

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: P840197

Luminaire Tested: **LD4C45D010 EU4459050 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: P840197
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 EU4459050 4LBCSSQMW
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

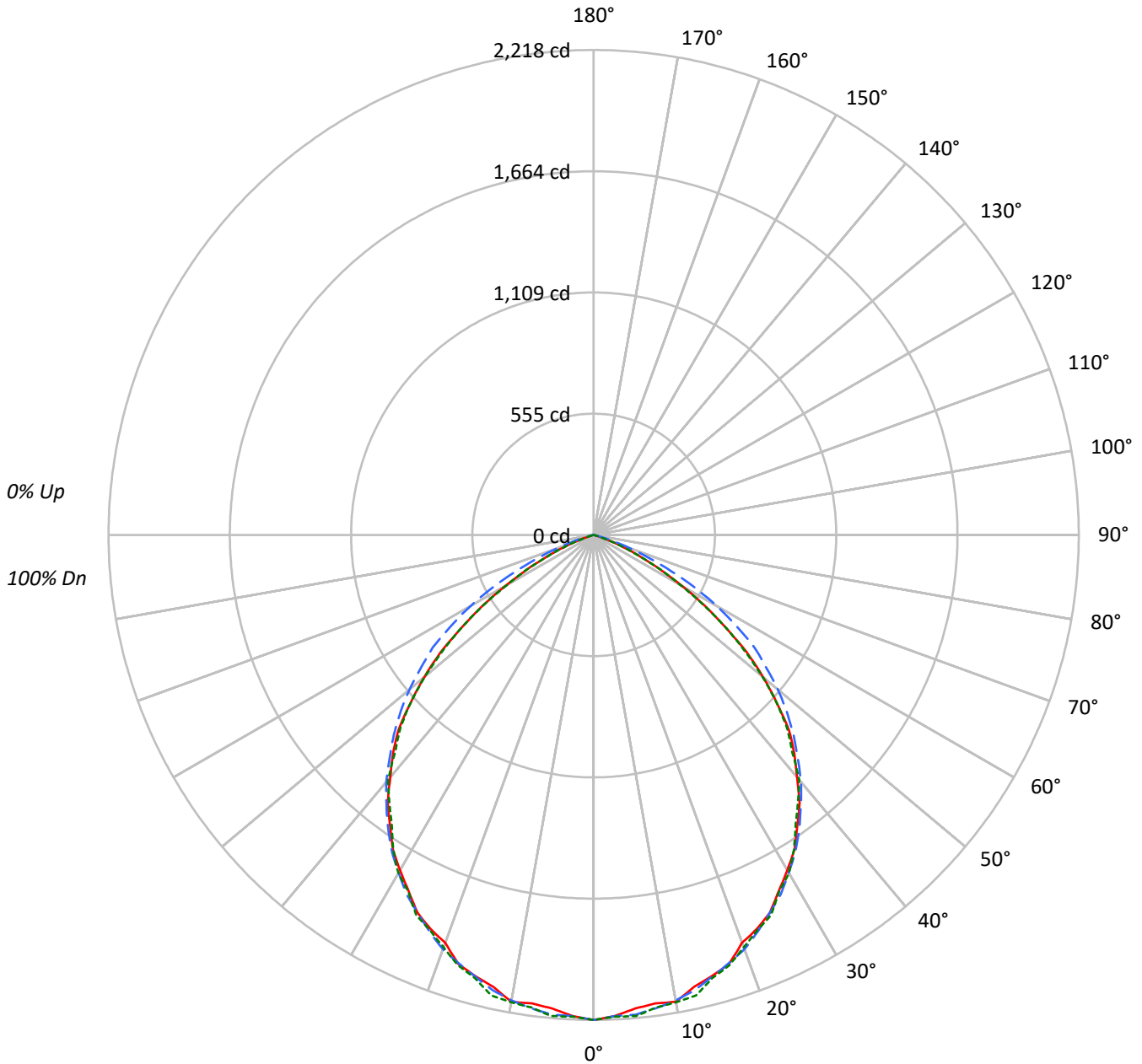
Lumens per Lamp: N/A
Luminaire Lumens: 4738.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	214012	214012	214012
5°	210558	213300	213910
10°	212376	211759	212680
15°	208656	208965	209595
20°	203802	207036	206071
25°	202920	202920	204261
30°	197273	198665	199033
35°	191116	192977	189632
40°	182147	185711	184124
45°	172385	176260	170665
50°	151821	165061	150876
55°	122954	151048	123493
60°	89966	125243	88152
65°	54681	89179	53242
70°	21328	48016	20453
75°	2349	12936	2349
80°	1778	1778	1778
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.4	4.4
10°-20°	592.4	12.5
20°-30°	879.0	18.6
30°-40°	1018.6	21.5
40°-50°	976.6	20.6
50°-60°	718.0	15.2
60°-70°	310.1	6.5
70°-80°	33.5	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°	1680.8	35.5
0°-40°	2699.4	57.0
0°-60°	4394.0	92.7
0°-90°	4738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2218	2218	2218	2218	2218	
5°	2174	2196	2202	2205	2208	207
15°	2089	2101	2092	2095	2098	589
25°	1906	1903	1906	1909	1919	873
35°	1622	1632	1638	1635	1610	1015
45°	1263	1266	1292	1273	1251	960
55°	731	806	898	803	734	658
65°	240	299	391	296	233	246
75°	6	10	35	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°	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0
2.5°	2202.2	2227.4	2230.6	2214.8	2208.5	2199.1	2221.1	2205.4	2211.7	2205.4	2202.2
5°	2173.9	2202.2	2205.4	2205.4	2199.1	2195.9	2205.4	2202.2	2199.1	2192.8	2202.2
7.5°	2161.3	2177.0	2192.8	2173.9	2183.3	2180.2	2202.2	2192.8	2189.6	2189.6	2183.3
10°	2167.6	2164.4	2177.0	2158.1	2164.4	2158.1	2177.0	2177.0	2170.7	2164.4	2161.3
12.5°	2117.1	2142.3	2142.3	2139.2	2132.9	2123.4	2142.3	2155.0	2136.0	2136.0	2132.9
15°	2088.8	2095.1	2098.2	2098.2	2095.1	2101.4	2110.8	2098.2	2101.4	2085.6	2091.9
17.5°	2057.3	2044.7	2054.1	2047.8	2051.0	2057.3	2069.9	2069.9	2051.0	2047.8	2054.1
20°	1984.8	2022.6	2025.8	2006.9	2010.0	2010.0	2032.1	2013.2	2025.8	2010.0	2016.3
22.5°	1950.1	1975.3	1978.5	1953.3	1969.0	1950.1	1972.2	1943.8	1975.3	1953.3	1962.7
25°	1906.0	1902.9	1912.3	1899.7	1902.9	1902.9	1918.6	1906.0	1915.5	1902.9	1906.0
27.5°	1833.7	1858.9	1855.6	1843.0	1849.3	1846.3	1877.8	1843.0	1861.9	1846.3	1852.6
30°	1770.6	1792.7	1786.4	1773.8	1773.8	1764.3	1799.0	1789.4	1786.4	1786.4	1783.1
32.5°	1707.6	1710.8	1704.5	1707.6	1710.8	1698.2	1726.5	1713.9	1710.8	1713.9	1717.1
35°	1622.5	1622.5	1628.8	1619.4	1632.0	1632.0	1657.2	1641.4	1638.3	1628.8	1638.3
37.5°	1546.9	1537.5	1540.6	1540.6	1546.9	1553.2	1565.8	1559.5	1559.5	1550.1	1556.4
40°	1446.1	1439.8	1449.2	1449.2	1458.7	1458.7	1471.3	1465.0	1474.4	1474.4	1474.4
42.5°	1357.9	1357.9	1351.6	1361.0	1364.2	1361.0	1383.1	1379.9	1383.1	1376.8	1379.9
45°	1263.3	1263.3	1257.0	1253.9	1269.6	1266.5	1291.7	1282.2	1294.8	1288.5	1291.7
47.5°	1134.1	1149.9	1140.4	1149.9	1168.8	1172.1	1187.7	1181.4	1194.0	1184.6	1197.2
50°	1011.4	1011.4	1020.8	1033.4	1052.3	1055.5	1074.4	1087.0	1093.3	1096.3	1099.6
52.5°	882.2	879.0	888.5	904.2	920.0	932.6	951.5	970.4	983.0	1001.9	992.4
55°	730.9	737.2	746.7	765.6	790.8	806.5	822.3	847.5	869.6	879.0	897.9
57.5°	601.7	595.4	601.7	626.9	655.3	667.9	690.0	715.2	746.7	765.6	771.9
60°	466.2	469.4	475.7	497.8	519.8	538.7	548.2	589.1	617.5	636.4	649.0
62.5°	343.5	349.8	356.1	375.0	396.9	412.7	428.4	463.1	488.3	507.2	519.8
65°	239.5	242.6	252.1	261.5	283.6	299.2	311.8	340.3	365.4	381.3	390.6
67.5°	148.1	151.2	157.5	170.2	185.9	198.5	211.1	230.0	252.1	267.8	271.0
70°	75.6	78.8	81.9	91.4	104.0	110.3	119.7	135.5	151.2	163.8	170.2
72.5°	25.2	25.2	28.4	34.7	41.0	47.3	50.4	66.2	78.8	85.1	88.2
75°	6.3	6.3	6.3	6.3	6.3	9.5	9.5	18.9	25.2	31.5	34.7
77.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.3	6.3
80°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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°	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0	2218.0
2.5°	2218.0	2211.7	2208.5	2211.7	2211.7	2208.5	2218.0	2230.6	2246.3	2205.4
5°	2214.8	2208.5	2214.8	2195.9	2205.4	2199.1	2211.7	2208.5	2221.1	2208.5
7.5°	2205.4	2192.8	2195.9	2186.5	2199.1	2183.3	2192.8	2211.7	2199.1	2180.2
10°	2173.9	2167.6	2189.6	2158.1	2151.8	2164.4	2189.6	2170.7	2164.4	2170.7
12.5°	2142.3	2142.3	2151.8	2126.6	2129.7	2136.0	2148.6	2136.0	2142.3	2158.1
15°	2107.7	2101.4	2117.1	2098.2	2095.1	2088.8	2101.4	2101.4	2107.7	2098.2
17.5°	2066.7	2057.3	2057.3	2051.0	2047.8	2063.6	2069.9	2073.0	2076.2	2063.6
20°	2016.3	2013.2	2022.6	2013.2	2016.3	2019.5	2019.5	2013.2	2041.5	2006.9
22.5°	1962.7	1972.2	1959.6	1953.3	1959.6	1965.9	1965.9	1969.0	1962.7	1956.4
25°	1909.2	1915.5	1918.6	1899.7	1909.2	1899.7	1921.8	1924.9	1912.3	1918.6
27.5°	1861.9	1852.6	1849.3	1836.7	1843.0	1840.0	1843.0	1843.0	1861.9	1836.7
30°	1789.4	1780.1	1783.1	1773.8	1776.8	1773.8	1776.8	1776.8	1789.4	1786.4
32.5°	1720.2	1710.8	1713.9	1704.5	1704.5	1707.6	1701.3	1701.3	1710.8	1704.5
35°	1654.0	1632.0	1635.1	1632.0	1635.1	1622.5	1622.5	1619.4	1625.7	1609.9
37.5°	1559.5	1550.1	1546.9	1543.8	1546.9	1540.6	1546.9	1537.5	1546.9	1534.3
40°	1474.4	1468.1	1471.3	1452.4	1452.4	1455.5	1449.2	1446.1	1449.2	1461.8
42.5°	1389.4	1376.8	1370.5	1364.2	1367.3	1357.9	1354.7	1348.4	1354.7	1342.1
45°	1288.5	1288.5	1285.4	1269.6	1272.8	1272.8	1260.2	1247.6	1250.7	1250.7
47.5°	1197.2	1190.9	1187.7	1172.1	1168.8	1165.8	1153.0	1143.6	1143.6	1134.1
50°	1096.3	1090.0	1080.7	1064.8	1058.6	1039.7	1030.3	1017.7	1005.1	1005.1
52.5°	1001.9	979.8	967.2	942.0	932.6	923.1	897.9	888.5	879.0	869.6
55°	888.5	869.6	844.4	816.0	803.4	787.6	762.4	743.5	730.9	734.1
57.5°	778.2	746.7	721.5	683.7	667.9	658.4	633.2	608.0	595.4	595.4
60°	642.7	617.5	586.0	551.3	538.7	523.0	491.4	475.7	466.2	456.8
62.5°	513.5	494.6	466.2	422.1	412.7	396.9	375.0	356.1	346.6	346.6
65°	384.3	365.4	340.3	308.8	296.2	283.6	264.7	245.8	236.3	233.2
67.5°	271.0	248.9	226.9	201.7	192.2	185.9	167.0	154.4	148.1	144.9
70°	163.8	151.2	135.5	116.6	107.1	100.8	88.2	78.8	75.6	72.5
72.5°	85.1	75.6	63.0	50.4	44.1	37.8	31.5	25.2	22.1	22.1
75°	31.5	25.2	15.8	9.5	6.3	6.3	6.3	6.3	6.3	6.3
77.5°	6.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
80°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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)