

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: P840191

Luminaire Tested: **LD4C45D010 EU4459030 4LBCSSQMW**

Issue Date: 5/25/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P840191
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209253)
Test Lab: INNOVATION CENTER
Issue Date: 5/25/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C45D010 EU4459030 4LBCSSQMW
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

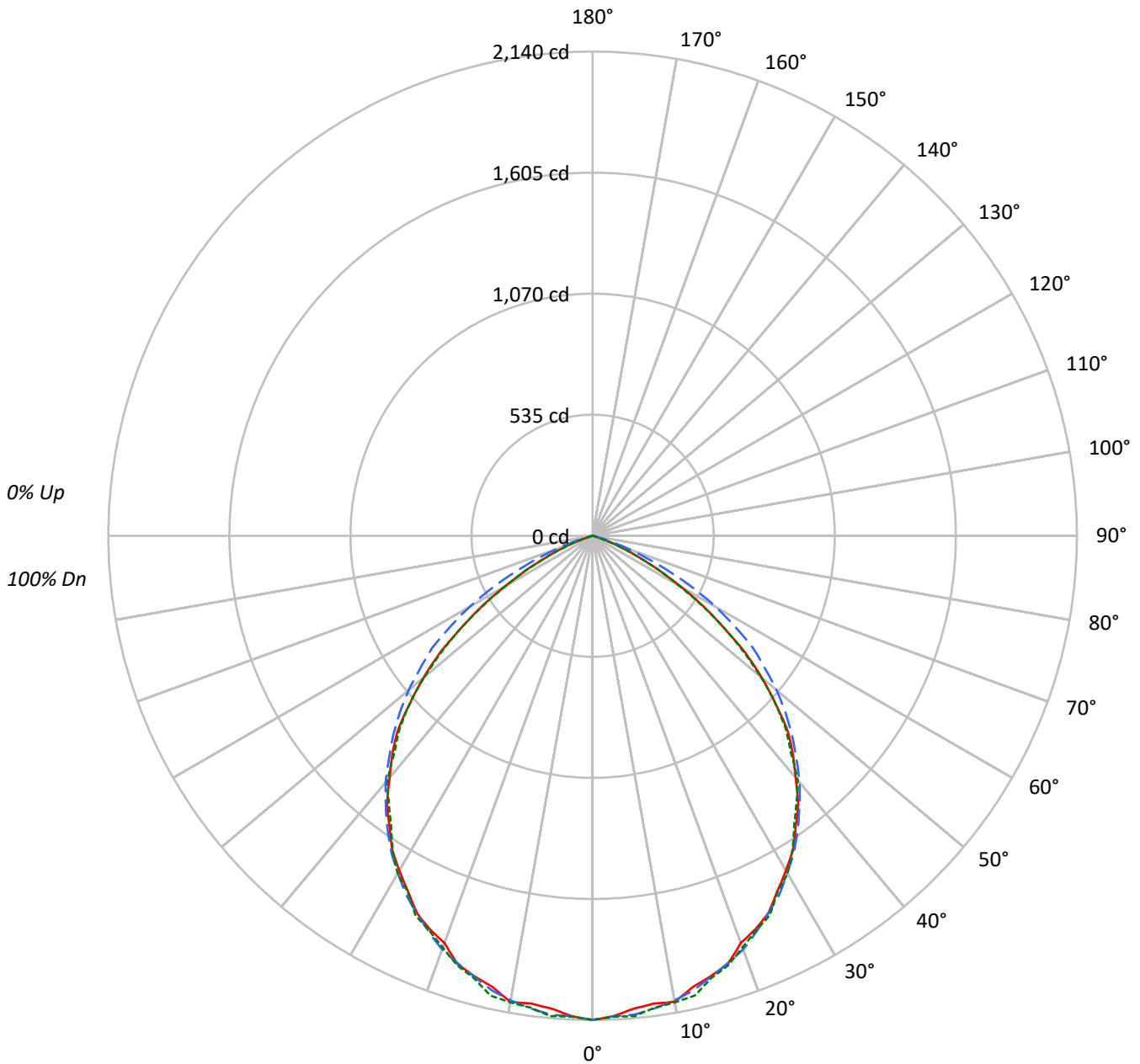
Lumens per Lamp: N/A
Luminaire Lumens: 4571.0 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
Input Voltage (V):
Input Current (A_{in}): 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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89								
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77								
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67								
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52								
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	206467	206467	206467
5°	203139	205783	206374
10°	204890	204293	205184
15°	201304	201603	202213
20°	196624	199746	198812
25°	195776	195776	197064
30°	190309	191669	192014
35°	184379	186169	182941
40°	175723	179162	177638
45°	166312	170051	164648
50°	146462	159237	145547
55°	118614	145715	119136
60°	86801	120823	85045
65°	52740	86051	51370
70°	20566	46323	19720
75°	2274	12489	2274
80°	1723	1723	1723
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.0	4.4
10°-20°	571.6	12.5
20°-30°	848.1	18.6
30°-40°	982.7	21.5
40°-50°	942.1	20.6
50°-60°	692.7	15.2
60°-70°	299.2	6.5
70°-80°	32.3	0.7
80°-90°	0.4	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°	1621.6	35.5
0°-40°	2604.2	57.0
0°-60°	4239.1	92.7
0°-90°	4571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4571.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2140	2140	2140	2140	2140	
5°	2097	2118	2125	2128	2131	200
15°	2015	2027	2018	2021	2024	568
25°	1839	1836	1839	1842	1851	842
35°	1565	1574	1580	1577	1553	979
45°	1219	1222	1246	1228	1207	927
55°	705	778	866	775	708	635
65°	231	289	377	286	225	237
75°	6	9	34	6	6	19
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8
2.5°	2124.6	2148.9	2152.0	2136.7	2130.7	2121.6	2142.8	2127.7	2133.7	2127.7	2124.6
5°	2097.3	2124.6	2127.7	2127.7	2121.6	2118.5	2127.7	2124.6	2121.6	2115.5	2124.6
7.5°	2085.1	2100.3	2115.5	2097.3	2106.3	2103.4	2124.6	2115.5	2112.4	2112.4	2106.3
10°	2091.2	2088.1	2100.3	2082.0	2088.1	2082.0	2100.3	2100.3	2094.2	2088.1	2085.1
12.5°	2042.5	2066.8	2066.8	2063.8	2057.7	2048.6	2066.8	2079.1	2060.7	2060.7	2057.7
15°	2015.2	2021.3	2024.3	2024.3	2021.3	2027.3	2036.4	2024.3	2027.3	2012.1	2018.2
17.5°	1984.8	1972.7	1981.7	1975.6	1978.7	1984.8	1997.0	1997.0	1978.7	1975.6	1981.7
20°	1914.9	1951.3	1954.4	1936.2	1939.2	1939.2	1960.5	1942.3	1954.4	1939.2	1945.3
22.5°	1881.4	1905.7	1908.8	1884.5	1899.6	1881.4	1902.7	1875.3	1905.7	1884.5	1893.5
25°	1838.9	1835.9	1844.9	1832.8	1835.9	1835.9	1851.0	1838.9	1848.0	1835.9	1838.9
27.5°	1769.0	1793.3	1790.2	1778.1	1784.2	1781.2	1811.6	1778.1	1796.3	1781.2	1787.3
30°	1708.1	1729.5	1723.4	1711.2	1711.2	1702.1	1735.5	1726.4	1723.4	1723.4	1720.3
32.5°	1647.4	1650.5	1644.4	1647.4	1650.5	1638.3	1665.6	1653.5	1650.5	1653.5	1656.6
35°	1565.3	1565.3	1571.4	1562.3	1574.5	1574.5	1598.8	1583.5	1580.5	1571.4	1580.5
37.5°	1492.4	1483.3	1486.3	1486.3	1492.4	1498.4	1510.6	1504.5	1504.5	1495.5	1501.5
40°	1395.1	1389.1	1398.1	1398.1	1407.3	1407.3	1419.4	1413.4	1422.4	1422.4	1422.4
42.5°	1310.1	1310.1	1304.0	1313.0	1316.1	1313.0	1334.4	1331.3	1334.4	1328.3	1331.3
45°	1218.8	1218.8	1212.7	1209.7	1224.9	1221.9	1246.2	1237.0	1249.2	1243.1	1246.2
47.5°	1094.2	1109.4	1100.2	1109.4	1127.6	1130.7	1145.9	1139.8	1151.9	1142.9	1155.0
50°	975.7	975.7	984.8	996.9	1015.2	1018.3	1036.5	1048.6	1054.7	1057.7	1060.8
52.5°	851.1	848.0	857.2	872.3	887.6	899.7	917.9	936.2	948.3	966.6	957.4
55°	705.1	711.2	720.4	738.6	762.9	778.1	793.3	817.6	838.9	848.0	866.2
57.5°	580.5	574.4	580.5	604.8	632.2	644.4	665.7	690.0	720.4	738.6	744.7
60°	449.8	452.9	459.0	480.3	501.5	519.7	528.9	568.3	595.8	614.0	626.1
62.5°	331.4	337.4	343.5	361.7	383.0	398.2	413.3	446.8	471.1	489.4	501.5
65°	231.0	234.0	243.2	252.2	273.6	288.7	300.9	328.3	352.6	367.8	376.9
67.5°	142.9	145.8	151.9	164.2	179.3	191.5	203.6	221.9	243.2	258.3	261.4
70°	72.9	76.0	79.0	88.2	100.3	106.4	115.5	130.7	145.8	158.0	164.2
72.5°	24.3	24.3	27.4	33.5	39.6	45.6	48.6	63.9	76.0	82.1	85.1
75°	6.1	6.1	6.1	6.1	6.1	9.2	9.2	18.2	24.3	30.4	33.5
77.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	6.1	6.1
80°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	0.0	0.0	0.0	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	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8
2.5°	2139.8	2133.7	2130.7	2133.7	2133.7	2130.7	2139.8	2152.0	2167.1	2127.7
5°	2136.7	2130.7	2136.7	2118.5	2127.7	2121.6	2133.7	2130.7	2142.8	2130.7
7.5°	2127.7	2115.5	2118.5	2109.4	2121.6	2106.3	2115.5	2133.7	2121.6	2103.4
10°	2097.3	2091.2	2112.4	2082.0	2076.0	2088.1	2112.4	2094.2	2088.1	2094.2
12.5°	2066.8	2066.8	2076.0	2051.7	2054.6	2060.7	2072.9	2060.7	2066.8	2082.0
15°	2033.4	2027.3	2042.5	2024.3	2021.3	2015.2	2027.3	2027.3	2033.4	2024.3
17.5°	1993.9	1984.8	1984.8	1978.7	1975.6	1990.9	1997.0	1999.9	2003.0	1990.9
20°	1945.3	1942.3	1951.3	1942.3	1945.3	1948.4	1948.4	1942.3	1969.6	1936.2
22.5°	1893.5	1902.7	1890.6	1884.5	1890.6	1896.6	1896.6	1899.6	1893.5	1887.5
25°	1841.9	1848.0	1851.0	1832.8	1841.9	1832.8	1854.1	1857.1	1844.9	1851.0
27.5°	1796.3	1787.3	1784.2	1772.0	1778.1	1775.1	1778.1	1778.1	1796.3	1772.0
30°	1726.4	1717.3	1720.3	1711.2	1714.2	1711.2	1714.2	1714.2	1726.4	1723.4
32.5°	1659.5	1650.5	1653.5	1644.4	1644.4	1647.4	1641.3	1641.3	1650.5	1644.4
35°	1595.7	1574.5	1577.4	1574.5	1577.4	1565.3	1565.3	1562.3	1568.4	1553.1
37.5°	1504.5	1495.5	1492.4	1489.4	1492.4	1486.3	1492.4	1483.3	1492.4	1480.2
40°	1422.4	1416.3	1419.4	1401.2	1401.2	1404.2	1398.1	1395.1	1398.1	1410.3
42.5°	1340.4	1328.3	1322.2	1316.1	1319.1	1310.1	1307.0	1300.9	1307.0	1294.8
45°	1243.1	1243.1	1240.1	1224.9	1228.0	1228.0	1215.8	1203.7	1206.6	1206.6
47.5°	1155.0	1149.0	1145.9	1130.7	1127.6	1124.7	1112.4	1103.3	1103.3	1094.2
50°	1057.7	1051.6	1042.6	1027.3	1021.2	1003.0	994.0	981.8	969.6	969.6
52.5°	966.6	945.2	933.1	908.8	899.7	890.5	866.2	857.2	848.0	838.9
55°	857.2	838.9	814.6	787.2	775.1	759.8	735.5	717.3	705.1	708.2
57.5°	750.8	720.4	696.1	659.6	644.4	635.2	610.9	586.6	574.4	574.4
60°	620.1	595.8	565.4	531.9	519.7	504.6	474.1	459.0	449.8	440.7
62.5°	495.4	477.2	449.8	407.3	398.2	383.0	361.7	343.5	334.3	334.3
65°	370.8	352.6	328.3	297.9	285.7	273.6	255.3	237.1	227.9	225.0
67.5°	261.4	240.1	218.9	194.6	185.4	179.3	161.1	148.9	142.9	139.8
70°	158.0	145.8	130.7	112.5	103.3	97.2	85.1	76.0	72.9	69.9
72.5°	82.1	72.9	60.8	48.6	42.5	36.5	30.4	24.3	21.3	21.3
75°	30.4	24.3	15.3	9.2	6.1	6.1	6.1	6.1	6.1	6.1
77.5°	6.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
80°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	0.0	0.0	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	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	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)