

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: P843432

Luminaire Tested: **LD4C20DE010B2750 EU4C20B27 4LBSQLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843432
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 EU4C20B27 4LBSQLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

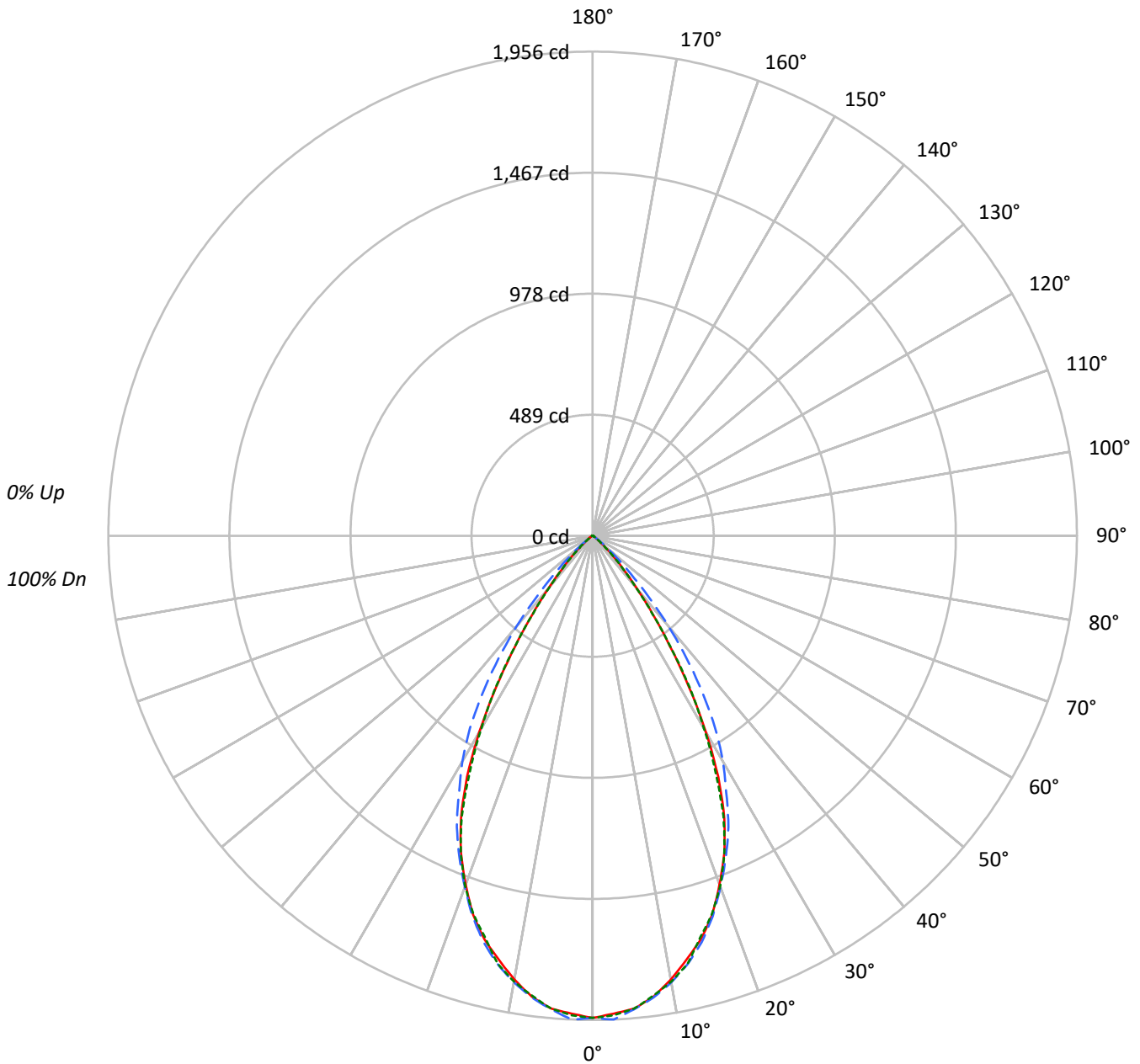
Lumens per Lamp: N/A
Luminaire Lumens: 1798.0 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P843432

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B27 4LBSQLI

Luminous Intensity Polar Plot





TEST NUMBER: P843432

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B27 4LBSQLI

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°	187912	187912	187912
5°	185753	185986	185753
10°	178329	179416	179181
15°	168589	169818	167720
20°	153847	154997	154618
25°	133974	138179	133048
30°	101867	117176	100363
35°	64126	91088	64703
40°	34600	60157	33971
45°	16375	29720	16211
50°	6124	11138	6124
55°	2910	3533	2708
60°	1910	1679	1910
65°	1142	1142	1142
70°	677	1044	677
75°	485	485	485
80°	722	722	722
85°	0	0	0



TEST NUMBER: P843432

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B27 4LBSQLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.6	10.0
10°-20°	473.2	26.3
20°-30°	578.1	32.2
30°-40°	404.3	22.5
40°-50°	132.5	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°	1231.9	68.5
0°-40°	1636.2	91.0
0°-60°	1789.8	99.5
0°-90°	1798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1798.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1948	1948	1948	1948	1948	
5°	1918	1918	1920	1908	1918	180
15°	1688	1694	1700	1689	1679	471
25°	1258	1277	1298	1274	1250	565
35°	544	643	773	633	549	347
45°	120	148	218	146	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	



TEST NUMBER: P843432

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B27 4LBSQLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5
2.5°	1932.6	1946.3	1942.6	1951.2	1951.2	1941.3	1943.8	1947.5	1952.4	1956.2	1926.5
5°	1917.8	1930.2	1919.0	1931.3	1923.9	1912.8	1931.3	1921.5	1927.7	1920.2	1925.2
7.5°	1878.3	1898.0	1875.7	1890.6	1885.7	1879.4	1886.8	1884.4	1888.1	1882.0	1868.3
10°	1820.1	1836.2	1821.4	1842.3	1832.5	1826.2	1832.5	1838.6	1837.3	1831.2	1838.6
12.5°	1753.2	1771.7	1764.3	1776.7	1765.6	1765.6	1780.4	1776.7	1778.0	1773.0	1781.7
15°	1687.7	1701.3	1690.1	1706.3	1701.3	1687.7	1693.8	1693.8	1703.7	1700.0	1690.1
17.5°	1606.0	1617.1	1604.7	1608.4	1603.6	1601.0	1627.1	1609.7	1619.6	1612.2	1613.4
20°	1498.3	1503.3	1499.6	1509.5	1503.3	1510.7	1508.3	1505.8	1505.8	1509.5	1500.9
22.5°	1389.4	1389.4	1393.2	1395.7	1400.6	1393.2	1408.0	1395.7	1396.9	1405.6	1403.1
25°	1258.4	1254.6	1263.2	1275.6	1280.6	1274.3	1294.2	1284.3	1291.7	1297.9	1284.3
27.5°	1098.8	1098.8	1107.3	1128.4	1132.1	1139.5	1166.8	1166.8	1176.6	1168.1	1177.9
30°	914.3	928.0	939.1	966.3	975.0	991.1	1019.6	1033.1	1055.4	1051.7	1046.7
32.5°	725.0	743.6	744.9	773.3	796.8	824.0	862.4	894.5	910.6	921.7	909.4
35°	544.4	555.6	565.4	585.2	624.8	660.7	695.4	737.4	765.9	773.3	762.1
37.5°	398.4	400.9	410.8	429.3	459.0	493.7	535.8	581.5	611.2	622.3	609.9
40°	274.7	277.1	282.1	298.1	322.9	347.6	381.1	428.1	455.3	477.6	461.4
42.5°	184.3	186.8	191.7	204.1	217.8	241.2	267.3	297.0	322.9	332.8	324.2
45°	120.0	120.0	122.5	131.1	138.6	157.2	175.7	194.3	211.5	217.8	211.5
47.5°	70.5	71.7	74.2	80.4	89.1	96.5	110.1	122.5	127.4	132.4	129.9
50°	40.8	40.8	44.5	48.2	54.5	59.3	64.3	69.3	71.7	74.2	71.7
52.5°	22.3	23.5	24.7	26.0	28.5	33.4	37.1	37.1	38.4	39.6	38.4
55°	17.3	17.3	17.3	17.3	18.6	18.6	18.6	19.8	19.8	21.0	19.8
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



TEST NUMBER: P843432

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B27 4LBSQLI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5	1947.5
2.5°	1947.5	1926.5	1928.9	1940.0	1933.9	1940.0	1938.9	1938.9
5°	1926.5	1920.2	1910.4	1906.6	1914.1	1930.2	1927.7	1917.8
7.5°	1886.8	1870.7	1882.0	1886.8	1880.7	1890.6	1895.5	1874.4
10°	1839.9	1833.7	1831.2	1833.7	1831.2	1841.1	1828.8	1828.8
12.5°	1773.0	1763.2	1763.2	1778.0	1769.3	1761.9	1771.7	1770.6
15°	1706.3	1686.4	1686.4	1691.4	1695.1	1690.1	1691.4	1679.0
17.5°	1607.2	1601.0	1592.4	1606.0	1609.7	1604.7	1608.4	1602.3
20°	1514.4	1514.4	1498.3	1504.5	1509.5	1513.3	1515.7	1505.8
22.5°	1395.7	1398.2	1387.0	1399.4	1403.1	1390.7	1393.2	1390.7
25°	1286.7	1285.6	1276.9	1271.9	1274.3	1269.5	1268.2	1249.7
27.5°	1166.8	1154.4	1135.8	1140.8	1119.7	1102.4	1102.4	1073.9
30°	1036.8	1015.9	991.1	966.3	947.7	928.0	916.9	900.8
32.5°	884.6	856.3	825.3	791.9	770.8	741.2	725.0	733.8
35°	733.8	691.6	649.6	616.2	584.0	566.7	546.9	549.3
37.5°	587.7	528.3	491.3	455.3	428.1	405.8	397.1	394.7
40°	429.3	382.3	345.2	319.2	300.7	283.3	273.5	269.7
42.5°	297.0	263.6	233.8	212.8	200.4	189.3	184.3	183.2
45°	193.0	173.2	153.5	138.6	128.7	121.3	120.0	118.8
47.5°	121.3	111.4	99.0	87.9	79.2	74.2	70.5	70.5
50°	69.3	65.6	59.3	53.2	48.2	45.8	42.1	40.8
52.5°	37.1	37.1	34.6	29.7	26.0	23.5	23.5	22.3
55°	19.8	19.8	18.6	18.6	17.3	17.3	17.3	16.1
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)