

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: P840123

Luminaire Tested: **LD4C10D010 EU4109035 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: P840123
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: LD4C10D010 EU4109035 4LBCSSQMW
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

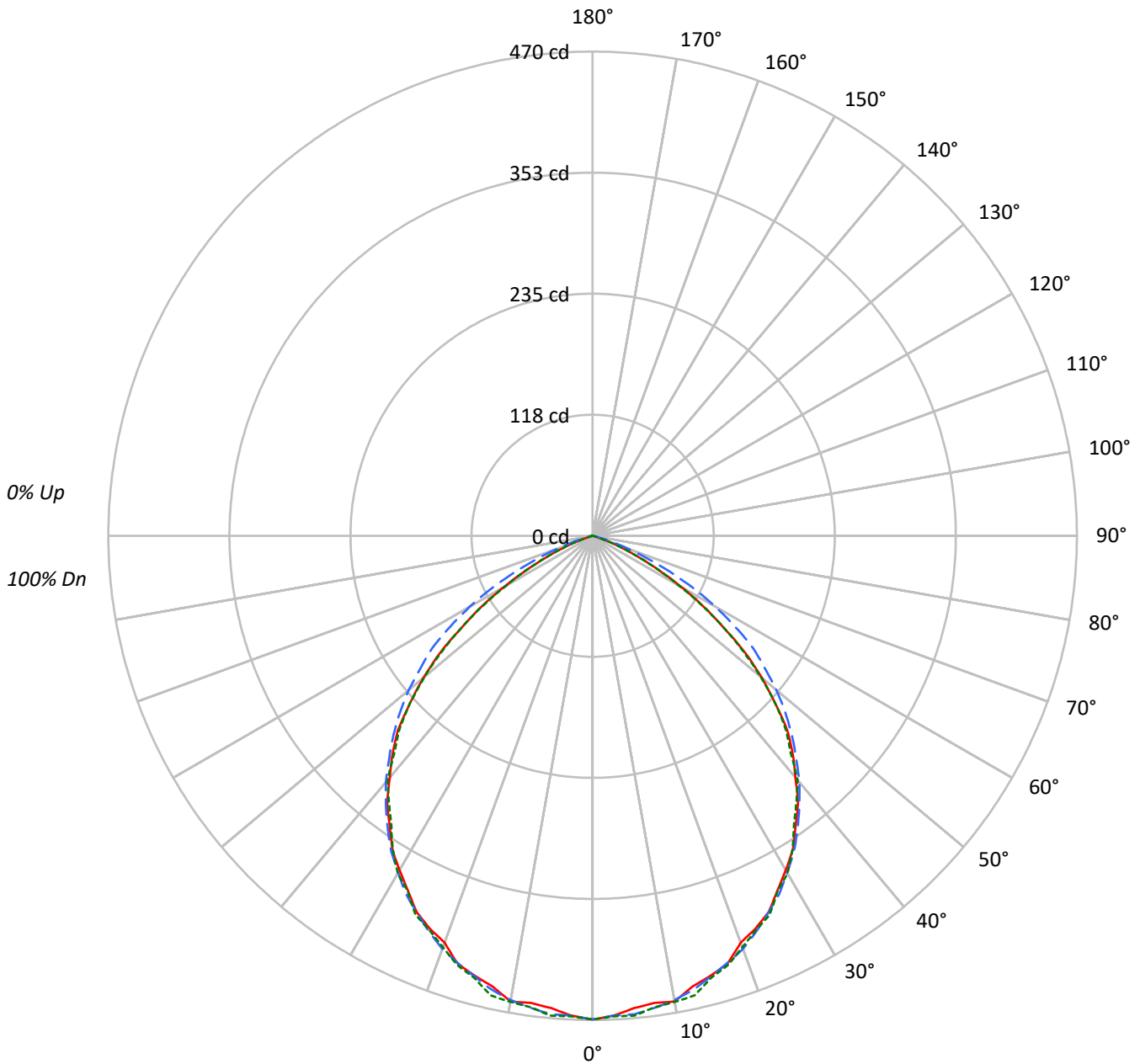
Lumens per Lamp: N/A
Luminaire Lumens: 1003.0 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.8
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				100				
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89				89				
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77				
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67				67				
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59				59				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46				
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41				41				
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37				37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33				
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31				31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	45302	45302	45302
5°	44574	45155	45281
10°	44962	44825	45021
15°	44173	44232	44372
20°	43147	43824	43629
25°	42958	42958	43246
30°	41759	42059	42137
35°	40461	40850	40143
40°	38556	39311	38984
45°	36488	37307	36134
50°	32139	34946	31943
55°	26024	31979	26142
60°	19047	26515	18661
65°	11575	18881	11279
70°	4514	10156	4316
75°	485	2721	485
80°	389	389	389
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	4.4
10°-20°	125.4	12.5
20°-30°	186.1	18.6
30°-40°	215.6	21.5
40°-50°	206.7	20.6
50°-60°	152.0	15.2
60°-70°	65.6	6.5
70°-80°	7.1	0.7
80°-90°	0.1	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°	355.8	35.5
0°-40°	571.4	57.0
0°-60°	930.2	92.7
0°-90°	1003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	460	465	466	467	468	44
15°	442	445	443	444	444	125
25°	404	403	404	404	406	185
35°	344	346	347	346	341	215
45°	267	268	273	269	265	203
55°	155	171	190	170	155	139
65°	51	63	83	63	49	52
75°	1	2	7	1	1	4
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°	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5
2.5°	466.2	471.5	472.2	468.9	467.5	465.5	470.2	466.9	468.2	466.9	466.2
5°	460.2	466.2	466.9	466.9	465.5	464.9	466.9	466.2	465.5	464.2	466.2
7.5°	457.5	460.9	464.2	460.2	462.2	461.5	466.2	464.2	463.5	463.5	462.2
10°	458.9	458.2	460.9	456.9	458.2	456.9	460.9	460.9	459.5	458.2	457.5
12.5°	448.2	453.5	453.5	452.9	451.5	449.5	453.5	456.2	452.2	452.2	451.5
15°	442.2	443.5	444.2	444.2	443.5	444.9	446.8	444.2	444.9	441.5	442.8
17.5°	435.5	432.9	434.8	433.5	434.2	435.5	438.2	438.2	434.2	433.5	434.8
20°	420.2	428.2	428.9	424.9	425.5	425.5	430.2	426.2	428.9	425.5	426.8
22.5°	412.8	418.2	418.8	413.5	416.8	412.8	417.5	411.5	418.2	413.5	415.5
25°	403.5	402.8	404.8	402.2	402.8	402.8	406.2	403.5	405.5	402.8	403.5
27.5°	388.2	393.5	392.8	390.2	391.5	390.8	397.5	390.2	394.2	390.8	392.2
30°	374.8	379.5	378.2	375.5	375.5	373.5	380.8	378.8	378.2	378.2	377.5
32.5°	361.5	362.2	360.8	361.5	362.2	359.5	365.5	362.8	362.2	362.8	363.5
35°	343.5	343.5	344.8	342.8	345.5	345.5	350.8	347.5	346.8	344.8	346.8
37.5°	327.5	325.5	326.1	326.1	327.5	328.8	331.5	330.1	330.1	328.1	329.5
40°	306.1	304.8	306.8	306.8	308.8	308.8	311.5	310.1	312.1	312.1	312.1
42.5°	287.5	287.5	286.1	288.1	288.8	288.1	292.8	292.1	292.8	291.5	292.1
45°	267.4	267.4	266.1	265.4	268.8	268.1	273.4	271.4	274.1	272.8	273.4
47.5°	240.1	243.4	241.4	243.4	247.4	248.1	251.4	250.1	252.8	250.8	253.4
50°	214.1	214.1	216.1	218.8	222.8	223.4	227.4	230.1	231.4	232.1	232.8
52.5°	186.8	186.1	188.1	191.4	194.8	197.4	201.4	205.4	208.1	212.1	210.1
55°	154.7	156.1	158.1	162.1	167.4	170.7	174.1	179.4	184.1	186.1	190.1
57.5°	127.4	126.0	127.4	132.7	138.7	141.4	146.1	151.4	158.1	162.1	163.4
60°	98.7	99.4	100.7	105.4	110.0	114.0	116.1	124.7	130.7	134.7	137.4
62.5°	72.7	74.0	75.4	79.4	84.0	87.4	90.7	98.0	103.4	107.4	110.0
65°	50.7	51.3	53.4	55.3	60.0	63.3	66.0	72.0	77.4	80.7	82.7
67.5°	31.3	32.0	33.3	36.0	39.3	42.0	44.7	48.7	53.4	56.7	57.4
70°	16.0	16.7	17.3	19.3	22.0	23.3	25.3	28.7	32.0	34.7	36.0
72.5°	5.3	5.3	6.0	7.3	8.7	10.0	10.7	14.0	16.7	18.0	18.7
75°	1.3	1.3	1.3	1.3	1.3	2.0	2.0	4.0	5.3	6.7	7.3
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5	469.5
2.5°	469.5	468.2	467.5	468.2	468.2	467.5	469.5	472.2	475.5	466.9
5°	468.9	467.5	468.9	464.9	466.9	465.5	468.2	467.5	470.2	467.5
7.5°	466.9	464.2	464.9	462.9	465.5	462.2	464.2	468.2	465.5	461.5
10°	460.2	458.9	463.5	456.9	455.5	458.2	463.5	459.5	458.2	459.5
12.5°	453.5	453.5	455.5	450.2	450.8	452.2	454.8	452.2	453.5	456.9
15°	446.2	444.9	448.2	444.2	443.5	442.2	444.9	444.9	446.2	444.2
17.5°	437.5	435.5	435.5	434.2	433.5	436.9	438.2	438.8	439.5	436.9
20°	426.8	426.2	428.2	426.2	426.8	427.5	427.5	426.2	432.2	424.9
22.5°	415.5	417.5	414.8	413.5	414.8	416.2	416.2	416.8	415.5	414.2
25°	404.2	405.5	406.2	402.2	404.2	402.2	406.8	407.5	404.8	406.2
27.5°	394.2	392.2	391.5	388.8	390.2	389.5	390.2	390.2	394.2	388.8
30°	378.8	376.8	377.5	375.5	376.1	375.5	376.1	376.1	378.8	378.2
32.5°	364.1	362.2	362.8	360.8	360.8	361.5	360.1	360.1	362.2	360.8
35°	350.1	345.5	346.1	345.5	346.1	343.5	343.5	342.8	344.1	340.8
37.5°	330.1	328.1	327.5	326.8	327.5	326.1	327.5	325.5	327.5	324.8
40°	312.1	310.8	311.5	307.5	307.5	308.1	306.8	306.1	306.8	309.5
42.5°	294.1	291.5	290.1	288.8	289.4	287.5	286.8	285.4	286.8	284.1
45°	272.8	272.8	272.1	268.8	269.4	269.4	266.8	264.1	264.8	264.8
47.5°	253.4	252.1	251.4	248.1	247.4	246.8	244.1	242.1	242.1	240.1
50°	232.1	230.8	228.8	225.4	224.1	220.1	218.1	215.4	212.8	212.8
52.5°	212.1	207.4	204.7	199.4	197.4	195.4	190.1	188.1	186.1	184.1
55°	188.1	184.1	178.8	172.7	170.1	166.7	161.4	157.4	154.7	155.4
57.5°	164.7	158.1	152.7	144.7	141.4	139.4	134.0	128.7	126.0	126.0
60°	136.1	130.7	124.1	116.7	114.0	110.7	104.0	100.7	98.7	96.7
62.5°	108.7	104.7	98.7	89.4	87.4	84.0	79.4	75.4	73.4	73.4
65°	81.4	77.4	72.0	65.4	62.7	60.0	56.0	52.0	50.0	49.4
67.5°	57.4	52.7	48.0	42.7	40.7	39.3	35.3	32.7	31.3	30.7
70°	34.7	32.0	28.7	24.7	22.7	21.3	18.7	16.7	16.0	15.3
72.5°	18.0	16.0	13.3	10.7	9.3	8.0	6.7	5.3	4.7	4.7
75°	6.7	5.3	3.3	2.0	1.3	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)