

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: P840169

Luminaire Tested: **LD4C35D010 EU4359027 4LBCSSQMW**

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: P840169
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: LD4C35D010 EU4359027 4LBCSSQMW
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

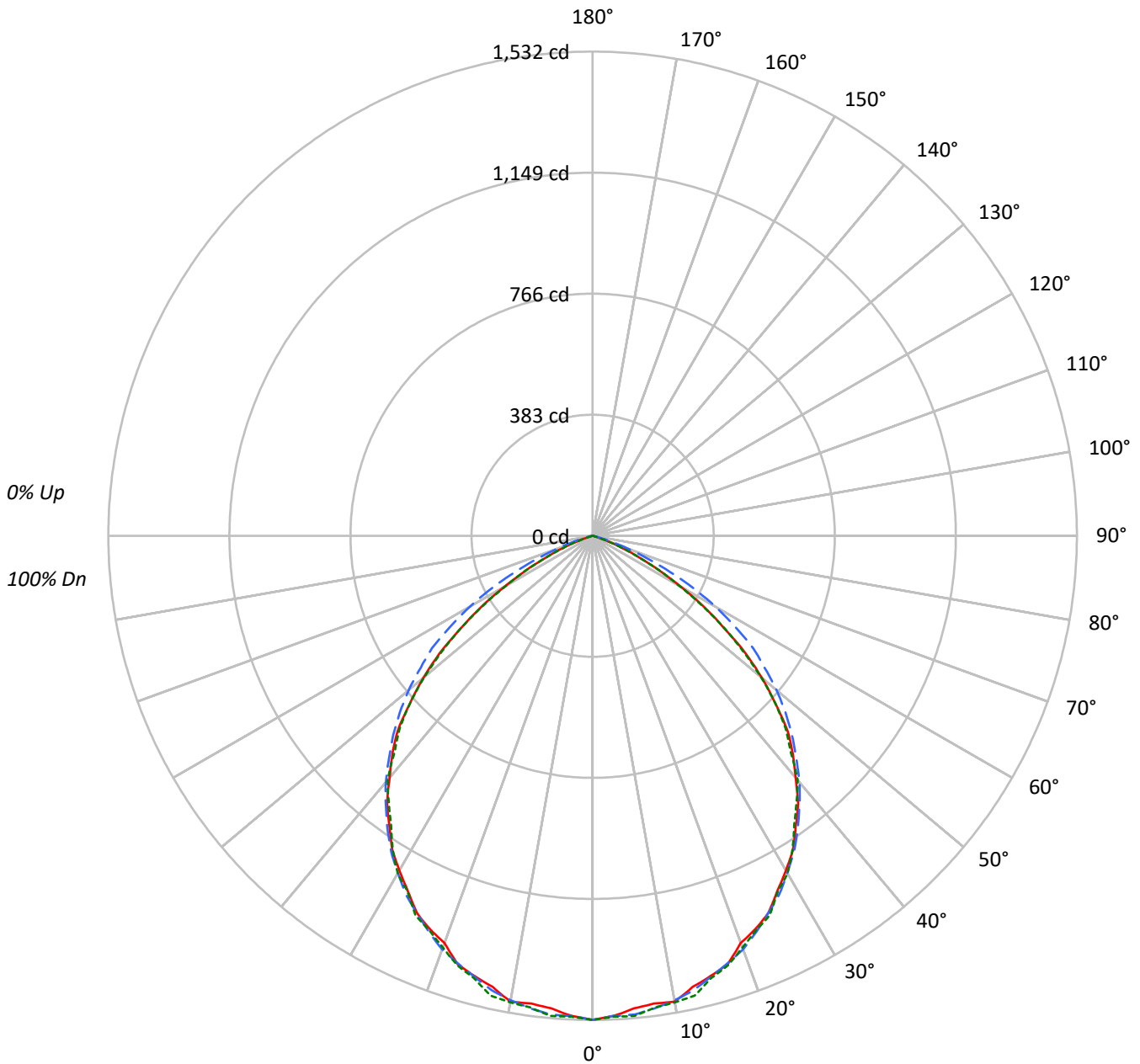
Lumens per Lamp: N/A
Luminaire Lumens: 3272.0 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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

TEST NUMBER: P840169

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMW

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°	147792	147792	147792
5°	145412	147301	147727
10°	146662	146241	146878
15°	144095	144305	144744
20°	140745	142973	142316
25°	140138	140138	141064
30°	136228	137197	137443
35°	131985	133269	130960
40°	125794	128250	127154
45°	119044	121719	117857
50°	104837	113979	104191
55°	84902	104315	85289
60°	62139	86493	60884
65°	37763	61599	36758
70°	14726	33148	14134
75°	1603	8947	1603
80°	1222	1222	1222
85°	0	0	0



TEST NUMBER: P840169

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.6	4.4
10°-20°	409.1	12.5
20°-30°	607.0	18.6
30°-40°	703.4	21.5
40°-50°	674.4	20.6
50°-60°	495.9	15.2
60°-70°	214.2	6.5
70°-80°	23.1	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°	1160.8	35.5
0°-40°	1864.2	57.0
0°-60°	3034.4	92.7
0°-90°	3272.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3272.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1532	1532	1532	1532	1532	
5°	1501	1516	1521	1523	1525	143
15°	1442	1451	1445	1447	1449	407
25°	1316	1314	1316	1318	1325	603
35°	1120	1127	1131	1129	1112	701
45°	872	875	892	879	864	663
55°	505	557	620	555	507	454
65°	165	207	270	204	161	170
75°	4	7	24	4	4	13
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P840169

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7
2.5°	1520.8	1538.2	1540.4	1529.5	1525.2	1518.7	1533.9	1523.0	1527.4	1523.0	1520.8
5°	1501.3	1520.8	1523.0	1523.0	1518.7	1516.5	1523.0	1520.8	1518.7	1514.3	1520.8
7.5°	1492.6	1503.4	1514.3	1501.3	1507.8	1505.6	1520.8	1514.3	1512.1	1512.1	1507.8
10°	1496.9	1494.7	1503.4	1490.4	1494.7	1490.4	1503.4	1503.4	1499.1	1494.7	1492.6
12.5°	1462.0	1479.4	1479.4	1477.3	1473.0	1466.4	1479.4	1488.2	1475.1	1475.1	1473.0
15°	1442.5	1446.9	1449.0	1449.0	1446.9	1451.2	1457.7	1449.0	1451.2	1440.3	1444.6
17.5°	1420.8	1412.1	1418.5	1414.2	1416.4	1420.8	1429.5	1429.5	1416.4	1414.2	1418.5
20°	1370.7	1396.8	1399.0	1386.0	1388.1	1388.1	1403.4	1390.3	1399.0	1388.1	1392.4
22.5°	1346.7	1364.1	1366.3	1348.9	1359.8	1346.7	1362.0	1342.4	1364.1	1348.9	1355.4
25°	1316.3	1314.1	1320.6	1311.9	1314.1	1314.1	1325.0	1316.3	1322.8	1314.1	1316.3
27.5°	1266.3	1283.7	1281.5	1272.8	1277.1	1275.0	1296.8	1272.8	1285.8	1275.0	1279.4
30°	1222.7	1238.0	1233.6	1224.9	1224.9	1218.4	1242.3	1235.8	1233.6	1233.6	1231.4
32.5°	1179.2	1181.4	1177.1	1179.2	1181.4	1172.7	1192.3	1183.6	1181.4	1183.6	1185.8
35°	1120.5	1120.5	1124.8	1118.3	1127.0	1127.0	1144.4	1133.5	1131.4	1124.8	1131.4
37.5°	1068.3	1061.8	1063.9	1063.9	1068.3	1072.6	1081.3	1077.0	1077.0	1070.5	1074.8
40°	998.7	994.3	1000.8	1000.8	1007.4	1007.4	1016.1	1011.7	1018.2	1018.2	1018.2
42.5°	937.8	937.8	933.4	939.9	942.1	939.9	955.2	952.9	955.2	950.8	952.9
45°	872.4	872.4	868.1	866.0	876.8	874.6	892.0	885.5	894.2	889.8	892.0
47.5°	783.2	794.1	787.6	794.1	807.2	809.4	820.2	815.9	824.6	818.1	826.8
50°	698.4	698.4	704.9	713.6	726.7	728.9	741.9	750.6	755.0	757.1	759.3
52.5°	609.2	607.0	613.6	624.4	635.3	644.0	657.1	670.1	678.8	691.9	685.3
55°	504.7	509.1	515.7	528.7	546.1	556.9	567.9	585.3	600.5	607.0	620.1
57.5°	415.5	411.2	415.5	432.9	452.5	461.2	476.5	493.9	515.7	528.7	533.1
60°	322.0	324.2	328.5	343.8	359.0	372.0	378.6	406.8	426.5	439.5	448.2
62.5°	237.2	241.5	245.9	258.9	274.1	285.0	295.9	319.8	337.2	350.3	359.0
65°	165.4	167.5	174.1	180.6	195.8	206.7	215.4	235.0	252.4	263.3	269.8
67.5°	102.3	104.4	108.7	117.5	128.4	137.1	145.8	158.8	174.1	184.9	187.1
70°	52.2	54.4	56.5	63.1	71.8	76.2	82.6	93.6	104.4	113.1	117.5
72.5°	17.4	17.4	19.6	24.0	28.3	32.7	34.8	45.7	54.4	58.8	60.9
75°	4.3	4.3	4.3	4.3	4.3	6.6	6.6	13.0	17.4	21.7	24.0
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



TEST NUMBER: P840169

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMW

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7	1531.7
2.5°	1531.7	1527.4	1525.2	1527.4	1527.4	1525.2	1531.7	1540.4	1551.3	1523.0
5°	1529.5	1525.2	1529.5	1516.5	1523.0	1518.7	1527.4	1525.2	1533.9	1525.2
7.5°	1523.0	1514.3	1516.5	1510.0	1518.7	1507.8	1514.3	1527.4	1518.7	1505.6
10°	1501.3	1496.9	1512.1	1490.4	1486.0	1494.7	1512.1	1499.1	1494.7	1499.1
12.5°	1479.4	1479.4	1486.0	1468.6	1470.7	1475.1	1483.8	1475.1	1479.4	1490.4
15°	1455.6	1451.2	1462.0	1449.0	1446.9	1442.5	1451.2	1451.2	1455.6	1449.0
17.5°	1427.2	1420.8	1420.8	1416.4	1414.2	1425.1	1429.5	1431.6	1433.8	1425.1
20°	1392.4	1390.3	1396.8	1390.3	1392.4	1394.7	1394.7	1390.3	1409.8	1386.0
22.5°	1355.4	1362.0	1353.3	1348.9	1353.3	1357.6	1357.6	1359.8	1355.4	1351.1
25°	1318.5	1322.8	1325.0	1311.9	1318.5	1311.9	1327.2	1329.3	1320.6	1325.0
27.5°	1285.8	1279.4	1277.1	1268.4	1272.8	1270.7	1272.8	1272.8	1285.8	1268.4
30°	1235.8	1229.3	1231.4	1224.9	1227.1	1224.9	1227.1	1227.1	1235.8	1233.6
32.5°	1187.9	1181.4	1183.6	1177.1	1177.1	1179.2	1174.9	1174.9	1181.4	1177.1
35°	1142.2	1127.0	1129.2	1127.0	1129.2	1120.5	1120.5	1118.3	1122.7	1111.8
37.5°	1077.0	1070.5	1068.3	1066.1	1068.3	1063.9	1068.3	1061.8	1068.3	1059.6
40°	1018.2	1013.8	1016.1	1003.0	1003.0	1005.1	1000.8	998.7	1000.8	1009.5
42.5°	959.5	950.8	946.5	942.1	944.2	937.8	935.5	931.2	935.5	926.8
45°	889.8	889.8	887.7	876.8	879.0	879.0	870.3	861.6	863.7	863.7
47.5°	826.8	822.5	820.2	809.4	807.2	805.1	796.3	789.8	789.8	783.2
50°	757.1	752.8	746.3	735.4	731.0	718.0	711.5	702.8	694.1	694.1
52.5°	691.9	676.6	667.9	650.5	644.0	637.5	620.1	613.6	607.0	600.5
55°	613.6	600.5	583.1	563.5	554.8	543.9	526.5	513.4	504.7	507.0
57.5°	537.4	515.7	498.3	472.2	461.2	454.7	437.3	419.9	411.2	411.2
60°	443.8	426.5	404.7	380.7	372.0	361.2	339.4	328.5	322.0	315.5
62.5°	354.6	341.6	322.0	291.5	285.0	274.1	258.9	245.9	239.3	239.3
65°	265.4	252.4	235.0	213.2	204.5	195.8	182.8	169.7	163.2	161.0
67.5°	187.1	171.9	156.7	139.3	132.7	128.4	115.3	106.6	102.3	100.0
70°	113.1	104.4	93.6	80.5	73.9	69.6	60.9	54.4	52.2	50.1
72.5°	58.8	52.2	43.5	34.8	30.4	26.1	21.7	17.4	15.3	15.3
75°	21.7	17.4	10.9	6.6	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)