

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 EX4C909050 4LBSQLI**

Issue Date: 2/9/2022

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 (P209151)
Test Lab: INNOVATION CENTER
Issue Date: 2/9/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C90D010 EX4C909050 4LBSQLI
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBSQ TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

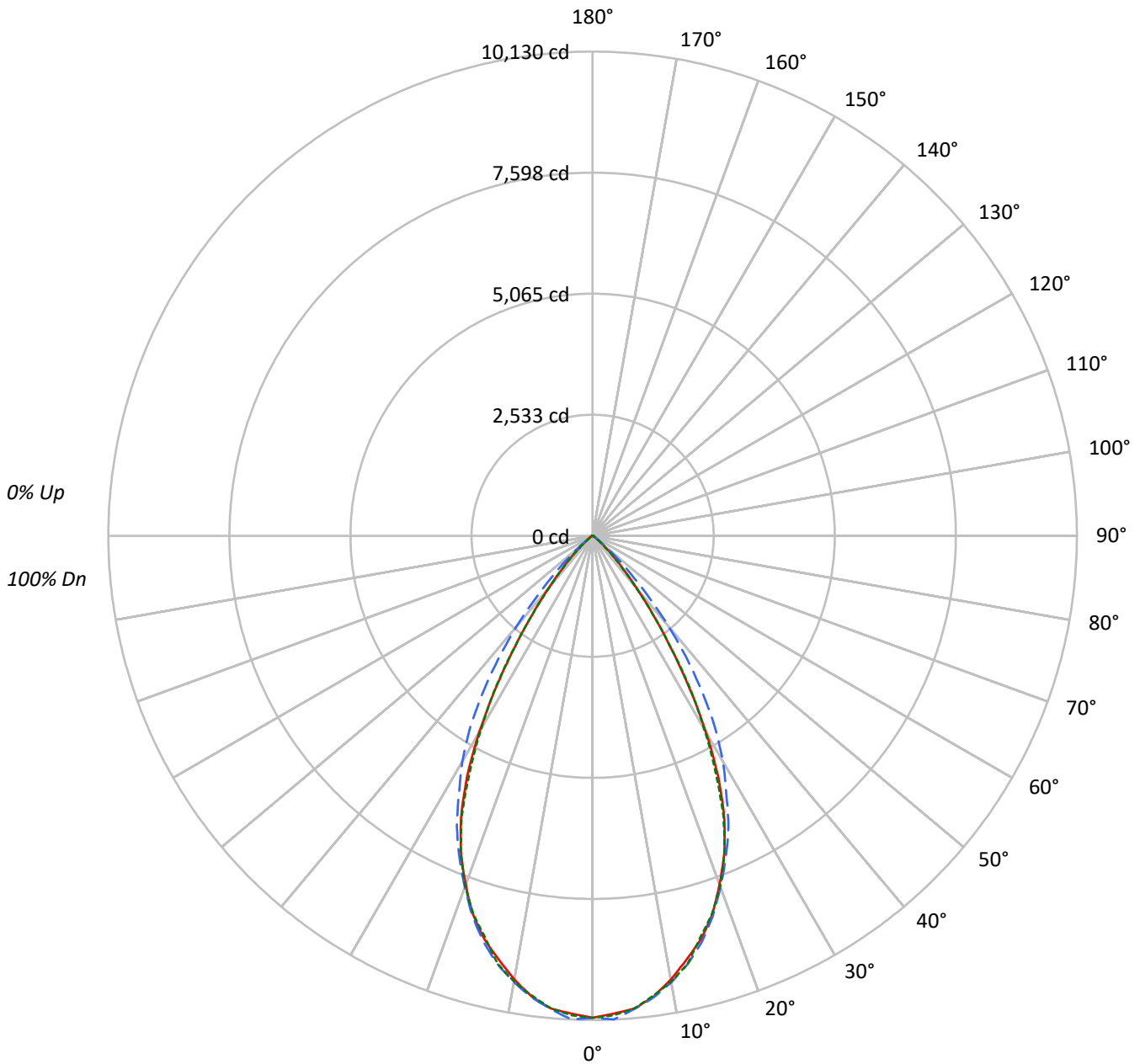
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9310.9 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
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_{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

TEST NUMBER: P#
CATALOG NUMBER: LD4C90D010 EX4C909050 4LBSQLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909050 4LBSQLI

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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93																			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87																			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80																			
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75																			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69																			
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64																			
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60																			
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56																			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53																			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	973119	973119	973119
5°	961940	963180	961940
10°	923466	929129	927875
15°	873032	879435	868547
20°	796756	802660	800699
25°	693760	715585	688980
30°	527554	606793	519721
35°	332077	471718	335092
40°	179162	311530	175937
45°	84807	153881	83920
50°	31748	57702	31748
55°	15090	18336	14030
60°	9880	8684	9880
65°	5845	5845	5845
70°	3611	5445	3611
75°	2423	2423	2423
80°	3612	3612	3612
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909050 4LBSQLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	935.1	10.0
10°-20°	2450.6	26.3
20°-30°	2993.7	32.2
30°-40°	2093.8	22.5
40°-50°	686.2	7.4
50°-60°	109.1	1.2
60°-70°	29.8	0.3
70°-80°	10.0	0.1
80°-90°	2.8	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°	6379.3	68.5
0°-40°	8473.2	91.0
0°-60°	9268.5	99.5
0°-90°	9310.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9310.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10085	10085	10085	10085	10085	
5°	9932	9935	9944	9883	9932	932
15°	8740	8775	8804	8746	8695	2438
25°	6516	6616	6721	6600	6472	2927
35°	2819	3329	4005	3277	2845	1799
45°	622	766	1128	756	615	521
55°	90	96	109	96	83	89
65°	26	32	26	32	26	28
75°	6	6	6	6	6	9
85°	0	0	0	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C90D010 EX4C909050 4LBSQLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3
2.5°	10008.4	10079.0	10059.6	10104.6	10104.6	10053.4	10066.2	10085.3	10110.9	10130.2	9976.2
5°	9931.5	9995.6	9937.8	10001.9	9963.4	9905.9	10001.9	9950.6	9982.8	9944.3	9970.0
7.5°	9726.5	9829.0	9713.7	9790.6	9765.0	9732.8	9771.2	9758.4	9777.8	9745.6	9675.3
10°	9425.3	9508.7	9431.8	9540.6	9489.4	9457.5	9489.4	9521.5	9515.0	9483.1	9521.5
12.5°	9079.4	9175.3	9136.9	9201.0	9143.4	9143.4	9220.3	9201.0	9207.5	9181.9	9226.6
15°	8739.7	8810.3	8752.5	8835.9	8810.3	8739.7	8771.6	8771.6	8823.1	8803.8	8752.5
17.5°	8316.9	8374.4	8310.4	8329.7	8304.1	8291.3	8425.7	8336.0	8387.3	8348.8	8355.4
20°	7759.5	7785.1	7765.7	7817.0	7785.1	7823.5	7810.7	7797.9	7797.9	7817.0	7772.3
22.5°	7195.5	7195.5	7214.8	7227.6	7253.2	7214.8	7291.7	7227.6	7233.9	7278.9	7266.1
25°	6516.4	6497.1	6542.0	6606.1	6631.7	6599.6	6702.1	6650.8	6689.3	6721.4	6650.8
27.5°	5689.9	5689.9	5734.6	5843.6	5862.7	5901.2	6042.1	6042.1	6093.4	6048.6	6099.9
30°	4735.0	4805.6	4863.1	5004.1	5049.0	5132.4	5279.7	5350.3	5465.6	5446.2	5420.6
32.5°	3754.7	3851.0	3857.2	4004.7	4126.3	4267.2	4466.0	4632.5	4715.9	4773.4	4709.4
35°	2819.2	2877.0	2928.2	3030.7	3235.7	3421.6	3601.0	3818.8	3966.3	4004.7	3946.9
37.5°	2063.3	2076.1	2127.3	2223.3	2377.1	2556.7	2774.5	3011.4	3165.4	3222.9	3158.9
40°	1422.4	1435.2	1460.8	1544.3	1672.4	1800.5	1973.6	2217.0	2358.0	2473.3	2389.9
42.5°	954.6	967.5	993.1	1057.1	1127.7	1249.3	1384.0	1537.7	1672.4	1723.6	1678.7
45°	621.5	621.5	634.3	679.3	717.7	813.7	909.9	1005.9	1095.6	1127.7	1095.6
47.5°	365.3	371.6	384.4	416.5	461.2	499.7	570.3	634.3	660.0	685.6	672.8
50°	211.5	211.5	230.6	250.0	281.9	307.5	333.1	358.7	371.6	384.4	371.6
52.5°	115.3	121.8	128.1	134.7	147.5	173.1	192.2	192.2	198.7	205.0	198.7
55°	89.7	89.7	89.7	89.7	96.2	96.2	96.2	102.5	102.5	109.0	102.5
57.5°	64.1	64.1	64.1	70.6	70.6	70.6	64.1	64.1	64.1	64.1	64.1
60°	51.2	51.2	51.2	51.2	51.2	51.2	51.2	45.0	45.0	45.0	45.0
62.5°	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
65°	25.6	25.6	32.2	32.2	32.2	32.2	32.2	25.6	25.6	25.6	25.6
67.5°	19.3	19.3	19.3	19.3	25.6	25.6	19.3	19.3	19.3	19.3	19.3
70°	12.8	12.8	12.8	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
72.5°	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
75°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	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°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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 EX4C909050 4LBSQLI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3	10085.3
2.5°	10085.3	9976.2	9989.0	10046.8	10014.7	10046.8	10040.5	10040.5
5°	9976.2	9944.3	9893.1	9873.7	9912.2	9995.6	9982.8	9931.5
7.5°	9771.2	9688.1	9745.6	9771.2	9739.3	9790.6	9816.2	9707.2
10°	9527.8	9495.9	9483.1	9495.9	9483.1	9534.3	9470.3	9470.3
12.5°	9181.9	9130.6	9130.6	9207.5	9162.5	9124.1	9175.3	9169.1
15°	8835.9	8733.2	8733.2	8758.8	8778.2	8752.5	8758.8	8694.8
17.5°	8323.2	8291.3	8246.3	8316.9	8336.0	8310.4	8329.7	8297.6
20°	7842.6	7842.6	7759.5	7791.4	7817.0	7836.3	7849.1	7797.9
22.5°	7227.6	7240.4	7182.7	7246.7	7266.1	7202.0	7214.8	7202.0
25°	6663.6	6657.4	6612.4	6586.8	6599.6	6573.9	6567.7	6471.5
27.5°	6042.1	5978.1	5882.1	5907.7	5798.7	5709.0	5709.0	5561.5
30°	5369.3	5260.6	5132.4	5004.1	4908.1	4805.6	4747.8	4664.7
32.5°	4581.3	4434.0	4273.8	4100.7	3991.9	3838.2	3754.7	3799.7
35°	3799.7	3581.7	3363.8	3191.0	3024.2	2934.5	2832.0	2844.8
37.5°	3043.5	2736.0	2543.9	2358.0	2217.0	2101.7	2056.7	2043.9
40°	2223.3	1979.9	1787.7	1653.0	1557.1	1467.4	1416.1	1396.8
42.5°	1537.7	1364.9	1210.9	1102.1	1038.0	980.3	954.6	948.4
45°	999.6	897.1	794.6	717.7	666.5	628.1	621.5	615.0
47.5°	628.1	576.6	512.5	455.0	410.0	384.4	365.3	365.3
50°	358.7	339.7	307.5	275.6	250.0	237.2	217.8	211.5
52.5°	192.2	192.2	179.4	153.7	134.7	121.8	121.8	115.3
55°	102.5	102.5	96.2	96.2	89.7	89.7	89.7	83.4
57.5°	64.1	64.1	70.6	70.6	64.1	64.1	64.1	64.1
60°	45.0	51.2	51.2	51.2	51.2	51.2	51.2	51.2
62.5°	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
65°	25.6	32.2	32.2	32.2	32.2	25.6	25.6	25.6
67.5°	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
70°	19.3	19.3	19.3	19.3	19.3	12.8	12.8	12.8
72.5°	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
75°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
82.5°	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
87.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
90°	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)