

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: P840124

Luminaire Tested: **LD4C10D010 EU4109040 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: P840124
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 EU4109040 4LBCSSQMMS
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

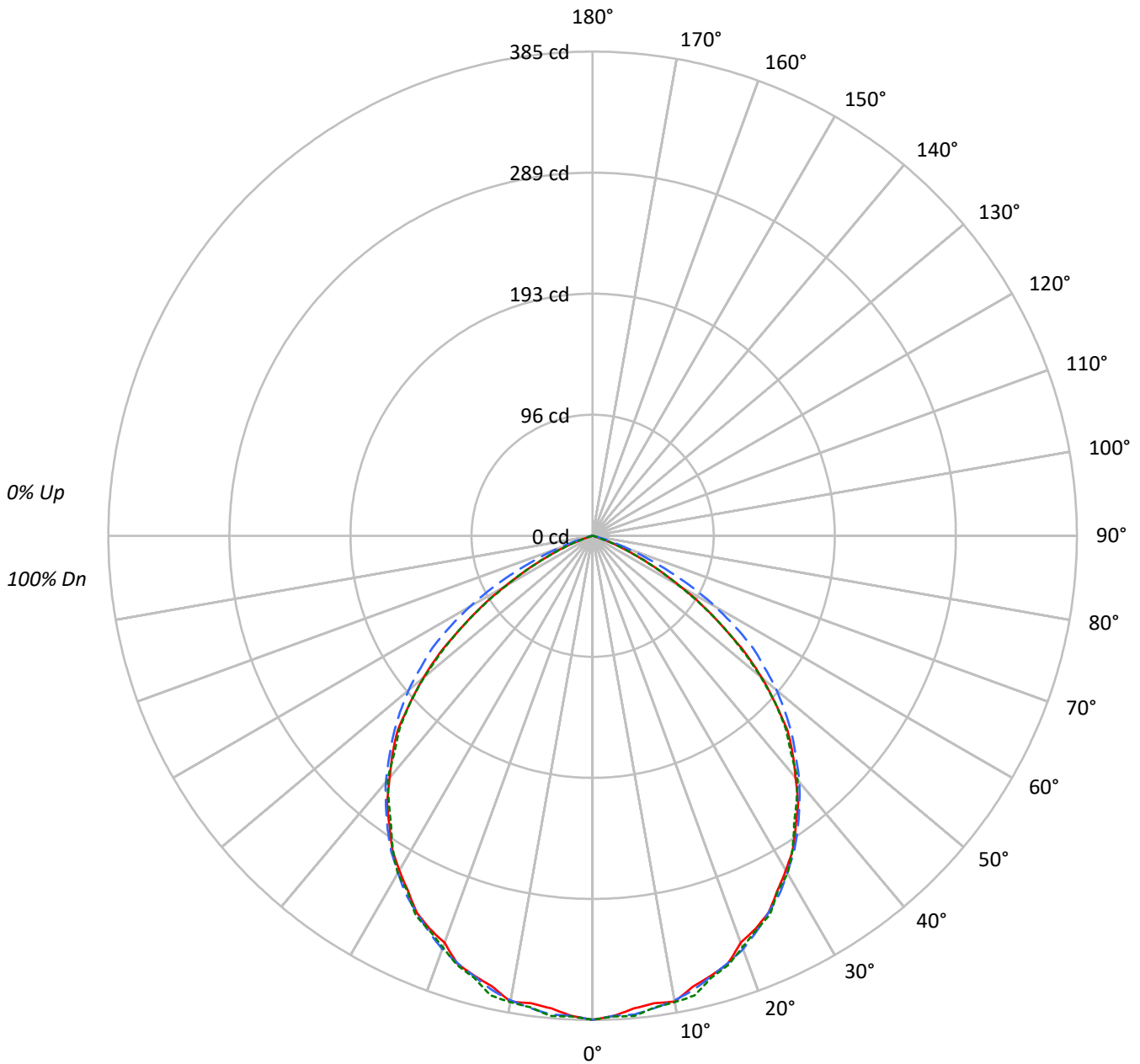
Lumens per Lamp: N/A
Luminaire Lumens: 822.0 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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									
RC	80									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°	37129	37129	37129
5°	36535	37009	37116
10°	36849	36742	36898
15°	36201	36251	36361
20°	35353	35918	35754
25°	35208	35208	35442
30°	34227	34472	34528
35°	33158	33476	32899
40°	31603	32220	31943
45°	29911	30580	29611
50°	26344	28641	26179
55°	21331	26209	21432
60°	15612	21729	15303
65°	9475	15480	9247
70°	3696	8322	3555
75°	410	2237	410
80°	333	333	333
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.3	4.4
10°-20°	102.8	12.5
20°-30°	152.5	18.6
30°-40°	176.7	21.5
40°-50°	169.4	20.6
50°-60°	124.6	15.2
60°-70°	53.8	6.5
70°-80°	5.8	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°	291.6	35.5
0°-40°	468.3	57.0
0°-60°	762.3	92.7
0°-90°	822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	822.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	385	385	385	385	385	
5°	377	381	382	383	383	36
15°	362	365	363	364	364	102
25°	331	330	331	331	333	151
35°	282	283	284	284	279	176
45°	219	220	224	221	217	167
55°	127	140	156	139	127	114
65°	42	52	68	51	40	43
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°	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8
2.5°	382.1	386.4	387.0	384.2	383.2	381.5	385.3	382.6	383.7	382.6	382.1
5°	377.2	382.1	382.6	382.6	381.5	381.0	382.6	382.1	381.5	380.4	382.1
7.5°	375.0	377.7	380.4	377.2	378.8	378.2	382.1	380.4	379.9	379.9	378.8
10°	376.1	375.5	377.7	374.4	375.5	374.4	377.7	377.7	376.6	375.5	375.0
12.5°	367.3	371.7	371.7	371.1	370.0	368.4	371.7	373.9	370.6	370.6	370.0
15°	362.4	363.5	364.0	364.0	363.5	364.6	366.2	364.0	364.6	361.8	362.9
17.5°	356.9	354.7	356.4	355.3	355.8	356.9	359.1	359.1	355.8	355.3	356.4
20°	344.3	350.9	351.5	348.2	348.7	348.7	352.6	349.3	351.5	348.7	349.8
22.5°	338.3	342.7	343.3	338.9	341.6	338.3	342.2	337.2	342.7	338.9	340.5
25°	330.7	330.1	331.8	329.6	330.1	330.1	332.9	330.7	332.3	330.1	330.7
27.5°	318.1	322.5	321.9	319.8	320.8	320.3	325.8	319.8	323.0	320.3	321.4
30°	307.2	311.0	309.9	307.7	307.7	306.1	312.1	310.5	309.9	309.9	309.4
32.5°	296.2	296.8	295.7	296.2	296.8	294.6	299.5	297.3	296.8	297.3	297.9
35°	281.5	281.5	282.6	280.9	283.1	283.1	287.5	284.8	284.2	282.6	284.2
37.5°	268.4	266.7	267.3	267.3	268.4	269.5	271.6	270.6	270.6	268.9	270.0
40°	250.9	249.8	251.4	251.4	253.1	253.1	255.3	254.2	255.8	255.8	255.8
42.5°	235.6	235.6	234.5	236.1	236.7	236.1	240.0	239.4	240.0	238.9	239.4
45°	219.2	219.2	218.1	217.5	220.3	219.7	224.1	222.5	224.6	223.5	224.1
47.5°	196.8	199.5	197.9	199.5	202.8	203.3	206.1	205.0	207.2	205.5	207.7
50°	175.5	175.5	177.1	179.3	182.6	183.1	186.4	188.6	189.7	190.2	190.8
52.5°	153.1	152.5	154.1	156.9	159.6	161.8	165.1	168.4	170.5	173.8	172.2
55°	126.8	127.9	129.5	132.8	137.2	139.9	142.7	147.0	150.9	152.5	155.8
57.5°	104.4	103.3	104.4	108.8	113.7	115.9	119.7	124.1	129.5	132.8	133.9
60°	80.9	81.4	82.5	86.4	90.2	93.5	95.1	102.2	107.1	110.4	112.6
62.5°	59.6	60.7	61.8	65.1	68.9	71.6	74.3	80.4	84.7	88.0	90.2
65°	41.5	42.1	43.7	45.4	49.2	51.9	54.1	59.0	63.4	66.1	67.8
67.5°	25.7	26.2	27.3	29.5	32.2	34.4	36.6	39.9	43.7	46.5	47.0
70°	13.1	13.7	14.2	15.9	18.0	19.1	20.8	23.5	26.2	28.4	29.5
72.5°	4.4	4.4	4.9	6.0	7.1	8.2	8.7	11.5	13.7	14.8	15.3
75°	1.1	1.1	1.1	1.1	1.1	1.6	1.6	3.3	4.4	5.5	6.0
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1	1.1
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°	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8	384.8
2.5°	384.8	383.7	383.2	383.7	383.7	383.2	384.8	387.0	389.7	382.6
5°	384.2	383.2	384.2	381.0	382.6	381.5	383.7	383.2	385.3	383.2
7.5°	382.6	380.4	381.0	379.3	381.5	378.8	380.4	383.7	381.5	378.2
10°	377.2	376.1	379.9	374.4	373.3	375.5	379.9	376.6	375.5	376.6
12.5°	371.7	371.7	373.3	368.9	369.5	370.6	372.8	370.6	371.7	374.4
15°	365.7	364.6	367.3	364.0	363.5	362.4	364.6	364.6	365.7	364.0
17.5°	358.6	356.9	356.9	355.8	355.3	358.0	359.1	359.6	360.2	358.0
20°	349.8	349.3	350.9	349.3	349.8	350.4	350.4	349.3	354.2	348.2
22.5°	340.5	342.2	340.0	338.9	340.0	341.1	341.1	341.6	340.5	339.4
25°	331.2	332.3	332.9	329.6	331.2	329.6	333.4	334.0	331.8	332.9
27.5°	323.0	321.4	320.8	318.7	319.8	319.2	319.8	319.8	323.0	318.7
30°	310.5	308.8	309.4	307.7	308.3	307.7	308.3	308.3	310.5	309.9
32.5°	298.4	296.8	297.3	295.7	295.7	296.2	295.2	295.2	296.8	295.7
35°	286.9	283.1	283.7	283.1	283.7	281.5	281.5	280.9	282.0	279.3
37.5°	270.6	268.9	268.4	267.8	268.4	267.3	268.4	266.7	268.4	266.2
40°	255.8	254.7	255.3	252.0	252.0	252.5	251.4	250.9	251.4	253.6
42.5°	241.1	238.9	237.8	236.7	237.2	235.6	235.0	233.9	235.0	232.8
45°	223.5	223.5	223.0	220.3	220.8	220.8	218.6	216.5	217.0	217.0
47.5°	207.7	206.6	206.1	203.3	202.8	202.2	200.0	198.4	198.4	196.8
50°	190.2	189.1	187.5	184.7	183.6	180.4	178.7	176.6	174.4	174.4
52.5°	173.8	170.0	167.8	163.4	161.8	160.1	155.8	154.1	152.5	150.9
55°	154.1	150.9	146.5	141.6	139.4	136.6	132.3	129.0	126.8	127.4
57.5°	135.0	129.5	125.2	118.6	115.9	114.2	109.9	105.5	103.3	103.3
60°	111.5	107.1	101.7	95.6	93.5	90.7	85.3	82.5	80.9	79.3
62.5°	89.1	85.8	80.9	73.2	71.6	68.9	65.1	61.8	60.1	60.1
65°	66.7	63.4	59.0	53.6	51.4	49.2	45.9	42.6	41.0	40.5
67.5°	47.0	43.2	39.4	35.0	33.3	32.2	29.0	26.8	25.7	25.1
70°	28.4	26.2	23.5	20.2	18.6	17.5	15.3	13.7	13.1	12.6
72.5°	14.8	13.1	10.9	8.7	7.6	6.6	5.5	4.4	3.8	3.8
75°	5.5	4.4	2.7	1.6	1.1	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	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)