

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: P840224

Luminaire Tested: **LD4C60D010 EU4609040 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: P840224
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: LD4C60D010 EU4609040 4LBCSSQMMS
Description: 4 INCH 6000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

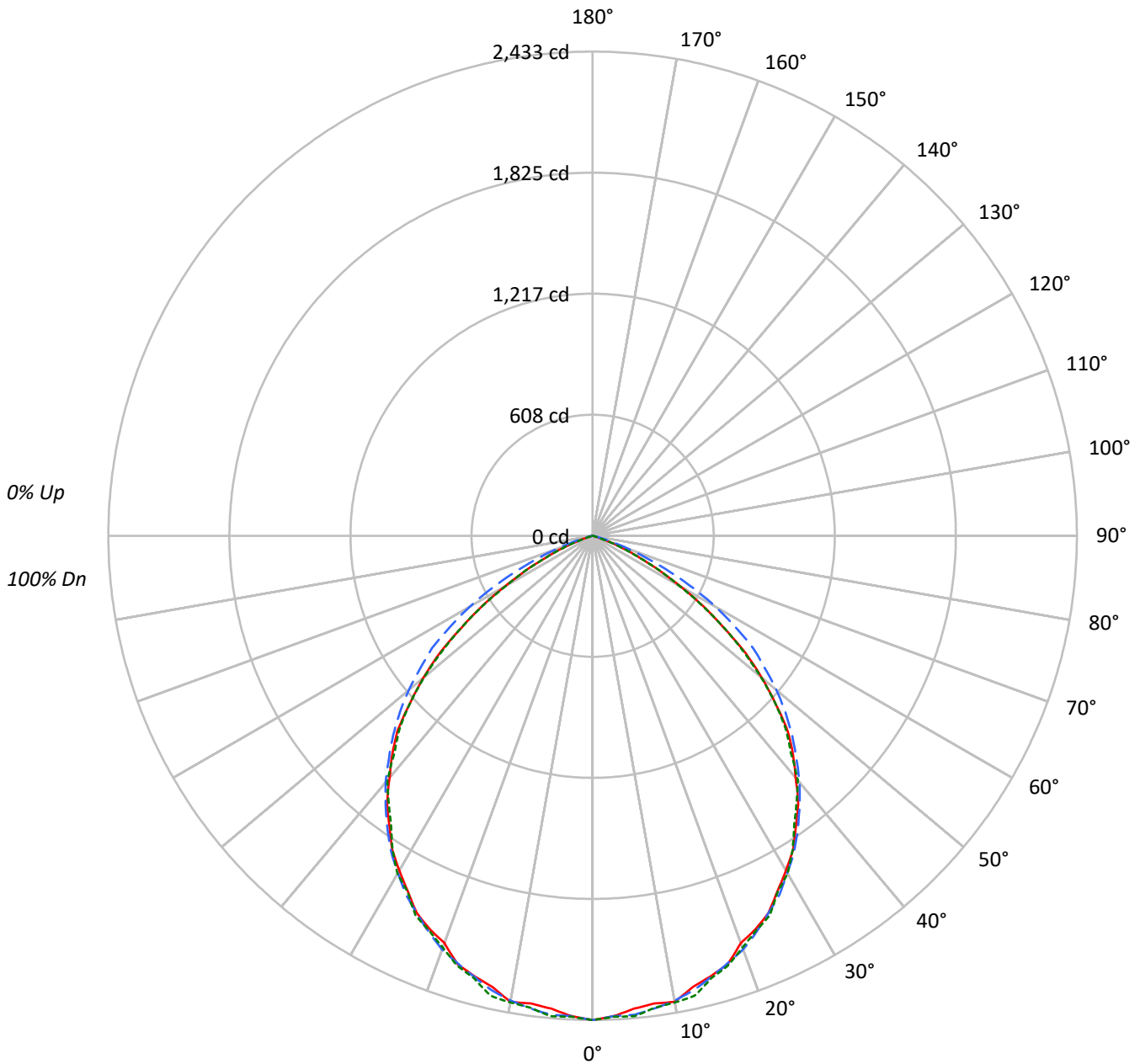
Lumens per Lamp: N/A
Luminaire Lumens: 5198.0 lumens
Efficiency: N/A
Efficacy: 72.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 72
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°	234786	234786	234786
5°	231005	234008	234676
10°	233000	232324	233333
15°	228914	229254	229943
20°	223589	227141	226084
25°	222626	222626	224095
30°	216414	217963	218353
35°	209668	211706	208043
40°	199831	203736	201998
45°	189128	193372	187245
50°	166562	181078	165526
55°	134898	165700	135487
60°	98708	137400	96720
65°	59978	97855	58402
70°	23387	52671	22428
75°	2572	14204	2572
80°	1945	1945	1945
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.7	4.4
10°-20°	649.9	12.5
20°-30°	964.4	18.6
30°-40°	1117.4	21.5
40°-50°	1071.4	20.6
50°-60°	787.7	15.2
60°-70°	340.2	6.5
70°-80°	36.7	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°	1844.0	35.5
0°-40°	2961.5	57.0
0°-60°	4820.6	92.7
0°-90°	5198.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5198.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2433	2433	2433	2433	2433	
5°	2385	2409	2416	2420	2423	228
15°	2292	2305	2295	2298	2302	646
25°	2091	2088	2091	2095	2105	957
35°	1780	1790	1797	1794	1766	1113
45°	1386	1390	1417	1396	1372	1054
55°	802	885	985	881	805	722
65°	263	328	429	325	256	270
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°	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3
2.5°	2416.0	2443.6	2447.2	2429.8	2422.9	2412.6	2436.7	2419.5	2426.4	2419.5	2416.0
5°	2385.0	2416.0	2419.5	2419.5	2412.6	2409.1	2419.5	2416.0	2412.6	2405.7	2416.0
7.5°	2371.2	2388.4	2405.7	2385.0	2395.3	2391.9	2416.0	2405.7	2402.2	2402.2	2395.3
10°	2378.1	2374.5	2388.4	2367.6	2374.5	2367.6	2388.4	2388.4	2381.5	2374.5	2371.2
12.5°	2322.6	2350.3	2350.3	2346.9	2340.0	2329.6	2350.3	2364.2	2343.4	2343.4	2340.0
15°	2291.6	2298.5	2301.9	2301.9	2298.5	2305.4	2315.7	2301.9	2305.4	2288.1	2295.0
17.5°	2257.1	2243.2	2253.5	2246.6	2250.2	2257.1	2270.9	2270.9	2250.2	2246.6	2253.5
20°	2177.5	2219.0	2222.5	2201.8	2205.2	2205.2	2229.4	2208.7	2222.5	2205.2	2212.1
22.5°	2139.5	2167.1	2170.6	2143.0	2160.2	2139.5	2163.7	2132.5	2167.1	2143.0	2153.3
25°	2091.1	2087.7	2098.0	2084.2	2087.7	2087.7	2104.9	2091.1	2101.5	2087.7	2091.1
27.5°	2011.7	2039.3	2035.8	2022.0	2028.9	2025.5	2060.1	2022.0	2042.7	2025.5	2032.4
30°	1942.4	1966.7	1959.8	1946.0	1946.0	1935.5	1973.6	1963.2	1959.8	1959.8	1956.3
32.5°	1873.3	1876.9	1870.0	1873.3	1876.9	1863.0	1894.1	1880.3	1876.9	1880.3	1883.8
35°	1780.0	1780.0	1786.9	1776.6	1790.4	1790.4	1818.1	1800.7	1797.3	1786.9	1797.3
37.5°	1697.1	1686.8	1690.2	1690.2	1697.1	1704.0	1717.8	1710.9	1710.9	1700.6	1707.5
40°	1586.5	1579.6	1589.9	1589.9	1600.3	1600.3	1614.1	1607.2	1617.5	1617.5	1617.5
42.5°	1489.8	1489.8	1482.9	1493.1	1496.7	1493.1	1517.4	1513.9	1517.4	1510.5	1513.9
45°	1386.0	1386.0	1379.1	1375.7	1392.9	1389.5	1417.1	1406.7	1420.5	1413.6	1417.1
47.5°	1244.2	1261.6	1251.2	1261.6	1282.3	1285.8	1303.0	1296.1	1310.0	1299.7	1313.5
50°	1109.6	1109.6	1119.9	1133.7	1154.4	1157.9	1178.7	1192.5	1199.4	1202.8	1206.3
52.5°	967.8	964.3	974.7	992.0	1009.3	1023.1	1043.8	1064.6	1078.4	1099.1	1088.7
55°	801.9	808.8	819.2	839.9	867.6	884.8	902.1	929.8	954.0	964.3	985.0
57.5°	660.1	653.2	660.1	687.8	718.9	732.8	757.0	784.6	819.2	839.9	846.8
60°	511.5	515.0	521.9	546.2	570.3	591.0	601.5	646.3	677.5	698.2	712.0
62.5°	376.8	383.7	390.6	411.4	435.5	452.8	470.0	508.1	535.7	556.5	570.3
65°	262.7	266.1	276.5	286.8	311.1	328.3	342.1	373.3	400.9	418.3	428.6
67.5°	162.5	165.8	172.8	186.7	203.9	217.7	231.6	252.3	276.5	293.8	297.3
70°	82.9	86.4	89.8	100.3	114.1	121.0	131.3	148.6	165.8	179.7	186.7
72.5°	27.6	27.6	31.2	38.1	45.0	51.9	55.3	72.6	86.4	93.4	96.7
75°	6.9	6.9	6.9	6.9	6.9	10.4	10.4	20.7	27.6	34.6	38.1
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°	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3	2433.3
2.5°	2433.3	2426.4	2422.9	2426.4	2426.4	2422.9	2433.3	2447.2	2464.4	2419.5
5°	2429.8	2422.9	2429.8	2409.1	2419.5	2412.6	2426.4	2422.9	2436.7	2422.9
7.5°	2419.5	2405.7	2409.1	2398.8	2412.6	2395.3	2405.7	2426.4	2412.6	2391.9
10°	2385.0	2378.1	2402.2	2367.6	2360.7	2374.5	2402.2	2381.5	2374.5	2381.5
12.5°	2350.3	2350.3	2360.7	2333.1	2336.5	2343.4	2357.2	2343.4	2350.3	2367.6
15°	2312.3	2305.4	2322.6	2301.9	2298.5	2291.6	2305.4	2305.4	2312.3	2301.9
17.5°	2267.4	2257.1	2257.1	2250.2	2246.6	2264.0	2270.9	2274.3	2277.8	2264.0
20°	2212.1	2208.7	2219.0	2208.7	2212.1	2215.6	2215.6	2208.7	2239.7	2201.8
22.5°	2153.3	2163.7	2149.9	2143.0	2149.9	2156.8	2156.8	2160.2	2153.3	2146.4
25°	2094.6	2101.5	2104.9	2084.2	2094.6	2084.2	2108.4	2111.8	2098.0	2104.9
27.5°	2042.7	2032.4	2028.9	2015.1	2022.0	2018.6	2022.0	2022.0	2042.7	2015.1
30°	1963.2	1952.9	1956.3	1946.0	1949.4	1946.0	1949.4	1949.4	1963.2	1959.8
32.5°	1887.2	1876.9	1880.3	1870.0	1870.0	1873.3	1866.4	1866.4	1876.9	1870.0
35°	1814.5	1790.4	1793.8	1790.4	1793.8	1780.0	1780.0	1776.6	1783.5	1766.2
37.5°	1710.9	1700.6	1697.1	1693.7	1697.1	1690.2	1697.1	1686.8	1697.1	1683.2
40°	1617.5	1610.6	1614.1	1593.4	1593.4	1596.8	1589.9	1586.5	1589.9	1603.7
42.5°	1524.3	1510.5	1503.6	1496.7	1500.1	1489.8	1486.2	1479.3	1486.2	1472.4
45°	1413.6	1413.6	1410.2	1392.9	1396.4	1396.4	1382.6	1368.8	1372.2	1372.2
47.5°	1313.5	1306.6	1303.0	1285.8	1282.3	1278.9	1265.0	1254.7	1254.7	1244.2
50°	1202.8	1195.9	1185.6	1168.2	1161.3	1140.6	1130.3	1116.5	1102.7	1102.7
52.5°	1099.1	1074.9	1061.1	1033.4	1023.1	1012.7	985.0	974.7	964.3	954.0
55°	974.7	954.0	926.4	895.2	881.4	864.0	836.4	815.7	801.9	805.4
57.5°	853.8	819.2	791.6	750.1	732.8	722.3	694.7	667.0	653.2	653.2
60°	705.1	677.5	642.9	604.8	591.0	573.8	539.1	521.9	511.5	501.2
62.5°	563.4	542.7	511.5	463.1	452.8	435.5	411.4	390.6	380.2	380.2
65°	421.7	400.9	373.3	338.7	324.9	311.1	290.4	269.6	259.2	255.8
67.5°	297.3	273.0	248.9	221.3	210.8	203.9	183.2	169.4	162.5	158.9
70°	179.7	165.8	148.6	127.9	117.5	110.6	96.7	86.4	82.9	79.5
72.5°	93.4	82.9	69.1	55.3	48.4	41.5	34.6	27.6	24.3	24.3
75°	34.6	27.6	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)