

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: P563799

Luminaire Tested: **LD4C20D010 EX4C20D2W 4LBSQLI**

Issue Date: 2/9/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P563799  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209151)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/9/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C20D010 EX4C20D2W 4LBSQLI  
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBSQ TRIM WITH LI FINISH, DIM TO WARM  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1920.4 lumens  
Efficiency: N/A  
Efficacy: 88.1 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): 21.8  
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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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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°	200716	200716	200716
5°	198403	198664	198403
10°	190478	191644	191379
15°	180076	181395	179137
20°	164341	165563	165153
25°	143087	147591	142108
30°	108809	125153	107204
35°	68496	97296	69108
40°	36956	64251	36288
45°	17494	31740	17303
50°	6545	11889	6545
55°	3112	3785	2893
60°	2046	1795	2046
65°	1210	1210	1210
70°	733	1128	733
75°	485	485	485
80°	722	722	722
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.9	10.0
10°-20°	505.5	26.3
20°-30°	617.5	32.2
30°-40°	431.9	22.5
40°-50°	141.5	7.4
50°-60°	22.5	1.2
60°-70°	6.1	0.3
70°-80°	2.0	0.1
80°-90°	0.6	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°	1315.8	68.5
0°-40°	1747.7	91.0
0°-60°	1911.7	99.5
0°-90°	1920.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1920.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2080	2080	2080	2080	2080	
5°	2048	2049	2051	2038	2048	192
15°	1803	1810	1816	1804	1793	503
25°	1344	1364	1386	1361	1335	604
35°	582	687	826	676	587	371
45°	128	158	233	156	127	108
55°	18	20	22	20	17	18
65°	5	7	5	7	5	6
75°	1	1	1	1	1	2
85°	0	0	0	0	0	1
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°	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2
2.5°	2064.3	2078.9	2074.9	2084.1	2084.1	2073.6	2076.2	2080.2	2085.5	2089.4	2057.7
5°	2048.4	2061.7	2049.8	2063.0	2055.0	2043.1	2063.0	2052.4	2059.0	2051.1	2056.4
7.5°	2006.2	2027.3	2003.6	2019.3	2014.1	2007.4	2015.4	2012.7	2016.7	2010.1	1995.6
10°	1944.1	1961.3	1945.4	1967.9	1957.3	1950.7	1957.3	1963.9	1962.6	1956.0	1963.9
12.5°	1872.7	1892.5	1884.6	1897.8	1885.9	1885.9	1901.8	1897.8	1899.1	1893.8	1903.1
15°	1802.7	1817.2	1805.3	1822.5	1817.2	1802.7	1809.2	1809.2	1819.9	1815.9	1805.3
17.5°	1715.4	1727.3	1714.1	1718.1	1712.8	1710.1	1737.9	1719.4	1730.0	1722.0	1723.3
20°	1600.5	1605.8	1601.8	1612.4	1605.8	1613.7	1611.0	1608.4	1608.4	1612.4	1603.1
22.5°	1484.1	1484.1	1488.2	1490.8	1496.0	1488.2	1503.9	1490.8	1492.0	1501.3	1498.6
25°	1344.0	1340.1	1349.3	1362.5	1367.8	1361.2	1382.4	1371.8	1379.7	1386.3	1371.8
27.5°	1173.5	1173.5	1182.8	1205.3	1209.2	1217.2	1246.3	1246.3	1256.9	1247.6	1258.2
30°	976.6	991.2	1003.1	1032.2	1041.4	1058.6	1089.0	1103.6	1127.4	1123.3	1118.0
32.5°	774.5	794.3	795.6	826.0	851.1	880.2	921.2	955.5	972.7	984.5	971.3
35°	581.5	593.4	604.0	625.1	667.4	705.7	742.8	787.6	818.0	826.0	814.1
37.5°	425.6	428.2	438.8	458.6	490.3	527.3	572.3	621.1	652.8	664.7	651.5
40°	293.4	296.0	301.3	318.5	344.9	371.4	407.1	457.2	486.3	510.1	492.9
42.5°	196.9	199.6	204.9	218.1	232.6	257.7	285.4	317.2	344.9	355.5	346.3
45°	128.2	128.2	130.8	140.1	148.0	167.8	187.7	207.5	226.0	232.6	226.0
47.5°	75.4	76.6	79.2	86.0	95.1	103.0	117.6	130.8	136.1	141.4	138.7
50°	43.6	43.6	47.6	51.6	58.2	63.5	68.7	74.0	76.6	79.2	76.6
52.5°	23.8	25.1	26.4	27.8	30.4	35.7	39.7	39.7	41.0	42.3	41.0
55°	18.5	18.5	18.5	18.5	19.8	19.8	19.8	21.2	21.2	22.5	21.2
57.5°	13.2	13.2	13.2	14.5	14.5	14.5	13.2	13.2	13.2	13.2	13.2
60°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	9.3	9.3	9.3	9.3
62.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
65°	5.3	5.3	6.6	6.6	6.6	6.6	6.6	5.3	5.3	5.3	5.3
67.5°	4.0	4.0	4.0	4.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0
70°	2.6	2.6	2.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2	2080.2
2.5°	2080.2	2057.7	2060.3	2072.2	2065.6	2072.2	2070.9	2070.9
5°	2057.7	2051.1	2040.5	2036.5	2044.5	2061.7	2059.0	2048.4
7.5°	2015.4	1998.3	2010.1	2015.4	2008.9	2019.3	2024.6	2002.2
10°	1965.2	1958.6	1956.0	1958.6	1956.0	1966.6	1953.3	1953.3
12.5°	1893.8	1883.2	1883.2	1899.1	1889.9	1881.9	1892.5	1891.2
15°	1822.5	1801.3	1801.3	1806.5	1810.6	1805.3	1806.5	1793.3
17.5°	1716.7	1710.1	1700.9	1715.4	1719.4	1714.1	1718.1	1711.4
20°	1617.7	1617.7	1600.5	1607.1	1612.4	1616.3	1619.0	1608.4
22.5°	1490.8	1493.5	1481.5	1494.7	1498.6	1485.5	1488.2	1485.5
25°	1374.4	1373.1	1363.9	1358.6	1361.2	1355.9	1354.6	1334.8
27.5°	1246.3	1233.0	1213.2	1218.5	1196.0	1177.5	1177.5	1147.1
30°	1107.4	1085.0	1058.6	1032.2	1012.3	991.2	979.3	962.2
32.5°	944.9	914.6	881.5	845.8	823.3	791.7	774.5	783.8
35°	783.8	738.8	693.8	658.1	623.7	605.2	584.1	586.7
37.5°	627.7	564.3	524.7	486.3	457.2	433.5	424.2	421.6
40°	458.6	408.4	368.7	341.0	321.1	302.6	292.1	288.1
42.5°	317.2	281.6	249.7	227.3	214.1	202.2	196.9	195.6
45°	206.2	185.0	163.9	148.0	137.4	129.6	128.2	126.8
47.5°	129.6	118.9	105.7	93.9	84.5	79.2	75.4	75.4
50°	74.0	70.1	63.5	56.9	51.6	48.9	45.0	43.6
52.5°	39.7	39.7	37.0	31.7	27.8	25.1	25.1	23.8
55°	21.2	21.2	19.8	19.8	18.5	18.5	18.5	17.2
57.5°	13.2	13.2	14.5	14.5	13.2	13.2	13.2	13.2
60°	9.3	10.6	10.6	10.6	10.6	10.6	10.6	10.6
62.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
65°	5.3	6.6	6.6	6.6	6.6	5.3	5.3	5.3
67.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70°	4.0	4.0	4.0	4.0	4.0	2.6	2.6	2.6
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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)