

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: P840143

Luminaire Tested: **LD4C20D010 EU4209035 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: P840143
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 4LBCSSQMW
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

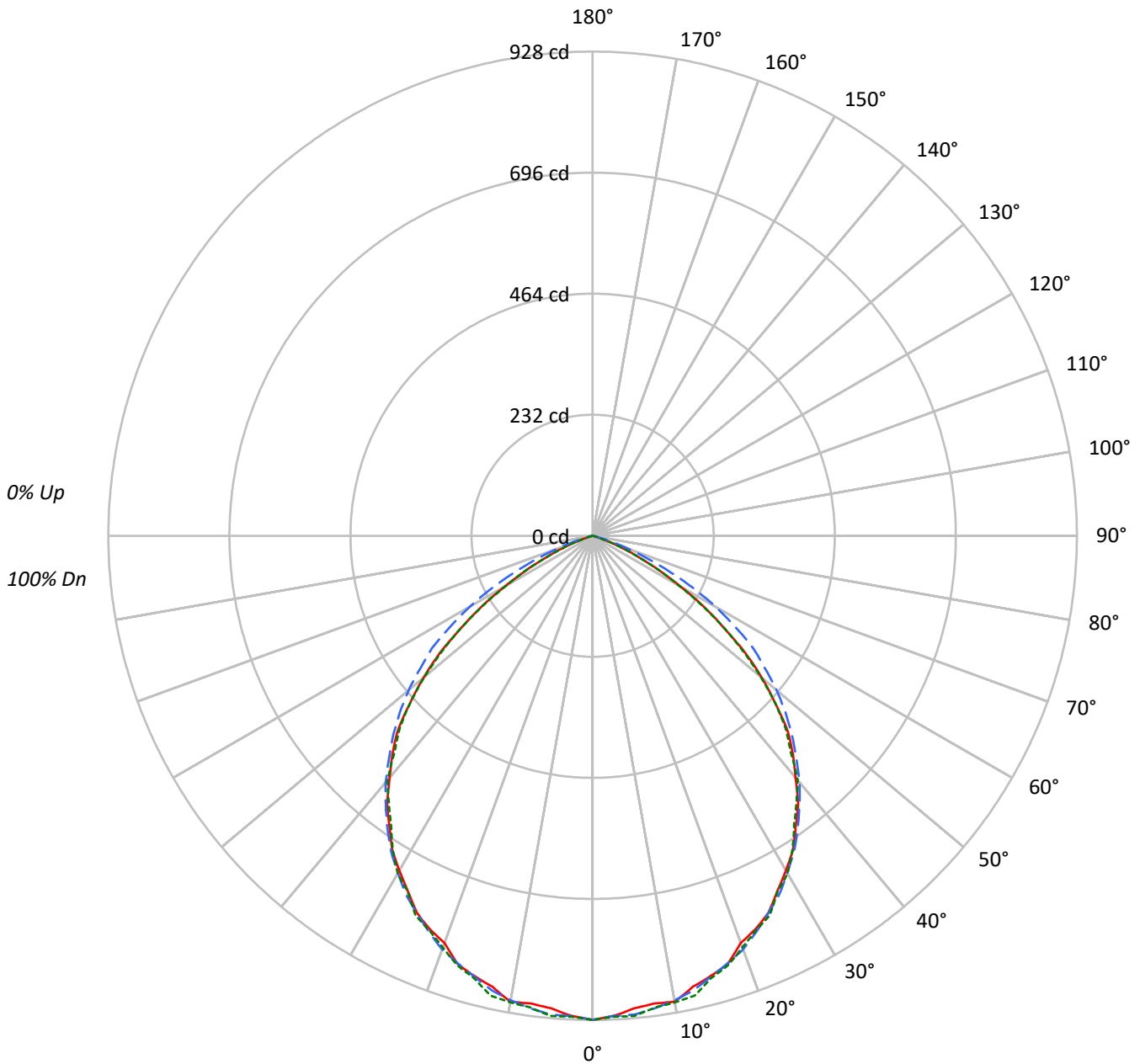
Lumens per Lamp: N/A
Luminaire Lumens: 1982.0 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	89522	89522	89522
5°	88082	89225	89487
10°	88846	88581	88963
15°	87286	87416	87676
20°	85256	86612	86201
25°	84884	84884	85448
30°	82526	83105	83261
35°	79945	80722	79321
40°	76192	77690	77023
45°	72117	73741	71394
50°	63512	69051	63106
55°	51426	63185	51661
60°	37631	52393	36878
65°	22877	37306	22260
70°	8915	20087	8548
75°	969	5406	969
80°	722	722	722
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	4.4
10°-20°	247.8	12.5
20°-30°	367.7	18.6
30°-40°	426.1	21.5
40°-50°	408.5	20.6
50°-60°	300.4	15.2
60°-70°	129.7	6.5
70°-80°	14.0	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°	703.1	35.5
0°-40°	1129.2	57.0
0°-60°	1838.1	92.7
0°-90°	1982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	928	928	928	928	928	
5°	909	919	921	923	924	87
15°	874	879	875	876	878	246
25°	797	796	797	799	803	365
35°	679	683	685	684	673	424
45°	528	530	540	532	523	402
55°	306	337	376	336	307	275
65°	100	125	163	124	98	103
75°	3	4	14	3	3	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°	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8
2.5°	921.2	931.8	933.1	926.5	923.9	919.9	929.1	922.6	925.2	922.6	921.2
5°	909.4	921.2	922.6	922.6	919.9	918.6	922.6	921.2	919.9	917.3	921.2
7.5°	904.1	910.7	917.3	909.4	913.3	912.0	921.2	917.3	916.0	916.0	913.3
10°	906.8	905.4	910.7	902.8	905.4	902.8	910.7	910.7	908.0	905.4	904.1
12.5°	885.6	896.2	896.2	894.9	892.2	888.3	896.2	901.5	893.5	893.5	892.2
15°	873.8	876.4	877.7	877.7	876.4	879.1	883.0	877.7	879.1	872.5	875.1
17.5°	860.6	855.4	859.3	856.6	858.0	860.6	865.9	865.9	858.0	856.6	859.3
20°	830.3	846.1	847.4	839.5	840.8	840.8	850.1	842.2	847.4	840.8	843.5
22.5°	815.8	826.3	827.7	817.1	823.7	815.8	825.0	813.1	826.3	817.1	821.0
25°	797.3	796.0	800.0	794.7	796.0	796.0	802.6	797.3	801.3	796.0	797.3
27.5°	767.1	777.6	776.3	771.0	773.6	772.3	785.5	771.0	778.9	772.3	775.0
30°	740.7	749.9	747.3	742.0	742.0	738.0	752.5	748.6	747.3	747.3	745.9
32.5°	714.3	715.7	713.0	714.3	715.7	710.4	722.2	716.9	715.7	716.9	718.3
35°	678.7	678.7	681.3	677.4	682.7	682.7	693.2	686.6	685.3	681.3	685.3
37.5°	647.1	643.2	644.5	644.5	647.1	649.7	655.0	652.4	652.4	648.4	651.1
40°	604.9	602.3	606.2	606.2	610.2	610.2	615.5	612.8	616.8	616.8	616.8
42.5°	568.0	568.0	565.4	569.3	570.7	569.3	578.6	577.2	578.6	576.0	577.2
45°	528.5	528.5	525.8	524.5	531.1	529.8	540.4	536.4	541.6	539.0	540.4
47.5°	474.4	481.0	477.1	481.0	488.9	490.3	496.9	494.2	499.5	495.6	500.8
50°	423.1	423.1	427.0	432.3	440.2	441.5	449.4	454.7	457.3	458.6	460.0
52.5°	369.0	367.7	371.7	378.2	384.8	390.1	398.0	405.9	411.2	419.1	415.1
55°	305.7	308.4	312.4	320.3	330.8	337.4	344.0	354.5	363.8	367.7	375.6
57.5°	251.7	249.1	251.7	262.2	274.1	279.4	288.6	299.2	312.4	320.3	322.9
60°	195.0	196.4	199.0	208.3	217.5	225.4	229.3	246.4	258.3	266.2	271.5
62.5°	143.7	146.3	148.9	156.9	166.0	172.7	179.2	193.7	204.3	212.2	217.5
65°	100.2	101.5	105.4	109.4	118.6	125.2	130.5	142.3	152.9	159.5	163.4
67.5°	61.9	63.2	65.9	71.2	77.8	83.0	88.3	96.2	105.4	112.0	113.4
70°	31.6	33.0	34.3	38.2	43.5	46.1	50.1	56.7	63.2	68.5	71.2
72.5°	10.5	10.5	11.9	14.5	17.2	19.8	21.1	27.7	33.0	35.6	36.9
75°	2.6	2.6	2.6	2.6	2.6	4.0	4.0	7.9	10.5	13.2	14.5
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.6	2.6
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°	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8	927.8
2.5°	927.8	925.2	923.9	925.2	925.2	923.9	927.8	933.1	939.7	922.6
5°	926.5	923.9	926.5	918.6	922.6	919.9	925.2	923.9	929.1	923.9
7.5°	922.6	917.3	918.6	914.7	919.9	913.3	917.3	925.2	919.9	912.0
10°	909.4	906.8	916.0	902.8	900.1	905.4	916.0	908.0	905.4	908.0
12.5°	896.2	896.2	900.1	889.6	890.9	893.5	898.8	893.5	896.2	902.8
15°	881.7	879.1	885.6	877.7	876.4	873.8	879.1	879.1	881.7	877.7
17.5°	864.5	860.6	860.6	858.0	856.6	863.3	865.9	867.2	868.5	863.3
20°	843.5	842.2	846.1	842.2	843.5	844.8	844.8	842.2	854.0	839.5
22.5°	821.0	825.0	819.8	817.1	819.8	822.4	822.4	823.7	821.0	818.4
25°	798.7	801.3	802.6	794.7	798.7	794.7	803.9	805.2	800.0	802.6
27.5°	778.9	775.0	773.6	768.3	771.0	769.7	771.0	771.0	778.9	768.3
30°	748.6	744.6	745.9	742.0	743.3	742.0	743.3	743.3	748.6	747.3
32.5°	719.6	715.7	716.9	713.0	713.0	714.3	711.7	711.7	715.7	713.0
35°	691.9	682.7	684.0	682.7	684.0	678.7	678.7	677.4	680.1	673.4
37.5°	652.4	648.4	647.1	645.8	647.1	644.5	647.1	643.2	647.1	641.8
40°	616.8	614.1	615.5	607.6	607.6	608.9	606.2	604.9	606.2	611.5
42.5°	581.2	576.0	573.3	570.7	572.0	568.0	566.7	564.1	566.7	561.4
45°	539.0	539.0	537.7	531.1	532.5	532.5	527.2	521.9	523.2	523.2
47.5°	500.8	498.2	496.9	490.3	488.9	487.7	482.3	478.4	478.4	474.4
50°	458.6	456.0	452.1	445.4	442.8	434.9	431.0	425.7	420.4	420.4
52.5°	419.1	409.9	404.6	394.0	390.1	386.1	375.6	371.7	367.7	363.8
55°	371.7	363.8	353.2	341.3	336.1	329.5	318.9	311.0	305.7	307.1
57.5°	325.5	312.4	301.8	286.0	279.4	275.4	264.9	254.3	249.1	249.1
60°	268.9	258.3	245.1	230.6	225.4	218.8	205.6	199.0	195.0	191.1
62.5°	214.8	206.9	195.0	176.6	172.7	166.0	156.9	148.9	145.0	145.0
65°	160.8	152.9	142.3	129.2	123.9	118.6	110.7	102.8	98.8	97.5
67.5°	113.4	104.1	94.9	84.4	80.4	77.8	69.8	64.6	61.9	60.6
70°	68.5	63.2	56.7	48.8	44.8	42.2	36.9	33.0	31.6	30.3
72.5°	35.6	31.6	26.3	21.1	18.4	15.8	13.2	10.5	9.2	9.2
75°	13.2	10.5	6.6	4.0	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	2.6	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)