

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: P840182

Luminaire Tested: **LD4C40D010 EU4409035 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: P840182  
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 EU4409035 4LBCSSQMMS  
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

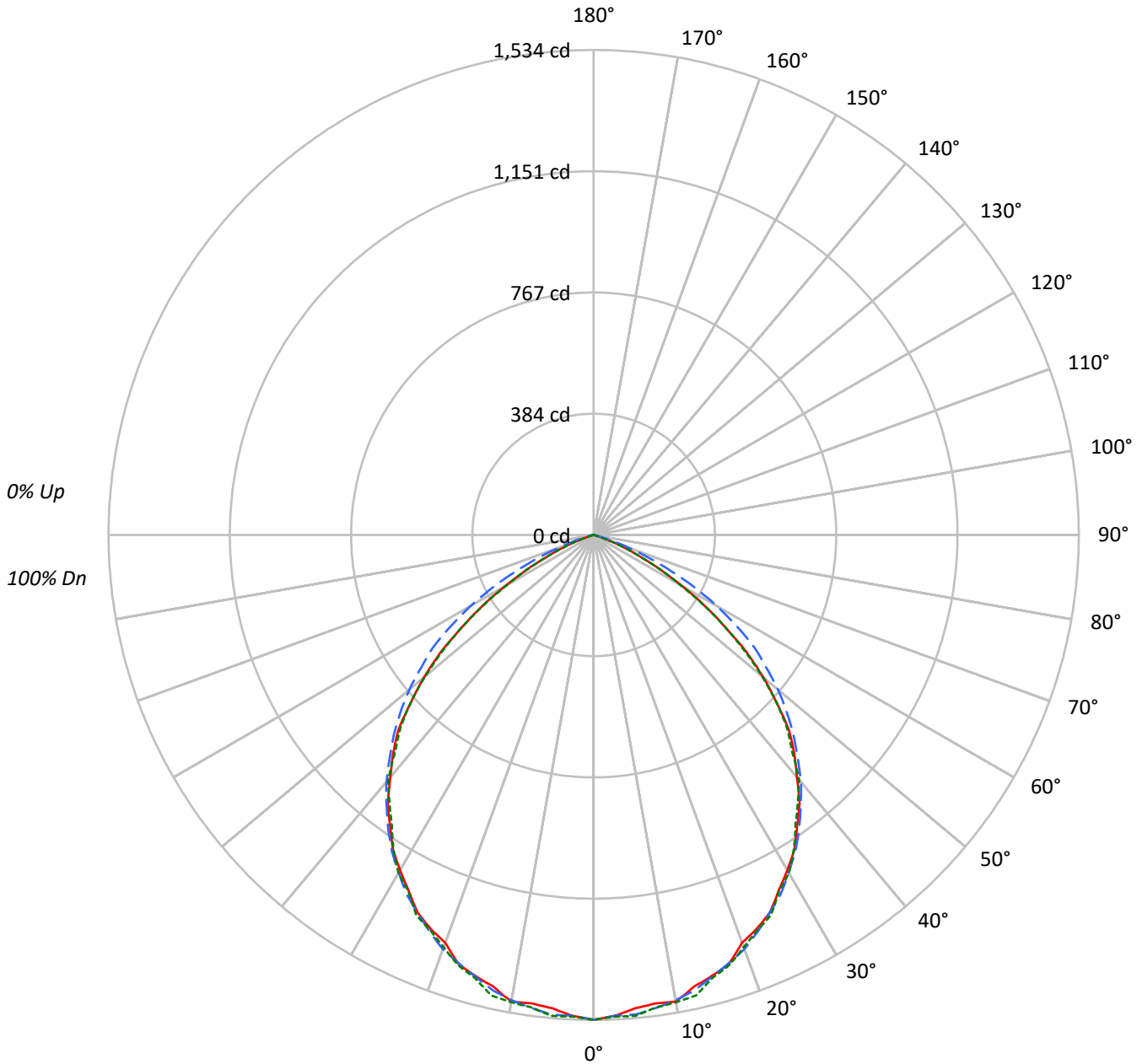
Lumens per Lamp: N/A  
Luminaire Lumens: 3276.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 47  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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°	147975	147975	147975
5°	145586	147485	147901
10°	146849	146417	147054
15°	144275	144485	144924
20°	140920	143148	142491
25°	140309	140309	141235
30°	136395	137365	137610
35°	132138	133434	131113
40°	125945	128401	127305
45°	119194	121869	118007
50°	104972	114129	104311
55°	85020	104433	85390
60°	62216	86589	60962
65°	37808	61667	36804
70°	14755	33205	14134
75°	1640	8947	1640
80°	1222	1222	1222
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.8	4.4
10°-20°	409.6	12.5
20°-30°	607.8	18.6
30°-40°	704.3	21.5
40°-50°	675.2	20.6
50°-60°	496.5	15.2
60°-70°	214.4	6.5
70°-80°	23.2	0.7
80°-90°	0.3	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°	1162.2	35.5
0°-40°	1866.4	57.0
0°-60°	3038.1	92.7
0°-90°	3276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3276.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1534	1534	1534	1534	1534	
5°	1503	1518	1523	1525	1527	143
15°	1444	1453	1446	1449	1451	407
25°	1318	1316	1318	1320	1327	603
35°	1122	1128	1133	1130	1113	702
45°	874	876	893	880	865	664
55°	505	558	621	556	508	455
65°	166	207	270	205	161	170
75°	4	7	24	4	4	13
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°	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6
2.5°	1522.7	1540.1	1542.3	1531.4	1527.0	1520.5	1535.7	1524.9	1529.2	1524.9	1522.7
5°	1503.1	1522.7	1524.9	1524.9	1520.5	1518.3	1524.9	1522.7	1520.5	1516.2	1522.7
7.5°	1494.4	1505.2	1516.2	1503.1	1509.6	1507.5	1522.7	1516.2	1514.0	1514.0	1509.6
10°	1498.8	1496.5	1505.2	1492.2	1496.5	1492.2	1505.2	1505.2	1500.9	1496.5	1494.4
12.5°	1463.8	1481.3	1481.3	1479.1	1474.8	1468.2	1481.3	1490.0	1476.9	1476.9	1474.8
15°	1444.3	1448.6	1450.8	1450.8	1448.6	1453.0	1459.5	1450.8	1453.0	1442.1	1446.4
17.5°	1422.5	1413.8	1420.3	1415.9	1418.1	1422.5	1431.2	1431.2	1418.1	1415.9	1420.3
20°	1372.4	1398.5	1400.7	1387.7	1389.8	1389.8	1405.1	1392.0	1400.7	1389.8	1394.1
22.5°	1348.4	1365.8	1368.0	1350.6	1361.4	1348.4	1363.7	1344.0	1365.8	1350.6	1357.1
25°	1317.9	1315.8	1322.2	1313.5	1315.8	1315.8	1326.6	1317.9	1324.5	1315.8	1317.9
27.5°	1267.8	1285.3	1283.0	1274.3	1278.7	1276.6	1298.3	1274.3	1287.4	1276.6	1280.9
30°	1224.2	1239.5	1235.1	1226.4	1226.4	1219.9	1243.9	1237.3	1235.1	1235.1	1232.9
32.5°	1180.7	1182.9	1178.5	1180.7	1182.9	1174.2	1193.7	1185.0	1182.9	1185.0	1187.2
35°	1121.8	1121.8	1126.2	1119.7	1128.4	1128.4	1145.8	1134.9	1132.8	1126.2	1132.8
37.5°	1069.6	1063.1	1065.2	1065.2	1069.6	1073.9	1082.6	1078.3	1078.3	1071.8	1076.1
40°	999.9	995.5	1002.0	1002.0	1008.6	1008.6	1017.3	1012.9	1019.4	1019.4	1019.4
42.5°	938.9	938.9	934.6	941.0	943.3	941.0	956.3	954.1	956.3	952.0	954.1
45°	873.5	873.5	869.1	867.0	877.9	875.7	893.1	886.6	895.3	890.9	893.1
47.5°	784.2	795.1	788.5	795.1	808.2	810.4	821.2	816.9	825.6	819.1	827.8
50°	699.3	699.3	705.8	714.5	727.6	729.8	742.8	751.6	755.9	758.0	760.3
52.5°	610.0	607.8	614.3	625.2	636.1	644.8	657.9	670.9	679.7	692.7	686.1
55°	505.4	509.7	516.3	529.4	546.8	557.6	568.6	586.0	601.3	607.8	620.8
57.5°	416.0	411.7	416.0	433.5	453.1	461.8	477.1	494.5	516.3	529.4	533.7
60°	322.4	324.6	328.9	344.2	359.4	372.5	379.1	407.3	427.0	440.0	448.7
62.5°	237.5	241.8	246.2	259.3	274.5	285.4	296.2	320.2	337.6	350.7	359.4
65°	165.6	167.7	174.3	180.8	196.1	206.9	215.6	235.3	252.7	263.6	270.1
67.5°	102.4	104.5	108.9	117.7	128.5	137.2	145.9	159.0	174.3	185.1	187.4
70°	52.3	54.5	56.6	63.2	71.9	76.3	82.7	93.7	104.5	113.2	117.7
72.5°	17.4	17.4	19.6	24.0	28.4	32.7	34.8	45.8	54.5	58.8	61.0
75°	4.4	4.4	4.4	4.4	4.4	6.6	6.6	13.1	17.4	21.8	24.0
77.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	4.4	4.4
80°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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°	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6	1533.6
2.5°	1533.6	1529.2	1527.0	1529.2	1529.2	1527.0	1533.6	1542.3	1553.2	1524.9
5°	1531.4	1527.0	1531.4	1518.3	1524.9	1520.5	1529.2	1527.0	1535.7	1527.0
7.5°	1524.9	1516.2	1518.3	1511.8	1520.5	1509.6	1516.2	1529.2	1520.5	1507.5
10°	1503.1	1498.8	1514.0	1492.2	1487.8	1496.5	1514.0	1500.9	1496.5	1500.9
12.5°	1481.3	1481.3	1487.8	1470.4	1472.5	1476.9	1485.6	1476.9	1481.3	1492.2
15°	1457.3	1453.0	1463.8	1450.8	1448.6	1444.3	1453.0	1453.0	1457.3	1450.8
17.5°	1429.0	1422.5	1422.5	1418.1	1415.9	1426.9	1431.2	1433.3	1435.6	1426.9
20°	1394.1	1392.0	1398.5	1392.0	1394.1	1396.4	1396.4	1392.0	1411.6	1387.7
22.5°	1357.1	1363.7	1355.0	1350.6	1355.0	1359.3	1359.3	1361.4	1357.1	1352.7
25°	1320.1	1324.5	1326.6	1313.5	1320.1	1313.5	1328.8	1331.0	1322.2	1326.6
27.5°	1287.4	1280.9	1278.7	1270.0	1274.3	1272.2	1274.3	1274.3	1287.4	1270.0
30°	1237.3	1230.8	1232.9	1226.4	1228.6	1226.4	1228.6	1228.6	1237.3	1235.1
32.5°	1189.4	1182.9	1185.0	1178.5	1178.5	1180.7	1176.3	1176.3	1182.9	1178.5
35°	1143.6	1128.4	1130.5	1128.4	1130.5	1121.8	1121.8	1119.7	1124.0	1113.1
37.5°	1078.3	1071.8	1069.6	1067.4	1069.6	1065.2	1069.6	1063.1	1069.6	1060.9
40°	1019.4	1015.1	1017.3	1004.2	1004.2	1006.4	1002.0	999.9	1002.0	1010.7
42.5°	960.7	952.0	947.6	943.3	945.4	938.9	936.7	932.3	936.7	928.0
45°	890.9	890.9	888.8	877.9	880.1	880.1	871.4	862.7	864.8	864.8
47.5°	827.8	823.5	821.2	810.4	808.2	806.0	797.2	790.8	790.8	784.2
50°	758.0	753.7	747.2	736.3	731.9	718.8	712.4	703.6	694.9	694.9
52.5°	692.7	677.4	668.7	651.3	644.8	638.2	620.8	614.3	607.8	601.3
55°	614.3	601.3	583.8	564.2	555.5	544.6	527.1	514.1	505.4	507.6
57.5°	538.1	516.3	498.9	472.7	461.8	455.2	437.8	420.4	411.7	411.7
60°	444.4	427.0	405.2	381.2	372.5	361.6	339.8	328.9	322.4	315.9
62.5°	355.1	342.0	322.4	291.9	285.4	274.5	259.3	246.2	239.6	239.6
65°	265.7	252.7	235.3	213.5	204.8	196.1	183.0	169.9	163.4	161.2
67.5°	187.4	172.1	156.9	139.4	132.9	128.5	115.5	106.7	102.4	100.2
70°	113.2	104.5	93.7	80.6	74.0	69.7	61.0	54.5	52.3	50.1
72.5°	58.8	52.3	43.6	34.8	30.5	26.1	21.8	17.4	15.3	15.3
75°	21.8	17.4	10.9	6.6	4.4	4.4	4.4	4.4	4.4	4.4
77.5°	4.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
80°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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)