

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: P840118

Luminaire Tested: **LD4C10D010 EU4109027 4LBCSSQMMS**

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: P840118
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 4LBCSSQMMS
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

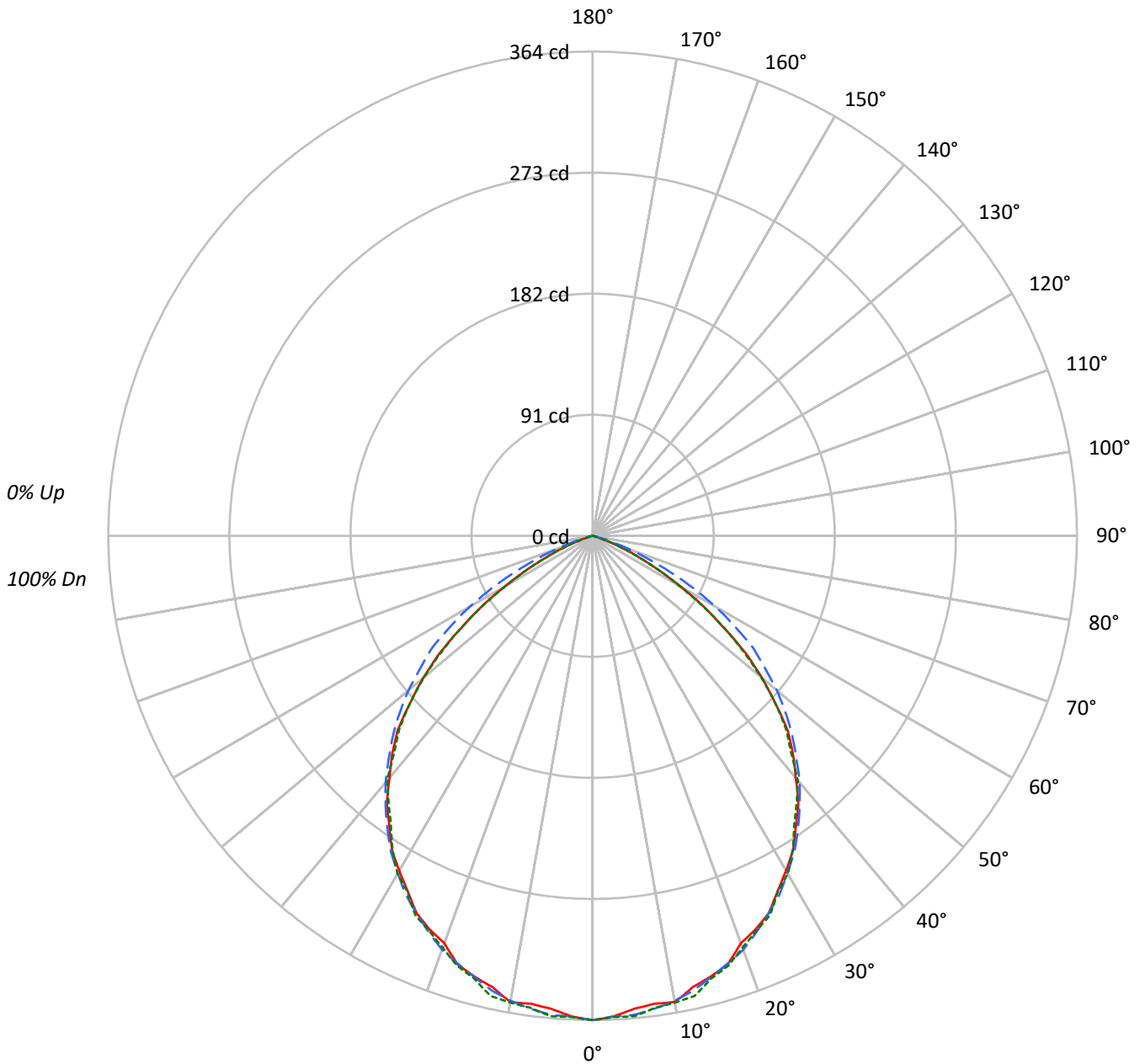
Lumens per Lamp: N/A
Luminaire Lumens: 778.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	34			34
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°	35141	35141	35141
5°	34578	35024	35121
10°	34870	34772	34919
15°	34263	34313	34413
20°	33464	33998	33834
25°	33323	33323	33536
30°	32389	32623	32678
35°	31380	31686	31132
40°	29915	30494	30230
45°	28301	28942	28028
50°	24933	27110	24768
55°	20187	24796	20271
60°	14782	20571	14473
65°	8973	14635	8744
70°	3498	7871	3357
75°	373	2125	373
80°	278	278	278
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.4	4.4
10°-20°	97.3	12.5
20°-30°	144.3	18.6
30°-40°	167.3	21.5
40°-50°	160.4	20.6
50°-60°	117.9	15.2
60°-70°	50.9	6.5
70°-80°	5.5	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°	276.0	35.5
0°-40°	443.3	57.0
0°-60°	721.5	92.7
0°-90°	778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	778.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	357	361	362	362	363	34
15°	343	345	344	344	344	97
25°	313	312	313	314	315	143
35°	266	268	269	268	264	167
45°	207	208	212	209	205	158
55°	120	132	147	132	120	108
65°	39	49	64	49	38	40
75°	1	2	6	1	1	3
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°	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2
2.5°	361.6	365.7	366.3	363.7	362.6	361.1	364.7	362.1	363.2	362.1	361.6
5°	357.0	361.6	362.1	362.1	361.1	360.6	362.1	361.6	361.1	360.1	361.6
7.5°	354.9	357.5	360.1	357.0	358.5	358.0	361.6	360.1	359.5	359.5	358.5
10°	355.9	355.4	357.5	354.4	355.4	354.4	357.5	357.5	356.4	355.4	354.9
12.5°	347.6	351.8	351.8	351.3	350.2	348.7	351.8	353.9	350.7	350.7	350.2
15°	343.0	344.0	344.5	344.5	344.0	345.1	346.6	344.5	345.1	342.5	343.5
17.5°	337.8	335.8	337.3	336.3	336.8	337.8	339.9	339.9	336.8	336.3	337.3
20°	325.9	332.1	332.7	329.5	330.1	330.1	333.7	330.6	332.7	330.1	331.1
22.5°	320.2	324.4	324.9	320.7	323.3	320.2	323.8	319.2	324.4	320.7	322.3
25°	313.0	312.5	314.0	311.9	312.5	312.5	315.0	313.0	314.5	312.5	313.0
27.5°	301.1	305.2	304.7	302.6	303.7	303.2	308.3	302.6	305.7	303.2	304.2
30°	290.7	294.4	293.3	291.3	291.3	289.7	295.4	293.8	293.3	293.3	292.8
32.5°	280.4	280.9	279.9	280.4	280.9	278.8	283.5	281.4	280.9	281.4	282.0
35°	266.4	266.4	267.5	265.9	268.0	268.0	272.1	269.5	269.0	267.5	269.0
37.5°	254.0	252.5	253.0	253.0	254.0	255.0	257.1	256.1	256.1	254.5	255.6
40°	237.5	236.4	238.0	238.0	239.5	239.5	241.6	240.6	242.1	242.1	242.1
42.5°	223.0	223.0	221.9	223.5	224.0	223.5	227.1	226.6	227.1	226.1	226.6
45°	207.4	207.4	206.4	205.9	208.5	208.0	212.1	210.5	212.6	211.6	212.1
47.5°	186.2	188.8	187.3	188.8	191.9	192.5	195.0	194.0	196.1	194.5	196.6
50°	166.1	166.1	167.6	169.7	172.8	173.3	176.4	178.5	179.5	180.0	180.6
52.5°	144.9	144.3	145.9	148.5	151.1	153.1	156.2	159.3	161.4	164.5	162.9
55°	120.0	121.1	122.6	125.7	129.9	132.4	135.0	139.2	142.8	144.3	147.4
57.5°	98.8	97.8	98.8	102.9	107.6	109.7	113.3	117.4	122.6	125.7	126.7
60°	76.6	77.1	78.1	81.7	85.4	88.5	90.0	96.7	101.4	104.5	106.6
62.5°	56.4	57.4	58.5	61.6	65.2	67.8	70.4	76.0	80.2	83.3	85.4
65°	39.3	39.8	41.4	42.9	46.6	49.1	51.2	55.9	60.0	62.6	64.1
67.5°	24.3	24.8	25.9	27.9	30.5	32.6	34.7	37.8	41.4	44.0	44.5
70°	12.4	12.9	13.4	15.0	17.1	18.1	19.7	22.2	24.8	26.9	27.9
72.5°	4.1	4.1	4.7	5.7	6.7	7.8	8.3	10.9	12.9	14.0	14.5
75°	1.0	1.0	1.0	1.0	1.0	1.6	1.6	3.1	4.1	5.2	5.7
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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°	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2	364.2
2.5°	364.2	363.2	362.6	363.2	363.2	362.6	364.2	366.3	368.8	362.1
5°	363.7	362.6	363.7	360.6	362.1	361.1	363.2	362.6	364.7	362.6
7.5°	362.1	360.1	360.6	359.0	361.1	358.5	360.1	363.2	361.1	358.0
10°	357.0	355.9	359.5	354.4	353.3	355.4	359.5	356.4	355.4	356.4
12.5°	351.8	351.8	353.3	349.2	349.7	350.7	352.8	350.7	351.8	354.4
15°	346.1	345.1	347.6	344.5	344.0	343.0	345.1	345.1	346.1	344.5
17.5°	339.4	337.8	337.8	336.8	336.3	338.9	339.9	340.4	340.9	338.9
20°	331.1	330.6	332.1	330.6	331.1	331.6	331.6	330.6	335.2	329.5
22.5°	322.3	323.8	321.8	320.7	321.8	322.8	322.8	323.3	322.3	321.3
25°	313.5	314.5	315.0	311.9	313.5	311.9	315.6	316.1	314.0	315.0
27.5°	305.7	304.2	303.7	301.6	302.6	302.1	302.6	302.6	305.7	301.6
30°	293.8	292.3	292.8	291.3	291.8	291.3	291.8	291.8	293.8	293.3
32.5°	282.5	280.9	281.4	279.9	279.9	280.4	279.4	279.4	280.9	279.9
35°	271.6	268.0	268.5	268.0	268.5	266.4	266.4	265.9	266.9	264.3
37.5°	256.1	254.5	254.0	253.5	254.0	253.0	254.0	252.5	254.0	251.9
40°	242.1	241.1	241.6	238.5	238.5	239.0	238.0	237.5	238.0	240.0
42.5°	228.1	226.1	225.0	224.0	224.5	223.0	222.4	221.4	222.4	220.4
45°	211.6	211.6	211.1	208.5	209.0	209.0	206.9	204.9	205.4	205.4
47.5°	196.6	195.6	195.0	192.5	191.9	191.4	189.3	187.8	187.8	186.2
50°	180.0	179.0	177.4	174.9	173.8	170.7	169.2	167.1	165.0	165.0
52.5°	164.5	160.9	158.8	154.7	153.1	151.6	147.4	145.9	144.3	142.8
55°	145.9	142.8	138.7	134.0	131.9	129.3	125.2	122.1	120.0	120.5
57.5°	127.8	122.6	118.5	112.3	109.7	108.1	104.0	99.8	97.8	97.8
60°	105.5	101.4	96.2	90.5	88.5	85.9	80.7	78.1	76.6	75.0
62.5°	84.3	81.2	76.6	69.3	67.8	65.2	61.6	58.5	56.9	56.9
65°	63.1	60.0	55.9	50.7	48.6	46.6	43.5	40.4	38.8	38.3
67.5°	44.5	40.9	37.3	33.1	31.6	30.5	27.4	25.3	24.3	23.8
70°	26.9	24.8	22.2	19.1	17.6	16.5	14.5	12.9	12.4	11.9
72.5°	14.0	12.4	10.3	8.3	7.2	6.2	5.2	4.1	3.6	3.6
75°	5.2	4.1	2.6	1.6	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)