

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 EX4C159035 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 EX4C159035 4LBCSSQMMMS  
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

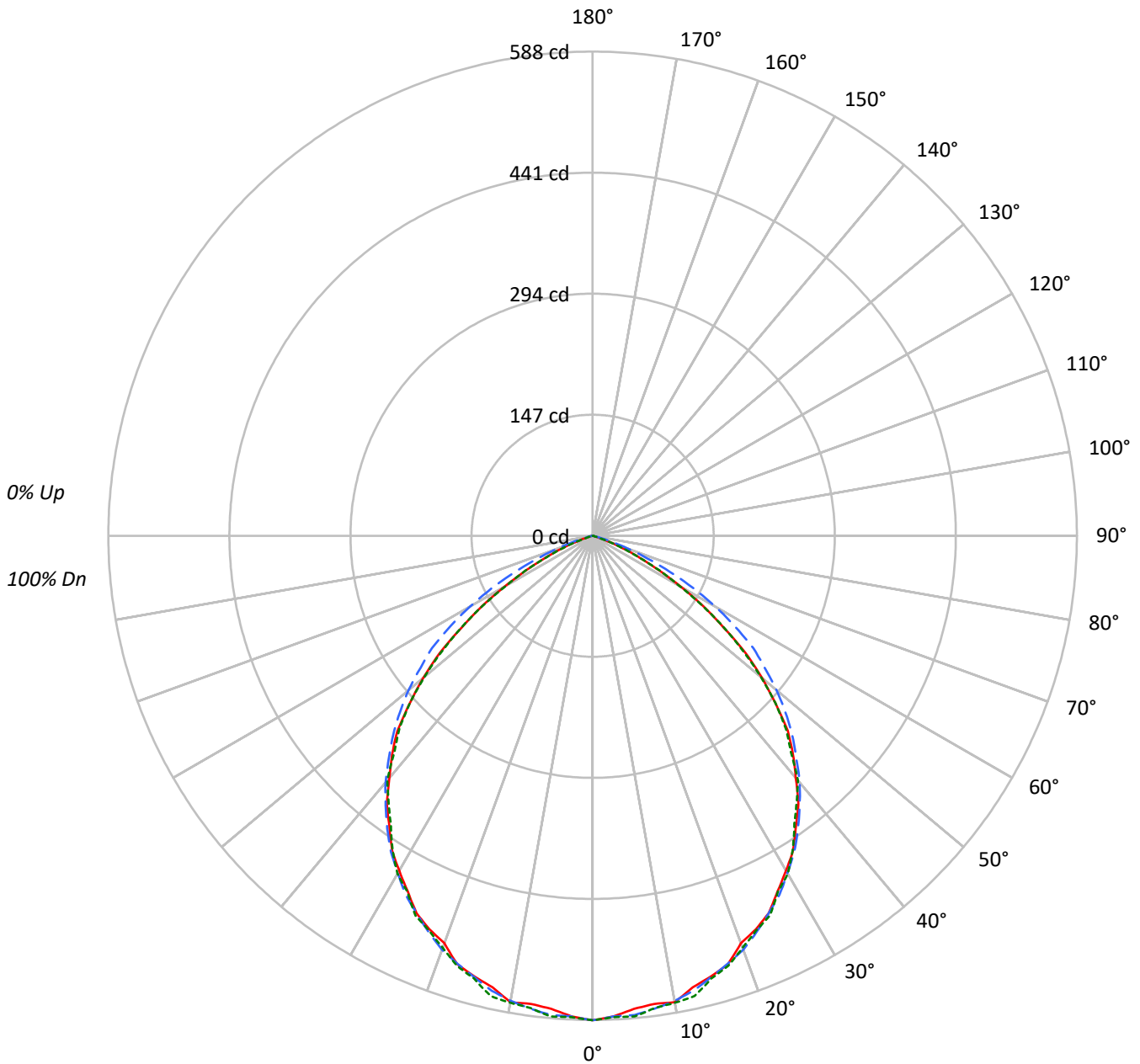
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1257.0 lumens  
Efficiency: N/A  
Efficacy: 79.6 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<sub>in</sub>): 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	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	33					33			
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°	56774	56774	56774
5°	55858	56584	56749
10°	56347	56180	56425
15°	55361	55440	55610
20°	54072	54924	54668
25°	53839	53839	54190
30°	52332	52711	52800
35°	50697	51192	50309
40°	48330	49274	48846
45°	45740	46763	45276
50°	40275	43787	40019
55°	32618	40071	32770
60°	23871	33231	23389
65°	14498	23653	14133
70°	5671	12752	5417
75°	634	3430	634
80°	500	500	500
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.5	4.4
10°-20°	157.2	12.5
20°-30°	233.2	18.6
30°-40°	270.2	21.5
40°-50°	259.1	20.6
50°-60°	190.5	15.2
60°-70°	82.3	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°	445.9	35.5
0°-40°	716.2	57.0
0°-60°	1165.7	92.7
0°-90°	1257.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1257.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	577	583	584	585	586	55
15°	554	558	555	556	557	156
25°	506	505	506	506	509	232
35°	430	433	435	434	427	269
45°	335	336	343	338	332	255
55°	194	214	238	213	195	174
65°	64	79	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°	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4
2.5°	584.2	590.9	591.8	587.6	585.9	583.4	589.3	585.1	586.8	585.1	584.2
5°	576.7	584.2	585.1	585.1	583.4	582.6	585.1	584.2	583.4	581.8	584.2
7.5°	573.4	577.6	581.8	576.7	579.2	578.4	584.2	581.8	580.9	580.9	579.2
10°	575.1	574.2	577.6	572.5	574.2	572.5	577.6	577.6	575.9	574.2	573.4
12.5°	561.7	568.4	568.4	567.5	565.9	563.3	568.4	571.7	566.7	566.7	565.9
15°	554.2	555.8	556.7	556.7	555.8	557.5	560.0	556.7	557.5	553.3	555.0
17.5°	545.8	542.5	545.0	543.3	544.1	545.8	549.2	549.2	544.1	543.3	545.0
20°	526.6	536.6	537.5	532.4	533.3	533.3	539.1	534.1	537.5	533.3	534.9
22.5°	517.4	524.1	524.9	518.2	522.4	517.4	523.2	515.7	524.1	518.2	520.7
25°	505.7	504.9	507.3	504.0	504.9	504.9	509.0	505.7	508.2	504.9	505.7
27.5°	486.5	493.2	492.3	489.0	490.6	489.8	498.2	489.0	494.0	489.8	491.5
30°	469.7	475.6	473.9	470.6	470.6	468.1	477.3	474.7	473.9	473.9	473.1
32.5°	453.0	453.9	452.2	453.0	453.9	450.5	458.0	454.7	453.9	454.7	455.5
35°	430.4	430.4	432.1	429.6	433.0	433.0	439.7	435.5	434.6	432.1	434.6
37.5°	410.4	407.9	408.7	408.7	410.4	412.1	415.4	413.7	413.7	411.2	412.9
40°	383.7	382.0	384.5	384.5	387.0	387.0	390.3	388.7	391.2	391.2	391.2
42.5°	360.3	360.3	358.6	361.1	361.9	361.1	366.9	366.1	366.9	365.3	366.1
45°	335.2	335.2	333.5	332.7	336.8	336.0	342.7	340.2	343.5	341.8	342.7
47.5°	300.9	305.1	302.6	305.1	310.1	310.9	315.1	313.4	316.8	314.3	317.6
50°	268.3	268.3	270.8	274.2	279.2	280.0	285.0	288.4	290.0	290.9	291.7
52.5°	234.0	233.2	235.7	239.9	244.1	247.4	252.4	257.4	260.8	265.8	263.3
55°	193.9	195.6	198.1	203.1	209.8	214.0	218.2	224.8	230.7	233.2	238.2
57.5°	159.6	158.0	159.6	166.3	173.9	177.2	183.1	189.7	198.1	203.1	204.8
60°	123.7	124.5	126.2	132.1	137.9	142.9	145.4	156.3	163.8	168.8	172.2
62.5°	91.1	92.8	94.5	99.5	105.3	109.5	113.7	122.9	129.6	134.6	137.9
65°	63.5	64.4	66.9	69.4	75.2	79.4	82.7	90.3	97.0	101.1	103.6
67.5°	39.3	40.1	41.8	45.2	49.3	52.7	56.0	61.0	66.9	71.0	71.9
70°	20.1	20.9	21.7	24.2	27.6	29.3	31.8	35.9	40.1	43.4	45.2
72.5°	6.7	6.7	7.5	9.2	10.9	12.5	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°	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4
2.5°	588.4	586.8	585.9	586.8	586.8	585.9	588.4	591.8	595.9	585.1
5°	587.6	585.9	587.6	582.6	585.1	583.4	586.8	585.9	589.3	585.9
7.5°	585.1	581.8	582.6	580.1	583.4	579.2	581.8	586.8	583.4	578.4
10°	576.7	575.1	580.9	572.5	570.9	574.2	580.9	575.9	574.2	575.9
12.5°	568.4	568.4	570.9	564.2	565.0	566.7	570.0	566.7	568.4	572.5
15°	559.2	557.5	561.7	556.7	555.8	554.2	557.5	557.5	559.2	556.7
17.5°	548.3	545.8	545.8	544.1	543.3	547.5	549.2	550.0	550.8	547.5
20°	534.9	534.1	536.6	534.1	534.9	535.8	535.8	534.1	541.6	532.4
22.5°	520.7	523.2	519.9	518.2	519.9	521.6	521.6	522.4	520.7	519.0
25°	506.5	508.2	509.0	504.0	506.5	504.0	509.9	510.7	507.3	509.0
27.5°	494.0	491.5	490.6	487.3	489.0	488.1	489.0	489.0	494.0	487.3
30°	474.7	472.3	473.1	470.6	471.4	470.6	471.4	471.4	474.7	473.9
32.5°	456.4	453.9	454.7	452.2	452.2	453.0	451.3	451.3	453.9	452.2
35°	438.8	433.0	433.8	433.0	433.8	430.4	430.4	429.6	431.3	427.1
37.5°	413.7	411.2	410.4	409.6	410.4	408.7	410.4	407.9	410.4	407.0
40°	391.2	389.5	390.3	385.3	385.3	386.1	384.5	383.7	384.5	387.8
42.5°	368.6	365.3	363.6	361.9	362.7	360.3	359.4	357.7	359.4	356.1
45°	341.8	341.8	341.0	336.8	337.7	337.7	334.3	331.0	331.8	331.8
47.5°	317.6	316.0	315.1	310.9	310.1	309.3	305.9	303.4	303.4	300.9
50°	290.9	289.2	286.7	282.5	280.8	275.8	273.3	270.0	266.6	266.6
52.5°	265.8	259.9	256.6	249.9	247.4	244.9	238.2	235.7	233.2	230.7
55°	235.7	230.7	224.0	216.5	213.1	208.9	202.3	197.2	193.9	194.8
57.5°	206.5	198.1	191.4	181.4	177.2	174.7	168.0	161.3	158.0	158.0
60°	170.5	163.8	155.5	146.3	142.9	138.8	130.4	126.2	123.7	121.2
62.5°	136.2	131.2	123.7	112.0	109.5	105.3	99.5	94.5	91.9	91.9
65°	102.0	97.0	90.3	81.9	78.6	75.2	70.2	65.2	62.7	61.9
67.5°	71.9	66.0	60.2	53.5	51.0	49.3	44.3	41.0	39.3	38.4
70°	43.4	40.1	35.9	30.9	28.4	26.7	23.4	20.9	20.1	19.2
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)