

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: P840271

Luminaire Tested: **LD4C90D010 EU4909030 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: P840271
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: LD4C90D010 EU4909030 4LBCSSQMW
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

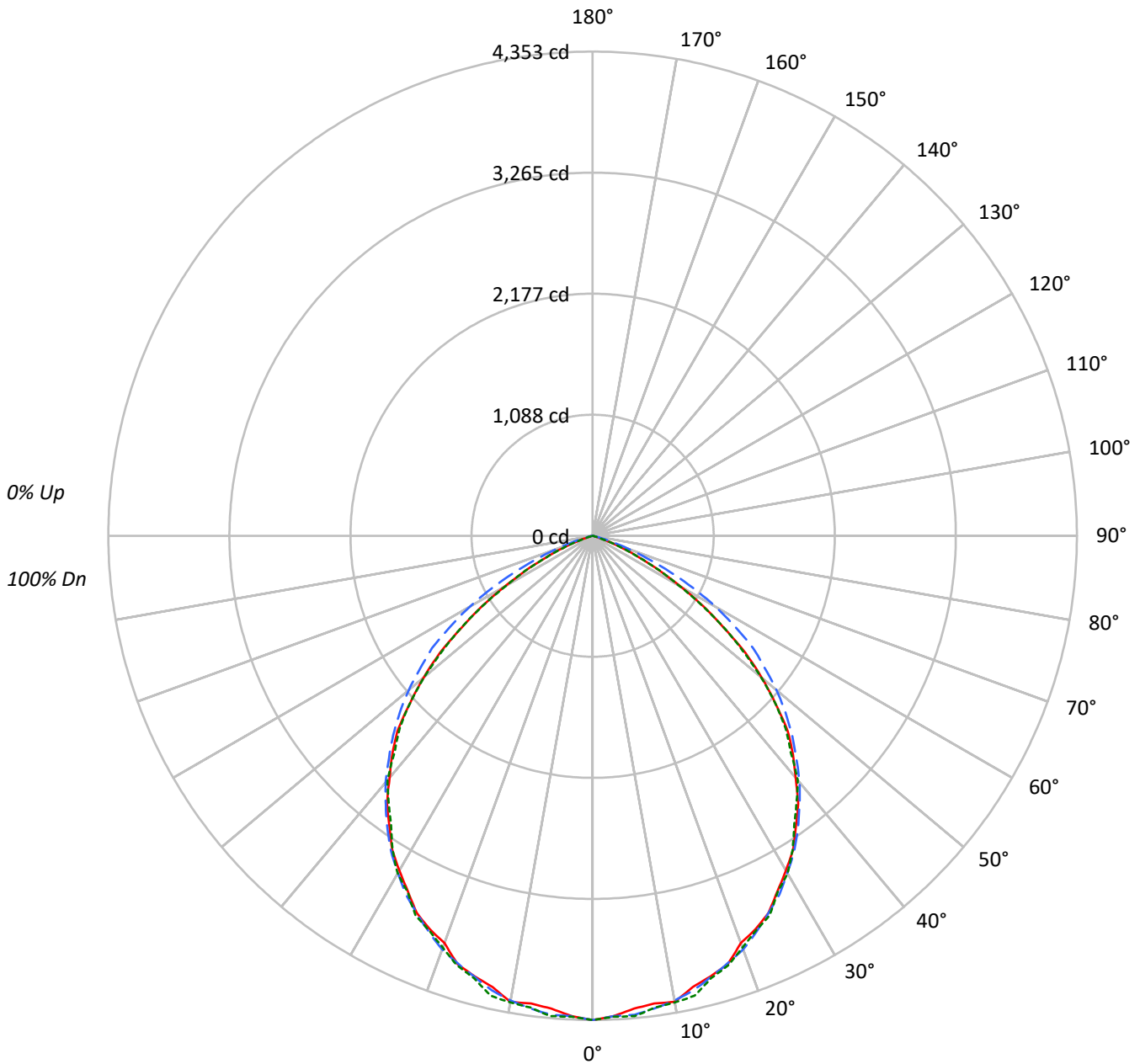
Lumens per Lamp: N/A
Luminaire Lumens: 9299.0 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (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				
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°	420026	420026	420026
5°	413252	418628	419829
10°	416825	415610	417413
15°	409520	410129	411358
20°	399995	406341	404452
25°	398270	398270	400900
30°	387170	389922	390624
35°	375082	378746	372173
40°	357492	364483	361372
45°	338329	345943	334958
50°	297968	323938	296107
55°	241316	296443	242376
60°	176575	245815	173024
65°	107307	175047	104476
70°	41838	94226	40145
75°	4623	25388	4623
80°	3501	3501	3501
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.9	4.4
10°-20°	1162.7	12.5
20°-30°	1725.2	18.6
30°-40°	1999.0	21.5
40°-50°	1916.6	20.6
50°-60°	1409.2	15.2
60°-70°	608.7	6.5
70°-80°	65.7	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°	3298.9	35.5
0°-40°	5297.9	57.0
0°-60°	8623.8	92.7
0°-90°	9299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9299.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4353	4353	4353	4353	4353	
5°	4267	4310	4322	4328	4334	407
15°	4100	4124	4106	4112	4118	1155
25°	3741	3735	3741	3747	3766	1713
35°	3184	3203	3215	3209	3160	1991
45°	2479	2486	2535	2498	2455	1885
55°	1434	1583	1762	1577	1441	1291
65°	470	587	767	581	458	483
75°	12	19	68	12	12	38
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°	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1
2.5°	4322.1	4371.6	4377.9	4346.8	4334.5	4316.1	4359.2	4328.4	4340.8	4328.4	4322.1
5°	4266.6	4322.1	4328.4	4328.4	4316.1	4309.8	4328.4	4322.1	4316.1	4303.7	4322.1
7.5°	4241.9	4272.7	4303.7	4266.6	4285.0	4279.0	4322.1	4303.7	4297.4	4297.4	4285.0
10°	4254.3	4248.0	4272.7	4235.6	4248.0	4235.6	4272.7	4272.7	4260.3	4248.0	4241.9
12.5°	4155.1	4204.6	4204.6	4198.5	4186.1	4167.5	4204.6	4229.5	4192.2	4192.2	4186.1
15°	4099.6	4112.0	4118.0	4118.0	4112.0	4124.3	4142.8	4118.0	4124.3	4093.3	4105.7
17.5°	4037.8	4013.1	4031.5	4019.1	4025.4	4037.8	4062.5	4062.5	4025.4	4019.1	4031.5
20°	3895.5	3969.7	3976.0	3938.9	3945.0	3945.0	3988.3	3951.3	3976.0	3945.0	3957.3
22.5°	3827.4	3876.8	3883.1	3833.7	3864.5	3827.4	3870.8	3815.0	3876.8	3833.7	3852.1
25°	3740.9	3734.8	3753.2	3728.5	3734.8	3734.8	3765.6	3740.9	3759.5	3734.8	3740.9
27.5°	3598.8	3648.3	3642.0	3617.2	3629.6	3623.5	3685.4	3617.2	3654.3	3623.5	3635.9
30°	3475.0	3518.3	3506.0	3481.3	3481.3	3462.6	3530.7	3512.0	3506.0	3506.0	3499.7
32.5°	3351.3	3357.6	3345.3	3351.3	3357.6	3332.9	3388.4	3363.7	3357.6	3363.7	3370.0
35°	3184.3	3184.3	3196.7	3178.3	3203.0	3203.0	3252.4	3221.4	3215.4	3196.7	3215.4
37.5°	3036.0	3017.6	3023.6	3023.6	3036.0	3048.3	3073.1	3060.7	3060.7	3042.3	3054.6
40°	2838.2	2825.8	2844.2	2844.2	2862.9	2862.9	2887.6	2875.3	2893.7	2893.7	2893.7
42.5°	2665.1	2665.1	2652.8	2671.2	2677.5	2671.2	2714.6	2708.3	2714.6	2702.2	2708.3
45°	2479.4	2479.4	2467.1	2461.0	2491.8	2485.7	2535.2	2516.5	2541.3	2528.9	2535.2
47.5°	2225.9	2256.9	2238.3	2256.9	2294.0	2300.3	2331.1	2318.7	2343.5	2325.0	2349.8
50°	1985.0	1985.0	2003.4	2028.1	2065.2	2071.5	2108.6	2133.3	2145.7	2151.7	2158.0
52.5°	1731.4	1725.1	1743.8	1774.6	1805.6	1830.3	1867.4	1904.5	1929.2	1966.3	1947.6
55°	1434.5	1446.8	1465.5	1502.6	1552.0	1582.8	1613.9	1663.3	1706.7	1725.1	1762.2
57.5°	1180.9	1168.6	1180.9	1230.4	1286.1	1310.9	1354.3	1403.7	1465.5	1502.6	1515.0
60°	915.0	921.3	933.7	977.1	1020.2	1057.3	1076.0	1156.2	1212.0	1249.1	1273.8
62.5°	674.1	686.5	698.8	735.9	779.1	810.1	840.9	909.0	958.4	995.5	1020.2
65°	470.0	476.1	494.7	513.1	556.5	587.3	612.0	667.8	717.2	748.3	766.7
67.5°	290.6	296.7	309.1	334.0	364.8	389.5	414.3	451.3	494.7	525.5	531.8
70°	148.3	154.6	160.7	179.4	204.1	216.5	234.9	265.9	296.7	321.4	334.0
72.5°	49.4	49.4	55.8	68.1	80.5	92.8	98.9	129.9	154.6	167.0	173.1
75°	12.4	12.4	12.4	12.4	12.4	18.7	18.7	37.1	49.4	61.8	68.1
77.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	12.4	12.4
80°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
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°	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1	4353.1
2.5°	4353.1	4340.8	4334.5	4340.8	4340.8	4334.5	4353.1	4377.9	4408.7	4328.4
5°	4346.8	4334.5	4346.8	4309.8	4328.4	4316.1	4340.8	4334.5	4359.2	4334.5
7.5°	4328.4	4303.7	4309.8	4291.3	4316.1	4285.0	4303.7	4340.8	4316.1	4279.0
10°	4266.6	4254.3	4297.4	4235.6	4223.2	4248.0	4297.4	4260.3	4248.0	4260.3
12.5°	4204.6	4204.6	4223.2	4173.8	4179.8	4192.2	4216.9	4192.2	4204.6	4235.6
15°	4136.7	4124.3	4155.1	4118.0	4112.0	4099.6	4124.3	4124.3	4136.7	4118.0
17.5°	4056.2	4037.8	4037.8	4025.4	4019.1	4050.2	4062.5	4068.6	4074.9	4050.2
20°	3957.3	3951.3	3969.7	3951.3	3957.3	3963.6	3963.6	3951.3	4006.8	3938.9
22.5°	3852.1	3870.8	3846.1	3833.7	3846.1	3858.4	3858.4	3864.5	3852.1	3839.8
25°	3747.2	3759.5	3765.6	3728.5	3747.2	3728.5	3771.9	3777.9	3753.2	3765.6
27.5°	3654.3	3635.9	3629.6	3604.9	3617.2	3611.2	3617.2	3617.2	3654.3	3604.9
30°	3512.0	3493.6	3499.7	3481.3	3487.3	3481.3	3487.3	3487.3	3512.0	3506.0
32.5°	3376.1	3357.6	3363.7	3345.3	3345.3	3351.3	3339.0	3339.0	3357.6	3345.3
35°	3246.1	3203.0	3209.1	3203.0	3209.1	3184.3	3184.3	3178.3	3190.6	3159.6
37.5°	3060.7	3042.3	3036.0	3029.9	3036.0	3023.6	3036.0	3017.6	3036.0	3011.3
40°	2893.7	2881.3	2887.6	2850.6	2850.6	2856.6	2844.2	2838.2	2844.2	2869.0
42.5°	2726.9	2702.2	2689.8	2677.5	2683.5	2665.1	2658.8	2646.5	2658.8	2634.1
45°	2528.9	2528.9	2522.8	2491.8	2498.1	2498.1	2473.4	2448.7	2454.7	2454.7
47.5°	2349.8	2337.4	2331.1	2300.3	2294.0	2288.0	2263.0	2244.6	2244.6	2225.9
50°	2151.7	2139.4	2120.9	2089.9	2077.6	2040.5	2022.0	1997.3	1972.6	1972.6
52.5°	1966.3	1922.9	1898.2	1848.7	1830.3	1811.7	1762.2	1743.8	1725.1	1706.7
55°	1743.8	1706.7	1657.2	1601.5	1576.8	1545.7	1496.3	1459.2	1434.5	1440.8
57.5°	1527.3	1465.5	1416.1	1341.9	1310.9	1292.2	1242.8	1193.3	1168.6	1168.6
60°	1261.4	1212.0	1150.2	1082.0	1057.3	1026.5	964.5	933.7	915.0	896.6
62.5°	1007.9	970.8	915.0	828.5	810.1	779.1	735.9	698.8	680.2	680.2
65°	754.3	717.2	667.8	606.0	581.3	556.5	519.4	482.4	463.7	457.6
67.5°	531.8	488.4	445.3	395.8	377.2	364.8	327.7	303.0	290.6	284.3
70°	321.4	296.7	265.9	228.8	210.2	197.8	173.1	154.6	148.3	142.3
72.5°	167.0	148.3	123.6	98.9	86.5	74.2	61.8	49.4	43.4	43.4
75°	61.8	49.4	31.0	18.7	12.4	12.4	12.4	12.4	12.4	12.4
77.5°	12.4	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
80°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
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)