

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: P840175

Luminaire Tested: **LD4C35D010 EU4359040 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: P840175  
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 EU4359040 4LBCSSQMW  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MW FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

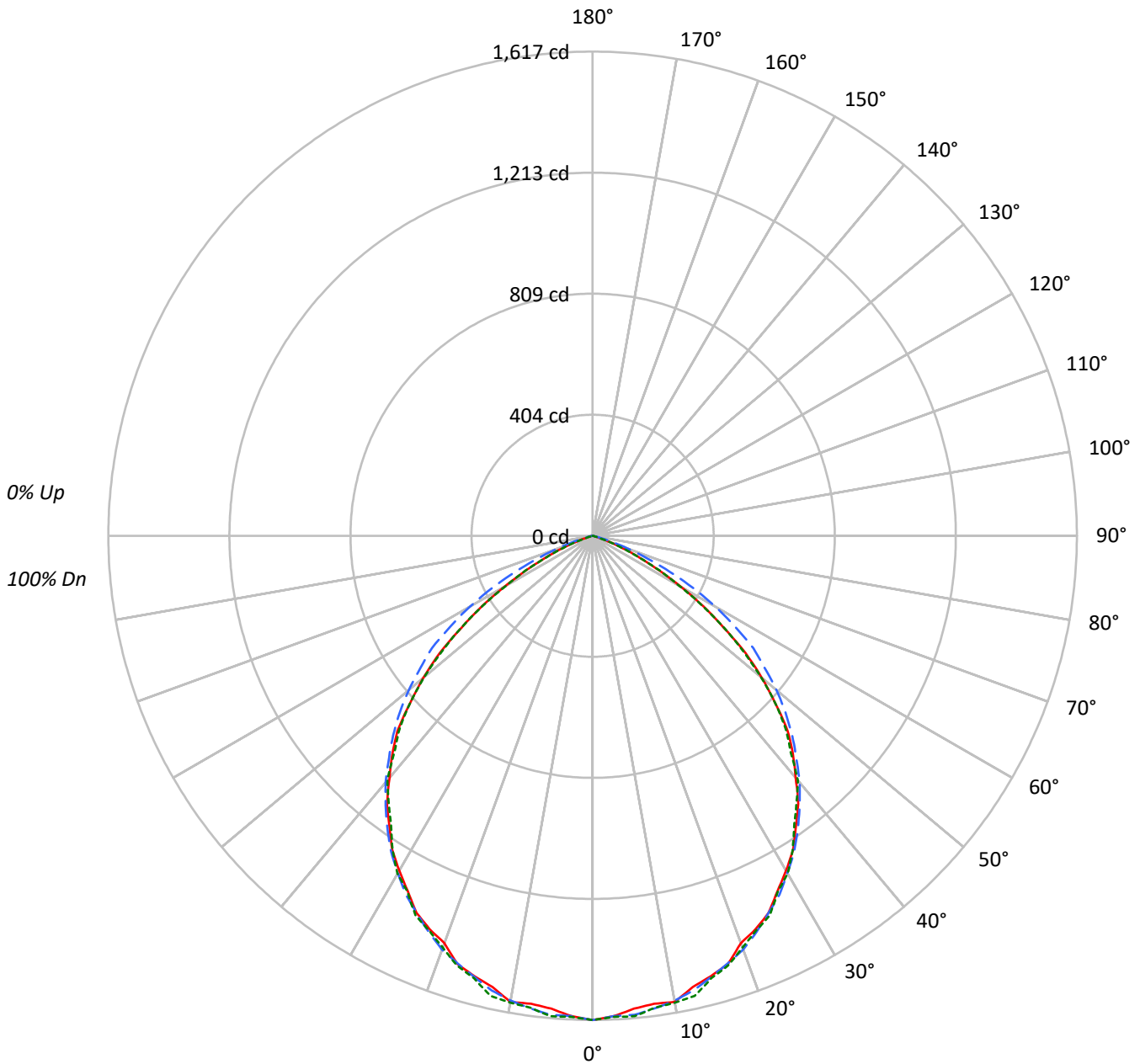
Lumens per Lamp: N/A  
Luminaire Lumens: 3455.0 lumens  
Efficiency: N/A  
Efficacy: 85.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.4  
Input Voltage (V):  
Input Current (A<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				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°	156061	156061	156061
5°	153538	155543	155989
10°	154863	154422	155088
15°	152156	152376	152836
20°	148621	150972	150274
25°	147974	147974	148953
30°	143849	144874	145130
35°	139359	140713	138275
40°	132822	135417	134270
45°	125703	128528	124448
50°	110706	120358	110016
55°	89663	110136	90050
60°	65612	91336	64281
65°	39863	65046	38813
70°	15545	35010	14924
75°	1715	9432	1715
80°	1278	1278	1278
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.7	4.4
10°-20°	432.0	12.5
20°-30°	641.0	18.6
30°-40°	742.7	21.5
40°-50°	712.1	20.6
50°-60°	523.6	15.2
60°-70°	226.1	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°	1225.7	35.5
0°-40°	1968.4	57.0
0°-60°	3204.1	92.7
0°-90°	3455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3455.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1617	1617	1617	1617	1617	
5°	1585	1601	1606	1608	1610	151
15°	1523	1532	1525	1528	1530	429
25°	1390	1388	1390	1392	1399	636
35°	1183	1190	1195	1192	1174	740
45°	921	924	942	928	912	700
55°	533	588	655	586	535	480
65°	175	218	285	216	170	180
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°	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4
2.5°	1605.9	1624.2	1626.6	1615.1	1610.5	1603.6	1619.6	1608.2	1612.8	1608.2	1605.9
5°	1585.2	1605.9	1608.2	1608.2	1603.6	1601.3	1608.2	1605.9	1603.6	1599.0	1605.9
7.5°	1576.1	1587.5	1599.0	1585.2	1592.1	1589.8	1605.9	1599.0	1596.7	1596.7	1592.1
10°	1580.6	1578.3	1587.5	1573.7	1578.3	1573.7	1587.5	1587.5	1582.9	1578.3	1576.1
12.5°	1543.8	1562.2	1562.2	1559.9	1555.3	1548.4	1562.2	1571.5	1557.6	1557.6	1555.3
15°	1523.2	1527.8	1530.0	1530.0	1527.8	1532.4	1539.2	1530.0	1532.4	1520.8	1525.4
17.5°	1500.2	1491.0	1497.9	1493.3	1495.6	1500.2	1509.4	1509.4	1495.6	1493.3	1497.9
20°	1447.4	1474.9	1477.3	1463.5	1465.7	1465.7	1481.9	1468.1	1477.3	1465.7	1470.3
22.5°	1422.1	1440.4	1442.8	1424.4	1435.8	1422.1	1438.2	1417.5	1440.4	1424.4	1431.2
25°	1389.9	1387.6	1394.5	1385.3	1387.6	1387.6	1399.1	1389.9	1396.8	1387.6	1389.9
27.5°	1337.1	1355.5	1353.2	1344.0	1348.6	1346.3	1369.3	1344.0	1357.7	1346.3	1350.9
30°	1291.1	1307.2	1302.6	1293.4	1293.4	1286.5	1311.8	1304.9	1302.6	1302.6	1300.3
32.5°	1245.2	1247.5	1242.9	1245.2	1247.5	1238.3	1259.0	1249.8	1247.5	1249.8	1252.1
35°	1183.1	1183.1	1187.7	1180.9	1190.1	1190.1	1208.4	1196.9	1194.6	1187.7	1194.6
37.5°	1128.0	1121.2	1123.4	1123.4	1128.0	1132.6	1141.8	1137.2	1137.2	1130.3	1134.9
40°	1054.5	1049.9	1056.8	1056.8	1063.7	1063.7	1072.9	1068.3	1075.1	1075.1	1075.1
42.5°	990.2	990.2	985.6	992.5	994.8	992.5	1008.6	1006.2	1008.6	1004.0	1006.2
45°	921.2	921.2	916.6	914.4	925.8	923.6	941.9	935.0	944.2	939.6	941.9
47.5°	827.0	838.6	831.6	838.6	852.3	854.7	866.1	861.5	870.7	863.9	873.0
50°	737.5	737.5	744.3	753.5	767.3	769.7	783.4	792.6	797.2	799.5	801.8
52.5°	643.3	641.0	647.9	659.3	670.9	680.0	693.8	707.6	716.8	730.6	723.6
55°	533.0	537.6	544.5	558.3	576.7	588.1	599.6	618.0	634.1	641.0	654.7
57.5°	438.8	434.2	438.8	457.1	477.9	487.0	503.2	521.5	544.5	558.3	562.9
60°	340.0	342.3	346.9	363.0	379.1	392.8	399.8	429.6	450.3	464.1	473.3
62.5°	250.5	255.1	259.6	273.4	289.5	301.0	312.4	337.7	356.1	369.9	379.1
65°	174.6	176.9	183.8	190.7	206.8	218.2	227.4	248.1	266.5	278.0	284.9
67.5°	108.0	110.2	114.8	124.1	135.5	144.7	153.9	167.7	183.8	195.3	197.6
70°	55.1	57.5	59.7	66.6	75.8	80.4	87.3	98.8	110.2	119.4	124.1
72.5°	18.4	18.4	20.7	25.3	29.9	34.5	36.7	48.3	57.5	62.1	64.3
75°	4.6	4.6	4.6	4.6	4.6	6.9	6.9	13.8	18.4	23.0	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°	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4
2.5°	1617.4	1612.8	1610.5	1612.8	1612.8	1610.5	1617.4	1626.6	1638.0	1608.2
5°	1615.1	1610.5	1615.1	1601.3	1608.2	1603.6	1612.8	1610.5	1619.6	1610.5
7.5°	1608.2	1599.0	1601.3	1594.4	1603.6	1592.1	1599.0	1612.8	1603.6	1589.8
10°	1585.2	1580.6	1596.7	1573.7	1569.1	1578.3	1596.7	1582.9	1578.3	1582.9
12.5°	1562.2	1562.2	1569.1	1550.7	1553.0	1557.6	1566.8	1557.6	1562.2	1573.7
15°	1537.0	1532.4	1543.8	1530.0	1527.8	1523.2	1532.4	1532.4	1537.0	1530.0
17.5°	1507.1	1500.2	1500.2	1495.6	1493.3	1504.8	1509.4	1511.7	1514.0	1504.8
20°	1470.3	1468.1	1474.9	1468.1	1470.3	1472.7	1472.7	1468.1	1488.7	1463.5
22.5°	1431.2	1438.2	1429.0	1424.4	1429.0	1433.6	1433.6	1435.8	1431.2	1426.6
25°	1392.2	1396.8	1399.1	1385.3	1392.2	1385.3	1401.4	1403.7	1394.5	1399.1
27.5°	1357.7	1350.9	1348.6	1339.4	1344.0	1341.7	1344.0	1344.0	1357.7	1339.4
30°	1304.9	1298.0	1300.3	1293.4	1295.7	1293.4	1295.7	1295.7	1304.9	1302.6
32.5°	1254.4	1247.5	1249.8	1242.9	1242.9	1245.2	1240.6	1240.6	1247.5	1242.9
35°	1206.1	1190.1	1192.3	1190.1	1192.3	1183.1	1183.1	1180.9	1185.5	1173.9
37.5°	1137.2	1130.3	1128.0	1125.8	1128.0	1123.4	1128.0	1121.2	1128.0	1118.8
40°	1075.1	1070.5	1072.9	1059.1	1059.1	1061.4	1056.8	1054.5	1056.8	1066.0
42.5°	1013.2	1004.0	999.4	994.8	997.1	990.2	987.9	983.3	987.9	978.7
45°	939.6	939.6	937.3	925.8	928.2	928.2	919.0	909.8	912.0	912.0
47.5°	873.0	868.5	866.1	854.7	852.3	850.1	840.8	834.0	834.0	827.0
50°	799.5	794.9	788.0	776.5	771.9	758.1	751.3	742.1	732.9	732.9
52.5°	730.6	714.4	705.3	686.9	680.0	673.1	654.7	647.9	641.0	634.1
55°	647.9	634.1	615.7	595.0	585.8	574.3	555.9	542.2	533.0	535.3
57.5°	567.5	544.5	526.1	498.6	487.0	480.1	461.7	443.4	434.2	434.2
60°	468.7	450.3	427.3	402.0	392.8	381.4	358.3	346.9	340.0	333.1
62.5°	374.5	360.7	340.0	307.8	301.0	289.5	273.4	259.6	252.7	252.7
65°	280.3	266.5	248.1	225.2	216.0	206.8	193.0	179.2	172.3	170.0
67.5°	197.6	181.5	165.4	147.1	140.1	135.5	121.8	112.6	108.0	105.6
70°	119.4	110.2	98.8	85.0	78.1	73.5	64.3	57.5	55.1	52.9
72.5°	62.1	55.1	45.9	36.7	32.2	27.6	23.0	18.4	16.1	16.1
75°	23.0	18.4	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)