

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: P840117

Luminaire Tested: **LD4C100D010 EU41009050 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: P840117
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 EU41009050 4LBCSSQMW
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

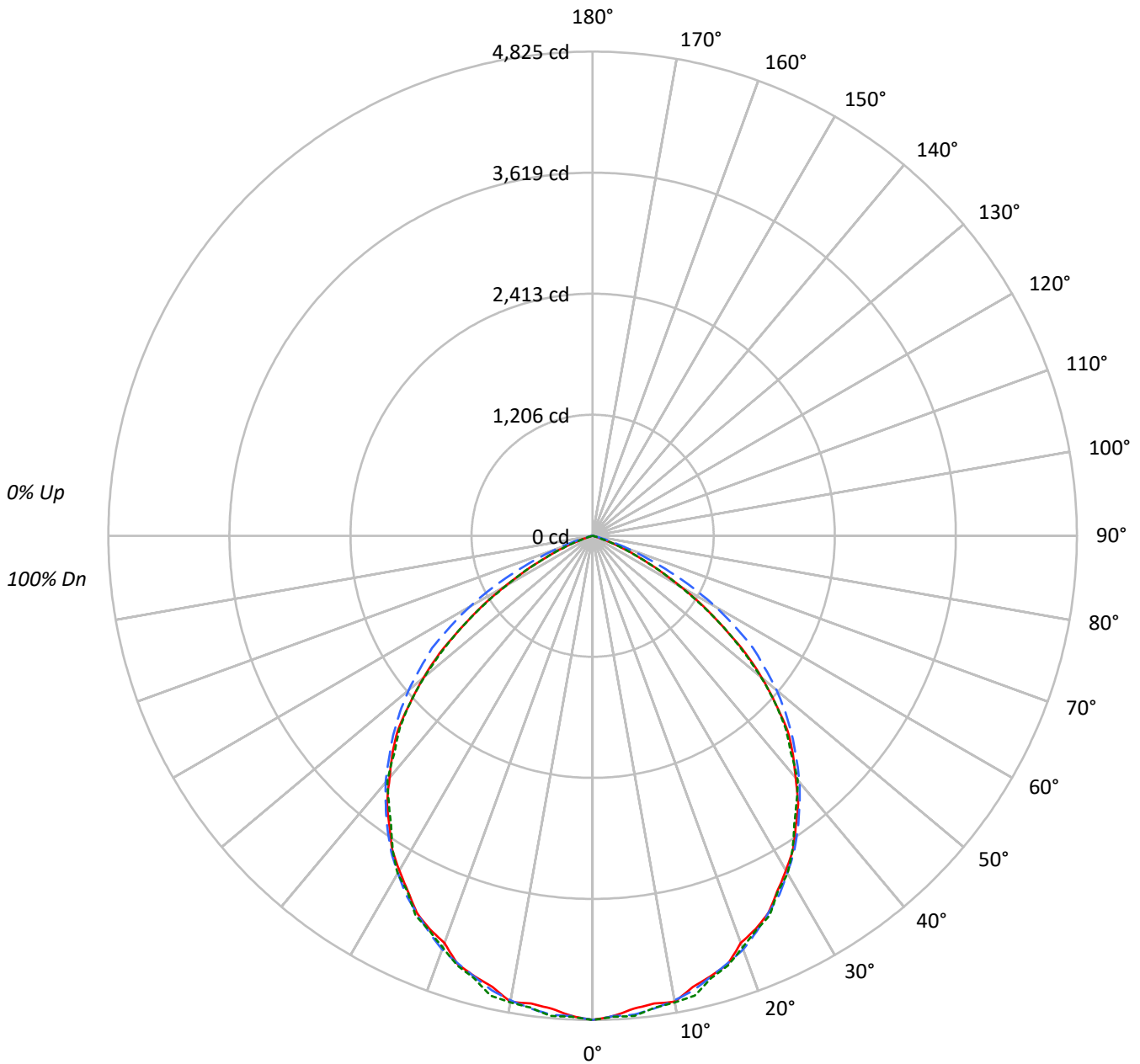
Lumens per Lamp: N/A
Luminaire Lumens: 10306.0 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 114.4
Input Voltage (V):
Input Current (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			100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89			89
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59			59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52			52
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46			46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41			41
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37			37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33			33
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	465520	465520	465520
5°	458010	463967	465294
10°	461963	460621	462620
15°	453872	454542	455910
20°	443316	450350	448245
25°	441399	441399	444316
30°	429096	432148	432928
35°	415709	419749	412481
40°	396199	403958	400506
45°	374967	383400	371228
50°	330227	359018	328171
55°	267441	328540	268619
60°	195699	272427	191762
65°	118928	193997	115800
70°	46380	104439	44489
75°	5107	28147	5107
80°	3890	3890	3890
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	455.4	4.4
10°-20°	1288.7	12.5
20°-30°	1912.1	18.6
30°-40°	2215.5	21.5
40°-50°	2124.2	20.6
50°-60°	1561.8	15.2
60°-70°	674.6	6.5
70°-80°	72.8	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°	3656.1	35.5
0°-40°	5871.7	57.0
0°-60°	9557.6	92.7
0°-90°	10306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10306.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4825	4825	4825	4825	4825	
5°	4729	4776	4790	4797	4804	451
15°	4544	4571	4550	4557	4564	1281
25°	4146	4139	4146	4153	4173	1898
35°	3529	3550	3564	3557	3502	2207
45°	2748	2755	2810	2769	2720	2089
55°	1590	1754	1953	1748	1597	1431
65°	521	651	850	644	507	535
75°	14	21	76	14	14	42
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°	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6
2.5°	4790.2	4845.0	4852.0	4817.6	4803.9	4783.5	4831.3	4797.2	4810.9	4797.2	4790.2
5°	4728.7	4790.2	4797.2	4797.2	4783.5	4776.5	4797.2	4790.2	4783.5	4769.8	4790.2
7.5°	4701.3	4735.4	4769.8	4728.7	4749.1	4742.4	4790.2	4769.8	4762.8	4762.8	4749.1
10°	4715.0	4708.0	4735.4	4694.3	4708.0	4694.3	4735.4	4735.4	4721.7	4708.0	4701.3
12.5°	4605.1	4659.9	4659.9	4653.2	4639.5	4618.8	4659.9	4687.5	4646.2	4646.2	4639.5
15°	4543.6	4557.3	4564.0	4564.0	4557.3	4571.0	4591.4	4564.0	4571.0	4536.6	4550.3
17.5°	4475.1	4447.7	4468.1	4454.4	4461.4	4475.1	4502.5	4502.5	4461.4	4454.4	4468.1
20°	4317.4	4399.6	4406.5	4365.4	4372.2	4372.2	4420.2	4379.1	4406.5	4372.2	4385.9
22.5°	4241.9	4296.7	4303.7	4248.9	4283.0	4241.9	4290.0	4228.2	4296.7	4248.9	4269.3
25°	4146.0	4139.2	4159.7	4132.3	4139.2	4139.2	4173.4	4146.0	4166.7	4139.2	4146.0
27.5°	3988.5	4043.3	4036.4	4009.0	4022.7	4015.9	4084.4	4009.0	4050.1	4015.9	4029.6
30°	3851.3	3899.4	3885.7	3858.2	3858.2	3837.6	3913.1	3892.4	3885.7	3885.7	3878.7
32.5°	3714.3	3721.2	3707.5	3714.3	3721.2	3693.8	3755.4	3728.0	3721.2	3728.0	3734.9
35°	3529.2	3529.2	3542.9	3522.4	3549.8	3549.8	3604.6	3570.3	3563.5	3542.9	3563.5
37.5°	3364.8	3344.3	3351.1	3351.1	3364.8	3378.5	3405.9	3392.2	3392.2	3371.7	3385.4
40°	3145.5	3131.8	3152.3	3152.3	3172.9	3172.9	3200.3	3186.6	3207.1	3207.1	3207.1
42.5°	2953.7	2953.7	2940.0	2960.4	2967.4	2960.4	3008.5	3001.5	3008.5	2994.8	3001.5
45°	2747.9	2747.9	2734.2	2727.5	2761.6	2754.9	2809.7	2789.1	2816.5	2802.8	2809.7
47.5°	2466.9	2501.3	2480.6	2501.3	2542.4	2549.4	2583.5	2569.8	2597.2	2576.8	2604.2
50°	2199.9	2199.9	2220.3	2247.7	2288.8	2295.8	2336.9	2364.3	2378.0	2384.7	2391.7
52.5°	1918.9	1911.9	1932.6	1966.7	2001.1	2028.5	2069.6	2110.7	2138.1	2179.2	2158.5
55°	1589.8	1603.5	1624.2	1665.3	1720.1	1754.2	1788.6	1843.4	1891.5	1911.9	1953.0
57.5°	1308.8	1295.1	1308.8	1363.6	1425.4	1452.8	1500.9	1555.7	1624.2	1665.3	1679.0
60°	1014.1	1021.1	1034.8	1082.9	1130.7	1171.8	1192.5	1281.4	1343.2	1384.3	1411.7
62.5°	747.1	760.8	774.5	815.6	863.4	897.8	931.9	1007.4	1062.2	1103.3	1130.7
65°	520.9	527.6	548.3	568.7	616.8	650.9	678.3	740.1	794.9	829.3	849.7
67.5°	322.1	328.8	342.5	370.2	404.3	431.7	459.1	500.2	548.3	582.4	589.4
70°	164.4	171.4	178.1	198.8	226.2	239.9	260.3	294.7	328.8	356.2	370.2
72.5°	54.8	54.8	61.8	75.5	89.2	102.9	109.6	144.0	171.4	185.1	191.8
75°	13.7	13.7	13.7	13.7	13.7	20.7	20.7	41.1	54.8	68.5	75.5
77.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	13.7	13.7
80°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
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°	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6	4824.6
2.5°	4824.6	4810.9	4803.9	4810.9	4810.9	4803.9	4824.6	4852.0	4886.1	4797.2
5°	4817.6	4803.9	4817.6	4776.5	4797.2	4783.5	4810.9	4803.9	4831.3	4803.9
7.5°	4797.2	4769.8	4776.5	4756.1	4783.5	4749.1	4769.8	4810.9	4783.5	4742.4
10°	4728.7	4715.0	4762.8	4694.3	4680.6	4708.0	4762.8	4721.7	4708.0	4721.7
12.5°	4659.9	4659.9	4680.6	4625.8	4632.5	4646.2	4673.6	4646.2	4659.9	4694.3
15°	4584.7	4571.0	4605.1	4564.0	4557.3	4543.6	4571.0	4571.0	4584.7	4564.0
17.5°	4495.5	4475.1	4475.1	4461.4	4454.4	4488.8	4502.5	4509.2	4516.2	4488.8
20°	4385.9	4379.1	4399.6	4379.1	4385.9	4392.8	4392.8	4379.1	4440.7	4365.4
22.5°	4269.3	4290.0	4262.6	4248.9	4262.6	4276.3	4276.3	4283.0	4269.3	4255.6
25°	4153.0	4166.7	4173.4	4132.3	4153.0	4132.3	4180.4	4187.1	4159.7	4173.4
27.5°	4050.1	4029.6	4022.7	3995.3	4009.0	4002.2	4009.0	4009.0	4050.1	3995.3
30°	3892.4	3871.9	3878.7	3858.2	3865.0	3858.2	3865.0	3865.0	3892.4	3885.7
32.5°	3741.7	3721.2	3728.0	3707.5	3707.5	3714.3	3700.6	3700.6	3721.2	3707.5
35°	3597.7	3549.8	3556.6	3549.8	3556.6	3529.2	3529.2	3522.4	3536.1	3501.8
37.5°	3392.2	3371.7	3364.8	3358.0	3364.8	3351.1	3364.8	3344.3	3364.8	3337.4
40°	3207.1	3193.4	3200.3	3159.2	3159.2	3166.0	3152.3	3145.5	3152.3	3179.7
42.5°	3022.2	2994.8	2981.1	2967.4	2974.1	2953.7	2946.7	2933.0	2946.7	2919.3
45°	2802.8	2802.8	2796.0	2761.6	2768.6	2768.6	2741.2	2713.8	2720.5	2720.5
47.5°	2604.2	2590.5	2583.5	2549.4	2542.4	2535.7	2508.0	2487.6	2487.6	2466.9
50°	2384.7	2371.0	2350.6	2316.2	2302.5	2261.4	2241.0	2213.6	2186.2	2186.2
52.5°	2179.2	2131.1	2103.7	2048.9	2028.5	2007.8	1953.0	1932.6	1911.9	1891.5
55°	1932.6	1891.5	1836.7	1774.9	1747.5	1713.1	1658.3	1617.2	1589.8	1596.8
57.5°	1692.7	1624.2	1569.4	1487.2	1452.8	1432.1	1377.3	1322.5	1295.1	1295.1
60°	1398.0	1343.2	1274.7	1199.2	1171.8	1137.7	1068.9	1034.8	1014.1	993.7
62.5°	1117.0	1075.9	1014.1	918.2	897.8	863.4	815.6	774.5	753.8	753.8
65°	836.0	794.9	740.1	671.6	644.2	616.8	575.7	534.6	513.9	507.2
67.5°	589.4	541.3	493.5	438.7	418.0	404.3	363.2	335.8	322.1	315.1
70°	356.2	328.8	294.7	253.6	232.9	219.2	191.8	171.4	164.4	157.7
72.5°	185.1	164.4	137.0	109.6	95.9	82.2	68.5	54.8	48.1	48.1
75°	68.5	54.8	34.4	20.7	13.7	13.7	13.7	13.7	13.7	13.7
77.5°	13.7	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
80°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
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)