

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: P840146

Luminaire Tested: **LD4C20D010 EU4209050 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: P840146
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 EU4209050 4LBCSSQMMS
Description: 4 INCH 2000 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

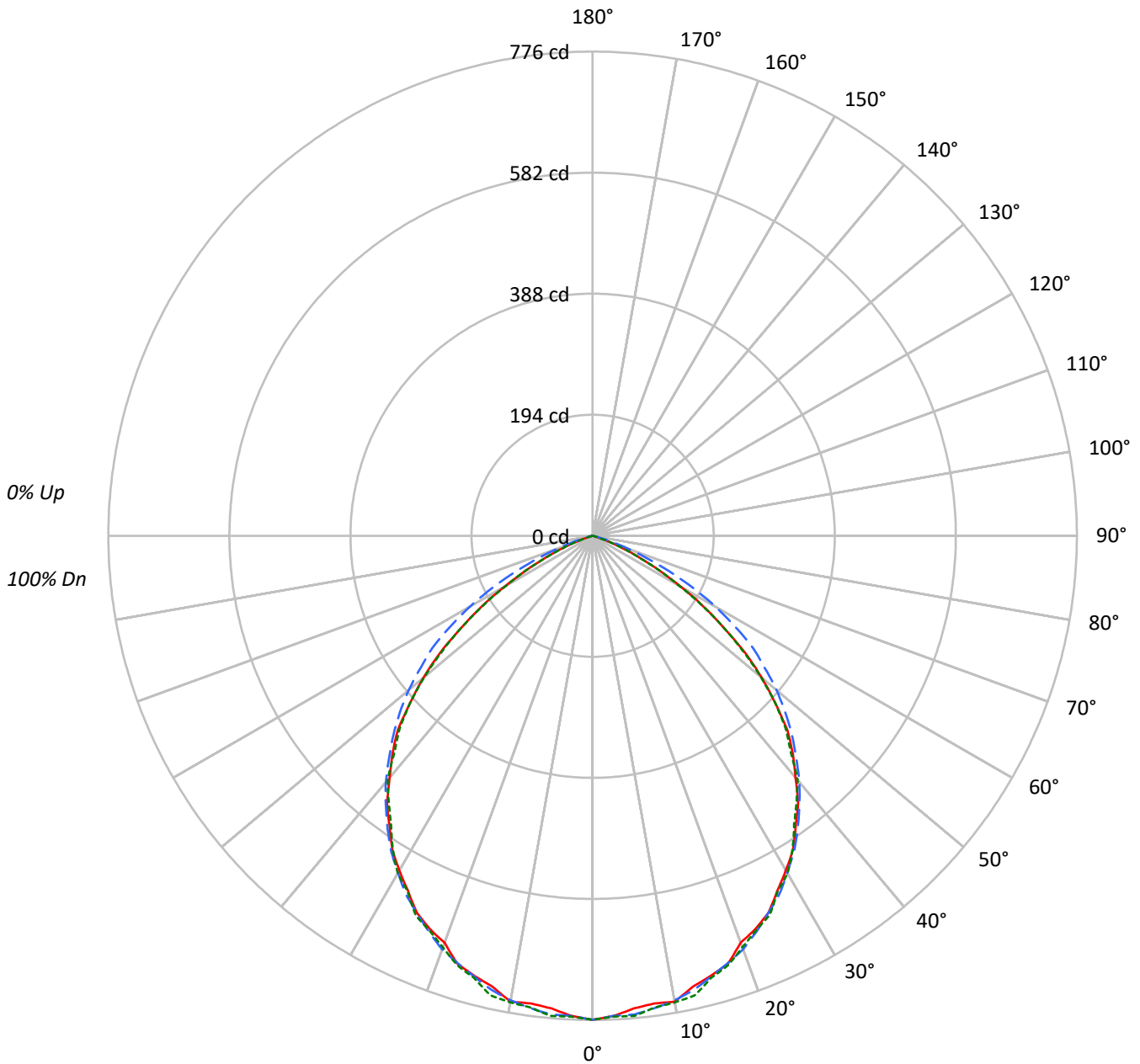
Lumens per Lamp: N/A
Luminaire Lumens: 1657.0 lumens
Efficiency: N/A
Efficacy: 76.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

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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								
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°	74846	74846	74846
5°	73641	74600	74813
10°	74277	74061	74384
15°	72972	73081	73301
20°	71271	72411	72072
25°	70969	70969	71437
30°	68989	69479	69601
35°	66835	67483	66316
40°	63697	64944	64389
45°	60286	61637	59686
50°	53094	57717	52764
55°	42998	52822	43183
60°	31475	43806	30838
65°	19133	31187	18607
70°	7448	16786	7166
75°	820	4511	820
80°	611	611	611
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	4.4
10°-20°	207.2	12.5
20°-30°	307.4	18.6
30°-40°	356.2	21.5
40°-50°	341.5	20.6
50°-60°	251.1	15.2
60°-70°	108.5	6.5
70°-80°	11.7	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°	587.8	35.5
0°-40°	944.0	57.0
0°-60°	1536.7	92.7
0°-90°	1657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	760	768	770	771	772	73
15°	730	735	732	733	734	206
25°	667	666	667	668	671	305
35°	567	571	573	572	563	355
45°	442	443	452	445	437	336
55°	256	282	314	281	257	230
65°	84	105	137	104	82	86
75°	2	3	12	2	2	7
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°	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7
2.5°	770.2	779.0	780.1	774.6	772.4	769.1	776.8	771.3	773.5	771.3	770.2
5°	760.3	770.2	771.3	771.3	769.1	768.0	771.3	770.2	769.1	766.9	770.2
7.5°	755.9	761.4	766.9	760.3	763.6	762.5	770.2	766.9	765.8	765.8	763.6
10°	758.1	756.9	761.4	754.7	756.9	754.7	761.4	761.4	759.2	756.9	755.9
12.5°	740.4	749.2	749.2	748.1	745.9	742.6	749.2	753.7	747.0	747.0	745.9
15°	730.5	732.7	733.8	733.8	732.7	734.9	738.2	733.8	734.9	729.4	731.6
17.5°	719.5	715.1	718.4	716.2	717.3	719.5	723.9	723.9	717.3	716.2	718.4
20°	694.1	707.4	708.5	701.9	703.0	703.0	710.7	704.1	708.5	703.0	705.2
22.5°	682.0	690.8	691.9	683.1	688.6	682.0	689.7	679.8	690.8	683.1	686.4
25°	666.6	665.5	668.8	664.4	665.5	665.5	671.0	666.6	669.9	665.5	666.6
27.5°	641.3	650.1	649.0	644.6	646.8	645.7	656.7	644.6	651.2	645.7	647.9
30°	619.2	626.9	624.7	620.3	620.3	617.0	629.1	625.8	624.7	624.7	623.6
32.5°	597.2	598.3	596.1	597.2	598.3	593.9	603.8	599.4	598.3	599.4	600.5
35°	567.4	567.4	569.6	566.3	570.7	570.7	579.6	574.0	572.9	569.6	572.9
37.5°	541.0	537.7	538.8	538.8	541.0	543.2	547.6	545.4	545.4	542.1	544.3
40°	505.7	503.5	506.8	506.8	510.1	510.1	514.6	512.3	515.6	515.6	515.6
42.5°	474.9	474.9	472.7	476.0	477.1	476.0	483.7	482.6	483.7	481.5	482.6
45°	441.8	441.8	439.6	438.5	444.0	442.9	451.7	448.4	452.8	450.6	451.7
47.5°	396.6	402.2	398.8	402.2	408.8	409.9	415.4	413.2	417.6	414.3	418.7
50°	353.7	353.7	357.0	361.4	368.0	369.1	375.7	380.1	382.3	383.4	384.5
52.5°	308.5	307.4	310.7	316.2	321.7	326.1	332.8	339.4	343.8	350.4	347.1
55°	255.6	257.8	261.1	267.7	276.6	282.0	287.6	296.4	304.1	307.4	314.0
57.5°	210.4	208.2	210.4	219.2	229.2	233.6	241.3	250.1	261.1	267.7	270.0
60°	163.1	164.2	166.4	174.1	181.8	188.4	191.7	206.0	216.0	222.6	227.0
62.5°	120.1	122.3	124.5	131.1	138.8	144.3	149.8	162.0	170.8	177.4	181.8
65°	83.8	84.8	88.2	91.4	99.2	104.7	109.1	119.0	127.8	133.3	136.6
67.5°	51.8	52.9	55.1	59.5	65.0	69.4	73.8	80.4	88.2	93.6	94.8
70°	26.4	27.6	28.6	32.0	36.4	38.6	41.9	47.4	52.9	57.3	59.5
72.5°	8.8	8.8	9.9	12.1	14.3	16.5	17.6	23.2	27.6	29.8	30.8
75°	2.2	2.2	2.2	2.2	2.2	3.3	3.3	6.6	8.8	11.0	12.1
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7	775.7
2.5°	775.7	773.5	772.4	773.5	773.5	772.4	775.7	780.1	785.6	771.3
5°	774.6	772.4	774.6	768.0	771.3	769.1	773.5	772.4	776.8	772.4
7.5°	771.3	766.9	768.0	764.7	769.1	763.6	766.9	773.5	769.1	762.5
10°	760.3	758.1	765.8	754.7	752.5	756.9	765.8	759.2	756.9	759.2
12.5°	749.2	749.2	752.5	743.7	744.8	747.0	751.4	747.0	749.2	754.7
15°	737.1	734.9	740.4	733.8	732.7	730.5	734.9	734.9	737.1	733.8
17.5°	722.8	719.5	719.5	717.3	716.2	721.7	723.9	725.0	726.1	721.7
20°	705.2	704.1	707.4	704.1	705.2	706.3	706.3	704.1	714.0	701.9
22.5°	686.4	689.7	685.3	683.1	685.3	687.5	687.5	688.6	686.4	684.2
25°	667.7	669.9	671.0	664.4	667.7	664.4	672.1	673.2	668.8	671.0
27.5°	651.2	647.9	646.8	642.4	644.6	643.5	644.6	644.6	651.2	642.4
30°	625.8	622.5	623.6	620.3	621.4	620.3	621.4	621.4	625.8	624.7
32.5°	601.6	598.3	599.4	596.1	596.1	597.2	595.0	595.0	598.3	596.1
35°	578.4	570.7	571.8	570.7	571.8	567.4	567.4	566.3	568.5	563.0
37.5°	545.4	542.1	541.0	539.9	541.0	538.8	541.0	537.7	541.0	536.6
40°	515.6	513.4	514.6	507.9	507.9	509.0	506.8	505.7	506.8	511.2
42.5°	485.9	481.5	479.3	477.1	478.2	474.9	473.8	471.6	473.8	469.4
45°	450.6	450.6	449.5	444.0	445.1	445.1	440.7	436.3	437.4	437.4
47.5°	418.7	416.5	415.4	409.9	408.8	407.7	403.2	400.0	400.0	396.6
50°	383.4	381.2	377.9	372.4	370.2	363.6	360.3	355.9	351.5	351.5
52.5°	350.4	342.6	338.2	329.4	326.1	322.8	314.0	310.7	307.4	304.1
55°	310.7	304.1	295.3	285.4	281.0	275.4	266.6	260.0	255.6	256.7
57.5°	272.2	261.1	252.3	239.1	233.6	230.3	221.4	212.6	208.2	208.2
60°	224.8	216.0	204.9	192.8	188.4	182.9	171.9	166.4	163.1	159.8
62.5°	179.6	173.0	163.1	147.6	144.3	138.8	131.1	124.5	121.2	121.2
65°	134.4	127.8	119.0	108.0	103.6	99.2	92.6	86.0	82.6	81.5
67.5°	94.8	87.0	79.3	70.5	67.2	65.0	58.4	54.0	51.8	50.7
70°	57.3	52.9	47.4	40.8	37.4	35.2	30.8	27.6	26.4	25.4
72.5°	29.8	26.4	22.0	17.6	15.4	13.2	11.0	8.8	7.7	7.7
75°	11.0	8.8	5.5	3.3	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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)