

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: P840122

Luminaire Tested: **LD4C10D010 EU4109035 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: P840122
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 4LBCSSQMMS
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

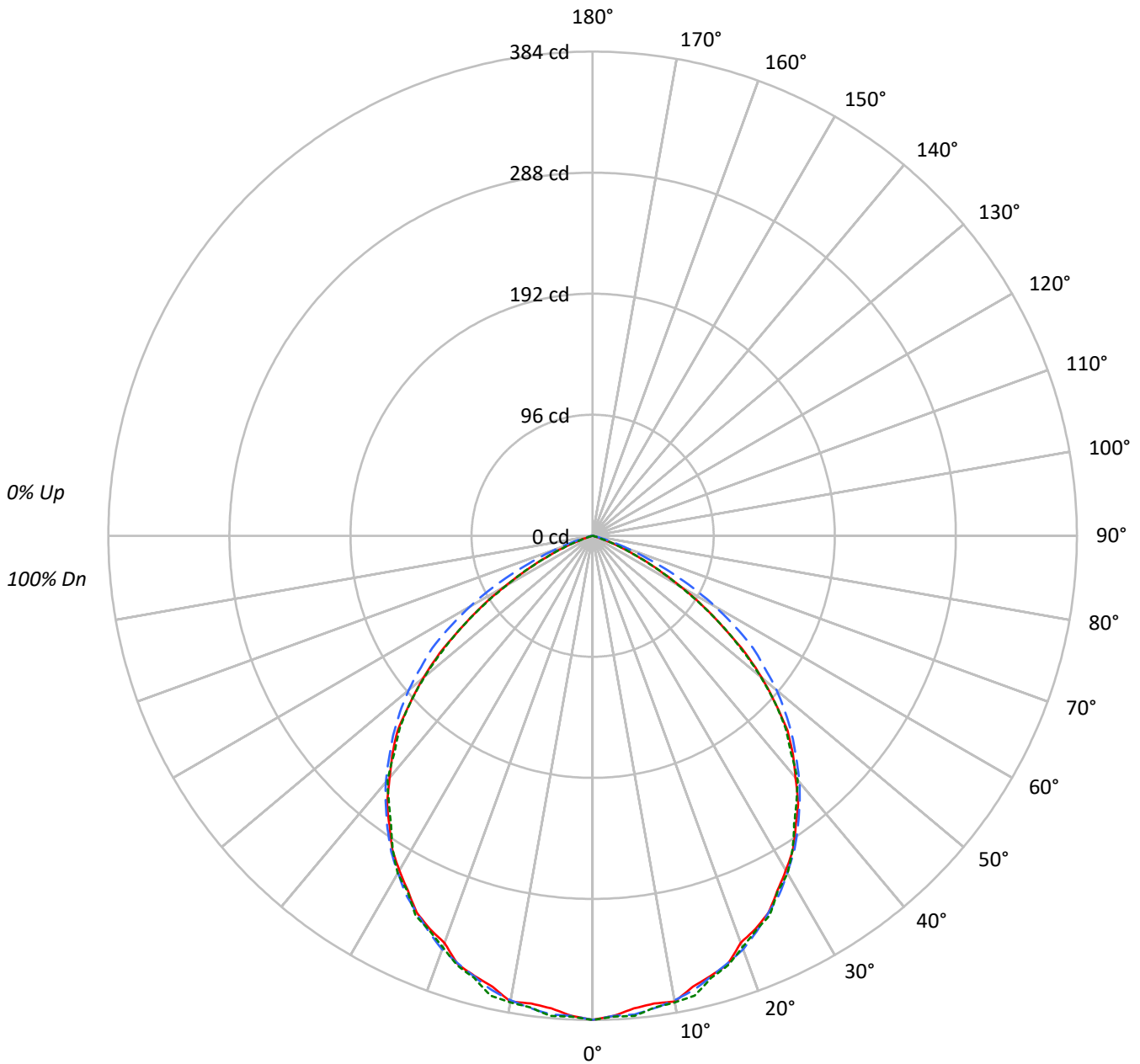
Lumens per Lamp: N/A
Luminaire Lumens: 820.0 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	37042	37042	37042
5°	36438	36912	37019
10°	36751	36653	36810
15°	36111	36161	36271
20°	35271	35836	35661
25°	35122	35122	35357
30°	34138	34383	34450
35°	33076	33394	32817
40°	31527	32144	31867
45°	29829	30512	29543
50°	26269	28566	26104
55°	21280	26142	21381
60°	15573	21671	15265
65°	9452	15434	9224
70°	3696	8322	3526
75°	410	2237	410
80°	333	333	333
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	4.4
10°-20°	102.5	12.5
20°-30°	152.1	18.6
30°-40°	176.3	21.5
40°-50°	169.0	20.6
50°-60°	124.3	15.2
60°-70°	53.7	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°	290.9	35.5
0°-40°	467.2	57.0
0°-60°	760.5	92.7
0°-90°	820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	384	384	384	384	384	
5°	376	380	381	382	382	36
15°	362	364	362	363	363	102
25°	330	329	330	330	332	151
35°	281	282	284	283	279	176
45°	219	219	224	220	216	166
55°	126	140	155	139	127	114
65°	41	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°	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9
2.5°	381.1	385.5	386.0	383.3	382.2	380.6	384.4	381.7	382.8	381.7	381.1
5°	376.2	381.1	381.7	381.7	380.6	380.0	381.7	381.1	380.6	379.5	381.1
7.5°	374.1	376.8	379.5	376.2	377.9	377.3	381.1	379.5	379.0	379.0	377.9
10°	375.1	374.6	376.8	373.5	374.6	373.5	376.8	376.8	375.7	374.6	374.1
12.5°	366.4	370.8	370.8	370.2	369.1	367.5	370.8	373.0	369.7	369.7	369.1
15°	361.5	362.6	363.1	363.1	362.6	363.7	365.3	363.1	363.7	361.0	362.0
17.5°	356.1	353.9	355.5	354.4	355.0	356.1	358.2	358.2	355.0	354.4	355.5
20°	343.5	350.1	350.6	347.3	347.9	347.9	351.7	348.4	350.6	347.9	349.0
22.5°	337.5	341.9	342.4	338.1	340.8	337.5	341.3	336.4	341.9	338.1	339.7
25°	329.9	329.3	331.0	328.8	329.3	329.3	332.1	329.9	331.5	329.3	329.9
27.5°	317.3	321.7	321.2	319.0	320.1	319.5	325.0	319.0	322.2	319.5	320.6
30°	306.4	310.3	309.2	307.0	307.0	305.3	311.3	309.7	309.2	309.2	308.6
32.5°	295.5	296.1	295.0	295.5	296.1	293.9	298.8	296.6	296.1	296.6	297.2
35°	280.8	280.8	281.9	280.3	282.4	282.4	286.8	284.1	283.5	281.9	283.5
37.5°	267.7	266.1	266.6	266.6	267.7	268.8	271.0	269.9	269.9	268.3	269.4
40°	250.3	249.2	250.8	250.8	252.5	252.5	254.6	253.5	255.2	255.2	255.2
42.5°	235.0	235.0	233.9	235.5	236.1	235.5	239.4	238.8	239.4	238.3	238.8
45°	218.6	218.6	217.6	217.0	219.7	219.2	223.6	221.9	224.1	223.0	223.6
47.5°	196.3	199.0	197.4	199.0	202.3	202.8	205.6	204.5	206.7	205.0	207.2
50°	175.0	175.0	176.7	178.8	182.1	182.7	185.9	188.1	189.2	189.7	190.3
52.5°	152.7	152.1	153.8	156.5	159.2	161.4	164.7	167.9	170.1	173.4	171.7
55°	126.5	127.6	129.2	132.5	136.9	139.6	142.3	146.7	150.5	152.1	155.4
57.5°	104.1	103.0	104.1	108.5	113.4	115.6	119.4	123.8	129.2	132.5	133.6
60°	80.7	81.2	82.3	86.2	90.0	93.2	94.9	102.0	106.9	110.1	112.3
62.5°	59.4	60.5	61.6	64.9	68.7	71.4	74.1	80.2	84.5	87.8	90.0
65°	41.4	42.0	43.6	45.3	49.1	51.8	54.0	58.9	63.2	66.0	67.6
67.5°	25.6	26.2	27.3	29.5	32.2	34.3	36.5	39.8	43.6	46.3	46.9
70°	13.1	13.6	14.2	15.8	18.0	19.1	20.7	23.4	26.2	28.3	29.5
72.5°	4.4	4.4	4.9	6.0	7.1	8.2	8.7	11.5	13.6	14.7	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°	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9	383.9
2.5°	383.9	382.8	382.2	382.8	382.8	382.2	383.9	386.0	388.8	381.7
5°	383.3	382.2	383.3	380.0	381.7	380.6	382.8	382.2	384.4	382.2
7.5°	381.7	379.5	380.0	378.4	380.6	377.9	379.5	382.8	380.6	377.3
10°	376.2	375.1	379.0	373.5	372.4	374.6	379.0	375.7	374.6	375.7
12.5°	370.8	370.8	372.4	368.1	368.6	369.7	371.9	369.7	370.8	373.5
15°	364.8	363.7	366.4	363.1	362.6	361.5	363.7	363.7	364.8	363.1
17.5°	357.7	356.1	356.1	355.0	354.4	357.1	358.2	358.8	359.3	357.1
20°	349.0	348.4	350.1	348.4	349.0	349.5	349.5	348.4	353.3	347.3
22.5°	339.7	341.3	339.2	338.1	339.2	340.2	340.2	340.8	339.7	338.6
25°	330.4	331.5	332.1	328.8	330.4	328.8	332.6	333.1	331.0	332.1
27.5°	322.2	320.6	320.1	317.9	319.0	318.4	319.0	319.0	322.2	317.9
30°	309.7	308.1	308.6	307.0	307.5	307.0	307.5	307.5	309.7	309.2
32.5°	297.7	296.1	296.6	295.0	295.0	295.5	294.4	294.4	296.1	295.0
35°	286.2	282.4	283.0	282.4	283.0	280.8	280.8	280.3	281.4	278.6
37.5°	269.9	268.3	267.7	267.2	267.7	266.6	267.7	266.1	267.7	265.5
40°	255.2	254.1	254.6	251.4	251.4	251.9	250.8	250.3	250.8	253.0
42.5°	240.5	238.3	237.2	236.1	236.6	235.0	234.5	233.4	234.5	232.3
45°	223.0	223.0	222.5	219.7	220.3	220.3	218.1	215.9	216.5	216.5
47.5°	207.2	206.1	205.6	202.8	202.3	201.8	199.6	197.9	197.9	196.3
50°	189.7	188.7	187.0	184.3	183.2	179.9	178.3	176.1	173.9	173.9
52.5°	173.4	169.6	167.4	163.0	161.4	159.8	155.4	153.8	152.1	150.5
55°	153.8	150.5	146.1	141.2	139.0	136.3	131.9	128.7	126.5	127.1
57.5°	134.7	129.2	124.9	118.3	115.6	113.9	109.6	105.2	103.0	103.0
60°	111.2	106.9	101.4	95.4	93.2	90.5	85.0	82.3	80.7	79.1
62.5°	88.9	85.6	80.7	73.1	71.4	68.7	64.9	61.6	60.0	60.0
65°	66.5	63.2	58.9	53.4	51.3	49.1	45.8	42.5	40.9	40.4
67.5°	46.9	43.1	39.3	34.9	33.3	32.2	28.9	26.7	25.6	25.1
70°	28.3	26.2	23.4	20.2	18.5	17.4	15.3	13.6	13.1	12.5
72.5°	14.7	13.1	10.9	8.7	7.6	6.5	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)