

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: P840268

Luminaire Tested: **LD4C90D010 EU4909027 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: P840268
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 EU4909027 4LBCSSQMMS
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

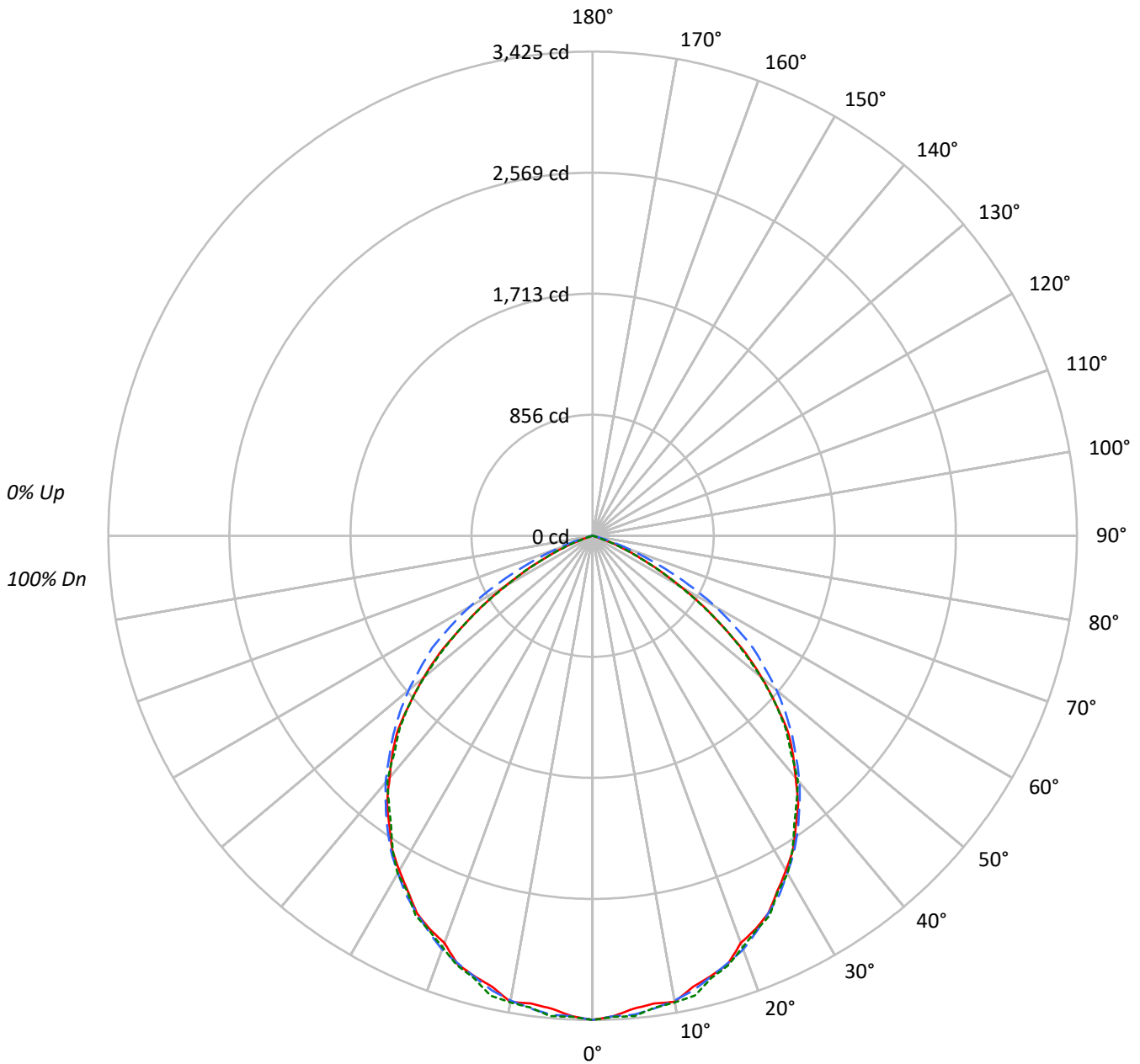
Lumens per Lamp: N/A
Luminaire Lumens: 7316.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (A_{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°	330455	330455	330455
5°	325131	329354	330303
10°	327930	326980	328401
15°	322194	322663	323642
20°	314698	319688	318199
25°	313333	313333	315409
30°	304600	306772	307318
35°	295102	297976	292805
40°	281250	286754	284311
45°	266185	272175	263537
50°	234427	254857	232956
55°	189857	233225	190681
60°	138925	193383	136127
65°	84430	137718	82192
70°	32923	74140	31569
75°	3616	19982	3616
80°	2778	2778	2778
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.3	4.4
10°-20°	914.8	12.5
20°-30°	1357.3	18.6
30°-40°	1572.8	21.5
40°-50°	1507.9	20.6
50°-60°	1108.7	15.2
60°-70°	478.9	6.5
70°-80°	51.7	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°	2595.4	35.5
0°-40°	4168.1	57.0
0°-60°	6784.8	92.7
0°-90°	7316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3425	3425	3425	3425	3425	
5°	3357	3391	3400	3405	3410	320
15°	3225	3245	3230	3235	3240	909
25°	2943	2938	2943	2948	2963	1348
35°	2505	2520	2530	2525	2486	1567
45°	1951	1956	1995	1965	1931	1483
55°	1129	1245	1386	1240	1134	1016
65°	370	462	603	457	360	380
75°	10	15	54	10	10	30
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°	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8
2.5°	3400.4	3439.3	3444.3	3419.9	3410.2	3395.7	3429.6	3405.4	3415.1	3405.4	3400.4
5°	3356.8	3400.4	3405.4	3405.4	3395.7	3390.7	3405.4	3400.4	3395.7	3385.9	3400.4
7.5°	3337.3	3361.5	3385.9	3356.8	3371.3	3366.5	3400.4	3385.9	3381.0	3381.0	3371.3
10°	3347.0	3342.1	3361.5	3332.4	3342.1	3332.4	3361.5	3361.5	3351.8	3342.1	3337.3
12.5°	3269.0	3307.9	3307.9	3303.2	3293.5	3278.8	3307.9	3327.6	3298.2	3298.2	3293.5
15°	3225.4	3235.1	3239.9	3239.9	3235.1	3244.8	3259.3	3239.9	3244.8	3220.4	3230.1
17.5°	3176.7	3157.3	3171.8	3162.1	3167.0	3176.7	3196.2	3196.2	3167.0	3162.1	3171.8
20°	3064.8	3123.2	3128.1	3098.9	3103.7	3103.7	3137.8	3108.7	3128.1	3103.7	3113.4
22.5°	3011.2	3050.1	3055.1	3016.2	3040.4	3011.2	3045.3	3001.5	3050.1	3016.2	3030.7
25°	2943.1	2938.4	2952.9	2933.4	2938.4	2938.4	2962.6	2943.1	2957.8	2938.4	2943.1
27.5°	2831.4	2870.3	2865.3	2845.9	2855.6	2850.8	2899.5	2845.9	2875.0	2850.8	2860.6
30°	2733.9	2768.1	2758.3	2738.9	2738.9	2724.2	2777.8	2763.1	2758.3	2758.3	2753.4
32.5°	2636.7	2641.6	2631.9	2636.7	2641.6	2622.2	2665.8	2646.4	2641.6	2646.4	2651.4
35°	2505.3	2505.3	2515.0	2500.5	2520.0	2520.0	2558.9	2534.5	2529.7	2515.0	2529.7
37.5°	2388.6	2374.1	2378.8	2378.8	2388.6	2398.3	2417.7	2408.0	2408.0	2393.5	2403.2
40°	2232.9	2223.2	2237.7	2237.7	2252.4	2252.4	2271.9	2262.1	2276.6	2276.6	2276.6
42.5°	2096.8	2096.8	2087.1	2101.6	2106.5	2101.6	2135.7	2130.7	2135.7	2126.0	2130.7
45°	1950.7	1950.7	1941.0	1936.2	1960.4	1955.7	1994.6	1979.9	1999.3	1989.6	1994.6
47.5°	1751.2	1775.6	1761.0	1775.6	1804.8	1809.8	1834.0	1824.3	1843.7	1829.2	1848.7
50°	1561.7	1561.7	1576.2	1595.6	1624.8	1629.8	1658.9	1678.4	1688.1	1692.9	1697.8
52.5°	1362.2	1357.2	1371.9	1396.1	1420.6	1440.0	1469.2	1498.4	1517.8	1547.0	1532.3
55°	1128.6	1138.3	1153.0	1182.2	1221.1	1245.3	1269.7	1308.6	1342.7	1357.2	1386.4
57.5°	929.1	919.4	929.1	968.0	1011.9	1031.3	1065.5	1104.4	1153.0	1182.2	1191.9
60°	719.9	724.9	734.6	768.7	802.7	831.8	846.5	909.7	953.5	982.7	1002.1
62.5°	530.3	540.1	549.8	579.0	612.9	637.3	661.6	715.1	754.0	783.2	802.7
65°	369.8	374.5	389.2	403.7	437.9	462.1	481.5	525.4	564.3	588.7	603.2
67.5°	228.7	233.4	243.1	262.8	287.0	306.5	325.9	355.1	389.2	413.4	418.4
70°	116.7	121.7	126.4	141.1	160.6	170.3	184.8	209.2	233.4	252.9	262.8
72.5°	38.9	38.9	43.9	53.6	63.3	73.0	77.8	102.2	121.7	131.4	136.2
75°	9.7	9.7	9.7	9.7	9.7	14.7	14.7	29.2	38.9	48.6	53.6
77.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	9.7	9.7
80°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8	3424.8
2.5°	3424.8	3415.1	3410.2	3415.1	3415.1	3410.2	3424.8	3444.3	3468.5	3405.4
5°	3419.9	3410.2	3419.9	3390.7	3405.4	3395.7	3415.1	3410.2	3429.6	3410.2
7.5°	3405.4	3385.9	3390.7	3376.2	3395.7	3371.3	3385.9	3415.1	3395.7	3366.5
10°	3356.8	3347.0	3381.0	3332.4	3322.6	3342.1	3381.0	3351.8	3342.1	3351.8
12.5°	3307.9	3307.9	3322.6	3283.7	3288.5	3298.2	3317.7	3298.2	3307.9	3332.4
15°	3254.5	3244.8	3269.0	3239.9	3235.1	3225.4	3244.8	3244.8	3254.5	3239.9
17.5°	3191.2	3176.7	3176.7	3167.0	3162.1	3186.5	3196.2	3201.0	3205.9	3186.5
20°	3113.4	3108.7	3123.2	3108.7	3113.4	3118.4	3118.4	3108.7	3152.3	3098.9
22.5°	3030.7	3045.3	3025.9	3016.2	3025.9	3035.6	3035.6	3040.4	3030.7	3020.9
25°	2948.1	2957.8	2962.6	2933.4	2948.1	2933.4	2967.5	2972.3	2952.9	2962.6
27.5°	2875.0	2860.6	2855.6	2836.1	2845.9	2841.1	2845.9	2845.9	2875.0	2836.1
30°	2763.1	2748.6	2753.4	2738.9	2743.7	2738.9	2743.7	2743.7	2763.1	2758.3
32.5°	2656.1	2641.6	2646.4	2631.9	2631.9	2636.7	2626.9	2626.9	2641.6	2631.9
35°	2553.9	2520.0	2524.7	2520.0	2524.7	2505.3	2505.3	2500.5	2510.2	2485.8
37.5°	2408.0	2393.5	2388.6	2383.8	2388.6	2378.8	2388.6	2374.1	2388.6	2369.1
40°	2276.6	2266.9	2271.9	2242.7	2242.7	2247.4	2237.7	2232.9	2237.7	2257.2
42.5°	2145.4	2126.0	2116.2	2106.5	2111.3	2096.8	2091.8	2082.1	2091.8	2072.4
45°	1989.6	1989.6	1984.8	1960.4	1965.4	1965.4	1945.9	1926.5	1931.3	1931.3
47.5°	1848.7	1839.0	1834.0	1809.8	1804.8	1800.1	1780.4	1765.9	1765.9	1751.2
50°	1692.9	1683.1	1668.7	1644.2	1634.5	1605.3	1590.8	1571.4	1551.9	1551.9
52.5°	1547.0	1512.9	1493.4	1454.5	1440.0	1425.3	1386.4	1371.9	1357.2	1342.7
55°	1371.9	1342.7	1303.8	1260.0	1240.5	1216.1	1177.2	1148.0	1128.6	1133.5
57.5°	1201.6	1153.0	1114.1	1055.7	1031.3	1016.6	977.7	938.8	919.4	919.4
60°	992.4	953.5	904.9	851.3	831.8	807.6	758.8	734.6	719.9	705.4
62.5°	792.9	763.8	719.9	651.8	637.3	612.9	579.0	549.8	535.1	535.1
65°	593.5	564.3	525.4	476.8	457.3	437.9	408.7	379.5	364.8	360.0
67.5°	418.4	384.3	350.3	311.4	296.7	287.0	257.8	238.4	228.7	223.7
70°	252.9	233.4	209.2	180.0	165.3	155.6	136.2	121.7	116.7	111.9
72.5°	131.4	116.7	97.3	77.8	68.1	58.4	48.6	38.9	34.1	34.1
75°	48.6	38.9	24.4	14.7	9.7	9.7	9.7	9.7	9.7	9.7
77.5°	9.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
80°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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)