

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: P840200

Luminaire Tested: **LD4C50D010 EU4509030 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: P840200
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 EU4509030 4LBCSSQMMS
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

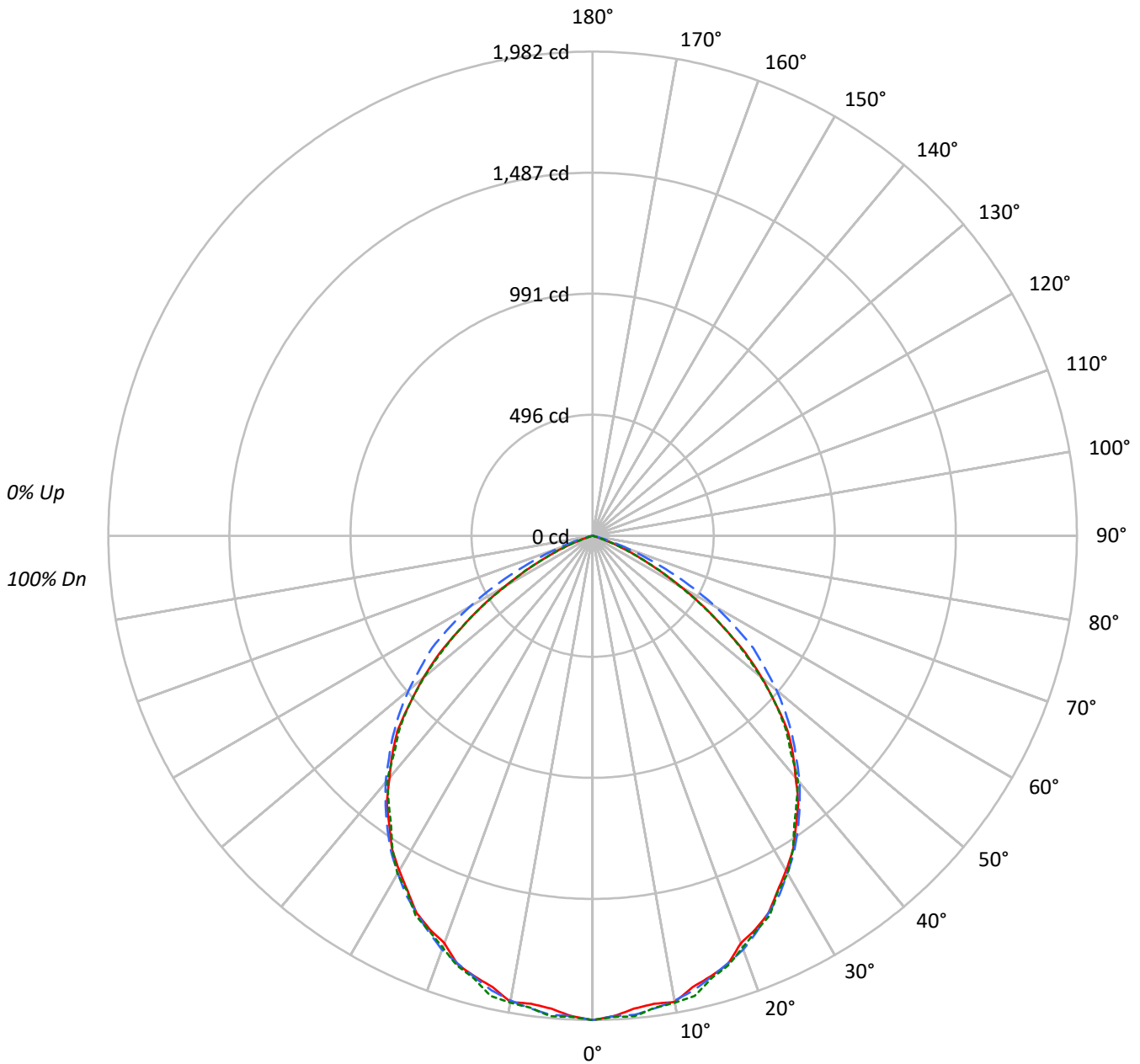
Lumens per Lamp: N/A
Luminaire Lumens: 4235.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

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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°	191289	191289	191289
5°	188204	190654	191197
10°	189831	189283	190106
15°	186510	186779	187349
20°	182167	185063	184200
25°	181382	181382	182575
30°	176327	177574	177898
35°	170821	172493	169502
40°	162812	165999	164576
45°	154086	157552	152544
50°	135700	147528	134859
55°	109900	135016	110388
60°	80414	111946	78793
65°	48882	79727	47580
70°	19071	42910	18281
75°	2088	11557	2088
80°	1611	1611	1611
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.1	4.4
10°-20°	529.5	12.5
20°-30°	785.7	18.6
30°-40°	910.4	21.5
40°-50°	872.9	20.6
50°-60°	641.8	15.2
60°-70°	277.2	6.5
70°-80°	29.9	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°	1502.4	35.5
0°-40°	2412.8	57.0
0°-60°	3927.5	92.7
0°-90°	4235.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4235.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1982	1982	1982	1982	1982	
5°	1943	1963	1968	1971	1974	185
15°	1867	1878	1870	1873	1876	526
25°	1704	1701	1704	1707	1715	780
35°	1450	1459	1464	1462	1439	907
45°	1129	1132	1155	1138	1118	858
55°	653	721	803	718	656	588
65°	214	268	349	265	208	220
75°	6	8	31	6	6	17
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°	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5
2.5°	1968.4	1990.9	1993.8	1979.7	1974.0	1965.6	1985.3	1971.3	1976.9	1971.3	1968.4
5°	1943.1	1968.4	1971.3	1971.3	1965.6	1962.8	1971.3	1968.4	1965.6	1960.0	1968.4
7.5°	1931.9	1945.9	1960.0	1943.1	1951.5	1948.8	1968.4	1960.0	1957.1	1957.1	1951.5
10°	1937.5	1934.6	1945.9	1929.0	1934.6	1929.0	1945.9	1945.9	1940.3	1934.6	1931.9
12.5°	1892.3	1914.9	1914.9	1912.1	1906.5	1898.0	1914.9	1926.2	1909.2	1909.2	1906.5
15°	1867.1	1872.7	1875.5	1875.5	1872.7	1878.3	1886.7	1875.5	1878.3	1864.2	1869.8
17.5°	1838.9	1827.7	1836.0	1830.4	1833.3	1838.9	1850.2	1850.2	1833.3	1830.4	1836.0
20°	1774.1	1807.9	1810.8	1793.9	1796.6	1796.6	1816.4	1799.5	1810.8	1796.6	1802.3
22.5°	1743.1	1765.6	1768.5	1746.0	1760.0	1743.1	1762.9	1737.5	1765.6	1746.0	1754.4
25°	1703.7	1700.9	1709.3	1698.1	1700.9	1700.9	1714.9	1703.7	1712.2	1700.9	1703.7
27.5°	1639.0	1661.5	1658.6	1647.4	1653.0	1650.3	1678.4	1647.4	1664.3	1650.3	1655.9
30°	1582.6	1602.3	1596.7	1585.5	1585.5	1577.0	1608.0	1599.5	1596.7	1596.7	1593.8
32.5°	1526.3	1529.2	1523.5	1526.3	1529.2	1517.9	1543.2	1531.9	1529.2	1531.9	1534.8
35°	1450.2	1450.2	1455.9	1447.5	1458.7	1458.7	1481.2	1467.1	1464.4	1455.9	1464.4
37.5°	1382.7	1374.3	1377.0	1377.0	1382.7	1388.3	1399.6	1393.9	1393.9	1385.5	1391.2
40°	1292.6	1287.0	1295.3	1295.3	1303.8	1303.8	1315.1	1309.5	1317.9	1317.9	1317.9
42.5°	1213.8	1213.8	1208.1	1216.5	1219.4	1216.5	1236.3	1233.4	1236.3	1230.7	1233.4
45°	1129.2	1129.2	1123.6	1120.8	1134.8	1132.1	1154.6	1146.1	1157.4	1151.7	1154.6
47.5°	1013.7	1027.9	1019.4	1027.9	1044.8	1047.6	1061.6	1056.0	1067.3	1058.9	1070.1
50°	904.0	904.0	912.4	923.7	940.5	943.4	960.3	971.6	977.2	980.0	982.8
52.5°	788.5	785.7	794.2	808.2	822.3	833.6	850.5	867.4	878.6	895.5	887.0
55°	653.3	658.9	667.4	684.3	706.8	720.9	735.0	757.5	777.3	785.7	802.6
57.5°	537.8	532.2	537.8	560.4	585.7	597.0	616.8	639.3	667.4	684.3	690.0
60°	416.7	419.6	425.2	445.0	464.6	481.5	490.0	526.6	552.0	568.9	580.1
62.5°	307.0	312.6	318.3	335.2	354.8	368.9	383.0	414.0	436.5	453.4	464.6
65°	214.1	216.8	225.3	233.7	253.5	267.5	278.7	304.1	326.7	340.8	349.2
67.5°	132.4	135.1	140.8	152.1	166.1	177.4	188.7	205.6	225.3	239.3	242.2
70°	67.6	70.4	73.2	81.7	93.0	98.6	107.0	121.1	135.1	146.4	152.1
72.5°	22.5	22.5	25.4	31.0	36.7	42.3	45.0	59.2	70.4	76.1	78.8
75°	5.6	5.6	5.6	5.6	5.6	8.5	8.5	16.9	22.5	28.2	31.0
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.6	5.6
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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°	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5	1982.5
2.5°	1982.5	1976.9	1974.0	1976.9	1976.9	1974.0	1982.5	1993.8	2007.8	1971.3
5°	1979.7	1974.0	1979.7	1962.8	1971.3	1965.6	1976.9	1974.0	1985.3	1974.0
7.5°	1971.3	1960.0	1962.8	1954.4	1965.6	1951.5	1960.0	1976.9	1965.6	1948.8
10°	1943.1	1937.5	1957.1	1929.0	1923.4	1934.6	1957.1	1940.3	1934.6	1940.3
12.5°	1914.9	1914.9	1923.4	1900.8	1903.6	1909.2	1920.5	1909.2	1914.9	1929.0
15°	1884.0	1878.3	1892.3	1875.5	1872.7	1867.1	1878.3	1878.3	1884.0	1875.5
17.5°	1847.3	1838.9	1838.9	1833.3	1830.4	1844.5	1850.2	1852.9	1855.8	1844.5
20°	1802.3	1799.5	1807.9	1799.5	1802.3	1805.1	1805.1	1799.5	1824.8	1793.9
22.5°	1754.4	1762.9	1751.6	1746.0	1751.6	1757.2	1757.2	1760.0	1754.4	1748.7
25°	1706.6	1712.2	1714.9	1698.1	1706.6	1698.1	1717.8	1720.6	1709.3	1714.9
27.5°	1664.3	1655.9	1653.0	1641.8	1647.4	1644.6	1647.4	1647.4	1664.3	1641.8
30°	1599.5	1591.1	1593.8	1585.5	1588.2	1585.5	1588.2	1588.2	1599.5	1596.7
32.5°	1537.5	1529.2	1531.9	1523.5	1523.5	1526.3	1520.7	1520.7	1529.2	1523.5
35°	1478.4	1458.7	1461.5	1458.7	1461.5	1450.2	1450.2	1447.5	1453.1	1439.0
37.5°	1393.9	1385.5	1382.7	1379.9	1382.7	1377.0	1382.7	1374.3	1382.7	1371.4
40°	1317.9	1312.2	1315.1	1298.2	1298.2	1301.0	1295.3	1292.6	1295.3	1306.6
42.5°	1241.9	1230.7	1225.0	1219.4	1222.2	1213.8	1210.9	1205.3	1210.9	1199.6
45°	1151.7	1151.7	1149.0	1134.8	1137.7	1137.7	1126.4	1115.2	1117.9	1117.9
47.5°	1070.1	1064.5	1061.6	1047.6	1044.8	1042.0	1030.6	1022.2	1022.2	1013.7
50°	980.0	974.3	965.9	951.8	946.2	929.3	920.9	909.6	898.4	898.4
52.5°	895.5	875.7	864.5	842.0	833.6	825.1	802.6	794.2	785.7	777.3
55°	794.2	777.3	754.8	729.4	718.1	704.0	681.5	664.6	653.3	656.2
57.5°	695.6	667.4	644.9	611.1	597.0	588.5	566.0	543.5	532.2	532.2
60°	574.5	552.0	523.8	492.8	481.5	467.5	439.3	425.2	416.7	408.3
62.5°	459.0	442.1	416.7	377.3	368.9	354.8	335.2	318.3	309.8	309.8
65°	343.5	326.7	304.1	276.0	264.7	253.5	236.6	219.7	211.2	208.4
67.5°	242.2	222.4	202.8	180.3	171.8	166.1	149.3	138.0	132.4	129.5
70°	146.4	135.1	121.1	104.2	95.7	90.1	78.8	70.4	67.6	64.8
72.5°	76.1	67.6	56.3	45.0	39.4	33.8	28.2	22.5	19.8	19.8
75°	28.2	22.5	14.1	8.5	5.6	5.6	5.6	5.6	5.6	5.6
77.5°	5.6	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)