

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: P840202

Luminaire Tested: **LD4C50D010 EU4509035 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: P840202
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 EU4509035 4LBCSSQMMS
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

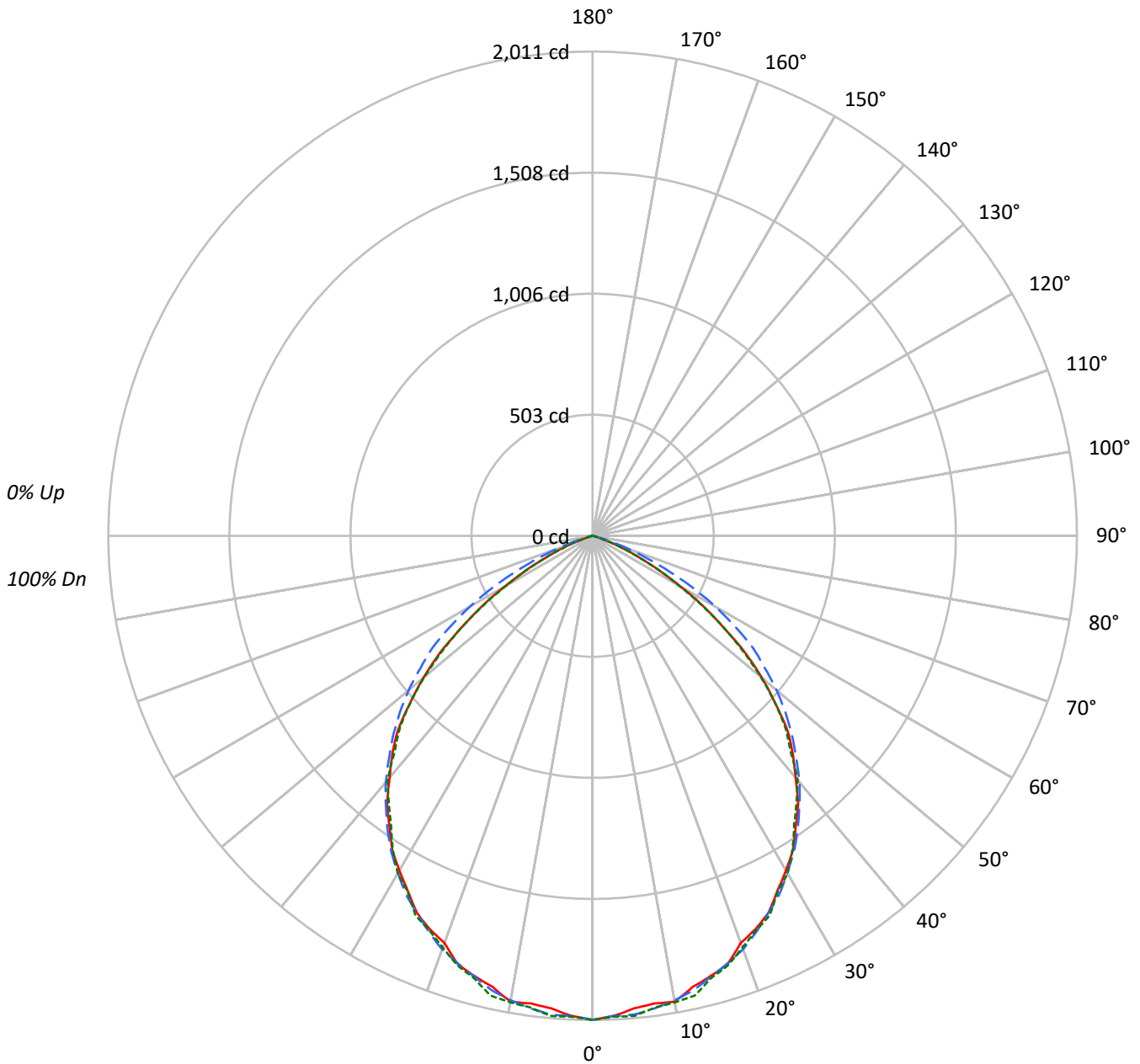
Lumens per Lamp: N/A
Luminaire Lumens: 4295.0 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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									
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°	194001	194001	194001
5°	190877	193357	193909
10°	192516	191957	192790
15°	189147	189426	189996
20°	184744	187681	186808
25°	183948	183948	185162
30°	178822	180092	180416
35°	173247	174932	171893
40°	165117	168342	166906
45°	156269	159790	154714
50°	137621	149615	136765
55°	111465	136917	111953
60°	81552	113529	79912
65°	49567	80845	48265
70°	19325	43530	18535
75°	2125	11743	2125
80°	1611	1611	1611
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.8	4.4
10°-20°	537.0	12.5
20°-30°	796.8	18.6
30°-40°	923.3	21.5
40°-50°	885.3	20.6
50°-60°	650.9	15.2
60°-70°	281.1	6.5
70°-80°	30.3	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°	1523.7	35.5
0°-40°	2447.0	57.0
0°-60°	3983.1	92.7
0°-90°	4295.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4295.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2011	2011	2011	2011	2011	
5°	1971	1991	1996	1999	2002	188
15°	1894	1905	1896	1899	1902	534
25°	1728	1725	1728	1731	1739	791
35°	1471	1479	1485	1482	1459	920
45°	1145	1148	1171	1154	1134	871
55°	663	731	814	728	666	596
65°	217	271	354	268	211	223
75°	6	9	32	6	6	18
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°	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6
2.5°	1996.3	2019.1	2022.0	2007.7	2002.0	1993.5	2013.4	1999.2	2004.9	1999.2	1996.3
5°	1970.7	1996.3	1999.2	1999.2	1993.5	1990.6	1999.2	1996.3	1993.5	1987.8	1996.3
7.5°	1959.2	1973.5	1987.8	1970.7	1979.2	1976.4	1996.3	1987.8	1984.9	1984.9	1979.2
10°	1964.9	1962.0	1973.5	1956.3	1962.0	1956.3	1973.5	1973.5	1967.7	1962.0	1959.2
12.5°	1919.2	1942.0	1942.0	1939.2	1933.5	1924.9	1942.0	1953.5	1936.3	1936.3	1933.5
15°	1893.5	1899.2	1902.0	1902.0	1899.2	1904.9	1913.4	1902.0	1904.9	1890.6	1896.3
17.5°	1865.0	1853.5	1862.1	1856.3	1859.3	1865.0	1876.4	1876.4	1859.3	1856.3	1862.1
20°	1799.2	1833.5	1836.4	1819.3	1822.1	1822.1	1842.1	1825.0	1836.4	1822.1	1827.8
22.5°	1767.8	1790.6	1793.5	1770.7	1784.9	1767.8	1787.8	1762.1	1790.6	1770.7	1779.2
25°	1727.8	1725.0	1733.5	1722.1	1725.0	1725.0	1739.2	1727.8	1736.4	1725.0	1727.8
27.5°	1662.2	1685.1	1682.1	1670.7	1676.4	1673.6	1702.2	1670.7	1687.9	1673.6	1679.3
30°	1605.0	1625.0	1619.3	1607.9	1607.9	1599.3	1630.8	1622.1	1619.3	1619.3	1616.4
32.5°	1547.9	1550.8	1545.1	1547.9	1550.8	1539.4	1565.0	1553.6	1550.8	1553.6	1556.5
35°	1470.8	1470.8	1476.5	1468.0	1479.4	1479.4	1502.2	1487.9	1485.1	1476.5	1485.1
37.5°	1402.3	1393.7	1396.5	1396.5	1402.3	1408.0	1419.4	1413.7	1413.7	1405.2	1410.9
40°	1310.9	1305.2	1313.7	1313.7	1322.3	1322.3	1333.7	1328.0	1336.5	1336.5	1336.5
42.5°	1231.0	1231.0	1225.2	1233.8	1236.7	1233.8	1253.8	1250.9	1253.8	1248.1	1250.9
45°	1145.2	1145.2	1139.5	1136.7	1150.9	1148.1	1171.0	1162.3	1173.7	1168.0	1171.0
47.5°	1028.1	1042.4	1033.8	1042.4	1059.6	1062.5	1076.7	1071.0	1082.4	1073.9	1085.3
50°	916.8	916.8	925.3	936.7	953.9	956.8	973.9	985.3	991.0	993.8	996.7
52.5°	799.7	796.8	805.4	819.6	834.0	845.4	862.5	879.6	891.1	908.2	899.6
55°	662.6	668.3	676.9	694.0	716.9	731.1	745.4	768.2	788.3	796.8	813.9
57.5°	545.5	539.7	545.5	568.3	594.0	605.5	625.5	648.3	676.9	694.0	699.7
60°	422.6	425.5	431.3	451.3	471.2	488.4	497.0	534.0	559.8	576.9	588.3
62.5°	311.4	317.1	322.8	339.9	359.8	374.2	388.4	419.8	442.7	459.8	471.2
65°	217.1	219.9	228.5	237.0	257.1	271.3	282.7	308.4	331.3	345.6	354.1
67.5°	134.2	137.0	142.7	154.3	168.5	179.9	191.3	208.5	228.5	242.7	245.6
70°	68.5	71.4	74.2	82.8	94.3	100.0	108.5	122.8	137.0	148.5	154.3
72.5°	22.8	22.8	25.7	31.5	37.2	42.9	45.7	60.0	71.4	77.1	79.9
75°	5.7	5.7	5.7	5.7	5.7	8.6	8.6	17.1	22.8	28.5	31.5
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.7	5.7
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°	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6	2010.6
2.5°	2010.6	2004.9	2002.0	2004.9	2004.9	2002.0	2010.6	2022.0	2036.3	1999.2
5°	2007.7	2002.0	2007.7	1990.6	1999.2	1993.5	2004.9	2002.0	2013.4	2002.0
7.5°	1999.2	1987.8	1990.6	1982.1	1993.5	1979.2	1987.8	2004.9	1993.5	1976.4
10°	1970.7	1964.9	1984.9	1956.3	1950.6	1962.0	1984.9	1967.7	1962.0	1967.7
12.5°	1942.0	1942.0	1950.6	1927.8	1930.6	1936.3	1947.7	1936.3	1942.0	1956.3
15°	1910.6	1904.9	1919.2	1902.0	1899.2	1893.5	1904.9	1904.9	1910.6	1902.0
17.5°	1873.5	1865.0	1865.0	1859.3	1856.3	1870.7	1876.4	1879.2	1882.1	1870.7
20°	1827.8	1825.0	1833.5	1825.0	1827.8	1830.7	1830.7	1825.0	1850.6	1819.3
22.5°	1779.2	1787.8	1776.4	1770.7	1776.4	1782.1	1782.1	1784.9	1779.2	1773.5
25°	1730.7	1736.4	1739.2	1722.1	1730.7	1722.1	1742.2	1745.0	1733.5	1739.2
27.5°	1687.9	1679.3	1676.4	1665.0	1670.7	1667.9	1670.7	1670.7	1687.9	1665.0
30°	1622.1	1613.6	1616.4	1607.9	1610.7	1607.9	1610.7	1610.7	1622.1	1619.3
32.5°	1559.3	1550.8	1553.6	1545.1	1545.1	1547.9	1542.2	1542.2	1550.8	1545.1
35°	1499.3	1479.4	1482.2	1479.4	1482.2	1470.8	1470.8	1468.0	1473.7	1459.3
37.5°	1413.7	1405.2	1402.3	1399.5	1402.3	1396.5	1402.3	1393.7	1402.3	1390.8
40°	1336.5	1330.8	1333.7	1316.6	1316.6	1319.4	1313.7	1310.9	1313.7	1325.1
42.5°	1259.5	1248.1	1242.4	1236.7	1239.5	1231.0	1228.0	1222.3	1228.0	1216.6
45°	1168.0	1168.0	1165.2	1150.9	1153.8	1153.8	1142.4	1131.0	1133.8	1133.8
47.5°	1085.3	1079.6	1076.7	1062.5	1059.6	1056.8	1045.2	1036.7	1036.7	1028.1
50°	993.8	988.1	979.6	965.3	959.6	942.4	933.9	922.5	911.1	911.1
52.5°	908.2	888.1	876.7	853.9	845.4	836.8	813.9	805.4	796.8	788.3
55°	805.4	788.3	765.4	739.7	728.3	713.9	691.1	674.0	662.6	665.5
57.5°	705.4	676.9	654.0	619.8	605.5	596.8	574.0	551.2	539.7	539.7
60°	582.6	559.8	531.2	499.8	488.4	474.1	445.5	431.3	422.6	414.1
62.5°	465.5	448.4	422.6	382.7	374.2	359.8	339.9	322.8	314.1	314.1
65°	348.4	331.3	308.4	279.9	268.5	257.1	239.9	222.8	214.2	211.4
67.5°	245.6	225.6	205.7	182.8	174.2	168.5	151.4	139.9	134.2	131.3
70°	148.5	137.0	122.8	105.7	97.1	91.4	79.9	71.4	68.5	65.7
72.5°	77.1	68.5	57.1	45.7	40.0	34.3	28.5	22.8	20.0	20.0
75°	28.5	22.8	14.3	8.6	5.7	5.7	5.7	5.7	5.7	5.7
77.5°	5.7	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)