

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: P840187

Luminaire Tested: **LD4C40D010 EU4409050 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: P840187
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 EU4409050 4LBCSSQMW
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

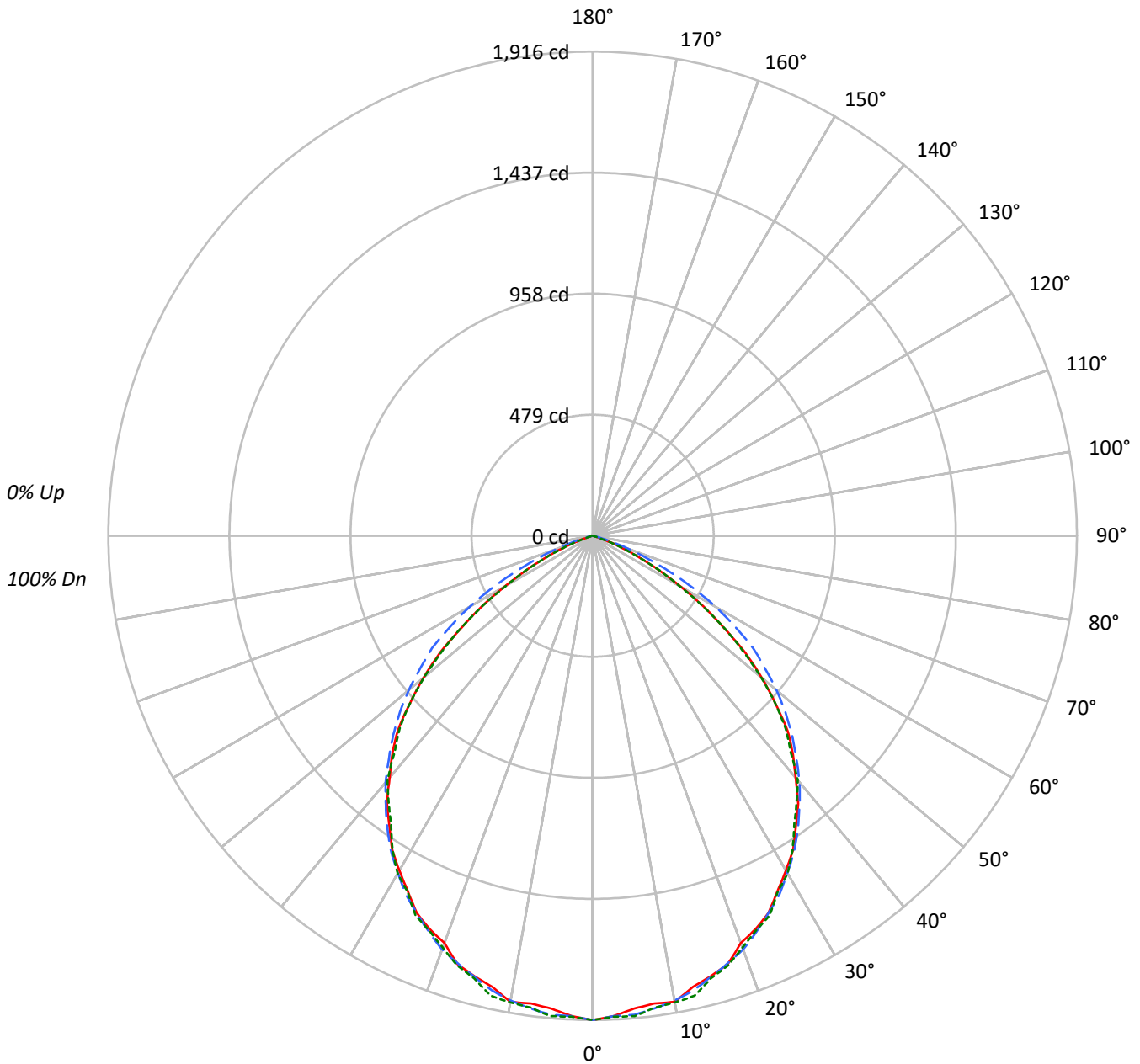
Lumens per Lamp: N/A
Luminaire Lumens: 4093.0 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
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									
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°	184882	184882	184882
5°	181898	184262	184785
10°	183463	182934	183727
15°	180256	180516	181065
20°	176057	178850	178019
25°	175303	175303	176453
30°	170410	171625	171937
35°	165096	166710	163812
40°	157346	160432	159059
45°	148914	152271	147441
50°	131151	142590	130326
55°	106216	130474	106687
60°	77731	108203	76149
65°	47238	77055	45982
70°	18422	41471	17660
75°	2013	11184	2013
80°	1556	1556	1556
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.9	4.4
10°-20°	511.8	12.5
20°-30°	759.4	18.6
30°-40°	879.9	21.5
40°-50°	843.6	20.6
50°-60°	620.3	15.2
60°-70°	267.9	6.5
70°-80°	28.9	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°	1452.0	35.5
0°-40°	2331.9	57.0
0°-60°	3795.8	92.7
0°-90°	4093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1916	1916	1916	1916	1916	
5°	1878	1897	1902	1905	1908	179
15°	1804	1815	1807	1810	1813	509
25°	1647	1644	1647	1649	1657	754
35°	1402	1410	1415	1412	1391	876
45°	1091	1094	1116	1100	1080	830
55°	631	697	776	694	634	568
65°	207	258	338	256	201	213
75°	5	8	30	5	5	17
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°	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1
2.5°	1902.4	1924.2	1926.9	1913.3	1907.8	1899.7	1918.7	1905.2	1910.6	1905.2	1902.4
5°	1878.0	1902.4	1905.2	1905.2	1899.7	1897.0	1905.2	1902.4	1899.7	1894.3	1902.4
7.5°	1867.1	1880.6	1894.3	1878.0	1886.1	1883.4	1902.4	1894.3	1891.5	1891.5	1886.1
10°	1872.5	1869.8	1880.6	1864.3	1869.8	1864.3	1880.6	1880.6	1875.2	1869.8	1867.1
12.5°	1828.9	1850.7	1850.7	1848.0	1842.5	1834.3	1850.7	1861.6	1845.2	1845.2	1842.5
15°	1804.5	1809.9	1812.6	1812.6	1809.9	1815.3	1823.5	1812.6	1815.3	1801.7	1807.1
17.5°	1777.3	1766.4	1774.5	1769.0	1771.8	1777.3	1788.1	1788.1	1771.8	1769.0	1774.5
20°	1714.6	1747.3	1750.0	1733.7	1736.4	1736.4	1755.5	1739.2	1750.0	1736.4	1741.8
22.5°	1684.6	1706.4	1709.2	1687.4	1701.0	1684.6	1703.7	1679.2	1706.4	1687.4	1695.5
25°	1646.6	1643.9	1652.0	1641.1	1643.9	1643.9	1657.4	1646.6	1654.8	1643.9	1646.6
27.5°	1584.0	1605.8	1603.0	1592.1	1597.6	1594.9	1622.1	1592.1	1608.5	1594.9	1600.4
30°	1529.5	1548.6	1543.2	1532.3	1532.3	1524.1	1554.1	1545.8	1543.2	1543.2	1540.4
32.5°	1475.1	1477.9	1472.4	1475.1	1477.9	1467.0	1491.4	1480.5	1477.9	1480.5	1483.3
35°	1401.6	1401.6	1407.0	1398.9	1409.8	1409.8	1431.6	1417.9	1415.3	1407.0	1415.3
37.5°	1336.3	1328.2	1330.9	1330.9	1336.3	1341.7	1352.6	1347.2	1347.2	1339.1	1344.5
40°	1249.2	1243.8	1251.9	1251.9	1260.1	1260.1	1271.0	1265.6	1273.7	1273.7	1273.7
42.5°	1173.1	1173.1	1167.6	1175.7	1178.5	1175.7	1194.8	1192.1	1194.8	1189.4	1192.1
45°	1091.3	1091.3	1085.9	1083.2	1096.8	1094.1	1115.9	1107.7	1118.5	1113.1	1115.9
47.5°	979.7	993.4	985.2	993.4	1009.7	1012.5	1026.0	1020.6	1031.5	1023.4	1034.3
50°	873.7	873.7	881.8	892.7	909.0	911.8	928.1	939.0	944.4	947.1	949.9
52.5°	762.1	759.3	767.5	781.1	794.7	805.6	821.9	838.3	849.2	865.5	857.3
55°	631.4	636.8	645.1	661.4	683.1	696.7	710.3	732.1	751.2	759.3	775.6
57.5°	519.8	514.4	519.8	541.6	566.1	577.0	596.1	617.8	645.1	661.4	666.8
60°	402.8	405.5	411.0	430.1	449.1	465.4	473.6	508.9	533.5	549.8	560.7
62.5°	296.7	302.1	307.6	323.9	342.9	356.6	370.1	400.1	421.9	438.2	449.1
65°	206.9	209.5	217.8	225.9	245.0	258.5	269.4	293.9	315.7	329.4	337.5
67.5°	127.9	130.6	136.0	147.0	160.6	171.5	182.3	198.7	217.8	231.3	234.1
70°	65.3	68.1	70.7	79.0	89.8	95.3	103.4	117.0	130.6	141.5	147.0
72.5°	21.8	21.8	24.5	30.0	35.4	40.9	43.5	57.2	68.1	73.5	76.2
75°	5.4	5.4	5.4	5.4	5.4	8.2	8.2	16.3	21.8	27.2	30.0
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	5.4	5.4
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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°	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1	1916.1
2.5°	1916.1	1910.6	1907.8	1910.6	1910.6	1907.8	1916.1	1926.9	1940.5	1905.2
5°	1913.3	1907.8	1913.3	1897.0	1905.2	1899.7	1910.6	1907.8	1918.7	1907.8
7.5°	1905.2	1894.3	1897.0	1888.9	1899.7	1886.1	1894.3	1910.6	1899.7	1883.4
10°	1878.0	1872.5	1891.5	1864.3	1858.9	1869.8	1891.5	1875.2	1869.8	1875.2
12.5°	1850.7	1850.7	1858.9	1837.1	1839.8	1845.2	1856.1	1845.2	1850.7	1864.3
15°	1820.8	1815.3	1828.9	1812.6	1809.9	1804.5	1815.3	1815.3	1820.8	1812.6
17.5°	1785.4	1777.3	1777.3	1771.8	1769.0	1782.7	1788.1	1790.8	1793.6	1782.7
20°	1741.8	1739.2	1747.3	1739.2	1741.8	1744.6	1744.6	1739.2	1763.6	1733.7
22.5°	1695.5	1703.7	1692.9	1687.4	1692.9	1698.3	1698.3	1701.0	1695.5	1690.1
25°	1649.3	1654.8	1657.4	1641.1	1649.3	1641.1	1660.2	1662.9	1652.0	1657.4
27.5°	1608.5	1600.4	1597.6	1586.7	1592.1	1589.5	1592.1	1592.1	1608.5	1586.7
30°	1545.8	1537.7	1540.4	1532.3	1535.0	1532.3	1535.0	1535.0	1545.8	1543.2
32.5°	1486.0	1477.9	1480.5	1472.4	1472.4	1475.1	1469.7	1469.7	1477.9	1472.4
35°	1428.8	1409.8	1412.5	1409.8	1412.5	1401.6	1401.6	1398.9	1404.4	1390.7
37.5°	1347.2	1339.1	1336.3	1333.6	1336.3	1330.9	1336.3	1328.2	1336.3	1325.4
40°	1273.7	1268.2	1271.0	1254.7	1254.7	1257.4	1251.9	1249.2	1251.9	1262.8
42.5°	1200.3	1189.4	1183.9	1178.5	1181.2	1173.1	1170.3	1164.8	1170.3	1159.4
45°	1113.1	1113.1	1110.4	1096.8	1099.6	1099.6	1088.7	1077.8	1080.5	1080.5
47.5°	1034.3	1028.8	1026.0	1012.5	1009.7	1007.1	996.1	988.0	988.0	979.7
50°	947.1	941.7	933.5	919.9	914.4	898.1	890.0	879.1	868.2	868.2
52.5°	865.5	846.4	835.5	813.7	805.6	797.4	775.6	767.5	759.3	751.2
55°	767.5	751.2	729.4	704.9	694.0	680.4	658.6	642.3	631.4	634.2
57.5°	672.3	645.1	623.3	590.6	577.0	568.8	547.0	525.2	514.4	514.4
60°	555.2	533.5	506.2	476.3	465.4	451.8	424.5	411.0	402.8	394.6
62.5°	443.6	427.3	402.8	364.7	356.6	342.9	323.9	307.6	299.4	299.4
65°	332.0	315.7	293.9	266.7	255.8	245.0	228.6	212.3	204.1	201.4
67.5°	234.1	215.0	196.0	174.2	166.0	160.6	144.2	133.4	127.9	125.1
70°	141.5	130.6	117.0	100.7	92.5	87.1	76.2	68.1	65.3	62.6
72.5°	73.5	65.3	54.4	43.5	38.1	32.6	27.2	21.8	19.1	19.1
75°	27.2	21.8	13.7	8.2	5.4	5.4	5.4	5.4	5.4	5.4
77.5°	5.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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)