

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: P840128

Luminaire Tested: **LD4C15D010 EU4159027 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: P840128
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: LD4C15D010 EU4159027 4LBCSSQMMS
Description: 4 INCH 1500 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

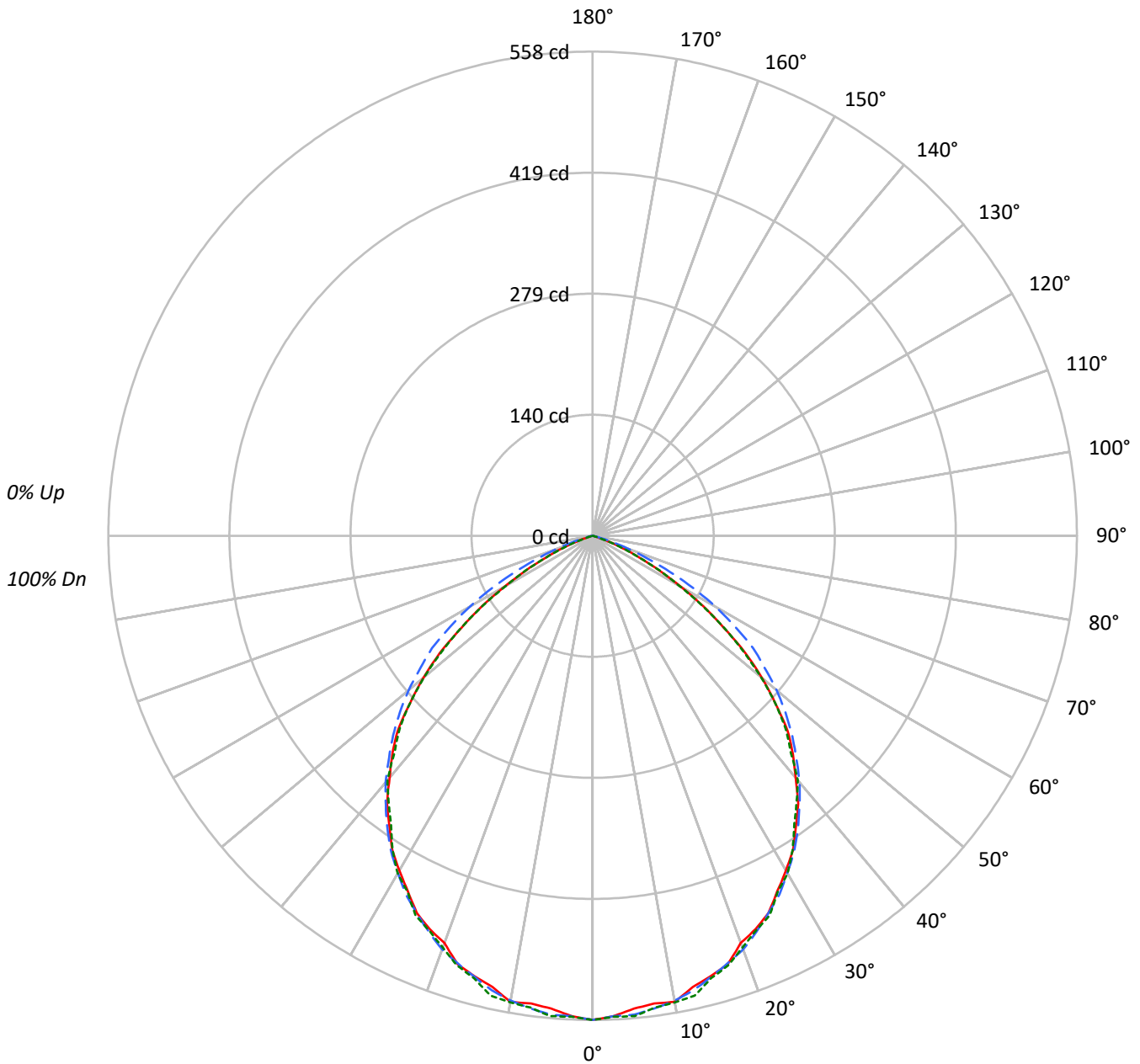
Lumens per Lamp: N/A
Luminaire Lumens: 1192.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 15.8
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			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°	53841	53841	53841
5°	52971	53659	53814
10°	53427	53280	53505
15°	52494	52574	52733
20°	51269	52090	51844
25°	51049	51049	51390
30°	49625	49981	50070
35°	48082	48554	47705
40°	45823	46718	46327
45°	43366	44348	42943
50°	38188	41520	37963
55°	30936	38002	31071
60°	22636	31513	22173
65°	13744	22443	13402
70°	5360	12075	5134
75°	596	3243	596
80°	445	445	445
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.7	4.4
10°-20°	149.0	12.5
20°-30°	221.1	18.6
30°-40°	256.3	21.5
40°-50°	245.7	20.6
50°-60°	180.6	15.2
60°-70°	78.0	6.5
70°-80°	8.4	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°	422.9	35.5
0°-40°	679.1	57.0
0°-60°	1105.5	92.7
0°-90°	1192.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1192.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	547	552	554	555	556	52
15°	526	529	526	527	528	148
25°	480	479	480	480	483	220
35°	408	411	412	411	405	255
45°	318	319	325	320	315	242
55°	184	203	226	202	185	165
65°	60	75	98	74	59	62
75°	2	2	9	2	2	5
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°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	554.0	560.4	561.2	557.2	555.6	553.3	558.8	554.8	556.4	554.8	554.0
5°	546.9	554.0	554.8	554.8	553.3	552.5	554.8	554.0	553.3	551.7	554.0
7.5°	543.8	547.7	551.7	546.9	549.3	548.5	554.0	551.7	550.9	550.9	549.3
10°	545.3	544.5	547.7	542.9	544.5	542.9	547.7	547.7	546.1	544.5	543.8
12.5°	532.6	539.0	539.0	538.2	536.6	534.2	539.0	542.2	537.4	537.4	536.6
15°	525.5	527.1	527.9	527.9	527.1	528.7	531.0	527.9	528.7	524.7	526.3
17.5°	517.6	514.4	516.8	515.2	516.0	517.6	520.8	520.8	516.0	515.2	516.8
20°	499.3	508.9	509.7	504.9	505.7	505.7	511.2	506.5	509.7	505.7	507.3
22.5°	490.6	497.0	497.8	491.4	495.4	490.6	496.2	489.0	497.0	491.4	493.8
25°	479.5	478.7	481.1	477.9	478.7	478.7	482.7	479.5	481.9	478.7	479.5
27.5°	461.3	467.7	466.8	463.7	465.3	464.5	472.4	463.7	468.4	464.5	466.1
30°	445.4	451.0	449.4	446.2	446.2	443.9	452.6	450.2	449.4	449.4	448.6
32.5°	429.6	430.4	428.8	429.6	430.4	427.2	434.3	431.2	430.4	431.2	432.0
35°	408.2	408.2	409.8	407.4	410.6	410.6	416.9	412.9	412.2	409.8	412.2
37.5°	389.2	386.8	387.6	387.6	389.2	390.8	393.9	392.3	392.3	390.0	391.6
40°	363.8	362.2	364.6	364.6	367.0	367.0	370.2	368.6	370.9	370.9	370.9
42.5°	341.6	341.6	340.0	342.4	343.2	342.4	348.0	347.2	348.0	346.4	347.2
45°	317.8	317.8	316.2	315.5	319.4	318.6	325.0	322.6	325.8	324.2	325.0
47.5°	285.3	289.3	286.9	289.3	294.1	294.9	298.8	297.2	300.4	298.0	301.2
50°	254.4	254.4	256.8	260.0	264.7	265.5	270.3	273.5	275.0	275.8	276.6
52.5°	221.9	221.1	223.5	227.5	231.5	234.6	239.4	244.1	247.3	252.1	249.7
55°	183.9	185.5	187.9	192.6	199.0	202.9	206.9	213.2	218.8	221.1	225.9
57.5°	151.4	149.8	151.4	157.7	164.9	168.0	173.6	179.9	187.9	192.6	194.2
60°	117.3	118.1	119.7	125.2	130.8	135.5	137.9	148.2	155.4	160.1	163.3
62.5°	86.4	88.0	89.6	94.3	99.9	103.8	107.8	116.5	122.9	127.6	130.8
65°	60.2	61.0	63.4	65.8	71.3	75.3	78.5	85.6	91.9	95.9	98.3
67.5°	37.3	38.0	39.6	42.8	46.8	49.9	53.1	57.9	63.4	67.4	68.2
70°	19.0	19.8	20.6	23.0	26.2	27.7	30.1	34.1	38.0	41.2	42.8
72.5°	6.3	6.3	7.1	8.7	10.3	11.9	12.7	16.7	19.8	21.4	22.2
75°	1.6	1.6	1.6	1.6	1.6	2.4	2.4	4.8	6.3	7.9	8.7
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	558.0	556.4	555.6	556.4	556.4	555.6	558.0	561.2	565.1	554.8
5°	557.2	555.6	557.2	552.5	554.8	553.3	556.4	555.6	558.8	555.6
7.5°	554.8	551.7	552.5	550.1	553.3	549.3	551.7	556.4	553.3	548.5
10°	546.9	545.3	550.9	542.9	541.4	544.5	550.9	546.1	544.5	546.1
12.5°	539.0	539.0	541.4	535.0	535.8	537.4	540.5	537.4	539.0	542.9
15°	530.3	528.7	532.6	527.9	527.1	525.5	528.7	528.7	530.3	527.9
17.5°	519.9	517.6	517.6	516.0	515.2	519.2	520.8	521.5	522.3	519.2
20°	507.3	506.5	508.9	506.5	507.3	508.1	508.1	506.5	513.6	504.9
22.5°	493.8	496.2	493.0	491.4	493.0	494.6	494.6	495.4	493.8	492.2
25°	480.3	481.9	482.7	477.9	480.3	477.9	483.5	484.3	481.1	482.7
27.5°	468.4	466.1	465.3	462.1	463.7	462.9	463.7	463.7	468.4	462.1
30°	450.2	447.8	448.6	446.2	447.0	446.2	447.0	447.0	450.2	449.4
32.5°	432.8	430.4	431.2	428.8	428.8	429.6	428.0	428.0	430.4	428.8
35°	416.1	410.6	411.4	410.6	411.4	408.2	408.2	407.4	409.0	405.0
37.5°	392.3	390.0	389.2	388.4	389.2	387.6	389.2	386.8	389.2	386.0
40°	370.9	369.3	370.2	365.4	365.4	366.2	364.6	363.8	364.6	367.8
42.5°	349.6	346.4	344.8	343.2	344.0	341.6	340.8	339.2	340.8	337.7
45°	324.2	324.2	323.4	319.4	320.2	320.2	317.1	313.9	314.7	314.7
47.5°	301.2	299.6	298.8	294.9	294.1	293.3	290.1	287.7	287.7	285.3
50°	275.8	274.2	271.9	267.9	266.3	261.6	259.2	256.0	252.9	252.9
52.5°	252.1	246.5	243.3	237.0	234.6	232.2	225.9	223.5	221.1	218.8
55°	223.5	218.8	212.4	205.3	202.1	198.1	191.8	187.1	183.9	184.7
57.5°	195.8	187.9	181.5	172.0	168.0	165.6	159.3	153.0	149.8	149.8
60°	161.7	155.4	147.4	138.7	135.5	131.6	123.6	119.7	117.3	114.9
62.5°	129.2	124.4	117.3	106.2	103.8	99.9	94.3	89.6	87.2	87.2
65°	96.7	91.9	85.6	77.7	74.5	71.3	66.6	61.8	59.4	58.7
67.5°	68.2	62.6	57.1	50.7	48.3	46.8	42.0	38.8	37.3	36.4
70°	41.2	38.0	34.1	29.3	26.9	25.4	22.2	19.8	19.0	18.2
72.5°	21.4	19.0	15.8	12.7	11.1	9.5	7.9	6.3	5.6	5.6
75°	7.9	6.3	4.0	2.4	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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)