

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: P840201

Luminaire Tested: **LD4C50D010 EU4509030 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: P840201
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 4LBCSSQMW
Description: 4 INCH 5000 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

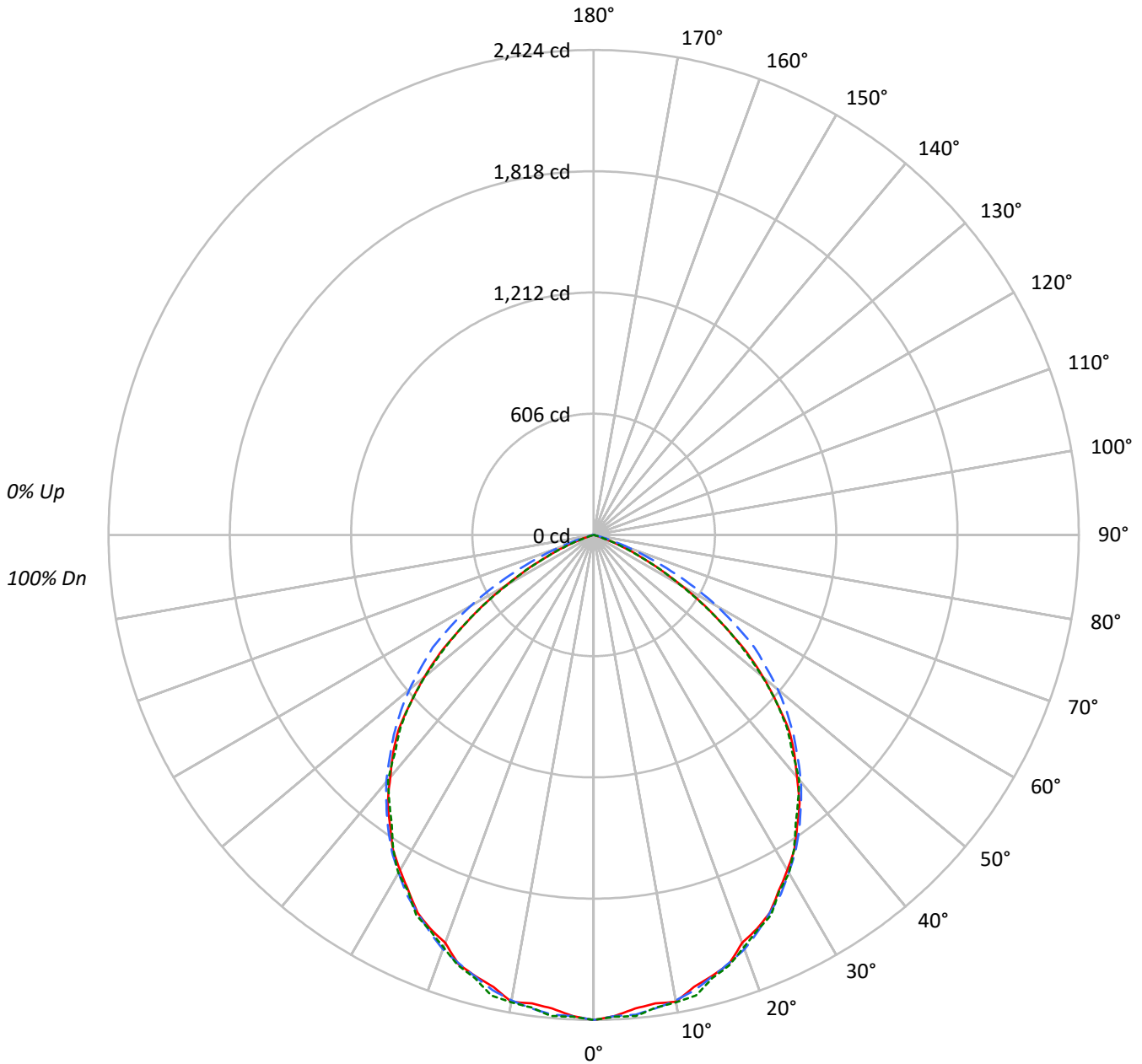
Lumens per Lamp: N/A
Luminaire Lumens: 5178.0 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	100	100	100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89	89	89	89
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77	77	77	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46	46	46	46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41	41	41	41
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37	37	37	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33	33	33	33
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31	31	31	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	233889	233889	233889
5°	230114	233107	233775
10°	232099	231423	232432
15°	228035	228375	229064
20°	222736	226269	225211
25°	221764	221764	223233
30°	215590	217116	217517
35°	208856	210893	207242
40°	199063	202955	201217
45°	188391	192635	186522
50°	165917	180387	164881
55°	134377	165077	134966
60°	98322	136879	96354
65°	59749	97466	58174
70°	23303	52473	22343
75°	2572	14129	2572
80°	1945	1945	1945
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.8	4.4
10°-20°	647.4	12.5
20°-30°	960.7	18.6
30°-40°	1113.1	21.5
40°-50°	1067.3	20.6
50°-60°	784.7	15.2
60°-70°	338.9	6.5
70°-80°	36.6	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°	1836.9	35.5
0°-40°	2950.1	57.0
0°-60°	4802.0	92.7
0°-90°	5178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2424	2424	2424	2424	2424	
5°	2376	2400	2407	2410	2414	227
15°	2283	2297	2286	2290	2293	643
25°	2083	2080	2083	2086	2097	954
35°	1773	1784	1790	1787	1759	1109
45°	1381	1384	1412	1391	1367	1050
55°	799	881	981	878	802	719
65°	262	327	427	324	255	269
75°	7	10	38	7	7	21
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°	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0
2.5°	2406.7	2434.2	2437.7	2420.5	2413.6	2403.3	2427.4	2410.2	2417.1	2410.2	2406.7
5°	2375.8	2406.7	2410.2	2410.2	2403.3	2399.8	2410.2	2406.7	2403.3	2396.4	2406.7
7.5°	2362.0	2379.2	2396.4	2375.8	2386.1	2382.7	2406.7	2396.4	2392.9	2392.9	2386.1
10°	2368.9	2365.4	2379.2	2358.5	2365.4	2358.5	2379.2	2379.2	2372.3	2365.4	2362.0
12.5°	2313.7	2341.2	2341.2	2337.9	2331.0	2320.6	2341.2	2355.1	2334.4	2334.4	2331.0
15°	2282.8	2289.7	2293.1	2293.1	2289.7	2296.6	2306.8	2293.1	2296.6	2279.3	2286.2
17.5°	2248.4	2234.6	2244.9	2238.0	2241.5	2248.4	2262.1	2262.1	2241.5	2238.0	2244.9
20°	2169.2	2210.5	2214.0	2193.3	2196.7	2196.7	2220.8	2200.2	2214.0	2196.7	2203.6
22.5°	2131.2	2158.8	2162.3	2134.7	2151.9	2131.2	2155.4	2124.3	2158.8	2134.7	2145.0
25°	2083.0	2079.7	2089.9	2076.2	2079.7	2079.7	2096.8	2083.0	2093.4	2079.7	2083.0
27.5°	2003.9	2031.5	2028.0	2014.2	2021.1	2017.7	2052.1	2014.2	2034.9	2017.7	2024.6
30°	1935.0	1959.1	1952.3	1938.5	1938.5	1928.1	1966.0	1955.6	1952.3	1952.3	1948.7
32.5°	1866.1	1869.6	1862.8	1866.1	1869.6	1855.9	1886.8	1873.0	1869.6	1873.0	1876.5
35°	1773.1	1773.1	1780.0	1769.8	1783.5	1783.5	1811.1	1793.8	1790.4	1780.0	1790.4
37.5°	1690.5	1680.3	1683.7	1683.7	1690.5	1697.4	1711.2	1704.3	1704.3	1694.0	1700.9
40°	1580.4	1573.5	1583.8	1583.8	1594.2	1594.2	1607.9	1601.1	1611.3	1611.3	1611.3
42.5°	1484.0	1484.0	1477.1	1487.4	1490.9	1487.4	1511.6	1508.1	1511.6	1504.7	1508.1
45°	1380.6	1380.6	1373.8	1370.4	1387.5	1384.1	1411.7	1401.3	1415.1	1408.2	1411.7
47.5°	1239.5	1256.7	1246.3	1256.7	1277.4	1280.9	1298.0	1291.2	1304.9	1294.7	1308.4
50°	1105.3	1105.3	1115.6	1129.3	1150.0	1153.5	1174.1	1187.9	1194.8	1198.2	1201.7
52.5°	964.1	960.6	971.0	988.1	1005.4	1019.2	1039.8	1060.5	1074.3	1094.9	1084.5
55°	798.8	805.7	816.0	836.7	864.2	881.4	898.7	926.2	950.3	960.6	981.3
57.5°	657.6	650.7	657.6	685.1	716.2	729.9	754.1	781.6	816.0	836.7	843.6
60°	509.5	513.0	519.9	544.1	568.1	588.8	599.1	643.8	674.9	695.5	709.3
62.5°	375.4	382.2	389.1	409.8	433.8	451.1	468.2	506.1	533.7	554.3	568.1
65°	261.7	265.1	275.5	285.7	309.9	327.0	340.8	371.9	399.4	416.7	426.9
67.5°	161.8	165.2	172.1	186.0	203.1	216.9	230.7	251.3	275.5	292.6	296.1
70°	82.6	86.1	89.5	99.9	113.6	120.5	130.8	148.1	165.2	179.0	186.0
72.5°	27.5	27.5	31.0	37.9	44.8	51.7	55.1	72.3	86.1	93.0	96.4
75°	6.9	6.9	6.9	6.9	6.9	10.4	10.4	20.7	27.5	34.4	37.9
77.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	6.9	6.9
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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°	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0	2424.0
2.5°	2424.0	2417.1	2413.6	2417.1	2417.1	2413.6	2424.0	2437.7	2454.9	2410.2
5°	2420.5	2413.6	2420.5	2399.8	2410.2	2403.3	2417.1	2413.6	2427.4	2413.6
7.5°	2410.2	2396.4	2399.8	2389.6	2403.3	2386.1	2396.4	2417.1	2403.3	2382.7
10°	2375.8	2368.9	2392.9	2358.5	2351.6	2365.4	2392.9	2372.3	2365.4	2372.3
12.5°	2341.2	2341.2	2351.6	2324.1	2327.5	2334.4	2348.1	2334.4	2341.2	2358.5
15°	2303.5	2296.6	2313.7	2293.1	2289.7	2282.8	2296.6	2296.6	2303.5	2293.1
17.5°	2258.6	2248.4	2248.4	2241.5	2238.0	2255.3	2262.1	2265.5	2269.0	2255.3
20°	2203.6	2200.2	2210.5	2200.2	2203.6	2207.1	2207.1	2200.2	2231.1	2193.3
22.5°	2145.0	2155.4	2141.6	2134.7	2141.6	2148.5	2148.5	2151.9	2145.0	2138.1
25°	2086.5	2093.4	2096.8	2076.2	2086.5	2076.2	2100.3	2103.7	2089.9	2096.8
27.5°	2034.9	2024.6	2021.1	2007.3	2014.2	2010.8	2014.2	2014.2	2034.9	2007.3
30°	1955.6	1945.4	1948.7	1938.5	1941.9	1938.5	1941.9	1941.9	1955.6	1952.3
32.5°	1879.9	1869.6	1873.0	1862.8	1862.8	1866.1	1859.3	1859.3	1869.6	1862.8
35°	1807.6	1783.5	1786.9	1783.5	1786.9	1773.1	1773.1	1769.8	1776.7	1759.4
37.5°	1704.3	1694.0	1690.5	1687.2	1690.5	1683.7	1690.5	1680.3	1690.5	1676.8
40°	1611.3	1604.4	1607.9	1587.3	1587.3	1590.7	1583.8	1580.4	1583.8	1597.5
42.5°	1518.4	1504.7	1497.8	1490.9	1494.3	1484.0	1480.5	1473.6	1480.5	1466.8
45°	1408.2	1408.2	1404.8	1387.5	1391.0	1391.0	1377.3	1363.5	1366.9	1366.9
47.5°	1308.4	1301.5	1298.0	1280.9	1277.4	1274.0	1260.1	1249.9	1249.9	1239.5
50°	1198.2	1191.3	1181.0	1163.7	1156.9	1136.2	1125.9	1112.2	1098.4	1098.4
52.5°	1094.9	1070.7	1057.0	1029.4	1019.2	1008.8	981.3	971.0	960.6	950.3
55°	971.0	950.3	922.8	891.8	878.0	860.7	833.2	812.5	798.8	802.3
57.5°	850.5	816.0	788.5	747.2	729.9	719.5	692.0	664.5	650.7	650.7
60°	702.4	674.9	640.4	602.5	588.8	571.6	537.1	519.9	509.5	499.3
62.5°	561.2	540.6	509.5	461.3	451.1	433.8	409.8	389.1	378.7	378.7
65°	420.0	399.4	371.9	337.4	323.7	309.9	289.2	268.6	258.2	254.8
67.5°	296.1	272.0	247.9	220.4	210.0	203.1	182.5	168.7	161.8	158.3
70°	179.0	165.2	148.1	127.4	117.0	110.1	96.4	86.1	82.6	79.2
72.5°	93.0	82.6	68.8	55.1	48.2	41.3	34.4	27.5	24.2	24.2
75°	34.4	27.5	17.3	10.4	6.9	6.9	6.9	6.9	6.9	6.9
77.5°	6.9	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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)