

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: P843488

Luminaire Tested: **LD4C20DE010B50 EU4C20B50 4LBSQLI**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843488
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: LD4C20DE010B50 EU4C20B50 4LBSQLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

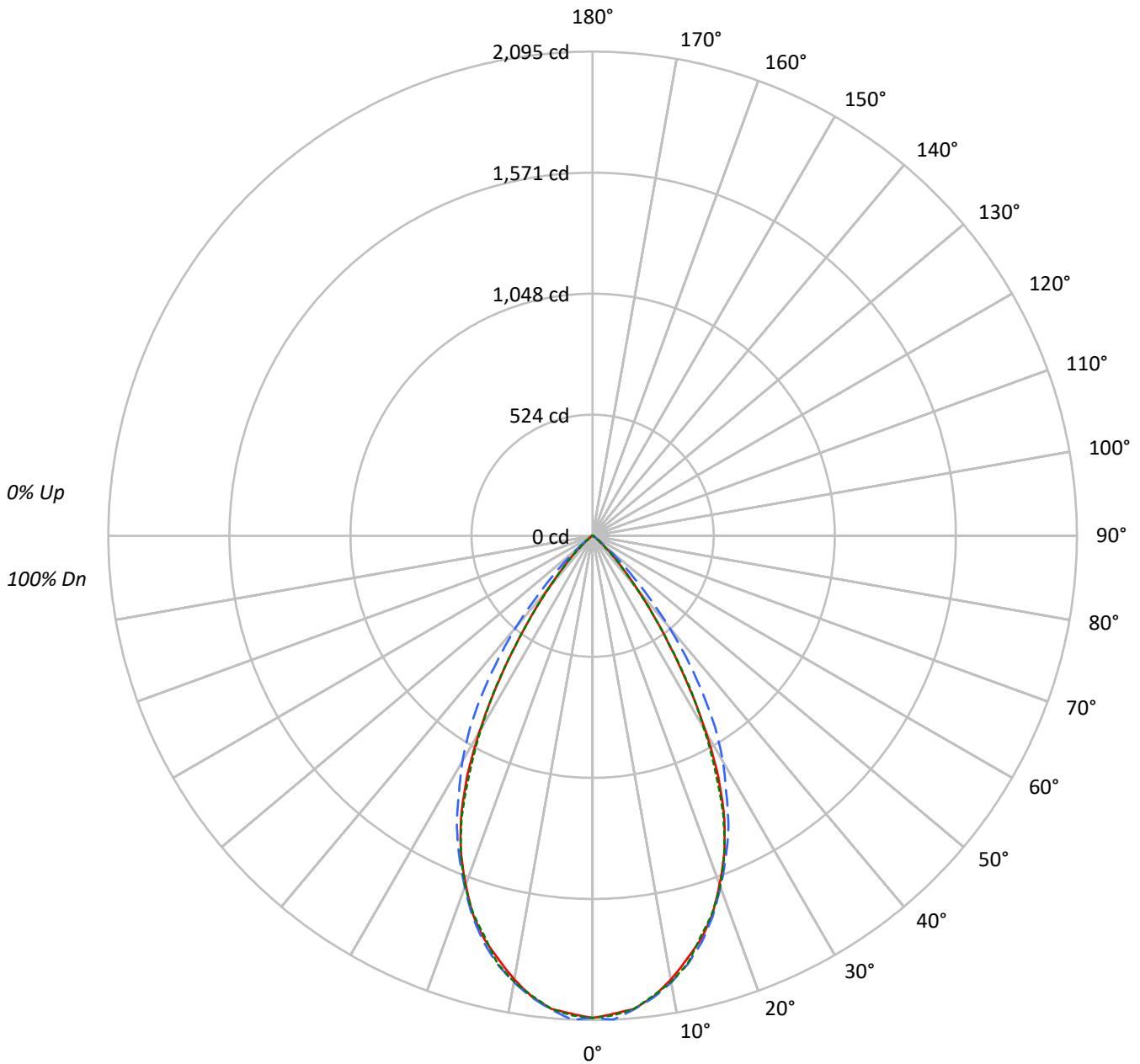
Lumens per Lamp: N/A
Luminaire Lumens: 1926.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
Input Current (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									
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°	201285	201285	201285
5°	198974	199236	198974
10°	191017	192192	191928
15°	180586	181905	179657
20°	164814	166025	165625
25°	143492	148017	142512
30°	109132	125510	107505
35°	68696	97566	69320
40°	37057	64440	36389
45°	17548	31835	17357
50°	6575	11934	6575
55°	3112	3785	2893
60°	2046	1795	2046
65°	1210	1210	1210
70°	733	1128	733
75°	522	522	522
80°	778	778	778
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.4	10.0
10°-20°	506.9	26.3
20°-30°	619.2	32.2
30°-40°	433.1	22.5
40°-50°	141.9	7.4
50°-60°	22.6	1.2
60°-70°	6.2	0.3
70°-80°	2.1	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°	1319.6	68.5
0°-40°	1752.7	91.0
0°-60°	1917.1	99.5
0°-90°	1926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1926.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2086	2086	2086	2086	2086	
5°	2054	2055	2057	2044	2054	193
15°	1808	1815	1821	1809	1798	504
25°	1348	1368	1390	1365	1339	605
35°	583	689	828	678	588	372
45°	129	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°	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1
2.5°	2070.2	2084.8	2080.8	2090.1	2090.1	2079.5	2082.2	2086.1	2091.4	2095.4	2063.5
5°	2054.3	2067.6	2055.6	2068.8	2060.9	2049.0	2068.8	2058.3	2064.9	2057.0	2062.3
7.5°	2011.9	2033.1	2009.3	2025.2	2019.9	2013.2	2021.1	2018.5	2022.5	2015.8	2001.3
10°	1949.6	1966.9	1950.9	1973.4	1962.9	1956.2	1962.9	1969.5	1968.2	1961.6	1969.5
12.5°	1878.0	1897.9	1890.0	1903.2	1891.3	1891.3	1907.2	1903.2	1904.6	1899.2	1908.5
15°	1807.8	1822.4	1810.5	1827.7	1822.4	1807.8	1814.4	1814.4	1825.1	1821.0	1810.5
17.5°	1720.3	1732.2	1719.0	1723.0	1717.7	1715.1	1742.9	1724.3	1734.8	1726.9	1728.3
20°	1605.1	1610.4	1606.3	1616.9	1610.4	1618.3	1615.6	1613.0	1613.0	1616.9	1607.7
22.5°	1488.4	1488.4	1492.3	1495.0	1500.4	1492.3	1508.3	1495.0	1496.3	1505.6	1503.0
25°	1347.8	1343.9	1353.2	1366.5	1371.8	1365.1	1386.3	1375.7	1383.7	1390.3	1375.7
27.5°	1176.9	1176.9	1186.1	1208.8	1212.7	1220.6	1249.8	1249.8	1260.4	1251.2	1261.8
30°	979.5	994.1	1005.9	1035.1	1044.4	1061.7	1092.1	1106.7	1130.5	1126.5	1121.2
32.5°	776.6	796.6	797.9	828.3	853.5	882.7	923.7	958.2	975.5	987.4	974.1
35°	583.2	595.1	605.7	626.9	669.3	707.8	744.9	789.9	820.4	828.3	816.4
37.5°	426.8	429.4	440.1	459.9	491.7	528.8	573.9	622.9	654.8	666.6	653.4
40°	294.2	296.9	302.2	319.4	346.0	372.4	408.2	458.6	487.8	511.6	494.3
42.5°	197.5	200.1	205.4	218.6	233.3	258.4	286.3	318.0	346.0	356.5	347.2
45°	128.6	128.6	131.3	140.6	148.5	168.3	188.3	208.0	226.7	233.3	226.7
47.5°	75.5	76.9	79.5	86.2	95.4	103.3	117.9	131.3	136.5	141.8	139.2
50°	43.8	43.8	47.7	51.7	58.3	63.6	68.9	74.2	76.9	79.5	76.9
52.5°	23.9	25.2	26.5	27.8	30.5	35.9	39.8	39.8	41.1	42.4	41.1
55°	18.5	18.5	18.5	18.5	19.9	19.9	19.9	21.2	21.2	22.5	21.2
57.5°	13.2	13.2	13.2	14.6	14.6	14.6	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	6.7	6.7	6.7	6.7	6.7	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°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	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°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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°	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1
2.5°	2086.1	2063.5	2066.2	2078.1	2071.5	2078.1	2076.9	2076.9
5°	2063.5	2057.0	2046.3	2042.4	2050.3	2067.6	2064.9	2054.3
7.5°	2021.1	2003.9	2015.8	2021.1	2014.6	2025.2	2030.4	2007.9
10°	1970.8	1964.2	1961.6	1964.2	1961.6	1972.2	1958.9	1958.9
12.5°	1899.2	1888.6	1888.6	1904.6	1895.3	1887.2	1897.9	1896.5
15°	1827.7	1806.4	1806.4	1811.7	1815.7	1810.5	1811.7	1798.5
17.5°	1721.6	1715.1	1705.8	1720.3	1724.3	1719.0	1723.0	1716.3
20°	1622.2	1622.2	1605.1	1611.6	1616.9	1620.9	1623.6	1613.0
22.5°	1495.0	1497.6	1485.7	1499.0	1503.0	1489.7	1492.3	1489.7
25°	1378.3	1377.0	1367.7	1362.4	1365.1	1359.8	1358.5	1338.6
27.5°	1249.8	1236.6	1216.7	1222.0	1199.5	1180.8	1180.8	1150.4
30°	1110.6	1088.1	1061.7	1035.1	1015.2	994.1	982.1	964.9
32.5°	947.6	917.2	884.0	848.2	825.7	793.9	776.6	785.9
35°	785.9	740.9	695.8	660.1	625.6	607.0	585.8	588.5
37.5°	629.5	565.9	526.2	487.8	458.6	434.7	425.4	422.7
40°	459.9	409.5	369.7	341.9	322.0	303.5	293.0	288.9
42.5°	318.0	282.3	250.4	227.9	214.7	202.7	197.5	196.2
45°	206.8	185.6	164.4	148.5	137.8	129.9	128.6	127.2
47.5°	129.9	119.3	106.0	94.1	84.8	79.5	75.5	75.5
50°	74.2	70.2	63.6	57.0	51.7	49.1	45.1	43.8
52.5°	39.8	39.8	37.1	31.8	27.8	25.2	25.2	23.9
55°	21.2	21.2	19.9	19.9	18.5	18.5	18.5	17.2
57.5°	13.2	13.2	14.6	14.6	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	6.7	6.7	6.7	6.7	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°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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)