

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: P840184

Luminaire Tested: **LD4C40D010 EU4409040 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: P840184  
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 4LBCSSQMMS  
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

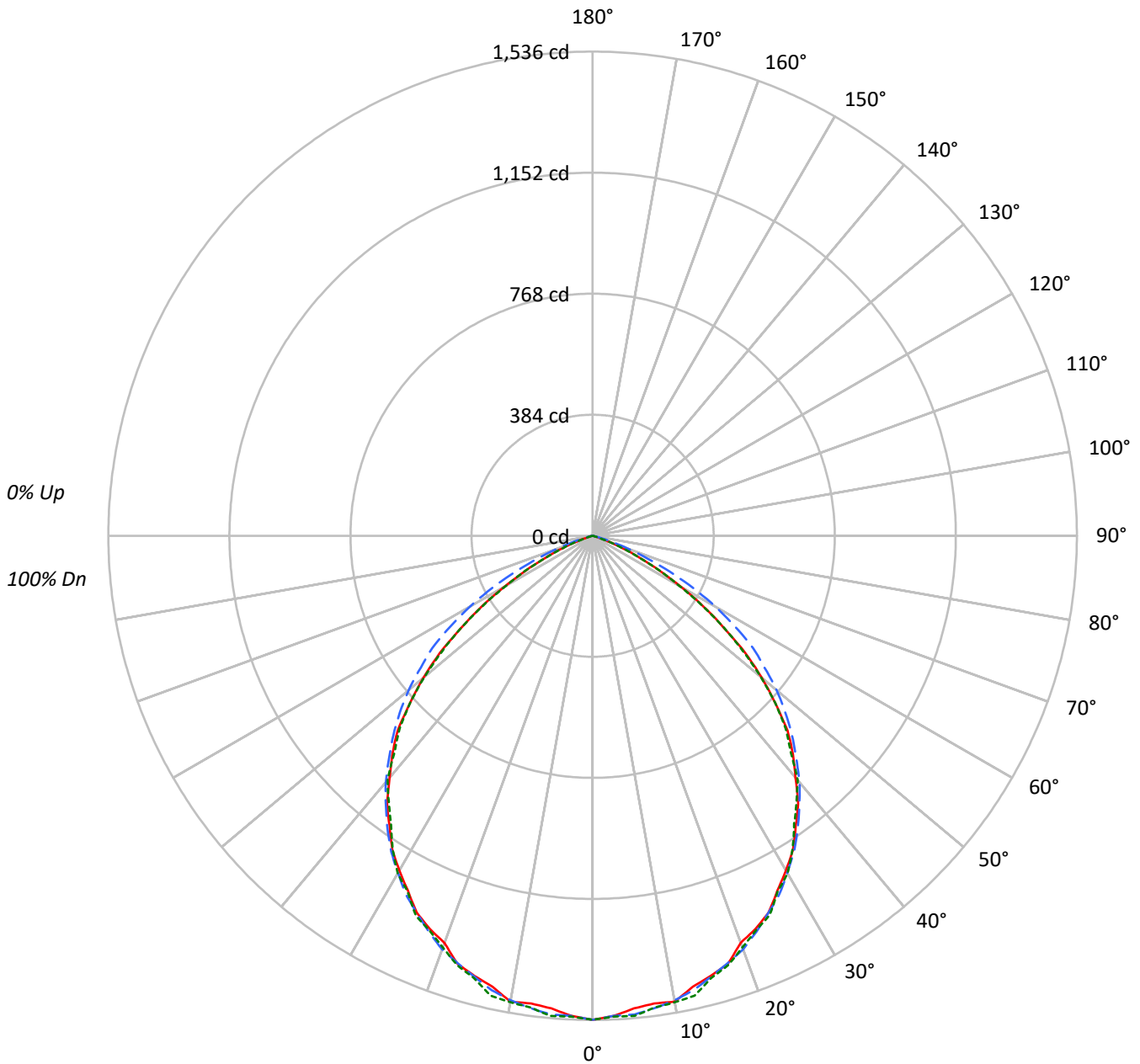
Lumens per Lamp: N/A  
Luminaire Lumens: 3280.0 lumens  
Efficiency: N/A  
Efficacy: 69.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				100				
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89				89				
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77				
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67				67				
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59				59				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46				
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41				41				
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37				37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33				
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31				31				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	148159	148159	148159
5°	145761	147659	148085
10°	147025	146594	147231
15°	144445	144665	145094
20°	141084	143333	142665
25°	140479	140479	141405
30°	136562	137532	137788
35°	132303	133587	131278
40°	126096	128565	127469
45°	119344	122019	118144
50°	105092	114264	104447
55°	85121	104568	85491
60°	62293	86705	61039
65°	37854	61736	36850
70°	14755	33233	14162
75°	1640	8947	1640
80°	1222	1222	1222
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.9	4.4
10°-20°	410.1	12.5
20°-30°	608.5	18.6
30°-40°	705.1	21.5
40°-50°	676.0	20.6
50°-60°	497.1	15.2
60°-70°	214.7	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°	1163.6	35.5
0°-40°	1868.7	57.0
0°-60°	3041.8	92.7
0°-90°	3280.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3280.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1505	1520	1524	1527	1529	144
15°	1446	1455	1448	1450	1452	408
25°	1320	1317	1320	1322	1328	604
35°	1123	1130	1134	1132	1114	702
45°	875	877	894	881	866	665
55°	506	558	622	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°	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5
2.5°	1524.5	1542.0	1544.2	1533.2	1528.9	1522.4	1537.6	1526.7	1531.1	1526.7	1524.5
5°	1504.9	1524.5	1526.7	1526.7	1522.4	1520.2	1526.7	1524.5	1522.4	1518.0	1524.5
7.5°	1496.2	1507.1	1518.0	1504.9	1511.4	1509.3	1524.5	1518.0	1515.8	1515.8	1511.4
10°	1500.6	1498.4	1507.1	1494.0	1498.4	1494.0	1507.1	1507.1	1502.7	1498.4	1496.2
12.5°	1465.6	1483.1	1483.1	1480.9	1476.6	1470.0	1483.1	1491.9	1478.7	1478.7	1476.6
15°	1446.0	1450.4	1452.5	1452.5	1450.4	1454.8	1461.3	1452.5	1454.8	1443.8	1448.2
17.5°	1424.2	1415.5	1422.0	1417.7	1419.9	1424.2	1433.0	1433.0	1419.9	1417.7	1422.0
20°	1374.0	1400.2	1402.4	1389.4	1391.5	1391.5	1406.8	1393.7	1402.4	1391.5	1395.9
22.5°	1350.0	1367.5	1369.7	1352.2	1363.1	1350.0	1365.3	1345.7	1367.5	1352.2	1358.7
25°	1319.5	1317.4	1323.9	1315.1	1317.4	1317.4	1328.2	1319.5	1326.1	1317.4	1319.5
27.5°	1269.4	1286.8	1284.6	1275.9	1280.3	1278.1	1299.9	1275.9	1289.0	1278.1	1282.5
30°	1225.7	1241.0	1236.7	1227.9	1227.9	1221.3	1245.4	1238.8	1236.7	1236.7	1234.4
32.5°	1182.1	1184.3	1180.0	1182.1	1184.3	1175.6	1195.2	1186.5	1184.3	1186.5	1188.7
35°	1123.2	1123.2	1127.6	1121.1	1129.8	1129.8	1147.2	1136.3	1134.1	1127.6	1134.1
37.5°	1070.9	1064.4	1066.5	1066.5	1070.9	1075.2	1084.0	1079.6	1079.6	1073.1	1077.5
40°	1001.1	996.7	1003.2	1003.2	1009.8	1009.8	1018.5	1014.2	1020.7	1020.7	1020.7
42.5°	940.1	940.1	935.7	942.2	944.4	942.2	957.5	955.3	957.5	953.1	955.3
45°	874.6	874.6	870.2	868.1	878.9	876.8	894.2	887.6	896.4	892.0	894.2
47.5°	785.1	796.1	789.5	796.1	809.2	811.4	822.2	817.9	826.6	820.1	828.8
50°	700.1	700.1	706.6	715.4	728.4	730.7	743.8	752.5	756.8	759.0	761.2
52.5°	610.7	608.5	615.1	625.9	636.9	645.6	658.7	671.8	680.5	693.6	687.0
55°	506.0	510.3	516.9	530.0	547.4	558.3	569.2	586.7	602.0	608.5	621.6
57.5°	416.5	412.2	416.5	434.0	453.7	462.4	477.7	495.1	516.9	530.0	534.4
60°	322.8	325.0	329.3	344.6	359.9	372.9	379.5	407.8	427.5	440.6	449.3
62.5°	237.8	242.1	246.5	259.6	274.8	285.7	296.6	320.6	338.1	351.1	359.9
65°	165.8	167.9	174.5	181.0	196.3	207.2	215.9	235.5	253.0	263.9	270.4
67.5°	102.5	104.7	109.0	117.8	128.7	137.4	146.1	159.2	174.5	185.4	187.6
70°	52.3	54.5	56.7	63.3	72.0	76.4	82.8	93.8	104.7	113.4	117.8
72.5°	17.4	17.4	19.7	24.0	28.4	32.7	34.9	45.8	54.5	58.9	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°	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5	1535.5
2.5°	1535.5	1531.1	1528.9	1531.1	1531.1	1528.9	1535.5	1544.2	1555.0	1526.7
5°	1533.2	1528.9	1533.2	1520.2	1526.7	1522.4	1531.1	1528.9	1537.6	1528.9
7.5°	1526.7	1518.0	1520.2	1513.7	1522.4	1511.4	1518.0	1531.1	1522.4	1509.3
10°	1504.9	1500.6	1515.8	1494.0	1489.6	1498.4	1515.8	1502.7	1498.4	1502.7
12.5°	1483.1	1483.1	1489.6	1472.2	1474.3	1478.7	1487.4	1478.7	1483.1	1494.0
15°	1459.1	1454.8	1465.6	1452.5	1450.4	1446.0	1454.8	1454.8	1459.1	1452.5
17.5°	1430.7	1424.2	1424.2	1419.9	1417.7	1428.6	1433.0	1435.1	1437.3	1428.6
20°	1395.9	1393.7	1400.2	1393.7	1395.9	1398.1	1398.1	1393.7	1413.3	1389.4
22.5°	1358.7	1365.3	1356.6	1352.2	1356.6	1361.0	1361.0	1363.1	1358.7	1354.4
25°	1321.7	1326.1	1328.2	1315.1	1321.7	1315.1	1330.4	1332.6	1323.9	1328.2
27.5°	1289.0	1282.5	1280.3	1271.5	1275.9	1273.8	1275.9	1275.9	1289.0	1271.5
30°	1238.8	1232.3	1234.4	1227.9	1230.1	1227.9	1230.1	1230.1	1238.8	1236.7
32.5°	1190.8	1184.3	1186.5	1180.0	1180.0	1182.1	1177.7	1177.7	1184.3	1180.0
35°	1145.0	1129.8	1131.9	1129.8	1131.9	1123.2	1123.2	1121.1	1125.4	1114.5
37.5°	1079.6	1073.1	1070.9	1068.7	1070.9	1066.5	1070.9	1064.4	1070.9	1062.1
40°	1020.7	1016.3	1018.5	1005.5	1005.5	1007.6	1003.2	1001.1	1003.2	1012.0
42.5°	961.9	953.1	948.8	944.4	946.6	940.1	937.8	933.5	937.8	929.1
45°	892.0	892.0	889.9	878.9	881.1	881.1	872.4	863.7	865.8	865.8
47.5°	828.8	824.5	822.2	811.4	809.2	807.0	798.2	791.7	791.7	785.1
50°	759.0	754.6	748.1	737.2	732.8	719.7	713.2	704.5	695.8	695.8
52.5°	693.6	678.3	669.5	652.1	645.6	639.0	621.6	615.1	608.5	602.0
55°	615.1	602.0	584.6	564.9	556.2	545.2	527.8	514.7	506.0	508.2
57.5°	538.7	516.9	499.5	473.3	462.4	455.8	438.4	420.9	412.2	412.2
60°	444.9	427.5	405.7	381.7	372.9	362.1	340.2	329.3	322.8	316.3
62.5°	355.5	342.4	322.8	292.2	285.7	274.8	259.6	246.5	239.9	239.9
65°	266.1	253.0	235.5	213.7	205.0	196.3	183.2	170.1	163.6	161.4
67.5°	187.6	172.3	157.1	139.6	133.0	128.7	115.6	106.9	102.5	100.3
70°	113.4	104.7	93.8	80.7	74.1	69.8	61.0	54.5	52.3	50.2
72.5°	58.9	52.3	43.6	34.9	30.5	26.2	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)