

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: P840119

Luminaire Tested: **LD4C10D010 EU4109027 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: P840119
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 EU4109027 4LBCSSQMW
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

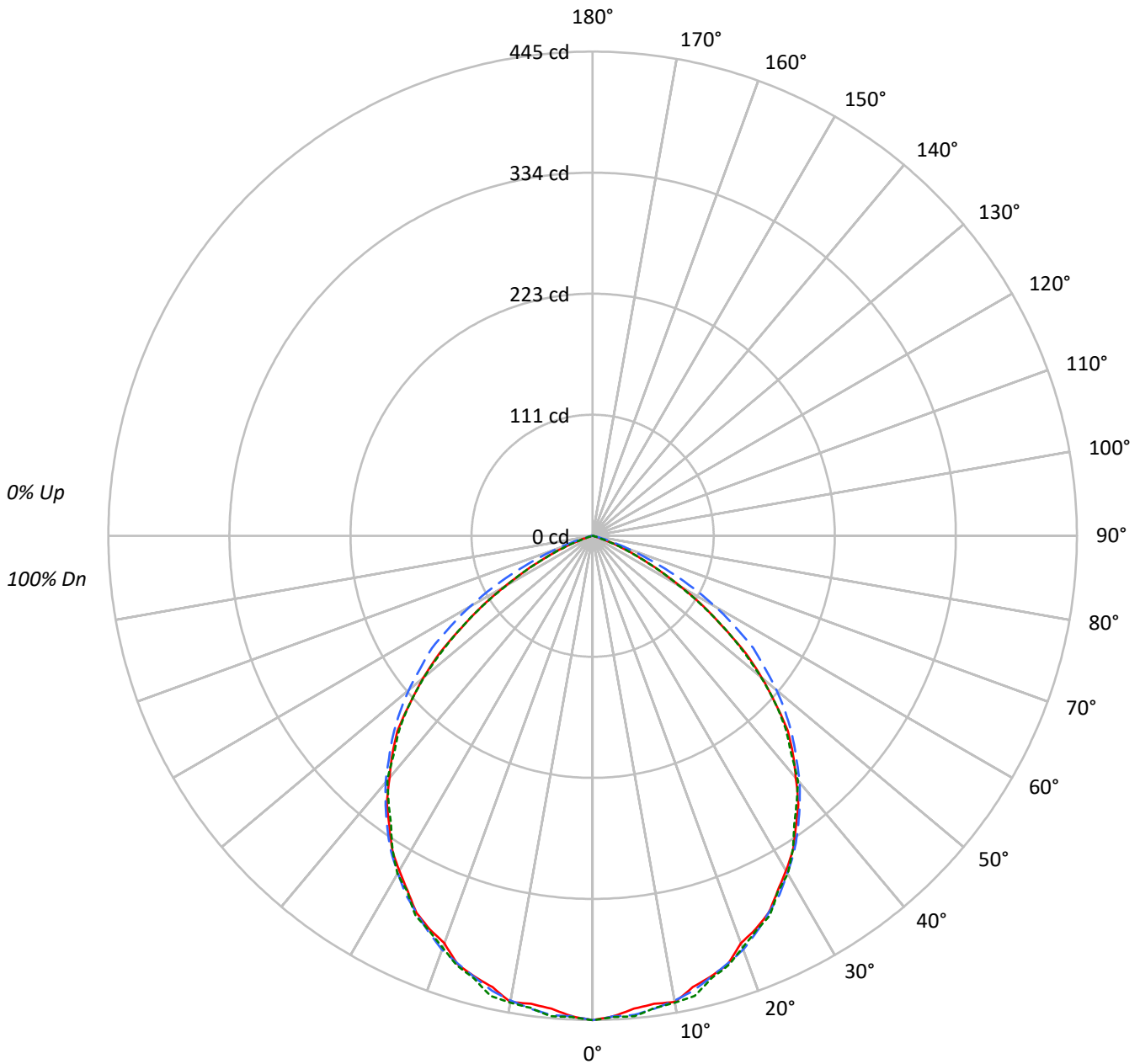
Lumens per Lamp: N/A
Luminaire Lumens: 951.0 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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
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	34		
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°	42957	42957	42957
5°	42259	42811	42937
10°	42630	42503	42689
15°	41885	41945	42065
20°	40908	41555	41360
25°	40733	40733	40999
30°	39597	39876	39954
35°	38365	38730	38058
40°	36565	37271	36956
45°	34605	35383	34250
50°	30472	33129	30277
55°	24678	30314	24779
60°	18063	25145	17696
65°	10982	17900	10685
70°	4288	9648	4119
75°	485	2610	485
80°	333	333	333
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	4.4
10°-20°	118.9	12.5
20°-30°	176.4	18.6
30°-40°	204.4	21.5
40°-50°	196.0	20.6
50°-60°	144.1	15.2
60°-70°	62.2	6.5
70°-80°	6.7	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°	337.4	35.5
0°-40°	541.8	57.0
0°-60°	881.9	92.7
0°-90°	951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	445	445	445	445	445	
5°	436	441	442	443	443	42
15°	419	422	420	420	421	118
25°	383	382	383	383	385	175
35°	326	328	329	328	323	204
45°	254	254	259	256	251	193
55°	147	162	180	161	147	132
65°	48	60	78	59	47	49
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°	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2
2.5°	442.0	447.1	447.7	444.5	443.3	441.4	445.8	442.7	443.9	442.7	442.0
5°	436.3	442.0	442.7	442.7	441.4	440.8	442.7	442.0	441.4	440.1	442.0
7.5°	433.8	437.0	440.1	436.3	438.2	437.6	442.0	440.1	439.5	439.5	438.2
10°	435.1	434.4	437.0	433.2	434.4	433.2	437.0	437.0	435.7	434.4	433.8
12.5°	424.9	430.0	430.0	429.4	428.1	426.2	430.0	432.5	428.7	428.7	428.1
15°	419.3	420.5	421.1	421.1	420.5	421.8	423.7	421.1	421.8	418.6	419.9
17.5°	412.9	410.4	412.3	411.0	411.7	412.9	415.5	415.5	411.7	411.0	412.3
20°	398.4	406.0	406.6	402.8	403.4	403.4	407.9	404.1	406.6	403.4	404.7
22.5°	391.4	396.5	397.1	392.1	395.2	391.4	395.9	390.2	396.5	392.1	394.0
25°	382.6	382.0	383.8	381.3	382.0	382.0	385.1	382.6	384.5	382.0	382.6
27.5°	368.0	373.1	372.5	369.9	371.2	370.6	376.9	369.9	373.7	370.6	371.8
30°	355.4	359.8	358.6	356.0	356.0	354.1	361.1	359.2	358.6	358.6	357.9
32.5°	342.7	343.4	342.1	342.7	343.4	340.9	346.5	344.0	343.4	344.0	344.6
35°	325.7	325.7	326.9	325.0	327.6	327.6	332.6	329.5	328.8	326.9	328.8
37.5°	310.5	308.6	309.2	309.2	310.5	311.8	314.3	313.0	313.0	311.1	312.4
40°	290.3	289.0	290.9	290.9	292.8	292.8	295.3	294.1	295.9	295.9	295.9
42.5°	272.6	272.6	271.3	273.2	273.8	273.2	277.6	277.0	277.6	276.4	277.0
45°	253.6	253.6	252.3	251.7	254.8	254.2	259.3	257.4	259.9	258.6	259.3
47.5°	227.6	230.8	228.9	230.8	234.6	235.3	238.4	237.1	239.7	237.8	240.3
50°	203.0	203.0	204.9	207.4	211.2	211.9	215.6	218.2	219.4	220.1	220.7
52.5°	177.1	176.4	178.3	181.5	184.7	187.2	191.0	194.8	197.3	201.1	199.2
55°	146.7	148.0	149.9	153.7	158.7	161.9	165.0	170.1	174.5	176.4	180.2
57.5°	120.8	119.5	120.8	125.8	131.5	134.1	138.5	143.6	149.9	153.7	154.9
60°	93.6	94.2	95.5	99.9	104.3	108.1	110.0	118.2	123.9	127.7	130.3
62.5°	68.9	70.2	71.5	75.3	79.7	82.8	86.0	93.0	98.0	101.8	104.3
65°	48.1	48.7	50.6	52.5	56.9	60.1	62.6	68.3	73.4	76.5	78.4
67.5°	29.7	30.3	31.6	34.2	37.3	39.8	42.4	46.2	50.6	53.7	54.4
70°	15.2	15.8	16.4	18.3	20.9	22.1	24.0	27.2	30.3	32.9	34.2
72.5°	5.1	5.1	5.7	7.0	8.2	9.5	10.1	13.3	15.8	17.1	17.7
75°	1.3	1.3	1.3	1.3	1.3	1.9	1.9	3.8	5.1	6.3	7.0
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2	445.2
2.5°	445.2	443.9	443.3	443.9	443.9	443.3	445.2	447.7	450.9	442.7
5°	444.5	443.3	444.5	440.8	442.7	441.4	443.9	443.3	445.8	443.3
7.5°	442.7	440.1	440.8	438.9	441.4	438.2	440.1	443.9	441.4	437.6
10°	436.3	435.1	439.5	433.2	431.9	434.4	439.5	435.7	434.4	435.7
12.5°	430.0	430.0	431.9	426.8	427.5	428.7	431.3	428.7	430.0	433.2
15°	423.1	421.8	424.9	421.1	420.5	419.3	421.8	421.8	423.1	421.1
17.5°	414.8	412.9	412.9	411.7	411.0	414.2	415.5	416.1	416.7	414.2
20°	404.7	404.1	406.0	404.1	404.7	405.4	405.4	404.1	409.8	402.8
22.5°	394.0	395.9	393.3	392.1	393.3	394.6	394.6	395.2	394.0	392.7
25°	383.2	384.5	385.1	381.3	383.2	381.3	385.7	386.4	383.8	385.1
27.5°	373.7	371.8	371.2	368.7	369.9	369.3	369.9	369.9	373.7	368.7
30°	359.2	357.3	357.9	356.0	356.6	356.0	356.6	356.6	359.2	358.6
32.5°	345.3	343.4	344.0	342.1	342.1	342.7	341.5	341.5	343.4	342.1
35°	332.0	327.6	328.2	327.6	328.2	325.7	325.7	325.0	326.3	323.1
37.5°	313.0	311.1	310.5	309.9	310.5	309.2	310.5	308.6	310.5	308.0
40°	295.9	294.7	295.3	291.5	291.5	292.1	290.9	290.3	290.9	293.4
42.5°	278.9	276.4	275.1	273.8	274.4	272.6	271.9	270.7	271.9	269.4
45°	258.6	258.6	258.0	254.8	255.5	255.5	253.0	250.4	251.0	251.0
47.5°	240.3	239.0	238.4	235.3	234.6	234.0	231.4	229.5	229.5	227.6
50°	220.1	218.8	216.9	213.7	212.5	208.7	206.8	204.3	201.7	201.7
52.5°	201.1	196.7	194.1	189.1	187.2	185.3	180.2	178.3	176.4	174.5
55°	178.3	174.5	169.5	163.8	161.3	158.1	153.0	149.2	146.7	147.3
57.5°	156.2	149.9	144.8	137.2	134.1	132.2	127.1	122.0	119.5	119.5
60°	129.0	123.9	117.6	110.7	108.1	105.0	98.6	95.5	93.6	91.7
62.5°	103.1	99.3	93.6	84.7	82.8	79.7	75.3	71.5	69.6	69.6
65°	77.1	73.4	68.3	62.0	59.4	56.9	53.1	49.3	47.4	46.8
67.5°	54.4	50.0	45.5	40.5	38.6	37.3	33.5	31.0	29.7	29.1
70°	32.9	30.3	27.2	23.4	21.5	20.2	17.7	15.8	15.2	14.6
72.5°	17.1	15.2	12.6	10.1	8.8	7.6	6.3	5.1	4.4	4.4
75°	6.3	5.1	3.2	1.9	1.3	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)