

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: P840172

Luminaire Tested: **LD4C35D010 EU4359035 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: P840172
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 EU4359035 4LBCSSQMMS
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

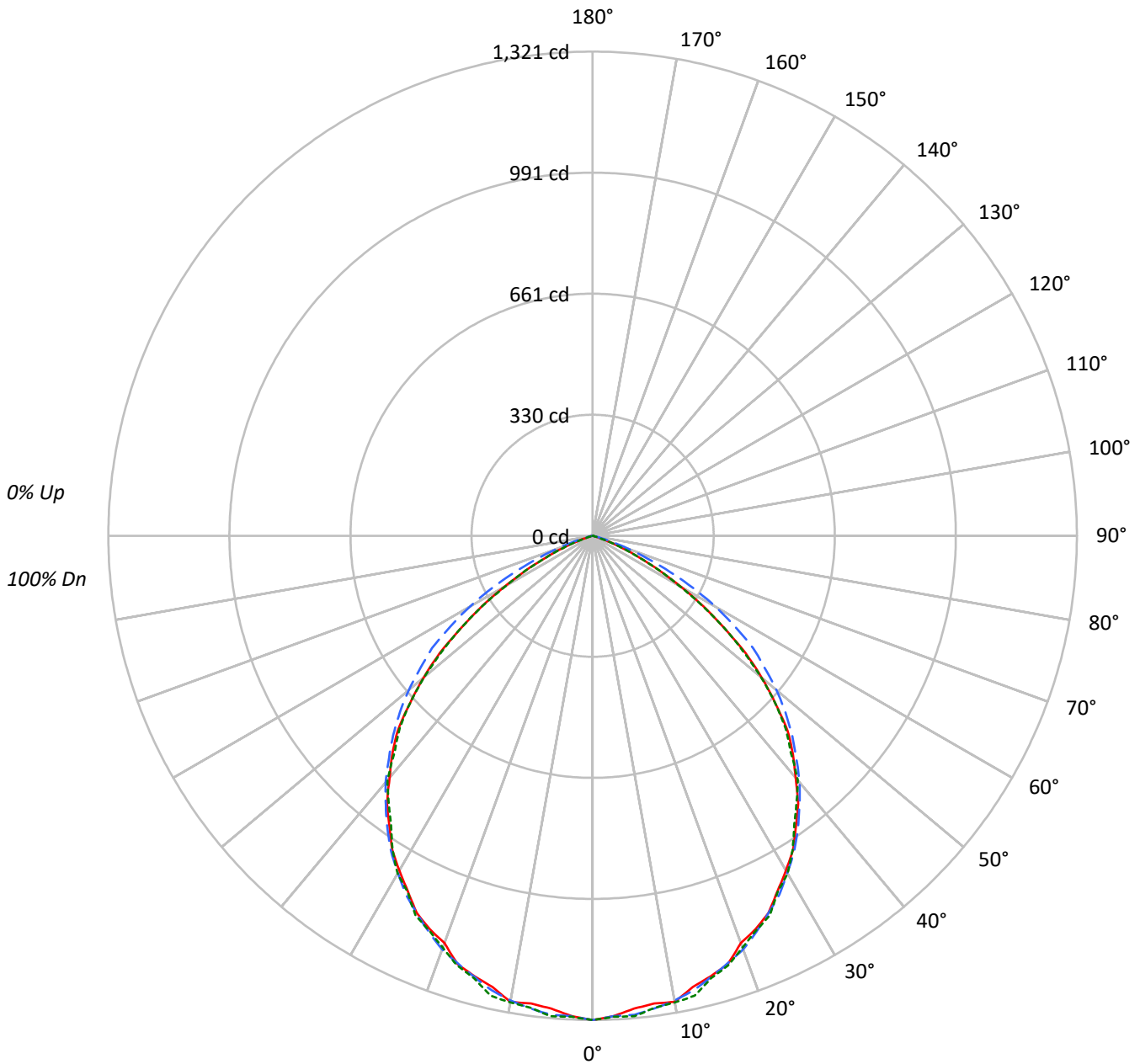
Lumens per Lamp: N/A
Luminaire Lumens: 2822.0 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

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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°	127471	127471	127471
5°	125411	127038	127406
10°	126499	126126	126675
15°	124276	124466	124836
20°	121390	123310	122745
25°	120868	120868	121667
30°	117499	118335	118546
35°	113833	114941	112950
40°	108487	110616	109671
45°	102669	104989	101646
50°	90426	98307	89856
55°	73228	89966	73547
60°	53590	74605	52509
65°	32557	53128	31713
70°	12695	28606	12187
75°	1417	7717	1417
80°	1056	1056	1056
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.7	4.4
10°-20°	352.9	12.5
20°-30°	523.6	18.6
30°-40°	606.7	21.5
40°-50°	581.7	20.6
50°-60°	427.7	15.2
60°-70°	184.7	6.5
70°-80°	19.9	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°	1001.1	35.5
0°-40°	1607.8	57.0
0°-60°	2617.1	92.7
0°-90°	2822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2822.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1321	1321	1321	1321	1321	
5°	1295	1308	1312	1314	1315	124
15°	1244	1252	1246	1248	1250	351
25°	1135	1133	1135	1137	1143	520
35°	966	972	976	974	959	604
45°	752	754	769	758	745	572
55°	435	480	535	478	437	392
65°	143	178	233	176	139	147
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°	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1
2.5°	1311.6	1326.7	1328.6	1319.2	1315.4	1309.8	1322.9	1313.6	1317.3	1313.6	1311.6
5°	1294.8	1311.6	1313.6	1313.6	1309.8	1307.9	1313.6	1311.6	1309.8	1306.1	1311.6
7.5°	1287.3	1296.6	1306.1	1294.8	1300.4	1298.6	1311.6	1306.1	1304.1	1304.1	1300.4
10°	1291.1	1289.1	1296.6	1285.4	1289.1	1285.4	1296.6	1296.6	1292.9	1289.1	1287.3
12.5°	1261.0	1276.0	1276.0	1274.1	1270.4	1264.7	1276.0	1283.5	1272.2	1272.2	1270.4
15°	1244.1	1247.9	1249.7	1249.7	1247.9	1251.6	1257.2	1249.7	1251.6	1242.2	1246.0
17.5°	1225.4	1217.9	1223.5	1219.7	1221.6	1225.4	1232.9	1232.9	1221.6	1219.7	1223.5
20°	1182.2	1204.7	1206.6	1195.4	1197.2	1197.2	1210.4	1199.1	1206.6	1197.2	1200.9
22.5°	1161.5	1176.5	1178.4	1163.4	1172.8	1161.5	1174.7	1157.8	1176.5	1163.4	1169.0
25°	1135.3	1133.4	1139.0	1131.5	1133.4	1133.4	1142.8	1135.3	1140.9	1133.4	1135.3
27.5°	1092.1	1107.2	1105.2	1097.7	1101.5	1099.6	1118.4	1097.7	1109.0	1099.6	1103.4
30°	1054.6	1067.7	1064.0	1056.5	1056.5	1050.8	1071.5	1065.8	1064.0	1064.0	1062.1
32.5°	1017.0	1019.0	1015.2	1017.0	1019.0	1011.5	1028.3	1020.8	1019.0	1020.8	1022.7
35°	966.4	966.4	970.1	964.5	972.0	972.0	987.0	977.6	975.8	970.1	975.8
37.5°	921.3	915.7	917.6	917.6	921.3	925.1	932.6	928.8	928.8	923.3	927.0
40°	861.3	857.6	863.2	863.2	868.8	868.8	876.3	872.6	878.2	878.2	878.2
42.5°	808.8	808.8	805.0	810.6	812.5	810.6	823.8	821.9	823.8	820.0	821.9
45°	752.4	752.4	748.7	746.9	756.2	754.4	769.4	763.7	771.2	767.5	769.4
47.5°	675.5	684.9	679.3	684.9	696.2	698.1	707.4	703.7	711.2	705.6	713.1
50°	602.4	602.4	608.0	615.5	626.7	628.6	639.9	647.4	651.2	653.0	654.9
52.5°	525.4	523.5	529.2	538.5	547.9	555.5	566.7	578.0	585.5	596.7	591.1
55°	435.3	439.1	444.7	456.0	471.0	480.3	489.8	504.8	517.9	523.5	534.8
57.5°	358.4	354.6	358.4	373.4	390.3	397.8	411.0	426.0	444.7	456.0	459.8
60°	277.7	279.6	283.4	296.5	309.6	320.9	326.5	350.9	367.8	379.1	386.6
62.5°	204.6	208.3	212.1	223.3	236.4	245.8	255.2	275.9	290.9	302.1	309.6
65°	142.6	144.5	150.1	155.7	168.9	178.2	185.7	202.7	217.7	227.1	232.7
67.5°	88.2	90.0	93.8	101.4	110.7	118.2	125.7	137.0	150.1	159.5	161.4
70°	45.0	46.9	48.8	54.4	61.9	65.7	71.3	80.7	90.0	97.5	101.4
72.5°	15.0	15.0	16.9	20.7	24.4	28.2	30.0	39.4	46.9	50.7	52.5
75°	3.8	3.8	3.8	3.8	3.8	5.7	5.7	11.3	15.0	18.8	20.7
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	3.8
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°	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1	1321.1
2.5°	1321.1	1317.3	1315.4	1317.3	1317.3	1315.4	1321.1	1328.6	1337.9	1313.6
5°	1319.2	1315.4	1319.2	1307.9	1313.6	1309.8	1317.3	1315.4	1322.9	1315.4
7.5°	1313.6	1306.1	1307.9	1302.3	1309.8	1300.4	1306.1	1317.3	1309.8	1298.6
10°	1294.8	1291.1	1304.1	1285.4	1281.6	1289.1	1304.1	1292.9	1289.1	1292.9
12.5°	1276.0	1276.0	1281.6	1266.6	1268.5	1272.2	1279.7	1272.2	1276.0	1285.4
15°	1255.4	1251.6	1261.0	1249.7	1247.9	1244.1	1251.6	1251.6	1255.4	1249.7
17.5°	1231.0	1225.4	1225.4	1221.6	1219.7	1229.1	1232.9	1234.7	1236.6	1229.1
20°	1200.9	1199.1	1204.7	1199.1	1200.9	1202.9	1202.9	1199.1	1215.9	1195.4
22.5°	1169.0	1174.7	1167.2	1163.4	1167.2	1170.9	1170.9	1172.8	1169.0	1165.3
25°	1137.2	1140.9	1142.8	1131.5	1137.2	1131.5	1144.7	1146.5	1139.0	1142.8
27.5°	1109.0	1103.4	1101.5	1094.0	1097.7	1095.9	1097.7	1097.7	1109.0	1094.0
30°	1065.8	1060.2	1062.1	1056.5	1058.3	1056.5	1058.3	1058.3	1065.8	1064.0
32.5°	1024.5	1019.0	1020.8	1015.2	1015.2	1017.0	1013.3	1013.3	1019.0	1015.2
35°	985.1	972.0	973.9	972.0	973.9	966.4	966.4	964.5	968.3	958.9
37.5°	928.8	923.3	921.3	919.5	921.3	917.6	921.3	915.7	921.3	913.8
40°	878.2	874.4	876.3	865.1	865.1	866.9	863.2	861.3	863.2	870.7
42.5°	827.6	820.0	816.3	812.5	814.4	808.8	806.9	803.1	806.9	799.4
45°	767.5	767.5	765.6	756.2	758.1	758.1	750.6	743.1	744.9	744.9
47.5°	713.1	709.3	707.4	698.1	696.2	694.3	686.8	681.2	681.2	675.5
50°	653.0	649.2	643.7	634.2	630.5	619.2	613.6	606.1	598.6	598.6
52.5°	596.7	583.6	576.0	561.0	555.5	549.8	534.8	529.2	523.5	517.9
55°	529.2	517.9	502.9	486.0	478.5	469.1	454.1	442.8	435.3	437.2
57.5°	463.5	444.7	429.7	407.2	397.8	392.1	377.1	362.1	354.6	354.6
60°	382.8	367.8	349.0	328.4	320.9	311.5	292.7	283.4	277.7	272.1
62.5°	305.9	294.6	277.7	251.4	245.8	236.4	223.3	212.1	206.4	206.4
65°	228.9	217.7	202.7	183.9	176.4	168.9	157.6	146.4	140.7	138.9
67.5°	161.4	148.2	135.1	120.1	114.5	110.7	99.5	92.0	88.2	86.3
70°	97.5	90.0	80.7	69.4	63.8	60.0	52.5	46.9	45.0	43.2
72.5°	50.7	45.0	37.5	30.0	26.3	22.5	18.8	15.0	13.2	13.2
75°	18.8	15.0	9.4	5.7	3.8	3.8	3.8	3.8	3.8	3.8
77.5°	3.8	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)