

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: P840136

Luminaire Tested: **LD4C15D010 EU4159050 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: P840136
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 EU4159050 4LBCSSQMMS
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

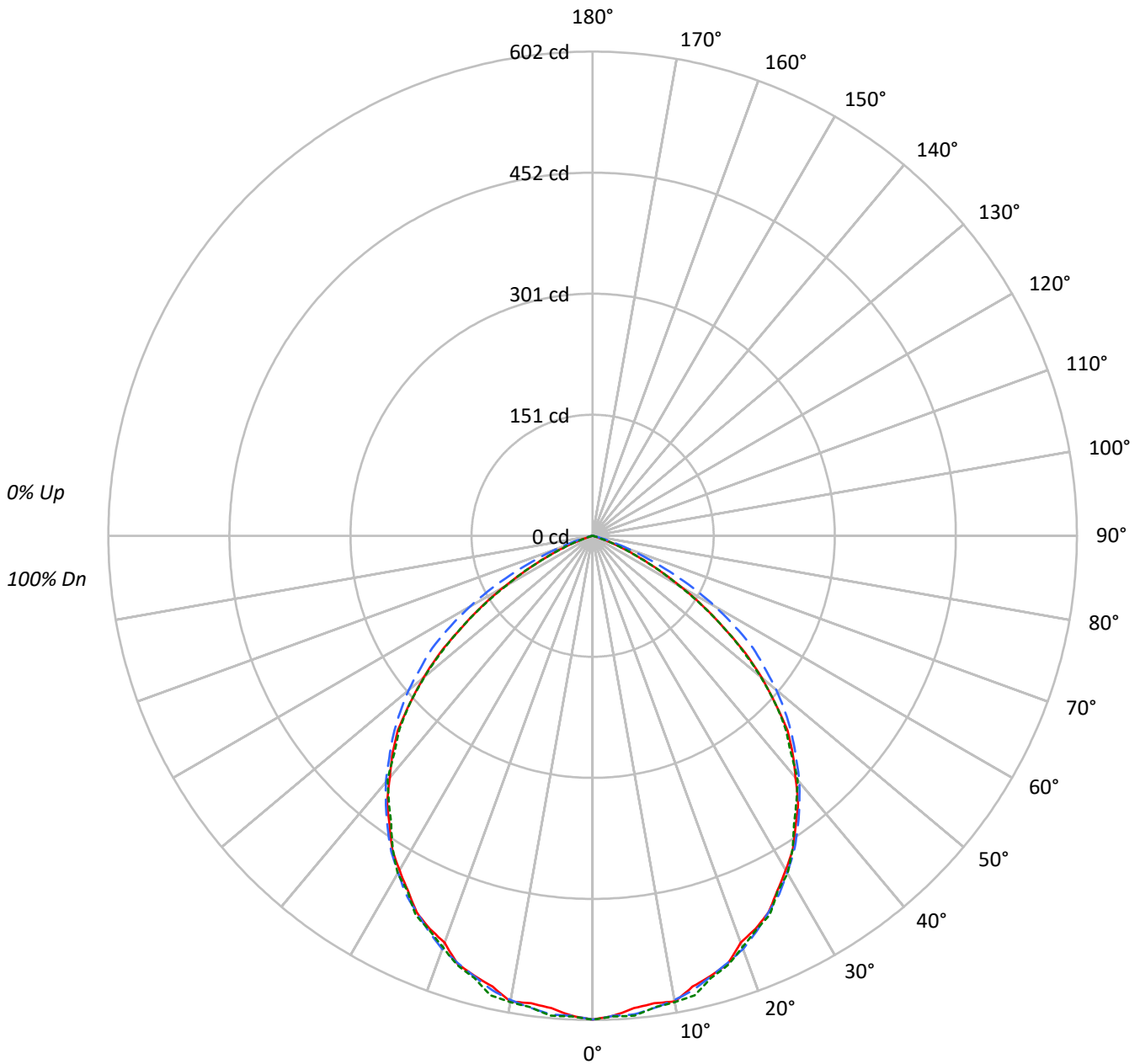
Lumens per Lamp: N/A
Luminaire Lumens: 1285.0 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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					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	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°	58038	58038	58038
5°	57107	57853	58018
10°	57601	57434	57679
15°	56589	56669	56849
20°	55273	56146	55889
25°	55031	55031	55404
30°	53502	53881	53981
35°	51828	52335	51428
40°	49400	50370	49942
45°	46750	47801	46286
50°	41175	44763	40920
55°	33342	40962	33493
60°	24392	33964	23910
65°	14817	24178	14429
70°	5783	13034	5558
75°	634	3504	634
80°	500	500	500
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.8	4.4
10°-20°	160.7	12.5
20°-30°	238.4	18.6
30°-40°	276.2	21.5
40°-50°	264.9	20.6
50°-60°	194.7	15.2
60°-70°	84.1	6.5
70°-80°	9.1	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°	455.9	35.5
0°-40°	732.1	57.0
0°-60°	1191.7	92.7
0°-90°	1285.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	590	596	597	598	599	56
15°	566	570	567	568	569	160
25°	517	516	517	518	520	237
35°	440	443	444	443	437	275
45°	343	344	350	345	339	260
55°	198	219	244	218	199	178
65°	65	81	106	80	63	67
75°	2	3	9	2	2	5
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°	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5
2.5°	597.3	604.1	605.0	600.7	599.0	596.4	602.4	598.1	599.8	598.1	597.3
5°	589.6	597.3	598.1	598.1	596.4	595.6	598.1	597.3	596.4	594.7	597.3
7.5°	586.2	590.4	594.7	589.6	592.1	591.3	597.3	594.7	593.8	593.8	592.1
10°	587.9	587.0	590.4	585.3	587.0	585.3	590.4	590.4	588.7	587.0	586.2
12.5°	574.2	581.0	581.0	580.2	578.5	575.9	581.0	584.5	579.3	579.3	578.5
15°	566.5	568.2	569.1	569.1	568.2	569.9	572.5	569.1	569.9	565.6	567.3
17.5°	558.0	554.6	557.1	555.4	556.3	558.0	561.4	561.4	556.3	555.4	557.1
20°	538.3	548.6	549.4	544.3	545.1	545.1	551.1	546.0	549.4	545.1	546.8
22.5°	528.9	535.7	536.6	529.8	534.0	528.9	534.9	527.2	535.7	529.8	532.3
25°	516.9	516.1	518.6	515.2	516.1	516.1	520.4	516.9	519.5	516.1	516.9
27.5°	497.3	504.1	503.3	499.9	501.6	500.7	509.3	499.9	505.0	500.7	502.4
30°	480.2	486.2	484.5	481.1	481.1	478.5	487.9	485.3	484.5	484.5	483.6
32.5°	463.1	464.0	462.3	463.1	464.0	460.6	468.2	464.8	464.0	464.8	465.7
35°	440.0	440.0	441.7	439.2	442.6	442.6	449.4	445.2	444.3	441.7	444.3
37.5°	419.5	417.0	417.8	417.8	419.5	421.2	424.7	422.9	422.9	420.4	422.1
40°	392.2	390.5	393.0	393.0	395.6	395.6	399.0	397.3	399.9	399.9	399.9
42.5°	368.3	368.3	366.6	369.1	370.0	369.1	375.1	374.2	375.1	373.4	374.2
45°	342.6	342.6	340.9	340.1	344.3	343.5	350.3	347.8	351.2	349.5	350.3
47.5°	307.6	311.9	309.3	311.9	317.0	317.9	322.1	320.4	323.8	321.3	324.7
50°	274.3	274.3	276.8	280.3	285.4	286.3	291.4	294.8	296.5	297.3	298.2
52.5°	239.3	238.4	241.0	245.2	249.5	252.9	258.1	263.2	266.6	271.7	269.1
55°	198.2	199.9	202.5	207.6	214.5	218.7	223.0	229.8	235.8	238.4	243.5
57.5°	163.2	161.5	163.2	170.0	177.7	181.1	187.1	194.0	202.5	207.6	209.3
60°	126.4	127.3	129.0	135.0	141.0	146.1	148.7	159.8	167.5	172.6	176.0
62.5°	93.2	94.9	96.6	101.7	107.7	111.9	116.2	125.6	132.4	137.6	141.0
65°	64.9	65.8	68.4	70.9	76.9	81.2	84.6	92.3	99.1	103.4	105.9
67.5°	40.2	41.0	42.7	46.2	50.4	53.8	57.2	62.4	68.4	72.6	73.5
70°	20.5	21.4	22.2	24.8	28.2	29.9	32.5	36.7	41.0	44.4	46.2
72.5°	6.8	6.8	7.7	9.4	11.1	12.8	13.7	18.0	21.4	23.1	23.9
75°	1.7	1.7	1.7	1.7	1.7	2.6	2.6	5.1	6.8	8.5	9.4
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°	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5	601.5
2.5°	601.5	599.8	599.0	599.8	599.8	599.0	601.5	605.0	609.2	598.1
5°	600.7	599.0	600.7	595.6	598.1	596.4	599.8	599.0	602.4	599.0
7.5°	598.1	594.7	595.6	593.0	596.4	592.1	594.7	599.8	596.4	591.3
10°	589.6	587.9	593.8	585.3	583.6	587.0	593.8	588.7	587.0	588.7
12.5°	581.0	581.0	583.6	576.8	577.6	579.3	582.7	579.3	581.0	585.3
15°	571.6	569.9	574.2	569.1	568.2	566.5	569.9	569.9	571.6	569.1
17.5°	560.5	558.0	558.0	556.3	555.4	559.7	561.4	562.2	563.1	559.7
20°	546.8	546.0	548.6	546.0	546.8	547.7	547.7	546.0	553.7	544.3
22.5°	532.3	534.9	531.5	529.8	531.5	533.2	533.2	534.0	532.3	530.6
25°	517.8	519.5	520.4	515.2	517.8	515.2	521.2	522.1	518.6	520.4
27.5°	505.0	502.4	501.6	498.1	499.9	499.0	499.9	499.9	505.0	498.1
30°	485.3	482.8	483.6	481.1	481.9	481.1	481.9	481.9	485.3	484.5
32.5°	466.5	464.0	464.8	462.3	462.3	463.1	461.4	461.4	464.0	462.3
35°	448.6	442.6	443.4	442.6	443.4	440.0	440.0	439.2	440.9	436.6
37.5°	422.9	420.4	419.5	418.7	419.5	417.8	419.5	417.0	419.5	416.1
40°	399.9	398.2	399.0	393.9	393.9	394.7	393.0	392.2	393.0	396.5
42.5°	376.8	373.4	371.7	370.0	370.8	368.3	367.4	365.7	367.4	364.0
45°	349.5	349.5	348.6	344.3	345.2	345.2	341.8	338.4	339.2	339.2
47.5°	324.7	323.0	322.1	317.9	317.0	316.2	312.7	310.2	310.2	307.6
50°	297.3	295.6	293.1	288.8	287.1	282.0	279.4	276.0	272.6	272.6
52.5°	271.7	265.7	262.3	255.5	252.9	250.3	243.5	241.0	238.4	235.8
55°	241.0	235.8	229.0	221.3	217.9	213.6	206.8	201.6	198.2	199.1
57.5°	211.1	202.5	195.7	185.4	181.1	178.6	171.7	164.9	161.5	161.5
60°	174.3	167.5	158.9	149.5	146.1	141.9	133.3	129.0	126.4	123.9
62.5°	139.3	134.2	126.4	114.5	111.9	107.7	101.7	96.6	94.0	94.0
65°	104.2	99.1	92.3	83.7	80.3	76.9	71.8	66.7	64.1	63.2
67.5°	73.5	67.5	61.5	54.7	52.1	50.4	45.3	41.9	40.2	39.3
70°	44.4	41.0	36.7	31.6	29.0	27.3	23.9	21.4	20.5	19.7
72.5°	23.1	20.5	17.1	13.7	12.0	10.2	8.5	6.8	6.0	6.0
75°	8.5	6.8	4.3	2.6	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)