

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: P#

Luminaire Tested: **LD4C15D010 EX4C159040 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: P#  
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 EX4C159040 4LBCSSQMMMS  
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

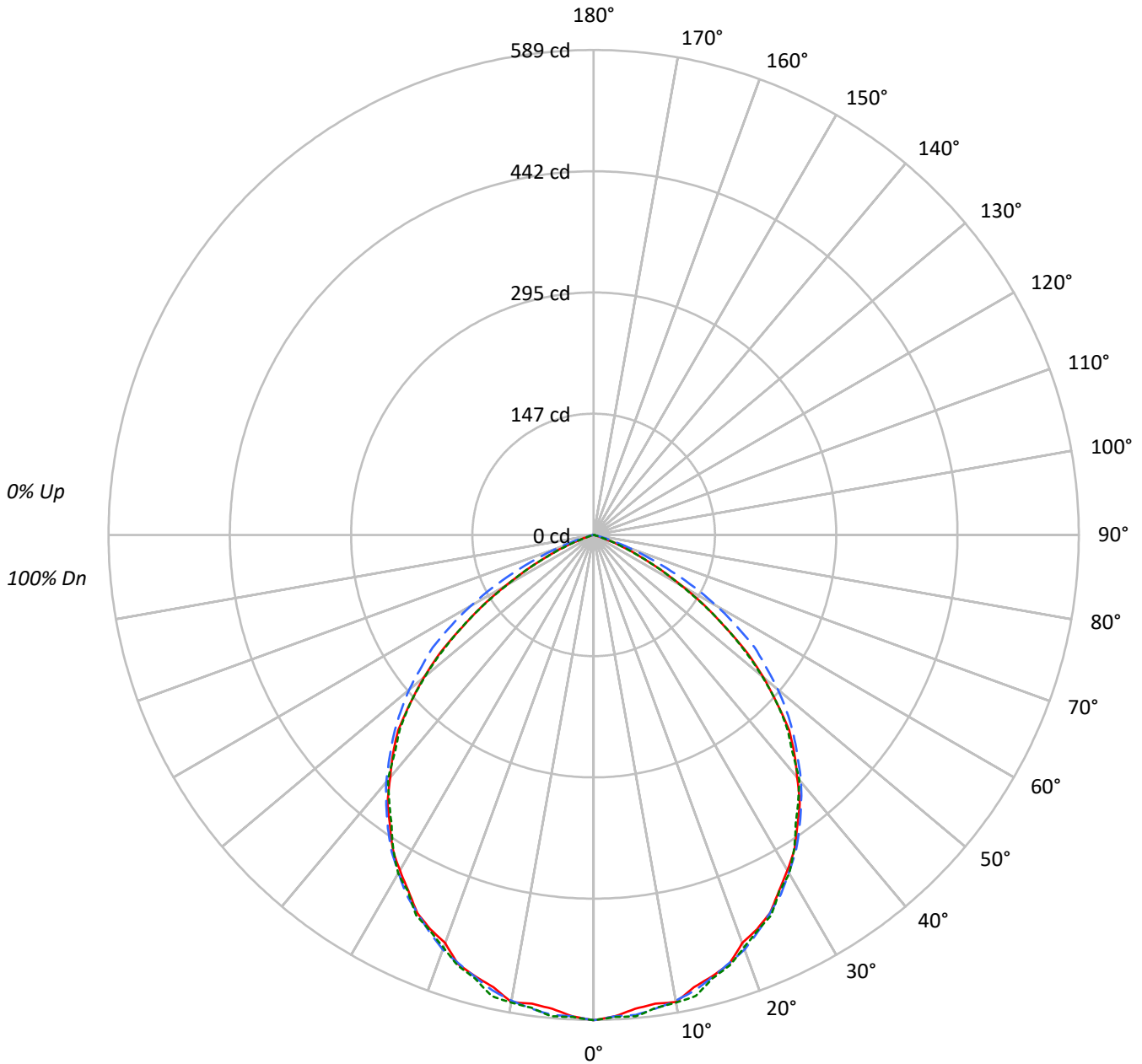
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1259.0 lumens  
Efficiency: N/A  
Efficacy: 79.7 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): 15.8  
Input Voltage (V):  
Input Current (Ain): 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°	56871	56871	56871
5°	55955	56681	56836
10°	56435	56268	56513
15°	55440	55530	55690
20°	54154	55017	54760
25°	53924	53924	54275
30°	52421	52789	52889
35°	50780	51275	50391
40°	48405	49350	48922
45°	45808	46832	45344
50°	40335	43862	40094
55°	32669	40138	32820
60°	23910	33289	23428
65°	14521	23699	14155
70°	5671	12752	5445
75°	634	3430	634
80°	500	500	500
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.6	4.4
10°-20°	157.4	12.5
20°-30°	233.6	18.6
30°-40°	270.7	21.5
40°-50°	259.5	20.6
50°-60°	190.8	15.2
60°-70°	82.4	6.5
70°-80°	8.9	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°	446.6	35.5
0°-40°	717.3	57.0
0°-60°	1167.6	92.7
0°-90°	1259.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1259.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	578	584	585	586	587	55
15°	555	558	556	557	558	156
25°	506	506	506	507	510	232
35°	431	434	435	434	428	270
45°	336	336	343	338	332	255
55°	194	214	239	214	195	175
65°	64	80	104	79	62	65
75°	2	2	9	2	2	5
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P#

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4
2.5°	585.2	591.9	592.7	588.5	586.8	584.4	590.2	586.0	587.7	586.0	585.2
5°	577.7	585.2	586.0	586.0	584.4	583.5	586.0	585.2	584.4	582.7	585.2
7.5°	574.3	578.5	582.7	577.7	580.2	579.3	585.2	582.7	581.8	581.8	580.2
10°	576.0	575.1	578.5	573.5	575.1	573.5	578.5	578.5	576.8	575.1	574.3
12.5°	562.6	569.3	569.3	568.4	566.8	564.2	569.3	572.6	567.6	567.6	566.8
15°	555.0	556.7	557.5	557.5	556.7	558.4	560.9	557.5	558.4	554.2	555.9
17.5°	546.7	543.3	545.8	544.2	545.0	546.7	550.0	550.0	545.0	544.2	545.8
20°	527.4	537.5	538.3	533.3	534.1	534.1	540.0	535.0	538.3	534.1	535.8
22.5°	518.2	524.9	525.7	519.0	523.2	518.2	524.1	516.5	524.9	519.0	521.5
25°	506.5	505.7	508.2	504.8	505.7	505.7	509.8	506.5	509.0	505.7	506.5
27.5°	487.2	493.9	493.1	489.7	491.4	490.6	499.0	489.7	494.8	490.6	492.3
30°	470.5	476.4	474.7	471.3	471.3	468.8	478.0	475.5	474.7	474.7	473.8
32.5°	453.7	454.6	452.9	453.7	454.6	451.2	458.8	455.4	454.6	455.4	456.3
35°	431.1	431.1	432.8	430.3	433.7	433.7	440.4	436.2	435.3	432.8	435.3
37.5°	411.0	408.6	409.4	409.4	411.0	412.7	416.1	414.4	414.4	411.9	413.6
40°	384.3	382.6	385.1	385.1	387.6	387.6	391.0	389.3	391.8	391.8	391.8
42.5°	360.8	360.8	359.2	361.7	362.5	361.7	367.5	366.7	367.5	365.9	366.7
45°	335.7	335.7	334.0	333.2	337.4	336.5	343.2	340.7	344.1	342.4	343.2
47.5°	301.4	305.6	303.0	305.6	310.6	311.4	315.6	313.9	317.3	314.8	318.1
50°	268.7	268.7	271.2	274.6	279.6	280.5	285.5	288.8	290.5	291.3	292.2
52.5°	234.4	233.6	236.1	240.3	244.5	247.8	252.8	257.9	261.2	266.2	263.7
55°	194.2	195.9	198.4	203.4	210.1	214.3	218.5	225.2	231.1	233.6	238.6
57.5°	159.9	158.2	159.9	166.6	174.1	177.5	183.4	190.0	198.4	203.4	205.1
60°	123.9	124.7	126.4	132.3	138.1	143.2	145.7	156.5	164.1	169.1	172.5
62.5°	91.3	92.9	94.6	99.6	105.5	109.7	113.8	123.1	129.8	134.8	138.1
65°	63.6	64.5	67.0	69.5	75.3	79.5	82.9	90.4	97.1	101.3	103.8
67.5°	39.3	40.2	41.8	45.2	49.4	52.7	56.1	61.1	67.0	71.1	72.0
70°	20.1	20.9	21.8	24.3	27.6	29.3	31.8	36.0	40.2	43.5	45.2
72.5°	6.7	6.7	7.5	9.2	10.9	12.6	13.4	17.6	20.9	22.6	23.4
75°	1.7	1.7	1.7	1.7	1.7	2.5	2.5	5.0	6.7	8.4	9.2
77.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4
2.5°	589.4	587.7	586.8	587.7	587.7	586.8	589.4	592.7	596.9	586.0
5°	588.5	586.8	588.5	583.5	586.0	584.4	587.7	586.8	590.2	586.8
7.5°	586.0	582.7	583.5	581.0	584.4	580.2	582.7	587.7	584.4	579.3
10°	577.7	576.0	581.8	573.5	571.8	575.1	581.8	576.8	575.1	576.8
12.5°	569.3	569.3	571.8	565.1	565.9	567.6	570.9	567.6	569.3	573.5
15°	560.1	558.4	562.6	557.5	556.7	555.0	558.4	558.4	560.1	557.5
17.5°	549.2	546.7	546.7	545.0	544.2	548.4	550.0	550.8	551.7	548.4
20°	535.8	535.0	537.5	535.0	535.8	536.6	536.6	535.0	542.5	533.3
22.5°	521.5	524.1	520.7	519.0	520.7	522.4	522.4	523.2	521.5	519.9
25°	507.3	509.0	509.8	504.8	507.3	504.8	510.7	511.5	508.2	509.8
27.5°	494.8	492.3	491.4	488.1	489.7	488.9	489.7	489.7	494.8	488.1
30°	475.5	473.0	473.8	471.3	472.2	471.3	472.2	472.2	475.5	474.7
32.5°	457.1	454.6	455.4	452.9	452.9	453.7	452.1	452.1	454.6	452.9
35°	439.5	433.7	434.5	433.7	434.5	431.1	431.1	430.3	432.0	427.8
37.5°	414.4	411.9	411.0	410.2	411.0	409.4	411.0	408.6	411.0	407.7
40°	391.8	390.1	391.0	385.9	385.9	386.8	385.1	384.3	385.1	388.4
42.5°	369.2	365.9	364.2	362.5	363.3	360.8	360.0	358.3	360.0	356.6
45°	342.4	342.4	341.6	337.4	338.2	338.2	334.9	331.5	332.3	332.3
47.5°	318.1	316.5	315.6	311.4	310.6	309.8	306.4	303.9	303.9	301.4
50°	291.3	289.7	287.2	283.0	281.3	276.3	273.8	270.4	267.1	267.1
52.5°	266.2	260.3	257.0	250.3	247.8	245.3	238.6	236.1	233.6	231.1
55°	236.1	231.1	224.4	216.8	213.5	209.3	202.6	197.6	194.2	195.1
57.5°	206.8	198.4	191.7	181.7	177.5	175.0	168.3	161.6	158.2	158.2
60°	170.8	164.1	155.7	146.5	143.2	139.0	130.6	126.4	123.9	121.4
62.5°	136.5	131.4	123.9	112.2	109.7	105.5	99.6	94.6	92.1	92.1
65°	102.1	97.1	90.4	82.0	78.7	75.3	70.3	65.3	62.8	62.0
67.5°	72.0	66.1	60.3	53.6	51.1	49.4	44.4	41.0	39.3	38.5
70°	43.5	40.2	36.0	31.0	28.5	26.8	23.4	20.9	20.1	19.3
72.5°	22.6	20.1	16.7	13.4	11.7	10.0	8.4	6.7	5.9	5.9
75°	8.4	6.7	4.2	2.5	1.7	1.7	1.7	1.7	1.7	1.7
77.5°	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)