

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: P840270

Luminaire Tested: **LD4C90D010 EU4909030 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: P840270
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 EU4909030 4LBCSSQMMS
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

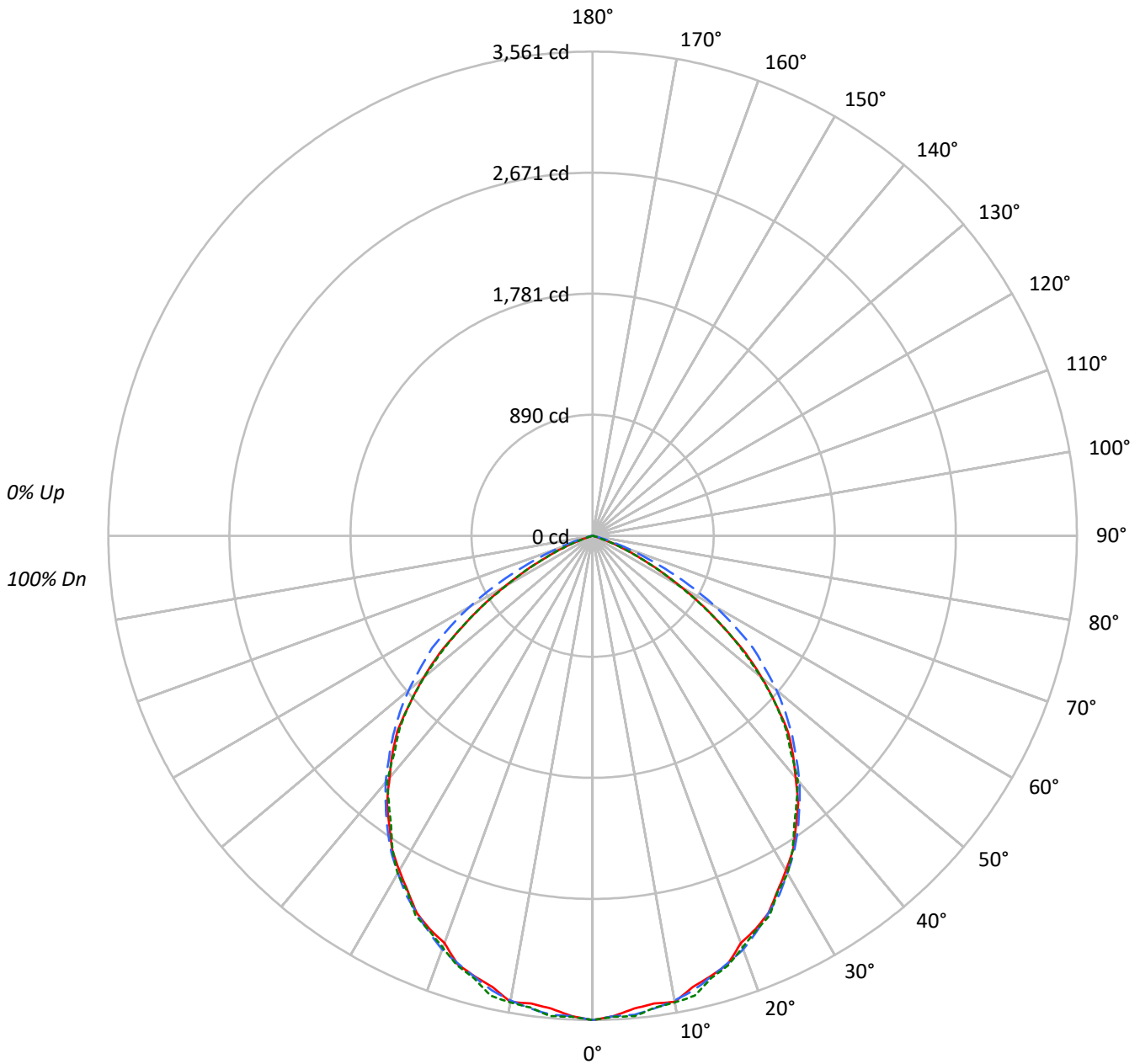
Lumens per Lamp: N/A
Luminaire Lumens: 7607.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (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					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°	343607	343607	343607
5°	338062	342459	343437
10°	340981	339991	341461
15°	335010	335499	336508
20°	327215	332410	330860
25°	325800	325800	327951
30°	316722	318972	319552
35°	306834	309826	304455
40°	292448	298166	295609
45°	276774	282996	274017
50°	243749	265004	242233
55°	197410	242511	198268
60°	144444	201083	141549
65°	87786	143197	85480
70°	34249	77074	32838
75°	3765	20765	3765
80°	2889	2889	2889
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.1	4.4
10°-20°	951.2	12.5
20°-30°	1411.3	18.6
30°-40°	1635.3	21.5
40°-50°	1567.9	20.6
50°-60°	1152.8	15.2
60°-70°	497.9	6.5
70°-80°	53.8	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°	2698.6	35.5
0°-40°	4333.9	57.0
0°-60°	7054.6	92.7
0°-90°	7607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7607.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3561	3561	3561	3561	3561	
5°	3490	3526	3536	3541	3546	333
15°	3354	3374	3359	3364	3369	945
25°	3060	3055	3060	3065	3080	1401
35°	2605	2620	2630	2625	2585	1629
45°	2028	2034	2074	2044	2008	1542
55°	1174	1295	1442	1290	1179	1056
65°	384	480	627	476	374	395
75°	10	15	56	10	10	31
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°	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1
2.5°	3535.7	3576.1	3581.3	3555.9	3545.8	3530.7	3566.0	3540.8	3551.0	3540.8	3535.7
5°	3490.3	3535.7	3540.8	3540.8	3530.7	3525.6	3540.8	3535.7	3530.7	3520.6	3535.7
7.5°	3470.1	3495.2	3520.6	3490.3	3505.4	3500.4	3535.7	3520.6	3515.5	3515.5	3505.4
10°	3480.2	3475.0	3495.2	3464.9	3475.0	3464.9	3495.2	3495.2	3485.1	3475.0	3470.1
12.5°	3399.1	3439.5	3439.5	3434.6	3424.5	3409.2	3439.5	3459.9	3429.4	3429.4	3424.5
15°	3353.7	3363.8	3368.7	3368.7	3363.8	3373.9	3389.0	3368.7	3373.9	3348.5	3358.6
17.5°	3303.1	3282.9	3297.9	3287.8	3293.0	3303.1	3323.3	3323.3	3293.0	3287.8	3297.9
20°	3186.7	3247.4	3252.5	3222.2	3227.2	3227.2	3262.6	3232.3	3252.5	3227.2	3237.3
22.5°	3131.0	3171.4	3176.6	3136.1	3161.3	3131.0	3166.5	3120.9	3171.4	3136.1	3151.2
25°	3060.2	3055.2	3070.3	3050.1	3055.2	3055.2	3080.4	3060.2	3075.5	3055.2	3060.2
27.5°	2944.0	2984.4	2979.3	2959.1	2969.2	2964.2	3014.8	2959.1	2989.4	2964.2	2974.3
30°	2842.7	2878.2	2868.1	2847.8	2847.8	2832.6	2888.3	2873.0	2868.1	2868.1	2862.9
32.5°	2741.5	2746.7	2736.6	2741.5	2746.7	2726.5	2771.9	2751.7	2746.7	2751.7	2756.8
35°	2604.9	2604.9	2615.0	2600.0	2620.2	2620.2	2660.6	2635.3	2630.3	2615.0	2630.3
37.5°	2483.6	2468.5	2473.5	2473.5	2483.6	2493.7	2513.9	2503.8	2503.8	2488.7	2498.8
40°	2321.8	2311.7	2326.7	2326.7	2342.0	2342.0	2362.2	2352.1	2367.2	2367.2	2367.2
42.5°	2180.2	2180.2	2170.1	2185.1	2190.3	2185.1	2220.6	2215.5	2220.6	2210.5	2215.5
45°	2028.3	2028.3	2018.2	2013.2	2038.4	2033.5	2073.9	2058.6	2078.9	2068.7	2073.9
47.5°	1820.9	1846.3	1831.0	1846.3	1876.6	1881.8	1906.9	1896.8	1917.1	1902.0	1922.2
50°	1623.8	1623.8	1638.9	1659.1	1689.4	1694.6	1724.9	1745.1	1755.3	1760.2	1765.4
52.5°	1416.4	1411.2	1426.5	1451.7	1477.1	1497.3	1527.6	1558.0	1578.2	1608.5	1593.3
55°	1173.5	1183.6	1198.9	1229.2	1269.6	1294.8	1320.2	1360.7	1396.2	1411.2	1441.6
57.5°	966.1	956.0	966.1	1006.5	1052.1	1072.3	1107.8	1148.3	1198.9	1229.2	1239.3
60°	748.5	753.7	763.8	799.3	834.6	864.9	880.2	945.8	991.4	1021.8	1042.0
62.5°	551.4	561.6	571.7	602.0	637.3	662.7	687.9	743.6	784.0	814.4	834.6
65°	384.5	389.4	404.7	419.8	455.3	480.5	500.7	546.3	586.7	612.1	627.2
67.5°	237.7	242.7	252.8	273.2	298.4	318.7	338.9	369.2	404.7	429.9	435.0
70°	121.4	126.5	131.5	146.7	167.0	177.1	192.1	217.5	242.7	262.9	273.2
72.5°	40.5	40.5	45.6	55.7	65.8	75.9	80.9	106.3	126.5	136.6	141.6
75°	10.1	10.1	10.1	10.1	10.1	15.3	15.3	30.3	40.5	50.6	55.7
77.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	10.1	10.1
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°	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1	3561.1
2.5°	3561.1	3551.0	3545.8	3551.0	3551.0	3545.8	3561.1	3581.3	3606.5	3540.8
5°	3555.9	3545.8	3555.9	3525.6	3540.8	3530.7	3551.0	3545.8	3566.0	3545.8
7.5°	3540.8	3520.6	3525.6	3510.5	3530.7	3505.4	3520.6	3551.0	3530.7	3500.4
10°	3490.3	3480.2	3515.5	3464.9	3454.8	3475.0	3515.5	3485.1	3475.0	3485.1
12.5°	3439.5	3439.5	3454.8	3414.3	3419.3	3429.4	3449.6	3429.4	3439.5	3464.9
15°	3384.0	3373.9	3399.1	3368.7	3363.8	3353.7	3373.9	3373.9	3384.0	3368.7
17.5°	3318.2	3303.1	3303.1	3293.0	3287.8	3313.2	3323.3	3328.3	3333.4	3313.2
20°	3237.3	3232.3	3247.4	3232.3	3237.3	3242.4	3242.4	3232.3	3277.7	3222.2
22.5°	3151.2	3166.5	3146.3	3136.1	3146.3	3156.4	3156.4	3161.3	3151.2	3141.1
25°	3065.3	3075.5	3080.4	3050.1	3065.3	3050.1	3085.6	3090.5	3070.3	3080.4
27.5°	2989.4	2974.3	2969.2	2949.0	2959.1	2954.1	2959.1	2959.1	2989.4	2949.0
30°	2873.0	2857.9	2862.9	2847.8	2852.8	2847.8	2852.8	2852.8	2873.0	2868.1
32.5°	2761.8	2746.7	2751.7	2736.6	2736.6	2741.5	2731.4	2731.4	2746.7	2736.6
35°	2655.5	2620.2	2625.1	2620.2	2625.1	2604.9	2604.9	2600.0	2610.1	2584.7
37.5°	2503.8	2488.7	2483.6	2478.6	2483.6	2473.5	2483.6	2468.5	2483.6	2463.3
40°	2367.2	2357.1	2362.2	2331.9	2331.9	2336.8	2326.7	2321.8	2326.7	2346.9
42.5°	2230.8	2210.5	2200.4	2190.3	2195.3	2180.2	2175.0	2164.9	2175.0	2154.8
45°	2068.7	2068.7	2063.8	2038.4	2043.6	2043.6	2023.3	2003.1	2008.1	2008.1
47.5°	1922.2	1912.1	1906.9	1881.8	1876.6	1871.6	1851.2	1836.2	1836.2	1820.9
50°	1760.2	1750.1	1735.0	1709.6	1699.5	1669.2	1654.1	1633.9	1613.7	1613.7
52.5°	1608.5	1573.0	1552.8	1512.4	1497.3	1482.0	1441.6	1426.5	1411.2	1396.2
55°	1426.5	1396.2	1355.7	1310.1	1289.9	1264.5	1224.0	1193.7	1173.5	1178.6
57.5°	1249.4	1198.9	1158.4	1097.7	1072.3	1057.1	1016.6	976.2	956.0	956.0
60°	1031.9	991.4	940.9	885.2	864.9	839.8	789.0	763.8	748.5	733.5
62.5°	824.5	794.1	748.5	677.8	662.7	637.3	602.0	571.7	556.4	556.4
65°	617.1	586.7	546.3	495.7	475.5	455.3	424.9	394.6	379.3	374.4
67.5°	435.0	399.6	364.3	323.8	308.5	298.4	268.1	247.9	237.7	232.6
70°	262.9	242.7	217.5	187.2	171.9	161.8	141.6	126.5	121.4	116.4
72.5°	136.6	121.4	101.1	80.9	70.8	60.7	50.6	40.5	35.5	35.5
75°	50.6	40.5	25.4	15.3	10.1	10.1	10.1	10.1	10.1	10.1
77.5°	10.1	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)