

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: P840178

Luminaire Tested: **LD4C40D010 EU4409027 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: P840178
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 EU4409027 4LBCSSQMMS
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

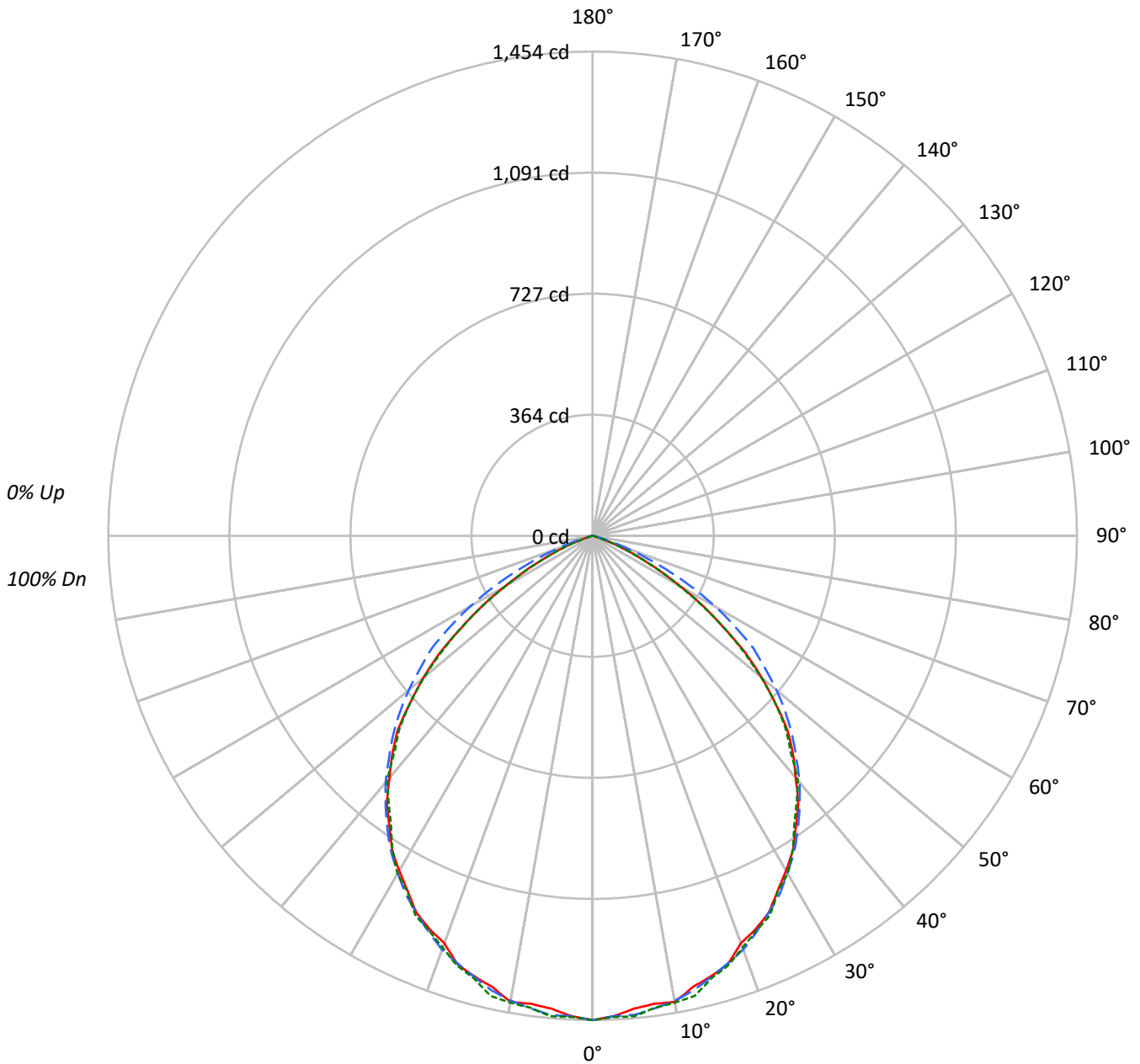
Lumens per Lamp: N/A
Luminaire Lumens: 3107.0 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
Input Voltage (V):
Input Current (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					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°	140343	140343	140343
5°	138080	139872	140269
10°	139265	138863	139471
15°	136833	137033	137442
20°	133650	135765	135139
25°	133069	133069	133953
30°	129365	130278	130512
35°	125330	126543	124352
40°	119445	121776	120743
45°	113040	115592	111921
50°	99553	108229	98938
55°	80629	99050	80983
60°	58993	82131	57816
65°	35845	58494	34909
70°	13993	31484	13400
75°	1528	8500	1528
80°	1167	1167	1167
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.3	4.4
10°-20°	388.5	12.5
20°-30°	576.4	18.6
30°-40°	667.9	21.5
40°-50°	640.4	20.6
50°-60°	470.8	15.2
60°-70°	203.4	6.5
70°-80°	21.9	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°	1102.2	35.5
0°-40°	1770.2	57.0
0°-60°	2881.4	92.7
0°-90°	3107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3107.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1454	1454	1454	1454	1454	
5°	1426	1440	1444	1446	1448	136
15°	1370	1378	1372	1374	1376	386
25°	1250	1248	1250	1252	1258	572
35°	1064	1070	1074	1072	1056	665
45°	828	830	847	835	820	630
55°	479	529	589	527	481	431
65°	157	196	256	194	153	161
75°	4	6	23	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°	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5
2.5°	1444.1	1460.6	1462.7	1452.4	1448.2	1442.1	1456.5	1446.2	1450.4	1446.2	1444.1
5°	1425.6	1444.1	1446.2	1446.2	1442.1	1440.0	1446.2	1444.1	1442.1	1438.0	1444.1
7.5°	1417.3	1427.6	1438.0	1425.6	1431.7	1429.7	1444.1	1438.0	1435.9	1435.9	1431.7
10°	1421.4	1419.3	1427.6	1415.2	1419.3	1415.2	1427.6	1427.6	1423.5	1419.3	1417.3
12.5°	1388.3	1404.8	1404.8	1402.8	1398.7	1392.4	1404.8	1413.2	1400.7	1400.7	1398.7
15°	1369.8	1373.9	1375.9	1375.9	1373.9	1378.0	1384.2	1375.9	1378.0	1367.7	1371.8
17.5°	1349.1	1340.9	1347.0	1342.9	1345.0	1349.1	1357.4	1357.4	1345.0	1342.9	1347.0
20°	1301.6	1326.4	1328.5	1316.1	1318.1	1318.1	1332.6	1320.2	1328.5	1318.1	1322.2
22.5°	1278.8	1295.3	1297.4	1280.9	1291.2	1278.8	1293.3	1274.7	1295.3	1280.9	1287.1
25°	1249.9	1247.9	1254.0	1245.8	1247.9	1247.9	1258.2	1249.9	1256.1	1247.9	1249.9
27.5°	1202.4	1219.0	1216.9	1208.6	1212.7	1210.7	1231.4	1208.6	1221.0	1210.7	1214.8
30°	1161.1	1175.6	1171.4	1163.2	1163.2	1156.9	1179.7	1173.5	1171.4	1171.4	1169.3
32.5°	1119.8	1121.9	1117.7	1119.8	1121.9	1113.6	1132.1	1123.9	1121.9	1123.9	1126.0
35°	1064.0	1064.0	1068.1	1061.9	1070.2	1070.2	1086.7	1076.3	1074.3	1068.1	1074.3
37.5°	1014.4	1008.2	1010.3	1010.3	1014.4	1018.5	1026.8	1022.6	1022.6	1016.5	1020.6
40°	948.3	944.2	950.3	950.3	956.6	956.6	964.8	960.7	966.8	966.8	966.8
42.5°	890.5	890.5	886.3	892.5	894.6	892.5	907.0	904.9	907.0	902.9	904.9
45°	828.4	828.4	824.3	822.3	832.6	830.5	847.1	840.8	849.1	845.0	847.1
47.5°	743.7	754.1	747.9	754.1	766.5	768.6	778.9	774.7	783.0	776.8	785.1
50°	663.2	663.2	669.4	677.6	690.0	692.1	704.5	712.8	716.9	718.9	721.0
52.5°	578.5	576.4	582.6	592.9	603.3	611.5	623.9	636.3	644.6	657.0	650.7
55°	479.3	483.4	489.7	502.1	518.6	528.9	539.2	555.7	570.2	576.4	588.8
57.5°	394.6	390.4	394.6	411.1	429.7	438.0	452.5	469.0	489.7	502.1	506.2
60°	305.7	307.8	312.0	326.5	340.9	353.3	359.5	386.3	404.9	417.3	425.6
62.5°	225.2	229.4	233.5	245.9	260.3	270.7	281.0	303.7	320.2	332.6	340.9
65°	157.0	159.1	165.3	171.5	186.0	196.2	204.5	223.1	239.6	250.0	256.2
67.5°	97.1	99.1	103.3	111.6	121.9	130.1	138.4	150.8	165.3	175.6	177.7
70°	49.6	51.7	53.7	59.9	68.2	72.3	78.5	88.8	99.1	107.4	111.6
72.5°	16.5	16.5	18.6	22.8	26.9	31.0	33.0	43.4	51.7	55.8	57.8
75°	4.1	4.1	4.1	4.1	4.1	6.2	6.2	12.4	16.5	20.7	22.8
77.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	4.1	4.1
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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°	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5	1454.5
2.5°	1454.5	1450.4	1448.2	1450.4	1450.4	1448.2	1454.5	1462.7	1473.0	1446.2
5°	1452.4	1448.2	1452.4	1440.0	1446.2	1442.1	1450.4	1448.2	1456.5	1448.2
7.5°	1446.2	1438.0	1440.0	1433.8	1442.1	1431.7	1438.0	1450.4	1442.1	1429.7
10°	1425.6	1421.4	1435.9	1415.2	1411.1	1419.3	1435.9	1423.5	1419.3	1423.5
12.5°	1404.8	1404.8	1411.1	1394.6	1396.6	1400.7	1409.0	1400.7	1404.8	1415.2
15°	1382.2	1378.0	1388.3	1375.9	1373.9	1369.8	1378.0	1378.0	1382.2	1375.9
17.5°	1355.3	1349.1	1349.1	1345.0	1342.9	1353.2	1357.4	1359.4	1361.5	1353.2
20°	1322.2	1320.2	1326.4	1320.2	1322.2	1324.3	1324.3	1320.2	1338.7	1316.1
22.5°	1287.1	1293.3	1285.1	1280.9	1285.1	1289.2	1289.2	1291.2	1287.1	1282.9
25°	1252.0	1256.1	1258.2	1245.8	1252.0	1245.8	1260.3	1262.3	1254.0	1258.2
27.5°	1221.0	1214.8	1212.7	1204.5	1208.6	1206.6	1208.6	1208.6	1221.0	1204.5
30°	1173.5	1167.3	1169.3	1163.2	1165.2	1163.2	1165.2	1165.2	1173.5	1171.4
32.5°	1128.0	1121.9	1123.9	1117.7	1117.7	1119.8	1115.6	1115.6	1121.9	1117.7
35°	1084.6	1070.2	1072.2	1070.2	1072.2	1064.0	1064.0	1061.9	1066.1	1055.7
37.5°	1022.6	1016.5	1014.4	1012.4	1014.4	1010.3	1014.4	1008.2	1014.4	1006.1
40°	966.8	962.7	964.8	952.4	952.4	954.5	950.3	948.3	950.3	958.6
42.5°	911.1	902.9	898.7	894.6	896.6	890.5	888.4	884.2	888.4	880.1
45°	845.0	845.0	842.9	832.6	834.7	834.7	826.4	818.2	820.2	820.2
47.5°	785.1	781.0	778.9	768.6	766.5	764.5	756.1	750.0	750.0	743.7
50°	718.9	714.8	708.7	698.3	694.2	681.8	675.6	667.3	659.1	659.1
52.5°	657.0	642.5	634.2	617.7	611.5	605.3	588.8	582.6	576.4	570.2
55°	582.6	570.2	553.7	535.1	526.8	516.5	499.9	487.6	479.3	481.4
57.5°	510.3	489.7	473.1	448.4	438.0	431.8	415.2	398.7	390.4	390.4
60°	421.5	404.9	384.3	361.5	353.3	343.0	322.3	312.0	305.7	299.6
62.5°	336.8	324.4	305.7	276.8	270.7	260.3	245.9	233.5	227.3	227.3
65°	252.0	239.6	223.1	202.5	194.2	186.0	173.6	161.2	154.9	152.9
67.5°	177.7	163.2	148.8	132.3	126.0	121.9	109.5	101.2	97.1	95.0
70°	107.4	99.1	88.8	76.5	70.2	66.1	57.8	51.7	49.6	47.5
72.5°	55.8	49.6	41.3	33.0	28.9	24.8	20.7	16.5	14.5	14.5
75°	20.7	16.5	10.4	6.2	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	4.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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)