

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: P840111

Luminaire Tested: **LD4C100D010 EU41009030 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: P840111
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: LD4C100D010 EU41009030 4LBCSSQMW
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

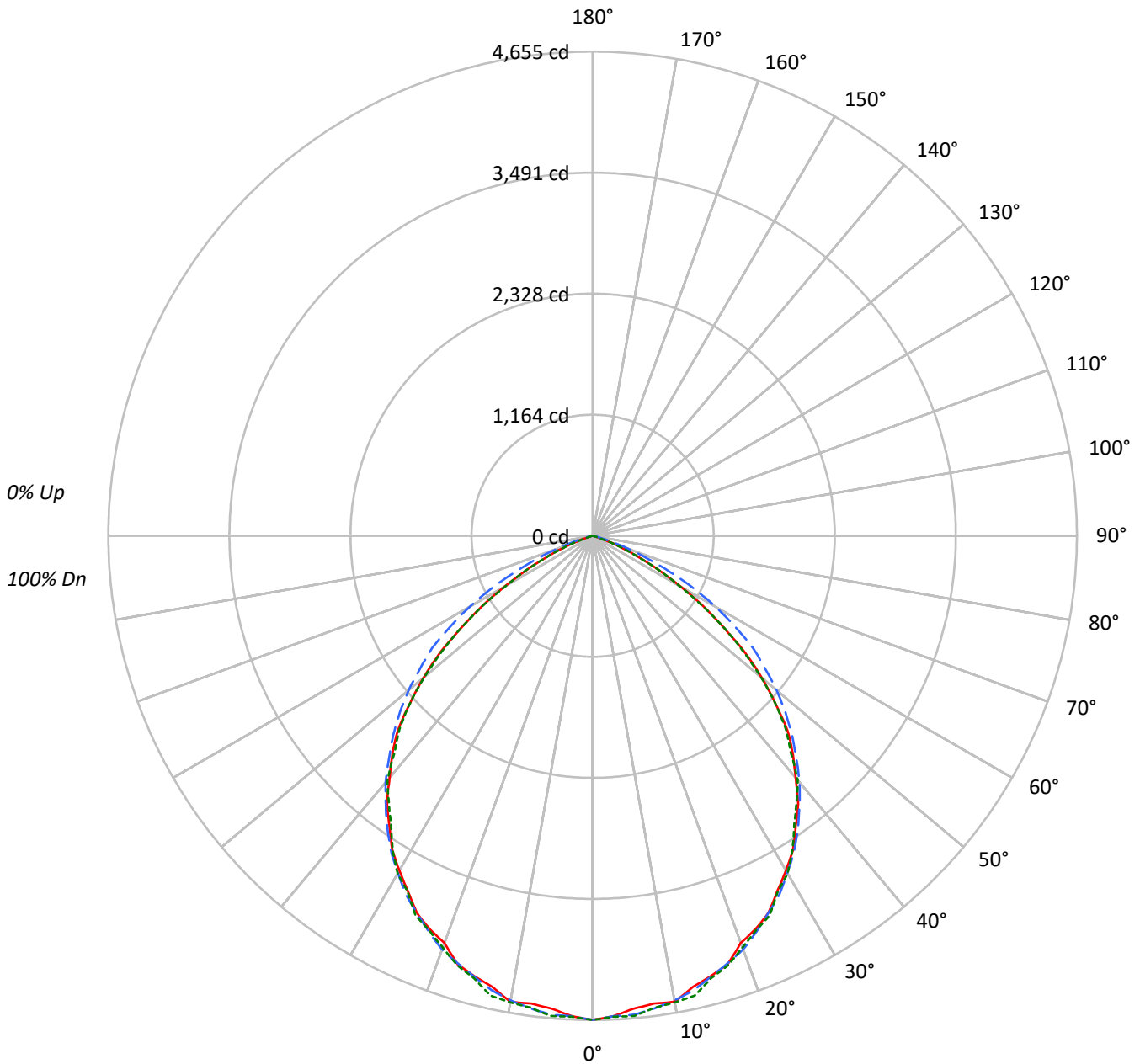
Lumens per Lamp: N/A
Luminaire Lumens: 9943.0 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 114.4
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

TEST NUMBER: P840111

CATALOG NUMBER: LD4C100D010 EU41009030 4LBCSSQMW

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°	449117	449117	449117
5°	441873	447627	448905
10°	445689	444396	446326
15°	437879	438529	439847
20°	427699	434486	432463
25°	425844	425844	428666
30°	413976	416929	417675
35°	401067	404966	397946
40°	382243	389724	386399
45°	361772	369905	358156
50°	318594	346379	316612
55°	258021	316966	259165
60°	188809	262836	185008
65°	114750	187170	111713
70°	44743	100771	42910
75°	4921	27140	4921
80°	3723	3723	3723
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.4	4.4
10°-20°	1243.3	12.5
20°-30°	1844.7	18.6
30°-40°	2137.5	21.5
40°-50°	2049.4	20.6
50°-60°	1506.8	15.2
60°-70°	650.8	6.5
70°-80°	70.2	0.7
80°-90°	0.9	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°	3527.3	35.5
0°-40°	5664.8	57.0
0°-60°	9221.0	92.7
0°-90°	9943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9943.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4655	4655	4655	4655	4655	
5°	4562	4608	4622	4628	4635	435
15°	4384	4410	4390	4397	4403	1235
25°	4000	3994	4000	4007	4026	1831
35°	3405	3425	3438	3431	3378	2129
45°	2651	2658	2711	2671	2625	2015
55°	1534	1692	1884	1686	1541	1380
65°	503	628	820	622	489	517
75°	13	20	73	13	13	41
85°	0	0	0	0	0	1
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°	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6
2.5°	4621.5	4674.3	4681.1	4647.9	4634.7	4615.0	4661.1	4628.2	4641.4	4628.2	4621.5
5°	4562.1	4621.5	4628.2	4628.2	4615.0	4608.2	4628.2	4621.5	4615.0	4601.8	4621.5
7.5°	4535.7	4568.6	4601.8	4562.1	4581.8	4575.3	4621.5	4601.8	4595.0	4595.0	4581.8
10°	4548.9	4542.1	4568.6	4528.9	4542.1	4528.9	4568.6	4568.6	4555.4	4542.1	4535.7
12.5°	4442.9	4495.7	4495.7	4489.3	4476.1	4456.1	4495.7	4522.4	4482.5	4482.5	4476.1
15°	4383.5	4396.7	4403.2	4403.2	4396.7	4410.0	4429.7	4403.2	4410.0	4376.8	4390.0
17.5°	4317.4	4291.0	4310.7	4297.5	4304.2	4317.4	4343.9	4343.9	4304.2	4297.5	4310.7
20°	4165.3	4244.6	4251.3	4211.7	4218.2	4218.2	4264.6	4224.9	4251.3	4218.2	4231.4
22.5°	4092.5	4145.3	4152.1	4099.2	4132.1	4092.5	4138.9	4079.2	4145.3	4099.2	4118.9
25°	3999.9	3993.5	4013.2	3986.7	3993.5	3993.5	4026.4	3999.9	4019.9	3993.5	3999.9
27.5°	3848.1	3900.9	3894.2	3867.8	3881.0	3874.5	3940.6	3867.8	3907.4	3874.5	3887.7
30°	3715.6	3762.0	3748.8	3722.4	3722.4	3702.4	3775.2	3755.3	3748.8	3748.8	3742.1
32.5°	3583.4	3590.2	3577.0	3583.4	3590.2	3563.7	3623.1	3596.7	3590.2	3596.7	3603.4
35°	3404.9	3404.9	3418.1	3398.4	3424.8	3424.8	3477.7	3444.5	3438.0	3418.1	3438.0
37.5°	3246.2	3226.5	3233.0	3233.0	3246.2	3259.5	3285.9	3272.7	3272.7	3253.0	3266.2
40°	3034.7	3021.5	3041.2	3041.2	3061.2	3061.2	3087.6	3074.4	3094.1	3094.1	3094.1
42.5°	2849.7	2849.7	2836.5	2856.2	2862.9	2856.2	2902.6	2895.8	2902.6	2889.3	2895.8
45°	2651.2	2651.2	2637.9	2631.5	2664.4	2657.9	2710.8	2690.8	2717.3	2704.0	2710.8
47.5°	2380.1	2413.2	2393.3	2413.2	2452.9	2459.6	2492.5	2479.3	2505.8	2486.1	2512.5
50°	2122.4	2122.4	2142.1	2168.6	2208.2	2215.0	2254.6	2281.0	2294.3	2300.7	2307.5
52.5°	1851.3	1844.6	1864.5	1897.5	1930.6	1957.1	1996.7	2036.4	2062.8	2102.5	2082.5
55°	1533.8	1547.0	1567.0	1606.7	1659.5	1692.4	1725.6	1778.5	1824.9	1844.6	1884.2
57.5°	1262.7	1249.5	1262.7	1315.6	1375.2	1401.6	1448.0	1500.9	1567.0	1606.7	1619.9
60°	978.4	985.1	998.4	1044.8	1090.9	1130.5	1150.5	1236.3	1295.9	1335.6	1362.0
62.5°	720.8	734.0	747.2	786.9	833.0	866.2	899.1	971.9	1024.8	1064.5	1090.9
65°	502.6	509.0	529.0	548.7	595.1	628.0	654.4	714.0	766.9	800.1	819.8
67.5°	310.8	317.2	330.5	357.2	390.1	416.5	442.9	482.6	529.0	561.9	568.6
70°	158.6	165.4	171.8	191.8	218.2	231.4	251.1	284.3	317.2	343.7	357.2
72.5°	52.9	52.9	59.6	72.8	86.0	99.3	105.7	138.9	165.4	178.6	185.1
75°	13.2	13.2	13.2	13.2	13.2	20.0	20.0	39.7	52.9	66.1	72.8
77.5°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	13.2	13.2
80°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
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°	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6	4654.6
2.5°	4654.6	4641.4	4634.7	4641.4	4641.4	4634.7	4654.6	4681.1	4714.0	4628.2
5°	4647.9	4634.7	4647.9	4608.2	4628.2	4615.0	4641.4	4634.7	4661.1	4634.7
7.5°	4628.2	4601.8	4608.2	4588.5	4615.0	4581.8	4601.8	4641.4	4615.0	4575.3
10°	4562.1	4548.9	4595.0	4528.9	4515.7	4542.1	4595.0	4555.4	4542.1	4555.4
12.5°	4495.7	4495.7	4515.7	4462.8	4469.3	4482.5	4509.0	4482.5	4495.7	4528.9
15°	4423.2	4410.0	4442.9	4403.2	4396.7	4383.5	4410.0	4410.0	4423.2	4403.2
17.5°	4337.1	4317.4	4317.4	4304.2	4297.5	4330.6	4343.9	4350.3	4357.1	4330.6
20°	4231.4	4224.9	4244.6	4224.9	4231.4	4238.1	4238.1	4224.9	4284.3	4211.7
22.5°	4118.9	4138.9	4112.4	4099.2	4112.4	4125.6	4125.6	4132.1	4118.9	4105.7
25°	4006.7	4019.9	4026.4	3986.7	4006.7	3986.7	4033.1	4039.6	4013.2	4026.4
27.5°	3907.4	3887.7	3881.0	3854.5	3867.8	3861.3	3867.8	3867.8	3907.4	3854.5
30°	3755.3	3735.6	3742.1	3722.4	3728.8	3722.4	3728.8	3728.8	3755.3	3748.8
32.5°	3609.9	3590.2	3596.7	3577.0	3577.0	3583.4	3570.2	3570.2	3590.2	3577.0
35°	3470.9	3424.8	3431.3	3424.8	3431.3	3404.9	3404.9	3398.4	3411.6	3378.4
37.5°	3272.7	3253.0	3246.2	3239.8	3246.2	3233.0	3246.2	3226.5	3246.2	3219.8
40°	3094.1	3080.9	3087.6	3048.0	3048.0	3054.4	3041.2	3034.7	3041.2	3067.7
42.5°	2915.8	2889.3	2876.1	2862.9	2869.4	2849.7	2843.0	2829.7	2843.0	2816.5
45°	2704.0	2704.0	2697.6	2664.4	2671.1	2671.1	2644.7	2618.2	2624.7	2624.7
47.5°	2512.5	2499.3	2492.5	2459.6	2452.9	2446.4	2419.7	2400.0	2400.0	2380.1
50°	2300.7	2287.5	2267.8	2234.7	2221.4	2181.8	2162.1	2135.6	2109.2	2109.2
52.5°	2102.5	2056.1	2029.6	1976.8	1957.1	1937.1	1884.2	1864.5	1844.6	1824.9
55°	1864.5	1824.9	1772.0	1712.4	1686.0	1652.8	1599.9	1560.3	1533.8	1540.6
57.5°	1633.1	1567.0	1514.1	1434.8	1401.6	1381.7	1328.8	1275.9	1249.5	1249.5
60°	1348.8	1295.9	1229.8	1157.0	1130.5	1097.6	1031.3	998.4	978.4	958.7
62.5°	1077.7	1038.0	978.4	885.9	866.2	833.0	786.9	747.2	727.3	727.3
65°	806.6	766.9	714.0	648.0	621.5	595.1	555.4	515.8	495.8	489.3
67.5°	568.6	522.2	476.1	423.2	403.3	390.1	350.4	324.0	310.8	304.0
70°	343.7	317.2	284.3	244.7	224.7	211.5	185.1	165.4	158.6	152.1
72.5°	178.6	158.6	132.2	105.7	92.5	79.3	66.1	52.9	46.4	46.4
75°	66.1	52.9	33.2	20.0	13.2	13.2	13.2	13.2	13.2	13.2
77.5°	13.2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
80°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
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)