

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: FAIL-SAFE

Report Number: P835286

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835286
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-3STD-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

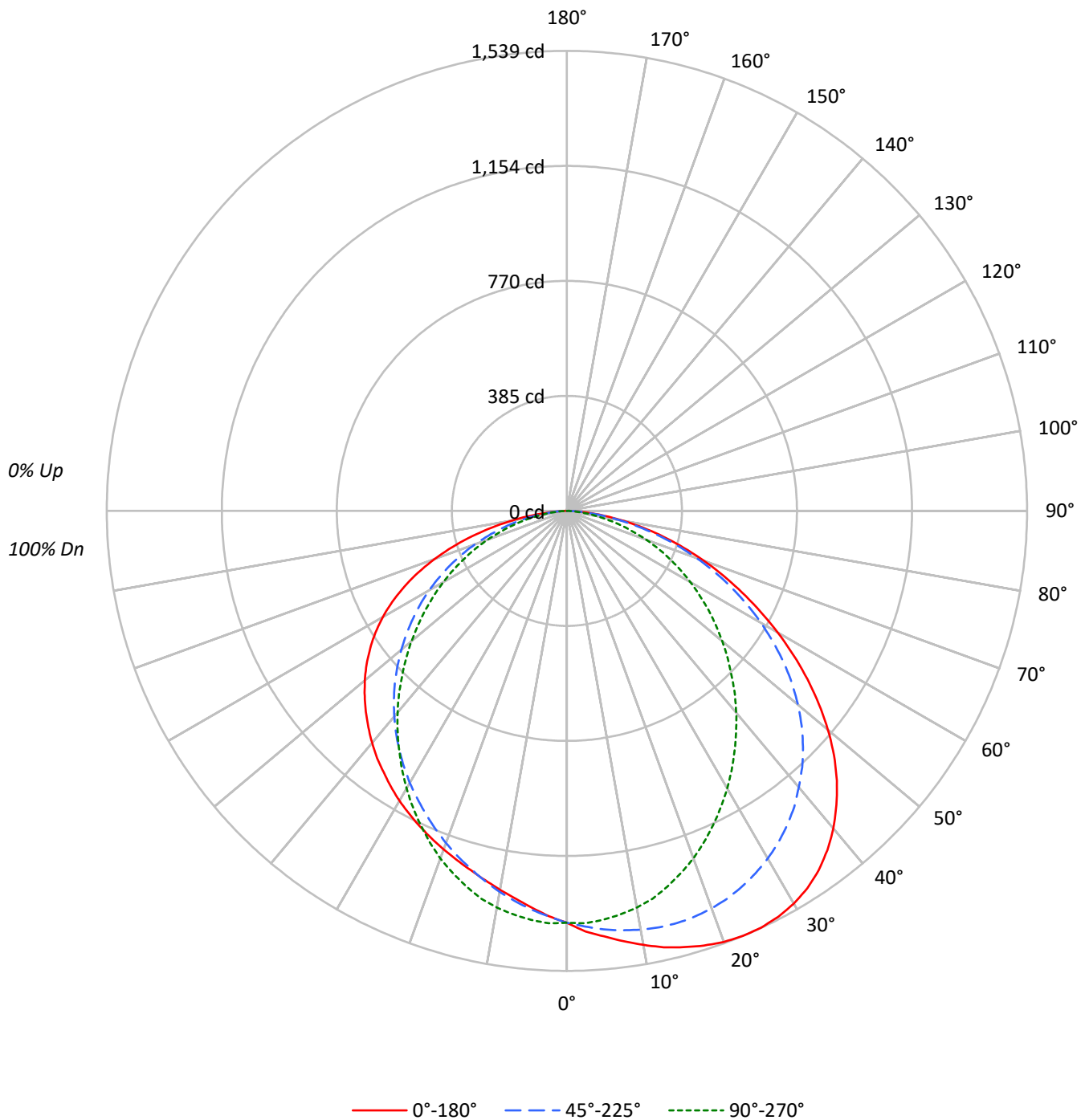
Lumens per Lamp: N/A
Luminaire Lumens: 4052.8 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
Input Voltage (V): 120
Input Current (Ain): 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: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3708	3708	3708
5°	3860	3710	3600
10°	4029	3682	3516
15°	4210	3623	3466
20°	4394	3543	3451
25°	4567	3440	3457
30°	4715	3332	3479
35°	4823	3213	3508
40°	4872	3094	3560
45°	4858	2964	3618
50°	4772	2839	3693
55°	4609	2708	3770
60°	4384	2569	3827
65°	4117	2413	3822
70°	3832	2225	3708
75°	3479	1954	3420
80°	2986	1605	2884
85°	2279	1096	1979

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	3.2
10°-20°	377.4	9.3
20°-30°	578.1	14.3
30°-40°	705.5	17.4
40°-50°	737.8	18.2
50°-60°	667.8	16.5
60°-70°	505.7	12.5
70°-80°	281.8	7.0
80°-90°	68.0	1.7
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°	1086.1	26.8
0°-40°	1791.7	44.2
0°-60°	3197.2	78.9
0°-90°	4052.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4052.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1378	1378	1378	1378	1378	
5°	1429	1405	1373	1340	1333	138
15°	1511	1427	1300	1240	1244	429
25°	1538	1387	1158	1118	1164	710
35°	1468	1284	978	977	1068	917
45°	1277	1117	779	813	951	982
55°	982	887	577	628	804	877
65°	647	608	379	431	600	641
75°	335	316	188	224	329	355
85°	74	65	36	48	64	89
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8
2.5°	1408.2	1401.6	1396.1	1398.3	1399.5	1395.2	1391.6	1392.2	1388.6	1395.5	1379.3
5°	1429.0	1423.0	1416.6	1419.0	1416.6	1410.3	1405.2	1403.7	1394.0	1398.0	1381.4
7.5°	1452.2	1445.5	1436.2	1438.9	1433.8	1422.0	1415.4	1411.5	1396.8	1397.1	1378.7
10°	1474.4	1468.7	1456.1	1457.9	1448.6	1432.9	1422.4	1416.9	1396.1	1393.1	1374.2
12.5°	1495.2	1487.4	1473.8	1474.8	1461.2	1440.4	1426.9	1419.0	1391.9	1382.9	1364.2
15°	1511.2	1503.7	1487.4	1487.1	1469.6	1442.5	1427.2	1416.3	1382.0	1367.8	1348.3
17.5°	1524.7	1517.8	1497.6	1497.0	1476.0	1441.6	1423.3	1409.7	1367.5	1350.1	1328.4
20°	1534.4	1527.5	1504.9	1502.8	1477.5	1437.1	1415.1	1398.0	1348.6	1327.8	1303.7
22.5°	1538.9	1532.0	1506.4	1503.4	1473.8	1428.1	1403.4	1383.2	1326.9	1299.8	1274.8
25°	1538.0	1531.4	1502.5	1499.4	1466.9	1414.5	1386.8	1363.6	1299.5	1267.6	1242.9
27.5°	1530.5	1525.3	1494.9	1491.0	1454.3	1396.1	1366.6	1341.0	1269.1	1233.5	1206.7
30°	1517.5	1513.6	1481.4	1477.8	1438.6	1376.0	1343.1	1313.6	1236.2	1196.2	1169.1
32.5°	1496.7	1493.1	1460.6	1457.3	1417.5	1350.1	1315.7	1285.3	1200.4	1156.1	1129.0
35°	1468.1	1466.0	1434.4	1430.8	1390.4	1320.6	1284.1	1250.7	1163.1	1113.1	1087.2
37.5°	1430.5	1430.5	1400.1	1396.1	1356.7	1284.4	1248.6	1213.0	1120.9	1067.9	1042.3
40°	1386.8	1390.7	1359.7	1355.8	1317.5	1245.6	1206.4	1169.1	1075.4	1020.3	995.3
42.5°	1334.4	1338.0	1312.1	1308.5	1272.7	1200.7	1164.3	1123.6	1027.8	971.8	945.9
45°	1276.6	1281.4	1258.2	1255.5	1222.1	1151.6	1116.7	1075.4	978.1	921.2	895.9
47.5°	1212.1	1218.5	1198.3	1196.8	1165.8	1101.3	1064.9	1023.0	926.0	868.5	844.7
50°	1139.9	1148.9	1132.3	1132.3	1104.6	1040.5	1008.9	967.0	871.8	814.3	790.8
52.5°	1062.5	1073.9	1061.6	1061.9	1039.3	981.8	948.9	908.0	815.2	758.6	736.9
55°	982.4	993.5	985.7	986.9	969.1	916.7	886.9	846.2	757.4	702.3	681.8
57.5°	898.6	910.7	905.6	908.0	895.6	848.7	817.6	782.1	697.8	643.3	625.8
60°	814.6	826.1	823.4	826.7	818.8	778.2	749.9	713.1	637.8	585.4	570.1
62.5°	729.7	740.2	739.6	743.2	739.0	705.3	680.0	648.7	575.8	527.6	513.5
65°	646.6	655.6	655.0	658.9	658.0	630.9	608.0	579.4	513.8	469.5	457.2
67.5°	565.9	573.4	571.3	575.8	577.0	555.3	535.5	509.9	454.7	411.7	401.1
70°	487.0	492.1	489.4	492.4	495.1	478.8	462.0	439.4	391.8	353.9	345.1
72.5°	409.6	413.2	409.0	412.0	414.4	402.6	388.8	369.2	329.8	296.9	289.7
75°	334.6	339.7	331.0	334.0	335.8	324.0	315.9	299.9	265.9	240.6	235.8
77.5°	262.0	265.0	260.2	259.0	260.2	251.8	245.4	233.1	207.5	186.7	183.7
80°	192.7	194.5	189.7	188.5	189.4	183.4	178.6	169.5	151.5	135.8	134.6
82.5°	129.2	130.1	125.9	124.7	125.3	123.5	117.8	111.4	103.0	89.7	89.4
85°	73.8	73.8	70.8	69.6	70.2	67.2	65.0	61.7	58.4	49.4	50.0
87.5°	27.1	27.1	25.6	25.3	28.3	25.0	24.1	22.6	23.5	18.7	19.9
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8
2.5°	1383.8	1380.8	1378.1	1368.7	1372.7	1363.0	1362.4	1358.8	1356.1	1351.0	1357.6
5°	1379.3	1373.3	1365.4	1354.3	1357.6	1346.2	1343.7	1339.5	1335.9	1329.3	1334.4
7.5°	1372.1	1362.1	1349.8	1335.6	1340.1	1326.0	1322.4	1317.8	1314.8	1307.0	1311.5
10°	1361.5	1347.4	1332.9	1315.7	1319.1	1303.7	1299.2	1294.4	1291.6	1284.7	1289.2
12.5°	1345.3	1328.1	1308.5	1289.8	1293.5	1279.0	1273.0	1267.9	1267.0	1261.2	1266.7
15°	1324.2	1300.4	1280.2	1260.3	1264.5	1247.7	1245.0	1239.9	1241.4	1237.4	1244.1
17.5°	1297.4	1270.0	1248.0	1226.6	1230.8	1216.7	1214.6	1212.1	1213.7	1213.0	1220.3
20°	1267.3	1237.1	1211.8	1190.8	1193.2	1182.0	1182.9	1182.3	1185.3	1188.7	1198.6
22.5°	1233.2	1199.2	1172.7	1151.0	1154.6	1145.0	1149.2	1150.4	1155.5	1163.1	1175.7
25°	1195.0	1158.5	1130.8	1110.4	1113.7	1107.3	1114.6	1117.6	1125.7	1138.4	1151.3
27.5°	1154.9	1116.4	1086.9	1067.3	1073.6	1067.3	1078.1	1084.2	1096.5	1110.4	1126.3
30°	1112.5	1072.4	1042.0	1024.5	1030.5	1024.8	1042.3	1050.4	1062.8	1081.7	1100.7
32.5°	1067.9	1025.7	995.9	982.4	986.6	985.7	1005.3	1014.3	1030.9	1052.5	1072.7
35°	1022.1	978.1	948.0	936.6	941.7	942.9	966.4	976.9	995.0	1021.2	1042.9
37.5°	974.8	930.0	900.5	891.1	895.6	900.1	927.6	938.1	958.6	987.2	1011.0
40°	925.7	880.9	852.0	844.4	849.0	853.8	883.6	898.0	920.3	951.3	977.2
42.5°	876.1	831.2	803.2	797.8	802.3	811.6	843.2	856.8	880.3	914.6	943.2
45°	825.5	778.8	754.4	750.2	755.0	765.8	796.9	813.1	838.1	875.8	906.5
47.5°	774.3	728.8	705.6	702.9	707.7	719.8	754.1	768.8	795.3	835.4	868.5
50°	722.5	678.2	655.9	655.0	659.5	672.5	705.3	722.8	750.2	795.0	829.1
52.5°	670.1	627.6	607.4	607.4	611.6	624.9	658.0	676.1	704.4	751.7	789.3
55°	617.7	577.3	558.0	559.5	565.6	577.0	609.2	628.2	656.8	705.9	745.7
57.5°	565.3	527.0	509.6	511.7	517.4	528.8	560.4	581.8	607.7	658.6	699.3
60°	513.5	477.3	462.0	464.4	469.5	480.9	513.8	532.1	558.0	609.8	650.5
62.5°	461.1	428.2	413.8	416.8	421.3	432.8	463.8	481.5	507.1	558.0	599.0
65°	409.3	378.9	366.5	369.5	373.7	384.3	413.5	430.7	455.0	504.7	543.9
67.5°	358.1	330.4	320.1	323.1	326.5	336.4	360.5	379.2	402.0	449.3	486.4
70°	307.5	282.8	273.7	276.8	279.8	288.8	309.9	327.1	348.1	391.5	425.8
72.5°	257.5	233.4	228.9	231.6	234.0	241.8	262.0	275.6	293.9	332.5	362.0
75°	208.7	187.9	184.9	187.6	189.7	195.8	212.6	224.4	239.7	273.1	297.2
77.5°	161.7	144.3	143.0	145.2	147.3	151.5	164.7	177.1	189.1	213.8	235.2
80°	117.8	103.6	103.6	105.7	105.1	110.2	119.6	129.5	138.2	156.0	171.7
82.5°	77.7	66.6	68.1	69.6	70.5	72.6	78.3	85.8	91.2	102.1	112.3
85°	43.1	35.5	37.0	38.2	37.6	40.1	43.1	47.6	50.3	55.4	60.8
87.5°	16.0	13.3	13.6	14.5	15.1	16.3	16.3	19.0	19.3	19.9	21.1
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):

	160°	170°	180°
0°	1377.8	1377.8	1377.8
2.5°	1345.0	1352.2	1357.6
5°	1321.8	1327.8	1332.6
7.5°	1299.2	1304.6	1308.8
10°	1277.8	1283.8	1286.8
12.5°	1255.8	1262.7	1265.1
15°	1234.1	1241.1	1244.1
17.5°	1211.8	1220.9	1224.2
20°	1191.1	1202.5	1205.2
22.5°	1170.0	1181.7	1185.0
25°	1147.1	1160.9	1164.3
27.5°	1122.7	1139.3	1142.6
30°	1098.3	1116.4	1119.7
32.5°	1072.1	1091.7	1094.7
35°	1044.7	1064.3	1067.9
37.5°	1014.3	1035.7	1042.9
40°	982.7	1005.9	1013.4
42.5°	949.5	974.8	982.7
45°	914.0	941.7	950.7
47.5°	878.2	909.5	917.3
50°	839.3	872.7	882.1
52.5°	798.7	835.1	844.4
55°	756.5	793.2	803.5
57.5°	710.7	748.7	759.5
60°	662.8	700.8	711.0
62.5°	613.8	648.1	658.0
65°	558.9	591.2	600.2
67.5°	500.8	530.3	537.9
70°	439.1	464.7	471.3
72.5°	374.6	392.4	401.1
75°	308.1	322.2	328.9
77.5°	241.2	251.2	256.6
80°	175.9	181.6	186.1
82.5°	115.0	117.5	120.8
85°	62.0	62.0	64.1
87.5°	21.1	20.2	21.1
90°	0.0	0.0	0.0

(END OF REPORT)