

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: P843404

Luminaire Tested: **LD4C15DE010B40 EU4C15B40 4LBSQLI**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843404  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209151)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C15DE010B40 EU4C15B40 4LBSQLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

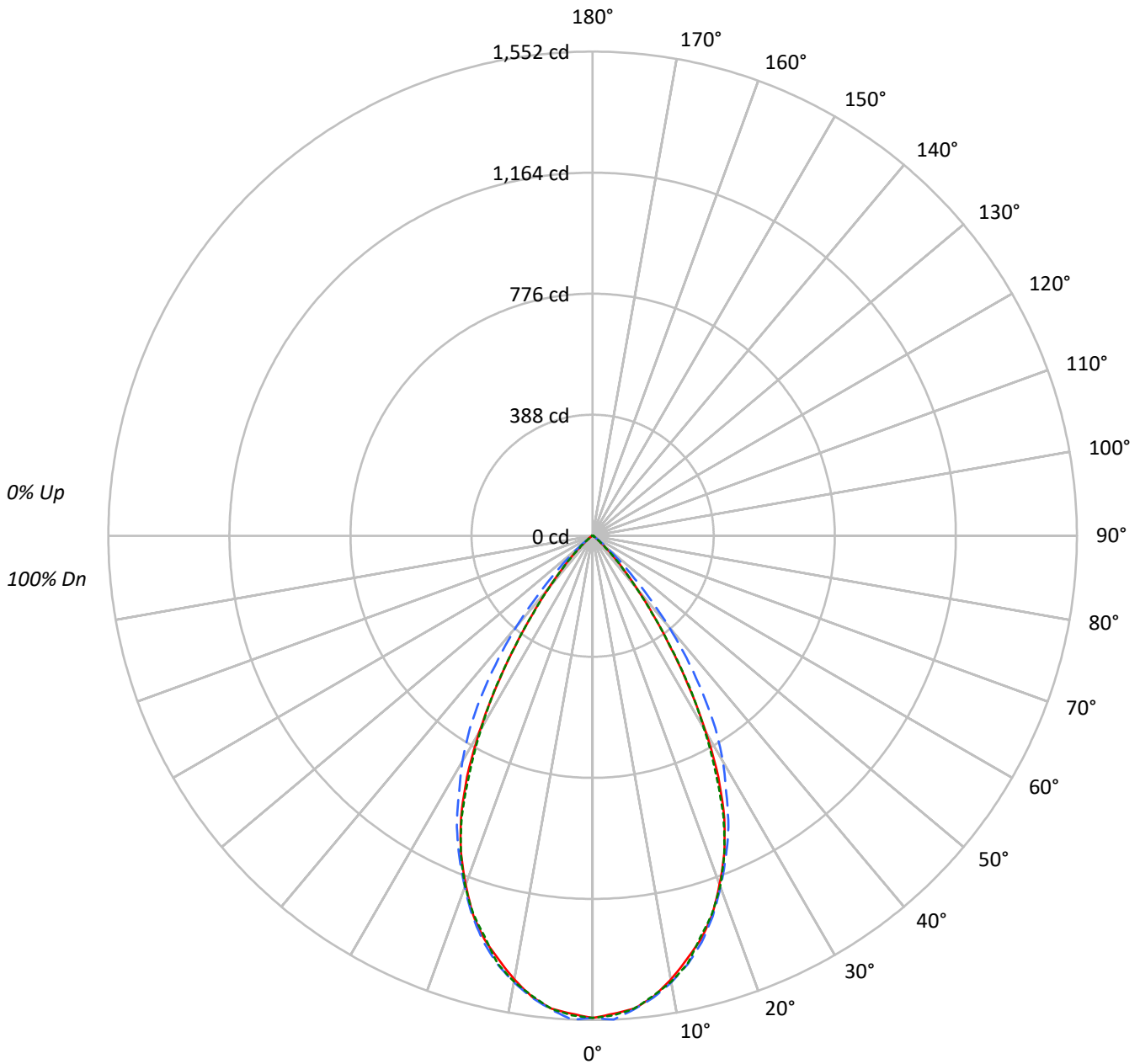
Lumens per Lamp: N/A  
Luminaire Lumens: 1426.8 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 17  
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				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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80			
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69			
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64			
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60			
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	149114	149114	149114
5°	147398	147591	147398
10°	141509	142371	142185
15°	133776	134755	133087
20°	122088	122992	122694
25°	106304	109647	105569
30°	80832	92988	79629
35°	50886	72277	51357
40°	27459	47738	26967
45°	12991	23580	12854
50°	4864	8841	4864
55°	2305	2809	2153
60°	1505	1332	1505
65°	890	890	890
70°	564	846	564
75°	373	373	373
80°	556	556	556
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.3	10.0
10°-20°	375.5	26.3
20°-30°	458.7	32.2
30°-40°	320.8	22.5
40°-50°	105.1	7.4
50°-60°	16.7	1.2
60°-70°	4.6	0.3
70°-80°	1.5	0.1
80°-90°	0.4	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°	977.5	68.5
0°-40°	1298.4	91.0
0°-60°	1420.2	99.5
0°-90°	1426.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1426.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1522	1522	1524	1514	1522	143
15°	1339	1345	1349	1340	1332	374
25°	998	1014	1030	1011	992	449
35°	432	510	614	502	436	276
45°	95	117	173	116	94	80
55°	14	15	17	15	13	14
65°	4	5	4	5	4	4
75°	1	1	1	1	1	1
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°	25°	30°	35°	40°	45°	50°
0°	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4
2.5°	1533.6	1544.5	1541.5	1548.4	1548.4	1540.5	1542.5	1545.4	1549.3	1552.3	1528.7
5°	1521.8	1531.7	1522.8	1532.6	1526.7	1517.9	1532.6	1524.8	1529.7	1523.8	1527.8
7.5°	1490.4	1506.2	1488.4	1500.3	1496.3	1491.4	1497.3	1495.3	1498.2	1493.4	1482.6
10°	1444.3	1457.0	1445.3	1462.0	1454.0	1449.2	1454.0	1459.0	1458.1	1453.1	1459.0
12.5°	1391.2	1405.9	1400.1	1409.9	1401.0	1401.0	1412.9	1409.9	1410.9	1407.0	1413.8
15°	1339.2	1350.1	1341.2	1354.0	1350.1	1339.2	1344.1	1344.1	1352.0	1349.0	1341.2
17.5°	1274.4	1283.2	1273.4	1276.4	1272.4	1270.5	1291.1	1277.3	1285.2	1279.3	1280.3
20°	1189.0	1192.9	1189.9	1197.8	1192.9	1198.8	1196.8	1194.9	1194.9	1197.8	1191.0
22.5°	1102.6	1102.6	1105.5	1107.6	1111.5	1105.5	1117.3	1107.6	1108.5	1115.4	1113.4
25°	998.5	995.6	1002.4	1012.3	1016.2	1011.3	1027.0	1019.1	1025.1	1029.9	1019.1
27.5°	871.9	871.9	878.7	895.4	898.4	904.3	925.9	925.9	933.7	926.8	934.7
30°	725.5	736.3	745.2	766.8	773.7	786.5	809.0	819.9	837.5	834.6	830.6
32.5°	575.4	590.1	591.0	613.6	632.3	653.8	684.3	709.9	722.7	731.5	721.6
35°	432.0	440.8	448.6	464.4	495.8	524.3	551.8	585.2	607.7	613.6	604.8
37.5°	316.1	318.1	326.0	340.7	364.2	391.7	425.2	461.4	485.0	493.8	484.1
40°	218.0	219.9	223.9	236.6	256.3	275.9	302.4	339.7	361.3	379.0	366.2
42.5°	146.3	148.3	152.2	162.0	172.8	191.4	212.1	235.6	256.3	264.1	257.2
45°	95.2	95.2	97.2	104.1	110.0	124.7	139.4	154.1	167.8	172.8	167.8
47.5°	55.9	56.9	58.9	63.8	70.6	76.6	87.4	97.2	101.1	105.0	103.1
50°	32.4	32.4	35.3	38.3	43.2	47.2	51.1	55.0	56.9	58.9	56.9
52.5°	17.7	18.7	19.7	20.6	22.6	26.5	29.4	29.4	30.5	31.4	30.5
55°	13.7	13.7	13.7	13.7	14.7	14.7	14.7	15.8	15.8	16.7	15.8
57.5°	9.8	9.8	9.8	10.8	10.8	10.8	9.8	9.8	9.8	9.8	9.8
60°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	6.9	6.9	6.9	6.9
62.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
65°	3.9	3.9	5.0	5.0	5.0	5.0	5.0	3.9	3.9	3.9	3.9
67.5°	3.0	3.0	3.0	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.0
70°	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4	1545.4
2.5°	1545.4	1528.7	1530.6	1539.5	1534.5	1539.5	1538.5	1538.5
5°	1528.7	1523.8	1515.9	1512.9	1518.9	1531.7	1529.7	1521.8
7.5°	1497.3	1484.5	1493.4	1497.3	1492.4	1500.3	1504.2	1487.5
10°	1460.0	1455.1	1453.1	1455.1	1453.1	1461.0	1451.2	1451.2
12.5°	1407.0	1399.1	1399.1	1410.9	1404.0	1398.1	1405.9	1405.0
15°	1354.0	1338.2	1338.2	1342.1	1345.1	1341.2	1342.1	1332.3
17.5°	1275.4	1270.5	1263.6	1274.4	1277.3	1273.4	1276.4	1271.5
20°	1201.8	1201.8	1189.0	1193.9	1197.8	1200.7	1202.7	1194.9
22.5°	1107.6	1109.5	1100.6	1110.4	1113.4	1103.5	1105.5	1103.5
25°	1021.0	1020.1	1013.2	1009.3	1011.3	1007.3	1006.3	991.6
27.5°	925.9	916.0	901.3	905.2	888.5	874.8	874.8	852.2
30°	822.7	806.1	786.5	766.8	752.1	736.3	727.5	714.7
32.5°	702.0	679.4	654.9	628.3	611.7	588.2	575.4	582.2
35°	582.2	548.8	515.5	488.9	463.5	449.7	433.9	436.0
37.5°	466.4	419.2	389.8	361.3	339.7	322.0	315.2	313.2
40°	340.7	303.3	273.9	253.3	238.6	224.9	217.0	214.1
42.5°	235.6	209.1	185.5	168.9	159.1	150.2	146.3	145.3
45°	153.1	137.5	121.7	110.0	102.2	96.2	95.2	94.2
47.5°	96.2	88.3	78.6	69.7	62.8	58.9	55.9	55.9
50°	55.0	52.0	47.2	42.2	38.3	36.4	33.4	32.4
52.5°	29.4	29.4	27.5	23.6	20.6	18.7	18.7	17.7
55°	15.8	15.8	14.7	14.7	13.7	13.7	13.7	12.8
57.5°	9.8	9.8	10.8	10.8	9.8	9.8	9.8	9.8
60°	6.9	7.8	7.8	7.8	7.8	7.8	7.8	7.8
62.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
65°	3.9	5.0	5.0	5.0	5.0	3.9	3.9	3.9
67.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
70°	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	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
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
90°	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)