

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: P843474

Luminaire Tested: **LD4C20DE010B40 EU4C20B40 4LBSQLI**

Issue Date: 5/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P843474  
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: LD4C20DE010B40 EU4C20B40 4LBSQLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

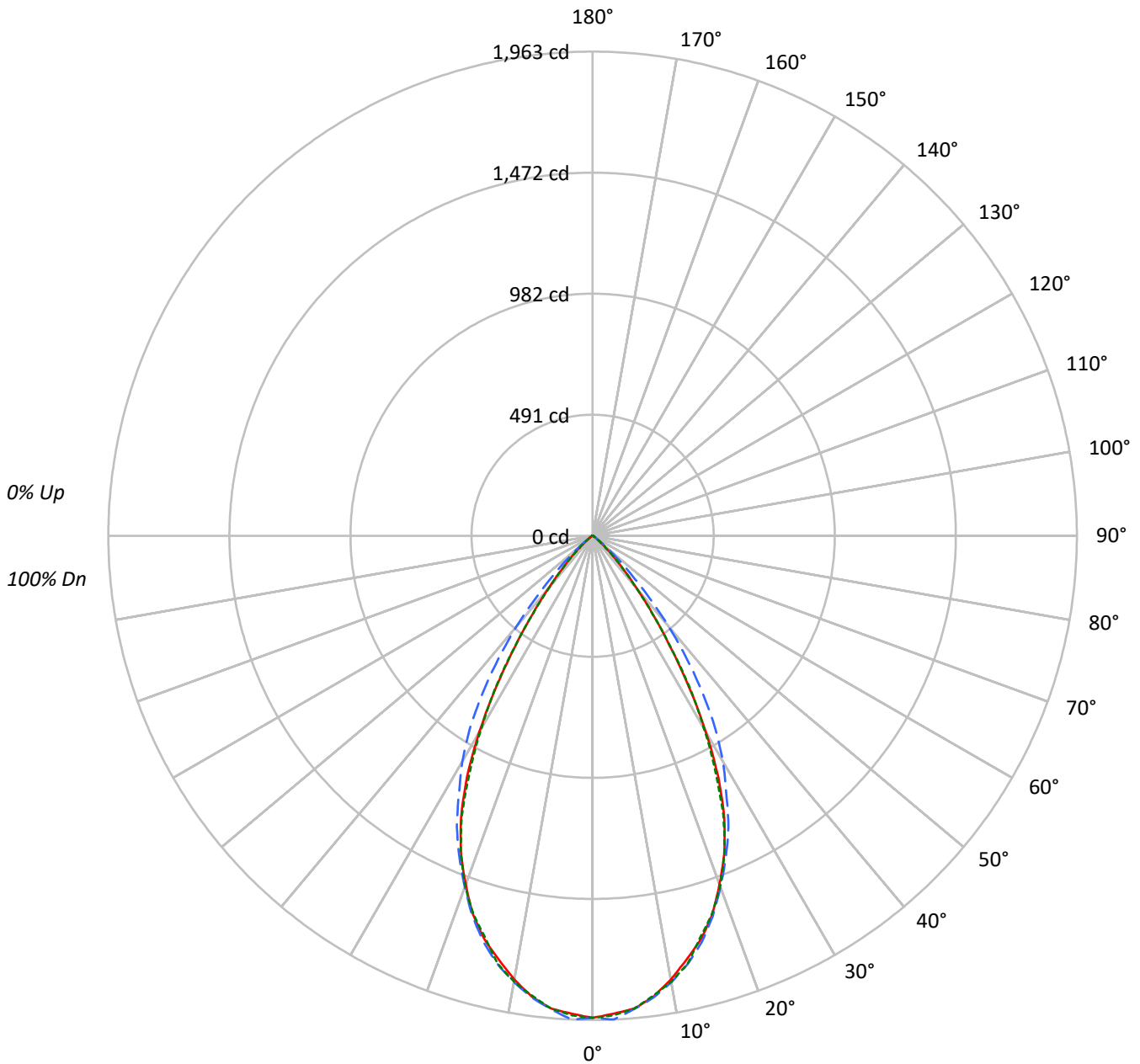
Lumens per Lamp: N/A  
Luminaire Lumens: 1804.3 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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

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

	0°	45°	90°
0°	188578	188578	188578
5°	186412	186644	186412
10°	178946	180043	179808
15°	169178	170427	168309
20°	154392	155542	155162
25°	134442	138669	133505
30°	102235	117588	100720
35°	64349	91418	64927
40°	34714	60371	34084
45°	16443	29816	16266
50°	6155	11183	6155
55°	2910	3566	2725
60°	1910	1679	1910
65°	1142	1142	1142
70°	677	1044	677
75°	485	485	485
80°	722	722	722
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.2	10.0
10°-20°	474.9	26.3
20°-30°	580.1	32.2
30°-40°	405.8	22.5
40°-50°	133.0	7.4
50°-60°	21.1	1.2
60°-70°	5.7	0.3
70°-80°	1.9	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°	1236.2	68.5
0°-40°	1642.0	91.0
0°-60°	1796.1	99.5
0°-90°	1804.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1804.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1954	1954	1954	1954	1954	
5°	1925	1925	1927	1915	1925	181
15°	1694	1700	1706	1695	1685	472
25°	1263	1282	1302	1279	1254	567
35°	546	645	776	635	551	349
45°	120	148	218	147	119	101
55°	17	19	21	19	16	17
65°	5	6	5	6	5	5
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°	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4
2.5°	1939.5	1953.1	1949.4	1958.1	1958.1	1948.2	1950.7	1954.4	1959.4	1963.1	1933.2
5°	1924.6	1937.0	1925.7	1938.2	1930.7	1919.6	1938.2	1928.3	1934.5	1927.0	1932.0
7.5°	1884.8	1904.7	1882.4	1897.3	1892.3	1886.1	1893.5	1891.0	1894.8	1888.5	1874.9
10°	1826.4	1842.6	1827.7	1848.8	1838.9	1832.7	1838.9	1845.1	1843.9	1837.6	1845.1
12.5°	1759.5	1778.0	1770.6	1783.0	1771.9	1771.9	1786.8	1783.0	1784.2	1779.3	1787.9
15°	1693.6	1707.3	1696.1	1712.3	1707.3	1693.6	1699.8	1699.8	1709.8	1706.1	1696.1
17.5°	1611.7	1622.8	1610.5	1614.2	1609.2	1606.8	1632.8	1615.4	1625.3	1617.9	1619.1
20°	1503.6	1508.6	1504.9	1514.8	1508.6	1516.1	1513.6	1511.1	1511.1	1514.8	1506.2
22.5°	1394.4	1394.4	1398.1	1400.6	1405.6	1398.1	1413.0	1400.6	1401.8	1410.6	1408.0
25°	1262.8	1259.0	1267.8	1280.2	1285.1	1278.9	1298.8	1288.8	1296.2	1302.5	1288.8
27.5°	1102.6	1102.6	1111.3	1132.4	1136.1	1143.5	1170.9	1170.9	1180.8	1172.2	1182.0
30°	917.6	931.2	942.4	969.7	978.4	994.6	1023.2	1036.8	1059.1	1055.4	1050.4
32.5°	727.7	746.3	747.4	776.1	799.6	827.0	865.5	897.7	913.9	925.0	912.6
35°	546.3	557.5	567.4	587.3	627.1	663.0	697.8	740.0	768.6	776.1	764.9
37.5°	399.8	402.3	412.3	430.9	460.6	495.4	537.7	583.6	613.4	624.5	612.2
40°	275.6	278.2	283.1	299.2	324.1	348.9	382.4	429.6	456.9	479.3	463.1
42.5°	185.0	187.5	192.5	204.9	218.5	242.1	268.2	297.9	324.1	334.0	325.3
45°	120.5	120.5	122.9	131.7	139.1	157.7	176.3	194.9	212.3	218.5	212.3
47.5°	70.8	72.0	74.5	80.7	89.4	96.9	110.5	122.9	127.9	132.8	130.4
50°	41.0	41.0	44.7	48.4	54.6	59.5	64.5	69.5	72.0	74.5	72.0
52.5°	22.3	23.6	24.9	26.1	28.6	33.5	37.2	37.2	38.5	39.8	38.5
55°	17.3	17.3	17.3	17.3	18.6	18.6	18.6	19.9	19.9	21.2	19.9
57.5°	12.4	12.4	12.4	13.6	13.6	13.6	12.4	12.4	12.4	12.4	12.4
60°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	8.7	8.7	8.7	8.7
62.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
65°	5.0	5.0	6.2	6.2	6.2	6.2	6.2	5.0	5.0	5.0	5.0
67.5°	3.7	3.7	3.7	3.7	5.0	5.0	3.7	3.7	3.7	3.7	3.7
70°	2.4	2.4	2.4	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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°	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4	1954.4
2.5°	1954.4	1933.2	1935.7	1946.9	1940.7	1946.9	1945.7	1945.7
5°	1933.2	1927.0	1917.2	1913.4	1920.8	1937.0	1934.5	1924.6
7.5°	1893.5	1877.4	1888.5	1893.5	1887.3	1897.3	1902.3	1881.1
10°	1846.3	1840.2	1837.6	1840.2	1837.6	1847.6	1835.2	1835.2
12.5°	1779.3	1769.4	1769.4	1784.2	1775.6	1768.2	1778.0	1776.8
15°	1712.3	1692.3	1692.3	1697.3	1701.1	1696.1	1697.3	1684.9
17.5°	1612.9	1606.8	1598.0	1611.7	1615.4	1610.5	1614.2	1607.9
20°	1519.8	1519.8	1503.6	1509.9	1514.8	1518.6	1521.1	1511.1
22.5°	1400.6	1403.1	1391.8	1404.3	1408.0	1395.7	1398.1	1395.7
25°	1291.3	1290.1	1281.3	1276.5	1278.9	1273.9	1272.8	1254.0
27.5°	1170.9	1158.4	1139.8	1144.8	1123.7	1106.3	1106.3	1077.7
30°	1040.5	1019.5	994.6	969.7	951.1	931.2	920.0	904.0
32.5°	887.8	859.2	828.2	794.6	773.6	743.7	727.7	736.3
35°	736.3	694.0	651.8	618.4	586.0	568.7	548.8	551.2
37.5°	589.8	530.2	493.0	456.9	429.6	407.3	398.5	396.1
40°	430.9	383.7	346.4	320.4	301.7	284.4	274.5	270.6
42.5°	297.9	264.5	234.7	213.5	201.2	190.0	185.0	183.8
45°	193.8	173.9	154.0	139.1	129.1	121.7	120.5	119.2
47.5°	121.7	111.7	99.3	88.2	79.4	74.5	70.8	70.8
50°	69.5	65.8	59.5	53.4	48.4	46.0	42.2	41.0
52.5°	37.2	37.2	34.8	29.8	26.1	23.6	23.6	22.3
55°	19.9	19.9	18.6	18.6	17.3	17.3	17.3	16.2
57.5°	12.4	12.4	13.6	13.6	12.4	12.4	12.4	12.4
60°	8.7	9.9	9.9	9.9	9.9	9.9	9.9	9.9
62.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
65°	5.0	6.2	6.2	6.2	6.2	5.0	5.0	5.0
67.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
70°	3.7	3.7	3.7	3.7	3.7	2.4	2.4	2.4
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)