

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: P840176

Luminaire Tested: **LD4C35D010 EU4359050 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: P840176  
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 EU4359050 4LBCSSQMMS  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

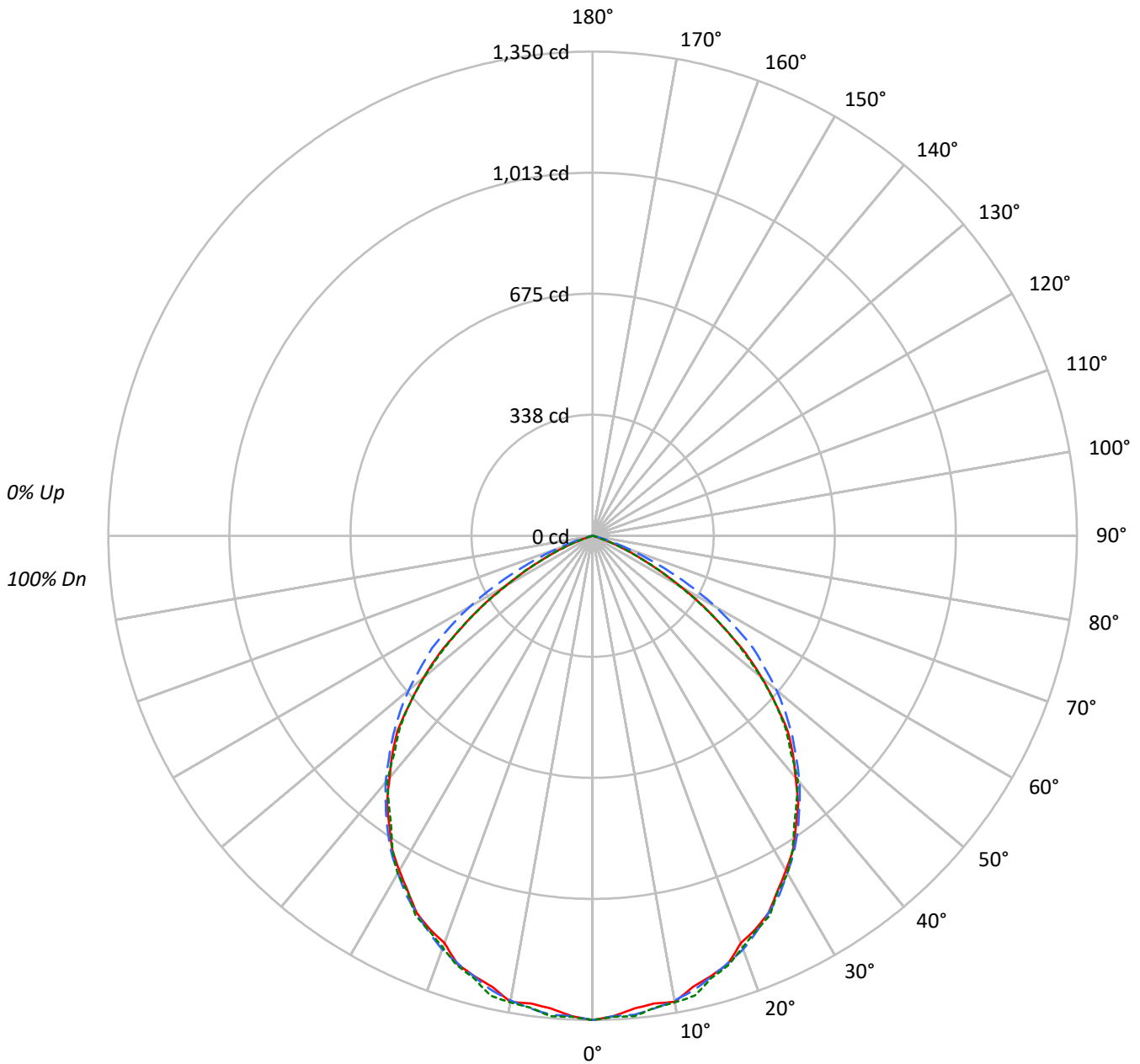
Lumens per Lamp: N/A  
Luminaire Lumens: 2884.0 lumens  
Efficiency: N/A  
Efficacy: 71.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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

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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								
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°	130270	130270	130270
5°	128171	129837	130205
10°	129271	128899	129458
15°	127014	127193	127583
20°	124060	126021	125436
25°	123519	123519	124339
30°	120073	120931	121142
35°	116331	117461	115424
40°	110868	113047	112077
45°	104935	107295	103884
50°	92408	100469	91837
55°	74843	91934	75162
60°	54767	76246	53667
65°	33288	54293	32397
70°	12977	29227	12441
75°	1417	7866	1417
80°	1111	1111	1111
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.4	4.4
10°-20°	360.6	12.5
20°-30°	535.1	18.6
30°-40°	620.0	21.5
40°-50°	594.4	20.6
50°-60°	437.1	15.2
60°-70°	188.8	6.5
70°-80°	20.4	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°	1023.1	35.5
0°-40°	1643.1	57.0
0°-60°	2674.6	92.7
0°-90°	2884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2884.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1323	1337	1340	1342	1344	126
15°	1272	1279	1273	1275	1277	358
25°	1160	1158	1160	1162	1168	531
35°	988	993	997	995	980	618
45°	769	771	786	775	761	585
55°	445	491	546	489	447	400
65°	146	182	238	180	142	150
75°	4	6	21	4	4	12
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°	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1
2.5°	1340.5	1355.8	1357.8	1348.1	1344.3	1338.6	1352.0	1342.4	1346.3	1342.4	1340.5
5°	1323.3	1340.5	1342.4	1342.4	1338.6	1336.6	1342.4	1340.5	1338.6	1334.8	1340.5
7.5°	1315.6	1325.1	1334.8	1323.3	1329.0	1327.1	1340.5	1334.8	1332.8	1332.8	1329.0
10°	1319.4	1317.5	1325.1	1313.6	1317.5	1313.6	1325.1	1325.1	1321.3	1317.5	1315.6
12.5°	1288.7	1304.0	1304.0	1302.1	1298.3	1292.5	1304.0	1311.7	1300.2	1300.2	1298.3
15°	1271.5	1275.3	1277.2	1277.2	1275.3	1279.1	1284.8	1277.2	1279.1	1269.5	1273.3
17.5°	1252.3	1244.6	1250.3	1246.5	1248.5	1252.3	1260.0	1260.0	1248.5	1246.5	1250.3
20°	1208.2	1231.2	1233.1	1221.6	1223.5	1223.5	1236.9	1225.4	1233.1	1223.5	1227.3
22.5°	1187.0	1202.4	1204.3	1189.0	1198.5	1187.0	1200.5	1183.2	1202.4	1189.0	1194.7
25°	1160.2	1158.3	1164.0	1156.4	1158.3	1158.3	1167.9	1160.2	1166.0	1158.3	1160.2
27.5°	1116.1	1131.5	1129.5	1121.9	1125.7	1123.8	1143.0	1121.9	1133.4	1123.8	1127.6
30°	1077.7	1091.2	1087.3	1079.7	1079.7	1073.9	1095.0	1089.2	1087.3	1087.3	1085.4
32.5°	1039.4	1041.3	1037.5	1039.4	1041.3	1033.7	1050.9	1043.2	1041.3	1043.2	1045.2
35°	987.6	987.6	991.4	985.7	993.4	993.4	1008.7	999.1	997.2	991.4	997.2
37.5°	941.6	935.9	937.7	937.7	941.6	945.4	953.1	949.2	949.2	943.5	947.4
40°	880.2	876.4	882.1	882.1	887.9	887.9	895.6	891.7	897.5	897.5	897.5
42.5°	826.6	826.6	822.7	828.4	830.4	828.4	841.9	839.9	841.9	838.1	839.9
45°	769.0	769.0	765.1	763.3	772.8	770.9	786.3	780.5	788.1	784.3	786.3
47.5°	690.3	700.0	694.2	700.0	711.5	713.4	723.0	719.1	726.8	721.1	728.8
50°	615.6	615.6	621.3	629.0	640.5	642.5	654.0	661.6	665.5	667.3	669.3
52.5°	537.0	535.0	540.8	550.4	560.0	567.7	579.2	590.7	598.3	609.8	604.0
55°	444.9	448.7	454.5	466.0	481.4	490.9	500.5	515.9	529.3	535.0	546.5
57.5°	366.3	362.4	366.3	381.6	398.9	406.6	420.0	435.3	454.5	466.0	469.9
60°	283.8	285.7	289.6	303.0	316.4	327.9	333.7	358.6	375.9	387.4	395.1
62.5°	209.1	212.9	216.7	228.2	241.6	251.2	260.8	281.9	297.2	308.7	316.4
65°	145.8	147.6	153.4	159.1	172.6	182.2	189.8	207.1	222.4	232.1	237.8
67.5°	90.1	92.0	95.8	103.6	113.1	120.8	128.5	140.0	153.4	163.0	164.9
70°	46.0	48.0	49.8	55.6	63.3	67.1	72.8	82.5	92.0	99.7	103.6
72.5°	15.3	15.3	17.3	21.1	25.0	28.8	30.7	40.3	48.0	51.8	53.7
75°	3.8	3.8	3.8	3.8	3.8	5.8	5.8	11.5	15.3	19.2	21.1
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.8	3.8
80°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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°	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1	1350.1
2.5°	1350.1	1346.3	1344.3	1346.3	1346.3	1344.3	1350.1	1357.8	1367.3	1342.4
5°	1348.1	1344.3	1348.1	1336.6	1342.4	1338.6	1346.3	1344.3	1352.0	1344.3
7.5°	1342.4	1334.8	1336.6	1330.9	1338.6	1329.0	1334.8	1346.3	1338.6	1327.1
10°	1323.3	1319.4	1332.8	1313.6	1309.8	1317.5	1332.8	1321.3	1317.5	1321.3
12.5°	1304.0	1304.0	1309.8	1294.5	1296.3	1300.2	1307.8	1300.2	1304.0	1313.6
15°	1283.0	1279.1	1288.7	1277.2	1275.3	1271.5	1279.1	1279.1	1283.0	1277.2
17.5°	1258.0	1252.3	1252.3	1248.5	1246.5	1256.1	1260.0	1261.8	1263.8	1256.1
20°	1227.3	1225.4	1231.2	1225.4	1227.3	1229.3	1229.3	1225.4	1242.7	1221.6
22.5°	1194.7	1200.5	1192.8	1189.0	1192.8	1196.7	1196.7	1198.5	1194.7	1190.9
25°	1162.1	1166.0	1167.9	1156.4	1162.1	1156.4	1169.8	1171.7	1164.0	1167.9
27.5°	1133.4	1127.6	1125.7	1118.0	1121.9	1120.0	1121.9	1121.9	1133.4	1118.0
30°	1089.2	1083.5	1085.4	1079.7	1081.6	1079.7	1081.6	1081.6	1089.2	1087.3
32.5°	1047.1	1041.3	1043.2	1037.5	1037.5	1039.4	1035.6	1035.6	1041.3	1037.5
35°	1006.8	993.4	995.3	993.4	995.3	987.6	987.6	985.7	989.5	979.9
37.5°	949.2	943.5	941.6	939.7	941.6	937.7	941.6	935.9	941.6	933.9
40°	897.5	893.6	895.6	884.1	884.1	886.0	882.1	880.2	882.1	889.8
42.5°	845.7	838.1	834.2	830.4	832.3	826.6	824.6	820.8	824.6	816.9
45°	784.3	784.3	782.4	772.8	774.8	774.8	767.1	759.4	761.3	761.3
47.5°	728.8	724.9	723.0	713.4	711.5	709.6	701.8	696.1	696.1	690.3
50°	667.3	663.5	657.8	648.2	644.3	632.8	627.1	619.5	611.8	611.8
52.5°	609.8	596.4	588.7	573.4	567.7	561.9	546.5	540.8	535.0	529.3
55°	540.8	529.3	514.0	496.7	489.0	479.4	464.1	452.6	444.9	446.8
57.5°	473.7	454.5	439.2	416.2	406.6	400.8	385.4	370.1	362.4	362.4
60°	391.2	375.9	356.7	335.6	327.9	318.4	299.1	289.6	283.8	278.1
62.5°	312.6	301.1	283.8	257.0	251.2	241.6	228.2	216.7	210.9	210.9
65°	233.9	222.4	207.1	187.9	180.3	172.6	161.1	149.6	143.8	141.9
67.5°	164.9	151.5	138.1	122.8	117.0	113.1	101.6	94.0	90.1	88.2
70°	99.7	92.0	82.5	71.0	65.2	61.3	53.7	48.0	46.0	44.1
72.5°	51.8	46.0	38.3	30.7	26.8	23.0	19.2	15.3	13.5	13.5
75°	19.2	15.3	9.6	5.8	3.8	3.8	3.8	3.8	3.8	3.8
77.5°	3.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)