

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: P840168

Luminaire Tested: **LD4C35D010 EU4359027 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: P840168  
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 EU4359027 4LBCSSQMMS  
Description: 4 INCH 3500 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**

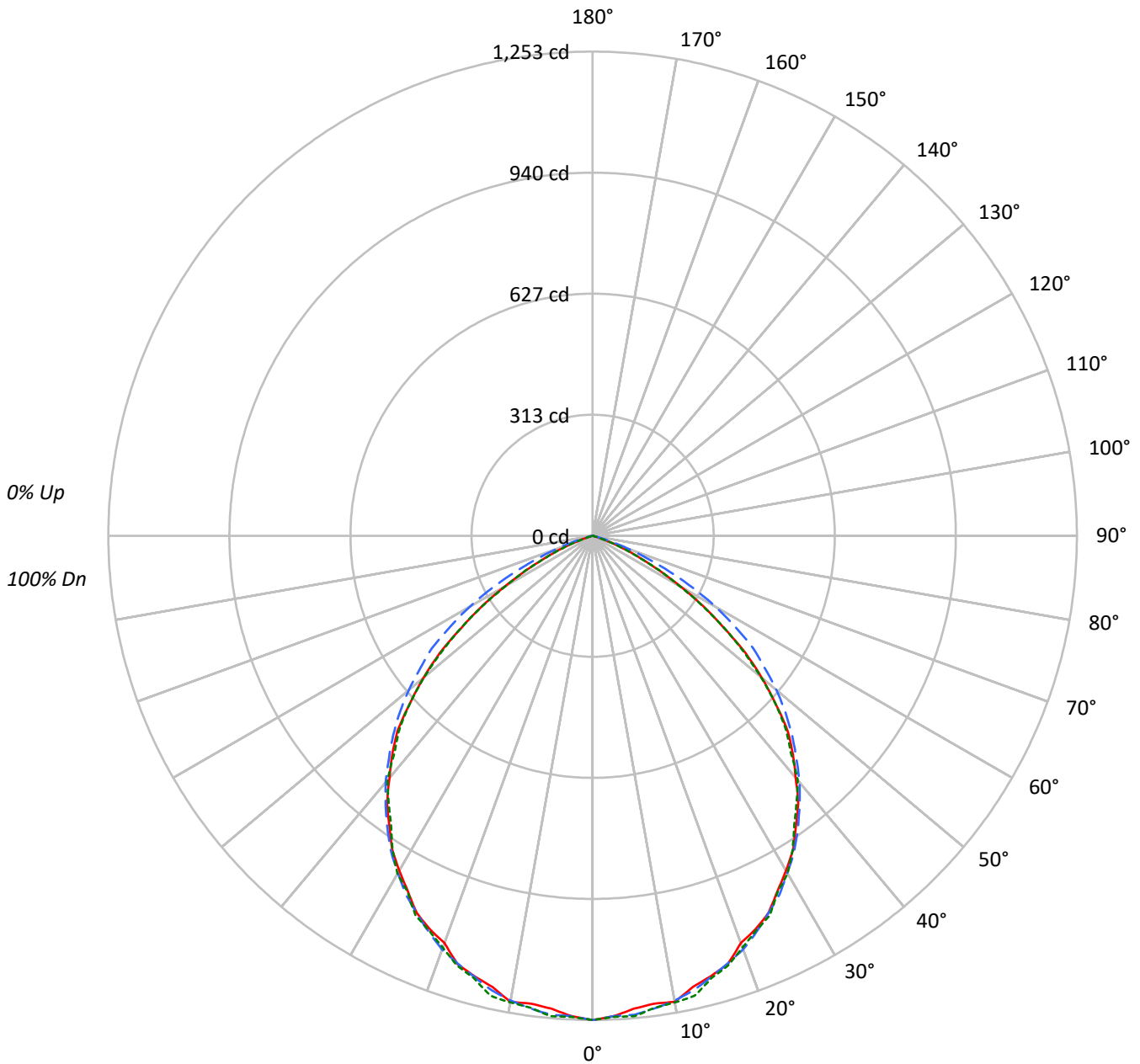
Lumens per Lamp: N/A  
Luminaire Lumens: 2677.0 lumens  
Efficiency: N/A  
Efficacy: 66.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.4  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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: P840168

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMMS

### Luminous Intensity Polar Plot





TEST NUMBER: P840168

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMMS

**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°	120920	120920	120920
5°	118970	120520	120859
10°	119993	119650	120169
15°	117893	118063	118423
20°	115147	116975	116430
25°	114651	114651	115407
30°	111460	112251	112452
35°	107979	109028	107143
40°	102920	104922	104028
45°	97402	99586	96433
50°	85773	93263	85248
55°	69476	85340	69779
60°	50830	70765	49808
65°	30891	50388	30069
70°	12046	27139	11567
75°	1342	7307	1342
80°	1000	1000	1000
85°	0	0	0



TEST NUMBER: P840168

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMMS

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.3	4.4
10°-20°	334.7	12.5
20°-30°	496.7	18.6
30°-40°	575.5	21.5
40°-50°	551.8	20.6
50°-60°	405.7	15.2
60°-70°	175.2	6.5
70°-80°	18.9	0.7
80°-90°	0.2	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°	949.7	35.5
0°-40°	1525.2	57.0
0°-60°	2482.6	92.7
0°-90°	2677.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2677.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1253	1253	1253	1253	1253	
5°	1228	1241	1244	1246	1248	117
15°	1180	1187	1182	1184	1186	333
25°	1077	1075	1077	1079	1084	493
35°	917	922	926	924	910	573
45°	714	716	730	719	707	543
55°	413	456	507	454	415	372
65°	135	169	221	167	132	139
75°	4	5	20	4	4	11
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P840168

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMMS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2
2.5°	1244.3	1258.5	1260.3	1251.4	1247.8	1242.5	1254.9	1246.1	1249.6	1246.1	1244.3
5°	1228.3	1244.3	1246.1	1246.1	1242.5	1240.7	1246.1	1244.3	1242.5	1239.0	1244.3
7.5°	1221.2	1230.0	1239.0	1228.3	1233.6	1231.8	1244.3	1239.0	1237.1	1237.1	1233.6
10°	1224.7	1222.9	1230.0	1219.3	1222.9	1219.3	1230.0	1230.0	1226.5	1222.9	1221.2
12.5°	1196.2	1210.4	1210.4	1208.7	1205.1	1199.7	1210.4	1217.6	1206.9	1206.9	1205.1
15°	1180.2	1183.8	1185.5	1185.5	1183.8	1187.3	1192.6	1185.5	1187.3	1178.4	1181.9
17.5°	1162.4	1155.3	1160.6	1157.0	1158.8	1162.4	1169.5	1169.5	1158.8	1157.0	1160.6
20°	1121.4	1142.8	1144.6	1133.9	1135.7	1135.7	1148.2	1137.5	1144.6	1135.7	1139.2
22.5°	1101.8	1116.1	1117.9	1103.6	1112.5	1101.8	1114.3	1098.3	1116.1	1103.6	1109.0
25°	1076.9	1075.2	1080.5	1073.4	1075.2	1075.2	1084.0	1076.9	1082.3	1075.2	1076.9
27.5°	1036.0	1050.3	1048.5	1041.3	1044.9	1043.1	1060.9	1041.3	1052.0	1043.1	1046.7
30°	1000.4	1012.9	1009.3	1002.2	1002.2	996.8	1016.4	1011.0	1009.3	1009.3	1007.5
32.5°	964.8	966.6	963.0	964.8	966.6	959.5	975.5	968.3	966.6	968.3	970.2
35°	916.7	916.7	920.3	915.0	922.1	922.1	936.3	927.4	925.6	920.3	925.6
37.5°	874.0	868.7	870.4	870.4	874.0	877.6	884.7	881.1	881.1	875.8	879.4
40°	817.1	813.5	818.8	818.8	824.2	824.2	831.3	827.7	833.0	833.0	833.0
42.5°	767.2	767.2	763.7	769.0	770.8	769.0	781.5	779.7	781.5	777.9	779.7
45°	713.8	713.8	710.2	708.5	717.3	715.6	729.8	724.5	731.6	728.0	729.8
47.5°	640.8	649.7	644.4	649.7	660.4	662.2	671.1	667.5	674.6	669.3	676.5
50°	571.4	571.4	576.7	583.9	594.5	596.3	607.0	614.1	617.7	619.4	621.3
52.5°	498.4	496.6	502.0	510.9	519.8	526.9	537.6	548.3	555.4	566.1	560.7
55°	413.0	416.5	421.9	432.6	446.8	455.7	464.6	478.8	491.3	496.6	507.3
57.5°	340.0	336.4	340.0	354.2	370.3	377.4	389.9	404.1	421.9	432.6	436.1
60°	263.4	265.2	268.8	281.3	293.7	304.4	309.8	332.9	348.9	359.6	366.7
62.5°	194.1	197.6	201.2	211.9	224.3	233.2	242.1	261.7	275.9	286.6	293.7
65°	135.3	137.0	142.4	147.7	160.2	169.1	176.2	192.2	206.5	215.4	220.7
67.5°	83.7	85.4	89.0	96.2	105.0	112.1	119.3	129.9	142.4	151.3	153.1
70°	42.7	44.5	46.3	51.6	58.8	62.3	67.6	76.5	85.4	92.5	96.2
72.5°	14.2	14.2	16.0	19.6	23.2	26.7	28.5	37.4	44.5	48.1	49.8
75°	3.6	3.6	3.6	3.6	3.6	5.4	5.4	10.7	14.2	17.8	19.6
77.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6	3.6
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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



TEST NUMBER: P840168

CATALOG NUMBER: LD4C35D010 EU4359027 4LBCSSQMMS

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2	1253.2
2.5°	1253.2	1249.6	1247.8	1249.6	1249.6	1247.8	1253.2	1260.3	1269.2	1246.1
5°	1251.4	1247.8	1251.4	1240.7	1246.1	1242.5	1249.6	1247.8	1254.9	1247.8
7.5°	1246.1	1239.0	1240.7	1235.4	1242.5	1233.6	1239.0	1249.6	1242.5	1231.8
10°	1228.3	1224.7	1237.1	1219.3	1215.8	1222.9	1237.1	1226.5	1222.9	1226.5
12.5°	1210.4	1210.4	1215.8	1201.5	1203.3	1206.9	1214.0	1206.9	1210.4	1219.3
15°	1190.9	1187.3	1196.2	1185.5	1183.8	1180.2	1187.3	1187.3	1190.9	1185.5
17.5°	1167.7	1162.4	1162.4	1158.8	1157.0	1166.0	1169.5	1171.3	1173.1	1166.0
20°	1139.2	1137.5	1142.8	1137.5	1139.2	1141.0	1141.0	1137.5	1153.5	1133.9
22.5°	1109.0	1114.3	1107.2	1103.6	1107.2	1110.8	1110.8	1112.5	1109.0	1105.4
25°	1078.7	1082.3	1084.0	1073.4	1078.7	1073.4	1085.9	1087.6	1080.5	1084.0
27.5°	1052.0	1046.7	1044.9	1037.8	1041.3	1039.6	1041.3	1041.3	1052.0	1037.8
30°	1011.0	1005.7	1007.5	1002.2	1003.9	1002.2	1003.9	1003.9	1011.0	1009.3
32.5°	971.9	966.6	968.3	963.0	963.0	964.8	961.2	961.2	966.6	963.0
35°	934.5	922.1	923.8	922.1	923.8	916.7	916.7	915.0	918.5	909.6
37.5°	881.1	875.8	874.0	872.3	874.0	870.4	874.0	868.7	874.0	866.9
40°	833.0	829.5	831.3	820.6	820.6	822.4	818.8	817.1	818.8	825.9
42.5°	785.0	777.9	774.4	770.8	772.5	767.2	765.4	761.9	765.4	758.3
45°	728.0	728.0	726.3	717.3	719.2	719.2	712.0	704.9	706.7	706.7
47.5°	676.5	672.9	671.1	662.2	660.4	658.7	651.5	646.2	646.2	640.8
50°	619.4	615.9	610.6	601.6	598.1	587.4	582.1	575.0	567.9	567.9
52.5°	566.1	553.6	546.5	532.2	526.9	521.5	507.3	502.0	496.6	491.3
55°	502.0	491.3	477.1	461.0	453.9	445.0	430.8	420.1	413.0	414.8
57.5°	439.7	421.9	407.7	386.3	377.4	372.0	357.8	343.5	336.4	336.4
60°	363.1	348.9	331.1	311.5	304.4	295.5	277.7	268.8	263.4	258.1
62.5°	290.1	279.5	263.4	238.5	233.2	224.3	211.9	201.2	195.8	195.8
65°	217.2	206.5	192.2	174.5	167.3	160.2	149.5	138.9	133.5	131.7
67.5°	153.1	140.6	128.2	114.0	108.6	105.0	94.3	87.2	83.7	81.9
70°	92.5	85.4	76.5	65.9	60.5	56.9	49.8	44.5	42.7	41.0
72.5°	48.1	42.7	35.6	28.5	24.9	21.4	17.8	14.2	12.5	12.5
75°	17.8	14.2	8.9	5.4	3.6	3.6	3.6	3.6	3.6	3.6
77.5°	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)