

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: P840276

Luminaire Tested: **LD4C90D010 EU4909050 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: P840276
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 EU4909050 4LBCSSQMMS
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

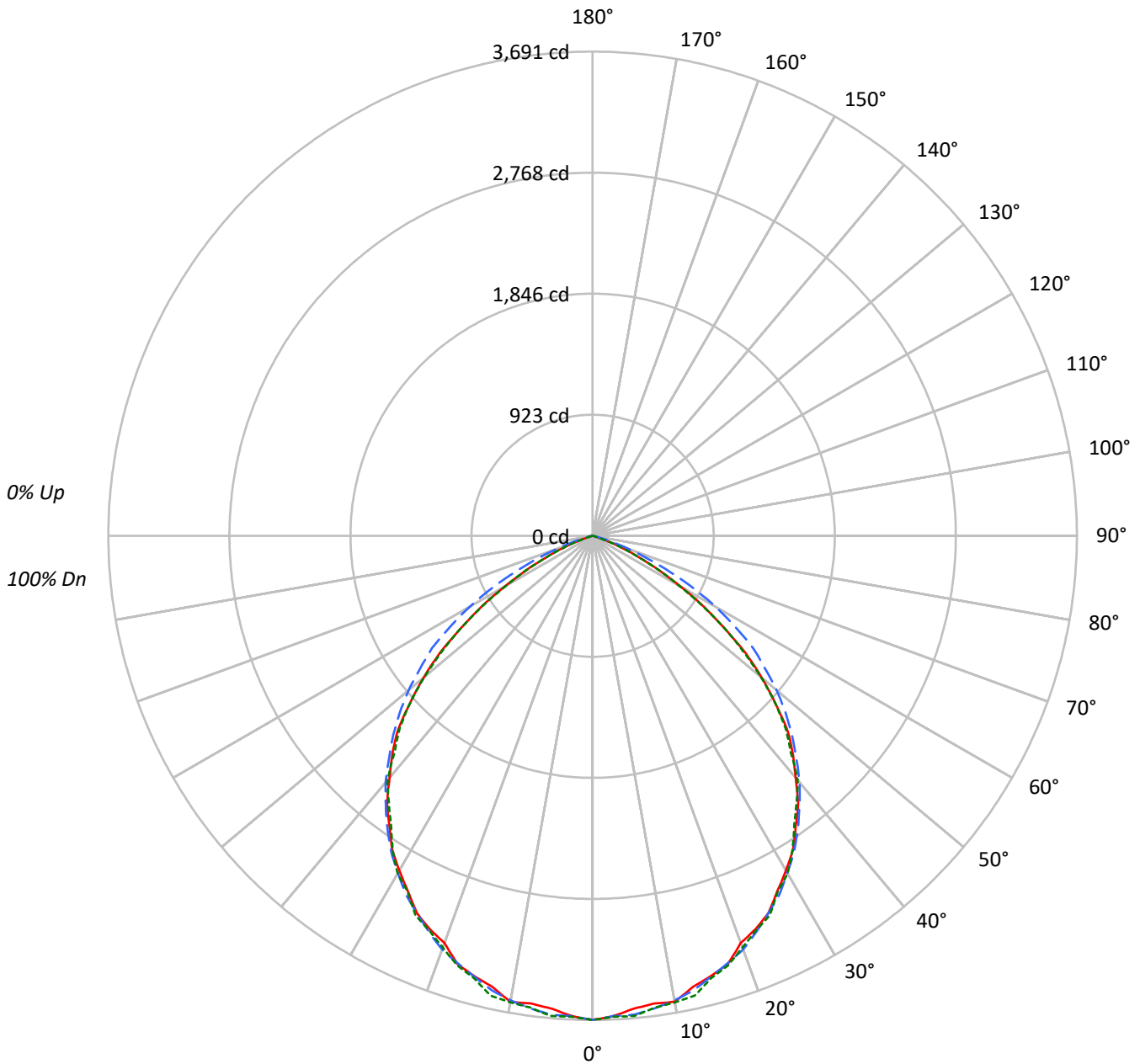
Lumens per Lamp: N/A
Luminaire Lumens: 7884.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	356112	356112	356112
5°	350372	354924	355942
10°	353395	352366	353894
15°	347207	347716	348765
20°	339126	344506	342904
25°	337660	337660	339896
30°	328253	330582	331183
35°	318013	321111	315539
40°	303091	309024	306379
45°	286858	293298	283992
50°	252620	274656	251044
55°	204593	251342	205485
60°	149712	208416	146702
65°	90982	148403	88585
70°	35490	79895	34023
75°	3914	21511	3914
80°	2945	2945	2945
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.4	4.4
10°-20°	985.8	12.5
20°-30°	1462.7	18.6
30°-40°	1694.9	21.5
40°-50°	1625.0	20.6
50°-60°	1194.8	15.2
60°-70°	516.0	6.5
70°-80°	55.7	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°	2796.9	35.5
0°-40°	4491.7	57.0
0°-60°	7311.5	92.7
0°-90°	7884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7884.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3691	3691	3691	3691	3691	
5°	3617	3654	3664	3670	3675	345
15°	3476	3497	3481	3486	3491	980
25°	3172	3166	3172	3177	3193	1452
35°	2700	2716	2726	2721	2679	1688
45°	2102	2108	2149	2118	2081	1598
55°	1216	1342	1494	1337	1222	1094
65°	398	498	650	493	388	410
75°	10	16	58	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°	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7
2.5°	3664.4	3706.4	3711.7	3685.4	3674.9	3659.3	3695.9	3669.8	3680.3	3669.8	3664.4
5°	3617.4	3664.4	3669.8	3669.8	3659.3	3654.0	3669.8	3664.4	3659.3	3648.8	3664.4
7.5°	3596.4	3622.5	3648.8	3617.4	3633.0	3627.9	3664.4	3648.8	3643.5	3643.5	3633.0
10°	3606.9	3601.6	3622.5	3591.1	3601.6	3591.1	3622.5	3622.5	3612.0	3601.6	3596.4
12.5°	3522.8	3564.8	3564.8	3559.6	3549.1	3533.3	3564.8	3585.9	3554.3	3554.3	3549.1
15°	3475.8	3486.3	3491.4	3491.4	3486.3	3496.7	3512.4	3491.4	3496.7	3470.4	3480.9
17.5°	3423.4	3402.4	3418.0	3407.6	3412.9	3423.4	3444.3	3444.3	3412.9	3407.6	3418.0
20°	3302.7	3365.6	3371.0	3339.5	3344.7	3344.7	3381.5	3350.0	3371.0	3344.7	3355.1
22.5°	3245.0	3286.9	3292.3	3250.3	3276.4	3245.0	3281.8	3234.5	3286.9	3250.3	3266.0
25°	3171.6	3166.5	3182.1	3161.1	3166.5	3166.5	3192.6	3171.6	3187.5	3166.5	3171.6
27.5°	3051.2	3093.1	3087.8	3066.8	3077.3	3072.2	3124.6	3066.8	3098.3	3072.2	3082.6
30°	2946.2	2983.0	2972.5	2951.5	2951.5	2935.7	2993.5	2977.6	2972.5	2972.5	2967.1
32.5°	2841.4	2846.7	2836.2	2841.4	2846.7	2825.8	2872.8	2851.9	2846.7	2851.9	2857.2
35°	2699.8	2699.8	2710.3	2694.6	2715.6	2715.6	2757.5	2731.2	2726.1	2710.3	2726.1
37.5°	2574.0	2558.4	2563.5	2563.5	2574.0	2584.5	2605.4	2595.0	2595.0	2579.3	2589.8
40°	2406.3	2395.8	2411.4	2411.4	2427.3	2427.3	2448.2	2437.8	2453.4	2453.4	2453.4
42.5°	2259.6	2259.6	2249.1	2264.7	2270.1	2264.7	2301.5	2296.2	2301.5	2291.0	2296.2
45°	2102.2	2102.2	2091.7	2086.5	2112.6	2107.5	2149.4	2133.6	2154.6	2144.1	2149.4
47.5°	1887.2	1913.5	1897.7	1913.5	1944.9	1950.3	1976.4	1965.9	1986.9	1971.2	1992.2
50°	1682.9	1682.9	1698.5	1719.5	1750.9	1756.3	1787.7	1808.7	1819.2	1824.3	1829.7
52.5°	1468.0	1462.6	1478.4	1504.5	1530.8	1551.8	1583.2	1614.7	1635.6	1667.1	1651.3
55°	1216.2	1226.7	1242.5	1274.0	1315.9	1342.0	1368.3	1410.2	1447.0	1462.6	1494.1
57.5°	1001.2	990.8	1001.2	1043.2	1090.4	1111.4	1148.2	1190.1	1242.5	1274.0	1284.4
60°	775.8	781.1	791.6	828.4	865.0	896.4	912.3	980.3	1027.5	1059.0	1080.0
62.5°	571.5	582.0	592.5	623.9	660.5	686.8	712.9	770.7	812.6	844.0	865.0
65°	398.5	403.6	419.4	435.1	471.8	497.9	518.9	566.2	608.1	634.4	650.0
67.5°	246.4	251.5	262.0	283.2	309.3	330.3	351.2	382.7	419.4	445.5	450.9
70°	125.8	131.1	136.3	152.1	173.0	183.5	199.1	225.4	251.5	272.5	283.2
72.5°	41.9	41.9	47.3	57.7	68.2	78.7	83.8	110.2	131.1	141.6	146.7
75°	10.5	10.5	10.5	10.5	10.5	15.8	15.8	31.4	41.9	52.4	57.7
77.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	10.5	10.5
80°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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°	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7	3690.7
2.5°	3690.7	3680.3	3674.9	3680.3	3680.3	3674.9	3690.7	3711.7	3737.8	3669.8
5°	3685.4	3674.9	3685.4	3654.0	3669.8	3659.3	3680.3	3674.9	3695.9	3674.9
7.5°	3669.8	3648.8	3654.0	3638.3	3659.3	3633.0	3648.8	3680.3	3659.3	3627.9
10°	3617.4	3606.9	3643.5	3591.1	3580.6	3601.6	3643.5	3612.0	3601.6	3612.0
12.5°	3564.8	3564.8	3580.6	3538.7	3543.8	3554.3	3575.2	3554.3	3564.8	3591.1
15°	3507.2	3496.7	3522.8	3491.4	3486.3	3475.8	3496.7	3496.7	3507.2	3491.4
17.5°	3439.0	3423.4	3423.4	3412.9	3407.6	3433.9	3444.3	3449.5	3454.8	3433.9
20°	3355.1	3350.0	3365.6	3350.0	3355.1	3360.5	3360.5	3350.0	3397.1	3339.5
22.5°	3266.0	3281.8	3260.8	3250.3	3260.8	3271.3	3271.3	3276.4	3266.0	3255.5
25°	3177.0	3187.5	3192.6	3161.1	3177.0	3161.1	3197.9	3203.1	3182.1	3192.6
27.5°	3098.3	3082.6	3077.3	3056.3	3066.8	3061.7	3066.8	3066.8	3098.3	3056.3
30°	2977.6	2962.0	2967.1	2951.5	2956.7	2951.5	2956.7	2956.7	2977.6	2972.5
32.5°	2862.3	2846.7	2851.9	2836.2	2836.2	2841.4	2830.9	2830.9	2846.7	2836.2
35°	2752.2	2715.6	2720.7	2715.6	2720.7	2699.8	2699.8	2694.6	2705.1	2678.8
37.5°	2595.0	2579.3	2574.0	2568.9	2574.0	2563.5	2574.0	2558.4	2574.0	2553.0
40°	2453.4	2442.9	2448.2	2416.8	2416.8	2421.9	2411.4	2406.3	2411.4	2432.4
42.5°	2312.0	2291.0	2280.5	2270.1	2275.2	2259.6	2254.2	2243.8	2254.2	2233.3
45°	2144.1	2144.1	2138.9	2112.6	2118.0	2118.0	2097.0	2076.1	2081.2	2081.2
47.5°	1992.2	1981.7	1976.4	1950.3	1944.9	1939.8	1918.6	1903.0	1903.0	1887.2
50°	1824.3	1813.8	1798.2	1771.9	1761.4	1730.0	1714.4	1693.4	1672.4	1672.4
52.5°	1667.1	1630.3	1609.3	1567.4	1551.8	1536.0	1494.1	1478.4	1462.6	1447.0
55°	1478.4	1447.0	1405.1	1357.8	1336.8	1310.5	1268.6	1237.2	1216.2	1221.5
57.5°	1294.9	1242.5	1200.6	1137.7	1111.4	1095.6	1053.6	1011.7	990.8	990.8
60°	1069.5	1027.5	975.1	917.4	896.4	870.3	817.7	791.6	775.8	760.2
62.5°	854.5	823.1	775.8	702.4	686.8	660.5	623.9	592.5	576.7	576.7
65°	639.5	608.1	566.2	513.8	492.8	471.8	440.4	409.0	393.1	388.0
67.5°	450.9	414.1	377.5	335.6	319.8	309.3	277.8	256.9	246.4	241.1
70°	272.5	251.5	225.4	194.0	178.2	167.7	146.7	131.1	125.8	120.6
72.5°	141.6	125.8	104.8	83.8	73.4	62.9	52.4	41.9	36.8	36.8
75°	52.4	41.9	26.3	15.8	10.5	10.5	10.5	10.5	10.5	10.5
77.5°	10.5	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
80°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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)