

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: P840177

Luminaire Tested: **LD4C35D010 EU4359050 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: P840177
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 4LBCSSQMW
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MW FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

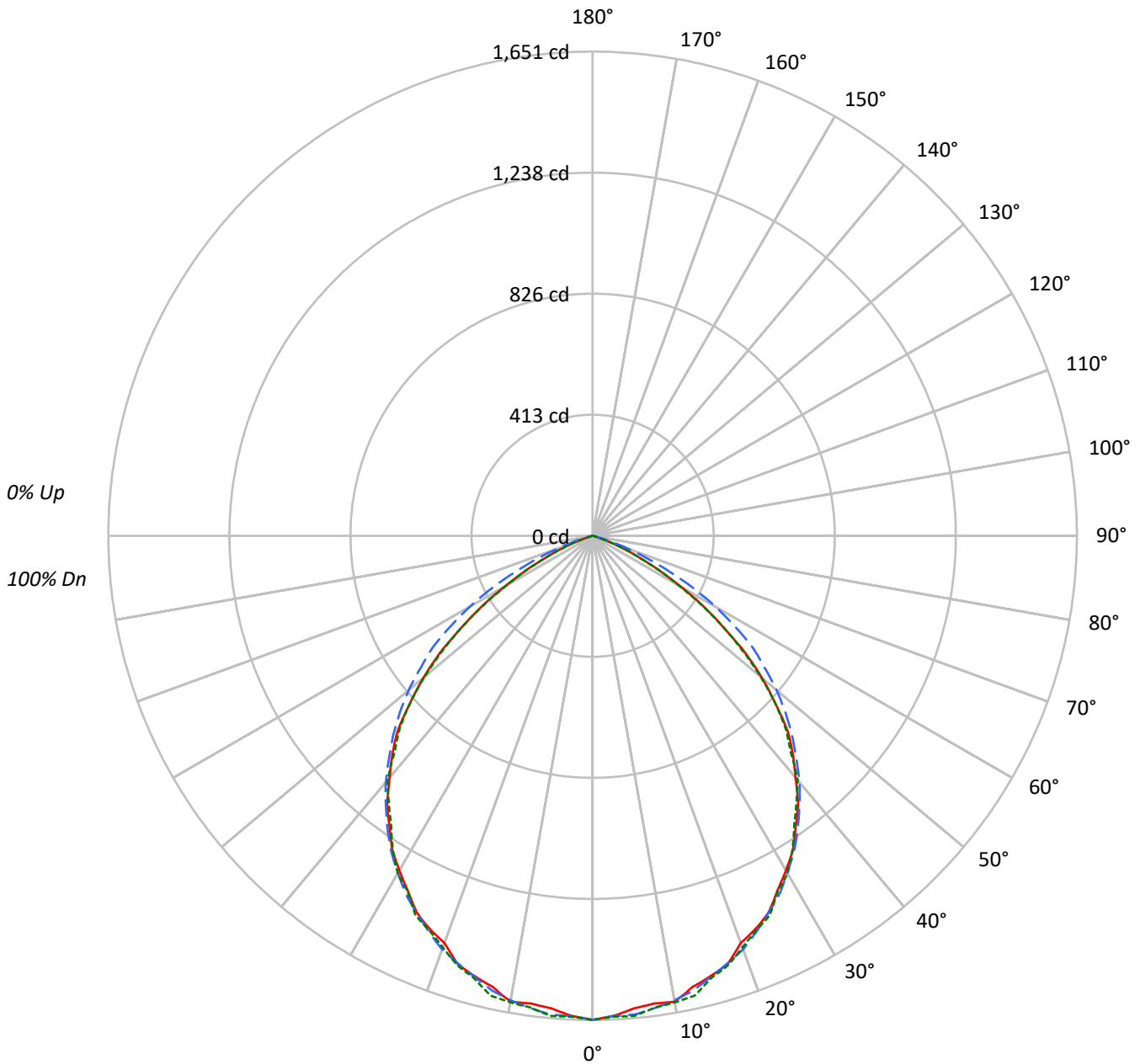
Lumens per Lamp: N/A
Luminaire Lumens: 3526.0 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
Input Voltage (V):
Input Current (A_{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									
RC	80									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°	159265	159265	159265
5°	156696	158740	159195
10°	158047	157587	158273
15°	155283	155513	155982
20°	151671	154073	153365
25°	151019	151019	152009
30°	146801	147849	148116
35°	142221	143611	141126
40°	135555	138200	137029
45°	128296	131175	127013
50°	112988	122835	112282
55°	91497	112407	91900
60°	66963	93208	65612
65°	40685	66370	39612
70°	15855	35744	15234
75°	1752	9618	1752
80°	1334	1334	1334
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.8	4.4
10°-20°	440.9	12.5
20°-30°	654.2	18.6
30°-40°	758.0	21.5
40°-50°	726.8	20.6
50°-60°	534.3	15.2
60°-70°	230.8	6.5
70°-80°	24.9	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°	1250.9	35.5
0°-40°	2008.9	57.0
0°-60°	3270.0	92.7
0°-90°	3526.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3526.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1651	1651	1651	1651	1651	
5°	1618	1634	1639	1641	1644	154
15°	1554	1564	1557	1559	1562	438
25°	1418	1416	1418	1421	1428	649
35°	1207	1214	1219	1217	1198	755
45°	940	942	961	947	931	715
55°	544	600	668	598	546	489
65°	178	223	291	220	174	183
75°	5	7	26	5	5	14
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°	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6
2.5°	1638.9	1657.6	1660.0	1648.2	1643.6	1636.6	1652.9	1641.3	1645.9	1641.3	1638.9
5°	1617.8	1638.9	1641.3	1641.3	1636.6	1634.2	1641.3	1638.9	1636.6	1631.9	1638.9
7.5°	1608.4	1620.1	1631.9	1617.8	1624.8	1622.5	1638.9	1631.9	1629.5	1629.5	1624.8
10°	1613.1	1610.7	1620.1	1606.1	1610.7	1606.1	1620.1	1620.1	1615.4	1610.7	1608.4
12.5°	1575.5	1594.3	1594.3	1592.0	1587.3	1580.2	1594.3	1603.8	1589.6	1589.6	1587.3
15°	1554.5	1559.2	1561.5	1561.5	1559.2	1563.9	1570.9	1561.5	1563.9	1552.1	1556.8
17.5°	1531.1	1521.7	1528.7	1524.0	1526.4	1531.1	1540.4	1540.4	1526.4	1524.0	1528.7
20°	1477.1	1505.2	1507.6	1493.6	1495.9	1495.9	1512.3	1498.2	1507.6	1495.9	1500.5
22.5°	1451.3	1470.0	1472.4	1453.7	1465.3	1451.3	1467.7	1446.6	1470.0	1453.7	1460.6
25°	1418.5	1416.2	1423.1	1413.8	1416.2	1416.2	1427.8	1418.5	1425.5	1416.2	1418.5
27.5°	1364.6	1383.4	1381.0	1371.6	1376.3	1374.0	1397.4	1371.6	1385.7	1374.0	1378.7
30°	1317.6	1334.1	1329.4	1320.0	1320.0	1312.9	1338.8	1331.7	1329.4	1329.4	1327.0
32.5°	1270.8	1273.2	1268.5	1270.8	1273.2	1263.8	1284.8	1275.4	1273.2	1275.4	1277.8
35°	1207.4	1207.4	1212.1	1205.1	1214.5	1214.5	1233.3	1221.5	1219.2	1212.1	1219.2
37.5°	1151.2	1144.2	1146.5	1146.5	1151.2	1155.9	1165.2	1160.6	1160.6	1153.6	1158.3
40°	1076.2	1071.5	1078.5	1078.5	1085.6	1085.6	1094.9	1090.2	1097.2	1097.2	1097.2
42.5°	1010.6	1010.6	1005.9	1012.9	1015.2	1012.9	1029.3	1026.9	1029.3	1024.6	1026.9
45°	940.2	940.2	935.5	933.2	944.8	942.5	961.3	954.2	963.6	958.9	961.3
47.5°	844.0	855.8	848.7	855.8	869.8	872.2	883.9	879.2	888.6	881.6	891.0
50°	752.7	752.7	759.6	769.0	783.1	785.5	799.5	808.9	813.6	815.9	818.3
52.5°	656.5	654.1	661.2	672.9	684.6	694.0	708.1	722.1	731.5	745.6	738.5
55°	543.9	548.6	555.7	569.8	588.5	600.2	611.9	630.7	647.1	654.1	668.2
57.5°	447.8	443.1	447.8	466.5	487.7	497.1	513.5	532.3	555.7	569.8	574.4
60°	347.0	349.4	354.0	370.5	386.9	400.9	408.0	438.4	459.6	473.6	483.0
62.5°	255.6	260.3	265.0	279.0	295.4	307.2	318.8	344.7	363.4	377.5	386.9
65°	178.2	180.5	187.6	194.6	211.0	222.7	232.1	253.2	272.0	283.7	290.7
67.5°	110.2	112.5	117.2	126.7	138.3	147.7	157.1	171.1	187.6	199.3	201.7
70°	56.2	58.6	60.9	68.0	77.4	82.1	89.1	100.8	112.5	121.9	126.7
72.5°	18.7	18.7	21.1	25.8	30.5	35.2	37.5	49.3	58.6	63.3	65.6
75°	4.7	4.7	4.7	4.7	4.7	7.1	7.1	14.1	18.7	23.4	25.8
77.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	4.7	4.7
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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°	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6	1650.6
2.5°	1650.6	1645.9	1643.6	1645.9	1645.9	1643.6	1650.6	1660.0	1671.7	1641.3
5°	1648.2	1643.6	1648.2	1634.2	1641.3	1636.6	1645.9	1643.6	1652.9	1643.6
7.5°	1641.3	1631.9	1634.2	1627.2	1636.6	1624.8	1631.9	1645.9	1636.6	1622.5
10°	1617.8	1613.1	1629.5	1606.1	1601.4	1610.7	1629.5	1615.4	1610.7	1615.4
12.5°	1594.3	1594.3	1601.4	1582.6	1584.9	1589.6	1599.0	1589.6	1594.3	1606.1
15°	1568.6	1563.9	1575.5	1561.5	1559.2	1554.5	1563.9	1563.9	1568.6	1561.5
17.5°	1538.0	1531.1	1531.1	1526.4	1524.0	1535.7	1540.4	1542.7	1545.1	1535.7
20°	1500.5	1498.2	1505.2	1498.2	1500.5	1502.9	1502.9	1498.2	1519.3	1493.6
22.5°	1460.6	1467.7	1458.4	1453.7	1458.4	1463.0	1463.0	1465.3	1460.6	1456.0
25°	1420.9	1425.5	1427.8	1413.8	1420.9	1413.8	1430.2	1432.5	1423.1	1427.8
27.5°	1385.7	1378.7	1376.3	1366.9	1371.6	1369.3	1371.6	1371.6	1385.7	1366.9
30°	1331.7	1324.7	1327.0	1320.0	1322.3	1320.0	1322.3	1322.3	1331.7	1329.4
32.5°	1280.1	1273.2	1275.4	1268.5	1268.5	1270.8	1266.1	1266.1	1273.2	1268.5
35°	1230.9	1214.5	1216.8	1214.5	1216.8	1207.4	1207.4	1205.1	1209.8	1198.1
37.5°	1160.6	1153.6	1151.2	1148.9	1151.2	1146.5	1151.2	1144.2	1151.2	1141.8
40°	1097.2	1092.5	1094.9	1080.9	1080.9	1083.2	1078.5	1076.2	1078.5	1087.9
42.5°	1034.0	1024.6	1019.9	1015.2	1017.5	1010.6	1008.2	1003.5	1008.2	998.8
45°	958.9	958.9	956.6	944.8	947.2	947.2	937.9	928.5	930.8	930.8
47.5°	891.0	886.3	883.9	872.2	869.8	867.5	858.1	851.1	851.1	844.0
50°	815.9	811.2	804.2	792.5	787.8	773.7	766.7	757.3	748.0	748.0
52.5°	745.6	729.1	719.8	701.0	694.0	686.9	668.2	661.2	654.1	647.1
55°	661.2	647.1	628.4	607.3	597.9	586.1	567.4	553.3	543.9	546.3
57.5°	579.1	555.7	536.9	508.8	497.1	490.0	471.2	452.5	443.1	443.1
60°	478.3	459.6	436.1	410.3	400.9	389.2	365.7	354.0	347.0	340.0
62.5°	382.2	368.1	347.0	314.2	307.2	295.4	279.0	265.0	257.9	257.9
65°	286.0	272.0	253.2	229.8	220.4	211.0	197.0	182.9	175.8	173.5
67.5°	201.7	185.2	168.8	150.1	143.0	138.3	124.3	114.9	110.2	107.8
70°	121.9	112.5	100.8	86.8	79.7	75.0	65.6	58.6	56.2	54.0
72.5°	63.3	56.2	46.9	37.5	32.8	28.1	23.4	18.7	16.5	16.5
75°	23.4	18.7	11.8	7.1	4.7	4.7	4.7	4.7	4.7	4.7
77.5°	4.7	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)