

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: P840115

Luminaire Tested: **LD4C100D010 EU41009040 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: P840115
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 EU41009040 4LBCSSQMW
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

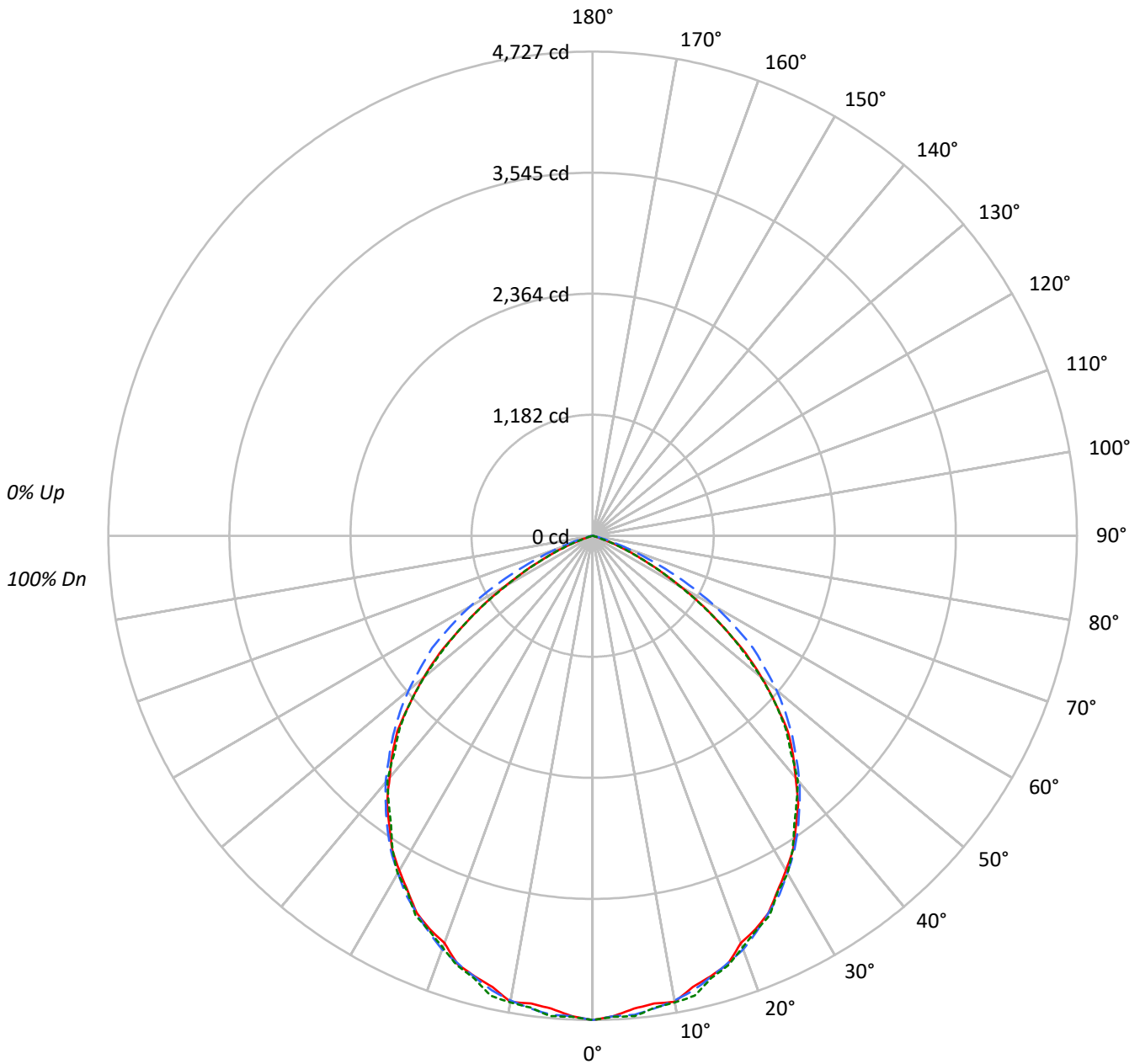
Lumens per Lamp: N/A
Luminaire Lumens: 10098.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	456122	456122	456122
5°	448760	454601	455898
10°	452636	451323	453283
15°	444712	445361	446710
20°	434363	441253	439199
25°	432488	432488	435341
30°	420427	423425	424182
35°	407310	411280	404153
40°	388213	395796	392420
45°	367408	375663	363737
50°	323562	351783	321551
55°	262041	321912	263202
60°	191762	266927	187902
65°	116531	190093	113471
70°	45449	102323	43587
75°	4996	27588	4996
80°	3778	3778	3778
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	446.2	4.4
10°-20°	1262.6	12.5
20°-30°	1873.5	18.6
30°-40°	2170.8	21.5
40°-50°	2081.3	20.6
50°-60°	1530.3	15.2
60°-70°	661.0	6.5
70°-80°	71.3	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°	3582.3	35.5
0°-40°	5753.1	57.0
0°-60°	9364.7	92.7
0°-90°	10098.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10098.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4727	4727	4727	4727	4727	
5°	4633	4680	4694	4700	4707	442
15°	4452	4479	4458	4465	4472	1255
25°	4062	4056	4062	4069	4089	1860
35°	3458	3478	3492	3485	3431	2162
45°	2692	2699	2753	2713	2666	2047
55°	1558	1719	1914	1712	1565	1402
65°	510	638	833	631	497	525
75°	13	20	74	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°	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2
2.5°	4693.5	4747.2	4754.0	4720.3	4706.9	4686.9	4733.8	4700.3	4713.8	4700.3	4693.5
5°	4633.2	4693.5	4700.3	4700.3	4686.9	4680.1	4700.3	4693.5	4686.9	4673.5	4693.5
7.5°	4606.4	4639.8	4673.5	4633.2	4653.2	4646.6	4693.5	4673.5	4666.6	4666.6	4653.2
10°	4619.8	4612.9	4639.8	4599.5	4612.9	4599.5	4639.8	4639.8	4626.4	4612.9	4606.4
12.5°	4512.1	4565.8	4565.8	4559.3	4545.8	4525.6	4565.8	4592.9	4552.4	4552.4	4545.8
15°	4451.9	4465.3	4471.9	4471.9	4465.3	4478.7	4498.7	4471.9	4478.7	4445.0	4458.4
17.5°	4384.7	4357.9	4377.9	4364.5	4371.3	4384.7	4411.6	4411.6	4371.3	4364.5	4377.9
20°	4230.2	4310.8	4317.6	4277.3	4283.9	4283.9	4331.0	4290.8	4317.6	4283.9	4297.3
22.5°	4156.3	4210.0	4216.8	4163.1	4196.5	4156.3	4203.4	4142.8	4210.0	4163.1	4183.1
25°	4062.3	4055.7	4075.7	4048.9	4055.7	4055.7	4089.1	4062.3	4082.6	4055.7	4062.3
27.5°	3908.0	3961.7	3954.9	3928.0	3941.5	3934.9	4002.0	3928.0	3968.3	3934.9	3948.3
30°	3773.5	3820.7	3807.2	3780.4	3780.4	3760.1	3834.1	3813.8	3807.2	3807.2	3800.4
32.5°	3639.3	3646.1	3632.7	3639.3	3646.1	3619.3	3679.6	3652.7	3646.1	3652.7	3659.6
35°	3457.9	3457.9	3471.4	3451.4	3478.2	3478.2	3531.9	3498.2	3491.6	3471.4	3491.6
37.5°	3296.8	3276.8	3283.4	3283.4	3296.8	3310.3	3337.1	3323.7	3323.7	3303.7	3317.1
40°	3082.1	3068.6	3088.6	3088.6	3108.9	3108.9	3135.8	3122.3	3142.3	3142.3	3142.3
42.5°	2894.1	2894.1	2880.7	2900.7	2907.5	2900.7	2947.8	2941.0	2947.8	2934.4	2941.0
45°	2692.5	2692.5	2679.1	2672.5	2705.9	2699.3	2753.0	2732.8	2759.6	2746.2	2753.0
47.5°	2417.2	2450.9	2430.6	2450.9	2491.1	2498.0	2531.4	2518.0	2544.8	2524.8	2551.7
50°	2155.5	2155.5	2175.5	2202.4	2242.6	2249.5	2289.8	2316.6	2330.0	2336.6	2343.5
52.5°	1880.2	1873.3	1893.6	1927.0	1960.7	1987.6	2027.9	2068.1	2095.0	2135.2	2115.0
55°	1557.7	1571.2	1591.4	1631.7	1685.4	1718.8	1752.5	1806.2	1853.3	1873.3	1913.6
57.5°	1282.4	1269.0	1282.4	1336.1	1396.7	1423.5	1470.6	1524.3	1591.4	1631.7	1645.1
60°	993.7	1000.5	1013.9	1061.0	1107.9	1148.2	1168.4	1255.6	1316.1	1356.4	1383.2
62.5°	732.0	745.4	758.9	799.1	846.0	879.7	913.1	987.1	1040.8	1081.0	1107.9
65°	510.4	517.0	537.2	557.2	604.4	637.8	664.6	725.2	778.9	812.6	832.6
67.5°	315.6	322.2	335.6	362.7	396.1	423.0	449.8	490.1	537.2	570.7	577.5
70°	161.1	167.9	174.5	194.8	221.6	235.1	255.1	288.8	322.2	349.0	362.7
72.5°	53.7	53.7	60.5	74.0	87.4	100.8	107.4	141.1	167.9	181.4	187.9
75°	13.4	13.4	13.4	13.4	13.4	20.3	20.3	40.3	53.7	67.1	74.0
77.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	13.4	13.4
80°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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°	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2	4727.2
2.5°	4727.2	4713.8	4706.9	4713.8	4713.8	4706.9	4727.2	4754.0	4787.5	4700.3
5°	4720.3	4706.9	4720.3	4680.1	4700.3	4686.9	4713.8	4706.9	4733.8	4706.9
7.5°	4700.3	4673.5	4680.1	4660.1	4686.9	4653.2	4673.5	4713.8	4686.9	4646.6
10°	4633.2	4619.8	4666.6	4599.5	4586.1	4612.9	4666.6	4626.4	4612.9	4626.4
12.5°	4565.8	4565.8	4586.1	4532.4	4539.0	4552.4	4579.3	4552.4	4565.8	4599.5
15°	4492.1	4478.7	4512.1	4471.9	4465.3	4451.9	4478.7	4478.7	4492.1	4471.9
17.5°	4404.7	4384.7	4384.7	4371.3	4364.5	4398.2	4411.6	4418.2	4425.0	4398.2
20°	4297.3	4290.8	4310.8	4290.8	4297.3	4304.2	4304.2	4290.8	4351.0	4277.3
22.5°	4183.1	4203.4	4176.5	4163.1	4176.5	4190.0	4190.0	4196.5	4183.1	4169.7
25°	4069.1	4082.6	4089.1	4048.9	4069.1	4048.9	4096.0	4102.6	4075.7	4089.1
27.5°	3968.3	3948.3	3941.5	3914.6	3928.0	3921.5	3928.0	3928.0	3968.3	3914.6
30°	3813.8	3793.8	3800.4	3780.4	3787.0	3780.4	3787.0	3787.0	3813.8	3807.2
32.5°	3666.1	3646.1	3652.7	3632.7	3632.7	3639.3	3625.9	3625.9	3646.1	3632.7
35°	3525.1	3478.2	3484.8	3478.2	3484.8	3457.9	3457.9	3451.4	3464.8	3431.1
37.5°	3323.7	3303.7	3296.8	3290.3	3296.8	3283.4	3296.8	3276.8	3296.8	3270.0
40°	3142.3	3128.9	3135.8	3095.5	3095.5	3102.1	3088.6	3082.1	3088.6	3115.5
42.5°	2961.2	2934.4	2921.0	2907.5	2914.1	2894.1	2887.3	2873.8	2887.3	2860.4
45°	2746.2	2746.2	2739.6	2705.9	2712.8	2712.8	2685.9	2659.1	2665.6	2665.6
47.5°	2551.7	2538.2	2531.4	2498.0	2491.1	2484.5	2457.4	2437.4	2437.4	2417.2
50°	2336.6	2323.2	2303.2	2269.5	2256.1	2215.8	2195.8	2168.9	2142.1	2142.1
52.5°	2135.2	2088.1	2061.3	2007.6	1987.6	1967.3	1913.6	1893.6	1873.3	1853.3
55°	1893.6	1853.3	1799.6	1739.1	1712.3	1678.6	1624.9	1584.6	1557.7	1564.6
57.5°	1658.6	1591.4	1537.7	1457.2	1423.5	1403.2	1349.5	1295.8	1269.0	1269.0
60°	1369.8	1316.1	1249.0	1175.0	1148.2	1114.7	1047.4	1013.9	993.7	973.7
62.5°	1094.5	1054.2	993.7	899.7	879.7	846.0	799.1	758.9	738.6	738.6
65°	819.1	778.9	725.2	658.1	631.2	604.4	564.1	523.8	503.5	497.0
67.5°	577.5	530.4	483.5	429.8	409.6	396.1	355.9	329.0	315.6	308.8
70°	349.0	322.2	288.8	248.5	228.2	214.8	187.9	167.9	161.1	154.5
72.5°	181.4	161.1	134.2	107.4	94.0	80.5	67.1	53.7	47.1	47.1
75°	67.1	53.7	33.7	20.3	13.4	13.4	13.4	13.4	13.4	13.4
77.5°	13.4	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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)