

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: P840199

Luminaire Tested: **LD4C50D010 EU4509027 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: P840199
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 4LBCSSQMW
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

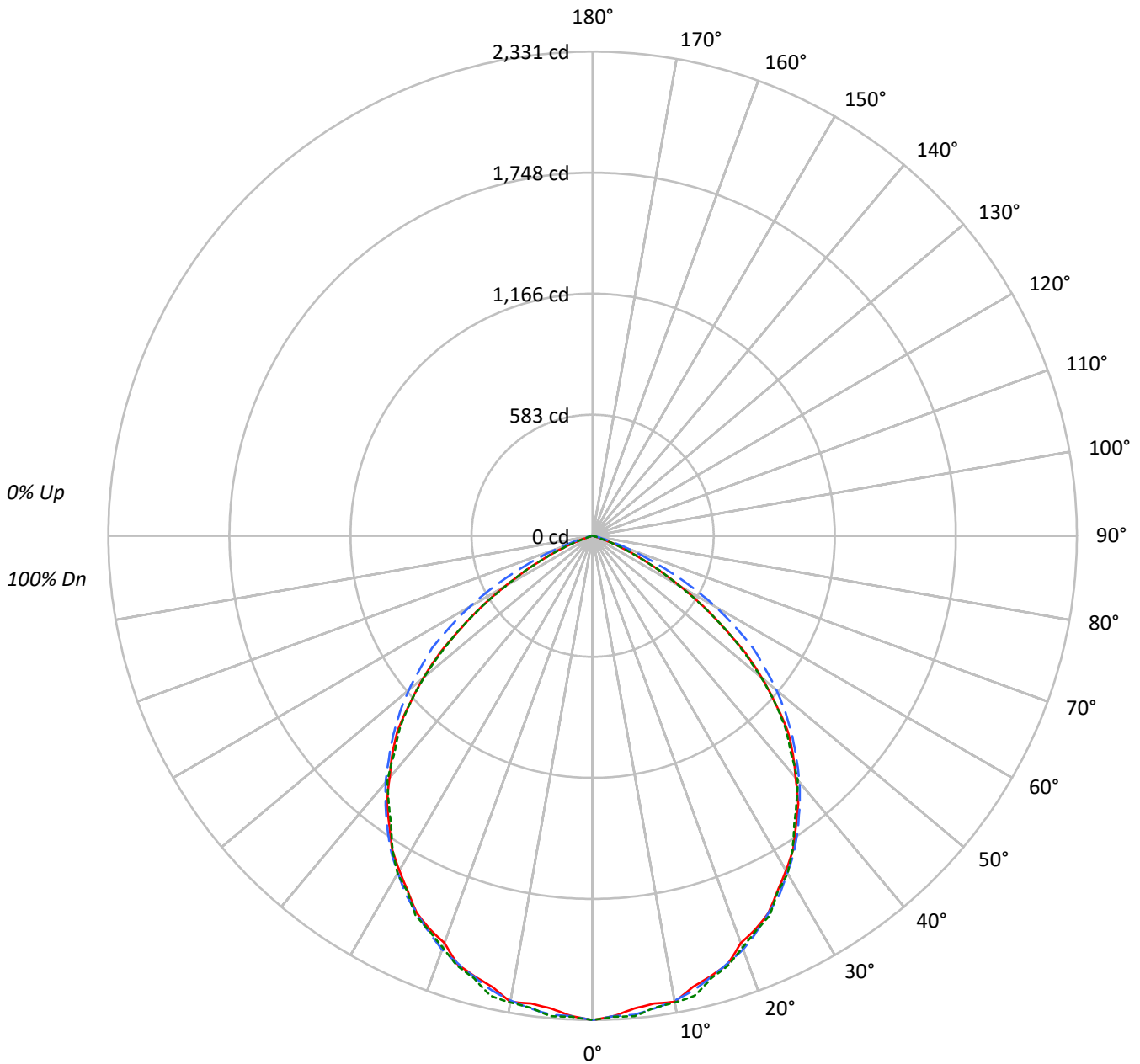
Lumens per Lamp: N/A
Luminaire Lumens: 4980.0 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	224945	224945	224945
5°	221310	224196	224835
10°	223222	222575	223545
15°	219314	219644	220303
20°	214214	217613	216596
25°	213289	213289	214695
30°	207345	208815	209194
35°	200869	202836	199314
40°	191455	195196	193533
45°	181186	185266	179385
50°	159567	173482	158576
55°	129229	158752	129801
60°	94559	131649	92668
65°	57466	93745	55959
70°	22400	50470	21497
75°	2461	13607	2461
80°	1889	1889	1889
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.1	4.4
10°-20°	622.7	12.5
20°-30°	923.9	18.6
30°-40°	1070.6	21.5
40°-50°	1026.4	20.6
50°-60°	754.7	15.2
60°-70°	326.0	6.5
70°-80°	35.2	0.7
80°-90°	0.5	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°	1766.7	35.5
0°-40°	2837.3	57.0
0°-60°	4618.4	92.7
0°-90°	4980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4980.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2331	2331	2331	2331	2331	
5°	2285	2308	2315	2318	2321	218
15°	2196	2209	2199	2202	2205	619
25°	2003	2000	2003	2007	2017	917
35°	1705	1715	1722	1719	1692	1066
45°	1328	1331	1358	1338	1315	1009
55°	768	848	944	844	772	691
65°	252	314	411	311	245	259
75°	7	10	36	7	7	20
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°	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3
2.5°	2314.7	2341.2	2344.5	2327.9	2321.3	2311.4	2334.5	2318.1	2324.7	2318.1	2314.7
5°	2284.9	2314.7	2318.1	2318.1	2311.4	2308.1	2318.1	2314.7	2311.4	2304.8	2314.7
7.5°	2271.7	2288.2	2304.8	2284.9	2294.8	2291.6	2314.7	2304.8	2301.4	2301.4	2294.8
10°	2278.3	2275.0	2288.2	2268.3	2275.0	2268.3	2288.2	2288.2	2281.6	2275.0	2271.7
12.5°	2225.2	2251.7	2251.7	2248.5	2241.9	2231.9	2251.7	2265.1	2245.1	2245.1	2241.9
15°	2195.5	2202.1	2205.4	2205.4	2202.1	2208.7	2218.6	2205.4	2208.7	2192.1	2198.8
17.5°	2162.4	2149.2	2159.0	2152.4	2155.8	2162.4	2175.6	2175.6	2155.8	2152.4	2159.0
20°	2086.2	2125.9	2129.3	2109.4	2112.7	2112.7	2135.9	2116.1	2129.3	2112.7	2119.3
22.5°	2049.7	2076.2	2079.6	2053.1	2069.6	2049.7	2073.0	2043.1	2076.2	2053.1	2063.0
25°	2003.4	2000.1	2010.0	1996.8	2000.1	2000.1	2016.6	2003.4	2013.4	2000.1	2003.4
27.5°	1927.3	1953.8	1950.4	1937.2	1943.8	1940.6	1973.7	1937.2	1957.0	1940.6	1947.2
30°	1861.0	1884.2	1877.6	1864.4	1864.4	1854.4	1890.8	1880.8	1877.6	1877.6	1874.2
32.5°	1794.8	1798.2	1791.5	1794.8	1798.2	1784.9	1814.6	1801.4	1798.2	1801.4	1804.8
35°	1705.3	1705.3	1712.0	1702.1	1715.3	1715.3	1741.8	1725.2	1722.0	1712.0	1722.0
37.5°	1625.9	1616.0	1619.3	1619.3	1625.9	1632.5	1645.8	1639.1	1639.1	1629.3	1635.9
40°	1520.0	1513.3	1523.2	1523.2	1533.2	1533.2	1546.4	1539.8	1549.7	1549.7	1549.7
42.5°	1427.3	1427.3	1420.7	1430.5	1433.9	1430.5	1453.8	1450.4	1453.8	1447.1	1450.4
45°	1327.8	1327.8	1321.2	1318.0	1334.5	1331.2	1357.7	1347.7	1360.9	1354.3	1357.7
47.5°	1192.1	1208.7	1198.7	1208.7	1228.5	1231.9	1248.4	1241.8	1255.0	1245.2	1258.4
50°	1063.0	1063.0	1072.9	1086.1	1106.0	1109.4	1129.2	1142.5	1149.1	1152.3	1155.7
52.5°	927.2	923.9	933.9	950.4	967.0	980.2	1000.1	1019.9	1033.2	1053.0	1043.0
55°	768.2	774.8	784.8	804.7	831.2	847.7	864.3	890.8	914.0	923.9	943.7
57.5°	632.4	625.8	632.4	658.9	688.8	702.0	725.3	751.7	784.8	804.7	811.3
60°	490.0	493.4	500.0	523.3	546.4	566.2	576.2	619.2	649.1	668.9	682.2
62.5°	361.0	367.6	374.2	394.1	417.2	433.8	450.3	486.8	513.3	533.1	546.4
65°	251.7	255.0	264.9	274.8	298.0	314.5	327.8	357.6	384.1	400.7	410.6
67.5°	155.6	158.9	165.5	178.9	195.4	208.6	221.8	241.7	264.9	281.4	284.8
70°	79.4	82.8	86.1	96.1	109.3	115.9	125.8	142.4	158.9	172.1	178.9
72.5°	26.5	26.5	29.9	36.5	43.1	49.7	53.0	69.6	82.8	89.4	92.7
75°	6.6	6.6	6.6	6.6	6.6	10.0	10.0	19.9	26.5	33.1	36.5
77.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	6.6	6.6
80°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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°	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3	2331.3
2.5°	2331.3	2324.7	2321.3	2324.7	2324.7	2321.3	2331.3	2344.5	2361.0	2318.1
5°	2327.9	2321.3	2327.9	2308.1	2318.1	2311.4	2324.7	2321.3	2334.5	2321.3
7.5°	2318.1	2304.8	2308.1	2298.2	2311.4	2294.8	2304.8	2324.7	2311.4	2291.6
10°	2284.9	2278.3	2301.4	2268.3	2261.7	2275.0	2301.4	2281.6	2275.0	2281.6
12.5°	2251.7	2251.7	2261.7	2235.2	2238.5	2245.1	2258.3	2245.1	2251.7	2268.3
15°	2215.4	2208.7	2225.2	2205.4	2202.1	2195.5	2208.7	2208.7	2215.4	2205.4
17.5°	2172.3	2162.4	2162.4	2155.8	2152.4	2169.0	2175.6	2178.9	2182.3	2169.0
20°	2119.3	2116.1	2125.9	2116.1	2119.3	2122.7	2122.7	2116.1	2145.8	2109.4
22.5°	2063.0	2073.0	2059.7	2053.1	2059.7	2066.3	2066.3	2069.6	2063.0	2056.4
25°	2006.8	2013.4	2016.6	1996.8	2006.8	1996.8	2020.0	2023.2	2010.0	2016.6
27.5°	1957.0	1947.2	1943.8	1930.6	1937.2	1933.9	1937.2	1937.2	1957.0	1930.6
30°	1880.8	1871.0	1874.2	1864.4	1867.6	1864.4	1867.6	1867.6	1880.8	1877.6
32.5°	1808.0	1798.2	1801.4	1791.5	1791.5	1794.8	1788.2	1788.2	1798.2	1791.5
35°	1738.4	1715.3	1718.6	1715.3	1718.6	1705.3	1705.3	1702.1	1708.7	1692.1
37.5°	1639.1	1629.3	1625.9	1622.6	1625.9	1619.3	1625.9	1616.0	1625.9	1612.7
40°	1549.7	1543.1	1546.4	1526.6	1526.6	1529.8	1523.2	1520.0	1523.2	1536.5
42.5°	1460.4	1447.1	1440.5	1433.9	1437.1	1427.3	1423.9	1417.3	1423.9	1410.7
45°	1354.3	1354.3	1351.1	1334.5	1337.8	1337.8	1324.6	1311.4	1314.6	1314.6
47.5°	1258.4	1251.8	1248.4	1231.9	1228.5	1225.3	1211.9	1202.1	1202.1	1192.1
50°	1152.3	1145.7	1135.9	1119.2	1112.6	1092.8	1082.9	1069.7	1056.4	1056.4
52.5°	1053.0	1029.8	1016.6	990.1	980.2	970.2	943.7	933.9	923.9	914.0
55°	933.9	914.0	887.5	857.7	844.4	827.8	801.3	781.5	768.2	771.6
57.5°	817.9	784.8	758.4	718.6	702.0	692.0	665.5	639.1	625.8	625.8
60°	675.5	649.1	616.0	579.5	566.2	549.8	516.5	500.0	490.0	480.2
62.5°	539.8	519.9	490.0	443.7	433.8	417.2	394.1	374.2	364.3	364.3
65°	404.0	384.1	357.6	324.5	311.3	298.0	278.2	258.3	248.3	245.1
67.5°	284.8	261.6	238.5	212.0	202.0	195.4	175.5	162.3	155.6	152.3
70°	172.1	158.9	142.4	122.5	112.5	105.9	92.7	82.8	79.4	76.2
72.5°	89.4	79.4	66.2	53.0	46.3	39.7	33.1	26.5	23.2	23.2
75°	33.1	26.5	16.6	10.0	6.6	6.6	6.6	6.6	6.6	6.6
77.5°	6.6	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
80°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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)