

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: P840205

Luminaire Tested: **LD4C50D010 EU4509040 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: P840205
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 EU4509040 4LBCSSQMW
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

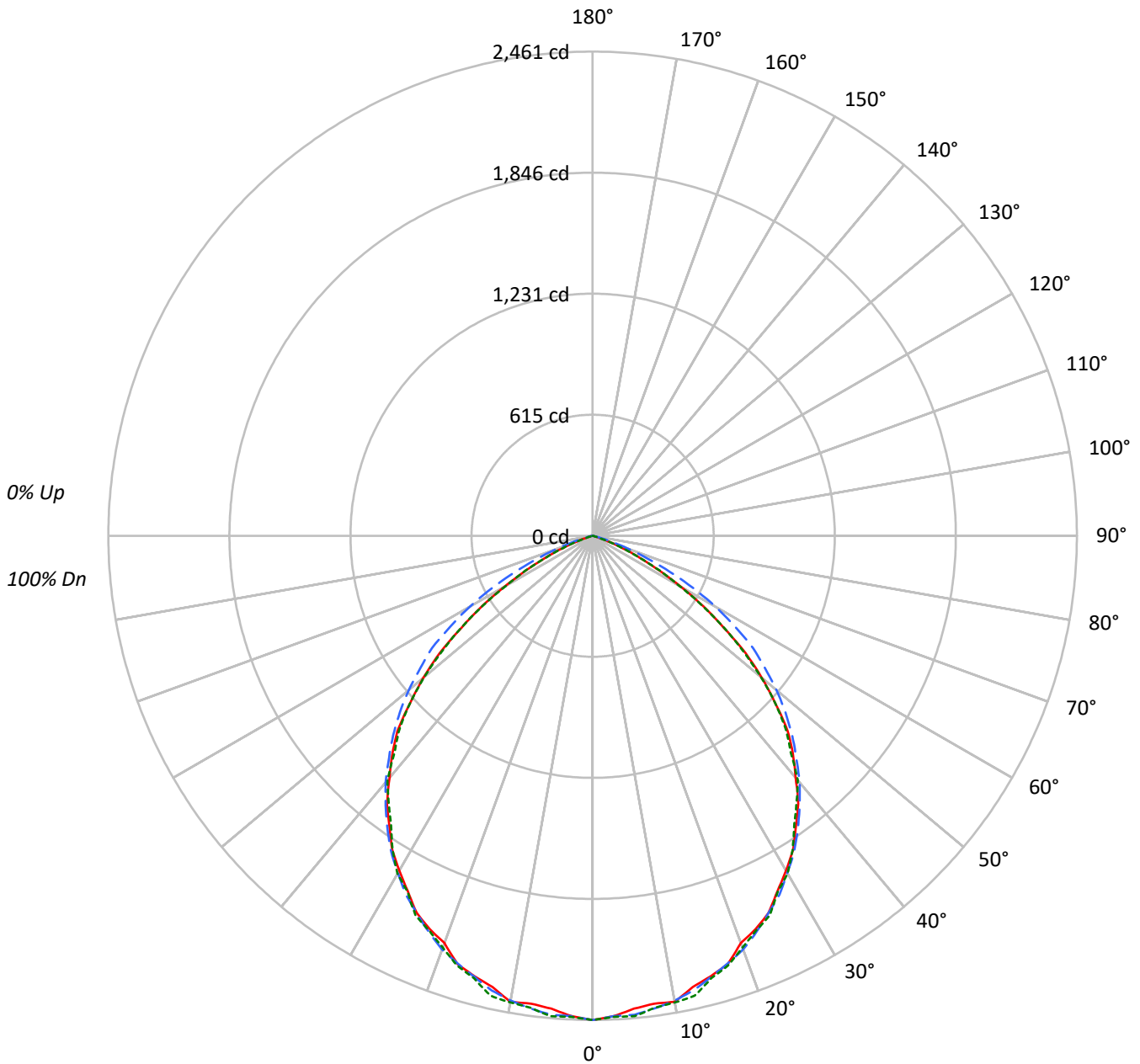
Lumens per Lamp: N/A
Luminaire Lumens: 5258.0 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

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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								
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°	237498	237498	237498
5°	233669	236710	237388
10°	235685	234999	236018
15°	231561	231901	232600
20°	226176	229760	228692
25°	225192	225192	226683
30°	218921	220470	220871
35°	212083	214156	210446
40°	202136	206091	204328
45°	191311	195610	189401
50°	168484	183164	167433
55°	136446	167618	137051
60°	99847	138983	97840
65°	60685	98973	59087
70°	23669	53291	22710
75°	2610	14353	2610
80°	2000	2000	2000
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.3	4.4
10°-20°	657.4	12.5
20°-30°	975.5	18.6
30°-40°	1130.3	21.5
40°-50°	1083.7	20.6
50°-60°	796.8	15.2
60°-70°	344.2	6.5
70°-80°	37.2	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°	1865.3	35.5
0°-40°	2995.6	57.0
0°-60°	4876.2	92.7
0°-90°	5258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2461	2461	2461	2461	2461	
5°	2412	2437	2444	2448	2451	230
15°	2318	2332	2322	2325	2328	653
25°	2115	2112	2115	2119	2129	968
35°	1800	1811	1818	1814	1787	1126
45°	1402	1406	1434	1412	1388	1066
55°	811	895	996	892	815	730
65°	266	332	434	329	259	273
75°	7	11	38	7	7	22
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°	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4
2.5°	2443.9	2471.8	2475.4	2457.9	2450.9	2440.5	2464.9	2447.5	2454.4	2447.5	2443.9
5°	2412.5	2443.9	2447.5	2447.5	2440.5	2436.9	2447.5	2443.9	2440.5	2433.5	2443.9
7.5°	2398.5	2415.9	2433.5	2412.5	2422.9	2419.5	2443.9	2433.5	2429.9	2429.9	2422.9
10°	2405.5	2401.9	2415.9	2395.0	2401.9	2395.0	2415.9	2415.9	2408.9	2401.9	2398.5
12.5°	2349.5	2377.4	2377.4	2374.0	2367.0	2356.4	2377.4	2391.5	2370.4	2370.4	2367.0
15°	2318.1	2325.1	2328.5	2328.5	2325.1	2332.0	2342.5	2328.5	2332.0	2314.5	2321.5
17.5°	2283.1	2269.1	2279.6	2272.6	2276.1	2283.1	2297.1	2297.1	2276.1	2272.6	2279.6
20°	2202.7	2244.6	2248.2	2227.2	2230.6	2230.6	2255.2	2234.2	2248.2	2230.6	2237.6
22.5°	2164.2	2192.1	2195.7	2167.7	2185.1	2164.2	2188.7	2157.2	2192.1	2167.7	2178.1
25°	2115.2	2111.8	2122.2	2108.2	2111.8	2111.8	2129.2	2115.2	2125.8	2111.8	2115.2
27.5°	2034.9	2062.9	2059.3	2045.3	2052.3	2048.9	2083.8	2045.3	2066.3	2048.9	2055.9
30°	1964.9	1989.4	1982.4	1968.4	1968.4	1957.9	1996.4	1985.8	1982.4	1982.4	1978.8
32.5°	1895.0	1898.5	1891.5	1895.0	1898.5	1884.6	1915.9	1902.0	1898.5	1902.0	1905.5
35°	1800.5	1800.5	1807.5	1797.1	1811.1	1811.1	1839.0	1821.5	1818.1	1807.5	1818.1
37.5°	1716.7	1706.2	1709.7	1709.7	1716.7	1723.6	1737.6	1730.6	1730.6	1720.2	1727.2
40°	1604.8	1597.8	1608.2	1608.2	1618.8	1618.8	1632.8	1625.8	1636.2	1636.2	1636.2
42.5°	1507.0	1507.0	1500.0	1510.4	1513.9	1510.4	1534.9	1531.4	1534.9	1527.9	1531.4
45°	1402.0	1402.0	1395.0	1391.6	1409.0	1405.5	1433.5	1422.9	1436.9	1429.9	1433.5
47.5°	1258.6	1276.2	1265.6	1276.2	1297.1	1300.7	1318.1	1311.1	1325.1	1314.7	1328.6
50°	1122.4	1122.4	1132.8	1146.8	1167.7	1171.3	1192.3	1206.3	1213.2	1216.7	1220.2
52.5°	979.0	975.4	986.0	1003.4	1020.9	1034.9	1055.9	1076.9	1090.8	1111.8	1101.3
55°	811.1	818.1	828.7	849.6	877.6	895.0	912.5	940.5	965.0	975.4	996.4
57.5°	667.7	660.8	667.7	695.7	727.2	741.2	765.7	793.7	828.7	849.6	856.6
60°	517.4	521.0	527.9	552.5	576.9	597.8	608.4	653.8	685.3	706.3	720.2
62.5°	381.2	388.1	395.1	416.1	440.5	458.0	475.5	514.0	541.9	562.9	576.9
65°	265.8	269.2	279.7	290.2	314.7	332.1	346.1	377.6	405.6	423.1	433.5
67.5°	164.3	167.8	174.7	188.9	206.3	220.3	234.2	255.2	279.7	297.1	300.7
70°	83.9	87.4	90.9	101.4	115.4	122.4	132.8	150.4	167.8	181.7	188.9
72.5°	28.0	28.0	31.5	38.5	45.5	52.5	55.9	73.5	87.4	94.4	97.9
75°	7.0	7.0	7.0	7.0	7.0	10.6	10.6	21.0	28.0	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4	2461.4
2.5°	2461.4	2454.4	2450.9	2454.4	2454.4	2450.9	2461.4	2475.4	2492.8	2447.5
5°	2457.9	2450.9	2457.9	2436.9	2447.5	2440.5	2454.4	2450.9	2464.9	2450.9
7.5°	2447.5	2433.5	2436.9	2426.5	2440.5	2422.9	2433.5	2454.4	2440.5	2419.5
10°	2412.5	2405.5	2429.9	2395.0	2388.0	2401.9	2429.9	2408.9	2401.9	2408.9
12.5°	2377.4	2377.4	2388.0	2360.0	2363.4	2370.4	2384.4	2370.4	2377.4	2395.0
15°	2339.0	2332.0	2349.5	2328.5	2325.1	2318.1	2332.0	2332.0	2339.0	2328.5
17.5°	2293.5	2283.1	2283.1	2276.1	2272.6	2290.1	2297.1	2300.5	2304.1	2290.1
20°	2237.6	2234.2	2244.6	2234.2	2237.6	2241.2	2241.2	2234.2	2265.6	2227.2
22.5°	2178.1	2188.7	2174.7	2167.7	2174.7	2181.7	2181.7	2185.1	2178.1	2171.1
25°	2118.8	2125.8	2129.2	2108.2	2118.8	2108.2	2132.8	2136.2	2122.2	2129.2
27.5°	2066.3	2055.9	2052.3	2038.3	2045.3	2041.9	2045.3	2045.3	2066.3	2038.3
30°	1985.8	1975.4	1978.8	1968.4	1971.9	1968.4	1971.9	1971.9	1985.8	1982.4
32.5°	1908.9	1898.5	1902.0	1891.5	1891.5	1895.0	1888.0	1888.0	1898.5	1891.5
35°	1835.5	1811.1	1814.5	1811.1	1814.5	1800.5	1800.5	1797.1	1804.1	1786.6
37.5°	1730.6	1720.2	1716.7	1713.2	1716.7	1709.7	1716.7	1706.2	1716.7	1702.7
40°	1636.2	1629.2	1632.8	1611.8	1611.8	1615.2	1608.2	1604.8	1608.2	1622.2
42.5°	1541.9	1527.9	1520.9	1513.9	1517.4	1507.0	1503.4	1496.4	1503.4	1489.4
45°	1429.9	1429.9	1426.5	1409.0	1412.5	1412.5	1398.5	1384.6	1388.0	1388.0
47.5°	1328.6	1321.7	1318.1	1300.7	1297.1	1293.7	1279.6	1269.2	1269.2	1258.6
50°	1216.7	1209.7	1199.3	1181.7	1174.7	1153.8	1143.3	1129.4	1115.4	1115.4
52.5°	1111.8	1087.3	1073.3	1045.3	1034.9	1024.4	996.4	986.0	975.4	965.0
55°	986.0	965.0	937.1	905.5	891.6	874.0	846.1	825.1	811.1	814.7
57.5°	863.6	828.7	800.7	758.8	741.2	730.7	702.7	674.7	660.8	660.8
60°	713.3	685.3	650.3	611.8	597.8	580.4	545.4	527.9	517.4	507.0
62.5°	569.9	548.9	517.4	468.5	458.0	440.5	416.1	395.1	384.6	384.6
65°	426.5	405.6	377.6	342.6	328.7	314.7	293.7	272.7	262.2	258.8
67.5°	300.7	276.2	251.8	223.8	213.3	206.3	185.3	171.3	164.3	160.8
70°	181.7	167.8	150.4	129.4	118.8	111.8	97.9	87.4	83.9	80.5
72.5°	94.4	83.9	69.9	55.9	48.9	41.9	34.9	28.0	24.5	24.5
75°	34.9	28.0	17.5	10.6	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)