

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: P843460

Luminaire Tested: **LD4C20DE010B2750 EU4C20B35 4LBSQLI**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843460  
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: LD4C20DE010B2750 EU4C20B35 4LBSQLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

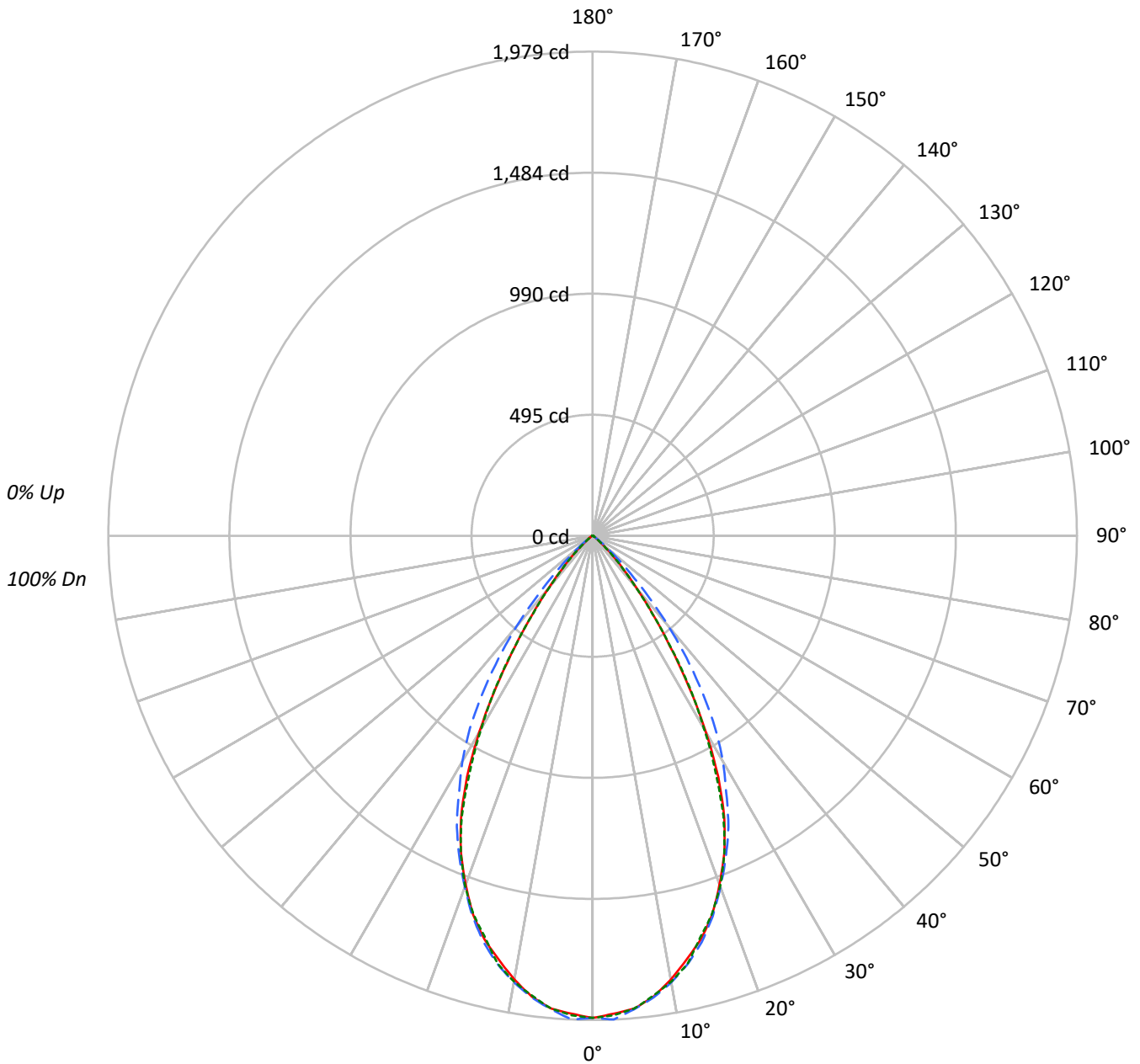
Lumens per Lamp: N/A  
Luminaire Lumens: 1819.1 lumens  
Efficiency: N/A  
Efficacy: 83.4 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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°	190122	190122	190122
5°	187933	188184	187933
10°	180416	181533	181278
15°	170567	171815	169698
20°	155665	156815	156435
25°	135550	139808	134613
30°	103071	118558	101544
35°	64879	92160	65468
40°	35004	60863	34374
45°	16566	30061	16388
50°	6215	11273	6215
55°	2961	3583	2742
60°	1930	1698	1930
65°	1142	1142	1142
70°	705	1072	705
75°	485	485	485
80°	722	722	722
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.7	10.0
10°-20°	478.8	26.3
20°-30°	584.9	32.2
30°-40°	409.1	22.5
40°-50°	134.1	7.4
50°-60°	21.3	1.2
60°-70°	5.8	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°	1246.4	68.5
0°-40°	1655.4	91.0
0°-60°	1810.8	99.5
0°-90°	1819.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1819.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1970	1970	1970	1970	1970	
5°	1940	1941	1943	1931	1940	182
15°	1708	1714	1720	1709	1699	476
25°	1273	1293	1313	1289	1264	572
35°	551	650	782	640	556	351
45°	121	150	220	148	120	102
55°	18	19	21	19	16	17
65°	5	6	5	6	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°	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4
2.5°	1955.4	1969.2	1965.4	1974.2	1974.2	1964.1	1966.7	1970.4	1975.4	1979.1	1949.1
5°	1940.3	1952.9	1941.6	1954.1	1946.6	1935.4	1954.1	1944.1	1950.4	1942.9	1947.8
7.5°	1900.4	1920.3	1897.8	1912.8	1907.9	1901.5	1909.0	1906.6	1910.3	1904.1	1890.3
10°	1841.4	1857.7	1842.7	1864.0	1853.9	1847.8	1853.9	1860.3	1859.0	1852.8	1860.3
12.5°	1773.9	1792.6	1785.1	1797.7	1786.3	1786.3	1801.4	1797.7	1798.9	1793.9	1802.6
15°	1707.5	1721.3	1710.0	1726.3	1721.3	1707.5	1713.8	1713.8	1723.8	1720.0	1710.0
17.5°	1624.9	1636.2	1623.7	1627.4	1622.4	1619.9	1646.2	1628.7	1638.7	1631.2	1632.5
20°	1516.0	1521.0	1517.2	1527.2	1521.0	1528.5	1526.1	1523.5	1523.5	1527.2	1518.6
22.5°	1405.8	1405.8	1409.6	1412.0	1417.1	1409.6	1424.6	1412.0	1413.3	1422.1	1419.6
25°	1273.2	1269.4	1278.2	1290.6	1295.7	1289.4	1309.5	1299.4	1306.9	1313.2	1299.4
27.5°	1111.7	1111.7	1120.4	1141.7	1145.4	1152.9	1180.4	1180.4	1190.5	1181.8	1191.7
30°	925.1	938.9	950.2	977.7	986.5	1002.7	1031.5	1045.3	1067.8	1064.1	1059.0
32.5°	733.6	752.4	753.6	782.4	806.1	833.7	872.5	905.1	921.4	932.6	920.1
35°	550.8	562.1	572.1	592.2	632.1	668.5	703.5	746.1	774.9	782.4	771.1
37.5°	403.1	405.6	415.7	434.4	464.4	499.5	542.0	588.4	618.4	629.7	617.1
40°	277.9	280.4	285.5	301.7	326.7	351.8	385.6	433.1	460.7	483.2	466.9
42.5°	186.5	189.0	194.0	206.6	220.3	244.1	270.4	300.5	326.7	336.8	328.0
45°	121.4	121.4	124.0	132.7	140.2	159.0	177.8	196.5	214.1	220.3	214.1
47.5°	71.4	72.6	75.1	81.3	90.1	97.6	111.4	124.0	128.9	133.9	131.5
50°	41.4	41.4	45.1	48.9	55.1	60.1	65.0	70.1	72.6	75.1	72.6
52.5°	22.5	23.8	25.1	26.3	28.8	33.8	37.5	37.5	38.8	40.1	38.8
55°	17.6	17.6	17.6	17.6	18.8	18.8	18.8	20.0	20.0	21.3	20.0
57.5°	12.5	12.5	12.5	13.7	13.7	13.7	12.5	12.5	12.5	12.5	12.5
60°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.8	8.8	8.8	8.8
62.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
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°	3.8	3.8	3.8	3.8	5.0	5.0	3.8	3.8	3.8	3.8	3.8
70°	2.5	2.5	2.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4	1970.4
2.5°	1970.4	1949.1	1951.7	1962.9	1956.6	1962.9	1961.7	1961.7
5°	1949.1	1942.9	1932.8	1929.1	1936.6	1952.9	1950.4	1940.3
7.5°	1909.0	1892.8	1904.1	1909.0	1902.8	1912.8	1917.8	1896.5
10°	1861.4	1855.3	1852.8	1855.3	1852.8	1862.8	1850.2	1850.2
12.5°	1793.9	1783.9	1783.9	1798.9	1790.2	1782.6	1792.6	1791.4
15°	1726.3	1706.3	1706.3	1711.3	1715.1	1710.0	1711.3	1698.8
17.5°	1626.1	1619.9	1611.1	1624.9	1628.7	1623.7	1627.4	1621.1
20°	1532.2	1532.2	1516.0	1522.3	1527.2	1531.0	1533.6	1523.5
22.5°	1412.0	1414.6	1403.3	1415.9	1419.6	1407.1	1409.6	1407.1
25°	1301.9	1300.7	1291.9	1286.9	1289.4	1284.4	1283.1	1264.4
27.5°	1180.4	1167.9	1149.2	1154.2	1132.9	1115.4	1115.4	1086.6
30°	1049.1	1027.8	1002.7	977.7	959.0	938.9	927.7	911.4
32.5°	895.1	866.3	835.0	801.2	779.9	749.9	733.6	742.4
35°	742.4	699.7	657.2	623.5	590.9	573.3	553.4	555.8
37.5°	594.6	534.5	497.0	460.7	433.1	410.6	401.8	399.4
40°	434.4	386.8	349.2	323.0	304.2	286.7	276.7	272.9
42.5°	300.5	266.6	236.6	215.3	202.9	191.5	186.5	185.3
45°	195.3	175.2	155.3	140.2	130.2	122.7	121.4	120.1
47.5°	122.7	112.6	100.2	88.8	80.1	75.1	71.4	71.4
50°	70.1	66.3	60.1	53.8	48.9	46.3	42.5	41.4
52.5°	37.5	37.5	35.0	30.0	26.3	23.8	23.8	22.5
55°	20.0	20.0	18.8	18.8	17.6	17.6	17.6	16.3
57.5°	12.5	12.5	13.7	13.7	12.5	12.5	12.5	12.5
60°	8.8	10.0	10.0	10.0	10.0	10.0	10.0	10.0
62.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
65°	5.0	6.2	6.2	6.2	6.2	5.0	5.0	5.0
67.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
70°	3.8	3.8	3.8	3.8	3.8	2.5	2.5	2.5
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)