

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: P#

Luminaire Tested: **LD4C90D010 EX4C909040 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: P#  
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 EX4C909040 4LBCSSQMW  
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MW FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

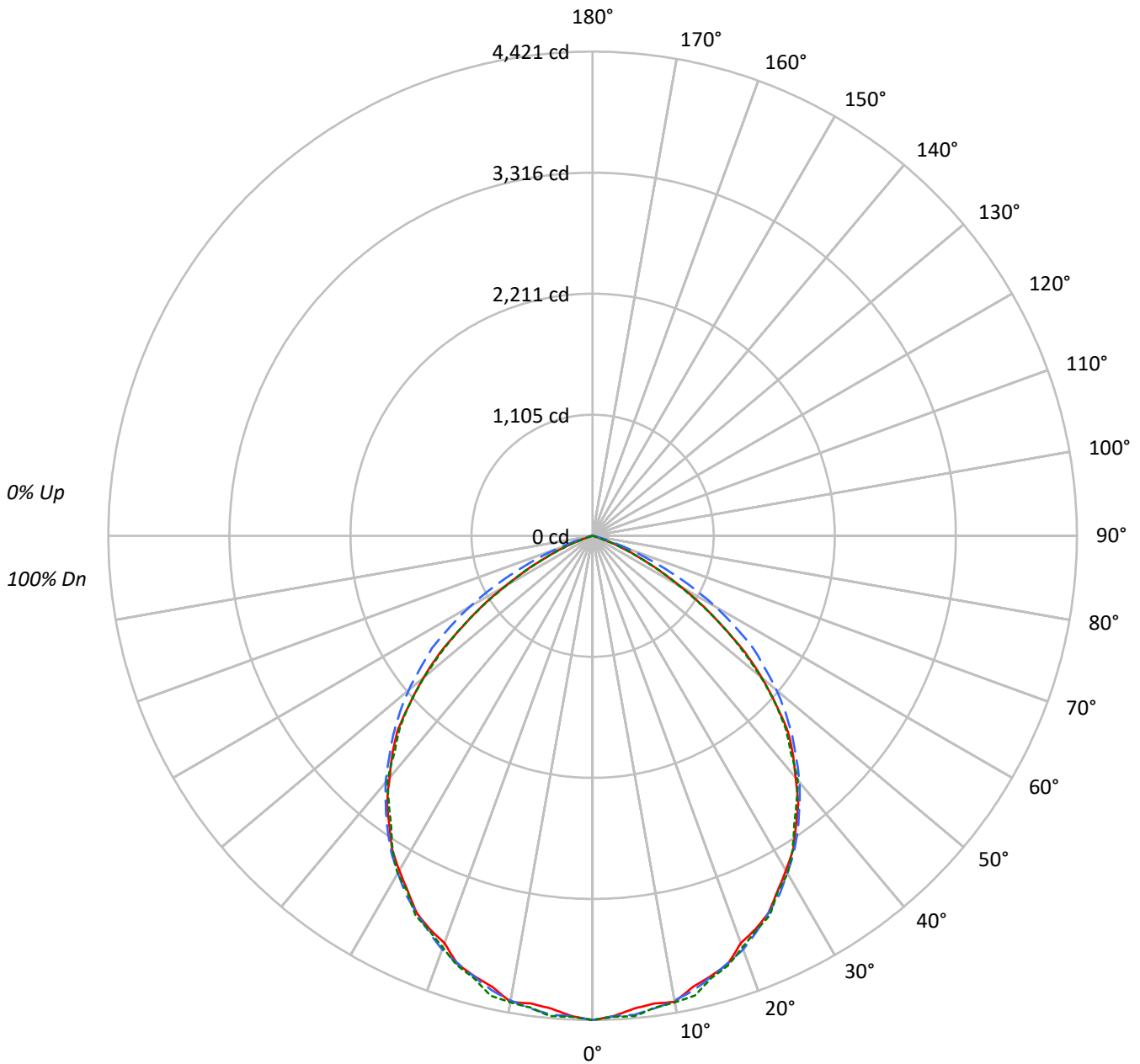
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9444.0 lumens  
Efficiency: N/A  
Efficacy: 97.3 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): 97.1  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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: P#  
CATALOG NUMBER: LD4C90D010 EX4C909040 4LBCSSQMW

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909040 4LBCSSQMW

**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°	426577	426577	426577
5°	419693	425156	426376
10°	423321	422087	423919
15°	415903	416522	417771
20°	406238	412676	410756
25°	404477	404477	407149
30°	393197	396005	396718
35°	380937	384647	377980
40°	363059	370163	367002
45°	343610	351333	340185
50°	302607	328996	300731
55°	245084	301069	246161
60°	179334	249636	175726
65°	108973	177764	106119
70°	42515	95693	40766
75°	4697	25798	4697
80°	3556	3556	3556
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909040 4LBCSSQMW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	417.3	4.4
10°-20°	1180.9	12.5
20°-30°	1752.1	18.6
30°-40°	2030.2	21.5
40°-50°	1946.5	20.6
50°-60°	1431.2	15.2
60°-70°	618.1	6.5
70°-80°	66.7	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°	3350.3	35.5
0°-40°	5380.5	57.0
0°-60°	8758.2	92.7
0°-90°	9444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9444.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4421	4421	4421	4421	4421	
5°	4333	4377	4390	4396	4402	413
15°	4164	4189	4170	4176	4182	1173
25°	3799	3793	3799	3806	3824	1739
35°	3234	3253	3266	3259	3209	2022
45°	2518	2524	2575	2537	2493	1914
55°	1457	1608	1790	1601	1463	1311
65°	477	596	779	590	465	491
75°	13	19	69	13	13	39
85°	0	0	0	0	0	1
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909040 4LBCSSQMW

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0
2.5°	4389.5	4439.7	4446.1	4414.6	4402.1	4383.4	4427.2	4395.9	4408.5	4395.9	4389.5
5°	4333.1	4389.5	4395.9	4395.9	4383.4	4377.0	4395.9	4389.5	4383.4	4370.8	4389.5
7.5°	4308.0	4339.3	4370.8	4333.1	4351.9	4345.7	4389.5	4370.8	4364.4	4364.4	4351.9
10°	4320.6	4314.2	4339.3	4301.6	4314.2	4301.6	4339.3	4339.3	4326.7	4314.2	4308.0
12.5°	4219.9	4270.1	4270.1	4264.0	4251.4	4232.5	4270.1	4295.5	4257.6	4257.6	4251.4
15°	4163.5	4176.1	4182.2	4182.2	4176.1	4188.6	4207.3	4182.2	4188.6	4157.1	4169.7
17.5°	4100.8	4075.6	4094.4	4081.8	4088.2	4100.8	4125.9	4125.9	4088.2	4081.8	4094.4
20°	3956.3	4031.6	4038.0	4000.3	4006.5	4006.5	4050.5	4012.9	4038.0	4006.5	4019.0
22.5°	3887.1	3937.3	3943.7	3893.5	3924.7	3887.1	3931.1	3874.5	3937.3	3893.5	3912.2
25°	3799.2	3793.0	3811.7	3786.6	3793.0	3793.0	3824.3	3799.2	3818.1	3793.0	3799.2
27.5°	3654.9	3705.2	3698.8	3673.6	3686.2	3680.0	3742.8	3673.6	3711.3	3680.0	3692.6
30°	3529.1	3573.2	3560.7	3535.5	3535.5	3516.6	3585.8	3566.8	3560.7	3560.7	3554.3
32.5°	3403.6	3410.0	3397.4	3403.6	3410.0	3384.9	3441.3	3416.1	3410.0	3416.1	3422.5
35°	3234.0	3234.0	3246.5	3227.8	3252.9	3252.9	3303.2	3271.6	3265.5	3246.5	3265.5
37.5°	3083.3	3064.6	3070.8	3070.8	3083.3	3095.9	3121.0	3108.4	3108.4	3089.7	3102.3
40°	2882.4	2869.9	2888.6	2888.6	2907.6	2907.6	2932.7	2920.1	2938.8	2938.8	2938.8
42.5°	2706.7	2706.7	2694.1	2712.8	2719.2	2712.8	2756.9	2750.5	2756.9	2744.3	2750.5
45°	2518.1	2518.1	2505.6	2499.4	2530.7	2524.5	2574.7	2555.8	2580.9	2568.3	2574.7
47.5°	2260.6	2292.1	2273.2	2292.1	2329.8	2336.2	2367.4	2354.9	2380.0	2361.3	2386.4
50°	2015.9	2015.9	2034.6	2059.7	2097.4	2103.8	2141.5	2166.6	2179.1	2185.3	2191.7
52.5°	1758.4	1752.0	1771.0	1802.2	1833.7	1858.9	1896.5	1934.2	1959.3	1997.0	1978.0
55°	1456.9	1469.4	1488.4	1526.0	1576.2	1607.5	1639.0	1689.2	1733.3	1752.0	1789.7
57.5°	1199.4	1186.8	1199.4	1249.6	1306.2	1331.3	1375.4	1425.6	1488.4	1526.0	1538.6
60°	929.3	935.7	948.3	992.3	1036.1	1073.8	1092.8	1174.2	1230.9	1268.5	1293.6
62.5°	684.6	697.2	709.7	747.4	791.2	822.7	854.0	923.2	973.4	1011.0	1036.1
65°	477.3	483.5	502.4	521.1	565.2	596.5	621.6	678.2	728.4	759.9	778.6
67.5°	295.2	301.3	313.9	339.2	370.5	395.6	420.7	458.4	502.4	533.7	540.1
70°	150.7	157.1	163.2	182.2	207.3	219.8	238.5	270.1	301.3	326.4	339.2
72.5°	50.2	50.2	56.6	69.2	81.7	94.3	100.4	131.9	157.1	169.6	175.8
75°	12.6	12.6	12.6	12.6	12.6	19.0	19.0	37.7	50.2	62.8	69.2
77.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	12.6	12.6
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



TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909040 4LBCSSQMW

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0	4421.0
2.5°	4421.0	4408.5	4402.1	4408.5	4408.5	4402.1	4421.0	4446.1	4477.4	4395.9
5°	4414.6	4402.1	4414.6	4377.0	4395.9	4383.4	4408.5	4402.1	4427.2	4402.1
7.5°	4395.9	4370.8	4377.0	4358.3	4383.4	4351.9	4370.8	4408.5	4383.4	4345.7
10°	4333.1	4320.6	4364.4	4301.6	4289.1	4314.2	4364.4	4326.7	4314.2	4326.7
12.5°	4270.1	4270.1	4289.1	4238.9	4245.0	4257.6	4282.7	4257.6	4270.1	4301.6
15°	4201.2	4188.6	4219.9	4182.2	4176.1	4163.5	4188.6	4188.6	4201.2	4182.2
17.5°	4119.5	4100.8	4100.8	4088.2	4081.8	4113.3	4125.9	4132.0	4138.4	4113.3
20°	4019.0	4012.9	4031.6	4012.9	4019.0	4025.4	4025.4	4012.9	4069.2	4000.3
22.5°	3912.2	3931.1	3906.0	3893.5	3906.0	3918.6	3918.6	3924.7	3912.2	3899.6
25°	3805.6	3818.1	3824.3	3786.6	3805.6	3786.6	3830.7	3836.9	3811.7	3824.3
27.5°	3711.3	3692.6	3686.2	3661.1	3673.6	3667.5	3673.6	3673.6	3711.3	3661.1
30°	3566.8	3548.1	3554.3	3535.5	3541.7	3535.5	3541.7	3541.7	3566.8	3560.7
32.5°	3428.7	3410.0	3416.1	3397.4	3397.4	3403.6	3391.0	3391.0	3410.0	3397.4
35°	3296.8	3252.9	3259.1	3252.9	3259.1	3234.0	3234.0	3227.8	3240.4	3208.9
37.5°	3108.4	3089.7	3083.3	3077.2	3083.3	3070.8	3083.3	3064.6	3083.3	3058.2
40°	2938.8	2926.3	2932.7	2895.0	2895.0	2901.2	2888.6	2882.4	2888.6	2913.7
42.5°	2769.5	2744.3	2731.8	2719.2	2725.4	2706.7	2700.3	2687.7	2700.3	2675.2
45°	2568.3	2568.3	2562.2	2530.7	2537.1	2537.1	2512.0	2486.8	2493.0	2493.0
47.5°	2386.4	2373.9	2367.4	2336.2	2329.8	2323.6	2298.3	2279.6	2279.6	2260.6
50°	2185.3	2172.7	2154.0	2122.5	2110.0	2072.3	2053.6	2028.5	2003.4	2003.4
52.5°	1997.0	1952.9	1927.8	1877.6	1858.9	1839.9	1789.7	1771.0	1752.0	1733.3
55°	1771.0	1733.3	1683.1	1626.5	1601.4	1569.8	1519.6	1482.0	1456.9	1463.3
57.5°	1551.1	1488.4	1438.1	1362.8	1331.3	1312.4	1262.1	1211.9	1186.8	1186.8
60°	1281.1	1230.9	1168.1	1098.9	1073.8	1042.5	979.5	948.3	929.3	910.6
62.5°	1023.6	985.9	929.3	841.4	822.7	791.2	747.4	709.7	690.8	690.8
65°	766.1	728.4	678.2	615.4	590.3	565.2	527.5	489.9	470.9	464.8
67.5°	540.1	496.0	452.2	402.0	383.0	370.5	332.8	307.7	295.2	288.8
70°	326.4	301.3	270.1	232.4	213.4	200.9	175.8	157.1	150.7	144.5
72.5°	169.6	150.7	125.5	100.4	87.9	75.3	62.8	50.2	44.1	44.1
75°	62.8	50.2	31.5	19.0	12.6	12.6	12.6	12.6	12.6	12.6
77.5°	12.6	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)