

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: P840228

Luminaire Tested: **LD4C65D010 EU4659027 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: P840228
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: LD4C65D010 EU4659027 4LBCSSQMMS
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

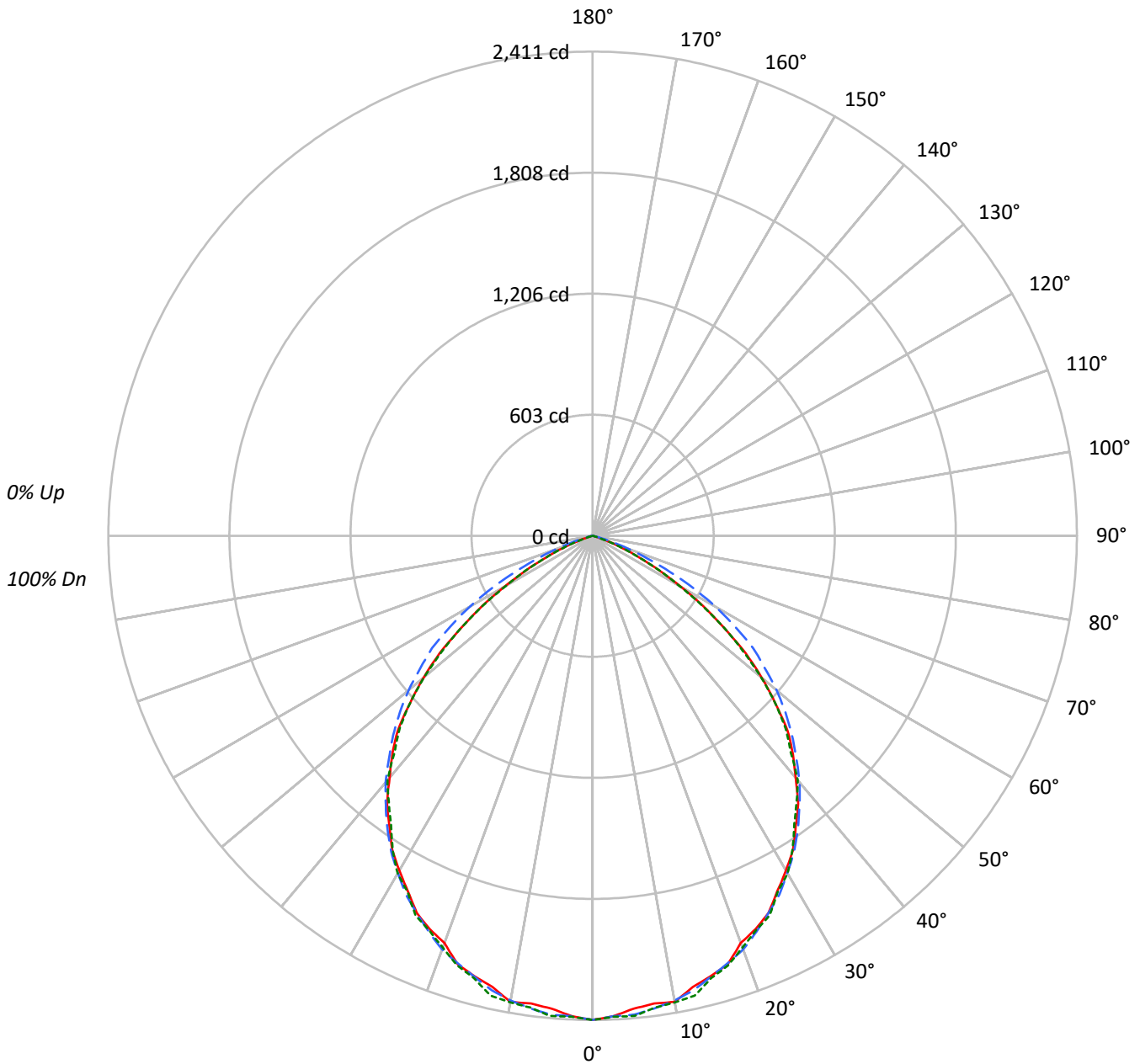
Lumens per Lamp: N/A
Luminaire Lumens: 5150.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 72.4
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				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
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89				89
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67				67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59				59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				52
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41				41
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	232625	232625	232625
5°	228865	231848	232506
10°	230845	230178	231178
15°	226806	227136	227825
20°	221525	225047	223999
25°	220572	220572	222030
30°	214420	215946	216336
35°	207737	209751	206123
40°	197992	201859	200134
45°	187381	191584	185512
50°	165016	179412	163995
55°	133653	164169	134225
60°	97801	136127	95833
65°	59430	96941	57877
70°	23190	52191	22231
75°	2535	14055	2535
80°	1945	1945	1945
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.6	4.4
10°-20°	643.9	12.5
20°-30°	955.5	18.6
30°-40°	1107.1	21.5
40°-50°	1061.5	20.6
50°-60°	780.5	15.2
60°-70°	337.1	6.5
70°-80°	36.4	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°	1827.0	35.5
0°-40°	2934.1	57.0
0°-60°	4776.0	92.7
0°-90°	5150.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5150.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2411	2411	2411	2411	2411	
5°	2363	2387	2394	2397	2400	225
15°	2270	2284	2274	2277	2281	640
25°	2072	2068	2072	2075	2086	949
35°	1764	1774	1781	1777	1750	1103
45°	1373	1377	1404	1384	1360	1044
55°	794	877	976	873	798	715
65°	260	325	425	322	254	268
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°	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9
2.5°	2393.7	2421.1	2424.6	2407.4	2400.5	2390.3	2414.2	2397.2	2404.0	2397.2	2393.7
5°	2362.9	2393.7	2397.2	2397.2	2390.3	2386.8	2397.2	2393.7	2390.3	2383.5	2393.7
7.5°	2349.3	2366.3	2383.5	2362.9	2373.2	2369.8	2393.7	2383.5	2380.0	2380.0	2373.2
10°	2356.1	2352.6	2366.3	2345.8	2352.6	2345.8	2366.3	2366.3	2359.5	2352.6	2349.3
12.5°	2301.2	2328.6	2328.6	2325.2	2318.4	2308.0	2328.6	2342.4	2321.7	2321.7	2318.4
15°	2270.5	2277.3	2280.7	2280.7	2277.3	2284.1	2294.4	2280.7	2284.1	2267.0	2273.8
17.5°	2236.2	2222.5	2232.7	2225.9	2229.4	2236.2	2249.9	2249.9	2229.4	2225.9	2232.7
20°	2157.4	2198.5	2202.0	2181.5	2184.8	2184.8	2208.8	2188.3	2202.0	2184.8	2191.7
22.5°	2119.7	2147.1	2150.6	2123.2	2140.2	2119.7	2143.7	2112.9	2147.1	2123.2	2133.4
25°	2071.8	2068.4	2078.6	2064.9	2068.4	2068.4	2085.5	2071.8	2082.1	2068.4	2071.8
27.5°	1993.1	2020.5	2017.0	2003.3	2010.2	2006.8	2041.0	2003.3	2023.9	2006.8	2013.6
30°	1924.5	1948.5	1941.7	1928.0	1928.0	1917.7	1955.4	1945.1	1941.7	1941.7	1938.2
32.5°	1856.0	1859.5	1852.7	1856.0	1859.5	1845.8	1876.6	1862.9	1859.5	1862.9	1866.4
35°	1763.6	1763.6	1770.4	1760.2	1773.9	1773.9	1801.3	1784.1	1780.7	1770.4	1780.7
37.5°	1681.4	1671.2	1674.6	1674.6	1681.4	1688.2	1701.9	1695.1	1695.1	1684.9	1691.7
40°	1571.9	1565.0	1575.2	1575.2	1585.5	1585.5	1599.2	1592.4	1602.6	1602.6	1602.6
42.5°	1476.0	1476.0	1469.2	1479.4	1482.9	1479.4	1503.4	1499.9	1503.4	1496.5	1499.9
45°	1373.2	1373.2	1366.3	1363.0	1380.0	1376.7	1404.0	1393.7	1407.4	1400.6	1404.0
47.5°	1232.8	1249.9	1239.6	1249.9	1270.5	1274.0	1291.0	1284.2	1297.9	1287.7	1301.4
50°	1099.3	1099.3	1109.5	1123.2	1143.8	1147.2	1167.8	1181.5	1188.3	1191.7	1195.2
52.5°	958.9	955.4	965.7	982.8	1000.0	1013.7	1034.2	1054.7	1068.4	1089.0	1078.6
55°	794.5	801.3	811.6	832.2	859.6	876.6	893.8	921.2	945.2	955.4	975.9
57.5°	654.0	647.2	654.0	681.4	712.3	726.0	750.0	777.4	811.6	832.2	839.0
60°	506.8	510.3	517.1	541.1	565.0	585.6	595.9	640.3	671.2	691.8	705.4
62.5°	373.3	380.2	387.0	407.6	431.5	448.6	465.7	503.4	530.8	551.3	565.0
65°	260.3	263.7	274.0	284.2	308.2	325.3	339.0	369.8	397.2	414.4	424.6
67.5°	161.0	164.3	171.2	185.0	202.0	215.7	229.4	250.0	274.0	291.0	294.5
70°	82.2	85.6	89.0	99.3	113.0	119.9	130.1	147.3	164.3	178.0	185.0
72.5°	27.4	27.4	30.9	37.7	44.6	51.4	54.8	72.0	85.6	92.5	95.8
75°	6.8	6.8	6.8	6.8	6.8	10.3	10.3	20.5	27.4	34.2	37.7
77.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	6.8	6.8
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°	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9	2410.9
2.5°	2410.9	2404.0	2400.5	2404.0	2404.0	2400.5	2410.9	2424.6	2441.6	2397.2
5°	2407.4	2400.5	2407.4	2386.8	2397.2	2390.3	2404.0	2400.5	2414.2	2400.5
7.5°	2397.2	2383.5	2386.8	2376.6	2390.3	2373.2	2383.5	2404.0	2390.3	2369.8
10°	2362.9	2356.1	2380.0	2345.8	2338.9	2352.6	2380.0	2359.5	2352.6	2359.5
12.5°	2328.6	2328.6	2338.9	2311.5	2314.9	2321.7	2335.4	2321.7	2328.6	2345.8
15°	2291.0	2284.1	2301.2	2280.7	2277.3	2270.5	2284.1	2284.1	2291.0	2280.7
17.5°	2246.4	2236.2	2236.2	2229.4	2225.9	2243.1	2249.9	2253.3	2256.8	2243.1
20°	2191.7	2188.3	2198.5	2188.3	2191.7	2195.1	2195.1	2188.3	2219.0	2181.5
22.5°	2133.4	2143.7	2130.0	2123.2	2130.0	2136.9	2136.9	2140.2	2133.4	2126.5
25°	2075.3	2082.1	2085.5	2064.9	2075.3	2064.9	2089.0	2092.3	2078.6	2085.5
27.5°	2023.9	2013.6	2010.2	1996.5	2003.3	2000.0	2003.3	2003.3	2023.9	1996.5
30°	1945.1	1934.8	1938.2	1928.0	1931.4	1928.0	1931.4	1931.4	1945.1	1941.7
32.5°	1869.7	1859.5	1862.9	1852.7	1852.7	1856.0	1849.2	1849.2	1859.5	1852.7
35°	1797.8	1773.9	1777.2	1773.9	1777.2	1763.6	1763.6	1760.2	1767.0	1749.9
37.5°	1695.1	1684.9	1681.4	1678.0	1681.4	1674.6	1681.4	1671.2	1681.4	1667.7
40°	1602.6	1595.7	1599.2	1578.7	1578.7	1582.1	1575.2	1571.9	1575.2	1588.9
42.5°	1510.2	1496.5	1489.7	1482.9	1486.2	1476.0	1472.5	1465.7	1472.5	1458.8
45°	1400.6	1400.6	1397.2	1380.0	1383.5	1383.5	1369.8	1356.1	1359.5	1359.5
47.5°	1301.4	1294.5	1291.0	1274.0	1270.5	1267.1	1253.3	1243.1	1243.1	1232.8
50°	1191.7	1184.8	1174.6	1157.4	1150.6	1130.1	1119.9	1106.2	1092.5	1092.5
52.5°	1089.0	1065.0	1051.3	1023.9	1013.7	1003.3	975.9	965.7	955.4	945.2
55°	965.7	945.2	917.8	886.9	873.3	856.1	828.7	808.1	794.5	797.9
57.5°	845.9	811.6	784.2	743.2	726.0	715.7	688.3	660.9	647.2	647.2
60°	698.6	671.2	637.0	599.3	585.6	568.5	534.2	517.1	506.8	496.6
62.5°	558.2	537.6	506.8	458.8	448.6	431.5	407.6	387.0	376.7	376.7
65°	417.8	397.2	369.8	335.6	321.9	308.2	287.7	267.1	256.8	253.5
67.5°	294.5	270.5	246.6	219.2	208.9	202.0	181.5	167.8	161.0	157.5
70°	178.0	164.3	147.3	126.7	116.4	109.5	95.8	85.6	82.2	78.8
72.5°	92.5	82.2	68.5	54.8	47.9	41.1	34.2	27.4	24.0	24.0
75°	34.2	27.4	17.2	10.3	6.8	6.8	6.8	6.8	6.8	6.8
77.5°	6.8	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)