

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: P#

Luminaire Tested: **LD4C50D010 EX4C509035 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: P#
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 EX4C509035 4LBCSSQMW
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

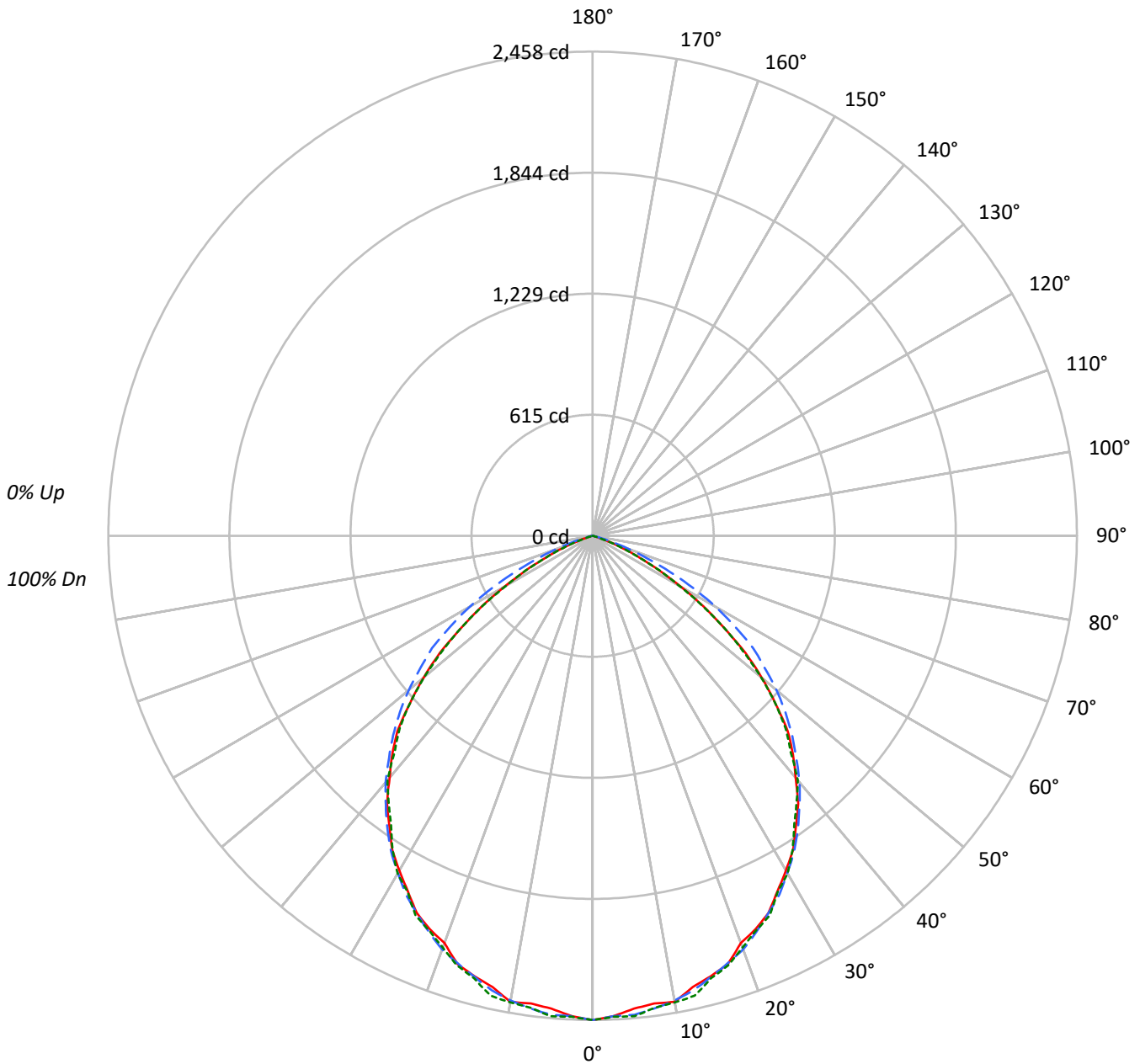
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5251.0 lumens
Efficiency: N/A
Efficacy: 89.9 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 (Ain): 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

TEST NUMBER: P#
CATALOG NUMBER: LD4C50D010 EX4C509035 4LBCSSQMW

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509035 4LBCSSQMW

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°	237189	237189	237189
5°	233359	236390	237068
10°	235371	234685	235704
15°	231251	231591	232290
20°	225868	229452	228384
25°	224894	224894	226384
30°	218631	220180	220581
35°	211800	213873	210163
40°	201872	205814	204063
45°	191052	195350	189142
50°	168258	182924	167208
55°	136261	167399	136866
60°	99712	138809	97705
65°	60594	98836	58996
70°	23641	53207	22654
75°	2610	14353	2610
80°	2000	2000	2000
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509035 4LBCSSQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.0	4.4
10°-20°	656.6	12.5
20°-30°	974.2	18.6
30°-40°	1128.8	21.5
40°-50°	1082.3	20.6
50°-60°	795.8	15.2
60°-70°	343.7	6.5
70°-80°	37.1	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°	1862.8	35.5
0°-40°	2991.6	57.0
0°-60°	4869.7	92.7
0°-90°	5251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2458	2458	2458	2458	2458	
5°	2409	2434	2441	2444	2448	230
15°	2315	2329	2318	2322	2325	652
25°	2112	2109	2112	2116	2126	967
35°	1798	1809	1816	1812	1784	1124
45°	1400	1404	1432	1411	1386	1064
55°	810	894	995	890	814	729
65°	265	332	433	328	258	273
75°	7	10	38	7	7	21
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509035 4LBCSSQMW

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2
2.5°	2440.6	2468.6	2472.1	2454.6	2447.6	2437.2	2461.6	2444.2	2451.2	2444.2	2440.6
5°	2409.3	2440.6	2444.2	2444.2	2437.2	2433.7	2444.2	2440.6	2437.2	2430.2	2440.6
7.5°	2395.3	2412.7	2430.2	2409.3	2419.7	2416.3	2440.6	2430.2	2426.7	2426.7	2419.7
10°	2402.3	2398.8	2412.7	2391.8	2398.8	2391.8	2412.7	2412.7	2405.7	2398.8	2395.3
12.5°	2346.3	2374.3	2374.3	2370.8	2363.8	2353.3	2374.3	2388.3	2367.3	2367.3	2363.8
15°	2315.0	2322.0	2325.4	2325.4	2322.0	2328.9	2339.3	2325.4	2328.9	2311.4	2318.4
17.5°	2280.1	2266.1	2276.5	2269.5	2273.1	2280.1	2294.0	2294.0	2273.1	2269.5	2276.5
20°	2199.7	2241.6	2245.2	2224.2	2227.7	2227.7	2252.2	2231.2	2245.2	2227.7	2234.6
22.5°	2161.3	2189.2	2192.8	2164.8	2182.2	2161.3	2185.8	2154.3	2189.2	2164.8	2175.2
25°	2112.4	2109.0	2119.4	2105.4	2109.0	2109.0	2126.4	2112.4	2122.9	2109.0	2112.4
27.5°	2032.2	2060.1	2056.6	2042.6	2049.6	2046.2	2081.1	2042.6	2063.5	2046.2	2053.1
30°	1962.3	1986.8	1979.8	1965.8	1965.8	1955.3	1993.7	1983.2	1979.8	1979.8	1976.2
32.5°	1892.4	1896.0	1889.0	1892.4	1896.0	1882.0	1913.4	1899.4	1896.0	1899.4	1903.0
35°	1798.1	1798.1	1805.1	1794.7	1808.7	1808.7	1836.6	1819.1	1815.7	1805.1	1815.7
37.5°	1714.4	1704.0	1707.4	1707.4	1714.4	1721.4	1735.3	1728.3	1728.3	1717.9	1724.9
40°	1602.7	1595.7	1606.1	1606.1	1616.6	1616.6	1630.6	1623.6	1634.0	1634.0	1634.0
42.5°	1505.0	1505.0	1498.0	1508.4	1511.9	1508.4	1532.9	1529.3	1532.9	1525.9	1529.3
45°	1400.1	1400.1	1393.1	1389.7	1407.1	1403.7	1431.6	1421.0	1435.0	1428.0	1431.6
47.5°	1256.9	1274.5	1263.9	1274.5	1295.4	1299.0	1316.3	1309.4	1323.3	1312.9	1326.9
50°	1120.9	1120.9	1131.3	1145.2	1166.2	1169.7	1190.7	1204.6	1211.6	1215.0	1218.6
52.5°	977.7	974.1	984.7	1002.1	1019.6	1033.6	1054.5	1075.4	1089.4	1110.3	1099.8
55°	810.0	817.0	827.6	848.5	876.4	893.8	911.3	939.2	963.7	974.1	995.1
57.5°	666.9	659.9	666.9	694.8	726.3	740.2	764.7	792.6	827.6	848.5	855.5
60°	516.7	520.3	527.2	551.7	576.1	597.1	607.6	652.9	684.4	705.3	719.3
62.5°	380.7	387.6	394.6	415.6	439.9	457.4	474.8	513.3	541.2	562.1	576.1
65°	265.4	268.8	279.4	289.8	314.3	331.7	345.6	377.1	405.0	422.5	432.9
67.5°	164.1	167.5	174.5	188.6	206.0	220.0	233.9	254.9	279.4	296.7	300.3
70°	83.8	87.3	90.7	101.3	115.2	122.2	132.6	150.2	167.5	181.5	188.6
72.5°	27.9	27.9	31.5	38.5	45.4	52.4	55.8	73.4	87.3	94.3	97.7
75°	7.0	7.0	7.0	7.0	7.0	10.5	10.5	20.9	27.9	34.9	38.5
77.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	7.0	7.0
80°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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



TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509035 4LBCSSQMW

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2	2458.2
2.5°	2458.2	2451.2	2447.6	2451.2	2451.2	2447.6	2458.2	2472.1	2489.5	2444.2
5°	2454.6	2447.6	2454.6	2433.7	2444.2	2437.2	2451.2	2447.6	2461.6	2447.6
7.5°	2444.2	2430.2	2433.7	2423.3	2437.2	2419.7	2430.2	2451.2	2437.2	2416.3
10°	2409.3	2402.3	2426.7	2391.8	2384.8	2398.8	2426.7	2405.7	2398.8	2405.7
12.5°	2374.3	2374.3	2384.8	2356.9	2360.3	2367.3	2381.2	2367.3	2374.3	2391.8
15°	2335.9	2328.9	2346.3	2325.4	2322.0	2315.0	2328.9	2328.9	2335.9	2325.4
17.5°	2290.5	2280.1	2280.1	2273.1	2269.5	2287.1	2294.0	2297.5	2301.0	2287.1
20°	2234.6	2231.2	2241.6	2231.2	2234.6	2238.2	2238.2	2231.2	2262.6	2224.2
22.5°	2175.2	2185.8	2171.8	2164.8	2171.8	2178.8	2178.8	2182.2	2175.2	2168.3
25°	2116.0	2122.9	2126.4	2105.4	2116.0	2105.4	2129.9	2133.3	2119.4	2126.4
27.5°	2063.5	2053.1	2049.6	2035.6	2042.6	2039.2	2042.6	2042.6	2063.5	2035.6
30°	1983.2	1972.8	1976.2	1965.8	1969.2	1965.8	1969.2	1969.2	1983.2	1979.8
32.5°	1906.4	1896.0	1899.4	1889.0	1889.0	1892.4	1885.5	1885.5	1896.0	1889.0
35°	1833.0	1808.7	1812.1	1808.7	1812.1	1798.1	1798.1	1794.7	1801.7	1784.2
37.5°	1728.3	1717.9	1714.4	1710.9	1714.4	1707.4	1714.4	1704.0	1714.4	1700.4
40°	1634.0	1627.0	1630.6	1609.7	1609.7	1613.1	1606.1	1602.7	1606.1	1620.1
42.5°	1539.9	1525.9	1518.9	1511.9	1515.4	1505.0	1501.4	1494.4	1501.4	1487.4
45°	1428.0	1428.0	1424.6	1407.1	1410.6	1410.6	1396.7	1382.7	1386.1	1386.1
47.5°	1326.9	1319.9	1316.3	1299.0	1295.4	1292.0	1277.9	1267.5	1267.5	1256.9
50°	1215.0	1208.1	1197.7	1180.1	1173.2	1152.2	1141.8	1127.9	1113.9	1113.9
52.5°	1110.3	1085.8	1071.9	1044.0	1033.6	1023.0	995.1	984.7	974.1	963.7
55°	984.7	963.7	935.8	904.3	890.4	872.9	844.9	824.0	810.0	813.6
57.5°	862.5	827.6	799.6	757.7	740.2	729.7	701.8	673.8	659.9	659.9
60°	712.3	684.4	649.5	611.0	597.1	579.7	544.6	527.2	516.7	506.3
62.5°	569.1	548.2	516.7	467.8	457.4	439.9	415.6	394.6	384.1	384.1
65°	426.0	405.0	377.1	342.2	328.2	314.3	293.3	272.4	261.8	258.4
67.5°	300.3	275.8	251.4	223.5	213.0	206.0	185.1	171.1	164.1	160.6
70°	181.5	167.5	150.2	129.2	118.7	111.7	97.7	87.3	83.8	80.3
72.5°	94.3	83.8	69.8	55.8	48.9	41.9	34.9	27.9	24.5	24.5
75°	34.9	27.9	17.5	10.5	7.0	7.0	7.0	7.0	7.0	7.0
77.5°	7.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
80°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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)