

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: P#

Luminaire Tested: **LD4C45D010 EX4C459050 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: P#
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: LD4C45D010 EX4C459050 4LBCSSQMMS
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

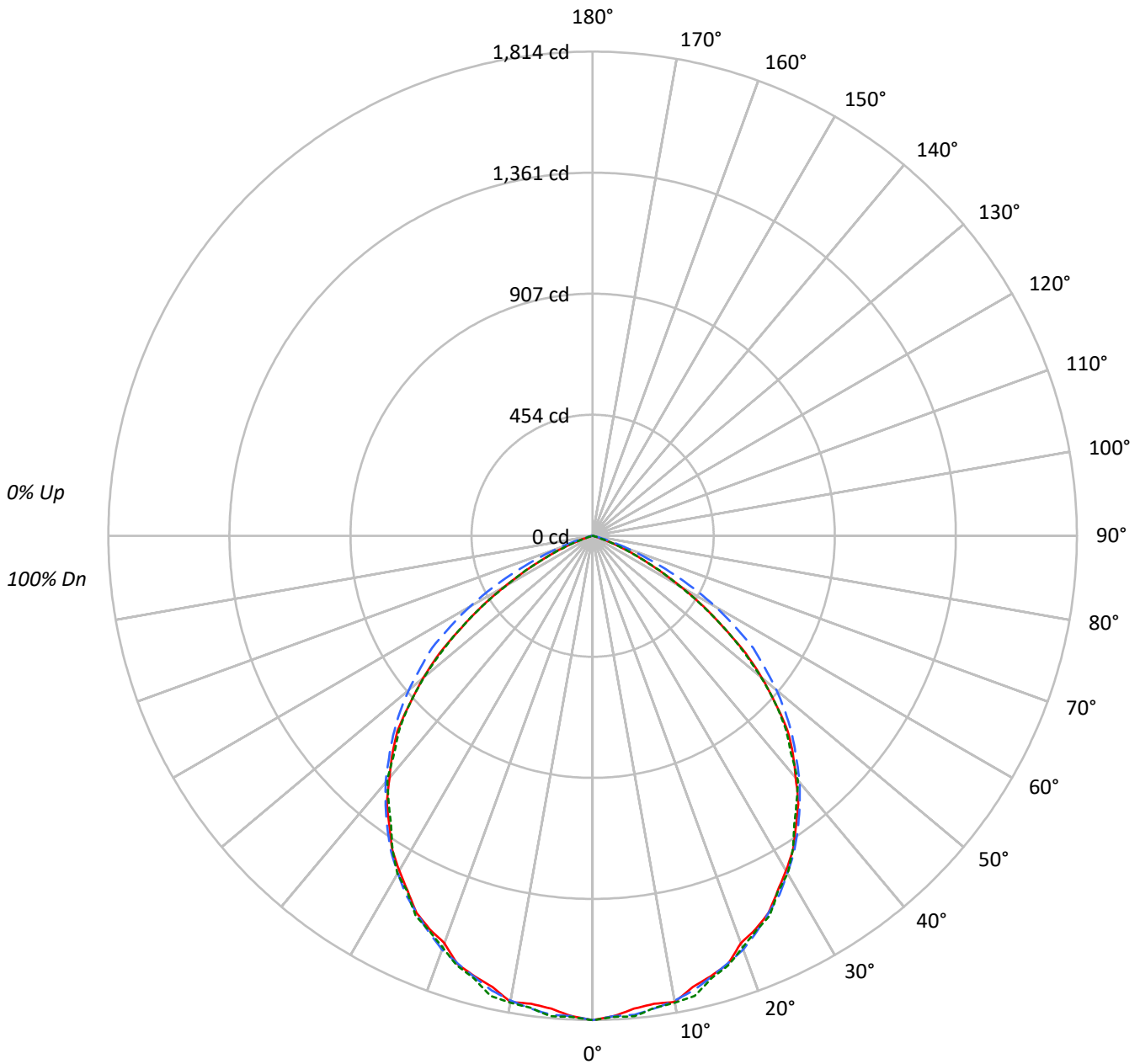
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3876.0 lumens
Efficiency: N/A
Efficacy: 78.1 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): 49.6
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									
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°	175079	175079	175079
5°	172251	174489	174992
10°	173743	173234	173988
15°	170697	170946	171466
20°	166724	169373	168582
25°	166009	166009	167105
30°	161375	162522	162823
35°	156344	157864	155131
40°	149007	151917	150620
45°	141027	144193	139622
50°	124201	135024	123421
55°	100581	123560	101018
60°	73602	102452	72116
65°	44726	72969	43562
70°	17435	39270	16729
75°	1939	10588	1939
80°	1445	1445	1445
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.3	4.4
10°-20°	484.6	12.5
20°-30°	719.1	18.6
30°-40°	833.2	21.5
40°-50°	798.9	20.6
50°-60°	587.4	15.2
60°-70°	253.7	6.5
70°-80°	27.4	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°	1375.0	35.5
0°-40°	2208.3	57.0
0°-60°	3594.6	92.7
0°-90°	3876.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3876.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1814	1814	1814	1814	1814	
5°	1778	1796	1802	1804	1807	170
15°	1709	1719	1711	1714	1716	482
25°	1559	1557	1559	1562	1570	714
35°	1327	1335	1340	1338	1317	830
45°	1034	1036	1057	1041	1023	786
55°	598	660	734	657	600	538
65°	196	245	320	242	191	201
75°	5	8	28	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°	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5
2.5°	1801.5	1822.2	1824.8	1811.8	1806.7	1799.0	1817.0	1804.2	1809.3	1804.2	1801.5
5°	1778.4	1801.5	1804.2	1804.2	1799.0	1796.4	1804.2	1801.5	1799.0	1793.9	1801.5
7.5°	1768.1	1780.9	1793.9	1778.4	1786.1	1783.6	1801.5	1793.9	1791.2	1791.2	1786.1
10°	1773.3	1770.6	1780.9	1765.5	1770.6	1765.5	1780.9	1780.9	1775.8	1770.6	1768.1
12.5°	1731.9	1752.5	1752.5	1750.0	1744.9	1737.1	1752.5	1762.9	1747.4	1747.4	1744.9
15°	1708.8	1713.9	1716.5	1716.5	1713.9	1719.1	1726.8	1716.5	1719.1	1706.2	1711.3
17.5°	1683.0	1672.7	1680.4	1675.3	1677.9	1683.0	1693.3	1693.3	1677.9	1675.3	1680.4
20°	1623.7	1654.6	1657.3	1641.8	1644.3	1644.3	1662.4	1647.0	1657.3	1644.3	1649.5
22.5°	1595.3	1615.9	1618.6	1598.0	1610.8	1595.3	1613.4	1590.2	1615.9	1598.0	1605.6
25°	1559.3	1556.7	1564.4	1554.1	1556.7	1556.7	1569.6	1559.3	1567.0	1556.7	1559.3
27.5°	1500.1	1520.7	1518.0	1507.7	1512.9	1510.4	1536.1	1507.7	1523.2	1510.4	1515.5
30°	1448.4	1466.5	1461.4	1451.1	1451.1	1443.3	1471.7	1463.9	1461.4	1461.4	1458.7
32.5°	1396.9	1399.5	1394.4	1396.9	1399.5	1389.2	1412.4	1402.1	1399.5	1402.1	1404.7
35°	1327.3	1327.3	1332.4	1324.8	1335.1	1335.1	1355.7	1342.7	1340.2	1332.4	1340.2
37.5°	1265.5	1257.8	1260.3	1260.3	1265.5	1270.6	1280.9	1275.8	1275.8	1268.1	1273.2
40°	1183.0	1177.9	1185.5	1185.5	1193.3	1193.3	1203.6	1198.5	1206.1	1206.1	1206.1
42.5°	1110.9	1110.9	1105.7	1113.4	1116.0	1113.4	1131.5	1128.9	1131.5	1126.3	1128.9
45°	1033.5	1033.5	1028.3	1025.8	1038.6	1036.1	1056.7	1048.9	1059.2	1054.1	1056.7
47.5°	927.8	940.7	933.0	940.7	956.2	958.8	971.6	966.5	976.8	969.1	979.4
50°	827.4	827.4	835.0	845.4	860.8	863.4	878.9	889.2	894.4	896.9	899.5
52.5°	721.7	719.1	726.8	739.7	752.6	762.9	778.4	793.8	804.1	819.6	811.8
55°	597.9	603.1	610.9	626.3	646.9	659.8	672.7	693.3	711.4	719.1	734.5
57.5°	492.2	487.1	492.2	512.9	536.1	546.4	564.5	585.1	610.9	626.3	631.5
60°	381.4	384.0	389.2	407.3	425.3	440.7	448.5	481.9	505.2	520.6	530.9
62.5°	281.0	286.1	291.3	306.7	324.7	337.7	350.5	378.9	399.5	414.9	425.3
65°	195.9	198.4	206.2	213.9	232.0	244.8	255.1	278.3	299.0	311.9	319.6
67.5°	121.1	123.7	128.8	139.2	152.1	162.4	172.7	188.1	206.2	219.0	221.7
70°	61.8	64.5	67.0	74.8	85.1	90.2	97.9	110.8	123.7	134.0	139.2
72.5°	20.6	20.6	23.2	28.4	33.5	38.7	41.2	54.2	64.5	69.6	72.1
75°	5.2	5.2	5.2	5.2	5.2	7.8	7.8	15.5	20.6	25.8	28.4
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	5.2	5.2
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5	1814.5
2.5°	1814.5	1809.3	1806.7	1809.3	1809.3	1806.7	1814.5	1824.8	1837.6	1804.2
5°	1811.8	1806.7	1811.8	1796.4	1804.2	1799.0	1809.3	1806.7	1817.0	1806.7
7.5°	1804.2	1793.9	1796.4	1788.7	1799.0	1786.1	1793.9	1809.3	1799.0	1783.6
10°	1778.4	1773.3	1791.2	1765.5	1760.3	1770.6	1791.2	1775.8	1770.6	1775.8
12.5°	1752.5	1752.5	1760.3	1739.7	1742.2	1747.4	1757.7	1747.4	1752.5	1765.5
15°	1724.3	1719.1	1731.9	1716.5	1713.9	1708.8	1719.1	1719.1	1724.3	1716.5
17.5°	1690.7	1683.0	1683.0	1677.9	1675.3	1688.2	1693.3	1695.9	1698.5	1688.2
20°	1649.5	1647.0	1654.6	1647.0	1649.5	1652.1	1652.1	1647.0	1670.1	1641.8
22.5°	1605.6	1613.4	1603.1	1598.0	1603.1	1608.3	1608.3	1610.8	1605.6	1600.5
25°	1561.9	1567.0	1569.6	1554.1	1561.9	1554.1	1572.2	1574.7	1564.4	1569.6
27.5°	1523.2	1515.5	1512.9	1502.6	1507.7	1505.2	1507.7	1507.7	1523.2	1502.6
30°	1463.9	1456.2	1458.7	1451.1	1453.6	1451.1	1453.6	1453.6	1463.9	1461.4
32.5°	1407.2	1399.5	1402.1	1394.4	1394.4	1396.9	1391.7	1391.7	1399.5	1394.4
35°	1353.1	1335.1	1337.6	1335.1	1337.6	1327.3	1327.3	1324.8	1329.9	1317.0
37.5°	1275.8	1268.1	1265.5	1262.9	1265.5	1260.3	1265.5	1257.8	1265.5	1255.1
40°	1206.1	1201.0	1203.6	1188.2	1188.2	1190.7	1185.5	1183.0	1185.5	1195.8
42.5°	1136.6	1126.3	1121.2	1116.0	1118.6	1110.9	1108.2	1103.1	1108.2	1097.9
45°	1054.1	1054.1	1051.6	1038.6	1041.3	1041.3	1031.0	1020.6	1023.2	1023.2
47.5°	979.4	974.3	971.6	958.8	956.2	953.7	943.3	935.6	935.6	927.8
50°	896.9	891.7	884.1	871.1	866.0	850.5	842.8	832.5	822.2	822.2
52.5°	819.6	801.5	791.2	770.6	762.9	755.1	734.5	726.8	719.1	711.4
55°	726.8	711.4	690.8	667.5	657.2	644.3	623.7	608.2	597.9	600.5
57.5°	636.6	610.9	590.2	559.3	546.4	538.6	518.0	497.4	487.1	487.1
60°	525.8	505.2	479.4	451.0	440.7	427.9	402.0	389.2	381.4	373.7
62.5°	420.1	404.6	381.4	345.3	337.7	324.7	306.7	291.3	283.5	283.5
65°	314.4	299.0	278.3	252.6	242.3	232.0	216.5	201.1	193.3	190.8
67.5°	221.7	203.6	185.6	165.0	157.2	152.1	136.6	126.3	121.1	118.5
70°	134.0	123.7	110.8	95.4	87.6	82.4	72.1	64.5	61.8	59.3
72.5°	69.6	61.8	51.5	41.2	36.1	30.9	25.8	20.6	18.1	18.1
75°	25.8	20.6	12.9	7.8	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	5.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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)