

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: P840170

Luminaire Tested: **LD4C35D010 EU4359030 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: P840170
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: LD4C35D010 EU4359030 4LBCSSQMMS
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

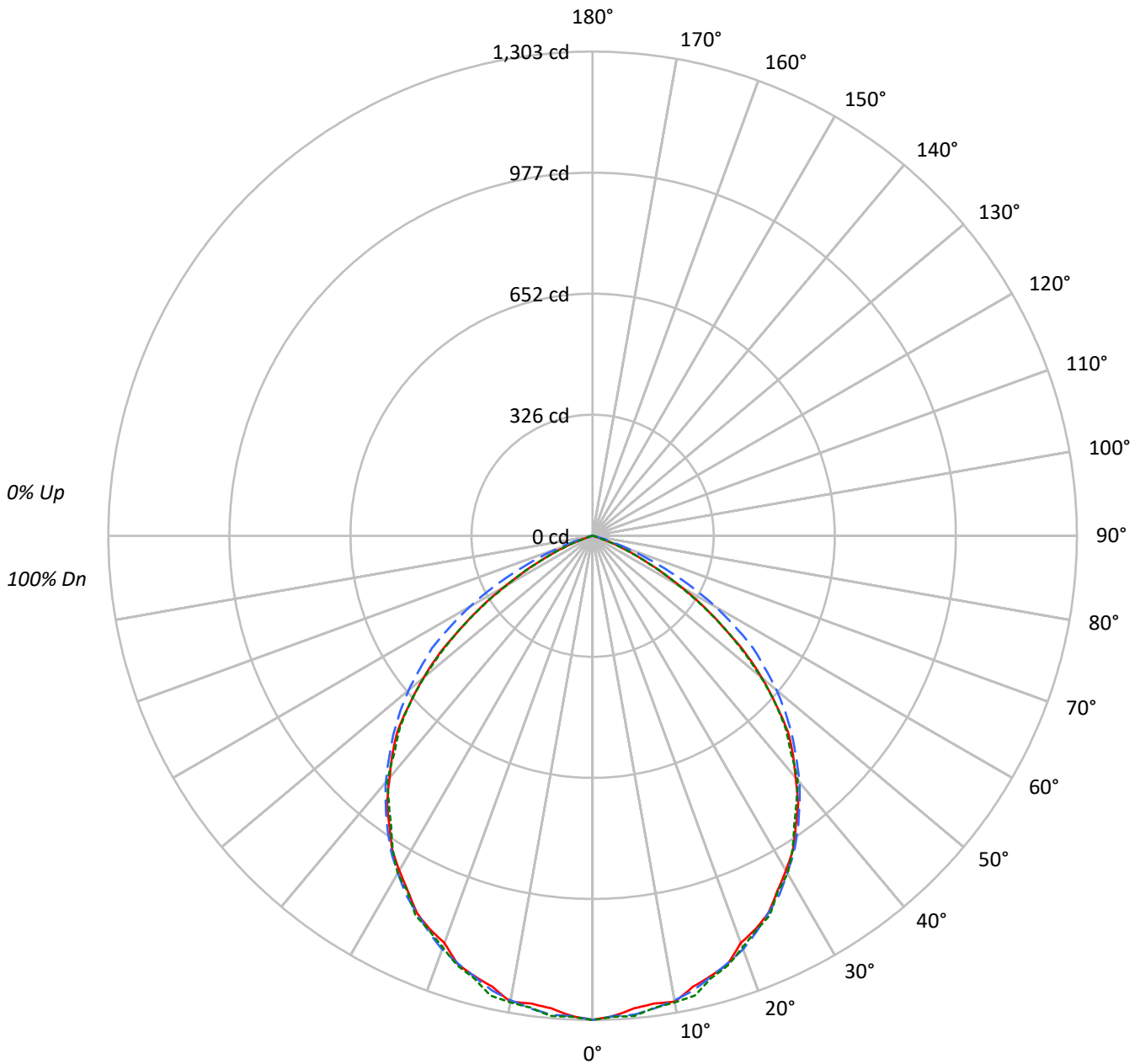
Lumens per Lamp: N/A
Luminaire Lumens: 2783.0 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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

TEST NUMBER: P840170

CATALOG NUMBER: LD4C35D010 EU4359030 4LBCSSQMMS

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	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°	125706	125706	125706
5°	123677	125285	125644
10°	124745	124382	124921
15°	122558	122738	123108
20°	119706	121606	121041
25°	119197	119197	119985
30°	115872	116697	116909
35°	112255	113350	111383
40°	106988	109079	108147
45°	101250	103529	100241
50°	89180	96956	88625
55°	72218	88721	72538
60°	52857	73563	51776
65°	32124	52398	31279
70°	12526	28211	12018
75°	1379	7605	1379
80°	1056	1056	1056
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	4.4
10°-20°	348.0	12.5
20°-30°	516.3	18.6
30°-40°	598.3	21.5
40°-50°	573.6	20.6
50°-60°	421.8	15.2
60°-70°	182.2	6.5
70°-80°	19.7	0.7
80°-90°	0.3	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°	987.3	35.5
0°-40°	1585.6	57.0
0°-60°	2580.9	92.7
0°-90°	2783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2783.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1303	1303	1303	1303	1303	
5°	1277	1290	1294	1295	1297	122
15°	1227	1234	1229	1231	1232	346
25°	1120	1118	1120	1121	1127	513
35°	953	959	962	960	946	596
45°	742	744	759	748	735	564
55°	429	474	527	472	431	386
65°	141	176	230	174	137	145
75°	4	6	20	4	4	11
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°	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8
2.5°	1293.5	1308.3	1310.2	1300.9	1297.2	1291.7	1304.6	1295.4	1299.1	1295.4	1293.5
5°	1276.9	1293.5	1295.4	1295.4	1291.7	1289.8	1295.4	1293.5	1291.7	1288.0	1293.5
7.5°	1269.5	1278.7	1288.0	1276.9	1282.4	1280.6	1293.5	1288.0	1286.1	1286.1	1282.4
10°	1273.2	1271.3	1278.7	1267.6	1271.3	1267.6	1278.7	1278.7	1275.0	1271.3	1269.5
12.5°	1243.5	1258.3	1258.3	1256.5	1252.8	1247.2	1258.3	1265.8	1254.6	1254.6	1252.8
15°	1226.9	1230.6	1232.4	1232.4	1230.6	1234.3	1239.8	1232.4	1234.3	1225.0	1228.7
17.5°	1208.4	1201.0	1206.5	1202.8	1204.7	1208.4	1215.8	1215.8	1204.7	1202.8	1206.5
20°	1165.8	1188.0	1189.9	1178.8	1180.6	1180.6	1193.6	1182.5	1189.9	1180.6	1184.3
22.5°	1145.5	1160.3	1162.1	1147.3	1156.6	1145.5	1158.4	1141.8	1160.3	1147.3	1152.9
25°	1119.6	1117.7	1123.3	1115.9	1117.7	1117.7	1127.0	1119.6	1125.1	1117.7	1119.6
27.5°	1077.1	1091.9	1090.0	1082.6	1086.3	1084.5	1103.0	1082.6	1093.7	1084.5	1088.2
30°	1040.0	1053.0	1049.3	1041.9	1041.9	1036.3	1056.7	1051.1	1049.3	1049.3	1047.4
32.5°	1003.0	1004.9	1001.2	1003.0	1004.9	997.5	1014.1	1006.7	1004.9	1006.7	1008.6
35°	953.0	953.0	956.7	951.2	958.6	958.6	973.4	964.1	962.3	956.7	962.3
37.5°	908.6	903.1	904.9	904.9	908.6	912.3	919.7	916.0	916.0	910.5	914.2
40°	849.4	845.7	851.2	851.2	856.8	856.8	864.2	860.5	866.0	866.0	866.0
42.5°	797.6	797.6	793.9	799.4	801.3	799.4	812.4	810.5	812.4	808.7	810.5
45°	742.0	742.0	738.3	736.5	745.7	743.9	758.7	753.1	760.5	756.8	758.7
47.5°	666.2	675.5	669.9	675.5	686.6	688.4	697.7	694.0	701.4	695.8	703.2
50°	594.1	594.1	599.6	607.0	618.1	620.0	631.1	638.5	642.2	644.0	645.9
52.5°	518.2	516.3	521.9	531.1	540.4	547.8	558.9	570.0	577.4	588.5	582.9
55°	429.3	433.0	438.6	449.7	464.5	473.7	483.0	497.8	510.8	516.3	527.4
57.5°	353.4	349.7	353.4	368.2	384.9	392.3	405.3	420.1	438.6	449.7	453.4
60°	273.9	275.7	279.4	292.4	305.3	316.4	322.0	346.0	362.7	373.8	381.2
62.5°	201.7	205.4	209.1	220.2	233.2	242.4	251.7	272.0	286.8	297.9	305.3
65°	140.7	142.5	148.1	153.6	166.6	175.8	183.2	199.9	214.7	223.9	229.5
67.5°	87.0	88.8	92.5	100.0	109.2	116.6	124.0	135.1	148.1	157.3	159.2
70°	44.4	46.3	48.1	53.7	61.1	64.8	70.3	79.6	88.8	96.2	100.0
72.5°	14.8	14.8	16.7	20.4	24.1	27.8	29.6	38.9	46.3	50.0	51.8
75°	3.7	3.7	3.7	3.7	3.7	5.6	5.6	11.1	14.8	18.5	20.4
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.7	3.7
80°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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°	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8	1302.8
2.5°	1302.8	1299.1	1297.2	1299.1	1299.1	1297.2	1302.8	1310.2	1319.4	1295.4
5°	1300.9	1297.2	1300.9	1289.8	1295.4	1291.7	1299.1	1297.2	1304.6	1297.2
7.5°	1295.4	1288.0	1289.8	1284.3	1291.7	1282.4	1288.0	1299.1	1291.7	1280.6
10°	1276.9	1273.2	1286.1	1267.6	1263.9	1271.3	1286.1	1275.0	1271.3	1275.0
12.5°	1258.3	1258.3	1263.9	1249.1	1250.9	1254.6	1262.0	1254.6	1258.3	1267.6
15°	1238.0	1234.3	1243.5	1232.4	1230.6	1226.9	1234.3	1234.3	1238.0	1232.4
17.5°	1213.9	1208.4	1208.4	1204.7	1202.8	1212.1	1215.8	1217.6	1219.5	1212.1
20°	1184.3	1182.5	1188.0	1182.5	1184.3	1186.2	1186.2	1182.5	1199.1	1178.8
22.5°	1152.9	1158.4	1151.0	1147.3	1151.0	1154.7	1154.7	1156.6	1152.9	1149.2
25°	1121.4	1125.1	1127.0	1115.9	1121.4	1115.9	1128.8	1130.7	1123.3	1127.0
27.5°	1093.7	1088.2	1086.3	1078.9	1082.6	1080.8	1082.6	1082.6	1093.7	1078.9
30°	1051.1	1045.6	1047.4	1041.9	1043.7	1041.9	1043.7	1043.7	1051.1	1049.3
32.5°	1010.4	1004.9	1006.7	1001.2	1001.2	1003.0	999.3	999.3	1004.9	1001.2
35°	971.5	958.6	960.4	958.6	960.4	953.0	953.0	951.2	954.9	945.6
37.5°	916.0	910.5	908.6	906.8	908.6	904.9	908.6	903.1	908.6	901.2
40°	866.0	862.3	864.2	853.1	853.1	854.9	851.2	849.4	851.2	858.6
42.5°	816.1	808.7	805.0	801.3	803.1	797.6	795.7	792.0	795.7	788.3
45°	756.8	756.8	755.0	745.7	747.6	747.6	740.2	732.8	734.6	734.6
47.5°	703.2	699.5	697.7	688.4	686.6	684.7	677.3	671.8	671.8	666.2
50°	644.0	640.3	634.8	625.5	621.8	610.7	605.2	597.8	590.4	590.4
52.5°	588.5	575.5	568.1	553.3	547.8	542.2	527.4	521.9	516.3	510.8
55°	521.9	510.8	496.0	479.3	471.9	462.6	447.8	436.7	429.3	431.2
57.5°	457.1	438.6	423.8	401.6	392.3	386.7	371.9	357.1	349.7	349.7
60°	377.5	362.7	344.2	323.8	316.4	307.2	288.7	279.4	273.9	268.3
62.5°	301.6	290.5	273.9	248.0	242.4	233.2	220.2	209.1	203.6	203.6
65°	225.8	214.7	199.9	181.4	174.0	166.6	155.5	144.4	138.8	137.0
67.5°	159.2	146.2	133.3	118.5	112.9	109.2	98.1	90.7	87.0	85.1
70°	96.2	88.8	79.6	68.5	62.9	59.2	51.8	46.3	44.4	42.6
72.5°	50.0	44.4	37.0	29.6	25.9	22.2	18.5	14.8	13.0	13.0
75°	18.5	14.8	9.3	5.6	3.7	3.7	3.7	3.7	3.7	3.7
77.5°	3.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)