

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: P840173

Luminaire Tested: **LD4C35D010 EU4359035 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: P840173
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 EU4359035 4LBCSSQMW
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

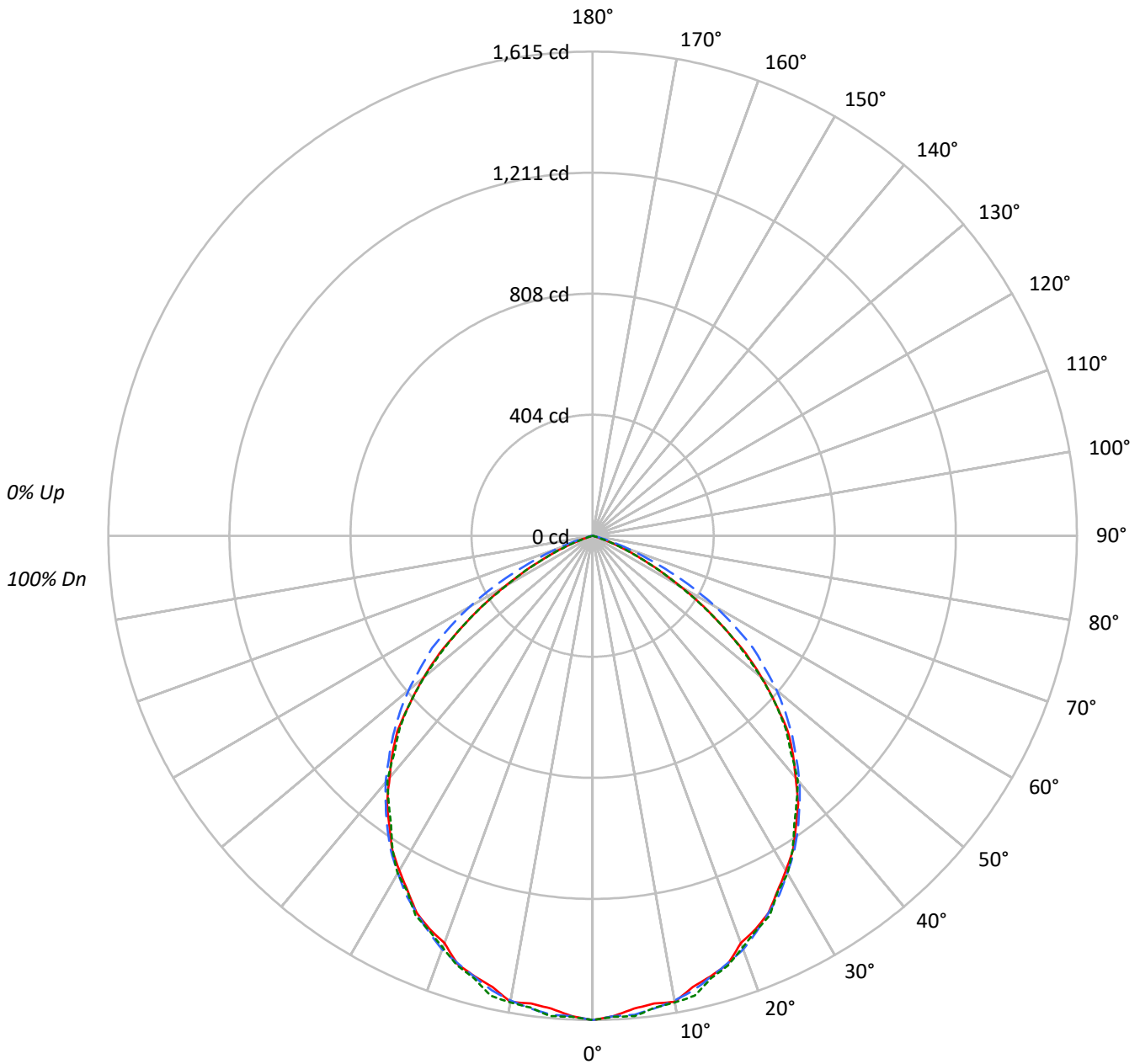
Lumens per Lamp: N/A
Luminaire Lumens: 3450.0 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
Input Voltage (V):
Input Current (Ain): 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°	155839	155839	155839
5°	153316	155311	155756
10°	154648	154197	154863
15°	151937	152156	152616
20°	148405	150757	150059
25°	147761	147761	148740
30°	143637	144662	144919
35°	139159	140513	138075
40°	132633	135228	134069
45°	125526	128350	124270
50°	110541	120178	109851
55°	89528	109984	89915
60°	65516	91201	64204
65°	39818	64932	38767
70°	15516	34954	14896
75°	1715	9432	1715
80°	1278	1278	1278
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.4	4.4
10°-20°	431.4	12.5
20°-30°	640.1	18.6
30°-40°	741.7	21.5
40°-50°	711.1	20.6
50°-60°	522.8	15.2
60°-70°	225.8	6.5
70°-80°	24.4	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°	1223.9	35.5
0°-40°	1965.6	57.0
0°-60°	3199.5	92.7
0°-90°	3450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1583	1599	1604	1606	1608	151
15°	1521	1530	1523	1526	1528	429
25°	1388	1386	1388	1390	1397	635
35°	1181	1188	1193	1191	1172	739
45°	920	922	941	927	911	699
55°	532	587	654	585	534	479
65°	174	218	284	216	170	179
75°	5	7	25	5	5	14
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°	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1
2.5°	1603.5	1621.9	1624.2	1612.7	1608.1	1601.3	1617.3	1605.9	1610.5	1605.9	1603.5
5°	1582.9	1603.5	1605.9	1605.9	1601.3	1599.0	1605.9	1603.5	1601.3	1596.7	1603.5
7.5°	1573.8	1585.2	1596.7	1582.9	1589.8	1587.5	1603.5	1596.7	1594.4	1594.4	1589.8
10°	1578.4	1576.0	1585.2	1571.4	1576.0	1571.4	1585.2	1585.2	1580.6	1576.0	1573.8
12.5°	1541.6	1559.9	1559.9	1557.7	1553.1	1546.2	1559.9	1569.2	1555.3	1555.3	1553.1
15°	1521.0	1525.6	1527.8	1527.8	1525.6	1530.2	1537.0	1527.8	1530.2	1518.6	1523.2
17.5°	1498.1	1488.9	1495.7	1491.1	1493.5	1498.1	1507.2	1507.2	1493.5	1491.1	1495.7
20°	1445.3	1472.8	1475.1	1461.4	1463.6	1463.6	1479.7	1465.9	1475.1	1463.6	1468.2
22.5°	1420.0	1438.3	1440.7	1422.3	1433.8	1420.0	1436.1	1415.4	1438.3	1422.3	1429.2
25°	1387.9	1385.6	1392.5	1383.3	1385.6	1385.6	1397.1	1387.9	1394.8	1385.6	1387.9
27.5°	1335.2	1353.5	1351.2	1342.0	1346.6	1344.4	1367.3	1342.0	1355.8	1344.4	1348.9
30°	1289.2	1305.3	1300.7	1291.6	1291.6	1284.6	1309.9	1303.0	1300.7	1300.7	1298.4
32.5°	1243.4	1245.7	1241.1	1243.4	1245.7	1236.5	1257.1	1248.0	1245.7	1248.0	1250.3
35°	1181.4	1181.4	1186.0	1179.2	1188.3	1188.3	1206.7	1195.2	1192.9	1186.0	1192.9
37.5°	1126.4	1119.5	1121.8	1121.8	1126.4	1131.0	1140.1	1135.5	1135.5	1128.7	1133.3
40°	1053.0	1048.4	1055.2	1055.2	1062.2	1062.2	1071.3	1066.7	1073.6	1073.6	1073.6
42.5°	988.8	988.8	984.2	991.0	993.4	991.0	1007.1	1004.8	1007.1	1002.5	1004.8
45°	919.9	919.9	915.3	913.1	924.5	922.2	940.6	933.7	942.8	938.2	940.6
47.5°	825.8	837.3	830.4	837.3	851.1	853.4	864.9	860.3	869.4	862.6	871.8
50°	736.4	736.4	743.3	752.4	766.2	768.5	782.3	791.5	796.1	798.3	800.6
52.5°	642.4	640.0	647.0	658.4	669.9	679.1	692.8	706.6	715.8	729.5	722.6
55°	532.2	536.8	543.7	557.5	575.8	587.2	598.8	617.1	633.2	640.0	653.8
57.5°	438.1	433.6	438.1	456.5	477.2	486.3	502.4	520.8	543.7	557.5	562.1
60°	339.5	341.8	346.4	362.5	378.5	392.3	399.2	429.0	449.6	463.4	472.6
62.5°	250.1	254.7	259.3	273.0	289.0	300.5	312.0	337.2	355.6	369.3	378.5
65°	174.4	176.6	183.5	190.4	206.5	217.9	227.1	247.8	266.1	277.6	284.4
67.5°	107.8	110.1	114.7	123.9	135.3	144.5	153.7	167.4	183.5	195.0	197.3
70°	55.0	57.4	59.6	66.5	75.7	80.3	87.1	98.7	110.1	119.2	123.9
72.5°	18.3	18.3	20.7	25.3	29.9	34.4	36.7	48.2	57.4	62.0	64.2
75°	4.6	4.6	4.6	4.6	4.6	6.9	6.9	13.8	18.3	22.9	25.3
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.6	4.6
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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°	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1	1615.1
2.5°	1615.1	1610.5	1608.1	1610.5	1610.5	1608.1	1615.1	1624.2	1635.6	1605.9
5°	1612.7	1608.1	1612.7	1599.0	1605.9	1601.3	1610.5	1608.1	1617.3	1608.1
7.5°	1605.9	1596.7	1599.0	1592.1	1601.3	1589.8	1596.7	1610.5	1601.3	1587.5
10°	1582.9	1578.4	1594.4	1571.4	1566.8	1576.0	1594.4	1580.6	1576.0	1580.6
12.5°	1559.9	1559.9	1566.8	1548.5	1550.8	1555.3	1564.5	1555.3	1559.9	1571.4
15°	1534.7	1530.2	1541.6	1527.8	1525.6	1521.0	1530.2	1530.2	1534.7	1527.8
17.5°	1504.9	1498.1	1498.1	1493.5	1491.1	1502.6	1507.2	1509.5	1511.8	1502.6
20°	1468.2	1465.9	1472.8	1465.9	1468.2	1470.5	1470.5	1465.9	1486.5	1461.4
22.5°	1429.2	1436.1	1426.9	1422.3	1426.9	1431.5	1431.5	1433.8	1429.2	1424.6
25°	1390.2	1394.8	1397.1	1383.3	1390.2	1383.3	1399.4	1401.6	1392.5	1397.1
27.5°	1355.8	1348.9	1346.6	1337.4	1342.0	1339.8	1342.0	1342.0	1355.8	1337.4
30°	1303.0	1296.2	1298.4	1291.6	1293.8	1291.6	1293.8	1293.8	1303.0	1300.7
32.5°	1252.5	1245.7	1248.0	1241.1	1241.1	1243.4	1238.8	1238.8	1245.7	1241.1
35°	1204.3	1188.3	1190.6	1188.3	1190.6	1181.4	1181.4	1179.2	1183.7	1172.2
37.5°	1135.5	1128.7	1126.4	1124.1	1126.4	1121.8	1126.4	1119.5	1126.4	1117.2
40°	1073.6	1069.0	1071.3	1057.6	1057.6	1059.8	1055.2	1053.0	1055.2	1064.4
42.5°	1011.7	1002.5	998.0	993.4	995.6	988.8	986.4	981.9	986.4	977.3
45°	938.2	938.2	936.0	924.5	926.8	926.8	917.6	908.5	910.7	910.7
47.5°	871.8	867.2	864.9	853.4	851.1	848.8	839.6	832.8	832.8	825.8
50°	798.3	793.7	786.9	775.4	770.8	757.0	750.2	741.0	731.8	731.8
52.5°	729.5	713.4	704.2	685.9	679.1	672.1	653.8	647.0	640.0	633.2
55°	647.0	633.2	614.9	594.2	585.0	573.5	555.1	541.4	532.2	534.5
57.5°	566.6	543.7	525.4	497.9	486.3	479.4	461.1	442.7	433.6	433.6
60°	468.0	449.6	426.7	401.4	392.3	380.9	357.8	346.4	339.5	332.7
62.5°	373.9	360.2	339.5	307.4	300.5	289.0	273.0	259.3	252.3	252.3
65°	279.9	266.1	247.8	224.8	215.7	206.5	192.7	179.0	172.0	169.8
67.5°	197.3	181.2	165.2	146.9	139.9	135.3	121.6	112.4	107.8	105.5
70°	119.2	110.1	98.7	84.9	78.0	73.4	64.2	57.4	55.0	52.8
72.5°	62.0	55.0	45.9	36.7	32.1	27.5	22.9	18.3	16.1	16.1
75°	22.9	18.3	11.5	6.9	4.6	4.6	4.6	4.6	4.6	4.6
77.5°	4.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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)