

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: P843446

Luminaire Tested: **LD4C20DE010B2750 EU4C20B30 4LBSQLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843446
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 EU4C20B30 4LBSQLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

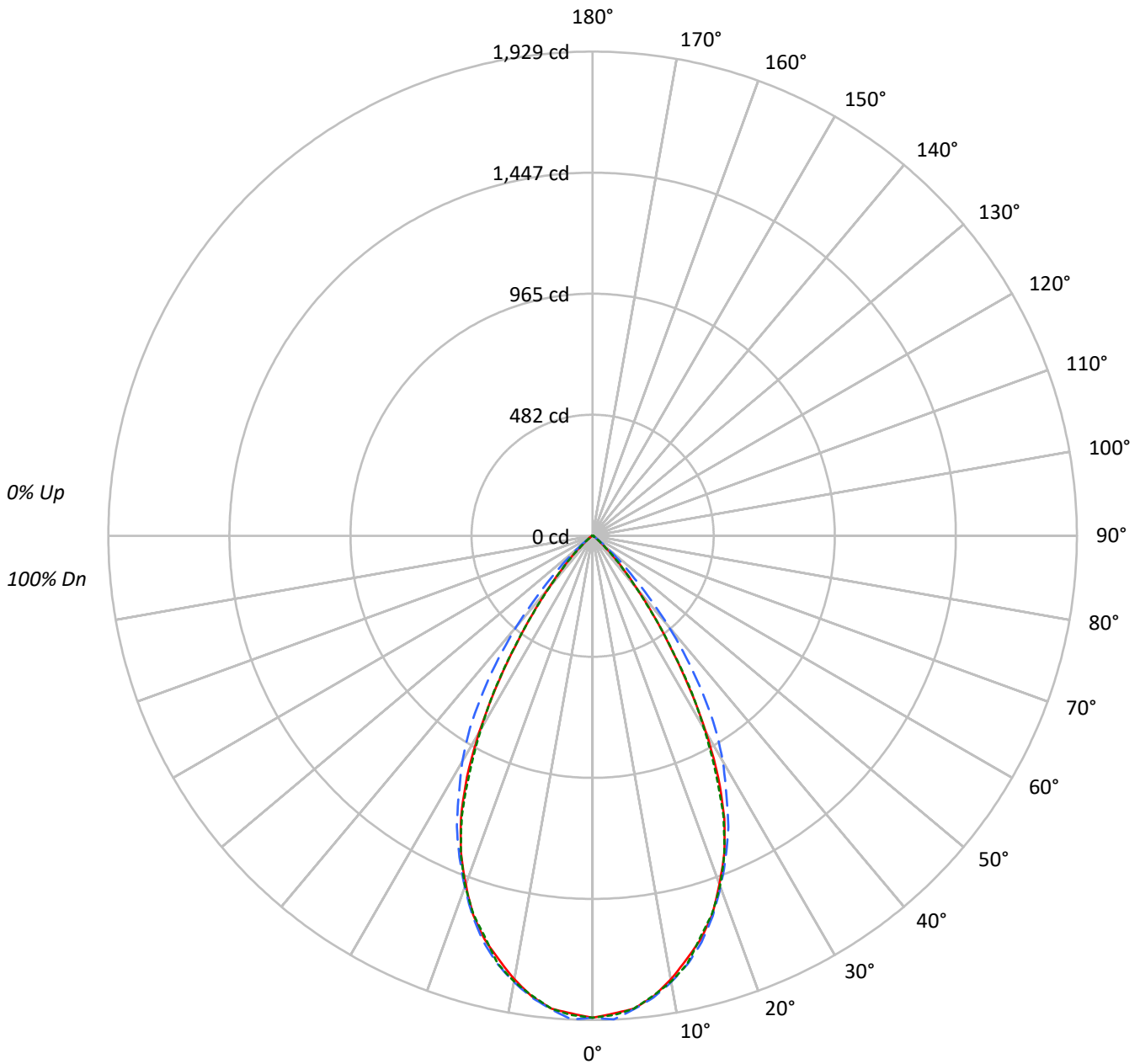
Lumens per Lamp: N/A
Luminaire Lumens: 1772.6 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	185259	185259	185259
5°	183128	183371	183128
10°	175811	176888	176643
15°	166211	167420	165352
20°	151681	152810	152430
25°	132079	136231	131163
30°	100430	115516	98948
35°	63219	89804	63796
40°	34109	59313	33492
45°	16143	29297	15979
50°	6049	10988	6049
55°	2860	3482	2675
60°	1872	1660	1872
65°	1119	1119	1119
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°	178.0	10.0
10°-20°	466.5	26.3
20°-30°	569.9	32.2
30°-40°	398.6	22.5
40°-50°	130.6	7.4
50°-60°	20.8	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°	1214.5	68.5
0°-40°	1613.1	91.0
0°-60°	1764.5	99.5
0°-90°	1772.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1772.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1920	1920	1920	1920	1920	
5°	1891	1891	1893	1882	1891	177
15°	1664	1671	1676	1665	1655	464
25°	1241	1259	1280	1256	1232	557
35°	537	634	762	624	542	343
45°	118	146	215	144	117	99
55°	17	18	21	18	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°	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0
2.5°	1905.3	1918.8	1915.2	1923.7	1923.7	1913.9	1916.3	1920.0	1924.9	1928.6	1899.2
5°	1890.7	1902.9	1891.9	1904.2	1896.8	1885.9	1904.2	1894.3	1900.5	1893.2	1898.0
7.5°	1851.7	1871.2	1849.3	1863.9	1859.0	1852.9	1860.2	1857.7	1861.4	1855.3	1842.0
10°	1794.4	1810.2	1795.7	1816.3	1806.5	1800.5	1806.5	1812.7	1811.4	1805.4	1812.7
12.5°	1728.5	1746.8	1739.5	1751.7	1740.7	1740.7	1755.4	1751.7	1752.9	1748.1	1756.5
15°	1663.9	1677.3	1666.3	1682.2	1677.3	1663.9	1669.9	1669.9	1679.7	1676.0	1666.3
17.5°	1583.4	1594.3	1582.1	1585.8	1581.0	1578.5	1604.0	1587.0	1596.7	1589.4	1590.7
20°	1477.2	1482.1	1478.4	1488.2	1482.1	1489.5	1486.9	1484.5	1484.5	1488.2	1479.6
22.5°	1369.8	1369.8	1373.5	1376.0	1380.8	1373.5	1388.1	1376.0	1377.1	1385.7	1383.3
25°	1240.6	1236.9	1245.5	1257.6	1262.5	1256.4	1275.9	1266.2	1273.5	1279.6	1266.2
27.5°	1083.2	1083.2	1091.7	1112.5	1116.1	1123.4	1150.3	1150.3	1160.0	1151.6	1161.3
30°	901.4	914.9	925.9	952.6	961.2	977.1	1005.1	1018.6	1040.5	1036.8	1031.9
32.5°	714.9	733.2	734.3	762.4	785.5	812.4	850.2	882.0	897.8	908.7	896.6
35°	536.7	547.7	557.5	576.9	616.0	651.4	685.6	727.0	755.0	762.4	751.4
37.5°	392.8	395.2	405.0	423.3	452.6	486.7	528.2	573.3	602.6	613.5	601.4
40°	270.8	273.2	278.2	294.0	318.3	342.8	375.8	422.1	448.9	470.9	455.0
42.5°	181.7	184.1	189.1	201.3	214.7	237.9	263.5	292.8	318.3	328.2	319.6
45°	118.3	118.3	120.8	129.3	136.6	154.9	173.2	191.5	208.6	214.7	208.6
47.5°	69.6	70.8	73.2	79.3	87.8	95.1	108.6	120.8	125.6	130.5	128.1
50°	40.3	40.3	43.9	47.6	53.6	58.5	63.5	68.3	70.8	73.2	70.8
52.5°	22.0	23.2	24.4	25.6	28.0	33.0	36.6	36.6	37.9	39.0	37.9
55°	17.0	17.0	17.0	17.0	18.3	18.3	18.3	19.5	19.5	20.7	19.5
57.5°	12.2	12.2	12.2	13.4	13.4	13.4	12.2	12.2	12.2	12.2	12.2
60°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	8.6	8.6	8.6	8.6
62.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
65°	4.9	4.9	6.1	6.1	6.1	6.1	6.1	4.9	4.9	4.9	4.9
67.5°	3.7	3.7	3.7	3.7	4.9	4.9	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°	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0	1920.0
2.5°	1920.0	1899.2	1901.6	1912.7	1906.6	1912.7	1911.5	1911.5
5°	1899.2	1893.2	1883.4	1879.7	1887.0	1902.9	1900.5	1890.7
7.5°	1860.2	1844.4	1855.3	1860.2	1854.1	1863.9	1868.7	1848.0
10°	1813.8	1807.8	1805.4	1807.8	1805.4	1815.1	1802.9	1802.9
12.5°	1748.1	1738.2	1738.2	1752.9	1744.4	1737.1	1746.8	1745.6
15°	1682.2	1662.6	1662.6	1667.5	1671.2	1666.3	1667.5	1655.3
17.5°	1584.5	1578.5	1570.0	1583.4	1587.0	1582.1	1585.8	1579.7
20°	1493.1	1493.1	1477.2	1483.3	1488.2	1491.9	1494.3	1484.5
22.5°	1376.0	1378.4	1367.4	1379.6	1383.3	1371.1	1373.5	1371.1
25°	1268.6	1267.4	1258.8	1253.9	1256.4	1251.5	1250.3	1232.0
27.5°	1150.3	1138.1	1119.8	1124.7	1104.0	1086.8	1086.8	1058.8
30°	1022.2	1001.5	977.1	952.6	934.4	914.9	903.9	888.1
32.5°	872.1	844.1	813.6	780.6	760.0	730.7	714.9	723.4
35°	723.4	681.9	640.4	607.5	575.8	558.6	539.2	541.6
37.5°	579.4	520.9	484.3	448.9	422.1	400.1	391.5	389.1
40°	423.3	376.9	340.3	314.6	296.5	279.3	269.6	265.9
42.5°	292.8	259.9	230.6	209.8	197.7	186.6	181.7	180.5
45°	190.3	170.8	151.2	136.6	126.9	119.6	118.3	117.1
47.5°	119.6	109.8	97.5	86.6	78.1	73.2	69.6	69.6
50°	68.3	64.6	58.5	52.5	47.6	45.2	41.5	40.3
52.5°	36.6	36.6	34.2	29.3	25.6	23.2	23.2	22.0
55°	19.5	19.5	18.3	18.3	17.0	17.0	17.0	15.9
57.5°	12.2	12.2	13.4	13.4	12.2	12.2	12.2	12.2
60°	8.6	9.7	9.7	9.7	9.7	9.7	9.7	9.7
62.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
65°	4.9	6.1	6.1	6.1	6.1	4.9	4.9	4.9
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)