381.8	1371.1	1371.1	1368.5	1373.8	1360.5
37.5°	1317.9	1310.0	1307.2	1304.6	1307.2	1301.9	1307.2	1299.3	1307.2	1296.6
40°	1246.0	1240.7	1243.4	1227.4	1227.4	1230.0	1224.7	1222.1	1224.7	1235.3
42.5°	1174.2	1163.5	1158.2	1152.9	1155.5	1147.6	1144.8	1139.5	1144.8	1134.2
45°	1088.9	1088.9	1086.3	1072.9	1075.6	1075.6	1065.0	1054.4	1057.0	1057.0
47.5°	1011.8	1006.4	1003.7	990.5	987.8	985.2	974.4	966.5	966.5	958.4
50°	926.5	921.2	913.2	899.9	894.6	878.6	870.7	860.0	849.4	849.4
52.5°	846.7	828.0	817.3	796.0	788.1	780.1	758.8	750.8	742.8	734.9
55°	750.8	734.9	713.6	689.6	678.9	665.6	644.3	628.3	617.7	620.4
57.5°	657.6	631.0	609.7	577.8	564.4	556.4	535.1	513.8	503.2	503.2
60°	543.1	521.9	495.2	465.9	455.3	442.0	415.3	402.0	394.0	386.1
62.5°	434.0	418.0	394.0	356.7	348.8	335.4	316.9	300.9	292.9	292.9
65°	324.8	308.8	287.5	260.9	250.3	239.6	223.7	207.7	199.7	197.1
67.5°	229.0	210.3	191.7	170.4	162.4	157.1	141.1	130.5	125.1	122.4
70°	138.4	127.7	114.5	98.5	90.5	85.2	74.5	66.6	63.9	61.3
72.5°	71.9	63.9	53.2	42.6	37.3	31.9	26.6	21.3	18.7	18.7
75°	26.6	21.3	13.4	8.0	5.3	5.3	5.3	5.3	5.3	5.3
77.5°	5.3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)