

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: **LD4C90D010 EX4C909050 4LBPSSQMW**

Issue Date: 2/18/2022

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 (P209253)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C90D010 EX4C909050 4LBPSSQMW
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBPSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

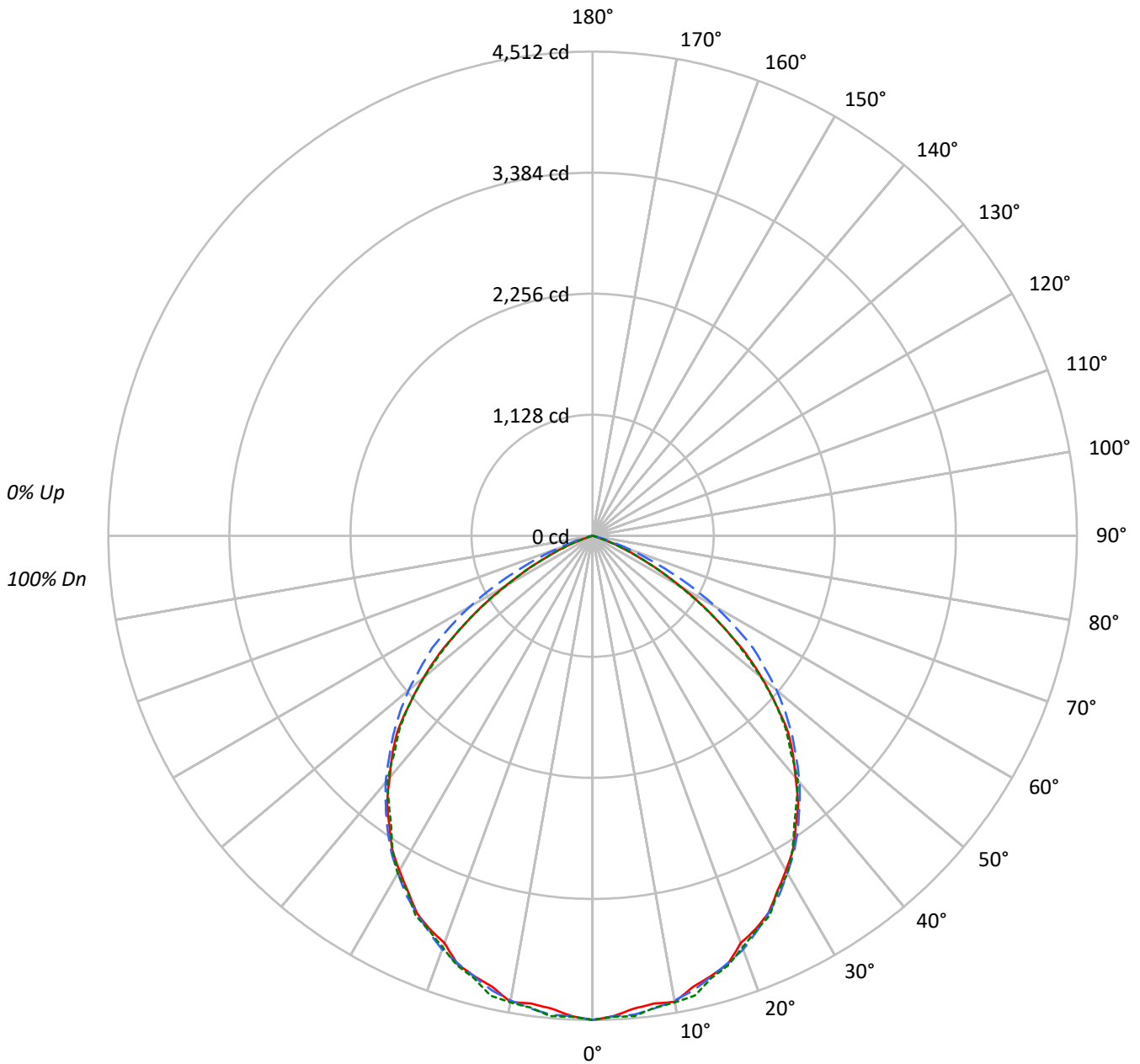
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9638.0 lumens
Efficiency: N/A
Efficacy: 99.3 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): 97.1
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									
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	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	33																			
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°	435339	435339	435339
5°	428323	433892	435132
10°	432012	430758	432629
15°	424454	425073	426362
20°	414576	421158	419197
25°	412781	412781	415517
30°	401275	404138	404863
35°	388758	392551	385743
40°	370529	377771	374547
45°	350664	358552	347171
50°	308821	335751	306900
55°	250114	307243	251208
60°	183020	254769	179334
65°	111211	181417	108288
70°	43389	97668	41612
75°	4772	26320	4772
80°	3612	3612	3612
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.9	4.4
10°-20°	1205.1	12.5
20°-30°	1788.1	18.6
30°-40°	2071.9	21.5
40°-50°	1986.5	20.6
50°-60°	1460.6	15.2
60°-70°	630.8	6.5
70°-80°	68.1	0.7
80°-90°	0.9	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°	3419.1	35.5
0°-40°	5491.1	57.0
0°-60°	8938.2	92.7
0°-90°	9638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9638.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4512	4512	4512	4512	4512	
5°	4422	4467	4480	4486	4492	422
15°	4249	4275	4255	4262	4268	1198
25°	3877	3871	3877	3884	3903	1775
35°	3300	3320	3333	3326	3275	2064
45°	2570	2576	2628	2589	2544	1954
55°	1487	1640	1826	1634	1493	1338
65°	487	609	795	602	474	501
75°	13	19	71	13	13	39
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°	22.5°	25°	30°	35°	40°	45°
0°	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8
2.5°	4479.7	4530.9	4537.5	4505.3	4492.5	4473.4	4518.1	4486.2	4499.0	4486.2	4479.7
5°	4422.2	4479.7	4486.2	4486.2	4473.4	4466.9	4486.2	4479.7	4473.4	4460.6	4479.7
7.5°	4396.5	4428.4	4460.6	4422.2	4441.2	4435.0	4479.7	4460.6	4454.1	4454.1	4441.2
10°	4409.3	4402.8	4428.4	4390.0	4402.8	4390.0	4428.4	4428.4	4415.6	4402.8	4396.5
12.5°	4306.6	4357.8	4357.8	4351.6	4338.7	4319.4	4357.8	4383.7	4345.0	4345.0	4338.7
15°	4249.1	4261.9	4268.2	4268.2	4261.9	4274.7	4293.8	4268.2	4274.7	4242.5	4255.3
17.5°	4185.0	4159.4	4178.5	4165.7	4172.2	4185.0	4210.6	4210.6	4172.2	4165.7	4178.5
20°	4037.5	4114.4	4120.9	4082.5	4088.8	4088.8	4133.7	4095.3	4120.9	4088.8	4101.6
22.5°	3966.9	4018.2	4024.7	3973.5	4005.4	3966.9	4011.9	3954.1	4018.2	3973.5	3992.6
25°	3877.2	3871.0	3890.1	3864.4	3871.0	3871.0	3902.9	3877.2	3896.6	3871.0	3877.2
27.5°	3730.0	3781.3	3774.7	3749.1	3761.9	3755.6	3819.7	3749.1	3787.5	3755.6	3768.5
30°	3601.6	3646.6	3633.8	3608.2	3608.2	3588.8	3659.4	3640.1	3633.8	3633.8	3627.3
32.5°	3473.5	3480.0	3467.2	3473.5	3480.0	3454.4	3511.9	3486.3	3480.0	3486.3	3492.9
35°	3300.4	3300.4	3313.2	3294.1	3319.8	3319.8	3371.0	3338.9	3332.6	3313.2	3332.6
37.5°	3146.7	3127.6	3133.8	3133.8	3146.7	3159.5	3185.1	3172.3	3172.3	3153.2	3166.0
40°	2941.7	2928.8	2947.9	2947.9	2967.3	2967.3	2992.9	2980.1	2999.2	2999.2	2999.2
42.5°	2762.3	2762.3	2749.5	2768.6	2775.1	2768.6	2813.5	2807.0	2813.5	2800.7	2807.0
45°	2569.8	2569.8	2557.0	2550.7	2582.6	2576.4	2627.6	2608.3	2633.9	2621.1	2627.6
47.5°	2307.0	2339.2	2319.9	2339.2	2377.6	2384.2	2416.1	2403.3	2428.9	2409.8	2435.4
50°	2057.3	2057.3	2076.4	2102.0	2140.5	2147.0	2185.5	2211.1	2223.9	2230.2	2236.7
52.5°	1794.5	1788.0	1807.4	1839.3	1871.4	1897.0	1935.5	1973.9	1999.5	2038.0	2018.6
55°	1486.8	1499.6	1518.9	1557.4	1608.6	1640.5	1672.7	1723.9	1768.9	1788.0	1826.4
57.5°	1224.0	1211.2	1224.0	1275.2	1333.0	1358.7	1403.6	1454.9	1518.9	1557.4	1570.2
60°	948.4	954.9	967.7	1012.7	1057.4	1095.9	1115.2	1198.4	1256.2	1294.6	1320.2
62.5°	698.7	711.5	724.3	762.7	807.5	839.6	871.5	942.1	993.4	1031.8	1057.4
65°	487.1	493.4	512.8	531.9	576.8	608.7	634.4	692.1	743.4	775.5	794.6
67.5°	301.2	307.5	320.3	346.2	378.1	403.7	429.4	467.8	512.8	544.7	551.2
70°	153.8	160.3	166.6	185.9	211.5	224.3	243.4	275.6	307.5	333.1	346.2
72.5°	51.3	51.3	57.8	70.6	83.4	96.2	102.5	134.7	160.3	173.1	179.4
75°	12.8	12.8	12.8	12.8	12.8	19.3	19.3	38.4	51.3	64.1	70.6
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	12.8	12.8
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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°	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8	4511.8
2.5°	4511.8	4499.0	4492.5	4499.0	4499.0	4492.5	4511.8	4537.5	4569.4	4486.2
5°	4505.3	4492.5	4505.3	4466.9	4486.2	4473.4	4499.0	4492.5	4518.1	4492.5
7.5°	4486.2	4460.6	4466.9	4447.8	4473.4	4441.2	4460.6	4499.0	4473.4	4435.0
10°	4422.2	4409.3	4454.1	4390.0	4377.2	4402.8	4454.1	4415.6	4402.8	4415.6
12.5°	4357.8	4357.8	4377.2	4325.9	4332.2	4345.0	4370.7	4345.0	4357.8	4390.0
15°	4287.5	4274.7	4306.6	4268.2	4261.9	4249.1	4274.7	4274.7	4287.5	4268.2
17.5°	4204.1	4185.0	4185.0	4172.2	4165.7	4197.8	4210.6	4216.9	4223.4	4197.8
20°	4101.6	4095.3	4114.4	4095.3	4101.6	4108.1	4108.1	4095.3	4152.8	4082.5
22.5°	3992.6	4011.9	3986.3	3973.5	3986.3	3999.1	3999.1	4005.4	3992.6	3979.7
25°	3883.8	3896.6	3902.9	3864.4	3883.8	3864.4	3909.4	3915.7	3890.1	3902.9
27.5°	3787.5	3768.5	3761.9	3736.3	3749.1	3742.8	3749.1	3749.1	3787.5	3736.3
30°	3640.1	3621.0	3627.3	3608.2	3614.5	3608.2	3614.5	3614.5	3640.1	3633.8
32.5°	3499.1	3480.0	3486.3	3467.2	3467.2	3473.5	3460.7	3460.7	3480.0	3467.2
35°	3364.5	3319.8	3326.0	3319.8	3326.0	3300.4	3300.4	3294.1	3306.9	3274.8
37.5°	3172.3	3153.2	3146.7	3140.4	3146.7	3133.8	3146.7	3127.6	3146.7	3121.0
40°	2999.2	2986.4	2992.9	2954.5	2954.5	2960.7	2947.9	2941.7	2947.9	2973.6
42.5°	2826.3	2800.7	2787.9	2775.1	2781.4	2762.3	2755.7	2742.9	2755.7	2730.1
45°	2621.1	2621.1	2614.8	2582.6	2589.2	2589.2	2563.6	2537.9	2544.2	2544.2
47.5°	2435.4	2422.6	2416.1	2384.2	2377.6	2371.4	2345.5	2326.4	2326.4	2307.0
50°	2230.2	2217.4	2198.3	2166.1	2153.3	2114.9	2095.8	2070.1	2044.5	2044.5
52.5°	2038.0	1993.0	1967.4	1916.1	1897.0	1877.7	1826.4	1807.4	1788.0	1768.9
55°	1807.4	1768.9	1717.7	1659.9	1634.3	1602.1	1550.8	1512.4	1486.8	1493.3
57.5°	1583.0	1518.9	1467.7	1390.8	1358.7	1339.3	1288.1	1236.8	1211.2	1211.2
60°	1307.4	1256.2	1192.1	1121.5	1095.9	1064.0	999.6	967.7	948.4	929.3
62.5°	1044.6	1006.2	948.4	858.7	839.6	807.5	762.7	724.3	705.0	705.0
65°	781.8	743.4	692.1	628.1	602.5	576.8	538.4	499.9	480.6	474.3
67.5°	551.2	506.2	461.5	410.3	390.9	378.1	339.7	314.0	301.2	294.7
70°	333.1	307.5	275.6	237.2	217.8	205.0	179.4	160.3	153.8	147.5
72.5°	173.1	153.8	128.1	102.5	89.7	76.9	64.1	51.3	45.0	45.0
75°	64.1	51.3	32.2	19.3	12.8	12.8	12.8	12.8	12.8	12.8
77.5°	12.8	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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)