

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: P840139

Luminaire Tested: **LD4C20D010 EU4209027 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: P840139  
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: LD4C20D010 EU4209027 4LBCSSQMW  
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MW FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

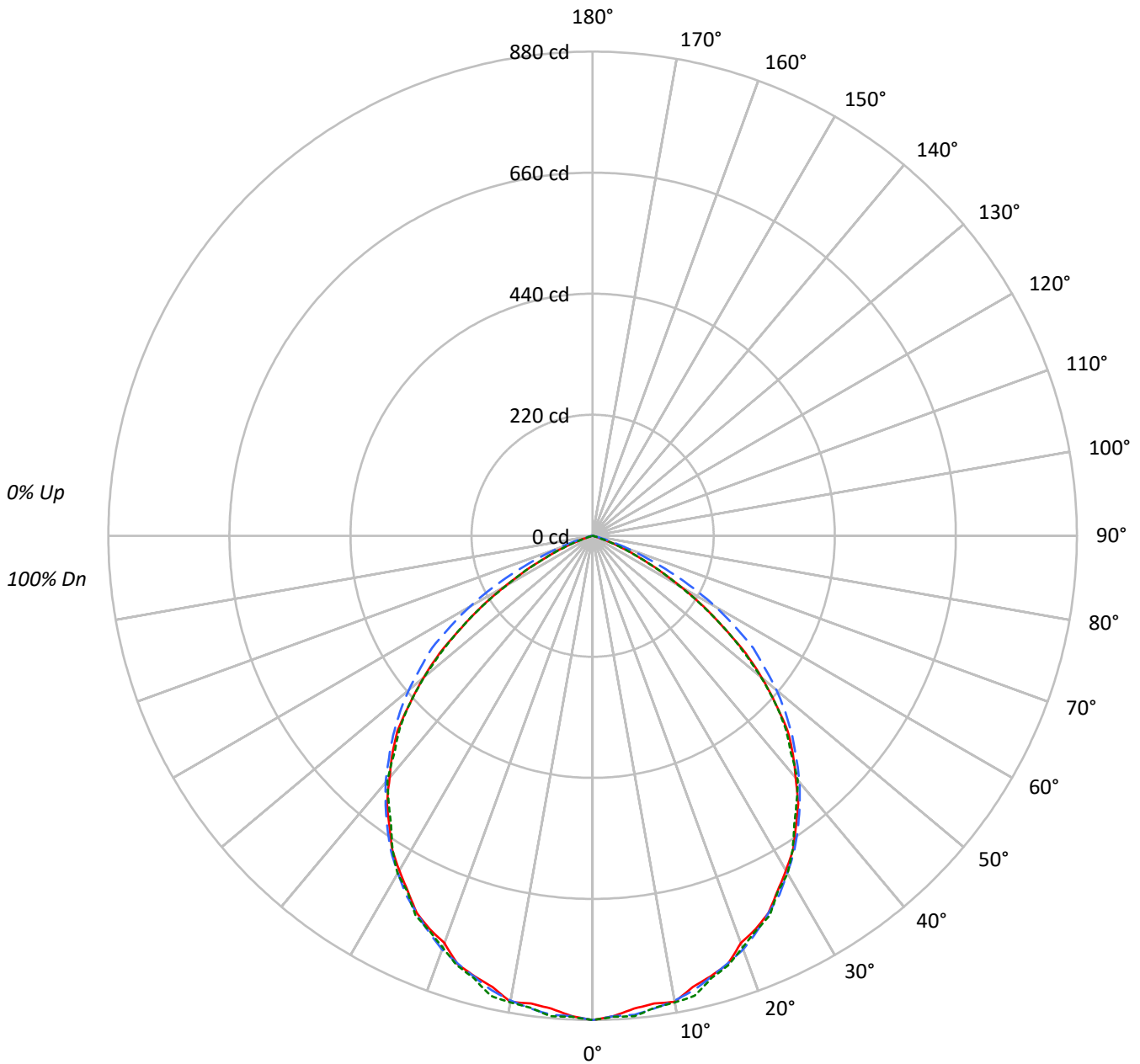
Lumens per Lamp: N/A  
Luminaire Lumens: 1880.0 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.8  
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	100	100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89	89	89	89
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77	77	77	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46	46	46	46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41	41	41	41
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37	37	37	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33	33	33	33
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31	31	31	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	84920	84920	84920
5°	83549	84634	84876
10°	84270	84025	84388
15°	82791	82921	83171
20°	80872	82155	81765
25°	80519	80519	81051
30°	78270	78827	78972
35°	75834	76576	75245
40°	72274	73685	73055
45°	68405	69934	67723
50°	60239	65493	59864
55°	48785	59938	49003
60°	35701	49692	34987
65°	21690	35388	21119
70°	8463	19043	8125
75°	932	5145	932
80°	722	722	722
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.1	4.4
10°-20°	235.1	12.5
20°-30°	348.8	18.6
30°-40°	404.2	21.5
40°-50°	387.5	20.6
50°-60°	284.9	15.2
60°-70°	123.1	6.5
70°-80°	13.3	0.7
80°-90°	0.2	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°	666.9	35.5
0°-40°	1071.1	57.0
0°-60°	1743.5	92.7
0°-90°	1880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1880.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	880	880	880	880	880	
5°	863	871	874	875	876	82
15°	829	834	830	831	833	234
25°	756	755	756	758	761	346
35°	644	648	650	649	639	403
45°	501	502	512	505	496	381
55°	290	320	356	319	291	261
65°	95	119	155	118	92	98
75°	2	4	14	2	2	8
85°	0	0	0	0	0	0
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°	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1
2.5°	873.8	883.8	885.1	878.8	876.3	872.6	881.3	875.1	877.6	875.1	873.8
5°	862.6	873.8	875.1	875.1	872.6	871.3	875.1	873.8	872.6	870.1	873.8
7.5°	857.6	863.8	870.1	862.6	866.3	865.1	873.8	870.1	868.8	868.8	866.3
10°	860.1	858.8	863.8	856.3	858.8	856.3	863.8	863.8	861.3	858.8	857.6
12.5°	840.0	850.0	850.0	848.8	846.3	842.5	850.0	855.1	847.5	847.5	846.3
15°	828.8	831.3	832.6	832.6	831.3	833.8	837.5	832.6	833.8	827.6	830.1
17.5°	816.3	811.3	815.1	812.6	813.8	816.3	821.3	821.3	813.8	812.6	815.1
20°	787.6	802.6	803.8	796.3	797.6	797.6	806.3	798.8	803.8	797.6	800.1
22.5°	773.8	783.8	785.1	775.1	781.3	773.8	782.6	771.3	783.8	775.1	778.8
25°	756.3	755.1	758.8	753.8	755.1	755.1	761.3	756.3	760.1	755.1	756.3
27.5°	727.6	737.6	736.3	731.3	733.8	732.6	745.1	731.3	738.8	732.6	735.1
30°	702.5	711.3	708.8	703.8	703.8	700.0	713.8	710.0	708.8	708.8	707.5
32.5°	677.5	678.8	676.3	677.5	678.8	673.8	685.0	680.0	678.8	680.0	681.3
35°	643.8	643.8	646.3	642.6	647.6	647.6	657.6	651.3	650.1	646.3	650.1
37.5°	613.8	610.1	611.3	611.3	613.8	616.3	621.3	618.8	618.8	615.1	617.6
40°	573.8	571.3	575.0	575.0	578.8	578.8	583.8	581.3	585.0	585.0	585.0
42.5°	538.8	538.8	536.3	540.0	541.3	540.0	548.8	547.5	548.8	546.3	547.5
45°	501.3	501.3	498.8	497.6	503.8	502.5	512.5	508.8	513.8	511.3	512.5
47.5°	450.0	456.3	452.5	456.3	463.8	465.1	471.3	468.8	473.8	470.1	475.1
50°	401.3	401.3	405.0	410.0	417.5	418.8	426.3	431.3	433.8	435.0	436.3
52.5°	350.0	348.8	352.5	358.8	365.0	370.0	377.5	385.0	390.0	397.5	393.8
55°	290.0	292.5	296.3	303.8	313.8	320.0	326.3	336.3	345.0	348.8	356.3
57.5°	238.8	236.3	238.8	248.8	260.0	265.0	273.8	283.8	296.3	303.8	306.3
60°	185.0	186.3	188.8	197.5	206.3	213.8	217.5	233.8	245.0	252.5	257.5
62.5°	136.3	138.8	141.3	148.8	157.5	163.8	170.0	183.8	193.8	201.3	206.3
65°	95.0	96.2	100.0	103.7	112.5	118.7	123.7	135.0	145.0	151.3	155.0
67.5°	58.8	60.0	62.5	67.5	73.8	78.8	83.8	91.2	100.0	106.2	107.5
70°	30.0	31.3	32.5	36.3	41.3	43.8	47.5	53.8	60.0	65.0	67.5
72.5°	10.0	10.0	11.3	13.8	16.3	18.8	20.0	26.3	31.3	33.8	35.0
75°	2.5	2.5	2.5	2.5	2.5	3.8	3.8	7.5	10.0	12.5	13.8
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1
2.5°	880.1	877.6	876.3	877.6	877.6	876.3	880.1	885.1	891.3	875.1
5°	878.8	876.3	878.8	871.3	875.1	872.6	877.6	876.3	881.3	876.3
7.5°	875.1	870.1	871.3	867.6	872.6	866.3	870.1	877.6	872.6	865.1
10°	862.6	860.1	868.8	856.3	853.8	858.8	868.8	861.3	858.8	861.3
12.5°	850.0	850.0	853.8	843.8	845.0	847.5	852.5	847.5	850.0	856.3
15°	836.3	833.8	840.0	832.6	831.3	828.8	833.8	833.8	836.3	832.6
17.5°	820.1	816.3	816.3	813.8	812.6	818.8	821.3	822.6	823.8	818.8
20°	800.1	798.8	802.6	798.8	800.1	801.3	801.3	798.8	810.1	796.3
22.5°	778.8	782.6	777.6	775.1	777.6	780.1	780.1	781.3	778.8	776.3
25°	757.6	760.1	761.3	753.8	757.6	753.8	762.6	763.8	758.8	761.3
27.5°	738.8	735.1	733.8	728.8	731.3	730.1	731.3	731.3	738.8	728.8
30°	710.0	706.3	707.5	703.8	705.0	703.8	705.0	705.0	710.0	708.8
32.5°	682.5	678.8	680.0	676.3	676.3	677.5	675.0	675.0	678.8	676.3
35°	656.3	647.6	648.8	647.6	648.8	643.8	643.8	642.6	645.1	638.8
37.5°	618.8	615.1	613.8	612.6	613.8	611.3	613.8	610.1	613.8	608.8
40°	585.0	582.5	583.8	576.3	576.3	577.5	575.0	573.8	575.0	580.0
42.5°	551.3	546.3	543.8	541.3	542.5	538.8	537.5	535.0	537.5	532.5
45°	511.3	511.3	510.0	503.8	505.0	505.0	500.1	495.1	496.3	496.3
47.5°	475.1	472.6	471.3	465.1	463.8	462.6	457.5	453.8	453.8	450.0
50°	435.0	432.5	428.8	422.5	420.0	412.5	408.8	403.8	398.8	398.8
52.5°	397.5	388.8	383.8	373.8	370.0	366.3	356.3	352.5	348.8	345.0
55°	352.5	345.0	335.0	323.8	318.8	312.5	302.5	295.0	290.0	291.3
57.5°	308.8	296.3	286.3	271.3	265.0	261.2	251.3	241.3	236.3	236.3
60°	255.0	245.0	232.5	218.8	213.8	207.5	195.0	188.8	185.0	181.3
62.5°	203.8	196.3	185.0	167.5	163.8	157.5	148.8	141.3	137.5	137.5
65°	152.5	145.0	135.0	122.5	117.5	112.5	105.0	97.5	93.7	92.5
67.5°	107.5	98.7	90.0	80.0	76.3	73.8	66.3	61.3	58.8	57.5
70°	65.0	60.0	53.8	46.3	42.5	40.0	35.0	31.3	30.0	28.8
72.5°	33.8	30.0	25.0	20.0	17.5	15.0	12.5	10.0	8.8	8.8
75°	12.5	10.0	6.3	3.8	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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)