

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: P840138

Luminaire Tested: **LD4C20D010 EU4209027 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: P840138
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 4LBCSSQMMS
Description: 4 INCH 2000 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

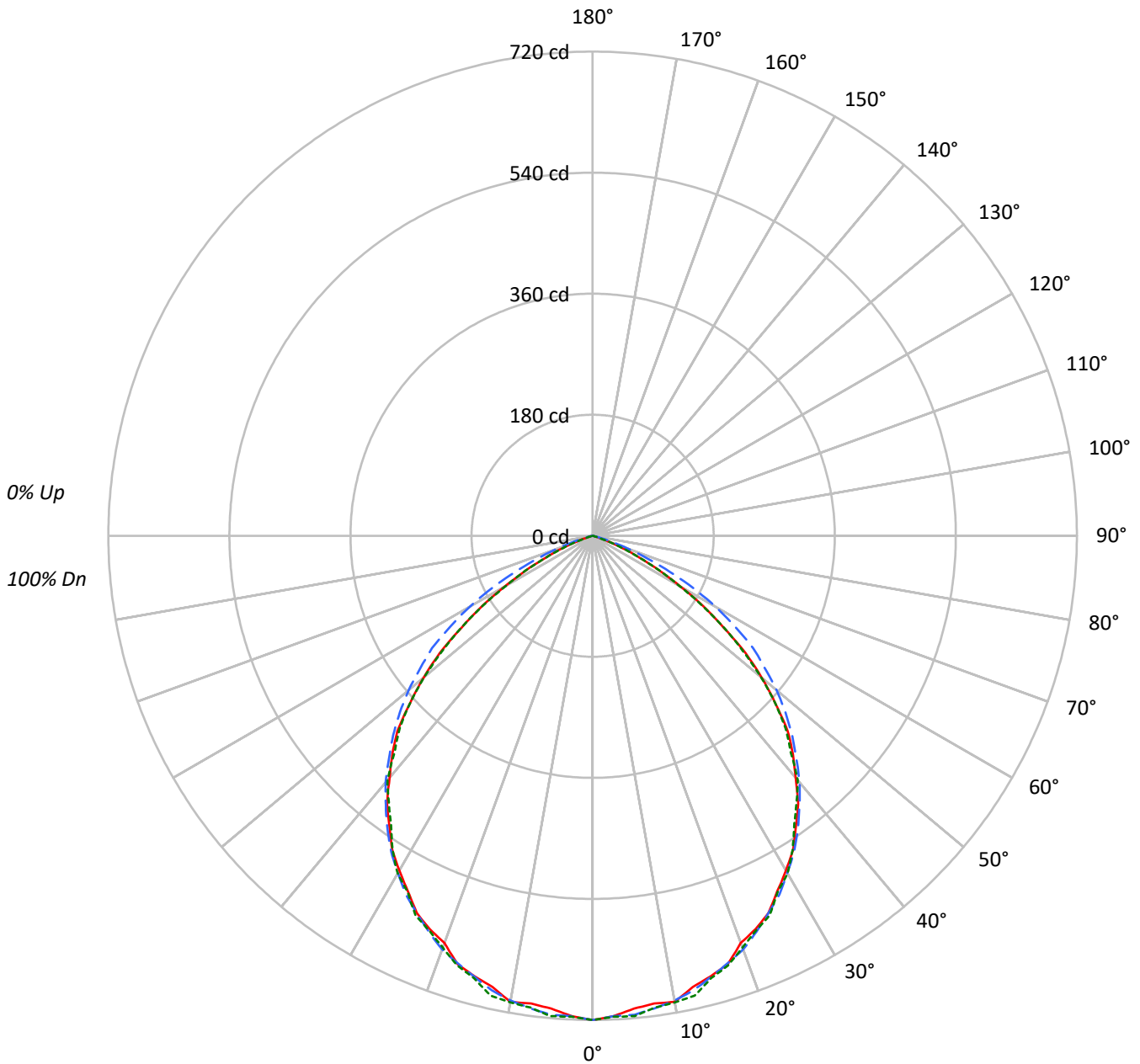
Lumens per Lamp: N/A
Luminaire Lumens: 1538.0 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
Input Current (A_{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

TEST NUMBER: P840138

CATALOG NUMBER: LD4C20D010 EU4209027 4LBCSSQMMS

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	34																			
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°	69472	69472	69472
5°	68352	69243	69437
10°	68937	68741	69035
15°	67737	67837	68037
20°	66158	67205	66897
25°	65869	65869	66306
30°	64031	64487	64610
35°	62041	62641	61558
40°	59124	60283	59767
45°	55961	57216	55401
50°	49281	53574	48981
55°	39919	49037	40088
60°	29198	40660	28619
65°	17740	28950	17283
70°	6912	15573	6630
75°	746	4213	746
80°	556	556	556
85°	0	0	0



TEST NUMBER: P840138

CATALOG NUMBER: LD4C20D010 EU4209027 4LBCSSQMMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	4.4
10°-20°	192.3	12.5
20°-30°	285.3	18.6
30°-40°	330.6	21.5
40°-50°	317.0	20.6
50°-60°	233.1	15.2
60°-70°	100.7	6.5
70°-80°	10.8	0.7
80°-90°	0.1	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°	545.6	35.5
0°-40°	876.2	57.0
0°-60°	1426.3	92.7
0°-90°	1538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	706	713	715	716	717	67
15°	678	682	679	680	681	191
25°	619	618	619	620	623	283
35°	527	530	532	531	523	329
45°	410	411	419	413	406	312
55°	237	262	292	261	238	214
65°	78	97	127	96	76	80
75°	2	3	11	2	2	6
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P840138

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0
2.5°	714.9	723.0	724.1	718.9	716.9	713.9	721.0	715.9	717.9	715.9	714.9
5°	705.7	714.9	715.9	715.9	713.9	712.8	715.9	714.9	713.9	711.8	714.9
7.5°	701.6	706.7	711.8	705.7	708.7	707.7	714.9	711.8	710.8	710.8	708.7
10°	703.6	702.6	706.7	700.5	702.6	700.5	706.7	706.7	704.6	702.6	701.6
12.5°	687.2	695.4	695.4	694.4	692.4	689.3	695.4	699.5	693.4	693.4	692.4
15°	678.1	680.1	681.1	681.1	680.1	682.1	685.2	681.1	682.1	677.0	679.1
17.5°	667.8	663.7	666.8	664.7	665.8	667.8	671.9	671.9	665.8	664.7	666.8
20°	644.3	656.6	657.6	651.5	652.5	652.5	659.6	653.5	657.6	652.5	654.5
22.5°	633.0	641.2	642.2	634.1	639.2	633.0	640.2	631.0	641.2	634.1	637.1
25°	618.7	617.7	620.8	616.7	617.7	617.7	622.8	618.7	621.8	617.7	618.7
27.5°	595.2	603.4	602.4	598.3	600.3	599.3	609.5	598.3	604.4	599.3	601.4
30°	574.7	581.9	579.9	575.8	575.8	572.7	584.0	580.9	579.9	579.9	578.8
32.5°	554.3	555.3	553.3	554.3	555.3	551.2	560.4	556.3	555.3	556.3	557.4
35°	526.7	526.7	528.7	525.7	529.8	529.8	537.9	532.8	531.8	528.7	531.8
37.5°	502.1	499.1	500.1	500.1	502.1	504.2	508.3	506.2	506.2	503.2	505.2
40°	469.4	467.4	470.4	470.4	473.5	473.5	477.6	475.6	478.6	478.6	478.6
42.5°	440.8	440.8	438.8	441.8	442.8	441.8	449.0	447.9	449.0	446.9	447.9
45°	410.1	410.1	408.0	407.0	412.1	411.1	419.3	416.2	420.3	418.3	419.3
47.5°	368.2	373.3	370.2	373.3	379.4	380.5	385.6	383.5	387.6	384.5	388.6
50°	328.3	328.3	331.3	335.4	341.6	342.6	348.7	352.8	354.9	355.9	356.9
52.5°	286.4	285.3	288.4	293.5	298.6	302.7	308.9	315.0	319.1	325.2	322.1
55°	237.3	239.3	242.4	248.5	256.7	261.8	266.9	275.1	282.3	285.3	291.5
57.5°	195.3	193.3	195.3	203.5	212.7	216.8	224.0	232.2	242.4	248.5	250.6
60°	151.3	152.4	154.4	161.6	168.7	174.9	178.0	191.2	200.5	206.6	210.7
62.5°	111.5	113.5	115.6	121.7	128.9	134.0	139.1	150.3	158.5	164.7	168.7
65°	77.7	78.7	81.8	84.9	92.0	97.1	101.2	110.4	118.6	123.8	126.8
67.5°	48.1	49.1	51.1	55.2	60.3	64.4	68.5	74.6	81.8	86.9	88.0
70°	24.5	25.6	26.6	29.7	33.8	35.8	38.8	44.0	49.1	53.2	55.2
72.5°	8.2	8.2	9.2	11.3	13.3	15.4	16.4	21.5	25.6	27.6	28.6
75°	2.0	2.0	2.0	2.0	2.0	3.1	3.1	6.1	8.2	10.2	11.3
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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



TEST NUMBER: P840138

CATALOG NUMBER: LD4C20D010 EU4209027 4LBCSSQMMS

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0
2.5°	720.0	717.9	716.9	717.9	717.9	716.9	720.0	724.1	729.2	715.9
5°	718.9	716.9	718.9	712.8	715.9	713.9	717.9	716.9	721.0	716.9
7.5°	715.9	711.8	712.8	709.8	713.9	708.7	711.8	717.9	713.9	707.7
10°	705.7	703.6	710.8	700.5	698.5	702.6	710.8	704.6	702.6	704.6
12.5°	695.4	695.4	698.5	690.3	691.3	693.4	697.5	693.4	695.4	700.5
15°	684.2	682.1	687.2	681.1	680.1	678.1	682.1	682.1	684.2	681.1
17.5°	670.9	667.8	667.8	665.8	664.7	669.9	671.9	672.9	674.0	669.9
20°	654.5	653.5	656.6	653.5	654.5	655.6	655.6	653.5	662.7	651.5
22.5°	637.1	640.2	636.1	634.1	636.1	638.2	638.2	639.2	637.1	635.1
25°	619.8	621.8	622.8	616.7	619.8	616.7	623.8	624.9	620.8	622.8
27.5°	604.4	601.4	600.3	596.2	598.3	597.3	598.3	598.3	604.4	596.2
30°	580.9	577.8	578.8	575.8	576.8	575.8	576.8	576.8	580.9	579.9
32.5°	558.4	555.3	556.3	553.3	553.3	554.3	552.2	552.2	555.3	553.3
35°	536.9	529.8	530.8	529.8	530.8	526.7	526.7	525.7	527.7	522.6
37.5°	506.2	503.2	502.1	501.1	502.1	500.1	502.1	499.1	502.1	498.0
40°	478.6	476.6	477.6	471.5	471.5	472.5	470.4	469.4	470.4	474.5
42.5°	451.0	446.9	444.9	442.8	443.8	440.8	439.8	437.7	439.8	435.7
45°	418.3	418.3	417.3	412.1	413.2	413.2	409.1	405.0	406.0	406.0
47.5°	388.6	386.6	385.6	380.5	379.4	378.4	374.3	371.2	371.2	368.2
50°	355.9	353.8	350.8	345.7	343.6	337.5	334.4	330.3	326.3	326.3
52.5°	325.2	318.0	313.9	305.8	302.7	299.6	291.5	288.4	285.3	282.3
55°	288.4	282.3	274.1	264.9	260.8	255.7	247.5	241.3	237.3	238.3
57.5°	252.6	242.4	234.2	221.9	216.8	213.7	205.5	197.4	193.3	193.3
60°	208.6	200.5	190.2	179.0	174.9	169.8	159.5	154.4	151.3	148.3
62.5°	166.7	160.6	151.3	137.0	134.0	128.9	121.7	115.6	112.5	112.5
65°	124.8	118.6	110.4	100.2	96.1	92.0	85.9	79.8	76.7	75.7
67.5°	88.0	80.8	73.6	65.5	62.4	60.3	54.2	50.1	48.1	47.0
70°	53.2	49.1	44.0	37.8	34.8	32.7	28.6	25.6	24.5	23.5
72.5°	27.6	24.5	20.4	16.4	14.3	12.3	10.2	8.2	7.2	7.2
75°	10.2	8.2	5.1	3.1	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)