

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: P563858

Luminaire Tested: **LD4C50D010 EX4C509030 4LBCSSQMMS**

Issue Date: 5/25/2022



Test Information

Test Method: LM-79-08
Report Number: P563858
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 EX4C509030 4LBCSSQMMS
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

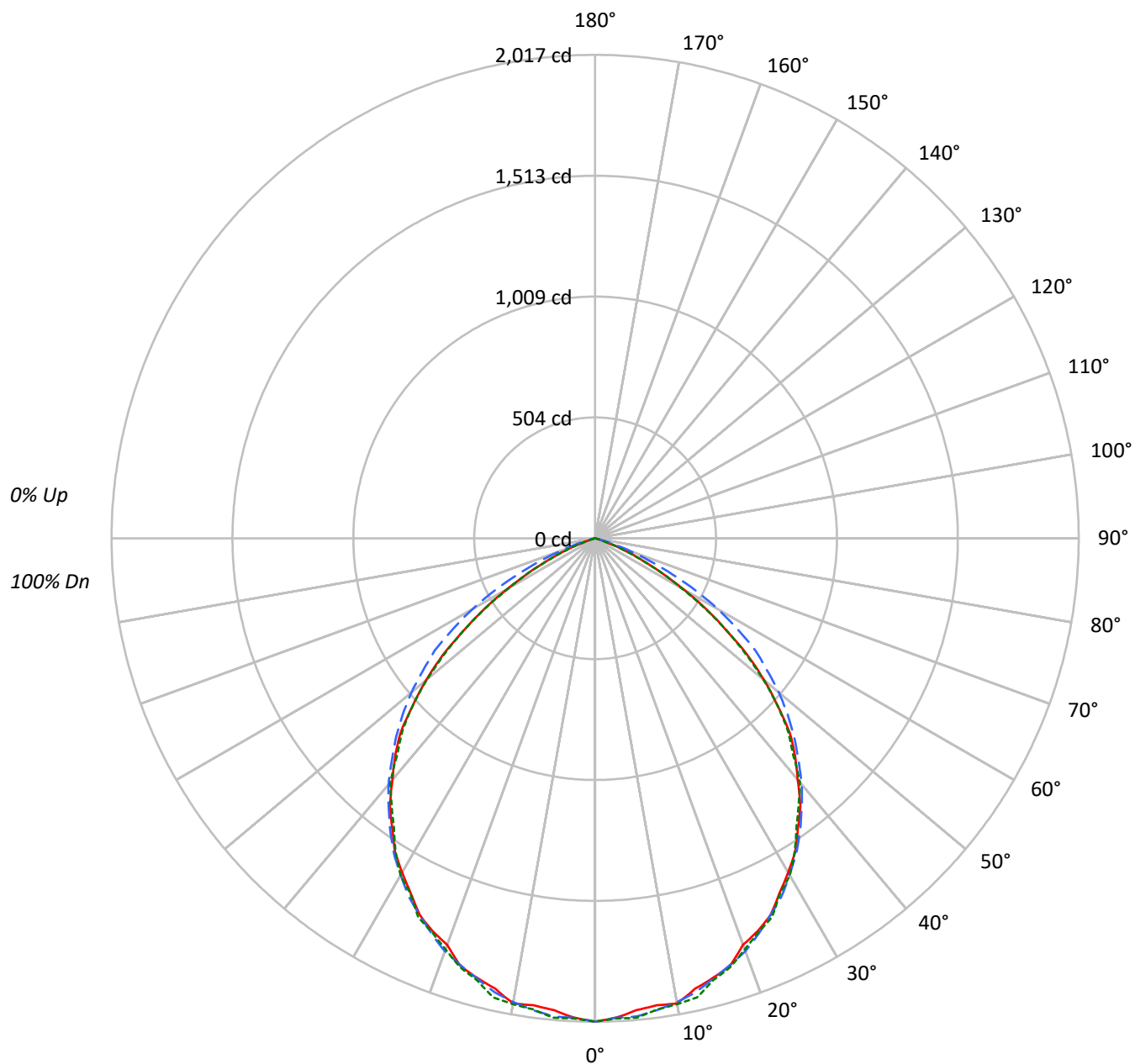
Lumens per Lamp: N/A
Luminaire Lumens: 4307.9 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	194580	194580	194580
5°	191439	193938	194490
10°	193094	192535	193378
15°	189716	189996	190575
20°	185299	188246	187373
25°	184502	184502	185715
30°	179357	180627	180962
35°	173754	175462	172423
40°	165609	168858	167410
45°	156733	160267	155164
50°	138026	150065	137186
55°	111784	137337	112289
60°	81803	113876	80144
65°	49726	81096	48402
70°	19409	43643	18591
75°	2125	11743	2125
80°	1611	1611	1611
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.4	4.4
10°-20°	538.6	12.5
20°-30°	799.2	18.6
30°-40°	926.1	21.5
40°-50°	887.9	20.6
50°-60°	652.8	15.2
60°-70°	282.0	6.5
70°-80°	30.4	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°	1528.2	35.5
0°-40°	2454.3	57.0
0°-60°	3995.1	92.7
0°-90°	4307.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4307.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2017	2017	2017	2017	2017	
5°	1976	1997	2002	2005	2008	189
15°	1899	1911	1902	1905	1908	535
25°	1733	1730	1733	1736	1744	793
35°	1475	1484	1490	1487	1464	922
45°	1149	1152	1174	1157	1137	873
55°	664	733	816	730	668	598
65°	218	272	355	269	212	224
75°	6	9	32	6	6	18
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°	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6
2.5°	2002.3	2025.1	2028.1	2013.8	2008.0	1999.4	2019.4	2005.2	2010.9	2005.2	2002.3
5°	1976.5	2002.3	2005.2	2005.2	1999.4	1996.6	2005.2	2002.3	1999.4	1993.7	2002.3
7.5°	1965.1	1979.4	1993.7	1976.5	1985.1	1982.3	2002.3	1993.7	1990.8	1990.8	1985.1
10°	1970.8	1967.9	1979.4	1962.2	1967.9	1962.2	1979.4	1979.4	1973.7	1967.9	1965.1
12.5°	1924.8	1947.8	1947.8	1945.0	1939.3	1930.6	1947.8	1959.3	1942.0	1942.0	1939.3
15°	1899.2	1904.9	1907.8	1907.8	1904.9	1910.6	1919.2	1907.8	1910.6	1896.3	1902.0
17.5°	1870.5	1859.1	1867.6	1861.9	1864.8	1870.5	1882.0	1882.0	1864.8	1861.9	1867.6
20°	1804.6	1839.0	1841.9	1824.8	1827.5	1827.5	1847.6	1830.5	1841.9	1827.5	1833.3
22.5°	1773.1	1796.0	1798.9	1776.0	1790.3	1773.1	1793.2	1767.4	1796.0	1776.0	1784.6
25°	1733.0	1730.2	1738.7	1727.3	1730.2	1730.2	1744.4	1733.0	1741.6	1730.2	1733.0
27.5°	1667.2	1690.1	1687.1	1675.7	1681.4	1678.7	1707.3	1675.7	1692.9	1678.7	1684.4
30°	1609.8	1629.9	1624.2	1612.8	1612.8	1604.1	1635.7	1627.0	1624.2	1624.2	1621.2
32.5°	1552.6	1555.5	1549.7	1552.6	1555.5	1544.0	1569.7	1558.2	1555.5	1558.2	1561.2
35°	1475.1	1475.1	1480.9	1472.4	1483.8	1483.8	1506.7	1492.3	1489.6	1480.9	1489.6
37.5°	1406.5	1397.9	1400.7	1400.7	1406.5	1412.2	1423.7	1417.9	1417.9	1409.3	1415.1
40°	1314.8	1309.1	1317.6	1317.6	1326.2	1326.2	1337.7	1332.0	1340.6	1340.6	1340.6
42.5°	1234.7	1234.7	1228.9	1237.4	1240.4	1237.4	1257.6	1254.6	1257.6	1251.9	1254.6
45°	1148.6	1148.6	1142.9	1140.1	1154.3	1151.6	1174.5	1165.8	1177.3	1171.5	1174.5
47.5°	1031.1	1045.6	1036.9	1045.6	1062.8	1065.6	1079.9	1074.2	1085.7	1077.1	1088.5
50°	919.5	919.5	928.1	939.6	956.7	959.6	976.8	988.3	994.0	996.9	999.7
52.5°	802.1	799.2	807.9	822.1	836.4	847.9	865.1	882.3	893.7	910.9	902.3
55°	664.5	670.2	678.9	696.1	719.0	733.3	747.6	770.5	790.7	799.2	816.4
57.5°	547.1	541.4	547.1	570.0	595.8	607.3	627.4	650.3	678.9	696.1	701.9
60°	423.9	426.8	432.5	452.7	472.6	489.8	498.4	535.7	561.5	578.7	590.1
62.5°	312.3	318.0	323.8	341.0	360.9	375.2	389.6	421.1	444.0	461.2	472.6
65°	217.8	220.5	229.2	237.7	257.9	272.1	283.5	309.3	332.3	346.7	355.2
67.5°	134.7	137.4	143.2	154.7	169.0	180.5	191.9	209.1	229.2	243.4	246.4
70°	68.8	71.6	74.5	83.1	94.6	100.3	108.8	123.2	137.4	148.9	154.7
72.5°	22.9	22.9	25.8	31.5	37.3	43.0	45.8	60.2	71.6	77.4	80.2
75°	5.7	5.7	5.7	5.7	5.7	8.6	8.6	17.2	22.9	28.7	31.5
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.7	5.7
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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°	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6	2016.6
2.5°	2016.6	2010.9	2008.0	2010.9	2010.9	2008.0	2016.6	2028.1	2042.3	2005.2
5°	2013.8	2008.0	2013.8	1996.6	2005.2	1999.4	2010.9	2008.0	2019.4	2008.0
7.5°	2005.2	1993.7	1996.6	1988.0	1999.4	1985.1	1993.7	2010.9	1999.4	1982.3
10°	1976.5	1970.8	1990.8	1962.2	1956.5	1967.9	1990.8	1973.7	1967.9	1973.7
12.5°	1947.8	1947.8	1956.5	1933.5	1936.3	1942.0	1953.5	1942.0	1947.8	1962.2
15°	1916.4	1910.6	1924.8	1907.8	1904.9	1899.2	1910.6	1910.6	1916.4	1907.8
17.5°	1879.1	1870.5	1870.5	1864.8	1861.9	1876.2	1882.0	1884.8	1887.7	1876.2
20°	1833.3	1830.5	1839.0	1830.5	1833.3	1836.1	1836.1	1830.5	1856.2	1824.8
22.5°	1784.6	1793.2	1781.7	1776.0	1781.7	1787.4	1787.4	1790.3	1784.6	1778.8
25°	1736.0	1741.6	1744.4	1727.3	1736.0	1727.3	1747.3	1750.2	1738.7	1744.4
27.5°	1692.9	1684.4	1681.4	1670.0	1675.7	1672.9	1675.7	1675.7	1692.9	1670.0
30°	1627.0	1618.5	1621.2	1612.8	1615.5	1612.8	1615.5	1615.5	1627.0	1624.2
32.5°	1563.9	1555.5	1558.2	1549.7	1549.7	1552.6	1546.9	1546.9	1555.5	1549.7
35°	1503.8	1483.8	1486.6	1483.8	1486.6	1475.1	1475.1	1472.4	1478.1	1463.8
37.5°	1417.9	1409.3	1406.5	1403.6	1406.5	1400.7	1406.5	1397.9	1406.5	1395.0
40°	1340.6	1334.8	1337.7	1320.5	1320.5	1323.4	1317.6	1314.8	1317.6	1329.1
42.5°	1263.3	1251.9	1246.1	1240.4	1243.2	1234.7	1231.7	1226.0	1231.7	1220.2
45°	1171.5	1171.5	1168.8	1154.3	1157.3	1157.3	1145.8	1134.4	1137.1	1137.1
47.5°	1088.5	1082.8	1079.9	1065.6	1062.8	1059.9	1048.3	1039.8	1039.8	1031.1
50°	996.9	991.1	982.5	968.2	962.5	945.3	936.7	925.2	913.9	913.9
52.5°	910.9	890.8	879.4	856.5	847.9	839.3	816.4	807.9	799.2	790.7
55°	807.9	790.7	767.8	741.9	730.5	716.1	693.2	676.0	664.5	667.5
57.5°	707.6	678.9	656.0	621.6	607.3	598.6	575.7	552.8	541.4	541.4
60°	584.4	561.5	532.8	501.3	489.8	475.5	446.9	432.5	423.9	415.3
62.5°	466.9	449.7	423.9	383.8	375.2	360.9	341.0	323.8	315.1	315.1
65°	349.4	332.3	309.3	280.7	269.3	257.9	240.7	223.5	214.8	212.0
67.5°	246.4	226.2	206.3	183.4	174.8	169.0	151.9	140.4	134.7	131.7
70°	148.9	137.4	123.2	106.0	97.3	91.6	80.2	71.6	68.8	65.9
72.5°	77.4	68.8	57.3	45.8	40.1	34.4	28.7	22.9	20.1	20.1
75°	28.7	22.9	14.3	8.6	5.7	5.7	5.7	5.7	5.7	5.7
77.5°	5.7	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)