

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: P840274

Luminaire Tested: **LD4C90D010 EU4909040 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: P840274
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 EU4909040 4LBCSSQMMS
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

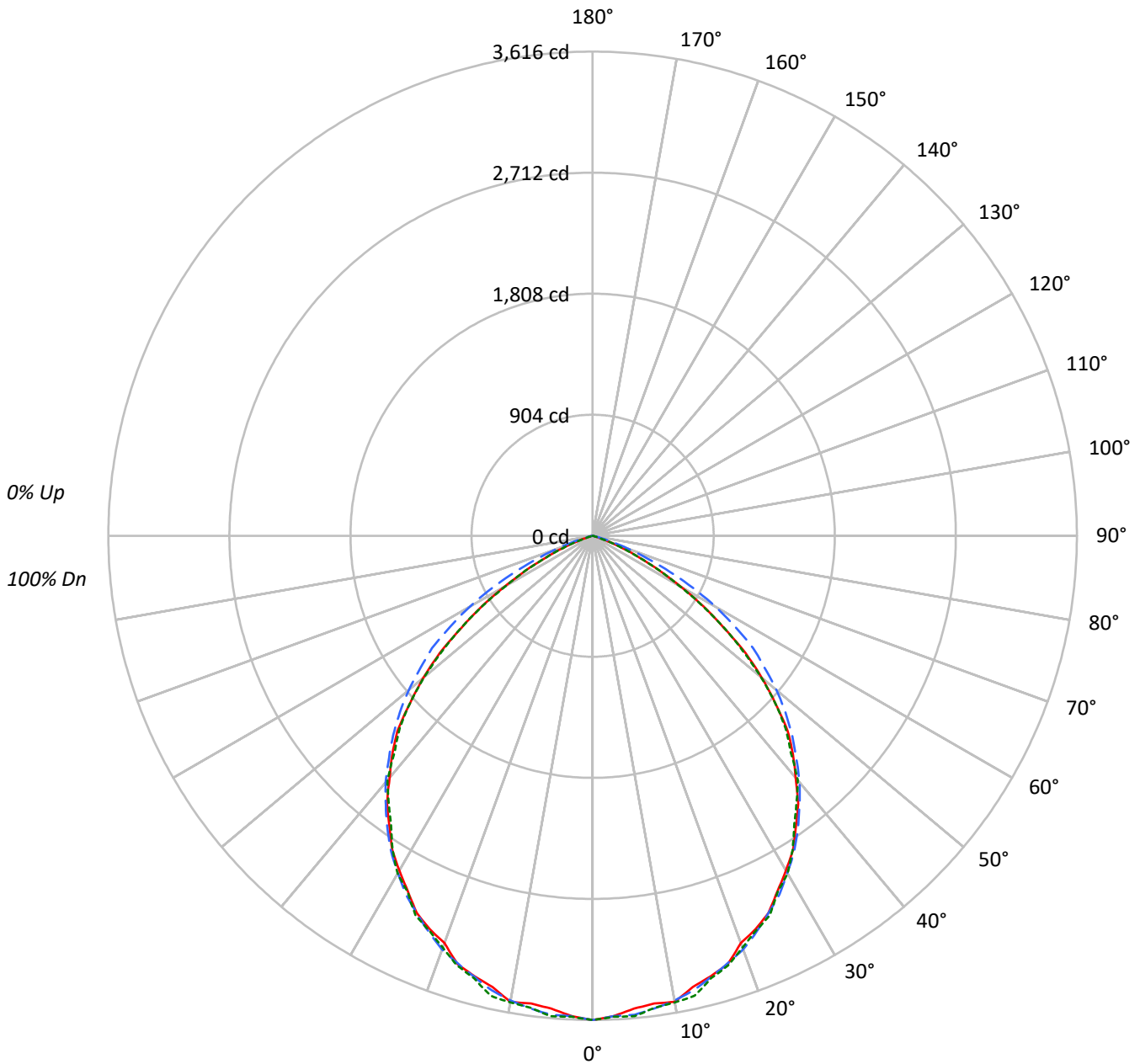
Lumens per Lamp: N/A
Luminaire Lumens: 7725.0 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (A_{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°	348933	348933	348933
5°	343302	347767	348764
10°	346272	345263	346762
15°	340204	340704	341733
20°	332287	337565	335994
25°	330857	330857	333040
30°	321635	323919	324498
35°	311593	314632	309178
40°	296982	302789	300207
45°	281072	287390	278261
50°	247532	269117	245985
55°	200472	246262	201346
60°	146702	204209	143730
65°	89133	145412	86804
70°	34757	78287	33346
75°	3840	21101	3840
80°	2889	2889	2889
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.3	4.4
10°-20°	965.9	12.5
20°-30°	1433.2	18.6
30°-40°	1660.7	21.5
40°-50°	1592.2	20.6
50°-60°	1170.7	15.2
60°-70°	505.6	6.5
70°-80°	54.6	0.7
80°-90°	0.7	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°	2740.5	35.5
0°-40°	4401.2	57.0
0°-60°	7164.1	92.7
0°-90°	7725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3616	3616	3616	3616	3616	
5°	3544	3580	3590	3596	3601	338
15°	3406	3426	3411	3416	3421	960
25°	3108	3103	3108	3113	3128	1423
35°	2645	2661	2671	2666	2625	1654
45°	2060	2065	2106	2075	2039	1566
55°	1192	1315	1464	1310	1197	1072
65°	390	488	637	483	380	401
75°	10	16	57	10	10	32
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°	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3
2.5°	3590.5	3631.6	3636.9	3611.1	3600.8	3585.5	3621.3	3595.8	3606.0	3595.8	3590.5
5°	3544.4	3590.5	3595.8	3595.8	3585.5	3580.3	3595.8	3590.5	3585.5	3575.2	3590.5
7.5°	3523.9	3549.5	3575.2	3544.4	3559.7	3554.7	3590.5	3575.2	3570.0	3570.0	3559.7
10°	3534.2	3528.9	3549.5	3518.6	3528.9	3518.6	3549.5	3549.5	3539.2	3528.9	3523.9
12.5°	3451.8	3492.9	3492.9	3487.8	3477.6	3462.1	3492.9	3513.6	3482.6	3482.6	3477.6
15°	3405.7	3416.0	3421.0	3421.0	3416.0	3426.2	3441.5	3421.0	3426.2	3400.4	3410.7
17.5°	3354.3	3333.8	3349.1	3338.8	3344.1	3354.3	3374.9	3374.9	3344.1	3338.8	3349.1
20°	3236.1	3297.8	3303.0	3272.2	3277.2	3277.2	3313.3	3282.4	3303.0	3277.2	3287.5
22.5°	3179.6	3220.6	3225.9	3184.8	3210.4	3179.6	3215.6	3169.3	3220.6	3184.8	3200.1
25°	3107.7	3102.6	3117.9	3097.4	3102.6	3102.6	3128.2	3107.7	3123.2	3102.6	3107.7
27.5°	2989.7	3030.7	3025.5	3005.0	3015.2	3010.2	3061.6	3005.0	3035.8	3010.2	3020.5
30°	2886.8	2922.8	2912.5	2892.0	2892.0	2876.5	2933.1	2917.6	2912.5	2912.5	2907.3
32.5°	2784.1	2789.3	2779.0	2784.1	2789.3	2768.8	2814.9	2794.3	2789.3	2794.3	2799.6
35°	2645.3	2645.3	2655.6	2640.3	2660.8	2660.8	2701.9	2676.1	2671.1	2655.6	2671.1
37.5°	2522.1	2506.8	2511.8	2511.8	2522.1	2532.4	2552.9	2542.6	2542.6	2527.3	2537.6
40°	2357.8	2347.5	2362.8	2362.8	2378.3	2378.3	2398.9	2388.6	2403.9	2403.9	2403.9
42.5°	2214.0	2214.0	2203.7	2219.0	2224.3	2219.0	2255.1	2249.8	2255.1	2244.8	2249.8
45°	2059.8	2059.8	2049.5	2044.5	2070.0	2065.0	2106.1	2090.6	2111.1	2100.8	2106.1
47.5°	1849.1	1874.9	1859.4	1874.9	1905.7	1911.0	1936.5	1926.3	1946.8	1931.5	1952.0
50°	1649.0	1649.0	1664.3	1684.8	1715.6	1720.9	1751.7	1772.2	1782.5	1787.5	1792.8
52.5°	1438.3	1433.1	1448.6	1474.2	1500.0	1520.5	1551.3	1582.1	1602.7	1633.5	1618.0
55°	1191.7	1201.9	1217.5	1248.3	1289.3	1314.9	1340.7	1381.8	1417.8	1433.1	1463.9
57.5°	981.0	970.8	981.0	1022.1	1068.4	1089.0	1125.0	1166.1	1217.5	1248.3	1258.5
60°	760.2	765.4	775.7	811.7	847.5	878.4	893.9	960.5	1006.8	1037.6	1058.2
62.5°	560.0	570.3	580.5	611.3	647.2	673.0	698.5	755.1	796.2	827.0	847.5
65°	390.4	395.5	411.0	426.3	462.3	487.9	508.4	554.8	595.8	621.6	636.9
67.5°	241.4	246.5	256.7	277.5	303.1	323.6	344.1	374.9	411.0	436.6	441.8
70°	123.2	128.5	133.5	149.0	169.5	179.8	195.1	220.9	246.5	267.0	277.5
72.5°	41.1	41.1	46.3	56.6	66.9	77.1	82.2	107.9	128.5	138.7	143.8
75°	10.3	10.3	10.3	10.3	10.3	15.5	15.5	30.8	41.1	51.3	56.6
77.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	10.3	10.3
80°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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°	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3	3616.3
2.5°	3616.3	3606.0	3600.8	3606.0	3606.0	3600.8	3616.3	3636.9	3662.4	3595.8
5°	3611.1	3600.8	3611.1	3580.3	3595.8	3585.5	3606.0	3600.8	3621.3	3600.8
7.5°	3595.8	3575.2	3580.3	3565.0	3585.5	3559.7	3575.2	3606.0	3585.5	3554.7
10°	3544.4	3534.2	3570.0	3518.6	3508.4	3528.9	3570.0	3539.2	3528.9	3539.2
12.5°	3492.9	3492.9	3508.4	3467.3	3472.3	3482.6	3503.1	3482.6	3492.9	3518.6
15°	3436.5	3426.2	3451.8	3421.0	3416.0	3405.7	3426.2	3426.2	3436.5	3421.0
17.5°	3369.6	3354.3	3354.3	3344.1	3338.8	3364.6	3374.9	3379.9	3385.1	3364.6
20°	3287.5	3282.4	3297.8	3282.4	3287.5	3292.7	3292.7	3282.4	3328.6	3272.2
22.5°	3200.1	3215.6	3195.1	3184.8	3195.1	3205.3	3205.3	3210.4	3200.1	3189.8
25°	3112.9	3123.2	3128.2	3097.4	3112.9	3097.4	3133.4	3138.5	3117.9	3128.2
27.5°	3035.8	3020.5	3015.2	2994.7	3005.0	2999.9	3005.0	3005.0	3035.8	2994.7
30°	2917.6	2902.3	2907.3	2892.0	2897.0	2892.0	2897.0	2897.0	2917.6	2912.5
32.5°	2804.6	2789.3	2794.3	2779.0	2779.0	2784.1	2773.8	2773.8	2789.3	2779.0
35°	2696.7	2660.8	2665.9	2660.8	2665.9	2645.3	2645.3	2640.3	2650.6	2624.8
37.5°	2542.6	2527.3	2522.1	2517.1	2522.1	2511.8	2522.1	2506.8	2522.1	2501.6
40°	2403.9	2393.6	2398.9	2368.1	2368.1	2373.1	2362.8	2357.8	2362.8	2383.4
42.5°	2265.4	2244.8	2234.5	2224.3	2229.3	2214.0	2208.8	2198.5	2208.8	2188.2
45°	2100.8	2100.8	2095.8	2070.0	2075.3	2075.3	2054.7	2034.2	2039.2	2039.2
47.5°	1952.0	1941.8	1936.5	1911.0	1905.7	1900.7	1879.9	1864.6	1864.6	1849.1
50°	1787.5	1777.2	1761.9	1736.2	1725.9	1695.1	1679.8	1659.2	1638.7	1638.7
52.5°	1633.5	1597.4	1576.9	1535.8	1520.5	1505.0	1463.9	1448.6	1433.1	1417.8
55°	1448.6	1417.8	1376.7	1330.4	1309.9	1284.1	1243.0	1212.2	1191.7	1196.9
57.5°	1268.8	1217.5	1176.4	1114.8	1089.0	1073.5	1032.4	991.3	970.8	970.8
60°	1047.9	1006.8	955.5	898.9	878.4	852.8	801.2	775.7	760.2	744.8
62.5°	837.3	806.5	760.2	688.3	673.0	647.2	611.3	580.5	565.0	565.0
65°	626.6	595.8	554.8	503.4	482.9	462.3	431.5	400.7	385.2	380.2
67.5°	441.8	405.8	369.9	328.8	313.3	303.1	272.2	251.7	241.4	236.2
70°	267.0	246.5	220.9	190.1	174.6	164.3	143.8	128.5	123.2	118.2
72.5°	138.7	123.2	102.7	82.2	71.9	61.6	51.3	41.1	36.0	36.0
75°	51.3	41.1	25.8	15.5	10.3	10.3	10.3	10.3	10.3	10.3
77.5°	10.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
80°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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)