

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: P840185

Luminaire Tested: **LD4C40D010 EU4409040 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: P840185
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: LD4C40D010 EU4409040 4LBCSSQMW
Description: 4 INCH 4000 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

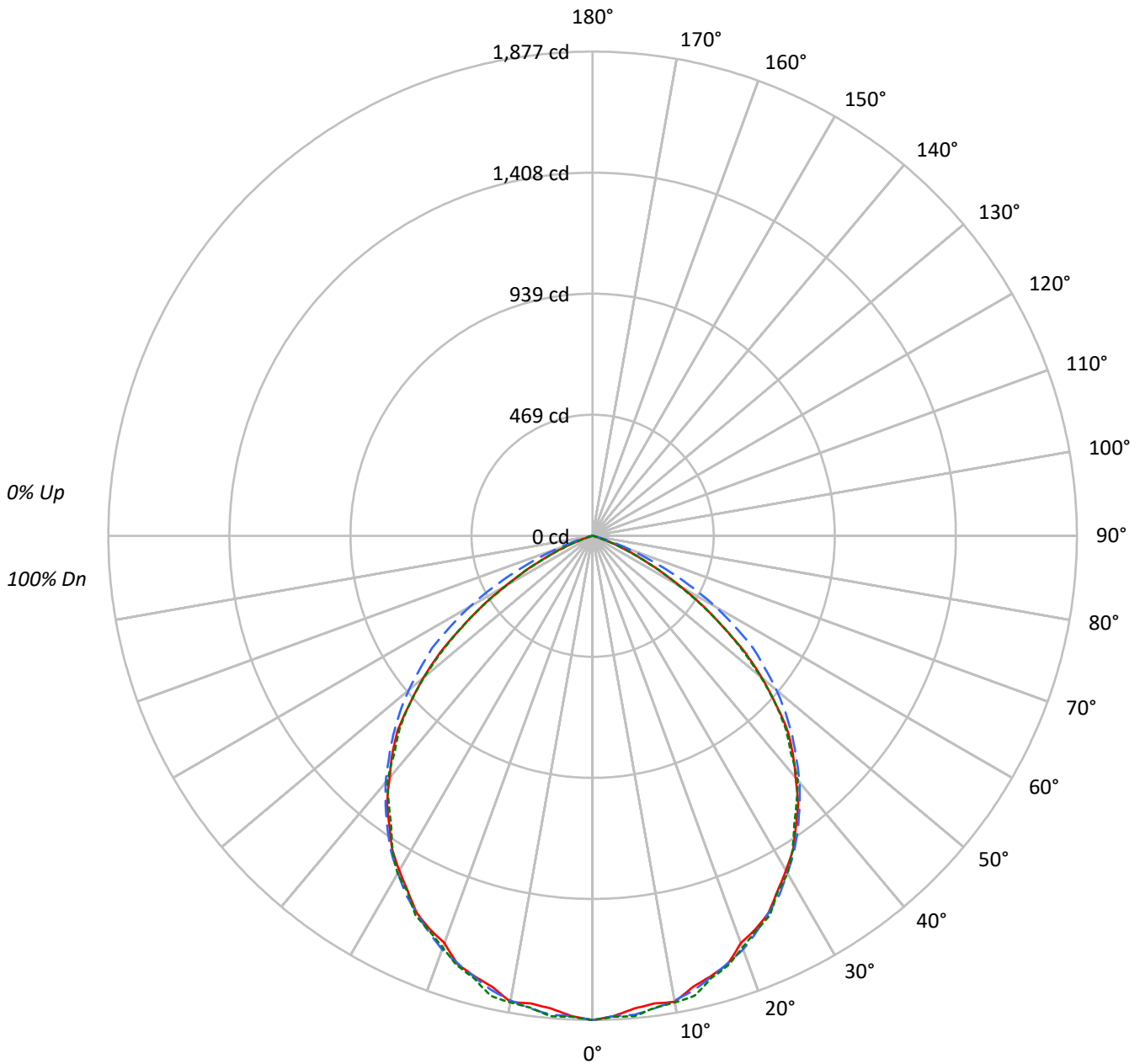
Lumens per Lamp: N/A
Luminaire Lumens: 4010.0 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
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

TEST NUMBER: P840185

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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°	181129	181129	181129
5°	178208	180523	181046
10°	179749	179220	180004
15°	176600	176860	177389
20°	172494	175226	174415
25°	171747	171747	172876
30°	166957	168149	168450
35°	161751	163329	160490
40°	154159	157170	155834
45°	145899	149187	144439
50°	128494	139692	127684
55°	104063	127833	104517
60°	76149	106003	74605
65°	46279	75480	45046
70°	18055	40625	17322
75°	1976	10960	1976
80°	1500	1500	1500
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.2	4.4
10°-20°	501.4	12.5
20°-30°	744.0	18.6
30°-40°	862.0	21.5
40°-50°	826.5	20.6
50°-60°	607.7	15.2
60°-70°	262.5	6.5
70°-80°	28.3	0.7
80°-90°	0.4	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°	1422.6	35.5
0°-40°	2284.6	57.0
0°-60°	3718.8	92.7
0°-90°	4010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1877	1877	1877	1877	1877	
5°	1840	1858	1864	1866	1869	176
15°	1768	1778	1770	1773	1776	498
25°	1613	1611	1613	1616	1624	739
35°	1373	1381	1387	1384	1362	859
45°	1069	1072	1093	1077	1058	813
55°	619	683	760	680	621	557
65°	203	253	331	251	197	208
75°	5	8	29	5	5	16
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°	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2
2.5°	1863.8	1885.1	1887.9	1874.5	1869.2	1861.2	1879.8	1866.5	1871.9	1866.5	1863.8
5°	1839.9	1863.8	1866.5	1866.5	1861.2	1858.5	1866.5	1863.8	1861.2	1855.9	1863.8
7.5°	1829.2	1842.5	1855.9	1839.9	1847.8	1845.2	1863.8	1855.9	1853.2	1853.2	1847.8
10°	1834.6	1831.8	1842.5	1826.5	1831.8	1826.5	1842.5	1842.5	1837.2	1831.8	1829.2
12.5°	1791.8	1813.1	1813.1	1810.5	1805.2	1797.1	1813.1	1823.9	1807.8	1807.8	1805.2
15°	1767.9	1773.2	1775.8	1775.8	1773.2	1778.5	1786.5	1775.8	1778.5	1765.2	1770.5
17.5°	1741.2	1730.6	1738.5	1733.2	1735.9	1741.2	1751.9	1751.9	1735.9	1733.2	1738.5
20°	1679.9	1711.8	1714.6	1698.6	1701.2	1701.2	1719.9	1703.9	1714.6	1701.2	1706.5
22.5°	1650.5	1671.8	1674.5	1653.2	1666.5	1650.5	1669.2	1645.2	1671.8	1653.2	1661.1
25°	1613.2	1610.6	1618.5	1607.8	1610.6	1610.6	1623.8	1613.2	1621.2	1610.6	1613.2
27.5°	1551.9	1573.2	1570.5	1559.9	1565.2	1562.6	1589.2	1559.9	1575.9	1562.6	1567.9
30°	1498.5	1517.2	1511.9	1501.2	1501.2	1493.2	1522.5	1514.5	1511.9	1511.9	1509.2
32.5°	1445.2	1447.9	1442.6	1445.2	1447.9	1437.2	1461.2	1450.5	1447.9	1450.5	1453.2
35°	1373.2	1373.2	1378.5	1370.6	1381.2	1381.2	1402.5	1389.2	1386.6	1378.5	1386.6
37.5°	1309.2	1301.3	1303.9	1303.9	1309.2	1314.5	1325.2	1319.9	1319.9	1311.9	1317.3
40°	1223.9	1218.6	1226.5	1226.5	1234.6	1234.6	1245.2	1239.9	1247.8	1247.8	1247.8
42.5°	1149.3	1149.3	1143.9	1151.9	1154.6	1151.9	1170.6	1167.9	1170.6	1165.3	1167.9
45°	1069.2	1069.2	1063.9	1061.3	1074.5	1071.9	1093.3	1085.2	1095.9	1090.5	1093.3
47.5°	959.9	973.3	965.2	973.3	989.2	992.0	1005.2	999.9	1010.6	1002.6	1013.3
50°	856.0	856.0	863.9	874.6	890.6	893.3	909.3	919.9	925.3	927.9	930.6
52.5°	746.6	743.9	752.0	765.2	778.6	789.3	805.3	821.3	831.9	847.9	839.9
55°	618.6	623.9	632.0	648.0	669.3	682.6	695.9	717.3	736.0	743.9	759.9
57.5°	509.3	503.9	509.3	530.6	554.6	565.3	584.0	605.3	632.0	648.0	653.3
60°	394.6	397.3	402.6	421.3	440.0	455.9	464.0	498.6	522.6	538.6	549.3
62.5°	290.7	296.0	301.4	317.3	336.0	349.3	362.6	392.0	413.3	429.3	440.0
65°	202.7	205.3	213.3	221.3	240.0	253.3	263.9	288.0	309.3	322.7	330.6
67.5°	125.3	127.9	133.3	144.0	157.3	168.0	178.6	194.6	213.3	226.6	229.3
70°	64.0	66.7	69.3	77.4	88.0	93.3	101.3	114.7	127.9	138.6	144.0
72.5°	21.3	21.3	24.0	29.4	34.7	40.0	42.6	56.0	66.7	72.0	74.6
75°	5.3	5.3	5.3	5.3	5.3	8.0	8.0	16.0	21.3	26.7	29.4
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	5.3	5.3
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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: P840185

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2	1877.2
2.5°	1877.2	1871.9	1869.2	1871.9	1871.9	1869.2	1877.2	1887.9	1901.1	1866.5
5°	1874.5	1869.2	1874.5	1858.5	1866.5	1861.2	1871.9	1869.2	1879.8	1869.2
7.5°	1866.5	1855.9	1858.5	1850.6	1861.2	1847.8	1855.9	1871.9	1861.2	1845.2
10°	1839.9	1834.6	1853.2	1826.5	1821.2	1831.8	1853.2	1837.2	1831.8	1837.2
12.5°	1813.1	1813.1	1821.2	1799.9	1802.5	1807.8	1818.5	1807.8	1813.1	1826.5
15°	1783.9	1778.5	1791.8	1775.8	1773.2	1767.9	1778.5	1778.5	1783.9	1775.8
17.5°	1749.2	1741.2	1741.2	1735.9	1733.2	1746.5	1751.9	1754.5	1757.2	1746.5
20°	1706.5	1703.9	1711.8	1703.9	1706.5	1709.2	1709.2	1703.9	1727.8	1698.6
22.5°	1661.1	1669.2	1658.5	1653.2	1658.5	1663.9	1663.9	1666.5	1661.1	1655.8
25°	1615.9	1621.2	1623.8	1607.8	1615.9	1607.8	1626.5	1629.2	1618.5	1623.8
27.5°	1575.9	1567.9	1565.2	1554.5	1559.9	1557.2	1559.9	1559.9	1575.9	1554.5
30°	1514.5	1506.6	1509.2	1501.2	1503.8	1501.2	1503.8	1503.8	1514.5	1511.9
32.5°	1455.9	1447.9	1450.5	1442.6	1442.6	1445.2	1439.9	1439.9	1447.9	1442.6
35°	1399.8	1381.2	1383.8	1381.2	1383.8	1373.2	1373.2	1370.6	1375.9	1362.5
37.5°	1319.9	1311.9	1309.2	1306.6	1309.2	1303.9	1309.2	1301.3	1309.2	1298.5
40°	1247.8	1242.5	1245.2	1229.2	1229.2	1231.9	1226.5	1223.9	1226.5	1237.2
42.5°	1175.9	1165.3	1159.9	1154.6	1157.2	1149.3	1146.6	1141.2	1146.6	1135.9
45°	1090.5	1090.5	1087.9	1074.5	1077.3	1077.3	1066.6	1055.9	1058.5	1058.5
47.5°	1013.3	1008.0	1005.2	992.0	989.2	986.6	975.9	967.9	967.9	959.9
50°	927.9	922.6	914.6	901.2	895.9	879.9	872.0	861.3	850.6	850.6
52.5°	847.9	829.2	818.6	797.2	789.3	781.2	759.9	752.0	743.9	736.0
55°	752.0	736.0	714.7	690.6	679.9	666.6	645.2	629.3	618.6	621.3
57.5°	658.6	632.0	610.6	578.7	565.3	557.2	535.9	514.6	503.9	503.9
60°	544.0	522.6	496.0	466.6	455.9	442.7	415.9	402.6	394.6	386.6
62.5°	434.6	418.6	394.6	357.3	349.3	336.0	317.3	301.4	293.3	293.3
65°	325.3	309.3	288.0	261.3	250.7	240.0	224.0	208.0	200.0	197.3
67.5°	229.3	210.6	192.0	170.7	162.6	157.3	141.3	130.7	125.3	122.6
70°	138.6	127.9	114.7	98.7	90.6	85.3	74.6	66.7	64.0	61.4
72.5°	72.0	64.0	53.3	42.6	37.3	32.0	26.7	21.3	18.7	18.7
75°	26.7	21.3	13.4	8.0	5.3	5.3	5.3	5.3	5.3	5.3
77.5°	5.3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)