

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: P840181

Luminaire Tested: **LD4C40D010 EU4409030 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: P840181
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 EU4409030 4LBCSSQMW
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

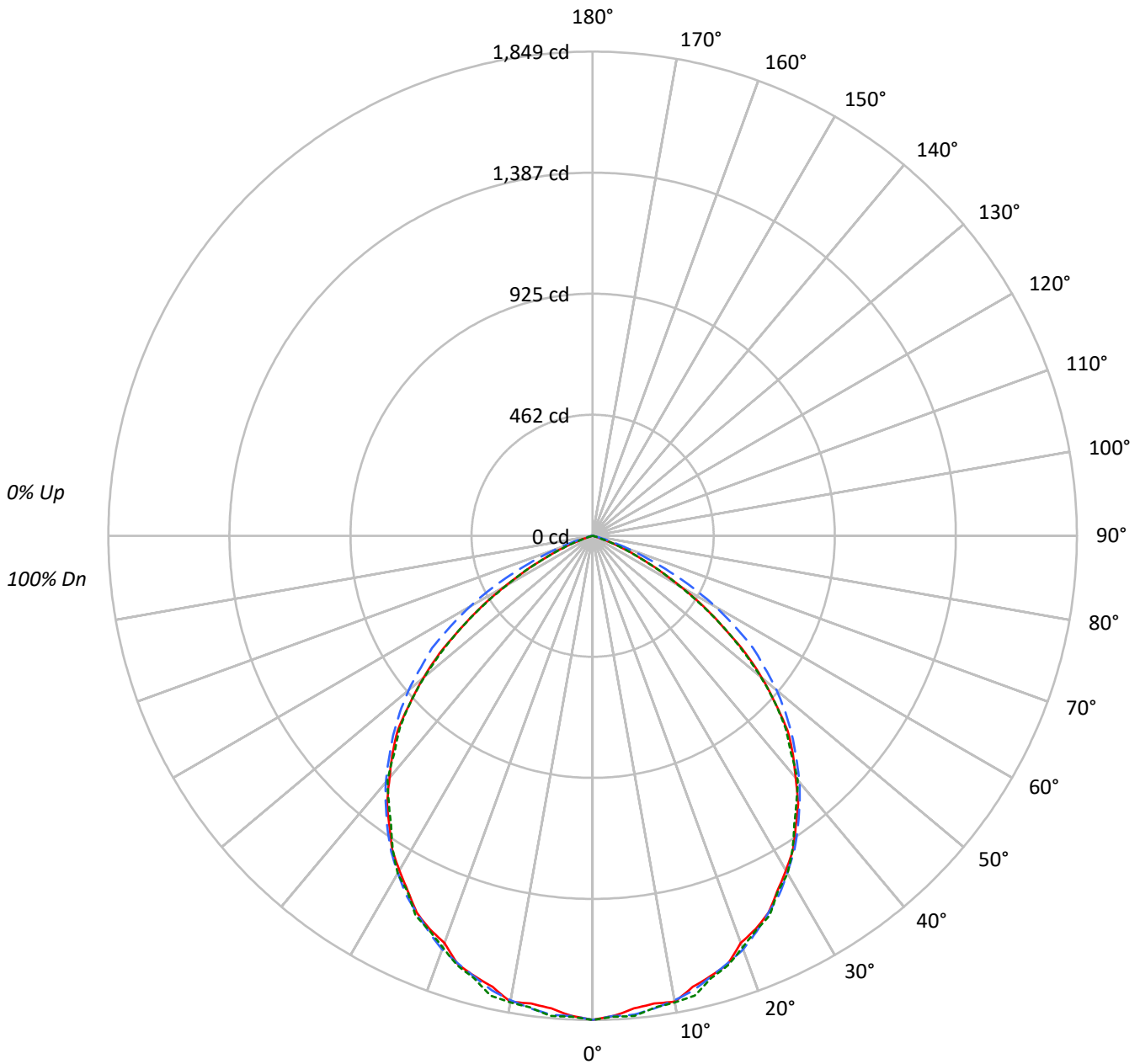
Lumens per Lamp: N/A
Luminaire Lumens: 3949.0 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	178369	178369	178369
5°	175496	177782	178286
10°	177016	176496	177261
15°	173913	174173	174692
20°	169866	172566	171755
25°	169128	169128	170246
30°	164416	165586	165887
35°	159289	160844	158052
40°	151816	154789	153466
45°	143674	146908	142242
50°	126543	137561	125747
55°	102482	125898	102936
60°	74991	104382	73486
65°	45571	74338	44361
70°	17773	40004	17040
75°	1939	10774	1939
80°	1500	1500	1500
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.5	4.4
10°-20°	493.8	12.5
20°-30°	732.7	18.6
30°-40°	848.9	21.5
40°-50°	813.9	20.6
50°-60°	598.5	15.2
60°-70°	258.5	6.5
70°-80°	27.9	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°	1400.9	35.5
0°-40°	2249.9	57.0
0°-60°	3662.3	92.7
0°-90°	3949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1849	1849	1849	1849	1849	
5°	1812	1830	1836	1838	1841	173
15°	1741	1752	1744	1746	1749	491
25°	1589	1586	1589	1591	1599	727
35°	1352	1360	1366	1363	1342	846
45°	1053	1056	1077	1061	1042	800
55°	609	672	748	670	612	548
65°	200	249	326	247	194	205
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°	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6
2.5°	1835.5	1856.5	1859.1	1846.0	1840.7	1832.9	1851.2	1838.1	1843.4	1838.1	1835.5
5°	1811.9	1835.5	1838.1	1838.1	1832.9	1830.2	1838.1	1835.5	1832.9	1827.6	1835.5
7.5°	1801.4	1814.5	1827.6	1811.9	1819.7	1817.2	1835.5	1827.6	1825.0	1825.0	1819.7
10°	1806.7	1804.0	1814.5	1798.7	1804.0	1798.7	1814.5	1814.5	1809.2	1804.0	1801.4
12.5°	1764.5	1785.5	1785.5	1783.0	1777.7	1769.8	1785.5	1796.2	1780.3	1780.3	1777.7
15°	1741.0	1746.2	1748.8	1748.8	1746.2	1751.5	1759.3	1748.8	1751.5	1738.3	1743.6
17.5°	1714.7	1704.2	1712.1	1706.8	1709.5	1714.7	1725.2	1725.2	1709.5	1706.8	1712.1
20°	1654.3	1685.8	1688.5	1672.7	1675.3	1675.3	1693.7	1678.0	1688.5	1675.3	1680.6
22.5°	1625.4	1646.4	1649.1	1628.1	1641.1	1625.4	1643.8	1620.1	1646.4	1628.1	1635.9
25°	1588.6	1586.1	1593.9	1583.4	1586.1	1586.1	1599.1	1588.6	1596.6	1586.1	1588.6
27.5°	1528.3	1549.3	1546.6	1536.1	1541.4	1538.8	1565.1	1536.1	1551.9	1538.8	1544.1
30°	1475.7	1494.1	1488.9	1478.4	1478.4	1470.5	1499.4	1491.5	1488.9	1488.9	1486.2
32.5°	1423.2	1425.9	1420.6	1423.2	1425.9	1415.4	1439.0	1428.5	1425.9	1428.5	1431.1
35°	1352.3	1352.3	1357.5	1349.7	1360.2	1360.2	1381.2	1368.0	1365.5	1357.5	1365.5
37.5°	1289.3	1281.5	1284.0	1284.0	1289.3	1294.5	1305.0	1299.8	1299.8	1292.0	1297.2
40°	1205.3	1200.0	1207.9	1207.9	1215.8	1215.8	1226.3	1221.0	1228.9	1228.9	1228.9
42.5°	1131.8	1131.8	1126.5	1134.4	1137.0	1134.4	1152.8	1150.1	1152.8	1147.5	1150.1
45°	1052.9	1052.9	1047.7	1045.1	1058.2	1055.6	1076.6	1068.7	1079.2	1073.9	1076.6
47.5°	945.3	958.4	950.5	958.4	974.2	976.9	989.9	984.7	995.2	987.4	997.9
50°	843.0	843.0	850.8	861.3	877.0	879.7	895.5	906.0	911.2	913.8	916.4
52.5°	735.3	732.6	740.5	753.6	766.8	777.3	793.0	808.8	819.3	835.0	827.1
55°	609.2	614.4	622.4	638.1	659.1	672.2	685.4	706.4	724.8	732.6	748.4
57.5°	501.5	496.3	501.5	522.5	546.2	556.7	575.1	596.1	622.4	638.1	643.4
60°	388.6	391.3	396.5	414.9	433.3	449.0	456.9	491.0	514.7	530.4	540.9
62.5°	286.3	291.5	296.8	312.5	330.8	344.0	357.1	386.0	407.0	422.8	433.3
65°	199.6	202.2	210.1	217.9	236.3	249.4	259.9	283.6	304.6	317.8	325.6
67.5°	123.4	126.0	131.2	141.8	154.9	165.4	175.9	191.7	210.1	223.2	225.8
70°	63.0	65.7	68.2	76.2	86.7	91.9	99.7	112.9	126.0	136.5	141.8
72.5°	21.0	21.0	23.7	28.9	34.2	39.4	42.0	55.2	65.7	70.9	73.5
75°	5.2	5.2	5.2	5.2	5.2	7.9	7.9	15.7	21.0	26.2	28.9
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	5.2	5.2
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°	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6	1848.6
2.5°	1848.6	1843.4	1840.7	1843.4	1843.4	1840.7	1848.6	1859.1	1872.2	1838.1
5°	1846.0	1840.7	1846.0	1830.2	1838.1	1832.9	1843.4	1840.7	1851.2	1840.7
7.5°	1838.1	1827.6	1830.2	1822.4	1832.9	1819.7	1827.6	1843.4	1832.9	1817.2
10°	1811.9	1806.7	1825.0	1798.7	1793.5	1804.0	1825.0	1809.2	1804.0	1809.2
12.5°	1785.5	1785.5	1793.5	1772.5	1775.0	1780.3	1790.8	1780.3	1785.5	1798.7
15°	1756.7	1751.5	1764.5	1748.8	1746.2	1741.0	1751.5	1751.5	1756.7	1748.8
17.5°	1722.6	1714.7	1714.7	1709.5	1706.8	1720.0	1725.2	1727.8	1730.5	1720.0
20°	1680.6	1678.0	1685.8	1678.0	1680.6	1683.2	1683.2	1678.0	1701.6	1672.7
22.5°	1635.9	1643.8	1633.3	1628.1	1633.3	1638.6	1638.6	1641.1	1635.9	1630.6
25°	1591.3	1596.6	1599.1	1583.4	1591.3	1583.4	1601.8	1604.4	1593.9	1599.1
27.5°	1551.9	1544.1	1541.4	1530.9	1536.1	1533.6	1536.1	1536.1	1551.9	1530.9
30°	1491.5	1483.6	1486.2	1478.4	1481.0	1478.4	1481.0	1481.0	1491.5	1488.9
32.5°	1433.7	1425.9	1428.5	1420.6	1420.6	1423.2	1418.0	1418.0	1425.9	1420.6
35°	1378.5	1360.2	1362.8	1360.2	1362.8	1352.3	1352.3	1349.7	1355.0	1341.8
37.5°	1299.8	1292.0	1289.3	1286.7	1289.3	1284.0	1289.3	1281.5	1289.3	1278.8
40°	1228.9	1223.6	1226.3	1210.5	1210.5	1213.1	1207.9	1205.3	1207.9	1218.4
42.5°	1158.0	1147.5	1142.3	1137.0	1139.6	1131.8	1129.1	1123.9	1129.1	1118.6
45°	1073.9	1073.9	1071.4	1058.2	1060.9	1060.9	1050.4	1039.9	1042.4	1042.4
47.5°	997.9	992.6	989.9	976.9	974.2	971.6	961.0	953.2	953.2	945.3
50°	913.8	908.5	900.7	887.5	882.3	866.5	858.7	848.2	837.7	837.7
52.5°	835.0	816.6	806.1	785.1	777.3	769.4	748.4	740.5	732.6	724.8
55°	740.5	724.8	703.8	680.1	669.6	656.4	635.4	619.7	609.2	611.9
57.5°	648.6	622.4	601.4	569.9	556.7	548.8	527.8	506.8	496.3	496.3
60°	535.7	514.7	488.4	459.5	449.0	435.9	409.6	396.5	388.6	380.8
62.5°	428.0	412.3	388.6	351.8	344.0	330.8	312.5	296.8	288.8	288.8
65°	320.3	304.6	283.6	257.3	246.8	236.3	220.6	204.8	196.9	194.3
67.5°	225.8	207.4	189.1	168.1	160.2	154.9	139.2	128.7	123.4	120.7
70°	136.5	126.0	112.9	97.2	89.2	84.0	73.5	65.7	63.0	60.4
72.5°	70.9	63.0	52.5	42.0	36.7	31.5	26.2	21.0	18.4	18.4
75°	26.2	21.0	13.2	7.9	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	5.2	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)