

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: P840133

Luminaire Tested: **LD4C15D010 EU4159035 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: P840133
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 EU4159035 4LBCSSQMW
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

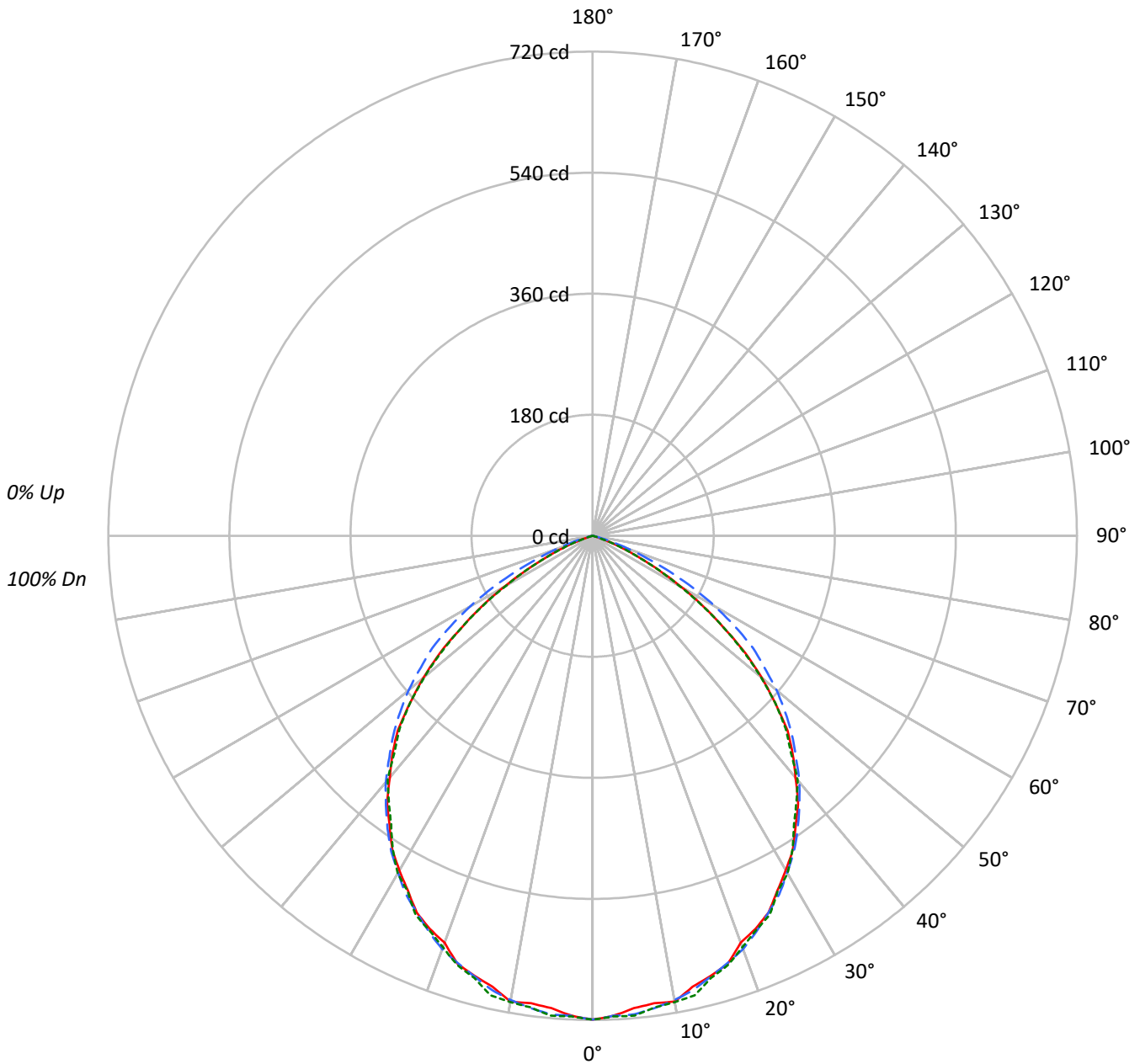
Lumens per Lamp: N/A
Luminaire Lumens: 1537.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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									
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°	69424	69424	69424
5°	68304	69195	69389
10°	68898	68692	68996
15°	67687	67787	67997
20°	66117	67164	66846
25°	65827	65827	66263
30°	63997	64454	64565
35°	61994	62606	61511
40°	59087	60245	59729
45°	55920	57175	55360
50°	49251	53544	48936
55°	39886	49003	40054
60°	29178	40622	28599
65°	17740	28927	17260
70°	6912	15573	6630
75°	746	4213	746
80°	556	556	556
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	4.4
10°-20°	192.2	12.5
20°-30°	285.2	18.6
30°-40°	330.4	21.5
40°-50°	316.8	20.6
50°-60°	232.9	15.2
60°-70°	100.6	6.5
70°-80°	10.8	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°	545.3	35.5
0°-40°	875.7	57.0
0°-60°	1425.4	92.7
0°-90°	1537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1537.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	705	712	714	715	716	67
15°	678	682	679	680	681	191
25°	618	617	618	619	622	283
35°	526	529	532	530	522	329
45°	410	411	419	413	406	312
55°	237	262	291	261	238	213
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°	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5
2.5°	714.4	722.6	723.6	718.5	716.4	713.4	720.5	715.4	717.5	715.4	714.4
5°	705.2	714.4	715.4	715.4	713.4	712.3	715.4	714.4	713.4	711.3	714.4
7.5°	701.1	706.2	711.3	705.2	708.3	707.3	714.4	711.3	710.3	710.3	708.3
10°	703.2	702.1	706.2	700.1	702.1	700.1	706.2	706.2	704.2	702.1	701.1
12.5°	686.8	695.0	695.0	694.0	691.9	688.8	695.0	699.1	692.9	692.9	691.9
15°	677.6	679.7	680.7	680.7	679.7	681.7	684.7	680.7	681.7	676.6	678.6
17.5°	667.4	663.3	666.4	664.3	665.4	667.4	671.5	671.5	665.4	664.3	666.4
20°	643.9	656.1	657.2	651.0	652.0	652.0	659.2	653.1	657.2	652.0	654.1
22.5°	632.6	640.8	641.8	633.7	638.7	632.6	639.8	630.6	640.8	633.7	636.7
25°	618.3	617.3	620.4	616.3	617.3	617.3	622.4	618.3	621.4	617.3	618.3
27.5°	594.8	603.0	602.0	597.9	599.9	598.9	609.1	597.9	604.0	598.9	601.0
30°	574.4	581.5	579.5	575.4	575.4	572.3	583.6	580.5	579.5	579.5	578.5
32.5°	553.9	555.0	552.9	553.9	555.0	550.9	560.1	556.0	555.0	556.0	557.0
35°	526.3	526.3	528.4	525.3	529.4	529.4	537.6	532.5	531.5	528.4	531.5
37.5°	501.8	498.8	499.8	499.8	501.8	503.9	507.9	505.9	505.9	502.8	504.9
40°	469.1	467.1	470.1	470.1	473.2	473.2	477.3	475.2	478.3	478.3	478.3
42.5°	440.5	440.5	438.5	441.5	442.6	441.5	448.7	447.6	448.7	446.6	447.6
45°	409.8	409.8	407.8	406.8	411.9	410.9	419.0	415.9	420.0	418.0	419.0
47.5°	367.9	373.0	370.0	373.0	379.2	380.2	385.3	383.3	387.3	384.3	388.4
50°	328.1	328.1	331.1	335.2	341.3	342.4	348.5	352.6	354.7	355.7	356.7
52.5°	286.2	285.1	288.2	293.3	298.4	302.5	308.7	314.8	318.9	325.0	321.9
55°	237.1	239.1	242.2	248.4	256.5	261.6	266.7	274.9	282.1	285.1	291.3
57.5°	195.2	193.2	195.2	203.4	212.6	216.7	223.8	232.0	242.2	248.4	250.4
60°	151.2	152.3	154.3	161.5	168.6	174.8	177.8	191.1	200.3	206.5	210.5
62.5°	111.4	113.5	115.5	121.6	128.8	133.9	139.0	150.2	158.4	164.5	168.6
65°	77.7	78.7	81.8	84.8	92.0	97.1	101.2	110.4	118.6	123.7	126.7
67.5°	48.0	49.0	51.1	55.2	60.3	64.4	68.5	74.6	81.8	86.9	87.9
70°	24.5	25.6	26.6	29.6	33.7	35.8	38.8	44.0	49.0	53.1	55.2
72.5°	8.2	8.2	9.2	11.3	13.3	15.3	16.3	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°	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5	719.5
2.5°	719.5	717.5	716.4	717.5	717.5	716.4	719.5	723.6	728.7	715.4
5°	718.5	716.4	718.5	712.3	715.4	713.4	717.5	716.4	720.5	716.4
7.5°	715.4	711.3	712.3	709.3	713.4	708.3	711.3	717.5	713.4	707.3
10°	705.2	703.2	710.3	700.1	698.0	702.1	710.3	704.2	702.1	704.2
12.5°	695.0	695.0	698.0	689.9	690.9	692.9	697.0	692.9	695.0	700.1
15°	683.7	681.7	686.8	680.7	679.7	677.6	681.7	681.7	683.7	680.7
17.5°	670.4	667.4	667.4	665.4	664.3	669.4	671.5	672.5	673.5	669.4
20°	654.1	653.1	656.1	653.1	654.1	655.1	655.1	653.1	662.3	651.0
22.5°	636.7	639.8	635.7	633.7	635.7	637.7	637.7	638.7	636.7	634.7
25°	619.4	621.4	622.4	616.3	619.4	616.3	623.4	624.4	620.4	622.4
27.5°	604.0	601.0	599.9	595.8	597.9	596.9	597.9	597.9	604.0	595.8
30°	580.5	577.4	578.5	575.4	576.4	575.4	576.4	576.4	580.5	579.5
32.5°	558.0	555.0	556.0	552.9	552.9	553.9	551.9	551.9	555.0	552.9
35°	536.5	529.4	530.4	529.4	530.4	526.3	526.3	525.3	527.4	522.2
37.5°	505.9	502.8	501.8	500.8	501.8	499.8	501.8	498.8	501.8	497.7
40°	478.3	476.2	477.3	471.2	471.2	472.2	470.1	469.1	470.1	474.2
42.5°	450.7	446.6	444.6	442.6	443.6	440.5	439.5	437.4	439.5	435.4
45°	418.0	418.0	417.0	411.9	412.9	412.9	408.8	404.7	405.7	405.7
47.5°	388.4	386.3	385.3	380.2	379.2	378.2	374.0	371.0	371.0	367.9
50°	355.7	353.6	350.6	345.4	343.4	337.3	334.2	330.1	326.0	326.0
52.5°	325.0	317.8	313.7	305.6	302.5	299.4	291.3	288.2	285.1	282.1
55°	288.2	282.1	273.9	264.7	260.6	255.5	247.3	241.2	237.1	238.1
57.5°	252.4	242.2	234.1	221.8	216.7	213.6	205.4	197.2	193.2	193.2
60°	208.5	200.3	190.1	178.8	174.8	169.7	159.4	154.3	151.2	148.2
62.5°	166.6	160.5	151.2	136.9	133.9	128.8	121.6	115.5	112.4	112.4
65°	124.7	118.6	110.4	100.2	96.1	92.0	85.9	79.7	76.6	75.6
67.5°	87.9	80.7	73.6	65.4	62.3	60.3	54.2	50.1	48.0	47.0
70°	53.1	49.0	44.0	37.8	34.7	32.7	28.6	25.6	24.5	23.5
72.5°	27.6	24.5	20.4	16.3	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)