

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: P840140

Luminaire Tested: **LD4C20D010 EU4209030 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: P840140
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: LD4C20D010 EU4209030 4LBCSSQMMS
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

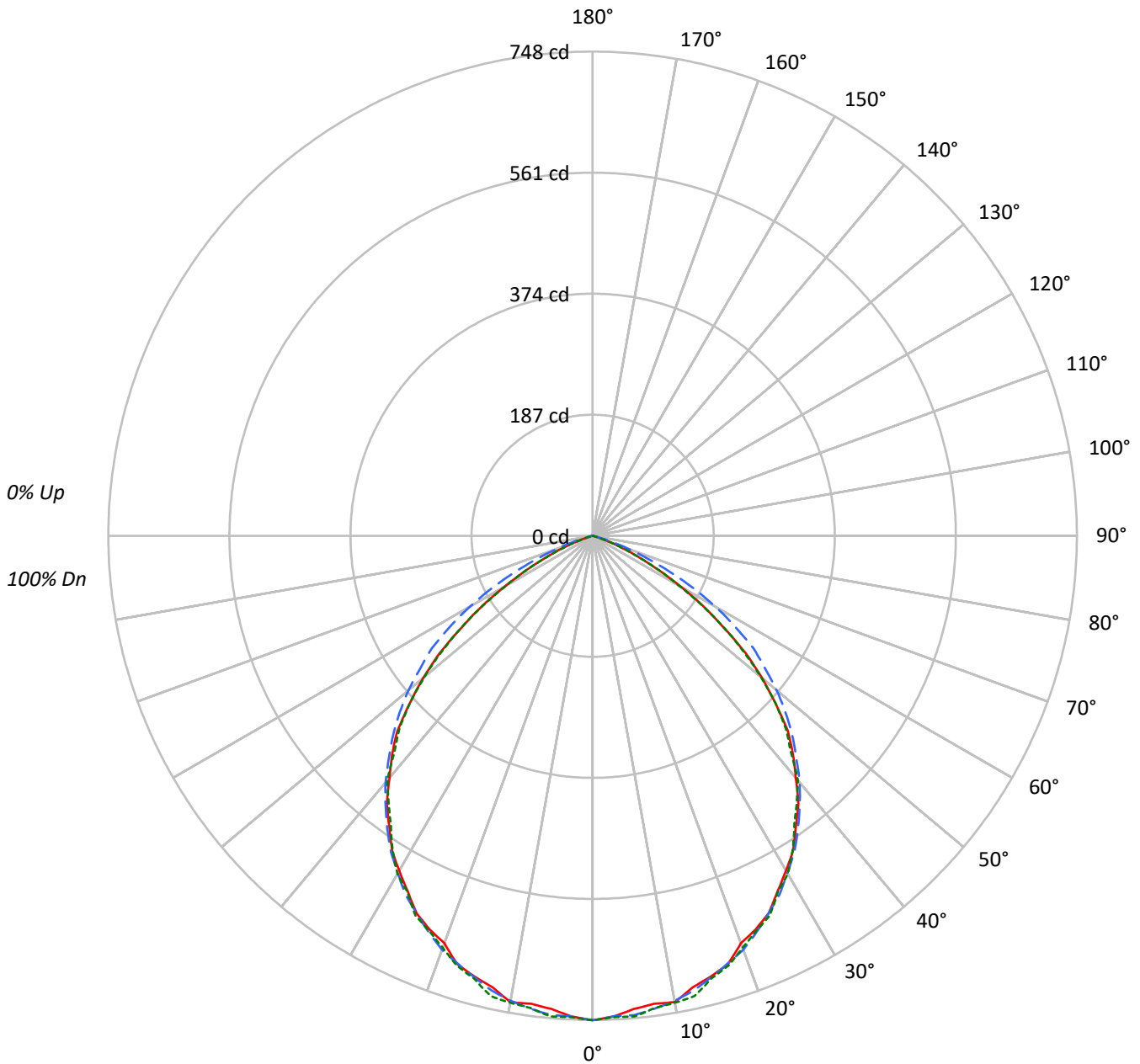
Lumens per Lamp: N/A
Luminaire Lumens: 1599.0 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
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	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°	72222	72222	72222
5°	71064	71984	72188
10°	71670	71465	71778
15°	70414	70524	70734
20°	68776	69875	69546
25°	68488	68488	68935
30°	66571	67050	67173
35°	64502	65127	63996
40°	61467	62676	62135
45°	58185	59481	57598
50°	51233	55706	50917
55°	41501	50972	41669
60°	30355	42262	29757
65°	18448	30092	17968
70°	7194	16193	6912
75°	783	4362	783
80°	611	611	611
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	4.4
10°-20°	199.9	12.5
20°-30°	296.7	18.6
30°-40°	343.7	21.5
40°-50°	329.6	20.6
50°-60°	242.3	15.2
60°-70°	104.7	6.5
70°-80°	11.3	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°	567.3	35.5
0°-40°	911.0	57.0
0°-60°	1482.9	92.7
0°-90°	1599.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1599.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	734	741	743	744	745	70
15°	705	709	706	707	708	199
25°	643	642	643	644	648	295
35°	548	551	553	552	543	342
45°	426	427	436	430	422	324
55°	247	272	303	271	248	222
65°	81	101	132	100	79	83
75°	2	3	12	2	2	7
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°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5
2.5°	743.2	751.7	752.8	747.5	745.3	742.2	749.6	744.3	746.4	744.3	743.2
5°	733.7	743.2	744.3	744.3	742.2	741.1	744.3	743.2	742.2	740.0	743.2
7.5°	729.4	734.7	740.0	733.7	736.8	735.8	743.2	740.0	739.0	739.0	736.8
10°	731.5	730.5	734.7	728.3	730.5	728.3	734.7	734.7	732.6	730.5	729.4
12.5°	714.5	723.0	723.0	721.9	719.8	716.6	723.0	727.3	720.9	720.9	719.8
15°	704.9	707.1	708.1	708.1	707.1	709.2	712.4	708.1	709.2	703.9	706.0
17.5°	694.3	690.1	693.2	691.1	692.2	694.3	698.6	698.6	692.2	691.1	693.2
20°	669.8	682.6	683.7	677.3	678.4	678.4	685.8	679.4	683.7	678.4	680.5
22.5°	658.1	666.6	667.7	659.2	664.5	658.1	665.6	656.0	666.6	659.2	662.4
25°	643.3	642.2	645.4	641.1	642.2	642.2	647.5	643.3	646.5	642.2	643.3
27.5°	618.8	627.3	626.3	622.0	624.1	623.1	633.7	622.0	628.4	623.1	625.2
30°	597.5	605.0	602.9	598.6	598.6	595.4	607.1	603.9	602.9	602.9	601.8
32.5°	576.3	577.4	575.2	576.3	577.4	573.1	582.7	578.4	577.4	578.4	579.5
35°	547.6	547.6	549.7	546.5	550.8	550.8	559.3	553.9	552.9	549.7	552.9
37.5°	522.0	518.9	519.9	519.9	522.0	524.2	528.4	526.3	526.3	523.1	525.3
40°	488.0	485.9	489.1	489.1	492.3	492.3	496.5	494.4	497.6	497.6	497.6
42.5°	458.3	458.3	456.2	459.3	460.4	459.3	466.8	465.7	466.8	464.7	465.7
45°	426.4	426.4	424.2	423.2	428.5	427.4	435.9	432.7	437.0	434.9	435.9
47.5°	382.8	388.1	384.9	388.1	394.5	395.5	400.8	398.7	403.0	399.8	404.1
50°	341.3	341.3	344.5	348.7	355.1	356.2	362.6	366.8	369.0	370.0	371.1
52.5°	297.7	296.6	299.9	305.1	310.5	314.7	321.1	327.5	331.7	338.1	334.9
55°	246.7	248.8	252.0	258.4	266.9	272.2	277.5	286.0	293.5	296.6	303.0
57.5°	203.1	200.9	203.1	211.6	221.2	225.4	232.9	241.4	252.0	258.4	260.5
60°	157.3	158.4	160.6	168.0	175.4	181.8	185.0	198.8	208.4	214.8	219.0
62.5°	115.9	118.0	120.2	126.5	134.0	139.3	144.6	156.3	164.8	171.2	175.4
65°	80.8	81.9	85.1	88.2	95.7	101.0	105.2	114.8	123.3	128.7	131.8
67.5°	50.0	51.0	53.1	57.4	62.7	67.0	71.2	77.6	85.1	90.4	91.4
70°	25.5	26.6	27.6	30.8	35.1	37.2	40.4	45.7	51.0	55.3	57.4
72.5°	8.5	8.5	9.6	11.7	13.8	16.0	17.0	22.3	26.6	28.7	29.8
75°	2.1	2.1	2.1	2.1	2.1	3.2	3.2	6.4	8.5	10.6	11.7
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.1	2.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5
2.5°	748.5	746.4	745.3	746.4	746.4	745.3	748.5	752.8	758.1	744.3
5°	747.5	745.3	747.5	741.1	744.3	742.2	746.4	745.3	749.6	745.3
7.5°	744.3	740.0	741.1	737.9	742.2	736.8	740.0	746.4	742.2	735.8
10°	733.7	731.5	739.0	728.3	726.2	730.5	739.0	732.6	730.5	732.6
12.5°	723.0	723.0	726.2	717.7	718.7	720.9	725.1	720.9	723.0	728.3
15°	711.3	709.2	714.5	708.1	707.1	704.9	709.2	709.2	711.3	708.1
17.5°	697.5	694.3	694.3	692.2	691.1	696.4	698.6	699.6	700.7	696.4
20°	680.5	679.4	682.6	679.4	680.5	681.6	681.6	679.4	689.0	677.3
22.5°	662.4	665.6	661.3	659.2	661.3	663.5	663.5	664.5	662.4	660.3
25°	644.3	646.5	647.5	641.1	644.3	641.1	648.6	649.6	645.4	647.5
27.5°	628.4	625.2	624.1	619.9	622.0	621.0	622.0	622.0	628.4	619.9
30°	603.9	600.7	601.8	598.6	599.7	598.6	599.7	599.7	603.9	602.9
32.5°	580.5	577.4	578.4	575.2	575.2	576.3	574.1	574.1	577.4	575.2
35°	558.2	550.8	551.8	550.8	551.8	547.6	547.6	546.5	548.6	543.3
37.5°	526.3	523.1	522.0	521.0	522.0	519.9	522.0	518.9	522.0	517.8
40°	497.6	495.5	496.5	490.2	490.2	491.2	489.1	488.0	489.1	493.3
42.5°	468.9	464.7	462.5	460.4	461.4	458.3	457.2	455.1	457.2	452.9
45°	434.9	434.9	433.8	428.5	429.6	429.6	425.3	421.1	422.1	422.1
47.5°	404.1	401.9	400.8	395.5	394.5	393.4	389.1	386.0	386.0	382.8
50°	370.0	367.9	364.7	359.4	357.2	350.9	347.7	343.4	339.2	339.2
52.5°	338.1	330.7	326.4	317.9	314.7	311.5	303.0	299.9	296.6	293.5
55°	299.9	293.5	285.0	275.4	271.1	265.8	257.3	250.9	246.7	247.7
57.5°	262.6	252.0	243.5	230.7	225.4	222.2	213.7	205.2	200.9	200.9
60°	216.9	208.4	197.8	186.1	181.8	176.5	165.8	160.6	157.3	154.2
62.5°	173.3	166.9	157.3	142.5	139.3	134.0	126.5	120.2	117.0	117.0
65°	129.7	123.3	114.8	104.2	100.0	95.7	89.3	82.9	79.7	78.7
67.5°	91.4	84.0	76.6	68.1	64.9	62.7	56.4	52.1	50.0	48.9
70°	55.3	51.0	45.7	39.3	36.1	34.0	29.8	26.6	25.5	24.5
72.5°	28.7	25.5	21.3	17.0	14.9	12.8	10.6	8.5	7.5	7.5
75°	10.6	8.5	5.3	3.2	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	2.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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)