

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: P840112

Luminaire Tested: **LD4C100D010 EU41009035 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: P840112
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 EU41009035 4LBCSSQMMS
Description: 4 INCH 10000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

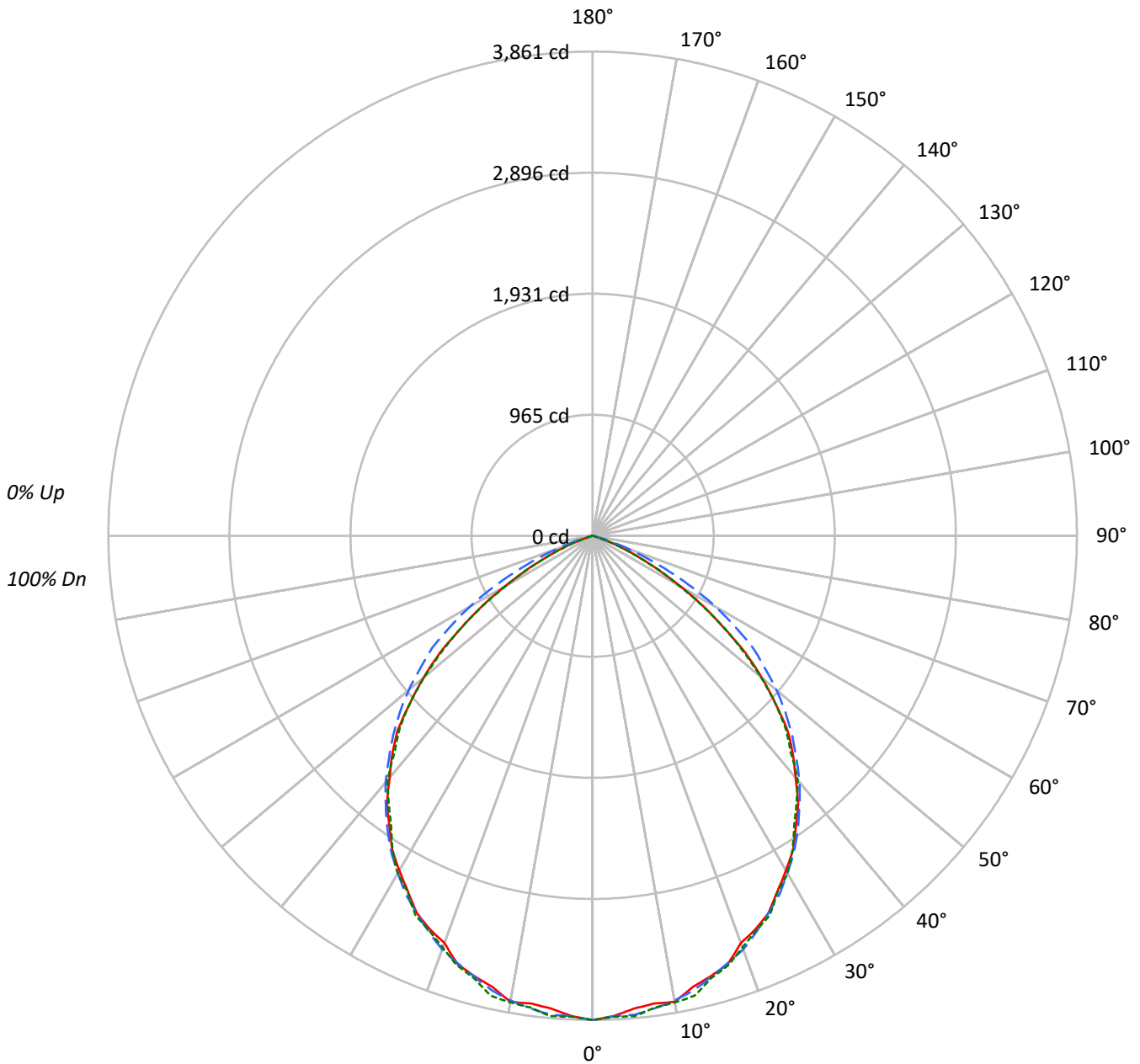
Lumens per Lamp: N/A
Luminaire Lumens: 8248.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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				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°	372553	372553	372553
5°	366547	371313	372378
10°	369708	368640	370237
15°	363240	363769	364868
20°	354785	360422	358738
25°	353257	353257	355589
30°	343406	345846	346470
35°	332689	335929	330110
40°	317085	323282	320524
45°	300094	306848	297105
50°	264284	287326	262648
55°	214047	262933	214972
60°	156621	218026	153475
65°	95183	155252	92672
70°	37126	83591	35603
75°	4101	22517	4101
80°	3112	3112	3112
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.5	4.4
10°-20°	1031.3	12.5
20°-30°	1530.2	18.6
30°-40°	1773.1	21.5
40°-50°	1700.0	20.6
50°-60°	1249.9	15.2
60°-70°	539.9	6.5
70°-80°	58.3	0.7
80°-90°	0.8	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°	2926.0	35.5
0°-40°	4699.1	57.0
0°-60°	7649.1	92.7
0°-90°	8248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3861	3861	3861	3861	3861	
5°	3784	3823	3834	3839	3845	361
15°	3636	3658	3642	3647	3653	1025
25°	3318	3313	3318	3324	3340	1519
35°	2824	2841	2852	2846	2802	1766
45°	2199	2205	2249	2216	2177	1672
55°	1272	1404	1563	1399	1278	1145
65°	417	521	680	516	406	429
75°	11	17	60	11	11	34
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°	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1
2.5°	3833.6	3877.5	3883.1	3855.6	3844.6	3828.2	3866.5	3839.2	3850.2	3839.2	3833.6
5°	3784.4	3833.6	3839.2	3839.2	3828.2	3822.7	3839.2	3833.6	3828.2	3817.3	3833.6
7.5°	3762.5	3789.8	3817.3	3784.4	3800.7	3795.4	3833.6	3817.3	3811.7	3811.7	3800.7
10°	3773.4	3767.8	3789.8	3756.9	3767.8	3756.9	3789.8	3789.8	3778.8	3767.8	3762.5
12.5°	3685.5	3729.4	3729.4	3724.0	3713.0	3696.5	3729.4	3751.5	3718.4	3718.4	3713.0
15°	3636.3	3647.2	3652.6	3652.6	3647.2	3658.2	3674.5	3652.6	3658.2	3630.7	3641.6
17.5°	3581.4	3559.5	3575.8	3564.9	3570.5	3581.4	3603.4	3603.4	3570.5	3564.9	3575.8
20°	3455.2	3521.0	3526.6	3493.7	3499.1	3499.1	3537.6	3504.7	3526.6	3499.1	3510.1
22.5°	3394.8	3438.7	3444.3	3400.4	3427.7	3394.8	3433.3	3383.8	3438.7	3400.4	3416.7
25°	3318.1	3312.7	3329.0	3307.1	3312.7	3312.7	3340.0	3318.1	3334.6	3312.7	3318.1
27.5°	3192.1	3235.9	3230.3	3208.4	3219.4	3214.0	3268.8	3208.4	3241.3	3214.0	3225.0
30°	3082.2	3120.7	3109.7	3087.8	3087.8	3071.2	3131.7	3115.1	3109.7	3109.7	3104.1
32.5°	2972.6	2978.1	2967.2	2972.6	2978.1	2956.2	3005.5	2983.5	2978.1	2983.5	2989.1
35°	2824.4	2824.4	2835.4	2819.0	2841.0	2841.0	2884.8	2857.3	2851.9	2835.4	2851.9
37.5°	2692.8	2676.5	2681.9	2681.9	2692.8	2703.8	2725.7	2714.8	2714.8	2698.4	2709.4
40°	2517.4	2506.4	2522.8	2522.8	2539.3	2539.3	2561.3	2550.3	2566.6	2566.6	2566.6
42.5°	2363.9	2363.9	2352.9	2369.3	2374.9	2369.3	2407.8	2402.2	2407.8	2396.8	2402.2
45°	2199.2	2199.2	2188.2	2182.9	2210.2	2204.8	2248.7	2232.1	2254.0	2243.1	2248.7
47.5°	1974.3	2001.8	1985.3	2001.8	2034.7	2040.3	2067.6	2056.7	2078.6	2062.3	2084.2
50°	1760.6	1760.6	1777.0	1798.9	1831.8	1837.4	1870.3	1892.2	1903.2	1908.5	1914.1
52.5°	1535.7	1530.1	1546.7	1574.0	1601.5	1623.4	1656.3	1689.2	1711.2	1744.1	1727.5
55°	1272.4	1283.3	1299.9	1332.8	1376.6	1403.9	1431.5	1475.3	1513.8	1530.1	1563.0
57.5°	1047.5	1036.5	1047.5	1091.3	1140.8	1162.7	1201.2	1245.1	1299.9	1332.8	1343.7
60°	811.6	817.2	828.2	866.7	904.9	937.8	954.4	1025.5	1075.0	1107.9	1129.8
62.5°	597.9	608.9	619.8	652.7	691.0	718.5	745.8	806.2	850.1	883.0	904.9
65°	416.9	422.3	438.8	455.2	493.6	520.9	542.9	592.3	636.2	663.7	680.0
67.5°	257.8	263.2	274.1	296.3	323.6	345.5	367.4	400.3	438.8	466.1	471.7
70°	131.6	137.2	142.5	159.1	181.0	192.0	208.3	235.9	263.2	285.1	296.3
72.5°	43.9	43.9	49.4	60.4	71.4	82.3	87.7	115.2	137.2	148.1	153.5
75°	11.0	11.0	11.0	11.0	11.0	16.6	16.6	32.9	43.9	54.8	60.4
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	11.0	11.0
80°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
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°	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1	3861.1
2.5°	3861.1	3850.2	3844.6	3850.2	3850.2	3844.6	3861.1	3883.1	3910.4	3839.2
5°	3855.6	3844.6	3855.6	3822.7	3839.2	3828.2	3850.2	3844.6	3866.5	3844.6
7.5°	3839.2	3817.3	3822.7	3806.3	3828.2	3800.7	3817.3	3850.2	3828.2	3795.4
10°	3784.4	3773.4	3811.7	3756.9	3745.9	3767.8	3811.7	3778.8	3767.8	3778.8
12.5°	3729.4	3729.4	3745.9	3702.0	3707.4	3718.4	3740.3	3718.4	3729.4	3756.9
15°	3669.2	3658.2	3685.5	3652.6	3647.2	3636.3	3658.2	3658.2	3669.2	3652.6
17.5°	3597.8	3581.4	3581.4	3570.5	3564.9	3592.4	3603.4	3608.7	3614.3	3592.4
20°	3510.1	3504.7	3521.0	3504.7	3510.1	3515.6	3515.6	3504.7	3553.9	3493.7
22.5°	3416.7	3433.3	3411.4	3400.4	3411.4	3422.3	3422.3	3427.7	3416.7	3405.8
25°	3323.6	3334.6	3340.0	3307.1	3323.6	3307.1	3345.6	3351.0	3329.0	3340.0
27.5°	3241.3	3225.0	3219.4	3197.4	3208.4	3203.0	3208.4	3208.4	3241.3	3197.4
30°	3115.1	3098.8	3104.1	3087.8	3093.2	3087.8	3093.2	3093.2	3115.1	3109.7
32.5°	2994.5	2978.1	2983.5	2967.2	2967.2	2972.6	2961.6	2961.6	2978.1	2967.2
35°	2879.2	2841.0	2846.4	2841.0	2846.4	2824.4	2824.4	2819.0	2830.0	2802.5
37.5°	2714.8	2698.4	2692.8	2687.5	2692.8	2681.9	2692.8	2676.5	2692.8	2670.9
40°	2566.6	2555.7	2561.3	2528.4	2528.4	2533.7	2522.8	2517.4	2522.8	2544.7
42.5°	2418.7	2396.8	2385.8	2374.9	2380.2	2363.9	2358.3	2347.3	2358.3	2336.4
45°	2243.1	2243.1	2237.7	2210.2	2215.8	2215.8	2193.8	2171.9	2177.3	2177.3
47.5°	2084.2	2073.2	2067.6	2040.3	2034.7	2029.4	2007.2	1990.9	1990.9	1974.3
50°	1908.5	1897.6	1881.2	1853.7	1842.7	1809.9	1793.5	1771.6	1749.7	1749.7
52.5°	1744.1	1705.6	1683.6	1639.8	1623.4	1606.9	1563.0	1546.7	1530.1	1513.8
55°	1546.7	1513.8	1469.9	1420.5	1398.6	1371.0	1327.2	1294.3	1272.4	1277.9
57.5°	1354.7	1299.9	1256.0	1190.2	1162.7	1146.2	1102.3	1058.4	1036.5	1036.5
60°	1118.8	1075.0	1020.2	959.7	937.8	910.5	855.5	828.2	811.6	795.3
62.5°	894.0	861.1	811.6	734.9	718.5	691.0	652.7	619.8	603.3	603.3
65°	669.1	636.2	592.3	537.5	515.6	493.6	460.7	427.8	411.3	405.9
67.5°	471.7	433.2	395.0	351.1	334.5	323.6	290.7	268.7	257.8	252.2
70°	285.1	263.2	235.9	203.0	186.4	175.4	153.5	137.2	131.6	126.2
72.5°	148.1	131.6	109.6	87.7	76.8	65.8	54.8	43.9	38.5	38.5
75°	54.8	43.9	27.5	16.6	11.0	11.0	11.0	11.0	11.0	11.0
77.5°	11.0	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
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)