

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: P840142

Luminaire Tested: **LD4C20D010 EU4209035 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: P840142
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 EU4209035 4LBCSSQMMS
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

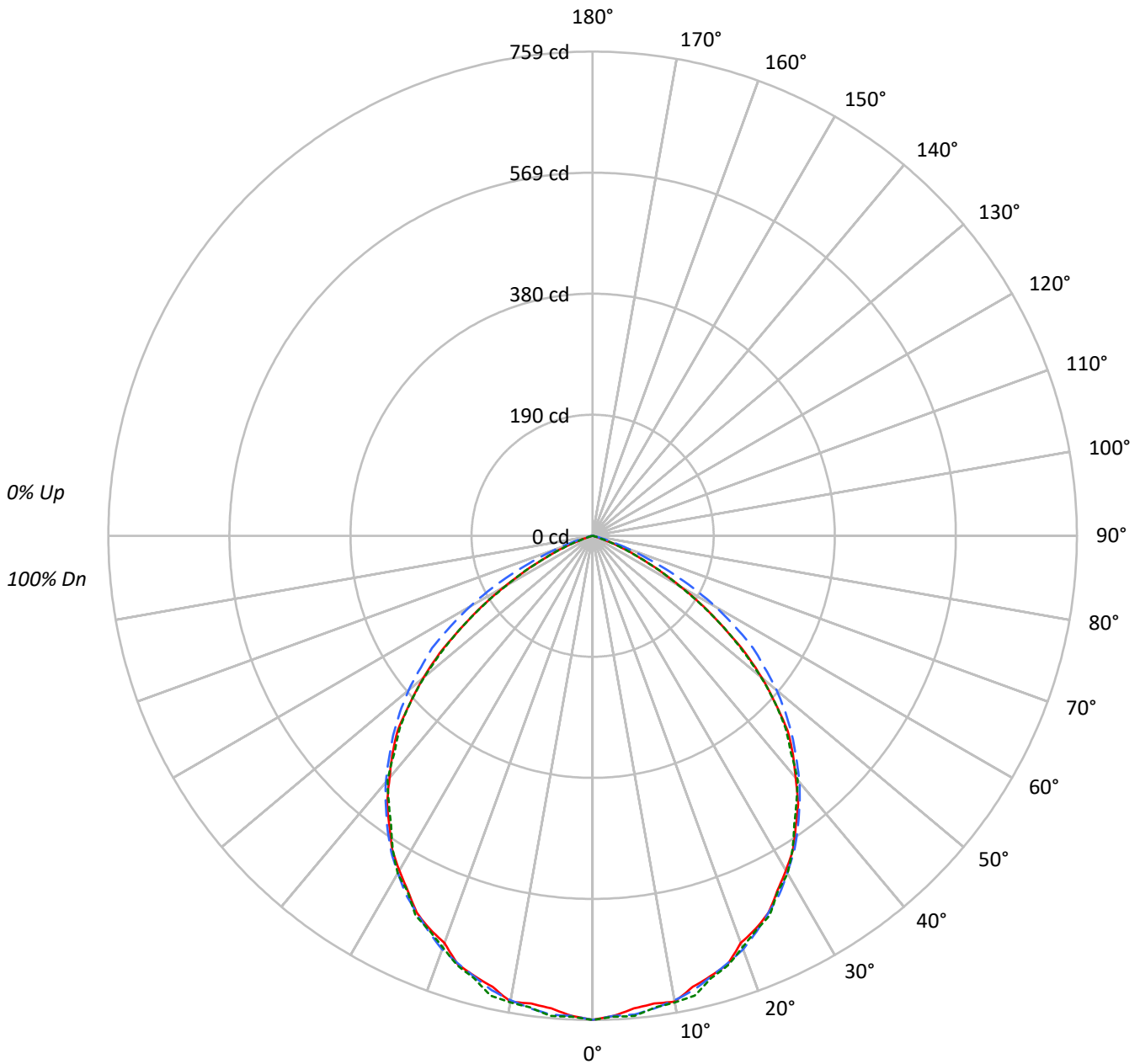
Lumens per Lamp: N/A
Luminaire Lumens: 1621.0 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
Input Current (Ain): 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				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°	73216	73216	73216
5°	72043	72972	73186
10°	72660	72444	72768
15°	71383	71493	71713
20°	69731	70830	70501
25°	69425	69425	69883
30°	67496	67975	68097
35°	65386	66022	64879
40°	62324	63533	62991
45°	58976	60300	58389
50°	51938	56471	51623
55°	42073	51678	42258
60°	30780	42841	30162
65°	18699	30503	18219
70°	7307	16419	6996
75°	820	4436	820
80°	611	611	611
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	4.4
10°-20°	202.7	12.5
20°-30°	300.7	18.6
30°-40°	348.5	21.5
40°-50°	334.1	20.6
50°-60°	245.7	15.2
60°-70°	106.1	6.5
70°-80°	11.5	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°	575.1	35.5
0°-40°	923.5	57.0
0°-60°	1503.3	92.7
0°-90°	1621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	744	751	753	754	756	71
15°	715	719	716	717	718	201
25°	652	651	652	653	656	299
35°	555	558	560	559	551	347
45°	432	433	442	436	428	329
55°	250	276	307	275	251	225
65°	82	102	134	101	80	84
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°	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8
2.5°	753.4	762.1	763.2	757.7	755.6	752.4	759.9	754.5	756.7	754.5	753.4
5°	743.8	753.4	754.5	754.5	752.4	751.3	754.5	753.4	752.4	750.2	753.4
7.5°	739.4	744.8	750.2	743.8	747.0	745.9	753.4	750.2	749.1	749.1	747.0
10°	741.6	740.5	744.8	738.3	740.5	738.3	744.8	744.8	742.7	740.5	739.4
12.5°	724.3	732.9	732.9	731.9	729.7	726.5	732.9	737.3	730.8	730.8	729.7
15°	714.6	716.8	717.9	717.9	716.8	719.0	722.2	717.9	719.0	713.5	715.7
17.5°	703.9	699.6	702.8	700.6	701.7	703.9	708.2	708.2	701.7	700.6	702.8
20°	679.1	692.0	693.1	686.6	687.7	687.7	695.2	688.8	693.1	687.7	689.8
22.5°	667.2	675.8	676.9	668.3	673.7	667.2	674.8	665.0	675.8	668.3	671.5
25°	652.1	651.1	654.3	650.0	651.1	651.1	656.4	652.1	655.4	651.1	652.1
27.5°	627.3	636.0	634.9	630.6	632.7	631.7	642.4	630.6	637.0	631.7	633.8
30°	605.8	613.3	611.2	606.9	606.9	603.6	615.5	612.2	611.2	611.2	610.1
32.5°	584.2	585.3	583.1	584.2	585.3	581.0	590.7	586.4	585.3	586.4	587.5
35°	555.1	555.1	557.2	554.0	558.3	558.3	567.0	561.6	560.5	557.2	560.5
37.5°	529.2	526.0	527.1	527.1	529.2	531.4	535.7	533.5	533.5	530.3	532.5
40°	494.8	492.6	495.8	495.8	499.1	499.1	503.4	501.2	504.4	504.4	504.4
42.5°	464.6	464.6	462.4	465.6	466.7	465.6	473.2	472.1	473.2	471.0	472.1
45°	432.2	432.2	430.1	429.0	434.4	433.3	441.9	438.7	443.0	440.8	441.9
47.5°	388.0	393.4	390.2	393.4	399.9	401.0	406.4	404.2	408.5	405.3	409.6
50°	346.0	346.0	349.2	353.5	360.0	361.1	367.6	371.9	374.0	375.1	376.2
52.5°	301.8	300.7	304.0	309.3	314.8	319.1	325.5	332.0	336.3	342.8	339.5
55°	250.1	252.2	255.5	261.9	270.6	275.9	281.3	289.9	297.5	300.7	307.2
57.5°	205.9	203.7	205.9	214.5	224.2	228.5	236.1	244.7	255.5	261.9	264.1
60°	159.5	160.6	162.8	170.3	177.8	184.3	187.6	201.6	211.3	217.7	222.0
62.5°	117.5	119.7	121.8	128.3	135.8	141.2	146.6	158.5	167.1	173.5	177.8
65°	81.9	83.0	86.2	89.5	97.0	102.4	106.7	116.4	125.0	130.4	133.6
67.5°	50.7	51.7	53.9	58.2	63.6	67.9	72.2	78.7	86.2	91.6	92.7
70°	25.9	27.0	28.0	31.3	35.6	37.7	40.9	46.4	51.7	56.0	58.2
72.5°	8.6	8.6	9.7	11.9	14.0	16.2	17.2	22.6	27.0	29.1	30.2
75°	2.2	2.2	2.2	2.2	2.2	3.3	3.3	6.5	8.6	10.8	11.9
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°	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8	758.8
2.5°	758.8	756.7	755.6	756.7	756.7	755.6	758.8	763.2	768.5	754.5
5°	757.7	755.6	757.7	751.3	754.5	752.4	756.7	755.6	759.9	755.6
7.5°	754.5	750.2	751.3	748.1	752.4	747.0	750.2	756.7	752.4	745.9
10°	743.8	741.6	749.1	738.3	736.2	740.5	749.1	742.7	740.5	742.7
12.5°	732.9	732.9	736.2	727.6	728.6	730.8	735.1	730.8	732.9	738.3
15°	721.1	719.0	724.3	717.9	716.8	714.6	719.0	719.0	721.1	717.9
17.5°	707.1	703.9	703.9	701.7	700.6	706.0	708.2	709.2	710.3	706.0
20°	689.8	688.8	692.0	688.8	689.8	690.9	690.9	688.8	698.5	686.6
22.5°	671.5	674.8	670.4	668.3	670.4	672.6	672.6	673.7	671.5	669.3
25°	653.2	655.4	656.4	650.0	653.2	650.0	657.5	658.6	654.3	656.4
27.5°	637.0	633.8	632.7	628.4	630.6	629.5	630.6	630.6	637.0	628.4
30°	612.2	609.0	610.1	606.9	607.9	606.9	607.9	607.9	612.2	611.2
32.5°	588.5	585.3	586.4	583.1	583.1	584.2	582.0	582.0	585.3	583.1
35°	565.9	558.3	559.4	558.3	559.4	555.1	555.1	554.0	556.2	550.8
37.5°	533.5	530.3	529.2	528.2	529.2	527.1	529.2	526.0	529.2	524.9
40°	504.4	502.3	503.4	496.9	496.9	498.0	495.8	494.8	495.8	500.1
42.5°	475.4	471.0	468.9	466.7	467.8	464.6	463.5	461.3	463.5	459.2
45°	440.8	440.8	439.8	434.4	435.5	435.5	431.2	426.9	427.9	427.9
47.5°	409.6	407.5	406.4	401.0	399.9	398.8	394.5	391.3	391.3	388.0
50°	375.1	372.9	369.7	364.3	362.2	355.7	352.5	348.2	343.9	343.9
52.5°	342.8	335.2	330.9	322.3	319.1	315.8	307.2	304.0	300.7	297.5
55°	304.0	297.5	288.9	279.2	274.9	269.5	260.8	254.4	250.1	251.2
57.5°	266.2	255.5	246.8	233.9	228.5	225.3	216.6	208.0	203.7	203.7
60°	219.9	211.3	200.5	188.6	184.3	178.9	168.1	162.8	159.5	156.3
62.5°	175.7	169.2	159.5	144.4	141.2	135.8	128.3	121.8	118.6	118.6
65°	131.5	125.0	116.4	105.6	101.3	97.0	90.6	84.1	80.8	79.8
67.5°	92.7	85.1	77.6	69.0	65.7	63.6	57.1	52.8	50.7	49.6
70°	56.0	51.7	46.4	39.9	36.6	34.5	30.2	27.0	25.9	24.8
72.5°	29.1	25.9	21.5	17.2	15.1	12.9	10.8	8.6	7.6	7.6
75°	10.8	8.6	5.4	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)