

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: P563840

Luminaire Tested: **LD4C45D010 EX4C459030 4LBCSSQMMS**

Issue Date: 5/25/2022



Test Information

Test Method: LM-79-08
Report Number: P563840
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: LD4C45D010 EX4C459030 4LBCSSQMMS
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

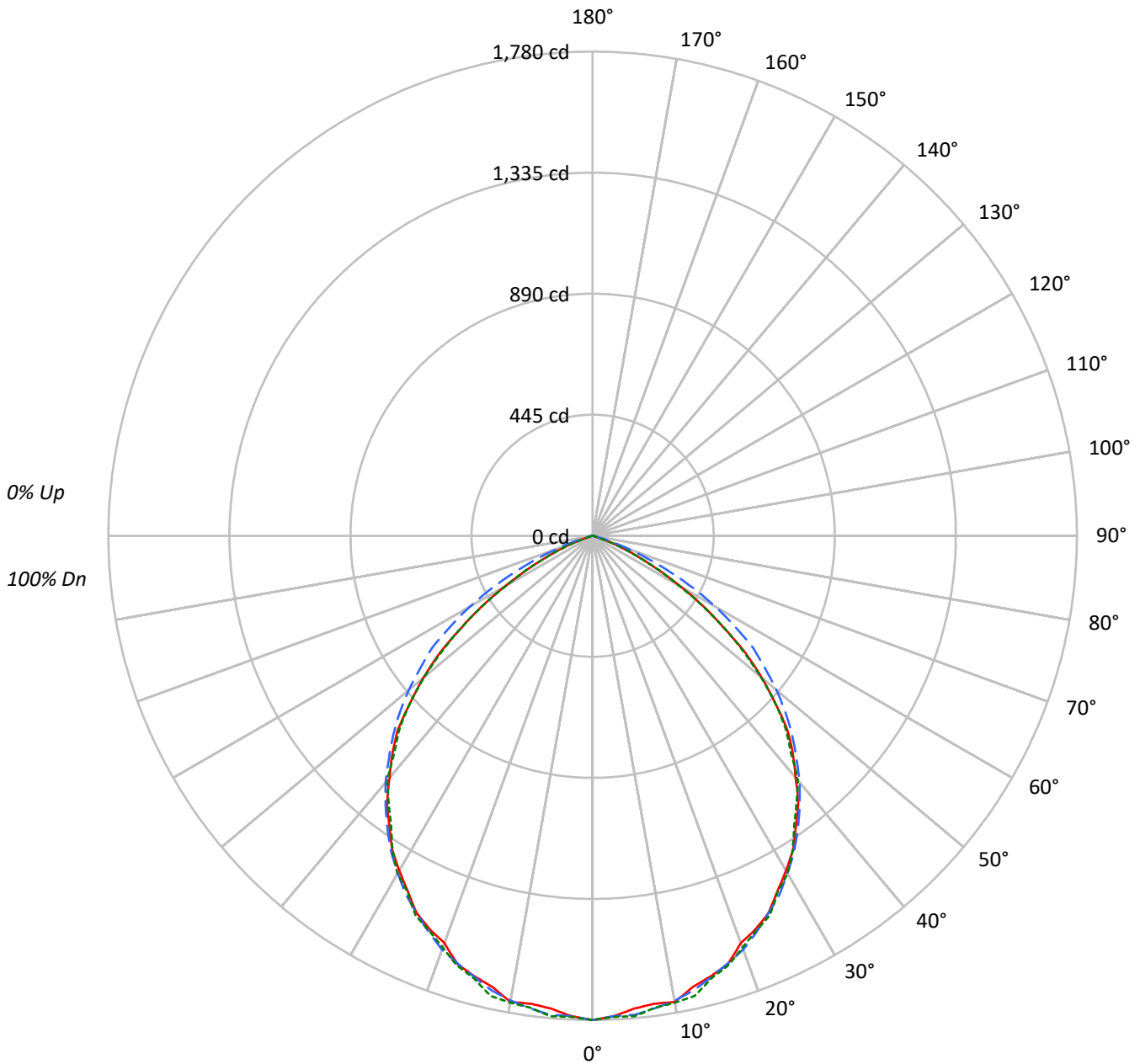
Lumens per Lamp: N/A
Luminaire Lumens: 3803.3 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
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: P563840

CATALOG NUMBER: LD4C45D010 EX4C459030 4LBCSSQMMS

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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				100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89				89
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67				67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59				59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				52
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41				41
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	171789	171789	171789
5°	169016	171225	171709
10°	170481	169981	170726
15°	167500	167740	168249
20°	163592	166200	165420
25°	162889	162889	163965
30°	158344	159481	159759
35°	153411	154895	152222
40°	146211	149070	147798
45°	138380	141491	137002
50°	121859	132487	121109
55°	98697	121255	99134
60°	72212	100541	70765
65°	43904	71599	42740
70°	17096	38537	16419
75°	1901	10401	1901
80°	1389	1389	1389
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.1	4.4
10°-20°	475.6	12.5
20°-30°	705.6	18.6
30°-40°	817.6	21.5
40°-50°	783.9	20.6
50°-60°	576.4	15.2
60°-70°	248.9	6.5
70°-80°	26.9	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°	1349.2	35.5
0°-40°	2166.9	57.0
0°-60°	3527.1	92.7
0°-90°	3803.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3803.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1780	1780	1780	1780	1780	
5°	1745	1763	1768	1770	1773	166
15°	1677	1687	1679	1682	1684	473
25°	1530	1528	1530	1533	1540	701
35°	1302	1310	1315	1312	1292	814
45°	1014	1017	1037	1022	1004	771
55°	587	647	721	645	589	528
65°	192	240	314	238	187	198
75°	5	8	28	5	5	16
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°	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4
2.5°	1767.8	1787.9	1790.6	1777.9	1772.8	1765.2	1782.9	1770.3	1775.4	1770.3	1767.8
5°	1745.0	1767.8	1770.3	1770.3	1765.2	1762.7	1770.3	1767.8	1765.2	1760.3	1767.8
7.5°	1734.9	1747.5	1760.3	1745.0	1752.6	1750.1	1767.8	1760.3	1757.6	1757.6	1752.6
10°	1740.0	1737.4	1747.5	1732.4	1737.4	1732.4	1747.5	1747.5	1742.5	1737.4	1734.9
12.5°	1699.4	1719.7	1719.7	1717.2	1712.2	1704.5	1719.7	1729.9	1714.6	1714.6	1712.2
15°	1676.8	1681.8	1684.3	1684.3	1681.8	1686.8	1694.4	1684.3	1686.8	1674.2	1679.2
17.5°	1651.4	1641.4	1648.9	1643.8	1646.4	1651.4	1661.6	1661.6	1646.4	1643.8	1648.9
20°	1593.2	1623.7	1626.2	1611.0	1613.5	1613.5	1631.3	1616.0	1626.2	1613.5	1618.6
22.5°	1565.4	1585.6	1588.3	1568.0	1580.6	1565.4	1583.2	1560.4	1585.6	1568.0	1575.5
25°	1530.0	1527.5	1535.1	1525.0	1527.5	1527.5	1540.1	1530.0	1537.7	1527.5	1530.0
27.5°	1471.9	1492.1	1489.6	1479.4	1484.5	1482.1	1507.3	1479.4	1494.7	1482.1	1487.0
30°	1421.2	1439.0	1433.9	1423.9	1423.9	1416.2	1444.0	1436.4	1433.9	1433.9	1431.4
32.5°	1370.7	1373.3	1368.2	1370.7	1373.3	1363.1	1385.8	1375.8	1373.3	1375.8	1378.3
35°	1302.4	1302.4	1307.4	1299.9	1310.1	1310.1	1330.3	1317.6	1315.0	1307.4	1315.0
37.5°	1241.7	1234.2	1236.7	1236.7	1241.7	1246.8	1256.9	1251.9	1251.9	1244.3	1249.3
40°	1160.8	1155.7	1163.3	1163.3	1170.9	1170.9	1181.1	1176.0	1183.5	1183.5	1183.5
42.5°	1090.0	1090.0	1084.9	1092.5	1095.1	1092.5	1110.3	1107.7	1110.3	1105.2	1107.7
45°	1014.1	1014.1	1009.1	1006.5	1019.1	1016.7	1036.9	1029.3	1039.4	1034.3	1036.9
47.5°	910.4	923.1	915.5	923.1	938.3	940.8	953.4	948.3	958.5	951.0	961.1
50°	811.8	811.8	819.4	829.5	844.7	847.2	862.4	872.6	877.5	880.1	882.6
52.5°	708.2	705.5	713.3	725.8	738.5	748.6	763.8	779.0	789.0	804.2	796.6
55°	586.7	591.8	599.4	614.6	634.8	647.3	660.1	680.3	698.0	705.5	720.8
57.5°	483.0	478.0	483.0	503.2	526.0	536.2	553.9	574.1	599.4	614.6	619.6
60°	374.2	376.9	381.9	399.7	417.3	432.4	440.0	472.9	495.7	510.8	521.0
62.5°	275.7	280.7	285.8	301.0	318.6	331.3	343.9	371.8	392.0	407.2	417.3
65°	192.3	194.7	202.3	209.8	227.6	240.3	250.3	273.1	293.4	306.1	313.6
67.5°	118.9	121.4	126.4	136.6	149.2	159.3	169.5	184.6	202.3	214.9	217.5
70°	60.6	63.3	65.7	73.3	83.5	88.5	96.0	108.7	121.4	131.4	136.6
72.5°	20.2	20.2	22.8	27.9	33.0	37.9	40.5	53.1	63.3	68.4	70.8
75°	5.1	5.1	5.1	5.1	5.1	7.6	7.6	15.2	20.2	25.3	27.9
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.1	5.1
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P563840

CATALOG NUMBER: LD4C45D010 EX4C459030 4LBCSSQMMS

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4	1780.4
2.5°	1780.4	1775.4	1772.8	1775.4	1775.4	1772.8	1780.4	1790.6	1803.2	1770.3
5°	1777.9	1772.8	1777.9	1762.7	1770.3	1765.2	1775.4	1772.8	1782.9	1772.8
7.5°	1770.3	1760.3	1762.7	1755.2	1765.2	1752.6	1760.3	1775.4	1765.2	1750.1
10°	1745.0	1740.0	1757.6	1732.4	1727.3	1737.4	1757.6	1742.5	1737.4	1742.5
12.5°	1719.7	1719.7	1727.3	1707.1	1709.6	1714.6	1724.8	1714.6	1719.7	1732.4
15°	1691.9	1686.8	1699.4	1684.3	1681.8	1676.8	1686.8	1686.8	1691.9	1684.3
17.5°	1659.0	1651.4	1651.4	1646.4	1643.8	1656.5	1661.6	1664.0	1666.7	1656.5
20°	1618.6	1616.0	1623.7	1616.0	1618.6	1621.1	1621.1	1616.0	1638.8	1611.0
22.5°	1575.5	1583.2	1573.0	1568.0	1573.0	1578.1	1578.1	1580.6	1575.5	1570.5
25°	1532.6	1537.7	1540.1	1525.0	1532.6	1525.0	1542.7	1545.2	1535.1	1540.1
27.5°	1494.7	1487.0	1484.5	1474.4	1479.4	1477.0	1479.4	1479.4	1494.7	1474.4
30°	1436.4	1428.9	1431.4	1423.9	1426.3	1423.9	1426.3	1426.3	1436.4	1433.9
32.5°	1380.8	1373.3	1375.8	1368.2	1368.2	1370.7	1365.7	1365.7	1373.3	1368.2
35°	1327.6	1310.1	1312.5	1310.1	1312.5	1302.4	1302.4	1299.9	1305.0	1292.3
37.5°	1251.9	1244.3	1241.7	1239.3	1241.7	1236.7	1241.7	1234.2	1241.7	1231.6
40°	1183.5	1178.4	1181.1	1165.9	1165.9	1168.4	1163.3	1160.8	1163.3	1173.4
42.5°	1115.4	1105.2	1100.1	1095.1	1097.6	1090.0	1087.5	1082.4	1087.5	1077.3
45°	1034.3	1034.3	1031.8	1019.1	1021.8	1021.8	1011.6	1001.5	1004.0	1004.0
47.5°	961.1	956.0	953.4	940.8	938.3	935.8	925.6	918.0	918.0	910.4
50°	880.1	875.0	867.5	854.8	849.8	834.5	827.0	816.9	806.8	806.8
52.5°	804.2	786.5	776.3	756.2	748.6	740.9	720.8	713.3	705.5	698.0
55°	713.3	698.0	677.9	655.0	644.9	632.2	611.9	596.8	586.7	589.3
57.5°	624.7	599.4	579.2	548.9	536.2	528.5	508.3	488.1	478.0	478.0
60°	515.9	495.7	470.5	442.6	432.4	419.9	394.5	381.9	374.2	366.7
62.5°	412.3	397.0	374.2	338.8	331.3	318.6	301.0	285.8	278.2	278.2
65°	308.5	293.4	273.1	247.9	237.7	227.6	212.5	197.3	189.6	187.2
67.5°	217.5	199.8	182.1	161.9	154.3	149.2	134.1	123.9	118.9	116.3
70°	131.4	121.4	108.7	93.6	86.0	80.9	70.8	63.3	60.6	58.2
72.5°	68.4	60.6	50.6	40.5	35.4	30.3	25.3	20.2	17.7	17.7
75°	25.3	20.2	12.7	7.6	5.1	5.1	5.1	5.1	5.1	5.1
77.5°	5.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)