

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: P840233

Luminaire Tested: **LD4C65D010 EU4659035 4LBCSSQMW**

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: P840233
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: LD4C65D010 EU4659035 4LBCSSQMW
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

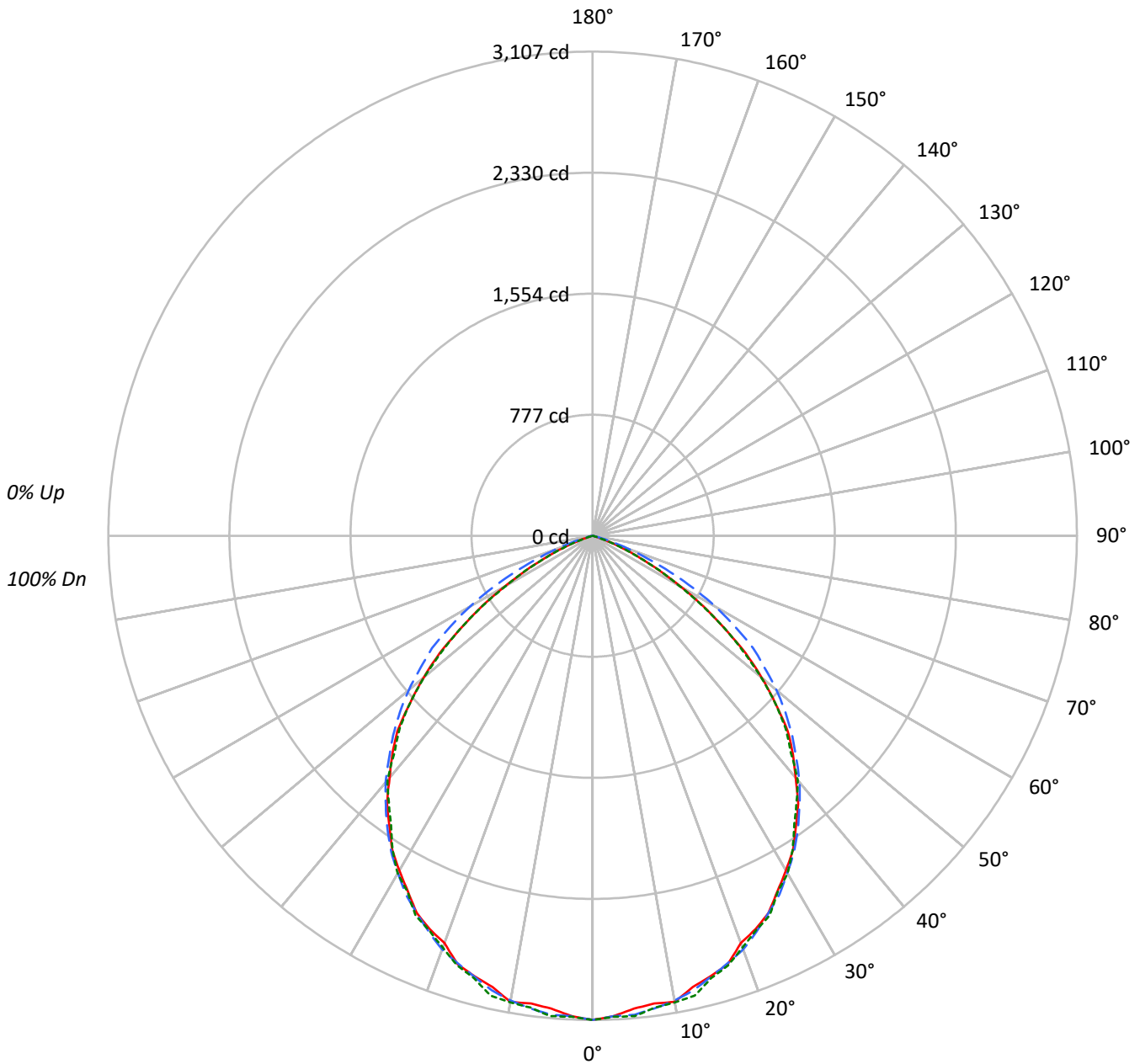
Lumens per Lamp: N/A
Luminaire Lumens: 6637.0 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 72.4
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									
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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89																			
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	299791	299791	299791
5°	294950	298786	299648
10°	297499	296636	297920
15°	292286	292715	293604
20°	285495	290023	288668
25°	284258	284258	286132
30°	276333	278294	278796
35°	267716	270319	265631
40°	255152	260140	257923
45°	241486	246917	239071
50°	212661	231215	211340
55°	172227	211574	172984
60°	126034	175436	123486
65°	76599	124932	74567
70°	29876	67256	28663
75°	3281	18118	3281
80°	2500	2500	2500
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.3	4.4
10°-20°	829.9	12.5
20°-30°	1231.4	18.6
30°-40°	1426.8	21.5
40°-50°	1368.0	20.6
50°-60°	1005.8	15.2
60°-70°	434.4	6.5
70°-80°	46.9	0.7
80°-90°	0.6	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°	2354.5	35.5
0°-40°	3781.3	57.0
0°-60°	6155.1	92.7
0°-90°	6637.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6637.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3107	3107	3107	3107	3107	
5°	3045	3076	3085	3089	3094	291
15°	2926	2944	2930	2935	2939	825
25°	2670	2666	2670	2674	2688	1222
35°	2273	2286	2295	2290	2255	1421
45°	1770	1774	1810	1783	1752	1345
55°	1024	1130	1258	1125	1028	921
65°	336	419	547	415	327	345
75°	9	13	49	9	9	27
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°	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0
2.5°	3084.8	3120.1	3124.6	3102.5	3093.7	3080.5	3111.3	3089.3	3098.2	3089.3	3084.8
5°	3045.2	3084.8	3089.3	3089.3	3080.5	3076.0	3089.3	3084.8	3080.5	3071.7	3084.8
7.5°	3027.6	3049.5	3071.7	3045.2	3058.4	3054.0	3084.8	3071.7	3067.2	3067.2	3058.4
10°	3036.4	3031.9	3049.5	3023.1	3031.9	3023.1	3049.5	3049.5	3040.7	3031.9	3027.6
12.5°	2965.6	3000.9	3000.9	2996.6	2987.8	2974.5	3000.9	3018.8	2992.1	2992.1	2987.8
15°	2926.0	2934.8	2939.2	2939.2	2934.8	2943.7	2956.8	2939.2	2943.7	2921.5	2930.3
17.5°	2881.9	2864.3	2877.4	2868.6	2873.1	2881.9	2899.6	2899.6	2873.1	2868.6	2877.4
20°	2780.4	2833.3	2837.8	2811.3	2815.6	2815.6	2846.6	2820.1	2837.8	2815.6	2824.5
22.5°	2731.7	2767.0	2771.5	2736.2	2758.2	2731.7	2762.7	2722.9	2767.0	2736.2	2749.4
25°	2670.0	2665.7	2678.8	2661.2	2665.7	2665.7	2687.6	2670.0	2683.3	2665.7	2670.0
27.5°	2568.6	2603.9	2599.4	2581.7	2590.6	2586.2	2630.4	2581.7	2608.2	2586.2	2595.1
30°	2480.2	2511.2	2502.3	2484.7	2484.7	2471.4	2520.0	2506.7	2502.3	2502.3	2497.8
32.5°	2392.0	2396.5	2387.6	2392.0	2396.5	2378.8	2418.4	2400.8	2396.5	2400.8	2405.3
35°	2272.8	2272.8	2281.6	2268.4	2286.1	2286.1	2321.4	2299.2	2294.9	2281.6	2294.9
37.5°	2166.9	2153.7	2158.1	2158.1	2166.9	2175.7	2193.3	2184.5	2184.5	2171.4	2180.2
40°	2025.7	2016.9	2030.0	2030.0	2043.4	2043.4	2061.0	2052.2	2065.3	2065.3	2065.3
42.5°	1902.2	1902.2	1893.4	1906.5	1911.0	1906.5	1937.5	1933.0	1937.5	1928.7	1933.0
45°	1769.7	1769.7	1760.8	1756.5	1778.5	1774.2	1809.5	1796.1	1813.8	1805.0	1809.5
47.5°	1588.7	1610.8	1597.5	1610.8	1637.3	1641.8	1663.8	1655.0	1672.6	1659.5	1677.1
50°	1416.7	1416.7	1429.9	1447.5	1474.0	1478.5	1505.0	1522.6	1531.4	1535.8	1540.3
52.5°	1235.8	1231.3	1244.6	1266.6	1288.7	1306.4	1332.8	1359.3	1376.9	1403.4	1390.1
55°	1023.8	1032.7	1046.0	1072.5	1107.7	1129.7	1151.9	1187.2	1218.1	1231.3	1257.7
57.5°	842.9	834.1	842.9	878.2	918.0	935.6	966.6	1001.9	1046.0	1072.5	1081.3
60°	653.1	657.6	666.4	697.4	728.2	754.6	768.0	825.2	865.0	891.5	909.1
62.5°	481.1	489.9	498.8	525.2	556.0	578.2	600.2	648.8	684.1	710.5	728.2
65°	335.5	339.8	353.1	366.3	397.2	419.2	436.8	476.6	511.9	534.1	547.2
67.5°	207.4	211.8	220.6	238.4	260.4	278.0	295.7	322.1	353.1	375.1	379.6
70°	105.9	110.4	114.7	128.0	145.7	154.5	167.6	189.8	211.8	229.4	238.4
72.5°	35.3	35.3	39.8	48.6	57.4	66.3	70.6	92.7	110.4	119.2	123.5
75°	8.8	8.8	8.8	8.8	8.8	13.3	13.3	26.5	35.3	44.1	48.6
77.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	8.8	8.8
80°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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°	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0	3107.0
2.5°	3107.0	3098.2	3093.7	3098.2	3098.2	3093.7	3107.0	3124.6	3146.6	3089.3
5°	3102.5	3093.7	3102.5	3076.0	3089.3	3080.5	3098.2	3093.7	3111.3	3093.7
7.5°	3089.3	3071.7	3076.0	3062.9	3080.5	3058.4	3071.7	3098.2	3080.5	3054.0
10°	3045.2	3036.4	3067.2	3023.1	3014.3	3031.9	3067.2	3040.7	3031.9	3040.7
12.5°	3000.9	3000.9	3014.3	2979.0	2983.3	2992.1	3009.8	2992.1	3000.9	3023.1
15°	2952.5	2943.7	2965.6	2939.2	2934.8	2926.0	2943.7	2943.7	2952.5	2939.2
17.5°	2895.1	2881.9	2881.9	2873.1	2868.6	2890.7	2899.6	2903.9	2908.4	2890.7
20°	2824.5	2820.1	2833.3	2820.1	2824.5	2829.0	2829.0	2820.1	2859.8	2811.3
22.5°	2749.4	2762.7	2745.1	2736.2	2745.1	2753.9	2753.9	2758.2	2749.4	2740.6
25°	2674.5	2683.3	2687.6	2661.2	2674.5	2661.2	2692.1	2696.4	2678.8	2687.6
27.5°	2608.2	2595.1	2590.6	2572.9	2581.7	2577.4	2581.7	2581.7	2608.2	2572.9
30°	2506.7	2493.5	2497.8	2484.7	2489.0	2484.7	2489.0	2489.0	2506.7	2502.3
32.5°	2409.6	2396.5	2400.8	2387.6	2387.6	2392.0	2383.1	2383.1	2396.5	2387.6
35°	2316.9	2286.1	2290.4	2286.1	2290.4	2272.8	2272.8	2268.4	2277.3	2255.1
37.5°	2184.5	2171.4	2166.9	2162.6	2166.9	2158.1	2166.9	2153.7	2166.9	2149.2
40°	2065.3	2056.5	2061.0	2034.5	2034.5	2038.9	2030.0	2025.7	2030.0	2047.7
42.5°	1946.3	1928.7	1919.8	1911.0	1915.3	1902.2	1897.7	1888.9	1897.7	1880.0
45°	1805.0	1805.0	1800.6	1778.5	1783.0	1783.0	1765.3	1747.7	1752.0	1752.0
47.5°	1677.1	1668.3	1663.8	1641.8	1637.3	1633.0	1615.2	1602.0	1602.0	1588.7
50°	1535.8	1526.9	1513.8	1491.6	1482.8	1456.4	1443.2	1425.6	1407.9	1407.9
52.5°	1403.4	1372.4	1354.8	1319.5	1306.4	1293.0	1257.7	1244.6	1231.3	1218.1
55°	1244.6	1218.1	1182.8	1143.0	1125.4	1103.2	1068.0	1041.5	1023.8	1028.3
57.5°	1090.1	1046.0	1010.7	957.8	935.6	922.3	887.0	851.7	834.1	834.1
60°	900.3	865.0	820.9	772.3	754.6	732.7	688.4	666.4	653.1	639.9
62.5°	719.4	692.9	653.1	591.3	578.2	556.0	525.2	498.8	485.5	485.5
65°	538.4	511.9	476.6	432.5	414.9	397.2	370.7	344.3	331.0	326.6
67.5°	379.6	348.6	317.8	282.5	269.2	260.4	233.9	216.3	207.4	202.9
70°	229.4	211.8	189.8	163.3	150.0	141.2	123.5	110.4	105.9	101.6
72.5°	119.2	105.9	88.2	70.6	61.8	52.9	44.1	35.3	31.0	31.0
75°	44.1	35.3	22.1	13.3	8.8	8.8	8.8	8.8	8.8	8.8
77.5°	8.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
80°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)