

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: P#

Luminaire Tested: **LD4C45D010 EX4C459027 4LBSQLI**

Issue Date: 2/9/2022

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: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209151)
Test Lab: INNOVATION CENTER
Issue Date: 2/9/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C45D010 EX4C459027 4LBSQLI
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQ TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4248.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
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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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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93																			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87																			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80																			
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75																			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69																			
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64																			
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60																			
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56																			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53																			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	443965	443965	443965
5°	438871	439433	438871
10°	421322	423899	423331
15°	398312	401229	396254
20°	363502	366203	365309
25°	316517	326471	314334
30°	240692	276846	237115
35°	151503	215216	152881
40°	81746	142130	80273
45°	38699	70207	38290
50°	14486	26329	14486
55°	6880	8361	6409
60°	4516	3956	4516
65°	2671	2671	2671
70°	1636	2483	1636
75°	1118	1118	1118
80°	1667	1667	1667
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	426.6	10.0
10°-20°	1118.1	26.3
20°-30°	1365.8	32.2
30°-40°	955.3	22.5
40°-50°	313.1	7.4
50°-60°	49.8	1.2
60°-70°	13.6	0.3
70°-80°	4.6	0.1
80°-90°	1.3	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°	2910.5	68.5
0°-40°	3865.8	91.0
0°-60°	4228.6	99.5
0°-90°	4248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4601	4601	4601	4601	4601	
5°	4531	4533	4537	4509	4531	425
15°	3987	4004	4017	3990	3967	1112
25°	2973	3018	3066	3011	2952	1335
35°	1286	1519	1827	1495	1298	821
45°	284	349	514	345	281	238
55°	41	44	50	44	38	40
65°	12	15	12	15	12	13
75°	3	3	3	3	3	4
85°	0	0	0	0	0	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2
2.5°	4566.2	4598.4	4589.6	4610.1	4610.1	4586.7	4592.5	4601.2	4612.9	4621.8	4551.5
5°	4531.1	4560.3	4534.0	4563.2	4545.7	4519.4	4563.2	4539.8	4554.5	4536.9	4548.6
7.5°	4437.6	4484.3	4431.7	4466.8	4455.1	4440.4	4458.0	4452.1	4461.0	4446.3	4414.2
10°	4300.2	4338.2	4303.1	4352.8	4329.4	4314.8	4329.4	4344.0	4341.1	4326.5	4344.0
12.5°	4142.3	4186.1	4168.6	4197.8	4171.6	4171.6	4206.6	4197.8	4200.8	4189.1	4209.5
15°	3987.4	4019.6	3993.2	4031.3	4019.6	3987.4	4001.9	4001.9	4025.4	4016.6	3993.2
17.5°	3794.5	3820.7	3791.5	3800.3	3788.6	3782.8	3844.1	3803.2	3826.6	3809.0	3812.0
20°	3540.1	3551.8	3543.0	3566.4	3551.8	3569.4	3563.5	3557.7	3557.7	3566.4	3546.0
22.5°	3282.8	3282.8	3291.6	3297.5	3309.2	3291.6	3326.7	3297.5	3300.4	3320.9	3315.0
25°	2973.0	2964.2	2984.7	3013.9	3025.6	3011.0	3057.7	3034.3	3051.9	3066.5	3034.3
27.5°	2595.9	2595.9	2616.3	2666.1	2674.8	2692.3	2756.6	2756.6	2780.0	2759.6	2783.0
30°	2160.3	2192.5	2218.7	2283.0	2303.5	2341.6	2408.8	2441.0	2493.6	2484.8	2473.1
32.5°	1713.0	1756.9	1759.8	1827.1	1882.6	1946.9	2037.5	2113.5	2151.6	2177.8	2148.6
35°	1286.2	1312.6	1336.0	1382.7	1476.2	1561.1	1642.9	1742.3	1809.6	1827.1	1800.7
37.5°	941.3	947.2	970.6	1014.3	1084.5	1166.4	1265.8	1373.9	1444.2	1470.4	1441.2
40°	649.0	654.8	666.5	704.5	763.0	821.5	900.4	1011.5	1075.8	1128.4	1090.3
42.5°	435.5	441.4	453.1	482.3	514.5	570.0	631.4	701.6	763.0	786.4	765.9
45°	283.6	283.6	289.4	309.9	327.5	371.2	415.1	458.9	499.8	514.5	499.8
47.5°	166.7	169.5	175.4	190.0	210.4	228.0	260.2	289.4	301.1	312.8	306.9
50°	96.5	96.5	105.2	114.0	128.6	140.3	152.0	163.7	169.5	175.4	169.5
52.5°	52.6	55.6	58.5	61.4	67.3	79.0	87.7	87.7	90.7	93.5	90.7
55°	40.9	40.9	40.9	40.9	43.9	43.9	43.9	46.8	46.8	49.7	46.8
57.5°	29.2	29.2	29.2	32.2	32.2	32.2	29.2	29.2	29.2	29.2	29.2
60°	23.4	23.4	23.4	23.4	23.4	23.4	23.4	20.5	20.5	20.5	20.5
62.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
65°	11.7	11.7	14.7	14.7	14.7	14.7	14.7	11.7	11.7	11.7	11.7
67.5°	8.8	8.8	8.8	8.8	11.7	11.7	8.8	8.8	8.8	8.8	8.8
70°	5.8	5.8	5.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
72.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	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°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2	4601.2
2.5°	4601.2	4551.5	4557.3	4583.7	4569.0	4583.7	4580.8	4580.8
5°	4551.5	4536.9	4513.6	4504.7	4522.3	4560.3	4554.5	4531.1
7.5°	4458.0	4420.0	4446.3	4458.0	4443.4	4466.8	4478.5	4428.7
10°	4346.9	4332.4	4326.5	4332.4	4326.5	4349.9	4320.7	4320.7
12.5°	4189.1	4165.7	4165.7	4200.8	4180.3	4162.7	4186.1	4183.2
15°	4031.3	3984.4	3984.4	3996.1	4004.9	3993.2	3996.1	3966.8
17.5°	3797.3	3782.8	3762.3	3794.5	3803.2	3791.5	3800.3	3785.6
20°	3578.1	3578.1	3540.1	3554.7	3566.4	3575.2	3581.1	3557.7
22.5°	3297.5	3303.3	3277.0	3306.2	3315.0	3285.8	3291.6	3285.8
25°	3040.2	3037.3	3016.8	3005.1	3011.0	2999.3	2996.4	2952.5
27.5°	2756.6	2727.4	2683.6	2695.3	2645.6	2604.6	2604.6	2537.4
30°	2449.7	2400.1	2341.6	2283.0	2239.2	2192.5	2166.1	2128.2
32.5°	2090.1	2023.0	1949.8	1870.9	1821.2	1751.1	1713.0	1733.6
35°	1733.6	1634.1	1534.7	1455.8	1379.7	1338.8	1292.1	1297.9
37.5°	1388.6	1248.3	1160.6	1075.8	1011.5	958.9	938.4	932.5
40°	1014.3	903.3	815.6	754.2	710.4	669.5	646.1	637.3
42.5°	701.6	622.7	552.4	502.8	473.6	447.2	435.5	432.7
45°	456.1	409.3	362.5	327.5	304.1	286.5	283.6	280.6
47.5°	286.5	263.0	233.8	207.6	187.1	175.4	166.7	166.7
50°	163.7	155.0	140.3	125.7	114.0	108.2	99.4	96.5
52.5°	87.7	87.7	81.8	70.1	61.4	55.6	55.6	52.6
55°	46.8	46.8	43.9	43.9	40.9	40.9	40.9	38.1
57.5°	29.2	29.2	32.2	32.2	29.2	29.2	29.2	29.2
60°	20.5	23.4	23.4	23.4	23.4	23.4	23.4	23.4
62.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
65°	11.7	14.7	14.7	14.7	14.7	11.7	11.7	11.7
67.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
70°	8.8	8.8	8.8	8.8	8.8	5.8	5.8	5.8
72.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	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
87.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
90°	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)