

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: P840180

Luminaire Tested: **LD4C40D010 EU4409030 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: P840180
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 EU4409030 4LBCSSQMMS
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

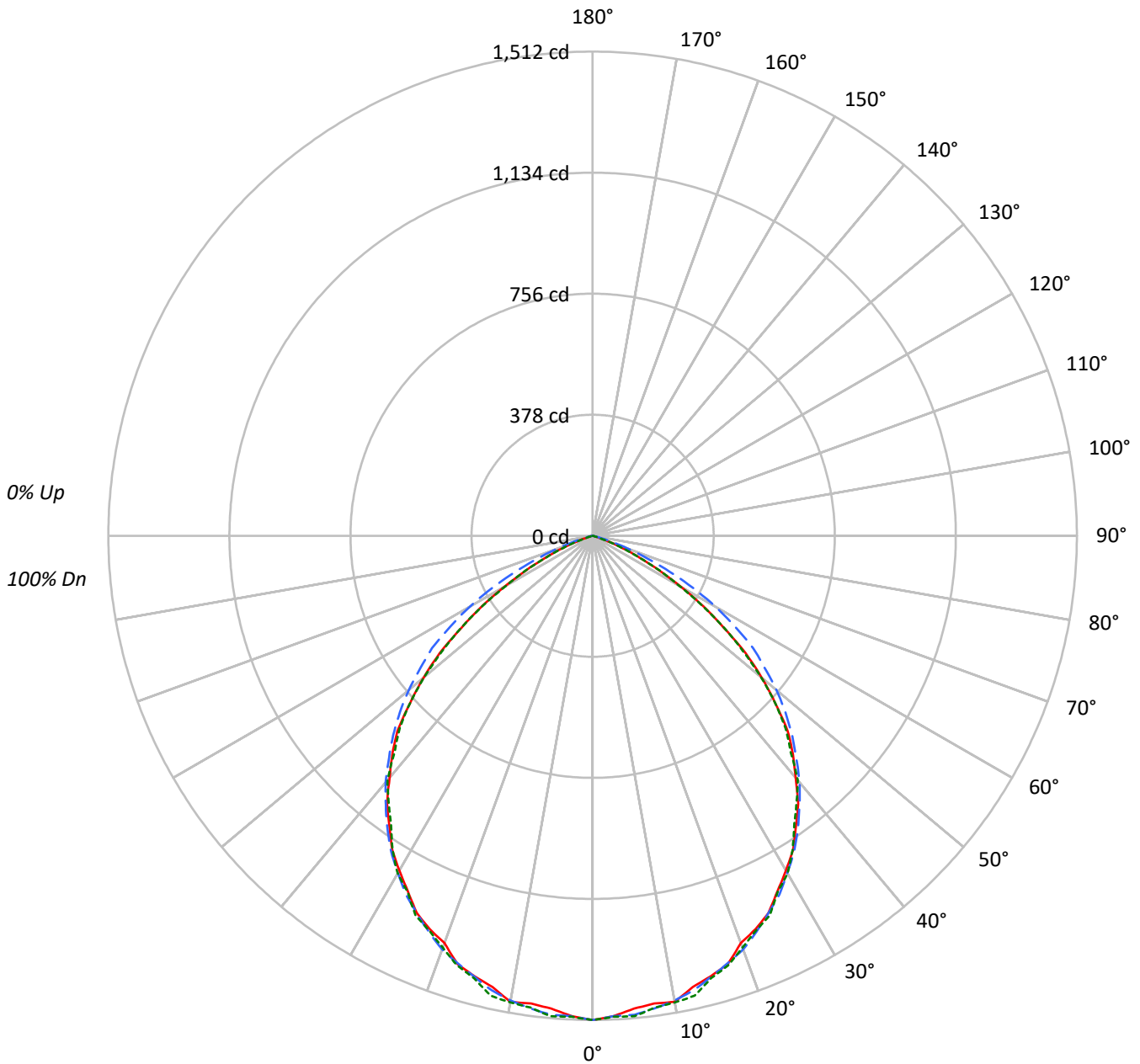
Lumens per Lamp: N/A
Luminaire Lumens: 3230.0 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
Input Voltage (V):
Input Current (A_{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			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°	145901	145901	145901
5°	143543	145412	145829
10°	144781	144360	144987
15°	142247	142457	142886
20°	138938	141146	140489
25°	138339	138339	139255
30°	134479	135437	135682
35°	130289	131561	129276
40°	124169	126600	125516
45°	117516	120163	116342
50°	103501	112523	102855
55°	83826	102969	84196
60°	61328	85373	60093
65°	37283	60800	36302
70°	14529	32725	13936
75°	1603	8835	1603
80°	1222	1222	1222
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	4.4
10°-20°	403.9	12.5
20°-30°	599.3	18.6
30°-40°	694.4	21.5
40°-50°	665.7	20.6
50°-60°	489.5	15.2
60°-70°	211.4	6.5
70°-80°	22.8	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°	1145.9	35.5
0°-40°	1840.2	57.0
0°-60°	2995.4	92.7
0°-90°	3230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3230.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1512	1512	1512	1512	1512	
5°	1482	1497	1501	1504	1506	141
15°	1424	1433	1426	1428	1430	401
25°	1299	1297	1299	1302	1308	595
35°	1106	1113	1117	1115	1098	692
45°	861	863	881	868	853	655
55°	498	550	612	548	500	448
65°	163	204	266	202	159	168
75°	4	6	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°	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1
2.5°	1501.3	1518.5	1520.7	1509.9	1505.6	1499.2	1514.2	1503.5	1507.8	1503.5	1501.3
5°	1482.0	1501.3	1503.5	1503.5	1499.2	1497.0	1503.5	1501.3	1499.2	1494.9	1501.3
7.5°	1473.4	1484.1	1494.9	1482.0	1488.4	1486.3	1501.3	1494.9	1492.7	1492.7	1488.4
10°	1477.7	1475.5	1484.1	1471.2	1475.5	1471.2	1484.1	1484.1	1479.8	1475.5	1473.4
12.5°	1443.3	1460.5	1460.5	1458.3	1454.1	1447.6	1460.5	1469.1	1456.2	1456.2	1454.1
15°	1424.0	1428.3	1430.4	1430.4	1428.3	1432.6	1439.0	1430.4	1432.6	1421.8	1426.1
17.5°	1402.5	1393.9	1400.3	1396.0	1398.2	1402.5	1411.1	1411.1	1398.2	1396.0	1400.3
20°	1353.1	1378.9	1381.1	1368.2	1370.3	1370.3	1385.3	1372.5	1381.1	1370.3	1374.6
22.5°	1329.4	1346.6	1348.8	1331.6	1342.3	1329.4	1344.5	1325.1	1346.6	1331.6	1338.0
25°	1299.4	1297.3	1303.7	1295.1	1297.3	1297.3	1308.0	1299.4	1305.9	1297.3	1299.4
27.5°	1250.0	1267.2	1265.0	1256.4	1260.7	1258.6	1280.1	1256.4	1269.3	1258.6	1262.9
30°	1207.0	1222.1	1217.8	1209.2	1209.2	1202.7	1226.4	1219.9	1217.8	1217.8	1215.6
32.5°	1164.1	1166.3	1162.0	1164.1	1166.3	1157.7	1177.0	1168.4	1166.3	1168.4	1170.6
35°	1106.1	1106.1	1110.4	1104.0	1112.6	1112.6	1129.7	1119.0	1116.9	1110.4	1116.9
37.5°	1054.5	1048.1	1050.3	1050.3	1054.5	1058.8	1067.4	1063.1	1063.1	1056.7	1061.0
40°	985.8	981.5	987.9	987.9	994.4	994.4	1003.0	998.7	1005.1	1005.1	1005.1
42.5°	925.7	925.7	921.4	927.8	930.0	927.8	942.9	940.7	942.9	938.6	940.7
45°	861.2	861.2	856.9	854.8	865.5	863.4	880.6	874.1	882.7	878.4	880.6
47.5°	773.2	783.9	777.5	783.9	796.8	799.0	809.7	805.4	814.0	807.6	816.2
50°	689.5	689.5	695.9	704.5	717.3	719.5	732.4	741.0	745.3	747.4	749.6
52.5°	601.4	599.2	605.7	616.4	627.2	635.8	648.6	661.5	670.1	683.0	676.5
55°	498.3	502.6	509.0	521.9	539.1	549.8	560.6	577.7	592.8	599.2	612.1
57.5°	410.2	405.9	410.2	427.4	446.7	455.3	470.4	487.6	509.0	521.9	526.2
60°	317.8	320.0	324.3	339.4	354.4	367.3	373.7	401.6	421.0	433.9	442.4
62.5°	234.1	238.4	242.7	255.6	270.6	281.4	292.1	315.7	332.9	345.8	354.4
65°	163.3	165.4	171.8	178.2	193.3	204.0	212.6	232.0	249.1	259.9	266.3
67.5°	101.0	103.1	107.3	116.0	126.7	135.3	143.9	156.8	171.8	182.5	184.7
70°	51.5	53.7	55.8	62.3	70.9	75.2	81.6	92.4	103.1	111.6	116.0
72.5°	17.2	17.2	19.4	23.7	28.0	32.2	34.4	45.1	53.7	58.0	60.1
75°	4.3	4.3	4.3	4.3	4.3	6.5	6.5	12.9	17.2	21.5	23.7
77.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	4.3	4.3
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°	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1	1512.1
2.5°	1512.1	1507.8	1505.6	1507.8	1507.8	1505.6	1512.1	1520.7	1531.3	1503.5
5°	1509.9	1505.6	1509.9	1497.0	1503.5	1499.2	1507.8	1505.6	1514.2	1505.6
7.5°	1503.5	1494.9	1497.0	1490.6	1499.2	1488.4	1494.9	1507.8	1499.2	1486.3
10°	1482.0	1477.7	1492.7	1471.2	1466.9	1475.5	1492.7	1479.8	1475.5	1479.8
12.5°	1460.5	1460.5	1466.9	1449.8	1451.9	1456.2	1464.7	1456.2	1460.5	1471.2
15°	1436.9	1432.6	1443.3	1430.4	1428.3	1424.0	1432.6	1432.6	1436.9	1430.4
17.5°	1408.9	1402.5	1402.5	1398.2	1396.0	1406.8	1411.1	1413.2	1415.4	1406.8
20°	1374.6	1372.5	1378.9	1372.5	1374.6	1376.8	1376.8	1372.5	1391.7	1368.2
22.5°	1338.0	1344.5	1335.9	1331.6	1335.9	1340.2	1340.2	1342.3	1338.0	1333.7
25°	1301.6	1305.9	1308.0	1295.1	1301.6	1295.1	1310.2	1312.3	1303.7	1308.0
27.5°	1269.3	1262.9	1260.7	1252.2	1256.4	1254.3	1256.4	1256.4	1269.3	1252.2
30°	1219.9	1213.5	1215.6	1209.2	1211.3	1209.2	1211.3	1211.3	1219.9	1217.8
32.5°	1172.7	1166.3	1168.4	1162.0	1162.0	1164.1	1159.8	1159.8	1166.3	1162.0
35°	1127.5	1112.6	1114.7	1112.6	1114.7	1106.1	1106.1	1104.0	1108.3	1097.5
37.5°	1063.1	1056.7	1054.5	1052.4	1054.5	1050.3	1054.5	1048.1	1054.5	1046.0
40°	1005.1	1000.8	1003.0	990.1	990.1	992.2	987.9	985.8	987.9	996.5
42.5°	947.2	938.6	934.3	930.0	932.1	925.7	923.5	919.2	923.5	914.9
45°	878.4	878.4	876.3	865.5	867.7	867.7	859.1	850.5	852.6	852.6
47.5°	816.2	811.9	809.7	799.0	796.8	794.7	786.0	779.6	779.6	773.2
50°	747.4	743.1	736.7	725.9	721.6	708.8	702.4	693.8	685.2	685.2
52.5°	683.0	667.9	659.3	642.2	635.8	629.3	612.1	605.7	599.2	592.8
55°	605.7	592.8	575.6	556.3	547.7	536.9	519.7	506.9	498.3	500.5
57.5°	530.5	509.0	491.9	466.1	455.3	448.8	431.7	414.5	405.9	405.9
60°	438.2	421.0	399.5	375.8	367.3	356.6	335.0	324.3	317.8	311.4
62.5°	350.1	337.2	317.8	287.8	281.4	270.6	255.6	242.7	236.3	236.3
65°	262.0	249.1	232.0	210.5	201.9	193.3	180.4	167.5	161.1	159.0
67.5°	184.7	169.7	154.7	137.5	131.0	126.7	113.8	105.2	101.0	98.8
70°	111.6	103.1	92.4	79.5	73.0	68.7	60.1	53.7	51.5	49.4
72.5°	58.0	51.5	42.9	34.4	30.1	25.8	21.5	17.2	15.1	15.1
75°	21.5	17.2	10.8	6.5	4.3	4.3	4.3	4.3	4.3	4.3
77.5°	4.3	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)