

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: P840135

Luminaire Tested: **LD4C15D010 EU4159040 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: P840135
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: LD4C15D010 EU4159040 4LBCSSQMW
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

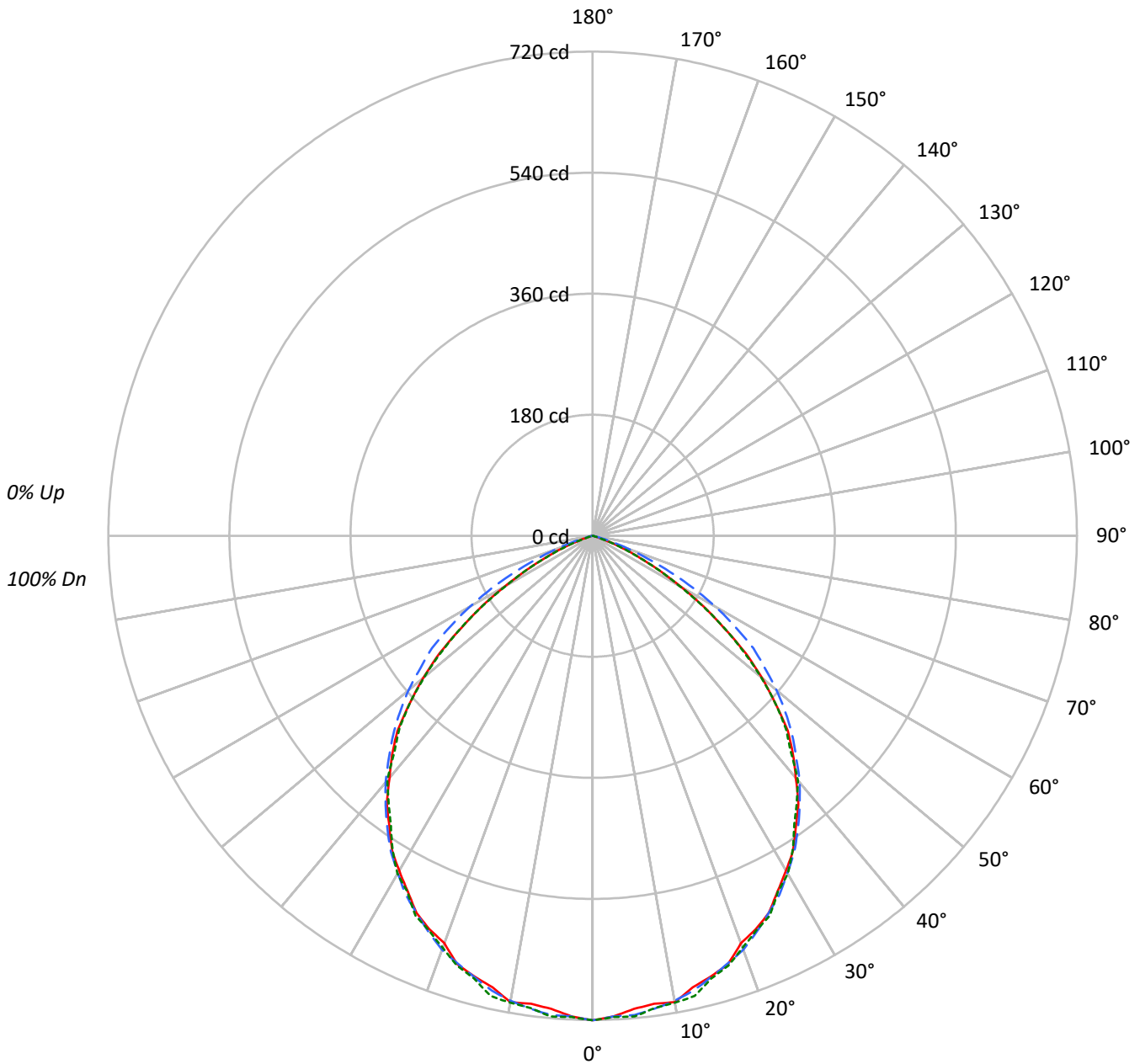
Lumens per Lamp: N/A
Luminaire Lumens: 1539.0 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 15.8
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	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°	69520	69520	69520
5°	68391	69282	69486
10°	68986	68780	69084
15°	67777	67877	68077
20°	66199	67246	66938
25°	65912	65912	66348
30°	64075	64532	64643
35°	62076	62677	61593
40°	59162	60321	59805
45°	56002	57257	55442
50°	49311	53619	49011
55°	39936	49054	40121
60°	29217	40680	28638
65°	17763	28973	17283
70°	6940	15601	6630
75°	746	4213	746
80°	556	556	556
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	4.4
10°-20°	192.4	12.5
20°-30°	285.5	18.6
30°-40°	330.8	21.5
40°-50°	317.2	20.6
50°-60°	233.2	15.2
60°-70°	100.7	6.5
70°-80°	10.9	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°	546.0	35.5
0°-40°	876.8	57.0
0°-60°	1427.3	92.7
0°-90°	1539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	706	713	715	716	717	67
15°	678	683	680	680	682	191
25°	619	618	619	620	623	283
35°	527	530	532	531	523	330
45°	410	411	420	413	406	312
55°	237	262	292	261	238	214
65°	78	97	127	96	76	80
75°	2	3	11	2	2	6
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°	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5
2.5°	715.3	723.5	724.5	719.4	717.4	714.3	721.5	716.4	718.4	716.4	715.3
5°	706.1	715.3	716.4	716.4	714.3	713.3	716.4	715.3	714.3	712.3	715.3
7.5°	702.0	707.1	712.3	706.1	709.2	708.2	715.3	712.3	711.2	711.2	709.2
10°	704.1	703.0	707.1	701.0	703.0	701.0	707.1	707.1	705.1	703.0	702.0
12.5°	687.7	695.9	695.9	694.9	692.8	689.7	695.9	700.0	693.8	693.8	692.8
15°	678.5	680.5	681.5	681.5	680.5	682.6	685.6	681.5	682.6	677.4	679.5
17.5°	668.3	664.2	667.2	665.2	666.2	668.3	672.4	672.4	666.2	665.2	667.2
20°	644.7	657.0	658.0	651.9	652.9	652.9	660.1	653.9	658.0	652.9	654.9
22.5°	633.4	641.6	642.7	634.5	639.6	633.4	640.6	631.4	641.6	634.5	637.5
25°	619.1	618.1	621.2	617.1	618.1	618.1	623.2	619.1	622.2	618.1	619.1
27.5°	595.6	603.8	602.8	598.7	600.7	599.7	609.9	598.7	604.8	599.7	601.7
30°	575.1	582.3	580.2	576.2	576.2	573.1	584.3	581.2	580.2	580.2	579.2
32.5°	554.7	555.7	553.6	554.7	555.7	551.6	560.8	556.7	555.7	556.7	557.7
35°	527.0	527.0	529.1	526.0	530.1	530.1	538.3	533.1	532.1	529.1	532.1
37.5°	502.5	499.4	500.4	500.4	502.5	504.5	508.6	506.6	506.6	503.5	505.5
40°	469.7	467.7	470.7	470.7	473.8	473.8	477.9	475.9	478.9	478.9	478.9
42.5°	441.1	441.1	439.0	442.1	443.1	442.1	449.3	448.2	449.3	447.2	448.2
45°	410.4	410.4	408.3	407.3	412.4	411.4	419.6	416.5	420.6	418.5	419.6
47.5°	368.4	373.5	370.4	373.5	379.7	380.7	385.8	383.8	387.8	384.8	388.9
50°	328.5	328.5	331.6	335.7	341.8	342.8	349.0	353.1	355.1	356.1	357.2
52.5°	286.6	285.5	288.6	293.7	298.8	302.9	309.1	315.2	319.3	325.4	322.3
55°	237.4	239.5	242.5	248.7	256.9	262.0	267.1	275.3	282.5	285.5	291.6
57.5°	195.4	193.4	195.4	203.6	212.9	217.0	224.1	232.3	242.5	248.7	250.7
60°	151.4	152.5	154.5	161.7	168.9	175.0	178.1	191.4	200.6	206.7	210.8
62.5°	111.6	113.6	115.7	121.8	128.9	134.1	139.2	150.4	158.6	164.8	168.9
65°	77.8	78.8	81.9	84.9	92.1	97.2	101.3	110.5	118.7	123.8	126.9
67.5°	48.1	49.1	51.1	55.3	60.4	64.5	68.6	74.7	81.9	87.0	88.0
70°	24.6	25.6	26.6	29.7	33.8	35.8	38.9	44.0	49.1	53.2	55.3
72.5°	8.2	8.2	9.2	11.3	13.3	15.4	16.4	21.5	25.6	27.6	28.6
75°	2.0	2.0	2.0	2.0	2.0	3.1	3.1	6.1	8.2	10.2	11.3
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5	720.5
2.5°	720.5	718.4	717.4	718.4	718.4	717.4	720.5	724.5	729.6	716.4
5°	719.4	717.4	719.4	713.3	716.4	714.3	718.4	717.4	721.5	717.4
7.5°	716.4	712.3	713.3	710.2	714.3	709.2	712.3	718.4	714.3	708.2
10°	706.1	704.1	711.2	701.0	699.0	703.0	711.2	705.1	703.0	705.1
12.5°	695.9	695.9	699.0	690.8	691.8	693.8	697.9	693.8	695.9	701.0
15°	684.6	682.6	687.7	681.5	680.5	678.5	682.6	682.6	684.6	681.5
17.5°	671.3	668.3	668.3	666.2	665.2	670.3	672.4	673.4	674.4	670.3
20°	654.9	653.9	657.0	653.9	654.9	656.0	656.0	653.9	663.1	651.9
22.5°	637.5	640.6	636.5	634.5	636.5	638.6	638.6	639.6	637.5	635.5
25°	620.2	622.2	623.2	617.1	620.2	617.1	624.3	625.3	621.2	623.2
27.5°	604.8	601.7	600.7	596.6	598.7	597.7	598.7	598.7	604.8	596.6
30°	581.2	578.2	579.2	576.2	577.2	576.2	577.2	577.2	581.2	580.2
32.5°	558.7	555.7	556.7	553.6	553.6	554.7	552.6	552.6	555.7	553.6
35°	537.2	530.1	531.1	530.1	531.1	527.0	527.0	526.0	528.1	522.9
37.5°	506.6	503.5	502.5	501.5	502.5	500.4	502.5	499.4	502.5	498.4
40°	478.9	476.9	477.9	471.8	471.8	472.8	470.7	469.7	470.7	474.8
42.5°	451.3	447.2	445.2	443.1	444.1	441.1	440.0	438.0	440.0	435.9
45°	418.5	418.5	417.5	412.4	413.4	413.4	409.3	405.3	406.3	406.3
47.5°	388.9	386.8	385.8	380.7	379.7	378.7	374.5	371.5	371.5	368.4
50°	356.1	354.1	351.0	345.9	343.8	337.7	334.7	330.6	326.5	326.5
52.5°	325.4	318.2	314.2	306.0	302.9	299.8	291.6	288.6	285.5	282.5
55°	288.6	282.5	274.3	265.1	261.0	255.8	247.6	241.5	237.4	238.5
57.5°	252.8	242.5	234.4	222.1	217.0	213.9	205.7	197.5	193.4	193.4
60°	208.8	200.6	190.4	179.1	175.0	169.9	159.6	154.5	151.4	148.4
62.5°	166.8	160.7	151.4	137.1	134.1	128.9	121.8	115.7	112.6	112.6
65°	124.8	118.7	110.5	100.3	96.2	92.1	86.0	79.8	76.7	75.7
67.5°	88.0	80.8	73.7	65.5	62.4	60.4	54.2	50.1	48.1	47.1
70°	53.2	49.1	44.0	37.9	34.8	32.7	28.6	25.6	24.6	23.5
72.5°	27.6	24.6	20.5	16.4	14.3	12.3	10.2	8.2	7.2	7.2
75°	10.2	8.2	5.1	3.1	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)