

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: P#

Luminaire Tested: **LD4C80D010 EX4C809050 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: P#  
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: LD4C80D010 EX4C809050 4LBCSSQMMS  
Description: 4 INCH 8000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

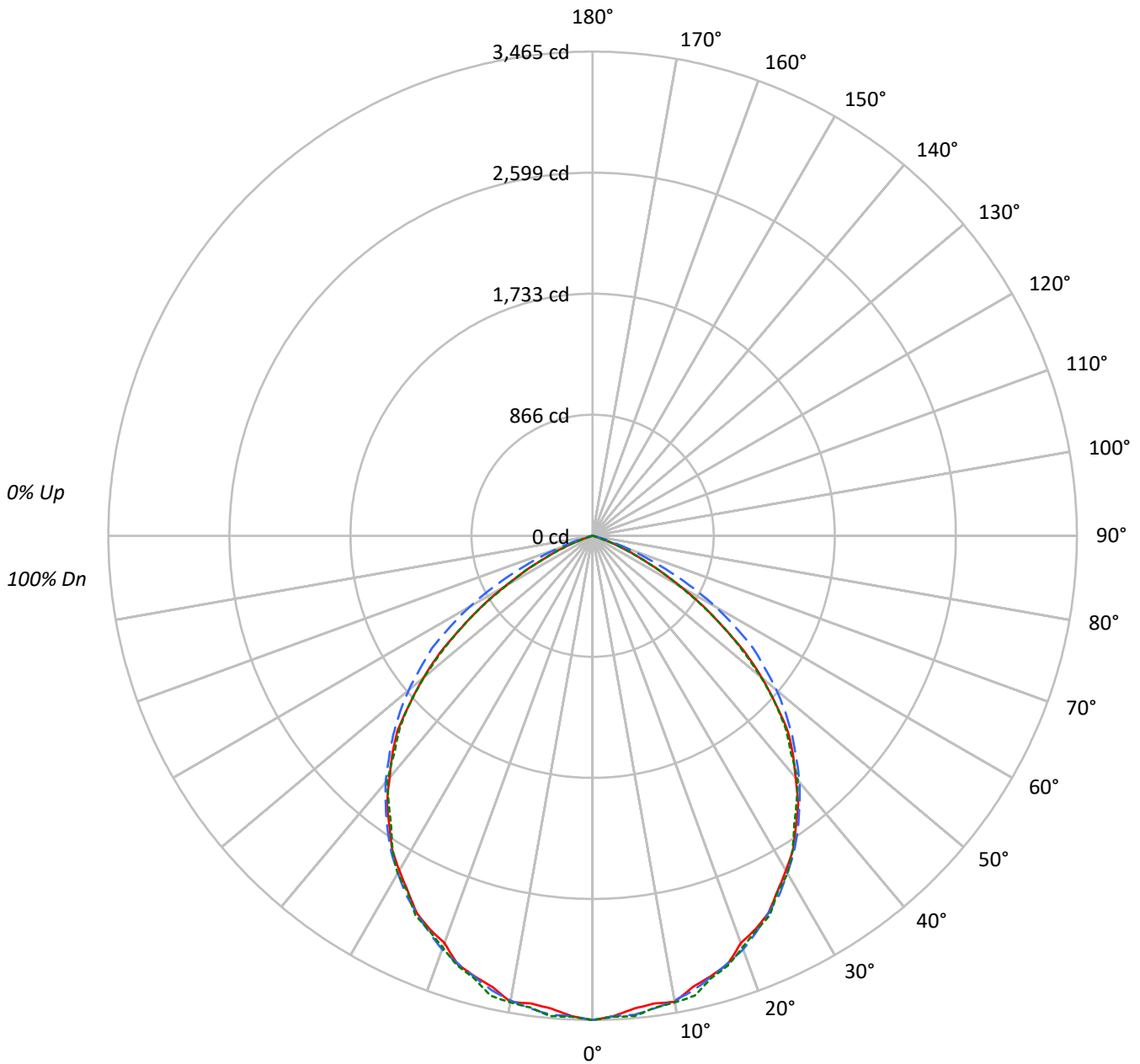
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7402.0 lumens  
Efficiency: N/A  
Efficacy: 82.7 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): 89.5  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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°	334344	334344	334344
5°	328947	333228	334178
10°	331791	330821	332261
15°	325980	326459	327438
20°	318394	323446	321947
25°	317017	317017	319114
30°	308187	310371	310939
35°	298565	301475	296245
40°	284563	290130	287649
45°	269309	275368	266635
50°	237174	257859	235703
55°	192094	235967	192935
60°	140565	195660	137728
65°	85412	139339	83174
70°	33318	75014	31964
75°	3653	20206	3653
80°	2778	2778	2778
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	327.1	4.4
10°-20°	925.5	12.5
20°-30°	1373.3	18.6
30°-40°	1591.2	21.5
40°-50°	1525.6	20.6
50°-60°	1121.7	15.2
60°-70°	484.5	6.5
70°-80°	52.3	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°	2625.9	35.5
0°-40°	4217.1	57.0
0°-60°	6864.5	92.7
0°-90°	7402.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7402.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3465	3465	3465	3465	3465	
5°	3396	3431	3440	3445	3450	324
15°	3263	3283	3268	3273	3278	920
25°	2978	2973	2978	2983	2997	1363
35°	2535	2550	2559	2554	2515	1585
45°	1974	1979	2018	1988	1954	1500
55°	1142	1260	1403	1255	1147	1028
65°	374	468	610	463	364	385
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°	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1
2.5°	3440.4	3479.8	3484.8	3460.1	3450.2	3435.6	3469.9	3445.4	3455.3	3445.4	3440.4
5°	3396.2	3440.4	3445.4	3445.4	3435.6	3430.6	3445.4	3440.4	3435.6	3425.7	3440.4
7.5°	3376.5	3401.0	3425.7	3396.2	3410.9	3406.1	3440.4	3425.7	3420.7	3420.7	3410.9
10°	3386.4	3381.4	3401.0	3371.5	3381.4	3371.5	3401.0	3401.0	3391.2	3381.4	3376.5
12.5°	3307.5	3346.8	3346.8	3342.0	3332.2	3317.3	3346.8	3366.7	3337.0	3337.0	3332.2
15°	3263.3	3273.1	3277.9	3277.9	3273.1	3283.0	3297.6	3277.9	3283.0	3258.3	3268.1
17.5°	3214.1	3194.4	3209.1	3199.2	3204.2	3214.1	3233.8	3233.8	3204.2	3199.2	3209.1
20°	3100.8	3159.9	3164.9	3135.4	3140.2	3140.2	3174.7	3145.2	3164.9	3140.2	3150.0
22.5°	3046.6	3086.0	3091.0	3051.6	3076.1	3046.6	3081.1	3036.8	3086.0	3051.6	3066.3
25°	2977.7	2972.9	2987.6	2967.9	2972.9	2972.9	2997.4	2977.7	2992.6	2972.9	2977.7
27.5°	2864.7	2904.0	2899.0	2879.3	2889.2	2884.3	2933.5	2879.3	2908.8	2884.3	2894.2
30°	2766.1	2800.6	2790.8	2771.1	2771.1	2756.2	2810.4	2795.6	2790.8	2790.8	2785.7
32.5°	2667.7	2672.7	2662.8	2667.7	2672.7	2653.0	2697.2	2677.5	2672.7	2677.5	2682.5
35°	2534.7	2534.7	2544.6	2529.9	2549.6	2549.6	2588.9	2564.2	2559.4	2544.6	2559.4
37.5°	2416.6	2402.0	2406.8	2406.8	2416.6	2426.5	2446.2	2436.3	2436.3	2421.7	2431.5
40°	2259.2	2249.4	2264.0	2264.0	2278.9	2278.9	2298.6	2288.7	2303.4	2303.4	2303.4
42.5°	2121.4	2121.4	2111.6	2126.3	2131.3	2126.3	2160.8	2155.8	2160.8	2151.0	2155.8
45°	1973.6	1973.6	1963.8	1959.0	1983.5	1978.7	2018.0	2003.2	2022.8	2013.0	2018.0
47.5°	1771.8	1796.5	1781.7	1796.5	1826.0	1831.1	1855.6	1845.7	1865.4	1850.7	1870.4
50°	1580.0	1580.0	1594.7	1614.4	1643.9	1648.9	1678.4	1698.1	1708.0	1712.8	1717.8
52.5°	1378.2	1373.2	1388.0	1412.6	1437.2	1456.9	1486.5	1516.0	1535.7	1565.2	1550.3
55°	1141.9	1151.7	1166.5	1196.1	1235.4	1259.9	1284.6	1324.0	1358.5	1373.2	1402.7
57.5°	940.0	930.2	940.0	979.4	1023.8	1043.4	1078.0	1117.3	1166.5	1196.1	1205.9
60°	728.4	733.4	743.2	777.8	812.1	841.6	856.5	920.3	964.7	994.2	1013.9
62.5°	536.6	546.4	556.3	585.8	620.1	644.8	669.3	723.5	762.9	792.4	812.1
65°	374.1	378.9	393.8	408.5	443.0	467.5	487.2	531.6	570.9	595.6	610.3
67.5°	231.3	236.2	246.0	265.9	290.4	310.1	329.7	359.3	393.8	418.3	423.3
70°	118.1	123.1	127.9	142.8	162.5	172.3	187.0	211.7	236.2	255.8	265.9
72.5°	39.4	39.4	44.4	54.2	64.1	73.9	78.7	103.4	123.1	132.9	137.8
75°	9.8	9.8	9.8	9.8	9.8	14.9	14.9	29.5	39.4	49.2	54.2
77.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	9.8	9.8
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°	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1	3465.1
2.5°	3465.1	3455.3	3450.2	3455.3	3455.3	3450.2	3465.1	3484.8	3509.3	3445.4
5°	3460.1	3450.2	3460.1	3430.6	3445.4	3435.6	3455.3	3450.2	3469.9	3450.2
7.5°	3445.4	3425.7	3430.6	3415.9	3435.6	3410.9	3425.7	3455.3	3435.6	3406.1
10°	3396.2	3386.4	3420.7	3371.5	3361.7	3381.4	3420.7	3391.2	3381.4	3391.2
12.5°	3346.8	3346.8	3361.7	3322.3	3327.1	3337.0	3356.7	3337.0	3346.8	3371.5
15°	3292.8	3283.0	3307.5	3277.9	3273.1	3263.3	3283.0	3283.0	3292.8	3277.9
17.5°	3228.7	3214.1	3214.1	3204.2	3199.2	3223.9	3233.8	3238.6	3243.6	3223.9
20°	3150.0	3145.2	3159.9	3145.2	3150.0	3155.0	3155.0	3145.2	3189.4	3135.4
22.5°	3066.3	3081.1	3061.5	3051.6	3061.5	3071.3	3071.3	3076.1	3066.3	3056.4
25°	2982.7	2992.6	2997.4	2967.9	2982.7	2967.9	3002.4	3007.2	2987.6	2997.4
27.5°	2908.8	2894.2	2889.2	2869.5	2879.3	2874.5	2879.3	2879.3	2908.8	2869.5
30°	2795.6	2780.9	2785.7	2771.1	2775.9	2771.1	2775.9	2775.9	2795.6	2790.8
32.5°	2687.3	2672.7	2677.5	2662.8	2662.8	2667.7	2657.8	2657.8	2672.7	2662.8
35°	2583.9	2549.6	2554.4	2549.6	2554.4	2534.7	2534.7	2529.9	2539.7	2515.0
37.5°	2436.3	2421.7	2416.6	2411.8	2416.6	2406.8	2416.6	2402.0	2416.6	2397.0
40°	2303.4	2293.5	2298.6	2269.0	2269.0	2273.9	2264.0	2259.2	2264.0	2283.7
42.5°	2170.6	2151.0	2141.1	2131.3	2136.1	2121.4	2116.4	2106.6	2116.4	2096.7
45°	2013.0	2013.0	2008.2	1983.5	1988.5	1988.5	1968.8	1949.1	1954.0	1954.0
47.5°	1870.4	1860.6	1855.6	1831.1	1826.0	1821.2	1801.3	1786.7	1786.7	1771.8
50°	1712.8	1702.9	1688.3	1663.6	1653.7	1624.2	1609.5	1589.9	1570.2	1570.2
52.5°	1565.2	1530.6	1511.0	1471.6	1456.9	1442.1	1402.7	1388.0	1373.2	1358.5
55°	1388.0	1358.5	1319.2	1274.8	1255.1	1230.4	1191.1	1161.5	1141.9	1146.9
57.5°	1215.7	1166.5	1127.2	1068.1	1043.4	1028.6	989.2	949.9	930.2	930.2
60°	1004.1	964.7	915.5	861.3	841.6	817.1	767.7	743.2	728.4	713.7
62.5°	802.3	772.7	728.4	659.5	644.8	620.1	585.8	556.3	541.4	541.4
65°	600.4	570.9	531.6	482.4	462.7	443.0	413.5	384.0	369.1	364.3
67.5°	423.3	388.8	354.4	315.1	300.2	290.4	260.9	241.2	231.3	226.3
70°	255.8	236.2	211.7	182.1	167.3	157.4	137.8	123.1	118.1	113.3
72.5°	132.9	118.1	98.4	78.7	68.9	59.0	49.2	39.4	34.5	34.5
75°	49.2	39.4	24.7	14.9	9.8	9.8	9.8	9.8	9.8	9.8
77.5°	9.8	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)