

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: P840273

Luminaire Tested: **LD4C90D010 EU4909035 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: P840273
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: LD4C90D010 EU4909035 4LBCSSQMW
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

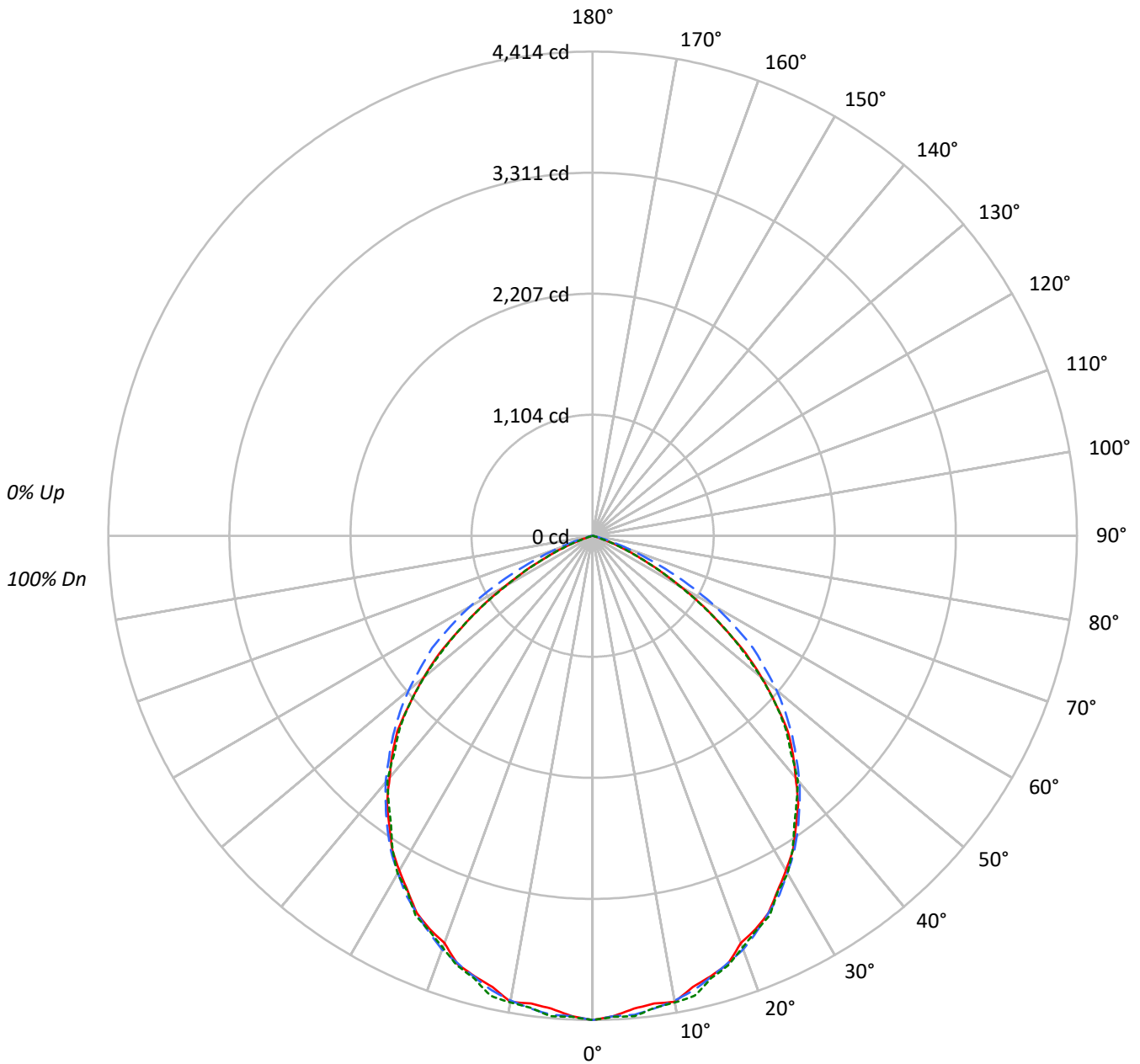
Lumens per Lamp: N/A
Luminaire Lumens: 9430.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
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°	425950	425950	425950
5°	419073	424526	425737
10°	422694	421460	423292
15°	415294	415903	417152
20°	405632	412070	410150
25°	403881	403881	406542
30°	392618	395415	396128
35°	380371	384070	377415
40°	362530	369622	366460
45°	343105	350814	339680
50°	302157	328501	300280
55°	244714	300615	245791
60°	179064	249269	175455
65°	108814	177513	105960
70°	42430	95552	40709
75°	4660	25761	4660
80°	3556	3556	3556
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	416.7	4.4
10°-20°	1179.1	12.5
20°-30°	1749.5	18.6
30°-40°	2027.2	21.5
40°-50°	1943.6	20.6
50°-60°	1429.1	15.2
60°-70°	617.2	6.5
70°-80°	66.6	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°	3345.3	35.5
0°-40°	5372.5	57.0
0°-60°	8745.3	92.7
0°-90°	9430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4414	4414	4414	4414	4414	
5°	4327	4370	4383	4389	4396	413
15°	4157	4182	4164	4170	4176	1172
25°	3794	3787	3794	3800	3819	1737
35°	3229	3248	3261	3254	3204	2019
45°	2514	2521	2571	2533	2489	1911
55°	1455	1605	1787	1599	1461	1309
65°	477	596	778	589	464	490
75°	12	19	69	12	12	38
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°	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5
2.5°	4383.0	4433.2	4439.5	4408.1	4395.5	4376.9	4420.6	4389.4	4401.9	4389.4	4383.0
5°	4326.7	4383.0	4389.4	4389.4	4376.9	4370.5	4389.4	4383.0	4376.9	4364.3	4383.0
7.5°	4301.6	4332.9	4364.3	4326.7	4345.4	4339.3	4383.0	4364.3	4357.9	4357.9	4345.4
10°	4314.2	4307.8	4332.9	4295.3	4307.8	4295.3	4332.9	4332.9	4320.3	4307.8	4301.6
12.5°	4213.6	4263.8	4263.8	4257.6	4245.1	4226.2	4263.8	4289.1	4251.3	4251.3	4245.1
15°	4157.4	4169.9	4176.0	4176.0	4169.9	4182.4	4201.1	4176.0	4182.4	4151.0	4163.5
17.5°	4094.7	4069.6	4088.3	4075.8	4082.1	4094.7	4119.8	4119.8	4082.1	4075.8	4088.3
20°	3950.4	4025.6	4032.0	3994.4	4000.5	4000.5	4044.5	4006.9	4032.0	4000.5	4013.1
22.5°	3881.3	3931.5	3937.9	3887.7	3918.9	3881.3	3925.3	3868.8	3931.5	3887.7	3906.4
25°	3793.6	3787.4	3806.1	3781.0	3787.4	3787.4	3818.6	3793.6	3812.5	3787.4	3793.6
27.5°	3649.5	3699.7	3693.3	3668.2	3680.7	3674.6	3737.3	3668.2	3705.8	3674.6	3687.1
30°	3523.9	3567.9	3555.4	3530.3	3530.3	3511.4	3580.4	3561.5	3555.4	3555.4	3549.0
32.5°	3398.5	3404.9	3392.4	3398.5	3404.9	3379.9	3436.2	3411.1	3404.9	3411.1	3417.5
35°	3229.2	3229.2	3241.7	3223.0	3248.1	3248.1	3298.3	3266.8	3260.6	3241.7	3260.6
37.5°	3078.8	3060.1	3066.2	3066.2	3078.8	3091.3	3116.4	3103.8	3103.8	3085.1	3097.7
40°	2878.2	2865.6	2884.3	2884.3	2903.2	2903.2	2928.3	2915.8	2934.5	2934.5	2934.5
42.5°	2702.7	2702.7	2690.1	2708.8	2715.2	2708.8	2752.8	2746.4	2752.8	2740.3	2746.4
45°	2514.4	2514.4	2501.8	2495.7	2526.9	2520.8	2570.9	2552.0	2577.1	2564.5	2570.9
47.5°	2257.3	2288.7	2269.8	2288.7	2326.3	2332.7	2363.9	2351.4	2376.5	2357.8	2382.9
50°	2012.9	2012.9	2031.6	2056.7	2094.3	2100.7	2138.3	2163.4	2175.9	2182.0	2188.4
52.5°	1755.8	1749.4	1768.3	1799.6	1831.0	1856.1	1893.7	1931.3	1956.4	1994.0	1975.1
55°	1454.7	1467.2	1486.2	1523.8	1573.9	1605.1	1636.6	1686.7	1730.7	1749.4	1787.0
57.5°	1197.6	1185.0	1197.6	1247.7	1304.3	1329.3	1373.3	1423.5	1486.2	1523.8	1536.3
60°	927.9	934.3	946.9	990.9	1034.6	1072.2	1091.1	1172.5	1229.0	1266.7	1291.7
62.5°	683.6	696.1	708.7	746.3	790.0	821.5	852.7	921.8	971.9	1009.5	1034.6
65°	476.6	482.8	501.7	520.4	564.4	595.6	620.7	677.2	727.3	758.8	777.5
67.5°	294.7	300.9	313.4	338.7	369.9	395.0	420.1	457.7	501.7	532.9	539.3
70°	150.4	156.8	163.0	181.9	207.0	219.5	238.2	269.7	300.9	325.9	338.7
72.5°	50.1	50.1	56.5	69.1	81.6	94.1	100.3	131.8	156.8	169.4	175.5
75°	12.5	12.5	12.5	12.5	12.5	18.9	18.9	37.6	50.1	62.7	69.1
77.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	12.5	12.5
80°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
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°	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5	4414.5
2.5°	4414.5	4401.9	4395.5	4401.9	4401.9	4395.5	4414.5	4439.5	4470.8	4389.4
5°	4408.1	4395.5	4408.1	4370.5	4389.4	4376.9	4401.9	4395.5	4420.6	4395.5
7.5°	4389.4	4364.3	4370.5	4351.8	4376.9	4345.4	4364.3	4401.9	4376.9	4339.3
10°	4326.7	4314.2	4357.9	4295.3	4282.7	4307.8	4357.9	4320.3	4307.8	4320.3
12.5°	4263.8	4263.8	4282.7	4232.6	4238.7	4251.3	4276.3	4251.3	4263.8	4295.3
15°	4195.0	4182.4	4213.6	4176.0	4169.9	4157.4	4182.4	4182.4	4195.0	4176.0
17.5°	4113.4	4094.7	4094.7	4082.1	4075.8	4107.2	4119.8	4125.9	4132.3	4107.2
20°	4013.1	4006.9	4025.6	4006.9	4013.1	4019.5	4019.5	4006.9	4063.2	3994.4
22.5°	3906.4	3925.3	3900.2	3887.7	3900.2	3912.8	3912.8	3918.9	3906.4	3893.9
25°	3800.0	3812.5	3818.6	3781.0	3800.0	3781.0	3825.0	3831.2	3806.1	3818.6
27.5°	3705.8	3687.1	3680.7	3655.7	3668.2	3662.1	3668.2	3668.2	3705.8	3655.7
30°	3561.5	3542.8	3549.0	3530.3	3536.4	3530.3	3536.4	3536.4	3561.5	3555.4
32.5°	3423.6	3404.9	3411.1	3392.4	3392.4	3398.5	3386.0	3386.0	3404.9	3392.4
35°	3291.9	3248.1	3254.3	3248.1	3254.3	3229.2	3229.2	3223.0	3235.6	3204.1
37.5°	3103.8	3085.1	3078.8	3072.6	3078.8	3066.2	3078.8	3060.1	3078.8	3053.7
40°	2934.5	2921.9	2928.3	2890.7	2890.7	2896.9	2884.3	2878.2	2884.3	2909.4
42.5°	2765.3	2740.3	2727.7	2715.2	2721.3	2702.7	2696.3	2683.7	2696.3	2671.2
45°	2564.5	2564.5	2558.4	2526.9	2533.3	2533.3	2508.2	2483.2	2489.3	2489.3
47.5°	2382.9	2370.3	2363.9	2332.7	2326.3	2320.2	2294.9	2276.2	2276.2	2257.3
50°	2182.0	2169.5	2150.8	2119.4	2106.8	2069.2	2050.5	2025.5	2000.4	2000.4
52.5°	1994.0	1950.0	1924.9	1874.8	1856.1	1837.2	1787.0	1768.3	1749.4	1730.7
55°	1768.3	1730.7	1680.6	1624.1	1599.0	1567.5	1517.4	1479.8	1454.7	1461.1
57.5°	1548.8	1486.2	1436.0	1360.8	1329.3	1310.4	1260.3	1210.1	1185.0	1185.0
60°	1279.2	1229.0	1166.4	1097.3	1072.2	1041.0	978.1	946.9	927.9	909.2
62.5°	1022.1	984.5	927.9	840.2	821.5	790.0	746.3	708.7	689.7	689.7
65°	765.0	727.3	677.2	614.5	589.4	564.4	526.8	489.2	470.2	464.1
67.5°	539.3	495.3	451.6	401.4	382.5	369.9	332.3	307.3	294.7	288.3
70°	325.9	300.9	269.7	232.0	213.1	200.6	175.5	156.8	150.4	144.3
72.5°	169.4	150.4	125.4	100.3	87.8	75.2	62.7	50.1	44.0	44.0
75°	62.7	50.1	31.5	18.9	12.5	12.5	12.5	12.5	12.5	12.5
77.5°	12.5	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
80°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
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)